

EXTRACTION OIL & GAS

ADAMS COUNTY

Sec 13-T1S-R66W

WARBLER 13W-27-07

OWB

PROPOSAL 1

Anticollision Report

17 October, 2022

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Reference PROPOSAL 1			
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	10/17/2022		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	22,440.61	PROPOSAL 1 (OWB)	MWD OWSG	OWSG MWD - Standard	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Sec 13-T1S-R66W						
ABND VERT ROCK 1 - Wellbore #1 - Design #1	100.00	102.00	752.14	750.76	545.644	CC
ABND VERT ROCK 1 - Wellbore #1 - Design #1	200.00	202.02	753.88	749.85	187.322	ES
ABND VERT ROCK 1 - Wellbore #1 - Design #1	8,200.00	7,271.09	4,389.37	4,208.76	24.303	SF
EXIST VERT JOHN ROCK 1 - Wellbore #1 - Design #1	4,061.57	3,620.83	2,030.20	1,924.94	19.288	CC
EXIST VERT JOHN ROCK 1 - Wellbore #1 - Design #1	4,300.00	3,828.24	2,033.60	1,921.88	18.202	ES
EXIST VERT JOHN ROCK 1 - Wellbore #1 - Design #1	6,900.00	6,109.95	2,466.03	2,291.00	14.090	SF
EXIST VERT PETE ROCK 1 - Wellbore #1 - Design #1	3,417.97	3,075.94	1,828.00	1,740.14	20.807	CC
EXIST VERT PETE ROCK 1 - Wellbore #1 - Design #1	3,600.00	3,234.29	1,830.20	1,737.38	19.717	ES
EXIST VERT PETE ROCK 1 - Wellbore #1 - Design #1	6,500.00	5,757.08	2,377.39	2,214.67	14.611	SF
WARBLER 13W-27-01 - OWB - PROPOSAL 1	1,893.57	1,851.99	65.98	48.09	3.688	CC
WARBLER 13W-27-01 - OWB - PROPOSAL 1	22,440.61	22,295.82	755.64	38.84	1.054	Level 2, ES, SF
WARBLER 13W-27-02 - OWB - PROPOSAL 1	932.45	917.07	125.22	118.40	18.344	CC
WARBLER 13W-27-02 - OWB - PROPOSAL 1	22,440.61	21,843.19	764.11	59.80	1.085	Level 2, ES, SF
WARBLER 13W-27-03 - OWB - PROPOSAL 1	698.75	691.16	139.47	134.73	29.400	CC
WARBLER 13W-27-03 - OWB - PROPOSAL 1	700.00	692.36	139.47	134.72	29.339	ES
WARBLER 13W-27-03 - OWB - PROPOSAL 1	22,440.61	21,570.53	1,957.86	1,139.79	2.393	SF
WARBLER 13W-27-04 - OWB - PROPOSAL 1	620.73	616.14	157.62	153.49	38.195	CC, ES
WARBLER 13W-27-04 - OWB - PROPOSAL 1	22,440.61	21,503.43	3,220.44	2,390.59	3.881	SF
WARBLER 13W-27-08 - OWB - PROPOSAL 1	100.00	100.00	28.05	27.78	104.321	CC, ES
WARBLER 13W-27-08 - OWB - PROPOSAL 1	22,440.61	22,092.04	1,276.09	435.77	1.519	SF
WARBLER 13W-27-09 - OWB - PROPOSAL 1	100.00	101.00	56.10	55.83	205.911	CC, ES
WARBLER 13W-27-09 - OWB - PROPOSAL 1	22,440.61	21,936.07	2,552.17	1,712.47	3.039	SF
WARBLER 13W-27-10 - OWB - PROPOSAL 1	100.00	102.00	84.15	83.87	304.864	CC, ES
WARBLER 13W-27-10 - OWB - PROPOSAL 1	22,440.61	21,981.35	3,832.98	2,994.21	4.570	SF
WARBLER 24W-27-05 - OWB - PROPOSAL 1	425.69	422.60	177.17	174.55	67.591	CC, ES
WARBLER 24W-27-05 - OWB - PROPOSAL 1	22,440.61	21,652.77	4,488.36	3,656.23	5.394	SF
WARBLER 24W-27-06 - OWB - PROPOSAL 1	209.81	209.78	195.95	194.89	185.599	CC, ES
WARBLER 24W-27-06 - OWB - PROPOSAL 1	22,440.61	22,014.98	5,764.06	4,931.81	6.926	SF
WARBLER 24W-27-11 - OWB - PROPOSAL 1	100.00	103.00	111.84	111.56	399.976	CC, ES
WARBLER 24W-27-11 - OWB - PROPOSAL 1	22,440.61	22,242.67	5,105.80	4,267.82	6.093	SF
WARBLER 24W-27-12 - OWB - PROPOSAL 1	100.00	103.00	139.88	139.61	512.591	CC, ES
WARBLER 24W-27-12 - OWB - PROPOSAL 1	22,440.61	22,645.94	6,339.24	5,502.96	7.580	SF

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Sec 14-T1S-R66W						
ABND VERT HECKENDORF 1 - Wellbore #1 - Design #1	11,000.00	7,533.00	54.19	-222.24	0.196	Level 1, ES
ABND VERT HECKENDORF 1 - Wellbore #1 - Design #1	11,012.92	7,533.00	52.63	-216.20	0.196	Level 1, CC, SF
ABND VERT HECKENDORF 2 - Wellbore #1 - Design #1	13,937.76	7,537.00	3,360.66	3,016.16	9.755	CC
ABND VERT HECKENDORF 2 - Wellbore #1 - Design #1	14,000.00	7,537.00	3,361.24	3,015.97	9.735	ES
ABND VERT HECKENDORF 2 - Wellbore #1 - Design #1	14,200.00	7,537.00	3,370.88	3,023.59	9.706	SF
SI VERT REBA SHAW 1 - Wellbore #1 - Design #1	19,274.46	7,580.00	3,166.86	2,679.40	6.497	CC
SI VERT REBA SHAW 1 - Wellbore #1 - Design #1	19,300.00	7,580.00	3,166.96	2,679.19	6.493	ES
SI VERT REBA SHAW 1 - Wellbore #1 - Design #1	19,400.00	7,580.00	3,169.35	2,680.57	6.484	SF
Sec 16-T1S-R66W						
ABND VERT GILBERT A. DIEDRICHS G U 1 - Wellbore	21,889.77	7,577.00	570.87	13.28	1.024	Level 2, CC, ES, SF
Sec 22-T1S-R66W						
ABND VERT FARMER 1 - Wellbore #1 - Design #1	19,548.49	7,580.00	5,749.46	5,254.66	11.620	CC
ABND VERT FARMER 1 - Wellbore #1 - Design #1	19,700.00	7,580.00	5,751.46	5,253.89	11.559	ES
ABND VERT FARMER 1 - Wellbore #1 - Design #1	20,300.00	7,580.00	5,798.37	5,292.24	11.456	SF
Sec 24-T1S-R66W						
ABND VERT BARR 1 - Wellbore #1 - Design #1	13,282.62	7,583.00	8,378.05	8,049.82	25.525	CC
ABND VERT BARR 1 - Wellbore #1 - Design #1	13,500.00	7,583.00	8,380.87	8,048.19	25.192	ES
ABND VERT BARR 1 - Wellbore #1 - Design #1	15,900.00	7,583.00	8,777.38	8,404.30	23.527	SF
ABND VERT BERGMAN 1 - Wellbore #1 - Design #1	11,097.28	7,551.00	4,907.89	4,636.58	18.089	CC
ABND VERT BERGMAN 1 - Wellbore #1 - Design #1	11,200.00	7,551.00	4,908.97	4,636.05	17.987	ES
ABND VERT BERGMAN 1 - Wellbore #1 - Design #1	12,100.00	7,551.00	5,009.28	4,724.26	17.575	SF
ABND VERT JOSEPHINE 1 - Wellbore #1 - Design #1	100.00	81.00	3,271.80	3,270.69	2,960.939	CC
ABND VERT JOSEPHINE 1 - Wellbore #1 - Design #1	800.00	774.06	3,279.67	3,261.51	180.544	ES
ABND VERT JOSEPHINE 1 - Wellbore #1 - Design #1	9,600.00	7,560.00	5,417.56	5,196.84	24.545	SF
EXIST VERT D G H L 1 - Wellbore #1 - Design #1	100.00	134.00	6,360.73	6,358.64	3,048.488	CC
EXIST VERT D G H L 1 - Wellbore #1 - Design #1	300.00	333.84	6,363.29	6,356.19	896.911	ES
EXIST VERT D G H L 1 - Wellbore #1 - Design #1	12,900.00	7,613.00	9,521.59	9,239.06	33.701	SF
SI VERT LEECH 1 - Wellbore #1 - Design #1	100.00	105.00	2,987.57	2,986.15	2,102.737	CC
SI VERT LEECH 1 - Wellbore #1 - Design #1	200.00	204.98	2,988.74	2,984.68	735.373	ES
SI VERT LEECH 1 - Wellbore #1 - Design #1	8,600.00	7,534.15	6,267.66	6,071.36	31.928	SF
Sec 25-T1S-R66W						
ALMA 1S-66-2524-19NH - ORIGINAL WELLBORE - WB	6,007.40	15,915.00	6,930.75	6,805.08	55.150	CC, ES
ALMA 1S-66-2524-19NH - ORIGINAL WELLBORE - WB	14,900.00	15,915.00	9,257.21	9,042.07	43.029	SF
ALMA 1S-66-2524-20CDH - ORIGINAL WELLBORE - W	6,350.81	16,202.00	7,139.66	6,998.31	50.509	CC
ALMA 1S-66-2524-20CDH - ORIGINAL WELLBORE - W	6,400.00	16,202.00	7,139.83	6,998.17	50.400	ES
ALMA 1S-66-2524-20CDH - ORIGINAL WELLBORE - W	14,700.00	16,202.00	8,892.00	8,675.54	41.080	SF

Offset Design												Offset Site Error:	0.00 usft	
Survey Program: 0-INC												Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)			
0.00	0.00	2.00	-2.00	0.00	0.02	143.05	-601.05	452.17	752.14					
100.00	100.00	102.00	98.00	0.13	1.24	143.05	-601.05	452.17	752.14	750.76	1.38	545.644	CC	
200.00	199.98	202.02	197.98	0.49	3.53	-174.55	-601.05	452.17	753.88	749.85	4.02	187.322	ES	
300.00	299.84	302.16	297.84	0.86	5.61	-174.58	-601.05	452.17	759.09	752.61	6.47	117.272		
400.00	399.45	402.55	397.45	1.23	7.66	-174.62	-601.05	452.17	767.76	758.87	8.89	86.343		
500.00	498.70	503.30	496.70	1.63	9.70	-174.68	-601.05	452.17	779.90	768.59	11.31	68.970		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-INC													Offset Well Error:		0.00 usft
Reference				Offset			Semi Major Axis			Distance			Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
600.00	597.47	604.53	595.47	2.05	11.75	-174.76	-601.05	452.17	795.47	781.74	13.73	57.938			
700.00	695.62	706.38	693.62	2.50	13.81	-174.85	-601.05	452.17	814.48	798.32	16.16	50.389			
800.00	793.06	808.94	791.06	2.99	15.88	-174.95	-601.05	452.17	836.89	818.27	18.61	44.960			
900.00	889.64	887.64	887.64	3.52	17.46	-175.05	-601.05	452.17	862.68	842.09	20.59	41.905			
1,000.00	985.27	983.27	983.27	4.10	19.39	-175.16	-601.05	452.17	891.82	868.91	22.90	38.939			
1,100.00	1,079.82	1,077.82	1,077.82	4.72	21.29	-175.28	-601.05	452.17	924.27	899.07	25.20	36.675			
1,200.00	1,173.17	1,171.17	1,171.17	5.40	23.17	-175.39	-601.05	452.17	960.00	932.52	27.48	34.934			
1,300.00	1,265.21	1,263.21	1,263.21	6.13	25.03	-175.51	-601.05	452.17	998.97	969.23	29.74	33.594			
1,400.00	1,355.84	1,353.84	1,353.84	6.92	26.85	-175.62	-601.05	452.17	1,041.12	1,009.16	31.97	32.568			
1,500.00	1,444.94	1,442.94	1,442.94	7.77	28.64	-175.72	-601.05	452.17	1,086.42	1,052.25	34.17	31.793			
1,600.00	1,532.44	1,530.44	1,530.44	8.68	30.41	-175.85	-601.05	452.17	1,134.72	1,098.37	36.35	31.217			
1,700.00	1,619.43	1,617.43	1,617.43	9.62	32.16	-176.02	-601.05	452.17	1,183.94	1,145.44	38.50	30.749			
1,800.00	1,706.42	1,704.42	1,704.42	10.56	33.91	-176.18	-601.05	452.17	1,233.17	1,192.51	40.66	30.327			
1,900.00	1,793.42	1,808.58	1,791.42	11.52	36.00	-176.32	-601.05	452.17	1,282.41	1,239.24	43.17	29.706			
2,000.00	1,880.41	1,878.41	1,878.41	12.48	37.41	-176.46	-601.05	452.17	1,331.66	1,286.67	44.99	29.599			
2,100.00	1,967.40	1,965.40	1,965.40	13.45	39.16	-176.59	-601.05	452.17	1,380.91	1,333.75	47.16	29.282			
2,200.00	2,054.39	2,052.39	2,052.39	14.42	40.91	-176.70	-601.05	452.17	1,430.16	1,380.83	49.33	28.993			
2,300.00	2,141.39	2,139.39	2,139.39	15.39	42.66	-176.81	-601.05	452.17	1,479.42	1,427.92	51.50	28.726			
2,400.00	2,228.38	2,226.38	2,226.38	16.36	44.41	-176.92	-601.05	452.17	1,528.68	1,475.01	53.67	28.481			
2,500.00	2,315.37	2,313.37	2,313.37	17.34	46.16	-177.01	-601.05	452.17	1,577.95	1,522.10	55.85	28.254			
2,600.00	2,402.37	2,400.37	2,400.37	18.32	47.91	-177.10	-601.05	452.17	1,627.21	1,569.19	58.02	28.043			
2,700.00	2,489.36	2,487.36	2,487.36	19.30	49.66	-177.19	-601.05	452.17	1,676.49	1,616.28	60.20	27.848			
2,800.00	2,576.35	2,574.35	2,574.35	20.28	51.41	-177.27	-601.05	452.17	1,725.76	1,663.38	62.38	27.665			
2,900.00	2,663.34	2,661.34	2,661.34	21.26	53.16	-177.34	-601.05	452.17	1,775.04	1,710.48	64.56	27.494			
3,000.00	2,750.34	2,748.34	2,748.34	22.24	54.91	-177.42	-601.05	452.17	1,824.32	1,757.58	66.74	27.335			
3,100.00	2,837.33	2,835.33	2,835.33	23.23	56.66	-177.48	-601.05	452.17	1,873.60	1,804.68	68.92	27.185			
3,200.00	2,924.32	2,922.32	2,922.32	24.21	58.41	-177.55	-601.05	452.17	1,922.88	1,851.78	71.10	27.044			
3,300.00	3,011.31	3,009.31	3,009.31	25.20	60.16	-177.61	-601.05	452.17	1,972.16	1,898.88	73.28	26.911			
3,400.00	3,098.31	3,103.69	3,096.31	26.18	62.05	-177.67	-601.05	452.17	2,021.45	1,945.84	75.62	26.733			
3,500.00	3,185.30	3,183.30	3,183.30	27.17	63.66	-177.72	-601.05	452.17	2,070.74	1,993.09	77.65	26.668			
3,600.00	3,272.29	3,270.29	3,270.29	28.16	65.40	-177.78	-601.05	452.17	2,120.03	2,040.19	79.83	26.556			
3,700.00	3,359.29	3,357.29	3,357.29	29.14	67.15	-177.83	-601.05	452.17	2,169.32	2,087.30	82.02	26.449			
3,800.00	3,446.28	3,444.28	3,444.28	30.13	68.90	-177.88	-601.05	452.17	2,218.61	2,134.41	84.20	26.348			
3,900.00	3,533.27	3,531.27	3,531.27	31.12	70.65	-177.92	-601.05	452.17	2,267.90	2,181.52	86.39	26.253			
4,000.00	3,620.26	3,618.26	3,618.26	32.10	72.40	-177.97	-601.05	452.17	2,317.20	2,228.62	88.57	26.161			
4,100.00	3,707.26	3,705.26	3,705.26	33.09	74.15	-178.01	-601.05	452.17	2,366.49	2,275.73	90.76	26.075			
4,200.00	3,794.25	3,807.75	3,792.25	34.08	76.21	-178.05	-601.05	452.17	2,415.79	2,322.53	93.26	25.905			
4,300.00	3,881.24	3,879.24	3,879.24	35.07	77.65	-178.09	-601.05	452.17	2,465.08	2,369.95	95.13	25.912			
4,400.00	3,968.23	3,966.23	3,966.23	36.06	79.40	-178.13	-601.05	452.17	2,514.38	2,417.06	97.32	25.837			
4,500.00	4,055.23	4,053.23	4,053.23	37.05	81.15	-178.16	-601.05	452.17	2,563.68	2,464.18	99.51	25.764			
4,600.00	4,142.22	4,140.22	4,140.22	38.04	82.90	-178.20	-601.05	452.17	2,612.98	2,511.29	101.69	25.695			
4,700.00	4,229.21	4,227.21	4,227.21	39.03	84.65	-178.23	-601.05	452.17	2,662.28	2,558.40	103.88	25.628			
4,800.00	4,316.21	4,314.21	4,314.21	40.02	86.40	-178.26	-601.05	452.17	2,711.58	2,605.51	106.07	25.564			
4,900.00	4,403.20	4,401.20	4,401.20	41.01	88.15	-178.29	-601.05	452.17	2,760.88	2,652.62	108.26	25.503			
5,000.00	4,490.19	4,488.19	4,488.19	42.00	89.90	-178.32	-601.05	452.17	2,810.18	2,699.74	110.45	25.444			
5,100.00	4,577.18	4,575.18	4,575.18	42.99	91.65	-178.35	-601.05	452.17	2,859.49	2,746.85	112.63	25.387			
5,200.00	4,664.18	4,662.18	4,662.18	43.98	93.40	-178.38	-601.05	452.17	2,908.79	2,793.96	114.82	25.333			
5,300.00	4,751.17	4,749.17	4,749.17	44.97	95.15	-178.41	-601.05	452.17	2,958.09	2,841.08	117.01	25.280			
5,400.00	4,838.16	4,836.16	4,836.16	45.96	96.90	-178.43	-601.05	452.17	3,007.40	2,888.19	119.20	25.229			
5,500.00	4,925.15	4,923.15	4,923.15	46.95	98.65	-178.46	-601.05	452.17	3,056.70	2,935.31	121.39	25.180			
5,600.00	5,012.15	5,010.15	5,010.15	47.94	100.40	-178.48	-601.05	452.17	3,106.00	2,982.42	123.58	25.133			
5,700.00	5,099.14	5,102.86	5,097.14	48.93	102.26	-178.51	-601.05	452.17	3,155.31	3,029.42	125.89	25.064			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 13-T1S-R66W - ABND VERT ROCK 1 - Wellbore #1 - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-INC													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,800.00	5,186.13	5,184.13	5,184.13	49.92	103.89	-178.53	-601.05	452.17	3,204.62	3,076.65	127.96	25.043		
5,900.00	5,273.13	5,271.13	5,271.13	50.91	105.64	-178.55	-601.05	452.17	3,253.92	3,123.77	130.16	25.000		
6,000.00	5,360.12	5,358.12	5,358.12	51.90	107.39	-178.57	-601.05	452.17	3,303.23	3,170.88	132.35	24.959		
6,100.00	5,447.11	5,445.11	5,445.11	52.89	109.14	-178.59	-601.05	452.17	3,352.53	3,218.00	134.54	24.919		
6,200.00	5,534.10	5,532.10	5,532.10	53.88	110.89	-178.61	-601.05	452.17	3,401.84	3,265.11	136.73	24.880		
6,300.00	5,621.10	5,619.10	5,619.10	54.87	112.64	-178.63	-601.05	452.17	3,451.15	3,312.23	138.92	24.842		
6,400.00	5,708.09	5,706.09	5,706.09	55.86	114.39	-178.65	-601.05	452.17	3,500.46	3,359.34	141.12	24.806		
6,500.00	5,795.08	5,806.92	5,793.08	56.85	116.42	-178.67	-601.05	452.17	3,549.76	3,406.18	143.59	24.722		
6,600.00	5,882.07	5,880.07	5,880.07	57.84	117.89	-178.69	-601.05	452.17	3,599.07	3,453.57	145.50	24.736		
6,700.00	5,969.07	5,967.07	5,967.07	58.83	119.64	-178.71	-601.05	452.17	3,648.38	3,500.69	147.69	24.702		
6,800.00	6,056.06	6,054.06	6,054.06	59.83	121.39	-178.73	-601.05	452.17	3,697.69	3,547.80	149.89	24.670		
6,900.00	6,143.05	6,141.05	6,141.05	60.82	123.14	-178.74	-601.05	452.17	3,747.00	3,594.92	152.08	24.638		
7,000.00	6,230.05	6,228.05	6,228.05	61.81	124.89	-178.76	-601.05	452.17	3,796.31	3,642.03	154.27	24.608		
7,100.00	6,317.04	6,315.04	6,315.04	62.80	126.64	-178.77	-601.05	452.17	3,845.62	3,689.15	156.47	24.578		
7,200.00	6,404.03	6,402.03	6,402.03	63.79	128.39	-178.79	-601.05	452.17	3,894.93	3,736.26	158.66	24.548		
7,300.00	6,491.02	6,489.02	6,489.02	64.78	130.14	-178.81	-601.05	452.17	3,944.24	3,783.38	160.86	24.520		
7,400.00	6,578.02	6,576.02	6,576.02	65.77	131.89	-178.82	-601.05	452.17	3,993.55	3,830.49	163.05	24.492		
7,500.00	6,665.01	6,663.01	6,663.01	66.76	133.64	-178.83	-601.05	452.17	4,042.86	3,877.61	165.25	24.465		
7,600.00	6,752.00	6,750.00	6,750.00	67.76	135.38	-178.85	-601.05	452.17	4,092.17	3,924.72	167.44	24.439		
7,700.00	6,838.99	6,836.99	6,836.99	68.75	137.13	-178.86	-601.05	452.17	4,141.48	3,971.84	169.64	24.414		
7,800.00	6,925.99	6,923.99	6,923.99	69.74	138.88	-178.88	-601.05	452.17	4,190.79	4,018.95	171.83	24.389		
7,900.00	7,012.98	7,010.98	7,010.98	70.73	140.63	-178.89	-601.05	452.17	4,240.10	4,066.07	174.03	24.364		
8,000.00	7,099.97	7,102.03	7,097.97	71.72	142.46	-178.90	-601.05	452.17	4,289.41	4,113.10	176.31	24.329		
8,100.00	7,186.97	7,184.97	7,184.97	72.71	144.13	-178.91	-601.05	452.17	4,338.72	4,160.30	178.42	24.317		
8,200.00	7,273.09	7,271.09	7,271.09	73.74	145.86	-169.61	-601.05	452.17	4,389.37	4,208.76	180.61	24.303 SF		
8,300.00	7,352.95	7,350.95	7,350.95	74.97	147.47	-155.16	-601.05	452.17	4,447.43	4,264.76	182.67	24.347		
8,400.00	7,423.63	7,421.63	7,421.63	76.39	148.89	-142.38	-601.05	452.17	4,512.24	4,327.72	184.52	24.454		
8,500.00	7,482.96	7,480.96	7,480.96	77.96	150.08	-130.09	-601.05	452.17	4,582.07	4,395.97	186.10	24.621		
8,600.00	7,529.15	7,527.15	7,527.15	79.64	151.01	-117.85	-601.05	452.17	4,655.08	4,467.72	187.36	24.845		
8,700.00	7,560.79	7,558.79	7,558.79	81.35	151.65	-105.92	-601.05	452.17	4,729.36	4,541.10	188.26	25.121		
8,800.00	7,576.92	7,574.92	7,574.92	83.05	151.97	-94.96	-601.05	452.17	4,802.94	4,614.16	188.78	25.442		
8,900.00	7,579.00	7,577.00	7,577.00	84.68	152.02	-90.00	-601.05	452.17	4,874.42	4,685.46	188.96	25.796		
9,000.00	7,579.00	7,577.00	7,577.00	86.34	152.02	-90.00	-601.05	452.17	4,946.35	4,757.23	189.12	26.154		
9,100.00	7,579.00	7,577.00	7,577.00	88.04	152.02	-90.00	-601.05	452.17	5,019.23	4,829.93	189.30	26.514		
9,200.00	7,579.00	7,577.00	7,577.00	89.80	152.02	-90.00	-601.05	452.17	5,093.04	4,903.53	189.51	26.875		
9,300.00	7,579.00	7,577.00	7,577.00	91.59	152.02	-90.00	-601.05	452.17	5,167.72	4,977.99	189.73	27.237		
9,400.00	7,579.00	7,577.00	7,577.00	93.42	152.02	-90.00	-601.05	452.17	5,243.25	5,053.29	189.97	27.601		
9,500.00	7,579.00	7,577.00	7,577.00	95.30	152.02	-90.00	-601.05	452.17	5,319.59	5,129.37	190.22	27.965		
9,600.00	7,579.00	7,577.00	7,577.00	97.21	152.02	-90.00	-601.05	452.17	5,396.70	5,206.22	190.48	28.332		
9,700.00	7,579.00	7,577.00	7,577.00	99.15	152.02	-90.00	-601.05	452.17	5,474.55	5,283.80	190.76	28.699		
9,800.00	7,579.00	7,577.00	7,577.00	101.13	152.02	-90.00	-601.05	452.17	5,553.11	5,362.07	191.04	29.068		
9,900.00	7,579.00	7,577.00	7,577.00	103.15	152.02	-90.00	-601.05	452.17	5,632.35	5,441.03	191.33	29.438		
10,000.00	7,579.00	7,577.00	7,577.00	105.19	152.02	-90.00	-601.05	452.17	5,712.25	5,520.62	191.62	29.810		
10,100.00	7,579.00	7,577.00	7,577.00	107.26	152.02	-90.00	-601.05	452.17	5,792.76	5,600.84	191.92	30.183		
10,200.00	7,579.00	7,577.00	7,577.00	109.36	152.02	-90.00	-601.05	452.17	5,873.88	5,681.65	192.23	30.557		
10,300.00	7,579.00	7,577.00	7,577.00	111.49	152.02	-90.00	-601.05	452.17	5,955.57	5,763.03	192.53	30.933		
10,400.00	7,579.00	7,577.00	7,577.00	113.64	152.02	-90.00	-601.05	452.17	6,037.81	5,844.97	192.84	31.310		
10,500.00	7,579.00	7,577.00	7,577.00	115.82	152.02	-90.00	-601.05	452.17	6,120.58	5,927.43	193.15	31.688		
10,600.00	7,579.00	7,577.00	7,577.00	118.01	152.02	-90.00	-601.05	452.17	6,203.85	6,010.40	193.46	32.068		
10,700.00	7,579.00	7,577.00	7,577.00	120.23	152.02	-90.00	-601.05	452.17	6,287.62	6,093.85	193.77	32.450		
10,800.00	7,579.00	7,577.00	7,577.00	122.47	152.02	-90.00	-601.05	452.17	6,371.85	6,177.78	194.07	32.832		
10,900.00	7,579.00	7,577.00	7,577.00	124.73	152.02	-90.00	-601.05	452.17	6,456.53	6,262.15	194.38	33.216		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft	
Survey Program: 0-INC												Offset Well Error:		0.00 usft
Reference				Offset		Semi Major Axis			Distance				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
11,000.00	7,579.00	7,577.00	7,577.00	127.01	152.02	-90.00	-601.05	452.17	6,541.65	6,346.96	194.68	33.601		
11,100.00	7,579.00	7,577.00	7,577.00	129.30	152.02	-90.00	-601.05	452.17	6,627.18	6,432.19	194.99	33.988		
11,200.00	7,579.00	7,577.00	7,577.00	131.61	152.02	-90.00	-601.05	452.17	6,713.11	6,517.82	195.29	34.375		
11,300.00	7,579.00	7,577.00	7,577.00	133.93	152.02	-90.00	-601.05	452.17	6,799.43	6,603.84	195.59	34.764		
11,400.00	7,579.00	7,577.00	7,577.00	136.27	152.02	-90.00	-601.05	452.17	6,886.11	6,690.23	195.88	35.154		
11,500.00	7,579.00	7,577.00	7,577.00	138.62	152.02	-90.00	-601.05	452.17	6,973.15	6,776.98	196.17	35.546		
11,600.00	7,579.00	7,577.00	7,577.00	140.99	152.02	-90.00	-601.05	452.17	7,060.54	6,864.07	196.46	35.938		
11,700.00	7,579.00	7,577.00	7,577.00	143.37	152.02	-90.00	-601.05	452.17	7,148.25	6,951.50	196.75	36.332		
11,800.00	7,579.00	7,577.00	7,577.00	145.76	152.02	-90.00	-601.05	452.17	7,236.29	7,039.26	197.03	36.726		
11,900.00	7,579.00	7,577.00	7,577.00	148.16	152.02	-90.00	-601.05	452.17	7,324.63	7,127.32	197.31	37.122		
12,000.00	7,579.00	7,577.00	7,577.00	150.58	152.02	-90.00	-601.05	452.17	7,413.27	7,215.68	197.59	37.518		
12,100.00	7,579.00	7,577.00	7,577.00	153.00	152.02	-90.00	-601.05	452.17	7,502.19	7,304.33	197.86	37.916		
12,200.00	7,579.00	7,577.00	7,577.00	155.43	152.02	-90.00	-601.05	452.17	7,591.39	7,393.26	198.13	38.314		
12,300.00	7,579.00	7,577.00	7,577.00	157.87	152.02	-90.00	-601.05	452.17	7,680.86	7,482.46	198.40	38.714		
12,400.00	7,579.00	7,577.00	7,577.00	160.32	152.02	-90.00	-601.05	452.17	7,770.58	7,571.92	198.66	39.114		
12,500.00	7,579.00	7,577.00	7,577.00	162.78	152.02	-90.00	-601.05	452.17	7,860.55	7,661.63	198.92	39.516		
12,600.00	7,579.00	7,577.00	7,577.00	165.25	152.02	-90.00	-601.05	452.17	7,950.76	7,751.58	199.18	39.918		
12,700.00	7,579.00	7,577.00	7,577.00	167.73	152.02	-90.00	-601.05	452.17	8,041.20	7,841.77	199.43	40.321		
12,800.00	7,579.00	7,577.00	7,577.00	170.21	152.02	-90.00	-601.05	452.17	8,131.87	7,932.19	199.68	40.724		
12,900.00	7,579.00	7,577.00	7,577.00	172.70	152.02	-90.00	-601.05	452.17	8,222.75	8,022.82	199.93	41.129		
13,000.00	7,579.00	7,577.00	7,577.00	175.19	152.02	-90.00	-601.05	452.17	8,313.84	8,113.67	200.17	41.534		
13,100.00	7,579.00	7,577.00	7,577.00	177.70	152.02	-90.00	-601.05	452.17	8,405.14	8,204.73	200.41	41.940		
13,200.00	7,579.00	7,577.00	7,577.00	180.20	152.02	-90.00	-601.05	452.17	8,496.63	8,295.98	200.65	42.346		
13,300.00	7,579.00	7,577.00	7,577.00	182.72	152.02	-90.00	-601.05	452.17	8,588.31	8,387.43	200.88	42.754		
13,400.00	7,579.00	7,577.00	7,577.00	185.24	152.02	-90.00	-601.05	452.17	8,680.17	8,479.06	201.11	43.161		
13,500.00	7,579.00	7,577.00	7,577.00	187.76	152.02	-90.00	-601.05	452.17	8,772.21	8,570.87	201.34	43.570		
13,600.00	7,579.00	7,577.00	7,577.00	190.30	152.02	-90.00	-601.05	452.17	8,864.42	8,662.86	201.56	43.979		
13,700.00	7,579.00	7,577.00	7,577.00	192.83	152.02	-90.00	-601.05	452.17	8,956.80	8,755.02	201.78	44.389		
13,800.00	7,579.00	7,577.00	7,577.00	195.37	152.02	-90.00	-601.05	452.17	9,049.35	8,847.35	202.00	44.799		
13,900.00	7,579.00	7,577.00	7,577.00	197.92	152.02	-90.00	-601.05	452.17	9,142.05	8,939.83	202.21	45.210		
14,000.00	7,579.00	7,577.00	7,577.00	200.47	152.02	-90.00	-601.05	452.17	9,234.90	9,032.47	202.43	45.621		
14,100.00	7,579.00	7,577.00	7,577.00	203.02	152.02	-90.00	-601.05	452.17	9,327.90	9,125.26	202.64	46.033		
14,200.00	7,579.00	7,577.00	7,577.00	205.58	152.02	-90.00	-601.05	452.17	9,421.04	9,218.20	202.84	46.445		
14,300.00	7,579.00	7,577.00	7,577.00	208.14	152.02	-90.00	-601.05	452.17	9,514.33	9,311.28	203.05	46.857		
14,400.00	7,579.00	7,577.00	7,577.00	210.70	152.02	-90.00	-601.05	452.17	9,607.74	9,404.49	203.25	47.271		
14,500.00	7,579.00	7,577.00	7,577.00	213.27	152.02	-90.00	-601.05	452.17	9,701.29	9,497.84	203.45	47.684		
14,600.00	7,579.00	7,577.00	7,577.00	215.84	152.02	-90.00	-601.05	452.17	9,794.97	9,591.32	203.65	48.098		
14,700.00	7,579.00	7,577.00	7,577.00	218.42	152.02	-90.00	-601.05	452.17	9,888.77	9,684.93	203.84	48.512		
14,800.00	7,579.00	7,577.00	7,577.00	221.00	152.02	-90.00	-601.05	452.17	9,982.69	9,778.66	204.03	48.927		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 13-T1S-R66W - EXIST VERT JOHN ROCK 1 - Wellbore #1 - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-INC													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	9.38	2,548.91	421.28	2,584.04					
100.00	100.00	47.00	47.00	0.13	0.62	9.38	2,548.91	421.28	2,583.49	2,582.74	0.75	3,426.803		
200.00	199.98	146.98	146.98	0.49	2.38	51.85	2,548.91	421.28	2,582.41	2,579.54	2.88	898.222		
300.00	299.84	246.84	246.84	0.86	4.55	51.99	2,548.91	421.28	2,579.18	2,573.77	5.41	476.402		
400.00	399.45	346.45	346.45	1.23	6.61	52.22	2,548.91	421.28	2,573.82	2,565.98	7.84	328.245		
500.00	498.70	445.70	445.70	1.63	8.63	52.56	2,548.91	421.28	2,566.35	2,556.09	10.25	250.369		
600.00	597.47	544.47	544.47	2.05	10.63	52.99	2,548.91	421.28	2,556.81	2,544.15	12.66	201.994		
700.00	695.62	642.62	642.62	2.50	12.61	53.51	2,548.91	421.28	2,545.25	2,530.18	15.07	168.887		
800.00	793.06	740.06	740.06	2.99	14.58	54.14	2,548.91	421.28	2,531.75	2,514.26	17.49	144.728		
900.00	889.64	836.64	836.64	3.52	16.53	54.86	2,548.91	421.28	2,516.37	2,496.44	19.93	126.272		
1,000.00	985.27	932.27	932.27	4.10	18.45	55.68	2,548.91	421.28	2,499.21	2,476.83	22.38	111.677		
1,100.00	1,079.82	1,026.82	1,026.82	4.72	20.36	56.59	2,548.91	421.28	2,480.37	2,455.52	24.85	99.822		
1,200.00	1,173.17	1,120.17	1,120.17	5.40	22.24	57.61	2,548.91	421.28	2,459.95	2,432.62	27.34	89.984		
1,300.00	1,265.21	1,212.21	1,212.21	6.13	24.09	58.72	2,548.91	421.28	2,438.10	2,408.25	29.85	81.676		
1,400.00	1,355.84	1,302.84	1,302.84	6.92	25.92	59.93	2,548.91	421.28	2,414.96	2,382.57	32.39	74.559		
1,500.00	1,444.94	1,408.06	1,391.94	7.77	28.03	61.23	2,548.91	421.28	2,390.68	2,355.40	35.28	67.759		
1,600.00	1,532.44	1,479.44	1,479.44	8.68	29.47	62.52	2,548.91	421.28	2,365.48	2,327.92	37.56	62.986		
1,700.00	1,619.43	1,566.43	1,566.43	9.62	31.22	63.48	2,548.91	421.28	2,340.55	2,300.37	40.18	58.252		
1,800.00	1,706.42	1,653.42	1,653.42	10.56	32.97	64.46	2,548.91	421.28	2,316.40	2,273.58	42.83	54.087		
1,900.00	1,793.42	1,740.42	1,740.42	11.52	34.72	65.45	2,548.91	421.28	2,293.06	2,247.57	45.50	50.402		
2,000.00	1,880.41	1,827.41	1,827.41	12.48	36.47	66.46	2,548.91	421.28	2,270.56	2,222.37	48.18	47.123		
2,100.00	1,967.40	1,914.40	1,914.40	13.45	38.22	67.48	2,548.91	421.28	2,248.91	2,198.02	50.89	44.194		
2,200.00	2,054.39	2,001.39	2,001.39	14.42	39.97	68.53	2,548.91	421.28	2,228.14	2,174.53	53.61	41.564		
2,300.00	2,141.39	2,088.39	2,088.39	15.39	41.72	69.58	2,548.91	421.28	2,208.27	2,151.93	56.34	39.194		
2,400.00	2,228.38	2,175.38	2,175.38	16.36	43.47	70.65	2,548.91	421.28	2,189.34	2,130.25	59.09	37.052		
2,500.00	2,315.37	2,262.37	2,262.37	17.34	45.22	71.74	2,548.91	421.28	2,171.36	2,109.51	61.85	35.109		
2,600.00	2,402.37	2,349.37	2,349.37	18.32	46.97	72.84	2,548.91	421.28	2,154.36	2,089.75	64.61	33.342		
2,700.00	2,489.36	2,436.36	2,436.36	19.30	48.72	73.95	2,548.91	421.28	2,138.37	2,070.98	67.39	31.731		
2,800.00	2,576.35	2,523.35	2,523.35	20.28	50.47	75.07	2,548.91	421.28	2,123.40	2,053.22	70.17	30.259		
2,900.00	2,663.34	2,610.34	2,610.34	21.26	52.22	76.21	2,548.91	421.28	2,109.47	2,036.51	72.96	28.911		
3,000.00	2,750.34	2,702.66	2,697.34	22.24	54.08	77.36	2,548.91	421.28	2,096.62	2,020.75	75.87	27.636		
3,100.00	2,837.33	2,784.33	2,784.33	23.23	55.72	78.51	2,548.91	421.28	2,084.85	2,006.29	78.55	26.540		
3,200.00	2,924.32	2,871.32	2,871.32	24.21	57.47	79.68	2,548.91	421.28	2,074.19	1,992.83	81.35	25.496		
3,300.00	3,011.31	2,958.31	2,958.31	25.20	59.22	80.86	2,548.91	421.28	2,064.65	1,980.50	84.15	24.535		
3,400.00	3,098.31	3,045.31	3,045.31	26.18	60.97	82.04	2,548.91	421.28	2,056.25	1,969.30	86.94	23.650		
3,500.00	3,185.30	3,132.30	3,132.30	27.17	62.72	83.23	2,548.91	421.28	2,049.00	1,959.27	89.74	22.834		
3,600.00	3,272.29	3,219.29	3,219.29	28.16	64.47	84.43	2,548.91	421.28	2,042.92	1,950.40	92.52	22.081		
3,700.00	3,359.29	3,306.29	3,306.29	29.14	66.22	85.63	2,548.91	421.28	2,038.01	1,942.71	95.30	21.386		
3,800.00	3,446.28	3,406.72	3,393.28	30.13	68.24	86.84	2,548.91	421.28	2,034.29	1,935.95	98.34	20.687		
3,900.00	3,533.27	3,480.27	3,480.27	31.12	69.72	88.04	2,548.91	421.28	2,031.76	1,930.93	100.83	20.151		
4,000.00	3,620.26	3,567.26	3,567.26	32.10	71.47	89.25	2,548.91	421.28	2,030.42	1,926.85	103.57	19.604		
4,061.57	3,673.83	3,620.83	3,620.83	32.71	72.55	90.00	2,548.91	421.28	2,030.20	1,924.94	105.26	19.288	CC	
4,100.00	3,707.26	3,654.26	3,654.26	33.09	73.22	90.47	2,548.91	421.28	2,030.29	1,923.98	106.31	19.099		
4,200.00	3,794.25	3,741.25	3,741.25	34.08	74.97	91.68	2,548.91	421.28	2,031.34	1,922.32	109.02	18.632		
4,300.00	3,881.24	3,828.24	3,828.24	35.07	76.72	92.88	2,548.91	421.28	2,033.60	1,921.88	111.72	18.202	ES	
4,400.00	3,968.23	3,915.23	3,915.23	36.06	78.47	94.09	2,548.91	421.28	2,037.05	1,922.64	114.41	17.805		
4,500.00	4,055.23	4,002.23	4,002.23	37.05	80.22	95.29	2,548.91	421.28	2,041.68	1,924.61	117.07	17.440		
4,600.00	4,142.22	4,089.22	4,089.22	38.04	81.97	96.49	2,548.91	421.28	2,047.49	1,927.77	119.72	17.103		
4,700.00	4,229.21	4,176.21	4,176.21	39.03	83.71	97.68	2,548.91	421.28	2,054.47	1,932.13	122.34	16.793		
4,800.00	4,316.21	4,263.21	4,263.21	40.02	85.46	98.87	2,548.91	421.28	2,062.60	1,937.66	124.94	16.508		
4,900.00	4,403.20	4,350.20	4,350.20	41.01	87.21	100.05	2,548.91	421.28	2,071.88	1,944.35	127.52	16.247		
5,000.00	4,490.19	4,437.19	4,437.19	42.00	88.96	101.22	2,548.91	421.28	2,082.28	1,952.20	130.08	16.007		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 13-T1S-R66W - EXIST VERT JOHN ROCK 1 - Wellbore #1 - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-INC													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	4,577.18	4,524.18	4,524.18	42.99	90.71	102.38	2,548.91	421.28	2,093.80	1,961.18	132.62	15.788		
5,200.00	4,664.18	4,611.18	4,611.18	43.98	92.46	103.53	2,548.91	421.28	2,106.40	1,971.27	135.13	15.588		
5,300.00	4,751.17	4,701.83	4,698.17	44.97	94.29	104.67	2,548.91	421.28	2,120.08	1,982.39	137.69	15.397		
5,400.00	4,838.16	4,785.16	4,785.16	45.96	95.96	105.79	2,548.91	421.28	2,134.81	1,994.72	140.09	15.239		
5,500.00	4,925.15	4,872.15	4,872.15	46.95	97.71	106.91	2,548.91	421.28	2,150.57	2,008.04	142.53	15.088		
5,600.00	5,012.15	4,959.15	4,959.15	47.94	99.46	108.01	2,548.91	421.28	2,167.34	2,022.39	144.95	14.952		
5,700.00	5,099.14	5,046.14	5,046.14	48.93	101.21	109.10	2,548.91	421.28	2,185.09	2,037.74	147.35	14.829		
5,800.00	5,186.13	5,133.13	5,133.13	49.92	102.96	110.17	2,548.91	421.28	2,203.81	2,054.08	149.73	14.719		
5,900.00	5,273.13	5,220.13	5,220.13	50.91	104.71	111.23	2,548.91	421.28	2,223.46	2,071.37	152.08	14.620		
6,000.00	5,360.12	5,307.12	5,307.12	51.90	106.46	112.28	2,548.91	421.28	2,244.02	2,089.60	154.42	14.532		
6,100.00	5,447.11	5,405.89	5,394.11	52.89	108.44	113.30	2,548.91	421.28	2,265.47	2,108.50	156.97	14.432		
6,200.00	5,534.10	5,481.10	5,481.10	53.88	109.96	114.32	2,548.91	421.28	2,287.78	2,128.75	159.03	14.386		
6,300.00	5,621.10	5,568.10	5,568.10	54.87	111.71	115.32	2,548.91	421.28	2,310.93	2,149.62	161.31	14.326		
6,400.00	5,708.09	5,655.09	5,655.09	55.86	113.46	116.30	2,548.91	421.28	2,334.89	2,171.33	163.57	14.275		
6,500.00	5,795.08	5,742.08	5,742.08	56.85	115.21	117.26	2,548.91	421.28	2,359.64	2,193.83	165.81	14.231		
6,600.00	5,882.07	5,829.07	5,829.07	57.84	116.96	118.21	2,548.91	421.28	2,385.15	2,217.12	168.04	14.194		
6,700.00	5,969.07	5,916.07	5,916.07	58.83	118.70	119.14	2,548.91	421.28	2,411.41	2,241.16	170.25	14.164		
6,800.00	6,056.06	6,003.06	6,003.06	59.83	120.45	120.06	2,548.91	421.28	2,438.37	2,265.93	172.44	14.140		
6,900.00	6,143.05	6,109.95	6,090.05	60.82	122.60	120.96	2,548.91	421.28	2,466.03	2,291.00	175.03	14.090 SF		
7,000.00	6,230.05	6,177.05	6,177.05	61.81	123.95	121.84	2,548.91	421.28	2,494.35	2,317.56	176.80	14.109		
7,100.00	6,317.04	6,264.04	6,264.04	62.80	125.70	122.70	2,548.91	421.28	2,523.33	2,344.37	178.95	14.101		
7,200.00	6,404.03	6,351.03	6,351.03	63.79	127.45	123.55	2,548.91	421.28	2,552.92	2,371.83	181.10	14.097		
7,300.00	6,491.02	6,438.02	6,438.02	64.78	129.20	124.39	2,548.91	421.28	2,583.12	2,399.89	183.23	14.097		
7,400.00	6,578.02	6,525.02	6,525.02	65.77	130.95	125.20	2,548.91	421.28	2,613.90	2,428.54	185.36	14.102		
7,500.00	6,665.01	6,612.01	6,612.01	66.76	132.70	126.00	2,548.91	421.28	2,645.24	2,457.77	187.47	14.110		
7,600.00	6,752.00	6,701.00	6,699.00	67.76	134.49	126.79	2,548.91	421.28	2,677.13	2,487.51	189.62	14.118		
7,700.00	6,838.99	6,785.99	6,785.99	68.75	136.20	127.56	2,548.91	421.28	2,709.53	2,517.85	191.68	14.136		
7,800.00	6,925.99	6,872.99	6,872.99	69.74	137.95	128.31	2,548.91	421.28	2,742.44	2,548.67	193.77	14.153		
7,900.00	7,012.98	6,959.98	6,959.98	70.73	139.70	129.05	2,548.91	421.28	2,775.84	2,579.98	195.86	14.173		
8,000.00	7,099.97	7,046.97	7,046.97	71.72	141.45	129.77	2,548.91	421.28	2,809.70	2,611.77	197.93	14.195		
8,100.00	7,186.97	7,133.97	7,133.97	72.71	143.20	130.48	2,548.91	421.28	2,844.02	2,644.01	200.01	14.220		
8,200.00	7,273.09	7,220.09	7,220.09	73.74	144.93	131.95	2,548.91	421.28	2,881.18	2,679.11	202.07	14.259		
8,300.00	7,352.95	7,300.05	7,299.95	74.97	146.54	147.58	2,548.91	421.28	2,932.65	2,728.62	204.03	14.374		
8,400.00	7,423.63	7,370.63	7,370.63	76.39	147.96	154.39	2,548.91	421.28	2,998.42	2,792.63	205.79	14.570		
8,500.00	7,482.96	7,429.96	7,429.96	77.96	149.15	159.81	2,548.91	421.28	3,076.36	2,869.07	207.29	14.841		
8,600.00	7,529.15	7,476.15	7,476.15	79.64	150.08	165.27	2,548.91	421.28	3,163.97	2,955.52	208.45	15.178		
8,700.00	7,560.79	7,507.79	7,507.79	81.35	150.71	173.91	2,548.91	421.28	3,258.51	3,049.28	209.24	15.573		
8,800.00	7,576.92	7,523.92	7,523.92	83.05	151.04	-152.01	2,548.91	421.28	3,357.07	3,147.45	209.62	16.015		
8,900.00	7,579.00	7,526.00	7,526.00	84.68	151.08	-90.00	2,548.91	421.28	3,456.78	3,247.12	209.66	16.488		
9,000.00	7,579.00	7,526.00	7,526.00	86.34	151.08	-90.00	2,548.91	421.28	3,556.50	3,346.86	209.64	16.965		
9,100.00	7,579.00	7,526.00	7,526.00	88.04	151.08	-90.00	2,548.91	421.28	3,656.24	3,446.62	209.62	17.442		
9,200.00	7,579.00	7,526.00	7,526.00	89.80	151.08	-90.00	2,548.91	421.28	3,755.99	3,546.38	209.61	17.919		
9,300.00	7,579.00	7,526.00	7,526.00	91.59	151.08	-90.00	2,548.91	421.28	3,855.75	3,646.16	209.59	18.396		
9,400.00	7,579.00	7,526.00	7,526.00	93.42	151.08	-90.00	2,548.91	421.28	3,955.53	3,745.94	209.58	18.873		
9,500.00	7,579.00	7,526.00	7,526.00	95.30	151.08	-90.00	2,548.91	421.28	4,055.31	3,845.74	209.58	19.350		
9,600.00	7,579.00	7,526.00	7,526.00	97.21	151.08	-90.00	2,548.91	421.28	4,155.11	3,945.54	209.57	19.827		
9,700.00	7,579.00	7,526.00	7,526.00	99.15	151.08	-90.00	2,548.91	421.28	4,254.92	4,045.35	209.56	20.304		
9,800.00	7,579.00	7,526.00	7,526.00	101.13	151.08	-90.00	2,548.91	421.28	4,354.73	4,145.17	209.56	20.780		
9,900.00	7,579.00	7,526.00	7,526.00	103.15	151.08	-90.00	2,548.91	421.28	4,454.55	4,245.00	209.56	21.257		
10,000.00	7,579.00	7,526.00	7,526.00	105.19	151.08	-90.00	2,548.91	421.28	4,554.39	4,344.83	209.56	21.734		
10,100.00	7,579.00	7,526.00	7,526.00	107.26	151.08	-90.00	2,548.91	421.28	4,654.22	4,444.67	209.56	22.210		
10,200.00	7,579.00	7,526.00	7,526.00	109.36	151.08	-90.00	2,548.91	421.28	4,754.07	4,544.51	209.56	22.686		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-INC													Offset Well Error:		0.00 usft
Reference				Offset		Semi Major Axis			Distance				Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
10,300.00	7,579.00	7,526.00	7,526.00	111.49	151.08	-90.00	2,548.91	421.28	4,853.92	4,644.36	209.56	23.162			
10,400.00	7,579.00	7,526.00	7,526.00	113.64	151.08	-90.00	2,548.91	421.28	4,953.78	4,744.22	209.56	23.639			
10,500.00	7,579.00	7,526.00	7,526.00	115.82	151.08	-90.00	2,548.91	421.28	5,053.64	4,844.07	209.57	24.114			
10,600.00	7,579.00	7,526.00	7,526.00	118.01	151.08	-90.00	2,548.91	421.28	5,153.51	4,943.94	209.57	24.590			
10,700.00	7,579.00	7,526.00	7,526.00	120.23	151.08	-90.00	2,548.91	421.28	5,253.39	5,043.80	209.58	25.066			
10,800.00	7,579.00	7,526.00	7,526.00	122.47	151.08	-90.00	2,548.91	421.28	5,353.26	5,143.67	209.59	25.542			
10,900.00	7,579.00	7,526.00	7,526.00	124.73	151.08	-90.00	2,548.91	421.28	5,453.15	5,243.55	209.60	26.017			
11,000.00	7,579.00	7,526.00	7,526.00	127.01	151.08	-90.00	2,548.91	421.28	5,553.03	5,343.42	209.61	26.492			
11,100.00	7,579.00	7,526.00	7,526.00	129.30	151.08	-90.00	2,548.91	421.28	5,652.92	5,443.30	209.62	26.967			
11,200.00	7,579.00	7,526.00	7,526.00	131.61	151.08	-90.00	2,548.91	421.28	5,752.82	5,543.19	209.63	27.442			
11,300.00	7,579.00	7,526.00	7,526.00	133.93	151.08	-90.00	2,548.91	421.28	5,852.72	5,643.07	209.64	27.917			
11,400.00	7,579.00	7,526.00	7,526.00	136.27	151.08	-90.00	2,548.91	421.28	5,952.62	5,742.96	209.66	28.392			
11,500.00	7,579.00	7,526.00	7,526.00	138.62	151.08	-90.00	2,548.91	421.28	6,052.52	5,842.85	209.67	28.867			
11,600.00	7,579.00	7,526.00	7,526.00	140.99	151.08	-90.00	2,548.91	421.28	6,152.43	5,942.75	209.69	29.341			
11,700.00	7,579.00	7,526.00	7,526.00	143.37	151.08	-90.00	2,548.91	421.28	6,252.34	6,042.64	209.70	29.815			
11,800.00	7,579.00	7,526.00	7,526.00	145.76	151.08	-90.00	2,548.91	421.28	6,352.26	6,142.54	209.72	30.289			
11,900.00	7,579.00	7,526.00	7,526.00	148.16	151.08	-90.00	2,548.91	421.28	6,452.17	6,242.44	209.74	30.763			
12,000.00	7,579.00	7,526.00	7,526.00	150.58	151.08	-90.00	2,548.91	421.28	6,552.09	6,342.34	209.76	31.237			
12,100.00	7,579.00	7,526.00	7,526.00	153.00	151.08	-90.00	2,548.91	421.28	6,652.01	6,442.24	209.77	31.710			
12,200.00	7,579.00	7,526.00	7,526.00	155.43	151.08	-90.00	2,548.91	421.28	6,751.94	6,542.14	209.79	32.184			
12,300.00	7,579.00	7,526.00	7,526.00	157.87	151.08	-90.00	2,548.91	421.28	6,851.86	6,642.05	209.81	32.657			
12,400.00	7,579.00	7,526.00	7,526.00	160.32	151.08	-90.00	2,548.91	421.28	6,951.79	6,741.96	209.84	33.130			
12,500.00	7,579.00	7,526.00	7,526.00	162.78	151.08	-90.00	2,548.91	421.28	7,051.72	6,841.87	209.86	33.603			
12,600.00	7,579.00	7,526.00	7,526.00	165.25	151.08	-90.00	2,548.91	421.28	7,151.66	6,941.78	209.88	34.075			
12,700.00	7,579.00	7,526.00	7,526.00	167.73	151.08	-90.00	2,548.91	421.28	7,251.59	7,041.69	209.90	34.547			
12,800.00	7,579.00	7,526.00	7,526.00	170.21	151.08	-90.00	2,548.91	421.28	7,351.53	7,141.60	209.93	35.020			
12,900.00	7,579.00	7,526.00	7,526.00	172.70	151.08	-90.00	2,548.91	421.28	7,451.46	7,241.51	209.95	35.492			
13,000.00	7,579.00	7,526.00	7,526.00	175.19	151.08	-90.00	2,548.91	421.28	7,551.40	7,341.43	209.97	35.963			
13,100.00	7,579.00	7,526.00	7,526.00	177.70	151.08	-90.00	2,548.91	421.28	7,651.34	7,441.34	210.00	36.435			
13,200.00	7,579.00	7,526.00	7,526.00	180.20	151.08	-90.00	2,548.91	421.28	7,751.29	7,541.26	210.03	36.906			
13,300.00	7,579.00	7,526.00	7,526.00	182.72	151.08	-90.00	2,548.91	421.28	7,851.23	7,641.18	210.05	37.377			
13,400.00	7,579.00	7,526.00	7,526.00	185.24	151.08	-90.00	2,548.91	421.28	7,951.17	7,741.09	210.08	37.848			
13,500.00	7,579.00	7,526.00	7,526.00	187.76	151.08	-90.00	2,548.91	421.28	8,051.12	7,841.01	210.11	38.319			
13,600.00	7,579.00	7,526.00	7,526.00	190.30	151.08	-90.00	2,548.91	421.28	8,151.07	7,940.93	210.14	38.789			
13,700.00	7,579.00	7,526.00	7,526.00	192.83	151.08	-90.00	2,548.91	421.28	8,251.02	8,040.85	210.17	39.260			
13,800.00	7,579.00	7,526.00	7,526.00	195.37	151.08	-90.00	2,548.91	421.28	8,350.97	8,140.77	210.20	39.730			
13,900.00	7,579.00	7,526.00	7,526.00	197.92	151.08	-90.00	2,548.91	421.28	8,450.92	8,240.69	210.23	40.199			
14,000.00	7,579.00	7,526.00	7,526.00	200.47	151.08	-90.00	2,548.91	421.28	8,550.87	8,340.62	210.26	40.669			
14,100.00	7,579.00	7,526.00	7,526.00	203.02	151.08	-90.00	2,548.91	421.28	8,650.83	8,440.54	210.29	41.138			
14,200.00	7,579.00	7,526.00	7,526.00	205.58	151.08	-90.00	2,548.91	421.28	8,750.78	8,540.46	210.32	41.607			
14,300.00	7,579.00	7,526.00	7,526.00	208.14	151.08	-90.00	2,548.91	421.28	8,850.74	8,640.39	210.35	42.076			
14,400.00	7,579.00	7,526.00	7,526.00	210.70	151.08	-90.00	2,548.91	421.28	8,950.69	8,740.31	210.38	42.545			
14,500.00	7,579.00	7,526.00	7,526.00	213.27	151.08	-90.00	2,548.91	421.28	9,050.65	8,840.23	210.42	43.013			
14,600.00	7,579.00	7,526.00	7,526.00	215.84	151.08	-90.00	2,548.91	421.28	9,150.61	8,940.16	210.45	43.481			
14,700.00	7,579.00	7,526.00	7,526.00	218.42	151.08	-90.00	2,548.91	421.28	9,250.57	9,040.08	210.49	43.949			
14,800.00	7,579.00	7,526.00	7,526.00	221.00	151.08	-90.00	2,548.91	421.28	9,350.53	9,140.01	210.52	44.416			
14,900.00	7,579.00	7,526.00	7,526.00	223.58	151.08	-90.00	2,548.91	421.28	9,450.49	9,239.94	210.56	44.883			
15,000.00	7,579.00	7,526.00	7,526.00	226.17	151.08	-90.00	2,548.91	421.28	9,550.45	9,339.86	210.59	45.350			
15,100.00	7,579.00	7,526.00	7,526.00	228.75	151.08	-90.00	2,548.91	421.28	9,650.42	9,439.79	210.63	45.817			
15,200.00	7,579.00	7,526.00	7,526.00	231.34	151.08	-90.00	2,548.91	421.28	9,750.38	9,539.71	210.67	46.284			
15,300.00	7,579.00	7,526.00	7,526.00	233.94	151.08	-90.00	2,548.91	421.28	9,850.34	9,639.64	210.70	46.750			
15,400.00	7,579.00	7,526.00	7,526.00	236.53	151.08	-90.00	2,548.91	421.28	9,950.31	9,739.57	210.74	47.216			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-INC													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-97.41	-287.67	-2,213.15	2,232.09					
100.00	100.00	62.00	62.00	0.13	0.74	-97.41	-287.67	-2,213.15	2,231.77	2,230.89	0.88	2,543.834		
200.00	199.98	161.98	161.98	0.49	2.62	-55.05	-287.67	-2,213.15	2,230.77	2,227.66	3.11	717.300		
300.00	299.84	261.84	261.84	0.86	4.77	-55.21	-287.67	-2,213.15	2,227.77	2,222.14	5.63	395.703		
400.00	399.45	361.45	361.45	1.23	6.82	-55.47	-287.67	-2,213.15	2,222.80	2,214.75	8.05	276.089		
500.00	498.70	460.70	460.70	1.63	8.84	-55.84	-287.67	-2,213.15	2,215.89	2,205.44	10.46	211.919		
600.00	597.47	559.47	559.47	2.05	10.84	-56.32	-287.67	-2,213.15	2,207.09	2,194.23	12.86	171.608		
700.00	695.62	657.62	657.62	2.50	12.82	-56.91	-287.67	-2,213.15	2,196.45	2,181.18	15.27	143.817		
800.00	793.06	755.06	755.06	2.99	14.79	-57.61	-287.67	-2,213.15	2,184.06	2,166.37	17.69	123.429		
900.00	889.64	851.64	851.64	3.52	16.74	-58.41	-287.67	-2,213.15	2,170.01	2,149.88	20.13	107.790		
1,000.00	985.27	947.27	947.27	4.10	18.66	-59.33	-287.67	-2,213.15	2,154.39	2,131.81	22.59	95.384		
1,100.00	1,079.82	1,041.82	1,041.82	4.72	20.57	-60.35	-287.67	-2,213.15	2,137.34	2,112.28	25.06	85.281		
1,200.00	1,173.17	1,135.17	1,135.17	5.40	22.45	-61.47	-287.67	-2,213.15	2,119.00	2,091.44	27.56	76.881		
1,300.00	1,265.21	1,227.21	1,227.21	6.13	24.30	-62.70	-287.67	-2,213.15	2,099.51	2,069.42	30.09	69.776		
1,400.00	1,355.84	1,317.84	1,317.84	6.92	26.13	-64.04	-287.67	-2,213.15	2,079.05	2,046.40	32.65	63.685		
1,500.00	1,444.94	1,406.94	1,406.94	7.77	27.92	-65.47	-287.67	-2,213.15	2,057.81	2,022.57	35.24	58.401		
1,600.00	1,532.44	1,505.56	1,494.44	8.68	29.91	-66.89	-287.67	-2,213.15	2,036.04	1,997.95	38.08	53.462		
1,700.00	1,619.43	1,581.43	1,581.43	9.62	31.43	-68.04	-287.67	-2,213.15	2,014.80	1,974.29	40.51	49.733		
1,800.00	1,706.42	1,668.42	1,668.42	10.56	33.18	-69.21	-287.67	-2,213.15	1,994.57	1,951.38	43.19	46.181		
1,900.00	1,793.42	1,755.42	1,755.42	11.52	34.93	-70.39	-287.67	-2,213.15	1,975.35	1,929.47	45.89	43.047		
2,000.00	1,880.41	1,842.41	1,842.41	12.48	36.68	-71.59	-287.67	-2,213.15	1,957.20	1,908.59	48.61	40.267		
2,100.00	1,967.40	1,929.40	1,929.40	13.45	38.43	-72.81	-287.67	-2,213.15	1,940.12	1,888.78	51.34	37.791		
2,200.00	2,054.39	2,016.39	2,016.39	14.42	40.18	-74.05	-287.67	-2,213.15	1,924.16	1,870.08	54.08	35.577		
2,300.00	2,141.39	2,103.39	2,103.39	15.39	41.93	-75.30	-287.67	-2,213.15	1,909.34	1,852.50	56.84	33.590		
2,400.00	2,228.38	2,209.62	2,190.38	16.36	44.07	-76.56	-287.67	-2,213.15	1,895.69	1,835.69	60.00	31.597		
2,500.00	2,315.37	2,277.37	2,277.37	17.34	45.43	-77.84	-287.67	-2,213.15	1,883.22	1,820.84	62.38	30.187		
2,600.00	2,402.37	2,364.37	2,364.37	18.32	47.18	-79.13	-287.67	-2,213.15	1,871.98	1,806.82	65.17	28.727		
2,700.00	2,489.36	2,451.36	2,451.36	19.30	48.93	-80.44	-287.67	-2,213.15	1,861.98	1,794.03	67.95	27.402		
2,800.00	2,576.35	2,538.35	2,538.35	20.28	50.68	-81.75	-287.67	-2,213.15	1,853.23	1,782.50	70.74	26.200		
2,900.00	2,663.34	2,625.34	2,625.34	21.26	52.43	-83.07	-287.67	-2,213.15	1,845.76	1,772.24	73.52	25.106		
3,000.00	2,750.34	2,712.34	2,712.34	22.24	54.18	-84.40	-287.67	-2,213.15	1,839.58	1,763.28	76.30	24.109		
3,100.00	2,837.33	2,800.67	2,799.33	23.23	55.96	-85.73	-287.67	-2,213.15	1,834.71	1,755.61	79.11	23.193		
3,200.00	2,924.32	2,886.32	2,886.32	24.21	57.68	-87.07	-287.67	-2,213.15	1,831.16	1,749.31	81.85	22.372		
3,300.00	3,011.31	2,973.31	2,973.31	25.20	59.43	-88.41	-287.67	-2,213.15	1,828.92	1,744.31	84.61	21.616		
3,400.00	3,098.31	3,060.31	3,060.31	26.18	61.18	-89.76	-287.67	-2,213.15	1,828.02	1,740.66	87.36	20.925		
3,417.97	3,113.94	3,075.94	3,075.94	26.36	61.50	-90.00	-287.67	-2,213.15	1,828.00	1,740.14	87.85	20.807 CC		
3,500.00	3,185.30	3,147.30	3,147.30	27.17	62.93	-91.10	-287.67	-2,213.15	1,828.45	1,738.35	90.10	20.294		
3,600.00	3,272.29	3,234.29	3,234.29	28.16	64.68	-92.45	-287.67	-2,213.15	1,830.20	1,737.38	92.82	19.717 ES		
3,700.00	3,359.29	3,321.29	3,321.29	29.14	66.43	-93.79	-287.67	-2,213.15	1,833.28	1,737.75	95.53	19.191		
3,800.00	3,446.28	3,408.28	3,408.28	30.13	68.18	-95.12	-287.67	-2,213.15	1,837.68	1,739.47	98.22	18.711		
3,900.00	3,533.27	3,504.73	3,495.27	31.12	70.12	-96.45	-287.67	-2,213.15	1,843.39	1,742.32	101.08	18.238		
4,000.00	3,620.26	3,582.26	3,582.26	32.10	71.68	-97.78	-287.67	-2,213.15	1,850.40	1,746.86	103.53	17.872		
4,100.00	3,707.26	3,669.26	3,669.26	33.09	73.43	-99.09	-287.67	-2,213.15	1,858.69	1,752.53	106.16	17.508		
4,200.00	3,794.25	3,756.25	3,756.25	34.08	75.18	-100.40	-287.67	-2,213.15	1,868.24	1,759.48	108.77	17.177		
4,300.00	3,881.24	3,843.24	3,843.24	35.07	76.93	-101.70	-287.67	-2,213.15	1,879.04	1,767.69	111.35	16.875		
4,400.00	3,968.23	3,930.23	3,930.23	36.06	78.68	-102.98	-287.67	-2,213.15	1,891.07	1,777.16	113.91	16.602		
4,500.00	4,055.23	4,017.23	4,017.23	37.05	80.43	-104.25	-287.67	-2,213.15	1,904.30	1,787.85	116.44	16.354		
4,600.00	4,142.22	4,104.22	4,104.22	38.04	82.18	-105.51	-287.67	-2,213.15	1,918.70	1,799.75	118.95	16.130		
4,700.00	4,229.21	4,208.79	4,191.21	39.03	84.28	-106.75	-287.67	-2,213.15	1,934.26	1,812.46	121.79	15.881		
4,800.00	4,316.21	4,278.21	4,278.21	40.02	85.68	-107.97	-287.67	-2,213.15	1,950.93	1,827.03	123.90	15.745		
4,900.00	4,403.20	4,365.20	4,365.20	41.01	87.43	-109.18	-287.67	-2,213.15	1,968.71	1,842.36	126.34	15.582		
5,000.00	4,490.19	4,452.19	4,452.19	42.00	89.17	-110.37	-287.67	-2,213.15	1,987.54	1,858.78	128.76	15.436		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft		
Survey Program: 0-INC													Sec 13-T1S-R66W - EXIST VERT PETE ROCK 1 - Wellbore #1 - Design #1		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
5,100.00	4,577.18	4,539.18	4,539.18	42.99	90.92	-111.54	-287.67	-2,213.15	2,007.42	1,876.26	131.15	15.306				
5,200.00	4,664.18	4,626.18	4,626.18	43.98	92.67	-112.70	-287.67	-2,213.15	2,028.29	1,894.77	133.53	15.190				
5,300.00	4,751.17	4,713.17	4,713.17	44.97	94.42	-113.83	-287.67	-2,213.15	2,050.15	1,914.27	135.88	15.088				
5,400.00	4,838.16	4,800.16	4,800.16	45.96	96.17	-114.95	-287.67	-2,213.15	2,072.94	1,934.73	138.21	14.999				
5,500.00	4,925.15	4,887.15	4,887.15	46.95	97.92	-116.04	-287.67	-2,213.15	2,096.65	1,956.13	140.52	14.921				
5,600.00	5,012.15	4,974.15	4,974.15	47.94	99.67	-117.12	-287.67	-2,213.15	2,121.24	1,978.43	142.81	14.854				
5,700.00	5,099.14	5,061.14	5,061.14	48.93	101.42	-118.17	-287.67	-2,213.15	2,146.68	2,001.60	145.08	14.797				
5,800.00	5,186.13	5,148.13	5,148.13	49.92	103.17	-119.21	-287.67	-2,213.15	2,172.94	2,025.60	147.34	14.748				
5,900.00	5,273.13	5,235.13	5,235.13	50.91	104.92	-120.22	-287.67	-2,213.15	2,199.99	2,050.42	149.57	14.708				
6,000.00	5,360.12	5,322.12	5,322.12	51.90	106.67	-121.22	-287.67	-2,213.15	2,227.81	2,076.01	151.80	14.676				
6,100.00	5,447.11	5,409.11	5,409.11	52.89	108.42	-122.19	-287.67	-2,213.15	2,256.36	2,102.36	154.01	14.651				
6,200.00	5,534.10	5,503.90	5,496.10	53.88	110.33	-123.14	-287.67	-2,213.15	2,285.62	2,129.26	156.36	14.618				
6,300.00	5,621.10	5,583.10	5,583.10	54.87	111.92	-124.07	-287.67	-2,213.15	2,315.57	2,157.18	158.39	14.620				
6,400.00	5,708.09	5,670.09	5,670.09	55.86	113.67	-124.99	-287.67	-2,213.15	2,346.16	2,185.60	160.56	14.613				
6,500.00	5,795.08	5,757.08	5,757.08	56.85	115.42	-125.88	-287.67	-2,213.15	2,377.39	2,214.67	162.72	14.611 SF				
6,600.00	5,882.07	5,844.07	5,844.07	57.84	117.17	-126.75	-287.67	-2,213.15	2,409.22	2,244.35	164.87	14.613				
6,700.00	5,969.07	5,931.07	5,931.07	58.83	118.92	-127.61	-287.67	-2,213.15	2,441.63	2,274.62	167.01	14.620				
6,800.00	6,056.06	6,018.06	6,018.06	59.83	120.67	-128.44	-287.67	-2,213.15	2,474.60	2,305.46	169.14	14.631				
6,900.00	6,143.05	6,105.05	6,105.05	60.82	122.41	-129.26	-287.67	-2,213.15	2,508.11	2,336.84	171.26	14.645				
7,000.00	6,230.05	6,207.95	6,192.05	61.81	124.48	-130.05	-287.67	-2,213.15	2,542.13	2,368.43	173.70	14.636				
7,100.00	6,317.04	6,279.04	6,279.04	62.80	125.91	-130.83	-287.67	-2,213.15	2,576.64	2,401.16	175.48	14.683				
7,200.00	6,404.03	6,366.03	6,366.03	63.79	127.66	-131.59	-287.67	-2,213.15	2,611.63	2,434.05	177.59	14.706				
7,300.00	6,491.02	6,453.02	6,453.02	64.78	129.41	-132.34	-287.67	-2,213.15	2,647.08	2,467.40	179.68	14.732				
7,400.00	6,578.02	6,540.02	6,540.02	65.77	131.16	-133.06	-287.67	-2,213.15	2,682.97	2,501.19	181.78	14.760				
7,500.00	6,665.01	6,627.01	6,627.01	66.76	132.91	-133.77	-287.67	-2,213.15	2,719.28	2,535.41	183.86	14.790				
7,600.00	6,752.00	6,714.00	6,714.00	67.76	134.66	-134.47	-287.67	-2,213.15	2,755.99	2,570.04	185.95	14.821				
7,700.00	6,838.99	6,800.99	6,800.99	68.75	136.41	-135.14	-287.67	-2,213.15	2,793.09	2,605.06	188.03	14.855				
7,800.00	6,925.99	6,887.99	6,887.99	69.74	138.16	-135.80	-287.67	-2,213.15	2,830.56	2,640.46	190.10	14.890				
7,900.00	7,012.98	6,974.98	6,974.98	70.73	139.91	-136.45	-287.67	-2,213.15	2,868.39	2,676.22	192.17	14.926				
8,000.00	7,099.97	7,061.97	7,061.97	71.72	141.66	-137.08	-287.67	-2,213.15	2,906.57	2,712.32	194.25	14.963				
8,100.00	7,186.97	7,148.97	7,148.97	72.71	143.41	-137.70	-287.67	-2,213.15	2,945.07	2,748.76	196.31	15.002				
8,200.00	7,273.09	7,235.09	7,235.09	73.74	145.14	-129.39	-287.67	-2,213.15	2,983.73	2,785.36	198.37	15.041				
8,300.00	7,352.95	7,314.95	7,314.95	74.97	146.75	-117.53	-287.67	-2,213.15	3,021.50	2,821.13	200.37	15.080				
8,400.00	7,423.63	7,385.63	7,385.63	76.39	148.17	-109.10	-287.67	-2,213.15	3,057.81	2,855.57	202.24	15.120				
8,500.00	7,482.96	7,444.96	7,444.96	77.96	149.36	-102.86	-287.67	-2,213.15	3,092.33	2,888.40	203.93	15.164				
8,600.00	7,529.15	7,508.85	7,491.15	79.64	150.65	-98.05	-287.67	-2,213.15	3,124.77	2,919.04	205.73	15.189				
8,700.00	7,560.79	7,522.79	7,522.79	81.35	150.93	-94.26	-287.67	-2,213.15	3,154.83	2,948.32	206.51	15.277				
8,800.00	7,576.92	7,538.92	7,538.92	83.05	151.25	-91.25	-287.67	-2,213.15	3,182.12	2,974.83	207.29	15.351				
8,900.00	7,579.00	7,541.00	7,541.00	84.68	151.29	-90.00	-287.67	-2,213.15	3,206.92	2,999.22	207.71	15.440				
9,000.00	7,579.00	7,541.00	7,541.00	86.34	151.29	-90.00	-287.67	-2,213.15	3,233.81	3,025.74	208.07	15.542				
9,100.00	7,579.00	7,541.00	7,541.00	88.04	151.29	-90.00	-287.67	-2,213.15	3,263.55	3,055.12	208.43	15.658				
9,200.00	7,579.00	7,541.00	7,541.00	89.80	151.29	-90.00	-287.67	-2,213.15	3,296.05	3,087.28	208.78	15.788				
9,300.00	7,579.00	7,541.00	7,541.00	91.59	151.29	-90.00	-287.67	-2,213.15	3,331.24	3,122.13	209.11	15.930				
9,400.00	7,579.00	7,541.00	7,541.00	93.42	151.29	-90.00	-287.67	-2,213.15	3,369.03	3,159.59	209.44	16.086				
9,500.00	7,579.00	7,541.00	7,541.00	95.30	151.29	-90.00	-287.67	-2,213.15	3,409.33	3,199.59	209.75	16.254				
9,600.00	7,579.00	7,541.00	7,541.00	97.21	151.29	-90.00	-287.67	-2,213.15	3,452.06	3,242.02	210.05	16.435				
9,700.00	7,579.00	7,541.00	7,541.00	99.15	151.29	-90.00	-287.67	-2,213.15	3,497.13	3,286.80	210.33	16.627				
9,800.00	7,579.00	7,541.00	7,541.00	101.13	151.29	-90.00	-287.67	-2,213.15	3,544.45	3,333.85	210.60	16.830				
9,900.00	7,579.00	7,541.00	7,541.00	103.15	151.29	-90.00	-287.67	-2,213.15	3,593.93	3,383.07	210.86	17.044				
10,000.00	7,579.00	7,541.00	7,541.00	105.19	151.29	-90.00	-287.67	-2,213.15	3,645.48	3,434.38	211.11	17.268				
10,100.00	7,579.00	7,541.00	7,541.00	107.26	151.29	-90.00	-287.67	-2,213.15	3,699.02	3,487.68	211.34	17.503				
10,200.00	7,579.00	7,541.00	7,541.00	109.36	151.29	-90.00	-287.67	-2,213.15	3,754.46	3,542.90	211.56	17.747				

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft		
Survey Program: 0-INC													Sec 13-T1S-R66W - EXIST VERT PETE ROCK 1 - Wellbore #1 - Design #1		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
10,300.00	7,579.00	7,541.00	7,541.00	111.49	151.29	-90.00	-287.67	-2,213.15	3,811.71	3,599.95	211.76	18.000				
10,400.00	7,579.00	7,541.00	7,541.00	113.64	151.29	-90.00	-287.67	-2,213.15	3,870.70	3,658.75	211.96	18.262				
10,500.00	7,579.00	7,541.00	7,541.00	115.82	151.29	-90.00	-287.67	-2,213.15	3,931.35	3,719.21	212.14	18.532				
10,600.00	7,579.00	7,541.00	7,541.00	118.01	151.29	-90.00	-287.67	-2,213.15	3,993.59	3,781.28	212.31	18.810				
10,700.00	7,579.00	7,541.00	7,541.00	120.23	151.29	-90.00	-287.67	-2,213.15	4,057.33	3,844.86	212.47	19.096				
10,800.00	7,579.00	7,541.00	7,541.00	122.47	151.29	-90.00	-287.67	-2,213.15	4,122.52	3,909.89	212.62	19.389				
10,900.00	7,579.00	7,541.00	7,541.00	124.73	151.29	-90.00	-287.67	-2,213.15	4,189.07	3,976.31	212.76	19.689				
11,000.00	7,579.00	7,541.00	7,541.00	127.01	151.29	-90.00	-287.67	-2,213.15	4,256.94	4,044.04	212.90	19.995				
11,100.00	7,579.00	7,541.00	7,541.00	129.30	151.29	-90.00	-287.67	-2,213.15	4,326.05	4,113.03	213.02	20.308				
11,200.00	7,579.00	7,541.00	7,541.00	131.61	151.29	-90.00	-287.67	-2,213.15	4,396.35	4,183.22	213.14	20.627				
11,300.00	7,579.00	7,541.00	7,541.00	133.93	151.29	-90.00	-287.67	-2,213.15	4,467.79	4,254.54	213.25	20.951				
11,400.00	7,579.00	7,541.00	7,541.00	136.27	151.29	-90.00	-287.67	-2,213.15	4,540.30	4,326.95	213.35	21.281				
11,500.00	7,579.00	7,541.00	7,541.00	138.62	151.29	-90.00	-287.67	-2,213.15	4,613.84	4,400.40	213.44	21.616				
11,600.00	7,579.00	7,541.00	7,541.00	140.99	151.29	-90.00	-287.67	-2,213.15	4,688.36	4,474.83	213.53	21.956				
11,700.00	7,579.00	7,541.00	7,541.00	143.37	151.29	-90.00	-287.67	-2,213.15	4,763.81	4,550.20	213.62	22.301				
11,800.00	7,579.00	7,541.00	7,541.00	145.76	151.29	-90.00	-287.67	-2,213.15	4,840.16	4,626.46	213.70	22.650				
11,900.00	7,579.00	7,541.00	7,541.00	148.16	151.29	-90.00	-287.67	-2,213.15	4,917.35	4,703.58	213.77	23.003				
12,000.00	7,579.00	7,541.00	7,541.00	150.58	151.29	-90.00	-287.67	-2,213.15	4,995.35	4,781.51	213.84	23.360				
12,100.00	7,579.00	7,541.00	7,541.00	153.00	151.29	-90.00	-287.67	-2,213.15	5,074.12	4,860.22	213.90	23.721				
12,200.00	7,579.00	7,541.00	7,541.00	155.43	151.29	-90.00	-287.67	-2,213.15	5,153.63	4,939.66	213.97	24.086				
12,300.00	7,579.00	7,541.00	7,541.00	157.87	151.29	-90.00	-287.67	-2,213.15	5,233.84	5,019.82	214.02	24.454				
12,400.00	7,579.00	7,541.00	7,541.00	160.32	151.29	-90.00	-287.67	-2,213.15	5,314.73	5,100.65	214.08	24.826				
12,500.00	7,579.00	7,541.00	7,541.00	162.78	151.29	-90.00	-287.67	-2,213.15	5,396.25	5,182.12	214.13	25.201				
12,600.00	7,579.00	7,541.00	7,541.00	165.25	151.29	-90.00	-287.67	-2,213.15	5,478.39	5,264.20	214.18	25.578				
12,700.00	7,579.00	7,541.00	7,541.00	167.73	151.29	-90.00	-287.67	-2,213.15	5,561.11	5,346.88	214.23	25.959				
12,800.00	7,579.00	7,541.00	7,541.00	170.21	151.29	-90.00	-287.67	-2,213.15	5,644.39	5,430.11	214.27	26.342				
12,900.00	7,579.00	7,541.00	7,541.00	172.70	151.29	-90.00	-287.67	-2,213.15	5,728.20	5,513.89	214.32	26.728				
13,000.00	7,579.00	7,541.00	7,541.00	175.19	151.29	-90.00	-287.67	-2,213.15	5,812.53	5,598.17	214.36	27.116				
13,100.00	7,579.00	7,541.00	7,541.00	177.70	151.29	-90.00	-287.67	-2,213.15	5,897.35	5,682.95	214.40	27.507				
13,200.00	7,579.00	7,541.00	7,541.00	180.20	151.29	-90.00	-287.67	-2,213.15	5,982.63	5,768.20	214.44	27.899				
13,300.00	7,579.00	7,541.00	7,541.00	182.72	151.29	-90.00	-287.67	-2,213.15	6,068.37	5,853.90	214.47	28.294				
13,400.00	7,579.00	7,541.00	7,541.00	185.24	151.29	-90.00	-287.67	-2,213.15	6,154.54	5,940.03	214.51	28.692				
13,500.00	7,579.00	7,541.00	7,541.00	187.76	151.29	-90.00	-287.67	-2,213.15	6,241.11	6,026.57	214.54	29.091				
13,600.00	7,579.00	7,541.00	7,541.00	190.30	151.29	-90.00	-287.67	-2,213.15	6,328.09	6,113.51	214.57	29.491				
13,700.00	7,579.00	7,541.00	7,541.00	192.83	151.29	-90.00	-287.67	-2,213.15	6,415.44	6,200.84	214.61	29.894				
13,800.00	7,579.00	7,541.00	7,541.00	195.37	151.29	-90.00	-287.67	-2,213.15	6,503.16	6,288.52	214.64	30.298				
13,900.00	7,579.00	7,541.00	7,541.00	197.92	151.29	-90.00	-287.67	-2,213.15	6,591.23	6,376.56	214.67	30.704				
14,000.00	7,579.00	7,541.00	7,541.00	200.47	151.29	-90.00	-287.67	-2,213.15	6,679.63	6,464.93	214.70	31.112				
14,100.00	7,579.00	7,541.00	7,541.00	203.02	151.29	-90.00	-287.67	-2,213.15	6,768.36	6,553.63	214.73	31.520				
14,200.00	7,579.00	7,541.00	7,541.00	205.58	151.29	-90.00	-287.67	-2,213.15	6,857.40	6,642.64	214.76	31.931				
14,300.00	7,579.00	7,541.00	7,541.00	208.14	151.29	-90.00	-287.67	-2,213.15	6,946.73	6,731.94	214.79	32.342				
14,400.00	7,579.00	7,541.00	7,541.00	210.70	151.29	-90.00	-287.67	-2,213.15	7,036.35	6,821.54	214.82	32.755				
14,500.00	7,579.00	7,541.00	7,541.00	213.27	151.29	-90.00	-287.67	-2,213.15	7,126.25	6,911.41	214.84	33.169				
14,600.00	7,579.00	7,541.00	7,541.00	215.84	151.29	-90.00	-287.67	-2,213.15	7,216.42	7,001.55	214.87	33.585				
14,700.00	7,579.00	7,541.00	7,541.00	218.42	151.29	-90.00	-287.67	-2,213.15	7,306.84	7,091.94	214.90	34.001				
14,800.00	7,579.00	7,541.00	7,541.00	221.00	151.29	-90.00	-287.67	-2,213.15	7,397.51	7,182.58	214.93	34.418				
14,900.00	7,579.00	7,541.00	7,541.00	223.58	151.29	-90.00	-287.67	-2,213.15	7,488.41	7,273.45	214.96	34.837				
15,000.00	7,579.00	7,541.00	7,541.00	226.17	151.29	-90.00	-287.67	-2,213.15	7,579.54	7,364.56	214.98	35.256				
15,100.00	7,579.00	7,541.00	7,541.00	228.75	151.29	-90.00	-287.67	-2,213.15	7,670.90	7,455.89	215.01	35.676				
15,200.00	7,579.00	7,541.00	7,541.00	231.34	151.29	-90.00	-287.67	-2,213.15	7,762.47	7,547.43	215.04	36.098				
15,300.00	7,579.00	7,541.00	7,541.00	233.94	151.29	-90.00	-287.67	-2,213.15	7,854.24	7,639.17	215.07	36.520				
15,400.00	7,579.00	7,541.00	7,541.00	236.53	151.29	-90.00	-287.67	-2,213.15	7,946.21	7,731.11	215.10	36.942				

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft		
Survey Program: 0-INC													Sec 13-T1S-R66W - EXIST VERT PETE ROCK 1 - Wellbore #1 - Design #1		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
15,500.00	7,579.00	7,541.00	7,541.00	239.13	151.29	-90.00	-287.67	-2,213.15	8,038.38	7,823.25	215.13	37.366				
15,600.00	7,579.00	7,541.00	7,541.00	241.73	151.29	-90.00	-287.67	-2,213.15	8,130.72	7,915.57	215.15	37.790				
15,700.00	7,579.00	7,541.00	7,541.00	244.34	151.29	-90.00	-287.67	-2,213.15	8,223.25	8,008.07	215.18	38.215				
15,800.00	7,579.00	7,541.00	7,541.00	246.94	151.29	-90.00	-287.67	-2,213.15	8,315.95	8,100.74	215.21	38.641				
15,900.00	7,579.00	7,541.00	7,541.00	249.55	151.29	-90.00	-287.67	-2,213.15	8,408.82	8,193.58	215.24	39.067				
16,000.00	7,579.00	7,541.00	7,541.00	252.16	151.29	-90.00	-287.67	-2,213.15	8,501.85	8,286.58	215.27	39.494				
16,100.00	7,579.00	7,541.00	7,541.00	254.77	151.29	-90.00	-287.67	-2,213.15	8,595.04	8,379.74	215.30	39.921				
16,200.00	7,579.00	7,541.00	7,541.00	257.38	151.29	-90.00	-287.67	-2,213.15	8,688.38	8,473.04	215.33	40.349				
16,300.00	7,579.00	7,541.00	7,541.00	260.00	151.29	-90.00	-287.67	-2,213.15	8,781.86	8,566.50	215.36	40.777				
16,400.00	7,579.00	7,541.00	7,541.00	262.62	151.29	-90.00	-287.67	-2,213.15	8,875.49	8,660.09	215.39	41.206				
16,500.00	7,579.00	7,541.00	7,541.00	265.24	151.29	-90.00	-287.67	-2,213.15	8,969.25	8,753.83	215.42	41.635				
16,600.00	7,579.00	7,541.00	7,541.00	267.86	151.29	-90.00	-287.67	-2,213.15	9,063.15	8,847.69	215.46	42.065				
16,700.00	7,579.00	7,541.00	7,541.00	270.48	151.29	-90.00	-287.67	-2,213.15	9,157.18	8,941.69	215.49	42.495				
16,800.00	7,579.00	7,541.00	7,541.00	273.10	151.29	-90.00	-287.67	-2,213.15	9,251.33	9,035.81	215.52	42.926				
16,900.00	7,579.00	7,541.00	7,541.00	275.73	151.29	-90.00	-287.67	-2,213.15	9,345.60	9,130.05	215.55	43.356				
17,000.00	7,579.00	7,541.00	7,541.00	278.36	151.29	-90.00	-287.67	-2,213.15	9,439.99	9,224.41	215.59	43.788				
17,100.00	7,579.00	7,541.00	7,541.00	280.99	151.29	-90.00	-287.67	-2,213.15	9,534.50	9,318.88	215.62	44.219				
17,200.00	7,579.00	7,541.00	7,541.00	283.62	151.29	-90.00	-287.67	-2,213.15	9,629.12	9,413.46	215.65	44.651				
17,300.00	7,579.00	7,541.00	7,541.00	286.25	151.29	-90.00	-287.67	-2,213.15	9,723.84	9,508.15	215.69	45.083				
17,400.00	7,579.00	7,541.00	7,541.00	288.88	151.29	-90.00	-287.67	-2,213.15	9,818.67	9,602.95	215.72	45.515				
17,500.00	7,579.00	7,541.00	7,541.00	291.52	151.29	-90.00	-287.67	-2,213.15	9,913.60	9,697.84	215.76	45.948				

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-MWD OWSG													Offset Well Error:		0.00 usft
Reference				Offset			Semi Major Axis			Distance			Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	1.00	-1.00	0.00	0.00	-84.03	15.67	-149.97	150.79						
100.00	100.00	101.00	99.00	0.13	0.14	-84.03	15.67	-149.97	150.79	150.52	0.27	553.474			
200.00	199.98	198.98	198.98	0.49	0.49	-42.08	15.67	-149.97	149.49	148.51	0.98	152.168			
300.00	299.84	295.71	295.69	0.86	0.84	-42.97	16.98	-150.89	146.70	145.01	1.69	86.811			
400.00	399.45	392.52	392.38	1.23	1.19	-43.82	20.95	-153.70	143.55	141.15	2.41	59.683			
500.00	498.70	489.44	488.95	1.63	1.55	-44.64	27.60	-158.41	140.05	136.92	3.14	44.639			
600.00	597.47	586.47	585.30	2.05	1.92	-45.42	36.92	-165.00	136.19	132.29	3.90	34.962			
700.00	695.62	683.62	681.33	2.50	2.32	-46.16	48.92	-173.49	131.96	127.27	4.69	28.149			
800.00	793.06	780.89	776.91	2.99	2.74	-46.87	63.59	-183.86	127.37	121.85	5.52	23.055			
900.00	889.64	878.27	871.95	3.52	3.20	-47.56	80.92	-196.12	122.42	116.00	6.41	19.085			
1,000.00	985.27	975.76	966.32	4.10	3.69	-48.21	100.91	-210.25	117.10	109.73	7.37	15.898			
1,100.00	1,079.82	1,073.38	1,059.91	4.72	4.23	-48.83	123.53	-226.25	111.41	103.03	8.38	13.290			
1,200.00	1,173.17	1,171.11	1,152.62	5.40	4.81	-49.43	148.77	-244.11	105.37	95.89	9.48	11.113			
1,300.00	1,265.21	1,268.97	1,244.34	6.13	5.44	-49.99	176.62	-263.80	98.97	88.31	10.66	9.282			
1,400.00	1,355.84	1,366.95	1,334.94	6.92	6.12	-50.52	207.05	-285.32	92.22	80.28	11.93	7.727			
1,500.00	1,444.94	1,465.05	1,424.33	7.77	6.85	-51.01	240.04	-308.65	85.11	71.81	13.30	6.400			
1,600.00	1,532.44	1,563.28	1,512.40	8.68	7.64	-51.39	275.55	-333.76	77.72	62.96	14.76	5.267			
1,700.00	1,619.43	1,661.68	1,599.08	9.62	8.49	-50.08	313.57	-360.66	71.52	55.37	16.15	4.429			
1,800.00	1,706.42	1,760.10	1,684.12	10.56	9.39	-46.19	354.01	-389.26	67.40	50.14	17.26	3.905			
1,893.57	1,787.82	1,851.99	1,761.95	11.46	10.29	-40.15	393.90	-417.47	65.98	48.09	17.89	3.688	CC		
1,900.00	1,793.42	1,858.30	1,767.23	11.52	10.36	-39.66	396.71	-419.46	65.99	48.07	17.91	3.684			
2,000.00	1,880.41	1,956.50	1,848.56	12.48	11.37	-31.22	441.65	-451.24	68.10	50.05	18.05	3.773			
2,100.00	1,967.40	2,055.89	1,930.32	13.45	12.43	-22.97	487.78	-483.87	72.48	54.42	18.06	4.013			
2,200.00	2,054.39	2,155.28	2,012.08	14.42	13.50	-15.78	533.91	-516.49	78.20	60.02	18.17	4.303			
2,300.00	2,141.39	2,254.66	2,093.84	15.39	14.58	-9.64	580.05	-549.12	84.97	66.47	18.50	4.594			
2,400.00	2,228.38	2,354.05	2,175.61	16.36	15.66	-4.45	626.18	-581.75	92.57	73.51	19.06	4.856			
2,500.00	2,315.37	2,453.44	2,257.37	17.34	16.75	-0.08	672.31	-614.37	100.81	80.96	19.86	5.077			
2,600.00	2,402.37	2,552.83	2,339.13	18.32	17.84	3.62	718.44	-647.00	109.56	88.72	20.84	5.257			
2,700.00	2,489.36	2,652.21	2,420.89	19.30	18.94	6.76	764.58	-679.63	118.68	96.72	21.97	5.403			
2,800.00	2,576.35	2,751.60	2,502.65	20.28	20.04	9.45	810.71	-712.25	128.11	104.91	23.20	5.521			
2,900.00	2,663.34	2,850.99	2,584.42	21.26	21.15	11.77	856.84	-744.88	137.79	113.27	24.52	5.619			
3,000.00	2,750.34	2,950.37	2,666.18	22.24	22.25	13.78	902.97	-777.51	147.66	121.76	25.90	5.701			
3,100.00	2,837.33	3,049.76	2,747.94	23.23	23.36	15.54	949.11	-810.13	157.68	130.37	27.32	5.772			
3,200.00	2,924.32	3,149.15	2,829.70	24.21	24.47	17.08	995.24	-842.76	167.84	139.07	28.77	5.834			
3,300.00	3,011.31	3,248.53	2,911.46	25.20	25.58	18.45	1,041.37	-875.39	178.10	147.86	30.24	5.890			
3,400.00	3,098.31	3,347.92	2,993.23	26.18	26.69	19.67	1,087.50	-908.01	188.45	156.73	31.73	5.940			
3,500.00	3,185.30	3,447.31	3,074.99	27.17	27.80	20.77	1,133.64	-940.64	198.88	165.65	33.23	5.985			
3,600.00	3,272.29	3,546.69	3,156.75	28.16	28.91	21.75	1,179.77	-973.27	209.38	174.64	34.74	6.027			
3,700.00	3,359.29	3,646.08	3,238.51	29.14	30.02	22.64	1,225.90	-1,005.89	219.92	183.67	36.25	6.066			
3,800.00	3,446.28	3,745.47	3,320.27	30.13	31.14	23.45	1,272.03	-1,038.52	230.52	192.75	37.77	6.103			
3,900.00	3,533.27	3,844.85	3,402.04	31.12	32.25	24.18	1,318.16	-1,071.15	241.16	201.86	39.30	6.137			
4,000.00	3,620.26	3,944.24	3,483.80	32.10	33.37	24.86	1,364.30	-1,103.77	251.83	211.01	40.82	6.169			
4,100.00	3,707.26	4,043.63	3,565.56	33.09	34.49	25.48	1,410.43	-1,136.40	262.54	220.19	42.35	6.199			
4,200.00	3,794.25	4,143.01	3,647.32	34.08	35.60	26.05	1,456.56	-1,169.03	273.27	229.39	43.88	6.228			
4,300.00	3,881.24	4,242.40	3,729.08	35.07	36.72	26.58	1,502.69	-1,201.66	284.03	238.62	45.41	6.255			
4,400.00	3,968.23	4,341.79	3,810.85	36.06	37.84	27.07	1,548.83	-1,234.28	294.81	247.87	46.94	6.281			
4,500.00	4,055.23	4,441.17	3,892.61	37.05	38.96	27.52	1,594.96	-1,266.91	305.61	257.14	48.47	6.305			
4,600.00	4,142.22	4,540.56	3,974.37	38.04	40.07	27.95	1,641.09	-1,299.54	316.43	266.43	50.00	6.329			
4,700.00	4,229.21	4,639.95	4,056.13	39.03	41.19	28.34	1,687.22	-1,332.16	327.26	275.73	51.53	6.351			
4,800.00	4,316.21	4,739.34	4,137.90	40.02	42.31	28.71	1,733.36	-1,364.79	338.11	285.05	53.06	6.372			
4,900.00	4,403.20	4,838.72	4,219.66	41.01	43.43	29.06	1,779.49	-1,397.42	348.97	294.38	54.59	6.393			
5,000.00	4,490.19	4,938.11	4,301.42	42.00	44.55	29.39	1,825.62	-1,430.04	359.84	303.73	56.12	6.412			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 13-T1S-R66W - WARBLER 13W-27-01 - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,100.00	4,577.18	5,037.50	4,383.18	42.99	45.67	29.69	1,871.75	-1,462.67	370.73	313.08	57.65	6.431			
5,200.00	4,664.18	5,136.88	4,464.94	43.98	46.79	29.98	1,917.89	-1,495.30	381.62	322.45	59.18	6.449			
5,300.00	4,751.17	5,236.27	4,546.71	44.97	47.91	30.26	1,964.02	-1,527.92	392.53	331.82	60.70	6.466			
5,400.00	4,838.16	5,335.66	4,628.47	45.96	49.03	30.52	2,010.15	-1,560.55	403.44	341.21	62.23	6.483			
5,500.00	4,925.15	5,435.04	4,710.23	46.95	50.15	30.76	2,056.28	-1,593.18	414.36	350.60	63.76	6.499			
5,600.00	5,012.15	5,534.43	4,791.99	47.94	51.27	30.99	2,102.42	-1,625.80	425.28	360.00	65.29	6.514			
5,700.00	5,099.14	5,633.82	4,873.75	48.93	52.39	31.21	2,148.55	-1,658.43	436.22	369.40	66.81	6.529			
5,800.00	5,186.13	5,733.20	4,955.52	49.92	53.51	31.42	2,194.68	-1,691.06	447.16	378.82	68.34	6.543			
5,900.00	5,273.13	5,832.59	5,037.28	50.91	54.63	31.62	2,240.81	-1,723.68	458.10	388.23	69.87	6.557			
6,000.00	5,360.12	5,931.98	5,119.04	51.90	55.75	31.82	2,286.94	-1,756.31	469.05	397.66	71.39	6.570			
6,100.00	5,447.11	6,031.36	5,200.80	52.89	56.87	32.00	2,333.08	-1,788.94	480.01	407.09	72.92	6.583			
6,200.00	5,534.10	6,130.75	5,282.56	53.88	57.99	32.17	2,379.21	-1,821.56	490.96	416.52	74.44	6.595			
6,300.00	5,621.10	6,230.14	5,364.33	54.87	59.11	32.34	2,425.34	-1,854.19	501.93	425.96	75.97	6.607			
6,400.00	5,708.09	6,329.52	5,446.09	55.86	60.24	32.50	2,471.47	-1,886.82	512.90	435.41	77.49	6.619			
6,500.00	5,795.08	6,428.91	5,527.85	56.85	61.36	32.65	2,517.61	-1,919.44	523.87	444.85	79.02	6.630			
6,600.00	5,882.07	6,528.30	5,609.61	57.84	62.48	32.80	2,563.74	-1,952.07	534.84	454.30	80.54	6.641			
6,700.00	5,969.07	6,627.69	5,691.37	58.83	63.60	32.94	2,609.87	-1,984.70	545.82	463.76	82.06	6.651			
6,800.00	6,056.06	6,727.07	5,773.14	59.83	64.72	33.07	2,656.00	-2,017.32	556.80	473.22	83.59	6.661			
6,900.00	6,143.05	6,826.46	5,854.90	60.82	65.84	33.20	2,702.14	-2,049.95	567.79	482.68	85.11	6.671			
7,000.00	6,230.05	6,925.85	5,936.66	61.81	66.97	33.33	2,748.27	-2,082.58	578.77	492.14	86.63	6.681			
7,100.00	6,317.04	7,025.23	6,018.42	62.80	68.09	33.45	2,794.40	-2,115.20	589.76	501.61	88.15	6.690			
7,200.00	6,404.03	7,124.62	6,100.19	63.79	69.21	33.56	2,840.53	-2,147.83	600.76	511.08	89.68	6.699			
7,300.00	6,491.02	7,224.01	6,181.95	64.78	70.33	33.67	2,886.67	-2,180.46	611.75	520.55	91.20	6.708			
7,400.00	6,578.02	7,323.39	6,263.71	65.77	71.45	33.78	2,932.80	-2,213.09	622.75	530.03	92.72	6.716			
7,500.00	6,665.01	7,422.78	6,345.47	66.76	72.58	33.88	2,978.93	-2,245.71	633.75	539.50	94.24	6.725			
7,600.00	6,752.00	7,522.17	6,427.23	67.76	73.70	33.99	3,025.06	-2,278.34	644.75	548.98	95.76	6.733			
7,700.00	6,838.99	7,621.55	6,509.00	68.75	74.82	34.08	3,071.20	-2,310.97	655.75	558.46	97.29	6.740			
7,800.00	6,925.99	7,720.94	6,590.76	69.74	75.94	34.18	3,117.33	-2,343.59	666.76	567.95	98.81	6.748			
7,900.00	7,012.98	7,820.33	6,672.52	70.73	77.06	34.27	3,163.46	-2,376.22	677.76	577.43	100.33	6.755			
8,000.00	7,099.97	7,919.71	6,754.28	71.72	78.19	34.35	3,209.59	-2,408.85	688.77	586.92	101.85	6.763			
8,100.00	7,186.97	8,018.31	6,835.29	72.71	79.31	34.41	3,255.30	-2,441.53	699.79	596.46	103.33	6.772			
8,200.00	7,273.09	8,117.91	6,909.33	73.74	80.51	39.85	3,297.09	-2,482.78	711.04	606.99	104.04	6.834			
8,300.00	7,352.95	8,206.10	6,975.51	74.97	81.84	46.78	3,334.47	-2,536.52	721.62	616.45	105.17	6.861			
8,400.00	7,423.63	8,298.23	7,032.61	76.39	83.26	50.83	3,366.76	-2,601.07	731.05	624.09	106.96	6.835			
8,500.00	7,482.96	8,389.52	7,079.59	77.96	84.74	53.20	3,393.35	-2,674.56	739.02	629.61	109.41	6.754			
8,600.00	7,529.15	8,480.18	7,115.60	79.64	86.23	54.56	3,413.78	-2,755.12	745.25	632.78	112.47	6.626			
8,700.00	7,560.79	8,570.41	7,140.01	81.35	87.69	55.31	3,427.67	-2,840.77	749.54	633.49	116.05	6.459			
8,800.00	7,576.92	8,660.39	7,152.39	83.05	89.08	55.64	3,434.79	-2,929.51	751.74	631.70	120.04	6.262			
8,900.00	7,579.00	8,755.22	7,154.00	84.68	90.47	55.68	3,435.84	-3,024.29	752.04	628.18	123.86	6.072			
9,000.00	7,579.00	8,855.22	7,154.00	86.34	91.96	55.68	3,436.00	-3,124.29	752.07	624.73	127.34	5.906			
9,100.00	7,579.00	8,955.22	7,154.00	88.04	93.49	55.68	3,436.16	-3,224.29	752.09	621.21	130.89	5.746			
9,200.00	7,579.00	9,055.22	7,154.00	89.80	95.06	55.69	3,436.31	-3,324.29	752.12	617.63	134.49	5.592			
9,300.00	7,579.00	9,155.22	7,154.00	91.59	96.69	55.69	3,436.47	-3,424.29	752.15	613.99	138.16	5.444			
9,400.00	7,579.00	9,255.22	7,154.00	93.42	98.35	55.69	3,436.63	-3,524.29	752.17	610.30	141.87	5.302			
9,500.00	7,579.00	9,355.22	7,154.00	95.30	100.06	55.69	3,436.78	-3,624.29	752.20	606.57	145.64	5.165			
9,600.00	7,579.00	9,455.22	7,154.00	97.21	101.81	55.69	3,436.94	-3,724.29	752.23	602.78	149.44	5.034			
9,700.00	7,579.00	9,555.22	7,154.00	99.15	103.59	55.69	3,437.10	-3,824.29	752.25	598.96	153.29	4.907			
9,800.00	7,579.00	9,655.22	7,154.00	101.13	105.42	55.69	3,437.26	-3,924.29	752.28	595.10	157.18	4.786			
9,900.00	7,579.00	9,755.22	7,154.00	103.15	107.28	55.69	3,437.41	-4,024.29	752.31	591.20	161.10	4.670			
10,000.00	7,579.00	9,855.22	7,154.00	105.19	109.17	55.70	3,437.57	-4,124.29	752.33	587.28	165.06	4.558			
10,100.00	7,579.00	9,955.22	7,154.00	107.26	111.10	55.70	3,437.73	-4,224.29	752.36	583.32	169.04	4.451			
10,200.00	7,579.00	10,055.22	7,154.00	109.36	113.06	55.70	3,437.89	-4,324.29	752.39	579.33	173.06	4.348			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-MWD OWSG													Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
10,300.00	7,579.00	10,155.22	7,154.00	111.49	115.05	55.70	3,438.04	-4,424.29	752.41	575.31	177.10	4.248			
10,400.00	7,579.00	10,255.22	7,154.00	113.64	117.07	55.70	3,438.20	-4,524.29	752.44	571.27	181.17	4.153			
10,500.00	7,579.00	10,355.22	7,154.00	115.82	119.11	55.70	3,438.36	-4,624.29	752.47	567.21	185.26	4.062			
10,600.00	7,579.00	10,455.22	7,154.00	118.01	121.18	55.70	3,438.51	-4,724.29	752.49	563.12	189.37	3.974			
10,700.00	7,579.00	10,555.22	7,154.00	120.23	123.28	55.71	3,438.67	-4,824.29	752.52	559.02	193.50	3.889			
10,800.00	7,579.00	10,655.22	7,154.00	122.47	125.40	55.71	3,438.83	-4,924.29	752.55	554.90	197.65	3.807			
10,900.00	7,579.00	10,755.22	7,154.00	124.73	127.55	55.71	3,438.99	-5,024.29	752.57	550.75	201.82	3.729			
11,000.00	7,579.00	10,855.22	7,154.00	127.01	129.71	55.71	3,439.14	-5,124.29	752.60	546.59	206.00	3.653			
11,100.00	7,579.00	10,955.22	7,154.00	129.30	131.90	55.71	3,439.30	-5,224.29	752.63	542.42	210.21	3.580			
11,200.00	7,579.00	11,055.22	7,154.00	131.61	134.11	55.71	3,439.46	-5,324.29	752.65	538.23	214.42	3.510			
11,300.00	7,579.00	11,155.22	7,154.00	133.93	136.33	55.71	3,439.61	-5,424.29	752.68	534.03	218.65	3.442			
11,400.00	7,579.00	11,255.22	7,154.00	136.27	138.58	55.72	3,439.77	-5,524.29	752.71	529.81	222.90	3.377			
11,500.00	7,579.00	11,355.22	7,154.00	138.62	140.84	55.72	3,439.93	-5,624.29	752.73	525.58	227.15	3.314			
11,600.00	7,579.00	11,455.22	7,154.00	140.99	143.11	55.72	3,440.09	-5,724.29	752.76	521.34	231.42	3.253			
11,700.00	7,579.00	11,555.22	7,154.00	143.37	145.41	55.72	3,440.24	-5,824.29	752.79	517.09	235.70	3.194			
11,800.00	7,579.00	11,655.22	7,154.00	145.76	147.71	55.72	3,440.40	-5,924.29	752.81	512.82	239.99	3.137			
11,900.00	7,579.00	11,755.22	7,154.00	148.16	150.03	55.72	3,440.56	-6,024.29	752.84	508.55	244.29	3.082			
12,000.00	7,579.00	11,855.22	7,154.00	150.58	152.37	55.72	3,440.72	-6,124.29	752.87	504.27	248.60	3.028			
12,100.00	7,579.00	11,955.22	7,154.00	153.00	154.72	55.73	3,440.87	-6,224.29	752.89	499.98	252.91	2.977			
12,200.00	7,579.00	12,055.22	7,154.00	155.43	157.07	55.73	3,441.03	-6,324.28	752.92	495.68	257.24	2.927			
12,300.00	7,579.00	12,155.22	7,154.00	157.87	159.45	55.73	3,441.19	-6,424.28	752.94	491.37	261.58	2.878			
12,400.00	7,579.00	12,255.22	7,154.00	160.32	161.83	55.73	3,441.34	-6,524.28	752.97	487.05	265.92	2.832			
12,500.00	7,579.00	12,355.22	7,154.00	162.78	164.22	55.73	3,441.50	-6,624.28	753.00	482.73	270.27	2.786			
12,600.00	7,579.00	12,455.22	7,154.00	165.25	166.62	55.73	3,441.66	-6,724.28	753.02	478.40	274.63	2.742			
12,700.00	7,579.00	12,555.22	7,154.00	167.73	169.04	55.73	3,441.82	-6,824.28	753.05	474.06	278.99	2.699			
12,800.00	7,579.00	12,655.22	7,154.00	170.21	171.46	55.73	3,441.97	-6,924.28	753.08	469.72	283.36	2.658			
12,900.00	7,579.00	12,755.22	7,154.00	172.70	173.89	55.74	3,442.13	-7,024.28	753.10	465.37	287.74	2.617			
13,000.00	7,579.00	12,855.22	7,154.00	175.19	176.33	55.74	3,442.29	-7,124.28	753.13	461.01	292.12	2.578			
13,100.00	7,579.00	12,955.22	7,154.00	177.70	178.78	55.74	3,442.44	-7,224.28	753.16	456.65	296.51	2.540			
13,200.00	7,579.00	13,055.22	7,154.00	180.20	181.23	55.74	3,442.60	-7,324.28	753.18	452.28	300.90	2.503			
13,300.00	7,579.00	13,155.22	7,154.00	182.72	183.70	55.74	3,442.76	-7,424.28	753.21	447.91	305.30	2.467			
13,400.00	7,579.00	13,255.22	7,154.00	185.24	186.17	55.74	3,442.92	-7,524.28	753.24	443.53	309.71	2.432			
13,500.00	7,579.00	13,355.22	7,154.00	187.76	188.64	55.74	3,443.07	-7,624.28	753.26	439.15	314.11	2.398			
13,600.00	7,579.00	13,455.22	7,154.00	190.30	191.13	55.75	3,443.23	-7,724.28	753.29	434.76	318.53	2.365			
13,700.00	7,579.00	13,555.22	7,154.00	192.83	193.62	55.75	3,443.39	-7,824.28	753.32	430.37	322.95	2.333			
13,800.00	7,579.00	13,655.22	7,154.00	195.37	196.11	55.75	3,443.55	-7,924.28	753.34	425.98	327.37	2.301			
13,900.00	7,579.00	13,755.22	7,154.00	197.92	198.62	55.75	3,443.70	-8,024.28	753.37	421.58	331.79	2.271			
14,000.00	7,579.00	13,855.22	7,154.00	200.47	201.12	55.75	3,443.86	-8,124.28	753.40	417.17	336.22	2.241			
14,100.00	7,579.00	13,955.22	7,154.00	203.02	203.64	55.75	3,444.02	-8,224.28	753.42	412.77	340.66	2.212			
14,200.00	7,579.00	14,055.22	7,154.00	205.58	206.15	55.75	3,444.17	-8,324.28	753.45	408.36	345.09	2.183			
14,300.00	7,579.00	14,155.22	7,154.00	208.14	208.68	55.76	3,444.33	-8,424.28	753.48	403.94	349.53	2.156			
14,400.00	7,579.00	14,255.22	7,154.00	210.70	211.20	55.76	3,444.49	-8,524.28	753.50	399.53	353.98	2.129			
14,500.00	7,579.00	14,355.22	7,154.00	213.27	213.74	55.76	3,444.65	-8,624.28	753.53	395.11	358.42	2.102			
14,600.00	7,579.00	14,455.22	7,154.00	215.84	216.27	55.76	3,444.80	-8,724.28	753.56	390.68	362.87	2.077			
14,700.00	7,579.00	14,555.22	7,154.00	218.42	218.81	55.76	3,444.96	-8,824.28	753.58	386.26	367.33	2.052			
14,800.00	7,579.00	14,655.22	7,154.00	221.00	221.36	55.76	3,445.12	-8,924.28	753.61	381.83	371.78	2.027			
14,900.00	7,579.00	14,755.22	7,154.00	223.58	223.91	55.76	3,445.28	-9,024.28	753.64	377.39	376.24	2.003			
15,000.00	7,579.00	14,855.22	7,154.00	226.17	226.46	55.77	3,445.43	-9,124.28	753.66	372.96	380.70	1.980			
15,100.00	7,579.00	14,955.22	7,154.00	228.75	229.02	55.77	3,445.59	-9,224.28	753.69	368.52	385.17	1.957			
15,200.00	7,579.00	15,055.22	7,154.00	231.34	231.58	55.77	3,445.75	-9,324.28	753.72	364.08	389.64	1.934			
15,300.00	7,579.00	15,155.22	7,154.00	233.94	234.14	55.77	3,445.90	-9,424.28	753.74	359.64	394.10	1.913			
15,400.00	7,579.00	15,255.22	7,154.00	236.53	236.71	55.77	3,446.06	-9,524.28	753.77	355.19	398.58	1.891			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-MWD OWSG													Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
15,500.00	7,579.00	15,355.22	7,154.00	239.13	239.28	55.77	3,446.22	-9,624.28	753.80	350.75	403.05	1.870			
15,600.00	7,579.00	15,455.22	7,154.00	241.73	241.85	55.77	3,446.38	-9,724.28	753.82	346.30	407.53	1.850			
15,700.00	7,579.00	15,555.22	7,154.00	244.34	244.43	55.77	3,446.53	-9,824.28	753.85	341.85	412.00	1.830			
15,800.00	7,579.00	15,655.22	7,154.00	246.94	247.01	55.78	3,446.69	-9,924.28	753.88	337.39	416.48	1.810			
15,900.00	7,579.00	15,755.22	7,154.00	249.55	249.59	55.78	3,446.85	-10,024.28	753.90	332.94	420.97	1.791			
16,000.00	7,579.00	15,855.22	7,154.00	252.16	252.17	55.78	3,447.00	-10,124.28	753.93	328.48	425.45	1.772			
16,100.00	7,579.00	15,955.22	7,154.00	254.77	254.76	55.78	3,447.16	-10,224.28	753.96	324.02	429.94	1.754			
16,200.00	7,579.00	16,055.22	7,154.00	257.38	257.35	55.78	3,447.32	-10,324.28	753.98	319.56	434.43	1.736			
16,300.00	7,579.00	16,155.22	7,154.00	260.00	259.94	55.78	3,447.48	-10,424.28	754.01	315.09	438.92	1.718			
16,400.00	7,579.00	16,255.22	7,154.00	262.62	262.54	55.78	3,447.63	-10,524.28	754.04	310.63	443.41	1.701			
16,500.00	7,579.00	16,355.22	7,154.00	265.24	265.14	55.79	3,447.79	-10,624.28	754.06	306.16	447.90	1.684			
16,600.00	7,579.00	16,455.22	7,154.00	267.86	267.74	55.79	3,447.95	-10,724.28	754.09	301.69	452.40	1.667			
16,700.00	7,579.00	16,555.22	7,154.00	270.48	270.34	55.79	3,448.11	-10,824.28	754.12	297.22	456.89	1.651			
16,800.00	7,579.00	16,655.22	7,154.00	273.10	272.94	55.79	3,448.26	-10,924.28	754.14	292.75	461.39	1.634			
16,900.00	7,579.00	16,755.22	7,154.00	275.73	275.55	55.79	3,448.42	-11,024.28	754.17	288.28	465.89	1.619			
17,000.00	7,579.00	16,855.22	7,154.00	278.36	278.15	55.79	3,448.58	-11,124.28	754.19	283.80	470.39	1.603			
17,100.00	7,579.00	16,955.22	7,154.00	280.99	280.76	55.79	3,448.73	-11,224.28	754.22	279.33	474.89	1.588			
17,200.00	7,579.00	17,055.22	7,154.00	283.62	283.37	55.80	3,448.89	-11,324.28	754.25	274.85	479.40	1.573			
17,300.00	7,579.00	17,155.22	7,154.00	286.25	285.99	55.80	3,449.05	-11,424.28	754.27	270.37	483.90	1.559			
17,400.00	7,579.00	17,255.22	7,154.00	288.88	288.60	55.80	3,449.21	-11,524.28	754.30	265.89	488.41	1.544			
17,500.00	7,579.00	17,355.22	7,154.00	291.52	291.22	55.80	3,449.36	-11,624.28	754.33	261.41	492.92	1.530			
17,600.00	7,579.00	17,455.22	7,154.00	294.15	293.84	55.80	3,449.52	-11,724.28	754.35	256.93	497.43	1.517			
17,700.00	7,579.00	17,555.22	7,154.00	296.79	296.46	55.80	3,449.68	-11,824.28	754.38	252.44	501.94	1.503			
17,800.00	7,579.00	17,655.22	7,154.00	299.43	299.08	55.80	3,449.83	-11,924.28	754.41	247.96	506.45	1.490	Level 3		
17,900.00	7,579.00	17,755.22	7,154.00	302.07	301.70	55.81	3,449.99	-12,024.28	754.43	243.47	510.96	1.476	Level 3		
18,000.00	7,579.00	17,855.22	7,154.00	304.71	304.33	55.81	3,450.15	-12,124.28	754.46	238.98	515.48	1.464	Level 3		
18,100.00	7,579.00	17,955.22	7,154.00	307.35	306.95	55.81	3,450.31	-12,224.28	754.49	234.49	519.99	1.451	Level 3		
18,200.00	7,579.00	18,055.22	7,154.00	310.00	309.58	55.81	3,450.46	-12,324.28	754.51	230.00	524.51	1.439	Level 3		
18,300.00	7,579.00	18,155.22	7,154.00	312.64	312.21	55.81	3,450.62	-12,424.28	754.54	225.51	529.03	1.426	Level 3		
18,400.00	7,579.00	18,255.22	7,154.00	315.29	314.84	55.81	3,450.78	-12,524.28	754.57	221.02	533.55	1.414	Level 3		
18,500.00	7,579.00	18,355.22	7,154.00	317.93	317.47	55.81	3,450.94	-12,624.28	754.59	216.53	538.07	1.402	Level 3		
18,600.00	7,579.00	18,455.22	7,154.00	320.58	320.10	55.81	3,451.09	-12,724.28	754.62	212.03	542.59	1.391	Level 3		
18,700.00	7,579.00	18,555.22	7,154.00	323.23	322.74	55.82	3,451.25	-12,824.28	754.65	207.54	547.11	1.379	Level 3		
18,800.00	7,579.00	18,655.22	7,154.00	325.88	325.37	55.82	3,451.41	-12,924.28	754.67	203.04	551.63	1.368	Level 3		
18,900.00	7,579.00	18,755.22	7,154.00	328.53	328.01	55.82	3,451.56	-13,024.28	754.70	198.55	556.15	1.357	Level 3		
19,000.00	7,579.00	18,855.22	7,154.00	331.18	330.65	55.82	3,451.72	-13,124.28	754.73	194.05	560.68	1.346	Level 3		
19,100.00	7,579.00	18,955.22	7,154.00	333.83	333.28	55.82	3,451.88	-13,224.28	754.75	189.55	565.20	1.335	Level 3		
19,200.00	7,579.00	19,055.22	7,154.00	336.48	335.92	55.82	3,452.04	-13,324.28	754.78	185.05	569.73	1.325	Level 3		
19,300.00	7,579.00	19,155.22	7,154.00	339.14	338.56	55.82	3,452.19	-13,424.28	754.81	180.55	574.26	1.314	Level 3		
19,400.00	7,579.00	19,255.22	7,154.00	341.79	341.21	55.83	3,452.35	-13,524.28	754.83	176.05	578.79	1.304	Level 3		
19,500.00	7,579.00	19,355.22	7,154.00	344.45	343.85	55.83	3,452.51	-13,624.28	754.86	171.55	583.31	1.294	Level 3		
19,600.00	7,579.00	19,455.22	7,154.00	347.10	346.49	55.83	3,452.66	-13,724.28	754.89	167.04	587.84	1.284	Level 3		
19,700.00	7,579.00	19,555.22	7,154.00	349.76	349.14	55.83	3,452.82	-13,824.28	754.91	162.54	592.37	1.274	Level 3		
19,800.00	7,579.00	19,655.22	7,154.00	352.42	351.78	55.83	3,452.98	-13,924.28	754.94	158.03	596.91	1.265	Level 3		
19,900.00	7,579.00	19,755.22	7,154.00	355.07	354.43	55.83	3,453.14	-14,024.28	754.97	153.53	601.44	1.255	Level 3		
20,000.00	7,579.00	19,855.22	7,154.00	357.73	357.08	55.83	3,453.29	-14,124.28	754.99	149.02	605.97	1.246	Level 2		
20,100.00	7,579.00	19,955.22	7,154.00	360.39	359.73	55.84	3,453.45	-14,224.27	755.02	144.51	610.50	1.237	Level 2		
20,200.00	7,579.00	20,055.22	7,154.00	363.05	362.37	55.84	3,453.61	-14,324.27	755.05	140.01	615.04	1.228	Level 2		
20,300.00	7,579.00	20,155.22	7,154.00	365.71	365.02	55.84	3,453.77	-14,424.27	755.07	135.50	619.57	1.219	Level 2		
20,400.00	7,579.00	20,255.22	7,154.00	368.38	367.68	55.84	3,453.92	-14,524.27	755.10	130.99	624.11	1.210	Level 2		
20,500.00	7,579.00	20,355.22	7,154.00	371.04	370.33	55.84	3,454.08	-14,624.27	755.13	126.48	628.65	1.201	Level 2		
20,600.00	7,579.00	20,455.22	7,154.00	373.70	372.98	55.84	3,454.24	-14,724.27	755.15	121.97	633.18	1.193	Level 2		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-MWD OWSG													Offset Well Error:		0.00 usft
Reference				Offset		Semi Major Axis			Distance				Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
20,700.00	7,579.00	20,555.22	7,154.00	376.36	375.63	55.84	3,454.39	-14,824.27	755.18	117.46	637.72	1.184	Level 2		
20,800.00	7,579.00	20,655.22	7,154.00	379.03	378.29	55.84	3,454.55	-14,924.27	755.21	112.95	642.26	1.176	Level 2		
20,900.00	7,579.00	20,755.22	7,154.00	381.69	380.94	55.85	3,454.71	-15,024.27	755.23	108.43	646.80	1.168	Level 2		
21,000.00	7,579.00	20,855.22	7,154.00	384.36	383.60	55.85	3,454.87	-15,124.27	755.26	103.92	651.34	1.160	Level 2		
21,100.00	7,579.00	20,955.22	7,154.00	387.02	386.25	55.85	3,455.02	-15,224.27	755.29	99.41	655.88	1.152	Level 2		
21,200.00	7,579.00	21,055.22	7,154.00	389.69	388.91	55.85	3,455.18	-15,324.27	755.31	94.89	660.42	1.144	Level 2		
21,300.00	7,579.00	21,155.22	7,154.00	392.36	391.57	55.85	3,455.34	-15,424.27	755.34	90.38	664.96	1.136	Level 2		
21,400.00	7,579.00	21,255.22	7,154.00	395.02	394.22	55.85	3,455.49	-15,524.27	755.37	85.86	669.50	1.128	Level 2		
21,500.00	7,579.00	21,355.22	7,154.00	397.69	396.88	55.85	3,455.65	-15,624.27	755.39	81.35	674.05	1.121	Level 2		
21,600.00	7,579.00	21,455.22	7,154.00	400.36	399.54	55.86	3,455.81	-15,724.27	755.42	76.83	678.59	1.113	Level 2		
21,700.00	7,579.00	21,555.22	7,154.00	403.03	402.20	55.86	3,455.97	-15,824.27	755.45	72.31	683.13	1.106	Level 2		
21,800.00	7,579.00	21,655.22	7,154.00	405.70	404.86	55.86	3,456.12	-15,924.27	755.47	67.79	687.68	1.099	Level 2		
21,900.00	7,579.00	21,755.22	7,154.00	408.37	407.52	55.86	3,456.28	-16,024.27	755.50	63.28	692.22	1.091	Level 2		
22,000.00	7,579.00	21,855.22	7,154.00	411.04	410.19	55.86	3,456.44	-16,124.27	755.53	58.76	696.77	1.084	Level 2		
22,100.00	7,579.00	21,955.22	7,154.00	413.71	412.85	55.86	3,456.60	-16,224.27	755.55	54.24	701.32	1.077	Level 2		
22,200.00	7,579.00	22,055.22	7,154.00	416.38	415.51	55.86	3,456.75	-16,324.27	755.58	49.72	705.86	1.070	Level 2		
22,300.00	7,579.00	22,155.22	7,154.00	419.05	418.18	55.87	3,456.91	-16,424.27	755.61	45.20	710.41	1.064	Level 2		
22,400.00	7,579.00	22,255.22	7,154.00	421.72	420.84	55.87	3,457.07	-16,524.27	755.63	40.68	714.96	1.057	Level 2		
22,440.61	7,579.00	22,295.82	7,154.00	422.81	421.92	55.87	3,457.13	-16,564.88	755.64	38.84	716.80	1.054	Level 2, ES, SF		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 13-T1S-R66W - WARBLER 13W-27-02 - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	1.00	-1.00	0.00	0.00	-94.71	-12.38	-150.25	150.76						
100.00	100.00	101.00	99.00	0.13	0.14	-94.71	-12.38	-150.25	150.76	150.49	0.27	553.374			
200.00	199.98	201.02	198.98	0.49	0.50	-52.84	-12.38	-150.25	149.70	148.71	0.99	151.326			
300.00	299.84	301.16	298.84	0.86	0.86	-54.52	-12.38	-150.25	146.60	144.88	1.71	85.606			
400.00	399.45	398.45	398.45	1.23	1.20	-57.47	-12.38	-150.25	141.71	139.27	2.43	58.213			
500.00	498.70	495.16	495.14	1.63	1.55	-61.22	-11.32	-151.42	136.43	133.26	3.16	43.107			
600.00	597.47	592.15	592.01	2.05	1.90	-65.35	-8.06	-155.03	132.02	128.10	3.92	33.657			
700.00	695.62	689.49	688.99	2.50	2.25	-69.82	-2.58	-161.10	128.62	123.90	4.72	27.236			
800.00	793.06	787.16	785.99	2.99	2.62	-74.58	5.13	-169.64	126.35	120.77	5.58	22.647			
900.00	889.64	885.19	882.87	3.52	3.01	-79.53	15.10	-180.67	125.29	118.79	6.50	19.262			
932.45	920.78	917.07	914.27	3.71	3.15	-81.16	18.82	-184.79	125.22	118.40	6.83	18.344	CC		
1,000.00	985.27	983.57	979.54	4.10	3.43	-84.57	27.33	-194.21	125.52	118.01	7.51	16.717			
1,100.00	1,079.82	1,082.31	1,075.88	4.72	3.88	-89.58	41.83	-210.27	127.06	118.47	8.60	14.783			
1,200.00	1,173.17	1,181.41	1,171.76	5.40	4.37	-94.43	58.61	-228.85	129.89	120.13	9.76	13.304			
1,300.00	1,265.21	1,280.88	1,267.06	6.13	4.90	-99.03	77.68	-249.96	133.96	122.95	11.01	12.169			
1,400.00	1,355.84	1,380.71	1,361.67	6.92	5.48	-103.31	99.04	-273.61	139.17	126.85	12.32	11.292			
1,500.00	1,444.94	1,480.92	1,455.46	7.77	6.12	-107.23	122.69	-299.80	145.43	131.72	13.71	10.609			
1,600.00	1,532.44	1,581.52	1,548.30	8.68	6.81	-110.75	148.63	-328.51	152.58	137.43	15.15	10.070			
1,700.00	1,619.43	1,682.69	1,640.26	9.62	7.57	-113.21	176.91	-359.82	159.57	142.90	16.67	9.572			
1,800.00	1,706.42	1,784.34	1,731.09	10.56	8.40	-114.30	207.49	-393.68	165.60	147.31	18.29	9.053			
1,900.00	1,793.42	1,885.04	1,819.70	11.52	9.27	-114.36	239.54	-429.17	170.69	150.67	20.02	8.527			
2,000.00	1,880.41	1,984.91	1,907.45	12.48	10.17	-114.33	271.51	-464.57	175.67	153.90	21.77	8.068			
2,100.00	1,967.40	2,084.79	1,995.20	13.45	11.07	-114.31	303.49	-499.97	180.65	157.10	23.55	7.672			
2,200.00	2,054.39	2,184.66	2,082.94	14.42	11.99	-114.28	335.46	-535.37	185.63	160.30	25.33	7.327			
2,300.00	2,141.39	2,284.54	2,170.69	15.39	12.91	-114.25	367.44	-570.77	190.61	163.48	27.13	7.025			
2,400.00	2,228.38	2,384.42	2,258.44	16.36	13.84	-114.23	399.41	-606.18	195.60	166.65	28.94	6.758			
2,500.00	2,315.37	2,484.29	2,346.18	17.34	14.78	-114.20	431.39	-641.58	200.58	169.82	30.76	6.521			
2,600.00	2,402.37	2,584.17	2,433.93	18.32	15.72	-114.18	463.36	-676.98	205.56	172.98	32.58	6.309			
2,700.00	2,489.36	2,684.04	2,521.68	19.30	16.66	-114.16	495.34	-712.38	210.54	176.13	34.41	6.119			
2,800.00	2,576.35	2,783.92	2,609.42	20.28	17.61	-114.14	527.31	-747.78	215.52	179.28	36.24	5.947			
2,900.00	2,663.34	2,883.79	2,697.17	21.26	18.56	-114.12	559.29	-783.19	220.50	182.43	38.07	5.791			
3,000.00	2,750.34	2,983.67	2,784.92	22.24	19.51	-114.10	591.26	-818.59	225.49	185.57	39.91	5.649			
3,100.00	2,837.33	3,083.55	2,872.66	23.23	20.46	-114.08	623.24	-853.99	230.47	188.71	41.75	5.520			
3,200.00	2,924.32	3,183.42	2,960.41	24.21	21.42	-114.07	655.21	-889.39	235.45	191.85	43.60	5.400			
3,300.00	3,011.31	3,283.30	3,048.16	25.20	22.38	-114.05	687.19	-924.79	240.43	194.99	45.45	5.291			
3,400.00	3,098.31	3,383.17	3,135.90	26.18	23.33	-114.03	719.16	-960.19	245.41	198.12	47.29	5.189			
3,500.00	3,185.30	3,483.05	3,223.65	27.17	24.29	-114.02	751.14	-995.60	250.40	201.25	49.14	5.095			
3,600.00	3,272.29	3,582.92	3,311.40	28.16	25.25	-114.00	783.11	-1,031.00	255.38	204.38	51.00	5.008			
3,700.00	3,359.29	3,682.80	3,399.14	29.14	26.21	-113.99	815.09	-1,066.40	260.36	207.51	52.85	4.927			
3,800.00	3,446.28	3,782.68	3,486.89	30.13	27.18	-113.98	847.06	-1,101.80	265.34	210.64	54.70	4.851			
3,900.00	3,533.27	3,882.55	3,574.64	31.12	28.14	-113.96	879.04	-1,137.20	270.32	213.77	56.56	4.780			
4,000.00	3,620.26	3,982.43	3,662.38	32.10	29.10	-113.95	911.01	-1,172.61	275.31	216.89	58.41	4.713			
4,100.00	3,707.26	4,082.30	3,750.13	33.09	30.07	-113.94	942.99	-1,208.01	280.29	220.02	60.27	4.650			
4,200.00	3,794.25	4,182.18	3,837.88	34.08	31.03	-113.93	974.96	-1,243.41	285.27	223.14	62.13	4.592			
4,300.00	3,881.24	4,282.06	3,925.62	35.07	31.99	-113.92	1,006.94	-1,278.81	290.25	226.26	63.99	4.536			
4,400.00	3,968.23	4,381.93	4,013.37	36.06	32.96	-113.91	1,038.91	-1,314.21	295.23	229.39	65.85	4.484			
4,500.00	4,055.23	4,481.81	4,101.12	37.05	33.92	-113.90	1,070.89	-1,349.62	300.22	232.51	67.71	4.434			
4,600.00	4,142.22	4,581.68	4,188.87	38.04	34.89	-113.89	1,102.86	-1,385.02	305.20	235.63	69.57	4.387			
4,700.00	4,229.21	4,681.56	4,276.61	39.03	35.86	-113.88	1,134.84	-1,420.42	310.18	238.75	71.43	4.342			
4,800.00	4,316.21	4,781.43	4,364.36	40.02	36.82	-113.87	1,166.81	-1,455.82	315.16	241.87	73.29	4.300			
4,900.00	4,403.20	4,881.31	4,452.11	41.01	37.79	-113.86	1,198.79	-1,491.22	320.14	244.99	75.16	4.260			
5,000.00	4,490.19	4,981.19	4,539.85	42.00	38.76	-113.85	1,230.76	-1,526.62	325.13	248.11	77.02	4.221			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 13-T1S-R66W - WARBLER 13W-27-02 - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,100.00	4,577.18	5,081.06	4,627.60	42.99	39.72	-113.84	1,262.74	-1,562.03	330.11	251.23	78.88	4.185			
5,200.00	4,664.18	5,180.94	4,715.35	43.98	40.69	-113.83	1,294.71	-1,597.43	335.09	254.34	80.75	4.150			
5,300.00	4,751.17	5,280.81	4,803.09	44.97	41.66	-113.82	1,326.69	-1,632.83	340.07	257.46	82.61	4.117			
5,400.00	4,838.16	5,380.69	4,890.84	45.96	42.63	-113.82	1,358.66	-1,668.23	345.06	260.58	84.48	4.085			
5,500.00	4,925.15	5,480.57	4,978.59	46.95	43.60	-113.81	1,390.64	-1,703.63	350.04	263.70	86.34	4.054			
5,600.00	5,012.15	5,580.44	5,066.33	47.94	44.56	-113.80	1,422.61	-1,739.04	355.02	266.81	88.21	4.025			
5,700.00	5,099.14	5,680.32	5,154.08	48.93	45.53	-113.79	1,454.59	-1,774.44	360.00	269.93	90.07	3.997			
5,800.00	5,186.13	5,780.19	5,241.83	49.92	46.50	-113.79	1,486.56	-1,809.84	364.98	273.05	91.94	3.970			
5,900.00	5,273.13	5,880.07	5,329.57	50.91	47.47	-113.78	1,518.54	-1,845.24	369.97	276.16	93.80	3.944			
6,000.00	5,360.12	5,979.94	5,417.32	51.90	48.44	-113.77	1,550.51	-1,880.64	374.95	279.28	95.67	3.919			
6,100.00	5,447.11	6,079.82	5,505.07	52.89	49.41	-113.77	1,582.49	-1,916.05	379.93	282.40	97.54	3.895			
6,200.00	5,534.10	6,179.70	5,592.81	53.88	50.38	-113.76	1,614.46	-1,951.45	384.91	285.51	99.40	3.872			
6,300.00	5,621.10	6,279.57	5,680.56	54.87	51.35	-113.75	1,646.44	-1,986.85	389.90	288.63	101.27	3.850			
6,400.00	5,708.09	6,379.45	5,768.31	55.86	52.32	-113.75	1,678.41	-2,022.25	394.88	291.74	103.14	3.829			
6,500.00	5,795.08	6,479.32	5,856.05	56.85	53.28	-113.74	1,710.39	-2,057.65	399.86	294.86	105.00	3.808			
6,600.00	5,882.07	6,579.20	5,943.80	57.84	54.25	-113.74	1,742.36	-2,093.05	404.84	297.97	106.87	3.788			
6,700.00	5,969.07	6,679.07	6,031.55	58.83	55.22	-113.73	1,774.34	-2,128.46	409.82	301.09	108.74	3.769			
6,800.00	6,056.06	6,778.95	6,119.29	59.83	56.19	-113.73	1,806.32	-2,163.86	414.81	304.20	110.61	3.750			
6,900.00	6,143.05	6,878.83	6,207.04	60.82	57.16	-113.72	1,838.29	-2,199.26	419.79	307.31	112.47	3.732			
7,000.00	6,230.05	6,978.70	6,294.79	61.81	58.13	-113.72	1,870.27	-2,234.66	424.77	310.43	114.34	3.715			
7,100.00	6,317.04	7,078.58	6,382.53	62.80	59.10	-113.71	1,902.24	-2,270.06	429.75	313.54	116.21	3.698			
7,200.00	6,404.03	7,178.45	6,470.28	63.79	60.07	-113.71	1,934.22	-2,305.47	434.74	316.66	118.08	3.682			
7,300.00	6,491.02	7,278.33	6,558.03	64.78	61.04	-113.70	1,966.19	-2,340.87	439.72	319.77	119.95	3.666			
7,400.00	6,578.02	7,378.21	6,645.77	65.77	62.01	-113.70	1,998.17	-2,376.27	444.70	322.88	121.82	3.651			
7,500.00	6,665.01	7,478.08	6,733.52	66.76	62.98	-113.69	2,030.14	-2,411.67	449.68	326.00	123.69	3.636			
7,600.00	6,752.00	7,573.55	6,817.35	67.76	63.92	-113.67	2,062.09	-2,445.63	454.75	329.25	125.50	3.624			
7,700.00	6,838.99	7,646.19	6,878.84	68.75	64.71	-112.99	2,083.10	-2,477.02	463.62	336.46	127.16	3.646			
7,800.00	6,925.99	7,715.80	6,933.82	69.74	65.59	-111.43	2,103.15	-2,514.64	478.62	349.78	128.84	3.715			
7,900.00	7,012.98	7,780.67	6,980.85	70.73	66.51	-109.29	2,120.31	-2,555.85	500.33	370.31	130.02	3.848			
8,000.00	7,099.97	7,839.82	7,019.67	71.72	67.42	-106.88	2,134.48	-2,598.13	529.32	399.10	130.22	4.065			
8,100.00	7,186.97	7,892.87	7,050.84	72.71	68.28	-104.42	2,145.86	-2,639.50	565.90	436.71	129.19	4.380			
8,200.00	7,273.09	7,940.86	7,075.83	73.74	69.10	-93.49	2,154.99	-2,679.42	608.48	481.48	127.00	4.791			
8,300.00	7,352.95	7,988.49	7,097.44	74.97	69.93	-79.98	2,162.90	-2,721.11	648.66	524.61	124.05	5.229			
8,400.00	7,423.63	8,036.34	7,115.80	76.39	70.79	-70.72	2,169.62	-2,764.77	683.97	563.32	120.65	5.669			
8,500.00	7,482.96	8,084.35	7,130.71	77.96	71.66	-64.37	2,175.09	-2,810.06	713.32	596.33	116.99	6.097			
8,600.00	7,529.15	8,132.48	7,142.04	79.64	72.54	-60.12	2,179.26	-2,856.63	735.95	622.73	113.21	6.501			
8,700.00	7,560.79	8,180.68	7,149.66	81.35	73.41	-57.51	2,182.07	-2,904.12	751.34	641.90	109.43	6.866			
8,800.00	7,576.92	8,228.92	7,153.51	83.05	74.27	-56.26	2,183.52	-2,952.18	759.16	653.39	105.77	7.177			
8,900.00	7,579.00	8,302.58	7,154.00	84.68	75.58	-56.10	2,183.77	-3,025.83	760.19	654.48	105.70	7.192			
9,000.00	7,579.00	8,402.58	7,154.00	86.34	77.38	-56.10	2,183.86	-3,125.83	760.22	650.96	109.26	6.958			
9,100.00	7,579.00	8,502.58	7,154.00	88.04	79.24	-56.10	2,183.95	-3,225.83	760.24	647.37	112.88	6.735			
9,200.00	7,579.00	8,602.58	7,154.00	89.80	81.13	-56.10	2,184.04	-3,325.83	760.27	643.70	116.57	6.522			
9,300.00	7,579.00	8,702.58	7,154.00	91.59	83.07	-56.10	2,184.13	-3,425.83	760.30	639.98	120.32	6.319			
9,400.00	7,579.00	8,802.58	7,154.00	93.42	85.05	-56.11	2,184.22	-3,525.83	760.33	636.21	124.13	6.126			
9,500.00	7,579.00	8,902.58	7,154.00	95.30	87.06	-56.11	2,184.31	-3,625.83	760.36	632.38	127.98	5.941			
9,600.00	7,579.00	9,002.58	7,154.00	97.21	89.11	-56.11	2,184.40	-3,725.83	760.39	628.51	131.88	5.766			
9,700.00	7,579.00	9,102.58	7,154.00	99.15	91.20	-56.11	2,184.49	-3,825.83	760.42	624.59	135.83	5.598			
9,800.00	7,579.00	9,202.58	7,154.00	101.13	93.31	-56.11	2,184.58	-3,925.83	760.45	620.64	139.81	5.439			
9,900.00	7,579.00	9,302.58	7,154.00	103.15	95.46	-56.11	2,184.67	-4,025.83	760.48	616.65	143.82	5.288			
10,000.00	7,579.00	9,402.58	7,154.00	105.19	97.63	-56.12	2,184.76	-4,125.83	760.50	612.63	147.87	5.143			
10,100.00	7,579.00	9,502.58	7,154.00	107.26	99.83	-56.12	2,184.85	-4,225.83	760.53	608.58	151.95	5.005			
10,200.00	7,579.00	9,602.58	7,154.00	109.36	102.06	-56.12	2,184.94	-4,325.83	760.56	604.51	156.06	4.874			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 13-T1S-R66W - WARBLER 13W-27-02 - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
10,300.00	7,579.00	9,702.58	7,154.00	111.49	104.30	-56.12	2,185.03	-4,425.83	760.59	600.40	160.19	4.748			
10,400.00	7,579.00	9,802.58	7,154.00	113.64	106.57	-56.12	2,185.12	-4,525.83	760.62	596.28	164.34	4.628			
10,500.00	7,579.00	9,902.58	7,154.00	115.82	108.86	-56.12	2,185.21	-4,625.83	760.65	592.13	168.52	4.514			
10,600.00	7,579.00	10,002.58	7,154.00	118.01	111.17	-56.12	2,185.30	-4,725.83	760.68	587.97	172.71	4.404			
10,700.00	7,579.00	10,102.58	7,154.00	120.23	113.49	-56.13	2,185.39	-4,825.83	760.71	583.78	176.93	4.300			
10,800.00	7,579.00	10,202.58	7,154.00	122.47	115.83	-56.13	2,185.48	-4,925.83	760.74	579.58	181.16	4.199			
10,900.00	7,579.00	10,302.58	7,154.00	124.73	118.19	-56.13	2,185.57	-5,025.83	760.76	575.36	185.41	4.103			
11,000.00	7,579.00	10,402.58	7,154.00	127.01	120.57	-56.13	2,185.66	-5,125.83	760.79	571.12	189.67	4.011			
11,100.00	7,579.00	10,502.58	7,154.00	129.30	122.95	-56.13	2,185.75	-5,225.83	760.82	566.87	193.95	3.923			
11,200.00	7,579.00	10,602.58	7,154.00	131.61	125.35	-56.13	2,185.84	-5,325.83	760.85	562.61	198.24	3.838			
11,300.00	7,579.00	10,702.58	7,154.00	133.93	127.77	-56.13	2,185.93	-5,425.83	760.88	558.34	202.54	3.757			
11,400.00	7,579.00	10,802.58	7,154.00	136.27	130.19	-56.14	2,186.02	-5,525.83	760.91	554.05	206.86	3.678			
11,500.00	7,579.00	10,902.58	7,154.00	138.62	132.63	-56.14	2,186.11	-5,625.83	760.94	549.76	211.18	3.603			
11,600.00	7,579.00	11,002.58	7,154.00	140.99	135.08	-56.14	2,186.20	-5,725.83	760.97	545.45	215.52	3.531			
11,700.00	7,579.00	11,102.58	7,154.00	143.37	137.53	-56.14	2,186.29	-5,825.83	761.00	541.13	219.86	3.461			
11,800.00	7,579.00	11,202.58	7,154.00	145.76	140.00	-56.14	2,186.38	-5,925.83	761.03	536.81	224.22	3.394			
11,900.00	7,579.00	11,302.58	7,154.00	148.16	142.47	-56.14	2,186.47	-6,025.83	761.05	532.47	228.58	3.329			
12,000.00	7,579.00	11,402.58	7,154.00	150.58	144.96	-56.14	2,186.56	-6,125.83	761.08	528.13	232.95	3.267			
12,100.00	7,579.00	11,502.58	7,154.00	153.00	147.45	-56.15	2,186.65	-6,225.83	761.11	523.78	237.33	3.207			
12,200.00	7,579.00	11,602.58	7,154.00	155.43	149.95	-56.15	2,186.74	-6,325.83	761.14	519.42	241.72	3.149			
12,300.00	7,579.00	11,702.58	7,154.00	157.87	152.46	-56.15	2,186.83	-6,425.83	761.17	515.06	246.11	3.093			
12,400.00	7,579.00	11,802.58	7,154.00	160.32	154.97	-56.15	2,186.92	-6,525.83	761.20	510.69	250.51	3.039			
12,500.00	7,579.00	11,902.58	7,154.00	162.78	157.49	-56.15	2,187.01	-6,625.83	761.23	506.31	254.92	2.986			
12,600.00	7,579.00	12,002.58	7,154.00	165.25	160.02	-56.15	2,187.10	-6,725.83	761.26	501.93	259.33	2.935			
12,700.00	7,579.00	12,102.58	7,154.00	167.73	162.55	-56.15	2,187.19	-6,825.83	761.29	497.54	263.75	2.886			
12,800.00	7,579.00	12,202.58	7,154.00	170.21	165.09	-56.16	2,187.28	-6,925.83	761.31	493.14	268.17	2.839			
12,900.00	7,579.00	12,302.58	7,154.00	172.70	167.63	-56.16	2,187.37	-7,025.83	761.34	488.74	272.60	2.793			
13,000.00	7,579.00	12,402.58	7,154.00	175.19	170.18	-56.16	2,187.46	-7,125.83	761.37	484.34	277.03	2.748			
13,100.00	7,579.00	12,502.58	7,154.00	177.70	172.73	-56.16	2,187.55	-7,225.83	761.40	479.93	281.47	2.705			
13,200.00	7,579.00	12,602.58	7,154.00	180.20	175.29	-56.16	2,187.64	-7,325.83	761.43	475.52	285.91	2.663			
13,300.00	7,579.00	12,702.58	7,154.00	182.72	177.85	-56.16	2,187.73	-7,425.83	761.46	471.10	290.36	2.622			
13,400.00	7,579.00	12,802.58	7,154.00	185.24	180.42	-56.16	2,187.82	-7,525.83	761.49	466.68	294.81	2.583			
13,500.00	7,579.00	12,902.58	7,154.00	187.76	182.99	-56.17	2,187.91	-7,625.83	761.52	462.26	299.26	2.545			
13,600.00	7,579.00	13,002.58	7,154.00	190.30	185.57	-56.17	2,188.01	-7,725.83	761.55	457.83	303.72	2.507			
13,700.00	7,579.00	13,102.58	7,154.00	192.83	188.15	-56.17	2,188.10	-7,825.83	761.57	453.39	308.18	2.471			
13,800.00	7,579.00	13,202.58	7,154.00	195.37	190.73	-56.17	2,188.19	-7,925.83	761.60	448.96	312.65	2.436			
13,900.00	7,579.00	13,302.58	7,154.00	197.92	193.31	-56.17	2,188.28	-8,025.83	761.63	444.52	317.11	2.402			
14,000.00	7,579.00	13,402.58	7,154.00	200.47	195.90	-56.17	2,188.37	-8,125.83	761.66	440.08	321.59	2.368			
14,100.00	7,579.00	13,502.58	7,154.00	203.02	198.50	-56.18	2,188.46	-8,225.83	761.69	435.63	326.06	2.336			
14,200.00	7,579.00	13,602.58	7,154.00	205.58	201.09	-56.18	2,188.55	-8,325.83	761.72	431.18	330.54	2.304			
14,300.00	7,579.00	13,702.58	7,154.00	208.14	203.69	-56.18	2,188.64	-8,425.83	761.75	426.73	335.02	2.274			
14,400.00	7,579.00	13,802.58	7,154.00	210.70	206.29	-56.18	2,188.73	-8,525.83	761.78	422.28	339.50	2.244			
14,500.00	7,579.00	13,902.58	7,154.00	213.27	208.89	-56.18	2,188.82	-8,625.83	761.81	417.82	343.98	2.215			
14,600.00	7,579.00	14,002.58	7,154.00	215.84	211.50	-56.18	2,188.91	-8,725.83	761.84	413.36	348.47	2.186			
14,700.00	7,579.00	14,102.58	7,154.00	218.42	214.11	-56.18	2,189.00	-8,825.83	761.86	408.90	352.96	2.158			
14,800.00	7,579.00	14,202.58	7,154.00	221.00	216.72	-56.19	2,189.09	-8,925.83	761.89	404.44	357.45	2.131			
14,900.00	7,579.00	14,302.58	7,154.00	223.58	219.33	-56.19	2,189.18	-9,025.83	761.92	399.97	361.95	2.105			
15,000.00	7,579.00	14,402.58	7,154.00	226.17	221.95	-56.19	2,189.27	-9,125.83	761.95	395.51	366.45	2.079			
15,100.00	7,579.00	14,502.58	7,154.00	228.75	224.57	-56.19	2,189.36	-9,225.83	761.98	391.04	370.95	2.054			
15,200.00	7,579.00	14,602.58	7,154.00	231.34	227.19	-56.19	2,189.45	-9,325.83	762.01	386.56	375.45	2.030			
15,300.00	7,579.00	14,702.58	7,154.00	233.94	229.81	-56.19	2,189.54	-9,425.83	762.04	382.09	379.95	2.006			
15,400.00	7,579.00	14,802.58	7,154.00	236.53	232.43	-56.19	2,189.63	-9,525.83	762.07	377.61	384.45	1.982			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 13-T1S-R66W - WARBLER 13W-27-02 - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
15,500.00	7,579.00	14,902.58	7,154.00	239.13	235.06	-56.20	2,189.72	-9,625.83	762.10	373.14	388.96	1.959			
15,600.00	7,579.00	15,002.58	7,154.00	241.73	237.69	-56.20	2,189.81	-9,725.83	762.13	368.66	393.47	1.937			
15,700.00	7,579.00	15,102.58	7,154.00	244.34	240.32	-56.20	2,189.90	-9,825.83	762.15	364.18	397.98	1.915			
15,800.00	7,579.00	15,202.58	7,154.00	246.94	242.95	-56.20	2,189.99	-9,925.83	762.18	359.69	402.49	1.894			
15,900.00	7,579.00	15,302.58	7,154.00	249.55	245.58	-56.20	2,190.08	-10,025.83	762.21	355.21	407.00	1.873			
16,000.00	7,579.00	15,402.58	7,154.00	252.16	248.22	-56.20	2,190.17	-10,125.83	762.24	350.72	411.52	1.852			
16,100.00	7,579.00	15,502.58	7,154.00	254.77	250.85	-56.20	2,190.26	-10,225.83	762.27	346.24	416.03	1.832			
16,200.00	7,579.00	15,602.58	7,154.00	257.38	253.49	-56.21	2,190.35	-10,325.83	762.30	341.75	420.55	1.813			
16,300.00	7,579.00	15,702.58	7,154.00	260.00	256.13	-56.21	2,190.44	-10,425.83	762.33	337.26	425.07	1.793			
16,400.00	7,579.00	15,802.58	7,154.00	262.62	258.77	-56.21	2,190.53	-10,525.83	762.36	332.76	429.59	1.775			
16,500.00	7,579.00	15,902.58	7,154.00	265.24	261.41	-56.21	2,190.62	-10,625.83	762.39	328.27	434.11	1.756			
16,600.00	7,579.00	16,002.58	7,154.00	267.86	264.05	-56.21	2,190.71	-10,725.83	762.41	323.78	438.64	1.738			
16,700.00	7,579.00	16,102.58	7,154.00	270.48	266.70	-56.21	2,190.80	-10,825.83	762.44	319.28	443.16	1.720			
16,800.00	7,579.00	16,202.58	7,154.00	273.10	269.34	-56.21	2,190.89	-10,925.83	762.47	314.78	447.69	1.703			
16,900.00	7,579.00	16,302.58	7,154.00	275.73	271.99	-56.22	2,190.98	-11,025.83	762.50	310.29	452.21	1.686			
17,000.00	7,579.00	16,402.58	7,154.00	278.36	274.64	-56.22	2,191.07	-11,125.83	762.53	305.79	456.74	1.669			
17,100.00	7,579.00	16,502.58	7,154.00	280.99	277.29	-56.22	2,191.16	-11,225.83	762.56	301.29	461.27	1.653			
17,200.00	7,579.00	16,602.58	7,154.00	283.62	279.93	-56.22	2,191.25	-11,325.83	762.59	296.79	465.80	1.637			
17,300.00	7,579.00	16,702.58	7,154.00	286.25	282.59	-56.22	2,191.34	-11,425.83	762.62	292.28	470.33	1.621			
17,400.00	7,579.00	16,802.58	7,154.00	288.88	285.24	-56.22	2,191.43	-11,525.83	762.65	287.78	474.87	1.606			
17,500.00	7,579.00	16,902.58	7,154.00	291.52	287.89	-56.22	2,191.52	-11,625.83	762.68	283.28	479.40	1.591			
17,600.00	7,579.00	17,002.58	7,154.00	294.15	290.54	-56.23	2,191.61	-11,725.83	762.70	278.77	483.93	1.576			
17,700.00	7,579.00	17,102.58	7,154.00	296.79	293.20	-56.23	2,191.70	-11,825.83	762.73	274.26	488.47	1.561			
17,800.00	7,579.00	17,202.58	7,154.00	299.43	295.86	-56.23	2,191.79	-11,925.83	762.76	269.76	493.01	1.547			
17,900.00	7,579.00	17,302.58	7,154.00	302.07	298.51	-56.23	2,191.88	-12,025.83	762.79	265.25	497.54	1.533			
18,000.00	7,579.00	17,402.58	7,154.00	304.71	301.17	-56.23	2,191.97	-12,125.83	762.82	260.74	502.08	1.519			
18,100.00	7,579.00	17,502.58	7,154.00	307.35	303.83	-56.23	2,192.06	-12,225.83	762.85	256.23	506.62	1.506			
18,200.00	7,579.00	17,602.58	7,154.00	310.00	306.49	-56.23	2,192.15	-12,325.83	762.88	251.72	511.16	1.492 Level 3			
18,300.00	7,579.00	17,702.58	7,154.00	312.64	309.15	-56.24	2,192.25	-12,425.83	762.91	247.20	515.70	1.479 Level 3			
18,400.00	7,579.00	17,802.58	7,154.00	315.29	311.81	-56.24	2,192.34	-12,525.83	762.94	242.69	520.25	1.466 Level 3			
18,500.00	7,579.00	17,902.58	7,154.00	317.93	314.47	-56.24	2,192.43	-12,625.83	762.97	238.18	524.79	1.454 Level 3			
18,600.00	7,579.00	18,002.58	7,154.00	320.58	317.13	-56.24	2,192.52	-12,725.83	762.99	233.66	529.33	1.441 Level 3			
18,700.00	7,579.00	18,102.58	7,154.00	323.23	319.79	-56.24	2,192.61	-12,825.83	763.02	229.15	533.88	1.429 Level 3			
18,800.00	7,579.00	18,202.58	7,154.00	325.88	322.46	-56.24	2,192.70	-12,925.83	763.05	224.63	538.42	1.417 Level 3			
18,900.00	7,579.00	18,302.58	7,154.00	328.53	325.12	-56.25	2,192.79	-13,025.83	763.08	220.11	542.97	1.405 Level 3			
19,000.00	7,579.00	18,402.58	7,154.00	331.18	327.79	-56.25	2,192.88	-13,125.83	763.11	215.60	547.51	1.394 Level 3			
19,100.00	7,579.00	18,502.58	7,154.00	333.83	330.45	-56.25	2,192.97	-13,225.83	763.14	211.08	552.06	1.382 Level 3			
19,200.00	7,579.00	18,602.58	7,154.00	336.48	333.12	-56.25	2,193.06	-13,325.83	763.17	206.56	556.61	1.371 Level 3			
19,300.00	7,579.00	18,702.58	7,154.00	339.14	335.79	-56.25	2,193.15	-13,425.83	763.20	202.04	561.16	1.360 Level 3			
19,400.00	7,579.00	18,802.58	7,154.00	341.79	338.45	-56.25	2,193.24	-13,525.83	763.23	197.52	565.71	1.349 Level 3			
19,500.00	7,579.00	18,902.58	7,154.00	344.45	341.12	-56.25	2,193.33	-13,625.83	763.25	193.00	570.26	1.338 Level 3			
19,600.00	7,579.00	19,002.58	7,154.00	347.10	343.79	-56.26	2,193.42	-13,725.83	763.28	188.48	574.81	1.328 Level 3			
19,700.00	7,579.00	19,102.58	7,154.00	349.76	346.46	-56.26	2,193.51	-13,825.83	763.31	183.95	579.36	1.318 Level 3			
19,800.00	7,579.00	19,202.58	7,154.00	352.42	349.13	-56.26	2,193.60	-13,925.83	763.34	179.43	583.91	1.307 Level 3			
19,900.00	7,579.00	19,302.58	7,154.00	355.07	351.80	-56.26	2,193.69	-14,025.83	763.37	174.91	588.46	1.297 Level 3			
20,000.00	7,579.00	19,402.58	7,154.00	357.73	354.47	-56.26	2,193.78	-14,125.83	763.40	170.38	593.02	1.287 Level 3			
20,100.00	7,579.00	19,502.58	7,154.00	360.39	357.14	-56.26	2,193.87	-14,225.83	763.43	165.86	597.57	1.278 Level 3			
20,200.00	7,579.00	19,602.58	7,154.00	363.05	359.81	-56.26	2,193.96	-14,325.83	763.46	161.33	602.12	1.268 Level 3			
20,300.00	7,579.00	19,702.58	7,154.00	365.71	362.48	-56.27	2,194.05	-14,425.83	763.49	156.81	606.68	1.258 Level 3			
20,400.00	7,579.00	19,802.58	7,154.00	368.38	365.16	-56.27	2,194.14	-14,525.83	763.52	152.28	611.23	1.249 Level 2			
20,500.00	7,579.00	19,902.58	7,154.00	371.04	367.83	-56.27	2,194.23	-14,625.83	763.54	147.75	615.79	1.240 Level 2			
20,600.00	7,579.00	20,002.58	7,154.00	373.70	370.50	-56.27	2,194.32	-14,725.83	763.57	143.23	620.35	1.231 Level 2			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-MWD OWSG													Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
20,700.00	7,579.00	20,102.58	7,154.00	376.36	373.18	-56.27	2,194.41	-14,825.83	763.60	138.70	624.90	1.222	Level 2		
20,800.00	7,579.00	20,202.58	7,154.00	379.03	375.85	-56.27	2,194.50	-14,925.83	763.63	134.17	629.46	1.213	Level 2		
20,900.00	7,579.00	20,302.58	7,154.00	381.69	378.53	-56.27	2,194.59	-15,025.83	763.66	129.64	634.02	1.204	Level 2		
21,000.00	7,579.00	20,402.58	7,154.00	384.36	381.20	-56.28	2,194.68	-15,125.83	763.69	125.11	638.58	1.196	Level 2		
21,100.00	7,579.00	20,502.58	7,154.00	387.02	383.88	-56.28	2,194.77	-15,225.83	763.72	120.58	643.14	1.187	Level 2		
21,200.00	7,579.00	20,602.58	7,154.00	389.69	386.55	-56.28	2,194.86	-15,325.83	763.75	116.05	647.70	1.179	Level 2		
21,300.00	7,579.00	20,702.58	7,154.00	392.36	389.23	-56.28	2,194.95	-15,425.83	763.78	111.52	652.26	1.171	Level 2		
21,400.00	7,579.00	20,802.58	7,154.00	395.02	391.91	-56.28	2,195.04	-15,525.83	763.81	106.99	656.82	1.163	Level 2		
21,500.00	7,579.00	20,902.58	7,154.00	397.69	394.59	-56.28	2,195.13	-15,625.83	763.83	102.46	661.38	1.155	Level 2		
21,600.00	7,579.00	21,002.58	7,154.00	400.36	397.26	-56.28	2,195.22	-15,725.83	763.86	97.92	665.94	1.147	Level 2		
21,700.00	7,579.00	21,102.58	7,154.00	403.03	399.94	-56.29	2,195.31	-15,825.83	763.89	93.39	670.50	1.139	Level 2		
21,800.00	7,579.00	21,202.58	7,154.00	405.70	402.62	-56.29	2,195.40	-15,925.83	763.92	88.86	675.06	1.132	Level 2		
21,900.00	7,579.00	21,302.58	7,154.00	408.37	405.30	-56.29	2,195.49	-16,025.83	763.95	84.32	679.63	1.124	Level 2		
22,000.00	7,579.00	21,402.58	7,154.00	411.04	407.98	-56.29	2,195.58	-16,125.83	763.98	79.79	684.19	1.117	Level 2		
22,100.00	7,579.00	21,502.58	7,154.00	413.71	410.66	-56.29	2,195.67	-16,225.83	764.01	75.25	688.75	1.109	Level 2		
22,200.00	7,579.00	21,602.58	7,154.00	416.38	413.34	-56.29	2,195.76	-16,325.83	764.04	70.72	693.32	1.102	Level 2		
22,300.00	7,579.00	21,702.58	7,154.00	419.05	416.02	-56.29	2,195.85	-16,425.83	764.07	66.18	697.88	1.095	Level 2		
22,400.00	7,579.00	21,802.58	7,154.00	421.72	418.70	-56.30	2,195.94	-16,525.83	764.10	61.65	702.45	1.088	Level 2		
22,440.61	7,579.00	21,843.19	7,154.00	422.81	419.78	-56.30	2,195.98	-16,566.44	764.11	59.80	704.30	1.085	Level 2, ES, SF		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	1.00	-1.00	0.00	0.00	-105.03	-40.43	-150.53	155.87					
100.00	100.00	101.00	99.00	0.13	0.14	-105.03	-40.43	-150.53	155.87	155.59	0.27	572.114		
200.00	199.98	201.02	198.98	0.49	0.50	-63.21	-40.43	-150.53	155.07	154.08	0.99	156.811		
300.00	299.84	301.16	298.84	0.86	0.86	-65.00	-40.43	-150.53	152.78	151.07	1.71	89.260		
400.00	399.45	401.55	398.45	1.23	1.22	-68.08	-40.43	-150.53	149.30	146.85	2.45	61.034		
500.00	498.70	502.30	497.70	1.63	1.58	-72.60	-40.43	-150.53	145.17	141.97	3.20	45.358		
600.00	597.47	596.47	596.47	2.05	1.91	-78.67	-40.43	-150.53	141.24	137.28	3.96	35.675		
698.75	694.40	691.16	691.15	2.50	2.25	-85.53	-39.90	-151.88	139.47	134.73	4.74	29.400	CC	
700.00	695.62	692.36	692.34	2.50	2.25	-85.62	-39.88	-151.92	139.47	134.72	4.75	29.339	ES	
800.00	793.06	788.55	788.41	2.99	2.59	-92.73	-38.16	-156.31	141.41	135.82	5.58	25.322		
900.00	889.64	885.12	884.65	3.52	2.94	-99.59	-35.25	-163.73	147.13	140.68	6.45	22.797		
1,000.00	985.27	982.05	980.91	4.10	3.30	-105.83	-31.14	-174.21	156.49	149.13	7.36	21.258		
1,100.00	1,079.82	1,079.30	1,077.07	4.72	3.68	-111.24	-25.83	-187.77	169.13	160.82	8.31	20.360		
1,200.00	1,173.17	1,176.86	1,172.97	5.40	4.09	-115.75	-19.30	-204.42	184.66	175.36	9.30	19.865		
1,300.00	1,265.21	1,274.70	1,268.48	6.13	4.52	-119.41	-11.56	-224.16	202.68	192.35	10.33	19.613		
1,400.00	1,355.84	1,372.80	1,363.46	6.92	4.99	-122.30	-2.61	-246.99	222.86	211.43	11.43	19.495		
1,500.00	1,444.94	1,471.14	1,457.78	7.77	5.50	-124.53	7.54	-272.90	244.93	232.33	12.60	19.442		
1,600.00	1,532.44	1,569.71	1,551.30	8.68	6.06	-126.30	18.90	-301.88	268.63	254.78	13.84	19.408		
1,700.00	1,619.43	1,668.94	1,644.31	9.62	6.68	-127.55	31.52	-334.06	292.39	277.22	15.17	19.276		
1,800.00	1,706.42	1,768.85	1,736.69	10.56	7.35	-127.99	45.40	-369.47	315.40	298.81	16.59	19.008		
1,900.00	1,793.42	1,866.86	1,826.40	11.52	8.06	-127.97	59.80	-406.20	337.85	319.77	18.08	18.687		
2,000.00	1,880.41	1,964.31	1,915.58	12.48	8.79	-127.94	74.14	-442.79	360.27	340.68	19.59	18.393		
2,100.00	1,967.40	2,061.76	2,004.76	13.45	9.54	-127.91	88.49	-479.38	382.69	361.58	21.12	18.123		
2,200.00	2,054.39	2,159.22	2,093.94	14.42	10.29	-127.89	102.83	-515.96	405.12	382.46	22.66	17.878		
2,300.00	2,141.39	2,256.67	2,183.12	15.39	11.06	-127.87	117.17	-552.55	427.54	403.33	24.22	17.655		
2,400.00	2,228.38	2,354.12	2,272.30	16.36	11.83	-127.85	131.51	-589.14	449.97	424.18	25.78	17.452		
2,500.00	2,315.37	2,451.58	2,361.48	17.34	12.61	-127.83	145.86	-625.73	472.39	445.03	27.36	17.267		
2,600.00	2,402.37	2,549.03	2,450.65	18.32	13.40	-127.82	160.20	-662.31	494.81	465.87	28.94	17.098		
2,700.00	2,489.36	2,646.48	2,539.83	19.30	14.19	-127.80	174.54	-698.90	517.24	486.71	30.53	16.943		
2,800.00	2,576.35	2,743.94	2,629.01	20.28	14.98	-127.79	188.88	-735.49	539.66	507.54	32.12	16.801		
2,900.00	2,663.34	2,841.39	2,718.19	21.26	15.77	-127.78	203.23	-772.07	562.09	528.37	33.72	16.670		
3,000.00	2,750.34	2,938.84	2,807.37	22.24	16.57	-127.77	217.57	-808.66	584.51	549.19	35.32	16.550		
3,100.00	2,837.33	3,036.30	2,896.55	23.23	17.37	-127.76	231.91	-845.25	606.94	570.01	36.92	16.438		
3,200.00	2,924.32	3,133.75	2,985.73	24.21	18.18	-127.75	246.26	-881.83	629.36	590.83	38.53	16.335		
3,300.00	3,011.31	3,231.20	3,074.91	25.20	18.98	-127.74	260.60	-918.42	651.78	611.65	40.14	16.239		
3,400.00	3,098.31	3,328.66	3,164.08	26.18	19.79	-127.73	274.94	-955.01	674.21	632.46	41.75	16.149		
3,500.00	3,185.30	3,426.11	3,253.26	27.17	20.59	-127.72	289.28	-991.59	696.63	653.27	43.36	16.066		
3,600.00	3,272.29	3,523.56	3,342.44	28.16	21.40	-127.72	303.63	-1,028.18	719.06	674.08	44.98	15.987		
3,700.00	3,359.29	3,621.02	3,431.62	29.14	22.21	-127.71	317.97	-1,064.77	741.48	694.89	46.59	15.914		
3,800.00	3,446.28	3,718.47	3,520.80	30.13	23.02	-127.70	332.31	-1,101.36	763.91	715.70	48.21	15.845		
3,900.00	3,533.27	3,815.92	3,609.98	31.12	23.84	-127.70	346.65	-1,137.94	786.33	736.50	49.83	15.780		
4,000.00	3,620.26	3,913.38	3,699.16	32.10	24.65	-127.69	361.00	-1,174.53	808.75	757.31	51.45	15.719		
4,100.00	3,707.26	4,010.83	3,788.33	33.09	25.46	-127.69	375.34	-1,211.12	831.18	778.11	53.07	15.662		
4,200.00	3,794.25	4,108.28	3,877.51	34.08	26.27	-127.68	389.68	-1,247.70	853.60	798.91	54.69	15.607		
4,300.00	3,881.24	4,205.74	3,966.69	35.07	27.09	-127.68	404.02	-1,284.29	876.03	819.71	56.32	15.556		
4,400.00	3,968.23	4,303.19	4,055.87	36.06	27.90	-127.67	418.37	-1,320.88	898.45	840.51	57.94	15.507		
4,500.00	4,055.23	4,400.64	4,145.05	37.05	28.72	-127.67	432.71	-1,357.46	920.88	861.31	59.56	15.461		
4,600.00	4,142.22	4,501.90	4,234.23	38.04	29.57	-127.66	447.05	-1,394.05	943.30	882.08	61.22	15.409		
4,700.00	4,229.21	4,604.45	4,323.41	39.03	30.42	-127.66	461.40	-1,430.64	965.73	902.84	62.89	15.357		
4,800.00	4,316.21	4,707.00	4,412.58	40.02	31.28	-127.66	475.74	-1,467.22	988.15	923.60	64.55	15.307		
4,900.00	4,403.20	4,809.54	4,501.76	41.01	32.14	-127.65	490.08	-1,503.81	1,010.58	944.35	66.22	15.260		
5,000.00	4,490.19	4,887.91	4,590.94	42.00	32.80	-127.65	504.42	-1,540.40	1,033.00	965.31	67.69	15.260		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	4,577.18	4,985.36	4,680.12	42.99	33.62	-127.65	518.77	-1,576.98	1,055.42	986.10	69.32	15.225		
5,200.00	4,664.18	5,082.82	4,769.30	43.98	34.43	-127.64	533.11	-1,613.57	1,077.85	1,006.90	70.95	15.192		
5,300.00	4,751.17	5,180.27	4,858.48	44.97	35.25	-127.64	547.45	-1,650.16	1,100.27	1,027.70	72.58	15.160		
5,400.00	4,838.16	5,277.72	4,947.66	45.96	36.07	-127.64	561.79	-1,686.75	1,122.70	1,048.49	74.21	15.130		
5,500.00	4,925.15	5,375.18	5,036.83	46.95	36.89	-127.63	576.14	-1,723.33	1,145.12	1,069.29	75.83	15.100		
5,600.00	5,012.15	5,472.63	5,126.01	47.94	37.71	-127.63	590.48	-1,759.92	1,167.55	1,090.08	77.46	15.072		
5,700.00	5,099.14	5,570.08	5,215.19	48.93	38.53	-127.63	604.82	-1,796.51	1,189.97	1,110.88	79.09	15.045		
5,800.00	5,186.13	5,667.54	5,304.37	49.92	39.34	-127.63	619.16	-1,833.09	1,212.40	1,131.67	80.72	15.019		
5,900.00	5,273.13	5,764.99	5,393.55	50.91	40.16	-127.62	633.51	-1,869.68	1,234.82	1,152.47	82.35	14.994		
6,000.00	5,360.12	5,862.44	5,482.73	51.90	40.98	-127.62	647.85	-1,906.27	1,257.24	1,173.26	83.98	14.970		
6,100.00	5,447.11	5,959.90	5,571.91	52.89	41.80	-127.62	662.19	-1,942.85	1,279.67	1,194.05	85.61	14.947		
6,200.00	5,534.10	6,057.35	5,661.09	53.88	42.62	-127.62	676.54	-1,979.44	1,302.09	1,214.85	87.25	14.924		
6,300.00	5,621.10	6,154.80	5,750.26	54.87	43.44	-127.62	690.88	-2,016.03	1,324.52	1,235.64	88.88	14.903		
6,400.00	5,708.09	6,252.26	5,839.44	55.86	44.26	-127.61	705.22	-2,052.61	1,346.94	1,256.43	90.51	14.882		
6,500.00	5,795.08	6,349.71	5,928.62	56.85	45.08	-127.61	719.56	-2,089.20	1,369.37	1,277.23	92.14	14.862		
6,600.00	5,882.07	6,447.16	6,017.80	57.84	45.90	-127.61	733.91	-2,125.79	1,391.79	1,298.02	93.77	14.842		
6,700.00	5,969.07	6,544.62	6,106.98	58.83	46.72	-127.61	748.25	-2,162.38	1,414.22	1,318.81	95.40	14.823		
6,800.00	6,056.06	6,642.07	6,196.16	59.83	47.54	-127.61	762.59	-2,198.96	1,436.64	1,339.60	97.04	14.805		
6,900.00	6,143.05	6,739.52	6,285.34	60.82	48.36	-127.60	776.93	-2,235.55	1,459.07	1,360.40	98.67	14.788		
7,000.00	6,230.05	6,836.97	6,374.51	61.81	49.18	-127.60	791.28	-2,272.14	1,481.49	1,381.19	100.30	14.770		
7,100.00	6,317.04	6,934.43	6,463.69	62.80	50.00	-127.60	805.62	-2,308.72	1,503.91	1,401.98	101.93	14.754		
7,200.00	6,404.03	7,031.88	6,552.87	63.79	50.82	-127.60	819.96	-2,345.31	1,526.34	1,422.77	103.57	14.738		
7,300.00	6,491.02	7,129.33	6,642.05	64.78	51.64	-127.60	834.30	-2,381.90	1,548.76	1,443.56	105.20	14.722		
7,400.00	6,578.02	7,226.79	6,731.23	65.77	52.46	-127.60	848.65	-2,418.48	1,571.19	1,464.36	106.83	14.707		
7,500.00	6,665.01	7,317.67	6,814.32	66.76	53.24	-127.59	862.01	-2,452.78	1,593.66	1,485.28	108.38	14.705		
7,600.00	6,752.00	7,384.46	6,873.10	67.76	53.90	-127.58	871.47	-2,482.97	1,617.40	1,507.68	109.73	14.740		
7,700.00	6,838.99	7,450.00	6,927.03	68.75	54.67	-126.92	880.14	-2,519.13	1,643.07	1,531.78	111.28	14.765		
7,800.00	6,925.99	7,508.64	6,971.54	69.74	55.48	-126.30	887.31	-2,556.58	1,670.85	1,558.00	112.84	14.807		
7,900.00	7,012.98	7,563.89	7,009.83	70.73	56.32	-125.54	893.47	-2,595.91	1,701.00	1,586.61	114.39	14.870		
8,000.00	7,099.97	7,613.97	7,041.15	71.72	57.14	-124.73	898.52	-2,634.63	1,733.79	1,618.00	115.79	14.974		
8,100.00	7,186.97	7,658.92	7,066.33	72.71	57.93	-123.90	902.57	-2,671.63	1,769.43	1,652.48	116.95	15.129		
8,200.00	7,273.09	7,700.00	7,086.77	73.74	58.68	-114.31	905.87	-2,707.10	1,807.31	1,689.42	117.89	15.331		
8,300.00	7,352.95	7,750.00	7,108.19	74.97	59.64	-101.35	909.32	-2,752.14	1,843.04	1,723.87	119.17	15.466		
8,400.00	7,423.63	7,783.90	7,120.46	76.39	60.32	-92.43	911.30	-2,783.66	1,874.73	1,755.06	119.67	15.666		
8,500.00	7,482.96	7,827.06	7,133.40	77.96	61.19	-86.05	913.39	-2,824.78	1,901.42	1,780.80	120.62	15.764		
8,600.00	7,529.15	7,870.74	7,143.33	79.64	62.08	-81.67	915.00	-2,867.28	1,922.20	1,800.59	121.62	15.805		
8,700.00	7,560.79	7,914.78	7,150.09	81.35	62.99	-78.91	916.10	-2,910.77	1,936.45	1,813.77	122.68	15.785		
8,800.00	7,576.92	7,959.02	7,153.54	83.05	63.91	-77.58	916.66	-2,954.86	1,943.74	1,819.94	123.80	15.700		
8,900.00	7,579.00	8,029.93	7,154.00	84.68	65.37	-77.41	916.75	-3,025.76	1,944.75	1,818.38	126.37	15.390		
9,000.00	7,579.00	8,129.93	7,154.00	86.34	67.47	-77.41	916.78	-3,125.76	1,944.85	1,814.33	130.52	14.901		
9,100.00	7,579.00	8,229.93	7,154.00	88.04	69.60	-77.41	916.81	-3,225.76	1,944.94	1,810.19	134.75	14.434		
9,200.00	7,579.00	8,329.93	7,154.00	89.80	71.78	-77.41	916.83	-3,325.76	1,945.04	1,805.99	139.05	13.988		
9,300.00	7,579.00	8,429.93	7,154.00	91.59	73.99	-77.41	916.86	-3,425.76	1,945.14	1,801.71	143.42	13.562		
9,400.00	7,579.00	8,529.93	7,154.00	93.42	76.23	-77.41	916.88	-3,525.76	1,945.24	1,797.38	147.85	13.157		
9,500.00	7,579.00	8,629.93	7,154.00	95.30	78.50	-77.41	916.91	-3,625.76	1,945.33	1,793.00	152.34	12.770		
9,600.00	7,579.00	8,729.93	7,154.00	97.21	80.79	-77.41	916.94	-3,725.76	1,945.43	1,788.56	156.87	12.402		
9,700.00	7,579.00	8,829.93	7,154.00	99.15	83.11	-77.41	916.96	-3,825.76	1,945.53	1,784.08	161.45	12.050		
9,800.00	7,579.00	8,929.93	7,154.00	101.13	85.45	-77.41	916.99	-3,925.76	1,945.62	1,779.55	166.07	11.716		
9,900.00	7,579.00	9,029.92	7,154.00	103.15	87.82	-77.41	917.01	-4,025.76	1,945.72	1,774.99	170.73	11.396		
10,000.00	7,579.00	9,129.92	7,154.00	105.19	90.20	-77.41	917.04	-4,125.76	1,945.82	1,770.39	175.43	11.092		
10,100.00	7,579.00	9,229.92	7,154.00	107.26	92.60	-77.41	917.07	-4,225.76	1,945.91	1,765.76	180.15	10.801		
10,200.00	7,579.00	9,329.92	7,154.00	109.36	95.02	-77.42	917.09	-4,325.76	1,946.01	1,761.10	184.91	10.524		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 13-T1S-R66W - WARBLER 13W-27-03 - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
10,300.00	7,579.00	9,429.92	7,154.00	111.49	97.45	-77.42	917.12	-4,425.76	1,946.11	1,756.41	189.70	10.259			
10,400.00	7,579.00	9,529.92	7,154.00	113.64	99.89	-77.42	917.14	-4,525.76	1,946.20	1,751.69	194.51	10.006			
10,500.00	7,579.00	9,629.92	7,154.00	115.82	102.35	-77.42	917.17	-4,625.76	1,946.30	1,746.95	199.35	9.763			
10,600.00	7,579.00	9,729.92	7,154.00	118.01	104.82	-77.42	917.19	-4,725.76	1,946.40	1,742.19	204.20	9.532			
10,700.00	7,579.00	9,829.92	7,154.00	120.23	107.30	-77.42	917.22	-4,825.76	1,946.49	1,737.41	209.08	9.310			
10,800.00	7,579.00	9,929.92	7,154.00	122.47	109.80	-77.42	917.25	-4,925.76	1,946.59	1,732.61	213.98	9.097			
10,900.00	7,579.00	10,029.92	7,154.00	124.73	112.30	-77.42	917.27	-5,025.76	1,946.69	1,727.79	218.90	8.893			
11,000.00	7,579.00	10,129.92	7,154.00	127.01	114.81	-77.42	917.30	-5,125.76	1,946.78	1,722.95	223.83	8.697			
11,100.00	7,579.00	10,229.92	7,154.00	129.30	117.33	-77.42	917.32	-5,225.76	1,946.88	1,718.10	228.78	8.510			
11,200.00	7,579.00	10,329.92	7,154.00	131.61	119.86	-77.42	917.35	-5,325.76	1,946.98	1,713.23	233.75	8.329			
11,300.00	7,579.00	10,429.92	7,154.00	133.93	122.39	-77.42	917.38	-5,425.76	1,947.07	1,708.35	238.72	8.156			
11,400.00	7,579.00	10,529.92	7,154.00	136.27	124.94	-77.42	917.40	-5,525.76	1,947.17	1,703.46	243.71	7.990			
11,500.00	7,579.00	10,629.92	7,154.00	138.62	127.49	-77.42	917.43	-5,625.76	1,947.27	1,698.55	248.72	7.829			
11,600.00	7,579.00	10,729.92	7,154.00	140.99	130.04	-77.42	917.45	-5,725.76	1,947.36	1,693.63	253.73	7.675			
11,700.00	7,579.00	10,829.92	7,154.00	143.37	132.60	-77.42	917.48	-5,825.76	1,947.46	1,688.70	258.76	7.526			
11,800.00	7,579.00	10,929.92	7,154.00	145.76	135.17	-77.43	917.51	-5,925.76	1,947.56	1,683.76	263.79	7.383			
11,900.00	7,579.00	11,029.92	7,154.00	148.16	137.74	-77.43	917.53	-6,025.76	1,947.65	1,678.82	268.84	7.245			
12,000.00	7,579.00	11,129.92	7,154.00	150.58	140.32	-77.43	917.56	-6,125.76	1,947.75	1,673.86	273.89	7.111			
12,100.00	7,579.00	11,229.92	7,154.00	153.00	142.90	-77.43	917.58	-6,225.76	1,947.85	1,668.89	278.96	6.983			
12,200.00	7,579.00	11,329.92	7,154.00	155.43	145.49	-77.43	917.61	-6,325.76	1,947.94	1,663.92	284.03	6.858			
12,300.00	7,579.00	11,429.92	7,154.00	157.87	148.08	-77.43	917.64	-6,425.76	1,948.04	1,658.93	289.11	6.738			
12,400.00	7,579.00	11,529.92	7,154.00	160.32	150.68	-77.43	917.66	-6,525.76	1,948.14	1,653.95	294.19	6.622			
12,500.00	7,579.00	11,629.92	7,154.00	162.78	153.27	-77.43	917.69	-6,625.76	1,948.23	1,648.95	299.29	6.510			
12,600.00	7,579.00	11,729.92	7,154.00	165.25	155.88	-77.43	917.71	-6,725.76	1,948.33	1,643.95	304.39	6.401			
12,700.00	7,579.00	11,829.92	7,154.00	167.73	158.48	-77.43	917.74	-6,825.76	1,948.43	1,638.94	309.49	6.296			
12,800.00	7,579.00	11,929.92	7,154.00	170.21	161.09	-77.43	917.76	-6,925.76	1,948.53	1,633.92	314.60	6.194			
12,900.00	7,579.00	12,029.92	7,154.00	172.70	163.70	-77.43	917.79	-7,025.76	1,948.62	1,628.90	319.72	6.095			
13,000.00	7,579.00	12,129.92	7,154.00	175.19	166.32	-77.43	917.82	-7,125.76	1,948.72	1,623.87	324.85	5.999			
13,100.00	7,579.00	12,229.92	7,154.00	177.70	168.94	-77.43	917.84	-7,225.76	1,948.82	1,618.84	329.97	5.906			
13,200.00	7,579.00	12,329.92	7,154.00	180.20	171.56	-77.43	917.87	-7,325.76	1,948.91	1,613.80	335.11	5.816			
13,300.00	7,579.00	12,429.92	7,154.00	182.72	174.18	-77.44	917.89	-7,425.76	1,949.01	1,608.76	340.25	5.728			
13,400.00	7,579.00	12,529.92	7,154.00	185.24	176.81	-77.44	917.92	-7,525.76	1,949.11	1,603.72	345.39	5.643			
13,500.00	7,579.00	12,629.92	7,154.00	187.76	179.43	-77.44	917.95	-7,625.76	1,949.20	1,598.67	350.54	5.561			
13,600.00	7,579.00	12,729.92	7,154.00	190.30	182.06	-77.44	917.97	-7,725.76	1,949.30	1,593.61	355.69	5.480			
13,700.00	7,579.00	12,829.92	7,154.00	192.83	184.70	-77.44	918.00	-7,825.76	1,949.40	1,588.55	360.84	5.402			
13,800.00	7,579.00	12,929.92	7,154.00	195.37	187.33	-77.44	918.02	-7,925.76	1,949.49	1,583.49	366.00	5.326			
13,900.00	7,579.00	13,029.92	7,154.00	197.92	189.97	-77.44	918.05	-8,025.76	1,949.59	1,578.43	371.16	5.253			
14,000.00	7,579.00	13,129.92	7,154.00	200.47	192.60	-77.44	918.08	-8,125.76	1,949.69	1,573.36	376.33	5.181			
14,100.00	7,579.00	13,229.92	7,154.00	203.02	195.24	-77.44	918.10	-8,225.76	1,949.78	1,568.28	381.50	5.111			
14,200.00	7,579.00	13,329.92	7,154.00	205.58	197.89	-77.44	918.13	-8,325.76	1,949.88	1,563.21	386.67	5.043			
14,300.00	7,579.00	13,429.92	7,154.00	208.14	200.53	-77.44	918.15	-8,425.76	1,949.98	1,558.13	391.85	4.976			
14,400.00	7,579.00	13,529.92	7,154.00	210.70	203.17	-77.44	918.18	-8,525.76	1,950.07	1,553.05	397.03	4.912			
14,500.00	7,579.00	13,629.92	7,154.00	213.27	205.82	-77.44	918.21	-8,625.76	1,950.17	1,547.96	402.21	4.849			
14,600.00	7,579.00	13,729.92	7,154.00	215.84	208.47	-77.44	918.23	-8,725.76	1,950.27	1,542.87	407.39	4.787			
14,700.00	7,579.00	13,829.92	7,154.00	218.42	211.12	-77.44	918.26	-8,825.76	1,950.36	1,537.78	412.58	4.727			
14,800.00	7,579.00	13,929.92	7,154.00	221.00	213.77	-77.44	918.28	-8,925.76	1,950.46	1,532.69	417.77	4.669			
14,900.00	7,579.00	14,029.92	7,154.00	223.58	216.42	-77.45	918.31	-9,025.76	1,950.56	1,527.60	422.96	4.612			
15,000.00	7,579.00	14,129.92	7,154.00	226.17	219.07	-77.45	918.34	-9,125.76	1,950.65	1,522.50	428.15	4.556			
15,100.00	7,579.00	14,229.92	7,154.00	228.75	221.73	-77.45	918.36	-9,225.76	1,950.75	1,517.40	433.35	4.502			
15,200.00	7,579.00	14,329.92	7,154.00	231.34	224.39	-77.45	918.39	-9,325.76	1,950.85	1,512.30	438.55	4.448			
15,300.00	7,579.00	14,429.92	7,154.00	233.94	227.04	-77.45	918.41	-9,425.76	1,950.94	1,507.19	443.75	4.396			
15,400.00	7,579.00	14,529.92	7,154.00	236.53	229.70	-77.45	918.44	-9,525.76	1,951.04	1,502.09	448.95	4.346			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 13-T1S-R66W - WARBLER 13W-27-03 - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
15,500.00	7,579.00	14,629.92	7,154.00	239.13	232.36	-77.45	918.46	-9,625.75	1,951.14	1,496.98	454.16	4.296			
15,600.00	7,579.00	14,729.92	7,154.00	241.73	235.02	-77.45	918.49	-9,725.75	1,951.23	1,491.87	459.37	4.248			
15,700.00	7,579.00	14,829.92	7,154.00	244.34	237.68	-77.45	918.52	-9,825.75	1,951.33	1,486.76	464.57	4.200			
15,800.00	7,579.00	14,929.92	7,154.00	246.94	240.34	-77.45	918.54	-9,925.75	1,951.43	1,481.64	469.78	4.154			
15,900.00	7,579.00	15,029.92	7,154.00	249.55	243.00	-77.45	918.57	-10,025.75	1,951.53	1,476.53	475.00	4.109			
16,000.00	7,579.00	15,129.92	7,154.00	252.16	245.67	-77.45	918.59	-10,125.75	1,951.62	1,471.41	480.21	4.064			
16,100.00	7,579.00	15,229.92	7,154.00	254.77	248.33	-77.45	918.62	-10,225.75	1,951.72	1,466.29	485.43	4.021			
16,200.00	7,579.00	15,329.92	7,154.00	257.38	251.00	-77.45	918.65	-10,325.75	1,951.82	1,461.17	490.64	3.978			
16,300.00	7,579.00	15,429.92	7,154.00	260.00	253.67	-77.45	918.67	-10,425.75	1,951.91	1,456.05	495.86	3.936			
16,400.00	7,579.00	15,529.92	7,154.00	262.62	256.33	-77.45	918.70	-10,525.75	1,952.01	1,450.93	501.08	3.896			
16,500.00	7,579.00	15,629.92	7,154.00	265.24	259.00	-77.46	918.72	-10,625.75	1,952.11	1,445.80	506.30	3.856			
16,600.00	7,579.00	15,729.92	7,154.00	267.86	261.67	-77.46	918.75	-10,725.75	1,952.20	1,440.68	511.53	3.816			
16,700.00	7,579.00	15,829.92	7,154.00	270.48	264.34	-77.46	918.78	-10,825.75	1,952.30	1,435.55	516.75	3.778			
16,800.00	7,579.00	15,929.92	7,154.00	273.10	267.01	-77.46	918.80	-10,925.75	1,952.40	1,430.42	521.98	3.740			
16,900.00	7,579.00	16,029.92	7,154.00	275.73	269.68	-77.46	918.83	-11,025.75	1,952.49	1,425.29	527.20	3.704			
17,000.00	7,579.00	16,129.92	7,154.00	278.36	272.35	-77.46	918.85	-11,125.75	1,952.59	1,420.16	532.43	3.667			
17,100.00	7,579.00	16,229.92	7,154.00	280.99	275.02	-77.46	918.88	-11,225.75	1,952.69	1,415.03	537.66	3.632			
17,200.00	7,579.00	16,329.92	7,154.00	283.62	277.70	-77.46	918.91	-11,325.75	1,952.78	1,409.89	542.89	3.597			
17,300.00	7,579.00	16,429.92	7,154.00	286.25	280.37	-77.46	918.93	-11,425.75	1,952.88	1,404.76	548.12	3.563			
17,400.00	7,579.00	16,529.92	7,154.00	288.88	283.04	-77.46	918.96	-11,525.75	1,952.98	1,399.62	553.35	3.529			
17,500.00	7,579.00	16,629.92	7,154.00	291.52	285.72	-77.46	918.98	-11,625.75	1,953.07	1,394.49	558.59	3.496			
17,600.00	7,579.00	16,729.92	7,154.00	294.15	288.39	-77.46	919.01	-11,725.75	1,953.17	1,389.35	563.82	3.464			
17,700.00	7,579.00	16,829.92	7,154.00	296.79	291.07	-77.46	919.03	-11,825.75	1,953.27	1,384.21	569.06	3.432			
17,800.00	7,579.00	16,929.92	7,154.00	299.43	293.74	-77.46	919.06	-11,925.75	1,953.36	1,379.07	574.29	3.401			
17,900.00	7,579.00	17,029.92	7,154.00	302.07	296.42	-77.46	919.09	-12,025.75	1,953.46	1,373.93	579.53	3.371			
18,000.00	7,579.00	17,129.92	7,154.00	304.71	299.10	-77.46	919.11	-12,125.75	1,953.56	1,368.79	584.77	3.341			
18,100.00	7,579.00	17,229.92	7,154.00	307.35	301.77	-77.47	919.14	-12,225.75	1,953.65	1,363.64	590.01	3.311			
18,200.00	7,579.00	17,329.92	7,154.00	310.00	304.45	-77.47	919.16	-12,325.75	1,953.75	1,358.50	595.25	3.282			
18,300.00	7,579.00	17,429.92	7,154.00	312.64	307.13	-77.47	919.19	-12,425.75	1,953.85	1,353.36	600.49	3.254			
18,400.00	7,579.00	17,529.92	7,154.00	315.29	309.81	-77.47	919.22	-12,525.75	1,953.94	1,348.21	605.73	3.226			
18,500.00	7,579.00	17,629.92	7,154.00	317.93	312.49	-77.47	919.24	-12,625.75	1,954.04	1,343.06	610.98	3.198			
18,600.00	7,579.00	17,729.92	7,154.00	320.58	315.17	-77.47	919.27	-12,725.75	1,954.14	1,337.92	616.22	3.171			
18,700.00	7,579.00	17,829.92	7,154.00	323.23	317.85	-77.47	919.29	-12,825.75	1,954.23	1,332.77	621.46	3.145			
18,800.00	7,579.00	17,929.92	7,154.00	325.88	320.53	-77.47	919.32	-12,925.75	1,954.33	1,327.62	626.71	3.118			
18,900.00	7,579.00	18,029.92	7,154.00	328.53	323.21	-77.47	919.35	-13,025.75	1,954.43	1,322.47	631.96	3.093			
19,000.00	7,579.00	18,129.92	7,154.00	331.18	325.89	-77.47	919.37	-13,125.75	1,954.53	1,317.32	637.20	3.067			
19,100.00	7,579.00	18,229.92	7,154.00	333.83	328.57	-77.47	919.40	-13,225.75	1,954.62	1,312.17	642.45	3.042			
19,200.00	7,579.00	18,329.92	7,154.00	336.48	331.25	-77.47	919.42	-13,325.75	1,954.72	1,307.02	647.70	3.018			
19,300.00	7,579.00	18,429.92	7,154.00	339.14	333.94	-77.47	919.45	-13,425.75	1,954.82	1,301.87	652.95	2.994			
19,400.00	7,579.00	18,529.92	7,154.00	341.79	336.62	-77.47	919.48	-13,525.75	1,954.91	1,296.72	658.20	2.970			
19,500.00	7,579.00	18,629.92	7,154.00	344.45	339.30	-77.47	919.50	-13,625.75	1,955.01	1,291.56	663.45	2.947			
19,600.00	7,579.00	18,729.92	7,154.00	347.10	341.98	-77.47	919.53	-13,725.75	1,955.11	1,286.41	668.70	2.924			
19,700.00	7,579.00	18,829.92	7,154.00	349.76	344.67	-77.48	919.55	-13,825.75	1,955.20	1,281.25	673.95	2.901			
19,800.00	7,579.00	18,929.92	7,154.00	352.42	347.35	-77.48	919.58	-13,925.75	1,955.30	1,276.10	679.20	2.879			
19,900.00	7,579.00	19,029.92	7,154.00	355.07	350.04	-77.48	919.61	-14,025.75	1,955.40	1,270.94	684.45	2.857			
20,000.00	7,579.00	19,129.92	7,154.00	357.73	352.72	-77.48	919.63	-14,125.75	1,955.49	1,265.79	689.71	2.835			
20,100.00	7,579.00	19,229.92	7,154.00	360.39	355.41	-77.48	919.66	-14,225.75	1,955.59	1,260.63	694.96	2.814			
20,200.00	7,579.00	19,329.92	7,154.00	363.05	358.09	-77.48	919.68	-14,325.75	1,955.69	1,255.47	700.21	2.793			
20,300.00	7,579.00	19,429.92	7,154.00	365.71	360.78	-77.48	919.71	-14,425.75	1,955.78	1,250.31	705.47	2.772			
20,400.00	7,579.00	19,529.92	7,154.00	368.38	363.46	-77.48	919.73	-14,525.75	1,955.88	1,245.16	710.72	2.752			
20,500.00	7,579.00	19,629.92	7,154.00	371.04	366.15	-77.48	919.76	-14,625.75	1,955.98	1,240.00	715.98	2.732			
20,600.00	7,579.00	19,729.92	7,154.00	373.70	368.83	-77.48	919.79	-14,725.75	1,956.07	1,234.84	721.24	2.712			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
20,700.00	7,579.00	19,829.92	7,154.00	376.36	371.52	-77.48	919.81	-14,825.75	1,956.17	1,229.68	726.49	2.693		
20,800.00	7,579.00	19,929.92	7,154.00	379.03	374.21	-77.48	919.84	-14,925.75	1,956.27	1,224.52	731.75	2.673		
20,900.00	7,579.00	20,029.92	7,154.00	381.69	376.89	-77.48	919.86	-15,025.75	1,956.36	1,219.36	737.01	2.654		
21,000.00	7,579.00	20,129.92	7,154.00	384.36	379.58	-77.48	919.89	-15,125.75	1,956.46	1,214.19	742.27	2.636		
21,100.00	7,579.00	20,229.92	7,154.00	387.02	382.27	-77.48	919.92	-15,225.75	1,956.56	1,209.03	747.52	2.617		
21,200.00	7,579.00	20,329.92	7,154.00	389.69	384.96	-77.48	919.94	-15,325.75	1,956.65	1,203.87	752.78	2.599		
21,300.00	7,579.00	20,429.92	7,154.00	392.36	387.64	-77.49	919.97	-15,425.75	1,956.75	1,198.71	758.04	2.581		
21,400.00	7,579.00	20,529.92	7,154.00	395.02	390.33	-77.49	919.99	-15,525.75	1,956.85	1,193.54	763.30	2.564		
21,500.00	7,579.00	20,629.92	7,154.00	397.69	393.02	-77.49	920.02	-15,625.75	1,956.94	1,188.38	768.56	2.546		
21,600.00	7,579.00	20,729.92	7,154.00	400.36	395.71	-77.49	920.05	-15,725.75	1,957.04	1,183.22	773.82	2.529		
21,700.00	7,579.00	20,829.92	7,154.00	403.03	398.40	-77.49	920.07	-15,825.75	1,957.14	1,178.05	779.09	2.512		
21,800.00	7,579.00	20,929.92	7,154.00	405.70	401.09	-77.49	920.10	-15,925.75	1,957.24	1,172.89	784.35	2.495		
21,900.00	7,579.00	21,029.92	7,154.00	408.37	403.77	-77.49	920.12	-16,025.75	1,957.33	1,167.72	789.61	2.479		
22,000.00	7,579.00	21,129.92	7,154.00	411.04	406.46	-77.49	920.15	-16,125.75	1,957.43	1,162.56	794.87	2.463		
22,100.00	7,579.00	21,229.92	7,154.00	413.71	409.15	-77.49	920.18	-16,225.75	1,957.53	1,157.39	800.14	2.446		
22,200.00	7,579.00	21,329.92	7,154.00	416.38	411.84	-77.49	920.20	-16,325.75	1,957.62	1,152.22	805.40	2.431		
22,300.00	7,579.00	21,429.92	7,154.00	419.05	414.53	-77.49	920.23	-16,425.75	1,957.72	1,147.06	810.66	2.415		
22,400.00	7,579.00	21,529.92	7,154.00	421.72	417.22	-77.49	920.25	-16,525.75	1,957.82	1,141.89	815.93	2.400		
22,440.61	7,579.00	21,570.53	7,154.00	422.81	418.31	-77.49	920.26	-16,566.36	1,957.86	1,139.79	818.06	2.393 SF		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	1.00	-1.00	0.00	0.00	-114.42	-68.48	-150.81	165.63					
100.00	100.00	101.00	99.00	0.13	0.14	-114.42	-68.48	-150.81	165.63	165.36	0.27	607.955		
200.00	199.98	201.02	198.98	0.49	0.50	-72.59	-68.48	-150.81	165.10	164.11	0.99	166.987		
300.00	299.84	301.16	298.84	0.86	0.86	-74.37	-68.48	-150.81	163.61	161.90	1.71	95.607		
400.00	399.45	401.55	398.45	1.23	1.22	-77.38	-68.48	-150.81	161.47	159.03	2.45	65.988		
500.00	498.70	502.30	497.70	1.63	1.58	-81.67	-68.48	-150.81	159.24	156.04	3.20	49.705		
600.00	597.47	596.47	596.47	2.05	1.91	-87.27	-68.48	-150.81	157.72	153.75	3.96	39.788		
620.73	617.87	616.14	616.14	2.14	1.98	-88.52	-68.48	-150.86	157.62	153.49	4.13	38.195	CC, ES	
700.00	695.62	690.75	690.74	2.50	2.24	-93.45	-68.64	-152.24	159.10	154.35	4.75	33.510		
800.00	793.06	784.82	784.69	2.99	2.57	-99.70	-69.17	-156.73	165.36	159.81	5.56	29.761		
900.00	889.64	878.69	878.25	3.52	2.91	-105.59	-70.05	-164.26	176.65	170.25	6.39	27.628		
1,000.00	985.27	972.24	971.19	4.10	3.25	-110.79	-71.29	-174.80	192.79	185.53	7.26	26.561		
1,100.00	1,079.82	1,065.35	1,063.31	4.72	3.61	-115.14	-72.87	-188.27	213.44	205.29	8.15	26.179		
1,200.00	1,173.17	1,157.91	1,154.39	5.40	3.99	-118.63	-74.79	-204.60	238.22	229.14	9.08	26.225		
1,300.00	1,265.21	1,249.80	1,244.24	6.13	4.39	-121.35	-77.03	-223.69	266.74	256.68	10.06	26.521		
1,400.00	1,355.84	1,340.91	1,332.68	6.92	4.82	-123.40	-79.58	-245.44	298.67	287.59	11.08	26.955		
1,500.00	1,444.94	1,431.15	1,419.54	7.77	5.28	-124.90	-82.43	-269.72	333.76	321.60	12.16	27.448		
1,600.00	1,532.44	1,520.46	1,504.70	8.68	5.77	-126.10	-85.56	-296.42	371.75	358.45	13.30	27.952		
1,700.00	1,619.43	1,609.43	1,588.67	9.62	6.29	-127.21	-88.99	-325.62	411.16	396.67	14.49	28.374		
1,800.00	1,706.42	1,698.22	1,671.52	10.56	6.86	-127.76	-92.71	-357.33	451.26	435.51	15.74	28.665		
1,900.00	1,793.42	1,789.04	1,755.55	11.52	7.49	-127.99	-96.72	-391.56	491.76	474.69	17.07	28.801		
2,000.00	1,880.41	1,880.45	1,840.10	12.48	8.13	-128.18	-100.77	-426.06	532.28	513.85	18.44	28.868		
2,100.00	1,967.40	1,971.86	1,924.65	13.45	8.79	-128.34	-104.82	-460.56	572.81	552.99	19.82	28.901		
2,200.00	2,054.39	2,063.27	2,009.20	14.42	9.46	-128.48	-108.87	-495.06	613.34	592.13	21.22	28.911		
2,300.00	2,141.39	2,154.67	2,093.75	15.39	10.14	-128.60	-112.92	-529.56	653.87	631.25	22.62	28.905		
2,400.00	2,228.38	2,246.08	2,178.30	16.36	10.82	-128.71	-116.96	-564.06	694.41	670.37	24.04	28.889		
2,500.00	2,315.37	2,337.49	2,262.85	17.34	11.51	-128.81	-121.01	-598.56	734.95	709.49	25.46	28.866		
2,600.00	2,402.37	2,428.90	2,347.40	18.32	12.21	-128.89	-125.06	-633.06	775.49	748.59	26.89	28.838		
2,700.00	2,489.36	2,520.31	2,431.95	19.30	12.91	-128.97	-129.11	-667.56	816.03	787.70	28.33	28.808		
2,800.00	2,576.35	2,611.72	2,516.50	20.28	13.61	-129.04	-133.16	-702.06	856.57	826.80	29.77	28.776		
2,900.00	2,663.34	2,703.13	2,601.06	21.26	14.31	-129.11	-137.20	-736.56	897.11	865.90	31.21	28.744		
3,000.00	2,750.34	2,805.47	2,685.61	22.24	15.11	-129.17	-141.25	-771.06	937.65	904.91	32.74	28.638		
3,100.00	2,837.33	2,885.94	2,770.16	23.23	15.73	-129.22	-145.30	-805.56	978.20	944.09	34.11	28.678		
3,200.00	2,924.32	2,977.35	2,854.71	24.21	16.44	-129.27	-149.35	-840.07	1,018.74	983.18	35.56	28.647		
3,300.00	3,011.31	3,068.76	2,939.26	25.20	17.16	-129.32	-153.40	-874.57	1,059.29	1,022.27	37.02	28.615		
3,400.00	3,098.31	3,160.17	3,023.81	26.18	17.87	-129.36	-157.44	-909.07	1,099.83	1,061.36	38.48	28.585		
3,500.00	3,185.30	3,251.58	3,108.36	27.17	18.59	-129.40	-161.49	-943.57	1,140.38	1,100.44	39.94	28.556		
3,600.00	3,272.29	3,342.99	3,192.91	28.16	19.31	-129.43	-165.54	-978.07	1,180.92	1,139.53	41.40	28.527		
3,700.00	3,359.29	3,434.39	3,277.46	29.14	20.02	-129.47	-169.59	-1,012.57	1,221.47	1,178.61	42.86	28.500		
3,800.00	3,446.28	3,525.80	3,362.01	30.13	20.74	-129.50	-173.64	-1,047.07	1,262.02	1,217.69	44.32	28.473		
3,900.00	3,533.27	3,617.21	3,446.56	31.12	21.46	-129.53	-177.68	-1,081.57	1,302.56	1,256.78	45.79	28.448		
4,000.00	3,620.26	3,708.62	3,531.11	32.10	22.18	-129.56	-181.73	-1,116.07	1,343.11	1,295.86	47.25	28.423		
4,100.00	3,707.26	3,800.03	3,615.67	33.09	22.91	-129.58	-185.78	-1,150.57	1,383.66	1,334.94	48.72	28.400		
4,200.00	3,794.25	3,908.56	3,700.22	34.08	23.76	-129.61	-189.83	-1,185.07	1,424.21	1,373.89	50.32	28.301		
4,300.00	3,881.24	3,982.85	3,784.77	35.07	24.35	-129.63	-193.88	-1,219.57	1,464.76	1,413.10	51.66	28.355		
4,400.00	3,968.23	4,074.25	3,869.32	36.06	25.07	-129.66	-197.92	-1,254.07	1,505.31	1,452.18	53.13	28.334		
4,500.00	4,055.23	4,165.66	3,953.87	37.05	25.80	-129.68	-201.97	-1,288.57	1,545.85	1,491.26	54.60	28.313		
4,600.00	4,142.22	4,257.07	4,038.42	38.04	26.52	-129.70	-206.02	-1,323.07	1,586.40	1,530.33	56.07	28.293		
4,700.00	4,229.21	4,348.48	4,122.97	39.03	27.24	-129.72	-210.07	-1,357.58	1,626.95	1,569.41	57.54	28.275		
4,800.00	4,316.21	4,439.89	4,207.52	40.02	27.97	-129.73	-214.12	-1,392.08	1,667.50	1,608.49	59.01	28.256		
4,900.00	4,403.20	4,531.30	4,292.07	41.01	28.69	-129.75	-218.16	-1,426.58	1,708.05	1,647.57	60.49	28.239		
5,000.00	4,490.19	4,622.71	4,376.62	42.00	29.42	-129.77	-222.21	-1,461.08	1,748.60	1,686.64	61.96	28.222		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 13-T1S-R66W - WARBLER 13W-27-04 - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,100.00	4,577.18	4,714.11	4,461.17	42.99	30.14	-129.78	-226.26	-1,495.58	1,789.15	1,725.72	63.43	28.205			
5,200.00	4,664.18	4,805.52	4,545.72	43.98	30.87	-129.80	-230.31	-1,530.08	1,829.70	1,764.79	64.91	28.189			
5,300.00	4,751.17	4,903.07	4,630.28	44.97	31.65	-129.81	-234.36	-1,564.58	1,870.25	1,803.82	66.43	28.153			
5,400.00	4,838.16	4,988.34	4,714.83	45.96	32.32	-129.83	-238.40	-1,599.08	1,910.80	1,842.94	67.86	28.159			
5,500.00	4,925.15	5,079.75	4,799.38	46.95	33.05	-129.84	-242.45	-1,633.58	1,951.35	1,882.02	69.33	28.145			
5,600.00	5,012.15	5,171.16	4,883.93	47.94	33.78	-129.85	-246.50	-1,668.08	1,991.90	1,921.09	70.81	28.131			
5,700.00	5,099.14	5,262.57	4,968.48	48.93	34.50	-129.86	-250.55	-1,702.58	2,032.45	1,960.17	72.29	28.117			
5,800.00	5,186.13	5,353.97	5,053.03	49.92	35.23	-129.88	-254.60	-1,737.08	2,073.00	1,999.24	73.76	28.104			
5,900.00	5,273.13	5,445.38	5,137.58	50.91	35.96	-129.89	-258.64	-1,771.58	2,113.55	2,038.31	75.24	28.091			
6,000.00	5,360.12	5,536.79	5,222.13	51.90	36.68	-129.90	-262.69	-1,806.08	2,154.10	2,077.39	76.72	28.079			
6,100.00	5,447.11	5,628.20	5,306.68	52.89	37.41	-129.91	-266.74	-1,840.58	2,194.65	2,116.46	78.19	28.067			
6,200.00	5,534.10	5,719.61	5,391.23	53.88	38.14	-129.92	-270.79	-1,875.09	2,235.20	2,155.53	79.67	28.055			
6,300.00	5,621.10	5,811.02	5,475.78	54.87	38.87	-129.93	-274.84	-1,909.59	2,275.75	2,194.60	81.15	28.044			
6,400.00	5,708.09	5,902.43	5,560.33	55.86	39.59	-129.94	-278.88	-1,944.09	2,316.30	2,233.68	82.63	28.033			
6,500.00	5,795.08	6,006.17	5,644.89	56.85	40.42	-129.95	-282.93	-1,978.59	2,356.85	2,272.65	84.20	27.990			
6,600.00	5,882.07	6,085.24	5,729.44	57.84	41.05	-129.96	-286.98	-2,013.09	2,397.41	2,311.82	85.58	28.012			
6,700.00	5,969.07	6,176.65	5,813.99	58.83	41.78	-129.96	-291.03	-2,047.59	2,437.96	2,350.89	87.06	28.002			
6,800.00	6,056.06	6,268.06	5,898.54	59.83	42.51	-129.97	-295.08	-2,082.09	2,478.51	2,389.96	88.54	27.992			
6,900.00	6,143.05	6,359.47	5,983.09	60.82	43.24	-129.98	-299.12	-2,116.59	2,519.06	2,429.04	90.02	27.983			
7,000.00	6,230.05	6,450.88	6,067.64	61.81	43.96	-129.99	-303.17	-2,151.09	2,559.61	2,468.11	91.50	27.973			
7,100.00	6,317.04	6,542.29	6,152.19	62.80	44.69	-130.00	-307.22	-2,185.59	2,600.16	2,507.18	92.98	27.964			
7,200.00	6,404.03	6,633.69	6,236.74	63.79	45.42	-130.00	-311.27	-2,220.09	2,640.71	2,546.25	94.46	27.955			
7,300.00	6,491.02	6,725.10	6,321.29	64.78	46.15	-130.01	-315.32	-2,254.59	2,681.26	2,585.32	95.94	27.947			
7,400.00	6,578.02	6,816.51	6,405.84	65.77	46.88	-130.02	-319.36	-2,289.09	2,721.81	2,624.39	97.42	27.938			
7,500.00	6,665.01	6,907.92	6,490.39	66.76	47.61	-130.02	-323.41	-2,323.59	2,762.36	2,663.46	98.90	27.930			
7,600.00	6,752.00	7,000.67	6,574.94	67.76	48.35	-130.03	-327.46	-2,358.10	2,802.92	2,702.52	100.39	27.919			
7,700.00	6,838.99	7,090.74	6,659.50	68.75	49.07	-130.04	-331.51	-2,392.60	2,843.47	2,741.60	101.86	27.914			
7,800.00	6,925.99	7,182.15	6,744.05	69.74	49.79	-130.04	-335.56	-2,427.10	2,884.02	2,780.67	103.35	27.907			
7,900.00	7,012.98	7,267.87	6,823.08	70.73	50.50	-130.03	-339.34	-2,460.07	2,924.60	2,819.84	104.76	27.916			
8,000.00	7,099.97	7,342.50	6,888.43	71.72	51.24	-129.86	-342.47	-2,495.85	2,965.59	2,859.40	106.19	27.927			
8,100.00	7,186.97	7,413.52	6,945.81	72.71	52.11	-129.51	-345.23	-2,537.53	3,007.16	2,899.40	107.77	27.904			
8,200.00	7,273.09	7,480.09	6,994.54	73.74	53.06	-119.97	-347.57	-2,582.77	3,048.96	2,939.53	109.44	27.860			
8,300.00	7,352.95	7,546.04	7,037.33	74.97	54.11	-106.94	-349.63	-2,632.86	3,087.87	2,976.51	111.37	27.727			
8,400.00	7,423.63	7,612.21	7,074.20	76.39	55.28	-97.73	-351.41	-2,687.74	3,122.33	3,008.72	113.61	27.484			
8,500.00	7,482.96	7,678.77	7,104.67	77.96	56.55	-91.22	-352.89	-2,746.85	3,151.25	3,035.13	116.12	27.138			
8,600.00	7,529.15	7,750.00	7,129.46	79.64	57.98	-86.73	-354.10	-2,813.57	3,173.78	3,054.77	119.01	26.669			
8,700.00	7,560.79	7,813.12	7,144.36	81.35	59.29	-83.92	-354.84	-2,874.87	3,189.23	3,067.44	121.79	26.186			
8,800.00	7,576.92	7,880.76	7,152.77	83.05	60.72	-82.56	-355.26	-2,941.94	3,197.16	3,072.34	124.82	25.614			
8,900.00	7,579.00	7,962.84	7,154.00	84.68	62.47	-82.38	-355.35	-3,024.00	3,198.31	3,069.94	128.37	24.916			
9,000.00	7,579.00	8,062.84	7,154.00	86.34	64.62	-82.38	-355.39	-3,124.00	3,198.47	3,065.89	132.58	24.125			
9,100.00	7,579.00	8,162.84	7,154.00	88.04	66.82	-82.38	-355.43	-3,224.00	3,198.63	3,061.76	136.87	23.369			
9,200.00	7,579.00	8,262.84	7,154.00	89.80	69.05	-82.38	-355.47	-3,324.00	3,198.80	3,057.56	141.24	22.648			
9,300.00	7,579.00	8,362.84	7,154.00	91.59	71.31	-82.38	-355.51	-3,424.00	3,198.96	3,053.29	145.67	21.960			
9,400.00	7,579.00	8,462.84	7,154.00	93.42	73.61	-82.38	-355.55	-3,524.00	3,199.12	3,048.96	150.17	21.304			
9,500.00	7,579.00	8,562.84	7,154.00	95.30	75.93	-82.38	-355.59	-3,624.00	3,199.29	3,044.57	154.71	20.679			
9,600.00	7,579.00	8,662.84	7,154.00	97.21	78.27	-82.38	-355.63	-3,724.00	3,199.45	3,040.14	159.31	20.083			
9,700.00	7,579.00	8,762.84	7,154.00	99.15	80.64	-82.38	-355.67	-3,824.00	3,199.61	3,035.65	163.96	19.515			
9,800.00	7,579.00	8,862.84	7,154.00	101.13	83.03	-82.39	-355.71	-3,924.00	3,199.78	3,031.13	168.65	18.973			
9,900.00	7,579.00	8,962.84	7,154.00	103.15	85.44	-82.39	-355.75	-4,024.00	3,199.94	3,026.57	173.37	18.457			
10,000.00	7,579.00	9,062.84	7,154.00	105.19	87.86	-82.39	-355.79	-4,124.00	3,200.10	3,021.97	178.14	17.964			
10,100.00	7,579.00	9,162.84	7,154.00	107.26	90.30	-82.39	-355.83	-4,224.00	3,200.27	3,017.33	182.93	17.494			
10,200.00	7,579.00	9,262.84	7,154.00	109.36	92.76	-82.39	-355.87	-4,324.00	3,200.43	3,012.67	187.76	17.045			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference				Offset		Semi Major Axis			Distance				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,300.00	7,579.00	9,362.84	7,154.00	111.49	95.23	-82.39	-355.91	-4,424.00	3,200.59	3,007.98	192.61	16.617		
10,400.00	7,579.00	9,462.84	7,154.00	113.64	97.71	-82.39	-355.95	-4,524.00	3,200.76	3,003.26	197.50	16.207		
10,500.00	7,579.00	9,562.84	7,154.00	115.82	100.20	-82.39	-355.99	-4,624.00	3,200.92	2,998.52	202.40	15.815		
10,600.00	7,579.00	9,662.84	7,154.00	118.01	102.70	-82.39	-356.03	-4,724.00	3,201.08	2,993.76	207.33	15.440		
10,700.00	7,579.00	9,762.84	7,154.00	120.23	105.22	-82.39	-356.07	-4,824.00	3,201.25	2,988.97	212.28	15.080		
10,800.00	7,579.00	9,862.84	7,154.00	122.47	107.74	-82.39	-356.11	-4,924.00	3,201.41	2,984.17	217.25	14.736		
10,900.00	7,579.00	9,962.84	7,154.00	124.73	110.27	-82.39	-356.15	-5,024.00	3,201.57	2,979.34	222.23	14.406		
11,000.00	7,579.00	10,062.84	7,154.00	127.01	112.81	-82.39	-356.19	-5,124.00	3,201.74	2,974.50	227.24	14.090		
11,100.00	7,579.00	10,162.84	7,154.00	129.30	115.36	-82.39	-356.23	-5,224.00	3,201.90	2,969.64	232.26	13.786		
11,200.00	7,579.00	10,262.84	7,154.00	131.61	117.91	-82.39	-356.27	-5,324.00	3,202.07	2,964.77	237.29	13.494		
11,300.00	7,579.00	10,362.84	7,154.00	133.93	120.47	-82.39	-356.31	-5,424.00	3,202.23	2,959.89	242.34	13.214		
11,400.00	7,579.00	10,462.84	7,154.00	136.27	123.04	-82.39	-356.35	-5,524.00	3,202.39	2,954.99	247.40	12.944		
11,500.00	7,579.00	10,562.84	7,154.00	138.62	125.61	-82.39	-356.39	-5,624.00	3,202.56	2,950.08	252.48	12.685		
11,600.00	7,579.00	10,662.84	7,154.00	140.99	128.19	-82.39	-356.43	-5,724.00	3,202.72	2,945.16	257.56	12.435		
11,700.00	7,579.00	10,762.84	7,154.00	143.37	130.77	-82.39	-356.47	-5,824.00	3,202.88	2,940.22	262.66	12.194		
11,800.00	7,579.00	10,862.84	7,154.00	145.76	133.36	-82.39	-356.51	-5,924.00	3,203.05	2,935.28	267.77	11.962		
11,900.00	7,579.00	10,962.84	7,154.00	148.16	135.95	-82.39	-356.55	-6,024.00	3,203.21	2,930.32	272.88	11.738		
12,000.00	7,579.00	11,062.84	7,154.00	150.58	138.55	-82.39	-356.59	-6,124.00	3,203.37	2,925.36	278.01	11.522		
12,100.00	7,579.00	11,162.84	7,154.00	153.00	141.15	-82.39	-356.63	-6,224.00	3,203.54	2,920.39	283.15	11.314		
12,200.00	7,579.00	11,262.84	7,154.00	155.43	143.75	-82.39	-356.67	-6,324.00	3,203.70	2,915.41	288.29	11.113		
12,300.00	7,579.00	11,362.84	7,154.00	157.87	146.36	-82.40	-356.71	-6,424.00	3,203.86	2,910.42	293.44	10.918		
12,400.00	7,579.00	11,462.84	7,154.00	160.32	148.97	-82.40	-356.75	-6,524.00	3,204.03	2,905.43	298.60	10.730		
12,500.00	7,579.00	11,562.84	7,154.00	162.78	151.58	-82.40	-356.79	-6,624.00	3,204.19	2,900.42	303.77	10.548		
12,600.00	7,579.00	11,662.84	7,154.00	165.25	154.20	-82.40	-356.83	-6,724.00	3,204.35	2,895.42	308.94	10.372		
12,700.00	7,579.00	11,762.84	7,154.00	167.73	156.82	-82.40	-356.87	-6,824.00	3,204.52	2,890.40	314.12	10.202		
12,800.00	7,579.00	11,862.84	7,154.00	170.21	159.44	-82.40	-356.91	-6,924.00	3,204.68	2,885.38	319.30	10.037		
12,900.00	7,579.00	11,962.84	7,154.00	172.70	162.07	-82.40	-356.95	-7,024.00	3,204.84	2,880.35	324.49	9.876		
13,000.00	7,579.00	12,062.84	7,154.00	175.19	164.70	-82.40	-356.99	-7,124.00	3,205.01	2,875.32	329.69	9.721		
13,100.00	7,579.00	12,162.84	7,154.00	177.70	167.33	-82.40	-357.03	-7,224.00	3,205.17	2,870.28	334.89	9.571		
13,200.00	7,579.00	12,262.84	7,154.00	180.20	169.96	-82.40	-357.07	-7,324.00	3,205.33	2,865.24	340.10	9.425		
13,300.00	7,579.00	12,362.84	7,154.00	182.72	172.60	-82.40	-357.11	-7,424.00	3,205.50	2,860.19	345.31	9.283		
13,400.00	7,579.00	12,462.84	7,154.00	185.24	175.23	-82.40	-357.15	-7,524.00	3,205.66	2,855.14	350.52	9.145		
13,500.00	7,579.00	12,562.84	7,154.00	187.76	177.87	-82.40	-357.19	-7,624.00	3,205.82	2,850.08	355.74	9.012		
13,600.00	7,579.00	12,662.84	7,154.00	190.30	180.51	-82.40	-357.23	-7,724.00	3,205.99	2,845.02	360.97	8.882		
13,700.00	7,579.00	12,762.84	7,154.00	192.83	183.16	-82.40	-357.27	-7,824.00	3,206.15	2,839.96	366.20	8.755		
13,800.00	7,579.00	12,862.84	7,154.00	195.37	185.80	-82.40	-357.31	-7,924.00	3,206.31	2,834.89	371.43	8.632		
13,900.00	7,579.00	12,962.84	7,154.00	197.92	188.45	-82.40	-357.35	-8,024.00	3,206.48	2,829.81	376.66	8.513		
14,000.00	7,579.00	13,062.84	7,154.00	200.47	191.10	-82.40	-357.39	-8,124.00	3,206.64	2,824.74	381.90	8.396		
14,100.00	7,579.00	13,162.84	7,154.00	203.02	193.75	-82.40	-357.43	-8,224.00	3,206.80	2,819.66	387.15	8.283		
14,200.00	7,579.00	13,262.84	7,154.00	205.58	196.40	-82.40	-357.47	-8,324.00	3,206.97	2,814.58	392.39	8.173		
14,300.00	7,579.00	13,362.84	7,154.00	208.14	199.05	-82.40	-357.50	-8,424.00	3,207.13	2,809.49	397.64	8.065		
14,400.00	7,579.00	13,462.84	7,154.00	210.70	201.70	-82.40	-357.54	-8,524.00	3,207.29	2,804.40	402.89	7.961		
14,500.00	7,579.00	13,562.84	7,154.00	213.27	204.36	-82.40	-357.58	-8,624.00	3,207.46	2,799.31	408.15	7.859		
14,600.00	7,579.00	13,662.84	7,154.00	215.84	207.02	-82.40	-357.62	-8,724.00	3,207.62	2,794.22	413.40	7.759		
14,700.00	7,579.00	13,762.84	7,154.00	218.42	209.67	-82.40	-357.66	-8,824.00	3,207.79	2,789.12	418.67	7.662		
14,800.00	7,579.00	13,862.84	7,154.00	221.00	212.33	-82.40	-357.70	-8,923.99	3,207.95	2,784.02	423.93	7.567		
14,900.00	7,579.00	13,962.84	7,154.00	223.58	214.99	-82.41	-357.74	-9,023.99	3,208.11	2,778.92	429.19	7.475		
15,000.00	7,579.00	14,062.84	7,154.00	226.17	217.65	-82.41	-357.78	-9,123.99	3,208.28	2,773.81	434.46	7.384		
15,100.00	7,579.00	14,162.84	7,154.00	228.75	220.31	-82.41	-357.82	-9,223.99	3,208.44	2,768.71	439.73	7.296		
15,200.00	7,579.00	14,262.84	7,154.00	231.34	222.98	-82.41	-357.86	-9,323.99	3,208.60	2,763.60	445.00	7.210		
15,300.00	7,579.00	14,362.84	7,154.00	233.94	225.64	-82.41	-357.90	-9,423.99	3,208.77	2,758.49	450.28	7.126		
15,400.00	7,579.00	14,462.84	7,154.00	236.53	228.31	-82.41	-357.94	-9,523.99	3,208.93	2,753.37	455.55	7.044		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference				Offset			Semi Major Axis			Distance			Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
15,500.00	7,579.00	14,562.84	7,154.00	239.13	230.97	-82.41	-357.98	-9,623.99	3,209.09	2,748.26	460.83	6.964		
15,600.00	7,579.00	14,662.84	7,154.00	241.73	233.64	-82.41	-358.02	-9,723.99	3,209.26	2,743.14	466.11	6.885		
15,700.00	7,579.00	14,762.84	7,154.00	244.34	236.31	-82.41	-358.06	-9,823.99	3,209.42	2,738.02	471.40	6.808		
15,800.00	7,579.00	14,862.84	7,154.00	246.94	238.97	-82.41	-358.10	-9,923.99	3,209.58	2,732.90	476.68	6.733		
15,900.00	7,579.00	14,962.84	7,154.00	249.55	241.64	-82.41	-358.14	-10,023.99	3,209.75	2,727.78	481.97	6.660		
16,000.00	7,579.00	15,062.83	7,154.00	252.16	244.31	-82.41	-358.18	-10,123.99	3,209.91	2,722.66	487.25	6.588		
16,100.00	7,579.00	15,162.83	7,154.00	254.77	246.98	-82.41	-358.22	-10,223.99	3,210.07	2,717.53	492.54	6.517		
16,200.00	7,579.00	15,262.83	7,154.00	257.38	249.65	-82.41	-358.26	-10,323.99	3,210.24	2,712.40	497.83	6.448		
16,300.00	7,579.00	15,362.83	7,154.00	260.00	252.33	-82.41	-358.30	-10,423.99	3,210.40	2,707.28	503.13	6.381		
16,400.00	7,579.00	15,462.83	7,154.00	262.62	255.00	-82.41	-358.34	-10,523.99	3,210.56	2,702.14	508.42	6.315		
16,500.00	7,579.00	15,562.83	7,154.00	265.24	257.67	-82.41	-358.38	-10,623.99	3,210.73	2,697.01	513.71	6.250		
16,600.00	7,579.00	15,662.83	7,154.00	267.86	260.35	-82.41	-358.42	-10,723.99	3,210.89	2,691.88	519.01	6.187		
16,700.00	7,579.00	15,762.83	7,154.00	270.48	263.02	-82.41	-358.46	-10,823.99	3,211.05	2,686.75	524.31	6.124		
16,800.00	7,579.00	15,862.83	7,154.00	273.10	265.69	-82.41	-358.50	-10,923.99	3,211.22	2,681.61	529.61	6.063		
16,900.00	7,579.00	15,962.83	7,154.00	275.73	268.37	-82.41	-358.54	-11,023.99	3,211.38	2,676.47	534.91	6.004		
17,000.00	7,579.00	16,062.83	7,154.00	278.36	271.05	-82.41	-358.58	-11,123.99	3,211.54	2,671.33	540.21	5.945		
17,100.00	7,579.00	16,162.83	7,154.00	280.99	273.72	-82.41	-358.62	-11,223.99	3,211.71	2,666.19	545.51	5.888		
17,200.00	7,579.00	16,262.83	7,154.00	283.62	276.40	-82.41	-358.66	-11,323.99	3,211.87	2,661.05	550.82	5.831		
17,300.00	7,579.00	16,362.83	7,154.00	286.25	279.08	-82.41	-358.70	-11,423.99	3,212.03	2,655.91	556.12	5.776		
17,400.00	7,579.00	16,462.83	7,154.00	288.88	281.76	-82.41	-358.74	-11,523.99	3,212.20	2,650.77	561.43	5.721		
17,500.00	7,579.00	16,562.83	7,154.00	291.52	284.43	-82.42	-358.78	-11,623.99	3,212.36	2,645.63	566.74	5.668		
17,600.00	7,579.00	16,662.83	7,154.00	294.15	287.11	-82.42	-358.82	-11,723.99	3,212.52	2,640.48	572.04	5.616		
17,700.00	7,579.00	16,762.83	7,154.00	296.79	289.79	-82.42	-358.86	-11,823.99	3,212.69	2,635.33	577.35	5.565		
17,800.00	7,579.00	16,862.83	7,154.00	299.43	292.47	-82.42	-358.90	-11,923.99	3,212.85	2,630.19	582.66	5.514		
17,900.00	7,579.00	16,962.83	7,154.00	302.07	295.15	-82.42	-358.94	-12,023.99	3,213.02	2,625.04	587.98	5.465		
18,000.00	7,579.00	17,062.83	7,154.00	304.71	297.83	-82.42	-358.98	-12,123.99	3,213.18	2,619.89	593.29	5.416		
18,100.00	7,579.00	17,162.83	7,154.00	307.35	300.52	-82.42	-359.02	-12,223.99	3,213.34	2,614.74	598.60	5.368		
18,200.00	7,579.00	17,262.83	7,154.00	310.00	303.20	-82.42	-359.06	-12,323.99	3,213.51	2,609.59	603.92	5.321		
18,300.00	7,579.00	17,362.83	7,154.00	312.64	305.88	-82.42	-359.10	-12,423.99	3,213.67	2,604.44	609.23	5.275		
18,400.00	7,579.00	17,462.83	7,154.00	315.29	308.56	-82.42	-359.14	-12,523.99	3,213.83	2,599.29	614.55	5.230		
18,500.00	7,579.00	17,562.83	7,154.00	317.93	311.24	-82.42	-359.18	-12,623.99	3,214.00	2,594.13	619.86	5.185		
18,600.00	7,579.00	17,662.83	7,154.00	320.58	313.93	-82.42	-359.22	-12,723.99	3,214.16	2,588.98	625.18	5.141		
18,700.00	7,579.00	17,762.83	7,154.00	323.23	316.61	-82.42	-359.26	-12,823.99	3,214.32	2,583.82	630.50	5.098		
18,800.00	7,579.00	17,862.83	7,154.00	325.88	319.30	-82.42	-359.30	-12,923.99	3,214.49	2,578.67	635.82	5.056		
18,900.00	7,579.00	17,962.83	7,154.00	328.53	321.98	-82.42	-359.34	-13,023.99	3,214.65	2,573.51	641.14	5.014		
19,000.00	7,579.00	18,062.83	7,154.00	331.18	324.66	-82.42	-359.38	-13,123.99	3,214.81	2,568.36	646.46	4.973		
19,100.00	7,579.00	18,162.83	7,154.00	333.83	327.35	-82.42	-359.42	-13,223.99	3,214.98	2,563.20	651.78	4.933		
19,200.00	7,579.00	18,262.83	7,154.00	336.48	330.03	-82.42	-359.46	-13,323.99	3,215.14	2,558.04	657.10	4.893		
19,300.00	7,579.00	18,362.83	7,154.00	339.14	332.72	-82.42	-359.50	-13,423.99	3,215.30	2,552.88	662.42	4.854		
19,400.00	7,579.00	18,462.83	7,154.00	341.79	335.40	-82.42	-359.54	-13,523.99	3,215.47	2,547.72	667.75	4.815		
19,500.00	7,579.00	18,562.83	7,154.00	344.45	338.09	-82.42	-359.58	-13,623.99	3,215.63	2,542.56	673.07	4.778		
19,600.00	7,579.00	18,662.83	7,154.00	347.10	340.78	-82.42	-359.62	-13,723.99	3,215.79	2,537.40	678.39	4.740		
19,700.00	7,579.00	18,762.83	7,154.00	349.76	343.46	-82.42	-359.66	-13,823.99	3,215.96	2,532.24	683.72	4.704		
19,800.00	7,579.00	18,862.83	7,154.00	352.42	346.15	-82.42	-359.70	-13,923.99	3,216.12	2,527.08	689.05	4.668		
19,900.00	7,579.00	18,962.83	7,154.00	355.07	348.84	-82.42	-359.73	-14,023.99	3,216.28	2,521.91	694.37	4.632		
20,000.00	7,579.00	19,062.83	7,154.00	357.73	351.52	-82.43	-359.77	-14,123.99	3,216.45	2,516.75	699.70	4.597		
20,100.00	7,579.00	19,162.83	7,154.00	360.39	354.21	-82.43	-359.81	-14,223.99	3,216.61	2,511.59	705.03	4.562		
20,200.00	7,579.00	19,262.83	7,154.00	363.05	356.90	-82.43	-359.85	-14,323.99	3,216.77	2,506.42	710.35	4.528		
20,300.00	7,579.00	19,362.83	7,154.00	365.71	359.59	-82.43	-359.89	-14,423.99	3,216.94	2,501.26	715.68	4.495		
20,400.00	7,579.00	19,462.83	7,154.00	368.38	362.28	-82.43	-359.93	-14,523.99	3,217.10	2,496.09	721.01	4.462		
20,500.00	7,579.00	19,562.83	7,154.00	371.04	364.96	-82.43	-359.97	-14,623.99	3,217.26	2,490.92	726.34	4.429		
20,600.00	7,579.00	19,662.83	7,154.00	373.70	367.65	-82.43	-360.01	-14,723.99	3,217.43	2,485.76	731.67	4.397		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference				Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
20,700.00	7,579.00	19,762.83	7,154.00	376.36	370.34	-82.43	-360.05	-14,823.99	3,217.59	2,480.59	737.00	4.366		
20,800.00	7,579.00	19,862.83	7,154.00	379.03	373.03	-82.43	-360.09	-14,923.99	3,217.76	2,475.42	742.33	4.335		
20,900.00	7,579.00	19,962.83	7,154.00	381.69	375.72	-82.43	-360.13	-15,023.99	3,217.92	2,470.26	747.66	4.304		
21,000.00	7,579.00	20,062.83	7,154.00	384.36	378.41	-82.43	-360.17	-15,123.99	3,218.08	2,465.09	752.99	4.274		
21,100.00	7,579.00	20,162.83	7,154.00	387.02	381.10	-82.43	-360.21	-15,223.99	3,218.25	2,459.92	758.33	4.244		
21,200.00	7,579.00	20,262.83	7,154.00	389.69	383.79	-82.43	-360.25	-15,323.99	3,218.41	2,454.75	763.66	4.214		
21,300.00	7,579.00	20,362.83	7,154.00	392.36	386.48	-82.43	-360.29	-15,423.99	3,218.57	2,449.58	768.99	4.185		
21,400.00	7,579.00	20,462.83	7,154.00	395.02	389.17	-82.43	-360.33	-15,523.99	3,218.74	2,444.41	774.33	4.157		
21,500.00	7,579.00	20,562.83	7,154.00	397.69	391.86	-82.43	-360.37	-15,623.99	3,218.90	2,439.24	779.66	4.129		
21,600.00	7,579.00	20,662.83	7,154.00	400.36	394.55	-82.43	-360.41	-15,723.99	3,219.06	2,434.07	785.00	4.101		
21,700.00	7,579.00	20,762.83	7,154.00	403.03	397.24	-82.43	-360.45	-15,823.99	3,219.23	2,428.90	790.33	4.073		
21,800.00	7,579.00	20,862.83	7,154.00	405.70	399.93	-82.43	-360.49	-15,923.98	3,219.39	2,423.72	795.67	4.046		
21,900.00	7,579.00	20,962.83	7,154.00	408.37	402.62	-82.43	-360.53	-16,023.98	3,219.55	2,418.55	801.00	4.019		
22,000.00	7,579.00	21,062.83	7,154.00	411.04	405.31	-82.43	-360.57	-16,123.98	3,219.72	2,413.38	806.34	3.993		
22,100.00	7,579.00	21,162.83	7,154.00	413.71	408.01	-82.43	-360.61	-16,223.98	3,219.88	2,408.21	811.67	3.967		
22,200.00	7,579.00	21,262.83	7,154.00	416.38	410.70	-82.43	-360.65	-16,323.98	3,220.04	2,403.03	817.01	3.941		
22,300.00	7,579.00	21,362.83	7,154.00	419.05	413.39	-82.43	-360.69	-16,423.98	3,220.21	2,397.86	822.35	3.916		
22,400.00	7,579.00	21,462.83	7,154.00	421.72	416.08	-82.43	-360.73	-16,523.98	3,220.37	2,392.69	827.68	3.891		
22,440.61	7,579.00	21,503.43	7,154.00	422.81	417.17	-82.43	-360.75	-16,564.59	3,220.44	2,390.59	829.85	3.881 SF		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 13-T1S-R66W - WARBLER 13W-27-08 - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-179.43	-28.05	-0.28	28.05						
100.00	100.00	100.00	100.00	0.13	0.13	-179.43	-28.05	-0.28	28.05	27.78	0.27	104.321	CC, ES		
200.00	199.98	199.98	199.98	0.49	0.49	-139.32	-28.05	-0.28	29.35	28.36	0.99	29.743			
300.00	299.84	300.54	300.52	0.86	0.85	-142.74	-27.13	-1.79	32.42	30.71	1.71	18.974			
400.00	399.45	401.19	401.03	1.23	1.22	-144.38	-24.36	-6.31	36.24	33.80	2.44	14.858			
500.00	498.70	501.93	501.37	1.63	1.59	-144.64	-19.76	-13.85	40.73	37.55	3.19	12.778			
600.00	597.47	602.74	601.42	2.05	1.98	-143.90	-13.31	-24.40	45.88	41.92	3.96	11.580			
700.00	695.62	703.61	701.02	2.50	2.40	-142.50	-5.03	-37.96	51.71	46.93	4.78	10.826			
800.00	793.06	804.51	800.03	2.99	2.85	-140.68	5.08	-54.50	58.23	52.59	5.64	10.326			
900.00	889.64	905.44	898.33	3.52	3.34	-138.62	17.01	-74.02	65.51	58.94	6.57	9.970			
1,000.00	985.27	1,006.37	995.77	4.10	3.88	-136.45	30.73	-96.49	73.56	65.98	7.58	9.701			
1,100.00	1,079.82	1,107.31	1,092.22	4.72	4.46	-134.25	46.24	-121.86	82.43	73.74	8.69	9.487			
1,200.00	1,173.17	1,208.23	1,187.54	5.40	5.09	-132.10	63.50	-150.12	92.13	82.23	9.90	9.307			
1,300.00	1,265.21	1,309.12	1,281.62	6.13	5.78	-130.03	82.50	-181.21	102.67	91.45	11.22	9.152			
1,400.00	1,355.84	1,409.97	1,374.32	6.92	6.53	-128.05	103.21	-215.10	114.07	101.40	12.67	9.006			
1,500.00	1,444.94	1,508.99	1,464.74	7.77	7.30	-127.03	124.25	-249.54	127.07	112.91	14.16	8.974			
1,600.00	1,532.44	1,607.84	1,555.00	8.68	8.08	-127.30	145.26	-283.93	142.12	126.48	15.64	9.085			
1,700.00	1,619.43	1,706.59	1,645.17	9.62	8.88	-127.97	166.25	-318.28	157.81	140.68	17.13	9.213			
1,800.00	1,706.42	1,805.34	1,735.34	10.56	9.67	-128.52	187.24	-352.63	173.51	154.89	18.63	9.316			
1,900.00	1,793.42	1,904.08	1,825.51	11.52	10.48	-128.98	208.23	-386.99	189.23	169.10	20.13	9.400			
2,000.00	1,880.41	2,002.83	1,915.68	12.48	11.29	-129.37	229.21	-421.34	204.96	183.32	21.64	9.470			
2,100.00	1,967.40	2,101.58	2,005.85	13.45	12.10	-129.70	250.20	-455.69	220.70	197.54	23.16	9.529			
2,200.00	2,054.39	2,200.32	2,096.01	14.42	12.91	-129.99	271.19	-490.04	236.44	211.76	24.68	9.579			
2,300.00	2,141.39	2,299.07	2,186.18	15.39	13.73	-130.24	292.18	-524.39	252.19	225.98	26.21	9.622			
2,400.00	2,228.38	2,402.18	2,276.35	16.36	14.58	-130.47	313.17	-558.74	267.94	240.17	27.77	9.648			
2,500.00	2,315.37	2,496.56	2,366.52	17.34	15.37	-130.67	334.15	-593.09	283.70	254.43	29.27	9.693			
2,600.00	2,402.37	2,595.31	2,456.69	18.32	16.19	-130.84	355.14	-627.45	299.46	268.66	30.80	9.722			
2,700.00	2,489.36	2,705.95	2,546.85	19.30	17.11	-131.00	376.13	-661.80	315.22	282.79	32.43	9.720			
2,800.00	2,576.35	2,807.20	2,637.02	20.28	17.95	-131.15	397.12	-696.15	330.99	297.00	33.99	9.739			
2,900.00	2,663.34	2,908.45	2,727.19	21.26	18.80	-131.28	418.11	-730.50	346.75	311.21	35.54	9.756			
3,000.00	2,750.34	3,009.71	2,817.36	22.24	19.64	-131.40	439.10	-764.85	362.52	325.42	37.10	9.771			
3,100.00	2,837.33	3,089.04	2,907.53	23.23	20.31	-131.51	460.08	-799.20	378.29	339.80	38.49	9.828			
3,200.00	2,924.32	3,187.79	2,997.70	24.21	21.13	-131.61	481.07	-833.55	394.06	354.02	40.03	9.843			
3,300.00	3,011.31	3,286.53	3,087.86	25.20	21.96	-131.70	502.06	-867.91	409.83	368.25	41.58	9.857			
3,400.00	3,098.31	3,385.28	3,178.03	26.18	22.79	-131.79	523.05	-902.26	425.60	382.48	43.12	9.871			
3,500.00	3,185.30	3,484.03	3,268.20	27.17	23.62	-131.87	544.04	-936.61	441.37	396.71	44.66	9.883			
3,600.00	3,272.29	3,582.77	3,358.37	28.16	24.44	-131.94	565.03	-970.96	457.15	410.94	46.21	9.894			
3,700.00	3,359.29	3,681.52	3,448.54	29.14	25.27	-132.01	586.01	-1,005.31	472.92	425.17	47.75	9.904			
3,800.00	3,446.28	3,780.26	3,538.71	30.13	26.10	-132.08	607.00	-1,039.66	488.70	439.40	49.30	9.914			
3,900.00	3,533.27	3,879.01	3,628.87	31.12	26.93	-132.14	627.99	-1,074.02	504.47	453.63	50.84	9.923			
4,000.00	3,620.26	3,977.76	3,719.04	32.10	27.76	-132.20	648.98	-1,108.37	520.25	467.86	52.39	9.931			
4,100.00	3,707.26	4,076.50	3,809.21	33.09	28.59	-132.25	669.97	-1,142.72	536.03	482.09	53.93	9.939			
4,200.00	3,794.25	4,175.25	3,899.38	34.08	29.42	-132.30	690.95	-1,177.07	551.80	496.32	55.48	9.946			
4,300.00	3,881.24	4,274.00	3,989.55	35.07	30.25	-132.35	711.94	-1,211.42	567.58	510.56	57.03	9.953			
4,400.00	3,968.23	4,372.74	4,079.72	36.06	31.08	-132.40	732.93	-1,245.77	583.36	524.79	58.57	9.960			
4,500.00	4,055.23	4,471.49	4,169.88	37.05	31.91	-132.44	753.92	-1,280.12	599.14	539.02	60.12	9.966			
4,600.00	4,142.22	4,570.24	4,260.05	38.04	32.74	-132.48	774.91	-1,314.48	614.92	553.25	61.67	9.971			
4,700.00	4,229.21	4,668.98	4,350.22	39.03	33.57	-132.52	795.90	-1,348.83	630.69	567.48	63.22	9.977			
4,800.00	4,316.21	4,767.73	4,440.39	40.02	34.40	-132.56	816.88	-1,383.18	646.47	581.71	64.76	9.982			
4,900.00	4,403.20	4,866.48	4,530.56	41.01	35.23	-132.59	837.87	-1,417.53	662.25	595.94	66.31	9.987			
5,000.00	4,490.19	4,965.22	4,620.73	42.00	36.06	-132.62	858.86	-1,451.88	678.03	610.17	67.86	9.992			
5,100.00	4,577.18	5,063.97	4,710.89	42.99	36.89	-132.66	879.85	-1,486.23	693.81	624.40	69.41	9.996			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-MWD OWSG													Offset Well Error:		0.00 usft
Reference				Offset			Semi Major Axis			Distance			Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,200.00	4,664.18	5,162.71	4,801.06	43.98	37.72	-132.69	900.84	-1,520.58	709.59	638.64	70.96	10.000			
5,300.00	4,751.17	5,261.46	4,891.23	44.97	38.55	-132.72	921.83	-1,554.94	725.37	652.87	72.51	10.004			
5,400.00	4,838.16	5,360.21	4,981.40	45.96	39.38	-132.74	942.81	-1,589.29	741.15	667.10	74.06	10.008			
5,500.00	4,925.15	5,458.95	5,071.57	46.95	40.22	-132.77	963.80	-1,623.64	756.93	681.33	75.60	10.012			
5,600.00	5,012.15	5,557.70	5,161.74	47.94	41.05	-132.80	984.79	-1,657.99	772.72	695.56	77.15	10.015			
5,700.00	5,099.14	5,656.45	5,251.90	48.93	41.88	-132.82	1,005.78	-1,692.34	788.50	709.79	78.70	10.019			
5,800.00	5,186.13	5,755.19	5,342.07	49.92	42.71	-132.85	1,026.77	-1,726.69	804.28	724.02	80.25	10.022			
5,900.00	5,273.13	5,853.94	5,432.24	50.91	43.54	-132.87	1,047.75	-1,761.04	820.06	738.26	81.80	10.025			
6,000.00	5,360.12	5,952.69	5,522.41	51.90	44.37	-132.89	1,068.74	-1,795.40	835.84	752.49	83.35	10.028			
6,100.00	5,447.11	6,051.43	5,612.58	52.89	45.20	-132.91	1,089.73	-1,829.75	851.62	766.72	84.90	10.031			
6,200.00	5,534.10	6,150.18	5,702.75	53.88	46.04	-132.93	1,110.72	-1,864.10	867.40	780.95	86.45	10.033			
6,300.00	5,621.10	6,248.92	5,792.91	54.87	46.87	-132.95	1,131.71	-1,898.45	883.18	795.18	88.00	10.036			
6,400.00	5,708.09	6,347.67	5,883.08	55.86	47.70	-132.97	1,152.70	-1,932.80	898.97	809.41	89.55	10.038			
6,500.00	5,795.08	6,446.42	5,973.25	56.85	48.53	-132.99	1,173.68	-1,967.15	914.75	823.65	91.10	10.041			
6,600.00	5,882.07	6,545.16	6,063.42	57.84	49.36	-133.01	1,194.67	-2,001.51	930.53	837.88	92.65	10.043			
6,700.00	5,969.07	6,643.91	6,153.59	58.83	50.19	-133.02	1,215.66	-2,035.86	946.31	852.11	94.20	10.045			
6,800.00	6,056.06	6,742.66	6,243.76	59.83	51.03	-133.04	1,236.65	-2,070.21	962.09	866.34	95.75	10.048			
6,900.00	6,143.05	6,841.40	6,333.92	60.82	51.86	-133.06	1,257.64	-2,104.56	977.88	880.57	97.30	10.050			
7,000.00	6,230.05	6,940.15	6,424.09	61.81	52.69	-133.07	1,278.63	-2,138.91	993.66	894.80	98.85	10.052			
7,100.00	6,317.04	7,038.90	6,514.26	62.80	53.52	-133.09	1,299.61	-2,173.26	1,009.44	909.04	100.41	10.054			
7,200.00	6,404.03	7,137.64	6,604.43	63.79	54.35	-133.10	1,320.60	-2,207.61	1,025.22	923.27	101.96	10.056			
7,300.00	6,491.02	7,236.39	6,694.60	64.78	55.19	-133.12	1,341.59	-2,241.97	1,041.01	937.50	103.51	10.057			
7,400.00	6,578.02	7,335.14	6,784.77	65.77	56.02	-133.13	1,362.58	-2,276.32	1,056.79	951.73	105.06	10.059			
7,500.00	6,665.01	7,433.88	6,874.93	66.76	56.85	-133.14	1,383.57	-2,310.67	1,072.57	965.96	106.61	10.061			
7,600.00	6,752.00	7,532.63	6,965.10	67.76	57.68	-133.16	1,404.55	-2,345.02	1,088.35	980.19	108.16	10.063			
7,700.00	6,838.99	7,631.37	7,055.27	68.75	58.51	-133.17	1,425.54	-2,379.37	1,104.14	994.43	109.71	10.064			
7,800.00	6,925.99	7,730.12	7,145.44	69.74	59.35	-133.18	1,446.53	-2,413.72	1,119.92	1,008.66	111.26	10.066			
7,900.00	7,012.98	7,828.85	7,235.61	70.73	60.19	-133.19	1,467.52	-2,448.07	1,135.73	1,022.94	112.79	10.070			
8,000.00	7,099.97	7,927.59	7,330.78	71.72	61.03	-133.20	1,488.51	-2,482.42	1,151.54	1,037.16	114.32	10.074			
8,100.00	7,186.97	8,026.33	7,425.95	72.71	61.87	-133.21	1,509.50	-2,516.77	1,167.35	1,051.37	115.85	10.078			
8,200.00	7,273.96	8,125.08	7,521.12	73.70	62.71	-133.22	1,530.49	-2,551.12	1,183.16	1,065.58	117.38	10.082			
8,300.00	7,360.96	8,223.82	7,616.29	74.69	63.55	-133.23	1,551.48	-2,585.47	1,198.97	1,079.79	118.91	10.086			
8,400.00	7,447.95	8,322.57	7,711.46	75.68	64.39	-133.24	1,572.47	-2,619.82	1,214.78	1,094.00	120.44	10.090			
8,500.00	7,534.95	8,421.31	7,806.63	76.67	65.23	-133.25	1,593.46	-2,654.17	1,230.59	1,108.21	121.97	10.094			
8,600.00	7,621.94	8,520.06	7,901.80	77.66	66.07	-133.26	1,614.45	-2,688.52	1,246.40	1,122.42	123.50	10.098			
8,700.00	7,708.94	8,618.80	8,000.00	78.65	66.91	-133.27	1,635.44	-2,722.87	1,262.21	1,136.63	125.03	10.102			
8,800.00	7,795.93	8,717.55	8,098.19	79.64	67.75	-133.28	1,656.43	-2,757.22	1,278.02	1,150.86	126.56	10.106			
8,900.00	7,882.93	8,816.30	8,196.38	80.63	68.59	-133.29	1,677.42	-2,791.57	1,293.83	1,165.09	128.09	10.110			
9,000.00	7,969.92	8,915.05	8,294.57	81.62	69.43	-133.30	1,698.41	-2,825.92	1,309.64	1,179.32	129.62	10.114			
9,100.00	8,056.92	9,013.80	8,392.76	82.61	70.27	-133.31	1,719.40	-2,860.27	1,325.45	1,193.55	131.15	10.118			
9,200.00	8,143.91	9,112.55	8,490.95	83.60	71.11	-133.32	1,740.39	-2,894.62	1,341.26	1,207.78	132.68	10.122			
9,300.00	8,230.91	9,211.30	8,589.14	84.59	71.95	-133.33	1,761.38	-2,928.97	1,357.07	1,222.01	134.21	10.126			
9,400.00	8,317.90	9,310.05	8,687.33	85.58	72.79	-133.34	1,782.37	-2,963.32	1,372.88	1,236.24	135.74	10.130			
9,500.00	8,404.90	9,408.80	8,785.52	86.57	73.63	-133.35	1,803.36	-2,997.67	1,388.69	1,250.47	137.27	10.134			
9,600.00	8,491.89	9,507.55	8,883.71	87.56	74.47	-133.36	1,824.35	-3,032.02	1,404.50	1,264.70	138.80	10.138			
9,700.00	8,578.89	9,606.30	8,981.90	88.55	75.31	-133.37	1,845.34	-3,066.37	1,420.31	1,278.93	140.33	10.142			
9,800.00	8,665.88	9,705.05	9,080.09	89.54	76.15	-133.38	1,866.33	-3,100.72	1,436.12	1,293.16	141.86	10.146			
9,900.00	8,752.88	9,803.80	9,178.28	90.53	76.99	-133.39	1,887.32	-3,135.07	1,451.93	1,307.39	143.39	10.150			
10,000.00	8,839.87	9,902.55	9,276.47	91.52	77.83	-133.40	1,908.31	-3,169.42	1,467.74	1,321.62	144.92	10.154			
10,100.00	8,926.87	10,001.30	9,374.66	92.51	78.67	-133.41	1,929.30	-3,203.77	1,483.55	1,335.85	146.45	10.158			
10,200.00	9,013.86	10,100.05	9,472.85	93.50	79.51	-133.42	1,950.29	-3,238.12	1,499.36	1,350.08	147.98	10.162			
10,300.00	9,100.86	10,198.80	9,571.04	94.49	80.35	-133.43	1,971.28	-3,272.47	1,515.17	1,364.31	149.51	10.166			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,400.00	7,579.00	10,051.43	7,579.00	113.64	104.87	-90.00	1,548.58	-4,526.00	1,268.02	1,064.16	203.85	6.220		
10,500.00	7,579.00	10,151.43	7,579.00	115.82	107.25	-90.00	1,548.64	-4,626.00	1,268.08	1,059.32	208.77	6.074		
10,600.00	7,579.00	10,251.43	7,579.00	118.01	109.64	-90.00	1,548.70	-4,726.00	1,268.15	1,054.44	213.71	5.934		
10,700.00	7,579.00	10,351.43	7,579.00	120.23	112.05	-90.00	1,548.75	-4,826.00	1,268.22	1,049.55	218.67	5.800		
10,800.00	7,579.00	10,451.43	7,579.00	122.47	114.47	-90.00	1,548.81	-4,926.00	1,268.29	1,044.63	223.65	5.671		
10,900.00	7,579.00	10,551.43	7,579.00	124.73	116.90	-90.00	1,548.87	-5,026.00	1,268.35	1,039.70	228.65	5.547		
11,000.00	7,579.00	10,651.43	7,579.00	127.01	119.35	-90.00	1,548.93	-5,126.00	1,268.42	1,034.75	233.67	5.428		
11,100.00	7,579.00	10,751.43	7,579.00	129.30	121.80	-90.00	1,548.99	-5,226.00	1,268.49	1,029.78	238.71	5.314		
11,200.00	7,579.00	10,851.43	7,579.00	131.61	124.27	-90.00	1,549.04	-5,326.00	1,268.55	1,024.79	243.76	5.204		
11,300.00	7,579.00	10,951.43	7,579.00	133.93	126.75	-90.00	1,549.10	-5,426.00	1,268.62	1,019.79	248.83	5.098		
11,400.00	7,579.00	11,051.43	7,579.00	136.27	129.23	-90.00	1,549.16	-5,526.00	1,268.69	1,014.78	253.91	4.997		
11,500.00	7,579.00	11,151.43	7,579.00	138.62	131.73	-90.00	1,549.22	-5,626.00	1,268.76	1,009.75	259.00	4.899		
11,600.00	7,579.00	11,251.43	7,579.00	140.99	134.23	-90.00	1,549.28	-5,726.00	1,268.82	1,004.71	264.11	4.804		
11,700.00	7,579.00	11,351.43	7,579.00	143.37	136.74	-90.00	1,549.33	-5,826.00	1,268.89	999.66	269.23	4.713		
11,800.00	7,579.00	11,451.43	7,579.00	145.76	139.26	-90.00	1,549.39	-5,926.00	1,268.96	994.60	274.36	4.625		
11,900.00	7,579.00	11,551.43	7,579.00	148.16	141.79	-90.00	1,549.45	-6,026.00	1,269.02	989.52	279.50	4.540		
12,000.00	7,579.00	11,651.43	7,579.00	150.58	144.32	-90.00	1,549.51	-6,126.00	1,269.09	984.44	284.65	4.458		
12,100.00	7,579.00	11,751.43	7,579.00	153.00	146.86	-90.00	1,549.57	-6,226.00	1,269.16	979.35	289.81	4.379		
12,200.00	7,579.00	11,851.43	7,579.00	155.43	149.40	-90.00	1,549.63	-6,326.00	1,269.22	974.25	294.98	4.303		
12,300.00	7,579.00	11,951.43	7,579.00	157.87	151.95	-90.00	1,549.68	-6,426.00	1,269.29	969.14	300.15	4.229		
12,400.00	7,579.00	12,051.43	7,579.00	160.32	154.50	-90.00	1,549.74	-6,526.00	1,269.36	964.02	305.34	4.157		
12,500.00	7,579.00	12,151.43	7,579.00	162.78	157.06	-90.00	1,549.80	-6,626.00	1,269.43	958.90	310.53	4.088		
12,600.00	7,579.00	12,251.43	7,579.00	165.25	159.63	-90.00	1,549.86	-6,726.00	1,269.49	953.76	315.73	4.021		
12,700.00	7,579.00	12,351.43	7,579.00	167.73	162.20	-90.00	1,549.92	-6,826.00	1,269.56	948.62	320.94	3.956		
12,800.00	7,579.00	12,451.43	7,579.00	170.21	164.77	-90.00	1,549.97	-6,926.00	1,269.63	943.48	326.15	3.893		
12,900.00	7,579.00	12,551.43	7,579.00	172.70	167.35	-90.00	1,550.03	-7,026.00	1,269.69	938.33	331.37	3.832		
13,000.00	7,579.00	12,651.43	7,579.00	175.19	169.93	-90.00	1,550.09	-7,126.00	1,269.76	933.17	336.59	3.772		
13,100.00	7,579.00	12,751.43	7,579.00	177.70	172.52	-90.00	1,550.15	-7,226.00	1,269.83	928.00	341.82	3.715		
13,200.00	7,579.00	12,851.43	7,579.00	180.20	175.11	-90.00	1,550.21	-7,326.00	1,269.89	922.84	347.06	3.659		
13,300.00	7,579.00	12,951.43	7,579.00	182.72	177.70	-90.00	1,550.26	-7,426.00	1,269.96	917.66	352.30	3.605		
13,400.00	7,579.00	13,051.43	7,579.00	185.24	180.30	-90.00	1,550.32	-7,526.00	1,270.03	912.48	357.55	3.552		
13,500.00	7,579.00	13,151.43	7,579.00	187.76	182.90	-90.00	1,550.38	-7,626.00	1,270.10	907.30	362.80	3.501		
13,600.00	7,579.00	13,251.43	7,579.00	190.30	185.50	-90.00	1,550.44	-7,726.00	1,270.16	902.11	368.05	3.451		
13,700.00	7,579.00	13,351.43	7,579.00	192.83	188.11	-90.00	1,550.50	-7,826.00	1,270.23	896.92	373.31	3.403		
13,800.00	7,579.00	13,451.43	7,579.00	195.37	190.71	-90.00	1,550.55	-7,926.00	1,270.30	891.72	378.58	3.355		
13,900.00	7,579.00	13,551.43	7,579.00	197.92	193.32	-90.00	1,550.61	-8,026.00	1,270.36	886.52	383.84	3.310		
14,000.00	7,579.00	13,651.43	7,579.00	200.47	195.94	-90.00	1,550.67	-8,126.00	1,270.43	881.31	389.12	3.265		
14,100.00	7,579.00	13,751.43	7,579.00	203.02	198.55	-90.00	1,550.73	-8,226.00	1,270.50	876.11	394.39	3.221		
14,200.00	7,579.00	13,851.43	7,579.00	205.58	201.17	-90.00	1,550.79	-8,326.00	1,270.56	870.89	399.67	3.179		
14,300.00	7,579.00	13,951.43	7,579.00	208.14	203.79	-90.00	1,550.84	-8,426.00	1,270.63	865.68	404.95	3.138		
14,400.00	7,579.00	14,051.43	7,579.00	210.70	206.42	-90.00	1,550.90	-8,526.00	1,270.70	860.46	410.24	3.097		
14,500.00	7,579.00	14,151.43	7,579.00	213.27	209.04	-90.00	1,550.96	-8,626.00	1,270.77	855.24	415.53	3.058		
14,600.00	7,579.00	14,251.43	7,579.00	215.84	211.67	-90.00	1,551.02	-8,726.00	1,270.83	850.01	420.82	3.020		
14,700.00	7,579.00	14,351.43	7,579.00	218.42	214.30	-90.00	1,551.08	-8,826.00	1,270.90	844.79	426.11	2.983		
14,800.00	7,579.00	14,451.43	7,579.00	221.00	216.93	-90.00	1,551.13	-8,926.00	1,270.97	839.55	431.41	2.946		
14,900.00	7,579.00	14,551.43	7,579.00	223.58	219.56	-90.00	1,551.19	-9,026.00	1,271.03	834.32	436.71	2.910		
15,000.00	7,579.00	14,651.43	7,579.00	226.17	222.20	-90.00	1,551.25	-9,126.00	1,271.10	829.09	442.01	2.876		
15,100.00	7,579.00	14,751.43	7,579.00	228.75	224.83	-90.00	1,551.31	-9,226.00	1,271.17	823.85	447.32	2.842		
15,200.00	7,579.00	14,851.43	7,579.00	231.34	227.47	-90.00	1,551.37	-9,326.00	1,271.23	818.61	452.63	2.809		
15,300.00	7,579.00	14,951.43	7,579.00	233.94	230.11	-90.00	1,551.42	-9,426.00	1,271.30	813.36	457.94	2.776		
15,400.00	7,579.00	15,051.43	7,579.00	236.53	232.75	-90.00	1,551.48	-9,526.00	1,271.37	808.12	463.25	2.744		
15,500.00	7,579.00	15,151.43	7,579.00	239.13	235.39	-90.00	1,551.54	-9,626.00	1,271.44	802.87	468.56	2.713		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 13-T1S-R66W - WARBLER 13W-27-08 - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
15,600.00	7,579.00	15,251.43	7,579.00	241.73	238.03	-90.00	1,551.60	-9,726.00	1,271.50	797.62	473.88	2.683			
15,700.00	7,579.00	15,351.43	7,579.00	244.34	240.68	-90.00	1,551.66	-9,826.00	1,271.57	792.37	479.20	2.654			
15,800.00	7,579.00	15,451.43	7,579.00	246.94	243.33	-90.00	1,551.71	-9,926.00	1,271.64	787.12	484.52	2.625			
15,900.00	7,579.00	15,551.43	7,579.00	249.55	245.97	-90.00	1,551.77	-10,026.00	1,271.70	781.86	489.84	2.596			
16,000.00	7,579.00	15,651.43	7,579.00	252.16	248.62	-90.00	1,551.83	-10,126.00	1,271.77	776.60	495.17	2.568			
16,100.00	7,579.00	15,751.43	7,579.00	254.77	251.27	-90.00	1,551.89	-10,226.00	1,271.84	771.35	500.49	2.541			
16,200.00	7,579.00	15,851.43	7,579.00	257.38	253.92	-90.00	1,551.95	-10,326.00	1,271.90	766.08	505.82	2.515			
16,300.00	7,579.00	15,951.43	7,579.00	260.00	256.58	-90.00	1,552.01	-10,426.00	1,271.97	760.82	511.15	2.488			
16,400.00	7,579.00	16,051.43	7,579.00	262.62	259.23	-90.00	1,552.06	-10,526.00	1,272.04	755.56	516.48	2.463			
16,500.00	7,579.00	16,151.43	7,579.00	265.24	261.88	-90.00	1,552.12	-10,626.00	1,272.11	750.29	521.81	2.438			
16,600.00	7,579.00	16,251.43	7,579.00	267.86	264.54	-90.00	1,552.18	-10,726.00	1,272.17	745.03	527.15	2.413			
16,700.00	7,579.00	16,351.43	7,579.00	270.48	267.19	-90.00	1,552.24	-10,826.00	1,272.24	739.76	532.48	2.389			
16,800.00	7,579.00	16,451.43	7,579.00	273.10	269.85	-90.00	1,552.30	-10,926.00	1,272.31	734.49	537.82	2.366			
16,900.00	7,579.00	16,551.43	7,579.00	275.73	272.51	-90.00	1,552.35	-11,026.00	1,272.37	729.22	543.16	2.343			
17,000.00	7,579.00	16,651.43	7,579.00	278.36	275.17	-90.00	1,552.41	-11,126.00	1,272.44	723.94	548.50	2.320			
17,100.00	7,579.00	16,751.43	7,579.00	280.99	277.83	-90.00	1,552.47	-11,226.00	1,272.51	718.67	553.84	2.298			
17,200.00	7,579.00	16,851.43	7,579.00	283.62	280.49	-90.00	1,552.53	-11,326.00	1,272.57	713.39	559.18	2.276			
17,300.00	7,579.00	16,951.43	7,579.00	286.25	283.15	-90.00	1,552.59	-11,426.00	1,272.64	708.12	564.52	2.254			
17,400.00	7,579.00	17,051.43	7,579.00	288.88	285.81	-90.00	1,552.64	-11,526.00	1,272.71	702.84	569.87	2.233			
17,500.00	7,579.00	17,151.43	7,579.00	291.52	288.48	-90.00	1,552.70	-11,626.00	1,272.78	697.56	575.22	2.213			
17,600.00	7,579.00	17,251.43	7,579.00	294.15	291.14	-90.00	1,552.76	-11,726.00	1,272.84	692.28	580.56	2.192			
17,700.00	7,579.00	17,351.43	7,579.00	296.79	293.81	-90.00	1,552.82	-11,826.00	1,272.91	687.00	585.91	2.173			
17,800.00	7,579.00	17,451.43	7,579.00	299.43	296.47	-90.00	1,552.88	-11,926.00	1,272.98	681.72	591.26	2.153			
17,900.00	7,579.00	17,551.43	7,579.00	302.07	299.14	-90.00	1,552.93	-12,026.00	1,273.04	676.43	596.61	2.134			
18,000.00	7,579.00	17,651.43	7,579.00	304.71	301.81	-90.00	1,552.99	-12,126.00	1,273.11	671.15	601.96	2.115			
18,100.00	7,579.00	17,751.43	7,579.00	307.35	304.47	-90.00	1,553.05	-12,226.00	1,273.18	665.86	607.31	2.096			
18,200.00	7,579.00	17,851.43	7,579.00	310.00	307.14	-90.00	1,553.11	-12,326.00	1,273.24	660.58	612.67	2.078			
18,300.00	7,579.00	17,951.43	7,579.00	312.64	309.81	-90.00	1,553.17	-12,426.00	1,273.31	655.29	618.02	2.060			
18,400.00	7,579.00	18,051.43	7,579.00	315.29	312.48	-90.00	1,553.22	-12,526.00	1,273.38	650.00	623.38	2.043			
18,500.00	7,579.00	18,151.43	7,579.00	317.93	315.15	-90.00	1,553.28	-12,626.00	1,273.45	644.71	628.73	2.025			
18,600.00	7,579.00	18,251.43	7,579.00	320.58	317.82	-90.00	1,553.34	-12,726.00	1,273.51	639.42	634.09	2.008			
18,700.00	7,579.00	18,351.43	7,579.00	323.23	320.49	-90.00	1,553.40	-12,826.00	1,273.58	634.13	639.45	1.992			
18,800.00	7,579.00	18,451.43	7,579.00	325.88	323.16	-90.00	1,553.46	-12,926.00	1,273.65	628.84	644.81	1.975			
18,900.00	7,579.00	18,551.43	7,579.00	328.53	325.83	-90.00	1,553.51	-13,026.00	1,273.71	623.55	650.17	1.959			
19,000.00	7,579.00	18,651.43	7,579.00	331.18	328.51	-90.00	1,553.57	-13,126.00	1,273.78	618.26	655.53	1.943			
19,100.00	7,579.00	18,751.43	7,579.00	333.83	331.18	-90.00	1,553.63	-13,226.00	1,273.85	612.96	660.89	1.927			
19,200.00	7,579.00	18,851.43	7,579.00	336.48	333.85	-90.00	1,553.69	-13,326.00	1,273.91	607.67	666.25	1.912			
19,300.00	7,579.00	18,951.43	7,579.00	339.14	336.53	-90.00	1,553.75	-13,426.00	1,273.98	602.37	671.61	1.897			
19,400.00	7,579.00	19,051.43	7,579.00	341.79	339.20	-90.00	1,553.80	-13,526.00	1,274.05	597.08	676.97	1.882			
19,500.00	7,579.00	19,151.43	7,579.00	344.45	341.88	-90.00	1,553.86	-13,626.00	1,274.12	591.78	682.34	1.867			
19,600.00	7,579.00	19,251.43	7,579.00	347.10	344.55	-90.00	1,553.92	-13,726.00	1,274.18	586.48	687.70	1.853			
19,700.00	7,579.00	19,351.43	7,579.00	349.76	347.23	-90.00	1,553.98	-13,826.00	1,274.25	581.18	693.07	1.839			
19,800.00	7,579.00	19,451.43	7,579.00	352.42	349.91	-90.00	1,554.04	-13,926.00	1,274.32	575.88	698.43	1.825			
19,900.00	7,579.00	19,551.43	7,579.00	355.07	352.58	-90.00	1,554.09	-14,026.00	1,274.38	570.58	703.80	1.811			
20,000.00	7,579.00	19,651.43	7,579.00	357.73	355.26	-90.00	1,554.15	-14,126.00	1,274.45	565.28	709.17	1.797			
20,100.00	7,579.00	19,751.43	7,579.00	360.39	357.94	-90.00	1,554.21	-14,226.00	1,274.52	559.98	714.53	1.784			
20,200.00	7,579.00	19,851.43	7,579.00	363.05	360.62	-90.00	1,554.27	-14,326.00	1,274.58	554.68	719.90	1.770			
20,300.00	7,579.00	19,951.43	7,579.00	365.71	363.29	-90.00	1,554.33	-14,426.00	1,274.65	549.38	725.27	1.757			
20,400.00	7,579.00	20,051.43	7,579.00	368.38	365.97	-90.00	1,554.39	-14,526.00	1,274.72	544.08	730.64	1.745			
20,500.00	7,579.00	20,151.43	7,579.00	371.04	368.65	-90.00	1,554.44	-14,626.00	1,274.79	538.78	736.01	1.732			
20,600.00	7,579.00	20,251.43	7,579.00	373.70	371.33	-90.00	1,554.50	-14,726.00	1,274.85	533.47	741.38	1.720			
20,700.00	7,579.00	20,351.43	7,579.00	376.36	374.01	-90.00	1,554.56	-14,826.00	1,274.92	528.17	746.75	1.707			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 13-T1S-R66W - WARBLER 13W-27-08 - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
20,800.00	7,579.00	20,451.43	7,579.00	379.03	376.69	-90.00	1,554.62	-14,926.00	1,274.99	522.86	752.12	1.695		
20,900.00	7,579.00	20,551.43	7,579.00	381.69	379.37	-90.00	1,554.68	-15,026.00	1,275.05	517.56	757.50	1.683		
21,000.00	7,579.00	20,651.43	7,579.00	384.36	382.05	-90.00	1,554.73	-15,126.00	1,275.12	512.25	762.87	1.671		
21,100.00	7,579.00	20,751.43	7,579.00	387.02	384.74	-90.00	1,554.79	-15,226.00	1,275.19	506.95	768.24	1.660		
21,200.00	7,579.00	20,851.43	7,579.00	389.69	387.42	-90.00	1,554.85	-15,326.00	1,275.26	501.64	773.61	1.648		
21,300.00	7,579.00	20,951.43	7,579.00	392.36	390.10	-90.00	1,554.91	-15,426.00	1,275.32	496.33	778.99	1.637		
21,400.00	7,579.00	21,051.43	7,579.00	395.02	392.78	-90.00	1,554.97	-15,526.00	1,275.39	491.03	784.36	1.626		
21,500.00	7,579.00	21,151.43	7,579.00	397.69	395.46	-90.00	1,555.02	-15,626.00	1,275.46	485.72	789.74	1.615		
21,600.00	7,579.00	21,251.43	7,579.00	400.36	398.15	-90.00	1,555.08	-15,726.00	1,275.52	480.41	795.11	1.604		
21,700.00	7,579.00	21,351.43	7,579.00	403.03	400.83	-90.00	1,555.14	-15,826.00	1,275.59	475.10	800.49	1.594		
21,800.00	7,579.00	21,451.43	7,579.00	405.70	403.51	-90.00	1,555.20	-15,926.00	1,275.66	469.79	805.87	1.583		
21,900.00	7,579.00	21,551.43	7,579.00	408.37	406.20	-90.00	1,555.26	-16,026.00	1,275.72	464.48	811.24	1.573		
22,000.00	7,579.00	21,651.43	7,579.00	411.04	408.88	-90.00	1,555.31	-16,126.00	1,275.79	459.17	816.62	1.562		
22,100.00	7,579.00	21,751.43	7,579.00	413.71	411.56	-90.00	1,555.37	-16,226.00	1,275.86	453.86	822.00	1.552		
22,200.00	7,579.00	21,851.43	7,579.00	416.38	414.25	-90.00	1,555.43	-16,326.00	1,275.93	448.55	827.37	1.542		
22,300.00	7,579.00	21,951.43	7,579.00	419.05	416.93	-90.00	1,555.49	-16,426.00	1,275.99	443.24	832.75	1.532		
22,400.00	7,579.00	22,051.43	7,579.00	421.72	419.62	-90.00	1,555.55	-16,526.00	1,276.06	437.93	838.13	1.523		
22,440.61	7,579.00	22,092.04	7,579.00	422.81	420.71	-90.00	1,555.57	-16,566.60	1,276.09	435.77	840.32	1.519 SF		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	1.00	1.00	0.00	0.00	-179.43	-56.10	-0.56	56.10					
100.00	100.00	101.00	101.00	0.13	0.14	-179.43	-56.10	-0.56	56.10	55.83	0.27	205.91	CC, ES	
200.00	199.98	200.98	200.98	0.49	0.50	-138.19	-56.10	-0.56	57.39	56.40	0.99	57.953		
300.00	299.84	300.84	300.84	0.86	0.85	-141.39	-56.10	-0.56	61.39	59.67	1.72	35.787		
400.00	399.45	401.07	401.05	1.23	1.21	-144.45	-55.87	-2.33	67.96	65.52	2.44	27.852		
500.00	498.70	501.34	501.18	1.63	1.56	-145.85	-55.18	-7.57	76.61	73.43	3.17	24.135		
600.00	597.47	601.57	601.01	2.05	1.93	-145.97	-54.05	-16.29	87.20	83.27	3.93	22.178		
700.00	695.62	701.67	700.35	2.50	2.32	-145.21	-52.46	-28.44	99.71	94.99	4.72	21.114		
800.00	793.06	801.56	799.00	2.99	2.73	-143.88	-50.43	-43.99	114.16	108.60	5.56	20.542		
900.00	889.64	901.15	896.75	3.52	3.17	-142.22	-47.97	-62.88	130.60	124.15	6.45	20.253		
1,000.00	985.27	1,000.38	993.42	4.10	3.64	-140.41	-45.08	-85.03	149.08	141.67	7.41	20.130		
1,100.00	1,079.82	1,099.16	1,088.83	4.72	4.16	-138.54	-41.78	-110.38	169.64	161.20	8.44	20.098		
1,200.00	1,173.17	1,197.42	1,182.82	5.40	4.71	-136.68	-38.07	-138.81	192.29	182.73	9.56	20.112		
1,300.00	1,265.21	1,295.11	1,275.22	6.13	5.32	-134.88	-33.98	-170.23	217.05	206.27	10.77	20.147		
1,400.00	1,355.84	1,408.14	1,365.70	6.92	6.08	-133.20	-29.55	-204.19	243.92	231.74	12.18	20.019		
1,500.00	1,444.94	1,487.47	1,454.88	7.77	6.63	-132.16	-25.10	-238.36	273.09	259.67	13.42	20.352		
1,600.00	1,532.44	1,582.42	1,543.46	8.68	7.30	-131.81	-20.67	-272.29	304.45	289.65	14.79	20.582		
1,700.00	1,619.43	1,677.15	1,631.82	9.62	7.98	-131.97	-16.26	-306.14	336.47	320.29	16.18	20.794		
1,800.00	1,706.42	1,771.88	1,720.19	10.56	8.67	-132.10	-11.85	-339.99	368.49	350.91	17.58	20.955		
1,900.00	1,793.42	1,866.61	1,808.55	11.52	9.36	-132.21	-7.43	-373.84	400.52	381.52	19.00	21.079		
2,000.00	1,880.41	1,961.34	1,896.92	12.48	10.06	-132.31	-3.02	-407.70	432.55	412.12	20.43	21.176		
2,100.00	1,967.40	2,056.07	1,985.28	13.45	10.76	-132.39	1.39	-441.55	464.57	442.71	21.86	21.253		
2,200.00	2,054.39	2,150.80	2,073.65	14.42	11.46	-132.46	5.81	-475.40	496.60	473.30	23.30	21.314		
2,300.00	2,141.39	2,245.54	2,162.02	15.39	12.17	-132.52	10.22	-509.25	528.63	503.89	24.74	21.365		
2,400.00	2,228.38	2,340.27	2,250.38	16.36	12.87	-132.58	14.63	-543.10	560.66	534.47	26.19	21.406		
2,500.00	2,315.37	2,435.00	2,338.75	17.34	13.58	-132.63	19.04	-576.95	592.69	565.05	27.64	21.440		
2,600.00	2,402.37	2,529.73	2,427.11	18.32	14.29	-132.67	23.46	-610.80	624.72	595.62	29.10	21.468		
2,700.00	2,489.36	2,624.46	2,515.48	19.30	15.00	-132.71	27.87	-644.65	656.75	626.19	30.56	21.492		
2,800.00	2,576.35	2,719.19	2,603.84	20.28	15.72	-132.75	32.28	-678.51	688.78	656.77	32.02	21.513		
2,900.00	2,663.34	2,813.92	2,692.21	21.26	16.43	-132.78	36.70	-712.36	720.81	687.33	33.48	21.530		
3,000.00	2,750.34	2,908.65	2,780.57	22.24	17.14	-132.81	41.11	-746.21	752.85	717.90	34.94	21.544		
3,100.00	2,837.33	3,003.38	2,868.94	23.23	17.86	-132.84	45.52	-780.06	784.88	748.47	36.41	21.557		
3,200.00	2,924.32	3,101.89	2,957.31	24.21	18.60	-132.86	49.93	-813.91	816.91	779.00	37.90	21.552		
3,300.00	3,011.31	3,207.16	3,045.67	25.20	19.40	-132.89	54.35	-847.76	848.94	809.49	39.45	21.518		
3,400.00	3,098.31	3,287.57	3,134.04	26.18	20.01	-132.91	58.76	-881.61	880.97	840.16	40.81	21.586		
3,500.00	3,185.30	3,382.30	3,222.40	27.17	20.72	-132.93	63.17	-915.46	913.01	870.72	42.28	21.593		
3,600.00	3,272.29	3,477.03	3,310.77	28.16	21.44	-132.95	67.59	-949.32	945.04	901.28	43.75	21.599		
3,700.00	3,359.29	3,571.76	3,399.13	29.14	22.16	-132.97	72.00	-983.17	977.07	931.84	45.23	21.604		
3,800.00	3,446.28	3,666.49	3,487.50	30.13	22.88	-132.98	76.41	-1,017.02	1,009.10	962.40	46.70	21.609		
3,900.00	3,533.27	3,761.22	3,575.86	31.12	23.59	-133.00	80.82	-1,050.87	1,041.13	992.96	48.17	21.613		
4,000.00	3,620.26	3,855.95	3,664.23	32.10	24.31	-133.01	85.24	-1,084.72	1,073.17	1,023.52	49.64	21.617		
4,100.00	3,707.26	3,950.68	3,752.60	33.09	25.03	-133.03	89.65	-1,118.57	1,105.20	1,054.08	51.12	21.620		
4,200.00	3,794.25	4,045.41	3,840.96	34.08	25.75	-133.04	94.06	-1,152.42	1,137.23	1,084.64	52.59	21.623		
4,300.00	3,881.24	4,140.14	3,929.33	35.07	26.47	-133.05	98.48	-1,186.27	1,169.26	1,115.20	54.07	21.626		
4,400.00	3,968.23	4,234.87	4,017.69	36.06	27.19	-133.06	102.89	-1,220.13	1,201.30	1,145.75	55.54	21.628		
4,500.00	4,055.23	4,329.60	4,106.06	37.05	27.91	-133.07	107.30	-1,253.98	1,233.33	1,176.31	57.02	21.630		
4,600.00	4,142.22	4,424.34	4,194.42	38.04	28.63	-133.08	111.71	-1,287.83	1,265.36	1,206.87	58.50	21.631		
4,700.00	4,229.21	4,519.07	4,282.79	39.03	29.35	-133.09	116.13	-1,321.68	1,297.40	1,237.42	59.97	21.633		
4,800.00	4,316.21	4,613.80	4,371.16	40.02	30.07	-133.10	120.54	-1,355.53	1,329.43	1,267.98	61.45	21.634		
4,900.00	4,403.20	4,708.53	4,459.52	41.01	30.79	-133.11	124.95	-1,389.38	1,361.46	1,298.53	62.93	21.635		
5,000.00	4,490.19	4,803.26	4,547.89	42.00	31.51	-133.12	129.37	-1,423.23	1,393.49	1,329.09	64.41	21.636		
5,100.00	4,577.18	4,902.01	4,636.25	42.99	32.26	-133.13	133.78	-1,457.08	1,425.53	1,359.61	65.91	21.627		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,200.00	4,664.18	5,007.28	4,724.62	43.98	33.06	-133.14	138.19	-1,490.94	1,457.56	1,390.09	67.47	21.603		
5,300.00	4,751.17	5,087.45	4,812.98	44.97	33.67	-133.15	142.61	-1,524.79	1,489.59	1,420.75	68.84	21.639		
5,400.00	4,838.16	5,182.18	4,901.35	45.96	34.39	-133.15	147.02	-1,558.64	1,521.63	1,451.31	70.32	21.639		
5,500.00	4,925.15	5,276.91	4,989.71	46.95	35.11	-133.16	151.43	-1,592.49	1,553.66	1,481.86	71.80	21.640		
5,600.00	5,012.15	5,371.64	5,078.08	47.94	35.83	-133.17	155.84	-1,626.34	1,585.69	1,512.42	73.28	21.640		
5,700.00	5,099.14	5,466.37	5,166.45	48.93	36.55	-133.17	160.26	-1,660.19	1,617.73	1,542.97	74.76	21.640		
5,800.00	5,186.13	5,561.10	5,254.81	49.92	37.27	-133.18	164.67	-1,694.04	1,649.76	1,573.52	76.24	21.640		
5,900.00	5,273.13	5,655.83	5,343.18	50.91	37.99	-133.18	169.08	-1,727.89	1,681.79	1,604.08	77.71	21.641		
6,000.00	5,360.12	5,750.56	5,431.54	51.90	38.71	-133.19	173.50	-1,761.75	1,713.82	1,634.63	79.19	21.641		
6,100.00	5,447.11	5,845.29	5,519.91	52.89	39.43	-133.20	177.91	-1,795.60	1,745.86	1,665.18	80.67	21.641		
6,200.00	5,534.10	5,940.02	5,608.27	53.88	40.15	-133.20	182.32	-1,829.45	1,777.89	1,695.74	82.15	21.641		
6,300.00	5,621.10	6,034.75	5,696.64	54.87	40.88	-133.21	186.73	-1,863.30	1,809.92	1,726.29	83.64	21.641		
6,400.00	5,708.09	6,129.48	5,785.00	55.86	41.60	-133.21	191.15	-1,897.15	1,841.96	1,756.84	85.12	21.641		
6,500.00	5,795.08	6,224.21	5,873.37	56.85	42.32	-133.22	195.56	-1,931.00	1,873.99	1,787.39	86.60	21.641		
6,600.00	5,882.07	6,318.94	5,961.74	57.84	43.04	-133.22	199.97	-1,964.85	1,906.02	1,817.95	88.08	21.640		
6,700.00	5,969.07	6,413.67	6,050.10	58.83	43.76	-133.22	204.39	-1,998.70	1,938.06	1,848.50	89.56	21.640		
6,800.00	6,056.06	6,508.40	6,138.47	59.83	44.48	-133.23	208.80	-2,032.56	1,970.09	1,879.05	91.04	21.640		
6,900.00	6,143.05	6,603.14	6,226.83	60.82	45.20	-133.23	213.21	-2,066.41	2,002.12	1,909.60	92.52	21.640		
7,000.00	6,230.05	6,702.13	6,315.20	61.81	45.96	-133.24	217.62	-2,100.26	2,034.16	1,940.12	94.03	21.632		
7,100.00	6,317.04	6,807.40	6,403.56	62.80	46.76	-133.24	222.04	-2,134.11	2,066.19	1,970.59	95.60	21.614		
7,200.00	6,404.03	6,887.33	6,491.93	63.79	47.37	-133.24	226.45	-2,167.96	2,098.22	2,001.26	96.96	21.639		
7,300.00	6,491.02	6,982.06	6,580.29	64.78	48.09	-133.25	230.86	-2,201.81	2,130.26	2,031.81	98.45	21.639		
7,400.00	6,578.02	7,076.79	6,668.66	65.77	48.81	-133.25	235.28	-2,235.66	2,162.29	2,062.36	99.93	21.638		
7,500.00	6,665.01	7,171.52	6,757.03	66.76	49.53	-133.26	239.69	-2,269.51	2,194.32	2,092.91	101.41	21.638		
7,600.00	6,752.00	7,266.25	6,845.39	67.76	50.25	-133.26	244.10	-2,303.37	2,226.36	2,123.46	102.89	21.637		
7,700.00	6,838.99	7,360.98	6,933.76	68.75	50.97	-133.26	248.51	-2,337.22	2,258.39	2,154.01	104.37	21.638		
7,800.00	6,925.99	7,455.71	7,022.12	69.74	51.70	-133.27	252.93	-2,371.07	2,290.42	2,184.57	105.86	21.637		
7,900.00	7,012.98	7,550.44	7,110.49	70.73	52.42	-133.27	257.34	-2,404.92	2,322.46	2,215.12	107.34	21.637		
8,000.00	7,099.97	7,645.17	7,198.85	71.72	53.14	-133.27	261.75	-2,438.77	2,354.49	2,245.67	108.82	21.636		
8,100.00	7,186.97	7,732.29	7,278.23	72.71	53.90	-133.15	265.72	-2,474.27	2,386.65	2,276.30	110.35	21.628		
8,200.00	7,273.09	7,815.53	7,348.30	73.74	54.83	-124.30	269.21	-2,518.93	2,418.84	2,306.65	112.19	21.559		
8,300.00	7,352.95	7,897.53	7,410.30	74.97	55.94	-112.29	272.31	-2,572.41	2,448.80	2,334.41	114.39	21.407		
8,400.00	7,423.63	7,979.08	7,463.77	76.39	57.25	-103.89	274.97	-2,633.83	2,475.34	2,358.38	116.96	21.165		
8,500.00	7,482.96	8,060.48	7,507.93	77.96	58.70	-97.98	277.18	-2,702.10	2,497.65	2,377.81	119.83	20.843		
8,600.00	7,529.15	8,141.94	7,542.01	79.64	60.28	-93.93	278.87	-2,775.98	2,515.03	2,392.05	122.98	20.451		
8,700.00	7,560.79	8,223.52	7,565.31	81.35	61.95	-91.38	280.03	-2,854.09	2,526.98	2,400.66	126.31	20.006		
8,800.00	7,576.92	8,305.24	7,577.33	83.05	63.66	-90.14	280.62	-2,934.85	2,533.12	2,403.39	129.74	19.525		
8,900.00	7,579.00	8,404.53	7,579.00	84.68	65.75	-89.98	280.70	-3,025.04	2,534.02	2,400.32	133.70	18.953		
9,000.00	7,579.00	8,504.53	7,579.00	86.34	67.90	-89.98	280.69	-3,125.04	2,534.16	2,396.23	137.93	18.373		
9,100.00	7,579.00	8,604.53	7,579.00	88.04	70.08	-89.98	280.68	-3,225.04	2,534.29	2,392.05	142.24	17.817		
9,200.00	7,579.00	8,704.53	7,579.00	89.80	72.30	-89.98	280.67	-3,325.04	2,534.43	2,387.80	146.62	17.285		
9,300.00	7,579.00	8,804.53	7,579.00	91.59	74.55	-89.98	280.66	-3,425.04	2,534.56	2,383.49	151.07	16.777		
9,400.00	7,579.00	8,904.53	7,579.00	93.42	76.83	-89.98	280.65	-3,525.04	2,534.69	2,379.11	155.58	16.292		
9,500.00	7,579.00	9,004.53	7,579.00	95.30	79.13	-89.98	280.64	-3,625.04	2,534.83	2,374.68	160.15	15.828		
9,600.00	7,579.00	9,104.53	7,579.00	97.21	81.46	-89.98	280.64	-3,725.04	2,534.96	2,370.20	164.76	15.386		
9,700.00	7,579.00	9,204.53	7,579.00	99.15	83.81	-89.98	280.63	-3,825.04	2,535.10	2,365.67	169.42	14.963		
9,800.00	7,579.00	9,304.53	7,579.00	101.13	86.18	-89.98	280.62	-3,925.04	2,535.23	2,361.10	174.13	14.559		
9,900.00	7,579.00	9,404.53	7,579.00	103.15	88.58	-89.98	280.61	-4,025.04	2,535.36	2,356.49	178.88	14.174		
10,000.00	7,579.00	9,504.53	7,579.00	105.19	90.98	-89.98	280.60	-4,125.04	2,535.50	2,351.84	183.66	13.806		
10,100.00	7,579.00	9,604.53	7,579.00	107.26	93.41	-89.98	280.59	-4,225.04	2,535.63	2,347.16	188.47	13.454		
10,200.00	7,579.00	9,704.53	7,579.00	109.36	95.85	-89.98	280.58	-4,325.04	2,535.77	2,342.45	193.32	13.117		
10,300.00	7,579.00	9,804.53	7,579.00	111.49	98.30	-89.98	280.57	-4,425.04	2,535.90	2,337.70	198.20	12.795		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,400.00	7,579.00	9,904.53	7,579.00	113.64	100.77	-89.98	280.56	-4,525.04	2,536.03	2,332.94	203.10	12.487		
10,500.00	7,579.00	10,004.53	7,579.00	115.82	103.25	-89.98	280.55	-4,625.04	2,536.17	2,328.14	208.03	12.192		
10,600.00	7,579.00	10,104.53	7,579.00	118.01	105.74	-89.98	280.55	-4,725.04	2,536.30	2,323.33	212.98	11.909		
10,700.00	7,579.00	10,204.53	7,579.00	120.23	108.24	-89.98	280.54	-4,825.04	2,536.44	2,318.49	217.95	11.638		
10,800.00	7,579.00	10,304.53	7,579.00	122.47	110.75	-89.98	280.53	-4,925.04	2,536.57	2,313.63	222.94	11.378		
10,900.00	7,579.00	10,404.53	7,579.00	124.73	113.26	-89.98	280.52	-5,025.04	2,536.70	2,308.75	227.95	11.128		
11,000.00	7,579.00	10,504.53	7,579.00	127.01	115.79	-89.98	280.51	-5,125.04	2,536.84	2,303.85	232.98	10.889		
11,100.00	7,579.00	10,604.53	7,579.00	129.30	118.32	-89.98	280.50	-5,225.04	2,536.97	2,298.94	238.03	10.658		
11,200.00	7,579.00	10,704.53	7,579.00	131.61	120.87	-89.98	280.49	-5,325.04	2,537.11	2,294.02	243.09	10.437		
11,300.00	7,579.00	10,804.53	7,579.00	133.93	123.41	-89.98	280.48	-5,425.04	2,537.24	2,289.07	248.17	10.224		
11,400.00	7,579.00	10,904.53	7,579.00	136.27	125.97	-89.98	280.47	-5,525.04	2,537.37	2,284.12	253.26	10.019		
11,500.00	7,579.00	11,004.53	7,579.00	138.62	128.53	-89.98	280.47	-5,625.04	2,537.51	2,279.15	258.36	9.822		
11,600.00	7,579.00	11,104.53	7,579.00	140.99	131.10	-89.98	280.46	-5,725.04	2,537.64	2,274.17	263.47	9.631		
11,700.00	7,579.00	11,204.53	7,579.00	143.37	133.67	-89.98	280.45	-5,825.04	2,537.78	2,269.18	268.60	9.448		
11,800.00	7,579.00	11,304.53	7,579.00	145.76	136.25	-89.98	280.44	-5,925.04	2,537.91	2,264.17	273.74	9.271		
11,900.00	7,579.00	11,404.53	7,579.00	148.16	138.83	-89.98	280.43	-6,025.04	2,538.04	2,259.16	278.88	9.101		
12,000.00	7,579.00	11,504.53	7,579.00	150.58	141.41	-89.98	280.42	-6,125.04	2,538.18	2,254.14	284.04	8.936		
12,100.00	7,579.00	11,604.53	7,579.00	153.00	144.01	-89.98	280.41	-6,225.04	2,538.31	2,249.11	289.21	8.777		
12,200.00	7,579.00	11,704.53	7,579.00	155.43	146.60	-89.98	280.40	-6,325.04	2,538.45	2,244.06	294.38	8.623		
12,300.00	7,579.00	11,804.53	7,579.00	157.87	149.20	-89.98	280.39	-6,425.04	2,538.58	2,239.02	299.56	8.474		
12,400.00	7,579.00	11,904.53	7,579.00	160.32	151.80	-89.98	280.38	-6,525.04	2,538.71	2,233.96	304.76	8.330		
12,500.00	7,579.00	12,004.53	7,579.00	162.78	154.41	-89.98	280.38	-6,625.04	2,538.85	2,228.90	309.95	8.191		
12,600.00	7,579.00	12,104.53	7,579.00	165.25	157.02	-89.98	280.37	-6,725.04	2,538.98	2,223.82	315.16	8.056		
12,700.00	7,579.00	12,204.53	7,579.00	167.73	159.63	-89.98	280.36	-6,825.04	2,539.12	2,218.75	320.37	7.926		
12,800.00	7,579.00	12,304.53	7,579.00	170.21	162.24	-89.98	280.35	-6,925.04	2,539.25	2,213.66	325.59	7.799		
12,900.00	7,579.00	12,404.53	7,579.00	172.70	164.86	-89.98	280.34	-7,025.04	2,539.38	2,208.57	330.81	7.676		
13,000.00	7,579.00	12,504.53	7,579.00	175.19	167.48	-89.98	280.33	-7,125.04	2,539.52	2,203.48	336.04	7.557		
13,100.00	7,579.00	12,604.53	7,579.00	177.70	170.11	-89.98	280.32	-7,225.04	2,539.65	2,198.37	341.28	7.442		
13,200.00	7,579.00	12,704.53	7,579.00	180.20	172.73	-89.98	280.31	-7,325.04	2,539.79	2,193.27	346.52	7.329		
13,300.00	7,579.00	12,804.53	7,579.00	182.72	175.36	-89.98	280.30	-7,425.03	2,539.92	2,188.16	351.76	7.221		
13,400.00	7,579.00	12,904.53	7,579.00	185.24	177.99	-89.98	280.30	-7,525.03	2,540.05	2,183.04	357.02	7.115		
13,500.00	7,579.00	13,004.53	7,579.00	187.76	180.62	-89.98	280.29	-7,625.03	2,540.19	2,177.92	362.27	7.012		
13,600.00	7,579.00	13,104.53	7,579.00	190.30	183.26	-89.98	280.28	-7,725.03	2,540.32	2,172.79	367.53	6.912		
13,700.00	7,579.00	13,204.53	7,579.00	192.83	185.90	-89.98	280.27	-7,825.03	2,540.46	2,167.66	372.79	6.815		
13,800.00	7,579.00	13,304.53	7,579.00	195.37	188.53	-89.98	280.26	-7,925.03	2,540.59	2,162.53	378.06	6.720		
13,900.00	7,579.00	13,404.53	7,579.00	197.92	191.17	-89.98	280.25	-8,025.03	2,540.72	2,157.39	383.33	6.628		
14,000.00	7,579.00	13,504.53	7,579.00	200.47	193.82	-89.98	280.24	-8,125.03	2,540.86	2,152.25	388.61	6.538		
14,100.00	7,579.00	13,604.53	7,579.00	203.02	196.46	-89.98	280.23	-8,225.03	2,540.99	2,147.10	393.89	6.451		
14,200.00	7,579.00	13,704.53	7,579.00	205.58	199.11	-89.98	280.22	-8,325.03	2,541.13	2,141.96	399.17	6.366		
14,300.00	7,579.00	13,804.53	7,579.00	208.14	201.75	-89.98	280.21	-8,425.03	2,541.26	2,136.80	404.46	6.283		
14,400.00	7,579.00	13,904.53	7,579.00	210.70	204.40	-89.98	280.21	-8,525.03	2,541.39	2,131.65	409.75	6.202		
14,500.00	7,579.00	14,004.53	7,579.00	213.27	207.05	-89.98	280.20	-8,625.03	2,541.53	2,126.49	415.04	6.124		
14,600.00	7,579.00	14,104.53	7,579.00	215.84	209.70	-89.98	280.19	-8,725.03	2,541.66	2,121.33	420.33	6.047		
14,700.00	7,579.00	14,204.53	7,579.00	218.42	212.36	-89.98	280.18	-8,825.03	2,541.80	2,116.17	425.63	5.972		
14,800.00	7,579.00	14,304.53	7,579.00	221.00	215.01	-89.98	280.17	-8,925.03	2,541.93	2,111.00	430.93	5.899		
14,900.00	7,579.00	14,404.53	7,579.00	223.58	217.66	-89.98	280.16	-9,025.03	2,542.06	2,105.83	436.23	5.827		
15,000.00	7,579.00	14,504.53	7,579.00	226.17	220.32	-89.98	280.15	-9,125.03	2,542.20	2,100.66	441.54	5.758		
15,100.00	7,579.00	14,604.53	7,579.00	228.75	222.98	-89.98	280.14	-9,225.03	2,542.33	2,095.49	446.85	5.689		
15,200.00	7,579.00	14,704.53	7,579.00	231.34	225.64	-89.98	280.13	-9,325.03	2,542.47	2,090.31	452.16	5.623		
15,300.00	7,579.00	14,804.53	7,579.00	233.94	228.30	-89.98	280.13	-9,425.03	2,542.60	2,085.13	457.47	5.558		
15,400.00	7,579.00	14,904.53	7,579.00	236.53	230.96	-89.98	280.12	-9,525.03	2,542.73	2,079.95	462.78	5.494		
15,500.00	7,579.00	15,004.53	7,579.00	239.13	233.62	-89.98	280.11	-9,625.03	2,542.87	2,074.77	468.10	5.432		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 13-T1S-R66W - WARBLER 13W-27-09 - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
15,600.00	7,579.00	15,104.53	7,579.00	241.73	236.28	-89.98	280.10	-9,725.03	2,543.00	2,069.58	473.42	5.372			
15,700.00	7,579.00	15,204.53	7,579.00	244.34	238.94	-89.98	280.09	-9,825.03	2,543.14	2,064.40	478.74	5.312			
15,800.00	7,579.00	15,304.53	7,579.00	246.94	241.61	-89.98	280.08	-9,925.03	2,543.27	2,059.21	484.06	5.254			
15,900.00	7,579.00	15,404.53	7,579.00	249.55	244.27	-89.98	280.07	-10,025.03	2,543.40	2,054.02	489.39	5.197			
16,000.00	7,579.00	15,504.53	7,579.00	252.16	246.94	-89.98	280.06	-10,125.03	2,543.54	2,048.82	494.72	5.141			
16,100.00	7,579.00	15,604.53	7,579.00	254.77	249.61	-89.98	280.05	-10,225.03	2,543.67	2,043.63	500.04	5.087			
16,200.00	7,579.00	15,704.53	7,579.00	257.38	252.27	-89.98	280.04	-10,325.03	2,543.81	2,038.43	505.37	5.034			
16,300.00	7,579.00	15,804.53	7,579.00	260.00	254.94	-89.98	280.04	-10,425.03	2,543.94	2,033.24	510.71	4.981			
16,400.00	7,579.00	15,904.53	7,579.00	262.62	257.61	-89.98	280.03	-10,525.03	2,544.07	2,028.04	516.04	4.930			
16,500.00	7,579.00	16,004.53	7,579.00	265.24	260.28	-89.98	280.02	-10,625.03	2,544.21	2,022.84	521.37	4.880			
16,600.00	7,579.00	16,104.53	7,579.00	267.86	262.95	-89.98	280.01	-10,725.03	2,544.34	2,017.63	526.71	4.831			
16,700.00	7,579.00	16,204.53	7,579.00	270.48	265.62	-89.98	280.00	-10,825.03	2,544.48	2,012.43	532.05	4.782			
16,800.00	7,579.00	16,304.53	7,579.00	273.10	268.29	-89.98	279.99	-10,925.03	2,544.61	2,007.23	537.39	4.735			
16,900.00	7,579.00	16,404.53	7,579.00	275.73	270.97	-89.98	279.98	-11,025.03	2,544.74	2,002.02	542.73	4.689			
17,000.00	7,579.00	16,504.53	7,579.00	278.36	273.64	-89.98	279.97	-11,125.03	2,544.88	1,996.81	548.07	4.643			
17,100.00	7,579.00	16,604.53	7,579.00	280.99	276.31	-89.98	279.96	-11,225.03	2,545.01	1,991.60	553.41	4.599			
17,200.00	7,579.00	16,704.53	7,579.00	283.62	278.99	-89.98	279.96	-11,325.03	2,545.15	1,986.39	558.75	4.555			
17,300.00	7,579.00	16,804.53	7,579.00	286.25	281.66	-89.98	279.95	-11,425.03	2,545.28	1,981.18	564.10	4.512			
17,400.00	7,579.00	16,904.53	7,579.00	288.88	284.34	-89.98	279.94	-11,525.03	2,545.41	1,975.97	569.45	4.470			
17,500.00	7,579.00	17,004.53	7,579.00	291.52	287.01	-89.98	279.93	-11,625.03	2,545.55	1,970.76	574.79	4.429			
17,600.00	7,579.00	17,104.53	7,579.00	294.15	289.69	-89.98	279.92	-11,725.03	2,545.68	1,965.54	580.14	4.388			
17,700.00	7,579.00	17,204.53	7,579.00	296.79	292.37	-89.98	279.91	-11,825.03	2,545.82	1,960.32	585.49	4.348			
17,800.00	7,579.00	17,304.53	7,579.00	299.43	295.04	-89.98	279.90	-11,925.03	2,545.95	1,955.11	590.84	4.309			
17,900.00	7,579.00	17,404.53	7,579.00	302.07	297.72	-89.98	279.89	-12,025.03	2,546.09	1,949.89	596.20	4.271			
18,000.00	7,579.00	17,504.53	7,579.00	304.71	300.40	-89.98	279.88	-12,125.03	2,546.22	1,944.67	601.55	4.233			
18,100.00	7,579.00	17,604.53	7,579.00	307.35	303.08	-89.98	279.87	-12,225.03	2,546.35	1,939.45	606.90	4.196			
18,200.00	7,579.00	17,704.53	7,579.00	310.00	305.76	-89.98	279.87	-12,325.03	2,546.49	1,934.23	612.26	4.159			
18,300.00	7,579.00	17,804.53	7,579.00	312.64	308.44	-89.98	279.86	-12,425.03	2,546.62	1,929.01	617.61	4.123			
18,400.00	7,579.00	17,904.53	7,579.00	315.29	311.12	-89.98	279.85	-12,525.03	2,546.76	1,923.79	622.97	4.088			
18,500.00	7,579.00	18,004.53	7,579.00	317.93	313.80	-89.98	279.84	-12,625.03	2,546.89	1,918.56	628.33	4.053			
18,600.00	7,579.00	18,104.53	7,579.00	320.58	316.48	-89.98	279.83	-12,725.03	2,547.02	1,913.34	633.68	4.019			
18,700.00	7,579.00	18,204.53	7,579.00	323.23	319.16	-89.98	279.82	-12,825.03	2,547.16	1,908.11	639.04	3.986			
18,800.00	7,579.00	18,304.54	7,579.00	325.88	321.84	-89.98	279.81	-12,925.03	2,547.29	1,902.89	644.40	3.953			
18,900.00	7,579.00	18,404.54	7,579.00	328.53	324.52	-89.98	279.80	-13,025.03	2,547.43	1,897.66	649.76	3.921			
19,000.00	7,579.00	18,504.54	7,579.00	331.18	327.20	-89.98	279.79	-13,125.03	2,547.56	1,892.43	655.13	3.889			
19,100.00	7,579.00	18,604.54	7,579.00	333.83	329.89	-89.98	279.79	-13,225.03	2,547.69	1,887.21	660.49	3.857			
19,200.00	7,579.00	18,704.54	7,579.00	336.48	332.57	-89.98	279.78	-13,325.03	2,547.83	1,881.98	665.85	3.826			
19,300.00	7,579.00	18,804.54	7,579.00	339.14	335.25	-89.98	279.77	-13,425.03	2,547.96	1,876.75	671.21	3.796			
19,400.00	7,579.00	18,904.54	7,579.00	341.79	337.94	-89.98	279.76	-13,525.03	2,548.10	1,871.52	676.58	3.766			
19,500.00	7,579.00	19,004.54	7,579.00	344.45	340.62	-89.98	279.75	-13,625.03	2,548.23	1,866.29	681.94	3.737			
19,600.00	7,579.00	19,104.54	7,579.00	347.10	343.30	-89.98	279.74	-13,725.03	2,548.36	1,861.05	687.31	3.708			
19,700.00	7,579.00	19,204.54	7,579.00	349.76	345.99	-89.98	279.73	-13,825.03	2,548.50	1,855.82	692.67	3.679			
19,800.00	7,579.00	19,304.54	7,579.00	352.42	348.67	-89.98	279.72	-13,925.03	2,548.63	1,850.59	698.04	3.651			
19,900.00	7,579.00	19,404.54	7,579.00	355.07	351.36	-89.98	279.71	-14,025.03	2,548.77	1,845.36	703.41	3.623			
20,000.00	7,579.00	19,504.54	7,579.00	357.73	354.04	-89.98	279.70	-14,125.03	2,548.90	1,840.12	708.78	3.596			
20,100.00	7,579.00	19,604.54	7,579.00	360.39	356.73	-89.98	279.70	-14,225.03	2,549.03	1,834.89	714.15	3.569			
20,200.00	7,579.00	19,704.54	7,579.00	363.05	359.42	-89.98	279.69	-14,325.03	2,549.17	1,829.65	719.52	3.543			
20,300.00	7,579.00	19,804.54	7,579.00	365.71	362.10	-89.98	279.68	-14,425.03	2,549.30	1,824.42	724.89	3.517			
20,400.00	7,579.00	19,904.54	7,579.00	368.38	364.79	-89.98	279.67	-14,525.03	2,549.44	1,819.18	730.26	3.491			
20,500.00	7,579.00	20,004.54	7,579.00	371.04	367.47	-89.98	279.66	-14,625.03	2,549.57	1,813.94	735.63	3.466			
20,600.00	7,579.00	20,104.54	7,579.00	373.70	370.16	-89.98	279.65	-14,725.03	2,549.70	1,808.71	741.00	3.441			
20,700.00	7,579.00	20,204.54	7,579.00	376.36	372.85	-89.98	279.64	-14,825.03	2,549.84	1,803.47	746.37	3.416			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 13-T1S-R66W - WARBLER 13W-27-09 - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
20,800.00	7,579.00	20,304.54	7,579.00	379.03	375.54	-89.98	279.63	-14,925.03	2,549.97	1,798.23	751.74	3.392		
20,900.00	7,579.00	20,404.54	7,579.00	381.69	378.22	-89.98	279.62	-15,025.03	2,550.11	1,792.99	757.12	3.368		
21,000.00	7,579.00	20,504.54	7,579.00	384.36	380.91	-89.98	279.62	-15,125.03	2,550.24	1,787.75	762.49	3.345		
21,100.00	7,579.00	20,604.54	7,579.00	387.02	383.60	-89.98	279.61	-15,225.03	2,550.37	1,782.51	767.86	3.321		
21,200.00	7,579.00	20,704.54	7,579.00	389.69	386.29	-89.98	279.60	-15,325.03	2,550.51	1,777.27	773.24	3.298		
21,300.00	7,579.00	20,804.54	7,579.00	392.36	388.98	-89.98	279.59	-15,425.03	2,550.64	1,772.03	778.61	3.276		
21,400.00	7,579.00	20,904.54	7,579.00	395.02	391.66	-89.98	279.58	-15,525.03	2,550.78	1,766.79	783.99	3.254		
21,500.00	7,579.00	21,004.54	7,579.00	397.69	394.35	-89.98	279.57	-15,625.03	2,550.91	1,761.55	789.36	3.232		
21,600.00	7,579.00	21,104.54	7,579.00	400.36	397.04	-89.98	279.56	-15,725.03	2,551.04	1,756.30	794.74	3.210		
21,700.00	7,579.00	21,204.54	7,579.00	403.03	399.73	-89.98	279.55	-15,825.03	2,551.18	1,751.06	800.12	3.189		
21,800.00	7,579.00	21,304.54	7,579.00	405.70	402.42	-89.98	279.54	-15,925.03	2,551.31	1,745.82	805.49	3.167		
21,900.00	7,579.00	21,404.54	7,579.00	408.37	405.11	-89.98	279.53	-16,025.03	2,551.45	1,740.58	810.87	3.147		
22,000.00	7,579.00	21,504.54	7,579.00	411.04	407.80	-89.98	279.53	-16,125.03	2,551.58	1,735.33	816.25	3.126		
22,100.00	7,579.00	21,604.54	7,579.00	413.71	410.49	-89.98	279.52	-16,225.03	2,551.71	1,730.09	821.63	3.106		
22,200.00	7,579.00	21,704.54	7,579.00	416.38	413.18	-89.98	279.51	-16,325.03	2,551.85	1,724.84	827.00	3.086		
22,300.00	7,579.00	21,804.54	7,579.00	419.05	415.87	-89.98	279.50	-16,425.03	2,551.98	1,719.60	832.38	3.066		
22,400.00	7,579.00	21,895.46	7,579.00	421.72	418.32	-89.98	279.49	-16,525.03	2,552.12	1,714.60	837.52	3.047		
22,440.61	7,579.00	21,936.07	7,579.00	422.81	419.41	-89.98	279.49	-16,565.63	2,552.17	1,712.47	839.70	3.039 SF		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 13-T1S-R66W - WARBLER 13W-27-10 - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	2.00	2.00	0.00	0.00	-179.43	-84.15	-0.84	84.15						
100.00	100.00	102.00	102.00	0.13	0.14	-179.43	-84.15	-0.84	84.15	83.87	0.28	304.864	CC, ES		
200.00	199.98	201.98	201.98	0.49	0.50	-137.80	-84.15	-0.84	85.43	84.44	0.99	85.967			
300.00	299.84	301.84	301.84	0.86	0.86	-140.00	-84.15	-0.84	89.38	87.66	1.72	52.000			
400.00	399.45	400.62	400.60	1.23	1.20	-142.20	-84.73	-2.51	96.66	94.22	2.44	39.627			
500.00	498.70	499.15	498.99	1.63	1.55	-143.34	-86.44	-7.37	107.64	104.48	3.17	33.986			
600.00	597.47	597.19	596.65	2.05	1.91	-143.60	-89.24	-15.37	122.21	118.29	3.92	31.193			
700.00	695.62	694.54	693.29	2.50	2.28	-143.22	-93.13	-26.44	140.30	135.61	4.70	29.871			
800.00	793.06	791.00	788.60	2.99	2.67	-142.43	-98.04	-40.45	161.89	156.38	5.51	29.375			
900.00	889.64	886.40	882.31	3.52	3.09	-141.39	-103.95	-57.27	186.94	180.58	6.37	29.366			
1,000.00	985.27	980.54	974.16	4.10	3.54	-140.23	-110.78	-76.76	215.44	208.17	7.27	29.646			
1,100.00	1,079.82	1,073.28	1,063.92	4.72	4.01	-139.01	-118.49	-98.72	247.34	239.12	8.22	30.096			
1,200.00	1,173.17	1,164.47	1,151.41	5.40	4.52	-137.79	-127.00	-122.98	282.57	273.35	9.22	30.645			
1,300.00	1,265.21	1,253.98	1,236.45	6.13	5.05	-136.58	-136.25	-149.34	321.08	310.80	10.28	31.238			
1,400.00	1,355.84	1,341.71	1,318.90	6.92	5.62	-135.39	-146.17	-177.59	362.77	351.38	11.39	31.848			
1,500.00	1,444.94	1,428.35	1,399.43	7.77	6.21	-134.23	-156.75	-207.77	407.53	394.97	12.56	32.450			
1,600.00	1,532.44	1,516.54	1,481.09	8.68	6.84	-133.50	-167.78	-239.19	454.66	440.85	13.81	32.929			
1,700.00	1,619.43	1,604.39	1,562.44	9.62	7.48	-133.48	-178.76	-270.49	502.43	487.36	15.07	33.337			
1,800.00	1,706.42	1,707.76	1,643.78	10.56	8.25	-133.47	-189.75	-301.79	550.20	533.73	16.47	33.415			
1,900.00	1,793.42	1,780.10	1,725.13	11.52	8.79	-133.46	-200.73	-333.09	597.97	580.32	17.65	33.877			
2,000.00	1,880.41	1,867.95	1,806.48	12.48	9.45	-133.45	-211.71	-364.39	645.74	626.78	18.96	34.060			
2,100.00	1,967.40	1,955.80	1,887.83	13.45	10.12	-133.45	-222.70	-395.69	693.51	673.23	20.28	34.204			
2,200.00	2,054.39	2,043.65	1,969.18	14.42	10.79	-133.44	-233.68	-426.99	741.28	719.68	21.60	34.319			
2,300.00	2,141.39	2,131.51	2,050.53	15.39	11.46	-133.43	-244.66	-458.30	789.05	766.12	22.93	34.412			
2,400.00	2,228.38	2,219.36	2,131.88	16.36	12.13	-133.43	-255.65	-489.60	836.82	812.55	24.26	34.488			
2,500.00	2,315.37	2,307.21	2,213.23	17.34	12.81	-133.42	-266.63	-520.90	884.59	858.98	25.60	34.550			
2,600.00	2,402.37	2,404.94	2,294.58	18.32	13.56	-133.42	-277.61	-552.20	932.36	905.34	27.02	34.507			
2,700.00	2,489.36	2,482.91	2,375.92	19.30	14.16	-133.42	-288.60	-583.50	980.13	951.84	28.29	34.643			
2,800.00	2,576.35	2,570.77	2,457.27	20.28	14.84	-133.41	-299.58	-614.80	1,027.90	998.26	29.64	34.678			
2,900.00	2,663.34	2,658.62	2,538.62	21.26	15.52	-133.41	-310.56	-646.10	1,075.67	1,044.68	30.99	34.707			
3,000.00	2,750.34	2,746.47	2,619.97	22.24	16.20	-133.41	-321.55	-677.40	1,123.44	1,091.09	32.35	34.732			
3,100.00	2,837.33	2,834.32	2,701.32	23.23	16.89	-133.41	-332.53	-708.70	1,171.21	1,137.51	33.70	34.753			
3,200.00	2,924.32	2,922.18	2,782.67	24.21	17.57	-133.40	-343.51	-740.01	1,218.98	1,183.92	35.06	34.771			
3,300.00	3,011.31	3,010.03	2,864.02	25.20	18.25	-133.40	-354.49	-771.31	1,266.75	1,230.33	36.42	34.786			
3,400.00	3,098.31	3,102.12	2,945.37	26.18	18.97	-133.40	-365.48	-802.61	1,314.52	1,276.71	37.81	34.769			
3,500.00	3,185.30	3,185.73	3,026.71	27.17	19.62	-133.40	-376.46	-833.91	1,362.29	1,323.15	39.14	34.809			
3,600.00	3,272.29	3,273.59	3,108.06	28.16	20.31	-133.40	-387.44	-865.21	1,410.06	1,369.56	40.50	34.818			
3,700.00	3,359.29	3,361.44	3,189.41	29.14	20.99	-133.40	-398.43	-896.51	1,457.83	1,415.97	41.86	34.826			
3,800.00	3,446.28	3,449.29	3,270.76	30.13	21.68	-133.39	-409.41	-927.81	1,505.60	1,462.37	43.22	34.832			
3,900.00	3,533.27	3,537.14	3,352.11	31.12	22.37	-133.39	-420.39	-959.11	1,553.37	1,508.78	44.59	34.838			
4,000.00	3,620.26	3,624.99	3,433.46	32.10	23.05	-133.39	-431.38	-990.41	1,601.14	1,555.18	45.95	34.842			
4,100.00	3,707.26	3,712.85	3,514.81	33.09	23.74	-133.39	-442.36	-1,021.72	1,648.91	1,601.59	47.32	34.846			
4,200.00	3,794.25	3,800.70	3,596.16	34.08	24.43	-133.39	-453.34	-1,053.02	1,696.68	1,647.99	48.69	34.849			
4,300.00	3,881.24	3,888.55	3,677.51	35.07	25.11	-133.39	-464.33	-1,084.32	1,744.45	1,694.40	50.05	34.852			
4,400.00	3,968.23	3,976.40	3,758.85	36.06	25.80	-133.39	-475.31	-1,115.62	1,792.22	1,740.80	51.42	34.854			
4,500.00	4,055.23	4,064.26	3,840.20	37.05	26.49	-133.39	-486.29	-1,146.92	1,839.99	1,787.20	52.79	34.855			
4,600.00	4,142.22	4,152.11	3,921.55	38.04	27.18	-133.38	-497.28	-1,178.22	1,887.76	1,833.60	54.16	34.856			
4,700.00	4,229.21	4,239.96	4,002.90	39.03	27.86	-133.38	-508.26	-1,209.52	1,935.53	1,880.00	55.53	34.857			
4,800.00	4,316.21	4,327.81	4,084.25	40.02	28.55	-133.38	-519.24	-1,240.82	1,983.30	1,926.40	56.90	34.858			
4,900.00	4,403.20	4,415.66	4,165.60	41.01	29.24	-133.38	-530.23	-1,272.12	2,031.07	1,972.80	58.27	34.858			
5,000.00	4,490.19	4,503.52	4,246.95	42.00	29.93	-133.38	-541.21	-1,303.43	2,078.84	2,019.20	59.64	34.858			
5,100.00	4,577.18	4,591.37	4,328.30	42.99	30.62	-133.38	-552.19	-1,334.73	2,126.61	2,065.60	61.01	34.858			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference				Offset			Semi Major Axis			Distance			Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,200.00	4,664.18	4,679.22	4,409.64	43.98	31.31	-133.38	-563.18	-1,366.03	2,174.38	2,112.00	62.38	34.857		
5,300.00	4,751.17	4,767.07	4,490.99	44.97	32.00	-133.38	-574.16	-1,397.33	2,222.15	2,158.40	63.75	34.857		
5,400.00	4,838.16	4,854.93	4,572.34	45.96	32.69	-133.38	-585.14	-1,428.63	2,269.92	2,204.80	65.12	34.856		
5,500.00	4,925.15	4,942.78	4,653.69	46.95	33.37	-133.38	-596.13	-1,459.93	2,317.69	2,251.19	66.49	34.855		
5,600.00	5,012.15	5,030.63	4,735.04	47.94	34.06	-133.38	-607.11	-1,491.23	2,365.46	2,297.59	67.87	34.854		
5,700.00	5,099.14	5,118.48	4,816.39	48.93	34.75	-133.38	-618.09	-1,522.53	2,413.23	2,343.99	69.24	34.853		
5,800.00	5,186.13	5,206.34	4,897.74	49.92	35.44	-133.38	-629.08	-1,553.83	2,461.00	2,390.39	70.61	34.852		
5,900.00	5,273.13	5,294.19	4,979.09	50.91	36.13	-133.38	-640.06	-1,585.14	2,508.77	2,436.78	71.99	34.851		
6,000.00	5,360.12	5,382.04	5,060.43	51.90	36.82	-133.38	-651.04	-1,616.44	2,556.54	2,483.18	73.36	34.849		
6,100.00	5,447.11	5,469.89	5,141.78	52.89	37.51	-133.38	-662.03	-1,647.74	2,604.31	2,529.58	74.73	34.848		
6,200.00	5,534.10	5,557.74	5,223.13	53.88	38.20	-133.37	-673.01	-1,679.04	2,652.08	2,575.97	76.11	34.846		
6,300.00	5,621.10	5,645.60	5,304.48	54.87	38.89	-133.37	-683.99	-1,710.34	2,699.85	2,622.37	77.48	34.845		
6,400.00	5,708.09	5,733.45	5,385.83	55.86	39.58	-133.37	-694.98	-1,741.64	2,747.62	2,668.76	78.86	34.843		
6,500.00	5,795.08	5,821.30	5,467.18	56.85	40.27	-133.37	-705.96	-1,772.94	2,795.39	2,715.16	80.23	34.841		
6,600.00	5,882.07	5,909.15	5,548.53	57.84	40.96	-133.37	-716.94	-1,804.24	2,843.16	2,761.55	81.61	34.840		
6,700.00	5,969.07	5,997.01	5,629.88	58.83	41.65	-133.37	-727.93	-1,835.54	2,890.93	2,807.95	82.98	34.838		
6,800.00	6,056.06	6,084.86	5,711.23	59.83	42.34	-133.37	-738.91	-1,866.85	2,938.70	2,854.34	84.36	34.836		
6,900.00	6,143.05	6,172.71	5,792.57	60.82	43.03	-133.37	-749.89	-1,898.15	2,986.47	2,900.74	85.73	34.834		
7,000.00	6,230.05	6,260.56	5,873.92	61.81	43.72	-133.37	-760.88	-1,929.45	3,034.24	2,947.13	87.11	34.832		
7,100.00	6,317.04	6,348.41	5,955.27	62.80	44.41	-133.37	-771.86	-1,960.75	3,082.01	2,993.52	88.49	34.831		
7,200.00	6,404.03	6,436.27	6,036.62	63.79	45.10	-133.37	-782.84	-1,992.05	3,129.78	3,039.92	89.86	34.829		
7,300.00	6,491.02	6,524.12	6,117.97	64.78	45.79	-133.37	-793.83	-2,023.35	3,177.55	3,086.31	91.24	34.827		
7,400.00	6,578.02	6,611.97	6,199.32	65.77	46.48	-133.37	-804.81	-2,054.65	3,225.32	3,132.71	92.62	34.825		
7,500.00	6,665.01	6,699.82	6,280.67	66.76	47.17	-133.37	-815.79	-2,085.95	3,273.09	3,179.10	93.99	34.823		
7,600.00	6,752.00	6,787.68	6,362.02	67.76	47.86	-133.37	-826.78	-2,117.25	3,320.86	3,225.49	95.37	34.821		
7,700.00	6,838.99	6,875.53	6,443.36	68.75	48.55	-133.37	-837.76	-2,148.56	3,368.63	3,271.88	96.75	34.819		
7,800.00	6,925.99	6,963.38	6,524.71	69.74	49.24	-133.37	-848.74	-2,179.86	3,416.40	3,318.28	98.12	34.817		
7,900.00	7,012.98	7,051.23	6,606.06	70.73	49.93	-133.37	-859.73	-2,211.16	3,464.17	3,364.67	99.50	34.815		
8,000.00	7,099.97	7,139.09	6,687.41	71.72	50.62	-133.37	-870.71	-2,242.46	3,511.94	3,411.06	100.88	34.813		
8,100.00	7,186.97	7,226.94	6,768.76	72.71	51.31	-133.37	-881.69	-2,273.76	3,559.71	3,457.45	102.26	34.811		
8,200.00	7,273.96	7,314.89	6,850.20	73.74	52.00	-123.86	-892.69	-2,305.10	3,607.12	3,503.46	103.67	34.796		
8,300.00	7,352.95	7,402.40	6,931.23	74.97	52.69	-110.67	-903.63	-2,336.27	3,651.85	3,546.62	105.23	34.703		
8,400.00	7,423.63	7,486.95	7,009.53	76.39	53.36	-101.43	-914.20	-2,366.40	3,692.59	3,585.64	106.95	34.526		
8,500.00	7,482.96	7,565.99	7,082.72	77.96	53.98	-94.95	-924.08	-2,394.56	3,728.53	3,619.77	108.76	34.281		
8,600.00	7,529.15	7,637.12	7,148.58	79.64	54.54	-90.46	-932.97	-2,419.90	3,759.15	3,648.55	110.61	33.986		
8,700.00	7,560.79	7,698.16	7,205.10	81.35	55.02	-87.50	-940.61	-2,441.65	3,784.17	3,671.76	112.41	33.665		
8,800.00	7,576.92	7,981.90	7,435.41	83.05	58.32	-88.40	-971.75	-2,599.37	3,802.20	3,683.13	119.06	31.935		
8,900.00	7,579.00	8,440.77	7,579.00	84.68	66.95	-89.97	-991.41	-3,022.48	3,806.13	3,673.14	132.99	28.620		
9,000.00	7,579.00	8,540.77	7,579.00	86.34	69.00	-89.97	-991.48	-3,122.48	3,806.33	3,669.14	137.19	27.744		
9,100.00	7,579.00	8,640.77	7,579.00	88.04	71.09	-89.97	-991.55	-3,222.48	3,806.53	3,665.05	141.48	26.905		
9,200.00	7,579.00	8,740.77	7,579.00	89.80	73.22	-89.97	-991.63	-3,322.48	3,806.73	3,660.89	145.84	26.102		
9,300.00	7,579.00	8,840.77	7,579.00	91.59	75.39	-89.97	-991.70	-3,422.48	3,806.92	3,656.66	150.27	25.334		
9,400.00	7,579.00	8,940.77	7,579.00	93.42	77.59	-89.97	-991.77	-3,522.48	3,807.12	3,652.36	154.76	24.600		
9,500.00	7,579.00	9,040.77	7,579.00	95.30	79.82	-89.97	-991.85	-3,622.48	3,807.32	3,648.01	159.31	23.900		
9,600.00	7,579.00	9,140.77	7,579.00	97.21	82.08	-89.97	-991.92	-3,722.48	3,807.52	3,643.61	163.91	23.230		
9,700.00	7,579.00	9,240.77	7,579.00	99.15	84.37	-89.97	-991.99	-3,822.48	3,807.72	3,639.16	168.55	22.591		
9,800.00	7,579.00	9,340.77	7,579.00	101.13	86.68	-89.97	-992.07	-3,922.48	3,807.92	3,634.67	173.24	21.980		
9,900.00	7,579.00	9,440.77	7,579.00	103.15	89.01	-89.97	-992.14	-4,022.48	3,808.11	3,630.14	177.98	21.397		
10,000.00	7,579.00	9,540.77	7,579.00	105.19	91.37	-89.97	-992.21	-4,122.48	3,808.31	3,625.57	182.75	20.839		
10,100.00	7,579.00	9,640.77	7,579.00	107.26	93.74	-89.97	-992.29	-4,222.48	3,808.51	3,620.96	187.55	20.307		
10,200.00	7,579.00	9,740.77	7,579.00	109.36	96.13	-89.97	-992.36	-4,322.48	3,808.71	3,616.32	192.39	19.797		
10,300.00	7,579.00	9,840.77	7,579.00	111.49	98.54	-89.97	-992.43	-4,422.48	3,808.91	3,611.65	197.25	19.310		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 13-T1S-R66W - WARBLER 13W-27-10 - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
10,400.00	7,579.00	9,940.77	7,579.00	113.64	100.96	-89.97	-992.51	-4,522.47	3,809.10	3,606.96	202.15	18.843			
10,500.00	7,579.00	10,040.76	7,579.00	115.82	103.40	-89.97	-992.58	-4,622.47	3,809.30	3,602.24	207.06	18.397			
10,600.00	7,579.00	10,140.76	7,579.00	118.01	105.85	-89.97	-992.65	-4,722.47	3,809.50	3,597.49	212.01	17.969			
10,700.00	7,579.00	10,240.76	7,579.00	120.23	108.31	-89.97	-992.73	-4,822.47	3,809.70	3,592.73	216.97	17.559			
10,800.00	7,579.00	10,340.76	7,579.00	122.47	110.78	-89.97	-992.80	-4,922.47	3,809.90	3,587.94	221.96	17.165			
10,900.00	7,579.00	10,440.76	7,579.00	124.73	113.27	-89.97	-992.87	-5,022.47	3,810.10	3,583.13	226.96	16.787			
11,000.00	7,579.00	10,540.76	7,579.00	127.01	115.76	-89.97	-992.95	-5,122.47	3,810.29	3,578.31	231.98	16.425			
11,100.00	7,579.00	10,640.76	7,579.00	129.30	118.27	-89.97	-993.02	-5,222.47	3,810.49	3,573.47	237.02	16.076			
11,200.00	7,579.00	10,740.76	7,579.00	131.61	120.78	-89.97	-993.09	-5,322.47	3,810.69	3,568.61	242.08	15.741			
11,300.00	7,579.00	10,840.76	7,579.00	133.93	123.30	-89.97	-993.16	-5,422.47	3,810.89	3,563.74	247.15	15.419			
11,400.00	7,579.00	10,940.76	7,579.00	136.27	125.83	-89.97	-993.24	-5,522.47	3,811.09	3,558.85	252.23	15.109			
11,500.00	7,579.00	11,040.76	7,579.00	138.62	128.36	-89.97	-993.31	-5,622.47	3,811.29	3,553.95	257.33	14.811			
11,600.00	7,579.00	11,140.76	7,579.00	140.99	130.91	-89.97	-993.38	-5,722.47	3,811.48	3,549.04	262.44	14.523			
11,700.00	7,579.00	11,240.76	7,579.00	143.37	133.45	-89.97	-993.46	-5,822.47	3,811.68	3,544.12	267.56	14.246			
11,800.00	7,579.00	11,340.76	7,579.00	145.76	136.01	-89.97	-993.53	-5,922.47	3,811.88	3,539.19	272.70	13.979			
11,900.00	7,579.00	11,440.76	7,579.00	148.16	138.57	-89.97	-993.60	-6,022.47	3,812.08	3,534.24	277.84	13.720			
12,000.00	7,579.00	11,540.76	7,579.00	150.58	141.14	-89.97	-993.68	-6,122.47	3,812.28	3,529.29	282.99	13.471			
12,100.00	7,579.00	11,640.76	7,579.00	153.00	143.71	-89.97	-993.75	-6,222.47	3,812.48	3,524.32	288.15	13.231			
12,200.00	7,579.00	11,740.76	7,579.00	155.43	146.28	-89.97	-993.82	-6,322.47	3,812.67	3,519.35	293.32	12.998			
12,300.00	7,579.00	11,840.76	7,579.00	157.87	148.86	-89.97	-993.90	-6,422.47	3,812.87	3,514.37	298.50	12.773			
12,400.00	7,579.00	11,940.76	7,579.00	160.32	151.45	-89.97	-993.97	-6,522.47	3,813.07	3,509.38	303.69	12.556			
12,500.00	7,579.00	12,040.76	7,579.00	162.78	154.04	-89.97	-994.04	-6,622.47	3,813.27	3,504.38	308.89	12.345			
12,600.00	7,579.00	12,140.76	7,579.00	165.25	156.63	-89.97	-994.12	-6,722.47	3,813.47	3,499.38	314.09	12.141			
12,700.00	7,579.00	12,240.76	7,579.00	167.73	159.23	-89.97	-994.19	-6,822.47	3,813.67	3,494.37	319.30	11.944			
12,800.00	7,579.00	12,340.76	7,579.00	170.21	161.83	-89.97	-994.26	-6,922.47	3,813.86	3,489.35	324.51	11.753			
12,900.00	7,579.00	12,440.76	7,579.00	172.70	164.43	-89.97	-994.34	-7,022.47	3,814.06	3,484.33	329.73	11.567			
13,000.00	7,579.00	12,540.76	7,579.00	175.19	167.04	-89.97	-994.41	-7,122.47	3,814.26	3,479.30	334.96	11.387			
13,100.00	7,579.00	12,640.76	7,579.00	177.70	169.65	-89.97	-994.48	-7,222.47	3,814.46	3,474.27	340.19	11.213			
13,200.00	7,579.00	12,740.76	7,579.00	180.20	172.26	-89.97	-994.56	-7,322.47	3,814.66	3,469.23	345.43	11.043			
13,300.00	7,579.00	12,840.76	7,579.00	182.72	174.88	-89.97	-994.63	-7,422.47	3,814.86	3,464.18	350.67	10.879			
13,400.00	7,579.00	12,940.76	7,579.00	185.24	177.49	-89.97	-994.70	-7,522.47	3,815.05	3,459.13	355.92	10.719			
13,500.00	7,579.00	13,040.76	7,579.00	187.76	180.12	-89.97	-994.78	-7,622.47	3,815.25	3,454.08	361.18	10.563			
13,600.00	7,579.00	13,140.76	7,579.00	190.30	182.74	-89.97	-994.85	-7,722.47	3,815.45	3,449.02	366.43	10.412			
13,700.00	7,579.00	13,240.76	7,579.00	192.83	185.36	-89.97	-994.92	-7,822.47	3,815.65	3,443.95	371.69	10.266			
13,800.00	7,579.00	13,340.76	7,579.00	195.37	187.99	-89.97	-995.00	-7,922.47	3,815.85	3,438.89	376.96	10.123			
13,900.00	7,579.00	13,440.76	7,579.00	197.92	190.62	-89.97	-995.07	-8,022.47	3,816.05	3,433.81	382.23	9.984			
14,000.00	7,579.00	13,540.76	7,579.00	200.47	193.25	-89.97	-995.14	-8,122.47	3,816.24	3,428.74	387.50	9.848			
14,100.00	7,579.00	13,640.76	7,579.00	203.02	195.89	-89.97	-995.22	-8,222.47	3,816.44	3,423.66	392.78	9.716			
14,200.00	7,579.00	13,740.76	7,579.00	205.58	198.52	-89.97	-995.29	-8,322.47	3,816.64	3,418.58	398.06	9.588			
14,300.00	7,579.00	13,840.76	7,579.00	208.14	201.16	-89.97	-995.36	-8,422.47	3,816.84	3,413.49	403.35	9.463			
14,400.00	7,579.00	13,940.76	7,579.00	210.70	203.80	-89.97	-995.44	-8,522.47	3,817.04	3,408.40	408.63	9.341			
14,500.00	7,579.00	14,040.76	7,579.00	213.27	206.44	-89.97	-995.51	-8,622.47	3,817.24	3,403.31	413.92	9.222			
14,600.00	7,579.00	14,140.76	7,579.00	215.84	209.08	-89.97	-995.58	-8,722.47	3,817.43	3,398.22	419.22	9.106			
14,700.00	7,579.00	14,240.76	7,579.00	218.42	211.73	-89.97	-995.65	-8,822.47	3,817.63	3,393.12	424.51	8.993			
14,800.00	7,579.00	14,340.76	7,579.00	221.00	214.37	-89.97	-995.73	-8,922.47	3,817.83	3,388.02	429.81	8.883			
14,900.00	7,579.00	14,440.76	7,579.00	223.58	217.02	-89.97	-995.80	-9,022.46	3,818.03	3,382.92	435.11	8.775			
15,000.00	7,579.00	14,540.76	7,579.00	226.17	219.67	-89.97	-995.87	-9,122.46	3,818.23	3,377.81	440.42	8.670			
15,100.00	7,579.00	14,640.76	7,579.00	228.75	222.32	-89.97	-995.95	-9,222.46	3,818.42	3,372.70	445.72	8.567			
15,200.00	7,579.00	14,740.76	7,579.00	231.34	224.97	-89.97	-996.02	-9,322.46	3,818.62	3,367.59	451.03	8.466			
15,300.00	7,579.00	14,840.76	7,579.00	233.94	227.62	-89.97	-996.09	-9,422.46	3,818.82	3,362.48	456.34	8.368			
15,400.00	7,579.00	14,940.76	7,579.00	236.53	230.28	-89.97	-996.17	-9,522.46	3,819.02	3,357.36	461.66	8.272			
15,500.00	7,579.00	15,040.76	7,579.00	239.13	232.93	-89.97	-996.24	-9,622.46	3,819.22	3,352.24	466.97	8.179			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
15,600.00	7,579.00	15,140.75	7,579.00	241.73	235.59	-89.97	-996.31	-9,722.46	3,819.42	3,347.13	472.29	8.087		
15,700.00	7,579.00	15,240.75	7,579.00	244.34	238.25	-89.97	-996.39	-9,822.46	3,819.61	3,342.00	477.61	7.997		
15,800.00	7,579.00	15,340.75	7,579.00	246.94	240.90	-89.97	-996.46	-9,922.46	3,819.81	3,336.88	482.93	7.910		
15,900.00	7,579.00	15,440.75	7,579.00	249.55	243.56	-89.97	-996.53	-10,022.46	3,820.01	3,331.76	488.26	7.824		
16,000.00	7,579.00	15,540.75	7,579.00	252.16	246.22	-89.97	-996.61	-10,122.46	3,820.21	3,326.63	493.58	7.740		
16,100.00	7,579.00	15,640.75	7,579.00	254.77	248.88	-89.97	-996.68	-10,222.46	3,820.41	3,321.50	498.91	7.658		
16,200.00	7,579.00	15,740.75	7,579.00	257.38	251.55	-89.97	-996.75	-10,322.46	3,820.61	3,316.37	504.24	7.577		
16,300.00	7,579.00	15,840.75	7,579.00	260.00	254.21	-89.97	-996.83	-10,422.46	3,820.80	3,311.24	509.57	7.498		
16,400.00	7,579.00	15,940.75	7,579.00	262.62	256.87	-89.97	-996.90	-10,522.46	3,821.00	3,306.10	514.90	7.421		
16,500.00	7,579.00	16,040.75	7,579.00	265.24	259.54	-89.97	-996.97	-10,622.46	3,821.20	3,300.97	520.23	7.345		
16,600.00	7,579.00	16,140.75	7,579.00	267.86	262.20	-89.97	-997.05	-10,722.46	3,821.40	3,295.83	525.57	7.271		
16,700.00	7,579.00	16,240.75	7,579.00	270.48	264.87	-89.97	-997.12	-10,822.46	3,821.60	3,290.69	530.90	7.198		
16,800.00	7,579.00	16,340.75	7,579.00	273.10	267.53	-89.97	-997.19	-10,922.46	3,821.80	3,285.55	536.24	7.127		
16,900.00	7,579.00	16,440.75	7,579.00	275.73	270.20	-89.97	-997.27	-11,022.46	3,821.99	3,280.41	541.58	7.057		
17,000.00	7,579.00	16,540.75	7,579.00	278.36	272.87	-89.97	-997.34	-11,122.46	3,822.19	3,275.27	546.92	6.989		
17,100.00	7,579.00	16,640.75	7,579.00	280.99	275.54	-89.97	-997.41	-11,222.46	3,822.39	3,270.13	552.26	6.921		
17,200.00	7,579.00	16,740.75	7,579.00	283.62	278.21	-89.97	-997.49	-11,322.46	3,822.59	3,264.98	557.61	6.855		
17,300.00	7,579.00	16,840.75	7,579.00	286.25	280.88	-89.97	-997.56	-11,422.46	3,822.79	3,259.84	562.95	6.791		
17,400.00	7,579.00	16,940.75	7,579.00	288.88	283.55	-89.97	-997.63	-11,522.46	3,822.99	3,254.69	568.30	6.727		
17,500.00	7,579.00	17,040.75	7,579.00	291.52	286.22	-89.97	-997.71	-11,622.46	3,823.18	3,249.54	573.64	6.665		
17,600.00	7,579.00	17,140.75	7,579.00	294.15	288.89	-89.97	-997.78	-11,722.46	3,823.38	3,244.39	578.99	6.604		
17,700.00	7,579.00	17,240.75	7,579.00	296.79	291.57	-89.97	-997.85	-11,822.46	3,823.58	3,239.24	584.34	6.543		
17,800.00	7,579.00	17,340.75	7,579.00	299.43	294.24	-89.97	-997.93	-11,922.46	3,823.78	3,234.09	589.69	6.484		
17,900.00	7,579.00	17,440.75	7,579.00	302.07	296.91	-89.97	-998.00	-12,022.46	3,823.98	3,228.93	595.04	6.426		
18,000.00	7,579.00	17,540.75	7,579.00	304.71	299.59	-89.97	-998.07	-12,122.46	3,824.18	3,223.78	600.39	6.369		
18,100.00	7,579.00	17,640.75	7,579.00	307.35	302.26	-89.97	-998.14	-12,222.46	3,824.37	3,218.63	605.75	6.313		
18,200.00	7,579.00	17,740.75	7,579.00	310.00	304.94	-89.97	-998.22	-12,322.46	3,824.57	3,213.47	611.10	6.258		
18,300.00	7,579.00	17,840.75	7,579.00	312.64	307.61	-89.97	-998.29	-12,422.46	3,824.77	3,208.31	616.46	6.204		
18,400.00	7,579.00	17,940.75	7,579.00	315.29	310.29	-89.97	-998.36	-12,522.46	3,824.97	3,203.16	621.81	6.151		
18,500.00	7,579.00	18,040.75	7,579.00	317.93	312.97	-89.97	-998.44	-12,622.46	3,825.17	3,198.00	627.17	6.099		
18,600.00	7,579.00	18,140.75	7,579.00	320.58	315.64	-89.97	-998.51	-12,722.46	3,825.37	3,192.84	632.53	6.048		
18,700.00	7,579.00	18,240.75	7,579.00	323.23	318.32	-89.97	-998.58	-12,822.46	3,825.56	3,187.68	637.88	5.997		
18,800.00	7,579.00	18,340.75	7,579.00	325.88	321.00	-89.97	-998.66	-12,922.46	3,825.76	3,182.52	643.24	5.948		
18,900.00	7,579.00	18,440.75	7,579.00	328.53	323.68	-89.97	-998.73	-13,022.46	3,825.96	3,177.36	648.60	5.899		
19,000.00	7,579.00	18,540.75	7,579.00	331.18	326.36	-89.97	-998.80	-13,122.46	3,826.16	3,172.19	653.96	5.851		
19,100.00	7,579.00	18,640.75	7,579.00	333.83	329.04	-89.97	-998.88	-13,222.46	3,826.36	3,167.03	659.33	5.803		
19,200.00	7,579.00	18,740.75	7,579.00	336.48	331.72	-89.97	-998.95	-13,322.46	3,826.56	3,161.87	664.69	5.757		
19,300.00	7,579.00	18,840.75	7,579.00	339.14	334.40	-89.97	-999.02	-13,422.46	3,826.75	3,156.70	670.05	5.711		
19,400.00	7,579.00	18,940.75	7,579.00	341.79	337.08	-89.97	-999.10	-13,522.45	3,826.95	3,151.54	675.41	5.666		
19,500.00	7,579.00	19,040.75	7,579.00	344.45	339.76	-89.97	-999.17	-13,622.45	3,827.15	3,146.37	680.78	5.622		
19,600.00	7,579.00	19,140.75	7,579.00	347.10	342.44	-89.97	-999.24	-13,722.45	3,827.35	3,141.20	686.14	5.578		
19,700.00	7,579.00	19,240.75	7,579.00	349.76	345.12	-89.97	-999.32	-13,822.45	3,827.55	3,136.04	691.51	5.535		
19,800.00	7,579.00	19,340.75	7,579.00	352.42	347.80	-89.97	-999.39	-13,922.45	3,827.74	3,130.87	696.88	5.493		
19,900.00	7,579.00	19,440.75	7,579.00	355.07	350.48	-89.97	-999.46	-14,022.45	3,827.94	3,125.70	702.24	5.451		
20,000.00	7,579.00	19,540.75	7,579.00	357.73	353.17	-89.97	-999.54	-14,122.45	3,828.14	3,120.53	707.61	5.410		
20,100.00	7,579.00	19,640.75	7,579.00	360.39	355.85	-89.97	-999.61	-14,222.45	3,828.34	3,115.36	712.98	5.370		
20,200.00	7,579.00	19,740.75	7,579.00	363.05	358.53	-89.97	-999.68	-14,322.45	3,828.54	3,110.19	718.35	5.330		
20,300.00	7,579.00	19,840.75	7,579.00	365.71	361.22	-89.97	-999.76	-14,422.45	3,828.74	3,105.02	723.72	5.290		
20,400.00	7,579.00	19,940.75	7,579.00	368.38	363.90	-89.97	-999.83	-14,522.45	3,828.93	3,099.85	729.09	5.252		
20,500.00	7,579.00	20,040.75	7,579.00	371.04	366.58	-89.97	-999.90	-14,622.45	3,829.13	3,094.68	734.46	5.214		
20,600.00	7,579.00	20,140.75	7,579.00	373.70	369.27	-89.97	-999.98	-14,722.45	3,829.33	3,089.50	739.83	5.176		
20,700.00	7,579.00	20,240.75	7,579.00	376.36	371.95	-89.97	-1,000.05	-14,822.45	3,829.53	3,084.33	745.20	5.139		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 13-T1S-R66W - WARBLER 13W-27-10 - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
20,800.00	7,579.00	20,340.74	7,579.00	379.03	374.64	-89.97	-1,000.12	-14,922.45	3,829.73	3,079.16	750.57	5.102		
20,900.00	7,579.00	20,440.74	7,579.00	381.69	377.32	-89.97	-1,000.20	-15,022.45	3,829.93	3,073.98	755.94	5.066		
21,000.00	7,579.00	20,540.74	7,579.00	384.36	380.01	-89.97	-1,000.27	-15,122.45	3,830.12	3,068.81	761.32	5.031		
21,100.00	7,579.00	20,640.74	7,579.00	387.02	382.69	-89.97	-1,000.34	-15,222.45	3,830.32	3,063.63	766.69	4.996		
21,200.00	7,579.00	20,740.74	7,579.00	389.69	385.38	-89.97	-1,000.42	-15,322.45	3,830.52	3,058.46	772.06	4.961		
21,300.00	7,579.00	20,840.74	7,579.00	392.36	388.07	-89.97	-1,000.49	-15,422.45	3,830.72	3,053.28	777.44	4.927		
21,400.00	7,579.00	20,940.74	7,579.00	395.02	390.75	-89.97	-1,000.56	-15,522.45	3,830.92	3,048.10	782.81	4.894		
21,500.00	7,579.00	21,040.74	7,579.00	397.69	393.44	-89.97	-1,000.63	-15,622.45	3,831.12	3,042.93	788.19	4.861		
21,600.00	7,579.00	21,140.74	7,579.00	400.36	396.13	-89.97	-1,000.71	-15,722.45	3,831.31	3,037.75	793.56	4.828		
21,700.00	7,579.00	21,240.74	7,579.00	403.03	398.81	-89.97	-1,000.78	-15,822.45	3,831.51	3,032.57	798.94	4.796		
21,800.00	7,579.00	21,340.74	7,579.00	405.70	401.50	-89.97	-1,000.85	-15,922.45	3,831.71	3,027.39	804.32	4.764		
21,900.00	7,579.00	21,440.74	7,579.00	408.37	404.19	-89.97	-1,000.93	-16,022.45	3,831.91	3,022.22	809.69	4.733		
22,000.00	7,579.00	21,540.74	7,579.00	411.04	406.88	-89.97	-1,001.00	-16,122.45	3,832.11	3,017.04	815.07	4.702		
22,100.00	7,579.00	21,640.74	7,579.00	413.71	409.56	-89.97	-1,001.07	-16,222.45	3,832.31	3,011.86	820.45	4.671		
22,200.00	7,579.00	21,740.74	7,579.00	416.38	412.25	-89.97	-1,001.15	-16,322.45	3,832.50	3,006.68	825.83	4.641		
22,300.00	7,579.00	21,840.74	7,579.00	419.05	414.94	-89.97	-1,001.22	-16,422.45	3,832.70	3,001.50	831.20	4.611		
22,400.00	7,579.00	21,940.74	7,579.00	421.72	417.63	-89.97	-1,001.29	-16,522.45	3,832.90	2,996.32	836.58	4.582		
22,440.61	7,579.00	21,981.35	7,579.00	422.81	418.72	-89.97	-1,001.32	-16,563.05	3,832.98	2,994.21	838.77	4.570 SF		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-MWD OWSG													Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	1.00	-1.00	0.00	0.00	-122.57	-96.53	-151.09	179.29						
100.00	100.00	101.00	99.00	0.13	0.14	-122.57	-96.53	-151.09	179.29	179.02	0.27	658.108			
200.00	199.98	201.02	198.98	0.49	0.50	-80.72	-96.53	-151.09	179.00	178.02	0.99	181.064			
300.00	299.84	301.16	298.84	0.86	0.86	-82.39	-96.53	-151.09	178.23	176.52	1.71	104.155			
400.00	399.45	398.45	398.45	1.23	1.20	-85.19	-96.53	-151.09	177.29	174.85	2.44	72.758			
425.69	424.99	422.60	422.60	1.33	1.29	-86.04	-96.57	-151.17	177.17	174.55	2.62	67.591	CC, ES		
500.00	498.70	492.07	492.05	1.63	1.53	-88.78	-97.31	-152.35	178.23	175.07	3.16	56.431			
600.00	597.47	585.11	584.98	2.05	1.85	-93.02	-99.70	-156.16	183.28	179.38	3.90	47.003			
700.00	695.62	677.43	676.99	2.50	2.18	-97.57	-103.65	-162.47	192.95	188.28	4.67	41.323			
800.00	793.06	768.77	767.76	2.99	2.52	-102.09	-109.11	-171.18	207.61	202.14	5.47	37.981			
900.00	889.64	858.92	856.96	3.52	2.87	-106.29	-116.01	-182.17	227.38	221.09	6.29	36.161			
1,000.00	985.27	947.67	944.34	4.10	3.24	-110.00	-124.24	-195.32	252.23	245.09	7.13	35.352			
1,100.00	1,079.82	1,034.81	1,029.63	4.72	3.63	-113.14	-133.73	-210.45	281.97	273.96	8.01	35.216			
1,200.00	1,173.17	1,120.17	1,112.61	5.40	4.04	-115.71	-144.35	-227.39	316.36	307.45	8.91	35.519			
1,300.00	1,265.21	1,203.60	1,193.10	6.13	4.46	-117.76	-155.99	-245.97	355.11	345.28	9.83	36.121			
1,400.00	1,355.84	1,284.96	1,270.95	6.92	4.91	-119.36	-168.54	-265.99	397.97	387.18	10.79	36.875			
1,500.00	1,444.94	1,364.13	1,346.03	7.77	5.38	-120.55	-181.87	-287.27	444.69	432.90	11.78	37.734			
1,600.00	1,532.44	1,441.06	1,418.29	8.68	5.87	-121.63	-195.88	-309.62	494.98	482.18	12.81	38.652			
1,700.00	1,619.43	1,516.51	1,488.46	9.62	6.37	-123.05	-210.62	-333.13	547.57	533.74	13.84	39.573			
1,800.00	1,706.42	1,590.81	1,556.81	10.56	6.90	-124.05	-226.08	-357.80	601.76	586.87	14.88	40.434			
1,900.00	1,793.42	1,664.43	1,623.77	11.52	7.45	-124.74	-242.32	-383.72	657.36	641.42	15.95	41.222			
2,000.00	1,880.41	1,746.91	1,698.41	12.48	8.10	-125.33	-260.97	-413.47	713.60	696.44	17.16	41.574			
2,100.00	1,967.40	1,829.39	1,773.04	13.45	8.75	-125.83	-279.62	-443.23	769.88	751.49	18.39	41.854			
2,200.00	2,054.39	1,911.87	1,847.67	14.42	9.42	-126.27	-298.27	-472.98	826.20	806.57	19.64	42.076			
2,300.00	2,141.39	2,005.65	1,922.31	15.39	10.18	-126.65	-316.92	-502.74	882.55	861.58	20.97	42.093			
2,400.00	2,228.38	2,076.84	1,996.94	16.36	10.77	-126.98	-335.56	-532.49	938.92	916.77	22.15	42.397			
2,500.00	2,315.37	2,159.32	2,071.58	17.34	11.45	-127.28	-354.21	-562.25	995.30	971.89	23.41	42.514			
2,600.00	2,402.37	2,241.80	2,146.21	18.32	12.13	-127.54	-372.86	-592.00	1,051.71	1,027.03	24.68	42.610			
2,700.00	2,489.36	2,324.28	2,220.84	19.30	12.82	-127.78	-391.51	-621.76	1,108.13	1,082.17	25.96	42.691			
2,800.00	2,576.35	2,406.77	2,295.48	20.28	13.51	-127.99	-410.16	-651.51	1,164.56	1,137.32	27.24	42.758			
2,900.00	2,663.34	2,489.25	2,370.11	21.26	14.21	-128.19	-428.81	-681.26	1,221.00	1,192.48	28.52	42.813			
3,000.00	2,750.34	2,571.73	2,444.74	22.24	14.90	-128.37	-447.46	-711.02	1,277.45	1,247.64	29.80	42.860			
3,100.00	2,837.33	2,654.21	2,519.38	23.23	15.60	-128.53	-466.10	-740.77	1,333.90	1,302.81	31.09	42.900			
3,200.00	2,924.32	2,736.70	2,594.01	24.21	16.30	-128.68	-484.75	-770.53	1,390.37	1,357.98	32.38	42.934			
3,300.00	3,011.31	2,819.18	2,668.65	25.20	17.00	-128.81	-503.40	-800.28	1,446.84	1,413.16	33.68	42.962			
3,400.00	3,098.31	2,901.66	2,743.28	26.18	17.70	-128.94	-522.05	-830.04	1,503.31	1,468.34	34.97	42.987			
3,500.00	3,185.30	2,984.14	2,817.91	27.17	18.40	-129.06	-540.70	-859.79	1,559.79	1,523.52	36.27	43.007			
3,600.00	3,272.29	3,066.62	2,892.55	28.16	19.10	-129.17	-559.35	-889.55	1,616.27	1,578.71	37.57	43.025			
3,700.00	3,359.29	3,149.11	2,967.18	29.14	19.81	-129.27	-578.00	-919.30	1,672.76	1,633.89	38.87	43.040			
3,800.00	3,446.28	3,231.59	3,041.81	30.13	20.51	-129.37	-596.64	-949.06	1,729.25	1,689.08	40.17	43.053			
3,900.00	3,533.27	3,314.07	3,116.45	31.12	21.21	-129.46	-615.29	-978.81	1,785.74	1,744.28	41.47	43.064			
4,000.00	3,620.26	3,403.45	3,191.08	32.10	21.98	-129.54	-633.94	-1,008.57	1,842.24	1,799.42	42.82	43.021			
4,100.00	3,707.26	3,479.04	3,265.72	33.09	22.63	-129.62	-652.59	-1,038.32	1,898.74	1,854.67	44.07	43.081			
4,200.00	3,794.25	3,561.52	3,340.35	34.08	23.33	-129.70	-671.24	-1,068.08	1,955.24	1,909.86	45.38	43.088			
4,300.00	3,881.24	3,644.00	3,414.98	35.07	24.04	-129.77	-689.89	-1,097.83	2,011.74	1,965.06	46.68	43.093			
4,400.00	3,968.23	3,726.48	3,489.62	36.06	24.75	-129.83	-708.54	-1,127.59	2,068.25	2,020.26	47.99	43.098			
4,500.00	4,055.23	3,808.96	3,564.25	37.05	25.45	-129.90	-727.19	-1,157.34	2,124.76	2,075.46	49.30	43.102			
4,600.00	4,142.22	3,908.55	3,638.88	38.04	26.31	-129.96	-745.83	-1,187.10	2,181.27	2,130.53	50.73	43.994			
4,700.00	4,229.21	3,973.93	3,713.52	39.03	26.87	-130.01	-764.48	-1,216.85	2,237.78	2,185.86	51.91	43.107			
4,800.00	4,316.21	4,056.41	3,788.15	40.02	27.58	-130.07	-783.13	-1,246.61	2,294.29	2,241.07	53.22	43.109			
4,900.00	4,403.20	4,138.89	3,862.79	41.01	28.29	-130.12	-801.78	-1,276.36	2,350.80	2,296.27	54.53	43.110			
5,000.00	4,490.19	4,221.38	3,937.42	42.00	29.00	-130.17	-820.43	-1,306.12	2,407.31	2,351.47	55.84	43.111			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	4,577.18	4,303.86	4,012.05	42.99	29.71	-130.21	-839.08	-1,335.87	2,463.83	2,406.68	57.15	43.112		
5,200.00	4,664.18	4,386.34	4,086.69	43.98	30.42	-130.26	-857.73	-1,365.63	2,520.35	2,461.89	58.46	43.112		
5,300.00	4,751.17	4,468.82	4,161.32	44.97	31.13	-130.30	-876.37	-1,395.38	2,576.86	2,517.09	59.77	43.111		
5,400.00	4,838.16	4,551.30	4,235.95	45.96	31.84	-130.34	-895.02	-1,425.14	2,633.38	2,572.30	61.08	43.111		
5,500.00	4,925.15	4,633.79	4,310.59	46.95	32.55	-130.38	-913.67	-1,454.89	2,689.90	2,627.51	62.40	43.110		
5,600.00	5,012.15	4,716.27	4,385.22	47.94	33.26	-130.42	-932.32	-1,484.65	2,746.42	2,682.71	63.71	43.109		
5,700.00	5,099.14	4,798.75	4,459.86	48.93	33.97	-130.45	-950.97	-1,514.40	2,802.94	2,737.92	65.02	43.108		
5,800.00	5,186.13	4,881.23	4,534.49	49.92	34.68	-130.49	-969.62	-1,544.16	2,859.46	2,793.13	66.34	43.106		
5,900.00	5,273.13	4,963.72	4,609.12	50.91	35.39	-130.52	-988.27	-1,573.91	2,915.99	2,848.34	67.65	43.105		
6,000.00	5,360.12	5,046.20	4,683.76	51.90	36.10	-130.55	-1,006.91	-1,603.67	2,972.51	2,903.55	68.96	43.103		
6,100.00	5,447.11	5,128.68	4,758.39	52.89	36.81	-130.58	-1,025.56	-1,633.42	3,029.03	2,958.76	70.28	43.101		
6,200.00	5,534.10	5,211.16	4,833.02	53.88	37.52	-130.61	-1,044.21	-1,663.18	3,085.56	3,013.97	71.59	43.099		
6,300.00	5,621.10	5,306.36	4,907.66	54.87	38.34	-130.64	-1,062.86	-1,692.93	3,142.08	3,069.08	73.01	43.039		
6,400.00	5,708.09	5,376.13	4,982.29	55.86	38.94	-130.67	-1,081.51	-1,722.68	3,198.61	3,124.38	74.22	43.094		
6,500.00	5,795.08	5,458.61	5,056.93	56.85	39.65	-130.70	-1,100.16	-1,752.44	3,255.13	3,179.59	75.54	43.092		
6,600.00	5,882.07	5,541.09	5,131.56	57.84	40.37	-130.72	-1,118.81	-1,782.19	3,311.66	3,234.80	76.86	43.089		
6,700.00	5,969.07	5,623.57	5,206.19	58.83	41.08	-130.75	-1,137.45	-1,811.95	3,368.19	3,290.01	78.17	43.087		
6,800.00	6,056.06	5,706.06	5,280.83	59.83	41.79	-130.77	-1,156.10	-1,841.70	3,424.71	3,345.22	79.49	43.084		
6,900.00	6,143.05	5,788.54	5,355.46	60.82	42.50	-130.79	-1,174.75	-1,871.46	3,481.24	3,400.43	80.81	43.082		
7,000.00	6,230.05	5,871.02	5,430.09	61.81	43.21	-130.82	-1,193.40	-1,901.21	3,537.77	3,455.64	82.12	43.079		
7,100.00	6,317.04	5,953.50	5,504.73	62.80	43.92	-130.84	-1,212.05	-1,930.97	3,594.30	3,510.86	83.44	43.076		
7,200.00	6,404.03	6,035.98	5,579.36	63.79	44.64	-130.86	-1,230.70	-1,960.72	3,650.82	3,566.07	84.76	43.073		
7,300.00	6,491.02	6,118.47	5,654.00	64.78	45.35	-130.88	-1,249.35	-1,990.48	3,707.35	3,621.28	86.08	43.070		
7,400.00	6,578.02	6,200.95	5,728.63	65.77	46.06	-130.90	-1,267.99	-2,020.23	3,763.88	3,676.49	87.40	43.067		
7,500.00	6,665.01	6,283.43	5,803.26	66.76	46.77	-130.92	-1,286.64	-2,049.99	3,820.41	3,731.70	88.71	43.064		
7,600.00	6,752.00	6,365.91	5,877.90	67.76	47.48	-130.94	-1,305.29	-2,079.74	3,876.94	3,786.91	90.03	43.061		
7,700.00	6,838.99	6,448.40	5,952.53	68.75	48.20	-130.96	-1,323.94	-2,109.50	3,933.47	3,842.12	91.35	43.058		
7,800.00	6,925.99	6,530.88	6,027.16	69.74	48.91	-130.97	-1,342.59	-2,139.25	3,990.00	3,897.33	92.67	43.055		
7,900.00	7,012.98	6,613.36	6,101.80	70.73	49.62	-130.99	-1,361.24	-2,169.01	4,046.53	3,952.54	93.99	43.051		
8,000.00	7,099.97	6,704.16	6,176.43	71.72	50.41	-131.01	-1,379.89	-2,198.76	4,103.06	4,007.69	95.38	43.019		
8,100.00	7,186.97	6,778.32	6,251.07	72.71	51.05	-131.02	-1,398.54	-2,228.52	4,159.59	4,062.96	96.63	43.045		
8,200.00	7,273.09	6,860.98	6,325.85	73.74	51.76	-120.82	-1,417.22	-2,258.33	4,215.69	4,117.70	97.99	43.022		
8,300.00	7,352.95	6,943.63	6,400.64	74.97	52.47	-106.51	-1,435.91	-2,288.15	4,268.56	4,169.01	99.55	42.879		
8,400.00	7,423.63	7,023.99	6,473.35	76.39	53.17	-96.41	-1,454.08	-2,317.14	4,316.57	4,215.27	101.30	42.610		
8,500.00	7,482.96	7,099.60	6,541.77	77.96	53.82	-89.27	-1,471.17	-2,344.41	4,358.64	4,255.43	103.21	42.232		
8,600.00	7,529.15	7,168.17	6,603.81	79.64	54.41	-84.34	-1,486.68	-2,369.15	4,393.97	4,288.78	105.19	41.770		
8,700.00	7,560.79	7,227.61	6,657.60	81.35	54.93	-81.10	-1,500.12	-2,390.59	4,422.04	4,314.85	107.19	41.254		
8,800.00	7,576.92	7,276.13	6,701.50	83.05	55.35	-79.26	-1,511.08	-2,408.10	4,442.54	4,333.42	109.11	40.714		
8,900.00	7,579.00	7,313.83	6,735.62	84.68	55.67	-79.00	-1,519.61	-2,421.70	4,456.49	4,345.58	110.91	40.181		
9,000.00	7,579.00	8,212.19	7,154.00	86.34	69.59	-84.54	-1,624.63	-3,121.30	4,459.68	4,326.43	133.24	33.471		
9,100.00	7,579.00	8,312.19	7,154.00	88.04	71.54	-84.54	-1,624.72	-3,221.30	4,459.89	4,322.39	137.50	32.435		
9,200.00	7,579.00	8,412.19	7,154.00	89.80	73.55	-84.54	-1,624.80	-3,321.30	4,460.10	4,318.27	141.84	31.446		
9,300.00	7,579.00	8,512.19	7,154.00	91.59	75.60	-84.55	-1,624.89	-3,421.30	4,460.32	4,314.08	146.24	30.500		
9,400.00	7,579.00	8,612.19	7,154.00	93.42	77.68	-84.55	-1,624.98	-3,521.30	4,460.53	4,309.82	150.71	29.597		
9,500.00	7,579.00	8,712.19	7,154.00	95.30	79.81	-84.55	-1,625.07	-3,621.30	4,460.74	4,305.51	155.24	28.735		
9,600.00	7,579.00	8,812.19	7,154.00	97.21	81.97	-84.55	-1,625.16	-3,721.30	4,460.96	4,301.14	159.82	27.913		
9,700.00	7,579.00	8,912.19	7,154.00	99.15	84.15	-84.55	-1,625.25	-3,821.30	4,461.17	4,296.72	164.45	27.129		
9,800.00	7,579.00	9,012.19	7,154.00	101.13	86.37	-84.55	-1,625.34	-3,921.30	4,461.38	4,292.26	169.12	26.380		
9,900.00	7,579.00	9,112.19	7,154.00	103.15	88.62	-84.55	-1,625.43	-4,021.30	4,461.60	4,287.76	173.83	25.666		
10,000.00	7,579.00	9,212.19	7,154.00	105.19	90.89	-84.55	-1,625.52	-4,121.30	4,461.81	4,283.22	178.59	24.984		
10,100.00	7,579.00	9,312.19	7,154.00	107.26	93.19	-84.55	-1,625.61	-4,221.30	4,462.02	4,278.65	183.37	24.333		
10,200.00	7,579.00	9,412.19	7,154.00	109.36	95.51	-84.55	-1,625.70	-4,321.30	4,462.24	4,274.05	188.19	23.711		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-MWD OWSG													Offset Well Error:		0.00 usft
Reference				Offset		Semi Major Axis			Distance				Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
10,300.00	7,579.00	9,512.19	7,154.00	111.49	97.84	-84.55	-1,625.79	-4,421.30	4,462.45	4,269.41	193.04	23.117			
10,400.00	7,579.00	9,612.19	7,154.00	113.64	100.20	-84.55	-1,625.88	-4,521.30	4,462.66	4,264.75	197.92	22.548			
10,500.00	7,579.00	9,712.19	7,154.00	115.82	102.57	-84.55	-1,625.97	-4,621.30	4,462.88	4,260.06	202.82	22.004			
10,600.00	7,579.00	9,812.19	7,154.00	118.01	104.97	-84.55	-1,626.05	-4,721.30	4,463.09	4,255.34	207.75	21.483			
10,700.00	7,579.00	9,912.19	7,154.00	120.23	107.37	-84.55	-1,626.14	-4,821.30	4,463.30	4,250.61	212.69	20.985			
10,800.00	7,579.00	10,012.19	7,154.00	122.47	109.79	-84.55	-1,626.23	-4,921.30	4,463.52	4,245.85	217.66	20.506			
10,900.00	7,579.00	10,112.19	7,154.00	124.73	112.23	-84.55	-1,626.32	-5,021.30	4,463.73	4,241.08	222.65	20.048			
11,000.00	7,579.00	10,212.19	7,154.00	127.01	114.67	-84.55	-1,626.41	-5,121.30	4,463.94	4,236.29	227.66	19.608			
11,100.00	7,579.00	10,312.19	7,154.00	129.30	117.13	-84.55	-1,626.50	-5,221.30	4,464.16	4,231.48	232.68	19.186			
11,200.00	7,579.00	10,412.19	7,154.00	131.61	119.60	-84.55	-1,626.59	-5,321.30	4,464.37	4,226.65	237.72	18.780			
11,300.00	7,579.00	10,512.19	7,154.00	133.93	122.08	-84.55	-1,626.68	-5,421.29	4,464.58	4,221.81	242.77	18.390			
11,400.00	7,579.00	10,612.19	7,154.00	136.27	124.57	-84.55	-1,626.77	-5,521.29	4,464.80	4,216.96	247.84	18.015			
11,500.00	7,579.00	10,712.19	7,154.00	138.62	127.06	-84.55	-1,626.86	-5,621.29	4,465.01	4,212.09	252.92	17.654			
11,600.00	7,579.00	10,812.19	7,154.00	140.99	129.57	-84.55	-1,626.95	-5,721.29	4,465.22	4,207.21	258.01	17.306			
11,700.00	7,579.00	10,912.19	7,154.00	143.37	132.09	-84.55	-1,627.04	-5,821.29	4,465.44	4,202.32	263.12	16.971			
11,800.00	7,579.00	11,012.19	7,154.00	145.76	134.61	-84.55	-1,627.13	-5,921.29	4,465.65	4,197.42	268.23	16.648			
11,900.00	7,579.00	11,112.19	7,154.00	148.16	137.14	-84.55	-1,627.22	-6,021.29	4,465.86	4,192.50	273.36	16.337			
12,000.00	7,579.00	11,212.19	7,154.00	150.58	139.67	-84.55	-1,627.31	-6,121.29	4,466.08	4,187.58	278.50	16.036			
12,100.00	7,579.00	11,312.19	7,154.00	153.00	142.22	-84.55	-1,627.39	-6,221.29	4,466.29	4,182.65	283.64	15.746			
12,200.00	7,579.00	11,412.19	7,154.00	155.43	144.76	-84.55	-1,627.48	-6,321.29	4,466.50	4,177.71	288.79	15.466			
12,300.00	7,579.00	11,512.19	7,154.00	157.87	147.32	-84.55	-1,627.57	-6,421.29	4,466.72	4,172.76	293.96	15.195			
12,400.00	7,579.00	11,612.19	7,154.00	160.32	149.88	-84.55	-1,627.66	-6,521.29	4,466.93	4,167.81	299.12	14.933			
12,500.00	7,579.00	11,712.19	7,154.00	162.78	152.44	-84.55	-1,627.75	-6,621.29	4,467.15	4,162.84	304.30	14.680			
12,600.00	7,579.00	11,812.19	7,154.00	165.25	155.01	-84.55	-1,627.84	-6,721.29	4,467.36	4,157.87	309.49	14.435			
12,700.00	7,579.00	11,912.19	7,154.00	167.73	157.59	-84.55	-1,627.93	-6,821.29	4,467.57	4,152.90	314.68	14.197			
12,800.00	7,579.00	12,012.19	7,154.00	170.21	160.17	-84.55	-1,628.02	-6,921.29	4,467.79	4,147.91	319.87	13.967			
12,900.00	7,579.00	12,112.19	7,154.00	172.70	162.75	-84.55	-1,628.11	-7,021.29	4,468.00	4,142.92	325.08	13.744			
13,000.00	7,579.00	12,212.19	7,154.00	175.19	165.34	-84.55	-1,628.20	-7,121.29	4,468.21	4,137.93	330.28	13.528			
13,100.00	7,579.00	12,312.19	7,154.00	177.70	167.93	-84.56	-1,628.29	-7,221.29	4,468.43	4,132.93	335.50	13.319			
13,200.00	7,579.00	12,412.19	7,154.00	180.20	170.52	-84.56	-1,628.38	-7,321.29	4,468.64	4,127.92	340.72	13.115			
13,300.00	7,579.00	12,512.19	7,154.00	182.72	173.12	-84.56	-1,628.47	-7,421.29	4,468.85	4,122.91	345.94	12.918			
13,400.00	7,579.00	12,612.18	7,154.00	185.24	175.72	-84.56	-1,628.56	-7,521.29	4,469.07	4,117.89	351.17	12.726			
13,500.00	7,579.00	12,712.18	7,154.00	187.76	178.32	-84.56	-1,628.64	-7,621.29	4,469.28	4,112.87	356.41	12.540			
13,600.00	7,579.00	12,812.18	7,154.00	190.30	180.93	-84.56	-1,628.73	-7,721.29	4,469.49	4,107.85	361.65	12.359			
13,700.00	7,579.00	12,912.18	7,154.00	192.83	183.54	-84.56	-1,628.82	-7,821.29	4,469.71	4,102.82	366.89	12.183			
13,800.00	7,579.00	13,012.18	7,154.00	195.37	186.15	-84.56	-1,628.91	-7,921.29	4,469.92	4,097.78	372.13	12.012			
13,900.00	7,579.00	13,112.18	7,154.00	197.92	188.77	-84.56	-1,629.00	-8,021.29	4,470.13	4,092.75	377.38	11.845			
14,000.00	7,579.00	13,212.18	7,154.00	200.47	191.39	-84.56	-1,629.09	-8,121.29	4,470.35	4,087.71	382.64	11.683			
14,100.00	7,579.00	13,312.18	7,154.00	203.02	194.01	-84.56	-1,629.18	-8,221.29	4,470.56	4,082.66	387.90	11.525			
14,200.00	7,579.00	13,412.18	7,154.00	205.58	196.63	-84.56	-1,629.27	-8,321.29	4,470.77	4,077.61	393.16	11.371			
14,300.00	7,579.00	13,512.18	7,154.00	208.14	199.26	-84.56	-1,629.36	-8,421.29	4,470.99	4,072.56	398.42	11.222			
14,400.00	7,579.00	13,612.18	7,154.00	210.70	201.88	-84.56	-1,629.45	-8,521.29	4,471.20	4,067.51	403.69	11.076			
14,500.00	7,579.00	13,712.18	7,154.00	213.27	204.51	-84.56	-1,629.54	-8,621.29	4,471.41	4,062.45	408.96	10.934			
14,600.00	7,579.00	13,812.18	7,154.00	215.84	207.14	-84.56	-1,629.63	-8,721.29	4,471.63	4,057.39	414.23	10.795			
14,700.00	7,579.00	13,912.18	7,154.00	218.42	209.78	-84.56	-1,629.72	-8,821.29	4,471.84	4,052.33	419.51	10.660			
14,800.00	7,579.00	14,012.18	7,154.00	221.00	212.41	-84.56	-1,629.81	-8,921.29	4,472.05	4,047.26	424.79	10.528			
14,900.00	7,579.00	14,112.18	7,154.00	223.58	215.05	-84.56	-1,629.89	-9,021.29	4,472.27	4,042.20	430.07	10.399			
15,000.00	7,579.00	14,212.18	7,154.00	226.17	217.68	-84.56	-1,629.98	-9,121.28	4,472.48	4,037.12	435.36	10.273			
15,100.00	7,579.00	14,312.18	7,154.00	228.75	220.32	-84.56	-1,630.07	-9,221.28	4,472.69	4,032.05	440.64	10.150			
15,200.00	7,579.00	14,412.18	7,154.00	231.34	222.97	-84.56	-1,630.16	-9,321.28	4,472.91	4,026.98	445.93	10.030			
15,300.00	7,579.00	14,512.18	7,154.00	233.94	225.61	-84.56	-1,630.25	-9,421.28	4,473.12	4,021.90	451.22	9.913			
15,400.00	7,579.00	14,612.18	7,154.00	236.53	228.25	-84.56	-1,630.34	-9,521.28	4,473.33	4,016.82	456.52	9.799			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
15,500.00	7,579.00	14,712.18	7,154.00	239.13	230.90	-84.56	-1,630.43	-9,621.28	4,473.55	4,011.74	461.81	9.687		
15,600.00	7,579.00	14,812.18	7,154.00	241.73	233.55	-84.56	-1,630.52	-9,721.28	4,473.76	4,006.65	467.11	9.578		
15,700.00	7,579.00	14,912.18	7,154.00	244.34	236.19	-84.56	-1,630.61	-9,821.28	4,473.97	4,001.57	472.41	9.471		
15,800.00	7,579.00	15,012.18	7,154.00	246.94	238.84	-84.56	-1,630.70	-9,921.28	4,474.19	3,996.48	477.71	9.366		
15,900.00	7,579.00	15,112.18	7,154.00	249.55	241.50	-84.56	-1,630.79	-10,021.28	4,474.40	3,991.39	483.01	9.264		
16,000.00	7,579.00	15,212.18	7,154.00	252.16	244.15	-84.56	-1,630.88	-10,121.28	4,474.61	3,986.30	488.32	9.163		
16,100.00	7,579.00	15,312.18	7,154.00	254.77	246.80	-84.56	-1,630.97	-10,221.28	4,474.83	3,981.20	493.62	9.065		
16,200.00	7,579.00	15,412.18	7,154.00	257.38	249.45	-84.56	-1,631.06	-10,321.28	4,475.04	3,976.11	498.93	8.969		
16,300.00	7,579.00	15,512.18	7,154.00	260.00	252.11	-84.56	-1,631.15	-10,421.28	4,475.25	3,971.01	504.24	8.875		
16,400.00	7,579.00	15,612.18	7,154.00	262.62	254.77	-84.56	-1,631.23	-10,521.28	4,475.47	3,965.91	509.55	8.783		
16,500.00	7,579.00	15,712.18	7,154.00	265.24	257.42	-84.56	-1,631.32	-10,621.28	4,475.68	3,960.81	514.87	8.693		
16,600.00	7,579.00	15,812.18	7,154.00	267.86	260.08	-84.56	-1,631.41	-10,721.28	4,475.89	3,955.71	520.18	8.605		
16,700.00	7,579.00	15,912.18	7,154.00	270.48	262.74	-84.56	-1,631.50	-10,821.28	4,476.11	3,950.61	525.50	8.518		
16,800.00	7,579.00	16,012.18	7,154.00	273.10	265.40	-84.56	-1,631.59	-10,921.28	4,476.32	3,945.51	530.81	8.433		
16,900.00	7,579.00	16,112.18	7,154.00	275.73	268.06	-84.57	-1,631.68	-11,021.28	4,476.53	3,940.40	536.13	8.350		
17,000.00	7,579.00	16,212.18	7,154.00	278.36	270.73	-84.57	-1,631.77	-11,121.28	4,476.75	3,935.30	541.45	8.268		
17,100.00	7,579.00	16,312.18	7,154.00	280.99	273.39	-84.57	-1,631.86	-11,221.28	4,476.96	3,930.19	546.77	8.188		
17,200.00	7,579.00	16,412.18	7,154.00	283.62	276.05	-84.57	-1,631.95	-11,321.28	4,477.17	3,925.08	552.10	8.109		
17,300.00	7,579.00	16,512.18	7,154.00	286.25	278.72	-84.57	-1,632.04	-11,421.28	4,477.39	3,919.97	557.42	8.032		
17,400.00	7,579.00	16,612.18	7,154.00	288.88	281.38	-84.57	-1,632.13	-11,521.28	4,477.60	3,914.86	562.74	7.957		
17,500.00	7,579.00	16,712.18	7,154.00	291.52	284.05	-84.57	-1,632.22	-11,621.28	4,477.82	3,909.75	568.07	7.883		
17,600.00	7,579.00	16,812.18	7,154.00	294.15	286.71	-84.57	-1,632.31	-11,721.28	4,478.03	3,904.63	573.40	7.810		
17,700.00	7,579.00	16,912.17	7,154.00	296.79	289.38	-84.57	-1,632.40	-11,821.28	4,478.24	3,899.52	578.72	7.738		
17,800.00	7,579.00	17,012.17	7,154.00	299.43	292.05	-84.57	-1,632.48	-11,921.28	4,478.46	3,894.40	584.05	7.668		
17,900.00	7,579.00	17,112.17	7,154.00	302.07	294.72	-84.57	-1,632.57	-12,021.28	4,478.67	3,889.29	589.38	7.599		
18,000.00	7,579.00	17,212.17	7,154.00	304.71	297.39	-84.57	-1,632.66	-12,121.28	4,478.88	3,884.17	594.71	7.531		
18,100.00	7,579.00	17,312.17	7,154.00	307.35	300.06	-84.57	-1,632.75	-12,221.28	4,479.10	3,879.05	600.05	7.465		
18,200.00	7,579.00	17,412.17	7,154.00	310.00	302.73	-84.57	-1,632.84	-12,321.28	4,479.31	3,873.93	605.38	7.399		
18,300.00	7,579.00	17,512.17	7,154.00	312.64	305.40	-84.57	-1,632.93	-12,421.28	4,479.52	3,868.81	610.71	7.335		
18,400.00	7,579.00	17,612.17	7,154.00	315.29	308.07	-84.57	-1,633.02	-12,521.28	4,479.74	3,863.69	616.05	7.272		
18,500.00	7,579.00	17,712.17	7,154.00	317.93	310.74	-84.57	-1,633.11	-12,621.28	4,479.95	3,858.57	621.38	7.210		
18,600.00	7,579.00	17,812.17	7,154.00	320.58	313.41	-84.57	-1,633.20	-12,721.28	4,480.16	3,853.44	626.72	7.149		
18,700.00	7,579.00	17,912.17	7,154.00	323.23	316.09	-84.57	-1,633.29	-12,821.27	4,480.38	3,848.32	632.05	7.089		
18,800.00	7,579.00	18,012.17	7,154.00	325.88	318.76	-84.57	-1,633.38	-12,921.27	4,480.59	3,843.20	637.39	7.030		
18,900.00	7,579.00	18,112.17	7,154.00	328.53	321.44	-84.57	-1,633.47	-13,021.27	4,480.80	3,838.07	642.73	6.972		
19,000.00	7,579.00	18,212.17	7,154.00	331.18	324.11	-84.57	-1,633.56	-13,121.27	4,481.02	3,832.95	648.07	6.914		
19,100.00	7,579.00	18,312.17	7,154.00	333.83	326.79	-84.57	-1,633.65	-13,221.27	4,481.23	3,827.82	653.41	6.858		
19,200.00	7,579.00	18,412.17	7,154.00	336.48	329.46	-84.57	-1,633.74	-13,321.27	4,481.44	3,822.69	658.75	6.803		
19,300.00	7,579.00	18,512.17	7,154.00	339.14	332.14	-84.57	-1,633.82	-13,421.27	4,481.66	3,817.56	664.09	6.749		
19,400.00	7,579.00	18,612.17	7,154.00	341.79	334.82	-84.57	-1,633.91	-13,521.27	4,481.87	3,812.43	669.44	6.695		
19,500.00	7,579.00	18,712.17	7,154.00	344.45	337.49	-84.57	-1,634.00	-13,621.27	4,482.08	3,807.30	674.78	6.642		
19,600.00	7,579.00	18,812.17	7,154.00	347.10	340.17	-84.57	-1,634.09	-13,721.27	4,482.30	3,802.17	680.12	6.590		
19,700.00	7,579.00	18,912.17	7,154.00	349.76	342.85	-84.57	-1,634.18	-13,821.27	4,482.51	3,797.04	685.47	6.539		
19,800.00	7,579.00	19,012.17	7,154.00	352.42	345.53	-84.57	-1,634.27	-13,921.27	4,482.72	3,791.91	690.81	6.489		
19,900.00	7,579.00	19,112.17	7,154.00	355.07	348.20	-84.57	-1,634.36	-14,021.27	4,482.94	3,786.78	696.16	6.440		
20,000.00	7,579.00	19,212.17	7,154.00	357.73	350.88	-84.57	-1,634.45	-14,121.27	4,483.15	3,781.65	701.50	6.391		
20,100.00	7,579.00	19,312.17	7,154.00	360.39	353.56	-84.57	-1,634.54	-14,221.27	4,483.36	3,776.51	706.85	6.343		
20,200.00	7,579.00	19,412.17	7,154.00	363.05	356.24	-84.57	-1,634.63	-14,321.27	4,483.58	3,771.38	712.20	6.295		
20,300.00	7,579.00	19,512.17	7,154.00	365.71	358.92	-84.57	-1,634.72	-14,421.27	4,483.79	3,766.25	717.54	6.249		
20,400.00	7,579.00	19,612.17	7,154.00	368.38	361.60	-84.57	-1,634.81	-14,521.27	4,484.00	3,761.11	722.89	6.203		
20,500.00	7,579.00	19,712.17	7,154.00	371.04	364.28	-84.57	-1,634.90	-14,621.27	4,484.22	3,755.98	728.24	6.158		
20,600.00	7,579.00	19,812.17	7,154.00	373.70	366.97	-84.57	-1,634.99	-14,721.27	4,484.43	3,750.84	733.59	6.113		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference				Offset			Semi Major Axis			Distance			Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
20,700.00	7,579.00	19,912.17	7,154.00	376.36	369.65	-84.57	-1,635.07	-14,821.27	4,484.64	3,745.70	738.94	6.069		
20,800.00	7,579.00	20,012.17	7,154.00	379.03	372.33	-84.58	-1,635.16	-14,921.27	4,484.86	3,740.57	744.29	6.026		
20,900.00	7,579.00	20,112.17	7,154.00	381.69	375.01	-84.58	-1,635.25	-15,021.27	4,485.07	3,735.43	749.64	5.983		
21,000.00	7,579.00	20,212.17	7,154.00	384.36	377.69	-84.58	-1,635.34	-15,121.27	4,485.28	3,730.29	754.99	5.941		
21,100.00	7,579.00	20,312.17	7,154.00	387.02	380.38	-84.58	-1,635.43	-15,221.27	4,485.50	3,725.15	760.34	5.899		
21,200.00	7,579.00	20,412.17	7,154.00	389.69	383.06	-84.58	-1,635.52	-15,321.27	4,485.71	3,720.02	765.70	5.858		
21,300.00	7,579.00	20,512.17	7,154.00	392.36	385.74	-84.58	-1,635.61	-15,421.27	4,485.92	3,714.88	771.05	5.818		
21,400.00	7,579.00	20,612.17	7,154.00	395.02	388.43	-84.58	-1,635.70	-15,521.27	4,486.14	3,709.74	776.40	5.778		
21,500.00	7,579.00	20,712.17	7,154.00	397.69	391.11	-84.58	-1,635.79	-15,621.27	4,486.35	3,704.60	781.75	5.739		
21,600.00	7,579.00	20,812.17	7,154.00	400.36	393.79	-84.58	-1,635.88	-15,721.27	4,486.56	3,699.46	787.11	5.700		
21,700.00	7,579.00	20,912.17	7,154.00	403.03	396.48	-84.58	-1,635.97	-15,821.27	4,486.78	3,694.31	792.46	5.662		
21,800.00	7,579.00	21,012.17	7,154.00	405.70	399.16	-84.58	-1,636.06	-15,921.27	4,486.99	3,689.17	797.82	5.624		
21,900.00	7,579.00	21,112.17	7,154.00	408.37	401.85	-84.58	-1,636.15	-16,021.27	4,487.20	3,684.03	803.17	5.587		
22,000.00	7,579.00	21,212.17	7,154.00	411.04	404.53	-84.58	-1,636.24	-16,121.27	4,487.42	3,678.89	808.53	5.550		
22,100.00	7,579.00	21,312.16	7,154.00	413.71	407.22	-84.58	-1,636.32	-16,221.27	4,487.63	3,673.75	813.88	5.514		
22,200.00	7,579.00	21,412.16	7,154.00	416.38	409.91	-84.58	-1,636.41	-16,321.27	4,487.84	3,668.60	819.24	5.478		
22,300.00	7,579.00	21,512.16	7,154.00	419.05	412.59	-84.58	-1,636.50	-16,421.27	4,488.06	3,663.46	824.60	5.443		
22,400.00	7,579.00	21,612.16	7,154.00	421.72	415.28	-84.58	-1,636.59	-16,521.27	4,488.27	3,658.32	829.95	5.408		
22,440.61	7,579.00	21,652.77	7,154.00	422.81	416.37	-84.58	-1,636.63	-16,561.87	4,488.36	3,656.23	832.13	5.394 SF		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-129.45	-124.58	-151.37	196.04					
100.00	100.00	100.00	100.00	0.13	0.13	-129.45	-124.58	-151.37	196.04	195.77	0.27	729.183		
200.00	199.98	199.98	199.98	0.49	0.49	-87.55	-124.58	-151.37	195.96	194.98	0.98	198.963		
209.81	209.78	209.78	209.78	0.53	0.53	-87.66	-124.58	-151.37	195.95	194.89	1.06	185.599 CC, ES		
300.00	299.84	293.47	293.45	0.86	0.82	-89.01	-125.72	-152.38	197.42	195.75	1.68	117.792		
400.00	399.45	386.47	386.34	1.23	1.14	-91.38	-129.15	-155.36	202.33	199.95	2.38	85.030		
500.00	498.70	478.64	478.20	1.63	1.48	-94.44	-134.78	-160.28	211.12	208.02	3.10	68.019		
600.00	597.47	569.67	568.64	2.05	1.83	-97.92	-142.52	-167.04	224.25	220.41	3.85	58.278		
700.00	695.62	659.24	657.27	2.50	2.20	-101.53	-152.24	-175.53	242.13	237.52	4.61	52.502		
800.00	793.06	747.07	743.75	2.99	2.58	-105.04	-163.80	-185.63	265.02	259.62	5.39	49.129		
900.00	889.64	832.90	827.77	3.52	2.98	-108.26	-177.02	-197.17	293.00	286.81	6.19	47.304		
1,000.00	985.27	916.51	909.06	4.10	3.39	-111.10	-191.72	-210.00	326.03	319.02	7.01	46.505		
1,100.00	1,079.82	997.70	987.43	4.72	3.82	-113.52	-207.69	-223.95	363.96	356.12	7.84	46.413		
1,200.00	1,173.17	1,076.29	1,062.69	5.40	4.27	-115.51	-224.74	-238.84	406.56	397.87	8.69	46.796		
1,300.00	1,265.21	1,152.16	1,134.73	6.13	4.73	-117.12	-242.67	-254.50	453.59	444.04	9.56	47.455		
1,400.00	1,355.84	1,225.19	1,203.45	6.92	5.19	-118.36	-261.28	-270.75	504.80	494.36	10.44	48.358		
1,500.00	1,444.94	1,295.31	1,268.82	7.77	5.66	-119.28	-280.38	-287.43	559.92	548.59	11.33	49.416		
1,600.00	1,532.44	1,362.50	1,330.85	8.68	6.14	-120.19	-299.81	-304.40	618.66	606.42	12.24	50.553		
1,700.00	1,619.43	1,427.70	1,390.46	9.62	6.62	-121.74	-319.71	-321.78	679.84	666.70	13.13	51.763		
1,800.00	1,706.42	1,491.35	1,448.06	10.56	7.12	-122.97	-340.11	-339.60	742.78	728.76	14.02	52.977		
1,900.00	1,793.42	1,553.44	1,503.65	11.52	7.62	-123.93	-360.94	-357.79	807.29	792.38	14.91	54.162		
2,000.00	1,880.41	1,613.97	1,557.26	12.48	8.13	-124.69	-382.12	-376.28	873.22	857.44	15.78	55.348		
2,100.00	1,967.40	1,672.95	1,608.91	13.45	8.65	-125.28	-403.57	-395.01	940.47	923.82	16.64	56.506		
2,200.00	2,054.39	1,730.39	1,658.63	14.42	9.17	-125.74	-425.22	-413.92	1,008.93	991.43	17.50	57.664		
2,300.00	2,141.39	1,797.64	1,716.33	15.39	9.80	-126.17	-451.23	-436.63	1,078.27	1,059.76	18.51	58.254		
2,400.00	2,228.38	1,869.40	1,777.88	16.36	10.48	-126.57	-479.02	-460.90	1,147.68	1,128.08	19.60	58.552		
2,500.00	2,315.37	1,941.16	1,839.43	17.34	11.17	-126.92	-506.82	-485.17	1,217.13	1,196.43	20.70	58.802		
2,600.00	2,402.37	2,012.92	1,900.98	18.32	11.86	-127.24	-534.61	-509.44	1,286.59	1,264.79	21.80	59.013		
2,700.00	2,489.36	2,084.68	1,962.53	19.30	12.55	-127.53	-562.40	-533.71	1,356.07	1,333.16	22.91	59.190		
2,800.00	2,576.35	2,156.45	2,024.08	20.28	13.24	-127.78	-590.19	-557.98	1,425.57	1,401.55	24.02	59.340		
2,900.00	2,663.34	2,228.21	2,085.63	21.26	13.94	-128.02	-617.98	-582.25	1,495.08	1,469.94	25.14	59.470		
3,000.00	2,750.34	2,300.03	2,147.18	22.24	14.64	-128.23	-645.77	-606.52	1,564.61	1,538.35	26.26	59.580		
3,100.00	2,837.33	2,371.73	2,208.73	23.23	15.34	-128.43	-673.56	-630.78	1,634.14	1,606.76	27.38	59.676		
3,200.00	2,924.32	2,443.49	2,270.28	24.21	16.04	-128.60	-701.36	-655.05	1,703.68	1,675.17	28.51	59.759		
3,300.00	3,011.31	2,515.25	2,331.83	25.20	16.75	-128.77	-729.15	-679.32	1,773.23	1,743.60	29.64	59.832		
3,400.00	3,098.31	2,587.02	2,393.38	26.18	17.45	-128.92	-756.94	-703.59	1,842.79	1,812.02	30.77	59.895		
3,500.00	3,185.30	2,658.78	2,454.93	27.17	18.16	-129.06	-784.73	-727.86	1,912.36	1,880.46	31.90	59.950		
3,600.00	3,272.29	2,730.54	2,516.48	28.16	18.87	-129.19	-812.52	-752.13	1,981.92	1,948.89	33.03	59.999		
3,700.00	3,359.29	2,802.30	2,578.03	29.14	19.57	-129.32	-840.31	-776.40	2,051.50	2,017.33	34.17	60.042		
3,800.00	3,446.28	2,874.06	2,639.58	30.13	20.28	-129.43	-868.10	-800.67	2,121.08	2,085.77	35.30	60.080		
3,900.00	3,533.27	2,945.82	2,701.13	31.12	20.99	-129.54	-895.90	-824.94	2,190.66	2,154.22	36.44	60.113		
4,000.00	3,620.26	3,017.59	2,762.68	32.10	21.70	-129.64	-923.69	-849.21	2,260.25	2,222.67	37.58	60.143		
4,100.00	3,707.26	3,089.35	2,824.23	33.09	22.41	-129.73	-951.48	-873.48	2,329.84	2,291.12	38.72	60.169		
4,200.00	3,794.25	3,161.11	2,885.78	34.08	23.12	-129.82	-979.27	-897.75	2,399.43	2,359.57	39.86	60.192		
4,300.00	3,881.24	3,232.87	2,947.33	35.07	23.83	-129.91	-1,007.06	-922.02	2,469.03	2,428.02	41.01	60.212		
4,400.00	3,968.23	3,304.63	3,008.88	36.06	24.54	-129.99	-1,034.85	-946.28	2,538.63	2,496.48	42.15	60.230		
4,500.00	4,055.23	3,376.39	3,070.43	37.05	25.26	-130.06	-1,062.64	-970.55	2,608.23	2,564.94	43.29	60.246		
4,600.00	4,142.22	3,448.16	3,131.98	38.04	25.97	-130.13	-1,090.43	-994.82	2,677.83	2,633.40	44.44	60.260		
4,700.00	4,229.21	3,519.92	3,193.53	39.03	26.68	-130.20	-1,118.23	-1,019.09	2,747.44	2,701.86	45.58	60.273		
4,800.00	4,316.21	3,608.32	3,255.08	40.02	27.56	-130.27	-1,146.02	-1,043.36	2,817.05	2,770.19	46.86	60.119		
4,900.00	4,403.20	3,663.44	3,316.63	41.01	28.11	-130.33	-1,173.81	-1,067.63	2,886.66	2,838.78	47.88	60.293		
5,000.00	4,490.19	3,735.20	3,378.18	42.00	28.82	-130.39	-1,201.60	-1,091.90	2,956.27	2,907.24	49.03	60.301		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 13-T1S-R66W - WARBLER 24W-27-06 - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,100.00	4,577.18	3,806.96	3,439.73	42.99	29.54	-130.44	-1,229.39	-1,116.17	3,025.88	2,975.71	50.17	60.308			
5,200.00	4,664.18	3,878.73	3,501.28	43.98	30.25	-130.50	-1,257.18	-1,140.44	3,095.49	3,044.17	51.32	60.314			
5,300.00	4,751.17	3,950.49	3,562.83	44.97	30.96	-130.55	-1,284.97	-1,164.71	3,165.11	3,112.64	52.47	60.319			
5,400.00	4,838.16	4,022.25	3,624.38	45.96	31.68	-130.60	-1,312.77	-1,188.98	3,234.72	3,181.10	53.62	60.324			
5,500.00	4,925.15	4,105.99	3,685.93	46.95	32.51	-130.64	-1,340.56	-1,213.25	3,304.34	3,249.48	54.87	60.226			
5,600.00	5,012.15	4,165.77	3,747.48	47.94	33.11	-130.69	-1,368.35	-1,237.52	3,373.96	3,318.03	55.93	60.330			
5,700.00	5,099.14	4,237.53	3,809.03	48.93	33.82	-130.73	-1,396.14	-1,261.78	3,443.58	3,386.50	57.08	60.332			
5,800.00	5,186.13	4,309.30	3,870.58	49.92	34.54	-130.77	-1,423.93	-1,286.05	3,513.20	3,454.97	58.23	60.333			
5,900.00	5,273.13	4,381.06	3,932.13	50.91	35.25	-130.81	-1,451.72	-1,310.32	3,582.82	3,523.44	59.38	60.334			
6,000.00	5,360.12	4,452.82	3,993.68	51.90	35.97	-130.85	-1,479.51	-1,334.59	3,652.44	3,591.91	60.54	60.335			
6,100.00	5,447.11	4,524.58	4,055.23	52.89	36.68	-130.89	-1,507.31	-1,358.86	3,722.07	3,660.38	61.69	60.335			
6,200.00	5,534.10	4,603.66	4,116.78	53.88	37.47	-130.92	-1,535.10	-1,383.13	3,791.69	3,728.79	62.90	60.280			
6,300.00	5,621.10	4,668.10	4,178.33	54.87	38.11	-130.96	-1,562.89	-1,407.40	3,861.32	3,797.32	64.00	60.333			
6,400.00	5,708.09	4,739.87	4,239.88	55.86	38.83	-130.99	-1,590.68	-1,431.67	3,930.94	3,865.79	65.16	60.332			
6,500.00	5,795.08	4,811.63	4,301.43	56.85	39.54	-131.02	-1,618.47	-1,455.94	4,000.57	3,934.26	66.31	60.330			
6,600.00	5,882.07	4,883.39	4,362.98	57.84	40.26	-131.05	-1,646.26	-1,480.21	4,070.19	4,002.73	67.47	60.328			
6,700.00	5,969.07	4,955.15	4,424.53	58.83	40.98	-131.08	-1,674.05	-1,504.48	4,139.82	4,071.20	68.62	60.325			
6,800.00	6,056.06	5,026.91	4,486.08	59.83	41.69	-131.11	-1,701.85	-1,528.75	4,209.45	4,139.67	69.78	60.323			
6,900.00	6,143.05	5,101.33	4,547.63	60.82	42.44	-131.14	-1,729.64	-1,553.02	4,279.08	4,208.12	70.96	60.302			
7,000.00	6,230.05	5,170.44	4,609.18	61.81	43.12	-131.16	-1,757.43	-1,577.28	4,348.71	4,276.61	72.10	60.316			
7,100.00	6,317.04	5,242.20	4,670.73	62.80	43.84	-131.19	-1,785.22	-1,601.55	4,418.33	4,345.08	73.26	60.313			
7,200.00	6,404.03	5,313.96	4,732.28	63.79	44.56	-131.21	-1,813.01	-1,625.82	4,487.96	4,413.55	74.42	60.309			
7,300.00	6,491.02	5,385.72	4,793.83	64.78	45.27	-131.24	-1,840.80	-1,650.09	4,557.59	4,482.02	75.58	60.305			
7,400.00	6,578.02	5,457.48	4,855.38	65.77	45.99	-131.26	-1,868.59	-1,674.36	4,627.22	4,550.49	76.74	60.301			
7,500.00	6,665.01	5,529.24	4,916.93	66.76	46.71	-131.29	-1,896.39	-1,698.63	4,696.86	4,618.96	77.90	60.296			
7,600.00	6,752.00	5,601.01	4,978.48	67.76	47.42	-131.31	-1,924.18	-1,722.90	4,766.49	4,687.43	79.06	60.292			
7,700.00	6,838.99	5,672.77	5,040.03	68.75	48.14	-131.33	-1,951.97	-1,747.17	4,836.12	4,755.90	80.22	60.287			
7,800.00	6,925.99	5,744.53	5,101.58	69.74	48.86	-131.35	-1,979.76	-1,771.44	4,905.75	4,824.37	81.38	60.282			
7,900.00	7,012.98	5,816.29	5,163.13	70.73	49.57	-131.37	-2,007.55	-1,795.71	4,975.38	4,892.84	82.54	60.277			
8,000.00	7,099.97	5,888.05	5,224.68	71.72	50.29	-131.39	-2,035.34	-1,819.98	5,045.02	4,961.31	83.71	60.271			
8,100.00	7,186.97	5,959.81	5,286.23	72.71	51.01	-131.41	-2,063.13	-1,844.25	5,114.65	5,029.78	84.87	60.266			
8,200.00	7,273.09	6,031.79	5,347.96	73.74	51.73	-119.72	-2,091.01	-1,868.59	5,183.90	5,097.83	86.07	60.230			
8,300.00	7,352.95	6,104.17	5,410.04	74.97	52.45	-103.02	-2,119.04	-1,893.06	5,250.07	5,162.59	87.48	60.014			
8,400.00	7,423.63	6,174.97	5,470.76	76.39	53.16	-91.02	-2,146.46	-1,917.01	5,311.13	5,222.02	89.10	59.605			
8,500.00	7,482.96	6,242.05	5,528.29	77.96	53.83	-82.47	-2,172.43	-1,939.69	5,365.53	5,274.63	90.90	59.027			
8,600.00	7,529.15	6,303.36	5,580.88	79.64	54.44	-76.49	-2,196.18	-1,960.43	5,412.02	5,319.21	92.81	58.314			
8,700.00	7,560.79	6,357.05	5,626.93	81.35	54.97	-72.49	-2,216.97	-1,978.59	5,449.63	5,354.87	94.77	57.505			
8,800.00	7,576.92	6,401.48	5,665.04	83.05	55.42	-70.09	-2,234.18	-1,993.61	5,477.66	5,380.96	96.70	56.645			
8,900.00	7,579.00	6,436.67	5,695.22	84.68	55.77	-69.58	-2,247.81	-2,005.51	5,497.06	5,398.50	98.56	55.774			
9,000.00	7,579.00	6,470.44	5,724.19	86.34	56.11	-69.92	-2,260.89	-2,016.94	5,516.50	5,416.07	100.43	54.929			
9,100.00	7,579.00	6,504.21	5,753.15	88.04	56.44	-70.26	-2,273.96	-2,028.36	5,537.47	5,435.15	102.33	54.116			
9,200.00	7,579.00	6,537.98	5,782.12	89.80	56.78	-70.59	-2,287.04	-2,039.78	5,559.95	5,455.71	104.24	53.337			
9,300.00	7,579.00	6,571.75	5,811.08	91.59	57.12	-70.93	-2,300.12	-2,051.20	5,583.93	5,477.76	106.17	52.592			
9,400.00	7,579.00	6,605.52	5,840.05	93.42	57.46	-71.26	-2,313.20	-2,062.62	5,609.39	5,501.27	108.12	51.881			
9,500.00	7,579.00	6,639.30	5,869.01	95.30	57.79	-71.60	-2,326.28	-2,074.04	5,636.31	5,526.23	110.08	51.203			
9,600.00	7,579.00	6,673.07	5,897.98	97.21	58.13	-71.93	-2,339.36	-2,085.46	5,664.66	5,552.62	112.04	50.559			
9,700.00	7,579.00	6,706.84	5,926.94	99.15	58.47	-72.27	-2,352.44	-2,096.88	5,694.42	5,580.42	114.01	49.948			
9,800.00	7,579.00	6,740.61	5,955.91	101.13	58.81	-72.60	-2,365.51	-2,108.30	5,725.58	5,609.61	115.97	49.370			
9,900.00	7,579.00	9,474.40	7,154.00	103.15	96.88	-85.75	-2,907.54	-4,021.08	5,739.27	5,564.92	174.35	32.917			
10,000.00	7,579.00	9,574.40	7,154.00	105.19	98.86	-85.75	-2,907.61	-4,121.08	5,739.47	5,560.41	179.06	32.054			
10,100.00	7,579.00	9,674.40	7,154.00	107.26	100.88	-85.75	-2,907.68	-4,221.08	5,739.66	5,555.86	183.80	31.228			
10,200.00	7,579.00	9,774.40	7,154.00	109.36	102.94	-85.75	-2,907.76	-4,321.07	5,739.86	5,551.28	188.58	30.438			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-MWD OWSG													Offset Well Error:		0.00 usft
Reference				Offset		Semi Major Axis			Distance				Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
10,300.00	7,579.00	9,874.40	7,154.00	111.49	105.02	-85.75	-2,907.83	-4,421.07	5,740.06	5,546.67	193.39	29.682			
10,400.00	7,579.00	9,974.40	7,154.00	113.64	107.13	-85.75	-2,907.90	-4,521.07	5,740.26	5,542.03	198.23	28.958			
10,500.00	7,579.00	10,074.40	7,154.00	115.82	109.27	-85.75	-2,907.98	-4,621.07	5,740.46	5,537.36	203.10	28.265			
10,600.00	7,579.00	10,174.40	7,154.00	118.01	111.43	-85.75	-2,908.05	-4,721.07	5,740.65	5,532.66	207.99	27.601			
10,700.00	7,579.00	10,274.40	7,154.00	120.23	113.62	-85.75	-2,908.12	-4,821.07	5,740.85	5,527.94	212.91	26.964			
10,800.00	7,579.00	10,374.40	7,154.00	122.47	115.83	-85.75	-2,908.20	-4,921.07	5,741.05	5,523.20	217.85	26.353			
10,900.00	7,579.00	10,474.40	7,154.00	124.73	118.07	-85.75	-2,908.27	-5,021.07	5,741.25	5,518.44	222.81	25.767			
11,000.00	7,579.00	10,574.40	7,154.00	127.01	120.32	-85.75	-2,908.34	-5,121.07	5,741.44	5,513.65	227.79	25.205			
11,100.00	7,579.00	10,674.39	7,154.00	129.30	122.60	-85.76	-2,908.42	-5,221.07	5,741.64	5,508.85	232.79	24.664			
11,200.00	7,579.00	10,774.39	7,154.00	131.61	124.89	-85.76	-2,908.49	-5,321.07	5,741.84	5,504.03	237.81	24.145			
11,300.00	7,579.00	10,874.39	7,154.00	133.93	127.20	-85.76	-2,908.56	-5,421.07	5,742.04	5,499.20	242.84	23.645			
11,400.00	7,579.00	10,974.39	7,154.00	136.27	129.52	-85.76	-2,908.64	-5,521.07	5,742.24	5,494.35	247.89	23.165			
11,500.00	7,579.00	11,074.39	7,154.00	138.62	131.86	-85.76	-2,908.71	-5,621.07	5,742.43	5,489.48	252.95	22.702			
11,600.00	7,579.00	11,174.39	7,154.00	140.99	134.22	-85.76	-2,908.78	-5,721.07	5,742.63	5,484.61	258.03	22.256			
11,700.00	7,579.00	11,274.39	7,154.00	143.37	136.59	-85.76	-2,908.86	-5,821.07	5,742.83	5,479.71	263.11	21.826			
11,800.00	7,579.00	11,374.39	7,154.00	145.76	138.97	-85.76	-2,908.93	-5,921.07	5,743.03	5,474.81	268.21	21.412			
11,900.00	7,579.00	11,474.39	7,154.00	148.16	141.37	-85.76	-2,909.00	-6,021.07	5,743.22	5,469.90	273.32	21.012			
12,000.00	7,579.00	11,574.39	7,154.00	150.58	143.77	-85.76	-2,909.08	-6,121.07	5,743.42	5,464.97	278.45	20.627			
12,100.00	7,579.00	11,674.39	7,154.00	153.00	146.19	-85.76	-2,909.15	-6,221.07	5,743.62	5,460.04	283.58	20.254			
12,200.00	7,579.00	11,774.39	7,154.00	155.43	148.62	-85.76	-2,909.22	-6,321.07	5,743.82	5,455.10	288.72	19.894			
12,300.00	7,579.00	11,874.39	7,154.00	157.87	151.06	-85.76	-2,909.29	-6,421.07	5,744.01	5,450.14	293.87	19.546			
12,400.00	7,579.00	11,974.39	7,154.00	160.32	153.51	-85.76	-2,909.37	-6,521.07	5,744.21	5,445.18	299.03	19.209			
12,500.00	7,579.00	12,074.39	7,154.00	162.78	155.96	-85.76	-2,909.44	-6,621.07	5,744.41	5,440.21	304.20	18.884			
12,600.00	7,579.00	12,174.39	7,154.00	165.25	158.43	-85.76	-2,909.51	-6,721.07	5,744.61	5,435.24	309.37	18.569			
12,700.00	7,579.00	12,274.39	7,154.00	167.73	160.90	-85.76	-2,909.59	-6,821.07	5,744.81	5,430.25	314.55	18.263			
12,800.00	7,579.00	12,374.39	7,154.00	170.21	163.38	-85.76	-2,909.66	-6,921.07	5,745.00	5,425.26	319.74	17.968			
12,900.00	7,579.00	12,474.39	7,154.00	172.70	165.87	-85.76	-2,909.73	-7,021.07	5,745.20	5,420.26	324.94	17.681			
13,000.00	7,579.00	12,574.39	7,154.00	175.19	168.37	-85.76	-2,909.81	-7,121.07	5,745.40	5,415.26	330.14	17.403			
13,100.00	7,579.00	12,674.39	7,154.00	177.70	170.87	-85.76	-2,909.88	-7,221.07	5,745.60	5,410.25	335.35	17.133			
13,200.00	7,579.00	12,774.39	7,154.00	180.20	173.38	-85.76	-2,909.95	-7,321.07	5,745.79	5,405.23	340.56	16.871			
13,300.00	7,579.00	12,874.39	7,154.00	182.72	175.90	-85.76	-2,910.03	-7,421.07	5,745.99	5,400.21	345.78	16.617			
13,400.00	7,579.00	12,974.39	7,154.00	185.24	178.42	-85.76	-2,910.10	-7,521.07	5,746.19	5,395.18	351.01	16.371			
13,500.00	7,579.00	13,074.39	7,154.00	187.76	180.95	-85.76	-2,910.17	-7,621.07	5,746.39	5,390.15	356.24	16.131			
13,600.00	7,579.00	13,174.39	7,154.00	190.30	183.48	-85.76	-2,910.25	-7,721.07	5,746.58	5,385.11	361.47	15.898			
13,700.00	7,579.00	13,274.39	7,154.00	192.83	186.02	-85.76	-2,910.32	-7,821.07	5,746.78	5,380.07	366.71	15.671			
13,800.00	7,579.00	13,374.39	7,154.00	195.37	188.56	-85.76	-2,910.39	-7,921.07	5,746.98	5,375.03	371.95	15.451			
13,900.00	7,579.00	13,474.39	7,154.00	197.92	191.11	-85.76	-2,910.47	-8,021.07	5,747.18	5,369.98	377.20	15.236			
14,000.00	7,579.00	13,574.39	7,154.00	200.47	193.66	-85.76	-2,910.54	-8,121.07	5,747.38	5,364.92	382.45	15.028			
14,100.00	7,579.00	13,674.39	7,154.00	203.02	196.22	-85.76	-2,910.61	-8,221.07	5,747.57	5,359.87	387.71	14.824			
14,200.00	7,579.00	13,774.39	7,154.00	205.58	198.78	-85.76	-2,910.69	-8,321.07	5,747.77	5,354.80	392.97	14.627			
14,300.00	7,579.00	13,874.39	7,154.00	208.14	201.35	-85.76	-2,910.76	-8,421.07	5,747.97	5,349.74	398.23	14.434			
14,400.00	7,579.00	13,974.39	7,154.00	210.70	203.91	-85.76	-2,910.83	-8,521.07	5,748.17	5,344.67	403.50	14.246			
14,500.00	7,579.00	14,074.39	7,154.00	213.27	206.49	-85.76	-2,910.90	-8,621.07	5,748.36	5,339.60	408.77	14.063			
14,600.00	7,579.00	14,174.39	7,154.00	215.84	209.06	-85.76	-2,910.98	-8,721.07	5,748.56	5,334.52	414.04	13.884			
14,700.00	7,579.00	14,274.39	7,154.00	218.42	211.64	-85.76	-2,911.05	-8,821.06	5,748.76	5,329.45	419.31	13.710			
14,800.00	7,579.00	14,374.39	7,154.00	221.00	214.22	-85.76	-2,911.12	-8,921.06	5,748.96	5,324.36	424.59	13.540			
14,900.00	7,579.00	14,474.39	7,154.00	223.58	216.81	-85.76	-2,911.20	-9,021.06	5,749.16	5,319.28	429.87	13.374			
15,000.00	7,579.00	14,574.39	7,154.00	226.17	219.40	-85.76	-2,911.27	-9,121.06	5,749.35	5,314.19	435.16	13.212			
15,100.00	7,579.00	14,674.39	7,154.00	228.75	221.99	-85.76	-2,911.34	-9,221.06	5,749.55	5,309.10	440.45	13.054			
15,200.00	7,579.00	14,774.39	7,154.00	231.34	224.59	-85.76	-2,911.42	-9,321.06	5,749.75	5,304.01	445.74	12.899			
15,300.00	7,579.00	14,874.39	7,154.00	233.94	227.18	-85.76	-2,911.49	-9,421.06	5,749.95	5,298.92	451.03	12.749			
15,400.00	7,579.00	14,974.39	7,154.00	236.53	229.78	-85.76	-2,911.56	-9,521.06	5,750.14	5,293.82	456.32	12.601			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 13-T1S-R66W - WARBLER 24W-27-06 - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
15,500.00	7,579.00	15,074.39	7,154.00	239.13	232.38	-85.76	-2,911.64	-9,621.06	5,750.34	5,288.72	461.62	12.457		
15,600.00	7,579.00	15,174.39	7,154.00	241.73	234.99	-85.76	-2,911.71	-9,721.06	5,750.54	5,283.62	466.92	12.316		
15,700.00	7,579.00	15,274.39	7,154.00	244.34	237.60	-85.76	-2,911.78	-9,821.06	5,750.74	5,278.52	472.22	12.178		
15,800.00	7,579.00	15,374.39	7,154.00	246.94	240.21	-85.76	-2,911.86	-9,921.06	5,750.93	5,273.41	477.52	12.043		
15,900.00	7,579.00	15,474.39	7,154.00	249.55	242.82	-85.76	-2,911.93	-10,021.06	5,751.13	5,268.31	482.83	11.911		
16,000.00	7,579.00	15,574.39	7,154.00	252.16	245.43	-85.76	-2,912.00	-10,121.06	5,751.33	5,263.20	488.13	11.782		
16,100.00	7,579.00	15,674.39	7,154.00	254.77	248.05	-85.76	-2,912.08	-10,221.06	5,751.53	5,258.09	493.44	11.656		
16,200.00	7,579.00	15,774.38	7,154.00	257.38	250.66	-85.76	-2,912.15	-10,321.06	5,751.73	5,252.97	498.75	11.532		
16,300.00	7,579.00	15,874.38	7,154.00	260.00	253.28	-85.76	-2,912.22	-10,421.06	5,751.92	5,247.86	504.06	11.411		
16,400.00	7,579.00	15,974.38	7,154.00	262.62	255.90	-85.76	-2,912.30	-10,521.06	5,752.12	5,242.74	509.38	11.292		
16,500.00	7,579.00	16,074.38	7,154.00	265.24	258.53	-85.76	-2,912.37	-10,621.06	5,752.32	5,237.63	514.69	11.176		
16,600.00	7,579.00	16,174.38	7,154.00	267.86	261.15	-85.76	-2,912.44	-10,721.06	5,752.52	5,232.51	520.01	11.062		
16,700.00	7,579.00	16,274.38	7,154.00	270.48	263.78	-85.76	-2,912.52	-10,821.06	5,752.71	5,227.38	525.33	10.951		
16,800.00	7,579.00	16,374.38	7,154.00	273.10	266.41	-85.76	-2,912.59	-10,921.06	5,752.91	5,222.26	530.65	10.841		
16,900.00	7,579.00	16,474.38	7,154.00	275.73	269.04	-85.76	-2,912.66	-11,021.06	5,753.11	5,217.14	535.97	10.734		
17,000.00	7,579.00	16,574.38	7,154.00	278.36	271.67	-85.76	-2,912.73	-11,121.06	5,753.31	5,212.01	541.29	10.629		
17,100.00	7,579.00	16,674.38	7,154.00	280.99	274.30	-85.76	-2,912.81	-11,221.06	5,753.50	5,206.89	546.62	10.526		
17,200.00	7,579.00	16,774.38	7,154.00	283.62	276.94	-85.76	-2,912.88	-11,321.06	5,753.70	5,201.76	551.94	10.424		
17,300.00	7,579.00	16,874.38	7,154.00	286.25	279.57	-85.76	-2,912.95	-11,421.06	5,753.90	5,196.63	557.27	10.325		
17,400.00	7,579.00	16,974.38	7,154.00	288.88	282.21	-85.76	-2,913.03	-11,521.06	5,754.10	5,191.50	562.60	10.228		
17,500.00	7,579.00	17,074.38	7,154.00	291.52	284.85	-85.76	-2,913.10	-11,621.06	5,754.30	5,186.37	567.93	10.132		
17,600.00	7,579.00	17,174.38	7,154.00	294.15	287.49	-85.76	-2,913.17	-11,721.06	5,754.49	5,181.23	573.26	10.038		
17,700.00	7,579.00	17,274.38	7,154.00	296.79	290.13	-85.76	-2,913.25	-11,821.06	5,754.69	5,176.10	578.59	9.946		
17,800.00	7,579.00	17,374.38	7,154.00	299.43	292.77	-85.76	-2,913.32	-11,921.06	5,754.89	5,170.96	583.92	9.856		
17,900.00	7,579.00	17,474.38	7,154.00	302.07	295.41	-85.76	-2,913.39	-12,021.06	5,755.09	5,165.83	589.26	9.767		
18,000.00	7,579.00	17,574.38	7,154.00	304.71	298.06	-85.77	-2,913.47	-12,121.06	5,755.28	5,160.69	594.59	9.679		
18,100.00	7,579.00	17,674.38	7,154.00	307.35	300.70	-85.77	-2,913.54	-12,221.06	5,755.48	5,155.55	599.93	9.594		
18,200.00	7,579.00	17,774.38	7,154.00	310.00	303.35	-85.77	-2,913.61	-12,321.06	5,755.68	5,150.41	605.27	9.509		
18,300.00	7,579.00	17,874.38	7,154.00	312.64	306.00	-85.77	-2,913.69	-12,421.06	5,755.88	5,145.27	610.61	9.427		
18,400.00	7,579.00	17,974.38	7,154.00	315.29	308.64	-85.77	-2,913.76	-12,521.06	5,756.08	5,140.13	615.94	9.345		
18,500.00	7,579.00	18,074.38	7,154.00	317.93	311.29	-85.77	-2,913.83	-12,621.06	5,756.27	5,134.99	621.28	9.265		
18,600.00	7,579.00	18,174.38	7,154.00	320.58	313.94	-85.77	-2,913.91	-12,721.06	5,756.47	5,129.85	626.63	9.186		
18,700.00	7,579.00	18,274.38	7,154.00	323.23	316.59	-85.77	-2,913.98	-12,821.06	5,756.67	5,124.70	631.97	9.109		
18,800.00	7,579.00	18,374.38	7,154.00	325.88	319.25	-85.77	-2,914.05	-12,921.06	5,756.87	5,119.56	637.31	9.033		
18,900.00	7,579.00	18,474.38	7,154.00	328.53	321.90	-85.77	-2,914.13	-13,021.06	5,757.06	5,114.41	642.65	8.958		
19,000.00	7,579.00	18,574.38	7,154.00	331.18	324.55	-85.77	-2,914.20	-13,121.06	5,757.26	5,109.26	648.00	8.885		
19,100.00	7,579.00	18,674.38	7,154.00	333.83	327.21	-85.77	-2,914.27	-13,221.06	5,757.46	5,104.12	653.34	8.812		
19,200.00	7,579.00	18,774.38	7,154.00	336.48	329.87	-85.77	-2,914.35	-13,321.06	5,757.66	5,098.97	658.69	8.741		
19,300.00	7,579.00	18,874.38	7,154.00	339.14	332.52	-85.77	-2,914.42	-13,421.06	5,757.85	5,093.82	664.04	8.671		
19,400.00	7,579.00	18,974.38	7,154.00	341.79	335.18	-85.77	-2,914.49	-13,521.06	5,758.05	5,088.67	669.38	8.602		
19,500.00	7,579.00	19,074.38	7,154.00	344.45	337.84	-85.77	-2,914.56	-13,621.06	5,758.25	5,083.52	674.73	8.534		
19,600.00	7,579.00	19,174.38	7,154.00	347.10	340.50	-85.77	-2,914.64	-13,721.06	5,758.45	5,078.37	680.08	8.467		
19,700.00	7,579.00	19,274.38	7,154.00	349.76	343.16	-85.77	-2,914.71	-13,821.06	5,758.65	5,073.22	685.43	8.402		
19,800.00	7,579.00	19,374.38	7,154.00	352.42	345.82	-85.77	-2,914.78	-13,921.06	5,758.84	5,068.06	690.78	8.337		
19,900.00	7,579.00	19,474.38	7,154.00	355.07	348.48	-85.77	-2,914.86	-14,021.06	5,759.04	5,062.91	696.13	8.273		
20,000.00	7,579.00	19,574.38	7,154.00	357.73	351.14	-85.77	-2,914.93	-14,121.06	5,759.24	5,057.76	701.48	8.210		
20,100.00	7,579.00	19,674.38	7,154.00	360.39	353.80	-85.77	-2,915.00	-14,221.06	5,759.44	5,052.60	706.83	8.148		
20,200.00	7,579.00	19,774.38	7,154.00	363.05	356.46	-85.77	-2,915.08	-14,321.06	5,759.63	5,047.45	712.19	8.087		
20,300.00	7,579.00	19,874.38	7,154.00	365.71	359.13	-85.77	-2,915.15	-14,421.06	5,759.83	5,042.29	717.54	8.027		
20,400.00	7,579.00	19,974.38	7,154.00	368.38	361.79	-85.77	-2,915.22	-14,521.06	5,760.03	5,037.14	722.89	7.968		
20,500.00	7,579.00	20,074.38	7,154.00	371.04	364.46	-85.77	-2,915.30	-14,621.06	5,760.23	5,031.98	728.25	7.910		
20,600.00	7,579.00	20,174.38	7,154.00	373.70	367.12	-85.77	-2,915.37	-14,721.06	5,760.42	5,026.82	733.60	7.852		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
20,700.00	7,579.00	20,274.38	7,154.00	376.36	369.79	-85.77	-2,915.44	-14,821.05	5,760.62	5,021.66	738.96	7.796		
20,800.00	7,579.00	20,374.38	7,154.00	379.03	372.45	-85.77	-2,915.52	-14,921.05	5,760.82	5,016.50	744.32	7.740		
20,900.00	7,579.00	20,474.38	7,154.00	381.69	375.12	-85.77	-2,915.59	-15,021.05	5,761.02	5,011.35	749.67	7.685		
21,000.00	7,579.00	20,574.38	7,154.00	384.36	377.79	-85.77	-2,915.66	-15,121.05	5,761.22	5,006.19	755.03	7.630		
21,100.00	7,579.00	20,674.38	7,154.00	387.02	380.46	-85.77	-2,915.74	-15,221.05	5,761.41	5,001.03	760.39	7.577		
21,200.00	7,579.00	20,774.38	7,154.00	389.69	383.13	-85.77	-2,915.81	-15,321.05	5,761.61	4,995.87	765.75	7.524		
21,300.00	7,579.00	20,874.37	7,154.00	392.36	385.79	-85.77	-2,915.88	-15,421.05	5,761.81	4,990.71	771.10	7.472		
21,400.00	7,579.00	20,974.37	7,154.00	395.02	388.46	-85.77	-2,915.96	-15,521.05	5,762.01	4,985.54	776.46	7.421		
21,500.00	7,579.00	21,074.37	7,154.00	397.69	391.13	-85.77	-2,916.03	-15,621.05	5,762.20	4,980.38	781.82	7.370		
21,600.00	7,579.00	21,174.37	7,154.00	400.36	393.81	-85.77	-2,916.10	-15,721.05	5,762.40	4,975.22	787.18	7.320		
21,700.00	7,579.00	21,274.37	7,154.00	403.03	396.48	-85.77	-2,916.17	-15,821.05	5,762.60	4,970.06	792.54	7.271		
21,800.00	7,579.00	21,374.37	7,154.00	405.70	399.15	-85.77	-2,916.25	-15,921.05	5,762.80	4,964.89	797.90	7.222		
21,900.00	7,579.00	21,474.37	7,154.00	408.37	401.82	-85.77	-2,916.32	-16,021.05	5,763.00	4,959.73	803.27	7.174		
22,000.00	7,579.00	21,574.37	7,154.00	411.04	404.49	-85.77	-2,916.39	-16,121.05	5,763.19	4,954.57	808.63	7.127		
22,100.00	7,579.00	21,674.37	7,154.00	413.71	407.16	-85.77	-2,916.47	-16,221.05	5,763.39	4,949.40	813.99	7.080		
22,200.00	7,579.00	21,774.37	7,154.00	416.38	409.84	-85.77	-2,916.54	-16,321.05	5,763.59	4,944.24	819.35	7.034		
22,300.00	7,579.00	21,874.37	7,154.00	419.05	412.51	-85.77	-2,916.61	-16,421.05	5,763.79	4,939.07	824.72	6.989		
22,400.00	7,579.00	21,974.37	7,154.00	421.72	415.19	-85.77	-2,916.69	-16,521.05	5,763.98	4,933.91	830.08	6.944		
22,440.61	7,579.00	22,014.98	7,154.00	422.81	416.27	-85.77	-2,916.72	-16,561.65	5,764.06	4,931.81	832.26	6.926 SF		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 13-T1S-R66W - WARBLER 24W-27-11 - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	3.00	3.00	0.00	0.00	-179.43	-111.83	-1.12	111.84						
100.00	100.00	103.00	103.00	0.13	0.15	-179.43	-111.83	-1.12	111.84	111.56	0.28	399.976	CC, ES		
200.00	199.98	202.98	202.98	0.49	0.50	-137.60	-111.83	-1.12	113.12	112.12	1.00	113.417			
300.00	299.84	300.27	300.25	0.86	0.84	-138.55	-112.95	-2.47	118.16	116.45	1.71	69.162			
400.00	399.45	397.19	397.04	1.23	1.18	-139.17	-116.17	-6.33	127.95	125.52	2.43	52.695			
500.00	498.70	493.36	492.84	1.63	1.54	-139.47	-121.44	-12.65	142.43	139.27	3.17	45.002			
600.00	597.47	588.45	587.26	2.05	1.91	-139.48	-128.66	-21.32	161.54	157.62	3.92	41.204			
700.00	695.62	682.19	679.92	2.50	2.30	-139.28	-137.75	-32.22	185.19	180.49	4.70	39.427			
800.00	793.06	774.30	770.46	2.99	2.71	-138.92	-148.56	-45.20	213.28	207.78	5.50	38.800			
900.00	889.64	864.54	858.60	3.52	3.14	-138.46	-160.95	-60.07	245.71	239.38	6.32	38.863			
1,000.00	985.27	952.69	944.06	4.10	3.59	-137.92	-174.77	-76.65	282.35	275.17	7.17	39.354			
1,100.00	1,079.82	1,038.55	1,026.63	4.72	4.06	-137.33	-189.84	-94.73	323.06	315.01	8.05	40.128			
1,200.00	1,173.17	1,121.97	1,106.14	5.40	4.55	-136.70	-205.99	-114.11	367.71	358.76	8.96	41.060			
1,300.00	1,265.21	1,202.81	1,182.45	6.13	5.05	-136.02	-223.05	-134.58	416.14	406.25	9.88	42.108			
1,400.00	1,355.84	1,280.95	1,255.49	6.92	5.58	-135.31	-240.84	-155.94	468.18	457.34	10.84	43.188			
1,500.00	1,444.94	1,356.33	1,325.19	7.77	6.12	-134.55	-259.21	-177.98	523.66	511.84	11.82	44.307			
1,600.00	1,532.44	1,428.91	1,391.57	8.68	6.66	-133.98	-278.00	-200.53	582.38	569.56	12.82	45.440			
1,700.00	1,619.43	1,499.57	1,455.45	9.62	7.22	-134.07	-297.32	-223.71	642.88	629.07	13.81	46.548			
1,800.00	1,706.42	1,574.10	1,522.15	10.56	7.83	-134.03	-318.60	-249.25	704.36	689.47	14.89	47.306			
1,900.00	1,793.42	1,652.87	1,592.57	11.52	8.49	-133.98	-341.20	-276.37	765.97	749.92	16.04	47.742			
2,000.00	1,880.41	1,731.64	1,662.98	12.48	9.16	-133.93	-363.81	-303.50	827.57	810.36	17.21	48.087			
2,100.00	1,967.40	1,810.41	1,733.40	13.45	9.84	-133.90	-386.41	-330.62	889.17	870.79	18.39	48.361			
2,200.00	2,054.39	1,889.18	1,803.81	14.42	10.52	-133.86	-409.01	-357.74	950.78	931.21	19.57	48.581			
2,300.00	2,141.39	1,967.95	1,874.23	15.39	11.20	-133.83	-431.61	-384.87	1,012.38	991.62	20.76	48.760			
2,400.00	2,228.38	2,046.72	1,944.65	16.36	11.88	-133.81	-454.22	-411.99	1,073.98	1,052.02	21.96	48.906			
2,500.00	2,315.37	2,125.49	2,015.06	17.34	12.57	-133.78	-476.82	-439.11	1,135.59	1,112.42	23.16	49.028			
2,600.00	2,402.37	2,204.26	2,085.48	18.32	13.26	-133.76	-499.42	-466.24	1,197.19	1,172.82	24.37	49.129			
2,700.00	2,489.36	2,283.03	2,155.89	19.30	13.95	-133.74	-522.02	-493.36	1,258.79	1,233.22	25.58	49.213			
2,800.00	2,576.35	2,361.80	2,226.31	20.28	14.64	-133.73	-544.62	-520.48	1,320.40	1,293.61	26.79	49.284			
2,900.00	2,663.34	2,440.57	2,296.72	21.26	15.33	-133.71	-567.23	-547.61	1,382.00	1,354.00	28.01	49.343			
3,000.00	2,750.34	2,519.35	2,367.14	22.24	16.03	-133.70	-589.83	-574.73	1,443.61	1,414.38	29.23	49.394			
3,100.00	2,837.33	2,598.12	2,437.55	23.23	16.72	-133.69	-612.43	-601.85	1,505.21	1,474.76	30.45	49.438			
3,200.00	2,924.32	2,676.89	2,507.97	24.21	17.42	-133.67	-635.03	-628.98	1,566.82	1,535.15	31.67	49.475			
3,300.00	3,011.31	2,755.66	2,578.38	25.20	18.11	-133.66	-657.64	-656.10	1,628.42	1,595.53	32.89	49.506			
3,400.00	3,098.31	2,834.43	2,648.80	26.18	18.81	-133.65	-680.24	-683.22	1,690.02	1,655.91	34.12	49.533			
3,500.00	3,185.30	2,913.20	2,719.21	27.17	19.51	-133.64	-702.84	-710.35	1,751.63	1,716.28	35.35	49.557			
3,600.00	3,272.29	3,008.03	2,789.63	28.16	20.35	-133.63	-725.44	-737.47	1,813.23	1,776.54	36.70	49.577			
3,700.00	3,359.29	3,070.74	2,860.04	29.14	20.91	-133.63	-748.05	-764.59	1,874.84	1,837.03	37.80	49.594			
3,800.00	3,446.28	3,149.51	2,930.46	30.13	21.61	-133.62	-770.65	-791.72	1,936.44	1,897.41	39.03	49.608			
3,900.00	3,533.27	3,228.28	3,000.87	31.12	22.31	-133.61	-793.25	-818.84	1,998.05	1,957.78	40.27	49.621			
4,000.00	3,620.26	3,307.05	3,071.29	32.10	23.01	-133.60	-815.85	-845.96	2,059.65	2,018.15	41.50	49.632			
4,100.00	3,707.26	3,385.83	3,141.71	33.09	23.71	-133.60	-838.45	-873.08	2,121.26	2,078.52	42.73	49.641			
4,200.00	3,794.25	3,464.60	3,212.12	34.08	24.41	-133.59	-861.06	-900.21	2,182.86	2,138.89	43.97	49.649			
4,300.00	3,881.24	3,543.37	3,282.54	35.07	25.11	-133.58	-883.66	-927.33	2,244.46	2,199.26	45.20	49.655			
4,400.00	3,968.23	3,622.14	3,352.95	36.06	25.81	-133.58	-906.26	-954.45	2,306.07	2,259.63	46.44	49.661			
4,500.00	4,055.23	3,700.91	3,423.37	37.05	26.51	-133.57	-928.86	-981.58	2,367.67	2,320.00	47.67	49.665			
4,600.00	4,142.22	3,779.68	3,493.78	38.04	27.21	-133.57	-951.47	-1,008.70	2,429.28	2,380.37	48.91	49.669			
4,700.00	4,229.21	3,858.45	3,564.20	39.03	27.92	-133.56	-974.07	-1,035.82	2,490.88	2,440.74	50.15	49.671			
4,800.00	4,316.21	3,937.22	3,634.61	40.02	28.62	-133.56	-996.67	-1,062.95	2,552.49	2,501.10	51.39	49.674			
4,900.00	4,403.20	4,015.99	3,705.03	41.01	29.32	-133.56	-1,019.27	-1,090.07	2,614.09	2,561.47	52.62	49.675			
5,000.00	4,490.19	4,105.24	3,775.44	42.00	30.12	-133.55	-1,041.88	-1,117.19	2,675.70	2,621.75	53.94	49.602			
5,100.00	4,577.18	4,173.53	3,845.86	42.99	30.72	-133.55	-1,064.48	-1,144.32	2,737.30	2,682.20	55.10	49.677			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 13-T1S-R66W - WARBLER 24W-27-11 - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,200.00	4,664.18	4,252.30	3,916.27	43.98	31.43	-133.54	-1,087.08	-1,171.44	2,798.91	2,742.56	56.34	49.677			
5,300.00	4,751.17	4,331.08	3,986.69	44.97	32.13	-133.54	-1,109.68	-1,198.56	2,860.51	2,802.93	57.58	49.676			
5,400.00	4,838.16	4,409.85	4,057.10	45.96	32.83	-133.54	-1,132.28	-1,225.69	2,922.12	2,863.29	58.82	49.676			
5,500.00	4,925.15	4,488.62	4,127.52	46.95	33.54	-133.53	-1,154.89	-1,252.81	2,983.72	2,923.65	60.07	49.675			
5,600.00	5,012.15	4,567.39	4,197.94	47.94	34.24	-133.53	-1,177.49	-1,279.93	3,045.32	2,984.02	61.31	49.673			
5,700.00	5,099.14	4,646.16	4,268.35	48.93	34.94	-133.53	-1,200.09	-1,307.06	3,106.93	3,044.38	62.55	49.672			
5,800.00	5,186.13	4,724.93	4,338.77	49.92	35.65	-133.53	-1,222.69	-1,334.18	3,168.53	3,104.74	63.79	49.670			
5,900.00	5,273.13	4,803.70	4,409.18	50.91	36.35	-133.52	-1,245.30	-1,361.30	3,230.14	3,165.10	65.03	49.668			
6,000.00	5,360.12	4,882.47	4,479.60	51.90	37.05	-133.52	-1,267.90	-1,388.43	3,291.74	3,225.47	66.28	49.666			
6,100.00	5,447.11	4,961.24	4,550.01	52.89	37.76	-133.52	-1,290.50	-1,415.55	3,353.35	3,285.83	67.52	49.663			
6,200.00	5,534.10	5,040.01	4,620.43	53.88	38.46	-133.51	-1,313.10	-1,442.67	3,414.95	3,346.19	68.77	49.661			
6,300.00	5,621.10	5,118.78	4,690.84	54.87	39.16	-133.51	-1,335.70	-1,469.80	3,476.56	3,406.55	70.01	49.658			
6,400.00	5,708.09	5,202.45	4,761.26	55.86	39.91	-133.51	-1,358.31	-1,496.92	3,538.16	3,466.87	71.29	49.629			
6,500.00	5,795.08	5,276.33	4,831.67	56.85	40.57	-133.51	-1,380.91	-1,524.04	3,599.77	3,527.27	72.50	49.652			
6,600.00	5,882.07	5,355.10	4,902.09	57.84	41.28	-133.51	-1,403.51	-1,551.17	3,661.37	3,587.63	73.75	49.648			
6,700.00	5,969.07	5,433.87	4,972.50	58.83	41.98	-133.50	-1,426.11	-1,578.29	3,722.98	3,647.98	74.99	49.645			
6,800.00	6,056.06	5,512.64	5,042.92	59.83	42.68	-133.50	-1,448.72	-1,605.41	3,784.58	3,708.34	76.24	49.642			
6,900.00	6,143.05	5,608.59	5,113.33	60.82	43.54	-133.50	-1,471.32	-1,632.53	3,846.19	3,768.57	77.62	49.554			
7,000.00	6,230.05	5,670.18	5,183.75	61.81	44.09	-133.50	-1,493.92	-1,659.66	3,907.79	3,829.06	78.73	49.635			
7,100.00	6,317.04	5,748.95	5,254.17	62.80	44.80	-133.50	-1,516.52	-1,686.78	3,969.40	3,889.42	79.98	49.631			
7,200.00	6,404.03	5,827.72	5,324.58	63.79	45.50	-133.49	-1,539.13	-1,713.90	4,031.00	3,949.77	81.23	49.627			
7,300.00	6,491.02	5,906.49	5,395.00	64.78	46.20	-133.49	-1,561.73	-1,741.03	4,092.60	4,010.13	82.47	49.623			
7,400.00	6,578.02	5,985.26	5,465.41	65.77	46.91	-133.49	-1,584.33	-1,768.15	4,154.21	4,070.49	83.72	49.619			
7,500.00	6,665.01	6,064.03	5,535.83	66.76	47.61	-133.49	-1,606.93	-1,795.27	4,215.81	4,130.84	84.97	49.615			
7,600.00	6,752.00	6,142.81	5,606.24	67.76	48.32	-133.49	-1,629.53	-1,822.40	4,277.42	4,191.20	86.22	49.611			
7,700.00	6,838.99	6,221.58	5,676.66	68.75	49.02	-133.49	-1,652.14	-1,849.52	4,339.02	4,251.55	87.47	49.607			
7,800.00	6,925.99	6,300.35	5,747.07	69.74	49.73	-133.48	-1,674.74	-1,876.64	4,400.63	4,311.91	88.72	49.602			
7,900.00	7,012.98	6,379.12	5,817.49	70.73	50.43	-133.48	-1,697.34	-1,903.77	4,462.23	4,372.27	89.97	49.598			
8,000.00	7,099.97	6,457.89	5,887.90	71.72	51.14	-133.48	-1,719.94	-1,930.89	4,523.84	4,432.62	91.22	49.594			
8,100.00	7,186.97	6,536.66	5,958.32	72.71	51.84	-133.48	-1,742.55	-1,958.01	4,585.44	4,492.97	92.47	49.589			
8,200.00	7,273.09	6,615.59	6,028.88	73.74	52.55	-122.71	-1,765.19	-1,985.19	4,646.71	4,552.96	93.75	49.563			
8,300.00	7,352.95	6,705.48	6,099.44	74.97	53.35	-107.37	-1,787.84	-2,012.37	4,705.28	4,609.95	95.33	49.359			
8,400.00	7,423.63	6,771.25	6,168.03	76.39	53.94	-96.32	-1,809.86	-2,038.79	4,759.38	4,662.45	96.93	49.099			
8,500.00	7,482.96	6,843.45	6,232.56	77.96	54.58	-88.36	-1,830.57	-2,063.65	4,807.71	4,708.93	98.78	48.672			
8,600.00	7,529.15	6,908.91	6,291.08	79.64	55.17	-82.73	-1,849.36	-2,086.19	4,849.24	4,748.53	100.72	48.148			
8,700.00	7,560.79	6,965.66	6,341.81	81.35	55.68	-78.90	-1,865.64	-2,105.73	4,883.21	4,780.53	102.68	47.558			
8,800.00	7,576.92	7,011.97	6,383.21	83.05	56.09	-76.57	-1,878.93	-2,121.68	4,909.07	4,804.49	104.59	46.937			
8,900.00	7,579.00	7,047.95	6,415.37	84.68	56.41	-76.07	-1,889.25	-2,134.07	4,927.74	4,821.35	106.39	46.317			
9,000.00	7,579.00	7,082.35	6,446.12	86.34	56.72	-76.45	-1,899.12	-2,145.91	4,946.80	4,838.61	108.19	45.722			
9,100.00	7,579.00	7,116.74	6,476.87	88.04	57.03	-76.83	-1,908.99	-2,157.75	4,967.57	4,857.56	110.01	45.156			
9,200.00	7,579.00	7,151.14	6,507.62	89.80	57.34	-77.21	-1,918.86	-2,169.60	4,990.01	4,878.18	111.83	44.620			
9,300.00	7,579.00	7,185.54	6,538.37	91.59	57.64	-77.59	-1,928.73	-2,181.44	5,014.12	4,900.45	113.67	44.113			
9,400.00	7,579.00	7,219.94	6,569.12	93.42	57.95	-77.97	-1,938.60	-2,193.29	5,039.86	4,924.36	115.50	43.636			
9,500.00	7,579.00	7,254.33	6,599.86	95.30	58.26	-78.35	-1,948.47	-2,205.13	5,067.20	4,949.87	117.33	43.187			
9,600.00	7,579.00	9,386.84	7,579.00	97.21	88.64	-89.97	-2,263.70	-3,721.09	5,079.30	4,915.49	163.81	31.008			
9,700.00	7,579.00	9,486.84	7,579.00	99.15	90.69	-89.97	-2,263.78	-3,821.09	5,079.50	4,911.10	168.41	30.162			
9,800.00	7,579.00	9,586.84	7,579.00	101.13	92.76	-89.97	-2,263.86	-3,921.09	5,079.71	4,906.65	173.06	29.353			
9,900.00	7,579.00	9,686.84	7,579.00	103.15	94.88	-89.97	-2,263.94	-4,021.09	5,079.92	4,902.17	177.75	28.579			
10,000.00	7,579.00	9,786.84	7,579.00	105.19	97.02	-89.97	-2,264.03	-4,121.09	5,080.13	4,897.64	182.48	27.839			
10,100.00	7,579.00	9,886.84	7,579.00	107.26	99.19	-89.97	-2,264.11	-4,221.09	5,080.33	4,893.08	187.25	27.131			
10,200.00	7,579.00	9,986.84	7,579.00	109.36	101.38	-89.97	-2,264.19	-4,321.09	5,080.54	4,888.49	192.05	26.454			
10,300.00	7,579.00	10,086.84	7,579.00	111.49	103.60	-89.97	-2,264.27	-4,421.09	5,080.75	4,883.86	196.89	25.805			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,400.00	7,579.00	10,186.84	7,579.00	113.64	105.84	-89.97	-2,264.35	-4,521.09	5,080.95	4,879.20	201.75	25.184		
10,500.00	7,579.00	10,286.84	7,579.00	115.82	108.11	-89.97	-2,264.44	-4,621.09	5,081.16	4,874.52	206.64	24.589		
10,600.00	7,579.00	10,386.84	7,579.00	118.01	110.39	-89.97	-2,264.52	-4,721.09	5,081.37	4,869.81	211.56	24.019		
10,700.00	7,579.00	10,486.84	7,579.00	120.23	112.70	-89.97	-2,264.60	-4,821.09	5,081.58	4,865.08	216.49	23.472		
10,800.00	7,579.00	10,586.84	7,579.00	122.47	115.02	-89.97	-2,264.68	-4,921.09	5,081.78	4,860.33	221.45	22.947		
10,900.00	7,579.00	10,686.84	7,579.00	124.73	117.36	-89.97	-2,264.77	-5,021.09	5,081.99	4,855.56	226.44	22.443		
11,000.00	7,579.00	10,786.84	7,579.00	127.01	119.72	-89.97	-2,264.85	-5,121.09	5,082.20	4,850.76	231.44	21.959		
11,100.00	7,579.00	10,886.84	7,579.00	129.30	122.09	-89.97	-2,264.93	-5,221.09	5,082.41	4,845.95	236.45	21.494		
11,200.00	7,579.00	10,986.84	7,579.00	131.61	124.48	-89.97	-2,265.01	-5,321.09	5,082.61	4,841.12	241.49	21.047		
11,300.00	7,579.00	11,086.84	7,579.00	133.93	126.87	-89.97	-2,265.09	-5,421.09	5,082.82	4,836.28	246.54	20.617		
11,400.00	7,579.00	11,186.84	7,579.00	136.27	129.29	-89.97	-2,265.18	-5,521.09	5,083.03	4,831.42	251.60	20.203		
11,500.00	7,579.00	11,286.84	7,579.00	138.62	131.71	-89.97	-2,265.26	-5,621.09	5,083.23	4,826.55	256.68	19.804		
11,600.00	7,579.00	11,386.84	7,579.00	140.99	134.14	-89.97	-2,265.34	-5,721.09	5,083.44	4,821.67	261.78	19.419		
11,700.00	7,579.00	11,486.84	7,579.00	143.37	136.59	-89.97	-2,265.42	-5,821.09	5,083.65	4,816.77	266.88	19.048		
11,800.00	7,579.00	11,586.84	7,579.00	145.76	139.05	-89.97	-2,265.50	-5,921.09	5,083.86	4,811.86	272.00	18.691		
11,900.00	7,579.00	11,686.84	7,579.00	148.16	141.51	-89.97	-2,265.59	-6,021.09	5,084.06	4,806.94	277.12	18.346		
12,000.00	7,579.00	11,786.84	7,579.00	150.58	143.98	-89.97	-2,265.67	-6,121.09	5,084.27	4,802.01	282.26	18.013		
12,100.00	7,579.00	11,886.84	7,579.00	153.00	146.47	-89.97	-2,265.75	-6,221.09	5,084.48	4,797.07	287.41	17.691		
12,200.00	7,579.00	11,986.84	7,579.00	155.43	148.96	-89.97	-2,265.83	-6,321.08	5,084.68	4,792.12	292.57	17.380		
12,300.00	7,579.00	12,086.84	7,579.00	157.87	151.46	-89.97	-2,265.92	-6,421.08	5,084.89	4,787.16	297.73	17.079		
12,400.00	7,579.00	12,186.84	7,579.00	160.32	153.96	-89.97	-2,266.00	-6,521.08	5,085.10	4,782.19	302.91	16.788		
12,500.00	7,579.00	12,286.84	7,579.00	162.78	156.47	-89.97	-2,266.08	-6,621.08	5,085.31	4,777.22	308.09	16.506		
12,600.00	7,579.00	12,386.84	7,579.00	165.25	158.99	-89.97	-2,266.16	-6,721.08	5,085.51	4,772.23	313.28	16.233		
12,700.00	7,579.00	12,486.84	7,579.00	167.73	161.52	-89.97	-2,266.24	-6,821.08	5,085.72	4,767.24	318.48	15.969		
12,800.00	7,579.00	12,586.84	7,579.00	170.21	164.05	-89.97	-2,266.33	-6,921.08	5,085.93	4,762.25	323.68	15.713		
12,900.00	7,579.00	12,686.84	7,579.00	172.70	166.59	-89.97	-2,266.41	-7,021.08	5,086.14	4,757.24	328.89	15.464		
13,000.00	7,579.00	12,786.84	7,579.00	175.19	169.13	-89.97	-2,266.49	-7,121.08	5,086.34	4,752.23	334.11	15.224		
13,100.00	7,579.00	12,886.84	7,579.00	177.70	171.68	-89.97	-2,266.57	-7,221.08	5,086.55	4,747.22	339.33	14.990		
13,200.00	7,579.00	12,986.84	7,579.00	180.20	174.23	-89.97	-2,266.66	-7,321.08	5,086.76	4,742.20	344.56	14.763		
13,300.00	7,579.00	13,086.84	7,579.00	182.72	176.79	-89.97	-2,266.74	-7,421.08	5,086.96	4,737.17	349.79	14.543		
13,400.00	7,579.00	13,186.84	7,579.00	185.24	179.35	-89.97	-2,266.82	-7,521.08	5,087.17	4,732.14	355.03	14.329		
13,500.00	7,579.00	13,286.84	7,579.00	187.76	181.92	-89.97	-2,266.90	-7,621.08	5,087.38	4,727.10	360.28	14.121		
13,600.00	7,579.00	13,386.83	7,579.00	190.30	184.49	-89.97	-2,266.98	-7,721.08	5,087.59	4,722.06	365.53	13.919		
13,700.00	7,579.00	13,486.83	7,579.00	192.83	187.06	-89.97	-2,267.07	-7,821.08	5,087.79	4,717.01	370.78	13.722		
13,800.00	7,579.00	13,586.83	7,579.00	195.37	189.64	-89.97	-2,267.15	-7,921.08	5,088.00	4,711.96	376.04	13.531		
13,900.00	7,579.00	13,686.83	7,579.00	197.92	192.22	-89.97	-2,267.23	-8,021.08	5,088.21	4,706.91	381.30	13.344		
14,000.00	7,579.00	13,786.83	7,579.00	200.47	194.81	-89.97	-2,267.31	-8,121.08	5,088.42	4,701.85	386.56	13.163		
14,100.00	7,579.00	13,886.83	7,579.00	203.02	197.39	-89.97	-2,267.39	-8,221.08	5,088.62	4,696.79	391.83	12.987		
14,200.00	7,579.00	13,986.83	7,579.00	205.58	199.99	-89.97	-2,267.48	-8,321.08	5,088.83	4,691.72	397.11	12.815		
14,300.00	7,579.00	14,086.83	7,579.00	208.14	202.58	-89.97	-2,267.56	-8,421.08	5,089.04	4,686.65	402.38	12.647		
14,400.00	7,579.00	14,186.83	7,579.00	210.70	205.18	-89.97	-2,267.64	-8,521.08	5,089.24	4,681.58	407.67	12.484		
14,500.00	7,579.00	14,286.83	7,579.00	213.27	207.78	-89.97	-2,267.72	-8,621.08	5,089.45	4,676.50	412.95	12.325		
14,600.00	7,579.00	14,386.83	7,579.00	215.84	210.38	-89.97	-2,267.81	-8,721.08	5,089.66	4,671.42	418.24	12.169		
14,700.00	7,579.00	14,486.83	7,579.00	218.42	212.99	-89.97	-2,267.89	-8,821.08	5,089.87	4,666.34	423.53	12.018		
14,800.00	7,579.00	14,586.83	7,579.00	221.00	215.60	-89.97	-2,267.97	-8,921.08	5,090.07	4,661.25	428.82	11.870		
14,900.00	7,579.00	14,686.83	7,579.00	223.58	218.21	-89.97	-2,268.05	-9,021.08	5,090.28	4,656.17	434.11	11.726		
15,000.00	7,579.00	14,786.83	7,579.00	226.17	220.82	-89.97	-2,268.13	-9,121.08	5,090.49	4,651.08	439.41	11.585		
15,100.00	7,579.00	14,886.83	7,579.00	228.75	223.43	-89.97	-2,268.22	-9,221.08	5,090.69	4,645.98	444.71	11.447		
15,200.00	7,579.00	14,986.83	7,579.00	231.34	226.05	-89.97	-2,268.30	-9,321.08	5,090.90	4,640.89	450.02	11.313		
15,300.00	7,579.00	15,086.83	7,579.00	233.94	228.67	-89.97	-2,268.38	-9,421.08	5,091.11	4,635.79	455.32	11.181		
15,400.00	7,579.00	15,186.83	7,579.00	236.53	231.29	-89.97	-2,268.46	-9,521.08	5,091.32	4,630.69	460.63	11.053		
15,500.00	7,579.00	15,286.83	7,579.00	239.13	233.92	-89.97	-2,268.55	-9,621.08	5,091.52	4,625.58	465.94	10.927		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 13-T1S-R66W - WARBLER 24W-27-11 - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
15,600.00	7,579.00	15,386.83	7,579.00	241.73	236.54	-89.97	-2,268.63	-9,721.08	5,091.73	4,620.48	471.25	10.805			
15,700.00	7,579.00	15,486.83	7,579.00	244.34	239.17	-89.97	-2,268.71	-9,821.08	5,091.94	4,615.37	476.57	10.685			
15,800.00	7,579.00	15,586.83	7,579.00	246.94	241.80	-89.97	-2,268.79	-9,921.08	5,092.15	4,610.26	481.89	10.567			
15,900.00	7,579.00	15,686.83	7,579.00	249.55	244.43	-89.97	-2,268.87	-10,021.08	5,092.35	4,605.15	487.20	10.452			
16,000.00	7,579.00	15,786.83	7,579.00	252.16	247.06	-89.97	-2,268.96	-10,121.08	5,092.56	4,600.03	492.52	10.340			
16,100.00	7,579.00	15,886.83	7,579.00	254.77	249.69	-89.97	-2,269.04	-10,221.08	5,092.77	4,594.92	497.85	10.230			
16,200.00	7,579.00	15,986.83	7,579.00	257.38	252.33	-89.97	-2,269.12	-10,321.08	5,092.97	4,589.80	503.17	10.122			
16,300.00	7,579.00	16,086.83	7,579.00	260.00	254.97	-89.97	-2,269.20	-10,421.07	5,093.18	4,584.68	508.50	10.016			
16,400.00	7,579.00	16,186.83	7,579.00	262.62	257.61	-89.97	-2,269.28	-10,521.07	5,093.39	4,579.56	513.83	9.913			
16,500.00	7,579.00	16,286.83	7,579.00	265.24	260.25	-89.97	-2,269.37	-10,621.07	5,093.60	4,574.44	519.16	9.811			
16,600.00	7,579.00	16,386.83	7,579.00	267.86	262.89	-89.97	-2,269.45	-10,721.07	5,093.80	4,569.32	524.49	9.712			
16,700.00	7,579.00	16,486.83	7,579.00	270.48	265.53	-89.97	-2,269.53	-10,821.07	5,094.01	4,564.19	529.82	9.615			
16,800.00	7,579.00	16,586.83	7,579.00	273.10	268.17	-89.97	-2,269.61	-10,921.07	5,094.22	4,559.06	535.15	9.519			
16,900.00	7,579.00	16,686.83	7,579.00	275.73	270.82	-89.97	-2,269.70	-11,021.07	5,094.42	4,553.94	540.49	9.426			
17,000.00	7,579.00	16,786.83	7,579.00	278.36	273.46	-89.97	-2,269.78	-11,121.07	5,094.63	4,548.81	545.83	9.334			
17,100.00	7,579.00	16,886.83	7,579.00	280.99	276.11	-89.97	-2,269.86	-11,221.07	5,094.84	4,543.68	551.16	9.244			
17,200.00	7,579.00	16,986.83	7,579.00	283.62	278.76	-89.97	-2,269.94	-11,321.07	5,095.05	4,538.54	556.50	9.155			
17,300.00	7,579.00	17,086.83	7,579.00	286.25	281.41	-89.97	-2,270.02	-11,421.07	5,095.25	4,533.41	561.84	9.069			
17,400.00	7,579.00	17,186.83	7,579.00	288.88	284.06	-89.97	-2,270.11	-11,521.07	5,095.46	4,528.27	567.19	8.984			
17,500.00	7,579.00	17,286.83	7,579.00	291.52	286.71	-89.97	-2,270.19	-11,621.07	5,095.67	4,523.14	572.53	8.900			
17,600.00	7,579.00	17,386.83	7,579.00	294.15	289.36	-89.97	-2,270.27	-11,721.07	5,095.88	4,518.00	577.87	8.818			
17,700.00	7,579.00	17,486.83	7,579.00	296.79	292.02	-89.97	-2,270.35	-11,821.07	5,096.08	4,512.86	583.22	8.738			
17,800.00	7,579.00	17,586.83	7,579.00	299.43	294.67	-89.97	-2,270.44	-11,921.07	5,096.29	4,507.72	588.57	8.659			
17,900.00	7,579.00	17,686.83	7,579.00	302.07	297.32	-89.97	-2,270.52	-12,021.07	5,096.50	4,502.58	593.91	8.581			
18,000.00	7,579.00	17,786.83	7,579.00	304.71	299.98	-89.97	-2,270.60	-12,121.07	5,096.70	4,497.44	599.26	8.505			
18,100.00	7,579.00	17,886.83	7,579.00	307.35	302.64	-89.97	-2,270.68	-12,221.07	5,096.91	4,492.30	604.61	8.430			
18,200.00	7,579.00	17,986.83	7,579.00	310.00	305.30	-89.97	-2,270.76	-12,321.07	5,097.12	4,487.15	609.96	8.356			
18,300.00	7,579.00	18,086.82	7,579.00	312.64	307.95	-89.97	-2,270.85	-12,421.07	5,097.33	4,482.01	615.32	8.284			
18,400.00	7,579.00	18,186.82	7,579.00	315.29	310.61	-89.97	-2,270.93	-12,521.07	5,097.53	4,476.86	620.67	8.213			
18,500.00	7,579.00	18,286.82	7,579.00	317.93	313.27	-89.97	-2,271.01	-12,621.07	5,097.74	4,471.72	626.02	8.143			
18,600.00	7,579.00	18,386.82	7,579.00	320.58	315.94	-89.97	-2,271.09	-12,721.07	5,097.95	4,466.57	631.38	8.074			
18,700.00	7,579.00	18,486.82	7,579.00	323.23	318.60	-89.97	-2,271.17	-12,821.07	5,098.16	4,461.42	636.73	8.007			
18,800.00	7,579.00	18,586.82	7,579.00	325.88	321.26	-89.97	-2,271.26	-12,921.07	5,098.36	4,456.27	642.09	7.940			
18,900.00	7,579.00	18,686.82	7,579.00	328.53	323.92	-89.97	-2,271.34	-13,021.07	5,098.57	4,451.12	647.45	7.875			
19,000.00	7,579.00	18,786.82	7,579.00	331.18	326.59	-89.97	-2,271.42	-13,121.07	5,098.78	4,445.97	652.81	7.811			
19,100.00	7,579.00	18,886.82	7,579.00	333.83	329.25	-89.97	-2,271.50	-13,221.07	5,098.98	4,440.82	658.17	7.747			
19,200.00	7,579.00	18,986.82	7,579.00	336.48	331.92	-89.97	-2,271.59	-13,321.07	5,099.19	4,435.67	663.52	7.685			
19,300.00	7,579.00	19,086.82	7,579.00	339.14	334.58	-89.97	-2,271.67	-13,421.07	5,099.40	4,430.51	668.89	7.624			
19,400.00	7,579.00	19,186.82	7,579.00	341.79	337.25	-89.97	-2,271.75	-13,521.07	5,099.61	4,425.36	674.25	7.563			
19,500.00	7,579.00	19,286.82	7,579.00	344.45	339.92	-89.97	-2,271.83	-13,621.07	5,099.81	4,420.20	679.61	7.504			
19,600.00	7,579.00	19,386.82	7,579.00	347.10	342.58	-89.97	-2,271.91	-13,721.07	5,100.02	4,415.05	684.97	7.446			
19,700.00	7,579.00	19,486.82	7,579.00	349.76	345.25	-89.97	-2,272.00	-13,821.07	5,100.23	4,409.89	690.33	7.388			
19,800.00	7,579.00	19,586.82	7,579.00	352.42	347.92	-89.97	-2,272.08	-13,921.07	5,100.43	4,404.74	695.70	7.331			
19,900.00	7,579.00	19,686.82	7,579.00	355.07	350.59	-89.97	-2,272.16	-14,021.07	5,100.64	4,399.58	701.06	7.276			
20,000.00	7,579.00	19,786.82	7,579.00	357.73	353.26	-89.97	-2,272.24	-14,121.07	5,100.85	4,394.42	706.43	7.221			
20,100.00	7,579.00	19,886.82	7,579.00	360.39	355.93	-89.97	-2,272.33	-14,221.07	5,101.06	4,389.26	711.79	7.166			
20,200.00	7,579.00	19,986.82	7,579.00	363.05	358.60	-89.97	-2,272.41	-14,321.07	5,101.26	4,384.10	717.16	7.113			
20,300.00	7,579.00	20,086.82	7,579.00	365.71	361.27	-89.97	-2,272.49	-14,421.06	5,101.47	4,378.94	722.53	7.061			
20,400.00	7,579.00	20,186.82	7,579.00	368.38	363.94	-89.97	-2,272.57	-14,521.06	5,101.68	4,373.78	727.90	7.009			
20,500.00	7,579.00	20,286.82	7,579.00	371.04	366.62	-89.97	-2,272.65	-14,621.06	5,101.89	4,368.62	733.26	6.958			
20,600.00	7,579.00	20,386.82	7,579.00	373.70	369.29	-89.97	-2,272.74	-14,721.06	5,102.09	4,363.46	738.63	6.907			
20,700.00	7,579.00	20,486.82	7,579.00	376.36	371.96	-89.97	-2,272.82	-14,821.06	5,102.30	4,358.30	744.00	6.858			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
20,800.00	7,579.00	20,586.82	7,579.00	379.03	374.63	-89.97	-2,272.90	-14,921.06	5,102.51	4,353.13	749.37	6.809		
20,900.00	7,579.00	20,686.82	7,579.00	381.69	377.31	-89.97	-2,272.98	-15,021.06	5,102.71	4,347.97	754.74	6.761		
21,000.00	7,579.00	20,786.82	7,579.00	384.36	379.98	-89.97	-2,273.06	-15,121.06	5,102.92	4,342.81	760.11	6.713		
21,100.00	7,579.00	20,886.82	7,579.00	387.02	382.66	-89.97	-2,273.15	-15,221.06	5,103.13	4,337.64	765.49	6.667		
21,200.00	7,579.00	20,986.82	7,579.00	389.69	385.33	-89.97	-2,273.23	-15,321.06	5,103.34	4,332.48	770.86	6.620		
21,300.00	7,579.00	21,086.82	7,579.00	392.36	388.01	-89.97	-2,273.31	-15,421.06	5,103.54	4,327.31	776.23	6.575		
21,400.00	7,579.00	21,186.82	7,579.00	395.02	390.69	-89.97	-2,273.39	-15,521.06	5,103.75	4,322.15	781.60	6.530		
21,500.00	7,579.00	21,286.82	7,579.00	397.69	393.36	-89.97	-2,273.48	-15,621.06	5,103.96	4,316.98	786.98	6.486		
21,600.00	7,579.00	21,386.82	7,579.00	400.36	396.04	-89.97	-2,273.56	-15,721.06	5,104.16	4,311.81	792.35	6.442		
21,700.00	7,579.00	21,486.82	7,579.00	403.03	398.72	-89.97	-2,273.64	-15,821.06	5,104.37	4,306.65	797.73	6.399		
21,800.00	7,579.00	21,586.82	7,579.00	405.70	401.39	-89.97	-2,273.72	-15,921.06	5,104.58	4,301.48	803.10	6.356		
21,900.00	7,579.00	21,686.82	7,579.00	408.37	404.07	-89.97	-2,273.80	-16,021.06	5,104.79	4,296.31	808.48	6.314		
22,000.00	7,579.00	21,786.82	7,579.00	411.04	406.75	-89.97	-2,273.89	-16,121.06	5,104.99	4,291.14	813.85	6.273		
22,100.00	7,579.00	21,886.82	7,579.00	413.71	409.43	-89.97	-2,273.97	-16,221.06	5,105.20	4,285.97	819.23	6.232		
22,200.00	7,579.00	21,986.82	7,579.00	416.38	412.11	-89.97	-2,274.05	-16,321.06	5,105.41	4,280.80	824.60	6.191		
22,300.00	7,579.00	22,086.82	7,579.00	419.05	414.79	-89.97	-2,274.13	-16,421.06	5,105.62	4,275.63	829.98	6.151		
22,400.00	7,579.00	22,186.82	7,579.00	421.72	417.47	-89.97	-2,274.22	-16,521.06	5,105.82	4,270.46	835.36	6.112		
22,440.61	7,579.00	22,242.67	7,579.00	422.81	418.96	-89.97	-2,274.13	-16,576.91	5,105.80	4,267.82	837.99	6.093 SF		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-MWD OWSG													Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	3.00	3.00	0.00	0.00	-179.43	-139.87	-1.40	139.88						
100.00	100.00	103.00	103.00	0.13	0.14	-179.43	-139.87	-1.40	139.88	139.61	0.27	512.591	CC, ES		
200.00	199.98	199.06	199.04	0.49	0.48	-137.02	-141.23	-2.44	142.58	141.60	0.98	145.072			
300.00	299.84	294.83	294.68	0.86	0.83	-137.09	-145.13	-5.43	150.50	148.80	1.70	88.416			
400.00	399.45	389.82	389.33	1.23	1.18	-137.20	-151.50	-10.31	163.61	161.18	2.43	67.271			
500.00	498.70	483.66	482.52	1.63	1.56	-137.30	-160.23	-17.01	181.84	178.66	3.17	57.316			
600.00	597.47	576.00	573.81	2.05	1.95	-137.37	-171.18	-25.41	205.09	201.17	3.93	52.252			
700.00	695.62	666.51	662.82	2.50	2.36	-137.40	-184.18	-35.37	233.26	228.57	4.69	49.725			
800.00	793.06	754.90	749.21	2.99	2.79	-137.35	-199.02	-46.75	266.22	260.74	5.47	48.654			
900.00	889.64	840.92	832.69	3.52	3.23	-137.24	-215.49	-59.38	303.80	297.53	6.27	48.475			
1,000.00	985.27	924.35	913.02	4.10	3.69	-137.06	-233.35	-73.07	345.84	338.76	7.08	48.863			
1,100.00	1,079.82	1,004.99	990.01	4.72	4.16	-136.80	-252.37	-87.66	392.16	384.26	7.90	49.660			
1,200.00	1,173.17	1,082.70	1,063.54	5.40	4.65	-136.46	-272.32	-102.95	442.57	433.84	8.73	50.671			
1,300.00	1,265.21	1,157.35	1,133.51	6.13	5.15	-136.04	-292.97	-118.79	496.88	487.30	9.58	51.846			
1,400.00	1,355.84	1,228.87	1,199.88	6.92	5.65	-135.55	-314.11	-134.99	554.88	544.44	10.44	53.146			
1,500.00	1,444.94	1,297.20	1,262.65	7.77	6.15	-134.96	-335.52	-151.41	616.38	605.07	11.30	54.536			
1,600.00	1,532.44	1,362.34	1,321.89	8.68	6.65	-134.57	-357.04	-167.90	681.11	668.94	12.18	55.938			
1,700.00	1,619.43	1,425.33	1,378.55	9.62	7.16	-134.97	-378.85	-184.63	747.68	734.65	13.03	57.370			
1,800.00	1,706.42	1,486.61	1,433.10	10.56	7.67	-135.22	-401.02	-201.63	815.44	801.56	13.88	58.733			
1,900.00	1,793.42	1,546.22	1,485.57	11.52	8.19	-135.36	-423.47	-218.84	884.33	869.60	14.73	60.027			
2,000.00	1,880.41	1,604.16	1,535.99	12.48	8.71	-135.40	-446.11	-236.20	954.29	938.73	15.57	61.303			
2,100.00	1,967.40	1,660.46	1,584.43	13.45	9.24	-135.38	-468.89	-253.66	1,025.29	1,008.89	16.40	62.522			
2,200.00	2,054.39	1,715.15	1,630.93	14.42	9.76	-135.31	-491.73	-271.17	1,097.26	1,080.05	17.21	63.748			
2,300.00	2,141.39	1,781.13	1,686.59	15.39	10.40	-135.19	-519.85	-292.73	1,169.87	1,151.66	18.21	64.246			
2,400.00	2,228.38	1,849.84	1,744.54	16.36	11.08	-135.08	-549.15	-315.20	1,242.50	1,223.25	19.26	64.528			
2,500.00	2,315.37	1,918.56	1,802.50	17.34	11.77	-134.98	-578.45	-337.66	1,315.14	1,294.83	20.31	64.762			
2,600.00	2,402.37	1,987.28	1,860.46	18.32	12.46	-134.89	-607.75	-360.13	1,387.77	1,366.41	21.36	64.957			
2,700.00	2,489.36	2,056.00	1,918.41	19.30	13.15	-134.81	-637.05	-382.59	1,460.41	1,437.98	22.43	65.120			
2,800.00	2,576.35	2,124.72	1,976.37	20.28	13.84	-134.73	-666.35	-405.06	1,533.04	1,509.55	23.49	65.257			
2,900.00	2,663.34	2,206.56	2,034.33	21.26	14.66	-134.67	-695.65	-427.52	1,605.68	1,581.02	24.66	65.104			
3,000.00	2,750.34	2,262.15	2,092.28	22.24	15.23	-134.61	-724.96	-449.99	1,678.32	1,652.69	25.63	65.471			
3,100.00	2,837.33	2,330.87	2,150.24	23.23	15.92	-134.55	-754.26	-472.45	1,750.96	1,724.25	26.71	65.555			
3,200.00	2,924.32	2,400.41	2,208.20	24.21	16.63	-134.50	-783.56	-494.92	1,823.60	1,795.81	27.79	65.612			
3,300.00	3,011.31	2,468.31	2,266.15	25.20	17.32	-134.45	-812.86	-517.39	1,896.24	1,867.37	28.87	65.688			
3,400.00	3,098.31	2,537.03	2,324.11	26.18	18.02	-134.41	-842.16	-539.85	1,968.88	1,938.93	29.95	65.740			
3,500.00	3,185.30	2,605.74	2,382.06	27.17	18.72	-134.37	-871.46	-562.32	2,041.53	2,010.49	31.03	65.786			
3,600.00	3,272.29	2,674.46	2,440.02	28.16	19.42	-134.33	-900.76	-584.78	2,114.17	2,082.05	32.12	65.824			
3,700.00	3,359.29	2,743.18	2,497.98	29.14	20.12	-134.30	-930.06	-607.25	2,186.81	2,153.61	33.21	65.857			
3,800.00	3,446.28	2,811.90	2,555.93	30.13	20.83	-134.26	-959.36	-629.71	2,259.45	2,225.16	34.29	65.886			
3,900.00	3,533.27	2,880.62	2,613.89	31.12	21.53	-134.23	-988.66	-652.18	2,332.10	2,296.72	35.38	65.910			
4,000.00	3,620.26	2,949.33	2,671.85	32.10	22.23	-134.20	-1,017.96	-674.64	2,404.74	2,368.27	36.47	65.931			
4,100.00	3,707.26	3,018.05	2,729.80	33.09	22.94	-134.18	-1,047.26	-697.11	2,477.39	2,439.82	37.57	65.948			
4,200.00	3,794.25	3,086.77	2,787.76	34.08	23.64	-134.15	-1,076.56	-719.57	2,550.03	2,511.37	38.66	65.963			
4,300.00	3,881.24	3,155.49	2,845.72	35.07	24.35	-134.13	-1,105.87	-742.04	2,622.68	2,582.92	39.75	65.976			
4,400.00	3,968.23	3,224.21	2,903.67	36.06	25.05	-134.10	-1,135.17	-764.50	2,695.32	2,654.47	40.85	65.986			
4,500.00	4,055.23	3,292.93	2,961.63	37.05	25.76	-134.08	-1,164.47	-786.97	2,767.97	2,726.02	41.94	65.994			
4,600.00	4,142.22	3,361.64	3,019.59	38.04	26.46	-134.06	-1,193.77	-809.43	2,840.61	2,797.57	43.04	66.001			
4,700.00	4,229.21	3,430.36	3,077.54	39.03	27.17	-134.04	-1,223.07	-831.90	2,913.26	2,869.12	44.14	66.006			
4,800.00	4,316.21	3,500.92	3,135.50	40.02	27.89	-134.02	-1,252.37	-854.36	2,985.90	2,940.65	45.25	65.989			
4,900.00	4,403.20	3,567.80	3,193.46	41.01	28.58	-134.01	-1,281.67	-876.83	3,058.55	3,012.21	46.33	66.013			
5,000.00	4,490.19	3,636.52	3,251.41	42.00	29.29	-133.99	-1,310.97	-899.29	3,131.19	3,083.76	47.43	66.014			
5,100.00	4,577.18	3,705.23	3,309.37	42.99	30.00	-133.97	-1,340.27	-921.76	3,203.84	3,155.31	48.53	66.015			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 13-T1S-R66W - WARBLER 24W-27-12 - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,200.00	4,664.18	3,773.95	3,367.33	43.98	30.70	-133.96	-1,369.57	-944.22	3,276.49	3,226.85	49.63	66.014			
5,300.00	4,751.17	3,842.67	3,425.28	44.97	31.41	-133.94	-1,398.87	-966.69	3,349.13	3,298.40	50.73	66.013			
5,400.00	4,838.16	3,911.39	3,483.24	45.96	32.12	-133.93	-1,428.17	-989.15	3,421.78	3,369.94	51.84	66.011			
5,500.00	4,925.15	3,980.11	3,541.20	46.95	32.83	-133.91	-1,457.47	-1,011.62	3,494.42	3,441.49	52.94	66.009			
5,600.00	5,012.15	4,048.82	3,599.15	47.94	33.53	-133.90	-1,486.78	-1,034.08	3,567.07	3,513.03	54.04	66.006			
5,700.00	5,099.14	4,117.54	3,657.11	48.93	34.24	-133.89	-1,516.08	-1,056.55	3,639.72	3,584.57	55.15	66.002			
5,800.00	5,186.13	4,186.26	3,715.06	49.92	34.95	-133.88	-1,545.38	-1,079.01	3,712.36	3,656.11	56.25	65.998			
5,900.00	5,273.13	4,254.98	3,773.02	50.91	35.66	-133.87	-1,574.68	-1,101.48	3,785.01	3,727.66	57.35	65.993			
6,000.00	5,360.12	4,323.70	3,830.98	51.90	36.37	-133.85	-1,603.98	-1,123.94	3,857.66	3,799.20	58.46	65.988			
6,100.00	5,447.11	4,407.59	3,888.93	52.89	37.23	-133.84	-1,633.28	-1,146.41	3,930.30	3,870.62	59.69	65.950			
6,200.00	5,534.10	4,461.13	3,946.89	53.88	37.78	-133.83	-1,662.58	-1,168.88	4,002.95	3,942.28	60.67	65.977			
6,300.00	5,621.10	4,529.85	4,004.85	54.87	38.49	-133.82	-1,691.88	-1,191.34	4,075.60	4,013.82	61.78	65.971			
6,400.00	5,708.09	4,601.43	4,062.80	55.86	39.23	-133.81	-1,721.18	-1,213.81	4,148.25	4,085.34	62.91	65.941			
6,500.00	5,795.08	4,667.29	4,120.76	56.85	39.91	-133.80	-1,750.48	-1,236.27	4,220.89	4,156.90	63.99	65.957			
6,600.00	5,882.07	4,736.01	4,178.72	57.84	40.62	-133.79	-1,779.78	-1,258.74	4,293.54	4,228.44	65.10	65.950			
6,700.00	5,969.07	4,804.72	4,236.67	58.83	41.33	-133.79	-1,809.08	-1,281.20	4,366.19	4,299.98	66.21	65.943			
6,800.00	6,056.06	4,873.44	4,294.63	59.83	42.04	-133.78	-1,838.39	-1,303.67	4,438.83	4,371.51	67.32	65.936			
6,900.00	6,143.05	4,942.16	4,352.59	60.82	42.74	-133.77	-1,867.69	-1,326.13	4,511.48	4,443.05	68.43	65.928			
7,000.00	6,230.05	5,010.88	4,410.54	61.81	43.45	-133.76	-1,896.99	-1,348.60	4,584.13	4,514.59	69.54	65.920			
7,100.00	6,317.04	5,079.60	4,468.50	62.80	44.16	-133.75	-1,926.29	-1,371.06	4,656.78	4,586.12	70.65	65.912			
7,200.00	6,404.03	5,148.31	4,526.46	63.79	44.87	-133.75	-1,955.59	-1,393.53	4,729.42	4,657.66	71.76	65.903			
7,300.00	6,491.02	5,217.03	4,584.41	64.78	45.58	-133.74	-1,984.89	-1,415.99	4,802.07	4,729.20	72.88	65.895			
7,400.00	6,578.02	5,285.75	4,642.37	65.77	46.29	-133.73	-2,014.19	-1,438.46	4,874.72	4,800.73	73.99	65.886			
7,500.00	6,665.01	5,354.47	4,700.33	66.76	47.00	-133.73	-2,043.49	-1,460.92	4,947.37	4,872.27	75.10	65.877			
7,600.00	6,752.00	5,423.19	4,758.28	67.76	47.71	-133.72	-2,072.79	-1,483.39	5,020.01	4,943.80	76.21	65.868			
7,700.00	6,838.99	5,508.10	4,816.24	68.75	48.59	-133.71	-2,102.09	-1,505.85	5,092.66	5,015.21	77.46	65.850			
7,800.00	6,925.99	5,560.62	4,874.19	69.74	49.13	-133.71	-2,131.39	-1,528.32	5,165.31	5,086.87	78.44	65.849			
7,900.00	7,012.98	5,629.34	4,932.15	70.73	49.84	-133.70	-2,160.69	-1,550.78	5,237.96	5,158.40	79.56	65.840			
8,000.00	7,099.97	5,701.94	4,990.11	71.72	50.59	-133.69	-2,189.99	-1,573.25	5,310.60	5,229.90	80.70	65.805			
8,100.00	7,186.97	5,766.78	5,048.06	72.71	51.26	-133.69	-2,219.30	-1,595.71	5,383.25	5,301.47	81.79	65.820			
8,200.00	7,273.99	5,835.71	5,106.20	73.74	51.97	-121.47	-2,248.69	-1,618.25	5,455.60	5,372.66	82.94	65.779			
8,300.00	7,352.95	5,905.07	5,164.70	74.97	52.68	-103.83	-2,278.26	-1,640.92	5,525.30	5,441.00	84.30	65.546			
8,400.00	7,423.63	5,972.98	5,221.98	76.39	53.39	-91.04	-2,307.22	-1,663.13	5,590.26	5,504.40	85.86	65.110			
8,500.00	7,482.96	6,037.38	5,276.29	77.96	54.05	-81.86	-2,334.68	-1,684.18	5,648.80	5,561.21	87.59	64.493			
8,600.00	7,529.15	6,103.70	5,325.98	79.64	54.74	-75.39	-2,359.80	-1,703.44	5,699.50	5,610.01	89.49	63.688			
8,700.00	7,560.79	6,147.95	5,369.54	81.35	55.19	-71.01	-2,381.82	-1,720.33	5,741.25	5,649.92	91.33	62.865			
8,800.00	7,576.92	6,209.23	5,405.66	83.05	55.83	-68.32	-2,400.08	-1,734.33	5,773.19	5,679.84	93.36	61.841			
8,900.00	7,579.00	6,224.77	5,434.33	84.68	55.99	-67.67	-2,414.58	-1,745.44	5,796.21	5,701.19	95.01	61.003			
9,000.00	7,579.00	6,257.41	5,461.86	86.34	56.32	-67.98	-2,428.50	-1,756.11	5,819.13	5,722.28	96.84	60.089			
9,100.00	7,579.00	6,309.95	5,489.39	88.04	56.87	-68.29	-2,442.41	-1,766.78	5,843.48	5,744.62	98.86	59.106			
9,200.00	7,579.00	6,322.69	5,516.92	89.80	57.00	-68.60	-2,456.33	-1,777.45	5,869.26	5,768.69	100.58	58.356			
9,300.00	7,579.00	6,355.33	5,544.44	91.59	57.34	-68.91	-2,470.25	-1,788.12	5,896.45	5,793.97	102.48	57.540			
9,400.00	7,579.00	6,387.96	5,571.97	93.42	57.67	-69.22	-2,484.16	-1,798.79	5,925.01	5,820.62	104.39	56.758			
9,500.00	7,579.00	6,420.60	5,599.50	95.30	58.01	-69.53	-2,498.08	-1,809.46	5,954.94	5,848.62	106.32	56.011			
9,600.00	7,579.00	6,453.24	5,627.02	97.21	58.35	-69.84	-2,512.00	-1,820.13	5,986.21	5,877.96	108.25	55.297			
9,700.00	7,579.00	6,485.88	5,654.55	99.15	58.68	-70.15	-2,525.91	-1,830.80	6,018.81	5,908.61	110.20	54.618			
9,800.00	7,579.00	6,518.52	5,682.08	101.13	59.02	-70.46	-2,539.83	-1,841.47	6,052.70	5,940.56	112.14	53.972			
9,900.00	7,579.00	6,551.16	5,709.61	103.15	59.36	-70.77	-2,553.75	-1,852.14	6,087.88	5,973.78	114.09	53.359			
10,000.00	7,579.00	6,583.79	5,737.13	105.19	59.70	-71.08	-2,567.66	-1,862.81	6,124.31	6,008.27	116.04	52.778			
10,100.00	7,579.00	6,616.43	5,764.66	107.26	60.03	-71.38	-2,581.58	-1,873.48	6,161.97	6,043.99	117.98	52.229			
10,200.00	7,579.00	6,649.07	5,792.19	109.36	60.37	-71.69	-2,595.50	-1,884.15	6,200.85	6,080.93	119.92	51.710			
10,300.00	7,579.00	6,681.71	5,819.71	111.49	60.71	-72.00	-2,609.41	-1,894.82	6,240.92	6,119.07	121.85	51.220			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 13-T1S-R66W - WARBLER 24W-27-12 - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
10,400.00	7,579.00	6,714.35	5,847.24	113.64	61.04	-72.30	-2,623.33	-1,905.49	6,282.15	6,158.39	123.77	50.758			
10,500.00	7,579.00	10,705.35	7,579.00	115.82	116.24	-89.97	-3,500.13	-4,621.32	6,316.85	6,110.26	206.59	30.577			
10,600.00	7,579.00	10,805.35	7,579.00	118.01	118.28	-89.97	-3,500.19	-4,721.32	6,317.04	6,105.58	211.46	29.873			
10,700.00	7,579.00	10,905.35	7,579.00	120.23	120.36	-89.97	-3,500.25	-4,821.32	6,317.23	6,100.86	216.36	29.198			
10,800.00	7,579.00	11,005.35	7,579.00	122.47	122.46	-89.97	-3,500.31	-4,921.32	6,317.41	6,096.13	221.28	28.549			
10,900.00	7,579.00	11,105.35	7,579.00	124.73	124.58	-89.97	-3,500.38	-5,021.32	6,317.60	6,091.37	226.23	27.926			
11,000.00	7,579.00	11,205.35	7,579.00	127.01	126.73	-89.97	-3,500.44	-5,121.32	6,317.79	6,086.59	231.20	27.326			
11,100.00	7,579.00	11,305.35	7,579.00	129.30	128.90	-89.97	-3,500.50	-5,221.32	6,317.98	6,081.79	236.18	26.750			
11,200.00	7,579.00	11,405.35	7,579.00	131.61	131.09	-89.97	-3,500.56	-5,321.32	6,318.16	6,076.98	241.19	26.196			
11,300.00	7,579.00	11,505.35	7,579.00	133.93	133.30	-89.97	-3,500.63	-5,421.32	6,318.35	6,072.14	246.21	25.663			
11,400.00	7,579.00	11,605.35	7,579.00	136.27	135.53	-89.97	-3,500.69	-5,521.32	6,318.54	6,067.29	251.24	25.149			
11,500.00	7,579.00	11,705.35	7,579.00	138.62	137.78	-89.97	-3,500.75	-5,621.32	6,318.73	6,062.43	256.30	24.654			
11,600.00	7,579.00	11,805.35	7,579.00	140.99	140.05	-89.97	-3,500.81	-5,721.32	6,318.91	6,057.55	261.36	24.177			
11,700.00	7,579.00	11,905.35	7,579.00	143.37	142.33	-89.97	-3,500.88	-5,821.32	6,319.10	6,052.66	266.44	23.717			
11,800.00	7,579.00	12,005.35	7,579.00	145.76	144.63	-89.97	-3,500.94	-5,921.32	6,319.29	6,047.75	271.53	23.272			
11,900.00	7,579.00	12,105.35	7,579.00	148.16	146.94	-89.97	-3,501.00	-6,021.32	6,319.48	6,042.84	276.64	22.844			
12,000.00	7,579.00	12,205.35	7,579.00	150.58	149.27	-89.97	-3,501.06	-6,121.32	6,319.66	6,037.91	281.75	22.430			
12,100.00	7,579.00	12,305.35	7,579.00	153.00	151.61	-89.97	-3,501.12	-6,221.32	6,319.85	6,032.97	286.88	22.030			
12,200.00	7,579.00	12,405.35	7,579.00	155.43	153.96	-89.97	-3,501.19	-6,321.32	6,320.04	6,028.02	292.02	21.643			
12,300.00	7,579.00	12,505.35	7,579.00	157.87	156.33	-89.97	-3,501.25	-6,421.32	6,320.23	6,023.06	297.16	21.269			
12,400.00	7,579.00	12,605.35	7,579.00	160.32	158.71	-89.97	-3,501.31	-6,521.31	6,320.41	6,018.09	302.32	20.906			
12,500.00	7,579.00	12,705.35	7,579.00	162.78	161.10	-89.97	-3,501.37	-6,621.31	6,320.60	6,013.12	307.48	20.556			
12,600.00	7,579.00	12,805.35	7,579.00	165.25	163.50	-89.97	-3,501.44	-6,721.31	6,320.79	6,008.13	312.65	20.217			
12,700.00	7,579.00	12,905.35	7,579.00	167.73	165.91	-89.97	-3,501.50	-6,821.31	6,320.98	6,003.14	317.83	19.888			
12,800.00	7,579.00	13,005.35	7,579.00	170.21	168.33	-89.97	-3,501.56	-6,921.31	6,321.16	5,998.14	323.02	19.569			
12,900.00	7,579.00	13,105.35	7,579.00	172.70	170.76	-89.97	-3,501.62	-7,021.31	6,321.35	5,993.14	328.22	19.260			
13,000.00	7,579.00	13,205.35	7,579.00	175.19	173.20	-89.97	-3,501.69	-7,121.31	6,321.54	5,988.12	333.42	18.960			
13,100.00	7,579.00	13,305.35	7,579.00	177.70	175.64	-89.97	-3,501.75	-7,221.31	6,321.73	5,983.10	338.62	18.669			
13,200.00	7,579.00	13,405.35	7,579.00	180.20	178.10	-89.97	-3,501.81	-7,321.31	6,321.91	5,978.07	343.84	18.386			
13,300.00	7,579.00	13,505.35	7,579.00	182.72	180.56	-89.97	-3,501.87	-7,421.31	6,322.10	5,973.04	349.06	18.112			
13,400.00	7,579.00	13,605.35	7,579.00	185.24	183.03	-89.97	-3,501.94	-7,521.31	6,322.29	5,968.01	354.28	17.845			
13,500.00	7,579.00	13,705.35	7,579.00	187.76	185.51	-89.97	-3,502.00	-7,621.31	6,322.48	5,962.96	359.51	17.586			
13,600.00	7,579.00	13,805.35	7,579.00	190.30	187.99	-89.97	-3,502.06	-7,721.31	6,322.66	5,957.91	364.75	17.334			
13,700.00	7,579.00	13,905.35	7,579.00	192.83	190.48	-89.97	-3,502.12	-7,821.31	6,322.85	5,952.86	369.99	17.089			
13,800.00	7,579.00	14,005.35	7,579.00	195.37	192.98	-89.97	-3,502.19	-7,921.31	6,323.04	5,947.80	375.24	16.851			
13,900.00	7,579.00	14,105.35	7,579.00	197.92	195.48	-89.97	-3,502.25	-8,021.31	6,323.23	5,942.74	380.49	16.619			
14,000.00	7,579.00	14,205.35	7,579.00	200.47	197.99	-89.97	-3,502.31	-8,121.31	6,323.41	5,937.67	385.74	16.393			
14,100.00	7,579.00	14,305.35	7,579.00	203.02	200.51	-89.97	-3,502.37	-8,221.31	6,323.60	5,932.60	391.00	16.173			
14,200.00	7,579.00	14,405.35	7,579.00	205.58	203.03	-89.97	-3,502.44	-8,321.31	6,323.79	5,927.53	396.26	15.959			
14,300.00	7,579.00	14,505.35	7,579.00	208.14	205.55	-89.97	-3,502.50	-8,421.31	6,323.98	5,922.45	401.53	15.750			
14,400.00	7,579.00	14,605.34	7,579.00	210.70	208.08	-89.97	-3,502.56	-8,521.31	6,324.16	5,917.37	406.80	15.546			
14,500.00	7,579.00	14,705.34	7,579.00	213.27	210.61	-89.97	-3,502.62	-8,621.31	6,324.35	5,912.28	412.07	15.348			
14,600.00	7,579.00	14,805.34	7,579.00	215.84	213.15	-89.97	-3,502.69	-8,721.31	6,324.54	5,907.19	417.35	15.154			
14,700.00	7,579.00	14,905.34	7,579.00	218.42	215.69	-89.97	-3,502.75	-8,821.31	6,324.73	5,902.10	422.63	14.965			
14,800.00	7,579.00	15,005.34	7,579.00	221.00	218.24	-89.97	-3,502.81	-8,921.31	6,324.91	5,897.00	427.91	14.781			
14,900.00	7,579.00	15,105.34	7,579.00	223.58	220.79	-89.97	-3,502.87	-9,021.31	6,325.10	5,891.90	433.20	14.601			
15,000.00	7,579.00	15,205.34	7,579.00	226.17	223.35	-89.97	-3,502.94	-9,121.31	6,325.29	5,886.80	438.49	14.425			
15,100.00	7,579.00	15,305.34	7,579.00	228.75	225.91	-89.97	-3,503.00	-9,221.31	6,325.48	5,881.70	443.78	14.254			
15,200.00	7,579.00	15,405.34	7,579.00	231.34	228.47	-89.97	-3,503.06	-9,321.31	6,325.66	5,876.59	449.08	14.086			
15,300.00	7,579.00	15,505.34	7,579.00	233.94	231.03	-89.97	-3,503.12	-9,421.31	6,325.85	5,871.48	454.37	13.922			
15,400.00	7,579.00	15,605.34	7,579.00	236.53	233.60	-89.97	-3,503.19	-9,521.31	6,326.04	5,866.37	459.67	13.762			
15,500.00	7,579.00	15,705.34	7,579.00	239.13	236.18	-89.97	-3,503.25	-9,621.31	6,326.23	5,861.25	464.98	13.605			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
15,600.00	7,579.00	15,805.34	7,579.00	241.73	238.75	-89.97	-3,503.31	-9,721.31	6,326.41	5,856.13	470.28	13.452		
15,700.00	7,579.00	15,905.34	7,579.00	244.34	241.33	-89.97	-3,503.37	-9,821.31	6,326.60	5,851.01	475.59	13.303		
15,800.00	7,579.00	16,005.34	7,579.00	246.94	243.91	-89.97	-3,503.44	-9,921.31	6,326.79	5,845.89	480.90	13.156		
15,900.00	7,579.00	16,105.34	7,579.00	249.55	246.50	-89.97	-3,503.50	-10,021.31	6,326.98	5,840.77	486.21	13.013		
16,000.00	7,579.00	16,205.34	7,579.00	252.16	249.08	-89.97	-3,503.56	-10,121.31	6,327.16	5,835.64	491.52	12.873		
16,100.00	7,579.00	16,305.34	7,579.00	254.77	251.67	-89.97	-3,503.62	-10,221.31	6,327.35	5,830.51	496.84	12.735		
16,200.00	7,579.00	16,405.34	7,579.00	257.38	254.26	-89.97	-3,503.69	-10,321.31	6,327.54	5,825.38	502.16	12.601		
16,300.00	7,579.00	16,505.34	7,579.00	260.00	256.86	-89.97	-3,503.75	-10,421.31	6,327.73	5,820.25	507.48	12.469		
16,400.00	7,579.00	16,605.34	7,579.00	262.62	259.46	-89.97	-3,503.81	-10,521.31	6,327.91	5,815.12	512.80	12.340		
16,500.00	7,579.00	16,705.34	7,579.00	265.24	262.06	-89.97	-3,503.87	-10,621.31	6,328.10	5,809.98	518.12	12.214		
16,600.00	7,579.00	16,805.34	7,579.00	267.86	264.66	-89.97	-3,503.94	-10,721.31	6,328.29	5,804.84	523.45	12.090		
16,700.00	7,579.00	16,905.34	7,579.00	270.48	267.26	-89.97	-3,504.00	-10,821.31	6,328.48	5,799.70	528.77	11.968		
16,800.00	7,579.00	17,005.34	7,579.00	273.10	269.87	-89.97	-3,504.06	-10,921.31	6,328.66	5,794.56	534.10	11.849		
16,900.00	7,579.00	17,105.34	7,579.00	275.73	272.48	-89.97	-3,504.12	-11,021.31	6,328.85	5,789.42	539.43	11.732		
17,000.00	7,579.00	17,205.34	7,579.00	278.36	275.09	-89.97	-3,504.19	-11,121.31	6,329.04	5,784.28	544.76	11.618		
17,100.00	7,579.00	17,305.34	7,579.00	280.99	277.70	-89.97	-3,504.25	-11,221.31	6,329.23	5,779.13	550.10	11.506		
17,200.00	7,579.00	17,405.34	7,579.00	283.62	280.31	-89.97	-3,504.31	-11,321.31	6,329.41	5,773.99	555.43	11.396		
17,300.00	7,579.00	17,505.34	7,579.00	286.25	282.93	-89.97	-3,504.37	-11,421.31	6,329.60	5,768.84	560.76	11.287		
17,400.00	7,579.00	17,605.34	7,579.00	288.88	285.54	-89.97	-3,504.44	-11,521.31	6,329.79	5,763.69	566.10	11.181		
17,500.00	7,579.00	17,705.34	7,579.00	291.52	288.16	-89.97	-3,504.50	-11,621.31	6,329.98	5,758.54	571.44	11.077		
17,600.00	7,579.00	17,805.34	7,579.00	294.15	290.78	-89.97	-3,504.56	-11,721.30	6,330.16	5,753.38	576.78	10.975		
17,700.00	7,579.00	17,905.34	7,579.00	296.79	293.40	-89.97	-3,504.62	-11,821.30	6,330.35	5,748.23	582.12	10.875		
17,800.00	7,579.00	18,005.34	7,579.00	299.43	296.03	-89.97	-3,504.69	-11,921.30	6,330.54	5,743.08	587.46	10.776		
17,900.00	7,579.00	18,105.34	7,579.00	302.07	298.65	-89.97	-3,504.75	-12,021.30	6,330.73	5,737.92	592.81	10.679		
18,000.00	7,579.00	18,205.34	7,579.00	304.71	301.28	-89.97	-3,504.81	-12,121.30	6,330.91	5,732.76	598.15	10.584		
18,100.00	7,579.00	18,305.34	7,579.00	307.35	303.91	-89.97	-3,504.87	-12,221.30	6,331.10	5,727.61	603.50	10.491		
18,200.00	7,579.00	18,405.34	7,579.00	310.00	306.54	-89.97	-3,504.94	-12,321.30	6,331.29	5,722.45	608.84	10.399		
18,300.00	7,579.00	18,505.34	7,579.00	312.64	309.17	-89.97	-3,505.00	-12,421.30	6,331.48	5,717.29	614.19	10.309		
18,400.00	7,579.00	18,605.34	7,579.00	315.29	311.80	-89.97	-3,505.06	-12,521.30	6,331.66	5,712.13	619.54	10.220		
18,500.00	7,579.00	18,705.34	7,579.00	317.93	314.43	-89.97	-3,505.12	-12,621.30	6,331.85	5,706.96	624.89	10.133		
18,600.00	7,579.00	18,805.34	7,579.00	320.58	317.07	-89.97	-3,505.19	-12,721.30	6,332.04	5,701.80	630.24	10.047		
18,700.00	7,579.00	18,905.34	7,579.00	323.23	319.71	-89.97	-3,505.25	-12,821.30	6,332.23	5,696.64	635.59	9.963		
18,800.00	7,579.00	19,005.34	7,579.00	325.88	322.34	-89.97	-3,505.31	-12,921.30	6,332.41	5,691.47	640.94	9.880		
18,900.00	7,579.00	19,105.34	7,579.00	328.53	324.98	-89.97	-3,505.37	-13,021.30	6,332.60	5,686.31	646.30	9.798		
19,000.00	7,579.00	19,205.34	7,579.00	331.18	327.62	-89.97	-3,505.44	-13,121.30	6,332.79	5,681.14	651.65	9.718		
19,100.00	7,579.00	19,305.34	7,579.00	333.83	330.26	-89.97	-3,505.50	-13,221.30	6,332.98	5,675.97	657.01	9.639		
19,200.00	7,579.00	19,405.34	7,579.00	336.48	332.90	-89.97	-3,505.56	-13,321.30	6,333.17	5,670.80	662.36	9.561		
19,300.00	7,579.00	19,505.34	7,579.00	339.14	335.54	-89.97	-3,505.62	-13,421.30	6,333.35	5,665.63	667.72	9.485		
19,400.00	7,579.00	19,605.34	7,579.00	341.79	338.19	-89.97	-3,505.68	-13,521.30	6,333.54	5,660.46	673.08	9.410		
19,500.00	7,579.00	19,705.34	7,579.00	344.45	340.83	-89.97	-3,505.75	-13,621.30	6,333.73	5,655.29	678.43	9.336		
19,600.00	7,579.00	19,805.34	7,579.00	347.10	343.48	-89.97	-3,505.81	-13,721.30	6,333.92	5,650.12	683.79	9.263		
19,700.00	7,579.00	19,905.34	7,579.00	349.76	346.13	-89.97	-3,505.87	-13,821.30	6,334.10	5,644.95	689.15	9.191		
19,800.00	7,579.00	20,005.34	7,579.00	352.42	348.77	-89.97	-3,505.93	-13,921.30	6,334.29	5,639.78	694.51	9.120		
19,900.00	7,579.00	20,105.34	7,579.00	355.07	351.42	-89.97	-3,506.00	-14,021.30	6,334.48	5,634.60	699.88	9.051		
20,000.00	7,579.00	20,205.34	7,579.00	357.73	354.07	-89.97	-3,506.06	-14,121.30	6,334.67	5,629.43	705.24	8.982		
20,100.00	7,579.00	20,305.33	7,579.00	360.39	356.72	-89.97	-3,506.12	-14,221.30	6,334.85	5,624.25	710.60	8.915		
20,200.00	7,579.00	20,405.33	7,579.00	363.05	359.37	-89.97	-3,506.18	-14,321.30	6,335.04	5,619.08	715.96	8.848		
20,300.00	7,579.00	20,505.33	7,579.00	365.71	362.02	-89.97	-3,506.25	-14,421.30	6,335.23	5,613.90	721.33	8.783		
20,400.00	7,579.00	20,605.33	7,579.00	368.38	364.68	-89.97	-3,506.31	-14,521.30	6,335.42	5,608.72	726.69	8.718		
20,500.00	7,579.00	20,705.33	7,579.00	371.04	367.33	-89.97	-3,506.37	-14,621.30	6,335.60	5,603.54	732.06	8.655		
20,600.00	7,579.00	20,805.33	7,579.00	373.70	369.98	-89.97	-3,506.43	-14,721.30	6,335.79	5,598.37	737.42	8.592		
20,700.00	7,579.00	20,905.33	7,579.00	376.36	372.64	-89.97	-3,506.50	-14,821.30	6,335.98	5,593.19	742.79	8.530		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 13-T1S-R66W - WARBLER 24W-27-12 - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
20,800.00	7,579.00	21,005.33	7,579.00	379.03	375.29	-89.97	-3,506.56	-14,921.30	6,336.17	5,588.01	748.16	8.469		
20,900.00	7,579.00	21,105.33	7,579.00	381.69	377.95	-89.97	-3,506.62	-15,021.30	6,336.35	5,582.83	753.53	8.409		
21,000.00	7,579.00	21,205.33	7,579.00	384.36	380.61	-89.97	-3,506.68	-15,121.30	6,336.54	5,577.65	758.89	8.350		
21,100.00	7,579.00	21,305.33	7,579.00	387.02	383.26	-89.97	-3,506.75	-15,221.30	6,336.73	5,572.47	764.26	8.291		
21,200.00	7,579.00	21,405.33	7,579.00	389.69	385.92	-89.97	-3,506.81	-15,321.30	6,336.92	5,567.28	769.63	8.234		
21,300.00	7,579.00	21,505.33	7,579.00	392.36	388.58	-89.97	-3,506.87	-15,421.30	6,337.10	5,562.10	775.00	8.177		
21,400.00	7,579.00	21,605.33	7,579.00	395.02	391.24	-89.97	-3,506.93	-15,521.30	6,337.29	5,556.92	780.37	8.121		
21,500.00	7,579.00	21,705.33	7,579.00	397.69	393.90	-89.97	-3,507.00	-15,621.30	6,337.48	5,551.73	785.74	8.066		
21,600.00	7,579.00	21,805.33	7,579.00	400.36	396.56	-89.97	-3,507.06	-15,721.30	6,337.67	5,546.55	791.11	8.011		
21,700.00	7,579.00	21,905.33	7,579.00	403.03	399.22	-89.97	-3,507.12	-15,821.30	6,337.85	5,541.37	796.49	7.957		
21,800.00	7,579.00	22,005.33	7,579.00	405.70	401.89	-89.97	-3,507.18	-15,921.30	6,338.04	5,536.18	801.86	7.904		
21,900.00	7,579.00	22,105.33	7,579.00	408.37	404.55	-89.97	-3,507.25	-16,021.30	6,338.23	5,531.00	807.23	7.852		
22,000.00	7,579.00	22,205.33	7,579.00	411.04	407.21	-89.97	-3,507.31	-16,121.30	6,338.42	5,525.81	812.60	7.800		
22,100.00	7,579.00	22,305.33	7,579.00	413.71	409.88	-89.97	-3,507.37	-16,221.30	6,338.60	5,520.62	817.98	7.749		
22,200.00	7,579.00	22,405.33	7,579.00	416.38	412.54	-89.97	-3,507.43	-16,321.30	6,338.79	5,515.44	823.35	7.699		
22,300.00	7,579.00	22,505.33	7,579.00	419.05	415.20	-89.97	-3,507.50	-16,421.30	6,338.98	5,510.25	828.73	7.649		
22,400.00	7,579.00	22,605.33	7,579.00	421.72	417.87	-89.97	-3,507.56	-16,521.30	6,339.17	5,505.06	834.10	7.600		
22,440.61	7,579.00	22,645.94	7,579.00	422.81	418.95	-89.97	-3,507.58	-16,561.90	6,339.24	5,502.96	836.28	7.580 SF		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-INC													Offset Well Error:		0.00 usft
Reference				Offset			Semi Major Axis			Distance			Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-61.72	2,764.73	-5,138.25	5,835.02						
100.00	100.00	54.00	54.00	0.13	0.65	-61.72	2,764.73	-5,138.25	5,834.84	5,834.06	0.78	7,466.526			
200.00	199.98	153.98	153.98	0.49	2.43	-19.32	2,764.73	-5,138.25	5,833.20	5,830.27	2.93	1,992.021			
300.00	299.84	253.84	253.84	0.86	4.61	-19.37	2,764.73	-5,138.25	5,828.26	5,822.79	5.47	1,065.950			
400.00	399.45	353.45	353.45	1.23	6.66	-19.45	2,764.73	-5,138.25	5,820.03	5,812.15	7.89	737.864			
500.00	498.70	452.70	452.70	1.63	8.68	-19.57	2,764.73	-5,138.25	5,808.54	5,798.26	10.28	565.023			
600.00	597.47	551.47	551.47	2.05	10.68	-19.72	2,764.73	-5,138.25	5,793.79	5,781.13	12.66	457.705			
700.00	695.62	649.62	649.62	2.50	12.66	-19.91	2,764.73	-5,138.25	5,775.80	5,760.77	15.03	384.395			
800.00	793.06	747.06	747.06	2.99	14.63	-20.14	2,764.73	-5,138.25	5,754.60	5,737.22	17.38	331.046			
900.00	889.64	843.64	843.64	3.52	16.58	-20.40	2,764.73	-5,138.25	5,730.22	5,710.49	19.73	290.427			
1,000.00	985.27	939.27	939.27	4.10	18.50	-20.70	2,764.73	-5,138.25	5,702.70	5,680.63	22.07	258.428			
1,100.00	1,079.82	1,033.82	1,033.82	4.72	20.41	-21.05	2,764.73	-5,138.25	5,672.08	5,647.68	24.39	232.540			
1,200.00	1,173.17	1,127.17	1,127.17	5.40	22.29	-21.44	2,764.73	-5,138.25	5,638.39	5,611.69	26.70	211.143			
1,300.00	1,265.21	1,219.21	1,219.21	6.13	24.14	-21.87	2,764.73	-5,138.25	5,601.69	5,572.69	29.00	193.143			
1,400.00	1,355.84	1,309.84	1,309.84	6.92	25.97	-22.36	2,764.73	-5,138.25	5,562.03	5,530.75	31.29	177.776			
1,500.00	1,444.94	1,401.06	1,398.94	7.77	27.80	-22.90	2,764.73	-5,138.25	5,519.48	5,485.88	33.60	164.281			
1,600.00	1,532.44	1,486.44	1,486.44	8.68	29.52	-23.40	2,764.73	-5,138.25	5,474.15	5,438.34	35.81	152.868			
1,700.00	1,619.43	1,573.43	1,573.43	9.62	31.27	-23.61	2,764.73	-5,138.25	5,428.03	5,389.97	38.05	142.645			
1,800.00	1,706.42	1,660.42	1,660.42	10.56	33.02	-23.81	2,764.73	-5,138.25	5,381.96	5,341.65	40.31	133.528			
1,900.00	1,793.42	1,747.42	1,747.42	11.52	34.77	-24.02	2,764.73	-5,138.25	5,335.94	5,293.38	42.57	125.352			
2,000.00	1,880.41	1,834.41	1,834.41	12.48	36.52	-24.23	2,764.73	-5,138.25	5,289.99	5,245.15	44.84	117.980			
2,100.00	1,967.40	1,921.40	1,921.40	13.45	38.27	-24.45	2,764.73	-5,138.25	5,244.10	5,196.98	47.12	111.303			
2,200.00	2,054.39	2,008.39	2,008.39	14.42	40.02	-24.67	2,764.73	-5,138.25	5,198.27	5,148.87	49.40	105.229			
2,300.00	2,141.39	2,104.61	2,095.39	15.39	41.96	-24.89	2,764.73	-5,138.25	5,152.50	5,100.63	51.88	99.323			
2,400.00	2,228.38	2,182.38	2,182.38	16.36	43.52	-25.12	2,764.73	-5,138.25	5,106.81	5,052.82	53.99	94.592			
2,500.00	2,315.37	2,269.37	2,269.37	17.34	45.27	-25.35	2,764.73	-5,138.25	5,061.18	5,004.88	56.29	89.910			
2,600.00	2,402.37	2,356.37	2,356.37	18.32	47.02	-25.59	2,764.73	-5,138.25	5,015.61	4,957.01	58.60	85.589			
2,700.00	2,489.36	2,443.36	2,443.36	19.30	48.77	-25.83	2,764.73	-5,138.25	4,970.13	4,909.21	60.92	81.590			
2,800.00	2,576.35	2,530.35	2,530.35	20.28	50.52	-26.07	2,764.73	-5,138.25	4,924.71	4,861.47	63.24	77.877			
2,900.00	2,663.34	2,617.34	2,617.34	21.26	52.27	-26.32	2,764.73	-5,138.25	4,879.37	4,813.81	65.56	74.421			
3,000.00	2,750.34	2,704.34	2,704.34	22.24	54.02	-26.57	2,764.73	-5,138.25	4,834.11	4,766.21	67.90	71.197			
3,100.00	2,837.33	2,808.67	2,791.33	23.23	56.12	-26.83	2,764.73	-5,138.25	4,788.93	4,718.34	70.59	67.846			
3,200.00	2,924.32	2,878.32	2,878.32	24.21	57.52	-27.09	2,764.73	-5,138.25	4,743.83	4,671.25	72.58	65.358			
3,300.00	3,011.31	2,965.31	2,965.31	25.20	59.27	-27.36	2,764.73	-5,138.25	4,698.81	4,623.88	74.93	62.707			
3,400.00	3,098.31	3,052.31	3,052.31	26.18	61.02	-27.63	2,764.73	-5,138.25	4,653.89	4,576.60	77.29	60.213			
3,500.00	3,185.30	3,139.30	3,139.30	27.17	62.77	-27.91	2,764.73	-5,138.25	4,609.05	4,529.40	79.65	57.863			
3,600.00	3,272.29	3,226.29	3,226.29	28.16	64.52	-28.19	2,764.73	-5,138.25	4,564.30	4,482.28	82.02	55.645			
3,700.00	3,359.29	3,313.29	3,313.29	29.14	66.27	-28.48	2,764.73	-5,138.25	4,519.65	4,435.25	84.40	53.549			
3,800.00	3,446.28	3,400.28	3,400.28	30.13	68.02	-28.77	2,764.73	-5,138.25	4,475.10	4,388.32	86.79	51.565			
3,900.00	3,533.27	3,487.27	3,487.27	31.12	69.77	-29.07	2,764.73	-5,138.25	4,430.65	4,341.48	89.18	49.684			
4,000.00	3,620.26	3,574.26	3,574.26	32.10	71.52	-29.37	2,764.73	-5,138.25	4,386.31	4,294.73	91.58	47.898			
4,100.00	3,707.26	3,661.26	3,661.26	33.09	73.27	-29.68	2,764.73	-5,138.25	4,342.07	4,248.09	93.98	46.202			
4,200.00	3,794.25	3,748.25	3,748.25	34.08	75.02	-30.00	2,764.73	-5,138.25	4,297.94	4,201.54	96.39	44.587			
4,300.00	3,881.24	3,835.24	3,835.24	35.07	76.77	-30.32	2,764.73	-5,138.25	4,253.92	4,155.11	98.82	43.049			
4,400.00	3,968.23	3,922.23	3,922.23	36.06	78.52	-30.65	2,764.73	-5,138.25	4,210.02	4,108.78	101.24	41.583			
4,500.00	4,055.23	4,009.23	4,009.23	37.05	80.27	-30.98	2,764.73	-5,138.25	4,166.25	4,062.57	103.68	40.183			
4,600.00	4,142.22	4,103.78	4,096.22	38.04	82.17	-31.32	2,764.73	-5,138.25	4,122.60	4,016.32	106.28	38.790			
4,700.00	4,229.21	4,183.21	4,183.21	39.03	83.77	-31.67	2,764.73	-5,138.25	4,079.08	3,970.49	108.58	37.566			
4,800.00	4,316.21	4,270.21	4,270.21	40.02	85.51	-32.03	2,764.73	-5,138.25	4,035.69	3,924.64	111.05	36.342			
4,900.00	4,403.20	4,357.20	4,357.20	41.01	87.26	-32.39	2,764.73	-5,138.25	3,992.44	3,878.92	113.52	35.169			
5,000.00	4,490.19	4,444.19	4,444.19	42.00	89.01	-32.76	2,764.73	-5,138.25	3,949.33	3,833.32	116.00	34.045			
5,100.00	4,577.18	4,531.18	4,531.18	42.99	90.76	-33.13	2,764.73	-5,138.25	3,906.37	3,787.87	118.50	32.966			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-INC													Offset Well Error:	0.00 usft
Reference				Offset			Semi Major Axis			Distance			Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,200.00	4,664.18	4,618.18	4,618.18	43.98	92.51	-33.52	2,764.73	-5,138.25	3,863.56	3,742.56	121.00	31.930		
5,300.00	4,751.17	4,705.17	4,705.17	44.97	94.26	-33.91	2,764.73	-5,138.25	3,820.90	3,697.39	123.52	30.935		
5,400.00	4,838.16	4,807.84	4,792.16	45.96	96.33	-34.31	2,764.73	-5,138.25	3,778.41	3,652.06	126.36	29.903		
5,500.00	4,925.15	4,879.15	4,879.15	46.95	97.76	-34.72	2,764.73	-5,138.25	3,736.09	3,607.51	128.58	29.057		
5,600.00	5,012.15	4,966.15	4,966.15	47.94	99.51	-35.14	2,764.73	-5,138.25	3,693.94	3,562.82	131.13	28.171		
5,700.00	5,099.14	5,053.14	5,053.14	48.93	101.26	-35.56	2,764.73	-5,138.25	3,651.97	3,518.29	133.69	27.317		
5,800.00	5,186.13	5,140.13	5,140.13	49.92	103.01	-36.00	2,764.73	-5,138.25	3,610.19	3,473.93	136.26	26.495		
5,900.00	5,273.13	5,227.13	5,227.13	50.91	104.76	-36.45	2,764.73	-5,138.25	3,568.60	3,429.75	138.85	25.702		
6,000.00	5,360.12	5,314.12	5,314.12	51.90	106.51	-36.90	2,764.73	-5,138.25	3,527.20	3,385.76	141.44	24.937		
6,100.00	5,447.11	5,401.11	5,401.11	52.89	108.26	-37.36	2,764.73	-5,138.25	3,486.02	3,341.96	144.06	24.199		
6,200.00	5,534.10	5,488.10	5,488.10	53.88	110.01	-37.84	2,764.73	-5,138.25	3,445.04	3,298.36	146.68	23.486		
6,300.00	5,621.10	5,575.10	5,575.10	54.87	111.76	-38.32	2,764.73	-5,138.25	3,404.29	3,254.97	149.32	22.798		
6,400.00	5,708.09	5,662.09	5,662.09	55.86	113.51	-38.82	2,764.73	-5,138.25	3,363.77	3,211.79	151.98	22.133		
6,500.00	5,795.08	5,749.08	5,749.08	56.85	115.26	-39.33	2,764.73	-5,138.25	3,323.49	3,168.84	154.65	21.490		
6,600.00	5,882.07	5,836.07	5,836.07	57.84	117.01	-39.84	2,764.73	-5,138.25	3,283.45	3,126.11	157.34	20.869		
6,700.00	5,969.07	5,923.07	5,923.07	58.83	118.75	-40.37	2,764.73	-5,138.25	3,243.67	3,083.63	160.04	20.268		
6,800.00	6,056.06	6,010.06	6,010.06	59.83	120.50	-40.91	2,764.73	-5,138.25	3,204.15	3,041.39	162.76	19.686		
6,900.00	6,143.05	6,102.95	6,097.05	60.82	122.37	-41.47	2,764.73	-5,138.25	3,164.91	2,999.29	165.62	19.110		
7,000.00	6,230.05	6,184.05	6,184.05	61.81	124.00	-42.03	2,764.73	-5,138.25	3,125.95	2,957.70	168.25	18.579		
7,100.00	6,317.04	6,271.04	6,271.04	62.80	125.75	-42.61	2,764.73	-5,138.25	3,087.29	2,916.27	171.03	18.052		
7,200.00	6,404.03	6,358.03	6,358.03	63.79	127.50	-43.20	2,764.73	-5,138.25	3,048.94	2,875.13	173.82	17.541		
7,300.00	6,491.02	6,445.02	6,445.02	64.78	129.25	-43.80	2,764.73	-5,138.25	3,010.91	2,834.28	176.62	17.047		
7,400.00	6,578.02	6,532.02	6,532.02	65.77	131.00	-44.42	2,764.73	-5,138.25	2,973.21	2,793.76	179.45	16.568		
7,500.00	6,665.01	6,619.01	6,619.01	66.76	132.75	-45.05	2,764.73	-5,138.25	2,935.85	2,753.55	182.30	16.104		
7,600.00	6,752.00	6,706.00	6,706.00	67.76	134.50	-45.70	2,764.73	-5,138.25	2,898.85	2,713.68	185.17	15.655		
7,700.00	6,838.99	6,807.01	6,792.99	68.75	136.53	-46.36	2,764.73	-5,138.25	2,862.22	2,673.89	188.34	15.197		
7,800.00	6,925.99	6,879.99	6,879.99	69.74	138.00	-47.03	2,764.73	-5,138.25	2,825.98	2,635.02	190.97	14.798		
7,900.00	7,012.98	6,966.98	6,966.98	70.73	139.75	-47.72	2,764.73	-5,138.25	2,790.14	2,596.25	193.90	14.390		
8,000.00	7,099.97	7,053.97	7,053.97	71.72	141.50	-48.43	2,764.73	-5,138.25	2,754.72	2,557.87	196.85	13.994		
8,100.00	7,186.97	7,140.97	7,140.97	72.71	143.25	-49.15	2,764.73	-5,138.25	2,719.73	2,519.91	199.82	13.611		
8,200.00	7,273.99	7,227.09	7,227.09	73.74	144.98	-43.14	2,764.73	-5,138.25	2,682.77	2,479.98	202.79	13.229		
8,300.00	7,352.95	7,306.95	7,306.95	74.97	146.59	-35.12	2,764.73	-5,138.25	2,632.24	2,426.62	205.62	12.801		
8,400.00	7,423.63	7,377.63	7,377.63	76.39	148.01	-30.27	2,764.73	-5,138.25	2,567.85	2,359.65	208.20	12.334		
8,500.00	7,482.96	7,436.96	7,436.96	77.96	149.20	-27.52	2,764.73	-5,138.25	2,491.44	2,281.02	210.42	11.840		
8,600.00	7,529.15	7,483.15	7,483.15	79.64	150.13	-26.41	2,764.73	-5,138.25	2,405.20	2,192.98	212.22	11.334		
8,700.00	7,560.79	7,514.79	7,514.79	81.35	150.76	-27.26	2,764.73	-5,138.25	2,311.63	2,098.12	213.51	10.827		
8,800.00	7,576.92	7,530.92	7,530.92	83.05	151.09	-35.24	2,764.73	-5,138.25	2,213.46	1,999.23	214.23	10.332		
8,900.00	7,579.00	7,533.00	7,533.00	84.68	151.13	-90.00	2,764.73	-5,138.25	2,113.58	1,899.16	214.42	9.857		
9,000.00	7,579.00	7,533.00	7,533.00	86.34	151.13	-90.00	2,764.73	-5,138.25	2,013.61	1,799.07	214.54	9.386		
9,100.00	7,579.00	7,533.00	7,533.00	88.04	151.13	-90.00	2,764.73	-5,138.25	1,913.65	1,698.97	214.67	8.914		
9,200.00	7,579.00	7,533.00	7,533.00	89.80	151.13	-90.00	2,764.73	-5,138.25	1,813.69	1,598.87	214.82	8.443		
9,300.00	7,579.00	7,533.00	7,533.00	91.59	151.13	-90.00	2,764.73	-5,138.25	1,713.73	1,498.75	214.98	7.972		
9,400.00	7,579.00	7,533.00	7,533.00	93.42	151.13	-90.00	2,764.73	-5,138.25	1,613.78	1,398.62	215.16	7.500		
9,500.00	7,579.00	7,533.00	7,533.00	95.30	151.13	-90.00	2,764.73	-5,138.25	1,513.84	1,298.48	215.36	7.029		
9,600.00	7,579.00	7,533.00	7,533.00	97.21	151.13	-90.00	2,764.73	-5,138.25	1,413.90	1,198.31	215.59	6.558		
9,700.00	7,579.00	7,533.00	7,533.00	99.15	151.13	-90.00	2,764.73	-5,138.25	1,313.98	1,098.13	215.85	6.087		
9,800.00	7,579.00	7,533.00	7,533.00	101.13	151.13	-90.00	2,764.73	-5,138.25	1,214.06	997.91	216.15	5.617		
9,900.00	7,579.00	7,533.00	7,533.00	103.15	151.13	-90.00	2,764.73	-5,138.25	1,114.17	897.66	216.51	5.146		
10,000.00	7,579.00	7,533.00	7,533.00	105.19	151.13	-90.00	2,764.73	-5,138.25	1,014.29	797.36	216.93	4.676		
10,100.00	7,579.00	7,533.00	7,533.00	107.26	151.13	-90.00	2,764.73	-5,138.25	914.44	697.00	217.44	4.205		
10,200.00	7,579.00	7,533.00	7,533.00	109.36	151.13	-90.00	2,764.73	-5,138.25	814.62	596.55	218.07	3.736		
10,300.00	7,579.00	7,533.00	7,533.00	111.49	151.13	-90.00	2,764.73	-5,138.25	714.86	495.99	218.88	3.266		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 14-T1S-R66W - ABND VERT HECKENDORF 1 - Wellbore #1 - Design #1	Offset Site Error:	0.00 usft
Survey Program: 0-INC														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
10,400.00	7,579.00	7,533.00	7,533.00	113.64	151.13	-90.00	2,764.73	-5,138.25	615.18	395.24	219.94	2.797			
10,500.00	7,579.00	7,533.00	7,533.00	115.82	151.13	-90.00	2,764.73	-5,138.25	515.62	294.21	221.40	2.329			
10,600.00	7,579.00	7,533.00	7,533.00	118.01	151.13	-90.00	2,764.73	-5,138.25	416.26	192.70	223.56	1.862			
10,700.00	7,579.00	7,533.00	7,533.00	120.23	151.13	-90.00	2,764.73	-5,138.25	317.32	90.27	227.05	1.398	Level 3		
10,800.00	7,579.00	7,533.00	7,533.00	122.47	151.13	-90.00	2,764.73	-5,138.25	219.33	-14.22	233.55	0.939	Level 1		
10,900.00	7,579.00	7,533.00	7,533.00	124.73	151.13	-90.00	2,764.73	-5,138.25	124.59	-124.42	249.01	0.500	Level 1		
11,000.00	7,579.00	7,533.00	7,533.00	127.01	151.13	-90.00	2,764.73	-5,138.25	54.19	-222.24	276.43	0.196	Level 1, ES		
11,012.92	7,579.00	7,533.00	7,533.00	127.30	151.13	-90.00	2,764.73	-5,138.25	52.63	-216.20	268.84	0.196	Level 1, CC, SF		
11,100.00	7,579.00	7,533.00	7,533.00	129.30	151.13	-90.00	2,764.73	-5,138.25	101.75	-92.50	194.24	0.524	Level 1		
11,200.00	7,579.00	7,533.00	7,533.00	131.61	151.13	-90.00	2,764.73	-5,138.25	194.34	0.70	193.64	1.004	Level 2		
11,300.00	7,579.00	7,533.00	7,533.00	133.93	151.13	-90.00	2,764.73	-5,138.25	291.86	93.09	198.77	1.468	Level 3		
11,400.00	7,579.00	7,533.00	7,533.00	136.27	151.13	-90.00	2,764.73	-5,138.25	390.64	188.66	201.98	1.934			
11,500.00	7,579.00	7,533.00	7,533.00	138.62	151.13	-90.00	2,764.73	-5,138.25	489.91	285.86	204.06	2.401			
11,600.00	7,579.00	7,533.00	7,533.00	140.99	151.13	-90.00	2,764.73	-5,138.25	589.43	383.94	205.49	2.868			
11,700.00	7,579.00	7,533.00	7,533.00	143.37	151.13	-90.00	2,764.73	-5,138.25	689.09	482.55	206.54	3.336			
11,800.00	7,579.00	7,533.00	7,533.00	145.76	151.13	-90.00	2,764.73	-5,138.25	788.83	581.50	207.34	3.805			
11,900.00	7,579.00	7,533.00	7,533.00	148.16	151.13	-90.00	2,764.73	-5,138.25	888.64	680.67	207.97	4.273			
12,000.00	7,579.00	7,533.00	7,533.00	150.58	151.13	-90.00	2,764.73	-5,138.25	988.48	780.00	208.48	4.741			
12,100.00	7,579.00	7,533.00	7,533.00	153.00	151.13	-90.00	2,764.73	-5,138.25	1,088.35	879.44	208.91	5.210			
12,200.00	7,579.00	7,533.00	7,533.00	155.43	151.13	-90.00	2,764.73	-5,138.25	1,188.24	978.97	209.27	5.678			
12,300.00	7,579.00	7,533.00	7,533.00	157.87	151.13	-90.00	2,764.73	-5,138.25	1,288.15	1,078.57	209.58	6.146			
12,400.00	7,579.00	7,533.00	7,533.00	160.32	151.13	-90.00	2,764.73	-5,138.25	1,388.08	1,178.22	209.85	6.614			
12,500.00	7,579.00	7,533.00	7,533.00	162.78	151.13	-90.00	2,764.73	-5,138.25	1,488.01	1,277.92	210.09	7.083			
12,600.00	7,579.00	7,533.00	7,533.00	165.25	151.13	-90.00	2,764.73	-5,138.25	1,587.95	1,377.64	210.31	7.551			
12,700.00	7,579.00	7,533.00	7,533.00	167.73	151.13	-90.00	2,764.73	-5,138.25	1,687.90	1,477.40	210.50	8.019			
12,800.00	7,579.00	7,533.00	7,533.00	170.21	151.13	-90.00	2,764.73	-5,138.25	1,787.85	1,577.18	210.67	8.486			
12,900.00	7,579.00	7,533.00	7,533.00	172.70	151.13	-90.00	2,764.73	-5,138.25	1,887.81	1,676.98	210.83	8.954			
13,000.00	7,579.00	7,533.00	7,533.00	175.19	151.13	-90.00	2,764.73	-5,138.25	1,987.77	1,776.79	210.98	9.422			
13,100.00	7,579.00	7,533.00	7,533.00	177.70	151.13	-90.00	2,764.73	-5,138.25	2,087.74	1,876.62	211.12	9.889			
13,200.00	7,579.00	7,533.00	7,533.00	180.20	151.13	-90.00	2,764.73	-5,138.25	2,187.71	1,976.47	211.25	10.356			
13,300.00	7,579.00	7,533.00	7,533.00	182.72	151.13	-90.00	2,764.73	-5,138.25	2,287.68	2,076.32	211.36	10.823			
13,400.00	7,579.00	7,533.00	7,533.00	185.24	151.13	-90.00	2,764.73	-5,138.25	2,387.66	2,176.18	211.48	11.290			
13,500.00	7,579.00	7,533.00	7,533.00	187.76	151.13	-90.00	2,764.73	-5,138.25	2,487.63	2,276.05	211.58	11.757			
13,600.00	7,579.00	7,533.00	7,533.00	190.30	151.13	-90.00	2,764.73	-5,138.25	2,587.61	2,375.93	211.69	12.224			
13,700.00	7,579.00	7,533.00	7,533.00	192.83	151.13	-90.00	2,764.73	-5,138.25	2,687.59	2,475.81	211.78	12.690			
13,800.00	7,579.00	7,533.00	7,533.00	195.37	151.13	-90.00	2,764.73	-5,138.25	2,787.57	2,575.70	211.87	13.157			
13,900.00	7,579.00	7,533.00	7,533.00	197.92	151.13	-90.00	2,764.73	-5,138.25	2,887.56	2,675.59	211.96	13.623			
14,000.00	7,579.00	7,533.00	7,533.00	200.47	151.13	-90.00	2,764.73	-5,138.25	2,987.54	2,775.49	212.05	14.089			
14,100.00	7,579.00	7,533.00	7,533.00	203.02	151.13	-90.00	2,764.73	-5,138.25	3,087.53	2,875.39	212.13	14.555			
14,200.00	7,579.00	7,533.00	7,533.00	205.58	151.13	-90.00	2,764.73	-5,138.25	3,187.51	2,975.30	212.21	15.020			
14,300.00	7,579.00	7,533.00	7,533.00	208.14	151.13	-90.00	2,764.73	-5,138.25	3,287.50	3,075.21	212.29	15.486			
14,400.00	7,579.00	7,533.00	7,533.00	210.70	151.13	-90.00	2,764.73	-5,138.25	3,387.49	3,175.12	212.37	15.951			
14,500.00	7,579.00	7,533.00	7,533.00	213.27	151.13	-90.00	2,764.73	-5,138.25	3,487.47	3,275.03	212.44	16.416			
14,600.00	7,579.00	7,533.00	7,533.00	215.84	151.13	-90.00	2,764.73	-5,138.25	3,587.46	3,374.95	212.51	16.881			
14,700.00	7,579.00	7,533.00	7,533.00	218.42	151.13	-90.00	2,764.73	-5,138.25	3,687.45	3,474.87	212.58	17.346			
14,800.00	7,579.00	7,533.00	7,533.00	221.00	151.13	-90.00	2,764.73	-5,138.25	3,787.44	3,574.79	212.65	17.811			
14,900.00	7,579.00	7,533.00	7,533.00	223.58	151.13	-90.00	2,764.73	-5,138.25	3,887.43	3,674.71	212.72	18.275			
15,000.00	7,579.00	7,533.00	7,533.00	226.17	151.13	-90.00	2,764.73	-5,138.25	3,987.42	3,774.64	212.79	18.739			
15,100.00	7,579.00	7,533.00	7,533.00	228.75	151.13	-90.00	2,764.73	-5,138.25	4,087.42	3,874.56	212.85	19.203			
15,200.00	7,579.00	7,533.00	7,533.00	231.34	151.13	-90.00	2,764.73	-5,138.25	4,187.41	3,974.49	212.92	19.667			
15,300.00	7,579.00	7,533.00	7,533.00	233.94	151.13	-90.00	2,764.73	-5,138.25	4,287.40	4,074.42	212.98	20.130			
15,400.00	7,579.00	7,533.00	7,533.00	236.53	151.13	-90.00	2,764.73	-5,138.25	4,387.39	4,174.35	213.05	20.594			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft		
Survey Program: 0-INC													Sec 14-T1S-R66W - ABND VERT HECKENDORF 1 - Wellbore #1 - Design #1		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
15,500.00	7,579.00	7,533.00	7,533.00	239.13	151.13	-90.00	2,764.73	-5,138.25	4,487.39	4,274.28	213.11	21.057				
15,600.00	7,579.00	7,533.00	7,533.00	241.73	151.13	-90.00	2,764.73	-5,138.25	4,587.38	4,374.21	213.17	21.520				
15,700.00	7,579.00	7,533.00	7,533.00	244.34	151.13	-90.00	2,764.73	-5,138.25	4,687.37	4,474.14	213.23	21.982				
15,800.00	7,579.00	7,533.00	7,533.00	246.94	151.13	-90.00	2,764.73	-5,138.25	4,787.37	4,574.07	213.29	22.445				
15,900.00	7,579.00	7,533.00	7,533.00	249.55	151.13	-90.00	2,764.73	-5,138.25	4,887.36	4,674.01	213.35	22.907				
16,000.00	7,579.00	7,533.00	7,533.00	252.16	151.13	-90.00	2,764.73	-5,138.25	4,987.35	4,773.94	213.41	23.369				
16,100.00	7,579.00	7,533.00	7,533.00	254.77	151.13	-90.00	2,764.73	-5,138.25	5,087.35	4,873.87	213.47	23.831				
16,200.00	7,579.00	7,533.00	7,533.00	257.38	151.13	-90.00	2,764.73	-5,138.25	5,187.34	4,973.81	213.53	24.293				
16,300.00	7,579.00	7,533.00	7,533.00	260.00	151.13	-90.00	2,764.73	-5,138.25	5,287.34	5,073.75	213.59	24.754				
16,400.00	7,579.00	7,533.00	7,533.00	262.62	151.13	-90.00	2,764.73	-5,138.25	5,387.33	5,173.68	213.65	25.215				
16,500.00	7,579.00	7,533.00	7,533.00	265.24	151.13	-90.00	2,764.73	-5,138.25	5,487.33	5,273.62	213.71	25.676				
16,600.00	7,579.00	7,533.00	7,533.00	267.86	151.13	-90.00	2,764.73	-5,138.25	5,587.33	5,373.55	213.77	26.137				
16,700.00	7,579.00	7,533.00	7,533.00	270.48	151.13	-90.00	2,764.73	-5,138.25	5,687.32	5,473.49	213.83	26.597				
16,800.00	7,579.00	7,533.00	7,533.00	273.10	151.13	-90.00	2,764.73	-5,138.25	5,787.32	5,573.43	213.89	27.058				
16,900.00	7,579.00	7,533.00	7,533.00	275.73	151.13	-90.00	2,764.73	-5,138.25	5,887.31	5,673.36	213.95	27.518				
17,000.00	7,579.00	7,533.00	7,533.00	278.36	151.13	-90.00	2,764.73	-5,138.25	5,987.31	5,773.30	214.01	27.977				
17,100.00	7,579.00	7,533.00	7,533.00	280.99	151.13	-90.00	2,764.73	-5,138.25	6,087.30	5,873.24	214.06	28.437				
17,200.00	7,579.00	7,533.00	7,533.00	283.62	151.13	-90.00	2,764.73	-5,138.25	6,187.30	5,973.18	214.12	28.896				
17,300.00	7,579.00	7,533.00	7,533.00	286.25	151.13	-90.00	2,764.73	-5,138.25	6,287.30	6,073.12	214.18	29.355				
17,400.00	7,579.00	7,533.00	7,533.00	288.88	151.13	-90.00	2,764.73	-5,138.25	6,387.29	6,173.05	214.24	29.814				
17,500.00	7,579.00	7,533.00	7,533.00	291.52	151.13	-90.00	2,764.73	-5,138.25	6,487.29	6,272.99	214.30	30.272				
17,600.00	7,579.00	7,533.00	7,533.00	294.15	151.13	-90.00	2,764.73	-5,138.25	6,587.29	6,372.93	214.36	30.730				
17,700.00	7,579.00	7,533.00	7,533.00	296.79	151.13	-90.00	2,764.73	-5,138.25	6,687.28	6,472.87	214.42	31.188				
17,800.00	7,579.00	7,533.00	7,533.00	299.43	151.13	-90.00	2,764.73	-5,138.25	6,787.28	6,572.81	214.48	31.646				
17,900.00	7,579.00	7,533.00	7,533.00	302.07	151.13	-90.00	2,764.73	-5,138.25	6,887.28	6,672.74	214.53	32.103				
18,000.00	7,579.00	7,533.00	7,533.00	304.71	151.13	-90.00	2,764.73	-5,138.25	6,987.28	6,772.68	214.59	32.561				
18,100.00	7,579.00	7,533.00	7,533.00	307.35	151.13	-90.00	2,764.73	-5,138.25	7,087.27	6,872.62	214.65	33.018				
18,200.00	7,579.00	7,533.00	7,533.00	310.00	151.13	-90.00	2,764.73	-5,138.25	7,187.27	6,972.56	214.71	33.474				
18,300.00	7,579.00	7,533.00	7,533.00	312.64	151.13	-90.00	2,764.73	-5,138.25	7,287.27	7,072.50	214.77	33.931				
18,400.00	7,579.00	7,533.00	7,533.00	315.29	151.13	-90.00	2,764.73	-5,138.25	7,387.26	7,172.43	214.83	34.387				
18,500.00	7,579.00	7,533.00	7,533.00	317.93	151.13	-90.00	2,764.73	-5,138.25	7,487.26	7,272.37	214.89	34.842				
18,600.00	7,579.00	7,533.00	7,533.00	320.58	151.13	-90.00	2,764.73	-5,138.25	7,587.26	7,372.31	214.95	35.298				
18,700.00	7,579.00	7,533.00	7,533.00	323.23	151.13	-90.00	2,764.73	-5,138.25	7,687.26	7,472.25	215.01	35.753				
18,800.00	7,579.00	7,533.00	7,533.00	325.88	151.13	-90.00	2,764.73	-5,138.25	7,787.26	7,572.19	215.07	36.208				
18,900.00	7,579.00	7,533.00	7,533.00	328.53	151.13	-90.00	2,764.73	-5,138.25	7,887.25	7,672.12	215.13	36.663				
19,000.00	7,579.00	7,533.00	7,533.00	331.18	151.13	-90.00	2,764.73	-5,138.25	7,987.25	7,772.06	215.19	37.117				
19,100.00	7,579.00	7,533.00	7,533.00	333.83	151.13	-90.00	2,764.73	-5,138.25	8,087.25	7,872.00	215.25	37.571				
19,200.00	7,579.00	7,533.00	7,533.00	336.48	151.13	-90.00	2,764.73	-5,138.25	8,187.25	7,971.94	215.31	38.025				
19,300.00	7,579.00	7,533.00	7,533.00	339.14	151.13	-90.00	2,764.73	-5,138.25	8,287.24	8,071.87	215.37	38.479				
19,400.00	7,579.00	7,533.00	7,533.00	341.79	151.13	-90.00	2,764.73	-5,138.25	8,387.24	8,171.81	215.43	38.932				
19,500.00	7,579.00	7,533.00	7,533.00	344.45	151.13	-90.00	2,764.73	-5,138.25	8,487.24	8,271.75	215.49	39.385				
19,600.00	7,579.00	7,533.00	7,533.00	347.10	151.13	-90.00	2,764.73	-5,138.25	8,587.24	8,371.68	215.56	39.838				
19,700.00	7,579.00	7,533.00	7,533.00	349.76	151.13	-90.00	2,764.73	-5,138.25	8,687.24	8,471.62	215.62	40.290				
19,800.00	7,579.00	7,533.00	7,533.00	352.42	151.13	-90.00	2,764.73	-5,138.25	8,787.23	8,571.56	215.68	40.742				
19,900.00	7,579.00	7,533.00	7,533.00	355.07	151.13	-90.00	2,764.73	-5,138.25	8,887.23	8,671.49	215.74	41.194				
20,000.00	7,579.00	7,533.00	7,533.00	357.73	151.13	-90.00	2,764.73	-5,138.25	8,987.23	8,771.43	215.80	41.645				
20,100.00	7,579.00	7,533.00	7,533.00	360.39	151.13	-90.00	2,764.73	-5,138.25	9,087.23	8,871.36	215.87	42.097				
20,200.00	7,579.00	7,533.00	7,533.00	363.05	151.13	-90.00	2,764.73	-5,138.25	9,187.23	8,971.30	215.93	42.547				
20,300.00	7,579.00	7,533.00	7,533.00	365.71	151.13	-90.00	2,764.73	-5,138.25	9,287.23	9,071.23	215.99	42.998				
20,400.00	7,579.00	7,533.00	7,533.00	368.38	151.13	-90.00	2,764.73	-5,138.25	9,387.22	9,171.17	216.06	43.448				
20,500.00	7,579.00	7,533.00	7,533.00	371.04	151.13	-90.00	2,764.73	-5,138.25	9,487.22	9,271.10	216.12	43.898				
20,600.00	7,579.00	7,533.00	7,533.00	373.70	151.13	-90.00	2,764.73	-5,138.25	9,587.22	9,371.04	216.18	44.348				

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft	
Survey Program: 0-INC												Offset Well Error:		0.00 usft
Sec 14-T1S-R66W - ABND VERT HECKENDORF 1 - Wellbore #1 - Design #1														
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
20,700.00	7,579.00	7,533.00	7,533.00	376.36	151.13	-90.00	2,764.73	-5,138.25	9,687.22	9,470.97	216.25	44.797		
20,800.00	7,579.00	7,533.00	7,533.00	379.03	151.13	-90.00	2,764.73	-5,138.25	9,787.22	9,570.91	216.31	45.246		
20,900.00	7,579.00	7,533.00	7,533.00	381.69	151.13	-90.00	2,764.73	-5,138.25	9,887.22	9,670.84	216.38	45.695		
21,000.00	7,579.00	7,533.00	7,533.00	384.36	151.13	-90.00	2,764.73	-5,138.25	9,987.22	9,770.78	216.44	46.143		

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 14-T1S-R66W - ABND VERT HECKENDORF 2 - Wellbore #1 - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-INC													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-93.83	-539.64	-8,067.22	8,085.36					
100.00	100.00	58.00	58.00	0.13	0.69	-93.83	-539.64	-8,067.22	8,085.25	8,084.42	0.83	9,748.360		
200.00	199.98	157.98	157.98	0.49	2.53	-51.44	-539.64	-8,067.22	8,084.16	8,081.14	3.02	2,678.201		
300.00	299.84	257.84	257.84	0.86	4.69	-51.52	-539.64	-8,067.22	8,080.90	8,075.35	5.55	1,456.771		
400.00	399.45	357.45	357.45	1.23	6.74	-51.65	-539.64	-8,067.22	8,075.47	8,067.50	7.97	1,013.342		
500.00	498.70	456.70	456.70	1.63	8.76	-51.84	-539.64	-8,067.22	8,067.89	8,057.52	10.37	777.765		
600.00	597.47	555.47	555.47	2.05	10.76	-52.08	-539.64	-8,067.22	8,058.18	8,045.40	12.77	630.792		
700.00	695.62	653.62	653.62	2.50	12.74	-52.38	-539.64	-8,067.22	8,046.35	8,031.17	15.18	530.065		
800.00	793.06	751.06	751.06	2.99	14.71	-52.72	-539.64	-8,067.22	8,032.45	8,014.86	17.59	456.583		
900.00	889.64	847.64	847.64	3.52	16.66	-53.13	-539.64	-8,067.22	8,016.50	7,996.49	20.02	400.525		
1,000.00	985.27	943.27	943.27	4.10	18.58	-53.58	-539.64	-8,067.22	7,998.55	7,976.10	22.45	356.295		
1,100.00	1,079.82	1,037.82	1,037.82	4.72	20.49	-54.09	-539.64	-8,067.22	7,978.64	7,953.74	24.90	320.469		
1,200.00	1,173.17	1,131.17	1,131.17	5.40	22.37	-54.66	-539.64	-8,067.22	7,956.82	7,929.46	27.36	290.831		
1,300.00	1,265.21	1,223.21	1,223.21	6.13	24.22	-55.27	-539.64	-8,067.22	7,933.14	7,903.30	29.84	265.885		
1,400.00	1,355.84	1,313.84	1,313.84	6.92	26.05	-55.94	-539.64	-8,067.22	7,907.67	7,875.34	32.33	244.583		
1,500.00	1,444.94	1,402.94	1,402.94	7.77	27.84	-56.67	-539.64	-8,067.22	7,880.47	7,845.62	34.84	226.171		
1,600.00	1,532.44	1,509.56	1,490.44	8.68	29.99	-57.33	-539.64	-8,067.22	7,851.65	7,813.89	37.76	207.951		
1,700.00	1,619.43	1,577.43	1,577.43	9.62	31.35	-57.60	-539.64	-8,067.22	7,822.49	7,782.57	39.92	195.976		
1,800.00	1,706.42	1,664.42	1,664.42	10.56	33.10	-57.88	-539.64	-8,067.22	7,793.53	7,751.05	42.47	183.491		
1,900.00	1,793.42	1,751.42	1,751.42	11.52	34.85	-58.16	-539.64	-8,067.22	7,764.77	7,719.73	45.04	172.382		
2,000.00	1,880.41	1,838.41	1,838.41	12.48	36.60	-58.44	-539.64	-8,067.22	7,736.23	7,688.60	47.63	162.440		
2,100.00	1,967.40	1,925.40	1,925.40	13.45	38.35	-58.73	-539.64	-8,067.22	7,707.89	7,657.67	50.22	153.495		
2,200.00	2,054.39	2,012.39	2,012.39	14.42	40.10	-59.01	-539.64	-8,067.22	7,679.76	7,626.95	52.81	145.409		
2,300.00	2,141.39	2,100.61	2,099.39	15.39	41.88	-59.30	-539.64	-8,067.22	7,651.85	7,596.40	55.45	138.004		
2,400.00	2,228.38	2,186.38	2,186.38	16.36	43.60	-59.59	-539.64	-8,067.22	7,624.16	7,566.12	58.04	131.369		
2,500.00	2,315.37	2,273.37	2,273.37	17.34	45.35	-59.88	-539.64	-8,067.22	7,596.68	7,536.02	60.66	125.240		
2,600.00	2,402.37	2,360.37	2,360.37	18.32	47.10	-60.17	-539.64	-8,067.22	7,569.43	7,506.14	63.28	119.609		
2,700.00	2,489.36	2,447.36	2,447.36	19.30	48.85	-60.46	-539.64	-8,067.22	7,542.40	7,476.48	65.92	114.419		
2,800.00	2,576.35	2,534.35	2,534.35	20.28	50.60	-60.76	-539.64	-8,067.22	7,515.60	7,447.04	68.56	109.623		
2,900.00	2,663.34	2,621.34	2,621.34	21.26	52.35	-61.06	-539.64	-8,067.22	7,489.02	7,417.82	71.20	105.176		
3,000.00	2,750.34	2,708.34	2,708.34	22.24	54.10	-61.35	-539.64	-8,067.22	7,462.68	7,388.82	73.86	101.044		
3,100.00	2,837.33	2,804.67	2,795.33	23.23	56.04	-61.65	-539.64	-8,067.22	7,436.57	7,359.87	76.70	96.956		
3,200.00	2,924.32	2,882.32	2,882.32	24.21	57.60	-61.96	-539.64	-8,067.22	7,410.70	7,331.52	79.18	93.599		
3,300.00	3,011.31	2,969.31	2,969.31	25.20	59.35	-62.26	-539.64	-8,067.22	7,385.06	7,303.22	81.84	90.235		
3,400.00	3,098.31	3,056.31	3,056.31	26.18	61.10	-62.57	-539.64	-8,067.22	7,359.67	7,275.16	84.52	87.081		
3,500.00	3,185.30	3,143.30	3,143.30	27.17	62.85	-62.87	-539.64	-8,067.22	7,334.52	7,247.33	87.19	84.118		
3,600.00	3,272.29	3,230.29	3,230.29	28.16	64.60	-63.18	-539.64	-8,067.22	7,309.62	7,219.74	89.88	81.330		
3,700.00	3,359.29	3,317.29	3,317.29	29.14	66.35	-63.49	-539.64	-8,067.22	7,284.96	7,192.40	92.56	78.702		
3,800.00	3,446.28	3,404.28	3,404.28	30.13	68.10	-63.81	-539.64	-8,067.22	7,260.56	7,165.30	95.26	76.221		
3,900.00	3,533.27	3,508.73	3,491.27	31.12	70.20	-64.12	-539.64	-8,067.22	7,236.41	7,138.11	98.31	73.611		
4,000.00	3,620.26	3,578.26	3,578.26	32.10	71.60	-64.44	-539.64	-8,067.22	7,212.52	7,111.86	100.66	71.655		
4,100.00	3,707.26	3,665.26	3,665.26	33.09	73.35	-64.75	-539.64	-8,067.22	7,188.89	7,085.52	103.36	69.549		
4,200.00	3,794.25	3,752.25	3,752.25	34.08	75.10	-65.07	-539.64	-8,067.22	7,165.51	7,059.44	106.08	67.551		
4,300.00	3,881.24	3,839.24	3,839.24	35.07	76.85	-65.39	-539.64	-8,067.22	7,142.41	7,033.61	108.79	65.653		
4,400.00	3,968.23	3,926.23	3,926.23	36.06	78.60	-65.71	-539.64	-8,067.22	7,119.56	7,008.05	111.51	63.846		
4,500.00	4,055.23	4,013.23	4,013.23	37.05	80.35	-66.04	-539.64	-8,067.22	7,096.99	6,982.76	114.24	62.126		
4,600.00	4,142.22	4,100.22	4,100.22	38.04	82.10	-66.36	-539.64	-8,067.22	7,074.69	6,957.73	116.97	60.485		
4,700.00	4,229.21	4,187.21	4,187.21	39.03	83.85	-66.69	-539.64	-8,067.22	7,052.66	6,932.97	119.70	58.920		
4,800.00	4,316.21	4,274.21	4,274.21	40.02	85.60	-67.02	-539.64	-8,067.22	7,030.92	6,908.48	122.44	57.425		
4,900.00	4,403.20	4,361.20	4,361.20	41.01	87.34	-67.35	-539.64	-8,067.22	7,009.45	6,884.27	125.18	55.996		
5,000.00	4,490.19	4,448.19	4,448.19	42.00	89.09	-67.68	-539.64	-8,067.22	6,988.26	6,860.34	127.92	54.629		
5,100.00	4,577.18	4,535.18	4,535.18	42.99	90.84	-68.02	-539.64	-8,067.22	6,967.36	6,836.68	130.67	53.319		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-INC													Offset Well Error:	0.00 usft
Reference				Offset		Semi Major Axis			Distance				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,200.00	4,664.18	4,622.18	4,622.18	43.98	92.59	-68.35	-539.64	-8,067.22	6,946.74	6,813.31	133.43	52.064		
5,300.00	4,751.17	4,709.17	4,709.17	44.97	94.34	-68.69	-539.64	-8,067.22	6,926.41	6,790.23	136.18	50.861		
5,400.00	4,838.16	4,803.84	4,796.16	45.96	96.25	-69.03	-539.64	-8,067.22	6,906.38	6,767.28	139.10	49.651		
5,500.00	4,925.15	4,883.15	4,883.15	46.95	97.84	-69.37	-539.64	-8,067.22	6,886.64	6,744.93	141.71	48.598		
5,600.00	5,012.15	4,970.15	4,970.15	47.94	99.59	-69.71	-539.64	-8,067.22	6,867.20	6,722.72	144.48	47.532		
5,700.00	5,099.14	5,057.14	5,057.14	48.93	101.34	-70.05	-539.64	-8,067.22	6,848.06	6,700.81	147.25	46.507		
5,800.00	5,186.13	5,144.13	5,144.13	49.92	103.09	-70.40	-539.64	-8,067.22	6,829.22	6,679.20	150.02	45.522		
5,900.00	5,273.13	5,231.13	5,231.13	50.91	104.84	-70.74	-539.64	-8,067.22	6,810.69	6,657.89	152.80	44.573		
6,000.00	5,360.12	5,318.12	5,318.12	51.90	106.59	-71.09	-539.64	-8,067.22	6,792.46	6,636.88	155.58	43.659		
6,100.00	5,447.11	5,405.11	5,405.11	52.89	108.34	-71.44	-539.64	-8,067.22	6,774.54	6,616.18	158.36	42.779		
6,200.00	5,534.10	5,507.90	5,492.10	53.88	110.41	-71.79	-539.64	-8,067.22	6,756.94	6,595.47	161.47	41.847		
6,300.00	5,621.10	5,579.10	5,579.10	54.87	111.84	-72.14	-539.64	-8,067.22	6,739.65	6,575.71	163.94	41.111		
6,400.00	5,708.09	5,666.09	5,666.09	55.86	113.59	-72.49	-539.64	-8,067.22	6,722.68	6,555.95	166.73	40.321		
6,500.00	5,795.08	5,753.08	5,753.08	56.85	115.34	-72.85	-539.64	-8,067.22	6,706.03	6,536.50	169.53	39.558		
6,600.00	5,882.07	5,840.07	5,840.07	57.84	117.09	-73.20	-539.64	-8,067.22	6,689.70	6,517.38	172.32	38.821		
6,700.00	5,969.07	5,927.07	5,927.07	58.83	118.84	-73.56	-539.64	-8,067.22	6,673.69	6,498.57	175.12	38.109		
6,800.00	6,056.06	6,014.06	6,014.06	59.83	120.58	-73.92	-539.64	-8,067.22	6,658.02	6,480.09	177.92	37.421		
6,900.00	6,143.05	6,101.05	6,101.05	60.82	122.33	-74.28	-539.64	-8,067.22	6,642.67	6,461.94	180.73	36.755		
7,000.00	6,230.05	6,188.05	6,188.05	61.81	124.08	-74.64	-539.64	-8,067.22	6,627.65	6,444.12	183.53	36.112		
7,100.00	6,317.04	6,275.04	6,275.04	62.80	125.83	-75.00	-539.64	-8,067.22	6,612.96	6,426.63	186.34	35.489		
7,200.00	6,404.03	6,362.03	6,362.03	63.79	127.58	-75.36	-539.64	-8,067.22	6,598.62	6,409.47	189.15	34.886		
7,300.00	6,491.02	6,449.02	6,449.02	64.78	129.33	-75.73	-539.64	-8,067.22	6,584.61	6,392.65	191.96	34.302		
7,400.00	6,578.02	6,536.02	6,536.02	65.77	131.08	-76.10	-539.64	-8,067.22	6,570.94	6,376.17	194.77	33.737		
7,500.00	6,665.01	6,623.01	6,623.01	66.76	132.83	-76.46	-539.64	-8,067.22	6,557.61	6,360.03	197.58	33.189		
7,600.00	6,752.00	6,710.00	6,710.00	67.76	134.58	-76.83	-539.64	-8,067.22	6,544.63	6,344.23	200.39	32.659		
7,700.00	6,838.99	6,803.01	6,796.99	68.75	136.45	-77.20	-539.64	-8,067.22	6,531.99	6,328.66	203.33	32.125		
7,800.00	6,925.99	6,883.99	6,883.99	69.74	138.08	-77.57	-539.64	-8,067.22	6,519.70	6,313.68	206.02	31.645		
7,900.00	7,012.98	6,970.98	6,970.98	70.73	139.83	-77.94	-539.64	-8,067.22	6,507.77	6,298.93	208.84	31.161		
8,000.00	7,099.97	7,057.97	7,057.97	71.72	141.58	-78.31	-539.64	-8,067.22	6,496.18	6,284.53	211.66	30.692		
8,100.00	7,186.97	7,144.97	7,144.97	72.71	143.33	-78.69	-539.64	-8,067.22	6,484.95	6,270.48	214.47	30.237		
8,200.00	7,273.09	7,231.09	7,231.09	73.74	145.06	-72.78	-539.64	-8,067.22	6,471.80	6,254.50	217.30	29.783		
8,300.00	7,352.95	7,310.95	7,310.95	74.97	146.67	-65.87	-539.64	-8,067.22	6,445.55	6,225.39	220.16	29.276		
8,400.00	7,423.63	7,381.63	7,381.63	76.39	148.09	-63.05	-539.64	-8,067.22	6,405.54	6,182.55	222.98	28.727		
8,500.00	7,482.96	7,440.96	7,440.96	77.96	149.28	-63.42	-539.64	-8,067.22	6,353.06	6,127.39	225.67	28.152		
8,600.00	7,529.15	7,487.15	7,487.15	79.64	150.21	-66.74	-539.64	-8,067.22	6,289.78	6,061.64	228.14	27.570		
8,700.00	7,560.79	7,518.79	7,518.79	81.35	150.85	-73.24	-539.64	-8,067.22	6,217.62	5,987.32	230.30	26.998		
8,800.00	7,576.92	7,534.92	7,534.92	83.05	151.17	-83.38	-539.64	-8,067.22	6,138.73	5,906.65	232.09	26.450		
8,900.00	7,579.00	7,537.00	7,537.00	84.68	151.21	-90.00	-539.64	-8,067.22	6,055.83	5,822.34	233.49	25.936		
9,000.00	7,579.00	7,537.00	7,537.00	86.34	151.21	-90.00	-539.64	-8,067.22	5,972.90	5,738.02	234.87	25.431		
9,100.00	7,579.00	7,537.00	7,537.00	88.04	151.21	-90.00	-539.64	-8,067.22	5,890.49	5,654.20	236.30	24.928		
9,200.00	7,579.00	7,537.00	7,537.00	89.80	151.21	-90.00	-539.64	-8,067.22	5,808.65	5,570.88	237.77	24.430		
9,300.00	7,579.00	7,537.00	7,537.00	91.59	151.21	-90.00	-539.64	-8,067.22	5,727.37	5,488.09	239.28	23.936		
9,400.00	7,579.00	7,537.00	7,537.00	93.42	151.21	-90.00	-539.64	-8,067.22	5,646.70	5,405.86	240.85	23.445		
9,500.00	7,579.00	7,537.00	7,537.00	95.30	151.21	-90.00	-539.64	-8,067.22	5,566.66	5,324.20	242.46	22.959		
9,600.00	7,579.00	7,537.00	7,537.00	97.21	151.21	-90.00	-539.64	-8,067.22	5,487.27	5,243.15	244.12	22.478		
9,700.00	7,579.00	7,537.00	7,537.00	99.15	151.21	-90.00	-539.64	-8,067.22	5,408.57	5,162.74	245.83	22.001		
9,800.00	7,579.00	7,537.00	7,537.00	101.13	151.21	-90.00	-539.64	-8,067.22	5,330.58	5,082.98	247.60	21.529		
9,900.00	7,579.00	7,537.00	7,537.00	103.15	151.21	-90.00	-539.64	-8,067.22	5,253.33	5,003.92	249.41	21.063		
10,000.00	7,579.00	7,537.00	7,537.00	105.19	151.21	-90.00	-539.64	-8,067.22	5,176.87	4,925.59	251.28	20.602		
10,100.00	7,579.00	7,537.00	7,537.00	107.26	151.21	-90.00	-539.64	-8,067.22	5,101.22	4,848.01	253.20	20.147		
10,200.00	7,579.00	7,537.00	7,537.00	109.36	151.21	-90.00	-539.64	-8,067.22	5,026.42	4,771.24	255.18	19.698		
10,300.00	7,579.00	7,537.00	7,537.00	111.49	151.21	-90.00	-539.64	-8,067.22	4,952.51	4,695.30	257.21	19.255		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-INC													Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
10,400.00	7,579.00	7,537.00	7,537.00	113.64	151.21	-90.00	-539.64	-8,067.22	4,879.52	4,620.23	259.29	18.819			
10,500.00	7,579.00	7,537.00	7,537.00	115.82	151.21	-90.00	-539.64	-8,067.22	4,807.52	4,546.09	261.43	18.389			
10,600.00	7,579.00	7,537.00	7,537.00	118.01	151.21	-90.00	-539.64	-8,067.22	4,736.52	4,472.90	263.62	17.967			
10,700.00	7,579.00	7,537.00	7,537.00	120.23	151.21	-90.00	-539.64	-8,067.22	4,666.59	4,400.72	265.87	17.552			
10,800.00	7,579.00	7,537.00	7,537.00	122.47	151.21	-90.00	-539.64	-8,067.22	4,597.78	4,329.60	268.17	17.145			
10,900.00	7,579.00	7,537.00	7,537.00	124.73	151.21	-90.00	-539.64	-8,067.22	4,530.12	4,259.59	270.53	16.745			
11,000.00	7,579.00	7,537.00	7,537.00	127.01	151.21	-90.00	-539.64	-8,067.22	4,463.68	4,190.75	272.93	16.354			
11,100.00	7,579.00	7,537.00	7,537.00	129.30	151.21	-90.00	-539.64	-8,067.22	4,398.51	4,123.12	275.39	15.972			
11,200.00	7,579.00	7,537.00	7,537.00	131.61	151.21	-90.00	-539.64	-8,067.22	4,334.67	4,056.77	277.90	15.598			
11,300.00	7,579.00	7,537.00	7,537.00	133.93	151.21	-90.00	-539.64	-8,067.22	4,272.21	3,991.76	280.45	15.233			
11,400.00	7,579.00	7,537.00	7,537.00	136.27	151.21	-90.00	-539.64	-8,067.22	4,211.20	3,928.16	283.05	14.878			
11,500.00	7,579.00	7,537.00	7,537.00	138.62	151.21	-90.00	-539.64	-8,067.22	4,151.71	3,866.02	285.69	14.532			
11,600.00	7,579.00	7,537.00	7,537.00	140.99	151.21	-90.00	-539.64	-8,067.22	4,093.79	3,805.43	288.36	14.197			
11,700.00	7,579.00	7,537.00	7,537.00	143.37	151.21	-90.00	-539.64	-8,067.22	4,037.52	3,746.45	291.07	13.871			
11,800.00	7,579.00	7,537.00	7,537.00	145.76	151.21	-90.00	-539.64	-8,067.22	3,982.97	3,689.16	293.81	13.556			
11,900.00	7,579.00	7,537.00	7,537.00	148.16	151.21	-90.00	-539.64	-8,067.22	3,930.20	3,633.63	296.57	13.252			
12,000.00	7,579.00	7,537.00	7,537.00	150.58	151.21	-90.00	-539.64	-8,067.22	3,879.30	3,579.94	299.35	12.959			
12,100.00	7,579.00	7,537.00	7,537.00	153.00	151.21	-90.00	-539.64	-8,067.22	3,830.32	3,528.18	302.14	12.677			
12,200.00	7,579.00	7,537.00	7,537.00	155.43	151.21	-90.00	-539.64	-8,067.22	3,783.36	3,478.43	304.94	12.407			
12,300.00	7,579.00	7,537.00	7,537.00	157.87	151.21	-90.00	-539.64	-8,067.22	3,738.49	3,430.76	307.73	12.149			
12,400.00	7,579.00	7,537.00	7,537.00	160.32	151.21	-90.00	-539.64	-8,067.22	3,695.77	3,385.27	310.51	11.902			
12,500.00	7,579.00	7,537.00	7,537.00	162.78	151.21	-90.00	-539.64	-8,067.22	3,655.29	3,342.03	313.27	11.668			
12,600.00	7,579.00	7,537.00	7,537.00	165.25	151.21	-90.00	-539.64	-8,067.22	3,617.13	3,301.14	315.99	11.447			
12,700.00	7,579.00	7,537.00	7,537.00	167.73	151.21	-90.00	-539.64	-8,067.22	3,581.35	3,262.67	318.68	11.238			
12,800.00	7,579.00	7,537.00	7,537.00	170.21	151.21	-90.00	-539.64	-8,067.22	3,548.03	3,226.71	321.32	11.042			
12,900.00	7,579.00	7,537.00	7,537.00	172.70	151.21	-90.00	-539.64	-8,067.22	3,517.24	3,193.35	323.89	10.859			
13,000.00	7,579.00	7,537.00	7,537.00	175.19	151.21	-90.00	-539.64	-8,067.22	3,489.04	3,162.65	326.40	10.690			
13,100.00	7,579.00	7,537.00	7,537.00	177.70	151.21	-90.00	-539.64	-8,067.22	3,463.51	3,134.69	328.82	10.533			
13,200.00	7,579.00	7,537.00	7,537.00	180.20	151.21	-90.00	-539.64	-8,067.22	3,440.69	3,109.54	331.15	10.390			
13,300.00	7,579.00	7,537.00	7,537.00	182.72	151.21	-90.00	-539.64	-8,067.22	3,420.64	3,087.27	333.37	10.261			
13,400.00	7,579.00	7,537.00	7,537.00	185.24	151.21	-90.00	-539.64	-8,067.22	3,403.41	3,067.93	335.48	10.145			
13,500.00	7,579.00	7,537.00	7,537.00	187.76	151.21	-90.00	-539.64	-8,067.22	3,389.05	3,051.59	337.47	10.043			
13,600.00	7,579.00	7,537.00	7,537.00	190.30	151.21	-90.00	-539.64	-8,067.22	3,377.59	3,038.27	339.32	9.954			
13,700.00	7,579.00	7,537.00	7,537.00	192.83	151.21	-90.00	-539.64	-8,067.22	3,369.06	3,028.03	341.03	9.879			
13,800.00	7,579.00	7,537.00	7,537.00	195.37	151.21	-90.00	-539.64	-8,067.22	3,363.48	3,020.89	342.60	9.818			
13,900.00	7,579.00	7,537.00	7,537.00	197.92	151.21	-90.00	-539.64	-8,067.22	3,360.87	3,016.86	344.01	9.770			
13,937.76	7,579.00	7,537.00	7,537.00	198.88	151.21	-90.00	-539.64	-8,067.22	3,360.66	3,016.16	344.50	9.755	CC		
14,000.00	7,579.00	7,537.00	7,537.00	200.47	151.21	-90.00	-539.64	-8,067.22	3,361.24	3,015.97	345.26	9.735	ES		
14,100.00	7,579.00	7,537.00	7,537.00	203.02	151.21	-90.00	-539.64	-8,067.22	3,364.57	3,018.22	346.35	9.714			
14,200.00	7,579.00	7,537.00	7,537.00	205.58	151.21	-90.00	-539.64	-8,067.22	3,370.88	3,023.59	347.28	9.706	SF		
14,300.00	7,579.00	7,537.00	7,537.00	208.14	151.21	-90.00	-539.64	-8,067.22	3,380.13	3,032.08	348.05	9.712			
14,400.00	7,579.00	7,537.00	7,537.00	210.70	151.21	-90.00	-539.64	-8,067.22	3,392.30	3,043.65	348.65	9.730			
14,500.00	7,579.00	7,537.00	7,537.00	213.27	151.21	-90.00	-539.64	-8,067.22	3,407.37	3,058.28	349.09	9.761			
14,600.00	7,579.00	7,537.00	7,537.00	215.84	151.21	-90.00	-539.64	-8,067.22	3,425.29	3,075.92	349.37	9.804			
14,700.00	7,579.00	7,537.00	7,537.00	218.42	151.21	-90.00	-539.64	-8,067.22	3,446.02	3,096.53	349.49	9.860			
14,800.00	7,579.00	7,537.00	7,537.00	221.00	151.21	-90.00	-539.64	-8,067.22	3,469.51	3,120.04	349.47	9.928			
14,900.00	7,579.00	7,537.00	7,537.00	223.58	151.21	-90.00	-539.64	-8,067.22	3,495.70	3,146.40	349.30	10.008			
15,000.00	7,579.00	7,537.00	7,537.00	226.17	151.21	-90.00	-539.64	-8,067.22	3,524.54	3,175.54	349.00	10.099			
15,100.00	7,579.00	7,537.00	7,537.00	228.75	151.21	-90.00	-539.64	-8,067.22	3,555.96	3,207.39	348.57	10.202			
15,200.00	7,579.00	7,537.00	7,537.00	231.34	151.21	-90.00	-539.64	-8,067.22	3,589.89	3,241.88	348.01	10.315			
15,300.00	7,579.00	7,537.00	7,537.00	233.94	151.21	-90.00	-539.64	-8,067.22	3,626.26	3,278.91	347.35	10.440			
15,400.00	7,579.00	7,537.00	7,537.00	236.53	151.21	-90.00	-539.64	-8,067.22	3,665.00	3,318.42	346.58	10.575			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-INC													Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
15,500.00	7,579.00	7,537.00	7,537.00	239.13	151.21	-90.00	-539.64	-8,067.22	3,706.03	3,360.32	345.71	10.720			
15,600.00	7,579.00	7,537.00	7,537.00	241.73	151.21	-90.00	-539.64	-8,067.22	3,749.28	3,404.52	344.76	10.875			
15,700.00	7,579.00	7,537.00	7,537.00	244.34	151.21	-90.00	-539.64	-8,067.22	3,794.67	3,450.95	343.72	11.040			
15,800.00	7,579.00	7,537.00	7,537.00	246.94	151.21	-90.00	-539.64	-8,067.22	3,842.13	3,499.51	342.62	11.214			
15,900.00	7,579.00	7,537.00	7,537.00	249.55	151.21	-90.00	-539.64	-8,067.22	3,891.59	3,550.13	341.45	11.397			
16,000.00	7,579.00	7,537.00	7,537.00	252.16	151.21	-90.00	-539.64	-8,067.22	3,942.95	3,602.72	340.23	11.589			
16,100.00	7,579.00	7,537.00	7,537.00	254.77	151.21	-90.00	-539.64	-8,067.22	3,996.16	3,657.20	338.97	11.789			
16,200.00	7,579.00	7,537.00	7,537.00	257.38	151.21	-90.00	-539.64	-8,067.22	4,051.15	3,713.49	337.66	11.998			
16,300.00	7,579.00	7,537.00	7,537.00	260.00	151.21	-90.00	-539.64	-8,067.22	4,107.83	3,771.51	336.31	12.214			
16,400.00	7,579.00	7,537.00	7,537.00	262.62	151.21	-90.00	-539.64	-8,067.22	4,166.13	3,831.20	334.94	12.438			
16,500.00	7,579.00	7,537.00	7,537.00	265.24	151.21	-90.00	-539.64	-8,067.22	4,226.01	3,892.46	333.54	12.670			
16,600.00	7,579.00	7,537.00	7,537.00	267.86	151.21	-90.00	-539.64	-8,067.22	4,287.37	3,955.24	332.13	12.909			
16,700.00	7,579.00	7,537.00	7,537.00	270.48	151.21	-90.00	-539.64	-8,067.22	4,350.18	4,019.47	330.70	13.154			
16,800.00	7,579.00	7,537.00	7,537.00	273.10	151.21	-90.00	-539.64	-8,067.22	4,414.35	4,085.08	329.27	13.406			
16,900.00	7,579.00	7,537.00	7,537.00	275.73	151.21	-90.00	-539.64	-8,067.22	4,479.84	4,152.00	327.83	13.665			
17,000.00	7,579.00	7,537.00	7,537.00	278.36	151.21	-90.00	-539.64	-8,067.22	4,546.58	4,220.19	326.39	13.930			
17,100.00	7,579.00	7,537.00	7,537.00	280.99	151.21	-90.00	-539.64	-8,067.22	4,614.52	4,289.57	324.95	14.201			
17,200.00	7,579.00	7,537.00	7,537.00	283.62	151.21	-90.00	-539.64	-8,067.22	4,683.62	4,360.10	323.52	14.477			
17,300.00	7,579.00	7,537.00	7,537.00	286.25	151.21	-90.00	-539.64	-8,067.22	4,753.81	4,431.72	322.09	14.759			
17,400.00	7,579.00	7,537.00	7,537.00	288.88	151.21	-90.00	-539.64	-8,067.22	4,825.06	4,504.38	320.68	15.046			
17,500.00	7,579.00	7,537.00	7,537.00	291.52	151.21	-90.00	-539.64	-8,067.22	4,897.31	4,578.03	319.27	15.339			
17,600.00	7,579.00	7,537.00	7,537.00	294.15	151.21	-90.00	-539.64	-8,067.22	4,970.52	4,652.63	317.88	15.636			
17,700.00	7,579.00	7,537.00	7,537.00	296.79	151.21	-90.00	-539.64	-8,067.22	5,044.65	4,728.14	316.51	15.938			
17,800.00	7,579.00	7,537.00	7,537.00	299.43	151.21	-90.00	-539.64	-8,067.22	5,119.66	4,804.51	315.15	16.245			
17,900.00	7,579.00	7,537.00	7,537.00	302.07	151.21	-90.00	-539.64	-8,067.22	5,195.52	4,881.71	313.81	16.556			
18,000.00	7,579.00	7,537.00	7,537.00	304.71	151.21	-90.00	-539.64	-8,067.22	5,272.18	4,959.69	312.49	16.872			
18,100.00	7,579.00	7,537.00	7,537.00	307.35	151.21	-90.00	-539.64	-8,067.22	5,349.61	5,038.42	311.19	17.191			
18,200.00	7,579.00	7,537.00	7,537.00	310.00	151.21	-90.00	-539.64	-8,067.22	5,427.78	5,117.87	309.90	17.514			
18,300.00	7,579.00	7,537.00	7,537.00	312.64	151.21	-90.00	-539.64	-8,067.22	5,506.65	5,198.01	308.64	17.841			
18,400.00	7,579.00	7,537.00	7,537.00	315.29	151.21	-90.00	-539.64	-8,067.22	5,586.20	5,278.80	307.40	18.172			
18,500.00	7,579.00	7,537.00	7,537.00	317.93	151.21	-90.00	-539.64	-8,067.22	5,666.40	5,360.22	306.18	18.507			
18,600.00	7,579.00	7,537.00	7,537.00	320.58	151.21	-90.00	-539.64	-8,067.22	5,747.22	5,442.24	304.99	18.844			
18,700.00	7,579.00	7,537.00	7,537.00	323.23	151.21	-90.00	-539.64	-8,067.22	5,828.64	5,524.83	303.81	19.185			
18,800.00	7,579.00	7,537.00	7,537.00	325.88	151.21	-90.00	-539.64	-8,067.22	5,910.62	5,607.97	302.65	19.529			
18,900.00	7,579.00	7,537.00	7,537.00	328.53	151.21	-90.00	-539.64	-8,067.22	5,993.15	5,691.63	301.52	19.876			
19,000.00	7,579.00	7,537.00	7,537.00	331.18	151.21	-90.00	-539.64	-8,067.22	6,076.21	5,775.80	300.41	20.226			
19,100.00	7,579.00	7,537.00	7,537.00	333.83	151.21	-90.00	-539.64	-8,067.22	6,159.77	5,860.45	299.32	20.579			
19,200.00	7,579.00	7,537.00	7,537.00	336.48	151.21	-90.00	-539.64	-8,067.22	6,243.82	5,945.56	298.25	20.935			
19,300.00	7,579.00	7,537.00	7,537.00	339.14	151.21	-90.00	-539.64	-8,067.22	6,328.32	6,031.12	297.21	21.293			
19,400.00	7,579.00	7,537.00	7,537.00	341.79	151.21	-90.00	-539.64	-8,067.22	6,413.28	6,117.10	296.18	21.653			
19,500.00	7,579.00	7,537.00	7,537.00	344.45	151.21	-90.00	-539.64	-8,067.22	6,498.66	6,203.48	295.18	22.016			
19,600.00	7,579.00	7,537.00	7,537.00	347.10	151.21	-90.00	-539.64	-8,067.22	6,584.45	6,290.26	294.19	22.381			
19,700.00	7,579.00	7,537.00	7,537.00	349.76	151.21	-90.00	-539.64	-8,067.22	6,670.64	6,377.42	293.23	22.749			
19,800.00	7,579.00	7,537.00	7,537.00	352.42	151.21	-90.00	-539.64	-8,067.22	6,757.21	6,464.93	292.28	23.119			
19,900.00	7,579.00	7,537.00	7,537.00	355.07	151.21	-90.00	-539.64	-8,067.22	6,844.15	6,552.79	291.36	23.490			
20,000.00	7,579.00	7,537.00	7,537.00	357.73	151.21	-90.00	-539.64	-8,067.22	6,931.44	6,640.98	290.45	23.864			
20,100.00	7,579.00	7,537.00	7,537.00	360.39	151.21	-90.00	-539.64	-8,067.22	7,019.07	6,729.50	289.57	24.240			
20,200.00	7,579.00	7,537.00	7,537.00	363.05	151.21	-90.00	-539.64	-8,067.22	7,107.02	6,818.32	288.70	24.617			
20,300.00	7,579.00	7,537.00	7,537.00	365.71	151.21	-90.00	-539.64	-8,067.22	7,195.29	6,907.44	287.85	24.997			
20,400.00	7,579.00	7,537.00	7,537.00	368.38	151.21	-90.00	-539.64	-8,067.22	7,283.86	6,996.84	287.02	25.378			
20,500.00	7,579.00	7,537.00	7,537.00	371.04	151.21	-90.00	-539.64	-8,067.22	7,372.73	7,086.52	286.21	25.760			
20,600.00	7,579.00	7,537.00	7,537.00	373.70	151.21	-90.00	-539.64	-8,067.22	7,461.87	7,176.46	285.41	26.144			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft	
Survey Program: 0-INC												Offset Well Error:		0.00 usft
Sec 14-T1S-R66W - ABND VERT HECKENDORF 2 - Wellbore #1 - Design #1														
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
20,700.00	7,579.00	7,537.00	7,537.00	376.36	151.21	-90.00	-539.64	-8,067.22	7,551.29	7,266.66	284.63	26.530		
20,800.00	7,579.00	7,537.00	7,537.00	379.03	151.21	-90.00	-539.64	-8,067.22	7,640.97	7,357.10	283.87	26.917		
20,900.00	7,579.00	7,537.00	7,537.00	381.69	151.21	-90.00	-539.64	-8,067.22	7,730.90	7,447.78	283.12	27.306		
21,000.00	7,579.00	7,537.00	7,537.00	384.36	151.21	-90.00	-539.64	-8,067.22	7,821.08	7,538.69	282.39	27.696		
21,100.00	7,579.00	7,537.00	7,537.00	387.02	151.21	-90.00	-539.64	-8,067.22	7,911.50	7,629.82	281.67	28.088		
21,200.00	7,579.00	7,537.00	7,537.00	389.69	151.21	-90.00	-539.64	-8,067.22	8,002.14	7,721.17	280.97	28.480		
21,300.00	7,579.00	7,537.00	7,537.00	392.36	151.21	-90.00	-539.64	-8,067.22	8,093.00	7,812.71	280.29	28.874		
21,400.00	7,579.00	7,537.00	7,537.00	395.02	151.21	-90.00	-539.64	-8,067.22	8,184.08	7,904.46	279.62	29.269		
21,500.00	7,579.00	7,537.00	7,537.00	397.69	151.21	-90.00	-539.64	-8,067.22	8,275.36	7,996.40	278.96	29.665		
21,600.00	7,579.00	7,537.00	7,537.00	400.36	151.21	-90.00	-539.64	-8,067.22	8,366.84	8,088.53	278.31	30.063		
21,700.00	7,579.00	7,537.00	7,537.00	403.03	151.21	-90.00	-539.64	-8,067.22	8,458.51	8,180.83	277.68	30.461		
21,800.00	7,579.00	7,537.00	7,537.00	405.70	151.21	-90.00	-539.64	-8,067.22	8,550.37	8,273.31	277.07	30.860		
21,900.00	7,579.00	7,537.00	7,537.00	408.37	151.21	-90.00	-539.64	-8,067.22	8,642.42	8,365.95	276.46	31.260		
22,000.00	7,579.00	7,537.00	7,537.00	411.04	151.21	-90.00	-539.64	-8,067.22	8,734.63	8,458.76	275.87	31.662		
22,100.00	7,579.00	7,537.00	7,537.00	413.71	151.21	-90.00	-539.64	-8,067.22	8,827.02	8,551.72	275.30	32.064		
22,200.00	7,579.00	7,537.00	7,537.00	416.38	151.21	-90.00	-539.64	-8,067.22	8,919.57	8,644.84	274.73	32.467		
22,300.00	7,579.00	7,537.00	7,537.00	419.05	151.21	-90.00	-539.64	-8,067.22	9,012.28	8,738.10	274.17	32.871		
22,400.00	7,579.00	7,537.00	7,537.00	421.72	151.21	-90.00	-539.64	-8,067.22	9,105.14	8,831.51	273.63	33.275		
22,440.61	7,579.00	7,537.00	7,537.00	422.81	151.21	-90.00	-539.64	-8,067.22	9,142.89	8,869.48	273.41	33.440		

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft		
Survey Program: 0-INC													Sec 14-T1S-R66W - SI VERT REBA SHAW 1 - Wellbore #1 - Design #1		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
9,800.00	7,579.00	7,580.00	7,580.00	101.13	152.08	-90.00	-339.16	-13,403.68	9,989.72	9,756.13	233.58	42.767				
9,900.00	7,579.00	7,580.00	7,580.00	103.15	152.08	-90.00	-339.16	-13,403.68	9,894.92	9,660.46	234.46	42.202				
10,000.00	7,579.00	7,580.00	7,580.00	105.19	152.08	-90.00	-339.16	-13,403.68	9,800.24	9,564.87	235.36	41.639				
10,100.00	7,579.00	7,580.00	7,580.00	107.26	152.08	-90.00	-339.16	-13,403.68	9,705.66	9,469.37	236.29	41.076				
10,200.00	7,579.00	7,580.00	7,580.00	109.36	152.08	-90.00	-339.16	-13,403.68	9,611.18	9,373.96	237.23	40.515				
10,300.00	7,579.00	7,580.00	7,580.00	111.49	152.08	-90.00	-339.16	-13,403.68	9,516.83	9,278.63	238.19	39.954				
10,400.00	7,579.00	7,580.00	7,580.00	113.64	152.08	-90.00	-339.16	-13,403.68	9,422.58	9,183.40	239.18	39.395				
10,500.00	7,579.00	7,580.00	7,580.00	115.82	152.08	-90.00	-339.16	-13,403.68	9,328.46	9,088.27	240.19	38.838				
10,600.00	7,579.00	7,580.00	7,580.00	118.01	152.08	-90.00	-339.16	-13,403.68	9,234.46	8,993.24	241.22	38.282				
10,700.00	7,579.00	7,580.00	7,580.00	120.23	152.08	-90.00	-339.16	-13,403.68	9,140.59	8,898.31	242.28	37.727				
10,800.00	7,579.00	7,580.00	7,580.00	122.47	152.08	-90.00	-339.16	-13,403.68	9,046.85	8,803.48	243.37	37.174				
10,900.00	7,579.00	7,580.00	7,580.00	124.73	152.08	-90.00	-339.16	-13,403.68	8,953.25	8,708.77	244.48	36.622				
11,000.00	7,579.00	7,580.00	7,580.00	127.01	152.08	-90.00	-339.16	-13,403.68	8,859.78	8,614.17	245.61	36.072				
11,100.00	7,579.00	7,580.00	7,580.00	129.30	152.08	-90.00	-339.16	-13,403.68	8,766.46	8,519.68	246.78	35.524				
11,200.00	7,579.00	7,580.00	7,580.00	131.61	152.08	-90.00	-339.16	-13,403.68	8,673.29	8,425.32	247.97	34.978				
11,300.00	7,579.00	7,580.00	7,580.00	133.93	152.08	-90.00	-339.16	-13,403.68	8,580.27	8,331.08	249.19	34.433				
11,400.00	7,579.00	7,580.00	7,580.00	136.27	152.08	-90.00	-339.16	-13,403.68	8,487.41	8,236.97	250.44	33.891				
11,500.00	7,579.00	7,580.00	7,580.00	138.62	152.08	-90.00	-339.16	-13,403.68	8,394.72	8,143.00	251.72	33.350				
11,600.00	7,579.00	7,580.00	7,580.00	140.99	152.08	-90.00	-339.16	-13,403.68	8,302.19	8,049.16	253.03	32.812				
11,700.00	7,579.00	7,580.00	7,580.00	143.37	152.08	-90.00	-339.16	-13,403.68	8,209.84	7,955.47	254.37	32.275				
11,800.00	7,579.00	7,580.00	7,580.00	145.76	152.08	-90.00	-339.16	-13,403.68	8,117.67	7,861.93	255.74	31.741				
11,900.00	7,579.00	7,580.00	7,580.00	148.16	152.08	-90.00	-339.16	-13,403.68	8,025.69	7,768.53	257.15	31.210				
12,000.00	7,579.00	7,580.00	7,580.00	150.58	152.08	-90.00	-339.16	-13,403.68	7,933.90	7,675.30	258.60	30.680				
12,100.00	7,579.00	7,580.00	7,580.00	153.00	152.08	-90.00	-339.16	-13,403.68	7,842.31	7,582.24	260.08	30.154				
12,200.00	7,579.00	7,580.00	7,580.00	155.43	152.08	-90.00	-339.16	-13,403.68	7,750.94	7,489.34	261.60	29.629				
12,300.00	7,579.00	7,580.00	7,580.00	157.87	152.08	-90.00	-339.16	-13,403.68	7,659.77	7,396.62	263.15	29.108				
12,400.00	7,579.00	7,580.00	7,580.00	160.32	152.08	-90.00	-339.16	-13,403.68	7,568.83	7,304.09	264.74	28.589				
12,500.00	7,579.00	7,580.00	7,580.00	162.78	152.08	-90.00	-339.16	-13,403.68	7,478.12	7,211.75	266.38	28.073				
12,600.00	7,579.00	7,580.00	7,580.00	165.25	152.08	-90.00	-339.16	-13,403.68	7,387.65	7,119.60	268.05	27.561				
12,700.00	7,579.00	7,580.00	7,580.00	167.73	152.08	-90.00	-339.16	-13,403.68	7,297.43	7,027.66	269.77	27.051				
12,800.00	7,579.00	7,580.00	7,580.00	170.21	152.08	-90.00	-339.16	-13,403.68	7,207.47	6,935.94	271.53	26.544				
12,900.00	7,579.00	7,580.00	7,580.00	172.70	152.08	-90.00	-339.16	-13,403.68	7,117.78	6,844.44	273.34	26.040				
13,000.00	7,579.00	7,580.00	7,580.00	175.19	152.08	-90.00	-339.16	-13,403.68	7,028.36	6,753.17	275.19	25.540				
13,100.00	7,579.00	7,580.00	7,580.00	177.70	152.08	-90.00	-339.16	-13,403.68	6,939.23	6,662.15	277.09	25.044				
13,200.00	7,579.00	7,580.00	7,580.00	180.20	152.08	-90.00	-339.16	-13,403.68	6,850.41	6,571.37	279.03	24.550				
13,300.00	7,579.00	7,580.00	7,580.00	182.72	152.08	-90.00	-339.16	-13,403.68	6,761.89	6,480.86	281.03	24.061				
13,400.00	7,579.00	7,580.00	7,580.00	185.24	152.08	-90.00	-339.16	-13,403.68	6,673.70	6,390.62	283.08	23.575				
13,500.00	7,579.00	7,580.00	7,580.00	187.76	152.08	-90.00	-339.16	-13,403.68	6,585.85	6,300.66	285.19	23.093				
13,600.00	7,579.00	7,580.00	7,580.00	190.30	152.08	-90.00	-339.16	-13,403.68	6,498.35	6,211.00	287.34	22.615				
13,700.00	7,579.00	7,580.00	7,580.00	192.83	152.08	-90.00	-339.16	-13,403.68	6,411.21	6,121.65	289.56	22.141				
13,800.00	7,579.00	7,580.00	7,580.00	195.37	152.08	-90.00	-339.16	-13,403.68	6,324.45	6,032.62	291.83	21.672				
13,900.00	7,579.00	7,580.00	7,580.00	197.92	152.08	-90.00	-339.16	-13,403.68	6,238.10	5,943.93	294.16	21.206				
14,000.00	7,579.00	7,580.00	7,580.00	200.47	152.08	-90.00	-339.16	-13,403.68	6,152.15	5,855.60	296.55	20.746				
14,100.00	7,579.00	7,580.00	7,580.00	203.02	152.08	-90.00	-339.16	-13,403.68	6,066.63	5,767.63	299.01	20.289				
14,200.00	7,579.00	7,580.00	7,580.00	205.58	152.08	-90.00	-339.16	-13,403.68	5,981.57	5,680.04	301.53	19.838				
14,300.00	7,579.00	7,580.00	7,580.00	208.14	152.08	-90.00	-339.16	-13,403.68	5,896.97	5,592.86	304.11	19.391				
14,400.00	7,579.00	7,580.00	7,580.00	210.70	152.08	-90.00	-339.16	-13,403.68	5,812.86	5,506.10	306.77	18.949				
14,500.00	7,579.00	7,580.00	7,580.00	213.27	152.08	-90.00	-339.16	-13,403.68	5,729.27	5,419.78	309.49	18.512				
14,600.00	7,579.00	7,580.00	7,580.00	215.84	152.08	-90.00	-339.16	-13,403.68	5,646.20	5,333.92	312.28	18.080				
14,700.00	7,579.00	7,580.00	7,580.00	218.42	152.08	-90.00	-339.16	-13,403.68	5,563.69	5,248.55	315.15	17.654				
14,800.00	7,579.00	7,580.00	7,580.00	221.00	152.08	-90.00	-339.16	-13,403.68	5,481.77	5,163.68	318.09	17.234				
14,900.00	7,579.00	7,580.00	7,580.00	223.58	152.08	-90.00	-339.16	-13,403.68	5,400.45	5,079.35	321.10	16.818				

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-INC													Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
15,000.00	7,579.00	7,580.00	7,580.00	226.17	152.08	-90.00	-339.16	-13,403.68	5,319.78	4,995.58	324.20	16.409			
15,100.00	7,579.00	7,580.00	7,580.00	228.75	152.08	-90.00	-339.16	-13,403.68	5,239.76	4,912.40	327.37	16.006			
15,200.00	7,579.00	7,580.00	7,580.00	231.34	152.08	-90.00	-339.16	-13,403.68	5,160.45	4,829.83	330.62	15.608			
15,300.00	7,579.00	7,580.00	7,580.00	233.94	152.08	-90.00	-339.16	-13,403.68	5,081.86	4,747.91	333.95	15.217			
15,400.00	7,579.00	7,580.00	7,580.00	236.53	152.08	-90.00	-339.16	-13,403.68	5,004.04	4,666.67	337.37	14.833			
15,500.00	7,579.00	7,580.00	7,580.00	239.13	152.08	-90.00	-339.16	-13,403.68	4,927.02	4,586.16	340.87	14.454			
15,600.00	7,579.00	7,580.00	7,580.00	241.73	152.08	-90.00	-339.16	-13,403.68	4,850.84	4,506.39	344.45	14.083			
15,700.00	7,579.00	7,580.00	7,580.00	244.34	152.08	-90.00	-339.16	-13,403.68	4,775.54	4,427.42	348.12	13.718			
15,800.00	7,579.00	7,580.00	7,580.00	246.94	152.08	-90.00	-339.16	-13,403.68	4,701.16	4,349.29	351.87	13.361			
15,900.00	7,579.00	7,580.00	7,580.00	249.55	152.08	-90.00	-339.16	-13,403.68	4,627.74	4,272.04	355.70	13.010			
16,000.00	7,579.00	7,580.00	7,580.00	252.16	152.08	-90.00	-339.16	-13,403.68	4,555.34	4,195.71	359.62	12.667			
16,100.00	7,579.00	7,580.00	7,580.00	254.77	152.08	-90.00	-339.16	-13,403.68	4,483.99	4,120.37	363.63	12.331			
16,200.00	7,579.00	7,580.00	7,580.00	257.38	152.08	-90.00	-339.16	-13,403.68	4,413.76	4,046.05	367.71	12.003			
16,300.00	7,579.00	7,580.00	7,580.00	260.00	152.08	-90.00	-339.16	-13,403.68	4,344.70	3,972.83	371.87	11.683			
16,400.00	7,579.00	7,580.00	7,580.00	262.62	152.08	-90.00	-339.16	-13,403.68	4,276.86	3,900.75	376.11	11.371			
16,500.00	7,579.00	7,580.00	7,580.00	265.24	152.08	-90.00	-339.16	-13,403.68	4,210.30	3,829.88	380.43	11.067			
16,600.00	7,579.00	7,580.00	7,580.00	267.86	152.08	-90.00	-339.16	-13,403.68	4,145.09	3,760.28	384.81	10.772			
16,700.00	7,579.00	7,580.00	7,580.00	270.48	152.08	-90.00	-339.16	-13,403.68	4,081.28	3,692.02	389.26	10.485			
16,800.00	7,579.00	7,580.00	7,580.00	273.10	152.08	-90.00	-339.16	-13,403.68	4,018.95	3,625.18	393.77	10.206			
16,900.00	7,579.00	7,580.00	7,580.00	275.73	152.08	-90.00	-339.16	-13,403.68	3,958.16	3,559.84	398.33	9.937			
17,000.00	7,579.00	7,580.00	7,580.00	278.36	152.08	-90.00	-339.16	-13,403.68	3,899.00	3,496.07	402.93	9.677			
17,100.00	7,579.00	7,580.00	7,580.00	280.99	152.08	-90.00	-339.16	-13,403.68	3,841.52	3,433.95	407.57	9.425			
17,200.00	7,579.00	7,580.00	7,580.00	283.62	152.08	-90.00	-339.16	-13,403.68	3,785.81	3,373.57	412.24	9.184			
17,300.00	7,579.00	7,580.00	7,580.00	286.25	152.08	-90.00	-339.16	-13,403.68	3,731.96	3,315.03	416.92	8.951			
17,400.00	7,579.00	7,580.00	7,580.00	288.88	152.08	-90.00	-339.16	-13,403.68	3,680.03	3,258.42	421.61	8.728			
17,500.00	7,579.00	7,580.00	7,580.00	291.52	152.08	-90.00	-339.16	-13,403.68	3,630.11	3,203.83	426.29	8.516			
17,600.00	7,579.00	7,580.00	7,580.00	294.15	152.08	-90.00	-339.16	-13,403.68	3,582.29	3,151.36	430.94	8.313			
17,700.00	7,579.00	7,580.00	7,580.00	296.79	152.08	-90.00	-339.16	-13,403.68	3,536.65	3,101.11	435.54	8.120			
17,800.00	7,579.00	7,580.00	7,580.00	299.43	152.08	-90.00	-339.16	-13,403.68	3,493.28	3,053.19	440.09	7.938			
17,900.00	7,579.00	7,580.00	7,580.00	302.07	152.08	-90.00	-339.16	-13,403.68	3,452.27	3,007.70	444.57	7.765			
18,000.00	7,579.00	7,580.00	7,580.00	304.71	152.08	-90.00	-339.16	-13,403.68	3,413.63	2,964.75	448.94	7.604			
18,100.00	7,579.00	7,580.00	7,580.00	307.35	152.08	-90.00	-339.16	-13,403.68	3,377.69	2,924.43	453.20	7.453			
18,200.00	7,579.00	7,580.00	7,580.00	310.00	152.08	-90.00	-339.16	-13,403.68	3,344.17	2,886.85	457.32	7.313			
18,300.00	7,579.00	7,580.00	7,580.00	312.64	152.08	-90.00	-339.16	-13,403.68	3,313.39	2,852.12	461.28	7.183			
18,400.00	7,579.00	7,580.00	7,580.00	315.29	152.08	-90.00	-339.16	-13,403.68	3,285.37	2,820.32	465.05	7.065			
18,500.00	7,579.00	7,580.00	7,580.00	317.93	152.08	-90.00	-339.16	-13,403.68	3,260.18	2,791.55	468.63	6.957			
18,600.00	7,579.00	7,580.00	7,580.00	320.58	152.08	-90.00	-339.16	-13,403.68	3,237.88	2,765.90	471.98	6.860			
18,700.00	7,579.00	7,580.00	7,580.00	323.23	152.08	-90.00	-339.16	-13,403.68	3,218.54	2,743.45	475.09	6.775			
18,800.00	7,579.00	7,580.00	7,580.00	325.88	152.08	-90.00	-339.16	-13,403.68	3,202.20	2,724.26	477.95	6.700			
18,900.00	7,579.00	7,580.00	7,580.00	328.53	152.08	-90.00	-339.16	-13,403.68	3,188.92	2,708.40	480.52	6.636			
19,000.00	7,579.00	7,580.00	7,580.00	331.18	152.08	-90.00	-339.16	-13,403.68	3,178.73	2,695.93	482.80	6.584			
19,100.00	7,579.00	7,580.00	7,580.00	333.83	152.08	-90.00	-339.16	-13,403.68	3,171.66	2,686.89	484.77	6.543			
19,200.00	7,579.00	7,580.00	7,580.00	336.48	152.08	-90.00	-339.16	-13,403.68	3,167.73	2,681.30	486.43	6.512			
19,274.46	7,579.00	7,580.00	7,580.00	338.46	152.08	-90.00	-339.16	-13,403.68	3,166.86	2,679.40	487.46	6.497	CC		
19,300.00	7,579.00	7,580.00	7,580.00	339.14	152.08	-90.00	-339.16	-13,403.68	3,166.96	2,679.19	487.77	6.493	ES		
19,400.00	7,579.00	7,580.00	7,580.00	341.79	152.08	-90.00	-339.16	-13,403.68	3,169.35	2,680.57	488.78	6.484	SF		
19,500.00	7,579.00	7,580.00	7,580.00	344.45	152.08	-90.00	-339.16	-13,403.68	3,174.88	2,685.42	489.46	6.487			
19,600.00	7,579.00	7,580.00	7,580.00	347.10	152.08	-90.00	-339.16	-13,403.68	3,183.55	2,693.74	489.81	6.500			
19,700.00	7,579.00	7,580.00	7,580.00	349.76	152.08	-90.00	-339.16	-13,403.68	3,195.32	2,705.48	489.84	6.523			
19,800.00	7,579.00	7,580.00	7,580.00	352.42	152.08	-90.00	-339.16	-13,403.68	3,210.17	2,720.62	489.55	6.557			
19,900.00	7,579.00	7,580.00	7,580.00	355.07	152.08	-90.00	-339.16	-13,403.68	3,228.05	2,739.09	488.96	6.602			
20,000.00	7,579.00	7,580.00	7,580.00	357.73	152.08	-90.00	-339.16	-13,403.68	3,248.91	2,760.84	488.07	6.657			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft	
Survey Program: 0-INC												Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
20,100.00	7,579.00	7,580.00	7,580.00	360.39	152.08	-90.00	-339.16	-13,403.68	3,272.69	2,785.79	486.90	6.721		
20,200.00	7,579.00	7,580.00	7,580.00	363.05	152.08	-90.00	-339.16	-13,403.68	3,299.34	2,813.87	485.47	6.796		
20,300.00	7,579.00	7,580.00	7,580.00	365.71	152.08	-90.00	-339.16	-13,403.68	3,328.77	2,844.99	483.79	6.881		
20,400.00	7,579.00	7,580.00	7,580.00	368.38	152.08	-90.00	-339.16	-13,403.68	3,360.93	2,879.05	481.87	6.975		
20,500.00	7,579.00	7,580.00	7,580.00	371.04	152.08	-90.00	-339.16	-13,403.68	3,395.72	2,915.98	479.75	7.078		
20,600.00	7,579.00	7,580.00	7,580.00	373.70	152.08	-90.00	-339.16	-13,403.68	3,433.08	2,955.65	477.43	7.191		
20,700.00	7,579.00	7,580.00	7,580.00	376.36	152.08	-90.00	-339.16	-13,403.68	3,472.92	2,997.98	474.94	7.312		
20,800.00	7,579.00	7,580.00	7,580.00	379.03	152.08	-90.00	-339.16	-13,403.68	3,515.15	3,042.85	472.29	7.443		
20,900.00	7,579.00	7,580.00	7,580.00	381.69	152.08	-90.00	-339.16	-13,403.68	3,559.69	3,090.18	469.51	7.582		
21,000.00	7,579.00	7,580.00	7,580.00	384.36	152.08	-90.00	-339.16	-13,403.68	3,606.45	3,139.84	466.61	7.729		
21,100.00	7,579.00	7,580.00	7,580.00	387.02	152.08	-90.00	-339.16	-13,403.68	3,655.35	3,191.74	463.61	7.885		
21,200.00	7,579.00	7,580.00	7,580.00	389.69	152.08	-90.00	-339.16	-13,403.68	3,706.30	3,245.79	460.52	8.048		
21,300.00	7,579.00	7,580.00	7,580.00	392.36	152.08	-90.00	-339.16	-13,403.68	3,759.23	3,301.87	457.36	8.219		
21,400.00	7,579.00	7,580.00	7,580.00	395.02	152.08	-90.00	-339.16	-13,403.68	3,814.04	3,359.90	454.14	8.398		
21,500.00	7,579.00	7,580.00	7,580.00	397.69	152.08	-90.00	-339.16	-13,403.68	3,870.66	3,419.77	450.89	8.585		
21,600.00	7,579.00	7,580.00	7,580.00	400.36	152.08	-90.00	-339.16	-13,403.68	3,929.01	3,481.41	447.60	8.778		
21,700.00	7,579.00	7,580.00	7,580.00	403.03	152.08	-90.00	-339.16	-13,403.68	3,989.01	3,544.72	444.29	8.978		
21,800.00	7,579.00	7,580.00	7,580.00	405.70	152.08	-90.00	-339.16	-13,403.68	4,050.60	3,609.62	440.98	9.186		
21,900.00	7,579.00	7,580.00	7,580.00	408.37	152.08	-90.00	-339.16	-13,403.68	4,113.69	3,676.03	437.66	9.399		
22,000.00	7,579.00	7,580.00	7,580.00	411.04	152.08	-90.00	-339.16	-13,403.68	4,178.22	3,743.87	434.35	9.619		
22,100.00	7,579.00	7,580.00	7,580.00	413.71	152.08	-90.00	-339.16	-13,403.68	4,244.13	3,813.07	431.06	9.846		
22,200.00	7,579.00	7,580.00	7,580.00	416.38	152.08	-90.00	-339.16	-13,403.68	4,311.35	3,883.56	427.79	10.078		
22,300.00	7,579.00	7,580.00	7,580.00	419.05	152.08	-90.00	-339.16	-13,403.68	4,379.83	3,955.27	424.55	10.316		
22,400.00	7,579.00	7,580.00	7,580.00	421.72	152.08	-90.00	-339.16	-13,403.68	4,449.49	4,028.15	421.34	10.560		
22,440.61	7,579.00	7,580.00	7,580.00	422.81	152.08	-90.00	-339.16	-13,403.68	4,478.11	4,058.06	420.05	10.661		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 16-T1S-R66W - ABND VERT GILBERT A. DIEDRICHS G U 1 - Wellbore #1 - Design #1	Offset Site Error:	0.00 usft
Survey Program: 0-INC														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
12,000.00	7,579.00	7,577.00	7,577.00	150.58	152.02	-90.00	2,260.09	-16,015.74	9,906.24	9,685.33	220.90	44.844			
12,100.00	7,579.00	7,577.00	7,577.00	153.00	152.02	-90.00	2,260.09	-16,015.74	9,806.41	9,585.30	221.11	44.351			
12,200.00	7,579.00	7,577.00	7,577.00	155.43	152.02	-90.00	2,260.09	-16,015.74	9,706.58	9,485.26	221.32	43.858			
12,300.00	7,579.00	7,577.00	7,577.00	157.87	152.02	-90.00	2,260.09	-16,015.74	9,606.75	9,385.22	221.53	43.365			
12,400.00	7,579.00	7,577.00	7,577.00	160.32	152.02	-90.00	2,260.09	-16,015.74	9,506.93	9,285.18	221.75	42.873			
12,500.00	7,579.00	7,577.00	7,577.00	162.78	152.02	-90.00	2,260.09	-16,015.74	9,407.11	9,185.14	221.97	42.380			
12,600.00	7,579.00	7,577.00	7,577.00	165.25	152.02	-90.00	2,260.09	-16,015.74	9,307.30	9,085.10	222.20	41.887			
12,700.00	7,579.00	7,577.00	7,577.00	167.73	152.02	-90.00	2,260.09	-16,015.74	9,207.49	8,985.06	222.43	41.395			
12,800.00	7,579.00	7,577.00	7,577.00	170.21	152.02	-90.00	2,260.09	-16,015.74	9,107.68	8,885.01	222.67	40.902			
12,900.00	7,579.00	7,577.00	7,577.00	172.70	152.02	-90.00	2,260.09	-16,015.74	9,007.88	8,784.97	222.91	40.410			
13,000.00	7,579.00	7,577.00	7,577.00	175.19	152.02	-90.00	2,260.09	-16,015.74	8,908.09	8,684.93	223.16	39.918			
13,100.00	7,579.00	7,577.00	7,577.00	177.70	152.02	-90.00	2,260.09	-16,015.74	8,808.29	8,584.88	223.41	39.426			
13,200.00	7,579.00	7,577.00	7,577.00	180.20	152.02	-90.00	2,260.09	-16,015.74	8,708.51	8,484.83	223.67	38.934			
13,300.00	7,579.00	7,577.00	7,577.00	182.72	152.02	-90.00	2,260.09	-16,015.74	8,608.72	8,384.78	223.94	38.442			
13,400.00	7,579.00	7,577.00	7,577.00	185.24	152.02	-90.00	2,260.09	-16,015.74	8,508.95	8,284.73	224.21	37.950			
13,500.00	7,579.00	7,577.00	7,577.00	187.76	152.02	-90.00	2,260.09	-16,015.74	8,409.17	8,184.68	224.49	37.459			
13,600.00	7,579.00	7,577.00	7,577.00	190.30	152.02	-90.00	2,260.09	-16,015.74	8,309.41	8,084.63	224.78	36.967			
13,700.00	7,579.00	7,577.00	7,577.00	192.83	152.02	-90.00	2,260.09	-16,015.74	8,209.65	7,984.58	225.07	36.476			
13,800.00	7,579.00	7,577.00	7,577.00	195.37	152.02	-90.00	2,260.09	-16,015.74	8,109.89	7,884.52	225.37	35.985			
13,900.00	7,579.00	7,577.00	7,577.00	197.92	152.02	-90.00	2,260.09	-16,015.74	8,010.14	7,784.47	225.68	35.494			
14,000.00	7,579.00	7,577.00	7,577.00	200.47	152.02	-90.00	2,260.09	-16,015.74	7,910.40	7,684.41	225.99	35.003			
14,100.00	7,579.00	7,577.00	7,577.00	203.02	152.02	-90.00	2,260.09	-16,015.74	7,810.66	7,584.35	226.31	34.513			
14,200.00	7,579.00	7,577.00	7,577.00	205.58	152.02	-90.00	2,260.09	-16,015.74	7,710.94	7,484.29	226.64	34.022			
14,300.00	7,579.00	7,577.00	7,577.00	208.14	152.02	-90.00	2,260.09	-16,015.74	7,611.21	7,384.23	226.98	33.532			
14,400.00	7,579.00	7,577.00	7,577.00	210.70	152.02	-90.00	2,260.09	-16,015.74	7,511.50	7,284.17	227.33	33.042			
14,500.00	7,579.00	7,577.00	7,577.00	213.27	152.02	-90.00	2,260.09	-16,015.74	7,411.79	7,184.10	227.69	32.552			
14,600.00	7,579.00	7,577.00	7,577.00	215.84	152.02	-90.00	2,260.09	-16,015.74	7,312.09	7,084.04	228.06	32.062			
14,700.00	7,579.00	7,577.00	7,577.00	218.42	152.02	-90.00	2,260.09	-16,015.74	7,212.40	6,983.97	228.44	31.573			
14,800.00	7,579.00	7,577.00	7,577.00	221.00	152.02	-90.00	2,260.09	-16,015.74	7,112.72	6,883.90	228.82	31.084			
14,900.00	7,579.00	7,577.00	7,577.00	223.58	152.02	-90.00	2,260.09	-16,015.74	7,013.05	6,783.82	229.22	30.595			
15,000.00	7,579.00	7,577.00	7,577.00	226.17	152.02	-90.00	2,260.09	-16,015.74	6,913.38	6,683.75	229.64	30.106			
15,100.00	7,579.00	7,577.00	7,577.00	228.75	152.02	-90.00	2,260.09	-16,015.74	6,813.73	6,583.67	230.06	29.617			
15,200.00	7,579.00	7,577.00	7,577.00	231.34	152.02	-90.00	2,260.09	-16,015.74	6,714.09	6,483.59	230.50	29.129			
15,300.00	7,579.00	7,577.00	7,577.00	233.94	152.02	-90.00	2,260.09	-16,015.74	6,614.46	6,383.51	230.94	28.641			
15,400.00	7,579.00	7,577.00	7,577.00	236.53	152.02	-90.00	2,260.09	-16,015.74	6,514.83	6,283.43	231.41	28.153			
15,500.00	7,579.00	7,577.00	7,577.00	239.13	152.02	-90.00	2,260.09	-16,015.74	6,415.23	6,183.34	231.88	27.666			
15,600.00	7,579.00	7,577.00	7,577.00	241.73	152.02	-90.00	2,260.09	-16,015.74	6,315.63	6,083.25	232.38	27.178			
15,700.00	7,579.00	7,577.00	7,577.00	244.34	152.02	-90.00	2,260.09	-16,015.74	6,216.04	5,983.16	232.89	26.691			
15,800.00	7,579.00	7,577.00	7,577.00	246.94	152.02	-90.00	2,260.09	-16,015.74	6,116.47	5,883.06	233.41	26.205			
15,900.00	7,579.00	7,577.00	7,577.00	249.55	152.02	-90.00	2,260.09	-16,015.74	6,016.92	5,782.96	233.95	25.718			
16,000.00	7,579.00	7,577.00	7,577.00	252.16	152.02	-90.00	2,260.09	-16,015.74	5,917.38	5,682.86	234.52	25.232			
16,100.00	7,579.00	7,577.00	7,577.00	254.77	152.02	-90.00	2,260.09	-16,015.74	5,817.85	5,582.75	235.10	24.747			
16,200.00	7,579.00	7,577.00	7,577.00	257.38	152.02	-90.00	2,260.09	-16,015.74	5,718.34	5,482.64	235.70	24.261			
16,300.00	7,579.00	7,577.00	7,577.00	260.00	152.02	-90.00	2,260.09	-16,015.74	5,618.85	5,382.53	236.32	23.776			
16,400.00	7,579.00	7,577.00	7,577.00	262.62	152.02	-90.00	2,260.09	-16,015.74	5,519.38	5,282.41	236.97	23.292			
16,500.00	7,579.00	7,577.00	7,577.00	265.24	152.02	-90.00	2,260.09	-16,015.74	5,419.92	5,182.29	237.64	22.808			
16,600.00	7,579.00	7,577.00	7,577.00	267.86	152.02	-90.00	2,260.09	-16,015.74	5,320.49	5,082.16	238.33	22.324			
16,700.00	7,579.00	7,577.00	7,577.00	270.48	152.02	-90.00	2,260.09	-16,015.74	5,221.08	4,982.03	239.05	21.841			
16,800.00	7,579.00	7,577.00	7,577.00	273.10	152.02	-90.00	2,260.09	-16,015.74	5,121.69	4,881.89	239.80	21.358			
16,900.00	7,579.00	7,577.00	7,577.00	275.73	152.02	-90.00	2,260.09	-16,015.74	5,022.32	4,781.74	240.58	20.876			
17,000.00	7,579.00	7,577.00	7,577.00	278.36	152.02	-90.00	2,260.09	-16,015.74	4,922.99	4,681.59	241.40	20.394			
17,100.00	7,579.00	7,577.00	7,577.00	280.99	152.02	-90.00	2,260.09	-16,015.74	4,823.67	4,581.43	242.24	19.912			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 16-T1S-R66W - ABND VERT GILBERT A. DIEDRICHS G U 1 - Wellbore #1 - Design #1	Offset Site Error:	0.00 usft
Survey Program: 0-INC														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
17,200.00	7,579.00	7,577.00	7,577.00	283.62	152.02	-90.00	2,260.09	-16,015.74	4,724.39	4,481.26	243.13	19.432			
17,300.00	7,579.00	7,577.00	7,577.00	286.25	152.02	-90.00	2,260.09	-16,015.74	4,625.14	4,381.09	244.05	18.952			
17,400.00	7,579.00	7,577.00	7,577.00	288.88	152.02	-90.00	2,260.09	-16,015.74	4,525.92	4,280.91	245.01	18.472			
17,500.00	7,579.00	7,577.00	7,577.00	291.52	152.02	-90.00	2,260.09	-16,015.74	4,426.74	4,180.72	246.02	17.993			
17,600.00	7,579.00	7,577.00	7,577.00	294.15	152.02	-90.00	2,260.09	-16,015.74	4,327.59	4,080.52	247.08	17.515			
17,700.00	7,579.00	7,577.00	7,577.00	296.79	152.02	-90.00	2,260.09	-16,015.74	4,228.49	3,980.31	248.18	17.038			
17,800.00	7,579.00	7,577.00	7,577.00	299.43	152.02	-90.00	2,260.09	-16,015.74	4,129.43	3,880.09	249.34	16.561			
17,900.00	7,579.00	7,577.00	7,577.00	302.07	152.02	-90.00	2,260.09	-16,015.74	4,030.41	3,779.85	250.56	16.086			
18,000.00	7,579.00	7,577.00	7,577.00	304.71	152.02	-90.00	2,260.09	-16,015.74	3,931.44	3,679.60	251.84	15.611			
18,100.00	7,579.00	7,577.00	7,577.00	307.35	152.02	-90.00	2,260.09	-16,015.74	3,832.53	3,579.34	253.19	15.137			
18,200.00	7,579.00	7,577.00	7,577.00	310.00	152.02	-90.00	2,260.09	-16,015.74	3,733.68	3,479.07	254.61	14.664			
18,300.00	7,579.00	7,577.00	7,577.00	312.64	152.02	-90.00	2,260.09	-16,015.74	3,634.88	3,378.77	256.11	14.193			
18,400.00	7,579.00	7,577.00	7,577.00	315.29	152.02	-90.00	2,260.09	-16,015.74	3,536.16	3,278.46	257.70	13.722			
18,500.00	7,579.00	7,577.00	7,577.00	317.93	152.02	-90.00	2,260.09	-16,015.74	3,437.51	3,178.13	259.37	13.253			
18,600.00	7,579.00	7,577.00	7,577.00	320.58	152.02	-90.00	2,260.09	-16,015.74	3,338.94	3,077.78	261.16	12.785			
18,700.00	7,579.00	7,577.00	7,577.00	323.23	152.02	-90.00	2,260.09	-16,015.74	3,240.46	2,977.41	263.05	12.319			
18,800.00	7,579.00	7,577.00	7,577.00	325.88	152.02	-90.00	2,260.09	-16,015.74	3,142.07	2,877.01	265.06	11.854			
18,900.00	7,579.00	7,577.00	7,577.00	328.53	152.02	-90.00	2,260.09	-16,015.74	3,043.79	2,776.59	267.20	11.391			
19,000.00	7,579.00	7,577.00	7,577.00	331.18	152.02	-90.00	2,260.09	-16,015.74	2,945.62	2,676.13	269.49	10.930			
19,100.00	7,579.00	7,577.00	7,577.00	333.83	152.02	-90.00	2,260.09	-16,015.74	2,847.58	2,575.64	271.94	10.471			
19,200.00	7,579.00	7,577.00	7,577.00	336.48	152.02	-90.00	2,260.09	-16,015.74	2,749.69	2,475.12	274.57	10.015			
19,300.00	7,579.00	7,577.00	7,577.00	339.14	152.02	-90.00	2,260.09	-16,015.74	2,651.95	2,374.56	277.39	9.560			
19,400.00	7,579.00	7,577.00	7,577.00	341.79	152.02	-90.00	2,260.09	-16,015.74	2,554.38	2,273.96	280.43	9.109			
19,500.00	7,579.00	7,577.00	7,577.00	344.45	152.02	-90.00	2,260.09	-16,015.74	2,457.01	2,173.31	283.71	8.660			
19,600.00	7,579.00	7,577.00	7,577.00	347.10	152.02	-90.00	2,260.09	-16,015.74	2,359.87	2,072.61	287.26	8.215			
19,700.00	7,579.00	7,577.00	7,577.00	349.76	152.02	-90.00	2,260.09	-16,015.74	2,262.96	1,971.86	291.11	7.774			
19,800.00	7,579.00	7,577.00	7,577.00	352.42	152.02	-90.00	2,260.09	-16,015.74	2,166.35	1,871.04	295.30	7.336			
19,900.00	7,579.00	7,577.00	7,577.00	355.07	152.02	-90.00	2,260.09	-16,015.74	2,070.05	1,770.16	299.88	6.903			
20,000.00	7,579.00	7,577.00	7,577.00	357.73	152.02	-90.00	2,260.09	-16,015.74	1,974.12	1,669.22	304.90	6.475			
20,100.00	7,579.00	7,577.00	7,577.00	360.39	152.02	-90.00	2,260.09	-16,015.74	1,878.61	1,568.20	310.42	6.052			
20,200.00	7,579.00	7,577.00	7,577.00	363.05	152.02	-90.00	2,260.09	-16,015.74	1,783.60	1,467.10	316.50	5.635			
20,300.00	7,579.00	7,577.00	7,577.00	365.71	152.02	-90.00	2,260.09	-16,015.74	1,689.17	1,365.93	323.23	5.226			
20,400.00	7,579.00	7,577.00	7,577.00	368.38	152.02	-90.00	2,260.09	-16,015.74	1,595.41	1,264.69	330.72	4.824			
20,500.00	7,579.00	7,577.00	7,577.00	371.04	152.02	-90.00	2,260.09	-16,015.74	1,502.45	1,163.38	339.07	4.431			
20,600.00	7,579.00	7,577.00	7,577.00	373.70	152.02	-90.00	2,260.09	-16,015.74	1,410.47	1,062.04	348.43	4.048			
20,700.00	7,579.00	7,577.00	7,577.00	376.36	152.02	-90.00	2,260.09	-16,015.74	1,319.64	960.70	358.95	3.676			
20,800.00	7,579.00	7,577.00	7,577.00	379.03	152.02	-90.00	2,260.09	-16,015.74	1,230.25	859.43	370.82	3.318			
20,900.00	7,579.00	7,577.00	7,577.00	381.69	152.02	-90.00	2,260.09	-16,015.74	1,142.61	758.37	384.24	2.974			
21,000.00	7,579.00	7,577.00	7,577.00	384.36	152.02	-90.00	2,260.09	-16,015.74	1,057.16	657.72	399.44	2.647			
21,100.00	7,579.00	7,577.00	7,577.00	387.02	152.02	-90.00	2,260.09	-16,015.74	974.49	557.86	416.63	2.339			
21,200.00	7,579.00	7,577.00	7,577.00	389.69	152.02	-90.00	2,260.09	-16,015.74	895.37	459.40	435.97	2.054			
21,300.00	7,579.00	7,577.00	7,577.00	392.36	152.02	-90.00	2,260.09	-16,015.74	820.81	363.38	457.43	1.794			
21,400.00	7,579.00	7,577.00	7,577.00	395.02	152.02	-90.00	2,260.09	-16,015.74	752.18	271.50	480.68	1.565			
21,500.00	7,579.00	7,577.00	7,577.00	397.69	152.02	-90.00	2,260.09	-16,015.74	691.25	186.49	504.76	1.369	Level 3		
21,600.00	7,579.00	7,577.00	7,577.00	400.36	152.02	-90.00	2,260.09	-16,015.74	640.21	112.48	527.73	1.213	Level 2		
21,700.00	7,579.00	7,577.00	7,577.00	403.03	152.02	-90.00	2,260.09	-16,015.74	601.59	55.07	546.52	1.101	Level 2		
21,800.00	7,579.00	7,577.00	7,577.00	405.70	152.02	-90.00	2,260.09	-16,015.74	577.89	20.55	557.34	1.037	Level 2		
21,889.77	7,579.00	7,577.00	7,577.00	408.09	152.02	-90.00	2,260.09	-16,015.74	570.87	13.28	557.60	1.024	Level 2, CC, ES, SF		
21,900.00	7,579.00	7,577.00	7,577.00	408.37	152.02	-90.00	2,260.09	-16,015.74	570.97	13.96	557.00	1.025	Level 2		
22,000.00	7,579.00	7,577.00	7,577.00	411.04	152.02	-90.00	2,260.09	-16,015.74	581.42	36.66	544.76	1.067	Level 2		
22,100.00	7,579.00	7,577.00	7,577.00	413.71	152.02	-90.00	2,260.09	-16,015.74	608.35	85.54	522.81	1.164	Level 2		
22,200.00	7,579.00	7,577.00	7,577.00	416.38	152.02	-90.00	2,260.09	-16,015.74	649.72	154.60	495.12	1.312	Level 3		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-INC Sec 16-T1S-R66W - ABND VERT GILBERT A. DIEDRICHS G U 1 - Wellbore #1 - Design #1												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
22,300.00	7,579.00	7,577.00	7,577.00	419.05	152.02	-90.00	2,260.09	-16,015.74	702.98	237.44	465.54	1.510	
22,400.00	7,579.00	7,577.00	7,577.00	421.72	152.02	-90.00	2,260.09	-16,015.74	765.65	328.90	436.75	1.753	
22,440.61	7,579.00	7,577.00	7,577.00	422.81	152.02	-90.00	2,260.09	-16,015.74	793.29	367.64	425.65	1.864	

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft		
Survey Program: 0-INC													Sec 22-T1S-R66W - ABND VERT FARMER 1 - Wellbore #1 - Design #1		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
11,400.00	7,579.00	7,580.00	7,580.00	136.27	152.08	-90.00	-2,921.42	-13,680.94	9,972.67	9,704.35	268.32	37.167				
11,500.00	7,579.00	7,580.00	7,580.00	138.62	152.08	-90.00	-2,921.42	-13,680.94	9,891.13	9,621.00	270.13	36.616				
11,600.00	7,579.00	7,580.00	7,580.00	140.99	152.08	-90.00	-2,921.42	-13,680.94	9,809.93	9,537.96	271.98	36.069				
11,700.00	7,579.00	7,580.00	7,580.00	143.37	152.08	-90.00	-2,921.42	-13,680.94	9,729.09	9,455.23	273.86	35.526				
11,800.00	7,579.00	7,580.00	7,580.00	145.76	152.08	-90.00	-2,921.42	-13,680.94	9,648.60	9,372.83	275.77	34.988				
11,900.00	7,579.00	7,580.00	7,580.00	148.16	152.08	-90.00	-2,921.42	-13,680.94	9,568.47	9,290.77	277.71	34.455				
12,000.00	7,579.00	7,580.00	7,580.00	150.58	152.08	-90.00	-2,921.42	-13,680.94	9,488.73	9,209.05	279.68	33.926				
12,100.00	7,579.00	7,580.00	7,580.00	153.00	152.08	-90.00	-2,921.42	-13,680.94	9,409.37	9,127.68	281.70	33.403				
12,200.00	7,579.00	7,580.00	7,580.00	155.43	152.08	-90.00	-2,921.42	-13,680.94	9,330.41	9,046.67	283.74	32.884				
12,300.00	7,579.00	7,580.00	7,580.00	157.87	152.08	-90.00	-2,921.42	-13,680.94	9,251.86	8,966.04	285.82	32.370				
12,400.00	7,579.00	7,580.00	7,580.00	160.32	152.08	-90.00	-2,921.42	-13,680.94	9,173.72	8,885.79	287.93	31.861				
12,500.00	7,579.00	7,580.00	7,580.00	162.78	152.08	-90.00	-2,921.42	-13,680.94	9,096.02	8,805.93	290.08	31.357				
12,600.00	7,579.00	7,580.00	7,580.00	165.25	152.08	-90.00	-2,921.42	-13,680.94	9,018.75	8,726.48	292.27	30.858				
12,700.00	7,579.00	7,580.00	7,580.00	167.73	152.08	-90.00	-2,921.42	-13,680.94	8,941.93	8,647.44	294.49	30.364				
12,800.00	7,579.00	7,580.00	7,580.00	170.21	152.08	-90.00	-2,921.42	-13,680.94	8,865.58	8,568.83	296.75	29.876				
12,900.00	7,579.00	7,580.00	7,580.00	172.70	152.08	-90.00	-2,921.42	-13,680.94	8,789.69	8,490.65	299.04	29.393				
13,000.00	7,579.00	7,580.00	7,580.00	175.19	152.08	-90.00	-2,921.42	-13,680.94	8,714.30	8,412.93	301.37	28.916				
13,100.00	7,579.00	7,580.00	7,580.00	177.70	152.08	-90.00	-2,921.42	-13,680.94	8,639.41	8,335.67	303.74	28.444				
13,200.00	7,579.00	7,580.00	7,580.00	180.20	152.08	-90.00	-2,921.42	-13,680.94	8,565.02	8,258.88	306.14	27.977				
13,300.00	7,579.00	7,580.00	7,580.00	182.72	152.08	-90.00	-2,921.42	-13,680.94	8,491.17	8,182.58	308.58	27.517				
13,400.00	7,579.00	7,580.00	7,580.00	185.24	152.08	-90.00	-2,921.42	-13,680.94	8,417.85	8,106.79	311.06	27.062				
13,500.00	7,579.00	7,580.00	7,580.00	187.76	152.08	-90.00	-2,921.42	-13,680.94	8,345.09	8,031.51	313.58	26.612				
13,600.00	7,579.00	7,580.00	7,580.00	190.30	152.08	-90.00	-2,921.42	-13,680.94	8,272.90	7,956.76	316.13	26.169				
13,700.00	7,579.00	7,580.00	7,580.00	192.83	152.08	-90.00	-2,921.42	-13,680.94	8,201.29	7,882.56	318.73	25.731				
13,800.00	7,579.00	7,580.00	7,580.00	195.37	152.08	-90.00	-2,921.42	-13,680.94	8,130.28	7,808.92	321.36	25.300				
13,900.00	7,579.00	7,580.00	7,580.00	197.92	152.08	-90.00	-2,921.42	-13,680.94	8,059.88	7,735.86	324.02	24.874				
14,000.00	7,579.00	7,580.00	7,580.00	200.47	152.08	-90.00	-2,921.42	-13,680.94	7,990.12	7,663.39	326.73	24.455				
14,100.00	7,579.00	7,580.00	7,580.00	203.02	152.08	-90.00	-2,921.42	-13,680.94	7,921.01	7,591.53	329.47	24.042				
14,200.00	7,579.00	7,580.00	7,580.00	205.58	152.08	-90.00	-2,921.42	-13,680.94	7,852.56	7,520.30	332.25	23.634				
14,300.00	7,579.00	7,580.00	7,580.00	208.14	152.08	-90.00	-2,921.42	-13,680.94	7,784.79	7,449.72	335.07	23.233				
14,400.00	7,579.00	7,580.00	7,580.00	210.70	152.08	-90.00	-2,921.42	-13,680.94	7,717.72	7,379.80	337.93	22.839				
14,500.00	7,579.00	7,580.00	7,580.00	213.27	152.08	-90.00	-2,921.42	-13,680.94	7,651.38	7,310.56	340.82	22.450				
14,600.00	7,579.00	7,580.00	7,580.00	215.84	152.08	-90.00	-2,921.42	-13,680.94	7,585.77	7,242.02	343.74	22.068				
14,700.00	7,579.00	7,580.00	7,580.00	218.42	152.08	-90.00	-2,921.42	-13,680.94	7,520.91	7,174.21	346.71	21.692				
14,800.00	7,579.00	7,580.00	7,580.00	221.00	152.08	-90.00	-2,921.42	-13,680.94	7,456.84	7,107.13	349.71	21.323				
14,900.00	7,579.00	7,580.00	7,580.00	223.58	152.08	-90.00	-2,921.42	-13,680.94	7,393.56	7,040.82	352.74	20.961				
15,000.00	7,579.00	7,580.00	7,580.00	226.17	152.08	-90.00	-2,921.42	-13,680.94	7,331.10	6,975.30	355.80	20.604				
15,100.00	7,579.00	7,580.00	7,580.00	228.75	152.08	-90.00	-2,921.42	-13,680.94	7,269.48	6,910.58	358.90	20.255				
15,200.00	7,579.00	7,580.00	7,580.00	231.34	152.08	-90.00	-2,921.42	-13,680.94	7,208.72	6,846.69	362.03	19.912				
15,300.00	7,579.00	7,580.00	7,580.00	233.94	152.08	-90.00	-2,921.42	-13,680.94	7,148.84	6,783.65	365.20	19.575				
15,400.00	7,579.00	7,580.00	7,580.00	236.53	152.08	-90.00	-2,921.42	-13,680.94	7,089.87	6,721.48	368.39	19.246				
15,500.00	7,579.00	7,580.00	7,580.00	239.13	152.08	-90.00	-2,921.42	-13,680.94	7,031.83	6,660.22	371.61	18.923				
15,600.00	7,579.00	7,580.00	7,580.00	241.73	152.08	-90.00	-2,921.42	-13,680.94	6,974.73	6,599.88	374.85	18.606				
15,700.00	7,579.00	7,580.00	7,580.00	244.34	152.08	-90.00	-2,921.42	-13,680.94	6,918.61	6,540.48	378.13	18.297				
15,800.00	7,579.00	7,580.00	7,580.00	246.94	152.08	-90.00	-2,921.42	-13,680.94	6,863.49	6,482.06	381.42	17.994				
15,900.00	7,579.00	7,580.00	7,580.00	249.55	152.08	-90.00	-2,921.42	-13,680.94	6,809.39	6,424.65	384.74	17.699				
16,000.00	7,579.00	7,580.00	7,580.00	252.16	152.08	-90.00	-2,921.42	-13,680.94	6,756.34	6,368.25	388.08	17.410				
16,100.00	7,579.00	7,580.00	7,580.00	254.77	152.08	-90.00	-2,921.42	-13,680.94	6,704.36	6,312.92	391.44	17.127				
16,200.00	7,579.00	7,580.00	7,580.00	257.38	152.08	-90.00	-2,921.42	-13,680.94	6,653.47	6,258.66	394.81	16.852				
16,300.00	7,579.00	7,580.00	7,580.00	260.00	152.08	-90.00	-2,921.42	-13,680.94	6,603.71	6,205.51	398.20	16.584				
16,400.00	7,579.00	7,580.00	7,580.00	262.62	152.08	-90.00	-2,921.42	-13,680.94	6,555.10	6,153.50	401.60	16.323				
16,500.00	7,579.00	7,580.00	7,580.00	265.24	152.08	-90.00	-2,921.42	-13,680.94	6,507.66	6,102.65	405.00	16.068				

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-INC													Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
16,600.00	7,579.00	7,580.00	7,580.00	267.86	152.08	-90.00	-2,921.42	-13,680.94	6,461.42	6,053.00	408.42	15.821			
16,700.00	7,579.00	7,580.00	7,580.00	270.48	152.08	-90.00	-2,921.42	-13,680.94	6,416.40	6,004.57	411.83	15.580			
16,800.00	7,579.00	7,580.00	7,580.00	273.10	152.08	-90.00	-2,921.42	-13,680.94	6,372.64	5,957.39	415.25	15.347			
16,900.00	7,579.00	7,580.00	7,580.00	275.73	152.08	-90.00	-2,921.42	-13,680.94	6,330.15	5,911.49	418.66	15.120			
17,000.00	7,579.00	7,580.00	7,580.00	278.36	152.08	-90.00	-2,921.42	-13,680.94	6,288.97	5,866.90	422.07	14.900			
17,100.00	7,579.00	7,580.00	7,580.00	280.99	152.08	-90.00	-2,921.42	-13,680.94	6,249.11	5,823.65	425.46	14.688			
17,200.00	7,579.00	7,580.00	7,580.00	283.62	152.08	-90.00	-2,921.42	-13,680.94	6,210.61	5,781.76	428.85	14.482			
17,300.00	7,579.00	7,580.00	7,580.00	286.25	152.08	-90.00	-2,921.42	-13,680.94	6,173.49	5,741.28	432.21	14.283			
17,400.00	7,579.00	7,580.00	7,580.00	288.88	152.08	-90.00	-2,921.42	-13,680.94	6,137.78	5,702.22	435.56	14.092			
17,500.00	7,579.00	7,580.00	7,580.00	291.52	152.08	-90.00	-2,921.42	-13,680.94	6,103.49	5,664.61	438.88	13.907			
17,600.00	7,579.00	7,580.00	7,580.00	294.15	152.08	-90.00	-2,921.42	-13,680.94	6,070.66	5,628.49	442.17	13.729			
17,700.00	7,579.00	7,580.00	7,580.00	296.79	152.08	-90.00	-2,921.42	-13,680.94	6,039.30	5,593.88	445.43	13.558			
17,800.00	7,579.00	7,580.00	7,580.00	299.43	152.08	-90.00	-2,921.42	-13,680.94	6,009.45	5,560.80	448.65	13.394			
17,900.00	7,579.00	7,580.00	7,580.00	302.07	152.08	-90.00	-2,921.42	-13,680.94	5,981.12	5,529.29	451.83	13.237			
18,000.00	7,579.00	7,580.00	7,580.00	304.71	152.08	-90.00	-2,921.42	-13,680.94	5,954.34	5,499.37	454.97	13.087			
18,100.00	7,579.00	7,580.00	7,580.00	307.35	152.08	-90.00	-2,921.42	-13,680.94	5,929.12	5,471.06	458.05	12.944			
18,200.00	7,579.00	7,580.00	7,580.00	310.00	152.08	-90.00	-2,921.42	-13,680.94	5,905.48	5,444.40	461.09	12.808			
18,300.00	7,579.00	7,580.00	7,580.00	312.64	152.08	-90.00	-2,921.42	-13,680.94	5,883.45	5,419.39	464.06	12.678			
18,400.00	7,579.00	7,580.00	7,580.00	315.29	152.08	-90.00	-2,921.42	-13,680.94	5,863.05	5,396.07	466.97	12.555			
18,500.00	7,579.00	7,580.00	7,580.00	317.93	152.08	-90.00	-2,921.42	-13,680.94	5,844.28	5,374.46	469.82	12.439			
18,600.00	7,579.00	7,580.00	7,580.00	320.58	152.08	-90.00	-2,921.42	-13,680.94	5,827.17	5,354.57	472.60	12.330			
18,700.00	7,579.00	7,580.00	7,580.00	323.23	152.08	-90.00	-2,921.42	-13,680.94	5,811.73	5,336.43	475.30	12.227			
18,800.00	7,579.00	7,580.00	7,580.00	325.88	152.08	-90.00	-2,921.42	-13,680.94	5,797.98	5,320.05	477.93	12.131			
18,900.00	7,579.00	7,580.00	7,580.00	328.53	152.08	-90.00	-2,921.42	-13,680.94	5,785.92	5,305.44	480.47	12.042			
19,000.00	7,579.00	7,580.00	7,580.00	331.18	152.08	-90.00	-2,921.42	-13,680.94	5,775.56	5,292.63	482.93	11.959			
19,100.00	7,579.00	7,580.00	7,580.00	333.83	152.08	-90.00	-2,921.42	-13,680.94	5,766.93	5,281.62	485.31	11.883			
19,200.00	7,579.00	7,580.00	7,580.00	336.48	152.08	-90.00	-2,921.42	-13,680.94	5,760.01	5,272.42	487.59	11.813			
19,300.00	7,579.00	7,580.00	7,580.00	339.14	152.08	-90.00	-2,921.42	-13,680.94	5,754.83	5,265.05	489.78	11.750			
19,400.00	7,579.00	7,580.00	7,580.00	341.79	152.08	-90.00	-2,921.42	-13,680.94	5,751.38	5,259.50	491.87	11.693			
19,500.00	7,579.00	7,580.00	7,580.00	344.45	152.08	-90.00	-2,921.42	-13,680.94	5,749.66	5,255.79	493.87	11.642			
19,548.49	7,579.00	7,580.00	7,580.00	345.73	152.08	-90.00	-2,921.42	-13,680.94	5,749.46	5,254.66	494.80	11.620	CC		
19,600.00	7,579.00	7,580.00	7,580.00	347.10	152.08	-90.00	-2,921.42	-13,680.94	5,749.69	5,253.92	495.77	11.598			
19,700.00	7,579.00	7,580.00	7,580.00	349.76	152.08	-90.00	-2,921.42	-13,680.94	5,751.46	5,253.89	497.56	11.559	ES		
19,800.00	7,579.00	7,580.00	7,580.00	352.42	152.08	-90.00	-2,921.42	-13,680.94	5,754.96	5,255.71	499.25	11.527			
19,900.00	7,579.00	7,580.00	7,580.00	355.07	152.08	-90.00	-2,921.42	-13,680.94	5,760.19	5,259.36	500.84	11.501			
20,000.00	7,579.00	7,580.00	7,580.00	357.73	152.08	-90.00	-2,921.42	-13,680.94	5,767.16	5,264.84	502.32	11.481			
20,100.00	7,579.00	7,580.00	7,580.00	360.39	152.08	-90.00	-2,921.42	-13,680.94	5,775.85	5,272.16	503.69	11.467			
20,200.00	7,579.00	7,580.00	7,580.00	363.05	152.08	-90.00	-2,921.42	-13,680.94	5,786.25	5,281.29	504.96	11.459			
20,300.00	7,579.00	7,580.00	7,580.00	365.71	152.08	-90.00	-2,921.42	-13,680.94	5,798.37	5,292.24	506.12	11.456	SF		
20,400.00	7,579.00	7,580.00	7,580.00	368.38	152.08	-90.00	-2,921.42	-13,680.94	5,812.17	5,304.99	507.18	11.460			
20,500.00	7,579.00	7,580.00	7,580.00	371.04	152.08	-90.00	-2,921.42	-13,680.94	5,827.66	5,319.53	508.13	11.469			
20,600.00	7,579.00	7,580.00	7,580.00	373.70	152.08	-90.00	-2,921.42	-13,680.94	5,844.82	5,335.84	508.98	11.483			
20,700.00	7,579.00	7,580.00	7,580.00	376.36	152.08	-90.00	-2,921.42	-13,680.94	5,863.64	5,353.92	509.72	11.504			
20,800.00	7,579.00	7,580.00	7,580.00	379.03	152.08	-90.00	-2,921.42	-13,680.94	5,884.09	5,373.73	510.36	11.529			
20,900.00	7,579.00	7,580.00	7,580.00	381.69	152.08	-90.00	-2,921.42	-13,680.94	5,906.17	5,395.27	510.90	11.560			
21,000.00	7,579.00	7,580.00	7,580.00	384.36	152.08	-90.00	-2,921.42	-13,680.94	5,929.85	5,418.51	511.34	11.597			
21,100.00	7,579.00	7,580.00	7,580.00	387.02	152.08	-90.00	-2,921.42	-13,680.94	5,955.12	5,443.43	511.69	11.638			
21,200.00	7,579.00	7,580.00	7,580.00	389.69	152.08	-90.00	-2,921.42	-13,680.94	5,981.95	5,470.02	511.94	11.685			
21,300.00	7,579.00	7,580.00	7,580.00	392.36	152.08	-90.00	-2,921.42	-13,680.94	6,010.33	5,498.24	512.09	11.737			
21,400.00	7,579.00	7,580.00	7,580.00	395.02	152.08	-90.00	-2,921.42	-13,680.94	6,040.23	5,528.07	512.16	11.794			
21,500.00	7,579.00	7,580.00	7,580.00	397.69	152.08	-90.00	-2,921.42	-13,680.94	6,071.63	5,559.49	512.14	11.855			
21,600.00	7,579.00	7,580.00	7,580.00	400.36	152.08	-90.00	-2,921.42	-13,680.94	6,104.50	5,592.47	512.03	11.922			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft	
Survey Program: 0-INC												Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
21,700.00	7,579.00	7,580.00	7,580.00	403.03	152.08	-90.00	-2,921.42	-13,680.94	6,138.83	5,626.99	511.85	11.994		
21,800.00	7,579.00	7,580.00	7,580.00	405.70	152.08	-90.00	-2,921.42	-13,680.94	6,174.59	5,663.01	511.58	12.070		
21,900.00	7,579.00	7,580.00	7,580.00	408.37	152.08	-90.00	-2,921.42	-13,680.94	6,211.75	5,700.52	511.24	12.150		
22,000.00	7,579.00	7,580.00	7,580.00	411.04	152.08	-90.00	-2,921.42	-13,680.94	6,250.29	5,739.47	510.82	12.236		
22,100.00	7,579.00	7,580.00	7,580.00	413.71	152.08	-90.00	-2,921.42	-13,680.94	6,290.19	5,779.85	510.34	12.326		
22,200.00	7,579.00	7,580.00	7,580.00	416.38	152.08	-90.00	-2,921.42	-13,680.94	6,331.41	5,821.63	509.78	12.420		
22,300.00	7,579.00	7,580.00	7,580.00	419.05	152.08	-90.00	-2,921.42	-13,680.94	6,373.94	5,864.77	509.17	12.518		
22,400.00	7,579.00	7,580.00	7,580.00	421.72	152.08	-90.00	-2,921.42	-13,680.94	6,417.74	5,909.25	508.49	12.621		
22,440.61	7,579.00	7,580.00	7,580.00	422.81	152.08	-90.00	-2,921.42	-13,680.94	6,435.88	5,927.69	508.20	12.664		

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft		
Survey Program: 0-INC													Sec 24-T1S-R66W - ABND VERT BARR 1 - Wellbore #1 - Design #1		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
0.00	0.00	4.00	4.00	0.00	0.05	-126.84	-5,557.84	-7,418.36	9,269.40							
100.00	100.00	104.00	104.00	0.13	1.29	-126.84	-5,557.84	-7,418.36	9,269.40	9,267.97	1.42	6,508.332				
200.00	199.98	203.98	203.98	0.49	3.57	-84.44	-5,557.84	-7,418.36	9,269.23	9,265.16	4.06	2,281.569				
300.00	299.84	303.84	303.84	0.86	5.64	-84.48	-5,557.84	-7,418.36	9,268.72	9,262.22	6.50	1,425.890				
400.00	399.45	403.45	403.45	1.23	7.68	-84.55	-5,557.84	-7,418.36	9,267.89	9,258.97	8.91	1,040.077				
500.00	498.70	502.70	502.70	1.63	9.69	-84.65	-5,557.84	-7,418.36	9,266.73	9,255.41	11.32	818.612				
600.00	597.47	601.47	601.47	2.05	11.69	-84.78	-5,557.84	-7,418.36	9,265.27	9,251.53	13.74	674.400				
700.00	695.62	700.38	699.62	2.50	13.69	-84.93	-5,557.84	-7,418.36	9,263.53	9,247.34	16.19	572.266				
800.00	793.06	802.94	797.06	2.99	15.76	-85.10	-5,557.84	-7,418.36	9,261.52	9,242.78	18.74	494.104				
900.00	889.64	906.36	893.64	3.52	17.84	-85.30	-5,557.84	-7,418.36	9,259.28	9,237.92	21.36	433.544				
1,000.00	985.27	989.27	989.27	4.10	19.51	-85.52	-5,557.84	-7,418.36	9,256.83	9,233.23	23.60	392.215				
1,100.00	1,079.82	1,083.82	1,083.82	4.72	21.42	-85.76	-5,557.84	-7,418.36	9,254.22	9,228.09	26.13	354.180				
1,200.00	1,173.17	1,177.17	1,177.17	5.40	23.29	-86.02	-5,557.84	-7,418.36	9,251.47	9,222.79	28.68	322.536				
1,300.00	1,265.21	1,269.21	1,269.21	6.13	25.15	-86.30	-5,557.84	-7,418.36	9,248.63	9,217.36	31.27	295.793				
1,400.00	1,355.84	1,359.84	1,359.84	6.92	26.97	-86.60	-5,557.84	-7,418.36	9,245.75	9,211.87	33.88	272.896				
1,500.00	1,444.94	1,448.94	1,448.94	7.77	28.77	-86.91	-5,557.84	-7,418.36	9,242.86	9,206.34	36.52	253.074				
1,600.00	1,532.44	1,536.44	1,536.44	8.68	30.53	-87.21	-5,557.84	-7,418.36	9,240.03	9,200.84	39.19	235.766				
1,700.00	1,619.43	1,623.43	1,623.43	9.62	32.28	-87.48	-5,557.84	-7,418.36	9,237.41	9,195.53	41.88	220.566				
1,800.00	1,706.42	1,710.42	1,710.42	10.56	34.03	-87.74	-5,557.84	-7,418.36	9,235.04	9,190.46	44.58	207.159				
1,900.00	1,793.42	1,802.58	1,797.42	11.52	35.88	-88.01	-5,557.84	-7,418.36	9,232.94	9,185.55	47.39	194.828				
2,000.00	1,880.41	1,884.41	1,884.41	12.48	37.53	-88.28	-5,557.84	-7,418.36	9,231.11	9,181.11	50.00	184.626				
2,100.00	1,967.40	1,971.40	1,971.40	13.45	39.28	-88.54	-5,557.84	-7,418.36	9,229.53	9,176.82	52.72	175.080				
2,200.00	2,054.39	2,058.39	2,058.39	14.42	41.03	-88.81	-5,557.84	-7,418.36	9,228.22	9,172.79	55.44	166.463				
2,300.00	2,141.39	2,145.39	2,145.39	15.39	42.78	-89.08	-5,557.84	-7,418.36	9,227.18	9,169.02	58.16	158.650				
2,400.00	2,228.38	2,232.38	2,232.38	16.36	44.53	-89.34	-5,557.84	-7,418.36	9,226.40	9,165.51	60.89	151.533				
2,500.00	2,315.37	2,319.37	2,319.37	17.34	46.28	-89.61	-5,557.84	-7,418.36	9,225.88	9,162.26	63.61	145.027				
2,600.00	2,402.37	2,406.37	2,406.37	18.32	48.03	-89.87	-5,557.84	-7,418.36	9,225.62	9,159.28	66.34	139.057				
2,647.01	2,443.26	2,447.26	2,447.26	18.78	48.85	-90.00	-5,557.84	-7,418.36	9,225.59	9,157.96	67.63	136.417				
2,700.00	2,489.36	2,506.64	2,493.36	19.30	50.05	-90.14	-5,557.84	-7,418.36	9,225.63	9,156.29	69.34	133.046				
2,800.00	2,576.35	2,580.35	2,580.35	20.28	51.53	-90.41	-5,557.84	-7,418.36	9,225.90	9,154.09	71.81	128.484				
2,900.00	2,663.34	2,667.34	2,667.34	21.26	53.28	-90.67	-5,557.84	-7,418.36	9,226.43	9,151.90	74.54	123.782				
3,000.00	2,750.34	2,754.34	2,754.34	22.24	55.03	-90.94	-5,557.84	-7,418.36	9,227.23	9,149.96	77.27	119.415				
3,100.00	2,837.33	2,841.33	2,841.33	23.23	56.78	-91.21	-5,557.84	-7,418.36	9,228.30	9,148.29	80.00	115.349				
3,200.00	2,924.32	2,928.32	2,928.32	24.21	58.53	-91.47	-5,557.84	-7,418.36	9,229.62	9,146.89	82.74	111.555				
3,300.00	3,011.31	3,015.31	3,015.31	25.20	60.28	-91.74	-5,557.84	-7,418.36	9,231.21	9,145.74	85.47	108.007				
3,400.00	3,098.31	3,102.31	3,102.31	26.18	62.03	-92.01	-5,557.84	-7,418.36	9,233.06	9,144.86	88.20	104.682				
3,500.00	3,185.30	3,189.30	3,189.30	27.17	63.78	-92.27	-5,557.84	-7,418.36	9,235.18	9,144.24	90.93	101.560				
3,600.00	3,272.29	3,276.29	3,276.29	28.16	65.53	-92.54	-5,557.84	-7,418.36	9,237.56	9,143.89	93.66	98.624				
3,700.00	3,359.29	3,363.29	3,363.29	29.14	67.28	-92.80	-5,557.84	-7,418.36	9,240.20	9,143.80	96.40	95.857				
3,800.00	3,446.28	3,450.28	3,450.28	30.13	69.02	-93.07	-5,557.84	-7,418.36	9,243.10	9,143.97	99.13	93.246				
3,900.00	3,533.27	3,537.27	3,537.27	31.12	70.77	-93.33	-5,557.84	-7,418.36	9,246.26	9,144.41	101.86	90.778				
4,000.00	3,620.26	3,624.26	3,624.26	32.10	72.52	-93.60	-5,557.84	-7,418.36	9,249.69	9,145.11	104.58	88.442				
4,100.00	3,707.26	3,711.26	3,711.26	33.09	74.27	-93.87	-5,557.84	-7,418.36	9,253.38	9,146.07	107.31	86.229				
4,200.00	3,794.25	3,801.75	3,798.25	34.08	76.09	-94.13	-5,557.84	-7,418.36	9,257.33	9,147.22	110.11	84.074				
4,300.00	3,881.24	3,885.24	3,885.24	35.07	77.77	-94.40	-5,557.84	-7,418.36	9,261.54	9,148.78	112.76	82.132				
4,400.00	3,968.23	3,972.23	3,972.23	36.06	79.52	-94.66	-5,557.84	-7,418.36	9,266.01	9,150.52	115.49	80.233				
4,500.00	4,055.23	4,059.23	4,059.23	37.05	81.27	-94.93	-5,557.84	-7,418.36	9,270.74	9,152.53	118.21	78.425				
4,600.00	4,142.22	4,146.22	4,146.22	38.04	83.02	-95.19	-5,557.84	-7,418.36	9,275.73	9,154.80	120.93	76.701				
4,700.00	4,229.21	4,233.21	4,233.21	39.03	84.77	-95.45	-5,557.84	-7,418.36	9,280.98	9,157.33	123.65	75.056				
4,800.00	4,316.21	4,320.21	4,320.21	40.02	86.52	-95.72	-5,557.84	-7,418.36	9,286.49	9,160.12	126.37	73.485				
4,900.00	4,403.20	4,407.20	4,407.20	41.01	88.27	-95.98	-5,557.84	-7,418.36	9,292.26	9,163.17	129.09	71.982				
5,000.00	4,490.19	4,505.81	4,494.19	42.00	90.25	-96.24	-5,557.84	-7,418.36	9,298.29	9,166.25	132.04	70.420				

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-INC													Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,100.00	4,577.18	4,581.18	4,581.18	42.99	91.77	-96.51	-5,557.84	-7,418.36	9,304.57	9,170.05	134.52	69.169			
5,200.00	4,664.18	4,668.18	4,668.18	43.98	93.52	-96.77	-5,557.84	-7,418.36	9,311.11	9,173.88	137.23	67.849			
5,300.00	4,751.17	4,755.17	4,755.17	44.97	95.27	-97.03	-5,557.84	-7,418.36	9,317.91	9,177.97	139.94	66.584			
5,400.00	4,838.16	4,842.16	4,842.16	45.96	97.02	-97.30	-5,557.84	-7,418.36	9,324.96	9,182.31	142.65	65.369			
5,500.00	4,925.15	4,929.15	4,929.15	46.95	98.77	-97.56	-5,557.84	-7,418.36	9,332.27	9,186.91	145.36	64.202			
5,600.00	5,012.15	5,016.15	5,016.15	47.94	100.52	-97.82	-5,557.84	-7,418.36	9,339.83	9,191.77	148.06	63.080			
5,700.00	5,099.14	5,103.14	5,103.14	48.93	102.27	-98.08	-5,557.84	-7,418.36	9,347.65	9,196.89	150.76	62.002			
5,800.00	5,186.13	5,209.87	5,190.13	49.92	104.41	-98.34	-5,557.84	-7,418.36	9,355.72	9,201.86	153.86	60.806			
5,900.00	5,273.13	5,277.13	5,277.13	50.91	105.76	-98.60	-5,557.84	-7,418.36	9,364.05	9,207.88	156.16	59.963			
6,000.00	5,360.12	5,364.12	5,364.12	51.90	107.51	-98.86	-5,557.84	-7,418.36	9,372.62	9,213.76	158.86	59.000			
6,100.00	5,447.11	5,451.11	5,451.11	52.89	109.26	-99.12	-5,557.84	-7,418.36	9,381.45	9,219.89	161.55	58.070			
6,200.00	5,534.10	5,538.10	5,538.10	53.88	111.01	-99.38	-5,557.84	-7,418.36	9,390.53	9,226.28	164.24	57.174			
6,300.00	5,621.10	5,625.10	5,625.10	54.87	112.76	-99.64	-5,557.84	-7,418.36	9,399.85	9,232.92	166.93	56.309			
6,400.00	5,708.09	5,712.09	5,712.09	55.86	114.51	-99.90	-5,557.84	-7,418.36	9,409.43	9,239.81	169.62	55.474			
6,500.00	5,795.08	5,800.92	5,799.08	56.85	116.30	-100.16	-5,557.84	-7,418.36	9,419.26	9,246.91	172.34	54.655			
6,600.00	5,882.07	5,886.07	5,886.07	57.84	118.01	-100.42	-5,557.84	-7,418.36	9,429.33	9,254.34	174.98	53.887			
6,700.00	5,969.07	5,973.07	5,973.07	58.83	119.76	-100.67	-5,557.84	-7,418.36	9,439.65	9,261.98	177.66	53.132			
6,800.00	6,056.06	6,060.06	6,060.06	59.83	121.51	-100.93	-5,557.84	-7,418.36	9,450.21	9,269.87	180.34	52.402			
6,900.00	6,143.05	6,147.05	6,147.05	60.82	123.26	-101.19	-5,557.84	-7,418.36	9,461.03	9,278.01	183.01	51.696			
7,000.00	6,230.05	6,234.05	6,234.05	61.81	125.01	-101.44	-5,557.84	-7,418.36	9,472.08	9,286.40	185.68	51.012			
7,100.00	6,317.04	6,321.04	6,321.04	62.80	126.76	-101.70	-5,557.84	-7,418.36	9,483.38	9,295.03	188.35	50.349			
7,200.00	6,404.03	6,408.03	6,408.03	63.79	128.51	-101.95	-5,557.84	-7,418.36	9,494.92	9,303.91	191.02	49.707			
7,300.00	6,491.02	6,504.98	6,495.02	64.78	130.46	-102.21	-5,557.84	-7,418.36	9,506.71	9,312.83	193.88	49.034			
7,400.00	6,578.02	6,582.02	6,582.02	65.77	132.01	-102.46	-5,557.84	-7,418.36	9,518.73	9,322.39	196.34	48.481			
7,500.00	6,665.01	6,669.01	6,669.01	66.76	133.76	-102.72	-5,557.84	-7,418.36	9,531.00	9,332.00	199.00	47.895			
7,600.00	6,752.00	6,756.00	6,756.00	67.76	135.51	-102.97	-5,557.84	-7,418.36	9,543.50	9,341.85	201.65	47.327			
7,700.00	6,838.99	6,842.99	6,842.99	68.75	137.25	-103.22	-5,557.84	-7,418.36	9,556.24	9,351.94	204.30	46.776			
7,800.00	6,925.99	6,929.99	6,929.99	69.74	139.00	-103.48	-5,557.84	-7,418.36	9,569.22	9,362.27	206.95	46.240			
7,900.00	7,012.98	7,016.98	7,016.98	70.73	140.75	-103.73	-5,557.84	-7,418.36	9,582.44	9,372.85	209.59	45.719			
8,000.00	7,099.97	7,103.97	7,103.97	71.72	142.50	-103.98	-5,557.84	-7,418.36	9,595.89	9,383.65	212.23	45.214			
8,100.00	7,186.97	7,209.03	7,190.97	72.71	144.62	-104.23	-5,557.84	-7,418.36	9,609.57	9,394.34	215.24	44.647			
8,200.00	7,273.09	7,277.09	7,277.09	73.74	145.98	-97.33	-5,557.84	-7,418.36	9,621.93	9,404.40	217.53	44.233			
8,300.00	7,352.95	7,356.95	7,356.95	74.97	147.59	-88.72	-5,557.84	-7,418.36	9,625.12	9,404.83	220.29	43.693			
8,400.00	7,423.63	7,427.63	7,427.63	76.39	149.01	-84.06	-5,557.84	-7,418.36	9,618.17	9,395.07	223.10	43.112			
8,500.00	7,482.96	7,486.96	7,486.96	77.96	150.20	-82.15	-5,557.84	-7,418.36	9,601.49	9,375.62	225.88	42.508			
8,600.00	7,529.15	7,533.15	7,533.15	79.64	151.13	-82.34	-5,557.84	-7,418.36	9,575.78	9,347.25	228.53	41.901			
8,700.00	7,560.79	7,564.79	7,564.79	81.35	151.77	-84.25	-5,557.84	-7,418.36	9,541.95	9,310.97	230.98	41.311			
8,800.00	7,576.92	7,580.92	7,580.92	83.05	152.09	-87.70	-5,557.84	-7,418.36	9,501.08	9,267.96	233.12	40.757			
8,900.00	7,579.00	7,583.00	7,583.00	84.68	152.14	-90.00	-5,557.84	-7,418.36	9,455.11	9,220.19	234.93	40.247			
9,000.00	7,579.00	7,583.00	7,583.00	86.34	152.14	-90.00	-5,557.84	-7,418.36	9,409.18	9,172.46	236.71	39.749			
9,100.00	7,579.00	7,583.00	7,583.00	88.04	152.14	-90.00	-5,557.84	-7,418.36	9,364.08	9,125.55	238.53	39.257			
9,200.00	7,579.00	7,583.00	7,583.00	89.80	152.14	-90.00	-5,557.84	-7,418.36	9,319.85	9,079.46	240.39	38.770			
9,300.00	7,579.00	7,583.00	7,583.00	91.59	152.14	-90.00	-5,557.84	-7,418.36	9,276.48	9,034.20	242.27	38.289			
9,400.00	7,579.00	7,583.00	7,583.00	93.42	152.14	-90.00	-5,557.84	-7,418.36	9,233.99	8,989.80	244.19	37.815			
9,500.00	7,579.00	7,583.00	7,583.00	95.30	152.14	-90.00	-5,557.84	-7,418.36	9,192.39	8,946.25	246.13	37.347			
9,600.00	7,579.00	7,583.00	7,583.00	97.21	152.14	-90.00	-5,557.84	-7,418.36	9,151.69	8,903.58	248.11	36.886			
9,700.00	7,579.00	7,583.00	7,583.00	99.15	152.14	-90.00	-5,557.84	-7,418.36	9,111.91	8,861.81	250.11	36.432			
9,800.00	7,579.00	7,583.00	7,583.00	101.13	152.14	-90.00	-5,557.84	-7,418.36	9,073.06	8,820.93	252.13	35.986			
9,900.00	7,579.00	7,583.00	7,583.00	103.15	152.14	-90.00	-5,557.84	-7,418.36	9,035.15	8,780.97	254.18	35.547			
10,000.00	7,579.00	7,583.00	7,583.00	105.19	152.14	-90.00	-5,557.84	-7,418.36	8,998.19	8,741.94	256.25	35.115			
10,100.00	7,579.00	7,583.00	7,583.00	107.26	152.14	-90.00	-5,557.84	-7,418.36	8,962.19	8,703.85	258.34	34.692			
10,200.00	7,579.00	7,583.00	7,583.00	109.36	152.14	-90.00	-5,557.84	-7,418.36	8,927.17	8,666.72	260.45	34.276			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-INC													Offset Well Error:		0.00 usft
Reference				Offset		Semi Major Axis			Distance				Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
10,300.00	7,579.00	7,583.00	7,583.00	111.49	152.14	-90.00	-5,557.84	-7,418.36	8,893.13	8,630.55	262.58	33.868			
10,400.00	7,579.00	7,583.00	7,583.00	113.64	152.14	-90.00	-5,557.84	-7,418.36	8,860.09	8,595.37	264.73	33.469			
10,500.00	7,579.00	7,583.00	7,583.00	115.82	152.14	-90.00	-5,557.84	-7,418.36	8,828.07	8,561.18	266.89	33.078			
10,600.00	7,579.00	7,583.00	7,583.00	118.01	152.14	-90.00	-5,557.84	-7,418.36	8,797.06	8,527.99	269.07	32.695			
10,700.00	7,579.00	7,583.00	7,583.00	120.23	152.14	-90.00	-5,557.84	-7,418.36	8,767.08	8,495.82	271.26	32.320			
10,800.00	7,579.00	7,583.00	7,583.00	122.47	152.14	-90.00	-5,557.84	-7,418.36	8,738.14	8,464.68	273.46	31.954			
10,900.00	7,579.00	7,583.00	7,583.00	124.73	152.14	-90.00	-5,557.84	-7,418.36	8,710.26	8,434.59	275.67	31.596			
11,000.00	7,579.00	7,583.00	7,583.00	127.01	152.14	-90.00	-5,557.84	-7,418.36	8,683.44	8,405.54	277.90	31.247			
11,100.00	7,579.00	7,583.00	7,583.00	129.30	152.14	-90.00	-5,557.84	-7,418.36	8,657.69	8,377.56	280.13	30.906			
11,200.00	7,579.00	7,583.00	7,583.00	131.61	152.14	-90.00	-5,557.84	-7,418.36	8,633.02	8,350.65	282.37	30.574			
11,300.00	7,579.00	7,583.00	7,583.00	133.93	152.14	-90.00	-5,557.84	-7,418.36	8,609.44	8,324.83	284.61	30.250			
11,400.00	7,579.00	7,583.00	7,583.00	136.27	152.14	-90.00	-5,557.84	-7,418.36	8,586.97	8,300.11	286.86	29.934			
11,500.00	7,579.00	7,583.00	7,583.00	138.62	152.14	-90.00	-5,557.84	-7,418.36	8,565.60	8,276.49	289.11	29.628			
11,600.00	7,579.00	7,583.00	7,583.00	140.99	152.14	-90.00	-5,557.84	-7,418.36	8,545.35	8,253.99	291.36	29.329			
11,700.00	7,579.00	7,583.00	7,583.00	143.37	152.14	-90.00	-5,557.84	-7,418.36	8,526.22	8,232.61	293.61	29.039			
11,800.00	7,579.00	7,583.00	7,583.00	145.76	152.14	-90.00	-5,557.84	-7,418.36	8,508.23	8,212.36	295.86	28.757			
11,900.00	7,579.00	7,583.00	7,583.00	148.16	152.14	-90.00	-5,557.84	-7,418.36	8,491.37	8,193.26	298.11	28.484			
12,000.00	7,579.00	7,583.00	7,583.00	150.58	152.14	-90.00	-5,557.84	-7,418.36	8,475.66	8,175.31	300.36	28.219			
12,100.00	7,579.00	7,583.00	7,583.00	153.00	152.14	-90.00	-5,557.84	-7,418.36	8,461.11	8,158.51	302.60	27.962			
12,200.00	7,579.00	7,583.00	7,583.00	155.43	152.14	-90.00	-5,557.84	-7,418.36	8,447.71	8,142.88	304.83	27.713			
12,300.00	7,579.00	7,583.00	7,583.00	157.87	152.14	-90.00	-5,557.84	-7,418.36	8,435.48	8,128.43	307.05	27.472			
12,400.00	7,579.00	7,583.00	7,583.00	160.32	152.14	-90.00	-5,557.84	-7,418.36	8,424.42	8,115.15	309.27	27.240			
12,500.00	7,579.00	7,583.00	7,583.00	162.78	152.14	-90.00	-5,557.84	-7,418.36	8,414.53	8,103.05	311.47	27.015			
12,600.00	7,579.00	7,583.00	7,583.00	165.25	152.14	-90.00	-5,557.84	-7,418.36	8,405.81	8,092.15	313.67	26.799			
12,700.00	7,579.00	7,583.00	7,583.00	167.73	152.14	-90.00	-5,557.84	-7,418.36	8,398.29	8,082.44	315.85	26.590			
12,800.00	7,579.00	7,583.00	7,583.00	170.21	152.14	-90.00	-5,557.84	-7,418.36	8,391.94	8,073.93	318.01	26.389			
12,900.00	7,579.00	7,583.00	7,583.00	172.70	152.14	-90.00	-5,557.84	-7,418.36	8,386.78	8,066.62	320.16	26.195			
13,000.00	7,579.00	7,583.00	7,583.00	175.19	152.14	-90.00	-5,557.84	-7,418.36	8,382.82	8,060.52	322.30	26.010			
13,100.00	7,579.00	7,583.00	7,583.00	177.70	152.14	-90.00	-5,557.84	-7,418.36	8,380.04	8,055.63	324.41	25.831			
13,200.00	7,579.00	7,583.00	7,583.00	180.20	152.14	-90.00	-5,557.84	-7,418.36	8,378.46	8,051.95	326.51	25.661			
13,282.62	7,579.00	7,583.00	7,583.00	182.28	152.14	-90.00	-5,557.84	-7,418.36	8,378.05	8,049.82	328.23	25.525	CC		
13,300.00	7,579.00	7,583.00	7,583.00	182.72	152.14	-90.00	-5,557.84	-7,418.36	8,378.07	8,049.48	328.59	25.497			
13,400.00	7,579.00	7,583.00	7,583.00	185.24	152.14	-90.00	-5,557.84	-7,418.36	8,378.87	8,048.23	330.65	25.341			
13,500.00	7,579.00	7,583.00	7,583.00	187.76	152.14	-90.00	-5,557.84	-7,418.36	8,380.87	8,048.19	332.68	25.192	ES		
13,600.00	7,579.00	7,583.00	7,583.00	190.30	152.14	-90.00	-5,557.84	-7,418.36	8,384.06	8,049.37	334.69	25.050			
13,700.00	7,579.00	7,583.00	7,583.00	192.83	152.14	-90.00	-5,557.84	-7,418.36	8,388.44	8,051.76	336.68	24.915			
13,800.00	7,579.00	7,583.00	7,583.00	195.37	152.14	-90.00	-5,557.84	-7,418.36	8,394.01	8,055.37	338.65	24.787			
13,900.00	7,579.00	7,583.00	7,583.00	197.92	152.14	-90.00	-5,557.84	-7,418.36	8,400.77	8,060.18	340.58	24.666			
14,000.00	7,579.00	7,583.00	7,583.00	200.47	152.14	-90.00	-5,557.84	-7,418.36	8,408.71	8,066.21	342.50	24.551			
14,100.00	7,579.00	7,583.00	7,583.00	203.02	152.14	-90.00	-5,557.84	-7,418.36	8,417.83	8,073.45	344.38	24.443			
14,200.00	7,579.00	7,583.00	7,583.00	205.58	152.14	-90.00	-5,557.84	-7,418.36	8,428.13	8,081.89	346.24	24.342			
14,300.00	7,579.00	7,583.00	7,583.00	208.14	152.14	-90.00	-5,557.84	-7,418.36	8,439.60	8,091.53	348.07	24.247			
14,400.00	7,579.00	7,583.00	7,583.00	210.70	152.14	-90.00	-5,557.84	-7,418.36	8,452.24	8,102.37	349.87	24.159			
14,500.00	7,579.00	7,583.00	7,583.00	213.27	152.14	-90.00	-5,557.84	-7,418.36	8,466.04	8,114.40	351.64	24.076			
14,600.00	7,579.00	7,583.00	7,583.00	215.84	152.14	-90.00	-5,557.84	-7,418.36	8,480.99	8,127.62	353.37	24.000			
14,700.00	7,579.00	7,583.00	7,583.00	218.42	152.14	-90.00	-5,557.84	-7,418.36	8,497.10	8,142.02	355.08	23.930			
14,800.00	7,579.00	7,583.00	7,583.00	221.00	152.14	-90.00	-5,557.84	-7,418.36	8,514.35	8,157.59	356.76	23.866			
14,900.00	7,579.00	7,583.00	7,583.00	223.58	152.14	-90.00	-5,557.84	-7,418.36	8,532.74	8,174.33	358.41	23.807			
15,000.00	7,579.00	7,583.00	7,583.00	226.17	152.14	-90.00	-5,557.84	-7,418.36	8,552.26	8,192.24	360.02	23.755			
15,100.00	7,579.00	7,583.00	7,583.00	228.75	152.14	-90.00	-5,557.84	-7,418.36	8,572.90	8,211.30	361.60	23.708			
15,200.00	7,579.00	7,583.00	7,583.00	231.34	152.14	-90.00	-5,557.84	-7,418.36	8,594.65	8,231.50	363.15	23.667			
15,300.00	7,579.00	7,583.00	7,583.00	233.94	152.14	-90.00	-5,557.84	-7,418.36	8,617.51	8,252.84	364.67	23.631			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft		
Survey Program: 0-INC													Sec 24-T1S-R66W - ABND VERT BARR 1 - Wellbore #1 - Design #1		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
15,400.00	7,579.00	7,583.00	7,583.00	236.53	152.14	-90.00	-5,557.84	-7,418.36	8,641.47	8,275.32	366.16	23.601				
15,500.00	7,579.00	7,583.00	7,583.00	239.13	152.14	-90.00	-5,557.84	-7,418.36	8,666.52	8,298.91	367.61	23.576				
15,600.00	7,579.00	7,583.00	7,583.00	241.73	152.14	-90.00	-5,557.84	-7,418.36	8,692.64	8,323.62	369.02	23.556				
15,700.00	7,579.00	7,583.00	7,583.00	244.34	152.14	-90.00	-5,557.84	-7,418.36	8,719.83	8,349.42	370.41	23.541				
15,800.00	7,579.00	7,583.00	7,583.00	246.94	152.14	-90.00	-5,557.84	-7,418.36	8,748.08	8,376.32	371.76	23.531				
15,900.00	7,579.00	7,583.00	7,583.00	249.55	152.14	-90.00	-5,557.84	-7,418.36	8,777.38	8,404.30	373.08	23.527 SF				
16,000.00	7,579.00	7,583.00	7,583.00	252.16	152.14	-90.00	-5,557.84	-7,418.36	8,807.72	8,433.35	374.37	23.527				
16,100.00	7,579.00	7,583.00	7,583.00	254.77	152.14	-90.00	-5,557.84	-7,418.36	8,839.08	8,463.46	375.62	23.532				
16,200.00	7,579.00	7,583.00	7,583.00	257.38	152.14	-90.00	-5,557.84	-7,418.36	8,871.46	8,494.62	376.84	23.542				
16,300.00	7,579.00	7,583.00	7,583.00	260.00	152.14	-90.00	-5,557.84	-7,418.36	8,904.85	8,526.82	378.03	23.556				
16,400.00	7,579.00	7,583.00	7,583.00	262.62	152.14	-90.00	-5,557.84	-7,418.36	8,939.23	8,560.04	379.19	23.575				
16,500.00	7,579.00	7,583.00	7,583.00	265.24	152.14	-90.00	-5,557.84	-7,418.36	8,974.59	8,594.28	380.31	23.598				
16,600.00	7,579.00	7,583.00	7,583.00	267.86	152.14	-90.00	-5,557.84	-7,418.36	9,010.92	8,629.52	381.40	23.626				
16,700.00	7,579.00	7,583.00	7,583.00	270.48	152.14	-90.00	-5,557.84	-7,418.36	9,048.22	8,665.75	382.46	23.658				
16,800.00	7,579.00	7,583.00	7,583.00	273.10	152.14	-90.00	-5,557.84	-7,418.36	9,086.46	8,702.96	383.49	23.694				
16,900.00	7,579.00	7,583.00	7,583.00	275.73	152.14	-90.00	-5,557.84	-7,418.36	9,125.63	8,741.14	384.49	23.734				
17,000.00	7,579.00	7,583.00	7,583.00	278.36	152.14	-90.00	-5,557.84	-7,418.36	9,165.73	8,780.27	385.46	23.779				
17,100.00	7,579.00	7,583.00	7,583.00	280.99	152.14	-90.00	-5,557.84	-7,418.36	9,206.74	8,820.35	386.40	23.827				
17,200.00	7,579.00	7,583.00	7,583.00	283.62	152.14	-90.00	-5,557.84	-7,418.36	9,248.65	8,861.35	387.31	23.879				
17,300.00	7,579.00	7,583.00	7,583.00	286.25	152.14	-90.00	-5,557.84	-7,418.36	9,291.45	8,903.27	388.18	23.936				
17,400.00	7,579.00	7,583.00	7,583.00	288.88	152.14	-90.00	-5,557.84	-7,418.36	9,335.12	8,946.09	389.03	23.996				
17,500.00	7,579.00	7,583.00	7,583.00	291.52	152.14	-90.00	-5,557.84	-7,418.36	9,379.66	8,989.80	389.86	24.059				
17,600.00	7,579.00	7,583.00	7,583.00	294.15	152.14	-90.00	-5,557.84	-7,418.36	9,425.05	9,034.40	390.65	24.127				
17,700.00	7,579.00	7,583.00	7,583.00	296.79	152.14	-90.00	-5,557.84	-7,418.36	9,471.27	9,079.85	391.42	24.197				
17,800.00	7,579.00	7,583.00	7,583.00	299.43	152.14	-90.00	-5,557.84	-7,418.36	9,518.32	9,126.16	392.16	24.272				
17,900.00	7,579.00	7,583.00	7,583.00	302.07	152.14	-90.00	-5,557.84	-7,418.36	9,566.19	9,173.32	392.87	24.349				
18,000.00	7,579.00	7,583.00	7,583.00	304.71	152.14	-90.00	-5,557.84	-7,418.36	9,614.85	9,221.30	393.56	24.431				
18,100.00	7,579.00	7,583.00	7,583.00	307.35	152.14	-90.00	-5,557.84	-7,418.36	9,664.31	9,270.09	394.22	24.515				
18,200.00	7,579.00	7,583.00	7,583.00	310.00	152.14	-90.00	-5,557.84	-7,418.36	9,714.54	9,319.69	394.86	24.603				
18,300.00	7,579.00	7,583.00	7,583.00	312.64	152.14	-90.00	-5,557.84	-7,418.36	9,765.54	9,370.07	395.47	24.694				
18,400.00	7,579.00	7,583.00	7,583.00	315.29	152.14	-90.00	-5,557.84	-7,418.36	9,817.30	9,421.24	396.06	24.788				
18,500.00	7,579.00	7,583.00	7,583.00	317.93	152.14	-90.00	-5,557.84	-7,418.36	9,869.79	9,473.17	396.62	24.885				
18,600.00	7,579.00	7,583.00	7,583.00	320.58	152.14	-90.00	-5,557.84	-7,418.36	9,923.02	9,525.85	397.17	24.985				
18,700.00	7,579.00	7,583.00	7,583.00	323.23	152.14	-90.00	-5,557.84	-7,418.36	9,976.96	9,579.27	397.69	25.088				

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-INC													Offset Well Error:	0.00 usft
Reference				Offset			Semi Major Axis			Distance			Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-111.79	-2,090.42	-5,228.69	5,631.15					
100.00	100.00	72.00	72.00	0.13	0.86	-111.79	-2,090.42	-5,228.69	5,631.08	5,630.08	1.00	5,647.188		
200.00	199.98	171.98	171.98	0.49	2.85	-69.41	-2,090.42	-5,228.69	5,630.46	5,627.12	3.34	1,686.522		
300.00	299.84	271.84	271.84	0.86	4.98	-69.49	-2,090.42	-5,228.69	5,628.62	5,622.79	5.84	964.336		
400.00	399.45	371.45	371.45	1.23	7.03	-69.63	-2,090.42	-5,228.69	5,625.57	5,617.31	8.26	681.367		
500.00	498.70	470.70	470.70	1.63	9.04	-69.83	-2,090.42	-5,228.69	5,621.32	5,610.65	10.67	527.041		
600.00	597.47	569.47	569.47	2.05	11.04	-70.08	-2,090.42	-5,228.69	5,615.90	5,602.82	13.08	429.354		
700.00	695.62	667.62	667.62	2.50	13.03	-70.38	-2,090.42	-5,228.69	5,609.33	5,593.83	15.51	361.765		
800.00	793.06	765.06	765.06	2.99	14.99	-70.74	-2,090.42	-5,228.69	5,601.67	5,583.72	17.95	312.122		
900.00	889.64	861.64	861.64	3.52	16.94	-71.15	-2,090.42	-5,228.69	5,592.96	5,572.55	20.41	274.058		
1,000.00	985.27	957.27	957.27	4.10	18.87	-71.60	-2,090.42	-5,228.69	5,583.24	5,560.35	22.89	243.909		
1,100.00	1,079.82	1,051.82	1,051.82	4.72	20.77	-72.11	-2,090.42	-5,228.69	5,572.57	5,547.18	25.40	219.415		
1,200.00	1,173.17	1,145.17	1,145.17	5.40	22.65	-72.66	-2,090.42	-5,228.69	5,561.04	5,533.11	27.93	199.107		
1,300.00	1,265.21	1,237.21	1,237.21	6.13	24.50	-73.26	-2,090.42	-5,228.69	5,548.69	5,518.20	30.49	181.988		
1,400.00	1,355.84	1,327.84	1,327.84	6.92	26.33	-73.89	-2,090.42	-5,228.69	5,535.62	5,502.54	33.08	167.357		
1,500.00	1,444.94	1,416.94	1,416.94	7.77	28.12	-74.57	-2,090.42	-5,228.69	5,521.90	5,486.21	35.69	154.706		
1,600.00	1,532.44	1,504.44	1,504.44	8.68	29.88	-75.21	-2,090.42	-5,228.69	5,507.65	5,469.31	38.34	143.665		
1,700.00	1,619.43	1,608.57	1,591.43	9.62	31.98	-75.65	-2,090.42	-5,228.69	5,493.53	5,452.18	41.35	132.865		
1,800.00	1,706.42	1,678.42	1,678.42	10.56	33.38	-76.09	-2,090.42	-5,228.69	5,479.82	5,436.14	43.68	125.453		
1,900.00	1,793.42	1,765.42	1,765.42	11.52	35.13	-76.53	-2,090.42	-5,228.69	5,466.52	5,420.15	46.37	117.889		
2,000.00	1,880.41	1,852.41	1,852.41	12.48	36.88	-76.97	-2,090.42	-5,228.69	5,453.63	5,404.56	49.07	111.142		
2,100.00	1,967.40	1,939.40	1,939.40	13.45	38.63	-77.41	-2,090.42	-5,228.69	5,441.16	5,389.38	51.78	105.091		
2,200.00	2,054.39	2,026.39	2,026.39	14.42	40.38	-77.86	-2,090.42	-5,228.69	5,429.10	5,374.61	54.49	99.636		
2,300.00	2,141.39	2,113.39	2,113.39	15.39	42.13	-78.30	-2,090.42	-5,228.69	5,417.47	5,360.26	57.21	94.697		
2,400.00	2,228.38	2,200.38	2,200.38	16.36	43.88	-78.75	-2,090.42	-5,228.69	5,406.27	5,346.33	59.93	90.205		
2,500.00	2,315.37	2,287.37	2,287.37	17.34	45.63	-79.20	-2,090.42	-5,228.69	5,395.49	5,332.83	62.66	86.104		
2,600.00	2,402.37	2,374.37	2,374.37	18.32	47.38	-79.65	-2,090.42	-5,228.69	5,385.14	5,319.75	65.40	82.347		
2,700.00	2,489.36	2,461.36	2,461.36	19.30	49.13	-80.10	-2,090.42	-5,228.69	5,375.23	5,307.09	68.13	78.894		
2,800.00	2,576.35	2,548.35	2,548.35	20.28	50.88	-80.56	-2,090.42	-5,228.69	5,365.75	5,294.87	70.87	75.710		
2,900.00	2,663.34	2,635.34	2,635.34	21.26	52.63	-81.01	-2,090.42	-5,228.69	5,356.70	5,283.09	73.62	72.766		
3,000.00	2,750.34	2,722.34	2,722.34	22.24	54.38	-81.47	-2,090.42	-5,228.69	5,348.10	5,271.74	76.36	70.038		
3,100.00	2,837.33	2,809.33	2,809.33	23.23	56.13	-81.92	-2,090.42	-5,228.69	5,339.94	5,260.83	79.11	67.502		
3,200.00	2,924.32	2,903.68	2,896.32	24.21	58.03	-82.38	-2,090.42	-5,228.69	5,332.22	5,250.22	82.01	65.023		
3,300.00	3,011.31	2,983.31	2,983.31	25.20	59.63	-82.84	-2,090.42	-5,228.69	5,324.95	5,240.34	84.61	62.936		
3,400.00	3,098.31	3,070.31	3,070.31	26.18	61.38	-83.30	-2,090.42	-5,228.69	5,318.12	5,230.76	87.36	60.875		
3,500.00	3,185.30	3,157.30	3,157.30	27.17	63.13	-83.76	-2,090.42	-5,228.69	5,311.75	5,221.63	90.11	58.945		
3,600.00	3,272.29	3,244.29	3,244.29	28.16	64.88	-84.22	-2,090.42	-5,228.69	5,305.82	5,212.95	92.87	57.133		
3,700.00	3,359.29	3,331.29	3,331.29	29.14	66.63	-84.68	-2,090.42	-5,228.69	5,300.35	5,204.73	95.62	55.430		
3,800.00	3,446.28	3,418.28	3,418.28	30.13	68.38	-85.15	-2,090.42	-5,228.69	5,295.33	5,196.95	98.38	53.826		
3,900.00	3,533.27	3,505.27	3,505.27	31.12	70.13	-85.61	-2,090.42	-5,228.69	5,290.77	5,189.63	101.13	52.315		
4,000.00	3,620.26	3,607.74	3,592.26	32.10	72.19	-86.07	-2,090.42	-5,228.69	5,286.66	5,182.46	104.20	50.736		
4,100.00	3,707.26	3,679.26	3,679.26	33.09	73.63	-86.54	-2,090.42	-5,228.69	5,283.01	5,176.37	106.64	49.540		
4,200.00	3,794.25	3,766.25	3,766.25	34.08	75.38	-87.00	-2,090.42	-5,228.69	5,279.82	5,170.42	109.40	48.263		
4,300.00	3,881.24	3,853.24	3,853.24	35.07	77.13	-87.47	-2,090.42	-5,228.69	5,277.08	5,164.93	112.15	47.054		
4,400.00	3,968.23	3,940.23	3,940.23	36.06	78.88	-87.93	-2,090.42	-5,228.69	5,274.81	5,159.91	114.90	45.908		
4,500.00	4,055.23	4,027.23	4,027.23	37.05	80.63	-88.40	-2,090.42	-5,228.69	5,272.99	5,155.34	117.65	44.819		
4,600.00	4,142.22	4,114.22	4,114.22	38.04	82.38	-88.87	-2,090.42	-5,228.69	5,271.64	5,151.24	120.40	43.785		
4,700.00	4,229.21	4,201.21	4,201.21	39.03	84.13	-89.33	-2,090.42	-5,228.69	5,270.75	5,147.61	123.14	42.801		
4,800.00	4,316.21	4,288.21	4,288.21	40.02	85.88	-89.80	-2,090.42	-5,228.69	5,270.32	5,144.43	125.89	41.865		
4,843.23	4,353.81	4,325.81	4,325.81	40.44	86.63	-90.00	-2,090.42	-5,228.69	5,270.28	5,143.20	127.08	41.474		
4,900.00	4,403.20	4,375.20	4,375.20	41.01	87.63	-90.26	-2,090.42	-5,228.69	5,270.35	5,141.72	128.63	40.972		
5,000.00	4,490.19	4,462.19	4,462.19	42.00	89.38	-90.73	-2,090.42	-5,228.69	5,270.84	5,139.47	131.37	40.122		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-INC													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	4,577.18	4,549.18	4,549.18	42.99	91.13	-91.20	-2,090.42	-5,228.69	5,271.80	5,137.69	134.11	39.310		
5,200.00	4,664.18	4,636.18	4,636.18	43.98	92.87	-91.66	-2,090.42	-5,228.69	5,273.21	5,136.37	136.84	38.535		
5,300.00	4,751.17	4,723.17	4,723.17	44.97	94.62	-92.13	-2,090.42	-5,228.69	5,275.09	5,135.52	139.57	37.795		
5,400.00	4,838.16	4,810.16	4,810.16	45.96	96.37	-92.60	-2,090.42	-5,228.69	5,277.43	5,135.13	142.30	37.087		
5,500.00	4,925.15	4,902.85	4,897.15	46.95	98.24	-93.06	-2,090.42	-5,228.69	5,280.22	5,135.08	145.14	36.381		
5,600.00	5,012.15	4,984.15	4,984.15	47.94	99.87	-93.53	-2,090.42	-5,228.69	5,283.48	5,135.73	147.74	35.761		
5,700.00	5,099.14	5,071.14	5,071.14	48.93	101.62	-93.99	-2,090.42	-5,228.69	5,287.19	5,136.73	150.46	35.140		
5,800.00	5,186.13	5,158.13	5,158.13	49.92	103.37	-94.45	-2,090.42	-5,228.69	5,291.36	5,138.19	153.17	34.546		
5,900.00	5,273.13	5,245.13	5,245.13	50.91	105.12	-94.92	-2,090.42	-5,228.69	5,295.98	5,140.11	155.88	33.975		
6,000.00	5,360.12	5,332.12	5,332.12	51.90	106.87	-95.38	-2,090.42	-5,228.69	5,301.06	5,142.48	158.58	33.428		
6,100.00	5,447.11	5,419.11	5,419.11	52.89	108.62	-95.84	-2,090.42	-5,228.69	5,306.60	5,145.32	161.28	32.903		
6,200.00	5,534.10	5,506.10	5,506.10	53.88	110.37	-96.30	-2,090.42	-5,228.69	5,312.58	5,148.61	163.97	32.399		
6,300.00	5,621.10	5,606.90	5,593.10	54.87	112.40	-96.76	-2,090.42	-5,228.69	5,319.02	5,152.08	166.94	31.862		
6,400.00	5,708.09	5,680.09	5,680.09	55.86	113.87	-97.22	-2,090.42	-5,228.69	5,325.91	5,156.56	169.34	31.450		
6,500.00	5,795.08	5,767.08	5,767.08	56.85	115.62	-97.68	-2,090.42	-5,228.69	5,333.24	5,161.22	172.02	31.003		
6,600.00	5,882.07	5,854.07	5,854.07	57.84	117.37	-98.14	-2,090.42	-5,228.69	5,341.02	5,166.33	174.69	30.574		
6,700.00	5,969.07	5,941.07	5,941.07	58.83	119.12	-98.60	-2,090.42	-5,228.69	5,349.24	5,171.88	177.36	30.160		
6,800.00	6,056.06	6,028.06	6,028.06	59.83	120.87	-99.05	-2,090.42	-5,228.69	5,357.90	5,177.88	180.02	29.763		
6,900.00	6,143.05	6,115.05	6,115.05	60.82	122.62	-99.51	-2,090.42	-5,228.69	5,367.00	5,184.33	182.68	29.380		
7,000.00	6,230.05	6,202.05	6,202.05	61.81	124.37	-99.96	-2,090.42	-5,228.69	5,376.54	5,191.22	185.32	29.012		
7,100.00	6,317.04	6,289.04	6,289.04	62.80	126.11	-100.41	-2,090.42	-5,228.69	5,386.52	5,198.55	187.97	28.657		
7,200.00	6,404.03	6,376.03	6,376.03	63.79	127.86	-100.86	-2,090.42	-5,228.69	5,396.92	5,206.32	190.60	28.315		
7,300.00	6,491.02	6,463.02	6,463.02	64.78	129.61	-101.31	-2,090.42	-5,228.69	5,407.76	5,214.53	193.23	27.986		
7,400.00	6,578.02	6,550.02	6,550.02	65.77	131.36	-101.76	-2,090.42	-5,228.69	5,419.02	5,223.16	195.86	27.668		
7,500.00	6,665.01	6,637.01	6,637.01	66.76	133.11	-102.20	-2,090.42	-5,228.69	5,430.71	5,232.23	198.48	27.362		
7,600.00	6,752.00	6,724.00	6,724.00	67.76	134.86	-102.65	-2,090.42	-5,228.69	5,442.82	5,241.73	201.09	27.067		
7,700.00	6,838.99	6,810.99	6,810.99	68.75	136.61	-103.09	-2,090.42	-5,228.69	5,455.35	5,251.66	203.69	26.782		
7,800.00	6,925.99	6,902.01	6,897.99	69.74	138.44	-103.53	-2,090.42	-5,228.69	5,468.29	5,261.92	206.37	26.498		
7,900.00	7,012.98	6,984.98	6,984.98	70.73	140.11	-103.97	-2,090.42	-5,228.69	5,481.65	5,272.77	208.88	26.243		
8,000.00	7,099.97	7,071.97	7,071.97	71.72	141.86	-104.41	-2,090.42	-5,228.69	5,495.42	5,283.95	211.46	25.988		
8,100.00	7,186.97	7,158.97	7,158.97	72.71	143.61	-104.85	-2,090.42	-5,228.69	5,509.59	5,295.55	214.04	25.741		
8,200.00	7,273.09	7,245.09	7,245.09	73.74	145.34	-98.10	-2,090.42	-5,228.69	5,522.64	5,306.01	216.63	25.493		
8,300.00	7,352.95	7,324.95	7,324.95	74.97	146.95	-99.61	-2,090.42	-5,228.69	5,526.92	5,307.61	219.31	25.202		
8,400.00	7,423.63	7,404.37	7,395.63	76.39	148.54	-85.05	-2,090.42	-5,228.69	5,521.60	5,299.41	222.19	24.851		
8,500.00	7,482.96	7,454.96	7,454.96	77.96	149.56	-83.17	-2,090.42	-5,228.69	5,507.22	5,282.55	224.67	24.512		
8,600.00	7,529.15	7,501.15	7,501.15	79.64	150.49	-83.28	-2,090.42	-5,228.69	5,484.54	5,257.33	227.20	24.140		
8,700.00	7,560.79	7,532.79	7,532.79	81.35	151.13	-84.97	-2,090.42	-5,228.69	5,454.48	5,224.98	229.51	23.766		
8,800.00	7,576.92	7,548.92	7,548.92	83.05	151.45	-88.00	-2,090.42	-5,228.69	5,418.13	5,186.62	231.51	23.403		
8,900.00	7,579.00	7,551.00	7,551.00	84.68	151.49	-90.00	-2,090.42	-5,228.69	5,377.31	5,144.13	233.19	23.060		
9,000.00	7,579.00	7,551.00	7,551.00	86.34	151.49	-90.00	-2,090.42	-5,228.69	5,337.23	5,102.39	234.84	22.727		
9,100.00	7,579.00	7,551.00	7,551.00	88.04	151.49	-90.00	-2,090.42	-5,228.69	5,298.73	5,062.22	236.51	22.403		
9,200.00	7,579.00	7,551.00	7,551.00	89.80	151.49	-90.00	-2,090.42	-5,228.69	5,261.86	5,023.64	238.22	22.089		
9,300.00	7,579.00	7,551.00	7,551.00	91.59	151.49	-90.00	-2,090.42	-5,228.69	5,226.63	4,986.69	239.94	21.783		
9,400.00	7,579.00	7,551.00	7,551.00	93.42	151.49	-90.00	-2,090.42	-5,228.69	5,193.09	4,951.40	241.69	21.487		
9,500.00	7,579.00	7,551.00	7,551.00	95.30	151.49	-90.00	-2,090.42	-5,228.69	5,161.27	4,917.82	243.45	21.201		
9,600.00	7,579.00	7,551.00	7,551.00	97.21	151.49	-90.00	-2,090.42	-5,228.69	5,131.21	4,885.98	245.23	20.924		
9,700.00	7,579.00	7,551.00	7,551.00	99.15	151.49	-90.00	-2,090.42	-5,228.69	5,102.92	4,855.91	247.01	20.658		
9,800.00	7,579.00	7,551.00	7,551.00	101.13	151.49	-90.00	-2,090.42	-5,228.69	5,076.45	4,827.64	248.81	20.403		
9,900.00	7,579.00	7,551.00	7,551.00	103.15	151.49	-90.00	-2,090.42	-5,228.69	5,051.82	4,801.21	250.61	20.158		
10,000.00	7,579.00	7,551.00	7,551.00	105.19	151.49	-90.00	-2,090.42	-5,228.69	5,029.06	4,776.65	252.41	19.924		
10,100.00	7,579.00	7,551.00	7,551.00	107.26	151.49	-90.00	-2,090.42	-5,228.69	5,008.19	4,753.98	254.21	19.701		
10,200.00	7,579.00	7,551.00	7,551.00	109.36	151.49	-90.00	-2,090.42	-5,228.69	4,989.24	4,733.24	256.00	19.489		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft		
Survey Program: 0-INC													Sec 24-T1S-R66W - ABND VERT BERGMAN 1 - Wellbore #1 - Design #1		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
10,300.00	7,579.00	7,551.00	7,551.00	111.49	151.49	-90.00	-2,090.42	-5,228.69	4,972.23	4,714.44	257.79	19.288				
10,400.00	7,579.00	7,551.00	7,551.00	113.64	151.49	-90.00	-2,090.42	-5,228.69	4,957.18	4,697.62	259.56	19.098				
10,500.00	7,579.00	7,551.00	7,551.00	115.82	151.49	-90.00	-2,090.42	-5,228.69	4,944.11	4,682.79	261.32	18.920				
10,600.00	7,579.00	7,551.00	7,551.00	118.01	151.49	-90.00	-2,090.42	-5,228.69	4,933.02	4,669.97	263.06	18.753				
10,700.00	7,579.00	7,551.00	7,551.00	120.23	151.49	-90.00	-2,090.42	-5,228.69	4,923.95	4,659.18	264.77	18.597				
10,800.00	7,579.00	7,551.00	7,551.00	122.47	151.49	-90.00	-2,090.42	-5,228.69	4,916.89	4,650.43	266.46	18.452				
10,900.00	7,579.00	7,551.00	7,551.00	124.73	151.49	-90.00	-2,090.42	-5,228.69	4,911.86	4,643.73	268.13	18.319				
11,000.00	7,579.00	7,551.00	7,551.00	127.01	151.49	-90.00	-2,090.42	-5,228.69	4,908.86	4,639.10	269.76	18.197				
11,097.28	7,579.00	7,551.00	7,551.00	129.24	151.49	-90.00	-2,090.42	-5,228.69	4,907.89	4,636.58	271.31	18.089	CC			
11,100.00	7,579.00	7,551.00	7,551.00	129.30	151.49	-90.00	-2,090.42	-5,228.69	4,907.90	4,636.54	271.36	18.087				
11,200.00	7,579.00	7,551.00	7,551.00	131.61	151.49	-90.00	-2,090.42	-5,228.69	4,908.97	4,636.05	272.92	17.987	ES			
11,300.00	7,579.00	7,551.00	7,551.00	133.93	151.49	-90.00	-2,090.42	-5,228.69	4,912.08	4,637.64	274.44	17.898				
11,400.00	7,579.00	7,551.00	7,551.00	136.27	151.49	-90.00	-2,090.42	-5,228.69	4,917.22	4,641.30	275.93	17.821				
11,500.00	7,579.00	7,551.00	7,551.00	138.62	151.49	-90.00	-2,090.42	-5,228.69	4,924.39	4,647.02	277.37	17.754				
11,600.00	7,579.00	7,551.00	7,551.00	140.99	151.49	-90.00	-2,090.42	-5,228.69	4,933.57	4,654.81	278.76	17.698				
11,700.00	7,579.00	7,551.00	7,551.00	143.37	151.49	-90.00	-2,090.42	-5,228.69	4,944.76	4,664.65	280.11	17.653				
11,800.00	7,579.00	7,551.00	7,551.00	145.76	151.49	-90.00	-2,090.42	-5,228.69	4,957.95	4,676.54	281.41	17.618				
11,900.00	7,579.00	7,551.00	7,551.00	148.16	151.49	-90.00	-2,090.42	-5,228.69	4,973.11	4,690.44	282.66	17.594				
12,000.00	7,579.00	7,551.00	7,551.00	150.58	151.49	-90.00	-2,090.42	-5,228.69	4,990.22	4,706.35	283.87	17.579				
12,100.00	7,579.00	7,551.00	7,551.00	153.00	151.49	-90.00	-2,090.42	-5,228.69	5,009.28	4,724.26	285.02	17.575	SF			
12,200.00	7,579.00	7,551.00	7,551.00	155.43	151.49	-90.00	-2,090.42	-5,228.69	5,030.25	4,744.13	286.12	17.581				
12,300.00	7,579.00	7,551.00	7,551.00	157.87	151.49	-90.00	-2,090.42	-5,228.69	5,053.11	4,765.94	287.18	17.596				
12,400.00	7,579.00	7,551.00	7,551.00	160.32	151.49	-90.00	-2,090.42	-5,228.69	5,077.84	4,789.67	288.18	17.621				
12,500.00	7,579.00	7,551.00	7,551.00	162.78	151.49	-90.00	-2,090.42	-5,228.69	5,104.41	4,815.29	289.12	17.655				
12,600.00	7,579.00	7,551.00	7,551.00	165.25	151.49	-90.00	-2,090.42	-5,228.69	5,132.80	4,842.77	290.02	17.698				
12,700.00	7,579.00	7,551.00	7,551.00	167.73	151.49	-90.00	-2,090.42	-5,228.69	5,162.96	4,872.09	290.87	17.750				
12,800.00	7,579.00	7,551.00	7,551.00	170.21	151.49	-90.00	-2,090.42	-5,228.69	5,194.87	4,903.20	291.67	17.811				
12,900.00	7,579.00	7,551.00	7,551.00	172.70	151.49	-90.00	-2,090.42	-5,228.69	5,228.50	4,936.08	292.42	17.880				
13,000.00	7,579.00	7,551.00	7,551.00	175.19	151.49	-90.00	-2,090.42	-5,228.69	5,263.82	4,970.70	293.12	17.958				
13,100.00	7,579.00	7,551.00	7,551.00	177.70	151.49	-90.00	-2,090.42	-5,228.69	5,300.78	5,007.01	293.77	18.044				
13,200.00	7,579.00	7,551.00	7,551.00	180.20	151.49	-90.00	-2,090.42	-5,228.69	5,339.37	5,044.98	294.38	18.137				
13,300.00	7,579.00	7,551.00	7,551.00	182.72	151.49	-90.00	-2,090.42	-5,228.69	5,379.53	5,084.59	294.95	18.239				
13,400.00	7,579.00	7,551.00	7,551.00	185.24	151.49	-90.00	-2,090.42	-5,228.69	5,421.25	5,125.78	295.47	18.348				
13,500.00	7,579.00	7,551.00	7,551.00	187.76	151.49	-90.00	-2,090.42	-5,228.69	5,464.47	5,168.53	295.94	18.465				
13,600.00	7,579.00	7,551.00	7,551.00	190.30	151.49	-90.00	-2,090.42	-5,228.69	5,509.18	5,212.79	296.38	18.588				
13,700.00	7,579.00	7,551.00	7,551.00	192.83	151.49	-90.00	-2,090.42	-5,228.69	5,555.32	5,258.54	296.78	18.719				
13,800.00	7,579.00	7,551.00	7,551.00	195.37	151.49	-90.00	-2,090.42	-5,228.69	5,602.87	5,305.73	297.14	18.856				
13,900.00	7,579.00	7,551.00	7,551.00	197.92	151.49	-90.00	-2,090.42	-5,228.69	5,651.78	5,354.32	297.46	19.000				
14,000.00	7,579.00	7,551.00	7,551.00	200.47	151.49	-90.00	-2,090.42	-5,228.69	5,702.03	5,404.28	297.75	19.150				
14,100.00	7,579.00	7,551.00	7,551.00	203.02	151.49	-90.00	-2,090.42	-5,228.69	5,753.58	5,455.58	298.01	19.307				
14,200.00	7,579.00	7,551.00	7,551.00	205.58	151.49	-90.00	-2,090.42	-5,228.69	5,806.40	5,508.17	298.23	19.470				
14,300.00	7,579.00	7,551.00	7,551.00	208.14	151.49	-90.00	-2,090.42	-5,228.69	5,860.45	5,562.03	298.42	19.638				
14,400.00	7,579.00	7,551.00	7,551.00	210.70	151.49	-90.00	-2,090.42	-5,228.69	5,915.69	5,617.10	298.58	19.812				
14,500.00	7,579.00	7,551.00	7,551.00	213.27	151.49	-90.00	-2,090.42	-5,228.69	5,972.09	5,673.37	298.72	19.992				
14,600.00	7,579.00	7,551.00	7,551.00	215.84	151.49	-90.00	-2,090.42	-5,228.69	6,029.63	5,730.80	298.83	20.178				
14,700.00	7,579.00	7,551.00	7,551.00	218.42	151.49	-90.00	-2,090.42	-5,228.69	6,088.27	5,789.35	298.91	20.368				
14,800.00	7,579.00	7,551.00	7,551.00	221.00	151.49	-90.00	-2,090.42	-5,228.69	6,147.97	5,849.00	298.97	20.564				
14,900.00	7,579.00	7,551.00	7,551.00	223.58	151.49	-90.00	-2,090.42	-5,228.69	6,208.71	5,909.70	299.01	20.764				
15,000.00	7,579.00	7,551.00	7,551.00	226.17	151.49	-90.00	-2,090.42	-5,228.69	6,270.46	5,971.43	299.03	20.969				
15,100.00	7,579.00	7,551.00	7,551.00	228.75	151.49	-90.00	-2,090.42	-5,228.69	6,333.18	6,034.15	299.03	21.179				
15,200.00	7,579.00	7,551.00	7,551.00	231.34	151.49	-90.00	-2,090.42	-5,228.69	6,396.85	6,097.84	299.01	21.394				
15,300.00	7,579.00	7,551.00	7,551.00	233.94	151.49	-90.00	-2,090.42	-5,228.69	6,461.44	6,162.47	298.97	21.612				

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-INC													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
15,400.00	7,579.00	7,551.00	7,551.00	236.53	151.49	-90.00	-2,090.42	-5,228.69	6,526.93	6,228.01	298.92	21.835		
15,500.00	7,579.00	7,551.00	7,551.00	239.13	151.49	-90.00	-2,090.42	-5,228.69	6,593.28	6,294.43	298.85	22.062		
15,600.00	7,579.00	7,551.00	7,551.00	241.73	151.49	-90.00	-2,090.42	-5,228.69	6,660.47	6,361.71	298.76	22.293		
15,700.00	7,579.00	7,551.00	7,551.00	244.34	151.49	-90.00	-2,090.42	-5,228.69	6,728.48	6,429.81	298.67	22.528		
15,800.00	7,579.00	7,551.00	7,551.00	246.94	151.49	-90.00	-2,090.42	-5,228.69	6,797.28	6,498.72	298.56	22.767		
15,900.00	7,579.00	7,551.00	7,551.00	249.55	151.49	-90.00	-2,090.42	-5,228.69	6,866.84	6,568.40	298.44	23.009		
16,000.00	7,579.00	7,551.00	7,551.00	252.16	151.49	-90.00	-2,090.42	-5,228.69	6,937.15	6,638.85	298.31	23.255		
16,100.00	7,579.00	7,551.00	7,551.00	254.77	151.49	-90.00	-2,090.42	-5,228.69	7,008.18	6,710.02	298.16	23.504		
16,200.00	7,579.00	7,551.00	7,551.00	257.38	151.49	-90.00	-2,090.42	-5,228.69	7,079.91	6,781.90	298.01	23.757		
16,300.00	7,579.00	7,551.00	7,551.00	260.00	151.49	-90.00	-2,090.42	-5,228.69	7,152.32	6,854.47	297.85	24.013		
16,400.00	7,579.00	7,551.00	7,551.00	262.62	151.49	-90.00	-2,090.42	-5,228.69	7,225.39	6,927.70	297.69	24.272		
16,500.00	7,579.00	7,551.00	7,551.00	265.24	151.49	-90.00	-2,090.42	-5,228.69	7,299.09	7,001.58	297.51	24.534		
16,600.00	7,579.00	7,551.00	7,551.00	267.86	151.49	-90.00	-2,090.42	-5,228.69	7,373.42	7,076.09	297.33	24.798		
16,700.00	7,579.00	7,551.00	7,551.00	270.48	151.49	-90.00	-2,090.42	-5,228.69	7,448.35	7,151.20	297.15	25.066		
16,800.00	7,579.00	7,551.00	7,551.00	273.10	151.49	-90.00	-2,090.42	-5,228.69	7,523.86	7,226.90	296.96	25.337		
16,900.00	7,579.00	7,551.00	7,551.00	275.73	151.49	-90.00	-2,090.42	-5,228.69	7,599.93	7,303.17	296.76	25.610		
17,000.00	7,579.00	7,551.00	7,551.00	278.36	151.49	-90.00	-2,090.42	-5,228.69	7,676.55	7,380.00	296.56	25.885		
17,100.00	7,579.00	7,551.00	7,551.00	280.99	151.49	-90.00	-2,090.42	-5,228.69	7,753.71	7,457.36	296.35	26.164		
17,200.00	7,579.00	7,551.00	7,551.00	283.62	151.49	-90.00	-2,090.42	-5,228.69	7,831.38	7,535.24	296.15	26.444		
17,300.00	7,579.00	7,551.00	7,551.00	286.25	151.49	-90.00	-2,090.42	-5,228.69	7,909.56	7,613.62	295.93	26.727		
17,400.00	7,579.00	7,551.00	7,551.00	288.88	151.49	-90.00	-2,090.42	-5,228.69	7,988.22	7,692.50	295.72	27.013		
17,500.00	7,579.00	7,551.00	7,551.00	291.52	151.49	-90.00	-2,090.42	-5,228.69	8,067.35	7,771.85	295.50	27.300		
17,600.00	7,579.00	7,551.00	7,551.00	294.15	151.49	-90.00	-2,090.42	-5,228.69	8,146.95	7,851.66	295.28	27.590		
17,700.00	7,579.00	7,551.00	7,551.00	296.79	151.49	-90.00	-2,090.42	-5,228.69	8,226.99	7,931.92	295.06	27.882		
17,800.00	7,579.00	7,551.00	7,551.00	299.43	151.49	-90.00	-2,090.42	-5,228.69	8,307.46	8,012.61	294.84	28.176		
17,900.00	7,579.00	7,551.00	7,551.00	302.07	151.49	-90.00	-2,090.42	-5,228.69	8,388.35	8,093.73	294.62	28.472		
18,000.00	7,579.00	7,551.00	7,551.00	304.71	151.49	-90.00	-2,090.42	-5,228.69	8,469.65	8,175.25	294.40	28.770		
18,100.00	7,579.00	7,551.00	7,551.00	307.35	151.49	-90.00	-2,090.42	-5,228.69	8,551.34	8,257.17	294.17	29.069		
18,200.00	7,579.00	7,551.00	7,551.00	310.00	151.49	-90.00	-2,090.42	-5,228.69	8,633.42	8,339.48	293.95	29.371		
18,300.00	7,579.00	7,551.00	7,551.00	312.64	151.49	-90.00	-2,090.42	-5,228.69	8,715.88	8,422.16	293.72	29.674		
18,400.00	7,579.00	7,551.00	7,551.00	315.29	151.49	-90.00	-2,090.42	-5,228.69	8,798.70	8,505.20	293.50	29.979		
18,500.00	7,579.00	7,551.00	7,551.00	317.93	151.49	-90.00	-2,090.42	-5,228.69	8,881.87	8,588.60	293.27	30.285		
18,600.00	7,579.00	7,551.00	7,551.00	320.58	151.49	-90.00	-2,090.42	-5,228.69	8,965.39	8,672.34	293.05	30.594		
18,700.00	7,579.00	7,551.00	7,551.00	323.23	151.49	-90.00	-2,090.42	-5,228.69	9,049.24	8,756.42	292.82	30.903		
18,800.00	7,579.00	7,551.00	7,551.00	325.88	151.49	-90.00	-2,090.42	-5,228.69	9,133.41	8,840.81	292.60	31.215		
18,900.00	7,579.00	7,551.00	7,551.00	328.53	151.49	-90.00	-2,090.42	-5,228.69	9,217.91	8,925.53	292.38	31.527		
19,000.00	7,579.00	7,551.00	7,551.00	331.18	151.49	-90.00	-2,090.42	-5,228.69	9,302.71	9,010.55	292.16	31.842		
19,100.00	7,579.00	7,551.00	7,551.00	333.83	151.49	-90.00	-2,090.42	-5,228.69	9,387.81	9,095.87	291.93	32.157		
19,200.00	7,579.00	7,551.00	7,551.00	336.48	151.49	-90.00	-2,090.42	-5,228.69	9,473.20	9,181.48	291.71	32.474		
19,300.00	7,579.00	7,551.00	7,551.00	339.14	151.49	-90.00	-2,090.42	-5,228.69	9,558.87	9,267.37	291.50	32.792		
19,400.00	7,579.00	7,551.00	7,551.00	341.79	151.49	-90.00	-2,090.42	-5,228.69	9,644.82	9,353.54	291.28	33.112		
19,500.00	7,579.00	7,551.00	7,551.00	344.45	151.49	-90.00	-2,090.42	-5,228.69	9,731.04	9,439.97	291.06	33.433		
19,600.00	7,579.00	7,551.00	7,551.00	347.10	151.49	-90.00	-2,090.42	-5,228.69	9,817.52	9,526.67	290.85	33.755		
19,700.00	7,579.00	7,551.00	7,551.00	349.76	151.49	-90.00	-2,090.42	-5,228.69	9,904.25	9,613.61	290.64	34.078		
19,800.00	7,579.00	7,551.00	7,551.00	352.42	151.49	-90.00	-2,090.42	-5,228.69	9,991.23	9,700.81	290.42	34.402		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 24-T1S-R66W - ABND VERT JOSEPHINE 1 - Wellbore #1 - Design #1	Offset Site Error:	0.00 usft
Survey Program:													0-INC	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-136.98	-2,392.13	-2,232.12	3,271.85						
100.00	100.00	81.00	81.00	0.13	0.97	-136.98	-2,392.13	-2,232.12	3,271.80	3,270.69	1.10	2,960.939 CC			
200.00	199.98	180.98	180.98	0.49	3.05	-94.60	-2,392.13	-2,232.12	3,271.94	3,268.39	3.54	923.088			
300.00	299.84	280.84	280.84	0.86	5.17	-94.68	-2,392.13	-2,232.12	3,272.36	3,266.34	6.02	543.211			
400.00	399.45	380.45	380.45	1.23	7.21	-94.82	-2,392.13	-2,232.12	3,273.09	3,264.64	8.44	387.692			
500.00	498.70	479.70	479.70	1.63	9.23	-95.01	-2,392.13	-2,232.12	3,274.14	3,263.28	10.86	301.618			
600.00	597.47	578.47	578.47	2.05	11.22	-95.25	-2,392.13	-2,232.12	3,275.55	3,262.28	13.28	246.729			
700.00	695.62	676.62	676.62	2.50	13.21	-95.54	-2,392.13	-2,232.12	3,277.38	3,261.67	15.71	208.601			
800.00	793.06	774.06	774.06	2.99	15.17	-95.87	-2,392.13	-2,232.12	3,279.67	3,261.51	18.17	180.544 ES			
900.00	889.64	870.64	870.64	3.52	17.12	-96.25	-2,392.13	-2,232.12	3,282.50	3,261.86	20.64	159.023			
1,000.00	985.27	966.27	966.27	4.10	19.05	-96.67	-2,392.13	-2,232.12	3,285.94	3,262.80	23.14	141.992			
1,100.00	1,079.82	1,060.82	1,060.82	4.72	20.95	-97.12	-2,392.13	-2,232.12	3,290.07	3,264.40	25.67	128.184			
1,200.00	1,173.17	1,154.17	1,154.17	5.40	22.83	-97.60	-2,392.13	-2,232.12	3,294.98	3,266.77	28.22	116.769			
1,300.00	1,265.21	1,246.21	1,246.21	6.13	24.69	-98.10	-2,392.13	-2,232.12	3,300.77	3,269.98	30.79	107.186			
1,400.00	1,355.84	1,336.84	1,336.84	6.92	26.51	-98.63	-2,392.13	-2,232.12	3,307.55	3,274.15	33.40	99.038			
1,500.00	1,444.94	1,425.94	1,425.94	7.77	28.30	-99.17	-2,392.13	-2,232.12	3,315.40	3,279.38	36.02	92.035			
1,600.00	1,532.44	1,513.44	1,513.44	8.68	30.06	-99.75	-2,392.13	-2,232.12	3,324.45	3,285.77	38.67	85.969			
1,700.00	1,619.43	1,600.43	1,600.43	9.62	31.81	-100.48	-2,392.13	-2,232.12	3,334.36	3,293.02	41.33	80.675			
1,800.00	1,706.42	1,687.42	1,687.42	10.56	33.56	-101.21	-2,392.13	-2,232.12	3,344.96	3,300.97	43.99	76.031			
1,900.00	1,793.42	1,774.42	1,774.42	11.52	35.31	-101.93	-2,392.13	-2,232.12	3,356.26	3,309.60	46.66	71.929			
2,000.00	1,880.41	1,861.41	1,861.41	12.48	37.07	-102.65	-2,392.13	-2,232.12	3,368.25	3,318.92	49.33	68.286			
2,100.00	1,967.40	1,948.40	1,948.40	13.45	38.82	-103.37	-2,392.13	-2,232.12	3,380.91	3,328.92	51.99	65.033			
2,200.00	2,054.39	2,035.39	2,035.39	14.42	40.57	-104.08	-2,392.13	-2,232.12	3,394.24	3,339.59	54.65	62.112			
2,300.00	2,141.39	2,122.39	2,122.39	15.39	42.32	-104.79	-2,392.13	-2,232.12	3,408.23	3,350.93	57.30	59.479			
2,400.00	2,228.38	2,209.38	2,209.38	16.36	44.07	-105.49	-2,392.13	-2,232.12	3,422.87	3,362.92	59.95	57.095			
2,500.00	2,315.37	2,296.37	2,296.37	17.34	45.96	-106.19	-2,392.13	-2,232.12	3,438.16	3,375.42	62.74	54.801			
2,600.00	2,402.37	2,383.37	2,383.37	18.32	47.57	-106.88	-2,392.13	-2,232.12	3,454.09	3,388.86	65.23	52.953			
2,700.00	2,489.36	2,470.36	2,470.36	19.30	49.32	-107.57	-2,392.13	-2,232.12	3,470.64	3,402.78	67.86	51.145			
2,800.00	2,576.35	2,557.35	2,557.35	20.28	51.07	-108.25	-2,392.13	-2,232.12	3,487.82	3,417.33	70.48	49.486			
2,900.00	2,663.34	2,644.34	2,644.34	21.26	52.81	-108.93	-2,392.13	-2,232.12	3,505.60	3,432.50	73.10	47.959			
3,000.00	2,750.34	2,731.34	2,731.34	22.24	54.56	-109.60	-2,392.13	-2,232.12	3,523.98	3,448.28	75.70	46.551			
3,100.00	2,837.33	2,818.33	2,818.33	23.23	56.31	-110.26	-2,392.13	-2,232.12	3,542.96	3,464.66	78.30	45.249			
3,200.00	2,924.32	2,905.32	2,905.32	24.21	58.06	-110.92	-2,392.13	-2,232.12	3,562.51	3,481.62	80.89	44.042			
3,300.00	3,011.31	3,007.69	2,992.31	25.20	60.12	-111.58	-2,392.13	-2,232.12	3,582.64	3,498.86	83.78	42.763			
3,400.00	3,098.31	3,079.31	3,079.31	26.18	61.56	-112.23	-2,392.13	-2,232.12	3,603.33	3,517.29	86.04	41.879			
3,500.00	3,185.30	3,166.30	3,166.30	27.17	63.31	-112.87	-2,392.13	-2,232.12	3,624.58	3,535.97	88.60	40.907			
3,600.00	3,272.29	3,253.29	3,253.29	28.16	65.06	-113.51	-2,392.13	-2,232.12	3,646.36	3,555.21	91.16	40.000			
3,700.00	3,359.29	3,340.29	3,340.29	29.14	66.81	-114.14	-2,392.13	-2,232.12	3,668.68	3,574.98	93.70	39.152			
3,800.00	3,446.28	3,427.28	3,427.28	30.13	68.56	-114.76	-2,392.13	-2,232.12	3,691.53	3,595.29	96.24	38.358			
3,900.00	3,533.27	3,514.27	3,514.27	31.12	70.31	-115.38	-2,392.13	-2,232.12	3,714.89	3,616.12	98.77	37.613			
4,000.00	3,620.26	3,601.26	3,601.26	32.10	72.06	-115.99	-2,392.13	-2,232.12	3,738.75	3,637.47	101.28	36.914			
4,100.00	3,707.26	3,688.26	3,688.26	33.09	73.81	-116.60	-2,392.13	-2,232.12	3,763.11	3,659.32	103.79	36.257			
4,200.00	3,794.25	3,775.25	3,775.25	34.08	75.56	-117.20	-2,392.13	-2,232.12	3,787.96	3,681.67	106.29	35.638			
4,300.00	3,881.24	3,862.24	3,862.24	35.07	77.31	-117.79	-2,392.13	-2,232.12	3,813.28	3,704.50	108.78	35.055			
4,400.00	3,968.23	3,949.23	3,949.23	36.06	79.06	-118.38	-2,392.13	-2,232.12	3,839.06	3,727.80	111.26	34.505			
4,500.00	4,055.23	4,036.23	4,036.23	37.05	80.81	-118.96	-2,392.13	-2,232.12	3,865.31	3,751.57	113.73	33.985			
4,600.00	4,142.22	4,123.22	4,123.22	38.04	82.56	-119.53	-2,392.13	-2,232.12	3,892.00	3,775.80	116.20	33.494			
4,700.00	4,229.21	4,210.21	4,210.21	39.03	84.31	-120.10	-2,392.13	-2,232.12	3,919.13	3,800.48	118.65	33.030			
4,800.00	4,316.21	4,302.79	4,297.21	40.02	86.17	-120.66	-2,392.13	-2,232.12	3,946.69	3,825.48	121.21	32.560			
4,900.00	4,403.20	4,384.20	4,384.20	41.01	87.81	-121.21	-2,392.13	-2,232.12	3,974.67	3,851.14	123.54	32.174			
5,000.00	4,490.19	4,471.19	4,471.19	42.00	89.56	-121.76	-2,392.13	-2,232.12	4,003.07	3,877.10	125.97	31.779			
5,100.00	4,577.18	4,558.18	4,558.18	42.99	91.31	-122.30	-2,392.13	-2,232.12	4,031.86	3,903.48	128.39	31.404			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 24-T1S-R66W - ABND VERT JOSEPHINE 1 - Wellbore #1 - Design #1	Offset Site Error:	0.00 usft
Survey Program: 0-INC														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,200.00	4,664.18	4,645.18	4,645.18	43.98	93.06	-122.84	-2,392.13	-2,232.12	4,061.06	3,930.25	130.80	31.047			
5,300.00	4,751.17	4,732.17	4,732.17	44.97	94.81	-123.37	-2,392.13	-2,232.12	4,090.63	3,957.43	133.21	30.709			
5,400.00	4,838.16	4,819.16	4,819.16	45.96	96.55	-123.89	-2,392.13	-2,232.12	4,120.59	3,984.99	135.60	30.387			
5,500.00	4,925.15	4,906.15	4,906.15	46.95	98.30	-124.41	-2,392.13	-2,232.12	4,150.92	4,012.92	137.99	30.080			
5,600.00	5,012.15	5,006.85	4,993.15	47.94	100.33	-124.92	-2,392.13	-2,232.12	4,181.60	4,040.95	140.65	29.730			
5,700.00	5,099.14	5,080.14	5,080.14	48.93	101.80	-125.42	-2,392.13	-2,232.12	4,212.64	4,069.89	142.75	29.510			
5,800.00	5,186.13	5,167.13	5,167.13	49.92	103.55	-125.92	-2,392.13	-2,232.12	4,244.03	4,098.91	145.12	29.245			
5,900.00	5,273.13	5,254.13	5,254.13	50.91	105.30	-126.41	-2,392.13	-2,232.12	4,275.76	4,128.28	147.48	28.992			
6,000.00	5,360.12	5,341.12	5,341.12	51.90	107.05	-126.89	-2,392.13	-2,232.12	4,307.82	4,157.98	149.83	28.751			
6,100.00	5,447.11	5,428.11	5,428.11	52.89	108.80	-127.37	-2,392.13	-2,232.12	4,340.20	4,188.02	152.18	28.520			
6,200.00	5,534.10	5,515.10	5,515.10	53.88	110.55	-127.85	-2,392.13	-2,232.12	4,372.89	4,218.37	154.52	28.300			
6,300.00	5,621.10	5,602.10	5,602.10	54.87	112.30	-128.31	-2,392.13	-2,232.12	4,405.90	4,249.04	156.86	28.089			
6,400.00	5,708.09	5,689.09	5,689.09	55.86	114.05	-128.77	-2,392.13	-2,232.12	4,439.21	4,280.03	159.18	27.887			
6,500.00	5,795.08	5,776.08	5,776.08	56.85	115.80	-129.23	-2,392.13	-2,232.12	4,472.81	4,311.31	161.51	27.695			
6,600.00	5,882.07	5,863.07	5,863.07	57.84	117.55	-129.68	-2,392.13	-2,232.12	4,506.71	4,342.89	163.82	27.510			
6,700.00	5,969.07	5,950.07	5,950.07	58.83	119.30	-130.12	-2,392.13	-2,232.12	4,540.88	4,374.75	166.13	27.333			
6,800.00	6,056.06	6,037.06	6,037.06	59.83	121.05	-130.56	-2,392.13	-2,232.12	4,575.34	4,406.90	168.44	27.164			
6,900.00	6,143.05	6,124.05	6,124.05	60.82	122.80	-130.99	-2,392.13	-2,232.12	4,610.06	4,439.32	170.73	27.001			
7,000.00	6,230.05	6,211.05	6,211.05	61.81	124.55	-131.42	-2,392.13	-2,232.12	4,645.05	4,472.02	173.03	26.846			
7,100.00	6,317.04	6,301.96	6,298.04	62.80	126.37	-131.84	-2,392.13	-2,232.12	4,680.29	4,504.90	175.40	26.684			
7,200.00	6,404.03	6,385.03	6,385.03	63.79	128.05	-132.26	-2,392.13	-2,232.12	4,715.79	4,538.19	177.60	26.553			
7,300.00	6,491.02	6,472.02	6,472.02	64.78	129.79	-132.67	-2,392.13	-2,232.12	4,751.53	4,571.65	179.88	26.415			
7,400.00	6,578.02	6,559.02	6,559.02	65.77	131.54	-133.07	-2,392.13	-2,232.12	4,787.52	4,605.37	182.15	26.283			
7,500.00	6,665.01	6,646.01	6,646.01	66.76	133.29	-133.47	-2,392.13	-2,232.12	4,823.74	4,639.32	184.42	26.156			
7,600.00	6,752.00	6,733.00	6,733.00	67.76	135.04	-133.87	-2,392.13	-2,232.12	4,860.19	4,673.50	186.69	26.034			
7,700.00	6,838.99	6,819.99	6,819.99	68.75	136.79	-134.25	-2,392.13	-2,232.12	4,896.87	4,707.92	188.95	25.916			
7,800.00	6,925.99	6,906.99	6,906.99	69.74	138.54	-134.64	-2,392.13	-2,232.12	4,933.77	4,742.56	191.20	25.804			
7,900.00	7,012.98	7,006.02	6,993.98	70.73	140.53	-135.02	-2,392.13	-2,232.12	4,970.88	4,777.18	193.70	25.663			
8,000.00	7,099.97	7,080.97	7,080.97	71.72	142.04	-135.39	-2,392.13	-2,232.12	5,008.20	4,812.50	195.71	25.590			
8,100.00	7,186.97	7,167.97	7,167.97	72.71	143.79	-135.76	-2,392.13	-2,232.12	5,045.73	4,847.78	197.95	25.490			
8,200.00	7,273.09	7,254.09	7,254.09	73.74	145.52	-127.29	-2,392.13	-2,232.12	5,083.21	4,883.01	200.20	25.391			
8,300.00	7,352.95	7,333.95	7,333.95	74.97	147.13	-115.36	-2,392.13	-2,232.12	5,119.05	4,916.59	202.46	25.284			
8,400.00	7,423.63	7,404.63	7,404.63	76.39	148.55	-106.93	-2,392.13	-2,232.12	5,152.45	4,947.75	204.70	25.171			
8,500.00	7,482.96	7,463.96	7,463.96	77.96	149.74	-100.82	-2,392.13	-2,232.12	5,182.85	4,976.01	206.83	25.058			
8,600.00	7,529.15	7,510.15	7,510.15	79.64	150.67	-96.33	-2,392.13	-2,232.12	5,209.80	5,001.00	208.80	24.951			
8,700.00	7,560.79	7,541.79	7,541.79	81.35	151.31	-93.06	-2,392.13	-2,232.12	5,232.92	5,022.38	210.53	24.855			
8,800.00	7,576.92	7,557.92	7,557.92	83.05	151.63	-90.79	-2,392.13	-2,232.12	5,251.81	5,039.85	211.96	24.777			
8,900.00	7,579.00	7,560.00	7,560.00	84.68	151.67	-90.00	-2,392.13	-2,232.12	5,266.92	5,053.85	213.07	24.719			
9,000.00	7,579.00	7,560.00	7,560.00	86.34	151.67	-90.00	-2,392.13	-2,232.12	5,283.02	5,068.88	214.15	24.670			
9,100.00	7,579.00	7,560.00	7,560.00	88.04	151.67	-90.00	-2,392.13	-2,232.12	5,300.97	5,085.73	215.23	24.629			
9,200.00	7,579.00	7,560.00	7,560.00	89.80	151.67	-90.00	-2,392.13	-2,232.12	5,320.73	5,104.41	216.33	24.596			
9,300.00	7,579.00	7,560.00	7,560.00	91.59	151.67	-90.00	-2,392.13	-2,232.12	5,342.30	5,124.87	217.43	24.571			
9,400.00	7,579.00	7,560.00	7,560.00	93.42	151.67	-90.00	-2,392.13	-2,232.12	5,365.64	5,147.11	218.53	24.554			
9,500.00	7,579.00	7,560.00	7,560.00	95.30	151.67	-90.00	-2,392.13	-2,232.12	5,390.73	5,171.11	219.62	24.545			
9,600.00	7,579.00	7,560.00	7,560.00	97.21	151.67	-90.00	-2,392.13	-2,232.12	5,417.56	5,196.84	220.72	24.545 SF			
9,700.00	7,579.00	7,560.00	7,560.00	99.15	151.67	-90.00	-2,392.13	-2,232.12	5,446.09	5,224.28	221.80	24.554			
9,800.00	7,579.00	7,560.00	7,560.00	101.13	151.67	-90.00	-2,392.13	-2,232.12	5,476.29	5,253.41	222.88	24.570			
9,900.00	7,579.00	7,560.00	7,560.00	103.15	151.67	-90.00	-2,392.13	-2,232.12	5,508.15	5,284.20	223.95	24.595			
10,000.00	7,579.00	7,560.00	7,560.00	105.19	151.67	-90.00	-2,392.13	-2,232.12	5,541.63	5,316.62	225.01	24.629			
10,100.00	7,579.00	7,560.00	7,560.00	107.26	151.67	-90.00	-2,392.13	-2,232.12	5,576.70	5,350.65	226.05	24.670			
10,200.00	7,579.00	7,560.00	7,560.00	109.36	151.67	-90.00	-2,392.13	-2,232.12	5,613.33	5,386.26	227.08	24.720			
10,300.00	7,579.00	7,560.00	7,560.00	111.49	151.67	-90.00	-2,392.13	-2,232.12	5,651.50	5,423.41	228.09	24.778			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 24-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft		
Survey Program: 0-INC													Sec 24-T1S-R66W - ABND VERT JOSEPHINE 1 - Wellbore #1 - Design #1		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
10,400.00	7,579.00	7,560.00	7,560.00	113.64	151.67	-90.00	-2,392.13	-2,232.12	5,691.17	5,462.09	229.08	24.844				
10,500.00	7,579.00	7,560.00	7,560.00	115.82	151.67	-90.00	-2,392.13	-2,232.12	5,732.30	5,502.25	230.05	24.917				
10,600.00	7,579.00	7,560.00	7,560.00	118.01	151.67	-90.00	-2,392.13	-2,232.12	5,774.88	5,543.87	231.01	24.998				
10,700.00	7,579.00	7,560.00	7,560.00	120.23	151.67	-90.00	-2,392.13	-2,232.12	5,818.86	5,586.92	231.95	25.087				
10,800.00	7,579.00	7,560.00	7,560.00	122.47	151.67	-90.00	-2,392.13	-2,232.12	5,864.22	5,631.36	232.86	25.183				
10,900.00	7,579.00	7,560.00	7,560.00	124.73	151.67	-90.00	-2,392.13	-2,232.12	5,910.93	5,677.17	233.76	25.286				
11,000.00	7,579.00	7,560.00	7,560.00	127.01	151.67	-90.00	-2,392.13	-2,232.12	5,958.94	5,724.31	234.63	25.397				
11,100.00	7,579.00	7,560.00	7,560.00	129.30	151.67	-90.00	-2,392.13	-2,232.12	6,008.24	5,772.75	235.49	25.514				
11,200.00	7,579.00	7,560.00	7,560.00	131.61	151.67	-90.00	-2,392.13	-2,232.12	6,058.78	5,822.46	236.32	25.638				
11,300.00	7,579.00	7,560.00	7,560.00	133.93	151.67	-90.00	-2,392.13	-2,232.12	6,110.55	5,873.42	237.13	25.769				
11,400.00	7,579.00	7,560.00	7,560.00	136.27	151.67	-90.00	-2,392.13	-2,232.12	6,163.50	5,925.58	237.92	25.906				
11,500.00	7,579.00	7,560.00	7,560.00	138.62	151.67	-90.00	-2,392.13	-2,232.12	6,217.61	5,978.92	238.69	26.049				
11,600.00	7,579.00	7,560.00	7,560.00	140.99	151.67	-90.00	-2,392.13	-2,232.12	6,272.84	6,033.41	239.44	26.198				
11,700.00	7,579.00	7,560.00	7,560.00	143.37	151.67	-90.00	-2,392.13	-2,232.12	6,329.18	6,089.01	240.16	26.354				
11,800.00	7,579.00	7,560.00	7,560.00	145.76	151.67	-90.00	-2,392.13	-2,232.12	6,386.58	6,145.71	240.87	26.515				
11,900.00	7,579.00	7,560.00	7,560.00	148.16	151.67	-90.00	-2,392.13	-2,232.12	6,445.03	6,203.47	241.55	26.681				
12,000.00	7,579.00	7,560.00	7,560.00	150.58	151.67	-90.00	-2,392.13	-2,232.12	6,504.48	6,262.26	242.22	26.854				
12,100.00	7,579.00	7,560.00	7,560.00	153.00	151.67	-90.00	-2,392.13	-2,232.12	6,564.92	6,322.06	242.87	27.031				
12,200.00	7,579.00	7,560.00	7,560.00	155.43	151.67	-90.00	-2,392.13	-2,232.12	6,626.32	6,382.83	243.49	27.214				
12,300.00	7,579.00	7,560.00	7,560.00	157.87	151.67	-90.00	-2,392.13	-2,232.12	6,688.65	6,444.55	244.10	27.401				
12,400.00	7,579.00	7,560.00	7,560.00	160.32	151.67	-90.00	-2,392.13	-2,232.12	6,751.89	6,507.20	244.69	27.594				
12,500.00	7,579.00	7,560.00	7,560.00	162.78	151.67	-90.00	-2,392.13	-2,232.12	6,816.01	6,570.74	245.26	27.791				
12,600.00	7,579.00	7,560.00	7,560.00	165.25	151.67	-90.00	-2,392.13	-2,232.12	6,880.98	6,635.16	245.82	27.992				
12,700.00	7,579.00	7,560.00	7,560.00	167.73	151.67	-90.00	-2,392.13	-2,232.12	6,946.78	6,700.43	246.35	28.198				
12,800.00	7,579.00	7,560.00	7,560.00	170.21	151.67	-90.00	-2,392.13	-2,232.12	7,013.40	6,766.52	246.87	28.409				
12,900.00	7,579.00	7,560.00	7,560.00	172.70	151.67	-90.00	-2,392.13	-2,232.12	7,080.80	6,833.42	247.38	28.623				
13,000.00	7,579.00	7,560.00	7,560.00	175.19	151.67	-90.00	-2,392.13	-2,232.12	7,148.96	6,901.09	247.87	28.842				
13,100.00	7,579.00	7,560.00	7,560.00	177.70	151.67	-90.00	-2,392.13	-2,232.12	7,217.86	6,969.52	248.34	29.065				
13,200.00	7,579.00	7,560.00	7,560.00	180.20	151.67	-90.00	-2,392.13	-2,232.12	7,287.49	7,038.69	248.80	29.291				
13,300.00	7,579.00	7,560.00	7,560.00	182.72	151.67	-90.00	-2,392.13	-2,232.12	7,357.81	7,108.57	249.24	29.521				
13,400.00	7,579.00	7,560.00	7,560.00	185.24	151.67	-90.00	-2,392.13	-2,232.12	7,428.82	7,179.15	249.67	29.755				
13,500.00	7,579.00	7,560.00	7,560.00	187.76	151.67	-90.00	-2,392.13	-2,232.12	7,500.48	7,250.40	250.09	29.992				
13,600.00	7,579.00	7,560.00	7,560.00	190.30	151.67	-90.00	-2,392.13	-2,232.12	7,572.79	7,322.30	250.49	30.232				
13,700.00	7,579.00	7,560.00	7,560.00	192.83	151.67	-90.00	-2,392.13	-2,232.12	7,645.72	7,394.85	250.88	30.476				
13,800.00	7,579.00	7,560.00	7,560.00	195.37	151.67	-90.00	-2,392.13	-2,232.12	7,719.26	7,468.01	251.26	30.723				
13,900.00	7,579.00	7,560.00	7,560.00	197.92	151.67	-90.00	-2,392.13	-2,232.12	7,793.39	7,541.77	251.62	30.973				
14,000.00	7,579.00	7,560.00	7,560.00	200.47	151.67	-90.00	-2,392.13	-2,232.12	7,868.09	7,616.12	251.97	31.226				
14,100.00	7,579.00	7,560.00	7,560.00	203.02	151.67	-90.00	-2,392.13	-2,232.12	7,943.35	7,691.03	252.32	31.482				
14,200.00	7,579.00	7,560.00	7,560.00	205.58	151.67	-90.00	-2,392.13	-2,232.12	8,019.15	7,766.50	252.65	31.740				
14,300.00	7,579.00	7,560.00	7,560.00	208.14	151.67	-90.00	-2,392.13	-2,232.12	8,095.47	7,842.50	252.97	32.001				
14,400.00	7,579.00	7,560.00	7,560.00	210.70	151.67	-90.00	-2,392.13	-2,232.12	8,172.31	7,919.02	253.28	32.265				
14,500.00	7,579.00	7,560.00	7,560.00	213.27	151.67	-90.00	-2,392.13	-2,232.12	8,249.64	7,996.05	253.59	32.532				
14,600.00	7,579.00	7,560.00	7,560.00	215.84	151.67	-90.00	-2,392.13	-2,232.12	8,327.45	8,073.58	253.88	32.801				
14,700.00	7,579.00	7,560.00	7,560.00	218.42	151.67	-90.00	-2,392.13	-2,232.12	8,405.74	8,151.57	254.16	33.072				
14,800.00	7,579.00	7,560.00	7,560.00	221.00	151.67	-90.00	-2,392.13	-2,232.12	8,484.48	8,230.04	254.44	33.346				
14,900.00	7,579.00	7,560.00	7,560.00	223.58	151.67	-90.00	-2,392.13	-2,232.12	8,563.66	8,308.96	254.70	33.622				
15,000.00	7,579.00	7,560.00	7,560.00	226.17	151.67	-90.00	-2,392.13	-2,232.12	8,643.28	8,388.31	254.96	33.900				
15,100.00	7,579.00	7,560.00	7,560.00	228.75	151.67	-90.00	-2,392.13	-2,232.12	8,723.31	8,468.10	255.21	34.180				
15,200.00	7,579.00	7,560.00	7,560.00	231.34	151.67	-90.00	-2,392.13	-2,232.12	8,803.75	8,548.30	255.46	34.463				
15,300.00	7,579.00	7,560.00	7,560.00	233.94	151.67	-90.00	-2,392.13	-2,232.12	8,884.59	8,628.90	255.69	34.747				
15,400.00	7,579.00	7,560.00	7,560.00	236.53	151.67	-90.00	-2,392.13	-2,232.12	8,965.82	8,709.90	255.92	35.034				
15,500.00	7,579.00	7,560.00	7,560.00	239.13	151.67	-90.00	-2,392.13	-2,232.12	9,047.42	8,791.28	256.14	35.322				

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft	
Survey Program: 0-INC												Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
15,600.00	7,579.00	7,560.00	7,560.00	241.73	151.67	-90.00	-2,392.13	-2,232.12	9,129.39	8,873.03	256.36	35.612		
15,700.00	7,579.00	7,560.00	7,560.00	244.34	151.67	-90.00	-2,392.13	-2,232.12	9,211.72	8,955.15	256.57	35.904		
15,800.00	7,579.00	7,560.00	7,560.00	246.94	151.67	-90.00	-2,392.13	-2,232.12	9,294.39	9,037.62	256.77	36.197		
15,900.00	7,579.00	7,560.00	7,560.00	249.55	151.67	-90.00	-2,392.13	-2,232.12	9,377.40	9,120.43	256.97	36.492		
16,000.00	7,579.00	7,560.00	7,560.00	252.16	151.67	-90.00	-2,392.13	-2,232.12	9,460.74	9,203.57	257.16	36.789		
16,100.00	7,579.00	7,560.00	7,560.00	254.77	151.67	-90.00	-2,392.13	-2,232.12	9,544.39	9,287.05	257.35	37.088		
16,200.00	7,579.00	7,560.00	7,560.00	257.38	151.67	-90.00	-2,392.13	-2,232.12	9,628.36	9,370.83	257.53	37.388		
16,300.00	7,579.00	7,560.00	7,560.00	260.00	151.67	-90.00	-2,392.13	-2,232.12	9,712.64	9,454.93	257.71	37.689		
16,400.00	7,579.00	7,560.00	7,560.00	262.62	151.67	-90.00	-2,392.13	-2,232.12	9,797.21	9,539.33	257.88	37.992		
16,500.00	7,579.00	7,560.00	7,560.00	265.24	151.67	-90.00	-2,392.13	-2,232.12	9,882.06	9,624.02	258.04	38.296		
16,600.00	7,579.00	7,560.00	7,560.00	267.86	151.67	-90.00	-2,392.13	-2,232.12	9,967.20	9,709.00	258.21	38.602		

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 24-T1S-R66W - EXIST VERT D G H L 1 - Wellbore #1 - Design #1	Offset Site Error:	0.00 usft
Survey Program: 0-INC														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	34.00	34.00	0.00	0.40	-153.90	-5,712.15	-2,798.24	6,360.73						
100.00	100.00	134.00	134.00	0.13	1.95	-153.90	-5,712.15	-2,798.24	6,360.73	6,358.64	2.09	3,048.488	CC		
200.00	199.98	233.98	233.98	0.49	4.17	-111.49	-5,712.15	-2,798.24	6,361.37	6,356.70	4.67	1,363.283			
300.00	299.84	333.84	333.84	0.86	6.24	-111.50	-5,712.15	-2,798.24	6,363.29	6,356.19	7.09	896.911	ES		
400.00	399.45	433.45	433.45	1.23	8.27	-111.51	-5,712.15	-2,798.24	6,366.49	6,356.99	9.50	670.048			
500.00	498.70	532.70	532.70	1.63	10.28	-111.53	-5,712.15	-2,798.24	6,370.99	6,359.08	11.91	535.041			
600.00	597.47	631.47	631.47	2.05	12.28	-111.55	-5,712.15	-2,798.24	6,376.80	6,362.48	14.32	445.280			
700.00	695.62	729.62	729.62	2.50	14.26	-111.57	-5,712.15	-2,798.24	6,383.92	6,367.18	16.75	381.208			
800.00	793.06	827.06	827.06	2.99	16.22	-111.60	-5,712.15	-2,798.24	6,392.39	6,373.20	19.19	333.149			
900.00	889.64	923.64	923.64	3.52	18.17	-111.63	-5,712.15	-2,798.24	6,402.21	6,380.56	21.65	295.760			
1,000.00	985.27	1,019.27	1,019.27	4.10	20.10	-111.65	-5,712.15	-2,798.24	6,413.41	6,389.29	24.12	265.843			
1,100.00	1,079.82	1,113.82	1,113.82	4.72	22.00	-111.67	-5,712.15	-2,798.24	6,426.02	6,399.40	26.62	241.371			
1,200.00	1,173.17	1,207.17	1,207.17	5.40	23.88	-111.69	-5,712.15	-2,798.24	6,440.06	6,410.92	29.14	220.991			
1,300.00	1,265.21	1,300.79	1,299.21	6.13	25.76	-111.70	-5,712.15	-2,798.24	6,455.57	6,423.85	31.71	203.567			
1,400.00	1,355.84	1,389.84	1,389.84	6.92	27.56	-111.70	-5,712.15	-2,798.24	6,472.56	6,438.32	34.24	189.039			
1,500.00	1,444.94	1,478.94	1,478.94	7.77	29.35	-111.68	-5,712.15	-2,798.24	6,491.06	6,454.25	36.82	176.308			
1,600.00	1,532.44	1,566.44	1,566.44	8.68	31.11	-111.75	-5,712.15	-2,798.24	6,511.09	6,471.68	39.41	165.213			
1,700.00	1,619.43	1,653.43	1,653.43	9.62	32.86	-112.10	-5,712.15	-2,798.24	6,531.80	6,489.78	42.01	155.468			
1,800.00	1,706.42	1,740.42	1,740.42	10.56	34.61	-112.46	-5,712.15	-2,798.24	6,552.81	6,508.19	44.62	146.850			
1,900.00	1,793.42	1,827.42	1,827.42	11.52	36.36	-112.81	-5,712.15	-2,798.24	6,574.13	6,526.89	47.23	139.182			
2,000.00	1,880.41	1,914.41	1,914.41	12.48	38.11	-113.16	-5,712.15	-2,798.24	6,595.74	6,545.90	49.85	132.321			
2,100.00	1,967.40	2,001.40	2,001.40	13.45	39.86	-113.51	-5,712.15	-2,798.24	6,617.66	6,565.20	52.46	126.149			
2,200.00	2,054.39	2,088.39	2,088.39	14.42	41.61	-113.86	-5,712.15	-2,798.24	6,639.87	6,584.80	55.07	120.570			
2,300.00	2,141.39	2,175.39	2,175.39	15.39	43.36	-114.21	-5,712.15	-2,798.24	6,662.37	6,604.69	57.68	115.506			
2,400.00	2,228.38	2,262.38	2,262.38	16.36	45.11	-114.55	-5,712.15	-2,798.24	6,685.15	6,624.87	60.29	110.888			
2,500.00	2,315.37	2,349.37	2,349.37	17.34	46.86	-114.90	-5,712.15	-2,798.24	6,708.23	6,645.33	62.89	106.663			
2,600.00	2,402.37	2,436.37	2,436.37	18.32	48.61	-115.24	-5,712.15	-2,798.24	6,731.58	6,666.09	65.49	102.783			
2,700.00	2,489.36	2,523.36	2,523.36	19.30	50.36	-115.58	-5,712.15	-2,798.24	6,755.21	6,687.12	68.09	99.209			
2,800.00	2,576.35	2,610.35	2,610.35	20.28	52.11	-115.91	-5,712.15	-2,798.24	6,779.12	6,708.44	70.68	95.906			
2,900.00	2,663.34	2,702.66	2,697.34	21.26	53.97	-116.25	-5,712.15	-2,798.24	6,803.31	6,729.93	73.38	92.710			
3,000.00	2,750.34	2,784.34	2,784.34	22.24	55.61	-116.58	-5,712.15	-2,798.24	6,827.76	6,751.90	75.86	90.002			
3,100.00	2,837.33	2,871.33	2,871.33	23.23	57.36	-116.91	-5,712.15	-2,798.24	6,852.48	6,774.04	78.44	87.355			
3,200.00	2,924.32	2,958.32	2,958.32	24.21	59.11	-117.24	-5,712.15	-2,798.24	6,877.47	6,796.45	81.02	84.883			
3,300.00	3,011.31	3,045.31	3,045.31	25.20	60.86	-117.57	-5,712.15	-2,798.24	6,902.72	6,819.12	83.60	82.572			
3,400.00	3,098.31	3,132.31	3,132.31	26.18	62.61	-117.89	-5,712.15	-2,798.24	6,928.23	6,842.06	86.17	80.405			
3,500.00	3,185.30	3,219.30	3,219.30	27.17	64.36	-118.22	-5,712.15	-2,798.24	6,953.99	6,865.26	88.73	78.371			
3,600.00	3,272.29	3,306.29	3,306.29	28.16	66.11	-118.54	-5,712.15	-2,798.24	6,980.01	6,888.72	91.29	76.458			
3,700.00	3,359.28	3,406.71	3,393.29	29.14	68.13	-118.86	-5,712.15	-2,798.24	7,006.28	6,912.16	94.12	74.441			
3,800.00	3,446.28	3,480.28	3,480.28	30.13	69.61	-119.18	-5,712.15	-2,798.24	7,032.79	6,936.39	96.40	72.954			
3,900.00	3,533.27	3,567.27	3,567.27	31.12	71.36	-119.49	-5,712.15	-2,798.24	7,059.55	6,960.61	98.95	71.346			
4,000.00	3,620.26	3,654.26	3,654.26	32.10	73.11	-119.81	-5,712.15	-2,798.24	7,086.56	6,985.07	101.49	69.825			
4,100.00	3,707.26	3,741.26	3,741.26	33.09	74.86	-120.12	-5,712.15	-2,798.24	7,113.80	7,009.77	104.03	68.383			
4,200.00	3,794.25	3,828.25	3,828.25	34.08	76.61	-120.43	-5,712.15	-2,798.24	7,141.28	7,034.72	106.56	67.015			
4,300.00	3,881.24	3,915.24	3,915.24	35.07	78.36	-120.73	-5,712.15	-2,798.24	7,168.99	7,059.90	109.09	65.715			
4,400.00	3,968.23	4,002.23	4,002.23	36.06	80.11	-121.04	-5,712.15	-2,798.24	7,196.94	7,085.32	111.62	64.479			
4,500.00	4,055.23	4,089.23	4,089.23	37.05	81.85	-121.34	-5,712.15	-2,798.24	7,225.11	7,110.97	114.14	63.303			
4,600.00	4,142.22	4,176.22	4,176.22	38.04	83.60	-121.65	-5,712.15	-2,798.24	7,253.51	7,136.86	116.65	62.181			
4,700.00	4,229.21	4,263.21	4,263.21	39.03	85.35	-121.95	-5,712.15	-2,798.24	7,282.13	7,162.97	119.16	61.111			
4,800.00	4,316.21	4,350.21	4,350.21	40.02	87.10	-122.24	-5,712.15	-2,798.24	7,310.97	7,189.30	121.67	60.089			
4,900.00	4,403.20	4,437.20	4,437.20	41.01	88.85	-122.54	-5,712.15	-2,798.24	7,340.03	7,215.86	124.17	59.112			
5,000.00	4,490.19	4,524.19	4,524.19	42.00	90.60	-122.84	-5,712.15	-2,798.24	7,369.31	7,242.64	126.67	58.178			
5,100.00	4,577.18	4,611.18	4,611.18	42.99	92.35	-123.13	-5,712.15	-2,798.24	7,398.80	7,269.64	129.16	57.283			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 24-T1S-R66W - EXIST VERT D G H L 1 - Wellbore #1 - Design #1	Offset Site Error:	0.00 usft
Survey Program: 0-INC														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,200.00	4,664.18	4,701.82	4,698.18	43.98	94.17	-123.42	-5,712.15	-2,798.24	7,428.50	7,296.77	131.72	56.395			
5,300.00	4,751.17	4,785.17	4,785.17	44.97	95.85	-123.71	-5,712.15	-2,798.24	7,458.40	7,324.27	134.13	55.604			
5,400.00	4,838.16	4,872.16	4,872.16	45.96	97.60	-123.99	-5,712.15	-2,798.24	7,488.52	7,351.90	136.61	54.815			
5,500.00	4,925.15	4,959.15	4,959.15	46.95	99.35	-124.28	-5,712.15	-2,798.24	7,518.83	7,379.74	139.09	54.058			
5,600.00	5,012.15	5,046.15	5,046.15	47.94	101.10	-124.56	-5,712.15	-2,798.24	7,549.35	7,407.79	141.56	53.330			
5,700.00	5,099.14	5,133.14	5,133.14	48.93	102.85	-124.84	-5,712.15	-2,798.24	7,580.06	7,436.03	144.03	52.630			
5,800.00	5,186.13	5,220.13	5,220.13	49.92	104.60	-125.12	-5,712.15	-2,798.24	7,610.97	7,464.48	146.49	51.956			
5,900.00	5,273.13	5,307.13	5,307.13	50.91	106.35	-125.40	-5,712.15	-2,798.24	7,642.07	7,493.13	148.95	51.307			
6,000.00	5,360.12	5,405.88	5,394.12	51.90	108.33	-125.67	-5,712.15	-2,798.24	7,673.37	7,521.73	151.64	50.603			
6,100.00	5,447.11	5,481.11	5,481.11	52.89	109.85	-125.94	-5,712.15	-2,798.24	7,704.85	7,551.00	153.85	50.080			
6,200.00	5,534.10	5,568.10	5,568.10	53.88	111.60	-126.22	-5,712.15	-2,798.24	7,736.52	7,580.22	156.30	49.499			
6,300.00	5,621.10	5,655.10	5,655.10	54.87	113.35	-126.49	-5,712.15	-2,798.24	7,768.37	7,609.63	158.74	48.938			
6,400.00	5,708.09	5,742.09	5,742.09	55.86	115.10	-126.75	-5,712.15	-2,798.24	7,800.40	7,639.23	161.18	48.397			
6,500.00	5,795.08	5,829.08	5,829.08	56.85	116.84	-127.02	-5,712.15	-2,798.24	7,832.62	7,669.01	163.61	47.874			
6,600.00	5,882.07	5,916.07	5,916.07	57.84	118.59	-127.28	-5,712.15	-2,798.24	7,865.01	7,698.97	166.04	47.368			
6,700.00	5,969.07	6,003.07	6,003.07	58.83	120.34	-127.54	-5,712.15	-2,798.24	7,897.57	7,729.11	168.47	46.880			
6,800.00	6,056.06	6,109.94	6,090.06	59.83	122.49	-127.80	-5,712.15	-2,798.24	7,930.31	7,759.03	171.29	46.298			
6,900.00	6,143.05	6,177.05	6,177.05	60.82	123.84	-128.06	-5,712.15	-2,798.24	7,963.22	7,789.92	173.30	45.949			
7,000.00	6,230.05	6,264.05	6,264.05	61.81	125.59	-128.32	-5,712.15	-2,798.24	7,996.30	7,820.58	175.72	45.506			
7,100.00	6,317.04	6,351.04	6,351.04	62.80	127.34	-128.57	-5,712.15	-2,798.24	8,029.55	7,851.42	178.13	45.077			
7,200.00	6,404.03	6,438.03	6,438.03	63.79	129.09	-128.83	-5,712.15	-2,798.24	8,062.96	7,882.42	180.54	44.661			
7,300.00	6,491.02	6,525.02	6,525.02	64.78	130.84	-129.08	-5,712.15	-2,798.24	8,096.53	7,913.59	182.94	44.258			
7,400.00	6,578.02	6,612.02	6,612.02	65.77	132.59	-129.33	-5,712.15	-2,798.24	8,130.26	7,944.93	185.34	43.867			
7,500.00	6,665.01	6,700.99	6,699.01	66.76	134.38	-129.58	-5,712.15	-2,798.24	8,164.16	7,976.38	187.77	43.479			
7,600.00	6,752.00	6,786.00	6,786.00	67.76	136.09	-129.82	-5,712.15	-2,798.24	8,198.20	8,008.08	190.13	43.120			
7,700.00	6,838.99	6,872.99	6,872.99	68.75	137.84	-130.07	-5,712.15	-2,798.24	8,232.41	8,039.89	192.52	42.762			
7,800.00	6,925.99	6,959.99	6,959.99	69.74	139.59	-130.31	-5,712.15	-2,798.24	8,266.76	8,071.86	194.90	42.415			
7,900.00	7,012.98	7,046.98	7,046.98	70.73	141.34	-130.55	-5,712.15	-2,798.24	8,301.27	8,103.99	197.28	42.078			
8,000.00	7,099.97	7,133.97	7,133.97	71.72	143.09	-130.79	-5,712.15	-2,798.24	8,335.92	8,136.26	199.66	41.750			
8,100.00	7,186.97	7,220.97	7,220.97	72.71	144.84	-131.02	-5,712.15	-2,798.24	8,370.73	8,168.69	202.04	41.432			
8,200.00	7,273.96	7,307.96	7,307.96	73.74	146.57	-122.65	-5,712.15	-2,798.24	8,405.21	8,200.79	204.42	41.117			
8,300.00	7,352.95	7,386.95	7,386.95	74.97	148.17	-111.09	-5,712.15	-2,798.24	8,436.77	8,229.89	206.88	40.780			
8,400.00	7,423.63	7,457.63	7,457.63	76.39	149.59	-103.15	-5,712.15	-2,798.24	8,464.41	8,255.04	209.38	40.427			
8,500.00	7,482.96	7,516.96	7,516.96	77.96	150.79	-97.65	-5,712.15	-2,798.24	8,487.60	8,275.77	211.83	40.069			
8,600.00	7,529.15	7,563.15	7,563.15	79.64	151.72	-93.89	-5,712.15	-2,798.24	8,505.92	8,291.75	214.16	39.717			
8,700.00	7,560.79	7,605.21	7,594.79	81.35	152.56	-91.49	-5,712.15	-2,798.24	8,519.06	8,302.55	216.52	39.346			
8,800.00	7,576.92	7,610.92	7,610.92	83.05	152.68	-90.24	-5,712.15	-2,798.24	8,526.83	8,308.66	218.17	39.083			
8,900.00	7,579.00	7,613.00	7,613.00	84.68	152.72	-90.00	-5,712.15	-2,798.24	8,529.90	8,310.15	219.75	38.817			
9,000.00	7,579.00	7,613.00	7,613.00	86.34	152.72	-90.00	-5,712.15	-2,798.24	8,533.27	8,311.97	221.30	38.560			
9,100.00	7,579.00	7,613.00	7,613.00	88.04	152.72	-90.00	-5,712.15	-2,798.24	8,537.81	8,314.94	222.88	38.307			
9,200.00	7,579.00	7,613.00	7,613.00	89.80	152.72	-90.00	-5,712.15	-2,798.24	8,543.52	8,319.05	224.48	38.060			
9,300.00	7,579.00	7,613.00	7,613.00	91.59	152.72	-90.00	-5,712.15	-2,798.24	8,550.40	8,324.30	226.10	37.817			
9,400.00	7,579.00	7,613.00	7,613.00	93.42	152.72	-90.00	-5,712.15	-2,798.24	8,558.44	8,330.70	227.73	37.581			
9,500.00	7,579.00	7,613.00	7,613.00	95.30	152.72	-90.00	-5,712.15	-2,798.24	8,567.64	8,338.25	229.39	37.350			
9,600.00	7,579.00	7,613.00	7,613.00	97.21	152.72	-90.00	-5,712.15	-2,798.24	8,577.99	8,346.94	231.05	37.126			
9,700.00	7,579.00	7,613.00	7,613.00	99.15	152.72	-90.00	-5,712.15	-2,798.24	8,589.50	8,356.78	232.72	36.909			
9,800.00	7,579.00	7,613.00	7,613.00	101.13	152.72	-90.00	-5,712.15	-2,798.24	8,602.15	8,367.75	234.40	36.698			
9,900.00	7,579.00	7,613.00	7,613.00	103.15	152.72	-90.00	-5,712.15	-2,798.24	8,615.95	8,379.86	236.09	36.495			
10,000.00	7,579.00	7,613.00	7,613.00	105.19	152.72	-90.00	-5,712.15	-2,798.24	8,630.88	8,393.11	237.77	36.299			
10,100.00	7,579.00	7,613.00	7,613.00	107.26	152.72	-90.00	-5,712.15	-2,798.24	8,646.94	8,407.48	239.46	36.110			
10,200.00	7,579.00	7,613.00	7,613.00	109.36	152.72	-90.00	-5,712.15	-2,798.24	8,664.13	8,422.98	241.15	35.928			
10,300.00	7,579.00	7,613.00	7,613.00	111.49	152.72	-90.00	-5,712.15	-2,798.24	8,682.44	8,439.60	242.84	35.754			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-INC													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,400.00	7,579.00	7,613.00	7,613.00	113.64	152.72	-90.00	-5,712.15	-2,798.24	8,701.85	8,457.33	244.52	35.587		
10,500.00	7,579.00	7,613.00	7,613.00	115.82	152.72	-90.00	-5,712.15	-2,798.24	8,722.37	8,476.17	246.20	35.428		
10,600.00	7,579.00	7,613.00	7,613.00	118.01	152.72	-90.00	-5,712.15	-2,798.24	8,743.99	8,496.11	247.87	35.276		
10,700.00	7,579.00	7,613.00	7,613.00	120.23	152.72	-90.00	-5,712.15	-2,798.24	8,766.69	8,517.15	249.54	35.132		
10,800.00	7,579.00	7,613.00	7,613.00	122.47	152.72	-90.00	-5,712.15	-2,798.24	8,790.47	8,539.28	251.19	34.995		
10,900.00	7,579.00	7,613.00	7,613.00	124.73	152.72	-90.00	-5,712.15	-2,798.24	8,815.32	8,562.49	252.84	34.866		
11,000.00	7,579.00	7,613.00	7,613.00	127.01	152.72	-90.00	-5,712.15	-2,798.24	8,841.24	8,586.77	254.47	34.743		
11,100.00	7,579.00	7,613.00	7,613.00	129.30	152.72	-90.00	-5,712.15	-2,798.24	8,868.20	8,612.11	256.09	34.629		
11,200.00	7,579.00	7,613.00	7,613.00	131.61	152.72	-90.00	-5,712.15	-2,798.24	8,896.21	8,638.51	257.70	34.521		
11,300.00	7,579.00	7,613.00	7,613.00	133.93	152.72	-90.00	-5,712.15	-2,798.24	8,925.25	8,665.95	259.30	34.421		
11,400.00	7,579.00	7,613.00	7,613.00	136.27	152.72	-90.00	-5,712.15	-2,798.24	8,955.31	8,694.43	260.88	34.327		
11,500.00	7,579.00	7,613.00	7,613.00	138.62	152.72	-90.00	-5,712.15	-2,798.24	8,986.39	8,723.94	262.45	34.241		
11,600.00	7,579.00	7,613.00	7,613.00	140.99	152.72	-90.00	-5,712.15	-2,798.24	9,018.47	8,754.47	264.00	34.161		
11,700.00	7,579.00	7,613.00	7,613.00	143.37	152.72	-90.00	-5,712.15	-2,798.24	9,051.53	8,786.00	265.53	34.088		
11,800.00	7,579.00	7,613.00	7,613.00	145.76	152.72	-90.00	-5,712.15	-2,798.24	9,085.58	8,818.53	267.05	34.022		
11,900.00	7,579.00	7,613.00	7,613.00	148.16	152.72	-90.00	-5,712.15	-2,798.24	9,120.60	8,852.05	268.55	33.962		
12,000.00	7,579.00	7,613.00	7,613.00	150.58	152.72	-90.00	-5,712.15	-2,798.24	9,156.58	8,886.54	270.03	33.909		
12,100.00	7,579.00	7,613.00	7,613.00	153.00	152.72	-90.00	-5,712.15	-2,798.24	9,193.50	8,922.00	271.50	33.862		
12,200.00	7,579.00	7,613.00	7,613.00	155.43	152.72	-90.00	-5,712.15	-2,798.24	9,231.36	8,958.41	272.94	33.821		
12,300.00	7,579.00	7,613.00	7,613.00	157.87	152.72	-90.00	-5,712.15	-2,798.24	9,270.14	8,995.77	274.37	33.787		
12,400.00	7,579.00	7,613.00	7,613.00	160.32	152.72	-90.00	-5,712.15	-2,798.24	9,309.83	9,034.05	275.78	33.758		
12,500.00	7,579.00	7,613.00	7,613.00	162.78	152.72	-90.00	-5,712.15	-2,798.24	9,350.43	9,073.26	277.17	33.735		
12,600.00	7,579.00	7,613.00	7,613.00	165.25	152.72	-90.00	-5,712.15	-2,798.24	9,391.92	9,113.38	278.54	33.719		
12,700.00	7,579.00	7,613.00	7,613.00	167.73	152.72	-90.00	-5,712.15	-2,798.24	9,434.28	9,154.39	279.89	33.707		
12,800.00	7,579.00	7,613.00	7,613.00	170.21	152.72	-90.00	-5,712.15	-2,798.24	9,477.51	9,196.29	281.22	33.702		
12,900.00	7,579.00	7,613.00	7,613.00	172.70	152.72	-90.00	-5,712.15	-2,798.24	9,521.59	9,239.06	282.53	33.701 SF		
13,000.00	7,579.00	7,613.00	7,613.00	175.19	152.72	-90.00	-5,712.15	-2,798.24	9,566.52	9,282.70	283.82	33.706		
13,100.00	7,579.00	7,613.00	7,613.00	177.70	152.72	-90.00	-5,712.15	-2,798.24	9,612.27	9,327.18	285.09	33.717		
13,200.00	7,579.00	7,613.00	7,613.00	180.20	152.72	-90.00	-5,712.15	-2,798.24	9,658.85	9,372.51	286.34	33.732		
13,300.00	7,579.00	7,613.00	7,613.00	182.72	152.72	-90.00	-5,712.15	-2,798.24	9,706.23	9,418.66	287.57	33.752		
13,400.00	7,579.00	7,613.00	7,613.00	185.24	152.72	-90.00	-5,712.15	-2,798.24	9,754.40	9,465.62	288.78	33.778		
13,500.00	7,579.00	7,613.00	7,613.00	187.76	152.72	-90.00	-5,712.15	-2,798.24	9,803.36	9,513.39	289.97	33.808		
13,600.00	7,579.00	7,613.00	7,613.00	190.30	152.72	-90.00	-5,712.15	-2,798.24	9,853.10	9,561.95	291.14	33.843		
13,700.00	7,579.00	7,613.00	7,613.00	192.83	152.72	-90.00	-5,712.15	-2,798.24	9,903.59	9,611.29	292.29	33.882		
13,800.00	7,579.00	7,613.00	7,613.00	195.37	152.72	-90.00	-5,712.15	-2,798.24	9,954.83	9,661.40	293.43	33.926		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-INC													Offset Well Error:	0.00 usft
Reference				Offset			Semi Major Axis		Distance				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	5.00	5.00	0.00	0.06	-174.61	-2,974.36	-280.63	2,987.57					
100.00	100.00	105.00	105.00	0.13	1.29	-174.61	-2,974.36	-280.63	2,987.57	2,986.15	1.42	2,102.737	CC	
200.00	199.98	204.98	204.98	0.49	3.57	-132.20	-2,974.36	-280.63	2,988.74	2,984.68	4.06	735.373	ES	
300.00	299.84	304.84	304.84	0.86	5.64	-132.23	-2,974.36	-280.63	2,992.26	2,985.76	6.50	460.006		
400.00	399.45	404.45	404.45	1.23	7.68	-132.26	-2,974.36	-280.63	2,998.13	2,989.22	8.91	336.359		
500.00	498.70	503.70	503.70	1.63	9.69	-132.31	-2,974.36	-280.63	3,006.37	2,995.05	11.31	265.725		
600.00	597.47	602.47	602.47	2.05	11.69	-132.37	-2,974.36	-280.63	3,016.98	3,003.26	13.71	219.999		
700.00	695.62	700.62	700.62	2.50	13.67	-132.44	-2,974.36	-280.63	3,029.97	3,013.86	16.12	188.007		
800.00	793.06	801.94	798.06	2.99	15.72	-132.52	-2,974.36	-280.63	3,045.38	3,026.78	18.60	163.712		
900.00	889.64	905.36	894.64	3.52	17.80	-132.61	-2,974.36	-280.63	3,063.22	3,042.06	21.15	144.818		
1,000.00	985.27	1,009.73	990.27	4.10	19.90	-132.69	-2,974.36	-280.63	3,083.50	3,059.75	23.75	129.852		
1,100.00	1,079.82	1,084.82	1,084.82	4.72	21.42	-132.78	-2,974.36	-280.63	3,106.25	3,080.48	25.78	120.506		
1,200.00	1,173.17	1,178.17	1,178.17	5.40	23.30	-132.86	-2,974.36	-280.63	3,131.50	3,103.30	28.20	111.035		
1,300.00	1,265.21	1,270.21	1,270.21	6.13	25.15	-132.94	-2,974.36	-280.63	3,159.26	3,128.63	30.63	103.140		
1,400.00	1,355.84	1,360.84	1,360.84	6.92	26.97	-133.00	-2,974.36	-280.63	3,189.56	3,156.50	33.06	96.483		
1,500.00	1,444.94	1,449.94	1,449.94	7.77	28.77	-133.05	-2,974.36	-280.63	3,222.40	3,186.91	35.48	90.816		
1,600.00	1,532.44	1,537.44	1,537.44	8.68	30.53	-133.21	-2,974.36	-280.63	3,257.75	3,219.84	37.90	85.951		
1,700.00	1,619.43	1,624.43	1,624.43	9.62	32.28	-133.80	-2,974.36	-280.63	3,294.10	3,253.79	40.31	81.710		
1,800.00	1,706.42	1,711.42	1,711.42	10.56	34.03	-134.37	-2,974.36	-280.63	3,330.80	3,288.07	42.73	77.957		
1,900.00	1,793.42	1,801.58	1,798.42	11.52	35.84	-134.93	-2,974.36	-280.63	3,367.81	3,322.61	45.20	74.511		
2,000.00	1,880.41	1,885.41	1,885.41	12.48	37.53	-135.49	-2,974.36	-280.63	3,405.14	3,357.60	47.54	71.627		
2,100.00	1,967.40	1,972.40	1,972.40	13.45	39.28	-136.03	-2,974.36	-280.63	3,442.76	3,392.82	49.94	68.937		
2,200.00	2,054.39	2,059.39	2,059.39	14.42	41.03	-136.56	-2,974.36	-280.63	3,480.68	3,428.35	52.34	66.507		
2,300.00	2,141.39	2,146.39	2,146.39	15.39	42.78	-137.08	-2,974.36	-280.63	3,518.89	3,464.16	54.73	64.301		
2,400.00	2,228.38	2,233.38	2,233.38	16.36	44.53	-137.59	-2,974.36	-280.63	3,557.36	3,500.25	57.11	62.290		
2,500.00	2,315.37	2,320.37	2,320.37	17.34	46.28	-138.09	-2,974.36	-280.63	3,596.10	3,536.62	59.49	60.452		
2,600.00	2,402.37	2,407.37	2,407.37	18.32	48.03	-138.58	-2,974.36	-280.63	3,635.10	3,573.24	61.86	58.764		
2,700.00	2,489.36	2,505.64	2,494.36	19.30	50.00	-139.06	-2,974.36	-280.63	3,674.35	3,609.89	64.45	57.009		
2,800.00	2,576.35	2,581.35	2,581.35	20.28	51.53	-139.53	-2,974.36	-280.63	3,713.83	3,647.25	66.58	55.776		
2,900.00	2,663.34	2,668.34	2,668.34	21.26	53.28	-139.99	-2,974.36	-280.63	3,753.55	3,684.61	68.94	54.448		
3,000.00	2,750.34	2,755.34	2,755.34	22.24	55.03	-140.45	-2,974.36	-280.63	3,793.49	3,722.21	71.29	53.215		
3,100.00	2,837.33	2,842.33	2,842.33	23.23	56.78	-140.90	-2,974.36	-280.63	3,833.65	3,760.03	73.63	52.068		
3,200.00	2,924.32	2,929.32	2,929.32	24.21	58.53	-141.33	-2,974.36	-280.63	3,874.03	3,798.06	75.96	50.998		
3,300.00	3,011.31	3,016.31	3,016.31	25.20	60.28	-141.76	-2,974.36	-280.63	3,914.60	3,836.31	78.29	49.998		
3,400.00	3,098.31	3,103.31	3,103.31	26.18	62.03	-142.18	-2,974.36	-280.63	3,955.38	3,874.76	80.62	49.062		
3,500.00	3,185.30	3,209.70	3,190.30	27.17	64.17	-142.60	-2,974.36	-280.63	3,996.35	3,913.02	83.33	47.958		
3,600.00	3,272.29	3,277.29	3,277.29	28.16	65.53	-143.00	-2,974.36	-280.63	4,037.51	3,952.25	85.26	47.358		
3,700.00	3,359.29	3,364.29	3,364.29	29.14	67.28	-143.40	-2,974.36	-280.63	4,078.84	3,991.28	87.57	46.580		
3,800.00	3,446.28	3,451.28	3,451.28	30.13	69.02	-143.79	-2,974.36	-280.63	4,120.36	4,030.48	89.87	45.847		
3,900.00	3,533.27	3,538.27	3,538.27	31.12	70.77	-144.18	-2,974.36	-280.63	4,162.04	4,069.87	92.17	45.155		
4,000.00	3,620.26	3,625.26	3,625.26	32.10	72.52	-144.55	-2,974.36	-280.63	4,203.89	4,109.42	94.47	44.500		
4,100.00	3,707.26	3,712.26	3,712.26	33.09	74.27	-144.92	-2,974.36	-280.63	4,245.90	4,149.14	96.76	43.880		
4,200.00	3,794.25	3,800.75	3,799.25	34.08	76.05	-145.29	-2,974.36	-280.63	4,288.06	4,188.98	99.08	43.279		
4,300.00	3,881.24	3,886.24	3,886.24	35.07	77.77	-145.64	-2,974.36	-280.63	4,330.38	4,229.04	101.33	42.735		
4,400.00	3,968.23	3,973.23	3,973.23	36.06	79.52	-146.00	-2,974.36	-280.63	4,372.84	4,269.23	103.61	42.204		
4,500.00	4,055.23	4,060.23	4,060.23	37.05	81.27	-146.34	-2,974.36	-280.63	4,415.44	4,309.55	105.89	41.699		
4,600.00	4,142.22	4,147.22	4,147.22	38.04	83.02	-146.68	-2,974.36	-280.63	4,458.19	4,350.03	108.16	41.218		
4,700.00	4,229.21	4,234.21	4,234.21	39.03	84.77	-147.01	-2,974.36	-280.63	4,501.06	4,390.63	110.43	40.760		
4,800.00	4,316.21	4,321.21	4,321.21	40.02	86.52	-147.34	-2,974.36	-280.63	4,544.07	4,431.38	112.69	40.322		
4,900.00	4,403.20	4,408.20	4,408.20	41.01	88.27	-147.66	-2,974.36	-280.63	4,587.21	4,472.25	114.96	39.904		
5,000.00	4,490.19	4,504.81	4,495.19	42.00	90.21	-147.97	-2,974.36	-280.63	4,630.47	4,513.06	117.41	39.439		
5,100.00	4,577.18	4,582.18	4,582.18	42.99	91.77	-148.28	-2,974.36	-280.63	4,673.84	4,554.37	119.47	39.121		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-INC													Offset Well Error:		0.00 usft
Reference				Offset		Semi Major Axis			Distance				Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,200.00	4,664.18	4,669.18	4,669.18	43.98	93.52	-148.59	-2,974.36	-280.63	4,717.34	4,595.62	121.72	38.754			
5,300.00	4,751.17	4,756.17	4,756.17	44.97	95.27	-148.89	-2,974.36	-280.63	4,760.95	4,636.97	123.97	38.403			
5,400.00	4,838.16	4,843.16	4,843.16	45.96	97.02	-149.18	-2,974.36	-280.63	4,804.67	4,678.45	126.22	38.065			
5,500.00	4,925.15	4,930.15	4,930.15	46.95	98.77	-149.47	-2,974.36	-280.63	4,848.49	4,720.03	128.47	37.741			
5,600.00	5,012.15	5,017.15	5,017.15	47.94	100.52	-149.75	-2,974.36	-280.63	4,892.43	4,761.72	130.71	37.430			
5,700.00	5,099.14	5,104.14	5,104.14	48.93	102.27	-150.03	-2,974.36	-280.63	4,936.46	4,803.51	132.95	37.130			
5,800.00	5,186.13	5,208.87	5,191.13	49.92	104.37	-150.31	-2,974.36	-280.63	4,980.59	4,845.05	135.54	36.745			
5,900.00	5,273.13	5,278.13	5,278.13	50.91	105.76	-150.58	-2,974.36	-280.63	5,024.82	4,887.40	137.42	36.565			
6,000.00	5,360.12	5,365.12	5,365.12	51.90	107.51	-150.84	-2,974.36	-280.63	5,069.14	4,929.49	139.66	36.298			
6,100.00	5,447.11	5,452.11	5,452.11	52.89	109.26	-151.10	-2,974.36	-280.63	5,113.56	4,971.67	141.89	36.040			
6,200.00	5,534.10	5,539.10	5,539.10	53.88	111.01	-151.36	-2,974.36	-280.63	5,158.06	5,013.94	144.12	35.791			
6,300.00	5,621.10	5,626.10	5,626.10	54.87	112.76	-151.61	-2,974.36	-280.63	5,202.65	5,056.31	146.34	35.551			
6,400.00	5,708.09	5,713.09	5,713.09	55.86	114.51	-151.86	-2,974.36	-280.63	5,247.32	5,098.76	148.57	35.319			
6,500.00	5,795.08	5,800.08	5,800.08	56.85	116.26	-152.11	-2,974.36	-280.63	5,292.08	5,141.29	150.79	35.095			
6,600.00	5,882.07	5,887.07	5,887.07	57.84	118.01	-152.35	-2,974.36	-280.63	5,336.92	5,183.90	153.01	34.879			
6,700.00	5,969.07	5,974.07	5,974.07	58.83	119.76	-152.59	-2,974.36	-280.63	5,381.83	5,226.60	155.23	34.669			
6,800.00	6,056.06	6,061.06	6,061.06	59.83	121.51	-152.82	-2,974.36	-280.63	5,426.83	5,269.37	157.45	34.466			
6,900.00	6,143.05	6,148.05	6,148.05	60.82	123.26	-153.05	-2,974.36	-280.63	5,471.89	5,312.22	159.67	34.270			
7,000.00	6,230.05	6,235.05	6,235.05	61.81	125.01	-153.28	-2,974.36	-280.63	5,517.03	5,355.15	161.89	34.079			
7,100.00	6,317.04	6,322.04	6,322.04	62.80	126.76	-153.50	-2,974.36	-280.63	5,562.24	5,398.14	164.10	33.895			
7,200.00	6,404.03	6,409.03	6,409.03	63.79	128.51	-153.72	-2,974.36	-280.63	5,607.52	5,441.21	166.32	33.716			
7,300.00	6,491.02	6,503.98	6,496.02	64.78	130.42	-153.94	-2,974.36	-280.63	5,652.87	5,484.18	168.69	33.511			
7,400.00	6,578.02	6,583.02	6,583.02	65.77	132.01	-154.15	-2,974.36	-280.63	5,698.28	5,527.54	170.74	33.374			
7,500.00	6,665.01	6,670.01	6,670.01	66.76	133.76	-154.36	-2,974.36	-280.63	5,743.76	5,570.81	172.95	33.211			
7,600.00	6,752.00	6,757.00	6,757.00	67.76	135.51	-154.56	-2,974.36	-280.63	5,789.30	5,614.14	175.16	33.052			
7,700.00	6,838.99	6,843.99	6,843.99	68.75	137.25	-154.77	-2,974.36	-280.63	5,834.90	5,657.54	177.37	32.898			
7,800.00	6,925.99	6,930.99	6,930.99	69.74	139.00	-154.97	-2,974.36	-280.63	5,880.57	5,700.99	179.57	32.748			
7,900.00	7,012.98	7,017.98	7,017.98	70.73	140.75	-155.17	-2,974.36	-280.63	5,926.29	5,744.51	181.78	32.602			
8,000.00	7,099.97	7,104.97	7,104.97	71.72	142.50	-155.36	-2,974.36	-280.63	5,972.06	5,788.08	183.98	32.460			
8,100.00	7,186.97	7,208.03	7,191.97	72.71	144.58	-155.55	-2,974.36	-280.63	6,017.90	5,831.39	186.51	32.266			
8,200.00	7,273.09	7,278.09	7,278.09	73.74	145.98	-146.26	-2,974.36	-280.63	6,064.32	5,875.93	188.39	32.190			
8,300.00	7,352.95	7,357.95	7,357.95	74.97	147.59	-132.39	-2,974.36	-280.63	6,113.50	5,922.94	190.56	32.081			
8,400.00	7,423.63	7,428.63	7,428.63	76.39	149.01	-121.37	-2,974.36	-280.63	6,164.60	5,971.96	192.64	32.000			
8,500.00	7,482.96	7,487.96	7,487.96	77.96	150.20	-112.22	-2,974.36	-280.63	6,216.40	6,021.82	194.58	31.948			
8,600.00	7,529.15	7,534.15	7,534.15	79.64	151.13	-104.43	-2,974.36	-280.63	6,267.66	6,071.36	196.31	31.928 SF			
8,700.00	7,560.79	7,565.79	7,565.79	81.35	151.77	-97.82	-2,974.36	-280.63	6,317.16	6,119.39	197.77	31.942			
8,800.00	7,576.92	7,581.92	7,581.92	83.05	152.09	-92.34	-2,974.36	-280.63	6,363.68	6,164.76	198.92	31.991			
8,900.00	7,579.00	7,584.00	7,584.00	84.68	152.14	-90.00	-2,974.36	-280.63	6,406.75	6,206.98	199.77	32.070			
9,000.00	7,579.00	7,584.00	7,584.00	86.34	152.14	-90.00	-2,974.36	-280.63	6,450.34	6,249.73	200.61	32.154			
9,100.00	7,579.00	7,584.00	7,584.00	88.04	152.14	-90.00	-2,974.36	-280.63	6,495.17	6,293.71	201.46	32.240			
9,200.00	7,579.00	7,584.00	7,584.00	89.80	152.14	-90.00	-2,974.36	-280.63	6,541.22	6,338.89	202.34	32.328			
9,300.00	7,579.00	7,584.00	7,584.00	91.59	152.14	-90.00	-2,974.36	-280.63	6,588.47	6,385.24	203.23	32.419			
9,400.00	7,579.00	7,584.00	7,584.00	93.42	152.14	-90.00	-2,974.36	-280.63	6,636.89	6,432.76	204.14	32.512			
9,500.00	7,579.00	7,584.00	7,584.00	95.30	152.14	-90.00	-2,974.36	-280.63	6,686.46	6,481.41	205.05	32.609			
9,600.00	7,579.00	7,584.00	7,584.00	97.21	152.14	-90.00	-2,974.36	-280.63	6,737.14	6,531.17	205.97	32.709			
9,700.00	7,579.00	7,584.00	7,584.00	99.15	152.14	-90.00	-2,974.36	-280.63	6,788.92	6,582.02	206.90	32.812			
9,800.00	7,579.00	7,584.00	7,584.00	101.13	152.14	-90.00	-2,974.36	-280.63	6,841.77	6,633.94	207.83	32.920			
9,900.00	7,579.00	7,584.00	7,584.00	103.15	152.14	-90.00	-2,974.36	-280.63	6,895.67	6,686.90	208.76	33.031			
10,000.00	7,579.00	7,584.00	7,584.00	105.19	152.14	-90.00	-2,974.36	-280.63	6,950.58	6,740.89	209.69	33.146			
10,100.00	7,579.00	7,584.00	7,584.00	107.26	152.14	-90.00	-2,974.36	-280.63	7,006.50	6,795.87	210.62	33.266			
10,200.00	7,579.00	7,584.00	7,584.00	109.36	152.14	-90.00	-2,974.36	-280.63	7,063.38	6,851.84	211.54	33.390			
10,300.00	7,579.00	7,584.00	7,584.00	111.49	152.14	-90.00	-2,974.36	-280.63	7,121.22	6,908.76	212.46	33.518			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft		
Survey Program: 0-INC													Sec 24-T1S-R66W - SI VERT LEECH 1 - Wellbore #1 - Design #1		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
10,400.00	7,579.00	7,584.00	7,584.00	113.64	152.14	-90.00	-2,974.36	-280.63	7,179.98	6,966.61	213.37	33.650				
10,500.00	7,579.00	7,584.00	7,584.00	115.82	152.14	-90.00	-2,974.36	-280.63	7,239.65	7,025.37	214.27	33.787				
10,600.00	7,579.00	7,584.00	7,584.00	118.01	152.14	-90.00	-2,974.36	-280.63	7,300.19	7,085.03	215.17	33.928				
10,700.00	7,579.00	7,584.00	7,584.00	120.23	152.14	-90.00	-2,974.36	-280.63	7,361.60	7,145.55	216.05	34.073				
10,800.00	7,579.00	7,584.00	7,584.00	122.47	152.14	-90.00	-2,974.36	-280.63	7,423.85	7,206.93	216.93	34.223				
10,900.00	7,579.00	7,584.00	7,584.00	124.73	152.14	-90.00	-2,974.36	-280.63	7,486.92	7,269.13	217.79	34.377				
11,000.00	7,579.00	7,584.00	7,584.00	127.01	152.14	-90.00	-2,974.36	-280.63	7,550.78	7,332.14	218.64	34.535				
11,100.00	7,579.00	7,584.00	7,584.00	129.30	152.14	-90.00	-2,974.36	-280.63	7,615.43	7,395.94	219.48	34.697				
11,200.00	7,579.00	7,584.00	7,584.00	131.61	152.14	-90.00	-2,974.36	-280.63	7,680.83	7,460.51	220.31	34.863				
11,300.00	7,579.00	7,584.00	7,584.00	133.93	152.14	-90.00	-2,974.36	-280.63	7,746.96	7,525.83	221.13	35.034				
11,400.00	7,579.00	7,584.00	7,584.00	136.27	152.14	-90.00	-2,974.36	-280.63	7,813.82	7,591.89	221.93	35.208				
11,500.00	7,579.00	7,584.00	7,584.00	138.62	152.14	-90.00	-2,974.36	-280.63	7,881.38	7,658.66	222.73	35.386				
11,600.00	7,579.00	7,584.00	7,584.00	140.99	152.14	-90.00	-2,974.36	-280.63	7,949.63	7,726.12	223.51	35.568				
11,700.00	7,579.00	7,584.00	7,584.00	143.37	152.14	-90.00	-2,974.36	-280.63	8,018.54	7,794.27	224.27	35.754				
11,800.00	7,579.00	7,584.00	7,584.00	145.76	152.14	-90.00	-2,974.36	-280.63	8,088.10	7,863.07	225.03	35.943				
11,900.00	7,579.00	7,584.00	7,584.00	148.16	152.14	-90.00	-2,974.36	-280.63	8,158.29	7,932.52	225.77	36.136				
12,000.00	7,579.00	7,584.00	7,584.00	150.58	152.14	-90.00	-2,974.36	-280.63	8,229.10	8,002.60	226.50	36.332				
12,100.00	7,579.00	7,584.00	7,584.00	153.00	152.14	-90.00	-2,974.36	-280.63	8,300.51	8,073.30	227.21	36.532				
12,200.00	7,579.00	7,584.00	7,584.00	155.43	152.14	-90.00	-2,974.36	-280.63	8,372.50	8,144.59	227.91	36.735				
12,300.00	7,579.00	7,584.00	7,584.00	157.87	152.14	-90.00	-2,974.36	-280.63	8,445.07	8,216.46	228.61	36.942				
12,400.00	7,579.00	7,584.00	7,584.00	160.32	152.14	-90.00	-2,974.36	-280.63	8,518.19	8,288.91	229.28	37.151				
12,500.00	7,579.00	7,584.00	7,584.00	162.78	152.14	-90.00	-2,974.36	-280.63	8,591.85	8,361.90	229.95	37.364				
12,600.00	7,579.00	7,584.00	7,584.00	165.25	152.14	-90.00	-2,974.36	-280.63	8,666.04	8,435.44	230.60	37.580				
12,700.00	7,579.00	7,584.00	7,584.00	167.73	152.14	-90.00	-2,974.36	-280.63	8,740.75	8,509.50	231.25	37.799				
12,800.00	7,579.00	7,584.00	7,584.00	170.21	152.14	-90.00	-2,974.36	-280.63	8,815.96	8,584.08	231.87	38.020				
12,900.00	7,579.00	7,584.00	7,584.00	172.70	152.14	-90.00	-2,974.36	-280.63	8,891.65	8,659.16	232.49	38.245				
13,000.00	7,579.00	7,584.00	7,584.00	175.19	152.14	-90.00	-2,974.36	-280.63	8,967.82	8,734.72	233.10	38.472				
13,100.00	7,579.00	7,584.00	7,584.00	177.70	152.14	-90.00	-2,974.36	-280.63	9,044.46	8,810.76	233.70	38.702				
13,200.00	7,579.00	7,584.00	7,584.00	180.20	152.14	-90.00	-2,974.36	-280.63	9,121.54	8,887.26	234.28	38.934				
13,300.00	7,579.00	7,584.00	7,584.00	182.72	152.14	-90.00	-2,974.36	-280.63	9,199.07	8,964.22	234.85	39.169				
13,400.00	7,579.00	7,584.00	7,584.00	185.24	152.14	-90.00	-2,974.36	-280.63	9,277.03	9,041.62	235.42	39.407				
13,500.00	7,579.00	7,584.00	7,584.00	187.76	152.14	-90.00	-2,974.36	-280.63	9,355.41	9,119.44	235.97	39.647				
13,600.00	7,579.00	7,584.00	7,584.00	190.30	152.14	-90.00	-2,974.36	-280.63	9,434.20	9,197.69	236.51	39.889				
13,700.00	7,579.00	7,584.00	7,584.00	192.83	152.14	-90.00	-2,974.36	-280.63	9,513.38	9,276.34	237.04	40.134				
13,800.00	7,579.00	7,584.00	7,584.00	195.37	152.14	-90.00	-2,974.36	-280.63	9,592.96	9,355.39	237.56	40.381				
13,900.00	7,579.00	7,584.00	7,584.00	197.92	152.14	-90.00	-2,974.36	-280.63	9,672.91	9,434.83	238.08	40.630				
14,000.00	7,579.00	7,584.00	7,584.00	200.47	152.14	-90.00	-2,974.36	-280.63	9,753.23	9,514.66	238.58	40.881				
14,100.00	7,579.00	7,584.00	7,584.00	203.02	152.14	-90.00	-2,974.36	-280.63	9,833.92	9,594.85	239.07	41.134				
14,200.00	7,579.00	7,584.00	7,584.00	205.58	152.14	-90.00	-2,974.36	-280.63	9,914.95	9,675.40	239.55	41.389				
14,300.00	7,579.00	7,584.00	7,584.00	208.14	152.14	-90.00	-2,974.36	-280.63	9,996.33	9,756.30	240.03	41.646				

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design												Sec 25-T1S-R66W - ALMA 1S-66-2524-19NH - ORIGINAL WELLBORE - WB #1 - CYCLONE 37	Offset Site Error:	0.00 usft
Survey Program: 224-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor	
0.00	0.00	15,915.00	7,507.08	0.00	138.87	-143.13	-4,520.91	-3,390.86	9,320.70					
100.00	100.00	15,915.00	7,507.08	0.13	138.87	-143.13	-4,520.91	-3,390.86	9,241.38	9,154.69	86.69	106.606		
200.00	199.98	15,915.00	7,507.08	0.49	138.87	-103.21	-4,520.91	-3,390.86	9,162.68	9,075.70	86.98	105.346		
300.00	299.84	15,915.00	7,507.08	0.86	138.87	-105.61	-4,520.91	-3,390.86	9,084.89	8,997.61	87.28	104.084		
400.00	399.45	15,915.00	7,507.08	1.23	138.87	-107.90	-4,520.91	-3,390.86	9,008.15	8,920.54	87.61	102.817		
500.00	498.70	15,915.00	7,507.08	1.63	138.87	-110.08	-4,520.91	-3,390.86	8,932.57	8,844.60	87.97	101.545		
600.00	597.47	15,915.00	7,507.08	2.05	138.87	-112.16	-4,520.91	-3,390.86	8,858.27	8,769.92	88.35	100.266		
700.00	695.62	15,915.00	7,507.08	2.50	138.87	-114.11	-4,520.91	-3,390.86	8,785.38	8,696.62	88.76	98.982		
800.00	793.06	15,915.00	7,507.08	2.99	138.87	-115.96	-4,520.91	-3,390.86	8,714.02	8,624.82	89.20	97.694		
900.00	889.64	15,915.00	7,507.08	3.52	138.87	-117.69	-4,520.91	-3,390.86	8,644.32	8,554.65	89.67	96.404		
1,000.00	985.27	15,915.00	7,507.08	4.10	138.87	-119.32	-4,520.91	-3,390.86	8,576.41	8,486.24	90.17	95.113		
1,100.00	1,079.82	15,915.00	7,507.08	4.72	138.87	-120.84	-4,520.91	-3,390.86	8,510.41	8,419.71	90.70	93.826		
1,200.00	1,173.17	15,915.00	7,507.08	5.40	138.87	-122.26	-4,520.91	-3,390.86	8,446.45	8,355.18	91.27	92.543		
1,300.00	1,265.21	15,915.00	7,507.08	6.13	138.87	-123.58	-4,520.91	-3,390.86	8,384.65	8,292.78	91.87	91.269		
1,400.00	1,355.84	15,915.00	7,507.08	6.92	138.87	-124.80	-4,520.91	-3,390.86	8,325.14	8,232.65	92.50	90.005		
1,500.00	1,444.94	15,915.00	7,507.08	7.77	138.87	-125.94	-4,520.91	-3,390.86	8,268.04	8,174.89	93.16	88.756		
1,600.00	1,532.44	15,915.00	7,507.08	8.68	138.87	-126.76	-4,520.91	-3,390.86	8,213.43	8,119.59	93.84	87.525		
1,700.00	1,619.43	15,915.00	7,507.08	9.62	138.87	-126.76	-4,520.91	-3,390.86	8,160.21	8,065.65	94.56	86.297		
1,800.00	1,706.42	15,915.00	7,507.08	10.56	138.87	-126.76	-4,520.91	-3,390.86	8,107.87	8,012.58	95.29	85.085		
1,900.00	1,793.42	15,915.00	7,507.08	11.52	138.87	-126.76	-4,520.91	-3,390.86	8,056.43	7,960.39	96.03	83.892		
2,000.00	1,880.41	15,915.00	7,507.08	12.48	138.87	-126.76	-4,520.91	-3,390.86	8,005.91	7,909.12	96.79	82.718		
2,100.00	1,967.40	15,915.00	7,507.08	13.45	138.87	-126.76	-4,520.91	-3,390.86	7,956.32	7,858.78	97.55	81.565		
2,200.00	2,054.39	15,915.00	7,507.08	14.42	138.87	-126.76	-4,520.91	-3,390.86	7,907.69	7,809.38	98.31	80.435		
2,300.00	2,141.39	15,915.00	7,507.08	15.39	138.87	-126.76	-4,520.91	-3,390.86	7,860.03	7,760.95	99.08	79.327		
2,400.00	2,228.38	15,915.00	7,507.08	16.36	138.87	-126.76	-4,520.91	-3,390.86	7,813.36	7,713.50	99.86	78.243		
2,500.00	2,315.37	15,915.00	7,507.08	17.34	138.87	-126.76	-4,520.91	-3,390.86	7,767.70	7,667.06	100.64	77.183		
2,600.00	2,402.37	15,915.00	7,507.08	18.32	138.87	-126.76	-4,520.91	-3,390.86	7,723.06	7,621.64	101.42	76.146		
2,700.00	2,489.36	15,915.00	7,507.08	19.30	138.87	-126.76	-4,520.91	-3,390.86	7,679.46	7,577.25	102.21	75.135		
2,800.00	2,576.35	15,915.00	7,507.08	20.28	138.87	-126.76	-4,520.91	-3,390.86	7,636.93	7,533.93	103.00	74.147		
2,900.00	2,663.34	15,915.00	7,507.08	21.26	138.87	-126.76	-4,520.91	-3,390.86	7,595.47	7,491.69	103.79	73.184		
3,000.00	2,750.34	15,915.00	7,507.08	22.24	138.87	-126.76	-4,520.91	-3,390.86	7,555.11	7,450.54	104.57	72.246		
3,100.00	2,837.33	15,915.00	7,507.08	23.23	138.87	-126.76	-4,520.91	-3,390.86	7,515.87	7,410.50	105.36	71.333		
3,200.00	2,924.32	15,915.00	7,507.08	24.21	138.87	-126.76	-4,520.91	-3,390.86	7,477.75	7,371.60	106.15	70.444		
3,300.00	3,011.31	15,915.00	7,507.08	25.20	138.87	-126.76	-4,520.91	-3,390.86	7,440.79	7,333.85	106.94	69.579		
3,400.00	3,098.31	15,915.00	7,507.08	26.18	138.87	-126.76	-4,520.91	-3,390.86	7,404.99	7,297.26	107.72	68.740		
3,500.00	3,185.30	15,915.00	7,507.08	27.17	138.87	-126.76	-4,520.91	-3,390.86	7,370.37	7,261.86	108.51	67.925		
3,600.00	3,272.29	15,915.00	7,507.08	28.16	138.87	-126.76	-4,520.91	-3,390.86	7,336.95	7,227.66	109.29	67.134		
3,700.00	3,359.29	15,915.00	7,507.08	29.14	138.87	-126.76	-4,520.91	-3,390.86	7,304.75	7,194.69	110.06	66.368		
3,800.00	3,446.28	15,915.00	7,507.08	30.13	138.87	-126.76	-4,520.91	-3,390.86	7,273.78	7,162.95	110.84	65.627		
3,900.00	3,533.27	15,915.00	7,507.08	31.12	138.87	-126.76	-4,520.91	-3,390.86	7,244.06	7,132.46	111.60	64.909		
4,000.00	3,620.26	15,915.00	7,507.08	32.10	138.87	-126.76	-4,520.91	-3,390.86	7,215.60	7,103.24	112.36	64.216		
4,100.00	3,707.26	15,915.00	7,507.08	33.09	138.87	-126.76	-4,520.91	-3,390.86	7,188.43	7,075.30	113.12	63.546		
4,200.00	3,794.25	15,915.00	7,507.08	34.08	138.87	-126.76	-4,520.91	-3,390.86	7,162.54	7,048.67	113.87	62.901		
4,300.00	3,881.24	15,915.00	7,507.08	35.07	138.87	-126.76	-4,520.91	-3,390.86	7,137.96	7,023.35	114.61	62.279		
4,400.00	3,968.23	15,915.00	7,507.08	36.06	138.87	-126.76	-4,520.91	-3,390.86	7,114.70	6,999.36	115.35	61.681		
4,500.00	4,055.23	15,915.00	7,507.08	37.05	138.87	-126.76	-4,520.91	-3,390.86	7,092.78	6,976.71	116.07	61.106		
4,600.00	4,142.22	15,915.00	7,507.08	38.04	138.87	-126.76	-4,520.91	-3,390.86	7,072.20	6,955.41	116.79	60.555		
4,700.00	4,229.21	15,915.00	7,507.08	39.03	138.87	-126.76	-4,520.91	-3,390.86	7,052.98	6,935.49	117.50	60.026		
4,800.00	4,316.21	15,915.00	7,507.08	40.02	138.87	-126.76	-4,520.91	-3,390.86	7,035.13	6,916.94	118.20	59.521		
4,900.00	4,403.20	15,915.00	7,507.08	41.01	138.87	-126.76	-4,520.91	-3,390.86	7,018.66	6,899.78	118.88	59.038		
5,000.00	4,490.19	15,915.00	7,507.08	42.00	138.87	-126.76	-4,520.91	-3,390.86	7,003.58	6,884.02	119.56	58.578		
5,100.00	4,577.18	15,915.00	7,507.08	42.99	138.87	-126.76	-4,520.91	-3,390.86	6,989.90	6,869.67	120.23	58.140		

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 224-MWD OWSG													Offset Well Error:		0.00 usft
Reference				Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,200.00	4,664.18	15,915.00	7,507.08	43.98	138.87	-126.76	-4,520.91	-3,390.86	6,977.62	6,856.74	120.88	57.724			
5,300.00	4,751.17	15,915.00	7,507.08	44.97	138.87	-126.76	-4,520.91	-3,390.86	6,966.76	6,845.24	121.52	57.330			
5,400.00	4,838.16	15,915.00	7,507.08	45.96	138.87	-126.76	-4,520.91	-3,390.86	6,957.31	6,835.17	122.15	56.958			
5,500.00	4,925.15	15,915.00	7,507.08	46.95	138.87	-126.76	-4,520.91	-3,390.86	6,949.30	6,826.53	122.76	56.607			
5,600.00	5,012.15	15,915.00	7,507.08	47.94	138.87	-126.76	-4,520.91	-3,390.86	6,942.71	6,819.35	123.37	56.278			
5,700.00	5,099.14	15,915.00	7,507.08	48.93	138.87	-126.76	-4,520.91	-3,390.86	6,937.56	6,813.61	123.95	55.969			
5,800.00	5,186.13	15,915.00	7,507.08	49.92	138.87	-126.76	-4,520.91	-3,390.86	6,933.85	6,809.32	124.53	55.682			
5,900.00	5,273.13	15,915.00	7,507.08	50.91	138.87	-126.76	-4,520.91	-3,390.86	6,931.58	6,806.50	125.09	55.414			
6,000.00	5,360.12	15,915.00	7,507.08	51.90	138.87	-126.76	-4,520.91	-3,390.86	6,930.75	6,805.12	125.63	55.168			
6,007.40	5,366.55	15,915.00	7,507.08	51.97	138.87	-126.76	-4,520.91	-3,390.86	6,930.75	6,805.08	125.67	55.150	CC, ES		
6,100.00	5,447.11	15,915.00	7,507.08	52.89	138.87	-126.76	-4,520.91	-3,390.86	6,931.37	6,805.21	126.16	54.941			
6,200.00	5,534.10	15,915.00	7,507.08	53.88	138.87	-126.76	-4,520.91	-3,390.86	6,933.42	6,806.75	126.68	54.734			
6,300.00	5,621.10	15,915.00	7,507.08	54.87	138.87	-126.76	-4,520.91	-3,390.86	6,936.92	6,809.75	127.18	54.546			
6,400.00	5,708.09	15,915.00	7,507.08	55.86	138.87	-126.76	-4,520.91	-3,390.86	6,941.86	6,814.20	127.66	54.378			
6,500.00	5,795.08	15,915.00	7,507.08	56.85	138.87	-126.76	-4,520.91	-3,390.86	6,948.23	6,820.10	128.13	54.228			
6,600.00	5,882.07	15,915.00	7,507.08	57.84	138.87	-126.76	-4,520.91	-3,390.86	6,956.04	6,827.45	128.58	54.097			
6,700.00	5,969.07	15,915.00	7,507.08	58.83	138.87	-126.76	-4,520.91	-3,390.86	6,965.27	6,836.25	129.02	53.985			
6,800.00	6,056.06	15,915.00	7,507.08	59.83	138.87	-126.76	-4,520.91	-3,390.86	6,975.92	6,846.48	129.45	53.891			
6,900.00	6,143.05	15,915.00	7,507.08	60.82	138.87	-126.76	-4,520.91	-3,390.86	6,987.99	6,858.14	129.85	53.814			
7,000.00	6,230.05	15,915.00	7,507.08	61.81	138.87	-126.76	-4,520.91	-3,390.86	7,001.47	6,871.22	130.25	53.755			
7,100.00	6,317.04	15,915.00	7,507.08	62.80	138.87	-126.76	-4,520.91	-3,390.86	7,016.34	6,885.72	130.62	53.714			
7,200.00	6,404.03	15,915.00	7,507.08	63.79	138.87	-126.76	-4,520.91	-3,390.86	7,032.61	6,901.62	130.99	53.689			
7,300.00	6,491.02	15,915.00	7,507.08	64.78	138.87	-126.76	-4,520.91	-3,390.86	7,050.26	6,918.92	131.34	53.681			
7,400.00	6,578.02	15,915.00	7,507.08	65.77	138.87	-126.76	-4,520.91	-3,390.86	7,069.27	6,937.60	131.67	53.689			
7,500.00	6,665.01	15,915.00	7,507.08	66.76	138.87	-126.76	-4,520.91	-3,390.86	7,089.65	6,957.66	131.99	53.713			
7,600.00	6,752.00	15,915.00	7,507.08	67.76	138.87	-126.76	-4,520.91	-3,390.86	7,111.38	6,979.08	132.30	53.753			
7,700.00	6,838.99	15,915.00	7,507.08	68.75	138.87	-126.76	-4,520.91	-3,390.86	7,134.44	7,001.85	132.59	53.808			
7,800.00	6,925.99	15,915.00	7,507.08	69.74	138.87	-126.76	-4,520.91	-3,390.86	7,158.82	7,025.95	132.87	53.879			
7,900.00	7,012.98	15,915.00	7,507.08	70.73	138.87	-126.76	-4,520.91	-3,390.86	7,184.51	7,051.38	133.13	53.964			
8,000.00	7,099.97	15,915.00	7,507.08	71.72	138.87	-126.76	-4,520.91	-3,390.86	7,211.50	7,078.11	133.39	54.064			
8,100.00	7,186.97	15,915.00	7,507.08	72.71	138.87	-126.76	-4,520.91	-3,390.86	7,239.77	7,106.14	133.63	54.178			
8,200.00	7,273.00	15,915.00	7,507.08	73.74	138.87	-118.51	-4,520.91	-3,390.86	7,268.65	7,134.79	133.86	54.298			
8,300.00	7,352.95	15,915.00	7,507.08	74.97	138.87	-107.32	-4,520.91	-3,390.86	7,294.54	7,160.41	134.13	54.384			
8,400.00	7,423.63	15,915.00	7,507.08	76.39	138.87	-99.71	-4,520.91	-3,390.86	7,316.26	7,181.81	134.45	54.418			
8,500.00	7,482.96	15,915.00	7,507.08	77.96	138.87	-94.55	-4,520.91	-3,390.86	7,333.19	7,198.38	134.81	54.396			
8,600.00	7,529.15	15,915.00	7,507.08	79.64	138.87	-91.18	-4,520.91	-3,390.86	7,344.86	7,209.64	135.22	54.319			
8,700.00	7,560.79	15,915.00	7,507.08	81.35	138.87	-89.26	-4,520.91	-3,390.86	7,350.93	7,215.29	135.65	54.191			
8,800.00	7,576.92	15,915.00	7,507.08	83.05	138.87	-88.59	-4,520.91	-3,390.86	7,351.24	7,215.17	136.08	54.022			
8,900.00	7,579.00	15,915.00	7,507.08	84.68	138.87	-88.70	-4,520.91	-3,390.86	7,346.63	7,210.14	136.49	53.826			
9,000.00	7,579.00	15,915.00	7,507.08	86.34	138.87	-88.70	-4,520.91	-3,390.86	7,342.46	7,205.53	136.93	53.621			
9,100.00	7,579.00	15,915.00	7,507.08	88.04	138.87	-88.70	-4,520.91	-3,390.86	7,339.65	7,202.23	137.42	53.410			
9,200.00	7,579.00	15,915.00	7,507.08	89.80	138.87	-88.70	-4,520.91	-3,390.86	7,338.20	7,200.25	137.95	53.196			
9,256.42	7,579.00	15,915.00	7,507.08	90.80	138.87	-88.70	-4,520.91	-3,390.86	7,337.98	7,199.71	138.27	53.071			
9,300.00	7,579.00	15,915.00	7,507.08	91.59	138.87	-88.70	-4,520.91	-3,390.86	7,338.11	7,199.60	138.51	52.977			
9,400.00	7,579.00	15,915.00	7,507.08	93.42	138.87	-88.70	-4,520.91	-3,390.86	7,339.39	7,200.26	139.12	52.755			
9,500.00	7,579.00	15,915.00	7,507.08	95.30	138.87	-88.70	-4,520.91	-3,390.86	7,342.02	7,202.25	139.77	52.530			
9,600.00	7,579.00	15,915.00	7,507.08	97.21	138.87	-88.70	-4,520.91	-3,390.86	7,346.02	7,205.56	140.46	52.301			
9,700.00	7,579.00	15,915.00	7,507.08	99.15	138.87	-88.70	-4,520.91	-3,390.86	7,351.38	7,210.19	141.18	52.070			
9,800.00	7,579.00	15,915.00	7,507.08	101.13	138.87	-88.70	-4,520.91	-3,390.86	7,358.09	7,216.14	141.95	51.836			
9,900.00	7,579.00	15,915.00	7,507.08	103.15	138.87	-88.70	-4,520.91	-3,390.86	7,366.15	7,223.40	142.75	51.600			
10,000.00	7,579.00	15,915.00	7,507.08	105.19	138.87	-88.70	-4,520.91	-3,390.86	7,375.56	7,231.96	143.60	51.362			
10,100.00	7,579.00	15,915.00	7,507.08	107.26	138.87	-88.70	-4,520.91	-3,390.86	7,386.31	7,241.83	144.48	51.122			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft		
Survey Program: 224-MWD OWSG													Sec 25-T1S-R66W - ALMA 1S-66-2524-19NH - ORIGINAL WELLBORE - WB #1 - CYCLONE 37		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
10,200.00	7,579.00	15,915.00	7,507.08	109.36	138.87	-88.70	-4,520.91	-3,390.86	7,398.40	7,252.99	145.41	50.880				
10,300.00	7,579.00	15,915.00	7,507.08	111.49	138.87	-88.70	-4,520.91	-3,390.86	7,411.82	7,265.44	146.38	50.635				
10,400.00	7,579.00	15,915.00	7,507.08	113.64	138.87	-88.70	-4,520.91	-3,390.86	7,426.56	7,279.17	147.38	50.389				
10,500.00	7,579.00	15,915.00	7,507.08	115.82	138.87	-88.70	-4,520.91	-3,390.86	7,442.61	7,294.18	148.43	50.142				
10,600.00	7,579.00	15,915.00	7,507.08	118.01	138.87	-88.70	-4,520.91	-3,390.86	7,459.97	7,310.45	149.52	49.893				
10,700.00	7,579.00	15,915.00	7,507.08	120.23	138.87	-88.70	-4,520.91	-3,390.86	7,478.63	7,327.98	150.65	49.642				
10,800.00	7,579.00	15,915.00	7,507.08	122.47	138.87	-88.70	-4,520.91	-3,390.86	7,498.57	7,346.75	151.82	49.391				
10,900.00	7,579.00	15,915.00	7,507.08	124.73	138.87	-88.70	-4,520.91	-3,390.86	7,519.80	7,366.76	153.03	49.139				
11,000.00	7,579.00	15,915.00	7,507.08	127.01	138.87	-88.70	-4,520.91	-3,390.86	7,542.28	7,388.00	154.28	48.887				
11,100.00	7,579.00	15,915.00	7,507.08	129.30	138.87	-88.70	-4,520.91	-3,390.86	7,566.03	7,410.46	155.57	48.634				
11,200.00	7,579.00	15,915.00	7,507.08	131.61	138.87	-88.70	-4,520.91	-3,390.86	7,591.01	7,434.11	156.90	48.382				
11,300.00	7,579.00	15,915.00	7,507.08	133.93	138.87	-88.70	-4,520.91	-3,390.86	7,617.23	7,458.97	158.26	48.131				
11,400.00	7,579.00	15,915.00	7,507.08	136.27	138.87	-88.70	-4,520.91	-3,390.86	7,644.66	7,485.00	159.66	47.880				
11,500.00	7,579.00	15,915.00	7,507.08	138.62	138.87	-88.70	-4,520.91	-3,390.86	7,673.31	7,512.21	161.10	47.632				
11,600.00	7,579.00	15,915.00	7,507.08	140.99	138.87	-88.70	-4,520.91	-3,390.86	7,703.14	7,540.58	162.56	47.386				
11,700.00	7,579.00	15,915.00	7,507.08	143.37	138.87	-88.70	-4,520.91	-3,390.86	7,734.15	7,570.09	164.06	47.143				
11,800.00	7,579.00	15,915.00	7,507.08	145.76	138.87	-88.70	-4,520.91	-3,390.86	7,766.32	7,600.74	165.58	46.903				
11,900.00	7,579.00	15,915.00	7,507.08	148.16	138.87	-88.70	-4,520.91	-3,390.86	7,799.65	7,632.51	167.13	46.668				
12,000.00	7,579.00	15,915.00	7,507.08	150.58	138.87	-88.70	-4,520.91	-3,390.86	7,834.10	7,665.40	168.71	46.436				
12,100.00	7,579.00	15,915.00	7,507.08	153.00	138.87	-88.70	-4,520.91	-3,390.86	7,869.68	7,699.38	170.30	46.210				
12,200.00	7,579.00	15,915.00	7,507.08	155.43	138.87	-88.70	-4,520.91	-3,390.86	7,906.37	7,734.45	171.92	45.989				
12,300.00	7,579.00	15,915.00	7,507.08	157.87	138.87	-88.70	-4,520.91	-3,390.86	7,944.14	7,770.59	173.55	45.775				
12,400.00	7,579.00	15,915.00	7,507.08	160.32	138.87	-88.70	-4,520.91	-3,390.86	7,982.99	7,807.79	175.19	45.566				
12,500.00	7,579.00	15,915.00	7,507.08	162.78	138.87	-88.70	-4,520.91	-3,390.86	8,022.89	7,846.04	176.85	45.365				
12,600.00	7,579.00	15,915.00	7,507.08	165.25	138.87	-88.70	-4,520.91	-3,390.86	8,063.84	7,885.32	178.52	45.171				
12,700.00	7,579.00	15,915.00	7,507.08	167.73	138.87	-88.70	-4,520.91	-3,390.86	8,105.81	7,925.62	180.19	44.984				
12,800.00	7,579.00	15,915.00	7,507.08	170.21	138.87	-88.70	-4,520.91	-3,390.86	8,148.80	7,966.93	181.87	44.806				
12,900.00	7,579.00	15,915.00	7,507.08	172.70	138.87	-88.70	-4,520.91	-3,390.86	8,192.78	8,009.23	183.55	44.635				
13,000.00	7,579.00	15,915.00	7,507.08	175.19	138.87	-88.70	-4,520.91	-3,390.86	8,237.74	8,052.51	185.23	44.473				
13,100.00	7,579.00	15,915.00	7,507.08	177.70	138.87	-88.70	-4,520.91	-3,390.86	8,283.66	8,096.75	186.91	44.319				
13,200.00	7,579.00	15,915.00	7,507.08	180.20	138.87	-88.70	-4,520.91	-3,390.86	8,330.53	8,141.95	188.59	44.174				
13,300.00	7,579.00	15,915.00	7,507.08	182.72	138.87	-88.70	-4,520.91	-3,390.86	8,378.34	8,188.08	190.25	44.037				
13,400.00	7,579.00	15,915.00	7,507.08	185.24	138.87	-88.70	-4,520.91	-3,390.86	8,427.05	8,235.14	191.92	43.910				
13,500.00	7,579.00	15,915.00	7,507.08	187.76	138.87	-88.70	-4,520.91	-3,390.86	8,476.67	8,283.10	193.57	43.791				
13,600.00	7,579.00	15,915.00	7,507.08	190.30	138.87	-88.70	-4,520.91	-3,390.86	8,527.17	8,331.96	195.21	43.681				
13,700.00	7,579.00	15,915.00	7,507.08	192.83	138.87	-88.70	-4,520.91	-3,390.86	8,578.54	8,381.70	196.84	43.581				
13,800.00	7,579.00	15,915.00	7,507.08	195.37	138.87	-88.70	-4,520.91	-3,390.86	8,630.76	8,432.30	198.46	43.488				
13,900.00	7,579.00	15,915.00	7,507.08	197.92	138.87	-88.70	-4,520.91	-3,390.86	8,683.82	8,483.76	200.07	43.405				
14,000.00	7,579.00	15,915.00	7,507.08	200.47	138.87	-88.70	-4,520.91	-3,390.86	8,737.71	8,536.05	201.65	43.330				
14,100.00	7,579.00	15,915.00	7,507.08	203.02	138.87	-88.70	-4,520.91	-3,390.86	8,792.40	8,589.17	203.23	43.264				
14,200.00	7,579.00	15,915.00	7,507.08	205.58	138.87	-88.70	-4,520.91	-3,390.86	8,847.88	8,643.10	204.78	43.206				
14,300.00	7,579.00	15,915.00	7,507.08	208.14	138.87	-88.70	-4,520.91	-3,390.86	8,904.14	8,697.82	206.32	43.157				
14,400.00	7,579.00	15,915.00	7,507.08	210.70	138.87	-88.70	-4,520.91	-3,390.86	8,961.16	8,753.32	207.84	43.116				
14,500.00	7,579.00	15,915.00	7,507.08	213.27	138.87	-88.70	-4,520.91	-3,390.86	9,018.93	8,809.59	209.34	43.083				
14,600.00	7,579.00	15,915.00	7,507.08	215.84	138.87	-88.70	-4,520.91	-3,390.86	9,077.43	8,866.62	210.82	43.058				
14,700.00	7,579.00	15,915.00	7,507.08	218.42	138.87	-88.70	-4,520.91	-3,390.86	9,136.66	8,924.38	212.28	43.041				
14,800.00	7,579.00	15,915.00	7,507.08	221.00	138.87	-88.70	-4,520.91	-3,390.86	9,196.59	8,982.87	213.72	43.031				
14,900.00	7,579.00	15,915.00	7,507.08	223.58	138.87	-88.70	-4,520.91	-3,390.86	9,257.21	9,042.07	215.14	43.029 SF				
15,000.00	7,579.00	15,915.00	7,507.08	226.17	138.87	-88.70	-4,520.91	-3,390.86	9,318.51	9,101.98	216.54	43.034				
15,100.00	7,579.00	15,915.00	7,507.08	228.75	138.87	-88.70	-4,520.91	-3,390.86	9,380.48	9,162.57	217.91	43.047				
15,200.00	7,579.00	15,915.00	7,507.08	231.34	138.87	-88.70	-4,520.91	-3,390.86	9,443.10	9,223.83	219.27	43.066				
15,300.00	7,579.00	15,915.00	7,507.08	233.94	138.87	-88.70	-4,520.91	-3,390.86	9,506.36	9,285.75	220.60	43.092				

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft	
Survey Program: 224-MWD OWSG												Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
15,400.00	7,579.00	15,915.00	7,507.08	236.53	138.87	-88.70	-4,520.91	-3,390.86	9,570.24	9,348.32	221.92	43.125		
15,500.00	7,579.00	15,915.00	7,507.08	239.13	138.87	-88.70	-4,520.91	-3,390.86	9,634.74	9,411.53	223.21	43.164		
15,600.00	7,579.00	15,915.00	7,507.08	241.73	138.87	-88.70	-4,520.91	-3,390.86	9,699.84	9,475.36	224.48	43.210		
15,700.00	7,579.00	15,915.00	7,507.08	244.34	138.87	-88.70	-4,520.91	-3,390.86	9,765.54	9,539.81	225.73	43.262		
15,800.00	7,579.00	15,915.00	7,507.08	246.94	138.87	-88.70	-4,520.91	-3,390.86	9,831.81	9,604.85	226.96	43.320		
15,900.00	7,579.00	15,915.00	7,507.08	249.55	138.87	-88.70	-4,520.91	-3,390.86	9,898.64	9,670.48	228.16	43.384		
16,000.00	7,579.00	15,915.00	7,507.08	252.16	138.87	-88.70	-4,520.91	-3,390.86	9,966.03	9,736.68	229.35	43.453		

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 25-T1S-R66W - ALMA 1S-66-2524-20CDH - ORIGINAL WELLBORE - WB #1 - CYCLONE 37	Offset Site Error:	0.00 usft
Survey Program: 28-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	16,202.00	7,737.61	0.00	140.81	-139.75	-4,546.43	-3,848.29	9,689.63						
100.00	100.00	16,202.00	7,737.61	0.13	140.81	-139.75	-4,546.43	-3,848.29	9,610.95	9,518.78	92.17	104.276			
200.00	199.98	16,202.00	7,737.61	0.49	140.81	-99.82	-4,546.43	-3,848.29	9,532.83	9,440.32	92.51	103.043			
300.00	299.84	16,202.00	7,737.61	0.86	140.81	-102.21	-4,546.43	-3,848.29	9,455.50	9,362.62	92.88	101.803			
400.00	399.45	16,202.00	7,737.61	1.23	140.81	-104.52	-4,546.43	-3,848.29	9,379.07	9,285.79	93.27	100.554			
500.00	498.70	16,202.00	7,737.61	1.63	140.81	-106.73	-4,546.43	-3,848.29	9,303.66	9,209.96	93.70	99.295			
600.00	597.47	16,202.00	7,737.61	2.05	140.81	-108.84	-4,546.43	-3,848.29	9,229.39	9,135.24	94.15	98.028			
700.00	695.62	16,202.00	7,737.61	2.50	140.81	-110.85	-4,546.43	-3,848.29	9,156.38	9,061.74	94.64	96.753			
800.00	793.06	16,202.00	7,737.61	2.99	140.81	-112.76	-4,546.43	-3,848.29	9,084.74	8,989.59	95.16	95.472			
900.00	889.64	16,202.00	7,737.61	3.52	140.81	-114.56	-4,546.43	-3,848.29	9,014.61	8,918.90	95.71	94.185			
1,000.00	985.27	16,202.00	7,737.61	4.10	140.81	-116.26	-4,546.43	-3,848.29	8,946.10	8,849.80	96.30	92.896			
1,100.00	1,079.82	16,202.00	7,737.61	4.72	140.81	-117.86	-4,546.43	-3,848.29	8,879.33	8,782.40	96.93	91.606			
1,200.00	1,173.17	16,202.00	7,737.61	5.40	140.81	-119.35	-4,546.43	-3,848.29	8,814.43	8,716.83	97.59	90.319			
1,300.00	1,265.21	16,202.00	7,737.61	6.13	140.81	-120.76	-4,546.43	-3,848.29	8,751.51	8,653.22	98.29	89.036			
1,400.00	1,355.84	16,202.00	7,737.61	6.92	140.81	-122.06	-4,546.43	-3,848.29	8,690.70	8,591.67	99.03	87.761			
1,500.00	1,444.94	16,202.00	7,737.61	7.77	140.81	-123.28	-4,546.43	-3,848.29	8,632.12	8,532.32	99.80	86.497			
1,600.00	1,532.44	16,202.00	7,737.61	8.68	140.81	-124.16	-4,546.43	-3,848.29	8,575.84	8,475.24	100.60	85.247			
1,700.00	1,619.43	16,202.00	7,737.61	9.62	140.81	-124.16	-4,546.43	-3,848.29	8,520.85	8,419.41	101.44	84.002			
1,800.00	1,706.42	16,202.00	7,737.61	10.56	140.81	-124.16	-4,546.43	-3,848.29	8,466.68	8,364.39	102.29	82.772			
1,900.00	1,793.42	16,202.00	7,737.61	11.52	140.81	-124.16	-4,546.43	-3,848.29	8,413.35	8,310.20	103.15	81.561			
2,000.00	1,880.41	16,202.00	7,737.61	12.48	140.81	-124.16	-4,546.43	-3,848.29	8,360.88	8,256.85	104.03	80.369			
2,100.00	1,967.40	16,202.00	7,737.61	13.45	140.81	-124.16	-4,546.43	-3,848.29	8,309.28	8,204.36	104.92	79.198			
2,200.00	2,054.39	16,202.00	7,737.61	14.42	140.81	-124.16	-4,546.43	-3,848.29	8,258.57	8,152.76	105.81	78.049			
2,300.00	2,141.39	16,202.00	7,737.61	15.39	140.81	-124.16	-4,546.43	-3,848.29	8,208.77	8,102.05	106.71	76.923			
2,400.00	2,228.38	16,202.00	7,737.61	16.36	140.81	-124.16	-4,546.43	-3,848.29	8,159.88	8,052.26	107.62	75.819			
2,500.00	2,315.37	16,202.00	7,737.61	17.34	140.81	-124.16	-4,546.43	-3,848.29	8,111.94	8,003.40	108.54	74.739			
2,600.00	2,402.37	16,202.00	7,737.61	18.32	140.81	-124.16	-4,546.43	-3,848.29	8,064.95	7,955.49	109.46	73.682			
2,700.00	2,489.36	16,202.00	7,737.61	19.30	140.81	-124.16	-4,546.43	-3,848.29	8,018.93	7,908.55	110.38	72.648			
2,800.00	2,576.35	16,202.00	7,737.61	20.28	140.81	-124.16	-4,546.43	-3,848.29	7,973.90	7,862.59	111.31	71.639			
2,900.00	2,663.34	16,202.00	7,737.61	21.26	140.81	-124.16	-4,546.43	-3,848.29	7,929.87	7,817.63	112.24	70.653			
3,000.00	2,750.34	16,202.00	7,737.61	22.24	140.81	-124.16	-4,546.43	-3,848.29	7,886.87	7,773.70	113.17	69.691			
3,100.00	2,837.33	16,202.00	7,737.61	23.23	140.81	-124.16	-4,546.43	-3,848.29	7,844.91	7,730.80	114.10	68.752			
3,200.00	2,924.32	16,202.00	7,737.61	24.21	140.81	-124.16	-4,546.43	-3,848.29	7,804.00	7,688.96	115.04	67.838			
3,300.00	3,011.31	16,202.00	7,737.61	25.20	140.81	-124.16	-4,546.43	-3,848.29	7,764.16	7,648.19	115.97	66.947			
3,400.00	3,098.31	16,202.00	7,737.61	26.18	140.81	-124.16	-4,546.43	-3,848.29	7,725.42	7,608.51	116.91	66.080			
3,500.00	3,185.30	16,202.00	7,737.61	27.17	140.81	-124.16	-4,546.43	-3,848.29	7,687.78	7,569.93	117.84	65.237			
3,600.00	3,272.29	16,202.00	7,737.61	28.16	140.81	-124.16	-4,546.43	-3,848.29	7,651.26	7,532.48	118.78	64.417			
3,700.00	3,359.29	16,202.00	7,737.61	29.14	140.81	-124.16	-4,546.43	-3,848.29	7,615.88	7,496.17	119.71	63.620			
3,800.00	3,446.28	16,202.00	7,737.61	30.13	140.81	-124.16	-4,546.43	-3,848.29	7,581.65	7,461.01	120.64	62.847			
3,900.00	3,533.27	16,202.00	7,737.61	31.12	140.81	-124.16	-4,546.43	-3,848.29	7,548.59	7,427.03	121.56	62.096			
4,000.00	3,620.26	16,202.00	7,737.61	32.10	140.81	-124.16	-4,546.43	-3,848.29	7,516.72	7,394.24	122.48	61.369			
4,100.00	3,707.26	16,202.00	7,737.61	33.09	140.81	-124.16	-4,546.43	-3,848.29	7,486.05	7,362.65	123.40	60.665			
4,200.00	3,794.25	16,202.00	7,737.61	34.08	140.81	-124.16	-4,546.43	-3,848.29	7,456.59	7,332.28	124.31	59.983			
4,300.00	3,881.24	16,202.00	7,737.61	35.07	140.81	-124.16	-4,546.43	-3,848.29	7,428.36	7,303.15	125.22	59.325			
4,400.00	3,968.23	16,202.00	7,737.61	36.06	140.81	-124.16	-4,546.43	-3,848.29	7,401.38	7,275.27	126.11	58.688			
4,500.00	4,055.23	16,202.00	7,737.61	37.05	140.81	-124.16	-4,546.43	-3,848.29	7,375.65	7,248.65	127.00	58.074			
4,600.00	4,142.22	16,202.00	7,737.61	38.04	140.81	-124.16	-4,546.43	-3,848.29	7,351.20	7,223.31	127.89	57.482			
4,700.00	4,229.21	16,202.00	7,737.61	39.03	140.81	-124.16	-4,546.43	-3,848.29	7,328.02	7,199.26	128.76	56.912			
4,800.00	4,316.21	16,202.00	7,737.61	40.02	140.81	-124.16	-4,546.43	-3,848.29	7,306.15	7,176.52	129.62	56.364			
4,900.00	4,403.20	16,202.00	7,737.61	41.01	140.81	-124.16	-4,546.43	-3,848.29	7,285.58	7,155.10	130.48	55.837			
5,000.00	4,490.19	16,202.00	7,737.61	42.00	140.81	-124.16	-4,546.43	-3,848.29	7,266.32	7,135.00	131.32	55.332			
5,100.00	4,577.18	16,202.00	7,737.61	42.99	140.81	-124.16	-4,546.43	-3,848.29	7,248.40	7,116.25	132.15	54.848			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec 25-T1S-R66W - ALMA 1S-66-2524-20CDH - ORIGINAL WELLBORE - WB #1 - CYCLONE 37	Offset Site Error:	0.00 usft
Survey Program: 28-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,200.00	4,664.18	16,202.00	7,737.61	43.98	140.81	-124.16	-4,546.43	-3,848.29	7,231.81	7,098.84	132.97	54.386			
5,300.00	4,751.17	16,202.00	7,737.61	44.97	140.81	-124.16	-4,546.43	-3,848.29	7,216.58	7,082.80	133.78	53.944			
5,400.00	4,838.16	16,202.00	7,737.61	45.96	140.81	-124.16	-4,546.43	-3,848.29	7,202.69	7,068.12	134.57	53.522			
5,500.00	4,925.15	16,202.00	7,737.61	46.95	140.81	-124.16	-4,546.43	-3,848.29	7,190.18	7,054.82	135.35	53.122			
5,600.00	5,012.15	16,202.00	7,737.61	47.94	140.81	-124.16	-4,546.43	-3,848.29	7,179.03	7,042.91	136.12	52.741			
5,700.00	5,099.14	16,202.00	7,737.61	48.93	140.81	-124.16	-4,546.43	-3,848.29	7,169.26	7,032.39	136.87	52.380			
5,800.00	5,186.13	16,202.00	7,737.61	49.92	140.81	-124.16	-4,546.43	-3,848.29	7,160.88	7,023.27	137.60	52.040			
5,900.00	5,273.13	16,202.00	7,737.61	50.91	140.81	-124.16	-4,546.43	-3,848.29	7,153.88	7,015.56	138.32	51.719			
6,000.00	5,360.12	16,202.00	7,737.61	51.90	140.81	-124.16	-4,546.43	-3,848.29	7,148.28	7,009.25	139.03	51.417			
6,100.00	5,447.11	16,202.00	7,737.61	52.89	140.81	-124.16	-4,546.43	-3,848.29	7,144.07	7,004.35	139.71	51.134			
6,200.00	5,534.10	16,202.00	7,737.61	53.88	140.81	-124.16	-4,546.43	-3,848.29	7,141.25	7,000.87	140.38	50.871			
6,300.00	5,621.10	16,202.00	7,737.61	54.87	140.81	-124.16	-4,546.43	-3,848.29	7,139.84	6,998.81	141.03	50.626			
6,350.81	5,665.30	16,202.00	7,737.61	55.37	140.81	-124.16	-4,546.43	-3,848.29	7,139.66	6,998.31	141.36	50.509	CC		
6,400.00	5,708.09	16,202.00	7,737.61	55.86	140.81	-124.16	-4,546.43	-3,848.29	7,139.83	6,998.17	141.66	50.400	ES		
6,500.00	5,795.08	16,202.00	7,737.61	56.85	140.81	-124.16	-4,546.43	-3,848.29	7,141.22	6,998.94	142.28	50.191			
6,600.00	5,882.07	16,202.00	7,737.61	57.84	140.81	-124.16	-4,546.43	-3,848.29	7,144.01	7,001.13	142.88	50.001			
6,700.00	5,969.07	16,202.00	7,737.61	58.83	140.81	-124.16	-4,546.43	-3,848.29	7,148.20	7,004.74	143.45	49.829			
6,800.00	6,056.06	16,202.00	7,737.61	59.83	140.81	-124.16	-4,546.43	-3,848.29	7,153.78	7,009.76	144.01	49.674			
6,900.00	6,143.05	16,202.00	7,737.61	60.82	140.81	-124.16	-4,546.43	-3,848.29	7,160.75	7,016.20	144.55	49.537			
7,000.00	6,230.05	16,202.00	7,737.61	61.81	140.81	-124.16	-4,546.43	-3,848.29	7,169.12	7,024.04	145.08	49.416			
7,100.00	6,317.04	16,202.00	7,737.61	62.80	140.81	-124.16	-4,546.43	-3,848.29	7,178.86	7,033.28	145.58	49.312			
7,200.00	6,404.03	16,202.00	7,737.61	63.79	140.81	-124.16	-4,546.43	-3,848.29	7,189.99	7,043.92	146.06	49.225			
7,300.00	6,491.02	16,202.00	7,737.61	64.78	140.81	-124.16	-4,546.43	-3,848.29	7,202.48	7,055.95	146.53	49.155			
7,400.00	6,578.02	16,202.00	7,737.61	65.77	140.81	-124.16	-4,546.43	-3,848.29	7,216.34	7,069.37	146.97	49.100			
7,500.00	6,665.01	16,202.00	7,737.61	66.76	140.81	-124.16	-4,546.43	-3,848.29	7,231.56	7,084.16	147.40	49.061			
7,600.00	6,752.00	16,202.00	7,737.61	67.76	140.81	-124.16	-4,546.43	-3,848.29	7,248.12	7,100.31	147.81	49.037			
7,700.00	6,838.99	16,202.00	7,737.61	68.75	140.81	-124.16	-4,546.43	-3,848.29	7,266.02	7,117.83	148.20	49.029			
7,800.00	6,925.99	16,202.00	7,737.61	69.74	140.81	-124.16	-4,546.43	-3,848.29	7,285.25	7,136.69	148.57	49.036			
7,900.00	7,012.98	16,202.00	7,737.61	70.73	140.81	-124.16	-4,546.43	-3,848.29	7,305.80	7,156.88	148.92	49.058			
8,000.00	7,099.97	16,202.00	7,737.61	71.72	140.81	-124.16	-4,546.43	-3,848.29	7,327.66	7,178.40	149.26	49.094			
8,100.00	7,186.97	16,202.00	7,737.61	72.71	140.81	-124.16	-4,546.43	-3,848.29	7,350.81	7,201.24	149.58	49.145			
8,200.00	7,273.09	16,202.00	7,737.61	73.74	140.81	-116.24	-4,546.43	-3,848.29	7,374.48	7,224.60	149.88	49.201			
8,300.00	7,352.95	16,202.00	7,737.61	74.97	140.81	-105.68	-4,546.43	-3,848.29	7,394.54	7,244.31	150.23	49.221			
8,400.00	7,423.63	16,202.00	7,737.61	76.39	140.81	-98.71	-4,546.43	-3,848.29	7,409.92	7,259.29	150.63	49.193			
8,500.00	7,482.96	16,202.00	7,737.61	77.96	140.81	-94.19	-4,546.43	-3,848.29	7,420.18	7,269.10	151.08	49.114			
8,600.00	7,529.15	16,202.00	7,737.61	79.64	140.81	-91.46	-4,546.43	-3,848.29	7,425.03	7,273.46	151.57	48.988			
8,700.00	7,560.79	16,202.00	7,737.61	81.35	140.81	-90.16	-4,546.43	-3,848.29	7,424.32	7,272.25	152.07	48.822			
8,800.00	7,576.92	16,202.00	7,737.61	83.05	140.81	-90.09	-4,546.43	-3,848.29	7,418.09	7,265.53	152.56	48.625			
8,900.00	7,579.00	16,202.00	7,737.61	84.68	140.81	-90.50	-4,546.43	-3,848.29	7,407.29	7,254.28	153.01	48.410			
9,000.00	7,579.00	16,202.00	7,737.61	86.34	140.81	-90.50	-4,546.43	-3,848.29	7,396.97	7,243.48	153.49	48.193			
9,100.00	7,579.00	16,202.00	7,737.61	88.04	140.81	-90.50	-4,546.43	-3,848.29	7,387.99	7,234.00	153.99	47.977			
9,200.00	7,579.00	16,202.00	7,737.61	89.80	140.81	-90.50	-4,546.43	-3,848.29	7,380.36	7,225.83	154.52	47.762			
9,300.00	7,579.00	16,202.00	7,737.61	91.59	140.81	-90.50	-4,546.43	-3,848.29	7,374.07	7,218.99	155.08	47.549			
9,400.00	7,579.00	16,202.00	7,737.61	93.42	140.81	-90.50	-4,546.43	-3,848.29	7,369.13	7,213.47	155.67	47.339			
9,500.00	7,579.00	16,202.00	7,737.61	95.30	140.81	-90.50	-4,546.43	-3,848.29	7,365.55	7,209.28	156.28	47.131			
9,600.00	7,579.00	16,202.00	7,737.61	97.21	140.81	-90.50	-4,546.43	-3,848.29	7,363.33	7,206.42	156.91	46.927			
9,700.00	7,579.00	16,202.00	7,737.61	99.15	140.81	-90.50	-4,546.43	-3,848.29	7,362.46	7,204.89	157.57	46.725			
9,713.82	7,579.00	16,202.00	7,737.61	99.43	140.81	-90.50	-4,546.43	-3,848.29	7,362.45	7,204.79	157.66	46.697			
9,800.00	7,579.00	16,202.00	7,737.61	101.13	140.81	-90.50	-4,546.43	-3,848.29	7,362.95	7,204.70	158.25	46.527			
9,900.00	7,579.00	16,202.00	7,737.61	103.15	140.81	-90.50	-4,546.43	-3,848.29	7,364.80	7,205.85	158.96	46.333			
10,000.00	7,579.00	16,202.00	7,737.61	105.19	140.81	-90.50	-4,546.43	-3,848.29	7,368.01	7,208.33	159.68	46.142			
10,100.00	7,579.00	16,202.00	7,737.61	107.26	140.81	-90.50	-4,546.43	-3,848.29	7,372.57	7,212.14	160.43	45.954			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 28-MWD OWSG													Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
10,200.00	7,579.00	16,202.00	7,737.61	109.36	140.81	-90.50	-4,546.43	-3,848.29	7,378.48	7,217.28	161.21	45.770			
10,300.00	7,579.00	16,202.00	7,737.61	111.49	140.81	-90.50	-4,546.43	-3,848.29	7,385.75	7,223.74	162.00	45.590			
10,400.00	7,579.00	16,202.00	7,737.61	113.64	140.81	-90.50	-4,546.43	-3,848.29	7,394.36	7,231.53	162.82	45.413			
10,500.00	7,579.00	16,202.00	7,737.61	115.82	140.81	-90.50	-4,546.43	-3,848.29	7,404.30	7,240.64	163.67	45.240			
10,600.00	7,579.00	16,202.00	7,737.61	118.01	140.81	-90.50	-4,546.43	-3,848.29	7,415.59	7,251.06	164.53	45.070			
10,700.00	7,579.00	16,202.00	7,737.61	120.23	140.81	-90.50	-4,546.43	-3,848.29	7,428.20	7,262.78	165.42	44.904			
10,800.00	7,579.00	16,202.00	7,737.61	122.47	140.81	-90.50	-4,546.43	-3,848.29	7,442.14	7,275.80	166.34	44.740			
10,900.00	7,579.00	16,202.00	7,737.61	124.73	140.81	-90.50	-4,546.43	-3,848.29	7,457.39	7,290.11	167.28	44.580			
11,000.00	7,579.00	16,202.00	7,737.61	127.01	140.81	-90.50	-4,546.43	-3,848.29	7,473.95	7,305.70	168.25	44.423			
11,100.00	7,579.00	16,202.00	7,737.61	129.30	140.81	-90.50	-4,546.43	-3,848.29	7,491.81	7,322.57	169.24	44.268			
11,200.00	7,579.00	16,202.00	7,737.61	131.61	140.81	-90.50	-4,546.43	-3,848.29	7,510.95	7,340.70	170.25	44.117			
11,300.00	7,579.00	16,202.00	7,737.61	133.93	140.81	-90.50	-4,546.43	-3,848.29	7,531.38	7,360.08	171.29	43.968			
11,400.00	7,579.00	16,202.00	7,737.61	136.27	140.81	-90.50	-4,546.43	-3,848.29	7,553.07	7,380.71	172.36	43.822			
11,500.00	7,579.00	16,202.00	7,737.61	138.62	140.81	-90.50	-4,546.43	-3,848.29	7,576.02	7,402.57	173.45	43.678			
11,600.00	7,579.00	16,202.00	7,737.61	140.99	140.81	-90.50	-4,546.43	-3,848.29	7,600.22	7,425.65	174.57	43.537			
11,700.00	7,579.00	16,202.00	7,737.61	143.37	140.81	-90.50	-4,546.43	-3,848.29	7,625.65	7,449.94	175.71	43.398			
11,800.00	7,579.00	16,202.00	7,737.61	145.76	140.81	-90.50	-4,546.43	-3,848.29	7,652.31	7,475.43	176.88	43.262			
11,900.00	7,579.00	16,202.00	7,737.61	148.16	140.81	-90.50	-4,546.43	-3,848.29	7,680.17	7,502.10	178.07	43.129			
12,000.00	7,579.00	16,202.00	7,737.61	150.58	140.81	-90.50	-4,546.43	-3,848.29	7,709.23	7,529.94	179.29	42.999			
12,100.00	7,579.00	16,202.00	7,737.61	153.00	140.81	-90.50	-4,546.43	-3,848.29	7,739.48	7,558.95	180.53	42.871			
12,200.00	7,579.00	16,202.00	7,737.61	155.43	140.81	-90.50	-4,546.43	-3,848.29	7,770.89	7,589.10	181.79	42.746			
12,300.00	7,579.00	16,202.00	7,737.61	157.87	140.81	-90.50	-4,546.43	-3,848.29	7,803.46	7,620.39	183.07	42.625			
12,400.00	7,579.00	16,202.00	7,737.61	160.32	140.81	-90.50	-4,546.43	-3,848.29	7,837.17	7,652.79	184.38	42.506			
12,500.00	7,579.00	16,202.00	7,737.61	162.78	140.81	-90.50	-4,546.43	-3,848.29	7,872.00	7,686.31	185.70	42.391			
12,600.00	7,579.00	16,202.00	7,737.61	165.25	140.81	-90.50	-4,546.43	-3,848.29	7,907.95	7,720.91	187.04	42.280			
12,700.00	7,579.00	16,202.00	7,737.61	167.73	140.81	-90.50	-4,546.43	-3,848.29	7,944.99	7,756.60	188.39	42.173			
12,800.00	7,579.00	16,202.00	7,737.61	170.21	140.81	-90.50	-4,546.43	-3,848.29	7,983.12	7,793.36	189.76	42.069			
12,900.00	7,579.00	16,202.00	7,737.61	172.70	140.81	-90.50	-4,546.43	-3,848.29	8,022.31	7,831.16	191.14	41.970			
13,000.00	7,579.00	16,202.00	7,737.61	175.19	140.81	-90.50	-4,546.43	-3,848.29	8,062.55	7,870.01	192.54	41.875			
13,100.00	7,579.00	16,202.00	7,737.61	177.70	140.81	-90.50	-4,546.43	-3,848.29	8,103.82	7,909.88	193.94	41.785			
13,200.00	7,579.00	16,202.00	7,737.61	180.20	140.81	-90.50	-4,546.43	-3,848.29	8,146.11	7,950.76	195.35	41.699			
13,300.00	7,579.00	16,202.00	7,737.61	182.72	140.81	-90.50	-4,546.43	-3,848.29	8,189.40	7,992.63	196.77	41.619			
13,400.00	7,579.00	16,202.00	7,737.61	185.24	140.81	-90.50	-4,546.43	-3,848.29	8,233.69	8,035.49	198.19	41.543			
13,500.00	7,579.00	16,202.00	7,737.61	187.76	140.81	-90.50	-4,546.43	-3,848.29	8,278.94	8,079.32	199.62	41.473			
13,600.00	7,579.00	16,202.00	7,737.61	190.30	140.81	-90.50	-4,546.43	-3,848.29	8,325.15	8,124.10	201.05	41.409			
13,700.00	7,579.00	16,202.00	7,737.61	192.83	140.81	-90.50	-4,546.43	-3,848.29	8,372.29	8,169.82	202.48	41.349			
13,800.00	7,579.00	16,202.00	7,737.61	195.37	140.81	-90.50	-4,546.43	-3,848.29	8,420.36	8,216.46	203.90	41.296			
13,900.00	7,579.00	16,202.00	7,737.61	197.92	140.81	-90.50	-4,546.43	-3,848.29	8,469.34	8,264.02	205.33	41.248			
14,000.00	7,579.00	16,202.00	7,737.61	200.47	140.81	-90.50	-4,546.43	-3,848.29	8,519.21	8,312.47	206.75	41.206			
14,100.00	7,579.00	16,202.00	7,737.61	203.02	140.81	-90.50	-4,546.43	-3,848.29	8,569.96	8,361.80	208.16	41.170			
14,200.00	7,579.00	16,202.00	7,737.61	205.58	140.81	-90.50	-4,546.43	-3,848.29	8,621.57	8,412.00	209.57	41.140			
14,300.00	7,579.00	16,202.00	7,737.61	208.14	140.81	-90.50	-4,546.43	-3,848.29	8,674.02	8,463.06	210.96	41.116			
14,400.00	7,579.00	16,202.00	7,737.61	210.70	140.81	-90.50	-4,546.43	-3,848.29	8,727.31	8,514.96	212.35	41.098			
14,500.00	7,579.00	16,202.00	7,737.61	213.27	140.81	-90.50	-4,546.43	-3,848.29	8,781.41	8,567.68	213.73	41.086			
14,600.00	7,579.00	16,202.00	7,737.61	215.84	140.81	-90.50	-4,546.43	-3,848.29	8,836.31	8,621.21	215.10	41.080			
14,700.00	7,579.00	16,202.00	7,737.61	218.42	140.81	-90.50	-4,546.43	-3,848.29	8,892.00	8,675.54	216.46	41.080 SF			
14,800.00	7,579.00	16,202.00	7,737.61	221.00	140.81	-90.50	-4,546.43	-3,848.29	8,948.46	8,730.66	217.80	41.086			
14,900.00	7,579.00	16,202.00	7,737.61	223.58	140.81	-90.50	-4,546.43	-3,848.29	9,005.67	8,786.54	219.13	41.097			
15,000.00	7,579.00	16,202.00	7,737.61	226.17	140.81	-90.50	-4,546.43	-3,848.29	9,063.63	8,843.18	220.45	41.115			
15,100.00	7,579.00	16,202.00	7,737.61	228.75	140.81	-90.50	-4,546.43	-3,848.29	9,122.31	8,900.57	221.75	41.138			
15,200.00	7,579.00	16,202.00	7,737.61	231.34	140.81	-90.50	-4,546.43	-3,848.29	9,181.71	8,958.68	223.03	41.168			
15,300.00	7,579.00	16,202.00	7,737.61	233.94	140.81	-90.50	-4,546.43	-3,848.29	9,241.81	9,017.51	224.30	41.202			

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well WARBLER 13W-27-07
Project:	ADAMS COUNTY	TVD Reference:	KB 25' @ 5106.00usft
Reference Site:	Sec 13-T1S-R66W	MD Reference:	KB 25' @ 5106.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WARBLER 13W-27-07	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

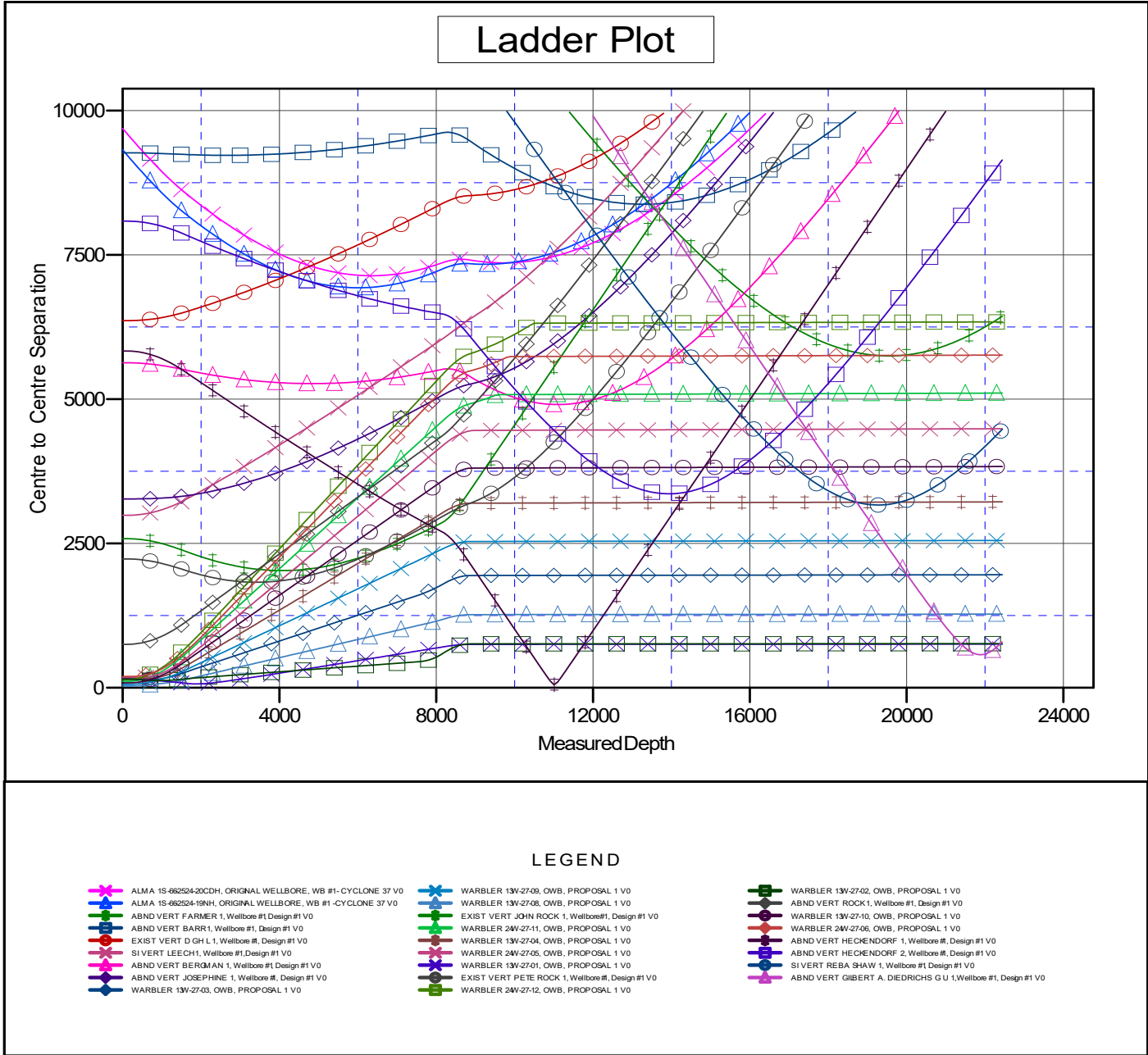
Offset Design												Offset Site Error:	0.00 usft	
Survey Program: 28-MWD OWSG												Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
15,400.00	7,579.00	16,202.00	7,737.61	236.53	140.81	-90.50	-4,546.43	-3,848.29	9,302.60	9,077.04	225.56	41.243		
15,500.00	7,579.00	16,202.00	7,737.61	239.13	140.81	-90.50	-4,546.43	-3,848.29	9,364.06	9,137.26	226.79	41.289		
15,600.00	7,579.00	16,202.00	7,737.61	241.73	140.81	-90.50	-4,546.43	-3,848.29	9,426.17	9,198.16	228.01	41.340		
15,700.00	7,579.00	16,202.00	7,737.61	244.34	140.81	-90.50	-4,546.43	-3,848.29	9,488.94	9,259.72	229.22	41.397		
15,800.00	7,579.00	16,202.00	7,737.61	246.94	140.81	-90.50	-4,546.43	-3,848.29	9,552.34	9,321.94	230.40	41.459		
15,900.00	7,579.00	16,202.00	7,737.61	249.55	140.81	-90.50	-4,546.43	-3,848.29	9,616.37	9,384.79	231.57	41.527		
16,000.00	7,579.00	16,202.00	7,737.61	252.16	140.81	-90.50	-4,546.43	-3,848.29	9,681.00	9,448.28	232.72	41.599		
16,100.00	7,579.00	16,202.00	7,737.61	254.77	140.81	-90.50	-4,546.43	-3,848.29	9,746.23	9,512.37	233.86	41.676		
16,200.00	7,579.00	16,202.00	7,737.61	257.38	140.81	-90.50	-4,546.43	-3,848.29	9,812.04	9,577.07	234.97	41.759		
16,300.00	7,579.00	16,202.00	7,737.61	260.00	140.81	-90.50	-4,546.43	-3,848.29	9,878.43	9,642.36	236.07	41.846		
16,400.00	7,579.00	16,202.00	7,737.61	262.62	140.81	-90.50	-4,546.43	-3,848.29	9,945.38	9,708.24	237.15	41.937		

Anticollision Report

Company: EXTRACTION OIL & GAS	Local Co-ordinate Reference: Well WARBLER 13W-27-07
Project: ADAMS COUNTY	TVD Reference: KB 25' @ 5106.00usft
Reference Site: Sec 13-T1S-R66W	MD Reference: KB 25' @ 5106.00usft
Site Error: 0.00 usft	North Reference: True
Reference Well: WARBLER 13W-27-07	Survey Calculation Method: Minimum Curvature
Well Error: 0.00 usft	Output errors are at: 2.00 sigma
Reference Wellbore: OWB	Database: EDT_32Bit_ODBC
Reference Design: PROPOSAL 1	Offset TVD Reference: Offset Datum

Reference Depths are relative to KB 25' @ 5106.00usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 105.500000°W

Coordinates are relative to: WARBLER 13W-27-07
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.50°



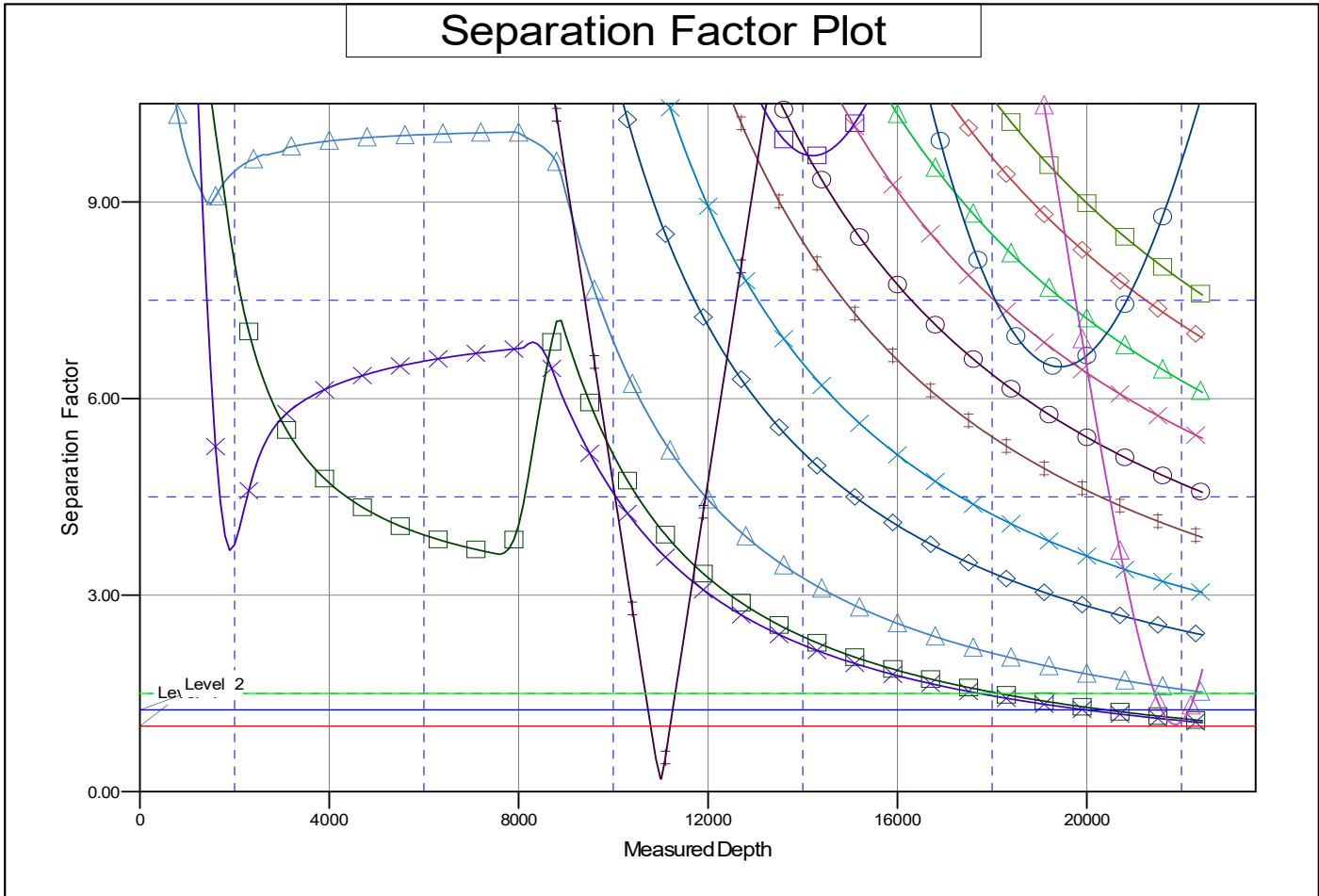
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: EXTRACTION OIL & GAS	Local Co-ordinate Reference: Well WARBLER 13W-27-07
Project: ADAMS COUNTY	TVD Reference: KB 25' @ 5106.00usft
Reference Site: Sec 13-T1S-R66W	MD Reference: KB 25' @ 5106.00usft
Site Error: 0.00 usft	North Reference: True
Reference Well: WARBLER 13W-27-07	Survey Calculation Method: Minimum Curvature
Well Error: 0.00 usft	Output errors are at: 2.00 sigma
Reference Wellbore: OWB	Database: EDT_32Bit_ODBC
Reference Design: PROPOSAL 1	Offset TVD Reference: Offset Datum

Reference Depths are relative to KB 25' @ 5106.00usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 105.500000°W

Coordinates are relative to: WARBLER 13W-27-07
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.50°



LEGEND

- | | | |
|---|--|---|
| <ul style="list-style-type: none"> ✱ ALMA 1S-662524-20CDH, ORIGINAL WELLBORE, WB #1-CYCLONE 37 V0 ▲ ALMA 1S-662524-19NH, ORIGINAL WELLBORE, WB #1 -CYCLONE 37 V0 ■ ABND VERT FARMER 1, Wellbore #1, Design #1 V0 ● ABND VERT BARR1, Wellbore #1, Design #1 V0 ✕ EXIST VERT D GHL 1, Wellbore #1, Design #1 V0 ✱ SI VERT LEECH1, Wellbore #1, Design #1 V0 ◆ ABND VERT BERGMAN 1, Wellbore #1, Design #1 V0 ● ABND VERT JOSEPHINE 1, Wellbore #1, Design #1 V0 ▲ WARBLER 13W-27-03, OWB, PROPOSAL 1 V0 | <ul style="list-style-type: none"> ✕ WARBLER 13W-27-06, OWB, PROPOSAL 1 V0 ▲ WARBLER 13W-27-08, OWB, PROPOSAL 1 V0 ■ EXIST VERT JOHN ROCK 1, Wellbore#1, Design #1 V0 ● WARBLER 24W-27-11, OWB, PROPOSAL 1 V0 ✕ WARBLER 13W-27-04, OWB, PROPOSAL 1 V0 ✱ WARBLER 24W-27-05, OWB, PROPOSAL 1 V0 ◆ WARBLER 13W-27-01, OWB, PROPOSAL 1 V0 ● EXIST VERT PETE ROCK 1, Wellbore #1, Design #1 V0 ■ WARBLER 24W-27-12, OWB, PROPOSAL 1 V0 | <ul style="list-style-type: none"> ✱ WARBLER 13W-27-02, OWB, PROPOSAL 1 V0 ● ABND VERT ROCK 1, Wellbore #1, Design #1 V0 ▲ WARBLER 13W-27-10, OWB, PROPOSAL 1 V0 ✕ WARBLER 24W-27-06, OWB, PROPOSAL 1 V0 ● ABND VERT HECKENDORF 1, Wellbore #1, Design #1 V0 ✕ ABND VERT HECKENDORF 2, Wellbore #1, Design #1 V0 ✱ SI VERT REBA SHAW 1, Wellbore #1, Design #1 V0 ✱ ABND VERT GIBBERT A. DIEDRICHS G U 1, Wellbore #1, Design #1 V0 |
|---|--|---|

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