



SRC ENERGY

**SECTION 15, T6N, R66W
HARVESTERS STATE 7-15 PAD
HARVESTERS STATE 31N-16B-M**

**OH
PLAN #1**

Anticollision Report

03 October, 2017





Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Reference	PLAN #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00 ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.45 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	10/3/2017		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	14,817.27	PLAN #1 (OH)	MWD+IFR1	OWSG MWD + IFR1

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
HARVESTERS STATE 7-15 PAD						
BERG 33-15 (AB_150CC) - OH - OH	100.00	58.65	1,676.97	1,670.40	255.358	CC
BERG 33-15 (AB_150CC) - OH - OH	500.00	460.07	1,677.74	1,670.21	222.896	ES
BERG 33-15 (AB_150CC) - OH - OH	6,900.00	6,789.57	2,044.39	1,985.09	34.479	SF
BERRY 22-2(PR_75CC) - OH - OH	100.00	29.32	4,413.09	4,406.53	672.185	CC
BERRY 22-2(PR_75CC) - OH - OH	200.00	124.73	4,413.14	4,406.51	665.371	ES
BERRY 22-2(PR_75CC) - OH - OH	10,500.00	6,969.66	6,352.61	6,241.73	57.290	SF
BLACK GOLD PETROLEUM 1(PR_150CC) - OH - OH	0.00	20.21	4,413.10			
BLACK GOLD PETROLEUM 1(PR_150CC) - OH - OH	500.00	520.80	4,413.74	4,406.09	576.577	ES
BLACK GOLD PETROLEUM 1(PR_150CC) - OH - OH	10,500.00	7,253.99	6,365.87	6,253.64	56.719	SF
BLACKGOLD 3(AB_150CC) - OH - OH	7,843.53	7,065.67	1,931.37	1,859.72	26.956	CC
BLACKGOLD 3(AB_150CC) - OH - OH	7,900.00	7,065.41	1,932.20	1,859.48	26.572	ES
BLACKGOLD 3(AB_150CC) - OH - OH	8,600.00	7,062.15	2,074.23	1,988.61	24.226	SF
BURBACH 15-22(SI_150CC) - OH - OH	8,816.93	7,015.99	595.50	289.14	1.944	CC, ES, SF
BURBACH 15-23(SI_150CC) - OH - OH	9,197.06	7,005.66	735.00	419.39	2.329	CC
BURBACH 15-23(SI_150CC) - OH - OH	9,200.00	7,005.72	735.01	419.33	2.328	ES, SF
BURMAN 16-42(PR_75CC) - OH - OH	11,467.67	6,943.61	1,887.03	1,512.10	5.033	CC
BURMAN 16-42(PR_75CC) - OH - OH	11,500.00	6,943.05	1,887.31	1,511.54	5.023	ES
BURMAN 16-42(PR_75CC) - OH - OH	11,700.00	6,939.55	1,901.27	1,521.18	5.002	SF
BURMAN 16-43(PR_75CC) - OH - OH	11,484.82	6,940.31	3,387.88	3,012.59	9.027	CC
BURMAN 16-43(PR_75CC) - OH - OH	11,600.00	6,938.30	3,389.83	3,011.53	8.961	ES
BURMAN 16-43(PR_75CC) - OH - OH	12,100.00	6,929.55	3,443.26	3,053.75	8.840	SF
DONN 30N 20A-L(SRC PLAN_75CC) - OH - SRC PLAN	9,774.55	7,265.52	3,909.84	3,786.98	31.824	CC
DONN 30N 20A-L(SRC PLAN_75CC) - OH - SRC PLAN	14,817.75	12,346.86	4,043.85	3,634.13	9.870	ES, SF
DONN 30N-20B-L(SRC PLAN_75CC) - OH - PLAN	9,701.37	7,306.64	4,107.64	3,987.08	34.071	CC
DONN 30N-20B-L(SRC PLAN_75CC) - OH - PLAN	14,817.75	12,357.26	4,189.11	3,782.40	10.300	ES, SF
FALKEN 34C-9-L(SRC PLAN_75CC) - OH - Plan 1	7,396.63	16,549.37	1,774.57	1,471.99	5.865	CC
FALKEN 34C-9-L(SRC PLAN_75CC) - OH - Plan 1	10,000.00	19,118.26	1,804.79	1,371.60	4.166	ES
FALKEN 34C-9-L(SRC PLAN_75CC) - OH - Plan 1	10,100.00	19,118.26	1,810.61	1,375.71	4.163	SF
FALKEN 34N-9C-L(SRC PLAN_75CC) - OH - Plan 1	9,946.70	19,020.00	1,593.59	1,160.42	3.679	CC
FALKEN 34N-9C-L(SRC PLAN_75CC) - OH - Plan 1	10,000.00	19,018.34	1,594.48	1,160.05	3.670	ES, SF
FRITZLER 11-21-4(PR_150CC) - OH - OH	13,749.25	6,987.38	3,873.98	3,642.75	16.754	CC
FRITZLER 11-21-4(PR_150CC) - OH - OH	13,900.00	6,988.79	3,876.91	3,641.45	16.465	ES
FRITZLER 11-21-4(PR_150CC) - OH - OH	14,700.00	6,996.64	3,988.93	3,736.44	15.798	SF
FRITZLER 11-21(PR_150CC) - OH - OH	14,353.15	6,872.13	4,538.66	4,085.19	10.009	CC
FRITZLER 11-21(PR_150CC) - OH - OH	14,500.00	6,869.56	4,541.04	4,083.66	9.928	ES
FRITZLER 11-21(PR_150CC) - OH - OH	14,817.75	6,864.00	4,562.37	4,097.33	9.811	SF
FRITZLER 1-17(PR_150CC) - OH - OH	14,817.75	6,879.00	3,315.99	2,855.85	7.207	CC, ES, SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
HARVESTERS STATE 7-15 PAD						
FRITZLER 17-23-18(PR_150CC) - OH - OH	14,817.75	7,196.00	3,861.13	3,653.11	18.562	CC, ES, SF
FRITZLER 17-32-12(PR_150CC) - OH - OH	14,817.75	7,302.02	1,937.22	1,736.08	9.631	CC, ES, SF
FRITZLER 17-42-11(PR_150CC) - OH - MWD	14,817.75	7,291.40	1,251.48	989.38	4.775	CC, ES, SF
FRITZLER 34-17(PR_150CC) - OH - OH	14,817.75	6,957.82	3,887.17	3,656.24	16.833	CC, ES, SF
FRITZLER 43-17(PR_150CC) - OH - OH	14,817.75	7,103.04	2,064.04	1,821.09	8.496	CC, ES, SF
FRITZLER 6-6-17 (PR_150CC) - OH - OH	14,817.75	6,950.27	2,985.32	2,751.78	12.783	CC, ES, SF
FRITZLER 6-8-17(PR_150CC) - OH - OH	14,817.75	7,045.77	4,098.64	3,853.00	16.685	CC, ES, SF
FRITZLER 8-8-17(PR_150CC) - OH - OH	14,817.75	6,879.63	3,868.01	3,607.62	14.855	CC, ES, SF
GREELEY SWD #1(XX) - OH - OH	10,053.65	6,950.35	3,606.55	3,270.21	10.723	CC
GREELEY SWD #1(XX) - OH - OH	10,100.00	6,949.54	3,606.85	3,269.31	10.686	ES
GREELEY SWD #1(XX) - OH - OH	10,800.00	6,937.29	3,682.95	3,329.18	10.411	SF
HARVESTER 31-15(SI_150CC) - OH - OH	6,500.00	6,496.29	888.22	831.93	15.781	CC, ES
HARVESTER 31-15(SI_150CC) - OH - OH	6,600.00	6,598.78	895.81	838.66	15.675	SF
HARVESTER 32-15(SI_150CC) - OH - OH	483.73	462.77	535.06	527.56	71.325	CC
HARVESTER 32-15(SI_150CC) - OH - OH	500.00	478.72	535.07	527.50	70.679	ES
HARVESTER 32-15(SI_150CC) - OH - OH	6,500.00	6,472.58	757.47	701.31	13.487	SF
HARVESTER STATE 30C-16-M - OH - PLAN #1	200.00	201.00	119.85	113.18	17.956	CC, ES
HARVESTER STATE 30C-16-M - OH - PLAN #1	14,817.75	15,216.01	1,351.77	906.33	3.035	SF
HARVESTER STATE 30N-16B-M - OH - PLAN #1	300.00	301.00	100.18	93.29	14.538	CC, ES
HARVESTER STATE 30N-16B-M - OH - PLAN #1	14,817.75	14,942.37	1,105.43	651.28	2.434	SF
HARVESTER STATE 31C-16-M - OH - PLAN #1	743.80	743.00	15.68	6.79	1.764	CC, ES
HARVESTER STATE 31C-16-M - OH - PLAN #1	14,817.75	15,004.33	366.14	70.42	1.238	Level 2, SF
HARVESTER STATE 33C-16-M - OH - PLAN #1	200.00	199.00	279.81	273.14	41.930	CC, ES
HARVESTER STATE 33C-16-M - OH - PLAN #1	14,817.75	15,239.25	2,466.97	2,013.43	5.439	SF
HARVESTER STATE 34C-16-M - OH - PLAN #1	200.00	198.00	400.03	393.35	59.952	CC, ES
HARVESTER STATE 34C-16-M - OH - PLAN #1	14,817.75	15,757.81	3,724.47	3,269.37	8.184	SF
HARVESTER STATE 5C-16-M - OH - PLAN #1	500.00	500.00	20.05	12.43	2.634	CC, ES
HARVESTER STATE 5C-16-M - OH - PLAN #1	14,817.75	14,986.33	365.93	61.82	1.203	Level 2, SF
HARVESTER STATE 12N-16B-M - OH - PLAN #1	200.00	199.00	240.10	233.43	35.979	CC, ES
HARVESTER STATE 12N-16B-M - OH - PLAN #1	14,817.75	14,964.66	2,036.14	1,580.70	4.471	SF
HARVESTER STATE 13C-16-M - OH - PLAN #1	200.00	198.00	339.92	333.25	50.944	CC, ES
HARVESTER STATE 13C-16-M - OH - PLAN #1	14,817.75	15,409.70	3,095.52	2,641.15	6.813	SF
HARVESTER STATE 33N-16C-M - OH - PLAN #1	200.00	198.00	319.88	313.21	47.941	CC, ES
HARVESTER STATE 33N-16C-M - OH - PLAN #1	14,817.75	15,249.20	2,876.86	2,421.47	6.317	SF
HARVESTER STATE 4C-16-M - OH - PLAN #1	500.00	501.00	80.15	74.40	13.960	CC
HARVESTER STATE 4C-16-M - OH - PLAN #1	600.00	598.27	80.32	73.90	12.513	ES
HARVESTER STATE 4C-16-M - OH - PLAN #1	14,817.75	15,116.21	961.16	526.14	2.209	SF
HARVESTERS RESOURCES 15M-303 (PR_150CC) - O	7,025.73	8,223.61	349.80	301.97	7.314	CC, ES
HARVESTERS RESOURCES 15M-303 (PR_150CC) - O	7,200.00	8,212.17	411.11	346.08	6.322	SF
HARVESTERS RESOURCES 15M-423(PR_150CC) - O	6,893.58	8,301.73	629.99	574.31	11.314	CC
HARVESTERS RESOURCES 15M-423(PR_150CC) - O	6,900.00	8,300.98	630.06	573.95	11.228	ES
HARVESTERS RESOURCES 15M-423(PR_150CC) - O	7,000.00	8,289.52	647.49	585.47	10.440	SF
HARVESTERS RESOURCES 15R-243(PR_150CC) - OH	6,729.87	8,191.92	936.06	873.88	15.055	CC, ES
HARVESTERS RESOURCES 15R-243(PR_150CC) - OH	6,900.00	8,189.86	973.28	906.16	14.501	SF
HARVESTERS RESOURCES 15R-403(PR_150CC) - OH	6,715.95	8,339.17	1,288.16	1,221.75	19.398	CC, ES
HARVESTERS RESOURCES 15R-403(PR_150CC) - OH	6,800.00	8,333.50	1,296.40	1,228.36	19.054	SF
HARVESTERS STATE 12N-16A-M - OH - PLAN #1	200.00	199.00	260.13	253.46	38.981	CC, ES
HARVESTERS STATE 12N-16A-M - OH - PLAN #1	14,817.75	14,898.02	2,241.89	1,785.64	4.914	SF
HARVESTERS STATE 12N-16C-M - OH - PLAN #1	200.00	199.00	220.05	213.38	32.975	CC, ES
HARVESTERS STATE 12N-16C-M - OH - PLAN #1	14,817.75	14,970.99	1,831.30	1,377.53	4.036	SF
HARVESTERS STATE 13N-16B-M - OH - PLAN #1	200.00	198.00	359.95	353.28	53.946	CC, ES
HARVESTERS STATE 13N-16B-M - OH - PLAN #1	14,817.75	15,312.40	3,294.90	2,838.99	7.227	SF
HARVESTERS STATE 32C-16-M - OH - PLAN #1	200.00	199.00	200.01	193.34	29.973	CC, ES

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
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Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
HARVESTERS STATE 7-15 PAD						
HARVESTERS STATE 32C-16-M - OH - PLAN #1	14,817.75	15,074.50	1,636.21	1,146.85	3.344	SF
HARVESTERS STATE 32C-16-M2 - OH - PLAN #1	500.00	500.00	80.16	72.54	10.530	CC, ES
HARVESTERS STATE 32C-16-M2 - OH - PLAN #1	14,817.75	14,998.85	927.01	489.53	2.119	SF
HARVESTERS STATE 32N-16B-M - OH - PLAN #1	300.00	299.00	179.98	173.09	26.128	CC, ES
HARVESTERS STATE 32N-16B-M - OH - PLAN #1	14,817.75	14,862.86	1,417.37	962.33	3.115	SF
HARVESTERS STATE 32N-16C-M - OH - PLAN #1	500.00	500.00	99.82	92.21	13.114	CC, ES
HARVESTERS STATE 34N-16C-M - OH - PLAN #1	14,817.75	14,904.83	1,113.52	661.77	2.465	SF
HARVESTERS STATE 33N-16B-M - OH - PLAN #1	200.00	199.00	299.83	293.16	44.931	CC, ES
HARVESTERS STATE 33N-16B-M - OH - PLAN #1	14,817.75	15,120.45	2,667.49	2,211.85	5.854	SF
HARVESTERS STATE 34N-16C-M - OH - PLAN #1	200.00	198.00	379.99	373.32	56.949	CC, ES
HARVESTERS STATE 34N-16C-M - OH - PLAN #1	14,817.75	15,458.51	3,507.34	3,051.64	7.697	SF
HARVESTERS STATE 4N-16A-M - OH - PLAN #1	735.95	734.23	35.81	26.97	4.048	CC
HARVESTERS STATE 4N-16A-M - OH - PLAN #1	14,817.75	14,733.28	440.09	-16.74	0.963	Level 1, ES, SF
HARVESTERS STATE 4N-16C-M - OH - PLAN #1	735.39	732.73	55.84	47.00	6.316	CC, ES
HARVESTERS STATE 4N-16C-M - OH - PLAN #1	14,817.75	14,969.16	587.40	151.61	1.348	Level 3, SF
HARVESTERS STATE 5N-16B-M - OH - PLAN #1	400.00	400.00	60.11	52.91	8.341	CC, ES
HARVESTERS STATE 5N-16B-M - OH - PLAN #1	14,817.75	14,803.45	569.17	118.28	1.262	Level 3, SF
HARVESTERS STATE 5N-16C-M - OH - PLAN #1	500.00	500.00	40.08	32.47	5.266	CC, ES
HARVESTERS STATE 5N-16C-M - OH - PLAN #1	14,817.75	14,865.66	473.13	43.77	1.102	Level 2, SF
HOOD 41-20(PR_150CC) - OH - OH	14,817.75	6,871.00	4,635.60	4,172.73	10.015	CC, ES, SF
HOOD 6-2-20(PR_150CC) - OH - OH	14,817.75	7,222.97	5,377.96	5,123.85	21.164	CC, ES, SF
LEFFLER 1 21-2(SI_75CC) - OH - OH	11,694.31	6,911.61	4,514.20	4,344.13	26.543	CC
LEFFLER 1 21-2(SI_75CC) - OH - OH	11,800.00	6,914.42	4,515.44	4,342.47	26.106	ES
LEFFLER 1 21-2(SI_75CC) - OH - OH	13,300.00	6,960.18	4,790.98	4,586.42	23.422	SF
LEFFLER 26C-23-L(SRC PLAN_75CC) - OH - BAKER P	7,000.00	10,317.13	4,202.44	4,064.19	30.397	ES
LEFFLER 26C-23-L(SRC PLAN_75CC) - OH - BAKER P	9,637.50	7,726.17	4,191.68	4,069.58	34.331	CC
LEFFLER 26C-23-L(SRC PLAN_75CC) - OH - BAKER P	12,100.00	7,049.69	4,667.36	4,495.72	27.192	SF
LEFFLER 26N-23B-L(SRC PLAN_75CC) - OH - PLAN	9,651.76	7,580.06	3,905.61	3,783.49	31.981	CC
LEFFLER 26N-23B-L(SRC PLAN_75CC) - OH - PLAN	9,800.00	7,522.17	3,907.33	3,781.97	31.170	ES
LEFFLER 26N-23B-L(SRC PLAN_75CC) - OH - PLAN	11,900.00	7,000.00	4,344.80	4,177.31	25.941	SF
LEFFLER FARM 1-21(PA_75CC) - OH - OH	13,036.34	6,902.83	4,728.55	4,311.16	11.329	CC
LEFFLER FARM 1-21(PA_75CC) - OH - OH	13,200.00	6,905.70	4,731.38	4,309.43	11.213	ES
LEFFLER FARM 1-21(PA_75CC) - OH - OH	14,000.00	6,880.31	4,825.72	4,386.22	10.980	SF
LOVELY 1(AB_150CC) - OH - OH	12,997.59	6,944.84	2,070.38	1,652.60	4.956	CC
LOVELY 1(AB_150CC) - OH - OH	13,100.00	6,943.05	2,072.91	1,652.47	4.930	ES
LOVELY 1(AB_150CC) - OH - OH	13,200.00	6,941.30	2,080.25	1,657.61	4.922	SF
LOVELY 14-9(AB_150CC) - OH - OH	14,494.53	6,921.66	2,016.50	1,557.30	4.391	CC
LOVELY 14-9(AB_150CC) - OH - OH	14,500.00	6,921.56	2,016.51	1,557.15	4.390	ES
LOVELY 14-9(AB_150CC) - OH - OH	14,700.00	6,918.06	2,026.94	1,563.05	4.370	SF
LUCAS SCHOOL 1(TA_150CC) - OH - OH	10,268.59	7,012.59	2,100.29	1,755.95	6.100	CC
LUCAS SCHOOL 1(TA_150CC) - OH - OH	10,300.00	7,012.04	2,100.52	1,755.35	6.085	ES
LUCAS SCHOOL 1(TA_150CC) - OH - OH	10,500.00	7,008.54	2,113.00	1,762.95	6.036	SF
LUCAS SCHOOL 34-9(TA_150CC) - OH - OH	11,484.31	6,951.32	2,080.50	1,704.85	5.538	CC
LUCAS SCHOOL 34-9(TA_150CC) - OH - OH	11,500.00	6,951.05	2,080.56	1,704.47	5.532	ES
LUCAS SCHOOL 34-9(TA_150CC) - OH - OH	11,700.00	6,947.55	2,091.65	1,710.71	5.491	SF
MAURICE LEFFLER 1(AB_150CC) - OH - OH	13,084.25	4,452.00	5,147.21	4,852.28	17.452	CC
MAURICE LEFFLER 1(AB_150CC) - OH - OH	13,200.00	4,452.00	5,148.52	4,850.71	17.288	ES
MAURICE LEFFLER 1(AB_150CC) - OH - OH	14,500.00	4,452.00	5,338.37	5,013.29	16.422	SF
MCGLOTHLIN 8-6-17(PR_150CC) - OH - OH	14,817.75	7,237.20	2,527.20	2,266.80	9.705	CC, ES, SF
MCGLOTHLIN 17-11(PR_75CC) - OH - OH	14,817.75	6,902.00	1,328.38	933.12	3.361	CC, ES, SF
MONTERA 10-34 (PR_75CC) - OH - OH	6,673.30	6,682.76	1,962.37	1,904.49	33.901	CC
MONTERA 10-34 (PR_75CC) - OH - OH	6,700.00	6,708.76	1,962.47	1,904.36	33.770	ES
MONTERA 10-34 (PR_75CC) - OH - OH	7,300.00	7,076.70	2,052.14	1,988.71	32.351	SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
HARVESTERS STATE 7-15 PAD						
RUTT-ADAMS HEIRS 2-22 - OH - OH	500.00	440.00	4,367.08	4,349.27	245.198	CC
RUTT-ADAMS HEIRS 2-22 - OH - OH	7,800.00	7,005.22	4,538.00	4,254.57	16.011	ES
RUTT-ADAMS HEIRS 2-22 - OH - OH	9,200.00	6,970.28	4,768.02	4,456.78	15.320	SF
SENA 15-21(PR_75CC) - OH - OH	7,810.75	7,049.59	853.81	568.61	2.994	CC, ES
SENA 15-21(PR_75CC) - OH - OH	7,900.00	7,048.03	858.46	571.68	2.993	SF
SENA 15-24(PR_75CC) - OH - OH	7,762.21	7,036.44	450.81	166.94	1.588	CC, ES, SF
SENA 15-25(PR_75CC) - OH - OH	8,135.36	7,036.91	233.29	-57.92	0.801	Level 1, CC, ES, SF
STATE 1(AB_150CC) - OH - OH	11,639.94	6,938.60	767.62	388.07	2.022	CC, ES
STATE 1(AB_150CC) - OH - OH	11,700.00	6,937.55	769.96	389.09	2.022	SF
STATE BEATRICE 16-1(AB_150CC) - OH - OH	11,769.68	6,938.33	789.38	406.23	2.060	CC
STATE BEATRICE 16-1(AB_150CC) - OH - OH	11,800.00	6,937.80	789.96	406.04	2.058	ES, SF
STATE BEATRICE 32-16(PR_75CC) - OH - OH	11,578.00	6,934.68	683.93	306.25	1.811	CC
STATE BEATRICE 32-16(PR_75CC) - OH - OH	11,600.00	6,934.30	684.29	306.12	1.809	ES, SF
STATE-HOPPE 16-1(SI_75CC) - OH - OH	14,336.48	6,883.42	3,370.79	2,917.40	7.435	CC
STATE-HOPPE 16-1(SI_75CC) - OH - OH	14,400.00	6,882.31	3,371.39	2,916.30	7.408	ES
STATE-HOPPE 16-1(SI_75CC) - OH - OH	14,800.00	6,875.31	3,402.51	2,938.53	7.333	SF
STATE-HOPPE 16-2(PR_75CC) - OH - OH	13,189.49	6,916.49	1,887.52	1,465.34	4.471	CC
STATE-HOPPE 16-2(PR_75CC) - OH - OH	13,200.00	6,916.30	1,887.55	1,465.09	4.468	ES
STATE-HOPPE 16-2(PR_75CC) - OH - OH	13,300.00	6,914.55	1,890.75	1,465.90	4.450	SF
STATE-HOPPE 16-3(PR_150CC) - OH - OH	14,387.83	6,893.59	721.24	475.56	2.936	CC
STATE-HOPPE 16-3(PR_150CC) - OH - OH	14,400.00	6,893.57	721.34	475.37	2.933	ES, SF
STOCKOVER 16-1(PR_75CC) - OH - OH	10,237.26	6,950.14	1,864.07	1,522.77	5.462	CC
STOCKOVER 16-1(PR_75CC) - OH - OH	10,300.00	6,949.04	1,865.13	1,522.25	5.440	ES
STOCKOVER 16-1(PR_75CC) - OH - OH	10,400.00	6,947.29	1,871.16	1,526.00	5.421	SF
ULRICH PC I 17-07D(PR_75CC) - OH - OH	14,817.75	6,999.24	2,243.23	2,137.46	21.208	CC, ES, SF
ULRICH PC I 17-08(PR_75CC) - OH - OH	14,817.75	6,907.00	1,135.89	779.65	3.189	CC, ES, SF
ULRICH PC I17-17D(PR_75CC) - OH - OH	14,817.75	7,107.85	1,725.48	1,644.67	21.354	CC, ES, SF

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (ft)	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)					
0.00	0.00	0.00	38.00	3.28	3.28	167.98	-1,640.11	349.36	1,677.34				
100.00	100.00	58.65	96.65	3.28	3.28	167.98	-1,640.17	349.37	1,676.97	1,670.40	6.57	255.358	CC
200.00	200.00	156.72	194.72	3.34	3.31	167.98	-1,640.48	349.35	1,677.27	1,670.62	6.65	252.264	
300.00	300.00	259.35	297.35	3.44	3.40	167.99	-1,640.80	349.14	1,677.53	1,670.69	6.85	245.057	
400.00	400.00	360.39	398.39	3.60	3.54	167.99	-1,640.91	349.06	1,677.62	1,670.48	7.14	234.871	
500.00	500.00	460.07	498.07	3.81	3.72	167.99	-1,641.02	349.09	1,677.74	1,670.21	7.53	222.896	ES
600.00	599.98	555.97	593.97	4.05	3.93	-164.64	-1,641.17	349.22	1,679.61	1,671.63	7.98	210.528	
700.00	699.86	652.29	690.29	4.32	4.17	-164.67	-1,641.65	349.32	1,684.76	1,676.27	8.49	198.357	
800.00	799.72	754.41	792.41	4.62	4.46	-164.71	-1,642.25	349.17	1,690.39	1,681.31	9.07	186.291	
900.00	899.58	857.74	895.74	4.93	4.77	-164.73	-1,642.70	348.62	1,695.79	1,686.08	9.70	174.778	
1,000.00	999.44	959.61	997.60	5.27	5.09	-164.76	-1,642.98	348.09	1,701.04	1,690.67	10.36	164.143	
1,100.00	1,099.31	1,057.31	1,095.30	5.62	5.42	-164.78	-1,643.25	347.41	1,706.25	1,695.21	11.04	154.557	
1,200.00	1,199.17	1,155.35	1,193.33	5.98	5.76	-164.81	-1,643.70	346.84	1,711.67	1,699.92	11.74	145.781	
1,300.00	1,299.03	1,255.23	1,293.21	6.36	6.12	-164.83	-1,644.19	346.16	1,717.09	1,704.62	12.47	137.701	
1,400.00	1,398.89	1,356.97	1,394.95	6.74	6.49	-164.84	-1,644.69	345.34	1,722.49	1,709.27	13.22	130.276	
1,500.00	1,498.75	1,461.12	1,499.10	7.13	6.88	-164.86	-1,644.99	344.53	1,727.69	1,713.69	14.00	123.430	
1,600.00	1,598.61	1,563.67	1,601.64	7.52	7.27	-164.88	-1,645.03	343.75	1,732.66	1,717.88	14.78	117.240	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BERG 33-15 (AB_150CC) - OH - OH												Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
1,700.00	1,698.47	1,661.74	1,699.71	7.92	7.65	-164.89	-1,645.11	342.68	1,737.60	1,722.04	15.55	111.721	
1,800.00	1,798.33	1,758.49	1,796.45	8.32	8.02	-164.91	-1,645.33	341.78	1,742.71	1,726.38	16.33	106.714	
1,900.00	1,898.19	1,857.76	1,895.72	8.73	8.41	-164.92	-1,645.69	340.82	1,747.95	1,730.83	17.13	102.064	
2,000.00	1,998.05	1,955.96	1,993.91	9.14	8.80	-164.93	-1,646.07	339.82	1,753.20	1,735.28	17.92	97.816	
2,100.00	2,097.91	2,054.60	2,092.54	9.55	9.20	-164.93	-1,646.63	338.65	1,758.60	1,739.87	18.73	93.899	
2,200.00	2,197.78	2,153.95	2,191.88	9.97	9.60	-164.94	-1,647.16	337.65	1,763.99	1,744.45	19.54	90.269	
2,300.00	2,297.64	2,252.06	2,289.99	10.39	9.99	-164.96	-1,647.68	336.99	1,769.47	1,749.11	20.35	86.937	
2,400.00	2,397.50	2,355.35	2,393.27	10.81	10.41	-164.97	-1,648.31	336.11	1,774.97	1,753.77	21.19	83.760	
2,500.00	2,497.36	2,459.58	2,497.50	11.23	10.84	-164.98	-1,648.60	335.10	1,780.13	1,758.09	22.04	80.782	
2,600.00	2,597.22	2,561.18	2,599.09	11.65	11.25	-165.01	-1,648.70	334.41	1,785.17	1,762.29	22.87	78.047	
2,700.00	2,697.08	2,658.69	2,696.61	12.07	11.65	-165.03	-1,648.72	333.90	1,790.18	1,766.48	23.69	75.552	
2,800.00	2,796.94	2,756.05	2,793.96	12.50	12.05	-165.06	-1,648.96	333.39	1,795.40	1,770.88	24.52	73.228	
2,900.00	2,896.80	2,856.83	2,894.74	12.92	12.47	-165.08	-1,649.24	332.87	1,800.65	1,775.29	25.36	71.007	
3,000.00	2,996.66	2,955.49	2,993.40	13.35	12.88	-165.11	-1,649.45	332.44	1,805.85	1,779.66	26.19	68.946	
3,100.00	3,096.52	3,051.97	3,089.88	13.78	13.28	-165.14	-1,649.82	331.98	1,811.23	1,784.21	27.02	67.037	
3,200.00	3,196.38	3,152.86	3,190.77	14.21	13.70	-165.16	-1,650.34	331.51	1,816.72	1,788.85	27.87	65.196	
3,300.00	3,296.25	3,260.28	3,298.19	14.64	14.15	-165.20	-1,650.53	331.29	1,821.95	1,793.20	28.74	63.387	
3,400.00	3,396.11	3,368.77	3,406.67	15.07	14.60	-165.23	-1,650.28	330.63	1,826.70	1,797.07	29.63	61.658	
3,500.00	3,495.97	3,466.76	3,504.66	15.50	15.01	-165.25	-1,649.82	329.98	1,831.19	1,800.73	30.46	60.111	
3,600.00	3,595.83	3,560.90	3,598.80	15.93	15.40	-165.27	-1,649.68	329.25	1,835.97	1,804.69	31.29	58.685	
3,700.00	3,695.69	3,651.66	3,689.55	16.36	15.78	-165.29	-1,649.87	328.58	1,841.12	1,809.03	32.09	57.369	
3,800.00	3,795.55	3,744.49	3,782.38	16.80	16.17	-165.30	-1,650.61	327.81	1,846.81	1,813.90	32.91	56.117	
3,900.00	3,895.41	3,846.79	3,884.68	17.23	16.60	-165.31	-1,651.53	327.01	1,852.62	1,818.85	33.77	54.856	
4,000.00	3,995.27	3,950.84	3,988.71	17.66	17.04	-165.33	-1,652.14	326.30	1,858.14	1,823.50	34.64	53.636	
4,100.00	4,095.13	4,051.19	4,089.06	18.10	17.46	-165.34	-1,652.66	325.54	1,863.57	1,828.08	35.50	52.498	
4,200.00	4,194.99	4,153.18	4,191.05	18.53	17.89	-165.35	-1,653.15	324.72	1,868.97	1,832.61	36.36	51.400	
4,300.00	4,294.85	4,269.10	4,306.97	18.96	18.38	-165.38	-1,653.21	323.96	1,874.00	1,836.71	37.29	50.257	
4,400.00	4,394.71	4,371.38	4,409.24	19.40	18.81	-165.40	-1,652.51	323.06	1,878.24	1,840.09	38.15	49.230	
4,500.00	4,494.58	4,471.22	4,509.07	19.83	19.23	-165.42	-1,651.96	322.21	1,882.61	1,843.61	39.01	48.264	
4,600.00	4,594.44	4,587.01	4,624.85	20.27	19.72	-165.43	-1,650.93	320.95	1,886.63	1,846.70	39.93	47.246	
4,700.00	4,694.30	4,680.25	4,718.08	20.71	20.11	-165.46	-1,649.61	320.38	1,890.22	1,849.46	40.76	46.377	
4,800.00	4,794.16	4,781.81	4,819.63	21.14	20.54	-165.51	-1,648.35	320.28	1,894.09	1,852.47	41.62	45.508	
4,900.00	4,894.02	4,863.65	4,901.46	21.58	20.88	-165.52	-1,647.74	319.28	1,898.23	1,855.83	42.40	44.773	
5,000.00	4,993.88	4,948.68	4,986.49	22.01	21.24	-165.52	-1,648.07	318.30	1,903.43	1,860.25	43.18	44.077	
5,100.00	5,093.74	5,060.81	5,098.62	22.45	21.72	-165.56	-1,648.42	318.37	1,908.89	1,864.79	44.10	43.285	
5,200.00	5,193.60	5,179.31	5,217.11	22.89	22.21	-165.63	-1,647.28	318.79	1,913.12	1,868.08	45.04	42.473	
5,300.00	5,293.46	5,280.40	5,318.18	23.32	22.64	-165.70	-1,645.74	319.60	1,916.92	1,871.01	45.91	41.757	
5,400.00	5,393.32	5,367.45	5,405.22	23.76	23.00	-165.77	-1,644.59	320.58	1,921.02	1,874.31	46.71	41.129	
5,500.00	5,493.18	5,453.48	5,491.24	24.20	23.36	-165.84	-1,644.10	321.77	1,925.89	1,878.39	47.50	40.544	
5,600.00	5,593.05	5,555.24	5,593.00	24.64	23.79	-165.91	-1,644.18	322.56	1,931.26	1,882.89	48.37	39.927	
5,700.00	5,692.91	5,659.59	5,697.34	25.07	24.23	-165.98	-1,643.68	323.55	1,936.12	1,886.87	49.25	39.311	
5,800.00	5,792.77	5,761.29	5,799.03	25.51	24.66	-166.05	-1,643.18	324.74	1,941.03	1,890.91	50.12	38.728	
5,900.00	5,892.63	5,859.90	5,897.64	25.95	25.07	-166.10	-1,642.78	324.84	1,945.79	1,894.81	50.97	38.172	
6,000.00	5,992.49	5,953.80	5,991.53	26.39	25.47	-166.15	-1,642.50	325.57	1,950.80	1,898.99	51.81	37.656	
6,100.00	6,092.35	6,043.52	6,081.24	26.82	25.85	-166.24	-1,642.32	327.31	1,956.18	1,903.56	52.62	37.178	
6,200.00	6,192.21	6,140.75	6,178.45	27.26	26.26	-166.33	-1,642.68	329.24	1,962.12	1,908.66	53.46	36.700	
6,300.00	6,292.07	6,250.52	6,288.21	27.70	26.72	-166.41	-1,642.70	330.74	1,967.58	1,913.21	54.37	36.186	
6,400.00	6,391.93	6,344.81	6,382.47	28.14	27.12	-166.50	-1,642.48	332.62	1,972.96	1,917.76	55.21	35.737	
6,500.00	6,491.69	6,428.13	6,465.78	28.58	27.47	-127.48	-1,642.80	334.13	1,979.39	1,923.41	55.99	35.356	
6,600.00	6,589.80	6,503.35	6,540.98	29.02	27.79	-113.01	-1,643.91	335.62	1,990.13	1,933.41	56.72	35.090	
6,700.00	6,683.86	6,619.21	6,656.82	29.46	28.28	-109.10	-1,645.89	336.96	2,004.67	1,947.00	57.67	34.761	
6,800.00	6,771.56	6,721.95	6,759.55	29.92	28.72	-107.19	-1,646.66	336.80	2,022.10	1,963.54	58.56	34.529	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BERG 33-15 (AB_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
6,900.00	6,850.72	6,789.57	6,827.17	30.40	29.00	-105.41	-1,647.35	336.95	2,044.39	1,985.09	59.29	34.479 SF		
7,000.00	6,919.40	6,857.98	6,895.58	30.96	29.30	-103.73	-1,648.11	337.18	2,071.69	2,011.61	60.08	34.483		
7,100.00	6,975.92	6,914.20	6,951.79	31.62	29.54	-101.64	-1,648.73	337.36	2,104.15	2,043.28	60.88	34.565		
7,200.00	7,018.87	6,956.85	6,994.43	32.44	29.72	-98.89	-1,649.20	337.50	2,141.76	2,080.07	61.69	34.716		
7,300.00	7,047.21	6,984.86	7,022.45	33.42	29.84	-95.33	-1,649.51	337.59	2,184.17	2,121.65	62.52	34.933		
7,400.00	7,060.23	6,997.56	7,035.15	34.55	29.89	-90.91	-1,649.65	337.63	2,230.66	2,167.32	63.34	35.215		
7,500.00	7,060.03	6,997.05	7,034.63	35.83	29.89	-88.66	-1,649.64	337.63	2,280.31	2,216.17	64.14	35.551		
7,600.00	7,058.28	6,994.98	7,032.56	37.28	29.88	-88.60	-1,649.62	337.62	2,333.11	2,268.12	64.99	35.898		
7,700.00	7,056.53	6,992.92	7,030.50	38.89	29.87	-88.54	-1,649.60	337.61	2,388.93	2,323.05	65.88	36.262		
7,800.00	7,054.78	6,990.85	7,028.43	40.63	29.86	-88.48	-1,649.57	337.61	2,447.57	2,380.78	66.79	36.646		
7,900.00	7,053.03	6,988.79	7,026.37	42.50	29.85	-88.42	-1,649.55	337.60	2,508.82	2,441.12	67.70	37.057		
8,000.00	7,051.28	6,986.72	7,024.31	44.47	29.84	-88.36	-1,649.53	337.59	2,572.49	2,503.89	68.61	37.497		
8,100.00	7,049.53	6,984.66	7,022.24	46.53	29.83	-88.30	-1,649.51	337.59	2,638.42	2,568.93	69.49	37.966		
8,200.00	7,047.78	6,982.59	7,020.18	48.67	29.83	-88.24	-1,649.48	337.58	2,706.44	2,636.08	70.36	38.466		
8,300.00	7,046.03	6,980.53	7,018.11	50.89	29.82	-88.18	-1,649.46	337.57	2,776.40	2,705.20	71.20	38.995		
8,400.00	7,044.28	6,978.46	7,016.05	53.16	29.81	-88.12	-1,649.44	337.57	2,848.14	2,776.13	72.01	39.554		
8,500.00	7,042.53	6,976.40	7,013.98	55.49	29.80	-88.05	-1,649.42	337.56	2,921.54	2,848.76	72.78	40.140		
8,600.00	7,040.78	6,974.33	7,011.92	57.86	29.79	-87.99	-1,649.39	337.55	2,996.49	2,922.96	73.53	40.754		
8,700.00	7,039.03	6,972.27	7,009.85	60.28	29.78	-87.93	-1,649.37	337.55	3,072.86	2,998.62	74.24	41.393		
8,800.00	7,037.28	6,970.20	7,007.79	62.74	29.77	-87.87	-1,649.35	337.54	3,150.55	3,075.63	74.91	42.056		
8,900.00	7,035.53	6,968.14	7,005.72	65.23	29.76	-87.81	-1,649.32	337.53	3,229.46	3,153.90	75.56	42.741		
9,000.00	7,033.78	6,966.07	7,003.66	67.74	29.76	-87.75	-1,649.30	337.53	3,309.52	3,233.35	76.17	43.448		
9,100.00	7,032.03	6,964.01	7,001.59	70.29	29.75	-87.69	-1,649.28	337.52	3,390.63	3,313.87	76.76	44.174		
9,200.00	7,030.28	6,961.94	6,999.53	72.85	29.74	-87.63	-1,649.26	337.51	3,472.73	3,395.42	77.31	44.918		
9,300.00	7,028.54	6,959.88	6,997.46	75.44	29.73	-87.57	-1,649.23	337.51	3,555.74	3,477.90	77.84	45.680		
9,400.00	7,026.79	6,957.81	6,995.40	78.05	29.72	-87.51	-1,649.21	337.50	3,639.61	3,561.26	78.34	46.457		
9,500.00	7,025.04	6,955.75	6,993.33	80.67	29.71	-87.45	-1,649.19	337.49	3,724.27	3,645.45	78.82	47.250		
9,600.00	7,023.29	6,953.68	6,991.27	83.31	29.70	-87.39	-1,649.16	337.49	3,809.67	3,730.40	79.28	48.056		
9,700.00	7,021.54	6,951.62	6,989.20	85.96	29.69	-87.33	-1,649.14	337.48	3,895.77	3,816.06	79.71	48.875		
9,800.00	7,019.79	6,949.55	6,987.14	88.63	29.69	-87.27	-1,649.12	337.47	3,982.52	3,902.40	80.12	49.706		
9,900.00	7,018.04	6,947.49	6,985.07	91.30	29.68	-87.21	-1,649.10	337.47	4,069.87	3,989.36	80.51	50.548		
10,000.00	7,016.29	6,945.42	6,983.01	93.99	29.67	-87.15	-1,649.07	337.46	4,157.79	4,076.90	80.89	51.401		
10,100.00	7,014.54	6,943.36	6,980.94	96.69	29.66	-87.09	-1,649.05	337.45	4,246.25	4,165.00	81.25	52.263		
10,200.00	7,012.79	6,941.29	6,978.88	99.40	29.65	-87.03	-1,649.03	337.45	4,335.21	4,253.62	81.59	53.135		
10,300.00	7,011.04	6,939.23	6,976.81	102.11	29.64	-86.97	-1,649.00	337.44	4,424.63	4,342.72	81.92	54.015		
10,400.00	7,009.29	6,937.16	6,974.75	104.83	29.63	-86.91	-1,648.98	337.43	4,514.50	4,432.28	82.23	54.902		
10,500.00	7,007.54	6,935.10	6,972.68	107.56	29.62	-86.85	-1,648.96	337.43	4,604.79	4,522.26	82.53	55.797		
10,600.00	7,005.79	6,933.03	6,970.62	110.30	29.62	-86.79	-1,648.94	337.42	4,695.47	4,612.66	82.81	56.699		
10,700.00	7,004.04	6,930.97	6,968.55	113.04	29.61	-86.73	-1,648.91	337.41	4,786.52	4,703.43	83.09	57.607		
10,800.00	7,002.29	6,928.90	6,966.49	115.79	29.60	-86.67	-1,648.89	337.41	4,877.92	4,794.57	83.35	58.522		
10,900.00	7,000.54	6,926.84	6,964.42	118.54	29.59	-86.61	-1,648.87	337.40	4,969.65	4,886.04	83.61	59.442		
11,000.00	6,998.79	6,924.77	6,962.36	121.30	29.58	-86.55	-1,648.84	337.39	5,061.69	4,977.84	83.85	60.367		
11,100.00	6,997.04	6,922.71	6,960.30	124.06	29.57	-86.49	-1,648.82	337.39	5,154.03	5,069.95	84.08	61.297		
11,200.00	6,995.29	6,920.64	6,958.23	126.83	29.56	-86.43	-1,648.80	337.38	5,246.65	5,162.34	84.31	62.231		
11,300.00	6,993.54	6,918.58	6,956.17	129.60	29.55	-86.37	-1,648.78	337.37	5,339.53	5,255.01	84.53	63.170		
11,400.00	6,991.80	6,916.51	6,954.10	132.37	29.54	-86.31	-1,648.75	337.37	5,432.67	5,347.93	84.74	64.112		
11,500.00	6,990.05	6,914.45	6,952.04	135.15	29.54	-86.25	-1,648.73	337.36	5,526.04	5,441.10	84.94	65.059		
11,600.00	6,988.30	6,912.38	6,949.97	137.93	29.53	-86.19	-1,648.71	337.35	5,619.64	5,534.51	85.14	66.009		
11,700.00	6,986.55	6,910.32	6,947.91	140.72	29.52	-86.13	-1,648.68	337.35	5,713.46	5,628.14	85.32	66.962		
11,800.00	6,984.80	6,908.25	6,945.84	143.50	29.51	-86.07	-1,648.66	337.34	5,807.49	5,721.98	85.51	67.918		
11,900.00	6,983.05	6,906.19	6,943.78	146.29	29.50	-86.00	-1,648.64	337.33	5,901.71	5,816.02	85.69	68.876		
12,000.00	6,981.30	6,904.12	6,941.71	149.09	29.49	-85.94	-1,648.62	337.33	5,996.11	5,910.25	85.86	69.838		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BERG 33-15 (AB_150CC) - OH - OH												Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
12,100.00	6,979.55	6,902.06	6,939.65	151.88	29.48	-85.88	-1,648.59	337.32	6,090.70	6,004.67	86.02	70.802	
12,200.00	6,977.80	6,899.99	6,937.58	154.68	29.47	-85.82	-1,648.57	337.31	6,185.45	6,099.26	86.19	71.768	
12,300.00	6,976.05	6,897.93	6,935.52	157.48	29.47	-85.76	-1,648.55	337.31	6,280.36	6,194.02	86.34	72.736	
12,400.00	6,974.30	6,895.86	6,933.45	160.28	29.46	-85.70	-1,648.52	337.30	6,375.43	6,288.94	86.50	73.706	
12,500.00	6,972.55	6,893.80	6,931.39	163.08	29.45	-85.64	-1,648.50	337.29	6,470.65	6,384.01	86.65	74.678	
12,600.00	6,970.80	6,891.73	6,929.32	165.89	29.44	-85.58	-1,648.48	337.29	6,566.01	6,479.22	86.79	75.652	
12,700.00	6,969.05	6,889.67	6,927.26	168.69	29.43	-85.52	-1,648.46	337.28	6,661.51	6,574.57	86.93	76.627	
12,800.00	6,967.30	6,887.60	6,925.19	171.50	29.42	-85.46	-1,648.43	337.27	6,757.13	6,670.06	87.07	77.603	
12,900.00	6,965.55	6,885.54	6,923.13	174.31	29.41	-85.40	-1,648.41	337.26	6,852.88	6,765.67	87.21	78.581	
13,000.00	6,963.80	6,883.47	6,921.06	177.12	29.40	-85.34	-1,648.39	337.26	6,948.75	6,861.41	87.34	79.560	
13,100.00	6,962.05	6,881.41	6,919.00	179.94	29.40	-85.28	-1,648.36	337.25	7,044.73	6,957.26	87.47	80.540	
13,200.00	6,960.30	6,879.34	6,916.93	182.75	29.39	-85.22	-1,648.34	337.24	7,140.82	7,053.23	87.60	81.520	
13,300.00	6,958.55	6,877.28	6,914.87	185.57	29.38	-85.16	-1,648.32	337.24	7,237.02	7,149.30	87.72	82.502	
13,400.00	6,956.80	6,875.21	6,912.80	188.38	29.37	-85.10	-1,648.30	337.23	7,333.32	7,245.48	87.84	83.485	
13,500.00	6,955.05	6,873.15	6,910.74	191.20	29.36	-85.04	-1,648.27	337.22	7,429.72	7,341.76	87.96	84.468	
13,600.00	6,953.31	6,871.08	6,908.67	194.02	29.35	-84.98	-1,648.25	337.22	7,526.21	7,438.13	88.08	85.452	
13,700.00	6,951.56	6,869.02	6,906.61	196.84	29.34	-84.92	-1,648.23	337.21	7,622.79	7,534.60	88.19	86.436	
13,800.00	6,949.81	6,866.95	6,904.54	199.67	29.33	-84.86	-1,648.20	337.20	7,719.45	7,631.15	88.30	87.421	
13,900.00	6,948.06	6,864.89	6,902.48	202.49	29.33	-84.80	-1,648.18	337.20	7,816.20	7,727.79	88.41	88.406	
14,000.00	6,946.31	6,862.82	6,900.41	205.31	29.32	-84.74	-1,648.16	337.19	7,913.03	7,824.51	88.52	89.391	
14,100.00	6,944.56	6,860.76	6,898.35	208.14	29.31	-84.68	-1,648.14	337.18	8,009.94	7,921.31	88.63	90.377	
14,200.00	6,942.81	6,858.69	6,896.29	210.96	29.30	-84.62	-1,648.11	337.18	8,106.92	8,018.19	88.73	91.363	
14,300.00	6,941.06	6,856.63	6,894.22	213.79	29.29	-84.56	-1,648.09	337.17	8,203.97	8,115.14	88.84	92.348	
14,400.00	6,939.31	6,854.56	6,892.16	216.62	29.28	-84.50	-1,648.07	337.16	8,301.10	8,212.16	88.94	93.334	
14,500.00	6,937.56	6,852.50	6,890.09	219.44	29.27	-84.44	-1,648.04	337.16	8,398.29	8,309.24	89.04	94.320	
14,600.00	6,935.81	6,850.43	6,888.03	222.27	29.26	-84.38	-1,648.02	337.15	8,495.54	8,406.40	89.14	95.306	
14,700.00	6,934.06	6,848.37	6,885.96	225.10	29.25	-84.32	-1,648.00	337.14	8,592.86	8,503.62	89.24	96.291	
14,800.00	6,932.31	6,846.30	6,883.90	227.93	29.25	-84.26	-1,647.98	337.14	8,690.23	8,600.90	89.34	97.277	
14,817.75	6,932.00	6,845.94	6,883.53	228.43	29.24	-84.25	-1,647.97	337.14	8,707.52	8,618.17	89.35	97.452	



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BERRY 22-2(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	70.00	3.28	3.28	172.91	-4,379.31	544.97	4,413.65					
100.00	100.00	29.32	99.32	3.28	3.28	172.91	-4,379.32	544.96	4,413.09	4,406.53	6.57	672.185 CC		
200.00	200.00	124.73	194.73	3.34	3.30	172.91	-4,379.39	544.74	4,413.14	4,406.51	6.63	665.371 ES		
300.00	300.00	214.79	284.79	3.44	3.36	172.91	-4,379.64	544.48	4,413.38	4,406.58	6.80	649.027		
400.00	400.00	309.48	379.48	3.60	3.46	172.92	-4,380.05	544.39	4,413.80	4,406.73	7.07	624.608		
500.00	500.00	412.19	482.19	3.81	3.63	172.92	-4,380.48	544.43	4,414.22	4,406.79	7.43	593.754		
600.00	599.98	510.69	580.69	4.05	3.83	-159.70	-4,380.91	544.43	4,416.28	4,408.41	7.87	560.843		
700.00	699.86	614.00	683.99	4.32	4.08	-159.70	-4,381.36	544.18	4,421.21	4,412.81	8.39	526.740		
800.00	799.72	717.81	787.80	4.62	4.35	-159.72	-4,381.72	543.69	4,426.44	4,417.47	8.97	493.564		
900.00	899.58	810.45	880.44	4.93	4.63	-159.73	-4,382.15	542.98	4,431.75	4,422.19	9.56	463.717		
1,000.00	999.44	910.72	980.70	5.27	4.94	-159.74	-4,382.68	541.91	4,437.09	4,426.89	10.21	434.787		
1,100.00	1,099.31	991.58	1,061.55	5.62	5.20	-159.74	-4,383.34	540.78	4,442.68	4,431.86	10.82	410.595		
1,200.00	1,199.17	1,080.17	1,150.12	5.98	5.50	-159.74	-4,384.41	539.30	4,448.61	4,437.12	11.48	387.399		
1,300.00	1,299.03	1,175.67	1,245.60	6.36	5.84	-159.74	-4,385.75	537.60	4,454.72	4,442.53	12.19	365.427		
1,400.00	1,398.89	1,284.64	1,354.54	6.74	6.23	-159.74	-4,387.25	535.52	4,460.80	4,447.83	12.96	344.073		
1,500.00	1,498.75	1,391.62	1,461.49	7.13	6.63	-159.73	-4,388.51	533.26	4,466.65	4,452.90	13.75	324.890		
1,600.00	1,598.61	1,490.83	1,560.67	7.52	7.00	-159.73	-4,389.60	531.22	4,472.43	4,457.91	14.52	308.123		
1,700.00	1,698.47	1,582.69	1,652.51	7.92	7.35	-159.73	-4,390.68	529.43	4,478.30	4,463.04	15.26	293.396		
1,800.00	1,798.33	1,704.55	1,774.33	8.32	7.82	-159.72	-4,391.99	527.14	4,484.10	4,467.96	16.14	277.846		
1,900.00	1,898.19	1,788.54	1,858.31	8.73	8.15	-159.72	-4,392.80	525.66	4,489.77	4,472.90	16.87	266.105		
2,000.00	1,998.05	1,882.36	1,952.11	9.14	8.52	-159.72	-4,393.90	524.14	4,495.68	4,478.03	17.65	254.703		
2,100.00	2,097.91	1,974.77	2,044.50	9.55	8.89	-159.72	-4,395.13	522.54	4,501.73	4,483.30	18.43	244.272		
2,200.00	2,197.78	2,064.44	2,134.14	9.97	9.25	-159.72	-4,396.50	520.87	4,507.97	4,488.76	19.20	234.773		
2,300.00	2,297.64	2,161.27	2,230.94	10.39	9.64	-159.72	-4,398.18	519.01	4,514.39	4,494.38	20.01	225.637		
2,400.00	2,397.50	2,303.30	2,372.94	10.81	10.21	-159.71	-4,400.13	516.36	4,520.51	4,499.51	21.00	215.212		
2,500.00	2,497.36	2,485.58	2,555.19	11.23	10.95	-159.72	-4,399.92	513.59	4,525.21	4,503.04	22.17	204.126		
2,600.00	2,597.22	2,594.48	2,664.07	11.65	11.40	-159.73	-4,398.53	511.96	4,528.71	4,505.67	23.03	196.610		
2,700.00	2,697.08	2,695.46	2,765.02	12.07	11.81	-159.73	-4,397.22	510.34	4,532.17	4,508.30	23.87	189.869		
2,800.00	2,796.94	2,789.36	2,858.91	12.50	12.20	-159.74	-4,396.07	508.71	4,535.68	4,511.00	24.68	183.782		
2,900.00	2,896.80	2,887.91	2,957.43	12.92	12.61	-159.74	-4,394.95	506.92	4,539.28	4,513.77	25.51	177.935		
3,000.00	2,996.66	2,980.64	3,050.14	13.35	12.99	-159.74	-4,393.99	505.18	4,542.97	4,516.65	26.32	172.605		
3,100.00	3,096.52	3,085.49	3,154.96	13.78	13.43	-159.74	-4,392.98	503.09	4,546.71	4,519.53	27.18	167.271		
3,200.00	3,196.38	3,194.72	3,264.17	14.21	13.88	-159.74	-4,391.73	500.91	4,550.27	4,522.21	28.06	162.143		
3,300.00	3,296.25	3,280.45	3,349.87	14.64	14.24	-159.74	-4,390.77	499.26	4,553.88	4,525.03	28.85	157.856		
3,400.00	3,396.11	3,366.69	3,436.10	15.07	14.60	-159.74	-4,390.10	497.46	4,557.80	4,528.17	29.64	153.790		
3,500.00	3,495.97	3,456.98	3,526.35	15.50	14.98	-159.73	-4,389.69	495.28	4,561.99	4,531.55	30.44	149.853		
3,600.00	3,595.83	3,549.02	3,618.37	15.93	15.36	-159.72	-4,389.46	492.83	4,566.36	4,535.10	31.26	146.084		
3,700.00	3,695.69	3,644.76	3,714.07	16.36	15.76	-159.72	-4,389.35	490.47	4,570.88	4,538.79	32.09	142.438		
3,800.00	3,795.55	3,740.77	3,810.07	16.80	16.17	-159.71	-4,389.21	488.56	4,575.44	4,542.52	32.92	138.970		
3,900.00	3,895.41	3,835.96	3,905.23	17.23	16.57	-159.71	-4,389.24	486.55	4,580.16	4,546.40	33.75	135.690		
4,000.00	3,995.27	3,939.87	4,009.12	17.66	17.00	-159.71	-4,389.20	484.67	4,584.84	4,550.22	34.62	132.419		
4,100.00	4,095.13	4,041.67	4,110.91	18.10	17.43	-159.71	-4,389.07	483.00	4,589.46	4,553.98	35.48	129.337		
4,200.00	4,194.99	4,147.95	4,217.19	18.53	17.88	-159.73	-4,388.80	481.92	4,594.03	4,557.66	36.36	126.332		
4,300.00	4,294.85	4,268.01	4,337.24	18.96	18.38	-159.76	-4,387.92	482.38	4,598.30	4,561.00	37.30	123.264		
4,400.00	4,394.71	4,414.27	4,483.48	19.40	18.99	-159.81	-4,385.67	483.46	4,601.82	4,563.46	38.36	119.976		
4,500.00	4,494.58	4,507.41	4,576.60	19.83	19.38	-159.84	-4,383.81	484.22	4,604.89	4,565.71	39.18	117.524		
4,600.00	4,594.44	4,579.37	4,648.54	20.27	19.68	-159.87	-4,382.67	484.76	4,608.36	4,568.45	39.92	115.444		
4,700.00	4,694.30	4,646.95	4,716.12	20.71	19.96	-159.89	-4,382.05	485.09	4,612.48	4,571.85	40.63	113.511		
4,800.00	4,794.16	4,719.59	4,788.76	21.14	20.27	-159.91	-4,381.94	485.44	4,617.31	4,575.94	41.37	111.607		
4,900.00	4,894.02	4,820.19	4,889.36	21.58	20.69	-159.94	-4,381.97	485.98	4,622.37	4,580.14	42.23	109.455		
5,000.00	4,993.88	4,918.95	4,988.12	22.01	21.10	-159.96	-4,382.05	486.26	4,627.44	4,584.36	43.08	107.408		
5,100.00	5,093.74	5,019.27	5,088.44	22.45	21.52	-159.99	-4,382.14	486.60	4,632.52	4,588.58	43.94	105.424		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BERRY 22-2(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,127.48	5,196.65	22.89	21.98	-160.02	-4,382.10	487.24	4,637.52	4,592.69	44.84	103.431		
5,300.00	5,293.46	5,262.37	5,331.53	23.32	22.54	-160.06	-4,381.50	488.20	4,642.17	4,596.32	45.85	101.249		
5,400.00	5,393.32	5,452.93	5,522.03	23.76	23.35	-160.15	-4,378.12	491.17	4,645.78	4,598.69	47.10	98.645		
5,500.00	5,493.18	5,561.05	5,630.01	24.20	23.80	-160.22	-4,374.07	494.62	4,647.41	4,599.42	47.99	96.839		
5,600.00	5,593.05	5,624.08	5,693.00	24.64	24.07	-160.26	-4,372.23	496.29	4,649.83	4,601.13	48.70	95.485		
5,700.00	5,692.91	5,687.92	5,756.81	25.07	24.34	-160.29	-4,370.92	497.57	4,653.04	4,603.63	49.40	94.185		
5,800.00	5,792.77	5,760.00	5,828.89	25.51	24.65	-160.32	-4,370.03	498.48	4,656.94	4,606.80	50.14	92.875		
5,900.00	5,892.63	5,842.27	5,911.15	25.95	25.00	-160.34	-4,369.54	498.90	4,661.37	4,610.45	50.92	91.535		
6,000.00	5,992.49	5,946.59	6,015.46	26.39	25.44	-160.37	-4,369.12	499.17	4,665.98	4,614.17	51.80	90.069		
6,100.00	6,092.35	6,052.49	6,121.37	26.82	25.89	-160.39	-4,368.44	499.12	4,670.30	4,617.61	52.69	88.634		
6,200.00	6,192.21	6,157.72	6,226.60	27.26	26.33	-160.41	-4,367.82	498.93	4,674.67	4,621.09	53.58	87.251		
6,300.00	6,292.07	6,273.56	6,342.43	27.70	26.82	-160.44	-4,366.78	498.66	4,678.71	4,624.21	54.51	85.834		
6,400.00	6,391.93	6,367.35	6,436.22	28.14	27.22	-160.46	-4,365.81	498.41	4,682.62	4,627.28	55.34	84.610		
6,500.00	6,491.69	6,459.84	6,528.70	28.58	27.61	-121.47	-4,365.05	498.16	4,687.01	4,630.84	56.17	83.438		
6,600.00	6,589.80	6,557.50	6,626.35	29.02	28.03	-107.19	-4,364.38	497.57	4,693.25	4,636.22	57.03	82.298		
6,700.00	6,683.86	6,665.02	6,733.87	29.46	28.49	-103.19	-4,363.46	497.38	4,701.41	4,643.48	57.93	81.158		
6,800.00	6,771.56	6,762.90	6,831.74	29.92	28.90	-101.19	-4,362.23	497.62	4,711.40	4,652.60	58.80	80.130		
6,900.00	6,850.72	6,842.94	6,911.78	30.40	29.24	-99.76	-4,361.21	497.40	4,723.61	4,663.99	59.61	79.237		
7,000.00	6,919.40	6,910.05	6,978.88	30.96	29.53	-98.46	-4,360.37	497.23	4,738.30	4,677.86	60.43	78.405		
7,100.00	6,975.92	6,967.44	7,036.26	31.62	29.77	-97.11	-4,359.59	497.44	4,755.56	4,694.25	61.31	77.569		
7,200.00	7,018.87	7,009.64	7,078.45	32.44	29.95	-95.53	-4,358.94	497.93	4,775.39	4,713.14	62.24	76.721		
7,300.00	7,047.21	7,024.07	7,092.89	33.42	30.01	-93.51	-4,358.74	498.13	4,797.71	4,734.52	63.20	75.917		
7,400.00	7,060.23	7,031.68	7,100.49	34.55	30.04	-91.28	-4,358.65	498.24	4,822.14	4,757.89	64.25	75.057		
7,500.00	7,060.03	7,030.60	7,099.41	35.83	30.04	-90.20	-4,358.66	498.22	4,848.24	4,782.87	65.37	74.167		
7,600.00	7,058.28	7,028.52	7,097.33	37.28	30.03	-90.18	-4,358.69	498.19	4,876.20	4,809.57	66.63	73.188		
7,700.00	7,056.53	7,026.44	7,095.25	38.89	30.02	-90.15	-4,358.71	498.16	4,906.03	4,838.03	68.00	72.148		
7,800.00	7,054.78	7,024.37	7,093.19	40.63	30.01	-90.13	-4,358.74	498.13	4,937.71	4,868.24	69.47	71.078		
7,900.00	7,053.03	7,022.32	7,091.13	42.50	30.00	-90.10	-4,358.77	498.10	4,971.20	4,900.18	71.02	70.002		
8,000.00	7,051.28	7,020.27	7,089.08	44.47	30.00	-90.08	-4,358.80	498.07	5,006.46	4,933.83	72.62	68.938		
8,100.00	7,049.53	7,018.23	7,087.04	46.53	29.99	-90.05	-4,358.82	498.04	5,043.45	4,969.18	74.27	67.903		
8,200.00	7,047.78	7,016.19	7,085.01	48.67	29.98	-90.03	-4,358.85	498.02	5,082.14	5,006.18	75.96	66.906		
8,300.00	7,046.03	7,014.17	7,082.98	50.89	29.97	-90.00	-4,358.88	497.99	5,122.49	5,044.83	77.67	65.955		
8,400.00	7,044.28	7,012.15	7,080.97	53.16	29.96	-89.98	-4,358.91	497.96	5,164.47	5,085.08	79.38	65.056		
8,500.00	7,042.53	7,000.01	7,068.83	55.49	29.91	-89.83	-4,359.09	497.80	5,208.03	5,126.97	81.06	64.249		
8,600.00	7,040.78	7,000.01	7,068.83	57.86	29.91	-89.83	-4,359.09	497.80	5,253.12	5,170.33	82.79	63.452		
8,700.00	7,039.03	7,000.01	7,068.83	60.28	29.91	-89.83	-4,359.09	497.80	5,299.71	5,215.20	84.51	62.712		
8,800.00	7,037.28	7,000.01	7,068.83	62.74	29.91	-89.83	-4,359.09	497.80	5,347.77	5,261.55	86.22	62.028		
8,900.00	7,035.53	7,000.01	7,068.83	65.23	29.91	-89.83	-4,359.09	497.80	5,397.25	5,309.35	87.90	61.399		
9,000.00	7,033.78	7,000.01	7,068.83	67.74	29.91	-89.83	-4,359.09	497.80	5,448.12	5,358.54	89.57	60.824		
9,100.00	7,032.03	7,000.01	7,068.83	70.29	29.91	-89.83	-4,359.09	497.80	5,500.33	5,409.12	91.22	60.300		
9,200.00	7,030.28	6,995.55	7,064.37	72.85	29.89	-89.77	-4,359.16	497.74	5,553.85	5,461.04	92.81	59.839		
9,300.00	7,028.54	6,993.27	7,062.09	75.44	29.88	-89.74	-4,359.20	497.71	5,608.65	5,514.26	94.39	59.419		
9,400.00	7,026.79	6,991.05	7,059.87	78.05	29.87	-89.72	-4,359.23	497.68	5,664.68	5,568.74	95.94	59.043		
9,500.00	7,025.04	6,988.88	7,057.70	80.67	29.86	-89.69	-4,359.27	497.66	5,721.90	5,624.44	97.46	58.710		
9,600.00	7,023.29	6,986.76	7,055.58	83.31	29.85	-89.66	-4,359.30	497.63	5,780.29	5,681.34	98.95	58.417		
9,700.00	7,021.54	6,984.69	7,053.51	85.96	29.84	-89.64	-4,359.33	497.61	5,839.81	5,739.40	100.40	58.163		
9,800.00	7,019.79	6,982.66	7,051.48	88.63	29.84	-89.61	-4,359.36	497.59	5,900.42	5,798.59	101.83	57.945		
9,900.00	7,018.04	6,980.68	7,049.50	91.30	29.83	-89.59	-4,359.39	497.57	5,962.09	5,858.87	103.22	57.761		
10,000.00	7,016.29	6,978.74	7,047.57	93.99	29.82	-89.57	-4,359.42	497.55	6,024.79	5,920.21	104.58	57.611		
10,100.00	7,014.54	6,976.85	7,045.67	96.69	29.81	-89.54	-4,359.45	497.53	6,088.48	5,982.58	105.90	57.491		
10,200.00	7,012.79	6,974.99	7,043.82	99.40	29.80	-89.52	-4,359.48	497.51	6,153.14	6,045.94	107.20	57.401		
10,300.00	7,011.04	6,973.18	7,042.00	102.11	29.80	-89.50	-4,359.51	497.49	6,218.73	6,110.28	108.46	57.338		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BERRY 22-2(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	6,971.40	7,040.22	104.83	29.79	-89.48	-4,359.53	497.48	6,285.23	6,175.55	109.69	57.302		
10,500.00	7,007.54	6,969.66	7,038.48	107.56	29.78	-89.45	-4,359.56	497.46	6,352.61	6,241.73	110.88	57.290 SF		
10,600.00	7,005.79	6,967.95	7,036.78	110.30	29.77	-89.43	-4,359.58	497.45	6,420.84	6,308.79	112.05	57.302		
10,700.00	7,004.04	6,966.28	7,035.11	113.04	29.77	-89.41	-4,359.61	497.43	6,489.89	6,376.70	113.19	57.337		
10,800.00	7,002.29	6,964.65	7,033.47	115.79	29.76	-89.39	-4,359.63	497.42	6,559.74	6,445.44	114.30	57.393		
10,900.00	7,000.54	6,963.04	7,031.87	118.54	29.75	-89.37	-4,359.65	497.41	6,630.35	6,514.98	115.37	57.469		
11,000.00	6,998.79	6,961.47	7,030.30	121.30	29.75	-89.35	-4,359.68	497.40	6,701.72	6,585.30	116.42	57.564		
11,100.00	6,997.04	6,959.93	7,028.76	124.06	29.74	-89.34	-4,359.70	497.38	6,773.81	6,656.37	117.44	57.677		
11,200.00	6,995.29	6,958.42	7,027.24	126.83	29.73	-89.32	-4,359.72	497.37	6,846.60	6,728.16	118.44	57.807		
11,300.00	6,993.54	6,956.94	7,025.76	129.60	29.73	-89.30	-4,359.74	497.36	6,920.07	6,800.67	119.41	57.954		
11,400.00	6,991.80	6,955.48	7,024.31	132.37	29.72	-89.28	-4,359.76	497.36	6,994.20	6,873.85	120.35	58.116		
11,500.00	6,990.05	6,954.05	7,022.88	135.15	29.71	-89.26	-4,359.78	497.35	7,068.96	6,947.70	121.26	58.294		
11,600.00	6,988.30	6,952.65	7,021.48	137.93	29.71	-89.25	-4,359.80	497.34	7,144.35	7,022.19	122.16	58.485		
11,700.00	6,986.55	6,951.28	7,020.11	140.72	29.70	-89.23	-4,359.82	497.33	7,220.32	7,097.30	123.03	58.690		
11,800.00	6,984.80	6,949.93	7,018.76	143.50	29.70	-89.21	-4,359.84	497.32	7,296.88	7,173.01	123.87	58.907		
11,900.00	6,983.05	6,948.61	7,017.43	146.29	29.69	-89.20	-4,359.86	497.32	7,374.00	7,249.31	124.69	59.137		
12,000.00	6,981.30	6,947.30	7,016.13	149.09	29.69	-89.18	-4,359.88	497.31	7,451.66	7,326.17	125.49	59.379		
12,100.00	6,979.55	6,946.03	7,014.85	151.88	29.68	-89.17	-4,359.90	497.30	7,529.85	7,403.58	126.27	59.631		
12,200.00	6,977.80	6,944.77	7,013.60	154.68	29.68	-89.15	-4,359.91	497.30	7,608.55	7,481.52	127.03	59.894		
12,300.00	6,976.05	6,943.54	7,012.37	157.48	29.67	-89.13	-4,359.93	497.29	7,687.75	7,559.97	127.77	60.168		
12,400.00	6,974.30	6,942.33	7,011.15	160.28	29.66	-89.12	-4,359.95	497.29	7,767.42	7,638.93	128.49	60.451		
12,500.00	6,972.55	6,941.13	7,009.96	163.08	29.66	-89.11	-4,359.96	497.28	7,847.56	7,718.37	129.19	60.743		
12,600.00	6,970.80	6,939.96	7,008.79	165.89	29.65	-89.09	-4,359.98	497.28	7,928.15	7,798.27	129.87	61.044		
12,700.00	6,969.05	6,938.81	7,007.64	168.69	29.65	-89.08	-4,359.99	497.27	8,009.17	7,878.63	130.54	61.354		
12,800.00	6,967.30	6,937.68	7,006.51	171.50	29.65	-89.06	-4,360.01	497.27	8,090.63	7,959.44	131.19	61.672		
12,900.00	6,965.55	6,936.57	7,005.40	174.31	29.64	-89.05	-4,360.03	497.26	8,172.49	8,040.67	131.82	61.998		
13,000.00	6,963.80	6,935.47	7,004.30	177.12	29.64	-89.04	-4,360.04	497.26	8,254.75	8,122.32	132.43	62.331		
13,100.00	6,962.05	6,934.40	7,003.23	179.94	29.63	-89.02	-4,360.05	497.26	8,337.40	8,204.37	133.03	62.671		
13,200.00	6,960.30	6,933.34	7,002.17	182.75	29.63	-89.01	-4,360.07	497.25	8,420.43	8,286.81	133.62	63.018		
13,300.00	6,958.55	6,932.30	7,001.13	185.57	29.62	-89.00	-4,360.08	497.25	8,503.82	8,369.63	134.19	63.372		
13,400.00	6,956.80	6,931.27	7,000.10	188.38	29.62	-88.98	-4,360.10	497.25	8,587.56	8,452.82	134.75	63.732		
13,500.00	6,955.05	6,930.26	6,999.09	191.20	29.61	-88.97	-4,360.11	497.24	8,671.65	8,536.36	135.29	64.098		
13,600.00	6,953.31	6,929.27	6,998.10	194.02	29.61	-88.96	-4,360.12	497.24	8,756.08	8,620.26	135.82	64.470		
13,700.00	6,951.56	6,928.29	6,997.12	196.84	29.61	-88.95	-4,360.14	497.24	8,840.83	8,704.49	136.33	64.847		
13,800.00	6,949.81	6,927.33	6,996.16	199.67	29.60	-88.94	-4,360.15	497.24	8,925.89	8,789.05	136.84	65.230		
13,900.00	6,948.06	6,926.38	6,995.21	202.49	29.60	-88.92	-4,360.16	497.24	9,011.26	8,873.93	137.33	65.618		
14,000.00	6,946.31	6,925.45	6,994.28	205.31	29.59	-88.91	-4,360.17	497.24	9,096.93	8,959.12	137.81	66.011		
14,100.00	6,944.56	6,924.53	6,993.36	208.14	29.59	-88.90	-4,360.19	497.23	9,182.89	9,044.61	138.28	66.409		
14,200.00	6,942.81	6,923.62	6,992.45	210.96	29.59	-88.89	-4,360.20	497.23	9,269.13	9,130.39	138.74	66.811		
14,300.00	6,941.06	6,922.73	6,991.56	213.79	29.58	-88.88	-4,360.21	497.23	9,355.64	9,216.46	139.18	67.218		
14,400.00	6,939.31	6,900.01	6,968.85	216.62	29.49	-88.60	-4,360.50	497.24	9,442.47	9,302.95	139.52	67.676		
14,500.00	6,937.56	6,900.01	6,968.85	219.44	29.49	-88.60	-4,360.50	497.24	9,529.51	9,389.55	139.96	68.089		
14,600.00	6,935.81	6,900.01	6,968.85	222.27	29.49	-88.60	-4,360.50	497.24	9,616.79	9,476.42	140.38	68.507		
14,700.00	6,934.06	6,900.01	6,968.85	225.10	29.49	-88.60	-4,360.50	497.24	9,704.32	9,563.54	140.79	68.928		
14,800.00	6,932.31	6,900.01	6,968.85	227.93	29.49	-88.60	-4,360.50	497.24	9,792.10	9,650.90	141.19	69.353		
14,817.75	6,932.00	6,900.01	6,968.85	228.43	29.49	-88.60	-4,360.50	497.24	9,807.70	9,666.43	141.26	69.429		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BLACK GOLD PETROLEUM 1(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	20.21	-1.79	3.28	3.28	172.91	-4,379.32	544.96	4,413.10					
100.00	100.00	112.83	90.83	3.28	3.29	172.91	-4,379.45	544.86	4,413.23	4,406.65	6.58	671.136		
200.00	200.00	211.65	189.65	3.34	3.35	172.91	-4,379.70	544.75	4,413.46	4,406.77	6.69	659.768		
300.00	300.00	318.15	296.15	3.44	3.48	172.91	-4,379.88	544.54	4,413.61	4,406.69	6.92	637.792		
400.00	400.00	418.36	396.36	3.60	3.64	172.92	-4,380.02	544.20	4,413.70	4,406.46	7.24	609.410		
500.00	500.00	520.80	498.80	3.81	3.85	172.92	-4,380.10	543.89	4,413.74	4,406.09	7.66	576.577 ES		
600.00	599.98	618.97	596.97	4.05	4.09	-159.69	-4,380.21	543.52	4,415.44	4,407.31	8.13	543.081		
700.00	699.86	720.69	698.69	4.32	4.36	-159.69	-4,380.28	543.22	4,419.99	4,411.31	8.68	509.427		
800.00	799.72	817.01	795.00	4.62	4.65	-159.71	-4,380.38	543.02	4,425.01	4,415.76	9.25	478.152		
900.00	899.58	918.13	896.13	4.93	4.96	-159.73	-4,380.50	542.70	4,430.04	4,420.15	9.89	448.030		
1,000.00	999.44	1,016.64	994.64	5.27	5.29	-159.75	-4,380.64	542.42	4,435.09	4,424.55	10.55	420.516		
1,100.00	1,099.31	1,119.06	1,097.06	5.62	5.64	-159.77	-4,380.74	542.13	4,440.10	4,428.86	11.25	394.787		
1,200.00	1,199.17	1,213.58	1,191.57	5.98	5.97	-159.79	-4,380.89	541.77	4,445.16	4,433.21	11.94	372.223		
1,300.00	1,299.03	1,305.07	1,283.06	6.36	6.30	-159.81	-4,381.19	541.38	4,450.38	4,437.73	12.64	351.951		
1,400.00	1,398.89	1,407.71	1,385.70	6.74	6.68	-159.82	-4,381.59	540.88	4,455.66	4,442.25	13.40	332.405		
1,500.00	1,498.75	1,514.55	1,492.54	7.13	7.09	-159.84	-4,381.90	540.22	4,460.81	4,446.62	14.19	314.282		
1,600.00	1,598.61	1,612.66	1,590.65	7.52	7.46	-159.85	-4,382.14	539.56	4,465.92	4,450.96	14.96	298.497		
1,700.00	1,698.47	1,711.44	1,689.42	7.92	7.85	-159.87	-4,382.40	538.94	4,471.06	4,455.32	15.74	284.034		
1,800.00	1,798.33	1,806.39	1,784.37	8.32	8.22	-159.88	-4,382.73	538.28	4,476.27	4,459.75	16.51	271.054		
1,900.00	1,898.19	1,900.03	1,878.01	8.73	8.59	-159.89	-4,383.19	537.50	4,481.60	4,464.31	17.29	259.215		
2,000.00	1,998.05	1,998.69	1,976.65	9.14	8.98	-159.90	-4,383.79	536.45	4,487.02	4,468.93	18.09	248.034		
2,100.00	2,097.91	2,110.19	2,088.15	9.55	9.43	-159.91	-4,384.35	535.11	4,492.32	4,473.37	18.95	237.068		
2,200.00	2,197.78	2,216.27	2,194.22	9.97	9.86	-159.92	-4,384.71	533.71	4,497.44	4,477.65	19.79	227.240		
2,300.00	2,297.64	2,330.71	2,308.65	10.39	10.32	-159.92	-4,384.80	532.20	4,502.30	4,481.63	20.67	217.793		
2,400.00	2,397.50	2,436.64	2,414.57	10.81	10.75	-159.93	-4,384.60	530.90	4,506.91	4,485.39	21.52	209.411		
2,500.00	2,497.36	2,537.16	2,515.08	11.23	11.16	-159.94	-4,384.36	529.88	4,511.49	4,489.14	22.35	201.838		
2,600.00	2,597.22	2,639.50	2,617.42	11.65	11.58	-159.95	-4,384.03	529.01	4,516.01	4,492.82	23.19	194.717		
2,700.00	2,697.08	2,735.95	2,713.87	12.07	11.98	-159.97	-4,383.71	528.17	4,520.54	4,496.53	24.01	188.266		
2,800.00	2,796.94	2,831.85	2,809.77	12.50	12.38	-159.98	-4,383.53	527.39	4,525.20	4,500.37	24.83	182.245		
2,900.00	2,896.80	2,929.75	2,907.66	12.92	12.78	-159.99	-4,383.30	526.70	4,529.83	4,504.17	25.66	176.536		
3,000.00	2,996.66	3,013.89	2,991.80	13.35	13.13	-160.01	-4,383.32	526.26	4,534.74	4,508.30	26.43	171.560		
3,100.00	3,096.52	3,106.27	3,084.18	13.78	13.51	-160.02	-4,383.56	525.81	4,539.89	4,512.65	27.24	166.652		
3,200.00	3,196.38	3,211.55	3,189.45	14.21	13.95	-160.04	-4,383.86	525.24	4,545.06	4,516.95	28.11	161.701		
3,300.00	3,296.25	3,296.31	3,274.22	14.64	14.31	-160.05	-4,384.22	524.76	4,550.36	4,521.47	28.89	157.521		
3,400.00	3,396.11	3,386.44	3,364.34	15.07	14.68	-160.06	-4,384.83	524.19	4,555.91	4,526.22	29.69	153.444		
3,500.00	3,495.97	3,543.74	3,521.64	15.50	15.34	-160.09	-4,385.05	523.42	4,560.94	4,530.15	30.78	148.156		
3,600.00	3,595.83	3,666.13	3,644.02	15.93	15.85	-160.12	-4,384.01	523.28	4,565.03	4,533.30	31.73	143.879		
3,700.00	3,695.69	3,779.89	3,757.78	16.36	16.32	-160.14	-4,382.66	523.02	4,568.79	4,536.15	32.64	139.991		
3,800.00	3,795.55	3,870.73	3,848.61	16.80	16.70	-160.16	-4,381.49	522.82	4,572.44	4,539.00	33.45	136.703		
3,900.00	3,895.41	3,959.73	3,937.60	17.23	17.08	-160.18	-4,380.61	522.49	4,576.38	4,542.12	34.25	133.606		
4,000.00	3,995.27	4,051.79	4,029.66	17.66	17.46	-160.19	-4,379.89	522.08	4,580.51	4,545.44	35.07	130.606		
4,100.00	4,095.13	4,138.43	4,116.29	18.10	17.83	-160.21	-4,379.40	521.55	4,584.83	4,548.96	35.87	127.829		
4,200.00	4,194.99	4,223.51	4,201.37	18.53	18.18	-160.22	-4,379.25	521.04	4,589.54	4,552.88	36.66	125.206		
4,300.00	4,294.85	4,324.62	4,302.48	18.96	18.61	-160.24	-4,379.15	520.47	4,594.32	4,556.81	37.52	122.465		
4,400.00	4,394.71	4,419.60	4,397.46	19.40	19.01	-160.25	-4,379.12	519.98	4,599.19	4,560.84	38.35	119.931		
4,500.00	4,494.58	4,521.85	4,499.71	19.83	19.44	-160.27	-4,379.10	519.53	4,604.07	4,564.86	39.21	117.408		
4,600.00	4,594.44	4,622.02	4,599.88	20.27	19.87	-160.29	-4,379.02	519.06	4,608.89	4,568.82	40.07	115.017		
4,700.00	4,694.30	4,711.87	4,689.72	20.71	20.25	-160.30	-4,379.07	518.58	4,613.85	4,572.96	40.88	112.854		
4,800.00	4,794.16	4,800.19	4,778.05	21.14	20.62	-160.32	-4,379.30	518.39	4,619.04	4,577.35	41.69	110.798		
4,900.00	4,894.02	4,900.89	4,878.74	21.58	21.04	-160.34	-4,379.64	518.43	4,624.34	4,581.79	42.55	108.681		
5,000.00	4,993.88	5,000.69	4,978.54	22.01	21.46	-160.36	-4,379.97	518.46	4,629.64	4,586.23	43.41	106.657		
5,100.00	5,093.74	5,095.89	5,073.74	22.45	21.87	-160.38	-4,380.33	518.49	4,634.99	4,590.74	44.24	104.760		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BLACK GOLD PETROLEUM 1(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,193.46	5,171.31	22.89	22.28	-160.40	-4,380.77	518.57	4,640.41	4,595.32	45.09	102.910		
5,300.00	5,293.46	5,299.23	5,277.08	23.32	22.72	-160.43	-4,381.22	518.58	4,645.80	4,599.82	45.98	101.046		
5,400.00	5,393.32	5,400.51	5,378.36	23.76	23.15	-160.45	-4,381.58	518.49	4,651.11	4,604.26	46.84	99.292		
5,500.00	5,493.18	5,494.02	5,471.87	24.20	23.55	-160.46	-4,381.95	518.43	4,656.47	4,608.79	47.67	97.674		
5,600.00	5,593.05	5,649.00	5,626.85	24.64	24.20	-160.50	-4,381.48	518.71	4,661.08	4,612.30	48.78	95.557		
5,700.00	5,692.91	5,738.72	5,716.56	25.07	24.58	-160.52	-4,380.82	518.89	4,665.36	4,615.77	49.59	94.073		
5,800.00	5,792.77	5,818.01	5,795.86	25.51	24.91	-160.54	-4,380.62	518.88	4,670.07	4,619.71	50.36	92.731		
5,900.00	5,892.63	5,909.96	5,887.81	25.95	25.30	-160.56	-4,380.66	518.78	4,675.08	4,623.89	51.19	91.334		
6,000.00	5,992.49	6,013.75	5,991.59	26.39	25.75	-160.58	-4,380.76	518.46	4,680.10	4,628.03	52.06	89.890		
6,100.00	6,092.35	6,108.29	6,086.13	26.82	26.15	-160.59	-4,380.90	518.03	4,685.15	4,632.25	52.90	88.563		
6,200.00	6,192.21	6,212.03	6,189.87	27.26	26.59	-160.61	-4,381.10	517.45	4,690.24	4,636.46	53.78	87.211		
6,300.00	6,292.07	6,337.47	6,315.31	27.70	27.12	-160.62	-4,380.91	516.49	4,694.96	4,640.20	54.76	85.743		
6,400.00	6,391.93	6,443.77	6,421.60	28.14	27.58	-160.63	-4,380.42	515.39	4,699.33	4,643.68	55.65	84.450		
6,500.00	6,491.69	6,549.57	6,527.39	28.58	28.03	-121.64	-4,379.88	514.31	4,703.93	4,647.40	56.53	83.204		
6,600.00	6,589.80	6,654.00	6,631.81	29.02	28.47	-107.36	-4,379.16	512.93	4,710.11	4,652.69	57.42	82.031		
6,700.00	6,683.86	6,745.75	6,723.55	29.46	28.86	-103.27	-4,378.55	511.62	4,718.36	4,660.11	58.25	81.002		
6,800.00	6,771.56	6,839.66	6,817.44	29.92	29.26	-101.20	-4,378.01	509.86	4,728.76	4,669.66	59.10	80.013		
6,900.00	6,850.72	6,935.80	6,913.55	30.40	29.67	-99.84	-4,377.31	507.30	4,741.19	4,681.20	59.99	79.035		
7,000.00	6,919.40	7,016.75	6,994.46	30.96	30.02	-98.64	-4,376.56	504.89	4,755.84	4,694.97	60.87	78.132		
7,100.00	6,975.92	7,085.56	7,063.22	31.62	30.31	-97.40	-4,375.84	502.47	4,772.90	4,711.11	61.79	77.239		
7,200.00	7,018.87	7,134.13	7,111.74	32.44	30.52	-95.90	-4,375.32	500.54	4,792.46	4,729.70	62.76	76.361		
7,300.00	7,047.21	7,166.27	7,143.86	33.42	30.65	-94.11	-4,374.97	499.26	4,814.49	4,750.69	63.80	75.467		
7,400.00	7,060.23	7,183.23	7,160.80	34.55	30.73	-92.01	-4,374.78	498.58	4,838.70	4,773.81	64.89	74.567		
7,500.00	7,060.03	7,187.01	7,164.58	35.83	30.74	-91.00	-4,374.74	498.43	4,864.72	4,798.68	66.04	73.666		
7,600.00	7,058.28	7,189.24	7,166.81	37.28	30.75	-91.03	-4,374.72	498.34	4,892.60	4,825.29	67.31	72.683		
7,700.00	7,056.53	7,191.47	7,169.04	38.89	30.76	-91.05	-4,374.69	498.25	4,922.36	4,853.66	68.71	71.641		
7,800.00	7,054.78	7,193.71	7,171.27	40.63	30.77	-91.08	-4,374.67	498.16	4,953.96	4,883.76	70.20	70.570		
7,900.00	7,053.03	7,195.94	7,173.50	42.50	30.78	-91.11	-4,374.64	498.07	4,987.37	4,915.60	71.77	69.494		
8,000.00	7,051.28	7,198.17	7,175.73	44.47	30.79	-91.13	-4,374.62	497.98	5,022.54	4,949.14	73.39	68.432		
8,100.00	7,049.53	7,200.40	7,177.97	46.53	30.80	-91.16	-4,374.59	497.89	5,059.44	4,984.37	75.07	67.398		
8,200.00	7,047.78	7,202.64	7,180.20	48.67	30.81	-91.19	-4,374.57	497.81	5,098.04	5,021.26	76.78	66.402		
8,300.00	7,046.03	7,204.87	7,182.43	50.89	30.82	-91.22	-4,374.55	497.72	5,138.29	5,059.79	78.50	65.453		
8,400.00	7,044.28	7,207.10	7,184.66	53.16	30.83	-91.24	-4,374.52	497.63	5,180.16	5,099.92	80.24	64.555		
8,500.00	7,042.53	7,209.33	7,186.89	55.49	30.84	-91.27	-4,374.50	497.54	5,223.61	5,141.62	81.99	63.712		
8,600.00	7,040.78	7,211.57	7,189.12	57.86	30.85	-91.30	-4,374.47	497.45	5,268.59	5,184.86	83.73	62.924		
8,700.00	7,039.03	7,213.80	7,191.35	60.28	30.86	-91.33	-4,374.45	497.36	5,315.08	5,229.62	85.46	62.192		
8,800.00	7,037.28	7,216.03	7,193.58	62.74	30.87	-91.35	-4,374.42	497.27	5,363.03	5,275.84	87.18	61.515		
8,900.00	7,035.53	7,218.27	7,195.81	65.23	30.88	-91.38	-4,374.40	497.18	5,412.40	5,323.51	88.89	60.892		
9,000.00	7,033.78	7,220.50	7,198.04	67.74	30.89	-91.41	-4,374.38	497.09	5,463.15	5,372.58	90.57	60.322		
9,100.00	7,032.03	7,222.73	7,200.27	70.29	30.90	-91.44	-4,374.35	497.00	5,515.25	5,423.02	92.22	59.803		
9,200.00	7,030.28	7,224.96	7,202.50	72.85	30.91	-91.46	-4,374.33	496.91	5,568.65	5,474.80	93.86	59.332		
9,300.00	7,028.54	7,227.20	7,204.73	75.44	30.92	-91.49	-4,374.30	496.83	5,623.33	5,527.87	95.46	58.908		
9,400.00	7,026.79	7,229.43	7,206.97	78.05	30.92	-91.52	-4,374.28	496.74	5,679.24	5,582.21	97.03	58.529		
9,500.00	7,025.04	7,231.66	7,209.20	80.67	30.93	-91.54	-4,374.25	496.65	5,736.35	5,637.77	98.58	58.192		
9,600.00	7,023.29	7,233.89	7,211.43	83.31	30.94	-91.57	-4,374.23	496.56	5,794.62	5,694.53	100.09	57.895		
9,700.00	7,021.54	7,236.13	7,213.66	85.96	30.95	-91.60	-4,374.21	496.47	5,854.02	5,752.45	101.57	57.636		
9,800.00	7,019.79	7,238.36	7,215.89	88.63	30.96	-91.63	-4,374.18	496.38	5,914.51	5,811.49	103.02	57.413		
9,900.00	7,018.04	7,240.59	7,218.12	91.30	30.97	-91.65	-4,374.16	496.29	5,976.06	5,871.63	104.43	57.225		
10,000.00	7,016.29	7,242.83	7,220.35	93.99	30.98	-91.68	-4,374.13	496.20	6,038.64	5,932.82	105.81	57.069		
10,100.00	7,014.54	7,245.06	7,222.58	96.69	30.99	-91.71	-4,374.11	496.11	6,102.21	5,995.05	107.16	56.944		
10,200.00	7,012.79	7,247.29	7,224.81	99.40	31.00	-91.74	-4,374.08	496.02	6,166.75	6,058.27	108.48	56.848		
10,300.00	7,011.04	7,249.52	7,227.04	102.11	31.01	-91.76	-4,374.06	495.93	6,232.23	6,122.47	109.76	56.779		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BLACK GOLD PETROLEUM 1(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	7,251.76	7,229.27	104.83	31.02	-91.79	-4,374.04	495.85	6,298.61	6,187.60	111.01	56.737		
10,500.00	7,007.54	7,253.99	7,231.50	107.56	31.03	-91.82	-4,374.01	495.76	6,365.87	6,253.64	112.24	56.719 SF		
10,600.00	7,005.79	7,256.22	7,233.74	110.30	31.04	-91.84	-4,373.99	495.67	6,433.98	6,320.56	113.43	56.725		
10,700.00	7,004.04	7,258.45	7,235.97	113.04	31.05	-91.87	-4,373.96	495.58	6,502.92	6,388.33	114.58	56.752		
10,800.00	7,002.29	7,260.69	7,238.20	115.79	31.06	-91.90	-4,373.94	495.49	6,572.65	6,456.94	115.71	56.801		
10,900.00	7,000.54	7,262.92	7,240.43	118.54	31.07	-91.93	-4,373.91	495.40	6,643.15	6,526.34	116.81	56.870		
11,000.00	6,998.79	7,265.15	7,242.66	121.30	31.08	-91.95	-4,373.89	495.31	6,714.41	6,596.52	117.88	56.957		
11,100.00	6,997.04	7,267.39	7,244.89	124.06	31.09	-91.98	-4,373.87	495.22	6,786.38	6,667.46	118.93	57.063		
11,200.00	6,995.29	7,269.62	7,247.12	126.83	31.10	-92.01	-4,373.84	495.13	6,859.06	6,739.12	119.94	57.186		
11,300.00	6,993.54	7,271.85	7,249.35	129.60	31.11	-92.04	-4,373.82	495.04	6,932.42	6,811.49	120.93	57.325		
11,400.00	6,991.80	7,274.08	7,251.58	132.37	31.12	-92.06	-4,373.79	494.95	7,006.44	6,884.55	121.90	57.479		
11,500.00	6,990.05	7,276.32	7,253.81	135.15	31.13	-92.09	-4,373.77	494.87	7,081.10	6,958.26	122.83	57.648		
11,600.00	6,988.30	7,278.55	7,256.04	137.93	31.13	-92.12	-4,373.74	494.78	7,156.37	7,032.62	123.75	57.831		
11,700.00	6,986.55	7,280.78	7,258.27	140.72	31.14	-92.14	-4,373.72	494.69	7,232.24	7,107.61	124.64	58.027		
11,800.00	6,984.80	7,283.01	7,260.50	143.50	31.15	-92.17	-4,373.70	494.60	7,308.70	7,183.19	125.50	58.236		
11,900.00	6,983.05	7,285.25	7,262.74	146.29	31.16	-92.20	-4,373.67	494.51	7,385.71	7,259.37	126.34	58.457		
12,000.00	6,981.30	7,287.48	7,264.97	149.09	31.17	-92.23	-4,373.65	494.42	7,463.27	7,336.10	127.16	58.690		
12,100.00	6,979.55	7,289.71	7,267.20	151.88	31.18	-92.25	-4,373.62	494.33	7,541.36	7,413.39	127.96	58.933		
12,200.00	6,977.80	7,291.95	7,269.43	154.68	31.19	-92.28	-4,373.60	494.24	7,619.95	7,491.21	128.74	59.187		
12,300.00	6,976.05	7,294.18	7,271.66	157.48	31.20	-92.31	-4,373.57	494.15	7,699.05	7,569.54	129.50	59.451		
12,400.00	6,974.30	7,296.41	7,273.89	160.28	31.21	-92.34	-4,373.55	494.06	7,778.62	7,648.38	130.24	59.725		
12,500.00	6,972.55	7,298.64	7,276.12	163.08	31.22	-92.36	-4,373.53	493.98	7,858.66	7,727.70	130.96	60.007		
12,600.00	6,970.80	7,300.88	7,278.35	165.89	31.23	-92.39	-4,373.50	493.89	7,939.15	7,807.49	131.66	60.299		
12,700.00	6,969.05	7,303.11	7,280.58	168.69	31.24	-92.42	-4,373.48	493.80	8,020.09	7,887.74	132.35	60.599		
12,800.00	6,967.30	7,305.34	7,282.81	171.50	31.25	-92.44	-4,373.45	493.71	8,101.44	7,968.43	133.01	60.906		
12,900.00	6,965.55	7,307.57	7,285.04	174.31	31.26	-92.47	-4,373.43	493.62	8,183.21	8,049.55	133.66	61.222		
13,000.00	6,963.80	7,309.81	7,287.27	177.12	31.27	-92.50	-4,373.40	493.53	8,265.38	8,131.08	134.30	61.545		
13,100.00	6,962.05	7,312.04	7,289.51	179.94	31.28	-92.53	-4,373.38	493.44	8,347.94	8,213.02	134.92	61.875		
13,200.00	6,960.30	7,314.27	7,291.74	182.75	31.29	-92.55	-4,373.36	493.35	8,430.87	8,295.35	135.52	62.211		
13,300.00	6,958.55	7,316.50	7,293.97	185.57	31.30	-92.58	-4,373.33	493.26	8,514.17	8,378.07	136.11	62.554		
13,400.00	6,956.80	7,318.74	7,296.20	188.38	31.31	-92.61	-4,373.31	493.17	8,597.83	8,461.15	136.68	62.904		
13,500.00	6,955.05	7,320.97	7,298.43	191.20	31.32	-92.64	-4,373.28	493.08	8,681.83	8,544.59	137.24	63.259		
13,600.00	6,953.31	7,323.20	7,300.66	194.02	31.33	-92.66	-4,373.26	493.00	8,766.17	8,628.38	137.79	63.620		
13,700.00	6,951.56	7,325.44	7,302.89	196.84	31.34	-92.69	-4,373.23	492.91	8,850.83	8,712.51	138.32	63.986		
13,800.00	6,949.81	7,327.67	7,305.12	199.67	31.34	-92.72	-4,373.21	492.82	8,935.81	8,796.96	138.85	64.358		
13,900.00	6,948.06	7,329.90	7,307.35	202.49	31.35	-92.74	-4,373.19	492.73	9,021.10	8,881.74	139.35	64.735		
14,000.00	6,946.31	7,332.13	7,309.58	205.31	31.36	-92.77	-4,373.16	492.64	9,106.68	8,966.83	139.85	65.117		
14,100.00	6,944.56	7,334.37	7,311.81	208.14	31.37	-92.80	-4,373.14	492.55	9,192.56	9,052.22	140.34	65.503		
14,200.00	6,942.81	7,336.60	7,314.04	210.96	31.38	-92.83	-4,373.11	492.46	9,278.71	9,137.90	140.81	65.894		
14,300.00	6,941.06	7,338.83	7,316.27	213.79	31.39	-92.85	-4,373.09	492.37	9,365.15	9,223.87	141.28	66.289		
14,400.00	6,939.31	7,341.06	7,318.51	216.62	31.40	-92.88	-4,373.06	492.28	9,451.85	9,310.12	141.73	66.688		
14,500.00	6,937.56	7,343.30	7,320.74	219.44	31.41	-92.91	-4,373.04	492.19	9,538.81	9,396.63	142.18	67.092		
14,600.00	6,935.81	7,345.53	7,322.97	222.27	31.42	-92.94	-4,373.02	492.10	9,626.02	9,483.41	142.61	67.499		
14,700.00	6,934.06	7,347.76	7,325.20	225.10	31.43	-92.96	-4,372.99	492.02	9,713.48	9,570.44	143.03	67.910		
14,800.00	6,932.31	7,350.00	7,327.43	227.93	31.44	-92.99	-4,372.97	491.93	9,801.17	9,657.73	143.45	68.325		
14,817.75	6,932.00	7,350.39	7,327.82	228.43	31.44	-92.99	-4,372.96	491.91	9,816.76	9,673.24	143.52	68.399		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BLACKGOLD 3(AB_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	22.81	-0.19	3.28	3.28	-26.66	2,302.79	-1,156.40	2,576.84					
100.00	100.00	120.85	97.85	3.28	3.29	-26.67	2,302.72	-1,156.60	2,576.87	2,570.29	6.58	391.699		
200.00	200.00	218.98	195.98	3.34	3.36	-26.67	2,302.88	-1,156.68	2,577.05	2,570.36	6.70	384.881		
300.00	300.00	328.26	305.26	3.44	3.49	-26.66	2,302.88	-1,156.33	2,576.89	2,569.96	6.93	371.632		
342.38	342.38	365.38	342.38	3.51	3.55	-26.66	2,302.88	-1,156.24	2,576.85	2,569.80	7.05	365.383		
400.00	400.00	420.07	397.07	3.60	3.64	-26.66	2,302.97	-1,156.21	2,576.92	2,569.67	7.24	355.690		
500.00	500.00	528.09	505.09	3.81	3.86	-26.66	2,302.90	-1,156.15	2,576.83	2,569.16	7.67	335.949		
600.00	599.98	634.76	611.76	4.05	4.12	0.73	2,302.74	-1,155.88	2,574.85	2,566.68	8.17	315.169		
700.00	699.86	740.44	717.43	4.32	4.41	0.73	2,302.18	-1,155.28	2,569.29	2,560.56	8.73	294.243		
800.00	799.72	838.32	815.31	4.62	4.70	0.74	2,301.88	-1,154.79	2,563.52	2,554.20	9.32	275.108		
900.00	899.58	945.53	922.52	4.93	5.04	0.75	2,301.23	-1,153.97	2,557.35	2,547.38	9.98	256.373		
1,000.00	999.44	1,038.26	1,015.25	5.27	5.35	0.76	2,300.74	-1,153.39	2,551.33	2,540.71	10.62	240.277		
1,100.00	1,099.31	1,134.98	1,111.97	5.62	5.68	0.77	2,300.44	-1,152.88	2,545.54	2,534.24	11.30	225.247		
1,200.00	1,199.17	1,237.46	1,214.44	5.98	6.05	0.78	2,300.06	-1,152.36	2,539.71	2,527.68	12.03	211.171		
1,300.00	1,299.03	1,335.67	1,312.65	6.36	6.41	0.79	2,299.63	-1,151.91	2,533.84	2,521.09	12.76	198.636		
1,400.00	1,398.89	1,432.53	1,409.51	6.74	6.77	0.80	2,299.46	-1,151.27	2,528.12	2,514.62	13.50	187.321		
1,500.00	1,498.75	1,535.58	1,512.55	7.13	7.16	0.81	2,299.24	-1,150.67	2,522.39	2,508.12	14.27	176.734		
1,600.00	1,598.61	1,638.21	1,615.18	7.52	7.55	0.81	2,298.66	-1,150.31	2,516.46	2,501.40	15.06	167.113		
1,700.00	1,698.47	1,732.32	1,709.29	7.92	7.91	0.80	2,297.96	-1,150.52	2,510.63	2,494.81	15.82	158.681		
1,800.00	1,798.33	1,832.28	1,809.24	8.32	8.30	0.79	2,297.48	-1,150.77	2,505.04	2,488.42	16.62	150.767		
1,900.00	1,898.19	1,939.14	1,916.10	8.73	8.73	0.78	2,296.53	-1,150.92	2,499.02	2,481.58	17.44	143.271		
2,000.00	1,998.05	2,031.68	2,008.64	9.14	9.09	0.77	2,295.76	-1,151.41	2,493.24	2,475.02	18.22	136.832		
2,100.00	2,097.91	2,136.57	2,113.53	9.55	9.51	0.75	2,294.95	-1,151.87	2,487.48	2,468.43	19.05	130.559		
2,200.00	2,197.78	2,239.49	2,216.44	9.97	9.93	0.74	2,293.95	-1,152.12	2,481.44	2,461.56	19.88	124.812		
2,300.00	2,297.64	2,335.79	2,312.74	10.39	10.32	0.72	2,293.05	-1,152.52	2,475.52	2,454.83	20.69	119.656		
2,400.00	2,397.50	2,435.59	2,412.53	10.81	10.72	0.70	2,292.00	-1,153.21	2,469.62	2,448.11	21.51	114.796		
2,500.00	2,497.36	2,532.59	2,509.52	11.23	11.12	0.67	2,290.95	-1,154.11	2,463.80	2,441.47	22.33	110.337		
2,600.00	2,597.22	2,628.27	2,605.19	11.65	11.51	0.64	2,290.02	-1,155.04	2,458.10	2,434.95	23.14	106.209		
2,700.00	2,697.08	2,720.21	2,697.12	12.07	11.89	0.62	2,289.45	-1,155.82	2,452.65	2,428.71	23.95	102.426		
2,800.00	2,796.94	2,811.19	2,788.10	12.50	12.26	0.60	2,289.21	-1,156.72	2,447.59	2,422.84	24.74	98.913		
2,900.00	2,896.80	2,914.02	2,890.92	12.92	12.69	0.58	2,289.01	-1,157.77	2,442.60	2,417.01	25.59	95.441		
3,000.00	2,996.66	3,011.84	2,988.73	13.35	13.09	0.55	2,288.63	-1,159.15	2,437.61	2,411.19	26.42	92.252		
3,100.00	3,096.52	3,111.00	3,087.88	13.78	13.50	0.51	2,288.20	-1,160.70	2,432.67	2,405.40	27.26	89.235		
3,200.00	3,196.38	3,203.90	3,180.77	14.21	13.89	0.47	2,287.89	-1,162.35	2,427.89	2,399.82	28.08	86.476		
3,300.00	3,296.25	3,298.02	3,274.86	14.64	14.28	0.43	2,287.62	-1,164.46	2,423.38	2,394.49	28.90	83.863		
3,400.00	3,396.11	3,396.46	3,373.27	15.07	14.69	0.37	2,287.39	-1,166.90	2,419.02	2,389.29	29.74	81.348		
3,500.00	3,495.97	3,502.56	3,479.34	15.50	15.13	0.32	2,287.09	-1,169.41	2,414.57	2,383.96	30.61	78.885		
3,600.00	3,595.83	3,597.77	3,574.52	15.93	15.53	0.27	2,286.85	-1,171.53	2,410.09	2,378.65	31.44	76.662		
3,700.00	3,695.69	3,728.55	3,705.26	16.36	16.08	0.20	2,285.61	-1,174.45	2,404.97	2,372.56	32.41	74.206		
3,800.00	3,795.55	3,836.11	3,812.78	16.80	16.53	0.13	2,283.73	-1,176.68	2,399.10	2,365.81	33.29	72.067		
3,900.00	3,895.41	3,936.52	3,913.15	17.23	16.95	0.07	2,281.86	-1,178.69	2,393.08	2,358.93	34.14	70.089		
4,000.00	3,995.27	4,035.88	4,012.47	17.66	17.37	0.00	2,279.97	-1,180.80	2,387.09	2,352.10	34.99	68.214		
4,100.00	4,095.13	4,137.27	4,113.82	18.10	17.80	-0.07	2,277.97	-1,183.00	2,381.06	2,345.21	35.85	66.411		
4,200.00	4,194.99	4,238.76	4,215.27	18.53	18.23	-0.14	2,275.92	-1,185.14	2,374.98	2,338.26	36.71	64.689		
4,300.00	4,294.85	4,339.29	4,315.76	18.96	18.65	-0.21	2,273.83	-1,187.21	2,368.82	2,331.25	37.57	63.049		
4,400.00	4,394.71	4,438.60	4,415.03	19.40	19.07	-0.27	2,271.79	-1,189.27	2,362.69	2,324.26	38.42	61.490		
4,500.00	4,494.58	4,539.24	4,515.61	19.83	19.50	-0.35	2,269.64	-1,191.48	2,356.54	2,317.26	39.28	59.989		
4,600.00	4,594.44	4,638.95	4,615.28	20.27	19.92	-0.42	2,267.46	-1,193.68	2,350.36	2,310.23	40.14	58.556		
4,700.00	4,694.30	4,743.07	4,719.35	20.71	20.36	-0.50	2,265.19	-1,195.99	2,344.20	2,303.19	41.01	57.160		
4,800.00	4,794.16	4,851.56	4,827.78	21.14	20.82	-0.58	2,262.38	-1,198.24	2,337.61	2,295.71	41.90	55.790		
4,900.00	4,894.02	4,950.27	4,926.43	21.58	21.24	-0.66	2,259.71	-1,200.22	2,330.89	2,288.14	42.75	54.519		
5,000.00	4,993.88	5,046.66	5,022.78	22.01	21.65	-0.73	2,257.28	-1,202.10	2,324.31	2,280.71	43.60	53.311		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BLACKGOLD 3(AB_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.00	5,093.74	5,142.47	5,118.54	22.45	22.05	-0.79	2,255.07	-1,203.84	2,317.87	2,273.42	44.44	52.154		
5,200.00	5,193.60	5,237.19	5,213.23	22.89	22.45	-0.85	2,253.12	-1,205.57	2,311.65	2,266.37	45.28	51.049		
5,300.00	5,293.46	5,333.06	5,309.07	23.32	22.86	-0.91	2,251.41	-1,207.21	2,305.61	2,259.48	46.13	49.984		
5,400.00	5,393.32	5,429.65	5,405.64	23.76	23.27	-0.95	2,250.14	-1,208.37	2,299.75	2,252.78	46.97	48.959		
5,500.00	5,493.18	5,527.46	5,503.44	24.20	23.68	-0.99	2,248.98	-1,209.46	2,293.96	2,246.14	47.82	47.967		
5,600.00	5,593.05	5,620.64	5,596.61	24.64	24.08	-1.03	2,248.01	-1,210.64	2,288.38	2,239.72	48.66	47.030		
5,700.00	5,692.91	5,717.17	5,693.13	25.07	24.49	-1.06	2,247.53	-1,211.56	2,283.13	2,233.62	49.50	46.120		
5,800.00	5,792.77	5,836.84	5,812.80	25.51	25.00	-1.07	2,246.74	-1,211.56	2,277.25	2,226.81	50.44	45.151		
5,900.00	5,892.63	5,939.88	5,915.83	25.95	25.43	-1.08	2,245.80	-1,211.34	2,271.08	2,219.77	51.31	44.263		
6,000.00	5,992.49	6,078.42	6,054.35	26.39	26.02	-1.07	2,244.15	-1,209.68	2,264.29	2,211.99	52.30	43.296		
6,100.00	6,092.35	6,190.21	6,166.08	26.82	26.50	-1.05	2,241.51	-1,207.15	2,255.85	2,202.66	53.19	42.408		
6,200.00	6,192.21	6,335.16	6,310.87	27.26	27.12	-1.01	2,236.52	-1,202.64	2,245.97	2,191.80	54.18	41.455		
6,300.00	6,292.07	6,418.93	6,394.53	27.70	27.47	-1.01	2,232.86	-1,200.43	2,235.64	2,180.65	55.00	40.651		
6,400.00	6,391.93	6,481.89	6,457.45	28.14	27.74	-1.02	2,230.66	-1,199.52	2,226.62	2,170.86	55.75	39.938		
6,500.00	6,491.69	6,552.11	6,527.64	28.58	28.04	38.20	2,229.07	-1,199.18	2,218.14	2,161.62	56.52	39.246		
6,600.00	6,589.80	6,630.51	6,606.04	29.02	28.37	53.51	2,228.13	-1,199.18	2,204.51	2,147.20	57.31	38.469		
6,700.00	6,683.86	6,717.37	6,692.90	29.46	28.74	59.49	2,227.42	-1,199.44	2,184.74	2,126.62	58.12	37.593		
6,800.00	6,771.56	6,796.63	6,772.15	29.92	29.08	64.20	2,226.95	-1,199.98	2,159.66	2,100.77	58.89	36.670		
6,900.00	6,850.72	6,859.13	6,834.65	30.40	29.35	68.64	2,226.87	-1,200.66	2,130.72	2,071.10	59.62	35.736		
7,000.00	6,919.40	6,918.20	6,893.71	30.96	29.60	73.20	2,227.19	-1,201.52	2,099.51	2,039.12	60.39	34.768		
7,100.00	6,975.92	6,978.75	6,954.26	31.62	29.85	77.95	2,227.58	-1,202.38	2,067.28	2,006.02	61.25	33.751		
7,200.00	7,018.87	7,023.34	6,998.84	32.44	30.04	82.29	2,227.85	-1,202.96	2,035.74	1,973.54	62.20	32.728		
7,300.00	7,047.21	7,052.26	7,027.75	33.42	30.17	85.96	2,228.03	-1,203.33	2,006.72	1,943.44	63.27	31.715		
7,400.00	7,060.23	7,066.23	7,041.72	34.55	30.22	88.75	2,228.12	-1,203.51	1,981.70	1,917.22	64.47	30.736		
7,500.00	7,060.03	7,067.27	7,042.77	35.83	30.23	89.67	2,228.12	-1,203.53	1,961.69	1,895.89	65.80	29.814		
7,600.00	7,058.28	7,066.81	7,042.30	37.28	30.23	89.65	2,228.12	-1,203.52	1,946.67	1,879.35	67.32	28.918		
7,700.00	7,056.53	7,066.34	7,041.84	38.89	30.23	89.64	2,228.12	-1,203.51	1,936.70	1,867.70	69.00	28.068		
7,800.00	7,054.78	7,065.87	7,041.37	40.63	30.22	89.62	2,228.11	-1,203.51	1,931.86	1,861.05	70.81	27.280		
7,843.53	7,054.02	7,065.67	7,041.17	41.44	30.22	89.62	2,228.11	-1,203.51	1,931.37	1,859.72	71.65	26.956 CC		
7,900.00	7,053.03	7,065.41	7,040.90	42.50	30.22	89.61	2,228.11	-1,203.50	1,932.20	1,859.48	72.72	26.572 ES		
8,000.00	7,051.28	7,064.94	7,040.44	44.47	30.22	89.60	2,228.11	-1,203.50	1,937.70	1,863.03	74.66	25.952		
8,100.00	7,049.53	7,064.47	7,039.97	46.53	30.22	89.58	2,228.10	-1,203.49	1,948.33	1,871.70	76.62	25.427		
8,200.00	7,047.78	7,064.01	7,039.50	48.67	30.22	89.57	2,228.10	-1,203.48	1,963.99	1,885.43	78.56	24.999		
8,300.00	7,046.03	7,063.54	7,039.04	50.89	30.21	89.56	2,228.10	-1,203.48	1,984.58	1,904.13	80.45	24.668		
8,400.00	7,044.28	7,063.08	7,038.57	53.16	30.21	89.54	2,228.10	-1,203.47	2,009.94	1,927.67	82.27	24.432		
8,500.00	7,042.53	7,062.61	7,038.11	55.49	30.21	89.53	2,228.09	-1,203.47	2,039.89	1,955.89	83.99	24.286		
8,600.00	7,040.78	7,062.15	7,037.64	57.86	30.21	89.51	2,228.09	-1,203.46	2,074.23	1,988.61	85.62	24.226 SF		
8,700.00	7,039.03	7,061.68	7,037.18	60.28	30.21	89.50	2,228.09	-1,203.45	2,112.75	2,025.61	87.14	24.247		
8,800.00	7,037.28	7,061.22	7,036.71	62.74	30.20	89.49	2,228.08	-1,203.45	2,155.23	2,066.69	88.54	24.342		
8,900.00	7,035.53	7,060.75	7,036.25	65.23	30.20	89.47	2,228.08	-1,203.44	2,201.43	2,111.60	89.83	24.507		
9,000.00	7,033.78	7,060.29	7,035.78	67.74	30.20	89.46	2,228.08	-1,203.44	2,251.13	2,160.12	91.01	24.735		
9,100.00	7,032.03	7,059.82	7,035.32	70.29	30.20	89.45	2,228.07	-1,203.43	2,304.10	2,212.02	92.08	25.023		
9,200.00	7,030.28	7,059.36	7,034.86	72.85	30.20	89.43	2,228.07	-1,203.42	2,360.12	2,267.07	93.05	25.364		
9,300.00	7,028.54	7,058.90	7,034.39	75.44	30.19	89.42	2,228.07	-1,203.42	2,418.98	2,325.06	93.92	25.755		
9,400.00	7,026.79	7,058.43	7,033.93	78.05	30.19	89.40	2,228.07	-1,203.41	2,480.47	2,385.77	94.70	26.192		
9,500.00	7,025.04	7,057.97	7,033.47	80.67	30.19	89.39	2,228.06	-1,203.41	2,544.41	2,449.00	95.41	26.669		
9,600.00	7,023.29	7,057.51	7,033.00	83.31	30.19	89.38	2,228.06	-1,203.40	2,610.61	2,514.58	96.03	27.185		
9,700.00	7,021.54	7,057.04	7,032.54	85.96	30.19	89.36	2,228.06	-1,203.40	2,678.92	2,582.33	96.59	27.735		
9,800.00	7,019.79	7,056.58	7,032.08	88.63	30.18	89.35	2,228.05	-1,203.39	2,749.16	2,652.07	97.08	28.317		
9,900.00	7,018.04	7,056.12	7,031.61	91.30	30.18	89.34	2,228.05	-1,203.38	2,821.20	2,723.67	97.52	28.928		
10,000.00	7,016.29	7,055.66	7,031.15	93.99	30.18	89.32	2,228.05	-1,203.38	2,894.90	2,796.99	97.91	29.566		
10,100.00	7,014.54	7,055.19	7,030.69	96.69	30.18	89.31	2,228.04	-1,203.37	2,970.14	2,871.88	98.26	30.228		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BLACKGOLD 3(AB_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,200.00	7,012.79	7,054.73	7,030.23	99.40	30.18	89.29	2,228.04	-1,203.37	3,046.80	2,948.24	98.56	30.913		
10,300.00	7,011.04	7,054.27	7,029.77	102.11	30.17	89.28	2,228.04	-1,203.36	3,124.79	3,025.96	98.83	31.619		
10,400.00	7,009.29	7,053.81	7,029.30	104.83	30.17	89.27	2,228.04	-1,203.35	3,203.99	3,104.93	99.06	32.343		
10,500.00	7,007.54	7,053.35	7,028.84	107.56	30.17	89.25	2,228.03	-1,203.35	3,284.34	3,185.07	99.27	33.086		
10,600.00	7,005.79	7,052.89	7,028.38	110.30	30.17	89.24	2,228.03	-1,203.34	3,365.73	3,266.28	99.45	33.844		
10,700.00	7,004.04	7,052.43	7,027.92	113.04	30.17	89.23	2,228.03	-1,203.34	3,448.10	3,348.50	99.61	34.617		
10,800.00	7,002.29	7,051.96	7,027.46	115.79	30.16	89.21	2,228.02	-1,203.33	3,531.39	3,431.64	99.74	35.404		
10,900.00	7,000.54	7,051.50	7,027.00	118.54	30.16	89.20	2,228.02	-1,203.32	3,615.52	3,515.65	99.86	36.204		
11,000.00	6,998.79	7,051.04	7,026.54	121.30	30.16	89.18	2,228.02	-1,203.32	3,700.44	3,600.47	99.97	37.016		
11,100.00	6,997.04	7,050.58	7,026.08	124.06	30.16	89.17	2,228.01	-1,203.31	3,786.10	3,686.04	100.06	37.839		
11,200.00	6,995.29	7,050.12	7,025.62	126.83	30.16	89.16	2,228.01	-1,203.31	3,872.44	3,772.31	100.14	38.672		
11,300.00	6,993.54	7,049.66	7,025.16	129.60	30.15	89.14	2,228.01	-1,203.30	3,959.43	3,859.23	100.20	39.514		
11,400.00	6,991.80	7,049.20	7,024.70	132.37	30.15	89.13	2,228.01	-1,203.30	4,047.02	3,946.76	100.26	40.365		
11,500.00	6,990.05	7,048.75	7,024.24	135.15	30.15	89.12	2,228.00	-1,203.29	4,135.17	4,034.86	100.31	41.224		
11,600.00	6,988.30	7,048.29	7,023.78	137.93	30.15	89.10	2,228.00	-1,203.28	4,223.85	4,123.50	100.35	42.091		
11,700.00	6,986.55	7,047.83	7,023.32	140.72	30.15	89.09	2,228.00	-1,203.28	4,313.03	4,212.64	100.38	42.965		
11,800.00	6,984.80	7,047.37	7,022.87	143.50	30.14	89.08	2,227.99	-1,203.27	4,402.67	4,302.25	100.41	43.846		
11,900.00	6,983.05	7,046.91	7,022.41	146.29	30.14	89.06	2,227.99	-1,203.27	4,492.74	4,392.31	100.44	44.732		
12,000.00	6,981.30	7,046.45	7,021.95	149.09	30.14	89.05	2,227.99	-1,203.26	4,583.23	4,482.78	100.46	45.625		
12,100.00	6,979.55	7,045.99	7,021.49	151.88	30.14	89.04	2,227.99	-1,203.25	4,674.11	4,573.64	100.47	46.522		
12,200.00	6,977.80	7,045.54	7,021.03	154.68	30.14	89.02	2,227.98	-1,203.25	4,765.35	4,664.87	100.48	47.425		
12,300.00	6,976.05	7,045.08	7,020.58	157.48	30.14	89.01	2,227.98	-1,203.24	4,856.94	4,756.45	100.49	48.332		
12,400.00	6,974.30	7,044.62	7,020.12	160.28	30.13	88.99	2,227.98	-1,203.24	4,948.85	4,848.35	100.50	49.244		
12,500.00	6,972.55	7,044.16	7,019.66	163.08	30.13	88.98	2,227.97	-1,203.23	5,041.07	4,940.57	100.50	50.159		
12,600.00	6,970.80	7,043.71	7,019.20	165.89	30.13	88.97	2,227.97	-1,203.22	5,133.58	5,033.08	100.50	51.078		
12,700.00	6,969.05	7,043.25	7,018.75	168.69	30.13	88.95	2,227.97	-1,203.22	5,226.37	5,125.87	100.50	52.001		
12,800.00	6,967.30	7,042.79	7,018.29	171.50	30.13	88.94	2,227.97	-1,203.21	5,319.42	5,218.91	100.50	52.927		
12,900.00	6,965.55	7,042.34	7,017.83	174.31	30.12	88.93	2,227.96	-1,203.21	5,412.72	5,312.21	100.50	53.856		
13,000.00	6,963.80	7,041.88	7,017.38	177.12	30.12	88.91	2,227.96	-1,203.20	5,506.25	5,405.75	100.50	54.788		
13,100.00	6,962.05	7,041.42	7,016.92	179.94	30.12	88.90	2,227.96	-1,203.20	5,600.00	5,499.50	100.50	55.722		
13,200.00	6,960.30	7,040.97	7,016.47	182.75	30.12	88.89	2,227.95	-1,203.19	5,693.97	5,593.48	100.50	56.659		
13,300.00	6,958.55	7,040.51	7,016.01	185.57	30.12	88.87	2,227.95	-1,203.18	5,788.14	5,687.65	100.49	57.598		
13,400.00	6,956.80	7,040.06	7,015.56	188.38	30.11	88.86	2,227.95	-1,203.18	5,882.50	5,782.01	100.49	58.539		
13,500.00	6,955.05	7,039.60	7,015.10	191.20	30.11	88.85	2,227.95	-1,203.17	5,977.05	5,876.56	100.48	59.482		
13,600.00	6,953.31	7,039.15	7,014.65	194.02	30.11	88.83	2,227.94	-1,203.17	6,071.77	5,971.29	100.48	60.427		
13,700.00	6,951.56	7,038.69	7,014.19	196.84	30.11	88.82	2,227.94	-1,203.16	6,166.66	6,066.18	100.48	61.374		
13,800.00	6,949.81	7,038.24	7,013.74	199.67	30.11	88.80	2,227.94	-1,203.15	6,261.70	6,161.23	100.47	62.322		
13,900.00	6,948.06	7,037.78	7,013.28	202.49	30.10	88.79	2,227.93	-1,203.15	6,356.90	6,256.43	100.47	63.271		
14,000.00	6,946.31	7,037.33	7,012.83	205.31	30.10	88.78	2,227.93	-1,203.14	6,452.24	6,351.78	100.47	64.222		
14,100.00	6,944.56	7,036.88	7,012.37	208.14	30.10	88.76	2,227.93	-1,203.14	6,547.73	6,447.26	100.47	65.174		
14,200.00	6,942.81	7,036.42	7,011.92	210.96	30.10	88.75	2,227.93	-1,203.13	6,643.34	6,542.88	100.46	66.126		
14,300.00	6,941.06	7,035.97	7,011.47	213.79	30.10	88.74	2,227.92	-1,203.13	6,739.08	6,638.62	100.46	67.080		
14,400.00	6,939.31	7,035.51	7,011.01	216.62	30.09	88.72	2,227.92	-1,203.12	6,834.95	6,734.49	100.46	68.035		
14,500.00	6,937.56	7,035.06	7,010.56	219.44	30.09	88.71	2,227.92	-1,203.11	6,930.93	6,830.47	100.46	68.990		
14,600.00	6,935.81	7,034.61	7,010.11	222.27	30.09	88.70	2,227.91	-1,203.11	7,027.02	6,926.56	100.46	69.946		
14,700.00	6,934.06	7,034.16	7,009.65	225.10	30.09	88.68	2,227.91	-1,203.10	7,123.22	7,022.76	100.46	70.903		
14,800.00	6,932.31	7,033.70	7,009.20	227.93	30.09	88.67	2,227.91	-1,203.10	7,219.53	7,119.06	100.47	71.860		
14,817.75	6,932.00	7,033.62	7,009.12	228.43	30.09	88.67	2,227.91	-1,203.10	7,236.63	7,136.16	100.47	72.030		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	21.00	3.28	3.28	-67.78	884.99	-2,166.89	2,340.74				
100.00	100.00	79.00	100.00	3.28	3.56	-67.78	884.99	-2,166.89	2,340.65	2,333.80	6.84	342.060	
200.00	200.00	179.00	200.00	3.34	5.57	-67.78	884.99	-2,166.89	2,340.65	2,331.74	8.91	262.749	
300.00	300.00	279.00	300.00	3.44	8.64	-67.78	884.99	-2,166.89	2,340.65	2,328.56	12.09	193.666	
400.00	400.00	379.00	400.00	3.60	11.94	-67.78	884.99	-2,166.89	2,340.65	2,325.10	15.55	150.544	
500.00	500.00	479.00	500.00	3.81	15.33	-67.78	884.99	-2,166.89	2,340.65	2,321.51	19.14	122.308	
600.00	599.98	578.98	599.98	4.05	18.76	-40.45	884.99	-2,166.89	2,339.32	2,316.52	22.80	102.596	
700.00	699.86	678.86	699.86	4.32	22.20	-40.55	884.99	-2,166.89	2,335.65	2,309.14	26.51	88.092	
800.00	799.72	778.72	799.72	4.62	25.65	-40.63	884.99	-2,166.89	2,331.65	2,301.38	30.26	77.048	
900.00	899.58	878.58	899.58	4.93	29.11	-40.72	884.99	-2,166.89	2,327.65	2,293.60	34.04	68.379	
1,000.00	999.44	978.44	999.44	5.27	32.58	-40.80	884.99	-2,166.89	2,323.65	2,285.81	37.84	61.405	
1,100.00	1,099.31	1,078.31	1,099.31	5.62	36.05	-40.89	884.99	-2,166.89	2,319.66	2,278.00	41.66	55.680	
1,200.00	1,199.17	1,178.17	1,199.17	5.98	39.52	-40.97	884.99	-2,166.89	2,315.67	2,270.18	45.49	50.900	
1,300.00	1,299.03	1,278.03	1,299.03	6.36	43.00	-41.06	884.99	-2,166.89	2,311.69	2,262.35	49.34	46.852	
1,400.00	1,398.89	1,377.89	1,398.89	6.74	46.47	-41.14	884.99	-2,166.89	2,307.71	2,254.52	53.20	43.381	
1,500.00	1,498.75	1,477.75	1,498.75	7.13	49.95	-41.23	884.99	-2,166.89	2,303.74	2,246.68	57.06	40.373	
1,600.00	1,598.61	1,577.61	1,598.61	7.52	53.43	-41.32	884.99	-2,166.89	2,299.78	2,238.85	60.93	37.743	
1,700.00	1,698.47	1,677.47	1,698.47	7.92	56.91	-41.40	884.99	-2,166.89	2,295.82	2,231.01	64.81	35.424	
1,800.00	1,798.33	1,777.33	1,798.33	8.32	60.39	-41.49	884.99	-2,166.89	2,291.86	2,223.17	68.69	33.364	
1,900.00	1,898.19	1,877.19	1,898.19	8.73	63.87	-41.58	884.99	-2,166.89	2,287.92	2,215.34	72.58	31.523	
2,000.00	1,998.05	1,977.05	1,998.05	9.14	67.35	-41.67	884.99	-2,166.89	2,283.97	2,207.50	76.47	29.868	
2,100.00	2,097.91	2,076.91	2,097.91	9.55	70.84	-41.75	884.99	-2,166.89	2,280.03	2,199.67	80.36	28.372	
2,200.00	2,197.78	2,176.78	2,197.78	9.97	74.32	-41.84	884.99	-2,166.89	2,276.10	2,191.84	84.26	27.013	
2,300.00	2,297.64	2,276.64	2,297.64	10.39	77.80	-41.93	884.99	-2,166.89	2,272.17	2,184.01	88.16	25.774	
2,400.00	2,397.50	2,376.50	2,397.50	10.81	81.28	-42.02	884.99	-2,166.89	2,268.25	2,176.19	92.06	24.639	
2,500.00	2,497.36	2,476.36	2,497.36	11.23	84.77	-42.11	884.99	-2,166.89	2,264.33	2,168.37	95.96	23.596	
2,600.00	2,597.22	2,576.22	2,597.22	11.65	88.25	-42.20	884.99	-2,166.89	2,260.42	2,160.56	99.87	22.635	
2,700.00	2,697.08	2,676.08	2,697.08	12.07	91.74	-42.29	884.99	-2,166.89	2,256.51	2,152.74	103.77	21.745	
2,800.00	2,796.94	2,775.94	2,796.94	12.50	95.22	-42.38	884.99	-2,166.89	2,252.61	2,144.94	107.68	20.920	
2,900.00	2,896.80	2,875.80	2,896.80	12.92	98.70	-42.47	884.99	-2,166.89	2,248.72	2,137.13	111.59	20.152	
3,000.00	2,996.66	2,975.66	2,996.66	13.35	102.19	-42.56	884.99	-2,166.89	2,244.83	2,129.33	115.50	19.436	
3,100.00	3,096.52	3,075.52	3,096.52	13.78	105.67	-42.65	884.99	-2,166.89	2,240.95	2,121.54	119.41	18.767	
3,200.00	3,196.38	3,175.38	3,196.38	14.21	109.16	-42.74	884.99	-2,166.89	2,237.07	2,113.75	123.32	18.140	
3,300.00	3,296.25	3,275.25	3,296.25	14.64	112.64	-42.83	884.99	-2,166.89	2,233.20	2,105.96	127.23	17.552	
3,400.00	3,396.11	3,375.11	3,396.11	15.07	116.13	-42.93	884.99	-2,166.89	2,229.33	2,098.19	131.15	16.999	
3,500.00	3,495.97	3,474.97	3,495.97	15.50	119.61	-43.02	884.99	-2,166.89	2,225.47	2,090.41	135.06	16.478	
3,600.00	3,595.83	3,574.83	3,595.83	15.93	123.10	-43.11	884.99	-2,166.89	2,221.62	2,082.64	138.97	15.986	
3,700.00	3,695.69	3,674.69	3,695.69	16.36	126.58	-43.20	884.99	-2,166.89	2,217.77	2,074.88	142.89	15.521	
3,800.00	3,795.55	3,774.55	3,795.55	16.80	130.07	-43.30	884.99	-2,166.89	2,213.92	2,067.12	146.81	15.081	
3,900.00	3,895.41	3,874.41	3,895.41	17.23	133.55	-43.39	884.99	-2,166.89	2,210.09	2,059.36	150.72	14.663	
4,000.00	3,995.27	3,974.27	3,995.27	17.66	137.04	-43.49	884.99	-2,166.89	2,206.26	2,051.62	154.64	14.267	
4,100.00	4,095.13	4,074.13	4,095.13	18.10	140.52	-43.58	884.99	-2,166.89	2,202.43	2,043.87	158.56	13.890	
4,200.00	4,194.99	4,173.99	4,194.99	18.53	144.01	-43.67	884.99	-2,166.89	2,198.61	2,036.14	162.47	13.532	
4,300.00	4,294.85	4,273.85	4,294.85	18.96	147.49	-43.77	884.99	-2,166.89	2,194.80	2,028.41	166.39	13.190	
4,400.00	4,394.71	4,373.71	4,394.71	19.40	150.98	-43.87	884.99	-2,166.89	2,190.99	2,020.68	170.31	12.865	
4,500.00	4,494.58	4,473.58	4,494.58	19.83	154.46	-43.96	884.99	-2,166.89	2,187.19	2,012.96	174.23	12.553	
4,600.00	4,594.44	4,573.44	4,594.44	20.27	157.95	-44.06	884.99	-2,166.89	2,183.40	2,005.25	178.15	12.256	
4,700.00	4,694.30	4,673.30	4,694.30	20.71	161.43	-44.15	884.99	-2,166.89	2,179.61	1,997.54	182.07	11.971	
4,800.00	4,794.16	4,773.16	4,794.16	21.14	164.92	-44.25	884.99	-2,166.89	2,175.82	1,989.84	185.99	11.699	
4,900.00	4,894.02	4,873.02	4,894.02	21.58	168.40	-44.35	884.99	-2,166.89	2,172.05	1,982.14	189.91	11.437	
5,000.00	4,993.88	4,972.88	4,993.88	22.01	171.89	-44.44	884.99	-2,166.89	2,168.28	1,974.45	193.83	11.187	
5,100.00	5,093.74	5,072.74	5,093.74	22.45	175.37	-44.54	884.99	-2,166.89	2,164.51	1,966.77	197.75	10.946	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,172.60	5,193.60	22.89	178.86	-44.64	884.99	-2,166.89	2,160.76	1,959.09	201.67	10.714		
5,300.00	5,293.46	5,272.46	5,293.46	23.32	182.35	-44.74	884.99	-2,166.89	2,157.00	1,951.42	205.59	10.492		
5,400.00	5,393.32	5,372.32	5,393.32	23.76	185.83	-44.84	884.99	-2,166.89	2,153.26	1,943.75	209.51	10.278		
5,500.00	5,493.18	5,472.18	5,493.18	24.20	189.32	-44.94	884.99	-2,166.89	2,149.52	1,936.09	213.43	10.071		
5,600.00	5,593.05	5,572.05	5,593.05	24.64	192.80	-45.04	884.99	-2,166.89	2,145.79	1,928.44	217.35	9.872		
5,700.00	5,692.91	5,671.91	5,692.91	25.07	196.29	-45.14	884.99	-2,166.89	2,142.06	1,920.79	221.27	9.681		
5,800.00	5,792.77	5,771.77	5,792.77	25.51	199.77	-45.24	884.99	-2,166.89	2,138.35	1,913.15	225.20	9.495		
5,900.00	5,892.63	5,871.63	5,892.63	25.95	203.26	-45.34	884.99	-2,166.89	2,134.63	1,905.51	229.12	9.317		
6,000.00	5,992.49	5,971.49	5,992.49	26.39	206.75	-45.44	884.99	-2,166.89	2,130.93	1,897.89	233.04	9.144		
6,100.00	6,092.35	6,071.35	6,092.35	26.82	210.23	-45.54	884.99	-2,166.89	2,127.23	1,890.27	236.96	8.977		
6,200.00	6,192.21	6,171.21	6,192.21	27.26	213.72	-45.64	884.99	-2,166.89	2,123.54	1,882.65	240.88	8.816		
6,300.00	6,292.07	6,271.07	6,292.07	27.70	217.20	-45.74	884.99	-2,166.89	2,119.85	1,875.04	244.81	8.659		
6,400.00	6,391.93	6,370.93	6,391.93	28.14	220.69	-45.84	884.99	-2,166.89	2,116.17	1,867.44	248.73	8.508		
6,500.00	6,491.79	6,470.79	6,491.79	28.58	224.17	-7.01	884.99	-2,166.89	2,110.51	1,857.87	252.65	8.354		
6,600.00	6,591.65	6,570.65	6,591.65	29.02	227.66	7.46	884.99	-2,166.89	2,091.75	1,835.25	256.50	8.155		
6,700.00	6,691.51	6,670.51	6,691.51	29.46	231.14	12.32	884.99	-2,166.89	2,058.58	1,798.39	260.20	7.912		
6,800.00	6,791.37	6,770.37	6,791.37	29.90	234.63	17.18	884.99	-2,166.89	2,011.87	1,748.23	263.64	7.631		
6,900.00	6,891.23	6,870.23	6,891.23	30.34	238.12	22.04	884.99	-2,166.89	1,952.82	1,686.09	266.74	7.321		
7,000.00	6,991.09	6,970.09	6,991.09	30.78	241.61	26.90	884.99	-2,166.89	1,883.01	1,613.48	269.54	6.986		
7,100.00	7,090.95	7,069.95	7,090.95	31.22	245.10	31.76	884.99	-2,166.89	1,804.30	1,532.65	271.64	6.642		
7,200.00	7,190.81	7,169.81	7,190.81	31.66	248.59	36.62	884.99	-2,166.89	1,718.79	1,445.29	273.50	6.284		
7,300.00	7,290.67	7,269.67	7,290.67	32.10	252.08	41.48	884.99	-2,166.89	1,628.81	1,354.26	274.54	5.933		
7,400.00	7,390.53	7,369.53	7,390.53	32.54	255.57	46.34	884.99	-2,166.89	1,536.80	1,261.58	275.21	5.584		
7,500.00	7,490.39	7,469.39	7,490.39	32.98	259.06	51.20	884.99	-2,166.89	1,445.12	1,169.64	275.48	5.246		
7,600.00	7,590.25	7,569.25	7,590.25	33.42	262.55	56.06	884.99	-2,166.89	1,354.65	1,078.83	275.81	4.911		
7,700.00	7,690.11	7,669.11	7,690.11	33.86	266.04	60.92	884.99	-2,166.89	1,265.61	989.29	276.31	4.580		
7,800.00	7,789.97	7,768.97	7,789.97	34.30	269.53	65.78	884.99	-2,166.89	1,178.32	901.30	277.02	4.254		
7,900.00	7,889.83	7,868.83	7,889.83	34.74	273.02	70.64	884.99	-2,166.89	1,093.21	815.20	278.01	3.932		
8,000.00	7,989.69	7,968.69	7,989.69	35.18	276.51	75.50	884.99	-2,166.89	1,010.83	731.48	279.35	3.619		
8,100.00	8,089.55	8,068.55	8,089.55	35.62	280.00	80.36	884.99	-2,166.89	931.90	650.77	281.13	3.315		
8,200.00	8,189.41	8,168.41	8,189.41	36.06	283.49	85.22	884.99	-2,166.89	857.38	573.92	283.45	3.025		
8,300.00	8,289.27	8,268.27	8,289.27	36.50	286.98	90.08	884.99	-2,166.89	788.51	502.13	286.38	2.753		
8,400.00	8,389.13	8,368.13	8,389.13	36.94	290.47	94.94	884.99	-2,166.89	726.90	436.97	289.93	2.507		
8,500.00	8,488.99	8,467.99	8,488.99	37.38	293.96	99.80	884.99	-2,166.89	674.56	380.54	294.02	2.294		
8,600.00	8,588.85	8,567.85	8,588.85	37.82	297.45	104.66	884.99	-2,166.89	633.76	335.40	298.36	2.124		
8,700.00	8,688.71	8,667.71	8,688.71	38.26	300.94	109.52	884.99	-2,166.89	606.86	304.35	302.51	2.006		
8,800.00	8,788.57	8,767.57	8,788.57	38.70	304.43	114.38	884.99	-2,166.89	595.74	289.85	305.89	1.948		
8,900.00	8,888.43	8,867.43	8,888.43	39.14	307.92	119.24	884.99	-2,166.89	595.50	289.14	306.35	1.944	CC, ES, SF	
9,000.00	8,988.29	8,967.29	8,988.29	39.58	311.41	124.10	884.99	-2,166.89	601.26	293.22	308.04	1.952		
9,100.00	9,088.15	9,067.15	9,088.15	40.02	314.90	128.96	884.99	-2,166.89	622.99	314.19	308.80	2.017		
9,200.00	9,187.99	9,166.99	9,187.99	40.46	318.39	133.82	884.99	-2,166.89	659.33	350.97	308.36	2.138		
9,300.00	9,287.85	9,266.85	9,287.85	40.90	321.88	138.68	884.99	-2,166.89	708.04	400.94	307.10	2.306		
9,400.00	9,387.71	9,366.71	9,387.71	41.34	325.37	143.54	884.99	-2,166.89	766.75	461.38	305.37	2.511		
9,500.00	9,487.57	9,466.57	9,487.57	41.78	328.86	148.40	884.99	-2,166.89	833.36	529.89	303.47	2.746		
9,600.00	9,587.43	9,566.43	9,587.43	42.22	332.35	153.26	884.99	-2,166.89	906.12	604.55	301.57	3.005		
9,700.00	9,687.29	9,666.29	9,687.29	42.66	335.84	158.12	884.99	-2,166.89	983.68	683.91	299.78	3.281		
9,800.00	9,787.15	9,766.15	9,787.15	43.10	339.33	162.98	884.99	-2,166.89	1,064.99	766.87	298.12	3.572		
9,900.00	9,886.99	9,865.99	9,886.99	43.54	342.82	167.84	884.99	-2,166.89	1,149.24	852.54	296.70	3.873		
10,000.00	9,986.85	9,965.85	9,986.85	43.98	346.31	172.70	884.99	-2,166.89	1,235.84	940.36	295.48	4.183		
10,100.00	10,086.71	10,065.71	10,086.71	44.42	349.80	177.56	884.99	-2,166.89	1,324.33	1,029.94	294.39	4.499		
10,200.00	10,186.57	10,165.57	10,186.57	44.86	353.29	182.42	884.99	-2,166.89	1,414.35	1,120.92	293.43	4.820		
10,300.00	10,286.43	10,265.43	10,286.43	45.30	356.78	187.28	884.99	-2,166.89	1,505.63	1,213.04	292.59	5.146		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BURBACH 15-22(SI_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	7,011.04	7,009.96	7,011.04	102.11	242.99	87.51	884.99	-2,166.89	1,597.95	1,306.11	291.84	5.475		
10,400.00	7,009.29	6,988.29	7,009.29	104.83	242.24	87.34	884.99	-2,166.89	1,691.14	1,400.78	290.36	5.824		
10,500.00	7,007.54	6,986.54	7,007.54	107.56	242.18	87.17	884.99	-2,166.89	1,785.07	1,495.42	289.65	6.163		
10,600.00	7,005.79	6,984.79	7,005.79	110.30	242.12	87.00	884.99	-2,166.89	1,879.63	1,590.61	289.01	6.504		
10,700.00	7,004.04	6,983.04	7,004.04	113.04	242.06	86.83	884.99	-2,166.89	1,974.71	1,686.28	288.43	6.846		
10,800.00	7,002.29	6,981.29	7,002.29	115.79	241.99	86.67	884.99	-2,166.89	2,070.26	1,782.36	287.90	7.191		
10,900.00	7,000.54	6,979.54	7,000.54	118.54	241.93	86.50	884.99	-2,166.89	2,166.21	1,878.80	287.42	7.537		
11,000.00	6,998.79	6,977.79	6,998.79	121.30	241.87	86.33	884.99	-2,166.89	2,262.51	1,975.54	286.97	7.884		
11,100.00	6,997.04	6,976.04	6,997.04	124.06	241.81	86.16	884.99	-2,166.89	2,359.12	2,072.56	286.56	8.232		
11,200.00	6,995.29	6,974.29	6,995.29	126.83	241.75	86.00	884.99	-2,166.89	2,456.00	2,169.81	286.19	8.582		
11,300.00	6,993.54	6,972.54	6,993.54	129.60	241.69	85.83	884.99	-2,166.89	2,553.11	2,267.28	285.84	8.932		
11,400.00	6,991.80	6,970.80	6,991.80	132.37	241.63	85.66	884.99	-2,166.89	2,650.44	2,364.93	285.51	9.283		
11,500.00	6,990.05	6,969.05	6,990.05	135.15	241.57	85.49	884.99	-2,166.89	2,747.96	2,462.75	285.21	9.635		
11,600.00	6,988.30	6,967.30	6,988.30	137.93	241.51	85.33	884.99	-2,166.89	2,845.65	2,560.72	284.93	9.987		
11,700.00	6,986.55	6,965.55	6,986.55	140.72	241.44	85.16	884.99	-2,166.89	2,943.50	2,658.83	284.67	10.340		
11,800.00	6,984.80	6,963.80	6,984.80	143.50	241.38	84.99	884.99	-2,166.89	3,041.48	2,757.05	284.43	10.693		
11,900.00	6,983.05	6,962.05	6,983.05	146.29	241.32	84.83	884.99	-2,166.89	3,139.59	2,855.39	284.20	11.047		
12,000.00	6,981.30	6,960.30	6,981.30	149.09	241.26	84.66	884.99	-2,166.89	3,237.82	2,953.83	283.99	11.401		
12,100.00	6,979.55	6,958.55	6,979.55	151.88	241.20	84.49	884.99	-2,166.89	3,336.15	3,052.36	283.79	11.756		
12,200.00	6,977.80	6,956.80	6,977.80	154.68	241.14	84.32	884.99	-2,166.89	3,434.57	3,150.97	283.60	12.111		
12,300.00	6,976.05	6,955.05	6,976.05	157.48	241.08	84.16	884.99	-2,166.89	3,533.09	3,249.66	283.42	12.466		
12,400.00	6,974.30	6,953.30	6,974.30	160.28	241.02	83.99	884.99	-2,166.89	3,631.68	3,348.42	283.26	12.821		
12,500.00	6,972.55	6,951.55	6,972.55	163.08	240.96	83.83	884.99	-2,166.89	3,730.35	3,447.25	283.10	13.177		
12,600.00	6,970.80	6,949.80	6,970.80	165.89	240.89	83.66	884.99	-2,166.89	3,829.08	3,546.13	282.95	13.533		
12,700.00	6,969.05	6,948.05	6,969.05	168.69	240.83	83.49	884.99	-2,166.89	3,927.88	3,645.07	282.81	13.889		
12,800.00	6,967.30	6,946.30	6,967.30	171.50	240.77	83.33	884.99	-2,166.89	4,026.74	3,744.06	282.68	14.245		
12,900.00	6,965.55	6,944.55	6,965.55	174.31	240.71	83.16	884.99	-2,166.89	4,125.65	3,843.10	282.55	14.601		
13,000.00	6,963.80	6,942.80	6,963.80	177.12	240.65	82.99	884.99	-2,166.89	4,224.61	3,942.18	282.43	14.958		
13,100.00	6,962.05	6,941.05	6,962.05	179.94	240.59	82.83	884.99	-2,166.89	4,323.62	4,041.30	282.32	15.315		
13,200.00	6,960.30	6,939.30	6,960.30	182.75	240.53	82.66	884.99	-2,166.89	4,422.68	4,140.46	282.21	15.671		
13,300.00	6,958.55	6,937.55	6,958.55	185.57	240.47	82.50	884.99	-2,166.89	4,521.77	4,239.66	282.11	16.028		
13,400.00	6,956.80	6,935.80	6,956.80	188.38	240.41	82.33	884.99	-2,166.89	4,620.90	4,338.89	282.02	16.385		
13,500.00	6,955.05	6,934.05	6,955.05	191.20	240.35	82.17	884.99	-2,166.89	4,720.07	4,438.15	281.93	16.742		
13,600.00	6,953.31	6,932.31	6,953.31	194.02	240.28	82.00	884.99	-2,166.89	4,819.27	4,537.44	281.84	17.099		
13,700.00	6,951.56	6,930.56	6,951.56	196.84	240.22	81.84	884.99	-2,166.89	4,918.51	4,636.75	281.76	17.457		
13,800.00	6,949.81	6,928.81	6,949.81	199.67	240.16	81.67	884.99	-2,166.89	5,017.77	4,736.09	281.68	17.814		
13,900.00	6,948.06	6,927.06	6,948.06	202.49	240.10	81.51	884.99	-2,166.89	5,117.06	4,835.46	281.61	18.171		
14,000.00	6,946.31	6,925.31	6,946.31	205.31	240.04	81.34	884.99	-2,166.89	5,216.38	4,934.85	281.54	18.528		
14,100.00	6,944.56	6,923.56	6,944.56	208.14	239.98	81.18	884.99	-2,166.89	5,315.73	5,034.26	281.47	18.886		
14,200.00	6,942.81	6,921.81	6,942.81	210.96	239.92	81.01	884.99	-2,166.89	5,415.09	5,133.68	281.41	19.243		
14,300.00	6,941.06	6,920.06	6,941.06	213.79	239.86	80.85	884.99	-2,166.89	5,514.48	5,233.13	281.35	19.600		
14,400.00	6,939.31	6,918.31	6,939.31	216.62	239.80	80.69	884.99	-2,166.89	5,613.89	5,332.60	281.29	19.957		
14,500.00	6,937.56	6,916.56	6,937.56	219.44	239.73	80.52	884.99	-2,166.89	5,713.32	5,432.08	281.24	20.315		
14,600.00	6,935.81	6,914.81	6,935.81	222.27	239.67	80.36	884.99	-2,166.89	5,812.77	5,531.58	281.19	20.672		
14,700.00	6,934.06	6,913.06	6,934.06	225.10	239.61	80.20	884.99	-2,166.89	5,912.24	5,631.10	281.14	21.029		
14,800.00	6,932.31	6,911.31	6,932.31	227.93	239.55	80.03	884.99	-2,166.89	6,011.72	5,730.63	281.10	21.387		
14,817.75	6,932.00	6,911.00	6,932.00	228.43	239.54	80.00	884.99	-2,166.89	6,029.38	5,748.29	281.09	21.450		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BURBACH 15-23(SI_150CC - OH - OH)													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	36.00	3.28	3.28	-100.02	-448.33	-2,536.94	2,576.50					
100.00	100.00	64.00	100.00	3.28	3.47	-100.02	-448.33	-2,536.94	2,576.25	2,569.50	6.75	381.681		
200.00	200.00	164.00	200.00	3.34	5.16	-100.02	-448.33	-2,536.94	2,576.25	2,567.75	8.49	303.294		
300.00	300.00	264.00	300.00	3.44	8.16	-100.02	-448.33	-2,536.94	2,576.25	2,564.64	11.60	222.014		
400.00	400.00	364.00	400.00	3.60	11.44	-100.02	-448.33	-2,536.94	2,576.25	2,561.20	15.05	171.233		
500.00	500.00	464.00	500.00	3.81	14.82	-100.02	-448.33	-2,536.94	2,576.25	2,557.62	18.63	138.313		
600.00	599.98	563.98	599.98	4.05	18.24	-72.69	-448.33	-2,536.94	2,575.73	2,553.44	22.29	115.578		
700.00	699.86	663.86	699.86	4.32	21.68	-72.80	-448.33	-2,536.94	2,574.30	2,548.30	25.99	99.032		
800.00	799.72	763.72	799.72	4.62	25.13	-72.92	-448.33	-2,536.94	2,572.74	2,543.00	29.74	86.503		
900.00	899.58	863.58	899.58	4.93	28.59	-73.03	-448.33	-2,536.94	2,571.20	2,537.68	33.52	76.708		
1,000.00	999.44	963.44	999.44	5.27	32.06	-73.14	-448.33	-2,536.94	2,569.66	2,532.34	37.32	68.855		
1,100.00	1,099.31	1,063.31	1,099.31	5.62	35.53	-73.25	-448.33	-2,536.94	2,568.13	2,527.00	41.14	62.426		
1,200.00	1,199.17	1,163.17	1,199.17	5.98	39.00	-73.37	-448.33	-2,536.94	2,566.62	2,521.65	44.97	57.070		
1,300.00	1,299.03	1,263.03	1,299.03	6.36	42.47	-73.48	-448.33	-2,536.94	2,565.11	2,516.29	48.82	52.543		
1,400.00	1,398.89	1,362.89	1,398.89	6.74	45.95	-73.59	-448.33	-2,536.94	2,563.62	2,510.94	52.68	48.668		
1,500.00	1,498.75	1,462.75	1,498.75	7.13	49.43	-73.70	-448.33	-2,536.94	2,562.13	2,505.59	56.54	45.315		
1,600.00	1,598.61	1,562.61	1,598.61	7.52	52.91	-73.82	-448.33	-2,536.94	2,560.65	2,500.24	60.41	42.386		
1,700.00	1,698.47	1,662.47	1,698.47	7.92	56.39	-73.93	-448.33	-2,536.94	2,559.19	2,494.90	64.29	39.807		
1,800.00	1,798.33	1,762.33	1,798.33	8.32	59.87	-74.04	-448.33	-2,536.94	2,557.73	2,489.56	68.17	37.519		
1,900.00	1,898.19	1,862.19	1,898.19	8.73	63.35	-74.16	-448.33	-2,536.94	2,556.28	2,484.22	72.06	35.475		
2,000.00	1,998.05	1,962.05	1,998.05	9.14	66.83	-74.27	-448.33	-2,536.94	2,554.85	2,478.90	75.95	33.639		
2,100.00	2,097.91	2,061.91	2,097.91	9.55	70.31	-74.39	-448.33	-2,536.94	2,553.42	2,473.58	79.84	31.980		
2,200.00	2,197.78	2,161.78	2,197.78	9.97	73.80	-74.50	-448.33	-2,536.94	2,552.01	2,468.27	83.74	30.475		
2,300.00	2,297.64	2,261.64	2,297.64	10.39	77.28	-74.61	-448.33	-2,536.94	2,550.60	2,462.96	87.64	29.103		
2,400.00	2,397.50	2,361.50	2,397.50	10.81	80.76	-74.73	-448.33	-2,536.94	2,549.20	2,457.66	91.54	27.848		
2,500.00	2,497.36	2,461.36	2,497.36	11.23	84.24	-74.84	-448.33	-2,536.94	2,547.82	2,452.37	95.44	26.694		
2,600.00	2,597.22	2,561.22	2,597.22	11.65	87.73	-74.96	-448.33	-2,536.94	2,546.44	2,447.09	99.35	25.631		
2,700.00	2,697.08	2,661.08	2,697.08	12.07	91.21	-75.07	-448.33	-2,536.94	2,545.08	2,441.82	103.26	24.648		
2,800.00	2,796.94	2,760.94	2,796.94	12.50	94.70	-75.19	-448.33	-2,536.94	2,543.72	2,436.56	107.16	23.737		
2,900.00	2,896.80	2,860.80	2,896.80	12.92	98.18	-75.30	-448.33	-2,536.94	2,542.38	2,431.30	111.07	22.889		
3,000.00	2,996.66	2,960.66	2,996.66	13.35	101.66	-75.41	-448.33	-2,536.94	2,541.04	2,426.06	114.98	22.099		
3,100.00	3,096.52	3,060.52	3,096.52	13.78	105.15	-75.53	-448.33	-2,536.94	2,539.72	2,420.82	118.89	21.361		
3,200.00	3,196.38	3,160.38	3,196.38	14.21	108.63	-75.64	-448.33	-2,536.94	2,538.40	2,415.60	122.81	20.670		
3,300.00	3,296.25	3,260.25	3,296.25	14.64	112.12	-75.76	-448.33	-2,536.94	2,537.10	2,410.38	126.72	20.021		
3,400.00	3,396.11	3,360.11	3,396.11	15.07	115.60	-75.88	-448.33	-2,536.94	2,535.81	2,405.17	130.63	19.412		
3,500.00	3,495.97	3,459.97	3,495.97	15.50	119.09	-75.99	-448.33	-2,536.94	2,534.52	2,399.98	134.55	18.837		
3,600.00	3,595.83	3,559.83	3,595.83	15.93	122.57	-76.11	-448.33	-2,536.94	2,533.25	2,394.79	138.46	18.295		
3,700.00	3,695.69	3,659.69	3,695.69	16.36	126.06	-76.22	-448.33	-2,536.94	2,531.99	2,389.61	142.38	17.783		
3,800.00	3,795.55	3,759.55	3,795.55	16.80	129.54	-76.34	-448.33	-2,536.94	2,530.74	2,384.44	146.30	17.299		
3,900.00	3,895.41	3,859.41	3,895.41	17.23	133.03	-76.45	-448.33	-2,536.94	2,529.49	2,379.28	150.21	16.839		
4,000.00	3,995.27	3,959.27	3,995.27	17.66	136.51	-76.57	-448.33	-2,536.94	2,528.26	2,374.13	154.13	16.403		
4,100.00	4,095.13	4,059.13	4,095.13	18.10	140.00	-76.69	-448.33	-2,536.94	2,527.04	2,368.99	158.05	15.989		
4,200.00	4,194.99	4,158.99	4,194.99	18.53	143.48	-76.80	-448.33	-2,536.94	2,525.83	2,363.86	161.97	15.595		
4,300.00	4,294.85	4,258.85	4,294.85	18.96	146.97	-76.92	-448.33	-2,536.94	2,524.63	2,358.75	165.89	15.219		
4,400.00	4,394.71	4,358.71	4,394.71	19.40	150.45	-77.03	-448.33	-2,536.94	2,523.44	2,353.64	169.80	14.861		
4,500.00	4,494.58	4,458.58	4,494.58	19.83	153.94	-77.15	-448.33	-2,536.94	2,522.26	2,348.54	173.72	14.519		
4,600.00	4,594.44	4,558.44	4,594.44	20.27	157.42	-77.27	-448.33	-2,536.94	2,521.09	2,343.45	177.64	14.192		
4,700.00	4,694.30	4,658.30	4,694.30	20.71	160.91	-77.38	-448.33	-2,536.94	2,519.93	2,338.37	181.56	13.879		
4,800.00	4,794.16	4,758.16	4,794.16	21.14	164.39	-77.50	-448.33	-2,536.94	2,518.79	2,333.30	185.48	13.580		
4,900.00	4,894.02	4,858.02	4,894.02	21.58	167.88	-77.62	-448.33	-2,536.94	2,517.65	2,328.24	189.40	13.292		
5,000.00	4,993.88	4,957.88	4,993.88	22.01	171.37	-77.74	-448.33	-2,536.94	2,516.52	2,323.20	193.32	13.017		
5,100.00	5,093.74	5,057.74	5,093.74	22.45	174.85	-77.85	-448.33	-2,536.94	2,515.41	2,318.16	197.25	12.753		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,200.00	5,193.60	5,157.60	5,193.60	22.89	178.34	-77.97	-448.33	-2,536.94	2,514.30	2,313.13	201.17	12.499	
5,300.00	5,293.46	5,257.46	5,293.46	23.32	181.82	-78.09	-448.33	-2,536.94	2,513.21	2,308.12	205.09	12.254	
5,400.00	5,393.32	5,357.32	5,393.32	23.76	185.31	-78.21	-448.33	-2,536.94	2,512.12	2,303.11	209.01	12.019	
5,500.00	5,493.18	5,457.18	5,493.18	24.20	188.79	-78.32	-448.33	-2,536.94	2,511.05	2,298.11	212.93	11.793	
5,600.00	5,593.05	5,557.05	5,593.05	24.64	192.28	-78.44	-448.33	-2,536.94	2,509.98	2,293.13	216.85	11.575	
5,700.00	5,692.91	5,656.91	5,692.91	25.07	195.76	-78.56	-448.33	-2,536.94	2,508.93	2,288.15	220.78	11.364	
5,800.00	5,792.77	5,756.77	5,792.77	25.51	199.25	-78.68	-448.33	-2,536.94	2,507.89	2,283.19	224.70	11.161	
5,900.00	5,892.63	5,856.63	5,892.63	25.95	202.74	-78.79	-448.33	-2,536.94	2,506.86	2,278.24	228.62	10.965	
6,000.00	5,992.49	5,956.49	5,992.49	26.39	206.22	-78.91	-448.33	-2,536.94	2,505.84	2,273.29	232.54	10.776	
6,100.00	6,092.35	6,056.35	6,092.35	26.82	209.71	-79.03	-448.33	-2,536.94	2,504.83	2,268.36	236.47	10.593	
6,200.00	6,192.21	6,156.21	6,192.21	27.26	213.19	-79.15	-448.33	-2,536.94	2,503.83	2,263.44	240.39	10.416	
6,300.00	6,292.07	6,256.07	6,292.07	27.70	216.68	-79.27	-448.33	-2,536.94	2,502.84	2,258.53	244.31	10.244	
6,400.00	6,391.93	6,355.93	6,391.93	28.14	220.16	-79.39	-448.33	-2,536.94	2,501.86	2,253.63	248.23	10.079	
6,500.00	6,491.79	6,455.79	6,491.79	28.58	223.65	-40.77	-448.33	-2,536.94	2,498.90	2,246.75	252.15	9.910	
6,600.00	6,589.80	6,553.80	6,589.80	29.02	227.07	-27.50	-448.33	-2,536.94	2,482.77	2,226.76	256.01	9.698	
6,700.00	6,683.86	6,647.86	6,683.86	29.46	230.36	-25.02	-448.33	-2,536.94	2,452.14	2,192.43	259.71	9.442	
6,800.00	6,771.56	6,735.56	6,771.56	29.92	233.42	-25.31	-448.33	-2,536.94	2,407.84	2,144.68	263.16	9.150	
6,900.00	6,850.72	6,814.72	6,850.72	30.40	236.18	-27.33	-448.33	-2,536.94	2,351.04	2,084.77	266.28	8.829	
7,000.00	6,919.40	6,883.40	6,919.40	30.96	238.58	-31.17	-448.33	-2,536.94	2,283.26	2,014.27	269.00	8.488	
7,100.00	6,975.92	6,939.92	6,975.92	31.62	240.55	-37.47	-448.33	-2,536.94	2,206.29	1,935.03	271.26	8.134	
7,200.00	7,018.87	6,982.87	7,018.87	32.44	242.05	-47.42	-448.33	-2,536.94	2,122.15	1,849.11	273.03	7.773	
7,300.00	7,047.21	7,011.21	7,047.21	33.42	243.04	-62.55	-448.33	-2,536.94	2,033.03	1,758.74	274.29	7.412	
7,400.00	7,060.23	7,024.23	7,060.23	34.55	243.49	-82.79	-448.33	-2,536.94	1,941.27	1,666.23	275.04	7.058	
7,500.00	7,060.03	7,024.03	7,060.03	35.83	243.49	-92.31	-448.33	-2,536.94	1,849.15	1,573.78	275.37	6.715	
7,600.00	7,058.28	7,022.28	7,058.28	37.28	243.42	-92.18	-448.33	-2,536.94	1,757.85	1,482.10	275.75	6.375	
7,700.00	7,056.53	7,020.53	7,056.53	38.89	243.36	-92.04	-448.33	-2,536.94	1,667.55	1,391.31	276.24	6.037	
7,800.00	7,054.78	7,018.78	7,054.78	40.63	243.30	-91.90	-448.33	-2,536.94	1,578.42	1,301.52	276.89	5.700	
7,900.00	7,053.03	7,017.03	7,053.03	42.50	243.24	-91.77	-448.33	-2,536.94	1,490.66	1,212.94	277.72	5.367	
8,000.00	7,051.28	7,015.28	7,051.28	44.47	243.18	-91.63	-448.33	-2,536.94	1,404.54	1,125.76	278.78	5.038	
8,100.00	7,049.53	7,013.53	7,049.53	46.53	243.12	-91.50	-448.33	-2,536.94	1,320.38	1,040.28	280.10	4.714	
8,200.00	7,047.78	7,011.78	7,047.78	48.67	243.06	-91.36	-448.33	-2,536.94	1,238.57	956.83	281.74	4.396	
8,300.00	7,046.03	7,010.03	7,046.03	50.89	243.00	-91.22	-448.33	-2,536.94	1,159.61	875.87	283.74	4.087	
8,400.00	7,044.28	7,008.28	7,044.28	53.16	242.94	-91.09	-448.33	-2,536.94	1,084.13	797.97	286.16	3.789	
8,500.00	7,042.53	7,006.53	7,042.53	55.49	242.88	-90.95	-448.33	-2,536.94	1,012.90	723.87	289.04	3.504	
8,600.00	7,040.78	7,004.78	7,040.78	57.86	242.81	-90.81	-448.33	-2,536.94	946.89	654.50	292.38	3.239	
8,700.00	7,039.03	7,003.03	7,039.03	60.28	242.75	-90.68	-448.33	-2,536.94	887.25	591.08	296.18	2.996	
8,800.00	7,037.28	7,001.28	7,037.28	62.74	242.69	-90.54	-448.33	-2,536.94	835.37	535.05	300.31	2.782	
8,900.00	7,035.53	7,000.47	7,035.53	65.23	242.66	-90.41	-448.33	-2,536.94	792.75	488.11	304.64	2.602	
9,000.00	7,033.78	7,002.22	7,033.78	67.74	242.72	-90.27	-448.33	-2,536.94	760.95	452.03	308.93	2.463	
9,100.00	7,032.03	7,003.97	7,032.03	70.29	242.79	-90.13	-448.33	-2,536.94	741.38	428.66	312.72	2.371	
9,197.06	7,030.34	7,005.66	7,030.34	72.78	242.84	-90.00	-448.33	-2,536.94	735.00	419.39	315.61	2.329 CC	
9,200.00	7,030.28	7,005.72	7,030.28	72.85	242.85	-90.00	-448.33	-2,536.94	735.01	419.33	315.68	2.328 ES, SF	
9,300.00	7,028.54	7,007.46	7,028.54	75.44	242.91	-89.86	-448.33	-2,536.94	742.18	424.60	317.57	2.337	
9,400.00	7,026.79	7,009.21	7,026.79	78.05	242.97	-89.72	-448.33	-2,536.94	762.50	444.16	318.34	2.395	
9,500.00	7,025.04	6,989.04	7,025.04	80.67	242.26	-89.59	-448.33	-2,536.94	794.97	477.63	317.34	2.505	
9,600.00	7,023.29	6,987.29	7,023.29	83.31	242.20	-89.45	-448.33	-2,536.94	838.18	521.96	316.22	2.651	
9,700.00	7,021.54	6,985.54	7,021.54	85.96	242.14	-89.31	-448.33	-2,536.94	890.56	575.97	314.59	2.831	
9,800.00	7,019.79	6,983.79	7,019.79	88.63	242.08	-89.18	-448.33	-2,536.94	950.61	637.92	312.69	3.040	
9,900.00	7,018.04	6,982.04	7,018.04	91.30	242.02	-89.04	-448.33	-2,536.94	1,016.96	706.29	310.67	3.273	
10,000.00	7,016.29	6,980.29	7,016.29	93.99	241.96	-88.91	-448.33	-2,536.94	1,088.46	779.79	308.67	3.526	
10,100.00	7,014.54	6,978.54	7,014.54	96.69	241.90	-88.77	-448.33	-2,536.94	1,164.17	857.43	306.74	3.795	
10,200.00	7,012.79	6,976.79	7,012.79	99.40	241.84	-88.63	-448.33	-2,536.94	1,243.31	938.39	304.92	4.077	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BURBACH 15-23(SI_150CC - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
10,300.00	7,011.04	6,975.04	7,011.04	102.11	241.78	-88.50	-448.33	-2,536.94	1,325.27	1,022.03	303.24	4.370		
10,400.00	7,009.29	6,973.29	7,009.29	104.83	241.71	-88.36	-448.33	-2,536.94	1,409.56	1,107.87	301.69	4.672		
10,500.00	7,007.54	6,971.54	7,007.54	107.56	241.65	-88.22	-448.33	-2,536.94	1,495.78	1,195.52	300.27	4.982		
10,600.00	7,005.79	6,969.79	7,005.79	110.30	241.59	-88.09	-448.33	-2,536.94	1,583.63	1,284.66	298.97	5.297		
10,700.00	7,004.04	6,968.04	7,004.04	113.04	241.53	-87.95	-448.33	-2,536.94	1,672.83	1,375.05	297.78	5.618		
10,800.00	7,002.29	6,966.29	7,002.29	115.79	241.47	-87.82	-448.33	-2,536.94	1,763.20	1,466.50	296.70	5.943		
10,900.00	7,000.54	6,964.54	7,000.54	118.54	241.41	-87.68	-448.33	-2,536.94	1,854.55	1,558.84	295.71	6.272		
11,000.00	6,998.79	6,962.79	6,998.79	121.30	241.35	-87.54	-448.33	-2,536.94	1,946.75	1,651.95	294.80	6.604		
11,100.00	6,997.04	6,961.04	6,997.04	124.06	241.29	-87.41	-448.33	-2,536.94	2,039.68	1,745.72	293.97	6.938		
11,200.00	6,995.29	6,959.29	6,995.29	126.83	241.23	-87.27	-448.33	-2,536.94	2,133.26	1,840.05	293.20	7.276		
11,300.00	6,993.54	6,957.54	6,993.54	129.60	241.17	-87.13	-448.33	-2,536.94	2,227.39	1,934.89	292.50	7.615		
11,400.00	6,991.80	6,955.80	6,991.80	132.37	241.10	-87.00	-448.33	-2,536.94	2,322.00	2,030.15	291.85	7.956		
11,500.00	6,990.05	6,954.05	6,990.05	135.15	241.04	-86.86	-448.33	-2,536.94	2,417.05	2,125.80	291.25	8.299		
11,600.00	6,988.30	6,952.30	6,988.30	137.93	240.98	-86.73	-448.33	-2,536.94	2,512.49	2,221.80	290.69	8.643		
11,700.00	6,986.55	6,950.55	6,986.55	140.72	240.92	-86.59	-448.33	-2,536.94	2,608.26	2,318.09	290.18	8.989		
11,800.00	6,984.80	6,948.80	6,984.80	143.50	240.86	-86.46	-448.33	-2,536.94	2,704.34	2,414.65	289.70	9.335		
11,900.00	6,983.05	6,947.05	6,983.05	146.29	240.80	-86.32	-448.33	-2,536.94	2,800.70	2,511.45	289.25	9.683		
12,000.00	6,981.30	6,945.30	6,981.30	149.09	240.74	-86.18	-448.33	-2,536.94	2,897.29	2,608.46	288.83	10.031		
12,100.00	6,979.55	6,943.55	6,979.55	151.88	240.68	-86.05	-448.33	-2,536.94	2,994.12	2,705.68	288.44	10.380		
12,200.00	6,977.80	6,941.80	6,977.80	154.68	240.62	-85.91	-448.33	-2,536.94	3,091.14	2,803.06	288.07	10.730		
12,300.00	6,976.05	6,940.05	6,976.05	157.48	240.55	-85.78	-448.33	-2,536.94	3,188.34	2,900.61	287.73	11.081		
12,400.00	6,974.30	6,938.30	6,974.30	160.28	240.49	-85.64	-448.33	-2,536.94	3,285.72	2,998.31	287.41	11.432		
12,500.00	6,972.55	6,936.55	6,972.55	163.08	240.43	-85.51	-448.33	-2,536.94	3,383.24	3,096.14	287.10	11.784		
12,600.00	6,970.80	6,934.80	6,970.80	165.89	240.37	-85.37	-448.33	-2,536.94	3,480.91	3,194.09	286.82	12.136		
12,700.00	6,969.05	6,933.05	6,969.05	168.69	240.31	-85.23	-448.33	-2,536.94	3,578.70	3,292.15	286.55	12.489		
12,800.00	6,967.30	6,931.30	6,967.30	171.50	240.25	-85.10	-448.33	-2,536.94	3,676.61	3,390.31	286.30	12.842		
12,900.00	6,965.55	6,929.55	6,965.55	174.31	240.19	-84.96	-448.33	-2,536.94	3,774.63	3,488.57	286.06	13.195		
13,000.00	6,963.80	6,927.80	6,963.80	177.12	240.13	-84.83	-448.33	-2,536.94	3,872.75	3,586.92	285.83	13.549		
13,100.00	6,962.05	6,926.05	6,962.05	179.94	240.07	-84.69	-448.33	-2,536.94	3,970.96	3,685.35	285.61	13.903		
13,200.00	6,960.30	6,924.30	6,960.30	182.75	240.00	-84.56	-448.33	-2,536.94	4,069.26	3,783.85	285.41	14.258		
13,300.00	6,958.55	6,922.55	6,958.55	185.57	239.94	-84.42	-448.33	-2,536.94	4,167.64	3,882.42	285.22	14.612		
13,400.00	6,956.80	6,920.80	6,956.80	188.38	239.88	-84.29	-448.33	-2,536.94	4,266.09	3,981.06	285.03	14.967		
13,500.00	6,955.05	6,919.05	6,955.05	191.20	239.82	-84.15	-448.33	-2,536.94	4,364.62	4,079.76	284.86	15.322		
13,600.00	6,953.31	6,917.31	6,953.31	194.02	239.76	-84.02	-448.33	-2,536.94	4,463.21	4,178.51	284.70	15.677		
13,700.00	6,951.56	6,915.56	6,951.56	196.84	239.70	-83.88	-448.33	-2,536.94	4,561.85	4,277.32	284.54	16.032		
13,800.00	6,949.81	6,913.81	6,949.81	199.67	239.64	-83.75	-448.33	-2,536.94	4,660.56	4,376.17	284.39	16.388		
13,900.00	6,948.06	6,912.06	6,948.06	202.49	239.58	-83.61	-448.33	-2,536.94	4,759.32	4,475.07	284.25	16.744		
14,000.00	6,946.31	6,910.31	6,946.31	205.31	239.52	-83.48	-448.33	-2,536.94	4,858.13	4,574.02	284.11	17.099		
14,100.00	6,944.56	6,908.56	6,944.56	208.14	239.46	-83.34	-448.33	-2,536.94	4,956.99	4,673.00	283.98	17.455		
14,200.00	6,942.81	6,906.81	6,942.81	210.96	239.39	-83.21	-448.33	-2,536.94	5,055.89	4,772.03	283.86	17.811		
14,300.00	6,941.06	6,905.06	6,941.06	213.79	239.33	-83.08	-448.33	-2,536.94	5,154.83	4,871.09	283.74	18.167		
14,400.00	6,939.31	6,903.31	6,939.31	216.62	239.27	-82.94	-448.33	-2,536.94	5,253.81	4,970.18	283.63	18.523		
14,500.00	6,937.56	6,901.56	6,937.56	219.44	239.21	-82.81	-448.33	-2,536.94	5,352.83	5,069.31	283.53	18.879		
14,600.00	6,935.81	6,900.19	6,935.81	222.27	239.16	-82.67	-448.33	-2,536.94	5,451.89	5,168.45	283.44	19.235		
14,700.00	6,934.06	6,901.94	6,934.06	225.10	239.22	-82.54	-448.33	-2,536.94	5,550.98	5,267.51	283.46	19.583		
14,800.00	6,932.31	6,903.69	6,932.31	227.93	239.29	-82.40	-448.33	-2,536.94	5,650.10	5,366.60	283.50	19.930		
14,817.75	6,932.00	6,904.00	6,932.00	228.43	239.30	-82.38	-448.33	-2,536.94	5,667.69	5,384.19	283.50	19.992		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BURMAN 16-42(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	47.00	3.28	3.28	-108.63	-1,617.42	-4,798.46	5,063.94					
100.00	100.00	53.00	100.00	3.28	3.41	-108.63	-1,617.42	-4,798.46	5,063.72	5,057.03	6.69	756.605		
200.00	200.00	153.00	200.00	3.34	4.87	-108.63	-1,617.42	-4,798.46	5,063.72	5,055.52	8.20	617.224		
300.00	300.00	253.00	300.00	3.44	7.81	-108.63	-1,617.42	-4,798.46	5,063.72	5,052.47	11.25	449.953		
400.00	400.00	353.00	400.00	3.60	11.07	-108.63	-1,617.42	-4,798.46	5,063.72	5,049.05	14.68	344.989		
500.00	500.00	453.00	500.00	3.81	14.45	-108.63	-1,617.42	-4,798.46	5,063.72	5,045.47	18.25	277.433		
600.00	599.98	552.98	599.98	4.05	17.86	-81.27	-1,617.42	-4,798.46	5,063.46	5,041.55	21.91	231.123		
700.00	699.86	652.86	699.86	4.32	21.30	-81.33	-1,617.42	-4,798.46	5,062.73	5,037.11	25.61	197.647		
800.00	799.72	752.72	799.72	4.62	24.75	-81.39	-1,617.42	-4,798.46	5,061.94	5,032.57	29.36	172.401		
900.00	899.58	852.58	899.58	4.93	28.21	-81.45	-1,617.42	-4,798.46	5,061.15	5,028.01	33.14	152.729		
1,000.00	999.44	952.44	999.44	5.27	31.67	-81.51	-1,617.42	-4,798.46	5,060.37	5,023.43	36.94	136.994		
1,100.00	1,099.31	1,052.31	1,099.31	5.62	35.14	-81.57	-1,617.42	-4,798.46	5,059.59	5,018.83	40.76	124.138		
1,200.00	1,199.17	1,152.17	1,199.17	5.98	38.62	-81.63	-1,617.42	-4,798.46	5,058.82	5,014.23	44.59	113.447		
1,300.00	1,299.03	1,252.03	1,299.03	6.36	42.09	-81.69	-1,617.42	-4,798.46	5,058.05	5,009.61	48.44	104.423		
1,400.00	1,398.89	1,351.89	1,398.89	6.74	45.57	-81.75	-1,617.42	-4,798.46	5,057.29	5,005.00	52.29	96.708		
1,500.00	1,498.75	1,451.75	1,498.75	7.13	49.04	-81.81	-1,617.42	-4,798.46	5,056.54	5,000.38	56.16	90.039		
1,600.00	1,598.61	1,551.61	1,598.61	7.52	52.52	-81.86	-1,617.42	-4,798.46	5,055.79	4,995.76	60.03	84.220		
1,700.00	1,698.47	1,651.47	1,698.47	7.92	56.00	-81.92	-1,617.42	-4,798.46	5,055.04	4,991.13	63.91	79.098		
1,800.00	1,798.33	1,751.33	1,798.33	8.32	59.48	-81.98	-1,617.42	-4,798.46	5,054.30	4,986.51	67.79	74.557		
1,900.00	1,898.19	1,851.19	1,898.19	8.73	62.97	-82.04	-1,617.42	-4,798.46	5,053.57	4,981.89	71.68	70.503		
2,000.00	1,998.05	1,951.05	1,998.05	9.14	66.45	-82.10	-1,617.42	-4,798.46	5,052.84	4,977.27	75.57	66.864		
2,100.00	2,097.91	2,050.91	2,097.91	9.55	69.93	-82.16	-1,617.42	-4,798.46	5,052.12	4,972.65	79.46	63.578		
2,200.00	2,197.78	2,150.78	2,197.78	9.97	73.41	-82.22	-1,617.42	-4,798.46	5,051.40	4,968.04	83.36	60.597		
2,300.00	2,297.64	2,250.64	2,297.64	10.39	76.89	-82.28	-1,617.42	-4,798.46	5,050.69	4,963.43	87.26	57.881		
2,400.00	2,397.50	2,350.50	2,397.50	10.81	80.38	-82.34	-1,617.42	-4,798.46	5,049.98	4,958.82	91.16	55.396		
2,500.00	2,497.36	2,450.36	2,497.36	11.23	83.86	-82.40	-1,617.42	-4,798.46	5,049.28	4,954.22	95.06	53.114		
2,600.00	2,597.22	2,550.22	2,597.22	11.65	87.34	-82.46	-1,617.42	-4,798.46	5,048.58	4,949.62	98.97	51.012		
2,700.00	2,697.08	2,650.08	2,697.08	12.07	90.83	-82.52	-1,617.42	-4,798.46	5,047.89	4,945.02	102.88	49.068		
2,800.00	2,796.94	2,749.94	2,796.94	12.50	94.31	-82.57	-1,617.42	-4,798.46	5,047.21	4,940.42	106.78	47.266		
2,900.00	2,896.80	2,849.80	2,896.80	12.92	97.80	-82.63	-1,617.42	-4,798.46	5,046.53	4,935.84	110.69	45.590		
3,000.00	2,996.66	2,949.66	2,996.66	13.35	101.28	-82.69	-1,617.42	-4,798.46	5,045.86	4,931.25	114.60	44.029		
3,100.00	3,096.52	3,049.52	3,096.52	13.78	104.76	-82.75	-1,617.42	-4,798.46	5,045.19	4,926.67	118.52	42.570		
3,200.00	3,196.38	3,149.38	3,196.38	14.21	108.25	-82.81	-1,617.42	-4,798.46	5,044.52	4,922.09	122.43	41.204		
3,300.00	3,296.25	3,249.25	3,296.25	14.64	111.73	-82.87	-1,617.42	-4,798.46	5,043.86	4,917.52	126.34	39.923		
3,400.00	3,396.11	3,349.11	3,396.11	15.07	115.22	-82.93	-1,617.42	-4,798.46	5,043.21	4,912.96	130.26	38.718		
3,500.00	3,495.97	3,448.97	3,495.97	15.50	118.70	-82.99	-1,617.42	-4,798.46	5,042.57	4,908.40	134.17	37.583		
3,600.00	3,595.83	3,548.83	3,595.83	15.93	122.19	-83.05	-1,617.42	-4,798.46	5,041.92	4,903.84	138.09	36.513		
3,700.00	3,695.69	3,648.69	3,695.69	16.36	125.67	-83.11	-1,617.42	-4,798.46	5,041.29	4,899.29	142.00	35.502		
3,800.00	3,795.55	3,748.55	3,795.55	16.80	129.16	-83.17	-1,617.42	-4,798.46	5,040.66	4,894.74	145.92	34.544		
3,900.00	3,895.41	3,848.41	3,895.41	17.23	132.64	-83.23	-1,617.42	-4,798.46	5,040.03	4,890.20	149.84	33.637		
4,000.00	3,995.27	3,948.27	3,995.27	17.66	136.13	-83.29	-1,617.42	-4,798.46	5,039.41	4,885.66	153.75	32.776		
4,100.00	4,095.13	4,048.13	4,095.13	18.10	139.61	-83.35	-1,617.42	-4,798.46	5,038.80	4,881.13	157.67	31.958		
4,200.00	4,194.99	4,147.99	4,194.99	18.53	143.10	-83.41	-1,617.42	-4,798.46	5,038.19	4,876.60	161.59	31.179		
4,300.00	4,294.85	4,247.85	4,294.85	18.96	146.58	-83.47	-1,617.42	-4,798.46	5,037.58	4,872.08	165.51	30.437		
4,400.00	4,394.71	4,347.71	4,394.71	19.40	150.07	-83.53	-1,617.42	-4,798.46	5,036.99	4,867.56	169.43	29.730		
4,500.00	4,494.58	4,447.58	4,494.58	19.83	153.55	-83.58	-1,617.42	-4,798.46	5,036.39	4,863.05	173.35	29.054		
4,600.00	4,594.44	4,547.44	4,594.44	20.27	157.04	-83.64	-1,617.42	-4,798.46	5,035.81	4,858.54	177.27	28.408		
4,700.00	4,694.30	4,647.30	4,694.30	20.71	160.53	-83.70	-1,617.42	-4,798.46	5,035.22	4,854.04	181.19	27.790		
4,800.00	4,794.16	4,747.16	4,794.16	21.14	164.01	-83.76	-1,617.42	-4,798.46	5,034.65	4,849.54	185.11	27.199		
4,900.00	4,894.02	4,847.02	4,894.02	21.58	167.50	-83.82	-1,617.42	-4,798.46	5,034.08	4,845.05	189.03	26.631		
5,000.00	4,993.88	4,946.88	4,993.88	22.01	170.98	-83.88	-1,617.42	-4,798.46	5,033.51	4,840.56	192.95	26.087		
5,100.00	5,093.74	5,046.74	5,093.74	22.45	174.47	-83.94	-1,617.42	-4,798.46	5,032.95	4,836.08	196.87	25.565		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BURMAN 16-42(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,146.60	5,193.60	22.89	177.95	-84.00	-1,617.42	-4,798.46	5,032.40	4,831.61	200.79	25.063		
5,300.00	5,293.46	5,246.46	5,293.46	23.32	181.44	-84.06	-1,617.42	-4,798.46	5,031.85	4,827.14	204.71	24.580		
5,400.00	5,393.32	5,346.32	5,393.32	23.76	184.92	-84.12	-1,617.42	-4,798.46	5,031.30	4,822.67	208.63	24.115		
5,500.00	5,493.18	5,446.18	5,493.18	24.20	188.41	-84.18	-1,617.42	-4,798.46	5,030.77	4,818.21	212.56	23.668		
5,600.00	5,593.05	5,546.05	5,593.05	24.64	191.90	-84.24	-1,617.42	-4,798.46	5,030.23	4,813.76	216.48	23.237		
5,700.00	5,692.91	5,645.91	5,692.91	25.07	195.38	-84.30	-1,617.42	-4,798.46	5,029.71	4,809.31	220.40	22.821		
5,800.00	5,792.77	5,745.77	5,792.77	25.51	198.87	-84.36	-1,617.42	-4,798.46	5,029.18	4,804.86	224.32	22.419		
5,900.00	5,892.63	5,845.63	5,892.63	25.95	202.35	-84.42	-1,617.42	-4,798.46	5,028.67	4,800.42	228.25	22.032		
6,000.00	5,992.49	5,945.49	5,992.49	26.39	205.84	-84.48	-1,617.42	-4,798.46	5,028.16	4,795.99	232.17	21.657		
6,100.00	6,092.35	6,045.35	6,092.35	26.82	209.32	-84.54	-1,617.42	-4,798.46	5,027.65	4,791.56	236.09	21.295		
6,200.00	6,192.21	6,145.21	6,192.21	27.26	212.81	-84.60	-1,617.42	-4,798.46	5,027.15	4,787.14	240.01	20.945		
6,300.00	6,292.07	6,245.07	6,292.07	27.70	216.30	-84.66	-1,617.42	-4,798.46	5,026.66	4,782.72	243.94	20.606		
6,400.00	6,391.93	6,344.93	6,391.93	28.14	219.78	-84.72	-1,617.42	-4,798.46	5,026.17	4,778.31	247.86	20.278		
6,500.00	6,491.69	6,444.69	6,491.69	28.58	223.26	-46.04	-1,617.42	-4,798.46	5,023.76	4,771.98	251.78	19.953		
6,600.00	6,589.80	6,542.80	6,589.80	29.02	226.69	-32.77	-1,617.42	-4,798.46	5,008.57	4,752.93	255.64	19.593		
6,700.00	6,683.86	6,636.86	6,683.86	29.46	229.97	-30.35	-1,617.42	-4,798.46	4,979.30	4,719.96	259.34	19.200		
6,800.00	6,771.56	6,724.56	6,771.56	29.92	233.03	-30.74	-1,617.42	-4,798.46	4,936.73	4,673.94	262.79	18.786		
6,900.00	6,850.72	6,803.72	6,850.72	30.40	235.80	-32.89	-1,617.42	-4,798.46	4,881.97	4,616.05	265.92	18.359		
7,000.00	6,919.40	6,872.40	6,919.40	30.96	238.19	-36.82	-1,617.42	-4,798.46	4,816.43	4,547.78	268.65	17.928		
7,100.00	6,975.92	6,928.92	6,975.92	31.62	240.17	-43.03	-1,617.42	-4,798.46	4,741.83	4,470.89	270.94	17.501		
7,200.00	7,018.87	6,971.87	7,018.87	32.44	241.67	-52.41	-1,617.42	-4,798.46	4,660.06	4,387.32	272.74	17.086		
7,300.00	7,047.21	7,000.21	7,047.21	33.42	242.65	-65.98	-1,617.42	-4,798.46	4,573.20	4,299.17	274.03	16.688		
7,400.00	7,060.23	7,013.23	7,060.23	34.55	243.11	-83.63	-1,617.42	-4,798.46	4,483.46	4,208.65	274.80	16.315		
7,500.00	7,060.03	7,013.03	7,060.03	35.83	243.10	-92.11	-1,617.42	-4,798.46	4,393.00	4,117.86	275.14	15.966		
7,600.00	7,058.28	7,011.28	7,058.28	37.28	243.04	-92.05	-1,617.42	-4,798.46	4,302.92	4,027.43	275.49	15.619		
7,700.00	7,056.53	7,009.53	7,056.53	38.89	242.98	-92.00	-1,617.42	-4,798.46	4,213.29	3,937.38	275.92	15.270		
7,800.00	7,054.78	7,007.78	7,054.78	40.63	242.92	-91.95	-1,617.42	-4,798.46	4,124.14	3,847.72	276.43	14.920		
7,900.00	7,053.03	7,006.03	7,053.03	42.50	242.86	-91.89	-1,617.42	-4,798.46	4,035.50	3,758.48	277.02	14.568		
8,000.00	7,051.28	7,004.28	7,051.28	44.47	242.80	-91.84	-1,617.42	-4,798.46	3,947.39	3,669.69	277.71	14.214		
8,100.00	7,049.53	7,002.53	7,049.53	46.53	242.74	-91.79	-1,617.42	-4,798.46	3,859.87	3,581.37	278.49	13.860		
8,200.00	7,047.78	7,000.78	7,047.78	48.67	242.67	-91.74	-1,617.42	-4,798.46	3,772.96	3,493.58	279.38	13.505		
8,300.00	7,046.03	7,000.97	7,046.03	50.89	242.68	-91.68	-1,617.42	-4,798.46	3,686.72	3,406.27	280.45	13.146		
8,400.00	7,044.28	7,002.72	7,044.28	53.16	242.74	-91.63	-1,617.42	-4,798.46	3,601.19	3,319.50	281.69	12.784		
8,500.00	7,042.53	7,004.47	7,042.53	55.49	242.80	-91.58	-1,617.42	-4,798.46	3,516.42	3,233.37	283.05	12.423		
8,600.00	7,040.78	7,006.22	7,040.78	57.86	242.86	-91.52	-1,617.42	-4,798.46	3,432.47	3,147.94	284.53	12.064		
8,700.00	7,039.03	7,007.97	7,039.03	60.28	242.93	-91.47	-1,617.42	-4,798.46	3,349.41	3,063.26	286.15	11.705		
8,800.00	7,037.28	7,009.72	7,037.28	62.74	242.99	-91.42	-1,617.42	-4,798.46	3,267.28	2,979.38	287.90	11.349		
8,900.00	7,035.53	6,988.53	7,035.53	65.23	242.25	-91.36	-1,617.42	-4,798.46	3,186.19	2,897.19	289.00	11.025		
9,000.00	7,033.78	6,986.78	7,033.78	67.74	242.19	-91.31	-1,617.42	-4,798.46	3,106.19	2,815.27	290.91	10.677		
9,100.00	7,032.03	6,985.03	7,032.03	70.29	242.12	-91.26	-1,617.42	-4,798.46	3,027.38	2,734.39	292.98	10.333		
9,200.00	7,030.28	6,983.28	7,030.28	72.85	242.06	-91.20	-1,617.42	-4,798.46	2,949.85	2,654.64	295.21	9.992		
9,300.00	7,028.54	6,981.54	7,028.54	75.44	242.00	-91.15	-1,617.42	-4,798.46	2,873.71	2,576.12	297.59	9.656		
9,400.00	7,026.79	6,979.79	7,026.79	78.05	241.94	-91.10	-1,617.42	-4,798.46	2,799.07	2,498.93	300.14	9.326		
9,500.00	7,025.04	6,978.04	7,025.04	80.67	241.88	-91.04	-1,617.42	-4,798.46	2,726.06	2,423.20	302.86	9.001		
9,600.00	7,023.29	6,976.29	7,023.29	83.31	241.82	-90.99	-1,617.42	-4,798.46	2,654.81	2,349.07	305.74	8.683		
9,700.00	7,021.54	6,974.54	7,021.54	85.96	241.76	-90.94	-1,617.42	-4,798.46	2,585.45	2,276.66	308.79	8.373		
9,800.00	7,019.79	6,972.79	7,019.79	88.63	241.70	-90.89	-1,617.42	-4,798.46	2,518.16	2,206.15	312.01	8.071		
9,900.00	7,018.04	6,971.04	7,018.04	91.30	241.64	-90.83	-1,617.42	-4,798.46	2,453.10	2,137.71	315.39	7.778		
10,000.00	7,016.29	6,969.29	7,016.29	93.99	241.58	-90.78	-1,617.42	-4,798.46	2,390.45	2,071.52	318.93	7.495		
10,100.00	7,014.54	6,967.54	7,014.54	96.69	241.51	-90.73	-1,617.42	-4,798.46	2,330.41	2,007.79	322.62	7.223		
10,200.00	7,012.79	6,965.79	7,012.79	99.40	241.45	-90.67	-1,617.42	-4,798.46	2,273.18	1,946.73	326.45	6.963		
10,300.00	7,011.04	6,964.04	7,011.04	102.11	241.39	-90.62	-1,617.42	-4,798.46	2,218.99	1,888.58	330.41	6.716		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BURMAN 16-42(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	6,962.29	7,009.29	104.83	241.33	-90.57	-1,617.42	-4,798.46	2,168.05	1,833.58	334.47	6.482		
10,500.00	7,007.54	6,960.54	7,007.54	107.56	241.27	-90.51	-1,617.42	-4,798.46	2,120.61	1,782.00	338.60	6.263		
10,600.00	7,005.79	6,958.79	7,005.79	110.30	241.21	-90.46	-1,617.42	-4,798.46	2,076.90	1,734.11	342.79	6.059		
10,700.00	7,004.04	6,957.04	7,004.04	113.04	241.15	-90.41	-1,617.42	-4,798.46	2,037.16	1,690.17	346.99	5.871		
10,800.00	7,002.29	6,955.29	7,002.29	115.79	241.09	-90.35	-1,617.42	-4,798.46	2,001.63	1,650.47	351.16	5.700		
10,900.00	7,000.54	6,953.54	7,000.54	118.54	241.03	-90.30	-1,617.42	-4,798.46	1,970.54	1,615.28	355.26	5.547		
11,000.00	6,998.79	6,951.79	6,998.79	121.30	240.96	-90.25	-1,617.42	-4,798.46	1,944.10	1,584.86	359.24	5.412		
11,100.00	6,997.04	6,950.04	6,997.04	124.06	240.90	-90.20	-1,617.42	-4,798.46	1,922.50	1,559.45	363.06	5.295		
11,200.00	6,995.29	6,948.29	6,995.29	126.83	240.84	-90.14	-1,617.42	-4,798.46	1,905.91	1,539.25	366.66	5.198		
11,300.00	6,993.54	6,946.54	6,993.54	129.60	240.78	-90.09	-1,617.42	-4,798.46	1,894.46	1,524.46	370.01	5.120		
11,400.00	6,991.80	6,944.80	6,991.80	132.37	240.72	-90.04	-1,617.42	-4,798.46	1,888.24	1,515.19	373.05	5.062		
11,467.67	6,990.61	6,943.61	6,990.61	134.25	240.68	-90.00	-1,617.42	-4,798.46	1,887.03	1,512.10	374.93	5.033 CC		
11,500.00	6,990.05	6,943.05	6,990.05	135.15	240.66	-89.98	-1,617.42	-4,798.46	1,887.31	1,511.54	375.76	5.023 ES		
11,600.00	6,988.30	6,941.30	6,988.30	137.93	240.60	-89.93	-1,617.42	-4,798.46	1,891.66	1,513.55	378.12	5.003		
11,700.00	6,986.55	6,939.55	6,986.55	140.72	240.54	-89.88	-1,617.42	-4,798.46	1,901.27	1,521.18	380.10	5.002 SF		
11,800.00	6,984.80	6,937.80	6,984.80	143.50	240.48	-89.82	-1,617.42	-4,798.46	1,916.06	1,534.37	381.69	5.020		
11,900.00	6,983.05	6,936.05	6,983.05	146.29	240.41	-89.77	-1,617.42	-4,798.46	1,935.91	1,553.00	382.91	5.056		
12,000.00	6,981.30	6,934.30	6,981.30	149.09	240.35	-89.72	-1,617.42	-4,798.46	1,960.66	1,576.89	383.76	5.109		
12,100.00	6,979.55	6,932.55	6,979.55	151.88	240.29	-89.66	-1,617.42	-4,798.46	1,990.13	1,605.86	384.27	5.179		
12,200.00	6,977.80	6,930.80	6,977.80	154.68	240.23	-89.61	-1,617.42	-4,798.46	2,024.11	1,639.66	384.45	5.265		
12,300.00	6,976.05	6,929.05	6,976.05	157.48	240.17	-89.56	-1,617.42	-4,798.46	2,062.39	1,678.05	384.34	5.366		
12,400.00	6,974.30	6,927.30	6,974.30	160.28	240.11	-89.50	-1,617.42	-4,798.46	2,104.72	1,720.76	383.97	5.482		
12,500.00	6,972.55	6,925.55	6,972.55	163.08	240.05	-89.45	-1,617.42	-4,798.46	2,150.88	1,767.51	383.37	5.610		
12,600.00	6,970.80	6,923.80	6,970.80	165.89	239.99	-89.40	-1,617.42	-4,798.46	2,200.61	1,818.03	382.57	5.752		
12,700.00	6,969.05	6,922.05	6,969.05	168.69	239.93	-89.35	-1,617.42	-4,798.46	2,253.68	1,872.07	381.61	5.906		
12,800.00	6,967.30	6,920.30	6,967.30	171.50	239.87	-89.29	-1,617.42	-4,798.46	2,309.86	1,929.35	380.51	6.070		
12,900.00	6,965.55	6,918.55	6,965.55	174.31	239.80	-89.24	-1,617.42	-4,798.46	2,368.93	1,989.63	379.30	6.245		
13,000.00	6,963.80	6,916.80	6,963.80	177.12	239.74	-89.19	-1,617.42	-4,798.46	2,430.68	2,052.67	378.01	6.430		
13,100.00	6,962.05	6,915.05	6,962.05	179.94	239.68	-89.13	-1,617.42	-4,798.46	2,494.91	2,118.26	376.65	6.624		
13,200.00	6,960.30	6,913.30	6,960.30	182.75	239.62	-89.08	-1,617.42	-4,798.46	2,561.43	2,186.19	375.24	6.826		
13,300.00	6,958.55	6,911.55	6,958.55	185.57	239.56	-89.03	-1,617.42	-4,798.46	2,630.08	2,256.27	373.80	7.036		
13,400.00	6,956.80	6,909.80	6,956.80	188.38	239.50	-88.97	-1,617.42	-4,798.46	2,700.68	2,328.33	372.35	7.253		
13,500.00	6,955.05	6,908.05	6,955.05	191.20	239.44	-88.92	-1,617.42	-4,798.46	2,773.08	2,402.20	370.88	7.477		
13,600.00	6,953.31	6,906.31	6,953.31	194.02	239.38	-88.87	-1,617.42	-4,798.46	2,847.16	2,477.74	369.42	7.707		
13,700.00	6,951.56	6,904.56	6,951.56	196.84	239.32	-88.81	-1,617.42	-4,798.46	2,922.78	2,554.81	367.97	7.943		
13,800.00	6,949.81	6,902.81	6,949.81	199.67	239.25	-88.76	-1,617.42	-4,798.46	2,999.83	2,633.29	366.54	8.184		
13,900.00	6,948.06	6,901.06	6,948.06	202.49	239.19	-88.71	-1,617.42	-4,798.46	3,078.20	2,713.07	365.13	8.431		
14,000.00	6,946.31	6,900.69	6,946.31	205.31	239.18	-88.66	-1,617.42	-4,798.46	3,157.79	2,794.00	363.79	8.680		
14,100.00	6,944.56	6,902.44	6,944.56	208.14	239.24	-88.60	-1,617.42	-4,798.46	3,238.51	2,875.96	362.55	8.933		
14,200.00	6,942.81	6,904.19	6,942.81	210.96	239.30	-88.55	-1,617.42	-4,798.46	3,320.28	2,958.94	361.34	9.189		
14,300.00	6,941.06	6,905.94	6,941.06	213.79	239.36	-88.50	-1,617.42	-4,798.46	3,403.02	3,042.85	360.17	9.448		
14,400.00	6,939.31	6,907.69	6,939.31	216.62	239.42	-88.44	-1,617.42	-4,798.46	3,486.66	3,127.64	359.02	9.711		
14,500.00	6,937.56	6,909.44	6,937.56	219.44	239.49	-88.39	-1,617.42	-4,798.46	3,571.15	3,213.23	357.92	9.978		
14,600.00	6,935.81	6,888.81	6,935.81	222.27	238.77	-88.34	-1,617.42	-4,798.46	3,656.42	3,300.36	356.06	10.269		
14,700.00	6,934.06	6,887.06	6,934.06	225.10	238.70	-88.28	-1,617.42	-4,798.46	3,742.41	3,387.52	354.90	10.545		
14,800.00	6,932.31	6,885.31	6,932.31	227.93	238.64	-88.23	-1,617.42	-4,798.46	3,829.09	3,475.32	353.77	10.824		
14,817.75	6,932.00	6,885.00	6,932.00	228.43	238.63	-88.22	-1,617.42	-4,798.46	3,844.54	3,490.97	353.57	10.874		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BURMAN 16-43(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	50.00	3.28	3.28	-122.99	-3,118.35	-4,804.32	5,727.84					
100.00	100.00	50.00	100.00	3.28	3.39	-122.99	-3,118.35	-4,804.32	5,727.62	5,720.94	6.68	857.575		
200.00	200.00	150.00	200.00	3.34	4.79	-122.99	-3,118.35	-4,804.32	5,727.62	5,719.49	8.13	704.749		
300.00	300.00	250.00	300.00	3.44	7.71	-122.99	-3,118.35	-4,804.32	5,727.62	5,716.46	11.16	513.275		
400.00	400.00	350.00	400.00	3.60	10.97	-122.99	-3,118.35	-4,804.32	5,727.62	5,713.04	14.58	392.896		
500.00	500.00	450.00	500.00	3.81	14.34	-122.99	-3,118.35	-4,804.32	5,727.62	5,709.47	18.15	315.570		
600.00	599.98	549.98	599.98	4.05	17.76	-95.62	-3,118.35	-4,804.32	5,727.79	5,705.98	21.81	262.680		
700.00	699.86	649.86	699.86	4.32	21.20	-95.66	-3,118.35	-4,804.32	5,728.26	5,702.75	25.51	224.533		
800.00	799.72	749.72	799.72	4.62	24.65	-95.72	-3,118.35	-4,804.32	5,728.79	5,699.53	29.26	195.800		
900.00	899.58	849.58	899.58	4.93	28.11	-95.77	-3,118.35	-4,804.32	5,729.31	5,696.28	33.04	173.430		
1,000.00	999.44	949.44	999.44	5.27	31.57	-95.82	-3,118.35	-4,804.32	5,729.85	5,693.01	36.84	155.550		
1,100.00	1,099.31	1,049.31	1,099.31	5.62	35.04	-95.87	-3,118.35	-4,804.32	5,730.39	5,689.73	40.66	140.950		
1,200.00	1,199.17	1,149.17	1,199.17	5.98	38.51	-95.93	-3,118.35	-4,804.32	5,730.93	5,686.44	44.49	128.814		
1,300.00	1,299.03	1,249.03	1,299.03	6.36	41.99	-95.98	-3,118.35	-4,804.32	5,731.48	5,683.14	48.34	118.574		
1,400.00	1,398.89	1,348.89	1,398.89	6.74	45.46	-96.03	-3,118.35	-4,804.32	5,732.03	5,679.83	52.19	109.823		
1,500.00	1,498.75	1,448.75	1,498.75	7.13	48.94	-96.08	-3,118.35	-4,804.32	5,732.59	5,676.53	56.06	102.260		
1,600.00	1,598.61	1,548.61	1,598.61	7.52	52.42	-96.14	-3,118.35	-4,804.32	5,733.15	5,673.22	59.93	95.663		
1,700.00	1,698.47	1,648.47	1,698.47	7.92	55.90	-96.19	-3,118.35	-4,804.32	5,733.71	5,669.91	63.81	89.858		
1,800.00	1,798.33	1,748.33	1,798.33	8.32	59.38	-96.24	-3,118.35	-4,804.32	5,734.29	5,666.59	67.69	84.711		
1,900.00	1,898.19	1,848.19	1,898.19	8.73	62.86	-96.29	-3,118.35	-4,804.32	5,734.86	5,663.28	71.58	80.119		
2,000.00	1,998.05	1,948.05	1,998.05	9.14	66.34	-96.35	-3,118.35	-4,804.32	5,735.44	5,659.97	75.47	75.996		
2,100.00	2,097.91	2,047.91	2,097.91	9.55	69.82	-96.40	-3,118.35	-4,804.32	5,736.03	5,656.66	79.37	72.274		
2,200.00	2,197.78	2,147.78	2,197.78	9.97	73.31	-96.45	-3,118.35	-4,804.32	5,736.62	5,653.36	83.26	68.898		
2,300.00	2,297.64	2,247.64	2,297.64	10.39	76.79	-96.50	-3,118.35	-4,804.32	5,737.22	5,650.05	87.16	65.822		
2,400.00	2,397.50	2,347.50	2,397.50	10.81	80.27	-96.55	-3,118.35	-4,804.32	5,737.82	5,646.75	91.06	63.009		
2,500.00	2,497.36	2,447.36	2,497.36	11.23	83.76	-96.61	-3,118.35	-4,804.32	5,738.42	5,643.45	94.97	60.425		
2,600.00	2,597.22	2,547.22	2,597.22	11.65	87.24	-96.66	-3,118.35	-4,804.32	5,739.03	5,640.16	98.87	58.044		
2,700.00	2,697.08	2,647.08	2,697.08	12.07	90.72	-96.71	-3,118.35	-4,804.32	5,739.65	5,636.87	102.78	55.844		
2,800.00	2,796.94	2,746.94	2,796.94	12.50	94.21	-96.76	-3,118.35	-4,804.32	5,740.27	5,633.58	106.69	53.804		
2,900.00	2,896.80	2,846.80	2,896.80	12.92	97.69	-96.82	-3,118.35	-4,804.32	5,740.89	5,630.29	110.60	51.907		
3,000.00	2,996.66	2,946.66	2,996.66	13.35	101.18	-96.87	-3,118.35	-4,804.32	5,741.52	5,627.01	114.51	50.140		
3,100.00	3,096.52	3,046.52	3,096.52	13.78	104.66	-96.92	-3,118.35	-4,804.32	5,742.15	5,623.73	118.42	48.489		
3,200.00	3,196.38	3,146.38	3,196.38	14.21	108.14	-96.97	-3,118.35	-4,804.32	5,742.79	5,620.46	122.33	46.943		
3,300.00	3,296.25	3,246.25	3,296.25	14.64	111.63	-97.02	-3,118.35	-4,804.32	5,743.43	5,617.19	126.25	45.493		
3,400.00	3,396.11	3,346.11	3,396.11	15.07	115.11	-97.08	-3,118.35	-4,804.32	5,744.08	5,613.92	130.16	44.130		
3,500.00	3,495.97	3,445.97	3,495.97	15.50	118.60	-97.13	-3,118.35	-4,804.32	5,744.73	5,610.66	134.08	42.846		
3,600.00	3,595.83	3,545.83	3,595.83	15.93	122.08	-97.18	-3,118.35	-4,804.32	5,745.39	5,607.40	137.99	41.635		
3,700.00	3,695.69	3,645.69	3,695.69	16.36	125.57	-97.23	-3,118.35	-4,804.32	5,746.05	5,604.14	141.91	40.491		
3,800.00	3,795.55	3,745.55	3,795.55	16.80	129.05	-97.28	-3,118.35	-4,804.32	5,746.72	5,600.90	145.83	39.408		
3,900.00	3,895.41	3,845.41	3,895.41	17.23	132.54	-97.34	-3,118.35	-4,804.32	5,747.39	5,597.65	149.74	38.381		
4,000.00	3,995.27	3,945.27	3,995.27	17.66	136.02	-97.39	-3,118.35	-4,804.32	5,748.07	5,594.41	153.66	37.407		
4,100.00	4,095.13	4,045.13	4,095.13	18.10	139.51	-97.44	-3,118.35	-4,804.32	5,748.75	5,591.17	157.58	36.481		
4,200.00	4,194.99	4,144.99	4,194.99	18.53	142.99	-97.49	-3,118.35	-4,804.32	5,749.44	5,587.94	161.50	35.600		
4,300.00	4,294.85	4,244.85	4,294.85	18.96	146.48	-97.54	-3,118.35	-4,804.32	5,750.13	5,584.71	165.42	34.761		
4,400.00	4,394.71	4,344.71	4,394.71	19.40	149.96	-97.60	-3,118.35	-4,804.32	5,750.82	5,581.49	169.34	33.961		
4,500.00	4,494.58	4,444.58	4,494.58	19.83	153.45	-97.65	-3,118.35	-4,804.32	5,751.53	5,578.27	173.26	33.196		
4,600.00	4,594.44	4,544.44	4,594.44	20.27	156.94	-97.70	-3,118.35	-4,804.32	5,752.23	5,575.05	177.18	32.466		
4,700.00	4,694.30	4,644.30	4,694.30	20.71	160.42	-97.75	-3,118.35	-4,804.32	5,752.94	5,571.84	181.10	31.767		
4,800.00	4,794.16	4,744.16	4,794.16	21.14	163.91	-97.80	-3,118.35	-4,804.32	5,753.65	5,568.64	185.02	31.098		
4,900.00	4,894.02	4,844.02	4,894.02	21.58	167.39	-97.86	-3,118.35	-4,804.32	5,754.37	5,565.43	188.94	30.456		
5,000.00	4,993.88	4,943.88	4,993.88	22.01	170.88	-97.91	-3,118.35	-4,804.32	5,755.10	5,562.24	192.86	29.841		
5,100.00	5,093.74	5,043.74	5,093.74	22.45	174.36	-97.96	-3,118.35	-4,804.32	5,755.83	5,559.04	196.78	29.250		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BURMAN 16-43(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,143.60	5,193.60	22.89	177.85	-98.01	-3,118.35	-4,804.32	5,756.56	5,555.86	200.71	28.682		
5,300.00	5,293.46	5,243.46	5,293.46	23.32	181.33	-98.06	-3,118.35	-4,804.32	5,757.30	5,552.67	204.63	28.136		
5,400.00	5,393.32	5,343.32	5,393.32	23.76	184.82	-98.12	-3,118.35	-4,804.32	5,758.04	5,549.49	208.55	27.610		
5,500.00	5,493.18	5,443.18	5,493.18	24.20	188.31	-98.17	-3,118.35	-4,804.32	5,758.79	5,546.32	212.47	27.104		
5,600.00	5,593.05	5,543.05	5,593.05	24.64	191.79	-98.22	-3,118.35	-4,804.32	5,759.54	5,543.15	216.39	26.616		
5,700.00	5,692.91	5,642.91	5,692.91	25.07	195.28	-98.27	-3,118.35	-4,804.32	5,760.30	5,539.98	220.32	26.146		
5,800.00	5,792.77	5,742.77	5,792.77	25.51	198.76	-98.32	-3,118.35	-4,804.32	5,761.06	5,536.82	224.24	25.692		
5,900.00	5,892.63	5,842.63	5,892.63	25.95	202.25	-98.38	-3,118.35	-4,804.32	5,761.83	5,533.67	228.16	25.253		
6,000.00	5,992.49	5,942.49	5,992.49	26.39	205.73	-98.43	-3,118.35	-4,804.32	5,762.60	5,530.51	232.09	24.830		
6,100.00	6,092.35	6,042.35	6,092.35	26.82	209.22	-98.48	-3,118.35	-4,804.32	5,763.38	5,527.37	236.01	24.420		
6,200.00	6,192.21	6,142.21	6,192.21	27.26	212.70	-98.53	-3,118.35	-4,804.32	5,764.16	5,524.23	239.93	24.024		
6,300.00	6,292.07	6,242.07	6,292.07	27.70	216.19	-98.58	-3,118.35	-4,804.32	5,764.94	5,521.09	243.86	23.641		
6,400.00	6,391.93	6,341.93	6,391.93	28.14	219.68	-98.63	-3,118.35	-4,804.32	5,765.73	5,517.95	247.78	23.270		
6,500.00	6,491.69	6,441.69	6,491.69	28.58	223.16	-59.95	-3,118.35	-4,804.32	5,764.84	5,513.14	251.70	22.904		
6,600.00	6,589.80	6,539.80	6,589.80	29.02	226.58	-46.82	-3,118.35	-4,804.32	5,752.76	5,497.20	255.56	22.511		
6,700.00	6,683.86	6,633.86	6,683.86	29.46	229.87	-44.72	-3,118.35	-4,804.32	5,728.37	5,469.10	259.27	22.094		
6,800.00	6,771.56	6,721.56	6,771.56	29.92	232.93	-45.59	-3,118.35	-4,804.32	5,692.35	5,429.61	262.74	21.665		
6,900.00	6,850.72	6,800.72	6,850.72	30.40	235.69	-48.28	-3,118.35	-4,804.32	5,645.74	5,379.84	265.91	21.232		
7,000.00	6,919.40	6,869.40	6,919.40	30.96	238.09	-52.62	-3,118.35	-4,804.32	5,589.84	5,321.13	268.71	20.803		
7,100.00	6,975.92	6,925.92	6,975.92	31.62	240.06	-58.66	-3,118.35	-4,804.32	5,526.17	5,255.07	271.10	20.384		
7,200.00	7,018.87	6,968.87	7,018.87	32.44	241.56	-66.48	-3,118.35	-4,804.32	5,456.46	5,183.39	273.06	19.982		
7,300.00	7,047.21	7,002.79	7,047.21	33.42	242.74	-75.92	-3,118.35	-4,804.32	5,382.56	5,107.79	274.77	19.589		
7,400.00	7,060.23	7,010.23	7,060.23	34.55	243.00	-86.42	-3,118.35	-4,804.32	5,306.39	5,030.76	275.63	19.252		
7,500.00	7,060.03	7,010.03	7,060.03	35.83	243.00	-91.18	-3,118.35	-4,804.32	5,229.88	4,953.58	276.30	18.928		
7,600.00	7,058.28	7,008.28	7,058.28	37.28	242.94	-91.15	-3,118.35	-4,804.32	5,154.12	4,877.08	277.04	18.604		
7,700.00	7,056.53	7,006.53	7,056.53	38.89	242.88	-91.12	-3,118.35	-4,804.32	5,079.19	4,801.29	277.91	18.277		
7,800.00	7,054.78	7,004.78	7,054.78	40.63	242.81	-91.09	-3,118.35	-4,804.32	5,005.15	4,726.24	278.90	17.946		
7,900.00	7,053.03	7,003.03	7,053.03	42.50	242.75	-91.06	-3,118.35	-4,804.32	4,932.01	4,651.99	280.02	17.613		
8,000.00	7,051.28	7,001.28	7,051.28	44.47	242.69	-91.03	-3,118.35	-4,804.32	4,859.83	4,578.56	281.27	17.278		
8,100.00	7,049.53	7,000.47	7,049.53	46.53	242.66	-91.00	-3,118.35	-4,804.32	4,788.66	4,505.98	282.68	16.940		
8,200.00	7,047.78	7,002.22	7,047.78	48.67	242.72	-90.97	-3,118.35	-4,804.32	4,718.52	4,434.22	284.30	16.597		
8,300.00	7,046.03	7,003.97	7,046.03	50.89	242.79	-90.94	-3,118.35	-4,804.32	4,649.48	4,363.44	286.05	16.254		
8,400.00	7,044.28	7,005.72	7,044.28	53.16	242.85	-90.91	-3,118.35	-4,804.32	4,581.59	4,293.67	287.91	15.913		
8,500.00	7,042.53	7,007.47	7,042.53	55.49	242.91	-90.88	-3,118.35	-4,804.32	4,514.88	4,224.99	289.90	15.574		
8,600.00	7,040.78	7,009.22	7,040.78	57.86	242.97	-90.85	-3,118.35	-4,804.32	4,449.42	4,157.43	291.99	15.238		
8,700.00	7,039.03	6,989.03	7,039.03	60.28	242.26	-90.82	-3,118.35	-4,804.32	4,385.27	4,091.83	293.43	14.945		
8,800.00	7,037.28	6,987.28	7,037.28	62.74	242.20	-90.79	-3,118.35	-4,804.32	4,322.47	4,026.85	295.63	14.621		
8,900.00	7,035.53	6,985.53	7,035.53	65.23	242.14	-90.76	-3,118.35	-4,804.32	4,261.10	3,963.17	297.93	14.302		
9,000.00	7,033.78	6,983.78	7,033.78	67.74	242.08	-90.74	-3,118.35	-4,804.32	4,201.21	3,900.88	300.33	13.989		
9,100.00	7,032.03	6,982.03	7,032.03	70.29	242.02	-90.71	-3,118.35	-4,804.32	4,142.87	3,840.04	302.83	13.681		
9,200.00	7,030.28	6,980.28	7,030.28	72.85	241.96	-90.68	-3,118.35	-4,804.32	4,086.14	3,780.72	305.42	13.379		
9,300.00	7,028.54	6,978.54	7,028.54	75.44	241.90	-90.65	-3,118.35	-4,804.32	4,031.09	3,722.99	308.10	13.084		
9,400.00	7,026.79	6,976.79	7,026.79	78.05	241.84	-90.62	-3,118.35	-4,804.32	3,977.80	3,666.93	310.86	12.796		
9,500.00	7,025.04	6,975.04	7,025.04	80.67	241.78	-90.59	-3,118.35	-4,804.32	3,926.33	3,612.61	313.71	12.516		
9,600.00	7,023.29	6,973.29	7,023.29	83.31	241.71	-90.56	-3,118.35	-4,804.32	3,876.75	3,560.12	316.63	12.244		
9,700.00	7,021.54	6,971.54	7,021.54	85.96	241.65	-90.53	-3,118.35	-4,804.32	3,829.14	3,509.52	319.62	11.980		
9,800.00	7,019.79	6,969.79	7,019.79	88.63	241.59	-90.50	-3,118.35	-4,804.32	3,783.58	3,460.90	322.68	11.726		
9,900.00	7,018.04	6,968.04	7,018.04	91.30	241.53	-90.47	-3,118.35	-4,804.32	3,740.13	3,414.35	325.78	11.480		
10,000.00	7,016.29	6,966.29	7,016.29	93.99	241.47	-90.44	-3,118.35	-4,804.32	3,698.88	3,369.94	328.94	11.245		
10,100.00	7,014.54	6,964.54	7,014.54	96.69	241.41	-90.41	-3,118.35	-4,804.32	3,659.90	3,327.76	332.14	11.019		
10,200.00	7,012.79	6,962.79	7,012.79	99.40	241.35	-90.38	-3,118.35	-4,804.32	3,623.26	3,287.88	335.37	10.804		
10,300.00	7,011.04	6,961.04	7,011.04	102.11	241.29	-90.35	-3,118.35	-4,804.32	3,589.02	3,250.40	338.62	10.599		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - BURMAN 16-43(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	6,959.29	7,009.29	104.83	241.23	-90.32	-3,118.35	-4,804.32	3,557.27	3,215.38	341.89	10.405		
10,500.00	7,007.54	6,957.54	7,007.54	107.56	241.17	-90.29	-3,118.35	-4,804.32	3,528.07	3,182.91	345.16	10.222		
10,600.00	7,005.79	6,955.79	7,005.79	110.30	241.10	-90.26	-3,118.35	-4,804.32	3,501.48	3,153.06	348.42	10.049		
10,700.00	7,004.04	6,954.04	7,004.04	113.04	241.04	-90.23	-3,118.35	-4,804.32	3,477.57	3,125.90	351.67	9.889		
10,800.00	7,002.29	6,952.29	7,002.29	115.79	240.98	-90.20	-3,118.35	-4,804.32	3,456.38	3,101.49	354.89	9.739		
10,900.00	7,000.54	6,950.54	7,000.54	118.54	240.92	-90.17	-3,118.35	-4,804.32	3,437.97	3,079.91	358.06	9.602		
11,000.00	6,998.79	6,948.79	6,998.79	121.30	240.86	-90.14	-3,118.35	-4,804.32	3,422.38	3,061.19	361.19	9.475		
11,100.00	6,997.04	6,947.04	6,997.04	124.06	240.80	-90.11	-3,118.35	-4,804.32	3,409.66	3,045.40	364.25	9.361		
11,200.00	6,995.29	6,945.29	6,995.29	126.83	240.74	-90.08	-3,118.35	-4,804.32	3,399.83	3,032.58	367.25	9.258		
11,300.00	6,993.54	6,943.54	6,993.54	129.60	240.68	-90.05	-3,118.35	-4,804.32	3,392.91	3,022.76	370.16	9.166		
11,400.00	6,991.80	6,941.80	6,991.80	132.37	240.62	-90.03	-3,118.35	-4,804.32	3,388.94	3,015.96	372.97	9.086		
11,484.82	6,990.31	6,940.31	6,990.31	134.73	240.56	-90.00	-3,118.35	-4,804.32	3,387.88	3,012.59	375.29	9.027 CC		
11,500.00	6,990.05	6,940.05	6,990.05	135.15	240.55	-90.00	-3,118.35	-4,804.32	3,387.91	3,012.22	375.69	9.018		
11,600.00	6,988.30	6,938.30	6,988.30	137.93	240.49	-89.97	-3,118.35	-4,804.32	3,389.83	3,011.53	378.30	8.961 ES		
11,700.00	6,986.55	6,936.55	6,986.55	140.72	240.43	-89.94	-3,118.35	-4,804.32	3,394.70	3,013.91	380.80	8.915		
11,800.00	6,984.80	6,934.80	6,984.80	143.50	240.37	-89.91	-3,118.35	-4,804.32	3,402.50	3,019.34	383.17	8.880		
11,900.00	6,983.05	6,933.05	6,983.05	146.29	240.31	-89.88	-3,118.35	-4,804.32	3,413.21	3,027.80	385.41	8.856		
12,000.00	6,981.30	6,931.30	6,981.30	149.09	240.25	-89.85	-3,118.35	-4,804.32	3,426.81	3,039.29	387.53	8.843		
12,100.00	6,979.55	6,929.55	6,979.55	151.88	240.19	-89.82	-3,118.35	-4,804.32	3,443.26	3,053.75	389.51	8.840 SF		
12,200.00	6,977.80	6,927.80	6,977.80	154.68	240.13	-89.79	-3,118.35	-4,804.32	3,462.52	3,071.17	391.35	8.848		
12,300.00	6,976.05	6,926.05	6,976.05	157.48	240.07	-89.76	-3,118.35	-4,804.32	3,484.54	3,091.48	393.06	8.865		
12,400.00	6,974.30	6,924.30	6,974.30	160.28	240.00	-89.73	-3,118.35	-4,804.32	3,509.27	3,114.64	394.64	8.892		
12,500.00	6,972.55	6,922.55	6,972.55	163.08	239.94	-89.70	-3,118.35	-4,804.32	3,536.66	3,140.59	396.08	8.929		
12,600.00	6,970.80	6,920.80	6,970.80	165.89	239.88	-89.67	-3,118.35	-4,804.32	3,566.64	3,169.26	397.38	8.975		
12,700.00	6,969.05	6,919.05	6,969.05	168.69	239.82	-89.64	-3,118.35	-4,804.32	3,599.16	3,200.59	398.56	9.030		
12,800.00	6,967.30	6,917.30	6,967.30	171.50	239.76	-89.61	-3,118.35	-4,804.32	3,634.13	3,234.51	399.62	9.094		
12,900.00	6,965.55	6,915.55	6,965.55	174.31	239.70	-89.58	-3,118.35	-4,804.32	3,671.49	3,270.94	400.55	9.166		
13,000.00	6,963.80	6,913.80	6,963.80	177.12	239.64	-89.55	-3,118.35	-4,804.32	3,711.17	3,309.80	401.37	9.246		
13,100.00	6,962.05	6,912.05	6,962.05	179.94	239.58	-89.52	-3,118.35	-4,804.32	3,753.09	3,351.02	402.07	9.334		
13,200.00	6,960.30	6,910.30	6,960.30	182.75	239.52	-89.49	-3,118.35	-4,804.32	3,797.19	3,394.52	402.67	9.430		
13,300.00	6,958.55	6,908.55	6,958.55	185.57	239.46	-89.46	-3,118.35	-4,804.32	3,843.38	3,440.21	403.17	9.533		
13,400.00	6,956.80	6,906.80	6,956.80	188.38	239.39	-89.43	-3,118.35	-4,804.32	3,891.59	3,488.02	403.58	9.643		
13,500.00	6,955.05	6,905.05	6,955.05	191.20	239.33	-89.40	-3,118.35	-4,804.32	3,941.75	3,537.86	403.89	9.759		
13,600.00	6,953.31	6,903.31	6,953.31	194.02	239.27	-89.37	-3,118.35	-4,804.32	3,993.79	3,589.66	404.13	9.883		
13,700.00	6,951.56	6,901.56	6,951.56	196.84	239.21	-89.34	-3,118.35	-4,804.32	4,047.62	3,643.34	404.28	10.012		
13,800.00	6,949.81	6,900.19	6,949.81	199.67	239.16	-89.32	-3,118.35	-4,804.32	4,103.18	3,698.81	404.38	10.147		
13,900.00	6,948.06	6,901.94	6,948.06	202.49	239.22	-89.29	-3,118.35	-4,804.32	4,160.41	3,755.89	404.52	10.285		
14,000.00	6,946.31	6,903.69	6,946.31	205.31	239.29	-89.26	-3,118.35	-4,804.32	4,219.23	3,814.63	404.59	10.428		
14,100.00	6,944.56	6,905.44	6,944.56	208.14	239.35	-89.23	-3,118.35	-4,804.32	4,279.58	3,874.96	404.62	10.577		
14,200.00	6,942.81	6,907.19	6,942.81	210.96	239.41	-89.20	-3,118.35	-4,804.32	4,341.39	3,936.80	404.59	10.730		
14,300.00	6,941.06	6,908.94	6,941.06	213.79	239.47	-89.17	-3,118.35	-4,804.32	4,404.60	4,000.09	404.51	10.889		
14,400.00	6,939.31	6,889.31	6,939.31	216.62	238.78	-89.14	-3,118.35	-4,804.32	4,469.16	4,065.52	403.64	11.072		
14,500.00	6,937.56	6,887.56	6,937.56	219.44	238.72	-89.11	-3,118.35	-4,804.32	4,535.00	4,131.64	403.36	11.243		
14,600.00	6,935.81	6,885.81	6,935.81	222.27	238.66	-89.08	-3,118.35	-4,804.32	4,602.07	4,199.03	403.04	11.418		
14,700.00	6,934.06	6,884.06	6,934.06	225.10	238.60	-89.05	-3,118.35	-4,804.32	4,670.32	4,267.63	402.70	11.598		
14,800.00	6,932.31	6,882.31	6,932.31	227.93	238.54	-89.02	-3,118.35	-4,804.32	4,739.70	4,337.38	402.32	11.781		
14,817.75	6,932.00	6,882.00	6,932.00	228.43	238.53	-89.01	-3,118.35	-4,804.32	4,752.13	4,349.88	402.25	11.814		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - DONN 30N 20A-L(SRC PLAN_75CC) - OH - SRC PLAN													Offset Site Error:	0.00 ft
Survey Program: 25-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	25.00	68.00	3.28	3.28	-142.69	-4,289.47	-3,268.96	5,393.54					
100.00	100.00	931.87	955.70	3.28	5.28	-142.89	-4,239.40	-3,207.86	5,384.71	5,376.14	8.57	628.330		
200.00	200.00	1,016.79	1,053.03	3.34	5.64	-142.93	-4,229.18	-3,195.40	5,368.82	5,359.90	8.91	602.247		
300.00	300.00	1,115.45	1,150.36	3.44	6.08	-142.97	-4,218.97	-3,182.93	5,352.93	5,343.55	9.38	570.958		
400.00	400.00	1,214.11	1,247.69	3.60	6.53	-143.01	-4,208.75	-3,170.47	5,337.04	5,327.15	9.90	539.228		
500.00	500.00	1,312.76	1,345.03	3.81	7.00	-143.05	-4,198.54	-3,158.00	5,321.16	5,310.69	10.47	508.051		
600.00	599.98	1,411.46	1,442.40	4.05	7.48	-116.01	-4,188.32	-3,145.54	5,306.03	5,294.94	11.09	478.282		
700.00	699.86	1,510.16	1,539.77	4.32	7.97	-116.22	-4,178.10	-3,133.07	5,292.25	5,280.50	11.75	450.305		
800.00	799.72	1,608.86	1,637.15	4.62	8.46	-116.32	-4,167.88	-3,120.60	5,278.67	5,266.22	12.45	424.025		
900.00	899.58	1,707.56	1,734.52	4.93	8.96	-116.41	-4,157.66	-3,108.13	5,265.11	5,251.94	13.17	399.681		
1,000.00	999.44	1,806.26	1,831.89	5.27	9.46	-116.51	-4,147.44	-3,095.66	5,251.57	5,237.65	13.92	377.244		
1,100.00	1,099.31	1,904.96	1,929.26	5.62	9.97	-116.60	-4,137.22	-3,083.19	5,238.04	5,223.35	14.69	356.623		
1,200.00	1,199.17	2,003.65	2,026.64	5.98	10.48	-116.70	-4,127.00	-3,070.72	5,224.52	5,209.05	15.47	337.694		
1,300.00	1,299.03	2,102.35	2,124.01	6.36	10.99	-116.80	-4,116.79	-3,058.25	5,211.02	5,194.75	16.27	320.320		
1,400.00	1,398.89	2,201.05	2,221.38	6.74	11.51	-116.89	-4,106.57	-3,045.78	5,197.53	5,180.45	17.08	304.362		
1,500.00	1,498.75	2,300.25	2,318.75	7.13	12.03	-116.99	-4,096.35	-3,033.31	5,184.06	5,166.16	17.90	289.650		
1,600.00	1,598.61	2,401.55	2,416.13	7.52	12.56	-117.09	-4,086.13	-3,020.84	5,170.60	5,151.86	18.74	275.965		
1,700.00	1,698.47	2,497.15	2,513.50	7.92	13.07	-117.19	-4,075.91	-3,008.37	5,157.16	5,137.60	19.56	263.697		
1,800.00	1,798.33	2,595.84	2,610.87	8.32	13.59	-117.29	-4,065.69	-2,995.90	5,143.73	5,123.33	20.40	252.167		
1,900.00	1,898.19	2,694.54	2,708.24	8.73	14.12	-117.39	-4,055.47	-2,983.43	5,130.32	5,109.07	21.24	241.487		
2,000.00	1,998.05	2,793.24	2,805.62	9.14	14.65	-117.49	-4,045.25	-2,970.96	5,116.92	5,094.82	22.10	231.575		
2,100.00	2,097.91	2,891.94	2,902.99	9.55	15.18	-117.59	-4,035.03	-2,958.50	5,103.54	5,080.59	22.95	222.355		
2,200.00	2,197.78	2,990.64	3,000.36	9.97	15.70	-117.69	-4,024.82	-2,946.03	5,090.17	5,066.36	23.81	213.765		
2,300.00	2,297.64	3,089.33	3,097.73	10.39	16.23	-117.79	-4,014.60	-2,933.56	5,076.82	5,052.15	24.68	205.744		
2,400.00	2,397.50	3,188.03	3,195.11	10.81	16.76	-117.89	-4,004.38	-2,921.09	5,063.49	5,037.95	25.54	198.242		
2,500.00	2,497.36	3,286.73	3,292.48	11.23	17.30	-117.99	-3,994.16	-2,908.62	5,050.17	5,023.76	26.41	191.213		
2,600.00	2,597.22	3,385.43	3,389.85	11.65	17.83	-118.10	-3,983.94	-2,896.15	5,036.87	5,009.59	27.28	184.614		
2,700.00	2,697.08	3,484.13	3,487.23	12.07	18.36	-118.20	-3,973.72	-2,883.68	5,023.58	4,995.43	28.16	178.410		
2,800.00	2,796.94	3,582.82	3,584.60	12.50	18.89	-118.30	-3,963.50	-2,871.21	5,010.31	4,981.28	29.03	172.567		
2,900.00	2,896.80	3,681.52	3,681.97	12.92	19.43	-118.41	-3,953.28	-2,858.74	4,997.06	4,967.15	29.91	167.056		
3,000.00	2,996.66	3,780.22	3,779.34	13.35	19.96	-118.52	-3,943.07	-2,846.27	4,983.82	4,953.03	30.79	161.850		
3,100.00	3,096.52	3,878.92	3,876.72	13.78	20.50	-118.62	-3,932.85	-2,833.80	4,970.61	4,938.93	31.67	156.926		
3,200.00	3,196.38	3,977.62	3,974.09	14.21	21.03	-118.73	-3,922.63	-2,821.33	4,957.40	4,924.84	32.56	152.262		
3,300.00	3,296.25	4,076.32	4,071.46	14.64	21.57	-118.83	-3,912.41	-2,808.86	4,944.22	4,910.77	33.44	147.838		
3,400.00	3,396.11	4,175.01	4,168.83	15.07	22.10	-118.94	-3,902.19	-2,796.39	4,931.05	4,896.72	34.33	143.637		
3,500.00	3,495.97	4,273.71	4,266.21	15.50	22.64	-119.05	-3,891.97	-2,783.93	4,917.90	4,882.68	35.22	139.643		
3,600.00	3,595.83	4,372.41	4,363.58	15.93	23.17	-119.16	-3,881.75	-2,771.46	4,904.77	4,868.66	36.11	135.841		
3,700.00	3,695.69	4,471.11	4,460.95	16.36	23.71	-119.27	-3,871.53	-2,758.99	4,891.65	4,854.65	37.00	132.218		
3,800.00	3,795.55	4,569.81	4,558.32	16.80	24.25	-119.38	-3,861.31	-2,746.52	4,878.55	4,840.66	37.89	128.762		
3,900.00	3,895.41	4,668.50	4,655.70	17.23	24.78	-119.49	-3,851.10	-2,734.05	4,865.47	4,826.69	38.78	125.462		
4,000.00	3,995.27	4,767.20	4,753.07	17.66	25.32	-119.60	-3,840.88	-2,721.58	4,852.41	4,812.74	39.67	122.308		
4,100.00	4,095.13	4,865.90	4,850.44	18.10	25.86	-119.71	-3,830.66	-2,709.11	4,839.37	4,798.80	40.57	119.290		
4,200.00	4,194.99	4,964.60	4,947.81	18.53	26.40	-119.82	-3,820.44	-2,696.64	4,826.34	4,784.88	41.46	116.401		
4,300.00	4,294.85	5,063.30	5,045.19	18.96	26.94	-119.94	-3,810.22	-2,684.17	4,813.33	4,770.97	42.36	113.631		
4,400.00	4,394.71	5,161.99	5,142.56	19.40	27.47	-120.05	-3,800.00	-2,671.70	4,800.35	4,757.09	43.26	110.975		
4,500.00	4,494.58	5,260.69	5,239.93	19.83	28.01	-120.16	-3,789.78	-2,659.23	4,787.38	4,743.22	44.15	108.425		
4,600.00	4,594.44	5,359.39	5,337.30	20.27	28.55	-120.28	-3,779.56	-2,646.76	4,774.43	4,729.37	45.05	105.975		
4,700.00	4,694.30	5,458.09	5,434.68	20.71	29.09	-120.39	-3,769.34	-2,634.29	4,761.49	4,715.54	45.95	103.620		
4,800.00	4,794.16	5,556.79	5,532.05	21.14	29.63	-120.51	-3,759.13	-2,621.82	4,748.58	4,701.73	46.85	101.354		
4,900.00	4,894.02	5,655.48	5,629.42	21.58	30.17	-120.63	-3,748.91	-2,609.36	4,735.69	4,687.94	47.75	99.172		
5,000.00	4,993.88	5,754.18	5,726.79	22.01	30.71	-120.74	-3,738.69	-2,596.89	4,722.82	4,674.16	48.65	97.070		
5,100.00	5,093.74	5,852.88	5,824.17	22.45	31.24	-120.86	-3,728.47	-2,584.42	4,709.96	4,660.41	49.56	95.043		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - DONN 30N 20A-L(SRC PLAN_75CC) - OH - SRC PLAN													Offset Site Error:	0.00 ft
Survey Program: 25-MWVD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,951.58	5,921.54	22.89	31.78	-120.98	-3,718.25	-2,571.95	4,697.13	4,646.67	50.46	93.088		
5,300.00	5,293.46	6,050.28	6,018.91	23.32	32.32	-121.10	-3,708.03	-2,559.48	4,684.32	4,632.95	51.36	91.201		
5,400.00	5,393.32	6,148.98	6,116.28	23.76	32.86	-121.22	-3,697.81	-2,547.01	4,671.52	4,619.26	52.27	89.379		
5,500.00	5,493.18	6,247.67	6,213.66	24.20	33.40	-121.34	-3,687.59	-2,534.54	4,658.75	4,605.58	53.17	87.617		
5,600.00	5,593.05	6,277.77	6,243.38	24.64	33.56	-121.37	-3,684.48	-2,530.97	4,646.63	4,592.83	53.80	86.372		
5,700.00	5,692.91	6,300.00	6,265.41	25.07	33.68	-121.39	-3,682.19	-2,529.15	4,636.20	4,581.82	54.38	85.257		
5,800.00	5,792.77	6,325.01	6,290.27	25.51	33.79	-121.40	-3,679.63	-2,528.03	4,627.49	4,572.54	54.95	84.210		
5,900.00	5,892.63	6,338.42	6,303.60	25.95	33.85	-121.40	-3,678.26	-2,527.84	4,620.45	4,564.99	55.46	83.311		
6,000.00	5,992.49	6,350.00	6,315.12	26.39	33.90	-121.40	-3,677.09	-2,527.90	4,615.19	4,559.25	55.94	82.499		
6,100.00	6,092.35	6,379.12	6,344.07	26.82	34.00	-121.39	-3,674.16	-2,528.97	4,611.57	4,555.10	56.47	81.661		
6,200.00	6,192.21	6,400.00	6,364.79	27.26	34.08	-121.37	-3,672.08	-2,530.56	4,609.72	4,552.76	56.95	80.938		
6,257.04	6,249.18	6,410.96	6,375.64	27.51	34.11	-121.35	-3,671.00	-2,531.67	4,609.43	4,552.22	57.21	80.565		
6,300.00	6,292.07	6,425.01	6,389.52	27.70	34.16	-121.34	-3,669.63	-2,533.36	4,609.61	4,552.18	57.43	80.266		
6,400.00	6,391.93	6,439.73	6,404.01	28.14	34.20	-121.31	-3,668.19	-2,535.46	4,611.21	4,553.36	57.84	79.719		
6,500.00	6,491.69	6,450.00	6,414.10	28.58	34.23	-82.41	-3,667.20	-2,537.13	4,613.51	4,555.29	58.22	79.243		
6,600.00	6,589.80	6,479.79	6,443.19	29.02	34.30	-68.72	-3,664.37	-2,542.89	4,610.15	4,551.49	58.67	78.583		
6,700.00	6,683.86	6,500.00	6,462.76	29.46	34.34	-65.79	-3,662.48	-2,547.57	4,600.37	4,541.30	59.07	77.877		
6,800.00	6,771.56	6,525.01	6,486.76	29.92	34.39	-65.45	-3,660.18	-2,554.22	4,584.36	4,524.85	59.50	77.043		
6,900.00	6,850.72	6,538.57	6,499.66	30.40	34.42	-66.37	-3,658.96	-2,558.22	4,562.42	4,502.51	59.91	76.148		
7,000.00	6,919.40	6,550.00	6,510.46	30.96	34.44	-68.15	-3,657.94	-2,561.81	4,535.16	4,474.78	60.38	75.108		
7,100.00	6,975.92	6,574.02	6,532.95	31.62	34.47	-70.74	-3,655.83	-2,569.98	4,503.14	4,442.13	61.01	73.808		
7,200.00	7,018.87	6,600.00	6,556.91	32.44	34.51	-73.98	-3,653.61	-2,579.76	4,467.26	4,405.46	61.80	72.283		
7,300.00	7,047.21	6,600.00	6,556.91	33.42	34.51	-77.50	-3,653.61	-2,579.76	4,428.24	4,365.58	62.67	70.662		
7,400.00	7,060.23	6,615.71	6,571.19	34.55	34.52	-81.56	-3,652.30	-2,586.15	4,387.22	4,323.44	63.78	68.783		
7,500.00	7,060.03	6,625.01	6,579.58	35.83	34.53	-83.49	-3,651.53	-2,590.11	4,345.54	4,280.49	65.05	66.800		
7,600.00	7,058.28	6,635.89	6,589.31	37.28	34.54	-83.63	-3,650.65	-2,594.88	4,305.44	4,238.93	66.51	64.729		
7,700.00	7,056.53	6,650.00	6,601.82	38.89	34.55	-83.81	-3,649.52	-2,601.32	4,267.20	4,199.04	68.16	62.603		
7,800.00	7,054.78	6,650.00	6,601.82	40.63	34.55	-83.81	-3,649.52	-2,601.32	4,230.89	4,160.96	69.93	60.504		
7,900.00	7,053.03	6,671.48	6,620.57	42.50	34.56	-84.08	-3,647.84	-2,611.66	4,196.44	4,124.53	71.91	58.358		
8,000.00	7,051.28	6,700.00	6,644.92	44.47	34.58	-84.43	-3,645.69	-2,626.35	4,164.09	4,090.05	74.04	56.241		
8,100.00	7,049.53	6,700.00	6,644.92	46.53	34.58	-84.43	-3,645.69	-2,626.35	4,133.54	4,057.33	76.21	54.238		
8,200.00	7,047.78	6,716.18	6,658.44	48.67	34.59	-84.63	-3,644.52	-2,635.17	4,105.10	4,026.57	78.53	52.273		
8,300.00	7,046.03	6,733.66	6,672.78	50.89	34.59	-84.83	-3,643.28	-2,645.08	4,078.70	3,997.75	80.95	50.386		
8,400.00	7,044.28	6,750.00	6,685.94	53.16	34.59	-85.03	-3,642.16	-2,654.70	4,054.33	3,970.89	83.44	48.588		
8,500.00	7,042.53	6,773.36	6,704.32	55.49	34.59	-85.29	-3,640.61	-2,669.03	4,032.01	3,945.99	86.02	46.871		
8,600.00	7,040.78	6,800.00	6,724.63	57.86	34.59	-85.59	-3,638.93	-2,686.19	4,011.73	3,923.07	88.66	45.247		
8,700.00	7,039.03	6,825.01	6,743.03	60.28	34.59	-85.86	-3,637.44	-2,703.06	3,993.47	3,902.12	91.35	43.717		
8,800.00	7,037.28	6,850.00	6,760.75	62.74	34.59	-86.12	-3,636.03	-2,720.62	3,977.20	3,883.12	94.08	42.277		
8,900.00	7,035.53	6,877.17	6,779.21	65.23	34.58	-86.39	-3,634.60	-2,740.49	3,962.89	3,866.04	96.84	40.920		
9,000.00	7,033.78	6,909.48	6,800.06	67.74	34.58	-86.70	-3,633.04	-2,765.13	3,950.48	3,850.84	99.64	39.646		
9,100.00	7,032.03	6,950.00	6,824.40	70.29	34.57	-87.06	-3,631.29	-2,797.47	3,939.93	3,837.43	102.49	38.441		
9,200.00	7,030.28	6,983.30	6,842.83	72.85	34.58	-87.34	-3,630.04	-2,825.16	3,931.12	3,825.76	105.36	37.313		
9,300.00	7,028.54	7,025.01	6,863.87	75.44	34.60	-87.65	-3,628.72	-2,861.16	3,923.99	3,815.73	108.26	36.246		
9,400.00	7,026.79	7,070.24	6,883.97	78.05	34.64	-87.96	-3,627.59	-2,901.65	3,918.44	3,807.21	111.22	35.230		
9,500.00	7,025.04	7,118.63	6,902.25	80.67	34.72	-88.24	-3,626.75	-2,946.43	3,914.35	3,800.12	114.23	34.267		
9,600.00	7,023.29	7,170.04	6,917.91	83.31	34.88	-88.48	-3,626.27	-2,995.37	3,911.63	3,794.31	117.32	33.343		
9,700.00	7,021.54	7,225.01	6,930.26	85.96	35.12	-88.67	-3,626.23	-3,048.93	3,910.16	3,789.70	120.47	32.458		
9,774.55	7,020.23	7,265.52	6,936.39	87.95	35.38	-88.77	-3,626.52	-3,088.96	3,909.84	3,786.98	122.86	31.824 CC		
9,800.00	7,019.79	7,279.89	6,937.95	88.63	35.48	-88.80	-3,626.69	-3,103.24	3,909.88	3,786.20	123.69	31.611		
9,900.00	7,018.04	7,336.93	6,940.99	91.30	35.96	-88.86	-3,627.68	-3,160.18	3,910.72	3,783.76	126.96	30.802		
10,000.00	7,016.29	7,430.78	6,940.65	93.99	37.01	-88.88	-3,629.85	-3,254.00	3,912.26	3,781.45	130.80	29.910		
10,100.00	7,014.54	7,530.76	6,940.23	96.69	38.44	-88.90	-3,632.18	-3,353.95	3,913.80	3,778.84	134.97	28.998		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - DONN 30N 20A-L(SRC PLAN_75CC) - OH - SRC PLAN													Offset Site Error:	0.00 ft
Survey Program: 25-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,200.00	7,012.79	7,630.74	6,939.82	99.40	40.13	-88.92	-3,634.50	-3,453.90	3,915.35	3,775.99	139.36	28.095		
10,300.00	7,011.04	7,730.72	6,939.40	102.11	42.02	-88.94	-3,636.83	-3,553.85	3,916.90	3,772.93	143.96	27.208		
10,400.00	7,009.29	7,830.69	6,938.98	104.83	44.10	-88.96	-3,639.15	-3,653.80	3,918.45	3,769.70	148.74	26.344		
10,500.00	7,007.54	7,930.67	6,938.57	107.56	46.32	-88.98	-3,641.48	-3,753.75	3,919.99	3,766.32	153.68	25.508		
10,600.00	7,005.79	8,030.65	6,938.15	110.30	48.67	-89.00	-3,643.80	-3,853.70	3,921.54	3,762.79	158.75	24.703		
10,700.00	7,004.04	8,130.63	6,937.73	113.04	51.12	-89.02	-3,646.13	-3,953.65	3,923.09	3,759.16	163.93	23.931		
10,800.00	7,002.29	8,230.61	6,937.31	115.79	53.67	-89.04	-3,648.45	-4,053.61	3,924.64	3,755.42	169.22	23.192		
10,900.00	7,000.54	8,330.59	6,936.90	118.54	56.30	-89.06	-3,650.78	-4,153.56	3,926.19	3,751.60	174.60	22.487		
11,000.00	6,998.79	8,430.57	6,936.48	121.30	59.00	-89.08	-3,653.10	-4,253.51	3,927.74	3,747.70	180.05	21.815		
11,100.00	6,997.04	8,530.55	6,936.06	124.06	61.76	-89.09	-3,655.43	-4,353.46	3,929.30	3,743.73	185.57	21.175		
11,200.00	6,995.29	8,630.52	6,935.65	126.83	64.57	-89.11	-3,657.75	-4,453.41	3,930.85	3,739.70	191.14	20.565		
11,300.00	6,993.54	8,730.50	6,935.23	129.60	67.43	-89.13	-3,660.08	-4,553.36	3,932.40	3,735.63	196.77	19.985		
11,400.00	6,991.80	8,830.48	6,934.81	132.37	70.33	-89.15	-3,662.40	-4,653.31	3,933.95	3,731.51	202.44	19.432		
11,500.00	6,990.05	8,930.46	6,934.40	135.15	73.26	-89.17	-3,664.73	-4,753.26	3,935.51	3,727.35	208.16	18.907		
11,600.00	6,988.30	9,030.44	6,933.98	137.93	76.23	-89.19	-3,667.05	-4,853.21	3,937.06	3,723.16	213.90	18.406		
11,700.00	6,986.55	9,130.42	6,933.56	140.72	79.22	-89.21	-3,669.38	-4,953.16	3,938.61	3,718.93	219.68	17.929		
11,800.00	6,984.80	9,230.40	6,933.14	143.50	82.24	-89.23	-3,671.70	-5,053.11	3,940.17	3,714.67	225.49	17.474		
11,900.00	6,983.05	9,330.38	6,932.73	146.29	85.28	-89.25	-3,674.02	-5,153.06	3,941.72	3,710.40	231.33	17.040		
12,000.00	6,981.30	9,430.35	6,932.31	149.09	88.35	-89.27	-3,676.35	-5,253.02	3,943.28	3,706.09	237.18	16.625		
12,100.00	6,979.55	9,530.33	6,931.89	151.88	91.43	-89.29	-3,678.67	-5,352.97	3,944.83	3,701.77	243.06	16.230		
12,200.00	6,977.80	9,630.31	6,931.48	154.68	94.52	-89.31	-3,681.00	-5,452.92	3,946.39	3,697.43	248.96	15.851		
12,300.00	6,976.05	9,730.29	6,931.06	157.48	97.64	-89.33	-3,683.32	-5,552.87	3,947.95	3,693.07	254.87	15.490		
12,400.00	6,974.30	9,830.27	6,930.64	160.28	100.76	-89.35	-3,685.65	-5,652.82	3,949.50	3,688.70	260.81	15.144		
12,500.00	6,972.55	9,930.25	6,930.22	163.08	103.90	-89.37	-3,687.97	-5,752.77	3,951.06	3,684.31	266.75	14.812		
12,600.00	6,970.80	10,030.23	6,929.81	165.89	107.05	-89.39	-3,690.30	-5,852.72	3,952.62	3,679.91	272.71	14.494		
12,700.00	6,969.05	10,130.21	6,929.39	168.69	110.21	-89.41	-3,692.62	-5,952.67	3,954.18	3,675.50	278.68	14.189		
12,800.00	6,967.30	10,230.18	6,928.97	171.50	113.38	-89.43	-3,694.95	-6,052.62	3,955.74	3,671.08	284.66	13.896		
12,900.00	6,965.55	10,330.16	6,928.56	174.31	116.55	-89.45	-3,697.27	-6,152.57	3,957.30	3,666.65	290.65	13.615		
13,000.00	6,963.80	10,430.14	6,928.14	177.12	119.74	-89.47	-3,699.60	-6,252.52	3,958.86	3,662.21	296.65	13.345		
13,100.00	6,962.05	10,489.69	6,927.89	179.94	121.64	-89.48	-3,701.93	-6,352.47	3,960.42	3,657.77	302.66	13.080		
13,200.00	6,960.30	10,525.02	6,927.44	182.75	122.76	-89.49	-3,704.25	-6,452.42	3,961.98	3,653.33	308.68	12.820		
13,300.00	6,958.55	10,615.16	6,927.37	185.57	125.64	-89.50	-3,707.30	-6,552.37	3,963.54	3,648.89	314.71	12.565		
13,400.00	6,956.80	10,715.06	6,926.95	188.38	128.82	-89.52	-3,712.51	-6,652.32	3,973.06	3,656.44	316.63	12.548		
13,500.00	6,955.05	10,754.53	6,926.79	191.20	130.08	-89.53	-3,714.79	-6,752.27	3,978.20	3,657.80	320.40	12.416		
13,600.00	6,953.31	10,800.00	6,926.60	194.02	131.53	-89.54	-3,718.39	-6,852.22	3,985.09	3,660.76	324.32	12.287		
13,700.00	6,951.56	10,825.02	6,926.49	196.84	132.32	-89.55	-3,720.84	-6,952.17	3,993.54	3,666.17	327.37	12.199		
13,800.00	6,949.81	10,851.28	6,926.38	199.67	133.15	-89.55	-3,723.75	-7,052.12	4,003.71	3,673.36	330.35	12.120		
13,900.00	6,948.06	10,900.00	6,926.18	202.49	134.68	-89.56	-3,730.11	-7,152.07	4,015.68	3,681.50	334.18	12.017		
14,000.00	6,946.31	10,915.21	6,926.11	205.31	135.15	-89.56	-3,732.34	-7,251.92	4,029.08	3,692.61	336.48	11.974		
14,100.00	6,944.56	10,946.95	6,925.98	208.14	136.14	-89.57	-3,737.39	-7,351.87	4,044.25	3,704.87	339.38	11.917		
14,200.00	6,942.81	11,729.19	6,922.72	210.96	161.11	-89.72	-3,799.57	-7,544.96	4,048.61	3,676.57	372.04	10.882		
14,300.00	6,941.06	11,829.18	6,922.30	213.79	164.37	-89.74	-3,799.55	-7,644.95	4,047.84	3,669.71	378.13	10.705		
14,400.00	6,939.31	11,929.17	6,921.88	216.62	167.63	-89.76	-3,799.54	-7,744.93	4,047.07	3,662.84	384.22	10.533		
14,500.00	6,937.56	12,029.15	6,921.46	219.44	170.90	-89.78	-3,799.53	-7,844.92	4,046.30	3,655.97	390.32	10.367		
14,600.00	6,935.81	12,129.14	6,921.05	222.27	174.17	-89.80	-3,799.51	-7,944.91	4,045.53	3,649.10	396.42	10.205		
14,700.00	6,934.06	12,229.13	6,920.63	225.10	177.44	-89.82	-3,799.50	-8,044.90	4,044.75	3,642.23	402.53	10.048		
14,800.00	6,932.31	12,329.12	6,920.21	227.93	180.71	-89.84	-3,799.49	-8,144.88	4,043.98	3,635.35	408.63	9.896		
14,817.75	6,932.00	12,346.86	6,920.14	228.43	181.30	-89.84	-3,799.48	-8,162.63	4,043.85	3,634.13	409.72	9.870 ES, SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - DONN 30N-20B-L(SRC PLAN_75CC) - OH - PLAN													Offset Site Error:	0.00 ft
Survey Program: 25-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	25.00	68.00	3.28	0.00	-142.82	-4,309.51	-3,268.97	5,409.49					
100.00	100.00	57.00	100.00	3.28	0.07	-142.82	-4,309.51	-3,268.97	5,409.06	5,405.71	3.36	1,612.223		
200.00	200.00	902.41	937.17	3.34	3.85	-143.04	-4,280.16	-3,220.34	5,406.83	5,399.59	7.24	746.668		
300.00	300.00	996.51	1,035.01	3.44	4.33	-143.10	-4,272.66	-3,207.91	5,393.20	5,385.43	7.77	694.541		
400.00	400.00	1,095.43	1,132.86	3.60	4.83	-143.16	-4,265.16	-3,195.48	5,379.57	5,371.21	8.36	643.235		
500.00	500.00	1,194.34	1,230.71	3.81	5.35	-143.22	-4,257.66	-3,183.05	5,365.95	5,356.94	9.01	595.712		
600.00	599.98	1,293.26	1,328.55	4.05	5.86	-116.15	-4,250.16	-3,170.62	5,353.09	5,343.40	9.69	552.473		
700.00	699.86	1,392.11	1,426.33	4.32	6.37	-116.36	-4,242.66	-3,158.20	5,341.59	5,331.19	10.40	513.454		
800.00	799.72	1,490.94	1,524.09	4.62	6.89	-116.47	-4,235.17	-3,145.79	5,330.31	5,319.16	11.15	478.095		
900.00	899.58	1,589.77	1,621.85	4.93	7.41	-116.58	-4,227.68	-3,133.37	5,319.05	5,307.14	11.92	446.293		
1,000.00	999.44	1,688.60	1,719.60	5.27	7.93	-116.69	-4,220.18	-3,120.95	5,307.81	5,295.11	12.71	417.713		
1,100.00	1,099.31	1,787.43	1,817.36	5.62	8.45	-116.81	-4,212.69	-3,108.53	5,296.59	5,283.08	13.51	392.008		
1,200.00	1,199.17	1,886.26	1,915.12	5.98	8.97	-116.92	-4,205.19	-3,096.11	5,285.39	5,271.07	14.33	368.852		
1,300.00	1,299.03	1,985.09	2,012.88	6.36	9.49	-117.03	-4,197.70	-3,083.70	5,274.22	5,259.06	15.16	347.943		
1,400.00	1,398.89	2,083.92	2,110.64	6.74	10.01	-117.14	-4,190.21	-3,071.28	5,263.06	5,247.06	16.00	329.010		
1,500.00	1,498.75	2,182.75	2,208.40	7.13	10.53	-117.26	-4,182.71	-3,058.86	5,251.92	5,235.08	16.84	311.818		
1,600.00	1,598.61	2,281.58	2,306.16	7.52	11.05	-117.37	-4,175.22	-3,046.44	5,240.80	5,223.11	17.70	296.159		
1,700.00	1,698.47	2,380.41	2,403.92	7.92	11.57	-117.49	-4,167.72	-3,034.03	5,229.70	5,211.15	18.55	281.853		
1,800.00	1,798.33	2,479.24	2,501.68	8.32	12.09	-117.60	-4,160.23	-3,021.61	5,218.63	5,199.21	19.42	268.744		
1,900.00	1,898.19	2,578.07	2,599.44	8.73	12.61	-117.72	-4,152.74	-3,009.19	5,207.57	5,187.29	20.29	256.697		
2,000.00	1,998.05	2,676.90	2,697.20	9.14	13.14	-117.83	-4,145.24	-2,996.77	5,196.54	5,175.38	21.16	245.596		
2,100.00	2,097.91	2,775.73	2,794.96	9.55	13.66	-117.95	-4,137.75	-2,984.35	5,185.53	5,163.49	22.03	235.338		
2,200.00	2,197.78	2,874.56	2,892.72	9.97	14.18	-118.07	-4,130.25	-2,971.94	5,174.54	5,151.63	22.91	225.836		
2,300.00	2,297.64	2,973.39	2,990.48	10.39	14.70	-118.18	-4,122.76	-2,959.52	5,163.57	5,139.78	23.79	217.011		
2,400.00	2,397.50	3,072.22	3,088.24	10.81	15.23	-118.30	-4,115.27	-2,947.10	5,152.62	5,127.94	24.68	208.798		
2,500.00	2,497.36	3,171.05	3,186.00	11.23	15.75	-118.42	-4,107.77	-2,934.68	5,141.70	5,116.13	25.56	201.135		
2,600.00	2,597.22	3,269.88	3,283.76	11.65	16.27	-118.54	-4,100.28	-2,922.26	5,130.79	5,104.34	26.45	193.973		
2,700.00	2,697.08	3,368.71	3,381.52	12.07	16.80	-118.66	-4,092.78	-2,909.85	5,119.91	5,092.57	27.34	187.263		
2,800.00	2,796.94	3,467.54	3,479.28	12.50	17.32	-118.78	-4,085.29	-2,897.43	5,109.06	5,080.82	28.23	180.967		
2,900.00	2,896.80	3,566.37	3,577.04	12.92	17.84	-118.90	-4,077.80	-2,885.01	5,098.22	5,069.09	29.12	175.048		
3,000.00	2,996.66	3,665.20	3,674.80	13.35	18.36	-119.02	-4,070.30	-2,872.59	5,087.41	5,057.39	30.02	169.474		
3,100.00	3,096.52	3,764.03	3,772.56	13.78	18.89	-119.14	-4,062.81	-2,860.17	5,076.62	5,045.70	30.91	164.215		
3,200.00	3,196.38	3,862.86	3,870.32	14.21	19.41	-119.26	-4,055.31	-2,847.76	5,065.85	5,034.04	31.81	159.248		
3,300.00	3,296.25	3,961.69	3,968.08	14.64	19.93	-119.39	-4,047.82	-2,835.34	5,055.10	5,022.39	32.71	154.548		
3,400.00	3,396.11	4,060.52	4,066.84	15.07	20.46	-119.51	-4,040.32	-2,822.92	5,044.38	5,010.77	33.61	150.095		
3,500.00	3,495.97	4,159.35	4,163.60	15.50	20.98	-119.63	-4,032.83	-2,810.50	5,033.68	4,999.18	34.51	145.870		
3,600.00	3,595.83	4,258.18	4,261.36	15.93	21.51	-119.76	-4,025.34	-2,798.09	5,023.01	4,987.60	35.41	141.857		
3,700.00	3,695.69	4,357.01	4,359.12	16.36	22.03	-119.88	-4,017.84	-2,785.67	5,012.36	4,976.05	36.31	138.040		
3,800.00	3,795.55	4,455.84	4,456.88	16.80	22.55	-120.01	-4,010.35	-2,773.25	5,001.73	4,964.52	37.21	134.405		
3,900.00	3,895.41	4,554.67	4,554.64	17.23	23.08	-120.13	-4,002.85	-2,760.83	4,991.13	4,953.01	38.12	130.941		
4,000.00	3,995.27	4,653.50	4,652.40	17.66	23.60	-120.26	-3,995.36	-2,748.41	4,980.55	4,941.53	39.02	127.635		
4,100.00	4,095.13	4,752.33	4,750.16	18.10	24.12	-120.39	-3,987.87	-2,736.00	4,970.00	4,930.07	39.93	124.476		
4,200.00	4,194.99	4,851.16	4,847.92	18.53	24.65	-120.51	-3,980.37	-2,723.58	4,959.47	4,918.63	40.83	121.457		
4,300.00	4,294.85	4,949.99	4,945.68	18.96	25.17	-120.64	-3,972.88	-2,711.16	4,948.96	4,907.22	41.74	118.566		
4,400.00	4,394.71	5,048.82	5,043.44	19.40	25.69	-120.77	-3,965.38	-2,698.74	4,938.48	4,895.83	42.65	115.798		
4,500.00	4,494.58	5,147.65	5,141.20	19.83	26.22	-120.90	-3,957.89	-2,686.32	4,928.03	4,884.47	43.56	113.143		
4,600.00	4,594.44	5,246.48	5,238.96	20.27	26.74	-121.03	-3,950.40	-2,673.91	4,917.60	4,873.13	44.46	110.596		
4,700.00	4,694.30	5,345.31	5,336.72	20.71	27.27	-121.16	-3,942.90	-2,661.49	4,907.19	4,861.82	45.37	108.150		
4,800.00	4,794.16	5,444.14	5,434.48	21.14	27.79	-121.29	-3,935.41	-2,649.07	4,896.81	4,850.53	46.28	105.799		
4,900.00	4,894.02	5,542.97	5,532.24	21.58	28.31	-121.42	-3,927.91	-2,636.65	4,886.46	4,839.26	47.19	103.538		
5,000.00	4,993.88	5,641.80	5,630.00	22.01	28.84	-121.55	-3,920.42	-2,624.23	4,876.13	4,828.02	48.11	101.362		
5,100.00	5,093.74	5,740.63	5,727.76	22.45	29.36	-121.68	-3,912.93	-2,611.82	4,865.82	4,816.81	49.02	99.266		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - DONN 30N-20B-L(SRC PLAN_75CC) - OH - PLAN													Offset Site Error:	0.00 ft
Survey Program: 25-MWVD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,839.46	5,825.52	22.89	29.89	-121.82	-3,905.43	-2,599.40	4,855.55	4,805.62	49.93	97.245		
5,300.00	5,293.46	5,938.29	5,923.28	23.32	30.41	-121.95	-3,897.94	-2,586.98	4,845.30	4,794.45	50.84	95.297		
5,400.00	5,393.32	6,037.12	6,021.04	23.76	30.93	-122.08	-3,890.44	-2,574.56	4,835.07	4,783.31	51.76	93.417		
5,500.00	5,493.18	6,135.95	6,118.80	24.20	31.46	-122.22	-3,882.95	-2,562.15	4,824.88	4,772.20	52.67	91.602		
5,600.00	5,593.05	6,234.78	6,216.56	24.64	31.98	-122.35	-3,875.46	-2,549.73	4,814.70	4,761.12	53.59	89.848		
5,700.00	5,692.91	6,333.61	6,314.32	25.07	32.50	-122.49	-3,867.96	-2,537.31	4,804.56	4,750.06	54.50	88.153		
5,800.00	5,792.77	6,386.60	6,366.76	25.51	32.78	-122.56	-3,863.95	-2,530.76	4,794.72	4,739.49	55.22	86.824		
5,900.00	5,892.63	6,400.00	6,380.05	25.95	32.85	-122.57	-3,862.94	-2,529.46	4,786.41	4,730.64	55.77	85.831		
6,000.00	5,992.49	6,425.01	6,404.94	26.39	32.97	-122.59	-3,861.06	-2,527.78	4,779.72	4,723.38	56.34	84.842		
6,100.00	6,092.35	6,450.00	6,429.85	26.82	33.08	-122.60	-3,859.21	-2,527.08	4,774.71	4,717.82	56.89	83.932		
6,200.00	6,192.21	6,450.00	6,429.85	27.26	33.08	-122.60	-3,859.21	-2,527.08	4,771.52	4,714.20	57.32	83.247		
6,300.00	6,292.07	6,500.00	6,479.68	27.70	33.26	-122.59	-3,855.57	-2,528.64	4,769.76	4,711.83	57.93	82.339		
6,352.22	6,344.22	6,500.00	6,479.68	27.93	33.26	-122.59	-3,855.57	-2,528.64	4,769.47	4,711.33	58.14	82.039		
6,400.00	6,391.93	6,500.00	6,479.68	28.14	33.26	-122.59	-3,855.57	-2,528.64	4,769.71	4,711.39	58.32	81.783		
6,500.00	6,491.69	6,525.01	6,504.52	28.58	33.34	-83.75	-3,853.79	-2,530.89	4,770.29	4,711.49	58.79	81.136		
6,600.00	6,589.80	6,550.00	6,529.24	29.02	33.41	-70.21	-3,852.05	-2,534.11	4,765.55	4,706.29	59.26	80.421		
6,700.00	6,683.86	6,568.98	6,547.92	29.46	33.45	-67.40	-3,850.74	-2,537.20	4,754.63	4,694.94	59.69	79.652		
6,800.00	6,771.56	6,600.00	6,578.23	29.92	33.53	-67.19	-3,848.65	-2,543.45	4,737.87	4,677.69	60.18	78.723		
6,900.00	6,850.72	6,600.00	6,578.23	30.40	33.53	-68.12	-3,848.65	-2,543.45	4,715.48	4,654.90	60.58	77.839		
7,000.00	6,919.40	6,625.01	6,602.42	30.96	33.58	-70.03	-3,847.01	-2,549.57	4,688.13	4,626.99	61.14	76.682		
7,100.00	6,975.92	6,650.00	6,626.34	31.62	33.63	-72.66	-3,845.41	-2,556.62	4,656.52	4,594.72	61.80	75.347		
7,200.00	7,018.87	6,650.00	6,626.34	32.44	33.63	-75.63	-3,845.41	-2,556.62	4,621.35	4,558.84	62.52	73.919		
7,300.00	7,047.21	6,670.06	6,645.33	33.42	33.66	-79.25	-3,844.16	-2,562.97	4,583.54	4,520.05	63.49	72.193		
7,400.00	7,060.23	6,680.77	6,655.38	34.55	33.67	-83.10	-3,843.50	-2,566.60	4,544.10	4,479.49	64.61	70.334		
7,500.00	7,060.03	6,700.00	6,673.28	35.83	33.70	-85.07	-3,842.34	-2,573.54	4,504.34	4,438.42	65.93	68.325		
7,600.00	7,058.28	6,700.00	6,673.28	37.28	33.70	-85.07	-3,842.34	-2,573.54	4,466.10	4,398.73	67.36	66.300		
7,700.00	7,056.53	6,700.00	6,673.28	38.89	33.70	-85.07	-3,842.34	-2,573.54	4,429.78	4,360.80	68.97	64.224		
7,800.00	7,054.78	6,725.01	6,696.23	40.63	33.73	-85.39	-3,840.87	-2,583.37	4,395.33	4,324.51	70.82	62.061		
7,900.00	7,053.03	6,725.01	6,696.23	42.50	33.73	-85.39	-3,840.87	-2,583.37	4,362.79	4,290.05	72.74	59.977		
8,000.00	7,051.28	6,740.68	6,710.40	44.47	33.74	-85.59	-3,839.98	-2,589.99	4,332.22	4,257.39	74.83	57.891		
8,100.00	7,049.53	6,750.00	6,718.75	46.53	33.75	-85.70	-3,839.98	-2,594.09	4,303.65	4,226.63	77.03	55.873		
8,200.00	7,047.78	6,768.04	6,734.75	48.67	33.77	-85.92	-3,838.47	-2,602.37	4,277.08	4,197.74	79.34	53.909		
8,300.00	7,046.03	6,783.70	6,748.44	50.89	33.78	-86.11	-3,837.64	-2,609.93	4,252.53	4,170.80	81.73	52.029		
8,400.00	7,044.28	6,800.00	6,762.49	53.16	33.79	-86.31	-3,836.79	-2,618.15	4,230.03	4,145.82	84.21	50.235		
8,500.00	7,042.53	6,825.01	6,783.63	55.49	33.81	-86.60	-3,835.54	-2,631.46	4,209.57	4,122.81	86.76	48.522		
8,600.00	7,040.78	6,840.90	6,796.78	57.86	33.81	-86.79	-3,834.78	-2,640.34	4,191.13	4,101.78	89.34	46.910		
8,700.00	7,039.03	6,864.22	6,815.67	60.28	33.82	-87.05	-3,833.70	-2,653.96	4,174.72	4,082.73	91.99	45.383		
8,800.00	7,037.28	6,900.00	6,843.66	62.74	33.84	-87.44	-3,832.15	-2,676.19	4,160.32	4,065.64	94.68	43.940		
8,900.00	7,035.53	6,919.13	6,858.11	65.23	33.84	-87.65	-3,831.38	-2,688.71	4,147.83	4,050.45	97.38	42.594		
9,000.00	7,033.78	6,950.00	6,880.60	67.74	33.85	-87.96	-3,830.21	-2,709.81	4,137.26	4,037.15	100.12	41.324		
9,100.00	7,032.03	6,987.75	6,906.69	70.29	33.87	-88.33	-3,828.92	-2,737.06	4,128.52	4,025.63	102.89	40.126		
9,200.00	7,030.28	7,025.01	6,930.82	72.85	33.90	-88.68	-3,827.79	-2,765.43	4,121.50	4,015.83	105.67	39.003		
9,300.00	7,028.54	7,073.60	6,959.72	75.44	33.95	-89.09	-3,826.56	-2,804.45	4,116.09	4,007.58	108.51	37.933		
9,400.00	7,026.79	7,125.01	6,986.98	78.05	34.03	-89.48	-3,825.56	-2,848.01	4,112.16	4,000.77	111.38	36.919		
9,500.00	7,025.04	7,179.61	7,011.99	80.67	34.17	-89.84	-3,824.84	-2,896.51	4,109.55	3,995.22	114.33	35.944		
9,600.00	7,023.29	7,240.36	7,034.85	83.31	34.40	-90.17	-3,824.46	-2,952.78	4,108.10	3,990.73	117.36	35.003		
9,700.00	7,021.54	7,305.72	7,053.34	85.96	34.76	-90.44	-3,824.54	-3,015.43	4,107.64	3,987.12	120.52	34.083		
9,701.37	7,021.51	7,306.64	7,053.56	86.00	34.77	-90.45	-3,824.55	-3,016.33	4,107.64	3,987.08	120.56	34.071 CC		
9,800.00	7,019.79	7,374.73	7,065.82	88.63	35.28	-90.63	-3,825.19	-3,083.27	4,108.03	3,984.22	123.81	33.181		
9,900.00	7,018.04	7,445.99	7,070.94	91.30	35.95	-90.72	-3,826.46	-3,154.30	4,109.17	3,981.96	127.21	32.303		
10,000.00	7,016.29	7,540.45	7,070.52	93.99	37.06	-90.74	-3,828.67	-3,248.72	4,110.77	3,979.73	131.05	31.369		
10,100.00	7,014.54	7,640.43	7,069.92	96.69	38.50	-90.76	-3,831.03	-3,348.68	4,112.39	3,977.20	135.19	30.418		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - DONN 30N-20B-L(SRC PLAN_75CC) - OH - PLAN													Offset Site Error:	0.00 ft
Survey Program: 25-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,200.00	7,012.79	7,740.41	7,069.32	99.40	40.18	-90.77	-3,833.39	-3,448.63	4,114.01	3,974.43	139.58	29.475		
10,300.00	7,011.04	7,840.39	7,068.72	102.11	42.06	-90.79	-3,835.74	-3,548.58	4,115.63	3,971.47	144.16	28.548		
10,400.00	7,009.29	7,940.37	7,068.12	104.83	44.11	-90.80	-3,838.10	-3,648.53	4,117.25	3,968.32	148.93	27.646		
10,500.00	7,007.54	8,040.35	7,067.51	107.56	46.31	-90.82	-3,840.45	-3,748.48	4,118.87	3,965.02	153.85	26.772		
10,600.00	7,005.79	8,140.33	7,066.91	110.30	48.64	-90.83	-3,842.81	-3,848.43	4,120.49	3,961.58	158.91	25.930		
10,700.00	7,004.04	8,240.31	7,066.31	113.04	51.08	-90.85	-3,845.17	-3,948.38	4,122.11	3,958.03	164.08	25.122		
10,800.00	7,002.29	8,340.29	7,065.71	115.79	53.62	-90.87	-3,847.52	-4,048.33	4,123.73	3,954.37	169.36	24.349		
10,900.00	7,000.54	8,440.27	7,065.11	118.54	56.24	-90.88	-3,849.88	-4,148.28	4,125.35	3,950.63	174.73	23.610		
11,000.00	6,998.79	8,540.25	7,064.50	121.30	58.93	-90.90	-3,852.24	-4,248.23	4,126.98	3,946.81	180.17	22.906		
11,100.00	6,997.04	8,640.23	7,063.90	124.06	61.68	-90.91	-3,854.59	-4,348.19	4,128.60	3,942.92	185.68	22.235		
11,200.00	6,995.29	8,740.21	7,063.30	126.83	64.48	-90.93	-3,856.95	-4,448.14	4,130.22	3,938.98	191.24	21.597		
11,300.00	6,993.54	8,840.19	7,062.70	129.60	67.33	-90.94	-3,859.30	-4,548.09	4,131.84	3,934.98	196.86	20.988		
11,400.00	6,991.80	8,940.17	7,062.10	132.37	70.23	-90.96	-3,861.66	-4,648.04	4,133.47	3,930.94	202.53	20.409		
11,500.00	6,990.05	9,040.15	7,061.49	135.15	73.15	-90.97	-3,864.02	-4,747.99	4,135.09	3,926.85	208.23	19.858		
11,600.00	6,988.30	9,140.13	7,060.89	137.93	76.12	-90.99	-3,866.37	-4,847.94	4,136.71	3,922.74	213.98	19.333		
11,700.00	6,986.55	9,240.11	7,060.29	140.72	79.11	-91.01	-3,868.73	-4,947.89	4,138.34	3,918.59	219.75	18.832		
11,800.00	6,984.80	9,340.10	7,059.69	143.50	82.12	-91.02	-3,871.09	-5,047.84	4,139.96	3,914.41	225.55	18.355		
11,900.00	6,983.05	9,440.08	7,059.09	146.29	85.16	-91.04	-3,873.44	-5,147.79	4,141.58	3,910.20	231.38	17.899		
12,000.00	6,981.30	9,540.06	7,058.48	149.09	88.22	-91.05	-3,875.80	-5,247.74	4,143.21	3,905.98	237.23	17.465		
12,100.00	6,979.55	9,640.04	7,057.88	151.88	91.30	-91.07	-3,878.15	-5,347.70	4,144.83	3,901.73	243.10	17.050		
12,200.00	6,977.80	9,740.02	7,057.28	154.68	94.40	-91.08	-3,880.51	-5,447.65	4,146.46	3,897.46	249.00	16.653		
12,300.00	6,976.05	9,840.00	7,056.68	157.48	97.51	-91.10	-3,882.87	-5,547.60	4,148.09	3,893.18	254.90	16.273		
12,400.00	6,974.30	9,939.98	7,056.08	160.28	100.63	-91.11	-3,885.22	-5,647.55	4,149.71	3,888.88	260.83	15.910		
12,500.00	6,972.55	10,039.96	7,055.47	163.08	103.77	-91.13	-3,887.58	-5,747.50	4,151.34	3,884.57	266.77	15.562		
12,600.00	6,970.80	10,139.94	7,054.87	165.89	106.92	-91.14	-3,889.93	-5,847.45	4,152.96	3,880.24	272.72	15.228		
12,700.00	6,969.05	10,239.92	7,054.27	168.69	110.08	-91.16	-3,892.29	-5,947.40	4,154.59	3,875.91	278.69	14.908		
12,800.00	6,967.30	10,339.90	7,053.67	171.50	113.24	-91.17	-3,894.65	-6,047.35	4,156.22	3,871.56	284.66	14.601		
12,900.00	6,965.55	10,439.88	7,053.07	174.31	116.42	-91.19	-3,897.00	-6,147.30	4,157.85	3,867.20	290.65	14.305		
13,000.00	6,963.80	10,539.86	7,052.46	177.12	119.61	-91.21	-3,899.36	-6,247.25	4,159.47	3,862.83	296.64	14.022		
13,100.00	6,962.05	10,639.84	7,051.86	179.94	122.80	-91.22	-3,901.72	-6,347.21	4,161.10	3,858.45	302.65	13.749		
13,200.00	6,960.30	10,739.82	7,051.26	182.75	126.00	-91.24	-3,904.07	-6,447.16	4,162.73	3,854.07	308.66	13.486		
13,300.00	6,958.55	10,839.80	7,050.66	185.57	129.20	-91.25	-3,906.43	-6,547.11	4,164.36	3,849.68	314.68	13.234		
13,400.00	6,956.80	10,939.78	7,050.06	188.38	132.42	-91.27	-3,908.78	-6,647.06	4,165.99	3,845.28	320.71	12.990		
13,500.00	6,955.05	11,039.76	7,049.45	191.20	135.63	-91.28	-3,911.14	-6,747.01	4,167.62	3,840.88	326.74	12.755		
13,600.00	6,953.31	11,139.75	7,048.85	194.02	138.85	-91.30	-3,913.50	-6,846.96	4,169.25	3,836.46	332.78	12.528		
13,700.00	6,951.56	11,239.73	7,048.25	196.84	142.08	-91.31	-3,915.85	-6,946.91	4,170.88	3,832.05	338.83	12.310		
13,800.00	6,949.81	11,339.71	7,047.65	199.67	145.31	-91.33	-3,918.21	-7,046.86	4,172.51	3,827.63	344.88	12.098		
13,900.00	6,948.06	11,439.69	7,047.05	202.49	148.55	-91.34	-3,920.56	-7,146.81	4,174.14	3,823.20	350.94	11.894		
14,000.00	6,946.31	11,539.67	7,046.44	205.31	151.79	-91.36	-3,922.92	-7,246.76	4,175.77	3,818.77	357.00	11.697		
14,100.00	6,944.56	11,639.65	7,045.84	208.14	155.03	-91.37	-3,925.28	-7,346.71	4,177.40	3,814.33	363.06	11.506		
14,200.00	6,942.81	11,739.63	7,045.24	210.96	158.28	-91.39	-3,927.63	-7,446.67	4,179.03	3,809.90	369.13	11.321		
14,300.00	6,941.06	11,839.61	7,044.64	213.79	161.53	-91.40	-3,929.99	-7,546.62	4,180.66	3,805.45	375.21	11.142		
14,400.00	6,939.31	11,939.59	7,044.04	216.62	164.78	-91.42	-3,932.35	-7,646.57	4,182.29	3,801.01	381.29	10.969		
14,500.00	6,937.56	12,039.57	7,043.43	219.44	168.04	-91.43	-3,934.70	-7,746.52	4,183.93	3,796.56	387.37	10.801		
14,600.00	6,935.81	12,139.55	7,042.83	222.27	171.30	-91.45	-3,937.06	-7,846.47	4,185.56	3,792.11	393.45	10.638		
14,700.00	6,934.06	12,239.53	7,042.23	225.10	174.56	-91.46	-3,939.41	-7,946.42	4,187.19	3,787.65	399.54	10.480		
14,800.00	6,932.31	12,339.51	7,041.63	227.93	177.82	-91.48	-3,941.77	-8,046.37	4,188.82	3,783.19	405.63	10.327		
14,817.75	6,932.00	12,357.26	7,041.52	228.43	178.40	-91.48	-3,942.19	-8,064.11	4,189.11	3,782.40	406.71	10.300 ES, SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FALKEN 34C-9-L(SRC PLAN_75CC) - OH - Plan 1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	15,789.20	7,243.40	3.28	247.77	0.59	2,063.63	21.40	7,531.66					
100.00	100.00	15,789.45	7,243.40	3.28	247.78	0.59	2,063.63	21.16	7,435.53	7,318.36	117.17	63.457		
200.00	200.00	15,789.69	7,243.40	3.34	247.79	0.58	2,063.63	20.91	7,339.52	7,221.93	117.58	62.421		
300.00	300.00	15,789.94	7,243.40	3.44	247.79	0.57	2,063.63	20.67	7,243.61	7,125.60	118.01	61.381		
400.00	400.00	15,809.88	7,243.40	3.60	248.36	0.57	2,063.63	20.43	7,147.81	7,029.11	118.70	60.217		
500.00	500.00	15,809.64	7,243.40	3.81	248.35	0.56	2,063.63	20.18	7,052.12	6,932.95	119.17	59.177		
600.00	599.98	15,808.59	7,243.41	4.05	248.32	31.30	2,063.63	19.13	6,956.13	6,836.50	119.63	58.148		
700.00	699.86	15,806.12	7,243.41	4.32	248.25	33.24	2,063.64	16.66	6,859.52	6,739.48	120.04	57.144		
800.00	799.72	15,803.45	7,243.42	4.62	248.18	33.15	2,063.64	13.99	6,762.91	6,642.45	120.45	56.145		
900.00	899.58	15,800.77	7,243.42	4.93	248.10	33.07	2,063.65	11.31	6,666.40	6,545.51	120.89	55.144		
1,000.00	999.44	15,801.97	7,243.43	5.27	248.14	32.98	2,063.65	8.63	6,569.99	6,448.59	121.40	54.118		
1,100.00	1,099.31	15,804.65	7,243.44	5.62	248.21	32.89	2,063.66	5.96	6,473.69	6,351.73	121.96	53.082		
1,200.00	1,199.17	15,807.33	7,243.44	5.98	248.29	32.80	2,063.66	3.28	6,377.50	6,254.96	122.54	52.044		
1,300.00	1,299.03	15,810.00	7,243.45	6.36	248.36	32.72	2,063.66	0.60	6,281.43	6,158.28	123.15	51.005		
1,400.00	1,398.89	15,812.68	7,243.46	6.74	248.44	32.63	2,063.67	-2.08	6,185.48	6,061.68	123.80	49.964		
1,500.00	1,498.75	15,815.36	7,243.46	7.13	248.51	32.54	2,063.67	-4.75	6,089.67	5,965.19	124.48	48.922		
1,600.00	1,598.61	15,818.04	7,243.47	7.52	248.59	32.46	2,063.68	-7.43	5,993.98	5,868.80	125.19	47.880		
1,700.00	1,698.47	15,820.71	7,243.48	7.92	248.67	32.37	2,063.68	-10.11	5,898.44	5,772.51	125.94	46.836		
1,800.00	1,798.33	15,823.39	7,243.48	8.32	248.74	32.28	2,063.69	-12.78	5,803.05	5,676.33	126.73	45.792		
1,900.00	1,898.19	15,826.07	7,243.49	8.73	248.82	32.20	2,063.69	-15.46	5,707.82	5,580.26	127.56	44.748		
2,000.00	1,998.05	15,828.75	7,243.50	9.14	248.89	32.11	2,063.70	-18.14	5,612.75	5,484.32	128.43	43.704		
2,100.00	2,097.91	15,831.42	7,243.50	9.55	248.97	32.02	2,063.70	-20.82	5,517.85	5,388.51	129.35	42.660		
2,200.00	2,197.78	15,834.10	7,243.51	9.97	249.04	31.93	2,063.71	-23.49	5,423.14	5,292.83	130.31	41.617		
2,300.00	2,297.64	15,836.78	7,243.52	10.39	249.12	31.85	2,063.71	-26.17	5,328.62	5,197.29	131.33	40.575		
2,400.00	2,397.50	15,839.45	7,243.52	10.81	249.20	31.76	2,063.72	-28.85	5,234.30	5,101.90	132.40	39.535		
2,500.00	2,497.36	15,842.13	7,243.53	11.23	249.27	31.67	2,063.72	-31.53	5,140.19	5,006.67	133.52	38.498		
2,600.00	2,597.22	15,844.81	7,243.54	11.65	249.35	31.59	2,063.73	-34.20	5,046.31	4,911.60	134.70	37.463		
2,700.00	2,697.08	15,847.49	7,243.54	12.07	249.42	31.50	2,063.73	-36.88	4,952.66	4,816.72	135.95	36.431		
2,800.00	2,796.94	15,850.16	7,243.55	12.50	249.50	31.41	2,063.74	-39.56	4,859.27	4,722.02	137.25	35.404		
2,900.00	2,896.80	15,852.84	7,243.56	12.92	249.57	31.32	2,063.74	-42.23	4,766.14	4,627.52	138.63	34.381		
3,000.00	2,996.66	15,855.52	7,243.56	13.35	249.65	31.24	2,063.75	-44.91	4,673.30	4,533.23	140.07	33.363		
3,100.00	3,096.52	15,858.19	7,243.57	13.78	249.73	31.15	2,063.75	-47.59	4,580.76	4,439.17	141.59	32.352		
3,200.00	3,196.38	15,860.87	7,243.58	14.21	249.80	31.06	2,063.76	-50.27	4,488.53	4,345.35	143.19	31.348		
3,300.00	3,296.25	15,863.55	7,243.58	14.64	249.88	30.98	2,063.76	-52.94	4,396.65	4,251.78	144.86	30.351		
3,400.00	3,396.11	15,866.23	7,243.59	15.07	249.95	30.89	2,063.77	-55.62	4,305.12	4,158.50	146.62	29.362		
3,500.00	3,495.97	15,868.90	7,243.59	15.50	250.03	30.80	2,063.77	-58.30	4,213.98	4,065.51	148.47	28.383		
3,600.00	3,595.83	15,871.58	7,243.60	15.93	250.10	30.71	2,063.78	-60.97	4,123.24	3,972.83	150.41	27.414		
3,700.00	3,695.69	15,874.26	7,243.61	16.36	250.18	30.63	2,063.78	-63.65	4,032.94	3,880.50	152.44	26.455		
3,800.00	3,795.55	15,876.94	7,243.61	16.80	250.26	30.54	2,063.78	-66.33	3,943.11	3,788.53	154.58	25.508		
3,900.00	3,895.41	15,879.61	7,243.62	17.23	250.33	30.45	2,063.79	-69.01	3,853.78	3,696.95	156.83	24.574		
4,000.00	3,995.27	15,882.29	7,243.63	17.66	250.41	30.36	2,063.79	-71.68	3,764.98	3,605.80	159.18	23.652		
4,100.00	4,095.13	15,884.97	7,243.63	18.10	250.48	30.28	2,063.80	-74.36	3,676.76	3,515.11	161.65	22.745		
4,200.00	4,194.99	15,887.64	7,243.64	18.53	250.56	30.19	2,063.80	-77.04	3,589.15	3,424.90	164.24	21.853		
4,300.00	4,294.85	15,909.74	7,243.65	18.96	251.18	30.10	2,063.81	-79.72	3,502.20	3,334.90	167.30	20.934		
4,400.00	4,394.71	15,907.07	7,243.65	19.40	251.11	30.01	2,063.81	-82.39	3,415.97	3,245.90	170.06	20.087		
4,500.00	4,494.58	15,904.39	7,243.66	19.83	251.03	29.93	2,063.82	-85.07	3,330.50	3,157.54	172.96	19.255		
4,600.00	4,594.44	15,901.71	7,243.67	20.27	250.96	29.84	2,063.82	-87.75	3,245.86	3,069.85	176.01	18.442		
4,700.00	4,694.30	15,901.03	7,243.67	20.71	250.94	29.75	2,063.83	-90.42	3,162.12	2,982.88	179.23	17.642		
4,800.00	4,794.16	15,903.71	7,243.68	21.14	251.01	29.66	2,063.83	-93.10	3,079.34	2,896.66	182.68	16.857		
4,900.00	4,894.02	15,906.39	7,243.69	21.58	251.09	29.58	2,063.84	-95.78	2,997.61	2,811.33	186.28	16.092		
5,000.00	4,993.88	15,909.06	7,243.69	22.01	251.16	29.49	2,063.84	-98.46	2,917.02	2,726.97	190.05	15.348		
5,100.00	5,093.74	15,911.74	7,243.70	22.45	251.24	29.40	2,063.85	-101.13	2,837.66	2,643.67	193.99	14.628		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FALKEN 34C-9-L(SRC PLAN_75CC) - OH - Plan 1												Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,200.00	5,193.60	15,914.42	7,243.71	22.89	251.32	29.31	2,063.85	-103.81	2,759.64	2,561.54	198.10	13.930	
5,300.00	5,293.46	15,917.09	7,243.71	23.32	251.39	29.23	2,063.86	-106.49	2,683.08	2,480.69	202.39	13.257	
5,400.00	5,393.32	15,919.77	7,243.72	23.76	251.47	29.14	2,063.86	-109.16	2,608.10	2,401.25	206.84	12.609	
5,500.00	5,493.18	15,922.45	7,243.73	24.20	251.54	29.05	2,063.87	-111.84	2,534.84	2,323.37	211.47	11.987	
5,600.00	5,593.05	15,925.13	7,243.73	24.64	251.62	28.96	2,063.87	-114.52	2,463.47	2,247.21	216.25	11.392	
5,700.00	5,692.91	15,927.80	7,243.74	25.07	251.69	28.88	2,063.88	-117.20	2,394.14	2,172.95	221.18	10.824	
5,800.00	5,792.77	15,930.48	7,243.75	25.51	251.77	28.79	2,063.88	-119.87	2,327.04	2,100.79	226.25	10.285	
5,900.00	5,892.63	15,933.16	7,243.75	25.95	251.85	28.70	2,063.89	-122.55	2,262.37	2,030.94	231.43	9.776	
6,000.00	5,992.49	15,935.83	7,243.76	26.39	251.92	28.61	2,063.89	-125.23	2,200.34	1,963.65	236.68	9.297	
6,100.00	6,092.35	15,938.51	7,243.76	26.82	252.00	28.53	2,063.90	-127.91	2,141.18	1,899.19	241.99	8.848	
6,200.00	6,192.21	15,941.19	7,243.77	27.26	252.07	28.44	2,063.90	-130.58	2,085.14	1,837.85	247.29	8.432	
6,300.00	6,292.07	15,943.87	7,243.78	27.70	252.15	28.35	2,063.90	-133.26	2,032.47	1,779.94	252.53	8.048	
6,400.00	6,391.93	15,946.54	7,243.78	28.14	252.22	28.26	2,063.91	-135.94	1,983.45	1,725.79	257.66	7.698	
6,500.00	6,491.79	15,951.30	7,243.80	28.58	252.36	69.19	2,063.92	-140.69	1,938.41	1,675.77	262.64	7.380	
6,600.00	6,589.80	15,969.79	7,243.84	29.02	252.88	86.45	2,063.95	-159.18	1,898.32	1,630.67	267.65	7.093	
6,700.00	6,683.86	16,003.40	7,243.92	29.46	253.83	92.39	2,064.01	-192.80	1,864.07	1,591.49	272.58	6.839	
6,800.00	6,771.56	16,051.32	7,244.04	29.92	255.19	95.30	2,064.10	-240.72	1,836.06	1,558.73	277.34	6.620	
6,900.00	6,850.72	16,112.36	7,244.19	30.40	256.92	96.67	2,064.21	-301.76	1,814.20	1,532.34	281.86	6.436	
7,000.00	6,919.40	16,185.02	7,244.37	30.96	258.97	97.11	2,064.34	-374.42	1,798.01	1,511.83	286.19	6.283	
7,100.00	6,975.92	16,267.51	7,244.57	31.62	261.31	96.99	2,064.49	-456.90	1,786.76	1,496.39	290.37	6.153	
7,200.00	7,018.87	16,357.80	7,244.79	32.44	263.86	96.63	2,064.65	-547.19	1,779.59	1,485.09	294.49	6.043	
7,300.00	7,047.21	16,453.66	7,245.02	33.42	266.58	96.24	2,064.82	-643.05	1,775.72	1,477.11	298.61	5.947	
7,396.63	7,060.04	16,549.37	7,245.26	34.51	269.29	96.00	2,064.99	-738.76	1,774.57	1,471.99	302.58	5.865 CC	
7,400.00	7,060.23	16,552.74	7,245.27	34.55	269.39	96.00	2,065.00	-742.13	1,774.57	1,471.86	302.71	5.862	
7,500.00	7,060.03	16,652.71	7,245.51	35.83	272.22	95.99	2,065.18	-842.10	1,775.47	1,468.68	306.79	5.787	
7,600.00	7,058.28	16,752.68	7,245.75	37.28	275.05	96.05	2,065.36	-942.07	1,776.61	1,465.58	311.03	5.712	
7,700.00	7,056.53	16,852.66	7,246.00	38.89	277.89	96.11	2,065.54	-1,042.05	1,777.75	1,462.33	315.42	5.636	
7,800.00	7,054.78	16,952.64	7,246.24	40.63	280.72	96.17	2,065.72	-1,142.02	1,778.89	1,458.95	319.94	5.560	
7,900.00	7,053.03	17,052.61	7,246.49	42.50	283.55	96.23	2,065.90	-1,242.00	1,780.03	1,455.45	324.58	5.484	
8,000.00	7,051.28	17,152.59	7,246.73	44.47	286.39	96.29	2,066.07	-1,341.98	1,781.18	1,451.84	329.33	5.408	
8,100.00	7,049.53	17,252.56	7,246.98	46.53	289.23	96.35	2,066.25	-1,441.95	1,782.32	1,448.15	334.17	5.334	
8,200.00	7,047.78	17,352.54	7,247.22	48.67	292.06	96.41	2,066.43	-1,541.93	1,783.47	1,444.38	339.09	5.260	
8,300.00	7,046.03	17,452.52	7,247.46	50.89	294.90	96.47	2,066.61	-1,641.90	1,784.62	1,440.54	344.08	5.187	
8,400.00	7,044.28	17,552.49	7,247.71	53.16	297.74	96.53	2,066.79	-1,741.88	1,785.77	1,436.64	349.13	5.115	
8,500.00	7,042.53	17,652.47	7,247.95	55.49	300.57	96.59	2,066.97	-1,841.85	1,786.93	1,432.69	354.23	5.044	
8,600.00	7,040.78	17,752.44	7,248.20	57.86	303.41	96.65	2,067.15	-1,941.83	1,788.08	1,428.70	359.38	4.975	
8,700.00	7,039.03	17,852.42	7,248.44	60.28	306.25	96.71	2,067.33	-2,041.80	1,789.24	1,424.67	364.57	4.908	
8,800.00	7,037.28	17,952.39	7,248.69	62.74	309.09	96.77	2,067.51	-2,141.78	1,790.40	1,420.61	369.79	4.842	
8,900.00	7,035.53	18,052.37	7,248.93	65.23	311.93	96.83	2,067.69	-2,241.75	1,791.56	1,416.51	375.05	4.777	
9,000.00	7,033.78	18,152.35	7,249.17	67.74	314.77	96.89	2,067.87	-2,341.73	1,792.73	1,412.39	380.33	4.714	
9,100.00	7,032.03	18,252.32	7,249.42	70.29	317.61	96.95	2,068.05	-2,441.70	1,793.89	1,408.25	385.64	4.652	
9,200.00	7,030.28	18,352.30	7,249.66	72.85	320.45	97.01	2,068.23	-2,541.68	1,795.06	1,404.09	390.97	4.591	
9,300.00	7,028.54	18,452.27	7,249.91	75.44	323.29	97.07	2,068.41	-2,641.65	1,796.23	1,399.91	396.32	4.532	
9,400.00	7,026.79	18,552.25	7,250.15	78.05	326.13	97.13	2,068.59	-2,741.63	1,797.40	1,395.72	401.69	4.475	
9,500.00	7,025.04	18,652.22	7,250.40	80.67	328.97	97.19	2,068.77	-2,841.61	1,798.58	1,391.51	407.07	4.418	
9,600.00	7,023.29	18,752.20	7,250.64	83.31	331.81	97.25	2,068.95	-2,941.58	1,799.75	1,387.29	412.46	4.363	
9,700.00	7,021.54	18,852.18	7,250.88	85.96	334.65	97.31	2,069.13	-3,041.56	1,800.93	1,383.06	417.87	4.310	
9,800.00	7,019.79	18,952.15	7,251.13	88.63	337.50	97.37	2,069.30	-3,141.53	1,802.11	1,378.82	423.29	4.257	
9,900.00	7,018.04	19,052.13	7,251.37	91.30	340.34	97.42	2,069.48	-3,241.51	1,803.29	1,374.57	428.72	4.206	
10,000.00	7,016.29	19,118.26	7,251.53	93.99	342.22	97.46	2,069.60	-3,307.64	1,804.79	1,371.60	433.19	4.166 ES	
10,100.00	7,014.54	19,118.26	7,251.53	96.69	342.22	97.46	2,069.60	-3,307.64	1,810.61	1,375.71	434.90	4.163 SF	
10,200.00	7,012.79	19,118.26	7,251.53	99.40	342.22	97.46	2,069.60	-3,307.64	1,821.91	1,386.56	435.34	4.185	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FALKEN 34C-9-L(SRC PLAN_75CC) - OH - Plan 1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	7,011.04	19,118.26	7,251.53	102.11	342.22	97.46	2,069.60	-3,307.64	1,838.58	1,404.03	434.56	4.231		
10,400.00	7,009.29	19,118.26	7,251.53	104.83	342.22	97.46	2,069.60	-3,307.64	1,860.49	1,427.88	432.61	4.301		
10,500.00	7,007.54	19,118.26	7,251.53	107.56	342.22	97.46	2,069.60	-3,307.64	1,887.45	1,457.85	429.60	4.393		
10,600.00	7,005.79	19,118.26	7,251.53	110.30	342.22	97.46	2,069.60	-3,307.64	1,919.25	1,493.60	425.64	4.509		
10,700.00	7,004.04	19,118.26	7,251.53	113.04	342.22	97.46	2,069.60	-3,307.64	1,955.65	1,534.79	420.86	4.647		
10,800.00	7,002.29	19,118.26	7,251.53	115.79	342.22	97.46	2,069.60	-3,307.64	1,996.39	1,581.02	415.38	4.806		
10,900.00	7,000.54	19,118.26	7,251.53	118.54	342.22	97.46	2,069.60	-3,307.64	2,041.23	1,631.90	409.33	4.987		
11,000.00	6,998.79	19,118.26	7,251.53	121.30	342.22	97.46	2,069.60	-3,307.64	2,089.90	1,687.06	402.83	5.188		
11,100.00	6,997.04	19,118.26	7,251.53	124.06	342.22	97.46	2,069.60	-3,307.64	2,142.13	1,746.13	396.00	5.409		
11,200.00	6,995.29	19,118.26	7,251.53	126.83	342.22	97.46	2,069.60	-3,307.64	2,197.67	1,808.73	388.94	5.650		
11,300.00	6,993.54	19,118.26	7,251.53	129.60	342.22	97.46	2,069.60	-3,307.64	2,256.28	1,874.55	381.73	5.911		
11,400.00	6,991.80	19,118.26	7,251.53	132.37	342.22	97.46	2,069.60	-3,307.64	2,317.72	1,943.27	374.45	6.190		
11,500.00	6,990.05	19,118.26	7,251.53	135.15	342.22	97.46	2,069.60	-3,307.64	2,381.78	2,014.61	367.17	6.487		
11,600.00	6,988.30	19,118.26	7,251.53	137.93	342.22	97.46	2,069.60	-3,307.64	2,448.25	2,088.31	359.94	6.802		
11,700.00	6,986.55	19,118.26	7,251.53	140.72	342.22	97.46	2,069.60	-3,307.64	2,516.93	2,164.14	352.80	7.134		
11,800.00	6,984.80	19,118.26	7,251.53	143.50	342.22	97.46	2,069.60	-3,307.64	2,587.66	2,241.88	345.78	7.483		
11,900.00	6,983.05	19,118.26	7,251.53	146.29	342.22	97.46	2,069.60	-3,307.64	2,660.27	2,321.35	338.92	7.849		
12,000.00	6,981.30	19,118.26	7,251.53	149.09	342.22	97.46	2,069.60	-3,307.64	2,734.61	2,402.37	332.23	8.231		
12,100.00	6,979.55	19,118.26	7,251.53	151.88	342.22	97.46	2,069.60	-3,307.64	2,810.54	2,484.81	325.73	8.628		
12,200.00	6,977.80	19,118.26	7,251.53	154.68	342.22	97.46	2,069.60	-3,307.64	2,887.93	2,568.51	319.43	9.041		
12,300.00	6,976.05	19,118.26	7,251.53	157.48	342.22	97.46	2,069.60	-3,307.64	2,966.68	2,653.36	313.32	9.468		
12,400.00	6,974.30	19,118.26	7,251.53	160.28	342.22	97.46	2,069.60	-3,307.64	3,046.68	2,739.25	307.42	9.910		
12,500.00	6,972.55	19,118.26	7,251.53	163.08	342.22	97.46	2,069.60	-3,307.64	3,127.82	2,826.09	301.73	10.366		
12,600.00	6,970.80	19,118.26	7,251.53	165.89	342.22	97.46	2,069.60	-3,307.64	3,210.04	2,913.80	296.24	10.836		
12,700.00	6,969.05	19,118.26	7,251.53	168.69	342.22	97.46	2,069.60	-3,307.64	3,293.23	3,002.28	290.95	11.319		
12,800.00	6,967.30	19,118.26	7,251.53	171.50	342.22	97.46	2,069.60	-3,307.64	3,377.34	3,091.48	285.86	11.815		
12,900.00	6,965.55	19,118.26	7,251.53	174.31	342.22	97.46	2,069.60	-3,307.64	3,462.29	3,181.33	280.96	12.323		
13,000.00	6,963.80	19,118.26	7,251.53	177.12	342.22	97.46	2,069.60	-3,307.64	3,548.03	3,271.79	276.24	12.844		
13,100.00	6,962.05	19,118.26	7,251.53	179.94	342.22	97.46	2,069.60	-3,307.64	3,634.49	3,362.79	271.70	13.377		
13,200.00	6,960.30	19,118.26	7,251.53	182.75	342.22	97.46	2,069.60	-3,307.64	3,721.64	3,454.30	267.34	13.921		
13,300.00	6,958.55	19,118.26	7,251.53	185.57	342.22	97.46	2,069.60	-3,307.64	3,809.41	3,546.27	263.14	14.477		
13,400.00	6,956.80	19,118.26	7,251.53	188.38	342.22	97.46	2,069.60	-3,307.64	3,897.78	3,638.67	259.10	15.043		
13,500.00	6,955.05	19,118.26	7,251.53	191.20	342.22	97.46	2,069.60	-3,307.64	3,986.69	3,731.47	255.22	15.621		
13,600.00	6,953.31	19,118.26	7,251.53	194.02	342.22	97.46	2,069.60	-3,307.64	4,076.12	3,824.63	251.49	16.208		
13,700.00	6,951.56	19,118.26	7,251.53	196.84	342.22	97.46	2,069.60	-3,307.64	4,166.03	3,918.13	247.89	16.806		
13,800.00	6,949.81	19,118.26	7,251.53	199.67	342.22	97.46	2,069.60	-3,307.64	4,256.39	4,011.95	244.43	17.413		
13,900.00	6,948.06	19,118.26	7,251.53	202.49	342.22	97.46	2,069.60	-3,307.64	4,347.17	4,106.06	241.10	18.030		
14,000.00	6,946.31	19,118.26	7,251.53	205.31	342.22	97.46	2,069.60	-3,307.64	4,438.34	4,200.45	237.90	18.657		
14,100.00	6,944.56	19,118.26	7,251.53	208.14	342.22	97.46	2,069.60	-3,307.64	4,529.89	4,295.09	234.81	19.292		
14,200.00	6,942.81	19,118.26	7,251.53	210.96	342.22	97.46	2,069.60	-3,307.64	4,621.79	4,389.96	231.83	19.936		
14,300.00	6,941.06	19,118.26	7,251.53	213.79	342.22	97.46	2,069.60	-3,307.64	4,714.02	4,485.06	228.97	20.588		
14,400.00	6,939.31	19,118.26	7,251.53	216.62	342.22	97.46	2,069.60	-3,307.64	4,806.56	4,580.36	226.20	21.249		
14,500.00	6,937.56	19,118.26	7,251.53	219.44	342.22	97.46	2,069.60	-3,307.64	4,899.40	4,675.86	223.54	21.918		
14,600.00	6,935.81	19,118.26	7,251.53	222.27	342.22	97.46	2,069.60	-3,307.64	4,992.51	4,771.54	220.97	22.594		
14,700.00	6,934.06	19,118.26	7,251.53	225.10	342.22	97.46	2,069.60	-3,307.64	5,085.88	4,867.40	218.48	23.278		
14,800.00	6,932.31	19,118.26	7,251.53	227.93	342.22	97.46	2,069.60	-3,307.64	5,179.50	4,963.41	216.09	23.969		
14,817.75	6,932.00	19,118.26	7,251.53	228.43	342.22	97.46	2,069.60	-3,307.64	5,196.14	4,980.47	215.67	24.093		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FALKEN 34N-9C-L(SRC PLAN_75CC) - OH - Plan 1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	15,713.94	7,135.44	3.28	247.96	-0.06	1,903.38	-2.07	7,384.95					
100.00	100.00	15,714.19	7,135.45	3.28	247.97	-0.07	1,903.38	-2.31	7,288.37	7,173.06	115.31	63.207		
200.00	200.00	15,714.43	7,135.45	3.34	247.98	-0.08	1,903.38	-2.56	7,191.89	7,076.21	115.68	62.170		
300.00	300.00	15,714.67	7,135.45	3.44	247.98	-0.08	1,903.37	-2.80	7,095.50	6,979.43	116.07	61.131		
400.00	400.00	15,714.92	7,135.45	3.60	247.99	-0.09	1,903.37	-3.05	6,999.22	6,882.74	116.48	60.088		
500.00	500.00	15,715.16	7,135.45	3.81	248.00	-0.10	1,903.37	-3.29	6,903.04	6,786.12	116.92	59.041		
600.00	599.98	15,716.19	7,135.45	4.05	248.03	30.81	1,903.36	-4.32	6,806.56	6,689.20	117.36	57.997		
700.00	699.86	15,718.61	7,135.46	4.32	248.10	32.88	1,903.33	-6.74	6,709.50	6,591.71	117.79	56.962		
800.00	799.72	15,721.23	7,135.46	4.62	248.17	32.78	1,903.31	-9.36	6,612.43	6,494.21	118.22	55.931		
900.00	899.58	15,723.85	7,135.47	4.93	248.24	32.69	1,903.28	-11.98	6,515.46	6,396.77	118.68	54.898		
1,000.00	999.44	15,726.47	7,135.48	5.27	248.32	32.60	1,903.25	-14.60	6,418.57	6,299.40	119.17	53.863		
1,100.00	1,099.31	15,729.09	7,135.48	5.62	248.39	32.50	1,903.23	-17.22	6,321.78	6,202.10	119.67	52.825		
1,200.00	1,199.17	15,731.71	7,135.49	5.98	248.47	32.41	1,903.20	-19.84	6,225.08	6,104.88	120.21	51.786		
1,300.00	1,299.03	15,734.33	7,135.49	6.36	248.54	32.32	1,903.17	-22.46	6,128.50	6,007.73	120.77	50.745		
1,400.00	1,398.89	15,736.95	7,135.50	6.74	248.61	32.22	1,903.15	-25.08	6,032.02	5,910.66	121.36	49.702		
1,500.00	1,498.75	15,739.58	7,135.51	7.13	248.69	32.13	1,903.12	-27.70	5,935.66	5,813.67	121.99	48.658		
1,600.00	1,598.61	15,742.20	7,135.51	7.52	248.76	32.04	1,903.09	-30.32	5,839.42	5,716.77	122.65	47.612		
1,700.00	1,698.47	15,744.82	7,135.52	7.92	248.84	31.94	1,903.07	-32.94	5,743.31	5,619.97	123.34	46.565		
1,800.00	1,798.33	15,747.44	7,135.53	8.32	248.91	31.85	1,903.04	-35.56	5,647.33	5,523.26	124.07	45.517		
1,900.00	1,898.19	15,750.06	7,135.53	8.73	248.98	31.76	1,903.01	-38.18	5,551.49	5,426.65	124.84	44.469		
2,000.00	1,998.05	15,752.68	7,135.54	9.14	249.06	31.66	1,902.98	-40.81	5,455.80	5,330.15	125.65	43.420		
2,100.00	2,097.91	15,755.30	7,135.55	9.55	249.13	31.57	1,902.96	-43.43	5,360.27	5,233.76	126.51	42.370		
2,200.00	2,197.78	15,757.92	7,135.55	9.97	249.21	31.47	1,902.93	-46.05	5,264.90	5,137.48	127.41	41.321		
2,300.00	2,297.64	15,760.54	7,135.56	10.39	249.28	31.38	1,902.90	-48.67	5,169.70	5,041.33	128.37	40.273		
2,400.00	2,397.50	15,763.16	7,135.57	10.81	249.35	31.29	1,902.88	-51.29	5,074.69	4,945.32	129.37	39.225		
2,500.00	2,497.36	15,765.78	7,135.57	11.23	249.43	31.19	1,902.85	-53.91	4,979.87	4,849.44	130.43	38.179		
2,600.00	2,597.22	15,768.40	7,135.58	11.65	249.50	31.10	1,902.82	-56.53	4,885.26	4,753.71	131.55	37.135		
2,700.00	2,697.08	15,771.02	7,135.58	12.07	249.58	31.01	1,902.80	-59.15	4,790.86	4,658.13	132.73	36.094		
2,800.00	2,796.94	15,773.64	7,135.59	12.50	249.65	30.91	1,902.77	-61.77	4,696.70	4,562.72	133.98	35.056		
2,900.00	2,896.80	15,776.27	7,135.60	12.92	249.72	30.82	1,902.74	-64.39	4,602.78	4,467.49	135.29	34.022		
3,000.00	2,996.66	15,778.89	7,135.60	13.35	249.80	30.72	1,902.72	-67.01	4,509.12	4,372.44	136.67	32.992		
3,100.00	3,096.52	15,781.51	7,135.61	13.78	249.87	30.63	1,902.69	-69.63	4,415.73	4,277.60	138.13	31.967		
3,200.00	3,196.38	15,784.13	7,135.62	14.21	249.95	30.54	1,902.66	-72.25	4,322.64	4,182.97	139.67	30.949		
3,300.00	3,296.25	15,786.75	7,135.62	14.64	250.02	30.44	1,902.64	-74.87	4,229.87	4,088.58	141.29	29.937		
3,400.00	3,396.11	15,789.37	7,135.63	15.07	250.09	30.35	1,902.61	-77.49	4,137.43	3,994.43	143.00	28.933		
3,500.00	3,495.97	15,808.07	7,135.64	15.50	250.62	30.26	1,902.58	-80.11	4,045.34	3,900.30	145.04	27.891		
3,600.00	3,595.83	15,805.45	7,135.64	15.93	250.55	30.16	1,902.55	-82.73	3,953.64	3,806.78	146.86	26.921		
3,700.00	3,695.69	15,802.83	7,135.65	16.36	250.47	30.07	1,902.53	-85.36	3,862.35	3,713.57	148.78	25.960		
3,800.00	3,795.55	15,800.21	7,135.65	16.80	250.40	29.97	1,902.50	-87.98	3,771.50	3,620.70	150.80	25.009		
3,900.00	3,895.41	15,802.47	7,135.66	17.23	250.46	29.88	1,902.47	-90.60	3,681.13	3,528.11	153.02	24.057		
4,000.00	3,995.27	15,805.09	7,135.67	17.66	250.54	29.79	1,902.45	-93.22	3,591.26	3,435.90	155.36	23.116		
4,100.00	4,095.13	15,807.71	7,135.67	18.10	250.61	29.69	1,902.42	-95.84	3,501.94	3,344.12	157.82	22.190		
4,200.00	4,194.99	15,810.33	7,135.68	18.53	250.69	29.60	1,902.39	-98.46	3,413.21	3,252.79	160.41	21.278		
4,300.00	4,294.85	15,812.96	7,135.69	18.96	250.76	29.50	1,902.37	-101.08	3,325.11	3,161.96	163.15	20.381		
4,400.00	4,394.71	15,815.58	7,135.69	19.40	250.83	29.41	1,902.34	-103.70	3,237.71	3,071.68	166.03	19.501		
4,500.00	4,494.58	15,818.20	7,135.70	19.83	250.91	29.32	1,902.31	-106.32	3,151.05	2,981.99	169.06	18.638		
4,600.00	4,594.44	15,820.82	7,135.71	20.27	250.98	29.22	1,902.29	-108.94	3,065.20	2,892.94	172.26	17.794		
4,700.00	4,694.30	15,823.44	7,135.71	20.71	251.06	29.13	1,902.26	-111.56	2,980.24	2,804.61	175.63	16.969		
4,800.00	4,794.16	15,826.06	7,135.72	21.14	251.13	29.03	1,902.23	-114.18	2,896.23	2,717.06	179.17	16.165		
4,900.00	4,894.02	15,828.68	7,135.73	21.58	251.20	28.94	1,902.21	-116.80	2,813.26	2,630.37	182.90	15.382		
5,000.00	4,993.88	15,831.30	7,135.73	22.01	251.28	28.85	1,902.18	-119.42	2,731.44	2,544.62	186.82	14.621		
5,100.00	5,093.74	15,833.92	7,135.74	22.45	251.35	28.75	1,902.15	-122.04	2,650.86	2,459.92	190.93	13.884		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FALKEN 34N-9C-L(SRC PLAN_75CC) - OH - Plan 1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
5,200.00	5,193.60	15,836.54	7,135.74	22.89	251.43	28.66	1,902.13	-124.66	2,571.64	2,376.38	195.25	13.171		
5,300.00	5,293.46	15,839.16	7,135.75	23.32	251.50	28.56	1,902.10	-127.28	2,493.91	2,294.13	199.78	12.483		
5,400.00	5,393.32	15,841.78	7,135.76	23.76	251.57	28.47	1,902.07	-129.90	2,417.81	2,213.31	204.51	11.823		
5,500.00	5,493.18	15,844.40	7,135.76	24.20	251.65	28.37	1,902.04	-132.53	2,343.51	2,134.07	209.44	11.189		
5,600.00	5,593.05	15,847.03	7,135.77	24.64	251.72	28.28	1,902.02	-135.15	2,271.18	2,056.61	214.57	10.585		
5,700.00	5,692.91	15,849.65	7,135.78	25.07	251.80	28.19	1,901.99	-137.77	2,201.02	1,981.13	219.88	10.010		
5,800.00	5,792.77	15,852.27	7,135.78	25.51	251.87	28.09	1,901.96	-140.39	2,133.23	1,907.87	225.36	9.466		
5,900.00	5,892.63	15,854.89	7,135.79	25.95	251.95	28.00	1,901.94	-143.01	2,068.05	1,837.08	230.98	8.953		
6,000.00	5,992.49	15,857.51	7,135.80	26.39	252.02	27.90	1,901.91	-145.63	2,005.75	1,769.05	236.69	8.474		
6,100.00	6,092.35	15,860.13	7,135.80	26.82	252.09	27.81	1,901.88	-148.25	1,946.58	1,704.11	242.46	8.028		
6,200.00	6,192.21	15,862.75	7,135.81	27.26	252.17	27.71	1,901.86	-150.87	1,890.85	1,642.62	248.23	7.617		
6,300.00	6,292.07	15,865.37	7,135.81	27.70	252.24	27.62	1,901.83	-153.49	1,838.86	1,584.96	253.91	7.242		
6,400.00	6,391.93	15,867.99	7,135.82	28.14	252.32	27.53	1,901.80	-156.11	1,790.96	1,531.54	259.42	6.904		
6,500.00	6,491.69	15,872.69	7,135.83	28.58	252.45	27.44	1,901.75	-160.81	1,747.50	1,482.79	264.71	6.602		
6,600.00	6,589.80	15,908.94	7,135.88	29.02	253.47	27.81	1,901.57	-179.24	1,709.34	1,438.94	270.40	6.321		
6,700.00	6,683.86	15,924.69	7,135.96	29.46	253.92	27.93	1,901.22	-212.80	1,677.30	1,402.37	274.93	6.101		
6,800.00	6,771.56	15,972.56	7,136.08	29.92	255.27	28.48	1,900.73	-260.67	1,651.66	1,372.03	279.63	5.907		
6,900.00	6,850.72	16,033.56	7,136.23	30.40	256.99	29.47	1,900.11	-321.67	1,632.16	1,348.17	283.99	5.747		
7,000.00	6,919.40	16,106.18	7,136.40	30.96	259.05	30.54	1,899.36	-394.29	1,618.12	1,330.05	288.07	5.617		
7,100.00	6,975.92	16,188.64	7,136.60	31.62	261.38	31.11	1,898.52	-476.74	1,608.60	1,316.63	291.97	5.509		
7,200.00	7,018.87	16,278.90	7,136.83	32.44	263.93	32.51	1,897.59	-567.00	1,602.56	1,306.72	295.84	5.417		
7,300.00	7,047.21	16,374.75	7,137.06	33.42	266.64	33.99	1,896.61	-662.84	1,599.06	1,299.30	299.77	5.334		
7,400.00	7,060.23	16,473.82	7,137.30	34.55	269.45	35.74	1,895.59	-761.91	1,597.44	1,293.65	303.79	5.258		
7,500.00	7,060.03	16,573.80	7,137.55	35.83	272.28	37.78	1,894.57	-861.88	1,597.11	1,289.23	307.88	5.187		
7,600.00	7,058.28	16,673.78	7,137.79	37.28	275.11	40.86	1,893.55	-961.85	1,596.94	1,284.80	312.14	5.116		
7,700.00	7,056.53	16,773.76	7,138.03	38.89	277.94	44.93	1,892.52	-1,061.83	1,596.77	1,280.21	316.56	5.044		
7,800.00	7,054.78	16,873.74	7,138.28	40.63	280.77	49.00	1,891.50	-1,161.80	1,596.60	1,275.48	321.11	4.972		
7,900.00	7,053.03	16,973.72	7,138.52	42.50	283.60	53.07	1,890.47	-1,261.78	1,596.43	1,270.64	325.79	4.900		
8,000.00	7,051.28	17,073.70	7,138.77	44.47	286.43	57.14	1,889.45	-1,361.75	1,596.27	1,265.70	330.57	4.829		
8,100.00	7,049.53	17,173.68	7,139.01	46.53	289.26	61.22	1,888.42	-1,461.72	1,596.11	1,260.67	335.44	4.758		
8,200.00	7,047.78	17,273.66	7,139.26	48.67	292.10	65.29	1,887.40	-1,561.70	1,595.95	1,255.56	340.39	4.689		
8,300.00	7,046.03	17,373.64	7,139.50	50.89	294.93	69.36	1,886.37	-1,661.67	1,595.79	1,250.38	345.41	4.620		
8,400.00	7,044.28	17,473.62	7,139.74	53.16	297.76	73.43	1,885.35	-1,761.65	1,595.64	1,245.15	350.49	4.553		
8,500.00	7,042.53	17,573.60	7,139.99	55.49	300.60	77.50	1,884.32	-1,861.62	1,595.49	1,239.86	355.63	4.486		
8,600.00	7,040.78	17,673.58	7,140.23	57.86	303.43	81.58	1,883.30	-1,961.60	1,595.34	1,234.53	360.81	4.422		
8,700.00	7,039.03	17,773.56	7,140.48	60.28	306.27	85.65	1,882.28	-2,061.57	1,595.20	1,229.16	366.03	4.358		
8,800.00	7,037.28	17,873.54	7,140.72	62.74	309.10	89.72	1,881.25	-2,161.54	1,595.05	1,223.76	371.29	4.296		
8,900.00	7,035.53	17,973.52	7,140.97	65.23	311.94	93.79	1,880.23	-2,261.52	1,594.91	1,218.33	376.58	4.235		
9,000.00	7,033.78	18,073.50	7,141.21	67.74	314.78	97.86	1,879.20	-2,361.49	1,594.77	1,212.88	381.90	4.176		
9,100.00	7,032.03	18,173.47	7,141.45	70.29	317.61	101.94	1,878.18	-2,461.47	1,594.64	1,207.40	387.24	4.118		
9,200.00	7,030.28	18,273.45	7,141.70	72.85	320.45	106.01	1,877.15	-2,561.44	1,594.50	1,201.90	392.60	4.061		
9,300.00	7,028.54	18,373.43	7,141.94	75.44	323.29	110.08	1,876.13	-2,661.42	1,594.37	1,196.38	397.99	4.006		
9,400.00	7,026.79	18,473.41	7,142.19	78.05	326.12	114.15	1,875.10	-2,761.39	1,594.24	1,190.85	403.39	3.952		
9,500.00	7,025.04	18,573.39	7,142.43	80.67	328.96	118.23	1,874.08	-2,861.36	1,594.12	1,185.31	408.81	3.899		
9,600.00	7,023.29	18,673.37	7,142.68	83.31	331.80	122.30	1,873.05	-2,961.34	1,594.00	1,179.75	414.24	3.848		
9,700.00	7,021.54	18,773.35	7,142.92	85.96	334.64	126.37	1,872.03	-3,061.31	1,593.88	1,174.19	419.69	3.798		
9,800.00	7,019.79	18,873.33	7,143.16	88.63	337.48	130.44	1,871.01	-3,161.29	1,593.76	1,168.61	425.14	3.749		
9,900.00	7,018.04	18,973.31	7,143.41	91.30	340.32	134.51	1,869.98	-3,261.26	1,593.64	1,163.03	430.61	3.701		
9,946.70	7,017.22	19,020.00	7,143.52	92.56	341.64	135.55	1,869.50	-3,307.95	1,593.59	1,160.42	433.17	3.679 CC		
10,000.00	7,016.29	19,018.34	7,143.52	93.99	341.60	136.55	1,869.52	-3,306.28	1,594.48	1,160.05	434.42	3.670 ES, SF		
10,100.00	7,014.54	19,018.34	7,143.52	96.69	341.60	137.55	1,869.52	-3,306.28	1,600.93	1,165.33	435.61	3.675		
10,200.00	7,012.79	19,018.34	7,143.52	99.40	341.60	138.55	1,869.52	-3,306.28	1,613.57	1,178.40	435.17	3.708		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FALKEN 34N-9C-L(SRC PLAN_75CC) - OH - Plan 1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	7,011.04	19,018.34	7,143.52	102.11	341.60	94.55	1,869.52	-3,306.28	1,632.25	1,199.06	433.19	3.768		
10,400.00	7,009.29	19,018.34	7,143.52	104.83	341.60	94.55	1,869.52	-3,306.28	1,656.77	1,226.97	429.80	3.855		
10,500.00	7,007.54	19,018.34	7,143.52	107.56	341.60	94.55	1,869.52	-3,306.28	1,686.87	1,261.71	425.15	3.968		
10,600.00	7,005.79	19,018.34	7,143.52	110.30	341.60	94.55	1,869.52	-3,306.28	1,722.25	1,302.83	419.42	4.106		
10,700.00	7,004.04	19,018.34	7,143.52	113.04	341.60	94.55	1,869.52	-3,306.28	1,762.61	1,349.80	412.80	4.270		
10,800.00	7,002.29	19,018.34	7,143.52	115.79	341.60	94.55	1,869.52	-3,306.28	1,807.60	1,402.12	405.48	4.458		
10,900.00	7,000.54	19,018.34	7,143.52	118.54	341.60	94.55	1,869.52	-3,306.28	1,856.89	1,459.26	397.63	4.670		
11,000.00	6,998.79	19,018.34	7,143.52	121.30	341.60	94.55	1,869.52	-3,306.28	1,910.15	1,520.74	389.42	4.905		
11,100.00	6,997.04	19,018.34	7,143.52	124.06	341.60	94.55	1,869.52	-3,306.28	1,967.06	1,586.08	380.97	5.163		
11,200.00	6,995.29	19,018.34	7,143.52	126.83	341.60	94.55	1,869.52	-3,306.28	2,027.30	1,654.87	372.43	5.443		
11,300.00	6,993.54	19,018.34	7,143.52	129.60	341.60	94.55	1,869.52	-3,306.28	2,090.59	1,726.72	363.87	5.745		
11,400.00	6,991.80	19,018.34	7,143.52	132.37	341.60	94.55	1,869.52	-3,306.28	2,156.67	1,801.27	355.39	6.068		
11,500.00	6,990.05	19,018.34	7,143.52	135.15	341.60	94.55	1,869.52	-3,306.28	2,225.27	1,878.22	347.05	6.412		
11,600.00	6,988.30	19,018.34	7,143.52	137.93	341.60	94.55	1,869.52	-3,306.28	2,296.19	1,957.29	338.89	6.776		
11,700.00	6,986.55	19,018.34	7,143.52	140.72	341.60	94.55	1,869.52	-3,306.28	2,369.20	2,038.25	330.95	7.159		
11,800.00	6,984.80	19,018.34	7,143.52	143.50	341.60	94.55	1,869.52	-3,306.28	2,444.12	2,120.86	323.26	7.561		
11,900.00	6,983.05	19,018.34	7,143.52	146.29	341.60	94.55	1,869.52	-3,306.28	2,520.79	2,204.96	315.83	7.982		
12,000.00	6,981.30	19,018.34	7,143.52	149.09	341.60	94.55	1,869.52	-3,306.28	2,599.04	2,290.37	308.67	8.420		
12,100.00	6,979.55	19,018.34	7,143.52	151.88	341.60	94.55	1,869.52	-3,306.28	2,678.74	2,376.95	301.78	8.876		
12,200.00	6,977.80	19,018.34	7,143.52	154.68	341.60	94.55	1,869.52	-3,306.28	2,759.76	2,464.58	295.17	9.350		
12,300.00	6,976.05	19,018.34	7,143.52	157.48	341.60	94.55	1,869.52	-3,306.28	2,841.99	2,553.15	288.84	9.839		
12,400.00	6,974.30	19,018.34	7,143.52	160.28	341.60	94.55	1,869.52	-3,306.28	2,925.33	2,642.56	282.77	10.345		
12,500.00	6,972.55	19,018.34	7,143.52	163.08	341.60	94.55	1,869.52	-3,306.28	3,009.68	2,732.72	276.96	10.867		
12,600.00	6,970.80	19,018.34	7,143.52	165.89	341.60	94.55	1,869.52	-3,306.28	3,094.96	2,823.57	271.40	11.404		
12,700.00	6,969.05	19,018.34	7,143.52	168.69	341.60	94.55	1,869.52	-3,306.28	3,181.10	2,915.02	266.08	11.955		
12,800.00	6,967.30	19,018.34	7,143.52	171.50	341.60	94.55	1,869.52	-3,306.28	3,268.04	3,007.04	261.00	12.521		
12,900.00	6,965.55	19,018.34	7,143.52	174.31	341.60	94.55	1,869.52	-3,306.28	3,355.70	3,099.56	256.13	13.101		
13,000.00	6,963.80	19,018.34	7,143.52	177.12	341.60	94.55	1,869.52	-3,306.28	3,444.03	3,192.55	251.48	13.695		
13,100.00	6,962.05	19,018.34	7,143.52	179.94	341.60	94.55	1,869.52	-3,306.28	3,532.98	3,285.95	247.03	14.302		
13,200.00	6,960.30	19,018.34	7,143.52	182.75	341.60	94.55	1,869.52	-3,306.28	3,622.51	3,379.73	242.78	14.921		
13,300.00	6,958.55	19,018.34	7,143.52	185.57	341.60	94.55	1,869.52	-3,306.28	3,712.58	3,473.87	238.71	15.553		
13,400.00	6,956.80	19,018.34	7,143.52	188.38	341.60	94.55	1,869.52	-3,306.28	3,803.14	3,568.33	234.81	16.197		
13,500.00	6,955.05	19,018.34	7,143.52	191.20	341.60	94.55	1,869.52	-3,306.28	3,894.16	3,663.09	231.07	16.852		
13,600.00	6,953.31	19,018.34	7,143.52	194.02	341.60	94.55	1,869.52	-3,306.28	3,985.61	3,758.12	227.50	17.519		
13,700.00	6,951.56	19,018.34	7,143.52	196.84	341.60	94.55	1,869.52	-3,306.28	4,077.47	3,853.40	224.07	18.197		
13,800.00	6,949.81	19,018.34	7,143.52	199.67	341.60	94.55	1,869.52	-3,306.28	4,169.70	3,948.91	220.79	18.886		
13,900.00	6,948.06	19,018.34	7,143.52	202.49	341.60	94.55	1,869.52	-3,306.28	4,262.28	4,044.64	217.64	19.584		
14,000.00	6,946.31	19,018.34	7,143.52	205.31	341.60	94.55	1,869.52	-3,306.28	4,355.19	4,140.57	214.61	20.293		
14,100.00	6,944.56	19,018.34	7,143.52	208.14	341.60	94.55	1,869.52	-3,306.28	4,448.40	4,236.69	211.71	21.011		
14,200.00	6,942.81	19,018.34	7,143.52	210.96	341.60	94.55	1,869.52	-3,306.28	4,541.91	4,332.98	208.93	21.739		
14,300.00	6,941.06	19,018.34	7,143.52	213.79	341.60	94.55	1,869.52	-3,306.28	4,635.68	4,429.43	206.25	22.476		
14,400.00	6,939.31	19,018.34	7,143.52	216.62	341.60	94.55	1,869.52	-3,306.28	4,729.71	4,526.03	203.68	23.222		
14,500.00	6,937.56	19,018.34	7,143.52	219.44	341.60	94.55	1,869.52	-3,306.28	4,823.98	4,622.78	201.20	23.976		
14,600.00	6,935.81	19,018.34	7,143.52	222.27	341.60	94.55	1,869.52	-3,306.28	4,918.48	4,719.66	198.82	24.738		
14,700.00	6,934.06	19,018.34	7,143.52	225.10	341.60	94.55	1,869.52	-3,306.28	5,013.19	4,816.66	196.53	25.508		
14,800.00	6,932.31	19,018.34	7,143.52	227.93	341.60	94.55	1,869.52	-3,306.28	5,108.10	4,913.77	194.33	26.286		
14,817.75	6,932.00	19,018.34	7,143.52	228.43	341.60	94.55	1,869.52	-3,306.28	5,124.97	4,931.02	193.95	26.425		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 11-21-4(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 172-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	1,504.54	1,552.85	3.28	8.09	-118.81	-4,135.04	-7,519.76	8,721.05					
100.00	100.00	1,584.00	1,631.02	3.28	8.51	-118.77	-4,124.29	-7,510.44	8,704.05	8,692.97	11.08	785.348		
200.00	200.00	1,584.00	1,631.02	3.34	8.51	-118.77	-4,124.29	-7,510.44	8,687.02	8,675.92	11.10	782.488		
300.00	300.00	1,683.84	1,729.31	3.44	9.03	-118.73	-4,110.47	-7,499.66	8,670.86	8,659.23	11.62	745.947		
400.00	400.00	1,730.29	1,775.03	3.60	9.27	-118.70	-4,103.95	-7,494.70	8,654.69	8,642.73	11.96	723.737		
500.00	500.00	1,790.79	1,834.66	3.81	9.58	-118.68	-4,095.94	-7,488.36	8,639.07	8,626.67	12.40	696.584		
600.00	599.98	1,887.03	1,929.58	4.05	10.08	-91.58	-4,083.86	-7,477.97	8,623.60	8,610.56	13.04	661.118		
700.00	699.86	1,942.62	1,984.41	4.32	10.37	-91.74	-4,076.76	-7,472.26	8,608.55	8,595.02	13.54	635.906		
800.00	799.72	800.00	2,259.84	4.62	4.71	-91.73	-4,041.30	-7,440.67	8,592.54	8,583.27	9.28	926.268		
900.00	899.58	2,485.99	2,519.04	4.93	13.31	-91.73	-4,006.60	-7,405.57	8,574.58	8,558.01	16.57	517.551		
1,000.00	999.44	2,542.37	2,574.37	5.27	13.63	-91.73	-3,999.13	-7,397.68	8,556.06	8,538.92	17.14	499.183		
1,100.00	1,099.31	2,876.36	2,901.32	5.62	15.58	-91.73	-3,951.48	-7,349.23	8,537.01	8,518.01	19.01	449.146		
1,200.00	1,199.17	2,922.73	2,946.58	5.98	15.86	-91.72	-3,944.34	-7,342.15	8,516.33	8,496.76	19.57	435.175		
1,300.00	1,299.03	3,010.00	3,031.96	6.36	16.39	-91.72	-3,931.66	-7,329.24	8,496.44	8,476.10	20.33	417.841		
1,400.00	1,398.89	3,134.80	3,153.95	6.74	17.13	-91.73	-3,914.31	-7,309.48	8,475.99	8,454.72	21.27	398.425		
1,500.00	1,498.75	3,166.75	3,185.21	7.13	17.32	-91.73	-3,910.03	-7,304.42	8,455.79	8,433.99	21.80	387.864		
1,600.00	1,598.61	3,200.00	3,217.79	7.52	17.52	-91.73	-3,905.69	-7,299.39	8,436.36	8,414.02	22.34	377.599		
1,700.00	1,698.47	3,340.08	3,355.01	7.92	18.34	-91.74	-3,887.30	-7,278.05	8,416.72	8,393.36	23.37	360.160		
1,800.00	1,798.33	3,391.00	3,404.90	8.32	18.64	-91.75	-3,880.64	-7,270.39	8,397.40	8,373.40	24.00	349.853		
1,900.00	1,898.19	3,391.00	3,404.90	8.73	18.64	-91.75	-3,880.64	-7,270.39	8,378.98	8,354.57	24.41	343.222		
2,000.00	1,998.05	3,446.04	3,458.94	9.14	18.95	-91.75	-3,873.48	-7,262.78	8,361.01	8,335.94	25.07	333.462		
2,100.00	2,097.91	3,486.00	3,498.27	9.55	19.18	-91.75	-3,868.28	-7,257.97	8,344.15	8,318.48	25.67	325.051		
2,200.00	2,197.78	2,200.00	3,583.39	9.97	12.09	-91.74	-3,856.74	-7,247.91	8,327.64	8,307.46	20.18	412.742		
2,300.00	2,297.64	3,616.31	3,626.51	10.39	19.90	-91.74	-3,850.71	-7,242.94	8,311.34	8,284.24	27.10	306.662		
2,400.00	2,397.50	3,642.69	3,652.49	10.81	20.04	-91.74	-3,847.00	-7,240.31	8,295.92	8,268.27	27.65	300.055		
2,500.00	2,497.36	4,096.66	4,097.57	11.23	22.66	-91.63	-3,774.21	-7,189.38	8,277.20	8,247.03	30.16	274.399		
2,600.00	2,597.22	2,600.00	4,225.85	11.65	13.88	-91.63	-3,756.69	-7,170.04	8,257.98	8,234.37	23.61	349.827		
2,700.00	2,697.08	4,291.08	4,288.01	12.07	23.81	-91.64	-3,748.18	-7,160.23	8,238.28	8,206.38	31.90	258.228		
2,800.00	2,796.94	4,343.00	4,338.99	12.50	24.11	-91.64	-3,741.50	-7,153.01	8,219.72	8,187.15	32.58	252.329		
2,900.00	2,896.80	4,343.00	4,338.99	12.92	24.11	-91.64	-3,741.50	-7,153.01	8,201.67	8,168.65	33.02	248.378		
3,000.00	2,996.66	3,000.00	4,440.13	13.35	16.49	-91.64	-3,728.08	-7,139.68	8,184.16	8,156.97	27.19	301.024		
3,100.00	3,096.52	4,496.42	4,489.79	13.78	24.99	-91.64	-3,721.26	-7,133.37	8,166.89	8,132.30	34.59	236.102		
3,200.00	3,196.38	4,546.13	4,538.72	14.21	25.27	-91.64	-3,714.74	-7,127.47	8,150.27	8,115.01	35.26	231.162		
3,300.00	3,296.25	4,612.20	4,603.83	14.64	25.63	-91.64	-3,706.66	-7,119.64	8,134.12	8,098.13	36.00	225.978		
3,400.00	3,396.11	4,629.00	4,620.39	15.07	25.72	-91.64	-3,704.73	-7,117.63	8,118.60	8,082.08	36.52	222.326		
3,500.00	3,495.97	4,679.64	4,670.40	15.50	25.99	-91.64	-3,699.14	-7,111.89	8,103.71	8,066.53	37.18	217.941		
3,600.00	3,595.83	4,724.00	4,714.28	15.93	26.23	-91.65	-3,694.49	-7,107.44	8,089.82	8,052.00	37.82	213.891		
3,700.00	3,695.69	4,809.26	4,798.71	16.36	26.66	-91.66	-3,686.06	-7,099.01	8,076.49	8,037.85	38.64	209.037		
3,800.00	3,795.55	4,853.29	4,842.31	16.80	26.89	-91.66	-3,681.95	-7,094.53	8,063.26	8,023.99	39.27	205.322		
3,900.00	3,895.41	4,915.00	4,903.51	17.23	27.19	-91.67	-3,676.43	-7,088.89	8,050.90	8,010.92	39.98	201.364		
4,000.00	3,995.27	4,915.00	4,903.51	17.66	27.19	-91.67	-3,676.43	-7,088.89	8,039.13	7,998.71	40.42	198.874		
4,100.00	4,095.13	4,978.64	4,966.70	18.10	27.50	-91.68	-3,670.96	-7,083.71	8,028.07	7,986.93	41.14	195.146		
4,200.00	4,194.99	5,027.57	5,015.33	18.53	27.73	-91.68	-3,666.86	-7,080.09	8,017.67	7,975.88	41.79	191.856		
4,300.00	4,294.85	5,104.00	5,091.34	18.96	28.09	-91.69	-3,660.62	-7,075.02	8,007.98	7,965.42	42.56	188.151		
4,400.00	4,394.71	5,104.00	5,091.34	19.40	28.09	-91.69	-3,660.62	-7,075.02	7,998.80	7,955.80	43.00	186.040		
4,500.00	4,494.58	5,159.25	5,146.34	19.83	28.33	-91.70	-3,656.45	-7,071.83	7,990.36	7,946.69	43.67	182.989		
4,600.00	4,594.44	5,197.66	5,184.61	20.27	28.50	-91.70	-3,653.88	-7,069.84	7,982.73	7,938.47	44.26	180.354		
4,700.00	4,694.30	5,236.10	5,222.94	20.71	28.67	-91.71	-3,651.56	-7,068.04	7,975.86	7,931.01	44.86	177.812		
4,800.00	4,794.16	5,294.00	5,280.71	21.14	28.92	-91.72	-3,648.58	-7,065.69	7,969.83	7,924.30	45.53	175.029		
4,900.00	4,894.02	5,294.00	5,280.71	21.58	28.92	-91.72	-3,648.58	-7,065.69	7,964.50	7,918.55	45.95	173.324		
5,000.00	4,993.88	5,383.56	5,370.14	22.01	29.28	-91.74	-3,644.71	-7,062.61	7,959.58	7,912.82	46.76	170.224		
5,100.00	5,093.74	5,443.47	5,429.98	22.45	29.51	-91.75	-3,642.45	-7,060.79	7,955.26	7,907.82	47.44	167.704		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 11-21-4(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 172-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,503.40	5,489.85	22.89	29.75	-91.77	-3,640.46	-7,059.17	7,951.44	7,903.33	48.11	165.269		
5,300.00	5,293.46	5,579.00	5,565.40	23.32	30.05	-91.79	-3,638.32	-7,057.41	7,948.15	7,899.29	48.86	162.681		
5,400.00	5,393.32	5,624.01	5,610.38	23.76	30.22	-91.81	-3,637.23	-7,056.52	7,945.31	7,895.85	49.46	160.638		
5,500.00	5,493.18	5,684.94	5,671.29	24.20	30.44	-91.82	-3,635.94	-7,055.51	7,942.99	7,892.85	50.13	158.436		
5,600.00	5,593.05	5,745.88	5,732.22	24.64	30.67	-91.84	-3,634.84	-7,054.72	7,941.15	7,890.35	50.81	156.306		
5,700.00	5,692.91	5,806.83	5,793.16	25.07	30.89	-91.86	-3,633.95	-7,054.17	7,939.82	7,888.34	51.48	154.245		
5,800.00	5,792.77	5,864.00	5,850.32	25.51	31.11	-91.88	-3,633.30	-7,053.85	7,938.97	7,886.84	52.13	152.299		
5,900.00	5,892.63	5,943.13	5,929.45	25.95	31.38	-91.91	-3,632.55	-7,053.70	7,938.52	7,885.65	52.87	150.154		
5,989.73	5,982.23	6,010.00	5,996.31	26.34	31.62	-91.93	-3,631.94	-7,053.80	7,938.39	7,884.87	53.52	148.337		
6,000.00	5,992.49	6,017.65	6,003.97	26.39	31.64	-91.93	-3,631.88	-7,053.82	7,938.39	7,884.80	53.59	148.132		
6,100.00	6,092.35	6,092.19	6,078.50	26.82	31.90	-91.95	-3,631.24	-7,054.19	7,938.59	7,884.28	54.31	146.171		
6,200.00	6,192.21	6,175.20	6,161.51	27.26	32.20	-91.98	-3,630.57	-7,054.88	7,939.09	7,884.02	55.07	144.170		
6,300.00	6,292.07	6,289.92	6,276.22	27.70	32.60	-92.01	-3,629.52	-7,055.86	7,939.57	7,883.60	55.97	141.863		
6,400.00	6,391.93	6,404.65	6,390.94	28.14	33.00	-92.04	-3,628.26	-7,056.71	7,939.86	7,883.00	56.86	139.628		
6,500.00	6,491.69	6,500.64	6,486.92	28.58	33.34	-92.04	-3,627.07	-7,057.38	7,938.24	7,880.55	57.68	137.620		
6,600.00	6,589.80	6,587.98	6,574.25	29.02	33.66	-92.04	-3,625.93	-7,058.16	7,924.70	7,866.24	58.46	135.561		
6,700.00	6,683.86	6,671.93	6,658.19	29.46	33.96	-92.04	-3,624.78	-7,059.06	7,898.00	7,838.79	59.21	133.396		
6,800.00	6,771.56	6,723.00	6,709.25	29.92	34.14	-92.04	-3,624.06	-7,059.69	7,858.88	7,799.09	59.79	131.444		
6,900.00	6,850.72	6,796.22	6,782.45	30.40	34.39	-92.04	-3,623.10	-7,060.78	7,808.36	7,747.91	60.45	129.174		
7,000.00	6,919.40	6,842.53	6,828.75	30.96	34.56	-92.04	-3,622.58	-7,061.63	7,747.82	7,686.85	60.98	127.062		
7,100.00	6,975.92	6,881.15	6,867.36	31.62	34.69	-92.04	-3,622.21	-7,062.43	7,678.71	7,617.24	61.47	124.915		
7,200.00	7,018.87	6,911.09	6,897.29	32.44	34.80	-92.04	-3,621.95	-7,063.11	7,602.69	7,540.75	61.94	122.738		
7,300.00	7,047.21	6,931.55	6,917.74	33.42	34.87	-92.04	-3,621.79	-7,063.61	7,521.64	7,459.23	62.40	120.537		
7,400.00	7,060.23	6,941.93	6,928.12	34.55	34.90	-92.04	-3,621.71	-7,063.87	7,437.52	7,374.66	62.85	118.333		
7,500.00	7,060.03	6,943.50	6,929.69	35.83	34.91	-92.04	-3,621.70	-7,063.91	7,352.41	7,289.10	63.31	116.125		
7,600.00	7,058.28	6,944.04	6,930.23	37.28	34.91	-92.04	-3,621.69	-7,063.92	7,267.61	7,203.76	63.85	113.819		
7,700.00	7,056.53	6,944.58	6,930.77	38.89	34.91	-92.04	-3,621.69	-7,063.93	7,183.21	7,118.73	64.47	111.411		
7,800.00	7,054.78	6,945.12	6,931.31	40.63	34.92	-92.04	-3,621.69	-7,063.95	7,099.20	7,034.02	65.18	108.911		
7,900.00	7,053.03	6,945.66	6,931.86	42.50	34.92	-92.04	-3,621.68	-7,063.96	7,015.62	6,949.64	65.98	106.331		
8,000.00	7,051.28	6,946.22	6,932.41	44.47	34.92	-92.04	-3,621.68	-7,063.97	6,932.47	6,865.61	66.86	103.682		
8,100.00	7,049.53	6,946.77	6,932.96	46.53	34.92	-92.04	-3,621.68	-7,063.99	6,849.77	6,781.94	67.83	100.979		
8,200.00	7,047.78	6,947.33	6,933.52	48.67	34.92	-92.04	-3,621.67	-7,064.00	6,767.54	6,698.65	68.89	98.233		
8,300.00	7,046.03	6,947.90	6,934.09	50.89	34.93	-92.04	-3,621.67	-7,064.02	6,685.79	6,615.75	70.04	95.459		
8,400.00	7,044.28	6,948.46	6,934.65	53.16	34.93	-92.04	-3,621.66	-7,064.03	6,604.55	6,533.27	71.27	92.668		
8,500.00	7,042.53	6,949.04	6,935.23	55.49	34.93	-92.04	-3,621.66	-7,064.05	6,523.82	6,451.23	72.59	89.872		
8,600.00	7,040.78	6,949.62	6,935.81	57.86	34.93	-92.04	-3,621.66	-7,064.06	6,443.64	6,369.64	74.00	87.082		
8,700.00	7,039.03	6,950.20	6,936.39	60.28	34.93	-92.04	-3,621.65	-7,064.08	6,364.01	6,288.53	75.49	84.308		
8,800.00	7,037.28	6,950.79	6,936.98	62.74	34.94	-92.04	-3,621.65	-7,064.09	6,284.97	6,207.91	77.06	81.560		
8,900.00	7,035.53	6,951.38	6,937.57	65.23	34.94	-92.04	-3,621.64	-7,064.11	6,206.54	6,127.82	78.72	78.846		
9,000.00	7,033.78	6,951.98	6,938.17	67.74	34.94	-92.04	-3,621.64	-7,064.12	6,128.73	6,048.27	80.46	76.173		
9,100.00	7,032.03	6,952.58	6,938.77	70.29	34.94	-92.04	-3,621.64	-7,064.14	6,051.57	5,969.29	82.28	73.547		
9,200.00	7,030.28	6,953.19	6,939.37	72.85	34.94	-92.04	-3,621.63	-7,064.15	5,975.10	5,890.91	84.19	70.974		
9,300.00	7,028.54	6,953.80	6,939.99	75.44	34.95	-92.04	-3,621.63	-7,064.17	5,899.32	5,813.15	86.17	68.458		
9,400.00	7,026.79	6,954.42	6,940.60	78.05	34.95	-92.04	-3,621.62	-7,064.19	5,824.28	5,736.03	88.24	66.003		
9,500.00	7,025.04	6,955.04	6,941.23	80.67	34.95	-92.04	-3,621.62	-7,064.20	5,749.99	5,659.60	90.39	63.612		
9,600.00	7,023.29	6,955.67	6,941.85	83.31	34.95	-92.04	-3,621.61	-7,064.22	5,676.50	5,583.88	92.62	61.288		
9,700.00	7,021.54	6,956.30	6,942.49	85.96	34.95	-92.04	-3,621.61	-7,064.24	5,603.82	5,508.89	94.93	59.031		
9,800.00	7,019.79	6,956.94	6,943.13	88.63	34.96	-92.04	-3,621.61	-7,064.25	5,532.00	5,434.68	97.32	56.844		
9,900.00	7,018.04	6,957.58	6,943.77	91.30	34.96	-92.04	-3,621.60	-7,064.27	5,461.07	5,361.28	99.79	54.726		
10,000.00	7,016.29	6,958.23	6,944.42	93.99	34.96	-92.04	-3,621.60	-7,064.29	5,391.05	5,288.72	102.34	52.679		
10,100.00	7,014.54	6,958.89	6,945.07	96.69	34.96	-92.04	-3,621.59	-7,064.30	5,322.00	5,217.03	104.96	50.703		
10,200.00	7,012.79	6,959.55	6,945.73	99.40	34.97	-92.04	-3,621.59	-7,064.32	5,253.94	5,146.27	107.67	48.797		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 11-21-4(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 172-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	7,011.04	6,960.22	6,946.40	102.11	34.97	-89.94	-3,621.58	-7,064.34	5,186.91	5,076.46	110.45	46.960		
10,400.00	7,009.29	6,960.89	6,947.07	104.83	34.97	-89.95	-3,621.58	-7,064.36	5,120.96	5,007.65	113.32	45.192		
10,500.00	7,007.54	6,961.57	6,947.75	107.56	34.97	-89.96	-3,621.58	-7,064.37	5,056.13	4,939.88	116.25	43.492		
10,600.00	7,005.79	6,962.25	6,948.44	110.30	34.98	-89.97	-3,621.57	-7,064.39	4,992.46	4,873.19	119.27	41.859		
10,700.00	7,004.04	6,962.94	6,949.13	113.04	34.98	-89.98	-3,621.57	-7,064.41	4,930.00	4,807.64	122.36	40.292		
10,800.00	7,002.29	6,963.64	6,949.82	115.79	34.98	-89.99	-3,621.56	-7,064.43	4,868.78	4,743.27	125.52	38.789		
10,900.00	7,000.54	6,964.34	6,950.52	118.54	34.98	-90.00	-3,621.56	-7,064.45	4,808.87	4,680.12	128.75	37.350		
11,000.00	6,998.79	6,965.05	6,951.23	121.30	34.99	-90.01	-3,621.55	-7,064.47	4,750.31	4,618.26	132.06	35.972		
11,100.00	6,997.04	6,965.76	6,951.95	124.06	34.99	-90.02	-3,621.55	-7,064.49	4,693.15	4,557.72	135.43	34.654		
11,200.00	6,995.29	6,966.49	6,952.67	126.83	34.99	-90.03	-3,621.54	-7,064.51	4,637.44	4,498.58	138.86	33.396		
11,300.00	6,993.54	6,967.21	6,953.40	129.60	34.99	-90.04	-3,621.54	-7,064.52	4,583.23	4,440.87	142.36	32.194		
11,400.00	6,991.80	6,967.95	6,954.13	132.37	35.00	-90.05	-3,621.53	-7,064.54	4,530.59	4,384.67	145.92	31.048		
11,500.00	6,990.05	6,968.69	6,954.87	135.15	35.00	-90.06	-3,621.53	-7,064.56	4,479.55	4,330.02	149.53	29.957		
11,600.00	6,988.30	6,969.44	6,955.62	137.93	35.00	-90.07	-3,621.53	-7,064.58	4,430.19	4,276.99	153.20	28.918		
11,700.00	6,986.55	6,970.20	6,956.38	140.72	35.00	-90.08	-3,621.52	-7,064.60	4,382.55	4,225.64	156.91	27.930		
11,800.00	6,984.80	6,970.96	6,957.14	143.50	35.01	-90.10	-3,621.52	-7,064.63	4,336.70	4,176.04	160.66	26.993		
11,900.00	6,983.05	6,971.73	6,957.91	146.29	35.01	-90.11	-3,621.51	-7,064.65	4,292.68	4,128.23	164.45	26.103		
12,000.00	6,981.30	6,972.51	6,958.69	149.09	35.01	-90.12	-3,621.51	-7,064.67	4,250.57	4,082.30	168.27	25.261		
12,100.00	6,979.55	6,973.29	6,959.47	151.88	35.01	-90.13	-3,621.50	-7,064.69	4,210.40	4,038.29	172.11	24.464		
12,200.00	6,977.80	6,974.08	6,960.26	154.68	35.02	-90.14	-3,621.50	-7,064.71	4,172.25	3,996.28	175.97	23.711		
12,300.00	6,976.05	6,974.88	6,961.06	157.48	35.02	-90.15	-3,621.49	-7,064.73	4,136.16	3,956.33	179.83	23.000		
12,400.00	6,974.30	6,975.69	6,961.87	160.28	35.02	-90.17	-3,621.49	-7,064.75	4,102.20	3,918.50	183.70	22.331		
12,500.00	6,972.55	6,976.50	6,962.68	163.08	35.03	-90.18	-3,621.48	-7,064.78	4,070.41	3,882.85	187.55	21.703		
12,600.00	6,970.80	6,977.33	6,963.50	165.89	35.03	-90.19	-3,621.48	-7,064.80	4,040.84	3,849.45	191.39	21.113		
12,700.00	6,969.05	6,978.16	6,964.33	168.69	35.03	-90.20	-3,621.47	-7,064.82	4,013.55	3,818.34	195.20	20.561		
12,800.00	6,967.30	6,978.99	6,965.17	171.50	35.03	-90.21	-3,621.47	-7,064.84	3,988.57	3,789.59	198.98	20.045		
12,900.00	6,965.55	6,979.84	6,966.02	174.31	35.04	-90.23	-3,621.46	-7,064.87	3,965.96	3,763.25	202.71	19.564		
13,000.00	6,963.80	6,980.70	6,966.87	177.12	35.04	-90.24	-3,621.46	-7,064.89	3,945.76	3,739.37	206.39	19.118		
13,100.00	6,962.05	6,981.56	6,967.74	179.94	35.04	-90.25	-3,621.45	-7,064.91	3,928.00	3,718.00	210.00	18.705		
13,200.00	6,960.30	6,982.43	6,968.61	182.75	35.05	-90.27	-3,621.45	-7,064.94	3,912.72	3,699.18	213.54	18.324		
13,300.00	6,958.55	6,983.31	6,969.49	185.57	35.05	-90.28	-3,621.44	-7,064.96	3,899.94	3,682.95	216.99	17.973		
13,400.00	6,956.80	6,984.20	6,970.38	188.38	35.05	-90.29	-3,621.44	-7,064.99	3,889.69	3,669.34	220.35	17.653		
13,500.00	6,955.05	6,985.10	6,971.28	191.20	35.06	-90.30	-3,621.43	-7,065.01	3,881.99	3,658.39	223.60	17.361		
13,600.00	6,953.31	6,986.01	6,972.19	194.02	35.06	-90.32	-3,621.43	-7,065.04	3,876.85	3,650.10	226.75	17.097		
13,700.00	6,951.56	6,986.93	6,973.10	196.84	35.06	-90.33	-3,621.42	-7,065.06	3,874.29	3,644.51	229.78	16.861		
13,749.25	6,950.69	6,987.38	6,973.56	198.23	35.06	-90.34	-3,621.42	-7,065.08	3,873.98	3,642.75	231.23	16.754 CC		
13,800.00	6,949.81	6,987.85	6,974.03	199.67	35.06	-90.35	-3,621.41	-7,065.09	3,874.31	3,641.63	232.68	16.651		
13,900.00	6,948.06	6,988.79	6,974.97	202.49	35.07	-90.36	-3,621.41	-7,065.12	3,876.91	3,641.45	235.46	16.465 ES		
14,000.00	6,946.31	6,989.74	6,975.91	205.31	35.07	-90.37	-3,621.40	-7,065.14	3,882.09	3,643.99	238.10	16.305		
14,100.00	6,944.56	6,990.69	6,976.87	208.14	35.07	-90.39	-3,621.40	-7,065.17	3,889.82	3,649.23	240.59	16.168		
14,200.00	6,942.81	6,991.66	6,977.83	210.96	35.08	-90.40	-3,621.39	-7,065.20	3,900.11	3,657.17	242.95	16.053		
14,300.00	6,941.06	6,992.63	6,978.81	213.79	35.08	-90.42	-3,621.39	-7,065.22	3,912.93	3,667.78	245.15	15.961		
14,400.00	6,939.31	6,993.62	6,979.79	216.62	35.09	-90.43	-3,621.38	-7,065.25	3,928.25	3,681.04	247.21	15.890		
14,500.00	6,937.56	6,994.62	6,980.79	219.44	35.09	-90.45	-3,621.38	-7,065.28	3,946.05	3,696.93	249.12	15.840		
14,600.00	6,935.81	6,995.63	6,981.80	222.27	35.09	-90.46	-3,621.37	-7,065.31	3,966.29	3,715.41	250.88	15.810		
14,700.00	6,934.06	6,996.64	6,982.81	225.10	35.10	-90.48	-3,621.37	-7,065.34	3,988.93	3,736.44	252.49	15.798 SF		
14,800.00	6,932.31	6,997.67	6,983.84	227.93	35.10	-90.49	-3,621.36	-7,065.37	4,013.94	3,759.98	253.95	15.806		
14,817.75	6,932.00	6,997.86	6,984.03	228.43	35.10	-90.49	-3,621.36	-7,065.37	4,018.62	3,764.42	254.20	15.809		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 11-21(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.00	0.00	0.00	68.00	3.28	3.28	-119.24	-4,290.69	-7,663.46	8,783.13					
100.00	100.00	32.00	100.00	3.28	3.33	-119.24	-4,290.69	-7,663.46	8,782.87	8,776.25	6.61	1,328.334		
200.00	200.00	132.00	200.00	3.34	4.35	-119.24	-4,290.69	-7,663.46	8,782.87	8,775.18	7.69	1,142.036		
300.00	300.00	232.00	300.00	3.44	7.15	-119.24	-4,290.69	-7,663.46	8,782.87	8,772.27	10.60	828.946		
400.00	400.00	332.00	400.00	3.60	10.38	-119.24	-4,290.69	-7,663.46	8,782.87	8,768.89	13.98	628.245		
500.00	500.00	432.00	500.00	3.81	13.73	-119.24	-4,290.69	-7,663.46	8,782.87	8,765.33	17.54	500.760		
600.00	599.98	531.98	599.98	4.05	17.14	-91.88	-4,290.69	-7,663.46	8,782.92	8,761.73	21.19	414.523		
700.00	699.86	631.86	699.86	4.32	20.58	-91.91	-4,290.69	-7,663.46	8,783.08	8,758.19	24.89	352.859		
800.00	799.72	731.72	799.72	4.62	24.02	-91.94	-4,290.69	-7,663.46	8,783.26	8,754.62	28.64	306.727		
900.00	899.58	831.58	899.58	4.93	27.48	-91.97	-4,290.69	-7,663.46	8,783.44	8,751.03	32.41	271.002		
1,000.00	999.44	931.44	999.44	5.27	30.95	-92.01	-4,290.69	-7,663.46	8,783.62	8,747.41	36.21	242.570		
1,100.00	1,099.31	1,031.31	1,099.31	5.62	34.41	-92.04	-4,290.69	-7,663.46	8,783.81	8,743.78	40.03	219.435		
1,200.00	1,199.17	1,131.17	1,199.17	5.98	37.89	-92.08	-4,290.69	-7,663.46	8,784.00	8,740.14	43.86	200.259		
1,300.00	1,299.03	1,231.03	1,299.03	6.36	41.36	-92.11	-4,290.69	-7,663.46	8,784.19	8,736.48	47.71	184.119		
1,400.00	1,398.89	1,330.89	1,398.89	6.74	44.84	-92.15	-4,290.69	-7,663.46	8,784.39	8,732.82	51.57	170.353		
1,500.00	1,498.75	1,430.75	1,498.75	7.13	48.31	-92.18	-4,290.69	-7,663.46	8,784.59	8,729.16	55.43	158.479		
1,600.00	1,598.61	1,530.61	1,598.61	7.52	51.79	-92.21	-4,290.69	-7,663.46	8,784.79	8,725.49	59.30	148.135		
1,700.00	1,698.47	1,630.47	1,698.47	7.92	55.27	-92.25	-4,290.69	-7,663.46	8,785.00	8,721.81	63.18	139.047		
1,800.00	1,798.33	1,730.33	1,798.33	8.32	58.75	-92.28	-4,290.69	-7,663.46	8,785.20	8,718.14	67.06	130.999		
1,900.00	1,898.19	1,830.19	1,898.19	8.73	62.23	-92.32	-4,290.69	-7,663.46	8,785.42	8,714.47	70.95	123.825		
2,000.00	1,998.05	1,930.05	1,998.05	9.14	65.71	-92.35	-4,290.69	-7,663.46	8,785.63	8,710.79	74.84	117.390		
2,100.00	2,097.91	2,029.91	2,097.91	9.55	69.20	-92.39	-4,290.69	-7,663.46	8,785.85	8,707.11	78.74	111.587		
2,200.00	2,197.78	2,129.78	2,197.78	9.97	72.68	-92.42	-4,290.69	-7,663.46	8,786.07	8,703.44	82.63	106.327		
2,300.00	2,297.64	2,229.64	2,297.64	10.39	76.16	-92.45	-4,290.69	-7,663.46	8,786.29	8,699.76	86.53	101.538		
2,400.00	2,397.50	2,329.50	2,397.50	10.81	79.64	-92.49	-4,290.69	-7,663.46	8,786.52	8,696.09	90.43	97.160		
2,500.00	2,497.36	2,429.36	2,497.36	11.23	83.13	-92.52	-4,290.69	-7,663.46	8,786.75	8,692.42	94.34	93.142		
2,600.00	2,597.22	2,529.22	2,597.22	11.65	86.61	-92.56	-4,290.69	-7,663.46	8,786.99	8,688.74	98.24	89.441		
2,700.00	2,697.08	2,629.08	2,697.08	12.07	90.10	-92.59	-4,290.69	-7,663.46	8,787.22	8,685.07	102.15	86.023		
2,800.00	2,796.94	2,728.94	2,796.94	12.50	93.58	-92.63	-4,290.69	-7,663.46	8,787.46	8,681.41	106.06	82.855		
2,900.00	2,896.80	2,828.80	2,896.80	12.92	97.06	-92.66	-4,290.69	-7,663.46	8,787.71	8,677.74	109.97	79.912		
3,000.00	2,996.66	2,928.66	2,996.66	13.35	100.55	-92.69	-4,290.69	-7,663.46	8,787.95	8,674.08	113.88	77.170		
3,100.00	3,096.52	3,028.52	3,096.52	13.78	104.03	-92.73	-4,290.69	-7,663.46	8,788.20	8,670.41	117.79	74.609		
3,200.00	3,196.38	3,128.38	3,196.38	14.21	107.52	-92.76	-4,290.69	-7,663.46	8,788.46	8,666.75	121.70	72.212		
3,300.00	3,296.25	3,228.25	3,296.25	14.64	111.00	-92.80	-4,290.69	-7,663.46	8,788.71	8,663.10	125.62	69.965		
3,400.00	3,396.11	3,328.11	3,396.11	15.07	114.49	-92.83	-4,290.69	-7,663.46	8,788.97	8,659.44	129.53	67.852		
3,500.00	3,495.97	3,427.97	3,495.97	15.50	117.97	-92.87	-4,290.69	-7,663.46	8,789.24	8,655.79	133.45	65.864		
3,600.00	3,595.83	3,527.83	3,595.83	15.93	121.46	-92.90	-4,290.69	-7,663.46	8,789.50	8,652.14	137.36	63.988		
3,700.00	3,695.69	3,627.69	3,695.69	16.36	124.94	-92.93	-4,290.69	-7,663.46	8,789.77	8,648.49	141.28	62.216		
3,800.00	3,795.55	3,727.55	3,795.55	16.80	128.43	-92.97	-4,290.69	-7,663.46	8,790.04	8,644.85	145.19	60.540		
3,900.00	3,895.41	3,827.41	3,895.41	17.23	131.91	-93.00	-4,290.69	-7,663.46	8,790.32	8,641.20	149.11	58.951		
4,000.00	3,995.27	3,927.27	3,995.27	17.66	135.40	-93.04	-4,290.69	-7,663.46	8,790.59	8,637.57	153.03	57.444		
4,100.00	4,095.13	4,027.13	4,095.13	18.10	138.88	-93.07	-4,290.69	-7,663.46	8,790.88	8,633.93	156.95	56.011		
4,200.00	4,194.99	4,126.99	4,194.99	18.53	142.37	-93.11	-4,290.69	-7,663.46	8,791.16	8,630.29	160.87	54.649		
4,300.00	4,294.85	4,226.85	4,294.85	18.96	145.85	-93.14	-4,290.69	-7,663.46	8,791.45	8,626.66	164.79	53.351		
4,400.00	4,394.71	4,326.71	4,394.71	19.40	149.34	-93.17	-4,290.69	-7,663.46	8,791.74	8,623.03	168.71	52.113		
4,500.00	4,494.58	4,426.58	4,494.58	19.83	152.82	-93.21	-4,290.69	-7,663.46	8,792.03	8,619.41	172.62	50.931		
4,600.00	4,594.44	4,526.44	4,594.44	20.27	156.31	-93.24	-4,290.69	-7,663.46	8,792.33	8,615.79	176.54	49.802		
4,700.00	4,694.30	4,626.30	4,694.30	20.71	159.79	-93.28	-4,290.69	-7,663.46	8,792.63	8,612.17	180.47	48.722		
4,800.00	4,794.16	4,726.16	4,794.16	21.14	163.28	-93.31	-4,290.69	-7,663.46	8,792.93	8,608.55	184.39	47.688		
4,900.00	4,894.02	4,826.02	4,894.02	21.58	166.76	-93.35	-4,290.69	-7,663.46	8,793.24	8,604.93	188.31	46.696		
5,000.00	4,993.88	4,925.88	4,993.88	22.01	170.25	-93.38	-4,290.69	-7,663.46	8,793.55	8,601.32	192.23	45.745		
5,100.00	5,093.74	5,025.74	5,093.74	22.45	173.73	-93.41	-4,290.69	-7,663.46	8,793.86	8,597.71	196.15	44.833		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 11-21(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,125.60	5,193.60	22.89	177.22	-93.45	-4,290.69	-7,663.46	8,794.18	8,594.11	200.07	43.955		
5,300.00	5,293.46	5,225.46	5,293.46	23.32	180.71	-93.48	-4,290.69	-7,663.46	8,794.50	8,590.51	203.99	43.112		
5,400.00	5,393.32	5,325.32	5,393.32	23.76	184.19	-93.52	-4,290.69	-7,663.46	8,794.82	8,586.91	207.91	42.300		
5,500.00	5,493.18	5,425.18	5,493.18	24.20	187.68	-93.55	-4,290.69	-7,663.46	8,795.15	8,583.31	211.84	41.519		
5,600.00	5,593.05	5,525.05	5,593.05	24.64	191.16	-93.59	-4,290.69	-7,663.46	8,795.47	8,579.72	215.76	40.765		
5,700.00	5,692.91	5,624.91	5,692.91	25.07	194.65	-93.62	-4,290.69	-7,663.46	8,795.81	8,576.12	219.68	40.039		
5,800.00	5,792.77	5,724.77	5,792.77	25.51	198.13	-93.65	-4,290.69	-7,663.46	8,796.14	8,572.54	223.60	39.338		
5,900.00	5,892.63	5,824.63	5,892.63	25.95	201.62	-93.69	-4,290.69	-7,663.46	8,796.48	8,568.95	227.53	38.661		
6,000.00	5,992.49	5,924.49	5,992.49	26.39	205.11	-93.72	-4,290.69	-7,663.46	8,796.82	8,565.37	231.45	38.008		
6,100.00	6,092.35	6,024.35	6,092.35	26.82	208.59	-93.76	-4,290.69	-7,663.46	8,797.16	8,561.79	235.37	37.375		
6,200.00	6,192.21	6,124.21	6,192.21	27.26	212.08	-93.79	-4,290.69	-7,663.46	8,797.51	8,558.22	239.30	36.764		
6,300.00	6,292.07	6,224.07	6,292.07	27.70	215.56	-93.82	-4,290.69	-7,663.46	8,797.86	8,554.64	243.22	36.173		
6,400.00	6,391.93	6,323.93	6,391.93	28.14	219.05	-93.86	-4,290.69	-7,663.46	8,798.22	8,551.07	247.14	35.600		
6,500.00	6,491.79	6,423.79	6,491.79	28.58	222.53	-55.16	-4,290.69	-7,663.46	8,798.69	8,547.53	251.06	35.038		
6,600.00	6,591.65	6,523.65	6,591.65	29.02	226.01	-41.95	-4,290.69	-7,663.46	8,799.05	8,544.00	254.92	34.456		
6,700.00	6,691.51	6,623.51	6,691.51	29.46	229.49	-39.70	-4,290.69	-7,663.46	8,799.41	8,540.46	258.83	33.861		
6,800.00	6,791.37	6,723.37	6,791.37	29.90	232.97	-40.36	-4,290.69	-7,663.46	8,799.77	8,536.92	262.69	33.265		
6,900.00	6,891.23	6,823.23	6,891.23	30.34	236.45	-42.83	-4,290.69	-7,663.46	8,800.13	8,533.38	266.54	32.682		
7,000.00	6,991.09	6,923.09	6,991.09	30.78	239.93	-47.01	-4,290.69	-7,663.46	8,800.49	8,529.84	270.36	32.100		
7,100.00	7,090.95	7,022.95	7,090.95	31.22	243.41	-53.14	-4,290.69	-7,663.46	8,800.85	8,526.30	274.18	31.588		
7,200.00	7,190.81	7,122.81	7,190.81	31.66	246.89	-61.58	-4,290.69	-7,663.46	8,801.21	8,522.76	278.00	31.093		
7,300.00	7,290.67	7,222.67	7,290.67	32.10	250.37	-72.51	-4,290.69	-7,663.46	8,801.57	8,519.22	281.82	30.640		
7,400.00	7,390.53	7,322.53	7,390.53	32.54	253.85	-85.46	-4,290.69	-7,663.46	8,801.93	8,515.68	285.64	30.178		
7,500.00	7,490.39	7,422.39	7,490.39	32.98	257.33	-91.51	-4,290.69	-7,663.46	8,802.29	8,512.14	289.46	29.819		
7,600.00	7,590.25	7,522.25	7,590.25	33.42	260.81	-91.49	-4,290.69	-7,663.46	8,802.65	8,508.60	293.28	29.447		
7,700.00	7,690.11	7,622.11	7,690.11	33.86	264.29	-91.47	-4,290.69	-7,663.46	8,803.01	8,505.06	297.10	29.154		
7,800.00	7,790.00	7,722.00	7,790.00	34.30	267.77	-91.45	-4,290.69	-7,663.46	8,803.37	8,501.52	300.92	28.782		
7,900.00	7,890.00	7,822.00	7,890.00	34.74	271.25	-91.42	-4,290.69	-7,663.46	8,803.73	8,497.98	304.74	28.405		
8,000.00	7,990.00	7,922.00	7,990.00	35.18	274.73	-91.40	-4,290.69	-7,663.46	8,804.09	8,494.44	308.56	28.022		
8,100.00	8,090.00	8,022.00	8,090.00	35.62	278.21	-91.38	-4,290.69	-7,663.46	8,804.45	8,490.90	312.38	27.635		
8,200.00	8,190.00	8,122.00	8,190.00	36.06	281.69	-91.36	-4,290.69	-7,663.46	8,804.81	8,487.36	316.20	27.244		
8,300.00	8,290.00	8,222.00	8,290.00	36.50	285.17	-91.34	-4,290.69	-7,663.46	8,805.17	8,483.82	320.02	26.849		
8,400.00	8,390.00	8,322.00	8,390.00	36.94	288.65	-91.31	-4,290.69	-7,663.46	8,805.53	8,480.28	323.84	26.451		
8,500.00	8,490.00	8,422.00	8,490.00	37.38	292.13	-91.29	-4,290.69	-7,663.46	8,805.89	8,476.74	327.66	26.051		
8,600.00	8,590.00	8,522.00	8,590.00	37.82	295.61	-91.27	-4,290.69	-7,663.46	8,806.25	8,473.20	331.48	25.649		
8,700.00	8,690.00	8,622.00	8,690.00	38.26	299.09	-91.25	-4,290.69	-7,663.46	8,806.61	8,469.66	335.30	25.245		
8,800.00	8,790.00	8,722.00	8,790.00	38.70	302.57	-91.23	-4,290.69	-7,663.46	8,806.97	8,466.12	339.12	24.841		
8,900.00	8,890.00	8,822.00	8,890.00	39.14	306.05	-91.20	-4,290.69	-7,663.46	8,807.33	8,462.58	342.94	24.437		
9,000.00	8,990.00	8,922.00	8,990.00	39.58	309.53	-91.18	-4,290.69	-7,663.46	8,807.69	8,459.04	346.76	24.033		
9,100.00	9,090.00	9,022.00	9,090.00	40.02	313.01	-91.16	-4,290.69	-7,663.46	8,808.05	8,455.50	350.58	23.630		
9,200.00	9,190.00	9,122.00	9,190.00	40.46	316.49	-91.14	-4,290.69	-7,663.46	8,808.41	8,451.96	354.40	23.228		
9,300.00	9,290.00	9,222.00	9,290.00	40.90	320.00	-91.12	-4,290.69	-7,663.46	8,808.77	8,448.42	358.22	22.828		
9,400.00	9,390.00	9,322.00	9,390.00	41.34	323.50	-91.09	-4,290.69	-7,663.46	8,809.13	8,444.88	362.04	22.429		
9,500.00	9,490.00	9,422.00	9,490.00	41.78	327.00	-91.07	-4,290.69	-7,663.46	8,809.49	8,441.34	365.86	22.033		
9,600.00	9,590.00	9,522.00	9,590.00	42.22	330.50	-91.05	-4,290.69	-7,663.46	8,809.85	8,437.80	369.68	21.640		
9,700.00	9,690.00	9,622.00	9,690.00	42.66	334.00	-91.03	-4,290.69	-7,663.46	8,810.21	8,434.26	373.50	21.250		
9,800.00	9,790.00	9,722.00	9,790.00	43.10	337.50	-91.01	-4,290.69	-7,663.46	8,810.57	8,430.72	377.32	20.863		
9,900.00	9,890.00	9,822.00	9,890.00	43.54	341.00	-90.98	-4,290.69	-7,663.46	8,810.93	8,427.18	381.14	20.480		
10,000.00	9,990.00	9,922.00	9,990.00	43.98	344.50	-90.96	-4,290.69	-7,663.46	8,811.29	8,423.64	384.96	20.100		
10,100.00	10,090.00	10,022.00	10,090.00	44.42	348.00	-90.94	-4,290.69	-7,663.46	8,811.65	8,420.10	388.78	19.725		
10,200.00	10,190.00	10,122.00	10,190.00	44.86	351.50	-90.92	-4,290.69	-7,663.46	8,812.01	8,416.56	392.60	19.355		
10,300.00	10,290.00	10,222.00	10,290.00	45.30	355.00	-90.89	-4,290.69	-7,663.46	8,812.37	8,413.02	396.42	18.989		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 11-21(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	6,941.29	7,009.29	104.83	240.60	-90.87	-4,290.69	-7,663.46	6,018.48	5,695.40	323.08	18.628		
10,500.00	7,007.54	6,939.54	7,007.54	107.56	240.54	-90.85	-4,290.69	-7,663.46	5,953.29	5,627.49	325.80	18.273		
10,600.00	7,005.79	6,937.79	7,005.79	110.30	240.48	-90.83	-4,290.69	-7,663.46	5,889.08	5,560.50	328.58	17.923		
10,700.00	7,004.04	6,936.04	7,004.04	113.04	240.41	-90.81	-4,290.69	-7,663.46	5,825.88	5,494.45	331.43	17.578		
10,800.00	7,002.29	6,934.29	7,002.29	115.79	240.35	-90.78	-4,290.69	-7,663.46	5,763.72	5,429.39	334.33	17.240		
10,900.00	7,000.54	6,932.54	7,000.54	118.54	240.29	-90.76	-4,290.69	-7,663.46	5,702.64	5,365.34	337.30	16.907		
11,000.00	6,998.79	6,930.79	6,998.79	121.30	240.23	-90.74	-4,290.69	-7,663.46	5,642.66	5,302.34	340.32	16.580		
11,100.00	6,997.04	6,929.04	6,997.04	124.06	240.17	-90.72	-4,290.69	-7,663.46	5,583.84	5,240.44	343.40	16.260		
11,200.00	6,995.29	6,927.29	6,995.29	126.83	240.11	-90.70	-4,290.69	-7,663.46	5,526.19	5,179.65	346.54	15.947		
11,300.00	6,993.54	6,925.54	6,993.54	129.60	240.05	-90.67	-4,290.69	-7,663.46	5,469.77	5,120.04	349.73	15.640		
11,400.00	6,991.80	6,923.80	6,991.80	132.37	239.99	-90.65	-4,290.69	-7,663.46	5,414.60	5,061.63	352.97	15.340		
11,500.00	6,990.05	6,922.05	6,990.05	135.15	239.93	-90.63	-4,290.69	-7,663.46	5,360.73	5,004.47	356.26	15.047		
11,600.00	6,988.30	6,920.30	6,988.30	137.93	239.86	-90.61	-4,290.69	-7,663.46	5,308.20	4,948.60	359.60	14.761		
11,700.00	6,986.55	6,918.55	6,986.55	140.72	239.80	-90.59	-4,290.69	-7,663.46	5,257.05	4,894.06	362.99	14.483		
11,800.00	6,984.80	6,916.80	6,984.80	143.50	239.74	-90.56	-4,290.69	-7,663.46	5,207.31	4,840.90	366.41	14.212		
11,900.00	6,983.05	6,915.05	6,983.05	146.29	239.68	-90.54	-4,290.69	-7,663.46	5,159.03	4,789.15	369.88	13.948		
12,000.00	6,981.30	6,913.30	6,981.30	149.09	239.62	-90.52	-4,290.69	-7,663.46	5,112.25	4,738.87	373.38	13.692		
12,100.00	6,979.55	6,911.55	6,979.55	151.88	239.56	-90.50	-4,290.69	-7,663.46	5,067.01	4,690.10	376.91	13.444		
12,200.00	6,977.80	6,909.80	6,977.80	154.68	239.50	-90.48	-4,290.69	-7,663.46	5,023.36	4,642.89	380.47	13.203		
12,300.00	6,976.05	6,908.05	6,976.05	157.48	239.44	-90.45	-4,290.69	-7,663.46	4,981.33	4,597.27	384.05	12.970		
12,400.00	6,974.30	6,906.30	6,974.30	160.28	239.38	-90.43	-4,290.69	-7,663.46	4,940.96	4,553.31	387.65	12.746		
12,500.00	6,972.55	6,904.55	6,972.55	163.08	239.32	-90.41	-4,290.69	-7,663.46	4,902.30	4,511.03	391.27	12.529		
12,600.00	6,970.80	6,902.80	6,970.80	165.89	239.25	-90.39	-4,290.69	-7,663.46	4,865.39	4,470.50	394.89	12.321		
12,700.00	6,969.05	6,901.05	6,969.05	168.69	239.19	-90.37	-4,290.69	-7,663.46	4,830.27	4,431.75	398.52	12.120		
12,800.00	6,967.30	6,900.70	6,967.30	171.50	239.18	-90.34	-4,290.69	-7,663.46	4,796.98	4,394.78	402.20	11.927		
12,900.00	6,965.55	6,902.45	6,965.55	174.31	239.24	-90.32	-4,290.69	-7,663.46	4,765.55	4,359.61	405.94	11.740		
13,000.00	6,963.80	6,904.20	6,963.80	177.12	239.30	-90.30	-4,290.69	-7,663.46	4,736.02	4,326.36	409.66	11.561		
13,100.00	6,962.05	6,905.95	6,962.05	179.94	239.36	-90.28	-4,290.69	-7,663.46	4,708.44	4,295.07	413.37	11.390		
13,200.00	6,960.30	6,907.70	6,960.30	182.75	239.43	-90.25	-4,290.69	-7,663.46	4,682.82	4,265.78	417.04	11.229		
13,300.00	6,958.55	6,909.45	6,958.55	185.57	239.49	-90.23	-4,290.69	-7,663.46	4,659.21	4,238.52	420.69	11.075		
13,400.00	6,956.80	6,888.80	6,956.80	188.38	238.77	-90.21	-4,290.69	-7,663.46	4,637.64	4,214.13	423.51	10.950		
13,500.00	6,955.05	6,887.05	6,955.05	191.20	238.70	-90.19	-4,290.69	-7,663.46	4,618.13	4,191.18	426.95	10.817		
13,600.00	6,953.31	6,885.31	6,953.31	194.02	238.64	-90.17	-4,290.69	-7,663.46	4,600.71	4,170.38	430.33	10.691		
13,700.00	6,951.56	6,883.56	6,951.56	196.84	238.58	-90.14	-4,290.69	-7,663.46	4,585.41	4,151.75	433.65	10.574		
13,800.00	6,949.81	6,881.81	6,949.81	199.67	238.52	-90.12	-4,290.69	-7,663.46	4,572.24	4,135.33	436.91	10.465		
13,900.00	6,948.06	6,880.06	6,948.06	202.49	238.46	-90.10	-4,290.69	-7,663.46	4,561.22	4,121.13	440.10	10.364		
14,000.00	6,946.31	6,878.31	6,946.31	205.31	238.40	-90.08	-4,290.69	-7,663.46	4,552.38	4,109.17	443.20	10.272		
14,100.00	6,944.56	6,876.56	6,944.56	208.14	238.34	-90.06	-4,290.69	-7,663.46	4,545.72	4,099.49	446.23	10.187		
14,200.00	6,942.81	6,874.81	6,942.81	210.96	238.28	-90.03	-4,290.69	-7,663.46	4,541.25	4,092.09	449.16	10.111		
14,300.00	6,941.06	6,873.06	6,941.06	213.79	238.22	-90.01	-4,290.69	-7,663.46	4,538.98	4,086.97	452.00	10.042		
14,353.15	6,940.13	6,872.13	6,940.13	215.29	238.18	-90.00	-4,290.69	-7,663.46	4,538.66	4,085.19	453.47	10.009 CC		
14,400.00	6,939.31	6,871.31	6,939.31	216.62	238.15	-89.99	-4,290.69	-7,663.46	4,538.91	4,084.16	454.74	9.981		
14,500.00	6,937.56	6,869.56	6,937.56	219.44	238.09	-89.97	-4,290.69	-7,663.46	4,541.04	4,083.66	457.38	9.928 ES		
14,600.00	6,935.81	6,867.81	6,935.81	222.27	238.03	-89.95	-4,290.69	-7,663.46	4,545.37	4,085.46	459.91	9.883		
14,700.00	6,934.06	6,866.06	6,934.06	225.10	237.97	-89.92	-4,290.69	-7,663.46	4,551.89	4,089.56	462.33	9.845		
14,800.00	6,932.31	6,864.31	6,932.31	227.93	237.91	-89.90	-4,290.69	-7,663.46	4,560.60	4,095.96	464.64	9.815		
14,817.75	6,932.00	6,864.00	6,932.00	228.43	237.90	-89.90	-4,290.69	-7,663.46	4,562.37	4,097.33	465.04	9.811 SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 1-17(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	53.00	3.28	3.28	-108.35	-2,973.29	-8,963.78	9,444.19					
100.00	100.00	47.00	100.00	3.28	3.38	-108.35	-2,973.29	-8,963.78	9,444.04	9,437.37	6.67	1,416.797		
200.00	200.00	147.00	200.00	3.34	4.71	-108.35	-2,973.29	-8,963.78	9,444.04	9,435.99	8.05	1,172.969		
300.00	300.00	247.00	300.00	3.44	7.62	-108.35	-2,973.29	-8,963.78	9,444.04	9,432.97	11.06	853.559		
400.00	400.00	347.00	400.00	3.60	10.87	-108.35	-2,973.29	-8,963.78	9,444.04	9,429.56	14.48	652.300		
500.00	500.00	447.00	500.00	3.81	14.24	-108.35	-2,973.29	-8,963.78	9,444.04	9,425.99	18.05	523.270		
600.00	599.98	546.98	599.98	4.05	17.66	-80.99	-2,973.29	-8,963.78	9,443.76	9,422.06	21.70	435.153		
700.00	699.86	646.86	699.86	4.32	21.09	-81.02	-2,973.29	-8,963.78	9,443.01	9,417.60	25.41	371.655		
800.00	799.72	746.72	799.72	4.62	24.54	-81.05	-2,973.29	-8,963.78	9,442.19	9,413.03	29.15	323.876		
900.00	899.58	846.58	899.58	4.93	28.00	-81.09	-2,973.29	-8,963.78	9,441.37	9,408.44	32.93	286.710		
1,000.00	999.44	946.44	999.44	5.27	31.47	-81.12	-2,973.29	-8,963.78	9,440.55	9,403.82	36.73	257.024		
1,100.00	1,099.31	1,046.31	1,099.31	5.62	34.94	-81.15	-2,973.29	-8,963.78	9,439.74	9,399.19	40.55	232.798		
1,200.00	1,199.17	1,146.17	1,199.17	5.98	38.41	-81.18	-2,973.29	-8,963.78	9,438.93	9,394.54	44.38	212.670		
1,300.00	1,299.03	1,246.03	1,299.03	6.36	41.88	-81.21	-2,973.29	-8,963.78	9,438.12	9,389.89	48.23	195.693		
1,400.00	1,398.89	1,345.89	1,398.89	6.74	45.36	-81.24	-2,973.29	-8,963.78	9,437.31	9,385.23	52.09	181.189		
1,500.00	1,498.75	1,445.75	1,498.75	7.13	48.84	-81.28	-2,973.29	-8,963.78	9,436.51	9,380.56	55.95	168.659		
1,600.00	1,598.61	1,545.61	1,598.61	7.52	52.31	-81.31	-2,973.29	-8,963.78	9,435.71	9,375.89	59.82	157.730		
1,700.00	1,698.47	1,645.47	1,698.47	7.92	55.79	-81.34	-2,973.29	-8,963.78	9,434.92	9,371.22	63.70	148.116		
1,800.00	1,798.33	1,745.33	1,798.33	8.32	59.27	-81.37	-2,973.29	-8,963.78	9,434.12	9,366.54	67.58	139.595		
1,900.00	1,898.19	1,845.19	1,898.19	8.73	62.76	-81.40	-2,973.29	-8,963.78	9,433.33	9,361.86	71.47	131.992		
2,000.00	1,998.05	1,945.05	1,998.05	9.14	66.24	-81.43	-2,973.29	-8,963.78	9,432.54	9,357.18	75.36	125.167		
2,100.00	2,097.91	2,044.91	2,097.91	9.55	69.72	-81.47	-2,973.29	-8,963.78	9,431.76	9,352.50	79.25	119.007		
2,200.00	2,197.78	2,144.78	2,197.78	9.97	73.20	-81.50	-2,973.29	-8,963.78	9,430.98	9,347.83	83.15	113.421		
2,300.00	2,297.64	2,244.64	2,297.64	10.39	76.69	-81.53	-2,973.29	-8,963.78	9,430.20	9,343.15	87.05	108.331		
2,400.00	2,397.50	2,344.50	2,397.50	10.81	80.17	-81.56	-2,973.29	-8,963.78	9,429.42	9,338.47	90.95	103.676		
2,500.00	2,497.36	2,444.36	2,497.36	11.23	83.65	-81.59	-2,973.29	-8,963.78	9,428.65	9,333.79	94.85	99.401		
2,600.00	2,597.22	2,544.22	2,597.22	11.65	87.14	-81.62	-2,973.29	-8,963.78	9,427.88	9,329.12	98.76	95.463		
2,700.00	2,697.08	2,644.08	2,697.08	12.07	90.62	-81.66	-2,973.29	-8,963.78	9,427.11	9,324.44	102.67	91.823		
2,800.00	2,796.94	2,743.94	2,796.94	12.50	94.10	-81.69	-2,973.29	-8,963.78	9,426.34	9,319.77	106.57	88.449		
2,900.00	2,896.80	2,843.80	2,896.80	12.92	97.59	-81.72	-2,973.29	-8,963.78	9,425.58	9,315.10	110.48	85.312		
3,000.00	2,996.66	2,943.66	2,996.66	13.35	101.07	-81.75	-2,973.29	-8,963.78	9,424.82	9,310.43	114.39	82.389		
3,100.00	3,096.52	3,043.52	3,096.52	13.78	104.56	-81.78	-2,973.29	-8,963.78	9,424.07	9,305.76	118.31	79.659		
3,200.00	3,196.38	3,143.38	3,196.38	14.21	108.04	-81.81	-2,973.29	-8,963.78	9,423.31	9,301.10	122.22	77.103		
3,300.00	3,296.25	3,243.25	3,296.25	14.64	111.52	-81.85	-2,973.29	-8,963.78	9,422.56	9,296.43	126.13	74.705		
3,400.00	3,396.11	3,343.11	3,396.11	15.07	115.01	-81.88	-2,973.29	-8,963.78	9,421.82	9,291.77	130.05	72.450		
3,500.00	3,495.97	3,442.97	3,495.97	15.50	118.49	-81.91	-2,973.29	-8,963.78	9,421.07	9,287.11	133.96	70.328		
3,600.00	3,595.83	3,542.83	3,595.83	15.93	121.98	-81.94	-2,973.29	-8,963.78	9,420.33	9,282.45	137.88	68.325		
3,700.00	3,695.69	3,642.69	3,695.69	16.36	125.46	-81.97	-2,973.29	-8,963.78	9,419.59	9,277.80	141.79	66.433		
3,800.00	3,795.55	3,742.55	3,795.55	16.80	128.95	-82.00	-2,973.29	-8,963.78	9,418.85	9,273.15	145.71	64.642		
3,900.00	3,895.41	3,842.41	3,895.41	17.23	132.43	-82.04	-2,973.29	-8,963.78	9,418.12	9,268.50	149.62	62.945		
4,000.00	3,995.27	3,942.27	3,995.27	17.66	135.92	-82.07	-2,973.29	-8,963.78	9,417.39	9,263.85	153.54	61.334		
4,100.00	4,095.13	4,042.13	4,095.13	18.10	139.40	-82.10	-2,973.29	-8,963.78	9,416.66	9,259.20	157.46	59.804		
4,200.00	4,194.99	4,141.99	4,194.99	18.53	142.89	-82.13	-2,973.29	-8,963.78	9,415.94	9,254.56	161.38	58.347		
4,300.00	4,294.85	4,241.85	4,294.85	18.96	146.37	-82.16	-2,973.29	-8,963.78	9,415.22	9,249.92	165.30	56.959		
4,400.00	4,394.71	4,341.71	4,394.71	19.40	149.86	-82.19	-2,973.29	-8,963.78	9,414.50	9,245.28	169.22	55.636		
4,500.00	4,494.58	4,441.58	4,494.58	19.83	153.35	-82.23	-2,973.29	-8,963.78	9,413.78	9,240.65	173.14	54.372		
4,600.00	4,594.44	4,541.44	4,594.44	20.27	156.83	-82.26	-2,973.29	-8,963.78	9,413.07	9,236.02	177.06	53.165		
4,700.00	4,694.30	4,641.30	4,694.30	20.71	160.32	-82.29	-2,973.29	-8,963.78	9,412.36	9,231.39	180.98	52.009		
4,800.00	4,794.16	4,741.16	4,794.16	21.14	163.80	-82.32	-2,973.29	-8,963.78	9,411.66	9,226.76	184.90	50.903		
4,900.00	4,894.02	4,841.02	4,894.02	21.58	167.29	-82.35	-2,973.29	-8,963.78	9,410.95	9,222.14	188.82	49.842		
5,000.00	4,993.88	4,940.88	4,993.88	22.01	170.77	-82.39	-2,973.29	-8,963.78	9,410.25	9,217.51	192.74	48.824		
5,100.00	5,093.74	5,040.74	5,093.74	22.45	174.26	-82.42	-2,973.29	-8,963.78	9,409.55	9,212.89	196.66	47.847		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 1-17(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,140.60	5,193.60	22.89	177.74	-82.45	-2,973.29	-8,963.78	9,408.86	9,208.28	200.58	46.908		
5,300.00	5,293.46	5,240.46	5,293.46	23.32	181.23	-82.48	-2,973.29	-8,963.78	9,408.16	9,203.66	204.50	46.006		
5,400.00	5,393.32	5,340.32	5,393.32	23.76	184.71	-82.51	-2,973.29	-8,963.78	9,407.47	9,199.05	208.42	45.137		
5,500.00	5,493.18	5,440.18	5,493.18	24.20	188.20	-82.54	-2,973.29	-8,963.78	9,406.79	9,194.44	212.34	44.300		
5,600.00	5,593.05	5,540.05	5,593.05	24.64	191.69	-82.58	-2,973.29	-8,963.78	9,406.10	9,189.84	216.27	43.493		
5,700.00	5,692.91	5,639.91	5,692.91	25.07	195.17	-82.61	-2,973.29	-8,963.78	9,405.42	9,185.24	220.19	42.715		
5,800.00	5,792.77	5,739.77	5,792.77	25.51	198.66	-82.64	-2,973.29	-8,963.78	9,404.75	9,180.64	224.11	41.965		
5,900.00	5,892.63	5,839.63	5,892.63	25.95	202.14	-82.67	-2,973.29	-8,963.78	9,404.07	9,176.04	228.03	41.240		
6,000.00	5,992.49	5,939.49	5,992.49	26.39	205.63	-82.70	-2,973.29	-8,963.78	9,403.40	9,171.44	231.96	40.540		
6,100.00	6,092.35	6,039.35	6,092.35	26.82	209.11	-82.74	-2,973.29	-8,963.78	9,402.73	9,166.85	235.88	39.863		
6,200.00	6,192.21	6,139.21	6,192.21	27.26	212.60	-82.77	-2,973.29	-8,963.78	9,402.06	9,162.26	239.80	39.208		
6,300.00	6,292.07	6,239.07	6,292.07	27.70	216.09	-82.80	-2,973.29	-8,963.78	9,401.40	9,157.68	243.72	38.574		
6,400.00	6,391.93	6,338.93	6,391.93	28.14	219.57	-82.83	-2,973.29	-8,963.78	9,400.74	9,153.09	247.65	37.960		
6,500.00	6,491.79	6,438.79	6,491.79	28.58	223.05	-44.12	-2,973.29	-8,963.78	9,398.13	9,146.56	251.57	37.358		
6,600.00	6,589.80	6,536.80	6,589.80	29.02	226.48	-30.76	-2,973.29	-8,963.78	9,382.57	9,127.15	255.42	36.733		
6,700.00	6,683.86	6,630.86	6,683.86	29.46	229.76	-28.16	-2,973.29	-8,963.78	9,352.73	9,093.61	259.12	36.094		
6,800.00	6,771.56	6,718.56	6,771.56	29.92	232.82	-28.30	-2,973.29	-8,963.78	9,309.37	9,046.80	262.57	35.454		
6,900.00	6,850.72	6,802.28	6,850.72	30.40	235.75	-30.09	-2,973.29	-8,963.78	9,253.59	8,987.73	265.86	34.807		
7,000.00	6,919.40	6,866.40	6,919.40	30.96	237.98	-33.57	-2,973.29	-8,963.78	9,186.78	8,918.36	268.42	34.226		
7,100.00	6,975.92	6,922.92	6,975.92	31.62	239.96	-39.27	-2,973.29	-8,963.78	9,110.63	8,839.94	270.69	33.658		
7,200.00	7,018.87	6,965.87	7,018.87	32.44	241.46	-48.33	-2,973.29	-8,963.78	9,027.03	8,754.58	272.45	33.132		
7,300.00	7,047.21	7,005.79	7,047.21	33.42	242.85	-62.41	-2,973.29	-8,963.78	8,938.08	8,663.98	274.10	32.609		
7,400.00	7,060.23	7,007.23	7,060.23	34.55	242.90	-82.44	-2,973.29	-8,963.78	8,845.97	8,571.57	274.40	32.238		
7,500.00	7,060.03	7,007.03	7,060.03	35.83	242.89	-92.54	-2,973.29	-8,963.78	8,752.92	8,478.28	274.64	31.870		
7,600.00	7,058.28	7,005.28	7,058.28	37.28	242.83	-92.51	-2,973.29	-8,963.78	8,659.98	8,385.11	274.87	31.506		
7,700.00	7,056.53	7,003.53	7,056.53	38.89	242.77	-92.48	-2,973.29	-8,963.78	8,567.21	8,292.06	275.15	31.137		
7,800.00	7,054.78	7,001.78	7,054.78	40.63	242.71	-92.45	-2,973.29	-8,963.78	8,474.60	8,199.13	275.47	30.764		
7,900.00	7,053.03	7,000.03	7,053.03	42.50	242.65	-92.42	-2,973.29	-8,963.78	8,382.16	8,106.32	275.84	30.388		
8,000.00	7,051.28	7,001.72	7,051.28	44.47	242.71	-92.38	-2,973.29	-8,963.78	8,289.89	8,013.51	276.38	29.995		
8,100.00	7,049.53	7,003.47	7,049.53	46.53	242.77	-92.35	-2,973.29	-8,963.78	8,197.80	7,920.84	276.97	29.598		
8,200.00	7,047.78	7,005.22	7,047.78	48.67	242.83	-92.32	-2,973.29	-8,963.78	8,105.91	7,828.30	277.61	29.199		
8,300.00	7,046.03	7,006.97	7,046.03	50.89	242.89	-92.29	-2,973.29	-8,963.78	8,014.20	7,735.90	278.30	28.797		
8,400.00	7,044.28	7,008.72	7,044.28	53.16	242.95	-92.26	-2,973.29	-8,963.78	7,922.70	7,643.65	279.05	28.392		
8,500.00	7,042.53	6,989.53	7,042.53	55.49	242.28	-92.23	-2,973.29	-8,963.78	7,831.40	7,552.28	279.11	28.058		
8,600.00	7,040.78	6,987.78	7,040.78	57.86	242.22	-92.20	-2,973.29	-8,963.78	7,740.32	7,460.47	279.85	27.659		
8,700.00	7,039.03	6,986.03	7,039.03	60.28	242.16	-92.17	-2,973.29	-8,963.78	7,649.46	7,368.82	280.63	27.258		
8,800.00	7,037.28	6,984.28	7,037.28	62.74	242.10	-92.13	-2,973.29	-8,963.78	7,558.83	7,277.35	281.47	26.854		
8,900.00	7,035.53	6,982.53	7,035.53	65.23	242.04	-92.10	-2,973.29	-8,963.78	7,468.44	7,186.06	282.37	26.449		
9,000.00	7,033.78	6,980.78	7,033.78	67.74	241.98	-92.07	-2,973.29	-8,963.78	7,378.29	7,094.97	283.33	26.042		
9,100.00	7,032.03	6,979.03	7,032.03	70.29	241.92	-92.04	-2,973.29	-8,963.78	7,288.41	7,004.07	284.34	25.633		
9,200.00	7,030.28	6,977.28	7,030.28	72.85	241.85	-92.01	-2,973.29	-8,963.78	7,198.79	6,913.38	285.41	25.223		
9,300.00	7,028.54	6,975.54	7,028.54	75.44	241.79	-91.98	-2,973.29	-8,963.78	7,109.44	6,822.90	286.54	24.811		
9,400.00	7,026.79	6,973.79	7,026.79	78.05	241.73	-91.95	-2,973.29	-8,963.78	7,020.39	6,732.66	287.73	24.399		
9,500.00	7,025.04	6,972.04	7,025.04	80.67	241.67	-91.92	-2,973.29	-8,963.78	6,931.63	6,642.65	288.98	23.987		
9,600.00	7,023.29	6,970.29	7,023.29	83.31	241.61	-91.89	-2,973.29	-8,963.78	6,843.18	6,552.89	290.28	23.574		
9,700.00	7,021.54	6,968.54	7,021.54	85.96	241.55	-91.85	-2,973.29	-8,963.78	6,755.05	6,463.40	291.65	23.161		
9,800.00	7,019.79	6,966.79	7,019.79	88.63	241.49	-91.82	-2,973.29	-8,963.78	6,667.26	6,374.17	293.09	22.748		
9,900.00	7,018.04	6,965.04	7,018.04	91.30	241.43	-91.79	-2,973.29	-8,963.78	6,579.81	6,285.23	294.58	22.336		
10,000.00	7,016.29	6,963.29	7,016.29	93.99	241.37	-91.76	-2,973.29	-8,963.78	6,492.73	6,196.59	296.14	21.924		
10,100.00	7,014.54	6,961.54	7,014.54	96.69	241.30	-91.73	-2,973.29	-8,963.78	6,406.02	6,108.26	297.76	21.514		
10,200.00	7,012.79	6,959.79	7,012.79	99.40	241.24	-91.70	-2,973.29	-8,963.78	6,319.71	6,020.26	299.45	21.104		
10,300.00	7,011.04	6,958.04	7,011.04	102.11	241.18	-91.67	-2,973.29	-8,963.78	6,233.81	5,932.59	301.21	20.696		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 1-17(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	6,956.29	7,009.29	104.83	241.12	-91.64	-2,973.29	-8,963.78	6,148.33	5,845.29	303.04	20.289		
10,500.00	7,007.54	6,954.54	7,007.54	107.56	241.06	-91.60	-2,973.29	-8,963.78	6,063.29	5,758.36	304.93	19.884		
10,600.00	7,005.79	6,952.79	7,005.79	110.30	241.00	-91.57	-2,973.29	-8,963.78	5,978.72	5,671.82	306.89	19.481		
10,700.00	7,004.04	6,951.04	7,004.04	113.04	240.94	-91.54	-2,973.29	-8,963.78	5,894.63	5,585.70	308.93	19.081		
10,800.00	7,002.29	6,949.29	7,002.29	115.79	240.88	-91.51	-2,973.29	-8,963.78	5,811.04	5,500.00	311.04	18.683		
10,900.00	7,000.54	6,947.54	7,000.54	118.54	240.82	-91.48	-2,973.29	-8,963.78	5,727.98	5,414.76	313.22	18.287		
11,000.00	6,998.79	6,945.79	6,998.79	121.30	240.75	-91.45	-2,973.29	-8,963.78	5,645.46	5,329.99	315.48	17.895		
11,100.00	6,997.04	6,944.04	6,997.04	124.06	240.69	-91.42	-2,973.29	-8,963.78	5,563.52	5,245.71	317.81	17.506		
11,200.00	6,995.29	6,942.29	6,995.29	126.83	240.63	-91.39	-2,973.29	-8,963.78	5,482.18	5,161.96	320.23	17.120		
11,300.00	6,993.54	6,940.54	6,993.54	129.60	240.57	-91.36	-2,973.29	-8,963.78	5,401.47	5,078.75	322.72	16.737		
11,400.00	6,991.80	6,938.80	6,991.80	132.37	240.51	-91.32	-2,973.29	-8,963.78	5,321.41	4,996.11	325.30	16.358		
11,500.00	6,990.05	6,937.05	6,990.05	135.15	240.45	-91.29	-2,973.29	-8,963.78	5,242.03	4,914.07	327.96	15.984		
11,600.00	6,988.30	6,935.30	6,988.30	137.93	240.39	-91.26	-2,973.29	-8,963.78	5,163.37	4,832.67	330.71	15.613		
11,700.00	6,986.55	6,933.55	6,986.55	140.72	240.33	-91.23	-2,973.29	-8,963.78	5,085.46	4,751.92	333.54	15.247		
11,800.00	6,984.80	6,931.80	6,984.80	143.50	240.27	-91.20	-2,973.29	-8,963.78	5,008.33	4,671.88	336.46	14.886		
11,900.00	6,983.05	6,930.05	6,983.05	146.29	240.21	-91.17	-2,973.29	-8,963.78	4,932.03	4,592.56	339.47	14.529		
12,000.00	6,981.30	6,928.30	6,981.30	149.09	240.14	-91.14	-2,973.29	-8,963.78	4,856.58	4,514.02	342.57	14.177		
12,100.00	6,979.55	6,926.55	6,979.55	151.88	240.08	-91.11	-2,973.29	-8,963.78	4,782.03	4,436.28	345.76	13.831		
12,200.00	6,977.80	6,924.80	6,977.80	154.68	240.02	-91.07	-2,973.29	-8,963.78	4,708.43	4,359.39	349.04	13.490		
12,300.00	6,976.05	6,923.05	6,976.05	157.48	239.96	-91.04	-2,973.29	-8,963.78	4,635.82	4,283.40	352.42	13.154		
12,400.00	6,974.30	6,921.30	6,974.30	160.28	239.90	-91.01	-2,973.29	-8,963.78	4,564.24	4,208.35	355.89	12.825		
12,500.00	6,972.55	6,919.55	6,972.55	163.08	239.84	-90.98	-2,973.29	-8,963.78	4,493.74	4,134.29	359.45	12.502		
12,600.00	6,970.80	6,917.80	6,970.80	165.89	239.78	-90.95	-2,973.29	-8,963.78	4,424.38	4,061.27	363.11	12.185		
12,700.00	6,969.05	6,916.05	6,969.05	168.69	239.72	-90.92	-2,973.29	-8,963.78	4,356.21	3,989.35	366.86	11.874		
12,800.00	6,967.30	6,914.30	6,967.30	171.50	239.66	-90.89	-2,973.29	-8,963.78	4,289.29	3,918.59	370.71	11.571		
12,900.00	6,965.55	6,912.55	6,965.55	174.31	239.59	-90.86	-2,973.29	-8,963.78	4,223.68	3,849.04	374.64	11.274		
13,000.00	6,963.80	6,910.80	6,963.80	177.12	239.53	-90.83	-2,973.29	-8,963.78	4,159.43	3,780.76	378.67	10.984		
13,100.00	6,962.05	6,909.05	6,962.05	179.94	239.47	-90.79	-2,973.29	-8,963.78	4,096.62	3,713.84	382.78	10.702		
13,200.00	6,960.30	6,907.30	6,960.30	182.75	239.41	-90.76	-2,973.29	-8,963.78	4,035.31	3,648.33	386.98	10.428		
13,300.00	6,958.55	6,905.55	6,958.55	185.57	239.35	-90.73	-2,973.29	-8,963.78	3,975.56	3,584.31	391.25	10.161		
13,400.00	6,956.80	6,903.80	6,956.80	188.38	239.29	-90.70	-2,973.29	-8,963.78	3,917.46	3,521.86	395.61	9.902		
13,500.00	6,955.05	6,902.05	6,955.05	191.20	239.23	-90.67	-2,973.29	-8,963.78	3,861.07	3,461.05	400.03	9.652		
13,600.00	6,953.31	6,900.31	6,953.31	194.02	239.17	-90.64	-2,973.29	-8,963.78	3,806.48	3,401.97	404.51	9.410		
13,700.00	6,951.56	6,901.44	6,951.56	196.84	239.21	-90.61	-2,973.29	-8,963.78	3,753.75	3,344.60	409.15	9.175		
13,800.00	6,949.81	6,903.19	6,949.81	199.67	239.27	-90.58	-2,973.29	-8,963.78	3,702.98	3,289.12	413.86	8.947		
13,900.00	6,948.06	6,904.94	6,948.06	202.49	239.33	-90.54	-2,973.29	-8,963.78	3,654.23	3,235.63	418.60	8.730		
14,000.00	6,946.31	6,906.69	6,946.31	205.31	239.39	-90.51	-2,973.29	-8,963.78	3,607.60	3,184.22	423.37	8.521		
14,100.00	6,944.56	6,908.44	6,944.56	208.14	239.45	-90.48	-2,973.29	-8,963.78	3,563.16	3,135.00	428.16	8.322		
14,200.00	6,942.81	6,889.81	6,942.81	210.96	238.80	-90.45	-2,973.29	-8,963.78	3,521.00	3,088.77	432.23	8.146		
14,300.00	6,941.06	6,888.06	6,941.06	213.79	238.74	-90.42	-2,973.29	-8,963.78	3,481.21	3,044.32	436.88	7.968		
14,400.00	6,939.31	6,886.31	6,939.31	216.62	238.68	-90.39	-2,973.29	-8,963.78	3,443.86	3,002.35	441.51	7.800		
14,500.00	6,937.56	6,884.56	6,937.56	219.44	238.62	-90.36	-2,973.29	-8,963.78	3,409.03	2,962.94	446.08	7.642		
14,600.00	6,935.81	6,882.81	6,935.81	222.27	238.56	-90.33	-2,973.29	-8,963.78	3,376.80	2,926.20	450.60	7.494		
14,700.00	6,934.06	6,881.06	6,934.06	225.10	238.50	-90.29	-2,973.29	-8,963.78	3,347.26	2,892.22	455.04	7.356		
14,800.00	6,932.31	6,879.31	6,932.31	227.93	238.43	-90.26	-2,973.29	-8,963.78	3,320.46	2,861.08	459.38	7.228		
14,817.75	6,932.00	6,879.00	6,932.00	228.43	238.42	-90.26	-2,973.29	-8,963.78	3,315.99	2,855.85	460.14	7.207 CC, ES, SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 121-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	36.00	3.28	3.28	-108.10	-2,940.13	-8,996.04	9,464.38					
100.00	100.00	28.57	64.57	3.28	3.28	-108.10	-2,940.19	-8,996.08	9,464.43	9,457.86	6.57	1,441.586		
200.00	200.00	73.20	109.19	3.34	3.28	-108.10	-2,940.53	-8,996.28	9,465.09	9,458.47	6.62	1,429.645		
300.00	300.00	121.00	156.99	3.44	3.29	-108.10	-2,941.22	-8,996.69	9,466.35	9,459.61	6.73	1,405.726		
400.00	400.00	163.15	199.13	3.60	3.31	-108.11	-2,941.95	-8,997.28	9,468.18	9,461.27	6.91	1,369.843		
500.00	500.00	208.00	243.97	3.81	3.34	-108.11	-2,942.67	-8,998.18	9,470.59	9,463.44	7.15	1,325.282		
600.00	599.98	208.00	243.97	4.05	3.34	-80.67	-2,942.67	-8,998.18	9,473.54	9,466.15	7.39	1,282.274		
700.00	699.86	256.41	292.34	4.32	3.39	-80.65	-2,943.27	-8,999.76	9,476.53	9,468.83	7.70	1,230.108		
800.00	799.72	300.00	335.88	4.62	3.44	-80.67	-2,943.57	-9,001.97	9,480.46	9,472.41	8.05	1,177.284		
900.00	899.58	300.00	335.88	4.93	3.44	-80.67	-2,943.57	-9,001.97	9,485.03	9,476.66	8.37	1,132.721		
1,000.00	999.44	300.00	335.88	5.27	3.44	-80.67	-2,943.57	-9,001.97	9,490.66	9,481.94	8.71	1,089.325		
1,100.00	1,099.31	355.40	391.14	5.62	3.52	-80.68	-2,943.48	-9,005.85	9,496.69	9,487.55	9.14	1,038.881		
1,200.00	1,199.17	391.00	426.60	5.98	3.59	-80.68	-2,943.09	-9,008.97	9,503.72	9,494.15	9.56	993.944		
1,300.00	1,299.03	391.00	426.60	6.36	3.59	-80.68	-2,943.09	-9,008.97	9,511.53	9,501.59	9.93	957.399		
1,400.00	1,398.89	432.58	467.95	6.74	3.67	-80.68	-2,942.30	-9,013.25	9,520.03	9,509.64	10.39	916.248		
1,500.00	1,498.75	481.00	516.00	7.13	3.78	-80.67	-2,940.87	-9,019.06	9,529.46	9,518.59	10.87	876.400		
1,600.00	1,598.61	481.00	516.00	7.52	3.78	-80.67	-2,940.87	-9,019.06	9,539.45	9,528.19	11.26	846.865		
1,700.00	1,698.47	512.89	547.58	7.92	3.86	-80.67	-2,939.70	-9,023.35	9,550.30	9,538.57	11.73	814.112		
1,800.00	1,798.33	540.79	575.17	8.32	3.93	-80.66	-2,938.56	-9,027.37	9,561.88	9,549.69	12.19	784.104		
1,900.00	1,898.19	572.00	605.97	8.73	4.02	-80.66	-2,937.17	-9,032.15	9,574.22	9,561.55	12.67	755.552		
2,000.00	1,998.05	572.00	605.97	9.14	4.02	-80.66	-2,937.17	-9,032.15	9,587.40	9,574.32	13.07	733.364		
2,100.00	2,097.91	572.00	605.97	9.55	4.02	-80.66	-2,937.17	-9,032.15	9,601.60	9,588.12	13.48	712.513		
2,200.00	2,197.78	636.85	669.79	9.97	4.24	-80.64	-2,934.06	-9,043.23	9,615.86	9,601.80	14.06	683.921		
2,300.00	2,297.64	693.00	724.80	10.39	4.44	-80.62	-2,931.18	-9,054.12	9,631.57	9,616.94	14.63	658.226		
2,400.00	2,397.50	693.00	724.80	10.81	4.44	-80.62	-2,931.18	-9,054.12	9,647.58	9,632.55	15.04	641.658		
2,500.00	2,497.36	693.00	724.80	11.23	4.44	-80.62	-2,931.18	-9,054.12	9,664.60	9,649.16	15.44	626.040		
2,600.00	2,597.22	730.33	761.25	11.65	4.59	-80.61	-2,929.32	-9,061.95	9,682.34	9,666.37	15.96	606.576		
2,700.00	2,697.08	761.00	791.15	12.07	4.72	-80.59	-2,927.95	-9,068.65	9,700.85	9,684.39	16.47	589.094		
2,800.00	2,796.94	791.32	820.64	12.50	4.86	-80.58	-2,926.52	-9,075.51	9,720.06	9,703.08	16.98	572.363		
2,900.00	2,896.80	830.39	858.56	12.92	5.04	-80.57	-2,924.30	-9,084.69	9,739.87	9,722.35	17.53	555.764		
3,000.00	2,996.66	855.00	882.38	13.35	5.16	-80.55	-2,922.67	-9,090.67	9,760.30	9,742.29	18.01	541.899		
3,100.00	3,096.52	855.00	882.38	13.78	5.16	-80.55	-2,922.67	-9,090.67	9,781.64	9,763.23	18.41	531.462		
3,200.00	3,196.38	910.69	936.07	14.21	5.46	-80.52	-2,918.72	-9,104.88	9,803.29	9,784.26	19.02	515.293		
3,300.00	3,296.25	949.00	972.84	14.64	5.67	-80.50	-2,915.92	-9,115.27	9,825.94	9,806.36	19.58	501.742		
3,400.00	3,396.11	970.00	992.94	15.07	5.80	-80.48	-2,914.31	-9,121.13	9,849.22	9,829.15	20.07	490.829		
3,500.00	3,495.97	1,028.49	1,048.78	15.50	6.16	-80.44	-2,909.22	-9,137.79	9,873.00	9,852.27	20.73	476.334		
3,600.00	3,595.83	1,044.00	1,063.55	15.93	6.25	-80.43	-2,907.72	-9,142.29	9,897.31	9,876.13	21.19	467.183		
3,700.00	3,695.69	1,088.25	1,105.56	16.36	6.55	-80.39	-2,903.27	-9,155.47	9,922.18	9,900.39	21.79	455.340		
3,800.00	3,795.55	1,139.00	1,153.47	16.80	6.90	-80.35	-2,897.97	-9,171.31	9,947.94	9,925.51	22.44	443.411		
3,900.00	3,895.41	1,139.00	1,153.47	17.23	6.90	-80.35	-2,897.97	-9,171.31	9,974.15	9,951.34	22.81	437.273		
8,000.00	7,051.28	3,887.00	3,653.90	44.47	35.07	-40.80	-2,568.73	-10,260.67	9,961.17	9,904.43	56.74	175.565		
8,100.00	7,049.53	3,915.81	3,680.25	46.53	35.38	-41.00	-2,565.23	-10,271.78	9,870.85	9,813.51	57.33	172.169		
8,200.00	7,047.78	3,928.53	3,691.86	48.67	35.51	-41.09	-2,563.70	-10,276.72	9,780.70	9,722.87	57.83	169.124		
8,300.00	7,046.03	3,941.40	3,703.61	50.89	35.64	-41.17	-2,562.16	-10,281.76	9,690.70	9,632.34	58.36	166.042		
8,400.00	7,044.28	3,982.00	3,740.58	53.16	36.07	-41.46	-2,557.36	-10,297.84	9,600.96	9,541.82	59.14	162.342		
8,500.00	7,042.53	3,982.00	3,740.58	55.49	36.07	-41.46	-2,557.36	-10,297.84	9,511.18	9,451.54	59.64	159.487		
8,600.00	7,040.78	3,982.00	3,740.58	57.86	36.07	-41.46	-2,557.36	-10,297.84	9,421.60	9,361.43	60.17	156.595		
8,700.00	7,039.03	4,003.98	3,760.55	60.28	36.31	-41.61	-2,554.78	-10,306.64	9,332.19	9,271.29	60.90	153.244		
8,800.00	7,037.28	4,027.98	3,782.34	62.74	36.57	-41.78	-2,551.94	-10,316.28	9,242.90	9,181.22	61.68	149.858		
8,900.00	7,035.53	4,052.20	3,804.31	65.23	36.83	-41.96	-2,549.04	-10,326.07	9,153.72	9,091.23	62.49	146.480		
9,000.00	7,033.78	7,196.00	6,816.82	67.74	57.37	-88.56	-2,366.25	-11,004.64	9,059.49	8,981.40	78.09	116.008		
9,100.00	7,032.03	7,196.00	6,816.82	70.29	57.37	-88.56	-2,366.25	-11,004.64	8,963.71	8,885.00	78.71	113.880		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 17-23-18(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 121-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,200.00	7,030.28	7,196.00	6,816.82	72.85	57.37	-88.56	-2,366.25	-11,004.64	8,868.02	8,788.66	79.36	111.739		
9,300.00	7,028.54	7,196.00	6,816.82	75.44	57.37	-88.56	-2,366.25	-11,004.64	8,772.43	8,692.38	80.05	109.588		
9,400.00	7,026.79	7,196.00	6,816.82	78.05	57.37	-88.56	-2,366.25	-11,004.64	8,676.94	8,596.17	80.77	107.427		
9,500.00	7,025.04	7,196.00	6,816.82	80.67	57.37	-88.56	-2,366.25	-11,004.64	8,581.55	8,500.02	81.53	105.260		
9,600.00	7,023.29	7,196.00	6,816.82	83.31	57.37	-88.56	-2,366.25	-11,004.64	8,486.27	8,403.95	82.32	103.088		
9,700.00	7,021.54	7,196.00	6,816.82	85.96	57.37	-88.56	-2,366.25	-11,004.64	8,391.09	8,307.94	83.15	100.913		
9,800.00	7,019.79	7,196.00	6,816.82	88.63	57.37	-88.56	-2,366.25	-11,004.64	8,296.03	8,212.01	84.02	98.739		
9,900.00	7,018.04	7,196.00	6,816.82	91.30	57.37	-88.56	-2,366.25	-11,004.64	8,201.09	8,116.16	84.93	96.566		
10,000.00	7,016.29	7,196.00	6,816.82	93.99	57.37	-88.56	-2,366.25	-11,004.64	8,106.27	8,020.40	85.87	94.397		
10,100.00	7,014.54	7,196.00	6,816.82	96.69	57.37	-88.56	-2,366.25	-11,004.64	8,011.58	7,924.71	86.86	92.233		
10,200.00	7,012.79	7,196.00	6,816.82	99.40	57.37	-88.56	-2,366.25	-11,004.64	7,917.01	7,829.12	87.89	90.078		
10,300.00	7,011.04	7,196.00	6,816.82	102.11	57.37	-88.56	-2,366.25	-11,004.64	7,822.58	7,733.62	88.96	87.932		
10,400.00	7,009.29	7,196.00	6,816.82	104.83	57.37	-88.56	-2,366.25	-11,004.64	7,728.29	7,638.22	90.08	85.798		
10,500.00	7,007.54	7,196.00	6,816.82	107.56	57.37	-88.56	-2,366.25	-11,004.64	7,634.15	7,542.92	91.23	83.677		
10,600.00	7,005.79	7,196.00	6,816.82	110.30	57.37	-88.56	-2,366.25	-11,004.64	7,540.16	7,447.72	92.44	81.571		
10,700.00	7,004.04	7,196.00	6,816.82	113.04	57.37	-88.56	-2,366.25	-11,004.64	7,446.32	7,352.63	93.69	79.482		
10,800.00	7,002.29	7,196.00	6,816.82	115.79	57.37	-88.56	-2,366.25	-11,004.64	7,352.65	7,257.66	94.98	77.410		
10,900.00	7,000.54	7,196.00	6,816.82	118.54	57.37	-88.56	-2,366.25	-11,004.64	7,259.14	7,162.81	96.33	75.359		
11,000.00	6,998.79	7,196.00	6,816.82	121.30	57.37	-88.56	-2,366.25	-11,004.64	7,165.81	7,068.09	97.72	73.329		
11,100.00	6,997.04	7,196.00	6,816.82	124.06	57.37	-88.56	-2,366.25	-11,004.64	7,072.66	6,973.50	99.17	71.321		
11,200.00	6,995.29	7,196.00	6,816.82	126.83	57.37	-88.56	-2,366.25	-11,004.64	6,979.71	6,879.04	100.66	69.337		
11,300.00	6,993.54	7,196.00	6,816.82	129.60	57.37	-88.56	-2,366.25	-11,004.64	6,886.94	6,784.73	102.21	67.378		
11,400.00	6,991.80	7,196.00	6,816.82	132.37	57.37	-88.56	-2,366.25	-11,004.64	6,794.39	6,690.57	103.82	65.444		
11,500.00	6,990.05	7,196.00	6,816.82	135.15	57.37	-88.56	-2,366.25	-11,004.64	6,702.05	6,596.57	105.48	63.538		
11,600.00	6,988.30	7,196.00	6,816.82	137.93	57.37	-88.56	-2,366.25	-11,004.64	6,609.93	6,502.73	107.20	61.659		
11,700.00	6,986.55	7,196.00	6,816.82	140.72	57.37	-88.56	-2,366.25	-11,004.64	6,518.04	6,409.06	108.98	59.809		
11,800.00	6,984.80	7,196.00	6,816.82	143.50	57.37	-88.56	-2,366.25	-11,004.64	6,426.40	6,315.58	110.82	57.988		
11,900.00	6,983.05	7,196.00	6,816.82	146.29	57.37	-88.56	-2,366.25	-11,004.64	6,335.01	6,222.28	112.73	56.198		
12,000.00	6,981.30	7,196.00	6,816.82	149.09	57.37	-88.56	-2,366.25	-11,004.64	6,243.88	6,129.18	114.70	54.438		
12,100.00	6,979.55	7,196.00	6,816.82	151.88	57.37	-88.56	-2,366.25	-11,004.64	6,153.03	6,036.30	116.73	52.710		
12,200.00	6,977.80	7,196.00	6,816.82	154.68	57.37	-88.56	-2,366.25	-11,004.64	6,062.47	5,943.63	118.84	51.013		
12,300.00	6,976.05	7,196.00	6,816.82	157.48	57.37	-88.56	-2,366.25	-11,004.64	5,972.20	5,851.19	121.02	49.349		
12,400.00	6,974.30	7,196.00	6,816.82	160.28	57.37	-88.56	-2,366.25	-11,004.64	5,882.26	5,758.99	123.27	47.718		
12,500.00	6,972.55	7,196.00	6,816.82	163.08	57.37	-88.56	-2,366.25	-11,004.64	5,792.64	5,667.04	125.60	46.120		
12,600.00	6,970.80	7,196.00	6,816.82	165.89	57.37	-88.56	-2,366.25	-11,004.64	5,703.37	5,575.36	128.01	44.555		
12,700.00	6,969.05	7,196.00	6,816.82	168.69	57.37	-88.56	-2,366.25	-11,004.64	5,614.46	5,483.96	130.50	43.024		
12,800.00	6,967.30	7,196.00	6,816.82	171.50	57.37	-88.56	-2,366.25	-11,004.64	5,525.92	5,392.85	133.07	41.527		
12,900.00	6,965.55	7,196.00	6,816.82	174.31	57.37	-88.56	-2,366.25	-11,004.64	5,437.79	5,302.06	135.73	40.063		
13,000.00	6,963.80	7,196.00	6,816.82	177.12	57.37	-88.56	-2,366.25	-11,004.64	5,350.07	5,211.59	138.48	38.634		
13,100.00	6,962.05	7,196.00	6,816.82	179.94	57.37	-88.56	-2,366.25	-11,004.64	5,262.79	5,121.47	141.32	37.239		
13,200.00	6,960.30	7,196.00	6,816.82	182.75	57.37	-88.56	-2,366.25	-11,004.64	5,175.97	5,031.71	144.26	35.879		
13,300.00	6,958.55	7,196.00	6,816.82	185.57	57.37	-88.56	-2,366.25	-11,004.64	5,089.64	4,942.34	147.30	34.552		
13,400.00	6,956.80	7,196.00	6,816.82	188.38	57.37	-88.56	-2,366.25	-11,004.64	5,003.81	4,853.37	150.44	33.260		
13,500.00	6,955.05	7,196.00	6,816.82	191.20	57.37	-88.56	-2,366.25	-11,004.64	4,918.52	4,764.83	153.69	32.002		
13,600.00	6,953.31	7,196.00	6,816.82	194.02	57.37	-88.56	-2,366.25	-11,004.64	4,833.80	4,676.75	157.05	30.779		
13,700.00	6,951.56	7,196.00	6,816.82	196.84	57.37	-88.56	-2,366.25	-11,004.64	4,749.67	4,589.14	160.52	29.589		
13,800.00	6,949.81	7,196.00	6,816.82	199.67	57.37	-88.56	-2,366.25	-11,004.64	4,666.16	4,502.05	164.11	28.433		
13,900.00	6,948.06	7,196.00	6,816.82	202.49	57.37	-88.56	-2,366.25	-11,004.64	4,583.31	4,415.50	167.82	27.312		
14,000.00	6,946.31	7,196.00	6,816.82	205.31	57.37	-88.56	-2,366.25	-11,004.64	4,501.16	4,329.52	171.65	26.223		
14,100.00	6,944.56	7,196.00	6,816.82	208.14	57.37	-88.56	-2,366.25	-11,004.64	4,419.75	4,244.15	175.60	25.169		
14,200.00	6,942.81	7,196.00	6,816.82	210.96	57.37	-88.56	-2,366.25	-11,004.64	4,339.12	4,159.42	179.69	24.147		
14,300.00	6,941.06	7,196.00	6,816.82	213.79	57.37	-88.56	-2,366.25	-11,004.64	4,259.30	4,075.39	183.92	23.159		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 121-MWD												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)		
14,400.00	6,939.31	7,196.00	6,816.82	216.62	57.37	-88.56	-2,366.25	-11,004.64	4,180.36	3,992.08	188.27	22.204	
14,500.00	6,937.56	7,196.00	6,816.82	219.44	57.37	-88.56	-2,366.25	-11,004.64	4,102.33	3,909.55	192.77	21.281	
14,600.00	6,935.81	7,196.00	6,816.82	222.27	57.37	-88.56	-2,366.25	-11,004.64	4,025.27	3,827.86	197.41	20.390	
14,700.00	6,934.06	7,196.00	6,816.82	225.10	57.37	-88.56	-2,366.25	-11,004.64	3,949.24	3,747.05	202.20	19.532	
14,800.00	6,932.31	7,196.00	6,816.82	227.93	57.37	-88.56	-2,366.25	-11,004.64	3,874.31	3,667.18	207.13	18.705	
14,817.75	6,932.00	7,196.00	6,816.82	228.43	57.37	-88.56	-2,366.25	-11,004.64	3,861.13	3,653.11	208.02	18.562 CC, ES, SF	



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 17-32-12(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 120-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	36.00	3.28	3.28	-108.11	-2,931.04	-8,963.49	9,430.61					
100.00	100.00	0.00	36.00	3.28	3.28	-108.11	-2,931.04	-8,963.49	9,430.76	9,424.19	6.56	1,436.545		
200.00	200.00	56.70	92.70	3.34	3.28	-108.11	-2,931.40	-8,963.71	9,431.48	9,424.86	6.62	1,424.766		
300.00	300.00	577.00	612.23	3.44	3.96	-108.03	-2,916.83	-8,962.58	9,430.44	9,423.03	7.42	1,271.722		
400.00	400.00	604.87	639.90	3.60	4.03	-108.01	-2,913.44	-8,962.86	9,427.54	9,419.90	7.64	1,233.621		
500.00	500.00	639.02	673.74	3.81	4.12	-107.98	-2,909.02	-8,963.51	9,425.35	9,417.41	7.94	1,187.703		
600.00	599.98	691.51	725.69	4.05	4.28	-80.60	-2,901.67	-8,965.11	9,423.55	9,415.22	8.33	1,131.373		
700.00	699.86	893.43	924.72	4.32	5.01	-80.47	-2,868.36	-8,972.01	9,420.95	9,411.63	9.33	1,010.226		
800.00	799.72	1,004.34	1,033.34	4.62	5.49	-80.37	-2,846.36	-8,976.21	9,417.58	9,407.49	10.10	932.640		
900.00	899.58	1,114.64	1,140.51	4.93	6.02	-80.25	-2,820.85	-8,981.50	9,414.20	9,403.25	10.95	859.739		
1,000.00	999.44	1,191.83	1,214.94	5.27	6.44	-80.15	-2,800.87	-8,985.87	9,410.84	9,399.14	11.70	804.355		
1,100.00	1,099.31	1,275.61	1,295.13	5.62	6.93	-80.03	-2,777.25	-8,991.47	9,407.78	9,395.25	12.54	750.374		
1,200.00	1,199.17	1,368.23	1,382.87	5.98	7.52	-79.87	-2,748.48	-8,998.53	9,404.83	9,391.34	13.49	697.270		
1,300.00	1,299.03	1,417.00	1,428.69	6.36	7.85	-79.79	-2,732.28	-9,002.62	9,402.12	9,387.93	14.19	662.800		
1,400.00	1,398.89	1,467.81	1,476.19	6.74	8.21	-79.69	-2,714.86	-9,007.30	9,399.96	9,385.03	14.93	629.671		
1,500.00	1,498.75	1,512.00	1,517.35	7.13	8.53	-79.61	-2,699.44	-9,011.86	9,398.56	9,382.93	15.63	601.168		
1,600.00	1,598.61	1,564.87	1,566.42	7.52	8.93	-79.50	-2,680.65	-9,017.68	9,397.74	9,381.31	16.43	572.065		
1,700.00	1,698.47	1,628.00	1,624.78	7.92	9.42	-79.38	-2,657.70	-9,024.94	9,397.32	9,380.00	17.32	542.695		
1,734.64	1,733.07	1,646.03	1,641.39	8.06	9.56	-79.34	-2,651.03	-9,027.10	9,397.28	9,379.68	17.60	533.953		
1,800.00	1,798.33	1,679.90	1,672.53	8.32	9.84	-79.27	-2,638.35	-9,031.28	9,397.40	9,379.27	18.14	518.185		
1,900.00	1,898.19	1,731.36	1,719.62	8.73	10.26	-79.16	-2,618.71	-9,037.94	9,398.03	9,379.07	18.97	495.470		
2,000.00	1,998.05	1,796.00	1,778.41	9.14	10.81	-79.01	-2,593.36	-9,046.84	9,399.24	9,379.31	19.93	471.678		
2,100.00	2,097.91	1,939.24	1,907.68	9.55	12.11	-78.68	-2,534.98	-9,066.80	9,400.38	9,378.75	21.63	434.533		
2,200.00	2,197.78	2,009.72	1,970.92	9.97	12.76	-78.51	-2,505.47	-9,076.68	9,401.51	9,378.81	22.70	414.130		
2,300.00	2,297.64	2,057.55	2,013.79	10.39	13.21	-78.39	-2,485.41	-9,083.60	9,403.17	9,379.60	23.57	398.995		
2,400.00	2,397.50	2,180.46	2,123.80	10.81	14.39	-78.09	-2,433.70	-9,101.74	9,405.27	9,380.11	25.16	373.770		
2,500.00	2,497.36	2,244.80	2,181.30	11.23	15.02	-77.94	-2,406.41	-9,111.16	9,407.32	9,381.11	26.21	358.962		
2,600.00	2,597.22	2,304.08	2,234.23	11.65	15.60	-77.79	-2,381.23	-9,120.04	9,409.81	9,382.61	27.20	345.890		
2,700.00	2,697.08	2,369.00	2,292.24	12.07	16.24	-77.63	-2,353.84	-9,129.99	9,412.83	9,384.57	28.26	333.066		
2,800.00	2,796.94	2,401.88	2,321.64	12.50	16.57	-77.55	-2,340.07	-9,135.16	9,416.40	9,387.40	29.00	324.703		
2,900.00	2,896.80	2,464.00	2,377.22	12.92	17.18	-77.40	-2,314.24	-9,145.29	9,420.72	9,390.68	30.03	313.704		
3,000.00	2,996.66	2,510.13	2,418.51	13.35	17.64	-77.29	-2,295.16	-9,152.98	9,425.52	9,394.61	30.90	305.014		
3,100.00	3,096.52	2,591.02	2,490.98	13.78	18.44	-77.10	-2,261.83	-9,166.42	9,430.58	9,398.46	32.12	293.602		
3,200.00	3,196.38	2,789.10	2,668.65	14.21	20.42	-76.63	-2,180.55	-9,198.99	9,436.05	9,401.53	34.52	273.317		
3,300.00	3,296.25	2,898.26	2,765.37	14.64	21.55	-76.35	-2,132.96	-9,216.22	9,440.19	9,404.11	36.07	261.697		
3,400.00	3,396.11	2,960.42	2,820.36	15.07	22.19	-76.19	-2,105.76	-9,226.24	9,444.82	9,407.69	37.13	254.345		
3,500.00	3,495.97	3,175.84	3,013.19	15.50	24.39	-75.67	-2,015.58	-9,259.19	9,449.38	9,409.63	39.75	237.729		
3,600.00	3,595.83	3,240.07	3,070.36	15.93	25.04	-75.52	-1,987.90	-9,268.73	9,453.37	9,412.55	40.82	231.570		
3,700.00	3,695.69	3,286.08	3,111.42	16.36	25.52	-75.40	-1,968.36	-9,275.72	9,457.93	9,416.22	41.71	226.764		
3,800.00	3,795.55	3,800.00	3,202.89	16.80	30.71	-75.16	-1,926.21	-9,291.19	9,462.84	9,415.56	47.28	200.137		
3,900.00	3,895.41	3,469.29	3,276.06	17.23	27.36	-74.97	-1,892.88	-9,303.32	9,467.75	9,423.37	44.38	213.314		
4,000.00	3,995.27	3,527.48	3,328.51	17.66	27.95	-74.84	-1,869.31	-9,312.21	9,473.20	9,427.83	45.38	208.762		
4,100.00	4,095.13	3,604.79	3,398.08	18.10	28.72	-74.66	-1,837.80	-9,324.24	9,479.04	9,432.48	46.57	203.566		
4,200.00	4,194.99	3,733.61	3,513.97	18.53	30.02	-74.36	-1,785.15	-9,344.03	9,484.80	9,436.52	48.27	196.476		
4,300.00	4,294.85	3,845.53	3,614.98	18.96	31.14	-74.10	-1,740.03	-9,360.97	9,490.64	9,440.83	49.81	190.548		
4,400.00	4,394.71	3,915.78	3,678.02	19.40	31.86	-73.94	-1,710.90	-9,371.59	9,496.46	9,445.52	50.93	186.449		
4,500.00	4,494.58	3,976.00	3,731.52	19.83	32.49	-73.79	-1,684.98	-9,381.21	9,502.90	9,450.93	51.97	182.867		
4,600.00	4,594.44	4,003.93	3,756.14	20.27	32.79	-73.72	-1,672.66	-9,385.86	9,509.91	9,457.24	52.67	180.552		
4,700.00	4,694.30	4,048.42	3,795.15	20.71	33.28	-73.60	-1,652.67	-9,393.49	9,517.57	9,464.01	53.56	177.712		
4,800.00	4,794.16	4,100.87	3,840.78	21.14	33.87	-73.46	-1,628.56	-9,402.82	9,525.84	9,471.30	54.54	174.661		
4,900.00	4,894.02	4,165.00	3,896.12	21.58	34.60	-73.29	-1,598.34	-9,414.53	9,534.60	9,478.94	55.66	171.290		
5,000.00	4,993.88	4,202.63	3,928.42	22.01	35.04	-73.18	-1,580.36	-9,421.58	9,543.93	9,487.44	56.49	168.951		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 17-32-12(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 120-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.00	5,093.74	4,260.00	3,977.55	22.45	35.71	-73.02	-1,552.90	-9,432.68	9,553.95	9,496.41	57.55	166.026		
5,200.00	5,193.60	4,608.47	4,285.48	22.89	39.46	-72.16	-1,401.96	-9,493.59	9,563.25	9,501.54	61.71	154.967		
5,300.00	5,293.46	4,746.00	4,410.95	23.32	40.79	-71.87	-1,349.70	-9,514.58	9,571.15	9,507.71	63.44	150.859		
5,400.00	5,393.32	4,803.41	4,463.61	23.76	41.33	-71.75	-1,328.53	-9,523.21	9,579.03	9,514.65	64.38	148.799		
5,500.00	5,493.18	5,552.95	5,175.83	24.20	47.05	-70.61	-1,111.83	-9,600.82	9,581.22	9,510.71	70.52	135.872		
5,600.00	5,593.05	5,927.18	5,544.94	24.64	48.88	-70.36	-1,053.51	-9,616.28	9,581.63	9,508.89	72.74	131.721		
5,700.00	5,692.91	5,997.85	5,615.32	25.07	49.14	-70.34	-1,047.28	-9,617.62	9,580.55	9,507.11	73.44	130.451		
5,800.00	5,792.77	6,102.93	5,720.14	25.51	49.49	-70.33	-1,040.20	-9,619.45	9,579.60	9,505.37	74.23	129.060		
5,900.00	5,892.63	6,210.35	5,827.40	25.95	49.82	-70.33	-1,034.38	-9,620.97	9,578.49	9,503.50	74.99	127.724		
6,000.00	5,992.49	6,000.00	5,949.44	26.39	49.22	-70.33	-1,029.12	-9,622.35	9,577.25	9,502.43	74.82	128.000		
6,100.00	6,092.35	6,441.15	6,058.00	26.82	50.48	-70.34	-1,025.14	-9,623.20	9,575.75	9,499.22	76.53	125.124		
6,200.00	6,192.21	6,513.92	6,130.73	27.26	50.68	-70.35	-1,022.98	-9,623.86	9,574.48	9,497.31	77.17	124.074		
6,300.00	6,292.07	6,586.43	6,203.22	27.70	50.87	-70.36	-1,021.23	-9,624.67	9,573.49	9,495.69	77.80	123.047		
6,400.00	6,391.93	6,668.30	6,285.06	28.14	51.09	-70.37	-1,019.70	-9,625.76	9,572.77	9,494.31	78.46	122.011		
6,500.00	6,491.69	6,765.92	6,382.66	28.58	51.33	-70.37	-1,018.33	-9,627.05	9,570.06	9,490.92	79.14	120.920		
6,600.00	6,589.80	6,861.34	6,478.07	29.02	51.57	-70.37	-1,017.41	-9,628.29	9,568.73	9,489.92	79.82	119.696		
6,700.00	6,683.86	6,952.05	6,568.77	29.46	51.79	-70.37	-1,016.77	-9,629.47	9,567.36	9,489.00	80.46	118.353		
6,800.00	6,771.56	7,037.95	6,654.66	29.92	52.00	-70.37	-1,016.32	-9,630.59	9,566.71	9,488.11	81.06	116.915		
6,900.00	6,850.72	7,117.92	6,734.63	30.40	52.20	-70.37	-1,015.94	-9,631.64	9,566.00	9,487.24	81.60	115.417		
7,000.00	6,919.40	7,212.44	6,804.26	30.96	52.43	-70.37	-1,015.61	-9,632.55	9,565.36	9,486.39	82.13	113.814		
7,100.00	6,975.92	7,245.16	6,861.86	31.62	52.51	-70.37	-1,015.33	-9,633.31	9,564.83	9,485.88	82.45	112.390		
7,200.00	7,018.87	7,289.30	6,905.99	32.44	52.62	-70.37	-1,015.12	-9,633.89	9,564.31	9,485.36	82.75	110.915		
7,300.00	7,047.21	7,318.90	6,935.58	33.42	52.70	-70.37	-1,014.98	-9,634.28	9,563.80	9,484.84	82.96	109.496		
7,400.00	7,060.23	7,333.21	6,949.90	34.55	52.73	-70.37	-1,014.91	-9,634.46	9,563.37	9,484.41	83.09	108.147		
7,500.00	7,060.03	7,334.32	6,951.00	35.83	52.74	-70.37	-1,014.90	-9,634.48	9,562.94	9,484.00	83.16	106.863		
7,600.00	7,058.28	7,333.88	6,950.56	37.28	52.73	-70.37	-1,014.91	-9,634.47	9,562.51	9,483.59	83.24	105.582		
7,700.00	7,056.53	7,333.44	6,950.12	38.89	52.73	-70.37	-1,014.91	-9,634.47	9,562.08	9,483.18	83.32	104.292		
7,800.00	7,054.78	7,333.00	6,949.68	40.63	52.73	-70.37	-1,014.91	-9,634.46	9,561.65	9,482.77	83.41	102.994		
7,900.00	7,053.03	7,332.56	6,949.24	42.50	52.73	-70.37	-1,014.91	-9,634.46	9,561.22	9,482.36	83.50	101.687		
8,000.00	7,051.28	7,332.11	6,948.80	44.47	52.73	-70.37	-1,014.91	-9,634.45	9,560.79	9,481.95	83.61	100.373		
8,100.00	7,049.53	7,331.67	6,948.36	46.53	52.73	-70.37	-1,014.92	-9,634.44	9,560.36	9,481.54	83.73	99.049		
8,200.00	7,047.78	7,331.23	6,947.92	48.67	52.73	-70.37	-1,014.92	-9,634.44	9,559.93	9,481.13	83.86	97.717		
8,300.00	7,046.03	7,330.79	6,947.47	50.89	52.73	-70.37	-1,014.92	-9,634.43	9,559.50	9,480.72	84.00	96.376		
8,400.00	7,044.28	7,330.35	6,947.03	53.16	52.73	-70.37	-1,014.92	-9,634.43	9,559.07	9,480.31	84.16	95.027		
8,500.00	7,042.53	7,329.91	6,946.59	55.49	52.72	-70.37	-1,014.93	-9,634.42	9,558.64	9,480.00	84.32	93.669		
8,600.00	7,040.78	7,329.47	6,946.15	57.86	52.72	-70.37	-1,014.93	-9,634.42	9,558.21	9,479.59	84.50	92.303		
8,700.00	7,039.03	7,329.02	6,945.71	60.28	52.72	-70.37	-1,014.93	-9,634.41	9,557.78	9,479.18	84.69	90.928		
8,800.00	7,037.28	7,328.58	6,945.27	62.74	52.72	-70.37	-1,014.93	-9,634.40	9,557.35	9,478.77	84.90	89.544		
8,900.00	7,035.53	7,328.14	6,944.83	65.23	52.72	-70.37	-1,014.93	-9,634.40	9,556.92	9,478.36	85.12	88.152		
9,000.00	7,033.78	7,327.70	6,944.38	67.74	52.72	-70.37	-1,014.94	-9,634.39	9,556.49	9,477.95	85.36	86.752		
9,100.00	7,032.03	7,327.26	6,943.94	70.29	52.72	-70.37	-1,014.94	-9,634.39	9,556.06	9,477.54	85.61	85.343		
9,200.00	7,030.28	7,326.82	6,943.50	72.85	52.72	-70.37	-1,014.94	-9,634.38	9,555.63	9,477.13	85.89	83.926		
9,300.00	7,028.54	7,326.38	6,943.06	75.44	52.72	-70.37	-1,014.94	-9,634.37	9,555.20	9,476.72	86.18	82.501		
9,400.00	7,026.79	7,325.94	6,942.62	78.05	52.71	-70.37	-1,014.94	-9,634.37	9,554.77	9,476.31	86.48	81.068		
9,500.00	7,025.04	7,325.49	6,942.18	80.67	52.71	-70.37	-1,014.95	-9,634.36	9,554.34	9,475.90	86.81	79.628		
9,600.00	7,023.29	7,325.05	6,941.74	83.31	52.71	-70.37	-1,014.95	-9,634.36	9,553.91	9,475.49	87.16	78.180		
9,700.00	7,021.54	7,324.61	6,941.30	85.96	52.71	-70.37	-1,014.95	-9,634.35	9,553.48	9,475.08	87.54	76.725		
9,800.00	7,019.79	7,324.17	6,940.85	88.63	52.71	-70.37	-1,014.95	-9,634.35	9,553.05	9,474.67	87.93	75.263		
9,900.00	7,018.04	7,323.73	6,940.41	91.30	52.71	-70.37	-1,014.95	-9,634.34	9,552.62	9,474.26	88.35	73.795		
10,000.00	7,016.29	7,323.29	6,939.97	93.99	52.71	-70.37	-1,014.96	-9,634.33	9,552.19	9,473.85	88.79	72.321		
10,100.00	7,014.54	7,322.85	6,939.53	96.69	52.71	-70.37	-1,014.96	-9,634.33	9,551.76	9,473.44	89.26	70.841		
10,200.00	7,012.79	7,322.40	6,939.09	99.40	52.71	-70.37	-1,014.96	-9,634.32	9,551.33	9,473.03	89.76	69.355		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 17-32-12(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 120-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	7,011.04	7,321.96	6,938.65	102.11	52.70	-91.49	-1,014.96	-9,634.32	6,127.58	6,037.29	90.29	67.865		
10,400.00	7,009.29	7,321.52	6,938.21	104.83	52.70	-91.47	-1,014.97	-9,634.31	6,029.71	5,938.87	90.85	66.371		
10,500.00	7,007.54	7,321.08	6,937.76	107.56	52.70	-91.45	-1,014.97	-9,634.31	5,931.92	5,840.48	91.44	64.873		
10,600.00	7,005.79	7,320.64	6,937.32	110.30	52.70	-91.43	-1,014.97	-9,634.30	5,834.20	5,742.13	92.06	63.372		
10,700.00	7,004.04	7,320.20	6,936.88	113.04	52.70	-91.41	-1,014.97	-9,634.29	5,736.55	5,643.83	92.72	61.868		
10,800.00	7,002.29	7,319.76	6,936.44	115.79	52.70	-91.39	-1,014.97	-9,634.29	5,638.99	5,545.57	93.42	60.363		
10,900.00	7,000.54	7,319.31	6,936.00	118.54	52.70	-91.37	-1,014.98	-9,634.28	5,541.52	5,447.36	94.15	58.856		
11,000.00	6,998.79	7,318.87	6,935.56	121.30	52.70	-91.35	-1,014.98	-9,634.28	5,444.14	5,349.21	94.93	57.349		
11,100.00	6,997.04	7,318.43	6,935.12	124.06	52.70	-91.33	-1,014.98	-9,634.27	5,346.85	5,251.10	95.75	55.843		
11,200.00	6,995.29	7,317.99	6,934.68	126.83	52.69	-91.31	-1,014.98	-9,634.26	5,249.67	5,153.05	96.61	54.337		
11,300.00	6,993.54	7,317.55	6,934.23	129.60	52.69	-91.29	-1,014.98	-9,634.26	5,152.59	5,055.07	97.52	52.834		
11,400.00	6,991.80	7,317.11	6,933.79	132.37	52.69	-91.27	-1,014.99	-9,634.25	5,055.63	4,957.14	98.49	51.333		
11,500.00	6,990.05	7,316.67	6,933.35	135.15	52.69	-91.25	-1,014.99	-9,634.25	4,958.79	4,859.29	99.50	49.837		
11,600.00	6,988.30	7,316.23	6,932.91	137.93	52.69	-91.23	-1,014.99	-9,634.24	4,862.08	4,761.50	100.57	48.345		
11,700.00	6,986.55	7,315.78	6,932.47	140.72	52.69	-91.21	-1,014.99	-9,634.24	4,765.50	4,663.80	101.70	46.859		
11,800.00	6,984.80	7,315.34	6,932.03	143.50	52.69	-91.19	-1,014.99	-9,634.23	4,669.06	4,566.17	102.89	45.380		
11,900.00	6,983.05	7,314.90	6,931.59	146.29	52.69	-91.17	-1,015.00	-9,634.22	4,572.78	4,468.64	104.14	43.908		
12,000.00	6,981.30	7,314.46	6,931.15	149.09	52.69	-91.15	-1,015.00	-9,634.22	4,476.67	4,371.20	105.47	42.445		
12,100.00	6,979.55	7,314.02	6,930.70	151.88	52.68	-91.13	-1,015.00	-9,634.21	4,380.72	4,273.86	106.87	40.993		
12,200.00	6,977.80	7,313.58	6,930.26	154.68	52.68	-91.11	-1,015.00	-9,634.21	4,284.96	4,176.62	108.34	39.551		
12,300.00	6,976.05	7,313.14	6,929.82	157.48	52.68	-91.09	-1,015.01	-9,634.20	4,189.40	4,079.51	109.90	38.121		
12,400.00	6,974.30	7,312.69	6,929.38	160.28	52.68	-91.07	-1,015.01	-9,634.20	4,094.06	3,982.52	111.54	36.705		
12,500.00	6,972.55	7,312.25	6,928.94	163.08	52.68	-91.05	-1,015.01	-9,634.19	3,998.94	3,885.66	113.28	35.303		
12,600.00	6,970.80	7,311.81	6,928.50	165.89	52.68	-91.03	-1,015.01	-9,634.18	3,904.06	3,788.95	115.11	33.916		
12,700.00	6,969.05	7,311.37	6,928.06	168.69	52.68	-91.01	-1,015.01	-9,634.18	3,809.44	3,692.40	117.05	32.547		
12,800.00	6,967.30	7,310.93	6,927.61	171.50	52.68	-90.99	-1,015.02	-9,634.17	3,715.11	3,596.02	119.09	31.195		
12,900.00	6,965.55	7,310.49	6,927.17	174.31	52.68	-90.97	-1,015.02	-9,634.17	3,621.08	3,499.82	121.26	29.862		
13,000.00	6,963.80	7,310.05	6,926.73	177.12	52.67	-90.95	-1,015.02	-9,634.16	3,527.38	3,403.83	123.55	28.550		
13,100.00	6,962.05	7,309.60	6,926.29	179.94	52.67	-90.93	-1,015.02	-9,634.15	3,434.04	3,308.06	125.98	27.259		
13,200.00	6,960.30	7,309.16	6,925.85	182.75	52.67	-90.91	-1,015.02	-9,634.15	3,341.08	3,212.53	128.55	25.991		
13,300.00	6,958.55	7,308.72	6,925.41	185.57	52.67	-90.89	-1,015.03	-9,634.14	3,248.53	3,117.26	131.27	24.747		
13,400.00	6,956.80	7,308.28	6,924.97	188.38	52.67	-90.87	-1,015.03	-9,634.14	3,156.45	3,022.29	134.16	23.528		
13,500.00	6,955.05	7,307.84	6,924.53	191.20	52.67	-90.85	-1,015.03	-9,634.13	3,064.86	2,927.63	137.22	22.335		
13,600.00	6,953.31	7,307.40	6,924.08	194.02	52.67	-90.83	-1,015.03	-9,634.13	2,973.81	2,833.33	140.48	21.170		
13,700.00	6,951.56	7,306.96	6,923.64	196.84	52.67	-90.81	-1,015.04	-9,634.12	2,883.35	2,739.42	143.93	20.033		
13,800.00	6,949.81	7,306.52	6,923.20	199.67	52.67	-90.79	-1,015.04	-9,634.11	2,793.54	2,645.94	147.60	18.926		
13,900.00	6,948.06	7,306.07	6,922.76	202.49	52.66	-90.77	-1,015.04	-9,634.11	2,704.45	2,552.95	151.50	17.851		
14,000.00	6,946.31	7,305.63	6,922.32	205.31	52.66	-90.75	-1,015.04	-9,634.10	2,616.15	2,460.50	155.65	16.808		
14,100.00	6,944.56	7,305.19	6,921.88	208.14	52.66	-90.73	-1,015.04	-9,634.10	2,528.72	2,368.65	160.07	15.798		
14,200.00	6,942.81	7,304.75	6,921.44	210.96	52.66	-90.70	-1,015.05	-9,634.09	2,442.26	2,277.49	164.77	14.823		
14,300.00	6,941.06	7,304.31	6,920.99	213.79	52.66	-90.68	-1,015.05	-9,634.09	2,356.86	2,187.10	169.77	13.883		
14,400.00	6,939.31	7,303.87	6,920.55	216.62	52.66	-90.66	-1,015.05	-9,634.08	2,272.66	2,097.57	175.09	12.980		
14,500.00	6,937.56	7,303.43	6,920.11	219.44	52.66	-90.64	-1,015.05	-9,634.07	2,189.79	2,009.04	180.74	12.115		
14,600.00	6,935.81	7,302.98	6,919.67	222.27	52.66	-90.62	-1,015.05	-9,634.07	2,108.40	1,921.64	186.76	11.290		
14,700.00	6,934.06	7,302.54	6,919.23	225.10	52.66	-90.60	-1,015.06	-9,634.06	2,028.68	1,835.54	193.14	10.504		
14,800.00	6,932.31	7,302.10	6,918.79	227.93	52.66	-90.58	-1,015.06	-9,634.06	1,950.82	1,750.93	199.90	9.759		
14,817.75	6,932.00	7,302.02	6,918.71	228.43	52.65	-90.58	-1,015.06	-9,634.06	1,937.22	1,736.08	201.13	9.631 CC, ES, SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 17-42-11(PR_150CC) - OH - MWD													Offset Site Error:	0.00 ft
Survey Program: 57-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	2,236.67	2,168.01	3.28	15.66	-105.13	-2,365.72	-8,747.51	9,317.50					
100.00	100.00	2,272.65	2,200.96	3.28	15.98	-105.06	-2,351.92	-8,743.19	9,294.57	9,276.40	18.17	511.486		
200.00	200.00	2,318.79	2,243.29	3.34	16.39	-104.96	-2,334.33	-8,737.92	9,272.29	9,253.72	18.57	499.313		
300.00	300.00	2,525.52	2,432.72	3.44	18.24	-104.51	-2,255.29	-8,713.37	9,249.74	9,229.41	20.33	455.077		
400.00	400.00	2,585.00	2,486.87	3.60	18.78	-104.38	-2,231.68	-8,706.46	9,227.02	9,206.07	20.95	440.447		
500.00	500.00	2,633.41	2,530.89	3.81	19.23	-104.27	-2,212.27	-8,701.11	9,204.78	9,183.25	21.53	427.482		
600.00	599.98	2,871.56	2,746.89	4.05	21.45	-76.82	-2,115.78	-8,673.71	9,182.13	9,158.36	23.77	386.308		
700.00	699.86	2,922.17	2,792.67	4.32	21.93	-76.96	-2,095.12	-8,667.55	9,157.94	9,133.50	24.45	374.571		
800.00	799.72	2,980.25	2,845.47	4.62	22.47	-76.84	-2,071.96	-8,660.55	9,134.15	9,108.93	25.22	362.250		
900.00	899.58	3,056.13	2,914.96	4.93	23.16	-76.70	-2,042.93	-8,651.18	9,110.68	9,084.54	26.14	348.540		
1,000.00	999.44	3,149.12	3,000.31	5.27	24.00	-76.53	-2,007.89	-8,639.63	9,087.40	9,060.18	27.22	333.892		
1,100.00	1,099.31	3,253.31	3,095.72	5.62	24.95	-76.33	-1,968.02	-8,626.81	9,064.14	9,035.73	28.41	319.032		
1,200.00	1,199.17	3,294.96	3,133.99	5.98	25.32	-76.25	-1,952.42	-8,621.69	9,041.20	9,012.09	29.10	310.655		
1,300.00	1,299.03	3,346.00	3,181.19	6.36	25.77	-76.16	-1,934.02	-8,615.48	9,018.84	8,988.95	29.88	301.789		
1,400.00	1,398.89	3,378.30	3,211.19	6.74	26.05	-76.10	-1,922.68	-8,611.65	8,997.09	8,966.57	30.52	294.798		
1,500.00	1,498.75	3,440.00	3,268.68	7.13	26.57	-76.00	-1,901.37	-8,604.73	8,976.10	8,944.71	31.39	285.974		
1,600.00	1,598.61	3,509.74	3,333.86	7.52	27.16	-75.88	-1,877.84	-8,596.97	8,955.51	8,923.20	32.31	277.143		
1,700.00	1,698.47	3,790.08	3,596.49	7.92	29.47	-75.43	-1,786.05	-8,562.57	8,935.03	8,900.27	34.76	257.017		
1,800.00	1,798.33	1,800.00	3,695.44	8.32	12.64	-75.26	-1,750.30	-8,548.21	8,912.45	8,892.31	20.13	442.729		
1,900.00	1,898.19	3,968.68	3,762.54	8.73	31.01	-75.13	-1,724.84	-8,538.64	8,889.86	8,852.90	36.96	240.542		
2,000.00	1,998.05	4,015.00	3,805.31	9.14	31.42	-75.04	-1,708.00	-8,532.94	8,867.83	8,830.08	37.76	234.871		
2,100.00	2,097.91	4,096.99	3,880.89	9.55	32.15	-74.89	-1,677.69	-8,523.25	8,846.20	8,807.35	38.85	227.699		
2,200.00	2,197.78	4,165.67	3,944.13	9.97	32.76	-74.75	-1,652.15	-8,515.32	8,824.84	8,785.00	39.85	221.477		
2,300.00	2,297.64	4,659.27	4,392.82	10.39	37.41	-73.72	-1,457.31	-8,451.51	8,802.18	8,757.80	44.38	198.357		
2,400.00	2,397.50	4,707.86	4,436.02	10.81	37.90	-73.60	-1,436.17	-8,444.67	8,777.14	8,731.86	45.28	193.847		
2,500.00	2,497.36	4,743.85	4,468.17	11.23	38.26	-73.52	-1,420.71	-8,439.79	8,752.78	8,706.71	46.07	189.981		
2,600.00	2,597.22	4,774.00	4,495.17	11.65	38.57	-73.45	-1,407.92	-8,435.83	8,729.14	8,682.32	46.82	186.455		
2,700.00	2,697.08	4,814.14	4,531.33	12.07	38.95	-73.36	-1,391.24	-8,430.73	8,706.20	8,658.56	47.64	182.762		
2,800.00	2,796.94	4,869.00	4,581.16	12.50	39.48	-73.24	-1,369.32	-8,424.02	8,684.05	8,635.47	48.58	178.745		
2,900.00	2,896.80	4,901.98	4,611.31	12.92	39.78	-73.17	-1,356.55	-8,420.06	8,662.47	8,613.13	49.33	175.592		
3,000.00	2,996.66	4,996.34	4,697.98	13.35	40.64	-72.97	-1,321.05	-8,408.58	8,641.27	8,590.69	50.58	170.844		
3,100.00	3,096.52	5,081.97	4,776.37	13.78	41.43	-72.79	-1,288.22	-8,398.13	8,619.99	8,568.23	51.76	166.541		
3,200.00	3,196.38	5,123.07	4,814.10	14.21	41.80	-72.71	-1,272.65	-8,393.29	8,599.28	8,546.70	52.58	163.547		
3,300.00	3,296.25	5,152.00	4,840.75	14.64	42.06	-72.65	-1,261.89	-8,389.98	8,579.26	8,525.95	53.30	160.954		
3,400.00	3,396.11	5,204.62	4,889.44	15.07	42.52	-72.54	-1,242.80	-8,384.17	8,559.87	8,505.67	54.20	157.930		
3,500.00	3,495.97	5,247.00	4,928.86	15.50	42.89	-72.46	-1,227.91	-8,379.70	8,541.19	8,486.17	55.02	155.241		
3,600.00	3,595.83	5,285.46	4,964.81	15.93	43.21	-72.39	-1,214.78	-8,375.79	8,523.18	8,467.39	55.79	152.770		
3,700.00	3,695.69	5,342.00	5,017.93	16.36	43.68	-72.29	-1,196.23	-8,370.33	8,505.91	8,449.21	56.70	150.022		
3,800.00	3,795.55	5,342.00	5,017.93	16.80	43.68	-72.29	-1,196.23	-8,370.33	8,489.33	8,432.15	57.18	148.467		
3,900.00	3,895.41	5,387.12	5,060.64	17.23	44.02	-72.22	-1,182.25	-8,366.29	8,473.50	8,415.52	57.97	146.163		
4,000.00	3,995.27	5,437.00	5,108.25	17.66	44.40	-72.14	-1,167.92	-8,362.26	8,458.64	8,399.84	58.80	143.860		
4,100.00	4,095.13	5,437.00	5,108.25	18.10	44.40	-72.14	-1,167.92	-8,362.26	8,444.44	8,385.17	59.27	142.472		
4,200.00	4,194.99	5,480.79	5,150.33	18.53	44.69	-72.08	-1,156.25	-8,359.07	8,431.09	8,371.07	60.02	140.473		
4,300.00	4,294.85	5,531.00	5,198.87	18.96	45.04	-72.02	-1,143.83	-8,355.72	8,418.55	8,357.74	60.81	138.448		
4,400.00	4,394.71	5,584.83	5,251.14	19.40	45.37	-71.96	-1,131.47	-8,352.26	8,406.58	8,345.00	61.59	136.499		
4,500.00	4,494.58	5,652.85	5,317.46	19.83	45.78	-71.89	-1,117.03	-8,347.73	8,394.88	8,332.44	62.43	134.458		
4,600.00	4,594.44	5,720.00	5,383.30	20.27	46.17	-71.83	-1,104.58	-8,343.42	8,383.79	8,320.53	63.25	132.543		
4,700.00	4,694.30	5,820.42	5,482.14	20.71	46.70	-71.76	-1,088.13	-8,336.77	8,372.96	8,308.76	64.20	130.417		
4,800.00	4,794.16	5,844.84	5,506.23	21.14	46.81	-71.74	-1,084.47	-8,335.18	8,362.38	8,297.61	64.77	129.116		
4,900.00	4,894.02	5,874.65	5,535.69	21.58	46.95	-71.73	-1,080.30	-8,333.41	8,352.62	8,287.27	65.35	127.806		
5,000.00	4,993.88	5,909.00	5,569.71	22.01	47.12	-71.71	-1,075.92	-8,331.61	8,343.70	8,277.74	65.96	126.499		
5,100.00	5,093.74	5,970.80	5,631.01	22.45	47.39	-71.69	-1,068.68	-8,328.64	8,335.42	8,268.76	66.66	125.040		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 17-42-11(PR_150CC) - OH - MWD													Offset Site Error:	0.00 ft
Survey Program: 57-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	6,033.42	5,693.19	22.89	47.65	-71.66	-1,061.87	-8,325.75	8,327.51	8,260.14	67.36	123.626		
5,300.00	5,293.46	6,097.00	5,756.41	23.32	47.92	-71.65	-1,055.62	-8,323.08	8,320.12	8,252.07	68.05	122.257		
5,400.00	5,393.32	6,135.27	5,794.49	23.76	48.06	-71.64	-1,052.13	-8,321.66	8,313.30	8,244.66	68.64	121.119		
5,500.00	5,493.18	6,192.00	5,850.98	24.20	48.28	-71.62	-1,047.19	-8,319.90	8,307.14	8,237.86	69.29	119.891		
5,600.00	5,593.05	6,243.12	5,901.90	24.64	48.48	-71.61	-1,042.79	-8,318.59	8,301.54	8,231.62	69.92	118.733		
5,700.00	5,692.91	6,312.04	5,970.53	25.07	48.74	-71.60	-1,036.69	-8,317.09	8,296.34	8,225.73	70.61	117.489		
5,800.00	5,792.77	6,381.00	6,039.25	25.51	49.00	-71.58	-1,031.09	-8,315.74	8,291.49	8,220.19	71.31	116.280		
5,900.00	5,892.63	6,459.25	6,117.28	25.95	49.27	-71.57	-1,025.46	-8,314.36	8,286.96	8,214.94	72.02	115.064		
6,000.00	5,992.49	6,536.58	6,194.45	26.39	49.53	-71.57	-1,020.55	-8,313.11	8,282.72	8,210.00	72.72	113.898		
6,100.00	6,092.35	6,598.49	6,256.25	26.82	49.74	-71.57	-1,017.09	-8,312.23	8,278.80	8,205.44	73.36	112.858		
6,200.00	6,192.21	6,665.00	6,322.68	27.26	49.95	-71.57	-1,013.84	-8,311.67	8,275.48	8,201.48	74.00	111.830		
6,300.00	6,292.07	6,716.52	6,374.15	27.70	50.10	-71.57	-1,011.67	-8,311.45	8,272.63	8,198.05	74.58	110.920		
6,400.00	6,391.93	6,807.34	6,464.92	28.14	50.37	-71.58	-1,008.52	-8,311.13	8,270.07	8,194.78	75.29	109.843		
6,500.00	6,491.69	6,909.54	6,567.08	28.58	50.66	-32.83	-1,005.83	-8,310.61	8,265.44	8,189.41	76.02	108.722		
6,600.00	6,589.80	7,006.00	6,663.52	29.02	50.93	-19.20	-1,003.55	-8,310.09	8,247.23	8,170.51	76.73	107.489		
6,700.00	6,683.86	7,096.94	6,754.43	29.46	51.18	-16.06	-1,001.59	-8,309.59	8,214.09	8,136.70	77.39	106.142		
6,800.00	6,771.56	7,180.71	6,838.19	29.92	51.41	-15.30	-1,000.06	-8,309.12	8,166.85	8,088.86	77.99	104.716		
6,900.00	6,850.72	7,255.93	6,913.39	30.40	51.62	-15.79	-998.91	-8,308.70	8,106.68	8,028.16	78.52	103.241		
7,000.00	6,919.40	7,320.55	6,978.01	30.96	51.79	-17.43	-998.07	-8,308.34	8,035.06	7,956.09	78.97	101.751		
7,100.00	6,975.92	7,373.63	7,031.08	31.62	51.94	-20.67	-997.47	-8,308.06	7,953.74	7,874.41	79.33	100.267		
7,200.00	7,018.87	7,413.84	7,071.29	32.44	52.04	-26.96	-997.07	-8,307.85	7,864.72	7,785.13	79.59	98.811		
7,300.00	7,047.21	7,447.16	7,104.61	33.42	52.13	-40.76	-996.77	-8,307.67	7,770.18	7,690.38	79.79	97.379		
7,400.00	7,060.23	7,463.38	7,120.83	34.55	52.18	-75.18	-996.62	-8,307.57	7,672.43	7,592.53	79.91	96.019		
7,500.00	7,060.03	7,462.27	7,119.72	35.83	52.17	-98.73	-996.63	-8,307.57	7,573.81	7,493.86	79.95	94.737		
7,600.00	7,058.28	7,459.17	7,116.63	37.28	52.17	-98.59	-996.66	-8,307.59	7,475.20	7,395.22	79.99	93.455		
7,700.00	7,056.53	7,456.10	7,113.55	38.89	52.16	-98.45	-996.68	-8,307.61	7,376.64	7,296.60	80.04	92.162		
7,800.00	7,054.78	7,453.05	7,110.50	40.63	52.15	-98.31	-996.71	-8,307.63	7,278.11	7,198.01	80.10	90.859		
7,900.00	7,053.03	7,450.02	7,107.47	42.50	52.14	-98.18	-996.74	-8,307.65	7,179.63	7,099.45	80.18	89.544		
8,000.00	7,051.28	7,447.01	7,104.47	44.47	52.13	-98.04	-996.77	-8,307.67	7,081.18	7,000.91	80.27	88.219		
8,100.00	7,049.53	7,444.03	7,101.48	46.53	52.13	-97.90	-996.79	-8,307.68	6,982.78	6,902.41	80.37	86.883		
8,200.00	7,047.78	7,441.07	7,098.52	48.67	52.12	-97.77	-996.82	-8,307.70	6,884.42	6,803.94	80.49	85.535		
8,300.00	7,046.03	7,438.14	7,095.59	50.89	52.11	-97.64	-996.85	-8,307.72	6,786.11	6,705.49	80.62	84.176		
8,400.00	7,044.28	7,435.22	7,092.67	53.16	52.10	-97.50	-996.88	-8,307.73	6,687.85	6,607.09	80.77	82.805		
8,500.00	7,042.53	7,432.33	7,089.78	55.49	52.09	-97.37	-996.90	-8,307.75	6,589.64	6,508.71	80.93	81.423		
8,600.00	7,040.78	7,429.46	7,086.91	57.86	52.09	-97.24	-996.93	-8,307.77	6,491.49	6,410.37	81.11	80.029		
8,700.00	7,039.03	7,426.61	7,084.06	60.28	52.08	-97.11	-996.95	-8,307.78	6,393.39	6,312.07	81.32	78.624		
8,800.00	7,037.28	7,423.78	7,081.23	62.74	52.07	-96.98	-996.98	-8,307.80	6,295.35	6,213.81	81.54	77.207		
8,900.00	7,035.53	7,421.21	7,078.66	65.23	52.06	-96.87	-997.00	-8,307.81	6,197.37	6,115.58	81.78	75.779		
9,000.00	7,033.78	7,419.05	7,076.50	67.74	52.06	-96.77	-997.02	-8,307.82	6,099.45	6,017.40	82.05	74.338		
9,100.00	7,032.03	7,416.88	7,074.34	70.29	52.05	-96.67	-997.04	-8,307.83	6,001.61	5,919.26	82.34	72.887		
9,200.00	7,030.28	7,414.72	7,072.17	72.85	52.05	-96.57	-997.06	-8,307.84	5,903.83	5,821.17	82.66	71.425		
9,300.00	7,028.54	7,412.55	7,070.01	75.44	52.04	-96.47	-997.08	-8,307.85	5,806.13	5,723.13	83.00	69.952		
9,400.00	7,026.79	7,410.39	7,067.84	78.05	52.03	-96.37	-997.10	-8,307.87	5,708.51	5,625.14	83.37	68.470		
9,500.00	7,025.04	7,408.22	7,065.68	80.67	52.03	-96.27	-997.12	-8,307.88	5,610.97	5,527.20	83.77	66.978		
9,600.00	7,023.29	7,406.05	7,063.51	83.31	52.02	-96.18	-997.15	-8,307.89	5,513.52	5,429.31	84.21	65.476		
9,700.00	7,021.54	7,403.88	7,061.34	85.96	52.02	-96.08	-997.17	-8,307.90	5,416.16	5,331.49	84.67	63.966		
9,800.00	7,019.79	7,401.71	7,059.17	88.63	52.01	-95.98	-997.19	-8,307.91	5,318.90	5,233.72	85.17	62.448		
9,900.00	7,018.04	7,399.54	7,057.00	91.30	52.01	-95.88	-997.21	-8,307.92	5,221.74	5,136.03	85.71	60.923		
10,000.00	7,016.29	7,397.37	7,054.82	93.99	52.00	-95.78	-997.23	-8,307.93	5,124.69	5,038.40	86.29	59.391		
10,100.00	7,014.54	7,395.20	7,052.65	96.69	51.99	-95.68	-997.25	-8,307.94	5,027.75	4,940.84	86.91	57.853		
10,200.00	7,012.79	7,393.02	7,050.48	99.40	51.99	-95.58	-997.27	-8,307.96	4,930.93	4,843.36	87.57	56.310		
10,300.00	7,011.04	7,390.85	7,048.30	102.11	51.98	-95.48	-997.29	-8,307.97	4,834.25	4,745.97	88.28	54.763		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 17-42-11(PR_150CC) - OH - MWD												Offset Site Error:	0.00 ft
Survey Program: 57-MWD												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,400.00	7,009.29	7,388.67	7,046.12	104.83	51.98	-95.38	-997.32	-8,307.98	4,737.69	4,648.66	89.03	53.213	
10,500.00	7,007.54	7,386.49	7,043.95	107.56	51.97	-95.28	-997.34	-8,307.99	4,641.29	4,551.45	89.84	51.661	
10,600.00	7,005.79	7,384.31	7,041.77	110.30	51.96	-95.18	-997.36	-8,308.00	4,545.04	4,454.33	90.71	50.108	
10,700.00	7,004.04	7,382.13	7,039.59	113.04	51.96	-95.08	-997.38	-8,308.01	4,448.95	4,357.32	91.63	48.555	
10,800.00	7,002.29	7,379.95	7,037.41	115.79	51.95	-94.98	-997.41	-8,308.02	4,353.04	4,260.43	92.61	47.004	
10,900.00	7,000.54	7,377.77	7,035.23	118.54	51.95	-94.88	-997.43	-8,308.04	4,257.31	4,163.66	93.66	45.456	
11,000.00	6,998.79	7,375.59	7,033.04	121.30	51.94	-94.78	-997.45	-8,308.05	4,161.79	4,067.01	94.78	43.912	
11,100.00	6,997.04	7,373.40	7,030.86	124.06	51.93	-94.68	-997.47	-8,308.06	4,066.48	3,970.51	95.97	42.374	
11,200.00	6,995.29	7,371.22	7,028.67	126.83	51.93	-94.58	-997.50	-8,308.07	3,971.40	3,874.16	97.24	40.843	
11,300.00	6,993.54	7,369.03	7,026.49	129.60	51.92	-94.48	-997.52	-8,308.08	3,876.56	3,777.97	98.59	39.321	
11,400.00	6,991.80	7,366.84	7,024.30	132.37	51.92	-94.38	-997.54	-8,308.09	3,781.99	3,681.96	100.03	37.809	
11,500.00	6,990.05	7,364.65	7,022.11	135.15	51.91	-94.28	-997.57	-8,308.11	3,687.70	3,586.14	101.56	36.310	
11,600.00	6,988.30	7,362.46	7,019.92	137.93	51.91	-94.18	-997.59	-8,308.12	3,593.72	3,490.53	103.20	34.824	
11,700.00	6,986.55	7,360.27	7,017.73	140.72	51.90	-94.08	-997.61	-8,308.13	3,500.08	3,395.14	104.94	33.354	
11,800.00	6,984.80	7,358.08	7,015.54	143.50	51.89	-93.98	-997.64	-8,308.14	3,406.79	3,300.00	106.79	31.901	
11,900.00	6,983.05	7,355.89	7,013.34	146.29	51.89	-93.87	-997.66	-8,308.15	3,313.90	3,205.12	108.77	30.467	
12,000.00	6,981.30	7,353.69	7,011.15	149.09	51.88	-93.77	-997.69	-8,308.16	3,221.42	3,110.54	110.88	29.053	
12,100.00	6,979.55	7,351.50	7,008.95	151.88	51.88	-93.67	-997.71	-8,308.18	3,129.41	3,016.28	113.13	27.662	
12,200.00	6,977.80	7,349.30	7,006.76	154.68	51.87	-93.57	-997.74	-8,308.19	3,037.91	2,922.38	115.53	26.296	
12,300.00	6,976.05	7,347.10	7,004.56	157.48	51.86	-93.47	-997.76	-8,308.20	2,946.95	2,828.86	118.09	24.955	
12,400.00	6,974.30	7,344.90	7,002.36	160.28	51.86	-93.37	-997.79	-8,308.21	2,856.59	2,735.77	120.82	23.643	
12,500.00	6,972.55	7,342.70	7,000.16	163.08	51.85	-93.27	-997.81	-8,308.22	2,766.90	2,643.16	123.74	22.360	
12,600.00	6,970.80	7,340.50	6,997.96	165.89	51.85	-93.17	-997.84	-8,308.24	2,677.94	2,551.07	126.86	21.109	
12,700.00	6,969.05	7,338.30	6,995.76	168.69	51.84	-93.07	-997.86	-8,308.25	2,589.78	2,459.58	130.20	19.891	
12,800.00	6,967.30	7,336.10	6,993.56	171.50	51.83	-92.96	-997.89	-8,308.26	2,502.50	2,368.74	133.76	18.709	
12,900.00	6,965.55	7,333.89	6,991.35	174.31	51.83	-92.86	-997.91	-8,308.27	2,416.21	2,278.64	137.57	17.563	
13,000.00	6,963.80	7,331.69	6,989.15	177.12	51.82	-92.76	-997.94	-8,308.28	2,331.02	2,189.37	141.65	16.456	
13,100.00	6,962.05	7,329.48	6,986.94	179.94	51.82	-92.66	-997.96	-8,308.29	2,247.04	2,101.04	146.01	15.390	
13,200.00	6,960.30	7,327.27	6,984.73	182.75	51.81	-92.56	-997.99	-8,308.31	2,164.43	2,013.76	150.67	14.365	
13,300.00	6,958.55	7,325.07	6,982.53	185.57	51.80	-92.46	-998.02	-8,308.32	2,083.33	1,927.68	155.65	13.385	
13,400.00	6,956.80	7,322.86	6,980.32	188.38	51.80	-92.35	-998.04	-8,308.33	2,003.95	1,842.98	160.97	12.449	
13,500.00	6,955.05	7,320.64	6,978.10	191.20	51.79	-92.25	-998.07	-8,308.34	1,926.48	1,759.84	166.64	11.561	
13,600.00	6,953.31	7,318.43	6,975.89	194.02	51.79	-92.15	-998.10	-8,308.35	1,851.17	1,678.49	172.67	10.721	
13,700.00	6,951.56	7,316.22	6,973.68	196.84	51.78	-92.05	-998.12	-8,308.37	1,778.29	1,599.21	179.08	9.930	
13,800.00	6,949.81	7,314.00	6,971.47	199.67	51.77	-91.95	-998.15	-8,308.38	1,708.15	1,522.30	185.86	9.191	
13,900.00	6,948.06	7,311.79	6,969.25	202.49	51.77	-91.84	-998.18	-8,308.39	1,641.12	1,448.12	192.99	8.503	
14,000.00	6,946.31	7,309.57	6,967.03	205.31	51.76	-91.74	-998.20	-8,308.40	1,577.57	1,377.11	200.46	7.870	
14,100.00	6,944.56	7,307.36	6,964.82	208.14	51.76	-91.64	-998.23	-8,308.41	1,517.95	1,309.73	208.22	7.290	
14,200.00	6,942.81	7,305.14	6,962.60	210.96	51.75	-91.54	-998.26	-8,308.43	1,462.74	1,246.55	216.19	6.766	
14,300.00	6,941.06	7,302.92	6,960.38	213.79	51.75	-91.43	-998.29	-8,308.44	1,412.46	1,188.17	224.29	6.298	
14,400.00	6,939.31	7,300.70	6,958.16	216.62	51.74	-91.33	-998.32	-8,308.45	1,367.65	1,135.27	232.38	5.885	
14,500.00	6,937.56	7,298.47	6,955.94	219.44	51.73	-91.23	-998.34	-8,308.46	1,328.86	1,088.55	240.31	5.530	
14,600.00	6,935.81	7,296.25	6,953.71	222.27	51.73	-91.13	-998.37	-8,308.48	1,296.64	1,048.76	247.88	5.231	
14,700.00	6,934.06	7,294.03	6,951.49	225.10	51.72	-91.02	-998.40	-8,308.49	1,271.48	1,016.59	254.89	4.988	
14,800.00	6,932.31	7,291.80	6,949.26	227.93	51.72	-90.92	-998.43	-8,308.50	1,253.81	992.71	261.10	4.802	
14,817.75	6,932.00	7,291.40	6,948.87	228.43	51.71	-90.90	-998.43	-8,308.50	1,251.48	989.38	262.10	4.775 CC, ES, SF	



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 34-17(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 168-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	36.00	3.28	3.28	-108.41	-2,996.96	-9,004.68	9,490.38					
100.00	100.00	37.15	73.15	3.28	3.28	-108.41	-2,996.88	-9,004.76	9,490.41	9,483.84	6.57	1,445.469		
200.00	200.00	95.19	131.18	3.34	3.29	-108.40	-2,996.43	-9,005.22	9,490.91	9,484.29	6.62	1,433.035		
300.00	300.00	168.00	203.98	3.44	3.30	-108.40	-2,995.32	-9,006.36	9,491.88	9,485.13	6.74	1,407.699		
400.00	400.00	168.00	203.98	3.60	3.30	-108.40	-2,995.32	-9,006.36	9,493.41	9,486.51	6.90	1,375.362		
500.00	500.00	212.97	248.92	3.81	3.33	-108.39	-2,994.45	-9,007.58	9,495.59	9,488.46	7.13	1,331.216		
600.00	599.98	259.00	294.90	4.05	3.37	-80.95	-2,993.57	-9,009.49	9,498.44	9,491.03	7.41	1,281.520		
700.00	699.86	259.00	294.90	4.32	3.37	-80.93	-2,993.57	-9,009.49	9,501.42	9,493.73	7.68	1,236.440		
800.00	799.72	292.87	328.72	4.62	3.40	-80.93	-2,993.03	-9,011.28	9,505.16	9,497.15	8.02	1,185.359		
900.00	899.58	350.00	385.74	4.93	3.48	-80.94	-2,992.56	-9,014.88	9,509.83	9,501.42	8.41	1,130.564		
1,000.00	999.44	350.00	385.74	5.27	3.48	-80.94	-2,992.56	-9,014.88	9,514.94	9,506.19	8.75	1,087.425		
1,100.00	1,099.31	409.85	445.43	5.62	3.58	-80.95	-2,992.39	-9,019.16	9,520.79	9,511.60	9.20	1,035.400		
1,200.00	1,199.17	487.25	522.61	5.98	3.74	-80.96	-2,992.23	-9,024.95	9,526.99	9,517.29	9.70	981.764		
1,300.00	1,299.03	532.00	567.24	6.36	3.84	-80.97	-2,992.08	-9,028.36	9,533.45	9,523.27	10.17	937.200		
1,400.00	1,398.89	587.21	622.26	6.74	3.98	-80.98	-2,992.04	-9,032.82	9,540.39	9,529.71	10.68	893.156		
1,500.00	1,498.75	644.00	678.83	7.13	4.14	-80.98	-2,992.36	-9,037.90	9,548.11	9,536.89	11.21	851.615		
1,600.00	1,598.61	673.19	707.89	7.52	4.22	-80.99	-2,992.65	-9,040.65	9,556.33	9,544.65	11.68	818.108		
1,700.00	1,698.47	762.35	796.63	7.92	4.50	-81.01	-2,993.71	-9,049.20	9,564.98	9,552.65	12.33	775.670		
1,800.00	1,798.33	870.48	904.27	8.32	4.87	-81.03	-2,995.01	-9,059.40	9,573.49	9,560.42	13.07	732.694		
1,900.00	1,898.19	1,900.00	1,099.31	8.73	9.11	-81.06	-2,995.50	-9,077.69	9,581.70	9,564.25	17.45	548.968		
2,000.00	1,998.05	1,129.47	1,162.16	9.14	5.85	-81.07	-2,995.44	-9,083.23	9,589.27	9,574.50	14.77	649.189		
2,100.00	2,097.91	1,155.64	1,188.20	9.55	5.95	-81.07	-2,995.33	-9,085.77	9,597.56	9,582.29	15.27	628.374		
2,200.00	2,197.78	1,190.00	1,222.36	9.97	6.09	-81.07	-2,995.13	-9,089.46	9,606.63	9,590.82	15.81	607.669		
2,300.00	2,297.64	1,190.00	1,222.36	10.39	6.09	-81.07	-2,995.13	-9,089.46	9,616.50	9,600.28	16.22	593.037		
2,400.00	2,397.50	1,244.95	1,276.92	10.81	6.33	-81.08	-2,994.75	-9,096.00	9,626.92	9,610.08	16.84	571.837		
2,500.00	2,497.36	1,285.00	1,316.63	11.23	6.50	-81.08	-2,994.50	-9,101.18	9,638.11	9,620.71	17.40	553.940		
2,600.00	2,597.22	1,285.00	1,316.63	11.65	6.50	-81.08	-2,994.50	-9,101.18	9,650.08	9,632.27	17.81	541.981		
2,700.00	2,697.08	1,343.83	1,374.90	12.07	6.76	-81.08	-2,994.52	-9,109.30	9,662.53	9,644.08	18.45	523.801		
2,800.00	2,796.94	1,379.00	1,409.70	12.50	6.92	-81.08	-2,994.90	-9,114.39	9,675.76	9,656.76	18.99	509.389		
2,900.00	2,896.80	1,415.26	1,445.53	12.92	7.09	-81.09	-2,995.32	-9,119.87	9,689.64	9,670.09	19.55	495.667		
3,000.00	2,996.66	1,475.00	1,504.49	13.35	7.38	-81.09	-2,995.55	-9,129.54	9,704.19	9,683.99	20.20	480.352		
3,100.00	3,096.52	1,475.00	1,504.49	13.78	7.38	-81.09	-2,995.55	-9,129.54	9,719.29	9,698.68	20.60	471.743		
3,200.00	3,196.38	1,529.08	1,557.76	14.21	7.65	-81.09	-2,995.65	-9,138.86	9,734.98	9,713.75	21.24	458.424		
3,300.00	3,296.25	1,570.00	1,598.02	14.64	7.85	-81.09	-2,995.91	-9,146.19	9,751.35	9,729.53	21.81	447.059		
3,400.00	3,396.11	1,612.36	1,639.65	15.07	8.07	-81.09	-2,996.24	-9,154.01	9,768.28	9,745.89	22.40	436.158		
3,500.00	3,495.97	1,665.00	1,691.32	15.50	8.34	-81.09	-2,996.57	-9,164.06	9,785.75	9,762.72	23.03	424.973		
3,600.00	3,595.83	1,665.00	1,691.32	15.93	8.34	-81.09	-2,996.57	-9,164.06	9,803.90	9,780.48	23.42	418.641		
3,700.00	3,695.69	1,723.28	1,748.40	16.36	8.66	-81.08	-2,996.84	-9,175.77	9,822.50	9,798.42	24.08	407.968		
3,800.00	3,795.55	1,759.00	1,783.31	16.80	8.85	-81.08	-2,996.96	-9,183.35	9,841.88	9,817.25	24.63	399.583		
3,900.00	3,895.41	1,759.00	1,783.31	17.23	8.85	-81.08	-2,996.96	-9,183.35	9,862.04	9,837.03	25.01	394.248		
4,000.00	3,995.27	1,816.81	1,839.70	17.66	9.18	-81.08	-2,997.63	-9,196.07	9,882.64	9,856.97	25.67	384.970		
4,100.00	4,095.13	1,853.00	1,874.94	18.10	9.39	-81.08	-2,998.55	-9,204.24	9,904.02	9,877.79	26.22	377.666		
4,200.00	4,194.99	1,901.57	1,922.19	18.53	9.67	-81.08	-3,000.03	-9,215.40	9,925.95	9,899.11	26.84	369.868		
4,300.00	4,294.85	1,960.72	1,979.67	18.96	10.02	-81.08	-3,001.81	-9,229.23	9,948.27	9,920.77	27.50	361.749		
4,400.00	4,394.71	2,025.18	2,042.26	19.40	10.41	-81.08	-3,003.73	-9,244.53	9,970.94	9,942.75	28.19	353.671		
4,500.00	4,494.58	2,042.00	2,058.58	19.83	10.52	-81.08	-3,004.22	-9,248.57	9,994.10	9,965.45	28.65	348.871		
7,500.00	7,060.03	6,974.00	6,858.74	35.83	40.55	-89.36	-3,034.47	-10,248.86	9,978.70	9,914.83	63.87	156.242		
7,600.00	7,058.28	6,974.00	6,858.74	37.28	40.55	-89.36	-3,034.47	-10,248.86	9,884.25	9,820.13	64.12	154.144		
7,700.00	7,056.53	6,974.00	6,858.74	38.89	40.55	-89.36	-3,034.47	-10,248.86	9,789.91	9,725.50	64.42	151.979		
7,800.00	7,054.78	6,974.00	6,858.74	40.63	40.55	-89.36	-3,034.47	-10,248.86	9,695.69	9,630.94	64.75	149.750		
7,900.00	7,053.03	6,961.01	6,845.76	42.50	40.50	-89.13	-3,034.24	-10,248.64	9,601.57	9,536.50	65.07	147.557		
8,000.00	7,051.28	6,960.97	6,845.72	44.47	40.50	-89.13	-3,034.24	-10,248.64	9,507.58	9,442.11	65.48	145.206		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 34-17(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 168-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,100.00	7,049.53	6,960.93	6,845.67	46.53	40.50	-89.13	-3,034.24	-10,248.64	9,413.72	9,347.80	65.92	142.800		
8,200.00	7,047.78	6,960.89	6,845.63	48.67	40.50	-89.13	-3,034.24	-10,248.64	9,319.98	9,253.57	66.41	140.342		
8,300.00	7,046.03	6,960.84	6,845.59	50.89	40.50	-89.13	-3,034.24	-10,248.64	9,226.38	9,159.44	66.94	137.836		
8,400.00	7,044.28	6,960.80	6,845.55	53.16	40.50	-89.13	-3,034.24	-10,248.64	9,132.91	9,065.40	67.51	135.287		
8,500.00	7,042.53	6,960.76	6,845.51	55.49	40.50	-89.13	-3,034.24	-10,248.64	9,039.58	8,971.46	68.12	132.699		
8,600.00	7,040.78	6,960.72	6,845.47	57.86	40.50	-89.13	-3,034.24	-10,248.64	8,946.40	8,877.62	68.78	130.077		
8,700.00	7,039.03	6,960.68	6,845.42	60.28	40.50	-89.13	-3,034.24	-10,248.64	8,853.36	8,783.88	69.48	127.426		
8,800.00	7,037.28	6,960.63	6,845.38	62.74	40.50	-89.13	-3,034.24	-10,248.64	8,760.48	8,690.26	70.22	124.751		
8,900.00	7,035.53	6,960.59	6,845.34	65.23	40.50	-89.13	-3,034.24	-10,248.64	8,667.76	8,596.74	71.01	122.056		
9,000.00	7,033.78	6,960.55	6,845.30	67.74	40.50	-89.13	-3,034.23	-10,248.64	8,575.20	8,503.35	71.85	119.347		
9,100.00	7,032.03	6,960.51	6,845.25	70.29	40.50	-89.13	-3,034.23	-10,248.64	8,482.81	8,410.07	72.73	116.628		
9,200.00	7,030.28	6,960.46	6,845.21	72.85	40.50	-89.12	-3,034.23	-10,248.63	8,390.59	8,316.93	73.66	113.904		
9,300.00	7,028.54	6,960.42	6,845.17	75.44	40.50	-89.12	-3,034.23	-10,248.63	8,298.55	8,223.91	74.64	111.181		
9,400.00	7,026.79	6,960.38	6,845.12	78.05	40.50	-89.12	-3,034.23	-10,248.63	8,206.70	8,131.04	75.66	108.461		
9,500.00	7,025.04	6,960.33	6,845.08	80.67	40.50	-89.12	-3,034.23	-10,248.63	8,115.04	8,038.31	76.74	105.750		
9,600.00	7,023.29	6,960.29	6,845.04	83.31	40.50	-89.12	-3,034.23	-10,248.63	8,023.59	7,945.73	77.86	103.052		
9,700.00	7,021.54	6,960.25	6,844.99	85.96	40.50	-89.12	-3,034.23	-10,248.63	7,932.33	7,853.30	79.03	100.370		
9,800.00	7,019.79	6,960.20	6,844.95	88.63	40.50	-89.12	-3,034.23	-10,248.63	7,841.30	7,761.04	80.25	97.708		
9,900.00	7,018.04	6,960.16	6,844.91	91.30	40.50	-89.12	-3,034.23	-10,248.63	7,750.48	7,668.95	81.52	95.069		
10,000.00	7,016.29	6,960.11	6,844.86	93.99	40.50	-89.12	-3,034.23	-10,248.63	7,659.89	7,577.04	82.85	92.457		
10,100.00	7,014.54	6,960.07	6,844.82	96.69	40.50	-89.12	-3,034.23	-10,248.63	7,569.54	7,485.31	84.22	89.875		
10,200.00	7,012.79	6,960.03	6,844.77	99.40	40.50	-89.12	-3,034.23	-10,248.63	7,479.43	7,393.78	85.65	87.324		
10,300.00	7,011.04	6,959.98	6,844.73	102.11	40.50	-89.12	-3,034.23	-10,248.63	7,389.58	7,302.44	87.13	84.808		
10,400.00	7,009.29	6,959.94	6,844.69	104.83	40.50	-89.12	-3,034.22	-10,248.63	7,299.99	7,211.32	88.67	82.329		
10,500.00	7,007.54	6,959.89	6,844.64	107.56	40.50	-89.11	-3,034.22	-10,248.62	7,210.68	7,120.41	90.26	79.888		
10,600.00	7,005.79	6,959.85	6,844.60	110.30	40.50	-89.11	-3,034.22	-10,248.62	7,121.64	7,029.74	91.91	77.487		
10,700.00	7,004.04	6,959.80	6,844.55	113.04	40.50	-89.11	-3,034.22	-10,248.62	7,032.91	6,939.30	93.61	75.128		
10,800.00	7,002.29	6,959.76	6,844.51	115.79	40.50	-89.11	-3,034.22	-10,248.62	6,944.48	6,849.10	95.38	72.812		
10,900.00	7,000.54	6,959.71	6,844.46	118.54	40.50	-89.11	-3,034.22	-10,248.62	6,856.37	6,759.17	97.20	70.540		
11,000.00	6,998.79	6,959.67	6,844.41	121.30	40.50	-89.11	-3,034.22	-10,248.62	6,768.59	6,669.51	99.08	68.313		
11,100.00	6,997.04	6,959.62	6,844.37	124.06	40.50	-89.11	-3,034.22	-10,248.62	6,681.15	6,580.12	101.03	66.132		
11,200.00	6,995.29	6,959.58	6,844.32	126.83	40.50	-89.11	-3,034.22	-10,248.62	6,594.07	6,491.03	103.04	63.998		
11,300.00	6,993.54	6,959.53	6,844.28	129.60	40.50	-89.11	-3,034.22	-10,248.62	6,507.36	6,402.25	105.11	61.911		
11,400.00	6,991.80	6,959.48	6,844.23	132.37	40.50	-89.11	-3,034.22	-10,248.62	6,421.04	6,313.79	107.25	59.871		
11,500.00	6,990.05	6,959.44	6,844.19	135.15	40.50	-89.11	-3,034.22	-10,248.62	6,335.12	6,225.66	109.46	57.879		
11,600.00	6,988.30	6,959.39	6,844.14	137.93	40.50	-89.11	-3,034.22	-10,248.62	6,249.62	6,137.89	111.73	55.935		
11,700.00	6,986.55	6,959.35	6,844.09	140.72	40.50	-89.11	-3,034.21	-10,248.62	6,164.55	6,050.47	114.08	54.038		
11,800.00	6,984.80	6,959.30	6,844.05	143.50	40.50	-89.10	-3,034.21	-10,248.61	6,079.94	5,963.45	116.50	52.190		
11,900.00	6,983.05	6,959.25	6,844.00	146.29	40.50	-89.10	-3,034.21	-10,248.61	5,995.81	5,876.82	118.99	50.389		
12,000.00	6,981.30	6,959.21	6,843.95	149.09	40.50	-89.10	-3,034.21	-10,248.61	5,912.16	5,790.60	121.56	48.637		
12,100.00	6,979.55	6,959.16	6,843.91	151.88	40.50	-89.10	-3,034.21	-10,248.61	5,829.04	5,704.83	124.20	46.931		
12,200.00	6,977.80	6,959.11	6,843.86	154.68	40.50	-89.10	-3,034.21	-10,248.61	5,746.45	5,619.52	126.93	45.273		
12,300.00	6,976.05	6,959.06	6,843.81	157.48	40.50	-89.10	-3,034.21	-10,248.61	5,664.42	5,534.68	129.74	43.661		
12,400.00	6,974.30	6,959.02	6,843.76	160.28	40.50	-89.10	-3,034.21	-10,248.61	5,582.98	5,450.35	132.63	42.096		
12,500.00	6,972.55	6,958.97	6,843.72	163.08	40.50	-89.10	-3,034.21	-10,248.61	5,502.15	5,366.55	135.60	40.576		
12,600.00	6,970.80	6,958.92	6,843.67	165.89	40.50	-89.10	-3,034.21	-10,248.61	5,421.96	5,283.29	138.66	39.102		
12,700.00	6,969.05	6,958.87	6,843.62	168.69	40.50	-89.10	-3,034.21	-10,248.61	5,342.43	5,200.62	141.81	37.673		
12,800.00	6,967.30	6,958.82	6,843.57	171.50	40.50	-89.10	-3,034.21	-10,248.61	5,263.61	5,118.56	145.05	36.288		
12,900.00	6,965.55	6,958.78	6,843.52	174.31	40.50	-89.10	-3,034.21	-10,248.61	5,185.52	5,037.13	148.38	34.946		
13,000.00	6,963.80	6,958.73	6,843.48	177.12	40.50	-89.09	-3,034.20	-10,248.61	5,108.19	4,956.37	151.81	33.648		
13,100.00	6,962.05	6,958.68	6,843.43	179.94	40.50	-89.09	-3,034.20	-10,248.60	5,031.65	4,876.32	155.33	32.393		
13,200.00	6,960.30	6,958.63	6,843.38	182.75	40.50	-89.09	-3,034.20	-10,248.60	4,955.96	4,797.01	158.95	31.179		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 34-17(PR_150CC) - OH - OH												Offset Site Error:	0.00 ft
Survey Program: 168-MWD												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
13,300.00	6,958.55	6,958.58	6,843.33	185.57	40.50	-89.09	-3,034.20	-10,248.60	4,881.14	4,718.47	162.67	30.007	
13,400.00	6,956.80	6,958.53	6,843.28	188.38	40.50	-89.09	-3,034.20	-10,248.60	4,807.24	4,640.76	166.48	28.876	
13,500.00	6,955.05	6,958.48	6,843.23	191.20	40.50	-89.09	-3,034.20	-10,248.60	4,734.29	4,563.90	170.39	27.784	
13,600.00	6,953.31	6,958.43	6,843.18	194.02	40.50	-89.09	-3,034.20	-10,248.60	4,662.35	4,487.94	174.41	26.732	
13,700.00	6,951.56	6,958.38	6,843.13	196.84	40.50	-89.09	-3,034.20	-10,248.60	4,591.46	4,412.93	178.52	25.719	
13,800.00	6,949.81	6,958.33	6,843.08	199.67	40.50	-89.09	-3,034.20	-10,248.60	4,521.67	4,338.93	182.74	24.744	
13,900.00	6,948.06	6,958.28	6,843.03	202.49	40.50	-89.09	-3,034.20	-10,248.60	4,453.03	4,265.97	187.06	23.806	
14,000.00	6,946.31	6,958.23	6,842.98	205.31	40.50	-89.09	-3,034.20	-10,248.60	4,385.59	4,194.13	191.47	22.905	
14,100.00	6,944.56	6,958.18	6,842.93	208.14	40.50	-89.08	-3,034.20	-10,248.60	4,319.42	4,123.44	195.98	22.040	
14,200.00	6,942.81	6,958.13	6,842.88	210.96	40.50	-89.08	-3,034.19	-10,248.60	4,254.58	4,053.99	200.59	21.210	
14,300.00	6,941.06	6,958.08	6,842.83	213.79	40.50	-89.08	-3,034.19	-10,248.59	4,191.11	3,985.82	205.29	20.416	
14,400.00	6,939.31	6,958.03	6,842.78	216.62	40.50	-89.08	-3,034.19	-10,248.59	4,129.09	3,919.01	210.08	19.655	
14,500.00	6,937.56	6,957.98	6,842.73	219.44	40.49	-89.08	-3,034.19	-10,248.59	4,068.59	3,853.63	214.95	18.928	
14,600.00	6,935.81	6,957.93	6,842.68	222.27	40.49	-89.08	-3,034.19	-10,248.59	4,009.66	3,789.76	219.90	18.234	
14,700.00	6,934.06	6,957.88	6,842.63	225.10	40.49	-89.08	-3,034.19	-10,248.59	3,952.39	3,727.46	224.93	17.572	
14,800.00	6,932.31	6,957.83	6,842.58	227.93	40.49	-89.08	-3,034.19	-10,248.59	3,896.84	3,666.82	230.02	16.941	
14,817.75	6,932.00	6,957.82	6,842.57	228.43	40.49	-89.08	-3,034.19	-10,248.59	3,887.17	3,656.24	230.93	16.833 CC, ES, SF	



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 43-17(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 118-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	36.00	3.28	3.28	-108.12	-2,929.22	-8,948.75	9,416.03					
100.00	100.00	37.15	73.15	3.28	3.28	-108.12	-2,929.14	-8,948.83	9,416.05	9,409.49	6.57	1,434.162		
200.00	200.00	95.18	131.18	3.34	3.29	-108.12	-2,928.71	-8,949.28	9,416.56	9,409.94	6.62	1,421.920		
300.00	300.00	467.68	503.52	3.44	3.72	-108.07	-2,919.10	-8,948.22	9,414.52	9,407.34	7.17	1,312.457		
400.00	400.00	735.58	771.22	3.60	4.41	-108.03	-2,910.54	-8,942.70	9,411.75	9,403.73	8.02	1,173.851		
500.00	500.00	795.05	830.61	3.81	4.59	-108.02	-2,908.05	-8,941.11	9,407.95	9,399.55	8.40	1,120.454		
600.00	599.98	850.00	885.47	4.05	4.76	-80.70	-2,905.01	-8,940.28	9,404.46	9,395.65	8.81	1,067.923		
700.00	699.86	889.01	924.40	4.32	4.89	-80.73	-2,902.42	-8,940.06	9,401.01	9,391.81	9.20	1,021.617		
800.00	799.72	945.00	980.22	4.62	5.08	-80.72	-2,898.11	-8,940.23	9,398.04	9,388.35	9.69	970.289		
900.00	899.58	1,020.84	1,055.69	4.93	5.35	-80.70	-2,890.72	-8,941.26	9,395.44	9,385.17	10.27	914.549		
1,000.00	999.44	1,170.53	1,204.08	5.27	5.93	-80.63	-2,871.34	-8,944.43	9,392.54	9,381.36	11.19	839.582		
1,100.00	1,099.31	1,835.37	1,852.88	5.62	9.26	-79.99	-2,729.05	-8,954.98	9,386.92	9,372.10	14.82	633.188		
1,200.00	1,199.17	2,018.59	2,028.82	5.98	10.38	-79.75	-2,677.95	-8,954.90	9,377.44	9,361.16	16.28	576.062		
1,300.00	1,299.03	2,081.00	2,088.61	6.36	10.77	-79.66	-2,660.05	-8,955.07	9,368.03	9,350.99	17.04	549.905		
1,400.00	1,398.89	2,101.96	2,108.68	6.74	10.91	-79.63	-2,654.00	-8,955.28	9,359.12	9,341.57	17.55	533.248		
1,500.00	1,498.75	2,148.29	2,152.96	7.13	11.21	-79.56	-2,640.42	-8,955.98	9,350.87	9,332.64	18.24	512.776		
1,600.00	1,598.61	2,356.72	2,351.43	7.52	12.62	-79.25	-2,576.85	-8,959.56	9,342.68	9,322.67	20.00	467.020		
1,700.00	1,698.47	2,451.58	2,441.63	7.92	13.27	-79.10	-2,547.52	-8,960.56	9,333.65	9,312.60	21.05	443.444		
1,800.00	1,798.33	2,578.46	2,562.47	8.32	14.16	-78.91	-2,508.83	-8,961.52	9,324.52	9,302.20	22.31	417.859		
1,900.00	1,898.19	2,756.03	2,730.99	8.73	15.43	-78.63	-2,452.92	-8,962.73	9,315.27	9,291.31	23.96	388.824		
2,000.00	1,998.05	2,815.27	2,786.94	9.14	15.87	-78.53	-2,433.45	-8,963.17	9,305.57	9,280.76	24.80	375.176		
2,100.00	2,097.91	2,872.40	2,841.02	9.55	16.28	-78.44	-2,415.05	-8,963.65	9,296.25	9,270.62	25.63	362.762		
2,200.00	2,197.78	2,933.00	2,898.91	9.97	16.71	-78.35	-2,397.14	-8,964.00	9,287.47	9,261.00	26.47	350.863		
2,300.00	2,297.64	2,988.97	2,952.56	10.39	17.10	-78.27	-2,381.21	-8,964.39	9,279.14	9,251.86	27.28	340.206		
2,400.00	2,397.50	3,163.89	3,120.12	10.81	18.32	-78.02	-2,331.01	-8,965.19	9,270.63	9,241.75	28.88	320.983		
2,500.00	2,497.36	2,500.00	3,234.97	11.23	13.78	-77.86	-2,297.79	-8,964.76	9,261.67	9,236.81	24.86	372.605		
2,600.00	2,597.22	3,360.11	3,308.54	11.65	19.67	-77.76	-2,276.27	-8,964.39	9,252.59	9,221.54	31.06	297.931		
2,700.00	2,697.08	3,409.00	3,355.40	12.07	20.02	-77.69	-2,262.31	-8,964.52	9,244.08	9,212.26	31.82	290.486		
2,800.00	2,796.94	3,508.27	3,450.61	12.50	20.71	-77.55	-2,234.22	-8,964.97	9,235.90	9,202.96	32.93	280.452		
2,900.00	2,896.80	3,586.62	3,525.75	12.92	21.26	-77.44	-2,212.00	-8,965.38	9,227.81	9,193.90	33.90	272.176		
3,000.00	2,996.66	3,663.99	3,599.79	13.35	21.81	-77.33	-2,189.58	-8,966.06	9,219.97	9,185.09	34.88	264.352		
3,100.00	3,096.52	3,768.90	3,699.90	13.78	22.57	-77.17	-2,158.24	-8,967.41	9,212.30	9,176.24	36.06	255.473		
3,200.00	3,196.38	3,873.53	3,799.13	14.21	23.35	-77.00	-2,125.11	-8,969.09	9,204.56	9,167.29	37.27	247.001		
3,300.00	3,296.25	3,986.76	3,906.39	14.64	24.21	-76.81	-2,088.85	-8,970.88	9,196.77	9,158.22	38.54	238.603		
3,400.00	3,396.11	4,049.72	3,966.10	15.07	24.68	-76.71	-2,068.93	-8,971.89	9,189.16	9,149.71	39.45	232.925		
3,500.00	3,495.97	4,103.05	4,016.78	15.50	25.08	-76.62	-2,052.35	-8,972.85	9,181.97	9,141.69	40.28	227.928		
3,600.00	3,595.83	4,166.00	4,076.76	15.93	25.55	-76.52	-2,033.30	-8,974.26	9,175.40	9,134.21	41.18	222.786		
3,700.00	3,695.69	4,581.25	4,470.10	16.36	28.71	-75.84	-1,900.43	-8,977.43	9,166.71	9,122.02	44.69	205.117		
3,800.00	3,795.55	4,639.00	4,524.56	16.80	29.16	-75.74	-1,881.21	-8,977.34	9,157.29	9,111.71	45.58	200.891		
3,900.00	3,895.41	4,671.41	4,555.22	17.23	29.41	-75.68	-1,870.72	-8,977.39	9,148.45	9,102.17	46.28	197.690		
4,000.00	3,995.27	4,736.00	4,616.68	17.66	29.89	-75.58	-1,850.83	-8,977.61	9,140.26	9,093.06	47.20	193.639		
4,100.00	4,095.13	4,767.74	4,647.00	18.10	30.12	-75.53	-1,841.46	-8,977.79	9,132.58	9,084.70	47.88	190.739		
4,200.00	4,194.99	4,830.00	4,706.59	18.53	30.57	-75.44	-1,823.44	-8,978.35	9,125.50	9,076.73	48.77	187.112		
4,300.00	4,294.85	4,882.51	4,757.08	18.96	30.93	-75.37	-1,809.03	-8,978.88	9,118.89	9,069.32	49.57	183.952		
4,400.00	4,394.71	4,948.90	4,821.35	19.40	31.38	-75.29	-1,792.41	-8,979.36	9,112.67	9,062.21	50.46	180.604		
4,500.00	4,494.58	5,020.00	4,890.43	19.83	31.84	-75.20	-1,775.58	-8,979.93	9,106.86	9,055.50	51.35	177.336		
4,600.00	4,594.44	5,076.00	4,944.97	20.27	32.19	-75.14	-1,762.90	-8,980.48	9,101.45	9,049.30	52.14	174.548		
4,700.00	4,694.30	5,142.31	5,009.73	20.71	32.59	-75.08	-1,748.68	-8,981.17	9,096.43	9,043.45	52.98	171.680		
4,800.00	4,794.16	5,209.00	5,075.15	21.14	32.98	-75.02	-1,735.70	-8,981.79	9,091.78	9,037.96	53.81	168.946		
4,900.00	4,894.02	5,277.58	5,142.70	21.58	33.35	-74.96	-1,723.91	-8,982.33	9,087.48	9,032.86	54.62	166.368		
5,000.00	4,993.88	5,345.18	5,209.53	22.01	33.70	-74.92	-1,713.71	-8,982.80	9,083.55	9,028.14	55.41	163.932		
5,100.00	5,093.74	5,411.77	5,275.47	22.45	34.03	-74.89	-1,704.50	-8,983.31	9,079.98	9,023.81	56.18	161.631		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 43-17(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 118-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,473.24	5,336.52	22.89	34.31	-74.86	-1,697.31	-8,983.74	9,076.82	9,019.92	56.90	159.526		
5,300.00	5,293.46	5,537.49	5,400.48	23.32	34.59	-74.84	-1,691.23	-8,984.15	9,074.06	9,016.45	57.61	157.497		
5,400.00	5,393.32	5,658.34	5,520.93	23.76	35.09	-74.82	-1,681.46	-8,984.91	9,071.62	9,013.07	58.55	154.940		
5,500.00	5,493.18	5,803.17	5,665.48	24.20	35.64	-74.81	-1,672.63	-8,984.04	9,068.27	9,008.73	59.54	152.315		
5,600.00	5,593.05	5,849.53	5,711.79	24.64	35.81	-74.82	-1,670.52	-8,983.73	9,065.28	9,005.14	60.14	150.735		
5,700.00	5,692.91	5,897.54	5,759.76	25.07	35.98	-74.82	-1,668.63	-8,983.64	9,062.88	9,002.13	60.74	149.196		
5,800.00	5,792.77	5,966.00	5,828.19	25.51	36.21	-74.83	-1,666.59	-8,983.83	9,061.07	8,999.66	61.41	147.539		
5,900.00	5,892.63	6,016.36	5,878.53	25.95	36.38	-74.84	-1,665.42	-8,984.13	9,059.68	8,997.67	62.01	146.089		
6,000.00	5,992.49	6,111.59	5,973.74	26.39	36.69	-74.85	-1,663.38	-8,984.80	9,058.52	8,995.76	62.77	144.320		
6,100.00	6,092.35	6,223.59	6,085.72	26.82	37.06	-74.88	-1,661.19	-8,985.43	9,057.29	8,993.71	63.58	142.465		
6,200.00	6,192.21	6,301.67	6,163.78	27.26	37.32	-74.89	-1,659.67	-8,985.92	9,056.11	8,991.83	64.27	140.903		
6,300.00	6,292.07	6,379.00	6,241.09	27.70	37.58	-74.91	-1,658.02	-8,986.62	9,055.16	8,990.20	64.97	139.384		
6,400.00	6,391.93	6,461.10	6,323.17	28.14	37.86	-74.92	-1,656.25	-8,987.55	9,054.44	8,988.76	65.68	137.859		
6,500.00	6,491.69	6,543.64	6,405.68	28.58	38.14	-36.16	-1,654.57	-8,988.65	9,051.90	8,985.51	66.39	136.338		
6,600.00	6,589.80	6,652.25	6,514.26	29.02	38.50	-22.59	-1,652.44	-8,990.11	9,035.92	8,968.73	67.19	134.475		
6,700.00	6,683.86	6,739.35	6,601.34	29.46	38.80	-19.59	-1,650.78	-8,991.21	9,005.01	8,937.10	67.90	132.617		
6,800.00	6,771.56	6,809.70	6,671.67	29.92	39.04	-19.06	-1,649.48	-8,992.23	8,960.15	8,891.62	68.52	130.764		
6,900.00	6,850.72	6,879.70	6,741.65	30.40	39.27	-19.89	-1,648.20	-8,993.38	8,902.43	8,833.32	69.10	128.828		
7,000.00	6,919.40	6,951.33	6,813.26	30.96	39.52	-22.06	-1,646.69	-8,994.60	8,833.14	8,763.49	69.65	126.824		
7,100.00	6,975.92	7,010.87	6,872.76	31.62	39.73	-26.05	-1,645.25	-8,995.66	8,753.97	8,683.87	70.10	124.872		
7,200.00	7,018.87	7,062.96	6,924.83	32.44	39.91	-33.31	-1,643.92	-8,996.57	8,666.87	8,596.38	70.49	122.953		
7,300.00	7,047.21	7,097.89	6,959.74	33.42	40.04	-47.31	-1,643.05	-8,997.15	8,574.01	8,503.24	70.77	121.151		
7,400.00	7,060.23	7,114.89	6,976.74	34.55	40.10	-74.90	-1,642.64	-8,997.42	8,477.69	8,406.74	70.96	119.478		
7,500.00	7,060.03	7,116.48	6,978.32	35.83	40.10	-91.86	-1,642.60	-8,997.44	8,380.26	8,309.19	71.07	117.916		
7,600.00	7,058.28	7,116.26	6,978.11	37.28	40.10	-91.86	-1,642.61	-8,997.44	8,282.84	8,211.65	71.19	116.347		
7,700.00	7,056.53	7,116.05	6,977.90	38.89	40.10	-91.85	-1,642.61	-8,997.44	8,185.49	8,114.15	71.33	114.754		
7,800.00	7,054.78	7,115.84	6,977.68	40.63	40.10	-91.84	-1,642.62	-8,997.43	8,088.20	8,016.71	71.49	113.137		
7,900.00	7,053.03	7,115.62	6,977.47	42.50	40.10	-91.84	-1,642.62	-8,997.43	7,990.97	7,919.30	71.67	111.495		
8,000.00	7,051.28	7,115.41	6,977.26	44.47	40.10	-91.83	-1,642.63	-8,997.43	7,893.82	7,821.95	71.87	109.830		
8,100.00	7,049.53	7,115.20	6,977.05	46.53	40.10	-91.82	-1,642.63	-8,997.42	7,796.74	7,724.64	72.10	108.140		
8,200.00	7,047.78	7,115.00	6,976.84	48.67	40.10	-91.82	-1,642.64	-8,997.42	7,699.73	7,627.38	72.35	106.427		
8,300.00	7,046.03	7,114.79	6,976.64	50.89	40.10	-91.81	-1,642.64	-8,997.42	7,602.80	7,530.18	72.62	104.691		
8,400.00	7,044.28	7,114.58	6,976.43	53.16	40.10	-91.81	-1,642.65	-8,997.41	7,505.95	7,433.03	72.92	102.931		
8,500.00	7,042.53	7,114.38	6,976.23	55.49	40.10	-91.80	-1,642.65	-8,997.41	7,409.19	7,335.94	73.25	101.150		
8,600.00	7,040.78	7,114.17	6,976.02	57.86	40.09	-91.79	-1,642.66	-8,997.41	7,312.51	7,238.91	73.61	99.348		
8,700.00	7,039.03	7,113.97	6,975.82	60.28	40.09	-91.79	-1,642.66	-8,997.40	7,215.93	7,141.94	73.99	97.525		
8,800.00	7,037.28	7,113.76	6,975.61	62.74	40.09	-91.78	-1,642.67	-8,997.40	7,119.43	7,045.03	74.41	95.683		
8,900.00	7,035.53	7,113.56	6,975.41	65.23	40.09	-91.77	-1,642.67	-8,997.40	7,023.04	6,948.18	74.85	93.822		
9,000.00	7,033.78	7,113.36	6,975.21	67.74	40.09	-91.77	-1,642.68	-8,997.39	6,926.75	6,851.41	75.34	91.945		
9,100.00	7,032.03	7,113.16	6,975.01	70.29	40.09	-91.76	-1,642.68	-8,997.39	6,830.56	6,754.71	75.85	90.051		
9,200.00	7,030.28	7,112.96	6,974.81	72.85	40.09	-91.76	-1,642.69	-8,997.39	6,734.49	6,658.08	76.40	88.144		
9,300.00	7,028.54	7,112.76	6,974.61	75.44	40.09	-91.75	-1,642.69	-8,997.38	6,638.53	6,561.53	76.99	86.223		
9,400.00	7,026.79	7,112.57	6,974.42	78.05	40.09	-91.74	-1,642.70	-8,997.38	6,542.69	6,465.07	77.62	84.291		
9,500.00	7,025.04	7,112.37	6,974.22	80.67	40.09	-91.74	-1,642.70	-8,997.38	6,446.98	6,368.69	78.29	82.350		
9,600.00	7,023.29	7,112.17	6,974.02	83.31	40.09	-91.73	-1,642.70	-8,997.37	6,351.40	6,272.40	79.00	80.401		
9,700.00	7,021.54	7,111.98	6,973.83	85.96	40.09	-91.73	-1,642.71	-8,997.37	6,255.96	6,176.21	79.75	78.446		
9,800.00	7,019.79	7,111.78	6,973.64	88.63	40.09	-91.72	-1,642.71	-8,997.37	6,160.66	6,080.12	80.54	76.487		
9,900.00	7,018.04	7,111.59	6,973.44	91.30	40.09	-91.71	-1,642.72	-8,997.37	6,065.52	5,984.13	81.39	74.526		
10,000.00	7,016.29	7,111.40	6,973.25	93.99	40.08	-91.71	-1,642.72	-8,997.36	5,970.53	5,888.25	82.28	72.565		
10,100.00	7,014.54	7,111.21	6,973.06	96.69	40.08	-91.70	-1,642.73	-8,997.36	5,875.71	5,792.49	83.22	70.606		
10,200.00	7,012.79	7,111.02	6,972.87	99.40	40.08	-91.70	-1,642.73	-8,997.36	5,781.06	5,696.85	84.21	68.651		
10,300.00	7,011.04	7,110.83	6,972.68	102.11	40.08	-91.69	-1,642.74	-8,997.35	5,686.60	5,601.35	85.25	66.702		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 43-17(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 118-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	7,110.64	6,972.49	104.83	40.08	-91.69	-1,642.74	-8,997.35	5,592.33	5,505.98	86.35	64.760		
10,500.00	7,007.54	7,110.45	6,972.30	107.56	40.08	-91.68	-1,642.75	-8,997.35	5,498.27	5,410.75	87.51	62.829		
10,600.00	7,005.79	7,110.26	6,972.11	110.30	40.08	-91.67	-1,642.75	-8,997.34	5,404.41	5,315.68	88.73	60.909		
10,700.00	7,004.04	7,110.08	6,971.93	113.04	40.08	-91.67	-1,642.76	-8,997.34	5,310.78	5,220.77	90.01	59.003		
10,800.00	7,002.29	7,109.89	6,971.74	115.79	40.08	-91.66	-1,642.76	-8,997.34	5,217.39	5,126.04	91.35	57.113		
10,900.00	7,000.54	7,109.71	6,971.56	118.54	40.08	-91.66	-1,642.77	-8,997.34	5,124.24	5,031.48	92.76	55.240		
11,000.00	6,998.79	7,109.52	6,971.37	121.30	40.08	-91.65	-1,642.77	-8,997.33	5,031.36	4,937.12	94.24	53.387		
11,100.00	6,997.04	7,109.34	6,971.19	124.06	40.08	-91.65	-1,642.77	-8,997.33	4,938.76	4,842.96	95.80	51.555		
11,200.00	6,995.29	7,109.16	6,971.01	126.83	40.08	-91.64	-1,642.78	-8,997.33	4,846.45	4,749.03	97.42	49.746		
11,300.00	6,993.54	7,108.97	6,970.83	129.60	40.08	-91.63	-1,642.78	-8,997.32	4,754.45	4,655.32	99.13	47.961		
11,400.00	6,991.80	7,108.79	6,970.64	132.37	40.08	-91.63	-1,642.79	-8,997.32	4,662.79	4,561.87	100.92	46.202		
11,500.00	6,990.05	7,108.61	6,970.46	135.15	40.07	-91.62	-1,642.79	-8,997.32	4,571.47	4,468.67	102.80	44.471		
11,600.00	6,988.30	7,108.43	6,970.28	137.93	40.07	-91.62	-1,642.80	-8,997.31	4,480.52	4,375.76	104.76	42.769		
11,700.00	6,986.55	7,108.25	6,970.11	140.72	40.07	-91.61	-1,642.80	-8,997.31	4,389.97	4,283.14	106.82	41.097		
11,800.00	6,984.80	7,108.08	6,969.93	143.50	40.07	-91.61	-1,642.80	-8,997.31	4,299.83	4,190.85	108.98	39.456		
11,900.00	6,983.05	7,107.90	6,969.75	146.29	40.07	-91.60	-1,642.81	-8,997.31	4,210.14	4,098.90	111.24	37.848		
12,000.00	6,981.30	7,107.72	6,969.57	149.09	40.07	-91.60	-1,642.81	-8,997.30	4,120.92	4,007.32	113.60	36.275		
12,100.00	6,979.55	7,107.55	6,969.40	151.88	40.07	-91.59	-1,642.82	-8,997.30	4,032.21	3,916.13	116.08	34.736		
12,200.00	6,977.80	7,107.37	6,969.22	154.68	40.07	-91.59	-1,642.82	-8,997.30	3,944.05	3,825.37	118.68	33.233		
12,300.00	6,976.05	7,107.20	6,969.05	157.48	40.07	-91.58	-1,642.83	-8,997.30	3,856.45	3,735.06	121.40	31.767		
12,400.00	6,974.30	7,107.02	6,968.88	160.28	40.07	-91.58	-1,642.83	-8,997.29	3,769.48	3,645.23	124.25	30.339		
12,500.00	6,972.55	7,106.85	6,968.70	163.08	40.07	-91.57	-1,642.83	-8,997.29	3,683.17	3,555.94	127.23	28.949		
12,600.00	6,970.80	7,106.68	6,968.53	165.89	40.07	-91.56	-1,642.84	-8,997.29	3,597.56	3,467.21	130.35	27.599		
12,700.00	6,969.05	7,106.51	6,968.36	168.69	40.07	-91.56	-1,642.84	-8,997.28	3,512.72	3,379.10	133.62	26.289		
12,800.00	6,967.30	7,106.34	6,968.19	171.50	40.07	-91.55	-1,642.85	-8,997.28	3,428.69	3,291.65	137.04	25.019		
12,900.00	6,965.55	7,106.17	6,968.02	174.31	40.07	-91.55	-1,642.85	-8,997.28	3,345.54	3,204.92	140.63	23.790		
13,000.00	6,963.80	7,106.00	6,967.85	177.12	40.07	-91.54	-1,642.86	-8,997.28	3,263.34	3,118.96	144.38	22.603		
13,100.00	6,962.05	7,105.83	6,967.68	179.94	40.07	-91.54	-1,642.86	-8,997.27	3,182.16	3,033.86	148.30	21.457		
13,200.00	6,960.30	7,105.66	6,967.51	182.75	40.06	-91.53	-1,642.86	-8,997.27	3,102.08	2,949.67	152.40	20.354		
13,300.00	6,958.55	7,105.49	6,967.35	185.57	40.06	-91.53	-1,642.87	-8,997.27	3,023.18	2,866.49	156.69	19.294		
13,400.00	6,956.80	7,105.33	6,967.18	188.38	40.06	-91.52	-1,642.87	-8,997.27	2,945.57	2,784.40	161.17	18.276		
13,500.00	6,955.05	7,105.16	6,967.01	191.20	40.06	-91.52	-1,642.88	-8,997.26	2,869.34	2,703.50	165.84	17.302		
13,600.00	6,953.31	7,105.00	6,966.85	194.02	40.06	-91.51	-1,642.88	-8,997.26	2,794.61	2,623.90	170.71	16.371		
13,700.00	6,951.56	7,104.83	6,966.68	196.84	40.06	-91.51	-1,642.88	-8,997.26	2,721.50	2,545.73	175.77	15.483		
13,800.00	6,949.81	7,104.67	6,966.52	199.67	40.06	-91.50	-1,642.89	-8,997.25	2,650.15	2,469.11	181.04	14.639		
13,900.00	6,948.06	7,104.50	6,966.36	202.49	40.06	-91.50	-1,642.89	-8,997.25	2,580.71	2,394.21	186.50	13.838		
14,000.00	6,946.31	7,104.34	6,966.20	205.31	40.06	-91.49	-1,642.90	-8,997.25	2,513.32	2,321.18	192.15	13.080		
14,100.00	6,944.56	7,104.18	6,966.03	208.14	40.06	-91.49	-1,642.90	-8,997.25	2,448.17	2,250.19	197.97	12.366		
14,200.00	6,942.81	7,104.02	6,965.87	210.96	40.06	-91.48	-1,642.90	-8,997.24	2,385.43	2,181.46	203.97	11.695		
14,300.00	6,941.06	7,103.86	6,965.71	213.79	40.06	-91.48	-1,642.91	-8,997.24	2,325.30	2,115.19	210.10	11.067		
14,400.00	6,939.31	7,103.70	6,965.55	216.62	40.06	-91.47	-1,642.91	-8,997.24	2,267.98	2,051.62	216.36	10.482		
14,500.00	6,937.56	7,103.54	6,965.39	219.44	40.06	-91.47	-1,642.92	-8,997.24	2,213.70	1,991.00	222.70	9.940		
14,600.00	6,935.81	7,103.38	6,965.23	222.27	40.06	-91.46	-1,642.92	-8,997.23	2,162.69	1,933.59	229.10	9.440		
14,700.00	6,934.06	7,103.22	6,965.08	225.10	40.06	-91.46	-1,642.92	-8,997.23	2,115.17	1,879.68	235.49	8.982		
14,800.00	6,932.31	7,103.06	6,964.92	227.93	40.06	-91.45	-1,642.93	-8,997.23	2,071.40	1,829.57	241.83	8.565		
14,817.75	6,932.00	7,103.04	6,964.89	228.43	40.06	-91.45	-1,642.93	-8,997.23	2,064.04	1,821.09	242.95	8.496 CC, ES, SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 6-6-17 (PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 89-MWVD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	36.00	3.28	3.28	-108.10	-2,935.04	-8,979.62	9,447.19					
100.00	100.00	186.33	222.31	3.28	3.34	-108.08	-2,932.07	-8,979.27	9,446.66	9,440.04	6.62	1,427.246		
200.00	200.00	310.45	346.38	3.34	3.47	-108.07	-2,929.15	-8,978.30	9,445.17	9,438.36	6.81	1,386.857		
300.00	300.00	417.99	453.87	3.44	3.66	-108.05	-2,925.85	-8,977.63	9,443.62	9,436.52	7.10	1,329.807		
400.00	400.00	500.17	535.99	3.60	3.83	-108.03	-2,922.79	-8,977.23	9,442.03	9,434.59	7.43	1,270.151		
500.00	500.00	542.00	577.78	3.81	3.93	-108.02	-2,920.98	-8,977.24	9,440.81	9,433.08	7.73	1,220.603		
600.00	599.98	593.47	629.20	4.05	4.06	-80.65	-2,918.66	-8,977.58	9,439.86	9,431.76	8.10	1,164.876		
700.00	699.86	648.00	683.67	4.32	4.21	-80.66	-2,916.24	-8,978.46	9,439.14	9,430.62	8.52	1,107.828		
779.65	779.40	661.29	696.94	4.55	4.24	-80.66	-2,915.67	-8,978.76	9,438.91	9,430.12	8.79	1,073.601		
800.00	799.72	669.14	704.78	4.62	4.27	-80.66	-2,915.34	-8,978.94	9,438.92	9,430.05	8.88	1,063.413		
900.00	899.58	724.05	759.63	4.93	4.42	-80.66	-2,913.22	-8,980.41	9,439.37	9,430.02	9.35	1,009.306		
1,000.00	999.44	790.00	825.51	5.27	4.62	-80.67	-2,910.81	-8,982.26	9,440.09	9,430.20	9.89	954.697		
1,100.00	1,099.31	843.23	878.66	5.62	4.79	-80.67	-2,908.66	-8,984.06	9,441.26	9,430.85	10.41	907.158		
1,200.00	1,199.17	884.00	919.35	5.98	4.93	-80.67	-2,906.65	-8,985.84	9,443.05	9,432.14	10.90	866.090		
1,300.00	1,299.03	884.00	919.35	6.36	4.93	-80.67	-2,906.65	-8,985.84	9,445.69	9,434.41	11.28	837.743		
1,400.00	1,398.89	940.20	975.38	6.74	5.12	-80.66	-2,903.67	-8,989.00	9,448.78	9,436.93	11.85	797.699		
1,500.00	1,498.75	979.00	1,014.03	7.13	5.25	-80.66	-2,901.62	-8,991.72	9,452.82	9,440.45	12.37	764.446		
1,600.00	1,598.61	1,009.80	1,044.69	7.52	5.36	-80.65	-2,899.88	-8,994.13	9,457.53	9,444.66	12.87	735.033		
1,700.00	1,698.47	1,074.00	1,108.50	7.92	5.60	-80.64	-2,895.58	-8,999.70	9,462.80	9,449.31	13.50	701.115		
1,800.00	1,798.33	1,146.67	1,180.58	8.32	5.89	-80.61	-2,889.50	-9,006.64	9,468.42	9,454.24	14.18	667.908		
1,900.00	1,898.19	1,197.18	1,230.58	8.73	6.09	-80.59	-2,884.49	-9,011.81	9,474.30	9,459.52	14.78	640.981		
2,000.00	1,998.05	1,234.80	1,267.73	9.14	6.25	-80.57	-2,880.39	-9,016.04	9,480.83	9,465.49	15.34	618.044		
2,100.00	2,097.91	1,263.00	1,295.53	9.55	6.37	-80.55	-2,877.13	-9,019.45	9,488.02	9,472.15	15.86	598.128		
2,200.00	2,197.78	1,305.28	1,337.12	9.97	6.56	-80.53	-2,871.87	-9,024.96	9,495.87	9,479.41	16.46	577.077		
2,300.00	2,297.64	1,358.00	1,388.78	10.39	6.80	-80.49	-2,864.64	-9,032.58	9,504.48	9,487.38	17.10	555.883		
2,400.00	2,397.50	1,401.81	1,431.62	10.81	7.01	-80.45	-2,858.34	-9,039.24	9,513.61	9,495.90	17.71	537.196		
2,500.00	2,497.36	1,506.95	1,534.50	11.23	7.53	-80.37	-2,843.58	-9,055.10	9,522.89	9,504.27	18.62	511.420		
2,600.00	2,597.22	1,576.10	1,602.30	11.65	7.88	-80.32	-2,834.59	-9,065.30	9,532.22	9,512.86	19.37	492.219		
2,700.00	2,697.08	1,642.00	1,666.84	12.07	8.21	-80.27	-2,826.02	-9,075.49	9,542.12	9,522.02	20.10	474.734		
2,800.00	2,796.94	1,700.99	1,724.61	12.50	8.52	-80.23	-2,818.49	-9,084.80	9,552.39	9,531.59	20.80	459.176		
2,900.00	2,896.80	1,862.10	1,882.51	12.92	9.38	-80.12	-2,798.02	-9,109.31	9,562.13	9,540.09	22.04	433.888		
3,000.00	2,996.66	1,926.00	1,945.04	13.35	9.72	-80.07	-2,789.51	-9,119.37	9,572.23	9,549.44	22.78	420.165		
3,100.00	3,096.52	2,045.98	2,062.63	13.78	10.38	-79.99	-2,774.42	-9,137.81	9,582.32	9,558.49	23.82	402.227		
3,200.00	3,196.38	2,094.53	2,110.23	14.21	10.65	-79.96	-2,768.44	-9,145.27	9,592.47	9,567.99	24.49	391.728		
3,300.00	3,296.25	2,359.96	2,369.82	14.64	12.15	-79.75	-2,730.52	-9,185.40	9,601.52	9,575.16	26.36	364.291		
3,400.00	3,396.11	2,401.00	2,410.05	15.07	12.38	-79.72	-2,725.03	-9,191.39	9,610.60	9,583.61	27.00	356.012		
3,500.00	3,495.97	2,462.88	2,470.74	15.50	12.73	-79.68	-2,717.21	-9,200.60	9,620.21	9,592.47	27.74	346.769		
3,600.00	3,595.83	2,525.17	2,531.75	15.93	13.09	-79.63	-2,709.02	-9,210.10	9,630.10	9,601.60	28.50	337.952		
3,700.00	3,695.69	2,590.00	2,595.13	16.36	13.47	-79.58	-2,700.18	-9,220.47	9,640.50	9,611.23	29.27	329.405		
3,800.00	3,795.55	2,695.98	2,698.69	16.80	14.09	-79.50	-2,685.53	-9,237.62	9,651.12	9,620.84	30.28	318.763		
3,900.00	3,895.41	2,761.37	2,762.59	17.23	14.48	-79.45	-2,676.56	-9,248.20	9,661.75	9,630.69	31.06	311.110		
4,000.00	3,995.27	2,874.00	2,872.84	17.66	15.14	-79.37	-2,661.99	-9,266.02	9,672.25	9,640.16	32.10	301.332		
4,100.00	4,095.13	2,922.92	2,920.83	18.10	15.42	-79.34	-2,656.33	-9,273.61	9,683.03	9,650.26	32.77	295.468		
4,200.00	4,194.99	2,969.00	2,966.02	18.53	15.68	-79.31	-2,651.36	-9,281.16	9,694.59	9,661.16	33.43	290.008		
4,300.00	4,294.85	4,300.00	3,110.96	18.96	23.42	-79.22	-2,634.75	-9,305.77	9,706.58	9,665.60	40.98	236.881		
4,400.00	4,394.71	3,228.16	3,220.26	19.40	17.17	-79.16	-2,623.54	-9,322.85	9,717.46	9,681.79	35.67	272.442		
4,500.00	4,494.58	3,441.08	3,430.05	19.83	18.34	-79.07	-2,605.16	-9,354.19	9,728.35	9,691.15	37.20	261.517		
4,600.00	4,594.44	3,729.00	3,714.36	20.27	19.88	-78.95	-2,578.65	-9,390.97	9,736.44	9,697.33	39.12	248.908		
4,700.00	4,694.30	3,771.21	3,755.98	20.71	20.12	-78.93	-2,574.09	-9,396.36	9,744.74	9,704.98	39.76	245.099		
4,800.00	4,794.16	3,824.00	3,807.87	21.14	20.41	-78.89	-2,567.81	-9,403.74	9,753.74	9,713.29	40.46	241.092		
4,900.00	4,894.02	3,824.00	3,807.87	21.58	20.41	-78.89	-2,567.81	-9,403.74	9,763.37	9,722.50	40.86	238.936		
5,000.00	4,993.88	3,884.71	3,867.38	22.01	20.77	-78.85	-2,560.12	-9,412.94	9,773.54	9,731.93	41.61	234.864		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 6-6-17 (PR_150CC) - OH - OH													Offset Site Error: 0.00 ft	
Survey Program: 89-MWD													Offset Well Error: 3.28 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
5,100.00	5,093.74	3,932.87	3,914.52	22.45	21.06	-78.82	-2,553.88	-9,420.67	9,784.36	9,742.07	42.29	231.349		
5,200.00	5,193.60	4,137.43	4,114.95	22.89	22.27	-78.69	-2,528.68	-9,452.77	9,795.26	9,751.39	43.87	223.265		
5,300.00	5,293.46	4,206.85	4,183.07	23.32	22.68	-78.64	-2,520.31	-9,463.22	9,805.43	9,760.76	44.67	219.510		
5,400.00	5,393.32	4,357.37	4,330.35	23.76	23.58	-78.53	-2,499.69	-9,486.40	9,815.53	9,769.57	45.96	213.579		
5,500.00	5,493.18	4,457.06	4,427.52	24.20	24.20	-78.45	-2,483.79	-9,501.97	9,825.26	9,778.29	46.97	209.191		
5,600.00	5,593.05	4,519.99	4,488.67	24.64	24.60	-78.39	-2,472.92	-9,512.14	9,835.23	9,787.47	47.76	205.920		
5,700.00	5,692.91	4,580.00	4,546.88	25.07	24.99	-78.33	-2,462.39	-9,522.19	9,845.66	9,797.12	48.54	202.831		
5,800.00	5,792.77	4,736.36	4,699.33	25.51	25.96	-78.20	-2,438.01	-9,546.89	9,855.58	9,805.68	49.90	197.514		
5,900.00	5,892.63	5,900.00	5,447.06	25.95	31.79	-77.86	-2,360.25	-9,632.36	9,865.09	9,809.05	56.04	176.037		
6,000.00	5,992.49	5,784.28	5,737.12	26.39	31.21	-77.87	-2,350.57	-9,646.12	9,867.94	9,812.03	55.91	176.509		
6,100.00	6,092.35	6,067.06	6,019.82	26.82	32.25	-77.93	-2,348.09	-9,651.61	9,868.44	9,811.05	57.39	171.949		
6,200.00	6,192.21	6,200.00	6,267.25	27.26	32.74	-77.99	-2,345.73	-9,651.79	9,866.91	9,808.61	58.30	169.252		
6,300.00	6,292.07	6,432.63	6,385.36	27.70	33.57	-78.02	-2,344.23	-9,650.95	9,864.76	9,805.16	59.60	165.518		
6,400.00	6,391.93	6,477.73	6,430.45	28.14	33.73	-78.03	-2,343.50	-9,650.84	9,863.00	9,802.77	60.22	163.770		
6,500.00	6,491.69	6,566.00	6,518.71	28.58	34.06	-39.30	-2,341.93	-9,651.41	9,859.99	9,798.99	61.00	161.634		
6,600.00	6,589.80	6,566.00	6,518.71	29.02	34.06	-25.77	-2,341.93	-9,651.41	9,843.82	9,782.36	61.46	160.171		
6,700.00	6,683.86	6,620.28	6,572.98	29.46	34.27	-22.88	-2,340.97	-9,652.19	9,813.64	9,751.54	62.10	158.031		
6,800.00	6,771.56	6,669.76	6,622.45	29.92	34.46	-22.56	-2,340.21	-9,653.09	9,769.89	9,707.19	62.69	155.832		
6,900.00	6,850.72	6,714.81	6,667.48	30.40	34.63	-23.68	-2,339.61	-9,654.05	9,713.56	9,650.32	63.24	153.604		
7,000.00	6,919.40	6,755.00	6,707.65	30.96	34.79	-26.21	-2,339.15	-9,655.04	9,645.98	9,582.26	63.72	151.378		
7,100.00	6,975.92	6,797.54	6,750.18	31.62	34.95	-30.68	-2,338.72	-9,656.17	9,568.68	9,504.51	64.17	149.113		
7,200.00	7,018.87	6,831.22	6,783.85	32.44	35.08	-38.32	-2,338.40	-9,657.11	9,483.48	9,418.94	64.55	146.922		
7,300.00	7,047.21	6,854.31	6,806.92	33.42	35.17	-51.74	-2,338.19	-9,657.78	9,392.45	9,327.60	64.85	144.834		
7,400.00	7,060.23	6,866.17	6,818.78	34.55	35.22	-74.79	-2,338.09	-9,658.13	9,297.79	9,232.70	65.08	142.861		
7,500.00	7,060.03	6,868.23	6,820.84	35.83	35.23	-88.11	-2,338.07	-9,658.19	9,201.80	9,136.53	65.27	140.987		
7,600.00	7,058.28	6,869.14	6,821.75	37.28	35.23	-88.13	-2,338.06	-9,658.21	9,105.83	9,040.36	65.47	139.088		
7,700.00	7,056.53	6,870.06	6,822.66	38.89	35.24	-88.16	-2,338.06	-9,658.24	9,009.95	8,944.25	65.70	137.143		
7,800.00	7,054.78	6,870.98	6,823.59	40.63	35.24	-88.18	-2,338.05	-9,658.27	8,914.16	8,848.20	65.96	135.155		
7,900.00	7,053.03	6,871.91	6,824.51	42.50	35.24	-88.20	-2,338.04	-9,658.30	8,818.46	8,752.22	66.24	133.123		
8,000.00	7,051.28	6,872.84	6,825.44	44.47	35.25	-88.22	-2,338.03	-9,658.32	8,722.86	8,656.29	66.56	131.050		
8,100.00	7,049.53	6,873.77	6,826.38	46.53	35.25	-88.24	-2,338.02	-9,658.35	8,627.35	8,560.44	66.91	128.937		
8,200.00	7,047.78	6,874.71	6,827.31	48.67	35.25	-88.26	-2,338.02	-9,658.38	8,531.95	8,464.66	67.30	126.784		
8,300.00	7,046.03	6,875.66	6,828.26	50.89	35.26	-88.28	-2,338.01	-9,658.41	8,436.66	8,368.95	67.71	124.595		
8,400.00	7,044.28	6,876.61	6,829.21	53.16	35.26	-88.30	-2,338.00	-9,658.44	8,341.48	8,273.31	68.16	122.372		
8,500.00	7,042.53	6,877.56	6,830.16	55.49	35.27	-88.32	-2,337.99	-9,658.47	8,246.41	8,177.75	68.65	120.116		
8,600.00	7,040.78	6,878.52	6,831.12	57.86	35.27	-88.34	-2,337.98	-9,658.50	8,151.46	8,082.28	69.18	117.831		
8,700.00	7,039.03	6,879.49	6,832.09	60.28	35.27	-88.37	-2,337.98	-9,658.52	8,056.63	7,986.88	69.74	115.519		
8,800.00	7,037.28	6,880.46	6,833.06	62.74	35.28	-88.39	-2,337.97	-9,658.55	7,961.92	7,891.58	70.35	113.183		
8,900.00	7,035.53	6,881.43	6,834.03	65.23	35.28	-88.41	-2,337.96	-9,658.58	7,867.35	7,796.36	70.99	110.826		
9,000.00	7,033.78	6,882.41	6,835.01	67.74	35.28	-88.43	-2,337.95	-9,658.61	7,772.91	7,701.24	71.67	108.452		
9,100.00	7,032.03	6,883.40	6,836.00	70.29	35.29	-88.45	-2,337.94	-9,658.64	7,678.62	7,606.22	72.40	106.063		
9,200.00	7,030.28	6,884.39	6,836.99	72.85	35.29	-88.47	-2,337.93	-9,658.67	7,584.47	7,511.30	73.17	103.662		
9,300.00	7,028.54	6,885.38	6,837.98	75.44	35.30	-88.50	-2,337.93	-9,658.70	7,490.47	7,416.49	73.98	101.254		
9,400.00	7,026.79	6,886.38	6,838.98	78.05	35.30	-88.52	-2,337.92	-9,658.73	7,396.63	7,321.79	74.83	98.841		
9,500.00	7,025.04	6,887.39	6,839.99	80.67	35.30	-88.54	-2,337.91	-9,658.76	7,302.95	7,227.21	75.74	96.427		
9,600.00	7,023.29	6,888.40	6,841.00	83.31	35.31	-88.56	-2,337.90	-9,658.79	7,209.44	7,132.76	76.68	94.014		
9,700.00	7,021.54	6,889.42	6,842.01	85.96	35.31	-88.59	-2,337.89	-9,658.83	7,116.11	7,038.43	77.68	91.606		
9,800.00	7,019.79	6,890.44	6,843.04	88.63	35.32	-88.61	-2,337.88	-9,658.86	7,022.96	6,944.23	78.73	89.207		
9,900.00	7,018.04	6,891.47	6,844.06	91.30	35.32	-88.63	-2,337.87	-9,658.89	6,930.00	6,850.18	79.82	86.818		
10,000.00	7,016.29	6,892.50	6,845.10	93.99	35.32	-88.65	-2,337.87	-9,658.92	6,837.24	6,756.28	80.97	84.444		
10,100.00	7,014.54	6,893.54	6,846.14	96.69	35.33	-88.68	-2,337.86	-9,658.95	6,744.69	6,662.52	82.17	82.086		
10,200.00	7,012.79	6,894.59	6,847.18	99.40	35.33	-88.70	-2,337.85	-9,658.98	6,652.35	6,568.94	83.42	79.747		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 6-6-17 (PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 89-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	7,011.04	6,895.64	6,848.23	102.11	35.34	-88.72	-2,337.84	-9,659.02	6,560.24	6,475.52	84.72	77.431		
10,400.00	7,009.29	6,896.70	6,849.29	104.83	35.34	-88.75	-2,337.83	-9,659.05	6,468.36	6,382.28	86.09	75.138		
10,500.00	7,007.54	6,897.76	6,850.35	107.56	35.34	-88.77	-2,337.82	-9,659.08	6,376.73	6,289.22	87.51	72.873		
10,600.00	7,005.79	6,898.83	6,851.42	110.30	35.35	-88.80	-2,337.81	-9,659.11	6,285.35	6,196.36	88.98	70.635		
10,700.00	7,004.04	6,899.90	6,852.49	113.04	35.35	-88.82	-2,337.81	-9,659.15	6,194.23	6,103.71	90.52	68.428		
10,800.00	7,002.29	6,900.98	6,853.57	115.79	35.36	-88.84	-2,337.80	-9,659.18	6,103.40	6,011.28	92.12	66.253		
10,900.00	7,000.54	6,902.07	6,854.66	118.54	35.36	-88.87	-2,337.79	-9,659.21	6,012.85	5,919.07	93.79	64.112		
11,000.00	6,998.79	6,903.16	6,855.75	121.30	35.37	-88.89	-2,337.78	-9,659.25	5,922.61	5,827.10	95.52	62.007		
11,100.00	6,997.04	6,904.26	6,856.84	124.06	35.37	-88.92	-2,337.77	-9,659.28	5,832.69	5,735.38	97.31	59.938		
11,200.00	6,995.29	6,905.36	6,857.95	126.83	35.37	-88.94	-2,337.76	-9,659.31	5,743.10	5,643.92	99.18	57.907		
11,300.00	6,993.54	6,906.47	6,859.06	129.60	35.38	-88.97	-2,337.75	-9,659.35	5,653.86	5,552.74	101.12	55.915		
11,400.00	6,991.80	6,907.59	6,860.17	132.37	35.38	-88.99	-2,337.74	-9,659.38	5,564.98	5,461.86	103.13	53.963		
11,500.00	6,990.05	6,908.71	6,861.30	135.15	35.39	-89.02	-2,337.73	-9,659.42	5,476.49	5,371.28	105.21	52.052		
11,600.00	6,988.30	6,909.84	6,862.42	137.93	35.39	-89.04	-2,337.72	-9,659.45	5,388.40	5,281.02	107.38	50.182		
11,700.00	6,986.55	6,910.98	6,863.56	140.72	35.40	-89.07	-2,337.72	-9,659.49	5,300.73	5,191.11	109.62	48.355		
11,800.00	6,984.80	6,912.12	6,864.70	143.50	35.40	-89.09	-2,337.71	-9,659.52	5,213.51	5,101.56	111.95	46.570		
11,900.00	6,983.05	6,913.27	6,865.85	146.29	35.40	-89.12	-2,337.70	-9,659.56	5,126.75	5,012.39	114.36	44.828		
12,000.00	6,981.30	6,914.42	6,867.00	149.09	35.41	-89.14	-2,337.69	-9,659.60	5,040.49	4,923.62	116.87	43.130		
12,100.00	6,979.55	6,915.58	6,868.17	151.88	35.41	-89.17	-2,337.68	-9,659.63	4,954.73	4,835.27	119.46	41.476		
12,200.00	6,977.80	6,916.75	6,869.33	154.68	35.42	-89.20	-2,337.67	-9,659.67	4,869.53	4,747.38	122.15	39.866		
12,300.00	6,976.05	6,917.93	6,870.51	157.48	35.42	-89.22	-2,337.66	-9,659.71	4,784.89	4,659.96	124.93	38.299		
12,400.00	6,974.30	6,919.11	6,871.69	160.28	35.43	-89.25	-2,337.65	-9,659.74	4,700.86	4,573.04	127.82	36.777		
12,500.00	6,972.55	6,920.30	6,872.88	163.08	35.43	-89.27	-2,337.64	-9,659.78	4,617.46	4,486.65	130.81	35.300		
12,600.00	6,970.80	6,921.49	6,874.07	165.89	35.44	-89.30	-2,337.63	-9,659.82	4,534.74	4,400.83	133.90	33.866		
12,700.00	6,969.05	6,922.70	6,875.28	168.69	35.44	-89.33	-2,337.62	-9,659.86	4,452.72	4,315.61	137.11	32.476		
12,800.00	6,967.30	6,923.91	6,876.48	171.50	35.45	-89.35	-2,337.61	-9,659.90	4,371.45	4,231.02	140.43	31.130		
12,900.00	6,965.55	6,925.12	6,877.70	174.31	35.45	-89.38	-2,337.60	-9,659.93	4,290.97	4,147.11	143.86	29.827		
13,000.00	6,963.80	6,926.35	6,878.92	177.12	35.46	-89.41	-2,337.59	-9,659.97	4,211.33	4,063.92	147.41	28.568		
13,100.00	6,962.05	6,927.58	6,880.16	179.94	35.46	-89.44	-2,337.58	-9,660.01	4,132.58	3,981.49	151.09	27.352		
13,200.00	6,960.30	6,928.82	6,881.39	182.75	35.47	-89.46	-2,337.57	-9,660.05	4,054.76	3,899.87	154.88	26.179		
13,300.00	6,958.55	6,930.06	6,882.64	185.57	35.47	-89.49	-2,337.56	-9,660.09	3,977.93	3,819.12	158.81	25.048		
13,400.00	6,956.80	6,931.32	6,883.89	188.38	35.48	-89.52	-2,337.55	-9,660.13	3,902.15	3,739.29	162.86	23.960		
13,500.00	6,955.05	6,932.58	6,885.15	191.20	35.48	-89.55	-2,337.55	-9,660.17	3,827.48	3,660.43	167.05	22.913		
13,600.00	6,953.31	6,933.85	6,886.42	194.02	35.49	-89.58	-2,337.54	-9,660.21	3,753.99	3,582.63	171.36	21.907		
13,700.00	6,951.56	6,935.12	6,887.70	196.84	35.49	-89.60	-2,337.53	-9,660.25	3,681.75	3,505.94	175.81	20.942		
13,800.00	6,949.81	6,936.41	6,888.98	199.67	35.50	-89.63	-2,337.52	-9,660.29	3,610.84	3,430.45	180.39	20.017		
13,900.00	6,948.06	6,937.70	6,890.27	202.49	35.50	-89.66	-2,337.51	-9,660.33	3,541.32	3,356.22	185.10	19.132		
14,000.00	6,946.31	6,939.00	6,891.57	205.31	35.51	-89.69	-2,337.50	-9,660.38	3,473.30	3,283.36	189.94	18.287		
14,100.00	6,944.56	6,940.31	6,892.87	208.14	35.51	-89.72	-2,337.49	-9,660.42	3,406.85	3,211.95	194.90	17.480		
14,200.00	6,942.81	6,941.62	6,894.19	210.96	35.52	-89.75	-2,337.48	-9,660.46	3,342.07	3,142.09	199.99	16.712		
14,300.00	6,941.06	6,942.95	6,895.51	213.79	35.52	-89.78	-2,337.47	-9,660.50	3,279.07	3,073.88	205.18	15.981		
14,400.00	6,939.31	6,944.29	6,896.85	216.62	35.53	-89.81	-2,337.46	-9,660.55	3,217.93	3,007.45	210.49	15.288		
14,500.00	6,937.56	6,945.68	6,898.24	219.44	35.53	-89.84	-2,337.45	-9,660.59	3,158.78	2,942.89	215.89	14.632		
14,600.00	6,935.81	6,947.09	6,899.66	222.27	35.54	-89.87	-2,337.43	-9,660.64	3,101.73	2,880.35	221.37	14.011		
14,700.00	6,934.06	6,948.53	6,901.10	225.10	35.54	-89.90	-2,337.42	-9,660.68	3,046.89	2,819.96	226.93	13.427		
14,800.00	6,932.31	6,950.00	6,902.57	227.93	35.55	-89.94	-2,337.41	-9,660.73	2,994.38	2,761.85	232.53	12.877		
14,817.75	6,932.00	6,950.27	6,902.83	228.43	35.55	-89.94	-2,337.41	-9,660.74	2,985.32	2,751.78	233.53	12.783 CC, ES, SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 6-8-17(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 82-MWVD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	36.00	3.28	3.28	-108.42	-2,993.32	-8,987.99	9,473.40					
100.00	100.00	43.26	79.26	3.28	3.28	-108.42	-2,993.21	-8,988.08	9,473.40	9,466.83	6.57	1,442.869		
200.00	200.00	113.98	149.97	3.34	3.29	-108.41	-2,992.56	-8,988.58	9,473.78	9,467.15	6.63	1,428.904		
300.00	300.00	171.00	206.98	3.44	3.33	-108.41	-2,991.62	-8,989.27	9,474.46	9,467.70	6.77	1,399.549		
400.00	400.00	209.97	245.94	3.60	3.36	-108.40	-2,990.93	-8,989.99	9,475.72	9,468.76	6.96	1,361.196		
500.00	500.00	263.00	298.94	3.81	3.41	-108.40	-2,990.24	-8,991.47	9,477.78	9,470.56	7.22	1,312.363		
600.00	599.98	263.00	298.94	4.05	3.41	-80.97	-2,990.24	-8,991.47	9,480.16	9,472.70	7.46	1,270.035		
700.00	699.86	263.00	298.94	4.32	3.41	-80.94	-2,990.24	-8,991.47	9,483.11	9,475.37	7.74	1,225.483		
800.00	799.72	305.08	340.99	4.62	3.47	-80.95	-2,990.13	-8,993.21	9,486.52	9,478.43	8.09	1,172.448		
900.00	899.58	354.00	389.82	4.93	3.55	-80.96	-2,990.80	-8,996.07	9,491.24	9,482.76	8.48	1,118.606		
1,000.00	999.44	354.00	389.82	5.27	3.55	-80.96	-2,990.80	-8,996.07	9,496.32	9,487.49	8.82	1,076.178		
1,100.00	1,099.31	354.00	389.82	5.62	3.55	-80.96	-2,990.80	-8,996.07	9,502.44	9,493.26	9.18	1,035.367		
1,200.00	1,199.17	354.00	389.82	5.98	3.55	-80.96	-2,990.80	-8,996.07	9,509.62	9,500.07	9.54	996.469		
1,300.00	1,299.03	409.82	445.46	6.36	3.65	-80.99	-2,992.76	-9,000.16	9,517.16	9,507.15	10.01	950.672		
1,400.00	1,398.89	445.00	480.46	6.74	3.73	-81.00	-2,994.71	-9,003.04	9,525.74	9,515.28	10.46	910.807		
1,500.00	1,498.75	546.68	581.53	7.13	3.97	-81.06	-3,002.30	-9,011.05	9,534.80	9,523.74	11.07	861.693		
1,600.00	1,598.61	607.93	642.37	7.52	4.14	-81.10	-3,007.80	-9,015.57	9,543.86	9,532.25	11.61	821.831		
1,700.00	1,698.47	715.10	748.70	7.92	4.48	-81.19	-3,018.70	-9,023.23	9,553.15	9,540.84	12.31	776.094		
1,800.00	1,798.33	801.28	834.22	8.32	4.77	-81.25	-3,027.59	-9,029.27	9,562.35	9,549.38	12.98	736.865		
1,900.00	1,898.19	1,383.00	1,413.90	8.73	7.01	-81.55	-3,059.97	-9,061.65	9,566.28	9,550.80	15.49	617.685		
2,000.00	1,998.05	1,383.00	1,413.90	9.14	7.01	-81.55	-3,059.97	-9,061.65	9,571.10	9,555.21	15.89	602.155		
2,100.00	2,097.91	1,383.00	1,413.90	9.55	7.01	-81.55	-3,059.97	-9,061.65	9,576.96	9,560.65	16.30	587.425		
2,200.00	2,197.78	1,383.00	1,413.90	9.97	7.01	-81.55	-3,059.97	-9,061.65	9,583.86	9,567.14	16.71	573.455		
2,300.00	2,297.64	1,383.00	1,413.90	10.39	7.01	-81.55	-3,059.97	-9,061.65	9,591.79	9,574.67	17.12	560.209		
2,400.00	2,397.50	1,445.00	1,475.62	10.81	7.27	-81.57	-3,061.69	-9,067.17	9,600.38	9,582.61	17.77	540.142		
2,500.00	2,497.36	1,445.00	1,475.62	11.23	7.27	-81.57	-3,061.69	-9,067.17	9,609.75	9,591.56	18.18	528.511		
2,600.00	2,597.22	1,445.00	1,475.62	11.65	7.27	-81.57	-3,061.69	-9,067.17	9,620.14	9,601.55	18.59	517.472		
2,700.00	2,697.08	1,445.00	1,475.62	12.07	7.27	-81.57	-3,061.69	-9,067.17	9,631.56	9,612.56	19.00	506.993		
2,800.00	2,796.94	1,516.36	1,546.40	12.50	7.59	-81.60	-3,064.87	-9,075.69	9,643.58	9,623.88	19.70	489.622		
2,900.00	2,896.80	1,569.00	1,598.58	12.92	7.83	-81.62	-3,067.79	-9,081.99	9,656.00	9,635.68	20.32	475.206		
3,000.00	2,996.66	1,600.94	1,630.21	13.35	7.98	-81.63	-3,069.94	-9,085.87	9,669.02	9,648.16	20.86	463.505		
3,100.00	3,096.52	1,628.60	1,657.56	13.78	8.11	-81.65	-3,072.17	-9,089.34	9,682.77	9,661.39	21.38	452.833		
3,200.00	3,196.38	1,665.00	1,693.49	14.21	8.29	-81.67	-3,075.63	-9,094.03	9,697.27	9,675.33	21.94	441.950		
3,300.00	3,296.25	1,665.00	1,693.49	14.64	8.29	-81.67	-3,075.63	-9,094.03	9,712.54	9,690.20	22.34	434.747		
3,400.00	3,396.11	1,696.87	1,724.87	15.07	8.45	-81.69	-3,079.08	-9,098.38	9,728.54	9,705.66	22.88	425.175		
3,500.00	3,495.97	1,747.00	1,774.06	15.50	8.71	-81.72	-3,085.16	-9,105.90	9,745.65	9,722.15	23.50	414.633		
3,600.00	3,595.83	1,887.68	1,912.21	15.93	9.45	-81.82	-3,102.32	-9,126.10	9,762.69	9,738.13	24.55	397.616		
3,700.00	3,695.69	3,700.00	2,012.83	16.36	19.55	-81.90	-3,115.70	-9,140.33	9,779.52	9,746.24	33.28	293.866		
3,800.00	3,795.55	2,082.09	2,103.15	16.80	10.49	-81.97	-3,127.51	-9,152.60	9,795.79	9,769.53	26.27	372.948		
3,900.00	3,895.41	2,136.00	2,156.05	17.23	10.79	-82.01	-3,134.32	-9,160.46	9,812.90	9,785.98	26.92	364.551		
4,000.00	3,995.27	2,136.00	2,156.05	17.66	10.79	-82.01	-3,134.32	-9,160.46	9,830.42	9,803.11	27.31	359.997		
4,100.00	4,095.13	2,209.04	2,227.61	18.10	11.20	-82.06	-3,143.75	-9,171.68	9,848.60	9,820.55	28.05	351.073		
4,200.00	4,194.99	2,404.04	2,418.75	18.53	12.30	-82.21	-3,169.92	-9,199.98	9,866.03	9,836.62	29.41	335.465		
4,300.00	4,294.85	2,449.13	2,462.93	18.96	12.56	-82.25	-3,176.28	-9,206.36	9,883.58	9,853.56	30.03	329.177		
4,400.00	4,394.71	2,485.57	2,498.58	19.40	12.77	-82.28	-3,181.69	-9,211.66	9,901.75	9,871.16	30.60	323.632		
4,500.00	4,494.58	2,527.19	2,539.22	19.83	13.01	-82.31	-3,188.17	-9,217.87	9,920.54	9,889.35	31.19	318.050		
4,600.00	4,594.44	2,602.90	2,613.09	20.27	13.46	-82.38	-3,200.11	-9,229.38	9,939.70	9,907.73	31.97	310.942		
4,700.00	4,694.30	4,700.00	3,395.49	20.71	25.03	-83.02	-3,310.90	-9,330.35	9,958.12	9,915.49	42.63	233.587		
4,800.00	4,794.16	3,501.00	3,495.24	21.14	18.56	-83.11	-3,323.90	-9,339.25	9,970.37	9,933.03	37.34	266.997		
4,900.00	4,894.02	3,550.00	3,543.56	21.58	18.83	-83.15	-3,330.67	-9,343.70	9,983.13	9,945.14	37.99	262.768		
5,000.00	4,993.88	3,550.00	3,543.56	22.01	18.83	-83.15	-3,330.67	-9,343.70	9,996.55	9,958.16	38.39	260.384		
7,100.00	6,975.92	7,075.97	7,034.72	31.62	35.91	-42.24	-3,585.41	-9,618.98	9,947.77	9,885.09	62.68	158.717		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 6-8-17(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 82-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
7,200.00	7,018.87	7,106.45	7,065.20	32.44	36.01	-51.37	-3,584.88	-9,619.03	9,865.14	9,802.07	63.07	156.413		
7,300.00	7,047.21	7,126.70	7,085.44	33.42	36.08	-65.03	-3,584.54	-9,619.08	9,777.31	9,713.90	63.42	154.180		
7,400.00	7,060.23	7,136.14	7,094.89	34.55	36.11	-83.63	-3,584.39	-9,619.10	9,686.43	9,622.72	63.71	152.029		
7,500.00	7,060.03	7,136.21	7,094.95	35.83	36.11	-92.83	-3,584.39	-9,619.10	9,594.66	9,530.67	63.99	149.943		
7,600.00	7,058.28	7,135.17	7,093.92	37.28	36.11	-92.82	-3,584.41	-9,619.10	9,503.02	9,438.71	64.30	147.783		
7,700.00	7,056.53	7,134.12	7,092.87	38.89	36.11	-92.80	-3,584.42	-9,619.10	9,411.55	9,346.88	64.67	145.534		
7,800.00	7,054.78	7,133.08	7,091.82	40.63	36.10	-92.79	-3,584.44	-9,619.09	9,320.26	9,255.17	65.09	143.201		
7,900.00	7,053.03	7,132.02	7,090.77	42.50	36.10	-92.77	-3,584.46	-9,619.09	9,229.14	9,163.59	65.55	140.789		
8,000.00	7,051.28	7,130.97	7,089.71	44.47	36.10	-92.75	-3,584.47	-9,619.09	9,138.22	9,072.14	66.07	138.303		
8,100.00	7,049.53	7,129.90	7,088.65	46.53	36.09	-92.74	-3,584.49	-9,619.09	9,047.48	8,980.83	66.65	135.749		
8,200.00	7,047.78	7,128.84	7,087.58	48.67	36.09	-92.72	-3,584.51	-9,619.08	8,956.94	8,889.66	67.28	133.136		
8,300.00	7,046.03	7,127.76	7,086.51	50.89	36.08	-92.71	-3,584.52	-9,619.08	8,866.61	8,798.65	67.96	130.468		
8,400.00	7,044.28	7,126.69	7,085.43	53.16	36.08	-92.69	-3,584.54	-9,619.08	8,776.48	8,707.78	68.70	127.755		
8,500.00	7,042.53	7,125.61	7,084.35	55.49	36.08	-92.67	-3,584.56	-9,619.07	8,686.57	8,617.08	69.49	125.003		
8,600.00	7,040.78	7,124.52	7,083.27	57.86	36.07	-92.66	-3,584.58	-9,619.07	8,596.88	8,526.54	70.34	122.221		
8,700.00	7,039.03	7,123.43	7,082.18	60.28	36.07	-92.64	-3,584.59	-9,619.07	8,507.42	8,436.18	71.24	119.414		
8,800.00	7,037.28	7,122.33	7,081.08	62.74	36.07	-92.63	-3,584.61	-9,619.06	8,418.20	8,346.00	72.20	116.592		
8,900.00	7,035.53	7,121.23	7,079.98	65.23	36.06	-92.61	-3,584.63	-9,619.06	8,329.23	8,256.01	73.22	113.760		
9,000.00	7,033.78	7,120.12	7,078.87	67.74	36.06	-92.59	-3,584.65	-9,619.06	8,240.50	8,166.21	74.29	110.925		
9,100.00	7,032.03	7,119.01	7,077.76	70.29	36.06	-92.58	-3,584.67	-9,619.06	8,152.04	8,076.62	75.42	108.095		
9,200.00	7,030.28	7,117.90	7,076.64	72.85	36.05	-92.56	-3,584.69	-9,619.05	8,063.85	7,987.25	76.60	105.274		
9,300.00	7,028.54	7,116.77	7,075.52	75.44	36.05	-92.54	-3,584.70	-9,619.05	7,975.93	7,898.09	77.84	102.469		
9,400.00	7,026.79	7,115.65	7,074.40	78.05	36.04	-92.53	-3,584.72	-9,619.05	7,888.30	7,809.17	79.13	99.684		
9,500.00	7,025.04	7,114.51	7,073.26	80.67	36.04	-92.51	-3,584.74	-9,619.05	7,800.97	7,720.49	80.48	96.926		
9,600.00	7,023.29	7,113.38	7,072.13	83.31	36.04	-92.49	-3,584.76	-9,619.04	7,713.95	7,632.06	81.89	94.197		
9,700.00	7,021.54	7,112.24	7,070.99	85.96	36.03	-92.47	-3,584.78	-9,619.04	7,627.25	7,543.89	83.36	91.501		
9,800.00	7,019.79	7,111.09	7,069.84	88.63	36.03	-92.46	-3,584.80	-9,619.04	7,540.87	7,455.99	84.88	88.843		
9,900.00	7,018.04	7,109.93	7,068.68	91.30	36.02	-92.44	-3,584.82	-9,619.03	7,454.83	7,368.38	86.46	86.225		
10,000.00	7,016.29	7,108.78	7,067.53	93.99	36.02	-92.42	-3,584.84	-9,619.03	7,369.15	7,281.06	88.09	83.650		
10,100.00	7,014.54	7,107.61	7,066.36	96.69	36.02	-92.40	-3,584.86	-9,619.03	7,283.83	7,194.04	89.79	81.121		
10,200.00	7,012.79	7,106.44	7,065.19	99.40	36.01	-92.39	-3,584.88	-9,619.03	7,198.89	7,107.35	91.54	78.639		
10,300.00	7,011.04	7,105.27	7,064.02	102.11	36.01	-92.37	-3,584.90	-9,619.02	7,114.34	7,020.99	93.36	76.206		
10,400.00	7,009.29	7,104.09	7,062.84	104.83	36.00	-92.35	-3,584.92	-9,619.02	7,030.20	6,934.97	95.23	73.823		
10,500.00	7,007.54	7,102.90	7,061.65	107.56	36.00	-92.33	-3,584.94	-9,619.02	6,946.48	6,849.31	97.16	71.492		
10,600.00	7,005.79	7,101.71	7,060.46	110.30	36.00	-92.32	-3,584.96	-9,619.02	6,863.19	6,764.03	99.16	69.214		
10,700.00	7,004.04	7,100.51	7,059.27	113.04	35.99	-92.30	-3,584.98	-9,619.01	6,780.35	6,679.13	101.22	66.988		
10,800.00	7,002.29	7,099.31	7,058.06	115.79	35.99	-92.28	-3,585.00	-9,619.01	6,697.98	6,594.64	103.34	64.817		
10,900.00	7,000.54	7,098.10	7,056.85	118.54	35.98	-92.26	-3,585.02	-9,619.01	6,616.10	6,510.58	105.52	62.699		
11,000.00	6,998.79	7,096.89	7,055.64	121.30	35.98	-92.24	-3,585.04	-9,619.01	6,534.72	6,426.95	107.77	60.636		
11,100.00	6,997.04	7,095.67	7,054.42	124.06	35.98	-92.23	-3,585.06	-9,619.01	6,453.86	6,343.78	110.08	58.627		
11,200.00	6,995.29	7,094.44	7,053.20	126.83	35.97	-92.21	-3,585.08	-9,619.00	6,373.55	6,261.09	112.47	56.671		
11,300.00	6,993.54	7,093.21	7,051.96	129.60	35.97	-92.19	-3,585.10	-9,619.00	6,293.80	6,178.89	114.91	54.770		
11,400.00	6,991.80	7,091.97	7,050.73	132.37	35.96	-92.17	-3,585.13	-9,619.00	6,214.64	6,097.21	117.43	52.922		
11,500.00	6,990.05	7,090.73	7,049.48	135.15	35.96	-92.15	-3,585.15	-9,619.00	6,136.08	6,016.07	120.02	51.127		
11,600.00	6,988.30	7,089.48	7,048.23	137.93	35.96	-92.13	-3,585.17	-9,619.00	6,058.16	5,935.48	122.67	49.384		
11,700.00	6,986.55	7,088.22	7,046.98	140.72	35.95	-92.11	-3,585.19	-9,618.99	5,980.89	5,855.49	125.40	47.694		
11,800.00	6,984.80	7,086.96	7,045.72	143.50	35.95	-92.10	-3,585.21	-9,618.99	5,904.31	5,776.10	128.20	46.054		
11,900.00	6,983.05	7,085.69	7,044.45	146.29	35.94	-92.08	-3,585.24	-9,618.99	5,828.43	5,697.35	131.08	44.466		
12,000.00	6,981.30	7,084.42	7,043.17	149.09	35.94	-92.06	-3,585.26	-9,618.99	5,753.29	5,619.27	134.03	42.927		
12,100.00	6,979.55	7,083.14	7,041.89	151.88	35.93	-92.04	-3,585.28	-9,618.99	5,678.92	5,541.87	137.05	41.437		
12,200.00	6,977.80	7,081.85	7,040.61	154.68	35.93	-92.02	-3,585.30	-9,618.98	5,605.34	5,465.19	140.15	39.996		
12,300.00	6,976.05	7,080.56	7,039.32	157.48	35.92	-92.00	-3,585.33	-9,618.98	5,532.60	5,389.27	143.32	38.602		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 6-8-17(PR_150CC) - OH - OH												Offset Site Error:	0.00 ft
Survey Program: 82-MWD												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
12,400.00	6,974.30	7,079.26	7,038.02	160.28	35.92	-91.98	-3,585.35	-9,618.98	5,460.71	5,314.13	146.58	37.255	
12,500.00	6,972.55	7,077.96	7,036.71	163.08	35.92	-91.96	-3,585.37	-9,618.98	5,389.72	5,239.81	149.91	35.954	
12,600.00	6,970.80	7,076.64	7,035.40	165.89	35.91	-91.94	-3,585.40	-9,618.98	5,319.66	5,166.35	153.31	34.698	
12,700.00	6,969.05	7,075.32	7,034.08	168.69	35.91	-91.92	-3,585.42	-9,618.98	5,250.58	5,093.78	156.80	33.486	
12,800.00	6,967.30	7,074.00	7,032.75	171.50	35.90	-91.90	-3,585.44	-9,618.97	5,182.50	5,022.13	160.36	32.317	
12,900.00	6,965.55	7,072.67	7,031.42	174.31	35.90	-91.88	-3,585.47	-9,618.97	5,115.47	4,951.46	164.00	31.191	
13,000.00	6,963.80	7,071.33	7,030.08	177.12	35.89	-91.86	-3,585.49	-9,618.97	5,049.53	4,881.81	167.72	30.107	
13,100.00	6,962.05	7,069.98	7,028.74	179.94	35.89	-91.84	-3,585.52	-9,618.97	4,984.72	4,813.21	171.52	29.063	
13,200.00	6,960.30	7,068.63	7,027.39	182.75	35.88	-91.82	-3,585.54	-9,618.97	4,921.09	4,745.71	175.38	28.059	
13,300.00	6,958.55	7,067.27	7,026.03	185.57	35.88	-91.80	-3,585.57	-9,618.97	4,858.69	4,679.36	179.33	27.094	
13,400.00	6,956.80	7,065.91	7,024.66	188.38	35.88	-91.78	-3,585.59	-9,618.97	4,797.56	4,614.22	183.34	26.168	
13,500.00	6,955.05	7,064.53	7,023.29	191.20	35.87	-91.76	-3,585.62	-9,618.96	4,737.75	4,550.32	187.42	25.278	
13,600.00	6,953.31	7,063.15	7,021.91	194.02	35.87	-91.74	-3,585.64	-9,618.96	4,679.31	4,487.74	191.57	24.426	
13,700.00	6,951.56	7,061.77	7,020.53	196.84	35.86	-91.72	-3,585.67	-9,618.96	4,622.30	4,426.51	195.79	23.609	
13,800.00	6,949.81	7,060.37	7,019.13	199.67	35.86	-91.70	-3,585.69	-9,618.96	4,566.76	4,366.70	200.06	22.827	
13,900.00	6,948.06	7,058.97	7,017.73	202.49	35.85	-91.68	-3,585.72	-9,618.96	4,512.76	4,308.37	204.39	22.080	
14,000.00	6,946.31	7,057.56	7,016.32	205.31	35.85	-91.65	-3,585.75	-9,618.96	4,460.34	4,251.58	208.77	21.365	
14,100.00	6,944.56	7,056.15	7,014.91	208.14	35.84	-91.63	-3,585.77	-9,618.96	4,409.57	4,196.38	213.19	20.684	
14,200.00	6,942.81	7,054.73	7,013.49	210.96	35.84	-91.61	-3,585.80	-9,618.96	4,360.50	4,142.85	217.65	20.034	
14,300.00	6,941.06	7,053.30	7,012.06	213.79	35.83	-91.59	-3,585.83	-9,618.96	4,313.19	4,091.05	222.15	19.416	
14,400.00	6,939.31	7,051.86	7,010.62	216.62	35.83	-91.57	-3,585.85	-9,618.96	4,267.70	4,041.04	226.67	18.828	
14,500.00	6,937.56	7,050.41	7,009.17	219.44	35.82	-91.55	-3,585.88	-9,618.96	4,224.09	3,992.88	231.21	18.270	
14,600.00	6,935.81	7,048.96	7,007.72	222.27	35.82	-91.53	-3,585.91	-9,618.95	4,182.41	3,946.66	235.76	17.740	
14,700.00	6,934.06	7,047.50	7,006.26	225.10	35.81	-91.50	-3,585.94	-9,618.95	4,142.73	3,902.43	240.30	17.240	
14,800.00	6,932.31	7,046.03	7,004.79	227.93	35.81	-91.48	-3,585.96	-9,618.95	4,105.10	3,860.26	244.84	16.767	
14,817.75	6,932.00	7,045.77	7,004.53	228.43	35.81	-91.48	-3,585.97	-9,618.95	4,098.64	3,853.00	245.64	16.685 CC, ES, SF	



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 8-8-17(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 172-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	916.39	943.51	3.28	5.47	-109.13	-3,069.09	-8,847.25	9,411.88					
100.00	100.00	989.94	1,015.18	3.28	5.85	-109.22	-3,080.85	-8,835.67	9,402.03	9,392.93	9.10	1,033.109		
200.00	200.00	1,041.85	1,065.70	3.34	6.13	-109.29	-3,089.57	-8,827.50	9,392.53	9,383.12	9.41	998.428		
300.00	300.00	1,098.00	1,120.48	3.44	6.43	-109.36	-3,098.61	-8,819.16	9,383.61	9,373.81	9.80	957.670		
400.00	400.00	1,126.02	1,147.88	3.60	6.58	-109.39	-3,102.94	-8,815.23	9,375.28	9,365.19	10.09	929.384		
500.00	500.00	1,161.28	1,182.43	3.81	6.76	-109.43	-3,108.19	-8,810.58	9,367.65	9,357.19	10.46	895.429		
600.00	599.98	1,200.02	1,220.48	4.05	6.97	-82.24	-3,113.72	-8,805.83	9,360.47	9,349.58	10.89	859.220		
700.00	699.86	1,268.85	1,288.01	4.32	7.34	-82.41	-3,124.14	-8,797.49	9,353.36	9,341.84	11.52	811.960		
800.00	799.72	1,341.83	1,359.47	4.62	7.74	-82.52	-3,135.98	-8,788.60	9,346.53	9,334.33	12.20	765.922		
900.00	899.58	1,416.29	1,432.52	4.93	8.14	-82.63	-3,147.44	-8,779.94	9,339.99	9,327.08	12.91	723.191		
1,000.00	999.44	1,720.39	1,731.92	5.27	9.77	-83.03	-3,186.10	-8,743.47	9,331.83	9,316.99	14.84	628.868		
1,100.00	1,099.31	1,757.00	1,767.95	5.62	9.97	-83.07	-3,190.73	-8,738.91	9,323.71	9,308.33	15.38	606.143		
1,200.00	1,199.17	1,804.57	1,814.76	5.98	10.23	-83.14	-3,196.97	-8,733.22	9,316.23	9,300.23	16.00	582.300		
1,300.00	1,299.03	2,214.41	2,216.94	6.36	12.58	-83.71	-3,252.31	-8,677.71	9,308.06	9,289.43	18.63	499.509		
1,400.00	1,398.89	2,284.25	2,285.48	6.74	12.98	-83.80	-3,260.83	-8,667.31	9,297.77	9,278.37	19.40	479.311		
1,500.00	1,498.75	2,321.00	2,321.65	7.13	13.19	-83.85	-3,264.78	-8,662.14	9,287.91	9,267.92	19.99	464.673		
1,600.00	1,598.61	2,370.23	2,370.15	7.52	13.46	-83.91	-3,270.01	-8,655.52	9,278.63	9,257.98	20.64	449.439		
1,700.00	1,698.47	2,416.00	2,415.25	7.92	13.72	-83.97	-3,275.22	-8,649.72	9,270.12	9,248.83	21.29	435.430		
1,800.00	1,798.33	2,541.32	2,538.37	8.32	14.43	-84.14	-3,291.56	-8,633.03	9,261.76	9,239.37	22.39	413.679		
1,900.00	1,898.19	2,639.42	2,634.82	8.73	15.00	-84.27	-3,303.88	-8,620.07	9,253.37	9,230.02	23.35	396.330		
2,000.00	1,998.05	2,778.49	2,770.88	9.14	15.85	-84.48	-3,324.32	-8,599.84	9,244.49	9,219.92	24.57	376.227		
2,100.00	2,097.91	2,871.17	2,861.39	9.55	16.42	-84.62	-3,338.68	-8,586.01	9,235.67	9,210.13	25.54	361.609		
2,200.00	2,197.78	2,920.28	2,909.53	9.97	16.71	-84.70	-3,345.49	-8,579.08	9,227.13	9,200.89	26.25	351.574		
2,300.00	2,297.64	2,958.44	2,947.02	10.39	16.93	-84.75	-3,350.51	-8,574.08	9,219.26	9,192.37	26.89	342.914		
2,400.00	2,397.50	3,008.44	2,996.24	10.81	17.22	-84.82	-3,356.89	-8,567.95	9,212.04	9,184.45	27.59	333.847		
2,500.00	2,497.36	3,078.00	3,064.54	11.23	17.63	-84.92	-3,366.73	-8,559.27	9,205.21	9,176.80	28.42	323.955		
2,600.00	2,597.22	3,130.11	3,115.77	11.65	17.92	-84.99	-3,373.95	-8,553.05	9,198.83	9,169.70	29.13	315.776		
2,700.00	2,697.08	3,169.00	3,154.18	12.07	18.14	-85.04	-3,378.48	-8,548.95	9,193.01	9,163.24	29.78	308.749		
2,800.00	2,796.94	3,226.86	3,211.46	12.50	18.43	-85.10	-3,384.53	-8,543.45	9,187.74	9,157.24	30.50	301.248		
2,900.00	2,896.80	3,277.60	3,261.75	12.92	18.70	-85.16	-3,389.64	-8,539.05	9,183.06	9,151.87	31.19	294.443		
3,000.00	2,996.66	3,338.32	3,321.89	13.35	19.01	-85.23	-3,396.23	-8,533.88	9,178.85	9,146.92	31.93	287.473		
3,100.00	3,096.52	3,410.37	3,393.21	13.78	19.38	-85.32	-3,404.50	-8,527.85	9,175.04	9,142.31	32.73	280.324		
3,200.00	3,196.38	3,582.14	3,563.35	14.21	20.26	-85.51	-3,422.82	-8,513.10	9,170.61	9,136.57	34.04	269.381		
3,300.00	3,296.25	3,640.00	3,620.64	14.64	20.57	-85.58	-3,429.33	-8,508.23	9,166.62	9,131.84	34.78	263.584		
3,400.00	3,396.11	4,088.52	4,061.49	15.07	23.15	-86.21	-3,490.46	-8,454.76	9,159.49	9,121.75	37.74	242.724		
3,500.00	3,495.97	4,139.49	4,111.49	15.50	23.46	-86.28	-3,497.58	-8,447.86	9,152.15	9,113.67	38.48	237.861		
3,600.00	3,595.83	4,207.00	4,177.91	15.93	23.85	-86.38	-3,506.22	-8,439.44	9,145.34	9,106.04	39.30	232.702		
3,700.00	3,695.69	4,246.91	4,217.19	16.36	24.09	-86.43	-3,511.40	-8,434.64	9,139.01	9,099.03	39.97	228.624		
3,800.00	3,795.55	4,301.00	4,270.26	16.80	24.40	-86.51	-3,519.44	-8,427.97	9,133.24	9,092.51	40.73	224.250		
3,900.00	3,895.41	4,345.41	4,313.80	17.23	24.67	-86.58	-3,526.35	-8,422.61	9,128.04	9,086.61	41.43	220.326		
4,000.00	3,995.27	4,396.00	4,363.53	17.66	24.96	-86.65	-3,533.77	-8,417.00	9,123.43	9,081.27	42.17	216.366		
4,100.00	4,095.13	4,460.94	4,427.48	18.10	25.33	-86.74	-3,542.84	-8,410.30	9,119.30	9,076.33	42.97	212.215		
4,200.00	4,194.99	4,517.15	4,482.91	18.53	25.64	-86.82	-3,550.40	-8,404.83	9,115.57	9,071.85	43.72	208.487		
4,300.00	4,294.85	4,563.66	4,528.86	18.96	25.90	-86.88	-3,556.33	-8,400.73	9,112.41	9,068.00	44.41	205.174		
4,400.00	4,394.71	4,585.00	4,549.97	19.40	26.01	-86.91	-3,558.94	-8,398.99	9,109.93	9,064.96	44.96	202.601		
4,500.00	4,494.58	4,646.77	4,611.18	19.83	26.32	-86.98	-3,565.98	-8,394.62	9,107.97	9,062.26	45.71	199.236		
4,600.00	4,594.44	4,680.00	4,644.17	20.27	26.49	-87.01	-3,569.42	-8,392.70	9,106.75	9,060.43	46.32	196.622		
4,700.00	4,694.30	4,728.64	4,692.53	20.71	26.71	-87.06	-3,574.17	-8,390.35	9,106.16	9,059.19	46.98	193.832		
4,800.00	4,794.16	4,928.56	4,891.66	21.14	27.61	-87.24	-3,589.69	-8,382.21	9,105.45	9,057.11	48.33	188.382		
4,900.00	4,894.02	4,986.06	4,949.01	21.58	27.86	-87.28	-3,593.22	-8,380.05	9,104.35	9,055.33	49.02	185.729		
5,000.00	4,993.88	5,040.56	5,003.40	22.01	28.08	-87.32	-3,596.31	-8,378.42	9,103.74	9,054.06	49.68	183.230		
5,100.00	5,093.74	5,179.04	5,141.79	22.45	28.60	-87.39	-3,599.74	-8,376.36	9,103.19	9,052.54	50.65	179.733		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 8-8-17(PR_150CC) - OH - OH												Offset Site Error:	0.00 ft
Survey Program: 172-MWD												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,200.00	5,193.60	5,249.00	5,211.75	22.89	28.83	-87.42	-3,599.68	-8,376.13	9,102.60	9,051.28	51.32	177.375	
5,300.00	5,293.46	5,309.68	5,272.43	23.32	29.03	-87.44	-3,599.72	-8,376.13	9,102.39	9,050.43	51.95	175.207	
5,301.11	5,294.57	5,310.37	5,273.12	23.33	29.03	-87.44	-3,599.72	-8,376.13	9,102.39	9,050.43	51.96	175.183	
5,400.00	5,393.32	5,385.37	5,348.12	23.76	29.28	-87.46	-3,600.02	-8,376.34	9,102.55	9,049.91	52.64	172.923	
5,500.00	5,493.18	5,476.21	5,438.96	24.20	29.58	-87.50	-3,600.49	-8,376.66	9,102.87	9,049.49	53.38	170.525	
5,600.00	5,593.05	5,567.05	5,529.80	24.64	29.88	-87.53	-3,601.05	-8,377.05	9,103.29	9,049.16	54.12	168.193	
5,700.00	5,692.91	5,668.36	5,631.10	25.07	30.21	-87.56	-3,601.73	-8,377.54	9,103.78	9,048.88	54.90	165.822	
5,800.00	5,792.77	5,785.72	5,748.46	25.51	30.60	-87.60	-3,602.24	-8,378.06	9,104.14	9,048.41	55.73	163.361	
5,900.00	5,892.63	5,903.12	5,865.86	25.95	30.98	-87.64	-3,602.37	-8,378.50	9,104.32	9,047.76	56.56	160.967	
6,000.00	5,992.49	6,003.30	5,966.04	26.39	31.32	-87.68	-3,602.54	-8,378.75	9,104.39	9,047.04	57.35	158.756	
6,100.00	6,092.35	6,103.30	6,066.03	26.82	31.67	-87.71	-3,603.15	-8,378.78	9,104.47	9,046.33	58.14	156.604	
6,200.00	6,192.21	6,211.48	6,174.20	27.26	32.05	-87.76	-3,604.29	-8,378.58	9,104.54	9,045.58	58.96	154.410	
6,300.00	6,292.07	6,362.07	6,324.78	27.70	32.62	-87.82	-3,606.13	-8,377.58	9,104.26	9,044.27	59.99	151.774	
6,400.00	6,391.93	6,512.59	6,475.28	28.14	33.20	-87.89	-3,608.03	-8,375.62	9,103.42	9,042.41	61.01	149.220	
6,500.00	6,491.69	6,562.36	6,525.04	28.58	33.40	-49.18	-3,608.92	-8,375.02	9,100.86	9,039.21	61.65	147.629	
6,600.00	6,589.80	6,633.00	6,595.66	29.02	33.68	-35.90	-3,610.37	-8,374.17	9,086.08	9,023.72	62.36	145.699	
6,700.00	6,683.86	6,700.60	6,663.23	29.46	33.95	-33.47	-3,612.04	-8,373.44	9,057.81	8,994.76	63.05	143.654	
6,800.00	6,771.56	6,769.14	6,731.75	29.92	34.22	-33.85	-3,614.01	-8,372.77	9,016.75	8,953.02	63.73	141.489	
6,900.00	6,850.72	6,859.34	6,821.91	30.40	34.58	-36.05	-3,616.44	-8,371.98	8,963.69	8,899.22	64.47	139.040	
7,000.00	6,919.40	6,937.56	6,900.11	30.96	34.89	-40.01	-3,618.22	-8,371.35	8,899.92	8,834.78	65.14	136.634	
7,100.00	6,975.92	7,001.85	6,964.38	31.62	35.14	-46.14	-3,619.45	-8,370.87	8,827.07	8,761.34	65.73	134.286	
7,200.00	7,018.87	7,055.43	7,017.95	32.44	35.35	-55.22	-3,620.33	-8,370.48	8,747.02	8,680.75	66.28	131.972	
7,300.00	7,047.21	7,095.76	7,058.28	33.42	35.51	-68.05	-3,620.98	-8,370.13	8,661.79	8,595.02	66.78	129.714	
7,400.00	7,060.23	7,113.33	7,075.84	34.55	35.58	-84.37	-3,621.26	-8,369.95	8,573.55	8,506.36	67.19	127.594	
7,500.00	7,060.03	7,111.58	7,074.09	35.83	35.58	-92.17	-3,621.23	-8,369.97	8,484.46	8,416.90	67.56	125.583	
7,600.00	7,058.28	7,107.62	7,070.13	37.28	35.56	-92.11	-3,621.17	-8,370.01	8,395.57	8,327.59	67.98	123.505	
7,700.00	7,056.53	7,103.71	7,066.22	38.89	35.55	-92.05	-3,621.10	-8,370.05	8,306.93	8,238.47	68.46	121.341	
7,800.00	7,054.78	7,099.84	7,062.35	40.63	35.53	-91.99	-3,621.04	-8,370.09	8,218.56	8,149.55	69.01	119.096	
7,900.00	7,053.03	7,096.02	7,058.53	42.50	35.51	-91.94	-3,620.98	-8,370.13	8,130.45	8,060.82	69.62	116.779	
8,000.00	7,051.28	7,092.24	7,054.75	44.47	35.50	-91.88	-3,620.92	-8,370.16	8,042.61	7,972.31	70.31	114.395	
8,100.00	7,049.53	7,088.50	7,051.01	46.53	35.48	-91.83	-3,620.86	-8,370.20	7,955.07	7,884.01	71.06	111.953	
8,200.00	7,047.78	7,084.80	7,047.32	48.67	35.47	-91.77	-3,620.80	-8,370.23	7,867.82	7,795.94	71.88	109.461	
8,300.00	7,046.03	7,081.15	7,043.67	50.89	35.46	-91.72	-3,620.74	-8,370.26	7,780.87	7,708.10	72.77	106.929	
8,400.00	7,044.28	7,077.54	7,040.05	53.16	35.44	-91.66	-3,620.69	-8,370.29	7,694.24	7,620.52	73.73	104.364	
8,500.00	7,042.53	7,073.96	7,036.48	55.49	35.43	-91.61	-3,620.63	-8,370.33	7,607.94	7,533.18	74.75	101.775	
8,600.00	7,040.78	7,070.43	7,032.95	57.86	35.41	-91.56	-3,620.57	-8,370.36	7,521.97	7,446.12	75.85	99.170	
8,700.00	7,039.03	7,066.94	7,029.45	60.28	35.40	-91.51	-3,620.52	-8,370.39	7,436.36	7,359.34	77.01	96.558	
8,800.00	7,037.28	7,063.48	7,026.00	62.74	35.38	-91.46	-3,620.46	-8,370.41	7,351.10	7,272.86	78.25	93.946	
8,900.00	7,035.53	7,060.06	7,022.58	65.23	35.37	-91.40	-3,620.41	-8,370.44	7,266.23	7,186.68	79.55	91.341	
9,000.00	7,033.78	7,056.68	7,019.19	67.74	35.36	-91.35	-3,620.35	-8,370.47	7,181.74	7,100.82	80.92	88.750	
9,100.00	7,032.03	7,053.33	7,015.85	70.29	35.34	-91.30	-3,620.30	-8,370.50	7,097.65	7,015.29	82.36	86.179	
9,200.00	7,030.28	7,050.02	7,012.54	72.85	35.33	-91.26	-3,620.25	-8,370.52	7,013.98	6,930.11	83.87	83.634	
9,300.00	7,028.54	7,046.74	7,009.26	75.44	35.32	-91.21	-3,620.19	-8,370.55	6,930.74	6,845.30	85.44	81.119	
9,400.00	7,026.79	7,043.50	7,006.02	78.05	35.31	-91.16	-3,620.14	-8,370.57	6,847.94	6,760.86	87.08	78.639	
9,500.00	7,025.04	7,040.29	7,002.81	80.67	35.29	-91.11	-3,620.09	-8,370.59	6,765.61	6,676.82	88.79	76.197	
9,600.00	7,023.29	7,037.12	6,999.64	83.31	35.28	-91.06	-3,620.04	-8,370.62	6,683.77	6,593.20	90.57	73.798	
9,700.00	7,021.54	7,033.97	6,996.50	85.96	35.27	-91.02	-3,619.99	-8,370.64	6,602.42	6,510.00	92.41	71.444	
9,800.00	7,019.79	7,031.02	6,993.55	88.63	35.26	-90.97	-3,619.94	-8,370.66	6,521.58	6,427.26	94.33	69.138	
9,900.00	7,018.04	7,028.14	6,990.67	91.30	35.24	-90.93	-3,619.90	-8,370.68	6,441.29	6,344.98	96.31	66.881	
10,000.00	7,016.29	7,025.26	6,987.78	93.99	35.23	-90.89	-3,619.85	-8,370.70	6,361.55	6,263.19	98.36	64.676	
10,100.00	7,014.54	7,022.37	6,984.89	96.69	35.22	-90.85	-3,619.80	-8,370.72	6,282.39	6,181.91	100.48	62.524	
10,200.00	7,012.79	7,019.47	6,982.00	99.40	35.21	-90.80	-3,619.75	-8,370.74	6,203.83	6,101.17	102.67	60.426	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - FRITZLER 8-8-17(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 172-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	7,011.04	7,016.57	6,979.10	102.11	35.20	-90.76	-3,619.71	-8,370.76	6,125.90	6,020.97	104.93	58.383		
10,400.00	7,009.29	7,013.66	6,976.19	104.83	35.19	-90.72	-3,619.66	-8,370.78	6,048.61	5,941.36	107.25	56.395		
10,500.00	7,007.54	7,010.75	6,973.28	107.56	35.18	-90.67	-3,619.61	-8,370.80	5,972.00	5,862.35	109.65	54.463		
10,600.00	7,005.79	7,007.83	6,970.36	110.30	35.16	-90.63	-3,619.56	-8,370.82	5,896.09	5,783.97	112.12	52.587		
10,700.00	7,004.04	7,004.91	6,967.44	113.04	35.15	-90.59	-3,619.51	-8,370.85	5,820.90	5,706.24	114.66	50.767		
10,800.00	7,002.29	7,001.98	6,964.51	115.79	35.14	-90.54	-3,619.45	-8,370.87	5,746.47	5,629.20	117.27	49.002		
10,900.00	7,000.54	6,999.05	6,961.58	118.54	35.13	-90.50	-3,619.40	-8,370.89	5,672.82	5,552.87	119.95	47.292		
11,000.00	6,998.79	6,996.11	6,958.64	121.30	35.12	-90.46	-3,619.35	-8,370.91	5,599.99	5,477.28	122.71	45.637		
11,100.00	6,997.04	6,993.17	6,955.70	124.06	35.11	-90.41	-3,619.30	-8,370.93	5,528.01	5,402.47	125.53	44.036		
11,200.00	6,995.29	6,990.21	6,952.75	126.83	35.09	-90.37	-3,619.24	-8,370.95	5,456.90	5,328.47	128.43	42.489		
11,300.00	6,993.54	6,987.26	6,949.79	129.60	35.08	-90.33	-3,619.19	-8,370.97	5,386.72	5,255.32	131.40	40.994		
11,400.00	6,991.80	6,984.30	6,946.83	132.37	35.07	-90.28	-3,619.14	-8,371.00	5,317.49	5,183.04	134.44	39.552		
11,500.00	6,990.05	6,981.33	6,943.86	135.15	35.06	-90.24	-3,619.08	-8,371.02	5,249.25	5,111.69	137.56	38.160		
11,600.00	6,988.30	6,978.36	6,940.89	137.93	35.05	-90.19	-3,619.03	-8,371.04	5,182.04	5,041.29	140.74	36.819		
11,700.00	6,986.55	6,975.38	6,937.91	140.72	35.04	-90.15	-3,618.97	-8,371.06	5,115.90	4,971.90	144.00	35.527		
11,800.00	6,984.80	6,972.40	6,934.93	143.50	35.02	-90.11	-3,618.91	-8,371.08	5,050.87	4,903.54	147.32	34.284		
11,900.00	6,983.05	6,969.41	6,931.94	146.29	35.01	-90.06	-3,618.86	-8,371.11	4,986.99	4,836.28	150.72	33.088		
12,000.00	6,981.30	6,966.41	6,928.95	149.09	35.00	-90.02	-3,618.80	-8,371.13	4,924.32	4,770.14	154.18	31.939		
12,100.00	6,979.55	6,963.41	6,925.95	151.88	34.99	-89.97	-3,618.74	-8,371.15	4,862.90	4,705.19	157.71	30.835		
12,200.00	6,977.80	6,960.40	6,922.94	154.68	34.98	-89.93	-3,618.68	-8,371.17	4,802.77	4,641.47	161.30	29.776		
12,300.00	6,976.05	6,957.39	6,919.93	157.48	34.96	-89.88	-3,618.62	-8,371.20	4,743.99	4,579.03	164.95	28.760		
12,400.00	6,974.30	6,954.37	6,916.91	160.28	34.95	-89.84	-3,618.56	-8,371.22	4,686.60	4,517.93	168.66	27.787		
12,500.00	6,972.55	6,951.35	6,913.89	163.08	34.94	-89.79	-3,618.50	-8,371.24	4,630.65	4,458.23	172.43	26.856		
12,600.00	6,970.80	6,948.32	6,910.86	165.89	34.93	-89.75	-3,618.44	-8,371.27	4,576.21	4,399.97	176.24	25.965		
12,700.00	6,969.05	6,945.29	6,907.83	168.69	34.92	-89.70	-3,618.38	-8,371.29	4,523.32	4,343.21	180.11	25.115		
12,800.00	6,967.30	6,942.25	6,904.79	171.50	34.90	-89.66	-3,618.32	-8,371.31	4,472.04	4,288.03	184.01	24.303		
12,900.00	6,965.55	6,939.20	6,901.74	174.31	34.89	-89.61	-3,618.25	-8,371.34	4,422.43	4,234.47	187.96	23.529		
13,000.00	6,963.80	6,936.15	6,898.69	177.12	34.88	-89.57	-3,618.19	-8,371.36	4,374.53	4,182.60	191.94	22.792		
13,100.00	6,962.05	6,933.09	6,895.63	179.94	34.87	-89.52	-3,618.13	-8,371.38	4,328.42	4,132.48	195.94	22.091		
13,200.00	6,960.30	6,930.03	6,892.57	182.75	34.86	-89.48	-3,618.06	-8,371.41	4,284.14	4,084.18	199.96	21.425		
13,300.00	6,958.55	6,926.96	6,889.50	185.57	34.84	-89.43	-3,618.00	-8,371.43	4,241.76	4,037.76	204.00	20.793		
13,400.00	6,956.80	6,923.88	6,886.43	188.38	34.83	-89.39	-3,617.93	-8,371.46	4,201.33	3,993.29	208.04	20.195		
13,500.00	6,955.05	6,920.80	6,883.34	191.20	34.82	-89.34	-3,617.86	-8,371.48	4,162.91	3,950.83	212.07	19.630		
13,600.00	6,953.31	6,917.71	6,880.26	194.02	34.81	-89.29	-3,617.80	-8,371.51	4,126.55	3,910.45	216.09	19.096		
13,700.00	6,951.56	6,914.62	6,877.17	196.84	34.79	-89.25	-3,617.73	-8,371.53	4,092.31	3,872.21	220.09	18.593		
13,800.00	6,949.81	6,911.52	6,874.07	199.67	34.78	-89.20	-3,617.66	-8,371.55	4,060.24	3,836.17	224.06	18.121		
13,900.00	6,948.06	6,908.41	6,870.96	202.49	34.77	-89.16	-3,617.59	-8,371.58	4,030.39	3,802.40	227.99	17.678		
14,000.00	6,946.31	6,905.30	6,867.85	205.31	34.76	-89.11	-3,617.52	-8,371.60	4,002.83	3,770.95	231.87	17.263		
14,100.00	6,944.56	6,902.18	6,864.74	208.14	34.74	-89.06	-3,617.45	-8,371.63	3,977.58	3,741.89	235.69	16.876		
14,200.00	6,942.81	6,899.06	6,861.61	210.96	34.73	-89.02	-3,617.38	-8,371.65	3,954.70	3,715.26	239.43	16.517		
14,300.00	6,941.06	6,895.93	6,858.48	213.79	34.72	-88.97	-3,617.31	-8,371.68	3,934.23	3,691.13	243.10	16.184		
14,400.00	6,939.31	6,892.80	6,855.35	216.62	34.71	-88.92	-3,617.24	-8,371.71	3,916.20	3,669.53	246.67	15.876		
14,500.00	6,937.56	6,889.65	6,852.21	219.44	34.70	-88.88	-3,617.17	-8,371.73	3,900.65	3,650.51	250.14	15.594		
14,600.00	6,935.81	6,886.51	6,849.06	222.27	34.68	-88.83	-3,617.09	-8,371.76	3,887.61	3,634.11	253.50	15.336		
14,700.00	6,934.06	6,883.35	6,845.91	225.10	34.67	-88.78	-3,617.02	-8,371.78	3,877.10	3,620.37	256.74	15.101		
14,800.00	6,932.31	6,880.19	6,842.75	227.93	34.66	-88.74	-3,616.94	-8,371.81	3,869.15	3,609.30	259.85	14.890		
14,817.75	6,932.00	6,879.63	6,842.19	228.43	34.66	-88.73	-3,616.93	-8,371.81	3,868.01	3,607.62	260.38	14.855 CC, ES, SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - GREELEY SWD #1(XX) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	65.00	3.28	3.28	-134.61	-3,326.25	-3,371.76	4,736.76					
100.00	100.00	35.00	100.00	3.28	3.34	-134.61	-3,326.25	-3,371.76	4,736.32	4,729.70	6.62	715.333		
200.00	200.00	135.00	200.00	3.34	4.42	-134.61	-3,326.25	-3,371.76	4,736.32	4,728.56	7.76	610.342		
300.00	300.00	235.00	300.00	3.44	7.24	-134.61	-3,326.25	-3,371.76	4,736.32	4,725.63	10.69	443.125		
400.00	400.00	335.00	400.00	3.60	10.48	-134.61	-3,326.25	-3,371.76	4,736.32	4,722.24	14.08	336.400		
500.00	500.00	435.00	500.00	3.81	13.83	-134.61	-3,326.25	-3,371.76	4,736.32	4,718.68	17.64	268.486		
600.00	599.98	534.98	599.98	4.05	17.25	-107.24	-3,326.25	-3,371.76	4,736.83	4,715.54	21.29	222.481		
700.00	699.86	634.86	699.86	4.32	20.68	-107.28	-3,326.25	-3,371.76	4,738.27	4,713.27	25.00	189.566		
800.00	799.72	734.72	799.72	4.62	24.13	-107.35	-3,326.25	-3,371.76	4,739.84	4,711.10	28.74	164.919		
900.00	899.58	834.58	899.58	4.93	27.59	-107.41	-3,326.25	-3,371.76	4,741.41	4,708.90	32.52	145.815		
1,000.00	999.44	934.44	999.44	5.27	31.05	-107.47	-3,326.25	-3,371.76	4,743.00	4,706.68	36.32	130.600		
1,100.00	1,099.31	1,034.31	1,099.31	5.62	34.52	-107.53	-3,326.25	-3,371.76	4,744.58	4,704.45	40.14	118.212		
1,200.00	1,199.17	1,134.17	1,199.17	5.98	37.99	-107.59	-3,326.25	-3,371.76	4,746.18	4,702.20	43.97	107.940		
1,300.00	1,299.03	1,234.03	1,299.03	6.36	41.46	-107.65	-3,326.25	-3,371.76	4,747.77	4,699.96	47.82	99.290		
1,400.00	1,398.89	1,333.89	1,398.89	6.74	44.94	-107.71	-3,326.25	-3,371.76	4,749.38	4,697.70	51.67	91.910		
1,500.00	1,498.75	1,433.75	1,498.75	7.13	48.42	-107.77	-3,326.25	-3,371.76	4,750.98	4,695.45	55.54	85.543		
1,600.00	1,598.61	1,533.61	1,598.61	7.52	51.90	-107.83	-3,326.25	-3,371.76	4,752.60	4,693.19	59.41	79.994		
1,700.00	1,698.47	1,633.47	1,698.47	7.92	55.38	-107.89	-3,326.25	-3,371.76	4,754.22	4,690.93	63.29	75.118		
1,800.00	1,798.33	1,733.33	1,798.33	8.32	58.86	-107.95	-3,326.25	-3,371.76	4,755.84	4,688.67	67.17	70.799		
1,900.00	1,898.19	1,833.19	1,898.19	8.73	62.34	-108.01	-3,326.25	-3,371.76	4,757.47	4,686.41	71.06	66.949		
2,000.00	1,998.05	1,933.05	1,998.05	9.14	65.82	-108.07	-3,326.25	-3,371.76	4,759.11	4,684.16	74.95	63.495		
2,100.00	2,097.91	2,032.91	2,097.91	9.55	69.30	-108.13	-3,326.25	-3,371.76	4,760.75	4,681.90	78.85	60.379		
2,200.00	2,197.78	2,132.78	2,197.78	9.97	72.78	-108.19	-3,326.25	-3,371.76	4,762.39	4,679.65	82.74	57.555		
2,300.00	2,297.64	2,232.64	2,297.64	10.39	76.27	-108.25	-3,326.25	-3,371.76	4,764.04	4,677.40	86.64	54.984		
2,400.00	2,397.50	2,332.50	2,397.50	10.81	79.75	-108.31	-3,326.25	-3,371.76	4,765.70	4,675.15	90.55	52.632		
2,500.00	2,497.36	2,432.36	2,497.36	11.23	83.23	-108.37	-3,326.25	-3,371.76	4,767.36	4,672.91	94.45	50.474		
2,600.00	2,597.22	2,532.22	2,597.22	11.65	86.72	-108.43	-3,326.25	-3,371.76	4,769.03	4,670.67	98.36	48.487		
2,700.00	2,697.08	2,632.08	2,697.08	12.07	90.20	-108.49	-3,326.25	-3,371.76	4,770.70	4,668.44	102.26	46.651		
2,800.00	2,796.94	2,731.94	2,796.94	12.50	93.68	-108.55	-3,326.25	-3,371.76	4,772.38	4,666.20	106.17	44.949		
2,900.00	2,896.80	2,831.80	2,896.80	12.92	97.17	-108.61	-3,326.25	-3,371.76	4,774.06	4,663.98	110.08	43.368		
3,000.00	2,996.66	2,931.66	2,996.66	13.35	100.65	-108.67	-3,326.25	-3,371.76	4,775.75	4,661.75	113.99	41.895		
3,100.00	3,096.52	3,031.52	3,096.52	13.78	104.14	-108.73	-3,326.25	-3,371.76	4,777.44	4,659.53	117.91	40.519		
3,200.00	3,196.38	3,131.38	3,196.38	14.21	107.62	-108.79	-3,326.25	-3,371.76	4,779.14	4,657.32	121.82	39.231		
3,300.00	3,296.25	3,231.25	3,296.25	14.64	111.11	-108.85	-3,326.25	-3,371.76	4,780.84	4,655.11	125.73	38.024		
3,400.00	3,396.11	3,331.11	3,396.11	15.07	114.59	-108.91	-3,326.25	-3,371.76	4,782.55	4,652.90	129.65	36.889		
3,500.00	3,495.97	3,430.97	3,495.97	15.50	118.08	-108.97	-3,326.25	-3,371.76	4,784.26	4,650.70	133.56	35.820		
3,600.00	3,595.83	3,530.83	3,595.83	15.93	121.56	-109.03	-3,326.25	-3,371.76	4,785.98	4,648.50	137.48	34.812		
3,700.00	3,695.69	3,630.69	3,695.69	16.36	125.05	-109.09	-3,326.25	-3,371.76	4,787.71	4,646.31	141.40	33.860		
3,800.00	3,795.55	3,730.55	3,795.55	16.80	128.53	-109.15	-3,326.25	-3,371.76	4,789.44	4,644.12	145.31	32.959		
3,900.00	3,895.41	3,830.41	3,895.41	17.23	132.02	-109.21	-3,326.25	-3,371.76	4,791.17	4,641.94	149.23	32.106		
4,000.00	3,995.27	3,930.27	3,995.27	17.66	135.50	-109.27	-3,326.25	-3,371.76	4,792.91	4,639.76	153.15	31.296		
4,100.00	4,095.13	4,030.13	4,095.13	18.10	138.99	-109.33	-3,326.25	-3,371.76	4,794.66	4,637.59	157.07	30.526		
4,200.00	4,194.99	4,129.99	4,194.99	18.53	142.47	-109.39	-3,326.25	-3,371.76	4,796.41	4,635.42	160.99	29.794		
4,300.00	4,294.85	4,229.85	4,294.85	18.96	145.96	-109.45	-3,326.25	-3,371.76	4,798.16	4,633.25	164.91	29.096		
4,400.00	4,394.71	4,329.71	4,394.71	19.40	149.44	-109.51	-3,326.25	-3,371.76	4,799.92	4,631.09	168.83	28.431		
4,500.00	4,494.58	4,429.58	4,494.58	19.83	152.93	-109.57	-3,326.25	-3,371.76	4,801.69	4,628.94	172.75	27.796		
4,600.00	4,594.44	4,529.44	4,594.44	20.27	156.41	-109.62	-3,326.25	-3,371.76	4,803.46	4,626.79	176.67	27.189		
4,700.00	4,694.30	4,629.30	4,694.30	20.71	159.90	-109.68	-3,326.25	-3,371.76	4,805.23	4,624.64	180.59	26.609		
4,800.00	4,794.16	4,729.16	4,794.16	21.14	163.38	-109.74	-3,326.25	-3,371.76	4,807.01	4,622.50	184.51	26.053		
4,900.00	4,894.02	4,829.02	4,894.02	21.58	166.87	-109.80	-3,326.25	-3,371.76	4,808.80	4,620.37	188.43	25.520		
5,000.00	4,993.88	4,928.88	4,993.88	22.01	170.35	-109.86	-3,326.25	-3,371.76	4,810.59	4,618.24	192.35	25.009		
5,100.00	5,093.74	5,028.74	5,093.74	22.45	173.84	-109.92	-3,326.25	-3,371.76	4,812.39	4,616.11	196.27	24.519		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - GREELEY SWD #1(XX) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,128.60	5,193.60	22.89	177.32	-109.98	-3,326.25	-3,371.76	4,814.19	4,613.99	200.20	24.047		
5,300.00	5,293.46	5,228.46	5,293.46	23.32	180.81	-110.04	-3,326.25	-3,371.76	4,815.99	4,611.88	204.12	23.594		
5,400.00	5,393.32	5,328.32	5,393.32	23.76	184.30	-110.10	-3,326.25	-3,371.76	4,817.81	4,609.76	208.04	23.158		
5,500.00	5,493.18	5,428.18	5,493.18	24.20	187.78	-110.16	-3,326.25	-3,371.76	4,819.62	4,607.66	211.96	22.738		
5,600.00	5,593.05	5,528.05	5,593.05	24.64	191.27	-110.21	-3,326.25	-3,371.76	4,821.44	4,605.56	215.89	22.333		
5,700.00	5,692.91	5,627.91	5,692.91	25.07	194.75	-110.27	-3,326.25	-3,371.76	4,823.27	4,603.46	219.81	21.943		
5,800.00	5,792.77	5,727.77	5,792.77	25.51	198.24	-110.33	-3,326.25	-3,371.76	4,825.10	4,601.37	223.73	21.566		
5,900.00	5,892.63	5,827.63	5,892.63	25.95	201.72	-110.39	-3,326.25	-3,371.76	4,826.94	4,599.28	227.66	21.203		
6,000.00	5,992.49	5,927.49	5,992.49	26.39	205.21	-110.45	-3,326.25	-3,371.76	4,828.78	4,597.20	231.58	20.852		
6,100.00	6,092.35	6,027.35	6,092.35	26.82	208.70	-110.51	-3,326.25	-3,371.76	4,830.63	4,595.13	235.50	20.512		
6,200.00	6,192.21	6,127.21	6,192.21	27.26	212.18	-110.57	-3,326.25	-3,371.76	4,832.48	4,593.05	239.43	20.184		
6,300.00	6,292.07	6,227.07	6,292.07	27.70	215.67	-110.62	-3,326.25	-3,371.76	4,834.34	4,590.99	243.35	19.866		
6,400.00	6,391.93	6,326.93	6,391.93	28.14	219.15	-110.68	-3,326.25	-3,371.76	4,836.20	4,588.93	247.27	19.558		
6,500.00	6,491.79	6,426.79	6,491.79	28.58	222.63	-71.97	-3,326.25	-3,371.76	4,836.67	4,585.47	251.19	19.255		
6,600.00	6,591.65	6,526.65	6,591.65	29.02	226.06	-58.84	-3,326.25	-3,371.76	4,827.88	4,572.82	255.06	18.929		
6,700.00	6,691.51	6,626.51	6,691.51	29.46	229.34	-56.78	-3,326.25	-3,371.76	4,808.92	4,550.15	258.77	18.584		
6,800.00	6,791.37	6,726.37	6,791.37	29.92	232.40	-57.65	-3,326.25	-3,371.76	4,780.44	4,518.18	262.26	18.228		
6,900.00	6,891.23	6,826.23	6,891.23	30.40	235.17	-60.19	-3,326.25	-3,371.76	4,743.40	4,477.94	265.46	17.868		
7,000.00	6,991.09	6,926.09	6,991.09	30.96	237.56	-64.03	-3,326.25	-3,371.76	4,698.99	4,430.67	268.33	17.512		
7,100.00	7,090.95	7,025.95	7,090.95	31.62	239.54	-68.96	-3,326.25	-3,371.76	4,648.61	4,377.79	270.82	17.165		
7,200.00	7,190.81	7,125.81	7,190.81	32.44	241.04	-74.78	-3,326.25	-3,371.76	4,593.80	4,320.85	272.94	16.831		
7,300.00	7,290.67	7,225.67	7,290.67	33.42	242.03	-81.19	-3,326.25	-3,371.76	4,536.16	4,261.49	274.67	16.515		
7,400.00	7,390.53	7,325.53	7,390.53	34.55	242.81	-87.81	-3,326.25	-3,371.76	4,477.32	4,200.99	276.32	16.203		
7,500.00	7,490.39	7,425.39	7,490.39	35.83	242.82	-90.71	-3,326.25	-3,371.76	4,418.86	4,141.54	277.32	15.934		
7,600.00	7,590.25	7,525.25	7,590.25	37.28	242.88	-90.68	-3,326.25	-3,371.76	4,361.86	4,083.31	278.55	15.659		
7,700.00	7,690.11	7,625.11	7,690.11	38.89	242.94	-90.65	-3,326.25	-3,371.76	4,306.41	4,026.47	279.94	15.383		
7,800.00	7,790.00	7,725.00	7,790.00	40.63	242.29	-90.63	-3,326.25	-3,371.76	4,252.60	3,971.82	280.78	15.146		
7,900.00	7,890.00	7,825.00	7,890.00	42.50	242.23	-90.60	-3,326.25	-3,371.76	4,200.48	3,918.11	282.37	14.876		
8,000.00	7,990.00	7,925.00	7,990.00	44.47	242.17	-90.57	-3,326.25	-3,371.76	4,150.11	3,866.01	284.10	14.608		
8,100.00	8,090.00	8,025.00	8,090.00	46.53	242.11	-90.54	-3,326.25	-3,371.76	4,101.56	3,815.59	285.98	14.342		
8,200.00	8,190.00	8,125.00	8,190.00	48.67	242.05	-90.52	-3,326.25	-3,371.76	4,054.90	3,766.92	287.98	14.081		
8,300.00	8,290.00	8,225.00	8,290.00	50.89	241.98	-90.49	-3,326.25	-3,371.76	4,010.18	3,720.09	290.10	13.824		
8,400.00	8,390.00	8,325.00	8,390.00	53.16	241.92	-90.46	-3,326.25	-3,371.76	3,967.49	3,675.16	292.33	13.572		
8,500.00	8,490.00	8,425.00	8,490.00	55.49	241.86	-90.43	-3,326.25	-3,371.76	3,926.87	3,632.21	294.66	13.327		
8,600.00	8,590.00	8,525.00	8,590.00	57.86	241.80	-90.40	-3,326.25	-3,371.76	3,888.40	3,591.33	297.08	13.089		
8,700.00	8,690.00	8,625.00	8,690.00	60.28	241.74	-90.38	-3,326.25	-3,371.76	3,852.15	3,552.57	299.58	12.859		
8,800.00	8,790.00	8,725.00	8,790.00	62.74	241.68	-90.35	-3,326.25	-3,371.76	3,818.17	3,516.02	302.15	12.637		
8,900.00	8,890.00	8,825.00	8,890.00	65.23	241.62	-90.32	-3,326.25	-3,371.76	3,786.52	3,481.74	304.78	12.424		
9,000.00	8,990.00	8,925.00	8,990.00	67.74	241.56	-90.29	-3,326.25	-3,371.76	3,757.27	3,449.81	307.46	12.220		
9,100.00	9,090.00	9,025.00	9,090.00	70.29	241.50	-90.27	-3,326.25	-3,371.76	3,730.47	3,420.28	310.19	12.027		
9,200.00	9,190.00	9,125.00	9,190.00	72.85	241.44	-90.24	-3,326.25	-3,371.76	3,706.17	3,393.23	312.94	11.843		
9,300.00	9,290.00	9,225.00	9,290.00	75.44	241.37	-90.21	-3,326.25	-3,371.76	3,684.43	3,368.72	315.72	11.670		
9,400.00	9,390.00	9,325.00	9,390.00	78.05	241.31	-90.18	-3,326.25	-3,371.76	3,665.29	3,346.79	318.51	11.508		
9,500.00	9,490.00	9,425.00	9,490.00	80.67	241.25	-90.15	-3,326.25	-3,371.76	3,648.79	3,327.49	321.30	11.356		
9,600.00	9,590.00	9,525.00	9,590.00	83.31	241.19	-90.13	-3,326.25	-3,371.76	3,634.96	3,310.89	324.08	11.216		
9,700.00	9,690.00	9,625.00	9,690.00	85.96	241.13	-90.10	-3,326.25	-3,371.76	3,623.85	3,297.00	326.84	11.087		
9,800.00	9,790.00	9,725.00	9,790.00	88.63	241.07	-90.07	-3,326.25	-3,371.76	3,615.46	3,285.88	329.58	10.970		
9,900.00	9,890.00	9,825.00	9,890.00	91.30	241.01	-90.04	-3,326.25	-3,371.76	3,609.82	3,277.54	332.28	10.864		
10,000.00	9,990.00	9,925.00	9,990.00	93.99	240.95	-90.01	-3,326.25	-3,371.76	3,606.95	3,272.01	334.94	10.769		
10,053.65	9,946.35	9,881.35	9,946.35	95.44	240.91	-90.00	-3,326.25	-3,371.76	3,606.55	3,270.21	336.35	10.723 CC		
10,100.00	9,896.65	9,831.65	9,896.65	96.69	240.89	-89.99	-3,326.25	-3,371.76	3,606.85	3,269.31	337.54	10.686 ES		
10,200.00	9,796.51	9,731.51	9,796.51	99.40	240.82	-89.96	-3,326.25	-3,371.76	3,609.52	3,269.43	340.09	10.613		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - GREELEY SWD #1(XX) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	7,011.04	6,946.04	7,011.04	102.11	240.76	-89.93	-3,326.25	-3,371.76	3,614.96	3,272.39	342.57	10.552		
10,400.00	7,009.29	6,944.29	7,009.29	104.83	240.70	-89.90	-3,326.25	-3,371.76	3,623.14	3,278.17	344.98	10.503		
10,500.00	7,007.54	6,942.54	7,007.54	107.56	240.64	-89.88	-3,326.25	-3,371.76	3,634.06	3,286.76	347.30	10.464		
10,600.00	7,005.79	6,940.79	7,005.79	110.30	240.58	-89.85	-3,326.25	-3,371.76	3,647.69	3,298.14	349.55	10.435		
10,700.00	7,004.04	6,939.04	7,004.04	113.04	240.52	-89.82	-3,326.25	-3,371.76	3,664.00	3,312.29	351.70	10.418		
10,800.00	7,002.29	6,937.29	7,002.29	115.79	240.46	-89.79	-3,326.25	-3,371.76	3,682.95	3,329.18	353.77	10.411 SF		
10,900.00	7,000.54	6,935.54	7,000.54	118.54	240.40	-89.76	-3,326.25	-3,371.76	3,704.50	3,348.76	355.74	10.413		
11,000.00	6,998.79	6,933.79	6,998.79	121.30	240.34	-89.74	-3,326.25	-3,371.76	3,728.61	3,370.99	357.62	10.426		
11,100.00	6,997.04	6,932.04	6,997.04	124.06	240.28	-89.71	-3,326.25	-3,371.76	3,755.23	3,395.83	359.40	10.448		
11,200.00	6,995.29	6,930.29	6,995.29	126.83	240.21	-89.68	-3,326.25	-3,371.76	3,784.30	3,423.21	361.09	10.480		
11,300.00	6,993.54	6,928.54	6,993.54	129.60	240.15	-89.65	-3,326.25	-3,371.76	3,815.78	3,453.10	362.68	10.521		
11,400.00	6,991.80	6,926.80	6,991.80	132.37	240.09	-89.63	-3,326.25	-3,371.76	3,849.59	3,485.42	364.17	10.571		
11,500.00	6,990.05	6,925.05	6,990.05	135.15	240.03	-89.60	-3,326.25	-3,371.76	3,885.68	3,520.11	365.57	10.629		
11,600.00	6,988.30	6,923.30	6,988.30	137.93	239.97	-89.57	-3,326.25	-3,371.76	3,923.99	3,557.12	366.88	10.696		
11,700.00	6,986.55	6,921.55	6,986.55	140.72	239.91	-89.54	-3,326.25	-3,371.76	3,964.45	3,596.36	368.09	10.770		
11,800.00	6,984.80	6,919.80	6,984.80	143.50	239.85	-89.51	-3,326.25	-3,371.76	4,007.00	3,637.78	369.22	10.853		
11,900.00	6,983.05	6,918.05	6,983.05	146.29	239.79	-89.49	-3,326.25	-3,371.76	4,051.57	3,681.31	370.26	10.942		
12,000.00	6,981.30	6,916.30	6,981.30	149.09	239.73	-89.46	-3,326.25	-3,371.76	4,098.09	3,726.87	371.22	11.039		
12,100.00	6,979.55	6,914.55	6,979.55	151.88	239.66	-89.43	-3,326.25	-3,371.76	4,146.51	3,774.40	372.10	11.143		
12,200.00	6,977.80	6,912.80	6,977.80	154.68	239.60	-89.40	-3,326.25	-3,371.76	4,196.74	3,823.83	372.91	11.254		
12,300.00	6,976.05	6,911.05	6,976.05	157.48	239.54	-89.38	-3,326.25	-3,371.76	4,248.74	3,875.09	373.65	11.371		
12,400.00	6,974.30	6,909.30	6,974.30	160.28	239.48	-89.35	-3,326.25	-3,371.76	4,302.43	3,928.12	374.31	11.494		
12,500.00	6,972.55	6,907.55	6,972.55	163.08	239.42	-89.32	-3,326.25	-3,371.76	4,357.76	3,982.84	374.91	11.623		
12,600.00	6,970.80	6,905.80	6,970.80	165.89	239.36	-89.29	-3,326.25	-3,371.76	4,414.65	4,039.20	375.45	11.758		
12,700.00	6,969.05	6,904.05	6,969.05	168.69	239.30	-89.26	-3,326.25	-3,371.76	4,473.06	4,097.13	375.93	11.899		
12,800.00	6,967.30	6,902.30	6,967.30	171.50	239.24	-89.24	-3,326.25	-3,371.76	4,532.92	4,156.56	376.36	12.044		
12,900.00	6,965.55	6,900.55	6,965.55	174.31	239.18	-89.21	-3,326.25	-3,371.76	4,594.18	4,217.44	376.74	12.195		
13,000.00	6,963.80	6,901.20	6,963.80	177.12	239.20	-89.18	-3,326.25	-3,371.76	4,656.78	4,279.63	377.15	12.347		
13,100.00	6,962.05	6,902.95	6,962.05	179.94	239.26	-89.15	-3,326.25	-3,371.76	4,720.66	4,343.11	377.55	12.503		
13,200.00	6,960.30	6,904.70	6,960.30	182.75	239.32	-89.13	-3,326.25	-3,371.76	4,785.78	4,407.87	377.91	12.664		
13,300.00	6,958.55	6,906.45	6,958.55	185.57	239.38	-89.10	-3,326.25	-3,371.76	4,852.09	4,473.86	378.23	12.828		
13,400.00	6,956.80	6,908.20	6,956.80	188.38	239.44	-89.07	-3,326.25	-3,371.76	4,919.54	4,541.02	378.52	12.997		
13,500.00	6,955.05	6,909.95	6,955.05	191.20	239.50	-89.04	-3,326.25	-3,371.76	4,988.08	4,609.31	378.77	13.169		
13,600.00	6,953.31	6,888.31	6,953.31	194.02	238.75	-89.01	-3,326.25	-3,371.76	5,057.67	4,679.49	378.17	13.374		
13,700.00	6,951.56	6,886.56	6,951.56	196.84	238.69	-88.99	-3,326.25	-3,371.76	5,128.26	4,750.02	378.24	13.558		
13,800.00	6,949.81	6,884.81	6,949.81	199.67	238.63	-88.96	-3,326.25	-3,371.76	5,199.82	4,821.53	378.28	13.746		
13,900.00	6,948.06	6,883.06	6,948.06	202.49	238.57	-88.93	-3,326.25	-3,371.76	5,272.30	4,894.00	378.30	13.937		
14,000.00	6,946.31	6,881.31	6,946.31	205.31	238.50	-88.90	-3,326.25	-3,371.76	5,345.67	4,967.38	378.29	14.131		
14,100.00	6,944.56	6,879.56	6,944.56	208.14	238.44	-88.88	-3,326.25	-3,371.76	5,419.89	5,041.63	378.26	14.328		
14,200.00	6,942.81	6,877.81	6,942.81	210.96	238.38	-88.85	-3,326.25	-3,371.76	5,494.93	5,116.71	378.21	14.529		
14,300.00	6,941.06	6,876.06	6,941.06	213.79	238.32	-88.82	-3,326.25	-3,371.76	5,570.75	5,192.60	378.15	14.732		
14,400.00	6,939.31	6,874.31	6,939.31	216.62	238.26	-88.79	-3,326.25	-3,371.76	5,647.32	5,269.26	378.06	14.938		
14,500.00	6,937.56	6,872.56	6,937.56	219.44	238.20	-88.76	-3,326.25	-3,371.76	5,724.62	5,346.65	377.96	15.146		
14,600.00	6,935.81	6,870.81	6,935.81	222.27	238.14	-88.74	-3,326.25	-3,371.76	5,802.60	5,424.75	377.85	15.357		
14,700.00	6,934.06	6,869.06	6,934.06	225.10	238.08	-88.71	-3,326.25	-3,371.76	5,881.26	5,503.53	377.73	15.570		
14,800.00	6,932.31	6,867.31	6,932.31	227.93	238.02	-88.68	-3,326.25	-3,371.76	5,960.55	5,582.96	377.59	15.786		
14,817.75	6,932.00	6,867.00	6,932.00	228.43	238.00	-88.68	-3,326.25	-3,371.76	5,974.69	5,597.13	377.56	15.824		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER 31-15(SI_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	11.00	3.28	3.28	28.06	917.68	489.23	1,040.00					
100.00	100.00	86.67	97.67	3.28	3.29	28.06	917.76	489.28	1,040.04	1,033.47	6.57	158.302		
200.00	200.00	186.72	197.72	3.34	3.33	28.07	917.92	489.49	1,040.28	1,033.61	6.67	155.986		
300.00	300.00	289.41	300.41	3.44	3.44	28.08	917.94	489.69	1,040.38	1,033.50	6.88	151.191		
321.75	321.75	311.82	322.82	3.48	3.47	28.08	917.91	489.70	1,040.37	1,033.43	6.94	149.880		
400.00	400.00	382.92	393.92	3.60	3.58	28.10	917.94	490.12	1,040.61	1,033.43	7.18	144.942		
500.00	500.00	485.62	496.61	3.81	3.77	28.15	918.03	491.14	1,041.16	1,033.58	7.58	137.373		
600.00	599.98	581.18	592.17	4.05	3.99	55.65	918.04	492.07	1,040.64	1,032.61	8.04	129.475		
700.00	699.86	684.44	695.41	4.32	4.26	55.97	918.00	493.60	1,038.61	1,030.04	8.58	121.091		
800.00	799.72	786.08	797.05	4.62	4.55	56.29	917.66	494.91	1,035.99	1,026.83	9.16	113.043		
900.00	899.58	882.66	893.62	4.93	4.85	56.59	917.43	496.08	1,033.46	1,023.68	9.78	105.678		
1,000.00	999.44	985.44	996.39	5.27	5.18	56.92	917.18	497.57	1,031.06	1,020.62	10.45	98.682		
1,100.00	1,099.31	1,080.27	1,091.21	5.62	5.50	57.21	917.07	498.67	1,028.67	1,017.55	11.12	92.510		
1,200.00	1,199.17	1,181.00	1,191.93	5.98	5.86	57.52	917.19	500.13	1,026.65	1,014.81	11.83	86.751		
1,300.00	1,299.03	1,288.19	1,299.11	6.36	6.24	57.87	916.79	501.62	1,024.22	1,011.62	12.59	81.339		
1,400.00	1,398.89	1,388.67	1,399.58	6.74	6.61	58.18	916.19	502.48	1,021.34	1,008.00	13.34	76.553		
1,500.00	1,498.75	1,488.96	1,499.87	7.13	6.99	58.49	915.61	503.29	1,018.49	1,004.38	14.10	72.210		
1,600.00	1,598.61	1,587.94	1,598.84	7.52	7.37	58.82	914.82	504.44	1,015.67	1,000.79	14.87	68.282		
1,700.00	1,698.47	1,686.40	1,697.29	7.92	7.75	59.14	914.27	505.43	1,012.99	997.34	15.65	64.717		
1,800.00	1,798.33	1,787.89	1,798.78	8.32	8.14	59.45	913.86	506.20	1,010.36	993.91	16.45	61.420		
1,900.00	1,898.19	1,895.84	1,906.72	8.73	8.57	59.77	913.06	506.63	1,007.28	990.00	17.28	58.297		
2,000.00	1,998.05	1,991.76	2,002.64	9.14	8.95	60.03	912.45	506.39	1,003.95	985.88	18.07	55.566		
2,100.00	2,097.91	2,094.12	2,105.00	9.55	9.35	60.29	911.99	506.05	1,000.77	981.89	18.89	52.988		
2,200.00	2,197.78	2,188.15	2,199.03	9.97	9.73	60.54	911.65	505.81	997.72	978.04	19.68	50.698		
2,300.00	2,297.64	2,285.61	2,296.49	10.39	10.12	60.79	911.75	505.69	995.16	974.67	20.49	48.567		
2,400.00	2,397.50	2,384.26	2,395.14	10.81	10.52	61.06	911.81	505.92	992.77	971.46	21.31	46.589		
2,500.00	2,497.36	2,489.02	2,499.90	11.23	10.95	61.33	911.91	505.84	990.27	968.11	22.15	44.697		
2,600.00	2,597.22	2,585.57	2,596.45	11.65	11.34	61.57	912.05	505.39	987.61	964.64	22.97	42.992		
2,700.00	2,697.08	2,684.74	2,695.62	12.07	11.74	61.80	912.50	504.98	985.25	961.44	23.80	41.393		
2,800.00	2,796.94	2,787.87	2,798.75	12.50	12.16	62.04	912.93	504.38	982.77	958.12	24.65	39.869		
2,900.00	2,896.80	2,894.51	2,905.37	12.92	12.60	62.28	912.95	503.39	979.79	954.28	25.51	38.405		
3,000.00	2,996.66	2,991.72	3,002.58	13.35	13.00	62.49	912.81	502.28	976.58	950.24	26.34	37.074		
3,100.00	3,096.52	3,097.62	3,108.47	13.78	13.44	62.70	912.91	500.53	973.27	946.07	27.20	35.777		
3,200.00	3,196.38	3,192.67	3,203.50	14.21	13.83	62.88	912.99	498.78	969.86	941.83	28.03	34.601		
3,300.00	3,296.25	3,296.39	3,307.21	14.64	14.26	63.10	912.89	497.32	966.57	937.68	28.89	33.460		
3,400.00	3,396.11	3,397.59	3,408.40	15.07	14.68	63.33	912.42	495.87	962.98	933.24	29.74	32.383		
3,500.00	3,495.97	3,495.82	3,506.61	15.50	15.09	63.55	912.03	494.41	959.42	928.84	30.58	31.376		
3,600.00	3,595.83	3,590.15	3,600.94	15.93	15.49	63.78	911.77	493.44	956.24	924.84	31.41	30.448		
3,700.00	3,695.69	3,681.98	3,692.77	16.36	15.87	64.02	911.86	493.12	953.79	921.57	32.22	29.599		
3,800.00	3,795.55	3,782.13	3,792.91	16.80	16.29	64.28	912.40	493.03	951.87	918.80	33.07	28.779		
3,900.00	3,895.41	3,885.12	3,895.91	17.23	16.72	64.54	912.84	492.65	949.71	915.78	33.94	27.984		
4,000.00	3,995.27	3,984.95	3,995.73	17.66	17.14	64.78	913.24	492.00	947.38	912.59	34.79	27.232		
4,100.00	4,095.13	4,085.17	4,095.95	18.10	17.56	65.03	913.62	491.40	945.08	909.44	35.64	26.515		
4,200.00	4,194.99	4,186.82	4,197.60	18.53	17.98	65.29	913.81	490.88	942.69	906.19	36.50	25.825		
4,300.00	4,294.85	4,285.00	4,295.78	18.96	18.40	65.54	914.01	490.27	940.28	902.93	37.35	25.175		
4,400.00	4,394.71	4,384.72	4,395.50	19.40	18.82	65.80	914.29	489.81	938.03	899.83	38.20	24.553		
4,500.00	4,494.58	4,482.80	4,493.57	19.83	19.23	66.06	914.60	489.41	935.87	896.82	39.05	23.965		
4,600.00	4,594.44	4,579.13	4,589.90	20.27	19.63	66.32	915.03	489.31	934.03	894.13	39.89	23.413		
4,700.00	4,694.30	4,680.01	4,690.78	20.71	20.06	66.61	915.59	489.39	932.41	891.65	40.75	22.879		
4,800.00	4,794.16	4,775.43	4,786.20	21.14	20.46	66.87	916.16	489.52	930.87	889.28	41.59	22.381		
4,900.00	4,894.02	4,868.80	4,879.56	21.58	20.86	67.15	917.07	490.17	930.01	887.59	42.42	21.924		
5,000.00	4,993.88	4,969.85	4,980.60	22.01	21.28	67.43	918.50	491.03	929.60	886.32	43.28	21.478		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER 31-15(SI_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.00	5,093.74	5,076.46	5,087.20	22.45	21.73	67.72	919.77	491.32	928.68	884.51	44.17	21.026		
5,200.00	5,193.60	5,184.25	5,194.99	22.89	22.19	68.02	920.23	491.26	926.98	881.92	45.06	20.573		
5,300.00	5,293.46	5,285.53	5,296.27	23.32	22.62	68.29	920.42	490.61	924.73	878.81	45.92	20.137		
5,400.00	5,393.32	5,391.18	5,401.91	23.76	23.06	68.56	920.49	489.60	922.22	875.42	46.80	19.705		
5,500.00	5,493.18	5,495.90	5,506.62	24.20	23.51	68.83	920.09	488.14	919.09	871.42	47.67	19.279		
5,600.00	5,593.05	5,591.73	5,602.44	24.64	23.91	69.07	919.80	486.64	915.93	867.41	48.52	18.877		
5,700.00	5,692.91	5,692.16	5,702.86	25.07	24.34	69.33	919.52	485.40	913.02	863.64	49.38	18.489		
5,800.00	5,792.77	5,795.40	5,806.09	25.51	24.77	69.58	919.33	483.66	909.90	859.65	50.25	18.107		
5,900.00	5,892.63	5,892.47	5,903.13	25.95	25.19	69.79	919.32	481.75	906.74	855.64	51.10	17.743		
6,000.00	5,992.49	5,991.91	6,002.56	26.39	25.61	70.02	919.44	479.96	903.80	851.84	51.96	17.393		
6,100.00	6,092.35	6,094.22	6,104.85	26.82	26.04	70.23	919.66	477.85	900.77	847.94	52.83	17.050		
6,200.00	6,192.21	6,196.77	6,207.37	27.26	26.48	70.45	919.61	475.59	897.45	843.75	53.70	16.712		
6,300.00	6,292.07	6,295.25	6,305.82	27.70	26.89	70.67	919.49	473.38	894.07	839.52	54.56	16.388		
6,400.00	6,391.93	6,401.45	6,411.98	28.14	27.35	70.87	919.55	470.42	890.46	835.02	55.44	16.063		
6,482.86	6,474.55	6,480.00	6,490.49	28.50	27.68	106.81	919.68	467.99	889.29	833.16	56.14	15.841		
6,500.00	6,491.69	6,496.29	6,506.78	28.58	27.75	109.96	919.76	467.49	888.22	831.93	56.28	15.781 CC, ES		
6,600.00	6,589.80	6,598.78	6,609.21	29.02	28.19	124.27	920.46	463.95	895.81	838.66	57.15	15.675 SF		
6,700.00	6,683.86	6,697.08	6,707.42	29.46	28.61	128.27	921.17	459.97	914.32	856.33	57.99	15.767		
6,800.00	6,771.56	6,785.96	6,796.23	29.92	28.98	129.89	921.56	456.44	944.31	885.53	58.79	16.064		
6,900.00	6,850.72	6,870.31	6,880.52	30.40	29.34	130.29	921.87	453.07	985.98	926.44	59.54	16.560		
7,000.00	6,919.40	6,944.66	6,954.79	30.96	29.66	129.39	922.36	449.62	1,038.87	978.63	60.24	17.246		
7,100.00	6,975.92	7,006.92	7,016.97	31.62	29.93	126.85	922.89	446.50	1,102.36	1,041.49	60.87	18.111		
7,200.00	7,018.87	7,056.49	7,066.46	32.44	30.14	122.07	923.29	443.94	1,175.22	1,113.81	61.41	19.137		
7,300.00	7,047.21	7,091.25	7,101.17	33.42	30.29	113.95	923.51	442.12	1,255.79	1,193.93	61.86	20.301		
7,400.00	7,060.23	7,112.42	7,122.31	34.55	30.38	101.35	923.62	440.98	1,342.00	1,279.80	62.20	21.576		
7,500.00	7,060.03	7,119.32	7,129.21	35.83	30.41	94.33	923.67	440.60	1,431.46	1,369.02	62.44	22.926		
7,600.00	7,058.28	7,124.55	7,134.42	37.28	30.43	94.82	923.70	440.30	1,522.32	1,459.66	62.66	24.295		
7,700.00	7,056.53	7,130.06	7,139.93	38.89	30.45	95.33	923.74	439.97	1,614.25	1,551.37	62.87	25.674		
7,800.00	7,054.78	7,135.90	7,145.76	40.63	30.48	95.87	923.78	439.63	1,707.07	1,643.99	63.08	27.061		
7,900.00	7,053.03	7,142.09	7,151.94	42.50	30.51	96.44	923.83	439.25	1,800.64	1,737.36	63.28	28.455		
8,000.00	7,051.28	7,148.66	7,158.49	44.47	30.53	97.04	923.88	438.84	1,894.86	1,831.39	63.47	29.853		
8,100.00	7,049.53	7,155.65	7,165.47	46.53	30.56	97.68	923.94	438.40	1,989.63	1,925.97	63.66	31.256		
8,200.00	7,047.78	7,163.10	7,172.90	48.67	30.60	98.36	924.00	437.91	2,084.87	2,021.03	63.84	32.660		
8,300.00	7,046.03	7,171.05	7,180.83	50.89	30.63	99.08	924.08	437.38	2,180.51	2,116.51	64.01	34.066		
8,400.00	7,044.28	7,179.56	7,189.32	53.16	30.67	99.85	924.16	436.80	2,276.52	2,212.34	64.18	35.472		
8,500.00	7,042.53	7,188.69	7,198.43	55.49	30.71	100.67	924.25	436.16	2,372.83	2,308.49	64.34	36.878		
8,600.00	7,040.78	7,198.52	7,208.23	57.86	30.75	101.54	924.36	435.45	2,469.42	2,404.92	64.51	38.282		
8,700.00	7,039.03	7,209.11	7,218.79	60.28	30.79	102.48	924.48	434.67	2,566.25	2,501.58	64.67	39.684		
8,800.00	7,037.28	7,220.57	7,230.22	62.74	30.84	103.49	924.62	433.79	2,663.29	2,598.46	64.83	41.082		
8,900.00	7,035.53	7,214.07	7,223.74	65.23	30.82	102.92	924.53	434.32	2,760.56	2,695.65	64.91	42.529		
9,000.00	7,033.78	7,218.88	7,228.54	67.74	30.84	103.35	924.58	433.97	2,858.00	2,792.97	65.03	43.946		
9,100.00	7,032.03	7,223.63	7,233.28	70.29	30.86	103.76	924.62	433.63	2,955.60	2,890.44	65.16	45.362		
9,200.00	7,030.28	7,228.33	7,237.96	72.85	30.88	104.17	924.67	433.29	3,053.34	2,988.07	65.27	46.777		
9,300.00	7,028.54	7,232.97	7,242.59	75.44	30.90	104.58	924.71	432.96	3,151.22	3,085.83	65.39	48.192		
9,400.00	7,026.79	7,237.56	7,247.17	78.05	30.92	104.97	924.74	432.64	3,249.22	3,183.72	65.50	49.606		
9,500.00	7,025.04	7,242.09	7,251.69	80.67	30.94	105.36	924.78	432.32	3,347.33	3,281.72	65.61	51.018		
9,600.00	7,023.29	7,275.88	7,253.71	83.31	31.08	105.54	924.81	432.16	3,445.54	3,379.70	65.84	52.331		
9,700.00	7,021.54	7,270.70	7,258.88	85.96	31.06	105.98	924.84	431.80	3,543.85	3,477.94	65.91	53.771		
9,800.00	7,019.79	7,265.53	7,264.04	88.63	31.04	106.43	924.87	431.45	3,642.24	3,576.28	65.97	55.211		
9,900.00	7,018.04	7,260.35	7,269.21	91.30	31.01	106.87	924.91	431.09	3,740.72	3,674.69	66.03	56.651		
10,000.00	7,016.29	7,264.83	7,274.37	93.99	31.03	107.31	924.94	430.73	3,839.26	3,773.13	66.13	58.055		
10,100.00	7,014.54	7,270.01	7,279.53	96.69	31.06	107.74	924.97	430.37	3,937.87	3,871.64	66.24	59.453		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER 31-15(SI_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,200.00	7,012.79	7,275.18	7,284.70	99.40	31.08	108.18	925.01	430.01	4,036.54	3,970.21	66.34	60.848		
10,300.00	7,011.04	7,280.36	7,289.86	102.11	31.10	108.61	925.04	429.65	4,135.27	4,068.83	66.44	62.241		
10,400.00	7,009.29	7,285.54	7,295.03	104.83	31.12	109.04	925.07	429.29	4,234.06	4,167.52	66.54	63.631		
10,500.00	7,007.54	7,290.71	7,300.19	107.56	31.15	109.47	925.11	428.94	4,332.89	4,266.25	66.64	65.018		
10,600.00	7,005.79	7,295.89	7,305.36	110.30	31.17	109.89	925.14	428.58	4,431.77	4,365.03	66.74	66.403		
10,700.00	7,004.04	7,301.07	7,310.52	113.04	31.19	110.31	925.17	428.22	4,530.69	4,463.85	66.84	67.784		
10,800.00	7,002.29	7,306.24	7,315.68	115.79	31.21	110.73	925.21	427.86	4,629.65	4,562.71	66.94	69.162		
10,900.00	7,000.54	7,311.42	7,320.85	118.54	31.24	111.15	925.24	427.50	4,728.65	4,661.62	67.04	70.537		
11,000.00	6,998.79	7,316.60	7,326.01	121.30	31.26	111.57	925.27	427.14	4,827.69	4,760.55	67.14	71.908		
11,100.00	6,997.04	7,321.77	7,331.18	124.06	31.28	111.98	925.31	426.78	4,926.76	4,859.53	67.24	73.276		
11,200.00	6,995.29	7,326.95	7,336.34	126.83	31.30	112.39	925.34	426.42	5,025.86	4,958.53	67.33	74.641		
11,300.00	6,993.54	7,332.13	7,341.51	129.60	31.33	112.80	925.38	426.07	5,124.99	5,057.56	67.43	76.002		
11,400.00	6,991.80	7,337.30	7,346.67	132.37	31.35	113.21	925.41	425.71	5,224.15	5,156.62	67.53	77.359		
11,500.00	6,990.05	7,342.48	7,351.83	135.15	31.37	113.61	925.44	425.35	5,323.34	5,255.71	67.63	78.713		
11,600.00	6,988.30	7,347.66	7,357.00	137.93	31.39	114.01	925.48	424.99	5,422.55	5,354.82	67.73	80.064		
11,700.00	6,986.55	7,352.84	7,362.16	140.72	31.42	114.41	925.51	424.63	5,521.78	5,453.96	67.83	81.410		
11,800.00	6,984.80	7,358.01	7,367.33	143.50	31.44	114.81	925.54	424.27	5,621.04	5,553.11	67.93	82.753		
11,900.00	6,983.05	7,363.19	7,372.49	146.29	31.46	115.20	925.58	423.91	5,720.32	5,652.29	68.02	84.092		
12,000.00	6,981.30	7,368.37	7,377.66	149.09	31.48	115.59	925.61	423.56	5,819.61	5,751.49	68.12	85.427		
12,100.00	6,979.55	7,373.54	7,382.82	151.88	31.51	115.98	925.64	423.20	5,918.93	5,850.71	68.22	86.758		
12,200.00	6,977.80	7,378.72	7,387.98	154.68	31.53	116.36	925.68	422.84	6,018.27	5,949.94	68.32	88.085		
12,300.00	6,976.05	7,383.90	7,393.15	157.48	31.55	116.75	925.71	422.48	6,117.62	6,049.19	68.42	89.408		
12,400.00	6,974.30	7,389.07	7,398.31	160.28	31.58	117.13	925.74	422.12	6,216.99	6,148.46	68.52	90.726		
12,500.00	6,972.55	7,394.25	7,403.48	163.08	31.60	117.50	925.78	421.76	6,316.37	6,247.75	68.63	92.041		
12,600.00	6,970.80	7,399.43	7,408.64	165.89	31.62	117.88	925.81	421.40	6,415.77	6,347.05	68.73	93.352		
12,700.00	6,969.05	7,404.60	7,413.81	168.69	31.64	118.25	925.84	421.04	6,515.19	6,446.36	68.83	94.658		
12,800.00	6,967.30	7,409.78	7,418.97	171.50	31.67	118.62	925.88	420.69	6,614.61	6,545.68	68.93	95.961		
12,900.00	6,965.55	7,414.96	7,424.13	174.31	31.69	118.99	925.91	420.33	6,714.05	6,645.02	69.03	97.259		
13,000.00	6,963.80	7,420.13	7,429.30	177.12	31.71	119.35	925.94	419.97	6,813.51	6,744.37	69.14	98.552		
13,100.00	6,962.05	7,425.31	7,434.46	179.94	31.73	119.72	925.98	419.61	6,912.97	6,843.73	69.24	99.842		
13,200.00	6,960.30	7,430.49	7,439.63	182.75	31.76	120.07	926.01	419.25	7,012.45	6,943.10	69.34	101.127		
13,300.00	6,958.55	7,435.66	7,444.79	185.57	31.78	120.43	926.04	418.89	7,111.93	7,042.49	69.45	102.408		
13,400.00	6,956.80	7,440.84	7,449.96	188.38	31.80	120.79	926.08	418.53	7,211.43	7,141.88	69.55	103.684		
13,500.00	6,955.05	7,446.02	7,455.12	191.20	31.82	121.14	926.11	418.18	7,310.94	7,241.28	69.66	104.956		
13,600.00	6,953.31	7,451.20	7,460.28	194.02	31.85	121.49	926.14	417.82	7,410.46	7,340.69	69.76	106.223		
13,700.00	6,951.56	7,456.37	7,465.45	196.84	31.87	121.83	926.18	417.46	7,509.98	7,440.11	69.87	107.486		
13,800.00	6,949.81	7,443.00	7,452.11	199.67	31.81	120.93	926.09	418.38	7,609.54	7,539.67	69.87	108.906		
13,900.00	6,948.06	7,443.00	7,452.11	202.49	31.81	120.93	926.09	418.38	7,709.10	7,639.15	69.95	110.208		
14,000.00	6,946.31	7,443.00	7,452.11	205.31	31.81	120.93	926.09	418.38	7,808.67	7,738.64	70.03	111.507		
14,100.00	6,944.56	7,443.00	7,452.11	208.14	31.81	120.93	926.09	418.38	7,908.25	7,838.14	70.11	112.802		
14,200.00	6,942.81	7,443.00	7,452.11	210.96	31.81	120.93	926.09	418.38	8,007.84	7,937.65	70.19	114.093		
14,300.00	6,941.06	7,443.00	7,452.11	213.79	31.81	120.93	926.09	418.38	8,107.44	8,037.17	70.27	115.381		
14,400.00	6,939.31	7,443.00	7,452.11	216.62	31.81	120.93	926.09	418.38	8,207.05	8,136.70	70.35	116.666		
14,500.00	6,937.56	7,443.00	7,452.11	219.44	31.81	120.93	926.09	418.38	8,306.67	8,236.24	70.43	117.947		
14,600.00	6,935.81	7,443.00	7,452.11	222.27	31.81	120.93	926.09	418.38	8,406.30	8,335.79	70.51	119.224		
14,700.00	6,934.06	7,443.00	7,452.11	225.10	31.81	120.93	926.09	418.38	8,505.93	8,435.35	70.59	120.498		
14,800.00	6,932.31	7,443.00	7,452.11	227.93	31.81	120.93	926.09	418.38	8,605.58	8,534.91	70.67	121.768		
14,817.75	6,932.00	7,443.00	7,452.11	228.43	31.81	120.93	926.09	418.38	8,623.27	8,552.58	70.69	121.993		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER 32-15(SI_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	21.00	3.28	3.28	104.57	-135.16	519.84	537.54					
100.00	100.00	80.31	101.31	3.28	3.29	104.52	-134.60	519.88	537.03	530.46	6.57	81.742		
200.00	200.00	182.75	203.74	3.34	3.33	104.35	-133.00	519.82	536.57	529.90	6.67	80.456		
300.00	300.00	283.23	304.21	3.44	3.43	104.23	-131.70	519.34	535.80	528.92	6.88	77.897		
400.00	400.00	380.87	401.84	3.60	3.58	104.12	-130.56	519.03	535.20	528.02	7.18	74.526		
483.73	483.73	462.77	483.73	3.77	3.73	104.01	-129.58	519.14	535.06	527.56	7.50	71.325 CC		
500.00	500.00	478.72	499.68	3.81	3.76	103.99	-129.39	519.19	535.07	527.50	7.57	70.679 ES		
600.00	599.98	578.62	599.57	4.05	3.99	131.35	-128.06	519.63	536.33	528.29	8.04	66.731		
700.00	699.86	677.59	698.53	4.32	4.25	131.53	-126.50	520.16	539.65	531.09	8.56	63.016		
800.00	799.72	777.32	798.24	4.62	4.53	131.78	-125.10	520.81	543.45	534.30	9.14	59.442		
900.00	899.58	876.04	896.95	4.93	4.83	132.00	-123.44	521.60	547.32	537.56	9.76	56.071		
1,000.00	999.44	975.95	996.84	5.27	5.16	132.23	-121.95	522.52	551.37	540.95	10.42	52.925		
1,100.00	1,099.31	1,076.42	1,097.30	5.62	5.49	132.47	-120.48	523.35	555.34	544.24	11.11	50.007		
1,200.00	1,199.17	1,176.92	1,197.78	5.98	5.85	132.70	-118.96	524.08	559.22	547.40	11.82	47.324		
1,300.00	1,299.03	1,278.70	1,299.55	6.36	6.21	132.95	-117.51	524.59	562.91	550.35	12.55	44.842		
1,400.00	1,398.89	1,377.70	1,398.54	6.74	6.58	133.17	-115.89	524.97	566.43	553.14	13.30	42.603		
1,500.00	1,498.75	1,479.18	1,500.01	7.13	6.96	133.41	-114.48	525.35	570.04	555.98	14.06	40.540		
1,600.00	1,598.61	1,580.66	1,601.48	7.52	7.34	133.68	-113.25	525.31	573.30	558.46	14.84	38.636		
1,700.00	1,698.47	1,682.53	1,703.34	7.92	7.74	133.96	-111.96	524.99	576.29	560.66	15.63	36.877		
1,800.00	1,798.33	1,780.37	1,801.18	8.32	8.12	134.26	-111.11	524.50	579.23	562.82	16.41	35.300		
1,900.00	1,898.19	1,880.11	1,900.92	8.73	8.51	134.55	-110.27	524.31	582.49	565.28	17.20	33.856		
2,000.00	1,998.05	1,981.83	2,002.63	9.14	8.92	134.85	-109.35	523.95	585.60	567.58	18.02	32.504		
2,100.00	2,097.91	2,082.07	2,102.86	9.55	9.32	135.20	-108.96	523.19	588.49	569.66	18.83	31.258		
2,200.00	2,197.78	2,181.06	2,201.85	9.97	9.71	135.58	-108.97	522.38	591.47	571.83	19.64	30.120		
2,300.00	2,297.64	2,280.14	2,300.93	10.39	10.11	135.96	-109.03	521.71	594.63	574.18	20.45	29.074		
2,400.00	2,397.50	2,381.10	2,401.88	10.81	10.52	136.38	-109.45	520.92	597.83	576.55	21.28	28.093		
2,500.00	2,497.36	2,479.06	2,499.83	11.23	10.91	136.80	-110.03	520.06	601.03	578.94	22.10	27.199		
2,600.00	2,597.22	2,577.85	2,598.62	11.65	11.31	137.24	-110.96	519.42	604.60	581.68	22.92	26.377		
2,700.00	2,697.08	2,675.29	2,696.06	12.07	11.71	137.67	-111.96	518.99	608.42	584.68	23.74	25.628		
2,800.00	2,796.94	2,775.56	2,796.32	12.50	12.12	138.10	-113.01	518.82	612.54	587.97	24.58	24.924		
2,900.00	2,896.80	2,877.45	2,898.20	12.92	12.54	138.55	-114.10	518.34	616.43	591.01	25.42	24.248		
3,000.00	2,996.66	2,977.68	2,998.43	13.35	12.95	138.95	-114.76	517.77	620.11	593.85	26.26	23.613		
3,100.00	3,096.52	3,079.59	3,100.34	13.78	13.37	139.33	-115.20	517.14	623.69	596.58	27.11	23.005		
3,200.00	3,196.38	3,180.25	3,200.99	14.21	13.79	139.69	-115.35	516.32	627.00	599.04	27.96	22.428		
3,300.00	3,296.25	3,280.06	3,300.80	14.64	14.21	140.04	-115.54	515.45	630.30	601.50	28.80	21.886		
3,400.00	3,396.11	3,376.26	3,397.00	15.07	14.61	140.37	-115.74	514.85	633.86	604.24	29.63	21.395		
3,500.00	3,495.97	3,475.44	3,496.18	15.50	15.02	140.70	-116.03	514.72	637.93	607.46	30.47	20.937		
3,600.00	3,595.83	3,575.91	3,596.65	15.93	15.44	141.04	-116.43	514.45	641.94	610.62	31.32	20.496		
3,700.00	3,695.69	3,676.37	3,697.11	16.36	15.86	141.39	-116.93	514.04	645.88	613.70	32.17	20.076		
3,800.00	3,795.55	3,776.83	3,797.56	16.80	16.28	141.75	-117.53	513.48	649.74	616.72	33.02	19.674		
3,900.00	3,895.41	3,877.29	3,898.01	17.23	16.70	142.12	-118.23	512.77	653.54	619.67	33.88	19.291		
4,000.00	3,995.27	3,977.73	3,998.45	17.66	17.13	142.50	-119.03	511.91	657.28	622.55	34.73	18.924		
4,100.00	4,095.13	4,078.17	4,098.88	18.10	17.55	142.89	-119.94	510.89	660.95	625.36	35.59	18.572		
4,200.00	4,194.99	4,178.60	4,199.30	18.53	17.97	143.29	-120.94	509.73	664.56	628.12	36.44	18.235		
4,300.00	4,294.85	4,277.41	4,298.10	18.96	18.39	143.68	-121.99	508.57	668.21	630.92	37.29	17.918		
4,400.00	4,394.71	4,375.23	4,395.90	19.40	18.80	144.05	-122.94	507.72	672.13	633.99	38.14	17.625		
4,500.00	4,494.58	4,477.18	4,497.85	19.83	19.23	144.39	-123.61	507.09	676.16	637.16	39.00	17.337		
4,600.00	4,594.44	4,578.13	4,598.80	20.27	19.65	144.69	-123.81	506.30	679.85	639.99	39.86	17.056		
4,700.00	4,694.30	4,676.83	4,697.50	20.71	20.07	144.99	-124.00	505.56	683.59	642.88	40.71	16.792		
4,800.00	4,794.16	4,774.54	4,795.21	21.14	20.48	145.27	-124.19	505.11	687.59	646.04	41.55	16.547		
4,900.00	4,894.02	4,874.44	4,895.10	21.58	20.90	145.54	-124.41	504.87	691.83	649.42	42.41	16.313		
5,000.00	4,993.88	4,976.48	4,997.15	22.01	21.33	145.79	-124.21	504.64	695.89	652.62	43.28	16.079		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER 32-15(SI_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.00	5,093.74	5,076.45	5,097.11	22.45	21.76	146.03	-123.95	504.19	699.75	655.61	44.14	15.854		
5,200.00	5,193.60	5,176.52	5,197.18	22.89	22.18	146.27	-123.78	503.73	703.65	658.65	45.00	15.638		
5,300.00	5,293.46	5,278.77	5,299.43	23.32	22.61	146.53	-123.56	503.10	707.40	661.53	45.87	15.423		
5,400.00	5,393.32	5,379.07	5,399.72	23.76	23.04	146.80	-123.51	502.09	710.89	664.17	46.73	15.214		
5,500.00	5,493.18	5,477.91	5,498.56	24.20	23.46	147.07	-123.60	501.08	714.48	666.90	47.58	15.016		
5,600.00	5,593.05	5,575.87	5,596.52	24.64	23.87	147.33	-123.63	500.36	718.28	669.85	48.43	14.831		
5,700.00	5,692.91	5,674.16	5,694.81	25.07	24.29	147.59	-123.85	499.82	722.37	673.09	49.28	14.658		
5,800.00	5,792.77	5,773.67	5,794.31	25.51	24.71	147.87	-124.38	499.25	726.61	676.47	50.14	14.492		
5,900.00	5,892.63	5,873.61	5,894.25	25.95	25.13	148.14	-124.81	498.75	730.87	679.87	51.00	14.331		
6,000.00	5,992.49	5,975.41	5,996.05	26.39	25.57	148.37	-124.84	498.35	735.03	683.16	51.87	14.171		
6,100.00	6,092.35	6,075.83	6,096.47	26.82	25.99	148.62	-124.89	497.67	738.97	686.24	52.73	14.014		
6,200.00	6,192.21	6,175.08	6,195.71	27.26	26.41	148.88	-125.13	496.92	742.96	689.37	53.59	13.864		
6,300.00	6,292.07	6,273.59	6,294.22	27.70	26.83	149.11	-125.27	496.38	747.09	692.65	54.44	13.722		
6,400.00	6,391.93	6,372.94	6,393.57	28.14	27.25	149.33	-125.28	496.10	751.39	696.09	55.30	13.587		
6,500.00	6,491.69	6,472.58	6,493.20	28.58	27.68	-171.53	-125.29	495.84	755.47	701.31	56.16	13.487 SF		
6,600.00	6,589.80	6,570.60	6,591.23	29.02	28.10	-157.16	-125.30	495.62	759.15	705.14	57.01	13.397		
6,700.00	6,683.86	6,664.60	6,685.22	29.46	28.50	-152.89	-125.31	495.42	763.05	709.20	57.83	13.334		
6,800.00	6,771.56	6,752.25	6,772.88	29.92	28.87	-150.34	-125.32	495.25	767.09	713.40	58.58	13.288		
6,900.00	6,850.72	6,831.39	6,852.02	30.40	29.21	-147.92	-125.32	495.11	771.39	717.74	59.27	13.248		
7,000.00	6,919.40	6,900.07	6,920.69	30.96	29.50	-144.80	-125.32	495.00	775.96	722.24	59.87	13.217		
7,100.00	6,975.92	6,956.59	6,977.22	31.62	29.74	-140.08	-125.33	494.92	1,045.24	984.88	60.36	17.317		
7,200.00	7,018.87	6,999.57	7,020.20	32.44	29.92	-132.42	-125.33	494.87	1,128.76	1,068.02	60.74	18.583		
7,300.00	7,047.21	7,027.97	7,048.59	33.42	30.04	-119.51	-125.33	494.83	1,218.25	1,157.24	61.01	19.968		
7,400.00	7,060.23	7,041.07	7,061.70	34.55	30.10	-98.73	-125.33	494.81	1,311.48	1,250.32	61.16	21.442		
7,500.00	7,060.03	7,040.99	7,061.62	35.83	30.10	-87.13	-125.33	494.81	1,406.22	1,344.99	61.23	22.966		
7,600.00	7,058.28	7,039.37	7,060.00	37.28	30.09	-86.92	-125.33	494.82	1,501.62	1,440.33	61.29	24.500		
7,700.00	7,056.53	7,037.75	7,058.37	38.89	30.08	-86.70	-125.33	494.82	1,597.59	1,536.24	61.35	26.041		
7,800.00	7,054.78	7,036.12	7,055.75	40.63	30.08	-86.49	-125.33	494.82	1,694.02	1,632.61	61.41	27.587		
7,900.00	7,053.03	7,034.50	7,055.13	42.50	30.07	-86.28	-125.33	494.82	1,790.84	1,729.38	61.46	29.136		
8,000.00	7,051.28	7,032.88	7,053.51	44.47	30.06	-86.06	-125.33	494.82	1,887.99	1,826.47	61.52	30.689		
8,100.00	7,049.53	7,031.26	7,051.89	46.53	30.06	-85.85	-125.33	494.83	1,985.42	1,923.85	61.57	32.244		
8,200.00	7,047.78	7,029.64	7,050.27	48.67	30.05	-85.64	-125.33	494.83	2,083.10	2,021.47	61.63	33.802		
8,300.00	7,046.03	7,028.02	7,048.65	50.89	30.04	-85.43	-125.33	494.83	2,180.98	2,119.30	61.68	35.361		
8,400.00	7,044.28	7,026.40	7,047.03	53.16	30.04	-85.22	-125.33	494.83	2,279.05	2,217.32	61.73	36.921		
8,500.00	7,042.53	7,024.78	7,045.41	55.49	30.03	-85.00	-125.33	494.83	2,377.27	2,315.50	61.78	38.482		
8,600.00	7,040.78	7,023.16	7,043.79	57.86	30.02	-84.79	-125.33	494.84	2,475.64	2,413.82	61.82	40.043		
8,700.00	7,039.03	7,021.55	7,042.18	60.28	30.02	-84.58	-125.33	494.84	2,574.13	2,512.26	61.87	41.605		
8,800.00	7,037.28	7,019.93	7,040.56	62.74	30.01	-84.37	-125.33	494.84	2,672.74	2,610.82	61.92	43.166		
8,900.00	7,035.53	7,018.32	7,038.94	65.23	30.00	-84.16	-125.33	494.84	2,771.44	2,709.48	61.96	44.727		
9,000.00	7,033.78	7,016.70	7,037.33	67.74	30.00	-83.95	-125.33	494.84	2,870.23	2,808.22	62.01	46.288		
9,100.00	7,032.03	7,015.09	7,035.72	70.29	29.99	-83.74	-125.33	494.85	2,969.10	2,907.05	62.05	47.849		
9,200.00	7,030.28	7,013.48	7,034.10	72.85	29.98	-83.53	-125.33	494.85	3,068.05	3,005.95	62.10	49.408		
9,300.00	7,028.54	7,011.86	7,032.49	75.44	29.97	-83.32	-125.33	494.85	3,167.06	3,104.92	62.14	50.967		
9,400.00	7,026.79	7,010.25	7,030.88	78.05	29.97	-83.11	-125.33	494.85	3,266.12	3,203.94	62.18	52.524		
9,500.00	7,025.04	7,008.64	7,029.27	80.67	29.96	-82.90	-125.33	494.85	3,365.25	3,303.02	62.23	54.080		
9,600.00	7,023.29	7,007.03	7,027.66	83.31	29.95	-82.69	-125.33	494.86	3,464.42	3,402.15	62.27	55.635		
9,700.00	7,021.54	7,005.42	7,026.05	85.96	29.95	-82.48	-125.33	494.86	3,563.64	3,501.32	62.31	57.189		
9,800.00	7,019.79	7,003.81	7,024.44	88.63	29.94	-82.28	-125.33	494.86	3,662.90	3,600.54	62.36	58.740		
9,900.00	7,018.04	7,002.20	7,022.83	91.30	29.93	-82.07	-125.33	494.86	3,762.20	3,699.80	62.40	60.290		
10,000.00	7,016.29	7,000.59	7,021.22	93.99	29.93	-81.86	-125.33	494.86	3,861.53	3,799.09	62.45	61.839		
10,100.00	7,014.54	6,998.99	7,019.62	96.69	29.92	-81.65	-125.33	494.87	3,960.90	3,898.41	62.49	63.385		
10,200.00	7,012.79	6,997.38	7,018.01	99.40	29.91	-81.45	-125.33	494.87	4,060.30	3,997.76	62.53	64.929		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER 32-15(SI_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	7,011.04	6,995.78	7,016.40	102.11	29.91	-81.24	-125.33	494.87	4,159.72	4,097.14	62.58	66.471		
10,400.00	7,009.29	6,994.17	7,014.80	104.83	29.90	-81.03	-125.33	494.87	4,259.17	4,196.55	62.62	68.011		
10,500.00	7,007.54	6,992.57	7,013.19	107.56	29.89	-80.83	-125.33	494.87	4,358.65	4,295.98	62.67	69.549		
10,600.00	7,005.79	6,990.96	7,011.59	110.30	29.89	-80.62	-125.33	494.88	4,458.15	4,395.43	62.72	71.084		
10,700.00	7,004.04	6,989.36	7,009.99	113.04	29.88	-80.41	-125.33	494.88	4,557.67	4,494.91	62.76	72.617		
10,800.00	7,002.29	6,987.76	7,008.39	115.79	29.87	-80.21	-125.33	494.88	4,657.21	4,594.40	62.81	74.147		
10,900.00	7,000.54	6,986.16	7,006.78	118.54	29.87	-80.00	-125.33	494.88	4,756.77	4,693.91	62.86	75.674		
11,000.00	6,998.79	6,984.55	7,005.18	121.30	29.86	-79.80	-125.33	494.89	4,856.35	4,793.44	62.91	77.199		
11,100.00	6,997.04	6,982.95	7,003.58	124.06	29.85	-79.60	-125.33	494.89	4,955.94	4,892.98	62.96	78.721		
11,200.00	6,995.29	6,981.35	7,001.98	126.83	29.84	-79.39	-125.33	494.89	5,055.55	4,992.54	63.01	80.240		
11,300.00	6,993.54	6,979.76	7,000.38	129.60	29.84	-79.19	-125.33	494.89	5,155.17	5,092.12	63.06	81.757		
11,400.00	6,991.80	6,978.16	6,998.79	132.37	29.83	-78.99	-125.33	494.89	5,254.81	5,191.70	63.11	83.270		
11,500.00	6,990.05	6,976.56	6,997.19	135.15	29.82	-78.78	-125.33	494.90	5,354.46	5,291.30	63.16	84.780		
11,600.00	6,988.30	6,974.96	6,995.59	137.93	29.82	-78.58	-125.33	494.90	5,454.12	5,390.91	63.21	86.287		
11,700.00	6,986.55	6,973.37	6,994.00	140.72	29.81	-78.38	-125.33	494.90	5,553.80	5,490.54	63.26	87.791		
11,800.00	6,984.80	6,971.77	6,992.40	143.50	29.80	-78.18	-125.33	494.90	5,653.48	5,590.17	63.32	89.291		
11,900.00	6,983.05	6,970.18	6,990.81	146.29	29.80	-77.98	-125.33	494.90	5,753.18	5,689.81	63.37	90.789		
12,000.00	6,981.30	6,968.58	6,989.21	149.09	29.79	-77.78	-125.33	494.91	5,852.88	5,789.46	63.42	92.282		
12,100.00	6,979.55	6,966.99	6,987.62	151.88	29.78	-77.58	-125.33	494.91	5,952.60	5,889.12	63.48	93.773		
12,200.00	6,977.80	6,965.40	6,986.02	154.68	29.78	-77.38	-125.33	494.91	6,052.32	5,988.79	63.53	95.260		
12,300.00	6,976.05	6,963.80	6,984.43	157.48	29.77	-77.18	-125.33	494.91	6,152.06	6,088.46	63.59	96.743		
12,400.00	6,974.30	6,962.21	6,982.84	160.28	29.76	-76.98	-125.33	494.92	6,251.80	6,188.15	63.65	98.223		
12,500.00	6,972.55	6,960.62	6,981.25	163.08	29.76	-76.78	-125.33	494.92	6,351.55	6,287.84	63.71	99.699		
12,600.00	6,970.80	6,959.03	6,979.66	165.89	29.75	-76.58	-125.33	494.92	6,451.30	6,387.54	63.77	101.172		
12,700.00	6,969.05	6,957.44	6,978.07	168.69	29.74	-76.38	-125.33	494.92	6,551.07	6,487.24	63.83	102.640		
12,800.00	6,967.30	6,955.85	6,976.48	171.50	29.74	-76.18	-125.33	494.92	6,650.84	6,586.95	63.89	104.105		
12,900.00	6,965.55	6,954.27	6,974.89	174.31	29.73	-75.99	-125.33	494.93	6,750.61	6,686.66	63.95	105.566		
13,000.00	6,963.80	6,952.68	6,973.31	177.12	29.72	-75.79	-125.33	494.93	6,850.39	6,786.39	64.01	107.023		
13,100.00	6,962.05	6,951.09	6,971.72	179.94	29.72	-75.59	-125.33	494.93	6,950.18	6,886.11	64.07	108.476		
13,200.00	6,960.30	6,949.51	6,970.13	182.75	29.71	-75.40	-125.33	494.93	7,049.98	6,985.84	64.13	109.926		
13,300.00	6,958.55	6,947.92	6,968.55	185.57	29.70	-75.20	-125.33	494.94	7,149.78	7,085.58	64.20	111.371		
13,400.00	6,956.80	6,946.34	6,966.96	188.38	29.70	-75.01	-125.33	494.94	7,249.58	7,185.32	64.26	112.812		
13,500.00	6,955.05	6,944.75	6,965.38	191.20	29.69	-74.81	-125.33	494.94	7,349.39	7,285.06	64.33	114.249		
13,600.00	6,953.31	6,943.17	6,963.80	194.02	29.68	-74.62	-125.33	494.94	7,449.20	7,384.81	64.39	115.682		
13,700.00	6,951.56	6,941.59	6,962.21	196.84	29.68	-74.43	-125.33	494.94	7,549.02	7,484.56	64.46	117.111		
13,800.00	6,949.81	6,940.00	6,960.63	199.67	29.67	-74.23	-125.33	494.95	7,648.85	7,584.32	64.53	118.535		
13,900.00	6,948.06	6,938.42	6,959.05	202.49	29.66	-74.04	-125.33	494.95	7,748.67	7,684.08	64.60	119.956		
14,000.00	6,946.31	6,936.84	6,957.47	205.31	29.66	-73.85	-125.33	494.95	7,848.50	7,783.84	64.67	121.372		
14,100.00	6,944.56	6,935.26	6,955.89	208.14	29.65	-73.66	-125.33	494.95	7,948.34	7,883.61	64.73	122.783		
14,200.00	6,942.81	6,933.68	6,954.31	210.96	29.64	-73.46	-125.33	494.96	8,048.18	7,983.37	64.81	124.191		
14,300.00	6,941.06	6,932.10	6,952.73	213.79	29.63	-73.27	-125.33	494.96	8,148.02	8,083.15	64.88	125.594		
14,400.00	6,939.31	6,930.53	6,951.15	216.62	29.63	-73.08	-125.33	494.96	8,247.87	8,182.92	64.95	126.992		
14,500.00	6,937.56	6,928.95	6,949.58	219.44	29.62	-72.89	-125.33	494.96	8,347.72	8,282.70	65.02	128.386		
14,600.00	6,935.81	6,927.37	6,948.00	222.27	29.61	-72.70	-125.33	494.96	8,447.57	8,382.48	65.09	129.776		
14,700.00	6,934.06	6,925.80	6,946.42	225.10	29.61	-72.51	-125.33	494.97	8,547.43	8,482.26	65.17	131.161		
14,800.00	6,932.31	6,924.22	6,944.85	227.93	29.60	-72.33	-125.33	494.97	8,647.29	8,582.04	65.24	132.542		
14,817.75	6,932.00	6,923.94	6,944.57	228.43	29.60	-72.29	-125.33	494.97	8,665.01	8,599.75	65.26	132.786		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 30C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	1.00	0.00	3.28	3.28	0.40	119.85	0.83	119.85					
100.00	100.00	101.00	100.00	3.28	3.28	0.40	119.85	0.83	119.85	113.28	6.57	18.243		
200.00	200.00	201.00	200.00	3.34	3.34	0.40	119.85	0.83	119.85	113.18	6.67	17.956 CC, ES		
300.00	300.00	296.93	295.91	3.44	3.44	0.32	121.48	0.67	121.55	114.65	6.90	17.625		
400.00	400.00	392.68	391.54	3.60	3.59	0.09	126.29	0.19	126.58	119.34	7.23	17.503		
500.00	500.00	488.01	486.52	3.81	3.79	-0.26	134.24	-0.61	134.92	127.26	7.66	17.612		
600.00	599.98	582.88	580.74	4.05	4.02	26.91	145.27	-1.72	145.00	136.84	8.16	17.769		
700.00	699.86	677.38	674.17	4.32	4.28	27.14	159.33	-3.13	155.64	146.92	8.72	17.856		
800.00	799.72	771.18	766.40	4.62	4.57	27.34	176.32	-4.83	169.12	159.80	9.32	18.139		
900.00	899.58	864.05	857.12	4.93	4.88	27.42	196.08	-6.82	185.81	175.86	9.96	18.661		
1,000.00	999.44	955.83	946.10	5.27	5.21	27.39	218.48	-9.07	205.65	195.03	10.62	19.364		
1,100.00	1,099.31	1,046.36	1,033.10	5.62	5.56	27.29	243.34	-11.56	228.59	217.29	11.29	20.241		
1,200.00	1,199.17	1,143.33	1,125.87	5.98	5.96	27.17	271.43	-14.38	253.04	241.05	11.99	21.097		
1,300.00	1,299.03	1,240.29	1,218.63	6.36	6.38	27.07	299.51	-17.20	277.49	264.77	12.72	21.808		
1,400.00	1,398.89	1,337.25	1,311.40	6.74	6.82	26.99	327.59	-20.02	301.95	288.47	13.48	22.404		
1,500.00	1,498.75	1,434.22	1,404.16	7.13	7.26	26.92	355.68	-22.84	326.40	312.15	14.25	22.905		
1,600.00	1,598.61	1,531.18	1,496.93	7.52	7.72	26.86	383.76	-25.66	350.85	335.81	15.04	23.328		
1,700.00	1,698.47	1,628.14	1,589.69	7.92	8.18	26.80	411.85	-28.48	375.31	359.47	15.84	23.688		
1,800.00	1,798.33	1,725.10	1,682.45	8.32	8.65	26.76	439.93	-31.30	399.76	383.10	16.66	23.995		
1,900.00	1,898.19	1,822.07	1,775.22	8.73	9.13	26.72	468.01	-34.12	424.22	406.73	17.49	24.260		
2,000.00	1,998.05	1,919.03	1,867.98	9.14	9.61	26.68	496.10	-36.94	448.68	430.35	18.32	24.489		
2,100.00	2,097.91	2,015.99	1,960.75	9.55	10.10	26.65	524.18	-39.76	473.13	453.97	19.17	24.687		
2,200.00	2,197.78	2,112.96	2,053.51	9.97	10.59	26.62	552.26	-42.58	497.59	477.57	20.02	24.860		
2,300.00	2,297.64	2,209.92	2,146.28	10.39	11.08	26.59	580.35	-45.40	522.04	501.17	20.87	25.012		
2,400.00	2,397.50	2,306.88	2,239.04	10.81	11.57	26.57	608.43	-48.22	546.50	524.77	21.73	25.146		
2,500.00	2,497.36	2,403.85	2,331.80	11.23	12.07	26.54	636.52	-51.04	570.96	548.36	22.60	25.265		
2,600.00	2,597.22	2,500.81	2,424.57	11.65	12.57	26.52	664.60	-53.86	595.41	571.94	23.47	25.370		
2,700.00	2,697.08	2,602.23	2,517.33	12.07	13.09	26.50	692.68	-56.68	619.87	595.50	24.36	25.441		
2,800.00	2,796.94	2,705.26	2,610.10	12.50	13.62	26.49	720.77	-59.50	644.32	619.05	25.27	25.496		
2,900.00	2,896.80	2,808.30	2,702.86	12.92	14.16	26.47	748.85	-62.31	668.78	642.60	26.18	25.544		
3,000.00	2,996.66	2,888.66	2,795.63	13.35	14.58	26.45	776.93	-65.13	693.24	666.25	26.98	25.691		
3,100.00	3,096.52	2,985.63	2,888.39	13.78	15.08	26.44	805.02	-67.95	717.69	689.82	27.87	25.752		
3,200.00	3,196.38	3,082.59	2,981.15	14.21	15.59	26.43	833.10	-70.77	742.15	713.39	28.76	25.808		
3,300.00	3,296.25	3,179.55	3,073.92	14.64	16.10	26.42	861.18	-73.59	766.61	736.96	29.65	25.858		
3,400.00	3,396.11	3,276.52	3,166.68	15.07	16.61	26.40	889.27	-76.41	791.06	760.53	30.54	25.904		
3,500.00	3,495.97	3,373.48	3,259.45	15.50	17.12	26.39	917.35	-79.23	815.52	784.09	31.43	25.946		
3,600.00	3,595.83	3,470.44	3,352.21	15.93	17.63	26.38	945.44	-82.05	839.98	807.65	32.33	25.985		
3,700.00	3,695.69	3,567.40	3,444.98	16.36	18.14	26.37	973.52	-84.87	864.43	831.21	33.22	26.020		
3,800.00	3,795.55	3,664.37	3,537.74	16.80	18.65	26.36	1,001.60	-87.69	888.89	854.77	34.12	26.052		
3,900.00	3,895.41	3,761.33	3,630.50	17.23	19.16	26.36	1,029.69	-90.51	913.35	878.33	35.02	26.082		
4,000.00	3,995.27	3,858.29	3,723.27	17.66	19.67	26.35	1,057.77	-93.33	937.80	901.88	35.92	26.109		
4,100.00	4,095.13	3,955.26	3,816.03	18.10	20.19	26.34	1,085.85	-96.15	962.26	925.44	36.82	26.135		
4,200.00	4,194.99	4,052.22	3,908.80	18.53	20.70	26.33	1,113.94	-98.97	986.72	949.00	37.72	26.158		
4,300.00	4,294.85	4,149.18	4,001.56	18.96	21.21	26.33	1,142.02	-101.79	1,011.17	972.55	38.62	26.180		
4,400.00	4,394.71	4,246.15	4,094.33	19.40	21.73	26.32	1,170.10	-104.61	1,035.63	996.10	39.53	26.200		
4,500.00	4,494.58	4,343.11	4,187.09	19.83	22.24	26.31	1,198.19	-107.43	1,060.09	1,019.65	40.43	26.219		
4,600.00	4,594.44	4,440.07	4,279.85	20.27	22.76	26.31	1,226.27	-110.25	1,084.54	1,043.21	41.34	26.236		
4,700.00	4,694.30	4,537.04	4,372.62	20.71	23.27	26.30	1,254.36	-113.07	1,109.00	1,066.76	42.24	26.253		
4,800.00	4,794.16	4,634.00	4,465.38	21.14	23.79	26.29	1,282.44	-115.89	1,133.46	1,090.31	43.15	26.268		
4,900.00	4,894.02	4,730.96	4,558.15	21.58	24.31	26.29	1,310.52	-118.70	1,157.91	1,113.86	44.06	26.282		
5,000.00	4,993.88	4,827.93	4,650.91	22.01	24.82	26.28	1,338.61	-121.52	1,182.37	1,137.41	44.96	26.295		
5,100.00	5,093.74	4,924.89	4,743.68	22.45	25.34	26.28	1,366.69	-124.34	1,206.83	1,160.95	45.87	26.308		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 30C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,021.85	4,836.44	22.89	25.85	26.27	1,394.77	-127.16	1,231.28	1,184.50	46.78	26.320		
5,300.00	5,293.46	5,118.82	4,929.20	23.32	26.37	26.27	1,422.86	-129.98	1,255.74	1,208.05	47.69	26.331		
5,400.00	5,393.32	5,215.78	5,021.97	23.76	26.89	26.27	1,450.94	-132.80	1,280.20	1,231.60	48.60	26.341		
5,500.00	5,493.18	5,312.74	5,114.73	24.20	27.41	26.26	1,479.03	-135.62	1,304.66	1,255.14	49.51	26.350		
5,600.00	5,593.05	5,425.90	5,223.05	24.64	28.01	26.26	1,511.60	-138.89	1,329.00	1,278.42	50.58	26.274		
5,700.00	5,692.91	5,609.29	5,400.66	25.07	28.94	26.28	1,556.93	-143.44	1,349.17	1,296.96	52.20	25.844		
5,800.00	5,792.77	5,796.79	5,584.88	25.51	29.81	26.34	1,591.50	-146.91	1,362.98	1,309.38	53.60	25.431		
5,900.00	5,892.63	5,986.90	5,773.58	25.95	30.62	26.45	1,614.23	-149.20	1,370.26	1,315.54	54.73	25.039		
6,000.00	5,992.49	6,177.98	5,964.34	26.39	31.36	26.60	1,624.48	-150.22	1,370.92	1,315.35	55.57	24.670		
6,100.00	6,092.35	6,305.99	6,092.35	26.82	31.82	26.73	1,625.09	-150.29	1,366.52	1,310.18	56.34	24.256		
6,200.00	6,192.21	6,405.85	6,192.21	27.26	32.17	26.83	1,625.09	-150.29	1,361.81	1,304.66	57.16	23.826		
6,300.00	6,292.07	6,505.71	6,292.07	27.70	32.53	26.93	1,625.09	-150.29	1,357.11	1,299.13	57.98	23.407		
6,400.00	6,391.93	6,605.57	6,391.93	28.14	32.89	27.03	1,625.09	-150.29	1,352.41	1,293.61	58.80	22.999		
6,500.00	6,491.69	6,705.33	6,491.69	28.58	33.25	26.25	1,625.09	-150.29	1,347.72	1,288.09	59.63	22.602		
6,600.00	6,589.80	6,803.44	6,589.80	29.02	33.61	26.33	1,625.09	-150.29	1,343.29	1,282.83	60.46	22.219		
6,700.00	6,683.86	6,903.28	6,683.86	29.46	33.96	26.41	1,625.06	-153.73	1,339.71	1,278.45	61.26	21.869		
6,800.00	6,771.56	7,010.14	6,794.37	29.92	34.34	26.49	1,624.91	-173.68	1,337.13	1,275.10	62.03	21.557		
6,900.00	6,850.72	7,123.52	6,900.30	30.40	34.73	26.57	1,624.59	-213.67	1,335.51	1,272.74	62.77	21.276		
7,000.00	6,919.40	7,244.04	7,003.23	30.96	35.11	26.65	1,624.11	-276.02	1,334.74	1,271.21	63.53	21.009		
7,076.54	6,963.83	7,341.30	7,076.55	31.47	35.38	26.73	1,623.61	-339.78	1,334.59	1,270.40	64.20	20.789		
7,100.00	6,975.92	7,371.98	7,097.56	31.62	35.46	26.81	1,623.43	-362.12	1,334.60	1,270.20	64.41	20.721		
7,200.00	7,018.87	7,506.95	7,176.33	32.44	35.83	26.89	1,622.58	-471.42	1,334.82	1,269.25	65.57	20.358		
7,300.00	7,047.21	7,647.75	7,232.07	33.42	36.43	26.97	1,621.57	-600.40	1,335.09	1,267.87	67.22	19.863		
7,400.00	7,060.23	7,792.19	7,258.42	34.55	37.65	27.05	1,620.46	-742.09	1,335.16	1,265.66	69.49	19.213		
7,479.78	7,062.18	7,886.70	7,259.82	35.57	38.70	27.13	1,619.72	-836.56	1,334.82	1,263.26	71.56	18.653		
7,500.00	7,060.03	7,906.94	7,259.74	35.83	38.95	27.21	1,619.56	-856.80	1,335.21	1,263.17	72.03	18.536		
7,600.00	7,058.28	8,006.93	7,259.36	37.28	40.29	27.29	1,618.78	-956.79	1,335.39	1,260.59	74.79	17.854		
7,700.00	7,056.53	8,106.92	7,258.98	38.89	41.78	27.37	1,618.00	-1,056.78	1,335.56	1,257.70	77.87	17.152		
7,800.00	7,054.78	8,206.91	7,258.60	40.63	43.42	27.45	1,617.22	-1,156.76	1,335.74	1,254.53	81.21	16.447		
7,900.00	7,053.03	8,306.90	7,258.22	42.50	45.18	27.53	1,616.44	-1,256.75	1,335.92	1,251.12	84.80	15.753		
8,000.00	7,051.28	8,406.90	7,257.84	44.47	47.05	27.61	1,615.65	-1,356.74	1,336.11	1,247.50	88.60	15.080		
8,100.00	7,049.53	8,506.89	7,257.46	46.53	49.01	27.69	1,614.87	-1,456.72	1,336.29	1,243.70	92.59	14.432		
8,200.00	7,047.78	8,606.88	7,257.08	48.67	51.06	27.77	1,614.09	-1,556.71	1,336.47	1,239.73	96.74	13.815		
8,300.00	7,046.03	8,706.87	7,256.70	50.89	53.19	27.85	1,613.31	-1,656.70	1,336.66	1,235.62	101.04	13.230		
8,400.00	7,044.28	8,806.86	7,256.32	53.16	55.38	27.93	1,612.53	-1,756.69	1,336.85	1,231.39	105.45	12.677		
8,500.00	7,042.53	8,906.85	7,255.94	55.49	57.63	28.01	1,611.74	-1,856.67	1,337.04	1,227.06	109.98	12.157		
8,600.00	7,040.78	9,006.84	7,255.56	57.86	59.93	28.09	1,610.96	-1,956.66	1,337.23	1,222.62	114.61	11.668		
8,700.00	7,039.03	9,106.83	7,255.19	60.28	62.28	28.17	1,610.18	-2,056.65	1,337.42	1,218.11	119.31	11.209		
8,800.00	7,037.28	9,206.82	7,254.81	62.74	64.67	28.25	1,609.40	-2,156.63	1,337.61	1,213.52	124.10	10.779		
8,900.00	7,035.53	9,306.81	7,254.43	65.23	67.09	28.33	1,608.62	-2,256.62	1,337.81	1,208.86	128.95	10.375		
9,000.00	7,033.78	9,406.80	7,254.05	67.74	69.55	28.41	1,607.83	-2,356.61	1,338.00	1,204.15	133.86	9.996		
9,100.00	7,032.03	9,506.79	7,253.67	70.29	72.04	28.49	1,607.05	-2,456.59	1,338.20	1,199.38	138.82	9.640		
9,200.00	7,030.28	9,606.78	7,253.29	72.85	74.55	28.57	1,606.27	-2,556.58	1,338.40	1,194.57	143.83	9.306		
9,300.00	7,028.54	9,706.77	7,252.91	75.44	77.09	28.65	1,605.49	-2,656.57	1,338.60	1,189.72	148.88	8.991		
9,400.00	7,026.79	9,806.76	7,252.53	78.05	79.65	28.73	1,604.71	-2,756.55	1,338.80	1,184.84	153.96	8.696		
9,500.00	7,025.04	9,906.75	7,252.15	80.67	82.23	28.81	1,603.92	-2,856.54	1,339.00	1,179.92	159.08	8.417		
9,600.00	7,023.29	10,006.74	7,251.77	83.31	84.83	28.89	1,603.14	-2,956.53	1,339.21	1,174.97	164.24	8.154		
9,700.00	7,021.54	10,106.74	7,251.39	85.96	87.44	28.97	1,602.36	-3,056.51	1,339.41	1,170.00	169.41	7.906		
9,800.00	7,019.79	10,206.73	7,251.01	88.63	90.07	29.05	1,601.58	-3,156.50	1,339.62	1,165.00	174.62	7.672		
9,900.00	7,018.04	10,306.72	7,250.63	91.30	92.71	29.13	1,600.80	-3,256.49	1,339.83	1,159.98	179.84	7.450		
10,000.00	7,016.29	10,406.71	7,250.25	93.99	95.37	29.21	1,600.01	-3,356.47	1,340.04	1,154.95	185.09	7.240		
10,100.00	7,014.54	10,506.70	7,249.87	96.69	98.03	29.29	1,599.23	-3,456.46	1,340.25	1,149.89	190.36	7.041		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 30C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,200.00	7,012.79	10,606.69	7,249.49	99.40	100.71	100.17	1,598.45	-3,556.45	1,340.46	1,144.82	195.64	6.852		
10,300.00	7,011.04	10,706.68	7,249.11	102.11	103.40	100.23	1,597.67	-3,656.43	1,340.68	1,139.74	200.93	6.672		
10,400.00	7,009.29	10,806.67	7,248.73	104.83	106.09	100.29	1,596.89	-3,756.42	1,340.89	1,134.65	206.24	6.501		
10,500.00	7,007.54	10,906.66	7,248.35	107.56	108.80	100.34	1,596.10	-3,856.41	1,341.11	1,129.54	211.57	6.339		
10,600.00	7,005.79	11,006.65	7,247.98	110.30	111.51	100.40	1,595.32	-3,956.40	1,341.33	1,124.42	216.90	6.184		
10,700.00	7,004.04	11,106.64	7,247.60	113.04	114.23	100.46	1,594.54	-4,056.38	1,341.54	1,119.30	222.25	6.036		
10,800.00	7,002.29	11,206.63	7,247.22	115.79	116.95	100.52	1,593.76	-4,156.37	1,341.77	1,114.16	227.60	5.895		
10,900.00	7,000.54	11,306.62	7,246.84	118.54	119.68	100.57	1,592.98	-4,256.36	1,341.99	1,109.02	232.97	5.760		
11,000.00	6,998.79	11,406.61	7,246.46	121.30	122.42	100.63	1,592.20	-4,356.34	1,342.21	1,103.87	238.34	5.631		
11,100.00	6,997.04	11,506.60	7,246.08	124.06	125.16	100.69	1,591.41	-4,456.33	1,342.44	1,098.71	243.72	5.508		
11,200.00	6,995.29	11,606.59	7,245.70	126.83	127.91	100.75	1,590.63	-4,556.32	1,342.66	1,093.55	249.11	5.390		
11,300.00	6,993.54	11,706.59	7,245.32	129.60	130.66	100.81	1,589.85	-4,656.30	1,342.89	1,088.39	254.50	5.277		
11,400.00	6,991.80	11,806.58	7,244.94	132.37	133.42	100.86	1,589.07	-4,756.29	1,343.12	1,083.22	259.90	5.168		
11,500.00	6,990.05	11,906.57	7,244.56	135.15	136.18	100.92	1,588.29	-4,856.28	1,343.35	1,078.05	265.30	5.063		
11,600.00	6,988.30	12,006.56	7,244.18	137.93	138.94	100.98	1,587.50	-4,956.26	1,343.58	1,072.87	270.71	4.963		
11,700.00	6,986.55	12,106.55	7,243.80	140.72	141.71	101.04	1,586.72	-5,056.25	1,343.81	1,067.69	276.12	4.867		
11,800.00	6,984.80	12,206.54	7,243.42	143.50	144.48	101.09	1,585.94	-5,156.24	1,344.05	1,062.51	281.54	4.774		
11,900.00	6,983.05	12,306.53	7,243.04	146.29	147.26	101.15	1,585.16	-5,256.22	1,344.28	1,057.32	286.96	4.685		
12,000.00	6,981.30	12,406.52	7,242.66	149.09	150.04	101.21	1,584.38	-5,356.21	1,344.52	1,052.14	292.38	4.598		
12,100.00	6,979.55	12,506.51	7,242.28	151.88	152.82	101.27	1,583.59	-5,456.20	1,344.76	1,046.95	297.81	4.516		
12,200.00	6,977.80	12,606.50	7,241.90	154.68	155.60	101.32	1,582.81	-5,556.18	1,345.00	1,041.76	303.24	4.435		
12,300.00	6,976.05	12,706.49	7,241.52	157.48	158.39	101.38	1,582.03	-5,656.17	1,345.24	1,036.57	308.67	4.358		
12,400.00	6,974.30	12,806.48	7,241.14	160.28	161.18	101.44	1,581.25	-5,756.16	1,345.48	1,031.38	314.10	4.284		
12,500.00	6,972.55	12,906.47	7,240.77	163.08	163.97	101.50	1,580.47	-5,856.15	1,345.72	1,026.19	319.54	4.211		
12,600.00	6,970.80	13,006.46	7,240.39	165.89	166.76	101.55	1,579.68	-5,956.13	1,345.97	1,021.00	324.97	4.142		
12,700.00	6,969.05	13,106.45	7,240.01	168.69	169.56	101.61	1,578.90	-6,056.12	1,346.22	1,015.80	330.41	4.074		
12,800.00	6,967.30	13,206.44	7,239.63	171.50	172.36	101.67	1,578.12	-6,156.11	1,346.46	1,010.61	335.85	4.009		
12,900.00	6,965.55	13,306.44	7,239.25	174.31	175.16	101.73	1,577.34	-6,256.09	1,346.71	1,005.42	341.29	3.946		
13,000.00	6,963.80	13,406.43	7,238.87	177.12	177.96	101.78	1,576.56	-6,356.08	1,346.96	1,000.23	346.73	3.885		
13,100.00	6,962.05	13,506.42	7,238.49	179.94	180.76	101.84	1,575.77	-6,456.07	1,347.21	995.04	352.17	3.825		
13,200.00	6,960.30	13,606.41	7,238.11	182.75	183.57	101.90	1,574.99	-6,556.05	1,347.47	989.85	357.62	3.768		
13,300.00	6,958.55	13,706.40	7,237.73	185.57	186.38	101.95	1,574.21	-6,656.04	1,347.72	984.66	363.06	3.712		
13,400.00	6,956.80	13,806.39	7,237.35	188.38	189.18	102.01	1,573.43	-6,756.03	1,347.98	979.48	368.50	3.658		
13,500.00	6,955.05	13,906.38	7,236.97	191.20	191.99	102.07	1,572.65	-6,856.01	1,348.24	974.29	373.94	3.605		
13,600.00	6,953.31	14,006.37	7,236.59	194.02	194.80	102.13	1,571.86	-6,956.00	1,348.49	969.11	379.39	3.554		
13,700.00	6,951.56	14,106.36	7,236.21	196.84	197.62	102.18	1,571.08	-7,055.99	1,348.75	963.92	384.83	3.505		
13,800.00	6,949.81	14,206.35	7,235.83	199.67	200.43	102.24	1,570.30	-7,155.97	1,349.01	958.74	390.27	3.457		
13,900.00	6,948.06	14,306.34	7,235.45	202.49	203.25	102.30	1,569.52	-7,255.96	1,349.28	953.56	395.71	3.410		
14,000.00	6,946.31	14,406.33	7,235.07	205.31	206.06	102.35	1,568.74	-7,355.95	1,349.54	948.38	401.16	3.364		
14,100.00	6,944.56	14,506.32	7,234.69	208.14	208.88	102.41	1,567.95	-7,455.93	1,349.81	943.21	406.60	3.320		
14,200.00	6,942.81	14,606.31	7,234.31	210.96	211.70	102.47	1,567.17	-7,555.92	1,350.07	938.03	412.04	3.277		
14,300.00	6,941.06	14,706.30	7,233.93	213.79	214.52	102.53	1,566.39	-7,655.91	1,350.34	932.86	417.48	3.235		
14,400.00	6,939.31	14,806.29	7,233.56	216.62	217.34	102.58	1,565.61	-7,755.90	1,350.61	927.69	422.92	3.194		
14,500.00	6,937.56	14,906.28	7,233.18	219.44	220.16	102.64	1,564.83	-7,855.88	1,350.88	922.52	428.36	3.154		
14,600.00	6,935.81	15,006.28	7,232.80	222.27	222.98	102.70	1,564.05	-7,955.87	1,351.15	917.36	433.79	3.115		
14,700.00	6,934.06	15,106.27	7,232.42	225.10	225.81	102.75	1,563.26	-8,055.86	1,351.43	912.20	439.23	3.077		
14,800.00	6,932.31	15,206.26	7,232.04	227.93	228.63	102.81	1,562.48	-8,155.84	1,351.70	907.04	444.66	3.040		
14,817.75	6,932.00	15,216.01	7,232.00	228.43	228.91	102.82	1,562.41	-8,165.60	1,351.77	906.33	445.44	3.035 SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 30N-16B-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	1.00	0.00	3.28	3.28	0.48	100.18	0.83	100.18					
100.00	100.00	101.00	100.00	3.28	3.28	0.48	100.18	0.83	100.18	93.61	6.57	15.249		
200.00	200.00	201.00	200.00	3.34	3.34	0.48	100.18	0.83	100.18	93.51	6.67	15.009		
300.00	300.00	301.00	300.00	3.44	3.45	0.48	100.18	0.83	100.18	93.29	6.89	14.538 CC, ES		
400.00	400.00	397.58	396.56	3.60	3.60	0.35	101.83	0.62	101.89	94.68	7.21	14.128		
500.00	500.00	493.97	492.82	3.81	3.80	0.00	106.69	0.00	106.93	99.30	7.63	14.012		
600.00	599.98	590.07	588.57	4.05	4.03	27.19	114.73	-1.03	113.76	105.63	8.13	13.997		
700.00	699.86	685.89	683.73	4.32	4.29	27.49	125.92	-2.46	121.17	112.49	8.68	13.956		
800.00	799.72	781.20	777.94	4.62	4.58	27.69	140.17	-4.29	131.48	122.19	9.29	14.154		
900.00	899.58	875.91	871.04	4.93	4.90	27.68	157.40	-6.50	145.05	135.13	9.93	14.609		
1,000.00	999.44	974.77	967.93	5.27	5.24	27.60	176.87	-8.99	160.14	149.56	10.58	15.135		
1,100.00	1,099.31	1,073.62	1,064.82	5.62	5.59	27.54	196.34	-11.49	175.22	163.94	11.28	15.539		
1,200.00	1,199.17	1,172.48	1,161.70	5.98	5.98	27.49	215.81	-13.98	190.30	178.31	12.00	15.864		
1,300.00	1,299.03	1,271.34	1,258.59	6.36	6.37	27.44	235.28	-16.48	205.38	192.65	12.74	16.123		
1,400.00	1,398.89	1,370.19	1,355.48	6.74	6.78	27.40	254.75	-18.97	220.47	206.97	13.50	16.330		
1,500.00	1,498.75	1,469.05	1,452.37	7.13	7.20	27.37	274.22	-21.47	235.55	221.27	14.28	16.495		
1,600.00	1,598.61	1,567.90	1,549.25	7.52	7.62	27.34	293.69	-23.96	250.63	235.56	15.07	16.628		
1,700.00	1,698.47	1,666.76	1,646.14	7.92	8.05	27.31	313.16	-26.46	265.72	249.84	15.88	16.735		
1,800.00	1,798.33	1,765.62	1,743.03	8.32	8.48	27.29	332.63	-28.95	280.80	264.11	16.69	16.822		
1,900.00	1,898.19	1,864.47	1,839.92	8.73	8.92	27.27	352.10	-31.45	295.88	278.37	17.52	16.892		
2,000.00	1,998.05	1,963.33	1,936.80	9.14	9.36	27.25	371.57	-33.94	310.97	292.62	18.35	16.949		
2,100.00	2,097.91	2,062.18	2,033.69	9.55	9.81	27.23	391.04	-36.44	326.05	306.86	19.18	16.995		
2,200.00	2,197.78	2,161.04	2,130.58	9.97	10.26	27.21	410.51	-38.93	341.13	321.10	20.03	17.032		
2,300.00	2,297.64	2,259.90	2,227.47	10.39	10.71	27.20	429.98	-41.43	356.21	335.34	20.88	17.063		
2,400.00	2,397.50	2,358.75	2,324.36	10.81	11.17	27.18	449.45	-43.92	371.30	349.57	21.73	17.087		
2,500.00	2,497.36	2,457.61	2,421.24	11.23	11.62	27.17	468.92	-46.42	386.38	363.79	22.59	17.107		
2,600.00	2,597.22	2,556.46	2,518.13	11.65	12.08	27.16	488.39	-48.91	401.46	378.02	23.45	17.122		
2,700.00	2,697.08	2,655.32	2,615.02	12.07	12.54	27.15	507.86	-51.41	416.55	392.24	24.31	17.135		
2,800.00	2,796.94	2,754.17	2,711.91	12.50	13.00	27.14	527.32	-53.90	431.63	406.45	25.18	17.144		
2,900.00	2,896.80	2,853.03	2,808.79	12.92	13.46	27.13	546.79	-56.40	446.71	420.67	26.05	17.151		
3,000.00	2,996.66	2,951.89	2,905.68	13.35	13.93	27.12	566.26	-58.89	461.80	434.88	26.92	17.157		
3,100.00	3,096.52	3,050.74	3,002.57	13.78	14.39	27.11	585.73	-61.39	476.88	449.09	27.79	17.160		
3,200.00	3,196.38	3,149.60	3,099.46	14.21	14.85	27.11	605.20	-63.88	491.96	463.30	28.67	17.162		
3,300.00	3,296.25	3,248.45	3,196.34	14.64	15.32	27.10	624.67	-66.38	507.05	477.51	29.54	17.164		
3,400.00	3,396.11	3,347.31	3,293.23	15.07	15.79	27.09	644.14	-68.87	522.13	491.71	30.42	17.164		
3,500.00	3,495.97	3,446.17	3,390.12	15.50	16.26	27.09	663.61	-71.37	537.21	505.91	31.30	17.163		
3,600.00	3,595.83	3,545.02	3,487.01	15.93	16.72	27.08	683.08	-73.86	552.30	520.12	32.18	17.162		
3,700.00	3,695.69	3,643.88	3,583.89	16.36	17.19	27.07	702.55	-76.36	567.38	534.32	33.06	17.160		
3,800.00	3,795.55	3,742.73	3,680.78	16.80	17.66	27.07	722.02	-78.85	582.46	548.52	33.95	17.158		
3,900.00	3,895.41	3,841.59	3,777.67	17.23	18.13	27.06	741.49	-81.35	597.55	562.72	34.83	17.155		
4,000.00	3,995.27	3,940.45	3,874.56	17.66	18.60	27.06	760.96	-83.84	612.63	576.91	35.72	17.152		
4,100.00	4,095.13	4,039.30	3,971.44	18.10	19.07	27.05	780.43	-86.34	627.71	591.11	36.60	17.149		
4,200.00	4,194.99	4,138.16	4,068.33	18.53	19.54	27.05	799.90	-88.83	642.80	605.31	37.49	17.145		
4,300.00	4,294.85	4,237.01	4,165.22	18.96	20.01	27.05	819.37	-91.32	657.88	619.50	38.38	17.142		
4,400.00	4,394.71	4,335.87	4,262.11	19.40	20.49	27.04	838.84	-93.82	672.96	633.70	39.27	17.138		
4,500.00	4,494.58	4,434.72	4,358.99	19.83	20.96	27.04	858.31	-96.31	688.05	647.89	40.16	17.134		
4,600.00	4,594.44	4,533.58	4,455.88	20.27	21.43	27.03	877.78	-98.81	703.13	662.08	41.05	17.130		
4,700.00	4,694.30	4,632.44	4,552.77	20.71	21.90	27.03	897.25	-101.30	718.21	676.28	41.94	17.126		
4,800.00	4,794.16	4,731.29	4,649.66	21.14	22.37	27.03	916.71	-103.80	733.30	690.47	42.83	17.122		
4,900.00	4,894.02	4,830.15	4,746.54	21.58	22.85	27.02	936.18	-106.29	748.38	704.66	43.72	17.117		
5,000.00	4,993.88	4,929.00	4,843.43	22.01	23.32	27.02	955.65	-108.79	763.47	718.85	44.61	17.113		
5,100.00	5,093.74	5,027.86	4,940.32	22.45	23.79	27.02	975.12	-111.28	778.55	733.04	45.51	17.109		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 30N-16B-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,126.72	5,037.21	22.89	24.27	27.01	994.59	-113.78	793.63	747.23	46.40	17.105		
5,300.00	5,293.46	5,225.57	5,134.09	23.32	24.74	27.01	1,014.06	-116.27	808.72	761.42	47.29	17.100		
5,400.00	5,393.32	5,324.43	5,230.98	23.76	25.22	27.01	1,033.53	-118.77	823.80	775.61	48.19	17.096		
5,500.00	5,493.18	5,423.28	5,327.87	24.20	25.69	27.01	1,053.00	-121.26	838.88	789.80	49.08	17.092		
5,600.00	5,593.05	5,522.14	5,424.76	24.64	26.17	27.00	1,072.47	-123.76	853.97	803.99	49.97	17.088		
5,700.00	5,692.91	5,621.00	5,521.65	25.07	26.64	27.00	1,091.94	-126.25	869.05	818.18	50.87	17.084		
5,800.00	5,792.77	5,719.85	5,618.53	25.51	27.11	27.00	1,111.41	-128.75	884.13	832.37	51.77	17.080		
5,900.00	5,892.63	5,818.71	5,715.42	25.95	27.59	27.00	1,130.88	-131.24	899.22	846.56	52.66	17.076		
6,000.00	5,992.49	5,917.56	5,812.31	26.39	28.06	26.99	1,150.35	-133.74	914.30	860.74	53.56	17.072		
6,100.00	6,092.35	6,016.42	5,909.20	26.82	28.54	26.99	1,169.82	-136.23	929.38	874.93	54.45	17.068		
6,200.00	6,192.21	6,115.28	6,006.08	27.26	29.01	26.99	1,189.29	-138.73	944.47	889.12	55.35	17.064		
6,300.00	6,292.07	6,214.13	6,102.97	27.70	29.49	26.99	1,208.76	-141.22	959.55	903.30	56.25	17.060		
6,400.00	6,391.93	6,312.99	6,199.86	28.14	29.97	26.99	1,228.23	-143.72	974.63	917.49	57.14	17.056		
6,500.00	6,491.69	6,411.79	6,296.69	28.58	30.44	65.22	1,247.69	-146.21	989.71	931.67	58.04	17.052		
6,600.00	6,591.80	6,509.29	6,392.26	29.02	30.91	78.66	1,266.89	-148.67	1,004.75	945.81	58.94	17.047		
6,700.00	6,683.86	6,605.23	6,486.27	29.46	31.37	82.65	1,285.78	-151.58	1,020.08	960.22	59.86	17.042		
6,800.00	6,771.56	6,709.61	6,587.41	29.92	31.87	84.90	1,306.01	-166.80	1,035.65	974.76	60.89	17.009		
6,900.00	6,850.72	6,821.40	6,691.48	30.40	32.39	86.46	1,326.70	-201.53	1,050.90	988.89	62.01	16.947		
7,000.00	6,919.40	6,941.74	6,795.01	30.96	32.92	87.70	1,347.13	-258.98	1,065.24	1,002.02	63.22	16.849		
7,100.00	6,975.92	7,071.48	6,892.65	31.62	33.47	88.73	1,366.19	-341.92	1,077.95	1,013.40	64.56	16.698		
7,200.00	7,018.87	7,210.75	6,976.83	32.44	34.15	89.58	1,382.36	-451.34	1,088.28	1,022.15	66.12	16.458		
7,300.00	7,047.21	7,358.40	7,038.42	33.42	35.18	90.19	1,393.82	-584.68	1,095.46	1,027.36	68.10	16.086		
7,400.00	7,060.23	7,511.74	7,068.82	34.55	36.69	90.49	1,398.89	-734.50	1,098.88	1,028.26	70.62	15.561		
7,500.00	7,060.03	7,631.32	7,070.82	35.83	38.12	90.56	1,398.46	-854.02	1,099.13	1,025.83	73.30	14.995		
7,600.00	7,058.28	7,731.31	7,070.53	37.28	39.49	90.64	1,397.71	-954.01	1,099.14	1,023.01	76.14	14.436		
7,700.00	7,056.53	7,831.30	7,070.25	38.89	41.02	90.72	1,396.96	-1,053.99	1,099.16	1,019.88	79.29	13.863		
7,800.00	7,054.78	7,931.29	7,069.97	40.63	42.69	90.79	1,396.21	-1,153.98	1,099.18	1,016.47	82.71	13.290		
7,900.00	7,053.03	8,031.28	7,069.68	42.50	44.48	90.87	1,395.45	-1,253.97	1,099.20	1,012.83	86.37	12.726		
8,000.00	7,051.28	8,131.27	7,069.40	44.47	46.37	90.94	1,394.70	-1,353.95	1,099.22	1,008.98	90.25	12.180		
8,100.00	7,049.53	8,231.26	7,069.11	46.53	48.36	91.02	1,393.95	-1,453.94	1,099.25	1,004.94	94.31	11.656		
8,200.00	7,047.78	8,331.25	7,068.83	48.67	50.44	91.10	1,393.20	-1,553.92	1,099.28	1,000.74	98.54	11.156		
8,300.00	7,046.03	8,431.23	7,068.54	50.89	52.59	91.17	1,392.45	-1,653.91	1,099.31	996.40	102.90	10.683		
8,400.00	7,044.28	8,531.22	7,068.26	53.16	54.80	91.25	1,391.69	-1,753.90	1,099.34	991.94	107.40	10.236		
8,500.00	7,042.53	8,631.21	7,067.97	55.49	57.08	91.33	1,390.94	-1,853.88	1,099.37	987.37	112.00	9.816		
8,600.00	7,040.78	8,731.20	7,067.69	57.86	59.40	91.40	1,390.19	-1,953.87	1,099.41	982.71	116.70	9.421		
8,700.00	7,039.03	8,831.19	7,067.40	60.28	61.77	91.48	1,389.44	-2,053.85	1,099.44	977.96	121.48	9.050		
8,800.00	7,037.28	8,931.18	7,067.12	62.74	64.17	91.55	1,388.68	-2,153.84	1,099.48	973.14	126.35	8.702		
8,900.00	7,035.53	9,031.17	7,066.83	65.23	66.62	91.63	1,387.93	-2,253.83	1,099.52	968.25	131.27	8.376		
9,000.00	7,033.78	9,131.16	7,066.55	67.74	69.09	91.71	1,387.18	-2,353.81	1,099.57	963.30	136.26	8.070		
9,100.00	7,032.03	9,231.15	7,066.26	70.29	71.60	91.78	1,386.43	-2,453.80	1,099.61	958.31	141.30	7.782		
9,200.00	7,030.28	9,331.14	7,065.98	72.85	74.13	91.86	1,385.67	-2,553.78	1,099.66	953.27	146.39	7.512		
9,300.00	7,028.54	9,431.13	7,065.69	75.44	76.68	91.94	1,384.92	-2,653.77	1,099.71	948.18	151.53	7.258		
9,400.00	7,026.79	9,531.12	7,065.41	78.05	79.25	92.01	1,384.17	-2,753.76	1,099.76	943.06	156.70	7.018		
9,500.00	7,025.04	9,631.11	7,065.12	80.67	81.85	92.09	1,383.42	-2,853.74	1,099.81	937.91	161.90	6.793		
9,600.00	7,023.29	9,731.10	7,064.84	83.31	84.46	92.16	1,382.66	-2,953.73	1,099.87	932.73	167.14	6.581		
9,700.00	7,021.54	9,831.08	7,064.56	85.96	87.08	92.24	1,381.91	-3,053.71	1,099.92	927.52	172.40	6.380		
9,800.00	7,019.79	9,931.07	7,064.27	88.63	89.72	92.32	1,381.16	-3,153.70	1,099.98	922.28	177.70	6.190		
9,900.00	7,018.04	10,031.06	7,063.99	91.30	92.38	92.39	1,380.41	-3,253.69	1,100.04	917.03	183.01	6.011		
10,000.00	7,016.29	10,131.05	7,063.70	93.99	95.04	92.47	1,379.66	-3,353.67	1,100.10	911.76	188.35	5.841		
10,100.00	7,014.54	10,231.04	7,063.42	96.69	97.72	92.55	1,378.90	-3,453.66	1,100.17	906.46	193.70	5.680		
10,200.00	7,012.79	10,331.03	7,063.13	99.40	100.40	92.62	1,378.15	-3,553.65	1,100.23	901.16	199.08	5.527		
10,300.00	7,011.04	10,431.02	7,062.85	102.11	103.10	92.70	1,377.40	-3,653.63	1,100.30	895.84	204.47	5.381		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 30N-16B-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	10,531.01	7,062.56	104.83	105.80	92.77	1,376.65	-3,753.62	1,100.37	890.50	209.87	5.243		
10,500.00	7,007.54	10,631.00	7,062.28	107.56	108.51	92.85	1,375.89	-3,853.60	1,100.45	885.15	215.29	5.111		
10,600.00	7,005.79	10,730.99	7,061.99	110.30	111.23	92.93	1,375.14	-3,953.59	1,100.52	879.80	220.72	4.986		
10,700.00	7,004.04	10,830.98	7,061.71	113.04	113.96	93.00	1,374.39	-4,053.58	1,100.60	874.43	226.17	4.866		
10,800.00	7,002.29	10,930.97	7,061.42	115.79	116.69	93.08	1,373.64	-4,153.56	1,100.67	869.05	231.62	4.752		
10,900.00	7,000.54	11,030.96	7,061.14	118.54	119.43	93.16	1,372.88	-4,253.55	1,100.75	863.67	237.08	4.643		
11,000.00	6,998.79	11,130.95	7,060.85	121.30	122.17	93.23	1,372.13	-4,353.53	1,100.84	858.28	242.56	4.538		
11,100.00	6,997.04	11,230.93	7,060.57	124.06	124.92	93.31	1,371.38	-4,453.52	1,100.92	852.88	248.04	4.439		
11,200.00	6,995.29	11,330.92	7,060.28	126.83	127.67	93.38	1,370.63	-4,553.51	1,101.00	847.48	253.52	4.343		
11,300.00	6,993.54	11,430.91	7,060.00	129.60	130.43	93.46	1,369.87	-4,653.49	1,101.09	842.07	259.02	4.251		
11,400.00	6,991.80	11,530.90	7,059.71	132.37	133.19	93.54	1,369.12	-4,753.48	1,101.18	836.66	264.52	4.163		
11,500.00	6,990.05	11,630.89	7,059.43	135.15	135.96	93.61	1,368.37	-4,853.46	1,101.27	831.24	270.03	4.078		
11,600.00	6,988.30	11,730.88	7,059.15	137.93	138.73	93.69	1,367.62	-4,953.45	1,101.37	825.82	275.55	3.997		
11,700.00	6,986.55	11,830.87	7,058.86	140.72	141.50	93.76	1,366.87	-5,053.44	1,101.46	820.40	281.07	3.919		
11,800.00	6,984.80	11,930.86	7,058.58	143.50	144.28	93.84	1,366.11	-5,153.42	1,101.56	814.97	286.59	3.844		
11,900.00	6,983.05	12,030.85	7,058.29	146.29	147.06	93.92	1,365.36	-5,253.41	1,101.66	809.54	292.12	3.771		
12,000.00	6,981.30	12,130.84	7,058.01	149.09	149.84	93.99	1,364.61	-5,353.39	1,101.76	804.11	297.65	3.702		
12,100.00	6,979.55	12,230.83	7,057.72	151.88	152.62	94.07	1,363.86	-5,453.38	1,101.86	798.68	303.19	3.634		
12,200.00	6,977.80	12,330.82	7,057.44	154.68	155.41	94.14	1,363.10	-5,553.37	1,101.97	793.24	308.73	3.569		
12,300.00	6,976.05	12,430.81	7,057.15	157.48	158.20	94.22	1,362.35	-5,653.35	1,102.08	787.81	314.27	3.507		
12,400.00	6,974.30	12,530.80	7,056.87	160.28	161.00	94.30	1,361.60	-5,753.34	1,102.19	782.37	319.82	3.446		
12,500.00	6,972.55	12,630.78	7,056.58	163.08	163.79	94.37	1,360.85	-5,853.32	1,102.30	776.93	325.36	3.388		
12,600.00	6,970.80	12,730.77	7,056.30	165.89	166.59	94.45	1,360.09	-5,953.31	1,102.41	771.49	330.92	3.331		
12,700.00	6,969.05	12,830.76	7,056.01	168.69	169.39	94.52	1,359.34	-6,053.30	1,102.52	766.06	336.47	3.277		
12,800.00	6,967.30	12,930.75	7,055.73	171.50	172.19	94.60	1,358.59	-6,153.28	1,102.64	760.62	342.02	3.224		
12,900.00	6,965.55	13,030.74	7,055.44	174.31	174.99	94.68	1,357.84	-6,253.27	1,102.76	755.18	347.58	3.173		
13,000.00	6,963.80	13,130.73	7,055.16	177.12	177.80	94.75	1,357.08	-6,353.25	1,102.88	749.74	353.14	3.123		
13,100.00	6,962.05	13,230.72	7,054.87	179.94	180.60	94.83	1,356.33	-6,453.24	1,103.00	744.31	358.70	3.075		
13,200.00	6,960.30	13,330.71	7,054.59	182.75	183.41	94.90	1,355.58	-6,553.23	1,103.13	738.87	364.26	3.028		
13,300.00	6,958.55	13,430.70	7,054.30	185.57	186.22	94.98	1,354.83	-6,653.21	1,103.25	733.43	369.82	2.983		
13,400.00	6,956.80	13,530.69	7,054.02	188.38	189.03	95.05	1,354.08	-6,753.20	1,103.38	728.00	375.38	2.939		
13,500.00	6,955.05	13,630.68	7,053.74	191.20	191.85	95.13	1,353.32	-6,853.18	1,103.51	722.57	380.95	2.897		
13,600.00	6,953.31	13,730.67	7,053.45	194.02	194.66	95.21	1,352.57	-6,953.17	1,103.65	717.13	386.51	2.855		
13,700.00	6,951.56	13,830.66	7,053.17	196.84	197.47	95.28	1,351.82	-7,053.16	1,103.78	711.70	392.08	2.815		
13,800.00	6,949.81	13,930.64	7,052.88	199.67	200.29	95.36	1,351.07	-7,153.14	1,103.92	706.27	397.64	2.776		
13,900.00	6,948.06	14,030.63	7,052.60	202.49	203.11	95.43	1,350.31	-7,253.13	1,104.05	700.85	403.21	2.738		
14,000.00	6,946.31	14,130.62	7,052.31	205.31	205.93	95.51	1,349.56	-7,353.11	1,104.19	695.42	408.77	2.701		
14,100.00	6,944.56	14,230.61	7,052.03	208.14	208.75	95.58	1,348.81	-7,453.10	1,104.34	690.00	414.34	2.665		
14,200.00	6,942.81	14,330.60	7,051.74	210.96	211.57	95.66	1,348.06	-7,553.09	1,104.48	684.58	419.90	2.630		
14,300.00	6,941.06	14,430.59	7,051.46	213.79	214.39	95.74	1,347.30	-7,653.07	1,104.62	679.16	425.47	2.596		
14,400.00	6,939.31	14,530.58	7,051.17	216.62	217.21	95.81	1,346.55	-7,753.06	1,104.77	673.74	431.03	2.563		
14,500.00	6,937.56	14,630.57	7,050.89	219.44	220.04	95.89	1,345.80	-7,853.04	1,104.92	668.32	436.60	2.531		
14,600.00	6,935.81	14,730.56	7,050.60	222.27	222.86	95.96	1,345.05	-7,953.03	1,105.07	662.91	442.16	2.499		
14,700.00	6,934.06	14,830.55	7,050.32	225.10	225.68	96.04	1,344.29	-8,053.02	1,105.23	657.50	447.73	2.469		
14,800.00	6,932.31	14,930.54	7,050.03	227.93	228.51	96.11	1,343.54	-8,153.00	1,105.38	652.09	453.29	2.439		
14,817.75	6,932.00	14,942.37	7,050.00	228.43	228.85	96.12	1,343.45	-8,164.84	1,105.43	651.28	454.14	2.434 SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 31C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	3.28	3.28	0.00	20.03	0.00	20.03					
100.00	100.00	100.00	100.00	3.28	3.28	0.00	20.03	0.00	20.03	13.46	6.57	3.049		
200.00	200.00	200.00	200.00	3.34	3.34	0.00	20.03	0.00	20.03	13.35	6.67	3.001		
300.00	300.00	300.00	300.00	3.44	3.44	0.00	20.03	0.00	20.03	13.14	6.89	2.907		
400.00	400.00	400.00	400.00	3.60	3.60	0.00	20.03	0.00	20.03	12.82	7.21	2.779		
500.00	500.00	500.00	500.00	3.81	3.81	0.00	20.03	0.00	20.03	12.42	7.61	2.631		
600.00	599.98	599.98	599.98	4.05	4.05	29.88	20.03	0.00	18.50	10.40	8.09	2.286		
700.00	699.86	699.41	699.39	4.32	4.32	35.82	21.62	-0.67	15.97	7.33	8.64	1.849		
743.80	743.60	743.00	742.94	4.45	4.44	37.23	23.32	-1.39	15.68	6.79	8.89	1.764 CC, ES		
800.00	799.72	798.99	798.83	4.62	4.62	37.20	26.37	-2.68	16.13	6.89	9.24	1.746		
900.00	899.58	901.02	898.61	4.93	4.94	36.02	32.41	-5.23	17.45	7.57	9.88	1.766		
1,000.00	999.44	1,001.03	998.38	5.27	5.28	35.01	38.45	-7.78	18.78	8.23	10.55	1.780		
1,100.00	1,099.31	1,101.04	1,098.16	5.62	5.63	34.13	44.49	-10.33	20.11	8.86	11.25	1.787		
1,200.00	1,199.17	1,201.05	1,197.93	5.98	5.99	33.37	50.53	-12.89	21.45	9.47	11.98	1.791		
1,300.00	1,299.03	1,301.06	1,297.71	6.36	6.36	32.69	56.58	-15.44	22.79	10.07	12.73	1.791		
1,400.00	1,398.89	1,401.06	1,397.49	6.74	6.74	32.09	62.62	-17.99	24.14	10.65	13.49	1.789		
1,500.00	1,498.75	1,501.07	1,497.26	7.13	7.13	31.55	68.66	-20.54	25.48	11.22	14.27	1.786		
1,600.00	1,598.61	1,601.08	1,597.04	7.52	7.53	31.07	74.70	-23.09	26.83	11.78	15.06	1.782		
1,700.00	1,698.47	1,701.09	1,696.81	7.92	7.93	30.63	80.74	-25.64	28.18	12.33	15.85	1.778		
1,800.00	1,798.33	1,801.10	1,796.59	8.32	8.33	30.23	86.78	-28.19	29.54	12.87	16.66	1.773		
1,900.00	1,898.19	1,901.11	1,896.36	8.73	8.74	29.87	92.82	-30.75	30.89	13.41	17.48	1.767		
2,000.00	1,998.05	2,001.12	1,996.14	9.14	9.15	29.54	98.86	-33.30	32.24	13.94	18.30	1.762		
2,100.00	2,097.91	2,101.13	2,095.91	9.55	9.56	29.23	104.90	-35.85	33.60	14.47	19.13	1.757		
2,200.00	2,197.78	2,201.14	2,195.69	9.97	9.98	28.95	110.94	-38.40	34.95	15.00	19.96	1.751		
2,300.00	2,297.64	2,301.15	2,295.46	10.39	10.40	28.69	116.98	-40.95	36.31	15.52	20.79	1.746		
2,400.00	2,397.50	2,401.16	2,395.24	10.81	10.82	28.45	123.02	-43.50	37.67	16.04	21.63	1.741		
2,500.00	2,497.36	2,501.17	2,495.02	11.23	11.24	28.22	129.06	-46.05	39.03	16.55	22.48	1.736		
2,600.00	2,597.22	2,601.18	2,594.79	11.65	11.67	28.01	135.10	-48.61	40.39	17.06	23.32	1.732		
2,700.00	2,697.08	2,701.19	2,694.57	12.07	12.09	27.82	141.14	-51.16	41.75	17.57	24.17	1.727		
2,800.00	2,796.94	2,801.20	2,794.34	12.50	12.52	27.63	147.18	-53.71	43.11	18.08	25.03	1.722		
2,900.00	2,896.80	2,901.20	2,894.12	12.92	12.95	27.46	153.22	-56.26	44.47	18.59	25.88	1.718		
3,000.00	2,996.66	3,001.21	2,993.89	13.35	13.37	27.30	159.26	-58.81	45.83	19.09	26.74	1.714		
3,100.00	3,096.52	3,101.22	3,093.67	13.78	13.80	27.15	165.30	-61.36	47.19	19.60	27.59	1.710		
3,200.00	3,196.38	3,201.23	3,193.44	14.21	14.23	27.00	171.34	-63.91	48.55	20.10	28.45	1.706		
3,300.00	3,296.25	3,301.24	3,293.22	14.64	14.66	26.87	177.38	-66.47	49.91	20.60	29.31	1.703		
3,400.00	3,396.11	3,401.25	3,392.99	15.07	15.10	26.74	183.42	-69.02	51.27	21.10	30.18	1.699		
3,500.00	3,495.97	3,501.26	3,492.77	15.50	15.53	26.61	189.46	-71.57	52.64	21.60	31.04	1.696		
3,600.00	3,595.83	3,601.27	3,592.55	15.93	15.96	26.50	195.50	-74.12	54.00	22.09	31.90	1.692		
3,700.00	3,695.69	3,701.28	3,692.32	16.36	16.40	26.39	201.54	-76.67	55.36	22.59	32.77	1.689		
3,800.00	3,795.55	3,801.29	3,792.10	16.80	16.83	26.28	207.58	-79.22	56.72	23.09	33.64	1.686		
3,900.00	3,895.41	3,901.30	3,891.87	17.23	17.26	26.18	213.62	-81.77	58.09	23.58	34.51	1.683		
4,000.00	3,995.27	4,001.31	3,991.65	17.66	17.70	26.09	219.66	-84.33	59.45	24.08	35.37	1.681		
4,100.00	4,095.13	4,101.32	4,091.42	18.10	18.13	25.99	225.71	-86.88	60.81	24.57	36.24	1.678		
4,200.00	4,194.99	4,201.33	4,191.20	18.53	18.57	25.91	231.75	-89.43	62.18	25.06	37.11	1.675		
4,300.00	4,294.85	4,301.34	4,290.97	18.96	19.00	25.82	237.79	-91.98	63.54	25.56	37.98	1.673		
4,400.00	4,394.71	4,401.34	4,390.75	19.40	19.44	25.74	243.83	-94.53	64.90	26.05	38.86	1.670		
4,500.00	4,494.58	4,501.35	4,490.52	19.83	19.88	25.67	249.87	-97.08	66.27	26.54	39.73	1.668		
4,600.00	4,594.44	4,601.36	4,590.30	20.27	20.31	25.59	255.91	-99.63	67.63	27.03	40.60	1.666		
4,700.00	4,694.30	4,701.37	4,690.07	20.70	20.75	25.52	261.95	-102.19	69.00	27.52	41.47	1.664		
4,800.00	4,794.16	4,801.38	4,789.85	21.14	21.19	25.45	267.99	-104.74	70.36	28.02	42.35	1.662		
4,900.00	4,894.02	4,901.39	4,889.63	21.58	21.63	25.39	274.03	-107.29	71.73	28.51	43.22	1.660		
5,000.00	4,993.88	5,001.40	4,989.40	22.01	22.06	25.32	280.07	-109.84	73.09	29.00	44.09	1.658		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 31C-16-M - OH - PLAN #1												Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,100.00	5,093.74	5,101.41	5,089.18	22.45	22.50	25.26	286.11	-112.39	74.45	29.49	44.97	1.656	
5,200.00	5,193.60	5,201.42	5,188.95	22.89	22.94	25.20	292.15	-114.94	75.82	29.98	45.84	1.654	
5,300.00	5,293.46	5,301.43	5,288.73	23.32	23.38	25.15	298.19	-117.49	77.18	30.46	46.72	1.652	
5,400.00	5,393.32	5,401.44	5,388.50	23.76	23.82	25.09	304.23	-120.05	78.55	30.95	47.60	1.650	
5,500.00	5,493.18	5,498.55	5,488.28	24.20	24.24	25.04	310.27	-122.60	79.91	31.45	48.46	1.649	
5,600.00	5,593.05	5,601.46	5,588.05	24.64	24.69	24.99	316.31	-125.15	81.28	31.93	49.35	1.647	
5,700.00	5,692.91	5,701.47	5,687.83	25.07	25.13	24.94	322.35	-127.70	82.64	32.42	50.22	1.645	
5,800.00	5,792.77	5,801.48	5,787.60	25.51	25.57	24.89	328.39	-130.25	84.01	32.91	51.10	1.644	
5,900.00	5,892.63	5,901.48	5,887.38	25.95	26.01	24.85	334.43	-132.80	85.37	33.39	51.98	1.642	
6,000.00	5,992.49	6,001.49	5,987.16	26.39	26.45	24.80	340.47	-135.35	86.74	33.88	52.86	1.641	
6,100.00	6,092.35	6,101.50	6,086.93	26.82	26.89	24.76	346.51	-137.91	88.10	34.37	53.73	1.640	
6,200.00	6,192.21	6,201.51	6,186.71	27.26	27.33	24.72	352.55	-140.46	89.47	34.86	54.61	1.638	
6,300.00	6,292.07	6,301.52	6,286.48	27.70	27.77	24.68	358.59	-143.01	90.83	35.34	55.49	1.637	
6,400.00	6,391.93	6,401.53	6,386.26	28.14	28.21	24.64	364.63	-145.56	92.20	35.83	56.37	1.636	
6,500.00	6,491.69	6,501.59	6,485.98	28.58	28.65	24.63	370.67	-148.11	93.50	36.25	57.25	1.633	
6,600.00	6,589.80	6,602.95	6,584.41	29.02	29.09	24.60	376.63	-150.63	94.85	36.70	58.15	1.648	
6,700.00	6,683.86	6,695.26	6,682.31	29.46	29.50	106.24	382.57	-154.98	105.40	46.43	58.98	1.787	
6,800.00	6,771.56	6,799.81	6,784.79	29.92	29.96	120.59	388.87	-174.07	122.53	63.19	59.34	2.065	
6,900.00	6,850.72	6,910.58	6,888.41	30.40	30.45	130.63	395.35	-212.32	143.57	85.16	58.41	2.458	
7,000.00	6,919.40	7,028.29	6,989.46	30.96	31.00	137.53	401.81	-271.98	165.64	109.85	55.80	2.969	
7,100.00	6,975.92	7,153.34	7,082.88	31.62	31.63	142.22	407.93	-354.60	186.49	134.97	51.52	3.620	
7,200.00	7,018.87	7,285.67	7,162.17	32.44	32.47	145.28	413.34	-460.11	204.32	158.29	46.03	4.439	
7,300.00	7,047.21	7,424.41	7,220.07	33.42	33.60	147.08	417.58	-585.81	217.67	177.17	40.50	5.375	
7,400.00	7,060.23	7,567.76	7,249.94	34.55	35.10	147.79	420.21	-725.68	225.43	188.45	36.98	6.096	
7,500.00	7,060.03	7,687.92	7,252.79	35.83	36.57	147.74	421.09	-845.74	227.95	190.29	37.66	6.053	
7,600.00	7,058.28	7,787.90	7,252.43	37.28	37.99	147.64	421.65	-945.72	229.83	190.24	39.59	5.805	
7,700.00	7,056.53	7,887.89	7,252.06	38.89	39.55	147.55	422.22	-1,045.70	231.70	189.98	41.73	5.553	
7,800.00	7,054.78	7,987.87	7,251.70	40.63	41.26	147.46	422.79	-1,145.68	233.58	189.53	44.04	5.303	
7,900.00	7,053.03	8,087.85	7,251.33	42.50	43.09	147.37	423.35	-1,245.66	235.45	188.93	46.52	5.061	
8,000.00	7,051.28	8,187.83	7,250.96	44.47	45.02	147.28	423.92	-1,345.63	237.33	188.20	49.13	4.831	
8,100.00	7,049.53	8,287.81	7,250.60	46.53	47.05	147.19	424.49	-1,445.61	239.21	187.35	51.86	4.613	
8,200.00	7,047.78	8,387.79	7,250.23	48.67	49.17	147.11	425.05	-1,545.59	241.08	186.40	54.69	4.409	
8,300.00	7,046.03	8,487.78	7,249.87	50.89	51.35	147.02	425.62	-1,645.57	242.96	185.36	57.60	4.218	
8,400.00	7,044.28	8,587.76	7,249.50	53.16	53.60	146.94	426.19	-1,745.55	244.84	184.24	60.60	4.040	
8,500.00	7,042.53	8,687.74	7,249.13	55.49	55.91	146.86	426.75	-1,845.53	246.72	183.06	63.66	3.876	
8,600.00	7,040.78	8,787.72	7,248.77	57.86	58.26	146.78	427.32	-1,945.51	248.60	181.82	66.78	3.723	
8,700.00	7,039.03	8,887.70	7,248.40	60.28	60.66	146.70	427.89	-2,045.49	250.48	180.53	69.96	3.581	
8,800.00	7,037.28	8,987.69	7,248.04	62.74	63.10	146.62	428.45	-2,145.47	252.36	179.18	73.18	3.449	
8,900.00	7,035.53	9,087.67	7,247.67	65.23	65.57	146.55	429.02	-2,245.45	254.24	177.80	76.44	3.326	
9,000.00	7,033.78	9,187.65	7,247.30	67.74	68.07	146.47	429.59	-2,345.43	256.13	176.38	79.74	3.212	
9,100.00	7,032.03	9,287.63	7,246.94	70.29	70.60	146.40	430.16	-2,445.41	258.01	174.93	83.08	3.105	
9,200.00	7,030.28	9,387.61	7,246.57	72.85	73.15	146.32	430.72	-2,545.39	259.89	173.44	86.45	3.006	
9,300.00	7,028.54	9,487.59	7,246.20	75.44	75.73	146.25	431.29	-2,645.37	261.77	171.93	89.85	2.914	
9,400.00	7,026.79	9,587.58	7,245.84	78.05	78.33	146.18	431.86	-2,745.35	263.66	170.39	93.27	2.827	
9,500.00	7,025.04	9,687.56	7,245.47	80.67	80.94	146.11	432.42	-2,845.33	265.54	168.82	96.72	2.745	
9,600.00	7,023.29	9,787.54	7,245.11	83.31	83.57	146.04	432.99	-2,945.31	267.42	167.23	100.19	2.669	
9,700.00	7,021.54	9,887.52	7,244.74	85.96	86.22	145.97	433.56	-3,045.29	269.31	165.63	103.68	2.597	
9,800.00	7,019.79	9,987.50	7,244.37	88.63	88.87	145.90	434.12	-3,145.27	271.19	164.00	107.19	2.530	
9,900.00	7,018.04	10,087.48	7,244.01	91.30	91.54	145.84	434.69	-3,245.24	273.08	162.36	110.72	2.466	
10,000.00	7,016.29	10,187.47	7,243.64	93.99	94.23	145.77	435.26	-3,345.22	274.97	160.70	114.27	2.406	
10,100.00	7,014.54	10,287.45	7,243.28	96.69	96.92	145.71	435.82	-3,445.20	276.85	159.02	117.83	2.350	
10,200.00	7,012.79	10,387.43	7,242.91	99.40	99.62	145.64	436.39	-3,545.18	278.74	157.33	121.41	2.296	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 31C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	7,011.04	10,487.41	7,242.54	102.11	102.33	145.58	436.96	-3,645.16	280.63	155.63	125.00	2.245		
10,400.00	7,009.29	10,587.39	7,242.18	104.83	105.05	145.52	437.52	-3,745.14	282.51	153.91	128.60	2.197		
10,500.00	7,007.54	10,687.37	7,241.81	107.56	107.77	145.45	438.09	-3,845.12	284.40	152.18	132.22	2.151		
10,600.00	7,005.79	10,787.36	7,241.44	110.30	110.51	145.39	438.66	-3,945.10	286.29	150.44	135.85	2.107		
10,700.00	7,004.04	10,887.34	7,241.08	113.04	113.25	145.33	439.22	-4,045.08	288.18	148.68	139.49	2.066		
10,800.00	7,002.29	10,987.32	7,240.71	115.79	115.99	145.28	439.79	-4,145.06	290.06	146.92	143.15	2.026		
10,900.00	7,000.54	11,087.30	7,240.35	118.54	118.74	145.22	440.36	-4,245.04	291.95	145.14	146.81	1.989		
11,000.00	6,998.79	11,187.28	7,239.98	121.30	121.50	145.16	440.92	-4,345.02	293.84	143.36	150.48	1.953		
11,100.00	6,997.04	11,287.26	7,239.61	124.06	124.26	145.10	441.49	-4,445.00	295.73	141.57	154.17	1.918		
11,200.00	6,995.29	11,387.25	7,239.25	126.83	127.02	145.05	442.06	-4,544.98	297.62	139.76	157.86	1.885		
11,300.00	6,993.54	11,487.23	7,238.88	129.60	129.79	144.99	442.62	-4,644.96	299.51	137.95	161.56	1.854		
11,400.00	6,991.80	11,587.21	7,238.52	132.37	132.57	144.94	443.19	-4,744.94	301.40	136.13	165.27	1.824		
11,500.00	6,990.05	11,687.19	7,238.15	135.15	135.34	144.88	443.76	-4,844.92	303.29	134.30	168.99	1.795		
11,600.00	6,988.30	11,787.17	7,237.78	137.93	138.12	144.83	444.32	-4,944.90	305.18	132.47	172.71	1.767		
11,700.00	6,986.55	11,887.16	7,237.42	140.72	140.91	144.78	444.89	-5,044.87	307.07	130.63	176.45	1.740		
11,800.00	6,984.80	11,987.14	7,237.05	143.50	143.69	144.73	445.46	-5,144.85	308.96	128.78	180.19	1.715		
11,900.00	6,983.05	12,087.12	7,236.69	146.29	146.48	144.67	446.02	-5,244.83	310.86	126.92	183.94	1.690		
12,000.00	6,981.30	12,187.10	7,236.32	149.09	149.28	144.62	446.59	-5,344.81	312.75	125.05	187.69	1.666		
12,100.00	6,979.55	12,287.08	7,235.95	151.88	152.07	144.57	447.16	-5,444.79	314.64	123.18	191.45	1.643		
12,200.00	6,977.80	12,387.06	7,235.59	154.68	154.87	144.52	447.73	-5,544.77	316.53	121.31	195.22	1.621		
12,300.00	6,976.05	12,487.05	7,235.22	157.48	157.67	144.47	448.29	-5,644.75	318.42	119.42	199.00	1.600		
12,400.00	6,974.30	12,587.03	7,234.85	160.28	160.47	144.43	448.86	-5,744.73	320.32	117.54	202.78	1.580		
12,500.00	6,972.55	12,687.01	7,234.49	163.08	163.27	144.38	449.43	-5,844.71	322.21	115.64	206.57	1.560		
12,600.00	6,970.80	12,786.99	7,234.12	165.89	166.08	144.33	449.99	-5,944.69	324.10	113.74	210.36	1.541		
12,700.00	6,969.05	12,886.97	7,233.76	168.69	168.89	144.28	450.56	-6,044.67	326.00	111.84	214.16	1.522		
12,800.00	6,967.30	12,986.95	7,233.39	171.50	171.70	144.24	451.13	-6,144.65	327.89	109.93	217.96	1.504		
12,900.00	6,965.55	13,086.94	7,233.02	174.31	174.51	144.19	451.69	-6,244.63	329.78	108.01	221.77	1.487 Level 3		
13,000.00	6,963.80	13,186.92	7,232.66	177.12	177.32	144.15	452.26	-6,344.61	331.68	106.09	225.59	1.470 Level 3		
13,100.00	6,962.05	13,286.90	7,232.29	179.94	180.14	144.10	452.83	-6,444.59	333.57	104.16	229.41	1.454 Level 3		
13,200.00	6,960.30	13,386.88	7,231.93	182.75	182.95	144.06	453.39	-6,544.57	335.47	102.23	233.23	1.438 Level 3		
13,300.00	6,958.55	13,486.86	7,231.56	185.57	185.77	144.02	453.96	-6,644.55	337.36	100.30	237.06	1.423 Level 3		
13,400.00	6,956.80	13,586.84	7,231.19	188.38	188.59	143.97	454.53	-6,744.53	339.25	98.36	240.90	1.408 Level 3		
13,500.00	6,955.05	13,686.83	7,230.83	191.20	191.41	143.93	455.09	-6,844.50	341.15	96.41	244.74	1.394 Level 3		
13,600.00	6,953.31	13,786.81	7,230.46	194.02	194.23	143.89	455.66	-6,944.48	343.04	94.46	248.58	1.380 Level 3		
13,700.00	6,951.56	13,886.79	7,230.09	196.84	197.05	143.85	456.23	-7,044.46	344.94	92.51	252.43	1.366 Level 3		
13,800.00	6,949.81	13,986.77	7,229.73	199.67	199.87	143.81	456.79	-7,144.44	346.84	90.55	256.28	1.353 Level 3		
13,900.00	6,948.06	14,086.75	7,229.36	202.49	202.70	143.76	457.36	-7,244.42	348.73	88.59	260.14	1.341 Level 3		
14,000.00	6,946.31	14,186.73	7,229.00	205.31	205.52	143.72	457.93	-7,344.40	350.63	86.63	264.00	1.328 Level 3		
14,100.00	6,944.56	14,286.72	7,228.63	208.14	208.35	143.68	458.49	-7,444.38	352.52	84.66	267.86	1.316 Level 3		
14,200.00	6,942.81	14,386.70	7,228.26	210.96	211.18	143.64	459.06	-7,544.36	354.42	82.69	271.73	1.304 Level 3		
14,300.00	6,941.06	14,486.68	7,227.90	213.79	214.01	143.61	459.63	-7,644.34	356.32	80.71	275.61	1.293 Level 3		
14,400.00	6,939.31	14,586.66	7,227.53	216.62	216.84	143.57	460.19	-7,744.32	358.21	78.73	279.48	1.282 Level 3		
14,500.00	6,937.56	14,686.64	7,227.17	219.44	219.67	143.53	460.76	-7,844.30	360.11	76.75	283.36	1.271 Level 3		
14,600.00	6,935.81	14,786.63	7,226.80	222.27	222.50	143.49	461.33	-7,944.28	362.00	74.76	287.25	1.260 Level 3		
14,700.00	6,934.06	14,886.61	7,226.43	225.10	225.33	143.45	461.89	-8,044.26	363.90	72.77	291.13	1.250 Level 2		
14,800.00	6,932.31	14,986.59	7,226.07	227.93	228.16	143.42	462.46	-8,144.24	365.80	70.77	295.02	1.240 Level 2		
14,817.75	6,932.00	15,004.33	7,226.00	228.43	228.67	143.41	462.56	-8,161.98	366.14	70.42	295.71	1.238 Level 2, SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 33C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	1.00	0.00	3.28	3.28	-179.49	-279.80	-2.50	279.81					
100.00	100.00	101.00	100.00	3.28	3.28	-179.49	-279.80	-2.50	279.81	273.24	6.57	42.591		
200.00	200.00	199.00	200.00	3.34	3.34	-179.49	-279.80	-2.50	279.81	273.14	6.67	41.930 CC, ES		
300.00	300.00	290.18	291.17	3.44	3.43	-179.47	-281.21	-2.62	281.36	274.48	6.88	40.886		
400.00	400.00	381.10	381.97	3.60	3.56	-179.40	-285.50	-2.98	286.08	278.89	7.19	39.767		
500.00	500.00	471.64	472.24	3.81	3.73	-179.30	-292.62	-3.57	293.96	286.36	7.60	38.698		
600.00	599.98	561.47	561.51	4.05	3.94	-151.81	-302.49	-4.39	306.49	298.42	8.07	37.961		
700.00	699.86	650.04	649.19	4.32	4.17	-151.93	-314.95	-5.43	324.77	316.16	8.61	37.718		
800.00	799.72	737.45	735.30	4.62	4.43	-152.11	-329.89	-6.67	346.45	337.27	9.18	37.751		
900.00	899.58	823.62	819.70	4.93	4.72	-152.24	-347.17	-8.11	371.07	361.29	9.77	37.977		
1,000.00	999.44	908.41	902.22	5.27	5.03	-152.32	-366.64	-9.73	398.56	388.18	10.38	38.390		
1,100.00	1,099.31	991.77	982.69	5.62	5.36	-152.36	-388.13	-11.51	428.85	417.85	11.01	38.967		
1,200.00	1,199.17	1,086.58	1,073.94	5.98	5.76	-152.38	-413.93	-13.66	460.52	448.85	11.67	39.447		
1,300.00	1,299.03	1,181.43	1,165.19	6.36	6.18	-152.41	-439.72	-15.80	492.19	479.81	12.37	39.780		
1,400.00	1,398.89	1,276.28	1,256.45	6.74	6.62	-152.43	-465.51	-17.95	523.86	510.76	13.10	40.003		
1,500.00	1,498.75	1,371.14	1,347.70	7.13	7.06	-152.44	-491.31	-20.09	555.52	541.69	13.84	40.145		
1,600.00	1,598.61	1,465.99	1,438.95	7.52	7.52	-152.46	-517.10	-22.24	587.19	572.60	14.60	40.225		
1,700.00	1,698.47	1,560.84	1,530.21	7.92	7.99	-152.47	-542.89	-24.38	618.86	603.49	15.37	40.259		
1,800.00	1,798.33	1,655.70	1,621.46	8.32	8.46	-152.48	-568.68	-26.53	650.53	634.37	16.16	40.258		
1,900.00	1,898.19	1,750.55	1,712.71	8.73	8.94	-152.49	-594.48	-28.67	682.20	665.24	16.96	40.232		
2,000.00	1,998.05	1,845.40	1,803.97	9.14	9.42	-152.50	-620.27	-30.82	713.87	696.10	17.76	40.188		
2,100.00	2,097.91	1,940.26	1,895.22	9.55	9.91	-152.51	-646.06	-32.96	745.54	726.96	18.58	40.130		
2,200.00	2,197.78	2,035.11	1,986.47	9.97	10.40	-152.52	-671.86	-35.11	777.20	757.81	19.40	40.063		
2,300.00	2,297.64	2,129.96	2,077.73	10.39	10.89	-152.53	-697.65	-37.25	808.87	788.65	20.23	39.988		
2,400.00	2,397.50	2,224.81	2,168.98	10.81	11.39	-152.54	-723.44	-39.40	840.54	819.48	21.06	39.910		
2,500.00	2,497.36	2,319.67	2,260.23	11.23	11.89	-152.54	-749.24	-41.54	872.21	850.31	21.90	39.828		
2,600.00	2,597.22	2,414.52	2,351.49	11.65	12.39	-152.55	-775.03	-43.69	903.88	881.14	22.74	39.745		
2,700.00	2,697.08	2,509.37	2,442.74	12.07	12.89	-152.56	-800.82	-45.83	935.55	911.96	23.59	39.662		
2,800.00	2,796.94	2,604.23	2,533.99	12.50	13.40	-152.56	-826.62	-47.98	967.22	942.78	24.44	39.579		
2,900.00	2,896.80	2,700.92	2,625.25	12.92	13.91	-152.57	-852.41	-50.12	998.89	973.59	25.30	39.483		
3,000.00	2,996.66	2,806.07	2,716.50	13.35	14.48	-152.57	-878.20	-52.27	1,030.55	1,004.35	26.20	39.328		
3,100.00	3,096.52	2,888.78	2,807.75	13.78	14.92	-152.58	-904.00	-54.41	1,062.22	1,035.22	27.00	39.336		
3,200.00	3,196.38	2,983.64	2,899.01	14.21	15.43	-152.58	-929.79	-56.56	1,093.89	1,066.03	27.86	39.258		
3,300.00	3,296.25	3,078.49	2,990.26	14.64	15.94	-152.58	-955.58	-58.70	1,125.56	1,096.83	28.73	39.181		
3,400.00	3,396.11	3,173.34	3,081.52	15.07	16.45	-152.59	-981.38	-60.85	1,157.23	1,127.64	29.59	39.107		
3,500.00	3,495.97	3,268.20	3,172.77	15.50	16.96	-152.59	-1,007.17	-62.99	1,188.90	1,158.44	30.46	39.035		
3,600.00	3,595.83	3,363.05	3,264.02	15.93	17.48	-152.60	-1,032.96	-65.14	1,220.57	1,189.24	31.32	38.965		
3,700.00	3,695.69	3,457.90	3,355.28	16.36	17.99	-152.60	-1,058.76	-67.28	1,252.24	1,220.04	32.19	38.896		
3,800.00	3,795.55	3,552.76	3,446.53	16.80	18.51	-152.60	-1,084.55	-69.43	1,283.90	1,250.84	33.06	38.830		
3,900.00	3,895.41	3,647.61	3,537.78	17.23	19.02	-152.60	-1,110.34	-71.57	1,315.57	1,281.64	33.94	38.766		
4,000.00	3,995.27	3,742.46	3,629.04	17.66	19.54	-152.61	-1,136.14	-73.72	1,347.24	1,312.43	34.81	38.703		
4,100.00	4,095.13	3,837.31	3,720.29	18.10	20.05	-152.61	-1,161.93	-75.86	1,378.91	1,343.23	35.68	38.643		
4,200.00	4,194.99	3,932.17	3,811.54	18.53	20.57	-152.61	-1,187.72	-78.01	1,410.58	1,374.02	36.56	38.584		
4,300.00	4,294.85	4,027.02	3,902.80	18.96	21.09	-152.62	-1,213.52	-80.15	1,442.25	1,404.81	37.43	38.527		
4,400.00	4,394.71	4,121.87	3,994.05	19.40	21.60	-152.62	-1,239.31	-82.30	1,473.92	1,435.61	38.31	38.472		
4,500.00	4,494.58	4,216.73	4,085.30	19.83	22.12	-152.62	-1,265.10	-84.44	1,505.59	1,466.40	39.19	38.419		
4,600.00	4,594.44	4,311.58	4,176.56	20.27	22.64	-152.62	-1,290.90	-86.59	1,537.26	1,497.19	40.07	38.367		
4,700.00	4,694.30	4,406.43	4,267.81	20.71	23.16	-152.62	-1,316.69	-88.73	1,568.92	1,527.98	40.95	38.316		
4,800.00	4,794.16	4,501.29	4,359.06	21.14	23.67	-152.63	-1,342.48	-90.88	1,600.59	1,558.77	41.83	38.267		
4,900.00	4,894.02	4,596.14	4,450.32	21.58	24.19	-152.63	-1,368.27	-93.02	1,632.26	1,589.55	42.71	38.220		
5,000.00	4,993.88	4,709.01	4,541.57	22.01	24.81	-152.63	-1,394.07	-95.17	1,663.93	1,620.25	43.68	38.096		
5,100.00	5,093.74	4,785.84	4,632.82	22.45	25.23	-152.63	-1,419.86	-97.31	1,695.60	1,651.13	44.47	38.129		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 33C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	4,880.70	4,724.08	22.89	25.75	-152.63	-1,445.65	-99.46	1,727.27	1,681.92	45.35	38.085		
5,300.00	5,293.46	4,975.55	4,815.33	23.32	26.27	-152.63	-1,471.45	-101.60	1,758.94	1,712.70	46.24	38.043		
5,400.00	5,393.32	5,070.40	4,906.58	23.76	26.79	-152.64	-1,497.24	-103.75	1,790.61	1,743.49	47.12	38.002		
5,500.00	5,493.18	5,165.26	4,997.84	24.20	27.31	-152.64	-1,523.03	-105.89	1,822.27	1,774.27	48.00	37.962		
5,600.00	5,593.05	5,260.11	5,089.09	24.64	27.83	-152.64	-1,548.83	-108.04	1,853.94	1,805.06	48.89	37.923		
5,700.00	5,692.91	5,354.96	5,180.34	25.07	28.35	-152.64	-1,574.62	-110.18	1,885.61	1,835.84	49.77	37.885		
5,800.00	5,792.77	5,449.81	5,271.60	25.51	28.87	-152.64	-1,600.41	-112.33	1,917.28	1,866.62	50.66	37.848		
5,900.00	5,892.63	5,544.67	5,362.85	25.95	29.39	-152.64	-1,626.21	-114.47	1,948.95	1,897.41	51.54	37.813		
6,000.00	5,992.49	5,639.52	5,454.10	26.39	29.91	-152.64	-1,652.00	-116.62	1,980.62	1,928.19	52.43	37.778		
6,100.00	6,092.35	5,734.37	5,545.36	26.82	30.43	-152.65	-1,677.79	-118.76	2,012.29	1,958.97	53.31	37.744		
6,200.00	6,192.21	5,829.23	5,636.61	27.26	30.96	-152.65	-1,703.59	-120.91	2,043.96	1,989.75	54.20	37.710		
6,300.00	6,292.07	5,924.08	5,727.87	27.70	31.48	-152.65	-1,729.38	-123.05	2,075.62	2,020.54	55.09	37.678		
6,400.00	6,391.93	6,018.93	5,819.12	28.14	32.00	-152.65	-1,755.17	-125.20	2,107.29	2,051.32	55.98	37.646		
6,500.00	6,491.79	6,113.74	5,910.32	28.58	32.52	-112.35	-1,780.95	-127.34	2,138.93	2,082.07	56.86	37.615		
6,600.00	6,589.80	6,207.32	6,000.36	29.02	33.03	-95.91	-1,806.40	-129.46	2,170.14	2,112.39	57.75	37.578		
6,700.00	6,683.86	6,302.58	6,087.04	29.46	33.56	-90.15	-1,830.90	-131.50	2,200.48	2,141.83	58.65	37.518		
6,800.00	6,771.56	6,381.83	6,168.24	29.92	33.99	-86.82	-1,853.86	-133.41	2,229.81	2,170.32	59.49	37.485		
6,900.00	6,850.72	6,458.46	6,241.97	30.40	34.41	-84.49	-1,874.69	-135.14	2,258.20	2,197.86	60.34	37.425		
7,000.00	6,919.40	6,525.43	6,306.40	30.96	34.78	-82.64	-1,892.90	-136.65	2,285.88	2,224.67	61.21	37.344		
7,100.00	6,975.92	6,581.09	6,359.95	31.62	35.09	-80.96	-1,908.04	-137.91	2,313.10	2,250.97	62.13	37.230		
7,200.00	7,018.87	6,624.07	6,401.29	32.44	35.33	-79.26	-1,919.73	-138.88	2,340.08	2,276.96	63.12	37.073		
7,300.00	7,047.21	6,653.31	6,429.42	33.42	35.49	-77.40	-1,927.68	-139.54	2,366.88	2,302.69	64.18	36.877		
7,400.00	7,060.23	6,668.09	6,443.64	34.55	35.57	-75.34	-1,931.70	-139.88	2,393.36	2,328.07	65.29	36.656		
7,500.00	7,060.03	6,670.34	6,445.81	35.83	35.58	-74.36	-1,932.31	-139.93	2,419.92	2,353.49	66.43	36.426		
7,600.00	7,058.28	6,671.12	6,446.56	37.28	35.58	-74.38	-1,932.52	-139.95	2,449.83	2,382.15	67.68	36.199		
7,700.00	7,056.53	8,121.98	7,248.52	38.89	42.94	-94.46	-2,165.77	-1,032.45	2,471.19	2,391.63	79.56	31.061		
7,800.00	7,054.78	8,221.98	7,247.92	40.63	44.28	-94.48	-2,166.35	-1,132.44	2,471.11	2,388.25	82.86	29.822		
7,900.00	7,053.03	8,321.97	7,247.33	42.50	45.82	-94.51	-2,166.94	-1,232.43	2,471.03	2,384.62	86.41	28.595		
8,000.00	7,051.28	8,421.96	7,246.73	44.47	47.52	-94.54	-2,167.52	-1,332.42	2,470.96	2,380.77	90.19	27.399		
8,100.00	7,049.53	8,521.96	7,246.13	46.53	49.34	-94.57	-2,168.11	-1,432.41	2,470.88	2,376.73	94.15	26.244		
8,200.00	7,047.78	8,621.95	7,245.54	48.67	51.28	-94.59	-2,168.69	-1,532.39	2,470.80	2,372.52	98.29	25.139		
8,300.00	7,046.03	8,721.94	7,244.94	50.89	53.30	-94.62	-2,169.27	-1,632.38	2,470.73	2,368.16	102.57	24.088		
8,400.00	7,044.28	8,821.94	7,244.35	53.16	55.41	-94.65	-2,169.86	-1,732.37	2,470.65	2,363.67	106.99	23.093		
8,500.00	7,042.53	8,921.93	7,243.75	55.49	57.58	-94.67	-2,170.44	-1,832.36	2,470.58	2,359.06	111.52	22.154		
8,600.00	7,040.78	9,021.92	7,243.16	57.86	59.82	-94.70	-2,171.02	-1,932.35	2,470.50	2,354.35	116.15	21.270		
8,700.00	7,039.03	9,121.92	7,242.56	60.28	62.11	-94.73	-2,171.61	-2,032.34	2,470.43	2,349.56	120.87	20.438		
8,800.00	7,037.28	9,221.91	7,241.96	62.74	64.44	-94.75	-2,172.19	-2,132.33	2,470.36	2,344.68	125.68	19.656		
8,900.00	7,035.53	9,321.90	7,241.37	65.23	66.82	-94.78	-2,172.77	-2,232.32	2,470.29	2,339.73	130.55	18.922		
9,000.00	7,033.78	9,421.90	7,240.77	67.74	69.23	-94.81	-2,173.36	-2,332.31	2,470.21	2,334.72	135.49	18.231		
9,100.00	7,032.03	9,521.89	7,240.18	70.29	71.68	-94.84	-2,173.94	-2,432.30	2,470.14	2,329.65	140.49	17.582		
9,200.00	7,030.28	9,621.88	7,239.58	72.85	74.16	-94.86	-2,174.53	-2,532.29	2,470.07	2,324.54	145.54	16.972		
9,300.00	7,028.54	9,721.88	7,238.98	75.44	76.67	-94.89	-2,175.11	-2,632.28	2,470.00	2,319.37	150.63	16.398		
9,400.00	7,026.79	9,821.87	7,238.39	78.05	79.20	-94.92	-2,175.69	-2,732.27	2,469.93	2,314.17	155.76	15.857		
9,500.00	7,025.04	9,921.86	7,237.79	80.67	81.75	-94.94	-2,176.28	-2,832.26	2,469.86	2,308.93	160.93	15.347		
9,600.00	7,023.29	10,021.86	7,237.20	83.31	84.32	-94.97	-2,176.86	-2,932.25	2,469.79	2,303.66	166.14	14.866		
9,700.00	7,021.54	10,121.85	7,236.60	85.96	86.91	-95.00	-2,177.44	-3,032.24	2,469.73	2,298.35	171.37	14.412		
9,800.00	7,019.79	10,221.84	7,236.01	88.63	89.52	-95.02	-2,178.03	-3,132.23	2,469.66	2,293.02	176.63	13.982		
9,900.00	7,018.04	10,321.83	7,235.41	91.30	92.14	-95.05	-2,178.61	-3,232.22	2,469.59	2,287.67	181.92	13.575		
10,000.00	7,016.29	10,421.83	7,234.81	93.99	94.77	-95.08	-2,179.20	-3,332.21	2,469.52	2,282.29	187.23	13.189		
10,100.00	7,014.54	10,521.82	7,234.22	96.69	97.42	-95.11	-2,179.78	-3,432.20	2,469.46	2,276.89	192.57	12.824		
10,200.00	7,012.79	10,621.81	7,233.62	99.40	100.08	-95.13	-2,180.36	-3,532.19	2,469.39	2,271.47	197.92	12.477		
10,300.00	7,011.04	10,721.81	7,233.03	102.11	102.75	-95.16	-2,180.95	-3,632.18	2,469.33	2,266.04	203.29	12.147		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 33C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	10,821.80	7,232.43	104.83	105.43	-95.19	-2,181.53	-3,732.17	2,469.26	2,260.59	208.68	11.833		
10,500.00	7,007.54	10,921.79	7,231.83	107.56	108.12	-95.21	-2,182.11	-3,832.16	2,469.20	2,255.12	214.08	11.534		
10,600.00	7,005.79	11,021.79	7,231.24	110.30	110.82	-95.24	-2,182.70	-3,932.15	2,469.14	2,249.64	219.49	11.249		
10,700.00	7,004.04	11,121.78	7,230.64	113.04	113.52	-95.27	-2,183.28	-4,032.14	2,469.07	2,244.15	224.92	10.978		
10,800.00	7,002.29	11,221.77	7,230.05	115.79	116.24	-95.29	-2,183.87	-4,132.13	2,469.01	2,238.65	230.36	10.718		
10,900.00	7,000.54	11,321.77	7,229.45	118.54	118.96	-95.32	-2,184.45	-4,232.12	2,468.95	2,233.14	235.81	10.470		
11,000.00	6,998.79	11,421.76	7,228.86	121.30	121.69	-95.35	-2,185.03	-4,332.11	2,468.89	2,227.61	241.28	10.233		
11,100.00	6,997.04	11,521.75	7,228.26	124.06	124.42	-95.38	-2,185.62	-4,432.10	2,468.83	2,222.08	246.75	10.005		
11,200.00	6,995.29	11,621.75	7,227.66	126.83	127.16	-95.40	-2,186.20	-4,532.09	2,468.77	2,216.54	252.23	9.788		
11,300.00	6,993.54	11,721.74	7,227.07	129.60	129.90	-95.43	-2,186.78	-4,632.08	2,468.71	2,210.99	257.72	9.579		
11,400.00	6,991.80	11,821.73	7,226.47	132.37	132.65	-95.46	-2,187.37	-4,732.07	2,468.65	2,205.44	263.21	9.379		
11,500.00	6,990.05	11,921.73	7,225.88	135.15	135.40	-95.48	-2,187.95	-4,832.06	2,468.59	2,199.88	268.72	9.187		
11,600.00	6,988.30	12,021.72	7,225.28	137.93	138.16	-95.51	-2,188.54	-4,932.05	2,468.54	2,194.31	274.23	9.002		
11,700.00	6,986.55	12,121.71	7,224.68	140.72	140.92	-95.54	-2,189.12	-5,032.04	2,468.48	2,188.73	279.75	8.824		
11,800.00	6,984.80	12,221.71	7,224.09	143.50	143.68	-95.56	-2,189.70	-5,132.03	2,468.42	2,183.15	285.27	8.653		
11,900.00	6,983.05	12,321.70	7,223.49	146.29	146.45	-95.59	-2,190.29	-5,232.01	2,468.37	2,177.57	290.80	8.488		
12,000.00	6,981.30	12,421.69	7,222.90	149.09	149.23	-95.62	-2,190.87	-5,332.00	2,468.31	2,171.98	296.33	8.330		
12,100.00	6,979.55	12,521.69	7,222.30	151.88	152.00	-95.65	-2,191.45	-5,431.99	2,468.26	2,166.38	301.87	8.176		
12,200.00	6,977.80	12,621.68	7,221.71	154.68	154.78	-95.67	-2,192.04	-5,531.98	2,468.20	2,160.79	307.42	8.029		
12,300.00	6,976.05	12,721.67	7,221.11	157.48	157.56	-95.70	-2,192.62	-5,631.97	2,468.15	2,155.18	312.96	7.886		
12,400.00	6,974.30	12,821.67	7,220.51	160.28	160.34	-95.73	-2,193.21	-5,731.96	2,468.09	2,149.58	318.52	7.749		
12,500.00	6,972.55	12,921.66	7,219.92	163.08	163.13	-95.75	-2,193.79	-5,831.95	2,468.04	2,143.97	324.07	7.616		
12,600.00	6,970.80	13,021.65	7,219.32	165.89	165.92	-95.78	-2,194.37	-5,931.94	2,467.99	2,138.36	329.63	7.487		
12,700.00	6,969.05	13,121.64	7,218.73	168.69	168.71	-95.81	-2,194.96	-6,031.93	2,467.94	2,132.74	335.20	7.363		
12,800.00	6,967.30	13,221.64	7,218.13	171.50	171.50	-95.83	-2,195.54	-6,131.92	2,467.89	2,127.12	340.76	7.242		
12,900.00	6,965.55	13,321.63	7,217.54	174.31	174.30	-95.86	-2,196.12	-6,231.91	2,467.84	2,121.51	346.33	7.126		
13,000.00	6,963.80	13,421.62	7,216.94	177.12	177.10	-95.89	-2,196.71	-6,331.90	2,467.79	2,115.88	351.90	7.013		
13,100.00	6,962.05	13,521.62	7,216.34	179.94	179.90	-95.92	-2,197.29	-6,431.89	2,467.74	2,110.26	357.48	6.903		
13,200.00	6,960.30	13,621.61	7,215.75	182.75	182.70	-95.94	-2,197.88	-6,531.88	2,467.69	2,104.63	363.06	6.797		
13,300.00	6,958.55	13,721.60	7,215.15	185.57	185.50	-95.97	-2,198.46	-6,631.87	2,467.64	2,099.00	368.64	6.694		
13,400.00	6,956.80	13,821.60	7,214.56	188.38	188.31	-96.00	-2,199.04	-6,731.86	2,467.59	2,093.37	374.22	6.594		
13,500.00	6,955.05	13,921.59	7,213.96	191.20	191.11	-96.02	-2,199.63	-6,831.85	2,467.54	2,087.74	379.80	6.497		
13,600.00	6,953.31	14,021.58	7,213.36	194.02	193.92	-96.05	-2,200.21	-6,931.84	2,467.50	2,082.11	385.39	6.403		
13,700.00	6,951.56	14,121.58	7,212.77	196.84	196.73	-96.08	-2,200.79	-7,031.83	2,467.45	2,076.47	390.98	6.311		
13,800.00	6,949.81	14,221.57	7,212.17	199.67	199.54	-96.11	-2,201.38	-7,131.82	2,467.41	2,070.84	396.57	6.222		
13,900.00	6,948.06	14,321.56	7,211.58	202.49	202.35	-96.13	-2,201.96	-7,231.81	2,467.36	2,065.20	402.16	6.135		
14,000.00	6,946.31	14,421.56	7,210.98	205.31	205.17	-96.16	-2,202.55	-7,331.80	2,467.32	2,059.56	407.75	6.051		
14,100.00	6,944.56	14,521.55	7,210.39	208.14	207.98	-96.19	-2,203.13	-7,431.79	2,467.27	2,053.93	413.35	5.969		
14,200.00	6,942.81	14,621.54	7,209.79	210.96	210.80	-96.21	-2,203.71	-7,531.78	2,467.23	2,048.29	418.94	5.889		
14,300.00	6,941.06	14,721.54	7,209.19	213.79	213.62	-96.24	-2,204.30	-7,631.77	2,467.19	2,042.65	424.54	5.811		
14,400.00	6,939.31	14,821.53	7,208.60	216.62	216.43	-96.27	-2,204.88	-7,731.76	2,467.14	2,037.00	430.14	5.736		
14,500.00	6,937.56	14,921.52	7,208.00	219.44	219.25	-96.29	-2,205.46	-7,831.75	2,467.10	2,031.36	435.74	5.662		
14,600.00	6,935.81	15,021.52	7,207.41	222.27	222.07	-96.32	-2,206.05	-7,931.74	2,467.06	2,025.72	441.34	5.590		
14,700.00	6,934.06	15,121.51	7,206.81	225.10	224.89	-96.35	-2,206.63	-8,031.73	2,467.02	2,020.08	446.94	5.520		
14,800.00	6,932.31	15,221.50	7,206.21	227.93	227.72	-96.38	-2,207.22	-8,131.72	2,466.98	2,014.43	452.55	5.451		
14,817.75	6,932.00	15,239.25	7,206.11	228.43	228.22	-96.38	-2,207.32	-8,149.46	2,466.97	2,013.43	453.54	5.439 SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 34C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	2.00	0.00	3.28	3.28	-179.52	-400.01	-3.34	400.03					
100.00	100.00	102.00	100.00	3.28	3.29	-179.52	-400.01	-3.34	400.03	393.46	6.57	60.888		
200.00	200.00	198.00	200.00	3.34	3.34	-179.52	-400.01	-3.34	400.03	393.35	6.67	59.952 CC, ES		
300.00	300.00	285.97	287.96	3.44	3.42	-179.51	-401.30	-3.40	401.49	394.62	6.88	58.392		
400.00	400.00	373.54	375.44	3.60	3.55	-179.49	-405.26	-3.58	406.02	398.84	7.18	56.553		
500.00	500.00	460.79	462.43	3.81	3.71	-179.46	-411.86	-3.89	413.59	406.02	7.57	54.636		
600.00	599.98	547.37	548.52	4.05	3.90	-152.02	-421.02	-4.31	425.71	417.68	8.03	52.991		
700.00	699.86	632.82	633.17	4.32	4.12	-152.13	-432.61	-4.85	443.48	434.93	8.56	51.834		
800.00	799.72	717.20	716.39	4.62	4.37	-152.33	-446.52	-5.49	464.57	455.46	9.11	51.008		
900.00	899.58	800.45	798.06	4.93	4.64	-152.49	-462.64	-6.23	488.50	478.81	9.69	50.428		
1,000.00	999.44	882.46	878.02	5.27	4.93	-152.62	-480.83	-7.08	515.23	504.94	10.28	50.099		
1,100.00	1,099.31	963.12	956.13	5.62	5.25	-152.72	-500.94	-8.01	544.68	533.78	10.90	49.982		
1,200.00	1,199.17	1,042.34	1,032.26	5.98	5.58	-152.81	-522.83	-9.02	576.78	565.26	11.51	50.090		
1,300.00	1,299.03	1,120.05	1,106.31	6.36	5.92	-152.87	-546.33	-10.10	611.46	599.33	12.13	50.396		
1,400.00	1,398.89	1,196.17	1,178.21	6.74	6.28	-152.91	-571.29	-11.26	648.64	635.90	12.75	50.881		
1,500.00	1,498.75	1,270.64	1,247.89	7.13	6.65	-152.94	-597.55	-12.47	688.25	674.89	13.36	51.521		
1,600.00	1,598.61	1,343.43	1,315.31	7.52	7.02	-152.96	-624.95	-13.74	730.20	716.24	13.96	52.304		
1,700.00	1,698.47	1,414.50	1,380.45	7.92	7.41	-152.96	-653.35	-15.05	774.41	759.86	14.55	53.217		
1,800.00	1,798.33	1,483.82	1,443.28	8.32	7.80	-152.96	-682.59	-16.41	820.81	805.67	15.13	54.241		
1,900.00	1,898.19	1,551.39	1,503.82	8.73	8.20	-152.95	-712.55	-17.79	869.30	853.60	15.70	55.365		
2,000.00	1,998.05	1,617.18	1,562.08	9.14	8.60	-152.93	-743.09	-19.21	919.81	903.56	16.25	56.586		
2,100.00	2,097.91	1,681.21	1,618.10	9.55	9.01	-152.91	-774.08	-20.64	972.26	955.47	16.80	57.888		
2,200.00	2,197.78	1,743.49	1,671.89	9.97	9.42	-152.89	-805.42	-22.09	1,026.57	1,009.25	17.32	59.264		
2,300.00	2,297.64	1,804.03	1,723.52	10.39	9.83	-152.87	-836.99	-23.55	1,082.67	1,064.84	17.83	60.717		
2,400.00	2,397.50	1,875.87	1,784.11	10.81	10.32	-152.84	-875.56	-25.33	1,140.22	1,121.74	18.47	61.726		
2,500.00	2,497.36	1,957.54	1,852.91	11.23	10.90	-152.80	-919.51	-27.36	1,197.92	1,178.69	19.23	62.285		
2,600.00	2,597.22	2,039.21	1,921.71	11.65	11.49	-152.77	-963.47	-29.40	1,255.63	1,235.63	20.00	62.767		
2,700.00	2,697.08	2,120.87	1,990.51	12.07	12.08	-152.74	-1,007.42	-31.43	1,313.34	1,292.55	20.79	63.184		
2,800.00	2,796.94	2,202.54	2,059.31	12.50	12.68	-152.72	-1,051.38	-33.46	1,371.05	1,349.47	21.58	63.546		
2,900.00	2,896.80	2,284.21	2,128.11	12.92	13.28	-152.70	-1,095.33	-35.50	1,428.76	1,406.38	22.37	63.858		
3,000.00	2,996.66	2,365.87	2,196.91	13.35	13.89	-152.68	-1,139.29	-37.53	1,486.46	1,463.28	23.18	64.130		
3,100.00	3,096.52	2,447.54	2,265.71	13.78	14.50	-152.66	-1,183.24	-39.56	1,544.17	1,520.18	23.99	64.367		
3,200.00	3,196.38	2,529.21	2,334.51	14.21	15.11	-152.64	-1,227.19	-41.60	1,601.88	1,577.07	24.81	64.575		
3,300.00	3,296.25	2,610.88	2,403.31	14.64	15.73	-152.62	-1,271.15	-43.63	1,659.59	1,633.96	25.63	64.757		
3,400.00	3,396.11	2,707.46	2,472.11	15.07	16.46	-152.60	-1,315.10	-45.66	1,717.30	1,690.76	26.54	64.698		
3,500.00	3,495.97	2,774.21	2,540.91	15.50	16.97	-152.59	-1,359.06	-47.69	1,775.01	1,747.72	27.28	65.054		
3,600.00	3,595.83	2,855.88	2,609.71	15.93	17.60	-152.58	-1,403.01	-49.73	1,832.72	1,804.60	28.12	65.177		
3,700.00	3,695.69	2,937.55	2,678.51	16.36	18.22	-152.56	-1,446.97	-51.76	1,890.43	1,861.47	28.96	65.284		
3,800.00	3,795.55	3,019.21	2,747.31	16.80	18.85	-152.55	-1,490.92	-53.79	1,948.14	1,918.34	29.80	65.379		
3,900.00	3,895.41	3,100.88	2,816.11	17.23	19.48	-152.54	-1,534.87	-55.83	2,005.84	1,975.20	30.64	65.462		
4,000.00	3,995.27	3,182.55	2,884.90	17.66	20.11	-152.53	-1,578.83	-57.86	2,063.55	2,032.07	31.49	65.534		
4,100.00	4,095.13	3,264.21	2,953.70	18.10	20.74	-152.52	-1,622.78	-59.89	2,121.26	2,088.93	32.34	65.598		
4,200.00	4,194.99	3,345.88	3,022.50	18.53	21.38	-152.51	-1,666.74	-61.92	2,178.97	2,145.78	33.19	65.654		
4,300.00	4,294.85	3,427.55	3,091.30	18.96	22.01	-152.50	-1,710.69	-63.96	2,236.68	2,202.64	34.04	65.704		
4,400.00	4,394.71	3,509.22	3,160.10	19.40	22.65	-152.49	-1,754.65	-65.99	2,294.39	2,259.49	34.90	65.747		
4,500.00	4,494.58	3,609.12	3,228.90	19.83	23.43	-152.48	-1,798.60	-68.02	2,352.10	2,316.23	35.87	65.777		
4,600.00	4,594.44	3,672.55	3,297.70	20.27	23.92	-152.47	-1,842.56	-70.06	2,409.81	2,373.20	36.61	65.816		
4,700.00	4,694.30	3,754.22	3,366.50	20.71	24.56	-152.47	-1,886.51	-72.09	2,467.52	2,430.05	37.48	65.844		
4,800.00	4,794.16	3,835.88	3,435.30	21.14	25.20	-152.46	-1,930.46	-74.12	2,525.23	2,486.89	38.34	65.868		
4,900.00	4,894.02	3,917.55	3,504.10	21.58	25.84	-152.45	-1,974.42	-76.15	2,582.94	2,543.74	39.20	65.889		
5,000.00	4,993.88	4,000.78	3,572.90	22.01	26.49	-152.44	-2,018.37	-78.19	2,640.65	2,600.57	40.08	65.890		
5,100.00	5,093.74	4,080.89	3,641.70	22.45	27.12	-152.44	-2,062.33	-80.22	2,698.36	2,657.43	40.93	65.920		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 34C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	4,162.55	3,710.50	22.89	27.76	-152.43	-2,106.28	-82.25	2,756.07	2,714.27	41.80	65.932		
5,300.00	5,293.46	4,244.22	3,779.30	23.32	28.40	-152.43	-2,150.24	-84.29	2,813.78	2,771.11	42.67	65.942		
5,400.00	5,393.32	4,325.89	3,848.10	23.76	29.04	-152.42	-2,194.19	-86.32	2,871.49	2,827.95	43.54	65.949		
5,500.00	5,493.18	4,407.56	3,916.90	24.20	29.68	-152.42	-2,238.15	-88.35	2,929.20	2,884.78	44.41	65.954		
5,600.00	5,593.05	4,489.22	3,985.70	24.64	30.32	-152.41	-2,282.10	-90.39	2,986.91	2,941.62	45.29	65.958		
5,700.00	5,692.91	4,570.89	4,054.50	25.07	30.97	-152.41	-2,326.05	-92.42	3,044.62	2,998.46	46.16	65.959		
5,800.00	5,792.77	4,652.56	4,123.30	25.51	31.61	-152.40	-2,370.01	-94.45	3,102.33	3,055.29	47.03	65.960		
5,900.00	5,892.63	4,734.22	4,192.10	25.95	32.25	-152.40	-2,413.96	-96.48	3,160.04	3,112.13	47.91	65.959		
6,000.00	5,992.49	4,815.89	4,260.90	26.39	32.90	-152.39	-2,457.92	-98.52	3,217.75	3,168.96	48.79	65.957		
6,100.00	6,092.35	4,902.44	4,329.70	26.82	33.58	-152.39	-2,501.87	-100.55	3,275.46	3,225.76	49.69	65.913		
6,200.00	6,192.21	4,979.23	4,398.50	27.26	34.19	-152.38	-2,545.83	-102.58	3,333.17	3,282.62	50.54	65.949		
6,300.00	6,292.07	5,060.89	4,467.30	27.70	34.83	-152.38	-2,589.78	-104.62	3,390.88	3,339.46	51.42	65.944		
6,400.00	6,391.93	5,142.56	4,536.10	28.14	35.48	-152.38	-2,633.74	-106.65	3,448.59	3,396.29	52.30	65.937		
6,500.00	6,491.69	5,224.20	4,604.88	28.58	36.12	-110.34	-2,677.68	-108.68	3,506.24	3,453.06	53.18	65.929		
6,600.00	6,589.80	5,304.89	4,672.85	29.02	36.76	-90.55	-2,721.10	-110.69	3,563.06	3,509.00	54.06	65.911		
6,700.00	6,683.86	5,382.70	4,738.40	29.46	37.37	-81.63	-2,762.98	-112.63	3,617.83	3,562.91	54.92	65.875		
6,800.00	6,771.56	5,455.72	4,799.91	29.92	37.95	-75.46	-2,802.28	-114.44	3,669.59	3,613.83	55.76	65.812		
6,900.00	6,850.72	5,528.59	4,867.40	30.40	38.52	-69.29	-2,842.93	-116.16	3,715.57	3,667.91	56.66	65.744		
7,000.00	6,919.40	5,602.46	4,934.90	30.96	39.08	-63.12	-2,882.30	-117.88	3,761.44	3,713.83	57.56	65.676		
7,100.00	6,975.92	5,672.48	5,002.40	31.62	39.64	-56.95	-2,921.79	-119.59	3,807.31	3,761.75	58.46	65.608		
7,200.00	7,018.87	5,742.50	5,070.90	32.44	40.20	-50.78	-2,962.40	-121.29	3,853.25	3,809.69	59.36	65.540		
7,300.00	7,047.21	5,810.96	5,139.40	33.42	40.76	-44.61	-3,003.23	-122.99	3,899.16	3,857.60	60.26	65.472		
7,400.00	7,060.23	5,879.42	5,207.90	34.55	41.32	-38.44	-3,044.29	-124.69	3,945.04	3,905.49	61.16	65.404		
7,500.00	7,060.03	5,947.88	5,276.40	35.83	41.88	-32.27	-3,085.46	-126.39	3,990.89	3,953.34	62.06	65.336		
7,600.00	7,058.28	6,016.34	5,344.90	37.28	42.44	-26.10	-3,126.74	-128.09	4,036.70	4,001.15	62.96	65.268		
7,700.00	7,056.53	6,084.72	5,413.40	38.89	43.00	-19.93	-3,168.13	-129.79	4,082.57	4,049.00	63.86	65.200		
7,800.00	7,054.78	6,153.10	5,481.90	40.63	43.56	-13.76	-3,209.63	-131.49	4,128.40	4,096.81	64.76	65.132		
7,900.00	7,053.03	6,221.48	5,550.40	42.50	44.12	-7.59	-3,251.23	-133.19	4,174.19	4,144.59	65.66	65.064		
8,000.00	7,051.28	6,289.86	5,618.90	44.47	44.68	-1.42	-3,292.93	-134.89	4,219.94	4,192.34	66.56	64.996		
8,100.00	7,049.53	6,358.24	5,687.40	46.53	45.24	4.75	-3,334.73	-136.59	4,265.65	4,240.05	67.46	64.928		
8,200.00	7,047.78	6,426.62	5,755.90	48.67	45.80	10.99	-3,376.63	-138.29	4,311.31	4,287.71	68.36	64.860		
8,300.00	7,046.03	6,495.00	5,824.40	50.89	46.36	17.23	-3,418.63	-139.99	4,356.92	4,335.32	69.26	64.792		
8,400.00	7,044.28	6,563.38	5,892.90	53.16	46.92	23.47	-3,460.73	-141.69	4,402.58	4,382.98	70.16	64.724		
8,500.00	7,042.53	6,631.76	5,961.40	55.49	47.48	29.71	-3,502.93	-143.39	4,448.19	4,430.59	71.06	64.656		
8,600.00	7,040.78	6,700.14	6,029.90	57.86	48.04	35.95	-3,545.23	-145.09	4,493.75	4,478.15	71.96	64.588		
8,700.00	7,039.03	6,768.52	6,098.40	60.28	48.60	42.19	-3,587.63	-146.79	4,539.26	4,525.66	72.86	64.520		
8,800.00	7,037.28	6,836.90	6,166.90	62.74	49.16	48.43	-3,630.13	-148.49	4,584.72	4,573.12	73.76	64.452		
8,900.00	7,035.53	6,905.28	6,235.40	65.23	49.72	54.67	-3,672.73	-150.19	4,630.13	4,620.53	74.66	64.384		
9,000.00	7,033.78	6,973.66	6,303.90	67.74	50.28	60.91	-3,715.33	-151.89	4,675.54	4,667.94	75.56	64.316		
9,100.00	7,032.03	7,042.04	6,372.40	70.29	50.84	67.15	-3,758.03	-153.59	4,720.95	4,715.35	76.46	64.248		
9,200.00	7,030.28	7,110.42	6,440.90	72.85	51.40	73.39	-3,800.83	-155.29	4,766.36	4,761.76	77.36	64.180		
9,300.00	7,028.54	7,178.80	6,509.40	75.44	51.96	79.63	-3,843.73	-156.99	4,811.77	4,808.17	78.26	64.112		
9,400.00	7,026.79	7,247.18	6,577.90	78.05	52.52	85.87	-3,886.83	-158.69	4,857.18	4,854.58	79.16	64.044		
9,500.00	7,025.04	7,315.56	6,646.40	80.67	53.08	92.11	-3,929.13	-160.39	4,902.59	4,900.99	80.06	63.976		
9,600.00	7,023.29	7,383.94	6,714.90	83.31	53.64	98.35	-3,971.63	-162.09	4,948.00	4,946.40	80.96	63.908		
9,700.00	7,021.54	7,452.32	6,783.40	85.96	54.20	104.59	-4,014.23	-163.79	4,993.41	4,991.81	81.86	63.840		
9,800.00	7,019.79	7,520.70	6,851.90	88.63	54.76	110.83	-4,056.93	-165.49	5,038.82	5,037.22	82.76	63.772		
9,900.00	7,018.04	7,589.08	6,920.40	91.30	55.32	117.07	-4,099.83	-167.19	5,084.23	5,082.63	83.66	63.704		
10,000.00	7,016.29	7,657.46	6,988.90	93.99	55.88	123.31	-4,142.93	-168.89	5,129.64	5,128.04	84.56	63.636		
10,100.00	7,014.54	7,725.84	7,057.40	96.69	56.44	129.55	-4,186.23	-170.59	5,175.05	5,173.45	85.46	63.568		
10,200.00	7,012.79	7,794.22	7,125.90	99.40	57.00	135.79	-4,229.73	-172.29	5,220.46	5,218.86	86.36	63.500		
10,300.00	7,011.04	7,862.60	7,194.40	102.11	57.56	142.03	-4,273.43	-173.99	5,265.87	5,264.27	87.26	63.432		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 34C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	11,340.47	7,230.07	104.83	106.27	-93.40	-3,442.46	-3,723.31	3,726.67	3,516.74	209.93	17.752		
10,500.00	7,007.54	11,440.46	7,229.67	107.56	108.93	-93.42	-3,443.07	-3,823.29	3,726.61	3,511.29	215.32	17.307		
10,600.00	7,005.79	11,540.45	7,229.26	110.30	111.61	-93.44	-3,443.68	-3,923.28	3,726.55	3,505.82	220.72	16.883		
10,700.00	7,004.04	11,640.44	7,228.85	113.04	114.29	-93.46	-3,444.30	-4,023.27	3,726.49	3,500.34	226.14	16.478		
10,800.00	7,002.29	11,740.43	7,228.45	115.79	116.98	-93.48	-3,444.91	-4,123.26	3,726.43	3,494.85	231.58	16.092		
10,900.00	7,000.54	11,840.42	7,228.04	118.54	119.68	-93.50	-3,445.52	-4,223.25	3,726.37	3,489.35	237.02	15.722		
11,000.00	6,998.79	11,940.42	7,227.64	121.30	122.39	-93.52	-3,446.13	-4,323.24	3,726.31	3,483.83	242.48	15.368		
11,100.00	6,997.04	12,040.41	7,227.23	124.06	125.10	-93.54	-3,446.75	-4,423.22	3,726.25	3,478.31	247.94	15.029		
11,200.00	6,995.29	12,140.40	7,226.83	126.83	127.82	-93.56	-3,447.36	-4,523.21	3,726.20	3,472.78	253.42	14.704		
11,300.00	6,993.54	12,240.39	7,226.42	129.60	130.55	-93.58	-3,447.97	-4,623.20	3,726.14	3,467.23	258.91	14.392		
11,400.00	6,991.80	12,340.38	7,226.01	132.37	133.28	-93.61	-3,448.58	-4,723.19	3,726.09	3,461.68	264.40	14.092		
11,500.00	6,990.05	12,440.37	7,225.61	135.15	136.01	-93.63	-3,449.20	-4,823.18	3,726.03	3,456.12	269.91	13.805		
11,600.00	6,988.30	12,540.36	7,225.20	137.93	138.75	-93.65	-3,449.81	-4,923.16	3,725.98	3,450.56	275.42	13.528		
11,700.00	6,986.55	12,640.35	7,224.80	140.72	141.50	-93.67	-3,450.42	-5,023.15	3,725.92	3,444.98	280.94	13.262		
11,800.00	6,984.80	12,740.34	7,224.39	143.50	144.25	-93.69	-3,451.03	-5,123.14	3,725.87	3,439.40	286.46	13.006		
11,900.00	6,983.05	12,840.33	7,223.99	146.29	147.01	-93.71	-3,451.65	-5,223.13	3,725.81	3,433.82	292.00	12.760		
12,000.00	6,981.30	12,940.32	7,223.58	149.09	149.76	-93.73	-3,452.26	-5,323.12	3,725.76	3,428.23	297.53	12.522		
12,100.00	6,979.55	13,040.31	7,223.17	151.88	152.53	-93.75	-3,452.87	-5,423.11	3,725.71	3,422.63	303.08	12.293		
12,200.00	6,977.80	13,140.31	7,222.77	154.68	155.29	-93.77	-3,453.48	-5,523.09	3,725.66	3,417.03	308.63	12.072		
12,300.00	6,976.05	13,240.30	7,222.36	157.48	158.06	-93.79	-3,454.10	-5,623.08	3,725.61	3,411.42	314.18	11.858		
12,400.00	6,974.30	13,340.29	7,221.96	160.28	160.83	-93.81	-3,454.71	-5,723.07	3,725.56	3,405.81	319.74	11.652		
12,500.00	6,972.55	13,440.28	7,221.55	163.08	163.61	-93.83	-3,455.32	-5,823.06	3,725.50	3,400.20	325.30	11.452		
12,600.00	6,970.80	13,540.27	7,221.15	165.89	166.39	-93.85	-3,455.93	-5,923.05	3,725.45	3,394.58	330.87	11.259		
12,700.00	6,969.05	13,640.26	7,220.74	168.69	169.17	-93.87	-3,456.55	-6,023.03	3,725.41	3,388.96	336.44	11.073		
12,800.00	6,967.30	13,740.25	7,220.33	171.50	171.95	-93.90	-3,457.16	-6,123.02	3,725.36	3,383.34	342.02	10.892		
12,900.00	6,965.55	13,840.24	7,219.93	174.31	174.74	-93.92	-3,457.77	-6,223.01	3,725.31	3,377.71	347.60	10.717		
13,000.00	6,963.80	13,940.23	7,219.52	177.12	177.52	-93.94	-3,458.38	-6,323.00	3,725.26	3,372.08	353.18	10.548		
13,100.00	6,962.05	14,040.22	7,219.12	179.94	180.31	-93.96	-3,458.99	-6,422.99	3,725.21	3,366.44	358.77	10.383		
13,200.00	6,960.30	14,140.21	7,218.71	182.75	183.11	-93.98	-3,459.61	-6,522.98	3,725.17	3,360.81	364.36	10.224		
13,300.00	6,958.55	14,240.21	7,218.31	185.57	185.90	-94.00	-3,460.22	-6,622.96	3,725.12	3,355.17	369.95	10.069		
13,400.00	6,956.80	14,340.20	7,217.90	188.38	188.70	-94.02	-3,460.83	-6,722.95	3,725.07	3,349.53	375.55	9.919		
13,500.00	6,955.05	14,440.19	7,217.49	191.20	191.49	-94.04	-3,461.44	-6,822.94	3,725.03	3,343.89	381.14	9.773		
13,600.00	6,953.31	14,540.18	7,217.09	194.02	194.29	-94.06	-3,462.06	-6,922.93	3,724.98	3,338.24	386.74	9.632		
13,700.00	6,951.56	14,640.17	7,216.68	196.84	197.10	-94.08	-3,462.67	-7,022.92	3,724.94	3,332.59	392.35	9.494		
13,800.00	6,949.81	14,740.16	7,216.28	199.67	199.90	-94.10	-3,463.28	-7,122.90	3,724.89	3,326.94	397.95	9.360		
13,900.00	6,948.06	14,840.15	7,215.87	202.49	202.70	-94.12	-3,463.89	-7,222.89	3,724.85	3,321.29	403.56	9.230		
14,000.00	6,946.31	14,940.14	7,215.47	205.31	205.51	-94.14	-3,464.51	-7,322.88	3,724.81	3,315.64	409.17	9.103		
14,100.00	6,944.56	15,040.13	7,215.06	208.14	208.32	-94.17	-3,465.12	-7,422.87	3,724.77	3,309.99	414.78	8.980		
14,200.00	6,942.81	15,140.12	7,214.65	210.96	211.13	-94.19	-3,465.73	-7,522.86	3,724.72	3,304.33	420.39	8.860		
14,300.00	6,941.06	15,240.11	7,214.25	213.79	213.94	-94.21	-3,466.34	-7,622.85	3,724.68	3,298.68	426.01	8.743		
14,400.00	6,939.31	15,340.10	7,213.84	216.62	216.75	-94.23	-3,466.96	-7,722.83	3,724.64	3,293.02	431.62	8.629		
14,500.00	6,937.56	15,440.10	7,213.44	219.44	219.56	-94.25	-3,467.57	-7,822.82	3,724.60	3,287.36	437.24	8.518		
14,600.00	6,935.81	15,540.09	7,213.03	222.27	222.37	-94.27	-3,468.18	-7,922.81	3,724.56	3,281.70	442.86	8.410		
14,700.00	6,934.06	15,640.08	7,212.63	225.10	225.19	-94.29	-3,468.79	-8,022.80	3,724.52	3,276.04	448.48	8.305		
14,800.00	6,932.31	15,740.07	7,212.22	227.93	228.01	-94.31	-3,469.41	-8,122.79	3,724.48	3,270.38	454.11	8.202		
14,817.75	6,932.00	15,757.81	7,212.15	228.43	228.51	-94.31	-3,469.51	-8,140.53	3,724.47	3,269.37	455.10	8.184 SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 5C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	3.28	3.28	-179.21	-20.04	-0.28	20.05					
100.00	100.00	100.00	100.00	3.28	3.28	-179.21	-20.04	-0.28	20.05	13.48	6.57	3.052		
200.00	200.00	200.00	200.00	3.34	3.34	-179.21	-20.04	-0.28	20.05	13.37	6.67	3.004		
300.00	300.00	300.00	300.00	3.44	3.44	-179.21	-20.04	-0.28	20.05	13.16	6.89	2.910		
400.00	400.00	400.00	400.00	3.60	3.60	-179.21	-20.04	-0.28	20.05	12.84	7.21	2.782		
500.00	500.00	500.00	500.00	3.81	3.81	-179.21	-20.04	-0.28	20.05	12.43	7.61	2.634 CC, ES		
600.00	599.98	599.98	599.98	4.05	4.05	-154.00	-20.04	-0.28	21.60	13.51	8.09	2.669		
700.00	699.86	700.31	700.29	4.32	4.32	-155.56	-19.14	-1.73	25.00	16.36	8.63	2.895		
800.00	799.72	800.26	800.19	4.62	4.61	-155.05	-17.56	-4.25	28.10	18.88	9.22	3.047		
900.00	899.58	900.21	900.10	4.93	4.92	-154.64	-15.99	-6.76	31.21	21.35	9.86	3.166		
1,000.00	999.44	1,000.16	1,000.01	5.27	5.26	-154.31	-14.42	-9.28	34.31	23.79	10.53	3.260		
1,100.00	1,099.31	1,100.11	1,099.92	5.62	5.60	-154.03	-12.85	-11.79	37.42	26.20	11.22	3.334		
1,200.00	1,199.17	1,200.06	1,199.82	5.98	5.96	-153.79	-11.28	-14.31	40.53	28.58	11.95	3.392		
1,300.00	1,299.03	1,300.02	1,299.73	6.36	6.33	-153.59	-9.71	-16.82	43.64	30.95	12.69	3.439		
1,400.00	1,398.89	1,400.03	1,399.64	6.74	6.71	-153.41	-8.14	-19.34	46.75	33.30	13.45	3.476		
1,500.00	1,498.75	1,500.08	1,499.55	7.13	7.10	-153.26	-6.56	-21.85	49.86	35.63	14.22	3.505		
1,600.00	1,598.61	1,600.13	1,599.45	7.52	7.49	-153.12	-4.99	-24.37	52.97	37.96	15.01	3.529		
1,700.00	1,698.47	1,700.18	1,699.36	7.92	7.88	-153.00	-3.42	-26.88	56.08	40.27	15.81	3.548		
1,800.00	1,798.33	1,800.23	1,799.27	8.32	8.29	-152.90	-1.85	-29.40	59.19	42.58	16.61	3.563		
1,900.00	1,898.19	1,900.28	1,899.18	8.73	8.69	-152.80	-0.28	-31.91	62.30	44.88	17.42	3.576		
2,000.00	1,998.05	2,000.32	1,999.09	9.14	9.10	-152.71	1.29	-34.43	65.41	47.17	18.24	3.586		
2,100.00	2,097.91	2,100.37	2,098.99	9.55	9.51	-152.63	2.86	-36.94	68.52	49.46	19.07	3.594		
2,200.00	2,197.78	2,200.42	2,198.90	9.97	9.92	-152.56	4.44	-39.46	71.63	51.74	19.89	3.601		
2,300.00	2,297.64	2,300.47	2,298.81	10.39	10.34	-152.49	6.01	-41.97	74.74	54.02	20.73	3.606		
2,400.00	2,397.50	2,400.52	2,398.72	10.81	10.76	-152.43	7.58	-44.49	77.85	56.29	21.57	3.610		
2,500.00	2,497.36	2,500.57	2,496.62	11.23	11.18	-152.37	9.15	-47.00	80.97	58.56	22.41	3.614		
2,600.00	2,597.22	2,600.61	2,598.53	11.65	11.60	-152.32	10.72	-49.52	84.08	60.83	23.25	3.616		
2,700.00	2,697.08	2,700.66	2,698.44	12.07	12.02	-152.27	12.29	-52.03	87.19	63.09	24.10	3.618		
2,800.00	2,796.94	2,800.71	2,798.35	12.50	12.44	-152.23	13.87	-54.55	90.30	65.36	24.95	3.620		
2,900.00	2,896.80	2,900.76	2,898.25	12.92	12.87	-152.18	15.44	-57.06	93.41	67.62	25.80	3.621		
3,000.00	2,996.66	3,000.81	2,998.16	13.35	13.29	-152.14	17.01	-59.58	96.52	69.87	26.65	3.622		
3,100.00	3,096.52	3,100.86	3,098.07	13.78	13.72	-152.11	18.58	-62.09	99.64	72.13	27.50	3.623		
3,200.00	3,196.38	3,200.91	3,197.98	14.21	14.15	-152.07	20.15	-64.61	102.75	74.39	28.36	3.623		
3,300.00	3,296.25	3,300.95	3,297.88	14.64	14.58	-152.04	21.72	-67.12	105.86	76.64	29.22	3.623		
3,400.00	3,396.11	3,401.00	3,397.79	15.07	15.01	-152.01	23.29	-69.64	108.97	78.89	30.08	3.623		
3,500.00	3,495.97	3,501.05	3,497.70	15.50	15.44	-151.98	24.87	-72.15	112.08	81.14	30.94	3.623		
3,600.00	3,595.83	3,601.10	3,597.61	15.93	15.87	-151.95	26.44	-74.67	115.19	83.39	31.80	3.622		
3,700.00	3,695.69	3,701.15	3,697.51	16.36	16.30	-151.92	28.01	-77.17	118.31	85.64	32.66	3.622		
3,800.00	3,795.55	3,801.20	3,797.42	16.80	16.73	-151.90	29.58	-79.70	121.42	87.89	33.53	3.621		
3,900.00	3,895.41	3,901.24	3,897.33	17.23	17.16	-151.87	31.15	-82.21	124.53	90.14	34.39	3.621		
4,000.00	3,995.27	4,001.29	3,997.24	17.66	17.59	-151.85	32.72	-84.72	127.64	92.38	35.26	3.620		
4,100.00	4,095.13	4,101.34	4,097.14	18.10	18.02	-151.83	34.29	-87.24	130.75	94.63	36.13	3.619		
4,200.00	4,194.99	4,201.39	4,197.05	18.53	18.46	-151.81	35.87	-89.75	133.87	96.87	36.99	3.619		
4,300.00	4,294.85	4,301.44	4,296.96	18.96	18.89	-151.79	37.44	-92.27	136.98	99.12	37.86	3.618		
4,400.00	4,394.71	4,401.49	4,396.87	19.40	19.32	-151.77	39.01	-94.78	140.09	101.36	38.73	3.617		
4,500.00	4,494.58	4,501.53	4,496.77	19.83	19.76	-151.75	40.58	-97.30	143.20	103.60	39.60	3.616		
4,600.00	4,594.44	4,601.58	4,596.68	20.27	20.19	-151.74	42.15	-99.81	146.31	105.85	40.47	3.616		
4,700.00	4,694.30	4,701.63	4,696.59	20.71	20.63	-151.72	43.72	-102.33	149.43	108.09	41.34	3.615		
4,800.00	4,794.16	4,801.68	4,796.50	21.14	21.06	-151.70	45.30	-104.84	152.54	110.33	42.21	3.614		
4,900.00	4,894.02	4,901.73	4,896.40	21.58	21.50	-151.69	46.87	-107.36	155.65	112.57	43.08	3.613		
5,000.00	4,993.88	5,001.78	4,996.31	22.01	21.93	-151.68	48.44	-109.87	158.76	114.81	43.95	3.612		
5,100.00	5,093.74	5,101.83	5,096.22	22.45	22.37	-151.66	50.01	-112.39	161.87	117.05	44.82	3.611		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 5C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,201.87	5,196.13	22.89	22.80	-151.65	51.58	-114.90	164.99	119.29	45.70	3.611		
5,300.00	5,293.46	5,301.92	5,296.03	23.32	23.24	-151.64	53.15	-117.42	168.10	121.53	46.57	3.610		
5,400.00	5,393.32	5,401.97	5,395.94	23.76	23.67	-151.62	54.72	-119.93	171.21	123.77	47.44	3.609		
5,500.00	5,493.18	5,502.02	5,495.85	24.20	24.11	-151.61	56.30	-122.45	174.32	126.01	48.31	3.608		
5,600.00	5,593.05	5,602.07	5,595.76	24.64	24.55	-151.60	57.87	-124.96	177.43	128.25	49.19	3.607		
5,700.00	5,692.91	5,702.12	5,695.66	25.07	24.98	-151.59	59.44	-127.48	180.55	130.48	50.06	3.606		
5,800.00	5,792.77	5,802.16	5,795.57	25.51	25.42	-151.58	61.01	-129.99	183.66	132.72	50.94	3.606		
5,900.00	5,892.63	5,902.21	5,895.48	25.95	25.86	-151.57	62.58	-132.51	186.77	134.96	51.81	3.605		
6,000.00	5,992.49	6,002.26	5,995.39	26.39	26.29	-151.56	64.15	-135.02	189.88	137.20	52.69	3.604		
6,100.00	6,092.35	6,102.31	6,095.29	26.82	26.73	-151.55	65.72	-137.54	193.00	139.44	53.56	3.603		
6,200.00	6,192.21	6,202.36	6,195.20	27.26	27.17	-151.54	67.30	-140.05	196.11	141.67	54.44	3.603		
6,300.00	6,292.07	6,302.41	6,295.11	27.70	27.60	-151.53	68.87	-142.57	199.22	143.91	55.31	3.602		
6,400.00	6,391.93	6,402.46	6,395.02	28.14	28.04	-151.52	70.44	-145.08	202.33	146.15	56.19	3.601		
6,500.00	6,491.69	6,502.56	6,494.87	28.58	28.48	-113.13	72.01	-147.60	205.40	148.33	57.06	3.600		
6,600.00	6,591.80	6,596.04	6,593.43	29.02	28.89	-103.18	73.56	-150.08	208.80	150.89	57.91	3.606		
6,700.00	6,693.86	6,695.31	6,692.44	29.46	29.32	-106.21	75.09	-156.12	215.14	156.35	58.79	3.660		
6,800.00	6,791.56	6,800.16	6,794.79	29.92	29.79	-111.04	76.55	-178.28	224.74	165.18	59.56	3.774		
6,900.00	6,890.72	6,910.62	6,897.13	30.40	30.29	-115.89	77.87	-219.43	236.63	176.74	59.89	3.951		
7,000.00	6,919.40	7,027.18	6,995.71	30.96	30.83	-120.23	78.96	-281.32	249.64	190.13	59.51	4.195		
7,100.00	6,975.92	7,150.08	7,085.61	31.62	31.47	-123.86	79.76	-364.85	262.44	204.06	58.38	4.495		
7,200.00	7,018.87	7,279.13	7,160.91	32.44	32.31	-126.69	80.16	-469.37	273.71	216.87	56.84	4.816		
7,300.00	7,047.21	7,413.48	7,215.27	33.42	33.42	-128.66	80.09	-591.96	282.26	226.64	55.62	5.075		
7,400.00	7,060.23	7,551.61	7,243.13	34.55	34.86	-129.76	79.50	-726.97	287.17	231.51	55.67	5.159		
7,500.00	7,060.03	7,669.34	7,245.82	35.83	36.32	-130.08	78.65	-844.61	288.55	231.15	57.40	5.027		
7,600.00	7,058.28	7,769.32	7,245.51	37.28	37.73	-130.30	77.88	-944.59	289.49	229.92	59.57	4.860		
7,700.00	7,056.53	7,869.31	7,245.20	38.89	39.30	-130.51	77.12	-1,044.58	290.43	228.46	61.98	4.686		
7,800.00	7,054.78	7,969.30	7,244.89	40.63	41.01	-130.72	76.35	-1,144.57	291.38	226.80	64.59	4.512		
7,900.00	7,053.03	8,069.29	7,244.58	42.50	42.84	-130.94	75.58	-1,244.55	292.33	224.96	67.37	4.339		
8,000.00	7,051.28	8,169.28	7,244.26	44.47	44.77	-131.15	74.81	-1,344.54	293.29	222.98	70.30	4.172		
8,100.00	7,049.53	8,269.27	7,243.95	46.53	46.80	-131.35	74.05	-1,444.52	294.25	220.88	73.37	4.011		
8,200.00	7,047.78	8,369.26	7,243.64	48.67	48.92	-131.56	73.28	-1,544.51	295.21	218.67	76.54	3.857		
8,300.00	7,046.03	8,469.25	7,243.33	50.89	51.10	-131.77	72.51	-1,644.50	296.18	216.38	79.80	3.712		
8,400.00	7,044.28	8,569.24	7,243.02	53.16	53.35	-131.97	71.74	-1,744.48	297.15	214.01	83.14	3.574		
8,500.00	7,042.53	8,669.23	7,242.71	55.49	55.66	-132.18	70.98	-1,844.47	298.12	211.57	86.55	3.445		
8,600.00	7,040.78	8,769.22	7,242.39	57.86	58.02	-132.38	70.21	-1,944.45	299.10	209.09	90.01	3.323		
8,700.00	7,039.03	8,869.21	7,242.08	60.28	60.41	-132.58	69.44	-2,044.44	300.08	206.57	93.52	3.209		
8,800.00	7,037.28	8,969.20	7,241.77	62.74	62.85	-132.78	68.67	-2,144.43	301.07	204.01	97.06	3.102		
8,900.00	7,035.53	9,069.19	7,241.46	65.23	65.32	-132.98	67.91	-2,244.41	302.06	201.42	100.64	3.001		
9,000.00	7,033.78	9,169.18	7,241.15	67.74	67.82	-133.17	67.14	-2,344.40	303.05	198.81	104.24	2.907		
9,100.00	7,032.03	9,269.17	7,240.83	70.29	70.35	-133.37	66.37	-2,444.39	304.05	196.18	107.87	2.819		
9,200.00	7,030.28	9,369.16	7,240.52	72.85	72.91	-133.56	65.60	-2,544.37	305.05	193.54	111.51	2.736		
9,300.00	7,028.54	9,469.15	7,240.21	75.44	75.48	-133.76	64.84	-2,644.36	306.05	190.89	115.16	2.658		
9,400.00	7,026.79	9,569.14	7,239.90	78.05	78.08	-133.95	64.07	-2,744.34	307.06	188.23	118.82	2.584		
9,500.00	7,025.04	9,669.13	7,239.59	80.67	80.69	-134.14	63.30	-2,844.33	308.07	185.58	122.49	2.515		
9,600.00	7,023.29	9,769.12	7,239.27	83.31	83.32	-134.33	62.53	-2,944.32	309.08	182.92	126.16	2.450		
9,700.00	7,021.54	9,869.11	7,238.96	85.96	85.96	-134.52	61.77	-3,044.30	310.10	180.26	129.84	2.388		
9,800.00	7,019.79	9,969.10	7,238.65	88.63	88.62	-134.70	61.00	-3,144.29	311.12	177.61	133.51	2.330		
9,900.00	7,018.04	10,069.09	7,238.34	91.30	91.29	-134.89	60.23	-3,244.28	312.14	174.96	137.18	2.275		
10,000.00	7,016.29	10,169.08	7,238.03	93.99	93.97	-135.07	59.46	-3,344.26	313.17	172.31	140.85	2.223		
10,100.00	7,014.54	10,269.07	7,237.72	96.69	96.66	-135.26	58.70	-3,444.25	314.20	169.68	144.52	2.174		
10,200.00	7,012.79	10,369.06	7,237.40	99.40	99.36	-135.44	57.93	-3,544.23	315.23	167.05	148.18	2.127		
10,300.00	7,011.04	10,469.05	7,237.09	102.11	102.06	-135.62	57.16	-3,644.22	316.27	164.44	151.83	2.083		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 5C-16-M - OH - PLAN #1												Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,400.00	7,009.29	10,569.04	7,236.78	104.83	104.78	-135.80	56.39	-3,744.21	317.31	161.83	155.47	2.041	
10,500.00	7,007.54	10,669.03	7,236.47	107.56	107.50	-135.98	55.63	-3,844.19	318.35	159.24	159.11	2.001	
10,600.00	7,005.79	10,769.01	7,236.16	110.30	110.23	-136.16	54.86	-3,944.18	319.39	156.66	162.74	1.963	
10,700.00	7,004.04	10,869.00	7,235.84	113.04	112.97	-136.33	54.09	-4,044.17	320.44	154.09	166.35	1.926	
10,800.00	7,002.29	10,968.99	7,235.53	115.79	115.71	-136.51	53.32	-4,144.15	321.49	151.54	169.96	1.892	
10,900.00	7,000.54	11,068.98	7,235.22	118.54	118.46	-136.68	52.56	-4,244.14	322.55	148.99	173.56	1.858	
11,000.00	6,998.79	11,168.97	7,234.91	121.30	121.21	-136.85	51.79	-4,344.12	323.61	146.47	177.14	1.827	
11,100.00	6,997.04	11,268.96	7,234.60	124.06	123.97	-137.02	51.02	-4,444.11	324.67	143.95	180.71	1.797	
11,200.00	6,995.29	11,368.95	7,234.28	126.83	126.73	-137.20	50.25	-4,544.10	325.73	141.46	184.27	1.768	
11,300.00	6,993.54	11,468.94	7,233.97	129.60	129.50	-137.36	49.49	-4,644.08	326.80	138.97	187.82	1.740	
11,400.00	6,991.80	11,568.93	7,233.66	132.37	132.27	-137.53	48.72	-4,744.07	327.87	136.51	191.36	1.713	
11,500.00	6,990.05	11,668.92	7,233.35	135.15	135.04	-137.70	47.95	-4,844.06	328.94	134.06	194.88	1.688	
11,600.00	6,988.30	11,768.91	7,233.04	137.93	137.82	-137.87	47.18	-4,944.04	330.01	131.62	198.39	1.663	
11,700.00	6,986.55	11,868.90	7,232.73	140.72	140.60	-138.03	46.42	-5,044.03	331.09	129.20	201.89	1.640	
11,800.00	6,984.80	11,968.89	7,232.41	143.50	143.39	-138.19	45.65	-5,144.01	332.17	126.80	205.38	1.617	
11,900.00	6,983.05	12,068.88	7,232.10	146.29	146.17	-138.36	44.88	-5,244.00	333.25	124.41	208.85	1.596	
12,000.00	6,981.30	12,168.87	7,231.79	149.09	148.96	-138.52	44.11	-5,343.99	334.34	122.04	212.30	1.575	
12,100.00	6,979.55	12,268.86	7,231.48	151.88	151.75	-138.68	43.35	-5,443.97	335.43	119.68	215.75	1.555	
12,200.00	6,977.80	12,368.85	7,231.17	154.68	154.55	-138.84	42.58	-5,543.96	336.52	117.34	219.18	1.535	
12,300.00	6,976.05	12,468.84	7,230.85	157.48	157.34	-139.00	41.81	-5,643.95	337.61	115.02	222.59	1.517	
12,400.00	6,974.30	12,568.83	7,230.54	160.28	160.14	-139.16	41.04	-5,743.93	338.71	112.71	226.00	1.499 Level 3	
12,500.00	6,972.55	12,668.82	7,230.23	163.08	162.94	-139.31	40.28	-5,843.92	339.81	110.42	229.38	1.481 Level 3	
12,600.00	6,970.80	12,768.81	7,229.92	165.89	165.75	-139.47	39.51	-5,943.90	340.91	108.15	232.76	1.465 Level 3	
12,700.00	6,969.05	12,868.80	7,229.61	168.69	168.55	-139.62	38.74	-6,043.89	342.01	105.89	236.12	1.448 Level 3	
12,800.00	6,967.30	12,968.79	7,229.29	171.50	171.36	-139.78	37.97	-6,143.88	343.12	103.65	239.47	1.433 Level 3	
12,900.00	6,965.55	13,068.78	7,228.98	174.31	174.16	-139.93	37.21	-6,243.86	344.23	101.43	242.80	1.418 Level 3	
13,000.00	6,963.80	13,168.77	7,228.67	177.12	176.97	-140.08	36.44	-6,343.85	345.34	99.22	246.12	1.403 Level 3	
13,100.00	6,962.05	13,268.76	7,228.36	179.94	179.78	-140.23	35.67	-6,443.84	346.45	97.02	249.43	1.389 Level 3	
13,200.00	6,960.30	13,368.75	7,228.05	182.75	182.60	-140.38	34.90	-6,543.82	347.57	94.85	252.72	1.375 Level 3	
13,300.00	6,958.55	13,468.74	7,227.73	185.57	185.41	-140.53	34.14	-6,643.81	348.68	92.69	256.00	1.362 Level 3	
13,400.00	6,956.80	13,568.73	7,227.42	188.38	188.23	-140.68	33.37	-6,743.79	349.80	90.54	259.26	1.349 Level 3	
13,500.00	6,955.05	13,668.72	7,227.11	191.20	191.04	-140.83	32.60	-6,843.78	350.93	88.42	262.51	1.337 Level 3	
13,600.00	6,953.31	13,768.70	7,226.80	194.02	193.86	-140.97	31.83	-6,943.77	352.05	86.30	265.75	1.325 Level 3	
13,700.00	6,951.56	13,868.69	7,226.49	196.84	196.68	-141.12	31.07	-7,043.75	353.18	84.21	268.97	1.313 Level 3	
13,800.00	6,949.81	13,968.68	7,226.18	199.67	199.50	-141.26	30.30	-7,143.74	354.31	82.13	272.18	1.302 Level 3	
13,900.00	6,948.06	14,068.67	7,225.86	202.49	202.32	-141.40	29.53	-7,243.73	355.44	80.06	275.38	1.291 Level 3	
14,000.00	6,946.31	14,168.66	7,225.55	205.31	205.14	-141.55	28.76	-7,343.71	356.58	78.01	278.56	1.280 Level 3	
14,100.00	6,944.56	14,268.65	7,225.24	208.14	207.97	-141.69	28.00	-7,443.70	357.71	75.98	281.74	1.270 Level 3	
14,200.00	6,942.81	14,368.64	7,224.93	210.96	210.79	-141.83	27.23	-7,543.68	358.85	73.96	284.89	1.260 Level 3	
14,300.00	6,941.06	14,468.63	7,224.62	213.79	213.62	-141.97	26.46	-7,643.67	359.99	71.95	288.04	1.250 Level 2	
14,400.00	6,939.31	14,568.62	7,224.30	216.62	216.44	-142.11	25.69	-7,743.66	361.13	69.97	291.17	1.240 Level 2	
14,500.00	6,937.56	14,668.61	7,223.99	219.44	219.27	-142.24	24.93	-7,843.64	362.28	67.99	294.29	1.231 Level 2	
14,600.00	6,935.81	14,768.60	7,223.68	222.27	222.10	-142.38	24.16	-7,943.63	363.42	66.03	297.39	1.222 Level 2	
14,700.00	6,934.06	14,868.59	7,223.37	225.10	224.92	-142.52	23.39	-8,043.62	364.57	64.09	300.48	1.213 Level 2	
14,800.00	6,932.31	14,968.58	7,223.06	227.93	227.75	-142.65	22.62	-8,143.60	365.72	62.16	303.56	1.205 Level 2	
14,817.75	6,932.00	14,986.33	7,223.00	228.43	228.25	-142.68	22.49	-8,161.35	365.93	61.82	304.11	1.203 Level 2, SF	



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 12N-16B-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	1.00	0.00	3.28	3.28	-179.47	-240.09	-2.23	240.10					
100.00	100.00	101.00	100.00	3.28	3.28	-179.47	-240.09	-2.23	240.10	233.53	6.57	36.547		
200.00	200.00	199.00	200.00	3.34	3.34	-179.47	-240.09	-2.23	240.10	233.43	6.67	35.979	CC, ES	
300.00	300.00	291.35	292.33	3.44	3.43	-179.44	-241.54	-2.38	241.67	234.79	6.88	35.109		
400.00	400.00	383.43	384.30	3.60	3.56	-179.34	-245.93	-2.85	246.44	239.24	7.20	34.235		
500.00	500.00	475.13	475.71	3.81	3.74	-179.18	-253.22	-3.62	254.40	246.80	7.60	33.453		
600.00	599.98	566.08	566.09	4.05	3.95	-151.64	-263.32	-4.70	267.05	258.97	8.09	33.023		
700.00	699.86	655.76	654.84	4.32	4.19	-151.74	-276.06	-6.06	285.48	276.85	8.63	33.086		
800.00	799.72	744.23	741.96	4.62	4.45	-151.89	-291.34	-7.69	307.33	298.13	9.20	33.405		
900.00	899.58	831.42	827.32	4.93	4.75	-151.97	-309.00	-9.57	332.15	322.36	9.80	33.900		
1,000.00	999.44	925.64	919.14	5.27	5.09	-152.01	-330.01	-11.81	358.98	348.56	10.42	34.454		
1,100.00	1,099.31	1,021.95	1,012.99	5.62	5.47	-152.05	-351.54	-14.11	385.88	374.80	11.08	34.829		
1,200.00	1,199.17	1,118.27	1,106.84	5.98	5.87	-152.08	-373.07	-16.41	412.77	401.00	11.77	35.073		
1,300.00	1,299.03	1,214.58	1,200.69	6.36	6.28	-152.11	-394.60	-18.70	439.66	427.18	12.48	35.218		
1,400.00	1,398.89	1,310.90	1,294.54	6.74	6.70	-152.14	-416.13	-21.00	466.56	453.34	13.22	35.291		
1,500.00	1,498.75	1,407.21	1,388.39	7.13	7.14	-152.16	-437.66	-23.29	493.45	479.47	13.97	35.311		
1,600.00	1,598.61	1,503.53	1,482.24	7.52	7.58	-152.18	-459.19	-25.59	520.34	505.60	14.74	35.292		
1,700.00	1,698.47	1,600.15	1,576.09	7.92	8.03	-152.20	-480.73	-27.89	547.24	531.71	15.53	35.243		
1,800.00	1,798.33	1,703.84	1,669.94	8.32	8.52	-152.21	-502.26	-30.18	574.13	557.78	16.35	35.109		
1,900.00	1,898.19	1,792.48	1,763.79	8.73	8.94	-152.23	-523.79	-32.48	601.02	583.90	17.12	35.101		
2,000.00	1,998.05	1,888.79	1,857.64	9.14	9.41	-152.24	-545.32	-34.77	627.92	609.98	17.93	35.013		
2,100.00	2,097.91	1,985.11	1,951.49	9.55	9.88	-152.26	-566.85	-37.07	654.81	636.06	18.75	34.919		
2,200.00	2,197.78	2,081.42	2,045.34	9.97	10.35	-152.27	-588.38	-39.37	681.70	662.13	19.58	34.822		
2,300.00	2,297.64	2,177.74	2,139.19	10.39	10.82	-152.28	-609.91	-41.66	708.60	688.19	20.41	34.724		
2,400.00	2,397.50	2,274.06	2,233.04	10.81	11.30	-152.29	-631.44	-43.96	735.49	714.25	21.24	34.625		
2,500.00	2,497.36	2,370.37	2,326.89	11.23	11.77	-152.30	-652.98	-46.26	762.38	740.30	22.08	34.527		
2,600.00	2,597.22	2,466.69	2,420.74	11.65	12.25	-152.31	-674.51	-48.55	789.28	766.35	22.92	34.431		
2,700.00	2,697.08	2,563.00	2,514.59	12.07	12.73	-152.31	-696.04	-50.85	816.17	792.40	23.77	34.336		
2,800.00	2,796.94	2,659.32	2,608.44	12.50	13.22	-152.32	-717.57	-53.14	843.07	818.45	24.62	34.244		
2,900.00	2,896.80	2,755.63	2,702.29	12.92	13.70	-152.33	-739.10	-55.44	869.96	844.49	25.47	34.154		
3,000.00	2,996.66	2,851.95	2,796.14	13.35	14.19	-152.34	-760.63	-57.74	896.85	870.53	26.33	34.067		
3,100.00	3,096.52	2,948.27	2,889.99	13.78	14.67	-152.34	-782.16	-60.03	923.75	896.56	27.18	33.982		
3,200.00	3,196.38	3,044.58	2,983.84	14.21	15.16	-152.35	-803.69	-62.33	950.64	922.60	28.04	33.900		
3,300.00	3,296.25	3,140.90	3,077.69	14.64	15.65	-152.35	-825.22	-64.62	977.53	948.63	28.90	33.821		
3,400.00	3,396.11	3,237.21	3,171.54	15.07	16.14	-152.36	-846.76	-66.92	1,004.43	974.66	29.77	33.744		
3,500.00	3,495.97	3,333.53	3,265.39	15.50	16.63	-152.36	-868.29	-69.22	1,031.32	1,000.69	30.63	33.670		
3,600.00	3,595.83	3,429.84	3,359.24	15.93	17.12	-152.37	-889.82	-71.51	1,058.22	1,026.72	31.50	33.599		
3,700.00	3,695.69	3,526.16	3,453.09	16.36	17.61	-152.37	-911.35	-73.81	1,085.11	1,052.75	32.36	33.530		
3,800.00	3,795.55	3,622.48	3,546.94	16.80	18.10	-152.38	-932.88	-76.10	1,112.00	1,078.77	33.23	33.463		
3,900.00	3,895.41	3,718.79	3,640.79	17.23	18.59	-152.38	-954.41	-78.40	1,138.90	1,104.80	34.10	33.399		
4,000.00	3,995.27	3,815.11	3,734.64	17.66	19.09	-152.38	-975.94	-80.70	1,165.79	1,130.82	34.97	33.337		
4,100.00	4,095.13	3,911.42	3,828.49	18.10	19.58	-152.39	-997.47	-82.99	1,192.68	1,156.84	35.84	33.277		
4,200.00	4,194.99	4,007.74	3,922.34	18.53	20.07	-152.39	-1,019.00	-85.29	1,219.58	1,182.86	36.71	33.219		
4,300.00	4,294.85	4,104.05	4,016.19	18.96	20.57	-152.40	-1,040.54	-87.58	1,246.47	1,208.89	37.59	33.163		
4,400.00	4,394.71	4,200.37	4,110.04	19.40	21.06	-152.40	-1,062.07	-89.88	1,273.37	1,234.91	38.46	33.108		
4,500.00	4,494.58	4,303.31	4,203.89	19.83	21.59	-152.40	-1,083.60	-92.18	1,300.26	1,260.89	39.37	33.030		
4,600.00	4,594.44	4,407.00	4,297.74	20.27	22.12	-152.41	-1,105.13	-94.47	1,327.15	1,286.88	40.28	32.951		
4,700.00	4,694.30	4,489.32	4,391.59	20.71	22.54	-152.41	-1,126.66	-96.77	1,354.05	1,312.96	41.09	32.956		
4,800.00	4,794.16	4,585.63	4,485.44	21.14	23.04	-152.41	-1,148.19	-99.06	1,380.94	1,338.98	41.96	32.908		
4,900.00	4,894.02	4,681.95	4,579.29	21.58	23.54	-152.41	-1,169.72	-101.36	1,407.83	1,364.99	42.84	32.862		
5,000.00	4,993.88	4,778.26	4,673.14	22.01	24.03	-152.42	-1,191.25	-103.66	1,434.73	1,391.01	43.72	32.818		
5,100.00	5,093.74	4,874.58	4,766.99	22.45	24.53	-152.42	-1,212.78	-105.95	1,461.62	1,417.03	44.60	32.775		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 12N-16B-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	4,970.90	4,860.84	22.89	25.02	-152.42	-1,234.32	-108.25	1,488.52	1,443.04	45.47	32.733		
5,300.00	5,293.46	5,067.21	4,954.70	23.32	25.52	-152.42	-1,255.85	-110.55	1,515.41	1,469.06	46.35	32.692		
5,400.00	5,393.32	5,163.53	5,048.55	23.76	26.02	-152.43	-1,277.38	-112.84	1,542.30	1,495.07	47.23	32.652		
5,500.00	5,493.18	5,259.84	5,142.40	24.20	26.51	-152.43	-1,298.91	-115.14	1,569.20	1,521.08	48.11	32.614		
5,600.00	5,593.05	5,356.16	5,236.25	24.64	27.01	-152.43	-1,320.44	-117.43	1,596.09	1,547.10	48.99	32.577		
5,700.00	5,692.91	5,452.48	5,330.10	25.07	27.51	-152.43	-1,341.97	-119.73	1,622.99	1,573.11	49.88	32.541		
5,800.00	5,792.77	5,548.79	5,423.95	25.51	28.00	-152.43	-1,363.50	-122.03	1,649.88	1,599.12	50.76	32.506		
5,900.00	5,892.63	5,645.11	5,517.80	25.95	28.50	-152.44	-1,385.03	-124.32	1,676.77	1,625.14	51.64	32.471		
6,000.00	5,992.49	5,741.42	5,611.65	26.39	29.00	-152.44	-1,406.56	-126.62	1,703.67	1,651.15	52.52	32.438		
6,100.00	6,092.35	5,837.74	5,705.50	26.82	29.50	-152.44	-1,428.10	-128.91	1,730.56	1,677.16	53.40	32.406		
6,200.00	6,192.21	5,934.05	5,799.35	27.26	29.99	-152.44	-1,449.63	-131.21	1,757.46	1,703.17	54.29	32.374		
6,300.00	6,292.07	6,030.37	5,893.20	27.70	30.49	-152.44	-1,471.16	-133.51	1,784.35	1,729.18	55.17	32.344		
6,400.00	6,391.93	6,126.69	5,987.05	28.14	30.99	-152.44	-1,492.69	-135.80	1,811.24	1,755.19	56.05	32.314		
6,500.00	6,491.79	6,222.95	6,080.85	28.58	31.49	-112.41	-1,514.21	-138.10	1,838.10	1,781.17	56.94	32.284		
6,600.00	6,589.80	6,317.99	6,173.45	29.02	31.98	-96.52	-1,535.45	-140.36	1,864.56	1,806.74	57.82	32.248		
6,700.00	6,683.86	6,409.49	6,262.62	29.46	32.45	-91.34	-1,555.91	-142.54	1,890.33	1,831.64	58.69	32.208		
6,800.00	6,771.56	6,504.77	6,346.16	29.92	32.95	-88.58	-1,575.08	-144.59	1,915.49	1,855.90	59.60	32.142		
6,900.00	6,850.72	6,573.07	6,422.01	30.40	33.30	-86.78	-1,592.48	-146.44	1,940.35	1,879.95	60.40	32.123		
7,000.00	6,919.40	6,655.55	6,502.31	30.96	33.73	-85.69	-1,610.91	-149.81	1,965.27	1,903.86	61.41	32.004		
7,100.00	6,975.92	6,769.18	6,611.11	31.62	34.29	-85.51	-1,635.99	-170.07	1,989.48	1,926.68	62.81	31.676		
7,200.00	7,018.87	6,916.13	6,743.54	32.44	34.95	-86.14	-1,666.70	-225.02	2,011.92	1,947.41	64.51	31.186		
7,300.00	7,047.21	7,122.00	6,901.03	33.42	35.73	-87.71	-1,703.63	-350.89	2,030.77	1,964.23	66.54	30.522		
7,400.00	7,060.23	7,400.00	7,032.20	34.55	36.65	-89.45	-1,735.18	-576.85	2,042.47	1,973.18	69.28	29.480		
7,500.00	7,060.03	7,647.76	7,065.89	35.83	38.28	-90.17	-1,744.57	-833.49	2,044.04	1,971.08	72.96	28.017		
7,600.00	7,058.28	7,747.75	7,065.66	37.28	39.40	-90.21	-1,745.17	-933.48	2,043.89	1,968.15	75.74	26.987		
7,700.00	7,056.53	7,847.74	7,065.43	38.89	40.75	-90.25	-1,745.77	-1,033.47	2,043.74	1,964.91	78.83	25.926		
7,800.00	7,054.78	7,947.73	7,065.20	40.63	42.28	-90.29	-1,746.37	-1,133.45	2,043.60	1,961.39	82.20	24.860		
7,900.00	7,053.03	8,047.72	7,064.97	42.50	43.97	-90.34	-1,746.97	-1,233.44	2,043.45	1,957.62	85.83	23.809		
8,000.00	7,051.28	8,147.71	7,064.74	44.47	45.79	-90.38	-1,747.57	-1,333.43	2,043.31	1,953.64	89.67	22.788		
8,100.00	7,049.53	8,247.69	7,064.51	46.53	47.72	-90.42	-1,748.17	-1,433.41	2,043.16	1,949.46	93.70	21.806		
8,200.00	7,047.78	8,347.68	7,064.28	48.67	49.74	-90.46	-1,748.76	-1,533.40	2,043.02	1,945.12	97.90	20.869		
8,300.00	7,046.03	8,447.67	7,064.05	50.89	51.85	-90.51	-1,749.36	-1,633.38	2,042.88	1,940.64	102.24	19.980		
8,400.00	7,044.28	8,547.66	7,063.82	53.16	54.03	-90.55	-1,749.96	-1,733.37	2,042.74	1,936.02	106.72	19.141		
8,500.00	7,042.53	8,647.65	7,063.59	55.49	56.27	-90.59	-1,750.56	-1,833.36	2,042.60	1,931.29	111.31	18.351		
8,600.00	7,040.78	8,747.64	7,063.36	57.86	58.56	-90.63	-1,751.16	-1,933.34	2,042.46	1,926.47	115.99	17.608		
8,700.00	7,039.03	8,847.62	7,063.13	60.28	60.90	-90.68	-1,751.76	-2,033.33	2,042.33	1,921.56	120.77	16.911		
8,800.00	7,037.28	8,947.61	7,062.90	62.74	63.29	-90.72	-1,752.36	-2,133.32	2,042.19	1,916.57	125.62	16.256		
8,900.00	7,035.53	9,047.60	7,062.67	65.23	65.72	-90.76	-1,752.96	-2,233.30	2,042.06	1,911.51	130.55	15.642		
9,000.00	7,033.78	9,147.59	7,062.44	67.74	68.17	-90.81	-1,753.55	-2,333.29	2,041.92	1,906.39	135.53	15.066		
9,100.00	7,032.03	9,247.58	7,062.21	70.29	70.66	-90.85	-1,754.15	-2,433.28	2,041.79	1,901.22	140.57	14.525		
9,200.00	7,030.28	9,347.57	7,061.97	72.85	73.18	-90.89	-1,754.75	-2,533.26	2,041.66	1,896.00	145.66	14.016		
9,300.00	7,028.54	9,447.55	7,061.74	75.44	75.72	-90.93	-1,755.35	-2,633.25	2,041.53	1,890.73	150.80	13.538		
9,400.00	7,026.79	9,547.54	7,061.51	78.05	78.28	-90.98	-1,755.95	-2,733.23	2,041.40	1,885.43	155.97	13.088		
9,500.00	7,025.04	9,647.53	7,061.28	80.67	80.87	-91.02	-1,756.55	-2,833.22	2,041.28	1,880.09	161.18	12.664		
9,600.00	7,023.29	9,747.52	7,061.05	83.31	83.47	-91.06	-1,757.15	-2,933.21	2,041.15	1,874.72	166.43	12.264		
9,700.00	7,021.54	9,847.51	7,060.82	85.96	86.09	-91.10	-1,757.75	-3,033.19	2,041.02	1,869.32	171.70	11.887		
9,800.00	7,019.79	9,947.50	7,060.59	88.63	88.72	-91.15	-1,758.34	-3,133.18	2,040.90	1,863.90	177.00	11.530		
9,900.00	7,018.04	10,047.48	7,060.36	91.30	91.37	-91.19	-1,758.94	-3,233.17	2,040.78	1,858.45	182.33	11.193		
10,000.00	7,016.29	10,147.47	7,060.13	93.99	94.02	-91.23	-1,759.54	-3,333.15	2,040.65	1,852.98	187.67	10.873		
10,100.00	7,014.54	10,247.46	7,059.90	96.69	96.70	-91.28	-1,760.14	-3,433.14	2,040.53	1,847.49	193.04	10.570		
10,200.00	7,012.79	10,347.45	7,059.67	99.40	99.38	-91.32	-1,760.74	-3,533.12	2,040.41	1,841.99	198.43	10.283		
10,300.00	7,011.04	10,447.44	7,059.44	102.11	102.07	-91.36	-1,761.34	-3,633.11	2,040.30	1,836.46	203.83	10.010		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 12N-16B-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	10,547.43	7,059.21	104.83	104.77	-91.40	-1,761.94	-3,733.10	2,040.18	1,830.93	209.25	9.750		
10,500.00	7,007.54	10,647.41	7,058.98	107.56	107.47	-91.45	-1,762.54	-3,833.08	2,040.06	1,825.38	214.69	9.502		
10,600.00	7,005.79	10,747.40	7,058.75	110.30	110.19	-91.49	-1,763.13	-3,933.07	2,039.95	1,819.81	220.14	9.267		
10,700.00	7,004.04	10,847.39	7,058.52	113.04	112.91	-91.53	-1,763.73	-4,033.06	2,039.83	1,814.24	225.60	9.042		
10,800.00	7,002.29	10,947.38	7,058.29	115.79	115.64	-91.57	-1,764.33	-4,133.04	2,039.72	1,808.65	231.07	8.827		
10,900.00	7,000.54	11,047.37	7,058.06	118.54	118.38	-91.62	-1,764.93	-4,233.03	2,039.61	1,803.06	236.55	8.622		
11,000.00	6,998.79	11,147.36	7,057.83	121.30	121.12	-91.66	-1,765.53	-4,333.01	2,039.50	1,797.45	242.05	8.426		
11,100.00	6,997.04	11,247.34	7,057.60	124.06	123.86	-91.70	-1,766.13	-4,433.00	2,039.39	1,791.84	247.55	8.238		
11,200.00	6,995.29	11,347.33	7,057.37	126.83	126.61	-91.75	-1,766.73	-4,532.99	2,039.28	1,786.22	253.06	8.058		
11,300.00	6,993.54	11,447.32	7,057.14	129.60	129.37	-91.79	-1,767.33	-4,632.97	2,039.18	1,780.59	258.58	7.886		
11,400.00	6,991.80	11,547.31	7,056.91	132.37	132.13	-91.83	-1,767.92	-4,732.96	2,039.07	1,774.96	264.11	7.720		
11,500.00	6,990.05	11,647.30	7,056.68	135.15	134.89	-91.87	-1,768.52	-4,832.95	2,038.96	1,769.32	269.65	7.562		
11,600.00	6,988.30	11,747.29	7,056.45	137.93	137.66	-91.92	-1,769.12	-4,932.93	2,038.86	1,763.67	275.19	7.409		
11,700.00	6,986.55	11,847.27	7,056.22	140.72	140.43	-91.96	-1,769.72	-5,032.92	2,038.76	1,758.02	280.74	7.262		
11,800.00	6,984.80	11,947.26	7,055.99	143.50	143.21	-92.00	-1,770.32	-5,132.90	2,038.66	1,752.37	286.29	7.121		
11,900.00	6,983.05	12,047.25	7,055.75	146.29	145.99	-92.05	-1,770.92	-5,232.89	2,038.56	1,746.71	291.85	6.985		
12,000.00	6,981.30	12,147.24	7,055.52	149.09	148.77	-92.09	-1,771.52	-5,332.88	2,038.46	1,741.04	297.41	6.854		
12,100.00	6,979.55	12,247.23	7,055.29	151.88	151.55	-92.13	-1,772.12	-5,432.86	2,038.36	1,735.38	302.98	6.728		
12,200.00	6,977.80	12,347.22	7,055.06	154.68	154.34	-92.17	-1,772.71	-5,532.85	2,038.26	1,729.71	308.56	6.606		
12,300.00	6,976.05	12,447.20	7,054.83	157.48	157.13	-92.22	-1,773.31	-5,632.84	2,038.17	1,724.03	314.13	6.488		
12,400.00	6,974.30	12,547.19	7,054.60	160.28	159.92	-92.26	-1,773.91	-5,732.82	2,038.07	1,718.36	319.72	6.375		
12,500.00	6,972.55	12,647.18	7,054.37	163.08	162.72	-92.30	-1,774.51	-5,832.81	2,037.98	1,712.68	325.30	6.265		
12,600.00	6,970.80	12,747.17	7,054.14	165.89	165.51	-92.35	-1,775.11	-5,932.80	2,037.89	1,707.00	330.89	6.159		
12,700.00	6,969.05	12,847.16	7,053.91	168.69	168.31	-92.39	-1,775.71	-6,032.78	2,037.80	1,701.31	336.48	6.056		
12,800.00	6,967.30	12,947.15	7,053.68	171.50	171.11	-92.43	-1,776.31	-6,132.77	2,037.71	1,695.63	342.08	5.957		
12,900.00	6,965.55	13,047.13	7,053.45	174.31	173.91	-92.47	-1,776.91	-6,232.75	2,037.62	1,689.94	347.68	5.861		
13,000.00	6,963.80	13,147.12	7,053.22	177.12	176.72	-92.52	-1,777.50	-6,332.74	2,037.53	1,684.25	353.28	5.767		
13,100.00	6,962.05	13,247.11	7,052.99	179.94	179.53	-92.56	-1,778.10	-6,432.73	2,037.44	1,678.56	358.89	5.677		
13,200.00	6,960.30	13,347.10	7,052.76	182.75	182.33	-92.60	-1,778.70	-6,532.71	2,037.36	1,672.87	364.49	5.590		
13,300.00	6,958.55	13,447.09	7,052.53	185.57	185.14	-92.65	-1,779.30	-6,632.70	2,037.27	1,667.17	370.10	5.505		
13,400.00	6,956.80	13,547.08	7,052.30	188.38	187.95	-92.69	-1,779.90	-6,732.69	2,037.19	1,661.48	375.71	5.422		
13,500.00	6,955.05	13,647.06	7,052.07	191.20	190.76	-92.73	-1,780.50	-6,832.67	2,037.11	1,655.78	381.33	5.342		
13,600.00	6,953.31	13,747.05	7,051.84	194.02	193.58	-92.77	-1,781.10	-6,932.66	2,037.03	1,650.09	386.94	5.264		
13,700.00	6,951.56	13,847.04	7,051.61	196.84	196.39	-92.82	-1,781.70	-7,032.64	2,036.95	1,644.39	392.56	5.189		
13,800.00	6,949.81	13,947.03	7,051.38	199.67	199.21	-92.86	-1,782.29	-7,132.63	2,036.87	1,638.69	398.18	5.115		
13,900.00	6,948.06	14,047.02	7,051.15	202.49	202.03	-92.90	-1,782.89	-7,232.62	2,036.79	1,633.00	403.80	5.044		
14,000.00	6,946.31	14,147.01	7,050.92	205.31	204.84	-92.95	-1,783.49	-7,332.60	2,036.72	1,627.30	409.42	4.975		
14,100.00	6,944.56	14,246.99	7,050.69	208.14	207.66	-92.99	-1,784.09	-7,432.59	2,036.64	1,621.60	415.04	4.907		
14,200.00	6,942.81	14,346.98	7,050.46	210.96	210.48	-93.03	-1,784.69	-7,532.58	2,036.57	1,615.90	420.67	4.841		
14,300.00	6,941.06	14,446.97	7,050.23	213.79	213.31	-93.07	-1,785.29	-7,632.56	2,036.49	1,610.20	426.29	4.777		
14,400.00	6,939.31	14,546.96	7,050.00	216.62	216.13	-93.12	-1,785.89	-7,732.55	2,036.42	1,604.50	431.92	4.715		
14,500.00	6,937.56	14,646.95	7,049.77	219.44	218.95	-93.16	-1,786.49	-7,832.53	2,036.35	1,598.80	437.55	4.654		
14,600.00	6,935.81	14,746.94	7,049.54	222.27	221.78	-93.20	-1,787.08	-7,932.52	2,036.28	1,593.10	443.18	4.595		
14,700.00	6,934.06	14,846.92	7,049.30	225.10	224.60	-93.25	-1,787.68	-8,032.51	2,036.21	1,587.41	448.81	4.537		
14,800.00	6,932.31	14,946.91	7,049.07	227.93	227.43	-93.29	-1,788.28	-8,132.49	2,036.15	1,581.71	454.44	4.481		
14,817.75	6,932.00	14,964.66	7,049.03	228.43	227.93	-93.30	-1,788.39	-8,150.24	2,036.14	1,580.70	455.44	4.471 SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 13C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	2.00	0.00	3.28	3.28	-179.48	-339.91	-3.06	339.92					
100.00	100.00	102.00	100.00	3.28	3.29	-179.48	-339.91	-3.06	339.92	333.35	6.57	51.740		
200.00	200.00	198.00	200.00	3.34	3.34	-179.48	-339.91	-3.06	339.92	333.25	6.67	50.944	CC, ES	
300.00	300.00	287.59	289.58	3.44	3.42	-179.47	-341.25	-3.14	341.42	334.54	6.88	49.638		
400.00	400.00	376.80	378.69	3.60	3.55	-179.44	-345.35	-3.41	346.03	338.84	7.19	48.154		
500.00	500.00	465.67	467.29	3.81	3.72	-179.38	-352.19	-3.84	353.73	346.15	7.58	46.656		
600.00	599.98	553.85	554.95	4.05	3.92	-151.92	-361.69	-4.44	366.04	357.99	8.05	45.460		
700.00	699.86	640.83	641.09	4.32	4.14	-152.04	-373.69	-5.21	384.05	375.47	8.58	44.755		
800.00	799.72	726.70	725.74	4.62	4.40	-152.23	-388.09	-6.12	405.41	396.27	9.14	44.355		
900.00	899.58	811.39	808.76	4.93	4.68	-152.38	-404.77	-7.18	429.67	419.94	9.73	44.173		
1,000.00	999.44	894.78	889.99	5.27	4.98	-152.49	-423.58	-8.38	456.76	446.43	10.33	44.215		
1,100.00	1,099.31	976.75	969.27	5.62	5.30	-152.57	-444.36	-9.70	486.62	475.67	10.95	44.446		
1,200.00	1,199.17	1,057.22	1,046.48	5.98	5.64	-152.62	-466.95	-11.13	519.16	507.59	11.57	44.866		
1,300.00	1,299.03	1,136.10	1,121.53	6.36	5.99	-152.65	-491.19	-12.67	554.32	542.12	12.19	45.456		
1,400.00	1,398.89	1,213.32	1,194.32	6.74	6.36	-152.66	-516.90	-14.31	592.00	579.19	12.81	46.200		
1,500.00	1,498.75	1,301.48	1,276.85	7.13	6.80	-152.66	-547.84	-16.28	631.44	617.93	13.50	46.763		
1,600.00	1,598.61	1,406.66	1,362.82	7.52	7.34	-152.66	-580.14	-18.33	670.94	656.64	14.29	46.945		
1,700.00	1,698.47	1,485.21	1,448.80	7.92	7.75	-152.66	-612.44	-20.38	710.44	695.45	14.98	47.414		
1,800.00	1,798.33	1,577.08	1,534.78	8.32	8.25	-152.66	-644.73	-22.43	749.94	734.19	15.75	47.617		
1,900.00	1,898.19	1,668.95	1,620.76	8.73	8.76	-152.66	-677.03	-24.49	789.44	772.91	16.53	47.761		
2,000.00	1,998.05	1,760.81	1,706.74	9.14	9.27	-152.66	-709.33	-26.54	828.94	811.62	17.32	47.859		
2,100.00	2,097.91	1,852.68	1,792.72	9.55	9.78	-152.66	-741.63	-28.59	868.44	850.32	18.12	47.922		
2,200.00	2,197.78	1,944.55	1,878.70	9.97	10.31	-152.66	-773.92	-30.64	907.94	889.01	18.93	47.957		
2,300.00	2,297.64	2,036.42	1,964.68	10.39	10.83	-152.66	-806.22	-32.70	947.44	927.69	19.75	47.969		
2,400.00	2,397.50	2,128.29	2,050.66	10.81	11.36	-152.66	-838.52	-34.75	986.94	966.37	20.58	47.965		
2,500.00	2,497.36	2,220.15	2,136.64	11.23	11.90	-152.66	-870.81	-36.80	1,026.44	1,005.03	21.41	47.948		
2,600.00	2,597.22	2,312.02	2,222.62	11.65	12.44	-152.65	-903.11	-38.86	1,065.94	1,043.70	22.24	47.920		
2,700.00	2,697.08	2,403.89	2,308.59	12.07	12.98	-152.65	-935.41	-40.91	1,105.44	1,082.36	23.09	47.884		
2,800.00	2,796.94	2,504.24	2,394.57	12.50	13.57	-152.65	-967.70	-42.96	1,144.94	1,120.97	23.97	47.756		
2,900.00	2,896.80	2,587.63	2,480.55	12.92	14.06	-152.65	-1,000.00	-45.01	1,184.44	1,159.66	24.78	47.795		
3,000.00	2,996.66	2,679.49	2,566.53	13.35	14.61	-152.65	-1,032.30	-47.07	1,223.95	1,198.31	25.63	47.745		
3,100.00	3,096.52	2,771.36	2,652.51	13.78	15.15	-152.65	-1,064.59	-49.12	1,263.45	1,236.95	26.49	47.693		
3,200.00	3,196.38	2,863.23	2,738.49	14.21	15.70	-152.65	-1,096.89	-51.17	1,302.95	1,275.60	27.35	47.639		
3,300.00	3,296.25	2,955.10	2,824.47	14.64	16.25	-152.65	-1,129.19	-53.22	1,342.45	1,314.23	28.21	47.584		
3,400.00	3,396.11	3,046.96	2,910.45	15.07	16.80	-152.65	-1,161.49	-55.28	1,381.95	1,352.87	29.08	47.528		
3,500.00	3,495.97	3,138.83	2,996.43	15.50	17.35	-152.65	-1,193.78	-57.33	1,421.45	1,391.51	29.94	47.473		
3,600.00	3,595.83	3,230.70	3,082.41	15.93	17.90	-152.65	-1,226.08	-59.38	1,460.95	1,430.14	30.81	47.417		
3,700.00	3,695.69	3,322.57	3,168.38	16.36	18.46	-152.65	-1,258.38	-61.44	1,500.45	1,468.77	31.68	47.361		
3,800.00	3,795.55	3,414.44	3,254.36	16.80	19.01	-152.65	-1,290.67	-63.49	1,539.95	1,507.40	32.55	47.306		
3,900.00	3,895.41	3,506.30	3,340.34	17.23	19.57	-152.65	-1,322.97	-65.54	1,579.45	1,546.02	33.43	47.252		
4,000.00	3,995.27	3,601.83	3,426.32	17.66	20.14	-152.65	-1,355.27	-67.59	1,618.95	1,584.63	34.32	47.172		
4,100.00	4,095.13	3,709.96	3,512.30	18.10	20.80	-152.65	-1,387.56	-69.65	1,658.45	1,623.17	35.28	47.007		
4,200.00	4,194.99	3,781.91	3,598.28	18.53	21.23	-152.65	-1,419.86	-71.70	1,697.95	1,661.90	36.05	47.094		
4,300.00	4,294.85	3,873.78	3,684.26	18.96	21.79	-152.65	-1,452.16	-73.75	1,737.45	1,700.52	36.93	47.044		
4,400.00	4,394.71	3,965.64	3,770.24	19.40	22.35	-152.65	-1,484.45	-75.80	1,776.95	1,739.14	37.81	46.994		
4,500.00	4,494.58	4,057.51	3,856.22	19.83	22.91	-152.65	-1,516.75	-77.86	1,816.45	1,777.76	38.69	46.945		
4,600.00	4,594.44	4,149.38	3,942.20	20.27	23.47	-152.65	-1,549.05	-79.91	1,855.95	1,816.38	39.57	46.897		
4,700.00	4,694.30	4,241.25	4,028.18	20.71	24.02	-152.65	-1,581.35	-81.96	1,895.46	1,855.00	40.46	46.851		
4,800.00	4,794.16	4,333.11	4,114.15	21.14	24.58	-152.65	-1,613.64	-84.02	1,934.96	1,893.62	41.34	46.805		
4,900.00	4,894.02	4,424.98	4,200.13	21.58	25.14	-152.65	-1,645.94	-86.07	1,974.46	1,932.23	42.22	46.761		
5,000.00	4,993.88	4,516.85	4,286.11	22.01	25.70	-152.65	-1,678.24	-88.12	2,013.96	1,970.85	43.11	46.717		
5,100.00	5,093.74	4,608.72	4,372.09	22.45	26.26	-152.65	-1,710.53	-90.17	2,053.46	2,009.46	44.00	46.674		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 13C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	4,700.59	4,458.07	22.89	26.82	-152.65	-1,742.83	-92.23	2,092.96	2,048.08	44.88	46.633		
5,300.00	5,293.46	4,807.55	4,544.05	23.32	27.47	-152.65	-1,775.13	-94.28	2,132.46	2,086.61	45.85	46.511		
5,400.00	5,393.32	4,884.32	4,630.03	23.76	27.94	-152.65	-1,807.42	-96.33	2,171.96	2,125.30	46.66	46.552		
5,500.00	5,493.18	4,976.19	4,716.01	24.20	28.50	-152.65	-1,839.72	-98.38	2,211.46	2,163.92	47.54	46.513		
5,600.00	5,593.05	5,068.06	4,801.99	24.64	29.06	-152.65	-1,872.02	-100.44	2,250.96	2,202.53	48.43	46.475		
5,700.00	5,692.91	5,159.93	4,887.97	25.07	29.63	-152.65	-1,904.31	-102.49	2,290.46	2,241.14	49.32	46.438		
5,800.00	5,792.77	5,251.79	4,973.94	25.51	30.19	-152.65	-1,936.61	-104.54	2,329.96	2,279.75	50.21	46.401		
5,900.00	5,892.63	5,343.66	5,059.92	25.95	30.75	-152.65	-1,968.91	-106.60	2,369.46	2,318.36	51.10	46.366		
6,000.00	5,992.49	5,435.53	5,145.90	26.39	31.31	-152.65	-2,001.21	-108.65	2,408.96	2,356.97	51.99	46.331		
6,100.00	6,092.35	5,527.40	5,231.88	26.82	31.87	-152.65	-2,033.50	-110.70	2,448.46	2,395.58	52.89	46.297		
6,200.00	6,192.21	5,619.26	5,317.86	27.26	32.43	-152.65	-2,065.80	-112.75	2,487.96	2,434.19	53.78	46.263		
6,300.00	6,292.07	5,711.13	5,403.84	27.70	33.00	-152.65	-2,098.10	-114.81	2,527.47	2,472.79	54.67	46.231		
6,400.00	6,391.93	5,803.00	5,489.82	28.14	33.56	-152.65	-2,130.39	-116.86	2,566.97	2,511.40	55.56	46.199		
6,500.00	6,491.69	5,905.18	5,575.76	28.58	34.18	-111.89	-2,162.67	-118.91	2,606.43	2,549.92	56.51	46.122		
6,600.00	6,589.80	5,985.48	5,660.60	29.02	34.68	-94.55	-2,194.54	-120.94	2,645.35	2,588.01	57.35	46.128		
6,700.00	6,683.86	6,072.78	5,742.30	29.46	35.21	-87.88	-2,225.24	-122.89	2,683.05	2,624.82	58.23	46.080		
6,800.00	6,771.56	6,154.57	5,818.86	29.92	35.71	-83.68	-2,253.99	-124.71	2,719.08	2,659.99	59.09	46.018		
6,900.00	6,850.72	6,228.86	5,888.38	30.40	36.17	-80.58	-2,280.11	-126.37	2,753.22	2,693.28	59.94	45.934		
7,000.00	6,919.40	6,293.79	5,949.15	30.96	36.57	-78.09	-2,302.94	-127.83	2,785.38	2,724.57	60.81	45.807		
7,100.00	6,975.92	6,347.78	5,999.68	31.62	36.90	-75.96	-2,321.92	-129.03	2,815.54	2,753.82	61.72	45.617		
7,200.00	7,018.87	6,389.50	6,038.73	32.44	37.15	-74.01	-2,336.58	-129.96	2,843.70	2,780.99	62.71	45.349		
7,300.00	7,047.21	6,417.92	6,065.32	33.42	37.33	-72.15	-2,346.57	-130.60	2,869.78	2,806.01	63.77	45.000		
7,400.00	7,060.23	6,432.33	6,078.81	34.55	37.41	-70.34	-2,351.64	-130.92	2,893.60	2,828.70	64.90	44.588		
7,500.00	7,060.03	6,434.62	6,080.95	35.83	37.43	-69.55	-2,352.44	-130.97	2,915.79	2,849.73	66.07	44.134		
7,600.00	7,058.28	6,435.48	6,081.76	37.28	37.43	-69.56	-2,352.75	-130.99	2,940.64	2,873.28	67.36	43.655		
7,700.00	7,056.53	6,436.34	6,082.56	38.89	37.44	-69.58	-2,353.05	-131.01	2,968.65	2,899.89	68.75	43.178		
7,800.00	7,054.78	6,437.20	6,083.37	40.63	37.44	-69.60	-2,353.35	-131.03	2,999.73	2,929.51	70.22	42.718		
7,900.00	7,053.03	6,438.06	6,084.18	42.50	37.45	-69.61	-2,353.66	-131.05	3,033.79	2,962.05	71.74	42.288		
8,000.00	7,051.28	6,438.93	6,084.98	44.47	37.45	-69.63	-2,353.96	-131.07	3,070.73	2,997.44	73.29	41.898		
8,100.00	7,049.53	6,439.79	6,085.78	46.53	37.45	-69.65	-2,354.26	-131.09	3,107.77	3,032.82	74.96	41.508		
8,200.00	7,047.78	6,438.53	6,084.52	48.67	37.44	-69.62	-2,353.56	-131.06	3,144.80	3,068.79	76.75	41.118		
8,300.00	7,046.03	6,437.27	6,083.26	50.89	37.43	-69.59	-2,352.86	-131.03	3,181.82	3,104.76	78.64	40.728		
8,400.00	7,044.28	6,436.01	6,082.00	53.16	37.42	-69.56	-2,352.16	-131.00	3,218.84	3,140.73	80.64	40.338		
8,500.00	7,042.53	6,434.75	6,080.74	55.49	37.41	-69.53	-2,351.46	-130.97	3,255.86	3,176.70	82.75	40.000		
8,600.00	7,040.78	6,433.49	6,079.48	57.86	37.40	-69.50	-2,350.76	-130.94	3,292.88	3,212.67	84.96	39.662		
8,700.00	7,039.03	6,432.23	6,078.22	60.28	37.39	-69.47	-2,350.06	-130.91	3,329.89	3,248.64	87.27	39.324		
8,800.00	7,037.28	6,430.97	6,076.96	62.74	37.38	-69.44	-2,349.36	-130.88	3,366.91	3,284.61	89.68	39.000		
8,900.00	7,035.53	6,429.71	6,075.70	65.23	37.37	-69.41	-2,348.66	-130.85	3,403.93	3,320.58	92.19	38.662		
9,000.00	7,033.78	6,428.45	6,074.44	67.74	37.36	-69.38	-2,347.96	-130.82	3,440.95	3,356.55	94.80	38.324		
9,100.00	7,032.03	6,427.19	6,073.18	70.29	37.35	-69.35	-2,347.26	-130.79	3,477.97	3,392.52	97.41	38.000		
9,200.00	7,030.28	6,425.93	6,071.92	72.85	37.34	-69.32	-2,346.56	-130.76	3,514.99	3,428.49	100.02	37.662		
9,300.00	7,028.53	6,424.67	6,070.66	75.44	37.33	-69.29	-2,345.86	-130.73	3,552.01	3,464.46	102.63	37.324		
9,400.00	7,026.78	6,423.41	6,069.40	78.05	37.32	-69.26	-2,345.16	-130.70	3,589.03	3,500.43	105.24	37.000		
9,500.00	7,025.03	6,422.15	6,068.14	80.67	37.31	-69.23	-2,344.46	-130.67	3,626.05	3,536.40	107.85	36.662		
9,600.00	7,023.28	6,420.89	6,066.88	83.31	37.30	-69.20	-2,343.76	-130.64	3,663.07	3,572.37	110.46	36.324		
9,700.00	7,021.53	6,419.63	6,065.62	85.96	37.29	-69.17	-2,343.06	-130.61	3,700.09	3,608.34	113.07	36.000		
9,800.00	7,019.78	6,418.37	6,064.36	88.63	37.28	-69.14	-2,342.36	-130.58	3,737.11	3,644.31	115.68	35.662		
9,900.00	7,018.03	6,417.11	6,063.10	91.30	37.27	-69.11	-2,341.66	-130.55	3,774.13	3,680.28	118.29	35.324		
10,000.00	7,016.28	6,415.85	6,061.84	93.99	37.26	-69.08	-2,340.96	-130.52	3,811.15	3,716.25	120.90	35.000		
10,100.00	7,014.53	6,414.59	6,060.58	96.69	37.25	-69.05	-2,340.26	-130.49	3,848.17	3,752.22	123.51	34.662		
10,200.00	7,012.78	6,413.33	6,059.32	99.40	37.24	-69.02	-2,339.56	-130.46	3,885.19	3,788.19	126.12	34.324		
10,300.00	7,011.03	6,412.07	6,058.06	102.11	37.23	-69.00	-2,338.86	-130.43	3,922.21	3,824.16	128.73	34.000		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 13C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	10,992.30	7,232.25	104.83	105.99	-94.13	-2,812.62	-3,728.14	3,098.30	2,888.98	209.32	14.802		
10,500.00	7,007.54	11,107.71	7,231.75	107.56	109.07	-94.15	-2,813.21	-3,828.12	3,098.22	2,883.10	215.12	14.402		
10,600.00	7,005.79	11,207.72	7,231.25	110.30	111.75	-94.17	-2,813.80	-3,928.11	3,098.15	2,877.62	220.53	14.048		
10,700.00	7,004.04	11,292.28	7,230.75	113.04	114.02	-94.20	-2,814.39	-4,028.10	3,098.08	2,872.54	225.54	13.736		
10,800.00	7,002.29	11,407.73	7,230.25	115.79	117.13	-94.22	-2,814.98	-4,128.09	3,098.01	2,866.61	231.39	13.388		
10,900.00	7,000.54	11,507.74	7,229.75	118.54	119.84	-94.24	-2,815.56	-4,228.08	3,097.93	2,861.09	236.84	13.080		
11,000.00	6,998.79	11,607.75	7,229.25	121.30	122.55	-94.27	-2,816.15	-4,328.07	3,097.86	2,855.56	242.30	12.785		
11,100.00	6,997.04	11,707.76	7,228.75	124.06	125.27	-94.29	-2,816.74	-4,428.06	3,097.79	2,850.02	247.77	12.503		
11,200.00	6,995.29	11,807.76	7,228.25	126.83	127.99	-94.31	-2,817.33	-4,528.05	3,097.72	2,844.47	253.25	12.232		
11,300.00	6,993.54	11,892.23	7,227.75	129.60	130.29	-94.34	-2,817.92	-4,628.04	3,097.65	2,839.34	258.32	11.992		
11,400.00	6,991.80	12,007.78	7,227.25	132.37	133.45	-94.36	-2,818.50	-4,728.03	3,097.58	2,833.34	264.24	11.723		
11,500.00	6,990.05	12,107.79	7,226.74	135.15	136.19	-94.38	-2,819.09	-4,828.02	3,097.51	2,827.77	269.74	11.483		
11,600.00	6,988.30	12,207.80	7,226.24	137.93	138.94	-94.41	-2,819.68	-4,928.00	3,097.44	2,822.19	275.25	11.253		
11,700.00	6,986.55	12,307.80	7,225.74	140.72	141.69	-94.43	-2,820.27	-5,027.99	3,097.38	2,816.60	280.77	11.032		
11,800.00	6,984.80	12,392.19	7,225.24	143.50	144.01	-94.45	-2,820.86	-5,127.98	3,097.31	2,811.44	285.87	10.835		
11,900.00	6,983.05	12,507.82	7,224.74	146.29	147.20	-94.48	-2,821.45	-5,227.97	3,097.24	2,805.41	291.83	10.613		
12,000.00	6,981.30	12,592.17	7,224.24	149.09	149.53	-94.50	-2,822.03	-5,327.96	3,097.18	2,800.24	296.94	10.430		
12,100.00	6,979.55	12,707.84	7,223.74	151.88	152.73	-94.52	-2,822.62	-5,427.95	3,097.11	2,794.20	302.91	10.224		
12,200.00	6,977.80	12,807.84	7,223.24	154.68	155.50	-94.55	-2,823.21	-5,527.94	3,097.05	2,788.59	308.46	10.040		
12,300.00	6,976.05	12,907.85	7,222.74	157.48	158.27	-94.57	-2,823.80	-5,627.93	3,096.98	2,782.97	314.01	9.863		
12,400.00	6,974.30	13,007.86	7,222.24	160.28	161.04	-94.59	-2,824.39	-5,727.92	3,096.92	2,777.35	319.57	9.691		
12,500.00	6,972.55	13,107.87	7,221.74	163.08	163.82	-94.62	-2,824.97	-5,827.91	3,096.85	2,771.72	325.13	9.525		
12,600.00	6,970.80	13,207.88	7,221.24	165.89	166.60	-94.64	-2,825.56	-5,927.90	3,096.79	2,766.09	330.70	9.364		
12,700.00	6,969.05	13,307.88	7,220.74	168.69	169.38	-94.66	-2,826.15	-6,027.88	3,096.73	2,760.46	336.27	9.209		
12,800.00	6,967.30	13,407.89	7,220.24	171.50	172.17	-94.69	-2,826.74	-6,127.87	3,096.66	2,754.83	341.84	9.059		
12,900.00	6,965.55	13,507.90	7,219.74	174.31	174.96	-94.71	-2,827.33	-6,227.86	3,096.60	2,749.19	347.41	8.913		
13,000.00	6,963.80	13,592.09	7,219.24	177.12	177.31	-94.73	-2,827.91	-6,327.85	3,096.54	2,743.99	352.55	8.783		
13,100.00	6,962.05	13,707.91	7,218.73	179.94	180.54	-94.76	-2,828.50	-6,427.84	3,096.48	2,737.90	358.58	8.635		
13,200.00	6,960.30	13,792.08	7,218.23	182.75	182.89	-94.78	-2,829.09	-6,527.83	3,096.42	2,732.70	363.72	8.513		
13,300.00	6,958.55	13,907.93	7,217.73	185.57	186.13	-94.80	-2,829.68	-6,627.82	3,096.36	2,726.61	369.75	8.374		
13,400.00	6,956.80	14,007.94	7,217.23	188.38	188.93	-94.83	-2,830.27	-6,727.81	3,096.30	2,720.96	375.34	8.249		
13,500.00	6,955.05	14,107.95	7,216.73	191.20	191.73	-94.85	-2,830.86	-6,827.80	3,096.24	2,715.31	380.94	8.128		
13,600.00	6,953.31	14,207.95	7,216.23	194.02	194.53	-94.87	-2,831.44	-6,927.79	3,096.18	2,709.65	386.53	8.010		
13,700.00	6,951.56	14,292.04	7,215.73	196.84	196.89	-94.90	-2,832.03	-7,027.78	3,096.13	2,704.44	391.68	7.905		
13,800.00	6,949.81	14,407.97	7,215.23	199.67	200.14	-94.92	-2,832.62	-7,127.76	3,096.07	2,698.34	397.73	7.784		
13,900.00	6,948.06	14,507.98	7,214.73	202.49	202.95	-94.94	-2,833.21	-7,227.75	3,096.01	2,692.68	403.33	7.676		
14,000.00	6,946.31	14,607.99	7,214.23	205.31	205.76	-94.97	-2,833.80	-7,327.74	3,095.96	2,687.02	408.94	7.571		
14,100.00	6,944.56	14,707.99	7,213.73	208.14	208.57	-94.99	-2,834.38	-7,427.73	3,095.90	2,681.36	414.54	7.468		
14,200.00	6,942.81	14,808.00	7,213.23	210.96	211.38	-95.01	-2,834.97	-7,527.72	3,095.85	2,675.70	420.15	7.368		
14,300.00	6,941.06	14,908.01	7,212.73	213.79	214.19	-95.04	-2,835.56	-7,627.71	3,095.79	2,670.03	425.76	7.271		
14,400.00	6,939.31	14,991.98	7,212.23	216.62	216.55	-95.06	-2,836.15	-7,727.70	3,095.74	2,664.82	430.92	7.184		
14,500.00	6,937.56	15,108.03	7,211.73	219.44	219.82	-95.08	-2,836.74	-7,827.69	3,095.68	2,658.70	436.98	7.084		
14,600.00	6,935.81	15,208.03	7,211.23	222.27	222.63	-95.11	-2,837.32	-7,927.68	3,095.63	2,653.04	442.59	6.994		
14,700.00	6,934.06	15,308.04	7,210.72	225.10	225.45	-95.13	-2,837.91	-8,027.67	3,095.58	2,647.37	448.21	6.907		
14,800.00	6,932.31	15,391.95	7,210.22	227.93	227.81	-95.15	-2,838.50	-8,127.66	3,095.53	2,642.15	453.37	6.828		
14,817.75	6,932.00	15,409.70	7,210.14	228.43	228.31	-95.16	-2,838.61	-8,145.40	3,095.52	2,641.15	454.37	6.813 SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 33N-16C-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	2.00	0.00	3.28	3.28	-179.50	-319.87	-2.78	319.88					
100.00	100.00	102.00	100.00	3.28	3.29	-179.50	-319.87	-2.78	319.88	313.31	6.57	48.690		
200.00	200.00	198.00	200.00	3.34	3.34	-179.50	-319.87	-2.78	319.88	313.21	6.67	47.941	CC, ES	
300.00	300.00	288.14	290.13	3.44	3.42	-179.49	-321.22	-2.87	321.39	314.51	6.88	46.721		
400.00	400.00	377.92	379.80	3.60	3.55	-179.44	-325.38	-3.16	326.02	318.84	7.19	45.357		
500.00	500.00	467.34	468.95	3.81	3.72	-179.37	-332.31	-3.64	333.77	326.19	7.59	44.000		
600.00	599.98	556.06	557.14	4.05	3.92	-151.90	-341.92	-4.31	346.15	338.09	8.06	42.956		
700.00	699.86	643.57	643.80	4.32	4.15	-152.03	-354.06	-5.15	364.24	355.65	8.59	42.404		
800.00	799.72	729.95	728.93	4.62	4.41	-152.22	-368.63	-6.15	385.70	376.54	9.15	42.147		
900.00	899.58	815.13	812.42	4.93	4.69	-152.36	-385.50	-7.32	410.07	400.33	9.74	42.099		
1,000.00	999.44	898.99	894.07	5.27	5.00	-152.46	-404.52	-8.64	437.28	426.94	10.35	42.263		
1,100.00	1,099.31	981.41	973.75	5.62	5.32	-152.53	-425.53	-10.09	467.28	456.31	10.97	42.611		
1,200.00	1,199.17	1,062.29	1,051.33	5.98	5.66	-152.57	-448.36	-11.67	499.97	488.38	11.59	43.135		
1,300.00	1,299.03	1,141.57	1,126.71	6.36	6.02	-152.59	-472.85	-13.36	535.28	523.07	12.22	43.820		
1,400.00	1,398.89	1,229.84	1,210.05	6.74	6.44	-152.59	-501.88	-15.37	572.54	559.65	12.89	44.413		
1,500.00	1,498.75	1,322.59	1,297.58	7.13	6.89	-152.59	-532.48	-17.49	609.92	596.31	13.61	44.807		
1,600.00	1,598.61	1,415.34	1,385.11	7.52	7.36	-152.59	-563.08	-19.60	647.30	632.94	14.35	45.098		
1,700.00	1,698.47	1,508.10	1,472.64	7.92	7.84	-152.59	-593.69	-21.72	684.67	669.56	15.11	45.309		
1,800.00	1,798.33	1,600.85	1,560.18	8.32	8.33	-152.59	-624.29	-23.84	722.05	706.16	15.88	45.456		
1,900.00	1,898.19	1,706.40	1,647.71	8.73	8.90	-152.59	-654.89	-25.96	759.43	742.70	16.73	45.394		
2,000.00	1,998.05	1,786.35	1,735.24	9.14	9.34	-152.60	-685.49	-28.07	796.80	779.34	17.47	45.617		
2,100.00	2,097.91	1,879.10	1,822.78	9.55	9.85	-152.60	-716.09	-30.19	834.18	815.91	18.27	45.649		
2,200.00	2,197.78	1,971.86	1,910.31	9.97	10.36	-152.60	-746.69	-32.31	871.56	852.47	19.09	45.658		
2,300.00	2,297.64	2,064.61	1,997.84	10.39	10.88	-152.60	-777.30	-34.42	908.93	889.02	19.91	45.650		
2,400.00	2,397.50	2,157.36	2,085.37	10.81	11.40	-152.60	-807.90	-36.54	946.31	925.57	20.74	45.629		
2,500.00	2,497.36	2,250.11	2,172.91	11.23	11.93	-152.60	-838.50	-38.66	983.69	962.12	21.57	45.597		
2,600.00	2,597.22	2,342.87	2,260.44	11.65	12.46	-152.60	-869.10	-40.77	1,021.07	998.65	22.41	45.558		
2,700.00	2,697.08	2,435.62	2,347.97	12.07	12.99	-152.60	-899.70	-42.89	1,058.44	1,035.19	23.26	45.512		
2,800.00	2,796.94	2,528.37	2,435.51	12.50	13.52	-152.60	-930.31	-45.01	1,095.82	1,071.72	24.10	45.462		
2,900.00	2,896.80	2,621.12	2,523.04	12.92	14.05	-152.60	-960.91	-47.12	1,133.20	1,108.24	24.96	45.409		
3,000.00	2,996.66	2,713.87	2,610.57	13.35	14.59	-152.60	-991.51	-49.24	1,170.57	1,144.76	25.81	45.354		
3,100.00	3,096.52	2,806.63	2,698.10	13.78	15.12	-152.60	-1,022.11	-51.36	1,207.95	1,181.28	26.67	45.297		
3,200.00	3,196.38	2,900.62	2,785.64	14.21	15.67	-152.60	-1,052.71	-53.47	1,245.33	1,217.79	27.53	45.229		
3,300.00	3,296.25	2,992.13	2,873.17	14.64	16.20	-152.60	-1,083.32	-55.59	1,282.70	1,254.31	28.39	45.182		
3,400.00	3,396.11	3,084.88	2,960.70	15.07	16.74	-152.60	-1,113.92	-57.71	1,320.08	1,290.83	29.25	45.124		
3,500.00	3,495.97	3,177.63	3,048.24	15.50	17.28	-152.60	-1,144.52	-59.82	1,357.46	1,327.34	30.12	45.066		
3,600.00	3,595.83	3,270.39	3,135.77	15.93	17.82	-152.60	-1,175.12	-61.94	1,394.84	1,363.85	30.99	45.009		
3,700.00	3,695.69	3,363.14	3,223.30	16.36	18.36	-152.60	-1,205.72	-64.06	1,432.21	1,400.35	31.86	44.953		
3,800.00	3,795.55	3,455.89	3,310.83	16.80	18.91	-152.60	-1,236.32	-66.18	1,469.59	1,436.86	32.73	44.897		
3,900.00	3,895.41	3,548.64	3,398.37	17.23	19.45	-152.60	-1,266.93	-68.29	1,506.97	1,473.36	33.61	44.842		
4,000.00	3,995.27	3,641.40	3,485.90	17.66	20.00	-152.60	-1,297.53	-70.41	1,544.34	1,509.86	34.48	44.789		
4,100.00	4,095.13	3,734.15	3,573.43	18.10	20.54	-152.60	-1,328.13	-72.53	1,581.72	1,546.36	35.36	44.736		
4,200.00	4,194.99	3,826.90	3,660.97	18.53	21.09	-152.60	-1,358.73	-74.64	1,619.10	1,582.86	36.23	44.685		
4,300.00	4,294.85	3,919.65	3,748.50	18.96	21.63	-152.60	-1,389.33	-76.76	1,656.47	1,619.36	37.11	44.634		
4,400.00	4,394.71	4,012.40	3,836.03	19.40	22.18	-152.60	-1,419.94	-78.88	1,693.85	1,655.86	37.99	44.585		
4,500.00	4,494.58	4,105.16	3,923.56	19.83	22.73	-152.60	-1,450.54	-80.99	1,731.23	1,692.36	38.87	44.537		
4,600.00	4,594.44	4,202.09	4,011.10	20.27	23.30	-152.60	-1,481.14	-83.11	1,768.61	1,728.83	39.77	44.466		
4,700.00	4,694.30	4,309.34	4,098.63	20.71	23.93	-152.60	-1,511.74	-85.23	1,805.98	1,765.25	40.73	44.339		
4,800.00	4,794.16	4,383.41	4,186.16	21.14	24.37	-152.60	-1,542.34	-87.34	1,843.36	1,801.84	41.52	44.399		
4,900.00	4,894.02	4,476.16	4,273.70	21.58	24.92	-152.60	-1,572.95	-89.46	1,880.74	1,838.33	42.40	44.355		
5,000.00	4,993.88	4,568.92	4,361.23	22.01	25.47	-152.60	-1,603.55	-91.58	1,918.11	1,874.83	43.29	44.313		
5,100.00	5,093.74	4,661.67	4,448.76	22.45	26.02	-152.60	-1,634.15	-93.69	1,955.49	1,911.32	44.17	44.271		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 33N-16C-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	4,754.42	4,536.29	22.89	26.56	-152.60	-1,664.75	-95.81	1,992.87	1,947.81	45.06	44.230		
5,300.00	5,293.46	4,847.17	4,623.83	23.32	27.11	-152.60	-1,695.35	-97.93	2,030.24	1,984.30	45.94	44.191		
5,400.00	5,393.32	4,939.93	4,711.36	23.76	27.66	-152.60	-1,725.96	-100.04	2,067.62	2,020.79	46.83	44.152		
5,500.00	5,493.18	5,032.68	4,798.89	24.20	28.21	-152.60	-1,756.56	-102.16	2,105.00	2,057.28	47.72	44.114		
5,600.00	5,593.05	5,125.43	4,886.43	24.64	28.76	-152.60	-1,787.16	-104.28	2,142.38	2,093.77	48.61	44.077		
5,700.00	5,692.91	5,218.18	4,973.96	25.07	29.31	-152.60	-1,817.76	-106.39	2,179.75	2,130.26	49.49	44.041		
5,800.00	5,792.77	5,310.93	5,061.49	25.51	29.86	-152.60	-1,848.36	-108.51	2,217.13	2,166.75	50.38	44.006		
5,900.00	5,892.63	5,403.69	5,149.02	25.95	30.41	-152.60	-1,878.96	-110.63	2,254.51	2,203.23	51.27	43.971		
6,000.00	5,992.49	5,503.56	5,236.56	26.39	31.01	-152.60	-1,909.57	-112.75	2,291.88	2,239.68	52.20	43.906		
6,100.00	6,092.35	5,589.19	5,324.09	26.82	31.51	-152.60	-1,940.17	-114.86	2,329.26	2,276.21	53.05	43.904		
6,200.00	6,192.21	5,681.94	5,411.62	27.26	32.07	-152.60	-1,970.77	-116.98	2,366.64	2,312.69	53.94	43.872		
6,300.00	6,292.07	5,774.69	5,499.16	27.70	32.62	-152.60	-2,001.37	-119.10	2,404.01	2,349.18	54.84	43.841		
6,400.00	6,391.93	5,867.45	5,586.69	28.14	33.17	-152.60	-2,031.97	-121.21	2,441.39	2,385.66	55.73	43.810		
6,500.00	6,491.69	5,960.15	5,674.18	28.58	33.72	-111.97	-2,062.56	-123.33	2,478.73	2,422.11	56.62	43.779		
6,600.00	6,589.80	6,051.68	5,760.56	29.02	34.26	-94.88	-2,092.76	-125.42	2,515.55	2,458.04	57.51	43.741		
6,700.00	6,683.86	6,139.82	5,843.74	29.46	34.79	-88.46	-2,121.84	-127.43	2,551.22	2,492.83	58.39	43.695		
6,800.00	6,771.56	6,222.41	5,921.68	29.92	35.28	-84.50	-2,149.09	-129.31	2,585.39	2,526.14	59.25	43.636		
6,900.00	6,850.72	6,302.58	5,992.46	30.40	35.75	-81.61	-2,173.83	-131.03	2,617.90	2,557.77	60.13	43.538		
7,000.00	6,919.40	6,362.98	6,054.34	30.96	36.11	-79.30	-2,195.47	-132.52	2,648.75	2,587.78	60.97	43.442		
7,100.00	6,975.92	6,417.50	6,105.79	31.62	36.44	-77.29	-2,213.46	-133.77	2,678.00	2,616.11	61.89	43.271		
7,200.00	7,018.87	6,459.63	6,145.55	32.44	36.69	-75.41	-2,227.35	-134.73	2,705.68	2,642.80	62.88	43.031		
7,300.00	7,047.21	6,488.33	6,172.63	33.42	36.86	-73.57	-2,236.82	-135.38	2,731.77	2,667.83	63.95	42.720		
7,400.00	7,060.23	6,502.89	6,186.38	34.55	36.95	-71.70	-2,241.63	-135.71	2,756.11	2,691.04	65.07	42.356		
7,500.00	7,060.03	6,505.21	6,188.57	35.83	36.96	-70.87	-2,242.39	-135.77	2,779.26	2,713.03	66.24	41.959		
7,600.00	7,058.28	6,506.09	6,189.40	37.28	36.97	-70.89	-2,242.68	-135.79	2,805.24	2,737.72	67.52	41.545		
7,700.00	7,056.53	6,506.97	6,190.23	38.89	36.97	-70.91	-2,242.97	-135.81	2,834.52	2,765.61	68.90	41.137		
7,800.00	7,054.78	6,507.85	6,191.05	40.63	36.98	-70.93	-2,243.26	-135.83	2,866.98	2,796.62	70.35	40.750		
7,900.00	7,053.03	6,508.73	6,191.87	42.50	36.98	-70.95	-2,243.55	-135.85	2,899.44	2,827.63	71.80	40.336		
8,000.00	7,051.28	6,509.61	6,192.69	44.47	36.98	-70.97	-2,243.84	-135.87	2,931.90	2,858.64	73.33	39.906		
8,100.00	7,049.53	6,510.49	6,193.51	46.53	36.98	-71.00	-2,244.13	-135.89	2,964.36	2,889.65	74.94	39.461		
8,200.00	7,047.78	6,511.37	6,194.33	48.67	36.98	-71.03	-2,244.42	-135.91	2,996.82	2,920.66	76.63	39.001		
8,300.00	7,046.03	6,512.25	6,195.15	50.89	36.98	-71.06	-2,244.71	-135.93	3,029.28	2,951.67	78.40	38.526		
8,400.00	7,044.28	6,513.13	6,195.97	53.16	36.98	-71.09	-2,245.00	-135.95	3,061.74	2,982.68	80.25	38.046		
8,500.00	7,042.53	6,514.01	6,196.79	55.49	36.98	-71.12	-2,245.29	-135.97	3,094.20	3,013.69	82.18	37.561		
8,600.00	7,040.78	6,514.89	6,197.61	57.86	36.98	-71.15	-2,245.58	-135.99	3,126.66	3,044.70	84.19	37.071		
8,700.00	7,039.03	6,515.77	6,198.43	60.28	36.98	-71.18	-2,245.87	-136.01	3,159.12	3,075.71	86.28	36.576		
8,800.00	7,037.28	6,516.65	6,199.25	62.74	36.98	-71.21	-2,246.16	-136.03	3,191.58	3,106.72	88.45	36.076		
8,900.00	7,035.53	6,517.53	6,200.07	65.23	36.98	-71.24	-2,246.45	-136.05	3,224.04	3,137.73	90.69	35.571		
9,000.00	7,033.78	6,518.41	6,200.89	67.74	36.98	-71.27	-2,246.74	-136.07	3,256.50	3,168.74	93.00	35.061		
9,100.00	7,032.03	6,519.29	6,201.71	70.29	36.98	-71.30	-2,247.03	-136.09	3,288.96	3,199.75	95.39	34.546		
9,200.00	7,030.28	6,520.17	6,202.53	72.85	36.98	-71.33	-2,247.32	-136.11	3,321.42	3,230.76	97.86	34.026		
9,300.00	7,028.53	6,521.05	6,203.35	75.44	36.98	-71.36	-2,247.61	-136.13	3,353.88	3,261.77	100.41	33.501		
9,400.00	7,026.78	6,521.93	6,204.17	78.05	36.98	-71.39	-2,247.90	-136.15	3,386.34	3,292.78	103.04	32.971		
9,500.00	7,025.03	6,522.81	6,204.99	80.67	36.98	-71.42	-2,248.19	-136.17	3,418.80	3,323.79	105.75	32.436		
9,600.00	7,023.28	6,523.69	6,205.81	83.31	36.98	-71.45	-2,248.48	-136.19	3,451.26	3,354.80	108.54	31.896		
9,700.00	7,021.53	6,524.57	6,206.63	85.96	36.98	-71.48	-2,248.77	-136.21	3,483.72	3,385.81	111.41	31.351		
9,800.00	7,019.78	6,525.45	6,207.45	88.63	36.98	-71.51	-2,249.06	-136.23	3,516.18	3,416.82	114.36	30.801		
9,900.00	7,018.03	6,526.33	6,208.27	91.30	36.98	-71.54	-2,249.35	-136.25	3,548.64	3,447.83	117.39	30.246		
10,000.00	7,016.28	6,527.21	6,209.09	93.99	36.98	-71.57	-2,249.64	-136.27	3,581.10	3,478.84	120.50	29.686		
10,100.00	7,014.53	6,528.09	6,209.91	96.69	36.98	-71.60	-2,249.93	-136.29	3,613.56	3,509.85	123.69	29.121		
10,200.00	7,012.78	6,528.97	6,210.73	99.40	36.98	-71.63	-2,250.22	-136.31	3,646.02	3,540.86	126.96	28.551		
10,300.00	7,011.03	6,529.85	6,211.55	102.11	36.98	-71.66	-2,250.51	-136.33	3,678.48	3,571.87	130.31	27.976		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 33N-16C-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	10,831.77	7,129.26	104.83	105.62	-92.39	-2,600.23	-3,728.24	2,880.38	2,670.76	209.62	13.741		
10,500.00	7,007.54	10,931.76	7,128.69	107.56	108.30	-92.41	-2,600.85	-3,828.23	2,880.29	2,665.26	215.03	13.395		
10,600.00	7,005.79	11,031.75	7,128.12	110.30	110.99	-92.44	-2,601.46	-3,928.22	2,880.20	2,659.74	220.46	13.065		
10,700.00	7,004.04	11,131.75	7,127.55	113.04	113.68	-92.46	-2,602.07	-4,028.21	2,880.11	2,654.22	225.90	12.750		
10,800.00	7,002.29	11,231.74	7,126.98	115.79	116.39	-92.48	-2,602.69	-4,128.19	2,880.02	2,648.67	231.35	12.449		
10,900.00	7,000.54	11,331.73	7,126.41	118.54	119.10	-92.51	-2,603.30	-4,228.18	2,879.93	2,643.12	236.81	12.161		
11,000.00	6,998.79	11,431.73	7,125.84	121.30	121.82	-92.53	-2,603.91	-4,328.17	2,879.85	2,637.56	242.28	11.886		
11,100.00	6,997.04	11,531.72	7,125.28	124.06	124.54	-92.55	-2,604.53	-4,428.16	2,879.76	2,631.99	247.77	11.623		
11,200.00	6,995.29	11,631.71	7,124.71	126.83	127.27	-92.58	-2,605.14	-4,528.15	2,879.67	2,626.41	253.26	11.370		
11,300.00	6,993.54	11,731.71	7,124.14	129.60	130.01	-92.60	-2,605.75	-4,628.14	2,879.59	2,620.82	258.77	11.128		
11,400.00	6,991.80	11,831.70	7,123.57	132.37	132.75	-92.62	-2,606.36	-4,728.13	2,879.50	2,615.22	264.28	10.896		
11,500.00	6,990.05	11,931.69	7,123.00	135.15	135.49	-92.65	-2,606.98	-4,828.12	2,879.41	2,609.62	269.80	10.672		
11,600.00	6,988.30	12,031.68	7,122.43	137.93	138.24	-92.67	-2,607.59	-4,928.11	2,879.33	2,604.00	275.33	10.458		
11,700.00	6,986.55	12,131.68	7,121.87	140.72	141.00	-92.70	-2,608.20	-5,028.10	2,879.25	2,598.39	280.86	10.252		
11,800.00	6,984.80	12,231.67	7,121.30	143.50	143.76	-92.72	-2,608.82	-5,128.09	2,879.16	2,592.76	286.40	10.053		
11,900.00	6,983.05	12,331.66	7,120.73	146.29	146.52	-92.74	-2,609.43	-5,228.08	2,879.08	2,587.13	291.95	9.862		
12,000.00	6,981.30	12,431.66	7,120.16	149.09	149.29	-92.77	-2,610.04	-5,328.07	2,878.99	2,581.50	297.50	9.677		
12,100.00	6,979.55	12,531.65	7,119.59	151.88	152.06	-92.79	-2,610.65	-5,428.06	2,878.91	2,575.86	303.06	9.500		
12,200.00	6,977.80	12,631.64	7,119.02	154.68	154.83	-92.81	-2,611.27	-5,528.05	2,878.83	2,570.21	308.62	9.328		
12,300.00	6,976.05	12,731.63	7,118.46	157.48	157.61	-92.84	-2,611.88	-5,628.04	2,878.75	2,564.56	314.19	9.163		
12,400.00	6,974.30	12,831.63	7,117.89	160.28	160.38	-92.86	-2,612.49	-5,728.03	2,878.67	2,558.91	319.76	9.003		
12,500.00	6,972.55	12,931.62	7,117.32	163.08	163.17	-92.88	-2,613.11	-5,828.01	2,878.59	2,553.25	325.34	8.848		
12,600.00	6,970.80	13,031.61	7,116.75	165.89	165.95	-92.91	-2,613.72	-5,928.00	2,878.51	2,547.59	330.92	8.699		
12,700.00	6,969.05	13,131.61	7,116.18	168.69	168.74	-92.93	-2,614.33	-6,027.99	2,878.43	2,541.93	336.50	8.554		
12,800.00	6,967.30	13,231.60	7,115.61	171.50	171.53	-92.95	-2,614.94	-6,127.98	2,878.35	2,536.26	342.09	8.414		
12,900.00	6,965.55	13,331.59	7,115.05	174.31	174.32	-92.98	-2,615.56	-6,227.97	2,878.27	2,530.59	347.68	8.278		
13,000.00	6,963.80	13,431.59	7,114.48	177.12	177.11	-93.00	-2,616.17	-6,327.96	2,878.19	2,524.92	353.28	8.147		
13,100.00	6,962.05	13,531.58	7,113.91	179.94	179.91	-93.03	-2,616.78	-6,427.95	2,878.12	2,519.24	358.87	8.020		
13,200.00	6,960.30	13,631.57	7,113.34	182.75	182.71	-93.05	-2,617.40	-6,527.94	2,878.04	2,513.56	364.48	7.896		
13,300.00	6,958.55	13,731.56	7,112.77	185.57	185.51	-93.07	-2,618.01	-6,627.93	2,877.96	2,507.88	370.08	7.777		
13,400.00	6,956.80	13,831.56	7,112.20	188.38	188.31	-93.10	-2,618.62	-6,727.92	2,877.89	2,502.20	375.69	7.660		
13,500.00	6,955.05	13,931.55	7,111.63	191.20	191.11	-93.12	-2,619.24	-6,827.91	2,877.81	2,496.52	381.29	7.547		
13,600.00	6,953.31	14,031.54	7,111.07	194.02	193.91	-93.14	-2,619.85	-6,927.90	2,877.74	2,490.83	386.91	7.438		
13,700.00	6,951.56	14,131.54	7,110.50	196.84	196.72	-93.17	-2,620.46	-7,027.89	2,877.66	2,485.14	392.52	7.331		
13,800.00	6,949.81	14,231.53	7,109.93	199.67	199.53	-93.19	-2,621.07	-7,127.88	2,877.59	2,479.45	398.14	7.228		
13,900.00	6,948.06	14,331.52	7,109.36	202.49	202.34	-93.21	-2,621.69	-7,227.87	2,877.51	2,473.76	403.75	7.127		
14,000.00	6,946.31	14,431.51	7,108.79	205.31	205.15	-93.24	-2,622.30	-7,327.86	2,877.44	2,468.07	409.37	7.029		
14,100.00	6,944.56	14,531.51	7,108.22	208.14	207.96	-93.26	-2,622.91	-7,427.85	2,877.37	2,462.37	415.00	6.933		
14,200.00	6,942.81	14,631.50	7,107.66	210.96	210.77	-93.29	-2,623.53	-7,527.84	2,877.30	2,456.68	420.62	6.841		
14,300.00	6,941.06	14,731.49	7,107.09	213.79	213.59	-93.31	-2,624.14	-7,627.82	2,877.22	2,450.98	426.24	6.750		
14,400.00	6,939.31	14,831.49	7,106.52	216.62	216.40	-93.33	-2,624.75	-7,727.81	2,877.15	2,445.28	431.87	6.662		
14,500.00	6,937.56	14,931.48	7,105.95	219.44	219.22	-93.36	-2,625.36	-7,827.80	2,877.08	2,439.58	437.50	6.576		
14,600.00	6,935.81	15,031.47	7,105.38	222.27	222.04	-93.38	-2,625.98	-7,927.79	2,877.01	2,433.88	443.13	6.492		
14,700.00	6,934.06	15,131.47	7,104.81	225.10	224.86	-93.40	-2,626.59	-8,027.78	2,876.94	2,428.18	448.76	6.411		
14,800.00	6,932.31	15,231.46	7,104.25	227.93	227.68	-93.43	-2,627.20	-8,127.77	2,876.87	2,422.48	454.39	6.331		
14,817.75	6,932.00	15,249.20	7,104.14	228.43	228.18	-93.43	-2,627.31	-8,145.52	2,876.86	2,421.47	455.39	6.317 SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 4C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	1.00	0.00	3.28	0.00	0.40	80.14	0.56	80.15					
100.00	100.00	101.00	100.00	3.28	0.18	0.40	80.14	0.56	80.15	76.68	3.46	23.133		
200.00	200.00	201.00	200.00	3.34	0.62	0.40	80.14	0.56	80.15	76.19	3.96	20.261		
300.00	300.00	301.00	300.00	3.44	1.06	0.40	80.14	0.56	80.15	75.64	4.50	17.801		
400.00	400.00	401.00	400.00	3.60	1.50	0.40	80.14	0.56	80.15	75.05	5.10	15.716		
500.00	500.00	501.00	500.00	3.81	1.93	0.40	80.14	0.56	80.15	74.40	5.74	13.960 CC		
600.00	599.98	598.27	597.26	4.05	2.36	28.17	81.81	0.33	80.32	73.90	6.42	12.513 ES		
700.00	699.86	695.56	694.40	4.32	2.79	29.21	86.75	-0.34	81.15	74.02	7.14	11.367		
800.00	799.72	792.71	791.20	4.62	3.23	29.96	94.95	-1.46	84.96	77.07	7.89	10.767		
900.00	899.58	889.52	887.32	4.93	3.66	30.26	106.34	-3.01	92.10	83.44	8.66	10.634		
1,000.00	999.44	985.76	982.44	5.27	4.09	30.17	120.85	-4.98	102.54	93.10	9.44	10.859		
1,100.00	1,099.31	1,083.18	1,078.24	5.62	4.53	29.83	138.32	-7.36	115.82	105.60	10.22	11.333		
1,200.00	1,199.17	1,182.24	1,175.60	5.98	4.97	29.53	156.46	-9.83	129.50	118.49	11.01	11.760		
1,300.00	1,299.03	1,281.29	1,272.95	6.36	5.42	29.29	174.60	-12.29	143.17	131.36	11.82	12.117		
1,400.00	1,398.89	1,380.35	1,370.30	6.74	5.87	29.08	192.74	-14.76	156.85	144.22	12.63	12.416		
1,500.00	1,498.75	1,479.41	1,467.65	7.13	6.33	28.91	210.88	-17.23	170.53	157.07	13.46	12.670		
1,600.00	1,598.61	1,578.47	1,565.00	7.52	6.79	28.77	229.02	-19.70	184.22	169.92	14.30	12.886		
1,700.00	1,698.47	1,677.53	1,662.36	7.92	7.26	28.65	247.16	-22.16	197.90	182.76	15.14	13.073		
1,800.00	1,798.33	1,776.59	1,759.71	8.32	7.72	28.54	265.30	-24.63	211.58	195.60	15.99	13.235		
1,900.00	1,898.19	1,875.65	1,857.06	8.73	8.19	28.44	283.44	-27.10	225.27	208.43	16.84	13.377		
2,000.00	1,998.05	1,974.70	1,954.41	9.14	8.65	28.36	301.58	-29.57	238.95	221.26	17.70	13.501		
2,100.00	2,097.91	2,073.76	2,051.77	9.55	9.12	28.28	319.72	-32.04	252.64	234.08	18.56	13.611		
2,200.00	2,197.78	2,172.82	2,149.12	9.97	9.59	28.22	337.86	-34.50	266.33	246.90	19.43	13.709		
2,300.00	2,297.64	2,271.88	2,246.47	10.39	10.06	28.16	356.00	-36.97	280.01	259.72	20.30	13.797		
2,400.00	2,397.50	2,370.94	2,343.82	10.81	10.53	28.10	374.14	-39.44	293.70	272.53	21.17	13.876		
2,500.00	2,497.36	2,470.00	2,441.17	11.23	11.00	28.05	392.28	-41.91	307.39	285.35	22.04	13.947		
2,600.00	2,597.22	2,569.06	2,538.53	11.65	11.47	28.00	410.42	-44.37	321.07	298.16	22.92	14.011		
2,700.00	2,697.08	2,668.11	2,635.88	12.07	11.94	27.96	428.56	-46.84	334.76	310.97	23.79	14.069		
2,800.00	2,796.94	2,767.17	2,733.23	12.50	12.41	27.92	446.70	-49.31	348.45	323.78	24.67	14.123		
2,900.00	2,896.80	2,866.23	2,830.58	12.92	12.88	27.89	464.84	-51.78	362.14	336.58	25.55	14.172		
3,000.00	2,996.66	2,965.29	2,927.94	13.35	13.35	27.85	482.98	-54.25	375.83	349.39	26.44	14.217		
3,100.00	3,096.52	3,064.35	3,025.29	13.78	13.82	27.82	501.12	-56.71	389.51	362.19	27.32	14.258		
3,200.00	3,196.38	3,163.41	3,122.64	14.21	14.29	27.79	519.26	-59.18	403.20	375.00	28.20	14.296		
3,300.00	3,296.25	3,262.47	3,219.99	14.64	14.76	27.77	537.40	-61.65	416.89	387.80	29.09	14.332		
3,400.00	3,396.11	3,361.52	3,317.34	15.07	15.23	27.74	555.54	-64.12	430.58	400.60	29.97	14.365		
3,500.00	3,495.97	3,460.58	3,414.70	15.50	15.70	27.72	573.68	-66.58	444.27	413.40	30.86	14.395		
3,600.00	3,595.83	3,559.64	3,512.05	15.93	16.17	27.70	591.82	-69.05	457.95	426.20	31.75	14.424		
3,700.00	3,695.69	3,658.70	3,609.40	16.36	16.64	27.67	609.96	-71.52	471.64	439.00	32.64	14.450		
3,800.00	3,795.55	3,757.76	3,706.75	16.80	17.12	27.66	628.10	-73.99	485.33	451.80	33.53	14.475		
3,900.00	3,895.41	3,856.82	3,804.11	17.23	17.59	27.64	646.24	-76.46	499.02	464.60	34.42	14.499		
4,000.00	3,995.27	3,955.88	3,901.46	17.66	18.06	27.62	664.38	-78.92	512.71	477.40	35.31	14.521		
4,100.00	4,095.13	4,054.93	3,998.81	18.10	18.53	27.60	682.52	-81.39	526.40	490.20	36.20	14.542		
4,200.00	4,194.99	4,153.99	4,096.16	18.53	19.00	27.59	700.66	-83.86	540.09	503.00	37.09	14.561		
4,300.00	4,294.85	4,253.05	4,193.51	18.96	19.48	27.57	718.79	-86.33	553.78	515.79	37.98	14.580		
4,400.00	4,394.71	4,352.11	4,290.87	19.40	19.95	27.56	736.93	-88.79	567.46	528.59	38.88	14.597		
4,500.00	4,494.58	4,451.17	4,388.22	19.83	20.42	27.54	755.07	-91.26	581.15	541.39	39.77	14.613		
4,600.00	4,594.44	4,550.23	4,485.57	20.27	20.89	27.53	773.21	-93.73	594.84	554.18	40.66	14.629		
4,700.00	4,694.30	4,649.29	4,582.92	20.71	21.36	27.52	791.35	-96.20	608.53	566.98	41.55	14.644		
4,800.00	4,794.16	4,748.34	4,680.28	21.14	21.84	27.51	809.49	-98.67	622.22	579.77	42.45	14.658		
4,900.00	4,894.02	4,847.40	4,777.63	21.58	22.31	27.49	827.63	-101.13	635.91	592.57	43.34	14.672		
5,000.00	4,993.88	4,946.46	4,874.98	22.01	22.78	27.48	845.77	-103.60	649.60	605.36	44.24	14.684		
5,100.00	5,093.74	5,045.52	4,972.33	22.45	23.25	27.47	863.91	-106.07	663.29	618.15	45.13	14.697		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 4C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,144.58	5,069.68	22.89	23.73	27.46	882.05	-108.54	676.98	630.95	46.03	14.708		
5,300.00	5,293.46	5,243.64	5,167.04	23.32	24.20	27.45	900.19	-111.00	690.67	643.74	46.92	14.719		
5,400.00	5,393.32	5,342.70	5,264.39	23.76	24.67	27.44	918.33	-113.47	704.35	656.54	47.82	14.730		
5,500.00	5,493.18	5,441.75	5,361.74	24.20	25.14	27.43	936.47	-115.94	718.04	669.33	48.71	14.740		
5,600.00	5,593.05	5,540.81	5,459.09	24.64	25.62	27.43	954.61	-118.41	731.73	682.12	49.61	14.750		
5,700.00	5,692.91	5,639.87	5,556.45	25.07	26.09	27.42	972.75	-120.87	745.42	694.92	50.51	14.759		
5,800.00	5,792.77	5,738.93	5,653.80	25.51	26.56	27.41	990.89	-123.34	759.11	707.71	51.40	14.768		
5,900.00	5,892.63	5,837.99	5,751.15	25.95	27.03	27.40	1,009.03	-125.81	772.80	720.50	52.30	14.777		
6,000.00	5,992.49	5,937.05	5,848.50	26.39	27.51	27.39	1,027.17	-128.28	786.49	733.29	53.20	14.785		
6,100.00	6,092.35	6,036.10	5,945.85	26.82	27.98	27.39	1,045.31	-130.75	800.18	746.09	54.09	14.793		
6,200.00	6,192.21	6,135.16	6,043.21	27.26	28.45	27.38	1,063.45	-133.21	813.87	758.88	54.99	14.800		
6,300.00	6,292.07	6,234.22	6,140.56	27.70	28.93	27.37	1,081.59	-135.68	827.56	771.67	55.89	14.808		
6,400.00	6,391.93	6,333.28	6,237.91	28.14	29.40	27.37	1,099.73	-138.15	841.25	784.46	56.78	14.815		
6,500.00	6,491.69	6,432.28	6,335.21	28.58	29.87	65.68	1,117.86	-140.62	854.94	797.26	57.68	14.822		
6,600.00	6,589.80	6,529.99	6,431.23	29.02	30.34	79.37	1,135.75	-143.05	868.74	810.15	58.58	14.829		
6,700.00	6,683.86	6,624.03	6,523.65	29.46	30.79	83.68	1,152.97	-145.39	883.11	823.64	59.48	14.848		
6,800.00	6,771.56	6,712.09	6,610.20	29.92	31.21	86.45	1,169.10	-147.59	899.21	838.84	60.36	14.896		
6,900.00	6,850.72	6,806.67	6,703.02	30.40	31.66	89.03	1,186.36	-152.32	918.23	856.84	61.39	14.958		
7,000.00	6,919.40	6,924.74	6,816.59	30.96	32.21	91.82	1,207.19	-176.23	939.05	876.42	62.63	14.993		
7,100.00	6,975.92	7,064.50	6,942.67	31.62	32.84	94.65	1,229.86	-231.40	960.19	896.33	63.86	15.035		
7,200.00	7,018.87	7,233.99	7,075.24	32.44	33.55	97.54	1,253.00	-333.61	979.61	914.69	64.92	15.090		
7,300.00	7,047.21	7,439.31	7,193.59	33.42	34.64	100.09	1,272.48	-499.16	994.29	928.31	65.98	15.070		
7,400.00	7,060.23	7,675.07	7,258.00	34.55	36.76	101.46	1,280.95	-724.39	1,000.82	932.75	68.07	14.703		
7,500.00	7,060.03	7,813.61	7,260.69	35.83	38.41	101.58	1,279.27	-862.82	1,000.33	929.59	70.74	14.141		
7,600.00	7,058.28	7,913.60	7,260.27	37.28	39.79	101.67	1,277.61	-962.79	999.71	926.21	73.50	13.602		
7,700.00	7,056.53	8,013.58	7,259.85	38.89	41.32	101.75	1,275.95	-1,062.76	999.09	922.53	76.56	13.050		
7,800.00	7,054.78	8,113.57	7,259.43	40.63	42.99	101.84	1,274.29	-1,162.74	998.47	918.58	79.89	12.498		
7,900.00	7,053.03	8,213.56	7,259.01	42.50	44.78	101.92	1,272.63	-1,262.71	997.86	914.40	83.47	11.955		
8,000.00	7,051.28	8,313.54	7,258.59	44.47	46.68	102.01	1,270.97	-1,362.68	997.25	910.00	87.25	11.430		
8,100.00	7,049.53	8,413.53	7,258.17	46.53	48.67	102.09	1,269.32	-1,462.65	996.64	905.43	91.21	10.927		
8,200.00	7,047.78	8,513.52	7,257.75	48.67	50.74	102.18	1,267.66	-1,562.63	996.04	900.70	95.33	10.448		
8,300.00	7,046.03	8,613.50	7,257.33	50.89	52.89	102.26	1,266.00	-1,662.60	995.43	895.84	99.59	9.995		
8,400.00	7,044.28	8,713.49	7,256.91	53.16	55.10	102.35	1,264.34	-1,762.57	994.83	890.86	103.97	9.568		
8,500.00	7,042.53	8,813.48	7,256.49	55.49	57.36	102.44	1,262.68	-1,862.54	994.23	885.77	108.46	9.167		
8,600.00	7,040.78	8,913.47	7,256.07	57.86	59.68	102.52	1,261.02	-1,962.52	993.63	880.60	113.04	8.790		
8,700.00	7,039.03	9,013.45	7,255.65	60.28	62.05	102.61	1,259.36	-2,062.49	993.04	875.34	117.70	8.437		
8,800.00	7,037.28	9,113.44	7,255.23	62.74	64.45	102.69	1,257.71	-2,162.46	992.45	870.02	122.43	8.106		
8,900.00	7,035.53	9,213.43	7,254.81	65.23	66.89	102.78	1,256.05	-2,262.43	991.85	864.63	127.22	7.796		
9,000.00	7,033.78	9,313.41	7,254.39	67.74	69.36	102.87	1,254.39	-2,362.41	991.27	859.20	132.07	7.506		
9,100.00	7,032.03	9,413.40	7,253.97	70.29	71.86	102.95	1,252.73	-2,462.38	990.68	853.71	136.97	7.233		
9,200.00	7,030.28	9,513.39	7,253.55	72.85	74.38	103.04	1,251.07	-2,562.35	990.10	848.19	141.91	6.977		
9,300.00	7,028.54	9,613.38	7,253.13	75.44	76.93	103.13	1,249.41	-2,662.32	989.51	842.63	146.89	6.736		
9,400.00	7,026.79	9,713.36	7,252.71	78.05	79.50	103.21	1,247.76	-2,762.30	988.94	837.03	151.90	6.510		
9,500.00	7,025.04	9,813.35	7,252.29	80.67	82.08	103.30	1,246.10	-2,862.27	988.36	831.41	156.95	6.297		
9,600.00	7,023.29	9,913.34	7,251.87	83.31	84.69	103.39	1,244.44	-2,962.24	987.78	825.76	162.02	6.097		
9,700.00	7,021.54	10,013.32	7,251.45	85.96	87.31	103.48	1,242.78	-3,062.21	987.21	820.09	167.12	5.907		
9,800.00	7,019.79	10,113.31	7,251.03	88.63	89.94	103.56	1,241.12	-3,162.19	986.64	814.40	172.24	5.728		
9,900.00	7,018.04	10,213.30	7,250.61	91.30	92.59	103.65	1,239.46	-3,262.16	986.07	808.70	177.38	5.559		
10,000.00	7,016.29	10,313.28	7,250.19	93.99	95.25	103.74	1,237.81	-3,362.13	985.51	802.97	182.53	5.399		
10,100.00	7,014.54	10,413.27	7,249.77	96.69	97.92	103.83	1,236.15	-3,462.10	984.94	797.24	187.71	5.247		
10,200.00	7,012.79	10,513.26	7,249.35	99.40	100.60	103.91	1,234.49	-3,562.07	984.38	791.49	192.89	5.103		
10,300.00	7,011.04	10,613.25	7,248.93	102.11	103.29	104.00	1,232.83	-3,662.05	983.82	785.73	198.09	4.967		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTER STATE 4C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	10,713.23	7,248.51	104.83	105.99	104.09	1,231.17	-3,762.02	983.27	779.97	203.30	4.837		
10,500.00	7,007.54	10,813.22	7,248.09	107.56	108.70	104.18	1,229.51	-3,861.99	982.71	774.19	208.52	4.713		
10,600.00	7,005.79	10,913.21	7,247.67	110.30	111.41	104.26	1,227.86	-3,961.96	982.16	768.41	213.75	4.595		
10,700.00	7,004.04	11,013.19	7,247.25	113.04	114.13	104.35	1,226.20	-4,061.94	981.61	762.63	218.99	4.483		
10,800.00	7,002.29	11,113.18	7,246.83	115.79	116.86	104.44	1,224.54	-4,161.91	981.07	756.84	224.23	4.375		
10,900.00	7,000.54	11,213.17	7,246.41	118.54	119.59	104.53	1,222.88	-4,261.88	980.52	751.04	229.48	4.273		
11,000.00	6,998.79	11,313.16	7,245.99	121.30	122.33	104.62	1,221.22	-4,361.85	979.98	745.24	234.73	4.175		
11,100.00	6,997.04	11,413.14	7,245.56	124.06	125.08	104.71	1,219.56	-4,461.83	979.44	739.45	239.99	4.081		
11,200.00	6,995.29	11,513.13	7,245.14	126.83	127.83	104.80	1,217.90	-4,561.80	978.90	733.64	245.26	3.991		
11,300.00	6,993.54	11,613.12	7,244.72	129.60	130.58	104.88	1,216.25	-4,661.77	978.37	727.84	250.52	3.905		
11,400.00	6,991.80	11,713.10	7,244.30	132.37	133.34	104.97	1,214.59	-4,761.74	977.83	722.04	255.79	3.823		
11,500.00	6,990.05	11,813.09	7,243.88	135.15	136.10	105.06	1,212.93	-4,861.72	977.30	716.24	261.07	3.743		
11,600.00	6,988.30	11,913.08	7,243.46	137.93	138.86	105.15	1,211.27	-4,961.69	976.77	710.43	266.34	3.667		
11,700.00	6,986.55	12,013.06	7,243.04	140.72	141.63	105.24	1,209.61	-5,061.66	976.25	704.63	271.62	3.594		
11,800.00	6,984.80	12,113.05	7,242.62	143.50	144.41	105.33	1,207.95	-5,161.63	975.72	698.83	276.89	3.524		
11,900.00	6,983.05	12,213.04	7,242.20	146.29	147.18	105.42	1,206.30	-5,261.61	975.20	693.03	282.17	3.456		
12,000.00	6,981.30	12,313.03	7,241.78	149.09	149.96	105.51	1,204.64	-5,361.58	974.68	687.24	287.45	3.391		
12,100.00	6,979.55	12,413.01	7,241.36	151.88	152.74	105.60	1,202.98	-5,461.55	974.17	681.44	292.73	3.328		
12,200.00	6,977.80	12,513.00	7,240.94	154.68	155.53	105.69	1,201.32	-5,561.52	973.65	675.65	298.00	3.267		
12,300.00	6,976.05	12,612.99	7,240.52	157.48	158.31	105.78	1,199.66	-5,661.50	973.14	669.86	303.28	3.209		
12,400.00	6,974.30	12,712.97	7,240.10	160.28	161.10	105.87	1,198.00	-5,761.47	972.63	664.08	308.56	3.152		
12,500.00	6,972.55	12,812.96	7,239.68	163.08	163.89	105.96	1,196.35	-5,861.44	972.13	658.29	313.83	3.098		
12,600.00	6,970.80	12,912.95	7,239.26	165.89	166.69	106.05	1,194.69	-5,961.41	971.62	652.52	319.10	3.045		
12,700.00	6,969.05	13,012.94	7,238.84	168.69	169.48	106.14	1,193.03	-6,061.39	971.12	646.74	324.38	2.994		
12,800.00	6,967.30	13,112.92	7,238.42	171.50	172.28	106.23	1,191.37	-6,161.36	970.62	640.97	329.65	2.944		
12,900.00	6,965.55	13,212.91	7,238.00	174.31	175.08	106.32	1,189.71	-6,261.33	970.12	635.21	334.91	2.897		
13,000.00	6,963.80	13,312.90	7,237.58	177.12	177.88	106.41	1,188.05	-6,361.30	969.63	629.45	340.18	2.850		
13,100.00	6,962.05	13,412.88	7,237.16	179.94	180.68	106.50	1,186.39	-6,461.28	969.14	623.69	345.44	2.805		
13,200.00	6,960.30	13,512.87	7,236.74	182.75	183.49	106.59	1,184.74	-6,561.25	968.65	617.94	350.70	2.762		
13,300.00	6,958.55	13,612.86	7,236.32	185.57	186.29	106.68	1,183.08	-6,661.22	968.16	612.20	355.96	2.720		
13,400.00	6,956.80	13,712.84	7,235.90	188.38	189.10	106.77	1,181.42	-6,761.19	967.67	606.46	361.21	2.679		
13,500.00	6,955.05	13,812.83	7,235.48	191.20	191.91	106.86	1,179.76	-6,861.16	967.19	600.72	366.47	2.639		
13,600.00	6,953.31	13,912.82	7,235.06	194.02	194.72	106.95	1,178.10	-6,961.14	966.71	594.99	371.71	2.601		
13,700.00	6,951.56	14,012.81	7,234.64	196.84	197.53	107.04	1,176.44	-7,061.11	966.23	589.27	376.96	2.563		
13,800.00	6,949.81	14,112.79	7,234.22	199.67	200.34	107.14	1,174.79	-7,161.08	965.76	583.56	382.20	2.527		
13,900.00	6,948.06	14,212.78	7,233.80	202.49	203.16	107.23	1,173.13	-7,261.05	965.28	577.85	387.44	2.491		
14,000.00	6,946.31	14,312.77	7,233.38	205.31	205.97	107.32	1,171.47	-7,361.03	964.81	572.14	392.67	2.457		
14,100.00	6,944.56	14,412.75	7,232.96	208.14	208.79	107.41	1,169.81	-7,461.00	964.34	566.44	397.90	2.424		
14,200.00	6,942.81	14,512.74	7,232.54	210.96	211.60	107.50	1,168.15	-7,560.97	963.88	560.75	403.13	2.391		
14,300.00	6,941.06	14,612.73	7,232.12	213.79	214.42	107.59	1,166.49	-7,660.94	963.42	555.07	408.35	2.359		
14,400.00	6,939.31	14,712.72	7,231.70	216.62	217.24	107.68	1,164.84	-7,760.92	962.96	549.39	413.57	2.328		
14,500.00	6,937.56	14,812.70	7,231.28	219.44	220.06	107.78	1,163.18	-7,860.89	962.50	543.72	418.78	2.298		
14,600.00	6,935.81	14,912.69	7,230.86	222.27	222.88	107.87	1,161.52	-7,960.86	962.04	538.05	423.99	2.269		
14,700.00	6,934.06	15,012.68	7,230.44	225.10	225.70	107.96	1,159.86	-8,060.83	961.59	532.40	429.19	2.240		
14,800.00	6,932.31	15,112.66	7,230.02	227.93	228.53	108.05	1,158.20	-8,160.81	961.14	526.75	434.39	2.213		
14,807.87	6,932.17	15,116.21	7,230.00	228.15	228.63	108.05	1,158.14	-8,164.35	961.11	526.39	434.72	2.211		
14,817.75	6,932.00	15,116.21	7,230.00	228.43	228.63	108.05	1,158.14	-8,164.35	961.16	526.14	435.02	2.209 SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS RESOURCES 15M-303 (PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 146-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	1.00	3.28	3.28	9.96	1,390.55	244.19	1,411.83					
100.00	100.00	107.52	108.51	3.28	3.29	9.96	1,390.21	244.25	1,411.53	1,404.95	6.57	214.735		
200.00	200.00	212.89	213.88	3.34	3.34	9.97	1,389.30	244.34	1,410.69	1,404.02	6.67	211.354		
300.00	300.00	315.68	316.67	3.44	3.45	9.98	1,388.18	244.24	1,409.60	1,402.71	6.89	204.463		
400.00	400.00	408.85	409.83	3.60	3.60	9.98	1,387.27	244.08	1,408.62	1,401.42	7.20	195.682		
500.00	500.00	504.73	505.71	3.81	3.79	9.97	1,386.83	243.67	1,408.09	1,400.50	7.59	185.505		
600.00	599.98	611.62	612.60	4.05	4.04	37.40	1,386.22	243.30	1,406.08	1,397.99	8.08	173.936		
700.00	699.86	708.20	709.18	4.32	4.30	37.53	1,385.59	242.68	1,401.50	1,392.88	8.62	162.676		
800.00	799.72	807.75	808.72	4.62	4.59	37.62	1,385.17	241.61	1,396.72	1,387.51	9.20	151.778		
900.00	899.58	911.24	912.20	4.93	4.92	37.71	1,384.46	240.43	1,391.66	1,381.81	9.85	141.341		
1,000.00	999.44	1,000.19	1,001.14	5.27	5.21	37.78	1,384.10	239.19	1,386.85	1,376.38	10.48	132.390		
1,100.00	1,099.31	1,081.28	1,082.19	5.62	5.48	37.79	1,385.01	236.87	1,383.27	1,372.17	11.10	124.611		
1,200.00	1,199.17	1,164.59	1,165.37	5.98	5.77	37.73	1,387.26	232.95	1,380.91	1,369.16	11.75	117.504		
1,300.00	1,299.03	1,243.03	1,243.57	6.36	6.05	37.59	1,390.77	227.79	1,379.97	1,367.56	12.40	111.245		
1,315.73	1,314.73	1,256.58	1,257.05	6.42	6.10	37.56	1,391.52	226.75	1,379.96	1,367.45	12.51	110.276		
1,400.00	1,398.89	1,333.47	1,333.47	6.74	6.38	37.35	1,396.23	219.77	1,380.19	1,367.07	13.12	105.187		
1,500.00	1,498.75	1,417.53	1,416.79	7.13	6.71	37.03	1,402.35	210.42	1,381.30	1,367.46	13.83	99.851		
1,600.00	1,598.61	1,508.15	1,506.40	7.52	7.08	36.64	1,410.02	199.28	1,383.45	1,368.86	14.59	94.814		
1,700.00	1,698.47	1,606.10	1,603.17	7.92	7.49	36.20	1,418.71	186.90	1,386.03	1,370.63	15.40	90.005		
1,800.00	1,798.33	1,721.77	1,717.49	8.32	8.00	35.69	1,428.43	172.17	1,388.24	1,371.93	16.31	85.136		
1,900.00	1,898.19	1,822.18	1,816.82	8.73	8.45	35.26	1,436.11	159.69	1,389.81	1,372.65	17.16	81.004		
2,000.00	1,998.05	1,939.55	1,933.03	9.14	8.98	34.78	1,444.14	145.33	1,390.66	1,372.56	18.10	76.837		
2,100.00	2,097.91	2,039.43	2,032.02	9.55	9.44	34.38	1,450.19	133.50	1,390.88	1,371.91	18.97	73.333		
2,200.00	2,197.78	2,127.22	2,119.00	9.97	9.85	34.04	1,456.01	123.08	1,391.71	1,371.93	19.78	70.347		
2,300.00	2,297.64	2,218.14	2,208.98	10.39	10.28	33.66	1,462.83	111.98	1,393.45	1,372.82	20.62	67.573		
2,400.00	2,397.50	2,318.83	2,308.66	10.81	10.77	33.25	1,470.39	99.92	1,395.28	1,373.77	21.51	64.857		
2,500.00	2,497.36	2,410.49	2,399.40	11.23	11.21	32.89	1,477.69	89.21	1,397.66	1,375.30	22.36	62.503		
2,600.00	2,597.22	2,510.69	2,498.64	11.65	11.69	32.52	1,485.66	77.94	1,400.13	1,376.88	23.26	60.206		
2,700.00	2,697.08	2,606.64	2,593.65	12.07	12.16	32.16	1,493.66	67.22	1,403.05	1,378.92	24.13	58.145		
2,800.00	2,796.94	2,715.24	2,701.23	12.50	12.69	31.76	1,502.22	55.04	1,405.57	1,380.50	25.08	56.054		
2,900.00	2,896.80	2,813.94	2,798.96	12.92	13.18	31.38	1,509.78	43.54	1,407.91	1,381.93	25.97	54.206		
3,000.00	2,996.66	2,909.13	2,893.13	13.35	13.65	31.00	1,517.33	31.91	1,410.55	1,383.69	26.86	52.518		
3,100.00	3,096.52	3,014.11	2,996.97	13.78	14.18	30.56	1,525.80	18.95	1,413.39	1,385.59	27.80	50.843		
3,200.00	3,196.38	3,114.93	3,096.79	14.21	14.69	30.17	1,533.32	6.98	1,415.72	1,387.00	28.72	49.299		
3,300.00	3,296.25	3,211.68	3,192.56	14.64	15.18	29.79	1,540.80	-4.65	1,418.36	1,388.75	29.62	47.893		
3,400.00	3,396.11	3,336.41	3,316.02	15.07	15.81	29.29	1,549.69	-19.94	1,420.53	1,389.87	30.66	46.324		
3,500.00	3,495.97	3,439.24	3,417.98	15.50	16.32	28.91	1,555.74	-31.81	1,421.49	1,389.90	31.59	44.993		
3,600.00	3,595.83	3,535.51	3,513.56	15.93	16.79	28.60	1,561.34	-41.86	1,422.46	1,389.98	32.48	43.793		
3,700.00	3,695.69	3,617.74	3,595.21	16.36	17.19	28.35	1,566.76	-49.97	1,424.25	1,390.96	33.29	42.779		
3,800.00	3,795.55	3,707.12	3,683.89	16.80	17.63	28.08	1,573.53	-58.86	1,427.06	1,392.92	34.14	41.800		
3,900.00	3,895.41	3,812.24	3,788.18	17.23	18.15	27.76	1,581.72	-69.20	1,430.13	1,395.06	35.07	40.775		
4,000.00	3,995.27	3,893.43	3,868.72	17.66	18.55	27.53	1,588.36	-76.94	1,433.63	1,397.76	35.87	39.966		
4,100.00	4,095.13	3,991.23	3,965.67	18.10	19.04	27.25	1,597.15	-86.30	1,437.97	1,401.21	36.76	39.114		
4,200.00	4,194.99	4,083.74	4,057.28	18.53	19.51	26.95	1,605.63	-96.05	1,442.53	1,404.90	37.63	38.334		
4,300.00	4,294.85	4,177.80	4,150.34	18.96	19.99	26.64	1,614.68	-106.29	1,447.62	1,409.11	38.51	37.593		
4,400.00	4,394.71	4,303.74	4,275.07	19.40	20.63	26.24	1,625.99	-119.49	1,452.10	1,412.53	39.57	36.693		
4,500.00	4,494.58	4,417.16	4,387.58	19.83	21.20	25.90	1,634.54	-131.07	1,455.17	1,414.61	40.56	35.878		
4,600.00	4,594.44	4,544.24	4,513.79	20.27	21.82	25.53	1,642.58	-143.47	1,457.11	1,415.51	41.60	35.024		
4,700.00	4,694.30	4,671.45	4,640.42	20.71	22.42	25.22	1,647.96	-154.39	1,456.86	1,414.24	42.63	34.178		
4,800.00	4,794.16	4,786.36	4,754.85	21.14	22.96	24.94	1,651.25	-164.23	1,455.29	1,411.71	43.58	33.392		
4,900.00	4,894.02	4,895.71	4,863.90	21.58	23.45	24.73	1,653.39	-172.06	1,452.78	1,408.27	44.50	32.645		
5,000.00	4,993.88	5,000.49	4,968.52	22.01	23.90	24.62	1,655.22	-177.35	1,449.97	1,404.58	45.39	31.944		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS RESOURCES 15M-303 (PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 146-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
5,100.00	5,093.74	5,110.83	5,078.82	22.45	24.36	24.60	1,656.61	-180.36	1,446.57	1,400.29	46.28	31.254		
5,200.00	5,193.60	5,211.41	5,179.37	22.89	24.78	24.59	1,657.42	-182.77	1,442.69	1,395.55	47.14	30.604		
5,300.00	5,293.46	5,316.79	5,284.72	23.32	25.21	24.60	1,658.23	-184.96	1,438.77	1,390.76	48.01	29.967		
5,400.00	5,393.32	5,415.78	5,383.69	23.76	25.62	24.60	1,658.72	-186.97	1,434.57	1,385.71	48.86	29.359		
5,500.00	5,493.18	5,528.77	5,496.66	24.20	26.08	24.62	1,658.92	-188.99	1,430.05	1,380.30	49.75	28.745		
5,600.00	5,593.05	5,627.83	5,595.70	24.64	26.47	24.64	1,658.62	-190.62	1,425.03	1,374.43	50.60	28.164		
5,700.00	5,692.91	5,719.21	5,687.07	25.07	26.84	24.66	1,658.67	-192.28	1,420.38	1,368.95	51.43	27.619		
5,800.00	5,792.77	5,822.78	5,790.62	25.51	27.27	24.68	1,658.83	-194.14	1,415.82	1,363.53	52.29	27.075		
5,900.00	5,892.63	8,303.87	7,214.94	25.95	42.04	-136.32	227.56	-185.65	1,323.70	1,306.62	17.08	77.504		
6,000.00	5,992.49	8,296.18	7,215.05	26.39	41.93	-134.51	235.24	-186.04	1,223.91	1,206.80	17.11	71.523		
6,100.00	6,092.35	8,288.79	7,215.14	26.82	41.83	-132.43	242.62	-186.42	1,124.13	1,106.97	17.16	65.518		
6,200.00	6,192.21	8,281.67	7,215.22	27.26	41.73	-130.03	249.73	-186.80	1,024.34	1,007.12	17.22	59.500		
6,300.00	6,292.07	8,274.93	7,215.29	27.70	41.63	-127.28	256.46	-187.16	924.55	907.26	17.29	53.477		
6,400.00	6,391.93	8,268.19	7,215.35	28.14	41.54	-123.92	263.19	-187.54	824.77	807.40	17.37	47.472		
6,500.00	6,491.69	8,261.60	7,215.40	28.58	41.44	-153.32	269.76	-187.90	724.98	707.52	17.46	41.525		
6,600.00	6,589.80	8,254.66	7,215.45	29.02	41.35	-176.32	276.70	-188.27	626.14	608.67	17.46	35.855		
6,700.00	6,683.86	8,247.52	7,215.49	29.46	41.25	-179.65	283.83	-188.64	531.70	513.71	17.99	29.553		
6,800.00	6,771.56	8,240.83	7,215.51	29.92	41.15	-179.15	290.51	-188.98	447.49	426.13	21.36	20.953		
6,900.00	6,850.72	8,232.86	7,215.54	30.40	41.04	-178.17	298.47	-189.37	383.01	352.71	30.30	12.640		
7,000.00	6,919.40	8,225.43	7,215.54	30.96	40.94	-177.40	305.89	-189.74	351.26	307.13	44.13	7.960		
7,025.73	6,935.17	8,223.61	7,215.53	31.13	40.92	-177.20	307.71	-189.83	349.80	301.97	47.83	7.314	CC, ES	
7,100.00	6,975.92	8,218.54	7,215.51	31.62	40.85	-176.62	312.77	-190.08	361.77	304.58	57.18	6.326		
7,200.00	7,018.87	8,212.17	7,215.47	32.44	40.76	-175.65	319.14	-190.40	411.11	346.08	65.03	6.322	SF	
7,300.00	7,047.21	8,206.31	7,215.42	33.42	40.68	-174.20	324.99	-190.69	486.68	418.19	68.49	7.106		
7,400.00	7,060.23	8,200.86	7,215.36	34.55	40.61	-171.35	330.43	-190.97	576.86	507.06	69.79	8.265		
7,500.00	7,060.03	8,195.78	7,215.29	35.83	40.54	-167.77	335.50	-191.23	673.62	603.38	70.24	9.590		
7,600.00	7,058.28	8,190.62	7,215.21	37.28	40.47	-165.82	340.65	-191.50	771.50	701.03	70.47	10.948		
7,700.00	7,056.53	8,185.32	7,215.13	38.89	40.40	-163.85	345.95	-191.78	869.84	799.24	70.60	12.321		
7,800.00	7,054.78	8,179.87	7,215.03	40.63	40.32	-161.85	351.39	-192.07	968.49	897.81	70.67	13.704		
7,900.00	7,053.03	8,175.00	7,214.93	42.50	40.26	-160.11	356.25	-192.33	1,067.37	996.65	70.72	15.093		
8,000.00	7,051.28	8,175.00	7,214.93	44.47	40.26	-160.11	356.25	-192.33	1,166.43	1,095.61	70.81	16.472		
8,100.00	7,049.53	8,169.37	7,214.81	46.53	40.18	-158.13	361.87	-192.63	1,265.61	1,194.80	70.81	17.874		
8,200.00	7,047.78	8,167.01	7,214.76	48.67	40.15	-157.32	364.23	-192.74	1,364.92	1,294.08	70.84	19.267		
8,300.00	7,046.03	8,164.80	7,214.71	50.89	40.12	-156.56	366.43	-192.85	1,464.31	1,393.44	70.87	20.663		
8,400.00	7,044.28	8,162.73	7,214.67	53.16	40.09	-155.86	368.50	-192.95	1,563.77	1,492.88	70.89	22.059		
8,500.00	7,042.53	8,160.79	7,214.63	55.49	40.07	-155.21	370.44	-193.04	1,663.30	1,592.39	70.91	23.457		
8,600.00	7,040.78	8,158.96	7,214.59	57.86	40.04	-154.61	372.26	-193.12	1,762.87	1,691.94	70.93	24.854		
8,700.00	7,039.03	8,157.24	7,214.56	60.28	40.02	-154.04	373.98	-193.19	1,862.48	1,791.54	70.95	26.252		
8,800.00	7,037.28	8,155.61	7,214.52	62.74	40.00	-153.51	375.61	-193.26	1,962.14	1,891.17	70.96	27.650		
8,900.00	7,035.53	8,154.08	7,214.49	65.23	39.98	-153.02	377.14	-193.33	2,061.82	1,990.84	70.98	29.047		
9,000.00	7,033.78	8,152.62	7,214.46	67.74	39.96	-152.55	378.60	-193.39	2,161.53	2,090.53	71.00	30.444		
9,100.00	7,032.03	8,144.00	7,214.28	70.29	39.84	-149.87	387.21	-193.71	2,261.29	2,190.36	70.93	31.879		
9,200.00	7,030.28	8,144.00	7,214.28	72.85	39.84	-149.87	387.21	-193.71	2,361.03	2,290.06	70.97	33.268		
9,300.00	7,028.54	8,144.00	7,214.28	75.44	39.84	-149.87	387.21	-193.71	2,460.80	2,389.79	71.01	34.656		
9,400.00	7,026.79	8,144.00	7,214.28	78.05	39.84	-149.87	387.21	-193.71	2,560.58	2,489.54	71.04	36.043		
9,500.00	7,025.04	8,144.00	7,214.28	80.67	39.84	-149.87	387.21	-193.71	2,660.38	2,589.30	71.08	37.428		
9,600.00	7,023.29	8,144.00	7,214.28	83.31	39.84	-149.87	387.21	-193.71	2,760.19	2,689.08	71.12	38.812		
9,700.00	7,021.54	8,144.00	7,214.28	85.96	39.84	-149.87	387.21	-193.71	2,860.02	2,788.87	71.15	40.195		
9,800.00	7,019.79	8,144.00	7,214.28	88.63	39.84	-149.87	387.21	-193.71	2,959.86	2,888.67	71.19	41.575		
9,900.00	7,018.04	8,144.00	7,214.28	91.30	39.84	-149.87	387.21	-193.71	3,059.71	2,988.48	71.23	42.954		
10,000.00	7,016.29	8,139.15	7,214.18	93.99	39.78	-148.42	392.05	-193.88	3,159.56	3,088.35	71.22	44.365		
10,100.00	7,014.54	8,137.46	7,214.14	96.69	39.76	-147.93	393.74	-193.94	3,259.43	3,188.19	71.24	45.753		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS RESOURCES 15M-303 (PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 146-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,200.00	7,012.79	8,135.81	7,214.11	99.40	39.73	147.45	395.39	-193.99	3,359.30	3,288.03	71.26	47.140		
10,300.00	7,011.04	8,134.19	7,214.08	102.11	39.71	146.98	397.01	-194.04	3,459.17	3,387.89	71.29	48.525		
10,400.00	7,009.29	8,132.61	7,214.05	104.83	39.69	146.53	398.59	-194.10	3,559.05	3,487.74	71.31	49.908		
10,500.00	7,007.54	8,131.06	7,214.02	107.56	39.67	146.10	400.14	-194.15	3,658.94	3,587.60	71.34	51.289		
10,600.00	7,005.79	8,129.55	7,213.99	110.30	39.65	145.67	401.65	-194.20	3,758.83	3,687.47	71.37	52.668		
10,700.00	7,004.04	8,128.06	7,213.96	113.04	39.63	145.26	403.14	-194.24	3,858.73	3,787.33	71.40	54.045		
10,800.00	7,002.29	8,126.61	7,213.93	115.79	39.61	144.86	404.59	-194.29	3,958.63	3,887.20	71.43	55.420		
10,900.00	7,000.54	8,125.18	7,213.91	118.54	39.60	144.48	406.01	-194.34	4,058.54	3,987.07	71.46	56.793		
11,000.00	6,998.79	8,123.79	7,213.88	121.30	39.58	144.10	407.41	-194.38	4,158.45	4,086.95	71.50	58.164		
11,100.00	6,997.04	8,122.42	7,213.85	124.06	39.56	143.74	408.78	-194.42	4,258.36	4,186.83	71.53	59.532		
11,200.00	6,995.29	8,121.08	7,213.83	126.83	39.54	143.39	410.12	-194.47	4,358.27	4,286.71	71.57	60.898		
11,300.00	6,993.54	8,119.76	7,213.81	129.60	39.52	143.04	411.43	-194.51	4,458.19	4,386.59	71.60	62.262		
11,400.00	6,991.80	8,118.00	7,213.70	132.37	39.45	141.57	417.19	-194.68	4,558.12	4,486.52	71.60	63.663		
11,500.00	6,990.05	8,114.00	7,213.70	135.15	39.45	141.57	417.19	-194.68	4,658.04	4,586.39	71.65	65.011		
11,600.00	6,988.30	8,114.00	7,213.70	137.93	39.45	141.57	417.19	-194.68	4,757.97	4,686.26	71.70	66.356		
11,700.00	6,986.55	8,114.00	7,213.70	140.72	39.45	141.57	417.19	-194.68	4,857.89	4,786.14	71.76	67.698		
11,800.00	6,984.80	8,114.00	7,213.70	143.50	39.45	141.57	417.19	-194.68	4,957.83	4,886.01	71.81	69.037		
11,900.00	6,983.05	8,114.00	7,213.70	146.29	39.45	141.57	417.19	-194.68	5,057.76	4,985.89	71.87	70.373		
12,000.00	6,981.30	8,114.00	7,213.70	149.09	39.45	141.57	417.19	-194.68	5,157.70	5,085.77	71.93	71.706		
12,100.00	6,979.55	8,109.43	7,213.63	151.88	39.39	140.44	421.76	-194.81	5,257.63	5,185.69	71.94	73.081		
12,200.00	6,977.80	8,108.12	7,213.60	154.68	39.37	140.13	423.07	-194.85	5,357.57	5,285.58	71.99	74.422		
12,300.00	6,976.05	8,106.83	7,213.58	157.48	39.36	139.82	424.36	-194.89	5,457.51	5,385.48	72.04	75.760		
12,400.00	6,974.30	8,105.55	7,213.57	160.28	39.34	139.51	425.64	-194.93	5,557.46	5,485.37	72.09	77.095		
12,500.00	6,972.55	8,104.29	7,213.55	163.08	39.32	139.22	426.90	-194.96	5,657.40	5,585.26	72.14	78.428		
12,600.00	6,970.80	8,103.05	7,213.53	165.89	39.31	138.93	428.14	-195.00	5,757.35	5,685.16	72.19	79.757		
12,700.00	6,969.05	8,101.82	7,213.51	168.69	39.29	138.65	429.36	-195.03	5,857.29	5,785.05	72.24	81.083		
12,800.00	6,967.30	8,100.61	7,213.49	171.50	39.28	138.37	430.57	-195.07	5,957.24	5,884.95	72.29	82.406		
12,900.00	6,965.55	8,099.42	7,213.48	174.31	39.26	138.10	431.76	-195.10	6,057.19	5,984.84	72.35	83.725		
13,000.00	6,963.80	8,098.25	7,213.46	177.12	39.25	137.83	432.94	-195.13	6,157.14	6,084.74	72.40	85.042		
13,100.00	6,962.05	8,097.09	7,213.45	179.94	39.23	137.58	434.10	-195.17	6,257.09	6,184.64	72.46	86.355		
13,200.00	6,960.30	8,095.94	7,213.43	182.75	39.22	137.32	435.24	-195.20	6,357.05	6,284.53	72.51	87.665		
13,300.00	6,958.55	8,094.81	7,213.42	185.57	39.20	137.07	436.37	-195.23	6,457.00	6,384.43	72.57	88.972		
13,400.00	6,956.80	8,093.69	7,213.41	188.38	39.19	136.83	437.49	-195.26	6,556.96	6,484.32	72.63	90.275		
13,500.00	6,955.05	8,092.59	7,213.39	191.20	39.17	136.59	438.59	-195.29	6,656.91	6,584.22	72.69	91.575		
13,600.00	6,953.31	8,091.50	7,213.38	194.02	39.16	136.36	439.68	-195.32	6,756.87	6,684.12	72.75	92.872		
13,700.00	6,951.56	8,090.43	7,213.37	196.84	39.15	136.13	440.75	-195.35	6,856.83	6,784.01	72.82	94.165		
13,800.00	6,949.81	8,089.37	7,213.36	199.67	39.13	135.91	441.81	-195.38	6,956.79	6,883.91	72.88	95.455		
13,900.00	6,948.06	8,088.00	7,213.30	202.49	39.05	134.60	448.18	-195.55	7,056.75	6,983.86	72.90	96.805		
14,000.00	6,946.31	8,083.00	7,213.30	205.31	39.05	134.60	448.18	-195.55	7,156.71	7,083.74	72.97	98.075		
14,100.00	6,944.56	8,083.00	7,213.30	208.14	39.05	134.60	448.18	-195.55	7,256.67	7,183.63	73.05	99.343		
14,200.00	6,942.81	8,083.00	7,213.30	210.96	39.05	134.60	448.18	-195.55	7,356.63	7,283.51	73.12	100.606		
14,300.00	6,941.06	8,083.00	7,213.30	213.79	39.05	134.60	448.18	-195.55	7,456.60	7,383.40	73.20	101.866		
14,400.00	6,939.31	8,083.00	7,213.30	216.62	39.05	134.60	448.18	-195.55	7,556.56	7,483.28	73.28	103.121		
14,500.00	6,937.56	8,083.00	7,213.30	219.44	39.05	134.60	448.18	-195.55	7,656.53	7,583.17	73.36	104.374		
14,600.00	6,935.81	8,083.00	7,213.30	222.27	39.05	134.60	448.18	-195.55	7,756.49	7,683.05	73.44	105.622		
14,700.00	6,934.06	8,083.00	7,213.30	225.10	39.05	134.60	448.18	-195.55	7,856.46	7,782.94	73.52	106.866		
14,800.00	6,932.31	8,083.00	7,213.30	227.93	39.05	134.60	448.18	-195.55	7,956.42	7,882.83	73.60	108.107		
14,817.75	6,932.00	8,083.00	7,213.30	228.43	39.05	134.60	448.18	-195.55	7,974.17	7,900.55	73.61	108.327		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS RESOURCES 15M-423(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 146-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	1.00	3.28	3.28	11.19	1,392.00	275.34	1,418.98					
100.00	100.00	102.17	103.17	3.28	3.29	11.20	1,391.85	275.54	1,418.86	1,412.29	6.57	215.883		
200.00	200.00	209.15	210.15	3.34	3.33	11.22	1,391.29	276.04	1,418.45	1,411.78	6.67	212.619		
300.00	300.00	313.03	314.02	3.44	3.44	11.22	1,390.37	275.89	1,417.54	1,410.66	6.89	205.808		
400.00	400.00	416.07	417.05	3.60	3.60	11.19	1,389.42	274.92	1,416.46	1,409.25	7.21	196.584		
500.00	500.00	519.94	520.91	3.81	3.81	11.20	1,388.00	274.89	1,415.12	1,407.50	7.62	185.755		
600.00	599.98	612.73	613.69	4.05	4.04	38.67	1,386.85	275.12	1,412.58	1,404.50	8.08	174.828		
700.00	699.86	715.27	716.23	4.32	4.31	38.86	1,385.66	275.63	1,407.78	1,399.15	8.63	163.133		
800.00	799.72	818.31	819.26	4.62	4.62	39.03	1,384.10	276.27	1,402.32	1,393.08	9.23	151.893		
900.00	899.58	914.38	915.31	4.93	4.93	39.21	1,382.72	277.00	1,396.97	1,387.12	9.86	141.748		
1,000.00	999.44	1,008.33	1,009.25	5.27	5.24	39.39	1,381.54	278.15	1,391.91	1,381.41	10.50	132.514		
1,100.00	1,099.31	1,101.33	1,102.24	5.62	5.56	39.56	1,380.98	279.07	1,387.45	1,376.28	11.18	124.156		
1,200.00	1,199.17	1,200.31	1,201.22	5.98	5.91	39.73	1,380.66	279.77	1,383.23	1,371.34	11.89	116.338		
1,300.00	1,299.03	1,301.85	1,302.75	6.36	6.29	39.91	1,380.31	280.52	1,379.00	1,366.36	12.63	109.143		
1,400.00	1,398.89	1,398.91	1,399.81	6.74	6.65	40.07	1,379.92	281.06	1,374.69	1,361.31	13.38	102.747		
1,500.00	1,498.75	1,495.42	1,496.32	7.13	7.01	40.23	1,379.90	281.71	1,370.78	1,356.65	14.13	96.994		
1,600.00	1,598.61	1,594.70	1,595.59	7.52	7.39	40.40	1,379.93	282.44	1,366.95	1,352.04	14.91	91.698		
1,700.00	1,698.47	1,695.84	1,696.73	7.92	7.79	40.58	1,379.96	283.23	1,363.14	1,347.44	15.70	86.825		
1,800.00	1,798.33	1,801.43	1,802.32	8.32	8.21	40.76	1,379.74	283.90	1,359.09	1,342.57	16.52	82.262		
1,900.00	1,898.19	1,894.38	1,895.27	8.73	8.57	40.92	1,379.52	284.27	1,354.96	1,337.67	17.29	78.359		
2,000.00	1,998.05	1,982.74	1,983.62	9.14	8.90	41.01	1,380.28	283.45	1,351.61	1,333.57	18.04	74.934		
2,100.00	2,097.91	2,066.69	2,067.54	9.55	9.22	41.04	1,382.06	281.82	1,349.24	1,330.47	18.77	71.890		
2,200.00	2,197.78	2,146.77	2,147.53	9.97	9.53	41.05	1,385.00	279.71	1,348.21	1,328.73	19.49	69.185		
2,215.50	2,213.25	2,158.89	2,159.63	10.03	9.57	41.04	1,385.57	279.37	1,348.19	1,328.60	19.60	68.794		
2,300.00	2,297.64	2,227.89	2,228.50	10.39	9.84	41.02	1,389.35	277.35	1,348.74	1,328.53	20.21	66.728		
2,400.00	2,397.50	2,316.00	2,316.40	10.81	10.19	41.00	1,394.98	274.93	1,350.33	1,329.36	20.97	64.389		
2,500.00	2,497.36	2,404.95	2,405.08	11.23	10.54	40.97	1,401.45	272.58	1,352.79	1,331.05	21.74	62.232		
2,600.00	2,597.22	2,497.81	2,497.59	11.65	10.92	40.90	1,408.91	269.58	1,355.88	1,333.35	22.53	60.190		
2,700.00	2,697.08	2,585.53	2,584.91	12.07	11.28	40.83	1,416.70	266.46	1,359.70	1,336.40	23.29	58.371		
2,800.00	2,796.94	2,675.29	2,674.18	12.50	11.65	40.74	1,425.43	263.22	1,364.34	1,340.27	24.07	56.672		
2,900.00	2,896.80	2,760.95	2,759.27	12.92	12.01	40.63	1,434.62	259.75	1,369.87	1,345.04	24.84	55.157		
3,000.00	2,996.66	2,861.73	2,859.28	13.35	12.44	40.47	1,446.15	255.08	1,375.97	1,350.29	25.68	53.577		
3,100.00	3,096.52	2,975.76	2,972.50	13.78	12.93	40.30	1,458.54	249.56	1,381.47	1,354.87	26.60	51.926		
3,200.00	3,196.38	3,075.97	3,072.01	14.21	13.37	40.12	1,469.07	244.10	1,386.50	1,359.04	27.46	50.495		
3,300.00	3,296.25	3,181.16	3,176.46	14.64	13.83	39.92	1,479.95	238.02	1,391.31	1,362.97	28.34	49.090		
3,400.00	3,396.11	3,284.79	3,279.46	15.07	14.29	39.76	1,490.00	232.57	1,395.61	1,366.39	29.22	47.762		
3,500.00	3,495.97	3,378.25	3,372.37	15.50	14.71	39.63	1,499.16	228.26	1,400.16	1,370.12	30.05	46.601		
3,600.00	3,595.83	3,473.02	3,466.54	15.93	15.13	39.51	1,508.86	223.91	1,405.15	1,374.27	30.88	45.504		
3,700.00	3,695.69	3,571.68	3,564.56	16.36	15.58	39.38	1,519.16	219.59	1,410.39	1,378.65	31.74	44.439		
3,800.00	3,795.55	3,675.07	3,667.29	16.80	16.05	39.24	1,529.88	214.85	1,415.52	1,382.89	32.62	43.388		
3,900.00	3,895.41	3,779.69	3,771.23	17.23	16.53	39.08	1,540.51	209.42	1,420.34	1,386.82	33.52	42.371		
4,000.00	3,995.27	3,872.37	3,863.30	17.66	16.95	38.93	1,549.90	204.43	1,425.10	1,390.75	34.35	41.483		
4,100.00	4,095.13	3,963.86	3,954.04	18.10	17.38	38.74	1,560.07	198.69	1,430.67	1,395.49	35.18	40.666		
4,200.00	4,194.99	4,056.69	4,046.04	18.53	17.82	38.54	1,570.78	192.59	1,436.62	1,400.60	36.02	39.886		
4,300.00	4,294.85	4,152.09	4,140.54	18.96	18.27	38.34	1,582.32	186.42	1,443.14	1,406.27	36.87	39.140		
4,400.00	4,394.71	4,258.85	4,246.39	19.40	18.77	38.15	1,594.90	180.45	1,449.56	1,411.76	37.79	38.353		
4,500.00	4,494.58	4,368.17	4,354.86	19.83	19.29	37.97	1,607.03	174.47	1,455.32	1,416.59	38.73	37.573		
4,600.00	4,594.44	4,465.91	4,451.94	20.27	19.75	37.83	1,617.45	169.82	1,460.79	1,421.19	39.60	36.888		
4,700.00	4,694.30	4,565.55	4,550.94	20.71	20.22	37.74	1,628.07	166.00	1,466.43	1,425.95	40.48	36.227		
4,800.00	4,794.16	4,670.77	4,655.51	21.14	20.71	37.65	1,639.03	162.24	1,471.88	1,430.50	41.39	35.562		
4,900.00	4,894.02	4,804.64	4,788.79	21.58	21.33	37.57	1,650.95	158.01	1,475.89	1,433.43	42.45	34.764		
5,000.00	4,993.88	4,930.57	4,914.37	22.01	21.90	37.53	1,659.64	154.49	1,478.02	1,434.56	43.46	34.010		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS RESOURCES 15M-423(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 146-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.00	5,093.74	5,062.03	5,045.63	22.45	22.48	37.54	1,665.99	151.35	1,478.18	1,433.71	44.47	33.242		
5,200.00	5,193.60	5,186.79	5,170.34	22.89	23.00	37.64	1,669.04	150.52	1,476.25	1,430.83	45.42	32.499		
5,300.00	5,293.46	5,297.73	5,281.28	23.32	23.47	37.74	1,670.49	149.93	1,473.27	1,426.94	46.32	31.804		
5,400.00	5,393.32	5,408.20	5,391.73	23.76	23.93	37.83	1,671.24	148.71	1,469.57	1,422.35	47.22	31.125		
5,500.00	5,493.18	5,516.23	5,499.73	24.20	24.37	37.88	1,671.43	146.54	1,465.22	1,417.12	48.10	30.464		
5,600.00	5,593.05	5,642.36	5,625.84	24.64	24.88	37.98	1,669.99	144.50	1,459.62	1,410.61	49.01	29.783		
5,700.00	5,692.91	5,740.53	5,723.99	25.07	25.27	38.10	1,667.82	144.14	1,453.23	1,403.38	49.85	29.154		
5,800.00	5,792.77	5,832.92	5,816.35	25.51	25.63	38.23	1,666.08	143.98	1,447.20	1,396.52	50.67	28.559		
5,900.00	5,892.63	5,940.78	5,923.67	25.95	26.14	38.36	1,664.14	143.81	1,441.11	1,390.43	51.48	27.964		
6,000.00	5,992.49	6,040.93	6,023.82	26.39	26.60	38.49	1,662.19	143.64	1,435.02	1,384.34	52.29	27.369		
6,100.00	6,092.35	6,140.07	6,122.96	26.82	27.04	38.62	1,660.24	143.47	1,428.93	1,378.25	53.10	26.774		
6,200.00	6,192.21	6,240.21	6,223.10	27.26	27.48	38.75	1,658.29	143.30	1,422.84	1,372.16	53.91	26.179		
6,300.00	6,292.07	6,340.31	6,323.20	27.70	27.92	38.88	1,656.34	143.13	1,416.75	1,366.07	54.72	25.584		
6,400.00	6,391.93	6,440.45	6,423.34	28.14	28.36	39.01	1,654.39	142.96	1,410.66	1,359.98	55.53	24.989		
6,500.00	6,491.79	6,540.57	6,523.46	28.58	28.80	39.14	1,652.44	142.79	1,404.57	1,353.89	56.34	24.394		
6,600.00	6,591.65	6,640.69	6,623.58	29.02	29.24	39.27	1,650.49	142.62	1,398.48	1,347.80	57.15	23.799		
6,700.00	6,691.51	6,740.81	6,723.70	29.46	29.68	39.40	1,648.54	142.45	1,392.39	1,341.71	57.96	23.204		
6,800.00	6,791.37	6,840.93	6,823.82	29.90	30.12	39.53	1,646.59	142.28	1,386.30	1,335.62	58.77	22.609		
6,900.00	6,891.23	6,940.05	6,923.94	30.34	30.56	39.66	1,644.64	142.11	1,380.21	1,329.53	59.58	22.014		
7,000.00	6,991.09	7,040.17	7,024.06	30.78	31.00	39.79	1,642.69	141.94	1,374.12	1,323.44	60.39	21.419		
7,100.00	7,090.95	7,140.29	7,124.18	31.22	31.44	39.92	1,640.74	141.77	1,368.03	1,317.35	61.20	20.824		
7,200.00	7,190.81	7,240.41	7,224.30	31.66	31.88	40.05	1,638.79	141.60	1,361.94	1,311.26	62.01	20.229		
7,300.00	7,290.67	7,340.53	7,324.42	32.10	32.32	40.18	1,636.84	141.43	1,355.85	1,305.17	62.82	19.634		
7,400.00	7,390.53	7,440.65	7,424.54	32.54	32.76	40.31	1,634.89	141.26	1,349.76	1,299.08	63.63	19.039		
7,500.00	7,490.39	7,540.77	7,524.66	32.98	33.20	40.44	1,632.94	141.09	1,343.67	1,292.99	64.44	18.444		
7,600.00	7,590.25	7,640.89	7,624.78	33.42	33.64	40.57	1,630.99	140.92	1,337.58	1,286.90	65.25	17.849		
7,700.00	7,690.11	7,740.01	7,723.90	33.86	34.08	40.70	1,629.04	140.75	1,331.49	1,280.81	66.06	17.254		
7,800.00	7,790.00	7,840.11	7,824.00	34.30	34.52	40.83	1,627.09	140.58	1,325.40	1,274.72	66.87	16.659		
7,900.00	7,890.00	7,940.21	7,924.10	34.74	34.96	40.96	1,625.14	140.41	1,319.31	1,268.63	67.68	16.064		
8,000.00	7,990.00	8,040.31	8,024.20	35.18	35.40	41.09	1,623.19	140.24	1,313.22	1,262.54	68.49	15.469		
8,100.00	8,090.00	8,140.41	8,124.30	35.62	35.84	41.22	1,621.24	140.07	1,307.13	1,256.45	69.30	14.874		
8,200.00	8,190.00	8,240.51	8,224.40	36.06	36.28	41.35	1,619.29	139.90	1,301.04	1,250.36	70.11	14.279		
8,300.00	8,290.00	8,340.61	8,324.50	36.50	36.72	41.48	1,617.34	139.73	1,294.95	1,244.27	70.92	13.684		
8,400.00	8,390.00	8,440.71	8,424.60	36.94	37.16	41.61	1,615.39	139.56	1,288.86	1,238.18	71.73	13.089		
8,500.00	8,490.00	8,540.81	8,524.70	37.38	37.60	41.74	1,613.44	139.39	1,282.77	1,232.09	72.54	12.494		
8,600.00	8,590.00	8,640.91	8,624.80	37.82	38.04	41.87	1,611.49	139.22	1,276.68	1,226.00	73.35	11.899		
8,700.00	8,690.00	8,740.01	8,724.90	38.26	38.48	42.00	1,609.54	139.05	1,270.59	1,219.91	74.16	11.304		
8,800.00	8,790.00	8,840.11	8,825.00	38.70	38.92	42.13	1,607.59	138.88	1,264.50	1,213.82	74.97	10.709		
8,900.00	8,890.00	8,940.21	8,925.10	39.14	39.36	42.26	1,605.64	138.71	1,258.41	1,207.73	75.78	10.114		
9,000.00	8,990.00	9,040.31	9,025.20	39.58	39.80	42.39	1,603.69	138.54	1,252.32	1,201.64	76.59	9.519		
9,100.00	9,090.00	9,140.41	9,125.30	40.02	40.24	42.52	1,601.74	138.37	1,246.23	1,195.55	77.40	8.924		
9,200.00	9,190.00	9,240.51	9,225.40	40.46	40.68	42.65	1,599.79	138.20	1,240.14	1,189.46	78.21	8.329		
9,300.00	9,290.00	9,340.61	9,325.50	40.90	41.12	42.78	1,597.84	138.03	1,234.05	1,183.37	79.02	7.734		
9,400.00	9,390.00	9,440.71	9,425.60	41.34	41.56	42.91	1,595.89	137.86	1,227.96	1,177.28	79.83	7.139		
9,500.00	9,490.00	9,540.81	9,525.70	41.78	42.00	43.04	1,593.94	137.69	1,221.87	1,171.19	80.64	6.544		
9,600.00	9,590.00	9,640.91	9,625.80	42.22	42.44	43.17	1,591.99	137.52	1,215.78	1,165.10	81.45	5.949		
9,700.00	9,690.00	9,741.01	9,725.90	42.66	42.88	43.30	1,589.99	137.35	1,209.69	1,159.01	82.26	5.354		
9,800.00	9,790.00	9,841.11	9,826.00	43.10	43.32	43.43	1,588.04	137.18	1,203.60	1,152.92	83.07	4.759		
9,900.00	9,890.00	9,941.21	9,926.10	43.54	43.76	43.56	1,586.09	137.01	1,197.51	1,146.83	83.88	4.164		
10,000.00	9,990.00	10,041.31	10,026.20	43.98	44.20	43.69	1,584.14	136.84	1,191.42	1,140.74	84.69	3.569		
10,100.00	10,090.00	10,141.41	10,126.30	44.42	44.64	43.82	1,582.19	136.67	1,185.33	1,134.65	85.50	2.974		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS RESOURCES 15M-423(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 146-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,200.00	7,012.79	8,011.00	7,274.05	99.40	37.05	124.96	588.19	142.22	3,709.59	3,639.86	69.73	53.197		
10,300.00	7,011.04	8,011.00	7,274.05	102.11	37.05	124.96	588.19	142.22	3,809.18	3,739.39	69.78	54.585		
10,400.00	7,009.29	8,011.00	7,274.05	104.83	37.05	124.96	588.19	142.22	3,908.78	3,838.94	69.84	55.970		
10,500.00	7,007.54	8,011.00	7,274.05	107.56	37.05	124.96	588.19	142.22	4,008.40	3,938.51	69.89	57.354		
10,600.00	7,005.79	8,011.00	7,274.05	110.30	37.05	124.96	588.19	142.22	4,108.05	4,038.10	69.94	58.736		
10,700.00	7,004.04	8,008.22	7,274.18	113.04	37.01	124.71	590.95	142.00	4,207.70	4,137.72	69.98	60.128		
10,800.00	7,002.29	8,003.37	7,274.40	115.79	36.96	124.29	595.78	141.63	4,307.37	4,237.36	70.01	61.528		
10,900.00	7,000.54	7,998.59	7,274.62	118.54	36.90	123.89	600.54	141.26	4,407.04	4,337.01	70.04	62.926		
11,000.00	6,998.79	7,993.88	7,274.83	121.30	36.85	123.50	605.23	140.89	4,506.72	4,436.66	70.07	64.321		
11,100.00	6,997.04	7,989.25	7,275.03	124.06	36.79	123.12	609.85	140.54	4,606.41	4,536.31	70.10	65.714		
11,200.00	6,995.29	7,984.68	7,275.23	126.83	36.74	122.76	614.40	140.20	4,706.11	4,635.97	70.13	67.104		
11,300.00	6,993.54	7,980.00	7,275.43	129.60	36.68	122.39	619.06	139.84	4,805.81	4,735.64	70.17	68.492		
11,400.00	6,991.80	7,974.74	7,275.64	132.37	36.62	121.99	624.30	139.45	4,905.51	4,835.31	70.20	69.879		
11,500.00	6,990.05	7,969.31	7,275.86	135.15	36.56	121.59	629.71	139.05	5,005.22	4,934.99	70.24	71.263		
11,600.00	6,988.30	7,963.94	7,276.07	137.93	36.50	121.19	635.07	138.65	5,104.94	5,034.67	70.27	72.645		
11,700.00	6,986.55	7,958.61	7,276.27	140.72	36.44	120.81	640.38	138.25	5,204.66	5,134.35	70.31	74.024		
11,800.00	6,984.80	7,953.32	7,276.46	143.50	36.38	120.45	645.65	137.87	5,304.38	5,234.03	70.35	75.400		
11,900.00	6,983.05	7,948.07	7,276.64	146.29	36.32	120.09	650.88	137.48	5,404.11	5,333.72	70.39	76.772		
12,000.00	6,981.30	7,942.84	7,276.82	149.09	36.26	119.74	656.10	137.10	5,503.84	5,433.40	70.44	78.140		
12,100.00	6,979.55	7,937.65	7,276.99	151.88	36.20	119.40	661.27	136.72	5,603.57	5,533.09	70.48	79.505		
12,200.00	6,977.80	7,932.51	7,277.15	154.68	36.15	119.07	666.39	136.35	5,703.31	5,632.78	70.53	80.866		
12,300.00	6,976.05	7,927.41	7,277.31	157.48	36.09	118.75	671.48	135.98	5,803.05	5,732.48	70.58	82.224		
12,400.00	6,974.30	7,922.35	7,277.46	160.28	36.03	118.43	676.52	135.62	5,902.80	5,832.17	70.63	83.578		
12,500.00	6,972.55	7,919.00	7,277.55	163.08	36.00	118.23	679.86	135.38	6,002.54	5,931.86	70.68	84.924		
12,600.00	6,970.80	7,919.00	7,277.55	165.89	36.00	118.23	679.86	135.38	6,102.30	6,031.55	70.75	86.256		
12,700.00	6,969.05	7,919.00	7,277.55	168.69	36.00	118.23	679.86	135.38	6,202.06	6,131.25	70.81	87.584		
12,800.00	6,967.30	7,919.00	7,277.55	171.50	36.00	118.23	679.86	135.38	6,301.83	6,230.95	70.88	88.909		
12,900.00	6,965.55	7,919.00	7,277.55	174.31	36.00	118.23	679.86	135.38	6,401.61	6,330.66	70.95	90.231		
13,000.00	6,963.80	7,919.00	7,277.55	177.12	36.00	118.23	679.86	135.38	6,501.39	6,430.38	71.01	91.550		
13,100.00	6,962.05	7,919.00	7,277.55	179.94	36.00	118.23	679.86	135.38	6,601.18	6,530.10	71.08	92.866		
13,200.00	6,960.30	7,919.00	7,277.55	182.75	36.00	118.23	679.86	135.38	6,700.98	6,629.83	71.15	94.178		
13,300.00	6,958.55	7,919.00	7,277.55	185.57	36.00	118.23	679.86	135.38	6,800.79	6,729.56	71.22	95.486		
13,400.00	6,956.80	7,919.00	7,277.55	188.38	36.00	118.23	679.86	135.38	6,900.59	6,829.30	71.29	96.792		
13,500.00	6,955.05	7,919.00	7,277.55	191.20	36.00	118.23	679.86	135.38	7,000.41	6,929.04	71.36	98.094		
13,600.00	6,953.31	7,919.00	7,277.55	194.02	36.00	118.23	679.86	135.38	7,100.23	7,028.79	71.44	99.392		
13,700.00	6,951.56	7,919.00	7,277.55	196.84	36.00	118.23	679.86	135.38	7,200.05	7,128.54	71.51	100.687		
13,800.00	6,949.81	7,919.00	7,277.55	199.67	36.00	118.23	679.86	135.38	7,299.88	7,228.30	71.58	101.978		
13,900.00	6,948.06	7,919.00	7,277.55	202.49	36.00	118.23	679.86	135.38	7,399.72	7,328.06	71.66	103.266		
14,000.00	6,946.31	7,919.00	7,277.55	205.31	36.00	118.23	679.86	135.38	7,499.55	7,427.82	71.73	104.550		
14,100.00	6,944.56	7,919.00	7,277.55	208.14	36.00	118.23	679.86	135.38	7,599.40	7,527.59	71.81	105.831		
14,200.00	6,942.81	7,906.10	7,277.89	210.96	35.86	117.47	692.73	134.54	7,699.15	7,627.30	71.85	107.149		
14,300.00	6,941.06	7,905.51	7,277.91	213.79	35.85	117.43	693.32	134.50	7,798.99	7,727.06	71.93	108.424		
14,400.00	6,939.31	7,904.93	7,277.92	216.62	35.85	117.40	693.89	134.47	7,898.84	7,826.83	72.01	109.696		
14,500.00	6,937.56	7,904.37	7,277.93	219.44	35.84	117.37	694.46	134.44	7,998.69	7,926.60	72.08	110.964		
14,600.00	6,935.81	7,903.82	7,277.95	222.27	35.83	117.34	695.01	134.41	8,098.54	8,026.38	72.16	112.228		
14,700.00	6,934.06	7,903.28	7,277.96	225.10	35.83	117.31	695.54	134.38	8,198.40	8,126.16	72.24	113.489		
14,800.00	6,932.31	7,902.75	7,277.97	227.93	35.82	117.28	696.07	134.35	8,298.26	8,225.94	72.32	114.745		
14,817.75	6,932.00	7,902.66	7,277.98	228.43	35.82	117.27	696.16	134.34	8,315.98	8,243.65	72.33	114.968		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS RESOURCES 15R-243(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 146-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	1.00	3.28	3.28	12.31	1,387.63	302.87	1,420.30					
100.00	100.00	79.63	80.63	3.28	3.29	12.33	1,388.05	303.51	1,420.98	1,414.41	6.57	216.275		
200.00	200.00	165.00	165.95	3.34	3.31	12.40	1,389.39	305.56	1,423.00	1,416.35	6.65	214.132		
300.00	300.00	281.45	282.34	3.44	3.41	12.53	1,390.96	309.08	1,424.99	1,418.14	6.85	207.944		
400.00	400.00	375.26	376.12	3.60	3.54	12.63	1,391.24	311.85	1,425.96	1,418.81	7.14	199.575		
500.00	500.00	472.86	473.69	3.81	3.72	12.65	1,393.41	312.72	1,428.31	1,420.78	7.53	189.765		
600.00	599.98	593.08	593.89	4.05	3.99	40.07	1,394.56	312.66	1,427.86	1,419.82	8.04	177.682		
700.00	699.86	683.15	683.96	4.32	4.23	40.21	1,395.12	313.01	1,424.87	1,416.32	8.54	166.768		
800.00	799.72	775.36	776.17	4.62	4.49	40.36	1,396.29	313.74	1,422.26	1,413.15	9.11	156.175		
900.00	899.58	884.37	885.16	4.93	4.83	40.53	1,397.62	314.57	1,419.61	1,409.84	9.76	145.387		
1,000.00	999.44	982.38	983.16	5.27	5.16	40.68	1,398.54	315.11	1,416.64	1,406.22	10.42	135.900		
1,100.00	1,099.31	1,071.72	1,072.49	5.62	5.46	40.81	1,399.85	315.63	1,414.20	1,403.12	11.08	127.603		
1,200.00	1,199.17	1,173.25	1,174.00	5.98	5.82	40.95	1,401.72	316.08	1,412.11	1,400.30	11.81	119.604		
1,300.00	1,299.03	1,279.74	1,280.48	6.36	6.21	41.07	1,403.41	315.69	1,409.57	1,397.01	12.57	112.181		
1,400.00	1,398.89	1,378.42	1,379.14	6.74	6.57	41.16	1,405.03	314.90	1,407.01	1,393.70	13.31	105.702		
1,500.00	1,498.75	1,472.24	1,472.95	7.13	6.93	41.25	1,406.55	314.25	1,404.45	1,390.40	14.05	99.933		
1,600.00	1,598.61	1,550.76	1,551.44	7.52	7.23	41.39	1,408.35	315.41	1,403.08	1,388.33	14.75	95.115		
1,635.82	1,634.38	1,578.29	1,578.94	7.66	7.34	41.46	1,409.18	316.26	1,402.98	1,387.97	15.00	93.523		
1,700.00	1,698.47	1,627.56	1,628.13	7.92	7.54	41.59	1,410.95	318.25	1,403.32	1,387.87	15.45	90.827		
1,800.00	1,798.33	1,713.90	1,714.25	8.32	7.88	41.88	1,414.57	323.28	1,404.90	1,388.71	16.20	86.747		
1,900.00	1,898.19	1,792.89	1,792.91	8.73	8.21	42.19	1,418.39	329.43	1,407.68	1,390.77	16.92	83.220		
2,000.00	1,998.05	1,870.29	1,869.85	9.14	8.53	42.53	1,423.14	336.35	1,412.07	1,394.44	17.63	80.088		
2,100.00	2,097.91	1,953.71	1,952.68	9.55	8.89	42.87	1,429.51	343.96	1,418.00	1,399.62	18.38	77.154		
2,200.00	2,197.78	2,047.10	2,045.34	9.97	9.30	43.27	1,437.17	352.78	1,424.66	1,405.48	19.18	74.282		
2,300.00	2,297.64	2,143.21	2,140.75	10.39	9.72	43.61	1,445.78	360.49	1,431.71	1,411.71	20.00	71.595		
2,400.00	2,397.50	2,242.84	2,239.61	10.81	10.17	43.99	1,454.59	369.20	1,438.92	1,418.08	20.84	69.049		
2,500.00	2,497.36	2,357.30	2,353.13	11.23	10.68	44.48	1,463.90	380.43	1,445.87	1,424.10	21.76	66.435		
2,600.00	2,597.22	2,462.60	2,457.70	11.65	11.16	44.91	1,471.35	390.25	1,451.70	1,429.05	22.65	64.106		
2,700.00	2,697.08	2,554.27	2,548.74	12.07	11.58	45.28	1,478.16	398.51	1,457.84	1,434.38	23.46	62.143		
2,800.00	2,796.94	2,640.82	2,634.64	12.50	11.98	45.62	1,485.10	406.66	1,464.75	1,440.50	24.25	60.406		
2,900.00	2,896.80	2,738.55	2,731.51	12.92	12.44	46.02	1,493.49	416.37	1,472.44	1,447.34	25.10	58.662		
3,000.00	2,996.66	2,864.09	2,855.97	13.35	13.04	46.59	1,502.70	430.02	1,479.37	1,453.26	26.11	56.662		
3,100.00	3,096.52	2,969.51	2,960.56	13.78	13.54	47.09	1,508.95	441.63	1,485.10	1,458.09	27.01	54.983		
3,200.00	3,196.38	3,075.60	3,066.02	14.21	14.03	47.51	1,515.42	451.15	1,490.36	1,462.45	27.91	53.394		
3,300.00	3,296.25	3,162.05	3,151.93	14.64	14.44	47.85	1,520.97	458.99	1,496.02	1,467.31	28.71	52.104		
3,400.00	3,396.11	3,250.30	3,239.53	15.07	14.86	48.21	1,527.13	467.77	1,502.60	1,473.07	29.52	50.897		
3,500.00	3,495.97	3,374.30	3,362.78	15.50	15.44	48.67	1,535.31	478.65	1,508.39	1,477.86	30.53	49.413		
3,600.00	3,595.83	3,468.63	3,456.58	15.93	15.89	49.01	1,541.31	486.58	1,513.96	1,482.59	31.37	48.261		
3,700.00	3,695.69	3,563.19	3,550.56	16.36	16.33	49.36	1,547.42	495.03	1,519.88	1,487.66	32.22	47.178		
3,800.00	3,795.55	3,658.06	3,644.84	16.80	16.79	49.70	1,554.00	503.35	1,526.23	1,493.16	33.06	46.159		
3,900.00	3,895.41	3,758.03	3,744.13	17.23	17.27	50.09	1,560.68	512.94	1,532.73	1,498.79	33.94	45.155		
4,000.00	3,995.27	3,847.73	3,833.16	17.66	17.70	50.46	1,566.43	522.16	1,539.37	1,504.60	34.77	44.276		
4,100.00	4,095.13	3,923.31	3,908.01	18.10	18.07	50.80	1,571.91	531.10	1,547.42	1,511.91	35.51	43.582		
4,200.00	4,194.99	4,014.40	3,998.08	18.53	18.53	51.22	1,579.07	542.64	1,556.49	1,520.15	36.34	42.833		
4,300.00	4,294.85	4,104.31	4,086.97	18.96	18.99	51.61	1,586.87	553.66	1,566.21	1,529.05	37.16	42.145		
4,400.00	4,394.71	4,227.57	4,209.04	19.40	19.60	52.06	1,598.01	566.63	1,575.64	1,537.44	38.19	41.255		
4,500.00	4,494.58	4,345.61	4,326.29	19.83	20.17	52.40	1,607.81	576.07	1,583.30	1,544.12	39.18	40.413		
4,600.00	4,594.44	4,446.04	4,426.11	20.27	20.65	52.65	1,616.32	583.04	1,590.74	1,550.69	40.06	39.713		
4,700.00	4,694.30	4,539.69	4,519.19	20.71	21.10	52.88	1,624.29	589.53	1,598.25	1,557.35	40.89	39.083		
4,800.00	4,794.16	4,642.12	4,620.95	21.14	21.59	53.14	1,633.16	597.14	1,606.14	1,564.36	41.78	38.439		
4,900.00	4,894.02	4,749.27	4,727.48	21.58	22.11	53.40	1,642.06	604.58	1,613.51	1,570.81	42.70	37.785		
5,000.00	4,993.88	4,869.59	4,847.17	22.01	22.68	53.70	1,651.05	612.85	1,620.17	1,576.47	43.69	37.081		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS RESOURCES 15R-243(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 146-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.00	5,093.74	5,004.16	4,981.22	22.45	23.30	54.05	1,659.21	621.49	1,625.48	1,580.74	44.75	36.326		
5,200.00	5,193.60	5,158.29	5,135.07	22.89	23.99	54.44	1,664.22	628.92	1,627.39	1,581.54	45.86	35.489		
5,300.00	5,293.46	5,343.12	5,319.82	23.32	24.74	54.71	1,667.80	630.66	1,627.48	1,580.52	46.96	34.660		
5,400.00	5,393.32	5,437.89	5,414.57	23.76	25.09	54.84	1,666.79	629.60	1,622.97	1,575.21	47.76	33.982		
5,500.00	5,493.18	5,532.81	5,509.49	24.20	25.44	54.97	1,665.99	628.79	1,618.79	1,570.23	48.57	33.332		
5,600.00	5,593.05	5,635.84	5,612.51	24.64	25.82	55.12	1,665.18	627.92	1,614.68	1,565.29	49.39	32.692		
5,700.00	5,692.91	5,741.37	5,718.03	25.07	26.21	55.26	1,664.11	626.65	1,610.21	1,559.99	50.22	32.062		
5,800.00	5,792.77	5,841.81	5,818.47	25.51	40.70	120.20	268.31	625.88	1,536.56	1,501.87	34.68	44.301		
5,900.00	5,892.63	5,941.34	5,918.00	25.95	40.64	119.87	272.78	625.90	1,451.52	1,414.93	36.59	39.670		
6,000.00	5,992.49	6,041.29	6,017.95	26.39	40.58	119.58	276.83	625.91	1,368.50	1,329.78	38.72	35.344		
6,100.00	6,092.35	6,141.19	6,117.85	26.82	40.53	119.31	280.53	625.93	1,287.89	1,246.79	41.10	31.339		
6,200.00	6,192.21	6,241.04	6,217.70	27.26	40.48	119.07	283.72	625.94	1,210.16	1,166.43	43.74	27.670		
6,300.00	6,292.07	6,340.91	6,317.57	27.70	40.45	118.89	286.18	625.95	1,135.93	1,089.27	46.65	24.349		
6,400.00	6,391.93	6,440.76	6,417.42	28.14	40.42	118.72	288.58	625.96	1,065.90	1,016.07	49.83	21.389		
6,500.00	6,491.79	6,540.62	6,517.28	28.58	40.38	157.27	290.89	625.96	1,002.65	949.34	53.30	18.811		
6,600.00	6,589.80	6,638.64	6,615.29	29.02	40.35	170.95	292.96	625.97	957.98	900.80	57.18	16.754		
6,700.00	6,683.86	6,732.69	6,709.35	29.46	40.33	174.50	294.73	625.98	937.23	876.15	61.08	15.343		
6,729.87	6,710.82	6,759.65	6,736.31	29.60	40.32	175.09	295.20	625.98	936.06	873.88	62.18	15.055 CC, ES		
6,800.00	6,771.56	6,820.39	6,797.05	29.92	40.31	176.08	296.17	625.98	942.52	878.01	64.51	14.610		
6,900.00	6,850.72	6,899.55	6,876.21	30.40	40.29	176.98	297.26	625.99	973.28	906.16	67.12	14.501 SF		
7,000.00	6,919.40	6,968.23	6,945.06	30.96	40.28	177.59	297.98	625.99	1,026.53	957.67	68.85	14.909		
7,100.00	6,975.92	7,024.75	7,001.39	31.62	40.28	178.10	298.33	625.99	1,097.80	1,027.92	69.88	15.709		
7,200.00	7,018.87	7,067.70	7,044.34	32.44	40.28	178.67	298.31	625.99	1,182.28	1,111.84	70.43	16.785		
7,300.00	7,047.21	7,096.04	7,072.68	33.42	40.29	179.68	297.93	625.99	1,275.48	1,204.78	70.70	18.041		
7,400.00	7,060.23	7,109.06	7,085.69	34.55	40.30	-176.50	297.19	625.99	1,373.59	1,302.78	70.81	19.397		
7,500.00	7,060.03	7,109.06	7,109.06	35.83	40.31	-162.60	296.16	625.98	1,473.44	1,402.59	70.85	20.796		
7,600.00	7,058.28	7,109.06	7,109.06	37.28	40.33	-161.40	295.09	625.98	1,573.39	1,502.51	70.89	22.196		
7,700.00	7,056.53	7,109.06	7,109.06	38.89	40.34	-160.23	294.03	625.97	1,673.35	1,602.43	70.92	23.596		
7,800.00	7,054.78	7,109.06	7,109.06	40.63	40.35	-159.07	292.96	625.97	1,773.31	1,702.36	70.95	24.994		
7,900.00	7,053.03	7,109.06	7,109.06	42.50	40.37	-157.93	291.90	625.97	1,873.27	1,802.29	70.98	26.391		
8,000.00	7,051.28	7,109.06	7,109.06	44.47	40.38	-156.81	290.84	625.96	1,973.24	1,902.22	71.02	27.786		
8,100.00	7,049.53	7,109.06	7,109.06	46.53	40.40	-155.71	289.77	625.96	2,073.21	2,002.16	71.05	29.180		
8,200.00	7,047.78	7,109.06	7,109.06	48.67	40.41	-154.63	288.70	625.96	2,173.18	2,102.10	71.08	30.572		
8,300.00	7,046.03	7,109.06	7,109.06	50.89	40.43	-153.57	287.64	625.95	2,273.15	2,202.03	71.12	31.963		
8,400.00	7,044.28	7,109.06	7,109.06	53.16	40.44	-152.52	286.57	625.95	2,373.13	2,301.97	71.16	33.351		
8,500.00	7,042.53	7,109.06	7,109.06	55.49	40.46	-151.50	285.50	625.95	2,473.11	2,401.91	71.19	34.738		
8,600.00	7,040.78	7,109.06	7,109.06	57.86	40.47	-150.50	284.44	625.94	2,573.08	2,501.85	71.23	36.124		
8,700.00	7,039.03	7,109.06	7,109.06	60.28	40.49	-149.52	283.37	625.94	2,673.06	2,601.79	71.27	37.507		
8,800.00	7,037.28	7,109.06	7,109.06	62.74	40.51	-148.40	282.12	625.93	2,773.04	2,701.73	71.31	38.886		
8,900.00	7,035.53	7,109.06	7,109.06	65.23	40.53	-147.24	280.80	625.93	2,873.03	2,801.67	71.36	40.264		
9,000.00	7,033.78	7,109.06	7,109.06	67.74	40.54	-146.09	279.46	625.92	2,973.01	2,901.61	71.40	41.638		
9,100.00	7,032.03	7,109.06	7,109.06	70.29	40.56	-144.96	278.09	625.92	3,072.99	3,001.54	71.45	43.010		
9,200.00	7,030.28	7,109.06	7,109.06	72.85	40.58	-143.85	276.71	625.91	3,172.97	3,101.48	71.50	44.380		
9,300.00	7,028.54	7,109.06	7,109.06	75.44	40.60	-142.75	275.30	625.91	3,272.96	3,201.41	71.55	45.746		
9,400.00	7,026.79	7,109.06	7,109.06	78.05	40.62	-141.66	273.87	625.90	3,372.94	3,301.35	71.60	47.110		
9,500.00	7,025.04	7,109.06	7,109.06	80.67	40.64	-140.59	272.42	625.90	3,472.93	3,401.28	71.65	48.471		
9,600.00	7,023.29	7,109.06	7,109.06	83.31	40.66	-139.53	270.94	625.89	3,572.91	3,501.21	71.70	49.830		
9,700.00	7,021.54	7,109.06	7,109.06	85.96	40.69	-138.49	269.43	625.88	3,672.90	3,601.14	71.76	51.185		
9,800.00	7,019.79	7,109.06	7,109.06	88.63	40.71	-137.47	267.90	625.88	3,772.88	3,701.07	71.81	52.537		
9,900.00	7,018.04	7,109.06	7,109.06	91.30	40.73	-136.46	266.35	625.87	3,872.87	3,801.00	71.87	53.886		
10,000.00	7,016.29	7,109.06	7,109.06	93.99	40.75	-135.48	264.77	625.86	3,972.86	3,900.92	71.93	55.231		
10,100.00	7,014.54	7,109.06	7,109.06	96.69	40.77	-134.50	263.16	625.86	4,072.84	4,000.85	71.99	56.573		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS RESOURCES 15R-243(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 146-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,200.00	7,012.79	8,225.61	7,132.34	99.40	40.80	-133.55	261.52	625.85	4,172.83	4,100.78	72.05	57.912		
10,300.00	7,011.04	8,227.28	7,132.37	102.11	40.82	-132.61	259.85	625.84	4,272.82	4,200.70	72.12	59.247		
10,400.00	7,009.29	8,228.97	7,132.40	104.83	40.85	-131.69	258.15	625.83	4,372.80	4,300.62	72.18	60.579		
10,500.00	7,007.54	8,230.70	7,132.43	107.56	40.87	-130.79	256.43	625.82	4,472.79	4,400.54	72.25	61.907		
10,600.00	7,005.79	8,232.46	7,132.46	110.30	40.89	-129.90	254.67	625.81	4,572.78	4,500.46	72.32	63.231		
10,700.00	7,004.04	8,234.25	7,132.48	113.04	40.92	-129.03	252.88	625.81	4,672.77	4,600.38	72.39	64.551		
10,800.00	7,002.29	8,236.07	7,132.51	115.79	40.95	-128.18	251.05	625.80	4,772.75	4,700.29	72.46	65.867		
10,900.00	7,000.54	8,237.93	7,132.54	118.54	40.97	-127.34	249.20	625.79	4,872.74	4,800.21	72.53	67.180		
11,000.00	6,998.79	8,239.82	7,132.57	121.30	41.00	-126.52	247.30	625.78	4,972.73	4,900.12	72.61	68.488		
11,100.00	6,997.04	8,238.01	7,132.54	124.06	40.97	-127.31	249.12	625.79	5,072.72	5,000.08	72.63	69.841		
11,200.00	6,995.29	8,238.96	7,132.56	126.83	40.99	-126.89	248.17	625.78	5,172.71	5,100.01	72.70	71.155		
11,300.00	6,993.54	8,239.90	7,132.57	129.60	41.00	-126.49	247.23	625.78	5,272.69	5,199.93	72.76	72.466		
11,400.00	6,991.80	8,240.83	7,132.59	132.37	41.01	-126.10	246.30	625.77	5,372.68	5,299.86	72.83	73.774		
11,500.00	6,990.05	8,241.75	7,132.60	135.15	41.03	-125.72	245.38	625.77	5,472.67	5,399.78	72.89	75.078		
11,600.00	6,988.30	8,242.66	7,132.61	137.93	41.04	-125.35	244.47	625.76	5,572.66	5,499.70	72.96	76.380		
11,700.00	6,986.55	8,243.57	7,132.63	140.72	41.05	-124.99	243.56	625.76	5,672.65	5,599.62	73.03	77.678		
11,800.00	6,984.80	8,244.47	7,132.64	143.50	41.07	-124.64	242.66	625.75	5,772.64	5,699.54	73.10	78.972		
11,900.00	6,983.05	8,245.36	7,132.65	146.29	41.08	-124.30	241.77	625.75	5,872.63	5,799.46	73.17	80.264		
12,000.00	6,981.30	8,246.24	7,132.67	149.09	41.09	-123.97	240.89	625.75	5,972.62	5,899.38	73.24	81.551		
12,100.00	6,979.55	8,247.12	7,132.68	151.88	41.10	-123.64	240.01	625.74	6,072.61	5,999.30	73.31	82.836		
12,200.00	6,977.80	8,247.99	7,132.69	154.68	41.12	-123.33	239.14	625.74	6,172.60	6,099.22	73.38	84.117		
12,300.00	6,976.05	8,248.85	7,132.71	157.48	41.13	-123.02	238.28	625.74	6,272.59	6,199.14	73.45	85.394		
12,400.00	6,974.30	8,249.70	7,132.72	160.28	41.14	-122.72	237.43	625.73	6,372.58	6,299.05	73.53	86.668		
12,500.00	6,972.55	8,250.55	7,132.73	163.08	41.15	-122.43	236.58	625.73	6,472.57	6,398.97	73.60	87.938		
12,600.00	6,970.80	8,251.39	7,132.74	165.89	41.17	-122.14	235.74	625.72	6,572.56	6,498.89	73.68	89.205		
12,700.00	6,969.05	8,252.22	7,132.76	168.69	41.18	-121.86	234.91	625.72	6,672.56	6,598.80	73.76	90.468		
12,800.00	6,967.30	8,253.05	7,132.77	171.50	41.19	-121.59	234.08	625.72	6,772.55	6,698.71	73.83	91.727		
12,900.00	6,965.55	8,253.87	7,132.78	174.31	41.20	-121.33	233.26	625.71	6,872.54	6,798.63	73.91	92.983		
13,000.00	6,963.80	8,254.68	7,132.79	177.12	41.21	-121.07	232.45	625.71	6,972.53	6,898.54	73.99	94.235		
13,100.00	6,962.05	8,255.48	7,132.80	179.94	41.22	-120.82	231.65	625.71	7,072.52	6,998.45	74.07	95.483		
13,200.00	6,960.30	8,256.28	7,132.82	182.75	41.24	-120.57	230.85	625.70	7,172.51	7,098.36	74.15	96.728		
13,300.00	6,958.55	8,257.08	7,132.83	185.57	41.25	-120.33	230.05	625.70	7,272.50	7,198.27	74.23	97.969		
13,400.00	6,956.80	8,257.86	7,132.84	188.38	41.26	-120.09	229.27	625.70	7,372.50	7,298.18	74.32	99.206		
13,500.00	6,955.05	8,258.64	7,132.85	191.20	41.27	-119.86	228.49	625.70	7,472.49	7,398.09	74.40	100.439		
13,600.00	6,953.31	8,259.42	7,132.86	194.02	41.28	-119.63	227.72	625.69	7,572.48	7,498.00	74.48	101.669		
13,700.00	6,951.56	8,260.18	7,132.87	196.84	41.29	-119.41	226.95	625.69	7,672.47	7,597.91	74.57	102.894		
13,800.00	6,949.81	8,260.95	7,132.88	199.67	41.30	-119.20	226.19	625.69	7,772.46	7,697.81	74.65	104.116		
13,900.00	6,948.06	8,261.72	7,132.89	202.49	41.35	-118.96	223.13	625.68	7,872.46	7,797.69	74.77	105.286		
14,000.00	6,946.31	8,262.49	7,132.92	205.31	41.35	-118.36	223.13	625.68	7,972.45	7,897.60	74.85	106.515		
14,100.00	6,944.56	8,263.26	7,132.92	208.14	41.35	-118.36	223.13	625.68	8,072.44	7,997.52	74.92	107.741		
14,200.00	6,942.81	8,264.03	7,132.92	210.96	41.35	-118.36	223.13	625.68	8,172.43	8,097.43	75.00	108.962		
14,300.00	6,941.06	8,264.80	7,132.92	213.79	41.35	-118.36	223.13	625.68	8,272.43	8,197.35	75.08	110.180		
14,400.00	6,939.31	8,265.57	7,132.92	216.62	41.35	-118.36	223.13	625.68	8,372.42	8,297.26	75.16	111.395		
14,500.00	6,937.56	8,266.34	7,132.92	219.44	41.35	-118.36	223.13	625.68	8,472.41	8,397.17	75.24	112.605		
14,600.00	6,935.81	8,267.11	7,132.92	222.27	41.35	-118.36	223.13	625.68	8,572.41	8,497.09	75.32	113.812		
14,700.00	6,934.06	8,267.88	7,132.92	225.10	41.35	-118.36	223.13	625.68	8,672.40	8,597.00	75.40	115.015		
14,800.00	6,932.31	8,268.65	7,132.92	227.93	41.35	-118.36	223.13	625.68	8,772.39	8,696.91	75.48	116.214		
14,817.75	6,932.00	8,268.94	7,132.92	228.43	41.35	-118.36	223.13	625.68	8,790.14	8,714.64	75.50	116.427		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS RESOURCES 15R-403(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 146-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	11.78	2.78	3.28	3.28	50.74	1,384.04	1,693.47	2,187.10					
100.00	100.00	142.65	133.65	3.28	3.29	50.72	1,383.94	1,692.15	2,186.27	2,179.69	6.58	332.374		
200.00	200.00	257.30	248.25	3.34	3.37	50.67	1,384.19	1,689.16	2,184.39	2,177.68	6.71	325.536		
300.00	300.00	360.65	351.51	3.44	3.51	50.58	1,385.18	1,685.09	2,181.95	2,175.00	6.95	313.872		
400.00	400.00	450.76	441.52	3.60	3.67	50.48	1,387.00	1,681.19	2,179.89	2,172.62	7.27	299.879		
500.00	500.00	549.97	540.59	3.81	3.89	50.35	1,389.53	1,676.66	2,177.98	2,170.29	7.69	283.264		
600.00	599.98	647.46	637.91	4.05	4.14	77.67	1,392.73	1,671.72	2,175.81	2,167.63	8.18	266.024		
700.00	699.86	742.25	732.49	4.32	4.42	77.65	1,396.41	1,666.61	2,173.12	2,164.40	8.72	249.124		
800.00	799.72	844.44	834.41	4.62	4.74	77.60	1,401.05	1,660.84	2,170.56	2,161.21	9.34	232.322		
900.00	899.58	938.96	928.68	4.93	5.06	77.55	1,405.20	1,655.38	2,167.80	2,157.82	9.98	217.203		
1,000.00	999.44	1,030.87	1,020.30	5.27	5.40	77.48	1,410.09	1,649.99	2,165.57	2,154.92	10.65	203.409		
1,100.00	1,099.31	1,305.69	1,291.54	5.62	6.57	76.78	1,431.55	1,612.71	2,158.38	2,146.24	12.14	177.779		
1,200.00	1,199.17	1,417.03	1,400.76	5.98	7.11	76.42	1,439.31	1,592.53	2,147.92	2,134.90	13.02	165.010		
1,300.00	1,299.03	1,505.61	1,487.58	6.36	7.55	76.12	1,445.72	1,576.18	2,137.47	2,123.65	13.82	154.715		
1,400.00	1,398.89	1,687.75	1,665.97	6.74	8.50	75.53	1,455.88	1,540.97	2,125.23	2,110.16	15.07	140.999		
1,500.00	1,498.75	1,799.28	1,775.21	7.13	9.10	75.21	1,459.33	1,518.76	2,111.12	2,095.12	16.01	131.901		
1,600.00	1,598.61	1,874.77	1,849.23	7.52	9.51	75.00	1,461.27	1,504.02	2,097.06	2,080.28	16.78	124.964		
1,700.00	1,698.47	1,943.87	1,917.17	7.92	9.88	74.82	1,463.43	1,491.62	2,084.50	2,066.96	17.53	118.881		
1,800.00	1,798.33	2,011.00	1,983.31	8.32	10.23	74.66	1,465.78	1,480.42	2,073.26	2,054.97	18.28	113.405		
1,900.00	1,898.19	2,080.26	2,051.68	8.73	10.59	74.49	1,468.79	1,469.73	2,063.52	2,044.48	19.04	108.371		
2,000.00	1,998.05	2,163.10	2,133.52	9.14	11.02	74.28	1,473.39	1,457.76	2,055.27	2,035.40	19.87	103.433		
2,100.00	2,097.91	2,252.82	2,222.08	9.55	11.49	74.04	1,479.08	1,444.57	2,047.43	2,026.69	20.74	98.707		
2,200.00	2,197.78	2,339.13	2,307.21	9.97	11.94	73.79	1,485.40	1,431.81	2,040.26	2,018.65	21.61	94.416		
2,300.00	2,297.64	2,432.79	2,399.53	10.39	12.44	73.50	1,492.95	1,418.03	2,033.68	2,011.16	22.52	90.311		
2,400.00	2,397.50	2,528.23	2,493.80	10.81	12.94	73.23	1,499.84	1,404.76	2,027.18	2,003.74	23.43	86.505		
2,500.00	2,497.36	2,619.81	2,584.35	11.23	13.41	72.99	1,506.38	1,392.71	2,021.19	1,996.86	24.33	83.085		
2,600.00	2,597.22	2,722.91	2,686.37	11.65	13.94	72.73	1,513.38	1,379.61	2,015.32	1,990.04	25.27	79.737		
2,700.00	2,697.08	2,863.38	2,825.19	12.07	14.68	72.35	1,522.64	1,360.21	2,008.68	1,982.27	26.41	76.056		
2,800.00	2,796.94	2,985.58	2,945.40	12.50	15.36	71.95	1,530.71	1,339.84	1,999.93	1,972.45	27.49	72.761		
2,900.00	2,896.80	3,079.61	3,037.96	12.92	15.88	71.65	1,536.48	1,324.32	1,991.08	1,962.65	28.43	70.040		
3,000.00	2,996.66	3,180.80	3,137.67	13.35	16.44	71.34	1,542.25	1,308.03	1,982.26	1,952.86	29.40	67.427		
3,100.00	3,096.52	3,273.93	3,229.41	13.78	16.95	71.05	1,547.67	1,293.02	1,973.58	1,943.25	30.33	65.068		
3,200.00	3,196.38	3,372.97	3,327.37	14.21	17.48	70.81	1,552.09	1,279.11	1,965.40	1,934.12	31.27	62.849		
3,300.00	3,296.25	3,479.29	3,432.65	14.64	18.02	70.59	1,555.21	1,264.67	1,956.43	1,924.20	32.23	60.710		
3,400.00	3,396.11	3,558.74	3,511.45	15.07	18.42	70.45	1,557.53	1,254.73	1,948.24	1,915.18	33.06	58.925		
3,500.00	3,495.97	3,641.43	3,593.42	15.50	18.84	70.27	1,560.98	1,244.42	1,941.01	1,907.09	33.92	57.227		
3,600.00	3,595.83	3,728.46	3,679.59	15.93	19.29	70.06	1,565.85	1,233.22	1,934.57	1,899.77	34.80	55.584		
3,700.00	3,695.69	3,837.83	3,787.55	16.36	19.89	69.72	1,573.53	1,217.51	1,928.21	1,892.39	35.82	53.826		
3,800.00	3,795.55	3,951.94	3,899.81	16.80	20.53	69.30	1,582.45	1,199.11	1,921.33	1,884.44	36.89	52.083		
3,900.00	3,895.41	4,075.36	4,021.07	17.23	21.24	68.83	1,591.43	1,178.01	1,913.47	1,875.46	38.01	50.343		
4,000.00	3,995.27	4,200.50	4,143.93	17.66	21.96	68.35	1,599.24	1,155.52	1,904.35	1,865.22	39.13	48.665		
4,100.00	4,095.13	4,283.64	4,225.65	18.10	22.43	68.04	1,603.88	1,140.93	1,895.09	1,855.05	40.05	47.320		
4,200.00	4,194.99	4,368.94	4,309.72	18.53	22.91	67.76	1,608.34	1,127.23	1,886.62	1,845.65	40.97	46.045		
4,300.00	4,294.85	4,459.07	4,398.73	18.96	23.40	67.49	1,612.90	1,113.80	1,878.83	1,836.93	41.90	44.836		
4,400.00	4,394.71	4,550.44	4,489.02	19.40	23.89	67.22	1,617.69	1,100.59	1,871.51	1,828.67	42.84	43.689		
4,500.00	4,494.58	4,637.90	4,575.49	19.83	24.36	66.97	1,622.43	1,088.44	1,864.74	1,820.99	43.75	42.627		
4,600.00	4,594.44	4,723.96	4,660.70	20.27	24.81	66.74	1,627.19	1,077.31	1,858.71	1,814.07	44.64	41.636		
4,700.00	4,694.30	4,806.13	4,742.15	20.71	25.23	66.54	1,631.86	1,067.52	1,853.49	1,807.98	45.51	40.726		
4,800.00	4,794.16	4,886.92	4,822.33	21.14	25.63	66.36	1,636.74	1,058.95	1,849.37	1,803.01	46.36	39.892		
4,900.00	4,894.02	4,975.62	4,910.49	21.58	26.06	66.19	1,642.11	1,050.65	1,846.08	1,798.85	47.23	39.084		
5,000.00	4,993.88	5,072.85	5,007.17	22.01	26.53	66.01	1,647.93	1,042.13	1,843.13	1,794.99	48.14	38.284		
5,100.00	5,093.74	5,169.96	5,103.60	22.45	27.00	65.80	1,654.54	1,032.83	1,840.34	1,791.28	49.06	37.510		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS RESOURCES 15R-403(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 146-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,270.65	5,203.65	22.89	27.48	65.60	1,661.15	1,023.72	1,837.72	1,787.72	50.00	36.757		
5,300.00	5,293.46	5,378.44	5,310.93	23.32	27.99	65.43	1,666.95	1,014.87	1,834.69	1,783.74	50.95	36.013		
5,400.00	5,393.32	5,474.78	5,406.95	23.76	28.42	65.34	1,670.96	1,008.32	1,831.59	1,779.77	51.82	35.345		
5,500.00	5,493.18	5,570.22	5,502.21	24.20	28.83	65.30	1,674.16	1,003.32	1,828.82	1,776.14	52.67	34.721		
5,600.00	5,593.05	5,666.92	5,598.79	24.64	29.24	65.29	1,676.74	999.31	1,826.17	1,772.65	53.52	34.124		
5,700.00	5,692.91	5,765.16	5,696.92	25.07	29.65	65.29	1,679.48	995.46	1,823.76	1,769.39	54.36	33.548		
5,800.00	5,792.77	8,381.14	7,251.12	25.51	42.92	120.06	259.85	960.17	1,818.86	1,772.38	46.48	39.129		
5,900.00	5,892.63	8,377.10	7,251.16	25.95	42.86	119.85	263.89	960.06	1,741.30	1,692.99	48.30	36.049		
6,000.00	5,992.49	8,372.77	7,251.21	26.39	42.80	119.63	268.21	959.95	1,666.10	1,615.87	50.24	33.166		
6,100.00	6,092.35	8,369.00	7,251.26	26.82	42.75	119.44	271.98	959.84	1,593.63	1,541.34	52.29	30.478		
6,200.00	6,192.21	8,364.34	7,251.33	27.26	42.69	119.20	276.65	959.71	1,524.25	1,469.82	54.43	28.003		
6,300.00	6,292.07	8,360.13	7,251.40	27.70	42.63	118.99	280.85	959.60	1,458.41	1,401.74	56.67	25.736		
6,400.00	6,391.93	8,355.65	7,251.48	28.14	42.57	118.76	285.33	959.47	1,396.62	1,337.65	58.97	23.685		
6,500.00	6,491.69	8,350.86	7,251.59	28.58	42.51	157.26	290.12	959.34	1,341.20	1,279.89	61.31	21.876		
6,600.00	6,589.80	8,345.63	7,251.71	29.02	42.44	170.85	295.34	959.20	1,303.78	1,240.04	63.74	20.455		
6,700.00	6,683.86	8,340.28	7,251.85	29.46	42.37	174.29	300.69	959.06	1,288.46	1,222.39	66.07	19.502		
6,715.95	6,698.34	8,339.17	7,251.88	29.53	42.35	174.58	301.79	959.03	1,288.16	1,221.75	66.41	19.398 CC, ES		
6,800.00	6,771.56	8,333.50	7,252.04	29.92	42.28	175.65	307.46	958.89	1,296.40	1,228.36	68.04	19.054 SF		
6,900.00	6,850.72	8,327.20	7,252.21	30.40	42.20	176.30	313.76	958.73	1,326.99	1,257.44	69.55	19.080		
7,000.00	6,919.40	8,321.52	7,252.36	30.96	42.12	176.59	319.43	958.59	1,378.01	1,307.43	70.58	19.524		
7,100.00	6,975.92	8,316.61	7,252.50	31.62	42.06	176.66	324.35	958.47	1,446.14	1,374.93	71.21	20.308		
7,200.00	7,018.87	8,312.54	7,252.60	32.44	42.00	176.53	328.41	958.37	1,527.55	1,456.00	71.55	21.350		
7,300.00	7,047.21	8,309.64	7,252.68	33.42	41.96	176.10	331.30	958.31	1,618.41	1,546.70	71.71	22.570		
7,400.00	7,060.23	8,307.10	7,252.75	34.55	41.93	174.61	333.84	958.25	1,715.17	1,643.42	71.76	23.903		
7,500.00	7,060.03	8,305.51	7,252.79	35.83	41.91	172.08	335.43	958.21	1,814.56	1,742.80	71.76	25.285		
7,600.00	7,058.28	8,304.03	7,252.83	37.28	41.89	171.56	336.91	958.18	1,914.18	1,842.41	71.77	26.673		
7,700.00	7,056.53	8,302.56	7,252.87	38.89	41.87	171.05	338.38	958.15	2,013.83	1,942.07	71.77	28.061		
7,800.00	7,054.78	8,301.08	7,252.90	40.63	41.85	170.55	339.86	958.11	2,113.52	2,041.75	71.77	29.450		
7,900.00	7,053.03	8,299.61	7,252.94	42.50	41.83	170.04	341.34	958.08	2,213.23	2,141.47	71.77	30.840		
8,000.00	7,051.28	8,298.13	7,252.98	44.47	41.82	169.53	342.81	958.05	2,312.97	2,241.20	71.77	32.229		
8,100.00	7,049.53	8,296.65	7,253.02	46.53	41.80	169.03	344.29	958.01	2,412.73	2,340.96	71.77	33.619		
8,200.00	7,047.78	8,295.18	7,253.06	48.67	41.78	168.53	345.76	957.98	2,512.50	2,440.74	71.77	35.009		
8,300.00	7,046.03	8,293.70	7,253.10	50.89	41.76	168.03	347.24	957.94	2,612.30	2,540.53	71.77	36.398		
8,400.00	7,044.28	8,292.22	7,253.14	53.16	41.74	167.53	348.71	957.91	2,712.10	2,640.33	71.77	37.788		
8,500.00	7,042.53	8,290.75	7,253.17	55.49	41.72	167.04	350.19	957.88	2,811.92	2,740.15	71.78	39.177		
8,600.00	7,040.78	8,289.27	7,253.21	57.86	41.70	166.54	351.66	957.84	2,911.76	2,839.98	71.78	40.565		
8,700.00	7,039.03	8,287.79	7,253.25	60.28	41.68	166.05	353.14	957.81	3,011.60	2,939.81	71.78	41.953		
8,800.00	7,037.28	8,286.32	7,253.29	62.74	41.66	165.56	354.62	957.78	3,111.45	3,039.66	71.79	43.340		
8,900.00	7,035.53	8,284.84	7,253.33	65.23	41.64	165.08	356.09	957.74	3,211.31	3,139.51	71.80	44.727		
9,000.00	7,033.78	8,283.36	7,253.37	67.74	41.62	164.60	357.57	957.71	3,311.18	3,239.37	71.81	46.113		
9,100.00	7,032.03	8,281.89	7,253.41	70.29	41.60	164.11	359.04	957.68	3,411.05	3,339.24	71.82	47.497		
9,200.00	7,030.28	8,280.41	7,253.45	72.85	41.59	163.64	360.52	957.64	3,510.93	3,439.11	71.83	48.881		
9,300.00	7,028.54	8,278.94	7,253.48	75.44	41.57	163.16	361.99	957.61	3,610.82	3,538.98	71.84	50.264		
9,400.00	7,026.79	8,277.54	7,253.52	78.05	41.56	162.69	363.47	957.58	3,710.71	3,638.85	71.86	51.635		
9,500.00	7,025.04	8,275.98	7,253.56	80.67	41.53	162.22	364.94	957.54	3,810.61	3,738.75	71.86	53.025		
9,600.00	7,023.29	8,274.51	7,253.60	83.31	41.51	161.75	366.42	957.51	3,910.52	3,838.64	71.88	54.404		
9,700.00	7,021.54	8,273.03	7,253.64	85.96	41.49	161.28	367.90	957.47	4,010.42	3,938.53	71.90	55.781		
9,800.00	7,019.79	8,271.55	7,253.68	88.63	41.47	160.82	369.37	957.44	4,110.33	4,038.42	71.91	57.157		
9,900.00	7,018.04	8,270.08	7,253.72	91.30	41.45	160.36	370.85	957.41	4,210.25	4,138.32	71.93	58.531		
10,000.00	7,016.29	8,268.60	7,253.75	93.99	41.43	159.90	372.32	957.37	4,310.17	4,238.21	71.95	59.904		
10,100.00	7,014.54	8,267.12	7,253.79	96.69	41.42	159.45	373.80	957.34	4,410.09	4,338.12	71.97	61.275		
10,200.00	7,012.79	8,265.65	7,253.83	99.40	41.40	159.00	375.27	957.31	4,510.01	4,438.02	71.99	62.645		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS RESOURCES 15R-403(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 146-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	7,011.04	8,264.17	7,253.87	102.11	41.38	158.55	376.75	957.27	4,609.94	4,537.92	72.02	64.012		
10,400.00	7,009.29	8,262.69	7,253.91	104.83	41.36	158.10	378.22	957.24	4,709.87	4,637.83	72.04	65.378		
10,500.00	7,007.54	8,261.22	7,253.95	107.56	41.34	157.66	379.70	957.21	4,809.80	4,737.74	72.07	66.742		
10,600.00	7,005.79	8,259.74	7,253.99	110.30	41.32	157.22	381.18	957.17	4,909.74	4,837.64	72.09	68.104		
10,700.00	7,004.04	8,258.27	7,254.02	113.04	41.30	156.79	382.65	957.14	5,009.67	4,937.55	72.12	69.464		
10,800.00	7,002.29	8,256.79	7,254.06	115.79	41.28	156.35	384.13	957.11	5,109.61	5,037.46	72.15	70.822		
10,900.00	7,000.54	8,255.31	7,254.10	118.54	41.27	155.92	385.60	957.07	5,209.55	5,137.37	72.18	72.178		
11,000.00	6,998.79	8,253.84	7,254.14	121.30	41.25	155.50	387.08	957.04	5,309.49	5,237.29	72.21	73.532		
11,100.00	6,997.04	8,252.36	7,254.18	124.06	41.23	155.07	388.55	957.00	5,409.44	5,337.20	72.24	74.883		
11,200.00	6,995.29	8,250.88	7,254.22	126.83	41.21	154.65	390.03	956.97	5,509.38	5,437.11	72.27	76.233		
11,300.00	6,993.54	8,249.41	7,254.26	129.60	41.19	154.23	391.50	956.94	5,609.33	5,537.03	72.30	77.579		
11,400.00	6,991.80	8,248.07	7,254.30	132.37	41.17	153.82	392.98	956.90	5,709.28	5,636.94	72.34	78.921		
11,500.00	6,990.05	8,246.55	7,254.33	135.15	41.19	153.41	394.46	956.87	5,809.23	5,736.81	72.42	80.221		
11,600.00	6,988.30	8,244.98	7,254.37	137.93	41.13	153.00	395.93	956.84	5,909.18	5,836.77	72.41	81.604		
11,700.00	6,986.55	8,243.50	7,254.41	140.72	41.12	152.59	397.41	956.80	6,009.13	5,936.68	72.45	82.941		
11,800.00	6,984.80	8,242.02	7,254.45	143.50	41.10	152.19	398.88	956.77	6,109.09	6,036.60	72.49	84.275		
11,900.00	6,983.05	8,240.55	7,254.49	146.29	41.08	151.79	400.36	956.74	6,209.04	6,136.51	72.53	85.606		
12,000.00	6,981.30	8,239.07	7,254.53	149.09	41.06	151.40	401.83	956.70	6,309.00	6,236.43	72.57	86.934		
12,100.00	6,979.55	8,237.60	7,254.57	151.88	41.04	151.00	403.31	956.67	6,408.96	6,336.34	72.61	88.260		
12,200.00	6,977.80	8,236.12	7,254.60	154.68	41.02	150.61	404.78	956.63	6,508.92	6,436.26	72.66	89.584		
12,300.00	6,976.05	8,234.64	7,254.64	157.48	41.01	150.23	406.26	956.60	6,608.87	6,536.17	72.70	90.904		
12,400.00	6,974.30	8,233.17	7,254.68	160.28	40.99	149.84	407.74	956.57	6,708.83	6,636.09	72.75	92.221		
12,500.00	6,972.55	8,231.69	7,254.72	163.08	40.97	149.46	409.21	956.53	6,808.80	6,736.00	72.79	93.536		
12,600.00	6,970.80	8,230.21	7,254.76	165.89	40.95	149.09	410.69	956.50	6,908.76	6,835.92	72.84	94.848		
12,700.00	6,969.05	8,228.74	7,254.80	168.69	40.93	148.71	412.16	956.47	7,008.72	6,935.83	72.89	96.156		
12,800.00	6,967.30	8,227.26	7,254.84	171.50	40.91	148.34	413.64	956.43	7,108.68	7,035.75	72.94	97.462		
12,900.00	6,965.55	8,225.78	7,254.88	174.31	40.89	147.98	415.11	956.40	7,208.65	7,135.66	72.99	98.765		
13,000.00	6,963.80	8,224.30	7,254.92	177.12	40.87	147.61	416.58	956.36	7,308.61	7,235.57	73.04	100.061		
13,100.00	6,962.05	8,222.82	7,254.96	179.94	40.85	147.24	418.03	956.32	7,408.57	7,335.48	73.09	101.357		
13,200.00	6,960.30	8,221.34	7,255.00	182.75	40.83	146.87	419.48	956.28	7,508.54	7,435.39	73.14	102.653		
13,300.00	6,958.55	8,219.86	7,255.04	185.57	40.81	146.50	420.93	956.24	7,608.50	7,535.30	73.19	103.949		
13,400.00	6,956.80	8,218.38	7,255.08	188.38	40.79	146.13	422.38	956.20	7,708.48	7,635.21	73.24	105.245		
13,500.00	6,955.05	8,216.90	7,255.12	191.20	40.77	145.76	423.83	956.16	7,808.44	7,735.12	73.29	106.541		
13,600.00	6,953.31	8,215.42	7,255.16	194.02	40.75	145.39	425.28	956.12	7,908.41	7,835.03	73.34	107.837		
13,700.00	6,951.56	8,213.94	7,255.20	196.84	40.73	145.02	426.73	956.08	8,008.37	7,934.94	73.39	109.133		
13,800.00	6,949.81	8,212.46	7,255.24	199.67	40.71	144.65	428.18	956.04	8,108.34	8,034.85	73.44	110.429		
13,900.00	6,948.06	8,210.98	7,255.28	202.49	40.69	144.28	429.63	956.00	8,208.30	8,134.76	73.49	111.725		
14,000.00	6,946.31	8,209.50	7,255.32	205.31	40.67	143.91	431.08	955.96	8,308.26	8,234.67	73.54	113.021		
14,100.00	6,944.56	8,208.02	7,255.36	208.14	40.65	143.54	432.53	955.92	8,408.23	8,334.58	73.59	114.317		
14,200.00	6,942.81	8,206.54	7,255.40	210.96	40.63	143.17	433.98	955.88	8,508.19	8,434.49	73.64	115.613		
14,300.00	6,941.06	8,205.06	7,255.44	213.79	40.61	142.80	435.43	955.84	8,608.16	8,534.40	73.69	116.909		
14,400.00	6,939.31	8,203.58	7,255.48	216.62	40.59	142.43	436.88	955.80	8,708.12	8,634.31	73.74	118.205		
14,500.00	6,937.56	8,202.10	7,255.52	219.44	40.57	142.06	438.33	955.76	8,808.09	8,734.22	73.79	119.501		
14,600.00	6,935.81	8,200.62	7,255.56	222.27	40.55	141.69	439.78	955.72	8,908.05	8,834.13	73.84	120.797		
14,700.00	6,934.06	8,199.14	7,255.60	225.10	40.53	141.32	441.23	955.68	9,008.02	8,934.04	73.89	122.093		
14,800.00	6,932.31	8,197.66	7,255.64	227.93	40.51	140.95	442.68	955.64	9,107.98	9,033.95	73.94	123.389		
14,817.75	6,932.00	8,197.00	7,255.63	228.43	39.37	125.78	543.80	952.68	9,125.57	9,052.30	73.27	124.549		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 12N-16A-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	1.00	0.00	3.28	3.28	-179.51	-260.12	-2.23	260.13					
100.00	100.00	101.00	100.00	3.28	3.28	-179.51	-260.12	-2.23	260.13	253.56	6.57	39.596		
200.00	200.00	199.00	200.00	3.34	3.34	-179.51	-260.12	-2.23	260.13	253.46	6.67	38.981	CC, ES	
300.00	300.00	290.76	291.74	3.44	3.43	-179.48	-261.55	-2.36	261.69	254.81	6.88	38.023		
400.00	400.00	382.24	383.12	3.60	3.56	-179.40	-265.89	-2.77	266.44	259.24	7.20	37.025		
500.00	500.00	473.36	473.95	3.81	3.74	-179.28	-273.10	-3.45	274.36	266.76	7.60	36.098		
600.00	599.98	563.74	563.76	4.05	3.94	-151.76	-283.08	-4.39	286.95	278.87	8.08	35.513		
700.00	699.86	652.86	651.97	4.32	4.18	-151.88	-295.68	-5.57	305.30	296.68	8.62	35.421		
800.00	799.72	740.79	738.58	4.62	4.44	-152.04	-310.79	-7.00	327.07	317.88	9.19	35.596		
900.00	899.58	827.46	823.45	4.93	4.73	-152.15	-328.26	-8.64	351.79	342.00	9.78	35.954		
1,000.00	999.44	912.74	906.41	5.27	5.05	-152.20	-347.94	-10.50	379.40	369.00	10.40	36.488		
1,100.00	1,099.31	1,003.84	994.50	5.62	5.41	-152.22	-371.09	-12.68	409.29	398.25	11.04	37.078		
1,200.00	1,199.17	1,100.79	1,086.65	5.98	5.82	-152.24	-395.50	-14.98	439.39	427.67	11.72	37.485		
1,300.00	1,299.03	1,194.57	1,178.81	6.36	6.23	-152.25	-419.91	-17.28	469.49	457.07	12.42	37.799		
1,400.00	1,398.89	1,289.93	1,270.96	6.74	6.66	-152.26	-444.33	-19.58	499.59	486.44	13.15	37.996		
1,500.00	1,498.75	1,385.29	1,363.12	7.13	7.10	-152.28	-468.74	-21.88	529.68	515.79	13.90	38.118		
1,600.00	1,598.61	1,480.66	1,455.28	7.52	7.55	-152.29	-493.15	-24.18	559.78	545.12	14.66	38.186		
1,700.00	1,698.47	1,576.02	1,547.43	7.92	8.02	-152.30	-517.57	-26.48	589.88	574.44	15.44	38.212		
1,800.00	1,798.33	1,671.38	1,639.59	8.32	8.48	-152.30	-541.98	-28.78	619.98	603.75	16.23	38.208		
1,900.00	1,898.19	1,766.75	1,731.75	8.73	8.95	-152.31	-566.39	-31.08	650.08	633.05	17.03	38.181		
2,000.00	1,998.05	1,862.11	1,823.90	9.14	9.43	-152.32	-590.81	-33.38	680.18	662.34	17.83	38.137		
2,100.00	2,097.91	1,957.47	1,916.06	9.55	9.91	-152.32	-615.22	-35.67	710.27	691.62	18.65	38.082		
2,200.00	2,197.78	2,052.83	2,008.21	9.97	10.40	-152.33	-639.63	-37.97	740.37	720.90	19.47	38.018		
2,300.00	2,297.64	2,148.20	2,100.37	10.39	10.88	-152.34	-664.05	-40.27	770.47	750.17	20.30	37.948		
2,400.00	2,397.50	2,243.56	2,192.53	10.81	11.37	-152.34	-688.46	-42.57	800.57	779.43	21.14	37.875		
2,500.00	2,497.36	2,338.92	2,284.68	11.23	11.87	-152.34	-712.87	-44.87	830.67	808.69	21.98	37.799		
2,600.00	2,597.22	2,434.29	2,376.84	11.65	12.36	-152.35	-737.29	-47.17	860.77	837.95	22.82	37.721		
2,700.00	2,697.08	2,529.65	2,469.00	12.07	12.86	-152.35	-761.70	-49.47	890.87	867.20	23.67	37.644		
2,800.00	2,796.94	2,625.01	2,561.15	12.50	13.35	-152.36	-786.11	-51.77	920.96	896.45	24.52	37.567		
2,900.00	2,896.80	2,720.37	2,653.31	12.92	13.85	-152.36	-810.53	-54.07	951.06	925.69	25.37	37.490		
3,000.00	2,996.66	2,815.74	2,745.46	13.35	14.35	-152.36	-834.94	-56.37	981.16	954.94	26.22	37.415		
3,100.00	3,096.52	2,911.10	2,837.62	13.78	14.85	-152.37	-859.35	-58.67	1,011.26	984.18	27.08	37.341		
3,200.00	3,196.38	3,006.46	2,929.78	14.21	15.36	-152.37	-883.77	-60.97	1,041.36	1,013.42	27.94	37.269		
3,300.00	3,296.25	3,101.83	3,021.93	14.64	15.86	-152.37	-908.18	-63.27	1,071.46	1,042.65	28.80	37.199		
3,400.00	3,396.11	3,202.81	3,114.09	15.07	16.39	-152.37	-932.59	-65.57	1,101.56	1,071.86	29.69	37.096		
3,500.00	3,495.97	3,307.45	3,206.25	15.50	16.95	-152.38	-957.01	-67.87	1,131.65	1,101.05	30.60	36.977		
3,600.00	3,595.83	3,387.91	3,298.40	15.93	17.37	-152.38	-981.42	-70.17	1,161.75	1,130.35	31.40	36.998		
3,700.00	3,695.69	3,483.28	3,390.56	16.36	17.88	-152.38	-1,005.83	-72.47	1,191.85	1,159.58	32.27	36.935		
3,800.00	3,795.55	3,578.64	3,482.71	16.80	18.39	-152.38	-1,030.25	-74.77	1,221.95	1,188.81	33.14	36.874		
3,900.00	3,895.41	3,674.00	3,574.87	17.23	18.90	-152.38	-1,054.66	-77.07	1,252.05	1,218.04	34.01	36.814		
4,000.00	3,995.27	3,769.37	3,667.03	17.66	19.40	-152.39	-1,079.07	-79.37	1,282.15	1,247.26	34.88	36.757		
4,100.00	4,095.13	3,864.73	3,759.18	18.10	19.91	-152.39	-1,103.49	-81.67	1,312.25	1,276.49	35.76	36.701		
4,200.00	4,194.99	3,960.09	3,851.34	18.53	20.42	-152.39	-1,127.90	-83.97	1,342.34	1,305.71	36.63	36.646		
4,300.00	4,294.85	4,055.45	3,943.50	18.96	20.93	-152.39	-1,152.31	-86.27	1,372.44	1,334.94	37.50	36.594		
4,400.00	4,394.71	4,150.82	4,035.65	19.40	21.44	-152.39	-1,176.73	-88.57	1,402.54	1,364.16	38.38	36.543		
4,500.00	4,494.58	4,246.18	4,127.81	19.83	21.95	-152.40	-1,201.14	-90.87	1,432.64	1,393.38	39.26	36.493		
4,600.00	4,594.44	4,341.54	4,219.96	20.27	22.46	-152.40	-1,225.55	-93.17	1,462.74	1,422.60	40.13	36.445		
4,700.00	4,694.30	4,436.91	4,312.12	20.71	22.97	-152.40	-1,249.97	-95.47	1,492.84	1,451.82	41.01	36.399		
4,800.00	4,794.16	4,532.27	4,404.28	21.14	23.48	-152.40	-1,274.38	-97.77	1,522.94	1,481.04	41.89	36.354		
4,900.00	4,894.02	4,627.63	4,496.43	21.58	23.99	-152.40	-1,298.79	-100.07	1,553.03	1,510.26	42.77	36.310		
5,000.00	4,993.88	4,722.99	4,588.59	22.01	24.50	-152.40	-1,323.21	-102.37	1,583.13	1,539.48	43.65	36.267		
5,100.00	5,093.74	4,818.36	4,680.75	22.45	25.01	-152.40	-1,347.62	-104.67	1,613.23	1,568.70	44.53	36.226		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 12N-16A-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	4,913.72	4,772.90	22.89	25.53	-152.40	-1,372.03	-106.97	1,643.33	1,597.92	45.41	36.186		
5,300.00	5,293.46	5,009.08	4,865.06	23.32	26.04	-152.41	-1,396.45	-109.27	1,673.43	1,627.13	46.30	36.147		
5,400.00	5,393.32	5,104.45	4,957.21	23.76	26.55	-152.41	-1,420.86	-111.57	1,703.53	1,656.35	47.18	36.109		
5,500.00	5,493.18	5,200.19	5,049.37	24.20	27.06	-152.41	-1,445.27	-113.86	1,733.63	1,685.56	48.06	36.070		
5,600.00	5,593.05	5,304.83	5,141.53	24.64	27.63	-152.41	-1,469.69	-116.16	1,763.72	1,714.73	48.99	36.001		
5,700.00	5,692.91	5,409.47	5,233.68	25.07	28.19	-152.41	-1,494.10	-118.46	1,793.82	1,743.90	49.92	35.934		
5,800.00	5,792.77	5,485.90	5,325.84	25.51	28.60	-152.41	-1,518.51	-120.76	1,823.92	1,773.21	50.71	35.967		
5,900.00	5,892.63	5,581.26	5,418.00	25.95	29.11	-152.41	-1,542.93	-123.06	1,854.02	1,802.42	51.60	35.934		
6,000.00	5,992.49	5,676.62	5,510.15	26.39	29.62	-152.41	-1,567.34	-125.36	1,884.12	1,831.64	52.48	35.901		
6,100.00	6,092.35	5,771.99	5,602.31	26.82	30.14	-152.41	-1,591.75	-127.66	1,914.22	1,860.85	53.37	35.870		
6,200.00	6,192.21	5,867.35	5,694.47	27.26	30.65	-152.41	-1,616.17	-129.96	1,944.32	1,890.06	54.25	35.839		
6,300.00	6,292.07	5,962.71	5,786.62	27.70	31.16	-152.41	-1,640.58	-132.26	1,974.41	1,919.28	55.14	35.809		
6,400.00	6,391.93	6,058.07	5,878.78	28.14	31.68	-152.41	-1,664.99	-134.56	2,004.51	1,948.49	56.02	35.780		
6,500.00	6,491.69	6,153.39	5,970.89	28.58	32.19	-112.20	-1,689.39	-136.86	2,034.57	1,977.66	56.91	35.751		
6,600.00	6,589.80	6,247.50	6,061.83	29.02	32.70	-95.95	-1,713.49	-139.13	2,064.17	2,006.38	57.80	35.715		
6,700.00	6,683.86	6,338.12	6,149.41	29.46	33.19	-90.39	-1,736.69	-141.32	2,092.92	2,034.25	58.67	35.673		
6,800.00	6,771.56	6,423.04	6,231.47	29.92	33.64	-87.26	-1,758.43	-143.36	2,120.75	2,061.22	59.53	35.625		
6,900.00	6,850.72	6,500.16	6,306.00	30.40	34.06	-85.12	-1,778.17	-145.22	2,147.81	2,087.42	60.38	35.569		
7,000.00	6,919.40	6,578.06	6,381.24	30.96	34.48	-83.64	-1,798.11	-147.84	2,174.35	2,112.99	61.36	35.438		
7,100.00	6,975.92	6,688.44	6,486.44	31.62	35.06	-83.14	-1,826.08	-165.32	2,199.72	2,136.96	62.76	35.050		
7,200.00	7,018.87	6,831.87	6,615.92	32.44	35.73	-83.45	-1,860.71	-215.54	2,222.88	2,158.37	64.51	34.457		
7,300.00	7,047.21	7,035.96	6,774.28	33.42	36.54	-84.79	-1,903.47	-335.50	2,242.16	2,175.52	66.65	33.642		
7,400.00	7,060.23	7,338.31	6,923.09	34.55	37.52	-86.70	-1,944.66	-592.14	2,254.19	2,184.54	69.65	32.364		
7,500.00	7,060.03	7,580.96	6,950.82	35.83	38.86	-87.23	-1,953.68	-831.82	2,255.79	2,182.47	73.32	30.767		
7,600.00	7,058.28	7,680.95	6,950.44	37.28	39.84	-87.26	-1,954.28	-931.81	2,255.57	2,179.47	76.10	29.641		
7,700.00	7,056.53	7,780.94	6,950.06	38.89	41.10	-87.30	-1,954.88	-1,031.79	2,255.35	2,176.16	79.18	28.482		
7,800.00	7,054.78	7,880.94	6,949.68	40.63	42.57	-87.33	-1,955.47	-1,131.78	2,255.13	2,172.58	82.55	27.318		
7,900.00	7,053.03	7,980.93	6,949.31	42.50	44.21	-87.37	-1,956.07	-1,231.77	2,254.91	2,168.75	86.17	26.170		
8,000.00	7,051.28	8,080.92	6,948.93	44.47	45.99	-87.40	-1,956.67	-1,331.76	2,254.70	2,164.70	90.00	25.053		
8,100.00	7,049.53	8,180.91	6,948.55	46.53	47.89	-87.43	-1,957.27	-1,431.75	2,254.48	2,160.46	94.02	23.979		
8,200.00	7,047.78	8,280.90	6,948.17	48.67	49.90	-87.47	-1,957.87	-1,531.73	2,254.27	2,156.06	98.21	22.954		
8,300.00	7,046.03	8,380.89	6,947.79	50.89	51.98	-87.50	-1,958.47	-1,631.72	2,254.05	2,151.51	102.54	21.981		
8,400.00	7,044.28	8,480.88	6,947.41	53.16	54.15	-87.54	-1,959.07	-1,731.71	2,253.84	2,146.83	107.01	21.062		
8,500.00	7,042.53	8,580.87	6,947.03	55.49	56.37	-87.57	-1,959.66	-1,831.70	2,253.63	2,142.04	111.59	20.196		
8,600.00	7,040.78	8,680.86	6,946.65	57.86	58.66	-87.61	-1,960.26	-1,931.69	2,253.42	2,137.15	116.27	19.381		
8,700.00	7,039.03	8,780.85	6,946.27	60.28	60.99	-87.64	-1,960.86	-2,031.67	2,253.20	2,132.17	121.04	18.616		
8,800.00	7,037.28	8,880.84	6,945.89	62.74	63.37	-87.68	-1,961.46	-2,131.66	2,252.99	2,127.11	125.88	17.897		
8,900.00	7,035.53	8,980.83	6,945.51	65.23	65.79	-87.71	-1,962.06	-2,231.65	2,252.79	2,121.98	130.80	17.223		
9,000.00	7,033.78	9,080.82	6,945.13	67.74	68.24	-87.75	-1,962.66	-2,331.64	2,252.58	2,116.80	135.78	16.590		
9,100.00	7,032.03	9,180.81	6,944.75	70.29	70.72	-87.78	-1,963.26	-2,431.63	2,252.37	2,111.55	140.82	15.995		
9,200.00	7,030.28	9,280.80	6,944.37	72.85	73.23	-87.82	-1,963.85	-2,531.61	2,252.16	2,106.26	145.90	15.436		
9,300.00	7,028.54	9,380.79	6,944.00	75.44	75.77	-87.85	-1,964.45	-2,631.60	2,251.96	2,100.93	151.03	14.911		
9,400.00	7,026.79	9,480.78	6,943.62	78.05	78.33	-87.88	-1,965.05	-2,731.59	2,251.75	2,095.55	156.20	14.416		
9,500.00	7,025.04	9,580.77	6,943.24	80.67	80.91	-87.92	-1,965.65	-2,831.58	2,251.55	2,090.14	161.41	13.949		
9,600.00	7,023.29	9,680.76	6,942.86	83.31	83.50	-87.95	-1,966.25	-2,931.57	2,251.34	2,084.69	166.65	13.509		
9,700.00	7,021.54	9,780.75	6,942.48	85.96	86.12	-87.99	-1,966.85	-3,031.55	2,251.14	2,079.22	171.92	13.094		
9,800.00	7,019.79	9,880.75	6,942.10	88.63	88.75	-88.02	-1,967.45	-3,131.54	2,250.94	2,073.72	177.22	12.701		
9,900.00	7,018.04	9,980.74	6,941.72	91.30	91.39	-88.06	-1,968.04	-3,231.53	2,250.74	2,068.19	182.54	12.330		
10,000.00	7,016.29	10,080.73	6,941.34	93.99	94.04	-88.09	-1,968.64	-3,331.52	2,250.54	2,062.65	187.89	11.978		
10,100.00	7,014.54	10,180.72	6,940.96	96.69	96.71	-88.13	-1,969.24	-3,431.51	2,250.34	2,057.08	193.26	11.644		
10,200.00	7,012.79	10,280.71	6,940.58	99.40	99.39	-88.16	-1,969.84	-3,531.49	2,250.14	2,051.49	198.65	11.327		
10,300.00	7,011.04	10,380.70	6,940.20	102.11	102.08	-88.20	-1,970.44	-3,631.48	2,249.94	2,045.89	204.05	11.026		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 12N-16A-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	10,480.69	6,939.82	104.83	104.78	-88.23	-1,971.04	-3,731.47	2,249.75	2,040.27	209.47	10.740		
10,500.00	7,007.54	10,580.68	6,939.44	107.56	107.48	-88.27	-1,971.64	-3,831.46	2,249.55	2,034.64	214.91	10.467		
10,600.00	7,005.79	10,680.67	6,939.06	110.30	110.19	-88.30	-1,972.23	-3,931.45	2,249.36	2,028.99	220.36	10.207		
10,700.00	7,004.04	10,780.66	6,938.68	113.04	112.91	-88.34	-1,972.83	-4,031.43	2,249.16	2,023.33	225.83	9.960		
10,800.00	7,002.29	10,880.65	6,938.31	115.79	115.64	-88.37	-1,973.43	-4,131.42	2,248.97	2,017.66	231.30	9.723		
10,900.00	7,000.54	10,980.64	6,937.93	118.54	118.37	-88.41	-1,974.03	-4,231.41	2,248.78	2,011.98	236.79	9.497		
11,000.00	6,998.79	11,080.63	6,937.55	121.30	121.11	-88.44	-1,974.63	-4,331.40	2,248.58	2,006.29	242.29	9.280		
11,100.00	6,997.04	11,180.62	6,937.17	124.06	123.86	-88.48	-1,975.23	-4,431.39	2,248.39	2,000.59	247.80	9.073		
11,200.00	6,995.29	11,280.61	6,936.79	126.83	126.61	-88.51	-1,975.83	-4,531.37	2,248.20	1,994.89	253.32	8.875		
11,300.00	6,993.54	11,380.60	6,936.41	129.60	129.36	-88.55	-1,976.42	-4,631.36	2,248.01	1,989.17	258.85	8.685		
11,400.00	6,991.80	11,480.59	6,936.03	132.37	132.12	-88.58	-1,977.02	-4,731.35	2,247.83	1,983.45	264.38	8.502		
11,500.00	6,990.05	11,580.58	6,935.65	135.15	134.88	-88.61	-1,977.62	-4,831.34	2,247.64	1,977.72	269.92	8.327		
11,600.00	6,988.30	11,680.57	6,935.27	137.93	137.65	-88.65	-1,978.22	-4,931.33	2,247.45	1,971.98	275.47	8.159		
11,700.00	6,986.55	11,780.56	6,934.89	140.72	140.42	-88.68	-1,978.82	-5,031.31	2,247.27	1,966.24	281.03	7.997		
11,800.00	6,984.80	11,880.55	6,934.51	143.50	143.20	-88.72	-1,979.42	-5,131.30	2,247.08	1,960.49	286.59	7.841		
11,900.00	6,983.05	11,980.55	6,934.13	146.29	145.97	-88.75	-1,980.02	-5,231.29	2,246.90	1,954.74	292.16	7.691		
12,000.00	6,981.30	12,080.54	6,933.75	149.09	148.75	-88.79	-1,980.61	-5,331.28	2,246.71	1,948.98	297.73	7.546		
12,100.00	6,979.55	12,180.53	6,933.37	151.88	151.54	-88.82	-1,981.21	-5,431.27	2,246.53	1,943.22	303.31	7.407		
12,200.00	6,977.80	12,280.52	6,933.00	154.68	154.32	-88.86	-1,981.81	-5,531.25	2,246.35	1,937.45	308.90	7.272		
12,300.00	6,976.05	12,380.51	6,932.62	157.48	157.11	-88.89	-1,982.41	-5,631.24	2,246.17	1,931.68	314.49	7.142		
12,400.00	6,974.30	12,480.50	6,932.24	160.28	159.90	-88.93	-1,983.01	-5,731.23	2,245.99	1,925.91	320.08	7.017		
12,500.00	6,972.55	12,580.49	6,931.86	163.08	162.70	-88.96	-1,983.61	-5,831.22	2,245.81	1,920.13	325.68	6.896		
12,600.00	6,970.80	12,680.48	6,931.48	165.89	165.49	-89.00	-1,984.21	-5,931.21	2,245.63	1,914.35	331.28	6.779		
12,700.00	6,969.05	12,780.47	6,931.10	168.69	168.29	-89.03	-1,984.80	-6,031.19	2,245.45	1,908.56	336.89	6.665		
12,800.00	6,967.30	12,880.46	6,930.72	171.50	171.09	-89.07	-1,985.40	-6,131.18	2,245.27	1,902.78	342.50	6.556		
12,900.00	6,965.55	12,980.45	6,930.34	174.31	173.89	-89.10	-1,986.00	-6,231.17	2,245.10	1,896.99	348.11	6.449		
13,000.00	6,963.80	13,080.44	6,929.96	177.12	176.70	-89.14	-1,986.60	-6,331.16	2,244.92	1,891.20	353.73	6.346		
13,100.00	6,962.05	13,180.43	6,929.58	179.94	179.50	-89.17	-1,987.20	-6,431.15	2,244.75	1,885.40	359.35	6.247		
13,200.00	6,960.30	13,280.42	6,929.20	182.75	182.31	-89.21	-1,987.80	-6,531.13	2,244.58	1,879.61	364.97	6.150		
13,300.00	6,958.55	13,380.41	6,928.82	185.57	185.12	-89.24	-1,988.40	-6,631.12	2,244.40	1,873.81	370.60	6.056		
13,400.00	6,956.80	13,480.40	6,928.44	188.38	187.93	-89.28	-1,988.99	-6,731.11	2,244.23	1,868.01	376.22	5.965		
13,500.00	6,955.05	13,580.39	6,928.06	191.20	190.74	-89.31	-1,989.59	-6,831.10	2,244.06	1,862.21	381.86	5.877		
13,600.00	6,953.31	13,680.38	6,927.69	194.02	193.55	-89.35	-1,990.19	-6,931.09	2,243.89	1,856.40	387.49	5.791		
13,700.00	6,951.56	13,780.37	6,927.31	196.84	196.37	-89.38	-1,990.79	-7,031.07	2,243.72	1,850.60	393.12	5.707		
13,800.00	6,949.81	13,880.36	6,926.93	199.67	199.18	-89.42	-1,991.39	-7,131.06	2,243.55	1,844.79	398.76	5.626		
13,900.00	6,948.06	13,980.36	6,926.55	202.49	202.00	-89.45	-1,991.99	-7,231.05	2,243.39	1,838.98	404.40	5.547		
14,000.00	6,946.31	14,080.35	6,926.17	205.31	204.82	-89.49	-1,992.59	-7,331.04	2,243.22	1,833.17	410.04	5.471		
14,100.00	6,944.56	14,180.34	6,925.79	208.14	207.63	-89.52	-1,993.18	-7,431.03	2,243.05	1,827.36	415.69	5.396		
14,200.00	6,942.81	14,280.33	6,925.41	210.96	210.45	-89.56	-1,993.78	-7,531.01	2,242.89	1,821.55	421.33	5.323		
14,300.00	6,941.06	14,380.32	6,925.03	213.79	213.28	-89.59	-1,994.38	-7,631.00	2,242.72	1,815.74	426.98	5.252		
14,400.00	6,939.31	14,480.31	6,924.65	216.62	216.10	-89.63	-1,994.98	-7,730.99	2,242.56	1,809.93	432.63	5.184		
14,500.00	6,937.56	14,580.30	6,924.27	219.44	218.92	-89.66	-1,995.58	-7,830.98	2,242.40	1,804.11	438.28	5.116		
14,600.00	6,935.81	14,680.29	6,923.89	222.27	221.74	-89.70	-1,996.18	-7,930.97	2,242.24	1,798.30	443.94	5.051		
14,700.00	6,934.06	14,780.28	6,923.51	225.10	224.57	-89.73	-1,996.78	-8,030.95	2,242.07	1,792.48	449.59	4.987		
14,800.00	6,932.31	14,880.27	6,923.13	227.93	227.39	-89.77	-1,997.37	-8,130.94	2,241.91	1,786.67	455.25	4.925		
14,817.75	6,932.00	14,898.02	6,923.07	228.43	227.90	-89.77	-1,997.48	-8,148.69	2,241.89	1,785.64	456.25	4.914 SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 12N-16C-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	1.00	0.00	3.28	3.28	-179.49	-220.04	-1.95	220.05					
100.00	100.00	101.00	100.00	3.28	3.28	-179.49	-220.04	-1.95	220.05	213.48	6.57	33.496		
200.00	200.00	199.00	200.00	3.34	3.34	-179.49	-220.04	-1.95	220.05	213.38	6.67	32.975	CC, ES	
300.00	300.00	291.95	292.94	3.44	3.43	-179.45	-221.51	-2.14	221.63	214.75	6.88	32.194		
400.00	400.00	384.64	385.51	3.60	3.57	-179.31	-225.94	-2.71	226.42	219.22	7.20	31.444		
500.00	500.00	476.95	477.52	3.81	3.74	-179.10	-233.31	-3.66	234.42	226.81	7.61	30.808		
600.00	599.98	568.49	568.47	4.05	3.95	-151.51	-243.52	-4.97	247.12	239.02	8.09	30.533		
700.00	699.86	658.74	657.78	4.32	4.19	-151.57	-256.39	-6.64	265.60	256.96	8.64	30.749		
800.00	799.72	749.79	747.44	4.62	4.47	-151.67	-272.12	-8.66	287.44	278.24	9.21	31.219		
900.00	899.58	847.17	843.17	4.93	4.80	-151.74	-289.81	-10.95	310.19	300.39	9.80	31.656		
1,000.00	999.44	944.55	938.91	5.27	5.15	-151.81	-307.49	-13.23	332.93	322.48	10.44	31.886		
1,100.00	1,099.31	1,041.93	1,034.64	5.62	5.52	-151.87	-325.17	-15.51	355.67	344.55	11.11	32.001		
1,200.00	1,199.17	1,139.31	1,130.37	5.98	5.91	-151.92	-342.85	-17.79	378.41	366.59	11.82	32.028		
1,300.00	1,299.03	1,236.69	1,226.11	6.36	6.31	-151.96	-360.54	-20.07	401.15	388.61	12.54	31.991		
1,400.00	1,398.89	1,334.07	1,321.84	6.74	6.72	-152.00	-378.22	-22.35	423.89	410.61	13.28	31.911		
1,500.00	1,498.75	1,431.45	1,417.57	7.13	7.15	-152.04	-395.90	-24.63	446.63	432.59	14.04	31.802		
1,600.00	1,598.61	1,528.83	1,513.31	7.52	7.57	-152.07	-413.59	-26.91	469.37	454.56	14.82	31.674		
1,700.00	1,698.47	1,626.21	1,609.04	7.92	8.01	-152.10	-431.27	-29.19	492.12	476.51	15.61	31.535		
1,800.00	1,798.33	1,723.59	1,704.77	8.32	8.45	-152.13	-448.95	-31.47	514.86	498.46	16.40	31.390		
1,900.00	1,898.19	1,820.97	1,800.51	8.73	8.89	-152.15	-466.64	-33.75	537.60	520.39	17.21	31.243		
2,000.00	1,998.05	1,918.35	1,896.24	9.14	9.34	-152.17	-484.32	-36.04	560.34	542.32	18.02	31.095		
2,100.00	2,097.91	2,015.72	1,991.97	9.55	9.79	-152.19	-502.00	-38.32	583.09	564.25	18.84	30.950		
2,200.00	2,197.78	2,113.10	2,087.71	9.97	10.25	-152.21	-519.68	-40.60	605.83	586.16	19.67	30.807		
2,300.00	2,297.64	2,210.48	2,183.44	10.39	10.70	-152.23	-537.37	-42.88	628.57	608.08	20.50	30.669		
2,400.00	2,397.50	2,307.86	2,279.17	10.81	11.16	-152.25	-555.05	-45.16	651.31	629.98	21.33	30.535		
2,500.00	2,497.36	2,405.24	2,374.91	11.23	11.62	-152.26	-572.73	-47.44	674.06	651.89	22.17	30.405		
2,600.00	2,597.22	2,502.62	2,470.64	11.65	12.08	-152.28	-590.42	-49.72	696.80	673.79	23.01	30.280		
2,700.00	2,697.08	2,600.00	2,566.37	12.07	12.55	-152.29	-608.10	-52.00	719.54	695.69	23.86	30.160		
2,800.00	2,796.94	2,697.38	2,662.10	12.50	13.01	-152.30	-625.78	-54.28	742.29	717.58	24.71	30.045		
2,900.00	2,896.80	2,794.76	2,757.84	12.92	13.48	-152.31	-643.47	-56.56	765.03	739.47	25.56	29.935		
3,000.00	2,996.66	2,907.86	2,853.57	13.35	14.02	-152.32	-661.15	-58.85	787.77	761.29	26.48	29.749		
3,100.00	3,096.52	2,989.52	2,949.30	13.78	14.42	-152.34	-678.83	-61.13	810.51	783.25	27.27	29.727		
3,200.00	3,196.38	3,086.90	3,045.04	14.21	14.89	-152.35	-696.52	-63.41	833.26	805.13	28.12	29.630		
3,300.00	3,296.25	3,184.28	3,140.77	14.64	15.36	-152.35	-714.20	-65.69	856.00	827.02	28.98	29.536		
3,400.00	3,396.11	3,281.66	3,236.50	15.07	15.83	-152.36	-731.88	-67.97	878.74	848.90	29.84	29.446		
3,500.00	3,495.97	3,379.04	3,332.24	15.50	16.30	-152.37	-749.56	-70.25	901.49	870.78	30.70	29.360		
3,600.00	3,595.83	3,476.42	3,427.97	15.93	16.77	-152.38	-767.25	-72.53	924.23	892.66	31.57	29.278		
3,700.00	3,695.69	3,573.79	3,523.70	16.36	17.24	-152.39	-784.93	-74.81	946.97	914.54	32.43	29.199		
3,800.00	3,795.55	3,671.17	3,619.44	16.80	17.72	-152.40	-802.61	-77.09	969.71	936.42	33.30	29.122		
3,900.00	3,895.41	3,768.55	3,715.17	17.23	18.19	-152.40	-820.30	-79.37	992.46	958.29	34.16	29.049		
4,000.00	3,995.27	3,865.93	3,810.90	17.66	18.67	-152.41	-837.98	-81.65	1,015.20	980.17	35.03	28.979		
4,100.00	4,095.13	3,963.31	3,906.64	18.10	19.14	-152.42	-855.66	-83.94	1,037.94	1,002.04	35.90	28.911		
4,200.00	4,194.99	4,060.69	4,002.37	18.53	19.62	-152.42	-873.35	-86.22	1,060.69	1,023.92	36.77	28.846		
4,300.00	4,294.85	4,158.07	4,098.10	18.96	20.09	-152.43	-891.03	-88.50	1,083.43	1,045.79	37.64	28.783		
4,400.00	4,394.71	4,255.45	4,193.84	19.40	20.57	-152.43	-908.71	-90.78	1,106.17	1,067.66	38.51	28.723		
4,500.00	4,494.58	4,352.83	4,289.57	19.83	21.04	-152.44	-926.39	-93.06	1,128.92	1,089.53	39.38	28.664		
4,600.00	4,594.44	4,450.21	4,385.30	20.27	21.52	-152.44	-944.08	-95.34	1,151.66	1,111.40	40.26	28.608		
4,700.00	4,694.30	4,547.59	4,481.04	20.71	22.00	-152.45	-961.76	-97.62	1,174.40	1,133.27	41.13	28.554		
4,800.00	4,794.16	4,644.97	4,576.77	21.14	22.47	-152.45	-979.44	-99.90	1,197.15	1,155.14	42.00	28.502		
4,900.00	4,894.02	4,742.35	4,672.50	21.58	22.95	-152.46	-997.13	-102.18	1,219.89	1,177.01	42.88	28.451		
5,000.00	4,993.88	4,839.73	4,768.24	22.01	23.43	-152.46	-1,014.81	-104.46	1,242.63	1,198.88	43.75	28.402		
5,100.00	5,093.74	4,937.11	4,863.97	22.45	23.91	-152.47	-1,032.49	-106.74	1,265.38	1,220.75	44.63	28.355		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 12N-16C-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,034.49	4,959.70	22.89	24.38	-152.47	-1,050.18	-109.03	1,288.12	1,242.62	45.50	28.309		
5,300.00	5,293.46	5,131.86	5,055.44	23.32	24.86	-152.48	-1,067.86	-111.31	1,310.86	1,264.48	46.38	28.265		
5,400.00	5,393.32	5,229.24	5,151.17	23.76	25.34	-152.48	-1,085.54	-113.59	1,333.60	1,286.35	47.25	28.222		
5,500.00	5,493.18	5,326.62	5,246.90	24.20	25.82	-152.48	-1,103.22	-115.87	1,356.35	1,308.22	48.13	28.180		
5,600.00	5,593.05	5,424.00	5,342.63	24.64	26.30	-152.49	-1,120.91	-118.15	1,379.09	1,330.08	49.01	28.140		
5,700.00	5,692.91	5,521.38	5,438.37	25.07	26.77	-152.49	-1,138.59	-120.43	1,401.83	1,351.95	49.89	28.101		
5,800.00	5,792.77	5,618.76	5,534.10	25.51	27.25	-152.49	-1,156.27	-122.71	1,424.58	1,373.81	50.76	28.063		
5,900.00	5,892.63	5,716.14	5,629.83	25.95	27.73	-152.50	-1,173.96	-124.99	1,447.32	1,395.68	51.64	28.026		
6,000.00	5,992.49	5,813.52	5,725.57	26.39	28.21	-152.50	-1,191.64	-127.27	1,470.06	1,417.54	52.52	27.990		
6,100.00	6,092.35	5,910.90	5,821.30	26.82	28.69	-152.50	-1,209.32	-129.55	1,492.81	1,439.41	53.40	27.955		
6,200.00	6,192.21	6,008.28	5,917.03	27.26	29.17	-152.51	-1,227.01	-131.84	1,515.55	1,461.27	54.28	27.921		
6,300.00	6,292.07	6,105.66	6,012.77	27.70	29.65	-152.51	-1,244.69	-134.12	1,538.29	1,483.14	55.16	27.889		
6,400.00	6,391.93	6,203.04	6,108.50	28.14	30.13	-152.51	-1,262.37	-136.40	1,561.04	1,505.00	56.04	27.857		
6,500.00	6,491.69	6,300.37	6,204.18	28.58	30.61	-112.70	-1,280.05	-138.68	1,583.75	1,526.83	56.92	27.825		
6,600.00	6,589.80	6,403.57	6,298.63	29.02	31.12	-97.28	-1,297.49	-140.93	1,606.14	1,548.31	57.83	27.773		
6,700.00	6,683.86	6,488.92	6,389.55	29.46	31.54	-92.61	-1,314.29	-143.09	1,628.10	1,569.43	58.67	27.751		
6,800.00	6,771.56	6,575.56	6,474.72	29.92	31.96	-90.37	-1,330.02	-145.12	1,649.89	1,590.37	59.52	27.718		
6,900.00	6,850.72	6,659.64	6,557.36	30.40	32.38	-89.16	-1,345.29	-147.64	1,672.04	1,611.62	60.42	27.672		
7,000.00	6,919.40	6,762.84	6,657.62	30.96	32.88	-88.77	-1,364.02	-162.62	1,694.27	1,632.69	61.58	27.514		
7,100.00	6,975.92	6,883.74	6,770.13	31.62	33.42	-88.93	-1,385.40	-200.80	1,715.78	1,652.84	62.94	27.261		
7,200.00	7,018.87	7,031.11	6,894.49	32.44	34.01	-89.64	-1,409.56	-275.45	1,735.54	1,671.05	64.49	26.910		
7,300.00	7,047.21	7,216.42	7,021.41	33.42	34.65	-90.85	-1,435.16	-407.10	1,751.96	1,685.65	66.31	26.420		
7,400.00	7,060.23	7,447.52	7,119.09	34.55	35.59	-92.13	-1,456.61	-614.04	1,762.63	1,693.79	68.84	25.603		
7,500.00	7,060.03	7,654.02	7,140.81	35.83	37.33	-92.61	-1,464.03	-818.47	1,765.51	1,693.35	72.16	24.465		
7,600.00	7,058.28	7,754.01	7,140.27	37.28	38.55	-92.65	-1,465.60	-918.44	1,766.39	1,691.45	74.94	23.571		
7,700.00	7,056.53	7,854.00	7,139.73	38.89	39.97	-92.69	-1,467.17	-1,018.42	1,767.26	1,689.23	78.03	22.649		
7,800.00	7,054.78	7,953.99	7,139.19	40.63	41.55	-92.73	-1,468.74	-1,118.40	1,768.13	1,686.74	81.40	21.723		
7,900.00	7,053.03	8,053.98	7,138.64	42.50	43.27	-92.77	-1,470.31	-1,218.37	1,769.01	1,683.99	85.01	20.808		
8,000.00	7,051.28	8,153.97	7,138.10	44.47	45.11	-92.80	-1,471.88	-1,318.35	1,769.88	1,681.03	88.85	19.919		
8,100.00	7,049.53	8,253.96	7,137.56	46.53	47.06	-92.84	-1,473.45	-1,418.32	1,770.76	1,677.88	92.88	19.065		
8,200.00	7,047.78	8,353.95	7,137.02	48.67	49.10	-92.88	-1,475.02	-1,518.30	1,771.63	1,674.55	97.08	18.249		
8,300.00	7,046.03	8,453.94	7,136.48	50.89	51.22	-92.92	-1,476.59	-1,618.27	1,772.51	1,671.09	101.42	17.476		
8,400.00	7,044.28	8,553.93	7,135.93	53.16	53.41	-92.95	-1,478.16	-1,718.25	1,773.39	1,667.49	105.90	16.746		
8,500.00	7,042.53	8,653.92	7,135.39	55.49	55.66	-92.99	-1,479.73	-1,818.22	1,774.27	1,663.79	110.48	16.059		
8,600.00	7,040.78	8,753.91	7,134.85	57.86	57.96	-93.03	-1,481.30	-1,918.20	1,775.15	1,659.98	115.17	15.413		
8,700.00	7,039.03	8,853.90	7,134.31	60.28	60.31	-93.07	-1,482.87	-2,018.18	1,776.03	1,656.09	119.94	14.807		
8,800.00	7,037.28	8,953.89	7,133.77	62.74	62.71	-93.10	-1,484.44	-2,118.15	1,776.91	1,652.12	124.79	14.239		
8,900.00	7,035.53	9,053.88	7,133.23	65.23	65.14	-93.14	-1,486.01	-2,218.13	1,777.79	1,648.08	129.71	13.706		
9,000.00	7,033.78	9,153.87	7,132.68	67.74	67.60	-93.18	-1,487.58	-2,318.10	1,778.68	1,643.98	134.70	13.205		
9,100.00	7,032.03	9,253.85	7,132.14	70.29	70.10	-93.22	-1,489.15	-2,418.08	1,779.56	1,639.83	139.73	12.736		
9,200.00	7,030.28	9,353.84	7,131.60	72.85	72.62	-93.25	-1,490.72	-2,518.05	1,780.44	1,635.63	144.82	12.294		
9,300.00	7,028.54	9,453.83	7,131.06	75.44	75.16	-93.29	-1,492.29	-2,618.03	1,781.33	1,631.38	149.95	11.880		
9,400.00	7,026.79	9,553.82	7,130.52	78.05	77.73	-93.33	-1,493.86	-2,718.00	1,782.21	1,627.10	155.11	11.490		
9,500.00	7,025.04	9,653.81	7,129.97	80.67	80.32	-93.37	-1,495.43	-2,817.98	1,783.10	1,622.78	160.32	11.122		
9,600.00	7,023.29	9,753.80	7,129.43	83.31	82.92	-93.40	-1,497.00	-2,917.96	1,783.99	1,618.43	165.55	10.776		
9,700.00	7,021.54	9,853.79	7,128.89	85.96	85.54	-93.44	-1,498.57	-3,017.93	1,784.88	1,614.06	170.82	10.449		
9,800.00	7,019.79	9,953.78	7,128.35	88.63	88.18	-93.48	-1,500.14	-3,117.91	1,785.76	1,609.65	176.11	10.140		
9,900.00	7,018.04	10,053.77	7,127.81	91.30	90.82	-93.51	-1,501.71	-3,217.88	1,786.65	1,605.23	181.43	9.848		
10,000.00	7,016.29	10,153.76	7,127.26	93.99	93.49	-93.55	-1,503.28	-3,317.86	1,787.54	1,600.78	186.77	9.571		
10,100.00	7,014.54	10,253.75	7,126.72	96.69	96.16	-93.59	-1,504.85	-3,417.83	1,788.44	1,596.31	192.12	9.309		
10,200.00	7,012.79	10,353.74	7,126.18	99.40	98.84	-93.63	-1,506.42	-3,517.81	1,789.33	1,591.83	197.50	9.060		
10,300.00	7,011.04	10,453.73	7,125.64	102.11	101.53	-93.66	-1,507.99	-3,617.78	1,790.22	1,587.32	202.90	8.823		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 12N-16C-M - OH - PLAN #1												Offset Site Error: 0.00 ft	
Survey Program: 0-MWD+IFR1												Offset Well Error: 3.28 ft	
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)		
10,400.00	7,009.29	10,553.72	7,125.10	104.83	104.23	-93.70	-1,509.56	-3,717.76	1,791.11	1,582.81	208.31	8.598	
10,500.00	7,007.54	10,653.71	7,124.55	107.56	106.94	-93.74	-1,511.13	-3,817.74	1,792.01	1,578.28	213.73	8.384	
10,600.00	7,005.79	10,753.70	7,124.01	110.30	109.66	-93.77	-1,512.70	-3,917.71	1,792.90	1,573.73	219.17	8.181	
10,700.00	7,004.04	10,853.68	7,123.47	113.04	112.38	-93.81	-1,514.27	-4,017.69	1,793.80	1,569.18	224.62	7.986	
10,800.00	7,002.29	10,953.67	7,122.93	115.79	115.11	-93.85	-1,515.84	-4,117.66	1,794.69	1,564.62	230.08	7.800	
10,900.00	7,000.54	11,053.66	7,122.39	118.54	117.84	-93.88	-1,517.41	-4,217.64	1,795.59	1,560.04	235.55	7.623	
11,000.00	6,998.79	11,153.65	7,121.85	121.30	120.58	-93.92	-1,518.98	-4,317.61	1,796.49	1,555.46	241.03	7.453	
11,100.00	6,997.04	11,253.64	7,121.30	124.06	123.33	-93.96	-1,520.55	-4,417.59	1,797.39	1,550.87	246.52	7.291	
11,200.00	6,995.29	11,353.63	7,120.76	126.83	126.08	-93.99	-1,522.12	-4,517.57	1,798.29	1,546.27	252.02	7.136	
11,300.00	6,993.54	11,453.62	7,120.22	129.60	128.84	-94.03	-1,523.69	-4,617.54	1,799.18	1,541.66	257.53	6.986	
11,400.00	6,991.80	11,553.61	7,119.68	132.37	131.60	-94.07	-1,525.26	-4,717.52	1,800.09	1,537.05	263.04	6.843	
11,500.00	6,990.05	11,653.60	7,119.14	135.15	134.36	-94.10	-1,526.83	-4,817.49	1,800.99	1,532.43	268.56	6.706	
11,600.00	6,988.30	11,753.59	7,118.59	137.93	137.13	-94.14	-1,528.40	-4,917.47	1,801.89	1,527.80	274.09	6.574	
11,700.00	6,986.55	11,853.58	7,118.05	140.72	139.90	-94.17	-1,529.97	-5,017.44	1,802.79	1,523.17	279.62	6.447	
11,800.00	6,984.80	11,953.57	7,117.51	143.50	142.67	-94.21	-1,531.54	-5,117.42	1,803.70	1,518.54	285.16	6.325	
11,900.00	6,983.05	12,053.56	7,116.97	146.29	145.45	-94.25	-1,533.11	-5,217.39	1,804.60	1,513.90	290.70	6.208	
12,000.00	6,981.30	12,153.55	7,116.43	149.09	148.23	-94.28	-1,534.68	-5,317.37	1,805.50	1,509.25	296.25	6.094	
12,100.00	6,979.55	12,253.54	7,115.88	151.88	151.01	-94.32	-1,536.25	-5,417.35	1,806.41	1,504.60	301.81	5.985	
12,200.00	6,977.80	12,353.53	7,115.34	154.68	153.80	-94.36	-1,537.82	-5,517.32	1,807.32	1,499.95	307.36	5.880	
12,300.00	6,976.05	12,453.51	7,114.80	157.48	156.59	-94.39	-1,539.39	-5,617.30	1,808.22	1,495.30	312.93	5.778	
12,400.00	6,974.30	12,553.50	7,114.26	160.28	159.38	-94.43	-1,540.96	-5,717.27	1,809.13	1,490.64	318.49	5.680	
12,500.00	6,972.55	12,653.49	7,113.72	163.08	162.17	-94.46	-1,542.53	-5,817.25	1,810.04	1,485.98	324.06	5.586	
12,600.00	6,970.80	12,753.48	7,113.17	165.89	164.97	-94.50	-1,544.10	-5,917.22	1,810.95	1,481.32	329.63	5.494	
12,700.00	6,969.05	12,853.47	7,112.63	168.69	167.76	-94.54	-1,545.67	-6,017.20	1,811.86	1,476.65	335.21	5.405	
12,800.00	6,967.30	12,953.46	7,112.09	171.50	170.56	-94.57	-1,547.24	-6,117.17	1,812.77	1,471.98	340.79	5.319	
12,900.00	6,965.55	13,053.45	7,111.55	174.31	173.36	-94.61	-1,548.81	-6,217.15	1,813.68	1,467.31	346.37	5.236	
13,000.00	6,963.80	13,153.44	7,111.01	177.12	176.17	-94.64	-1,550.38	-6,317.13	1,814.59	1,462.64	351.95	5.156	
13,100.00	6,962.05	13,253.43	7,110.47	179.94	178.97	-94.68	-1,551.95	-6,417.10	1,815.51	1,457.97	357.54	5.078	
13,200.00	6,960.30	13,353.42	7,109.92	182.75	181.78	-94.72	-1,553.52	-6,517.08	1,816.42	1,453.29	363.13	5.002	
13,300.00	6,958.55	13,453.41	7,109.38	185.57	184.58	-94.75	-1,555.09	-6,617.05	1,817.33	1,448.61	368.72	4.929	
13,400.00	6,956.80	13,553.40	7,108.84	188.38	187.39	-94.79	-1,556.65	-6,717.03	1,818.25	1,443.94	374.31	4.858	
13,500.00	6,955.05	13,653.39	7,108.30	191.20	190.20	-94.82	-1,558.22	-6,817.00	1,819.17	1,439.26	379.91	4.788	
13,600.00	6,953.31	13,753.38	7,107.76	194.02	193.01	-94.86	-1,559.79	-6,916.98	1,820.08	1,434.58	385.51	4.721	
13,700.00	6,951.56	13,853.37	7,107.21	196.84	195.83	-94.90	-1,561.36	-7,016.95	1,821.00	1,429.90	391.10	4.656	
13,800.00	6,949.81	13,953.36	7,106.67	199.67	198.64	-94.93	-1,562.93	-7,116.93	1,821.92	1,425.21	396.70	4.593	
13,900.00	6,948.06	14,053.34	7,106.13	202.49	201.46	-94.97	-1,564.50	-7,216.91	1,822.84	1,420.53	402.31	4.531	
14,000.00	6,946.31	14,153.33	7,105.59	205.31	204.27	-95.00	-1,566.07	-7,316.88	1,823.75	1,415.85	407.91	4.471	
14,100.00	6,944.56	14,253.32	7,105.05	208.14	207.09	-95.04	-1,567.64	-7,416.86	1,824.67	1,411.16	413.51	4.413	
14,200.00	6,942.81	14,353.31	7,104.50	210.96	209.91	-95.07	-1,569.21	-7,516.83	1,825.60	1,406.48	419.12	4.356	
14,300.00	6,941.06	14,453.30	7,103.96	213.79	212.73	-95.11	-1,570.78	-7,616.81	1,826.52	1,401.79	424.73	4.300	
14,400.00	6,939.31	14,553.29	7,103.42	216.62	215.55	-95.14	-1,572.35	-7,716.78	1,827.44	1,397.10	430.33	4.247	
14,500.00	6,937.56	14,653.28	7,102.88	219.44	218.37	-95.18	-1,573.92	-7,816.76	1,828.36	1,392.42	435.94	4.194	
14,600.00	6,935.81	14,753.27	7,102.34	222.27	221.19	-95.21	-1,575.49	-7,916.73	1,829.28	1,387.73	441.55	4.143	
14,700.00	6,934.06	14,853.26	7,101.79	225.10	224.01	-95.25	-1,577.06	-8,016.71	1,830.21	1,383.05	447.16	4.093	
14,800.00	6,932.31	14,953.25	7,101.25	227.93	226.84	-95.29	-1,578.63	-8,116.69	1,831.13	1,378.36	452.78	4.044	
14,817.75	6,932.00	14,970.99	7,101.16	228.43	227.34	-95.29	-1,578.91	-8,134.43	1,831.30	1,377.53	453.77	4.036 SF	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 13N-16B-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	2.00	0.00	3.28	3.28	-179.51	-359.94	-3.06	359.95					
100.00	100.00	102.00	100.00	3.28	3.29	-179.51	-359.94	-3.06	359.95	353.38	6.57	54.788		
200.00	200.00	198.00	200.00	3.34	3.34	-179.51	-359.94	-3.06	359.95	353.28	6.67	53.946	CC, ES	
300.00	300.00	287.05	289.03	3.44	3.42	-179.50	-361.26	-3.14	361.44	354.56	6.88	52.555		
400.00	400.00	375.70	377.59	3.60	3.55	-179.47	-365.31	-3.38	366.02	358.83	7.18	50.952		
500.00	500.00	464.03	465.65	3.81	3.72	-179.42	-372.07	-3.78	373.68	366.10	7.58	49.313		
600.00	599.98	551.67	552.78	4.05	3.91	-151.96	-381.46	-4.34	385.92	377.87	8.05	47.966		
700.00	699.86	638.13	638.43	4.32	4.14	-152.08	-393.32	-5.05	403.85	395.28	8.57	47.110		
800.00	799.72	723.51	722.60	4.62	4.39	-152.27	-407.55	-5.90	425.12	415.99	9.13	46.567		
900.00	899.58	807.71	805.17	4.93	4.66	-152.42	-424.04	-6.88	449.27	439.55	9.71	46.251		
1,000.00	999.44	890.64	885.97	5.27	4.96	-152.53	-442.64	-7.99	476.23	465.92	10.31	46.170		
1,100.00	1,099.31	972.17	964.86	5.62	5.28	-152.62	-463.19	-9.21	505.95	495.02	10.93	46.285		
1,200.00	1,199.17	1,052.22	1,041.71	5.98	5.62	-152.68	-485.54	-10.54	538.34	526.79	11.55	46.600		
1,300.00	1,299.03	1,130.71	1,116.42	6.36	5.97	-152.71	-509.53	-11.97	573.34	561.16	12.17	47.095		
1,400.00	1,398.89	1,207.56	1,188.92	6.74	6.33	-152.73	-534.99	-13.49	610.85	598.06	12.79	47.752		
1,500.00	1,498.75	1,282.72	1,259.13	7.13	6.71	-152.73	-561.76	-15.08	650.81	637.40	13.40	48.551		
1,600.00	1,598.61	1,360.04	1,330.63	7.52	7.11	-152.73	-591.14	-16.84	693.06	679.03	14.03	49.383		
1,700.00	1,698.47	1,450.35	1,413.88	7.92	7.60	-152.71	-626.07	-18.92	736.02	721.25	14.77	49.842		
1,800.00	1,798.33	1,540.65	1,497.12	8.32	8.10	-152.70	-661.00	-21.00	778.98	763.46	15.52	50.199		
1,900.00	1,898.19	1,630.95	1,580.37	8.73	8.61	-152.69	-695.94	-23.08	821.94	805.65	16.28	50.474		
2,000.00	1,998.05	1,721.25	1,663.62	9.14	9.13	-152.68	-730.87	-25.16	864.90	847.83	17.06	50.684		
2,100.00	2,097.91	1,811.56	1,746.86	9.55	9.66	-152.67	-765.80	-27.24	907.85	890.00	17.86	50.843		
2,200.00	2,197.78	1,901.86	1,830.11	9.97	10.20	-152.66	-800.73	-29.32	950.81	932.15	18.66	50.961		
2,300.00	2,297.64	2,007.84	1,913.36	10.39	10.83	-152.66	-835.66	-31.40	993.77	974.22	19.55	50.841		
2,400.00	2,397.50	2,082.47	1,996.60	10.81	11.28	-152.65	-870.60	-33.49	1,036.73	1,016.44	20.29	51.104		
2,500.00	2,497.36	2,172.77	2,079.85	11.23	11.83	-152.64	-905.53	-35.57	1,079.69	1,058.58	21.11	51.141		
2,600.00	2,597.22	2,263.07	2,163.10	11.65	12.38	-152.64	-940.46	-37.65	1,122.65	1,100.70	21.94	51.161		
2,700.00	2,697.08	2,353.37	2,246.34	12.07	12.93	-152.63	-975.39	-39.73	1,165.60	1,142.82	22.78	51.168		
2,800.00	2,796.94	2,443.68	2,329.59	12.50	13.49	-152.63	-1,010.32	-41.81	1,208.56	1,184.94	23.62	51.164		
2,900.00	2,896.80	2,533.98	2,412.83	12.92	14.05	-152.62	-1,045.26	-43.89	1,251.52	1,227.05	24.47	51.151		
3,000.00	2,996.66	2,624.28	2,496.08	13.35	14.61	-152.62	-1,080.19	-45.97	1,294.48	1,269.16	25.32	51.131		
3,100.00	3,096.52	2,714.58	2,579.33	13.78	15.17	-152.62	-1,115.12	-48.06	1,337.44	1,311.27	26.17	51.105		
3,200.00	3,196.38	2,804.89	2,662.57	14.21	15.74	-152.61	-1,150.05	-50.14	1,380.40	1,353.37	27.03	51.075		
3,300.00	3,296.25	2,904.81	2,745.82	14.64	16.36	-152.61	-1,184.98	-52.22	1,423.35	1,395.42	27.94	50.949		
3,400.00	3,396.11	2,985.49	2,829.07	15.07	16.87	-152.61	-1,219.91	-54.30	1,466.31	1,437.56	28.75	51.006		
3,500.00	3,495.97	3,075.80	2,912.31	15.50	17.44	-152.60	-1,254.85	-56.38	1,509.27	1,479.66	29.61	50.967		
3,600.00	3,595.83	3,166.10	2,995.56	15.93	18.01	-152.60	-1,289.78	-58.46	1,552.23	1,521.75	30.48	50.928		
3,700.00	3,695.69	3,256.40	3,078.81	16.36	18.58	-152.60	-1,324.71	-60.54	1,595.19	1,563.84	31.35	50.887		
3,800.00	3,795.55	3,346.70	3,162.05	16.80	19.15	-152.60	-1,359.64	-62.62	1,638.15	1,605.93	32.22	50.845		
3,900.00	3,895.41	3,437.01	3,245.30	17.23	19.72	-152.59	-1,394.57	-64.71	1,681.10	1,648.01	33.09	50.804		
4,000.00	3,995.27	3,527.31	3,328.55	17.66	20.30	-152.59	-1,429.51	-66.79	1,724.06	1,690.10	33.96	50.761		
4,100.00	4,095.13	3,617.61	3,411.79	18.10	20.87	-152.59	-1,464.44	-68.87	1,767.02	1,732.18	34.84	50.719		
4,200.00	4,194.99	3,707.91	3,495.04	18.53	21.44	-152.59	-1,499.37	-70.95	1,809.98	1,774.26	35.72	50.677		
4,300.00	4,294.85	3,801.78	3,578.29	18.96	22.04	-152.58	-1,534.30	-73.03	1,852.94	1,816.32	36.61	50.608		
4,400.00	4,394.71	3,888.52	3,661.53	19.40	22.59	-152.58	-1,569.23	-75.11	1,895.90	1,858.42	37.47	50.593		
4,500.00	4,494.58	3,978.82	3,744.78	19.83	23.17	-152.58	-1,604.17	-77.19	1,938.85	1,900.50	38.35	50.552		
4,600.00	4,594.44	4,069.12	3,828.03	20.27	23.74	-152.58	-1,639.10	-79.28	1,981.81	1,942.58	39.24	50.511		
4,700.00	4,694.30	4,159.43	3,911.27	20.71	24.32	-152.58	-1,674.03	-81.36	2,024.77	1,984.65	40.12	50.471		
4,800.00	4,794.16	4,249.73	3,994.52	21.14	24.90	-152.58	-1,708.96	-83.44	2,067.73	2,026.73	41.00	50.431		
4,900.00	4,894.02	4,340.03	4,077.77	21.58	25.47	-152.57	-1,743.89	-85.52	2,110.69	2,068.80	41.89	50.392		
5,000.00	4,993.88	4,430.34	4,161.01	22.01	26.05	-152.57	-1,778.83	-87.60	2,153.65	2,110.88	42.77	50.354		
5,100.00	5,093.74	4,520.64	4,244.26	22.45	26.63	-152.57	-1,813.76	-89.68	2,196.60	2,152.95	43.66	50.316		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 13N-16B-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	4,610.94	4,327.51	22.89	27.21	-152.57	-1,848.69	-91.76	2,239.56	2,195.02	44.54	50.279		
5,300.00	5,293.46	4,701.24	4,410.75	23.32	27.79	-152.57	-1,883.62	-93.84	2,282.52	2,237.09	45.43	50.242		
5,400.00	5,393.32	4,791.55	4,494.00	23.76	28.36	-152.57	-1,918.55	-95.93	2,325.48	2,279.16	46.32	50.206		
5,500.00	5,493.18	4,881.85	4,577.25	24.20	28.94	-152.57	-1,953.48	-98.01	2,368.44	2,321.23	47.21	50.171		
5,600.00	5,593.05	4,972.15	4,660.49	24.64	29.52	-152.56	-1,988.42	-100.09	2,411.40	2,363.30	48.10	50.136		
5,700.00	5,692.91	5,062.45	4,743.74	25.07	30.10	-152.56	-2,023.35	-102.17	2,454.35	2,405.37	48.99	50.102		
5,800.00	5,792.77	5,152.76	4,826.99	25.51	30.68	-152.56	-2,058.28	-104.25	2,497.31	2,447.44	49.88	50.069		
5,900.00	5,892.63	5,243.06	4,910.23	25.95	31.26	-152.56	-2,093.21	-106.33	2,540.27	2,489.50	50.77	50.036		
6,000.00	5,992.49	5,333.36	4,993.48	26.39	31.84	-152.56	-2,128.14	-108.41	2,583.23	2,531.57	51.66	50.004		
6,100.00	6,092.35	5,423.67	5,076.73	26.82	32.42	-152.56	-2,163.08	-110.50	2,626.19	2,573.64	52.55	49.972		
6,200.00	6,192.21	5,513.97	5,159.97	27.26	33.00	-152.56	-2,198.01	-112.58	2,669.15	2,615.70	53.45	49.941		
6,300.00	6,292.07	5,604.27	5,243.22	27.70	33.58	-152.56	-2,232.94	-114.66	2,712.11	2,657.77	54.34	49.910		
6,400.00	6,391.93	5,705.43	5,326.47	28.14	34.23	-152.56	-2,267.87	-116.74	2,755.06	2,699.77	55.29	49.877		
6,500.00	6,491.69	5,784.83	5,409.68	28.58	34.74	-111.59	-2,302.79	-118.82	2,797.98	2,741.85	56.13	49.850		
6,600.00	6,589.80	5,873.96	5,491.84	29.02	35.31	-93.83	-2,337.27	-120.87	2,840.29	2,783.27	57.02	49.812		
6,700.00	6,683.86	5,959.82	5,570.99	29.46	35.87	-86.76	-2,370.48	-122.85	2,881.20	2,823.30	57.90	49.763		
6,800.00	6,771.56	6,040.29	5,645.17	29.92	36.38	-82.20	-2,401.60	-124.71	2,920.15	2,861.40	58.76	49.698		
6,900.00	6,850.72	6,113.38	5,712.55	30.40	36.85	-78.79	-2,429.88	-126.39	2,956.82	2,897.21	59.61	49.603		
7,000.00	6,919.40	6,177.31	5,771.48	30.96	37.27	-76.04	-2,454.61	-127.87	2,990.98	2,930.51	60.47	49.459		
7,100.00	6,975.92	6,230.49	5,820.51	31.62	37.61	-73.73	-2,475.18	-129.09	3,022.54	2,961.15	61.38	49.240		
7,200.00	7,018.87	6,271.62	5,858.43	32.44	37.87	-71.69	-2,491.09	-130.04	3,051.39	2,989.02	62.37	48.927		
7,300.00	7,047.21	6,300.32	5,884.29	33.42	38.06	-69.83	-2,501.95	-130.69	3,077.40	3,013.97	63.43	48.515		
7,400.00	7,060.23	6,313.99	5,897.48	34.55	38.15	-68.10	-2,507.48	-131.02	3,100.38	3,035.83	64.55	48.029		
7,500.00	7,060.03	6,316.37	5,899.68	35.83	38.16	-67.38	-2,508.40	-131.07	3,121.06	3,055.33	65.73	47.486		
7,600.00	7,058.28	6,317.35	5,900.58	37.28	38.17	-67.40	-2,508.78	-131.09	3,144.14	3,077.11	67.03	46.908		
7,700.00	7,056.53	6,318.33	5,901.49	38.89	38.17	-67.41	-2,509.16	-131.12	3,170.21	3,101.77	68.44	46.323		
7,800.00	7,054.78	6,319.32	5,902.40	40.63	38.18	-67.43	-2,509.54	-131.14	3,199.20	3,129.27	69.93	45.750		
7,900.00	7,053.03	6,320.30	5,903.30	42.50	38.19	-67.45	-2,509.92	-131.16	3,231.02	3,159.54	71.48	45.204		
8,000.00	7,051.28	6,321.28	5,904.21	44.47	38.19	-67.47	-2,510.30	-131.18	3,265.59	3,192.53	73.06	44.695		
8,100.00	7,049.53	6,322.27	5,905.11	46.53	38.20	-67.49	-2,510.68	-131.21	3,302.83	3,228.16	74.67	44.231		
8,200.00	7,047.78	6,323.26	5,906.01	48.67	38.20	-67.50	-2,511.06	-131.23	3,340.17	3,264.64	76.31	43.761		
8,300.00	7,046.03	6,324.25	5,906.91	50.89	38.21	-67.51	-2,511.44	-131.25	3,377.50	3,301.15	78.00	43.291		
8,400.00	7,044.28	6,325.24	5,907.81	53.16	38.22	-67.52	-2,511.82	-131.27	3,414.83	3,337.62	79.73	42.821		
8,500.00	7,042.53	6,326.23	5,908.71	55.49	38.23	-67.53	-2,512.20	-131.29	3,452.16	3,374.14	81.50	42.351		
8,600.00	7,040.78	6,327.22	5,909.61	57.86	38.24	-67.54	-2,512.58	-131.31	3,489.49	3,410.66	83.31	41.881		
8,700.00	7,039.03	6,328.21	5,910.51	60.28	38.25	-67.55	-2,512.96	-131.33	3,526.82	3,447.18	85.16	41.411		
8,800.00	7,037.28	6,329.20	5,911.41	62.74	38.26	-67.56	-2,513.34	-131.35	3,564.15	3,483.70	87.04	40.941		
8,900.00	7,035.53	6,330.19	5,912.31	65.23	38.27	-67.57	-2,513.72	-131.37	3,601.48	3,520.22	88.95	40.471		
9,000.00	7,033.78	6,331.18	5,913.21	67.74	38.28	-67.58	-2,514.10	-131.39	3,638.81	3,556.74	90.90	40.001		
9,100.00	7,032.03	6,332.17	5,914.11	70.29	38.29	-67.59	-2,514.48	-131.41	3,676.14	3,593.26	92.89	39.531		
9,200.00	7,030.28	6,333.16	5,915.01	72.85	38.30	-67.60	-2,514.86	-131.43	3,713.47	3,629.78	94.91	39.061		
9,300.00	7,028.53	6,334.15	5,915.91	75.44	38.31	-67.61	-2,515.24	-131.45	3,750.80	3,666.30	96.96	38.591		
9,400.00	7,026.78	6,335.14	5,916.81	78.05	38.32	-67.62	-2,515.62	-131.47	3,788.13	3,702.82	99.04	38.121		
9,500.00	7,025.03	6,336.13	5,917.71	80.67	38.33	-67.63	-2,516.00	-131.49	3,825.46	3,739.34	101.15	37.651		
9,600.00	7,023.28	6,337.12	5,918.61	83.31	38.34	-67.64	-2,516.38	-131.51	3,862.79	3,775.86	103.28	37.181		
9,700.00	7,021.53	6,338.11	5,919.51	85.96	38.35	-67.65	-2,516.76	-131.53	3,900.12	3,812.38	105.43	36.711		
9,800.00	7,019.78	6,339.10	5,920.41	88.63	38.36	-67.66	-2,517.14	-131.55	3,937.45	3,848.90	107.60	36.241		
9,900.00	7,018.03	6,340.09	5,921.31	91.30	38.37	-67.67	-2,517.52	-131.57	3,974.78	3,885.42	109.79	35.771		
10,000.00	7,016.28	6,341.08	5,922.21	93.99	38.38	-67.68	-2,517.90	-131.59	4,012.11	3,921.94	111.99	35.301		
10,100.00	7,014.53	6,342.07	5,923.11	96.69	38.39	-67.69	-2,518.28	-131.61	4,049.44	3,958.46	114.21	34.831		
10,200.00	7,012.78	6,343.06	5,924.01	99.40	38.40	-67.70	-2,518.66	-131.63	4,086.77	3,994.98	116.44	34.361		
10,300.00	7,011.03	6,344.05	5,924.91	102.11	38.41	-67.71	-2,519.04	-131.65	4,124.10	4,031.50	118.68	33.891		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 13N-16B-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	10,895.12	7,062.24	104.83	105.89	-90.92	-3,022.00	-3,725.62	3,300.08	3,089.96	210.12	15.706		
10,500.00	7,007.54	11,004.89	7,061.94	107.56	108.82	-90.95	-3,022.60	-3,825.61	3,299.95	3,084.16	215.79	15.293		
10,600.00	7,005.79	11,104.90	7,061.64	110.30	111.49	-90.97	-3,023.20	-3,925.60	3,299.82	3,078.61	221.21	14.917		
10,700.00	7,004.04	11,204.91	7,061.35	113.04	114.18	-91.00	-3,023.80	-4,025.59	3,299.69	3,073.05	226.64	14.559		
10,800.00	7,002.29	11,304.92	7,061.05	115.79	116.87	-91.02	-3,024.40	-4,125.57	3,299.56	3,067.47	232.09	14.217		
10,900.00	7,000.54	11,404.94	7,060.75	118.54	119.57	-91.05	-3,024.99	-4,225.56	3,299.43	3,061.89	237.55	13.890		
11,000.00	6,998.79	11,504.95	7,060.45	121.30	122.28	-91.07	-3,025.59	-4,325.55	3,299.30	3,056.29	243.02	13.576		
11,100.00	6,997.04	11,595.04	7,060.16	124.06	124.73	-91.10	-3,026.19	-4,425.53	3,299.18	3,050.95	248.23	13.291		
11,200.00	6,995.29	11,704.97	7,059.86	126.83	127.72	-91.12	-3,026.79	-4,525.52	3,299.05	3,045.06	253.99	12.989		
11,300.00	6,993.54	11,795.02	7,059.56	129.60	130.17	-91.15	-3,027.38	-4,625.51	3,298.92	3,039.71	259.22	12.726		
11,400.00	6,991.80	11,904.99	7,059.26	132.37	133.18	-91.17	-3,027.98	-4,725.49	3,298.80	3,033.80	265.00	12.448		
11,500.00	6,990.05	12,005.00	7,058.97	135.15	135.92	-91.20	-3,028.58	-4,825.48	3,298.67	3,028.16	270.52	12.194		
11,600.00	6,988.30	12,105.01	7,058.67	137.93	138.66	-91.22	-3,029.18	-4,925.47	3,298.55	3,022.51	276.05	11.949		
11,700.00	6,986.55	12,194.98	7,058.37	140.72	141.13	-91.25	-3,029.78	-5,025.46	3,298.43	3,017.13	281.30	11.726		
11,800.00	6,984.80	12,305.03	7,058.07	143.50	144.16	-91.27	-3,030.37	-5,125.44	3,298.30	3,011.19	287.12	11.488		
11,900.00	6,983.05	12,405.04	7,057.78	146.29	146.92	-91.30	-3,030.97	-5,225.43	3,298.18	3,005.52	292.66	11.269		
12,000.00	6,981.30	12,505.05	7,057.48	149.09	149.68	-91.32	-3,031.57	-5,325.42	3,298.06	2,999.84	298.22	11.059		
12,100.00	6,979.55	12,605.06	7,057.18	151.88	152.44	-91.35	-3,032.17	-5,425.40	3,297.94	2,994.16	303.78	10.857		
12,200.00	6,977.80	12,705.07	7,056.88	154.68	155.21	-91.38	-3,032.77	-5,525.39	3,297.82	2,988.48	309.34	10.661		
12,300.00	6,976.05	12,805.08	7,056.59	157.48	157.98	-91.40	-3,033.36	-5,625.38	3,297.70	2,982.79	314.91	10.472		
12,400.00	6,974.30	12,905.09	7,056.29	160.28	160.75	-91.43	-3,033.96	-5,725.37	3,297.58	2,977.10	320.48	10.289		
12,500.00	6,972.55	13,005.11	7,055.99	163.08	163.53	-91.45	-3,034.56	-5,825.35	3,297.46	2,971.40	326.06	10.113		
12,600.00	6,970.80	13,105.12	7,055.69	165.89	166.31	-91.48	-3,035.16	-5,925.34	3,297.34	2,965.70	331.64	9.942		
12,700.00	6,969.05	13,205.13	7,055.39	168.69	169.09	-91.50	-3,035.75	-6,025.33	3,297.23	2,960.00	337.23	9.777		
12,800.00	6,967.30	13,305.14	7,055.10	171.50	171.88	-91.53	-3,036.35	-6,125.31	3,297.11	2,954.29	342.82	9.618		
12,900.00	6,965.55	13,405.15	7,054.80	174.31	174.67	-91.55	-3,036.95	-6,225.30	3,297.00	2,948.58	348.41	9.463		
13,000.00	6,963.80	13,505.16	7,054.50	177.12	177.46	-91.58	-3,037.55	-6,325.29	3,296.88	2,942.87	354.01	9.313		
13,100.00	6,962.05	13,605.17	7,054.20	179.94	180.25	-91.60	-3,038.15	-6,425.28	3,296.77	2,937.15	359.61	9.168		
13,200.00	6,960.30	13,694.82	7,053.91	182.75	182.75	-91.63	-3,038.74	-6,525.26	3,296.65	2,931.73	364.93	9.034		
13,300.00	6,958.55	13,805.19	7,053.61	185.57	185.84	-91.65	-3,039.34	-6,625.25	3,296.54	2,925.72	370.82	8.890		
13,400.00	6,956.80	13,905.20	7,053.31	188.38	188.63	-91.68	-3,039.94	-6,725.24	3,296.43	2,919.99	376.43	8.757		
13,500.00	6,955.05	14,005.21	7,053.01	191.20	191.43	-91.70	-3,040.54	-6,825.22	3,296.31	2,914.27	382.05	8.628		
13,600.00	6,953.31	14,105.22	7,052.72	194.02	194.24	-91.73	-3,041.14	-6,925.21	3,296.20	2,908.54	387.66	8.503		
13,700.00	6,951.56	14,205.23	7,052.42	196.84	197.04	-91.75	-3,041.73	-7,025.20	3,296.09	2,902.81	393.28	8.381		
13,800.00	6,949.81	14,305.24	7,052.12	199.67	199.84	-91.78	-3,042.33	-7,125.19	3,295.98	2,897.08	398.90	8.263		
13,900.00	6,948.06	14,405.25	7,051.82	202.49	202.65	-91.81	-3,042.93	-7,225.17	3,295.87	2,891.35	404.52	8.148		
14,000.00	6,946.31	14,505.27	7,051.53	205.31	205.46	-91.83	-3,043.53	-7,325.16	3,295.76	2,885.62	410.15	8.036		
14,100.00	6,944.56	14,605.28	7,051.23	208.14	208.27	-91.86	-3,044.12	-7,425.15	3,295.66	2,879.88	415.78	7.927		
14,200.00	6,942.81	14,705.29	7,050.93	210.96	211.08	-91.88	-3,044.72	-7,525.13	3,295.55	2,874.14	421.40	7.820		
14,300.00	6,941.06	14,805.30	7,050.63	213.79	213.89	-91.91	-3,045.32	-7,625.12	3,295.44	2,868.41	427.04	7.717		
14,400.00	6,939.31	14,905.31	7,050.34	216.62	216.70	-91.93	-3,045.92	-7,725.11	3,295.34	2,862.67	432.67	7.616		
14,500.00	6,937.56	15,005.32	7,050.04	219.44	219.52	-91.96	-3,046.52	-7,825.10	3,295.23	2,856.93	438.30	7.518		
14,600.00	6,935.81	15,105.33	7,049.74	222.27	222.33	-91.98	-3,047.11	-7,925.08	3,295.13	2,851.19	443.94	7.422		
14,700.00	6,934.06	15,205.34	7,049.44	225.10	225.15	-92.01	-3,047.71	-8,025.07	3,295.02	2,845.45	449.58	7.329		
14,800.00	6,932.31	15,294.65	7,049.15	227.93	227.66	-92.03	-3,048.31	-8,125.06	3,294.92	2,840.01	454.91	7.243		
14,817.75	6,932.00	15,312.40	7,049.09	228.43	228.16	-92.04	-3,048.42	-8,142.80	3,294.90	2,838.99	455.91	7.227 SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 32C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	1.00	0.00	3.28	3.28	-179.52	-200.01	-1.67	200.01					
100.00	100.00	101.00	100.00	3.28	3.28	-179.52	-200.01	-1.67	200.01	193.45	6.57	30.445		
200.00	200.00	199.00	200.00	3.34	3.34	-179.52	-200.01	-1.67	200.01	193.34	6.67	29.973	CC, ES	
300.00	300.00	292.56	293.54	3.44	3.43	-179.47	-201.49	-1.88	201.60	194.72	6.89	29.281		
400.00	400.00	385.86	386.73	3.60	3.57	-179.30	-205.98	-2.51	206.42	199.21	7.20	28.656		
500.00	500.00	478.76	479.32	3.81	3.75	-179.04	-213.43	-3.56	214.46	206.84	7.61	28.168		
600.00	599.98	570.89	570.86	4.05	3.98	-151.41	-223.75	-5.02	227.21	219.11	8.10	28.049		
700.00	699.86	661.72	660.72	4.32	4.25	-151.45	-236.77	-6.86	245.76	237.12	8.65	28.422		
800.00	799.72	758.64	756.34	4.62	4.59	-151.56	-252.49	-9.08	266.58	257.37	9.21	28.939		
900.00	899.58	856.45	852.82	4.93	4.97	-151.65	-268.38	-11.33	287.42	277.61	9.81	29.300		
1,000.00	999.44	954.25	949.29	5.27	5.38	-151.73	-284.26	-13.57	308.26	297.80	10.46	29.478		
1,100.00	1,099.31	1,052.05	1,045.77	5.62	5.81	-151.81	-300.15	-15.82	329.10	317.96	11.14	29.551		
1,200.00	1,199.17	1,149.86	1,142.25	5.98	6.26	-151.87	-316.03	-18.06	349.94	338.10	11.84	29.548		
1,300.00	1,299.03	1,247.66	1,238.73	6.36	6.73	-151.92	-331.92	-20.30	370.78	358.21	12.57	29.492		
1,400.00	1,398.89	1,345.46	1,335.21	6.74	7.20	-151.97	-347.80	-22.55	391.62	378.30	13.32	29.400		
1,500.00	1,498.75	1,443.27	1,431.69	7.13	7.69	-152.02	-363.68	-24.79	412.46	398.38	14.08	29.284		
1,600.00	1,598.61	1,541.07	1,528.17	7.52	8.18	-152.06	-379.57	-27.04	433.31	418.44	14.86	29.154		
1,700.00	1,698.47	1,638.88	1,624.65	7.92	8.68	-152.10	-395.45	-29.28	454.15	438.50	15.65	29.015		
1,800.00	1,798.33	1,736.68	1,721.13	8.32	9.19	-152.13	-411.34	-31.52	474.99	458.54	16.45	28.872		
1,900.00	1,898.19	1,834.48	1,817.61	8.73	9.70	-152.16	-427.22	-33.77	495.83	478.57	17.26	28.729		
2,000.00	1,998.05	1,932.29	1,914.08	9.14	10.22	-152.19	-443.11	-36.01	516.67	498.60	18.07	28.586		
2,100.00	2,097.91	2,030.09	2,010.56	9.55	10.74	-152.22	-458.99	-38.26	537.52	518.62	18.90	28.446		
2,200.00	2,197.78	2,127.89	2,107.04	9.97	11.26	-152.24	-474.88	-40.50	558.36	538.64	19.72	28.310		
2,300.00	2,297.64	2,225.70	2,203.52	10.39	11.78	-152.26	-490.76	-42.74	579.20	558.65	20.56	28.178		
2,400.00	2,397.50	2,323.50	2,300.00	10.81	12.31	-152.28	-506.65	-44.99	600.04	578.65	21.39	28.050		
2,500.00	2,497.36	2,421.30	2,396.48	11.23	12.83	-152.30	-522.53	-47.23	620.89	598.65	22.23	27.928		
2,600.00	2,597.22	2,519.11	2,492.96	11.65	13.36	-152.32	-538.41	-49.48	641.73	618.65	23.08	27.810		
2,700.00	2,697.08	2,616.91	2,589.44	12.07	13.89	-152.34	-554.30	-51.72	662.57	638.65	23.92	27.697		
2,800.00	2,796.94	2,714.71	2,685.92	12.50	14.43	-152.36	-570.18	-53.96	683.42	658.64	24.77	27.588		
2,900.00	2,896.80	2,812.52	2,782.39	12.92	14.96	-152.37	-586.07	-56.21	704.26	678.63	25.62	27.484		
3,000.00	2,996.66	2,910.32	2,878.87	13.35	15.50	-152.38	-601.95	-58.45	725.10	698.62	26.48	27.385		
3,100.00	3,096.52	3,008.13	2,975.35	13.78	16.03	-152.40	-617.84	-60.70	745.94	718.61	27.33	27.289		
3,200.00	3,196.38	3,105.93	3,071.83	14.21	16.57	-152.41	-633.72	-62.94	766.79	738.59	28.19	27.198		
3,300.00	3,296.25	3,203.73	3,168.31	14.64	17.10	-152.42	-649.61	-65.18	787.63	758.58	29.05	27.110		
3,400.00	3,396.11	3,301.54	3,264.79	15.07	17.64	-152.43	-665.49	-67.43	808.47	778.56	29.91	27.026		
3,500.00	3,495.97	3,400.66	3,361.27	15.50	18.19	-152.45	-681.38	-69.67	829.32	798.53	30.78	26.941		
3,600.00	3,595.83	3,502.86	3,457.75	15.93	18.75	-152.46	-697.26	-71.92	850.16	818.49	31.67	26.847		
3,700.00	3,695.69	3,605.05	3,554.23	16.36	19.32	-152.47	-713.14	-74.16	871.00	838.45	32.55	26.757		
3,800.00	3,795.55	3,707.25	3,650.71	16.80	19.88	-152.47	-729.03	-76.40	891.85	858.41	33.44	26.671		
3,900.00	3,895.41	3,809.45	3,747.18	17.23	20.45	-152.48	-744.91	-78.65	912.69	878.36	34.33	26.588		
4,000.00	3,995.27	3,888.36	3,843.66	17.66	20.88	-152.49	-760.80	-80.89	933.53	898.42	35.11	26.589		
4,100.00	4,095.13	3,986.16	3,940.14	18.10	21.42	-152.50	-776.68	-83.14	954.38	918.40	35.98	26.526		
4,200.00	4,194.99	4,083.96	4,036.62	18.53	21.97	-152.51	-792.57	-85.38	975.22	938.37	36.85	26.466		
4,300.00	4,294.85	4,181.77	4,133.10	18.96	22.51	-152.52	-808.45	-87.62	996.06	958.34	37.72	26.407		
4,400.00	4,394.71	4,279.57	4,229.58	19.40	23.05	-152.52	-824.34	-89.87	1,016.91	978.31	38.59	26.351		
4,500.00	4,494.58	4,377.38	4,326.06	19.83	23.59	-152.53	-840.22	-92.11	1,037.75	998.29	39.46	26.296		
4,600.00	4,594.44	4,475.18	4,422.54	20.27	24.14	-152.54	-856.10	-94.36	1,058.59	1,018.26	40.34	26.244		
4,700.00	4,694.30	4,572.98	4,519.02	20.71	24.68	-152.54	-871.99	-96.60	1,079.44	1,038.23	41.21	26.194		
4,800.00	4,794.16	4,670.79	4,615.49	21.14	25.22	-152.55	-887.87	-98.84	1,100.28	1,058.19	42.08	26.145		
4,900.00	4,894.02	4,768.59	4,711.97	21.58	25.77	-152.55	-903.76	-101.09	1,121.12	1,078.16	42.96	26.098		
5,000.00	4,993.88	4,866.39	4,808.45	22.01	26.31	-152.56	-919.64	-103.33	1,141.97	1,098.13	43.83	26.052		
5,100.00	5,093.74	4,964.20	4,904.93	22.45	26.85	-152.57	-935.53	-105.58	1,162.81	1,118.10	44.71	26.008		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 32C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,062.00	5,001.41	22.89	27.40	-152.57	-951.41	-107.82	1,183.65	1,138.07	45.59	25.966		
5,300.00	5,293.46	5,159.80	5,097.89	23.32	27.94	-152.58	-967.30	-110.06	1,204.50	1,158.03	46.46	25.924		
5,400.00	5,393.32	5,257.61	5,194.37	23.76	28.49	-152.58	-983.18	-112.31	1,225.34	1,178.00	47.34	25.885		
5,500.00	5,493.18	5,355.41	5,290.85	24.20	29.03	-152.59	-999.07	-114.55	1,246.18	1,197.97	48.22	25.846		
5,600.00	5,593.05	5,453.22	5,387.33	24.64	29.58	-152.59	-1,014.95	-116.80	1,267.03	1,217.93	49.09	25.808		
5,700.00	5,692.91	5,551.02	5,483.81	25.07	30.12	-152.59	-1,030.83	-119.04	1,287.87	1,237.90	49.97	25.772		
5,800.00	5,792.77	5,648.82	5,580.28	25.51	30.67	-152.60	-1,046.72	-121.28	1,308.71	1,257.86	50.85	25.737		
5,900.00	5,892.63	5,746.63	5,676.76	25.95	31.21	-152.60	-1,062.60	-123.53	1,329.56	1,277.83	51.73	25.703		
6,000.00	5,992.49	5,844.43	5,773.24	26.39	31.76	-152.61	-1,078.49	-125.77	1,350.40	1,297.79	52.61	25.670		
6,100.00	6,092.35	5,942.23	5,869.72	26.82	32.31	-152.61	-1,094.37	-128.02	1,371.24	1,317.76	53.49	25.637		
6,200.00	6,192.21	6,040.04	5,966.20	27.26	32.85	-152.62	-1,110.26	-130.26	1,392.09	1,337.72	54.37	25.606		
6,300.00	6,292.07	6,137.84	6,062.68	27.70	33.40	-152.62	-1,126.14	-132.50	1,412.93	1,357.68	55.25	25.576		
6,400.00	6,391.93	6,235.64	6,159.16	28.14	33.94	-152.62	-1,142.03	-134.75	1,433.77	1,377.65	56.13	25.546		
6,500.00	6,491.69	6,333.39	6,255.58	28.58	34.49	-112.91	-1,157.90	-136.99	1,454.59	1,397.58	57.01	25.516		
6,600.00	6,589.80	6,429.87	6,350.75	29.02	35.03	-97.72	-1,173.57	-139.20	1,475.15	1,417.24	57.90	25.476		
6,700.00	6,683.86	6,522.74	6,442.37	29.46	35.55	-93.30	-1,188.65	-141.34	1,495.42	1,436.61	58.81	25.430		
6,800.00	6,771.56	6,609.72	6,528.17	29.92	36.03	-91.31	-1,202.78	-143.33	1,515.79	1,456.07	59.72	25.382		
6,900.00	6,850.72	6,688.67	6,606.05	30.40	36.47	-90.23	-1,215.60	-145.14	1,536.94	1,476.28	60.65	25.340		
7,000.00	6,919.40	6,779.16	6,695.14	30.96	36.98	-89.96	-1,230.29	-150.25	1,559.40	1,497.57	61.83	25.222		
7,100.00	6,975.92	6,898.55	6,810.06	31.62	37.65	-90.54	-1,249.36	-175.63	1,582.17	1,518.80	63.38	24.965		
7,200.00	7,018.87	7,051.73	6,947.14	32.44	38.50	-91.86	-1,272.34	-239.12	1,604.03	1,538.81	65.22	24.596		
7,300.00	7,047.21	7,300.00	7,087.33	33.42	39.91	-93.60	-1,296.20	-358.17	1,622.71	1,554.91	67.80	23.933		
7,400.00	7,060.23	7,547.07	7,228.59	34.55	41.71	-96.12	-1,321.25	-628.51	1,634.28	1,563.64	70.63	23.137		
7,500.00	7,060.03	7,757.31	7,246.73	35.83	44.06	-96.56	-1,325.63	-837.21	1,635.76	1,561.11	74.65	21.912		
7,600.00	7,058.28	7,857.30	7,246.20	37.28	45.52	-96.60	-1,326.22	-937.20	1,635.74	1,557.76	77.98	20.977		
7,700.00	7,056.53	7,957.30	7,245.67	38.89	47.21	-96.64	-1,326.80	-1,037.19	1,635.71	1,554.08	81.63	20.038		
7,800.00	7,054.78	8,057.29	7,245.14	40.63	49.11	-96.68	-1,327.38	-1,137.18	1,635.69	1,550.11	85.57	19.115		
7,900.00	7,053.03	8,157.28	7,244.61	42.50	51.18	-96.73	-1,327.97	-1,237.17	1,635.66	1,545.90	89.76	18.223		
8,000.00	7,051.28	8,257.27	7,244.08	44.47	53.40	-96.77	-1,328.55	-1,337.16	1,635.64	1,541.48	94.16	17.371		
8,100.00	7,049.53	8,357.26	7,243.55	46.53	55.75	-96.81	-1,329.14	-1,437.15	1,635.61	1,536.87	98.75	16.564		
8,200.00	7,047.78	8,457.26	7,243.03	48.67	58.21	-96.86	-1,329.72	-1,537.14	1,635.59	1,532.10	103.49	15.804		
8,300.00	7,046.03	8,557.25	7,242.50	50.89	60.76	-96.90	-1,330.31	-1,637.13	1,635.57	1,527.19	108.38	15.091		
8,400.00	7,044.28	8,657.24	7,241.97	53.16	63.40	-96.94	-1,330.89	-1,737.12	1,635.55	1,522.16	113.39	14.424		
8,500.00	7,042.53	8,757.23	7,241.44	55.49	66.10	-96.99	-1,331.47	-1,837.11	1,635.53	1,517.03	118.50	13.802		
8,600.00	7,040.78	8,857.23	7,240.91	57.86	68.86	-97.03	-1,332.06	-1,937.09	1,635.51	1,511.80	123.71	13.221		
8,700.00	7,039.03	8,957.22	7,240.38	60.28	71.68	-97.07	-1,332.64	-2,037.08	1,635.50	1,506.50	129.00	12.678		
8,800.00	7,037.28	9,057.21	7,239.85	62.74	74.54	-97.12	-1,333.23	-2,137.07	1,635.48	1,501.12	134.36	12.173		
8,900.00	7,035.53	9,157.20	7,239.32	65.23	77.44	-97.16	-1,333.81	-2,237.06	1,635.47	1,495.68	139.78	11.700		
9,000.00	7,033.78	9,257.20	7,238.80	67.74	80.38	-97.20	-1,334.40	-2,337.05	1,635.45	1,490.19	145.26	11.259		
9,100.00	7,032.03	9,357.19	7,238.27	70.29	83.35	-97.25	-1,334.98	-2,437.04	1,635.44	1,484.65	150.79	10.846		
9,200.00	7,030.28	9,457.18	7,237.74	72.85	86.34	-97.29	-1,335.56	-2,537.03	1,635.42	1,479.06	156.36	10.459		
9,300.00	7,028.54	9,557.17	7,237.21	75.44	89.36	-97.33	-1,336.15	-2,637.02	1,635.41	1,473.44	161.97	10.097		
9,400.00	7,026.79	9,657.17	7,236.68	78.05	92.41	-97.38	-1,336.73	-2,737.01	1,635.40	1,467.78	167.62	9.757		
9,500.00	7,025.04	9,757.16	7,236.15	80.67	95.47	-97.42	-1,337.32	-2,837.00	1,635.39	1,462.09	173.30	9.437		
9,600.00	7,023.29	9,857.15	7,235.62	83.31	98.55	-97.46	-1,337.90	-2,936.99	1,635.38	1,456.38	179.01	9.136		
9,700.00	7,021.54	9,957.14	7,235.10	85.96	101.65	-97.50	-1,338.49	-3,036.98	1,635.38	1,450.63	184.74	8.852		
9,800.00	7,019.79	10,057.14	7,234.57	88.63	104.76	-97.55	-1,339.07	-3,136.97	1,635.37	1,444.87	190.50	8.585		
9,900.00	7,018.04	10,157.13	7,234.04	91.30	107.89	-97.59	-1,339.66	-3,236.96	1,635.36	1,439.08	196.28	8.332		
10,000.00	7,016.29	10,257.12	7,233.51	93.99	111.03	-97.63	-1,340.24	-3,336.94	1,635.36	1,433.28	202.08	8.093		
10,100.00	7,014.54	10,357.11	7,232.98	96.69	114.18	-97.68	-1,340.82	-3,436.93	1,635.35	1,427.46	207.89	7.866		
10,200.00	7,012.79	10,457.11	7,232.45	99.40	117.34	-97.72	-1,341.41	-3,536.92	1,635.35	1,421.62	213.73	7.652		
10,300.00	7,011.04	10,557.10	7,231.92	102.11	120.51	-97.76	-1,341.99	-3,636.91	1,635.35	1,415.78	219.57	7.448		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 32C-16-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	10,657.09	7,231.39	104.83	123.69	-97.81	-1,342.58	-3,736.90	1,635.35	1,409.91	225.43	7.254		
10,500.00	7,007.54	10,757.08	7,230.87	107.56	126.88	-97.85	-1,343.16	-3,836.89	1,635.35	1,404.04	231.30	7.070		
10,505.68	7,007.44	10,762.76	7,230.84	107.72	127.06	-97.85	-1,343.19	-3,842.57	1,635.35	1,403.71	231.64	7.060		
10,600.00	7,005.79	10,857.08	7,230.34	110.30	130.07	-97.89	-1,343.75	-3,936.88	1,635.35	1,398.16	237.19	6.895		
10,700.00	7,004.04	10,957.07	7,229.81	113.04	133.27	-97.94	-1,344.33	-4,036.87	1,635.35	1,392.26	243.08	6.728		
10,800.00	7,002.29	11,057.06	7,229.28	115.79	136.48	-97.98	-1,344.91	-4,136.86	1,635.35	1,386.36	248.99	6.568		
10,900.00	7,000.54	11,157.05	7,228.75	118.54	139.69	-98.02	-1,345.50	-4,236.85	1,635.35	1,380.45	254.90	6.416		
11,000.00	6,998.79	11,257.04	7,228.22	121.30	142.91	-98.07	-1,346.08	-4,336.84	1,635.36	1,374.54	260.82	6.270		
11,100.00	6,997.04	11,357.04	7,227.69	124.06	146.14	-98.11	-1,346.67	-4,436.83	1,635.36	1,368.61	266.75	6.131		
11,200.00	6,995.29	11,457.03	7,227.17	126.83	149.37	-98.15	-1,347.25	-4,536.82	1,635.37	1,362.69	272.68	5.997		
11,300.00	6,993.54	11,557.02	7,226.64	129.60	152.60	-98.20	-1,347.84	-4,636.81	1,635.37	1,356.75	278.62	5.869		
11,400.00	6,991.80	11,657.01	7,226.11	132.37	155.84	-98.24	-1,348.42	-4,736.80	1,635.38	1,350.81	284.57	5.747		
11,500.00	6,990.05	11,757.01	7,225.58	135.15	159.08	-98.28	-1,349.00	-4,836.78	1,635.39	1,344.87	290.52	5.629		
11,600.00	6,988.30	11,857.00	7,225.05	137.93	162.33	-98.33	-1,349.59	-4,936.77	1,635.40	1,338.92	296.48	5.516		
11,700.00	6,986.55	11,956.99	7,224.52	140.72	165.58	-98.37	-1,350.17	-5,036.76	1,635.41	1,332.97	302.44	5.407		
11,800.00	6,984.80	12,056.98	7,223.99	143.50	168.83	-98.41	-1,350.76	-5,136.75	1,635.42	1,327.02	308.41	5.303		
11,900.00	6,983.05	12,156.98	7,223.46	146.29	172.09	-98.45	-1,351.34	-5,236.74	1,635.44	1,321.06	314.38	5.202		
12,000.00	6,981.30	12,256.97	7,222.94	149.09	175.34	-98.50	-1,351.93	-5,336.73	1,635.45	1,315.10	320.35	5.105		
12,100.00	6,979.55	12,356.96	7,222.41	151.88	178.61	-98.54	-1,352.51	-5,436.72	1,635.46	1,309.14	326.33	5.012		
12,200.00	6,977.80	12,456.95	7,221.88	154.68	181.87	-98.58	-1,353.09	-5,536.71	1,635.48	1,303.17	332.31	4.922		
12,300.00	6,976.05	12,556.95	7,221.35	157.48	185.14	-98.63	-1,353.68	-5,636.70	1,635.49	1,297.20	338.29	4.835		
12,400.00	6,974.30	12,656.94	7,220.82	160.28	188.41	-98.67	-1,354.26	-5,736.69	1,635.51	1,291.24	344.28	4.751		
12,500.00	6,972.55	12,756.93	7,220.29	163.08	191.68	-98.71	-1,354.85	-5,836.68	1,635.53	1,285.27	350.26	4.669		
12,600.00	6,970.80	12,856.92	7,219.76	165.89	194.95	-98.76	-1,355.43	-5,936.67	1,635.55	1,279.30	356.25	4.591		
12,700.00	6,969.05	12,956.92	7,219.24	168.69	198.23	-98.80	-1,356.02	-6,036.66	1,635.57	1,273.32	362.25	4.515		
12,800.00	6,967.30	13,056.91	7,218.71	171.50	201.50	-98.84	-1,356.60	-6,136.65	1,635.59	1,267.35	368.24	4.442		
12,900.00	6,965.55	13,156.90	7,218.18	174.31	204.78	-98.89	-1,357.18	-6,236.63	1,635.61	1,261.38	374.23	4.371		
13,000.00	6,963.80	13,256.89	7,217.65	177.12	208.06	-98.93	-1,357.77	-6,336.62	1,635.63	1,255.40	380.23	4.302		
13,100.00	6,962.05	13,356.89	7,217.12	179.94	211.35	-98.97	-1,358.35	-6,436.61	1,635.66	1,249.43	386.23	4.235		
13,200.00	6,960.30	13,456.88	7,216.59	182.75	214.63	-99.02	-1,358.94	-6,536.60	1,635.68	1,243.45	392.23	4.170		
13,300.00	6,958.55	13,556.87	7,216.06	185.57	217.92	-99.06	-1,359.52	-6,636.59	1,635.71	1,237.48	398.23	4.107		
13,400.00	6,956.80	13,656.86	7,215.53	188.38	221.20	-99.10	-1,360.11	-6,736.58	1,635.73	1,231.50	404.23	4.047		
13,500.00	6,955.05	13,756.85	7,215.01	191.20	224.49	-99.15	-1,360.69	-6,836.57	1,635.76	1,225.53	410.23	3.987		
13,600.00	6,953.31	13,856.85	7,214.48	194.02	227.78	-99.19	-1,361.27	-6,936.56	1,635.79	1,219.56	416.23	3.930		
13,700.00	6,951.56	13,956.84	7,213.95	196.84	231.07	-99.23	-1,361.86	-7,036.55	1,635.82	1,213.58	422.24	3.874		
13,800.00	6,949.81	14,056.83	7,213.42	199.67	234.37	-99.27	-1,362.44	-7,136.54	1,635.85	1,207.61	428.24	3.820		
13,900.00	6,948.06	14,156.82	7,212.89	202.49	237.66	-99.32	-1,363.03	-7,236.53	1,635.88	1,201.63	434.25	3.767		
14,000.00	6,946.31	14,256.82	7,212.36	205.31	240.95	-99.36	-1,363.61	-7,336.52	1,635.91	1,195.66	440.25	3.716		
14,100.00	6,944.56	14,356.81	7,211.83	208.14	244.25	-99.40	-1,364.20	-7,436.51	1,635.95	1,189.69	446.26	3.666		
14,200.00	6,942.81	14,456.80	7,211.31	210.96	247.55	-99.45	-1,364.78	-7,536.50	1,635.98	1,183.72	452.26	3.617		
14,300.00	6,941.06	14,556.79	7,210.78	213.79	250.84	-99.49	-1,365.36	-7,636.48	1,636.01	1,177.75	458.27	3.570		
14,400.00	6,939.31	14,656.79	7,210.25	216.62	254.14	-99.53	-1,365.95	-7,736.47	1,636.05	1,171.78	464.27	3.524		
14,500.00	6,937.56	14,756.78	7,209.72	219.44	257.44	-99.58	-1,366.53	-7,836.46	1,636.09	1,165.81	470.28	3.479		
14,600.00	6,935.81	14,856.77	7,209.19	222.27	260.74	-99.62	-1,367.12	-7,936.45	1,636.12	1,159.84	476.28	3.435		
14,700.00	6,934.06	14,956.76	7,208.66	225.10	264.04	-99.66	-1,367.70	-8,036.44	1,636.16	1,153.88	482.29	3.393		
14,800.00	6,932.31	15,056.76	7,208.13	227.93	267.34	-99.71	-1,368.29	-8,136.43	1,636.20	1,147.91	488.29	3.351		
14,817.75	6,932.00	15,074.50	7,208.04	228.43	267.93	-99.71	-1,368.39	-8,154.18	1,636.21	1,146.85	489.35	3.344 SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 32C-16-M2 - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	3.28	3.28	-179.40	-80.15	-0.83	80.16					
100.00	100.00	100.00	100.00	3.28	3.28	-179.40	-80.15	-0.83	80.16	73.59	6.57	12.201		
200.00	200.00	200.00	200.00	3.34	3.34	-179.40	-80.15	-0.83	80.16	73.48	6.67	12.010		
300.00	300.00	300.00	300.00	3.44	3.44	-179.40	-80.15	-0.83	80.16	73.27	6.89	11.634		
400.00	400.00	400.00	400.00	3.60	3.60	-179.40	-80.15	-0.83	80.16	72.95	7.21	11.122		
500.00	500.00	500.00	500.00	3.81	3.81	-179.40	-80.15	-0.83	80.16	72.54	7.61	10.530 CC, ES		
600.00	599.98	597.30	597.29	4.05	4.03	-152.20	-81.72	-1.35	83.32	75.24	8.08	10.310		
700.00	699.86	694.07	693.92	4.32	4.27	-152.58	-86.39	-2.88	92.41	83.80	8.61	10.731		
800.00	799.72	807.62	791.94	4.62	4.59	-152.60	-93.57	-5.24	104.37	95.14	9.23	11.311		
900.00	899.58	908.35	890.90	4.93	4.90	-152.58	-100.97	-7.66	116.48	106.63	9.85	11.829		
1,000.00	999.44	1,009.09	989.86	5.27	5.23	-152.57	-108.37	-10.09	128.60	118.09	10.51	12.241		
1,100.00	1,099.31	1,090.17	1,088.82	5.62	5.51	-152.57	-115.77	-12.52	140.71	129.59	11.13	12.645		
1,200.00	1,199.17	1,189.44	1,187.77	5.98	5.86	-152.56	-123.17	-14.95	152.83	140.99	11.84	12.912		
1,300.00	1,299.03	1,288.70	1,286.73	6.36	6.23	-152.55	-130.57	-17.38	164.95	152.38	12.57	13.126		
1,400.00	1,398.89	1,387.96	1,385.69	6.74	6.61	-152.55	-137.97	-19.80	177.06	163.75	13.31	13.298		
1,500.00	1,498.75	1,487.23	1,484.65	7.13	7.00	-152.54	-145.37	-22.23	189.18	175.10	14.08	13.438		
1,600.00	1,598.61	1,586.49	1,583.60	7.52	7.39	-152.54	-152.77	-24.66	201.30	186.44	14.85	13.551		
1,700.00	1,698.47	1,685.75	1,682.56	7.92	7.79	-152.53	-160.17	-27.09	213.41	197.77	15.64	13.643		
1,800.00	1,798.33	1,785.02	1,781.52	8.32	8.19	-152.53	-167.57	-29.52	225.53	209.09	16.44	13.719		
1,900.00	1,898.19	1,884.28	1,880.47	8.73	8.60	-152.53	-174.97	-31.94	237.64	220.40	17.24	13.781		
2,000.00	1,998.05	1,983.54	1,979.43	9.14	9.01	-152.52	-182.37	-34.37	249.76	231.70	18.06	13.832		
2,100.00	2,097.91	2,082.81	2,078.39	9.55	9.43	-152.52	-189.77	-36.80	261.88	243.00	18.87	13.875		
2,200.00	2,197.78	2,182.07	2,177.35	9.97	9.85	-152.52	-197.17	-39.23	273.99	254.30	19.70	13.910		
2,300.00	2,297.64	2,281.33	2,276.30	10.39	10.27	-152.52	-204.57	-41.65	286.11	265.58	20.53	13.939		
2,400.00	2,397.50	2,380.60	2,375.26	10.81	10.69	-152.51	-211.97	-44.08	298.23	276.87	21.36	13.963		
2,500.00	2,497.36	2,479.86	2,474.22	11.23	11.12	-152.51	-219.37	-46.51	310.34	288.15	22.19	13.983		
2,600.00	2,597.22	2,579.12	2,573.18	11.65	11.54	-152.51	-226.77	-48.94	322.46	299.42	23.03	14.000		
2,700.00	2,697.08	2,678.39	2,672.13	12.07	11.97	-152.51	-234.17	-51.37	334.57	310.70	23.88	14.013		
2,800.00	2,796.94	2,777.65	2,771.09	12.50	12.40	-152.51	-241.57	-53.79	346.69	321.97	24.72	14.025		
2,900.00	2,896.80	2,876.91	2,870.05	12.92	12.83	-152.51	-248.97	-56.22	358.81	333.24	25.57	14.034		
3,000.00	2,996.66	2,976.18	2,969.00	13.35	13.27	-152.51	-256.37	-58.65	370.92	344.51	26.42	14.041		
3,100.00	3,096.52	3,075.44	3,067.96	13.78	13.70	-152.50	-263.77	-61.08	383.04	355.77	27.27	14.047		
3,200.00	3,196.38	3,174.70	3,166.92	14.21	14.13	-152.50	-271.17	-63.51	395.16	367.03	28.12	14.052		
3,300.00	3,296.25	3,273.97	3,265.88	14.64	14.57	-152.50	-278.57	-65.93	407.27	378.30	28.98	14.056		
3,400.00	3,396.11	3,373.23	3,364.83	15.07	15.01	-152.50	-285.97	-68.36	419.39	389.56	29.83	14.058		
3,500.00	3,495.97	3,472.49	3,463.79	15.50	15.44	-152.50	-293.38	-70.79	431.50	400.81	30.69	14.060		
3,600.00	3,595.83	3,571.76	3,562.75	15.93	15.88	-152.50	-300.78	-73.22	443.62	412.07	31.55	14.062		
3,700.00	3,695.69	3,671.02	3,661.71	16.36	16.32	-152.50	-308.18	-75.65	455.74	423.33	32.41	14.062		
3,800.00	3,795.55	3,770.28	3,760.66	16.80	16.76	-152.50	-315.58	-78.07	467.85	434.58	33.27	14.063		
3,900.00	3,895.41	3,869.55	3,859.62	17.23	17.20	-152.50	-322.98	-80.50	479.97	445.84	34.13	14.063		
4,000.00	3,995.27	3,968.81	3,958.58	17.66	17.64	-152.50	-330.38	-82.93	492.09	457.09	34.99	14.062		
4,100.00	4,095.13	4,068.07	4,057.53	18.10	18.08	-152.50	-337.78	-85.36	504.20	468.34	35.86	14.061		
4,200.00	4,194.99	4,167.34	4,156.49	18.53	18.52	-152.50	-345.18	-87.79	516.32	479.60	36.72	14.060		
4,300.00	4,294.85	4,266.60	4,255.45	18.96	18.96	-152.49	-352.58	-90.21	528.43	490.85	37.59	14.059		
4,400.00	4,394.71	4,365.86	4,354.41	19.40	19.40	-152.49	-359.98	-92.64	540.55	502.10	38.45	14.057		
4,500.00	4,494.58	4,465.12	4,453.36	19.83	19.84	-152.49	-367.38	-95.07	552.67	513.35	39.32	14.056		
4,600.00	4,594.44	4,564.39	4,552.32	20.27	20.28	-152.49	-374.78	-97.50	564.78	524.60	40.19	14.054		
4,700.00	4,694.30	4,663.65	4,651.28	20.71	20.72	-152.49	-382.18	-99.93	576.90	535.85	41.05	14.052		
4,800.00	4,794.16	4,762.91	4,750.23	21.14	21.17	-152.49	-389.58	-102.35	589.02	547.09	41.92	14.050		
4,900.00	4,894.02	4,862.18	4,849.19	21.58	21.61	-152.49	-396.98	-104.78	601.13	558.34	42.79	14.048		
5,000.00	4,993.88	4,961.44	4,948.15	22.01	22.05	-152.49	-404.38	-107.21	613.25	569.59	43.66	14.046		
5,100.00	5,093.74	5,060.70	5,047.11	22.45	22.49	-152.49	-411.78	-109.64	625.36	580.83	44.53	14.044		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 32C-16-M2 - OH - PLAN #1												Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,200.00	5,193.60	5,159.97	5,146.06	22.89	22.94	-152.49	-419.18	-112.07	637.48	592.08	45.40	14.041	
5,300.00	5,293.46	5,259.23	5,245.02	23.32	23.38	-152.49	-426.58	-114.49	649.60	603.33	46.27	14.039	
5,400.00	5,393.32	5,358.49	5,343.98	23.76	23.82	-152.49	-433.98	-116.92	661.71	614.57	47.14	14.037	
5,500.00	5,493.18	5,457.76	5,442.94	24.20	24.27	-152.49	-441.38	-119.35	673.83	625.82	48.01	14.035	
5,600.00	5,593.05	5,557.02	5,541.89	24.64	24.71	-152.49	-448.78	-121.78	685.95	637.06	48.88	14.032	
5,700.00	5,692.91	5,656.28	5,640.85	25.07	25.16	-152.49	-456.18	-124.21	698.06	648.31	49.76	14.030	
5,800.00	5,792.77	5,755.55	5,739.81	25.51	25.60	-152.49	-463.58	-126.63	710.18	659.55	50.63	14.028	
5,900.00	5,892.63	5,854.81	5,838.76	25.95	26.05	-152.49	-470.98	-129.06	722.29	670.80	51.50	14.025	
6,000.00	5,992.49	5,954.07	5,937.72	26.39	26.49	-152.49	-478.38	-131.49	734.41	682.04	52.37	14.023	
6,100.00	6,092.35	6,053.34	6,036.68	26.82	26.93	-152.49	-485.78	-133.92	746.53	693.28	53.24	14.021	
6,200.00	6,192.21	6,152.60	6,135.64	27.26	27.38	-152.49	-493.18	-136.35	758.64	704.53	54.12	14.018	
6,300.00	6,292.07	6,251.86	6,234.59	27.70	27.82	-152.49	-500.58	-138.77	770.76	715.77	54.99	14.016	
6,400.00	6,391.93	6,351.13	6,333.55	28.14	28.27	-152.49	-507.98	-141.20	782.88	727.01	55.86	14.014	
6,500.00	6,491.69	6,450.34	6,432.45	28.58	28.71	-113.26	-515.38	-143.63	794.97	738.23	56.74	14.011	
6,600.00	6,589.80	6,548.26	6,530.08	29.02	29.15	-99.36	-522.68	-146.02	806.96	749.35	57.61	14.007	
6,700.00	6,683.86	6,642.54	6,624.06	29.46	29.58	-96.59	-529.71	-148.33	819.44	760.96	58.48	14.013	
6,800.00	6,771.56	6,744.11	6,724.69	29.92	30.03	-96.39	-537.30	-158.89	832.97	773.54	59.43	14.015	
6,900.00	6,850.72	6,853.38	6,829.57	30.40	30.50	-96.96	-545.36	-187.98	847.07	786.62	60.45	14.014	
7,000.00	6,919.40	6,971.86	6,935.84	30.96	30.99	-97.88	-553.70	-239.30	861.11	799.62	61.48	14.005	
7,100.00	6,975.92	7,100.90	7,038.60	31.62	31.48	-98.96	-561.99	-316.55	874.29	811.74	62.55	13.978	
7,200.00	7,018.87	7,241.30	7,130.25	32.44	32.08	-100.04	-569.69	-422.25	885.65	821.92	63.73	13.896	
7,300.00	7,047.21	7,392.51	7,200.57	33.42	33.07	-100.96	-576.01	-555.56	894.15	828.85	65.30	13.693	
7,400.00	7,060.23	7,552.01	7,238.65	34.55	34.59	-101.55	-580.11	-709.96	898.82	831.27	67.56	13.304	
7,500.00	7,060.03	7,681.78	7,242.79	35.83	36.15	-101.72	-581.47	-839.55	899.67	829.42	70.25	12.807	
7,600.00	7,058.28	7,781.77	7,242.40	37.28	37.55	-101.80	-582.25	-939.54	899.98	826.94	73.04	12.322	
7,700.00	7,056.53	7,881.76	7,242.01	38.89	39.11	-101.89	-583.03	-1,039.52	900.28	824.15	76.13	11.825	
7,800.00	7,054.78	7,981.75	7,241.61	40.63	40.81	-101.97	-583.81	-1,139.51	900.59	821.09	79.50	11.328	
7,900.00	7,053.03	8,081.74	7,241.22	42.50	42.63	-102.06	-584.60	-1,239.50	900.90	817.80	83.11	10.840	
8,000.00	7,051.28	8,181.73	7,240.83	44.47	44.57	-102.14	-585.38	-1,339.48	901.22	814.30	86.92	10.368	
8,100.00	7,049.53	8,281.72	7,240.43	46.53	46.60	-102.22	-586.16	-1,439.47	901.53	810.62	90.91	9.916	
8,200.00	7,047.78	8,381.71	7,240.04	48.67	48.71	-102.31	-586.94	-1,539.46	901.85	806.78	95.07	9.486	
8,300.00	7,046.03	8,481.70	7,239.65	50.89	50.89	-102.39	-587.72	-1,639.45	902.17	802.81	99.36	9.080	
8,400.00	7,044.28	8,581.69	7,239.25	53.16	53.14	-102.48	-588.51	-1,739.43	902.49	798.72	103.77	8.697	
8,500.00	7,042.53	8,681.68	7,238.86	55.49	55.45	-102.56	-589.29	-1,839.42	902.81	794.52	108.29	8.337	
8,600.00	7,040.78	8,781.67	7,238.47	57.86	57.80	-102.64	-590.07	-1,939.41	903.14	790.24	112.89	8.000	
8,700.00	7,039.03	8,881.67	7,238.07	60.28	60.20	-102.73	-590.85	-2,039.39	903.46	785.88	117.58	7.684	
8,800.00	7,037.28	8,981.66	7,237.68	62.74	62.64	-102.81	-591.64	-2,139.38	903.79	781.45	122.34	7.387	
8,900.00	7,035.53	9,081.65	7,237.29	65.23	65.11	-102.89	-592.42	-2,239.37	904.12	776.96	127.16	7.110	
9,000.00	7,033.78	9,181.64	7,236.89	67.74	67.61	-102.98	-593.20	-2,339.35	904.45	772.41	132.04	6.850	
9,100.00	7,032.03	9,281.63	7,236.50	70.29	70.14	-103.06	-593.98	-2,439.34	904.79	767.82	136.97	6.606	
9,200.00	7,030.28	9,381.62	7,236.11	72.85	72.69	-103.14	-594.76	-2,539.33	905.12	763.19	141.93	6.377	
9,300.00	7,028.54	9,481.61	7,235.71	75.44	75.27	-103.23	-595.55	-2,639.32	905.46	758.52	146.94	6.162	
9,400.00	7,026.79	9,581.60	7,235.32	78.05	77.86	-103.31	-596.33	-2,739.30	905.80	753.82	151.98	5.960	
9,500.00	7,025.04	9,681.59	7,234.93	80.67	80.48	-103.39	-597.11	-2,839.29	906.14	749.09	157.05	5.770	
9,600.00	7,023.29	9,781.58	7,234.53	83.31	83.11	-103.47	-597.89	-2,939.28	906.49	744.33	162.15	5.590	
9,700.00	7,021.54	9,881.57	7,234.14	85.96	85.75	-103.56	-598.67	-3,039.26	906.83	739.56	167.28	5.421	
9,800.00	7,019.79	9,981.56	7,233.75	88.63	88.41	-103.64	-599.46	-3,139.25	907.18	734.76	172.42	5.261	
9,900.00	7,018.04	10,081.55	7,233.35	91.30	91.08	-103.72	-600.24	-3,239.24	907.53	729.94	177.59	5.110	
10,000.00	7,016.29	10,181.55	7,232.96	93.99	93.76	-103.81	-601.02	-3,339.22	907.88	725.11	182.77	4.967	
10,100.00	7,014.54	10,281.54	7,232.57	96.69	96.45	-103.89	-601.80	-3,439.21	908.24	720.27	187.97	4.832	
10,200.00	7,012.79	10,381.53	7,232.17	99.40	99.15	-103.97	-602.59	-3,539.20	908.59	715.41	193.18	4.703	
10,300.00	7,011.04	10,481.52	7,231.78	102.11	101.86	-104.05	-603.37	-3,639.18	908.95	710.54	198.40	4.581	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 32C-16-M2 - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	10,581.51	7,231.39	104.83	104.57	-104.14	-604.15	-3,739.17	909.31	705.66	203.64	4.465		
10,500.00	7,007.54	10,681.50	7,230.99	107.56	107.30	-104.22	-604.93	-3,839.16	909.67	700.78	208.89	4.355		
10,600.00	7,005.79	10,781.49	7,230.60	110.30	110.03	-104.30	-605.71	-3,939.15	910.03	695.89	214.14	4.250		
10,700.00	7,004.04	10,881.48	7,230.21	113.04	112.77	-104.38	-606.50	-4,039.13	910.39	690.99	219.41	4.149		
10,800.00	7,002.29	10,981.47	7,229.81	115.79	115.51	-104.47	-607.28	-4,139.12	910.76	686.08	224.68	4.054		
10,900.00	7,000.54	11,081.46	7,229.42	118.54	118.26	-104.55	-608.06	-4,239.11	911.13	681.17	229.96	3.962		
11,000.00	6,998.79	11,181.45	7,229.03	121.30	121.01	-104.63	-608.84	-4,339.09	911.50	676.26	235.24	3.875		
11,100.00	6,997.04	11,281.44	7,228.63	124.06	123.77	-104.71	-609.62	-4,439.08	911.87	671.34	240.53	3.791		
11,200.00	6,995.29	11,381.44	7,228.24	126.83	126.53	-104.79	-610.41	-4,539.07	912.24	666.42	245.82	3.711		
11,300.00	6,993.54	11,481.43	7,227.85	129.60	129.30	-104.88	-611.19	-4,639.05	912.62	661.50	251.12	3.634		
11,400.00	6,991.80	11,581.42	7,227.46	132.37	132.07	-104.96	-611.97	-4,739.04	913.00	656.58	256.42	3.561		
11,500.00	6,990.05	11,681.41	7,227.06	135.15	134.84	-105.04	-612.75	-4,839.03	913.38	651.65	261.72	3.490		
11,600.00	6,988.30	11,781.40	7,226.67	137.93	137.62	-105.12	-613.54	-4,939.02	913.76	646.73	267.03	3.422		
11,700.00	6,986.55	11,881.39	7,226.28	140.72	140.40	-105.20	-614.32	-5,039.00	914.14	641.81	272.34	3.357		
11,800.00	6,984.80	11,981.38	7,225.88	143.50	143.19	-105.28	-615.10	-5,138.99	914.53	636.88	277.65	3.294		
11,900.00	6,983.05	12,081.37	7,225.49	146.29	145.97	-105.36	-615.88	-5,238.98	914.91	631.96	282.96	3.233		
12,000.00	6,981.30	12,181.36	7,225.10	149.09	148.76	-105.45	-616.66	-5,338.96	915.30	627.03	288.27	3.175		
12,100.00	6,979.55	12,281.35	7,224.70	151.88	151.55	-105.53	-617.45	-5,438.95	915.69	622.11	293.58	3.119		
12,200.00	6,977.80	12,381.34	7,224.31	154.68	154.35	-105.61	-618.23	-5,538.94	916.09	617.19	298.89	3.065		
12,300.00	6,976.05	12,481.33	7,223.92	157.48	157.15	-105.69	-619.01	-5,638.92	916.48	612.27	304.21	3.013		
12,400.00	6,974.30	12,581.32	7,223.52	160.28	159.94	-105.77	-619.79	-5,738.91	916.88	607.36	309.52	2.962		
12,500.00	6,972.55	12,681.32	7,223.13	163.08	162.75	-105.85	-620.57	-5,838.90	917.27	602.44	314.83	2.914		
12,600.00	6,970.80	12,781.31	7,222.74	165.89	165.55	-105.93	-621.36	-5,938.88	917.67	597.53	320.15	2.866		
12,700.00	6,969.05	12,881.30	7,222.34	168.69	168.35	-106.01	-622.14	-6,038.87	918.08	592.62	325.46	2.821		
12,800.00	6,967.30	12,981.29	7,221.95	171.50	171.16	-106.09	-622.92	-6,138.86	918.48	587.71	330.77	2.777		
12,900.00	6,965.55	13,081.28	7,221.56	174.31	173.97	-106.18	-623.70	-6,238.85	918.88	582.81	336.08	2.734		
13,000.00	6,963.80	13,181.27	7,221.16	177.12	176.78	-106.26	-624.49	-6,338.83	919.29	577.91	341.38	2.693		
13,100.00	6,962.05	13,281.26	7,220.77	179.94	179.59	-106.34	-625.27	-6,438.82	919.70	573.01	346.69	2.653		
13,200.00	6,960.30	13,381.25	7,220.38	182.75	182.40	-106.42	-626.05	-6,538.81	920.11	568.12	351.99	2.614		
13,300.00	6,958.55	13,481.24	7,219.98	185.57	185.22	-106.50	-626.83	-6,638.79	920.52	563.23	357.30	2.576		
13,400.00	6,956.80	13,581.23	7,219.59	188.38	188.03	-106.58	-627.61	-6,738.78	920.94	558.34	362.60	2.540		
13,500.00	6,955.05	13,681.22	7,219.20	191.20	190.85	-106.66	-628.40	-6,838.77	921.35	553.46	367.90	2.504		
13,600.00	6,953.31	13,781.21	7,218.80	194.02	193.67	-106.74	-629.18	-6,938.75	921.77	548.58	373.19	2.470		
13,700.00	6,951.56	13,881.21	7,218.41	196.84	196.49	-106.82	-629.96	-7,038.74	922.19	543.71	378.49	2.437		
13,800.00	6,949.81	13,981.20	7,218.02	199.67	199.31	-106.90	-630.74	-7,138.73	922.61	538.84	383.78	2.404		
13,900.00	6,948.06	14,081.19	7,217.62	202.49	202.13	-106.98	-631.52	-7,238.72	923.04	533.97	389.07	2.372		
14,000.00	6,946.31	14,181.18	7,217.23	205.31	204.95	-107.06	-632.31	-7,338.70	923.46	529.11	394.35	2.342		
14,100.00	6,944.56	14,281.17	7,216.84	208.14	207.77	-107.14	-633.09	-7,438.69	923.89	524.25	399.64	2.312		
14,200.00	6,942.81	14,381.16	7,216.44	210.96	210.60	-107.22	-633.87	-7,538.68	924.32	519.40	404.92	2.283		
14,300.00	6,941.06	14,481.15	7,216.05	213.79	213.42	-107.30	-634.65	-7,638.66	924.75	514.55	410.20	2.254		
14,400.00	6,939.31	14,581.14	7,215.66	216.62	216.25	-107.38	-635.44	-7,738.65	925.18	509.71	415.47	2.227		
14,500.00	6,937.56	14,681.13	7,215.26	219.44	219.08	-107.46	-636.22	-7,838.64	925.61	504.87	420.74	2.200		
14,600.00	6,935.81	14,781.12	7,214.87	222.27	221.90	-107.54	-637.00	-7,938.62	926.05	500.04	426.01	2.174		
14,700.00	6,934.06	14,881.11	7,214.48	225.10	224.73	-107.62	-637.78	-8,038.61	926.49	495.21	431.28	2.148		
14,800.00	6,932.31	14,981.10	7,214.08	227.93	227.56	-107.70	-638.56	-8,138.60	926.93	490.39	436.54	2.123		
14,817.75	6,932.00	14,998.85	7,214.01	228.43	228.06	-107.71	-638.70	-8,156.34	927.01	489.53	437.47	2.119 SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 32N-16B-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	1.00	0.00	3.28	3.28	-179.47	-179.97	-1.67	179.98					
100.00	100.00	101.00	100.00	3.28	3.28	-179.47	-179.97	-1.67	179.98	173.41	6.57	27.396		
200.00	200.00	201.00	200.00	3.34	3.34	-179.47	-179.97	-1.67	179.98	173.30	6.67	26.964		
300.00	300.00	299.00	300.00	3.44	3.44	-179.47	-179.97	-1.67	179.98	173.09	6.89	26.128 CC, ES		
400.00	400.00	393.19	394.17	3.60	3.58	-179.39	-181.46	-1.93	181.57	174.37	7.20	25.232		
500.00	500.00	487.12	487.98	3.81	3.76	-179.16	-185.99	-2.71	186.40	178.80	7.59	24.546		
600.00	599.98	580.50	581.05	4.05	3.97	-151.57	-193.49	-4.02	195.98	187.91	8.07	24.281		
700.00	699.86	672.81	672.76	4.32	4.21	-151.64	-203.84	-5.81	211.43	202.82	8.61	24.549		
800.00	799.72	768.61	767.62	4.62	4.49	-151.72	-217.00	-8.10	229.77	220.60	9.18	25.033		
900.00	899.58	866.87	864.90	4.93	4.81	-151.78	-230.69	-10.47	248.33	238.55	9.78	25.383		
1,000.00	999.44	965.13	962.17	5.27	5.15	-151.83	-244.39	-12.85	266.89	256.46	10.43	25.591		
1,100.00	1,099.31	1,063.40	1,059.44	5.62	5.50	-151.88	-258.09	-15.23	285.45	274.34	11.11	25.698		
1,200.00	1,199.17	1,161.66	1,156.72	5.98	5.88	-151.92	-271.79	-17.61	304.01	292.20	11.81	25.735		
1,300.00	1,299.03	1,259.92	1,253.99	6.36	6.26	-151.95	-285.48	-19.99	322.57	310.03	12.54	25.721		
1,400.00	1,398.89	1,358.18	1,351.27	6.74	6.66	-151.99	-299.18	-22.37	341.13	327.84	13.29	25.672		
1,500.00	1,498.75	1,456.45	1,448.54	7.13	7.07	-152.01	-312.88	-24.74	359.69	345.64	14.05	25.599		
1,600.00	1,598.61	1,554.71	1,545.81	7.52	7.48	-152.04	-326.58	-27.12	378.25	363.43	14.83	25.511		
1,700.00	1,698.47	1,652.97	1,643.09	7.92	7.90	-152.06	-340.27	-29.50	396.81	381.20	15.61	25.413		
1,800.00	1,798.33	1,751.23	1,740.36	8.32	8.32	-152.08	-353.97	-31.88	415.37	398.96	16.41	25.310		
1,900.00	1,898.19	1,849.50	1,837.64	8.73	8.75	-152.10	-367.67	-34.26	433.93	416.72	17.22	25.204		
2,000.00	1,998.05	1,947.76	1,934.91	9.14	9.18	-152.12	-381.37	-36.63	452.49	434.46	18.03	25.097		
2,100.00	2,097.91	2,046.02	2,032.18	9.55	9.61	-152.14	-395.06	-39.01	471.05	452.20	18.85	24.991		
2,200.00	2,197.78	2,144.28	2,129.46	9.97	10.05	-152.15	-408.76	-41.39	489.61	469.94	19.67	24.887		
2,300.00	2,297.64	2,242.55	2,226.73	10.39	10.49	-152.17	-422.46	-43.77	508.17	487.67	20.50	24.785		
2,400.00	2,397.50	2,340.81	2,324.01	10.81	10.93	-152.18	-436.16	-46.15	526.74	505.40	21.34	24.687		
2,500.00	2,497.36	2,439.07	2,421.28	11.23	11.38	-152.19	-449.85	-48.52	545.30	523.12	22.17	24.591		
2,600.00	2,597.22	2,537.33	2,518.55	11.65	11.83	-152.20	-463.55	-50.90	563.86	540.84	23.02	24.499		
2,700.00	2,697.08	2,635.59	2,615.83	12.07	12.27	-152.21	-477.25	-53.28	582.42	558.56	23.86	24.410		
2,800.00	2,796.94	2,733.86	2,713.10	12.50	12.72	-152.22	-490.95	-55.66	600.98	576.27	24.71	24.325		
2,900.00	2,896.80	2,832.12	2,810.38	12.92	13.17	-152.23	-504.64	-58.04	619.54	593.98	25.56	24.243		
3,000.00	2,996.66	2,930.38	2,907.65	13.35	13.62	-152.24	-518.34	-60.41	638.10	611.69	26.41	24.164		
3,100.00	3,096.52	3,028.64	3,004.92	13.78	14.08	-152.25	-532.04	-62.79	656.66	629.40	27.26	24.089		
3,200.00	3,196.38	3,126.91	3,102.20	14.21	14.53	-152.26	-545.73	-65.17	675.22	647.10	28.12	24.016		
3,300.00	3,296.25	3,225.17	3,199.47	14.64	14.98	-152.27	-559.43	-67.55	693.78	664.81	28.97	23.946		
3,400.00	3,396.11	3,323.43	3,296.74	15.07	15.44	-152.27	-573.13	-69.93	712.34	682.51	29.83	23.880		
3,500.00	3,495.97	3,421.69	3,394.02	15.50	15.89	-152.28	-586.83	-72.30	730.90	700.21	30.69	23.815		
3,600.00	3,595.83	3,519.96	3,491.29	15.93	16.35	-152.29	-600.52	-74.68	749.46	717.91	31.55	23.754		
3,700.00	3,695.69	3,618.22	3,588.57	16.36	16.81	-152.29	-614.22	-77.06	768.02	735.61	32.41	23.694		
3,800.00	3,795.55	3,716.48	3,685.84	16.80	17.26	-152.30	-627.92	-79.44	786.58	753.31	33.28	23.637		
3,900.00	3,895.41	3,814.74	3,783.11	17.23	17.72	-152.30	-641.62	-81.82	805.14	771.00	34.14	23.583		
4,000.00	3,995.27	3,913.01	3,880.39	17.66	18.18	-152.31	-655.31	-84.19	823.70	788.70	35.01	23.530		
4,100.00	4,095.13	4,011.27	3,977.66	18.10	18.64	-152.31	-669.01	-86.57	842.27	806.39	35.87	23.479		
4,200.00	4,194.99	4,109.53	4,074.94	18.53	19.10	-152.32	-682.71	-88.95	860.83	824.09	36.74	23.430		
4,300.00	4,294.85	4,207.79	4,172.21	18.96	19.56	-152.32	-696.41	-91.33	879.39	841.78	37.61	23.383		
4,400.00	4,394.71	4,306.06	4,269.48	19.40	20.02	-152.33	-710.10	-93.71	897.95	859.47	38.48	23.338		
4,500.00	4,494.58	4,404.32	4,366.76	19.83	20.48	-152.33	-723.80	-96.08	916.51	877.16	39.35	23.294		
4,600.00	4,594.44	4,502.58	4,464.03	20.27	20.94	-152.34	-737.50	-98.46	935.07	894.85	40.21	23.252		
4,700.00	4,694.30	4,600.84	4,561.31	20.71	21.40	-152.34	-751.20	-100.84	953.63	912.54	41.09	23.211		
4,800.00	4,794.16	4,700.90	4,658.58	21.14	21.87	-152.34	-764.89	-103.22	972.19	930.23	41.96	23.167		
4,900.00	4,894.02	4,802.63	4,755.85	21.58	22.34	-152.35	-778.59	-105.60	990.75	947.90	42.85	23.121		
5,000.00	4,993.88	4,904.37	4,853.13	22.01	22.82	-152.35	-792.29	-107.97	1,009.31	965.57	43.74	23.076		
5,100.00	5,093.74	5,006.11	4,950.40	22.45	23.30	-152.35	-805.99	-110.35	1,027.87	983.25	44.63	23.033		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 32N-16B-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,107.85	5,047.68	22.89	23.78	-152.36	-819.68	-112.73	1,046.43	1,000.92	45.52	22.991		
5,300.00	5,293.46	5,209.58	5,144.95	23.32	24.26	-152.36	-833.38	-115.11	1,064.99	1,018.59	46.40	22.950		
5,400.00	5,393.32	5,288.68	5,242.22	23.76	24.63	-152.36	-847.08	-117.49	1,083.56	1,036.36	47.19	22.961		
5,500.00	5,493.18	5,386.94	5,339.50	24.20	25.09	-152.37	-860.78	-119.86	1,102.12	1,054.05	48.06	22.930		
5,600.00	5,593.05	5,485.20	5,436.77	24.64	25.55	-152.37	-874.47	-122.24	1,120.68	1,071.74	48.94	22.899		
5,700.00	5,692.91	5,583.47	5,534.05	25.07	26.01	-152.37	-888.17	-124.62	1,139.24	1,089.42	49.81	22.870		
5,800.00	5,792.77	5,681.73	5,631.32	25.51	26.48	-152.38	-901.87	-127.00	1,157.80	1,107.11	50.69	22.841		
5,900.00	5,892.63	5,779.99	5,728.59	25.95	26.94	-152.38	-915.57	-129.38	1,176.36	1,124.80	51.56	22.814		
6,000.00	5,992.49	5,878.25	5,825.87	26.39	27.40	-152.38	-929.26	-131.75	1,194.92	1,142.48	52.44	22.787		
6,100.00	6,092.35	5,976.52	5,923.14	26.82	27.87	-152.38	-942.96	-134.13	1,213.48	1,160.17	53.32	22.760		
6,200.00	6,192.21	6,074.78	6,020.42	27.26	28.33	-152.39	-956.66	-136.51	1,232.04	1,177.85	54.19	22.735		
6,300.00	6,292.07	6,173.04	6,117.69	27.70	28.79	-152.39	-970.36	-138.89	1,250.60	1,195.53	55.07	22.710		
6,400.00	6,391.93	6,271.30	6,214.96	28.14	29.26	-152.39	-984.05	-141.27	1,269.16	1,213.22	55.94	22.686		
6,500.00	6,491.69	6,369.51	6,312.19	28.58	29.72	-112.80	-997.74	-143.64	1,287.69	1,230.87	56.82	22.662		
6,600.00	6,589.80	6,466.46	6,408.15	29.02	30.18	-97.90	-1,011.26	-145.99	1,305.95	1,248.25	57.70	22.634		
6,700.00	6,683.86	6,562.79	6,503.41	29.46	30.63	-93.80	-1,024.69	-150.48	1,323.95	1,265.36	58.59	22.597		
6,800.00	6,771.56	6,664.71	6,602.45	29.92	31.10	-91.90	-1,038.78	-169.37	1,341.51	1,281.96	59.55	22.527		
6,900.00	6,850.72	6,772.76	6,702.74	30.40	31.56	-90.85	-1,053.20	-206.53	1,358.14	1,297.56	60.58	22.420		
7,000.00	6,919.40	6,887.83	6,801.04	30.96	32.02	-90.27	-1,067.52	-264.30	1,373.34	1,311.64	61.70	22.260		
7,100.00	6,975.92	7,010.61	6,892.72	31.62	32.46	-90.00	-1,081.11	-344.54	1,386.54	1,323.57	62.97	22.020		
7,200.00	7,018.87	7,141.26	6,971.60	32.44	32.93	-89.94	-1,093.09	-447.71	1,397.17	1,332.66	64.51	21.658		
7,300.00	7,047.21	7,279.13	7,030.38	33.42	33.62	-90.00	-1,102.43	-571.78	1,404.69	1,338.21	66.48	21.130		
7,400.00	7,060.23	7,422.48	7,062.01	34.55	34.84	-90.13	-1,108.09	-711.16	1,408.62	1,339.65	68.97	20.424		
7,500.00	7,060.03	7,545.78	7,065.80	35.83	36.25	-90.23	-1,109.69	-834.31	1,409.17	1,337.46	71.71	19.650		
7,600.00	7,058.28	7,645.77	7,065.41	37.28	37.61	-90.29	-1,110.50	-934.29	1,409.24	1,334.68	74.55	18.902		
7,700.00	7,056.53	7,745.76	7,065.02	38.89	39.13	-90.34	-1,111.31	-1,034.28	1,409.30	1,331.59	77.71	18.136		
7,800.00	7,054.78	7,845.75	7,064.62	40.63	40.80	-90.40	-1,112.13	-1,134.27	1,409.37	1,328.23	81.14	17.369		
7,900.00	7,053.03	7,945.75	7,064.23	42.50	42.60	-90.45	-1,112.94	-1,234.25	1,409.44	1,324.61	84.83	16.616		
8,000.00	7,051.28	8,045.74	7,063.84	44.47	44.52	-90.51	-1,113.75	-1,334.24	1,409.51	1,320.79	88.72	15.887		
8,100.00	7,049.53	8,145.73	7,063.44	46.53	46.53	-90.56	-1,114.56	-1,434.23	1,409.58	1,316.77	92.81	15.188		
8,200.00	7,047.78	8,245.72	7,063.05	48.67	48.63	-90.62	-1,115.37	-1,534.21	1,409.65	1,312.60	97.06	14.524		
8,300.00	7,046.03	8,345.71	7,062.66	50.89	50.80	-90.68	-1,116.18	-1,634.20	1,409.73	1,308.28	101.45	13.896		
8,400.00	7,044.28	8,445.70	7,062.27	53.16	53.04	-90.73	-1,117.00	-1,734.19	1,409.80	1,303.83	105.97	13.304		
8,500.00	7,042.53	8,545.69	7,061.87	55.49	55.33	-90.79	-1,117.81	-1,834.17	1,409.88	1,299.28	110.60	12.747		
8,600.00	7,040.78	8,645.68	7,061.48	57.86	57.68	-90.84	-1,118.62	-1,934.16	1,409.96	1,294.63	115.33	12.226		
8,700.00	7,039.03	8,745.67	7,061.09	60.28	60.07	-90.90	-1,119.43	-2,034.15	1,410.04	1,289.90	120.14	11.737		
8,800.00	7,037.28	8,845.66	7,060.69	62.74	62.50	-90.95	-1,120.24	-2,134.13	1,410.12	1,285.09	125.03	11.278		
8,900.00	7,035.53	8,945.65	7,060.30	65.23	64.97	-91.01	-1,121.05	-2,234.12	1,410.20	1,280.22	129.98	10.849		
9,000.00	7,033.78	9,045.64	7,059.91	67.74	67.46	-91.06	-1,121.87	-2,334.11	1,410.29	1,275.29	135.00	10.447		
9,100.00	7,032.03	9,145.63	7,059.51	70.29	69.99	-91.12	-1,122.68	-2,434.09	1,410.37	1,270.30	140.07	10.069		
9,200.00	7,030.28	9,245.63	7,059.12	72.85	72.53	-91.17	-1,123.49	-2,534.08	1,410.46	1,265.27	145.18	9.715		
9,300.00	7,028.54	9,345.62	7,058.73	75.44	75.11	-91.23	-1,124.30	-2,634.07	1,410.54	1,260.20	150.34	9.382		
9,400.00	7,026.79	9,445.61	7,058.33	78.05	77.70	-91.28	-1,125.11	-2,734.05	1,410.63	1,255.10	155.54	9.069		
9,500.00	7,025.04	9,545.60	7,057.94	80.67	80.31	-91.34	-1,125.92	-2,834.04	1,410.72	1,249.95	160.77	8.775		
9,600.00	7,023.29	9,645.59	7,057.55	83.31	82.93	-91.39	-1,126.74	-2,934.03	1,410.81	1,244.78	166.03	8.497		
9,700.00	7,021.54	9,745.58	7,057.15	85.96	85.57	-91.45	-1,127.55	-3,034.01	1,410.91	1,239.58	171.32	8.235		
9,800.00	7,019.79	9,845.57	7,056.76	88.63	88.23	-91.50	-1,128.36	-3,134.00	1,411.00	1,234.36	176.64	7.988		
9,900.00	7,018.04	9,945.56	7,056.37	91.30	90.89	-91.56	-1,129.17	-3,233.99	1,411.10	1,229.12	181.98	7.754		
10,000.00	7,016.29	10,045.55	7,055.98	93.99	93.57	-91.61	-1,129.98	-3,333.97	1,411.19	1,223.85	187.34	7.533		
10,100.00	7,014.54	10,145.54	7,055.58	96.69	96.26	-91.67	-1,130.79	-3,433.96	1,411.29	1,218.57	192.72	7.323		
10,200.00	7,012.79	10,245.53	7,055.19	99.40	98.96	-91.72	-1,131.61	-3,533.95	1,411.39	1,213.27	198.12	7.124		
10,300.00	7,011.04	10,345.52	7,054.80	102.11	101.67	-91.78	-1,132.42	-3,633.93	1,411.49	1,207.95	203.54	6.935		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 32N-16B-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	10,445.52	7,054.40	104.83	104.38	-91.83	-1,133.23	-3,733.92	1,411.59	1,202.62	208.97	6.755		
10,500.00	7,007.54	10,545.51	7,054.01	107.56	107.10	-91.89	-1,134.04	-3,833.91	1,411.69	1,197.28	214.41	6.584		
10,600.00	7,005.79	10,645.50	7,053.62	110.30	109.83	-91.94	-1,134.85	-3,933.89	1,411.80	1,191.93	219.87	6.421		
10,700.00	7,004.04	10,745.49	7,053.22	113.04	112.57	-92.00	-1,135.66	-4,033.88	1,411.90	1,186.57	225.34	6.266		
10,800.00	7,002.29	10,845.48	7,052.83	115.79	115.31	-92.05	-1,136.48	-4,133.87	1,412.01	1,181.19	230.82	6.117		
10,900.00	7,000.54	10,945.47	7,052.44	118.54	118.05	-92.11	-1,137.29	-4,233.85	1,412.12	1,175.81	236.31	5.976		
11,000.00	6,998.79	11,045.46	7,052.04	121.30	120.81	-92.16	-1,138.10	-4,333.84	1,412.23	1,170.42	241.81	5.840		
11,100.00	6,997.04	11,145.45	7,051.65	124.06	123.56	-92.22	-1,138.91	-4,433.83	1,412.34	1,165.02	247.32	5.711		
11,200.00	6,995.29	11,245.44	7,051.26	126.83	126.33	-92.27	-1,139.72	-4,533.81	1,412.45	1,159.62	252.83	5.586		
11,300.00	6,993.54	11,345.43	7,050.86	129.60	129.09	-92.32	-1,140.53	-4,633.80	1,412.56	1,154.21	258.36	5.467		
11,400.00	6,991.80	11,445.42	7,050.47	132.37	131.86	-92.38	-1,141.35	-4,733.79	1,412.68	1,148.79	263.89	5.353		
11,500.00	6,990.05	11,545.41	7,050.08	135.15	134.63	-92.43	-1,142.16	-4,833.77	1,412.79	1,143.37	269.43	5.244		
11,600.00	6,988.30	11,645.40	7,049.69	137.93	137.41	-92.49	-1,142.97	-4,933.76	1,412.91	1,137.94	274.97	5.138		
11,700.00	6,986.55	11,745.40	7,049.29	140.72	140.19	-92.54	-1,143.78	-5,033.75	1,413.03	1,132.51	280.52	5.037		
11,800.00	6,984.80	11,845.39	7,048.90	143.50	142.97	-92.60	-1,144.59	-5,133.73	1,413.15	1,127.07	286.08	4.940		
11,900.00	6,983.05	11,945.38	7,048.51	146.29	145.76	-92.65	-1,145.40	-5,233.72	1,413.27	1,121.63	291.64	4.846		
12,000.00	6,981.30	12,045.37	7,048.11	149.09	148.55	-92.71	-1,146.22	-5,333.71	1,413.39	1,116.19	297.20	4.756		
12,100.00	6,979.55	12,145.36	7,047.72	151.88	151.34	-92.76	-1,147.03	-5,433.69	1,413.52	1,110.75	302.77	4.669		
12,200.00	6,977.80	12,245.35	7,047.33	154.68	154.13	-92.82	-1,147.84	-5,533.68	1,413.64	1,105.30	308.34	4.585		
12,300.00	6,976.05	12,345.34	7,046.93	157.48	156.93	-92.87	-1,148.65	-5,633.67	1,413.77	1,099.85	313.92	4.504		
12,400.00	6,974.30	12,445.33	7,046.54	160.28	159.73	-92.93	-1,149.46	-5,733.65	1,413.90	1,094.40	319.50	4.425		
12,500.00	6,972.55	12,545.32	7,046.15	163.08	162.53	-92.98	-1,150.27	-5,833.64	1,414.02	1,088.94	325.08	4.350		
12,600.00	6,970.80	12,645.31	7,045.75	165.89	165.33	-93.04	-1,151.09	-5,933.63	1,414.15	1,083.48	330.67	4.277		
12,700.00	6,969.05	12,745.30	7,045.36	168.69	168.13	-93.09	-1,151.90	-6,033.61	1,414.29	1,078.03	336.26	4.206		
12,800.00	6,967.30	12,845.29	7,044.97	171.50	170.94	-93.15	-1,152.71	-6,133.60	1,414.42	1,072.57	341.85	4.138		
12,900.00	6,965.55	12,945.28	7,044.57	174.31	173.75	-93.20	-1,153.52	-6,233.59	1,414.55	1,067.11	347.45	4.071		
13,000.00	6,963.80	13,045.28	7,044.18	177.12	176.56	-93.26	-1,154.33	-6,333.58	1,414.69	1,061.64	353.04	4.007		
13,100.00	6,962.05	13,145.27	7,043.79	179.94	179.37	-93.31	-1,155.14	-6,433.56	1,414.82	1,056.18	358.64	3.945		
13,200.00	6,960.30	13,245.26	7,043.40	182.75	182.18	-93.37	-1,155.96	-6,533.55	1,414.96	1,050.72	364.24	3.885		
13,300.00	6,958.55	13,345.25	7,043.00	185.57	184.99	-93.42	-1,156.77	-6,633.54	1,415.10	1,045.25	369.85	3.826		
13,400.00	6,956.80	13,445.24	7,042.61	188.38	187.81	-93.48	-1,157.58	-6,733.52	1,415.24	1,039.79	375.45	3.769		
13,500.00	6,955.05	13,545.23	7,042.22	191.20	190.62	-93.53	-1,158.39	-6,833.51	1,415.38	1,034.33	381.06	3.714		
13,600.00	6,953.31	13,645.22	7,041.82	194.02	193.44	-93.58	-1,159.20	-6,933.50	1,415.53	1,028.86	386.67	3.661		
13,700.00	6,951.56	13,745.21	7,041.43	196.84	196.26	-93.64	-1,160.01	-7,033.48	1,415.67	1,023.40	392.28	3.609		
13,800.00	6,949.81	13,845.20	7,041.04	199.67	199.08	-93.69	-1,160.82	-7,133.47	1,415.82	1,017.93	397.89	3.558		
13,900.00	6,948.06	13,945.19	7,040.64	202.49	201.90	-93.75	-1,161.64	-7,233.46	1,415.96	1,012.47	403.50	3.509		
14,000.00	6,946.31	14,045.18	7,040.25	205.31	204.72	-93.80	-1,162.45	-7,333.44	1,416.11	1,007.00	409.11	3.461		
14,100.00	6,944.56	14,145.17	7,039.86	208.14	207.55	-93.86	-1,163.26	-7,433.43	1,416.26	1,001.54	414.73	3.415		
14,200.00	6,942.81	14,245.16	7,039.46	210.96	210.37	-93.91	-1,164.07	-7,533.42	1,416.41	996.07	420.34	3.370		
14,300.00	6,941.06	14,345.16	7,039.07	213.79	213.19	-93.97	-1,164.88	-7,633.40	1,416.56	990.61	425.96	3.326		
14,400.00	6,939.31	14,445.15	7,038.68	216.62	216.02	-94.02	-1,165.69	-7,733.39	1,416.72	985.15	431.57	3.283		
14,500.00	6,937.56	14,545.14	7,038.28	219.44	218.85	-94.08	-1,166.51	-7,833.38	1,416.87	979.68	437.19	3.241		
14,600.00	6,935.81	14,645.13	7,037.89	222.27	221.67	-94.13	-1,167.32	-7,933.36	1,417.03	974.22	442.81	3.200		
14,700.00	6,934.06	14,745.12	7,037.50	225.10	224.50	-94.18	-1,168.13	-8,033.35	1,417.19	968.76	448.42	3.160		
14,800.00	6,932.31	14,845.11	7,037.11	227.93	227.33	-94.24	-1,168.94	-8,133.34	1,417.34	963.30	454.04	3.122		
14,817.75	6,932.00	14,862.86	7,037.04	228.43	227.83	-94.25	-1,169.09	-8,151.08	1,417.37	962.33	455.04	3.115 SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 32N-16C-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	3.28	3.28	-179.52	-99.82	-0.83	99.82					
100.00	100.00	100.00	100.00	3.28	3.28	-179.52	-99.82	-0.83	99.82	93.25	6.57	15.195		
200.00	200.00	200.00	200.00	3.34	3.34	-179.52	-99.82	-0.83	99.82	93.15	6.67	14.957		
300.00	300.00	300.00	300.00	3.44	3.44	-179.52	-99.82	-0.83	99.82	92.93	6.89	14.489		
400.00	400.00	400.00	400.00	3.60	3.60	-179.52	-99.82	-0.83	99.82	92.62	7.21	13.852		
500.00	500.00	500.00	500.00	3.81	3.81	-179.52	-99.82	-0.83	99.82	92.21	7.61	13.114 CC, ES		
600.00	599.98	599.31	599.31	4.05	4.04	-152.57	-99.88	-0.85	101.43	93.35	8.09	12.541		
700.00	699.86	695.66	695.63	4.32	4.28	-153.41	-102.09	-1.37	108.02	99.41	8.61	12.547		
800.00	799.72	791.47	791.28	4.62	4.55	-153.87	-107.42	-2.61	118.26	109.08	9.18	12.882		
900.00	899.58	886.55	885.97	4.93	4.83	-153.90	-115.78	-4.56	131.71	121.92	9.79	13.452		
1,000.00	999.44	984.83	983.64	5.27	5.15	-153.72	-126.36	-7.04	147.12	136.69	10.43	14.102		
1,100.00	1,099.31	1,083.63	1,081.83	5.62	5.48	-153.57	-137.03	-9.53	162.56	151.45	11.11	14.637		
1,200.00	1,199.17	1,182.43	1,180.03	5.98	5.84	-153.45	-147.69	-12.02	177.99	166.19	11.81	15.075		
1,300.00	1,299.03	1,281.23	1,278.22	6.36	6.21	-153.35	-158.36	-14.51	193.43	180.90	12.53	15.435		
1,400.00	1,398.89	1,380.03	1,376.41	6.74	6.59	-153.27	-169.03	-17.01	208.86	195.59	13.27	15.734		
1,500.00	1,498.75	1,478.83	1,474.60	7.13	6.97	-153.19	-179.69	-19.50	224.30	210.27	14.03	15.983		
1,600.00	1,598.61	1,577.64	1,572.79	7.52	7.37	-153.13	-190.36	-21.99	239.74	224.93	14.81	16.191		
1,700.00	1,698.47	1,676.44	1,670.99	7.92	7.77	-153.07	-201.03	-24.48	255.17	239.58	15.59	16.367		
1,800.00	1,798.33	1,775.24	1,769.18	8.32	8.18	-153.02	-211.69	-26.98	270.61	254.23	16.39	16.516		
1,900.00	1,898.19	1,874.04	1,867.37	8.73	8.60	-152.97	-222.36	-29.47	286.05	268.86	17.19	16.643		
2,000.00	1,998.05	1,972.84	1,965.56	9.14	9.01	-152.93	-233.03	-31.96	301.49	283.49	18.00	16.752		
2,100.00	2,097.91	2,071.64	2,063.75	9.55	9.44	-152.90	-243.69	-34.45	316.93	298.11	18.81	16.845		
2,200.00	2,197.78	2,170.44	2,161.95	9.97	9.86	-152.86	-254.36	-36.95	332.36	312.73	19.64	16.926		
2,300.00	2,297.64	2,269.24	2,260.14	10.39	10.29	-152.83	-265.02	-39.44	347.80	327.34	20.46	16.997		
2,400.00	2,397.50	2,368.04	2,358.33	10.81	10.72	-152.81	-275.69	-41.93	363.24	341.95	21.29	17.058		
2,500.00	2,497.36	2,466.84	2,456.52	11.23	11.15	-152.78	-286.36	-44.42	378.68	356.55	22.13	17.112		
2,600.00	2,597.22	2,565.65	2,554.71	11.65	11.58	-152.76	-297.02	-46.92	394.12	371.15	22.97	17.159		
2,700.00	2,697.08	2,664.45	2,652.90	12.07	12.02	-152.73	-307.69	-49.41	409.55	385.74	23.81	17.201		
2,800.00	2,796.94	2,763.25	2,751.10	12.50	12.46	-152.71	-318.36	-51.90	424.99	400.34	24.65	17.238		
2,900.00	2,896.80	2,862.05	2,849.29	12.92	12.89	-152.70	-329.02	-54.39	440.43	414.93	25.50	17.271		
3,000.00	2,996.66	2,960.85	2,947.48	13.35	13.33	-152.68	-339.69	-56.89	455.87	429.52	26.35	17.300		
3,100.00	3,096.52	3,059.65	3,045.67	13.78	13.77	-152.66	-350.35	-59.38	471.31	444.11	27.20	17.327		
3,200.00	3,196.38	3,158.45	3,143.86	14.21	14.22	-152.65	-361.02	-61.87	486.75	458.69	28.05	17.350		
3,300.00	3,296.25	3,257.25	3,242.06	14.64	14.66	-152.63	-371.69	-64.36	502.19	473.28	28.91	17.371		
3,400.00	3,396.11	3,356.05	3,340.25	15.07	15.10	-152.62	-382.35	-66.86	517.62	487.86	29.77	17.390		
3,500.00	3,495.97	3,454.85	3,438.44	15.50	15.55	-152.61	-393.02	-69.35	533.06	502.44	30.62	17.407		
3,600.00	3,595.83	3,553.66	3,536.63	15.93	15.99	-152.59	-403.69	-71.84	548.50	517.02	31.48	17.422		
3,700.00	3,695.69	3,652.46	3,634.82	16.36	16.44	-152.58	-414.35	-74.33	563.94	531.60	32.34	17.436		
3,800.00	3,795.55	3,751.26	3,733.02	16.80	16.88	-152.57	-425.02	-76.83	579.38	546.17	33.20	17.449		
3,900.00	3,895.41	3,850.06	3,831.21	17.23	17.33	-152.56	-435.68	-79.32	594.82	560.75	34.07	17.460		
4,000.00	3,995.27	3,948.86	3,929.40	17.66	17.78	-152.55	-446.35	-81.81	610.26	575.33	34.93	17.471		
4,100.00	4,095.13	4,047.66	4,027.59	18.10	18.23	-152.54	-457.02	-84.30	625.69	589.90	35.79	17.480		
4,200.00	4,194.99	4,146.46	4,125.78	18.53	18.67	-152.54	-467.68	-86.79	641.13	604.47	36.66	17.489		
4,300.00	4,294.85	4,245.26	4,223.98	18.96	19.12	-152.53	-478.35	-89.29	656.57	619.05	37.52	17.497		
4,400.00	4,394.71	4,344.06	4,322.17	19.40	19.57	-152.52	-489.02	-91.78	672.01	633.62	38.39	17.504		
4,500.00	4,494.58	4,442.86	4,420.36	19.83	20.02	-152.51	-499.68	-94.27	687.45	648.19	39.26	17.511		
4,600.00	4,594.44	4,541.67	4,518.55	20.27	20.47	-152.50	-510.35	-96.76	702.89	662.76	40.13	17.517		
4,700.00	4,694.30	4,640.47	4,616.74	20.71	20.92	-152.50	-521.01	-99.26	718.33	677.33	40.99	17.522		
4,800.00	4,794.16	4,739.27	4,714.94	21.14	21.37	-152.49	-531.68	-101.75	733.77	691.90	41.86	17.528		
4,900.00	4,894.02	4,838.07	4,813.13	21.58	21.82	-152.48	-542.35	-104.24	749.21	706.47	42.73	17.532		
5,000.00	4,993.88	4,936.87	4,911.32	22.01	22.27	-152.48	-553.01	-106.73	764.64	721.04	43.60	17.537		
5,100.00	5,093.74	5,035.67	5,009.51	22.45	22.72	-152.47	-563.68	-109.23	780.08	735.61	44.47	17.541		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 32N-16C-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,134.47	5,107.70	22.89	23.17	-152.47	-574.35	-111.72	795.52	750.18	45.34	17.544		
5,300.00	5,293.46	5,233.27	5,205.89	23.32	23.63	-152.46	-585.01	-114.21	810.96	764.75	46.22	17.547		
5,400.00	5,393.32	5,332.07	5,304.09	23.76	24.08	-152.46	-595.68	-116.70	826.40	779.31	47.09	17.551		
5,500.00	5,493.18	5,430.87	5,402.28	24.20	24.53	-152.45	-606.34	-119.20	841.84	793.88	47.96	17.553		
5,600.00	5,593.05	5,529.68	5,500.47	24.64	24.98	-152.45	-617.01	-121.69	857.28	808.45	48.83	17.556		
5,700.00	5,692.91	5,628.48	5,598.66	25.07	25.43	-152.44	-627.68	-124.18	872.72	823.01	49.70	17.558		
5,800.00	5,792.77	5,727.28	5,696.85	25.51	25.89	-152.44	-638.34	-126.67	888.16	837.58	50.58	17.561		
5,900.00	5,892.63	5,826.08	5,795.05	25.95	26.34	-152.43	-649.01	-129.17	903.59	852.14	51.45	17.563		
6,000.00	5,992.49	5,924.88	5,893.24	26.39	26.79	-152.43	-659.68	-131.66	919.03	866.71	52.32	17.564		
6,100.00	6,092.35	6,023.68	5,991.43	26.82	27.25	-152.42	-670.34	-134.15	934.47	881.27	53.20	17.566		
6,200.00	6,192.21	6,122.48	6,089.62	27.26	27.70	-152.42	-681.01	-136.64	949.91	895.84	54.07	17.568		
6,300.00	6,292.07	6,221.28	6,187.81	27.70	28.15	-152.42	-691.67	-139.14	965.35	910.40	54.95	17.569		
6,400.00	6,391.93	6,320.08	6,286.01	28.14	28.60	-152.41	-702.34	-141.63	980.79	924.97	55.82	17.570		
6,500.00	6,491.69	6,418.83	6,384.15	28.58	29.06	-112.99	-713.00	-144.12	996.20	939.50	56.70	17.571		
6,600.00	6,589.80	6,516.32	6,481.03	29.02	29.51	-98.58	-723.53	-146.58	1,011.41	953.84	57.57	17.568		
6,700.00	6,683.86	6,614.00	6,577.92	29.46	29.95	-95.04	-734.08	-152.24	1,026.62	968.16	58.47	17.558		
6,800.00	6,771.56	6,717.12	6,678.14	29.92	30.41	-93.66	-745.12	-173.37	1,041.67	982.24	59.43	17.527		
6,900.00	6,850.72	6,826.01	6,778.78	30.40	30.87	-93.07	-756.35	-213.01	1,056.10	995.65	60.45	17.471		
7,000.00	6,919.40	6,941.33	6,876.39	30.96	31.33	-92.90	-767.43	-273.12	1,069.43	1,007.89	61.54	17.377		
7,100.00	6,975.92	7,063.55	6,966.26	31.62	31.78	-92.95	-777.85	-355.02	1,081.12	1,018.34	62.78	17.221		
7,200.00	7,018.87	7,192.63	7,042.43	32.44	32.32	-93.14	-786.96	-458.55	1,090.60	1,026.32	64.28	16.967		
7,300.00	7,047.21	7,327.82	7,098.26	33.42	33.20	-93.36	-794.03	-581.19	1,097.33	1,031.13	66.19	16.577		
7,400.00	7,060.23	7,467.51	7,127.61	34.55	34.54	-93.57	-798.33	-717.41	1,100.86	1,032.23	68.63	16.040		
7,500.00	7,060.03	7,587.71	7,130.77	35.83	35.98	-93.68	-799.66	-837.48	1,101.39	1,030.06	71.33	15.441		
7,600.00	7,058.28	7,687.70	7,130.34	37.28	37.37	-93.75	-800.44	-937.47	1,101.50	1,027.32	74.18	14.849		
7,700.00	7,056.53	7,787.70	7,129.91	38.89	38.92	-93.82	-801.22	-1,037.46	1,101.61	1,024.27	77.34	14.243		
7,800.00	7,054.78	7,887.69	7,129.47	40.63	40.62	-93.89	-802.00	-1,137.45	1,101.73	1,020.94	80.78	13.638		
7,900.00	7,053.03	7,987.68	7,129.04	42.50	42.45	-93.96	-802.77	-1,237.43	1,101.84	1,017.37	84.47	13.044		
8,000.00	7,051.28	8,087.67	7,128.60	44.47	44.38	-94.02	-803.55	-1,337.42	1,101.96	1,013.59	88.37	12.470		
8,100.00	7,049.53	8,187.66	7,128.17	46.53	46.41	-94.09	-804.33	-1,437.41	1,102.07	1,009.62	92.45	11.921		
8,200.00	7,047.78	8,287.65	7,127.74	48.67	48.52	-94.16	-805.11	-1,537.40	1,102.19	1,005.49	96.70	11.398		
8,300.00	7,046.03	8,387.64	7,127.30	50.89	50.71	-94.23	-805.88	-1,637.38	1,102.31	1,001.22	101.09	10.904		
8,400.00	7,044.28	8,487.63	7,126.87	53.16	52.96	-94.30	-806.66	-1,737.37	1,102.44	996.83	105.60	10.439		
8,500.00	7,042.53	8,587.63	7,126.43	55.49	55.27	-94.36	-807.44	-1,837.36	1,102.56	992.33	110.23	10.003		
8,600.00	7,040.78	8,687.62	7,126.00	57.86	57.63	-94.43	-808.22	-1,937.35	1,102.69	987.74	114.94	9.593		
8,700.00	7,039.03	8,787.61	7,125.57	60.28	60.03	-94.50	-808.99	-2,037.33	1,102.81	983.07	119.75	9.210		
8,800.00	7,037.28	8,887.60	7,125.13	62.74	62.47	-94.57	-809.77	-2,137.32	1,102.94	978.32	124.62	8.850		
8,900.00	7,035.53	8,987.59	7,124.70	65.23	64.94	-94.64	-810.55	-2,237.31	1,103.07	973.51	129.56	8.514		
9,000.00	7,033.78	9,087.58	7,124.26	67.74	67.45	-94.70	-811.32	-2,337.29	1,103.20	968.64	134.56	8.198		
9,100.00	7,032.03	9,187.57	7,123.83	70.29	69.98	-94.77	-812.10	-2,437.28	1,103.34	963.72	139.62	7.903		
9,200.00	7,030.28	9,287.57	7,123.40	72.85	72.53	-94.84	-812.88	-2,537.27	1,103.47	958.76	144.71	7.625		
9,300.00	7,028.54	9,387.56	7,122.96	75.44	75.11	-94.91	-813.66	-2,637.26	1,103.61	953.76	149.85	7.365		
9,400.00	7,026.79	9,487.55	7,122.53	78.05	77.71	-94.98	-814.43	-2,737.24	1,103.75	948.72	155.03	7.120		
9,500.00	7,025.04	9,587.54	7,122.10	80.67	80.32	-95.04	-815.21	-2,837.23	1,103.89	943.65	160.24	6.889		
9,600.00	7,023.29	9,687.53	7,121.66	83.31	82.95	-95.11	-815.99	-2,937.22	1,104.03	938.55	165.48	6.672		
9,700.00	7,021.54	9,787.52	7,121.23	85.96	85.60	-95.18	-816.77	-3,037.21	1,104.17	933.42	170.75	6.467		
9,800.00	7,019.79	9,887.51	7,120.79	88.63	88.26	-95.25	-817.54	-3,137.19	1,104.31	928.28	176.04	6.273		
9,900.00	7,018.04	9,987.50	7,120.36	91.30	90.93	-95.32	-818.32	-3,237.18	1,104.46	923.11	181.35	6.090		
10,000.00	7,016.29	10,087.50	7,119.93	93.99	93.61	-95.38	-819.10	-3,337.17	1,104.61	917.92	186.69	5.917		
10,100.00	7,014.54	10,187.49	7,119.49	96.69	96.30	-95.45	-819.87	-3,437.16	1,104.75	912.72	192.04	5.753		
10,200.00	7,012.79	10,287.48	7,119.06	99.40	99.00	-95.52	-820.65	-3,537.14	1,104.90	907.50	197.41	5.597		
10,300.00	7,011.04	10,387.47	7,118.62	102.11	101.71	-95.59	-821.43	-3,637.13	1,105.06	902.26	202.79	5.449		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 32N-16C-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	10,487.46	7,118.19	104.83	104.43	-95.65	-822.21	-3,737.12	1,105.21	897.02	208.19	5.309		
10,500.00	7,007.54	10,587.45	7,117.76	107.56	107.16	-95.72	-822.98	-3,837.11	1,105.36	891.76	213.60	5.175		
10,600.00	7,005.79	10,687.44	7,117.32	110.30	109.89	-95.79	-823.76	-3,937.09	1,105.52	886.50	219.03	5.047		
10,700.00	7,004.04	10,787.44	7,116.89	113.04	112.63	-95.86	-824.54	-4,037.08	1,105.68	881.22	224.46	4.926		
10,800.00	7,002.29	10,887.43	7,116.45	115.79	115.37	-95.92	-825.32	-4,137.07	1,105.84	875.93	229.90	4.810		
10,900.00	7,000.54	10,987.42	7,116.02	118.54	118.12	-95.99	-826.09	-4,237.06	1,106.00	870.64	235.36	4.699		
11,000.00	6,998.79	11,087.41	7,115.59	121.30	120.87	-96.06	-826.87	-4,337.04	1,106.16	865.34	240.82	4.593		
11,100.00	6,997.04	11,187.40	7,115.15	124.06	123.63	-96.13	-827.65	-4,437.03	1,106.33	860.04	246.29	4.492		
11,200.00	6,995.29	11,287.39	7,114.72	126.83	126.40	-96.20	-828.42	-4,537.02	1,106.49	854.73	251.76	4.395		
11,300.00	6,993.54	11,387.38	7,114.29	129.60	129.16	-96.26	-829.20	-4,637.00	1,106.66	849.41	257.25	4.302		
11,400.00	6,991.80	11,487.37	7,113.85	132.37	131.94	-96.33	-829.98	-4,736.99	1,106.83	844.09	262.73	4.213		
11,500.00	6,990.05	11,587.37	7,113.42	135.15	134.71	-96.40	-830.76	-4,836.98	1,107.00	838.77	268.23	4.127		
11,600.00	6,988.30	11,687.36	7,112.98	137.93	137.49	-96.47	-831.53	-4,936.97	1,107.17	833.44	273.73	4.045		
11,700.00	6,986.55	11,787.35	7,112.55	140.72	140.27	-96.53	-832.31	-5,036.95	1,107.34	828.11	279.23	3.966		
11,800.00	6,984.80	11,887.34	7,112.12	143.50	143.06	-96.60	-833.09	-5,136.94	1,107.52	822.78	284.74	3.890		
11,900.00	6,983.05	11,987.33	7,111.68	146.29	145.84	-96.67	-833.87	-5,236.93	1,107.70	817.44	290.25	3.816		
12,000.00	6,981.30	12,087.32	7,111.25	149.09	148.63	-96.74	-834.64	-5,336.92	1,107.87	812.11	295.77	3.746		
12,100.00	6,979.55	12,187.31	7,110.81	151.88	151.43	-96.80	-835.42	-5,436.90	1,108.05	806.77	301.28	3.678		
12,200.00	6,977.80	12,287.31	7,110.38	154.68	154.22	-96.87	-836.20	-5,536.89	1,108.23	801.43	306.81	3.612		
12,300.00	6,976.05	12,387.30	7,109.95	157.48	157.02	-96.94	-836.97	-5,636.88	1,108.42	796.09	312.33	3.549		
12,400.00	6,974.30	12,487.29	7,109.51	160.28	159.82	-97.00	-837.75	-5,736.87	1,108.60	790.74	317.86	3.488		
12,500.00	6,972.55	12,587.28	7,109.08	163.08	162.62	-97.07	-838.53	-5,836.85	1,108.79	785.40	323.39	3.429		
12,600.00	6,970.80	12,687.27	7,108.64	165.89	165.42	-97.14	-839.31	-5,936.84	1,108.97	780.06	328.92	3.372		
12,700.00	6,969.05	12,787.26	7,108.21	168.69	168.23	-97.21	-840.08	-6,036.83	1,109.16	774.71	334.45	3.316		
12,800.00	6,967.30	12,887.25	7,107.78	171.50	171.04	-97.27	-840.86	-6,136.82	1,109.35	769.37	339.98	3.263		
12,900.00	6,965.55	12,987.24	7,107.34	174.31	173.84	-97.34	-841.64	-6,236.80	1,109.54	764.03	345.52	3.211		
13,000.00	6,963.80	13,087.24	7,106.91	177.12	176.65	-97.41	-842.42	-6,336.79	1,109.74	758.68	351.05	3.161		
13,100.00	6,962.05	13,187.23	7,106.48	179.94	179.47	-97.48	-843.19	-6,436.78	1,109.93	753.34	356.59	3.113		
13,200.00	6,960.30	13,287.22	7,106.04	182.75	182.28	-97.54	-843.97	-6,536.76	1,110.13	748.00	362.13	3.066		
13,300.00	6,958.55	13,387.21	7,105.61	185.57	185.09	-97.61	-844.75	-6,636.75	1,110.33	742.66	367.67	3.020		
13,400.00	6,956.80	13,487.20	7,105.17	188.38	187.91	-97.68	-845.53	-6,736.74	1,110.53	737.32	373.21	2.976		
13,500.00	6,955.05	13,587.19	7,104.74	191.20	190.73	-97.74	-846.30	-6,836.73	1,110.73	731.98	378.75	2.933		
13,600.00	6,953.31	13,687.18	7,104.31	194.02	193.55	-97.81	-847.08	-6,936.71	1,110.93	726.64	384.29	2.891		
13,700.00	6,951.56	13,787.18	7,103.87	196.84	196.37	-97.88	-847.86	-7,036.70	1,111.13	721.30	389.83	2.850		
13,800.00	6,949.81	13,887.17	7,103.44	199.67	199.19	-97.95	-848.63	-7,136.69	1,111.34	715.97	395.37	2.811		
13,900.00	6,948.06	13,987.16	7,103.00	202.49	202.01	-98.01	-849.41	-7,236.68	1,111.55	710.63	400.91	2.773		
14,000.00	6,946.31	14,087.15	7,102.57	205.31	204.83	-98.08	-850.19	-7,336.66	1,111.75	705.30	406.45	2.735		
14,100.00	6,944.56	14,187.14	7,102.14	208.14	207.65	-98.15	-850.97	-7,436.65	1,111.96	699.97	411.99	2.699		
14,200.00	6,942.81	14,287.13	7,101.70	210.96	210.48	-98.21	-851.74	-7,536.64	1,112.18	694.64	417.53	2.664		
14,300.00	6,941.06	14,387.12	7,101.27	213.79	213.30	-98.28	-852.52	-7,636.63	1,112.39	689.31	423.07	2.629		
14,400.00	6,939.31	14,487.12	7,100.83	216.62	216.13	-98.35	-853.30	-7,736.61	1,112.60	683.99	428.61	2.596		
14,500.00	6,937.56	14,587.11	7,100.40	219.44	218.96	-98.41	-854.08	-7,836.60	1,112.82	678.67	434.15	2.563		
14,600.00	6,935.81	14,687.10	7,099.97	222.27	221.79	-98.48	-854.85	-7,936.59	1,113.04	673.35	439.69	2.531		
14,700.00	6,934.06	14,787.09	7,099.53	225.10	224.61	-98.55	-855.63	-8,036.58	1,113.26	668.03	445.23	2.500		
14,800.00	6,932.31	14,887.08	7,099.10	227.93	227.44	-98.61	-856.41	-8,136.56	1,113.48	662.71	450.77	2.470		
14,817.75	6,932.00	14,904.83	7,099.02	228.43	227.95	-98.63	-856.55	-8,154.31	1,113.52	661.77	451.75	2.465 SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 33N-16B-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	1.00	0.00	3.28	3.28	-179.52	-299.82	-2.50	299.83					
100.00	100.00	101.00	100.00	3.28	3.28	-179.52	-299.82	-2.50	299.83	293.26	6.57	45.639		
200.00	200.00	199.00	200.00	3.34	3.34	-179.52	-299.82	-2.50	299.83	293.16	6.67	44.931	CC, ES	
300.00	300.00	289.61	290.60	3.44	3.43	-179.50	-301.22	-2.61	301.38	294.50	6.88	43.799		
400.00	400.00	379.95	380.83	3.60	3.56	-179.45	-305.46	-2.94	306.07	298.88	7.19	42.558		
500.00	500.00	469.93	470.53	3.81	3.73	-179.36	-312.49	-3.48	313.90	306.31	7.59	41.346		
600.00	599.98	559.19	559.25	4.05	3.93	-151.88	-322.25	-4.22	326.36	318.30	8.07	40.456		
700.00	699.86	647.23	646.42	4.32	4.16	-152.00	-334.56	-5.17	344.56	335.96	8.60	40.059		
800.00	799.72	734.12	732.03	4.62	4.42	-152.19	-349.33	-6.30	366.15	356.98	9.17	39.948		
900.00	899.58	819.79	815.96	4.93	4.71	-152.32	-366.41	-7.61	390.66	380.90	9.76	40.038		
1,000.00	999.44	904.10	898.04	5.27	5.01	-152.41	-385.66	-9.09	418.03	407.66	10.37	40.327		
1,100.00	1,099.31	986.96	978.10	5.62	5.34	-152.46	-406.92	-10.72	448.18	437.19	10.99	40.791		
1,200.00	1,199.17	1,068.27	1,056.03	5.98	5.69	-152.48	-430.01	-12.49	481.05	469.43	11.61	41.421		
1,300.00	1,299.03	1,157.61	1,141.10	6.36	6.09	-152.49	-457.26	-14.58	515.95	503.67	12.28	42.014		
1,400.00	1,398.89	1,251.27	1,230.23	6.74	6.53	-152.49	-485.93	-16.78	550.99	538.00	12.99	42.418		
1,500.00	1,498.75	1,344.93	1,319.37	7.13	6.98	-152.49	-514.60	-18.98	586.03	572.31	13.72	42.711		
1,600.00	1,598.61	1,438.59	1,408.50	7.52	7.45	-152.49	-543.28	-21.18	621.07	606.60	14.47	42.918		
1,700.00	1,698.47	1,532.25	1,497.64	7.92	7.93	-152.50	-571.95	-23.38	656.11	640.87	15.24	43.060		
1,800.00	1,798.33	1,625.91	1,586.78	8.32	8.41	-152.50	-600.63	-25.58	691.14	675.13	16.02	43.151		
1,900.00	1,898.19	1,719.57	1,675.91	8.73	8.90	-152.50	-629.30	-27.78	726.18	709.37	16.81	43.203		
2,000.00	1,998.05	1,813.23	1,765.05	9.14	9.40	-152.50	-657.97	-29.98	761.22	743.61	17.61	43.226		
2,100.00	2,097.91	1,906.89	1,854.19	9.55	9.90	-152.50	-686.65	-32.18	796.26	777.84	18.42	43.226		
2,200.00	2,197.78	2,000.55	1,943.32	9.97	10.40	-152.50	-715.32	-34.38	831.30	812.06	19.24	43.208		
2,300.00	2,297.64	2,094.21	2,032.46	10.39	10.91	-152.50	-744.00	-36.58	866.34	846.27	20.06	43.178		
2,400.00	2,397.50	2,187.87	2,121.59	10.81	11.42	-152.50	-772.67	-38.78	901.38	880.48	20.90	43.137		
2,500.00	2,497.36	2,281.53	2,210.73	11.23	11.94	-152.50	-801.34	-40.98	936.41	914.68	21.73	43.089		
2,600.00	2,597.22	2,375.20	2,299.87	11.65	12.45	-152.51	-830.02	-43.19	971.45	948.88	22.57	43.036		
2,700.00	2,697.08	2,468.86	2,389.00	12.07	12.97	-152.51	-858.69	-45.39	1,006.49	983.07	23.42	42.979		
2,800.00	2,796.94	2,562.52	2,478.14	12.50	13.49	-152.51	-887.37	-47.59	1,041.53	1,017.26	24.27	42.919		
2,900.00	2,896.80	2,656.18	2,567.28	12.92	14.02	-152.51	-916.04	-49.79	1,076.57	1,051.45	25.12	42.858		
3,000.00	2,996.66	2,749.84	2,656.41	13.35	14.54	-152.51	-944.71	-51.99	1,111.61	1,085.63	25.98	42.795		
3,100.00	3,096.52	2,843.50	2,745.55	13.78	15.07	-152.51	-973.39	-54.19	1,146.65	1,119.81	26.83	42.732		
3,200.00	3,196.38	2,937.16	2,834.68	14.21	15.59	-152.51	-1,002.06	-56.39	1,181.68	1,153.99	27.69	42.670		
3,300.00	3,296.25	3,030.82	2,923.82	14.64	16.12	-152.51	-1,030.74	-58.59	1,216.72	1,188.17	28.56	42.607		
3,400.00	3,396.11	3,124.48	3,012.96	15.07	16.65	-152.51	-1,059.41	-60.79	1,251.76	1,222.34	29.42	42.546		
3,500.00	3,495.97	3,218.14	3,102.09	15.50	17.18	-152.51	-1,088.08	-62.99	1,286.80	1,256.51	30.29	42.485		
3,600.00	3,595.83	3,311.80	3,191.23	15.93	17.71	-152.51	-1,116.76	-65.19	1,321.84	1,290.68	31.16	42.425		
3,700.00	3,695.69	3,405.46	3,280.36	16.36	18.24	-152.51	-1,145.43	-67.39	1,356.88	1,324.85	32.03	42.366		
3,800.00	3,795.55	3,500.88	3,369.50	16.80	18.78	-152.51	-1,174.11	-69.59	1,391.92	1,359.01	32.91	42.298		
3,900.00	3,895.41	3,607.22	3,458.64	17.23	19.38	-152.51	-1,202.78	-71.79	1,426.95	1,393.11	33.84	42.162		
4,000.00	3,995.27	3,686.44	3,547.77	17.66	19.83	-152.51	-1,231.45	-73.99	1,461.99	1,427.35	34.65	42.198		
4,100.00	4,095.13	3,780.10	3,636.91	18.10	20.37	-152.51	-1,260.13	-76.19	1,497.03	1,461.51	35.52	42.144		
4,200.00	4,194.99	3,873.76	3,726.05	18.53	20.90	-152.51	-1,288.80	-78.39	1,532.07	1,495.67	36.40	42.092		
4,300.00	4,294.85	3,967.42	3,815.18	18.96	21.43	-152.51	-1,317.48	-80.59	1,567.11	1,529.83	37.28	42.041		
4,400.00	4,394.71	4,061.09	3,904.32	19.40	21.97	-152.51	-1,346.15	-82.79	1,602.15	1,563.99	38.15	41.991		
4,500.00	4,494.58	4,154.75	3,993.45	19.83	22.50	-152.51	-1,374.82	-84.99	1,637.19	1,598.15	39.03	41.942		
4,600.00	4,594.44	4,248.41	4,082.59	20.27	23.04	-152.51	-1,403.50	-87.19	1,672.22	1,632.31	39.91	41.895		
4,700.00	4,694.30	4,342.07	4,171.73	20.71	23.57	-152.51	-1,432.17	-89.39	1,707.26	1,666.47	40.80	41.849		
4,800.00	4,794.16	4,435.73	4,260.86	21.14	24.11	-152.51	-1,460.84	-91.59	1,742.30	1,700.62	41.68	41.804		
4,900.00	4,894.02	4,529.39	4,350.00	21.58	24.65	-152.51	-1,489.52	-93.79	1,777.34	1,734.78	42.56	41.761		
5,000.00	4,993.88	4,623.05	4,439.14	22.01	25.18	-152.52	-1,518.19	-95.99	1,812.38	1,768.93	43.44	41.718		
5,100.00	5,093.74	4,716.71	4,528.27	22.45	25.72	-152.52	-1,546.87	-98.19	1,847.42	1,803.09	44.33	41.677		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 33N-16B-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	4,810.37	4,617.41	22.89	26.26	-152.52	-1,575.54	-100.39	1,882.46	1,837.24	45.21	41.636		
5,300.00	5,293.46	4,904.03	4,706.54	23.32	26.79	-152.52	-1,604.21	-102.59	1,917.49	1,871.40	46.10	41.597		
5,400.00	5,393.32	5,002.31	4,795.68	23.76	27.36	-152.52	-1,632.89	-104.79	1,952.53	1,905.53	47.01	41.538		
5,500.00	5,493.18	5,108.65	4,884.82	24.20	27.97	-152.52	-1,661.56	-106.99	1,987.57	1,939.61	47.96	41.445		
5,600.00	5,593.05	5,185.01	4,973.95	24.64	28.41	-152.52	-1,690.24	-109.19	2,022.61	1,973.85	48.76	41.485		
5,700.00	5,692.91	5,278.67	5,063.09	25.07	28.94	-152.52	-1,718.91	-111.39	2,057.65	2,008.01	49.64	41.449		
5,800.00	5,792.77	5,372.33	5,152.22	25.51	29.48	-152.52	-1,747.58	-113.59	2,092.69	2,042.16	50.53	41.414		
5,900.00	5,892.63	5,465.99	5,241.36	25.95	30.02	-152.52	-1,776.26	-115.79	2,127.73	2,076.31	51.42	41.380		
6,000.00	5,992.49	5,559.65	5,330.50	26.39	30.56	-152.52	-1,804.93	-117.99	2,162.76	2,110.46	52.31	41.347		
6,100.00	6,092.35	5,653.31	5,419.63	26.82	31.10	-152.52	-1,833.61	-120.19	2,197.80	2,144.61	53.20	41.315		
6,200.00	6,192.21	5,746.98	5,508.77	27.26	31.63	-152.52	-1,862.28	-122.39	2,232.84	2,178.76	54.09	41.283		
6,300.00	6,292.07	5,840.64	5,597.91	27.70	32.17	-152.52	-1,890.95	-124.59	2,267.88	2,212.90	54.98	41.253		
6,400.00	6,391.93	5,934.30	5,687.04	28.14	32.71	-152.52	-1,919.63	-126.79	2,302.92	2,247.05	55.87	41.222		
6,500.00	6,491.79	6,027.91	5,776.13	28.58	33.25	-112.03	-1,948.29	-128.99	2,337.92	2,281.16	56.76	41.192		
6,600.00	6,589.80	6,120.34	5,864.10	29.02	33.78	-95.21	-1,976.58	-131.16	2,372.41	2,314.77	57.65	41.155		
6,700.00	6,683.86	6,209.35	5,948.81	29.46	34.30	-89.07	-2,003.84	-133.25	2,405.84	2,347.32	58.52	41.110		
6,800.00	6,771.56	6,307.24	6,028.19	29.92	34.86	-85.37	-2,029.37	-135.21	2,437.94	2,378.49	59.46	41.003		
6,900.00	6,850.72	6,368.52	6,100.29	30.40	35.21	-82.72	-2,052.56	-136.99	2,468.65	2,408.42	60.24	40.981		
7,000.00	6,919.40	6,434.75	6,163.32	30.96	35.59	-80.60	-2,072.84	-138.55	2,498.06	2,436.95	61.11	40.878		
7,100.00	6,975.92	6,489.82	6,215.73	31.62	35.91	-78.74	-2,089.70	-139.84	2,526.30	2,464.27	62.03	40.727		
7,200.00	7,018.87	6,532.39	6,256.24	32.44	36.16	-76.95	-2,102.73	-140.84	2,553.49	2,490.47	63.02	40.518		
7,300.00	7,047.21	6,561.39	6,283.84	33.42	36.32	-75.12	-2,111.61	-141.52	2,579.64	2,515.55	64.09	40.250		
7,400.00	7,060.23	6,576.12	6,297.86	34.55	36.41	-73.20	-2,116.12	-141.87	2,604.61	2,539.40	65.21	39.941		
7,500.00	7,060.03	6,578.49	6,300.12	35.83	36.42	-72.32	-2,116.85	-141.92	2,628.91	2,562.53	66.37	39.608		
7,600.00	7,058.28	6,579.40	6,300.99	37.28	36.43	-72.34	-2,117.13	-141.94	2,656.24	2,588.59	67.65	39.266		
7,700.00	7,056.53	8,003.43	7,075.20	38.89	43.31	-90.40	-2,372.87	-1,027.92	2,670.91	2,590.69	80.22	33.294		
7,800.00	7,054.78	8,103.42	7,074.88	40.63	44.52	-90.43	-2,373.54	-1,127.91	2,670.84	2,587.31	83.53	31.976		
7,900.00	7,053.03	8,203.41	7,074.55	42.50	45.96	-90.46	-2,374.21	-1,227.89	2,670.77	2,583.69	87.08	30.672		
8,000.00	7,051.28	8,303.40	7,074.23	44.47	47.59	-90.49	-2,374.88	-1,327.88	2,670.69	2,579.84	90.85	29.397		
8,100.00	7,049.53	8,403.39	7,073.90	46.53	49.37	-90.52	-2,375.54	-1,427.87	2,670.62	2,575.81	94.81	28.167		
8,200.00	7,047.78	8,503.38	7,073.58	48.67	51.26	-90.55	-2,376.21	-1,527.85	2,670.55	2,571.60	98.95	26.989		
8,300.00	7,046.03	8,603.37	7,073.25	50.89	53.26	-90.58	-2,376.88	-1,627.84	2,670.48	2,567.24	103.24	25.868		
8,400.00	7,044.28	8,703.36	7,072.93	53.16	55.34	-90.62	-2,377.55	-1,727.83	2,670.41	2,562.75	107.65	24.805		
8,500.00	7,042.53	8,803.35	7,072.60	55.49	57.50	-90.65	-2,378.21	-1,827.82	2,670.34	2,558.15	112.19	23.802		
8,600.00	7,040.78	8,903.34	7,072.28	57.86	59.72	-90.68	-2,378.88	-1,927.80	2,670.27	2,553.44	116.83	22.857		
8,700.00	7,039.03	9,003.33	7,071.96	60.28	61.99	-90.71	-2,379.55	-2,027.79	2,670.20	2,548.64	121.56	21.967		
8,800.00	7,037.28	9,103.32	7,071.63	62.74	64.32	-90.74	-2,380.22	-2,127.78	2,670.13	2,543.76	126.37	21.130		
8,900.00	7,035.53	9,203.31	7,071.31	65.23	66.69	-90.77	-2,380.88	-2,227.76	2,670.07	2,538.82	131.25	20.343		
9,000.00	7,033.78	9,303.30	7,070.98	67.74	69.09	-90.80	-2,381.55	-2,327.75	2,670.00	2,533.80	136.20	19.604		
9,100.00	7,032.03	9,403.29	7,070.66	70.29	71.53	-90.83	-2,382.22	-2,427.74	2,669.94	2,528.73	141.20	18.909		
9,200.00	7,030.28	9,503.28	7,070.33	72.85	74.01	-90.86	-2,382.89	-2,527.72	2,669.87	2,523.61	146.26	18.254		
9,300.00	7,028.54	9,603.27	7,070.01	75.44	76.50	-90.89	-2,383.55	-2,627.71	2,669.81	2,518.45	151.36	17.639		
9,400.00	7,026.79	9,703.25	7,069.68	78.05	79.03	-90.92	-2,384.22	-2,727.70	2,669.74	2,513.24	156.51	17.058		
9,500.00	7,025.04	9,803.24	7,069.36	80.67	81.58	-90.95	-2,384.89	-2,827.69	2,669.68	2,507.99	161.69	16.511		
9,600.00	7,023.29	9,903.23	7,069.03	83.31	84.14	-90.98	-2,385.55	-2,927.67	2,669.62	2,502.71	166.91	15.995		
9,700.00	7,021.54	10,003.22	7,068.71	85.96	86.73	-91.01	-2,386.22	-3,027.66	2,669.56	2,497.40	172.16	15.507		
9,800.00	7,019.79	10,103.21	7,068.38	88.63	89.33	-91.04	-2,386.89	-3,127.65	2,669.50	2,492.07	177.43	15.045		
9,900.00	7,018.04	10,203.20	7,068.06	91.30	91.95	-91.07	-2,387.56	-3,227.63	2,669.44	2,486.71	182.74	14.608		
10,000.00	7,016.29	10,303.19	7,067.73	93.99	94.58	-91.10	-2,388.22	-3,327.62	2,669.38	2,481.32	188.06	14.194		
10,100.00	7,014.54	10,403.18	7,067.41	96.69	97.23	-91.14	-2,388.89	-3,427.61	2,669.33	2,475.91	193.41	13.801		
10,200.00	7,012.79	10,503.17	7,067.08	99.40	99.88	-91.17	-2,389.56	-3,527.60	2,669.27	2,470.49	198.78	13.428		
10,300.00	7,011.04	10,603.16	7,066.76	102.11	102.55	-91.20	-2,390.23	-3,627.58	2,669.21	2,465.05	204.17	13.074		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 33N-16B-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	10,703.15	7,066.43	104.83	105.23	-91.23	-2,390.89	-3,727.57	2,669.16	2,459.59	209.57	12.736		
10,500.00	7,007.54	10,803.14	7,066.11	107.56	107.92	-91.26	-2,391.56	-3,827.56	2,669.10	2,454.11	214.99	12.415		
10,600.00	7,005.79	10,903.13	7,065.78	110.30	110.61	-91.29	-2,392.23	-3,927.54	2,669.05	2,448.62	220.43	12.109		
10,700.00	7,004.04	11,003.12	7,065.46	113.04	113.32	-91.32	-2,392.90	-4,027.53	2,669.00	2,443.12	225.88	11.816		
10,800.00	7,002.29	11,103.11	7,065.13	115.79	116.03	-91.35	-2,393.56	-4,127.52	2,668.95	2,437.61	231.34	11.537		
10,900.00	7,000.54	11,203.10	7,064.81	118.54	118.75	-91.38	-2,394.23	-4,227.50	2,668.90	2,432.09	236.81	11.270		
11,000.00	6,998.79	11,303.09	7,064.48	121.30	121.47	-91.41	-2,394.90	-4,327.49	2,668.84	2,426.55	242.29	11.015		
11,100.00	6,997.04	11,403.08	7,064.16	124.06	124.20	-91.44	-2,395.57	-4,427.48	2,668.79	2,421.01	247.78	10.771		
11,200.00	6,995.29	11,503.07	7,063.83	126.83	126.94	-91.47	-2,396.23	-4,527.47	2,668.75	2,415.46	253.29	10.536		
11,300.00	6,993.54	11,603.06	7,063.51	129.60	129.68	-91.50	-2,396.90	-4,627.45	2,668.70	2,409.90	258.80	10.312		
11,400.00	6,991.80	11,703.05	7,063.18	132.37	132.43	-91.53	-2,397.57	-4,727.44	2,668.65	2,404.33	264.32	10.096		
11,500.00	6,990.05	11,803.04	7,062.86	135.15	135.18	-91.56	-2,398.24	-4,827.43	2,668.60	2,398.76	269.84	9.889		
11,600.00	6,988.30	11,903.03	7,062.53	137.93	137.94	-91.59	-2,398.90	-4,927.41	2,668.56	2,393.18	275.38	9.690		
11,700.00	6,986.55	12,003.02	7,062.21	140.72	140.70	-91.63	-2,399.57	-5,027.40	2,668.51	2,387.59	280.92	9.499		
11,800.00	6,984.80	12,103.01	7,061.88	143.50	143.46	-91.66	-2,400.24	-5,127.39	2,668.47	2,382.00	286.47	9.315		
11,900.00	6,983.05	12,203.00	7,061.56	146.29	146.23	-91.69	-2,400.91	-5,227.38	2,668.42	2,376.40	292.02	9.138		
12,000.00	6,981.30	12,302.99	7,061.23	149.09	149.00	-91.72	-2,401.57	-5,327.36	2,668.38	2,370.80	297.58	8.967		
12,100.00	6,979.55	12,402.98	7,060.91	151.88	151.77	-91.75	-2,402.24	-5,427.35	2,668.34	2,365.19	303.15	8.802		
12,200.00	6,977.80	12,502.97	7,060.58	154.68	154.55	-91.78	-2,402.91	-5,527.34	2,668.30	2,359.58	308.71	8.643		
12,300.00	6,976.05	12,602.96	7,060.26	157.48	157.33	-91.81	-2,403.57	-5,627.32	2,668.26	2,353.97	314.29	8.490		
12,400.00	6,974.30	12,702.95	7,059.93	160.28	160.11	-91.84	-2,404.24	-5,727.31	2,668.22	2,348.35	319.87	8.342		
12,500.00	6,972.55	12,802.94	7,059.61	163.08	162.90	-91.87	-2,404.91	-5,827.30	2,668.18	2,342.73	325.45	8.198		
12,600.00	6,970.80	12,902.93	7,059.29	165.89	165.69	-91.90	-2,405.58	-5,927.28	2,668.14	2,337.10	331.04	8.060		
12,700.00	6,969.05	13,002.92	7,058.96	168.69	168.48	-91.93	-2,406.24	-6,027.27	2,668.10	2,331.47	336.63	7.926		
12,800.00	6,967.30	13,102.91	7,058.64	171.50	171.27	-91.96	-2,406.91	-6,127.26	2,668.07	2,325.84	342.22	7.796		
12,900.00	6,965.55	13,202.90	7,058.31	174.31	174.07	-91.99	-2,407.58	-6,227.25	2,668.03	2,320.21	347.82	7.671		
13,000.00	6,963.80	13,302.89	7,057.99	177.12	176.86	-92.02	-2,408.25	-6,327.23	2,667.99	2,314.57	353.42	7.549		
13,100.00	6,962.05	13,402.88	7,057.66	179.94	179.66	-92.05	-2,408.91	-6,427.22	2,667.96	2,308.93	359.03	7.431		
13,200.00	6,960.30	13,502.87	7,057.34	182.75	182.46	-92.08	-2,409.58	-6,527.21	2,667.93	2,303.29	364.63	7.317		
13,300.00	6,958.55	13,602.86	7,057.01	185.57	185.27	-92.12	-2,410.25	-6,627.19	2,667.89	2,297.65	370.24	7.206		
13,400.00	6,956.80	13,702.85	7,056.69	188.38	188.07	-92.15	-2,410.92	-6,727.18	2,667.86	2,292.01	375.85	7.098		
13,500.00	6,955.05	13,802.84	7,056.36	191.20	190.88	-92.18	-2,411.58	-6,827.17	2,667.83	2,286.36	381.47	6.994		
13,600.00	6,953.31	13,902.83	7,056.04	194.02	193.68	-92.21	-2,412.25	-6,927.16	2,667.80	2,280.71	387.09	6.892		
13,700.00	6,951.56	14,002.82	7,055.71	196.84	196.49	-92.24	-2,412.92	-7,027.14	2,667.77	2,275.06	392.71	6.793		
13,800.00	6,949.81	14,102.81	7,055.39	199.67	199.30	-92.27	-2,413.59	-7,127.13	2,667.74	2,269.41	398.33	6.697		
13,900.00	6,948.06	14,202.80	7,055.06	202.49	202.11	-92.30	-2,414.25	-7,227.12	2,667.71	2,263.76	403.95	6.604		
14,000.00	6,946.31	14,302.79	7,054.74	205.31	204.93	-92.33	-2,414.92	-7,327.10	2,667.68	2,258.11	409.58	6.513		
14,100.00	6,944.56	14,402.78	7,054.41	208.14	207.74	-92.36	-2,415.59	-7,427.09	2,667.66	2,252.45	415.20	6.425		
14,200.00	6,942.81	14,502.77	7,054.09	210.96	210.56	-92.39	-2,416.26	-7,527.08	2,667.63	2,246.80	420.83	6.339		
14,300.00	6,941.06	14,602.76	7,053.76	213.79	213.37	-92.42	-2,416.92	-7,627.06	2,667.60	2,241.14	426.46	6.255		
14,400.00	6,939.31	14,702.75	7,053.44	216.62	216.19	-92.45	-2,417.59	-7,727.05	2,667.58	2,235.49	432.09	6.174		
14,500.00	6,937.56	14,802.74	7,053.11	219.44	219.01	-92.48	-2,418.26	-7,827.04	2,667.56	2,229.83	437.73	6.094		
14,600.00	6,935.81	14,902.73	7,052.79	222.27	221.83	-92.51	-2,418.92	-7,927.03	2,667.53	2,224.17	443.36	6.017		
14,700.00	6,934.06	15,002.72	7,052.46	225.10	224.65	-92.54	-2,419.59	-8,027.01	2,667.51	2,218.51	449.00	5.941		
14,800.00	6,932.31	15,102.70	7,052.14	227.93	227.47	-92.58	-2,420.26	-8,127.00	2,667.49	2,212.85	454.64	5.867		
14,817.75	6,932.00	15,120.45	7,052.08	228.43	227.97	-92.58	-2,420.38	-8,144.75	2,667.49	2,211.85	455.64	5.854 SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 34N-16C-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	2.00	0.00	3.28	3.28	-179.50	-379.97	-3.34	379.99					
100.00	100.00	102.00	100.00	3.28	3.29	-179.50	-379.97	-3.34	379.99	373.42	6.57	57.838		
200.00	200.00	198.00	200.00	3.34	3.34	-179.50	-379.97	-3.34	379.99	373.32	6.67	56.949	CC, ES	
300.00	300.00	286.51	288.49	3.44	3.42	-179.49	-381.28	-3.41	381.47	374.59	6.88	55.473		
400.00	400.00	374.62	376.51	3.60	3.55	-179.46	-385.29	-3.63	386.02	378.84	7.18	53.752		
500.00	500.00	462.40	464.03	3.81	3.71	-179.42	-391.97	-3.99	393.63	386.06	7.57	51.973		
600.00	599.98	549.51	550.64	4.05	3.91	-151.97	-401.24	-4.50	405.81	397.77	8.04	50.477		
700.00	699.86	635.46	635.79	4.32	4.13	-152.08	-412.96	-5.14	423.66	415.10	8.56	49.470		
800.00	799.72	720.34	719.48	4.62	4.38	-152.27	-427.03	-5.91	444.84	435.72	9.12	48.784		
900.00	899.58	804.07	801.60	4.93	4.65	-152.42	-443.33	-6.81	468.88	459.18	9.70	48.336		
1,000.00	999.44	886.53	881.98	5.27	4.95	-152.54	-461.72	-7.81	495.72	485.42	10.30	48.131		
1,100.00	1,099.31	967.63	960.48	5.62	5.27	-152.64	-482.05	-8.93	525.30	514.39	10.91	48.130		
1,200.00	1,199.17	1,047.27	1,036.97	5.98	5.60	-152.70	-504.17	-10.14	557.54	546.01	11.53	48.341		
1,300.00	1,299.03	1,125.36	1,111.36	6.36	5.94	-152.75	-527.91	-11.44	592.38	580.22	12.15	48.741		
1,400.00	1,398.89	1,201.85	1,183.55	6.74	6.30	-152.78	-553.12	-12.82	629.72	616.95	12.77	49.313		
1,500.00	1,498.75	1,276.67	1,253.50	7.13	6.68	-152.79	-579.63	-14.27	669.50	656.12	13.38	50.031		
1,600.00	1,598.61	1,349.78	1,321.16	7.52	7.06	-152.80	-607.28	-15.78	711.63	697.64	13.99	50.885		
1,700.00	1,698.47	1,425.20	1,390.22	7.92	7.47	-152.79	-637.55	-17.44	755.97	741.37	14.61	51.754		
1,800.00	1,798.33	1,514.49	1,471.72	8.32	7.97	-152.77	-673.98	-19.43	801.00	785.65	15.35	52.196		
1,900.00	1,898.19	1,603.78	1,553.21	8.73	8.49	-152.76	-710.41	-21.43	846.02	829.92	16.10	52.541		
2,000.00	1,998.05	1,693.07	1,634.71	9.14	9.01	-152.75	-746.83	-23.42	891.05	874.18	16.87	52.809		
2,100.00	2,097.91	1,782.36	1,716.21	9.55	9.54	-152.74	-783.26	-25.42	936.07	918.42	17.66	53.015		
2,200.00	2,197.78	1,871.65	1,797.71	9.97	10.08	-152.74	-819.68	-27.41	981.10	962.65	18.45	53.172		
2,300.00	2,297.64	1,960.94	1,879.20	10.39	10.63	-152.73	-856.11	-29.41	1,026.12	1,006.87	19.26	53.290		
2,400.00	2,397.50	2,050.23	1,960.70	10.81	11.18	-152.72	-892.54	-31.40	1,071.15	1,051.08	20.07	53.376		
2,500.00	2,497.36	2,139.52	2,042.20	11.23	11.74	-152.72	-928.96	-33.40	1,116.18	1,095.29	20.89	53.436		
2,600.00	2,597.22	2,228.81	2,123.70	11.65	12.30	-152.71	-965.39	-35.39	1,161.20	1,139.49	21.71	53.475		
2,700.00	2,697.08	2,318.10	2,205.19	12.07	12.86	-152.70	-1,001.82	-37.38	1,206.23	1,183.68	22.55	53.497		
2,800.00	2,796.94	2,407.39	2,286.69	12.50	13.42	-152.70	-1,038.24	-39.38	1,251.25	1,227.87	23.39	53.507		
2,900.00	2,896.80	2,496.68	2,368.19	12.92	13.99	-152.70	-1,074.67	-41.37	1,296.28	1,272.05	24.23	53.505		
3,000.00	2,996.66	2,585.97	2,449.69	13.35	14.56	-152.69	-1,111.09	-43.37	1,341.30	1,316.23	25.07	53.494		
3,100.00	3,096.52	2,675.26	2,531.19	13.78	15.13	-152.69	-1,147.52	-45.36	1,386.33	1,360.40	25.92	53.476		
3,200.00	3,196.38	2,764.55	2,612.68	14.21	15.71	-152.68	-1,183.95	-47.36	1,431.35	1,404.57	26.78	53.452		
3,300.00	3,296.25	2,853.84	2,694.18	14.64	16.28	-152.68	-1,220.37	-49.35	1,476.38	1,448.74	27.64	53.424		
3,400.00	3,396.11	2,943.13	2,775.68	15.07	16.86	-152.68	-1,256.80	-51.35	1,521.40	1,492.91	28.49	53.392		
3,500.00	3,495.97	3,032.42	2,857.18	15.50	17.44	-152.67	-1,293.22	-53.34	1,566.43	1,537.07	29.36	53.358		
3,600.00	3,595.83	3,121.71	2,938.67	15.93	18.02	-152.67	-1,329.65	-55.33	1,611.45	1,581.23	30.22	53.321		
3,700.00	3,695.69	3,211.00	3,020.17	16.36	18.60	-152.67	-1,366.08	-57.33	1,656.48	1,625.39	31.09	53.283		
3,800.00	3,795.55	3,300.29	3,101.67	16.80	19.18	-152.66	-1,402.50	-59.32	1,701.51	1,669.55	31.96	53.243		
3,900.00	3,895.41	3,389.58	3,183.17	17.23	19.76	-152.66	-1,438.93	-61.32	1,746.53	1,713.70	32.83	53.202		
4,000.00	3,995.27	3,478.87	3,264.66	17.66	20.34	-152.66	-1,475.36	-63.31	1,791.56	1,757.86	33.70	53.161		
4,100.00	4,095.13	3,568.16	3,346.16	18.10	20.92	-152.66	-1,511.78	-65.31	1,836.58	1,802.01	34.57	53.119		
4,200.00	4,194.99	3,657.45	3,427.66	18.53	21.51	-152.66	-1,548.21	-67.30	1,881.61	1,846.16	35.45	53.078		
4,300.00	4,294.85	3,746.74	3,509.16	18.96	22.09	-152.65	-1,584.63	-69.29	1,926.63	1,890.31	36.33	53.036		
4,400.00	4,394.71	3,836.03	3,590.65	19.40	22.68	-152.65	-1,621.06	-71.29	1,971.66	1,934.45	37.21	52.994		
4,500.00	4,494.58	3,925.32	3,672.15	19.83	23.26	-152.65	-1,657.49	-73.28	2,016.68	1,978.60	38.08	52.953		
4,600.00	4,594.44	4,014.61	3,753.65	20.27	23.85	-152.65	-1,693.91	-75.28	2,061.71	2,022.74	38.97	52.912		
4,700.00	4,694.30	4,103.90	3,835.15	20.71	24.44	-152.65	-1,730.34	-77.27	2,106.73	2,066.89	39.85	52.871		
4,800.00	4,794.16	4,206.81	3,916.64	21.14	25.11	-152.64	-1,766.77	-79.27	2,151.76	2,110.96	40.80	52.733		
4,900.00	4,894.02	4,282.48	3,998.14	21.58	25.61	-152.64	-1,803.19	-81.26	2,196.79	2,155.17	41.61	52.791		
5,000.00	4,993.88	4,371.77	4,079.64	22.01	26.20	-152.64	-1,839.62	-83.26	2,241.81	2,199.31	42.50	52.752		
5,100.00	5,093.74	4,461.06	4,161.14	22.45	26.79	-152.64	-1,876.04	-85.25	2,286.84	2,243.45	43.38	52.713		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 34N-16C-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	4,550.35	4,242.64	22.89	27.37	-152.64	-1,912.47	-87.24	2,331.86	2,287.59	44.27	52.675		
5,300.00	5,293.46	4,639.64	4,324.13	23.32	27.96	-152.64	-1,948.90	-89.24	2,376.89	2,331.73	45.16	52.637		
5,400.00	5,393.32	4,728.93	4,405.63	23.76	28.55	-152.64	-1,985.32	-91.23	2,421.91	2,375.87	46.04	52.600		
5,500.00	5,493.18	4,818.22	4,487.13	24.20	29.14	-152.63	-2,021.75	-93.23	2,466.94	2,420.01	46.93	52.564		
5,600.00	5,593.05	4,907.51	4,568.63	24.64	29.73	-152.63	-2,058.17	-95.22	2,511.96	2,464.14	47.82	52.528		
5,700.00	5,692.91	5,003.20	4,650.12	25.07	30.36	-152.63	-2,094.60	-97.22	2,556.99	2,508.24	48.75	52.454		
5,800.00	5,792.77	5,086.09	4,731.62	25.51	30.91	-152.63	-2,131.03	-99.21	2,602.01	2,552.41	49.60	52.458		
5,900.00	5,892.63	5,175.38	4,813.12	25.95	31.50	-152.63	-2,167.45	-101.21	2,647.04	2,596.55	50.49	52.424		
6,000.00	5,992.49	5,264.67	4,894.62	26.39	32.09	-152.63	-2,203.88	-103.20	2,692.06	2,640.68	51.38	52.390		
6,100.00	6,092.35	5,353.96	4,976.11	26.82	32.68	-152.63	-2,240.31	-105.19	2,737.09	2,684.81	52.28	52.357		
6,200.00	6,192.21	5,443.25	5,057.61	27.26	33.27	-152.63	-2,276.73	-107.19	2,782.12	2,728.95	53.17	52.325		
6,300.00	6,292.07	5,532.54	5,139.11	27.70	33.86	-152.63	-2,313.16	-109.18	2,827.14	2,773.08	54.06	52.293		
6,400.00	6,391.93	5,621.83	5,220.61	28.14	34.45	-152.62	-2,349.58	-111.18	2,872.17	2,817.21	54.96	52.262		
6,500.00	6,491.69	5,711.08	5,302.07	28.58	35.04	-111.52	-2,385.99	-113.17	2,917.15	2,861.30	55.85	52.230		
6,600.00	6,589.80	5,800.79	5,382.50	29.02	35.64	-93.50	-2,421.94	-115.14	2,961.51	2,904.76	56.75	52.183		
6,700.00	6,683.86	5,884.09	5,459.98	29.46	36.19	-86.18	-2,456.57	-117.03	3,004.40	2,946.78	57.62	52.141		
6,800.00	6,771.56	5,963.64	5,532.59	29.92	36.72	-81.39	-2,489.03	-118.81	3,045.21	2,986.73	58.48	52.073		
6,900.00	6,850.72	6,035.90	5,598.54	30.40	37.20	-77.78	-2,518.51	-120.43	3,083.50	3,024.18	59.33	51.974		
7,000.00	6,919.40	6,100.91	5,656.22	30.96	37.63	-74.87	-2,544.28	-121.84	3,119.03	3,058.83	60.20	51.812		
7,100.00	6,975.92	6,151.65	5,704.19	31.62	37.96	-72.44	-2,565.73	-123.01	3,151.59	3,090.50	61.09	51.586		
7,200.00	7,018.87	6,207.70	5,741.29	32.44	38.34	-70.33	-2,582.31	-123.92	3,181.06	3,118.90	62.16	51.177		
7,300.00	7,047.21	6,220.02	5,766.59	33.42	38.42	-68.45	-2,593.62	-124.54	3,207.26	3,144.14	63.13	50.806		
7,400.00	7,060.23	6,234.13	5,779.47	34.55	38.51	-66.74	-2,599.37	-124.85	3,229.99	3,165.74	64.25	50.275		
7,500.00	7,060.03	6,236.46	5,781.60	35.83	38.53	-66.05	-2,600.32	-124.91	3,250.00	3,184.58	65.42	49.680		
7,600.00	7,058.28	6,237.40	5,782.46	37.28	38.53	-66.07	-2,600.71	-124.93	3,272.28	3,205.56	66.72	49.045		
7,700.00	7,056.53	6,238.35	5,783.32	38.89	38.54	-66.08	-2,601.09	-124.95	3,297.44	3,229.30	68.13	48.398		
7,800.00	7,054.78	6,239.29	5,784.18	40.63	38.54	-66.10	-2,601.48	-124.97	3,325.41	3,255.79	69.63	47.760		
7,900.00	7,053.03	6,240.23	5,785.04	42.50	38.55	-66.12	-2,601.86	-124.99	3,356.14	3,284.95	71.19	47.146		
8,000.00	7,051.28	6,241.18	5,785.90	44.47	38.56	-66.13	-2,602.25	-125.01	3,389.54	3,316.75	72.79	46.568		
8,100.00	7,049.53	6,242.12	5,786.76	46.53	38.56	-66.15	-2,602.63	-125.03	3,425.53	3,351.12	74.41	46.034		
8,200.00	7,047.78	6,243.06	5,787.62	48.67	38.57	-66.17	-2,603.02	-125.05	3,464.03	3,387.99	76.05	45.550		
8,300.00	7,046.03	6,244.01	5,788.48	50.89	38.58	-66.18	-2,603.40	-125.07	3,504.97	3,427.29	77.68	45.118		
8,400.00	7,044.28	9,041.24	7,140.90	53.16	57.99	-91.58	-3,220.88	-1,725.42	3,514.92	3,405.68	109.24	32.177		
8,500.00	7,042.53	9,141.23	7,140.36	55.49	59.96	-91.60	-3,221.47	-1,825.41	3,514.79	3,401.09	113.69	30.915		
8,600.00	7,040.78	9,241.22	7,139.82	57.86	62.02	-91.62	-3,222.06	-1,925.40	3,514.65	3,396.40	118.25	29.721		
8,700.00	7,039.03	9,341.22	7,139.28	60.28	64.16	-91.64	-3,222.65	-2,025.39	3,514.52	3,391.61	122.91	28.594		
8,800.00	7,037.28	9,441.21	7,138.74	62.74	66.36	-91.66	-3,223.23	-2,125.38	3,514.39	3,386.74	127.66	27.530		
8,900.00	7,035.53	9,541.20	7,138.20	65.23	68.62	-91.68	-3,223.82	-2,225.37	3,514.26	3,381.79	132.48	26.528		
9,000.00	7,033.78	9,641.19	7,137.66	67.74	70.93	-91.70	-3,224.41	-2,325.36	3,514.14	3,376.77	137.36	25.583		
9,100.00	7,032.03	9,741.19	7,137.11	70.29	73.29	-91.72	-3,225.00	-2,425.35	3,514.01	3,371.69	142.31	24.692		
9,200.00	7,030.28	9,841.18	7,136.57	72.85	75.68	-91.73	-3,225.59	-2,525.34	3,513.88	3,366.56	147.32	23.853		
9,300.00	7,028.54	9,941.17	7,136.03	75.44	78.10	-91.75	-3,226.17	-2,625.33	3,513.75	3,361.38	152.37	23.061		
9,400.00	7,026.79	10,041.16	7,135.49	78.05	80.56	-91.77	-3,226.76	-2,725.32	3,513.62	3,356.16	157.47	22.313		
9,500.00	7,025.04	10,141.16	7,134.95	80.67	83.05	-91.79	-3,227.35	-2,825.31	3,513.50	3,350.89	162.60	21.608		
9,600.00	7,023.29	10,241.15	7,134.41	83.31	85.56	-91.81	-3,227.94	-2,925.30	3,513.37	3,345.59	167.78	20.940		
9,700.00	7,021.54	10,341.14	7,133.87	85.96	88.09	-91.83	-3,228.53	-3,025.29	3,513.24	3,340.25	172.99	20.309		
9,800.00	7,019.79	10,441.13	7,133.33	88.63	90.64	-91.85	-3,229.11	-3,125.27	3,513.12	3,334.89	178.23	19.711		
9,900.00	7,018.04	10,541.13	7,132.79	91.30	93.21	-91.87	-3,229.70	-3,225.26	3,512.99	3,329.50	183.50	19.145		
10,000.00	7,016.29	10,641.12	7,132.25	93.99	95.80	-91.89	-3,230.29	-3,325.25	3,512.87	3,324.08	188.79	18.607		
10,100.00	7,014.54	10,741.11	7,131.70	96.69	98.40	-91.91	-3,230.88	-3,425.24	3,512.74	3,318.64	194.10	18.097		
10,200.00	7,012.79	10,841.10	7,131.16	99.40	101.02	-91.93	-3,231.46	-3,525.23	3,512.62	3,313.17	199.44	17.612		
10,300.00	7,011.04	10,941.10	7,130.62	102.11	103.65	-91.95	-3,232.05	-3,625.22	3,512.49	3,307.69	204.80	17.151		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 34N-16C-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	11,041.09	7,130.08	104.83	106.29	-91.97	-3,232.64	-3,725.21	3,512.37	3,302.19	210.18	16.711		
10,500.00	7,007.54	11,141.08	7,129.54	107.56	108.94	-91.99	-3,233.23	-3,825.20	3,512.25	3,296.68	215.57	16.293		
10,600.00	7,005.79	11,241.08	7,129.00	110.30	111.61	-92.01	-3,233.82	-3,925.19	3,512.13	3,291.15	220.98	15.893		
10,700.00	7,004.04	11,341.07	7,128.46	113.04	114.28	-92.03	-3,234.40	-4,025.18	3,512.00	3,285.60	226.40	15.512		
10,800.00	7,002.29	11,441.06	7,127.92	115.79	116.97	-92.05	-3,234.99	-4,125.17	3,511.88	3,280.04	231.84	15.148		
10,900.00	7,000.54	11,541.05	7,127.38	118.54	119.66	-92.07	-3,235.58	-4,225.16	3,511.76	3,274.47	237.29	14.799		
11,000.00	6,998.79	11,641.05	7,126.83	121.30	122.36	-92.09	-3,236.17	-4,325.15	3,511.64	3,268.89	242.75	14.466		
11,100.00	6,997.04	11,741.04	7,126.29	124.06	125.06	-92.11	-3,236.76	-4,425.14	3,511.52	3,263.29	248.23	14.147		
11,200.00	6,995.29	11,841.03	7,125.75	126.83	127.78	-92.13	-3,237.34	-4,525.13	3,511.40	3,257.69	253.71	13.840		
11,300.00	6,993.54	11,941.02	7,125.21	129.60	130.49	-92.15	-3,237.93	-4,625.12	3,511.28	3,252.08	259.20	13.547		
11,400.00	6,991.80	12,041.02	7,124.67	132.37	133.22	-92.17	-3,238.52	-4,725.10	3,511.16	3,246.46	264.70	13.265		
11,500.00	6,990.05	12,141.01	7,124.13	135.15	135.95	-92.19	-3,239.11	-4,825.09	3,511.04	3,240.83	270.21	12.994		
11,600.00	6,988.30	12,241.00	7,123.59	137.93	138.69	-92.21	-3,239.70	-4,925.08	3,510.92	3,235.19	275.73	12.733		
11,700.00	6,986.55	12,340.99	7,123.05	140.72	141.43	-92.23	-3,240.28	-5,025.07	3,510.81	3,229.55	281.26	12.483		
11,800.00	6,984.80	12,440.99	7,122.51	143.50	144.17	-92.25	-3,240.87	-5,125.06	3,510.69	3,223.90	286.79	12.241		
11,900.00	6,983.05	12,540.98	7,121.97	146.29	146.92	-92.27	-3,241.46	-5,225.05	3,510.57	3,218.24	292.33	12.009		
12,000.00	6,981.30	12,640.97	7,121.42	149.09	149.68	-92.29	-3,242.05	-5,325.04	3,510.45	3,212.58	297.87	11.785		
12,100.00	6,979.55	12,740.96	7,120.88	151.88	152.44	-92.31	-3,242.63	-5,425.03	3,510.34	3,206.91	303.42	11.569		
12,200.00	6,977.80	12,840.96	7,120.34	154.68	155.20	-92.33	-3,243.22	-5,525.02	3,510.22	3,201.24	308.98	11.361		
12,300.00	6,976.05	12,940.95	7,119.80	157.48	157.96	-92.35	-3,243.81	-5,625.01	3,510.11	3,195.56	314.54	11.159		
12,400.00	6,974.30	13,040.94	7,119.26	160.28	160.73	-92.37	-3,244.40	-5,725.00	3,509.99	3,189.88	320.11	10.965		
12,500.00	6,972.55	13,140.93	7,118.72	163.08	163.50	-92.39	-3,244.99	-5,824.99	3,509.88	3,184.20	325.68	10.777		
12,600.00	6,970.80	13,240.93	7,118.18	165.89	166.28	-92.41	-3,245.57	-5,924.98	3,509.76	3,178.51	331.26	10.595		
12,700.00	6,969.05	13,340.92	7,117.64	168.69	169.05	-92.43	-3,246.16	-6,024.97	3,509.65	3,172.81	336.84	10.419		
12,800.00	6,967.30	13,440.91	7,117.10	171.50	171.83	-92.45	-3,246.75	-6,124.96	3,509.54	3,167.12	342.42	10.249		
12,900.00	6,965.55	13,540.90	7,116.55	174.31	174.62	-92.47	-3,247.34	-6,224.95	3,509.42	3,161.42	348.01	10.084		
13,000.00	6,963.80	13,640.90	7,116.01	177.12	177.40	-92.49	-3,247.93	-6,324.93	3,509.31	3,155.71	353.60	9.925		
13,100.00	6,962.05	13,740.89	7,115.47	179.94	180.19	-92.51	-3,248.51	-6,424.92	3,509.20	3,150.00	359.19	9.770		
13,200.00	6,960.30	13,840.88	7,114.93	182.75	182.98	-92.53	-3,249.10	-6,524.91	3,509.09	3,144.29	364.79	9.619		
13,300.00	6,958.55	13,940.87	7,114.39	185.57	185.77	-92.55	-3,249.69	-6,624.90	3,508.98	3,138.58	370.39	9.474		
13,400.00	6,956.80	14,040.87	7,113.85	188.38	188.57	-92.57	-3,250.28	-6,724.89	3,508.87	3,132.87	376.00	9.332		
13,500.00	6,955.05	14,140.86	7,113.31	191.20	191.36	-92.59	-3,250.86	-6,824.88	3,508.76	3,127.15	381.61	9.195		
13,600.00	6,953.31	14,240.85	7,112.77	194.02	194.16	-92.61	-3,251.45	-6,924.87	3,508.65	3,121.43	387.22	9.061		
13,700.00	6,951.56	14,340.84	7,112.23	196.84	196.96	-92.63	-3,252.04	-7,024.86	3,508.54	3,115.71	392.83	8.931		
13,800.00	6,949.81	14,440.84	7,111.69	199.67	199.76	-92.65	-3,252.63	-7,124.85	3,508.43	3,109.98	398.44	8.805		
13,900.00	6,948.06	14,540.83	7,111.14	202.49	202.56	-92.67	-3,253.22	-7,224.84	3,508.32	3,104.26	404.06	8.683		
14,000.00	6,946.31	14,640.82	7,110.60	205.31	205.37	-92.69	-3,253.80	-7,324.83	3,508.21	3,098.53	409.68	8.563		
14,100.00	6,944.56	14,740.81	7,110.06	208.14	208.17	-92.71	-3,254.39	-7,424.82	3,508.10	3,092.80	415.30	8.447		
14,200.00	6,942.81	14,840.81	7,109.52	210.96	210.98	-92.73	-3,254.98	-7,524.81	3,507.99	3,087.07	420.92	8.334		
14,300.00	6,941.06	14,940.80	7,108.98	213.79	213.79	-92.75	-3,255.57	-7,624.80	3,507.89	3,081.34	426.55	8.224		
14,400.00	6,939.31	15,040.79	7,108.44	216.62	216.60	-92.77	-3,256.16	-7,724.79	3,507.78	3,075.61	432.18	8.117		
14,500.00	6,937.56	15,140.79	7,107.90	219.44	219.41	-92.78	-3,256.74	-7,824.78	3,507.68	3,069.87	437.80	8.012		
14,600.00	6,935.81	15,240.78	7,107.36	222.27	222.22	-92.80	-3,257.33	-7,924.76	3,507.57	3,064.13	443.44	7.910		
14,700.00	6,934.06	15,340.77	7,106.82	225.10	225.03	-92.82	-3,257.92	-8,024.75	3,507.46	3,058.40	449.07	7.811		
14,800.00	6,932.31	15,440.76	7,106.28	227.93	227.85	-92.84	-3,258.51	-8,124.74	3,507.36	3,052.66	454.70	7.714		
14,817.75	6,932.00	15,458.51	7,106.18	228.43	228.35	-92.85	-3,258.61	-8,142.49	3,507.34	3,051.64	455.70	7.697 SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 4N-16A-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	3.28	3.28	0.40	40.07	0.28	40.07					
100.00	100.00	100.00	100.00	3.28	3.28	0.40	40.07	0.28	40.07	33.50	6.57	6.099		
200.00	200.00	200.00	200.00	3.34	3.34	0.40	40.07	0.28	40.07	33.39	6.67	6.003		
300.00	300.00	300.00	300.00	3.44	3.44	0.40	40.07	0.28	40.07	33.18	6.89	5.815		
400.00	400.00	400.00	400.00	3.60	3.60	0.40	40.07	0.28	40.07	32.86	7.21	5.560		
500.00	500.00	500.00	500.00	3.81	3.81	0.40	40.07	0.28	40.07	32.45	7.61	5.264		
600.00	599.98	599.98	599.98	4.05	4.05	29.00	40.07	0.28	38.53	30.44	8.09	4.761		
700.00	699.86	698.70	698.68	4.32	4.31	31.98	41.72	-0.12	36.03	27.39	8.64	4.172		
735.95	735.76	734.23	734.18	4.42	4.42	32.85	43.12	-0.45	35.81	26.97	8.85	4.048 CC		
800.00	799.72	797.52	797.36	4.62	4.61	33.83	46.68	-1.31	36.49	27.25	9.24	3.950		
900.00	899.58	896.21	895.68	4.93	4.93	33.83	54.94	-3.29	40.21	30.33	9.88	4.069		
1,000.00	999.44	1,004.50	994.33	5.27	5.30	32.66	65.92	-5.92	46.54	35.96	10.58	4.398		
1,100.00	1,099.31	1,104.72	1,093.43	5.62	5.65	31.69	77.19	-8.61	53.12	41.84	11.28	4.708		
1,200.00	1,199.17	1,204.94	1,192.54	5.98	6.01	30.94	88.46	-11.31	59.72	47.71	12.01	4.972		
1,300.00	1,299.03	1,305.16	1,291.64	6.36	6.39	30.33	99.73	-14.01	66.32	53.56	12.76	5.199		
1,400.00	1,398.89	1,405.38	1,390.75	6.74	6.78	29.84	111.00	-16.71	72.92	59.40	13.52	5.393		
1,500.00	1,498.75	1,505.60	1,489.85	7.13	7.17	29.42	122.27	-19.41	79.54	65.24	14.30	5.561		
1,600.00	1,598.61	1,594.18	1,588.96	7.52	7.53	29.08	133.53	-22.11	86.15	71.11	15.05	5.726		
1,700.00	1,698.47	1,706.04	1,688.06	7.92	7.98	28.78	144.80	-24.81	92.77	76.88	15.90	5.836		
1,800.00	1,798.33	1,806.26	1,787.16	8.32	8.39	28.52	156.07	-27.51	99.39	82.68	16.71	5.949		
1,900.00	1,898.19	1,906.48	1,886.27	8.73	8.81	28.29	167.34	-30.21	106.02	88.49	17.53	6.048		
2,000.00	1,998.05	2,006.70	1,985.37	9.14	9.23	28.09	178.61	-32.91	112.64	94.28	18.35	6.137		
2,100.00	2,097.91	2,106.92	2,084.48	9.55	9.65	27.91	189.88	-35.61	119.26	100.08	19.19	6.216		
2,200.00	2,197.78	2,207.14	2,183.58	9.97	10.08	27.75	201.14	-38.31	125.89	105.87	20.03	6.287		
2,300.00	2,297.64	2,307.36	2,282.69	10.39	10.51	27.61	212.41	-41.00	132.52	111.65	20.87	6.351		
2,400.00	2,397.50	2,407.59	2,381.79	10.81	10.94	27.48	223.68	-43.70	139.15	117.43	21.71	6.408		
2,500.00	2,497.36	2,507.81	2,480.90	11.23	11.37	27.36	234.95	-46.40	145.77	123.21	22.56	6.461		
2,600.00	2,597.22	2,608.03	2,580.00	11.65	11.80	27.25	246.22	-49.10	152.40	128.99	23.42	6.508		
2,700.00	2,697.08	2,708.25	2,679.11	12.07	12.24	27.15	257.48	-51.80	159.03	134.76	24.27	6.552		
2,800.00	2,796.94	2,808.47	2,778.21	12.50	12.67	27.06	268.75	-54.50	165.66	140.53	25.13	6.592		
2,900.00	2,896.80	2,891.31	2,877.31	12.92	13.04	26.98	280.02	-57.20	172.29	146.38	25.92	6.648		
3,000.00	2,996.66	3,008.91	2,976.42	13.35	13.55	26.90	291.29	-59.90	178.92	152.07	26.85	6.663		
3,100.00	3,096.52	3,109.13	3,075.52	13.78	13.99	26.83	302.56	-62.60	185.56	157.84	27.72	6.694		
3,200.00	3,196.38	3,209.35	3,174.63	14.21	14.43	26.76	313.83	-65.30	192.19	163.60	28.58	6.723		
3,300.00	3,296.25	3,309.57	3,273.73	14.64	14.87	26.70	325.09	-68.00	198.82	169.37	29.45	6.751		
3,400.00	3,396.11	3,409.79	3,372.84	15.07	15.31	26.64	336.36	-70.70	205.45	175.13	30.32	6.776		
3,500.00	3,495.97	3,489.99	3,471.94	15.50	15.67	26.58	347.63	-73.39	212.08	180.98	31.10	6.818		
3,600.00	3,595.83	3,589.77	3,571.05	15.93	16.11	26.53	358.90	-76.09	218.72	186.74	31.97	6.840		
3,700.00	3,695.69	3,689.55	3,670.15	16.36	16.55	26.48	370.17	-78.79	225.35	192.50	32.84	6.861		
3,800.00	3,795.55	3,789.33	3,769.26	16.80	16.99	26.44	381.44	-81.49	231.98	198.26	33.72	6.880		
3,900.00	3,895.41	3,889.11	3,868.36	17.23	17.44	26.39	392.70	-84.19	238.61	204.02	34.59	6.898		
4,000.00	3,995.27	3,988.89	3,967.47	17.66	17.88	26.35	403.97	-86.89	245.25	209.78	35.46	6.915		
4,100.00	4,095.13	4,088.67	4,066.57	18.10	18.32	26.31	415.24	-89.59	251.88	215.54	36.34	6.932		
4,200.00	4,194.99	4,188.45	4,165.67	18.53	18.77	26.28	426.51	-92.29	258.51	221.30	37.21	6.947		
4,300.00	4,294.85	4,288.23	4,264.78	18.96	19.21	26.24	437.78	-94.99	265.14	227.06	38.09	6.961		
4,400.00	4,394.71	4,388.01	4,363.88	19.40	19.66	26.21	449.05	-97.69	271.78	232.81	38.97	6.975		
4,500.00	4,494.58	4,487.79	4,462.99	19.83	20.10	26.18	460.31	-100.39	278.41	238.57	39.84	6.988		
4,600.00	4,594.44	4,587.57	4,562.09	20.27	20.55	26.15	471.58	-103.08	285.04	244.32	40.72	7.000		
4,700.00	4,694.30	4,687.35	4,661.20	20.71	20.99	26.12	482.85	-105.78	291.68	250.08	41.60	7.012		
4,800.00	4,794.16	4,787.13	4,760.30	21.14	21.44	26.09	494.12	-108.48	298.31	255.83	42.48	7.023		
4,900.00	4,894.02	4,886.91	4,858.41	21.58	21.89	26.06	505.39	-111.18	304.95	261.59	43.36	7.033		
5,000.00	4,993.88	4,986.69	4,958.51	22.01	22.33	26.04	516.66	-113.88	311.58	267.34	44.24	7.043		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 4N-16A-M - OH - PLAN #1												Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,100.00	5,093.74	5,086.47	5,057.62	22.45	22.78	26.01	527.92	-116.58	318.21	273.09	45.12	7.053	
5,200.00	5,193.60	5,186.24	5,156.72	22.89	23.23	25.99	539.19	-119.28	324.85	278.85	46.00	7.062	
5,300.00	5,293.46	5,286.02	5,255.82	23.32	23.67	25.97	550.46	-121.98	331.48	284.60	46.88	7.071	
5,400.00	5,393.32	5,385.80	5,354.93	23.76	24.12	25.95	561.73	-124.68	338.11	290.35	47.76	7.079	
5,500.00	5,493.18	5,485.58	5,454.03	24.20	24.57	25.93	573.00	-127.38	344.75	296.11	48.64	7.087	
5,600.00	5,593.05	5,585.36	5,553.14	24.64	25.02	25.91	584.27	-130.08	351.38	301.86	49.53	7.095	
5,700.00	5,692.91	5,685.14	5,652.24	25.07	25.46	25.89	595.53	-132.78	358.02	307.61	50.41	7.102	
5,800.00	5,792.77	5,784.92	5,751.35	25.51	25.91	25.87	606.80	-135.47	364.65	313.36	51.29	7.110	
5,900.00	5,892.63	5,884.70	5,850.45	25.95	26.36	25.85	618.07	-138.17	371.28	319.11	52.17	7.116	
6,000.00	5,992.49	5,984.48	5,949.56	26.39	26.81	25.83	629.34	-140.87	377.92	324.86	53.06	7.123	
6,100.00	6,092.35	6,084.26	6,048.66	26.82	27.26	25.82	640.61	-143.57	384.55	330.61	53.94	7.129	
6,200.00	6,192.21	6,184.04	6,147.77	27.26	27.70	25.80	651.88	-146.27	391.19	336.36	54.82	7.135	
6,300.00	6,292.07	6,283.82	6,246.87	27.70	28.15	25.79	663.14	-148.97	397.82	342.11	55.71	7.141	
6,400.00	6,391.93	6,383.47	6,345.84	28.14	28.60	25.76	674.40	-151.76	404.46	347.87	56.59	7.147	
6,500.00	6,491.69	6,481.27	6,442.22	28.58	29.04	63.24	685.29	-163.54	411.29	353.84	57.45	7.159	
6,600.00	6,589.80	6,577.68	6,534.38	29.02	29.47	75.39	695.60	-189.55	418.21	359.93	58.28	7.175	
6,700.00	6,683.86	6,672.92	6,620.58	29.46	29.88	77.48	705.15	-228.69	424.98	365.88	59.10	7.191	
6,800.00	6,771.56	6,767.14	6,699.23	29.92	30.30	77.70	713.74	-279.70	431.39	371.48	59.91	7.201	
6,900.00	6,850.72	6,860.51	6,768.95	30.40	30.76	77.38	721.25	-341.22	437.23	376.46	60.77	7.195	
7,000.00	6,919.40	6,953.17	6,828.59	30.96	31.29	76.91	727.55	-411.75	442.32	380.58	61.74	7.164	
7,100.00	6,975.92	7,045.28	6,877.19	31.62	31.94	76.46	732.53	-489.75	446.51	383.58	62.93	7.096	
7,200.00	7,018.87	7,137.01	6,913.97	32.44	32.73	76.12	736.13	-573.61	449.67	385.26	64.41	6.982	
7,300.00	7,047.21	7,228.49	6,938.37	33.42	33.65	75.92	738.29	-661.66	451.70	385.48	66.22	6.821	
7,400.00	7,060.23	7,319.87	6,949.99	34.55	34.70	75.89	738.98	-752.23	452.56	384.20	68.36	6.621	
7,500.00	7,060.03	7,416.30	6,950.83	35.83	35.93	76.03	738.39	-848.63	452.36	381.50	70.86	6.384	
7,600.00	7,058.28	7,516.29	6,950.53	37.28	37.38	76.21	737.66	-948.62	452.03	378.29	73.73	6.130	
7,700.00	7,056.53	7,616.28	6,950.23	38.89	38.97	76.39	736.92	-1,048.61	451.70	374.79	76.91	5.873	
7,800.00	7,054.78	7,716.27	6,949.93	40.63	40.71	76.57	736.18	-1,148.59	451.37	371.01	80.36	5.617	
7,900.00	7,053.03	7,816.26	6,949.63	42.50	42.57	76.75	735.44	-1,248.58	451.05	367.01	84.04	5.367	
8,000.00	7,051.28	7,916.25	6,949.33	44.47	44.53	76.93	734.71	-1,348.57	450.74	362.80	87.93	5.126	
8,100.00	7,049.53	8,016.24	6,949.04	46.53	46.58	77.11	733.97	-1,448.55	450.43	358.42	92.01	4.896	
8,200.00	7,047.78	8,116.23	6,948.74	48.67	48.72	77.29	733.23	-1,548.54	450.12	353.88	96.24	4.677	
8,300.00	7,046.03	8,216.22	6,948.44	50.89	50.93	77.47	732.49	-1,648.52	449.82	349.20	100.62	4.471	
8,400.00	7,044.28	8,316.21	6,948.14	53.16	53.20	77.65	731.76	-1,748.51	449.52	344.40	105.12	4.276	
8,500.00	7,042.53	8,416.19	6,947.84	55.49	55.52	77.83	731.02	-1,848.50	449.23	339.50	109.73	4.094	
8,600.00	7,040.78	8,516.18	6,947.54	57.86	57.89	78.01	730.28	-1,948.48	448.94	334.50	114.44	3.923	
8,700.00	7,039.03	8,616.17	6,947.25	60.28	60.31	78.20	729.54	-2,048.47	448.65	329.42	119.23	3.763	
8,800.00	7,037.28	8,716.16	6,946.95	62.74	62.76	78.38	728.80	-2,148.46	448.37	324.27	124.10	3.613	
8,900.00	7,035.53	8,816.15	6,946.65	65.23	65.24	78.56	728.07	-2,248.44	448.10	319.05	129.04	3.472	
9,000.00	7,033.78	8,916.14	6,946.35	67.74	67.76	78.74	727.33	-2,348.43	447.83	313.78	134.05	3.341	
9,100.00	7,032.03	9,016.13	6,946.05	70.29	70.30	78.92	726.59	-2,448.42	447.56	308.45	139.10	3.217	
9,200.00	7,030.28	9,116.12	6,945.75	72.85	72.86	79.11	725.85	-2,548.40	447.30	303.08	144.21	3.102	
9,300.00	7,028.54	9,216.11	6,945.46	75.44	75.44	79.29	725.12	-2,648.39	447.04	297.67	149.37	2.993	
9,400.00	7,026.79	9,316.10	6,945.16	78.05	78.05	79.47	724.38	-2,748.37	446.79	292.22	154.57	2.891	
9,500.00	7,025.04	9,416.09	6,944.86	80.67	80.67	79.66	723.64	-2,848.36	446.54	286.74	159.80	2.794	
9,600.00	7,023.29	9,516.08	6,944.56	83.31	83.31	79.84	722.90	-2,948.35	446.30	281.23	165.07	2.704	
9,700.00	7,021.54	9,616.07	6,944.26	85.96	85.96	80.02	722.17	-3,048.33	446.06	275.69	170.37	2.618	
9,800.00	7,019.79	9,716.06	6,943.96	88.63	88.62	80.21	721.43	-3,148.32	445.82	270.12	175.70	2.537	
9,900.00	7,018.04	9,816.05	6,943.67	91.30	91.30	80.39	720.69	-3,248.31	445.59	264.53	181.06	2.461	
10,000.00	7,016.29	9,916.04	6,943.37	93.99	93.98	80.58	719.95	-3,348.29	445.37	258.93	186.44	2.389	
10,100.00	7,014.54	10,016.03	6,943.07	96.69	96.68	80.76	719.21	-3,448.28	445.15	253.30	191.84	2.320	
10,200.00	7,012.79	10,116.02	6,942.77	99.40	99.38	80.95	718.48	-3,548.26	444.93	247.66	197.27	2.255	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 4N-16A-M - OH - PLAN #1												Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,300.00	7,011.04	10,216.01	6,942.47	102.11	102.10	81.13	717.74	-3,648.25	444.72	242.00	202.72	2.194	
10,400.00	7,009.29	10,315.99	6,942.17	104.83	104.82	81.32	717.00	-3,748.24	444.51	236.33	208.18	2.135	
10,500.00	7,007.54	10,415.98	6,941.88	107.56	107.55	81.50	716.26	-3,848.22	444.31	230.65	213.66	2.080	
10,600.00	7,005.79	10,515.97	6,941.58	110.30	110.28	81.69	715.53	-3,948.21	444.11	224.96	219.16	2.026	
10,700.00	7,004.04	10,615.96	6,941.28	113.04	113.02	81.87	714.79	-4,048.20	443.92	219.26	224.67	1.976	
10,800.00	7,002.29	10,715.95	6,940.98	115.79	115.77	82.06	714.05	-4,148.18	443.73	213.54	230.19	1.928	
10,900.00	7,000.54	10,815.94	6,940.68	118.54	118.52	82.24	713.31	-4,248.17	443.55	207.82	235.73	1.882	
11,000.00	6,998.79	10,915.93	6,940.38	121.30	121.28	82.43	712.58	-4,348.15	443.37	202.09	241.28	1.838	
11,100.00	6,997.04	11,015.92	6,940.09	124.06	124.04	82.62	711.84	-4,448.14	443.20	196.36	246.84	1.796	
11,200.00	6,995.29	11,115.91	6,939.79	126.83	126.80	82.80	711.10	-4,548.13	443.03	190.62	252.41	1.755	
11,300.00	6,993.54	11,215.90	6,939.49	129.60	129.57	82.99	710.36	-4,648.11	442.86	184.88	257.99	1.717	
11,400.00	6,991.80	11,315.89	6,939.19	132.37	132.35	83.18	709.63	-4,748.10	442.70	179.13	263.58	1.680	
11,500.00	6,990.05	11,415.88	6,938.89	135.15	135.12	83.36	708.89	-4,848.09	442.55	173.37	269.17	1.644	
11,600.00	6,988.30	11,515.87	6,938.59	137.93	137.90	83.55	708.15	-4,948.07	442.40	167.62	274.78	1.610	
11,700.00	6,986.55	11,615.86	6,938.30	140.72	140.69	83.74	707.41	-5,048.06	442.25	161.86	280.39	1.577	
11,800.00	6,984.80	11,715.85	6,938.00	143.50	143.47	83.92	706.67	-5,148.05	442.11	156.10	286.01	1.546	
11,900.00	6,983.05	11,815.84	6,937.70	146.29	146.26	84.11	705.94	-5,248.03	441.97	150.34	291.63	1.516	
12,000.00	6,981.30	11,915.83	6,937.40	149.09	149.05	84.30	705.20	-5,348.02	441.84	144.58	297.27	1.486 Level 3	
12,100.00	6,979.55	12,015.82	6,937.10	151.88	151.85	84.49	704.46	-5,448.00	441.72	138.81	302.90	1.458 Level 3	
12,200.00	6,977.80	12,115.81	6,936.80	154.68	154.65	84.67	703.72	-5,547.99	441.59	133.05	308.54	1.431 Level 3	
12,300.00	6,976.05	12,215.79	6,936.51	157.48	157.44	84.86	702.99	-5,647.98	441.48	127.29	314.19	1.405 Level 3	
12,400.00	6,974.30	12,315.78	6,936.21	160.28	160.24	85.05	702.25	-5,747.96	441.36	121.52	319.84	1.380 Level 3	
12,500.00	6,972.55	12,415.77	6,935.91	163.08	163.05	85.24	701.51	-5,847.95	441.26	115.76	325.49	1.356 Level 3	
12,600.00	6,970.80	12,515.76	6,935.61	165.89	165.85	85.43	700.77	-5,947.94	441.15	110.00	331.15	1.332 Level 3	
12,700.00	6,969.05	12,615.75	6,935.31	168.69	168.66	85.61	700.04	-6,047.92	441.05	104.25	336.81	1.310 Level 3	
12,800.00	6,967.30	12,715.74	6,935.01	171.50	171.47	85.80	699.30	-6,147.91	440.96	98.49	342.47	1.288 Level 3	
12,900.00	6,965.55	12,815.73	6,934.72	174.31	174.28	85.99	698.56	-6,247.89	440.87	92.74	348.14	1.266 Level 3	
13,000.00	6,963.80	12,915.72	6,934.42	177.12	177.09	86.18	697.82	-6,347.88	440.79	86.98	353.80	1.246 Level 2	
13,100.00	6,962.05	13,015.71	6,934.12	179.94	179.90	86.37	697.08	-6,447.87	440.71	81.24	359.47	1.226 Level 2	
13,200.00	6,960.30	13,115.70	6,933.82	182.75	182.72	86.55	696.35	-6,547.85	440.63	75.49	365.14	1.207 Level 2	
13,300.00	6,958.55	13,215.69	6,933.52	185.57	185.53	86.74	695.61	-6,647.84	440.56	69.75	370.81	1.188 Level 2	
13,400.00	6,956.80	13,315.68	6,933.22	188.38	188.35	86.93	694.87	-6,747.83	440.50	64.01	376.48	1.170 Level 2	
13,500.00	6,955.05	13,415.67	6,932.93	191.20	191.17	87.12	694.13	-6,847.81	440.44	58.28	382.16	1.153 Level 2	
13,600.00	6,953.31	13,515.66	6,932.63	194.02	193.98	87.31	693.40	-6,947.80	440.38	52.55	387.83	1.136 Level 2	
13,700.00	6,951.56	13,615.65	6,932.33	196.84	196.81	87.50	692.66	-7,047.79	440.33	46.83	393.50	1.119 Level 2	
13,800.00	6,949.81	13,715.64	6,932.03	199.67	199.63	87.69	691.92	-7,147.77	440.29	41.11	399.17	1.103 Level 2	
13,900.00	6,948.06	13,815.63	6,931.73	202.49	202.45	87.88	691.18	-7,247.76	440.24	35.40	404.84	1.087 Level 2	
14,000.00	6,946.31	13,915.62	6,931.43	205.31	205.27	88.06	690.45	-7,347.74	440.21	29.69	410.51	1.072 Level 2	
14,100.00	6,944.56	14,015.61	6,931.14	208.14	208.10	88.25	689.71	-7,447.73	440.18	23.99	416.18	1.058 Level 2	
14,200.00	6,942.81	14,115.59	6,930.84	210.96	210.92	88.44	688.97	-7,547.72	440.15	18.30	421.85	1.043 Level 2	
14,300.00	6,941.06	14,215.58	6,930.54	213.79	213.75	88.63	688.23	-7,647.70	440.13	12.61	427.52	1.029 Level 2	
14,400.00	6,939.31	14,315.57	6,930.24	216.62	216.58	88.82	687.49	-7,747.69	440.11	6.92	433.19	1.016 Level 2	
14,500.00	6,937.56	14,415.56	6,929.94	219.44	219.40	89.01	686.76	-7,847.68	440.10	1.25	438.85	1.003 Level 2	
14,600.00	6,935.81	14,515.55	6,929.64	222.27	222.23	89.20	686.02	-7,947.66	440.09	-4.42	444.51	0.990 Level 1	
14,700.00	6,934.06	14,615.54	6,929.35	225.10	225.06	89.39	685.28	-8,047.65	440.09	-10.08	450.17	0.978 Level 1	
14,711.92	6,933.85	14,627.46	6,929.31	225.44	225.40	89.41	685.19	-8,059.57	440.09	-10.76	450.84	0.976 Level 1	
14,800.00	6,932.31	14,715.53	6,929.05	227.93	227.89	89.58	684.54	-8,147.63	440.09	-15.74	455.82	0.965 Level 1	
14,817.75	6,932.00	14,733.28	6,928.99	228.43	228.39	89.61	684.41	-8,165.38	440.09	-16.74	456.83	0.963 Level 1, ES, SF	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 4N-16C-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	3.28	3.28	0.27	60.11	0.28	60.11					
100.00	100.00	100.00	100.00	3.28	3.28	0.27	60.11	0.28	60.11	53.54	6.57	9.150		
200.00	200.00	200.00	200.00	3.34	3.34	0.27	60.11	0.28	60.11	53.44	6.67	9.007		
300.00	300.00	300.00	300.00	3.44	3.44	0.27	60.11	0.28	60.11	53.22	6.89	8.725		
400.00	400.00	400.00	400.00	3.60	3.60	0.27	60.11	0.28	60.11	52.90	7.21	8.341		
500.00	500.00	500.00	500.00	3.81	3.81	0.27	60.11	0.28	60.11	52.50	7.61	7.897		
600.00	599.98	599.98	599.98	4.05	4.05	28.45	60.11	0.28	58.57	50.48	8.09	7.238		
700.00	699.86	698.01	697.99	4.32	4.31	30.46	61.77	0.01	56.05	47.42	8.63	6.492		
735.39	735.20	732.73	732.68	4.42	4.41	31.11	63.15	-0.21	55.84	47.00	8.84	6.316 CC, ES		
800.00	799.72	796.12	795.97	4.62	4.61	32.04	66.74	-0.79	56.54	47.31	9.23	6.124		
900.00	899.58	894.11	893.59	4.93	4.92	32.74	75.00	-2.12	60.38	50.51	9.87	6.115		
1,000.00	999.44	991.75	990.53	5.27	5.25	32.61	86.51	-3.97	67.53	56.98	10.55	6.403		
1,100.00	1,099.31	1,089.43	1,087.07	5.62	5.60	31.92	101.19	-6.34	77.87	66.63	11.24	6.927		
1,200.00	1,199.17	1,188.79	1,185.12	5.98	5.96	31.23	117.06	-8.89	89.16	77.20	11.96	7.457		
1,300.00	1,299.03	1,288.14	1,283.16	6.36	6.33	30.70	132.93	-11.45	100.46	87.76	12.70	7.912		
1,400.00	1,398.89	1,387.50	1,381.21	6.74	6.72	30.28	148.80	-14.01	111.76	98.31	13.46	8.306		
1,500.00	1,498.75	1,486.85	1,479.26	7.13	7.12	29.93	164.66	-16.56	123.07	108.84	14.23	8.648		
1,600.00	1,598.61	1,586.21	1,577.30	7.52	7.52	29.65	180.53	-19.12	134.39	119.37	15.02	8.947		
1,700.00	1,698.47	1,685.56	1,675.35	7.92	7.94	29.40	196.40	-21.67	145.71	129.89	15.82	9.210		
1,800.00	1,798.33	1,784.92	1,773.40	8.32	8.35	29.19	212.27	-24.23	157.03	140.40	16.63	9.442		
1,900.00	1,898.19	1,884.28	1,871.44	8.73	8.78	29.01	228.14	-26.79	168.35	150.90	17.45	9.648		
2,000.00	1,998.05	1,983.63	1,969.49	9.14	9.20	28.86	244.01	-29.34	179.67	161.40	18.28	9.832		
2,100.00	2,097.91	2,082.99	2,067.54	9.55	9.63	28.72	259.88	-31.90	191.00	171.89	19.11	9.996		
2,200.00	2,197.78	2,182.34	2,165.58	9.97	10.07	28.60	275.75	-34.45	202.32	182.38	19.95	10.144		
2,300.00	2,297.64	2,281.70	2,263.63	10.39	10.50	28.49	291.61	-37.01	213.65	192.86	20.79	10.277		
2,400.00	2,397.50	2,381.05	2,361.68	10.81	10.94	28.39	307.48	-39.57	224.98	203.34	21.64	10.398		
2,500.00	2,497.36	2,480.41	2,459.73	11.23	11.38	28.30	323.35	-42.12	236.31	213.82	22.49	10.508		
2,600.00	2,597.22	2,579.76	2,557.77	11.65	11.83	28.22	339.22	-44.68	247.63	224.29	23.34	10.609		
2,700.00	2,697.08	2,679.12	2,655.82	12.07	12.27	28.14	355.09	-47.23	258.96	234.76	24.20	10.701		
2,800.00	2,796.94	2,778.48	2,753.87	12.50	12.72	28.07	370.96	-49.79	270.29	245.23	25.06	10.785		
2,900.00	2,896.80	2,877.83	2,851.91	12.92	13.16	28.01	386.83	-52.35	281.62	255.70	25.92	10.863		
3,000.00	2,996.66	2,977.19	2,949.96	13.35	13.61	27.95	402.70	-54.90	292.95	266.16	26.79	10.935		
3,100.00	3,096.52	3,076.54	3,048.01	13.78	14.06	27.90	418.57	-57.46	304.28	276.63	27.66	11.002		
3,200.00	3,196.38	3,175.90	3,146.05	14.21	14.51	27.85	434.43	-60.01	315.61	287.09	28.53	11.064		
3,300.00	3,296.25	3,275.25	3,244.10	14.64	14.96	27.80	450.30	-62.57	326.94	297.55	29.40	11.121		
3,400.00	3,396.11	3,374.61	3,342.15	15.07	15.42	27.76	466.17	-65.13	338.27	308.00	30.27	11.175		
3,500.00	3,495.97	3,473.97	3,440.19	15.50	15.87	27.72	482.04	-67.68	349.61	318.46	31.14	11.225		
3,600.00	3,595.83	3,573.32	3,538.24	15.93	16.32	27.68	497.91	-70.24	360.94	328.92	32.02	11.272		
3,700.00	3,695.69	3,672.68	3,636.29	16.36	16.78	27.65	513.78	-72.79	372.27	339.37	32.90	11.317		
3,800.00	3,795.55	3,772.03	3,734.34	16.80	17.23	27.61	529.65	-75.35	383.60	349.83	33.77	11.358		
3,900.00	3,895.41	3,871.39	3,832.38	17.23	17.69	27.58	545.52	-77.91	394.93	360.28	34.65	11.397		
4,000.00	3,995.27	3,970.74	3,930.43	17.66	18.14	27.55	561.39	-80.46	406.26	370.73	35.53	11.434		
4,100.00	4,095.13	4,070.10	4,028.48	18.10	18.60	27.53	577.25	-83.02	417.59	381.18	36.41	11.469		
4,200.00	4,194.99	4,169.46	4,126.52	18.53	19.06	27.50	593.12	-85.57	428.93	391.63	37.29	11.502		
4,300.00	4,294.85	4,268.81	4,224.57	18.96	19.51	27.47	608.99	-88.13	440.26	402.08	38.17	11.533		
4,400.00	4,394.71	4,368.17	4,322.62	19.40	19.97	27.45	624.86	-90.69	451.59	412.53	39.06	11.562		
4,500.00	4,494.58	4,467.52	4,420.66	19.83	20.43	27.43	640.73	-93.24	462.92	422.98	39.94	11.590		
4,600.00	4,594.44	4,566.88	4,518.71	20.27	20.89	27.41	656.60	-95.80	474.25	433.43	40.82	11.617		
4,700.00	4,694.30	4,666.23	4,616.76	20.71	21.34	27.38	672.47	-98.35	485.59	443.88	41.71	11.642		
4,800.00	4,794.16	4,765.59	4,714.80	21.14	21.80	27.37	688.34	-100.91	496.92	454.32	42.59	11.666		
4,900.00	4,894.02	4,864.95	4,812.85	21.58	22.26	27.35	704.20	-103.47	508.25	464.77	43.48	11.689		
5,000.00	4,993.88	4,964.30	4,910.90	22.01	22.72	27.33	720.07	-106.02	519.58	475.22	44.37	11.711		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 4N-16C-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.00	5,093.74	5,063.66	5,008.95	22.45	23.18	27.31	735.94	-108.58	530.92	485.66	45.25	11.732		
5,200.00	5,193.60	5,163.01	5,106.99	22.89	23.64	27.29	751.81	-111.13	542.25	496.11	46.14	11.752		
5,300.00	5,293.46	5,262.37	5,205.04	23.32	24.10	27.28	767.68	-113.69	553.58	506.55	47.03	11.772		
5,400.00	5,393.32	5,361.72	5,303.09	23.76	24.56	27.26	783.55	-116.25	564.91	517.00	47.91	11.790		
5,500.00	5,493.18	5,461.08	5,401.13	24.20	25.02	27.25	799.42	-118.80	576.25	527.44	48.80	11.808		
5,600.00	5,593.05	5,560.44	5,499.18	24.64	25.48	27.23	815.29	-121.36	587.58	537.89	49.69	11.825		
5,700.00	5,692.91	5,659.79	5,597.23	25.07	25.94	27.22	831.16	-123.91	598.91	548.33	50.58	11.841		
5,800.00	5,792.77	5,759.15	5,695.27	25.51	26.40	27.21	847.02	-126.47	610.24	558.78	51.47	11.857		
5,900.00	5,892.63	5,858.50	5,793.32	25.95	26.86	27.20	862.89	-129.03	621.58	569.22	52.36	11.872		
6,000.00	5,992.49	5,957.86	5,891.37	26.39	27.32	27.18	878.76	-131.58	632.91	579.66	53.25	11.886		
6,100.00	6,092.35	6,057.21	5,989.41	26.82	27.79	27.17	894.63	-134.14	644.24	590.11	54.14	11.900		
6,200.00	6,192.21	6,156.57	6,087.46	27.26	28.25	27.16	910.50	-136.69	655.58	600.55	55.03	11.914		
6,300.00	6,292.07	6,255.93	6,185.51	27.70	28.71	27.15	926.37	-139.25	666.91	610.99	55.92	11.927		
6,400.00	6,391.93	6,355.28	6,283.56	28.14	29.17	27.14	942.24	-141.81	678.24	621.43	56.81	11.939		
6,500.00	6,491.69	6,454.58	6,381.55	28.58	29.63	65.59	958.10	-144.36	689.58	631.88	57.70	11.951		
6,600.00	6,589.80	6,552.59	6,478.27	29.02	30.09	79.75	973.75	-146.88	701.02	642.43	58.60	11.964		
6,700.00	6,683.86	6,652.75	6,577.01	29.46	30.55	84.71	989.66	-151.61	713.13	653.58	59.54	11.977		
6,800.00	6,771.56	6,762.31	6,683.10	29.92	31.06	87.84	1,006.21	-172.70	725.39	664.80	60.59	11.972		
6,900.00	6,850.72	6,878.94	6,790.42	30.40	31.57	90.19	1,022.24	-214.98	737.16	675.50	61.67	11.954		
7,000.00	6,919.40	7,003.18	6,894.45	30.96	32.09	92.10	1,036.93	-280.94	747.79	685.06	62.73	11.920		
7,100.00	6,975.92	7,135.08	6,988.95	31.62	32.67	93.65	1,049.23	-371.79	756.54	692.68	63.86	11.847		
7,200.00	7,018.87	7,273.85	7,066.31	32.44	33.49	94.84	1,057.93	-486.33	762.69	697.49	65.20	11.697		
7,300.00	7,047.21	7,417.69	7,118.81	33.42	34.69	95.63	1,061.95	-619.87	765.62	698.62	67.00	11.427		
7,400.00	7,060.23	7,563.87	7,140.58	34.55	36.26	95.96	1,060.60	-764.08	764.95	695.55	69.40	11.022		
7,500.00	7,060.03	7,672.16	7,140.65	35.83	37.62	96.10	1,056.94	-872.30	762.26	690.27	71.99	10.589		
7,600.00	7,058.28	7,772.11	7,140.21	37.28	39.04	96.22	1,053.48	-972.19	759.71	684.90	74.81	10.155		
7,700.00	7,056.53	7,872.07	7,139.78	38.89	40.61	96.34	1,050.02	-1,072.09	757.16	679.22	77.94	9.714		
7,800.00	7,054.78	7,972.02	7,139.35	40.63	42.31	96.46	1,046.56	-1,171.98	754.61	673.27	81.35	9.277		
7,900.00	7,053.03	8,071.98	7,138.91	42.50	44.13	96.59	1,043.10	-1,271.88	752.07	667.09	84.99	8.849		
8,000.00	7,051.28	8,171.93	7,138.48	44.47	46.06	96.71	1,039.64	-1,371.77	749.53	660.70	88.84	8.437		
8,100.00	7,049.53	8,271.88	7,138.05	46.53	48.07	96.83	1,036.19	-1,471.66	747.00	654.13	92.87	8.044		
8,200.00	7,047.78	8,371.84	7,137.61	48.67	50.17	96.96	1,032.73	-1,571.56	744.47	647.42	97.05	7.671		
8,300.00	7,046.03	8,471.79	7,137.18	50.89	52.34	97.09	1,029.27	-1,671.45	741.94	640.56	101.38	7.318		
8,400.00	7,044.28	8,571.75	7,136.75	53.16	54.57	97.21	1,025.81	-1,771.34	739.42	633.59	105.83	6.987		
8,500.00	7,042.53	8,671.70	7,136.31	55.49	56.85	97.34	1,022.35	-1,871.24	736.90	626.52	110.38	6.676		
8,600.00	7,040.78	8,771.66	7,135.88	57.86	59.19	97.47	1,018.89	-1,971.13	734.38	619.36	115.02	6.385		
8,700.00	7,039.03	8,871.61	7,135.45	60.28	61.57	97.60	1,015.43	-2,071.03	731.87	612.12	119.75	6.112		
8,800.00	7,037.28	8,971.57	7,135.01	62.74	63.98	97.73	1,011.97	-2,170.92	729.36	604.82	124.55	5.856		
8,900.00	7,035.53	9,071.52	7,134.58	65.23	66.43	97.86	1,008.52	-2,270.81	726.86	597.45	129.41	5.617		
9,000.00	7,033.78	9,171.48	7,134.14	67.74	68.91	97.99	1,005.06	-2,370.71	724.36	590.04	134.32	5.393		
9,100.00	7,032.03	9,271.43	7,133.71	70.29	71.42	98.13	1,001.60	-2,470.60	721.86	582.58	139.28	5.183		
9,200.00	7,030.28	9,371.39	7,133.28	72.85	73.95	98.26	998.14	-2,570.50	719.36	575.08	144.29	4.986		
9,300.00	7,028.54	9,471.34	7,132.84	75.44	76.51	98.40	994.68	-2,670.39	716.88	567.54	149.33	4.801		
9,400.00	7,026.79	9,571.30	7,132.41	78.05	79.08	98.53	991.22	-2,770.28	714.39	559.98	154.41	4.627		
9,500.00	7,025.04	9,671.25	7,131.98	80.67	81.68	98.67	987.76	-2,870.18	711.91	552.39	159.52	4.463		
9,600.00	7,023.29	9,771.20	7,131.54	83.31	84.29	98.81	984.30	-2,970.07	709.43	544.78	164.65	4.309		
9,700.00	7,021.54	9,871.16	7,131.11	85.96	86.91	98.95	980.84	-3,069.97	706.96	537.15	169.81	4.163		
9,800.00	7,019.79	9,971.11	7,130.68	88.63	89.55	99.09	977.39	-3,169.86	704.49	529.50	174.99	4.026		
9,900.00	7,018.04	10,071.07	7,130.24	91.30	92.20	99.23	973.93	-3,269.75	702.03	521.84	180.18	3.896		
10,000.00	7,016.29	10,171.02	7,129.81	93.99	94.86	99.37	970.47	-3,369.65	699.57	514.17	185.40	3.773		
10,100.00	7,014.54	10,270.98	7,129.38	96.69	97.53	99.51	967.01	-3,469.54	697.11	506.48	190.62	3.657		
10,200.00	7,012.79	10,370.93	7,128.94	99.40	100.22	99.65	963.55	-3,569.43	694.66	498.79	195.86	3.547		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 4N-16C-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	7,011.04	10,470.89	7,128.51	102.11	102.91	99.80	960.09	-3,669.33	692.21	491.10	201.11	3.442		
10,400.00	7,009.29	10,570.84	7,128.07	104.83	105.61	99.95	956.63	-3,769.22	689.77	483.39	206.38	3.342		
10,500.00	7,007.54	10,670.80	7,127.64	107.56	108.31	100.09	953.17	-3,869.12	687.33	475.69	211.64	3.248		
10,600.00	7,005.79	10,770.75	7,127.21	110.30	111.03	100.24	949.72	-3,969.01	684.90	467.98	216.92	3.157		
10,700.00	7,004.04	10,870.71	7,126.77	113.04	113.75	100.39	946.26	-4,068.90	682.47	460.27	222.20	3.071		
10,800.00	7,002.29	10,970.66	7,126.34	115.79	116.47	100.54	942.80	-4,168.80	680.04	452.56	227.48	2.989		
10,900.00	7,000.54	11,070.62	7,125.91	118.54	119.21	100.69	939.34	-4,268.69	677.62	444.85	232.77	2.911		
11,000.00	6,998.79	11,170.57	7,125.47	121.30	121.94	100.84	935.88	-4,368.59	675.21	437.14	238.06	2.836		
11,100.00	6,997.04	11,270.52	7,125.04	124.06	124.68	101.00	932.42	-4,468.48	672.80	429.44	243.36	2.765		
11,200.00	6,995.29	11,370.48	7,124.61	126.83	127.43	101.15	928.96	-4,568.37	670.39	421.74	248.65	2.696		
11,300.00	6,993.54	11,470.43	7,124.17	129.60	130.18	101.31	925.50	-4,668.27	667.99	414.04	253.95	2.630		
11,400.00	6,991.80	11,570.39	7,123.74	132.37	132.94	101.46	922.05	-4,768.16	665.60	406.35	259.24	2.567		
11,500.00	6,990.05	11,670.34	7,123.31	135.15	135.70	101.62	918.59	-4,868.06	663.21	398.67	264.53	2.507		
11,600.00	6,988.30	11,770.30	7,122.87	137.93	138.46	101.78	915.13	-4,967.95	660.82	390.99	269.83	2.449		
11,700.00	6,986.55	11,870.25	7,122.44	140.72	141.23	101.94	911.67	-5,067.84	658.44	383.32	275.12	2.393		
11,800.00	6,984.80	11,970.21	7,122.00	143.50	143.99	102.10	908.21	-5,167.74	656.06	375.66	280.40	2.340		
11,900.00	6,983.05	12,070.16	7,121.57	146.29	146.77	102.26	904.75	-5,267.63	653.69	368.01	285.68	2.288		
12,000.00	6,981.30	12,170.12	7,121.14	149.09	149.54	102.43	901.29	-5,367.52	651.33	360.37	290.96	2.239		
12,100.00	6,979.55	12,270.07	7,120.70	151.88	152.32	102.59	897.83	-5,467.42	648.97	352.73	296.24	2.191		
12,200.00	6,977.80	12,370.03	7,120.27	154.68	155.10	102.76	894.38	-5,567.31	646.62	345.11	301.51	2.145		
12,300.00	6,976.05	12,469.98	7,119.84	157.48	157.88	102.93	890.92	-5,667.21	644.27	337.50	306.77	2.100		
12,400.00	6,974.30	12,569.94	7,119.40	160.28	160.67	103.09	887.46	-5,767.10	641.93	329.90	312.03	2.057		
12,500.00	6,972.55	12,669.89	7,118.97	163.08	163.45	103.26	884.00	-5,866.99	639.59	322.31	317.28	2.016		
12,600.00	6,970.80	12,769.84	7,118.54	165.89	166.24	103.43	880.54	-5,966.89	637.26	314.74	322.52	1.976		
12,700.00	6,969.05	12,869.80	7,118.10	168.69	169.03	103.61	877.08	-6,066.78	634.93	307.18	327.76	1.937		
12,800.00	6,967.30	12,969.75	7,117.67	171.50	171.83	103.78	873.62	-6,166.68	632.61	299.63	332.98	1.900		
12,900.00	6,965.55	13,069.71	7,117.24	174.31	174.62	103.95	870.16	-6,266.57	630.30	292.09	338.20	1.864		
13,000.00	6,963.80	13,169.66	7,116.80	177.12	177.42	104.13	866.70	-6,366.46	627.99	284.57	343.41	1.829		
13,100.00	6,962.05	13,269.62	7,116.37	179.94	180.22	104.31	863.25	-6,466.36	625.69	277.07	348.62	1.795		
13,200.00	6,960.30	13,369.57	7,115.93	182.75	183.01	104.49	859.79	-6,566.25	623.39	269.58	353.81	1.762		
13,300.00	6,958.55	13,469.53	7,115.50	185.57	185.82	104.67	856.33	-6,666.14	621.10	262.11	358.99	1.730		
13,400.00	6,956.80	13,569.48	7,115.07	188.38	188.62	104.85	852.87	-6,766.04	618.82	254.66	364.16	1.699		
13,500.00	6,955.05	13,669.44	7,114.63	191.20	191.42	105.03	849.41	-6,865.93	616.54	247.22	369.32	1.669		
13,600.00	6,953.31	13,769.39	7,114.20	194.02	194.23	105.21	845.95	-6,965.83	614.27	239.80	374.47	1.640		
13,700.00	6,951.56	13,869.35	7,113.77	196.84	197.03	105.40	842.49	-7,065.72	612.00	232.40	379.60	1.612		
13,800.00	6,949.81	13,969.30	7,113.33	199.67	199.84	105.59	839.03	-7,165.61	609.74	225.01	384.73	1.585		
13,900.00	6,948.06	14,069.26	7,112.90	202.49	202.65	105.77	835.58	-7,265.51	607.49	217.65	389.84	1.558		
14,000.00	6,946.31	14,169.21	7,112.47	205.31	205.46	105.96	832.12	-7,365.40	605.24	210.31	394.94	1.533		
14,100.00	6,944.56	14,269.17	7,112.03	208.14	208.27	106.15	828.66	-7,465.30	603.01	202.98	400.02	1.507		
14,200.00	6,942.81	14,369.12	7,111.60	210.96	211.08	106.35	825.20	-7,565.19	600.77	195.68	405.09	1.483 Level 3		
14,300.00	6,941.06	14,469.07	7,111.17	213.79	213.89	106.54	821.74	-7,665.08	598.55	188.40	410.15	1.459 Level 3		
14,400.00	6,939.31	14,569.03	7,110.73	216.62	216.70	106.74	818.28	-7,764.98	596.33	181.14	415.19	1.436 Level 3		
14,500.00	6,937.56	14,668.98	7,110.30	219.44	219.52	106.93	814.82	-7,864.87	594.12	173.90	420.21	1.414 Level 3		
14,600.00	6,935.81	14,768.94	7,109.86	222.27	222.33	107.13	811.36	-7,964.77	591.91	166.69	425.22	1.392 Level 3		
14,700.00	6,934.06	14,868.89	7,109.43	225.10	225.15	107.33	807.91	-8,064.66	589.72	159.50	430.22	1.371 Level 3		
14,800.00	6,932.31	14,968.85	7,109.00	227.93	227.97	107.53	804.45	-8,164.55	587.53	152.33	435.19	1.350 Level 3		
14,813.17	6,932.08	14,969.16	7,109.00	228.30	227.97	107.53	804.44	-8,164.87	587.38	151.71	435.67	1.348 Level 3		
14,817.75	6,932.00	14,969.16	7,109.00	228.43	227.97	107.53	804.44	-8,164.87	587.40	151.61	435.79	1.348 Level 3, SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 5N-16B-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	3.28	3.28	-179.47	-60.11	-0.56	60.11					
100.00	100.00	100.00	100.00	3.28	3.28	-179.47	-60.11	-0.56	60.11	53.54	6.57	9.150		
200.00	200.00	200.00	200.00	3.34	3.34	-179.47	-60.11	-0.56	60.11	53.44	6.67	9.007		
300.00	300.00	300.00	300.00	3.44	3.44	-179.47	-60.11	-0.56	60.11	53.22	6.89	8.725		
400.00	400.00	400.00	400.00	3.60	3.60	-179.47	-60.11	-0.56	60.11	52.91	7.21	8.341	CC, ES	
500.00	500.00	498.33	498.31	3.81	3.79	-178.51	-61.44	-1.60	61.48	53.88	7.60	8.084		
600.00	599.98	602.09	597.81	4.05	4.03	-149.77	-64.54	-4.04	66.20	58.12	8.08	8.194		
700.00	699.86	702.37	697.45	4.32	4.29	-149.81	-67.68	-6.52	73.63	65.02	8.61	8.550		
800.00	799.72	802.67	797.07	4.62	4.57	-150.04	-70.83	-8.99	81.46	72.26	9.19	8.859		
900.00	899.58	902.98	896.68	4.93	4.89	-150.23	-73.97	-11.46	89.28	79.46	9.82	9.090		
1,000.00	999.44	1,003.29	996.29	5.27	5.22	-150.39	-77.12	-13.94	97.11	86.62	10.49	9.261		
1,100.00	1,099.31	1,103.60	1,095.91	5.62	5.56	-150.52	-80.26	-16.41	104.94	93.76	11.18	9.386		
1,200.00	1,199.17	1,203.90	1,195.52	5.98	5.92	-150.63	-83.40	-18.89	112.76	100.86	11.90	9.476		
1,300.00	1,299.03	1,304.21	1,295.13	6.36	6.29	-150.74	-86.55	-21.36	120.59	107.95	12.64	9.540		
1,400.00	1,398.89	1,404.52	1,394.74	6.74	6.67	-150.82	-89.69	-23.84	128.42	115.02	13.40	9.585		
1,500.00	1,498.75	1,504.82	1,494.36	7.13	7.06	-150.90	-92.84	-26.31	136.25	122.08	14.17	9.616		
1,600.00	1,598.61	1,605.13	1,593.97	7.52	7.45	-150.97	-95.98	-28.78	144.08	129.12	14.95	9.635		
1,700.00	1,698.47	1,705.44	1,693.58	7.92	7.85	-151.03	-99.12	-31.26	151.91	136.16	15.75	9.646		
1,800.00	1,798.33	1,805.74	1,793.19	8.32	8.26	-151.09	-102.27	-33.73	159.73	143.18	16.55	9.651		
1,900.00	1,898.19	1,906.05	1,892.81	8.73	8.67	-151.14	-105.41	-36.21	167.56	150.20	17.36	9.651		
2,000.00	1,998.05	2,006.36	1,992.42	9.14	9.08	-151.19	-108.56	-38.68	175.39	157.21	18.18	9.647		
2,100.00	2,097.91	2,106.67	2,092.03	9.55	9.49	-151.23	-111.70	-41.15	183.22	164.22	19.00	9.641		
2,200.00	2,197.78	2,206.97	2,191.64	9.97	9.91	-151.27	-114.85	-43.63	191.05	171.22	19.83	9.633		
2,300.00	2,297.64	2,307.28	2,291.26	10.39	10.33	-151.30	-117.99	-46.10	198.88	178.21	20.67	9.624		
2,400.00	2,397.50	2,407.59	2,390.87	10.81	10.75	-151.34	-121.13	-48.58	206.71	185.21	21.50	9.613		
2,500.00	2,497.36	2,507.89	2,490.48	11.23	11.17	-151.37	-124.28	-51.05	214.54	192.20	22.34	9.602		
2,600.00	2,597.22	2,591.80	2,590.10	11.65	11.53	-151.40	-127.42	-53.53	222.37	199.25	23.12	9.619		
2,700.00	2,697.08	2,708.51	2,689.71	12.07	12.02	-151.42	-130.57	-56.00	230.20	206.16	24.03	9.578		
2,800.00	2,796.94	2,808.82	2,789.32	12.50	12.45	-151.45	-133.71	-58.47	238.03	213.15	24.88	9.566		
2,900.00	2,896.80	2,909.12	2,888.93	12.92	12.88	-151.47	-136.85	-60.95	245.86	220.12	25.73	9.554		
3,000.00	2,996.66	3,009.43	2,988.55	13.35	13.31	-151.49	-140.00	-63.42	253.69	227.10	26.59	9.542		
3,100.00	3,096.52	3,109.74	3,088.16	13.78	13.74	-151.52	-143.14	-65.90	261.52	234.08	27.44	9.530		
3,200.00	3,196.38	3,189.96	3,187.77	14.21	14.08	-151.53	-146.29	-68.37	269.35	241.13	28.21	9.547		
3,300.00	3,296.25	3,289.65	3,287.38	14.64	14.51	-151.55	-149.43	-70.84	277.18	248.11	29.07	9.535		
3,400.00	3,396.11	3,389.34	3,387.00	15.07	14.94	-151.57	-152.57	-73.32	285.01	255.08	29.93	9.524		
3,500.00	3,495.97	3,489.04	3,486.61	15.50	15.37	-151.59	-155.72	-75.79	292.84	262.05	30.78	9.513		
3,600.00	3,595.83	3,588.73	3,586.22	15.93	15.80	-151.60	-158.86	-78.27	300.67	269.02	31.64	9.502		
3,700.00	3,695.69	3,688.42	3,685.83	16.36	16.23	-151.62	-162.01	-80.74	308.50	275.99	32.50	9.491		
3,800.00	3,795.55	3,788.11	3,785.45	16.80	16.67	-151.63	-165.15	-83.22	316.33	282.96	33.37	9.481		
3,900.00	3,895.41	3,887.81	3,885.06	17.23	17.10	-151.64	-168.30	-85.69	324.16	289.93	34.23	9.471		
4,000.00	3,995.27	3,987.50	3,984.67	17.66	17.53	-151.66	-171.44	-88.16	331.99	296.90	35.09	9.461		
4,100.00	4,095.13	4,087.19	4,084.28	18.10	17.97	-151.67	-174.58	-90.64	339.82	303.86	35.96	9.451		
4,200.00	4,194.99	4,186.89	4,183.90	18.53	18.40	-151.68	-177.73	-93.11	347.65	310.83	36.82	9.442		
4,300.00	4,294.85	4,286.58	4,283.51	18.96	18.84	-151.69	-180.87	-95.59	355.48	317.79	37.69	9.433		
4,400.00	4,394.71	4,386.27	4,383.12	19.40	19.27	-151.70	-184.02	-98.06	363.31	324.76	38.55	9.424		
4,500.00	4,494.58	4,485.97	4,482.74	19.83	19.71	-151.71	-187.16	-100.53	371.14	331.72	39.42	9.415		
4,600.00	4,594.44	4,585.66	4,582.35	20.27	20.14	-151.72	-190.30	-103.01	378.97	338.68	40.29	9.407		
4,700.00	4,694.30	4,685.35	4,681.96	20.71	20.58	-151.73	-193.45	-105.48	386.80	345.64	41.15	9.399		
4,800.00	4,794.16	4,785.04	4,781.57	21.14	21.01	-151.74	-196.59	-107.96	394.63	352.61	42.02	9.391		
4,900.00	4,894.02	4,884.74	4,881.19	21.58	21.45	-151.75	-199.74	-110.43	402.46	359.57	42.89	9.383		
5,000.00	4,993.88	4,984.43	4,980.80	22.01	21.88	-151.76	-202.88	-112.91	410.29	366.53	43.76	9.376		
5,100.00	5,093.74	5,084.12	5,080.41	22.45	22.32	-151.76	-206.02	-115.38	418.12	373.49	44.63	9.369		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 5N-16B-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,183.82	5,180.02	22.89	22.76	-151.77	-209.17	-117.85	425.95	380.45	45.50	9.361		
5,300.00	5,293.46	5,283.51	5,279.64	23.32	23.19	-151.78	-212.31	-120.33	433.78	387.41	46.37	9.355		
5,400.00	5,393.32	5,383.20	5,379.25	23.76	23.63	-151.79	-215.46	-122.80	441.61	394.37	47.24	9.348		
5,500.00	5,493.18	5,482.89	5,478.86	24.20	24.07	-151.79	-218.60	-125.28	449.44	401.33	48.11	9.341		
5,600.00	5,593.05	5,582.59	5,578.47	24.64	24.51	-151.80	-221.74	-127.75	457.27	408.28	48.98	9.335		
5,700.00	5,692.91	5,682.28	5,678.09	25.07	24.94	-151.81	-224.89	-130.22	465.10	415.24	49.86	9.329		
5,800.00	5,792.77	5,781.97	5,777.70	25.51	25.38	-151.81	-228.03	-132.70	472.93	422.20	50.73	9.323		
5,900.00	5,892.63	5,881.67	5,877.31	25.95	25.82	-151.82	-231.18	-135.17	480.76	429.16	51.60	9.317		
6,000.00	5,992.49	5,981.36	5,976.92	26.39	26.26	-151.83	-234.32	-137.65	488.59	436.12	52.47	9.311		
6,100.00	6,092.35	6,081.05	6,076.54	26.82	26.70	-151.83	-237.47	-140.12	496.42	443.07	53.35	9.306		
6,200.00	6,192.21	6,180.75	6,176.15	27.26	27.13	-151.84	-240.61	-142.60	504.25	450.03	54.22	9.300		
6,300.00	6,292.07	6,280.44	6,275.76	27.70	27.57	-151.84	-243.75	-145.07	512.08	456.99	55.09	9.295		
6,400.00	6,391.93	6,380.13	6,375.38	28.14	28.01	-151.85	-246.90	-147.54	519.91	463.94	55.97	9.290		
6,500.00	6,491.69	6,479.34	6,474.46	28.58	28.45	-112.80	-250.03	-150.91	527.71	470.88	56.84	9.285		
6,600.00	6,589.80	6,577.91	6,571.70	29.02	28.88	-98.50	-253.18	-166.16	535.36	477.66	57.70	9.278		
6,700.00	6,683.86	6,676.96	6,665.85	29.46	29.31	-94.46	-256.32	-196.41	542.69	484.12	58.57	9.265		
6,800.00	6,771.56	6,776.52	6,754.62	29.92	29.73	-92.52	-259.38	-241.16	549.53	490.08	59.46	9.242		
6,900.00	6,850.72	6,876.62	6,835.76	30.40	30.15	-91.38	-262.29	-299.56	555.72	495.32	60.40	9.200		
7,000.00	6,919.40	6,977.29	6,907.11	30.96	30.64	-90.67	-264.96	-370.37	561.10	499.62	61.48	9.127		
7,100.00	6,975.92	7,078.51	6,966.72	31.62	31.24	-90.22	-267.34	-452.01	565.52	502.75	62.77	9.009		
7,200.00	7,018.87	7,180.25	7,012.85	32.44	32.00	-89.97	-269.34	-542.54	568.90	504.53	64.37	8.838		
7,300.00	7,047.21	7,282.45	7,044.10	33.42	32.95	-89.88	-270.92	-639.72	571.12	504.81	66.31	8.613		
7,400.00	7,060.23	7,385.05	7,059.45	34.55	34.09	-89.93	-272.02	-741.04	572.14	503.55	68.59	8.341		
7,500.00	7,060.03	7,486.34	7,060.76	35.83	35.38	-90.08	-272.68	-842.30	572.11	500.96	71.16	8.040		
7,600.00	7,058.28	7,586.33	7,060.33	37.28	36.82	-90.21	-273.28	-942.29	571.96	497.90	74.06	7.723		
7,700.00	7,056.53	7,686.32	7,059.89	38.89	38.42	-90.34	-273.88	-1,042.28	571.81	494.55	77.27	7.400		
7,800.00	7,054.78	7,786.32	7,059.46	40.63	40.16	-90.47	-274.48	-1,142.26	571.67	490.91	80.76	7.079		
7,900.00	7,053.03	7,886.31	7,059.03	42.50	42.03	-90.60	-275.08	-1,242.25	571.53	487.04	84.49	6.765		
8,000.00	7,051.28	7,986.30	7,058.59	44.47	44.00	-90.73	-275.67	-1,342.24	571.39	482.96	88.43	6.461		
8,100.00	7,049.53	8,086.29	7,058.16	46.53	46.06	-90.87	-276.27	-1,442.23	571.25	478.70	92.56	6.172		
8,200.00	7,047.78	8,186.28	7,057.72	48.67	48.21	-91.00	-276.87	-1,542.22	571.12	474.28	96.85	5.897		
8,300.00	7,046.03	8,286.27	7,057.29	50.89	50.42	-91.13	-277.47	-1,642.21	570.99	469.72	101.27	5.638		
8,400.00	7,044.28	8,386.26	7,056.86	53.16	52.70	-91.26	-278.07	-1,742.20	570.87	465.04	105.83	5.394		
8,500.00	7,042.53	8,486.25	7,056.42	55.49	55.03	-91.40	-278.67	-1,842.18	570.74	460.26	110.48	5.166		
8,600.00	7,040.78	8,586.25	7,055.99	57.86	57.41	-91.53	-279.27	-1,942.17	570.62	455.39	115.24	4.952		
8,700.00	7,039.03	8,686.24	7,055.55	60.28	59.84	-91.66	-279.87	-2,042.16	570.50	450.43	120.07	4.751		
8,800.00	7,037.28	8,786.23	7,055.12	62.74	62.30	-91.79	-280.46	-2,142.15	570.39	445.41	124.98	4.564		
8,900.00	7,035.53	8,886.22	7,054.69	65.23	64.79	-91.93	-281.06	-2,242.14	570.28	440.33	129.95	4.388		
9,000.00	7,033.78	8,986.21	7,054.25	67.74	67.31	-92.06	-281.66	-2,342.13	570.17	435.19	134.98	4.224		
9,100.00	7,032.03	9,086.20	7,053.82	70.29	69.86	-92.19	-282.26	-2,442.11	570.07	430.01	140.06	4.070		
9,200.00	7,030.28	9,186.19	7,053.38	72.85	72.43	-92.32	-282.86	-2,542.10	569.96	424.78	145.19	3.926		
9,300.00	7,028.54	9,286.18	7,052.95	75.44	75.02	-92.46	-283.46	-2,642.09	569.86	419.51	150.35	3.790		
9,400.00	7,026.79	9,386.18	7,052.52	78.05	77.63	-92.59	-284.06	-2,742.08	569.77	414.22	155.55	3.663		
9,500.00	7,025.04	9,486.17	7,052.08	80.67	80.25	-92.72	-284.66	-2,842.07	569.68	408.89	160.78	3.543		
9,600.00	7,023.29	9,586.16	7,051.65	83.31	82.90	-92.86	-285.25	-2,942.06	569.59	403.54	166.05	3.430		
9,700.00	7,021.54	9,686.15	7,051.21	85.96	85.55	-92.99	-285.85	-3,042.05	569.50	398.16	171.34	3.324		
9,800.00	7,019.79	9,786.14	7,050.78	88.63	88.22	-93.12	-286.45	-3,142.03	569.42	392.77	176.65	3.223		
9,900.00	7,018.04	9,886.13	7,050.35	91.30	90.90	-93.25	-287.05	-3,242.02	569.34	387.36	181.98	3.129		
10,000.00	7,016.29	9,986.12	7,049.91	93.99	93.59	-93.39	-287.65	-3,342.01	569.26	381.93	187.33	3.039		
10,100.00	7,014.54	10,086.11	7,049.48	96.69	96.29	-93.52	-288.25	-3,442.00	569.18	376.48	192.70	2.954		
10,200.00	7,012.79	10,186.11	7,049.04	99.40	99.00	-93.65	-288.85	-3,541.99	569.11	371.03	198.09	2.873		
10,300.00	7,011.04	10,286.10	7,048.61	102.11	101.72	-93.79	-289.44	-3,641.98	569.04	365.56	203.49	2.796		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 5N-16B-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	10,386.09	7,048.18	104.83	104.45	-93.92	-290.04	-3,741.97	568.98	360.08	208.90	2.724		
10,500.00	7,007.54	10,486.08	7,047.74	107.56	107.18	-94.05	-290.64	-3,841.95	568.92	354.60	214.32	2.655		
10,600.00	7,005.79	10,586.07	7,047.31	110.30	109.92	-94.19	-291.24	-3,941.94	568.86	349.10	219.75	2.589		
10,700.00	7,004.04	10,686.06	7,046.87	113.04	112.66	-94.32	-291.84	-4,041.93	568.80	343.61	225.20	2.526		
10,800.00	7,002.29	10,786.05	7,046.44	115.79	115.41	-94.45	-292.44	-4,141.92	568.75	338.10	230.65	2.466		
10,900.00	7,000.54	10,886.04	7,046.01	118.54	118.17	-94.59	-293.04	-4,241.91	568.70	332.59	236.11	2.409		
11,000.00	6,998.79	10,986.04	7,045.57	121.30	120.93	-94.72	-293.64	-4,341.90	568.65	327.08	241.57	2.354		
11,100.00	6,997.04	11,086.03	7,045.14	124.06	123.69	-94.85	-294.23	-4,441.88	568.61	321.57	247.04	2.302		
11,200.00	6,995.29	11,186.02	7,044.70	126.83	126.46	-94.99	-294.83	-4,541.87	568.57	316.05	252.52	2.252		
11,300.00	6,993.54	11,286.01	7,044.27	129.60	129.23	-95.12	-295.43	-4,641.86	568.53	310.53	258.00	2.204		
11,400.00	6,991.80	11,386.00	7,043.84	132.37	132.01	-95.25	-296.03	-4,741.85	568.50	305.01	263.49	2.158		
11,500.00	6,990.05	11,485.99	7,043.40	135.15	134.79	-95.39	-296.63	-4,841.84	568.46	299.49	268.97	2.113		
11,600.00	6,988.30	11,585.98	7,042.97	137.93	137.57	-95.52	-297.23	-4,941.83	568.44	293.97	274.47	2.071		
11,700.00	6,986.55	11,685.97	7,042.53	140.72	140.36	-95.65	-297.83	-5,041.82	568.41	288.45	279.96	2.030		
11,800.00	6,984.80	11,785.97	7,042.10	143.50	143.15	-95.79	-298.43	-5,141.80	568.39	282.93	285.46	1.991		
11,900.00	6,983.05	11,885.96	7,041.67	146.29	145.94	-95.92	-299.02	-5,241.79	568.37	277.41	290.96	1.953		
12,000.00	6,981.30	11,985.95	7,041.23	149.09	148.73	-96.05	-299.62	-5,341.78	568.35	271.90	296.46	1.917		
12,100.00	6,979.55	12,085.94	7,040.80	151.88	151.53	-96.19	-300.22	-5,441.77	568.34	266.38	301.96	1.882		
12,200.00	6,977.80	12,185.93	7,040.37	154.68	154.33	-96.32	-300.82	-5,541.76	568.33	260.87	307.46	1.848		
12,300.00	6,976.05	12,285.92	7,039.93	157.48	157.13	-96.45	-301.42	-5,641.75	568.32	255.36	312.96	1.816		
12,400.00	6,974.30	12,385.91	7,039.50	160.28	159.93	-96.59	-302.02	-5,741.74	568.32	249.86	318.46	1.785		
12,465.21	6,973.16	12,451.12	7,039.21	162.11	161.76	-96.68	-302.41	-5,806.94	568.32	246.27	322.05	1.765		
12,500.00	6,972.55	12,485.90	7,039.06	163.08	162.74	-96.72	-302.62	-5,841.72	568.32	244.35	323.97	1.754		
12,600.00	6,970.80	12,585.89	7,038.63	165.89	165.55	-96.86	-303.22	-5,941.71	568.32	238.86	329.47	1.725		
12,700.00	6,969.05	12,685.89	7,038.20	168.69	168.35	-96.99	-303.81	-6,041.70	568.33	233.36	334.97	1.697		
12,800.00	6,967.30	12,785.88	7,037.76	171.50	171.16	-97.12	-304.41	-6,141.69	568.34	227.87	340.47	1.669		
12,900.00	6,965.55	12,885.87	7,037.33	174.31	173.98	-97.26	-305.01	-6,241.68	568.35	222.38	345.97	1.643		
13,000.00	6,963.80	12,985.86	7,036.89	177.12	176.79	-97.39	-305.61	-6,341.67	568.36	216.90	351.46	1.617		
13,100.00	6,962.05	13,085.85	7,036.46	179.94	179.60	-97.52	-306.21	-6,441.65	568.38	211.42	356.96	1.592		
13,200.00	6,960.30	13,185.84	7,036.03	182.75	182.42	-97.66	-306.81	-6,541.64	568.40	205.95	362.45	1.568		
13,300.00	6,958.55	13,285.83	7,035.59	185.57	185.24	-97.79	-307.41	-6,641.63	568.43	200.49	367.94	1.545		
13,400.00	6,956.80	13,385.82	7,035.16	188.38	188.06	-97.92	-308.00	-6,741.62	568.46	195.02	373.43	1.522		
13,500.00	6,955.05	13,485.82	7,034.72	191.20	190.88	-98.06	-308.60	-6,841.61	568.49	189.57	378.92	1.500		
13,600.00	6,953.31	13,585.81	7,034.29	194.02	193.70	-98.19	-309.20	-6,941.60	568.52	184.12	384.40	1.479 Level 3		
13,700.00	6,951.56	13,685.80	7,033.86	196.84	196.52	-98.32	-309.80	-7,041.59	568.56	178.67	389.88	1.458 Level 3		
13,800.00	6,949.81	13,785.79	7,033.42	199.67	199.34	-98.46	-310.40	-7,141.57	568.60	173.24	395.36	1.438 Level 3		
13,900.00	6,948.06	13,885.78	7,032.99	202.49	202.17	-98.59	-311.00	-7,241.56	568.64	167.81	400.83	1.419 Level 3		
14,000.00	6,946.31	13,985.77	7,032.55	205.31	204.99	-98.72	-311.60	-7,341.55	568.68	162.38	406.30	1.400 Level 3		
14,100.00	6,944.56	14,085.76	7,032.12	208.14	207.82	-98.86	-312.20	-7,441.54	568.73	156.96	411.77	1.381 Level 3		
14,200.00	6,942.81	14,185.75	7,031.69	210.96	210.64	-98.99	-312.79	-7,541.53	568.78	151.55	417.23	1.363 Level 3		
14,300.00	6,941.06	14,285.75	7,031.25	213.79	213.47	-99.12	-313.39	-7,641.52	568.84	146.15	422.69	1.346 Level 3		
14,400.00	6,939.31	14,385.74	7,030.82	216.62	216.30	-99.26	-313.99	-7,741.51	568.90	140.75	428.15	1.329 Level 3		
14,500.00	6,937.56	14,485.73	7,030.38	219.44	219.13	-99.39	-314.59	-7,841.49	568.96	135.36	433.60	1.312 Level 3		
14,600.00	6,935.81	14,585.72	7,029.95	222.27	221.96	-99.52	-315.19	-7,941.48	569.02	129.98	439.05	1.296 Level 3		
14,700.00	6,934.06	14,685.71	7,029.52	225.10	224.79	-99.66	-315.79	-8,041.47	569.09	124.60	444.49	1.280 Level 3		
14,800.00	6,932.31	14,785.70	7,029.08	227.93	227.62	-99.79	-316.39	-8,141.46	569.16	119.23	449.93	1.265 Level 3		
14,817.75	6,932.00	14,803.45	7,029.01	228.43	228.12	-99.81	-316.49	-8,159.20	569.17	118.28	450.89	1.262 Level 3, SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 5N-16C-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	3.28	3.28	-179.20	-40.08	-0.56	40.08					
100.00	100.00	100.00	100.00	3.28	3.28	-179.20	-40.08	-0.56	40.08	33.51	6.57	6.101		
200.00	200.00	200.00	200.00	3.34	3.34	-179.20	-40.08	-0.56	40.08	33.41	6.67	6.006		
300.00	300.00	300.00	300.00	3.44	3.44	-179.20	-40.08	-0.56	40.08	33.19	6.89	5.818		
400.00	400.00	400.00	400.00	3.60	3.60	-179.20	-40.08	-0.56	40.08	32.87	7.21	5.562		
500.00	500.00	500.00	500.00	3.81	3.81	-179.20	-40.08	-0.56	40.08	32.47	7.61	5.266 CC, ES		
600.00	599.98	600.04	599.95	4.05	4.04	-150.74	-40.08	-2.16	41.65	33.56	8.09	5.151		
700.00	699.86	700.13	699.82	4.32	4.30	-150.54	-40.08	-4.66	45.93	37.31	8.62	5.328		
800.00	799.72	800.24	799.68	4.62	4.59	-150.65	-40.08	-7.15	50.62	41.41	9.21	5.498		
900.00	899.58	900.35	899.54	4.93	4.90	-150.74	-40.08	-9.65	55.30	45.46	9.84	5.621		
1,000.00	999.44	1,000.46	999.40	5.27	5.23	-150.82	-40.08	-12.14	59.98	49.48	10.50	5.710		
1,100.00	1,099.31	1,100.57	1,099.26	5.62	5.58	-150.88	-40.08	-14.64	64.66	53.46	11.20	5.773		
1,200.00	1,199.17	1,200.68	1,199.12	5.98	5.94	-150.94	-40.08	-17.14	69.34	57.42	11.92	5.817		
1,300.00	1,299.03	1,300.79	1,298.98	6.36	6.31	-150.99	-40.08	-19.63	74.03	61.36	12.66	5.846		
1,400.00	1,398.89	1,400.90	1,398.83	6.74	6.68	-151.03	-40.08	-22.13	78.71	65.29	13.42	5.864		
1,500.00	1,498.75	1,501.01	1,498.69	7.13	7.07	-151.07	-40.08	-24.62	83.39	69.20	14.19	5.875		
1,600.00	1,598.61	1,601.12	1,598.55	7.52	7.46	-151.10	-40.08	-27.12	88.07	73.10	14.98	5.880		
1,700.00	1,698.47	1,701.23	1,698.41	7.92	7.86	-151.13	-40.08	-29.62	92.76	76.98	15.77	5.881		
1,800.00	1,798.33	1,801.34	1,798.27	8.32	8.26	-151.16	-40.08	-32.11	97.44	80.86	16.58	5.878		
1,900.00	1,898.19	1,901.45	1,898.13	8.73	8.66	-151.19	-40.08	-34.61	102.12	84.73	17.39	5.873		
2,000.00	1,998.05	2,001.56	1,997.99	9.14	9.07	-151.21	-40.08	-37.10	106.80	88.60	18.21	5.866		
2,100.00	2,097.91	2,101.67	2,097.85	9.55	9.48	-151.23	-40.08	-39.60	111.49	92.46	19.03	5.859		
2,200.00	2,197.78	2,201.78	2,197.71	9.97	9.90	-151.25	-40.08	-42.10	116.17	96.31	19.86	5.850		
2,300.00	2,297.64	2,301.89	2,297.57	10.39	10.31	-151.27	-40.08	-44.59	120.85	100.16	20.69	5.841		
2,400.00	2,397.50	2,402.00	2,397.43	10.81	10.73	-151.29	-40.08	-47.09	125.53	104.01	21.53	5.831		
2,500.00	2,497.36	2,502.11	2,497.29	11.23	11.15	-151.30	-40.08	-49.58	130.22	107.85	22.37	5.822		
2,600.00	2,597.22	2,602.22	2,597.14	11.65	11.57	-151.32	-40.08	-52.08	134.90	111.69	23.21	5.812		
2,700.00	2,697.08	2,702.33	2,697.00	12.07	11.99	-151.33	-40.08	-54.58	139.58	115.52	24.06	5.802		
2,800.00	2,796.94	2,802.44	2,796.86	12.50	12.42	-151.34	-40.08	-57.07	144.26	119.36	24.91	5.792		
2,900.00	2,896.80	2,902.54	2,896.72	12.92	12.84	-151.35	-40.08	-59.57	148.95	123.19	25.76	5.783		
3,000.00	2,996.66	3,002.65	2,996.58	13.35	13.27	-151.37	-40.08	-62.06	153.63	127.02	26.61	5.774		
3,100.00	3,096.52	3,102.76	3,096.44	13.78	13.69	-151.38	-40.08	-64.56	158.31	130.85	27.46	5.764		
3,200.00	3,196.38	3,202.87	3,196.30	14.21	14.12	-151.39	-40.08	-67.06	162.99	134.68	28.32	5.756		
3,300.00	3,296.25	3,297.02	3,296.16	14.64	14.52	-151.39	-40.08	-69.55	167.68	138.53	29.15	5.752		
3,400.00	3,396.11	3,403.09	3,396.02	15.07	14.98	-151.40	-40.08	-72.05	172.36	142.32	30.04	5.738		
3,500.00	3,495.97	3,503.20	3,495.88	15.50	15.41	-151.41	-40.08	-74.54	177.04	146.15	30.90	5.730		
3,600.00	3,595.83	3,603.31	3,595.74	15.93	15.84	-151.42	-40.08	-77.04	181.73	149.97	31.76	5.722		
3,700.00	3,695.69	3,703.42	3,695.59	16.36	16.27	-151.43	-40.08	-79.53	186.41	153.79	32.62	5.714		
3,800.00	3,795.55	3,803.53	3,795.45	16.80	16.70	-151.43	-40.08	-82.03	191.09	157.61	33.48	5.707		
3,900.00	3,895.41	3,903.64	3,895.31	17.23	17.13	-151.44	-40.08	-84.53	195.77	161.42	34.35	5.700		
4,000.00	3,995.27	4,003.75	3,995.17	17.66	17.57	-151.45	-40.08	-87.02	200.46	165.24	35.21	5.692		
4,100.00	4,095.13	4,103.86	4,095.03	18.10	18.00	-151.45	-40.08	-89.52	205.14	169.06	36.08	5.686		
4,200.00	4,194.99	4,203.97	4,194.89	18.53	18.43	-151.46	-40.08	-92.01	209.82	172.87	36.95	5.679		
4,300.00	4,294.85	4,304.08	4,294.75	18.96	18.87	-151.47	-40.08	-94.51	214.50	176.69	37.82	5.672		
4,400.00	4,394.71	4,404.19	4,394.61	19.40	19.30	-151.47	-40.08	-97.01	219.19	180.50	38.68	5.666		
4,500.00	4,494.58	4,504.30	4,494.47	19.83	19.74	-151.48	-40.08	-99.50	223.87	184.32	39.55	5.660		
4,600.00	4,594.44	4,604.41	4,594.33	20.27	20.17	-151.48	-40.08	-102.00	228.55	188.13	40.42	5.654		
4,700.00	4,694.30	4,704.52	4,694.19	20.71	20.60	-151.49	-40.08	-104.49	233.23	191.94	41.29	5.649		
4,800.00	4,794.16	4,804.63	4,794.04	21.14	21.04	-151.49	-40.08	-106.99	237.92	195.76	42.16	5.643		
4,900.00	4,894.02	4,904.74	4,893.90	21.58	21.47	-151.49	-40.08	-109.49	242.60	199.57	43.03	5.638		
5,000.00	4,993.88	5,004.85	4,993.76	22.01	21.91	-151.50	-40.08	-111.98	247.28	203.38	43.90	5.632		
5,100.00	5,093.74	5,104.96	5,093.62	22.45	22.35	-151.50	-40.08	-114.48	251.97	207.19	44.78	5.627		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 5N-16C-M - OH - PLAN #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,205.07	5,193.48	22.89	22.78	-151.51	-40.08	-116.97	256.65	211.00	45.65	5.622		
5,300.00	5,293.46	5,305.18	5,293.34	23.32	23.22	-151.51	-40.08	-119.47	261.33	214.81	46.52	5.618		
5,400.00	5,393.32	5,405.29	5,393.20	23.76	23.65	-151.51	-40.08	-121.97	266.01	218.62	47.39	5.613		
5,500.00	5,493.18	5,505.40	5,493.06	24.20	24.09	-151.52	-40.08	-124.46	270.70	222.43	48.27	5.608		
5,600.00	5,593.05	5,605.51	5,592.92	24.64	24.53	-151.52	-40.08	-126.96	275.38	226.24	49.14	5.604		
5,700.00	5,692.91	5,705.62	5,692.78	25.07	24.96	-151.52	-40.08	-129.45	280.06	230.05	50.01	5.600		
5,800.00	5,792.77	5,805.73	5,792.64	25.51	25.40	-151.53	-40.08	-131.95	284.74	233.86	50.89	5.596		
5,900.00	5,892.63	5,905.84	5,892.49	25.95	25.84	-151.53	-40.08	-134.45	289.43	237.67	51.76	5.592		
6,000.00	5,992.49	6,005.95	5,992.35	26.39	26.27	-151.53	-40.08	-136.94	294.11	241.47	52.64	5.588		
6,100.00	6,092.35	6,106.06	6,092.21	26.82	26.71	-151.54	-40.08	-139.44	298.79	245.28	53.51	5.584		
6,200.00	6,192.21	6,206.17	6,192.07	27.26	27.15	-151.54	-40.08	-141.93	303.48	249.09	54.38	5.580		
6,300.00	6,292.07	6,306.27	6,291.93	27.70	27.59	-151.54	-40.08	-144.43	308.16	252.90	55.26	5.577		
6,400.00	6,391.93	6,406.38	6,391.79	28.14	28.02	-151.54	-40.08	-146.93	312.84	256.71	56.14	5.573		
6,500.00	6,491.69	6,493.45	6,491.60	28.58	28.40	-112.89	-40.08	-149.42	317.47	260.52	56.95	5.574		
6,600.00	6,589.80	6,592.30	6,590.08	29.02	28.84	-100.46	-40.18	-156.92	322.12	264.29	57.83	5.570		
6,700.00	6,683.86	6,692.57	6,687.61	29.46	29.29	-98.24	-40.57	-179.72	327.14	268.41	58.73	5.570		
6,800.00	6,771.56	6,794.63	6,781.97	29.92	29.75	-98.00	-41.28	-218.33	332.40	272.75	59.65	5.572		
6,900.00	6,850.72	6,898.55	6,870.44	30.40	30.23	-98.39	-42.30	-272.61	337.72	277.13	60.59	5.574		
7,000.00	6,919.40	7,004.32	6,950.21	30.96	30.76	-99.00	-43.62	-341.86	342.90	281.31	61.59	5.568		
7,100.00	6,975.92	7,111.85	7,018.44	31.62	31.40	-99.66	-45.21	-424.80	347.74	285.00	62.73	5.543		
7,200.00	7,018.87	7,221.00	7,072.43	32.44	32.20	-100.26	-47.03	-519.49	352.01	287.88	64.13	5.489		
7,300.00	7,047.21	7,331.54	7,109.82	33.42	33.21	-100.76	-49.04	-623.35	355.53	289.65	65.89	5.396		
7,400.00	7,060.23	7,443.14	7,128.79	34.55	34.42	-101.12	-51.18	-733.16	358.13	290.09	68.04	5.263		
7,500.00	7,060.03	7,549.15	7,130.82	35.83	35.76	-101.34	-53.25	-839.08	359.77	289.22	70.55	5.099		
7,600.00	7,058.28	7,649.13	7,130.45	37.28	37.18	-101.51	-55.21	-939.05	361.22	287.88	73.34	4.925		
7,700.00	7,056.53	7,749.11	7,130.08	38.89	38.75	-101.69	-57.16	-1,039.01	362.68	286.25	76.43	4.745		
7,800.00	7,054.78	7,849.10	7,129.72	40.63	40.47	-101.86	-59.12	-1,138.97	364.14	284.35	79.79	4.563		
7,900.00	7,053.03	7,949.08	7,129.35	42.50	42.31	-102.04	-61.07	-1,238.94	365.60	282.21	83.39	4.384		
8,000.00	7,051.28	8,049.06	7,128.99	44.47	44.25	-102.21	-63.03	-1,338.90	367.07	279.88	87.19	4.210		
8,100.00	7,049.53	8,149.05	7,128.62	46.53	46.29	-102.38	-64.98	-1,438.86	368.54	277.38	91.16	4.043		
8,200.00	7,047.78	8,249.03	7,128.25	48.67	48.42	-102.55	-66.94	-1,538.83	370.01	274.72	95.30	3.883		
8,300.00	7,046.03	8,349.01	7,127.89	50.89	50.61	-102.72	-68.90	-1,638.79	371.49	271.93	99.56	3.731		
8,400.00	7,044.28	8,449.00	7,127.52	53.16	52.87	-102.88	-70.85	-1,738.75	372.97	269.03	103.94	3.588		
8,500.00	7,042.53	8,548.98	7,127.16	55.49	55.19	-103.05	-72.81	-1,838.72	374.45	266.03	108.42	3.454		
8,600.00	7,040.78	8,648.96	7,126.79	57.86	57.55	-103.21	-74.76	-1,938.68	375.94	262.94	112.99	3.327		
8,700.00	7,039.03	8,748.94	7,126.42	60.28	59.95	-103.38	-76.72	-2,038.64	377.43	259.79	117.64	3.208		
8,800.00	7,037.28	8,848.93	7,126.06	62.74	62.40	-103.54	-78.67	-2,138.61	378.92	256.56	122.35	3.097		
8,900.00	7,035.53	8,948.91	7,125.69	65.23	64.87	-103.70	-80.63	-2,238.57	380.41	253.29	127.13	2.992		
9,000.00	7,033.78	9,048.89	7,125.32	67.74	67.38	-103.86	-82.58	-2,338.53	381.91	249.96	131.95	2.894		
9,100.00	7,032.03	9,148.88	7,124.96	70.29	69.91	-104.01	-84.54	-2,438.50	383.41	246.59	136.82	2.802		
9,200.00	7,030.28	9,248.86	7,124.59	72.85	72.47	-104.17	-86.49	-2,538.46	384.92	243.19	141.73	2.716		
9,300.00	7,028.54	9,348.84	7,124.23	75.44	75.05	-104.33	-88.45	-2,638.42	386.42	239.75	146.67	2.635		
9,400.00	7,026.79	9,448.83	7,123.86	78.05	77.65	-104.48	-90.40	-2,738.39	387.93	236.28	151.65	2.558		
9,500.00	7,025.04	9,548.81	7,123.49	80.67	80.26	-104.63	-92.36	-2,838.35	389.44	232.79	156.65	2.486		
9,600.00	7,023.29	9,648.79	7,123.13	83.31	82.89	-104.78	-94.31	-2,938.31	390.96	229.28	161.68	2.418		
9,700.00	7,021.54	9,748.78	7,122.76	85.96	85.54	-104.93	-96.27	-3,038.28	392.48	225.75	166.72	2.354		
9,800.00	7,019.79	9,848.76	7,122.40	88.63	88.19	-105.08	-98.22	-3,138.24	394.00	222.21	171.79	2.293		
9,900.00	7,018.04	9,948.74	7,122.03	91.30	90.86	-105.23	-100.18	-3,238.20	395.52	218.65	176.87	2.236		
10,000.00	7,016.29	10,048.73	7,121.66	93.99	93.55	-105.38	-102.13	-3,338.17	397.04	215.08	181.97	2.182		
10,100.00	7,014.54	10,148.71	7,121.30	96.69	96.24	-105.52	-104.09	-3,438.13	398.57	211.50	187.08	2.131		
10,200.00	7,012.79	10,248.69	7,120.93	99.40	98.94	-105.67	-106.04	-3,538.09	400.10	207.91	192.20	2.082		
10,300.00	7,011.04	10,348.68	7,120.57	102.11	101.64	-105.81	-108.00	-3,638.06	401.64	204.31	197.33	2.035		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HARVESTERS STATE 5N-16C-M - OH - PLAN #1												Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IFR1												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,400.00	7,009.29	10,448.66	7,120.20	104.83	104.36	-105.96	-109.95	-3,738.02	403.17	200.71	202.46	1.991	
10,500.00	7,007.54	10,548.64	7,119.83	107.56	107.08	-106.10	-111.91	-3,837.98	404.71	197.10	207.61	1.949	
10,600.00	7,005.79	10,648.63	7,119.47	110.30	109.81	-106.24	-113.87	-3,937.95	406.25	193.49	212.76	1.909	
10,700.00	7,004.04	10,748.61	7,119.10	113.04	112.55	-106.38	-115.82	-4,037.91	407.79	189.88	217.91	1.871	
10,800.00	7,002.29	10,848.59	7,118.73	115.79	115.29	-106.52	-117.78	-4,137.88	409.34	186.27	223.07	1.835	
10,900.00	7,000.54	10,948.58	7,118.37	118.54	118.04	-106.65	-119.73	-4,237.84	410.89	182.65	228.24	1.800	
11,000.00	6,998.79	11,048.56	7,118.00	121.30	120.79	-106.79	-121.69	-4,337.80	412.44	179.03	233.40	1.767	
11,100.00	6,997.04	11,148.54	7,117.64	124.06	123.55	-106.92	-123.64	-4,437.77	413.99	175.42	238.57	1.735	
11,200.00	6,995.29	11,248.52	7,117.27	126.83	126.31	-107.06	-125.60	-4,537.73	415.54	171.80	243.74	1.705	
11,300.00	6,993.54	11,348.51	7,116.90	129.60	129.07	-107.19	-127.55	-4,637.69	417.10	168.19	248.91	1.676	
11,400.00	6,991.80	11,448.49	7,116.54	132.37	131.84	-107.32	-129.51	-4,737.66	418.66	164.58	254.08	1.648	
11,500.00	6,990.05	11,548.47	7,116.17	135.15	134.61	-107.45	-131.46	-4,837.62	420.22	160.97	259.26	1.621	
11,600.00	6,988.30	11,648.46	7,115.81	137.93	137.39	-107.58	-133.42	-4,937.58	421.78	157.36	264.43	1.595	
11,700.00	6,986.55	11,748.44	7,115.44	140.72	140.17	-107.71	-135.37	-5,037.55	423.35	153.75	269.60	1.570	
11,800.00	6,984.80	11,848.42	7,115.07	143.50	142.95	-107.84	-137.33	-5,137.51	424.92	150.15	274.77	1.546	
11,900.00	6,983.05	11,948.41	7,114.71	146.29	145.73	-107.97	-139.28	-5,237.47	426.49	146.55	279.94	1.524	
12,000.00	6,981.30	12,048.39	7,114.34	149.09	148.52	-108.10	-141.24	-5,337.44	428.06	142.96	285.10	1.501	
12,100.00	6,979.55	12,148.37	7,113.97	151.88	151.31	-108.22	-143.19	-5,437.40	429.63	139.37	290.27	1.480 Level 3	
12,200.00	6,977.80	12,248.36	7,113.61	154.68	154.10	-108.35	-145.15	-5,537.36	431.21	135.78	295.43	1.460 Level 3	
12,300.00	6,976.05	12,348.34	7,113.24	157.48	156.90	-108.47	-147.10	-5,637.33	432.79	132.20	300.59	1.440 Level 3	
12,400.00	6,974.30	12,448.32	7,112.88	160.28	159.69	-108.59	-149.06	-5,737.29	434.37	128.62	305.75	1.421 Level 3	
12,500.00	6,972.55	12,548.31	7,112.51	163.08	162.49	-108.71	-151.01	-5,837.25	435.95	125.05	310.91	1.402 Level 3	
12,600.00	6,970.80	12,648.29	7,112.14	165.89	165.29	-108.84	-152.97	-5,937.22	437.54	121.48	316.06	1.384 Level 3	
12,700.00	6,969.05	12,748.27	7,111.78	168.69	168.09	-108.96	-154.92	-6,037.18	439.12	117.91	321.21	1.367 Level 3	
12,800.00	6,967.30	12,848.26	7,111.41	171.50	170.90	-109.08	-156.88	-6,137.14	440.71	114.36	326.35	1.350 Level 3	
12,900.00	6,965.55	12,948.24	7,111.05	174.31	173.70	-109.19	-158.84	-6,237.11	442.30	110.80	331.50	1.334 Level 3	
13,000.00	6,963.80	13,048.22	7,110.68	177.12	176.51	-109.31	-160.79	-6,337.07	443.89	107.25	336.64	1.319 Level 3	
13,100.00	6,962.05	13,148.21	7,110.31	179.94	179.32	-109.43	-162.75	-6,437.03	445.49	103.71	341.77	1.303 Level 3	
13,200.00	6,960.30	13,248.19	7,109.95	182.75	182.13	-109.54	-164.70	-6,537.00	447.08	100.18	346.91	1.289 Level 3	
13,300.00	6,958.55	13,348.17	7,109.58	185.57	184.94	-109.66	-166.66	-6,636.96	448.68	96.64	352.03	1.275 Level 3	
13,400.00	6,956.80	13,448.16	7,109.22	188.38	187.75	-109.77	-168.61	-6,736.92	450.28	93.12	357.16	1.261 Level 3	
13,500.00	6,955.05	13,548.14	7,108.85	191.20	190.57	-109.89	-170.57	-6,836.89	451.88	89.60	362.28	1.247 Level 2	
13,600.00	6,953.31	13,648.12	7,108.48	194.02	193.38	-110.00	-172.52	-6,936.85	453.48	86.08	367.40	1.234 Level 2	
13,700.00	6,951.56	13,748.10	7,108.12	196.84	196.20	-110.11	-174.48	-7,036.81	455.09	82.58	372.51	1.222 Level 2	
13,800.00	6,949.81	13,848.09	7,107.75	199.67	199.01	-110.22	-176.43	-7,136.78	456.69	79.07	377.62	1.209 Level 2	
13,900.00	6,948.06	13,948.07	7,107.38	202.49	201.83	-110.33	-178.39	-7,236.74	458.30	75.58	382.72	1.197 Level 2	
14,000.00	6,946.31	14,048.05	7,107.02	205.31	204.65	-110.44	-180.34	-7,336.70	459.91	72.09	387.82	1.186 Level 2	
14,100.00	6,944.56	14,148.04	7,106.65	208.14	207.47	-110.55	-182.30	-7,436.67	461.52	68.60	392.92	1.175 Level 2	
14,200.00	6,942.81	14,248.02	7,106.29	210.96	210.29	-110.66	-184.25	-7,536.63	463.13	65.12	398.01	1.164 Level 2	
14,300.00	6,941.06	14,348.00	7,105.92	213.79	213.11	-110.77	-186.21	-7,636.59	464.75	61.65	403.10	1.153 Level 2	
14,400.00	6,939.31	14,447.99	7,105.55	216.62	215.94	-110.87	-188.16	-7,736.56	466.36	58.18	408.18	1.143 Level 2	
14,500.00	6,937.56	14,547.97	7,105.19	219.44	218.76	-110.98	-190.12	-7,836.52	467.98	54.72	413.26	1.132 Level 2	
14,600.00	6,935.81	14,647.95	7,104.82	222.27	221.58	-111.08	-192.07	-7,936.48	469.60	51.27	418.33	1.123 Level 2	
14,700.00	6,934.06	14,747.94	7,104.46	225.10	224.41	-111.19	-194.03	-8,036.45	471.22	47.82	423.40	1.113 Level 2	
14,800.00	6,932.31	14,847.92	7,104.09	227.93	227.23	-111.29	-195.98	-8,136.41	472.84	44.38	428.46	1.104 Level 2	
14,817.75	6,932.00	14,865.66	7,104.02	228.43	227.74	-111.31	-196.33	-8,154.15	473.13	43.77	429.36	1.102 Level 2, SF	



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HOOD 41-20(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	61.00	3.28	3.28	-115.63	-4,315.74	-8,995.43	9,977.33					
100.00	100.00	39.00	100.00	3.28	3.35	-115.63	-4,315.74	-8,995.43	9,977.14	9,970.51	6.63	1,503.800		
200.00	200.00	139.00	200.00	3.34	4.52	-115.63	-4,315.74	-8,995.43	9,977.14	9,969.29	7.85	1,270.169		
300.00	300.00	239.00	300.00	3.44	7.37	-115.63	-4,315.74	-8,995.43	9,977.14	9,966.33	10.81	922.681		
400.00	400.00	339.00	400.00	3.60	10.61	-115.63	-4,315.74	-8,995.43	9,977.14	9,962.93	14.21	702.017		
500.00	500.00	439.00	500.00	3.81	13.97	-115.63	-4,315.74	-8,995.43	9,977.14	9,959.37	17.78	561.254		
600.00	599.98	538.98	599.98	4.05	17.38	-88.26	-4,315.74	-8,995.43	9,977.09	9,955.66	21.43	465.612		
700.00	699.86	638.86	699.86	4.32	20.82	-88.29	-4,315.74	-8,995.43	9,976.94	9,951.81	25.13	396.976		
800.00	799.72	738.72	799.72	4.62	24.27	-88.32	-4,315.74	-8,995.43	9,976.79	9,947.91	28.88	345.489		
900.00	899.58	838.58	899.58	4.93	27.72	-88.35	-4,315.74	-8,995.43	9,976.63	9,943.98	32.65	305.532		
1,000.00	999.44	938.44	999.44	5.27	31.19	-88.38	-4,315.74	-8,995.43	9,976.48	9,940.03	36.45	273.679		
1,100.00	1,099.31	1,038.31	1,099.31	5.62	34.66	-88.41	-4,315.74	-8,995.43	9,976.34	9,936.06	40.27	247.724		
1,200.00	1,199.17	1,138.17	1,199.17	5.98	38.13	-88.44	-4,315.74	-8,995.43	9,976.19	9,932.09	44.11	226.187		
1,300.00	1,299.03	1,238.03	1,299.03	6.36	41.60	-88.47	-4,315.74	-8,995.43	9,976.05	9,928.10	47.95	208.041		
1,400.00	1,398.89	1,337.89	1,398.89	6.74	45.08	-88.50	-4,315.74	-8,995.43	9,975.91	9,924.10	51.81	192.553		
1,500.00	1,498.75	1,437.75	1,498.75	7.13	48.56	-88.53	-4,315.74	-8,995.43	9,975.77	9,920.10	55.67	179.184		
1,600.00	1,598.61	1,537.61	1,598.61	7.52	52.04	-88.56	-4,315.74	-8,995.43	9,975.64	9,916.09	59.55	167.531		
1,700.00	1,698.47	1,637.47	1,698.47	7.92	55.52	-88.59	-4,315.74	-8,995.43	9,975.51	9,912.09	63.42	157.285		
1,800.00	1,798.33	1,737.33	1,798.33	8.32	59.00	-88.62	-4,315.74	-8,995.43	9,975.38	9,908.07	67.31	148.210		
1,900.00	1,898.19	1,837.19	1,898.19	8.73	62.48	-88.65	-4,315.74	-8,995.43	9,975.26	9,904.06	71.19	140.116		
2,000.00	1,998.05	1,937.05	1,998.05	9.14	65.96	-88.68	-4,315.74	-8,995.43	9,975.13	9,900.05	75.08	132.853		
2,100.00	2,097.91	2,036.91	2,097.91	9.55	69.44	-88.71	-4,315.74	-8,995.43	9,975.01	9,896.03	78.98	126.301		
2,200.00	2,197.78	2,136.78	2,197.78	9.97	72.92	-88.74	-4,315.74	-8,995.43	9,974.90	9,892.02	82.87	120.361		
2,300.00	2,297.64	2,236.64	2,297.64	10.39	76.41	-88.78	-4,315.74	-8,995.43	9,974.78	9,888.01	86.77	114.951		
2,400.00	2,397.50	2,336.50	2,397.50	10.81	79.89	-88.81	-4,315.74	-8,995.43	9,974.67	9,883.99	90.68	110.004		
2,500.00	2,497.36	2,436.36	2,497.36	11.23	83.37	-88.84	-4,315.74	-8,995.43	9,974.56	9,879.98	94.58	105.462		
2,600.00	2,597.22	2,536.22	2,597.22	11.65	86.86	-88.87	-4,315.74	-8,995.43	9,974.46	9,875.97	98.48	101.279		
2,700.00	2,697.08	2,636.08	2,697.08	12.07	90.34	-88.90	-4,315.74	-8,995.43	9,974.35	9,871.96	102.39	97.414		
2,800.00	2,796.94	2,735.94	2,796.94	12.50	93.82	-88.93	-4,315.74	-8,995.43	9,974.25	9,867.95	106.30	93.831		
2,900.00	2,896.80	2,835.80	2,896.80	12.92	97.31	-88.96	-4,315.74	-8,995.43	9,974.15	9,863.94	110.21	90.502		
3,000.00	2,996.66	2,935.66	2,996.66	13.35	100.79	-88.99	-4,315.74	-8,995.43	9,974.06	9,859.94	114.12	87.400		
3,100.00	3,096.52	3,035.52	3,096.52	13.78	104.28	-89.02	-4,315.74	-8,995.43	9,973.97	9,855.94	118.03	84.502		
3,200.00	3,196.38	3,135.38	3,196.38	14.21	107.76	-89.05	-4,315.74	-8,995.43	9,973.88	9,851.93	121.94	81.790		
3,300.00	3,296.25	3,235.25	3,296.25	14.64	111.25	-89.08	-4,315.74	-8,995.43	9,973.79	9,847.93	125.86	79.247		
3,400.00	3,396.11	3,335.11	3,396.11	15.07	114.73	-89.11	-4,315.74	-8,995.43	9,973.71	9,843.94	129.77	76.856		
3,500.00	3,495.97	3,434.97	3,495.97	15.50	118.21	-89.14	-4,315.74	-8,995.43	9,973.63	9,839.94	133.69	74.604		
3,600.00	3,595.83	3,534.83	3,595.83	15.93	121.70	-89.17	-4,315.74	-8,995.43	9,973.55	9,835.95	137.60	72.481		
3,700.00	3,695.69	3,634.69	3,695.69	16.36	125.18	-89.20	-4,315.74	-8,995.43	9,973.47	9,831.96	141.52	70.475		
3,800.00	3,795.55	3,734.55	3,795.55	16.80	128.67	-89.23	-4,315.74	-8,995.43	9,973.40	9,827.97	145.44	68.576		
3,900.00	3,895.41	3,834.41	3,895.41	17.23	132.15	-89.26	-4,315.74	-8,995.43	9,973.33	9,823.98	149.35	66.777		
4,000.00	3,995.27	3,934.27	3,995.27	17.66	135.64	-89.29	-4,315.74	-8,995.43	9,973.27	9,820.00	153.27	65.070		
4,100.00	4,095.13	4,034.13	4,095.13	18.10	139.13	-89.32	-4,315.74	-8,995.43	9,973.20	9,816.01	157.19	63.447		
4,200.00	4,194.99	4,133.99	4,194.99	18.53	142.61	-89.35	-4,315.74	-8,995.43	9,973.14	9,812.03	161.11	61.904		
4,300.00	4,294.85	4,233.85	4,294.85	18.96	146.10	-89.38	-4,315.74	-8,995.43	9,973.08	9,808.06	165.03	60.433		
4,400.00	4,394.71	4,333.71	4,394.71	19.40	149.58	-89.41	-4,315.74	-8,995.43	9,973.03	9,804.08	168.95	59.031		
4,500.00	4,494.58	4,433.58	4,494.58	19.83	153.07	-89.44	-4,315.74	-8,995.43	9,972.97	9,800.11	172.86	57.692		
4,600.00	4,594.44	4,533.44	4,594.44	20.27	156.55	-89.47	-4,315.74	-8,995.43	9,972.92	9,796.14	176.78	56.413		
4,700.00	4,694.30	4,633.30	4,694.30	20.71	160.04	-89.50	-4,315.74	-8,995.43	9,972.88	9,792.17	180.70	55.189		
4,800.00	4,794.16	4,733.16	4,794.16	21.14	163.52	-89.53	-4,315.74	-8,995.43	9,972.83	9,788.21	184.63	54.017		
4,900.00	4,894.02	4,833.02	4,894.02	21.58	167.01	-89.56	-4,315.74	-8,995.43	9,972.79	9,784.24	188.55	52.893		
5,000.00	4,993.88	4,932.88	4,993.88	22.01	170.49	-89.59	-4,315.74	-8,995.43	9,972.75	9,780.28	192.47	51.815		
5,100.00	5,093.74	5,032.74	5,093.74	22.45	173.98	-89.62	-4,315.74	-8,995.43	9,972.71	9,776.33	196.39	50.781		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HOOD 41-20(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,132.60	5,193.60	22.89	177.46	-89.65	-4,315.74	-8,995.43	9,972.68	9,772.37	200.31	49.786		
5,300.00	5,293.46	5,232.46	5,293.46	23.32	180.95	-89.68	-4,315.74	-8,995.43	9,972.65	9,768.42	204.23	48.830		
5,400.00	5,393.32	5,332.32	5,393.32	23.76	184.44	-89.71	-4,315.74	-8,995.43	9,972.62	9,764.47	208.15	47.910		
5,500.00	5,493.18	5,432.18	5,493.18	24.20	187.92	-89.74	-4,315.74	-8,995.43	9,972.60	9,760.52	212.08	47.024		
5,600.00	5,593.05	5,532.05	5,593.05	24.64	191.41	-89.77	-4,315.74	-8,995.43	9,972.57	9,756.58	216.00	46.170		
5,700.00	5,692.91	5,631.91	5,692.91	25.07	194.89	-89.80	-4,315.74	-8,995.43	9,972.55	9,752.63	219.92	45.346		
5,800.00	5,792.77	5,731.77	5,792.77	25.51	198.38	-89.83	-4,315.74	-8,995.43	9,972.54	9,748.70	223.84	44.552		
5,900.00	5,892.63	5,831.63	5,892.63	25.95	201.86	-89.86	-4,315.74	-8,995.43	9,972.52	9,744.76	227.76	43.784		
6,000.00	5,992.49	5,931.49	5,992.49	26.39	205.35	-89.89	-4,315.74	-8,995.43	9,972.51	9,740.83	231.69	43.043		
6,100.00	6,092.35	6,031.35	6,092.35	26.82	208.84	-89.92	-4,315.74	-8,995.43	9,972.50	9,736.89	235.61	42.326		
6,200.00	6,192.21	6,131.21	6,192.21	27.26	212.32	-89.95	-4,315.74	-8,995.43	9,972.50	9,732.97	239.53	41.633		
6,300.00	6,292.07	6,231.07	6,292.07	27.70	215.81	-89.98	-4,315.74	-8,995.43	9,972.50	9,729.04	243.46	40.962		
6,349.59	6,341.60	6,280.60	6,341.60	27.92	217.54	-90.00	-4,315.74	-8,995.43	9,972.50	9,727.09	245.40	40.637		
6,400.00	6,391.93	6,330.93	6,391.93	28.14	219.29	-90.02	-4,315.74	-8,995.43	9,972.50	9,725.12	247.38	40.312		
6,500.00	6,491.69	6,430.69	6,491.69	28.58	222.77	-90.31	-4,315.74	-8,995.43	9,970.65	9,719.35	251.30	39.676		
6,600.00	6,589.80	6,528.80	6,589.80	29.02	226.20	-90.05	-4,315.74	-8,995.43	9,956.53	9,701.38	255.16	39.021		
6,700.00	6,683.86	6,622.86	6,683.86	29.46	229.48	-90.70	-4,315.74	-8,995.43	9,928.88	9,670.02	258.86	38.356		
6,800.00	6,771.56	6,710.56	6,771.56	29.92	232.54	-90.20	-4,315.74	-8,995.43	9,888.41	9,626.09	262.32	37.696		
6,900.00	6,850.72	6,789.72	6,850.72	30.40	235.31	-90.48	-4,315.74	-8,995.43	9,836.17	9,570.71	265.46	37.053		
7,000.00	6,919.40	6,858.40	6,919.40	30.96	237.70	-90.51	-4,315.74	-8,995.43	9,773.49	9,505.27	268.21	36.439		
7,100.00	6,975.92	6,914.92	6,975.92	31.62	239.68	-90.46	-4,315.74	-8,995.43	9,701.96	9,431.43	270.53	35.863		
7,200.00	7,018.87	6,957.87	7,018.87	32.44	241.18	-90.48	-4,315.74	-8,995.43	9,623.41	9,351.03	272.37	35.332		
7,300.00	7,047.21	6,986.21	7,047.21	33.42	242.17	-90.56	-4,315.74	-8,995.43	9,539.80	9,266.08	273.72	34.853		
7,400.00	7,060.23	7,000.77	7,060.23	34.55	242.67	-90.61	-4,315.74	-8,995.43	9,453.21	9,178.61	274.60	34.425		
7,500.00	7,060.03	7,000.97	7,060.03	35.83	242.68	-91.80	-4,315.74	-8,995.43	9,365.76	9,090.75	275.01	34.056		
7,600.00	7,058.28	7,002.72	7,058.28	37.28	242.74	-91.78	-4,315.74	-8,995.43	9,278.52	9,002.97	275.54	33.673		
7,700.00	7,056.53	7,004.47	7,056.53	38.89	242.80	-91.76	-4,315.74	-8,995.43	9,191.53	8,915.39	276.15	33.285		
7,800.00	7,054.78	7,006.22	7,054.78	40.63	242.86	-91.74	-4,315.74	-8,995.43	9,104.82	8,828.00	276.82	32.891		
7,900.00	7,053.03	7,007.97	7,053.03	42.50	242.93	-91.71	-4,315.74	-8,995.43	9,018.37	8,740.81	277.56	32.491		
8,000.00	7,051.28	7,009.72	7,051.28	44.47	242.99	-91.69	-4,315.74	-8,995.43	8,932.21	8,653.84	278.38	32.087		
8,100.00	7,049.53	6,988.53	7,049.53	46.53	242.25	-91.67	-4,315.74	-8,995.43	8,846.34	8,567.88	278.46	31.769		
8,200.00	7,047.78	6,986.78	7,047.78	48.67	242.19	-91.65	-4,315.74	-8,995.43	8,760.77	8,481.48	279.29	31.368		
8,300.00	7,046.03	6,985.03	7,046.03	50.89	242.12	-91.63	-4,315.74	-8,995.43	8,675.51	8,395.32	280.20	30.962		
8,400.00	7,044.28	6,983.28	7,044.28	53.16	242.06	-91.60	-4,315.74	-8,995.43	8,590.57	8,309.40	281.17	30.553		
8,500.00	7,042.53	6,981.53	7,042.53	55.49	242.00	-91.58	-4,315.74	-8,995.43	8,505.95	8,223.74	282.21	30.140		
8,600.00	7,040.78	6,979.78	7,040.78	57.86	241.94	-91.56	-4,315.74	-8,995.43	8,421.67	8,138.35	283.32	29.725		
8,700.00	7,039.03	6,978.03	7,039.03	60.28	241.88	-91.54	-4,315.74	-8,995.43	8,337.74	8,053.24	284.50	29.307		
8,800.00	7,037.28	6,976.28	7,037.28	62.74	241.82	-91.52	-4,315.74	-8,995.43	8,254.17	7,968.43	285.74	28.887		
8,900.00	7,035.53	6,974.53	7,035.53	65.23	241.76	-91.49	-4,315.74	-8,995.43	8,170.96	7,883.91	287.05	28.466		
9,000.00	7,033.78	6,972.78	7,033.78	67.74	241.70	-91.47	-4,315.74	-8,995.43	8,088.13	7,799.71	288.42	28.043		
9,100.00	7,032.03	6,971.03	7,032.03	70.29	241.64	-91.45	-4,315.74	-8,995.43	8,005.70	7,715.84	289.86	27.619		
9,200.00	7,030.28	6,969.28	7,030.28	72.85	241.57	-91.43	-4,315.74	-8,995.43	7,923.67	7,632.31	291.36	27.196		
9,300.00	7,028.54	6,967.54	7,028.54	75.44	241.51	-91.41	-4,315.74	-8,995.43	7,842.05	7,549.13	292.92	26.772		
9,400.00	7,026.79	6,965.79	7,026.79	78.05	241.45	-91.38	-4,315.74	-8,995.43	7,760.87	7,466.32	294.55	26.348		
9,500.00	7,025.04	6,964.04	7,025.04	80.67	241.39	-91.36	-4,315.74	-8,995.43	7,680.13	7,383.89	296.24	25.926		
9,600.00	7,023.29	6,962.29	7,023.29	83.31	241.33	-91.34	-4,315.74	-8,995.43	7,599.85	7,301.86	297.98	25.504		
9,700.00	7,021.54	6,960.54	7,021.54	85.96	241.27	-91.32	-4,315.74	-8,995.43	7,520.04	7,220.24	299.80	25.084		
9,800.00	7,019.79	6,958.79	7,019.79	88.63	241.21	-91.30	-4,315.74	-8,995.43	7,440.71	7,139.05	301.67	24.665		
9,900.00	7,018.04	6,957.04	7,018.04	91.30	241.15	-91.27	-4,315.74	-8,995.43	7,361.89	7,058.29	303.60	24.249		
10,000.00	7,016.29	6,955.29	7,016.29	93.99	241.09	-91.25	-4,315.74	-8,995.43	7,283.59	6,978.00	305.59	23.834		
10,100.00	7,014.54	6,953.54	7,014.54	96.69	241.03	-91.23	-4,315.74	-8,995.43	7,205.83	6,898.18	307.65	23.422		
10,200.00	7,012.79	6,951.79	7,012.79	99.40	240.96	-91.21	-4,315.74	-8,995.43	7,128.62	6,818.86	309.76	23.013		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HOOD 41-20(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	7,011.04	6,950.04	7,011.04	102.11	240.90	-91.19	-4,315.74	-8,995.43	7,051.98	6,740.04	311.94	22.607		
10,400.00	7,009.29	6,948.29	7,009.29	104.83	240.84	-91.16	-4,315.74	-8,995.43	6,975.94	6,661.76	314.18	22.204		
10,500.00	7,007.54	6,946.54	7,007.54	107.56	240.78	-91.14	-4,315.74	-8,995.43	6,900.50	6,584.03	316.47	21.804		
10,600.00	7,005.79	6,944.79	7,005.79	110.30	240.72	-91.12	-4,315.74	-8,995.43	6,825.70	6,506.86	318.83	21.408		
10,700.00	7,004.04	6,943.04	7,004.04	113.04	240.66	-91.10	-4,315.74	-8,995.43	6,751.55	6,430.29	321.25	21.016		
10,800.00	7,002.29	6,941.29	7,002.29	115.79	240.60	-91.08	-4,315.74	-8,995.43	6,678.07	6,354.33	323.74	20.628		
10,900.00	7,000.54	6,939.54	7,000.54	118.54	240.54	-91.05	-4,315.74	-8,995.43	6,605.28	6,279.01	326.28	20.244		
11,000.00	6,998.79	6,937.79	6,998.79	121.30	240.48	-91.03	-4,315.74	-8,995.43	6,533.22	6,204.34	328.88	19.865		
11,100.00	6,997.04	6,936.04	6,997.04	124.06	240.41	-91.01	-4,315.74	-8,995.43	6,461.90	6,130.35	331.55	19.490		
11,200.00	6,995.29	6,934.29	6,995.29	126.83	240.35	-90.99	-4,315.74	-8,995.43	6,391.35	6,057.07	334.28	19.120		
11,300.00	6,993.54	6,932.54	6,993.54	129.60	240.29	-90.97	-4,315.74	-8,995.43	6,321.59	5,984.53	337.07	18.755		
11,400.00	6,991.80	6,930.80	6,991.80	132.37	240.23	-90.94	-4,315.74	-8,995.43	6,252.66	5,912.74	339.92	18.395		
11,500.00	6,990.05	6,929.05	6,990.05	135.15	240.17	-90.92	-4,315.74	-8,995.43	6,184.57	5,841.74	342.83	18.040		
11,600.00	6,988.30	6,927.30	6,988.30	137.93	240.11	-90.90	-4,315.74	-8,995.43	6,117.35	5,771.55	345.80	17.690		
11,700.00	6,986.55	6,925.55	6,986.55	140.72	240.05	-90.88	-4,315.74	-8,995.43	6,051.05	5,702.21	348.83	17.346		
11,800.00	6,984.80	6,923.80	6,984.80	143.50	239.99	-90.86	-4,315.74	-8,995.43	5,985.68	5,633.75	351.93	17.008		
11,900.00	6,983.05	6,922.05	6,983.05	146.29	239.93	-90.83	-4,315.74	-8,995.43	5,921.27	5,566.19	355.08	16.676		
12,000.00	6,981.30	6,920.30	6,981.30	149.09	239.86	-90.81	-4,315.74	-8,995.43	5,857.87	5,499.57	358.29	16.349		
12,100.00	6,979.55	6,918.55	6,979.55	151.88	239.80	-90.79	-4,315.74	-8,995.43	5,795.49	5,433.93	361.56	16.029		
12,200.00	6,977.80	6,916.80	6,977.80	154.68	239.74	-90.77	-4,315.74	-8,995.43	5,734.18	5,369.29	364.89	15.715		
12,300.00	6,976.05	6,915.05	6,976.05	157.48	239.68	-90.75	-4,315.74	-8,995.43	5,673.97	5,305.70	368.28	15.407		
12,400.00	6,974.30	6,913.30	6,974.30	160.28	239.62	-90.72	-4,315.74	-8,995.43	5,614.90	5,243.18	371.71	15.105		
12,500.00	6,972.55	6,911.55	6,972.55	163.08	239.56	-90.70	-4,315.74	-8,995.43	5,556.99	5,181.79	375.20	14.811		
12,600.00	6,970.80	6,909.80	6,970.80	165.89	239.50	-90.68	-4,315.74	-8,995.43	5,500.30	5,121.55	378.75	14.522		
12,700.00	6,969.05	6,908.05	6,969.05	168.69	239.44	-90.66	-4,315.74	-8,995.43	5,444.85	5,062.51	382.34	14.241		
12,800.00	6,967.30	6,906.30	6,967.30	171.50	239.38	-90.64	-4,315.74	-8,995.43	5,390.68	5,004.71	385.97	13.966		
12,900.00	6,965.55	6,904.55	6,965.55	174.31	239.32	-90.61	-4,315.74	-8,995.43	5,337.84	4,948.19	389.65	13.699		
13,000.00	6,963.80	6,902.80	6,963.80	177.12	239.25	-90.59	-4,315.74	-8,995.43	5,286.36	4,892.99	393.37	13.438		
13,100.00	6,962.05	6,901.05	6,962.05	179.94	239.19	-90.57	-4,315.74	-8,995.43	5,236.29	4,839.15	397.13	13.185		
13,200.00	6,960.30	6,900.70	6,960.30	182.75	239.18	-90.55	-4,315.74	-8,995.43	5,187.65	4,786.68	400.98	12.938		
13,300.00	6,958.55	6,902.45	6,958.55	185.57	239.24	-90.53	-4,315.74	-8,995.43	5,140.51	4,735.58	404.92	12.695		
13,400.00	6,956.80	6,904.20	6,956.80	188.38	239.30	-90.50	-4,315.74	-8,995.43	5,094.88	4,685.99	408.89	12.460		
13,500.00	6,955.05	6,905.95	6,955.05	191.20	239.36	-90.48	-4,315.74	-8,995.43	5,050.83	4,637.94	412.89	12.233		
13,600.00	6,953.31	6,907.70	6,953.31	194.02	239.43	-90.46	-4,315.74	-8,995.43	5,008.39	4,591.49	416.90	12.013		
13,700.00	6,951.56	6,909.44	6,951.56	196.84	239.49	-90.44	-4,315.74	-8,995.43	4,967.59	4,546.67	420.92	11.802		
13,800.00	6,949.81	6,888.81	6,949.81	199.67	238.77	-90.41	-4,315.74	-8,995.43	4,928.49	4,504.32	424.17	11.619		
13,900.00	6,948.06	6,887.06	6,948.06	202.49	238.70	-90.39	-4,315.74	-8,995.43	4,891.11	4,463.04	428.08	11.426		
14,000.00	6,946.31	6,885.31	6,946.31	205.31	238.64	-90.37	-4,315.74	-8,995.43	4,855.51	4,423.53	431.98	11.240		
14,100.00	6,944.56	6,883.56	6,944.56	208.14	238.58	-90.35	-4,315.74	-8,995.43	4,821.72	4,385.85	435.87	11.062		
14,200.00	6,942.81	6,881.81	6,942.81	210.96	238.52	-90.33	-4,315.74	-8,995.43	4,789.78	4,350.03	439.75	10.892		
14,300.00	6,941.06	6,880.06	6,941.06	213.79	238.46	-90.30	-4,315.74	-8,995.43	4,759.73	4,316.13	443.60	10.730		
14,400.00	6,939.31	6,878.31	6,939.31	216.62	238.40	-90.28	-4,315.74	-8,995.43	4,731.60	4,284.18	447.42	10.575		
14,500.00	6,937.56	6,876.56	6,937.56	219.44	238.34	-90.26	-4,315.74	-8,995.43	4,705.42	4,254.23	451.20	10.429		
14,600.00	6,935.81	6,874.81	6,935.81	222.27	238.28	-90.24	-4,315.74	-8,995.43	4,681.24	4,226.31	454.93	10.290		
14,700.00	6,934.06	6,873.06	6,934.06	225.10	238.22	-90.22	-4,315.74	-8,995.43	4,659.07	4,200.46	458.61	10.159		
14,800.00	6,932.31	6,871.31	6,932.31	227.93	238.16	-90.19	-4,315.74	-8,995.43	4,638.95	4,176.72	462.23	10.036		
14,817.75	6,932.00	6,871.00	6,932.00	228.43	238.14	-90.19	-4,315.74	-8,995.43	4,635.60	4,172.73	462.87	10.015 CC, ES, SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HOOD 6-2-20(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 82-MWVD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	670.49	704.37	3.28	4.32	-108.49	-2,988.75	-8,937.52	9,450.29					
100.00	100.00	724.00	757.32	3.28	4.49	-108.53	-2,993.95	-8,931.84	9,443.17	9,435.42	7.75	1,218.720		
200.00	200.00	724.00	757.32	3.34	4.49	-108.53	-2,993.95	-8,931.84	9,436.74	9,428.95	7.79	1,211.488		
300.00	300.00	724.00	757.32	3.44	4.49	-108.53	-2,993.95	-8,931.84	9,431.36	9,423.47	7.89	1,195.619		
400.00	400.00	724.00	757.32	3.60	4.49	-108.53	-2,993.95	-8,931.84	9,427.04	9,419.00	8.04	1,172.481		
500.00	500.00	777.09	809.77	3.81	4.67	-108.58	-3,000.47	-8,926.90	9,422.75	9,414.34	8.41	1,120.143		
600.00	599.98	818.00	850.05	4.05	4.81	-81.31	-3,006.95	-8,923.87	9,419.91	9,411.12	8.79	1,071.729		
700.00	699.86	818.00	850.05	4.32	4.81	-81.34	-3,006.95	-8,923.87	9,417.06	9,408.00	9.06	1,039.768		
800.00	799.72	818.00	850.05	4.62	4.81	-81.34	-3,006.95	-8,923.87	9,415.20	9,405.85	9.35	1,006.783		
900.00	899.58	818.00	850.05	4.93	4.81	-81.34	-3,006.95	-8,923.87	9,414.40	9,404.73	9.67	973.641		
925.23	924.78	818.00	850.05	5.02	4.81	-81.34	-3,006.95	-8,923.87	9,414.37	9,404.61	9.75	965.334		
1,000.00	999.44	818.00	850.05	5.27	4.81	-81.34	-3,006.95	-8,923.87	9,414.66	9,404.66	10.01	940.984		
1,100.00	1,099.31	863.09	894.34	5.62	4.97	-81.41	-3,015.04	-8,921.48	9,415.26	9,404.74	10.52	895.061		
1,200.00	1,199.17	912.00	942.33	5.98	5.15	-81.48	-3,024.39	-8,920.16	9,417.53	9,406.47	11.06	851.134		
1,300.00	1,299.03	912.00	942.33	6.36	5.15	-81.48	-3,024.39	-8,920.16	9,420.01	9,408.58	11.44	823.745		
1,400.00	1,398.89	912.00	942.33	6.74	5.15	-81.48	-3,024.39	-8,920.16	9,423.55	9,411.74	11.81	797.640		
1,500.00	1,498.75	912.00	942.33	7.13	5.15	-81.48	-3,024.39	-8,920.16	9,428.15	9,415.95	12.20	772.848		
1,600.00	1,598.61	912.00	942.33	7.52	5.15	-81.48	-3,024.39	-8,920.16	9,433.81	9,421.22	12.59	749.362		
1,700.00	1,698.47	912.00	942.33	7.92	5.15	-81.48	-3,024.39	-8,920.16	9,440.52	9,427.54	12.98	727.152		
1,800.00	1,798.33	962.75	992.09	8.32	5.34	-81.55	-3,034.31	-8,920.37	9,447.35	9,433.77	13.58	695.908		
1,900.00	1,898.19	1,006.00	1,034.51	8.73	5.50	-81.61	-3,042.63	-8,921.94	9,455.89	9,441.74	14.15	668.477		
2,000.00	1,998.05	1,006.00	1,034.51	9.14	5.50	-81.61	-3,042.63	-8,921.94	9,464.79	9,450.24	14.55	650.711		
2,100.00	2,097.91	1,006.00	1,034.51	9.55	5.50	-81.61	-3,042.63	-8,921.94	9,474.74	9,459.79	14.95	633.923		
2,200.00	2,197.78	1,006.00	1,034.51	9.97	5.50	-81.61	-3,042.63	-8,921.94	9,485.73	9,470.39	15.35	618.059		
2,300.00	2,297.64	1,042.65	1,070.44	10.39	5.63	-81.66	-3,049.46	-8,924.19	9,497.41	9,481.51	15.89	597.603		
2,400.00	2,397.50	1,061.71	1,089.14	10.81	5.70	-81.68	-3,052.87	-8,925.66	9,510.01	9,493.64	16.37	580.967		
2,500.00	2,497.36	1,101.00	1,127.68	11.23	5.85	-81.72	-3,059.60	-8,929.31	9,523.55	9,506.63	16.93	562.605		
2,600.00	2,597.22	1,101.00	1,127.68	11.65	5.85	-81.72	-3,059.60	-8,929.31	9,537.72	9,520.39	17.33	550.447		
2,700.00	2,697.08	1,101.00	1,127.68	12.07	5.85	-81.72	-3,059.60	-8,929.31	9,552.91	9,535.18	17.73	538.933		
2,800.00	2,796.94	1,101.00	1,127.68	12.50	5.85	-81.72	-3,059.60	-8,929.31	9,569.12	9,550.99	18.12	528.024		
2,900.00	2,896.80	1,150.74	1,176.32	12.92	6.04	-81.78	-3,068.31	-8,934.96	9,585.60	9,566.88	18.72	512.005		
3,000.00	2,996.66	1,197.00	1,221.30	13.35	6.23	-81.83	-3,077.22	-8,941.06	9,603.51	9,584.20	19.31	497.359		
3,100.00	3,096.52	1,197.00	1,221.30	13.78	6.23	-81.83	-3,077.22	-8,941.06	9,621.79	9,602.09	19.70	488.398		
3,200.00	3,196.38	1,197.00	1,221.30	14.21	6.23	-81.83	-3,077.22	-8,941.06	9,641.07	9,620.98	20.09	479.891		
3,300.00	3,296.25	1,197.00	1,221.30	14.64	6.23	-81.83	-3,077.22	-8,941.06	9,661.34	9,640.87	20.48	471.813		
3,400.00	3,396.11	1,238.15	1,261.09	15.07	6.40	-81.88	-3,085.74	-8,947.13	9,682.15	9,661.11	21.04	460.071		
3,500.00	3,495.97	1,292.00	1,312.86	15.50	6.64	-81.94	-3,097.68	-8,955.95	9,704.25	9,682.58	21.67	447.752		
3,600.00	3,595.83	1,292.00	1,312.86	15.93	6.64	-81.94	-3,097.68	-8,955.95	9,726.54	9,704.49	22.05	441.057		
3,700.00	3,695.69	1,292.00	1,312.86	16.36	6.64	-81.94	-3,097.68	-8,955.95	9,749.81	9,727.38	22.43	434.690		
3,800.00	3,795.55	1,292.00	1,312.86	16.80	6.64	-81.94	-3,097.68	-8,955.95	9,774.05	9,751.25	22.80	428.635		
3,900.00	3,895.41	1,328.93	1,348.14	17.23	6.82	-81.99	-3,106.36	-8,962.55	9,798.88	9,775.54	23.34	419.758		
4,000.00	3,995.27	1,346.84	1,365.19	17.66	6.92	-82.02	-3,110.73	-8,965.91	9,824.59	9,800.79	23.80	412.737		
4,100.00	4,095.13	1,387.00	1,403.23	18.10	7.12	-82.07	-3,120.85	-8,973.84	9,851.22	9,826.84	24.37	404.189		
4,200.00	4,194.99	1,387.00	1,403.23	18.53	7.12	-82.07	-3,120.85	-8,973.84	9,878.35	9,853.61	24.73	399.385		
4,300.00	4,294.85	1,438.05	1,451.39	18.96	7.41	-82.14	-3,134.22	-8,984.21	9,906.24	9,880.87	25.37	390.507		
4,400.00	4,394.71	1,481.00	1,491.84	19.40	7.66	-82.20	-3,145.79	-8,992.87	9,934.47	9,908.53	25.95	382.883		
4,500.00	4,494.58	1,525.04	1,533.18	19.83	7.94	-82.26	-3,158.05	-9,001.81	9,963.22	9,936.67	26.55	375.196		
4,600.00	4,594.44	1,573.00	1,577.98	20.27	8.25	-82.34	-3,172.01	-9,011.71	9,992.66	9,965.49	27.17	367.764		
7,700.00	7,056.53	3,925.00	3,692.33	38.89	30.62	-53.69	-4,144.73	-9,332.43	9,986.25	9,929.58	56.67	176.224		
7,800.00	7,054.78	3,925.00	3,692.33	40.63	30.62	-53.69	-4,144.73	-9,332.43	9,902.51	9,845.38	57.13	173.341		
7,900.00	7,053.03	3,925.00	3,692.33	42.50	30.62	-53.69	-4,144.73	-9,332.43	9,819.07	9,761.43	57.65	170.336		
8,000.00	7,051.28	3,925.00	3,692.33	44.47	30.62	-53.69	-4,144.73	-9,332.43	9,735.95	9,677.72	58.22	167.220		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HOOD 6-2-20(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 82-MWVD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,100.00	7,049.53	3,925.00	3,692.33	46.53	30.62	-53.69	-4,144.73	-9,332.43	9,653.14	9,594.28	58.86	164.009		
8,200.00	7,047.78	3,925.00	3,692.33	48.67	30.62	-53.69	-4,144.73	-9,332.43	9,570.66	9,511.11	59.55	160.715		
8,300.00	7,046.03	3,925.00	3,692.33	50.89	30.62	-53.69	-4,144.73	-9,332.43	9,488.53	9,428.22	60.30	157.352		
8,400.00	7,044.28	7,206.61	6,795.50	53.16	53.08	-88.77	-4,949.26	-9,551.56	9,406.01	9,323.83	82.18	114.456		
8,500.00	7,042.53	7,206.85	6,795.75	55.49	53.08	-88.77	-4,949.27	-9,551.56	9,322.74	9,239.52	83.22	112.029		
8,600.00	7,040.78	7,207.10	6,795.99	57.86	53.08	-88.77	-4,949.27	-9,551.57	9,239.79	9,155.47	84.32	109.581		
8,700.00	7,039.03	7,207.34	6,796.24	60.28	53.08	-88.78	-4,949.27	-9,551.57	9,157.19	9,071.70	85.48	107.121		
8,800.00	7,037.28	7,207.59	6,796.49	62.74	53.08	-88.78	-4,949.28	-9,551.58	9,074.93	8,988.22	86.71	104.656		
8,900.00	7,035.53	7,207.83	6,796.73	65.23	53.08	-88.78	-4,949.28	-9,551.58	8,993.04	8,905.04	88.00	102.194		
9,000.00	7,033.78	7,208.08	6,796.98	67.74	53.08	-88.78	-4,949.29	-9,551.58	8,911.51	8,822.16	89.35	99.740		
9,100.00	7,032.03	7,208.33	6,797.22	70.29	53.08	-88.79	-4,949.29	-9,551.59	8,830.37	8,739.61	90.75	97.301		
9,200.00	7,030.28	7,208.58	6,797.47	72.85	53.08	-88.79	-4,949.30	-9,551.59	8,749.61	8,657.39	92.22	94.881		
9,300.00	7,028.54	7,208.82	6,797.72	75.44	53.08	-88.79	-4,949.30	-9,551.60	8,669.26	8,575.52	93.74	92.485		
9,400.00	7,026.79	7,209.07	6,797.97	78.05	53.08	-88.80	-4,949.31	-9,551.60	8,589.31	8,494.00	95.31	90.117		
9,500.00	7,025.04	7,209.32	6,798.22	80.67	53.08	-88.80	-4,949.31	-9,551.61	8,509.80	8,412.85	96.94	87.780		
9,600.00	7,023.29	7,209.57	6,798.46	83.31	53.08	-88.80	-4,949.32	-9,551.61	8,430.72	8,332.08	98.63	85.478		
9,700.00	7,021.54	7,209.82	6,798.71	85.96	53.09	-88.80	-4,949.32	-9,551.62	8,352.08	8,251.71	100.37	83.213		
9,800.00	7,019.79	7,210.07	6,798.96	88.63	53.09	-88.81	-4,949.32	-9,551.62	8,273.91	8,171.75	102.16	80.987		
9,900.00	7,018.04	7,210.31	6,799.21	91.30	53.09	-88.81	-4,949.33	-9,551.63	8,196.21	8,092.20	104.01	78.803		
10,000.00	7,016.29	7,210.56	6,799.46	93.99	53.09	-88.81	-4,949.33	-9,551.63	8,119.01	8,013.10	105.91	76.661		
10,100.00	7,014.54	7,210.81	6,799.71	96.69	53.09	-88.81	-4,949.34	-9,551.64	8,042.30	7,934.44	107.86	74.563		
10,200.00	7,012.79	7,211.06	6,799.96	99.40	53.09	-88.82	-4,949.34	-9,551.64	7,966.11	7,856.25	109.86	72.510		
10,300.00	7,011.04	7,211.32	6,800.21	102.11	53.09	-88.82	-4,949.35	-9,551.65	7,890.45	7,778.53	111.92	70.502		
10,400.00	7,009.29	7,211.57	6,800.46	104.83	53.09	-88.82	-4,949.35	-9,551.65	7,815.34	7,701.31	114.03	68.540		
10,500.00	7,007.54	7,211.82	6,800.71	107.56	53.09	-88.83	-4,949.36	-9,551.66	7,740.79	7,624.61	116.18	66.625		
10,600.00	7,005.79	7,212.07	6,800.96	110.30	53.09	-88.83	-4,949.36	-9,551.66	7,666.82	7,548.43	118.40	64.756		
10,700.00	7,004.04	7,212.32	6,801.22	113.04	53.09	-88.83	-4,949.37	-9,551.67	7,593.45	7,472.79	120.66	62.934		
10,800.00	7,002.29	7,212.57	6,801.47	115.79	53.09	-88.83	-4,949.37	-9,551.67	7,520.69	7,397.72	122.97	61.158		
10,900.00	7,000.54	7,212.83	6,801.72	118.54	53.09	-88.84	-4,949.38	-9,551.68	7,448.57	7,323.23	125.34	59.428		
11,000.00	6,998.79	7,213.08	6,801.97	121.30	53.09	-88.84	-4,949.38	-9,551.68	7,377.09	7,249.33	127.76	57.744		
11,100.00	6,997.04	7,213.33	6,802.23	124.06	53.10	-88.84	-4,949.39	-9,551.69	7,306.28	7,176.06	130.23	56.105		
11,200.00	6,995.29	7,213.58	6,802.48	126.83	53.10	-88.84	-4,949.39	-9,551.69	7,236.17	7,103.42	132.75	54.511		
11,300.00	6,993.54	7,213.84	6,802.73	129.60	53.10	-88.85	-4,949.39	-9,551.70	7,166.76	7,031.44	135.32	52.962		
11,400.00	6,991.80	7,214.09	6,802.99	132.37	53.10	-88.85	-4,949.40	-9,551.70	7,098.08	6,960.13	137.95	51.456		
11,500.00	6,990.05	7,214.35	6,803.24	135.15	53.10	-88.85	-4,949.40	-9,551.71	7,030.15	6,889.53	140.62	49.993		
11,600.00	6,988.30	7,214.60	6,803.50	137.93	53.10	-88.86	-4,949.41	-9,551.71	6,963.00	6,819.65	143.35	48.573		
11,700.00	6,986.55	7,214.86	6,803.75	140.72	53.10	-88.86	-4,949.41	-9,551.72	6,896.64	6,750.51	146.13	47.195		
11,800.00	6,984.80	7,215.11	6,804.01	143.50	53.10	-88.86	-4,949.42	-9,551.72	6,831.11	6,682.14	148.96	45.858		
11,900.00	6,983.05	7,215.37	6,804.26	146.29	53.10	-88.86	-4,949.42	-9,551.73	6,766.41	6,614.57	151.85	44.561		
12,000.00	6,981.30	7,215.62	6,804.52	149.09	53.10	-88.87	-4,949.43	-9,551.73	6,702.59	6,547.80	154.78	43.304		
12,100.00	6,979.55	7,215.88	6,804.77	151.88	53.10	-88.87	-4,949.43	-9,551.74	6,639.65	6,481.89	157.77	42.086		
12,200.00	6,977.80	7,216.14	6,805.03	154.68	53.10	-88.87	-4,949.44	-9,551.74	6,577.64	6,416.83	160.80	40.905		
12,300.00	6,976.05	7,216.39	6,805.29	157.48	53.10	-88.88	-4,949.44	-9,551.75	6,516.56	6,352.68	163.89	39.763		
12,400.00	6,974.30	7,216.65	6,805.54	160.28	53.10	-88.88	-4,949.45	-9,551.75	6,456.46	6,289.44	167.02	38.656		
12,500.00	6,972.55	7,216.91	6,805.80	163.08	53.11	-88.88	-4,949.45	-9,551.76	6,397.36	6,227.16	170.21	37.586		
12,600.00	6,970.80	7,217.17	6,806.06	165.89	53.11	-88.88	-4,949.45	-9,551.76	6,339.29	6,165.85	173.44	36.551		
12,700.00	6,969.05	7,217.42	6,806.32	168.69	53.11	-88.89	-4,949.46	-9,551.77	6,282.27	6,105.55	176.72	35.550		
12,800.00	6,967.30	7,217.68	6,806.58	171.50	53.11	-88.89	-4,949.46	-9,551.77	6,226.33	6,046.29	180.04	34.582		
12,900.00	6,965.55	7,217.94	6,806.83	174.31	53.11	-88.89	-4,949.47	-9,551.78	6,171.51	5,988.09	183.42	33.648		
13,000.00	6,963.80	7,218.20	6,807.09	177.12	53.11	-88.90	-4,949.47	-9,551.78	6,117.83	5,931.00	186.83	32.745		
13,100.00	6,962.05	7,218.46	6,807.35	179.94	53.11	-88.90	-4,949.48	-9,551.79	6,065.32	5,875.03	190.29	31.874		
13,200.00	6,960.30	7,218.72	6,807.61	182.75	53.11	-88.90	-4,949.48	-9,551.79	6,014.02	5,820.23	193.79	31.034		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - HOOD 6-2-20(PR_150CC) - OH - OH												Offset Site Error:	0.00 ft
Survey Program: 82-MWD												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
13,300.00	6,958.55	7,218.98	6,807.87	185.57	53.11	-88.90	-4,949.49	-9,551.80	5,963.96	5,766.63	197.33	30.224	
13,400.00	6,956.80	7,219.24	6,808.13	188.38	53.11	-88.91	-4,949.49	-9,551.80	5,915.16	5,714.25	200.90	29.443	
13,500.00	6,955.05	7,219.50	6,808.39	191.20	53.11	-88.91	-4,949.50	-9,551.81	5,867.66	5,663.14	204.52	28.690	
13,600.00	6,953.31	7,219.76	6,808.66	194.02	53.11	-88.91	-4,949.50	-9,551.81	5,821.49	5,613.33	208.16	27.966	
13,700.00	6,951.56	7,220.02	6,808.92	196.84	53.11	-88.92	-4,949.51	-9,551.82	5,776.68	5,564.84	211.84	27.269	
13,800.00	6,949.81	7,220.29	6,809.18	199.67	53.12	-88.92	-4,949.51	-9,551.82	5,733.27	5,517.73	215.54	26.599	
13,900.00	6,948.06	7,220.55	6,809.44	202.49	53.12	-88.92	-4,949.52	-9,551.83	5,691.28	5,472.01	219.27	25.955	
14,000.00	6,946.31	7,220.81	6,809.70	205.31	53.12	-88.92	-4,949.52	-9,551.83	5,650.75	5,427.73	223.03	25.337	
14,100.00	6,944.56	7,221.07	6,809.97	208.14	53.12	-88.93	-4,949.52	-9,551.84	5,611.71	5,384.92	226.80	24.743	
14,200.00	6,942.81	7,221.34	6,810.23	210.96	53.12	-88.93	-4,949.53	-9,551.84	5,574.19	5,343.61	230.59	24.174	
14,300.00	6,941.06	7,221.60	6,810.49	213.79	53.12	-88.93	-4,949.53	-9,551.85	5,538.23	5,303.84	234.39	23.629	
14,400.00	6,939.31	7,221.86	6,810.76	216.62	53.12	-88.94	-4,949.54	-9,551.85	5,503.84	5,265.65	238.20	23.106	
14,500.00	6,937.56	7,222.13	6,811.02	219.44	53.12	-88.94	-4,949.54	-9,551.86	5,471.07	5,229.06	242.01	22.607	
14,600.00	6,935.81	7,222.39	6,811.28	222.27	53.12	-88.94	-4,949.55	-9,551.86	5,439.94	5,194.11	245.82	22.129	
14,700.00	6,934.06	7,222.66	6,811.55	225.10	53.12	-88.95	-4,949.55	-9,551.87	5,410.47	5,160.84	249.63	21.674	
14,800.00	6,932.31	7,222.92	6,811.81	227.93	53.12	-88.95	-4,949.56	-9,551.87	5,382.71	5,129.27	253.44	21.239	
14,817.75	6,932.00	7,222.97	6,811.86	228.43	53.12	-88.95	-4,949.56	-9,551.87	5,377.96	5,123.85	254.11	21.164	CC, ES, SF



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LEFFLER 1 21-2(SI_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	64.00	3.28	3.28	-130.79	-4,242.94	-4,917.20	6,495.04					
100.00	100.00	48.56	112.56	3.28	3.28	-130.79	-4,242.78	-4,917.28	6,494.69	6,488.12	6.57	989.063		
200.00	200.00	182.82	246.81	3.34	3.33	-130.77	-4,240.90	-4,918.09	6,494.23	6,487.56	6.67	973.682		
300.00	300.00	277.89	341.85	3.44	3.43	-130.76	-4,239.07	-4,918.76	6,493.51	6,486.63	6.87	944.604		
400.00	400.00	375.63	439.58	3.60	3.57	-130.74	-4,237.51	-4,919.31	6,492.90	6,485.72	7.18	904.684		
500.00	500.00	479.10	543.04	3.81	3.77	-130.73	-4,236.06	-4,919.70	6,492.27	6,484.69	7.58	856.937		
600.00	599.98	598.00	661.92	4.05	4.04	-103.36	-4,234.45	-4,919.85	6,491.88	6,483.79	8.09	802.523		
618.55	618.51	620.71	684.64	4.09	4.10	-103.37	-4,234.13	-4,919.83	6,491.86	6,483.66	8.19	792.200		
700.00	699.86	686.03	749.95	4.32	4.27	-103.39	-4,233.35	-4,919.79	6,492.13	6,483.54	8.59	755.817		
800.00	799.72	787.91	851.82	4.62	4.56	-103.43	-4,232.27	-4,919.68	6,492.59	6,483.41	9.18	707.503		
900.00	899.58	876.88	940.79	4.93	4.84	-103.47	-4,231.35	-4,919.62	6,493.08	6,483.31	9.77	664.824		
1,000.00	999.44	970.67	1,034.57	5.27	5.14	-103.50	-4,230.45	-4,919.68	6,493.74	6,483.33	10.40	624.164		
1,100.00	1,099.31	1,078.89	1,142.79	5.62	5.50	-103.54	-4,229.40	-4,919.77	6,494.39	6,483.28	11.12	584.129		
1,200.00	1,199.17	1,171.80	1,235.69	5.98	5.83	-103.58	-4,228.44	-4,919.80	6,494.99	6,483.18	11.80	550.234		
1,300.00	1,299.03	1,257.68	1,321.57	6.36	6.13	-103.61	-4,227.63	-4,919.99	6,495.77	6,483.28	12.48	520.362		
1,400.00	1,398.89	1,344.53	1,408.42	6.74	6.45	-103.65	-4,227.07	-4,920.20	6,496.77	6,483.59	13.18	492.933		
1,500.00	1,498.75	1,442.88	1,506.76	7.13	6.82	-103.69	-4,226.67	-4,920.43	6,497.93	6,484.00	13.93	466.407		
1,600.00	1,598.61	1,546.96	1,610.84	7.52	7.21	-103.73	-4,226.19	-4,920.58	6,498.99	6,484.27	14.72	441.567		
1,700.00	1,698.47	1,647.11	1,710.99	7.92	7.60	-103.77	-4,225.93	-4,920.59	6,500.08	6,484.58	15.50	419.358		
1,800.00	1,798.33	1,747.37	1,811.25	8.32	7.99	-103.82	-4,225.55	-4,920.62	6,501.11	6,484.82	16.29	399.049		
1,900.00	1,898.19	1,832.68	1,896.57	8.73	8.32	-103.85	-4,225.36	-4,920.65	6,502.25	6,485.22	17.03	381.785		
2,000.00	1,998.05	1,909.60	1,973.48	9.14	8.63	-103.89	-4,225.36	-4,920.86	6,503.73	6,485.99	17.74	366.565		
2,100.00	2,097.91	1,998.16	2,062.05	9.55	8.98	-103.92	-4,225.48	-4,921.31	6,505.46	6,486.96	18.50	351.578		
2,200.00	2,197.78	2,093.06	2,156.94	9.97	9.35	-103.97	-4,225.70	-4,921.86	6,507.33	6,488.03	19.30	337.254		
2,300.00	2,297.64	2,193.04	2,256.92	10.39	9.75	-104.01	-4,225.96	-4,922.47	6,509.23	6,489.12	20.11	323.657		
2,400.00	2,397.50	2,284.39	2,348.26	10.81	10.12	-104.05	-4,226.12	-4,923.16	6,511.20	6,490.30	20.90	311.581		
2,500.00	2,497.36	2,385.43	2,449.31	11.23	10.53	-104.09	-4,226.31	-4,924.03	6,513.25	6,491.52	21.73	299.788		
2,600.00	2,597.22	2,479.76	2,543.63	11.65	10.91	-104.13	-4,226.47	-4,924.85	6,515.30	6,492.77	22.53	289.173		
2,700.00	2,697.08	2,573.31	2,637.18	12.07	11.30	-104.17	-4,226.64	-4,925.79	6,517.47	6,494.13	23.34	279.298		
2,800.00	2,796.94	2,659.55	2,723.41	12.50	11.65	-104.20	-4,226.71	-4,926.89	6,519.77	6,495.66	24.11	270.398		
2,900.00	2,896.80	2,746.47	2,810.32	12.92	12.01	-104.23	-4,226.91	-4,928.15	6,522.31	6,497.41	24.89	262.012		
3,000.00	2,996.66	2,836.97	2,900.81	13.35	12.38	-104.27	-4,227.26	-4,929.54	6,525.01	6,499.32	25.69	253.978		
3,100.00	3,096.52	2,928.20	2,992.02	13.78	12.76	-104.30	-4,227.84	-4,930.90	6,527.85	6,501.36	26.49	246.388		
3,200.00	3,196.38	3,025.35	3,089.16	14.21	13.16	-104.34	-4,228.50	-4,932.46	6,530.81	6,503.48	27.32	239.016		
3,300.00	3,296.25	3,217.65	3,281.44	14.64	13.96	-104.42	-4,229.41	-4,934.59	6,533.45	6,504.90	28.56	228.798		
3,400.00	3,396.11	3,290.28	3,354.07	15.07	14.26	-104.45	-4,229.56	-4,935.02	6,535.31	6,506.02	29.29	223.153		
3,500.00	3,495.97	3,411.36	3,475.15	15.50	14.77	-104.50	-4,229.65	-4,935.76	6,537.14	6,506.92	30.22	216.305		
3,600.00	3,595.83	3,498.35	3,562.13	15.93	15.13	-104.54	-4,229.77	-4,936.18	6,538.91	6,507.89	31.02	210.829		
3,700.00	3,695.69	3,576.75	3,640.53	16.36	15.46	-104.57	-4,229.96	-4,936.72	6,540.91	6,509.14	31.77	205.863		
3,800.00	3,795.55	3,655.99	3,719.77	16.80	15.79	-104.60	-4,230.13	-4,937.64	6,543.25	6,510.71	32.54	201.114		
3,900.00	3,895.41	3,739.45	3,803.22	17.23	16.14	-104.64	-4,230.32	-4,938.93	6,545.88	6,512.57	33.32	196.481		
4,000.00	3,995.27	3,827.70	3,891.46	17.66	16.51	-104.67	-4,230.64	-4,940.42	6,548.72	6,514.60	34.12	191.948		
4,100.00	4,095.13	3,912.30	3,976.05	18.10	16.86	-104.70	-4,231.20	-4,941.83	6,551.73	6,516.83	34.90	187.709		
4,200.00	4,194.99	3,979.29	4,043.02	18.53	17.15	-104.73	-4,231.88	-4,943.08	6,555.14	6,519.53	35.61	184.061		
4,300.00	4,294.85	4,049.24	4,112.95	18.96	17.44	-104.76	-4,232.87	-4,944.59	6,559.04	6,522.71	36.34	180.506		
4,400.00	4,394.71	4,119.92	4,183.59	19.40	17.74	-104.79	-4,234.22	-4,946.22	6,563.38	6,526.32	37.06	177.089		
4,500.00	4,494.58	4,189.12	4,252.75	19.83	18.03	-104.82	-4,235.82	-4,947.99	6,568.19	6,530.40	37.78	173.848		
4,600.00	4,594.44	4,328.93	4,392.48	20.27	18.62	-104.88	-4,238.95	-4,951.59	6,572.96	6,534.15	38.81	169.348		
4,700.00	4,694.30	4,449.36	4,512.86	20.71	19.13	-104.93	-4,240.87	-4,954.56	6,577.22	6,537.46	39.76	165.422		
4,800.00	4,794.16	4,596.21	4,659.66	21.14	19.75	-104.98	-4,242.50	-4,958.00	6,581.10	6,540.27	40.82	161.210		
4,900.00	4,894.02	4,741.60	4,805.03	21.58	20.36	-105.04	-4,243.55	-4,960.33	6,584.12	6,542.24	41.88	157.218		
5,000.00	4,993.88	4,853.55	4,916.96	22.01	20.84	-105.09	-4,244.28	-4,961.49	6,586.69	6,543.91	42.79	153.933		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LEFFLER 1 21-2(SI_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.00	5,093.74	4,959.08	5,022.49	22.45	21.28	-105.13	-4,244.86	-4,962.61	6,589.23	6,545.56	43.67	150.879		
5,200.00	5,193.60	5,077.65	5,141.06	22.89	21.78	-105.18	-4,245.14	-4,963.89	6,591.56	6,546.95	44.61	147.753		
5,300.00	5,293.46	5,185.57	5,248.96	23.32	22.24	-105.22	-4,244.96	-4,965.11	6,593.66	6,548.16	45.51	144.898		
5,400.00	5,393.32	5,296.60	5,359.99	23.76	22.71	-105.26	-4,244.38	-4,966.54	6,595.65	6,549.24	46.41	142.108		
5,500.00	5,493.18	5,372.13	5,435.51	24.20	23.03	-105.28	-4,244.07	-4,967.52	6,597.72	6,550.55	47.17	139.878		
5,600.00	5,593.05	5,511.15	5,574.52	24.64	23.62	-105.33	-4,243.63	-4,969.27	6,599.88	6,551.68	48.20	136.938		
5,700.00	5,692.91	5,572.40	5,635.76	25.07	23.88	-105.35	-4,243.51	-4,969.93	6,601.90	6,553.01	48.89	135.035		
5,800.00	5,792.77	5,650.03	5,713.39	25.51	24.21	-105.38	-4,243.72	-4,970.87	6,604.37	6,554.71	49.65	133.006		
5,900.00	5,892.63	5,739.06	5,802.41	25.95	24.59	-105.41	-4,243.98	-4,972.22	6,607.08	6,556.61	50.47	130.915		
6,000.00	5,992.49	5,829.96	5,893.29	26.39	24.98	-105.45	-4,244.41	-4,973.57	6,609.89	6,558.60	51.29	128.871		
6,100.00	6,092.35	5,914.51	5,977.82	26.82	25.34	-105.48	-4,244.64	-4,975.24	6,612.93	6,560.85	52.08	126.964		
6,200.00	6,192.21	6,017.17	6,080.46	27.26	25.77	-105.51	-4,244.72	-4,977.58	6,616.07	6,563.11	52.96	124.927		
6,300.00	6,292.07	6,122.37	6,185.63	27.70	26.22	-105.55	-4,244.92	-4,979.71	6,619.09	6,565.25	53.84	122.929		
6,400.00	6,391.93	6,206.54	6,269.78	28.14	26.58	-105.57	-4,244.86	-4,981.75	6,622.23	6,567.59	54.64	121.202		
6,500.00	6,491.69	6,280.07	6,343.29	28.58	26.89	-66.77	-4,244.94	-4,983.72	6,624.16	6,568.78	55.38	119.606		
6,600.00	6,589.80	6,389.30	6,452.48	29.02	27.36	-53.48	-4,245.36	-4,986.67	6,616.11	6,559.83	56.29	117.544		
6,700.00	6,683.86	6,481.89	6,545.02	29.46	27.75	-51.22	-4,245.37	-4,989.28	6,596.65	6,539.54	57.11	115.506		
6,800.00	6,771.56	6,559.41	6,622.52	29.92	28.08	-51.84	-4,245.56	-4,991.43	6,566.62	6,508.76	57.86	113.488		
6,900.00	6,850.72	6,627.53	6,690.62	30.40	28.37	-54.15	-4,246.03	-4,993.21	6,526.95	6,468.38	58.57	111.435		
7,000.00	6,919.40	6,687.09	6,750.14	30.96	28.63	-57.86	-4,246.31	-4,995.05	6,478.75	6,419.49	59.26	109.323		
7,100.00	6,975.92	6,735.90	6,798.93	31.62	28.83	-62.91	-4,246.37	-4,996.83	6,423.33	6,363.39	59.95	107.149		
7,200.00	7,018.87	6,774.05	6,837.04	32.44	29.00	-69.23	-4,246.33	-4,998.40	6,362.18	6,301.53	60.65	104.892		
7,300.00	7,047.21	6,800.01	6,862.98	33.42	29.11	-76.67	-4,246.25	-4,999.55	6,296.91	6,235.51	61.40	102.563		
7,400.00	7,060.23	6,812.15	6,875.10	34.55	29.16	-84.85	-4,246.21	-5,000.11	6,229.19	6,167.02	62.17	100.196		
7,500.00	7,060.03	6,815.06	6,878.01	35.83	29.17	-88.62	-4,246.20	-5,000.25	6,160.84	6,097.83	63.00	97.785		
7,600.00	7,058.28	6,816.99	6,879.94	37.28	29.18	-88.64	-4,246.20	-5,000.34	6,093.25	6,029.28	63.97	95.250		
7,700.00	7,056.53	6,818.93	6,881.88	38.89	29.19	-88.67	-4,246.19	-5,000.43	6,026.56	5,961.48	65.08	92.606		
7,800.00	7,054.78	6,820.89	6,883.83	40.63	29.20	-88.69	-4,246.18	-5,000.52	5,960.80	5,894.48	66.32	89.880		
7,900.00	7,053.03	6,822.87	6,885.81	42.50	29.21	-88.72	-4,246.18	-5,000.62	5,896.01	5,828.31	67.69	87.098		
8,000.00	7,051.28	6,824.86	6,887.80	44.47	29.21	-88.74	-4,246.18	-5,000.71	5,832.20	5,763.01	69.19	84.287		
8,100.00	7,049.53	6,826.87	6,889.80	46.53	29.22	-88.77	-4,246.17	-5,000.81	5,769.43	5,698.61	70.82	81.469		
8,200.00	7,047.78	6,828.89	6,891.83	48.67	29.23	-88.80	-4,246.17	-5,000.90	5,707.71	5,635.16	72.56	78.665		
8,300.00	7,046.03	6,830.94	6,893.87	50.89	29.24	-88.82	-4,246.16	-5,001.00	5,647.09	5,572.69	74.41	75.893		
8,400.00	7,044.28	6,833.00	6,895.93	53.16	29.25	-88.85	-4,246.16	-5,001.10	5,587.61	5,511.24	76.37	73.168		
8,500.00	7,042.53	6,835.08	6,898.00	55.49	29.26	-88.87	-4,246.16	-5,001.20	5,529.28	5,450.86	78.43	70.503		
8,600.00	7,040.78	6,837.18	6,900.10	57.86	29.27	-88.90	-4,246.15	-5,001.30	5,472.17	5,391.59	80.58	67.908		
8,700.00	7,039.03	6,839.29	6,902.21	60.28	29.28	-88.93	-4,246.15	-5,001.40	5,416.30	5,333.47	82.83	65.391		
8,800.00	7,037.28	6,841.43	6,904.35	62.74	29.28	-88.95	-4,246.15	-5,001.51	5,361.70	5,276.54	85.16	62.957		
8,900.00	7,035.53	6,843.58	6,906.50	65.23	29.29	-88.98	-4,246.14	-5,001.61	5,308.43	5,220.85	87.58	60.610		
9,000.00	7,033.78	6,845.76	6,908.67	67.74	29.30	-89.01	-4,246.14	-5,001.72	5,256.52	5,166.45	90.08	58.355		
9,100.00	7,032.03	6,847.95	6,910.86	70.29	29.31	-89.04	-4,246.14	-5,001.83	5,206.02	5,113.37	92.65	56.190		
9,200.00	7,030.28	6,850.16	6,913.07	72.85	29.32	-89.07	-4,246.14	-5,001.93	5,156.96	5,061.67	95.29	54.119		
9,300.00	7,028.54	6,852.39	6,915.30	75.44	29.33	-89.09	-4,246.14	-5,002.04	5,109.38	5,011.38	98.00	52.139		
9,400.00	7,026.79	6,854.64	6,917.55	78.05	29.34	-89.12	-4,246.13	-5,002.15	5,063.33	4,962.56	100.76	50.249		
9,500.00	7,025.04	6,856.92	6,919.82	80.67	29.35	-89.15	-4,246.13	-5,002.27	5,018.84	4,915.25	103.59	48.450		
9,600.00	7,023.29	6,859.21	6,922.11	83.31	29.36	-89.18	-4,246.13	-5,002.38	4,975.97	4,869.50	106.47	46.737		
9,700.00	7,021.54	6,861.52	6,924.42	85.96	29.37	-89.21	-4,246.13	-5,002.50	4,934.75	4,825.36	109.39	45.110		
9,800.00	7,019.79	6,863.86	6,926.75	88.63	29.38	-89.24	-4,246.13	-5,002.61	4,895.23	4,782.86	112.36	43.566		
9,900.00	7,018.04	6,866.22	6,929.10	91.30	29.39	-89.27	-4,246.13	-5,002.73	4,857.44	4,742.06	115.37	42.102		
10,000.00	7,016.29	6,868.60	6,931.48	93.99	29.40	-89.30	-4,246.13	-5,002.85	4,821.42	4,703.01	118.42	40.716		
10,100.00	7,014.54	6,871.00	6,933.88	96.69	29.41	-89.33	-4,246.13	-5,002.97	4,787.23	4,665.74	121.49	39.404		
10,200.00	7,012.79	6,873.42	6,936.30	99.40	29.42	-89.36	-4,246.14	-5,003.09	4,754.89	4,630.30	124.59	38.165		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LEFFLER 1 21-2(SI_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	7,011.04	6,875.87	6,938.74	102.11	29.43	-89.39	-4,246.14	-5,003.22	4,724.44	4,596.74	127.70	36.995		
10,400.00	7,009.29	6,878.34	6,941.21	104.83	29.44	-89.42	-4,246.14	-5,003.34	4,695.93	4,565.09	130.84	35.892		
10,500.00	7,007.54	6,880.83	6,943.70	107.56	29.45	-89.45	-4,246.14	-5,003.47	4,669.38	4,535.40	133.98	34.853		
10,600.00	7,005.79	6,883.35	6,946.22	110.30	29.46	-89.49	-4,246.14	-5,003.60	4,644.83	4,507.71	137.12	33.875		
10,700.00	7,004.04	6,885.89	6,948.75	113.04	29.47	-89.52	-4,246.15	-5,003.73	4,622.31	4,482.06	140.26	32.956		
10,800.00	7,002.29	6,888.46	6,951.32	115.79	29.49	-89.55	-4,246.15	-5,003.86	4,601.86	4,458.47	143.39	32.094		
10,900.00	7,000.54	6,891.05	6,953.90	118.54	29.50	-89.58	-4,246.15	-5,003.99	4,583.49	4,436.99	146.50	31.286		
11,000.00	6,998.79	6,893.67	6,956.52	121.30	29.51	-89.62	-4,246.16	-5,004.13	4,567.24	4,417.64	149.60	30.530		
11,100.00	6,997.04	6,900.01	6,962.86	124.06	29.53	-89.70	-4,246.17	-5,004.46	4,553.12	4,400.43	152.69	29.820		
11,200.00	6,995.29	6,900.01	6,962.86	126.83	29.53	-89.70	-4,246.17	-5,004.46	4,541.16	4,385.45	155.71	29.164		
11,300.00	6,993.54	6,900.01	6,962.86	129.60	29.53	-89.70	-4,246.17	-5,004.46	4,531.37	4,372.67	158.70	28.553		
11,400.00	6,991.80	6,900.01	6,962.86	132.37	29.53	-89.70	-4,246.17	-5,004.46	4,523.78	4,362.13	161.65	27.986		
11,500.00	6,990.05	6,900.01	6,962.86	135.15	29.53	-89.70	-4,246.17	-5,004.46	4,518.38	4,353.84	164.54	27.460		
11,600.00	6,988.30	6,909.14	6,971.97	137.93	29.57	-89.81	-4,246.19	-5,004.94	4,515.19	4,347.76	167.43	26.967		
11,694.31	6,986.65	6,911.61	6,974.44	140.56	29.58	-89.84	-4,246.20	-5,005.07	4,514.20	4,344.13	170.07	26.543 CC		
11,700.00	6,986.55	6,911.76	6,974.59	140.72	29.58	-89.85	-4,246.20	-5,005.08	4,514.21	4,343.98	170.23	26.518		
11,800.00	6,984.80	6,914.42	6,977.24	143.50	29.60	-89.88	-4,246.21	-5,005.22	4,515.44	4,342.47	172.97	26.106 ES		
11,900.00	6,983.05	6,917.12	6,979.94	146.29	29.61	-89.91	-4,246.22	-5,005.37	4,518.88	4,343.25	175.63	25.729		
12,000.00	6,981.30	6,919.87	6,982.69	149.09	29.62	-89.95	-4,246.23	-5,005.52	4,524.53	4,346.30	178.23	25.385		
12,100.00	6,979.55	6,922.66	6,985.48	151.88	29.63	-89.99	-4,246.24	-5,005.67	4,532.38	4,351.62	180.76	25.074		
12,200.00	6,977.80	6,925.50	6,988.31	154.68	29.64	-90.02	-4,246.25	-5,005.83	4,542.41	4,359.20	183.21	24.794		
12,300.00	6,976.05	6,928.39	6,991.19	157.48	29.66	-90.06	-4,246.27	-5,005.99	4,554.62	4,369.04	185.58	24.543		
12,400.00	6,974.30	6,931.33	6,994.13	160.28	29.67	-90.10	-4,246.28	-5,006.15	4,568.97	4,381.11	187.86	24.321		
12,500.00	6,972.55	6,934.32	6,997.11	163.08	29.68	-90.13	-4,246.29	-5,006.32	4,585.47	4,395.40	190.06	24.126		
12,600.00	6,970.80	6,937.35	7,000.14	165.89	29.69	-90.17	-4,246.31	-5,006.49	4,604.07	4,411.89	192.18	23.957		
12,700.00	6,969.05	6,940.44	7,003.23	168.69	29.71	-90.21	-4,246.33	-5,006.66	4,624.76	4,430.55	194.21	23.813		
12,800.00	6,967.30	6,943.59	7,006.37	171.50	29.72	-90.25	-4,246.34	-5,006.84	4,647.51	4,451.35	196.15	23.693		
12,900.00	6,965.55	6,946.79	7,009.56	174.31	29.73	-90.29	-4,246.36	-5,007.02	4,672.28	4,474.27	198.01	23.597		
13,000.00	6,963.80	6,950.05	7,012.81	177.12	29.75	-90.33	-4,246.38	-5,007.21	4,699.05	4,499.27	199.77	23.522		
13,100.00	6,962.05	6,953.36	7,016.13	179.94	29.76	-90.37	-4,246.40	-5,007.40	4,727.78	4,526.32	201.45	23.468		
13,200.00	6,960.30	6,956.74	7,019.50	182.75	29.78	-90.42	-4,246.43	-5,007.60	4,758.43	4,555.39	203.05	23.435		
13,300.00	6,958.55	6,960.18	7,022.93	185.57	29.79	-90.46	-4,246.45	-5,007.80	4,790.98	4,586.42	204.55	23.422 SF		
13,400.00	6,956.80	6,963.68	7,026.42	188.38	29.81	-90.51	-4,246.48	-5,008.01	4,825.37	4,619.39	205.98	23.427		
13,500.00	6,955.05	6,967.25	7,029.98	191.20	29.82	-90.55	-4,246.50	-5,008.22	4,861.58	4,654.26	207.32	23.450		
13,600.00	6,953.31	6,970.88	7,033.61	194.02	29.84	-90.60	-4,246.53	-5,008.43	4,899.55	4,690.97	208.58	23.490		
13,700.00	6,951.56	6,974.58	7,037.31	196.84	29.85	-90.64	-4,246.56	-5,008.66	4,939.26	4,729.50	209.76	23.547		
13,800.00	6,949.81	6,978.36	7,041.08	199.67	29.87	-90.69	-4,246.59	-5,008.89	4,980.65	4,769.79	210.86	23.620		
13,900.00	6,948.06	6,982.21	7,044.92	202.49	29.89	-90.74	-4,246.63	-5,009.12	5,023.69	4,811.80	211.89	23.709		
14,000.00	6,946.31	6,986.13	7,048.83	205.31	29.90	-90.79	-4,246.66	-5,009.36	5,068.34	4,855.49	212.85	23.812		
14,100.00	6,944.56	6,990.13	7,052.82	208.14	29.92	-90.84	-4,246.70	-5,009.61	5,114.55	4,900.81	213.74	23.929		
14,200.00	6,942.81	6,994.21	7,056.89	210.96	29.94	-90.89	-4,246.74	-5,009.86	5,162.27	4,947.71	214.56	24.060		
14,300.00	6,941.06	6,998.37	7,061.05	213.79	29.95	-90.95	-4,246.78	-5,010.12	5,211.48	4,996.16	215.32	24.204		
14,400.00	6,939.31	7,002.62	7,065.29	216.62	29.97	-91.00	-4,246.82	-5,010.39	5,262.12	5,046.11	216.01	24.361		
14,500.00	6,937.56	7,006.00	7,068.66	219.44	29.99	-91.04	-4,246.86	-5,010.60	5,314.16	5,097.52	216.64	24.530		
14,600.00	6,935.81	7,009.72	7,072.37	222.27	30.00	-91.09	-4,246.90	-5,010.84	5,367.56	5,150.34	217.21	24.711		
14,700.00	6,934.06	7,013.44	7,076.08	225.10	30.02	-91.14	-4,246.94	-5,011.07	5,422.27	5,204.53	217.73	24.903		
14,800.00	6,932.31	7,017.16	7,079.80	227.93	30.03	-91.18	-4,246.98	-5,011.31	5,478.25	5,260.05	218.20	25.106		
14,817.75	6,932.00	7,017.82	7,080.46	228.43	30.04	-91.19	-4,246.99	-5,011.35	5,488.32	5,270.04	218.28	25.143		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LEFFLER 26C-23-L(SRC PLAN_75CC) - OH - BAKER PLAN												Offset Site Error:	0.00 ft
Survey Program: 25-MWD												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	25.00	73.00	3.28	3.28	-148.49	-5,373.23	-3,294.14	6,303.04				
100.00	100.00	90.58	138.58	3.28	3.28	-148.49	-5,373.07	-3,294.01	6,302.54	6,295.97	6.57	959.575	
200.00	200.00	193.27	241.26	3.34	3.33	-148.49	-5,372.31	-3,293.83	6,301.80	6,295.14	6.67	945.288	
300.00	300.00	263.24	311.23	3.44	3.39	-148.48	-5,371.82	-3,294.04	6,301.37	6,294.53	6.84	921.518	
400.00	400.00	1,476.13	1,510.95	3.60	7.52	-147.57	-5,232.57	-3,324.80	6,298.28	6,287.24	11.04	570.647	
500.00	500.00	1,534.55	1,567.81	3.81	7.83	-147.49	-5,219.35	-3,326.96	6,280.96	6,269.47	11.49	546.696	
600.00	599.98	1,614.39	1,645.59	4.05	8.27	-120.28	-5,201.61	-3,330.14	6,265.03	6,252.94	12.09	518.288	
700.00	699.86	1,684.02	1,713.39	4.32	8.65	-120.34	-5,186.05	-3,333.37	6,250.92	6,238.25	12.68	493.092	
800.00	799.72	1,803.35	1,829.64	4.62	9.32	-120.21	-5,159.79	-3,339.15	6,237.49	6,223.94	13.56	460.161	
900.00	899.58	1,901.69	1,925.33	4.93	9.88	-120.10	-5,137.63	-3,343.96	6,223.60	6,209.24	14.36	433.365	
1,000.00	999.44	2,000.03	2,021.03	5.27	10.46	-120.00	-5,115.46	-3,348.76	6,209.73	6,194.53	15.19	408.735	
1,100.00	1,099.31	2,101.62	2,116.72	5.62	11.05	-119.89	-5,093.30	-3,353.57	6,195.88	6,179.82	16.06	385.743	
1,200.00	1,199.17	2,203.28	2,212.41	5.98	11.66	-119.78	-5,071.14	-3,358.37	6,182.05	6,165.10	16.95	364.713	
1,300.00	1,299.03	2,295.06	2,308.11	6.36	12.21	-119.67	-5,048.98	-3,363.18	6,168.25	6,150.44	17.80	346.497	
1,400.00	1,398.89	2,393.41	2,403.80	6.74	12.80	-119.56	-5,026.82	-3,367.98	6,154.46	6,135.76	18.70	329.107	
1,500.00	1,498.75	2,491.75	2,499.50	7.13	13.39	-119.45	-5,004.66	-3,372.79	6,140.70	6,121.09	19.61	313.135	
1,600.00	1,598.61	2,590.10	2,595.19	7.52	13.99	-119.34	-4,982.50	-3,377.60	6,126.97	6,106.44	20.53	298.441	
1,700.00	1,698.47	2,688.44	2,690.88	7.92	14.59	-119.23	-4,960.34	-3,382.40	6,113.25	6,091.80	21.46	284.896	
1,800.00	1,798.33	2,786.78	2,786.58	8.32	15.20	-119.12	-4,938.18	-3,387.21	6,099.56	6,077.17	22.39	272.386	
1,900.00	1,898.19	2,885.13	2,882.27	8.73	15.80	-119.00	-4,916.02	-3,392.01	6,085.89	6,062.56	23.33	260.807	
2,000.00	1,998.05	2,983.47	2,977.96	9.14	16.41	-118.89	-4,893.86	-3,396.82	6,072.25	6,047.97	24.28	250.068	
2,100.00	2,097.91	3,081.81	3,073.66	9.55	17.02	-118.78	-4,871.70	-3,401.62	6,058.63	6,033.39	25.24	240.087	
2,200.00	2,197.78	3,180.16	3,169.35	9.97	17.63	-118.66	-4,849.54	-3,406.43	6,045.03	6,018.84	26.19	230.793	
2,300.00	2,297.64	3,278.50	3,265.04	10.39	18.24	-118.55	-4,827.38	-3,411.23	6,031.46	6,004.30	27.15	222.120	
2,400.00	2,397.50	3,376.84	3,360.74	10.81	18.85	-118.43	-4,805.22	-3,416.04	6,017.91	5,989.79	28.12	214.013	
2,500.00	2,497.36	3,475.19	3,456.43	11.23	19.46	-118.32	-4,783.05	-3,420.85	6,004.38	5,975.30	29.09	206.420	
2,600.00	2,597.22	3,573.53	3,552.13	11.65	20.08	-118.20	-4,760.89	-3,425.65	5,990.88	5,960.82	30.06	199.295	
2,700.00	2,697.08	3,671.88	3,647.82	12.07	20.69	-118.09	-4,738.73	-3,430.46	5,977.41	5,946.37	31.04	192.600	
2,800.00	2,796.94	3,770.22	3,743.51	12.50	21.31	-117.97	-4,716.57	-3,435.26	5,963.95	5,931.94	32.01	186.297	
2,900.00	2,896.80	10,715.09	7,245.36	12.92	120.68	-155.25	-3,892.00	33.51	5,909.71	5,810.34	99.37	59.473	
3,000.00	2,996.66	10,710.92	7,245.43	13.35	120.55	-155.20	-3,892.01	29.34	5,839.87	5,739.35	100.52	58.097	
3,100.00	3,096.52	10,706.76	7,245.51	13.78	120.41	-155.14	-3,892.02	25.18	5,770.91	5,669.21	101.70	56.747	
3,200.00	3,196.38	10,702.59	7,245.58	14.21	120.28	-155.08	-3,892.04	21.01	5,702.87	5,599.98	102.89	55.425	
3,300.00	3,296.25	10,701.57	7,245.65	14.64	120.25	-155.03	-3,892.05	16.85	5,635.78	5,531.59	104.19	54.093	
3,400.00	3,396.11	10,694.26	7,245.73	15.07	120.02	-154.97	-3,892.06	12.69	5,569.67	5,464.32	105.35	52.868	
3,500.00	3,495.97	10,690.10	7,245.80	15.50	119.89	-154.91	-3,892.08	8.52	5,504.58	5,397.97	106.61	51.633	
3,600.00	3,595.83	10,685.93	7,245.87	15.93	119.75	-154.86	-3,892.09	4.36	5,440.55	5,332.67	107.88	50.429	
3,700.00	3,695.69	10,681.76	7,245.95	16.36	119.62	-154.80	-3,892.11	0.19	5,377.62	5,268.44	109.18	49.256	
3,800.00	3,795.55	10,677.60	7,246.02	16.80	119.49	-154.74	-3,892.12	-3.97	5,315.81	5,205.33	110.48	48.114	
3,900.00	3,895.41	10,673.43	7,246.09	17.23	119.36	-154.69	-3,892.13	-8.14	5,255.18	5,143.38	111.81	47.003	
4,000.00	3,995.27	10,669.27	7,246.16	17.66	119.23	-154.63	-3,892.15	-12.30	5,195.76	5,082.63	113.14	45.924	
4,100.00	4,095.13	10,665.10	7,246.24	18.10	119.09	-154.57	-3,892.16	-16.47	5,137.60	5,023.12	114.48	44.877	
4,200.00	4,194.99	10,660.94	7,246.31	18.53	118.96	-154.52	-3,892.18	-20.63	5,080.74	4,964.91	115.83	43.863	
4,300.00	4,294.85	10,656.77	7,246.38	18.96	118.83	-154.46	-3,892.19	-24.80	5,025.22	4,908.03	117.19	42.881	
4,400.00	4,394.71	10,652.61	7,246.46	19.40	118.70	-154.40	-3,892.20	-28.96	4,971.09	4,852.54	118.55	41.932	
4,500.00	4,494.58	10,655.60	7,246.53	19.83	118.79	-154.35	-3,892.22	-33.13	4,918.40	4,798.29	120.11	40.951	
4,600.00	4,594.44	10,644.27	7,246.60	20.27	118.43	-154.29	-3,892.23	-37.29	4,867.18	4,745.90	121.28	40.133	
4,700.00	4,694.30	10,640.11	7,246.68	20.71	118.30	-154.23	-3,892.25	-41.46	4,817.49	4,694.86	122.63	39.283	
4,800.00	4,794.16	10,635.94	7,246.75	21.14	118.17	-154.17	-3,892.26	-45.62	4,769.38	4,645.39	123.99	38.467	
4,900.00	4,894.02	10,631.78	7,246.82	21.58	118.04	-154.12	-3,892.27	-49.79	4,722.89	4,597.56	125.33	37.684	
5,000.00	4,993.88	10,627.61	7,246.90	22.01	117.91	-154.06	-3,892.29	-53.95	4,678.08	4,551.42	126.66	36.934	
5,100.00	5,093.74	10,623.45	7,246.97	22.45	117.78	-154.00	-3,892.30	-58.12	4,634.98	4,507.01	127.98	36.217	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LEFFLER 26C-23-L(SRC PLAN_75CC) - OH - BAKER PLAN													Offset Site Error:	0.00 ft
Survey Program: 25-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	10,619.28	7,247.04	22.89	117.64	-153.95	-3,892.32	-62.28	4,593.66	4,464.38	129.27	35.535		
5,300.00	5,293.46	10,615.12	7,247.12	23.32	117.51	-153.89	-3,892.33	-66.45	4,554.15	4,423.60	130.55	34.885		
5,400.00	5,393.32	10,610.95	7,247.19	23.76	117.38	-153.83	-3,892.34	-70.61	4,516.50	4,384.71	131.79	34.269		
5,500.00	5,493.18	10,606.78	7,247.26	24.20	117.25	-153.78	-3,892.36	-74.78	4,480.77	4,347.76	133.01	33.687		
5,600.00	5,593.05	10,602.62	7,247.34	24.64	117.12	-153.72	-3,892.37	-78.94	4,447.00	4,312.80	134.20	33.138		
5,700.00	5,692.91	10,598.45	7,247.41	25.07	116.99	-153.66	-3,892.38	-83.11	4,415.23	4,279.89	135.34	32.622		
5,800.00	5,792.77	10,594.29	7,247.48	25.51	116.85	-153.61	-3,892.40	-87.27	4,385.51	4,249.06	136.45	32.140		
5,900.00	5,892.63	10,590.12	7,247.56	25.95	116.72	-153.55	-3,892.41	-91.44	4,357.87	4,220.36	137.51	31.691		
6,000.00	5,992.49	10,585.96	7,247.63	26.39	116.59	-153.49	-3,892.43	-95.60	4,332.36	4,193.84	138.52	31.275		
6,100.00	6,092.35	10,581.79	7,247.70	26.82	116.46	-153.44	-3,892.44	-99.77	4,309.02	4,169.54	139.48	30.892		
6,200.00	6,192.21	10,577.63	7,247.78	27.26	116.33	-153.38	-3,892.45	-103.93	4,287.88	4,147.49	140.39	30.543		
6,300.00	6,292.07	10,573.46	7,247.85	27.70	116.20	-153.32	-3,892.47	-108.10	4,268.98	4,127.74	141.24	30.226		
6,400.00	6,391.93	10,569.29	7,247.92	28.14	116.07	-153.27	-3,892.48	-112.26	4,252.34	4,110.32	142.02	29.942		
6,500.00	6,491.80	10,565.05	7,248.03	28.58	115.87	-115.01	-3,892.50	-118.50	4,238.00	4,095.33	142.67	29.704		
6,600.00	6,589.80	10,561.00	7,248.38	29.02	115.24	-101.90	-3,892.57	-138.45	4,226.15	4,083.32	142.83	29.590		
6,700.00	6,683.86	10,558.09	7,249.00	29.46	114.14	-98.59	-3,892.69	-173.46	4,216.87	4,074.44	142.43	29.607		
6,800.00	6,771.56	10,458.87	7,249.87	29.92	112.59	-96.96	-3,892.85	-222.67	4,210.05	4,068.53	141.52	29.750		
6,900.00	6,850.72	10,403.35	7,250.96	30.40	110.84	-95.80	-3,893.06	-284.87	4,205.39	4,065.03	140.37	29.960		
7,000.00	6,919.40	10,317.13	7,251.62	30.96	108.14	-94.77	-3,893.32	-364.39	4,202.44	4,064.19	138.25	30.397 ES		
7,100.00	6,975.92	10,234.79	7,251.62	31.62	105.57	-93.94	-3,893.60	-446.73	4,200.73	4,064.37	136.35	30.808		
7,200.00	7,018.87	10,144.62	7,251.62	32.44	102.76	-93.27	-3,893.90	-536.91	4,199.84	4,065.50	134.34	31.263		
7,300.00	7,047.21	10,055.21	7,251.62	33.42	99.99	-92.81	-3,894.22	-632.69	4,199.37	4,066.86	132.51	31.690		
7,400.00	7,060.23	9,954.26	7,251.62	34.55	96.87	-92.61	-3,894.55	-731.74	4,199.04	4,068.54	130.50	32.177		
7,500.00	7,060.03	9,854.23	7,251.62	35.83	93.81	-92.62	-3,894.88	-831.71	4,198.70	4,070.03	128.68	32.630		
7,600.00	7,058.28	9,754.22	7,251.62	37.28	90.76	-92.64	-3,895.22	-931.70	4,198.37	4,071.32	127.04	33.046		
7,700.00	7,056.53	9,654.20	7,251.62	38.89	87.73	-92.67	-3,895.55	-1,031.68	4,198.03	4,072.44	125.59	33.427		
7,800.00	7,054.78	9,554.18	7,251.62	40.63	84.72	-92.69	-3,895.89	-1,131.66	4,197.69	4,073.40	124.29	33.774		
7,900.00	7,053.03	9,454.17	7,251.62	42.50	81.74	-92.72	-3,896.22	-1,231.65	4,197.36	4,074.23	123.13	34.089		
8,000.00	7,051.28	9,354.15	7,251.62	44.47	78.79	-92.74	-3,896.55	-1,331.63	4,197.02	4,074.92	122.10	34.372		
8,100.00	7,049.53	9,254.13	7,251.62	46.53	75.88	-92.76	-3,896.89	-1,431.61	4,196.69	4,075.49	121.20	34.626		
8,200.00	7,047.78	9,154.12	7,251.62	48.67	73.00	-92.79	-3,897.22	-1,531.60	4,196.35	4,075.95	120.41	34.852		
8,300.00	7,046.03	9,049.94	7,251.62	50.89	70.04	-92.81	-3,897.56	-1,631.58	4,196.02	4,076.42	119.60	35.084		
8,400.00	7,044.28	8,954.08	7,251.62	53.16	67.37	-92.84	-3,897.89	-1,731.56	4,195.69	4,076.55	119.13	35.218		
8,500.00	7,042.53	8,854.07	7,251.62	55.49	64.63	-92.86	-3,898.22	-1,831.55	4,195.36	4,076.71	118.65	35.360		
8,600.00	7,040.78	8,754.05	7,251.62	57.86	61.96	-92.88	-3,898.56	-1,931.53	4,195.03	4,076.76	118.26	35.472		
8,700.00	7,039.03	8,654.03	7,251.62	60.28	59.36	-92.91	-3,898.89	-2,031.51	4,194.70	4,076.71	117.98	35.554		
8,800.00	7,037.28	8,554.02	7,251.62	62.74	56.85	-92.93	-3,899.23	-2,131.50	4,194.37	4,076.56	117.80	35.605		
8,900.00	7,035.53	8,454.00	7,251.62	65.23	54.44	-92.96	-3,899.56	-2,231.48	4,194.04	4,076.30	117.74	35.621		
9,000.00	7,033.78	8,353.98	7,251.62	67.74	52.17	-92.98	-3,899.89	-2,331.46	4,193.71	4,075.91	117.80	35.602		
9,100.00	7,032.03	8,253.97	7,251.62	70.29	50.05	-93.01	-3,900.23	-2,431.45	4,193.38	4,075.40	117.98	35.542		
9,200.00	7,030.28	8,153.95	7,251.62	72.85	48.13	-93.03	-3,900.56	-2,531.43	4,193.06	4,074.74	118.32	35.439		
9,300.00	7,028.54	8,050.10	7,251.62	75.44	46.43	-93.05	-3,900.90	-2,631.41	4,192.73	4,074.00	118.74	35.311		
9,400.00	7,026.79	7,953.92	7,251.62	78.05	45.16	-93.08	-3,901.23	-2,731.40	4,192.41	4,072.92	119.49	35.086		
9,500.00	7,025.04	7,853.90	7,251.62	80.67	44.20	-93.10	-3,901.56	-2,831.38	4,192.08	4,071.71	120.37	34.827		
9,600.00	7,023.29	7,750.15	7,251.62	83.31	43.55	-93.13	-3,901.90	-2,931.36	4,191.76	4,070.34	121.42	34.522		
9,637.50	7,022.63	7,726.17	7,251.51	84.30	43.45	-93.13	-3,902.00	-2,955.34	4,191.68	4,069.58	122.10	34.331 CC		
9,700.00	7,021.54	7,700.00	7,250.51	85.96	43.34	-93.12	-3,902.32	-2,981.49	4,191.93	4,068.51	123.42	33.965		
9,800.00	7,019.79	7,652.02	7,245.96	88.63	43.18	-93.07	-3,903.54	-3,029.23	4,193.36	4,067.88	125.48	33.420		
9,900.00	7,018.04	7,600.00	7,237.09	91.30	43.03	-92.96	-3,905.76	-3,080.42	4,196.09	4,068.57	127.52	32.906		
10,000.00	7,016.29	7,560.21	7,227.57	93.99	42.94	-92.84	-3,908.10	-3,118.97	4,200.13	4,070.40	129.73	32.377		
10,100.00	7,014.54	7,509.37	7,212.02	96.69	42.83	-92.64	-3,911.86	-3,167.22	4,205.56	4,073.72	131.84	31.898		
10,200.00	7,012.79	7,476.36	7,199.94	99.40	42.76	-92.48	-3,914.76	-3,197.80	4,212.39	4,078.25	134.14	31.403		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LEFFLER 26C-23-L(SRC PLAN_75CC) - OH - BAKER PLAN													Offset Site Error:	0.00 ft
Survey Program: 25-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	7,011.04	7,437.44	7,183.74	102.11	42.68	-92.26	-3,918.64	-3,232.96	4,220.72	4,084.33	136.39	30.947		
10,400.00	7,009.29	7,400.00	7,166.20	104.83	42.61	-92.03	-3,922.81	-3,265.77	4,230.59	4,091.95	138.63	30.516		
10,500.00	7,007.54	7,366.22	7,148.79	107.56	42.53	-91.80	-3,926.94	-3,294.42	4,242.06	4,101.16	140.91	30.106		
10,600.00	7,005.79	7,333.95	7,130.79	110.30	42.47	-91.56	-3,931.20	-3,320.86	4,255.19	4,112.04	143.15	29.725		
10,700.00	7,004.04	7,300.00	7,110.48	113.04	42.39	-91.29	-3,936.00	-3,347.63	4,270.03	4,124.67	145.36	29.375		
10,800.00	7,002.29	7,275.81	7,095.17	115.79	42.33	-91.08	-3,939.61	-3,366.01	4,286.61	4,139.02	147.59	29.044		
10,900.00	7,000.54	7,252.01	7,079.46	118.54	42.27	-90.87	-3,943.30	-3,383.49	4,304.98	4,155.22	149.76	28.746		
11,000.00	6,998.79	7,225.52	7,061.23	121.30	42.20	-90.63	-3,947.59	-3,402.23	4,325.15	4,173.27	151.89	28.476		
11,100.00	6,997.04	7,203.01	7,045.15	124.06	42.14	-90.42	-3,951.37	-3,417.52	4,347.16	4,193.19	153.97	28.234		
11,200.00	6,995.29	7,182.09	7,029.75	126.83	42.08	-90.21	-3,954.98	-3,431.21	4,371.00	4,214.99	156.01	28.018		
11,300.00	6,993.54	7,152.01	7,006.86	129.60	41.99	-89.90	-3,960.35	-3,449.96	4,396.73	4,238.77	157.96	27.835		
11,400.00	6,991.80	7,152.01	7,006.86	132.37	41.99	-89.90	-3,960.35	-3,449.96	4,424.24	4,264.31	159.92	27.665		
11,500.00	6,990.05	7,127.70	6,987.74	135.15	41.91	-89.65	-3,964.83	-3,464.28	4,453.58	4,291.81	161.77	27.530		
11,600.00	6,988.30	7,100.00	6,965.32	137.93	41.82	-89.35	-3,970.08	-3,479.68	4,484.83	4,321.28	163.55	27.422		
11,700.00	6,986.55	7,100.00	6,965.32	140.72	41.82	-89.35	-3,970.08	-3,479.68	4,517.77	4,352.45	165.32	27.327		
11,800.00	6,984.80	7,100.00	6,965.32	143.50	41.82	-89.35	-3,970.08	-3,479.68	4,552.67	4,385.65	167.02	27.258		
11,900.00	6,983.05	7,070.80	6,941.00	146.29	41.71	-89.03	-3,975.76	-3,494.81	4,589.10	4,420.49	168.61	27.218		
12,000.00	6,981.30	7,052.01	6,925.01	149.09	41.65	-88.82	-3,979.50	-3,503.94	4,627.40	4,457.25	170.14	27.197		
12,100.00	6,979.55	7,049.69	6,923.02	151.88	41.64	-88.79	-3,979.97	-3,505.03	4,667.36	4,495.72	171.65	27.192 SF		
12,200.00	6,977.80	7,049.69	6,923.02	154.68	41.64	-88.79	-3,979.97	-3,505.03	4,709.10	4,536.01	173.08	27.207		
12,300.00	6,976.05	7,026.94	6,903.27	157.48	41.55	-88.53	-3,984.58	-3,515.35	4,752.31	4,577.89	174.43	27.246		
12,400.00	6,974.30	7,010.76	6,889.02	160.28	41.48	-88.34	-3,987.90	-3,522.25	4,797.23	4,621.52	175.71	27.302		
12,500.00	6,972.55	7,010.76	6,889.02	163.08	41.48	-88.34	-3,987.90	-3,522.25	4,843.67	4,666.71	176.96	27.371		
12,600.00	6,970.80	7,000.00	6,879.45	165.89	41.44	-88.21	-3,990.14	-3,526.63	4,891.66	4,713.53	178.14	27.460		
12,700.00	6,969.05	7,000.00	6,879.45	168.69	41.44	-88.21	-3,990.14	-3,526.63	4,941.17	4,761.91	179.26	27.564		
12,800.00	6,967.30	7,000.00	6,879.45	171.50	41.44	-88.21	-3,990.14	-3,526.63	4,992.20	4,811.86	180.33	27.683		
12,900.00	6,965.55	6,977.79	6,859.47	174.31	41.34	-87.95	-3,994.79	-3,535.14	5,044.41	4,863.09	181.32	27.820		
13,000.00	6,963.80	6,971.04	6,853.34	177.12	41.31	-87.87	-3,996.22	-3,537.58	5,098.13	4,915.85	182.28	27.969		
13,100.00	6,962.05	6,952.01	6,835.94	179.94	41.23	-87.64	-4,000.28	-3,544.11	5,153.26	4,970.10	183.16	28.135		
13,200.00	6,960.30	6,952.01	6,835.94	182.75	41.23	-87.64	-4,000.28	-3,544.11	5,209.54	5,025.52	184.02	28.309		
13,300.00	6,958.55	6,952.01	6,835.94	185.57	41.23	-87.64	-4,000.28	-3,544.11	5,267.11	5,082.28	184.83	28.497		
13,400.00	6,956.80	6,952.01	6,835.94	188.38	41.23	-87.64	-4,000.28	-3,544.11	5,325.94	5,140.35	185.59	28.698		
13,500.00	6,955.05	6,952.01	6,835.94	191.20	41.23	-87.64	-4,000.28	-3,544.11	5,385.98	5,199.68	186.30	28.910		
13,600.00	6,953.31	6,952.01	6,835.94	194.02	41.23	-87.64	-4,000.28	-3,544.11	5,447.20	5,260.23	186.97	29.134		
13,700.00	6,951.56	6,952.01	6,835.94	196.84	41.23	-87.64	-4,000.28	-3,544.11	5,509.55	5,321.95	187.60	29.369		
13,800.00	6,949.81	6,927.45	6,813.20	199.67	41.11	-87.34	-4,005.57	-3,551.74	5,572.62	5,384.45	188.18	29.614		
13,900.00	6,948.06	6,923.04	6,809.09	202.49	41.09	-87.29	-4,006.53	-3,553.01	5,636.98	5,448.25	188.73	29.869		
14,000.00	6,946.31	6,900.00	6,787.47	205.31	40.98	-87.01	-4,011.56	-3,559.20	5,702.56	5,513.34	189.23	30.136		
14,100.00	6,944.56	6,900.00	6,787.47	208.14	40.98	-87.01	-4,011.56	-3,559.20	5,768.81	5,579.10	189.71	30.409		
14,200.00	6,942.81	6,900.00	6,787.47	210.96	40.98	-87.01	-4,011.56	-3,559.20	5,836.02	5,645.87	190.16	30.691		
14,300.00	6,941.06	6,900.00	6,787.47	213.79	40.98	-87.01	-4,011.56	-3,559.20	5,904.16	5,713.59	190.57	30.981		
14,400.00	6,939.31	6,900.00	6,787.47	216.62	40.98	-87.01	-4,011.56	-3,559.20	5,973.20	5,782.24	190.96	31.280		
14,500.00	6,937.56	6,900.00	6,787.47	219.44	40.98	-87.01	-4,011.56	-3,559.20	6,043.10	5,851.78	191.32	31.587		
14,600.00	6,935.81	6,900.00	6,787.47	222.27	40.98	-87.01	-4,011.56	-3,559.20	6,113.84	5,922.19	191.65	31.901		
14,700.00	6,934.06	6,900.00	6,787.47	225.10	40.98	-87.01	-4,011.56	-3,559.20	6,185.38	5,993.43	191.95	32.224		
14,800.00	6,932.31	6,900.00	6,787.47	227.93	40.98	-87.01	-4,011.56	-3,559.20	6,257.71	6,065.48	192.23	32.553		
14,817.75	6,932.00	6,900.00	6,787.47	228.43	40.98	-87.01	-4,011.56	-3,559.20	6,270.62	6,078.35	192.28	32.612		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LEFFLER 26N-23B-L(SRC PLAN_75CC) - OH - PLAN													Offset Site Error:	0.00 ft
Survey Program: 25-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	25.00	73.00	3.28	3.28	-148.39	-5,353.19	-3,294.14	6,285.97					
100.00	100.00	1,255.77	1,285.66	3.28	7.07	-147.29	-5,182.91	-3,328.21	6,272.58	6,262.36	10.22	613.480		
200.00	200.00	1,392.22	1,417.17	3.34	7.88	-147.05	-5,147.35	-3,335.84	6,253.36	6,242.39	10.97	570.002		
300.00	300.00	1,468.09	1,490.42	3.44	8.34	-146.93	-5,127.90	-3,339.41	6,234.10	6,222.66	11.45	544.624		
400.00	400.00	1,576.78	1,595.45	3.60	9.01	-146.75	-5,100.30	-3,343.82	6,214.76	6,202.61	12.15	511.374		
500.00	500.00	1,633.46	1,650.33	3.81	9.36	-146.66	-5,086.26	-3,345.95	6,195.86	6,183.24	12.62	490.847		
600.00	599.98	1,802.75	1,808.82	4.05	10.41	-119.37	-5,045.51	-3,352.53	6,178.04	6,164.29	13.75	449.284		
700.00	699.86	1,894.76	1,902.82	4.32	11.01	-119.39	-5,019.99	-3,357.05	6,160.80	6,146.30	14.51	424.731		
800.00	799.72	1,992.36	1,996.92	4.62	11.65	-119.27	-4,994.44	-3,361.59	6,143.82	6,128.49	15.33	400.797		
900.00	899.58	2,089.97	2,091.01	4.93	12.29	-119.14	-4,968.89	-3,366.12	6,126.86	6,110.68	16.18	378.654		
1,000.00	999.44	2,187.58	2,185.11	5.27	12.93	-119.01	-4,943.35	-3,370.65	6,109.94	6,092.89	17.06	358.235		
1,100.00	1,099.31	2,285.18	2,279.20	5.62	13.58	-118.88	-4,917.80	-3,375.19	6,093.05	6,075.10	17.95	339.438		
1,200.00	1,199.17	2,382.79	2,373.30	5.98	14.23	-118.75	-4,892.25	-3,379.72	6,076.18	6,057.32	18.86	322.142		
1,300.00	1,299.03	2,480.39	2,467.39	6.36	14.89	-118.62	-4,866.71	-3,384.25	6,059.35	6,039.57	19.79	306.222		
1,400.00	1,398.89	2,578.00	2,561.48	6.74	15.54	-118.49	-4,841.16	-3,388.78	6,042.55	6,021.83	20.73	291.555		
1,500.00	1,498.75	2,675.61	2,655.58	7.13	16.20	-118.36	-4,815.61	-3,393.32	6,025.79	6,004.11	21.67	278.025		
1,600.00	1,598.61	2,773.21	2,749.67	7.52	16.86	-118.22	-4,790.06	-3,397.85	6,009.05	5,986.42	22.63	265.522		
1,700.00	1,698.47	2,870.82	2,843.77	7.92	17.52	-118.09	-4,764.52	-3,402.38	5,992.35	5,968.75	23.60	253.950		
1,800.00	1,798.33	2,968.42	2,937.86	8.32	18.18	-117.96	-4,738.97	-3,406.92	5,975.67	5,951.10	24.57	243.218		
1,900.00	1,898.19	3,066.03	3,031.96	8.73	18.84	-117.82	-4,713.42	-3,411.45	5,959.03	5,933.49	25.55	233.248		
2,000.00	1,998.05	3,163.64	3,126.05	9.14	19.51	-117.69	-4,687.88	-3,415.98	5,942.43	5,915.90	26.53	223.967		
2,100.00	2,097.91	3,261.24	3,220.14	9.55	20.17	-117.55	-4,662.33	-3,420.51	5,925.86	5,898.33	27.52	215.311		
2,200.00	2,197.78	3,358.85	3,314.24	9.97	20.84	-117.41	-4,636.78	-3,425.05	5,909.32	5,880.80	28.52	207.223		
2,300.00	2,297.64	3,456.45	3,408.33	10.39	21.50	-117.27	-4,611.23	-3,429.58	5,892.81	5,863.30	29.52	199.654		
2,400.00	2,397.50	3,554.06	3,502.43	10.81	22.17	-117.14	-4,585.69	-3,434.11	5,876.34	5,845.82	30.52	192.556		
2,500.00	2,497.36	3,651.67	3,596.52	11.23	22.84	-117.00	-4,560.14	-3,438.65	5,859.90	5,828.38	31.52	185.889		
2,600.00	2,597.22	10,485.78	7,077.96	11.65	117.92	-153.97	-3,629.13	-62.75	5,826.21	5,732.95	93.26	62.474		
2,700.00	2,697.08	10,483.44	7,077.96	12.07	117.84	-153.94	-3,629.12	-65.09	5,752.79	5,658.42	94.37	60.957		
2,800.00	2,796.94	10,481.11	7,077.95	12.50	117.77	-153.91	-3,629.12	-67.43	5,680.19	5,584.67	95.52	59.467		
2,900.00	2,896.80	10,478.77	7,077.95	12.92	117.69	-153.87	-3,629.11	-69.76	5,608.42	5,511.73	96.69	58.003		
3,000.00	2,996.66	10,476.43	7,077.95	13.35	117.62	-153.84	-3,629.10	-72.10	5,537.53	5,439.64	97.89	56.568		
3,100.00	3,096.52	10,474.10	7,077.95	13.78	117.55	-153.80	-3,629.10	-74.44	5,467.55	5,368.43	99.12	55.162		
3,200.00	3,196.38	10,471.76	7,077.94	14.21	117.47	-153.77	-3,629.09	-76.78	5,398.52	5,298.15	100.37	53.786		
3,300.00	3,296.25	10,469.42	7,077.94	14.64	117.40	-153.74	-3,629.09	-79.11	5,330.46	5,228.82	101.65	52.442		
3,400.00	3,396.11	10,467.08	7,077.94	15.07	117.33	-153.70	-3,629.08	-81.45	5,263.42	5,160.48	102.94	51.129		
3,500.00	3,495.97	10,464.75	7,077.94	15.50	117.25	-153.67	-3,629.07	-83.79	5,197.45	5,093.18	104.27	49.848		
3,600.00	3,595.83	10,462.41	7,077.93	15.93	117.18	-153.63	-3,629.07	-86.12	5,132.57	5,026.96	105.61	48.600		
3,700.00	3,695.69	10,460.07	7,077.93	16.36	117.11	-153.60	-3,629.06	-88.46	5,068.83	4,961.86	106.97	47.386		
3,800.00	3,795.55	10,457.74	7,077.93	16.80	117.03	-153.57	-3,629.06	-90.80	5,006.28	4,897.93	108.35	46.206		
3,900.00	3,895.41	10,455.40	7,077.93	17.23	116.96	-153.53	-3,629.05	-93.14	4,944.96	4,835.21	109.74	45.060		
4,000.00	3,995.27	10,453.06	7,077.92	17.66	116.88	-153.50	-3,629.05	-95.47	4,884.91	4,773.76	111.15	43.948		
4,100.00	4,095.13	10,450.73	7,077.92	18.10	116.81	-153.46	-3,629.04	-97.81	4,826.19	4,713.61	112.57	42.871		
4,200.00	4,194.99	10,448.39	7,077.92	18.53	116.74	-153.43	-3,629.03	-100.15	4,768.84	4,654.83	114.01	41.830		
4,300.00	4,294.85	10,446.05	7,077.92	18.96	116.66	-153.40	-3,629.03	-102.48	4,712.91	4,597.47	115.45	40.824		
4,400.00	4,394.71	10,443.71	7,077.92	19.40	116.59	-153.36	-3,629.02	-104.82	4,658.46	4,541.57	116.89	39.853		
4,500.00	4,494.58	10,441.38	7,077.91	19.83	116.52	-153.33	-3,629.02	-107.16	4,605.54	4,487.20	118.34	38.919		
4,600.00	4,594.44	10,439.04	7,077.91	20.27	116.44	-153.29	-3,629.01	-109.49	4,554.19	4,434.41	119.78	38.020		
4,700.00	4,694.30	10,436.70	7,077.91	20.71	116.37	-153.26	-3,629.01	-111.83	4,504.48	4,383.25	121.23	37.157		
4,800.00	4,794.16	10,435.68	7,077.91	21.14	116.34	-153.23	-3,629.00	-114.17	4,456.46	4,333.76	122.70	36.320		
4,900.00	4,894.02	10,438.01	7,077.90	21.58	116.41	-153.19	-3,628.99	-116.51	4,410.18	4,285.92	124.26	35.492		
5,000.00	4,993.88	10,440.35	7,077.90	22.01	116.48	-153.16	-3,628.99	-118.84	4,365.70	4,239.90	125.80	34.703		
5,100.00	5,093.74	10,427.35	7,077.90	22.45	116.08	-153.12	-3,628.98	-121.18	4,323.07	4,196.18	126.90	34.068		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LEFFLER 26N-23B-L(SRC PLAN_75CC) - OH - PLAN													Offset Site Error:	0.00 ft
Survey Program: 25-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	10,425.02	7,077.90	22.89	116.00	-153.09	-3,628.98	-123.52	4,282.36	4,154.09	128.27	33.386		
5,300.00	5,293.46	10,422.68	7,077.89	23.32	115.93	-153.06	-3,628.97	-125.85	4,243.61	4,114.00	129.61	32.741		
5,400.00	5,393.32	10,420.34	7,077.89	23.76	115.86	-153.02	-3,628.96	-128.19	4,206.87	4,075.95	130.92	32.132		
5,500.00	5,493.18	10,418.01	7,077.89	24.20	115.78	-152.99	-3,628.96	-130.53	4,172.22	4,040.01	132.20	31.559		
5,600.00	5,593.05	10,415.67	7,077.89	24.64	115.71	-152.95	-3,628.95	-132.87	4,139.68	4,006.24	133.44	31.023		
5,700.00	5,692.91	10,413.33	7,077.89	25.07	115.63	-152.92	-3,628.95	-135.20	4,109.32	3,974.69	134.63	30.522		
5,800.00	5,792.77	10,411.00	7,077.88	25.51	115.56	-152.89	-3,628.94	-137.54	4,081.19	3,945.41	135.78	30.058		
5,900.00	5,892.63	10,408.66	7,077.88	25.95	115.49	-152.85	-3,628.94	-139.88	4,053.32	3,918.46	136.87	29.629		
6,000.00	5,992.49	10,406.32	7,077.88	26.39	115.41	-152.82	-3,628.93	-142.21	4,031.77	3,893.87	137.90	29.237		
6,100.00	6,092.35	10,403.98	7,077.88	26.82	115.34	-152.78	-3,628.92	-144.55	4,010.58	3,871.70	138.87	28.880		
6,200.00	6,192.21	10,401.65	7,077.87	27.26	115.27	-152.75	-3,628.92	-146.89	3,991.77	3,851.99	139.78	28.558		
6,300.00	6,292.07	10,399.31	7,077.87	27.70	115.19	-152.71	-3,628.91	-149.22	3,975.39	3,834.78	140.61	28.272		
6,400.00	6,391.93	10,396.97	7,077.87	28.14	115.12	-152.68	-3,628.91	-151.56	3,961.47	3,820.10	141.37	28.021		
6,500.00	6,491.69	10,394.63	7,077.86	28.58	114.98	-114.31	-3,628.90	-155.98	3,950.02	3,808.03	141.99	27.818		
6,600.00	6,591.55	10,392.29	7,077.85	29.02	114.91	-100.93	-3,628.85	-174.13	3,941.07	3,798.97	142.10	27.735		
6,700.00	6,691.41	10,390.00	7,077.81	29.46	113.37	-97.36	-3,628.77	-207.43	3,934.62	3,792.98	141.65	27.778		
6,800.00	6,791.27	10,387.66	7,077.77	29.90	111.83	-93.79	-3,628.65	-255.05	3,930.49	3,789.81	140.67	27.941		
6,900.00	6,891.13	10,385.32	7,077.71	30.34	110.29	-90.22	-3,628.50	-315.82	3,928.27	3,788.88	139.39	28.181		
7,000.00	6,990.99	10,382.98	7,077.63	30.78	108.75	-86.65	-3,628.32	-388.24	3,927.46	3,789.98	137.48	28.567		
7,100.00	7,090.85	10,380.64	7,077.55	31.22	107.21	-83.08	-3,628.24	-420.71	3,927.40	3,790.70	136.71	28.729		
7,200.00	7,190.71	10,378.30	7,077.47	31.66	105.67	-79.51	-3,628.12	-470.54	3,927.49	3,792.00	135.49	28.986		
7,300.00	7,290.57	10,376.00	7,077.39	32.10	104.13	-75.94	-3,627.90	-560.68	3,927.81	3,794.40	133.41	29.441		
7,400.00	7,390.43	10,373.70	7,077.31	32.54	102.59	-72.37	-3,627.66	-656.44	3,927.94	3,796.60	131.34	29.906		
7,500.00	7,490.29	10,371.40	7,077.23	32.98	101.05	-68.80	-3,627.41	-755.47	3,927.56	3,798.20	129.37	30.360		
7,600.00	7,590.15	10,369.10	7,077.15	33.42	99.51	-65.23	-3,627.17	-855.45	3,926.64	3,799.09	127.55	30.786		
7,700.00	7,690.01	10,366.80	7,077.07	33.86	97.97	-61.66	-3,626.92	-955.43	3,925.65	3,799.73	125.92	31.176		
7,800.00	7,789.87	10,364.50	7,076.99	34.30	96.43	-58.09	-3,626.67	-1,055.41	3,924.65	3,800.18	124.47	31.531		
7,900.00	7,889.73	10,362.20	7,076.91	34.74	94.89	-54.52	-3,626.43	-1,155.39	3,923.66	3,800.49	123.18	31.854		
8,000.00	7,989.59	10,359.90	7,076.83	35.18	93.35	-50.95	-3,626.18	-1,255.37	3,922.67	3,800.64	122.03	32.145		
8,100.00	8,089.45	10,357.60	7,076.75	35.62	91.81	-47.38	-3,625.93	-1,355.53	3,921.68	3,800.67	121.01	32.409		
8,200.00	8,189.31	10,355.30	7,076.67	36.06	90.27	-43.81	-3,625.68	-1,455.52	3,920.69	3,800.58	120.11	32.643		
8,300.00	8,289.17	10,353.00	7,076.59	36.50	88.73	-40.24	-3,625.44	-1,555.51	3,919.70	3,800.37	119.32	32.849		
8,400.00	8,389.03	10,350.70	7,076.51	36.94	87.19	-36.67	-3,625.19	-1,655.50	3,918.70	3,800.05	118.65	33.028		
8,500.00	8,488.89	10,348.40	7,076.43	37.38	85.65	-33.10	-3,624.94	-1,755.48	3,917.71	3,799.63	118.07	33.180		
8,600.00	8,588.75	10,346.10	7,076.35	37.82	84.11	-29.53	-3,624.69	-1,855.47	3,916.72	3,799.11	117.60	33.305		
8,700.00	8,688.61	10,343.80	7,076.27	38.26	82.57	-25.96	-3,624.45	-1,955.46	3,915.72	3,798.49	117.23	33.401		
8,800.00	8,788.47	10,341.50	7,076.19	38.70	81.03	-22.39	-3,624.20	-2,055.44	3,914.73	3,797.76	116.97	33.468		
8,900.00	8,888.33	10,339.20	7,076.11	39.14	79.49	-18.82	-3,623.95	-2,155.43	3,913.74	3,796.92	116.82	33.503		
9,000.00	8,988.19	10,336.90	7,076.03	39.58	77.95	-15.25	-3,623.71	-2,255.42	3,912.75	3,795.97	116.78	33.506		
9,100.00	9,088.05	10,334.60	7,075.95	40.02	76.41	-11.68	-3,623.46	-2,355.40	3,911.75	3,794.89	116.87	33.472		
9,200.00	9,187.91	10,332.30	7,075.87	40.46	74.87	-8.11	-3,623.21	-2,455.39	3,910.76	3,793.67	117.09	33.399		
9,300.00	9,287.77	10,330.00	7,075.79	40.90	73.33	-4.54	-3,622.96	-2,555.38	3,909.77	3,792.30	117.47	33.284		
9,400.00	9,387.63	10,327.70	7,075.71	41.34	71.79	-0.97	-3,622.72	-2,655.37	3,908.78	3,790.77	118.02	33.121		
9,500.00	9,487.49	10,325.40	7,075.63	41.78	70.25	2.60	-3,622.47	-2,755.35	3,907.79	3,789.04	118.75	32.907		
9,600.00	9,587.35	10,323.10	7,075.55	42.22	68.71	6.03	-3,622.22	-2,855.34	3,906.80	3,787.10	119.70	32.638		
9,700.00	9,687.21	10,320.80	7,075.47	42.66	67.17	9.46	-3,622.00	-2,948.47	3,905.82	3,784.84	120.98	32.284		
9,800.00	9,787.07	10,318.50	7,075.39	43.10	65.63	12.89	-3,622.07	-2,968.40	3,905.61	3,783.49	122.12	31.981 CC		
9,900.00	9,886.93	10,316.20	7,075.31	43.54	64.09	16.32	-3,622.49	-2,998.38	3,905.83	3,782.82	123.01	31.752		
10,000.00	9,986.79	10,313.90	7,075.23	43.98	62.55	19.75	-3,623.21	-3,028.03	3,907.33	3,781.97	125.36	31.170 ES		
10,100.00	10,086.65	10,311.60	7,075.15	44.42	61.01	23.18	-3,624.72	-3,063.88	3,910.43	3,782.88	127.55	30.657		
10,200.00	10,186.51	10,309.30	7,075.07	44.86	59.47	26.61	-3,626.78	-3,100.48	3,915.14	3,785.37	129.76	30.172		
10,300.00	10,286.37	10,307.00	7,074.99	45.30	57.93	30.04	-3,629.32	-3,135.54	3,921.47	3,789.48	131.99	29.711		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LEFFLER 26N-23B-L(SRC PLAN_75CC) - OH - PLAN													Offset Site Error:	0.00 ft
Survey Program: 25-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,200.00	7,012.79	7,374.34	7,021.57	99.40	46.24	-90.04	-3,632.27	-3,168.80	3,929.46	3,795.24	134.21	29.277		
10,300.00	7,011.04	7,340.41	7,008.89	102.11	46.17	-89.86	-3,635.57	-3,200.09	3,939.15	3,802.71	136.44	28.871		
10,400.00	7,009.29	7,300.00	6,991.71	104.83	46.08	-89.62	-3,640.05	-3,236.39	3,950.59	3,811.99	138.60	28.504		
10,500.00	7,007.54	7,277.05	6,980.98	107.56	46.03	-89.47	-3,642.77	-3,256.48	3,963.76	3,822.87	140.90	28.132		
10,600.00	7,005.79	7,250.00	6,967.45	110.30	45.97	-89.28	-3,646.43	-3,279.62	3,978.77	3,835.69	143.08	27.808		
10,700.00	7,004.04	7,221.20	6,952.01	113.04	45.91	-89.06	-3,650.51	-3,303.59	3,995.61	3,850.36	145.24	27.510		
10,800.00	7,002.29	7,193.70	6,936.30	115.79	45.84	-88.84	-3,654.66	-3,325.78	4,014.31	3,866.94	147.37	27.240		
10,900.00	7,000.54	7,168.97	6,921.41	118.54	45.77	-88.63	-3,658.61	-3,345.11	4,034.89	3,885.43	149.47	26.995		
11,000.00	6,998.79	7,150.00	6,909.49	121.30	45.72	-88.46	-3,661.78	-3,359.53	4,057.39	3,905.85	151.54	26.775		
11,100.00	6,997.04	7,121.76	6,891.01	124.06	45.64	-88.20	-3,666.69	-3,380.30	4,081.77	3,928.26	153.51	26.589		
11,200.00	6,995.29	7,100.00	6,876.16	126.83	45.57	-87.99	-3,670.65	-3,395.72	4,108.07	3,952.61	155.46	26.425		
11,300.00	6,993.54	7,100.00	6,876.16	129.60	45.57	-87.99	-3,670.65	-3,395.72	4,136.39	3,978.96	157.43	26.274		
11,400.00	6,991.80	7,050.00	6,840.20	132.37	45.42	-87.48	-3,680.25	-3,429.08	4,166.49	4,007.34	159.15	26.180		
11,500.00	6,990.05	7,050.00	6,840.20	135.15	45.42	-87.48	-3,680.25	-3,429.08	4,198.37	4,037.38	160.99	26.078		
11,600.00	6,988.30	7,035.01	6,828.94	137.93	45.36	-87.32	-3,683.26	-3,438.50	4,232.23	4,069.52	162.71	26.011		
11,700.00	6,986.55	7,017.17	6,815.26	140.72	45.30	-87.13	-3,686.92	-3,449.35	4,267.92	4,103.57	164.35	25.968		
11,800.00	6,984.80	7,000.00	6,801.83	143.50	45.24	-86.94	-3,690.51	-3,459.42	4,305.44	4,139.51	165.93	25.948		
11,900.00	6,983.05	7,000.00	6,801.83	146.29	45.24	-86.94	-3,690.51	-3,459.42	4,344.80	4,177.31	167.49	25.941 SF		
12,000.00	6,981.30	6,976.69	6,783.18	149.09	45.15	-86.68	-3,695.51	-3,472.48	4,385.80	4,216.88	168.92	25.964		
12,100.00	6,979.55	6,950.00	6,761.27	151.88	45.05	-86.38	-3,701.39	-3,486.55	4,428.70	4,258.43	170.27	26.010		
12,200.00	6,977.80	6,950.00	6,761.27	154.68	45.05	-86.38	-3,701.39	-3,486.55	4,473.05	4,301.43	171.63	26.063		
12,300.00	6,976.05	6,942.60	6,755.10	157.48	45.02	-86.29	-3,703.04	-3,490.28	4,519.16	4,346.26	172.90	26.137		
12,400.00	6,974.30	6,935.01	6,748.73	160.28	44.98	-86.20	-3,704.75	-3,494.03	4,566.88	4,392.77	174.11	26.230		
12,500.00	6,972.55	6,935.01	6,748.73	163.08	44.98	-86.20	-3,704.75	-3,494.03	4,616.25	4,440.98	175.27	26.338		
12,600.00	6,970.80	6,913.66	6,730.58	165.89	44.89	-85.95	-3,709.63	-3,504.16	4,666.97	4,490.64	176.33	26.468		
12,700.00	6,969.05	6,900.00	6,718.80	168.69	44.83	-85.79	-3,712.80	-3,510.31	4,719.27	4,541.94	177.34	26.612		
12,800.00	6,967.30	6,900.00	6,718.80	171.50	44.83	-85.79	-3,712.80	-3,510.31	4,773.00	4,594.68	178.32	26.767		
12,900.00	6,965.55	6,900.00	6,718.80	174.31	44.83	-85.79	-3,712.80	-3,510.31	4,828.19	4,648.95	179.24	26.937		
13,000.00	6,963.80	6,900.00	6,718.80	177.12	44.83	-85.79	-3,712.80	-3,510.31	4,884.81	4,704.70	180.11	27.122		
13,100.00	6,962.05	6,874.28	6,696.29	179.94	44.71	-85.48	-3,718.85	-3,521.16	4,942.40	4,761.51	180.90	27.322		
13,200.00	6,960.30	6,850.00	6,674.66	182.75	44.60	-85.18	-3,724.67	-3,530.54	5,001.66	4,820.04	181.63	27.538		
13,300.00	6,958.55	6,850.00	6,674.66	185.57	44.60	-85.18	-3,724.67	-3,530.54	5,061.85	4,879.50	182.35	27.759		
13,400.00	6,956.80	6,850.00	6,674.66	188.38	44.60	-85.18	-3,724.67	-3,530.54	5,123.29	4,940.27	183.02	27.993		
13,500.00	6,955.05	6,850.00	6,674.66	191.20	44.60	-85.18	-3,724.67	-3,530.54	5,185.92	5,002.27	183.65	28.238		
13,600.00	6,953.31	6,843.19	6,668.53	194.02	44.57	-85.09	-3,726.33	-3,533.01	5,249.69	5,065.46	184.23	28.495		
13,700.00	6,951.56	6,835.01	6,661.14	196.84	44.53	-84.99	-3,728.32	-3,535.89	5,314.54	5,129.76	184.77	28.763		
13,800.00	6,949.81	6,835.01	6,661.14	199.67	44.53	-84.99	-3,728.32	-3,535.89	5,380.42	5,195.14	185.28	29.040		
13,900.00	6,948.06	6,835.01	6,661.14	202.49	44.53	-84.99	-3,728.32	-3,535.89	5,447.34	5,261.59	185.75	29.326		
14,000.00	6,946.31	6,835.01	6,661.14	205.31	44.53	-84.99	-3,728.32	-3,535.89	5,515.26	5,329.08	186.18	29.623		
14,100.00	6,944.56	6,818.12	6,645.77	208.14	44.44	-84.78	-3,732.46	-3,541.54	5,583.96	5,397.38	186.58	29.928		
14,200.00	6,942.81	6,800.00	6,629.13	210.96	44.35	-84.55	-3,736.95	-3,547.12	5,653.78	5,466.84	186.94	30.243		
14,300.00	6,941.06	6,800.00	6,629.13	213.79	44.35	-84.55	-3,736.95	-3,547.12	5,724.29	5,537.00	187.29	30.564		
14,400.00	6,939.31	6,800.00	6,629.13	216.62	44.35	-84.55	-3,736.95	-3,547.12	5,795.67	5,608.06	187.60	30.893		
14,500.00	6,937.56	6,800.00	6,629.13	219.44	44.35	-84.55	-3,736.95	-3,547.12	5,867.88	5,679.99	187.89	31.230		
14,600.00	6,935.81	6,800.00	6,629.13	222.27	44.35	-84.55	-3,736.95	-3,547.12	5,940.89	5,752.74	188.15	31.575		
14,700.00	6,934.06	6,800.00	6,629.13	225.10	44.35	-84.55	-3,736.95	-3,547.12	6,014.69	5,826.29	188.39	31.926		
14,800.00	6,932.31	6,800.00	6,629.13	227.93	44.35	-84.55	-3,736.95	-3,547.12	6,089.23	5,900.62	188.61	32.285		
14,817.75	6,932.00	6,800.00	6,629.13	228.43	44.35	-84.55	-3,736.95	-3,547.12	6,102.53	5,913.89	188.64	32.350		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LEFFLER FARM 1-21(PA_75CC) - OH - OH												Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	66.00	3.28	3.28	-125.17	-4,470.66	-6,345.47	7,762.48				
100.00	100.00	34.00	100.00	3.28	3.33	-125.17	-4,470.66	-6,345.47	7,762.20	7,755.58	6.62	1,172.896	
200.00	200.00	134.00	200.00	3.34	4.40	-125.17	-4,470.66	-6,345.47	7,762.20	7,754.47	7.74	1,003.289	
300.00	300.00	234.00	300.00	3.44	7.21	-125.17	-4,470.66	-6,345.47	7,762.20	7,751.54	10.66	728.344	
400.00	400.00	334.00	400.00	3.60	10.44	-125.17	-4,470.66	-6,345.47	7,762.20	7,748.16	14.05	552.617	
500.00	500.00	434.00	500.00	3.81	13.80	-125.17	-4,470.66	-6,345.47	7,762.20	7,744.60	17.61	440.862	
600.00	599.98	533.98	599.98	4.05	17.21	-97.80	-4,470.66	-6,345.47	7,762.44	7,741.18	21.26	365.178	
700.00	699.86	633.86	699.86	4.32	20.64	-97.82	-4,470.66	-6,345.47	7,763.09	7,738.13	24.96	311.017	
800.00	799.72	733.72	799.72	4.62	24.09	-97.86	-4,470.66	-6,345.47	7,763.81	7,735.11	28.71	270.469	
900.00	899.58	833.58	899.58	4.93	27.55	-97.90	-4,470.66	-6,345.47	7,764.54	7,732.06	32.48	239.049	
1,000.00	999.44	933.44	999.44	5.27	31.02	-97.94	-4,470.66	-6,345.47	7,765.27	7,728.99	36.28	214.032	
1,100.00	1,099.31	1,033.31	1,099.31	5.62	34.48	-97.98	-4,470.66	-6,345.47	7,766.00	7,725.90	40.10	193.667	
1,200.00	1,199.17	1,133.17	1,199.17	5.98	37.96	-98.02	-4,470.66	-6,345.47	7,766.73	7,722.80	43.93	176.782	
1,300.00	1,299.03	1,233.03	1,299.03	6.36	41.43	-98.06	-4,470.66	-6,345.47	7,767.47	7,719.69	47.78	162.566	
1,400.00	1,398.89	1,332.89	1,398.89	6.74	44.91	-98.09	-4,470.66	-6,345.47	7,768.21	7,716.57	51.64	150.439	
1,500.00	1,498.75	1,432.75	1,498.75	7.13	48.38	-98.13	-4,470.66	-6,345.47	7,768.96	7,713.46	55.50	139.976	
1,600.00	1,598.61	1,532.61	1,598.61	7.52	51.86	-98.17	-4,470.66	-6,345.47	7,769.71	7,710.33	59.37	130.860	
1,700.00	1,698.47	1,632.47	1,698.47	7.92	55.34	-98.21	-4,470.66	-6,345.47	7,770.46	7,707.21	63.25	122.849	
1,800.00	1,798.33	1,732.33	1,798.33	8.32	58.82	-98.25	-4,470.66	-6,345.47	7,771.21	7,704.08	67.14	115.755	
1,900.00	1,898.19	1,832.19	1,898.19	8.73	62.30	-98.29	-4,470.66	-6,345.47	7,771.97	7,700.95	71.02	109.430	
2,000.00	1,998.05	1,932.05	1,998.05	9.14	65.78	-98.32	-4,470.66	-6,345.47	7,772.74	7,697.82	74.91	103.756	
2,100.00	2,097.91	2,031.91	2,097.91	9.55	69.27	-98.36	-4,470.66	-6,345.47	7,773.50	7,694.69	78.81	98.638	
2,200.00	2,197.78	2,131.78	2,197.78	9.97	72.75	-98.40	-4,470.66	-6,345.47	7,774.27	7,691.57	82.71	94.000	
2,300.00	2,297.64	2,231.64	2,297.64	10.39	76.23	-98.44	-4,470.66	-6,345.47	7,775.04	7,688.44	86.60	89.776	
2,400.00	2,397.50	2,331.50	2,397.50	10.81	79.71	-98.48	-4,470.66	-6,345.47	7,775.82	7,685.31	90.51	85.914	
2,500.00	2,497.36	2,431.36	2,497.36	11.23	83.20	-98.52	-4,470.66	-6,345.47	7,776.60	7,682.19	94.41	82.370	
2,600.00	2,597.22	2,531.22	2,597.22	11.65	86.68	-98.55	-4,470.66	-6,345.47	7,777.39	7,679.07	98.32	79.106	
2,700.00	2,697.08	2,631.08	2,697.08	12.07	90.17	-98.59	-4,470.66	-6,345.47	7,778.17	7,675.95	102.22	76.090	
2,800.00	2,796.94	2,730.94	2,796.94	12.50	93.65	-98.63	-4,470.66	-6,345.47	7,778.96	7,672.83	106.13	73.295	
2,900.00	2,896.80	2,830.80	2,896.80	12.92	97.13	-98.67	-4,470.66	-6,345.47	7,779.76	7,669.72	110.04	70.698	
3,000.00	2,996.66	2,930.66	2,996.66	13.35	100.62	-98.71	-4,470.66	-6,345.47	7,780.55	7,666.60	113.95	68.279	
3,100.00	3,096.52	3,030.52	3,096.52	13.78	104.10	-98.75	-4,470.66	-6,345.47	7,781.36	7,663.49	117.86	66.019	
3,200.00	3,196.38	3,130.38	3,196.38	14.21	107.59	-98.78	-4,470.66	-6,345.47	7,782.16	7,660.38	121.78	63.905	
3,300.00	3,296.25	3,230.25	3,296.25	14.64	111.07	-98.82	-4,470.66	-6,345.47	7,782.97	7,657.28	125.69	61.921	
3,400.00	3,396.11	3,330.11	3,396.11	15.07	114.56	-98.86	-4,470.66	-6,345.47	7,783.78	7,654.17	129.61	60.057	
3,500.00	3,495.97	3,429.97	3,495.97	15.50	118.04	-98.90	-4,470.66	-6,345.47	7,784.60	7,651.07	133.52	58.302	
3,600.00	3,595.83	3,529.83	3,595.83	15.93	121.53	-98.94	-4,470.66	-6,345.47	7,785.41	7,647.98	137.44	56.647	
3,700.00	3,695.69	3,629.69	3,695.69	16.36	125.01	-98.98	-4,470.66	-6,345.47	7,786.24	7,644.88	141.35	55.084	
3,800.00	3,795.55	3,729.55	3,795.55	16.80	128.50	-99.01	-4,470.66	-6,345.47	7,787.06	7,641.79	145.27	53.604	
3,900.00	3,895.41	3,829.41	3,895.41	17.23	131.98	-99.05	-4,470.66	-6,345.47	7,787.89	7,638.70	149.19	52.202	
4,000.00	3,995.27	3,929.27	3,995.27	17.66	135.47	-99.09	-4,470.66	-6,345.47	7,788.72	7,635.62	153.11	50.872	
4,100.00	4,095.13	4,029.13	4,095.13	18.10	138.95	-99.13	-4,470.66	-6,345.47	7,789.56	7,632.54	157.02	49.607	
4,200.00	4,194.99	4,128.99	4,194.99	18.53	142.44	-99.17	-4,470.66	-6,345.47	7,790.40	7,629.46	160.94	48.405	
4,300.00	4,294.85	4,228.85	4,294.85	18.96	145.92	-99.21	-4,470.66	-6,345.47	7,791.24	7,626.38	164.86	47.259	
4,400.00	4,394.71	4,328.71	4,394.71	19.40	149.41	-99.24	-4,470.66	-6,345.47	7,792.09	7,623.31	168.78	46.167	
4,500.00	4,494.58	4,428.58	4,494.58	19.83	152.89	-99.28	-4,470.66	-6,345.47	7,792.94	7,620.24	172.70	45.124	
4,600.00	4,594.44	4,528.44	4,594.44	20.27	156.38	-99.32	-4,470.66	-6,345.47	7,793.79	7,617.17	176.62	44.127	
4,700.00	4,694.30	4,628.30	4,694.30	20.71	159.86	-99.36	-4,470.66	-6,345.47	7,794.65	7,614.11	180.54	43.174	
4,800.00	4,794.16	4,728.16	4,794.16	21.14	163.35	-99.40	-4,470.66	-6,345.47	7,795.51	7,611.05	184.46	42.261	
4,900.00	4,894.02	4,828.02	4,894.02	21.58	166.83	-99.44	-4,470.66	-6,345.47	7,796.37	7,607.99	188.38	41.385	
5,000.00	4,993.88	4,927.88	4,993.88	22.01	170.32	-99.47	-4,470.66	-6,345.47	7,797.24	7,604.93	192.31	40.546	
5,100.00	5,093.74	5,027.74	5,093.74	22.45	173.80	-99.51	-4,470.66	-6,345.47	7,798.11	7,601.88	196.23	39.740	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LEFFLER FARM 1-21(PA_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,127.60	5,193.60	22.89	177.29	-99.55	-4,470.66	-6,345.47	7,798.98	7,598.84	200.15	38.966		
5,300.00	5,293.46	5,227.46	5,293.46	23.32	180.78	-99.59	-4,470.66	-6,345.47	7,799.86	7,595.79	204.07	38.221		
5,400.00	5,393.32	5,327.32	5,393.32	23.76	184.26	-99.63	-4,470.66	-6,345.47	7,800.74	7,592.75	207.99	37.505		
5,500.00	5,493.18	5,427.18	5,493.18	24.20	187.75	-99.66	-4,470.66	-6,345.47	7,801.63	7,589.71	211.92	36.815		
5,600.00	5,593.05	5,527.05	5,593.05	24.64	191.23	-99.70	-4,470.66	-6,345.47	7,802.52	7,586.68	215.84	36.150		
5,700.00	5,692.91	5,626.91	5,692.91	25.07	194.72	-99.74	-4,470.66	-6,345.47	7,803.41	7,583.65	219.76	35.509		
5,800.00	5,792.77	5,726.77	5,792.77	25.51	198.20	-99.78	-4,470.66	-6,345.47	7,804.30	7,580.62	223.68	34.890		
5,900.00	5,892.63	5,826.63	5,892.63	25.95	201.69	-99.82	-4,470.66	-6,345.47	7,805.20	7,577.60	227.61	34.293		
6,000.00	5,992.49	5,926.49	5,992.49	26.39	205.17	-99.85	-4,470.66	-6,345.47	7,806.10	7,574.57	231.53	33.715		
6,100.00	6,092.35	6,026.35	6,092.35	26.82	208.66	-99.89	-4,470.66	-6,345.47	7,807.01	7,571.56	235.45	33.158		
6,200.00	6,192.21	6,126.21	6,192.21	27.26	212.15	-99.93	-4,470.66	-6,345.47	7,807.92	7,568.54	239.38	32.618		
6,300.00	6,292.07	6,226.07	6,292.07	27.70	215.63	-99.97	-4,470.66	-6,345.47	7,808.83	7,565.53	243.30	32.096		
6,400.00	6,391.93	6,325.93	6,391.93	28.14	219.12	-100.01	-4,470.66	-6,345.47	7,809.75	7,562.52	247.22	31.590		
6,500.00	6,491.79	6,425.79	6,491.79	28.58	222.60	-61.30	-4,470.66	-6,345.47	7,809.00	7,557.86	251.14	31.094		
6,600.00	6,589.80	6,523.80	6,589.80	29.02	226.02	-48.14	-4,470.66	-6,345.47	7,797.27	7,542.27	255.00	30.577		
6,700.00	6,683.86	6,617.86	6,683.86	29.46	229.31	-45.99	-4,470.66	-6,345.47	7,773.40	7,514.69	258.71	30.047		
6,800.00	6,771.56	6,705.56	6,771.56	29.92	232.37	-46.79	-4,470.66	-6,345.47	7,738.07	7,475.89	262.19	29.514		
6,900.00	6,850.72	6,784.72	6,850.72	30.40	235.13	-49.38	-4,470.66	-6,345.47	7,692.25	7,426.90	265.35	28.989		
7,000.00	6,919.40	6,853.40	6,919.40	30.96	237.53	-53.56	-4,470.66	-6,345.47	7,637.18	7,369.03	268.16	28.480		
7,100.00	6,975.92	6,909.92	6,975.92	31.62	239.50	-59.41	-4,470.66	-6,345.47	7,574.34	7,303.79	270.56	27.995		
7,200.00	7,018.87	6,952.87	7,018.87	32.44	241.00	-66.98	-4,470.66	-6,345.47	7,505.40	7,232.87	272.53	27.540		
7,300.00	7,047.21	6,981.21	7,047.21	33.42	241.99	-76.16	-4,470.66	-6,345.47	7,432.13	7,158.09	274.04	27.120		
7,400.00	7,060.23	7,005.77	7,060.23	34.55	242.85	-86.46	-4,470.66	-6,345.47	7,356.43	7,080.93	275.50	26.703		
7,500.00	7,060.03	7,005.97	7,060.03	35.83	242.86	-91.17	-4,470.66	-6,345.47	7,280.17	7,004.00	276.17	26.361		
7,600.00	7,058.28	7,007.72	7,058.28	37.28	242.92	-91.15	-4,470.66	-6,345.47	7,204.44	6,927.43	277.01	26.008		
7,700.00	7,056.53	7,009.47	7,056.53	38.89	242.98	-91.13	-4,470.66	-6,345.47	7,129.31	6,851.34	277.97	25.648		
7,800.00	7,054.78	6,988.78	7,054.78	40.63	242.26	-91.11	-4,470.66	-6,345.47	7,054.79	6,776.54	278.26	25.354		
7,900.00	7,053.03	6,987.03	7,053.03	42.50	242.19	-91.09	-4,470.66	-6,345.47	6,980.91	6,701.60	279.31	24.993		
8,000.00	7,051.28	6,985.28	7,051.28	44.47	242.13	-91.07	-4,470.66	-6,345.47	6,907.69	6,627.21	280.48	24.628		
8,100.00	7,049.53	6,983.53	7,049.53	46.53	242.07	-91.05	-4,470.66	-6,345.47	6,835.15	6,553.39	281.76	24.259		
8,200.00	7,047.78	6,981.78	7,047.78	48.67	242.01	-91.02	-4,470.66	-6,345.47	6,763.30	6,480.17	283.13	23.887		
8,300.00	7,046.03	6,980.03	7,046.03	50.89	241.95	-91.00	-4,470.66	-6,345.47	6,692.18	6,407.57	284.61	23.513		
8,400.00	7,044.28	6,978.28	7,044.28	53.16	241.89	-90.98	-4,470.66	-6,345.47	6,621.80	6,335.62	286.19	23.138		
8,500.00	7,042.53	6,976.53	7,042.53	55.49	241.83	-90.96	-4,470.66	-6,345.47	6,552.20	6,264.34	287.86	22.762		
8,600.00	7,040.78	6,974.78	7,040.78	57.86	241.77	-90.94	-4,470.66	-6,345.47	6,483.39	6,193.77	289.62	22.386		
8,700.00	7,039.03	6,973.03	7,039.03	60.28	241.71	-90.92	-4,470.66	-6,345.47	6,415.40	6,123.93	291.47	22.011		
8,800.00	7,037.28	6,971.28	7,037.28	62.74	241.64	-90.90	-4,470.66	-6,345.47	6,348.25	6,054.85	293.40	21.637		
8,900.00	7,035.53	6,969.53	7,035.53	65.23	241.58	-90.88	-4,470.66	-6,345.47	6,281.98	5,986.56	295.42	21.265		
9,000.00	7,033.78	6,967.78	7,033.78	67.74	241.52	-90.86	-4,470.66	-6,345.47	6,216.61	5,919.10	297.52	20.895		
9,100.00	7,032.03	6,966.03	7,032.03	70.29	241.46	-90.83	-4,470.66	-6,345.47	6,152.17	5,852.48	299.69	20.528		
9,200.00	7,030.28	6,964.28	7,030.28	72.85	241.40	-90.81	-4,470.66	-6,345.47	6,088.70	5,786.75	301.94	20.165		
9,300.00	7,028.54	6,962.54	7,028.54	75.44	241.34	-90.79	-4,470.66	-6,345.47	6,026.21	5,721.94	304.27	19.806		
9,400.00	7,026.79	6,960.79	7,026.79	78.05	241.28	-90.77	-4,470.66	-6,345.47	5,964.74	5,658.08	306.66	19.450		
9,500.00	7,025.04	6,959.04	7,025.04	80.67	241.22	-90.75	-4,470.66	-6,345.47	5,904.33	5,595.20	309.13	19.100		
9,600.00	7,023.29	6,957.29	7,023.29	83.31	241.16	-90.73	-4,470.66	-6,345.47	5,845.00	5,533.34	311.66	18.754		
9,700.00	7,021.54	6,955.54	7,021.54	85.96	241.10	-90.71	-4,470.66	-6,345.47	5,786.79	5,472.53	314.26	18.414		
9,800.00	7,019.79	6,953.79	7,019.79	88.63	241.03	-90.69	-4,470.66	-6,345.47	5,729.74	5,412.82	316.92	18.079		
9,900.00	7,018.04	6,952.04	7,018.04	91.30	240.97	-90.66	-4,470.66	-6,345.47	5,673.87	5,354.23	319.64	17.751		
10,000.00	7,016.29	6,950.29	7,016.29	93.99	240.91	-90.64	-4,470.66	-6,345.47	5,619.23	5,296.81	322.42	17.428		
10,100.00	7,014.54	6,948.54	7,014.54	96.69	240.85	-90.62	-4,470.66	-6,345.47	5,565.85	5,240.59	325.26	17.112		
10,200.00	7,012.79	6,946.79	7,012.79	99.40	240.79	-90.60	-4,470.66	-6,345.47	5,513.76	5,185.61	328.15	16.802		
10,300.00	7,011.04	6,945.04	7,011.04	102.11	240.73	-90.58	-4,470.66	-6,345.47	5,463.01	5,131.92	331.10	16.500		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LEFFLER FARM 1-21(PA_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	6,943.29	7,009.29	104.83	240.67	-90.56	-4,470.66	-6,345.47	5,413.63	5,079.54	334.09	16.204		
10,500.00	7,007.54	6,941.54	7,007.54	107.56	240.61	-90.54	-4,470.66	-6,345.47	5,365.66	5,028.53	337.13	15.916		
10,600.00	7,005.79	6,939.79	7,005.79	110.30	240.55	-90.52	-4,470.66	-6,345.47	5,319.13	4,978.92	340.21	15.635		
10,700.00	7,004.04	6,938.04	7,004.04	113.04	240.48	-90.50	-4,470.66	-6,345.47	5,274.09	4,930.76	343.33	15.362		
10,800.00	7,002.29	6,936.29	7,002.29	115.79	240.42	-90.47	-4,470.66	-6,345.47	5,230.57	4,884.09	346.49	15.096		
10,900.00	7,000.54	6,934.54	7,000.54	118.54	240.36	-90.45	-4,470.66	-6,345.47	5,188.62	4,838.94	349.68	14.838		
11,000.00	6,998.79	6,932.79	6,998.79	121.30	240.30	-90.43	-4,470.66	-6,345.47	5,148.26	4,795.37	352.90	14.589		
11,100.00	6,997.04	6,931.04	6,997.04	124.06	240.24	-90.41	-4,470.66	-6,345.47	5,109.55	4,753.41	356.14	14.347		
11,200.00	6,995.29	6,929.29	6,995.29	126.83	240.18	-90.39	-4,470.66	-6,345.47	5,072.51	4,713.10	359.41	14.113		
11,300.00	6,993.54	6,927.54	6,993.54	129.60	240.12	-90.37	-4,470.66	-6,345.47	5,037.18	4,674.49	362.69	13.888		
11,400.00	6,991.80	6,925.80	6,991.80	132.37	240.06	-90.35	-4,470.66	-6,345.47	5,003.60	4,637.61	365.99	13.671		
11,500.00	6,990.05	6,924.05	6,990.05	135.15	240.00	-90.33	-4,470.66	-6,345.47	4,971.80	4,602.51	369.29	13.463		
11,600.00	6,988.30	6,922.30	6,988.30	137.93	239.93	-90.30	-4,470.66	-6,345.47	4,941.83	4,569.23	372.60	13.263		
11,700.00	6,986.55	6,920.55	6,986.55	140.72	239.87	-90.28	-4,470.66	-6,345.47	4,913.70	4,537.80	375.90	13.072		
11,800.00	6,984.80	6,918.80	6,984.80	143.50	239.81	-90.26	-4,470.66	-6,345.47	4,887.46	4,508.26	379.20	12.889		
11,900.00	6,983.05	6,917.05	6,983.05	146.29	239.75	-90.24	-4,470.66	-6,345.47	4,863.14	4,480.65	382.48	12.715		
12,000.00	6,981.30	6,915.30	6,981.30	149.09	239.69	-90.22	-4,470.66	-6,345.47	4,840.75	4,455.01	385.75	12.549		
12,100.00	6,979.55	6,913.55	6,979.55	151.88	239.63	-90.20	-4,470.66	-6,345.47	4,820.34	4,431.35	388.99	12.392		
12,200.00	6,977.80	6,911.80	6,977.80	154.68	239.57	-90.18	-4,470.66	-6,345.47	4,801.92	4,409.72	392.20	12.244		
12,300.00	6,976.05	6,910.05	6,976.05	157.48	239.51	-90.16	-4,470.66	-6,345.47	4,785.52	4,390.15	395.38	12.104		
12,400.00	6,974.30	6,908.30	6,974.30	160.28	239.45	-90.13	-4,470.66	-6,345.47	4,771.16	4,372.65	398.51	11.972		
12,500.00	6,972.55	6,906.55	6,972.55	163.08	239.39	-90.11	-4,470.66	-6,345.47	4,758.86	4,357.26	401.61	11.850		
12,600.00	6,970.80	6,904.80	6,970.80	165.89	239.32	-90.09	-4,470.66	-6,345.47	4,748.64	4,343.99	404.65	11.735		
12,700.00	6,969.05	6,903.05	6,969.05	168.69	239.26	-90.07	-4,470.66	-6,345.47	4,740.50	4,332.86	407.63	11.629		
12,800.00	6,967.30	6,901.30	6,967.30	171.50	239.20	-90.05	-4,470.66	-6,345.47	4,734.45	4,323.90	410.56	11.532		
12,900.00	6,965.55	6,900.45	6,965.55	174.31	239.17	-90.03	-4,470.66	-6,345.47	4,730.52	4,317.07	413.45	11.442		
13,000.00	6,963.80	6,902.20	6,963.80	177.12	239.23	-90.01	-4,470.66	-6,345.47	4,728.69	4,312.34	416.36	11.357		
13,036.34	6,963.17	6,902.83	6,963.17	178.15	239.26	-90.00	-4,470.66	-6,345.47	4,728.55	4,311.16	417.40	11.329 CC		
13,100.00	6,962.05	6,903.95	6,962.05	179.94	239.29	-89.99	-4,470.66	-6,345.47	4,728.98	4,309.79	419.19	11.281		
13,200.00	6,960.30	6,905.70	6,960.30	182.75	239.36	-89.97	-4,470.66	-6,345.47	4,731.38	4,309.43	421.95	11.213 ES		
13,300.00	6,958.55	6,907.45	6,958.55	185.57	239.42	-89.94	-4,470.66	-6,345.47	4,735.90	4,311.26	424.63	11.153		
13,400.00	6,956.80	6,909.20	6,956.80	188.38	239.48	-89.92	-4,470.66	-6,345.47	4,742.51	4,315.29	427.22	11.101		
13,500.00	6,955.05	6,889.05	6,955.05	191.20	238.77	-89.90	-4,470.66	-6,345.47	4,751.22	4,322.26	428.96	11.076		
13,600.00	6,953.31	6,887.31	6,953.31	194.02	238.71	-89.88	-4,470.66	-6,345.47	4,762.02	4,330.76	431.26	11.042		
13,700.00	6,951.56	6,885.56	6,951.56	196.84	238.65	-89.86	-4,470.66	-6,345.47	4,774.88	4,341.42	433.46	11.016		
13,800.00	6,949.81	6,883.81	6,949.81	199.67	238.59	-89.84	-4,470.66	-6,345.47	4,789.80	4,354.23	435.57	10.997		
13,900.00	6,948.06	6,882.06	6,948.06	202.49	238.53	-89.82	-4,470.66	-6,345.47	4,806.75	4,369.17	437.58	10.985		
14,000.00	6,946.31	6,880.31	6,946.31	205.31	238.47	-89.80	-4,470.66	-6,345.47	4,825.72	4,386.22	439.50	10.980 SF		
14,100.00	6,944.56	6,878.56	6,944.56	208.14	238.41	-89.77	-4,470.66	-6,345.47	4,846.67	4,405.35	441.32	10.982		
14,200.00	6,942.81	6,876.81	6,942.81	210.96	238.35	-89.75	-4,470.66	-6,345.47	4,869.59	4,426.54	443.05	10.991		
14,300.00	6,941.06	6,875.06	6,941.06	213.79	238.29	-89.73	-4,470.66	-6,345.47	4,894.44	4,449.76	444.68	11.007		
14,400.00	6,939.31	6,873.31	6,939.31	216.62	238.22	-89.71	-4,470.66	-6,345.47	4,921.20	4,474.98	446.21	11.029		
14,500.00	6,937.56	6,871.56	6,937.56	219.44	238.16	-89.69	-4,470.66	-6,345.47	4,949.83	4,502.18	447.66	11.057		
14,600.00	6,935.81	6,869.81	6,935.81	222.27	238.10	-89.67	-4,470.66	-6,345.47	4,980.31	4,531.30	449.00	11.092		
14,700.00	6,934.06	6,868.06	6,934.06	225.10	238.04	-89.65	-4,470.66	-6,345.47	5,012.60	4,562.33	450.26	11.133		
14,800.00	6,932.31	6,866.31	6,932.31	227.93	237.98	-89.63	-4,470.66	-6,345.47	5,046.66	4,595.23	451.43	11.179		
14,817.75	6,932.00	6,866.00	6,932.00	228.43	237.97	-89.62	-4,470.66	-6,345.47	5,052.88	4,601.26	451.63	11.188		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LOVELY 1(AB_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	19.00	3.28	3.28	-69.89	2,328.36	-6,357.90	6,770.86					
100.00	100.00	81.00	100.00	3.28	3.57	-69.89	2,328.36	-6,357.90	6,770.83	6,763.98	6.86	987.511		
200.00	200.00	181.00	200.00	3.34	5.63	-69.89	2,328.36	-6,357.90	6,770.83	6,761.87	8.96	755.262		
300.00	300.00	281.00	300.00	3.44	8.71	-69.89	2,328.36	-6,357.90	6,770.83	6,758.68	12.15	557.240		
400.00	400.00	381.00	400.00	3.60	12.01	-69.89	2,328.36	-6,357.90	6,770.83	6,755.22	15.62	433.609		
500.00	500.00	481.00	500.00	3.81	15.40	-69.89	2,328.36	-6,357.90	6,770.83	6,751.63	19.21	352.545		
600.00	599.98	580.98	599.98	4.05	18.82	-42.53	2,328.36	-6,357.90	6,769.55	6,746.68	22.87	296.001		
700.00	699.86	680.86	699.86	4.32	22.27	-42.58	2,328.36	-6,357.90	6,766.00	6,739.41	26.58	254.526		
800.00	799.72	780.72	799.72	4.62	25.72	-42.61	2,328.36	-6,357.90	6,762.11	6,731.78	30.33	222.941		
900.00	899.58	880.58	899.58	4.93	29.18	-42.65	2,328.36	-6,357.90	6,758.23	6,724.12	34.11	198.134		
1,000.00	999.44	980.44	999.44	5.27	32.65	-42.68	2,328.36	-6,357.90	6,754.35	6,716.44	37.91	178.166		
1,100.00	1,099.31	1,080.31	1,099.31	5.62	36.12	-42.71	2,328.36	-6,357.90	6,750.47	6,708.74	41.73	161.766		
1,200.00	1,199.17	1,180.17	1,199.17	5.98	39.59	-42.74	2,328.36	-6,357.90	6,746.60	6,701.03	45.56	148.068		
1,300.00	1,299.03	1,280.03	1,299.03	6.36	43.07	-42.77	2,328.36	-6,357.90	6,742.72	6,693.31	49.41	136.464		
1,400.00	1,398.89	1,379.89	1,398.89	6.74	46.54	-42.80	2,328.36	-6,357.90	6,738.85	6,685.58	53.27	126.512		
1,500.00	1,498.75	1,479.75	1,498.75	7.13	50.02	-42.83	2,328.36	-6,357.90	6,734.98	6,677.85	57.13	117.887		
1,600.00	1,598.61	1,579.61	1,598.61	7.52	53.50	-42.86	2,328.36	-6,357.90	6,731.11	6,670.11	61.00	110.342		
1,700.00	1,698.47	1,679.47	1,698.47	7.92	56.98	-42.89	2,328.36	-6,357.90	6,727.24	6,662.36	64.88	103.688		
1,800.00	1,798.33	1,779.33	1,798.33	8.32	60.46	-42.92	2,328.36	-6,357.90	6,723.38	6,654.62	68.76	97.778		
1,900.00	1,898.19	1,879.19	1,898.19	8.73	63.94	-42.95	2,328.36	-6,357.90	6,719.52	6,646.87	72.65	92.494		
2,000.00	1,998.05	1,979.05	1,998.05	9.14	67.42	-42.98	2,328.36	-6,357.90	6,715.66	6,639.12	76.54	87.742		
2,100.00	2,097.91	2,078.91	2,097.91	9.55	70.91	-43.01	2,328.36	-6,357.90	6,711.80	6,631.36	80.43	83.447		
2,200.00	2,197.78	2,178.78	2,197.78	9.97	74.39	-43.04	2,328.36	-6,357.90	6,707.94	6,623.61	84.33	79.546		
2,300.00	2,297.64	2,278.64	2,297.64	10.39	77.87	-43.07	2,328.36	-6,357.90	6,704.08	6,615.86	88.23	75.987		
2,400.00	2,397.50	2,378.50	2,397.50	10.81	81.35	-43.10	2,328.36	-6,357.90	6,700.23	6,608.10	92.13	72.728		
2,500.00	2,497.36	2,478.36	2,497.36	11.23	84.84	-43.13	2,328.36	-6,357.90	6,696.38	6,600.35	96.03	69.732		
2,600.00	2,597.22	2,578.22	2,597.22	11.65	88.32	-43.16	2,328.36	-6,357.90	6,692.53	6,592.59	99.94	66.969		
2,700.00	2,697.08	2,678.08	2,697.08	12.07	91.81	-43.20	2,328.36	-6,357.90	6,688.68	6,584.84	103.84	64.413		
2,800.00	2,796.94	2,777.94	2,796.94	12.50	95.29	-43.23	2,328.36	-6,357.90	6,684.84	6,577.09	107.75	62.041		
2,900.00	2,896.80	2,877.80	2,896.80	12.92	98.77	-43.26	2,328.36	-6,357.90	6,680.99	6,569.34	111.66	59.835		
3,000.00	2,996.66	2,977.66	2,996.66	13.35	102.26	-43.29	2,328.36	-6,357.90	6,677.15	6,561.58	115.57	57.777		
3,100.00	3,096.52	3,077.52	3,096.52	13.78	105.74	-43.32	2,328.36	-6,357.90	6,673.31	6,553.83	119.48	55.854		
3,200.00	3,196.38	3,177.38	3,196.38	14.21	109.23	-43.35	2,328.36	-6,357.90	6,669.47	6,546.08	123.39	54.052		
3,300.00	3,296.25	3,277.25	3,296.25	14.64	112.71	-43.38	2,328.36	-6,357.90	6,665.64	6,538.34	127.30	52.361		
3,400.00	3,396.11	3,377.11	3,396.11	15.07	116.20	-43.41	2,328.36	-6,357.90	6,661.80	6,530.59	131.22	50.770		
3,500.00	3,495.97	3,476.97	3,495.97	15.50	119.68	-43.44	2,328.36	-6,357.90	6,657.97	6,522.84	135.13	49.271		
3,600.00	3,595.83	3,576.83	3,595.83	15.93	123.17	-43.48	2,328.36	-6,357.90	6,654.14	6,515.10	139.04	47.856		
3,700.00	3,695.69	3,676.69	3,695.69	16.36	126.65	-43.51	2,328.36	-6,357.90	6,650.32	6,507.36	142.96	46.519		
3,800.00	3,795.55	3,776.55	3,795.55	16.80	130.14	-43.54	2,328.36	-6,357.90	6,646.49	6,499.61	146.88	45.252		
3,900.00	3,895.41	3,876.41	3,895.41	17.23	133.62	-43.57	2,328.36	-6,357.90	6,642.67	6,491.87	150.79	44.052		
4,000.00	3,995.27	3,976.27	3,995.27	17.66	137.11	-43.60	2,328.36	-6,357.90	6,638.84	6,484.13	154.71	42.912		
4,100.00	4,095.13	4,076.13	4,095.13	18.10	140.59	-43.63	2,328.36	-6,357.90	6,635.02	6,476.40	158.63	41.828		
4,200.00	4,194.99	4,175.99	4,194.99	18.53	144.08	-43.66	2,328.36	-6,357.90	6,631.21	6,468.66	162.54	40.796		
4,300.00	4,294.85	4,275.85	4,294.85	18.96	147.56	-43.69	2,328.36	-6,357.90	6,627.39	6,460.93	166.46	39.813		
4,400.00	4,394.71	4,375.71	4,394.71	19.40	151.05	-43.73	2,328.36	-6,357.90	6,623.58	6,453.19	170.38	38.875		
4,500.00	4,494.58	4,475.58	4,494.58	19.83	154.53	-43.76	2,328.36	-6,357.90	6,619.76	6,445.46	174.30	37.979		
4,600.00	4,594.44	4,575.44	4,594.44	20.27	158.02	-43.79	2,328.36	-6,357.90	6,615.95	6,437.74	178.22	37.123		
4,700.00	4,694.30	4,675.30	4,694.30	20.71	161.50	-43.82	2,328.36	-6,357.90	6,612.15	6,430.01	182.14	36.303		
4,800.00	4,794.16	4,775.16	4,794.16	21.14	164.99	-43.85	2,328.36	-6,357.90	6,608.34	6,422.28	186.06	35.518		
4,900.00	4,894.02	4,875.02	4,894.02	21.58	168.47	-43.88	2,328.36	-6,357.90	6,604.54	6,414.56	189.98	34.765		
5,000.00	4,993.88	4,974.88	4,993.88	22.01	171.96	-43.92	2,328.36	-6,357.90	6,600.73	6,406.84	193.90	34.042		
5,100.00	5,093.74	5,074.74	5,093.74	22.45	175.44	-43.95	2,328.36	-6,357.90	6,596.93	6,399.12	197.82	33.348		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LOVELY 1(AB_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,174.60	5,193.60	22.89	178.93	-43.98	2,328.36	-6,357.90	6,593.14	6,391.40	201.74	32.682		
5,300.00	5,293.46	5,274.46	5,293.46	23.32	182.42	-44.01	2,328.36	-6,357.90	6,589.34	6,383.68	205.66	32.040		
5,400.00	5,393.32	5,374.32	5,393.32	23.76	185.90	-44.04	2,328.36	-6,357.90	6,585.55	6,375.97	209.58	31.422		
5,500.00	5,493.18	5,474.18	5,493.18	24.20	189.39	-44.07	2,328.36	-6,357.90	6,581.76	6,368.25	213.50	30.828		
5,600.00	5,593.05	5,574.05	5,593.05	24.64	192.87	-44.11	2,328.36	-6,357.90	6,577.97	6,360.54	217.42	30.254		
5,700.00	5,692.91	5,673.91	5,692.91	25.07	196.36	-44.14	2,328.36	-6,357.90	6,574.18	6,352.83	221.34	29.701		
5,800.00	5,792.77	5,773.77	5,792.77	25.51	199.84	-44.17	2,328.36	-6,357.90	6,570.39	6,345.13	225.27	29.167		
5,900.00	5,892.63	5,873.63	5,892.63	25.95	203.33	-44.20	2,328.36	-6,357.90	6,566.61	6,337.42	229.19	28.652		
6,000.00	5,992.49	5,973.49	5,992.49	26.39	206.82	-44.23	2,328.36	-6,357.90	6,562.83	6,329.72	233.11	28.153		
6,100.00	6,092.35	6,073.35	6,092.35	26.82	210.30	-44.27	2,328.36	-6,357.90	6,559.05	6,322.02	237.03	27.672		
6,200.00	6,192.21	6,173.21	6,192.21	27.26	213.79	-44.30	2,328.36	-6,357.90	6,555.27	6,314.32	240.95	27.205		
6,300.00	6,292.07	6,273.07	6,292.07	27.70	217.27	-44.33	2,328.36	-6,357.90	6,551.50	6,306.62	244.88	26.754		
6,400.00	6,391.93	6,372.93	6,391.93	28.14	220.76	-44.36	2,328.36	-6,357.90	6,547.72	6,298.92	248.80	26.317		
6,500.00	6,491.79	6,472.79	6,491.79	28.58	224.24	-5.46	2,328.36	-6,357.90	6,541.98	6,289.27	252.72	25.887		
6,600.00	6,591.65	6,572.65	6,591.65	29.02	227.72	9.03	2,328.36	-6,357.90	6,523.25	6,266.68	256.57	25.425		
6,700.00	6,691.51	6,672.51	6,691.51	29.46	231.20	13.87	2,328.36	-6,357.90	6,490.24	6,229.98	260.27	24.937		
6,800.00	6,791.37	6,772.37	6,791.37	29.90	234.68	17.37	2,328.36	-6,357.90	6,443.78	6,180.07	263.71	24.435		
6,900.00	6,891.23	6,872.23	6,891.23	30.34	238.16	21.10	2,328.36	-6,357.90	6,385.03	6,118.23	266.81	23.931		
7,000.00	6,991.09	6,972.09	6,991.09	30.78	241.64	25.91	2,328.36	-6,357.90	6,315.49	6,045.99	269.50	23.434		
7,100.00	7,090.95	7,071.95	7,090.95	31.22	245.12	32.78	2,328.36	-6,357.90	6,236.89	5,965.18	271.71	22.954		
7,200.00	7,190.81	7,171.81	7,190.81	32.44	248.60	43.25	2,328.36	-6,357.90	6,151.23	5,877.80	273.42	22.497		
7,300.00	7,290.67	7,271.67	7,290.67	33.42	243.63	59.43	2,328.36	-6,357.90	6,060.65	5,786.07	274.57	22.073		
7,400.00	7,390.53	7,371.53	7,390.53	34.55	244.09	81.88	2,328.36	-6,357.90	5,967.42	5,692.24	275.18	21.685		
7,500.00	7,490.39	7,471.39	7,490.39	35.83	244.08	92.66	2,328.36	-6,357.90	5,873.73	5,598.39	275.34	21.333		
7,600.00	7,590.25	7,571.25	7,590.25	37.28	244.02	92.61	2,328.36	-6,357.90	5,780.27	5,504.79	275.48	20.983		
7,700.00	7,690.11	7,671.11	7,690.11	38.89	243.96	92.56	2,328.36	-6,357.90	5,687.03	5,411.36	275.67	20.630		
7,800.00	7,790.00	7,771.00	7,790.00	40.63	243.90	92.51	2,328.36	-6,357.90	5,594.03	5,318.12	275.91	20.275		
7,900.00	7,890.00	7,871.00	7,890.00	42.50	243.83	92.47	2,328.36	-6,357.90	5,501.27	5,225.06	276.21	19.917		
8,000.00	7,990.00	7,971.00	7,990.00	44.47	243.77	92.42	2,328.36	-6,357.90	5,408.77	5,132.21	276.56	19.557		
8,100.00	8,090.00	8,071.00	8,090.00	46.53	243.71	92.37	2,328.36	-6,357.90	5,316.53	5,039.56	276.97	19.195		
8,200.00	8,190.00	8,171.00	8,190.00	48.67	243.65	92.32	2,328.36	-6,357.90	5,224.59	4,947.14	277.45	18.831		
8,300.00	8,290.00	8,271.00	8,290.00	50.89	243.59	92.27	2,328.36	-6,357.90	5,132.94	4,854.94	278.00	18.464		
8,400.00	8,390.00	8,371.00	8,390.00	53.16	243.53	92.22	2,328.36	-6,357.90	5,041.61	4,763.00	278.62	18.095		
8,500.00	8,490.00	8,471.00	8,490.00	55.49	243.47	92.18	2,328.36	-6,357.90	4,950.62	4,671.31	279.31	17.725		
8,600.00	8,590.00	8,571.00	8,590.00	57.86	243.41	92.13	2,328.36	-6,357.90	4,859.97	4,579.89	280.08	17.352		
8,700.00	8,690.00	8,671.00	8,690.00	60.28	243.35	92.08	2,328.36	-6,357.90	4,769.71	4,488.77	280.93	16.978		
8,800.00	8,790.00	8,771.00	8,790.00	62.74	243.29	92.03	2,328.36	-6,357.90	4,679.83	4,397.96	281.87	16.603		
8,900.00	8,890.00	8,871.00	8,890.00	65.23	243.22	91.98	2,328.36	-6,357.90	4,590.38	4,307.48	282.90	16.226		
9,000.00	8,990.00	8,971.00	8,990.00	67.74	243.16	91.93	2,328.36	-6,357.90	4,501.37	4,217.36	284.01	15.849		
9,100.00	9,090.00	9,071.00	9,090.00	70.29	243.10	91.89	2,328.36	-6,357.90	4,412.83	4,127.60	285.22	15.471		
9,200.00	9,190.00	9,171.00	9,190.00	72.85	243.04	91.84	2,328.36	-6,357.90	4,324.78	4,038.25	286.53	15.093		
9,300.00	9,290.00	9,271.00	9,290.00	75.44	242.98	91.79	2,328.36	-6,357.90	4,237.27	3,949.33	287.94	14.716		
9,400.00	9,390.00	9,371.00	9,390.00	78.05	242.92	91.74	2,328.36	-6,357.90	4,150.32	3,860.86	289.46	14.338		
9,500.00	9,490.00	9,471.00	9,490.00	80.67	242.86	91.69	2,328.36	-6,357.90	4,063.97	3,772.89	291.09	13.961		
9,600.00	9,590.00	9,571.00	9,590.00	83.31	242.80	91.64	2,328.36	-6,357.90	3,978.26	3,685.44	292.82	13.586		
9,700.00	9,690.00	9,671.00	9,690.00	85.96	242.74	91.60	2,328.36	-6,357.90	3,893.23	3,598.55	294.68	13.212		
9,800.00	9,790.00	9,771.00	9,790.00	88.63	242.67	91.55	2,328.36	-6,357.90	3,808.93	3,512.28	296.65	12.840		
9,900.00	9,890.00	9,871.00	9,890.00	91.30	242.68	91.50	2,328.36	-6,357.90	3,725.40	3,426.58	298.82	12.467		
10,000.00	9,990.00	9,971.00	9,990.00	93.99	242.74	91.45	2,328.36	-6,357.90	3,642.70	3,341.54	301.16	12.095		
10,100.00	10,090.00	10,071.00	10,090.00	96.69	242.80	91.40	2,328.36	-6,357.90	3,560.89	3,257.24	303.64	11.727		
10,200.00	10,190.00	10,171.00	10,190.00	99.40	242.86	91.35	2,328.36	-6,357.90	3,480.03	3,173.77	306.26	11.363		
10,300.00	10,290.00	10,271.00	10,290.00	102.11	242.93	91.31	2,328.36	-6,357.90	3,400.18	3,091.16	309.02	11.003		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LOVELY 1(AB_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	7,009.71	7,009.29	104.83	242.99	91.26	2,328.36	-6,357.90	3,321.43	3,009.51	311.92	10.648		
10,500.00	7,007.54	6,988.54	7,007.54	107.56	242.25	91.21	2,328.36	-6,357.90	3,243.84	2,929.67	314.17	10.325		
10,600.00	7,005.79	6,986.79	7,005.79	110.30	242.19	91.16	2,328.36	-6,357.90	3,167.51	2,850.26	317.25	9.984		
10,700.00	7,004.04	6,985.04	7,004.04	113.04	242.13	91.11	2,328.36	-6,357.90	3,092.54	2,772.05	320.49	9.650		
10,800.00	7,002.29	6,983.29	7,002.29	115.79	242.06	91.06	2,328.36	-6,357.90	3,019.01	2,695.13	323.88	9.321		
10,900.00	7,000.54	6,981.54	7,000.54	118.54	242.00	91.02	2,328.36	-6,357.90	2,947.03	2,619.60	327.43	9.000		
11,000.00	6,998.79	6,979.79	6,998.79	121.30	241.94	90.97	2,328.36	-6,357.90	2,876.74	2,545.59	331.14	8.687		
11,100.00	6,997.04	6,978.04	6,997.04	124.06	241.88	90.92	2,328.36	-6,357.90	2,808.28	2,473.23	335.01	8.382		
11,200.00	6,995.29	6,976.29	6,995.29	126.83	241.82	90.87	2,328.36	-6,357.90	2,741.68	2,402.64	339.04	8.087		
11,300.00	6,993.54	6,974.54	6,993.54	129.60	241.76	90.82	2,328.36	-6,357.90	2,677.20	2,333.98	343.22	7.800		
11,400.00	6,991.80	6,972.80	6,991.80	132.37	241.70	90.77	2,328.36	-6,357.90	2,614.95	2,267.40	347.55	7.524		
11,500.00	6,990.05	6,971.05	6,990.05	135.15	241.64	90.72	2,328.36	-6,357.90	2,555.10	2,203.09	352.02	7.259		
11,600.00	6,988.30	6,969.30	6,988.30	137.93	241.58	90.68	2,328.36	-6,357.90	2,497.82	2,141.22	356.60	7.004		
11,700.00	6,986.55	6,967.55	6,986.55	140.72	241.51	90.63	2,328.36	-6,357.90	2,443.30	2,081.99	361.30	6.762		
11,800.00	6,984.80	6,965.80	6,984.80	143.50	241.45	90.58	2,328.36	-6,357.90	2,391.70	2,025.62	366.09	6.533		
11,900.00	6,983.05	6,964.05	6,983.05	146.29	241.39	90.53	2,328.36	-6,357.90	2,343.25	1,972.31	370.94	6.317		
12,000.00	6,981.30	6,962.30	6,981.30	149.09	241.33	90.48	2,328.36	-6,357.90	2,298.12	1,922.30	375.82	6.115		
12,100.00	6,979.55	6,960.55	6,979.55	151.88	241.27	90.43	2,328.36	-6,357.90	2,256.52	1,875.81	380.71	5.927		
12,200.00	6,977.80	6,958.80	6,977.80	154.68	241.21	90.39	2,328.36	-6,357.90	2,218.65	1,833.09	385.56	5.754		
12,300.00	6,976.05	6,957.05	6,976.05	157.48	241.15	90.34	2,328.36	-6,357.90	2,184.71	1,794.37	390.34	5.597		
12,400.00	6,974.30	6,955.30	6,974.30	160.28	241.09	90.29	2,328.36	-6,357.90	2,154.87	1,759.88	394.99	5.456		
12,500.00	6,972.55	6,953.55	6,972.55	163.08	241.03	90.24	2,328.36	-6,357.90	2,129.32	1,729.84	399.48	5.330		
12,600.00	6,970.80	6,951.80	6,970.80	165.89	240.96	90.19	2,328.36	-6,357.90	2,108.20	1,704.45	403.75	5.222		
12,700.00	6,969.05	6,950.05	6,969.05	168.69	240.90	90.14	2,328.36	-6,357.90	2,091.65	1,683.89	407.76	5.130		
12,800.00	6,967.30	6,948.30	6,967.30	171.50	240.84	90.10	2,328.36	-6,357.90	2,079.78	1,668.31	411.47	5.054		
12,900.00	6,965.55	6,946.55	6,965.55	174.31	240.78	90.05	2,328.36	-6,357.90	2,072.68	1,657.83	414.84	4.996		
12,997.59	6,963.84	6,944.84	6,963.84	177.06	240.72	90.00	2,328.36	-6,357.90	2,070.38	1,652.60	417.77	4.956 CC		
13,000.00	6,963.80	6,944.80	6,963.80	177.12	240.72	90.00	2,328.36	-6,357.90	2,070.38	1,652.54	417.84	4.955		
13,100.00	6,962.05	6,943.05	6,962.05	179.94	240.66	89.95	2,328.36	-6,357.90	2,072.91	1,652.47	420.44	4.930 ES		
13,200.00	6,960.30	6,941.30	6,960.30	182.75	240.60	89.90	2,328.36	-6,357.90	2,080.25	1,657.61	422.63	4.922 SF		
13,300.00	6,958.55	6,939.55	6,958.55	185.57	240.54	89.85	2,328.36	-6,357.90	2,092.34	1,667.94	424.40	4.930		
13,400.00	6,956.80	6,937.80	6,956.80	188.38	240.48	89.81	2,328.36	-6,357.90	2,109.11	1,683.36	425.75	4.954		
13,500.00	6,955.05	6,936.05	6,955.05	191.20	240.42	89.76	2,328.36	-6,357.90	2,130.45	1,703.76	426.69	4.993		
13,600.00	6,953.31	6,934.31	6,953.31	194.02	240.35	89.71	2,328.36	-6,357.90	2,156.21	1,728.98	427.24	5.047		
13,700.00	6,951.56	6,932.56	6,951.56	196.84	240.29	89.66	2,328.36	-6,357.90	2,186.25	1,758.84	427.41	5.115		
13,800.00	6,949.81	6,930.81	6,949.81	199.67	240.23	89.61	2,328.36	-6,357.90	2,220.39	1,793.13	427.25	5.197		
13,900.00	6,948.06	6,929.06	6,948.06	202.49	240.17	89.56	2,328.36	-6,357.90	2,258.44	1,831.66	426.78	5.292		
14,000.00	6,946.31	6,927.31	6,946.31	205.31	240.11	89.51	2,328.36	-6,357.90	2,300.21	1,874.18	426.03	5.399		
14,100.00	6,944.56	6,925.56	6,944.56	208.14	240.05	89.47	2,328.36	-6,357.90	2,345.51	1,920.46	425.04	5.518		
14,200.00	6,942.81	6,923.81	6,942.81	210.96	239.99	89.42	2,328.36	-6,357.90	2,394.12	1,970.28	423.84	5.649		
14,300.00	6,941.06	6,922.06	6,941.06	213.79	239.93	89.37	2,328.36	-6,357.90	2,445.86	2,023.40	422.46	5.790		
14,400.00	6,939.31	6,920.31	6,939.31	216.62	239.87	89.32	2,328.36	-6,357.90	2,500.52	2,079.59	420.93	5.940		
14,500.00	6,937.56	6,918.56	6,937.56	219.44	239.80	89.27	2,328.36	-6,357.90	2,557.93	2,138.65	419.28	6.101		
14,600.00	6,935.81	6,916.81	6,935.81	222.27	239.74	89.22	2,328.36	-6,357.90	2,617.90	2,200.37	417.53	6.270		
14,700.00	6,934.06	6,915.06	6,934.06	225.10	239.68	89.18	2,328.36	-6,357.90	2,680.26	2,264.55	415.71	6.447		
14,800.00	6,932.31	6,913.31	6,932.31	227.93	239.62	89.13	2,328.36	-6,357.90	2,744.84	2,331.00	413.84	6.633		
14,817.75	6,932.00	6,913.00	6,932.00	228.43	239.61	89.12	2,328.36	-6,357.90	2,756.52	2,343.02	413.50	6.666		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LOVELY 14-9(AB_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	16.00	3.28	3.28	-73.93	2,263.22	-7,854.16	8,173.75					
100.00	100.00	84.00	100.00	3.28	3.59	-73.93	2,263.22	-7,854.16	8,173.74	8,166.86	6.88	1,188.474		
200.00	200.00	184.00	200.00	3.34	5.71	-73.93	2,263.22	-7,854.16	8,173.74	8,164.69	9.05	903.145		
300.00	300.00	284.00	300.00	3.44	8.80	-73.93	2,263.22	-7,854.16	8,173.74	8,161.49	12.25	667.366		
400.00	400.00	384.00	400.00	3.60	12.11	-73.93	2,263.22	-7,854.16	8,173.74	8,158.02	15.72	520.096		
500.00	500.00	484.00	500.00	3.81	15.50	-73.93	2,263.22	-7,854.16	8,173.74	8,154.43	19.31	423.336		
600.00	599.98	583.98	599.98	4.05	18.93	-46.57	2,263.22	-7,854.16	8,172.54	8,149.56	22.97	355.744		
700.00	699.86	683.86	699.86	4.32	22.37	-46.62	2,263.22	-7,854.16	8,169.23	8,142.54	26.69	306.124		
800.00	799.72	783.72	799.72	4.62	25.82	-46.65	2,263.22	-7,854.16	8,165.60	8,135.17	30.43	268.297		
900.00	899.58	883.58	899.58	4.93	29.28	-46.67	2,263.22	-7,854.16	8,161.98	8,127.77	34.21	238.562		
1,000.00	999.44	983.44	999.44	5.27	32.75	-46.70	2,263.22	-7,854.16	8,158.36	8,120.35	38.01	214.612		
1,100.00	1,099.31	1,083.31	1,099.31	5.62	36.22	-46.73	2,263.22	-7,854.16	8,154.74	8,112.91	41.83	194.932		
1,200.00	1,199.17	1,183.17	1,199.17	5.98	39.69	-46.75	2,263.22	-7,854.16	8,151.13	8,105.46	45.67	178.486		
1,300.00	1,299.03	1,283.03	1,299.03	6.36	43.17	-46.78	2,263.22	-7,854.16	8,147.51	8,098.00	49.51	164.548		
1,400.00	1,398.89	1,382.89	1,398.89	6.74	46.65	-46.81	2,263.22	-7,854.16	8,143.90	8,090.53	53.37	152.591		
1,500.00	1,498.75	1,482.75	1,498.75	7.13	50.12	-46.84	2,263.22	-7,854.16	8,140.29	8,083.05	57.24	142.226		
1,600.00	1,598.61	1,582.61	1,598.61	7.52	53.60	-46.86	2,263.22	-7,854.16	8,136.68	8,075.57	61.11	133.156		
1,700.00	1,698.47	1,682.47	1,698.47	7.92	57.08	-46.89	2,263.22	-7,854.16	8,133.07	8,068.09	64.98	125.156		
1,800.00	1,798.33	1,782.33	1,798.33	8.32	60.56	-46.92	2,263.22	-7,854.16	8,129.47	8,060.60	68.87	118.048		
1,900.00	1,898.19	1,882.19	1,898.19	8.73	64.05	-46.94	2,263.22	-7,854.16	8,125.87	8,053.11	72.75	111.692		
2,000.00	1,998.05	1,982.05	1,998.05	9.14	67.53	-46.97	2,263.22	-7,854.16	8,122.26	8,045.62	76.64	105.976		
2,100.00	2,097.91	2,081.91	2,097.91	9.55	71.01	-47.00	2,263.22	-7,854.16	8,118.66	8,038.13	80.54	100.808		
2,200.00	2,197.78	2,181.78	2,197.78	9.97	74.49	-47.03	2,263.22	-7,854.16	8,115.07	8,030.63	84.43	96.113		
2,300.00	2,297.64	2,281.64	2,297.64	10.39	77.98	-47.05	2,263.22	-7,854.16	8,111.47	8,023.14	88.33	91.830		
2,400.00	2,397.50	2,381.50	2,397.50	10.81	81.46	-47.08	2,263.22	-7,854.16	8,107.88	8,015.64	92.23	87.907		
2,500.00	2,497.36	2,481.36	2,497.36	11.23	84.94	-47.11	2,263.22	-7,854.16	8,104.28	8,008.15	96.13	84.301		
2,600.00	2,597.22	2,581.22	2,597.22	11.65	88.43	-47.13	2,263.22	-7,854.16	8,100.69	8,000.65	100.04	80.975		
2,700.00	2,697.08	2,681.08	2,697.08	12.07	91.91	-47.16	2,263.22	-7,854.16	8,097.10	7,993.16	103.95	77.898		
2,800.00	2,796.94	2,780.94	2,796.94	12.50	95.39	-47.19	2,263.22	-7,854.16	8,093.52	7,985.66	107.85	75.042		
2,900.00	2,896.80	2,880.80	2,896.80	12.92	98.88	-47.22	2,263.22	-7,854.16	8,089.93	7,978.17	111.76	72.386		
3,000.00	2,996.66	2,980.66	2,996.66	13.35	102.36	-47.24	2,263.22	-7,854.16	8,086.35	7,970.68	115.67	69.908		
3,100.00	3,096.52	3,080.52	3,096.52	13.78	105.85	-47.27	2,263.22	-7,854.16	8,082.77	7,963.18	119.58	67.592		
3,200.00	3,196.38	3,180.38	3,196.38	14.21	109.33	-47.30	2,263.22	-7,854.16	8,079.19	7,955.69	123.49	65.422		
3,300.00	3,296.25	3,280.25	3,296.25	14.64	112.82	-47.33	2,263.22	-7,854.16	8,075.61	7,948.20	127.41	63.384		
3,400.00	3,396.11	3,380.11	3,396.11	15.07	116.30	-47.35	2,263.22	-7,854.16	8,072.03	7,940.71	131.32	61.468		
3,500.00	3,495.97	3,479.97	3,495.97	15.50	119.79	-47.38	2,263.22	-7,854.16	8,068.46	7,933.23	135.23	59.663		
3,600.00	3,595.83	3,579.83	3,595.83	15.93	123.27	-47.41	2,263.22	-7,854.16	8,064.89	7,925.74	139.15	57.959		
3,700.00	3,695.69	3,679.69	3,695.69	16.36	126.76	-47.44	2,263.22	-7,854.16	8,061.32	7,918.25	143.06	56.347		
3,800.00	3,795.55	3,779.55	3,795.55	16.80	130.24	-47.46	2,263.22	-7,854.16	8,057.75	7,910.77	146.98	54.822		
3,900.00	3,895.41	3,879.41	3,895.41	17.23	133.73	-47.49	2,263.22	-7,854.16	8,054.18	7,903.29	150.90	53.375		
4,000.00	3,995.27	3,979.27	3,995.27	17.66	137.21	-47.52	2,263.22	-7,854.16	8,050.62	7,895.80	154.81	52.002		
4,100.00	4,095.13	4,079.13	4,095.13	18.10	140.70	-47.55	2,263.22	-7,854.16	8,047.06	7,888.32	158.73	50.696		
4,200.00	4,194.99	4,178.99	4,194.99	18.53	144.18	-47.57	2,263.22	-7,854.16	8,043.49	7,880.85	162.65	49.453		
4,300.00	4,294.85	4,278.85	4,294.85	18.96	147.67	-47.60	2,263.22	-7,854.16	8,039.94	7,873.37	166.57	48.269		
4,400.00	4,394.71	4,378.71	4,394.71	19.40	151.15	-47.63	2,263.22	-7,854.16	8,036.38	7,865.89	170.49	47.138		
4,500.00	4,494.58	4,478.58	4,494.58	19.83	154.64	-47.66	2,263.22	-7,854.16	8,032.82	7,858.42	174.40	46.059		
4,600.00	4,594.44	4,578.44	4,594.44	20.27	158.12	-47.69	2,263.22	-7,854.16	8,029.27	7,850.95	178.32	45.026		
4,700.00	4,694.30	4,678.30	4,694.30	20.71	161.61	-47.71	2,263.22	-7,854.16	8,025.72	7,843.48	182.24	44.039		
4,800.00	4,794.16	4,778.16	4,794.16	21.14	165.09	-47.74	2,263.22	-7,854.16	8,022.17	7,836.01	186.16	43.092		
4,900.00	4,894.02	4,878.02	4,894.02	21.58	168.58	-47.77	2,263.22	-7,854.16	8,018.62	7,828.54	190.08	42.185		
5,000.00	4,993.88	4,977.88	4,993.88	22.01	172.06	-47.80	2,263.22	-7,854.16	8,015.08	7,821.07	194.00	41.314		
5,100.00	5,093.74	5,077.74	5,093.74	22.45	175.55	-47.82	2,263.22	-7,854.16	8,011.53	7,813.61	197.92	40.478		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LOVELY 14-9(AB_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,177.60	5,193.60	22.89	179.03	-47.85	2,263.22	-7,854.16	8,007.99	7,806.15	201.84	39.674		
5,300.00	5,293.46	5,277.46	5,293.46	23.32	182.52	-47.88	2,263.22	-7,854.16	8,004.45	7,798.69	205.76	38.901		
5,400.00	5,393.32	5,377.32	5,393.32	23.76	186.01	-47.91	2,263.22	-7,854.16	8,000.91	7,791.23	209.69	38.157		
5,500.00	5,493.18	5,477.18	5,493.18	24.20	189.49	-47.94	2,263.22	-7,854.16	7,997.38	7,783.77	213.61	37.440		
5,600.00	5,593.05	5,577.05	5,593.05	24.64	192.98	-47.96	2,263.22	-7,854.16	7,993.84	7,776.31	217.53	36.749		
5,700.00	5,692.91	5,676.91	5,692.91	25.07	196.46	-47.99	2,263.22	-7,854.16	7,990.31	7,768.86	221.45	36.082		
5,800.00	5,792.77	5,776.77	5,792.77	25.51	199.95	-48.02	2,263.22	-7,854.16	7,986.78	7,761.41	225.37	35.438		
5,900.00	5,892.63	5,876.63	5,892.63	25.95	203.43	-48.05	2,263.22	-7,854.16	7,983.25	7,753.96	229.29	34.817		
6,000.00	5,992.49	5,976.49	5,992.49	26.39	206.92	-48.08	2,263.22	-7,854.16	7,979.72	7,746.51	233.21	34.216		
6,100.00	6,092.35	6,076.35	6,092.35	26.82	210.41	-48.11	2,263.22	-7,854.16	7,976.20	7,739.06	237.14	33.635		
6,200.00	6,192.21	6,176.21	6,192.21	27.26	213.89	-48.13	2,263.22	-7,854.16	7,972.68	7,731.62	241.06	33.074		
6,300.00	6,292.07	6,276.07	6,292.07	27.70	217.38	-48.16	2,263.22	-7,854.16	7,969.16	7,724.17	244.98	32.530		
6,400.00	6,391.93	6,375.93	6,391.93	28.14	220.86	-48.19	2,263.22	-7,854.16	7,965.64	7,716.73	248.90	32.003		
6,500.00	6,491.79	6,475.79	6,491.79	28.58	224.35	-9.31	2,263.22	-7,854.16	7,960.11	7,707.29	252.82	31.485		
6,600.00	6,591.65	6,575.65	6,591.65	29.02	227.77	5.06	2,263.22	-7,854.16	7,941.33	7,684.65	256.68	30.939		
6,700.00	6,691.51	6,675.51	6,691.51	29.46	231.05	9.67	2,263.22	-7,854.16	7,907.96	7,647.58	260.37	30.372		
6,800.00	6,791.37	6,775.37	6,791.37	29.92	234.11	12.81	2,263.22	-7,854.16	7,860.82	7,597.01	263.81	29.797		
6,900.00	6,891.23	6,875.23	6,891.23	30.40	236.88	16.01	2,263.22	-7,854.16	7,801.11	7,534.20	266.91	29.228		
7,000.00	6,991.09	6,975.09	6,991.09	30.96	239.28	20.09	2,263.22	-7,854.16	7,730.29	7,460.71	269.58	28.675		
7,100.00	7,090.95	7,074.95	7,090.95	31.62	241.25	26.04	2,263.22	-7,854.16	7,650.14	7,378.36	271.78	28.148		
7,200.00	7,190.81	7,174.81	7,190.81	32.44	242.75	35.66	2,263.22	-7,854.16	7,562.66	7,289.20	273.46	27.655		
7,300.00	7,290.67	7,274.67	7,290.67	33.42	243.74	52.32	2,263.22	-7,854.16	7,470.01	7,195.43	274.58	27.205		
7,400.00	7,390.53	7,374.53	7,390.53	34.55	244.19	79.46	2,263.22	-7,854.16	7,374.51	7,099.36	275.14	26.802		
7,500.00	7,490.39	7,474.39	7,490.39	35.83	244.18	93.47	2,263.22	-7,854.16	7,278.37	7,003.14	275.23	26.445		
7,600.00	7,590.25	7,574.25	7,590.25	37.28	244.12	93.42	2,263.22	-7,854.16	7,182.36	6,907.07	275.29	26.090		
7,700.00	7,690.11	7,674.11	7,690.11	38.89	244.06	93.37	2,263.22	-7,854.16	7,086.45	6,811.07	275.37	25.734		
7,800.00	7,790.00	7,774.00	7,790.00	40.63	244.00	93.32	2,263.22	-7,854.16	6,990.65	6,715.16	275.49	25.375		
7,900.00	7,890.00	7,874.00	7,890.00	42.50	243.94	93.27	2,263.22	-7,854.16	6,894.98	6,619.34	275.64	25.015		
8,000.00	7,990.00	7,974.00	7,990.00	44.47	243.88	93.22	2,263.22	-7,854.16	6,799.43	6,523.61	275.82	24.652		
8,100.00	8,090.00	8,074.00	8,090.00	46.53	243.82	93.18	2,263.22	-7,854.16	6,704.01	6,427.97	276.04	24.286		
8,200.00	8,190.00	8,174.00	8,190.00	48.67	243.76	93.13	2,263.22	-7,854.16	6,608.72	6,332.43	276.30	23.919		
8,300.00	8,290.00	8,274.00	8,290.00	50.89	243.70	93.08	2,263.22	-7,854.16	6,513.58	6,236.99	276.59	23.549		
8,400.00	8,390.00	8,374.00	8,390.00	53.16	243.63	93.03	2,263.22	-7,854.16	6,418.58	6,141.65	276.93	23.178		
8,500.00	8,490.00	8,474.00	8,490.00	55.49	243.57	92.98	2,263.22	-7,854.16	6,323.74	6,046.43	277.31	22.804		
8,600.00	8,590.00	8,574.00	8,590.00	57.86	243.51	92.93	2,263.22	-7,854.16	6,229.05	5,951.31	277.74	22.428		
8,700.00	8,690.00	8,674.00	8,690.00	60.28	243.45	92.88	2,263.22	-7,854.16	6,134.54	5,856.32	278.21	22.050		
8,800.00	8,790.00	8,774.00	8,790.00	62.74	243.39	92.83	2,263.22	-7,854.16	6,040.20	5,761.46	278.74	21.670		
8,900.00	8,890.00	8,874.00	8,890.00	65.23	243.33	92.78	2,263.22	-7,854.16	5,946.04	5,666.73	279.31	21.288		
9,000.00	8,990.00	8,974.00	8,990.00	67.74	243.27	92.73	2,263.22	-7,854.16	5,852.08	5,572.14	279.94	20.904		
9,100.00	9,090.00	9,074.00	9,090.00	70.29	243.21	92.68	2,263.22	-7,854.16	5,758.32	5,477.69	280.63	20.519		
9,200.00	9,190.00	9,174.00	9,190.00	72.85	243.15	92.63	2,263.22	-7,854.16	5,664.78	5,383.40	281.38	20.132		
9,300.00	9,290.00	9,274.00	9,290.00	75.44	243.08	92.58	2,263.22	-7,854.16	5,571.46	5,289.27	282.18	19.744		
9,400.00	9,390.00	9,374.00	9,390.00	78.05	243.02	92.53	2,263.22	-7,854.16	5,478.37	5,195.32	283.05	19.355		
9,500.00	9,490.00	9,474.00	9,490.00	80.67	242.96	92.48	2,263.22	-7,854.16	5,385.53	5,101.55	283.98	18.964		
9,600.00	9,590.00	9,574.00	9,590.00	83.31	242.90	92.43	2,263.22	-7,854.16	5,292.95	5,007.97	284.99	18.573		
9,700.00	9,690.00	9,674.00	9,690.00	85.96	242.84	92.38	2,263.22	-7,854.16	5,200.65	4,914.59	286.06	18.181		
9,800.00	9,790.00	9,774.00	9,790.00	88.63	242.78	92.33	2,263.22	-7,854.16	5,108.63	4,821.43	287.20	17.788		
9,900.00	9,890.00	9,874.00	9,890.00	91.30	242.72	92.28	2,263.22	-7,854.16	5,016.92	4,728.50	288.42	17.395		
10,000.00	9,990.00	9,974.00	9,990.00	93.99	242.66	92.23	2,263.22	-7,854.16	4,925.53	4,635.82	289.71	17.001		
10,100.00	10,090.00	10,074.00	10,090.00	96.69	242.70	92.18	2,263.22	-7,854.16	4,834.48	4,543.29	291.19	16.602		
10,200.00	10,190.00	10,174.00	10,190.00	99.40	242.76	92.13	2,263.22	-7,854.16	4,743.80	4,451.02	292.77	16.203		
10,300.00	10,290.00	10,274.00	10,290.00	102.11	242.82	92.08	2,263.22	-7,854.16	4,653.49	4,359.05	294.44	15.804		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LOVELY 14-9(AB_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	7,006.71	7,009.29	104.83	242.88	92.03	2,263.22	-7,854.16	4,563.58	4,267.38	296.20	15.407		
10,500.00	7,007.54	7,008.46	7,007.54	107.56	242.94	91.98	2,263.22	-7,854.16	4,474.11	4,176.06	298.05	15.011		
10,600.00	7,005.79	6,989.79	7,005.79	110.30	242.29	91.93	2,263.22	-7,854.16	4,385.09	4,085.80	299.29	14.652		
10,700.00	7,004.04	6,988.04	7,004.04	113.04	242.23	91.89	2,263.22	-7,854.16	4,296.55	3,995.33	301.21	14.264		
10,800.00	7,002.29	6,986.29	7,002.29	115.79	242.17	91.84	2,263.22	-7,854.16	4,208.52	3,905.27	303.25	13.878		
10,900.00	7,000.54	6,984.54	7,000.54	118.54	242.11	91.79	2,263.22	-7,854.16	4,121.04	3,815.65	305.39	13.494		
11,000.00	6,998.79	6,982.79	6,998.79	121.30	242.05	91.74	2,263.22	-7,854.16	4,034.14	3,726.49	307.64	13.113		
11,100.00	6,997.04	6,981.04	6,997.04	124.06	241.99	91.69	2,263.22	-7,854.16	3,947.85	3,637.84	310.01	12.734		
11,200.00	6,995.29	6,979.29	6,995.29	126.83	241.92	91.64	2,263.22	-7,854.16	3,862.23	3,549.73	312.51	12.359		
11,300.00	6,993.54	6,977.54	6,993.54	129.60	241.86	91.59	2,263.22	-7,854.16	3,777.32	3,462.19	315.13	11.986		
11,400.00	6,991.80	6,975.80	6,991.80	132.37	241.80	91.54	2,263.22	-7,854.16	3,693.16	3,375.27	317.89	11.618		
11,500.00	6,990.05	6,974.05	6,990.05	135.15	241.74	91.49	2,263.22	-7,854.16	3,609.81	3,289.02	320.78	11.253		
11,600.00	6,988.30	6,972.30	6,988.30	137.93	241.68	91.44	2,263.22	-7,854.16	3,527.32	3,203.50	323.82	10.893		
11,700.00	6,986.55	6,970.55	6,986.55	140.72	241.62	91.39	2,263.22	-7,854.16	3,445.76	3,118.75	327.01	10.537		
11,800.00	6,984.80	6,968.80	6,984.80	143.50	241.56	91.34	2,263.22	-7,854.16	3,365.19	3,034.84	330.35	10.187		
11,900.00	6,983.05	6,967.05	6,983.05	146.29	241.50	91.29	2,263.22	-7,854.16	3,285.69	2,951.84	333.85	9.842		
12,000.00	6,981.30	6,965.30	6,981.30	149.09	241.44	91.24	2,263.22	-7,854.16	3,207.34	2,869.82	337.52	9.503		
12,100.00	6,979.55	6,963.55	6,979.55	151.88	241.37	91.19	2,263.22	-7,854.16	3,130.22	2,788.87	341.35	9.170		
12,200.00	6,977.80	6,961.80	6,977.80	154.68	241.31	91.14	2,263.22	-7,854.16	3,054.43	2,709.06	345.36	8.844		
12,300.00	6,976.05	6,960.05	6,976.05	157.48	241.25	91.09	2,263.22	-7,854.16	2,980.06	2,630.51	349.54	8.526		
12,400.00	6,974.30	6,958.30	6,974.30	160.28	241.19	91.04	2,263.22	-7,854.16	2,907.23	2,553.32	353.91	8.215		
12,500.00	6,972.55	6,956.55	6,972.55	163.08	241.13	90.99	2,263.22	-7,854.16	2,836.05	2,477.60	358.45	7.912		
12,600.00	6,970.80	6,954.80	6,970.80	165.89	241.07	90.94	2,263.22	-7,854.16	2,766.66	2,403.49	363.17	7.618		
12,700.00	6,969.05	6,953.05	6,969.05	168.69	241.01	90.89	2,263.22	-7,854.16	2,699.19	2,331.13	368.06	7.334		
12,800.00	6,967.30	6,951.30	6,967.30	171.50	240.95	90.84	2,263.22	-7,854.16	2,633.78	2,260.66	373.12	7.059		
12,900.00	6,965.55	6,949.55	6,965.55	174.31	240.89	90.79	2,263.22	-7,854.16	2,570.60	2,192.26	378.35	6.794		
13,000.00	6,963.80	6,947.80	6,963.80	177.12	240.83	90.74	2,263.22	-7,854.16	2,509.82	2,126.10	383.72	6.541		
13,100.00	6,962.05	6,946.05	6,962.05	179.94	240.76	90.69	2,263.22	-7,854.16	2,451.61	2,062.38	389.23	6.299		
13,200.00	6,960.30	6,944.30	6,960.30	182.75	240.70	90.64	2,263.22	-7,854.16	2,396.15	2,001.31	394.84	6.069		
13,300.00	6,958.55	6,942.55	6,958.55	185.57	240.64	90.59	2,263.22	-7,854.16	2,343.66	1,943.11	400.54	5.851		
13,400.00	6,956.80	6,940.80	6,956.80	188.38	240.58	90.54	2,263.22	-7,854.16	2,294.32	1,888.02	406.30	5.647		
13,500.00	6,955.05	6,939.05	6,955.05	191.20	240.52	90.49	2,263.22	-7,854.16	2,248.34	1,836.27	412.07	5.456		
13,600.00	6,953.31	6,937.31	6,953.31	194.02	240.46	90.44	2,263.22	-7,854.16	2,205.95	1,788.13	417.81	5.280		
13,700.00	6,951.56	6,935.56	6,951.56	196.84	240.40	90.39	2,263.22	-7,854.16	2,167.34	1,743.86	423.48	5.118		
13,800.00	6,949.81	6,933.81	6,949.81	199.67	240.34	90.35	2,263.22	-7,854.16	2,132.72	1,703.70	429.02	4.971		
13,900.00	6,948.06	6,932.06	6,948.06	202.49	240.28	90.30	2,263.22	-7,854.16	2,102.29	1,667.92	434.37	4.840		
14,000.00	6,946.31	6,930.31	6,946.31	205.31	240.21	90.25	2,263.22	-7,854.16	2,076.23	1,636.76	439.47	4.724		
14,100.00	6,944.56	6,928.56	6,944.56	208.14	240.15	90.20	2,263.22	-7,854.16	2,054.72	1,610.45	444.27	4.625		
14,200.00	6,942.81	6,926.81	6,942.81	210.96	240.09	90.15	2,263.22	-7,854.16	2,037.89	1,589.18	448.71	4.542		
14,300.00	6,941.06	6,925.06	6,941.06	213.79	240.03	90.10	2,263.22	-7,854.16	2,025.86	1,573.13	452.73	4.475		
14,400.00	6,939.31	6,923.31	6,939.31	216.62	239.97	90.05	2,263.22	-7,854.16	2,018.71	1,562.42	456.29	4.424		
14,494.53	6,937.66	6,921.66	6,937.66	219.29	239.91	90.00	2,263.22	-7,854.16	2,016.50	1,557.30	459.20	4.391 CC		
14,500.00	6,937.56	6,921.56	6,937.56	219.44	239.91	90.00	2,263.22	-7,854.16	2,016.51	1,557.15	459.35	4.390 ES		
14,600.00	6,935.81	6,919.81	6,935.81	222.27	239.85	89.95	2,263.22	-7,854.16	2,019.25	1,557.37	461.89	4.372		
14,700.00	6,934.06	6,918.06	6,934.06	225.10	239.79	89.90	2,263.22	-7,854.16	2,026.94	1,563.05	463.88	4.370 SF		
14,800.00	6,932.31	6,916.31	6,932.31	227.93	239.73	89.85	2,263.22	-7,854.16	2,039.50	1,574.16	465.33	4.383		
14,817.75	6,932.00	6,916.00	6,932.00	228.43	239.71	89.84	2,263.22	-7,854.16	2,042.23	1,576.70	465.53	4.387		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LUCAS SCHOOL 1(TA_150CC) - OH - OH												Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	1.00	0.00	3.28	3.28	-56.76	2,378.81	-3,629.62	4,339.69				
100.00	100.00	101.00	100.00	3.28	3.73	-56.76	2,378.81	-3,629.62	4,339.69	4,332.67	7.02	618.476	
200.00	200.00	201.00	200.00	3.34	6.21	-56.76	2,378.81	-3,629.62	4,339.69	4,330.15	9.55	454.628	
300.00	300.00	301.00	300.00	3.44	9.36	-56.76	2,378.81	-3,629.62	4,339.69	4,326.89	12.80	339.009	
400.00	400.00	401.00	400.00	3.60	12.68	-56.76	2,378.81	-3,629.62	4,339.69	4,323.40	16.29	266.432	
500.00	500.00	501.00	500.00	3.81	16.08	-56.76	2,378.81	-3,629.62	4,339.69	4,319.80	19.89	218.201	
600.00	599.98	600.98	599.98	4.05	19.51	-29.41	2,378.81	-3,629.62	4,338.17	4,314.61	23.56	184.148	
700.00	699.86	700.86	699.86	4.32	22.96	-29.46	2,378.81	-3,629.62	4,333.97	4,306.70	27.27	158.902	
800.00	799.72	800.72	799.72	4.62	26.41	-29.49	2,378.81	-3,629.62	4,329.38	4,298.36	31.03	139.544	
900.00	899.58	900.58	899.58	4.93	29.87	-29.53	2,378.81	-3,629.62	4,324.79	4,289.99	34.80	124.260	
1,000.00	999.44	1,000.44	999.44	5.27	33.34	-29.56	2,378.81	-3,629.62	4,320.20	4,281.60	38.61	111.903	
1,100.00	1,099.31	1,100.31	1,099.31	5.62	36.81	-29.59	2,378.81	-3,629.62	4,315.62	4,273.19	42.43	101.719	
1,200.00	1,199.17	1,200.17	1,199.17	5.98	40.29	-29.63	2,378.81	-3,629.62	4,311.03	4,264.77	46.26	93.188	
1,300.00	1,299.03	1,300.03	1,299.03	6.36	43.76	-29.66	2,378.81	-3,629.62	4,306.45	4,256.34	50.11	85.943	
1,400.00	1,398.89	1,400.11	1,398.89	6.74	47.25	-29.70	2,378.81	-3,629.62	4,301.86	4,247.89	53.97	79.705	
1,500.00	1,498.75	1,500.25	1,498.75	7.13	50.73	-29.73	2,378.81	-3,629.62	4,297.28	4,239.44	57.85	74.287	
1,600.00	1,598.61	1,600.39	1,598.61	7.52	54.22	-29.77	2,378.81	-3,629.62	4,292.70	4,230.97	61.73	69.542	
1,700.00	1,698.47	1,700.53	1,698.47	7.92	57.71	-29.80	2,378.81	-3,629.62	4,288.12	4,222.51	65.62	65.352	
1,800.00	1,798.33	1,800.67	1,798.33	8.32	61.20	-29.84	2,378.81	-3,629.62	4,283.55	4,214.04	69.51	61.627	
1,900.00	1,898.19	1,900.81	1,898.19	8.73	64.70	-29.87	2,378.81	-3,629.62	4,278.97	4,205.57	73.40	58.293	
2,000.00	1,998.05	2,000.95	1,998.05	9.14	68.19	-29.91	2,378.81	-3,629.62	4,274.40	4,197.10	77.30	55.293	
2,100.00	2,097.91	2,101.09	2,097.91	9.55	71.68	-29.94	2,378.81	-3,629.62	4,269.83	4,188.62	81.21	52.579	
2,200.00	2,197.78	2,201.22	2,197.78	9.97	75.17	-29.98	2,378.81	-3,629.62	4,265.26	4,180.15	85.11	50.113	
2,300.00	2,297.64	2,301.36	2,297.64	10.39	78.66	-30.02	2,378.81	-3,629.62	4,260.69	4,171.67	89.02	47.861	
2,400.00	2,397.50	2,401.50	2,397.50	10.81	82.16	-30.05	2,378.81	-3,629.62	4,256.13	4,163.19	92.93	45.798	
2,500.00	2,497.36	2,501.64	2,497.36	11.23	85.65	-30.09	2,378.81	-3,629.62	4,251.56	4,154.71	96.85	43.900	
2,600.00	2,597.22	2,601.78	2,597.22	11.65	89.14	-30.12	2,378.81	-3,629.62	4,247.00	4,146.24	100.76	42.150	
2,700.00	2,697.08	2,701.92	2,697.08	12.07	92.64	-30.16	2,378.81	-3,629.62	4,242.44	4,137.76	104.68	40.529	
2,800.00	2,796.94	2,802.06	2,796.94	12.50	96.13	-30.19	2,378.81	-3,629.62	4,237.88	4,129.28	108.59	39.025	
2,900.00	2,896.80	2,902.20	2,896.80	12.92	99.62	-30.23	2,378.81	-3,629.62	4,233.32	4,120.81	112.51	37.626	
3,000.00	2,996.66	3,002.34	2,996.66	13.35	103.12	-30.27	2,378.81	-3,629.62	4,228.76	4,112.33	116.43	36.320	
3,100.00	3,096.52	3,102.48	3,096.52	13.78	106.61	-30.30	2,378.81	-3,629.62	4,224.21	4,103.85	120.35	35.099	
3,200.00	3,196.38	3,202.62	3,196.38	14.21	110.11	-30.34	2,378.81	-3,629.62	4,219.65	4,095.38	124.27	33.954	
3,300.00	3,296.25	3,302.75	3,296.25	14.64	113.60	-30.37	2,378.81	-3,629.62	4,215.10	4,086.91	128.20	32.880	
3,400.00	3,396.11	3,402.89	3,396.11	15.07	117.10	-30.41	2,378.81	-3,629.62	4,210.55	4,078.43	132.12	31.869	
3,500.00	3,495.97	3,503.03	3,495.97	15.50	120.59	-30.45	2,378.81	-3,629.62	4,206.00	4,069.96	136.04	30.917	
3,600.00	3,595.83	3,603.17	3,595.83	15.93	124.08	-30.48	2,378.81	-3,629.62	4,201.46	4,061.49	139.97	30.017	
3,700.00	3,695.69	3,703.31	3,695.69	16.36	127.58	-30.52	2,378.81	-3,629.62	4,196.91	4,053.02	143.89	29.167	
3,800.00	3,795.55	3,803.45	3,795.55	16.80	131.07	-30.56	2,378.81	-3,629.62	4,192.37	4,044.55	147.82	28.362	
3,900.00	3,895.41	3,903.59	3,895.41	17.23	134.57	-30.59	2,378.81	-3,629.62	4,187.83	4,036.08	151.75	27.598	
4,000.00	3,995.27	4,003.73	3,995.27	17.66	138.06	-30.63	2,378.81	-3,629.62	4,183.29	4,027.62	155.67	26.872	
4,100.00	4,095.13	4,103.87	4,095.13	18.10	141.56	-30.67	2,378.81	-3,629.62	4,178.75	4,019.15	159.60	26.183	
4,200.00	4,194.99	4,204.01	4,194.99	18.53	145.05	-30.70	2,378.81	-3,629.62	4,174.21	4,010.69	163.53	25.526	
4,300.00	4,294.85	4,304.15	4,294.85	18.96	148.55	-30.74	2,378.81	-3,629.62	4,169.68	4,002.22	167.45	24.900	
4,400.00	4,394.71	4,404.29	4,394.71	19.40	152.04	-30.78	2,378.81	-3,629.62	4,165.15	3,993.76	171.38	24.303	
4,500.00	4,494.58	4,504.42	4,494.58	19.83	155.54	-30.81	2,378.81	-3,629.62	4,160.62	3,985.30	175.31	23.733	
4,600.00	4,594.44	4,604.56	4,594.44	20.27	159.03	-30.85	2,378.81	-3,629.62	4,156.09	3,976.85	179.24	23.187	
4,700.00	4,694.30	4,704.70	4,694.30	20.71	162.53	-30.89	2,378.81	-3,629.62	4,151.56	3,968.39	183.17	22.665	
4,800.00	4,794.16	4,804.84	4,794.16	21.14	166.02	-30.93	2,378.81	-3,629.62	4,147.03	3,959.93	187.10	22.165	
4,900.00	4,894.02	4,904.98	4,894.02	21.58	169.52	-30.96	2,378.81	-3,629.62	4,142.51	3,951.48	191.03	21.685	
5,000.00	4,993.88	5,005.12	4,993.88	22.01	173.01	-31.00	2,378.81	-3,629.62	4,137.99	3,943.03	194.96	21.225	
5,100.00	5,093.74	5,105.26	5,093.74	22.45	176.51	-31.04	2,378.81	-3,629.62	4,133.47	3,934.58	198.89	20.783	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LUCAS SCHOOL 1(TA_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,205.40	5,193.60	22.89	180.01	-31.08	2,378.81	-3,629.62	4,128.95	3,926.13	202.82	20.358		
5,300.00	5,293.46	5,305.54	5,293.46	23.32	183.50	-31.11	2,378.81	-3,629.62	4,124.43	3,917.68	206.75	19.949		
5,400.00	5,393.32	5,405.68	5,393.32	23.76	187.00	-31.15	2,378.81	-3,629.62	4,119.92	3,909.24	210.68	19.555		
5,500.00	5,493.18	5,505.82	5,493.18	24.20	190.49	-31.19	2,378.81	-3,629.62	4,115.40	3,900.79	214.61	19.176		
5,600.00	5,593.05	5,605.95	5,593.05	24.64	193.99	-31.23	2,378.81	-3,629.62	4,110.89	3,892.35	218.54	18.810		
5,700.00	5,692.91	5,706.09	5,692.91	25.07	197.48	-31.27	2,378.81	-3,629.62	4,106.38	3,883.91	222.47	18.458		
5,800.00	5,792.77	5,806.23	5,792.77	25.51	200.98	-31.30	2,378.81	-3,629.62	4,101.87	3,875.47	226.41	18.117		
5,900.00	5,892.63	5,906.37	5,892.63	25.95	204.47	-31.34	2,378.81	-3,629.62	4,097.37	3,867.03	230.34	17.789		
6,000.00	5,992.49	6,006.51	5,992.49	26.39	207.97	-31.38	2,378.81	-3,629.62	4,092.86	3,858.59	234.27	17.471		
6,100.00	6,092.35	6,106.65	6,092.35	26.82	211.46	-31.42	2,378.81	-3,629.62	4,088.36	3,850.16	238.20	17.164		
6,200.00	6,192.21	6,206.79	6,192.21	27.26	214.96	-31.46	2,378.81	-3,629.62	4,083.86	3,841.73	242.13	16.866		
6,300.00	6,292.07	6,306.93	6,292.07	27.70	218.45	-31.50	2,378.81	-3,629.62	4,079.36	3,833.30	246.06	16.578		
6,400.00	6,391.93	6,407.07	6,391.93	28.14	221.95	-31.54	2,378.81	-3,629.62	4,074.87	3,824.87	250.00	16.300		
6,500.00	6,491.69	6,507.31	6,491.69	28.58	225.45	7.45	2,378.81	-3,629.62	4,068.60	3,814.67	253.93	16.022		
6,600.00	6,589.80	6,609.20	6,589.80	29.02	229.01	22.33	2,378.81	-3,629.62	4,050.66	3,792.74	257.92	15.705		
6,700.00	6,683.86	6,684.86	6,683.86	29.46	231.65	27.84	2,378.81	-3,629.62	4,019.95	3,758.97	260.98	15.403		
6,800.00	6,771.56	6,772.56	6,771.56	29.92	234.71	32.33	2,378.81	-3,629.62	3,977.31	3,712.87	264.43	15.041		
6,900.00	6,850.72	6,851.72	6,850.72	30.40	237.47	37.32	2,378.81	-3,629.62	3,923.90	3,656.34	267.56	14.666		
7,000.00	6,919.40	6,920.40	6,919.40	30.96	239.87	43.54	2,378.81	-3,629.62	3,861.21	3,590.91	270.29	14.285		
7,100.00	6,975.92	6,976.92	6,975.92	31.62	241.84	51.50	2,378.81	-3,629.62	3,790.97	3,518.38	272.60	13.907		
7,200.00	7,018.87	7,019.87	7,018.87	32.44	243.34	61.49	2,378.81	-3,629.62	3,715.13	3,440.69	274.44	13.537		
7,300.00	7,047.21	7,048.21	7,047.21	33.42	244.33	73.30	2,378.81	-3,629.62	3,635.75	3,359.94	275.80	13.183		
7,400.00	7,060.23	7,061.23	7,060.23	34.55	244.78	85.89	2,378.81	-3,629.62	3,554.97	3,278.28	276.69	12.848		
7,500.00	7,060.03	7,061.03	7,060.03	35.83	244.78	91.32	2,378.81	-3,629.62	3,474.76	3,197.56	277.20	12.535		
7,600.00	7,058.28	7,059.28	7,058.28	37.28	244.72	91.27	2,378.81	-3,629.62	3,395.65	3,117.85	277.79	12.224		
7,700.00	7,056.53	7,057.53	7,056.53	38.89	244.66	91.23	2,378.81	-3,629.62	3,317.66	3,039.13	278.53	11.911		
7,800.00	7,054.78	7,055.78	7,054.78	40.63	244.59	91.18	2,378.81	-3,629.62	3,240.88	2,961.45	279.43	11.598		
7,900.00	7,053.03	7,054.03	7,053.03	42.50	244.53	91.13	2,378.81	-3,629.62	3,165.40	2,884.92	280.48	11.286		
8,000.00	7,051.28	7,052.28	7,051.28	44.47	244.47	91.08	2,378.81	-3,629.62	3,091.30	2,809.60	281.70	10.974		
8,100.00	7,049.53	7,050.53	7,049.53	46.53	244.41	91.03	2,378.81	-3,629.62	3,018.70	2,735.61	283.10	10.663		
8,200.00	7,047.78	7,048.78	7,047.78	48.67	244.35	90.99	2,378.81	-3,629.62	2,947.71	2,663.04	284.67	10.355		
8,300.00	7,046.03	7,047.03	7,046.03	50.89	244.29	90.94	2,378.81	-3,629.62	2,878.44	2,592.02	286.41	10.050		
8,400.00	7,044.28	7,045.28	7,044.28	53.16	244.23	90.89	2,378.81	-3,629.62	2,811.01	2,522.67	288.34	9.749		
8,500.00	7,042.53	7,043.53	7,042.53	55.49	244.17	90.84	2,378.81	-3,629.62	2,745.57	2,455.13	290.44	9.453		
8,600.00	7,040.78	7,041.78	7,040.78	57.86	244.11	90.80	2,378.81	-3,629.62	2,682.27	2,389.55	292.72	9.163		
8,700.00	7,039.03	7,040.03	7,039.03	60.28	244.04	90.75	2,378.81	-3,629.62	2,621.25	2,326.08	295.17	8.881		
8,800.00	7,037.28	7,038.28	7,037.28	62.74	243.98	90.70	2,378.81	-3,629.62	2,562.68	2,264.90	297.78	8.606		
8,900.00	7,035.53	7,036.53	7,035.53	65.23	243.92	90.65	2,378.81	-3,629.62	2,506.73	2,206.18	300.55	8.341		
9,000.00	7,033.78	7,034.78	7,033.78	67.74	243.86	90.61	2,378.81	-3,629.62	2,453.58	2,150.12	303.46	8.085		
9,100.00	7,032.03	7,033.03	7,032.03	70.29	243.80	90.56	2,378.81	-3,629.62	2,403.42	2,096.91	306.51	7.841		
9,200.00	7,030.28	7,031.28	7,030.28	72.85	243.74	90.51	2,378.81	-3,629.62	2,356.43	2,046.76	309.67	7.610		
9,300.00	7,028.54	7,029.54	7,028.54	75.44	243.68	90.46	2,378.81	-3,629.62	2,312.81	1,999.88	312.93	7.391		
9,400.00	7,026.79	7,027.79	7,026.79	78.05	243.62	90.41	2,378.81	-3,629.62	2,272.76	1,956.49	316.27	7.186		
9,500.00	7,025.04	7,026.04	7,025.04	80.67	243.56	90.37	2,378.81	-3,629.62	2,236.46	1,916.80	319.66	6.996		
9,600.00	7,023.29	7,024.29	7,023.29	83.31	243.49	90.32	2,378.81	-3,629.62	2,204.11	1,881.03	323.08	6.822		
9,700.00	7,021.54	7,022.54	7,021.54	85.96	243.43	90.27	2,378.81	-3,629.62	2,175.87	1,849.38	326.49	6.664		
9,800.00	7,019.79	7,020.79	7,019.79	88.63	243.37	90.22	2,378.81	-3,629.62	2,151.91	1,822.04	329.87	6.523		
9,900.00	7,018.04	7,019.04	7,018.04	91.30	243.31	90.18	2,378.81	-3,629.62	2,132.38	1,799.19	333.19	6.400		
10,000.00	7,016.29	7,017.29	7,016.29	93.99	243.25	90.13	2,378.81	-3,629.62	2,117.39	1,780.98	336.41	6.294		
10,100.00	7,014.54	7,015.54	7,014.54	96.69	243.19	90.08	2,378.81	-3,629.62	2,107.04	1,767.55	339.50	6.206		
10,200.00	7,012.79	7,013.79	7,012.79	99.40	243.13	90.03	2,378.81	-3,629.62	2,101.41	1,758.98	342.43	6.137		
10,268.59	7,011.59	7,012.59	7,011.59	101.26	243.09	90.00	2,378.81	-3,629.62	2,100.29	1,755.95	344.34	6.100 CC		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LUCAS SCHOOL 1(TA_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	7,011.04	7,012.04	7,011.04	102.11	243.07	89.99	2,378.81	-3,629.62	2,100.52	1,755.35	345.18	6.085 ES		
10,400.00	7,009.29	7,010.29	7,009.29	104.83	243.01	89.94	2,378.81	-3,629.62	2,104.40	1,756.67	347.72	6.052		
10,500.00	7,007.54	7,008.54	7,007.54	107.56	242.95	89.89	2,378.81	-3,629.62	2,113.00	1,762.95	350.04	6.036 SF		
10,600.00	7,005.79	7,006.79	7,005.79	110.30	242.88	89.84	2,378.81	-3,629.62	2,126.27	1,774.14	352.13	6.038		
10,700.00	7,004.04	7,005.04	7,004.04	113.04	242.82	89.79	2,378.81	-3,629.62	2,144.12	1,790.15	353.98	6.057		
10,800.00	7,002.29	7,003.29	7,002.29	115.79	242.76	89.75	2,378.81	-3,629.62	2,166.45	1,810.88	355.58	6.093		
10,900.00	7,000.54	7,001.54	7,000.54	118.54	242.70	89.70	2,378.81	-3,629.62	2,193.12	1,836.18	356.94	6.144		
11,000.00	6,998.79	7,000.21	6,998.79	121.30	242.65	89.65	2,378.81	-3,629.62	2,223.96	1,865.88	358.08	6.211		
11,100.00	6,997.04	7,001.96	6,997.04	124.06	242.72	89.60	2,378.81	-3,629.62	2,258.81	1,899.70	359.11	6.290		
11,200.00	6,995.29	7,003.71	6,995.29	126.83	242.78	89.56	2,378.81	-3,629.62	2,297.49	1,937.56	359.93	6.383		
11,300.00	6,993.54	7,005.46	6,993.54	129.60	242.84	89.51	2,378.81	-3,629.62	2,339.81	1,979.25	360.55	6.489		
11,400.00	6,991.80	7,007.21	6,991.80	132.37	242.90	89.46	2,378.81	-3,629.62	2,385.56	2,024.56	361.00	6.608		
11,500.00	6,990.05	7,008.95	6,990.05	135.15	242.96	89.41	2,378.81	-3,629.62	2,434.57	2,073.28	361.29	6.739		
11,600.00	6,988.30	7,009.30	6,988.30	137.93	242.27	89.36	2,378.81	-3,629.62	2,486.63	2,125.94	360.69	6.894		
11,700.00	6,986.55	7,007.55	6,986.55	140.72	242.21	89.32	2,378.81	-3,629.62	2,541.56	2,180.97	360.58	7.048		
11,800.00	6,984.80	7,005.80	6,984.80	143.50	242.15	89.27	2,378.81	-3,629.62	2,599.17	2,238.80	360.37	7.213		
11,900.00	6,983.05	7,004.05	6,983.05	146.29	242.09	89.22	2,378.81	-3,629.62	2,659.30	2,299.24	360.06	7.386		
12,000.00	6,981.30	7,002.30	6,981.30	149.09	242.03	89.17	2,378.81	-3,629.62	2,721.78	2,362.11	359.67	7.567		
12,100.00	6,979.55	7,000.55	6,979.55	151.88	241.97	89.13	2,378.81	-3,629.62	2,786.44	2,427.23	359.21	7.757		
12,200.00	6,977.80	7,000.80	6,977.80	154.68	241.91	89.08	2,378.81	-3,629.62	2,853.14	2,494.45	358.69	7.954		
12,300.00	6,976.05	7,000.05	6,976.05	157.48	241.85	89.03	2,378.81	-3,629.62	2,921.74	2,563.62	358.12	8.158		
12,400.00	6,974.30	7,000.30	6,974.30	160.28	241.78	88.98	2,378.81	-3,629.62	2,992.11	2,634.59	357.52	8.369		
12,500.00	6,972.55	7,000.55	6,972.55	163.08	241.72	88.94	2,378.81	-3,629.62	3,064.13	2,707.24	356.89	8.586		
12,600.00	6,970.80	7,000.80	6,970.80	165.89	241.66	88.89	2,378.81	-3,629.62	3,137.68	2,781.45	356.23	8.808		
12,700.00	6,969.05	7,000.05	6,969.05	168.69	241.60	88.84	2,378.81	-3,629.62	3,212.65	2,857.10	355.55	9.036		
12,800.00	6,967.30	7,000.30	6,967.30	171.50	241.54	88.79	2,378.81	-3,629.62	3,288.96	2,934.10	354.86	9.268		
12,900.00	6,965.55	7,000.55	6,965.55	174.31	241.48	88.74	2,378.81	-3,629.62	3,366.51	3,012.34	354.17	9.505		
13,000.00	6,963.80	7,000.80	6,963.80	177.12	241.42	88.70	2,378.81	-3,629.62	3,445.22	3,091.75	353.47	9.747		
13,100.00	6,962.05	7,001.05	6,962.05	179.94	241.36	88.65	2,378.81	-3,629.62	3,525.00	3,172.23	352.77	9.992		
13,200.00	6,960.30	7,001.30	6,960.30	182.75	241.30	88.60	2,378.81	-3,629.62	3,605.79	3,253.72	352.07	10.242		
13,300.00	6,958.55	7,001.55	6,958.55	185.57	241.24	88.55	2,378.81	-3,629.62	3,687.52	3,336.15	351.37	10.495		
13,400.00	6,956.80	7,001.80	6,956.80	188.38	241.17	88.51	2,378.81	-3,629.62	3,770.14	3,419.45	350.69	10.751		
13,500.00	6,955.05	7,002.05	6,955.05	191.20	241.11	88.46	2,378.81	-3,629.62	3,853.57	3,503.57	350.00	11.010		
13,600.00	6,953.31	7,002.31	6,953.31	194.02	241.05	88.41	2,378.81	-3,629.62	3,937.78	3,588.45	349.33	11.272		
13,700.00	6,951.56	7,002.56	6,951.56	196.84	240.99	88.36	2,378.81	-3,629.62	4,022.71	3,674.04	348.67	11.537		
13,800.00	6,949.81	7,002.81	6,949.81	199.67	240.93	88.32	2,378.81	-3,629.62	4,108.31	3,760.29	348.02	11.805		
13,900.00	6,948.06	7,003.06	6,948.06	202.49	240.87	88.27	2,378.81	-3,629.62	4,194.56	3,847.18	347.38	12.075		
14,000.00	6,946.31	7,003.31	6,946.31	205.31	240.81	88.22	2,378.81	-3,629.62	4,281.40	3,934.64	346.75	12.347		
14,100.00	6,944.56	7,003.56	6,944.56	208.14	240.75	88.17	2,378.81	-3,629.62	4,368.80	4,022.66	346.14	12.622		
14,200.00	6,942.81	7,003.81	6,942.81	210.96	240.69	88.12	2,378.81	-3,629.62	4,456.73	4,111.20	345.53	12.898		
14,300.00	6,941.06	7,004.06	6,941.06	213.79	240.62	88.08	2,378.81	-3,629.62	4,545.16	4,200.22	344.94	13.177		
14,400.00	6,939.31	7,004.31	6,939.31	216.62	240.56	88.03	2,378.81	-3,629.62	4,634.06	4,289.70	344.36	13.457		
14,500.00	6,937.56	7,004.56	6,937.56	219.44	240.50	87.98	2,378.81	-3,629.62	4,723.40	4,379.60	343.80	13.739		
14,600.00	6,935.81	7,004.81	6,935.81	222.27	240.44	87.93	2,378.81	-3,629.62	4,813.17	4,469.92	343.25	14.022		
14,700.00	6,934.06	7,005.06	6,934.06	225.10	240.38	87.89	2,378.81	-3,629.62	4,903.32	4,560.62	342.71	14.308		
14,800.00	6,932.31	7,005.31	6,932.31	227.93	240.32	87.84	2,378.81	-3,629.62	4,993.85	4,651.68	342.18	14.594		
14,817.75	6,932.00	7,005.00	6,932.00	228.43	240.31	87.83	2,378.81	-3,629.62	5,009.96	4,667.87	342.09	14.645		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LUCAS SCHOOL 34-9(TA_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	39.00	3.28	3.28	-64.13	2,349.88	-4,844.97	5,384.90					
100.00	100.00	61.00	100.00	3.28	3.45	-64.13	2,349.88	-4,844.97	5,384.76	5,378.03	6.73	799.731		
200.00	200.00	161.00	200.00	3.34	5.08	-64.13	2,349.88	-4,844.97	5,384.76	5,376.35	8.41	639.988		
300.00	300.00	261.00	300.00	3.44	8.06	-64.13	2,349.88	-4,844.97	5,384.76	5,373.26	11.51	467.907		
400.00	400.00	361.00	400.00	3.60	11.34	-64.13	2,349.88	-4,844.97	5,384.76	5,369.82	14.94	360.306		
500.00	500.00	461.00	500.00	3.81	14.72	-64.13	2,349.88	-4,844.97	5,384.76	5,366.24	18.52	290.689		
600.00	599.98	560.98	599.98	4.05	18.14	-36.77	2,349.88	-4,844.97	5,383.37	5,361.18	22.18	242.680		
700.00	699.86	660.86	699.86	4.32	21.58	-36.83	2,349.88	-4,844.97	5,379.51	5,353.61	25.89	207.761		
800.00	799.72	760.72	799.72	4.62	25.03	-36.86	2,349.88	-4,844.97	5,375.28	5,345.65	29.64	181.356		
900.00	899.58	860.58	899.58	4.93	28.49	-36.89	2,349.88	-4,844.97	5,371.06	5,337.65	33.42	160.732		
1,000.00	999.44	960.44	999.44	5.27	31.95	-36.93	2,349.88	-4,844.97	5,366.85	5,329.63	37.22	144.207		
1,100.00	1,099.31	1,060.31	1,099.31	5.62	35.42	-36.96	2,349.88	-4,844.97	5,362.63	5,321.60	41.04	130.684		
1,200.00	1,199.17	1,160.17	1,199.17	5.98	38.89	-37.00	2,349.88	-4,844.97	5,358.42	5,313.55	44.87	119.424		
1,300.00	1,299.03	1,260.03	1,299.03	6.36	42.37	-37.03	2,349.88	-4,844.97	5,354.20	5,305.49	48.71	109.909		
1,400.00	1,398.89	1,359.89	1,398.89	6.74	45.85	-37.06	2,349.88	-4,844.97	5,349.99	5,297.42	52.57	101.768		
1,500.00	1,498.75	1,459.75	1,498.75	7.13	49.32	-37.10	2,349.88	-4,844.97	5,345.78	5,289.35	56.43	94.725		
1,600.00	1,598.61	1,559.61	1,598.61	7.52	52.80	-37.13	2,349.88	-4,844.97	5,341.58	5,281.27	60.31	88.575		
1,700.00	1,698.47	1,659.47	1,698.47	7.92	56.28	-37.17	2,349.88	-4,844.97	5,337.37	5,273.19	64.18	83.159		
1,800.00	1,798.33	1,759.33	1,798.33	8.32	59.76	-37.20	2,349.88	-4,844.97	5,333.17	5,265.10	68.07	78.354		
1,900.00	1,898.19	1,859.19	1,898.19	8.73	63.24	-37.23	2,349.88	-4,844.97	5,328.97	5,257.02	71.95	74.063		
2,000.00	1,998.05	1,959.05	1,998.05	9.14	66.73	-37.27	2,349.88	-4,844.97	5,324.77	5,248.93	75.84	70.209		
2,100.00	2,097.91	2,058.91	2,097.91	9.55	70.21	-37.30	2,349.88	-4,844.97	5,320.57	5,240.84	79.74	66.728		
2,200.00	2,197.78	2,158.78	2,197.78	9.97	73.69	-37.34	2,349.88	-4,844.97	5,316.38	5,232.75	83.63	63.569		
2,300.00	2,297.64	2,258.64	2,297.64	10.39	77.17	-37.37	2,349.88	-4,844.97	5,312.18	5,224.65	87.53	60.690		
2,400.00	2,397.50	2,358.50	2,397.50	10.81	80.66	-37.41	2,349.88	-4,844.97	5,307.99	5,216.56	91.43	58.055		
2,500.00	2,497.36	2,458.36	2,497.36	11.23	84.14	-37.44	2,349.88	-4,844.97	5,303.80	5,208.47	95.33	55.634		
2,600.00	2,597.22	2,558.22	2,597.22	11.65	87.62	-37.48	2,349.88	-4,844.97	5,299.61	5,200.38	99.24	53.403		
2,700.00	2,697.08	2,658.08	2,697.08	12.07	91.11	-37.51	2,349.88	-4,844.97	5,295.43	5,192.28	103.14	51.340		
2,800.00	2,796.94	2,757.94	2,796.94	12.50	94.59	-37.55	2,349.88	-4,844.97	5,291.24	5,184.19	107.05	49.427		
2,900.00	2,896.80	2,857.80	2,896.80	12.92	98.08	-37.58	2,349.88	-4,844.97	5,287.06	5,176.10	110.96	47.648		
3,000.00	2,996.66	2,957.66	2,996.66	13.35	101.56	-37.62	2,349.88	-4,844.97	5,282.88	5,168.01	114.87	45.990		
3,100.00	3,096.52	3,057.52	3,096.52	13.78	105.04	-37.65	2,349.88	-4,844.97	5,278.71	5,159.92	118.78	44.441		
3,200.00	3,196.38	3,157.38	3,196.38	14.21	108.53	-37.68	2,349.88	-4,844.97	5,274.53	5,151.84	122.69	42.990		
3,300.00	3,296.25	3,257.25	3,296.25	14.64	112.01	-37.72	2,349.88	-4,844.97	5,270.36	5,143.75	126.61	41.628		
3,400.00	3,396.11	3,357.11	3,396.11	15.07	115.50	-37.76	2,349.88	-4,844.97	5,266.18	5,135.66	130.52	40.348		
3,500.00	3,495.97	3,456.97	3,495.97	15.50	118.98	-37.79	2,349.88	-4,844.97	5,262.01	5,127.58	134.43	39.142		
3,600.00	3,595.83	3,556.83	3,595.83	15.93	122.47	-37.83	2,349.88	-4,844.97	5,257.85	5,119.50	138.35	38.005		
3,700.00	3,695.69	3,656.69	3,695.69	16.36	125.95	-37.86	2,349.88	-4,844.97	5,253.68	5,111.42	142.26	36.929		
3,800.00	3,795.55	3,756.55	3,795.55	16.80	129.44	-37.90	2,349.88	-4,844.97	5,249.51	5,103.34	146.18	35.912		
3,900.00	3,895.41	3,856.41	3,895.41	17.23	132.92	-37.93	2,349.88	-4,844.97	5,245.35	5,095.26	150.10	34.947		
4,000.00	3,995.27	3,956.27	3,995.27	17.66	136.41	-37.97	2,349.88	-4,844.97	5,241.19	5,087.18	154.01	34.031		
4,100.00	4,095.13	4,056.13	4,095.13	18.10	139.89	-38.00	2,349.88	-4,844.97	5,237.03	5,079.10	157.93	33.161		
4,200.00	4,194.99	4,155.99	4,194.99	18.53	143.38	-38.04	2,349.88	-4,844.97	5,232.88	5,071.03	161.85	32.332		
4,300.00	4,294.85	4,255.85	4,294.85	18.96	146.86	-38.07	2,349.88	-4,844.97	5,228.72	5,062.96	165.77	31.543		
4,400.00	4,394.71	4,355.71	4,394.71	19.40	150.35	-38.11	2,349.88	-4,844.97	5,224.57	5,054.89	169.68	30.790		
4,500.00	4,494.58	4,455.58	4,494.58	19.83	153.83	-38.14	2,349.88	-4,844.97	5,220.42	5,046.82	173.60	30.071		
4,600.00	4,594.44	4,555.44	4,594.44	20.27	157.32	-38.18	2,349.88	-4,844.97	5,216.27	5,038.75	177.52	29.384		
4,700.00	4,694.30	4,655.30	4,694.30	20.71	160.80	-38.22	2,349.88	-4,844.97	5,212.13	5,030.69	181.44	28.726		
4,800.00	4,794.16	4,755.16	4,794.16	21.14	164.29	-38.25	2,349.88	-4,844.97	5,207.98	5,022.62	185.36	28.096		
4,900.00	4,894.02	4,855.02	4,894.02	21.58	167.78	-38.29	2,349.88	-4,844.97	5,203.84	5,014.56	189.28	27.493		
5,000.00	4,993.88	4,954.88	4,993.88	22.01	171.26	-38.32	2,349.88	-4,844.97	5,199.70	5,006.50	193.20	26.913		
5,100.00	5,093.74	5,054.74	5,093.74	22.45	174.75	-38.36	2,349.88	-4,844.97	5,195.56	4,998.44	197.12	26.357		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LUCAS SCHOOL 34-9(TA_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
5,200.00	5,193.60	5,154.60	5,193.60	22.89	178.23	-38.40	2,349.88	-4,844.97	5,191.43	4,990.39	201.04	25.823		
5,300.00	5,293.46	5,254.46	5,293.46	23.32	181.72	-38.43	2,349.88	-4,844.97	5,187.30	4,982.33	204.96	25.308		
5,400.00	5,393.32	5,354.32	5,393.32	23.76	185.20	-38.47	2,349.88	-4,844.97	5,183.16	4,974.28	208.88	24.814		
5,500.00	5,493.18	5,454.18	5,493.18	24.20	188.69	-38.50	2,349.88	-4,844.97	5,179.03	4,966.23	212.81	24.337		
5,600.00	5,593.05	5,554.05	5,593.05	24.64	192.17	-38.54	2,349.88	-4,844.97	5,174.91	4,958.18	216.73	23.878		
5,700.00	5,692.91	5,653.91	5,692.91	25.07	195.66	-38.58	2,349.88	-4,844.97	5,170.78	4,950.13	220.65	23.435		
5,800.00	5,792.77	5,753.77	5,792.77	25.51	199.15	-38.61	2,349.88	-4,844.97	5,166.66	4,942.09	224.57	23.007		
5,900.00	5,892.63	5,853.63	5,892.63	25.95	202.63	-38.65	2,349.88	-4,844.97	5,162.54	4,934.05	228.49	22.594		
6,000.00	5,992.49	5,953.49	5,992.49	26.39	206.12	-38.69	2,349.88	-4,844.97	5,158.42	4,926.00	232.41	22.195		
6,100.00	6,092.35	6,053.35	6,092.35	26.82	209.60	-38.72	2,349.88	-4,844.97	5,154.30	4,917.97	236.34	21.809		
6,200.00	6,192.21	6,153.21	6,192.21	27.26	213.09	-38.76	2,349.88	-4,844.97	5,150.19	4,909.93	240.26	21.436		
6,300.00	6,292.07	6,253.07	6,292.07	27.70	216.57	-38.80	2,349.88	-4,844.97	5,146.07	4,901.89	244.18	21.075		
6,400.00	6,391.93	6,352.93	6,391.93	28.14	220.06	-38.83	2,349.88	-4,844.97	5,141.96	4,893.86	248.10	20.725		
6,500.00	6,491.69	6,452.69	6,491.69	28.58	223.54	0.10	2,349.88	-4,844.97	5,135.96	4,883.94	252.02	20.379		
6,600.00	6,589.80	6,550.80	6,589.80	29.02	226.97	14.77	2,349.88	-4,844.97	5,117.46	4,861.58	255.88	20.000		
6,700.00	6,683.86	6,644.86	6,683.86	29.46	230.25	19.93	2,349.88	-4,844.97	5,085.24	4,825.66	259.57	19.591		
6,800.00	6,771.56	6,732.56	6,771.56	29.92	233.31	23.90	2,349.88	-4,844.97	5,040.12	4,777.10	263.02	19.163		
6,900.00	6,850.72	6,811.72	6,850.72	30.40	236.07	28.28	2,349.88	-4,844.97	4,983.29	4,717.16	266.13	18.725		
7,000.00	6,919.40	6,880.40	6,919.40	30.96	238.47	33.90	2,349.88	-4,844.97	4,916.21	4,647.37	268.83	18.287		
7,100.00	6,975.92	6,936.92	6,975.92	31.62	240.45	41.60	2,349.88	-4,844.97	4,840.62	4,569.54	271.08	17.857		
7,200.00	7,018.87	6,979.87	7,018.87	32.44	241.94	52.33	2,349.88	-4,844.97	4,758.48	4,485.65	272.83	17.441		
7,300.00	7,047.21	7,008.21	7,047.21	33.42	242.93	66.79	2,349.88	-4,844.97	4,671.92	4,397.85	274.07	17.047		
7,400.00	7,060.23	7,021.23	7,060.23	34.55	243.39	84.10	2,349.88	-4,844.97	4,583.15	4,308.37	274.78	16.679		
7,500.00	7,060.03	7,021.03	7,060.03	35.83	243.38	91.92	2,349.88	-4,844.97	4,494.26	4,219.19	275.07	16.339		
7,600.00	7,058.28	7,019.28	7,058.28	37.28	243.32	91.87	2,349.88	-4,844.97	4,405.88	4,130.50	275.37	16.000		
7,700.00	7,056.53	7,017.53	7,056.53	38.89	243.26	91.82	2,349.88	-4,844.97	4,318.00	4,042.23	275.77	15.658		
7,800.00	7,054.78	7,015.78	7,054.78	40.63	243.20	91.77	2,349.88	-4,844.97	4,230.66	3,954.40	276.26	15.314		
7,900.00	7,053.03	7,014.03	7,053.03	42.50	243.14	91.73	2,349.88	-4,844.97	4,143.89	3,867.05	276.84	14.968		
8,000.00	7,051.28	7,012.28	7,051.28	44.47	243.08	91.68	2,349.88	-4,844.97	4,057.73	3,780.20	277.53	14.621		
8,100.00	7,049.53	7,010.53	7,049.53	46.53	243.01	91.63	2,349.88	-4,844.97	3,972.22	3,693.89	278.33	14.272		
8,200.00	7,047.78	7,008.78	7,047.78	48.67	242.95	91.58	2,349.88	-4,844.97	3,887.40	3,608.16	279.25	13.921		
8,300.00	7,046.03	7,007.03	7,046.03	50.89	242.89	91.53	2,349.88	-4,844.97	3,803.32	3,523.04	280.28	13.570		
8,400.00	7,044.28	7,005.28	7,044.28	53.16	242.83	91.49	2,349.88	-4,844.97	3,720.02	3,438.58	281.44	13.218		
8,500.00	7,042.53	7,003.53	7,042.53	55.49	242.77	91.44	2,349.88	-4,844.97	3,637.57	3,354.83	282.73	12.866		
8,600.00	7,040.78	7,001.78	7,040.78	57.86	242.71	91.39	2,349.88	-4,844.97	3,556.01	3,271.85	284.16	12.514		
8,700.00	7,039.03	7,000.03	7,039.03	60.28	242.65	91.34	2,349.88	-4,844.97	3,475.42	3,189.69	285.72	12.164		
8,800.00	7,037.28	7,001.72	7,037.28	62.74	242.71	91.29	2,349.88	-4,844.97	3,395.85	3,108.30	287.55	11.810		
8,900.00	7,035.53	7,003.47	7,035.53	65.23	242.77	91.24	2,349.88	-4,844.97	3,317.40	3,027.87	289.53	11.458		
9,000.00	7,033.78	7,005.22	7,033.78	67.74	242.83	91.20	2,349.88	-4,844.97	3,240.12	2,948.48	291.65	11.110		
9,100.00	7,032.03	7,006.97	7,032.03	70.29	242.89	91.15	2,349.88	-4,844.97	3,164.13	2,870.20	293.92	10.765		
9,200.00	7,030.28	7,008.72	7,030.28	72.85	242.95	91.10	2,349.88	-4,844.97	3,089.49	2,793.14	296.35	10.425		
9,300.00	7,028.54	6,989.54	7,028.54	75.44	242.28	91.05	2,349.88	-4,844.97	3,016.33	2,718.12	298.21	10.115		
9,400.00	7,026.79	6,987.79	7,026.79	78.05	242.22	91.00	2,349.88	-4,844.97	2,944.74	2,643.91	300.83	9.789		
9,500.00	7,025.04	6,986.04	7,025.04	80.67	242.16	90.96	2,349.88	-4,844.97	2,874.85	2,571.24	303.61	9.469		
9,600.00	7,023.29	6,984.29	7,023.29	83.31	242.10	90.91	2,349.88	-4,844.97	2,806.78	2,500.23	306.55	9.156		
9,700.00	7,021.54	6,982.54	7,021.54	85.96	242.04	90.86	2,349.88	-4,844.97	2,740.67	2,431.03	309.64	8.851		
9,800.00	7,019.79	6,980.79	7,019.79	88.63	241.98	90.81	2,349.88	-4,844.97	2,676.66	2,363.77	312.89	8.555		
9,900.00	7,018.04	6,979.04	7,018.04	91.30	241.92	90.76	2,349.88	-4,844.97	2,614.91	2,298.63	316.29	8.268		
10,000.00	7,016.29	6,977.29	7,016.29	93.99	241.85	90.72	2,349.88	-4,844.97	2,555.58	2,235.76	319.82	7.991		
10,100.00	7,014.54	6,975.54	7,014.54	96.69	241.79	90.67	2,349.88	-4,844.97	2,498.84	2,175.35	323.49	7.725		
10,200.00	7,012.79	6,973.79	7,012.79	99.40	241.73	90.62	2,349.88	-4,844.97	2,444.88	2,117.60	327.28	7.470		
10,300.00	7,011.04	6,972.04	7,011.04	102.11	241.67	90.57	2,349.88	-4,844.97	2,393.88	2,062.71	331.17	7.229		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - LUCAS SCHOOL 34-9(TA_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	6,970.29	7,009.29	104.83	241.61	90.52	2,349.88	-4,844.97	2,346.03	2,010.88	335.15	7.000		
10,500.00	7,007.54	6,968.54	7,007.54	107.56	241.55	90.47	2,349.88	-4,844.97	2,301.54	1,962.35	339.19	6.785		
10,600.00	7,005.79	6,966.79	7,005.79	110.30	241.49	90.43	2,349.88	-4,844.97	2,260.59	1,917.32	343.27	6.586		
10,700.00	7,004.04	6,965.04	7,004.04	113.04	241.43	90.38	2,349.88	-4,844.97	2,223.39	1,876.03	347.35	6.401		
10,800.00	7,002.29	6,963.29	7,002.29	115.79	241.37	90.33	2,349.88	-4,844.97	2,190.12	1,838.71	351.41	6.232		
10,900.00	7,000.54	6,961.54	7,000.54	118.54	241.30	90.28	2,349.88	-4,844.97	2,160.97	1,805.56	355.41	6.080		
11,000.00	6,998.79	6,959.79	6,998.79	121.30	241.24	90.23	2,349.88	-4,844.97	2,136.11	1,776.79	359.32	5.945		
11,100.00	6,997.04	6,958.04	6,997.04	124.06	241.18	90.19	2,349.88	-4,844.97	2,115.69	1,752.60	363.09	5.827		
11,200.00	6,995.29	6,956.29	6,995.29	126.83	241.12	90.14	2,349.88	-4,844.97	2,099.83	1,733.15	366.68	5.727		
11,300.00	6,993.54	6,954.54	6,993.54	129.60	241.06	90.09	2,349.88	-4,844.97	2,088.65	1,718.58	370.07	5.644		
11,400.00	6,991.80	6,952.80	6,991.80	132.37	241.00	90.04	2,349.88	-4,844.97	2,082.21	1,709.00	373.21	5.579		
11,484.31	6,990.32	6,951.32	6,990.32	134.72	240.95	90.00	2,349.88	-4,844.97	2,080.50	1,704.85	375.66	5.538 CC		
11,500.00	6,990.05	6,951.05	6,990.05	135.15	240.94	89.99	2,349.88	-4,844.97	2,080.56	1,704.47	376.09	5.532 ES		
11,600.00	6,988.30	6,949.30	6,988.30	137.93	240.88	89.94	2,349.88	-4,844.97	2,083.72	1,705.04	378.67	5.503		
11,700.00	6,986.55	6,947.55	6,986.55	140.72	240.82	89.90	2,349.88	-4,844.97	2,091.65	1,710.71	380.94	5.491 SF		
11,800.00	6,984.80	6,945.80	6,984.80	143.50	240.76	89.85	2,349.88	-4,844.97	2,104.31	1,721.41	382.90	5.496		
11,900.00	6,983.05	6,944.05	6,983.05	146.29	240.69	89.80	2,349.88	-4,844.97	2,121.61	1,737.08	384.53	5.517		
12,000.00	6,981.30	6,942.30	6,981.30	149.09	240.63	89.75	2,349.88	-4,844.97	2,143.44	1,757.60	385.84	5.555		
12,100.00	6,979.55	6,940.55	6,979.55	151.88	240.57	89.70	2,349.88	-4,844.97	2,169.67	1,782.82	386.85	5.609		
12,200.00	6,977.80	6,938.80	6,977.80	154.68	240.51	89.66	2,349.88	-4,844.97	2,200.12	1,812.56	387.56	5.677		
12,300.00	6,976.05	6,937.05	6,976.05	157.48	240.45	89.61	2,349.88	-4,844.97	2,234.64	1,846.65	387.99	5.759		
12,400.00	6,974.30	6,935.30	6,974.30	160.28	240.39	89.56	2,349.88	-4,844.97	2,273.04	1,884.87	388.17	5.856		
12,500.00	6,972.55	6,933.55	6,972.55	163.08	240.33	89.51	2,349.88	-4,844.97	2,315.12	1,927.00	388.12	5.965		
12,600.00	6,970.80	6,931.80	6,970.80	165.89	240.27	89.46	2,349.88	-4,844.97	2,360.69	1,972.83	387.86	6.086		
12,700.00	6,969.05	6,930.05	6,969.05	168.69	240.21	89.41	2,349.88	-4,844.97	2,409.55	2,022.13	387.42	6.219		
12,800.00	6,967.30	6,928.30	6,967.30	171.50	240.14	89.37	2,349.88	-4,844.97	2,461.50	2,074.68	386.82	6.363		
12,900.00	6,965.55	6,926.55	6,965.55	174.31	240.08	89.32	2,349.88	-4,844.97	2,516.36	2,130.28	386.08	6.518		
13,000.00	6,963.80	6,924.80	6,963.80	177.12	240.02	89.27	2,349.88	-4,844.97	2,573.93	2,188.70	385.23	6.682		
13,100.00	6,962.05	6,923.05	6,962.05	179.94	239.96	89.22	2,349.88	-4,844.97	2,634.04	2,249.76	384.28	6.854		
13,200.00	6,960.30	6,921.30	6,960.30	182.75	239.90	89.17	2,349.88	-4,844.97	2,696.51	2,313.26	383.25	7.036		
13,300.00	6,958.55	6,919.55	6,958.55	185.57	239.84	89.13	2,349.88	-4,844.97	2,761.20	2,379.04	382.16	7.225		
13,400.00	6,956.80	6,917.80	6,956.80	188.38	239.78	89.08	2,349.88	-4,844.97	2,827.94	2,446.92	381.02	7.422		
13,500.00	6,955.05	6,916.05	6,955.05	191.20	239.72	89.03	2,349.88	-4,844.97	2,896.59	2,516.74	379.85	7.626		
13,600.00	6,953.31	6,914.31	6,953.31	194.02	239.66	88.98	2,349.88	-4,844.97	2,967.03	2,588.38	378.65	7.836		
13,700.00	6,951.56	6,912.56	6,951.56	196.84	239.59	88.93	2,349.88	-4,844.97	3,039.12	2,661.69	377.43	8.052		
13,800.00	6,949.81	6,910.81	6,949.81	199.67	239.53	88.88	2,349.88	-4,844.97	3,112.76	2,736.55	376.21	8.274		
13,900.00	6,948.06	6,909.06	6,948.06	202.49	239.47	88.84	2,349.88	-4,844.97	3,187.83	2,812.85	374.98	8.501		
14,000.00	6,946.31	6,907.31	6,946.31	205.31	239.41	88.79	2,349.88	-4,844.97	3,264.24	2,890.48	373.76	8.733		
14,100.00	6,944.56	6,905.56	6,944.56	208.14	239.35	88.74	2,349.88	-4,844.97	3,341.89	2,969.34	372.55	8.970		
14,200.00	6,942.81	6,903.81	6,942.81	210.96	239.29	88.69	2,349.88	-4,844.97	3,420.70	3,049.35	371.35	9.212		
14,300.00	6,941.06	6,902.06	6,941.06	213.79	239.23	88.64	2,349.88	-4,844.97	3,500.60	3,130.43	370.16	9.457		
14,400.00	6,939.31	6,900.31	6,939.31	216.62	239.17	88.60	2,349.88	-4,844.97	3,581.50	3,212.50	369.00	9.706		
14,500.00	6,937.56	6,901.44	6,937.56	219.44	239.21	88.55	2,349.88	-4,844.97	3,663.34	3,295.39	367.95	9.956		
14,600.00	6,935.81	6,903.19	6,935.81	222.27	239.27	88.50	2,349.88	-4,844.97	3,746.07	3,379.12	366.95	10.209		
14,700.00	6,934.06	6,904.94	6,934.06	225.10	239.33	88.45	2,349.88	-4,844.97	3,829.62	3,463.65	365.97	10.464		
14,800.00	6,932.31	6,906.69	6,932.31	227.93	239.39	88.40	2,349.88	-4,844.97	3,913.94	3,548.92	365.01	10.723		
14,817.75	6,932.00	6,907.00	6,932.00	228.43	239.40	88.39	2,349.88	-4,844.97	3,928.98	3,564.13	364.85	10.769		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - MAURICE LEFFLER 1(AB_150CC) - OH - OH												Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	66.00	3.28	3.28	-123.92	-4,271.75	-6,352.09	7,655.15				
100.00	100.00	34.00	100.00	3.28	3.33	-123.92	-4,271.75	-6,352.09	7,654.86	7,648.25	6.62	1,156.677	
200.00	200.00	134.00	200.00	3.34	4.40	-123.92	-4,271.75	-6,352.09	7,654.86	7,647.13	7.74	989.415	
300.00	300.00	234.00	300.00	3.44	7.21	-123.92	-4,271.75	-6,352.09	7,654.86	7,644.21	10.66	718.272	
400.00	400.00	334.00	400.00	3.60	10.44	-123.92	-4,271.75	-6,352.09	7,654.86	7,640.82	14.05	544.975	
500.00	500.00	434.00	500.00	3.81	13.80	-123.92	-4,271.75	-6,352.09	7,654.86	7,637.26	17.61	434.765	
600.00	599.98	533.98	599.98	4.05	17.21	-96.55	-4,271.75	-6,352.09	7,655.06	7,633.81	21.26	360.127	
700.00	699.86	633.86	699.86	4.32	20.64	-96.58	-4,271.75	-6,352.09	7,655.61	7,630.65	24.96	306.712	
800.00	799.72	733.72	799.72	4.62	24.09	-96.62	-4,271.75	-6,352.09	7,656.22	7,627.52	28.70	266.721	
900.00	899.58	833.58	899.58	4.93	27.55	-96.66	-4,271.75	-6,352.09	7,656.83	7,624.35	32.48	235.734	
1,000.00	999.44	933.44	999.44	5.27	31.02	-96.70	-4,271.75	-6,352.09	7,657.45	7,621.16	36.28	211.061	
1,100.00	1,099.31	1,033.31	1,099.31	5.62	34.48	-96.74	-4,271.75	-6,352.09	7,658.06	7,617.96	40.10	190.976	
1,200.00	1,199.17	1,133.17	1,199.17	5.98	37.96	-96.78	-4,271.75	-6,352.09	7,658.68	7,614.75	43.93	174.324	
1,300.00	1,299.03	1,233.03	1,299.03	6.36	41.43	-96.82	-4,271.75	-6,352.09	7,659.31	7,611.53	47.78	160.303	
1,400.00	1,398.89	1,332.89	1,398.89	6.74	44.91	-96.86	-4,271.75	-6,352.09	7,659.94	7,608.30	51.64	148.343	
1,500.00	1,498.75	1,432.75	1,498.75	7.13	48.38	-96.89	-4,271.75	-6,352.09	7,660.57	7,605.07	55.50	138.024	
1,600.00	1,598.61	1,532.61	1,598.61	7.52	51.86	-96.93	-4,271.75	-6,352.09	7,661.21	7,601.83	59.37	129.034	
1,700.00	1,698.47	1,632.47	1,698.47	7.92	55.34	-96.97	-4,271.75	-6,352.09	7,661.84	7,598.59	63.25	121.133	
1,800.00	1,798.33	1,732.33	1,798.33	8.32	58.82	-97.01	-4,271.75	-6,352.09	7,662.49	7,595.35	67.13	114.136	
1,900.00	1,898.19	1,832.19	1,898.19	8.73	62.30	-97.05	-4,271.75	-6,352.09	7,663.13	7,592.11	71.02	107.898	
2,000.00	1,998.05	1,932.05	1,998.05	9.14	65.78	-97.09	-4,271.75	-6,352.09	7,663.78	7,588.87	74.91	102.302	
2,100.00	2,097.91	2,031.91	2,097.91	9.55	69.27	-97.13	-4,271.75	-6,352.09	7,664.44	7,585.63	78.81	97.255	
2,200.00	2,197.78	2,131.78	2,197.78	9.97	72.75	-97.17	-4,271.75	-6,352.09	7,665.09	7,582.39	82.70	92.680	
2,300.00	2,297.64	2,231.64	2,297.64	10.39	76.23	-97.21	-4,271.75	-6,352.09	7,665.75	7,579.15	86.60	88.515	
2,400.00	2,397.50	2,331.50	2,397.50	10.81	79.71	-97.25	-4,271.75	-6,352.09	7,666.42	7,575.91	90.51	84.706	
2,500.00	2,497.36	2,431.36	2,497.36	11.23	83.20	-97.29	-4,271.75	-6,352.09	7,667.09	7,572.68	94.41	81.211	
2,600.00	2,597.22	2,531.22	2,597.22	11.65	86.68	-97.32	-4,271.75	-6,352.09	7,667.76	7,569.44	98.32	77.991	
2,700.00	2,697.08	2,631.08	2,697.08	12.07	90.17	-97.36	-4,271.75	-6,352.09	7,668.43	7,566.21	102.22	75.017	
2,800.00	2,796.94	2,730.94	2,796.94	12.50	93.65	-97.40	-4,271.75	-6,352.09	7,669.11	7,562.98	106.13	72.261	
2,900.00	2,896.80	2,830.80	2,896.80	12.92	97.13	-97.44	-4,271.75	-6,352.09	7,669.79	7,559.75	110.04	69.699	
3,000.00	2,996.66	2,930.66	2,996.66	13.35	100.62	-97.48	-4,271.75	-6,352.09	7,670.48	7,556.53	113.95	67.313	
3,100.00	3,096.52	3,030.52	3,096.52	13.78	104.10	-97.52	-4,271.75	-6,352.09	7,671.17	7,553.30	117.86	65.085	
3,200.00	3,196.38	3,130.38	3,196.38	14.21	107.59	-97.56	-4,271.75	-6,352.09	7,671.86	7,550.08	121.78	63.000	
3,300.00	3,296.25	3,230.25	3,296.25	14.64	111.07	-97.60	-4,271.75	-6,352.09	7,672.56	7,546.87	125.69	61.043	
3,400.00	3,396.11	3,330.11	3,396.11	15.07	114.56	-97.64	-4,271.75	-6,352.09	7,673.26	7,543.65	129.60	59.205	
3,500.00	3,495.97	3,429.97	3,495.97	15.50	118.04	-97.67	-4,271.75	-6,352.09	7,673.96	7,540.44	133.52	57.474	
3,600.00	3,595.83	3,529.83	3,595.83	15.93	121.53	-97.71	-4,271.75	-6,352.09	7,674.67	7,537.23	137.44	55.842	
3,700.00	3,695.69	3,629.69	3,695.69	16.36	125.01	-97.75	-4,271.75	-6,352.09	7,675.38	7,534.03	141.35	54.300	
3,800.00	3,795.55	3,729.55	3,795.55	16.80	128.50	-97.79	-4,271.75	-6,352.09	7,676.09	7,530.82	145.27	52.841	
3,900.00	3,895.41	3,829.41	3,895.41	17.23	131.98	-97.83	-4,271.75	-6,352.09	7,676.81	7,527.62	149.19	51.458	
4,000.00	3,995.27	3,929.27	3,995.27	17.66	135.47	-97.87	-4,271.75	-6,352.09	7,677.53	7,524.43	153.10	50.146	
4,100.00	4,095.13	4,029.13	4,095.13	18.10	138.95	-97.91	-4,271.75	-6,352.09	7,678.26	7,521.23	157.02	48.899	
4,200.00	4,194.99	4,128.99	4,194.99	18.53	142.44	-97.95	-4,271.75	-6,352.09	7,678.98	7,518.04	160.94	47.713	
4,300.00	4,294.85	4,228.85	4,294.85	18.96	145.92	-97.99	-4,271.75	-6,352.09	7,679.72	7,514.85	164.86	46.583	
4,400.00	4,394.71	4,328.71	4,394.71	19.40	149.41	-98.03	-4,271.75	-6,352.09	7,680.45	7,511.67	168.78	45.506	
4,500.00	4,494.58	4,428.58	4,494.58	19.83	152.89	-98.06	-4,271.75	-6,352.09	7,681.19	7,508.49	172.70	44.477	
4,600.00	4,594.44	4,452.00	4,518.00	20.27	153.71	-98.07	-4,271.75	-6,352.09	7,682.31	7,508.37	173.94	44.166	
4,700.00	4,694.30	4,452.00	4,518.00	20.71	153.71	-98.07	-4,271.75	-6,352.09	7,684.70	7,510.36	174.34	44.079	
4,800.00	4,794.16	4,452.00	4,518.00	21.14	153.71	-98.07	-4,271.75	-6,352.09	7,688.39	7,513.68	174.71	44.008	
4,900.00	4,894.02	4,452.00	4,518.00	21.58	153.71	-98.07	-4,271.75	-6,352.09	7,693.38	7,518.33	175.04	43.951	
5,000.00	4,993.88	4,452.00	4,518.00	22.01	153.71	-98.07	-4,271.75	-6,352.09	7,699.66	7,524.31	175.35	43.910	
5,100.00	5,093.74	4,452.00	4,518.00	22.45	153.71	-98.07	-4,271.75	-6,352.09	7,707.23	7,531.60	175.63	43.884	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - MAURICE LEFFLER 1(AB_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	4,452.00	4,518.00	22.89	153.71	-98.07	-4,271.75	-6,352.09	7,716.10	7,540.22	175.88	43.872		
5,300.00	5,293.46	4,452.00	4,518.00	23.32	153.71	-98.07	-4,271.75	-6,352.09	7,726.24	7,550.15	176.10	43.875		
5,400.00	5,393.32	4,452.00	4,518.00	23.76	153.71	-98.07	-4,271.75	-6,352.09	7,737.67	7,561.38	176.28	43.893		
5,500.00	5,493.18	4,452.00	4,518.00	24.20	153.71	-98.07	-4,271.75	-6,352.09	7,750.37	7,573.92	176.44	43.925		
5,600.00	5,593.05	4,452.00	4,518.00	24.64	153.71	-98.07	-4,271.75	-6,352.09	7,764.34	7,587.76	176.58	43.972		
5,700.00	5,692.91	4,452.00	4,518.00	25.07	153.71	-98.07	-4,271.75	-6,352.09	7,779.56	7,602.89	176.68	44.032		
5,800.00	5,792.77	4,452.00	4,518.00	25.51	153.71	-98.07	-4,271.75	-6,352.09	7,796.05	7,619.29	176.75	44.107		
5,900.00	5,892.63	4,452.00	4,518.00	25.95	153.71	-98.07	-4,271.75	-6,352.09	7,813.77	7,636.97	176.80	44.196		
6,000.00	5,992.49	4,452.00	4,518.00	26.39	153.71	-98.07	-4,271.75	-6,352.09	7,832.73	7,655.92	176.82	44.299		
6,100.00	6,092.35	4,452.00	4,518.00	26.82	153.71	-98.07	-4,271.75	-6,352.09	7,852.93	7,676.12	176.81	44.415		
6,200.00	6,192.21	4,452.00	4,518.00	27.26	153.71	-98.07	-4,271.75	-6,352.09	7,874.33	7,697.56	176.77	44.545		
6,300.00	6,292.07	4,452.00	4,518.00	27.70	153.71	-98.07	-4,271.75	-6,352.09	7,896.95	7,720.24	176.71	44.689		
6,400.00	6,391.93	4,452.00	4,518.00	28.14	153.71	-98.07	-4,271.75	-6,352.09	7,920.77	7,744.14	176.62	44.846		
6,500.00	6,491.69	4,452.00	4,518.00	28.58	153.71	-58.66	-4,271.75	-6,352.09	7,944.11	7,767.60	176.51	45.008		
6,600.00	6,589.80	4,452.00	4,518.00	29.02	153.71	-44.06	-4,271.75	-6,352.09	7,957.42	7,781.07	176.36	45.121		
6,700.00	6,683.86	4,452.00	4,518.00	29.46	153.71	-40.28	-4,271.75	-6,352.09	7,958.99	7,782.80	176.19	45.173		
6,800.00	6,771.56	4,452.00	4,518.00	29.92	153.71	-39.14	-4,271.75	-6,352.09	7,948.76	7,772.75	176.01	45.161		
6,900.00	6,850.72	4,452.00	4,518.00	30.40	153.71	-39.37	-4,271.75	-6,352.09	7,926.96	7,751.13	175.84	45.081		
7,000.00	6,919.40	4,452.00	4,518.00	30.96	153.71	-40.67	-4,271.75	-6,352.09	7,894.03	7,718.33	175.70	44.930		
7,100.00	6,975.92	4,452.00	4,518.00	31.62	153.71	-43.02	-4,271.75	-6,352.09	7,850.64	7,675.02	175.62	44.703		
7,200.00	7,018.87	4,452.00	4,518.00	32.44	153.71	-46.55	-4,271.75	-6,352.09	7,797.70	7,622.06	175.64	44.397		
7,300.00	7,047.21	4,452.00	4,518.00	33.42	153.71	-51.47	-4,271.75	-6,352.09	7,736.32	7,560.55	175.77	44.013		
7,400.00	7,060.23	4,452.00	4,518.00	34.55	153.71	-58.09	-4,271.75	-6,352.09	7,667.85	7,491.79	176.05	43.554		
7,500.00	7,060.03	4,452.00	4,518.00	35.83	153.71	-61.64	-4,271.75	-6,352.09	7,594.58	7,418.11	176.47	43.036		
7,600.00	7,058.28	4,452.00	4,518.00	37.28	153.71	-61.64	-4,271.75	-6,352.09	7,521.36	7,344.36	176.99	42.496		
7,700.00	7,056.53	4,452.00	4,518.00	38.89	153.71	-61.64	-4,271.75	-6,352.09	7,448.75	7,271.14	177.61	41.939		
7,800.00	7,054.78	4,452.00	4,518.00	40.63	153.71	-61.64	-4,271.75	-6,352.09	7,376.79	7,198.47	178.33	41.366		
7,900.00	7,053.03	4,452.00	4,518.00	42.50	153.71	-61.64	-4,271.75	-6,352.09	7,305.49	7,126.35	179.14	40.780		
8,000.00	7,051.28	4,452.00	4,518.00	44.47	153.71	-61.64	-4,271.75	-6,352.09	7,234.87	7,054.82	180.05	40.183		
8,100.00	7,049.53	4,452.00	4,518.00	46.53	153.71	-61.64	-4,271.75	-6,352.09	7,164.95	6,983.90	181.05	39.574		
8,200.00	7,047.78	4,452.00	4,518.00	48.67	153.71	-61.64	-4,271.75	-6,352.09	7,095.75	6,913.61	182.14	38.958		
8,300.00	7,046.03	4,452.00	4,518.00	50.89	153.71	-61.64	-4,271.75	-6,352.09	7,027.29	6,843.98	183.31	38.335		
8,400.00	7,044.28	4,452.00	4,518.00	53.16	153.71	-61.64	-4,271.75	-6,352.09	6,959.60	6,775.02	184.57	37.707		
8,500.00	7,042.53	4,452.00	4,518.00	55.49	153.71	-61.64	-4,271.75	-6,352.09	6,892.69	6,706.78	185.91	37.075		
8,600.00	7,040.78	4,452.00	4,518.00	57.86	153.71	-61.64	-4,271.75	-6,352.09	6,826.59	6,639.26	187.33	36.442		
8,700.00	7,039.03	4,452.00	4,518.00	60.28	153.71	-61.64	-4,271.75	-6,352.09	6,761.32	6,572.50	188.82	35.809		
8,800.00	7,037.28	4,452.00	4,518.00	62.74	153.71	-61.64	-4,271.75	-6,352.09	6,696.91	6,506.53	190.38	35.177		
8,900.00	7,035.53	4,452.00	4,518.00	65.23	153.71	-61.64	-4,271.75	-6,352.09	6,633.38	6,441.37	192.01	34.547		
9,000.00	7,033.78	4,452.00	4,518.00	67.74	153.71	-61.64	-4,271.75	-6,352.09	6,570.76	6,377.05	193.71	33.921		
9,100.00	7,032.03	4,452.00	4,518.00	70.29	153.71	-61.64	-4,271.75	-6,352.09	6,509.07	6,313.60	195.47	33.299		
9,200.00	7,030.28	4,452.00	4,518.00	72.85	153.71	-61.64	-4,271.75	-6,352.09	6,448.35	6,251.05	197.30	32.683		
9,300.00	7,028.54	4,452.00	4,518.00	75.44	153.71	-61.64	-4,271.75	-6,352.09	6,388.61	6,189.43	199.19	32.074		
9,400.00	7,026.79	4,452.00	4,518.00	78.05	153.71	-61.64	-4,271.75	-6,352.09	6,329.89	6,128.76	201.13	31.472		
9,500.00	7,025.04	4,452.00	4,518.00	80.67	153.71	-61.64	-4,271.75	-6,352.09	6,272.21	6,069.08	203.13	30.878		
9,600.00	7,023.29	4,452.00	4,518.00	83.31	153.71	-61.64	-4,271.75	-6,352.09	6,215.61	6,010.42	205.19	30.292		
9,700.00	7,021.54	4,452.00	4,518.00	85.96	153.71	-61.64	-4,271.75	-6,352.09	6,160.11	5,952.81	207.30	29.716		
9,800.00	7,019.79	4,452.00	4,518.00	88.63	153.71	-61.64	-4,271.75	-6,352.09	6,105.74	5,896.28	209.46	29.150		
9,900.00	7,018.04	4,452.00	4,518.00	91.30	153.71	-61.64	-4,271.75	-6,352.09	6,052.54	5,840.87	211.67	28.594		
10,000.00	7,016.29	4,452.00	4,518.00	93.99	153.71	-61.64	-4,271.75	-6,352.09	6,000.53	5,786.60	213.93	28.049		
10,100.00	7,014.54	4,452.00	4,518.00	96.69	153.71	-61.64	-4,271.75	-6,352.09	5,949.75	5,733.52	216.23	27.515		
10,200.00	7,012.79	4,452.00	4,518.00	99.40	153.71	-61.64	-4,271.75	-6,352.09	5,900.23	5,681.65	218.58	26.993		
10,300.00	7,011.04	4,452.00	4,518.00	102.11	153.71	-61.64	-4,271.75	-6,352.09	5,852.00	5,631.02	220.98	26.483		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - MAURICE LEFFLER 1(AB_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	4,452.00	4,518.00	104.83	153.71	-61.64	-4,271.75	-6,352.09	5,805.08	5,581.68	223.41	25.984		
10,500.00	7,007.54	4,452.00	4,518.00	107.56	153.71	-61.64	-4,271.75	-6,352.09	5,759.53	5,533.65	225.88	25.498		
10,600.00	7,005.79	4,452.00	4,518.00	110.30	153.71	-61.64	-4,271.75	-6,352.09	5,715.36	5,486.97	228.39	25.025		
10,700.00	7,004.04	4,452.00	4,518.00	113.04	153.71	-61.64	-4,271.75	-6,352.09	5,672.61	5,441.67	230.93	24.564		
10,800.00	7,002.29	4,452.00	4,518.00	115.79	153.71	-61.64	-4,271.75	-6,352.09	5,631.31	5,397.80	233.51	24.116		
10,900.00	7,000.54	4,452.00	4,518.00	118.54	153.71	-61.64	-4,271.75	-6,352.09	5,591.49	5,355.37	236.11	23.681		
11,000.00	6,998.79	4,452.00	4,518.00	121.30	153.71	-61.64	-4,271.75	-6,352.09	5,553.19	5,314.44	238.75	23.260		
11,100.00	6,997.04	4,452.00	4,518.00	124.06	153.71	-61.64	-4,271.75	-6,352.09	5,516.44	5,275.03	241.41	22.851		
11,200.00	6,995.29	4,452.00	4,518.00	126.83	153.71	-61.64	-4,271.75	-6,352.09	5,481.26	5,237.17	244.09	22.456		
11,300.00	6,993.54	4,452.00	4,518.00	129.60	153.71	-61.64	-4,271.75	-6,352.09	5,447.69	5,200.90	246.80	22.074		
11,400.00	6,991.80	4,452.00	4,518.00	132.37	153.71	-61.64	-4,271.75	-6,352.09	5,415.76	5,166.25	249.52	21.705		
11,500.00	6,990.05	4,452.00	4,518.00	135.15	153.71	-61.64	-4,271.75	-6,352.09	5,385.50	5,133.25	252.25	21.350		
11,600.00	6,988.30	4,452.00	4,518.00	137.93	153.71	-61.64	-4,271.75	-6,352.09	5,356.94	5,101.94	255.00	21.008		
11,700.00	6,986.55	4,452.00	4,518.00	140.72	153.71	-61.64	-4,271.75	-6,352.09	5,330.10	5,072.35	257.75	20.679		
11,800.00	6,984.80	4,452.00	4,518.00	143.50	153.71	-61.64	-4,271.75	-6,352.09	5,305.01	5,044.49	260.51	20.364		
11,900.00	6,983.05	4,452.00	4,518.00	146.29	153.71	-61.64	-4,271.75	-6,352.09	5,281.69	5,018.41	263.28	20.061		
12,000.00	6,981.30	4,452.00	4,518.00	149.09	153.71	-61.64	-4,271.75	-6,352.09	5,260.17	4,994.13	266.04	19.772		
12,100.00	6,979.55	4,452.00	4,518.00	151.88	153.71	-61.64	-4,271.75	-6,352.09	5,240.47	4,971.68	268.79	19.496		
12,200.00	6,977.80	4,452.00	4,518.00	154.68	153.71	-61.64	-4,271.75	-6,352.09	5,222.62	4,951.07	271.54	19.233		
12,300.00	6,976.05	4,452.00	4,518.00	157.48	153.71	-61.64	-4,271.75	-6,352.09	5,206.62	4,932.34	274.28	18.983		
12,400.00	6,974.30	4,452.00	4,518.00	160.28	153.71	-61.64	-4,271.75	-6,352.09	5,192.50	4,915.49	277.00	18.745		
12,500.00	6,972.55	4,452.00	4,518.00	163.08	153.71	-61.64	-4,271.75	-6,352.09	5,180.27	4,900.56	279.70	18.521		
12,600.00	6,970.80	4,452.00	4,518.00	165.89	153.71	-61.64	-4,271.75	-6,352.09	5,169.94	4,887.56	282.38	18.308		
12,700.00	6,969.05	4,452.00	4,518.00	168.69	153.71	-61.64	-4,271.75	-6,352.09	5,161.54	4,876.50	285.04	18.108		
12,800.00	6,967.30	4,452.00	4,518.00	171.50	153.71	-61.64	-4,271.75	-6,352.09	5,155.06	4,867.39	287.66	17.920		
12,900.00	6,965.55	4,452.00	4,518.00	174.31	153.71	-61.64	-4,271.75	-6,352.09	5,150.51	4,860.25	290.26	17.745		
13,000.00	6,963.80	4,452.00	4,518.00	177.12	153.71	-61.64	-4,271.75	-6,352.09	5,147.90	4,855.09	292.81	17.581		
13,084.25	6,962.33	4,452.00	4,518.00	179.49	153.71	-61.64	-4,271.75	-6,352.09	5,147.21	4,852.28	294.94	17.452 CC		
13,100.00	6,962.05	4,452.00	4,518.00	179.94	153.71	-61.64	-4,271.75	-6,352.09	5,147.24	4,851.91	295.33	17.429		
13,200.00	6,960.30	4,452.00	4,518.00	182.75	153.71	-61.64	-4,271.75	-6,352.09	5,148.52	4,850.71	297.81	17.288 ES		
13,300.00	6,958.55	4,452.00	4,518.00	185.57	153.71	-61.64	-4,271.75	-6,352.09	5,151.73	4,851.50	300.24	17.159		
13,400.00	6,956.80	4,452.00	4,518.00	188.38	153.71	-61.64	-4,271.75	-6,352.09	5,156.89	4,854.27	302.62	17.041		
13,500.00	6,955.05	4,452.00	4,518.00	191.20	153.71	-61.64	-4,271.75	-6,352.09	5,163.98	4,859.02	304.95	16.934		
13,600.00	6,953.31	4,452.00	4,518.00	194.02	153.71	-61.64	-4,271.75	-6,352.09	5,172.99	4,865.75	307.23	16.837		
13,700.00	6,951.56	4,452.00	4,518.00	196.84	153.71	-61.64	-4,271.75	-6,352.09	5,183.91	4,874.46	309.46	16.752		
13,800.00	6,949.81	4,452.00	4,518.00	199.67	153.71	-61.64	-4,271.75	-6,352.09	5,196.74	4,885.11	311.63	16.676		
13,900.00	6,948.06	4,452.00	4,518.00	202.49	153.71	-61.64	-4,271.75	-6,352.09	5,211.46	4,897.72	313.73	16.611		
14,000.00	6,946.31	4,452.00	4,518.00	205.31	153.71	-61.64	-4,271.75	-6,352.09	5,228.04	4,912.26	315.78	16.556		
14,100.00	6,944.56	4,452.00	4,518.00	208.14	153.71	-61.64	-4,271.75	-6,352.09	5,246.48	4,928.71	317.77	16.510		
14,200.00	6,942.81	4,452.00	4,518.00	210.96	153.71	-61.64	-4,271.75	-6,352.09	5,266.76	4,947.06	319.69	16.474		
14,300.00	6,941.06	4,452.00	4,518.00	213.79	153.71	-61.64	-4,271.75	-6,352.09	5,288.84	4,967.29	321.55	16.448		
14,400.00	6,939.31	4,452.00	4,518.00	216.62	153.71	-61.64	-4,271.75	-6,352.09	5,312.72	4,989.38	323.34	16.431		
14,500.00	6,937.56	4,452.00	4,518.00	219.44	153.71	-61.64	-4,271.75	-6,352.09	5,338.37	5,013.29	325.07	16.422 SF		
14,600.00	6,935.81	4,452.00	4,518.00	222.27	153.71	-61.64	-4,271.75	-6,352.09	5,365.75	5,039.02	326.74	16.422		
14,700.00	6,934.06	4,452.00	4,518.00	225.10	153.71	-61.64	-4,271.75	-6,352.09	5,394.86	5,066.52	328.33	16.431		
14,800.00	6,932.31	4,452.00	4,518.00	227.93	153.71	-61.64	-4,271.75	-6,352.09	5,425.64	5,095.78	329.86	16.448		
14,817.75	6,932.00	4,452.00	4,518.00	228.43	153.71	-61.64	-4,271.75	-6,352.09	5,431.28	5,101.15	330.13	16.452		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - MCGLOTHLIN 8-6-17 (PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 82-MWVD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	1,377.00	1,307.28	3.28	7.39	-107.91	-2,849.10	-8,815.72	9,356.46					
100.00	100.00	1,411.49	1,341.35	3.28	7.56	-107.89	-2,845.13	-8,812.10	9,342.85	9,332.58	10.27	909.420		
200.00	200.00	1,471.00	1,400.14	3.34	7.85	-107.86	-2,837.83	-8,806.48	9,329.94	9,319.37	10.56	883.142		
300.00	300.00	1,541.45	1,471.45	3.44	8.19	-107.78	-2,820.58	-8,793.10	9,317.49	9,310.53	6.96	1,338.100		
400.00	400.00	1,660.00	1,586.91	3.60	8.77	-107.76	-2,815.28	-8,788.39	9,304.32	9,292.69	11.63	800.187		
500.00	500.00	1,706.68	1,633.06	3.81	9.00	-107.74	-2,810.26	-8,783.50	9,291.46	9,279.44	12.01	773.351		
600.00	599.98	1,755.00	1,680.96	4.05	9.23	-80.59	-2,805.37	-8,779.47	9,279.67	9,267.22	12.45	745.455		
700.00	699.86	1,933.98	1,858.04	4.32	10.11	-80.68	-2,784.80	-8,763.69	9,267.06	9,253.55	13.51	685.981		
800.00	799.72	2,274.09	2,193.36	4.62	11.90	-80.58	-2,739.27	-8,729.85	9,253.04	9,237.66	15.38	601.545		
900.00	899.58	2,356.86	2,274.82	4.93	12.35	-80.56	-2,727.76	-8,720.68	9,237.32	9,221.24	16.08	574.611		
1,000.00	999.44	2,510.00	2,425.38	5.27	13.19	-80.52	-2,706.62	-8,702.37	9,220.59	9,203.46	17.12	538.459		
1,100.00	1,099.31	2,566.70	2,481.15	5.62	13.50	-80.50	-2,699.21	-8,695.32	9,204.13	9,186.41	17.73	519.225		
1,200.00	1,199.17	2,752.44	2,664.03	5.98	14.52	-80.47	-2,675.76	-8,672.92	9,188.03	9,169.09	18.95	484.941		
1,300.00	1,299.03	2,792.00	2,702.94	6.36	14.74	-80.46	-2,670.58	-8,668.02	9,171.46	9,151.96	19.50	470.401		
1,400.00	1,398.89	2,792.00	2,702.94	6.74	14.74	-80.46	-2,670.58	-8,668.02	9,155.80	9,135.93	19.87	460.739		
1,500.00	1,498.75	2,831.47	2,741.85	7.13	14.94	-80.45	-2,665.71	-8,663.52	9,140.71	9,120.28	20.44	447.286		
1,600.00	1,598.61	2,848.66	2,758.83	7.52	15.03	-80.45	-2,663.75	-8,661.77	9,126.67	9,105.77	20.91	436.578		
1,700.00	1,698.47	1,700.00	2,787.58	7.92	9.28	-80.44	-2,660.79	-8,659.17	9,113.65	9,097.53	16.13	565.119		
1,800.00	1,798.33	3,047.80	2,955.83	8.32	16.06	-80.41	-2,641.16	-8,643.40	9,100.42	9,077.81	22.62	402.355		
1,900.00	1,898.19	3,193.92	3,100.09	8.73	16.84	-80.37	-2,622.66	-8,629.40	9,086.55	9,062.84	23.71	383.297		
2,000.00	1,998.05	3,262.00	3,167.33	9.14	17.20	-80.36	-2,614.35	-8,622.78	9,072.66	9,048.22	24.43	371.302		
2,100.00	2,097.91	3,387.60	3,291.39	9.55	17.86	-80.33	-2,599.19	-8,610.29	9,058.60	9,033.16	25.43	356.210		
2,200.00	2,197.78	3,449.00	3,352.04	9.97	18.19	-80.32	-2,591.76	-8,604.32	9,044.75	9,018.62	26.13	346.092		
2,300.00	2,297.64	3,543.00	3,444.90	10.39	18.69	-80.30	-2,580.35	-8,595.18	9,030.92	9,003.93	26.99	334.591		
2,400.00	2,397.50	4,488.00	4,368.51	10.81	24.30	-79.94	-2,431.97	-8,468.67	9,010.73	8,978.81	31.92	282.282		
2,500.00	2,497.36	4,537.48	4,416.51	11.23	24.61	-79.92	-2,423.88	-8,459.76	8,987.96	8,955.36	32.60	275.719		
2,600.00	2,597.22	4,583.00	4,460.81	11.65	24.90	-79.91	-2,416.74	-8,452.11	8,966.13	8,932.87	33.26	269.581		
2,700.00	2,697.08	4,583.00	4,460.81	12.07	24.90	-79.91	-2,416.74	-8,452.11	8,944.95	8,911.24	33.71	265.351		
2,800.00	2,796.94	4,583.00	4,460.81	12.50	24.90	-79.91	-2,416.74	-8,452.11	8,924.83	8,890.67	34.16	261.262		
2,900.00	2,896.80	4,621.08	4,498.02	12.92	25.13	-79.90	-2,411.16	-8,446.26	8,905.32	8,870.53	34.78	256.014		
3,000.00	2,996.66	4,637.71	4,514.32	13.35	25.22	-79.89	-2,408.89	-8,443.91	8,886.85	8,851.54	35.31	251.671		
3,100.00	3,096.52	4,678.00	4,553.95	13.78	25.46	-79.88	-2,403.79	-8,438.75	8,869.48	8,833.53	35.95	246.739		
3,200.00	3,196.38	4,678.00	4,553.95	14.21	25.46	-79.88	-2,403.79	-8,438.75	8,852.66	8,816.26	36.40	243.223		
3,300.00	3,296.25	4,678.00	4,553.95	14.64	25.46	-79.88	-2,403.79	-8,438.75	8,836.94	8,800.09	36.85	239.834		
3,400.00	3,396.11	4,738.88	4,614.03	15.07	25.79	-79.88	-2,396.87	-8,431.74	8,821.78	8,784.21	37.57	234.836		
3,500.00	3,495.97	4,772.00	4,646.77	15.50	25.96	-79.87	-2,393.39	-8,428.13	8,807.38	8,769.22	38.16	230.793		
3,600.00	3,595.83	4,830.17	4,704.33	15.93	26.26	-79.87	-2,387.62	-8,422.05	8,793.56	8,754.70	38.86	226.267		
3,700.00	3,695.69	4,867.00	4,740.81	16.36	26.45	-79.87	-2,384.15	-8,418.33	8,780.31	8,740.84	39.47	222.445		
3,800.00	3,795.55	4,912.50	4,785.91	16.80	26.68	-79.86	-2,380.06	-8,413.99	8,767.70	8,727.59	40.11	218.565		
3,900.00	3,895.41	4,961.00	4,834.06	17.23	26.92	-79.86	-2,375.93	-8,409.78	8,755.85	8,715.08	40.77	214.760		
4,000.00	3,995.27	4,999.09	4,871.90	17.66	27.10	-79.86	-2,372.84	-8,406.67	8,744.62	8,703.24	41.38	211.337		
4,100.00	4,095.13	5,056.00	4,928.46	18.10	27.37	-79.86	-2,368.43	-8,402.19	8,733.89	8,691.82	42.07	207.623		
4,200.00	4,194.99	5,056.00	4,928.46	18.53	27.37	-79.86	-2,368.43	-8,402.19	8,723.97	8,681.47	42.50	205.249		
4,300.00	4,294.85	5,110.54	4,982.73	18.96	27.62	-79.86	-2,364.52	-8,398.40	8,714.56	8,671.38	43.18	201.835		
4,400.00	4,394.71	5,150.00	5,022.04	19.40	27.80	-79.87	-2,361.95	-8,396.19	8,706.18	8,662.40	43.78	198.851		
4,500.00	4,494.58	5,184.28	5,056.21	19.83	27.95	-79.87	-2,359.89	-8,394.47	8,698.51	8,654.15	44.36	196.085		
4,600.00	4,594.44	5,243.00	5,114.77	20.27	28.20	-79.87	-2,356.72	-8,391.59	8,691.32	8,646.27	45.04	192.954		
4,700.00	4,694.30	5,277.87	5,149.57	20.71	28.35	-79.88	-2,355.05	-8,390.03	8,684.75	8,639.13	45.62	190.378		
4,800.00	4,794.16	5,336.00	5,207.61	21.14	28.59	-79.89	-2,352.63	-8,388.03	8,679.09	8,632.80	46.29	187.487		
4,900.00	4,894.02	5,336.00	5,207.61	21.58	28.59	-79.89	-2,352.63	-8,388.03	8,673.97	8,627.26	46.71	185.690		
5,000.00	4,993.88	5,394.57	5,266.13	22.01	28.81	-79.90	-2,350.75	-8,386.48	8,669.61	8,622.23	47.38	182.989		
5,100.00	5,093.74	5,430.00	5,301.54	22.45	28.95	-79.91	-2,349.96	-8,385.64	8,665.85	8,617.91	47.94	180.753		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - MCGLOTHLIN 8-6-17 (PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 82-MWVD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,518.73	5,390.24	22.89	29.29	-79.93	-2,348.06	-8,383.90	8,662.44	8,613.70	48.74	177.745		
5,300.00	5,293.46	5,587.04	5,458.52	23.32	29.54	-79.94	-2,346.29	-8,382.95	8,659.42	8,609.98	49.44	175.151		
5,400.00	5,393.32	5,655.39	5,526.83	23.76	29.80	-79.95	-2,344.26	-8,382.35	8,656.77	8,606.63	50.14	172.639		
5,500.00	5,493.18	5,711.00	5,582.41	24.20	30.01	-79.96	-2,342.11	-8,382.11	8,654.51	8,603.71	50.79	170.390		
5,600.00	5,593.05	5,793.88	5,665.25	24.64	30.32	-79.97	-2,339.59	-8,382.09	8,652.56	8,601.00	51.56	167.815		
5,700.00	5,692.91	5,863.74	5,735.06	25.07	30.58	-79.98	-2,337.31	-8,382.32	8,650.98	8,598.71	52.27	165.504		
5,800.00	5,792.77	5,933.60	5,804.89	25.51	30.84	-79.99	-2,335.13	-8,382.77	8,649.75	8,596.77	52.98	163.263		
5,900.00	5,892.63	6,008.30	5,879.55	25.95	31.12	-80.00	-2,332.89	-8,383.50	8,648.86	8,595.15	53.71	161.026		
6,000.00	5,992.49	6,118.08	5,989.28	26.39	31.52	-80.02	-2,329.77	-8,384.58	8,648.04	8,593.45	54.59	158.405		
6,100.00	6,092.35	6,227.84	6,099.01	26.82	31.92	-80.03	-2,326.82	-8,385.48	8,647.11	8,591.63	55.48	155.866		
6,200.00	6,192.21	6,334.35	6,205.47	27.26	32.32	-80.05	-2,323.97	-8,386.24	8,646.07	8,589.72	56.35	153.428		
6,300.00	6,292.07	6,438.14	6,309.20	27.70	32.72	-80.06	-2,320.41	-8,387.17	8,644.98	8,587.76	57.22	151.081		
6,400.00	6,391.93	6,541.95	6,412.91	28.14	33.11	-80.07	-2,315.95	-8,388.33	8,643.85	8,585.76	58.09	148.803		
6,500.00	6,491.69	6,716.20	6,586.87	28.58	33.81	-41.33	-2,306.30	-8,390.22	8,640.36	8,581.06	59.30	145.699		
6,600.00	6,589.80	6,600.00	6,679.37	29.02	33.34	-27.90	-2,299.50	-8,390.76	8,622.73	8,563.50	59.23	145.590		
6,700.00	6,683.86	6,938.16	6,808.22	29.46	34.72	-25.20	-2,290.00	-8,391.77	8,590.69	8,529.56	61.13	140.534		
6,800.00	6,771.56	7,003.26	6,873.11	29.92	35.00	-25.13	-2,284.78	-8,392.51	8,545.19	8,483.39	61.80	138.282		
6,900.00	6,850.72	7,062.43	6,932.07	30.40	35.24	-26.64	-2,279.92	-8,393.39	8,487.35	8,424.95	62.40	136.019		
7,000.00	6,919.40	7,129.00	6,998.40	30.96	35.52	-29.80	-2,274.34	-8,394.60	8,418.56	8,355.57	63.00	133.632		
7,100.00	6,975.92	7,158.46	7,027.75	31.62	35.64	-35.07	-2,271.89	-8,395.18	8,340.43	8,277.04	63.38	131.585		
7,200.00	7,018.87	7,192.89	7,062.07	32.44	35.78	-43.95	-2,269.18	-8,395.86	8,254.87	8,191.11	63.76	129.464		
7,300.00	7,047.21	7,216.13	7,085.24	33.42	35.88	-58.81	-2,267.43	-8,396.31	8,163.97	8,099.90	64.06	127.435		
7,400.00	7,060.23	7,227.62	7,096.69	34.55	35.92	-81.83	-2,266.59	-8,396.54	8,069.93	8,005.63	64.30	125.510		
7,500.00	7,060.03	7,228.93	7,098.00	35.83	35.93	-93.89	-2,266.50	-8,396.56	7,975.00	7,910.51	64.48	123.673		
7,600.00	7,058.28	7,229.04	7,098.11	37.28	35.93	-93.89	-2,266.49	-8,396.56	7,880.16	7,815.47	64.70	121.802		
7,700.00	7,056.53	7,229.16	7,098.23	38.89	35.93	-93.89	-2,266.48	-8,396.57	7,785.46	7,720.51	64.94	119.881		
7,800.00	7,054.78	7,229.27	7,098.34	40.63	35.93	-93.89	-2,266.47	-8,396.57	7,690.88	7,625.66	65.23	117.910		
7,900.00	7,053.03	7,229.39	7,098.45	42.50	35.93	-93.90	-2,266.46	-8,396.57	7,596.45	7,530.90	65.55	115.891		
8,000.00	7,051.28	7,229.50	7,098.57	44.47	35.93	-93.90	-2,266.45	-8,396.57	7,502.16	7,436.25	65.91	113.825		
8,100.00	7,049.53	7,229.62	7,098.68	46.53	35.93	-93.90	-2,266.45	-8,396.58	7,408.02	7,341.71	66.31	111.715		
8,200.00	7,047.78	7,229.73	7,098.80	48.67	35.93	-93.90	-2,266.44	-8,396.58	7,314.04	7,247.28	66.76	109.563		
8,300.00	7,046.03	7,229.84	7,098.91	50.89	35.93	-93.91	-2,266.43	-8,396.58	7,220.22	7,152.97	67.25	107.370		
8,400.00	7,044.28	7,229.96	7,099.03	53.16	35.93	-93.91	-2,266.42	-8,396.58	7,126.57	7,058.79	67.78	105.142		
8,500.00	7,042.53	7,230.07	7,099.14	55.49	35.93	-93.91	-2,266.41	-8,396.58	7,033.09	6,964.73	68.36	102.880		
8,600.00	7,040.78	7,230.19	7,099.25	57.86	35.93	-93.91	-2,266.40	-8,396.59	6,939.79	6,870.80	68.99	100.589		
8,700.00	7,039.03	7,230.30	7,099.37	60.28	35.93	-93.92	-2,266.40	-8,396.59	6,846.68	6,777.01	69.67	98.272		
8,800.00	7,037.28	7,230.42	7,099.48	62.74	35.94	-93.92	-2,266.39	-8,396.59	6,753.77	6,683.37	70.40	95.932		
8,900.00	7,035.53	7,230.53	7,099.60	65.23	35.94	-93.92	-2,266.38	-8,396.59	6,661.07	6,589.88	71.18	93.575		
9,000.00	7,033.78	7,230.64	7,099.71	67.74	35.94	-93.92	-2,266.37	-8,396.60	6,568.58	6,496.56	72.02	91.204		
9,100.00	7,032.03	7,230.76	7,099.82	70.29	35.94	-93.93	-2,266.36	-8,396.60	6,476.31	6,403.40	72.91	88.824		
9,200.00	7,030.28	7,230.87	7,099.94	72.85	35.94	-93.93	-2,266.36	-8,396.60	6,384.27	6,310.41	73.86	86.438		
9,300.00	7,028.54	7,230.99	7,100.05	75.44	35.94	-93.93	-2,266.35	-8,396.60	6,292.48	6,217.62	74.87	84.051		
9,400.00	7,026.79	7,231.10	7,100.17	78.05	35.94	-93.93	-2,266.34	-8,396.60	6,200.94	6,125.01	75.93	81.667		
9,500.00	7,025.04	7,231.21	7,100.28	80.67	35.94	-93.94	-2,266.33	-8,396.61	6,109.67	6,032.62	77.05	79.290		
9,600.00	7,023.29	7,231.33	7,100.39	83.31	35.94	-93.94	-2,266.32	-8,396.61	6,018.68	5,940.43	78.24	76.924		
9,700.00	7,021.54	7,231.44	7,100.51	85.96	35.94	-93.94	-2,266.31	-8,396.61	5,927.97	5,848.48	79.49	74.573		
9,800.00	7,019.79	7,231.56	7,100.62	88.63	35.94	-93.95	-2,266.31	-8,396.61	5,837.57	5,756.76	80.81	72.240		
9,900.00	7,018.04	7,231.67	7,100.73	91.30	35.94	-93.95	-2,266.30	-8,396.62	5,747.49	5,665.30	82.19	69.930		
10,000.00	7,016.29	7,231.78	7,100.85	93.99	35.94	-93.95	-2,266.29	-8,396.62	5,657.73	5,574.09	83.64	67.644		
10,100.00	7,014.54	7,231.90	7,100.96	96.69	35.94	-93.95	-2,266.28	-8,396.62	5,568.33	5,483.17	85.16	65.386		
10,200.00	7,012.79	7,232.01	7,101.07	99.40	35.94	-93.96	-2,266.27	-8,396.62	5,479.30	5,392.54	86.75	63.159		
10,300.00	7,011.04	7,232.12	7,101.19	102.11	35.94	-93.96	-2,266.27	-8,396.62	5,390.65	5,302.23	88.42	60.966		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - MCGLOTHLIN 8-6-17 (PR_150CC) - OH - OH													Offset Site Error: 0.00 ft	
Survey Program: 82-MWD													Offset Well Error: 3.28 ft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	7,232.24	7,101.30	104.83	35.94	-93.96	-2,266.26	-8,396.63	5,302.40	5,212.24	90.16	58.808		
10,500.00	7,007.54	7,232.35	7,101.41	107.56	35.94	-93.96	-2,266.25	-8,396.63	5,214.58	5,122.59	91.99	56.689		
10,600.00	7,005.79	7,232.46	7,101.52	110.30	35.94	-93.97	-2,266.24	-8,396.63	5,127.20	5,033.32	93.89	54.610		
10,700.00	7,004.04	7,232.58	7,101.64	113.04	35.94	-93.97	-2,266.23	-8,396.63	5,040.30	4,944.42	95.87	52.573		
10,800.00	7,002.29	7,232.69	7,101.75	115.79	35.94	-93.97	-2,266.22	-8,396.64	4,953.88	4,855.94	97.94	50.579		
10,900.00	7,000.54	7,232.80	7,101.86	118.54	35.95	-93.97	-2,266.22	-8,396.64	4,867.99	4,767.89	100.10	48.630		
11,000.00	6,998.79	7,232.92	7,101.98	121.30	35.95	-93.98	-2,266.21	-8,396.64	4,782.65	4,680.29	102.35	46.727		
11,100.00	6,997.04	7,233.03	7,102.09	124.06	35.95	-93.98	-2,266.20	-8,396.64	4,697.88	4,593.19	104.70	44.872		
11,200.00	6,995.29	7,233.14	7,102.20	126.83	35.95	-93.98	-2,266.19	-8,396.64	4,613.73	4,506.59	107.14	43.064		
11,300.00	6,993.54	7,233.26	7,102.31	129.60	35.95	-93.98	-2,266.18	-8,396.65	4,530.21	4,420.54	109.68	41.305		
11,400.00	6,991.80	7,233.37	7,102.43	132.37	35.95	-93.99	-2,266.18	-8,396.65	4,447.38	4,335.06	112.32	39.596		
11,500.00	6,990.05	7,233.48	7,102.54	135.15	35.95	-93.99	-2,266.17	-8,396.65	4,365.27	4,250.20	115.07	37.937		
11,600.00	6,988.30	7,233.59	7,102.65	137.93	35.95	-93.99	-2,266.16	-8,396.65	4,283.92	4,166.00	117.92	36.328		
11,700.00	6,986.55	7,233.71	7,102.76	140.72	35.95	-93.99	-2,266.15	-8,396.66	4,203.37	4,082.48	120.89	34.769		
11,800.00	6,984.80	7,233.82	7,102.88	143.50	35.95	-94.00	-2,266.14	-8,396.66	4,123.68	3,999.70	123.98	33.262		
11,900.00	6,983.05	7,233.93	7,102.99	146.29	35.95	-94.00	-2,266.14	-8,396.66	4,044.88	3,917.70	127.18	31.804		
12,000.00	6,981.30	7,234.05	7,103.10	149.09	35.95	-94.00	-2,266.13	-8,396.66	3,967.05	3,836.54	130.50	30.398		
12,100.00	6,979.55	7,234.16	7,103.21	151.88	35.95	-94.00	-2,266.12	-8,396.66	3,890.22	3,756.27	133.95	29.042		
12,200.00	6,977.80	7,234.27	7,103.33	154.68	35.95	-94.01	-2,266.11	-8,396.67	3,814.47	3,676.95	137.53	27.736		
12,300.00	6,976.05	7,234.38	7,103.44	157.48	35.95	-94.01	-2,266.10	-8,396.67	3,739.86	3,598.64	141.23	26.481		
12,400.00	6,974.30	7,234.50	7,103.55	160.28	35.95	-94.01	-2,266.10	-8,396.67	3,666.46	3,521.40	145.06	25.275		
12,500.00	6,972.55	7,234.61	7,103.66	163.08	35.95	-94.01	-2,266.09	-8,396.67	3,594.35	3,445.32	149.03	24.119		
12,600.00	6,970.80	7,234.72	7,103.77	165.89	35.95	-94.02	-2,266.08	-8,396.68	3,523.59	3,370.47	153.13	23.011		
12,700.00	6,969.05	7,234.83	7,103.89	168.69	35.95	-94.02	-2,266.07	-8,396.68	3,454.29	3,296.93	157.36	21.952		
12,800.00	6,967.30	7,234.94	7,104.00	171.50	35.95	-94.02	-2,266.06	-8,396.68	3,386.51	3,224.79	161.72	20.941		
12,900.00	6,965.55	7,235.06	7,104.11	174.31	35.95	-94.03	-2,266.06	-8,396.68	3,320.37	3,154.16	166.21	19.977		
13,000.00	6,963.80	7,235.17	7,104.22	177.12	35.95	-94.03	-2,266.05	-8,396.68	3,255.95	3,085.12	170.83	19.060		
13,100.00	6,962.05	7,235.28	7,104.33	179.94	35.96	-94.03	-2,266.04	-8,396.69	3,193.37	3,017.80	175.57	18.189		
13,200.00	6,960.30	7,235.39	7,104.44	182.75	35.96	-94.03	-2,266.03	-8,396.69	3,132.72	2,952.30	180.42	17.363		
13,300.00	6,958.55	7,235.50	7,104.56	185.57	35.96	-94.04	-2,266.02	-8,396.69	3,074.14	2,888.76	185.38	16.583		
13,400.00	6,956.80	7,235.62	7,104.67	188.38	35.96	-94.04	-2,266.02	-8,396.69	3,017.73	2,827.29	190.44	15.846		
13,500.00	6,955.05	7,235.73	7,104.78	191.20	35.96	-94.04	-2,266.01	-8,396.69	2,963.63	2,768.05	195.58	15.153		
13,600.00	6,953.31	7,235.84	7,104.89	194.02	35.96	-94.04	-2,266.00	-8,396.70	2,911.95	2,711.16	200.79	14.503		
13,700.00	6,951.56	7,235.95	7,105.00	196.84	35.96	-94.05	-2,265.99	-8,396.70	2,862.84	2,656.79	206.04	13.894		
13,800.00	6,949.81	7,236.06	7,105.11	199.67	35.96	-94.05	-2,265.98	-8,396.70	2,816.42	2,605.08	211.33	13.327		
13,900.00	6,948.06	7,236.17	7,105.22	202.49	35.96	-94.05	-2,265.98	-8,396.70	2,772.83	2,556.20	216.63	12.800		
14,000.00	6,946.31	7,236.29	7,105.34	205.31	35.96	-94.05	-2,265.97	-8,396.71	2,732.21	2,510.30	221.91	12.312		
14,100.00	6,944.56	7,236.40	7,105.45	208.14	35.96	-94.06	-2,265.96	-8,396.71	2,694.69	2,467.55	227.14	11.864		
14,200.00	6,942.81	7,236.51	7,105.56	210.96	35.96	-94.06	-2,265.95	-8,396.71	2,660.39	2,428.10	232.29	11.453		
14,300.00	6,941.06	7,236.62	7,105.67	213.79	35.96	-94.06	-2,265.94	-8,396.71	2,629.46	2,392.13	237.33	11.079		
14,400.00	6,939.31	7,236.73	7,105.78	216.62	35.96	-94.06	-2,265.94	-8,396.71	2,602.01	2,359.78	242.23	10.742		
14,500.00	6,937.56	7,236.84	7,105.89	219.44	35.96	-94.07	-2,265.93	-8,396.72	2,578.14	2,331.19	246.96	10.440		
14,600.00	6,935.81	7,236.95	7,106.00	222.27	35.96	-94.07	-2,265.92	-8,396.72	2,557.97	2,306.50	251.47	10.172		
14,700.00	6,934.06	7,237.07	7,106.11	225.10	35.96	-94.07	-2,265.91	-8,396.72	2,541.57	2,285.84	255.73	9.938		
14,800.00	6,932.31	7,237.18	7,106.22	227.93	35.96	-94.07	-2,265.90	-8,396.72	2,529.02	2,269.30	259.72	9.738		
14,817.75	6,932.00	7,237.20	7,106.24	228.43	35.96	-94.07	-2,265.90	-8,396.72	2,527.20	2,266.80	260.40	9.705 CC, ES, SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - MCGLOTHLIN 17-11(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.00	0.00	0.00	30.00	3.28	3.28	-82.91	1,137.96	-9,145.02	9,215.59					
100.00	100.00	70.00	100.00	3.28	3.50	-82.91	1,137.96	-9,145.02	9,215.55	9,208.76	6.78	1,358.242		
200.00	200.00	170.00	200.00	3.34	5.32	-82.91	1,137.96	-9,145.02	9,215.55	9,206.89	8.66	1,064.453		
300.00	300.00	270.00	300.00	3.44	8.35	-82.91	1,137.96	-9,145.02	9,215.55	9,203.75	11.80	781.231		
400.00	400.00	370.00	400.00	3.60	11.64	-82.91	1,137.96	-9,145.02	9,215.55	9,200.30	15.25	604.452		
500.00	500.00	470.00	500.00	3.81	15.02	-82.91	1,137.96	-9,145.02	9,215.55	9,196.72	18.83	489.392		
600.00	599.98	569.98	599.98	4.05	18.45	-55.55	1,137.96	-9,145.02	9,214.56	9,192.07	22.49	409.685		
700.00	699.86	669.86	699.86	4.32	21.89	-55.60	1,137.96	-9,145.02	9,211.83	9,185.63	26.20	351.568		
800.00	799.72	769.72	799.72	4.62	25.34	-55.63	1,137.96	-9,145.02	9,208.85	9,178.90	29.95	307.477		
900.00	899.58	869.58	899.58	4.93	28.80	-55.65	1,137.96	-9,145.02	9,205.87	9,172.15	33.73	272.951		
1,000.00	999.44	969.44	999.44	5.27	32.27	-55.68	1,137.96	-9,145.02	9,202.90	9,165.37	37.53	245.229		
1,100.00	1,099.31	1,069.31	1,099.31	5.62	35.73	-55.71	1,137.96	-9,145.02	9,199.92	9,158.58	41.35	222.506		
1,200.00	1,199.17	1,169.17	1,199.17	5.98	39.21	-55.73	1,137.96	-9,145.02	9,196.95	9,151.77	45.18	203.559		
1,300.00	1,299.03	1,269.03	1,299.03	6.36	42.68	-55.76	1,137.96	-9,145.02	9,193.98	9,144.95	49.03	187.529		
1,400.00	1,398.89	1,368.89	1,398.89	6.74	46.16	-55.79	1,137.96	-9,145.02	9,191.01	9,138.13	52.88	173.799		
1,500.00	1,498.75	1,468.75	1,498.75	7.13	49.64	-55.82	1,137.96	-9,145.02	9,188.04	9,131.30	56.75	161.911		
1,600.00	1,598.61	1,568.61	1,598.61	7.52	53.12	-55.84	1,137.96	-9,145.02	9,185.08	9,124.46	60.62	151.522		
1,700.00	1,698.47	1,668.47	1,698.47	7.92	56.60	-55.87	1,137.96	-9,145.02	9,182.12	9,117.62	64.50	142.367		
1,800.00	1,798.33	1,768.33	1,798.33	8.32	60.08	-55.90	1,137.96	-9,145.02	9,179.16	9,110.78	68.38	134.241		
1,900.00	1,898.19	1,868.19	1,898.19	8.73	63.56	-55.92	1,137.96	-9,145.02	9,176.20	9,103.93	72.26	126.980		
2,000.00	1,998.05	1,968.05	1,998.05	9.14	67.04	-55.95	1,137.96	-9,145.02	9,173.24	9,097.09	76.15	120.455		
2,100.00	2,097.91	2,067.91	2,097.91	9.55	70.52	-55.98	1,137.96	-9,145.02	9,170.29	9,090.24	80.05	114.559		
2,200.00	2,197.78	2,167.78	2,197.78	9.97	74.00	-56.01	1,137.96	-9,145.02	9,167.34	9,083.39	83.94	109.207		
2,300.00	2,297.64	2,267.64	2,297.64	10.39	77.49	-56.03	1,137.96	-9,145.02	9,164.39	9,076.54	87.84	104.326		
2,400.00	2,397.50	2,367.50	2,397.50	10.81	80.97	-56.06	1,137.96	-9,145.02	9,161.44	9,069.69	91.74	99.858		
2,500.00	2,497.36	2,467.36	2,497.36	11.23	84.45	-56.09	1,137.96	-9,145.02	9,158.49	9,062.85	95.65	95.753		
2,600.00	2,597.22	2,567.22	2,597.22	11.65	87.94	-56.12	1,137.96	-9,145.02	9,155.55	9,056.00	99.55	91.968		
2,700.00	2,697.08	2,667.08	2,697.08	12.07	91.42	-56.14	1,137.96	-9,145.02	9,152.61	9,049.15	103.46	88.467		
2,800.00	2,796.94	2,766.94	2,796.94	12.50	94.91	-56.17	1,137.96	-9,145.02	9,149.67	9,042.30	107.37	85.220		
2,900.00	2,896.80	2,866.80	2,896.80	12.92	98.39	-56.20	1,137.96	-9,145.02	9,146.73	9,035.46	111.27	82.200		
3,000.00	2,996.66	2,966.66	2,996.66	13.35	101.87	-56.23	1,137.96	-9,145.02	9,143.80	9,028.61	115.18	79.384		
3,100.00	3,096.52	3,066.52	3,096.52	13.78	105.36	-56.25	1,137.96	-9,145.02	9,140.86	9,021.77	119.10	76.753		
3,200.00	3,196.38	3,166.38	3,196.38	14.21	108.84	-56.28	1,137.96	-9,145.02	9,137.93	9,014.93	123.01	74.288		
3,300.00	3,296.25	3,266.25	3,296.25	14.64	112.33	-56.31	1,137.96	-9,145.02	9,135.00	9,008.08	126.92	71.975		
3,400.00	3,396.11	3,366.11	3,396.11	15.07	115.81	-56.34	1,137.96	-9,145.02	9,132.08	9,001.24	130.83	69.799		
3,500.00	3,495.97	3,465.97	3,495.97	15.50	119.30	-56.36	1,137.96	-9,145.02	9,129.15	8,994.41	134.75	67.750		
3,600.00	3,595.83	3,565.83	3,595.83	15.93	122.78	-56.39	1,137.96	-9,145.02	9,126.23	8,987.57	138.66	65.816		
3,700.00	3,695.69	3,665.69	3,695.69	16.36	126.27	-56.42	1,137.96	-9,145.02	9,123.31	8,980.73	142.58	63.988		
3,800.00	3,795.55	3,765.55	3,795.55	16.80	129.75	-56.45	1,137.96	-9,145.02	9,120.39	8,973.90	146.49	62.258		
3,900.00	3,895.41	3,865.41	3,895.41	17.23	133.24	-56.47	1,137.96	-9,145.02	9,117.47	8,967.06	150.41	60.618		
4,000.00	3,995.27	3,965.27	3,995.27	17.66	136.72	-56.50	1,137.96	-9,145.02	9,114.56	8,960.23	154.33	59.060		
4,100.00	4,095.13	4,065.13	4,095.13	18.10	140.21	-56.53	1,137.96	-9,145.02	9,111.65	8,953.40	158.24	57.580		
4,200.00	4,194.99	4,164.99	4,194.99	18.53	143.69	-56.56	1,137.96	-9,145.02	9,108.74	8,946.58	162.16	56.171		
4,300.00	4,294.85	4,264.85	4,294.85	18.96	147.18	-56.58	1,137.96	-9,145.02	9,105.83	8,939.75	166.08	54.828		
4,400.00	4,394.71	4,364.71	4,394.71	19.40	150.66	-56.61	1,137.96	-9,145.02	9,102.93	8,932.93	170.00	53.547		
4,500.00	4,494.58	4,464.58	4,494.58	19.83	154.15	-56.64	1,137.96	-9,145.02	9,100.02	8,926.10	173.92	52.324		
4,600.00	4,594.44	4,564.44	4,594.44	20.27	157.63	-56.67	1,137.96	-9,145.02	9,097.12	8,919.28	177.84	51.154		
4,700.00	4,694.30	4,664.30	4,694.30	20.71	161.12	-56.69	1,137.96	-9,145.02	9,094.22	8,912.47	181.76	50.035		
4,800.00	4,794.16	4,764.16	4,794.16	21.14	164.60	-56.72	1,137.96	-9,145.02	9,091.32	8,905.65	185.68	48.963		
4,900.00	4,894.02	4,864.02	4,894.02	21.58	168.09	-56.75	1,137.96	-9,145.02	9,088.43	8,898.83	189.60	47.936		
5,000.00	4,993.88	4,963.88	4,993.88	22.01	171.58	-56.78	1,137.96	-9,145.02	9,085.54	8,892.02	193.52	46.950		
5,100.00	5,093.74	5,063.74	5,093.74	22.45	175.06	-56.81	1,137.96	-9,145.02	9,082.65	8,885.21	197.44	46.003		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - MCGLOTHLIN 17-11(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,163.60	5,193.60	22.89	178.55	-56.83	1,137.96	-9,145.02	9,079.76	8,878.40	201.36	45.093		
5,300.00	5,293.46	5,263.46	5,293.46	23.32	182.03	-56.86	1,137.96	-9,145.02	9,076.87	8,871.59	205.28	44.217		
5,400.00	5,393.32	5,363.32	5,393.32	23.76	185.52	-56.89	1,137.96	-9,145.02	9,073.99	8,864.79	209.20	43.375		
5,500.00	5,493.18	5,463.18	5,493.18	24.20	189.00	-56.92	1,137.96	-9,145.02	9,071.10	8,857.98	213.12	42.563		
5,600.00	5,593.05	5,563.05	5,593.05	24.64	192.49	-56.94	1,137.96	-9,145.02	9,068.22	8,851.18	217.04	41.781		
5,700.00	5,692.91	5,662.91	5,692.91	25.07	195.97	-56.97	1,137.96	-9,145.02	9,065.35	8,844.38	220.96	41.026		
5,800.00	5,792.77	5,762.77	5,792.77	25.51	199.46	-57.00	1,137.96	-9,145.02	9,062.47	8,837.59	224.89	40.298		
5,900.00	5,892.63	5,862.63	5,892.63	25.95	202.95	-57.03	1,137.96	-9,145.02	9,059.60	8,830.79	228.81	39.595		
6,000.00	5,992.49	5,962.49	5,992.49	26.39	206.43	-57.06	1,137.96	-9,145.02	9,056.73	8,824.00	232.73	38.915		
6,100.00	6,092.35	6,062.35	6,092.35	26.82	209.92	-57.08	1,137.96	-9,145.02	9,053.86	8,817.21	236.65	38.258		
6,200.00	6,192.21	6,162.21	6,192.21	27.26	213.40	-57.11	1,137.96	-9,145.02	9,050.99	8,810.42	240.57	37.623		
6,300.00	6,292.07	6,262.07	6,292.07	27.70	216.89	-57.14	1,137.96	-9,145.02	9,048.13	8,803.63	244.50	37.007		
6,400.00	6,391.93	6,361.93	6,391.93	28.14	220.37	-57.17	1,137.96	-9,145.02	9,045.26	8,796.84	248.42	36.411		
6,500.00	6,491.79	6,461.79	6,491.79	28.58	223.86	-18.35	1,137.96	-9,145.02	9,040.34	8,788.00	252.34	35.826		
6,600.00	6,589.80	6,559.80	6,589.80	29.02	227.28	-4.27	1,137.96	-9,145.02	9,021.75	8,765.56	256.19	35.215		
6,700.00	6,683.86	6,653.86	6,683.86	29.46	230.56	-0.22	1,137.96	-9,145.02	8,988.12	8,728.24	259.89	34.585		
6,800.00	6,771.56	6,741.56	6,771.56	29.92	233.63	2.02	1,137.96	-9,145.02	8,940.28	8,676.96	263.32	33.952		
6,900.00	6,850.72	6,820.72	6,850.72	30.40	236.39	3.84	1,137.96	-9,145.02	8,879.40	8,612.98	266.41	33.330		
7,000.00	6,919.40	6,889.40	6,919.40	30.96	238.79	5.86	1,137.96	-9,145.02	8,806.98	8,537.90	269.08	32.730		
7,100.00	6,975.92	6,945.92	6,975.92	31.62	240.76	8.67	1,137.96	-9,145.02	8,724.81	8,453.54	271.26	32.163		
7,200.00	7,018.87	6,988.87	7,018.87	32.44	242.26	13.53	1,137.96	-9,145.02	8,634.91	8,362.00	272.91	31.640		
7,300.00	7,047.21	7,017.21	7,047.21	33.42	243.25	24.65	1,137.96	-9,145.02	8,539.51	8,265.52	273.99	31.167		
7,400.00	7,060.23	7,030.23	7,060.23	34.55	243.70	63.35	1,137.96	-9,145.02	8,440.96	8,166.47	274.49	30.752		
7,500.00	7,060.03	7,030.03	7,060.03	35.83	243.70	99.15	1,137.96	-9,145.02	8,341.55	8,067.05	274.50	30.389		
7,600.00	7,058.28	7,028.28	7,058.28	37.28	243.63	99.04	1,137.96	-9,145.02	8,242.16	7,967.71	274.45	30.031		
7,700.00	7,056.53	7,026.53	7,056.53	38.89	243.57	98.93	1,137.96	-9,145.02	8,142.78	7,868.37	274.41	29.674		
7,800.00	7,054.78	7,024.78	7,054.78	40.63	243.51	98.82	1,137.96	-9,145.02	8,043.42	7,769.04	274.38	29.315		
7,900.00	7,053.03	7,023.03	7,053.03	42.50	243.45	98.71	1,137.96	-9,145.02	7,944.07	7,669.72	274.35	28.956		
8,000.00	7,051.28	7,021.28	7,051.28	44.47	243.39	98.60	1,137.96	-9,145.02	7,844.74	7,570.41	274.32	28.597		
8,100.00	7,049.53	7,019.53	7,049.53	46.53	243.33	98.50	1,137.96	-9,145.02	7,745.42	7,471.11	274.31	28.236		
8,200.00	7,047.78	7,017.78	7,047.78	48.67	243.27	98.39	1,137.96	-9,145.02	7,646.13	7,371.83	274.30	27.875		
8,300.00	7,046.03	7,016.03	7,046.03	50.89	243.21	98.28	1,137.96	-9,145.02	7,546.85	7,272.55	274.30	27.514		
8,400.00	7,044.28	7,014.28	7,044.28	53.16	243.15	98.17	1,137.96	-9,145.02	7,447.59	7,173.29	274.30	27.151		
8,500.00	7,042.53	7,012.53	7,042.53	55.49	243.08	98.06	1,137.96	-9,145.02	7,348.35	7,074.03	274.31	26.788		
8,600.00	7,040.78	7,010.78	7,040.78	57.86	243.02	97.95	1,137.96	-9,145.02	7,249.13	6,974.79	274.33	26.425		
8,700.00	7,039.03	7,009.03	7,039.03	60.28	242.96	97.84	1,137.96	-9,145.02	7,149.93	6,875.56	274.36	26.060		
8,800.00	7,037.28	7,007.28	7,037.28	62.74	242.90	97.73	1,137.96	-9,145.02	7,050.75	6,776.35	274.40	25.695		
8,900.00	7,035.53	7,005.53	7,035.53	65.23	242.84	97.62	1,137.96	-9,145.02	6,951.60	6,677.15	274.45	25.329		
9,000.00	7,033.78	7,003.78	7,033.78	67.74	242.78	97.51	1,137.96	-9,145.02	6,852.47	6,577.96	274.51	24.963		
9,100.00	7,032.03	7,002.03	7,032.03	70.29	242.72	97.40	1,137.96	-9,145.02	6,753.36	6,478.78	274.58	24.595		
9,200.00	7,030.28	7,000.28	7,030.28	72.85	242.66	97.30	1,137.96	-9,145.02	6,654.29	6,379.62	274.66	24.227		
9,300.00	7,028.54	7,001.46	7,028.54	75.44	242.70	97.19	1,137.96	-9,145.02	6,555.24	6,280.38	274.86	23.849		
9,400.00	7,026.79	7,003.21	7,026.79	78.05	242.76	97.08	1,137.96	-9,145.02	6,456.22	6,181.13	275.09	23.469		
9,500.00	7,025.04	7,004.96	7,025.04	80.67	242.82	96.97	1,137.96	-9,145.02	6,357.22	6,081.89	275.33	23.089		
9,600.00	7,023.29	7,006.71	7,023.29	83.31	242.88	96.86	1,137.96	-9,145.02	6,258.27	5,982.67	275.59	22.708		
9,700.00	7,021.54	7,008.46	7,021.54	85.96	242.94	96.75	1,137.96	-9,145.02	6,159.34	5,883.47	275.87	22.327		
9,800.00	7,019.79	6,989.79	7,019.79	88.63	242.29	96.64	1,137.96	-9,145.02	6,060.45	5,785.00	275.45	22.002		
9,900.00	7,018.04	6,988.04	7,018.04	91.30	242.23	96.53	1,137.96	-9,145.02	5,961.59	5,685.96	275.63	21.629		
10,000.00	7,016.29	6,986.29	7,016.29	93.99	242.17	96.42	1,137.96	-9,145.02	5,862.78	5,586.93	275.84	21.254		
10,100.00	7,014.54	6,984.54	7,014.54	96.69	242.11	96.31	1,137.96	-9,145.02	5,764.00	5,487.93	276.07	20.879		
10,200.00	7,012.79	6,982.79	7,012.79	99.40	242.05	96.20	1,137.96	-9,145.02	5,665.27	5,388.95	276.32	20.503		
10,300.00	7,011.04	6,981.04	7,011.04	102.11	241.99	96.09	1,137.96	-9,145.02	5,566.58	5,289.99	276.59	20.126		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - MCGLOTHLIN 17-11(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	6,979.29	7,009.29	104.83	241.92	95.98	1,137.96	-9,145.02	5,467.93	5,191.05	276.88	19.748		
10,500.00	7,007.54	6,977.54	7,007.54	107.56	241.86	95.87	1,137.96	-9,145.02	5,369.34	5,092.14	277.20	19.370		
10,600.00	7,005.79	6,975.79	7,005.79	110.30	241.80	95.76	1,137.96	-9,145.02	5,270.80	4,993.25	277.55	18.990		
10,700.00	7,004.04	6,974.04	7,004.04	113.04	241.74	95.65	1,137.96	-9,145.02	5,172.32	4,894.38	277.93	18.610		
10,800.00	7,002.29	6,972.29	7,002.29	115.79	241.68	95.54	1,137.96	-9,145.02	5,073.89	4,795.55	278.34	18.229		
10,900.00	7,000.54	6,970.54	7,000.54	118.54	241.62	95.43	1,137.96	-9,145.02	4,975.53	4,696.74	278.79	17.847		
11,000.00	6,998.79	6,968.79	6,998.79	121.30	241.56	95.32	1,137.96	-9,145.02	4,877.23	4,597.96	279.26	17.465		
11,100.00	6,997.04	6,967.04	6,997.04	124.06	241.50	95.21	1,137.96	-9,145.02	4,779.00	4,499.22	279.78	17.081		
11,200.00	6,995.29	6,965.29	6,995.29	126.83	241.44	95.10	1,137.96	-9,145.02	4,680.85	4,400.51	280.34	16.697		
11,300.00	6,993.54	6,963.54	6,993.54	129.60	241.37	94.99	1,137.96	-9,145.02	4,582.77	4,301.83	280.94	16.312		
11,400.00	6,991.80	6,961.80	6,991.80	132.37	241.31	94.88	1,137.96	-9,145.02	4,484.78	4,203.19	281.59	15.927		
11,500.00	6,990.05	6,960.05	6,990.05	135.15	241.25	94.77	1,137.96	-9,145.02	4,386.88	4,104.60	282.28	15.541		
11,600.00	6,988.30	6,958.30	6,988.30	137.93	241.19	94.66	1,137.96	-9,145.02	4,289.08	4,006.04	283.03	15.154		
11,700.00	6,986.55	6,956.55	6,986.55	140.72	241.13	94.54	1,137.96	-9,145.02	4,191.38	3,907.53	283.84	14.767		
11,800.00	6,984.80	6,954.80	6,984.80	143.50	241.07	94.43	1,137.96	-9,145.02	4,093.78	3,809.07	284.71	14.379		
11,900.00	6,983.05	6,953.05	6,983.05	146.29	241.01	94.32	1,137.96	-9,145.02	3,996.31	3,710.67	285.64	13.991		
12,000.00	6,981.30	6,951.30	6,981.30	149.09	240.95	94.21	1,137.96	-9,145.02	3,898.97	3,612.32	286.65	13.602		
12,100.00	6,979.55	6,949.55	6,979.55	151.88	240.89	94.10	1,137.96	-9,145.02	3,801.76	3,514.03	287.73	13.213		
12,200.00	6,977.80	6,947.80	6,977.80	154.68	240.82	93.99	1,137.96	-9,145.02	3,704.70	3,415.81	288.89	12.824		
12,300.00	6,976.05	6,946.05	6,976.05	157.48	240.76	93.88	1,137.96	-9,145.02	3,607.80	3,317.66	290.14	12.435		
12,400.00	6,974.30	6,944.30	6,974.30	160.28	240.70	93.77	1,137.96	-9,145.02	3,511.07	3,219.59	291.48	12.046		
12,500.00	6,972.55	6,942.55	6,972.55	163.08	240.64	93.66	1,137.96	-9,145.02	3,414.53	3,121.60	292.93	11.657		
12,600.00	6,970.80	6,940.80	6,970.80	165.89	240.58	93.55	1,137.96	-9,145.02	3,318.19	3,023.71	294.48	11.268		
12,700.00	6,969.05	6,939.05	6,969.05	168.69	240.52	93.44	1,137.96	-9,145.02	3,222.08	2,925.92	296.16	10.880		
12,800.00	6,967.30	6,937.30	6,967.30	171.50	240.46	93.33	1,137.96	-9,145.02	3,126.21	2,828.24	297.96	10.492		
12,900.00	6,965.55	6,935.55	6,965.55	174.31	240.40	93.22	1,137.96	-9,145.02	3,030.60	2,730.69	299.91	10.105		
13,000.00	6,963.80	6,933.80	6,963.80	177.12	240.34	93.11	1,137.96	-9,145.02	2,935.29	2,633.28	302.01	9.719		
13,100.00	6,962.05	6,932.05	6,962.05	179.94	240.28	92.99	1,137.96	-9,145.02	2,840.30	2,536.01	304.28	9.334		
13,200.00	6,960.30	6,930.30	6,960.30	182.75	240.21	92.88	1,137.96	-9,145.02	2,745.66	2,438.92	306.74	8.951		
13,300.00	6,958.55	6,928.55	6,958.55	185.57	240.15	92.77	1,137.96	-9,145.02	2,651.41	2,342.02	309.39	8.570		
13,400.00	6,956.80	6,926.80	6,956.80	188.38	240.09	92.66	1,137.96	-9,145.02	2,557.60	2,245.34	312.26	8.190		
13,500.00	6,955.05	6,925.05	6,955.05	191.20	240.03	92.55	1,137.96	-9,145.02	2,464.28	2,148.90	315.38	7.814		
13,600.00	6,953.31	6,923.31	6,953.31	194.02	239.97	92.44	1,137.96	-9,145.02	2,371.50	2,052.74	318.76	7.440		
13,700.00	6,951.56	6,921.56	6,951.56	196.84	239.91	92.33	1,137.96	-9,145.02	2,279.33	1,956.89	322.44	7.069		
13,800.00	6,949.81	6,919.81	6,949.81	199.67	239.85	92.22	1,137.96	-9,145.02	2,187.85	1,861.40	326.44	6.702		
13,900.00	6,948.06	6,918.06	6,948.06	202.49	239.79	92.11	1,137.96	-9,145.02	2,097.14	1,766.34	330.80	6.340		
14,000.00	6,946.31	6,916.31	6,946.31	205.31	239.73	91.99	1,137.96	-9,145.02	2,007.31	1,671.76	335.55	5.982		
14,100.00	6,944.56	6,914.56	6,944.56	208.14	239.66	91.88	1,137.96	-9,145.02	1,918.49	1,577.74	340.75	5.630		
14,200.00	6,942.81	6,912.81	6,942.81	210.96	239.60	91.77	1,137.96	-9,145.02	1,830.82	1,484.40	346.42	5.285		
14,300.00	6,941.06	6,911.06	6,941.06	213.79	239.54	91.66	1,137.96	-9,145.02	1,744.47	1,391.84	352.63	4.947		
14,400.00	6,939.31	6,909.31	6,939.31	216.62	239.48	91.55	1,137.96	-9,145.02	1,659.66	1,300.24	359.42	4.618		
14,500.00	6,937.56	6,907.56	6,937.56	219.44	239.42	91.44	1,137.96	-9,145.02	1,576.62	1,209.77	366.86	4.298		
14,600.00	6,935.81	6,905.81	6,935.81	222.27	239.36	91.33	1,137.96	-9,145.02	1,495.67	1,120.69	374.98	3.989		
14,700.00	6,934.06	6,904.06	6,934.06	225.10	239.30	91.22	1,137.96	-9,145.02	1,417.14	1,033.30	383.84	3.692		
14,800.00	6,932.31	6,902.31	6,932.31	227.93	239.24	91.11	1,137.96	-9,145.02	1,341.47	948.00	393.47	3.409		
14,817.75	6,932.00	6,902.00	6,932.00	228.43	239.23	91.09	1,137.96	-9,145.02	1,328.38	933.12	395.26	3.361 CC, ES, SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - MONTERA 10-34 (PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	14.17	1.17	3.28	3.28	3.07	2,184.36	117.08	2,187.50					
100.00	100.00	123.82	110.82	3.28	3.30	3.06	2,184.09	116.71	2,187.24	2,180.66	6.58	332.398		
200.00	200.00	232.32	219.31	3.34	3.37	3.06	2,183.29	116.57	2,186.49	2,179.78	6.71	325.877		
300.00	300.00	329.92	316.91	3.44	3.49	3.06	2,182.44	116.55	2,185.61	2,178.68	6.94	315.018		
400.00	400.00	421.05	408.04	3.60	3.65	3.04	2,181.94	116.01	2,185.04	2,177.79	7.25	301.432		
500.00	500.00	511.18	498.17	3.81	3.83	3.02	2,181.86	115.22	2,184.90	2,177.26	7.64	286.145		
530.59	530.59	539.42	526.40	3.88	3.89	30.40	2,181.91	114.96	2,184.80	2,177.03	7.77	281.218		
600.00	599.98	603.48	590.47	4.05	4.05	30.41	2,182.15	114.33	2,183.65	2,175.56	8.09	269.805		
700.00	699.86	694.19	681.16	4.32	4.29	30.48	2,182.76	113.90	2,180.15	2,171.54	8.60	253.397		
800.00	799.72	813.78	800.76	4.62	4.63	30.56	2,183.28	113.95	2,176.05	2,166.81	9.24	235.382		
900.00	899.58	896.78	883.75	4.93	4.89	30.62	2,183.66	114.12	2,171.95	2,162.13	9.82	221.181		
1,000.00	999.44	1,016.60	1,003.57	5.27	5.28	30.72	2,183.99	114.45	2,167.71	2,157.17	10.55	205.544		
1,100.00	1,099.31	1,111.90	1,098.87	5.62	5.60	30.80	2,183.95	114.92	2,163.16	2,151.94	11.22	192.765		
1,200.00	1,199.17	1,207.32	1,194.29	5.98	5.94	30.88	2,184.05	115.68	2,158.78	2,146.86	11.92	181.102		
1,300.00	1,299.03	1,317.42	1,304.39	6.36	6.33	30.98	2,183.92	116.33	2,154.17	2,141.48	12.69	169.754		
1,400.00	1,398.89	1,412.41	1,399.38	6.74	6.68	31.05	2,183.83	116.41	2,149.56	2,136.14	13.42	160.156		
1,500.00	1,498.75	1,523.41	1,510.38	7.13	7.10	31.14	2,183.48	116.66	2,144.74	2,130.52	14.23	150.765		
1,600.00	1,598.61	1,628.45	1,615.41	7.52	7.50	31.22	2,182.74	116.79	2,139.53	2,124.51	15.02	142.446		
1,700.00	1,698.47	1,729.45	1,716.41	7.92	7.89	31.29	2,181.97	116.39	2,134.23	2,118.43	15.81	135.001		
1,800.00	1,798.33	1,829.15	1,816.10	8.32	8.28	31.34	2,181.10	115.58	2,128.80	2,112.20	16.60	128.227		
1,900.00	1,898.19	1,922.52	1,909.46	8.73	8.65	31.39	2,180.61	114.79	2,123.71	2,106.33	17.38	122.208		
2,000.00	1,998.05	2,028.63	2,015.57	9.14	9.07	31.45	2,179.82	113.99	2,118.41	2,100.20	18.21	116.342		
2,100.00	2,097.91	2,119.03	2,105.96	9.55	9.43	31.49	2,179.36	112.90	2,113.32	2,094.34	18.98	111.319		
2,200.00	2,197.78	2,211.26	2,198.19	9.97	9.80	31.53	2,179.22	111.84	2,108.60	2,088.82	19.77	106.647		
2,300.00	2,297.64	2,294.47	2,281.39	10.39	10.14	31.57	2,179.59	111.16	2,104.48	2,083.95	20.53	102.524		
2,400.00	2,397.50	2,384.84	2,371.75	10.81	10.51	31.61	2,180.57	110.24	2,100.99	2,079.68	21.31	98.580		
2,500.00	2,497.36	2,472.30	2,459.19	11.23	10.86	31.64	2,181.99	108.94	2,098.01	2,075.92	22.09	94.975		
2,600.00	2,597.22	2,561.04	2,547.90	11.65	11.23	31.67	2,183.96	107.61	2,095.62	2,072.75	22.87	91.612		
2,700.00	2,697.08	2,668.83	2,655.64	12.07	11.67	31.70	2,186.62	105.91	2,093.49	2,069.74	23.74	88.180		
2,800.00	2,796.94	2,769.26	2,756.04	12.50	12.09	31.73	2,188.59	104.33	2,090.84	2,066.26	24.58	85.065		
2,900.00	2,896.80	2,875.53	2,862.27	12.92	12.53	31.74	2,190.78	102.19	2,088.26	2,062.81	25.44	82.071		
3,000.00	2,996.66	2,980.80	2,967.50	13.35	12.96	31.75	2,192.53	99.78	2,085.26	2,058.95	26.31	79.264		
3,100.00	3,096.52	3,071.74	3,058.40	13.78	13.34	31.77	2,194.09	97.95	2,082.33	2,055.22	27.11	76.800		
3,200.00	3,196.38	3,174.83	3,161.45	14.21	13.77	31.79	2,196.17	96.06	2,079.72	2,051.75	27.97	74.353		
3,300.00	3,296.25	3,263.46	3,250.05	14.64	14.14	31.82	2,197.89	94.66	2,077.07	2,048.30	28.77	72.196		
3,400.00	3,396.11	3,346.77	3,333.32	15.07	14.49	31.84	2,200.19	93.39	2,075.22	2,045.68	29.55	70.236		
3,500.00	3,495.97	3,448.72	3,435.21	15.50	14.91	31.88	2,203.59	92.33	2,073.99	2,043.59	30.40	68.217		
3,600.00	3,595.83	3,555.26	3,541.72	15.93	15.36	31.95	2,206.33	92.05	2,072.04	2,040.76	31.28	66.242		
3,700.00	3,695.69	3,678.11	3,664.53	16.36	15.87	32.02	2,209.33	91.25	2,070.02	2,037.79	32.23	64.236		
3,800.00	3,795.55	3,780.19	3,766.59	16.80	16.30	32.07	2,210.71	90.28	2,066.82	2,033.74	33.09	62.470		
3,900.00	3,895.41	3,889.04	3,875.42	17.23	16.76	32.11	2,212.21	88.77	2,063.62	2,029.64	33.97	60.742		
4,000.00	3,995.27	4,009.54	3,995.88	17.66	17.26	32.12	2,213.04	85.86	2,059.64	2,024.73	34.91	59.003		
4,100.00	4,095.13	4,110.16	4,096.46	18.10	17.68	32.12	2,213.26	83.06	2,055.16	2,019.40	35.76	57.464		
4,200.00	4,194.99	4,197.14	4,183.42	18.53	18.05	32.13	2,213.69	80.97	2,050.98	2,014.41	36.57	56.085		
4,300.00	4,294.85	4,294.42	4,280.68	18.96	18.46	32.15	2,214.46	79.17	2,047.15	2,009.73	37.41	54.716		
4,400.00	4,394.71	4,381.24	4,367.48	19.40	18.83	32.19	2,215.42	77.99	2,043.68	2,005.46	38.22	53.475		
4,500.00	4,494.58	4,475.50	4,461.73	19.83	19.22	32.23	2,216.93	77.14	2,040.73	2,001.68	39.05	52.258		
4,600.00	4,594.44	4,564.05	4,550.25	20.27	19.60	32.27	2,218.66	75.98	2,038.11	1,998.25	39.86	51.131		
4,700.00	4,694.30	4,670.57	4,656.72	20.71	20.05	32.29	2,221.17	74.16	2,035.87	1,995.12	40.75	49.965		
4,800.00	4,794.16	4,782.95	4,769.07	21.14	20.52	32.32	2,223.04	71.98	2,032.89	1,991.24	41.66	48.803		
4,900.00	4,894.02	4,900.83	4,886.91	21.58	21.02	32.33	2,224.25	69.14	2,029.26	1,986.68	42.58	47.653		
5,000.00	4,993.88	4,988.68	4,974.72	22.01	21.39	32.33	2,225.04	66.70	2,025.46	1,982.06	43.40	46.673		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - MONTERA 10-34 (PR_75CC) - OH - OH													Offset Site Error: 0.00 ft	
Survey Program: 100-GYRO-NS													Offset Well Error: 3.28 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
5,100.00	5,093.74	5,097.08	5,083.08	22.45	21.85	32.33	2,226.16	63.80	2,021.80	1,977.51	44.29	45.649		
5,200.00	5,193.60	5,188.03	5,174.01	22.89	22.24	32.36	2,226.96	62.22	2,018.08	1,972.97	45.11	44.733		
5,300.00	5,293.46	5,282.77	5,268.74	23.32	22.64	32.40	2,228.12	61.06	2,014.74	1,968.78	45.95	43.843		
5,400.00	5,393.32	5,381.78	5,367.73	23.76	23.06	32.44	2,229.47	60.01	2,011.55	1,964.74	46.81	42.972		
5,500.00	5,493.18	5,480.06	5,466.00	24.20	23.47	32.51	2,230.79	59.67	2,008.41	1,960.74	47.66	42.137		
5,600.00	5,593.05	5,569.65	5,555.57	24.64	23.85	32.58	2,232.21	59.58	2,005.53	1,957.04	48.48	41.365		
5,700.00	5,692.91	5,673.37	5,659.27	25.07	24.29	32.67	2,234.15	60.14	2,003.00	1,953.64	49.36	40.579		
5,800.00	5,792.77	5,792.12	5,778.02	25.51	24.79	32.79	2,235.54	61.10	1,999.81	1,949.51	50.30	39.761		
5,900.00	5,892.63	5,902.55	5,888.44	25.95	25.26	32.88	2,236.04	61.23	1,995.84	1,944.64	51.20	38.984		
6,000.00	5,992.49	6,021.81	6,007.70	26.39	25.77	32.97	2,235.67	60.88	1,991.07	1,938.94	52.13	38.197		
6,100.00	6,092.35	6,127.09	6,112.98	26.82	26.21	33.05	2,234.75	60.35	1,985.72	1,932.72	53.00	37.464		
6,200.00	6,192.21	6,227.16	6,213.04	27.26	26.64	33.12	2,233.72	59.84	1,980.23	1,926.36	53.86	36.763		
6,300.00	6,292.07	6,322.62	6,308.49	27.70	27.04	33.18	2,232.88	59.10	1,974.86	1,920.16	54.71	36.097		
6,400.00	6,391.93	6,415.34	6,401.20	28.14	27.44	33.23	2,232.35	57.96	1,969.76	1,914.21	55.55	35.462		
6,500.00	6,491.69	6,499.07	6,484.93	28.58	27.79	72.31	2,232.42	56.77	1,965.52	1,909.17	56.35	34.881		
6,600.00	6,589.80	6,610.32	6,596.16	29.02	28.26	87.01	2,232.58	55.41	1,963.02	1,905.77	57.25	34.286		
6,673.30	6,659.28	6,682.76	6,668.59	29.34	28.57	90.73	2,232.43	54.41	1,962.37	1,904.49	57.88	33.901 CC		
6,700.00	6,683.86	6,708.76	6,694.59	29.46	28.68	91.70	2,232.35	53.96	1,962.47	1,904.36	58.11	33.770 ES		
6,800.00	6,771.56	6,800.23	6,786.05	29.92	29.07	94.38	2,231.97	52.46	1,964.81	1,905.85	58.95	33.328		
6,900.00	6,850.72	6,879.99	6,865.80	30.40	29.41	96.13	2,231.58	51.21	1,971.06	1,911.28	59.78	32.974		
7,000.00	6,919.40	6,947.55	6,933.36	30.96	29.70	97.08	2,231.26	50.22	1,982.26	1,921.65	60.61	32.704		
7,100.00	6,975.92	7,002.34	6,988.14	31.62	29.93	97.21	2,231.01	49.70	1,999.26	1,937.77	61.49	32.514		
7,200.00	7,018.87	7,047.26	7,033.06	32.44	30.12	96.48	2,230.78	49.44	2,022.53	1,960.09	62.44	32.393		
7,300.00	7,047.21	7,076.70	7,062.50	33.42	30.25	94.68	2,230.59	49.34	2,052.14	1,988.71	63.43	32.351 SF		
7,400.00	7,060.23	7,090.21	7,076.00	34.55	30.31	91.72	2,230.49	49.31	2,087.77	2,023.32	64.44	32.396		
7,500.00	7,060.03	7,090.18	7,075.98	35.83	30.31	90.00	2,230.49	49.31	2,128.47	2,063.02	65.45	32.522		
7,600.00	7,058.28	7,088.60	7,074.40	37.28	30.30	89.95	2,230.50	49.32	2,173.09	2,106.58	66.51	32.673		
7,700.00	7,056.53	7,087.04	7,072.83	38.89	30.29	89.91	2,230.51	49.32	2,221.31	2,153.70	67.61	32.855		
7,800.00	7,054.78	7,085.49	7,071.29	40.63	30.29	89.86	2,230.52	49.32	2,272.92	2,204.19	68.73	33.072		
7,900.00	7,053.03	7,083.97	7,069.77	42.50	30.28	89.82	2,230.54	49.33	2,327.68	2,257.84	69.84	33.330		
8,000.00	7,051.28	7,082.46	7,068.26	44.47	30.27	89.77	2,230.55	49.33	2,385.37	2,314.44	70.93	33.629		
8,100.00	7,049.53	7,080.97	7,066.77	46.53	30.27	89.73	2,230.56	49.33	2,445.79	2,373.79	72.00	33.970		
8,200.00	7,047.78	7,079.50	7,065.30	48.67	30.26	89.68	2,230.57	49.34	2,508.75	2,435.72	73.03	34.353		
8,300.00	7,046.03	7,078.05	7,063.85	50.89	30.25	89.64	2,230.58	49.34	2,574.05	2,500.03	74.02	34.777		
8,400.00	7,044.28	7,076.61	7,062.41	53.16	30.25	89.60	2,230.59	49.34	2,641.52	2,566.56	74.96	35.239		
8,500.00	7,042.53	7,075.19	7,060.99	55.49	30.24	89.55	2,230.60	49.35	2,711.00	2,635.14	75.86	35.737		
8,600.00	7,040.78	7,073.79	7,059.59	57.86	30.24	89.51	2,230.61	49.35	2,782.34	2,705.62	76.71	36.269		
8,700.00	7,039.03	7,072.40	7,058.20	60.28	30.23	89.47	2,230.62	49.35	2,855.39	2,777.87	77.52	36.834		
8,800.00	7,037.28	7,071.03	7,056.83	62.74	30.23	89.43	2,230.63	49.36	2,930.04	2,851.76	78.28	37.428		
8,900.00	7,035.53	7,069.68	7,055.48	65.23	30.22	89.39	2,230.64	49.36	3,006.17	2,927.16	79.01	38.050		
9,000.00	7,033.78	7,068.34	7,054.14	67.74	30.21	89.35	2,230.64	49.37	3,083.65	3,003.97	79.69	38.697		
9,100.00	7,032.03	7,067.02	7,052.81	70.29	30.21	89.31	2,230.65	49.37	3,162.40	3,082.07	80.33	39.368		
9,200.00	7,030.28	7,065.71	7,051.51	72.85	30.20	89.27	2,230.66	49.37	3,242.32	3,161.39	80.93	40.061		
9,300.00	7,028.54	7,064.41	7,050.21	75.44	30.20	89.23	2,230.67	49.38	3,323.33	3,241.82	81.51	40.774		
9,400.00	7,026.79	7,063.13	7,048.93	78.05	30.19	89.20	2,230.68	49.38	3,405.34	3,323.30	82.04	41.506		
9,500.00	7,025.04	7,061.87	7,047.66	80.67	30.19	89.16	2,230.69	49.39	3,488.30	3,405.74	82.55	42.255		
9,600.00	7,023.29	7,060.61	7,046.41	83.31	30.18	89.12	2,230.70	49.39	3,572.12	3,489.09	83.03	43.020		
9,700.00	7,021.54	7,059.38	7,045.17	85.96	30.18	89.08	2,230.70	49.40	3,656.76	3,573.28	83.49	43.800		
9,800.00	7,019.79	7,058.15	7,043.95	88.63	30.17	89.05	2,230.71	49.40	3,742.16	3,658.24	83.92	44.594		
9,900.00	7,018.04	7,056.94	7,042.74	91.30	30.17	89.01	2,230.72	49.41	3,828.26	3,743.94	84.32	45.400		
10,000.00	7,016.29	7,055.74	7,041.54	93.99	30.16	88.98	2,230.73	49.41	3,915.03	3,830.32	84.71	46.218		
10,100.00	7,014.54	7,054.56	7,040.36	96.69	30.16	88.94	2,230.73	49.41	4,002.41	3,917.34	85.07	47.047		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - MONTERA 10-34 (PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,200.00	7,012.79	7,053.38	7,039.18	99.40	30.15	88.91	2,230.74	49.42	4,090.37	4,004.95	85.42	47.886		
10,300.00	7,011.04	7,052.22	7,038.02	102.11	30.15	88.87	2,230.75	49.42	4,178.87	4,093.12	85.75	48.734		
10,400.00	7,009.29	7,051.07	7,036.87	104.83	30.14	88.84	2,230.76	49.43	4,267.88	4,181.81	86.06	49.591		
10,500.00	7,007.54	7,049.94	7,035.74	107.56	30.14	88.80	2,230.76	49.43	4,357.36	4,271.00	86.36	50.456		
10,600.00	7,005.79	7,048.81	7,034.61	110.30	30.13	88.77	2,230.77	49.44	4,447.29	4,360.65	86.64	51.329		
10,700.00	7,004.04	7,047.70	7,033.50	113.04	30.13	88.74	2,230.78	49.44	4,537.64	4,450.73	86.91	52.209		
10,800.00	7,002.29	7,046.60	7,032.40	115.79	30.12	88.70	2,230.78	49.45	4,628.39	4,541.22	87.17	53.095		
10,900.00	7,000.54	7,045.51	7,031.31	118.54	30.12	88.67	2,230.79	49.45	4,719.52	4,632.10	87.42	53.987		
11,000.00	6,998.79	7,044.43	7,030.23	121.30	30.11	88.64	2,230.79	49.46	4,810.99	4,723.34	87.66	54.885		
11,100.00	6,997.04	7,043.37	7,029.16	124.06	30.11	88.61	2,230.80	49.46	4,902.80	4,814.92	87.88	55.788		
11,200.00	6,995.29	7,042.31	7,028.11	126.83	30.10	88.58	2,230.81	49.47	4,994.92	4,906.82	88.10	56.696		
11,300.00	6,993.54	7,041.26	7,027.06	129.60	30.10	88.55	2,230.81	49.47	5,087.34	4,999.03	88.31	57.608		
11,400.00	6,991.80	7,040.23	7,026.03	132.37	30.09	88.51	2,230.82	49.48	5,180.04	5,091.53	88.51	58.525		
11,500.00	6,990.05	7,039.20	7,025.00	135.15	30.09	88.48	2,230.83	49.48	5,273.01	5,184.31	88.70	59.446		
11,600.00	6,988.30	7,038.19	7,023.99	137.93	30.09	88.45	2,230.83	49.49	5,366.23	5,277.34	88.89	60.370		
11,700.00	6,986.55	7,037.18	7,022.98	140.72	30.08	88.42	2,230.84	49.49	5,459.69	5,370.62	89.07	61.298		
11,800.00	6,984.80	7,036.19	7,021.99	143.50	30.08	88.39	2,230.84	49.50	5,553.38	5,464.14	89.24	62.228		
11,900.00	6,983.05	7,035.20	7,021.00	146.29	30.07	88.36	2,230.85	49.50	5,647.28	5,557.87	89.41	63.162		
12,000.00	6,981.30	7,034.22	7,020.02	149.09	30.07	88.34	2,230.85	49.51	5,741.39	5,651.82	89.57	64.099		
12,100.00	6,979.55	7,033.26	7,019.06	151.88	30.06	88.31	2,230.86	49.51	5,835.70	5,745.97	89.73	65.038		
12,200.00	6,977.80	7,032.30	7,018.10	154.68	30.06	88.28	2,230.86	49.52	5,930.19	5,840.31	89.88	65.979		
12,300.00	6,976.05	7,031.35	7,017.15	157.48	30.06	88.25	2,230.87	49.52	6,024.86	5,934.83	90.03	66.923		
12,400.00	6,974.30	7,030.41	7,016.21	160.28	30.05	88.22	2,230.87	49.53	6,119.70	6,029.53	90.17	67.869		
12,500.00	6,972.55	7,029.48	7,015.28	163.08	30.05	88.19	2,230.88	49.53	6,214.70	6,124.39	90.31	68.816		
12,600.00	6,970.80	7,028.56	7,014.36	165.89	30.04	88.17	2,230.88	49.54	6,309.85	6,219.41	90.44	69.765		
12,700.00	6,969.05	7,027.65	7,013.45	168.69	30.04	88.14	2,230.89	49.54	6,405.15	6,314.58	90.58	70.716		
12,800.00	6,967.30	7,026.75	7,012.55	171.50	30.04	88.11	2,230.89	49.55	6,500.60	6,409.89	90.70	71.668		
12,900.00	6,965.55	7,025.85	7,011.65	174.31	30.03	88.09	2,230.90	49.55	6,596.17	6,505.34	90.83	72.622		
13,000.00	6,963.80	7,024.96	7,010.76	177.12	30.03	88.06	2,230.90	49.56	6,691.88	6,600.93	90.95	73.576		
13,100.00	6,962.05	7,024.08	7,009.88	179.94	30.03	88.03	2,230.91	49.56	6,787.71	6,696.64	91.07	74.532		
13,200.00	6,960.30	7,023.21	7,009.01	182.75	30.02	88.01	2,230.91	49.57	6,883.66	6,792.47	91.19	75.489		
13,300.00	6,958.55	7,022.35	7,008.15	185.57	30.02	87.98	2,230.92	49.57	6,979.72	6,888.42	91.30	76.446		
13,400.00	6,956.80	7,021.50	7,007.30	188.38	30.01	87.96	2,230.92	49.58	7,075.89	6,984.48	91.41	77.405		
13,500.00	6,955.05	7,020.65	7,006.45	191.20	30.01	87.93	2,230.93	49.58	7,172.17	7,080.65	91.52	78.364		
13,600.00	6,953.31	7,019.81	7,005.61	194.02	30.01	87.91	2,230.93	49.59	7,268.55	7,176.92	91.63	79.323		
13,700.00	6,951.56	7,018.98	7,004.78	196.84	30.00	87.88	2,230.93	49.59	7,365.02	7,273.28	91.74	80.283		
13,800.00	6,949.81	7,018.15	7,003.95	199.67	30.00	87.86	2,230.94	49.60	7,461.59	7,369.75	91.84	81.244		
13,900.00	6,948.06	7,017.33	7,003.13	202.49	30.00	87.83	2,230.94	49.60	7,558.24	7,466.30	91.94	82.205		
14,000.00	6,946.31	7,016.52	7,002.32	205.31	29.99	87.81	2,230.95	49.61	7,654.98	7,562.94	92.04	83.166		
14,100.00	6,944.56	7,015.72	7,001.52	208.14	29.99	87.79	2,230.95	49.61	7,751.81	7,659.66	92.14	84.127		
14,200.00	6,942.81	7,014.93	7,000.73	210.96	29.99	87.76	2,230.95	49.62	7,848.71	7,756.47	92.24	85.089		
14,300.00	6,941.06	7,014.14	6,999.94	213.79	29.98	87.74	2,230.96	49.62	7,945.69	7,853.35	92.34	86.051		
14,400.00	6,939.31	7,013.36	6,999.16	216.62	29.98	87.72	2,230.96	49.63	8,042.74	7,950.31	92.43	87.012		
14,500.00	6,937.56	7,012.58	6,998.38	219.44	29.98	87.69	2,230.97	49.63	8,139.87	8,047.34	92.53	87.974		
14,600.00	6,935.81	7,011.81	6,997.61	222.27	29.97	87.67	2,230.97	49.64	8,237.06	8,144.44	92.62	88.935		
14,700.00	6,934.06	7,011.05	6,996.85	225.10	29.97	87.65	2,230.97	49.64	8,334.32	8,241.61	92.71	89.896		
14,800.00	6,932.31	7,010.29	6,996.09	227.93	29.97	87.62	2,230.98	49.65	8,431.64	8,338.84	92.80	90.857		
14,817.75	6,932.00	7,010.16	6,995.96	228.43	29.97	87.62	2,230.98	49.65	8,448.92	8,356.11	92.82	91.028		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - RUTT-ADAMS HEIRS 2-22 - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	60.00	3.28	3.28	-166.13	-4,239.76	-1,046.81	4,367.49					
100.00	100.00	40.00	100.00	3.28	3.35	-166.13	-4,239.76	-1,046.81	4,367.08	4,360.44	6.64	657.870		
200.00	200.00	140.00	200.00	3.34	4.54	-166.13	-4,239.76	-1,046.81	4,367.08	4,359.20	7.88	554.265		
300.00	300.00	240.00	300.00	3.44	7.40	-166.13	-4,239.76	-1,046.81	4,367.08	4,356.24	10.84	402.700		
400.00	400.00	340.00	400.00	3.60	10.64	-166.13	-4,239.76	-1,046.81	4,367.08	4,352.83	14.25	306.562		
500.00	500.00	440.00	500.00	3.81	14.00	-166.13	-4,239.76	-1,046.81	4,367.08	4,349.27	17.81	245.198 CC		
600.00	599.98	539.98	599.98	4.05	17.42	-138.75	-4,239.76	-1,046.81	4,368.39	4,346.93	21.46	203.533		
700.00	699.86	639.86	699.86	4.32	20.85	-138.77	-4,239.76	-1,046.81	4,372.02	4,346.85	25.17	173.699		
800.00	799.72	739.72	799.72	4.62	24.30	-138.81	-4,239.76	-1,046.81	4,375.99	4,347.07	28.92	151.335		
900.00	899.58	839.58	899.58	4.93	27.76	-138.86	-4,239.76	-1,046.81	4,379.96	4,347.26	32.69	133.973		
1,000.00	999.44	939.44	999.44	5.27	31.22	-138.91	-4,239.76	-1,046.81	4,383.93	4,347.44	36.49	120.128		
1,100.00	1,099.31	1,039.31	1,099.31	5.62	34.69	-138.95	-4,239.76	-1,046.81	4,387.91	4,347.60	40.31	108.845		
1,200.00	1,199.17	1,139.17	1,199.17	5.98	38.16	-139.00	-4,239.76	-1,046.81	4,391.89	4,347.74	44.15	99.480		
1,300.00	1,299.03	1,239.03	1,299.03	6.36	41.64	-139.04	-4,239.76	-1,046.81	4,395.87	4,347.88	48.00	91.589		
1,400.00	1,398.89	1,338.89	1,398.89	6.74	45.11	-139.09	-4,239.76	-1,046.81	4,399.86	4,348.01	51.85	84.853		
1,500.00	1,498.75	1,438.75	1,498.75	7.13	48.59	-139.13	-4,239.76	-1,046.81	4,403.85	4,348.13	55.72	79.037		
1,600.00	1,598.61	1,538.61	1,598.61	7.52	52.07	-139.18	-4,239.76	-1,046.81	4,407.84	4,348.25	59.59	73.968		
1,700.00	1,698.47	1,638.47	1,698.47	7.92	55.55	-139.22	-4,239.76	-1,046.81	4,411.83	4,348.36	63.47	69.511		
1,800.00	1,798.33	1,738.33	1,798.33	8.32	59.03	-139.26	-4,239.76	-1,046.81	4,415.83	4,348.47	67.35	65.562		
1,900.00	1,898.19	1,838.19	1,898.19	8.73	62.51	-139.31	-4,239.76	-1,046.81	4,419.83	4,348.59	71.24	62.040		
2,000.00	1,998.05	1,938.05	1,998.05	9.14	65.99	-139.35	-4,239.76	-1,046.81	4,423.83	4,348.70	75.13	58.880		
2,100.00	2,097.91	2,037.91	2,097.91	9.55	69.48	-139.40	-4,239.76	-1,046.81	4,427.83	4,348.80	79.03	56.028		
2,200.00	2,197.78	2,137.78	2,197.78	9.97	72.96	-139.44	-4,239.76	-1,046.81	4,431.84	4,348.91	82.93	53.443		
2,300.00	2,297.64	2,237.64	2,297.64	10.39	76.44	-139.49	-4,239.76	-1,046.81	4,435.85	4,349.02	86.83	51.089		
2,400.00	2,397.50	2,337.50	2,397.50	10.81	79.92	-139.53	-4,239.76	-1,046.81	4,439.86	4,349.13	90.73	48.935		
2,500.00	2,497.36	2,437.36	2,497.36	11.23	83.41	-139.58	-4,239.76	-1,046.81	4,443.88	4,349.24	94.63	46.959		
2,600.00	2,597.22	2,537.22	2,597.22	11.65	86.89	-139.62	-4,239.76	-1,046.81	4,447.89	4,349.36	98.54	45.138		
2,700.00	2,697.08	2,637.08	2,697.08	12.07	90.37	-139.66	-4,239.76	-1,046.81	4,451.92	4,349.47	102.45	43.456		
2,800.00	2,796.94	2,736.94	2,796.94	12.50	93.86	-139.71	-4,239.76	-1,046.81	4,455.94	4,349.58	106.36	41.896		
2,900.00	2,896.80	2,836.80	2,896.80	12.92	97.34	-139.75	-4,239.76	-1,046.81	4,459.96	4,349.70	110.27	40.447		
3,000.00	2,996.66	2,936.66	2,996.66	13.35	100.83	-139.79	-4,239.76	-1,046.81	4,463.99	4,349.81	114.18	39.097		
3,100.00	3,096.52	3,036.52	3,096.52	13.78	104.31	-139.84	-4,239.76	-1,046.81	4,468.02	4,349.93	118.09	37.835		
3,200.00	3,196.38	3,136.38	3,196.38	14.21	107.80	-139.88	-4,239.76	-1,046.81	4,472.06	4,350.05	122.00	36.655		
3,300.00	3,296.25	3,236.25	3,296.25	14.64	111.28	-139.93	-4,239.76	-1,046.81	4,476.09	4,350.17	125.92	35.548		
3,400.00	3,396.11	3,336.11	3,396.11	15.07	114.77	-139.97	-4,239.76	-1,046.81	4,480.13	4,350.30	129.83	34.507		
3,500.00	3,495.97	3,435.97	3,495.97	15.50	118.25	-140.01	-4,239.76	-1,046.81	4,484.17	4,350.42	133.75	33.527		
3,600.00	3,595.83	3,535.83	3,595.83	15.93	121.73	-140.05	-4,239.76	-1,046.81	4,488.21	4,350.55	137.67	32.602		
3,700.00	3,695.69	3,635.69	3,695.69	16.36	125.22	-140.10	-4,239.76	-1,046.81	4,492.26	4,350.68	141.58	31.729		
3,800.00	3,795.55	3,735.55	3,795.55	16.80	128.70	-140.14	-4,239.76	-1,046.81	4,496.31	4,350.81	145.50	30.902		
3,900.00	3,895.41	3,835.41	3,895.41	17.23	132.19	-140.18	-4,239.76	-1,046.81	4,500.36	4,350.94	149.42	30.119		
4,000.00	3,995.27	3,935.27	3,995.27	17.66	135.67	-140.23	-4,239.76	-1,046.81	4,504.41	4,351.08	153.34	29.376		
4,100.00	4,095.13	4,035.13	4,095.13	18.10	139.16	-140.27	-4,239.76	-1,046.81	4,508.47	4,351.21	157.26	28.670		
4,200.00	4,194.99	4,134.99	4,194.99	18.53	142.65	-140.31	-4,239.76	-1,046.81	4,512.53	4,351.35	161.18	27.998		
4,300.00	4,294.85	4,234.85	4,294.85	18.96	146.13	-140.36	-4,239.76	-1,046.81	4,516.59	4,351.49	165.09	27.358		
4,400.00	4,394.71	4,334.71	4,394.71	19.40	149.62	-140.40	-4,239.76	-1,046.81	4,520.65	4,351.64	169.01	26.747		
4,500.00	4,494.58	4,434.58	4,494.58	19.83	153.10	-140.44	-4,239.76	-1,046.81	4,524.72	4,351.78	172.94	26.164		
4,600.00	4,594.44	4,534.44	4,594.44	20.27	156.59	-140.48	-4,239.76	-1,046.81	4,528.79	4,351.93	176.86	25.607		
4,700.00	4,694.30	4,634.30	4,694.30	20.71	160.07	-140.53	-4,239.76	-1,046.81	4,532.86	4,352.08	180.78	25.074		
4,800.00	4,794.16	4,734.16	4,794.16	21.14	163.56	-140.57	-4,239.76	-1,046.81	4,536.93	4,352.23	184.70	24.564		
4,900.00	4,894.02	4,834.02	4,894.02	21.58	167.04	-140.61	-4,239.76	-1,046.81	4,541.01	4,352.39	188.62	24.075		
5,000.00	4,993.88	4,933.88	4,993.88	22.01	170.53	-140.65	-4,239.76	-1,046.81	4,545.09	4,352.55	192.54	23.606		
5,100.00	5,093.74	5,033.74	5,093.74	22.45	174.01	-140.69	-4,239.76	-1,046.81	4,549.17	4,352.70	196.46	23.155		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - RUTT-ADAMS HEIRS 2-22 - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,133.60	5,193.60	22.89	177.50	-140.74	-4,239.76	-1,046.81	4,553.25	4,352.87	200.39	22.722		
5,300.00	5,293.46	5,233.46	5,293.46	23.32	180.98	-140.78	-4,239.76	-1,046.81	4,557.34	4,353.03	204.31	22.306		
5,400.00	5,393.32	5,333.32	5,393.32	23.76	184.47	-140.82	-4,239.76	-1,046.81	4,561.43	4,353.20	208.23	21.906		
5,500.00	5,493.18	5,433.18	5,493.18	24.20	187.96	-140.86	-4,239.76	-1,046.81	4,565.52	4,353.36	212.15	21.520		
5,600.00	5,593.05	5,533.05	5,593.05	24.64	191.44	-140.90	-4,239.76	-1,046.81	4,569.61	4,353.53	216.08	21.148		
5,700.00	5,692.91	5,632.91	5,692.91	25.07	194.93	-140.95	-4,239.76	-1,046.81	4,573.71	4,353.71	220.00	20.790		
5,800.00	5,792.77	5,732.77	5,792.77	25.51	198.41	-140.99	-4,239.76	-1,046.81	4,577.80	4,353.88	223.92	20.444		
5,900.00	5,892.63	5,832.63	5,892.63	25.95	201.90	-141.03	-4,239.76	-1,046.81	4,581.90	4,354.06	227.85	20.110		
6,000.00	5,992.49	5,932.49	5,992.49	26.39	205.38	-141.07	-4,239.76	-1,046.81	4,586.01	4,354.24	231.77	19.787		
6,100.00	6,092.35	6,032.35	6,092.35	26.82	208.87	-141.11	-4,239.76	-1,046.81	4,590.11	4,354.42	235.69	19.475		
6,200.00	6,192.21	6,132.21	6,192.21	27.26	212.36	-141.15	-4,239.76	-1,046.81	4,594.22	4,354.60	239.62	19.173		
6,300.00	6,292.07	6,232.07	6,292.07	27.70	215.84	-141.19	-4,239.76	-1,046.81	4,598.33	4,354.79	243.54	18.881		
6,400.00	6,391.93	6,331.93	6,391.93	28.14	219.33	-141.23	-4,239.76	-1,046.81	4,602.44	4,354.98	247.47	18.598		
6,500.00	6,491.69	6,431.69	6,491.69	28.58	222.81	-102.34	-4,239.76	-1,046.81	4,606.13	4,354.75	251.39	18.323		
6,600.00	6,589.80	6,529.80	6,589.80	29.02	226.23	-88.57	-4,239.76	-1,046.81	4,607.01	4,351.76	255.25	18.049		
6,700.00	6,683.86	6,623.86	6,683.86	29.46	229.52	-85.44	-4,239.76	-1,046.81	4,604.86	4,345.88	258.98	17.781		
6,800.00	6,771.56	6,711.56	6,771.56	29.92	232.58	-84.73	-4,239.76	-1,046.81	4,600.05	4,337.55	262.49	17.524		
6,900.00	6,850.72	6,809.28	6,850.72	30.40	235.99	-85.03	-4,239.76	-1,046.81	4,593.11	4,326.71	266.39	17.242		
7,000.00	6,919.40	6,859.40	6,919.40	30.96	237.74	-85.85	-4,239.76	-1,046.81	4,584.69	4,315.99	268.70	17.063		
7,100.00	6,975.92	6,915.92	6,975.92	31.62	239.71	-86.90	-4,239.76	-1,046.81	4,575.50	4,304.17	271.33	16.863		
7,200.00	7,018.87	6,958.87	7,018.87	32.44	241.21	-88.00	-4,239.76	-1,046.81	4,566.23	4,292.59	273.65	16.687		
7,300.00	7,047.21	6,987.21	7,047.21	33.42	242.20	-88.99	-4,239.76	-1,046.81	4,557.51	4,281.90	275.62	16.536		
7,400.00	7,060.23	7,000.23	7,060.23	34.55	242.66	-89.79	-4,239.76	-1,046.81	4,549.83	4,272.63	277.21	16.413		
7,500.00	7,060.03	7,000.03	7,060.03	35.83	242.65	-90.05	-4,239.76	-1,046.81	4,543.63	4,265.16	278.48	16.316		
7,600.00	7,058.28	7,001.72	7,058.28	37.28	242.71	-90.03	-4,239.76	-1,046.81	4,539.56	4,259.57	279.98	16.214		
7,700.00	7,056.53	7,003.47	7,056.53	38.89	242.77	-90.01	-4,239.76	-1,046.81	4,537.68	4,256.04	281.64	16.111		
7,735.29	7,055.91	7,004.09	7,055.91	39.50	242.79	-90.00	-4,239.76	-1,046.81	4,537.54	4,255.27	282.27	16.075		
7,800.00	7,054.78	7,005.22	7,054.78	40.63	242.83	-89.99	-4,239.76	-1,046.81	4,538.00	4,254.57	283.43	16.011 ES		
7,900.00	7,053.03	7,006.97	7,053.03	42.50	242.89	-89.96	-4,239.76	-1,046.81	4,540.53	4,255.20	285.33	15.913		
8,000.00	7,051.28	7,008.72	7,051.28	44.47	242.95	-89.94	-4,239.76	-1,046.81	4,545.25	4,257.94	287.31	15.820		
8,100.00	7,049.53	6,989.53	7,049.53	46.53	242.28	-89.92	-4,239.76	-1,046.81	4,552.17	4,263.53	288.64	15.771		
8,200.00	7,047.78	6,987.78	7,047.78	48.67	242.22	-89.90	-4,239.76	-1,046.81	4,561.27	4,270.64	290.63	15.694		
8,300.00	7,046.03	6,986.03	7,046.03	50.89	242.16	-89.88	-4,239.76	-1,046.81	4,572.53	4,279.87	292.66	15.624		
8,400.00	7,044.28	6,984.28	7,044.28	53.16	242.10	-89.85	-4,239.76	-1,046.81	4,585.95	4,291.23	294.73	15.560		
8,500.00	7,042.53	6,982.53	7,042.53	55.49	242.04	-89.83	-4,239.76	-1,046.81	4,601.51	4,304.70	296.81	15.503		
8,600.00	7,040.78	6,980.78	7,040.78	57.86	241.98	-89.81	-4,239.76	-1,046.81	4,619.17	4,320.27	298.90	15.454		
8,700.00	7,039.03	6,979.03	7,039.03	60.28	241.92	-89.79	-4,239.76	-1,046.81	4,638.93	4,337.93	301.00	15.412		
8,800.00	7,037.28	6,977.28	7,037.28	62.74	241.85	-89.76	-4,239.76	-1,046.81	4,660.74	4,357.66	303.08	15.378		
8,900.00	7,035.53	6,975.53	7,035.53	65.23	241.79	-89.74	-4,239.76	-1,046.81	4,684.59	4,379.44	305.16	15.351		
9,000.00	7,033.78	6,973.78	7,033.78	67.74	241.73	-89.72	-4,239.76	-1,046.81	4,710.44	4,403.23	307.21	15.333		
9,100.00	7,032.03	6,972.03	7,032.03	70.29	241.67	-89.70	-4,239.76	-1,046.81	4,738.26	4,429.03	309.24	15.322		
9,200.00	7,030.28	6,970.28	7,030.28	72.85	241.61	-89.68	-4,239.76	-1,046.81	4,768.02	4,456.78	311.24	15.320 SF		
9,300.00	7,028.54	6,968.54	7,028.54	75.44	241.55	-89.65	-4,239.76	-1,046.81	4,799.67	4,486.47	313.20	15.324		
9,400.00	7,026.79	6,966.79	7,026.79	78.05	241.49	-89.63	-4,239.76	-1,046.81	4,833.19	4,518.05	315.14	15.337		
9,500.00	7,025.04	6,965.04	7,025.04	80.67	241.43	-89.61	-4,239.76	-1,046.81	4,868.52	4,551.50	317.03	15.357		
9,600.00	7,023.29	6,963.29	7,023.29	83.31	241.37	-89.59	-4,239.76	-1,046.81	4,905.65	4,586.77	318.88	15.384		
9,700.00	7,021.54	6,961.54	7,021.54	85.96	241.30	-89.57	-4,239.76	-1,046.81	4,944.51	4,623.82	320.69	15.418		
9,800.00	7,019.79	6,959.79	7,019.79	88.63	241.24	-89.54	-4,239.76	-1,046.81	4,985.08	4,662.63	322.45	15.460		
9,900.00	7,018.04	6,958.04	7,018.04	91.30	241.18	-89.52	-4,239.76	-1,046.81	5,027.31	4,703.14	324.17	15.508		
10,000.00	7,016.29	6,956.29	7,016.29	93.99	241.12	-89.50	-4,239.76	-1,046.81	5,071.16	4,745.31	325.84	15.563		
10,100.00	7,014.54	6,954.54	7,014.54	96.69	241.06	-89.48	-4,239.76	-1,046.81	5,116.58	4,789.12	327.47	15.625		
10,200.00	7,012.79	6,952.79	7,012.79	99.40	241.00	-89.46	-4,239.76	-1,046.81	5,163.55	4,834.50	329.05	15.692		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - RUTT-ADAMS HEIRS 2-22 - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	7,011.04	6,951.04	7,011.04	102.11	240.94	-89.43	-4,239.76	-1,046.81	5,212.01	4,881.43	330.58	15.766		
10,400.00	7,009.29	6,949.29	7,009.29	104.83	240.88	-89.41	-4,239.76	-1,046.81	5,261.92	4,929.86	332.06	15.846		
10,500.00	7,007.54	6,947.54	7,007.54	107.56	240.82	-89.39	-4,239.76	-1,046.81	5,313.24	4,979.75	333.50	15.932		
10,600.00	7,005.79	6,945.79	7,005.79	110.30	240.75	-89.37	-4,239.76	-1,046.81	5,365.94	5,031.06	334.89	16.023		
10,700.00	7,004.04	6,944.04	7,004.04	113.04	240.69	-89.35	-4,239.76	-1,046.81	5,419.97	5,083.74	336.23	16.120		
10,800.00	7,002.29	6,942.29	7,002.29	115.79	240.63	-89.32	-4,239.76	-1,046.81	5,475.30	5,137.77	337.53	16.222		
10,900.00	7,000.54	6,940.54	7,000.54	118.54	240.57	-89.30	-4,239.76	-1,046.81	5,531.87	5,193.09	338.78	16.329		
11,000.00	6,998.79	6,938.79	6,998.79	121.30	240.51	-89.28	-4,239.76	-1,046.81	5,589.66	5,249.67	339.99	16.441		
11,100.00	6,997.04	6,937.04	6,997.04	124.06	240.45	-89.26	-4,239.76	-1,046.81	5,648.64	5,307.48	341.16	16.557		
11,200.00	6,995.29	6,935.29	6,995.29	126.83	240.39	-89.23	-4,239.76	-1,046.81	5,708.75	5,366.46	342.29	16.678		
11,300.00	6,993.54	6,933.54	6,993.54	129.60	240.33	-89.21	-4,239.76	-1,046.81	5,769.97	5,426.60	343.37	16.804		
11,400.00	6,991.80	6,931.80	6,991.80	132.37	240.27	-89.19	-4,239.76	-1,046.81	5,832.26	5,487.84	344.42	16.934		
11,500.00	6,990.05	6,930.05	6,990.05	135.15	240.21	-89.17	-4,239.76	-1,046.81	5,895.59	5,550.17	345.42	17.068		
11,600.00	6,988.30	6,928.30	6,988.30	137.93	240.14	-89.15	-4,239.76	-1,046.81	5,959.92	5,613.53	346.39	17.206		
11,700.00	6,986.55	6,926.55	6,986.55	140.72	240.08	-89.12	-4,239.76	-1,046.81	6,025.23	5,677.90	347.33	17.347		
11,800.00	6,984.80	6,924.80	6,984.80	143.50	240.02	-89.10	-4,239.76	-1,046.81	6,091.48	5,743.25	348.22	17.493		
11,900.00	6,983.05	6,923.05	6,983.05	146.29	239.96	-89.08	-4,239.76	-1,046.81	6,158.64	5,809.55	349.09	17.642		
12,000.00	6,981.30	6,921.30	6,981.30	149.09	239.90	-89.06	-4,239.76	-1,046.81	6,226.67	5,876.76	349.92	17.795		
12,100.00	6,979.55	6,919.55	6,979.55	151.88	239.84	-89.04	-4,239.76	-1,046.81	6,295.57	5,944.85	350.72	17.951		
12,200.00	6,977.80	6,917.80	6,977.80	154.68	239.78	-89.01	-4,239.76	-1,046.81	6,365.28	6,013.80	351.48	18.110		
12,300.00	6,976.05	6,916.05	6,976.05	157.48	239.72	-88.99	-4,239.76	-1,046.81	6,435.80	6,083.57	352.22	18.272		
12,400.00	6,974.30	6,914.30	6,974.30	160.28	239.66	-88.97	-4,239.76	-1,046.81	6,507.08	6,154.15	352.93	18.437		
12,500.00	6,972.55	6,912.55	6,972.55	163.08	239.59	-88.95	-4,239.76	-1,046.81	6,579.12	6,225.50	353.61	18.605		
12,600.00	6,970.80	6,910.80	6,970.80	165.89	239.53	-88.93	-4,239.76	-1,046.81	6,651.88	6,297.61	354.27	18.776		
12,700.00	6,969.05	6,909.05	6,969.05	168.69	239.47	-88.90	-4,239.76	-1,046.81	6,725.33	6,370.43	354.90	18.950		
12,800.00	6,967.30	6,907.30	6,967.30	171.50	239.41	-88.88	-4,239.76	-1,046.81	6,799.47	6,443.96	355.50	19.126		
12,900.00	6,965.55	6,905.55	6,965.55	174.31	239.35	-88.86	-4,239.76	-1,046.81	6,874.25	6,518.17	356.08	19.305		
13,000.00	6,963.80	6,903.80	6,963.80	177.12	239.29	-88.84	-4,239.76	-1,046.81	6,949.67	6,593.03	356.64	19.486		
13,100.00	6,962.05	6,902.05	6,962.05	179.94	239.23	-88.82	-4,239.76	-1,046.81	7,025.71	6,668.53	357.18	19.670		
13,200.00	6,960.30	6,900.30	6,960.30	182.75	239.17	-88.79	-4,239.76	-1,046.81	7,102.34	6,744.64	357.69	19.856		
13,300.00	6,958.55	6,901.45	6,958.55	185.57	239.21	-88.77	-4,239.76	-1,046.81	7,179.54	6,821.25	358.29	20.038		
13,400.00	6,956.80	6,903.20	6,956.80	188.38	239.27	-88.75	-4,239.76	-1,046.81	7,257.30	6,898.41	358.89	20.222		
13,500.00	6,955.05	6,904.95	6,955.05	191.20	239.33	-88.73	-4,239.76	-1,046.81	7,335.60	6,976.13	359.47	20.407		
13,600.00	6,953.31	6,906.70	6,953.31	194.02	239.39	-88.70	-4,239.76	-1,046.81	7,414.42	7,054.39	360.03	20.594		
13,700.00	6,951.56	6,908.44	6,951.56	196.84	239.45	-88.68	-4,239.76	-1,046.81	7,493.74	7,133.17	360.57	20.783		
13,800.00	6,949.81	6,889.81	6,949.81	199.67	238.80	-88.66	-4,239.76	-1,046.81	7,573.56	7,213.17	360.38	21.015		
13,900.00	6,948.06	6,888.06	6,948.06	202.49	238.74	-88.64	-4,239.76	-1,046.81	7,653.84	7,293.07	360.77	21.215		
14,000.00	6,946.31	6,886.31	6,946.31	205.31	238.68	-88.62	-4,239.76	-1,046.81	7,734.59	7,373.44	361.15	21.417		
14,100.00	6,944.56	6,884.56	6,944.56	208.14	238.62	-88.59	-4,239.76	-1,046.81	7,815.78	7,454.28	361.50	21.620		
14,200.00	6,942.81	6,882.81	6,942.81	210.96	238.56	-88.57	-4,239.76	-1,046.81	7,897.40	7,535.56	361.85	21.825		
14,300.00	6,941.06	6,881.06	6,941.06	213.79	238.50	-88.55	-4,239.76	-1,046.81	7,979.44	7,617.27	362.18	22.032		
14,400.00	6,939.31	6,879.31	6,939.31	216.62	238.43	-88.53	-4,239.76	-1,046.81	8,061.89	7,699.39	362.50	22.240		
14,500.00	6,937.56	6,877.56	6,937.56	219.44	238.37	-88.51	-4,239.76	-1,046.81	8,144.73	7,781.93	362.80	22.450		
14,600.00	6,935.81	6,875.81	6,935.81	222.27	238.31	-88.48	-4,239.76	-1,046.81	8,227.95	7,864.85	363.09	22.661		
14,700.00	6,934.06	6,874.06	6,934.06	225.10	238.25	-88.46	-4,239.76	-1,046.81	8,311.54	7,948.16	363.37	22.873		
14,800.00	6,932.31	6,872.31	6,932.31	227.93	238.19	-88.44	-4,239.76	-1,046.81	8,395.48	8,031.84	363.64	23.087		
14,817.75	6,932.00	6,872.00	6,932.00	228.43	238.18	-88.44	-4,239.76	-1,046.81	8,410.42	8,046.73	363.69	23.125		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - SENA 15-21(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	5.00	0.00	3.28	3.28	-45.30	1,150.86	-1,162.84	1,636.06					
100.00	100.00	105.00	100.00	3.28	3.80	-45.30	1,150.86	-1,162.84	1,636.06	1,628.97	7.09	230.907		
200.00	200.00	205.00	200.00	3.34	6.33	-45.30	1,150.86	-1,162.84	1,636.06	1,626.39	9.66	169.284		
300.00	300.00	305.00	300.00	3.44	9.49	-45.30	1,150.86	-1,162.84	1,636.06	1,623.12	12.93	126.512		
400.00	400.00	405.00	400.00	3.60	12.82	-45.30	1,150.86	-1,162.84	1,636.06	1,619.63	16.42	99.619		
500.00	500.00	505.00	500.00	3.81	16.22	-45.30	1,150.86	-1,162.84	1,636.06	1,616.03	20.03	81.700		
600.00	599.98	605.02	599.98	4.05	19.65	-17.95	1,150.86	-1,162.84	1,634.40	1,610.70	23.70	68.970		
700.00	699.86	705.14	699.86	4.32	23.10	-18.01	1,150.86	-1,162.84	1,629.81	1,602.39	27.42	59.432		
800.00	799.72	805.28	799.72	4.62	26.57	-18.07	1,150.86	-1,162.84	1,624.80	1,593.62	31.18	52.104		
900.00	899.58	905.42	899.58	4.93	30.04	-18.13	1,150.86	-1,162.84	1,619.79	1,584.81	34.97	46.315		
1,000.00	999.44	1,005.56	999.44	5.27	33.52	-18.19	1,150.86	-1,162.84	1,614.78	1,575.99	38.79	41.633		
1,100.00	1,099.31	1,105.69	1,099.31	5.62	37.00	-18.24	1,150.86	-1,162.84	1,609.77	1,567.15	42.62	37.774		
1,200.00	1,199.17	1,205.83	1,199.17	5.98	40.48	-18.30	1,150.86	-1,162.84	1,604.76	1,558.30	46.46	34.540		
1,300.00	1,299.03	1,305.97	1,299.03	6.36	43.97	-18.36	1,150.86	-1,162.84	1,599.75	1,549.44	50.32	31.793		
1,400.00	1,398.89	1,406.11	1,398.89	6.74	47.46	-18.42	1,150.86	-1,162.84	1,594.75	1,540.57	54.18	29.432		
1,500.00	1,498.75	1,506.25	1,498.75	7.13	50.94	-18.48	1,150.86	-1,162.84	1,589.75	1,531.69	58.06	27.382		
1,600.00	1,598.61	1,606.39	1,598.61	7.52	54.43	-18.54	1,150.86	-1,162.84	1,584.75	1,522.81	61.94	25.585		
1,700.00	1,698.47	1,706.53	1,698.47	7.92	57.92	-18.60	1,150.86	-1,162.84	1,579.75	1,513.92	65.83	23.998		
1,800.00	1,798.33	1,806.67	1,798.33	8.32	61.41	-18.66	1,150.86	-1,162.84	1,574.75	1,505.03	69.72	22.587		
1,900.00	1,898.19	1,906.81	1,898.19	8.73	64.90	-18.73	1,150.86	-1,162.84	1,569.75	1,496.14	73.62	21.323		
2,000.00	1,998.05	2,006.95	1,998.05	9.14	68.40	-18.79	1,150.86	-1,162.84	1,564.76	1,487.24	77.52	20.186		
2,100.00	2,097.91	2,107.09	2,097.91	9.55	71.89	-18.85	1,150.86	-1,162.84	1,559.77	1,478.35	81.42	19.157		
2,200.00	2,197.78	2,207.22	2,197.78	9.97	75.38	-18.91	1,150.86	-1,162.84	1,554.78	1,469.45	85.33	18.221		
2,300.00	2,297.64	2,307.36	2,297.64	10.39	78.87	-18.98	1,150.86	-1,162.84	1,549.79	1,460.56	89.24	17.367		
2,400.00	2,397.50	2,407.50	2,397.50	10.81	82.37	-19.04	1,150.86	-1,162.84	1,544.81	1,451.66	93.15	16.585		
2,500.00	2,497.36	2,507.64	2,497.36	11.23	85.86	-19.10	1,150.86	-1,162.84	1,539.82	1,442.76	97.06	15.865		
2,600.00	2,597.22	2,607.78	2,597.22	11.65	89.35	-19.17	1,150.86	-1,162.84	1,534.84	1,433.87	100.97	15.200		
2,700.00	2,697.08	2,707.92	2,697.08	12.07	92.85	-19.23	1,150.86	-1,162.84	1,529.86	1,424.97	104.89	14.585		
2,800.00	2,796.94	2,808.06	2,796.94	12.50	96.34	-19.30	1,150.86	-1,162.84	1,524.88	1,416.07	108.81	14.014		
2,900.00	2,896.80	2,908.20	2,896.80	12.92	99.83	-19.36	1,150.86	-1,162.84	1,519.90	1,407.18	112.73	13.483		
3,000.00	2,996.66	3,008.34	2,996.66	13.35	103.33	-19.43	1,150.86	-1,162.84	1,514.93	1,398.28	116.65	12.987		
3,100.00	3,096.52	3,108.48	3,096.52	13.78	106.82	-19.50	1,150.86	-1,162.84	1,509.96	1,389.39	120.57	12.524		
3,200.00	3,196.38	3,208.62	3,196.38	14.21	110.32	-19.56	1,150.86	-1,162.84	1,504.99	1,380.50	124.49	12.089		
3,300.00	3,296.25	3,308.75	3,296.25	14.64	113.81	-19.63	1,150.86	-1,162.84	1,500.02	1,371.61	128.41	11.681		
3,400.00	3,396.11	3,408.89	3,396.11	15.07	117.31	-19.70	1,150.86	-1,162.84	1,495.05	1,362.72	132.34	11.297		
3,500.00	3,495.97	3,509.03	3,495.97	15.50	120.80	-19.77	1,150.86	-1,162.84	1,490.09	1,353.83	136.26	10.936		
3,600.00	3,595.83	3,609.17	3,595.83	15.93	124.29	-19.84	1,150.86	-1,162.84	1,485.13	1,344.94	140.18	10.594		
3,700.00	3,695.69	3,709.31	3,695.69	16.36	127.79	-19.91	1,150.86	-1,162.84	1,480.17	1,336.06	144.11	10.271		
3,800.00	3,795.55	3,809.45	3,795.55	16.80	131.28	-19.98	1,150.86	-1,162.84	1,475.21	1,327.18	148.04	9.965		
3,900.00	3,895.41	3,909.59	3,895.41	17.23	134.78	-20.05	1,150.86	-1,162.84	1,470.26	1,318.29	151.96	9.675		
4,000.00	3,995.27	4,009.73	3,995.27	17.66	138.27	-20.12	1,150.86	-1,162.84	1,465.30	1,309.41	155.89	9.400		
4,100.00	4,095.13	4,109.87	4,095.13	18.10	141.77	-20.19	1,150.86	-1,162.84	1,460.35	1,300.54	159.82	9.138		
4,200.00	4,194.99	4,189.99	4,194.99	18.53	144.56	-20.26	1,150.86	-1,162.84	1,455.40	1,292.36	163.05	8.926		
4,300.00	4,294.85	4,289.85	4,294.85	18.96	148.05	-20.33	1,150.86	-1,162.84	1,450.46	1,283.49	166.96	8.687		
4,400.00	4,394.71	4,389.71	4,394.71	19.40	151.54	-20.40	1,150.86	-1,162.84	1,445.51	1,274.63	170.88	8.459		
4,500.00	4,494.58	4,489.58	4,494.58	19.83	155.02	-20.48	1,150.86	-1,162.84	1,440.57	1,265.77	174.80	8.241		
4,600.00	4,594.44	4,589.44	4,594.44	20.27	158.51	-20.55	1,150.86	-1,162.84	1,435.63	1,256.91	178.72	8.033		
4,700.00	4,694.30	4,689.30	4,694.30	20.71	161.99	-20.62	1,150.86	-1,162.84	1,430.69	1,248.05	182.64	7.833		
4,800.00	4,794.16	4,789.16	4,794.16	21.14	165.48	-20.70	1,150.86	-1,162.84	1,425.76	1,239.20	186.56	7.642		
4,900.00	4,894.02	4,889.02	4,894.02	21.58	168.96	-20.77	1,150.86	-1,162.84	1,420.83	1,230.35	190.48	7.459		
5,000.00	4,993.88	4,988.88	4,993.88	22.01	172.45	-20.85	1,150.86	-1,162.84	1,415.90	1,221.50	194.40	7.283		
5,100.00	5,093.74	5,088.74	5,093.74	22.45	175.93	-20.93	1,150.86	-1,162.84	1,410.97	1,212.65	198.32	7.115		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - SENA 15-21(PR_75CC) - OH - OH												Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,200.00	5,193.60	5,188.60	5,193.60	22.89	179.42	-21.00	1,150.86	-1,162.84	1,406.05	1,203.80	202.24	6.952	
5,300.00	5,293.46	5,288.46	5,293.46	23.32	182.90	-21.08	1,150.86	-1,162.84	1,401.12	1,194.96	206.16	6.796	
5,400.00	5,393.32	5,388.32	5,393.32	23.76	186.39	-21.16	1,150.86	-1,162.84	1,396.21	1,186.12	210.08	6.646	
5,500.00	5,493.18	5,488.18	5,493.18	24.20	189.88	-21.24	1,150.86	-1,162.84	1,391.29	1,177.28	214.01	6.501	
5,600.00	5,593.05	5,588.05	5,593.05	24.64	193.36	-21.31	1,150.86	-1,162.84	1,386.37	1,168.45	217.93	6.362	
5,700.00	5,692.91	5,687.91	5,692.91	25.07	196.85	-21.39	1,150.86	-1,162.84	1,381.46	1,159.61	221.85	6.227	
5,800.00	5,792.77	5,787.77	5,792.77	25.51	200.33	-21.47	1,150.86	-1,162.84	1,376.55	1,150.78	225.77	6.097	
5,900.00	5,892.63	5,887.63	5,892.63	25.95	203.82	-21.56	1,150.86	-1,162.84	1,371.65	1,141.95	229.69	5.972	
6,000.00	5,992.49	5,987.49	5,992.49	26.39	207.30	-21.64	1,150.86	-1,162.84	1,366.74	1,133.13	233.61	5.850	
6,100.00	6,092.35	6,087.35	6,092.35	26.82	210.79	-21.72	1,150.86	-1,162.84	1,361.84	1,124.31	237.54	5.733	
6,200.00	6,192.21	6,187.21	6,192.21	27.26	214.28	-21.80	1,150.86	-1,162.84	1,356.94	1,115.48	241.46	5.620	
6,300.00	6,292.07	6,287.07	6,292.07	27.70	217.76	-21.88	1,150.86	-1,162.84	1,352.05	1,106.67	245.38	5.510	
6,400.00	6,391.93	6,386.93	6,391.93	28.14	221.25	-21.97	1,150.86	-1,162.84	1,347.16	1,097.85	249.30	5.404	
6,500.00	6,491.79	6,486.79	6,491.79	28.58	224.73	17.07	1,150.86	-1,162.84	1,340.70	1,087.48	253.22	5.295	
6,600.00	6,591.65	6,586.65	6,591.65	29.02	228.15	32.38	1,150.86	-1,162.84	1,333.96	1,076.88	257.08	5.150	
6,700.00	6,691.51	6,686.51	6,691.51	29.46	231.44	38.74	1,150.86	-1,162.84	1,326.16	1,065.37	260.79	4.970	
6,800.00	6,791.37	6,786.37	6,791.37	29.90	234.50	44.45	1,150.86	-1,162.84	1,318.42	1,053.86	264.26	4.762	
6,900.00	6,891.23	6,886.23	6,891.23	30.34	237.26	50.91	1,150.86	-1,162.84	1,310.74	1,041.99	267.42	4.534	
7,000.00	6,991.09	6,986.09	6,991.09	30.78	239.66	58.44	1,150.86	-1,162.84	1,302.94	1,029.05	270.24	4.294	
7,100.00	7,090.95	7,085.95	7,090.95	31.22	241.63	66.80	1,150.86	-1,162.84	1,295.05	1,016.65	272.70	4.051	
7,200.00	7,190.81	7,185.81	7,190.81	31.66	243.13	75.24	1,150.86	-1,162.84	1,287.16	1,003.66	274.83	3.815	
7,300.00	7,290.67	7,285.67	7,290.67	32.10	244.12	82.77	1,150.86	-1,162.84	1,279.26	990.67	276.67	3.596	
7,400.00	7,390.53	7,385.53	7,390.53	32.54	244.57	88.55	1,150.86	-1,162.84	1,271.36	977.68	278.25	3.405	
7,500.00	7,490.39	7,485.39	7,490.39	32.98	244.57	90.36	1,150.86	-1,162.84	1,263.46	964.69	279.65	3.249	
7,600.00	7,590.25	7,585.25	7,590.25	33.42	244.51	90.25	1,150.86	-1,162.84	1,255.56	951.70	281.28	3.127	
7,700.00	7,690.11	7,685.11	7,690.11	33.86	244.45	90.13	1,150.86	-1,162.84	1,247.66	938.71	283.10	3.041	
7,800.00	7,790.00	7,785.00	7,790.00	34.30	244.38	90.01	1,150.86	-1,162.84	1,239.76	925.72	284.99	2.996	
7,900.00	7,890.00	7,885.00	7,890.00	34.74	244.38	90.00	1,150.86	-1,162.84	1,231.86	912.73	285.19	2.994 CC, ES	
8,000.00	7,990.00	7,985.00	7,990.00	35.18	244.32	89.90	1,150.86	-1,162.84	1,223.96	900.00	286.78	2.993 SF	
8,100.00	8,090.00	8,085.00	8,090.00	35.62	244.26	89.78	1,150.86	-1,162.84	1,216.06	887.01	288.36	3.033	
8,200.00	8,190.00	8,185.00	8,190.00	36.06	244.20	89.66	1,150.86	-1,162.84	1,208.16	874.02	289.64	3.112	
8,300.00	8,290.00	8,285.00	8,290.00	36.50	244.14	89.54	1,150.86	-1,162.84	1,200.26	861.03	290.61	3.229	
8,400.00	8,390.00	8,385.00	8,390.00	36.94	244.08	89.43	1,150.86	-1,162.84	1,192.36	848.04	291.27	3.378	
8,500.00	8,490.00	8,485.00	8,490.00	37.38	244.02	89.31	1,150.86	-1,162.84	1,184.46	835.05	291.68	3.556	
8,600.00	8,590.00	8,585.00	8,590.00	37.82	243.96	89.19	1,150.86	-1,162.84	1,176.56	822.06	291.88	3.759	
8,700.00	8,690.00	8,685.00	8,690.00	38.26	243.90	89.07	1,150.86	-1,162.84	1,168.66	809.07	291.93	3.983	
8,800.00	8,790.00	8,785.00	8,790.00	38.70	243.84	88.96	1,150.86	-1,162.84	1,160.76	796.08	291.86	4.224	
8,900.00	8,890.00	8,885.00	8,890.00	39.14	243.77	88.84	1,150.86	-1,162.84	1,152.86	783.09	291.71	4.479	
9,000.00	8,990.00	8,985.00	8,990.00	39.58	243.71	88.72	1,150.86	-1,162.84	1,144.96	770.10	291.51	4.747	
9,100.00	9,090.00	9,085.00	9,090.00	40.02	243.65	88.60	1,150.86	-1,162.84	1,137.06	757.11	291.28	5.026	
9,200.00	9,190.00	9,185.00	9,190.00	40.46	243.59	88.49	1,150.86	-1,162.84	1,129.16	744.12	291.03	5.313	
9,300.00	9,290.00	9,285.00	9,290.00	40.90	243.53	88.37	1,150.86	-1,162.84	1,121.26	731.13	290.76	5.608	
9,400.00	9,390.00	9,385.00	9,390.00	41.34	243.47	88.25	1,150.86	-1,162.84	1,113.36	718.14	290.50	5.909	
9,500.00	9,490.00	9,485.00	9,490.00	41.78	243.41	88.14	1,150.86	-1,162.84	1,105.46	705.15	290.24	6.215	
9,600.00	9,590.00	9,585.00	9,590.00	42.22	243.35	88.02	1,150.86	-1,162.84	1,097.56	692.16	289.98	6.526	
9,700.00	9,690.00	9,685.00	9,690.00	42.66	243.29	87.90	1,150.86	-1,162.84	1,089.66	679.17	289.73	6.842	
9,800.00	9,790.00	9,785.00	9,790.00	43.10	243.22	87.78	1,150.86	-1,162.84	1,081.76	666.18	289.49	7.161	
9,900.00	9,890.00	9,885.00	9,890.00	43.54	243.16	87.67	1,150.86	-1,162.84	1,073.86	653.19	289.26	7.483	
10,000.00	9,990.00	9,985.00	9,990.00	43.98	243.10	87.55	1,150.86	-1,162.84	1,065.96	640.20	289.03	7.808	
10,100.00	10,090.00	10,085.00	10,090.00	44.42	243.04	87.43	1,150.86	-1,162.84	1,058.06	627.21	288.82	8.135	
10,200.00	10,190.00	10,185.00	10,190.00	44.86	242.98	87.31	1,150.86	-1,162.84	1,050.16	614.22	288.62	8.464	
10,300.00	10,290.00	10,285.00	10,290.00	45.30	242.92	87.20	1,150.86	-1,162.84	1,042.26	601.23	288.42	8.796	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - SENA 15-21(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	7,011.04	7,006.04	7,011.04	102.11	242.86	87.08	1,150.86	-1,162.84	2,631.25	2,343.01	288.24	9.129		
10,400.00	7,009.29	7,004.29	7,009.29	104.83	242.80	86.96	1,150.86	-1,162.84	2,726.02	2,437.96	288.06	9.463		
10,500.00	7,007.54	7,002.54	7,007.54	107.56	242.74	86.85	1,150.86	-1,162.84	2,821.14	2,533.25	287.89	9.799		
10,600.00	7,005.79	7,000.79	7,005.79	110.30	242.67	86.73	1,150.86	-1,162.84	2,916.60	2,628.87	287.73	10.137		
10,700.00	7,004.04	7,000.96	7,004.04	113.04	242.68	86.61	1,150.86	-1,162.84	3,012.34	2,724.70	287.64	10.473		
10,800.00	7,002.29	7,002.71	7,002.29	115.79	242.74	86.50	1,150.86	-1,162.84	3,108.36	2,820.74	287.62	10.807		
10,900.00	7,000.54	7,004.46	7,000.54	118.54	242.80	86.38	1,150.86	-1,162.84	3,204.61	2,917.01	287.60	11.143		
11,000.00	6,998.79	7,006.21	6,998.79	121.30	242.86	86.26	1,150.86	-1,162.84	3,301.09	3,013.50	287.59	11.479		
11,100.00	6,997.04	7,007.96	6,997.04	124.06	242.92	86.14	1,150.86	-1,162.84	3,397.77	3,110.19	287.58	11.815		
11,200.00	6,995.29	7,009.71	6,995.29	126.83	242.99	86.03	1,150.86	-1,162.84	3,494.64	3,207.06	287.58	12.152		
11,300.00	6,993.54	6,988.54	6,993.54	129.60	242.25	85.91	1,150.86	-1,162.84	3,591.68	3,304.89	286.78	12.524		
11,400.00	6,991.80	6,986.80	6,991.80	132.37	242.19	85.79	1,150.86	-1,162.84	3,688.87	3,402.20	286.67	12.868		
11,500.00	6,990.05	6,985.05	6,990.05	135.15	242.13	85.68	1,150.86	-1,162.84	3,786.21	3,499.65	286.56	13.212		
11,600.00	6,988.30	6,983.30	6,988.30	137.93	242.06	85.56	1,150.86	-1,162.84	3,883.69	3,597.23	286.46	13.557		
11,700.00	6,986.55	6,981.55	6,986.55	140.72	242.00	85.44	1,150.86	-1,162.84	3,981.29	3,694.93	286.36	13.903		
11,800.00	6,984.80	6,979.80	6,984.80	143.50	241.94	85.33	1,150.86	-1,162.84	4,079.00	3,792.74	286.27	14.249		
11,900.00	6,983.05	6,978.05	6,983.05	146.29	241.88	85.21	1,150.86	-1,162.84	4,176.82	3,890.65	286.18	14.595		
12,000.00	6,981.30	6,976.30	6,981.30	149.09	241.82	85.09	1,150.86	-1,162.84	4,274.75	3,988.66	286.09	14.942		
12,100.00	6,979.55	6,974.55	6,979.55	151.88	241.76	84.98	1,150.86	-1,162.84	4,372.76	4,086.76	286.00	15.289		
12,200.00	6,977.80	6,972.80	6,977.80	154.68	241.70	84.86	1,150.86	-1,162.84	4,470.87	4,184.94	285.92	15.637		
12,300.00	6,976.05	6,971.05	6,976.05	157.48	241.64	84.74	1,150.86	-1,162.84	4,569.05	4,283.20	285.85	15.984		
12,400.00	6,974.30	6,969.30	6,974.30	160.28	241.58	84.63	1,150.86	-1,162.84	4,667.31	4,381.54	285.77	16.332		
12,500.00	6,972.55	6,967.55	6,972.55	163.08	241.51	84.51	1,150.86	-1,162.84	4,765.64	4,479.94	285.70	16.680		
12,600.00	6,970.80	6,965.80	6,970.80	165.89	241.45	84.40	1,150.86	-1,162.84	4,864.04	4,578.41	285.63	17.029		
12,700.00	6,969.05	6,964.05	6,969.05	168.69	241.39	84.28	1,150.86	-1,162.84	4,962.51	4,676.94	285.57	17.378		
12,800.00	6,967.30	6,962.30	6,967.30	171.50	241.33	84.16	1,150.86	-1,162.84	5,061.03	4,775.52	285.51	17.727		
12,900.00	6,965.55	6,960.55	6,965.55	174.31	241.27	84.05	1,150.86	-1,162.84	5,159.61	4,874.16	285.45	18.076		
13,000.00	6,963.80	6,958.80	6,963.80	177.12	241.21	83.93	1,150.86	-1,162.84	5,258.24	4,972.85	285.39	18.425		
13,100.00	6,962.05	6,957.05	6,962.05	179.94	241.15	83.82	1,150.86	-1,162.84	5,356.92	5,071.59	285.33	18.774		
13,200.00	6,960.30	6,955.30	6,960.30	182.75	241.09	83.70	1,150.86	-1,162.84	5,455.65	5,170.37	285.28	19.124		
13,300.00	6,958.55	6,953.55	6,958.55	185.57	241.03	83.58	1,150.86	-1,162.84	5,554.43	5,269.20	285.23	19.474		
13,400.00	6,956.80	6,951.80	6,956.80	188.38	240.96	83.47	1,150.86	-1,162.84	5,653.24	5,368.07	285.18	19.823		
13,500.00	6,955.05	6,950.05	6,955.05	191.20	240.90	83.35	1,150.86	-1,162.84	5,752.10	5,466.97	285.13	20.173		
13,600.00	6,953.31	6,948.31	6,953.31	194.02	240.84	83.24	1,150.86	-1,162.84	5,851.00	5,565.91	285.09	20.523		
13,700.00	6,951.56	6,946.56	6,951.56	196.84	240.78	83.12	1,150.86	-1,162.84	5,949.93	5,664.88	285.05	20.874		
13,800.00	6,949.81	6,944.81	6,949.81	199.67	240.72	83.00	1,150.86	-1,162.84	6,048.90	5,763.89	285.01	21.224		
13,900.00	6,948.06	6,943.06	6,948.06	202.49	240.66	82.89	1,150.86	-1,162.84	6,147.90	5,862.93	284.97	21.574		
14,000.00	6,946.31	6,941.31	6,946.31	205.31	240.60	82.77	1,150.86	-1,162.84	6,246.93	5,962.00	284.93	21.924		
14,100.00	6,944.56	6,939.56	6,944.56	208.14	240.54	82.66	1,150.86	-1,162.84	6,345.99	6,061.10	284.89	22.275		
14,200.00	6,942.81	6,937.81	6,942.81	210.96	240.48	82.54	1,150.86	-1,162.84	6,445.08	6,160.22	284.86	22.625		
14,300.00	6,941.06	6,936.06	6,941.06	213.79	240.42	82.43	1,150.86	-1,162.84	6,544.20	6,259.37	284.83	22.976		
14,400.00	6,939.31	6,934.31	6,939.31	216.62	240.35	82.31	1,150.86	-1,162.84	6,643.34	6,358.54	284.80	23.327		
14,500.00	6,937.56	6,932.56	6,937.56	219.44	240.29	82.20	1,150.86	-1,162.84	6,742.51	6,457.74	284.77	23.677		
14,600.00	6,935.81	6,930.81	6,935.81	222.27	240.23	82.08	1,150.86	-1,162.84	6,841.70	6,556.96	284.74	24.028		
14,700.00	6,934.06	6,929.06	6,934.06	225.10	240.17	81.97	1,150.86	-1,162.84	6,940.91	6,656.20	284.72	24.378		
14,800.00	6,932.31	6,927.31	6,932.31	227.93	240.11	81.85	1,150.86	-1,162.84	7,040.15	6,755.46	284.69	24.729		
14,817.75	6,932.00	6,927.00	6,932.00	228.43	240.10	81.83	1,150.86	-1,162.84	7,057.76	6,773.08	284.69	24.791		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - SENA 15-24(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	19.00	3.28	3.28	-97.90	-153.35	-1,104.49	1,115.25					
100.00	100.00	81.00	100.00	3.28	3.57	-97.90	-153.35	-1,104.49	1,115.09	1,108.23	6.86	162.633		
200.00	200.00	181.00	200.00	3.34	5.63	-97.90	-153.35	-1,104.49	1,115.09	1,106.12	8.96	124.384		
300.00	300.00	281.00	300.00	3.44	8.71	-97.90	-153.35	-1,104.49	1,115.09	1,102.94	12.15	91.772		
400.00	400.00	381.00	400.00	3.60	12.01	-97.90	-153.35	-1,104.49	1,115.09	1,099.47	15.62	71.411		
500.00	500.00	481.00	500.00	3.81	15.40	-97.90	-153.35	-1,104.49	1,115.09	1,095.88	19.21	58.060		
600.00	599.98	580.98	599.98	4.05	18.82	-70.62	-153.35	-1,104.49	1,114.51	1,091.64	22.87	48.733		
700.00	699.86	680.86	699.86	4.32	22.27	-70.87	-153.35	-1,104.49	1,112.92	1,086.33	26.58	41.868		
800.00	799.72	780.72	799.72	4.62	25.72	-71.13	-153.35	-1,104.49	1,111.20	1,080.87	30.33	36.636		
900.00	899.58	880.58	899.58	4.93	29.18	-71.38	-153.35	-1,104.49	1,109.50	1,075.39	34.11	32.528		
1,000.00	999.44	980.44	999.44	5.27	32.65	-71.64	-153.35	-1,104.49	1,107.83	1,069.92	37.91	29.222		
1,100.00	1,099.31	1,080.31	1,099.31	5.62	36.12	-71.90	-153.35	-1,104.49	1,106.17	1,064.44	41.73	26.508		
1,200.00	1,199.17	1,180.17	1,199.17	5.98	39.59	-72.16	-153.35	-1,104.49	1,104.55	1,058.98	45.56	24.241		
1,300.00	1,299.03	1,280.03	1,299.03	6.36	43.07	-72.42	-153.35	-1,104.49	1,102.94	1,053.53	49.41	22.322		
1,400.00	1,398.89	1,379.89	1,398.89	6.74	46.54	-72.68	-153.35	-1,104.49	1,101.36	1,048.09	53.27	20.676		
1,500.00	1,498.75	1,479.75	1,498.75	7.13	50.02	-72.94	-153.35	-1,104.49	1,099.80	1,042.66	57.13	19.250		
1,600.00	1,598.61	1,579.61	1,598.61	7.52	53.50	-73.21	-153.35	-1,104.49	1,098.26	1,037.25	61.00	18.003		
1,700.00	1,698.47	1,679.47	1,698.47	7.92	56.98	-73.47	-153.35	-1,104.49	1,096.74	1,031.86	64.88	16.904		
1,800.00	1,798.33	1,779.33	1,798.33	8.32	60.46	-73.73	-153.35	-1,104.49	1,095.25	1,026.49	68.76	15.928		
1,900.00	1,898.19	1,879.19	1,898.19	8.73	63.94	-74.00	-153.35	-1,104.49	1,093.79	1,021.14	72.65	15.055		
2,000.00	1,998.05	1,979.05	1,998.05	9.14	67.42	-74.26	-153.35	-1,104.49	1,092.34	1,015.80	76.54	14.271		
2,100.00	2,097.91	2,078.91	2,097.91	9.55	70.91	-74.53	-153.35	-1,104.49	1,090.92	1,010.49	80.44	13.563		
2,200.00	2,197.78	2,178.78	2,197.78	9.97	74.39	-74.80	-153.35	-1,104.49	1,089.53	1,005.19	84.33	12.919		
2,300.00	2,297.64	2,278.64	2,297.64	10.39	77.87	-75.06	-153.35	-1,104.49	1,088.15	999.92	88.23	12.333		
2,400.00	2,397.50	2,378.50	2,397.50	10.81	81.35	-75.33	-153.35	-1,104.49	1,086.81	994.67	92.13	11.796		
2,500.00	2,497.36	2,478.36	2,497.36	11.23	84.84	-75.60	-153.35	-1,104.49	1,085.48	989.44	96.04	11.303		
2,600.00	2,597.22	2,578.22	2,597.22	11.65	88.32	-75.87	-153.35	-1,104.49	1,084.18	984.24	99.94	10.848		
2,700.00	2,697.08	2,678.08	2,697.08	12.07	91.81	-76.14	-153.35	-1,104.49	1,082.90	979.05	103.85	10.428		
2,800.00	2,796.94	2,777.94	2,796.94	12.50	95.29	-76.41	-153.35	-1,104.49	1,081.65	973.89	107.76	10.038		
2,900.00	2,896.80	2,877.80	2,896.80	12.92	98.77	-76.68	-153.35	-1,104.49	1,080.42	968.76	111.67	9.675		
3,000.00	2,996.66	2,977.66	2,996.66	13.35	102.26	-76.96	-153.35	-1,104.49	1,079.22	963.64	115.58	9.338		
3,100.00	3,096.52	3,077.52	3,096.52	13.78	105.74	-77.23	-153.35	-1,104.49	1,078.04	958.55	119.49	9.022		
3,200.00	3,196.38	3,177.38	3,196.38	14.21	109.23	-77.50	-153.35	-1,104.49	1,076.88	953.48	123.40	8.727		
3,300.00	3,296.25	3,277.25	3,296.25	14.64	112.71	-77.77	-153.35	-1,104.49	1,075.75	948.44	127.31	8.450		
3,400.00	3,396.11	3,377.11	3,396.11	15.07	116.20	-78.05	-153.35	-1,104.49	1,074.65	943.42	131.23	8.189		
3,500.00	3,495.97	3,476.97	3,495.97	15.50	119.68	-78.32	-153.35	-1,104.49	1,073.57	938.42	135.14	7.944		
3,600.00	3,595.83	3,576.83	3,595.83	15.93	123.17	-78.60	-153.35	-1,104.49	1,072.51	933.45	139.06	7.713		
3,700.00	3,695.69	3,676.69	3,695.69	16.36	126.65	-78.88	-153.35	-1,104.49	1,071.48	928.50	142.97	7.494		
3,800.00	3,795.55	3,776.55	3,795.55	16.80	130.14	-79.15	-153.35	-1,104.49	1,070.47	923.58	146.89	7.288		
3,900.00	3,895.41	3,876.41	3,895.41	17.23	133.62	-79.43	-153.35	-1,104.49	1,069.49	918.68	150.81	7.092		
4,000.00	3,995.27	3,976.27	3,995.27	17.66	137.11	-79.71	-153.35	-1,104.49	1,068.54	913.81	154.73	6.906		
4,100.00	4,095.13	4,076.13	4,095.13	18.10	140.59	-79.98	-153.35	-1,104.49	1,067.61	908.96	158.64	6.730		
4,200.00	4,194.99	4,175.99	4,194.99	18.53	144.08	-80.26	-153.35	-1,104.49	1,066.70	904.14	162.56	6.562		
4,300.00	4,294.85	4,275.85	4,294.85	18.96	147.56	-80.54	-153.35	-1,104.49	1,065.82	899.34	166.48	6.402		
4,400.00	4,394.71	4,375.71	4,394.71	19.40	151.05	-80.82	-153.35	-1,104.49	1,064.96	894.56	170.40	6.250		
4,500.00	4,494.58	4,475.58	4,494.58	19.83	154.53	-81.10	-153.35	-1,104.49	1,064.13	889.81	174.32	6.104		
4,600.00	4,594.44	4,575.44	4,594.44	20.27	158.02	-81.38	-153.35	-1,104.49	1,063.33	885.09	178.24	5.966		
4,700.00	4,694.30	4,675.30	4,694.30	20.71	161.50	-81.66	-153.35	-1,104.49	1,062.55	880.39	182.16	5.833		
4,800.00	4,794.16	4,775.16	4,794.16	21.14	164.99	-81.94	-153.35	-1,104.49	1,061.80	875.72	186.08	5.706		
4,900.00	4,894.02	4,875.02	4,894.02	21.58	168.47	-82.23	-153.35	-1,104.49	1,061.07	871.07	190.00	5.585		
5,000.00	4,993.88	4,974.88	4,993.88	22.01	171.96	-82.51	-153.35	-1,104.49	1,060.37	866.45	193.92	5.468		
5,100.00	5,093.74	5,074.74	5,093.74	22.45	175.44	-82.79	-153.35	-1,104.49	1,059.70	861.85	197.85	5.356		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - SENA 15-24(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,174.60	5,193.60	22.89	178.93	-83.07	-153.35	-1,104.49	1,059.05	857.28	201.77	5.249		
5,300.00	5,293.46	5,274.46	5,293.46	23.32	182.42	-83.36	-153.35	-1,104.49	1,058.42	852.73	205.69	5.146		
5,400.00	5,393.32	5,374.32	5,393.32	23.76	185.90	-83.64	-153.35	-1,104.49	1,057.82	848.21	209.61	5.047		
5,500.00	5,493.18	5,474.18	5,493.18	24.20	189.39	-83.92	-153.35	-1,104.49	1,057.25	843.72	213.53	4.951		
5,600.00	5,593.05	5,574.05	5,593.05	24.64	192.87	-84.21	-153.35	-1,104.49	1,056.71	839.25	217.46	4.859		
5,700.00	5,692.91	5,673.91	5,692.91	25.07	196.36	-84.49	-153.35	-1,104.49	1,056.19	834.81	221.38	4.771		
5,800.00	5,792.77	5,773.77	5,792.77	25.51	199.84	-84.77	-153.35	-1,104.49	1,055.69	830.39	225.30	4.686		
5,900.00	5,892.63	5,873.63	5,892.63	25.95	203.33	-85.06	-153.35	-1,104.49	1,055.22	826.00	229.22	4.603		
6,000.00	5,992.49	5,973.49	5,992.49	26.39	206.82	-85.34	-153.35	-1,104.49	1,054.78	821.64	233.15	4.524		
6,100.00	6,092.35	6,073.35	6,092.35	26.82	210.30	-85.63	-153.35	-1,104.49	1,054.37	817.30	237.07	4.447		
6,200.00	6,192.21	6,173.21	6,192.21	27.26	213.79	-85.91	-153.35	-1,104.49	1,053.98	812.98	240.99	4.373		
6,300.00	6,292.07	6,273.07	6,292.07	27.70	217.27	-86.20	-153.35	-1,104.49	1,053.61	808.70	244.92	4.302		
6,400.00	6,391.93	6,372.93	6,391.93	28.14	220.76	-86.49	-153.35	-1,104.49	1,053.28	804.44	248.84	4.233		
6,500.00	6,491.69	6,472.69	6,491.69	28.58	224.24	-86.78	-153.35	-1,104.49	1,051.06	798.31	252.76	4.158		
6,600.00	6,589.80	6,570.80	6,589.80	29.02	227.67	-87.06	-153.35	-1,104.49	1,036.33	779.71	256.62	4.038		
6,700.00	6,683.86	6,664.86	6,683.86	29.46	230.95	-87.34	-153.35	-1,104.49	1,007.96	747.64	260.32	3.872		
6,800.00	6,771.56	6,752.56	6,771.56	29.92	234.01	-87.62	-153.35	-1,104.49	967.00	703.21	263.79	3.666		
6,900.00	6,850.72	6,831.72	6,850.72	30.40	236.77	-87.90	-153.35	-1,104.49	914.96	648.03	266.94	3.428		
7,000.00	6,919.40	6,900.40	6,919.40	30.96	239.17	-88.18	-153.35	-1,104.49	853.87	584.15	269.72	3.166		
7,100.00	6,975.92	6,956.92	6,975.92	31.62	241.14	-88.46	-153.35	-1,104.49	786.25	514.13	272.12	2.889		
7,200.00	7,018.87	7,000.13	7,018.87	32.44	242.65	-88.74	-153.35	-1,104.49	715.19	441.01	274.17	2.609		
7,300.00	7,047.21	7,028.21	7,047.21	33.42	243.63	-89.02	-153.35	-1,104.49	644.39	368.48	275.91	2.336		
7,400.00	7,060.23	7,041.23	7,060.23	34.55	244.09	-89.30	-153.35	-1,104.49	578.20	300.75	277.45	2.084		
7,500.00	7,060.03	7,041.03	7,060.03	35.83	244.08	-89.58	-153.35	-1,104.49	521.50	242.55	278.95	1.870		
7,600.00	7,058.28	7,039.28	7,058.28	37.28	244.02	-90.36	-153.35	-1,104.49	479.10	198.29	280.81	1.706		
7,700.00	7,056.53	7,037.53	7,056.53	38.89	243.96	-90.14	-153.35	-1,104.49	455.08	172.30	282.79	1.609		
7,762.21	7,055.44	7,036.44	7,055.44	39.97	243.92	-90.00	-153.35	-1,104.49	450.81	166.94	283.87	1.588 CC, ES, SF		
7,800.00	7,054.78	7,035.78	7,054.78	40.63	243.90	-89.92	-153.35	-1,104.49	452.39	168.01	284.38	1.591		
7,900.00	7,053.03	7,034.03	7,053.03	42.50	243.83	-89.69	-153.35	-1,104.49	471.39	186.18	285.21	1.653		
8,000.00	7,051.28	7,032.28	7,051.28	44.47	243.77	-89.47	-153.35	-1,104.49	509.67	224.41	285.26	1.787		
8,100.00	7,049.53	7,030.53	7,049.53	46.53	243.71	-89.25	-153.35	-1,104.49	563.29	278.50	284.79	1.978		
8,200.00	7,047.78	7,028.78	7,047.78	48.67	243.65	-89.03	-153.35	-1,104.49	628.36	344.27	284.09	2.212		
8,300.00	7,046.03	7,027.03	7,046.03	50.89	243.59	-88.80	-153.35	-1,104.49	701.68	418.35	283.34	2.476		
8,400.00	7,044.28	7,025.28	7,044.28	53.16	243.53	-88.58	-153.35	-1,104.49	780.95	498.33	282.62	2.763		
8,500.00	7,042.53	7,023.53	7,042.53	55.49	243.47	-88.36	-153.35	-1,104.49	864.52	582.55	281.98	3.066		
8,600.00	7,040.78	7,021.78	7,040.78	57.86	243.41	-88.14	-153.35	-1,104.49	951.27	669.86	281.41	3.380		
8,700.00	7,039.03	7,020.03	7,039.03	60.28	243.35	-87.92	-153.35	-1,104.49	1,040.39	759.48	280.91	3.704		
8,800.00	7,037.28	7,018.28	7,037.28	62.74	243.29	-87.69	-153.35	-1,104.49	1,131.33	850.85	280.48	4.034		
8,900.00	7,035.53	7,016.53	7,035.53	65.23	243.22	-87.47	-153.35	-1,104.49	1,223.68	943.59	280.10	4.369		
9,000.00	7,033.78	7,014.78	7,033.78	67.74	243.16	-87.25	-153.35	-1,104.49	1,317.15	1,037.39	279.77	4.708		
9,100.00	7,032.03	7,013.03	7,032.03	70.29	243.10	-87.03	-153.35	-1,104.49	1,411.51	1,132.04	279.47	5.051		
9,200.00	7,030.28	7,011.28	7,030.28	72.85	243.04	-86.81	-153.35	-1,104.49	1,506.60	1,227.39	279.21	5.396		
9,300.00	7,028.54	7,009.54	7,028.54	75.44	242.98	-86.59	-153.35	-1,104.49	1,602.28	1,323.31	278.98	5.743		
9,400.00	7,026.79	7,007.79	7,026.79	78.05	242.92	-86.36	-153.35	-1,104.49	1,698.46	1,419.70	278.76	6.093		
9,500.00	7,025.04	7,006.04	7,025.04	80.67	242.86	-86.14	-153.35	-1,104.49	1,795.05	1,516.48	278.57	6.444		
9,600.00	7,023.29	7,004.29	7,023.29	83.31	242.80	-85.92	-153.35	-1,104.49	1,892.00	1,613.60	278.40	6.796		
9,700.00	7,021.54	7,002.54	7,021.54	85.96	242.74	-85.70	-153.35	-1,104.49	1,989.25	1,711.01	278.24	7.149		
9,800.00	7,019.79	7,000.79	7,019.79	88.63	242.67	-85.48	-153.35	-1,104.49	2,086.76	1,808.66	278.10	7.504		
9,900.00	7,018.04	7,000.96	7,018.04	91.30	242.68	-85.26	-153.35	-1,104.49	2,184.49	1,906.45	278.03	7.857		
10,000.00	7,016.29	7,002.71	7,016.29	93.99	242.74	-85.04	-153.35	-1,104.49	2,282.41	2,004.38	278.03	8.209		
10,100.00	7,014.54	7,004.46	7,014.54	96.69	242.80	-84.82	-153.35	-1,104.49	2,380.51	2,102.47	278.04	8.562		
10,200.00	7,012.79	7,006.21	7,012.79	99.40	242.86	-84.60	-153.35	-1,104.49	2,478.76	2,200.70	278.06	8.915		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - SENA 15-24(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	7,011.04	7,007.96	7,011.04	102.11	242.93	-84.38	-153.35	-1,104.49	2,577.14	2,299.06	278.08	9.268		
10,400.00	7,009.29	7,009.71	7,009.29	104.83	242.99	-84.16	-153.35	-1,104.49	2,675.64	2,397.53	278.11	9.621		
10,500.00	7,007.54	6,988.54	7,007.54	107.56	242.25	-83.94	-153.35	-1,104.49	2,774.24	2,496.90	277.34	10.003		
10,600.00	7,005.79	6,986.79	7,005.79	110.30	242.19	-83.72	-153.35	-1,104.49	2,872.95	2,595.68	277.26	10.362		
10,700.00	7,004.04	6,985.04	7,004.04	113.04	242.13	-83.50	-153.35	-1,104.49	2,971.73	2,694.54	277.19	10.721		
10,800.00	7,002.29	6,983.29	7,002.29	115.79	242.06	-83.28	-153.35	-1,104.49	3,070.60	2,793.48	277.12	11.080		
10,900.00	7,000.54	6,981.54	7,000.54	118.54	242.00	-83.06	-153.35	-1,104.49	3,169.53	2,892.48	277.05	11.440		
11,000.00	6,998.79	6,979.79	6,998.79	121.30	241.94	-82.84	-153.35	-1,104.49	3,268.53	2,991.54	276.99	11.800		
11,100.00	6,997.04	6,978.04	6,997.04	124.06	241.88	-82.62	-153.35	-1,104.49	3,367.59	3,090.66	276.93	12.160		
11,200.00	6,995.29	6,976.29	6,995.29	126.83	241.82	-82.40	-153.35	-1,104.49	3,466.70	3,189.83	276.87	12.521		
11,300.00	6,993.54	6,974.54	6,993.54	129.60	241.76	-82.18	-153.35	-1,104.49	3,565.86	3,289.04	276.82	12.881		
11,400.00	6,991.80	6,972.80	6,991.80	132.37	241.70	-81.97	-153.35	-1,104.49	3,665.06	3,388.29	276.77	13.242		
11,500.00	6,990.05	6,971.05	6,990.05	135.15	241.64	-81.75	-153.35	-1,104.49	3,764.31	3,487.58	276.73	13.603		
11,600.00	6,988.30	6,969.30	6,988.30	137.93	241.58	-81.53	-153.35	-1,104.49	3,863.59	3,586.91	276.68	13.964		
11,700.00	6,986.55	6,967.55	6,986.55	140.72	241.51	-81.31	-153.35	-1,104.49	3,962.91	3,686.27	276.64	14.325		
11,800.00	6,984.80	6,965.80	6,984.80	143.50	241.45	-81.10	-153.35	-1,104.49	4,062.26	3,785.66	276.60	14.686		
11,900.00	6,983.05	6,964.05	6,983.05	146.29	241.39	-80.88	-153.35	-1,104.49	4,161.65	3,885.08	276.57	15.048		
12,000.00	6,981.30	6,962.30	6,981.30	149.09	241.33	-80.66	-153.35	-1,104.49	4,261.06	3,984.52	276.53	15.409		
12,100.00	6,979.55	6,960.55	6,979.55	151.88	241.27	-80.45	-153.35	-1,104.49	4,360.49	4,083.99	276.50	15.770		
12,200.00	6,977.80	6,958.80	6,977.80	154.68	241.21	-80.23	-153.35	-1,104.49	4,459.95	4,183.48	276.47	16.132		
12,300.00	6,976.05	6,957.05	6,976.05	157.48	241.15	-80.01	-153.35	-1,104.49	4,559.44	4,282.99	276.44	16.493		
12,400.00	6,974.30	6,955.30	6,974.30	160.28	241.09	-79.80	-153.35	-1,104.49	4,658.94	4,382.52	276.42	16.855		
12,500.00	6,972.55	6,953.55	6,972.55	163.08	241.03	-79.58	-153.35	-1,104.49	4,758.47	4,482.07	276.39	17.216		
12,600.00	6,970.80	6,951.80	6,970.80	165.89	240.96	-79.37	-153.35	-1,104.49	4,858.01	4,581.64	276.37	17.578		
12,700.00	6,969.05	6,950.05	6,969.05	168.69	240.90	-79.15	-153.35	-1,104.49	4,957.57	4,681.22	276.35	17.939		
12,800.00	6,967.30	6,948.30	6,967.30	171.50	240.84	-78.94	-153.35	-1,104.49	5,057.15	4,780.82	276.33	18.301		
12,900.00	6,965.55	6,946.55	6,965.55	174.31	240.78	-78.73	-153.35	-1,104.49	5,156.75	4,880.43	276.31	18.663		
13,000.00	6,963.80	6,944.80	6,963.80	177.12	240.72	-78.51	-153.35	-1,104.49	5,256.36	4,980.06	276.30	19.024		
13,100.00	6,962.05	6,943.05	6,962.05	179.94	240.66	-78.30	-153.35	-1,104.49	5,355.98	5,079.70	276.28	19.386		
13,200.00	6,960.30	6,941.30	6,960.30	182.75	240.60	-78.09	-153.35	-1,104.49	5,455.62	5,179.35	276.27	19.747		
13,300.00	6,958.55	6,939.55	6,958.55	185.57	240.54	-77.87	-153.35	-1,104.49	5,555.26	5,279.01	276.26	20.109		
13,400.00	6,956.80	6,937.80	6,956.80	188.38	240.48	-77.66	-153.35	-1,104.49	5,654.93	5,378.68	276.25	20.470		
13,500.00	6,955.05	6,936.05	6,955.05	191.20	240.42	-77.45	-153.35	-1,104.49	5,754.60	5,478.36	276.24	20.832		
13,600.00	6,953.31	6,934.31	6,953.31	194.02	240.35	-77.24	-153.35	-1,104.49	5,854.28	5,578.05	276.23	21.193		
13,700.00	6,951.56	6,932.56	6,951.56	196.84	240.29	-77.03	-153.35	-1,104.49	5,953.97	5,677.75	276.23	21.555		
13,800.00	6,949.81	6,930.81	6,949.81	199.67	240.23	-76.81	-153.35	-1,104.49	6,053.67	5,777.45	276.22	21.916		
13,900.00	6,948.06	6,929.06	6,948.06	202.49	240.17	-76.60	-153.35	-1,104.49	6,153.39	5,877.17	276.22	22.277		
14,000.00	6,946.31	6,927.31	6,946.31	205.31	240.11	-76.39	-153.35	-1,104.49	6,253.11	5,976.89	276.22	22.639		
14,100.00	6,944.56	6,925.56	6,944.56	208.14	240.05	-76.18	-153.35	-1,104.49	6,352.84	6,076.62	276.21	23.000		
14,200.00	6,942.81	6,923.81	6,942.81	210.96	239.99	-75.97	-153.35	-1,104.49	6,452.57	6,176.36	276.21	23.361		
14,300.00	6,941.06	6,922.06	6,941.06	213.79	239.93	-75.77	-153.35	-1,104.49	6,552.32	6,276.10	276.22	23.722		
14,400.00	6,939.31	6,920.31	6,939.31	216.62	239.87	-75.56	-153.35	-1,104.49	6,652.07	6,375.85	276.22	24.083		
14,500.00	6,937.56	6,918.56	6,937.56	219.44	239.80	-75.35	-153.35	-1,104.49	6,751.83	6,475.60	276.22	24.444		
14,600.00	6,935.81	6,916.81	6,935.81	222.27	239.74	-75.14	-153.35	-1,104.49	6,851.59	6,575.37	276.23	24.804		
14,700.00	6,934.06	6,915.06	6,934.06	225.10	239.68	-74.93	-153.35	-1,104.49	6,951.36	6,675.13	276.23	25.165		
14,800.00	6,932.31	6,913.31	6,932.31	227.93	239.62	-74.73	-153.35	-1,104.49	7,051.14	6,774.90	276.24	25.526		
14,817.75	6,932.00	6,913.00	6,932.00	228.43	239.61	-74.69	-153.35	-1,104.49	7,068.85	6,792.61	276.24	25.590		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - SENA 15-25(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	12.00	3.28	3.28	-70.40	527.92	-1,482.72	1,573.94					
100.00	100.00	88.00	100.00	3.28	3.62	-70.40	527.92	-1,482.72	1,573.90	1,566.99	6.91	227.885		
200.00	200.00	188.00	200.00	3.34	5.83	-70.40	527.92	-1,482.72	1,573.90	1,564.73	9.17	171.726		
300.00	300.00	288.00	300.00	3.44	8.93	-70.40	527.92	-1,482.72	1,573.90	1,561.52	12.38	127.158		
400.00	400.00	388.00	400.00	3.60	12.25	-70.40	527.92	-1,482.72	1,573.90	1,558.05	15.85	99.298		
500.00	500.00	488.00	500.00	3.81	15.64	-70.40	527.92	-1,482.72	1,573.90	1,554.45	19.44	80.943		
600.00	599.98	587.98	599.98	4.05	19.07	-43.08	527.92	-1,482.72	1,572.62	1,549.51	23.11	68.047		
700.00	699.86	687.86	699.86	4.32	22.51	-43.23	527.92	-1,482.72	1,569.11	1,542.28	26.82	58.495		
800.00	799.72	787.72	799.72	4.62	25.96	-43.36	527.92	-1,482.72	1,565.27	1,534.69	30.57	51.196		
900.00	899.58	887.58	899.58	4.93	29.42	-43.49	527.92	-1,482.72	1,561.43	1,527.08	34.35	45.454		
1,000.00	999.44	987.44	999.44	5.27	32.89	-43.62	527.92	-1,482.72	1,557.61	1,519.46	38.15	40.825		
1,100.00	1,099.31	1,087.31	1,099.31	5.62	36.36	-43.76	527.92	-1,482.72	1,553.80	1,511.82	41.97	37.019		
1,200.00	1,199.17	1,187.17	1,199.17	5.98	39.83	-43.89	527.92	-1,482.72	1,549.99	1,504.18	45.81	33.837		
1,300.00	1,299.03	1,287.03	1,299.03	6.36	43.31	-44.03	527.92	-1,482.72	1,546.19	1,496.54	49.65	31.139		
1,400.00	1,398.89	1,386.89	1,398.89	6.74	46.79	-44.16	527.92	-1,482.72	1,542.40	1,488.89	53.51	28.825		
1,500.00	1,498.75	1,486.75	1,498.75	7.13	50.26	-44.30	527.92	-1,482.72	1,538.62	1,481.25	57.37	26.817		
1,600.00	1,598.61	1,586.61	1,598.61	7.52	53.74	-44.44	527.92	-1,482.72	1,534.85	1,473.60	61.25	25.060		
1,700.00	1,698.47	1,686.47	1,698.47	7.92	57.22	-44.58	527.92	-1,482.72	1,531.09	1,465.96	65.12	23.511		
1,800.00	1,798.33	1,786.33	1,798.33	8.32	60.70	-44.72	527.92	-1,482.72	1,527.33	1,458.33	69.01	22.133		
1,900.00	1,898.19	1,886.19	1,898.19	8.73	64.19	-44.85	527.92	-1,482.72	1,523.59	1,450.70	72.89	20.902		
2,000.00	1,998.05	1,986.05	1,998.05	9.14	67.67	-44.99	527.92	-1,482.72	1,519.85	1,443.07	76.78	19.794		
2,100.00	2,097.91	2,085.91	2,097.91	9.55	71.15	-45.14	527.92	-1,482.72	1,516.12	1,435.45	80.68	18.793		
2,200.00	2,197.78	2,185.78	2,197.78	9.97	74.63	-45.28	527.92	-1,482.72	1,512.41	1,427.83	84.57	17.883		
2,300.00	2,297.64	2,285.64	2,297.64	10.39	78.12	-45.42	527.92	-1,482.72	1,508.70	1,420.23	88.47	17.053		
2,400.00	2,397.50	2,385.50	2,397.50	10.81	81.60	-45.56	527.92	-1,482.72	1,505.00	1,412.63	92.37	16.293		
2,500.00	2,497.36	2,485.36	2,497.36	11.23	85.08	-45.71	527.92	-1,482.72	1,501.31	1,405.04	96.27	15.594		
2,600.00	2,597.22	2,585.22	2,597.22	11.65	88.57	-45.85	527.92	-1,482.72	1,497.63	1,397.45	100.18	14.950		
2,700.00	2,697.08	2,685.08	2,697.08	12.07	92.05	-46.00	527.92	-1,482.72	1,493.96	1,389.87	104.09	14.353		
2,800.00	2,796.94	2,784.94	2,796.94	12.50	95.53	-46.14	527.92	-1,482.72	1,490.30	1,382.31	107.99	13.800		
2,900.00	2,896.80	2,884.80	2,896.80	12.92	99.02	-46.29	527.92	-1,482.72	1,486.65	1,374.75	111.90	13.285		
3,000.00	2,996.66	2,984.66	2,996.66	13.35	102.50	-46.43	527.92	-1,482.72	1,483.01	1,367.19	115.81	12.805		
3,100.00	3,096.52	3,084.52	3,096.52	13.78	105.99	-46.58	527.92	-1,482.72	1,479.37	1,359.65	119.72	12.357		
3,200.00	3,196.38	3,184.38	3,196.38	14.21	109.47	-46.73	527.92	-1,482.72	1,475.75	1,352.12	123.63	11.936		
3,300.00	3,296.25	3,284.25	3,296.25	14.64	112.96	-46.88	527.92	-1,482.72	1,472.14	1,344.59	127.55	11.542		
3,400.00	3,396.11	3,384.11	3,396.11	15.07	116.44	-47.03	527.92	-1,482.72	1,468.54	1,337.08	131.46	11.171		
3,500.00	3,495.97	3,483.97	3,495.97	15.50	119.92	-47.18	527.92	-1,482.72	1,464.95	1,329.57	135.37	10.821		
3,600.00	3,595.83	3,583.83	3,595.83	15.93	123.41	-47.33	527.92	-1,482.72	1,461.37	1,322.08	139.29	10.492		
3,700.00	3,695.69	3,683.69	3,695.69	16.36	126.89	-47.48	527.92	-1,482.72	1,457.79	1,314.59	143.20	10.180		
3,800.00	3,795.55	3,783.55	3,795.55	16.80	130.38	-47.64	527.92	-1,482.72	1,454.23	1,307.11	147.12	9.885		
3,900.00	3,895.41	3,883.41	3,895.41	17.23	133.86	-47.79	527.92	-1,482.72	1,450.68	1,299.65	151.04	9.605		
4,000.00	3,995.27	3,983.27	3,995.27	17.66	137.35	-47.95	527.92	-1,482.72	1,447.14	1,292.19	154.95	9.339		
4,100.00	4,095.13	4,083.13	4,095.13	18.10	140.84	-48.10	527.92	-1,482.72	1,443.61	1,284.74	158.87	9.087		
4,200.00	4,194.99	4,182.99	4,194.99	18.53	144.32	-48.26	527.92	-1,482.72	1,440.10	1,277.31	162.79	8.846		
4,300.00	4,294.85	4,282.85	4,294.85	18.96	147.81	-48.41	527.92	-1,482.72	1,436.59	1,269.88	166.71	8.617		
4,400.00	4,394.71	4,382.71	4,394.71	19.40	151.29	-48.57	527.92	-1,482.72	1,433.09	1,262.47	170.63	8.399		
4,500.00	4,494.58	4,482.58	4,494.58	19.83	154.78	-48.73	527.92	-1,482.72	1,429.60	1,255.06	174.54	8.191		
4,600.00	4,594.44	4,582.44	4,594.44	20.27	158.26	-48.89	527.92	-1,482.72	1,426.13	1,247.67	178.46	7.991		
4,700.00	4,694.30	4,682.30	4,694.30	20.71	161.75	-49.05	527.92	-1,482.72	1,422.67	1,240.28	182.38	7.800		
4,800.00	4,794.16	4,782.16	4,794.16	21.14	165.23	-49.21	527.92	-1,482.72	1,419.21	1,232.91	186.30	7.618		
4,900.00	4,894.02	4,882.02	4,894.02	21.58	168.72	-49.37	527.92	-1,482.72	1,415.77	1,225.55	190.22	7.443		
5,000.00	4,993.88	4,981.88	4,993.88	22.01	172.20	-49.53	527.92	-1,482.72	1,412.34	1,218.20	194.14	7.275		
5,100.00	5,093.74	5,081.74	5,093.74	22.45	175.69	-49.70	527.92	-1,482.72	1,408.92	1,210.86	198.06	7.114		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - SENA 15-25(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,181.60	5,193.60	22.89	179.17	-49.86	527.92	-1,482.72	1,405.51	1,203.53	201.98	6.959		
5,300.00	5,293.46	5,281.46	5,293.46	23.32	182.66	-50.02	527.92	-1,482.72	1,402.12	1,196.21	205.90	6.810		
5,400.00	5,393.32	5,381.32	5,393.32	23.76	186.15	-50.19	527.92	-1,482.72	1,398.73	1,188.91	209.83	6.666		
5,500.00	5,493.18	5,481.18	5,493.18	24.20	189.63	-50.36	527.92	-1,482.72	1,395.36	1,181.61	213.75	6.528		
5,600.00	5,593.05	5,581.05	5,593.05	24.64	193.12	-50.52	527.92	-1,482.72	1,392.00	1,174.33	217.67	6.395		
5,700.00	5,692.91	5,680.91	5,692.91	25.07	196.60	-50.69	527.92	-1,482.72	1,388.65	1,167.06	221.59	6.267		
5,800.00	5,792.77	5,780.77	5,792.77	25.51	200.09	-50.86	527.92	-1,482.72	1,385.31	1,159.80	225.51	6.143		
5,900.00	5,892.63	5,880.63	5,892.63	25.95	203.57	-51.03	527.92	-1,482.72	1,381.99	1,152.55	229.43	6.023		
6,000.00	5,992.49	5,980.49	5,992.49	26.39	207.06	-51.20	527.92	-1,482.72	1,378.67	1,145.32	233.35	5.908		
6,100.00	6,092.35	6,080.35	6,092.35	26.82	210.55	-51.37	527.92	-1,482.72	1,375.37	1,138.10	237.28	5.796		
6,200.00	6,192.21	6,180.21	6,192.21	27.26	214.03	-51.54	527.92	-1,482.72	1,372.09	1,130.89	241.20	5.689		
6,300.00	6,292.07	6,280.07	6,292.07	27.70	217.52	-51.71	527.92	-1,482.72	1,368.81	1,123.69	245.12	5.584		
6,400.00	6,391.93	6,379.93	6,391.93	28.14	221.00	-51.89	527.92	-1,482.72	1,365.55	1,116.50	249.04	5.483		
6,500.00	6,491.79	6,479.79	6,491.79	28.58	224.48	-13.17	527.92	-1,482.72	1,362.26	1,109.29	252.96	5.377		
6,600.00	6,591.65	6,579.65	6,591.65	29.02	227.91	1.04	527.92	-1,482.72	1,341.50	1,084.68	256.82	5.224		
6,700.00	6,691.51	6,679.51	6,691.51	29.46	231.39	5.49	527.92	-1,482.72	1,307.92	1,047.41	260.51	5.021		
6,800.00	6,791.37	6,779.37	6,791.37	29.90	234.87	9.94	527.92	-1,482.72	1,260.35	996.40	263.95	4.775		
6,900.00	6,891.23	6,879.23	6,891.23	30.34	238.35	14.39	527.92	-1,482.72	1,200.00	932.96	267.04	4.494		
7,000.00	6,991.09	6,979.09	6,991.09	30.78	241.83	18.84	527.92	-1,482.72	1,128.44	858.72	269.72	4.184		
7,100.00	7,090.95	7,078.95	7,090.95	31.22	245.31	23.29	527.92	-1,482.72	1,047.52	775.61	271.91	3.852		
7,200.00	7,190.81	7,178.81	7,190.81	31.66	248.79	27.74	527.92	-1,482.72	959.41	685.82	273.59	3.507		
7,300.00	7,290.67	7,278.67	7,290.67	32.10	252.27	32.19	527.92	-1,482.72	866.49	591.76	274.72	3.154		
7,400.00	7,390.53	7,378.53	7,390.53	32.54	255.75	36.64	527.92	-1,482.72	771.38	496.04	275.34	2.802		
7,500.00	7,490.39	7,478.39	7,490.39	32.98	259.23	41.09	527.92	-1,482.72	676.74	401.18	275.56	2.456		
7,600.00	7,590.25	7,578.25	7,590.25	33.42	262.71	45.54	527.92	-1,482.72	583.90	307.98	275.92	2.116		
7,700.00	7,690.11	7,678.11	7,690.11	33.86	266.19	49.99	527.92	-1,482.72	493.86	217.22	276.64	1.785		
7,800.00	7,790.00	7,778.00	7,790.00	34.30	269.67	54.44	527.92	-1,482.72	408.48	130.43	278.04	1.469 Level 3		
7,900.00	7,890.00	7,878.00	7,890.00	34.74	273.15	58.89	527.92	-1,482.72	331.36	50.68	280.67	1.181 Level 2		
8,000.00	7,990.00	7,978.00	7,990.00	35.18	276.63	63.34	527.92	-1,482.72	269.70	-15.36	285.06	0.946 Level 1		
8,100.00	8,090.00	8,078.00	8,090.00	35.62	280.11	67.79	527.92	-1,482.72	235.95	-54.09	290.04	0.814 Level 1		
8,135.36	8,048.91	8,036.91	8,048.91	47.29	243.94	90.00	527.92	-1,482.72	233.29	-57.92	291.21	0.801 Level 1, CC, ES, SF		
8,200.00	8,148.82	8,136.82	8,148.82	48.73	247.42	94.45	527.92	-1,482.72	242.07	-49.68	291.75	0.830 Level 1		
8,300.00	8,248.73	8,236.73	8,248.73	50.17	250.90	98.90	527.92	-1,482.72	285.52	-4.05	289.57	0.986 Level 1		
8,400.00	8,348.64	8,336.64	8,348.64	51.61	254.38	103.35	527.92	-1,482.72	352.76	66.25	286.51	1.231 Level 2		
8,500.00	8,448.55	8,436.55	8,448.55	53.05	257.86	107.80	527.92	-1,482.72	432.84	148.81	284.03	1.524		
8,600.00	8,548.46	8,536.46	8,548.46	54.49	261.34	112.25	527.92	-1,482.72	519.86	237.62	282.23	1.842		
8,700.00	8,648.37	8,636.37	8,648.37	55.93	264.82	116.70	527.92	-1,482.72	610.86	329.91	280.94	2.174		
8,800.00	8,748.28	8,736.28	8,748.28	57.37	268.30	121.15	527.92	-1,482.72	704.30	424.30	280.00	2.515		
8,900.00	8,848.19	8,836.19	8,848.19	58.81	271.78	125.60	527.92	-1,482.72	799.33	520.04	279.29	2.862		
9,000.00	8,948.10	8,936.10	8,948.10	60.25	275.26	130.05	527.92	-1,482.72	895.43	616.70	278.74	3.212		
9,100.00	9,048.01	9,036.01	9,048.01	61.69	278.74	134.50	527.92	-1,482.72	992.31	714.01	278.30	3.566		
9,200.00	9,147.92	9,135.92	9,147.92	63.13	282.22	138.95	527.92	-1,482.72	1,089.74	811.81	277.94	3.921		
9,300.00	9,247.83	9,235.83	9,247.83	64.57	285.70	143.40	527.92	-1,482.72	1,187.60	909.96	277.64	4.277		
9,400.00	9,347.74	9,335.74	9,347.74	66.01	289.18	147.85	527.92	-1,482.72	1,285.79	1,008.40	277.39	4.635		
9,500.00	9,447.65	9,435.65	9,447.65	67.45	292.66	152.30	527.92	-1,482.72	1,384.23	1,107.06	277.17	4.994		
9,600.00	9,547.56	9,535.56	9,547.56	68.89	296.14	156.75	527.92	-1,482.72	1,482.88	1,205.90	276.99	5.354		
9,700.00	9,647.47	9,635.47	9,647.47	70.33	299.62	161.20	527.92	-1,482.72	1,581.70	1,304.88	276.83	5.714		
9,800.00	9,747.38	9,735.38	9,747.38	71.77	303.10	165.65	527.92	-1,482.72	1,680.66	1,403.98	276.68	6.074		
9,900.00	9,847.29	9,835.29	9,847.29	73.21	306.58	170.10	527.92	-1,482.72	1,779.73	1,503.18	276.55	6.435		
10,000.00	9,947.20	9,935.20	9,947.20	74.65	310.06	174.55	527.92	-1,482.72	1,878.90	1,602.46	276.44	6.797		
10,100.00	10,047.11	10,035.11	10,047.11	76.09	313.54	179.00	527.92	-1,482.72	1,978.15	1,701.82	276.33	7.159		
10,200.00	10,147.02	10,135.02	10,147.02	77.53	317.02	183.45	527.92	-1,482.72	2,077.47	1,801.23	276.23	7.521		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - SENA 15-25(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
10,300.00	7,011.04	7,000.96	7,011.04	102.11	242.68	80.78	527.92	-1,482.72	2,176.85	1,900.63	276.21	7.881		
10,400.00	7,009.29	7,002.71	7,009.29	104.83	242.74	80.36	527.92	-1,482.72	2,276.28	2,000.03	276.26	8.240		
10,500.00	7,007.54	7,004.46	7,007.54	107.56	242.80	79.95	527.92	-1,482.72	2,375.76	2,099.46	276.30	8.598		
10,600.00	7,005.79	7,006.21	7,005.79	110.30	242.86	79.53	527.92	-1,482.72	2,475.28	2,198.92	276.36	8.957		
10,700.00	7,004.04	7,007.96	7,004.04	113.04	242.92	79.11	527.92	-1,482.72	2,574.84	2,298.42	276.42	9.315		
10,800.00	7,002.29	7,009.71	7,002.29	115.79	242.99	78.70	527.92	-1,482.72	2,674.43	2,397.95	276.48	9.673		
10,900.00	7,000.54	6,988.54	7,000.54	118.54	242.25	78.29	527.92	-1,482.72	2,774.05	2,498.30	275.75	10.060		
11,000.00	6,998.79	6,986.79	6,998.79	121.30	242.19	77.88	527.92	-1,482.72	2,873.69	2,597.99	275.70	10.423		
11,100.00	6,997.04	6,985.04	6,997.04	124.06	242.13	77.47	527.92	-1,482.72	2,973.36	2,697.70	275.65	10.787		
11,200.00	6,995.29	6,983.29	6,995.29	126.83	242.06	77.06	527.92	-1,482.72	3,073.04	2,797.43	275.61	11.150		
11,300.00	6,993.54	6,981.54	6,993.54	129.60	242.00	76.65	527.92	-1,482.72	3,172.75	2,897.18	275.57	11.513		
11,400.00	6,991.80	6,979.80	6,991.80	132.37	241.94	76.24	527.92	-1,482.72	3,272.47	2,996.94	275.53	11.877		
11,500.00	6,990.05	6,978.05	6,990.05	135.15	241.88	75.84	527.92	-1,482.72	3,372.21	3,096.71	275.49	12.241		
11,600.00	6,988.30	6,976.30	6,988.30	137.93	241.82	75.44	527.92	-1,482.72	3,471.96	3,196.50	275.46	12.604		
11,700.00	6,986.55	6,974.55	6,986.55	140.72	241.76	75.04	527.92	-1,482.72	3,571.72	3,296.29	275.43	12.968		
11,800.00	6,984.80	6,972.80	6,984.80	143.50	241.70	74.63	527.92	-1,482.72	3,671.50	3,396.10	275.40	13.331		
11,900.00	6,983.05	6,971.05	6,983.05	146.29	241.64	74.24	527.92	-1,482.72	3,771.29	3,495.91	275.38	13.695		
12,000.00	6,981.30	6,969.30	6,981.30	149.09	241.58	73.84	527.92	-1,482.72	3,871.09	3,595.74	275.35	14.059		
12,100.00	6,979.55	6,967.55	6,979.55	151.88	241.51	73.44	527.92	-1,482.72	3,970.89	3,695.57	275.33	14.422		
12,200.00	6,977.80	6,965.80	6,977.80	154.68	241.45	73.05	527.92	-1,482.72	4,070.71	3,795.40	275.31	14.786		
12,300.00	6,976.05	6,964.05	6,976.05	157.48	241.39	72.66	527.92	-1,482.72	4,170.54	3,895.25	275.29	15.150		
12,400.00	6,974.30	6,962.30	6,974.30	160.28	241.33	72.27	527.92	-1,482.72	4,270.37	3,995.09	275.27	15.513		
12,500.00	6,972.55	6,960.55	6,972.55	163.08	241.27	71.88	527.92	-1,482.72	4,370.21	4,094.95	275.26	15.877		
12,600.00	6,970.80	6,958.80	6,970.80	165.89	241.21	71.49	527.92	-1,482.72	4,470.05	4,194.81	275.24	16.240		
12,700.00	6,969.05	6,957.05	6,969.05	168.69	241.15	71.11	527.92	-1,482.72	4,569.90	4,294.67	275.23	16.604		
12,800.00	6,967.30	6,955.30	6,967.30	171.50	241.09	70.72	527.92	-1,482.72	4,669.76	4,394.54	275.22	16.967		
12,900.00	6,965.55	6,953.55	6,965.55	174.31	241.03	70.34	527.92	-1,482.72	4,769.62	4,494.41	275.21	17.331		
13,000.00	6,963.80	6,951.80	6,963.80	177.12	240.96	69.96	527.92	-1,482.72	4,869.49	4,594.29	275.20	17.694		
13,100.00	6,962.05	6,950.05	6,962.05	179.94	240.90	69.58	527.92	-1,482.72	4,969.36	4,694.17	275.20	18.058		
13,200.00	6,960.30	6,948.30	6,960.30	182.75	240.84	69.20	527.92	-1,482.72	5,069.24	4,794.05	275.19	18.421		
13,300.00	6,958.55	6,946.55	6,958.55	185.57	240.78	68.83	527.92	-1,482.72	5,169.12	4,893.93	275.19	18.784		
13,400.00	6,956.80	6,944.80	6,956.80	188.38	240.72	68.46	527.92	-1,482.72	5,269.00	4,993.82	275.18	19.147		
13,500.00	6,955.05	6,943.05	6,955.05	191.20	240.66	68.09	527.92	-1,482.72	5,368.89	5,093.71	275.18	19.510		
13,600.00	6,953.31	6,941.31	6,953.31	194.02	240.60	67.72	527.92	-1,482.72	5,468.78	5,193.60	275.18	19.873		
13,700.00	6,951.56	6,939.56	6,951.56	196.84	240.54	67.35	527.92	-1,482.72	5,568.68	5,293.50	275.18	20.236		
13,800.00	6,949.81	6,937.81	6,949.81	199.67	240.48	66.99	527.92	-1,482.72	5,668.58	5,393.39	275.18	20.599		
13,900.00	6,948.06	6,936.06	6,948.06	202.49	240.42	66.62	527.92	-1,482.72	5,768.48	5,493.29	275.19	20.962		
14,000.00	6,946.31	6,934.31	6,946.31	205.31	240.35	66.26	527.92	-1,482.72	5,868.38	5,593.19	275.19	21.325		
14,100.00	6,944.56	6,932.56	6,944.56	208.14	240.29	65.90	527.92	-1,482.72	5,968.29	5,693.09	275.20	21.687		
14,200.00	6,942.81	6,930.81	6,942.81	210.96	240.23	65.55	527.92	-1,482.72	6,068.20	5,793.00	275.20	22.050		
14,300.00	6,941.06	6,929.06	6,941.06	213.79	240.17	65.19	527.92	-1,482.72	6,168.11	5,892.90	275.21	22.412		
14,400.00	6,939.31	6,927.31	6,939.31	216.62	240.11	64.84	527.92	-1,482.72	6,268.03	5,992.81	275.22	22.775		
14,500.00	6,937.56	6,925.56	6,937.56	219.44	240.05	64.49	527.92	-1,482.72	6,367.94	6,092.72	275.23	23.137		
14,600.00	6,935.81	6,923.81	6,935.81	222.27	239.99	64.14	527.92	-1,482.72	6,467.86	6,192.62	275.24	23.499		
14,700.00	6,934.06	6,922.06	6,934.06	225.10	239.93	63.79	527.92	-1,482.72	6,567.78	6,292.53	275.25	23.861		
14,800.00	6,932.31	6,920.31	6,932.31	227.93	239.87	63.45	527.92	-1,482.72	6,667.71	6,392.44	275.26	24.223		
14,817.75	6,932.00	6,920.00	6,932.00	228.43	239.85	63.39	527.92	-1,482.72	6,685.44	6,410.17	275.26	24.287		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STATE 1(AB_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	49.00	3.28	3.28	-78.27	1,035.86	-4,990.69	5,097.29					
100.00	100.00	51.00	100.00	3.28	3.40	-78.27	1,035.86	-4,990.69	5,097.06	5,090.37	6.68	762.646		
200.00	200.00	151.00	200.00	3.34	4.82	-78.27	1,035.86	-4,990.69	5,097.06	5,088.90	8.15	625.200		
300.00	300.00	251.00	300.00	3.44	7.75	-78.27	1,035.86	-4,990.69	5,097.06	5,085.87	11.19	455.477		
400.00	400.00	351.00	400.00	3.60	11.01	-78.27	1,035.86	-4,990.69	5,097.06	5,082.44	14.61	348.844		
500.00	500.00	451.00	500.00	3.81	14.38	-78.27	1,035.86	-4,990.69	5,097.06	5,078.87	18.18	280.304		
600.00	599.98	550.98	599.98	4.05	17.79	-50.93	1,035.86	-4,990.69	5,095.96	5,074.12	21.84	233.336		
700.00	699.86	650.86	699.86	4.32	21.23	-50.99	1,035.86	-4,990.69	5,092.92	5,067.37	25.55	199.356		
800.00	799.72	750.72	799.72	4.62	24.68	-51.04	1,035.86	-4,990.69	5,089.60	5,060.31	29.29	173.751		
900.00	899.58	850.58	899.58	4.93	28.14	-51.08	1,035.86	-4,990.69	5,086.28	5,053.21	33.07	153.811		
1,000.00	999.44	950.44	999.44	5.27	31.61	-51.13	1,035.86	-4,990.69	5,082.97	5,046.10	36.87	137.869		
1,100.00	1,099.31	1,050.31	1,099.31	5.62	35.07	-51.18	1,035.86	-4,990.69	5,079.66	5,038.97	40.69	124.849		
1,200.00	1,199.17	1,150.17	1,199.17	5.98	38.55	-51.22	1,035.86	-4,990.69	5,076.35	5,031.83	44.52	114.024		
1,300.00	1,299.03	1,250.03	1,299.03	6.36	42.02	-51.27	1,035.86	-4,990.69	5,073.05	5,024.68	48.37	104.890		
1,400.00	1,398.89	1,349.89	1,398.89	6.74	45.50	-51.32	1,035.86	-4,990.69	5,069.75	5,017.53	52.22	97.082		
1,500.00	1,498.75	1,449.75	1,498.75	7.13	48.98	-51.36	1,035.86	-4,990.69	5,066.45	5,010.37	56.09	90.335		
1,600.00	1,598.61	1,549.61	1,598.61	7.52	52.45	-51.41	1,035.86	-4,990.69	5,063.16	5,003.20	59.96	84.447		
1,700.00	1,698.47	1,649.47	1,698.47	7.92	55.93	-51.46	1,035.86	-4,990.69	5,059.87	4,996.03	63.83	79.267		
1,800.00	1,798.33	1,749.33	1,798.33	8.32	59.41	-51.50	1,035.86	-4,990.69	5,056.58	4,988.87	67.72	74.674		
1,900.00	1,898.19	1,849.19	1,898.19	8.73	62.90	-51.55	1,035.86	-4,990.69	5,053.30	4,981.70	71.60	70.575		
2,000.00	1,998.05	1,949.05	1,998.05	9.14	66.38	-51.60	1,035.86	-4,990.69	5,050.02	4,974.53	75.49	66.895		
2,100.00	2,097.91	2,048.91	2,097.91	9.55	69.86	-51.64	1,035.86	-4,990.69	5,046.74	4,967.36	79.39	63.573		
2,200.00	2,197.78	2,148.78	2,197.78	9.97	73.34	-51.69	1,035.86	-4,990.69	5,043.47	4,960.19	83.28	60.559		
2,300.00	2,297.64	2,248.64	2,297.64	10.39	76.82	-51.74	1,035.86	-4,990.69	5,040.20	4,953.02	87.18	57.814		
2,400.00	2,397.50	2,348.50	2,397.50	10.81	80.31	-51.78	1,035.86	-4,990.69	5,036.93	4,945.85	91.08	55.302		
2,500.00	2,497.36	2,448.36	2,497.36	11.23	83.79	-51.83	1,035.86	-4,990.69	5,033.67	4,938.69	94.98	52.995		
2,600.00	2,597.22	2,548.22	2,597.22	11.65	87.27	-51.88	1,035.86	-4,990.69	5,030.41	4,931.52	98.89	50.870		
2,700.00	2,697.08	2,648.08	2,697.08	12.07	90.76	-51.92	1,035.86	-4,990.69	5,027.15	4,924.36	102.79	48.905		
2,800.00	2,796.94	2,747.94	2,796.94	12.50	94.24	-51.97	1,035.86	-4,990.69	5,023.90	4,917.20	106.70	47.084		
2,900.00	2,896.80	2,847.80	2,896.80	12.92	97.73	-52.02	1,035.86	-4,990.69	5,020.65	4,910.04	110.61	45.390		
3,000.00	2,996.66	2,947.66	2,996.66	13.35	101.21	-52.07	1,035.86	-4,990.69	5,017.40	4,902.88	114.52	43.812		
3,100.00	3,096.52	3,047.52	3,096.52	13.78	104.70	-52.11	1,035.86	-4,990.69	5,014.16	4,895.73	118.43	42.338		
3,200.00	3,196.38	3,147.38	3,196.38	14.21	108.18	-52.16	1,035.86	-4,990.69	5,010.92	4,888.58	122.34	40.958		
3,300.00	3,296.25	3,247.25	3,296.25	14.64	111.66	-52.21	1,035.86	-4,990.69	5,007.69	4,881.43	126.26	39.663		
3,400.00	3,396.11	3,347.11	3,396.11	15.07	115.15	-52.26	1,035.86	-4,990.69	5,004.46	4,874.29	130.17	38.446		
3,500.00	3,495.97	3,446.97	3,495.97	15.50	118.63	-52.30	1,035.86	-4,990.69	5,001.23	4,867.14	134.08	37.299		
3,600.00	3,595.83	3,546.83	3,595.83	15.93	122.12	-52.35	1,035.86	-4,990.69	4,998.00	4,860.00	138.00	36.218		
3,700.00	3,695.69	3,646.69	3,695.69	16.36	125.60	-52.40	1,035.86	-4,990.69	4,994.78	4,852.87	141.91	35.196		
3,800.00	3,795.55	3,746.55	3,795.55	16.80	129.09	-52.45	1,035.86	-4,990.69	4,991.56	4,845.73	145.83	34.229		
3,900.00	3,895.41	3,846.41	3,895.41	17.23	132.57	-52.50	1,035.86	-4,990.69	4,988.35	4,838.60	149.75	33.312		
4,000.00	3,995.27	3,946.27	3,995.27	17.66	136.06	-52.54	1,035.86	-4,990.69	4,985.14	4,831.47	153.66	32.442		
4,100.00	4,095.13	4,046.13	4,095.13	18.10	139.54	-52.59	1,035.86	-4,990.69	4,981.93	4,824.35	157.58	31.615		
4,200.00	4,194.99	4,145.99	4,194.99	18.53	143.03	-52.64	1,035.86	-4,990.69	4,978.72	4,817.23	161.50	30.828		
4,300.00	4,294.85	4,245.85	4,294.85	18.96	146.51	-52.69	1,035.86	-4,990.69	4,975.52	4,810.11	165.42	30.079		
4,400.00	4,394.71	4,345.71	4,394.71	19.40	150.00	-52.74	1,035.86	-4,990.69	4,972.33	4,802.99	169.33	29.364		
4,500.00	4,494.58	4,445.58	4,494.58	19.83	153.48	-52.79	1,035.86	-4,990.69	4,969.13	4,795.88	173.25	28.681		
4,600.00	4,594.44	4,545.44	4,594.44	20.27	156.97	-52.83	1,035.86	-4,990.69	4,965.94	4,788.77	177.17	28.029		
4,700.00	4,694.30	4,645.30	4,694.30	20.71	160.46	-52.88	1,035.86	-4,990.69	4,962.76	4,781.66	181.09	27.405		
4,800.00	4,794.16	4,745.16	4,794.16	21.14	163.94	-52.93	1,035.86	-4,990.69	4,959.57	4,774.56	185.01	26.807		
4,900.00	4,894.02	4,845.02	4,894.02	21.58	167.43	-52.98	1,035.86	-4,990.69	4,956.39	4,767.46	188.93	26.234		
5,000.00	4,993.88	4,944.88	4,993.88	22.01	170.91	-53.03	1,035.86	-4,990.69	4,953.22	4,760.37	192.85	25.684		
5,100.00	5,093.74	5,044.74	5,093.74	22.45	174.40	-53.08	1,035.86	-4,990.69	4,950.05	4,753.27	196.77	25.156		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STATE 1(AB_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,144.60	5,193.60	22.89	177.88	-53.13	1,035.86	-4,990.69	4,946.88	4,746.18	200.69	24.649		
5,300.00	5,293.46	5,244.46	5,293.46	23.32	181.37	-53.17	1,035.86	-4,990.69	4,943.71	4,739.10	204.61	24.161		
5,400.00	5,393.32	5,344.32	5,393.32	23.76	184.85	-53.22	1,035.86	-4,990.69	4,940.55	4,732.02	208.53	23.692		
5,500.00	5,493.18	5,444.18	5,493.18	24.20	188.34	-53.27	1,035.86	-4,990.69	4,937.39	4,724.94	212.46	23.240		
5,600.00	5,593.05	5,544.05	5,593.05	24.64	191.83	-53.32	1,035.86	-4,990.69	4,934.24	4,717.86	216.38	22.804		
5,700.00	5,692.91	5,643.91	5,692.91	25.07	195.31	-53.37	1,035.86	-4,990.69	4,931.09	4,710.79	220.30	22.384		
5,800.00	5,792.77	5,743.77	5,792.77	25.51	198.80	-53.42	1,035.86	-4,990.69	4,927.94	4,703.72	224.22	21.978		
5,900.00	5,892.63	5,843.63	5,892.63	25.95	202.28	-53.47	1,035.86	-4,990.69	4,924.80	4,696.66	228.14	21.587		
6,000.00	5,992.49	5,943.49	5,992.49	26.39	205.77	-53.52	1,035.86	-4,990.69	4,921.66	4,689.59	232.06	21.208		
6,100.00	6,092.35	6,043.35	6,092.35	26.82	209.25	-53.57	1,035.86	-4,990.69	4,918.52	4,682.54	235.99	20.842		
6,200.00	6,192.21	6,143.21	6,192.21	27.26	212.74	-53.62	1,035.86	-4,990.69	4,915.39	4,675.48	239.91	20.489		
6,300.00	6,292.07	6,243.07	6,292.07	27.70	216.23	-53.67	1,035.86	-4,990.69	4,912.26	4,668.43	243.83	20.146		
6,400.00	6,391.93	6,342.93	6,391.93	28.14	219.71	-53.72	1,035.86	-4,990.69	4,909.14	4,661.38	247.75	19.815		
6,500.00	6,491.79	6,442.79	6,491.79	28.58	223.19	-14.89	1,035.86	-4,990.69	4,903.97	4,652.29	251.67	19.486		
6,600.00	6,591.65	6,542.65	6,591.65	29.02	226.62	-0.71	1,035.86	-4,990.69	4,898.85	4,643.22	255.53	19.118		
6,700.00	6,691.51	6,642.51	6,691.51	29.46	229.90	3.56	1,035.86	-4,990.69	4,893.78	4,634.15	259.22	18.716		
6,800.00	6,791.37	6,742.37	6,791.37	29.90	233.18	6.82	1,035.86	-4,990.69	4,888.71	4,625.08	262.66	18.290		
6,900.00	6,891.23	6,842.23	6,891.23	30.34	236.46	10.08	1,035.86	-4,990.69	4,883.64	4,616.01	265.75	17.849		
7,000.00	6,991.09	6,942.09	6,991.09	30.78	239.74	13.34	1,035.86	-4,990.69	4,878.57	4,606.94	268.42	17.403		
7,100.00	7,090.95	7,041.95	7,090.95	31.22	243.02	16.60	1,035.86	-4,990.69	4,873.50	4,597.87	270.61	16.961		
7,200.00	7,190.81	7,141.81	7,190.81	31.66	246.30	19.86	1,035.86	-4,990.69	4,868.43	4,588.80	272.26	16.530		
7,300.00	7,290.67	7,241.67	7,290.67	32.10	249.58	23.12	1,035.86	-4,990.69	4,863.36	4,579.73	273.48	16.110		
7,400.00	7,390.53	7,341.53	7,390.53	32.54	252.86	26.38	1,035.86	-4,990.69	4,858.29	4,570.66	273.87	15.731		
7,500.00	7,490.39	7,441.39	7,490.39	32.98	256.14	29.64	1,035.86	-4,990.69	4,853.22	4,561.59	273.90	15.370		
7,600.00	7,590.25	7,541.25	7,590.25	33.42	259.42	32.90	1,035.86	-4,990.69	4,848.15	4,552.52	273.89	15.012		
7,700.00	7,690.11	7,641.11	7,690.11	33.86	262.70	36.16	1,035.86	-4,990.69	4,843.08	4,543.45	273.90	14.653		
7,800.00	7,790.00	7,741.00	7,790.00	34.30	265.98	39.42	1,035.86	-4,990.69	4,838.01	4,534.38	273.92	14.294		
7,900.00	7,890.00	7,841.00	7,890.00	34.74	269.26	42.68	1,035.86	-4,990.69	4,832.94	4,525.31	273.97	13.934		
8,000.00	7,990.00	7,941.00	7,990.00	35.18	272.54	45.94	1,035.86	-4,990.69	4,827.87	4,516.24	274.04	13.573		
8,100.00	8,090.00	8,041.00	8,090.00	35.62	275.82	49.20	1,035.86	-4,990.69	4,822.80	4,507.17	274.13	13.212		
8,200.00	8,190.00	8,141.00	8,190.00	36.06	279.10	52.46	1,035.86	-4,990.69	4,817.73	4,498.10	274.34	12.846		
8,300.00	8,290.00	8,241.00	8,290.00	36.50	282.38	55.72	1,035.86	-4,990.69	4,812.66	4,489.03	274.61	12.478		
8,400.00	8,390.00	8,341.00	8,390.00	36.94	285.66	58.98	1,035.86	-4,990.69	4,807.59	4,479.96	274.93	12.109		
8,500.00	8,490.00	8,441.00	8,490.00	37.38	288.94	62.24	1,035.86	-4,990.69	4,802.52	4,470.89	275.28	11.740		
8,600.00	8,590.00	8,541.00	8,590.00	37.82	292.22	65.50	1,035.86	-4,990.69	4,797.45	4,461.82	275.69	11.371		
8,700.00	8,690.00	8,641.00	8,690.00	38.26	295.50	68.76	1,035.86	-4,990.69	4,792.38	4,452.75	276.14	11.002		
8,800.00	8,790.00	8,741.00	8,790.00	38.70	298.78	72.02	1,035.86	-4,990.69	4,787.31	4,443.68	275.84	10.664		
8,900.00	8,890.00	8,841.00	8,890.00	39.14	302.06	75.28	1,035.86	-4,990.69	4,782.24	4,434.61	276.30	10.297		
9,000.00	8,990.00	8,941.00	8,990.00	39.58	305.34	78.54	1,035.86	-4,990.69	4,777.17	4,425.54	276.84	9.929		
9,100.00	9,090.00	9,041.00	9,090.00	40.02	308.62	81.80	1,035.86	-4,990.69	4,772.10	4,416.47	277.47	9.562		
9,200.00	9,190.00	9,141.00	9,190.00	40.46	311.90	85.06	1,035.86	-4,990.69	4,767.03	4,407.40	277.19	9.193		
9,300.00	9,290.00	9,241.00	9,290.00	40.90	315.18	88.32	1,035.86	-4,990.69	4,761.96	4,398.33	279.03	8.824		
9,400.00	9,390.00	9,341.00	9,390.00	41.34	318.46	91.58	1,035.86	-4,990.69	4,756.89	4,389.26	279.99	8.456		
9,500.00	9,490.00	9,441.00	9,490.00	41.78	321.74	94.84	1,035.86	-4,990.69	4,751.82	4,380.19	281.10	8.087		
9,600.00	9,590.00	9,541.00	9,590.00	42.22	325.02	98.10	1,035.86	-4,990.69	4,746.75	4,371.12	282.37	7.718		
9,700.00	9,690.00	9,641.00	9,690.00	42.66	328.30	101.36	1,035.86	-4,990.69	4,741.68	4,362.05	283.82	7.350		
9,800.00	9,790.00	9,741.00	9,790.00	43.10	331.58	104.62	1,035.86	-4,990.69	4,736.61	4,352.98	285.48	6.983		
9,900.00	9,890.00	9,841.00	9,890.00	43.54	334.86	107.88	1,035.86	-4,990.69	4,731.54	4,343.91	287.38	6.617		
10,000.00	9,990.00	9,941.00	9,990.00	43.98	338.14	111.14	1,035.86	-4,990.69	4,726.47	4,334.84	289.54	6.253		
10,100.00	10,090.00	10,041.00	10,090.00	44.42	341.42	114.40	1,035.86	-4,990.69	4,721.40	4,325.77	292.01	5.892		
10,200.00	10,190.00	10,141.00	10,190.00	44.86	344.70	117.66	1,035.86	-4,990.69	4,716.33	4,316.70	294.82	5.534		
10,300.00	10,290.00	10,241.00	10,290.00	45.30	347.98	120.92	1,035.86	-4,990.69	4,711.26	4,307.63	298.02	5.181		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STATE 1(AB_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	6,960.29	7,009.29	104.83	241.26	91.62	1,035.86	-4,990.69	1,458.15	1,156.49	301.66	4.834		
10,500.00	7,007.54	6,958.54	7,007.54	107.56	241.20	91.49	1,035.86	-4,990.69	1,374.15	1,068.36	305.79	4.494		
10,600.00	7,005.79	6,956.79	7,005.79	110.30	241.14	91.36	1,035.86	-4,990.69	1,292.43	981.96	310.48	4.163		
10,700.00	7,004.04	6,955.04	7,004.04	113.04	241.08	91.23	1,035.86	-4,990.69	1,213.45	897.69	315.76	3.843		
10,800.00	7,002.29	6,953.29	7,002.29	115.79	241.02	91.10	1,035.86	-4,990.69	1,137.77	816.09	321.68	3.537		
10,900.00	7,000.54	6,951.54	7,000.54	118.54	240.96	90.97	1,035.86	-4,990.69	1,066.10	737.84	328.26	3.248		
11,000.00	6,998.79	6,949.79	6,998.79	121.30	240.89	90.84	1,035.86	-4,990.69	999.32	663.83	335.48	2.979		
11,100.00	6,997.04	6,948.04	6,997.04	124.06	240.83	90.70	1,035.86	-4,990.69	938.45	595.21	343.24	2.734		
11,200.00	6,995.29	6,946.29	6,995.29	126.83	240.77	90.57	1,035.86	-4,990.69	884.72	533.39	351.33	2.518		
11,300.00	6,993.54	6,944.54	6,993.54	129.60	240.71	90.44	1,035.86	-4,990.69	839.50	480.09	359.41	2.336		
11,400.00	6,991.80	6,942.80	6,991.80	132.37	240.65	90.31	1,035.86	-4,990.69	804.23	437.25	366.98	2.191		
11,500.00	6,990.05	6,941.05	6,990.05	135.15	240.59	90.18	1,035.86	-4,990.69	780.26	406.82	373.44	2.089		
11,600.00	6,988.30	6,939.30	6,988.30	137.93	240.53	90.05	1,035.86	-4,990.69	768.65	390.44	378.21	2.032		
11,639.94	6,987.60	6,938.60	6,987.60	139.04	240.50	90.00	1,035.86	-4,990.69	767.62	388.07	379.54	2.022 CC, ES		
11,700.00	6,986.55	6,937.55	6,986.55	140.72	240.47	89.92	1,035.86	-4,990.69	769.96	389.09	380.87	2.022 SF		
11,800.00	6,984.80	6,935.80	6,984.80	143.50	240.41	89.79	1,035.86	-4,990.69	784.12	402.83	381.29	2.056		
11,900.00	6,983.05	6,934.05	6,983.05	146.29	240.34	89.66	1,035.86	-4,990.69	810.46	430.77	379.68	2.135		
12,000.00	6,981.30	6,932.30	6,981.30	149.09	240.28	89.53	1,035.86	-4,990.69	847.84	471.36	376.48	2.252		
12,100.00	6,979.55	6,930.55	6,979.55	151.88	240.22	89.40	1,035.86	-4,990.69	894.89	522.70	372.19	2.404		
12,200.00	6,977.80	6,928.80	6,977.80	154.68	240.16	89.27	1,035.86	-4,990.69	950.16	582.86	367.30	2.587		
12,300.00	6,976.05	6,927.05	6,976.05	157.48	240.10	89.14	1,035.86	-4,990.69	1,012.31	650.14	362.17	2.795		
12,400.00	6,974.30	6,925.30	6,974.30	160.28	240.04	89.01	1,035.86	-4,990.69	1,080.16	723.08	357.08	3.025		
12,500.00	6,972.55	6,923.55	6,972.55	163.08	239.98	88.88	1,035.86	-4,990.69	1,152.70	800.52	352.17	3.273		
12,600.00	6,970.80	6,921.80	6,970.80	165.89	239.92	88.75	1,035.86	-4,990.69	1,229.09	881.53	347.56	3.536		
12,700.00	6,969.05	6,920.05	6,969.05	168.69	239.86	88.62	1,035.86	-4,990.69	1,308.67	965.40	343.27	3.812		
12,800.00	6,967.30	6,918.30	6,967.30	171.50	239.80	88.49	1,035.86	-4,990.69	1,390.88	1,051.57	339.31	4.099		
12,900.00	6,965.55	6,916.55	6,965.55	174.31	239.73	88.36	1,035.86	-4,990.69	1,475.30	1,139.61	335.69	4.395		
13,000.00	6,963.80	6,914.80	6,963.80	177.12	239.67	88.22	1,035.86	-4,990.69	1,561.55	1,229.18	332.37	4.698		
13,100.00	6,962.05	6,913.05	6,962.05	179.94	239.61	88.09	1,035.86	-4,990.69	1,649.35	1,320.01	329.34	5.008		
13,200.00	6,960.30	6,911.30	6,960.30	182.75	239.55	87.96	1,035.86	-4,990.69	1,738.47	1,411.90	326.57	5.323		
13,300.00	6,958.55	6,909.55	6,958.55	185.57	239.49	87.83	1,035.86	-4,990.69	1,828.71	1,504.67	324.04	5.644		
13,400.00	6,956.80	6,907.80	6,956.80	188.38	239.43	87.70	1,035.86	-4,990.69	1,919.92	1,598.20	321.72	5.968		
13,500.00	6,955.05	6,906.05	6,955.05	191.20	239.37	87.57	1,035.86	-4,990.69	2,011.96	1,692.37	319.59	6.295		
13,600.00	6,953.31	6,904.31	6,953.31	194.02	239.31	87.44	1,035.86	-4,990.69	2,104.73	1,787.09	317.64	6.626		
13,700.00	6,951.56	6,902.56	6,951.56	196.84	239.25	87.31	1,035.86	-4,990.69	2,198.13	1,882.29	315.84	6.960		
13,800.00	6,949.81	6,900.81	6,949.81	199.67	239.18	87.18	1,035.86	-4,990.69	2,292.09	1,977.91	314.18	7.295		
13,900.00	6,948.06	6,900.94	6,948.06	202.49	239.19	87.05	1,035.86	-4,990.69	2,386.53	2,073.82	312.71	7.632		
14,000.00	6,946.31	6,902.69	6,946.31	205.31	239.25	86.92	1,035.86	-4,990.69	2,481.41	2,170.00	311.41	7.968		
14,100.00	6,944.56	6,904.44	6,944.56	208.14	239.31	86.79	1,035.86	-4,990.69	2,576.68	2,266.46	310.22	8.306		
14,200.00	6,942.81	6,906.19	6,942.81	210.96	239.37	86.66	1,035.86	-4,990.69	2,672.29	2,363.17	309.12	8.645		
14,300.00	6,941.06	6,907.94	6,941.06	213.79	239.43	86.53	1,035.86	-4,990.69	2,768.21	2,460.11	308.10	8.985		
14,400.00	6,939.31	6,909.69	6,939.31	216.62	239.49	86.40	1,035.86	-4,990.69	2,864.41	2,557.25	307.16	9.325		
14,500.00	6,937.56	6,888.56	6,937.56	219.44	238.76	86.27	1,035.86	-4,990.69	2,960.86	2,655.37	305.49	9.692		
14,600.00	6,935.81	6,886.81	6,935.81	222.27	238.70	86.14	1,035.86	-4,990.69	3,057.53	2,752.97	304.56	10.039		
14,700.00	6,934.06	6,885.06	6,934.06	225.10	238.63	86.01	1,035.86	-4,990.69	3,154.41	2,850.72	303.69	10.387		
14,800.00	6,932.31	6,883.31	6,932.31	227.93	238.57	85.88	1,035.86	-4,990.69	3,251.48	2,948.61	302.87	10.735		
14,817.75	6,932.00	6,883.00	6,932.00	228.43	238.56	85.86	1,035.86	-4,990.69	3,268.73	2,966.00	302.73	10.797		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STATE BEATRICE 16-1(AB_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	47.00	3.28	3.28	-78.34	1,056.64	-5,120.57	5,228.67					
100.00	100.00	53.00	100.00	3.28	3.41	-78.34	1,056.64	-5,120.57	5,228.45	5,221.76	6.69	781.218		
200.00	200.00	153.00	200.00	3.34	4.87	-78.34	1,056.64	-5,120.57	5,228.45	5,220.25	8.20	637.303		
300.00	300.00	253.00	300.00	3.44	7.81	-78.34	1,056.64	-5,120.57	5,228.45	5,217.20	11.25	464.591		
400.00	400.00	353.00	400.00	3.60	11.07	-78.34	1,056.64	-5,120.57	5,228.45	5,213.78	14.68	356.212		
500.00	500.00	453.00	500.00	3.81	14.45	-78.34	1,056.64	-5,120.57	5,228.45	5,210.20	18.25	286.459		
600.00	599.98	552.98	599.98	4.05	17.86	-50.99	1,056.64	-5,120.57	5,227.36	5,205.45	21.91	238.603		
700.00	699.86	652.86	699.86	4.32	21.30	-51.06	1,056.64	-5,120.57	5,224.32	5,198.71	25.62	203.949		
800.00	799.72	752.72	799.72	4.62	24.75	-51.10	1,056.64	-5,120.57	5,221.01	5,191.65	29.36	177.817		
900.00	899.58	852.58	899.58	4.93	28.21	-51.15	1,056.64	-5,120.57	5,217.70	5,184.56	33.14	157.454		
1,000.00	999.44	952.44	999.44	5.27	31.67	-51.19	1,056.64	-5,120.57	5,214.39	5,177.45	36.94	141.167		
1,100.00	1,099.31	1,052.31	1,099.31	5.62	35.14	-51.24	1,056.64	-5,120.57	5,211.08	5,170.32	40.76	127.860		
1,200.00	1,199.17	1,152.17	1,199.17	5.98	38.62	-51.28	1,056.64	-5,120.57	5,207.78	5,163.19	44.59	116.794		
1,300.00	1,299.03	1,252.03	1,299.03	6.36	42.09	-51.33	1,056.64	-5,120.57	5,204.48	5,156.04	48.44	107.452		
1,400.00	1,398.89	1,351.89	1,398.89	6.74	45.57	-51.37	1,056.64	-5,120.57	5,201.18	5,148.89	52.29	99.466		
1,500.00	1,498.75	1,451.75	1,498.75	7.13	49.04	-51.42	1,056.64	-5,120.57	5,197.89	5,141.74	56.16	92.563		
1,600.00	1,598.61	1,551.61	1,598.61	7.52	52.52	-51.46	1,056.64	-5,120.57	5,194.60	5,134.57	60.03	86.539		
1,700.00	1,698.47	1,651.47	1,698.47	7.92	56.00	-51.51	1,056.64	-5,120.57	5,191.31	5,127.41	63.90	81.237		
1,800.00	1,798.33	1,751.33	1,798.33	8.32	59.48	-51.55	1,056.64	-5,120.57	5,188.03	5,120.25	67.79	76.536		
1,900.00	1,898.19	1,851.19	1,898.19	8.73	62.97	-51.60	1,056.64	-5,120.57	5,184.75	5,113.08	71.67	72.340		
2,000.00	1,998.05	1,951.05	1,998.05	9.14	66.45	-51.65	1,056.64	-5,120.57	5,181.48	5,105.91	75.56	68.573		
2,100.00	2,097.91	2,050.91	2,097.91	9.55	69.93	-51.69	1,056.64	-5,120.57	5,178.20	5,098.75	79.46	65.171		
2,200.00	2,197.78	2,150.78	2,197.78	9.97	73.41	-51.74	1,056.64	-5,120.57	5,174.93	5,091.58	83.35	62.086		
2,300.00	2,297.64	2,250.64	2,297.64	10.39	76.89	-51.78	1,056.64	-5,120.57	5,171.67	5,084.42	87.25	59.274		
2,400.00	2,397.50	2,350.50	2,397.50	10.81	80.38	-51.83	1,056.64	-5,120.57	5,168.40	5,077.25	91.15	56.702		
2,500.00	2,497.36	2,450.36	2,497.36	11.23	83.86	-51.87	1,056.64	-5,120.57	5,165.14	5,070.09	95.05	54.339		
2,600.00	2,597.22	2,550.22	2,597.22	11.65	87.34	-51.92	1,056.64	-5,120.57	5,161.89	5,062.93	98.96	52.162		
2,700.00	2,697.08	2,650.08	2,697.08	12.07	90.83	-51.97	1,056.64	-5,120.57	5,158.63	5,055.77	102.86	50.150		
2,800.00	2,796.94	2,749.94	2,796.94	12.50	94.31	-52.01	1,056.64	-5,120.57	5,155.38	5,048.61	106.77	48.284		
2,900.00	2,896.80	2,849.80	2,896.80	12.92	97.80	-52.06	1,056.64	-5,120.57	5,152.14	5,041.46	110.68	46.550		
3,000.00	2,996.66	2,949.66	2,996.66	13.35	101.28	-52.11	1,056.64	-5,120.57	5,148.89	5,034.30	114.59	44.933		
3,100.00	3,096.52	3,049.52	3,096.52	13.78	104.76	-52.15	1,056.64	-5,120.57	5,145.65	5,027.15	118.50	43.423		
3,200.00	3,196.38	3,149.38	3,196.38	14.21	108.25	-52.20	1,056.64	-5,120.57	5,142.42	5,020.01	122.41	42.009		
3,300.00	3,296.25	3,249.25	3,296.25	14.64	111.73	-52.24	1,056.64	-5,120.57	5,139.19	5,012.86	126.33	40.682		
3,400.00	3,396.11	3,349.11	3,396.11	15.07	115.22	-52.29	1,056.64	-5,120.57	5,135.96	5,005.72	130.24	39.435		
3,500.00	3,495.97	3,448.97	3,495.97	15.50	118.70	-52.34	1,056.64	-5,120.57	5,132.73	4,998.58	134.15	38.260		
3,600.00	3,595.83	3,548.83	3,595.83	15.93	122.19	-52.38	1,056.64	-5,120.57	5,129.51	4,991.44	138.07	37.152		
3,700.00	3,695.69	3,648.69	3,695.69	16.36	125.67	-52.43	1,056.64	-5,120.57	5,126.29	4,984.30	141.98	36.105		
3,800.00	3,795.55	3,748.55	3,795.55	16.80	129.16	-52.48	1,056.64	-5,120.57	5,123.07	4,977.17	145.90	35.114		
3,900.00	3,895.41	3,848.41	3,895.41	17.23	132.64	-52.52	1,056.64	-5,120.57	5,119.86	4,970.04	149.82	34.174		
4,000.00	3,995.27	3,948.27	3,995.27	17.66	136.13	-52.57	1,056.64	-5,120.57	5,116.65	4,962.92	153.73	33.283		
4,100.00	4,095.13	4,048.13	4,095.13	18.10	139.61	-52.62	1,056.64	-5,120.57	5,113.44	4,955.79	157.65	32.435		
4,200.00	4,194.99	4,147.99	4,194.99	18.53	143.10	-52.66	1,056.64	-5,120.57	5,110.24	4,948.67	161.57	31.629		
4,300.00	4,294.85	4,247.85	4,294.85	18.96	146.58	-52.71	1,056.64	-5,120.57	5,107.04	4,941.56	165.49	30.861		
4,400.00	4,394.71	4,347.71	4,394.71	19.40	150.07	-52.76	1,056.64	-5,120.57	5,103.85	4,934.44	169.40	30.128		
4,500.00	4,494.58	4,447.58	4,494.58	19.83	153.55	-52.81	1,056.64	-5,120.57	5,100.65	4,927.33	173.32	29.429		
4,600.00	4,594.44	4,547.44	4,594.44	20.27	157.04	-52.85	1,056.64	-5,120.57	5,097.47	4,920.22	177.24	28.760		
4,700.00	4,694.30	4,647.30	4,694.30	20.71	160.53	-52.90	1,056.64	-5,120.57	5,094.28	4,913.12	181.16	28.120		
4,800.00	4,794.16	4,747.16	4,794.16	21.14	164.01	-52.95	1,056.64	-5,120.57	5,091.10	4,906.02	185.08	27.507		
4,900.00	4,894.02	4,847.02	4,894.02	21.58	167.50	-52.99	1,056.64	-5,120.57	5,087.92	4,898.92	189.00	26.920		
5,000.00	4,993.88	4,946.88	4,993.88	22.01	170.98	-53.04	1,056.64	-5,120.57	5,084.75	4,891.82	192.92	26.357		
5,100.00	5,093.74	5,046.74	5,093.74	22.45	174.47	-53.09	1,056.64	-5,120.57	5,081.57	4,884.73	196.84	25.816		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STATE BEATRICE 16-1(AB_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,146.60	5,193.60	22.89	177.95	-53.14	1,056.64	-5,120.57	5,078.41	4,877.64	200.76	25.296		
5,300.00	5,293.46	5,246.46	5,293.46	23.32	181.44	-53.18	1,056.64	-5,120.57	5,075.24	4,870.56	204.68	24.796		
5,400.00	5,393.32	5,346.32	5,393.32	23.76	184.92	-53.23	1,056.64	-5,120.57	5,072.08	4,863.48	208.60	24.314		
5,500.00	5,493.18	5,446.18	5,493.18	24.20	188.41	-53.28	1,056.64	-5,120.57	5,068.92	4,856.40	212.53	23.851		
5,600.00	5,593.05	5,546.05	5,593.05	24.64	191.90	-53.33	1,056.64	-5,120.57	5,065.77	4,849.32	216.45	23.404		
5,700.00	5,692.91	5,645.91	5,692.91	25.07	195.38	-53.38	1,056.64	-5,120.57	5,062.62	4,842.25	220.37	22.973		
5,800.00	5,792.77	5,745.77	5,792.77	25.51	198.87	-53.42	1,056.64	-5,120.57	5,059.47	4,835.18	224.29	22.558		
5,900.00	5,892.63	5,845.63	5,892.63	25.95	202.35	-53.47	1,056.64	-5,120.57	5,056.33	4,828.12	228.21	22.156		
6,000.00	5,992.49	5,945.49	5,992.49	26.39	205.84	-53.52	1,056.64	-5,120.57	5,053.19	4,821.06	232.13	21.768		
6,100.00	6,092.35	6,045.35	6,092.35	26.82	209.32	-53.57	1,056.64	-5,120.57	5,050.06	4,814.00	236.06	21.393		
6,200.00	6,192.21	6,145.21	6,192.21	27.26	212.81	-53.62	1,056.64	-5,120.57	5,046.92	4,806.94	239.98	21.031		
6,300.00	6,292.07	6,245.07	6,292.07	27.70	216.30	-53.66	1,056.64	-5,120.57	5,043.79	4,799.89	243.90	20.680		
6,400.00	6,391.93	6,344.93	6,391.93	28.14	219.78	-53.71	1,056.64	-5,120.57	5,040.67	4,792.85	247.82	20.340		
6,500.00	6,491.69	6,444.69	6,491.69	28.58	223.26	-14.89	1,056.64	-5,120.57	5,035.50	4,783.76	251.74	20.003		
6,600.00	6,589.80	6,542.80	6,589.80	29.02	226.69	-0.70	1,056.64	-5,120.57	5,016.78	4,761.19	255.60	19.628		
6,700.00	6,683.86	6,636.86	6,683.86	29.46	229.97	3.57	1,056.64	-5,120.57	4,983.15	4,723.86	259.29	19.218		
6,800.00	6,771.56	6,724.56	6,771.56	29.92	233.03	6.18	1,056.64	-5,120.57	4,935.44	4,672.71	262.73	18.785		
6,900.00	6,850.72	6,803.72	6,850.72	30.40	235.80	8.60	1,056.64	-5,120.57	4,874.83	4,609.01	265.82	18.339		
7,000.00	6,919.40	6,872.40	6,919.40	30.96	238.19	11.55	1,056.64	-5,120.57	4,802.81	4,534.32	268.49	17.888		
7,100.00	6,975.92	6,928.92	6,975.92	31.62	240.17	15.86	1,056.64	-5,120.57	4,721.18	4,450.51	270.68	17.442		
7,200.00	7,018.87	6,971.87	7,018.87	32.44	241.67	23.29	1,056.64	-5,120.57	4,631.97	4,359.63	272.33	17.009		
7,300.00	7,047.21	7,000.21	7,047.21	33.42	242.65	38.60	1,056.64	-5,120.57	4,537.37	4,263.95	273.42	16.595		
7,400.00	7,060.23	7,013.23	7,060.23	34.55	243.11	73.59	1,056.64	-5,120.57	4,439.75	4,165.82	273.94	16.207		
7,500.00	7,060.03	7,013.03	7,060.03	35.83	243.10	95.41	1,056.64	-5,120.57	4,341.40	4,067.42	273.97	15.846		
7,600.00	7,058.28	7,011.28	7,058.28	37.28	243.04	95.28	1,056.64	-5,120.57	4,243.12	3,969.16	273.96	15.488		
7,700.00	7,056.53	7,009.53	7,056.53	38.89	242.98	95.15	1,056.64	-5,120.57	4,144.92	3,870.95	273.97	15.129		
7,800.00	7,054.78	7,007.78	7,054.78	40.63	242.92	95.03	1,056.64	-5,120.57	4,046.81	3,772.82	273.99	14.770		
7,900.00	7,053.03	7,006.03	7,053.03	42.50	242.86	94.90	1,056.64	-5,120.57	3,948.79	3,674.76	274.03	14.410		
8,000.00	7,051.28	7,004.28	7,051.28	44.47	242.80	94.78	1,056.64	-5,120.57	3,850.88	3,576.78	274.10	14.049		
8,100.00	7,049.53	7,002.53	7,049.53	46.53	242.74	94.65	1,056.64	-5,120.57	3,753.07	3,478.89	274.19	13.688		
8,200.00	7,047.78	7,000.78	7,047.78	48.67	242.67	94.52	1,056.64	-5,120.57	3,655.39	3,381.08	274.31	13.326		
8,300.00	7,046.03	7,000.97	7,046.03	50.89	242.68	94.40	1,056.64	-5,120.57	3,557.83	3,283.30	274.52	12.960		
8,400.00	7,044.28	7,002.72	7,044.28	53.16	242.74	94.27	1,056.64	-5,120.57	3,460.40	3,185.58	274.83	12.591		
8,500.00	7,042.53	7,004.47	7,042.53	55.49	242.80	94.14	1,056.64	-5,120.57	3,363.13	3,087.96	275.17	12.222		
8,600.00	7,040.78	7,006.22	7,040.78	57.86	242.86	94.02	1,056.64	-5,120.57	3,266.03	2,990.46	275.57	11.852		
8,700.00	7,039.03	7,007.97	7,039.03	60.28	242.93	93.89	1,056.64	-5,120.57	3,169.10	2,893.09	276.01	11.482		
8,800.00	7,037.28	7,009.72	7,037.28	62.74	242.99	93.77	1,056.64	-5,120.57	3,072.36	2,795.86	276.50	11.111		
8,900.00	7,035.53	6,988.53	7,035.53	65.23	242.25	93.64	1,056.64	-5,120.57	2,975.85	2,699.58	276.26	10.772		
9,000.00	7,033.78	6,986.78	7,033.78	67.74	242.19	93.51	1,056.64	-5,120.57	2,879.57	2,602.79	276.77	10.404		
9,100.00	7,032.03	6,985.03	7,032.03	70.29	242.12	93.39	1,056.64	-5,120.57	2,783.55	2,506.18	277.36	10.036		
9,200.00	7,030.28	6,983.28	7,030.28	72.85	242.06	93.26	1,056.64	-5,120.57	2,687.82	2,409.77	278.05	9.667		
9,300.00	7,028.54	6,981.54	7,028.54	75.44	242.00	93.13	1,056.64	-5,120.57	2,592.41	2,313.58	278.83	9.297		
9,400.00	7,026.79	6,979.79	7,026.79	78.05	241.94	93.01	1,056.64	-5,120.57	2,497.36	2,217.63	279.73	8.928		
9,500.00	7,025.04	6,978.04	7,025.04	80.67	241.88	92.88	1,056.64	-5,120.57	2,402.71	2,121.95	280.76	8.558		
9,600.00	7,023.29	6,976.29	7,023.29	83.31	241.82	92.75	1,056.64	-5,120.57	2,308.50	2,026.58	281.93	8.188		
9,700.00	7,021.54	6,974.54	7,021.54	85.96	241.76	92.63	1,056.64	-5,120.57	2,214.81	1,931.54	283.27	7.819		
9,800.00	7,019.79	6,972.79	7,019.79	88.63	241.70	92.50	1,056.64	-5,120.57	2,121.69	1,836.90	284.79	7.450		
9,900.00	7,018.04	6,971.04	7,018.04	91.30	241.64	92.37	1,056.64	-5,120.57	2,029.23	1,742.70	286.53	7.082		
10,000.00	7,016.29	6,969.29	7,016.29	93.99	241.58	92.25	1,056.64	-5,120.57	1,937.51	1,649.01	288.50	6.716		
10,100.00	7,014.54	6,967.54	7,014.54	96.69	241.51	92.12	1,056.64	-5,120.57	1,846.65	1,555.91	290.74	6.352		
10,200.00	7,012.79	6,965.79	7,012.79	99.40	241.45	91.99	1,056.64	-5,120.57	1,756.78	1,463.50	293.28	5.990		
10,300.00	7,011.04	6,964.04	7,011.04	102.11	241.39	91.87	1,056.64	-5,120.57	1,668.06	1,371.90	296.16	5.632		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STATE BEATRICE 16-1(AB_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	6,962.29	7,009.29	104.83	241.33	91.74	1,056.64	-5,120.57	1,580.69	1,281.26	299.42	5.279		
10,500.00	7,007.54	6,960.54	7,007.54	107.56	241.27	91.61	1,056.64	-5,120.57	1,494.90	1,191.78	303.12	4.932		
10,600.00	7,005.79	6,958.79	7,005.79	110.30	241.21	91.48	1,056.64	-5,120.57	1,410.98	1,103.68	307.29	4.592		
10,700.00	7,004.04	6,957.04	7,004.04	113.04	241.15	91.36	1,056.64	-5,120.57	1,329.28	1,017.28	312.00	4.260		
10,800.00	7,002.29	6,955.29	7,002.29	115.79	241.09	91.23	1,056.64	-5,120.57	1,250.25	932.95	317.29	3.940		
10,900.00	7,000.54	6,953.54	7,000.54	118.54	241.03	91.10	1,056.64	-5,120.57	1,174.41	851.20	323.21	3.634		
11,000.00	6,998.79	6,951.79	6,998.79	121.30	240.96	90.98	1,056.64	-5,120.57	1,102.43	772.67	329.76	3.343		
11,100.00	6,997.04	6,950.04	6,997.04	124.06	240.90	90.85	1,056.64	-5,120.57	1,035.11	698.18	336.93	3.072		
11,200.00	6,995.29	6,948.29	6,995.29	126.83	240.84	90.72	1,056.64	-5,120.57	973.43	628.78	344.64	2.824		
11,300.00	6,993.54	6,946.54	6,993.54	129.60	240.78	90.60	1,056.64	-5,120.57	918.51	565.79	352.71	2.604		
11,400.00	6,991.80	6,944.80	6,991.80	132.37	240.72	90.47	1,056.64	-5,120.57	871.63	510.80	360.83	2.416		
11,500.00	6,990.05	6,943.05	6,990.05	135.15	240.66	90.34	1,056.64	-5,120.57	834.16	465.60	368.56	2.263		
11,600.00	6,988.30	6,941.30	6,988.30	137.93	240.60	90.22	1,056.64	-5,120.57	807.41	432.05	375.35	2.151		
11,700.00	6,986.55	6,939.55	6,986.55	140.72	240.54	90.09	1,056.64	-5,120.57	792.45	411.83	380.62	2.082		
11,769.68	6,985.33	6,938.33	6,985.33	142.66	240.49	90.00	1,056.64	-5,120.57	789.38	406.23	383.15	2.060 CC		
11,800.00	6,984.80	6,937.80	6,984.80	143.50	240.48	89.96	1,056.64	-5,120.57	789.96	406.04	383.92	2.058 ES, SF		
11,900.00	6,983.05	6,936.05	6,983.05	146.29	240.41	89.83	1,056.64	-5,120.57	800.06	415.01	385.05	2.078		
12,000.00	6,981.30	6,934.30	6,981.30	149.09	240.35	89.71	1,056.64	-5,120.57	822.28	438.18	384.10	2.141		
12,100.00	6,979.55	6,932.55	6,979.55	151.88	240.29	89.58	1,056.64	-5,120.57	855.69	474.25	381.44	2.243		
12,200.00	6,977.80	6,930.80	6,977.80	154.68	240.23	89.45	1,056.64	-5,120.57	899.02	521.50	377.52	2.381		
12,300.00	6,976.05	6,929.05	6,976.05	157.48	240.17	89.33	1,056.64	-5,120.57	950.93	578.10	372.83	2.551		
12,400.00	6,974.30	6,927.30	6,974.30	160.28	240.11	89.20	1,056.64	-5,120.57	1,010.10	642.33	367.77	2.747		
12,500.00	6,972.55	6,925.55	6,972.55	163.08	240.05	89.07	1,056.64	-5,120.57	1,075.33	712.70	362.62	2.965		
12,600.00	6,970.80	6,923.80	6,970.80	165.89	239.99	88.95	1,056.64	-5,120.57	1,145.57	787.97	357.60	3.203		
12,700.00	6,969.05	6,922.05	6,969.05	168.69	239.93	88.82	1,056.64	-5,120.57	1,219.98	867.16	352.82	3.458		
12,800.00	6,967.30	6,920.30	6,967.30	171.50	239.87	88.69	1,056.64	-5,120.57	1,297.83	949.49	348.34	3.726		
12,900.00	6,965.55	6,918.55	6,965.55	174.31	239.80	88.57	1,056.64	-5,120.57	1,378.53	1,034.36	344.18	4.005		
13,000.00	6,963.80	6,916.80	6,963.80	177.12	239.74	88.44	1,056.64	-5,120.57	1,461.62	1,121.28	340.34	4.295		
13,100.00	6,962.05	6,915.05	6,962.05	179.94	239.68	88.31	1,056.64	-5,120.57	1,546.72	1,209.90	336.82	4.592		
13,200.00	6,960.30	6,913.30	6,960.30	182.75	239.62	88.18	1,056.64	-5,120.57	1,633.50	1,299.90	333.59	4.897		
13,300.00	6,958.55	6,911.55	6,958.55	185.57	239.56	88.06	1,056.64	-5,120.57	1,721.71	1,391.07	330.64	5.207		
13,400.00	6,956.80	6,909.80	6,956.80	188.38	239.50	87.93	1,056.64	-5,120.57	1,811.15	1,483.22	327.93	5.523		
13,500.00	6,955.05	6,908.05	6,955.05	191.20	239.44	87.80	1,056.64	-5,120.57	1,901.63	1,576.19	325.44	5.843		
13,600.00	6,953.31	6,906.31	6,953.31	194.02	239.38	87.68	1,056.64	-5,120.57	1,993.03	1,669.87	323.16	6.167		
13,700.00	6,951.56	6,904.56	6,951.56	196.84	239.32	87.55	1,056.64	-5,120.57	2,085.21	1,764.16	321.06	6.495		
13,800.00	6,949.81	6,902.81	6,949.81	199.67	239.25	87.42	1,056.64	-5,120.57	2,178.09	1,858.96	319.12	6.825		
13,900.00	6,948.06	6,901.06	6,948.06	202.49	239.19	87.30	1,056.64	-5,120.57	2,271.56	1,954.22	317.34	7.158		
14,000.00	6,946.31	6,900.69	6,946.31	205.31	239.18	87.17	1,056.64	-5,120.57	2,365.57	2,049.83	315.74	7.492		
14,100.00	6,944.56	6,902.44	6,944.56	208.14	239.24	87.04	1,056.64	-5,120.57	2,460.05	2,145.72	314.33	7.826		
14,200.00	6,942.81	6,904.19	6,942.81	210.96	239.30	86.92	1,056.64	-5,120.57	2,554.95	2,241.92	313.03	8.162		
14,300.00	6,941.06	6,905.94	6,941.06	213.79	239.36	86.79	1,056.64	-5,120.57	2,650.22	2,338.39	311.83	8.499		
14,400.00	6,939.31	6,907.69	6,939.31	216.62	239.42	86.66	1,056.64	-5,120.57	2,745.83	2,435.10	310.73	8.837		
14,500.00	6,937.56	6,909.44	6,937.56	219.44	239.49	86.54	1,056.64	-5,120.57	2,841.74	2,532.04	309.70	9.176		
14,600.00	6,935.81	6,888.81	6,935.81	222.27	238.77	86.41	1,056.64	-5,120.57	2,937.92	2,629.95	307.97	9.540		
14,700.00	6,934.06	6,887.06	6,934.06	225.10	238.70	86.28	1,056.64	-5,120.57	3,034.35	2,727.38	306.97	9.885		
14,800.00	6,932.31	6,885.31	6,932.31	227.93	238.64	86.16	1,056.64	-5,120.57	3,131.00	2,824.97	306.03	10.231		
14,817.75	6,932.00	6,885.00	6,932.00	228.43	238.63	86.14	1,056.64	-5,120.57	3,148.17	2,842.31	305.87	10.293		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STATE BEATRICE 32-16(PR_75CC) - OH - OH												Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma												Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	54.00	3.28	3.28	-94.83	-415.19	-4,917.83	4,935.62				
100.00	100.00	46.00	100.00	3.28	3.38	-94.83	-415.19	-4,917.83	4,935.33	4,928.66	6.66	740.865	
200.00	200.00	146.00	200.00	3.34	4.69	-94.83	-415.19	-4,917.83	4,935.33	4,927.30	8.03	614.888	
300.00	300.00	246.00	300.00	3.44	7.59	-94.83	-415.19	-4,917.83	4,935.33	4,924.29	11.03	447.332	
400.00	400.00	346.00	400.00	3.60	10.84	-94.83	-415.19	-4,917.83	4,935.33	4,920.88	14.44	341.669	
500.00	500.00	446.00	500.00	3.81	14.21	-94.83	-415.19	-4,917.83	4,935.33	4,917.31	18.01	273.969	
600.00	599.98	545.98	599.98	4.05	17.62	-67.48	-415.19	-4,917.83	4,934.66	4,912.99	21.67	227.741	
700.00	699.86	645.86	699.86	4.32	21.06	-67.55	-415.19	-4,917.83	4,932.81	4,907.44	25.37	194.407	
800.00	799.72	745.72	799.72	4.62	24.51	-67.60	-415.19	-4,917.83	4,930.80	4,901.68	29.12	169.333	
900.00	899.58	845.58	899.58	4.93	27.97	-67.66	-415.19	-4,917.83	4,928.79	4,895.90	32.89	149.835	
1,000.00	999.44	945.44	999.44	5.27	31.43	-67.72	-415.19	-4,917.83	4,926.79	4,890.09	36.69	134.265	
1,100.00	1,099.31	1,045.31	1,099.31	5.62	34.90	-67.77	-415.19	-4,917.83	4,924.79	4,884.27	40.51	121.561	
1,200.00	1,199.17	1,145.17	1,199.17	5.98	38.37	-67.83	-415.19	-4,917.83	4,922.79	4,878.45	44.35	111.007	
1,300.00	1,299.03	1,245.03	1,299.03	6.36	41.85	-67.89	-415.19	-4,917.83	4,920.80	4,872.61	48.19	102.107	
1,400.00	1,398.89	1,344.89	1,398.89	6.74	45.32	-67.94	-415.19	-4,917.83	4,918.82	4,866.77	52.05	94.505	
1,500.00	1,498.75	1,444.75	1,498.75	7.13	48.80	-68.00	-415.19	-4,917.83	4,916.84	4,860.92	55.91	87.938	
1,600.00	1,598.61	1,544.61	1,598.61	7.52	52.28	-68.06	-415.19	-4,917.83	4,914.86	4,855.08	59.78	82.210	
1,700.00	1,698.47	1,644.47	1,698.47	7.92	55.76	-68.11	-415.19	-4,917.83	4,912.89	4,849.23	63.66	77.173	
1,800.00	1,798.33	1,744.33	1,798.33	8.32	59.24	-68.17	-415.19	-4,917.83	4,910.93	4,843.38	67.54	72.708	
1,900.00	1,898.19	1,844.19	1,898.19	8.73	62.72	-68.23	-415.19	-4,917.83	4,908.96	4,837.53	71.43	68.724	
2,000.00	1,998.05	1,944.05	1,998.05	9.14	66.20	-68.28	-415.19	-4,917.83	4,907.01	4,831.69	75.32	65.148	
2,100.00	2,097.91	2,043.91	2,097.91	9.55	69.68	-68.34	-415.19	-4,917.83	4,905.06	4,825.84	79.21	61.922	
2,200.00	2,197.78	2,143.78	2,197.78	9.97	73.17	-68.40	-415.19	-4,917.83	4,903.11	4,820.00	83.11	58.995	
2,300.00	2,297.64	2,243.64	2,297.64	10.39	76.65	-68.46	-415.19	-4,917.83	4,901.17	4,814.16	87.01	56.329	
2,400.00	2,397.50	2,343.50	2,397.50	10.81	80.13	-68.51	-415.19	-4,917.83	4,899.24	4,808.32	90.91	53.891	
2,500.00	2,497.36	2,443.36	2,497.36	11.23	83.62	-68.57	-415.19	-4,917.83	4,897.30	4,802.49	94.81	51.652	
2,600.00	2,597.22	2,543.22	2,597.22	11.65	87.10	-68.63	-415.19	-4,917.83	4,895.38	4,796.66	98.72	49.589	
2,700.00	2,697.08	2,643.08	2,697.08	12.07	90.58	-68.69	-415.19	-4,917.83	4,893.46	4,790.83	102.62	47.683	
2,800.00	2,796.94	2,742.94	2,796.94	12.50	94.07	-68.74	-415.19	-4,917.83	4,891.54	4,785.01	106.53	45.916	
2,900.00	2,896.80	2,842.80	2,896.80	12.92	97.55	-68.80	-415.19	-4,917.83	4,889.63	4,779.19	110.44	44.274	
3,000.00	2,996.66	2,942.66	2,996.66	13.35	101.04	-68.86	-415.19	-4,917.83	4,887.72	4,773.37	114.35	42.743	
3,100.00	3,096.52	3,042.52	3,096.52	13.78	104.52	-68.92	-415.19	-4,917.83	4,885.82	4,767.56	118.26	41.313	
3,200.00	3,196.38	3,142.38	3,196.38	14.21	108.01	-68.97	-415.19	-4,917.83	4,883.92	4,761.75	122.17	39.975	
3,300.00	3,296.25	3,242.25	3,296.25	14.64	111.49	-69.03	-415.19	-4,917.83	4,882.03	4,755.94	126.09	38.719	
3,400.00	3,396.11	3,342.11	3,396.11	15.07	114.97	-69.09	-415.19	-4,917.83	4,880.14	4,750.14	130.00	37.539	
3,500.00	3,495.97	3,441.97	3,495.97	15.50	118.46	-69.15	-415.19	-4,917.83	4,878.26	4,744.35	133.92	36.428	
3,600.00	3,595.83	3,541.83	3,595.83	15.93	121.94	-69.20	-415.19	-4,917.83	4,876.39	4,738.56	137.83	35.380	
3,700.00	3,695.69	3,641.69	3,695.69	16.36	125.43	-69.26	-415.19	-4,917.83	4,874.51	4,732.77	141.75	34.389	
3,800.00	3,795.55	3,741.55	3,795.55	16.80	128.91	-69.32	-415.19	-4,917.83	4,872.65	4,726.98	145.66	33.452	
3,900.00	3,895.41	3,841.41	3,895.41	17.23	132.40	-69.38	-415.19	-4,917.83	4,870.79	4,721.21	149.58	32.563	
4,000.00	3,995.27	3,941.27	3,995.27	17.66	135.88	-69.44	-415.19	-4,917.83	4,868.93	4,715.43	153.50	31.720	
4,100.00	4,095.13	4,041.13	4,095.13	18.10	139.37	-69.49	-415.19	-4,917.83	4,867.08	4,709.66	157.41	30.919	
4,200.00	4,194.99	4,140.99	4,194.99	18.53	142.85	-69.55	-415.19	-4,917.83	4,865.23	4,703.90	161.33	30.157	
4,300.00	4,294.85	4,240.85	4,294.85	18.96	146.34	-69.61	-415.19	-4,917.83	4,863.39	4,698.14	165.25	29.430	
4,400.00	4,394.71	4,340.71	4,394.71	19.40	149.83	-69.67	-415.19	-4,917.83	4,861.55	4,692.38	169.17	28.738	
4,500.00	4,494.58	4,440.58	4,494.58	19.83	153.31	-69.73	-415.19	-4,917.83	4,859.72	4,686.63	173.09	28.077	
4,600.00	4,594.44	4,540.44	4,594.44	20.27	156.80	-69.78	-415.19	-4,917.83	4,857.89	4,680.88	177.01	27.445	
4,700.00	4,694.30	4,640.30	4,694.30	20.71	160.28	-69.84	-415.19	-4,917.83	4,856.07	4,675.14	180.93	26.840	
4,800.00	4,794.16	4,740.16	4,794.16	21.14	163.77	-69.90	-415.19	-4,917.83	4,854.25	4,669.41	184.85	26.261	
4,900.00	4,894.02	4,840.02	4,894.02	21.58	167.25	-69.96	-415.19	-4,917.83	4,852.44	4,663.67	188.77	25.706	
5,000.00	4,993.88	4,939.88	4,993.88	22.01	170.74	-70.02	-415.19	-4,917.83	4,850.64	4,657.95	192.69	25.174	
5,100.00	5,093.74	5,039.74	5,093.74	22.45	174.22	-70.08	-415.19	-4,917.83	4,848.83	4,652.23	196.61	24.662	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STATE BEATRICE 32-16(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,139.60	5,193.60	22.89	177.71	-70.14	-415.19	-4,917.83	4,847.04	4,646.51	200.53	24.171		
5,300.00	5,293.46	5,239.46	5,293.46	23.32	181.19	-70.19	-415.19	-4,917.83	4,845.25	4,640.80	204.45	23.699		
5,400.00	5,393.32	5,339.32	5,393.32	23.76	184.68	-70.25	-415.19	-4,917.83	4,843.46	4,635.09	208.37	23.244		
5,500.00	5,493.18	5,439.18	5,493.18	24.20	188.17	-70.31	-415.19	-4,917.83	4,841.68	4,629.39	212.29	22.807		
5,600.00	5,593.05	5,539.05	5,593.05	24.64	191.65	-70.37	-415.19	-4,917.83	4,839.90	4,623.69	216.22	22.385		
5,700.00	5,692.91	5,638.91	5,692.91	25.07	195.14	-70.43	-415.19	-4,917.83	4,838.13	4,617.99	220.14	21.978		
5,800.00	5,792.77	5,738.77	5,792.77	25.51	198.62	-70.49	-415.19	-4,917.83	4,836.37	4,612.31	224.06	21.585		
5,900.00	5,892.63	5,838.63	5,892.63	25.95	202.11	-70.55	-415.19	-4,917.83	4,834.60	4,606.62	227.98	21.206		
6,000.00	5,992.49	5,938.49	5,992.49	26.39	205.59	-70.60	-415.19	-4,917.83	4,832.85	4,600.95	231.90	20.840		
6,100.00	6,092.35	6,038.35	6,092.35	26.82	209.08	-70.66	-415.19	-4,917.83	4,831.10	4,595.27	235.83	20.486		
6,200.00	6,192.21	6,138.21	6,192.21	27.26	212.57	-70.72	-415.19	-4,917.83	4,829.35	4,589.60	239.75	20.143		
6,300.00	6,292.07	6,238.07	6,292.07	27.70	216.05	-70.78	-415.19	-4,917.83	4,827.61	4,583.94	243.67	19.812		
6,400.00	6,391.93	6,337.93	6,391.93	28.14	219.54	-70.84	-415.19	-4,917.83	4,825.88	4,578.28	247.59	19.491		
6,500.00	6,491.79	6,437.79	6,491.79	28.58	223.02	-32.12	-415.19	-4,917.83	4,822.09	4,570.58	251.51	19.172		
6,600.00	6,591.65	6,537.65	6,591.65	29.02	226.44	-18.51	-415.19	-4,917.83	4,804.69	4,549.32	255.37	18.815		
6,700.00	6,691.51	6,637.51	6,691.51	29.46	229.73	-15.38	-415.19	-4,917.83	4,772.28	4,513.21	259.06	18.421		
6,800.00	6,791.37	6,737.37	6,791.37	29.92	232.79	-14.63	-415.19	-4,917.83	4,725.67	4,463.16	262.51	18.002		
6,900.00	6,891.23	6,837.23	6,891.23	30.40	235.78	-15.11	-415.19	-4,917.83	4,666.02	4,400.18	265.83	17.552		
7,000.00	6,991.09	6,937.09	6,991.09	30.96	237.95	-16.73	-415.19	-4,917.83	4,594.81	4,326.52	268.29	17.126		
7,100.00	7,090.95	7,036.95	7,090.95	31.62	239.92	-19.93	-415.19	-4,917.83	4,513.81	4,243.31	270.50	16.687		
7,200.00	7,190.81	7,136.81	7,190.81	32.44	241.42	-26.10	-415.19	-4,917.83	4,425.01	4,152.83	272.18	16.258		
7,300.00	7,290.67	7,236.67	7,290.67	33.42	242.88	-39.45	-415.19	-4,917.83	4,330.62	4,056.84	273.78	15.818		
7,400.00	7,390.53	7,336.53	7,390.53	34.55	242.86	-72.64	-415.19	-4,917.83	4,232.96	3,959.10	273.85	15.457		
7,500.00	7,490.39	7,436.39	7,490.39	35.83	242.86	-95.95	-415.19	-4,917.83	4,134.34	3,860.42	273.92	15.093		
7,600.00	7,590.25	7,536.25	7,590.25	37.28	242.80	-95.81	-415.19	-4,917.83	4,035.76	3,761.82	273.95	14.732		
7,700.00	7,690.11	7,636.11	7,690.11	38.89	242.74	-95.66	-415.19	-4,917.83	3,937.26	3,663.28	273.99	14.370		
7,800.00	7,790.00	7,736.00	7,790.00	40.63	242.67	-95.52	-415.19	-4,917.83	3,838.84	3,564.79	274.04	14.008		
7,900.00	7,890.00	7,836.00	7,890.00	42.50	242.68	-95.37	-415.19	-4,917.83	3,740.49	3,466.31	274.19	13.642		
8,000.00	7,990.00	7,936.00	7,990.00	44.47	242.74	-95.23	-415.19	-4,917.83	3,642.24	3,367.83	274.41	13.273		
8,100.00	8,090.00	8,036.00	8,090.00	46.53	242.80	-95.08	-415.19	-4,917.83	3,544.08	3,269.43	274.65	12.904		
8,200.00	8,190.00	8,136.00	8,190.00	48.67	242.86	-94.94	-415.19	-4,917.83	3,446.03	3,171.11	274.92	12.535		
8,300.00	8,290.00	8,236.00	8,290.00	50.89	242.93	-94.79	-415.19	-4,917.83	3,348.10	3,072.87	275.22	12.165		
8,400.00	8,390.00	8,336.00	8,390.00	53.16	242.99	-94.65	-415.19	-4,917.83	3,250.28	2,974.73	275.56	11.795		
8,500.00	8,490.00	8,436.00	8,490.00	55.49	242.25	-94.50	-415.19	-4,917.83	3,152.61	2,877.48	275.13	11.459		
8,600.00	8,590.00	8,536.00	8,590.00	57.86	242.19	-94.36	-415.19	-4,917.83	3,055.08	2,779.66	275.42	11.092		
8,700.00	8,690.00	8,636.00	8,690.00	60.28	242.12	-94.21	-415.19	-4,917.83	2,957.72	2,681.95	275.77	10.725		
8,800.00	8,790.00	8,736.00	8,790.00	62.74	242.06	-94.06	-415.19	-4,917.83	2,860.54	2,584.37	276.16	10.358		
8,900.00	8,890.00	8,836.00	8,890.00	65.23	242.00	-93.92	-415.19	-4,917.83	2,763.56	2,486.93	276.62	9.990		
9,000.00	8,990.00	8,936.00	8,990.00	67.74	241.94	-93.77	-415.19	-4,917.83	2,666.80	2,389.64	277.15	9.622		
9,100.00	9,090.00	9,036.00	9,090.00	70.29	241.88	-93.63	-415.19	-4,917.83	2,570.28	2,292.52	277.76	9.253		
9,200.00	9,190.00	9,136.00	9,190.00	72.85	241.82	-93.48	-415.19	-4,917.83	2,474.05	2,195.58	278.47	8.885		
9,300.00	9,290.00	9,236.00	9,290.00	75.44	241.76	-93.33	-415.19	-4,917.83	2,378.12	2,098.85	279.27	8.515		
9,400.00	9,390.00	9,336.00	9,390.00	78.05	241.70	-93.19	-415.19	-4,917.83	2,282.54	2,002.35	280.19	8.146		
9,500.00	9,490.00	9,436.00	9,490.00	80.67	241.64	-93.04	-415.19	-4,917.83	2,187.35	1,906.10	281.25	7.777		
9,600.00	9,590.00	9,536.00	9,590.00	83.31	241.58	-92.90	-415.19	-4,917.83	2,092.62	1,810.15	282.47	7.408		
9,700.00	9,690.00	9,636.00	9,690.00	85.96	241.51	-92.75	-415.19	-4,917.83	1,998.39	1,714.54	283.85	7.040		
9,800.00	9,790.00	9,736.00	9,790.00	88.63	241.45	-92.60	-415.19	-4,917.83	1,904.75	1,619.30	285.45	6.673		
9,900.00	9,890.00	9,836.00	9,890.00	91.30	241.39	-92.46	-415.19	-4,917.83	1,811.79	1,524.52	287.27	6.307		
10,000.00	9,990.00	9,936.00	9,990.00	93.99	241.33	-92.31	-415.19	-4,917.83	1,719.62	1,430.26	289.36	5.943		
10,100.00	10,090.00	10,036.00	10,090.00	96.69	241.27	-92.16	-415.19	-4,917.83	1,628.37	1,336.61	291.76	5.581		
10,200.00	10,190.00	10,136.00	10,190.00	99.40	241.21	-92.02	-415.19	-4,917.83	1,538.20	1,243.69	294.51	5.223		
10,300.00	10,290.00	10,236.00	10,290.00	102.11	241.15	-91.87	-415.19	-4,917.83	1,449.33	1,151.66	297.66	4.869		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STATE BEATRICE 32-16(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	6,955.29	7,009.29	104.83	241.09	-91.73	-415.19	-4,917.83	1,361.99	1,060.71	301.28	4.521		
10,500.00	7,007.54	6,953.54	7,007.54	107.56	241.03	-91.58	-415.19	-4,917.83	1,276.52	971.08	305.44	4.179		
10,600.00	7,005.79	6,951.79	7,005.79	110.30	240.96	-91.43	-415.19	-4,917.83	1,193.30	883.10	310.19	3.847		
10,700.00	7,004.04	6,950.04	7,004.04	113.04	240.90	-91.29	-415.19	-4,917.83	1,112.84	797.22	315.62	3.526		
10,800.00	7,002.29	6,948.29	7,002.29	115.79	240.84	-91.14	-415.19	-4,917.83	1,035.79	714.01	321.78	3.219		
10,900.00	7,000.54	6,946.54	7,000.54	118.54	240.78	-90.99	-415.19	-4,917.83	962.97	634.25	328.71	2.930		
11,000.00	6,998.79	6,944.79	6,998.79	121.30	240.72	-90.85	-415.19	-4,917.83	895.40	559.02	336.38	2.662		
11,100.00	6,997.04	6,943.04	6,997.04	124.06	240.66	-90.70	-415.19	-4,917.83	834.37	489.71	344.66	2.421		
11,200.00	6,995.29	6,941.29	6,995.29	126.83	240.60	-90.55	-415.19	-4,917.83	781.41	428.16	353.26	2.212		
11,300.00	6,993.54	6,939.54	6,993.54	129.60	240.54	-90.41	-415.19	-4,917.83	738.26	376.60	361.66	2.041		
11,400.00	6,991.80	6,937.80	6,991.80	132.37	240.48	-90.26	-415.19	-4,917.83	706.71	337.57	369.14	1.914		
11,500.00	6,990.05	6,936.05	6,990.05	135.15	240.41	-90.11	-415.19	-4,917.83	688.37	313.49	374.88	1.836		
11,578.00	6,988.68	6,934.68	6,988.68	137.32	240.37	-90.00	-415.19	-4,917.83	683.93	306.25	377.68	1.811 CC		
11,600.00	6,988.30	6,934.30	6,988.30	137.93	240.35	-89.97	-415.19	-4,917.83	684.29	306.12	378.17	1.809 ES, SF		
11,700.00	6,986.55	6,932.55	6,986.55	140.72	240.29	-89.82	-415.19	-4,917.83	694.73	316.02	378.71	1.834		
11,800.00	6,984.80	6,930.80	6,984.80	143.50	240.23	-89.67	-415.19	-4,917.83	719.05	342.36	376.70	1.909		
11,900.00	6,983.05	6,929.05	6,983.05	146.29	240.17	-89.53	-415.19	-4,917.83	755.92	383.22	372.70	2.028		
12,000.00	6,981.30	6,927.30	6,981.30	149.09	240.11	-89.38	-415.19	-4,917.83	803.62	436.16	367.46	2.187		
12,100.00	6,979.55	6,925.55	6,979.55	151.88	240.05	-89.24	-415.19	-4,917.83	860.33	498.72	361.61	2.379		
12,200.00	6,977.80	6,923.80	6,977.80	154.68	239.99	-89.09	-415.19	-4,917.83	924.41	568.77	355.64	2.599		
12,300.00	6,976.05	6,922.05	6,976.05	157.48	239.93	-88.94	-415.19	-4,917.83	994.43	644.57	349.86	2.842		
12,400.00	6,974.30	6,920.30	6,974.30	160.28	239.87	-88.80	-415.19	-4,917.83	1,069.23	724.79	344.44	3.104		
12,500.00	6,972.55	6,918.55	6,972.55	163.08	239.80	-88.65	-415.19	-4,917.83	1,147.87	808.42	339.45	3.382		
12,600.00	6,970.80	6,916.80	6,970.80	165.89	239.74	-88.50	-415.19	-4,917.83	1,229.61	894.71	334.90	3.672		
12,700.00	6,969.05	6,915.05	6,969.05	168.69	239.68	-88.36	-415.19	-4,917.83	1,313.88	983.09	330.79	3.972		
12,800.00	6,967.30	6,913.30	6,967.30	171.50	239.62	-88.21	-415.19	-4,917.83	1,400.21	1,073.13	327.08	4.281		
12,900.00	6,965.55	6,911.55	6,965.55	174.31	239.56	-88.06	-415.19	-4,917.83	1,488.26	1,164.52	323.74	4.597		
13,000.00	6,963.80	6,909.80	6,963.80	177.12	239.50	-87.92	-415.19	-4,917.83	1,577.73	1,257.01	320.73	4.919		
13,100.00	6,962.05	6,908.05	6,962.05	179.94	239.44	-87.77	-415.19	-4,917.83	1,668.40	1,350.39	318.01	5.246		
13,200.00	6,960.30	6,906.30	6,960.30	182.75	239.38	-87.62	-415.19	-4,917.83	1,760.07	1,444.52	315.55	5.578		
13,300.00	6,958.55	6,904.55	6,958.55	185.57	239.32	-87.48	-415.19	-4,917.83	1,852.61	1,539.29	313.32	5.913		
13,400.00	6,956.80	6,902.80	6,956.80	188.38	239.25	-87.33	-415.19	-4,917.83	1,945.88	1,634.58	311.30	6.251		
13,500.00	6,955.05	6,901.05	6,955.05	191.20	239.19	-87.19	-415.19	-4,917.83	2,039.79	1,730.34	309.45	6.592		
13,600.00	6,953.31	6,900.70	6,953.31	194.02	239.18	-87.04	-415.19	-4,917.83	2,134.25	1,826.43	307.81	6.934		
13,700.00	6,951.56	6,902.44	6,951.56	196.84	239.24	-86.89	-415.19	-4,917.83	2,229.19	1,922.79	306.39	7.276		
13,800.00	6,949.81	6,904.19	6,949.81	199.67	239.30	-86.75	-415.19	-4,917.83	2,324.55	2,019.45	305.10	7.619		
13,900.00	6,948.06	6,905.94	6,948.06	202.49	239.36	-86.60	-415.19	-4,917.83	2,420.29	2,116.37	303.92	7.964		
14,000.00	6,946.31	6,907.69	6,946.31	205.31	239.43	-86.46	-415.19	-4,917.83	2,516.36	2,213.52	302.84	8.309		
14,100.00	6,944.56	6,909.44	6,944.56	208.14	239.49	-86.31	-415.19	-4,917.83	2,612.72	2,310.87	301.85	8.656		
14,200.00	6,942.81	6,888.81	6,942.81	210.96	238.77	-86.16	-415.19	-4,917.83	2,709.35	2,409.18	300.17	9.026		
14,300.00	6,941.06	6,887.06	6,941.06	213.79	238.70	-86.02	-415.19	-4,917.83	2,806.21	2,506.99	299.21	9.379		
14,400.00	6,939.31	6,885.31	6,939.31	216.62	238.64	-85.87	-415.19	-4,917.83	2,903.28	2,604.95	298.33	9.732		
14,500.00	6,937.56	6,883.56	6,937.56	219.44	238.58	-85.73	-415.19	-4,917.83	3,000.54	2,703.04	297.50	10.086		
14,600.00	6,935.81	6,881.81	6,935.81	222.27	238.52	-85.58	-415.19	-4,917.83	3,097.98	2,801.25	296.73	10.440		
14,700.00	6,934.06	6,880.06	6,934.06	225.10	238.46	-85.43	-415.19	-4,917.83	3,195.57	2,899.56	296.01	10.795		
14,800.00	6,932.31	6,878.31	6,932.31	227.93	238.40	-85.29	-415.19	-4,917.83	3,293.31	2,997.97	295.34	11.151		
14,817.75	6,932.00	6,878.00	6,932.00	228.43	238.39	-85.26	-415.19	-4,917.83	3,310.67	3,015.45	295.22	11.214		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STATE-HOPPE 16-1(SI_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	57.00	3.28	3.28	-112.19	-3,122.73	-7,655.59	8,268.18					
100.00	100.00	43.00	100.00	3.28	3.36	-112.19	-3,122.73	-7,655.59	8,267.98	8,261.33	6.65	1,243.398		
200.00	200.00	143.00	200.00	3.34	4.62	-112.19	-3,122.73	-7,655.59	8,267.98	8,260.03	7.95	1,039.721		
300.00	300.00	243.00	300.00	3.44	7.49	-112.19	-3,122.73	-7,655.59	8,267.98	8,257.04	10.94	755.860		
400.00	400.00	343.00	400.00	3.60	10.74	-112.19	-3,122.73	-7,655.59	8,267.98	8,253.64	14.34	576.367		
500.00	500.00	443.00	500.00	3.81	14.11	-112.19	-3,122.73	-7,655.59	8,267.98	8,250.07	17.91	461.582		
600.00	599.98	542.98	599.98	4.05	17.52	-84.83	-3,122.73	-7,655.59	8,267.82	8,246.26	21.57	383.391		
700.00	699.86	642.86	699.86	4.32	20.96	-84.86	-3,122.73	-7,655.59	8,267.39	8,242.12	25.27	327.160		
800.00	799.72	742.72	799.72	4.62	24.40	-84.90	-3,122.73	-7,655.59	8,266.92	8,237.90	29.02	284.914		
900.00	899.58	842.58	899.58	4.93	27.86	-84.94	-3,122.73	-7,655.59	8,266.45	8,233.66	32.79	252.090		
1,000.00	999.44	942.44	999.44	5.27	31.33	-84.97	-3,122.73	-7,655.59	8,265.99	8,229.40	36.59	225.898		
1,100.00	1,099.31	1,042.31	1,099.31	5.62	34.80	-85.01	-3,122.73	-7,655.59	8,265.53	8,225.12	40.41	204.539		
1,200.00	1,199.17	1,142.17	1,199.17	5.98	38.27	-85.05	-3,122.73	-7,655.59	8,265.07	8,220.82	44.24	186.804		
1,300.00	1,299.03	1,242.03	1,299.03	6.36	41.74	-85.08	-3,122.73	-7,655.59	8,264.61	8,216.52	48.09	171.855		
1,400.00	1,398.89	1,341.89	1,398.89	6.74	45.22	-85.12	-3,122.73	-7,655.59	8,264.16	8,212.22	51.95	159.088		
1,500.00	1,498.75	1,441.75	1,498.75	7.13	48.70	-85.15	-3,122.73	-7,655.59	8,263.72	8,207.90	55.81	148.064		
1,600.00	1,598.61	1,541.61	1,598.61	7.52	52.18	-85.19	-3,122.73	-7,655.59	8,263.27	8,203.59	59.68	138.451		
1,700.00	1,698.47	1,641.47	1,698.47	7.92	55.66	-85.23	-3,122.73	-7,655.59	8,262.83	8,199.27	63.56	129.998		
1,800.00	1,798.33	1,741.33	1,798.33	8.32	59.14	-85.26	-3,122.73	-7,655.59	8,262.39	8,194.95	67.44	122.508		
1,900.00	1,898.19	1,841.19	1,898.19	8.73	62.62	-85.30	-3,122.73	-7,655.59	8,261.96	8,190.63	71.33	115.826		
2,000.00	1,998.05	1,941.05	1,998.05	9.14	66.10	-85.34	-3,122.73	-7,655.59	8,261.53	8,186.31	75.22	109.829		
2,100.00	2,097.91	2,040.91	2,097.91	9.55	69.58	-85.37	-3,122.73	-7,655.59	8,261.10	8,181.98	79.12	104.418		
2,200.00	2,197.78	2,140.78	2,197.78	9.97	73.06	-85.41	-3,122.73	-7,655.59	8,260.68	8,177.66	83.01	99.511		
2,300.00	2,297.64	2,240.64	2,297.64	10.39	76.55	-85.45	-3,122.73	-7,655.59	8,260.26	8,173.34	86.91	95.042		
2,400.00	2,397.50	2,340.50	2,397.50	10.81	80.03	-85.48	-3,122.73	-7,655.59	8,259.84	8,169.02	90.81	90.954		
2,500.00	2,497.36	2,440.36	2,497.36	11.23	83.51	-85.52	-3,122.73	-7,655.59	8,259.42	8,164.71	94.72	87.201		
2,600.00	2,597.22	2,540.22	2,597.22	11.65	87.00	-85.56	-3,122.73	-7,655.59	8,259.01	8,160.39	98.62	83.744		
2,700.00	2,697.08	2,640.08	2,697.08	12.07	90.48	-85.59	-3,122.73	-7,655.59	8,258.61	8,156.08	102.53	80.549		
2,800.00	2,796.94	2,739.94	2,796.94	12.50	93.96	-85.63	-3,122.73	-7,655.59	8,258.20	8,151.76	106.44	77.587		
2,900.00	2,896.80	2,839.80	2,896.80	12.92	97.45	-85.66	-3,122.73	-7,655.59	8,257.80	8,147.45	110.35	74.835		
3,000.00	2,996.66	2,939.66	2,996.66	13.35	100.93	-85.70	-3,122.73	-7,655.59	8,257.40	8,143.15	114.26	72.270		
3,100.00	3,096.52	3,039.52	3,096.52	13.78	104.42	-85.74	-3,122.73	-7,655.59	8,257.01	8,138.84	118.17	69.875		
3,200.00	3,196.38	3,139.38	3,196.38	14.21	107.90	-85.77	-3,122.73	-7,655.59	8,256.62	8,134.54	122.08	67.632		
3,300.00	3,296.25	3,239.25	3,296.25	14.64	111.39	-85.81	-3,122.73	-7,655.59	8,256.23	8,130.24	125.99	65.528		
3,400.00	3,396.11	3,339.11	3,396.11	15.07	114.87	-85.85	-3,122.73	-7,655.59	8,255.85	8,125.94	129.91	63.551		
3,500.00	3,495.97	3,438.97	3,495.97	15.50	118.35	-85.88	-3,122.73	-7,655.59	8,255.47	8,121.64	133.82	61.689		
3,600.00	3,595.83	3,538.83	3,595.83	15.93	121.84	-85.92	-3,122.73	-7,655.59	8,255.09	8,117.35	137.74	59.933		
3,700.00	3,695.69	3,638.69	3,695.69	16.36	125.32	-85.96	-3,122.73	-7,655.59	8,254.71	8,113.06	141.66	58.273		
3,800.00	3,795.55	3,738.55	3,795.55	16.80	128.81	-85.99	-3,122.73	-7,655.59	8,254.34	8,108.77	145.57	56.703		
3,900.00	3,895.41	3,838.41	3,895.41	17.23	132.29	-86.03	-3,122.73	-7,655.59	8,253.98	8,104.49	149.49	55.215		
4,000.00	3,995.27	3,938.27	3,995.27	17.66	135.78	-86.07	-3,122.73	-7,655.59	8,253.61	8,100.21	153.41	53.802		
4,100.00	4,095.13	4,038.13	4,095.13	18.10	139.26	-86.10	-3,122.73	-7,655.59	8,253.25	8,095.93	157.32	52.460		
4,200.00	4,194.99	4,137.99	4,194.99	18.53	142.75	-86.14	-3,122.73	-7,655.59	8,252.89	8,091.65	161.24	51.183		
4,300.00	4,294.85	4,237.85	4,294.85	18.96	146.24	-86.17	-3,122.73	-7,655.59	8,252.54	8,087.38	165.16	49.966		
4,400.00	4,394.71	4,337.71	4,394.71	19.40	149.72	-86.21	-3,122.73	-7,655.59	8,252.19	8,083.11	169.08	48.806		
4,500.00	4,494.58	4,437.58	4,494.58	19.83	153.21	-86.25	-3,122.73	-7,655.59	8,251.84	8,078.84	173.00	47.698		
4,600.00	4,594.44	4,537.44	4,594.44	20.27	156.69	-86.28	-3,122.73	-7,655.59	8,251.50	8,074.58	176.92	46.640		
4,700.00	4,694.30	4,637.30	4,694.30	20.71	160.18	-86.32	-3,122.73	-7,655.59	8,251.16	8,070.32	180.84	45.627		
4,800.00	4,794.16	4,737.16	4,794.16	21.14	163.66	-86.36	-3,122.73	-7,655.59	8,250.82	8,066.06	184.76	44.657		
4,900.00	4,894.02	4,837.02	4,894.02	21.58	167.15	-86.39	-3,122.73	-7,655.59	8,250.49	8,061.81	188.68	43.727		
5,000.00	4,993.88	4,936.88	4,993.88	22.01	170.63	-86.43	-3,122.73	-7,655.59	8,250.16	8,057.55	192.60	42.835		
5,100.00	5,093.74	5,036.74	5,093.74	22.45	174.12	-86.47	-3,122.73	-7,655.59	8,249.83	8,053.31	196.52	41.979		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STATE-HOPPE 16-1(SI_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,136.60	5,193.60	22.89	177.60	-86.50	-3,122.73	-7,655.59	8,249.51	8,049.06	200.45	41.156		
5,300.00	5,293.46	5,236.46	5,293.46	23.32	181.09	-86.54	-3,122.73	-7,655.59	8,249.19	8,044.82	204.37	40.365		
5,400.00	5,393.32	5,336.32	5,393.32	23.76	184.58	-86.58	-3,122.73	-7,655.59	8,248.87	8,040.58	208.29	39.603		
5,500.00	5,493.18	5,436.18	5,493.18	24.20	188.06	-86.61	-3,122.73	-7,655.59	8,248.56	8,036.34	212.21	38.870		
5,600.00	5,593.05	5,536.05	5,593.05	24.64	191.55	-86.65	-3,122.73	-7,655.59	8,248.24	8,032.11	216.13	38.163		
5,700.00	5,692.91	5,635.91	5,692.91	25.07	195.03	-86.69	-3,122.73	-7,655.59	8,247.94	8,027.88	220.05	37.481		
5,800.00	5,792.77	5,735.77	5,792.77	25.51	198.52	-86.72	-3,122.73	-7,655.59	8,247.63	8,023.66	223.98	36.824		
5,900.00	5,892.63	5,835.63	5,892.63	25.95	202.00	-86.76	-3,122.73	-7,655.59	8,247.33	8,019.43	227.90	36.188		
6,000.00	5,992.49	5,935.49	5,992.49	26.39	205.49	-86.80	-3,122.73	-7,655.59	8,247.04	8,015.22	231.82	35.575		
6,100.00	6,092.35	6,035.35	6,092.35	26.82	208.97	-86.83	-3,122.73	-7,655.59	8,246.74	8,011.00	235.75	34.982		
6,200.00	6,192.21	6,135.21	6,192.21	27.26	212.46	-86.87	-3,122.73	-7,655.59	8,246.45	8,006.79	239.67	34.408		
6,300.00	6,292.07	6,235.07	6,292.07	27.70	215.95	-86.91	-3,122.73	-7,655.59	8,246.17	8,002.58	243.59	33.852		
6,400.00	6,391.93	6,334.93	6,391.93	28.14	219.43	-86.94	-3,122.73	-7,655.59	8,245.88	7,998.37	247.51	33.315		
6,500.00	6,491.69	6,434.69	6,491.69	28.58	222.91	-48.24	-3,122.73	-7,655.59	8,243.70	7,992.27	251.43	32.787		
6,600.00	6,589.80	6,532.80	6,589.80	29.02	226.34	-34.96	-3,122.73	-7,655.59	8,228.95	7,973.66	255.29	32.234		
6,700.00	6,683.86	6,626.86	6,683.86	29.46	229.62	-32.53	-3,122.73	-7,655.59	8,200.32	7,941.32	258.99	31.662		
6,800.00	6,771.56	6,714.56	6,771.56	29.92	232.68	-32.93	-3,122.73	-7,655.59	8,158.55	7,896.10	262.45	31.086		
6,900.00	6,850.72	6,806.28	6,850.72	30.40	235.89	-35.08	-3,122.73	-7,655.59	8,104.72	7,838.70	266.02	30.467		
7,000.00	6,919.40	6,862.40	6,919.40	30.96	237.84	-38.98	-3,122.73	-7,655.59	8,040.21	7,771.89	268.32	29.965		
7,100.00	6,975.92	6,918.92	6,975.92	31.62	239.82	-45.08	-3,122.73	-7,655.59	7,966.66	7,696.04	270.62	29.439		
7,200.00	7,018.87	6,961.87	7,018.87	32.44	241.32	-54.17	-3,122.73	-7,655.59	7,885.93	7,613.50	272.43	28.946		
7,300.00	7,047.21	7,009.79	7,047.21	33.42	242.99	-67.14	-3,122.73	-7,655.59	7,800.04	7,525.62	274.42	28.424		
7,400.00	7,060.23	7,003.23	7,060.23	34.55	242.76	-83.92	-3,122.73	-7,655.59	7,711.14	7,436.63	274.51	28.090		
7,500.00	7,060.03	7,003.03	7,060.03	35.83	242.75	-92.03	-3,122.73	-7,655.59	7,621.38	7,346.53	274.86	27.729		
7,600.00	7,058.28	7,001.28	7,058.28	37.28	242.69	-92.00	-3,122.73	-7,655.59	7,531.84	7,256.64	275.20	27.369		
7,700.00	7,056.53	7,000.47	7,056.53	38.89	242.66	-91.97	-3,122.73	-7,655.59	7,442.56	7,166.92	275.64	27.001		
7,800.00	7,054.78	7,002.22	7,054.78	40.63	242.72	-91.94	-3,122.73	-7,655.59	7,353.56	7,077.32	276.24	26.620		
7,900.00	7,053.03	7,003.97	7,053.03	42.50	242.79	-91.91	-3,122.73	-7,655.59	7,264.84	6,987.94	276.90	26.236		
8,000.00	7,051.28	7,005.72	7,051.28	44.47	242.85	-91.88	-3,122.73	-7,655.59	7,176.42	6,898.78	277.64	25.848		
8,100.00	7,049.53	7,007.47	7,049.53	46.53	242.91	-91.85	-3,122.73	-7,655.59	7,088.31	6,809.87	278.44	25.457		
8,200.00	7,047.78	7,009.22	7,047.78	48.67	242.97	-91.82	-3,122.73	-7,655.59	7,000.51	6,721.20	279.31	25.063		
8,300.00	7,046.03	6,989.03	7,046.03	50.89	242.26	-91.79	-3,122.73	-7,655.59	6,913.05	6,633.56	279.49	24.735		
8,400.00	7,044.28	6,987.28	7,044.28	53.16	242.20	-91.76	-3,122.73	-7,655.59	6,825.93	6,545.54	280.38	24.345		
8,500.00	7,042.53	6,985.53	7,042.53	55.49	242.14	-91.73	-3,122.73	-7,655.59	6,739.17	6,457.82	281.35	23.953		
8,600.00	7,040.78	6,983.78	7,040.78	57.86	242.08	-91.71	-3,122.73	-7,655.59	6,652.78	6,370.38	282.39	23.559		
8,700.00	7,039.03	6,982.03	7,039.03	60.28	242.02	-91.68	-3,122.73	-7,655.59	6,566.77	6,283.27	283.50	23.163		
8,800.00	7,037.28	6,980.28	7,037.28	62.74	241.96	-91.65	-3,122.73	-7,655.59	6,481.17	6,196.47	284.69	22.766		
8,900.00	7,035.53	6,978.53	7,035.53	65.23	241.90	-91.62	-3,122.73	-7,655.59	6,395.98	6,110.03	285.95	22.367		
9,000.00	7,033.78	6,976.78	7,033.78	67.74	241.84	-91.59	-3,122.73	-7,655.59	6,311.23	6,023.94	287.29	21.968		
9,100.00	7,032.03	6,975.03	7,032.03	70.29	241.78	-91.56	-3,122.73	-7,655.59	6,226.93	5,938.22	288.70	21.569		
9,200.00	7,030.28	6,973.28	7,030.28	72.85	241.71	-91.53	-3,122.73	-7,655.59	6,143.10	5,852.91	290.19	21.169		
9,300.00	7,028.54	6,971.54	7,028.54	75.44	241.65	-91.50	-3,122.73	-7,655.59	6,059.76	5,768.00	291.75	20.770		
9,400.00	7,026.79	6,969.79	7,026.79	78.05	241.59	-91.47	-3,122.73	-7,655.59	5,976.93	5,683.54	293.39	20.372		
9,500.00	7,025.04	6,968.04	7,025.04	80.67	241.53	-91.44	-3,122.73	-7,655.59	5,894.63	5,599.52	295.11	19.975		
9,600.00	7,023.29	6,966.29	7,023.29	83.31	241.47	-91.41	-3,122.73	-7,655.59	5,812.89	5,515.99	296.90	19.579		
9,700.00	7,021.54	6,964.54	7,021.54	85.96	241.41	-91.38	-3,122.73	-7,655.59	5,731.72	5,432.95	298.77	19.184		
9,800.00	7,019.79	6,962.79	7,019.79	88.63	241.35	-91.35	-3,122.73	-7,655.59	5,651.16	5,350.44	300.72	18.792		
9,900.00	7,018.04	6,961.04	7,018.04	91.30	241.29	-91.32	-3,122.73	-7,655.59	5,571.23	5,268.48	302.75	18.402		
10,000.00	7,016.29	6,959.29	7,016.29	93.99	241.23	-91.29	-3,122.73	-7,655.59	5,491.96	5,187.10	304.86	18.015		
10,100.00	7,014.54	6,957.54	7,014.54	96.69	241.16	-91.26	-3,122.73	-7,655.59	5,413.37	5,106.32	307.05	17.630		
10,200.00	7,012.79	6,955.79	7,012.79	99.40	241.10	-91.23	-3,122.73	-7,655.59	5,335.50	5,026.17	309.32	17.249		
10,300.00	7,011.04	6,954.04	7,011.04	102.11	241.04	-91.20	-3,122.73	-7,655.59	5,258.37	4,946.70	311.68	16.871		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STATE-HOPPE 16-1(SI_75CC) - OH - OH													Offset Site Error: 0.00 ft	
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error: 3.28 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	6,952.29	7,009.29	104.83	240.98	-91.17	-3,122.73	-7,655.59	5,182.03	4,867.92	314.11	16.497		
10,500.00	7,007.54	6,950.54	7,007.54	107.56	240.92	-91.14	-3,122.73	-7,655.59	5,106.50	4,789.87	316.63	16.128		
10,600.00	7,005.79	6,948.79	7,005.79	110.30	240.86	-91.11	-3,122.73	-7,655.59	5,031.83	4,712.59	319.24	15.762		
10,700.00	7,004.04	6,947.04	7,004.04	113.04	240.80	-91.08	-3,122.73	-7,655.59	4,958.05	4,636.12	321.93	15.401		
10,800.00	7,002.29	6,945.29	7,002.29	115.79	240.74	-91.05	-3,122.73	-7,655.59	4,885.20	4,560.49	324.70	15.045		
10,900.00	7,000.54	6,943.54	7,000.54	118.54	240.68	-91.02	-3,122.73	-7,655.59	4,813.32	4,485.76	327.56	14.694		
11,000.00	6,998.79	6,941.79	6,998.79	121.30	240.62	-90.99	-3,122.73	-7,655.59	4,742.46	4,411.95	330.51	14.349		
11,100.00	6,997.04	6,940.04	6,997.04	124.06	240.55	-90.96	-3,122.73	-7,655.59	4,672.67	4,339.13	333.55	14.009		
11,200.00	6,995.29	6,938.29	6,995.29	126.83	240.49	-90.93	-3,122.73	-7,655.59	4,604.00	4,267.33	336.67	13.675		
11,300.00	6,993.54	6,936.54	6,993.54	129.60	240.43	-90.90	-3,122.73	-7,655.59	4,536.48	4,196.61	339.87	13.348		
11,400.00	6,991.80	6,934.80	6,991.80	132.37	240.37	-90.87	-3,122.73	-7,655.59	4,470.18	4,127.02	343.16	13.026		
11,500.00	6,990.05	6,933.05	6,990.05	135.15	240.31	-90.84	-3,122.73	-7,655.59	4,405.16	4,058.62	346.54	12.712		
11,600.00	6,988.30	6,931.30	6,988.30	137.93	240.25	-90.81	-3,122.73	-7,655.59	4,341.46	3,991.47	350.00	12.404		
11,700.00	6,986.55	6,929.55	6,986.55	140.72	240.19	-90.78	-3,122.73	-7,655.59	4,279.16	3,925.62	353.54	12.104		
11,800.00	6,984.80	6,927.80	6,984.80	143.50	240.13	-90.75	-3,122.73	-7,655.59	4,218.30	3,861.14	357.15	11.811		
11,900.00	6,983.05	6,926.05	6,983.05	146.29	240.07	-90.72	-3,122.73	-7,655.59	4,158.95	3,798.11	360.85	11.526		
12,000.00	6,981.30	6,924.30	6,981.30	149.09	240.00	-90.69	-3,122.73	-7,655.59	4,101.19	3,736.58	364.61	11.248		
12,100.00	6,979.55	6,922.55	6,979.55	151.88	239.94	-90.66	-3,122.73	-7,655.59	4,045.07	3,676.63	368.44	10.979		
12,200.00	6,977.80	6,920.80	6,977.80	154.68	239.88	-90.64	-3,122.73	-7,655.59	3,990.67	3,618.33	372.34	10.718		
12,300.00	6,976.05	6,919.05	6,976.05	157.48	239.82	-90.61	-3,122.73	-7,655.59	3,938.05	3,561.76	376.29	10.465		
12,400.00	6,974.30	6,917.30	6,974.30	160.28	239.76	-90.58	-3,122.73	-7,655.59	3,887.30	3,507.00	380.30	10.222		
12,500.00	6,972.55	6,915.55	6,972.55	163.08	239.70	-90.55	-3,122.73	-7,655.59	3,838.48	3,454.13	384.35	9.987		
12,600.00	6,970.80	6,913.80	6,970.80	165.89	239.64	-90.52	-3,122.73	-7,655.59	3,791.66	3,403.23	388.44	9.761		
12,700.00	6,969.05	6,912.05	6,969.05	168.69	239.58	-90.49	-3,122.73	-7,655.59	3,746.93	3,354.38	392.55	9.545		
12,800.00	6,967.30	6,910.30	6,967.30	171.50	239.52	-90.46	-3,122.73	-7,655.59	3,704.36	3,307.68	396.68	9.338		
12,900.00	6,965.55	6,908.55	6,965.55	174.31	239.45	-90.43	-3,122.73	-7,655.59	3,664.03	3,263.21	400.82	9.141		
13,000.00	6,963.80	6,906.80	6,963.80	177.12	239.39	-90.40	-3,122.73	-7,655.59	3,626.00	3,221.05	404.96	8.954		
13,100.00	6,962.05	6,905.05	6,962.05	179.94	239.33	-90.37	-3,122.73	-7,655.59	3,590.36	3,181.28	409.08	8.777		
13,200.00	6,960.30	6,903.30	6,960.30	182.75	239.27	-90.34	-3,122.73	-7,655.59	3,557.17	3,144.00	413.17	8.609		
13,300.00	6,958.55	6,901.55	6,958.55	185.57	239.21	-90.31	-3,122.73	-7,655.59	3,526.50	3,109.28	417.22	8.452		
13,400.00	6,956.80	6,900.20	6,956.80	188.38	239.16	-90.28	-3,122.73	-7,655.59	3,498.43	3,077.20	421.23	8.305		
13,500.00	6,955.05	6,901.95	6,955.05	191.20	239.22	-90.25	-3,122.73	-7,655.59	3,473.00	3,047.73	425.27	8.167		
13,600.00	6,953.31	6,903.70	6,953.31	194.02	239.29	-90.22	-3,122.73	-7,655.59	3,450.29	3,021.05	429.24	8.038		
13,700.00	6,951.56	6,905.44	6,951.56	196.84	239.35	-90.19	-3,122.73	-7,655.59	3,430.34	2,997.24	433.10	7.920		
13,800.00	6,949.81	6,907.19	6,949.81	199.67	239.41	-90.16	-3,122.73	-7,655.59	3,413.21	2,976.35	436.86	7.813		
13,900.00	6,948.06	6,908.94	6,948.06	202.49	239.47	-90.13	-3,122.73	-7,655.59	3,398.93	2,958.44	440.49	7.716		
14,000.00	6,946.31	6,889.31	6,946.31	205.31	238.78	-90.10	-3,122.73	-7,655.59	3,387.54	2,944.31	443.23	7.643		
14,100.00	6,944.56	6,887.56	6,944.56	208.14	238.72	-90.07	-3,122.73	-7,655.59	3,379.08	2,932.63	446.45	7.569		
14,200.00	6,942.81	6,885.81	6,942.81	210.96	238.66	-90.04	-3,122.73	-7,655.59	3,373.56	2,924.05	449.50	7.505		
14,300.00	6,941.06	6,884.06	6,941.06	213.79	238.60	-90.01	-3,122.73	-7,655.59	3,370.99	2,918.61	452.39	7.452		
14,336.48	6,940.42	6,883.42	6,940.42	214.82	238.58	-90.00	-3,122.73	-7,655.59	3,370.79	2,917.40	453.39	7.435 CC		
14,400.00	6,939.31	6,882.31	6,939.31	216.62	238.54	-89.98	-3,122.73	-7,655.59	3,371.39	2,916.30	455.09	7.408 ES		
14,500.00	6,937.56	6,880.56	6,937.56	219.44	238.48	-89.95	-3,122.73	-7,655.59	3,374.76	2,917.15	457.60	7.375		
14,600.00	6,935.81	6,878.81	6,935.81	222.27	238.42	-89.92	-3,122.73	-7,655.59	3,381.08	2,921.15	459.93	7.351		
14,700.00	6,934.06	6,877.06	6,934.06	225.10	238.36	-89.89	-3,122.73	-7,655.59	3,390.33	2,928.28	462.05	7.338		
14,800.00	6,932.31	6,875.31	6,932.31	227.93	238.29	-89.86	-3,122.73	-7,655.59	3,402.51	2,938.53	463.97	7.333 SF		
14,817.75	6,932.00	6,875.00	6,932.00	228.43	238.28	-89.86	-3,122.73	-7,655.59	3,404.97	2,940.67	464.29	7.334		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STATE-HOPPE 16-2(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	44.00	3.28	3.28	-104.04	-1,630.86	-6,519.97	6,720.99					
100.00	100.00	56.00	100.00	3.28	3.42	-104.04	-1,630.86	-6,519.97	6,720.85	6,714.14	6.71	1,002.023		
200.00	200.00	156.00	200.00	3.34	4.94	-104.04	-1,630.86	-6,519.97	6,720.85	6,712.56	8.28	811.509		
300.00	300.00	256.00	300.00	3.44	7.90	-104.04	-1,630.86	-6,519.97	6,720.85	6,709.50	11.35	592.194		
400.00	400.00	356.00	400.00	3.60	11.17	-104.04	-1,630.86	-6,519.97	6,720.85	6,706.07	14.78	454.787		
500.00	500.00	456.00	500.00	3.81	14.55	-104.04	-1,630.86	-6,519.97	6,720.85	6,702.49	18.35	366.178		
600.00	599.98	555.98	599.98	4.05	17.97	-76.69	-1,630.86	-6,519.97	6,720.44	6,698.43	22.01	305.322		
700.00	699.86	655.86	699.86	4.32	21.40	-76.74	-1,630.86	-6,519.97	6,719.34	6,693.62	25.72	261.265		
800.00	799.72	755.72	799.72	4.62	24.85	-76.78	-1,630.86	-6,519.97	6,718.13	6,688.66	29.47	228.003		
900.00	899.58	855.58	899.58	4.93	28.31	-76.82	-1,630.86	-6,519.97	6,716.92	6,683.68	33.24	202.062		
1,000.00	999.44	955.44	999.44	5.27	31.78	-76.87	-1,630.86	-6,519.97	6,715.72	6,678.68	37.04	181.299		
1,100.00	1,099.31	1,055.31	1,099.31	5.62	35.25	-76.91	-1,630.86	-6,519.97	6,714.52	6,673.66	40.86	164.324		
1,200.00	1,199.17	1,155.17	1,199.17	5.98	38.72	-76.96	-1,630.86	-6,519.97	6,713.33	6,668.63	44.70	150.202		
1,300.00	1,299.03	1,255.03	1,299.03	6.36	42.20	-77.00	-1,630.86	-6,519.97	6,712.14	6,663.60	48.54	138.276		
1,400.00	1,398.89	1,354.89	1,398.89	6.74	45.67	-77.04	-1,630.86	-6,519.97	6,710.95	6,658.55	52.40	128.076		
1,500.00	1,498.75	1,454.75	1,498.75	7.13	49.15	-77.09	-1,630.86	-6,519.97	6,709.77	6,653.51	56.26	119.258		
1,600.00	1,598.61	1,554.61	1,598.61	7.52	52.63	-77.13	-1,630.86	-6,519.97	6,708.59	6,648.46	60.13	111.560		
1,700.00	1,698.47	1,654.47	1,698.47	7.92	56.11	-77.17	-1,630.86	-6,519.97	6,707.42	6,643.41	64.01	104.784		
1,800.00	1,798.33	1,754.33	1,798.33	8.32	59.59	-77.22	-1,630.86	-6,519.97	6,706.25	6,638.35	67.89	98.775		
1,900.00	1,898.19	1,854.19	1,898.19	8.73	63.07	-77.26	-1,630.86	-6,519.97	6,705.08	6,633.30	71.78	93.410		
2,000.00	1,998.05	1,954.05	1,998.05	9.14	66.55	-77.31	-1,630.86	-6,519.97	6,703.92	6,628.25	75.67	88.592		
2,100.00	2,097.91	2,053.91	2,097.91	9.55	70.03	-77.35	-1,630.86	-6,519.97	6,702.76	6,623.20	79.57	84.242		
2,200.00	2,197.78	2,153.78	2,197.78	9.97	73.52	-77.39	-1,630.86	-6,519.97	6,701.61	6,618.15	83.46	80.295		
2,300.00	2,297.64	2,253.64	2,297.64	10.39	77.00	-77.44	-1,630.86	-6,519.97	6,700.46	6,613.10	87.36	76.698		
2,400.00	2,397.50	2,353.50	2,397.50	10.81	80.48	-77.48	-1,630.86	-6,519.97	6,699.31	6,608.05	91.26	73.407		
2,500.00	2,497.36	2,453.36	2,497.36	11.23	83.97	-77.53	-1,630.86	-6,519.97	6,698.17	6,603.00	95.17	70.384		
2,600.00	2,597.22	2,553.22	2,597.22	11.65	87.45	-77.57	-1,630.86	-6,519.97	6,697.03	6,597.96	99.07	67.598		
2,700.00	2,697.08	2,653.08	2,697.08	12.07	90.93	-77.61	-1,630.86	-6,519.97	6,695.90	6,592.92	102.98	65.023		
2,800.00	2,796.94	2,752.94	2,796.94	12.50	94.42	-77.66	-1,630.86	-6,519.97	6,694.77	6,587.88	106.89	62.635		
2,900.00	2,896.80	2,852.80	2,896.80	12.92	97.90	-77.70	-1,630.86	-6,519.97	6,693.64	6,582.84	110.80	60.415		
3,000.00	2,996.66	2,952.66	2,996.66	13.35	101.39	-77.75	-1,630.86	-6,519.97	6,692.52	6,577.81	114.71	58.345		
3,100.00	3,096.52	3,052.52	3,096.52	13.78	104.87	-77.79	-1,630.86	-6,519.97	6,691.40	6,572.78	118.62	56.412		
3,200.00	3,196.38	3,152.38	3,196.38	14.21	108.35	-77.83	-1,630.86	-6,519.97	6,690.28	6,567.75	122.53	54.602		
3,300.00	3,296.25	3,252.25	3,296.25	14.64	111.84	-77.88	-1,630.86	-6,519.97	6,689.17	6,562.73	126.44	52.903		
3,400.00	3,396.11	3,352.11	3,396.11	15.07	115.32	-77.92	-1,630.86	-6,519.97	6,688.07	6,557.71	130.36	51.306		
3,500.00	3,495.97	3,451.97	3,495.97	15.50	118.81	-77.97	-1,630.86	-6,519.97	6,686.96	6,552.69	134.27	49.802		
3,600.00	3,595.83	3,551.83	3,595.83	15.93	122.29	-78.01	-1,630.86	-6,519.97	6,685.86	6,547.68	138.19	48.383		
3,700.00	3,695.69	3,651.69	3,695.69	16.36	125.78	-78.05	-1,630.86	-6,519.97	6,684.77	6,542.67	142.10	47.042		
3,800.00	3,795.55	3,751.55	3,795.55	16.80	129.26	-78.10	-1,630.86	-6,519.97	6,683.68	6,537.66	146.02	45.773		
3,900.00	3,895.41	3,851.41	3,895.41	17.23	132.75	-78.14	-1,630.86	-6,519.97	6,682.59	6,532.66	149.94	44.570		
4,000.00	3,995.27	3,951.27	3,995.27	17.66	136.23	-78.19	-1,630.86	-6,519.97	6,681.51	6,527.66	153.85	43.428		
4,100.00	4,095.13	4,051.13	4,095.13	18.10	139.72	-78.23	-1,630.86	-6,519.97	6,680.43	6,522.66	157.77	42.343		
4,200.00	4,194.99	4,150.99	4,194.99	18.53	143.20	-78.28	-1,630.86	-6,519.97	6,679.36	6,517.67	161.69	41.310		
4,300.00	4,294.85	4,250.85	4,294.85	18.96	146.69	-78.32	-1,630.86	-6,519.97	6,678.28	6,512.68	165.61	40.326		
4,400.00	4,394.71	4,350.71	4,394.71	19.40	150.17	-78.36	-1,630.86	-6,519.97	6,677.22	6,507.69	169.53	39.388		
4,500.00	4,494.58	4,450.58	4,494.58	19.83	153.66	-78.41	-1,630.86	-6,519.97	6,676.15	6,502.71	173.45	38.491		
4,600.00	4,594.44	4,550.44	4,594.44	20.27	157.14	-78.45	-1,630.86	-6,519.97	6,675.10	6,497.73	177.37	37.635		
4,700.00	4,694.30	4,650.30	4,694.30	20.71	160.63	-78.50	-1,630.86	-6,519.97	6,674.04	6,492.76	181.29	36.815		
4,800.00	4,794.16	4,750.16	4,794.16	21.14	164.12	-78.54	-1,630.86	-6,519.97	6,672.99	6,487.78	185.21	36.030		
4,900.00	4,894.02	4,850.02	4,894.02	21.58	167.60	-78.59	-1,630.86	-6,519.97	6,671.94	6,482.82	189.13	35.278		
5,000.00	4,993.88	4,949.88	4,993.88	22.01	171.09	-78.63	-1,630.86	-6,519.97	6,670.90	6,477.85	193.05	34.556		
5,100.00	5,093.74	5,049.74	5,093.74	22.45	174.57	-78.67	-1,630.86	-6,519.97	6,669.86	6,472.89	196.97	33.863		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STATE-HOPPE 16-2(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,149.60	5,193.60	22.89	178.06	-78.72	-1,630.86	-6,519.97	6,668.83	6,467.94	200.89	33.197		
5,300.00	5,293.46	5,249.46	5,293.46	23.32	181.54	-78.76	-1,630.86	-6,519.97	6,667.80	6,462.99	204.81	32.556		
5,400.00	5,393.32	5,349.32	5,393.32	23.76	185.03	-78.81	-1,630.86	-6,519.97	6,666.77	6,458.04	208.73	31.939		
5,500.00	5,493.18	5,449.18	5,493.18	24.20	188.51	-78.85	-1,630.86	-6,519.97	6,665.75	6,453.09	212.65	31.346		
5,600.00	5,593.05	5,549.05	5,593.05	24.64	192.00	-78.90	-1,630.86	-6,519.97	6,664.73	6,448.15	216.58	30.773		
5,700.00	5,692.91	5,648.91	5,692.91	25.07	195.49	-78.94	-1,630.86	-6,519.97	6,663.71	6,443.21	220.50	30.221		
5,800.00	5,792.77	5,748.77	5,792.77	25.51	198.97	-78.99	-1,630.86	-6,519.97	6,662.70	6,438.28	224.42	29.689		
5,900.00	5,892.63	5,848.63	5,892.63	25.95	202.46	-79.03	-1,630.86	-6,519.97	6,661.69	6,433.35	228.34	29.174		
6,000.00	5,992.49	5,948.49	5,992.49	26.39	205.94	-79.07	-1,630.86	-6,519.97	6,660.69	6,428.43	232.26	28.677		
6,100.00	6,092.35	6,048.35	6,092.35	26.82	209.43	-79.12	-1,630.86	-6,519.97	6,659.69	6,423.51	236.19	28.197		
6,200.00	6,192.21	6,148.21	6,192.21	27.26	212.91	-79.16	-1,630.86	-6,519.97	6,658.70	6,418.59	240.11	27.732		
6,300.00	6,292.07	6,248.07	6,292.07	27.70	216.40	-79.21	-1,630.86	-6,519.97	6,657.71	6,413.67	244.03	27.282		
6,400.00	6,391.93	6,347.93	6,391.93	28.14	219.89	-79.25	-1,630.86	-6,519.97	6,656.72	6,408.77	247.96	26.846		
6,500.00	6,491.69	6,447.69	6,491.69	28.58	223.37	-40.55	-1,630.86	-6,519.97	6,653.74	6,401.87	251.87	26.417		
6,600.00	6,589.80	6,545.80	6,589.80	29.02	226.79	-27.13	-1,630.86	-6,519.97	6,637.56	6,381.83	255.73	25.955		
6,700.00	6,683.86	6,639.86	6,683.86	29.46	230.08	-24.42	-1,630.86	-6,519.97	6,606.82	6,347.39	259.43	25.467		
6,800.00	6,771.56	6,727.56	6,771.56	29.92	233.14	-24.36	-1,630.86	-6,519.97	6,562.30	6,299.43	262.88	24.963		
6,900.00	6,850.72	6,806.72	6,850.72	30.40	235.90	-25.88	-1,630.86	-6,519.97	6,505.13	6,239.14	265.99	24.456		
7,000.00	6,919.40	6,875.40	6,919.40	30.96	238.30	-29.00	-1,630.86	-6,519.97	6,436.75	6,168.04	268.70	23.955		
7,100.00	6,975.92	6,931.92	6,975.92	31.62	240.27	-34.32	-1,630.86	-6,519.97	6,358.86	6,087.91	270.95	23.469		
7,200.00	7,018.87	6,974.87	7,018.87	32.44	241.77	-43.19	-1,630.86	-6,519.97	6,273.43	6,000.74	272.69	23.006		
7,300.00	7,047.21	7,003.21	7,047.21	33.42	242.76	-58.01	-1,630.86	-6,519.97	6,182.57	5,908.67	273.89	22.573		
7,400.00	7,060.23	7,016.23	7,060.23	34.55	243.21	-81.00	-1,630.86	-6,519.97	6,088.54	5,813.99	274.55	22.177		
7,500.00	7,060.03	7,016.03	7,060.03	35.83	243.21	-93.02	-1,630.86	-6,519.97	5,993.59	5,718.85	274.74	21.815		
7,600.00	7,058.28	7,014.28	7,058.28	37.28	243.15	-92.97	-1,630.86	-6,519.97	5,898.78	5,623.87	274.91	21.457		
7,700.00	7,056.53	7,012.53	7,056.53	38.89	243.08	-92.91	-1,630.86	-6,519.97	5,804.14	5,529.01	275.12	21.096		
7,800.00	7,054.78	7,010.78	7,054.78	40.63	243.02	-92.86	-1,630.86	-6,519.97	5,709.68	5,434.30	275.38	20.734		
7,900.00	7,053.03	7,009.03	7,053.03	42.50	242.96	-92.81	-1,630.86	-6,519.97	5,615.42	5,339.74	275.68	20.370		
8,000.00	7,051.28	7,007.28	7,051.28	44.47	242.90	-92.75	-1,630.86	-6,519.97	5,521.35	5,245.33	276.02	20.003		
8,100.00	7,049.53	7,005.53	7,049.53	46.53	242.84	-92.70	-1,630.86	-6,519.97	5,427.50	5,151.08	276.42	19.635		
8,200.00	7,047.78	7,003.78	7,047.78	48.67	242.78	-92.65	-1,630.86	-6,519.97	5,333.87	5,057.01	276.86	19.265		
8,300.00	7,046.03	7,002.03	7,046.03	50.89	242.72	-92.59	-1,630.86	-6,519.97	5,240.47	4,963.11	277.37	18.894		
8,400.00	7,044.28	7,000.28	7,044.28	53.16	242.66	-92.54	-1,630.86	-6,519.97	5,147.32	4,869.40	277.93	18.520		
8,500.00	7,042.53	7,001.47	7,042.53	55.49	242.60	-92.49	-1,630.86	-6,519.97	5,054.44	4,775.79	278.65	18.139		
8,600.00	7,040.78	7,003.22	7,040.78	57.86	242.76	-92.44	-1,630.86	-6,519.97	4,961.83	4,682.37	279.46	17.755		
8,700.00	7,039.03	7,004.97	7,039.03	60.28	242.82	-92.38	-1,630.86	-6,519.97	4,869.51	4,589.17	280.34	17.370		
8,800.00	7,037.28	7,006.72	7,037.28	62.74	242.88	-92.33	-1,630.86	-6,519.97	4,777.50	4,496.21	281.29	16.985		
8,900.00	7,035.53	7,008.47	7,035.53	65.23	242.94	-92.28	-1,630.86	-6,519.97	4,685.81	4,403.51	282.31	16.598		
9,000.00	7,033.78	6,989.78	7,033.78	67.74	242.29	-92.22	-1,630.86	-6,519.97	4,594.48	4,311.78	282.69	16.253		
9,100.00	7,032.03	6,988.03	7,032.03	70.29	242.23	-92.17	-1,630.86	-6,519.97	4,503.51	4,219.76	283.75	15.871		
9,200.00	7,030.28	6,986.28	7,030.28	72.85	242.17	-92.12	-1,630.86	-6,519.97	4,412.92	4,128.03	284.89	15.490		
9,300.00	7,028.54	6,984.54	7,028.54	75.44	242.11	-92.06	-1,630.86	-6,519.97	4,322.76	4,036.64	286.12	15.108		
9,400.00	7,026.79	6,982.79	7,026.79	78.05	242.05	-92.01	-1,630.86	-6,519.97	4,233.04	3,945.59	287.44	14.727		
9,500.00	7,025.04	6,981.04	7,025.04	80.67	241.99	-91.96	-1,630.86	-6,519.97	4,143.78	3,854.92	288.86	14.345		
9,600.00	7,023.29	6,979.29	7,023.29	83.31	241.92	-91.91	-1,630.86	-6,519.97	4,055.03	3,764.65	290.37	13.965		
9,700.00	7,021.54	6,977.54	7,021.54	85.96	241.86	-91.85	-1,630.86	-6,519.97	3,966.81	3,674.81	291.99	13.585		
9,800.00	7,019.79	6,975.79	7,019.79	88.63	241.80	-91.80	-1,630.86	-6,519.97	3,879.16	3,585.44	293.72	13.207		
9,900.00	7,018.04	6,974.04	7,018.04	91.30	241.74	-91.75	-1,630.86	-6,519.97	3,792.12	3,496.56	295.56	12.830		
10,000.00	7,016.29	6,972.29	7,016.29	93.99	241.68	-91.69	-1,630.86	-6,519.97	3,705.74	3,408.21	297.52	12.455		
10,100.00	7,014.54	6,970.54	7,014.54	96.69	241.62	-91.64	-1,630.86	-6,519.97	3,620.05	3,320.45	299.60	12.083		
10,200.00	7,012.79	6,968.79	7,012.79	99.40	241.56	-91.59	-1,630.86	-6,519.97	3,535.12	3,233.31	301.81	11.713		
10,300.00	7,011.04	6,967.04	7,011.04	102.11	241.50	-91.53	-1,630.86	-6,519.97	3,450.99	3,146.84	304.15	11.346		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STATE-HOPPE 16-2(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	6,965.29	7,009.29	104.83	241.44	-91.48	-1,630.86	-6,519.97	3,367.73	3,061.10	306.63	10.983		
10,500.00	7,007.54	6,963.54	7,007.54	107.56	241.37	-91.43	-1,630.86	-6,519.97	3,285.40	2,976.15	309.26	10.623		
10,600.00	7,005.79	6,961.79	7,005.79	110.30	241.31	-91.37	-1,630.86	-6,519.97	3,204.08	2,892.05	312.03	10.268		
10,700.00	7,004.04	6,960.04	7,004.04	113.04	241.25	-91.32	-1,630.86	-6,519.97	3,123.84	2,808.88	314.96	9.918		
10,800.00	7,002.29	6,958.29	7,002.29	115.79	241.19	-91.27	-1,630.86	-6,519.97	3,044.78	2,726.72	318.05	9.573		
10,900.00	7,000.54	6,956.54	7,000.54	118.54	241.13	-91.22	-1,630.86	-6,519.97	2,966.97	2,645.66	321.31	9.234		
11,000.00	6,998.79	6,954.79	6,998.79	121.30	241.07	-91.16	-1,630.86	-6,519.97	2,890.53	2,565.79	324.74	8.901		
11,100.00	6,997.04	6,953.04	6,997.04	124.06	241.01	-91.11	-1,630.86	-6,519.97	2,815.56	2,487.22	328.34	8.575		
11,200.00	6,995.29	6,951.29	6,995.29	126.83	240.95	-91.06	-1,630.86	-6,519.97	2,742.19	2,410.07	332.11	8.257		
11,300.00	6,993.54	6,949.54	6,993.54	129.60	240.89	-91.00	-1,630.86	-6,519.97	2,670.55	2,334.48	336.07	7.946		
11,400.00	6,991.80	6,947.80	6,991.80	132.37	240.82	-90.95	-1,630.86	-6,519.97	2,600.78	2,260.57	340.20	7.645		
11,500.00	6,990.05	6,946.05	6,990.05	135.15	240.76	-90.90	-1,630.86	-6,519.97	2,533.03	2,188.51	344.52	7.352		
11,600.00	6,988.30	6,944.30	6,988.30	137.93	240.70	-90.84	-1,630.86	-6,519.97	2,467.48	2,118.48	349.00	7.070		
11,700.00	6,986.55	6,942.55	6,986.55	140.72	240.64	-90.79	-1,630.86	-6,519.97	2,404.30	2,050.65	353.64	6.799		
11,800.00	6,984.80	6,940.80	6,984.80	143.50	240.58	-90.74	-1,630.86	-6,519.97	2,343.68	1,985.24	358.44	6.539		
11,900.00	6,983.05	6,939.05	6,983.05	146.29	240.52	-90.68	-1,630.86	-6,519.97	2,285.83	1,922.46	363.37	6.291		
12,000.00	6,981.30	6,937.30	6,981.30	149.09	240.46	-90.63	-1,630.86	-6,519.97	2,230.96	1,862.54	368.42	6.056		
12,100.00	6,979.55	6,935.55	6,979.55	151.88	240.40	-90.58	-1,630.86	-6,519.97	2,179.30	1,805.75	373.55	5.834		
12,200.00	6,977.80	6,933.80	6,977.80	154.68	240.34	-90.53	-1,630.86	-6,519.97	2,131.09	1,752.35	378.73	5.627		
12,300.00	6,976.05	6,932.05	6,976.05	157.48	240.28	-90.47	-1,630.86	-6,519.97	2,086.55	1,702.62	383.93	5.435		
12,400.00	6,974.30	6,930.30	6,974.30	160.28	240.21	-90.42	-1,630.86	-6,519.97	2,045.93	1,656.84	389.09	5.258		
12,500.00	6,972.55	6,928.55	6,972.55	163.08	240.15	-90.37	-1,630.86	-6,519.97	2,009.47	1,615.30	394.17	5.098		
12,600.00	6,970.80	6,926.80	6,970.80	165.89	240.09	-90.31	-1,630.86	-6,519.97	1,977.40	1,578.30	399.11	4.955		
12,700.00	6,969.05	6,925.05	6,969.05	168.69	240.03	-90.26	-1,630.86	-6,519.97	1,949.94	1,546.10	403.84	4.828		
12,800.00	6,967.30	6,923.30	6,967.30	171.50	239.97	-90.21	-1,630.86	-6,519.97	1,927.27	1,518.96	408.31	4.720		
12,900.00	6,965.55	6,921.55	6,965.55	174.31	239.91	-90.15	-1,630.86	-6,519.97	1,909.58	1,497.12	412.47	4.630		
13,000.00	6,963.80	6,919.80	6,963.80	177.12	239.85	-90.10	-1,630.86	-6,519.97	1,897.00	1,480.77	416.24	4.557		
13,100.00	6,962.05	6,918.05	6,962.05	179.94	239.79	-90.05	-1,630.86	-6,519.97	1,889.64	1,470.06	419.58	4.504		
13,189.49	6,960.49	6,916.49	6,960.49	182.46	239.73	-90.00	-1,630.86	-6,519.97	1,887.52	1,465.34	422.18	4.471 CC		
13,200.00	6,960.30	6,916.30	6,960.30	182.75	239.73	-89.99	-1,630.86	-6,519.97	1,887.55	1,465.09	422.46	4.468 ES		
13,300.00	6,958.55	6,914.55	6,958.55	185.57	239.66	-89.94	-1,630.86	-6,519.97	1,890.75	1,465.90	424.85	4.450 SF		
13,400.00	6,956.80	6,912.80	6,956.80	188.38	239.60	-89.89	-1,630.86	-6,519.97	1,899.22	1,472.50	426.72	4.451		
13,500.00	6,955.05	6,911.05	6,955.05	191.20	239.54	-89.84	-1,630.86	-6,519.97	1,912.88	1,484.80	428.08	4.469		
13,600.00	6,953.31	6,909.31	6,953.31	194.02	239.48	-89.78	-1,630.86	-6,519.97	1,931.63	1,502.70	428.93	4.503		
13,700.00	6,951.56	6,907.56	6,951.56	196.84	239.42	-89.73	-1,630.86	-6,519.97	1,955.32	1,526.02	429.30	4.555		
13,800.00	6,949.81	6,905.81	6,949.81	199.67	239.36	-89.68	-1,630.86	-6,519.97	1,983.77	1,554.55	429.22	4.622		
13,900.00	6,948.06	6,904.06	6,948.06	202.49	239.30	-89.62	-1,630.86	-6,519.97	2,016.78	1,588.06	428.72	4.704		
14,000.00	6,946.31	6,902.31	6,946.31	205.31	239.24	-89.57	-1,630.86	-6,519.97	2,054.13	1,626.28	427.85	4.801		
14,100.00	6,944.56	6,900.56	6,944.56	208.14	239.18	-89.52	-1,630.86	-6,519.97	2,095.59	1,668.93	426.66	4.912		
14,200.00	6,942.81	6,901.19	6,942.81	210.96	239.20	-89.46	-1,630.86	-6,519.97	2,140.92	1,715.66	425.27	5.034		
14,300.00	6,941.06	6,902.94	6,941.06	213.79	239.26	-89.41	-1,630.86	-6,519.97	2,189.88	1,766.21	423.68	5.169		
14,400.00	6,939.31	6,904.69	6,939.31	216.62	239.32	-89.36	-1,630.86	-6,519.97	2,242.23	1,820.34	421.89	5.315		
14,500.00	6,937.56	6,906.44	6,937.56	219.44	239.38	-89.30	-1,630.86	-6,519.97	2,297.75	1,877.79	419.96	5.471		
14,600.00	6,935.81	6,908.19	6,935.81	222.27	239.44	-89.25	-1,630.86	-6,519.97	2,356.19	1,938.29	417.90	5.638		
14,700.00	6,934.06	6,909.94	6,934.06	225.10	239.50	-89.20	-1,630.86	-6,519.97	2,417.37	2,001.61	415.76	5.814		
14,800.00	6,932.31	6,888.31	6,932.31	227.93	238.75	-89.14	-1,630.86	-6,519.97	2,481.06	2,068.32	412.74	6.011		
14,817.75	6,932.00	6,888.00	6,932.00	228.43	238.74	-89.14	-1,630.86	-6,519.97	2,492.62	2,080.29	412.32	6.045		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STATE-HOPPE 16-3(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	39.00	3.28	3.28	-93.69	-494.27	-7,658.67	7,674.70					
100.00	100.00	100.00	126.58	3.28	3.29	-93.69	-493.99	-7,658.38	7,674.34	7,667.77	6.57	1,167.760		
200.00	200.00	182.03	221.03	3.34	3.33	-93.69	-493.38	-7,657.98	7,673.89	7,667.22	6.67	1,151.211		
277.94	277.94	238.95	277.94	3.42	3.38	-93.68	-493.01	-7,657.93	7,673.78	7,666.99	6.80	1,129.246		
300.00	300.00	255.18	294.17	3.44	3.40	-93.68	-492.93	-7,657.94	7,673.79	7,666.95	6.84	1,121.712		
400.00	400.00	330.18	369.17	3.60	3.49	-93.68	-492.73	-7,658.14	7,674.04	7,666.94	7.10	1,081.409		
500.00	500.00	410.93	449.92	3.81	3.63	-93.68	-492.80	-7,658.58	7,674.58	7,667.15	7.43	1,032.643		
600.00	599.98	519.69	558.68	4.05	3.85	-66.32	-493.07	-7,659.19	7,674.45	7,666.56	7.89	972.411		
700.00	699.86	609.34	648.33	4.32	4.06	-66.36	-493.72	-7,659.69	7,673.12	7,664.74	8.38	916.109		
800.00	799.72	697.72	736.70	4.62	4.30	-66.40	-494.60	-7,660.29	7,671.75	7,662.85	8.91	861.424		
900.00	899.58	799.45	838.42	4.93	4.59	-66.45	-495.64	-7,661.05	7,670.45	7,660.94	9.52	805.991		
1,000.00	999.44	904.28	943.25	5.27	4.91	-66.49	-496.67	-7,661.78	7,669.11	7,658.94	10.18	753.623		
1,100.00	1,099.31	1,009.52	1,048.48	5.62	5.26	-66.54	-497.55	-7,662.46	7,667.71	7,656.84	10.87	705.407		
1,200.00	1,199.17	1,111.34	1,150.30	5.98	5.60	-66.58	-498.10	-7,663.09	7,666.26	7,654.68	11.58	662.107		
1,300.00	1,299.03	1,208.89	1,247.84	6.36	5.95	-66.61	-498.45	-7,663.71	7,664.83	7,652.54	12.29	623.473		
1,400.00	1,398.89	1,318.92	1,357.87	6.74	6.35	-66.66	-498.72	-7,664.33	7,663.31	7,650.24	13.07	586.243		
1,500.00	1,498.75	1,410.99	1,449.93	7.13	6.69	-66.69	-499.01	-7,664.86	7,661.81	7,648.02	13.80	555.227		
1,600.00	1,598.61	1,510.73	1,549.68	7.52	7.06	-66.73	-499.40	-7,665.46	7,660.36	7,645.79	14.57	525.853		
1,700.00	1,698.47	1,604.02	1,642.97	7.92	7.42	-66.77	-499.72	-7,666.08	7,658.96	7,643.64	15.32	499.883		
1,800.00	1,798.33	1,712.89	1,751.83	8.32	7.84	-66.81	-499.90	-7,666.80	7,657.55	7,641.40	16.14	474.310		
1,900.00	1,898.19	1,809.02	1,847.96	8.73	8.22	-66.84	-500.02	-7,667.41	7,656.12	7,639.19	16.93	452.318		
2,000.00	1,998.05	1,911.15	1,950.08	9.14	8.62	-66.88	-500.24	-7,668.04	7,654.68	7,636.94	17.74	431.532		
2,100.00	2,097.91	2,003.54	2,042.48	9.55	8.99	-66.91	-500.44	-7,668.66	7,653.29	7,634.77	18.52	413.297		
2,200.00	2,197.78	2,141.74	2,180.67	9.97	9.54	-66.97	-500.51	-7,669.22	7,651.60	7,632.11	19.48	392.696		
2,300.00	2,297.64	2,252.27	2,291.20	10.39	9.99	-67.01	-501.01	-7,669.38	7,649.72	7,629.38	20.35	375.990		
2,400.00	2,397.50	2,357.76	2,396.69	10.81	10.42	-67.05	-501.66	-7,669.34	7,647.67	7,626.48	21.19	360.918		
2,500.00	2,497.36	2,456.68	2,495.60	11.23	10.82	-67.09	-502.13	-7,669.33	7,645.64	7,623.63	22.01	347.365		
2,600.00	2,597.22	2,580.97	2,619.89	11.65	11.32	-67.14	-502.57	-7,669.19	7,643.51	7,620.57	22.94	333.250		
2,700.00	2,697.08	2,706.36	2,745.29	12.07	11.83	-67.19	-502.69	-7,668.58	7,640.98	7,617.12	23.87	320.131		
2,800.00	2,796.94	2,800.34	2,839.26	12.50	12.22	-67.22	-502.44	-7,668.05	7,638.35	7,613.68	24.68	309.542		
2,900.00	2,896.80	2,855.05	2,893.97	12.92	12.44	-67.24	-502.12	-7,667.94	7,636.05	7,610.73	25.33	301.489		
3,000.00	2,996.66	2,900.01	2,938.93	13.35	12.63	-67.25	-501.73	-7,668.09	7,634.36	7,608.42	25.94	294.309		
3,100.00	3,096.52	2,971.27	3,010.18	13.78	12.92	-67.27	-500.96	-7,668.75	7,633.18	7,606.51	26.66	286.297		
3,200.00	3,196.38	3,047.48	3,086.38	14.21	13.24	-67.29	-500.02	-7,669.86	7,632.47	7,605.07	27.41	278.503		
3,300.00	3,296.25	3,123.72	3,162.60	14.64	13.55	-67.31	-498.92	-7,671.11	7,631.98	7,603.83	28.15	271.116		
3,349.56	3,345.73	3,151.67	3,190.54	14.85	13.67	-67.32	-498.48	-7,671.68	7,631.91	7,603.43	28.48	267.989		
3,400.00	3,396.11	3,180.13	3,218.99	15.07	13.79	-67.32	-498.02	-7,672.34	7,631.98	7,603.17	28.81	264.883		
3,500.00	3,495.97	3,248.56	3,287.39	15.50	14.08	-67.34	-496.81	-7,674.20	7,632.51	7,602.98	29.53	258.499		
3,600.00	3,595.83	3,333.08	3,371.85	15.93	14.43	-67.35	-495.15	-7,676.79	7,633.35	7,603.04	30.31	251.852		
3,700.00	3,695.69	3,449.88	3,488.56	16.36	14.92	-67.37	-492.26	-7,680.39	7,634.20	7,602.97	31.23	244.449		
3,800.00	3,795.55	3,579.45	3,618.03	16.80	15.47	-67.39	-488.72	-7,683.94	7,634.67	7,602.46	32.21	237.048		
3,900.00	3,895.41	3,682.92	3,721.43	17.23	15.90	-67.41	-486.21	-7,686.52	7,634.92	7,601.85	33.07	230.845		
4,000.00	3,995.27	3,786.13	3,824.60	17.66	16.33	-67.43	-484.06	-7,689.04	7,635.16	7,601.22	33.94	224.961		
4,100.00	4,095.13	3,887.54	3,925.96	18.10	16.76	-67.45	-482.16	-7,691.46	7,635.36	7,600.56	34.80	219.414		
4,200.00	4,194.99	3,991.06	4,029.44	18.53	17.20	-67.48	-480.57	-7,693.88	7,635.53	7,599.87	35.67	214.075		
4,300.00	4,294.85	4,114.95	4,153.28	18.96	17.72	-67.51	-478.78	-7,696.54	7,635.54	7,598.91	36.62	208.489		
4,400.00	4,394.71	4,202.96	4,241.27	19.40	18.09	-67.53	-477.58	-7,698.39	7,635.49	7,598.06	37.43	204.008		
4,500.00	4,494.58	4,310.52	4,348.80	19.83	18.54	-67.56	-476.41	-7,700.60	7,635.43	7,597.12	38.31	199.281		
4,600.00	4,594.44	4,415.37	4,453.62	20.27	18.98	-67.59	-475.66	-7,702.66	7,635.31	7,596.12	39.19	194.820		
4,700.00	4,694.30	4,546.40	4,584.63	20.71	19.54	-67.63	-475.03	-7,704.94	7,635.01	7,594.83	40.18	190.021		
4,800.00	4,794.16	4,667.28	4,705.50	21.14	20.05	-67.67	-474.67	-7,706.44	7,634.20	7,593.07	41.13	185.633		
4,900.00	4,894.02	4,762.96	4,801.17	21.58	20.45	-67.70	-474.37	-7,707.61	7,633.38	7,591.42	41.96	181.900		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STATE-HOPPE 16-3(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.00	4,993.88	4,869.69	4,907.90	22.01	20.90	-67.74	-474.04	-7,708.92	7,632.58	7,589.73	42.85	178.118		
5,100.00	5,093.74	4,973.41	5,011.61	22.45	21.34	-67.77	-473.66	-7,710.09	7,631.67	7,587.94	43.73	174.536		
5,200.00	5,193.60	5,083.15	5,121.34	22.89	21.80	-67.81	-473.16	-7,711.26	7,630.70	7,586.08	44.63	170.995		
5,300.00	5,293.46	5,180.91	5,219.09	23.32	22.22	-67.84	-472.76	-7,712.23	7,629.66	7,584.18	45.48	167.777		
5,400.00	5,393.32	5,285.09	5,323.28	23.76	22.66	-67.88	-472.45	-7,713.26	7,628.63	7,582.27	46.35	164.579		
5,500.00	5,493.18	5,456.51	5,494.68	24.20	23.38	-67.93	-471.54	-7,714.01	7,626.98	7,579.48	47.51	160.537		
5,600.00	5,593.05	5,545.08	5,583.26	24.64	23.76	-67.96	-470.92	-7,714.04	7,624.98	7,576.66	48.32	157.801		
5,700.00	5,692.91	5,623.45	5,661.63	25.07	24.09	-67.99	-470.63	-7,714.32	7,623.31	7,574.22	49.09	155.293		
5,800.00	5,792.77	5,723.96	5,762.13	25.51	24.52	-68.02	-470.32	-7,714.74	7,621.72	7,571.77	49.95	152.580		
5,900.00	5,892.63	5,814.80	5,852.97	25.95	24.90	-68.05	-469.98	-7,715.20	7,620.22	7,569.44	50.77	150.079		
6,000.00	5,992.49	5,910.15	5,948.32	26.39	25.31	-68.08	-469.56	-7,715.75	7,618.78	7,567.16	51.62	147.605		
6,100.00	6,092.35	5,985.74	6,023.90	26.82	25.63	-68.11	-469.31	-7,716.33	7,617.55	7,565.17	52.37	145.443		
6,200.00	6,192.21	6,096.36	6,134.52	27.26	26.10	-68.15	-469.11	-7,717.32	7,616.45	7,563.17	53.28	142.947		
6,300.00	6,292.07	6,167.50	6,205.66	27.70	26.40	-68.17	-469.04	-7,717.99	7,615.43	7,561.40	54.02	140.969		
6,400.00	6,391.93	6,251.90	6,290.05	28.14	26.76	-68.20	-469.02	-7,719.09	7,614.75	7,559.93	54.82	138.910		
6,500.00	6,491.69	6,349.99	6,388.13	28.58	27.18	-29.44	-469.22	-7,720.40	7,612.07	7,556.40	55.67	136.731		
6,600.00	6,589.80	6,463.54	6,501.67	29.02	27.66	-15.72	-469.52	-7,721.86	7,595.65	7,539.07	56.59	134.231		
6,700.00	6,683.86	6,573.74	6,611.87	29.46	28.13	-12.38	-470.06	-7,722.95	7,563.82	7,506.36	57.47	131.620		
6,800.00	6,771.56	6,654.83	6,692.95	29.92	28.47	-11.29	-470.57	-7,723.68	7,517.60	7,459.41	58.19	129.185		
6,900.00	6,850.72	6,720.64	6,758.75	30.40	28.75	-11.24	-471.32	-7,724.35	7,458.31	7,399.50	58.81	126.821		
7,000.00	6,919.40	6,774.23	6,812.33	30.96	28.98	-12.03	-472.03	-7,725.00	7,387.42	7,328.10	59.32	124.528		
7,100.00	6,975.92	6,822.47	6,860.56	31.62	29.19	-13.88	-472.71	-7,725.67	7,306.62	7,246.87	59.76	122.271		
7,200.00	7,018.87	6,863.51	6,901.60	32.44	29.36	-17.71	-473.24	-7,726.28	7,217.81	7,157.70	60.10	120.091		
7,300.00	7,047.21	6,891.17	6,929.25	33.42	29.48	-26.70	-473.56	-7,726.70	7,123.12	7,062.79	60.34	118.055		
7,400.00	7,060.23	6,904.71	6,942.78	34.55	29.54	-57.07	-473.71	-7,726.91	7,024.90	6,964.43	60.47	116.179		
7,500.00	7,060.03	6,900.01	6,938.09	35.83	29.52	-89.89	-473.66	-7,726.84	6,925.48	6,864.99	60.49	114.489		
7,600.00	7,058.28	6,905.82	6,943.90	37.28	29.54	-90.35	-473.72	-7,726.93	6,826.03	6,765.47	60.56	112.720		
7,700.00	7,056.53	6,905.66	6,943.73	38.89	29.54	-90.33	-473.72	-7,726.93	6,726.60	6,665.99	60.61	110.989		
7,800.00	7,054.78	6,905.49	6,943.57	40.63	29.54	-90.32	-473.72	-7,726.92	6,627.18	6,566.52	60.66	109.250		
7,900.00	7,053.03	6,905.33	6,943.40	42.50	29.54	-90.31	-473.72	-7,726.92	6,527.79	6,467.06	60.72	107.503		
8,000.00	7,051.28	6,905.16	6,943.24	44.47	29.54	-90.30	-473.71	-7,726.92	6,428.41	6,367.62	60.79	105.748		
8,100.00	7,049.53	6,905.00	6,943.07	46.53	29.54	-90.28	-473.71	-7,726.91	6,329.05	6,268.18	60.86	103.985		
8,200.00	7,047.78	6,904.83	6,942.91	48.67	29.54	-90.27	-473.71	-7,726.91	6,229.71	6,168.76	60.95	102.214		
8,300.00	7,046.03	6,904.66	6,942.74	50.89	29.54	-90.26	-473.71	-7,726.91	6,130.39	6,069.36	61.04	100.435		
8,400.00	7,044.28	6,904.50	6,942.57	53.16	29.54	-90.24	-473.71	-7,726.91	6,031.10	5,969.96	61.14	98.647		
8,500.00	7,042.53	6,904.33	6,942.41	55.49	29.54	-90.23	-473.71	-7,726.90	5,931.83	5,870.58	61.25	96.850		
8,600.00	7,040.78	6,904.16	6,942.24	57.86	29.54	-90.22	-473.70	-7,726.90	5,832.59	5,771.22	61.37	95.045		
8,700.00	7,039.03	6,903.99	6,942.07	60.28	29.54	-90.20	-473.70	-7,726.90	5,733.37	5,671.87	61.50	93.231		
8,800.00	7,037.28	6,903.82	6,941.90	62.74	29.53	-90.19	-473.70	-7,726.90	5,634.18	5,572.54	61.64	91.409		
8,900.00	7,035.53	6,903.65	6,941.73	65.23	29.53	-90.18	-473.70	-7,726.89	5,535.01	5,473.22	61.79	89.577		
9,000.00	7,033.78	6,903.48	6,941.56	67.74	29.53	-90.16	-473.70	-7,726.89	5,435.88	5,373.92	61.96	87.737		
9,100.00	7,032.03	6,903.31	6,941.39	70.29	29.53	-90.15	-473.69	-7,726.89	5,336.78	5,274.64	62.14	85.887		
9,200.00	7,030.28	6,903.14	6,941.22	72.85	29.53	-90.14	-473.69	-7,726.89	5,237.72	5,175.38	62.33	84.029		
9,300.00	7,028.54	6,902.97	6,941.05	75.44	29.53	-90.12	-473.69	-7,726.88	5,138.69	5,076.14	62.54	82.161		
9,400.00	7,026.79	6,902.80	6,940.88	78.05	29.53	-90.11	-473.69	-7,726.88	5,039.70	4,976.92	62.77	80.285		
9,500.00	7,025.04	6,902.63	6,940.71	80.67	29.53	-90.09	-473.69	-7,726.88	4,940.75	4,877.73	63.02	78.399		
9,600.00	7,023.29	6,902.46	6,940.53	83.31	29.53	-90.08	-473.69	-7,726.88	4,841.84	4,778.55	63.29	76.505		
9,700.00	7,021.54	6,902.28	6,940.36	85.96	29.53	-90.07	-473.68	-7,726.87	4,742.98	4,679.40	63.58	74.602		
9,800.00	7,019.79	6,902.11	6,940.19	88.63	29.53	-90.05	-473.68	-7,726.87	4,644.17	4,580.28	63.89	72.690		
9,900.00	7,018.04	6,901.94	6,940.01	91.30	29.53	-90.04	-473.68	-7,726.87	4,545.41	4,481.18	64.23	70.769		
10,000.00	7,016.29	6,901.76	6,939.84	93.99	29.53	-90.03	-473.68	-7,726.86	4,446.70	4,382.11	64.59	68.841		
10,100.00	7,014.54	6,901.59	6,939.66	96.69	29.52	-90.01	-473.68	-7,726.86	4,348.06	4,283.07	64.99	66.905		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STATE-HOPPE 16-3(PR_150CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-GYRO-NS													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,200.00	7,012.79	6,901.41	6,939.49	99.40	29.52	-90.00	-473.67	-7,726.86	4,249.48	4,184.06	65.42	64.961		
10,300.00	7,011.04	6,901.23	6,939.31	102.11	29.52	-89.98	-473.67	-7,726.86	4,150.96	4,085.08	65.88	63.010		
10,400.00	7,009.29	6,901.06	6,939.14	104.83	29.52	-89.97	-473.67	-7,726.85	4,052.52	3,986.14	66.38	61.053		
10,500.00	7,007.54	6,900.88	6,938.96	107.56	29.52	-89.96	-473.67	-7,726.85	3,954.16	3,887.24	66.92	59.091		
10,600.00	7,005.79	6,900.70	6,938.78	110.30	29.52	-89.94	-473.67	-7,726.85	3,855.88	3,788.38	67.50	57.123		
10,700.00	7,004.04	6,900.53	6,938.60	113.04	29.52	-89.93	-473.66	-7,726.85	3,757.69	3,689.56	68.13	55.151		
10,800.00	7,002.29	6,900.35	6,938.43	115.79	29.52	-89.91	-473.66	-7,726.84	3,659.60	3,590.78	68.82	53.177		
10,900.00	7,000.54	6,900.17	6,938.25	118.54	29.52	-89.90	-473.66	-7,726.84	3,561.62	3,492.05	69.56	51.200		
11,000.00	6,998.79	6,899.99	6,938.07	121.30	29.52	-89.88	-473.66	-7,726.84	3,463.75	3,393.38	70.37	49.224		
11,100.00	6,997.04	6,899.81	6,937.89	124.06	29.52	-89.87	-473.66	-7,726.83	3,366.00	3,294.76	71.24	47.248		
11,200.00	6,995.29	6,899.63	6,937.71	126.83	29.52	-89.86	-473.66	-7,726.83	3,268.40	3,196.21	72.19	45.275		
11,300.00	6,993.54	6,899.45	6,937.53	129.60	29.52	-89.84	-473.65	-7,726.83	3,170.94	3,097.72	73.22	43.306		
11,400.00	6,991.80	6,899.27	6,937.34	132.37	29.52	-89.83	-473.65	-7,726.83	3,073.64	2,999.30	74.34	41.344		
11,500.00	6,990.05	6,899.08	6,937.16	135.15	29.51	-89.81	-473.65	-7,726.82	2,976.53	2,900.97	75.56	39.391		
11,600.00	6,988.30	6,898.90	6,936.98	137.93	29.51	-89.80	-473.65	-7,726.82	2,879.61	2,802.72	76.89	37.450		
11,700.00	6,986.55	6,898.72	6,936.80	140.72	29.51	-89.78	-473.65	-7,726.82	2,782.91	2,704.57	78.34	35.522		
11,800.00	6,984.80	6,898.53	6,936.61	143.50	29.51	-89.77	-473.64	-7,726.81	2,686.45	2,606.53	79.93	33.611		
11,900.00	6,983.05	6,898.35	6,936.43	146.29	29.51	-89.75	-473.64	-7,726.81	2,590.26	2,508.60	81.66	31.721		
12,000.00	6,981.30	6,898.17	6,936.24	149.09	29.51	-89.74	-473.64	-7,726.81	2,494.37	2,410.82	83.55	29.854		
12,100.00	6,979.55	6,897.98	6,936.06	151.88	29.51	-89.72	-473.64	-7,726.81	2,398.82	2,313.19	85.63	28.013		
12,200.00	6,977.80	6,897.79	6,935.87	154.68	29.51	-89.71	-473.64	-7,726.80	2,303.64	2,215.73	87.91	26.204		
12,300.00	6,976.05	6,897.61	6,935.69	157.48	29.51	-89.70	-473.63	-7,726.80	2,208.89	2,118.47	90.42	24.428		
12,400.00	6,974.30	6,897.42	6,935.50	160.28	29.51	-89.68	-473.63	-7,726.80	2,114.63	2,021.44	93.19	22.692		
12,500.00	6,972.55	6,897.23	6,935.31	163.08	29.51	-89.67	-473.63	-7,726.79	2,020.91	1,924.67	96.24	20.999		
12,600.00	6,970.80	6,897.05	6,935.12	165.89	29.51	-89.65	-473.63	-7,726.79	1,927.83	1,828.21	99.62	19.353		
12,700.00	6,969.05	6,896.86	6,934.94	168.69	29.50	-89.64	-473.63	-7,726.79	1,835.47	1,732.11	103.36	17.758		
12,800.00	6,967.30	6,896.67	6,934.75	171.50	29.50	-89.62	-473.62	-7,726.79	1,743.96	1,636.44	107.51	16.221		
12,900.00	6,965.55	6,896.48	6,934.56	174.31	29.50	-89.61	-473.62	-7,726.78	1,653.43	1,541.29	112.14	14.745		
13,000.00	6,963.80	6,896.29	6,934.37	177.12	29.50	-89.59	-473.62	-7,726.78	1,564.05	1,446.76	117.29	13.335		
13,100.00	6,962.05	6,896.10	6,934.18	179.94	29.50	-89.58	-473.62	-7,726.78	1,476.04	1,352.99	123.05	11.996		
13,200.00	6,960.30	6,895.91	6,933.99	182.75	29.50	-89.56	-473.61	-7,726.77	1,389.65	1,260.16	129.49	10.732		
13,300.00	6,958.55	6,895.71	6,933.79	185.57	29.50	-89.54	-473.61	-7,726.77	1,305.20	1,168.51	136.69	9.549		
13,400.00	6,956.80	6,895.52	6,933.60	188.38	29.50	-89.53	-473.61	-7,726.77	1,223.11	1,078.37	144.74	8.450		
13,500.00	6,955.05	6,895.33	6,933.41	191.20	29.50	-89.51	-473.61	-7,726.76	1,143.86	990.15	153.72	7.441		
13,600.00	6,953.31	6,895.14	6,933.22	194.02	29.50	-89.50	-473.61	-7,726.76	1,068.11	904.43	163.68	6.526		
13,700.00	6,951.56	6,894.94	6,933.02	196.84	29.50	-89.48	-473.60	-7,726.76	996.64	822.02	174.62	5.708		
13,800.00	6,949.81	6,894.75	6,932.83	199.67	29.50	-89.47	-473.60	-7,726.76	930.44	744.00	186.44	4.990		
13,900.00	6,948.06	6,894.55	6,932.63	202.49	29.49	-89.45	-473.60	-7,726.75	870.72	671.81	198.91	4.377		
14,000.00	6,946.31	6,894.36	6,932.44	205.31	29.49	-89.44	-473.60	-7,726.75	818.90	607.35	211.55	3.871		
14,100.00	6,944.56	6,894.16	6,932.24	208.14	29.49	-89.42	-473.60	-7,726.75	776.55	552.95	223.60	3.473		
14,200.00	6,942.81	6,893.96	6,932.04	210.96	29.49	-89.41	-473.59	-7,726.74	745.29	511.24	234.06	3.184		
14,300.00	6,941.06	6,893.77	6,931.85	213.79	29.49	-89.39	-473.59	-7,726.74	726.56	484.75	241.82	3.005		
14,387.83	6,939.52	6,893.59	6,931.67	216.27	29.49	-89.38	-473.59	-7,726.74	721.24	475.56	245.67	2.936 CC		
14,400.00	6,939.31	6,893.57	6,931.65	216.62	29.49	-89.37	-473.59	-7,726.74	721.34	475.37	245.96	2.933 ES, SF		
14,500.00	6,937.56	6,893.37	6,931.45	219.44	29.49	-89.36	-473.59	-7,726.73	729.91	483.80	246.11	2.966		
14,600.00	6,935.81	6,893.17	6,931.25	222.27	29.49	-89.34	-473.58	-7,726.73	751.80	509.29	242.50	3.100		
14,700.00	6,934.06	6,892.97	6,931.05	225.10	29.49	-89.33	-473.58	-7,726.73	785.89	549.96	235.93	3.331		
14,800.00	6,932.31	6,892.77	6,930.85	227.93	29.49	-89.31	-473.58	-7,726.72	830.70	603.29	227.41	3.653		
14,817.75	6,932.00	6,892.73	6,930.81	228.43	29.49	-89.31	-473.58	-7,726.72	839.65	613.88	225.77	3.719		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STOCKOVER 16-1(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	62.00	3.28	3.28	-113.95	-1,585.20	-3,568.45	3,905.20					
100.00	100.00	38.00	100.00	3.28	3.35	-113.95	-1,585.20	-3,568.45	3,904.71	3,898.08	6.63	588.846		
200.00	200.00	138.00	200.00	3.34	4.49	-113.95	-1,585.20	-3,568.45	3,904.71	3,896.88	7.83	498.620		
300.00	300.00	238.00	300.00	3.44	7.34	-113.95	-1,585.20	-3,568.45	3,904.71	3,893.92	10.78	362.152		
400.00	400.00	338.00	400.00	3.60	10.58	-113.95	-1,585.20	-3,568.45	3,904.71	3,890.53	14.18	275.388		
500.00	500.00	438.00	500.00	3.81	13.94	-113.95	-1,585.20	-3,568.45	3,904.71	3,886.96	17.74	220.076		
600.00	599.98	537.98	599.98	4.05	17.35	-86.60	-1,585.20	-3,568.45	3,904.60	3,883.21	21.39	182.513		
700.00	699.86	637.86	699.86	4.32	20.78	-86.67	-1,585.20	-3,568.45	3,904.32	3,879.22	25.10	155.564		
800.00	799.72	737.72	799.72	4.62	24.23	-86.75	-1,585.20	-3,568.45	3,904.02	3,875.17	28.84	135.356		
900.00	899.58	837.58	899.58	4.93	27.69	-86.83	-1,585.20	-3,568.45	3,903.72	3,871.10	32.62	119.678		
1,000.00	999.44	937.44	999.44	5.27	31.15	-86.91	-1,585.20	-3,568.45	3,903.43	3,867.01	36.42	107.183		
1,100.00	1,099.31	1,037.31	1,099.31	5.62	34.62	-86.98	-1,585.20	-3,568.45	3,903.15	3,862.91	40.24	97.004		
1,200.00	1,199.17	1,137.17	1,199.17	5.98	38.09	-87.06	-1,585.20	-3,568.45	3,902.88	3,858.81	44.07	88.559		
1,300.00	1,299.03	1,237.03	1,299.03	6.36	41.57	-87.14	-1,585.20	-3,568.45	3,902.61	3,854.69	47.92	81.445		
1,400.00	1,398.89	1,336.89	1,398.89	6.74	45.04	-87.21	-1,585.20	-3,568.45	3,902.35	3,850.58	51.77	75.374		
1,500.00	1,498.75	1,436.75	1,498.75	7.13	48.52	-87.29	-1,585.20	-3,568.45	3,902.10	3,846.46	55.64	70.133		
1,600.00	1,598.61	1,536.61	1,598.61	7.52	52.00	-87.37	-1,585.20	-3,568.45	3,901.85	3,842.34	59.51	65.566		
1,700.00	1,698.47	1,636.47	1,698.47	7.92	55.48	-87.45	-1,585.20	-3,568.45	3,901.61	3,838.22	63.39	61.552		
1,800.00	1,798.33	1,736.33	1,798.33	8.32	58.96	-87.52	-1,585.20	-3,568.45	3,901.38	3,834.11	67.27	57.995		
1,900.00	1,898.19	1,836.19	1,898.19	8.73	62.44	-87.60	-1,585.20	-3,568.45	3,901.16	3,830.00	71.16	54.824		
2,000.00	1,998.05	1,936.05	1,998.05	9.14	65.92	-87.68	-1,585.20	-3,568.45	3,900.94	3,825.89	75.05	51.979		
2,100.00	2,097.91	2,035.91	2,097.91	9.55	69.41	-87.75	-1,585.20	-3,568.45	3,900.73	3,821.78	78.94	49.412		
2,200.00	2,197.78	2,135.78	2,197.78	9.97	72.89	-87.83	-1,585.20	-3,568.45	3,900.52	3,817.68	82.84	47.085		
2,300.00	2,297.64	2,235.64	2,297.64	10.39	76.37	-87.91	-1,585.20	-3,568.45	3,900.33	3,813.59	86.74	44.966		
2,400.00	2,397.50	2,335.50	2,397.50	10.81	79.85	-87.99	-1,585.20	-3,568.45	3,900.14	3,809.50	90.64	43.029		
2,500.00	2,497.36	2,435.36	2,497.36	11.23	83.34	-88.06	-1,585.20	-3,568.45	3,899.96	3,805.41	94.54	41.250		
2,600.00	2,597.22	2,535.22	2,597.22	11.65	86.82	-88.14	-1,585.20	-3,568.45	3,899.78	3,801.33	98.45	39.612		
2,700.00	2,697.08	2,635.08	2,697.08	12.07	90.30	-88.22	-1,585.20	-3,568.45	3,899.61	3,797.26	102.36	38.098		
2,800.00	2,796.94	2,734.94	2,796.94	12.50	93.79	-88.30	-1,585.20	-3,568.45	3,899.45	3,793.19	106.26	36.696		
2,900.00	2,896.80	2,834.80	2,896.80	12.92	97.27	-88.37	-1,585.20	-3,568.45	3,899.30	3,789.13	110.17	35.392		
3,000.00	2,996.66	2,934.66	2,996.66	13.35	100.76	-88.45	-1,585.20	-3,568.45	3,899.15	3,785.07	114.08	34.178		
3,100.00	3,096.52	3,034.52	3,096.52	13.78	104.24	-88.53	-1,585.20	-3,568.45	3,899.01	3,781.02	118.00	33.044		
3,200.00	3,196.38	3,134.38	3,196.38	14.21	107.73	-88.61	-1,585.20	-3,568.45	3,898.88	3,776.97	121.91	31.982		
3,300.00	3,296.25	3,234.25	3,296.25	14.64	111.21	-88.68	-1,585.20	-3,568.45	3,898.76	3,772.94	125.82	30.986		
3,400.00	3,396.11	3,334.11	3,396.11	15.07	114.70	-88.76	-1,585.20	-3,568.45	3,898.64	3,768.90	129.74	30.050		
3,500.00	3,495.97	3,433.97	3,495.97	15.50	118.18	-88.84	-1,585.20	-3,568.45	3,898.53	3,764.88	133.65	29.169		
3,600.00	3,595.83	3,533.83	3,595.83	15.93	121.66	-88.91	-1,585.20	-3,568.45	3,898.43	3,760.86	137.57	28.338		
3,700.00	3,695.69	3,633.69	3,695.69	16.36	125.15	-88.99	-1,585.20	-3,568.45	3,898.33	3,756.85	141.48	27.553		
3,800.00	3,795.55	3,733.55	3,795.55	16.80	128.63	-89.07	-1,585.20	-3,568.45	3,898.24	3,752.84	145.40	26.810		
3,900.00	3,895.41	3,833.41	3,895.41	17.23	132.12	-89.15	-1,585.20	-3,568.45	3,898.16	3,748.84	149.32	26.107		
4,000.00	3,995.27	3,933.27	3,995.27	17.66	135.60	-89.22	-1,585.20	-3,568.45	3,898.08	3,744.85	153.24	25.439		
4,100.00	4,095.13	4,033.13	4,095.13	18.10	139.09	-89.30	-1,585.20	-3,568.45	3,898.01	3,740.86	157.15	24.804		
4,200.00	4,194.99	4,132.99	4,194.99	18.53	142.58	-89.38	-1,585.20	-3,568.45	3,897.95	3,736.88	161.07	24.200		
4,300.00	4,294.85	4,232.85	4,294.85	18.96	146.06	-89.46	-1,585.20	-3,568.45	3,897.90	3,732.91	164.99	23.625		
4,400.00	4,394.71	4,332.71	4,394.71	19.40	149.55	-89.53	-1,585.20	-3,568.45	3,897.85	3,728.94	168.91	23.076		
4,500.00	4,494.58	4,432.58	4,494.58	19.83	153.03	-89.61	-1,585.20	-3,568.45	3,897.81	3,724.98	172.83	22.553		
4,600.00	4,594.44	4,532.44	4,594.44	20.27	156.52	-89.69	-1,585.20	-3,568.45	3,897.78	3,721.03	176.75	22.053		
4,700.00	4,694.30	4,632.30	4,694.30	20.71	160.00	-89.77	-1,585.20	-3,568.45	3,897.76	3,717.09	180.67	21.574		
4,800.00	4,794.16	4,732.16	4,794.16	21.14	163.49	-89.84	-1,585.20	-3,568.45	3,897.74	3,713.15	184.59	21.116		
4,900.00	4,894.02	4,832.02	4,894.02	21.58	166.97	-89.92	-1,585.20	-3,568.45	3,897.73	3,709.22	188.51	20.676		
5,000.00	4,993.88	4,931.88	4,993.88	22.01	170.46	-90.00	-1,585.20	-3,568.45	3,897.72	3,705.29	192.43	20.255		
5,002.16	4,996.04	4,934.04	4,996.04	22.02	170.53	-90.00	-1,585.20	-3,568.45	3,897.72	3,705.21	192.52	20.246		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STOCKOVER 16-1(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.00	5,093.74	5,031.74	5,093.74	22.45	173.94	-90.08	-1,585.20	-3,568.45	3,897.73	3,701.37	196.35	19.851		
5,200.00	5,193.60	5,131.60	5,193.60	22.89	177.43	-90.15	-1,585.20	-3,568.45	3,897.74	3,697.46	200.28	19.462		
5,300.00	5,293.46	5,231.46	5,293.46	23.32	180.91	-90.23	-1,585.20	-3,568.45	3,897.76	3,693.56	204.20	19.088		
5,400.00	5,393.32	5,331.32	5,393.32	23.76	184.40	-90.31	-1,585.20	-3,568.45	3,897.78	3,689.66	208.12	18.729		
5,500.00	5,493.18	5,431.18	5,493.18	24.20	187.89	-90.39	-1,585.20	-3,568.45	3,897.81	3,685.77	212.04	18.382		
5,600.00	5,593.05	5,531.05	5,593.05	24.64	191.37	-90.46	-1,585.20	-3,568.45	3,897.85	3,681.89	215.96	18.049		
5,700.00	5,692.91	5,630.91	5,692.91	25.07	194.86	-90.54	-1,585.20	-3,568.45	3,897.90	3,678.01	219.89	17.727		
5,800.00	5,792.77	5,730.77	5,792.77	25.51	198.34	-90.62	-1,585.20	-3,568.45	3,897.95	3,674.14	223.81	17.416		
5,900.00	5,892.63	5,830.63	5,892.63	25.95	201.83	-90.69	-1,585.20	-3,568.45	3,898.01	3,670.28	227.73	17.117		
6,000.00	5,992.49	5,930.49	5,992.49	26.39	205.31	-90.77	-1,585.20	-3,568.45	3,898.08	3,666.43	231.65	16.827		
6,100.00	6,092.35	6,030.35	6,092.35	26.82	208.80	-90.85	-1,585.20	-3,568.45	3,898.15	3,662.58	235.58	16.547		
6,200.00	6,192.21	6,130.21	6,192.21	27.26	212.29	-90.93	-1,585.20	-3,568.45	3,898.24	3,658.74	239.50	16.277		
6,300.00	6,292.07	6,230.07	6,292.07	27.70	215.77	-91.00	-1,585.20	-3,568.45	3,898.33	3,654.90	243.42	16.015		
6,400.00	6,391.93	6,329.93	6,391.93	28.14	219.26	-91.08	-1,585.20	-3,568.45	3,898.42	3,651.07	247.35	15.761		
6,500.00	6,491.69	6,429.69	6,491.69	28.58	222.74	-91.16	-1,585.20	-3,568.45	3,898.51	3,647.24	251.27	15.508		
6,600.00	6,589.80	6,527.80	6,589.80	29.02	226.16	-91.24	-1,585.20	-3,568.45	3,898.60	3,643.41	255.19	15.255		
6,700.00	6,683.86	6,621.86	6,683.86	29.46	229.45	-91.32	-1,585.20	-3,568.45	3,898.69	3,639.58	259.12	15.002		
6,800.00	6,771.56	6,709.56	6,771.56	29.92	232.51	-91.40	-1,585.20	-3,568.45	3,898.78	3,635.75	263.04	14.749		
6,900.00	6,857.72	6,795.72	6,857.72	30.40	235.27	-91.48	-1,585.20	-3,568.45	3,898.87	3,631.92	266.96	14.496		
7,000.00	6,919.40	6,857.40	6,919.40	30.96	237.67	-91.56	-1,585.20	-3,568.45	3,903.41	3,628.09	270.88	14.243		
7,100.00	6,975.92	6,913.92	6,975.92	31.62	239.64	-91.64	-1,585.20	-3,568.45	3,903.81	3,624.26	274.80	13.990		
7,200.00	7,018.87	6,956.87	7,018.87	32.44	241.14	-91.72	-1,585.20	-3,568.45	3,903.90	3,620.43	278.72	13.737		
7,300.00	7,047.21	6,985.21	7,047.21	33.42	242.13	-91.80	-1,585.20	-3,568.45	3,904.00	3,616.60	282.64	13.484		
7,400.00	7,060.23	7,001.77	7,060.23	34.55	242.71	-91.88	-1,585.20	-3,568.45	3,904.10	3,612.77	286.56	13.231		
7,500.00	7,060.03	7,001.97	7,060.03	35.83	242.72	-91.96	-1,585.20	-3,568.45	3,904.20	3,608.94	290.48	12.978		
7,600.00	7,058.28	7,003.72	7,058.28	37.28	242.78	-92.04	-1,585.20	-3,568.45	3,904.30	3,605.11	294.40	12.725		
7,700.00	7,056.53	7,005.47	7,056.53	38.89	242.84	-92.12	-1,585.20	-3,568.45	3,904.40	3,601.28	298.32	12.472		
7,800.00	7,054.78	7,007.22	7,054.78	40.63	242.90	-92.20	-1,585.20	-3,568.45	3,904.50	3,597.45	302.24	12.219		
7,900.00	7,053.03	7,008.97	7,053.03	42.50	242.96	-92.28	-1,585.20	-3,568.45	3,904.60	3,593.62	306.16	11.966		
8,000.00	7,051.28	7,009.28	7,051.28	44.47	242.97	-92.36	-1,585.20	-3,568.45	3,904.70	3,589.79	310.08	11.713		
8,100.00	7,049.53	7,009.53	7,049.53	46.53	242.21	-92.44	-1,585.20	-3,568.45	3,904.80	3,585.96	314.00	11.460		
8,200.00	7,047.78	7,007.78	7,047.78	48.67	242.15	-92.52	-1,585.20	-3,568.45	3,904.90	3,582.13	317.92	11.207		
8,300.00	7,046.03	7,006.03	7,046.03	50.89	242.09	-92.60	-1,585.20	-3,568.45	3,905.00	3,578.30	321.84	10.954		
8,400.00	7,044.28	7,004.28	7,044.28	53.16	242.03	-92.68	-1,585.20	-3,568.45	3,905.10	3,574.47	325.76	10.701		
8,500.00	7,042.53	7,002.53	7,042.53	55.49	241.97	-92.76	-1,585.20	-3,568.45	3,905.20	3,570.64	329.68	10.448		
8,600.00	7,040.78	7,000.78	7,040.78	57.86	241.91	-92.84	-1,585.20	-3,568.45	3,905.30	3,566.81	333.60	10.195		
8,700.00	7,039.03	6,999.03	7,039.03	60.28	241.85	-92.92	-1,585.20	-3,568.45	3,905.40	3,562.98	337.52	9.942		
8,800.00	7,037.28	6,997.28	7,037.28	62.74	241.78	-93.00	-1,585.20	-3,568.45	3,905.50	3,559.15	341.44	9.689		
8,900.00	7,035.53	6,995.53	7,035.53	65.23	241.72	-93.08	-1,585.20	-3,568.45	3,905.60	3,555.32	345.36	9.436		
9,000.00	7,033.78	6,993.78	7,033.78	67.74	241.66	-93.16	-1,585.20	-3,568.45	3,905.70	3,551.49	349.28	9.183		
9,100.00	7,032.03	6,992.03	7,032.03	70.29	241.60	-93.24	-1,585.20	-3,568.45	3,905.80	3,547.66	353.20	8.930		
9,200.00	7,030.28	6,990.28	7,030.28	72.85	241.54	-93.32	-1,585.20	-3,568.45	3,905.90	3,543.83	357.12	8.677		
9,300.00	7,028.54	6,988.54	7,028.54	75.44	241.48	-93.40	-1,585.20	-3,568.45	3,906.00	3,539.99	361.04	8.424		
9,400.00	7,026.79	6,986.79	7,026.79	78.05	241.42	-93.48	-1,585.20	-3,568.45	3,906.10	3,536.16	364.96	8.171		
9,500.00	7,025.04	6,985.04	7,025.04	80.67	241.36	-93.56	-1,585.20	-3,568.45	3,906.20	3,532.33	368.88	7.918		
9,600.00	7,023.29	6,983.29	7,023.29	83.31	241.30	-93.64	-1,585.20	-3,568.45	3,906.30	3,528.50	372.80	7.665		
9,700.00	7,021.54	6,981.54	7,021.54	85.96	241.23	-93.72	-1,585.20	-3,568.45	3,906.40	3,524.67	376.72	7.412		
9,800.00	7,019.79	6,979.79	7,019.79	88.63	241.17	-93.80	-1,585.20	-3,568.45	3,906.50	3,520.84	380.64	7.159		
9,900.00	7,018.04	6,978.04	7,018.04	91.30	241.11	-93.88	-1,585.20	-3,568.45	3,906.60	3,517.01	384.56	6.906		
10,000.00	7,016.29	6,976.29	7,016.29	93.99	241.05	-93.96	-1,585.20	-3,568.45	3,906.70	3,513.18	388.48	6.653		
10,100.00	7,014.54	6,974.54	7,014.54	96.69	240.99	-94.04	-1,585.20	-3,568.45	3,906.80	3,509.35	392.40	6.400		
10,200.00	7,012.79	6,972.79	7,012.79	99.40	240.93	-94.12	-1,585.20	-3,568.45	3,906.90	3,505.52	396.32	6.147		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - STOCKOVER 16-1(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,237.26	7,012.14	6,950.14	7,012.14	100.41	240.91	-90.00	-1,585.20	-3,568.45	1,864.07	1,522.77	341.31	5.462	CC	
10,300.00	7,011.04	6,949.04	7,011.04	102.11	240.87	-89.97	-1,585.20	-3,568.45	1,865.13	1,522.25	342.88	5.440	ES	
10,400.00	7,009.29	6,947.29	7,009.29	104.83	240.81	-89.91	-1,585.20	-3,568.45	1,871.16	1,526.00	345.17	5.421	SF	
10,500.00	7,007.54	6,945.54	7,007.54	107.56	240.75	-89.86	-1,585.20	-3,568.45	1,882.49	1,535.32	347.17	5.422		
10,600.00	7,005.79	6,943.79	7,005.79	110.30	240.69	-89.80	-1,585.20	-3,568.45	1,899.03	1,550.15	348.88	5.443		
10,700.00	7,004.04	6,942.04	7,004.04	113.04	240.62	-89.75	-1,585.20	-3,568.45	1,920.63	1,570.34	350.30	5.483		
10,800.00	7,002.29	6,940.29	7,002.29	115.79	240.56	-89.70	-1,585.20	-3,568.45	1,947.14	1,595.71	351.43	5.541		
10,900.00	7,000.54	6,938.54	7,000.54	118.54	240.50	-89.64	-1,585.20	-3,568.45	1,978.35	1,626.07	352.28	5.616		
11,000.00	6,998.79	6,936.79	6,998.79	121.30	240.44	-89.59	-1,585.20	-3,568.45	2,014.04	1,661.16	352.88	5.707		
11,100.00	6,997.04	6,935.04	6,997.04	124.06	240.38	-89.54	-1,585.20	-3,568.45	2,053.99	1,700.75	353.24	5.815		
11,200.00	6,995.29	6,933.29	6,995.29	126.83	240.32	-89.48	-1,585.20	-3,568.45	2,097.94	1,744.56	353.38	5.937		
11,300.00	6,993.54	6,931.54	6,993.54	129.60	240.26	-89.43	-1,585.20	-3,568.45	2,145.66	1,792.32	353.34	6.073		
11,400.00	6,991.80	6,929.80	6,991.80	132.37	240.20	-89.37	-1,585.20	-3,568.45	2,196.89	1,843.77	353.12	6.221		
11,500.00	6,990.05	6,928.05	6,990.05	135.15	240.14	-89.32	-1,585.20	-3,568.45	2,251.40	1,898.63	352.77	6.382		
11,600.00	6,988.30	6,926.30	6,988.30	137.93	240.07	-89.27	-1,585.20	-3,568.45	2,308.95	1,956.66	352.29	6.554		
11,700.00	6,986.55	6,924.55	6,986.55	140.72	240.01	-89.21	-1,585.20	-3,568.45	2,369.33	2,017.61	351.72	6.736		
11,800.00	6,984.80	6,922.80	6,984.80	143.50	239.95	-89.16	-1,585.20	-3,568.45	2,432.32	2,081.26	351.06	6.929		
11,900.00	6,983.05	6,921.05	6,983.05	146.29	239.89	-89.11	-1,585.20	-3,568.45	2,497.72	2,147.39	350.33	7.130		
12,000.00	6,981.30	6,919.30	6,981.30	149.09	239.83	-89.05	-1,585.20	-3,568.45	2,565.36	2,215.81	349.55	7.339		
12,100.00	6,979.55	6,917.55	6,979.55	151.88	239.77	-89.00	-1,585.20	-3,568.45	2,635.05	2,286.32	348.74	7.556		
12,200.00	6,977.80	6,915.80	6,977.80	154.68	239.71	-88.94	-1,585.20	-3,568.45	2,706.65	2,358.75	347.89	7.780		
12,300.00	6,976.05	6,914.05	6,976.05	157.48	239.65	-88.89	-1,585.20	-3,568.45	2,779.99	2,432.96	347.03	8.011		
12,400.00	6,974.30	6,912.30	6,974.30	160.28	239.59	-88.84	-1,585.20	-3,568.45	2,854.96	2,508.80	346.16	8.248		
12,500.00	6,972.55	6,910.55	6,972.55	163.08	239.52	-88.78	-1,585.20	-3,568.45	2,931.41	2,586.14	345.28	8.490		
12,600.00	6,970.80	6,908.80	6,970.80	165.89	239.46	-88.73	-1,585.20	-3,568.45	3,009.25	2,664.86	344.40	8.738		
12,700.00	6,969.05	6,907.05	6,969.05	168.69	239.40	-88.68	-1,585.20	-3,568.45	3,088.37	2,744.84	343.52	8.990		
12,800.00	6,967.30	6,905.30	6,967.30	171.50	239.34	-88.62	-1,585.20	-3,568.45	3,168.66	2,826.00	342.66	9.247		
12,900.00	6,965.55	6,903.55	6,965.55	174.31	239.28	-88.57	-1,585.20	-3,568.45	3,250.04	2,908.24	341.80	9.509		
13,000.00	6,963.80	6,901.80	6,963.80	177.12	239.22	-88.51	-1,585.20	-3,568.45	3,332.44	2,991.48	340.96	9.774		
13,100.00	6,962.05	6,900.05	6,962.05	179.94	239.16	-88.46	-1,585.20	-3,568.45	3,415.78	3,075.65	340.13	10.043		
13,200.00	6,960.30	6,901.70	6,960.30	182.75	239.22	-88.41	-1,585.20	-3,568.45	3,499.99	3,160.55	339.44	10.311		
13,300.00	6,958.55	6,903.45	6,958.55	185.57	239.28	-88.35	-1,585.20	-3,568.45	3,585.01	3,246.24	338.77	10.582		
13,400.00	6,956.80	6,905.20	6,956.80	188.38	239.34	-88.30	-1,585.20	-3,568.45	3,670.78	3,332.66	338.12	10.856		
13,500.00	6,955.05	6,906.95	6,955.05	191.20	239.40	-88.25	-1,585.20	-3,568.45	3,757.26	3,419.77	337.49	11.133		
13,600.00	6,953.31	6,908.70	6,953.31	194.02	239.46	-88.19	-1,585.20	-3,568.45	3,844.39	3,507.52	336.87	11.412		
13,700.00	6,951.56	6,889.56	6,951.56	196.84	238.79	-88.14	-1,585.20	-3,568.45	3,932.13	3,596.59	335.55	11.719		
13,800.00	6,949.81	6,887.81	6,949.81	199.67	238.73	-88.09	-1,585.20	-3,568.45	4,020.45	3,685.60	334.85	12.007		
13,900.00	6,948.06	6,886.06	6,948.06	202.49	238.67	-88.03	-1,585.20	-3,568.45	4,109.30	3,775.13	334.17	12.297		
14,000.00	6,946.31	6,884.31	6,946.31	205.31	238.61	-87.98	-1,585.20	-3,568.45	4,198.65	3,865.14	333.51	12.589		
14,100.00	6,944.56	6,882.56	6,944.56	208.14	238.55	-87.92	-1,585.20	-3,568.45	4,288.47	3,955.60	332.87	12.883		
14,200.00	6,942.81	6,880.81	6,942.81	210.96	238.49	-87.87	-1,585.20	-3,568.45	4,378.73	4,046.49	332.24	13.179		
14,300.00	6,941.06	6,879.06	6,941.06	213.79	238.43	-87.82	-1,585.20	-3,568.45	4,469.40	4,137.77	331.63	13.477		
14,400.00	6,939.31	6,877.31	6,939.31	216.62	238.36	-87.76	-1,585.20	-3,568.45	4,560.47	4,229.42	331.04	13.776		
14,500.00	6,937.56	6,875.56	6,937.56	219.44	238.30	-87.71	-1,585.20	-3,568.45	4,651.90	4,321.43	330.47	14.077		
14,600.00	6,935.81	6,873.81	6,935.81	222.27	238.24	-87.66	-1,585.20	-3,568.45	4,743.67	4,413.76	329.91	14.379		
14,700.00	6,934.06	6,872.06	6,934.06	225.10	238.18	-87.60	-1,585.20	-3,568.45	4,835.77	4,506.40	329.37	14.682		
14,800.00	6,932.31	6,870.31	6,932.31	227.93	238.12	-87.55	-1,585.20	-3,568.45	4,928.18	4,599.34	328.85	14.986		
14,817.75	6,932.00	6,870.00	6,932.00	228.43	238.11	-87.54	-1,585.20	-3,568.45	4,944.61	4,615.86	328.76	15.040		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 78-MWVD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	60.22	3.28	3.28	-92.34	-373.67	-9,145.36	9,153.19					
100.00	100.00	185.85	211.83	3.28	3.34	-92.33	-372.22	-9,143.79	9,152.05	9,145.42	6.62	1,381.922		
200.00	200.00	289.38	315.35	3.34	3.45	-92.33	-371.71	-9,142.47	9,150.75	9,143.96	6.79	1,348.190		
300.00	300.00	369.19	395.15	3.44	3.58	-92.33	-371.54	-9,141.57	9,149.61	9,142.59	7.02	1,303.612		
400.00	400.00	465.15	491.11	3.60	3.76	-92.33	-371.30	-9,140.60	9,148.59	9,141.23	7.36	1,242.391		
500.00	500.00	547.74	573.70	3.81	3.95	-92.32	-371.08	-9,139.84	9,147.67	9,139.92	7.75	1,179.621		
600.00	599.98	623.97	649.93	4.05	4.15	-64.98	-371.20	-9,139.31	9,146.25	9,138.06	8.19	1,117.075		
700.00	699.86	738.78	764.73	4.32	4.47	-65.04	-371.35	-9,138.74	9,143.73	9,134.95	8.78	1,041.425		
800.00	799.72	849.71	875.66	4.62	4.81	-65.07	-371.20	-9,137.89	9,140.74	9,131.32	9.42	970.496		
900.00	899.58	930.80	956.75	4.93	5.08	-65.09	-371.08	-9,137.30	9,137.78	9,127.77	10.00	913.724		
1,000.00	999.44	984.00	1,009.95	5.27	5.26	-65.11	-371.13	-9,137.00	9,135.09	9,124.57	10.52	868.761		
1,100.00	1,099.31	984.00	1,009.95	5.62	5.26	-65.11	-371.13	-9,137.00	9,133.30	9,122.43	10.87	840.585		
1,200.00	1,199.17	1,049.98	1,075.92	5.98	5.47	-65.13	-371.13	-9,137.29	9,131.76	9,120.32	11.45	797.875		
1,300.00	1,299.03	1,112.00	1,137.93	6.36	5.68	-65.14	-370.90	-9,138.67	9,131.50	9,119.48	12.03	759.304		
1,341.34	1,340.31	1,112.00	1,137.93	6.51	5.68	-65.14	-370.90	-9,138.67	9,131.41	9,119.23	12.18	749.555		
1,400.00	1,398.89	1,112.00	1,137.93	6.74	5.68	-65.14	-370.90	-9,138.67	9,131.60	9,119.19	12.41	736.047		
1,500.00	1,498.75	1,112.00	1,137.93	7.13	5.68	-65.14	-370.90	-9,138.67	9,132.79	9,120.00	12.79	713.896		
1,600.00	1,598.61	1,157.21	1,183.10	7.52	5.83	-65.16	-370.68	-9,140.40	9,134.62	9,121.29	13.33	685.013		
1,700.00	1,698.47	1,182.14	1,208.00	7.92	5.92	-65.16	-370.57	-9,141.64	9,137.37	9,123.56	13.81	661.420		
1,800.00	1,798.33	1,241.00	1,266.74	8.32	6.12	-65.18	-370.38	-9,145.39	9,141.19	9,126.78	14.41	634.150		
1,900.00	1,898.19	1,241.00	1,266.74	8.73	6.12	-65.18	-370.38	-9,145.39	9,145.35	9,130.53	14.82	617.245		
2,000.00	1,998.05	1,241.00	1,266.74	9.14	6.12	-65.18	-370.38	-9,145.39	9,150.59	9,135.37	15.22	601.238		
2,100.00	2,097.91	1,241.00	1,266.74	9.55	6.12	-65.18	-370.38	-9,145.39	9,156.93	9,141.30	15.62	586.085		
2,200.00	2,197.78	1,302.97	1,328.50	9.97	6.34	-65.19	-370.23	-9,150.60	9,163.46	9,147.21	16.25	563.939		
2,300.00	2,297.64	1,369.00	1,394.14	10.39	6.58	-65.21	-370.07	-9,157.65	9,171.58	9,154.69	16.89	542.921		
2,400.00	2,397.50	1,369.00	1,394.14	10.81	6.58	-65.21	-370.07	-9,157.65	9,179.78	9,162.48	17.30	530.662		
2,500.00	2,497.36	1,369.00	1,394.14	11.23	6.58	-65.21	-370.07	-9,157.65	9,189.06	9,171.36	17.70	519.045		
2,600.00	2,597.22	1,369.00	1,394.14	11.65	6.58	-65.21	-370.07	-9,157.65	9,199.42	9,181.31	18.11	508.034		
2,700.00	2,697.08	1,424.84	1,449.53	12.07	6.79	-65.23	-370.09	-9,164.74	9,210.19	9,191.47	18.72	492.000		
2,800.00	2,796.94	1,450.36	1,474.80	12.50	6.89	-65.23	-370.21	-9,168.29	9,221.96	9,202.74	19.22	479.834		
2,900.00	2,896.80	1,498.00	1,521.90	12.92	7.07	-65.25	-370.63	-9,175.46	9,234.62	9,214.81	19.80	466.286		
3,000.00	2,996.66	1,498.00	1,521.90	13.35	7.07	-65.25	-370.63	-9,175.46	9,247.87	9,227.66	20.20	457.728		
3,100.00	3,096.52	1,498.00	1,521.90	13.78	7.07	-65.25	-370.63	-9,175.46	9,262.18	9,241.58	20.60	449.601		
3,200.00	3,196.38	1,548.57	1,571.76	14.21	7.28	-65.26	-371.24	-9,183.87	9,276.97	9,255.77	21.20	437.650		
3,300.00	3,296.25	1,572.25	1,595.06	14.64	7.38	-65.27	-371.55	-9,188.10	9,292.72	9,271.04	21.69	428.515		
3,400.00	3,396.11	1,626.00	1,647.80	15.07	7.60	-65.29	-372.31	-9,198.40	9,309.48	9,287.18	22.30	417.531		
3,500.00	3,495.97	1,626.00	1,647.80	15.50	7.60	-65.29	-372.31	-9,198.40	9,326.63	9,303.94	22.69	411.132		
3,600.00	3,595.83	1,626.00	1,647.80	15.93	7.60	-65.29	-372.31	-9,198.40	9,344.82	9,321.74	23.07	405.049		
3,700.00	3,695.69	1,626.00	1,647.80	16.36	7.60	-65.29	-372.31	-9,198.40	9,364.04	9,340.58	23.45	399.264		
3,800.00	3,795.55	1,686.12	1,706.56	16.80	7.88	-65.31	-373.32	-9,211.09	9,383.43	9,359.34	24.09	389.535		
3,900.00	3,895.41	1,754.00	1,772.54	17.23	8.19	-65.33	-374.72	-9,226.97	9,404.46	9,379.70	24.76	379.812		
4,000.00	3,995.27	1,754.00	1,772.54	17.66	8.19	-65.33	-374.72	-9,226.97	9,425.41	9,400.28	25.14	374.979		
4,100.00	4,095.13	1,754.00	1,772.54	18.10	8.19	-65.33	-374.72	-9,226.97	9,447.38	9,421.87	25.51	370.382		
4,200.00	4,194.99	1,754.00	1,772.54	18.53	8.19	-65.33	-374.72	-9,226.97	9,470.35	9,444.48	25.87	366.009		
4,300.00	4,294.85	1,807.50	1,824.29	18.96	8.47	-65.35	-375.85	-9,240.50	9,493.81	9,467.32	26.48	358.506		
4,400.00	4,394.71	1,835.57	1,851.36	19.40	8.61	-65.36	-376.37	-9,247.88	9,518.08	9,491.11	26.97	352.889		
4,500.00	4,494.58	1,883.00	1,896.99	19.83	8.86	-65.38	-377.13	-9,260.81	9,543.12	9,515.57	27.55	346.387		
4,600.00	4,594.44	1,883.00	1,896.99	20.27	8.86	-65.38	-377.13	-9,260.81	9,568.74	9,540.83	27.91	342.897		
4,700.00	4,694.30	1,923.61	1,935.94	20.71	9.09	-65.39	-377.73	-9,272.30	9,595.07	9,566.61	28.45	337.245		
4,800.00	4,794.16	1,954.67	1,965.65	21.14	9.27	-65.40	-378.21	-9,281.32	9,622.06	9,593.11	28.95	332.369		
4,900.00	4,894.02	2,011.00	2,019.39	21.58	9.60	-65.41	-379.14	-9,298.18	9,649.81	9,620.24	29.57	326.327		
5,000.00	4,993.88	2,011.00	2,019.39	22.01	9.60	-65.41	-379.14	-9,298.18	9,678.01	9,648.10	29.91	323.538		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - ULRICH PC I 17-07D(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 78-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.00	5,093.74	2,062.63	2,068.50	22.45	9.92	-65.43	-380.01	-9,314.09	9,706.86	9,676.34	30.51	318.136		
5,200.00	5,193.60	2,106.37	2,110.03	22.89	10.20	-65.44	-380.74	-9,327.82	9,736.22	9,705.15	31.07	313.362		
5,300.00	5,293.46	5,300.00	2,374.03	23.32	32.19	-65.52	-384.66	-9,413.06	9,764.85	9,718.26	46.58	209.627		
5,400.00	5,393.32	2,461.47	2,448.15	23.76	12.57	-65.54	-385.88	-9,436.13	9,792.59	9,758.99	33.61	291.390		
5,500.00	5,493.18	2,525.00	2,508.67	24.20	13.01	-65.56	-386.73	-9,455.43	9,820.88	9,786.60	34.28	286.451		
5,600.00	5,593.05	2,562.35	2,544.20	24.64	13.28	-65.56	-387.13	-9,466.95	9,849.57	9,814.75	34.82	282.849		
5,700.00	5,692.91	2,620.87	2,599.80	25.07	13.70	-65.58	-387.50	-9,485.18	9,878.66	9,843.18	35.48	278.462		
5,800.00	5,792.77	2,653.00	2,630.30	25.51	13.94	-65.58	-387.58	-9,495.29	9,908.16	9,872.18	35.98	275.363		
5,900.00	5,892.63	2,699.10	2,673.98	25.95	14.29	-65.59	-387.61	-9,510.05	9,938.18	9,901.61	36.57	271.780		
6,000.00	5,992.49	2,730.74	2,703.87	26.39	14.53	-65.60	-387.61	-9,520.41	9,968.84	9,931.77	37.07	268.930		
6,100.00	6,092.35	3,002.82	2,961.68	26.82	16.59	-65.66	-390.30	-9,607.24	9,998.27	9,959.32	38.94	256.747		
7,000.00	6,919.40	6,794.78	6,646.85	30.96	38.88	-8.97	-408.62	-10,299.77	9,950.10	9,889.67	60.44	164.636		
7,100.00	6,975.92	6,847.31	6,699.35	31.62	39.06	-10.01	-409.59	-10,301.16	9,869.71	9,808.83	60.88	162.109		
7,200.00	7,018.87	6,887.96	6,739.98	32.44	39.20	-12.35	-410.35	-10,302.26	9,781.12	9,719.90	61.22	159.770		
7,300.00	7,047.21	6,912.26	6,764.27	33.42	39.29	-18.03	-410.82	-10,302.92	9,686.49	9,625.06	61.43	157.673		
7,400.00	7,060.23	6,924.54	6,776.54	34.55	39.33	-40.59	-411.07	-10,303.27	9,588.14	9,526.59	61.55	155.782		
7,500.00	7,060.03	6,926.59	6,778.59	35.83	39.34	-79.73	-411.12	-10,303.33	9,488.43	9,426.84	61.59	154.063		
7,600.00	7,058.28	6,927.44	6,779.43	37.28	39.34	-79.80	-411.13	-10,303.35	9,388.67	9,327.05	61.62	152.364		
7,700.00	7,056.53	6,928.29	6,780.28	38.89	39.35	-79.88	-411.15	-10,303.37	9,288.91	9,227.26	61.65	150.660		
7,800.00	7,054.78	6,929.14	6,781.14	40.63	39.35	-79.95	-411.17	-10,303.40	9,189.16	9,127.47	61.69	148.950		
7,900.00	7,053.03	6,930.00	6,781.99	42.50	39.35	-80.03	-411.19	-10,303.42	9,089.41	9,027.68	61.73	147.235		
8,000.00	7,051.28	6,930.86	6,782.86	44.47	39.36	-80.10	-411.21	-10,303.45	8,989.67	8,927.89	61.78	145.514		
8,100.00	7,049.53	6,931.73	6,783.72	46.53	39.36	-80.18	-411.23	-10,303.47	8,889.93	8,828.11	61.83	143.788		
8,200.00	7,047.78	6,932.59	6,784.59	48.67	39.36	-80.25	-411.24	-10,303.50	8,790.20	8,728.33	61.88	142.057		
8,300.00	7,046.03	6,933.47	6,785.46	50.89	39.37	-80.33	-411.26	-10,303.52	8,690.48	8,628.55	61.93	140.321		
8,400.00	7,044.28	6,934.34	6,786.33	53.16	39.37	-80.41	-411.28	-10,303.54	8,590.76	8,528.77	61.99	138.579		
8,500.00	7,042.53	6,935.22	6,787.21	55.49	39.37	-80.48	-411.30	-10,303.57	8,491.05	8,429.00	62.05	136.833		
8,600.00	7,040.78	6,936.10	6,788.09	57.86	39.38	-80.56	-411.32	-10,303.59	8,391.35	8,329.22	62.12	135.081		
8,700.00	7,039.03	6,936.99	6,788.98	60.28	39.38	-80.64	-411.34	-10,303.62	8,291.65	8,229.46	62.19	133.324		
8,800.00	7,037.28	6,937.88	6,789.87	62.74	39.38	-80.72	-411.36	-10,303.65	8,191.96	8,129.69	62.27	131.562		
8,900.00	7,035.53	6,938.77	6,790.76	65.23	39.39	-80.79	-411.38	-10,303.67	8,092.28	8,029.93	62.35	129.794		
9,000.00	7,033.78	6,939.67	6,791.66	67.74	39.39	-80.87	-411.40	-10,303.70	7,992.60	7,930.17	62.43	128.022		
9,100.00	7,032.03	6,940.57	6,792.56	70.29	39.39	-80.95	-411.42	-10,303.72	7,892.93	7,830.41	62.52	126.245		
9,200.00	7,030.28	6,941.48	6,793.46	72.85	39.39	-81.03	-411.43	-10,303.75	7,793.27	7,730.66	62.62	124.462		
9,300.00	7,028.54	6,942.39	6,794.37	75.44	39.40	-81.11	-411.45	-10,303.77	7,693.62	7,630.91	62.72	122.675		
9,400.00	7,026.79	6,943.30	6,795.29	78.05	39.40	-81.19	-411.47	-10,303.80	7,593.98	7,531.16	62.82	120.882		
9,500.00	7,025.04	6,944.22	6,796.20	80.67	39.40	-81.27	-411.49	-10,303.83	7,494.35	7,431.42	62.93	119.084		
9,600.00	7,023.29	6,945.14	6,797.12	83.31	39.41	-81.35	-411.51	-10,303.85	7,394.73	7,331.68	63.05	117.282		
9,700.00	7,021.54	6,946.06	6,798.04	85.96	39.41	-81.43	-411.54	-10,303.88	7,295.12	7,231.94	63.18	115.474		
9,800.00	7,019.79	6,946.99	6,798.97	88.63	39.41	-81.51	-411.56	-10,303.91	7,195.52	7,132.21	63.31	113.662		
9,900.00	7,018.04	6,947.92	6,799.90	91.30	39.42	-81.60	-411.58	-10,303.93	7,095.93	7,032.49	63.44	111.844		
10,000.00	7,016.29	6,948.86	6,800.84	93.99	39.42	-81.68	-411.60	-10,303.96	6,996.35	6,932.76	63.59	110.022		
10,100.00	7,014.54	6,949.80	6,801.78	96.69	39.42	-81.76	-411.62	-10,303.99	6,896.79	6,833.04	63.74	108.195		
10,200.00	7,012.79	6,950.74	6,802.72	99.40	39.43	-81.84	-411.64	-10,304.01	6,797.23	6,733.33	63.91	106.362		
10,300.00	7,011.04	6,951.69	6,803.67	102.11	39.43	-81.93	-411.66	-10,304.04	6,697.69	6,633.62	64.08	104.526		
10,400.00	7,009.29	6,952.64	6,804.62	104.83	39.43	-82.01	-411.68	-10,304.07	6,598.17	6,533.91	64.26	102.684		
10,500.00	7,007.54	6,953.60	6,805.58	107.56	39.44	-82.10	-411.70	-10,304.10	6,498.65	6,434.21	64.45	100.838		
10,600.00	7,005.79	6,954.56	6,806.54	110.30	39.44	-82.18	-411.72	-10,304.12	6,399.16	6,334.51	64.65	98.987		
10,700.00	7,004.04	6,955.52	6,807.50	113.04	39.45	-82.27	-411.75	-10,304.15	6,299.68	6,234.82	64.86	97.131		
10,800.00	7,002.29	6,956.49	6,808.47	115.79	39.45	-82.35	-411.77	-10,304.18	6,200.21	6,135.13	65.08	95.271		
10,900.00	7,000.54	6,957.47	6,809.44	118.54	39.45	-82.44	-411.79	-10,304.21	6,100.76	6,035.45	65.31	93.407		
11,000.00	6,998.79	6,958.44	6,810.42	121.30	39.46	-82.52	-411.81	-10,304.24	6,001.33	5,935.77	65.56	91.538		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 78-MWVD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
11,100.00	6,997.04	6,959.43	6,811.40	124.06	39.46	-82.61	-411.83	-10,304.26	5,901.92	5,836.10	65.82	89.665		
11,200.00	6,995.29	6,960.41	6,812.39	126.83	39.46	-82.70	-411.86	-10,304.29	5,802.53	5,736.44	66.10	87.788		
11,300.00	6,993.54	6,961.40	6,813.38	129.60	39.47	-82.78	-411.88	-10,304.32	5,703.17	5,636.78	66.39	85.907		
11,400.00	6,991.80	6,962.40	6,814.37	132.37	39.47	-82.87	-411.90	-10,304.35	5,603.82	5,537.12	66.69	84.022		
11,500.00	6,990.05	6,963.40	6,815.37	135.15	39.47	-82.96	-411.93	-10,304.38	5,504.50	5,437.48	67.02	82.134		
11,600.00	6,988.30	6,964.40	6,816.37	137.93	39.48	-83.05	-411.95	-10,304.41	5,405.20	5,337.84	67.36	80.242		
11,700.00	6,986.55	6,965.41	6,817.38	140.72	39.48	-83.14	-411.97	-10,304.44	5,305.92	5,238.20	67.72	78.347		
11,800.00	6,984.80	6,966.42	6,818.39	143.50	39.48	-83.23	-411.99	-10,304.47	5,206.68	5,138.57	68.11	76.449		
11,900.00	6,983.05	6,967.44	6,819.41	146.29	39.49	-83.32	-412.02	-10,304.50	5,107.46	5,038.95	68.51	74.548		
12,000.00	6,981.30	6,968.46	6,820.43	149.09	39.49	-83.41	-412.04	-10,304.53	5,008.28	4,939.34	68.94	72.645		
12,100.00	6,979.55	6,969.49	6,821.45	151.88	39.49	-83.50	-412.07	-10,304.56	4,909.13	4,839.73	69.40	70.740		
12,200.00	6,977.80	6,970.52	6,822.48	154.68	39.50	-83.59	-412.09	-10,304.59	4,810.01	4,740.13	69.88	68.833		
12,300.00	6,976.05	6,971.55	6,823.52	157.48	39.50	-83.68	-412.11	-10,304.62	4,710.93	4,640.54	70.39	66.926		
12,400.00	6,974.30	6,972.59	6,824.56	160.28	39.51	-83.77	-412.14	-10,304.65	4,611.89	4,540.96	70.93	65.017		
12,500.00	6,972.55	6,973.64	6,825.60	163.08	39.51	-83.87	-412.16	-10,304.68	4,512.89	4,441.38	71.51	63.108		
12,600.00	6,970.80	6,974.69	6,826.65	165.89	39.51	-83.96	-412.19	-10,304.71	4,413.94	4,341.82	72.12	61.200		
12,700.00	6,969.05	6,975.74	6,827.70	168.69	39.52	-84.05	-412.21	-10,304.74	4,315.03	4,242.26	72.77	59.293		
12,800.00	6,967.30	6,976.80	6,828.76	171.50	39.52	-84.15	-412.24	-10,304.77	4,216.18	4,142.71	73.47	57.387		
12,900.00	6,965.55	6,977.86	6,829.83	174.31	39.52	-84.24	-412.26	-10,304.80	4,117.38	4,043.17	74.21	55.485		
13,000.00	6,963.80	6,978.93	6,830.89	177.12	39.53	-84.34	-412.29	-10,304.83	4,018.64	3,943.64	75.00	53.585		
13,100.00	6,962.05	6,980.01	6,831.97	179.94	39.53	-84.43	-412.31	-10,304.87	3,919.96	3,844.13	75.84	51.690		
13,200.00	6,960.30	6,981.08	6,833.04	182.75	39.54	-84.53	-412.34	-10,304.90	3,821.36	3,744.62	76.73	49.800		
13,300.00	6,958.55	6,982.17	6,834.13	185.57	39.54	-84.62	-412.37	-10,304.93	3,722.82	3,645.13	77.69	47.916		
13,400.00	6,956.80	6,983.26	6,835.21	188.38	39.54	-84.72	-412.39	-10,304.96	3,624.37	3,545.65	78.72	46.040		
13,500.00	6,955.05	6,984.35	6,836.31	191.20	39.55	-84.82	-412.42	-10,305.00	3,526.00	3,446.18	79.82	44.173		
13,600.00	6,953.31	6,985.45	6,837.41	194.02	39.55	-84.92	-412.45	-10,305.03	3,427.73	3,346.72	81.00	42.316		
13,700.00	6,951.56	6,986.55	6,838.51	196.84	39.56	-85.01	-412.47	-10,305.06	3,329.55	3,247.28	82.27	40.471		
13,800.00	6,949.81	6,987.66	6,839.62	199.67	39.56	-85.11	-412.50	-10,305.09	3,231.50	3,147.86	83.63	38.639		
13,900.00	6,948.06	6,988.77	6,840.73	202.49	39.56	-85.21	-412.53	-10,305.13	3,133.56	3,048.46	85.10	36.822		
14,000.00	6,946.31	6,989.89	6,841.85	205.31	39.57	-85.31	-412.55	-10,305.16	3,035.75	2,949.07	86.68	35.022		
14,100.00	6,944.56	6,991.02	6,842.97	208.14	39.57	-85.41	-412.58	-10,305.19	2,938.10	2,849.71	88.39	33.241		
14,200.00	6,942.81	6,992.15	6,844.10	210.96	39.58	-85.51	-412.61	-10,305.23	2,840.61	2,750.37	90.23	31.481		
14,300.00	6,941.06	6,993.28	6,845.23	213.79	39.58	-85.61	-412.64	-10,305.26	2,743.29	2,651.06	92.23	29.743		
14,400.00	6,939.31	6,994.42	6,846.37	216.62	39.58	-85.71	-412.66	-10,305.30	2,646.18	2,551.78	94.40	28.031		
14,500.00	6,937.56	6,995.57	6,847.52	219.44	39.59	-85.82	-412.69	-10,305.33	2,549.29	2,452.53	96.76	26.347		
14,600.00	6,935.81	6,996.72	6,848.67	222.27	39.59	-85.92	-412.72	-10,305.36	2,452.65	2,353.32	99.33	24.692		
14,700.00	6,934.06	6,997.88	6,849.82	225.10	39.60	-86.02	-412.75	-10,305.40	2,356.29	2,254.15	102.13	23.071		
14,800.00	6,932.31	6,999.04	6,850.99	227.93	39.60	-86.12	-412.78	-10,305.43	2,260.24	2,155.04	105.20	21.486		
14,817.75	6,932.00	6,999.24	6,851.19	228.43	39.60	-86.14	-412.78	-10,305.44	2,243.23	2,137.46	105.77	21.208	CC, ES, SF	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - ULRICH PC I 17-08(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	39.00	3.28	3.28	-92.00	-319.26	-9,148.34	9,153.99					
100.00	100.00	61.00	100.00	3.28	3.45	-92.00	-319.26	-9,148.34	9,153.91	9,147.17	6.73	1,359.515		
200.00	200.00	161.00	200.00	3.34	5.08	-92.00	-319.26	-9,148.34	9,153.91	9,145.49	8.41	1,087.957		
300.00	300.00	261.00	300.00	3.44	8.06	-92.00	-319.26	-9,148.34	9,153.91	9,142.40	11.51	795.425		
400.00	400.00	361.00	400.00	3.60	11.34	-92.00	-319.26	-9,148.34	9,153.91	9,138.96	14.94	612.507		
500.00	500.00	461.00	500.00	3.81	14.72	-92.00	-319.26	-9,148.34	9,153.91	9,135.38	18.52	494.160		
600.00	599.98	560.98	599.98	4.05	18.14	-64.64	-319.26	-9,148.34	9,153.16	9,130.98	22.18	412.627		
700.00	699.86	660.86	699.86	4.32	21.58	-64.69	-319.26	-9,148.34	9,151.10	9,125.21	25.89	353.445		
800.00	799.72	760.72	799.72	4.62	25.03	-64.72	-319.26	-9,148.34	9,148.84	9,119.20	29.64	308.686		
900.00	899.58	860.58	899.58	4.93	28.49	-64.75	-319.26	-9,148.34	9,146.59	9,113.17	33.41	273.728		
1,000.00	999.44	960.44	999.44	5.27	31.95	-64.78	-319.26	-9,148.34	9,144.34	9,107.12	37.22	245.715		
1,100.00	1,099.31	1,060.31	1,099.31	5.62	35.42	-64.81	-319.26	-9,148.34	9,142.09	9,101.05	41.03	222.792		
1,200.00	1,199.17	1,160.17	1,199.17	5.98	38.89	-64.84	-319.26	-9,148.34	9,139.84	9,094.97	44.87	203.705		
1,300.00	1,299.03	1,260.03	1,299.03	6.36	42.37	-64.87	-319.26	-9,148.34	9,137.60	9,088.89	48.71	187.576		
1,400.00	1,398.89	1,359.89	1,398.89	6.74	45.85	-64.90	-319.26	-9,148.34	9,135.36	9,082.79	52.57	173.774		
1,500.00	1,498.75	1,459.75	1,498.75	7.13	49.32	-64.93	-319.26	-9,148.34	9,133.12	9,076.69	56.43	161.835		
1,600.00	1,598.61	1,559.61	1,598.61	7.52	52.80	-64.96	-319.26	-9,148.34	9,130.88	9,070.58	60.31	151.409		
1,700.00	1,698.47	1,659.47	1,698.47	7.92	56.28	-64.99	-319.26	-9,148.34	9,128.65	9,064.47	64.18	142.228		
1,800.00	1,798.33	1,759.33	1,798.33	8.32	59.76	-65.02	-319.26	-9,148.34	9,126.42	9,058.35	68.07	134.083		
1,900.00	1,898.19	1,859.19	1,898.19	8.73	63.24	-65.05	-319.26	-9,148.34	9,124.19	9,052.24	71.95	126.809		
2,000.00	1,998.05	1,959.05	1,998.05	9.14	66.73	-65.08	-319.26	-9,148.34	9,121.97	9,046.12	75.84	120.275		
2,100.00	2,097.91	2,058.91	2,097.91	9.55	70.21	-65.11	-319.26	-9,148.34	9,119.74	9,040.01	79.74	114.374		
2,200.00	2,197.78	2,158.78	2,197.78	9.97	73.69	-65.14	-319.26	-9,148.34	9,117.52	9,033.89	83.63	109.019		
2,300.00	2,297.64	2,258.64	2,297.64	10.39	77.17	-65.17	-319.26	-9,148.34	9,115.30	9,027.77	87.53	104.137		
2,400.00	2,397.50	2,358.50	2,397.50	10.81	80.66	-65.20	-319.26	-9,148.34	9,113.09	9,021.66	91.43	99.670		
2,500.00	2,497.36	2,458.36	2,497.36	11.23	84.14	-65.23	-319.26	-9,148.34	9,110.88	9,015.54	95.34	95.566		
2,600.00	2,597.22	2,558.22	2,597.22	11.65	87.62	-65.26	-319.26	-9,148.34	9,108.66	9,009.42	99.24	91.784		
2,700.00	2,697.08	2,658.08	2,697.08	12.07	91.11	-65.29	-319.26	-9,148.34	9,106.46	9,003.31	103.15	88.287		
2,800.00	2,796.94	2,757.94	2,796.94	12.50	94.59	-65.32	-319.26	-9,148.34	9,104.25	8,997.20	107.05	85.043		
2,900.00	2,896.80	2,857.80	2,896.80	12.92	98.08	-65.35	-319.26	-9,148.34	9,102.05	8,991.08	110.96	82.028		
3,000.00	2,996.66	2,957.66	2,996.66	13.35	101.56	-65.38	-319.26	-9,148.34	9,099.85	8,984.97	114.87	79.217		
3,100.00	3,096.52	3,057.52	3,096.52	13.78	105.04	-65.41	-319.26	-9,148.34	9,097.65	8,978.86	118.78	76.590		
3,200.00	3,196.38	3,157.38	3,196.38	14.21	108.53	-65.44	-319.26	-9,148.34	9,095.45	8,972.76	122.70	74.130		
3,300.00	3,296.25	3,257.25	3,296.25	14.64	112.01	-65.47	-319.26	-9,148.34	9,093.26	8,966.65	126.61	71.822		
3,400.00	3,396.11	3,357.11	3,396.11	15.07	115.50	-65.50	-319.26	-9,148.34	9,091.07	8,960.55	130.52	69.651		
3,500.00	3,495.97	3,456.97	3,495.97	15.50	118.98	-65.53	-319.26	-9,148.34	9,088.88	8,954.44	134.44	67.607		
3,600.00	3,595.83	3,556.83	3,595.83	15.93	122.47	-65.56	-319.26	-9,148.34	9,086.70	8,948.34	138.35	65.678		
3,700.00	3,695.69	3,656.69	3,695.69	16.36	125.95	-65.59	-319.26	-9,148.34	9,084.51	8,942.25	142.27	63.855		
3,800.00	3,795.55	3,756.55	3,795.55	16.80	129.44	-65.62	-319.26	-9,148.34	9,082.33	8,936.15	146.18	62.130		
3,900.00	3,895.41	3,856.41	3,895.41	17.23	132.92	-65.65	-319.26	-9,148.34	9,080.15	8,930.05	150.10	60.494		
4,000.00	3,995.27	3,956.27	3,995.27	17.66	136.41	-65.68	-319.26	-9,148.34	9,077.98	8,923.96	154.02	58.941		
4,100.00	4,095.13	4,056.13	4,095.13	18.10	139.89	-65.71	-319.26	-9,148.34	9,075.81	8,917.87	157.93	57.466		
4,200.00	4,194.99	4,155.99	4,194.99	18.53	143.38	-65.74	-319.26	-9,148.34	9,073.64	8,911.78	161.85	56.061		
4,300.00	4,294.85	4,255.85	4,294.85	18.96	146.86	-65.77	-319.26	-9,148.34	9,071.47	8,905.70	165.77	54.723		
4,400.00	4,394.71	4,355.71	4,394.71	19.40	150.35	-65.80	-319.26	-9,148.34	9,069.30	8,899.61	169.69	53.446		
4,500.00	4,494.58	4,455.58	4,494.58	19.83	153.83	-65.83	-319.26	-9,148.34	9,067.14	8,893.53	173.61	52.227		
4,600.00	4,594.44	4,555.44	4,594.44	20.27	157.32	-65.86	-319.26	-9,148.34	9,064.98	8,887.45	177.53	51.062		
4,700.00	4,694.30	4,655.30	4,694.30	20.71	160.80	-65.89	-319.26	-9,148.34	9,062.82	8,881.38	181.45	49.947		
4,800.00	4,794.16	4,755.16	4,794.16	21.14	164.29	-65.92	-319.26	-9,148.34	9,060.67	8,875.30	185.37	48.879		
4,900.00	4,894.02	4,855.02	4,894.02	21.58	167.78	-65.95	-319.26	-9,148.34	9,058.52	8,869.23	189.29	47.856		
5,000.00	4,993.88	4,954.88	4,993.88	22.01	171.26	-65.98	-319.26	-9,148.34	9,056.37	8,863.16	193.21	46.874		
5,100.00	5,093.74	5,054.74	5,093.74	22.45	174.75	-66.01	-319.26	-9,148.34	9,054.22	8,857.09	197.13	45.931		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - ULRICH PC I 17-08(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.00	5,193.60	5,154.60	5,193.60	22.89	178.23	-66.04	-319.26	-9,148.34	9,052.07	8,851.02	201.05	45.024		
5,300.00	5,293.46	5,254.46	5,293.46	23.32	181.72	-66.07	-319.26	-9,148.34	9,049.93	8,844.96	204.97	44.152		
5,400.00	5,393.32	5,354.32	5,393.32	23.76	185.20	-66.10	-319.26	-9,148.34	9,047.79	8,838.90	208.89	43.313		
5,500.00	5,493.18	5,454.18	5,493.18	24.20	188.69	-66.14	-319.26	-9,148.34	9,045.65	8,832.84	212.81	42.505		
5,600.00	5,593.05	5,554.05	5,593.05	24.64	192.17	-66.17	-319.26	-9,148.34	9,043.52	8,826.79	216.73	41.726		
5,700.00	5,692.91	5,653.91	5,692.91	25.07	195.66	-66.20	-319.26	-9,148.34	9,041.39	8,820.73	220.66	40.975		
5,800.00	5,792.77	5,753.77	5,792.77	25.51	199.15	-66.23	-319.26	-9,148.34	9,039.26	8,814.68	224.58	40.250		
5,900.00	5,892.63	5,853.63	5,892.63	25.95	202.63	-66.26	-319.26	-9,148.34	9,037.13	8,808.63	228.50	39.550		
6,000.00	5,992.49	5,953.49	5,992.49	26.39	206.12	-66.29	-319.26	-9,148.34	9,035.01	8,802.59	232.42	38.873		
6,100.00	6,092.35	6,053.35	6,092.35	26.82	209.60	-66.32	-319.26	-9,148.34	9,032.89	8,796.54	236.34	38.219		
6,200.00	6,192.21	6,153.21	6,192.21	27.26	213.09	-66.35	-319.26	-9,148.34	9,030.77	8,790.50	240.27	37.586		
6,300.00	6,292.07	6,253.07	6,292.07	27.70	216.57	-66.38	-319.26	-9,148.34	9,028.65	8,784.46	244.19	36.974		
6,400.00	6,391.93	6,352.93	6,391.93	28.14	220.06	-66.41	-319.26	-9,148.34	9,026.54	8,778.42	248.11	36.381		
6,500.00	6,491.69	6,452.69	6,491.69	28.58	223.54	-27.64	-319.26	-9,148.34	9,022.35	8,770.32	252.03	35.799		
6,600.00	6,589.80	6,550.80	6,589.80	29.02	226.97	-13.86	-319.26	-9,148.34	9,004.45	8,748.56	255.89	35.189		
6,700.00	6,683.86	6,644.86	6,683.86	29.46	230.25	-10.40	-319.26	-9,148.34	8,971.43	8,711.85	259.58	34.561		
6,800.00	6,771.56	6,732.56	6,771.56	29.92	233.31	-9.13	-319.26	-9,148.34	8,924.10	8,661.08	263.02	33.930		
6,900.00	6,850.72	6,811.72	6,850.72	30.40	236.07	-8.81	-319.26	-9,148.34	8,863.63	8,597.51	266.11	33.308		
7,000.00	6,919.40	6,880.40	6,919.40	30.96	238.47	-9.19	-319.26	-9,148.34	8,791.51	8,522.72	268.79	32.708		
7,100.00	6,975.92	6,936.92	6,975.92	31.62	240.45	-10.39	-319.26	-9,148.34	8,709.51	8,438.53	270.98	32.141		
7,200.00	7,018.87	6,979.87	7,018.87	32.44	241.94	-13.11	-319.26	-9,148.34	8,619.66	8,347.02	272.64	31.616		
7,300.00	7,047.21	7,008.21	7,047.21	33.42	242.93	-20.14	-319.26	-9,148.34	8,524.17	8,250.44	273.73	31.141		
7,400.00	7,060.23	7,021.23	7,060.23	34.55	243.39	-53.06	-319.26	-9,148.34	8,425.39	8,151.15	274.24	30.723		
7,500.00	7,060.03	7,021.03	7,060.03	35.83	243.38	-104.64	-319.26	-9,148.34	8,325.64	8,051.38	274.26	30.357		
7,600.00	7,058.28	7,019.28	7,058.28	37.28	243.32	-104.48	-319.26	-9,148.34	8,225.88	7,951.66	274.22	29.997		
7,700.00	7,056.53	7,017.53	7,056.53	38.89	243.26	-104.31	-319.26	-9,148.34	8,126.12	7,851.94	274.19	29.637		
7,800.00	7,054.78	7,015.78	7,054.78	40.63	243.20	-104.14	-319.26	-9,148.34	8,026.38	7,752.22	274.16	29.276		
7,900.00	7,053.03	7,014.03	7,053.03	42.50	243.14	-103.97	-319.26	-9,148.34	7,926.64	7,652.50	274.13	28.915		
8,000.00	7,051.28	7,012.28	7,051.28	44.47	243.08	-103.80	-319.26	-9,148.34	7,826.90	7,552.79	274.11	28.554		
8,100.00	7,049.53	7,010.53	7,049.53	46.53	243.01	-103.63	-319.26	-9,148.34	7,727.17	7,453.08	274.09	28.192		
8,200.00	7,047.78	7,008.78	7,047.78	48.67	242.95	-103.46	-319.26	-9,148.34	7,627.45	7,353.38	274.07	27.830		
8,300.00	7,046.03	7,007.03	7,046.03	50.89	242.89	-103.29	-319.26	-9,148.34	7,527.73	7,253.68	274.06	27.468		
8,400.00	7,044.28	7,005.28	7,044.28	53.16	242.83	-103.12	-319.26	-9,148.34	7,428.03	7,153.98	274.05	27.105		
8,500.00	7,042.53	7,003.53	7,042.53	55.49	242.77	-102.95	-319.26	-9,148.34	7,328.33	7,054.28	274.05	26.741		
8,600.00	7,040.78	7,001.78	7,040.78	57.86	242.71	-102.77	-319.26	-9,148.34	7,228.63	6,954.59	274.05	26.378		
8,700.00	7,039.03	7,000.03	7,039.03	60.28	242.65	-102.60	-319.26	-9,148.34	7,128.95	6,854.90	274.05	26.013		
8,800.00	7,037.28	7,001.72	7,037.28	62.74	242.71	-102.43	-319.26	-9,148.34	7,029.27	6,755.10	274.18	25.638		
8,900.00	7,035.53	7,003.47	7,035.53	65.23	242.77	-102.26	-319.26	-9,148.34	6,929.61	6,655.29	274.32	25.261		
9,000.00	7,033.78	7,005.22	7,033.78	67.74	242.83	-102.09	-319.26	-9,148.34	6,829.95	6,555.49	274.46	24.885		
9,100.00	7,032.03	7,006.97	7,032.03	70.29	242.89	-101.91	-319.26	-9,148.34	6,730.30	6,455.70	274.60	24.509		
9,200.00	7,030.28	7,008.72	7,030.28	72.85	242.95	-101.74	-319.26	-9,148.34	6,630.67	6,355.91	274.76	24.133		
9,300.00	7,028.54	6,989.54	7,028.54	75.44	242.28	-101.57	-319.26	-9,148.34	6,531.04	6,256.85	274.19	23.820		
9,400.00	7,026.79	6,987.79	7,026.79	78.05	242.22	-101.40	-319.26	-9,148.34	6,431.42	6,157.19	274.23	23.453		
9,500.00	7,025.04	6,986.04	7,025.04	80.67	242.16	-101.22	-319.26	-9,148.34	6,331.82	6,057.54	274.28	23.085		
9,600.00	7,023.29	6,984.29	7,023.29	83.31	242.10	-101.05	-319.26	-9,148.34	6,232.23	5,957.89	274.34	22.717		
9,700.00	7,021.54	6,982.54	7,021.54	85.96	242.04	-100.88	-319.26	-9,148.34	6,132.65	5,858.24	274.40	22.349		
9,800.00	7,019.79	6,980.79	7,019.79	88.63	241.98	-100.70	-319.26	-9,148.34	6,033.08	5,758.61	274.48	21.980		
9,900.00	7,018.04	6,979.04	7,018.04	91.30	241.92	-100.53	-319.26	-9,148.34	5,933.53	5,658.97	274.56	21.611		
10,000.00	7,016.29	6,977.29	7,016.29	93.99	241.85	-100.35	-319.26	-9,148.34	5,833.99	5,559.34	274.65	21.242		
10,100.00	7,014.54	6,975.54	7,014.54	96.69	241.79	-100.18	-319.26	-9,148.34	5,734.47	5,459.72	274.75	20.872		
10,200.00	7,012.79	6,973.79	7,012.79	99.40	241.73	-100.00	-319.26	-9,148.34	5,634.97	5,360.10	274.86	20.501		
10,300.00	7,011.04	6,972.04	7,011.04	102.11	241.67	-99.83	-319.26	-9,148.34	5,535.48	5,260.49	274.98	20.130		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - ULRICH PC I 17-08(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-2" Cone@2.448 Sigma													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.00	7,009.29	6,970.29	7,009.29	104.83	241.61	-99.65	-319.26	-9,148.34	5,436.01	5,160.89	275.12	19.759		
10,500.00	7,007.54	6,968.54	7,007.54	107.56	241.55	-99.48	-319.26	-9,148.34	5,336.56	5,061.29	275.27	19.387		
10,600.00	7,005.79	6,966.79	7,005.79	110.30	241.49	-99.30	-319.26	-9,148.34	5,237.13	4,961.70	275.43	19.015		
10,700.00	7,004.04	6,965.04	7,004.04	113.04	241.43	-99.13	-319.26	-9,148.34	5,137.72	4,862.12	275.60	18.642		
10,800.00	7,002.29	6,963.29	7,002.29	115.79	241.37	-98.95	-319.26	-9,148.34	5,038.33	4,762.54	275.79	18.269		
10,900.00	7,000.54	6,961.54	7,000.54	118.54	241.30	-98.78	-319.26	-9,148.34	4,938.97	4,662.97	276.00	17.895		
11,000.00	6,998.79	6,959.79	6,998.79	121.30	241.24	-98.60	-319.26	-9,148.34	4,839.64	4,563.41	276.23	17.521		
11,100.00	6,997.04	6,958.04	6,997.04	124.06	241.18	-98.42	-319.26	-9,148.34	4,740.33	4,463.86	276.47	17.146		
11,200.00	6,995.29	6,956.29	6,995.29	126.83	241.12	-98.25	-319.26	-9,148.34	4,641.05	4,364.31	276.74	16.771		
11,300.00	6,993.54	6,954.54	6,993.54	129.60	241.06	-98.07	-319.26	-9,148.34	4,541.80	4,264.78	277.02	16.395		
11,400.00	6,991.80	6,952.80	6,991.80	132.37	241.00	-97.89	-319.26	-9,148.34	4,442.59	4,165.25	277.34	16.019		
11,500.00	6,990.05	6,951.05	6,990.05	135.15	240.94	-97.72	-319.26	-9,148.34	4,343.41	4,065.73	277.68	15.642		
11,600.00	6,988.30	6,949.30	6,988.30	137.93	240.88	-97.54	-319.26	-9,148.34	4,244.26	3,966.22	278.04	15.265		
11,700.00	6,986.55	6,947.55	6,986.55	140.72	240.82	-97.36	-319.26	-9,148.34	4,145.16	3,866.72	278.44	14.887		
11,800.00	6,984.80	6,945.80	6,984.80	143.50	240.76	-97.19	-319.26	-9,148.34	4,046.10	3,767.23	278.87	14.509		
11,900.00	6,983.05	6,944.05	6,983.05	146.29	240.69	-97.01	-319.26	-9,148.34	3,947.09	3,667.76	279.34	14.130		
12,000.00	6,981.30	6,942.30	6,981.30	149.09	240.63	-96.83	-319.26	-9,148.34	3,848.13	3,568.29	279.84	13.751		
12,100.00	6,979.55	6,940.55	6,979.55	151.88	240.57	-96.65	-319.26	-9,148.34	3,749.22	3,468.83	280.39	13.371		
12,200.00	6,977.80	6,938.80	6,977.80	154.68	240.51	-96.47	-319.26	-9,148.34	3,650.38	3,369.39	280.99	12.991		
12,300.00	6,976.05	6,937.05	6,976.05	157.48	240.45	-96.30	-319.26	-9,148.34	3,551.59	3,269.96	281.64	12.611		
12,400.00	6,974.30	6,935.30	6,974.30	160.28	240.39	-96.12	-319.26	-9,148.34	3,452.88	3,170.54	282.34	12.230		
12,500.00	6,972.55	6,933.55	6,972.55	163.08	240.33	-95.94	-319.26	-9,148.34	3,354.23	3,071.13	283.10	11.848		
12,600.00	6,970.80	6,931.80	6,970.80	165.89	240.27	-95.76	-319.26	-9,148.34	3,255.68	2,971.74	283.94	11.466		
12,700.00	6,969.05	6,930.05	6,969.05	168.69	240.21	-95.58	-319.26	-9,148.34	3,157.21	2,872.37	284.84	11.084		
12,800.00	6,967.30	6,928.30	6,967.30	171.50	240.14	-95.41	-319.26	-9,148.34	3,058.84	2,773.01	285.83	10.702		
12,900.00	6,965.55	6,926.55	6,965.55	174.31	240.08	-95.23	-319.26	-9,148.34	2,960.57	2,673.67	286.91	10.319		
13,000.00	6,963.80	6,924.80	6,963.80	177.12	240.02	-95.05	-319.26	-9,148.34	2,862.43	2,574.34	288.09	9.936		
13,100.00	6,962.05	6,923.05	6,962.05	179.94	239.96	-94.87	-319.26	-9,148.34	2,764.42	2,475.04	289.38	9.553		
13,200.00	6,960.30	6,921.30	6,960.30	182.75	239.90	-94.69	-319.26	-9,148.34	2,666.56	2,375.76	290.79	9.170		
13,300.00	6,958.55	6,919.55	6,958.55	185.57	239.84	-94.51	-319.26	-9,148.34	2,568.86	2,276.51	292.35	8.787		
13,400.00	6,956.80	6,917.80	6,956.80	188.38	239.78	-94.33	-319.26	-9,148.34	2,471.34	2,177.28	294.05	8.404		
13,500.00	6,955.05	6,916.05	6,955.05	191.20	239.72	-94.15	-319.26	-9,148.34	2,374.02	2,078.09	295.93	8.022		
13,600.00	6,953.31	6,914.31	6,953.31	194.02	239.66	-93.97	-319.26	-9,148.34	2,276.94	1,978.93	298.01	7.640		
13,700.00	6,951.56	6,912.56	6,951.56	196.84	239.59	-93.79	-319.26	-9,148.34	2,180.12	1,879.82	300.31	7.260		
13,800.00	6,949.81	6,910.81	6,949.81	199.67	239.53	-93.61	-319.26	-9,148.34	2,083.60	1,780.75	302.85	6.880		
13,900.00	6,948.06	6,909.06	6,948.06	202.49	239.47	-93.43	-319.26	-9,148.34	1,987.42	1,681.74	305.69	6.501		
14,000.00	6,946.31	6,907.31	6,946.31	205.31	239.41	-93.26	-319.26	-9,148.34	1,891.64	1,582.79	308.85	6.125		
14,100.00	6,944.56	6,905.56	6,944.56	208.14	239.35	-93.08	-319.26	-9,148.34	1,796.32	1,483.94	312.38	5.750		
14,200.00	6,942.81	6,903.81	6,942.81	210.96	239.29	-92.90	-319.26	-9,148.34	1,701.53	1,385.18	316.35	5.379		
14,300.00	6,941.06	6,902.06	6,941.06	213.79	239.23	-92.72	-319.26	-9,148.34	1,607.37	1,286.56	320.81	5.010		
14,400.00	6,939.31	6,900.31	6,939.31	216.62	239.17	-92.54	-319.26	-9,148.34	1,513.95	1,188.10	325.86	4.646		
14,500.00	6,937.56	6,901.44	6,937.56	219.44	239.21	-92.36	-319.26	-9,148.34	1,421.43	1,089.75	331.68	4.286		
14,600.00	6,935.81	6,903.19	6,935.81	222.27	239.27	-92.18	-319.26	-9,148.34	1,330.00	991.67	338.32	3.931		
14,700.00	6,934.06	6,904.94	6,934.06	225.10	239.33	-92.00	-319.26	-9,148.34	1,239.88	893.98	345.90	3.585		
14,800.00	6,932.31	6,906.69	6,932.31	227.93	239.39	-91.82	-319.26	-9,148.34	1,151.39	796.82	354.57	3.247		
14,817.75	6,932.00	6,907.00	6,932.00	228.43	239.40	-91.78	-319.26	-9,148.34	1,135.89	779.65	356.23	3.189 CC, ES, SF		



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - ULRICH PC I17-17D(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 78-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	26.00	3.28	3.28	-92.18	-348.41	-9,145.57	9,152.24					
100.00	100.00	110.39	136.38	3.28	3.29	-92.18	-348.69	-9,145.21	9,151.93	9,145.35	6.58	1,391.509		
200.00	200.00	185.38	211.38	3.34	3.34	-92.18	-348.61	-9,145.01	9,151.66	9,144.99	6.67	1,371.610		
243.42	243.42	217.42	243.42	3.38	3.36	-92.18	-348.56	-9,145.00	9,151.64	9,144.90	6.74	1,357.876		
300.00	300.00	259.38	285.38	3.44	3.41	-92.18	-348.56	-9,145.03	9,151.68	9,144.83	6.85	1,335.865		
400.00	400.00	346.33	372.33	3.60	3.52	-92.18	-348.65	-9,145.23	9,151.91	9,144.79	7.13	1,284.119		
500.00	500.00	434.73	460.73	3.81	3.68	-92.18	-348.77	-9,145.55	9,152.28	9,144.79	7.49	1,222.561		
600.00	599.98	608.32	634.32	4.05	4.07	-64.84	-349.24	-9,145.86	9,151.85	9,143.73	8.12	1,127.290		
700.00	699.86	678.54	704.54	4.32	4.26	-64.88	-349.60	-9,145.66	9,149.55	9,140.98	8.57	1,067.049		
800.00	799.72	727.00	752.99	4.62	4.40	-64.90	-349.83	-9,145.70	9,147.48	9,138.47	9.01	1,015.642		
900.00	899.58	767.53	793.52	4.93	4.51	-64.91	-349.88	-9,145.99	9,146.02	9,136.58	9.44	968.597		
1,000.00	999.44	800.38	826.37	5.27	4.61	-64.92	-349.71	-9,146.50	9,145.31	9,135.44	9.88	925.949		
1,046.75	1,046.13	815.74	841.73	5.43	4.66	-64.92	-349.57	-9,146.82	9,145.23	9,135.15	10.09	906.761		
1,100.00	1,099.31	856.00	881.96	5.62	4.78	-64.93	-348.99	-9,147.92	9,145.42	9,135.02	10.40	879.535		
1,200.00	1,199.17	856.00	881.96	5.98	4.78	-64.93	-348.99	-9,147.92	9,146.11	9,135.35	10.76	849.941		
1,300.00	1,299.03	856.00	881.96	6.36	4.78	-64.93	-348.99	-9,147.92	9,147.89	9,136.76	11.13	821.650		
1,400.00	1,398.89	913.47	939.37	6.74	4.97	-64.94	-347.72	-9,150.32	9,150.04	9,138.35	11.69	782.395		
1,500.00	1,498.75	938.36	964.22	7.13	5.05	-64.94	-347.02	-9,151.70	9,153.25	9,141.09	12.16	752.619		
1,600.00	1,598.61	984.00	1,009.72	7.52	5.20	-64.94	-345.48	-9,154.78	9,157.36	9,144.66	12.70	720.855		
1,700.00	1,698.47	984.00	1,009.72	7.92	5.20	-64.94	-345.48	-9,154.78	9,162.11	9,149.02	13.10	699.452		
1,800.00	1,798.33	984.00	1,009.72	8.32	5.20	-64.94	-345.48	-9,154.78	9,167.95	9,154.46	13.50	679.230		
1,900.00	1,898.19	1,045.67	1,071.11	8.73	5.41	-64.94	-342.64	-9,159.94	9,174.15	9,160.04	14.11	650.198		
2,000.00	1,998.05	1,112.00	1,136.95	9.14	5.65	-64.93	-338.33	-9,166.70	9,181.61	9,166.86	14.75	622.660		
2,100.00	2,097.91	1,112.00	1,136.95	9.55	5.65	-64.93	-338.33	-9,166.70	9,189.31	9,174.16	15.15	606.570		
2,200.00	2,197.78	1,112.00	1,136.95	9.97	5.65	-64.93	-338.33	-9,166.70	9,198.09	9,182.54	15.55	591.363		
2,300.00	2,297.64	1,181.59	1,205.81	10.39	5.92	-64.92	-332.52	-9,174.83	9,207.33	9,191.11	16.22	567.767		
2,400.00	2,397.50	1,241.00	1,264.44	10.81	6.15	-64.89	-326.57	-9,182.38	9,217.33	9,200.48	16.85	547.064		
2,500.00	2,497.36	1,286.15	1,308.89	11.23	6.34	-64.87	-321.29	-9,188.37	9,227.81	9,210.37	17.44	529.264		
2,600.00	2,597.22	1,364.49	1,385.71	11.65	6.68	-64.82	-310.20	-9,198.94	9,238.59	9,220.43	18.16	508.683		
2,700.00	2,697.08	1,411.04	1,431.17	12.07	6.89	-64.79	-302.58	-9,205.42	9,249.76	9,230.99	18.77	492.778		
2,800.00	2,796.94	1,455.47	1,474.43	12.50	7.10	-64.75	-294.81	-9,211.87	9,261.53	9,242.16	19.37	478.061		
2,900.00	2,896.80	1,498.00	1,515.73	12.92	7.31	-64.71	-286.91	-9,218.30	9,273.89	9,253.92	19.97	464.428		
3,000.00	2,996.66	1,540.15	1,556.53	13.35	7.52	-64.67	-278.72	-9,224.93	9,286.87	9,266.29	20.57	451.376		
3,100.00	3,096.52	1,580.58	1,595.58	13.78	7.74	-64.63	-270.58	-9,231.53	9,300.47	9,279.30	21.17	439.261		
3,200.00	3,196.38	1,626.00	1,639.33	14.21	7.98	-64.59	-261.12	-9,239.26	9,314.71	9,292.91	21.80	427.345		
3,300.00	3,296.25	1,666.97	1,678.66	14.64	8.21	-64.54	-252.18	-9,246.46	9,329.55	9,307.13	22.41	416.264		
3,400.00	3,396.11	1,713.68	1,723.31	15.07	8.48	-64.48	-241.39	-9,254.90	9,344.94	9,321.89	23.06	405.250		
3,500.00	3,495.97	1,754.00	1,761.70	15.50	8.72	-64.43	-231.57	-9,262.38	9,360.91	9,337.24	23.67	395.439		
3,600.00	3,595.83	1,754.00	1,761.70	15.93	8.72	-64.43	-231.57	-9,262.38	9,377.73	9,353.67	24.06	389.735		
3,700.00	3,695.69	1,814.98	1,819.45	16.36	9.12	-64.35	-216.01	-9,274.30	9,394.92	9,370.11	24.81	378.646		
3,800.00	3,795.55	1,883.00	1,883.40	16.80	9.56	-64.26	-197.86	-9,288.65	9,413.32	9,387.72	25.61	367.622		
3,900.00	3,895.41	1,883.00	1,883.40	17.23	9.56	-64.26	-197.86	-9,288.65	9,431.92	9,405.93	25.99	362.930		
4,000.00	3,995.27	2,044.10	2,034.38	17.66	10.70	-64.02	-153.34	-9,322.95	9,450.90	9,423.49	27.41	344.773		
4,100.00	4,095.13	2,149.04	2,133.03	18.10	11.47	-63.87	-125.00	-9,344.80	9,469.39	9,440.90	28.49	332.370		
4,200.00	4,194.99	2,215.46	2,195.62	18.53	11.96	-63.78	-107.66	-9,358.73	9,488.04	9,458.73	29.32	323.655		
4,300.00	4,294.85	2,303.38	2,278.59	18.96	12.61	-63.67	-85.38	-9,377.40	9,506.98	9,476.70	30.29	313.916		
4,400.00	4,394.71	2,418.32	2,387.39	19.40	13.46	-63.52	-57.27	-9,401.59	9,525.75	9,494.31	31.44	302.973		
4,500.00	4,494.58	2,480.19	2,445.85	19.83	13.93	-63.45	-41.85	-9,414.70	9,544.74	9,512.49	32.24	296.029		
4,600.00	4,594.44	2,559.16	2,520.21	20.27	14.54	-63.34	-21.38	-9,431.68	9,564.09	9,530.92	33.17	288.347		
4,700.00	4,694.30	4,700.00	2,616.94	20.71	31.70	-63.20	5.63	-9,453.66	9,583.39	9,535.31	48.08	199.339		
4,800.00	4,794.16	2,706.49	2,658.72	21.14	15.71	-63.14	17.60	-9,463.28	9,603.02	9,568.05	34.97	274.594		
4,900.00	4,894.02	2,748.92	2,698.42	21.58	16.06	-63.08	29.25	-9,472.68	9,623.24	9,587.59	35.65	269.932		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design HARVESTERS STATE 7-15 PAD - ULRICH PC I17-17D(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 78-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.00	4,993.88	2,827.48	2,771.70	22.01	16.70	-62.97	51.28	-9,490.48	9,644.00	9,607.40	36.60	263.499		
5,100.00	5,093.74	5,100.00	2,957.99	22.45	35.37	-62.70	104.50	-9,534.01	9,663.87	9,611.04	52.83	182.929		
5,200.00	5,193.60	3,103.73	3,031.06	22.89	18.96	-62.59	124.91	-9,550.66	9,683.53	9,644.15	39.38	245.872		
5,300.00	5,293.46	3,167.00	3,090.36	23.32	19.48	-62.51	141.96	-9,564.66	9,703.83	9,663.61	40.22	241.275		
5,400.00	5,393.32	5,400.00	3,279.89	23.76	37.54	-62.25	193.69	-9,608.51	9,724.03	9,668.08	55.95	173.809		
5,500.00	5,493.18	3,506.29	3,410.37	24.20	22.22	-62.08	228.21	-9,637.19	9,743.01	9,699.57	43.44	224.275		
5,600.00	5,593.05	5,721.75	5,567.85	24.64	34.24	-61.09	500.14	-9,878.93	9,760.72	9,705.62	55.10	177.146		
5,700.00	5,692.91	5,842.55	5,688.64	25.07	34.58	-61.13	498.78	-9,879.14	9,758.31	9,702.40	55.91	174.523		
5,800.00	5,792.77	5,956.65	5,802.72	25.51	34.90	-61.18	496.67	-9,879.16	9,755.73	9,699.03	56.71	172.036		
5,900.00	5,892.63	6,113.79	5,959.83	25.95	35.34	-61.24	493.68	-9,878.68	9,752.86	9,695.24	57.62	169.262		
6,000.00	5,992.49	6,230.00	6,076.01	26.39	35.66	-61.28	491.37	-9,877.83	9,749.54	9,691.12	58.42	166.880		
6,100.00	6,092.35	6,325.12	6,171.12	26.82	35.94	-61.32	489.75	-9,877.06	9,746.16	9,686.99	59.17	164.713		
6,200.00	6,192.21	6,451.54	6,297.52	27.26	36.31	-61.36	487.82	-9,876.01	9,742.78	9,682.77	60.01	162.351		
6,300.00	6,292.07	6,564.58	6,410.54	27.70	36.64	-61.40	486.52	-9,874.65	9,739.01	9,678.20	60.82	160.135		
6,400.00	6,391.93	6,649.16	6,495.12	28.14	36.90	-61.43	485.94	-9,873.69	9,735.34	9,673.79	61.55	158.180		
6,500.00	6,491.69	6,725.83	6,571.78	28.58	37.13	-22.62	485.45	-9,872.98	9,729.80	9,667.55	62.25	156.291		
6,600.00	6,589.80	6,809.65	6,655.60	29.02	37.39	-8.68	484.85	-9,872.38	9,710.75	9,647.77	62.98	154.193		
6,700.00	6,683.86	6,897.47	6,743.41	29.46	37.66	-4.91	484.44	-9,871.82	9,676.68	9,612.99	63.69	151.929		
6,800.00	6,771.56	6,961.47	6,807.41	29.92	37.87	-3.11	484.30	-9,871.52	9,628.49	9,564.19	64.30	149.740		
6,900.00	6,850.72	6,900.00	6,941.69	30.40	37.67	-1.98	484.17	-9,870.63	9,567.08	9,502.69	64.39	148.580		
7,000.00	6,919.40	7,230.51	7,074.43	30.96	38.72	-1.08	483.52	-9,868.75	9,493.52	9,427.75	65.77	144.346		
7,100.00	6,975.92	7,281.34	7,127.25	31.62	38.88	-0.09	482.80	-9,867.93	9,410.23	9,344.08	66.15	142.248		
7,200.00	7,018.87	7,309.91	7,155.81	32.44	38.97	1.38	482.33	-9,867.50	9,319.39	9,252.99	66.40	140.345		
7,300.00	7,047.21	7,329.28	7,175.18	33.42	39.03	4.84	482.02	-9,867.23	9,223.21	9,156.65	66.56	138.572		
7,400.00	7,060.23	7,337.70	7,183.60	34.55	39.06	31.98	481.88	-9,867.12	9,124.02	9,057.39	66.62	136.947		
7,500.00	7,060.03	7,336.61	7,182.51	35.83	39.06	138.22	481.90	-9,867.14	9,024.09	8,957.47	66.62	135.447		
7,600.00	7,058.28	7,334.39	7,180.28	37.28	39.05	137.99	481.94	-9,867.17	8,924.18	8,857.56	66.62	133.960		
7,700.00	7,056.53	7,332.15	7,178.05	38.89	39.04	137.76	481.97	-9,867.20	8,824.27	8,757.65	66.61	132.471		
7,800.00	7,054.78	7,329.90	7,175.80	40.63	39.03	137.52	482.01	-9,867.23	8,724.36	8,657.75	66.61	130.979		
7,900.00	7,053.03	7,327.64	7,173.54	42.50	39.03	137.28	482.05	-9,867.26	8,624.45	8,557.84	66.61	129.484		
8,000.00	7,051.28	7,325.36	7,171.26	44.47	39.02	137.03	482.08	-9,867.29	8,524.54	8,457.93	66.60	127.987		
8,100.00	7,049.53	7,323.07	7,168.97	46.53	39.01	136.79	482.12	-9,867.32	8,424.63	8,358.03	66.60	126.487		
8,200.00	7,047.78	7,320.77	7,166.67	48.67	39.01	136.53	482.16	-9,867.35	8,324.73	8,258.12	66.61	124.984		
8,300.00	7,046.03	7,318.45	7,164.35	50.89	39.00	136.28	482.19	-9,867.38	8,224.83	8,158.22	66.61	123.479		
8,400.00	7,044.28	7,316.11	7,162.01	53.16	38.99	136.02	482.23	-9,867.42	8,124.92	8,058.31	66.61	121.972		
8,500.00	7,042.53	7,313.76	7,159.66	55.49	38.98	135.75	482.27	-9,867.45	8,025.02	7,958.40	66.62	120.463		
8,600.00	7,040.78	7,311.40	7,157.30	57.86	38.98	135.48	482.31	-9,867.48	7,925.12	7,858.50	66.62	118.951		
8,700.00	7,039.03	7,309.02	7,154.92	60.28	38.97	135.21	482.35	-9,867.52	7,825.23	7,758.59	66.63	117.437		
8,800.00	7,037.28	7,306.62	7,152.52	62.74	38.96	134.93	482.39	-9,867.55	7,725.33	7,658.69	66.64	115.921		
8,900.00	7,035.53	7,304.21	7,150.12	65.23	38.95	134.65	482.43	-9,867.59	7,625.44	7,558.78	66.65	114.403		
9,000.00	7,033.78	7,301.79	7,147.69	67.74	38.95	134.37	482.47	-9,867.62	7,525.55	7,458.88	66.67	112.883		
9,100.00	7,032.03	7,299.35	7,145.25	70.29	38.94	134.08	482.50	-9,867.66	7,425.65	7,358.97	66.68	111.361		
9,200.00	7,030.28	7,296.89	7,142.79	72.85	38.93	133.78	482.54	-9,867.70	7,325.77	7,259.07	66.70	109.838		
9,300.00	7,028.54	7,294.42	7,140.32	75.44	38.92	133.48	482.58	-9,867.73	7,225.88	7,159.17	66.71	108.312		
9,400.00	7,026.79	7,291.93	7,137.83	78.05	38.92	133.18	482.63	-9,867.77	7,126.00	7,059.26	66.73	106.784		
9,500.00	7,025.04	7,289.42	7,135.33	80.67	38.91	132.87	482.67	-9,867.81	7,026.11	6,959.36	66.75	105.255		
9,600.00	7,023.29	7,286.90	7,132.81	83.31	38.90	132.55	482.71	-9,867.85	6,926.23	6,859.46	66.78	103.724		
9,700.00	7,021.54	7,284.36	7,130.27	85.96	38.89	132.23	482.75	-9,867.89	6,826.36	6,759.56	66.80	102.191		
9,800.00	7,019.79	7,283.08	7,128.99	88.63	38.89	132.07	482.77	-9,867.90	6,726.48	6,659.65	66.83	100.653		
9,900.00	7,018.04	7,279.94	7,125.85	91.30	38.88	131.66	482.82	-9,867.95	6,626.61	6,559.75	66.86	99.119		
10,000.00	7,016.29	7,276.79	7,122.70	93.99	38.87	131.26	482.87	-9,868.00	6,526.74	6,459.85	66.88	97.583		
10,100.00	7,014.54	7,273.63	7,119.54	96.69	38.86	130.84	482.92	-9,868.05	6,426.87	6,359.96	66.91	96.046		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

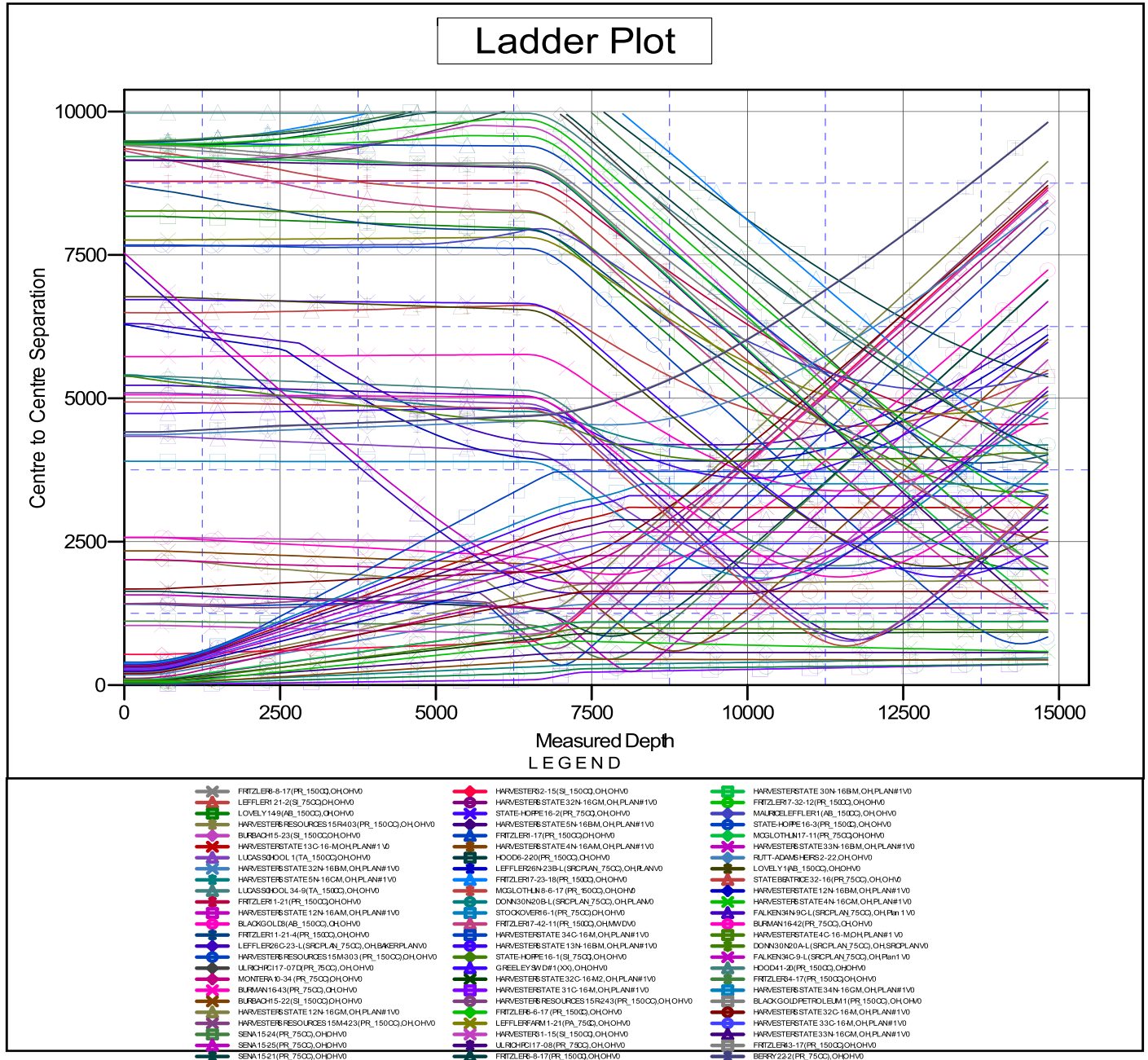
Offset Design HARVESTERS STATE 7-15 PAD - ULRICH PC I17-17D(PR_75CC) - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 78-MWD													Offset Well Error:	3.28 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,200.00	7,012.79	7,270.46	7,116.37	99.40	38.85	130.42	482.97	-9,868.10	6,327.01	6,260.06	66.95	94.507		
10,300.00	7,011.04	7,267.29	7,113.20	102.11	38.84	129.99	483.02	-9,868.15	6,227.14	6,160.16	66.98	92.966		
10,400.00	7,009.29	7,264.11	7,110.02	104.83	38.83	129.56	483.07	-9,868.21	6,127.28	6,060.26	67.02	91.424		
10,500.00	7,007.54	7,260.92	7,106.83	107.56	38.82	129.12	483.12	-9,868.26	6,027.43	5,960.37	67.06	89.880		
10,600.00	7,005.79	7,257.72	7,103.64	110.30	38.81	128.67	483.16	-9,868.31	5,927.57	5,860.47	67.10	88.335		
10,700.00	7,004.04	7,254.52	7,100.43	113.04	38.80	128.22	483.21	-9,868.36	5,827.72	5,760.58	67.15	86.789		
10,800.00	7,002.29	7,251.31	7,097.22	115.79	38.79	127.76	483.25	-9,868.41	5,727.88	5,660.68	67.20	85.240		
10,900.00	7,000.54	7,248.09	7,094.01	118.54	38.78	127.30	483.30	-9,868.46	5,628.03	5,560.79	67.25	83.691		
11,000.00	6,998.79	7,244.87	7,090.78	121.30	38.77	126.83	483.34	-9,868.51	5,528.19	5,460.89	67.30	82.140		
11,100.00	6,997.04	7,241.63	7,087.55	124.06	38.76	126.35	483.38	-9,868.57	5,428.36	5,361.00	67.36	80.587		
11,200.00	6,995.29	7,238.39	7,084.31	126.83	38.75	125.86	483.42	-9,868.62	5,328.53	5,261.10	67.42	79.033		
11,300.00	6,993.54	7,235.15	7,081.07	129.60	38.74	125.37	483.46	-9,868.67	5,228.70	5,161.21	67.49	77.478		
11,400.00	6,991.80	7,231.89	7,077.81	132.37	38.73	124.87	483.50	-9,868.72	5,128.88	5,061.32	67.56	75.921		
11,500.00	6,990.05	7,228.63	7,074.55	135.15	38.72	124.37	483.54	-9,868.78	5,029.06	4,961.43	67.63	74.363		
11,600.00	6,988.30	7,225.36	7,071.28	137.93	38.71	123.85	483.57	-9,868.83	4,929.24	4,861.54	67.71	72.803		
11,700.00	6,986.55	7,222.08	7,068.01	140.72	38.70	123.33	483.61	-9,868.88	4,829.44	4,761.65	67.79	71.241		
11,800.00	6,984.80	7,218.80	7,064.72	143.50	38.69	122.81	483.64	-9,868.94	4,729.63	4,661.76	67.88	69.678		
11,900.00	6,983.05	7,215.51	7,061.43	146.29	38.68	122.27	483.68	-9,868.99	4,629.84	4,561.87	67.97	68.114		
12,000.00	6,981.30	7,212.21	7,058.13	149.09	38.67	121.73	483.71	-9,869.05	4,530.05	4,461.98	68.07	66.548		
12,100.00	6,979.55	7,208.90	7,054.82	151.88	38.66	121.18	483.74	-9,869.10	4,430.27	4,362.09	68.18	64.980		
12,200.00	6,977.80	7,205.58	7,051.51	154.68	38.65	120.62	483.77	-9,869.16	4,330.49	4,262.20	68.29	63.410		
12,300.00	6,976.05	7,202.26	7,048.19	157.48	38.63	120.06	483.80	-9,869.21	4,230.73	4,162.31	68.42	61.839		
12,400.00	6,974.30	7,198.93	7,044.86	160.28	38.62	119.49	483.83	-9,869.27	4,130.97	4,062.42	68.55	60.265		
12,500.00	6,972.55	7,195.59	7,041.52	163.08	38.61	118.91	483.85	-9,869.32	4,031.22	3,962.53	68.69	58.689		
12,600.00	6,970.80	7,192.25	7,038.17	165.89	38.60	118.32	483.88	-9,869.38	3,931.48	3,862.64	68.84	57.112		
12,700.00	6,969.05	7,188.89	7,034.82	168.69	38.59	117.72	483.90	-9,869.44	3,831.75	3,762.75	69.00	55.532		
12,800.00	6,967.30	7,185.53	7,031.46	171.50	38.58	117.12	483.93	-9,869.49	3,732.04	3,662.86	69.18	53.950		
12,900.00	6,965.55	7,182.16	7,028.09	174.31	38.57	116.51	483.95	-9,869.55	3,632.33	3,562.97	69.37	52.365		
13,000.00	6,963.80	7,178.78	7,024.71	177.12	38.56	115.89	483.97	-9,869.61	3,532.64	3,463.07	69.57	50.778		
13,100.00	6,962.05	7,175.40	7,021.33	179.94	38.55	115.26	483.99	-9,869.66	3,432.96	3,363.17	69.79	49.187		
13,200.00	6,960.30	7,172.00	7,017.93	182.75	38.54	114.63	484.01	-9,869.72	3,333.30	3,263.27	70.04	47.594		
13,300.00	6,958.55	7,168.60	7,014.53	185.57	38.53	113.99	484.03	-9,869.78	3,233.66	3,163.36	70.30	45.998		
13,400.00	6,956.80	7,165.19	7,011.12	188.38	38.52	113.34	484.04	-9,869.84	3,134.04	3,063.45	70.59	44.399		
13,500.00	6,955.05	7,170.74	7,016.67	191.20	38.54	114.39	484.04	-9,869.70	3,034.41	2,963.50	70.91	42.794		
13,600.00	6,953.31	7,164.87	7,010.80	194.02	38.52	113.27	484.06	-9,869.82	2,934.84	2,863.59	71.25	41.189		
13,700.00	6,951.56	7,159.22	7,005.15	196.84	38.50	112.18	484.07	-9,869.93	2,835.29	2,763.66	71.64	39.579		
13,800.00	6,949.81	7,153.77	6,999.70	199.67	38.48	111.11	484.09	-9,870.03	2,735.77	2,663.71	72.06	37.966		
13,900.00	6,948.06	7,148.52	6,994.45	202.49	38.47	110.07	484.10	-9,870.12	2,636.27	2,563.75	72.53	36.349		
14,000.00	6,946.31	7,143.45	6,989.39	205.31	38.45	109.05	484.12	-9,870.21	2,536.81	2,463.76	73.05	34.727		
14,100.00	6,944.56	7,138.56	6,984.49	208.14	38.43	108.05	484.13	-9,870.29	2,437.39	2,363.75	73.63	33.101		
14,200.00	6,942.81	7,133.83	6,979.77	210.96	38.42	107.08	484.14	-9,870.36	2,338.01	2,263.72	74.29	31.472		
14,300.00	6,941.06	7,129.26	6,975.20	213.79	38.41	106.13	484.15	-9,870.43	2,238.67	2,163.65	75.03	29.839		
14,400.00	6,939.31	7,124.84	6,970.78	216.62	38.39	105.20	484.16	-9,870.50	2,139.39	2,063.54	75.86	28.203		
14,500.00	6,937.56	7,120.57	6,966.50	219.44	38.38	104.29	484.17	-9,870.56	2,040.18	1,963.38	76.80	26.564		
14,600.00	6,935.81	7,116.43	6,962.36	222.27	38.36	103.40	484.18	-9,870.62	1,941.04	1,863.16	77.88	24.924		
14,700.00	6,934.06	7,112.41	6,958.35	225.10	38.35	102.54	484.19	-9,870.67	1,841.98	1,762.87	79.11	23.283		
14,800.00	6,932.31	7,108.53	6,954.47	227.93	38.34	101.70	484.20	-9,870.72	1,743.03	1,662.50	80.53	21.644		
14,817.75	6,932.00	7,107.85	6,953.79	228.43	38.34	101.55	484.20	-9,870.73	1,725.48	1,644.67	80.80	21.354	CC, ES, SF	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Reference Depths are relative to KB @ 4821.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.5000000

Coordinates are relative to: HARVESTERS STATE 31N-16B-M
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.48°



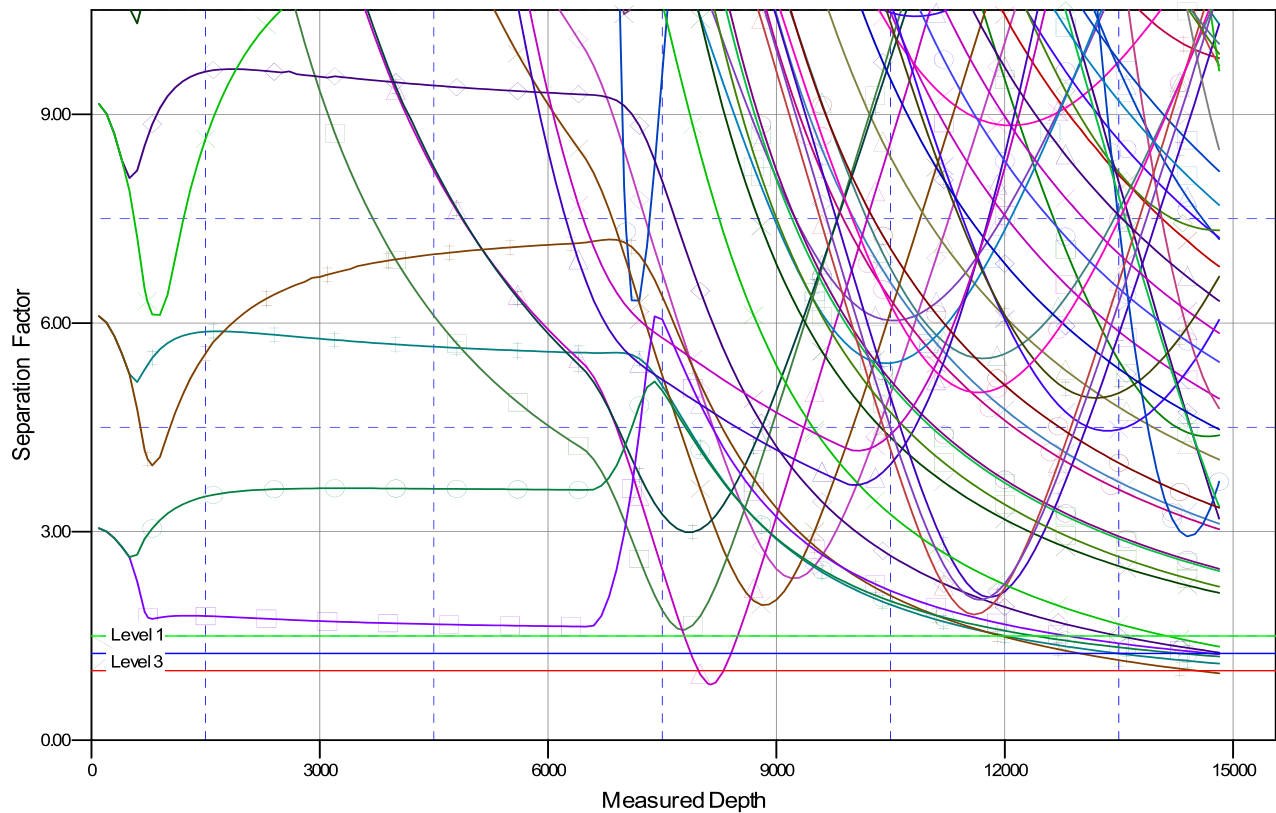
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	SRC ENERGY	Local Co-ordinate Reference:	Well HARVESTERS STATE 31N-16B-M
Project:	SECTION 15, T6N, R66W	TVD Reference:	KB @ 4821.00ft
Reference Site:	HARVESTERS STATE 7-15 PAD	MD Reference:	KB @ 4821.00ft
Site Error:	3.28 ft	North Reference:	True
Reference Well:	HARVESTERS STATE 31N-16B-M	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 ft	Output errors are at	2.45 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Reference Depths are relative to KB @ 4821.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.5000000

Coordinates are relative to: HARVESTERS STATE 31N-16B-M
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.48°

Separation Factor Plot



LEGEND

<ul style="list-style-type: none"> FRTZLER8-8-17(PR_150Q3,OH,OHV0) LEIFLER21-2(SL_750Q3,OH,OHV0) LOVELY149(AE_150Q3,OH,OHV0) HARVESTERS RESOURCES15R403(PR_150Q3,OH,OHV0) BURBACH15-23(SL_150Q3,OH,OHV0) HARVESTERS STATE13C-16-MOH,PLAN#1V0 LUCAS SCHOOL 1(TA_150Q3,OH,OHV0) HARVESTERS STATE32N-16BM,OH,PLAN#1V0 HARVESTERS STATE5N-16GM,OH,PLAN#1V0 LUCAS SCHOOL 34-9(TA_150Q3,OH,OHV0) FRTZLER11-21(PR_150Q3,OH,OHV0) HARVESTERS STATE12N-16AM,OH,PLAN#1V0 BLACKGOLD(BA_150Q3,OH,OHV0) FRTZLER11-21-4(PR_150Q3,OH,OHV0) LEIFLER20C-23-L(SRCP,PLAN,750Q3,OH,BK,PLANV0) HARVESTERS RESOURCES15M423(PR_150Q3,OH,OHV0) ULRICH17-07(PR_750Q3,OH,OHV0) MONTERA 8-34(PR_750Q3,OH,OHV0) BURMAN16-43(PR_750Q3,OH,OHV0) BURBACH15-22(SL_150Q3,OH,OHV0) HARVESTERS STATE12N-16GM,OH,PLAN#1V0 HARVESTERS RESOURCES15M423(PR_150Q3,OH,OHV0) SENA15-24(PR_750Q3,OH,OHV0) SENA15-25(PR_750Q3,OH,OHV0) SENA15-21(PR_750Q3,OH,OHV0) 	<ul style="list-style-type: none"> HARVESTERS STATE2-15(SL_150Q3,OH,OHV0) HARVESTERS STATE32N-16BM,OH,PLAN#1V0 STATE-HOPE16-2(PR_750Q3,OH,OHV0) FRTZLER11-17(PR_150Q3,OH,OHV0) HARVESTERS STATE4N-16AM,OH,PLAN#1V0 HOOD6-22(PR_150Q3,OH,OHV0) LEIFLER20N-23B-L(SRCP,PLAN,750Q3,OH,PLANV0) FRTZLER7-23-16(PR_150Q3,OH,OHV0) MOGLOTHJN16-17(PR_150Q3,OH,OHV0) DONN3ON20B-L(SRCP,PLAN,750Q3,OH,PLANV0) STOCKOVER16-1(PR_750Q3,OH,OHV0) FRTZLER7-42-11(PR_150Q3,OH,OHV0) HARVESTERS STATE34C-16M,OH,PLAN#1V0 HARVESTERS STATE13N-16BM,OH,PLAN#1V0 STATE-HOPE16-1(CS_750Q3,OH,OHV0) GREILEY(SWD#100X,OH,OHV0) HARVESTERS STATE32C-16M2,OH,PLAN#1V0 HARVESTERS STATE31C-16M,OH,PLAN#1V0 HARVESTERS RESOURCES15R423(PR_150Q3,OH,OHV0) FRTZLER6-17(PR_150Q3,OH,OHV0) LEIFLER14M11-2(PA_750Q3,OH,OHV0) HARVESTERS STATE11-15(SL_150Q3,OH,OHV0) ULRICH17-08(PR_750Q3,OH,OHV0) FRTZLER8-8-17(PR_150Q3,OH,OHV0) 	<ul style="list-style-type: none"> HARVESTERS STATE30N-16BM,OH,PLAN#1V0 FRTZLER7-32-12(PR_150Q3,OH,OHV0) MAURZELFLETER1(AE_150Q3,OH,OHV0) STATE-HOPE16-3(PR_150Q3,OH,OHV0) MOGLOTHJN17-11(PR_750Q3,OH,OHV0) HARVESTERS STATE33N-16BM,OH,PLAN#1V0 RUTT-ADAMSHERS2-22,OH,OHV0 LOVELY14B_150Q3,OH,OHV0 STATE16BTRX32-16(PR_750Q3,OH,OHV0) HARVESTERS STATE12N-16BM,OH,PLAN#1V0 HARVESTERS STATE4N-16GM,OH,PLAN#1V0 FALKENIN9C-L(SRCP,PLAN,750Q3,OH,PLANV0) BURMAN16-42(PR_750Q3,OH,OHV0) HARVESTERS STATE4C-16-MOH,PLAN#1V0 DONN3ON20A-L(SRCP,PLAN,750Q3,OH,SRCP,PLANV0) FALKENIN9C-L(SRCP,PLAN,750Q3,OH,PLANV0) HOOD41-2(PR_150Q3,OH,OHV0) FRTZLER84-17(PR_150Q3,OH,OHV0) HARVESTERS STATE34N-16GM,OH,PLAN#1V0 BLACKGOLDPETROLEUM1(PR_150Q3,OH,OHV0) HARVESTERS STATE32C-16M,OH,PLAN#1V0 HARVESTERS STATE33N-16GM,OH,PLAN#1V0 FRTZLER83-17(PR_150Q3,OH,OHV0) BERRY23-2(PR_750Q3,OH,OHV0)
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