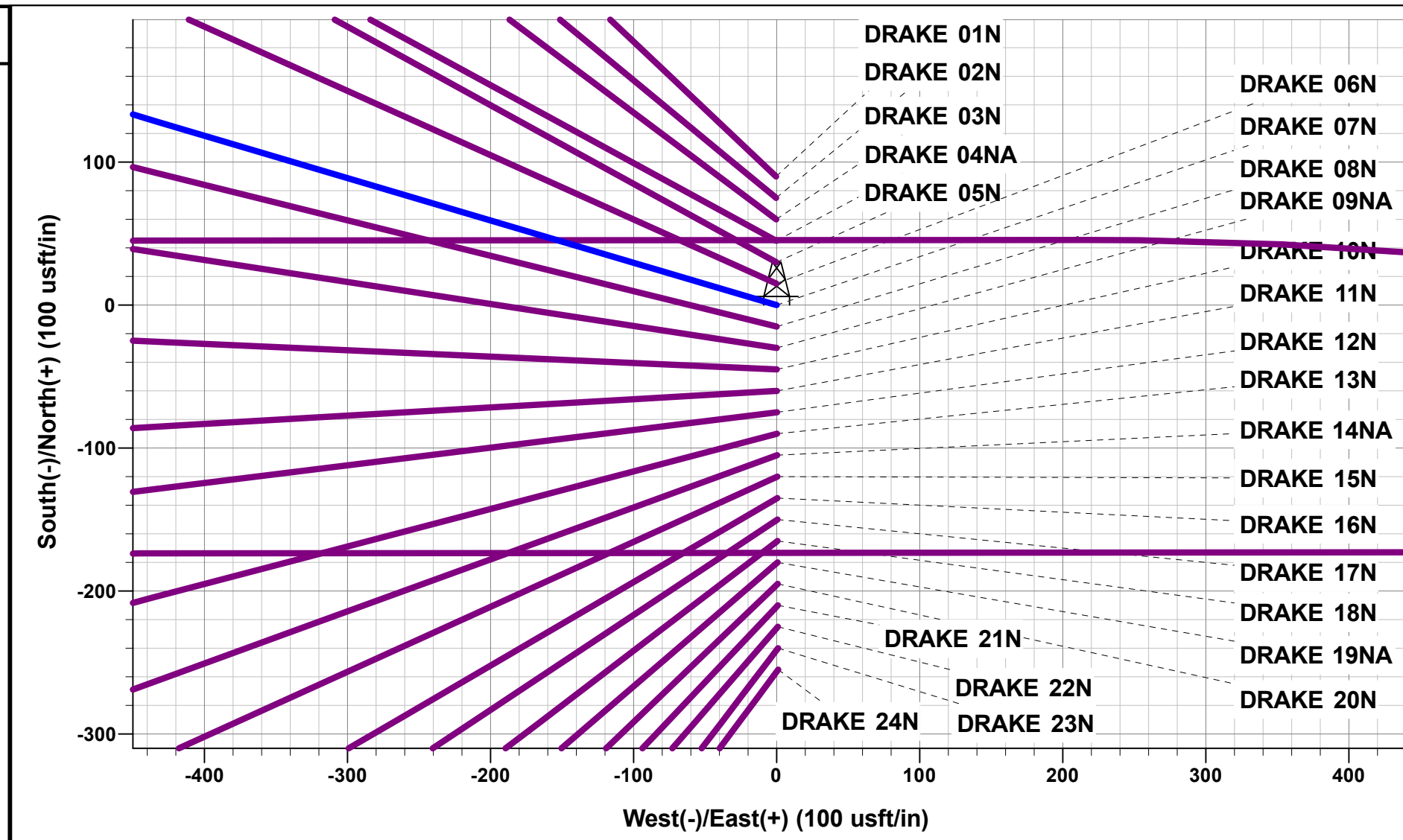




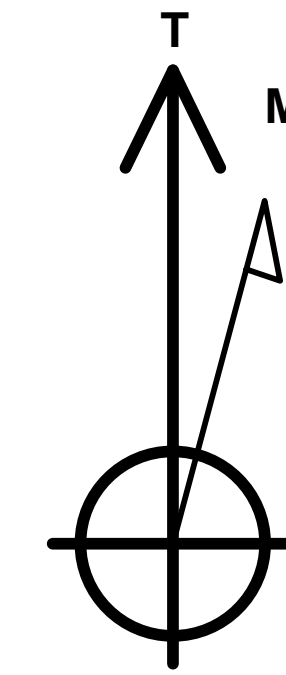
Project: WELD COUNTY, COLORADO (TRUE)  
 Site: SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)  
 Well: DRAKE 07N  
 Wellbore: ORIGINAL WELLBORE  
 Design: PROPOSAL #1

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Dep	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL: 2146ft FNL & 1015ft FWL of Sec 17
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	START NUDDGE (2.5°/100ft BUR)
2050.00	28.75	286.50	2002.35	80.24	-270.89	-264.01	282.52	EOB TO 28.75° INC
2550.00	28.75	286.50	2440.71	148.54	-501.48	-488.75	523.02	END OF TANGENT
2638.35	28.75	290.17	2518.18	161.91	-541.80	-527.93	565.50	EOT TO 290.17° AZ
5300.30	28.75	290.17	4852.08	603.42	-1743.45	-1692.57	1845.69	END OF TANGENT
6450.13	0.00	0.00	5954.27	700.83	-2008.56	-1949.52	2128.13	EOD TO VERTICAL
6568.68	0.00	0.00	6072.82	700.83	-2008.56	-1949.52	2128.13	KOP (8°/100ft BUR)
7506.18	75.00	89.96	6764.61	701.20	-1477.73	-1420.19	2658.96	EP: 1434ft FNL & 450ft FEL of Sec 18
7698.05	90.35	89.96	6789.00	701.33	-1287.99	-1230.99	2848.70	HZ LANDING POINT
11118.05	90.35	89.96	6768.11	703.69	2131.95	2179.24	6268.64	END OF TANGENT
11426.06	90.35	83.80	6766.23	720.45	2439.35	2487.03	6576.65	EOT TO 83.8° AZ
11526.06	90.35	83.80	6765.62	731.25	2538.77	2586.98	6676.65	END OF TANGENT
11834.06	90.35	89.96	6763.74	748.00	2846.15	2894.75	6984.63	EOT TO 89.96° AZ
12056.39	90.35	96.63	6762.38	735.23	3067.98	3114.97	7206.96	EOT TO 96.63° AZ
12156.39	90.35	96.63	6761.77	723.68	3167.31	3213.13	7306.96	END OF TANGENT
12489.88	90.35	89.96	6759.73	704.53	3500.06	3543.46	7640.44	EOT TO 89.96° AZ
17340.88	90.35	89.96	6729.89	707.91	8350.97	8380.61	12491.35	END OF TANGENT
17372.88	90.35	90.60	6729.70	707.76	8382.97	8412.51	12523.35	EOT TO 90.6° AZ
17472.88	90.35	90.60	6729.08	706.71	8482.96	8512.13	12623.35	END OF TANGENT
17504.88	90.35	89.96	6728.88	706.55	8514.96	8544.03	12655.35	EOT TO 89.96° AZ
17510.98	90.35	89.84	6728.85	706.56	8521.06	8550.11	12661.45	EOT TO 89.84° AZ
18294.20	90.35	89.84	6724.00	708.78	9304.26	9331.21	13444.65	BHL: 1432ft FNL & 200ft FEL of Sec 16



PROPOSED LOCAL COORDINATES:  
 SHL: 2146ft FNL & 1015ft FWL of Sec 17  
 EP: 1434ft FNL & 450ft FEL of Sec 18  
 BHL: 1432ft FNL & 200ft FEL of Sec 16

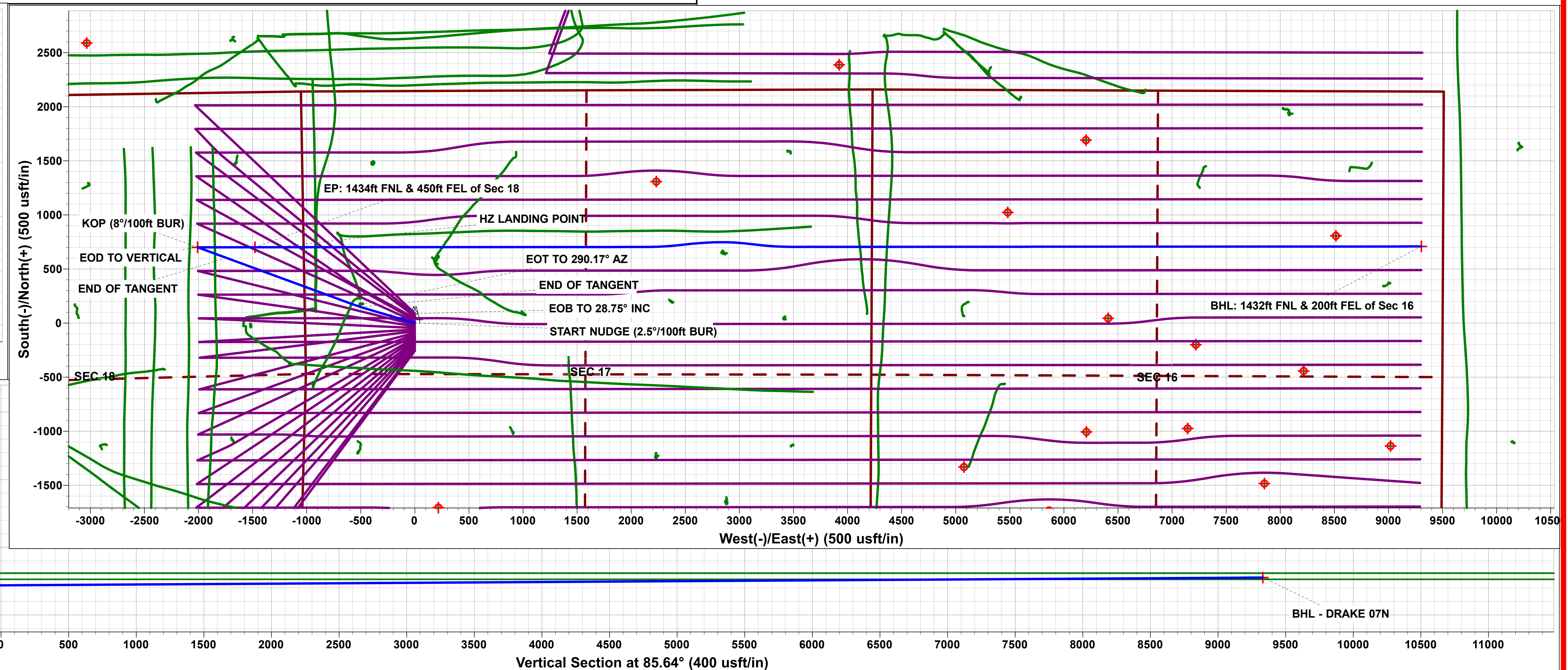
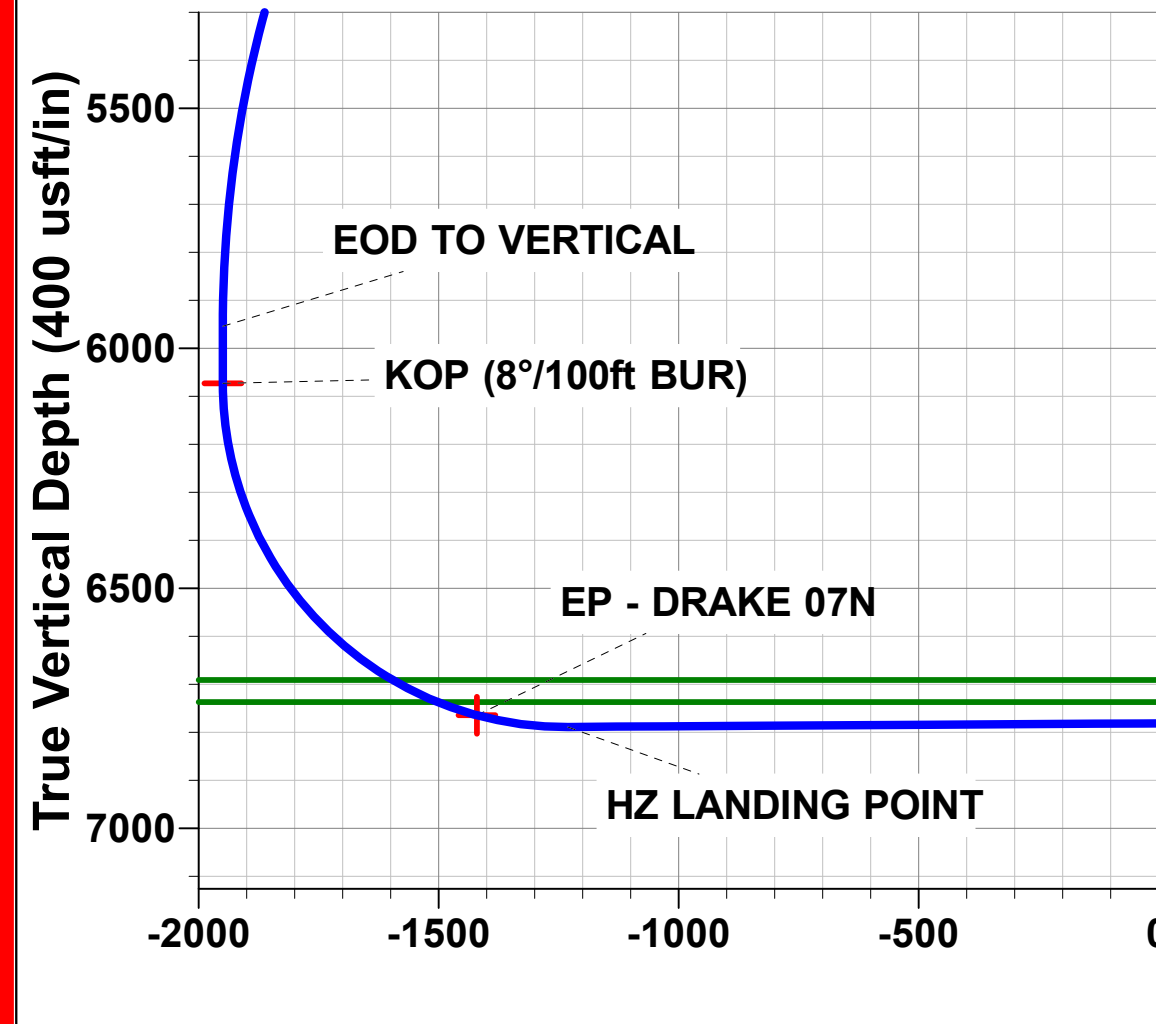
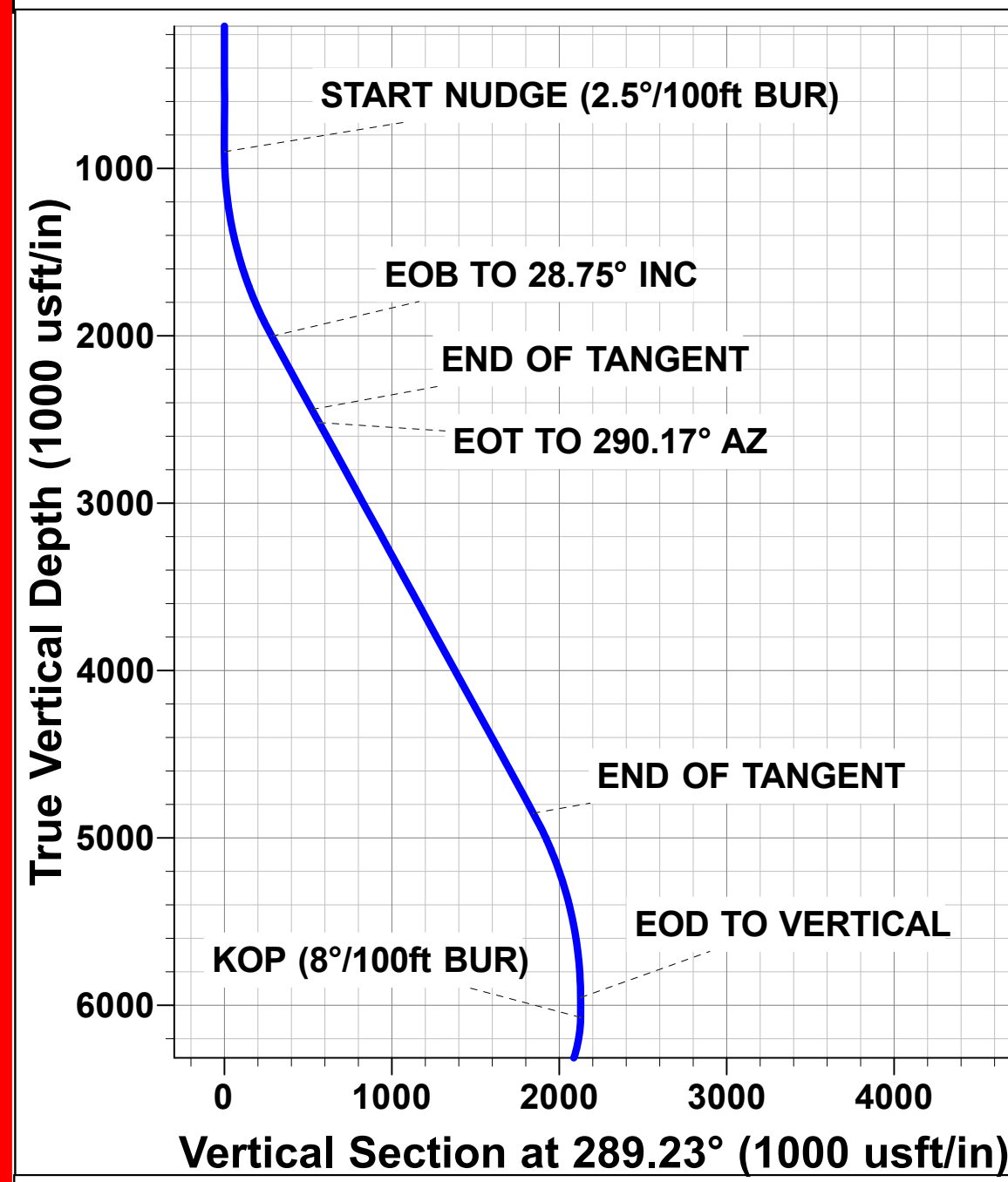


Azimuths to True North  
 Magnetic North: 7.75°

Magnetic Field  
 Strength: 51934.9nT  
 Dip Angle: 66.61°  
 Date: 2021-05-24  
 Model: IGRF2020

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL - DRAKE 07N	6724.00	708.80	9304.26	1359273.57	3265782.38	40.315685	-104.546867
EP - DRAKE 07N	6764.61	701.20	-1477.73	1359154.13	3255001.52	40.315669	-104.585531
KOP - DRAKE 07N	6072.82	700.83	-2008.56	1359148.26	3254470.74	40.315668	-104.587434



# **PDC ENERGY**

**WELD COUNTY, COLORADO (TRUE)  
SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)  
DRAKE 07N**

**ORIGINAL WELLBORE  
PROPOSAL #1**

## **Anticollision Report**

**26 May, 2021**

## Anticollision Report

<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well DRAKE 07N
<b>Project:</b>	WELD COUNTY, COLORADO (TRUE)	<b>TVD Reference:</b>	KB 23ft @ 4759.00usft
<b>Reference Site:</b>	SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)	<b>MD Reference:</b>	KB 23ft @ 4759.00usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	DRAKE 07N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	Database 1
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	PROPOSAL #1		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD + Stations Interval 100.00usft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum centre distance of 9,999.98usft	<b>Error Surface:</b>	Ellipsoid Separation
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b>	2021-05-26		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	18,294.20	PROPOSAL #1 (ORIGINAL WELLBORE)	MWD	MWD - Standard

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
<b>Summary</b>						
<b>Offset Well - Wellbore - Design</b>						
SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)						
GEORGE 01N - ORIGINAL WELLBORE - PROPOSAL #	8,104.61	18,121.45	3,955.55	3,613.06	11.549	CC
GEORGE 01N - ORIGINAL WELLBORE - PROPOSAL #	17,800.00	8,500.00	3,958.36	3,600.72	11.068	ES
GEORGE 01N - ORIGINAL WELLBORE - PROPOSAL #	18,294.20	7,918.26	3,972.83	3,603.45	10.755	SF
GEORGE 02N - ORIGINAL WELLBORE - PROPOSAL #	8,104.16	18,011.63	4,173.60	3,830.34	12.159	CC
GEORGE 02N - ORIGINAL WELLBORE - PROPOSAL #	18,294.20	7,830.88	4,176.59	3,807.11	11.304	ES, SF
SW NE SEC. 8 T4N R64W 6th P.M. (HEN)						
ABDN DD ALTER C 16-28D - Wellbore #1 - Wellbore #1	15,740.10	7,083.43	1,439.13	1,159.20	5.141	CC, ES
ABDN DD ALTER C 16-28D - Wellbore #1 - Wellbore #1	15,800.00	7,083.31	1,440.38	1,159.57	5.129	SF
ABDN DD ALTER C 16-29D - ORIGINAL WELLBORE - W	14,594.15	6,807.91	1,378.78	1,151.22	6.059	CC
ABDN DD ALTER C 16-29D - ORIGINAL WELLBORE - W	14,600.00	6,807.99	1,378.79	1,151.10	6.056	ES
ABDN DD ALTER C 16-29D - ORIGINAL WELLBORE - W	14,700.00	6,809.28	1,382.84	1,153.70	6.035	SF
ABDN DD ALTER C 16-29D - SIDETRACK - SIDETRAC	14,301.83	6,673.31	1,637.78	1,422.16	7.596	CC, ES
ABDN DD ALTER C 16-29D - SIDETRACK - SIDETRAC	14,500.00	6,676.09	1,649.72	1,430.69	7.532	SF
ABDN HZ FRANKLIN C08-62HXX - ORIGINAL WELLBO	8,156.54	6,866.31	1,976.19	1,908.44	29.170	CC
ABDN HZ FRANKLIN C08-62HXX - ORIGINAL WELLBO	11,834.06	10,481.69	2,009.24	1,762.81	8.153	ES
ABDN HZ FRANKLIN C08-62HXX - ORIGINAL WELLBO	12,100.00	10,756.00	2,034.11	1,772.93	7.788	SF
ABDN HZ FRANKLIN C08-62HXX - SIDETRACK - SIDE	8,772.06	7,532.00	1,924.44	1,833.14	21.079	CC
ABDN HZ FRANKLIN C08-62HXX - SIDETRACK - SIDE	8,900.00	7,595.00	1,926.44	1,831.42	20.272	ES
ABDN HZ FRANKLIN C08-62HXX - SIDETRACK - SIDE	12,300.00	10,776.11	2,176.22	1,912.95	8.266	SF
ABDN VERT RYANN STATE C 16-27 - Wellbore #1 - We	17,083.84	6,622.74	1,224.13	944.82	4.383	CC
ABDN VERT RYANN STATE C 16-27 - Wellbore #1 - We	17,100.00	6,623.13	1,224.23	944.49	4.376	ES
ABDN VERT RYANN STATE C 16-27 - Wellbore #1 - We	17,200.00	6,625.47	1,229.62	948.57	4.375	SF
ABDN VERT STATE 16-214 - Wellbore #1 - Wellbore #1	16,245.30	6,674.93	546.05	289.49	2.128	CC, ES, SF
EXIST DD NGL C1C - Wellbore #1 - Wellbore #1	13,118.56	7,004.04	188.83	34.08	1.220	Level 3, CC, ES, SF
EXIST HZ FRANKLIN C17-69HN - Wellbore #1 - Wellbor	11,860.20	10,630.65	1,488.34	1,238.96	5.968	CC
EXIST HZ FRANKLIN C17-69HN - Wellbore #1 - Wellbor	11,900.00	10,669.03	1,488.77	1,237.26	5.919	ES
EXIST HZ FRANKLIN C17-69HN - Wellbore #1 - Wellbor	12,100.00	10,846.00	1,505.11	1,243.39	5.751	SF
EXIST HZ JAGGED 11N - Wellbore #1 - Wellbore #1	7,100.00	10,256.19	1,814.89	1,680.71	13.526	SF
EXIST HZ JAGGED 11N - Wellbore #1 - Wellbore #1	7,250.00	10,189.69	1,807.30	1,674.31	13.590	ES
EXIST HZ JAGGED 11N - Wellbore #1 - Wellbore #1	7,288.18	10,155.02	1,807.09	1,674.92	13.672	CC
EXIST HZ JAGGED 12N - Wellbore #1 - Wellbore #1	7,000.00	10,292.58	1,591.55	1,456.22	11.761	SF
EXIST HZ JAGGED 12N - Wellbore #1 - Wellbore #1	7,600.00	9,709.00	1,560.82	1,439.81	12.899	ES
EXIST HZ JAGGED 12N - Wellbore #1 - Wellbore #1	8,543.87	8,796.52	1,555.01	1,446.95	14.390	CC
EXIST HZ MARK ALTER C16-79HN - Wellbore #1 - Well	13,355.04	8,474.38	15.03	-51.78	0.225	Level 3, CC, ES, SF
EXIST HZ SANDY HILLS PC C17-67HN - Wellbore #1 -	8,644.29	6,991.44	107.84	36.33	1.508	CC

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

## Anticollision Report

<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well DRAKE 07N
<b>Project:</b>	WELD COUNTY, COLORADO (TRUE)	<b>TVD Reference:</b>	KB 23ft @ 4759.00usft
<b>Reference Site:</b>	SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)	<b>MD Reference:</b>	KB 23ft @ 4759.00usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	DRAKE 07N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	Database 1
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SW NE SEC. 8 T4N R64W 6th P.M. (HEN)						
EXIST HZ SANDY HILLS PC C17-67HN - Wellbore #1 -	11,600.00	9,954.37	125.24	2.90	1.024	Level 3, ES, SF
EXIST HZ STOCKLEY C15-79HN - Wellbore #1 - Wellbo	18,294.20	9,873.73	373.80	286.10	4.262	CC, ES, SF
EXIST VERT CPC HARLESS 17-1 - Wellbore #1 - Wellb	12,454.92	6,745.87	876.47	724.51	5.768	CC
EXIST VERT CPC HARLESS 17-1 - Wellbore #1 - Wellb	12,489.88	6,745.78	876.95	724.17	5.740	ES
EXIST VERT CPC HARLESS 17-1 - Wellbore #1 - Wellb	12,500.00	6,745.75	877.29	724.32	5.735	SF
EXIST VERT HARLESS PM C 17-2 - Wellbore #1 - Desi	11,245.15	6,746.43	602.45	348.99	2.377	CC, ES, SF
EXIST VERT NGL C1A - Wellbore #1 - Design #1	12,913.44	6,717.12	1,683.26	1,385.76	5.658	CC, ES
EXIST VERT NGL C1A - Wellbore #1 - Design #1	13,100.00	6,715.98	1,693.57	1,392.22	5.620	SF
EXIST VERT ROHR 15-4I4 - Wellbore #1 - Wellbore #1	18,294.20	6,619.11	1,261.03	1,060.98	6.304	CC, ES, SF
EXIST VERT ROHR C 15-19 - Wellbore #1 - Wellbore #1	18,294.20	6,617.94	1,432.89	1,399.91	43.451	CC, ES, SF
EXIST VERT RYANN STATE C 16-1 - Wellbore #1 - Wel	17,632.58	6,668.03	708.93	414.64	2.409	CC, ES, SF
EXIST VERT STATE 16-3I4 - Wellbore #1 - Design #1	15,194.72	6,675.35	985.22	626.09	2.743	CC
EXIST VERT STATE 16-3I4 - Wellbore #1 - Design #1	15,200.00	6,675.32	985.23	625.96	2.742	ES, SF
EXIST VERT STATE 16-4I4 - Wellbore #1 - Design #1	14,471.03	6,687.28	317.41	-21.82	0.936	Level 3, CC, ES, SF
HEN 21N - ORIGINAL WELLBORE - PROPOSAL #1	11,838.41	8,895.63	1,743.21	1,566.66	9.874	CC
HEN 21N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	15,350.15	1,793.53	1,265.97	3.400	ES, SF
HEN 22N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	15,390.47	1,552.11	1,023.46	2.936	CC, ES, SF

## Anticollision Report

<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well DRAKE 07N
<b>Project:</b>	WELD COUNTY, COLORADO (TRUE)	<b>TVD Reference:</b>	KB 23ft @ 4759.00usft
<b>Reference Site:</b>	SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)	<b>MD Reference:</b>	KB 23ft @ 4759.00usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	DRAKE 07N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	Database 1
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

### Summary

Site Name Offset Well - Wellbore - Design	Reference	Offset	Distance		Separation Factor	Warning
	Measured Depth (usft)	Measured Depth (usft)	Between Centres (usft)	Between Ellipses (usft)		
SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)						
ABDN DD SH C17-24D - Wellbore #1 - Wellbore #1	100.00	80.07	1,454.46	1,454.28	8,251.592	CC
ABDN DD SH C17-24D - Wellbore #1 - Wellbore #1	400.00	376.63	1,455.01	1,453.82	1,230.104	ES
ABDN DD SH C17-24D - Wellbore #1 - Wellbore #1	11,200.00	7,001.56	2,572.90	2,441.64	19.601	SF
ABDN DD STATE C 16-20D - Wellbore #1 - Wellbore #1	14,438.68	6,752.51	1,267.80	1,047.51	5.755	CC, ES
ABDN DD STATE C 16-20D - Wellbore #1 - Wellbore #1	14,500.00	6,752.52	1,269.28	1,047.81	5.731	SF
ABDN HZ FRICK C #17-79HN - ORIGINAL WELLBORE	8,066.36	7,123.43	36.97	11.98	1.480	Level 3, CC, ES
ABDN HZ FRICK C #17-79HN - ORIGINAL WELLBORE	8,100.00	7,123.73	49.98	15.82	1.463	Level 3, SF
ABDN HZ FRICK C #17-79HN - SIDETRACK - SIDETRA	8,074.01	7,129.83	35.20	10.31	1.414	Level 3, CC, ES
ABDN HZ FRICK C #17-79HN - SIDETRACK - SIDETRA	8,100.00	7,131.00	43.73	11.75	1.367	Level 3, SF
ABDN VERT ANGELA C17-25 - Wellbore #1 - Design #1	900.00	886.00	1,720.13	1,700.76	88.826	CC
ABDN VERT ANGELA C17-25 - Wellbore #1 - Design #1	1,000.00	985.97	1,721.01	1,699.41	79.692	ES
ABDN VERT ANGELA C17-25 - Wellbore #1 - Design #1	9,700.00	6,762.77	2,459.59	2,244.93	11.458	SF
ABDN VERT CHENOWETH 21-4 - Wellbore #1 - Wellbo	14,114.75	6,782.57	4,549.48	4,352.28	23.071	CC
ABDN VERT CHENOWETH 21-4 - Wellbore #1 - Wellbo	14,200.00	6,780.21	4,550.28	4,350.78	22.808	ES
ABDN VERT CHENOWETH 21-4 - Wellbore #1 - Wellbo	15,400.00	6,734.59	4,727.44	4,503.95	21.153	SF
ABDN VERT CHENOWETH #1 - Wellbore #1 - Design #1	15,137.19	6,713.45	4,802.12	4,443.74	13.400	CC
ABDN VERT CHENOWETH #1 - Wellbore #1 - Design #1	15,300.00	6,712.45	4,804.88	4,442.17	13.247	ES
ABDN VERT CHENOWETH #1 - Wellbore #1 - Design #1	16,200.00	6,706.91	4,918.32	4,537.02	12.899	SF
ABDN VERT CLEMONS 13-15 - Wellbore #1 - Wellbore	18,294.20	6,632.43	2,010.46	1,731.12	7.197	CC, ES, SF
ABDN VERT FRICK #32-18 - Wellbore #1 - Wellbore #1	6,419.33	5,947.32	1,275.45	1,237.30	33.432	CC, ES
ABDN VERT FRICK #32-18 - Wellbore #1 - Wellbore #1	6,568.68	6,095.96	1,276.64	1,238.31	33.305	SF
ABDN VERT FRICK C18-2 - Wellbore #1 - Wellbore #1	6,414.70	5,938.79	1,161.68	1,140.17	54.008	CC, ES
ABDN VERT FRICK C18-2 - Wellbore #1 - Wellbore #1	6,600.00	6,126.78	1,164.07	1,142.40	53.700	SF
ABDN VERT FRICK C18-8 - Wellbore #1 - Wellbore #1	4,420.24	4,073.66	496.00	463.08	15.066	CC, ES
ABDN VERT FRICK C18-8 - Wellbore #1 - Wellbore #1	4,600.00	4,231.11	503.52	468.89	14.540	SF
ABDN VERT HARLESS PM C17-8 - Wellbore #1 - Wellb	12,429.40	6,704.91	670.62	519.26	4.431	CC, ES, SF
ABDN VERT MARY MILLS #41-18 - Wellbore #1 - Wellb	7,100.00	6,544.13	824.76	778.04	17.655	SF
ABDN VERT MARY MILLS #41-18 - Wellbore #1 - Wellb	7,287.57	6,654.09	812.91	767.73	17.995	CC, ES
ABDN VERT OCOMA C17-10 - Wellbore #1 - Wellbore #	11,185.13	6,729.73	1,933.41	1,815.00	16.329	CC
ABDN VERT OCOMA C17-10 - Wellbore #1 - Wellbore #	11,200.00	6,729.83	1,933.50	1,814.67	16.271	ES
ABDN VERT OCOMA C17-10 - Wellbore #1 - Wellbore #	11,526.06	6,732.26	1,981.37	1,855.35	15.722	SF
ABDN VERT OCOMA C17-11 - Wellbore #1 - Wellbore #	907.11	865.75	1,364.73	1,362.23	546.367	CC, ES
ABDN VERT OCOMA C17-11 - Wellbore #1 - Wellbore #	10,300.00	6,748.04	1,726.58	1,632.53	18.359	SF
ABDN VERT OCOMA C17-13 - Wellbore #1 - Design #1	900.00	892.00	2,547.29	2,527.87	131.130	CC
ABDN VERT OCOMA C17-13 - Wellbore #1 - Design #1	1,600.00	1,581.17	2,554.13	2,518.74	72.178	ES
ABDN VERT OCOMA C17-13 - Wellbore #1 - Design #1	9,300.00	6,771.21	3,307.54	3,102.35	16.119	SF
ABDN VERT OCOMA C17-16 - Wellbore #1 - Wellbore #	12,532.18	6,856.32	3,096.90	2,942.67	20.080	CC
ABDN VERT OCOMA C17-16 - Wellbore #1 - Wellbore #	12,600.00	6,858.11	3,097.64	2,941.60	19.852	ES
ABDN VERT OCOMA C17-16 - Wellbore #1 - Wellbore #	13,300.00	6,876.61	3,190.60	3,020.77	18.788	SF
ABDN VERT OCOMA C17-23 - Wellbore #1 - Wellbore #	12,142.26	6,759.79	2,359.14	2,215.97	16.477	CC
ABDN VERT OCOMA C17-23 - Wellbore #1 - Wellbore #	12,156.39	6,759.62	2,359.19	2,215.73	16.446	ES
ABDN VERT OCOMA C17-23 - Wellbore #1 - Wellbore #	12,400.00	6,756.84	2,383.44	2,236.08	16.175	SF
ABDN VERT OCOMA C17-9 - Wellbore #1 - Wellbore #1	12,475.56	6,706.58	1,839.77	1,687.24	12.062	CC
ABDN VERT OCOMA C17-9 - Wellbore #1 - Wellbore #1	12,500.00	6,706.28	1,840.02	1,686.84	12.012	ES
ABDN VERT OCOMA C17-9 - Wellbore #1 - Wellbore #1	12,800.00	6,702.63	1,869.71	1,710.98	11.779	SF
ABDN VERT OCOMA-UPRR C7-15 - Wellbore #1 - Desi	6,568.68	6,143.82	2,148.63	1,991.30	13.657	CC
ABDN VERT OCOMA-UPRR C7-15 - Wellbore #1 - Desi	6,600.00	6,175.13	2,148.95	1,990.99	13.604	ES
ABDN VERT OCOMA-UPRR C7-15 - Wellbore #1 - Desi	6,850.00	6,417.96	2,175.13	2,013.15	13.428	SF
ABDN VERT OCOMA-UPRR C7-16 - Wellbore #1 - Well	6,568.68	6,059.04	1,964.43	1,916.96	41.386	SF
ABDN VERT OCOMA-UPRR C7-16 - Wellbore #1 - Well	7,280.14	6,704.21	1,944.00	1,899.12	43.316	CC, ES
ABDN VERT RITER C18-10 - Wellbore #1 - Wellbore #1	6,281.73	5,817.51	2,049.51	2,002.14	43.260	CC
ABDN VERT RITER C18-10 - Wellbore #1 - Wellbore #1	6,300.00	5,833.06	2,049.53	2,002.12	43.226	ES

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

Anticollision Report

<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well DRAKE 07N
<b>Project:</b>	WELD COUNTY, COLORADO (TRUE)	<b>TVD Reference:</b>	KB 23ft @ 4759.00usft
<b>Reference Site:</b>	SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)	<b>MD Reference:</b>	KB 23ft @ 4759.00usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	DRAKE 07N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	Database 1
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference	Offset	Distance		Separation	Warning
	Measured	Measured	Between	Between		
Offset Well - Wellbore - Design	Depth	Depth	Centres	Ellipses	Factor	
	(usft)	(usft)	(usft)	(usft)		
SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)						
ABDN VERT RITER C18-10 - Wellbore #1 - Wellbore #1	6,568.68	6,086.97	2,052.72	2,005.02	43.037	SF
ABDN VERT RITER C18-16 - Wellbore #1 - Wellbore #1	2,635.16	2,527.37	2,869.08	2,855.12	205.377	CC
ABDN VERT RITER C18-16 - Wellbore #1 - Wellbore #1	2,700.00	2,574.01	2,869.42	2,854.80	196.206	ES
ABDN VERT RITER C18-16 - Wellbore #1 - Wellbore #1	9,600.00	6,866.59	3,865.03	3,795.92	55.921	SF
ABDN VERT RYANN STATE C16-22 - Wellbore #1 - Des	17,205.38	6,652.73	1,150.43	736.03	2.776	CC, ES, SF
ABDN VERT RYANN STATE C16-24 - Wellbore #1 - We	15,984.38	6,677.44	2,465.09	2,216.21	9.905	CC
ABDN VERT RYANN STATE C16-24 - Wellbore #1 - We	16,000.00	6,677.29	2,465.14	2,215.83	9.888	ES
ABDN VERT RYANN STATE C16-24 - Wellbore #1 - We	16,300.00	6,674.47	2,485.21	2,229.98	9.737	SF
ABDN VERT SANDY HILLS FARM C17-4 - Wellbore #1	8,590.36	6,790.34	786.24	728.59	13.637	CC
ABDN VERT SANDY HILLS FARM C17-4 - Wellbore #1	8,600.00	6,790.64	786.30	728.58	13.623	ES, SF
ABDN VERT SCHNEIDER #43-18 - Wellbore #1 - Wellbo	4,010.05	3,747.17	1,567.91	1,539.41	55.019	CC
ABDN VERT SCHNEIDER #43-18 - Wellbore #1 - Wellbo	4,100.00	3,820.63	1,568.63	1,539.15	53.210	ES
ABDN VERT SCHNEIDER #43-18 - Wellbore #1 - Wellbo	7,800.00	6,805.06	1,834.20	1,785.40	37.586	SF
ABDN VERT SCHNEIDER/DIC/COLTON #34-18 - Wellb	5,689.60	5,260.62	3,384.99	3,235.60	22.659	CC
ABDN VERT SCHNEIDER/DIC/COLTON #34-18 - Wellb	6,600.00	6,157.13	3,387.51	3,217.74	19.953	ES
ABDN VERT SCHNEIDER/DIC/COLTON #34-18 - Wellb	7,100.00	6,609.73	3,450.41	3,272.51	19.395	SF
ABDN VERT STATE 16-1214 - Wellbore #1 - Design #1	14,064.68	6,689.04	2,036.53	1,708.14	6.201	CC
ABDN VERT STATE 16-1214 - Wellbore #1 - Design #1	14,100.00	6,688.83	2,036.84	1,707.50	6.185	ES
ABDN VERT STATE 16-1214 - Wellbore #1 - Design #1	14,300.00	6,687.60	2,050.08	1,716.69	6.149	SF
ABDN VERT STATE 16-614 - Wellbore #1 - Design #1	15,398.68	6,670.84	662.63	297.94	1.817	CC
ABDN VERT STATE 16-614 - Wellbore #1 - Design #1	15,400.00	6,670.83	662.63	297.91	1.817	ES, SF
ABDN VERT STATE 16-714 - Wellbore #1 - Design #1	16,209.02	6,651.85	907.42	520.66	2.346	CC, ES, SF
ABDN VERT STATE 16-814 - Wellbore #1 - Wellbore #1	17,941.71	6,627.02	365.15	62.01	1.205	Level 3, CC, ES, SF
ABDN VERT STATE 16-914 - Wellbore #1 - Design #1	18,004.42	6,658.79	1,844.67	1,407.88	4.223	CC, ES
ABDN VERT STATE 16-914 - Wellbore #1 - Design #1	18,100.00	6,658.20	1,847.14	1,408.20	4.208	SF
ABDN VERT STATE A 14-16 - Wellbore #1 - Design #1	14,210.91	4,414.00	3,656.58	3,431.90	16.275	CC
ABDN VERT STATE A 14-16 - Wellbore #1 - Design #1	14,300.00	4,414.00	3,657.66	3,431.03	16.139	ES
ABDN VERT STATE A 14-16 - Wellbore #1 - Design #1	15,000.00	4,414.00	3,740.75	3,501.39	15.628	SF
ABDN VERT STATE A 14-16X - Wellbore #1 - Wellbore #	14,212.00	6,683.07	2,910.82	2,710.77	14.551	CC
ABDN VERT STATE A 14-16X - Wellbore #1 - Wellbore #	14,300.00	6,682.68	2,912.15	2,709.78	14.391	ES
ABDN VERT STATE A 14-16X - Wellbore #1 - Wellbore #	14,800.00	6,680.50	2,969.61	2,757.97	14.032	SF
ABDN VERT UPRR 36 PAN AM B #1 - Wellbore #1 - De	900.00	895.00	2,496.55	2,476.99	127.658	CC
ABDN VERT UPRR 36 PAN AM B #1 - Wellbore #1 - De	1,300.00	1,292.97	2,501.54	2,473.03	87.750	ES
ABDN VERT UPRR 36 PAN AM B #1 - Wellbore #1 - De	9,500.00	6,772.99	3,293.18	3,083.57	15.710	SF
ABDN VERT UPRR OCOMA C17-12 - Wellbore #1 - We	1,944.17	1,920.51	1,303.24	1,296.11	182.723	CC
ABDN VERT UPRR OCOMA C17-12 - Wellbore #1 - We	2,000.00	1,970.31	1,303.52	1,295.91	171.288	ES
ABDN VERT UPRR OCOMA C17-12 - Wellbore #1 - We	9,100.00	6,800.00	1,911.43	1,844.71	28.648	SF
DRAKE 01N - ORIGINAL WELLBORE - PROPOSAL #1	215.64	218.64	89.96	89.26	128.576	CC
DRAKE 01N - ORIGINAL WELLBORE - PROPOSAL #1	300.00	302.92	89.96	88.88	83.396	ES
DRAKE 01N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,626.92	1,314.26	694.47	2.120	SF
DRAKE 02N - ORIGINAL WELLBORE - PROPOSAL #1	315.99	317.99	74.94	73.79	65.249	CC
DRAKE 02N - ORIGINAL WELLBORE - PROPOSAL #1	400.00	401.96	74.94	73.41	49.107	ES
DRAKE 02N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,512.75	1,093.44	470.83	1.756	SF
DRAKE 03N - ORIGINAL WELLBORE - PROPOSAL #1	415.99	417.99	59.96	58.36	37.522	CC
DRAKE 03N - ORIGINAL WELLBORE - PROPOSAL #1	500.00	501.97	59.96	57.99	30.352	ES
DRAKE 03N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,535.71	877.99	263.36	1.428	Level 3, SF
DRAKE 04NA - ORIGINAL WELLBORE - PROPOSAL #1	515.99	517.99	44.99	42.94	21.972	CC
DRAKE 04NA - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,373.76	607.66	3.41	1.006	Level 3, ES, SF
DRAKE 05N - ORIGINAL WELLBORE - PROPOSAL #1	616.33	617.33	29.98	27.49	12.010	CC
DRAKE 05N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,359.61	437.39	-172.21	0.717	Level 3, ES, SF
<b>DRAKE 06N - ORIGINAL WELLBORE - PROPOSAL #1</b>	<b>716.33</b>	<b>717.33</b>	<b>15.04</b>	<b>12.10</b>	<b>5.106</b>	<b>CC</b>
DRAKE 06N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,391.82	229.63	-144.40	0.614	Level 3, ES, SF

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

## Anticollision Report

<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well DRAKE 07N
<b>Project:</b>	WELD COUNTY, COLORADO (TRUE)	<b>TVD Reference:</b>	KB 23ft @ 4759.00usft
<b>Reference Site:</b>	SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)	<b>MD Reference:</b>	KB 23ft @ 4759.00usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	DRAKE 07N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	Database 1
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)						
DRAKE 08N - ORIGINAL WELLBORE - PROPOSAL #1	900.00	900.00	15.01	11.24	3.982	CC
DRAKE 08N - ORIGINAL WELLBORE - PROPOSAL #1	18,200.04	18,259.62	226.63	-167.43	0.575	Level 3, ES, SF
DRAKE 09NA - ORIGINAL WELLBORE - PROPOSAL #1	900.00	899.00	29.98	26.22	7.959	CC
DRAKE 09NA - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,207.35	440.80	-98.16	0.818	Level 3, ES, SF
DRAKE 10N - ORIGINAL WELLBORE - PROPOSAL #1	900.00	899.00	44.96	41.19	11.934	CC
DRAKE 10N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,252.80	656.13	34.93	1.056	Level 3, ES, SF
DRAKE 11N - ORIGINAL WELLBORE - PROPOSAL #1	900.00	899.00	60.00	56.23	15.928	CC, ES
DRAKE 11N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,346.24	876.80	256.73	1.414	Level 3, SF
DRAKE 12N - ORIGINAL WELLBORE - PROPOSAL #1	900.00	898.00	74.97	71.21	19.915	CC, ES
DRAKE 12N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,278.62	1,093.49	471.06	1.757	SF
DRAKE 13N - ORIGINAL WELLBORE - PROPOSAL #1	900.00	898.00	89.98	86.22	23.901	CC, ES
DRAKE 13N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,359.72	1,313.51	692.90	2.116	SF
DRAKE 14NA - ORIGINAL WELLBORE - PROPOSAL #1	900.00	898.00	104.99	101.23	27.888	CC, ES
DRAKE 14NA - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,279.88	1,531.46	910.41	2.466	SF
DRAKE 15N - ORIGINAL WELLBORE - PROPOSAL #1	900.00	898.00	119.93	116.17	31.855	CC, ES
DRAKE 15N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,367.16	1,749.50	1,129.45	2.822	SF
DRAKE 16N - ORIGINAL WELLBORE - PROPOSAL #1	900.00	898.00	134.98	131.21	35.852	CC, ES
DRAKE 16N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,470.78	1,969.27	1,349.48	3.177	SF
DRAKE 17N - ORIGINAL WELLBORE - PROPOSAL #1	900.00	898.00	149.99	146.22	39.839	CC, ES
DRAKE 17N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,324.40	2,182.26	1,568.37	3.555	SF
DRAKE 18N - ORIGINAL WELLBORE - PROPOSAL #1	900.00	897.00	164.96	161.20	43.842	CC, ES
DRAKE 18N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,584.07	2,406.57	1,787.65	3.888	SF
DRAKE 19NA - ORIGINAL WELLBORE - PROPOSAL #1	800.00	797.00	179.93	176.62	54.310	CC, ES
DRAKE 19NA - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,523.56	2,625.05	2,006.06	4.241	SF
DRAKE 20N - ORIGINAL WELLBORE - PROPOSAL #1	700.00	697.00	194.94	192.08	68.078	CC, ES
DRAKE 20N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,629.88	2,842.95	2,223.54	4.590	SF
DRAKE 21N - ORIGINAL WELLBORE - PROPOSAL #1	600.00	598.00	209.99	207.58	86.909	CC, ES
DRAKE 21N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,755.39	3,062.56	2,444.27	4.953	SF
DRAKE 22N - ORIGINAL WELLBORE - PROPOSAL #1	500.00	498.00	224.92	222.96	114.366	CC, ES
DRAKE 22N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,786.52	3,280.36	2,662.48	5.309	SF
DRAKE 23N - ORIGINAL WELLBORE - PROPOSAL #1	400.00	397.00	239.97	238.46	158.404	CC, ES
DRAKE 23N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,757.30	3,499.92	2,885.11	5.693	SF
DRAKE 24N - ORIGINAL WELLBORE - PROPOSAL #1	300.00	297.00	254.98	253.91	239.330	CC, ES
DRAKE 24N - ORIGINAL WELLBORE - PROPOSAL #1	18,294.20	18,931.07	3,642.43	3,024.93	5.899	SF
EXIST DD CRICKET C22-30D - Wellbore #1 - Wellbore #	18,294.20	6,752.07	3,923.53	3,595.28	11.953	CC, ES, SF
EXIST DD FRANKLIN #C18-27D - Wellbore #1 - Wellbor	6,441.71	6,139.65	1,390.48	1,328.45	22.414	CC
EXIST DD FRANKLIN #C18-27D - Wellbore #1 - Wellbor	6,450.13	6,147.00	1,390.49	1,328.44	22.409	ES
EXIST DD FRANKLIN #C18-27D - Wellbore #1 - Wellbor	6,600.00	6,283.00	1,391.97	1,329.66	22.340	SF
EXIST DD NEI C17-33D - Wellbore #1 - Wellbore #1	4,972.40	5,168.53	2,191.79	2,115.02	28.550	CC
EXIST DD NEI C17-33D - Wellbore #1 - Wellbore #1	5,000.00	5,180.10	2,191.92	2,114.79	28.416	ES
EXIST DD NEI C17-33D - Wellbore #1 - Wellbore #1	8,500.00	7,494.36	2,642.73	2,529.84	23.410	SF
EXIST DD NEI C18-21D - Wellbore #1 - Wellbore #1	6,585.36	6,279.67	1,778.73	1,725.24	33.258	CC, ES
EXIST DD NEI C18-21D - Wellbore #1 - Wellbore #1	6,600.00	6,293.62	1,778.85	1,725.33	33.241	SF
EXIST DD NEI C18-22D - Wellbore #1 - Wellbore #1	5,960.93	5,840.44	1,165.85	1,090.88	15.551	CC
EXIST DD NEI C18-22D - Wellbore #1 - Wellbore #1	6,000.00	5,873.61	1,165.98	1,090.75	15.499	ES
EXIST DD NEI C18-22D - Wellbore #1 - Wellbore #1	6,600.00	6,465.44	1,171.55	1,094.33	15.172	SF
EXIST DD NEI C18-23D - Wellbore #1 - Wellbore #1	4,908.00	4,778.26	2,426.95	2,358.57	35.494	CC
EXIST DD NEI C18-23D - Wellbore #1 - Wellbore #1	5,000.00	4,845.29	2,428.00	2,358.04	34.704	ES
EXIST DD NEI C18-23D - Wellbore #1 - Wellbore #1	7,400.00	7,353.65	2,705.16	2,619.03	31.410	SF
EXIST DD NEI C18-24D - Wellbore #1 - Wellbore #1	6,587.59	6,380.00	2,803.52	2,735.42	41.166	CC, ES
EXIST DD NEI C18-24D - Wellbore #1 - Wellbore #1	6,650.00	6,436.46	2,804.93	2,736.75	41.140	SF
EXIST DD OSTER C19-27D - Wellbore #1 - Wellbore #1	4,540.10	4,149.29	2,914.40	2,876.38	76.665	CC

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

## Anticollision Report

<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well DRAKE 07N
<b>Project:</b>	WELD COUNTY, COLORADO (TRUE)	<b>TVD Reference:</b>	KB 23ft @ 4759.00usft
<b>Reference Site:</b>	SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)	<b>MD Reference:</b>	KB 23ft @ 4759.00usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	DRAKE 07N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	Database 1
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)						
EXIST DD OSTER C19-27D - Wellbore #1 - Wellbore #1	4,600.00	4,175.30	2,914.85	2,876.13	75.270	ES
EXIST DD OSTER C19-27D - Wellbore #1 - Wellbore #1	9,800.00	7,253.81	4,852.15	4,769.76	58.897	SF
EXIST DD PLUSS C17-32D - Wellbore #1 - Wellbore #1	2,568.71	2,437.70	215.47	199.92	13.858	CC, ES
EXIST DD PLUSS C17-32D - Wellbore #1 - Wellbore #1	2,700.00	2,549.47	228.10	210.20	12.746	SF
EXIST DD SH FARMS C17-3 - Wellbore #1 - Wellbore #1	826.49	824.58	628.08	624.64	182.493	CC, ES
EXIST DD SH FARMS C17-3 - Wellbore #1 - Wellbore #1	10,000.00	6,915.72	870.34	762.76	8.090	SF
EXIST DD SH FARMS C17-6 - Wellbore #1 - Wellbore #1	1,618.22	1,653.00	587.21	579.96	80.982	CC
EXIST DD SH FARMS C17-6 - Wellbore #1 - Wellbore #1	10,000.00	6,905.28	607.71	499.90	5.637	ES
EXIST DD SH FARMS C17-6 - Wellbore #1 - Wellbore #1	10,100.00	6,902.26	617.96	507.67	5.603	SF
EXIST HZ COLLINS 18Q-221 - Wellbore #1 - Wellbore #	6,820.49	10,586.19	1,388.99	1,307.81	17.110	CC, ES
EXIST HZ COLLINS 18Q-221 - Wellbore #1 - Wellbore #	6,950.00	10,587.68	1,406.58	1,322.51	16.732	SF
EXIST HZ COLLINS 18Q-301 - Wellbore #1 - Wellbore #	6,817.98	10,671.35	1,637.82	1,556.01	20.018	CC, ES
EXIST HZ COLLINS 18Q-301 - Wellbore #1 - Wellbore #	7,000.00	10,667.24	1,670.56	1,585.30	19.595	SF
EXIST HZ COLLINS 18T-201 - Wellbore #1 - Wellbore #	6,982.81	10,427.26	617.99	547.83	8.808	CC
EXIST HZ COLLINS 18T-201 - Wellbore #1 - Wellbore #	7,000.00	10,427.61	618.44	546.99	8.656	ES
EXIST HZ COLLINS 18T-201 - Wellbore #1 - Wellbore #	7,150.00	10,431.28	658.56	578.05	8.179	SF
EXIST HZ COLLINS 18T-221 - ORIGINAL WELLBORE -	7,243.37	7,227.00	3,146.43	3,088.80	54.591	CC
EXIST HZ COLLINS 18T-221 - ORIGINAL WELLBORE -	7,250.00	7,227.00	3,146.44	3,088.79	54.577	ES
EXIST HZ COLLINS 18T-221 - ORIGINAL WELLBORE -	9,100.00	7,227.00	3,693.48	3,618.43	49.217	SF
EXIST HZ COLLINS 18T-221 - SIDETRACK - SIDETRAC	7,234.90	10,299.49	214.32	163.29	4.200	CC
EXIST HZ COLLINS 18T-221 - SIDETRACK - SIDETRAC	7,250.00	10,299.25	215.01	160.87	3.971	ES
EXIST HZ COLLINS 18T-221 - SIDETRACK - SIDETRAC	7,350.00	10,297.58	251.20	176.45	3.360	SF
EXIST HZ COLLINS 18T-321 - Wellbore #1 - Wellbore #	7,135.52	10,563.77	405.29	345.98	6.834	CC
EXIST HZ COLLINS 18T-321 - Wellbore #1 - Wellbore #	7,150.00	10,563.74	405.69	344.58	6.639	ES
EXIST HZ COLLINS 18T-321 - Wellbore #1 - Wellbore #	7,300.00	10,564.25	454.33	377.28	5.897	SF
EXIST HZ COLLINS 18T-341 - Wellbore #1 - Wellbore #	6,942.20	10,522.59	877.71	803.63	11.849	CC
EXIST HZ COLLINS 18T-341 - Wellbore #1 - Wellbore #	6,950.00	10,522.39	877.78	803.31	11.787	ES
EXIST HZ COLLINS 18T-341 - Wellbore #1 - Wellbore #	7,100.00	10,519.11	908.59	827.56	11.213	SF
EXIST HZ FRICK PC C17-65HN - Wellbore #1 - Wellbor	3,565.08	3,352.24	670.93	638.61	20.759	CC
EXIST HZ FRICK PC C17-65HN - Wellbore #1 - Wellbor	3,600.00	3,377.40	671.35	638.54	20.459	ES
EXIST HZ FRICK PC C17-65HN - Wellbore #1 - Wellbor	12,800.00	11,373.00	1,348.07	1,048.57	4.501	SF
EXIST HZ STOCKLEY C22-79HN - Wellbore #1 - Wellbo	18,294.20	6,050.00	3,802.40	3,484.41	11.958	CC, ES, SF
EXIST VERT CHENOWETH #21-2 - Wellbore #1 - Desig	16,492.88	6,687.11	4,544.04	4,148.77	11.496	CC
EXIST VERT CHENOWETH #21-2 - Wellbore #1 - Desig	16,600.00	6,686.45	4,545.30	4,147.16	11.416	ES
EXIST VERT CHENOWETH #21-2 - Wellbore #1 - Desig	17,300.00	6,682.14	4,615.16	4,202.32	11.179	SF
EXIST VERT CLEMONS #15-1 - Wellbore #1 - Wellbore	18,294.20	6,623.07	3,358.90	3,057.08	11.129	CC, ES, SF
EXIST VERT CPC-HARLESS #17-2 - Wellbore #1 - Well	11,313.01	6,745.49	508.52	387.25	4.193	CC, ES
EXIST VERT CPC-HARLESS #17-2 - Wellbore #1 - Well	11,400.00	6,743.01	517.20	393.75	4.190	SF
EXIST VERT MORIAH #17-15 - Wellbore #1 - Wellbore #	11,823.96	6,719.06	100.89	-33.39	0.751	Level 3, CC, ES, SF
EXIST VERT OCOMA C17-15 - Wellbore #1 - Wellbore #	11,127.16	6,834.04	3,319.25	3,202.24	28.368	CC
EXIST VERT OCOMA C17-15 - Wellbore #1 - Wellbore #	11,200.00	6,835.67	3,320.98	3,202.05	27.926	ES
EXIST VERT OCOMA C17-15 - Wellbore #1 - Wellbore #	12,300.00	6,859.78	3,521.40	3,381.47	25.165	SF
EXIST VERT RYANN STATE C16-21 - Wellbore #1 - Des	16,133.12	6,676.32	1,681.54	1,296.37	4.366	CC
EXIST VERT RYANN STATE C16-21 - Wellbore #1 - Des	16,200.00	6,675.91	1,682.87	1,296.11	4.351	ES, SF
EXIST VERT RYANN STATE C16-23 - Wellbore #1 - Des	17,517.65	6,659.80	2,557.51	2,134.26	6.043	CC
EXIST VERT RYANN STATE C16-23 - Wellbore #1 - Des	17,600.00	6,659.30	2,558.83	2,133.48	6.016	ES
EXIST VERT RYANN STATE C16-23 - Wellbore #1 - Des	17,800.00	6,658.06	2,573.04	2,144.01	5.997	SF
EXIST VERT RYANN STATE C16-25 - Wellbore #1 - Des	14,850.98	6,680.21	2,438.01	2,088.19	6.969	CC
EXIST VERT RYANN STATE C16-25 - Wellbore #1 - Des	14,900.00	6,679.91	2,438.50	2,087.39	6.945	ES
EXIST VERT RYANN STATE C16-25 - Wellbore #1 - Des	15,100.00	6,678.68	2,450.69	2,095.31	6.896	SF
EXIST VERT RYANN STATE C21-27 - Wellbore #1 - We	17,269.68	6,651.28	3,746.31	3,461.64	13.160	CC
EXIST VERT RYANN STATE C21-27 - Wellbore #1 - We	17,400.00	6,651.38	3,748.10	3,459.99	13.010	ES

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

Anticollision Report

<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well DRAKE 07N
<b>Project:</b>	WELD COUNTY, COLORADO (TRUE)	<b>TVD Reference:</b>	KB 23ft @ 4759.00usft
<b>Reference Site:</b>	SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)	<b>MD Reference:</b>	KB 23ft @ 4759.00usft
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	DRAKE 07N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	Database 1
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)						
EXIST VERT RYANN STATE C21-27 - Wellbore #1 - We	17,900.00	6,651.73	3,798.34	3,500.69	12.761	SF
EXIST VERT SANDY HILLS FARM C17-5 - Wellbore #1	2,527.63	2,404.34	30.17	17.21	2.328	CC, ES, SF
EXIST VERT SH FARMS C17-19 - Wellbore #1 - Wellbo	9,195.12	6,764.69	157.08	87.42	2.255	CC
EXIST VERT SH FARMS C17-19 - Wellbore #1 - Wellbo	9,200.00	6,764.71	157.16	87.14	2.245	ES, SF
EXIST VERT STATE 16-1014 - Wellbore #1 - Design #1	16,841.87	6,675.96	2,191.48	1,786.66	5.413	CC
EXIST VERT STATE 16-1014 - Wellbore #1 - Design #1	16,900.00	6,675.60	2,192.25	1,785.95	5.396	ES
EXIST VERT STATE 16-1014 - Wellbore #1 - Design #1	17,000.00	6,674.99	2,197.18	1,788.85	5.381	SF
EXIST VERT STATE 16-1114 - Wellbore #1 - Design #1	15,197.14	6,677.08	1,712.83	1,353.53	4.767	CC
EXIST VERT STATE 16-1114 - Wellbore #1 - Design #1	15,200.00	6,677.06	1,712.84	1,353.45	4.766	ES
EXIST VERT STATE 16-1114 - Wellbore #1 - Design #1	15,300.00	6,676.45	1,715.92	1,354.27	4.745	SF
EXIST VERT STATE 16-1414 - Wellbore #1 - Design #1	15,042.99	6,686.03	3,395.86	3,040.62	9.559	CC
EXIST VERT STATE 16-1414 - Wellbore #1 - Design #1	15,100.00	6,685.68	3,396.33	3,039.57	9.520	ES
EXIST VERT STATE 16-1414 - Wellbore #1 - Design #1	15,600.00	6,682.60	3,441.23	3,074.04	9.372	SF
EXIST VERT STATE 16-1514 - Wellbore #1 - Design #1	16,683.08	6,662.94	3,170.68	2,770.58	7.925	CC
EXIST VERT STATE 16-1514 - Wellbore #1 - Design #1	16,800.00	6,662.22	3,172.83	2,769.73	7.911	ES
EXIST VERT STATE 16-1514 - Wellbore #1 - Design #1	17,100.00	6,660.37	3,197.97	2,789.01	7.820	SF
EXIST VERT STATE 16-1614 - Wellbore #1 - Design #1	17,989.97	6,653.88	3,181.64	2,745.40	7.293	CC
EXIST VERT STATE 16-1614 - Wellbore #1 - Design #1	18,100.00	6,653.20	3,183.54	2,744.46	7.250	ES
EXIST VERT STATE 16-1614 - Wellbore #1 - Design #1	18,294.20	6,652.00	3,196.17	2,753.08	7.213	SF
EXIST VERT STATE 16-514 - Wellbore #1 - Wellbore #1	14,107.65	6,681.42	511.18	314.01	2.593	CC, ES, SF
EXIST VERT STATE A 41-16 - Wellbore #1 - Design #1	17,504.50	6,630.89	100.14	-320.93	0.238	Level 3, CC
EXIST VERT STATE A 41-16 - Wellbore #1 - Design #1	17,504.88	6,630.88	100.14	-320.93	0.238	Level 3, ES, SF
EXIST VERT THOUTT #1 - Wellbore #1 - Wellbore #1	17,782.74	6,633.71	4,590.06	4,291.37	15.368	CC
EXIST VERT THOUTT #1 - Wellbore #1 - Wellbore #1	17,900.00	6,635.77	4,591.55	4,289.71	15.212	ES
EXIST VERT THOUTT #1 - Wellbore #1 - Wellbore #1	18,294.20	6,642.12	4,618.48	4,307.61	14.857	SF
EXIST VERT UPRR OCOMA C17-4 - Wellbore #1 - Desi	900.00	872.00	2,720.03	2,700.91	142.238	CC
EXIST VERT UPRR OCOMA C17-4 - Wellbore #1 - Desi	1,000.00	971.97	2,721.38	2,700.02	127.442	ES
EXIST VERT UPRR OCOMA C17-4 - Wellbore #1 - Desi	10,800.00	6,742.05	3,334.58	3,094.94	13.915	SF

Offset Design: SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE) - GEORGE 01N - ORIGINAL WELLBORE - PROPOSAL #1														Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:				Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	17,190.10	6,852.97	0.00	268.22	179.06	-3,252.48	53.19	7,602.99						
100.00	100.00	17,190.85	6,852.98	0.09	268.24	179.08	-3,252.48	52.44	7,512.72	7,371.48	141.25	53.189			
200.00	200.00	17,191.61	6,852.98	0.31	268.26	179.09	-3,252.48	51.69	7,422.71	7,280.41	142.30	52.164			
300.00	300.00	17,192.36	6,852.99	0.54	268.29	179.10	-3,252.48	50.93	7,332.95	7,189.57	143.38	51.143			
400.00	400.00	17,193.12	6,852.99	0.76	268.31	179.12	-3,252.48	50.18	7,243.47	7,098.97	144.50	50.128			
500.00	500.00	17,193.87	6,853.00	0.99	268.33	179.13	-3,252.48	49.42	7,154.26	7,008.61	145.65	49.119			
600.00	600.00	17,194.63	6,853.00	1.21	268.35	179.14	-3,252.48	48.67	7,065.34	6,918.50	146.84	48.117			
700.00	700.00	17,195.38	6,853.01	1.44	268.37	179.16	-3,252.48	47.91	6,976.72	6,828.66	148.06	47.122			
800.00	800.00	17,196.14	6,853.01	1.66	268.39	179.17	-3,252.48	47.16	6,888.41	6,739.09	149.32	46.132			
900.00	900.00	17,196.89	6,853.02	1.88	268.41	179.18	-3,252.48	46.40	6,800.43	6,649.80	150.63	45.148			
1,000.00	999.97	17,199.74	6,853.04	2.10	268.49	-111.49	-3,252.48	43.56	6,713.12	6,561.11	152.01	44.163			
1,100.00	1,099.75	17,206.76	6,853.10	2.32	268.68	-115.27	-3,252.49	36.54	6,626.98	6,473.47	153.51	43.171			
1,200.00	1,199.14	17,217.94	6,853.18	2.55	268.99	-118.65	-3,252.49	25.35	6,542.19	6,387.05	155.14	42.169			
1,300.00	1,297.97	17,233.27	6,853.30	2.82	269.41	-121.66	-3,252.50	10.03	6,458.96	6,302.04	156.92	41.162			
1,400.00	1,396.04	17,252.71	6,853.44	3.14	269.94	-124.33	-3,252.50	-9.42	6,377.47	6,218.63	158.84	40.150			

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