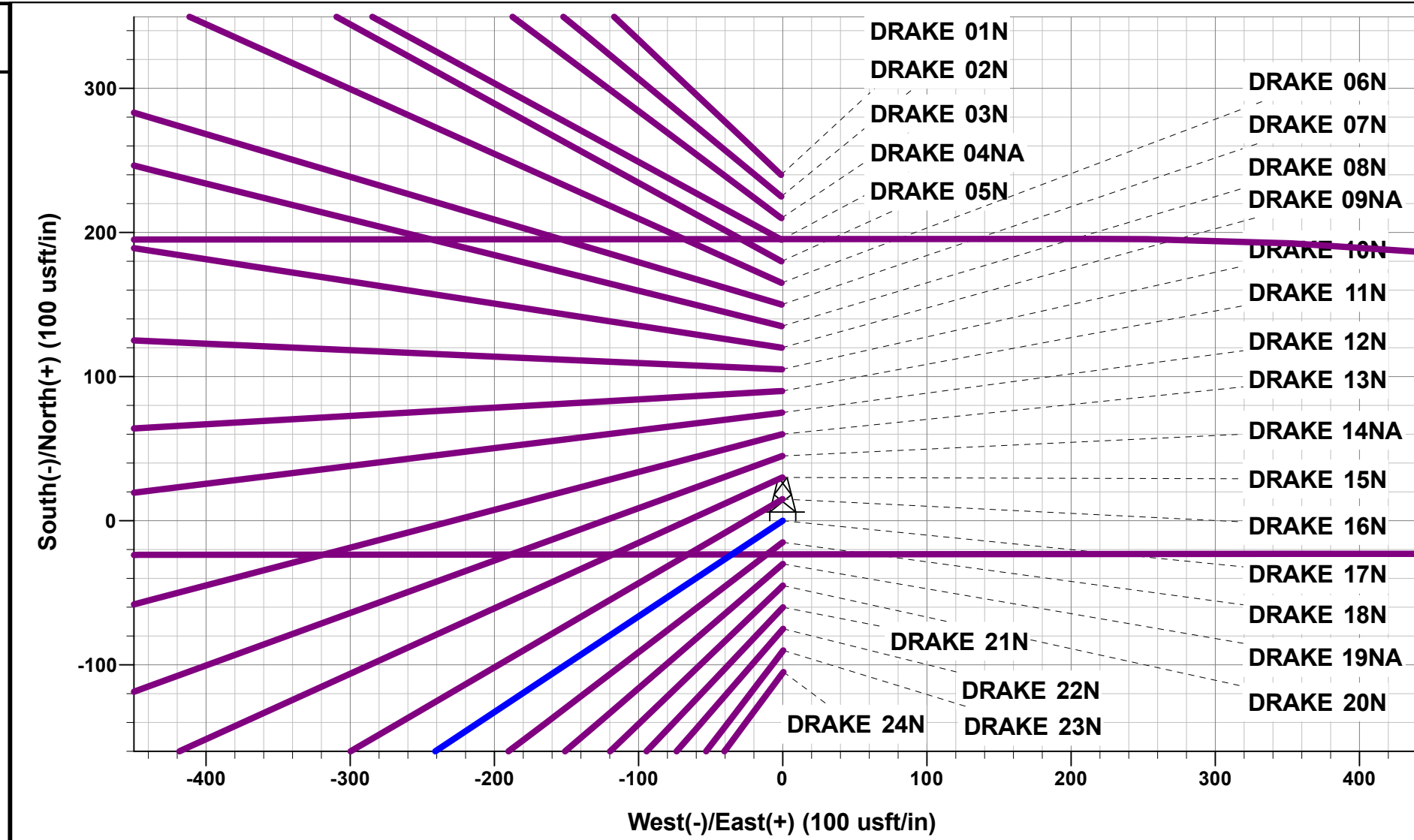




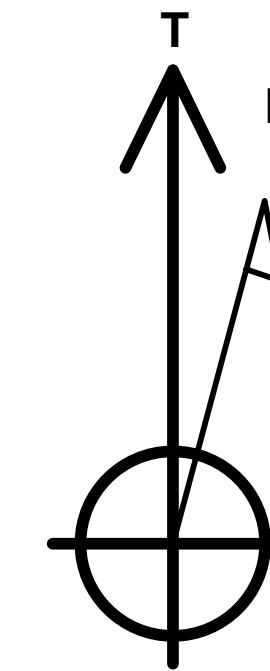
Project: WELD COUNTY, COLORADO (TRUE)
 Site: SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)
 Well: DRAKE 17N
 Wellbore: ORIGINAL WELLBORE
 Design: PROPOSAL #1

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: 2296ft FNL & 1013ft FWL of Sec 17
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	START NUDDGE (3°/100ft BUR)
2054.13	31.62	236.42	2001.42	-156.88	-236.26	-211.69	283.60	EOB TO 31.62° INC
5586.69	31.62	236.42	5009.42	-1181.48	-1779.34	-1594.27	2135.87	END OF TANGENT
6640.83	0.00	0.00	6010.84	-1338.36	-2015.60	-1805.95	2419.47	EOD TO VERTICAL
6740.83	0.00	0.00	6110.84	-1338.36	-2015.60	-1805.95	2419.47	KOP (8°/100ft BUR)
7678.32	75.00	89.95	6802.63	-1337.90	-1484.77	-1280.53	2950.30	EP: 1652ft FSL & 450ft FEL of Sec 18
7873.25	90.59	89.95	6827.00	-1337.73	-1291.98	-1089.70	3143.09	HZ LANDING POINT
15969.52	90.59	89.95	6743.06	-1330.66	6803.85	6923.68	11238.93	END OF TANGENT
16446.99	90.59	80.40	6738.10	-1290.55	7279.06	7388.43	11716.38	EOT TO 80.4° AZ
16546.99	90.59	80.40	6737.06	-1273.87	7377.65	7483.67	11816.37	END OF TANGENT
17024.47	90.59	89.95	6732.10	-1233.76	7852.86	7948.42	12293.82	EOT TO 89.95° AZ
17228.95	90.60	94.04	6729.97	-1240.88	8057.17	8151.68	12498.30	EOT TO 94.04° AZ
18466.68	90.60	94.04	6717.00	-1328.07	9291.75	9386.18	13735.95	BHL: 1651ft FSL & 200ft FEL of Sec 16



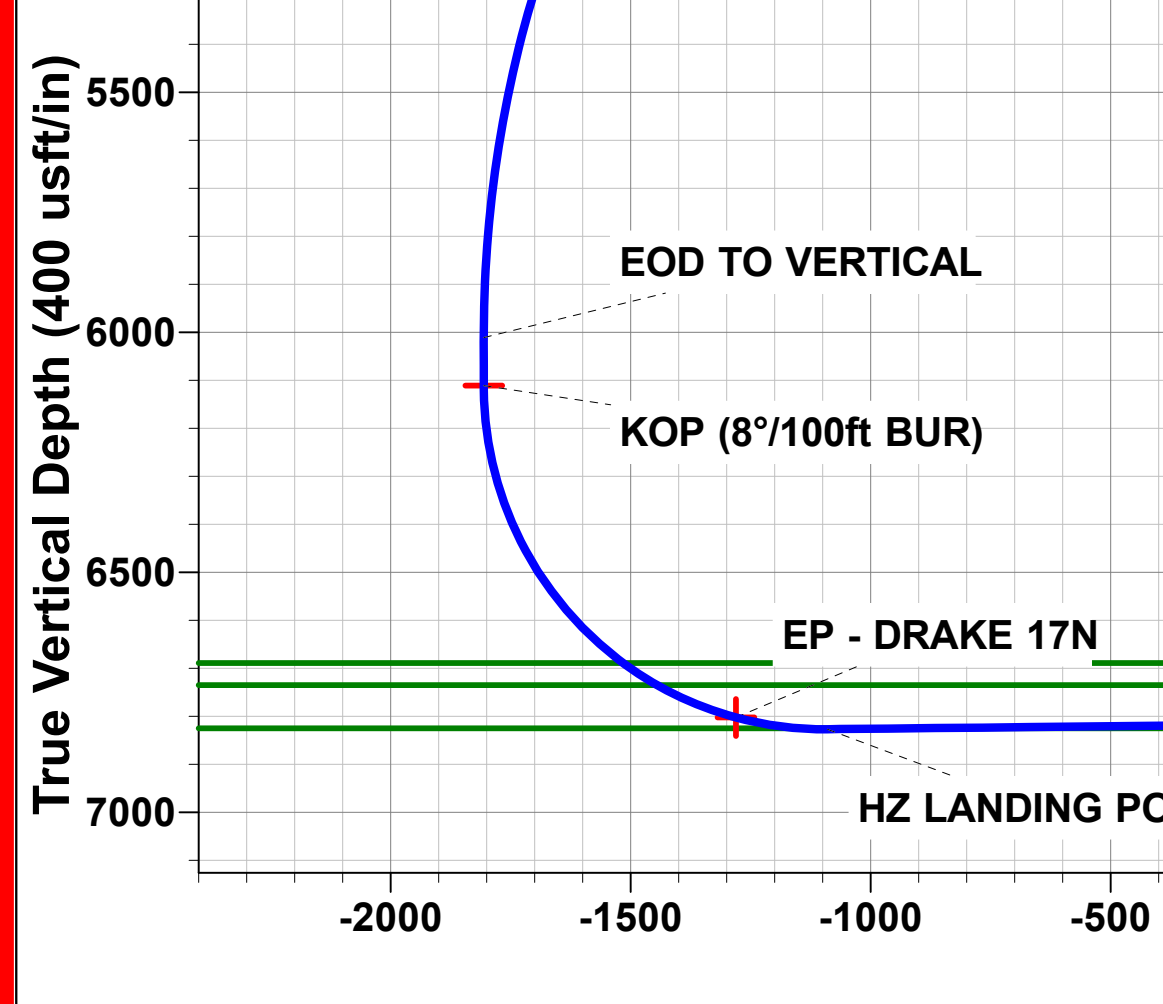
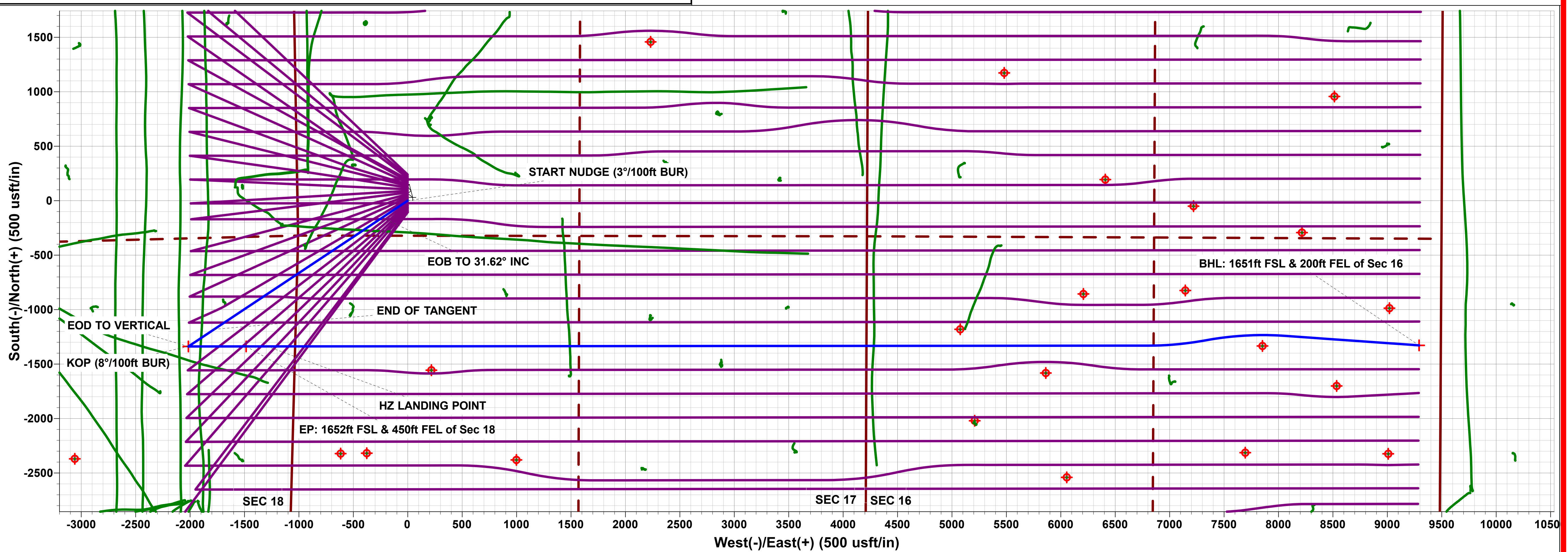
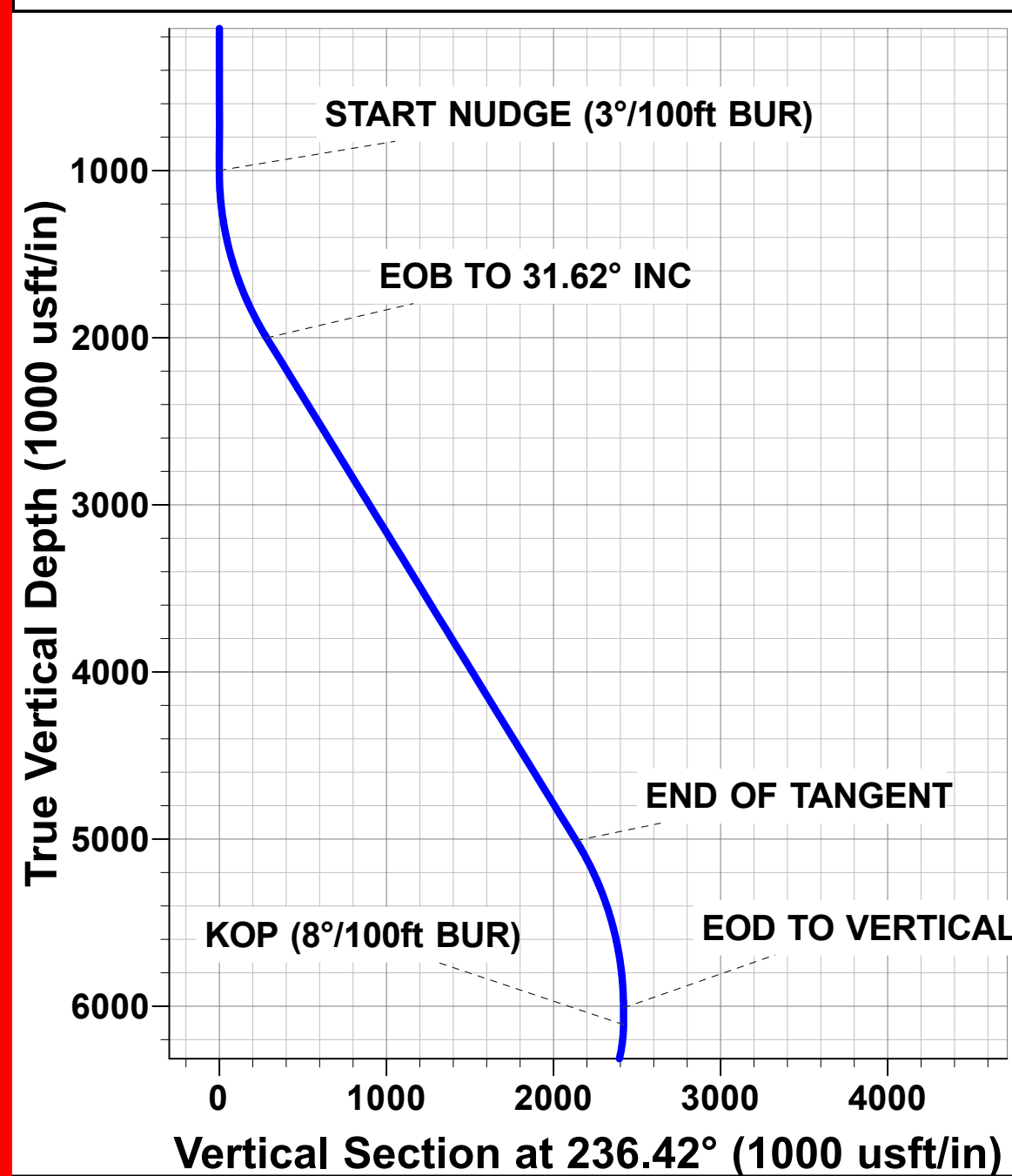
PROPOSED LOCAL COORDINATES:
 SHL: 2296ft FNL & 1013ft FWL of Sec 17
 EP: 1652ft FSL & 450ft FEL of Sec 18
 BHL: 1651ft FSL & 200ft FEL of Sec 16



Azimuths to True North
 Magnetic North: 7.75°
 Magnetic Field
 Strength: 51934.4nT
 Dip Angle: 66.61°
 Date: 2021-05-25
 Model: IGRF2020

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL - DRAKE 17N	6717.00	-1328.07	9291.75	1357086.79	3265793.20	40.309683	-104.546913
EP - DRAKE 17N	6802.63	-1337.90	-1484.77	1356965.20	3255017.82	40.309660	-104.585553
KOP - DRAKE 17N	6110.84	-1338.36	-2015.60	1356959.23	3254487.05	40.309659	-104.587456



PDC ENERGY

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

**ORIGINAL WELLBORE
PROPOSAL #1**

Anticollision Report

27 May, 2021

Anticollision Report

Company:	PDC ENERGY	Local Co-ordinate Reference:	Well DRAKE 17N
Project:	WELD COUNTY, COLORADO (TRUE)	TVD Reference:	KB 23ft @ 4757.00usft
Reference Site:	SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)	MD Reference:	KB 23ft @ 4757.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	DRAKE 17N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
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 + Stations Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 9,999.98usft	Error Surface:	Ellipsoid Separation
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	2021-05-27		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	18,466.38	PROPOSAL #1 (ORIGINAL WELLBORE)	MWD	MWD - Standard

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured	Offset Measured	Distance		Separation Factor	Warning
	Depth (usft)	Depth (usft)	Between Centres (usft)	Between Ellipses (usft)		
SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)						
GEORGE 01N - ORIGINAL WELLBORE - PROPOSAL #	8,284.37	18,121.45	1,766.34	1,425.72	5.186	CC
GEORGE 01N - ORIGINAL WELLBORE - PROPOSAL #	18,467.08	7,929.38	1,786.52	1,419.83	4.872	ES, SF
GEORGE 02N - ORIGINAL WELLBORE - PROPOSAL #	8,284.20	18,011.63	1,984.71	1,643.17	5.811	CC
GEORGE 02N - ORIGINAL WELLBORE - PROPOSAL #	18,467.08	7,841.12	1,989.70	1,622.88	5.424	ES, SF
SW NE SEC. 8 T4N R64W 6th P.M. (HEN)						
ABDN DD ALTER C 16-28D - Wellbore #1 - Wellbore #1	16,522.19	7,039.32	3,623.99	3,335.84	12.577	CC
ABDN DD ALTER C 16-28D - Wellbore #1 - Wellbore #1	16,546.99	7,039.30	3,624.07	3,335.69	12.567	ES
ABDN DD ALTER C 16-28D - Wellbore #1 - Wellbore #1	16,700.00	7,039.10	3,632.42	3,342.84	12.544	SF
ABDN DD ALTER C 16-29D - ORIGINAL WELLBORE - W	14,771.38	6,785.42	3,566.36	3,340.90	15.818	CC
ABDN DD ALTER C 16-29D - ORIGINAL WELLBORE - W	14,900.00	6,786.64	3,568.68	3,340.13	15.614	ES
ABDN DD ALTER C 16-29D - ORIGINAL WELLBORE - W	15,500.00	6,792.13	3,640.02	3,401.07	15.233	SF
ABDN DD ALTER C 16-29D - SIDETRACK - SIDETRAC	14,479.01	6,581.82	3,823.21	3,609.94	17.927	CC
ABDN DD ALTER C 16-29D - SIDETRACK - SIDETRAC	14,600.00	6,582.34	3,825.12	3,608.76	17.679	ES
ABDN DD ALTER C 16-29D - SIDETRACK - SIDETRAC	15,300.00	6,585.38	3,910.36	3,680.53	17.014	SF
ABDN HZ FRANKLIN C08-62HNX - ORIGINAL WELLBO	1,827.34	2,160.86	3,135.71	3,126.04	324.444	CC, ES
ABDN HZ FRANKLIN C08-62HNX - ORIGINAL WELLBO	13,100.00	10,756.00	4,340.57	4,064.83	15.742	SF
ABDN HZ FRANKLIN C08-62HNX - SIDETRACK - SIDE	1,821.72	2,151.76	3,137.08	3,127.49	326.965	CC, ES
ABDN HZ FRANKLIN C08-62HNX - SIDETRACK - SIDE	13,200.00	10,803.00	4,464.29	4,186.52	16.072	SF
ABDN VERT RYANN STATE C 16-27 - Wellbore #1 - We	17,135.38	6,500.00	3,319.42	3,046.68	12.171	CC
ABDN VERT RYANN STATE C 16-27 - Wellbore #1 - We	17,200.00	6,500.00	3,320.77	3,046.06	12.088	ES
ABDN VERT RYANN STATE C 16-27 - Wellbore #1 - We	17,700.00	6,553.93	3,383.27	3,097.08	11.822	SF
ABDN VERT STATE 16-214 - Wellbore #1 - Wellbore #1	16,715.15	6,700.00	2,669.51	2,408.94	10.245	CC, ES
ABDN VERT STATE 16-214 - Wellbore #1 - Wellbore #1	16,900.00	6,700.00	2,681.84	2,419.06	10.206	SF
EXIST DD NGL C1C - Wellbore #1 - Wellbore #1	13,312.44	7,697.00	1,885.55	1,703.88	10.379	CC, ES
EXIST DD NGL C1C - Wellbore #1 - Wellbore #1	13,600.00	7,697.00	1,907.35	1,720.30	10.197	SF
EXIST HZ FRANKLIN C17-69HN - Wellbore #1 - Wellbor	2,690.68	3,242.00	2,982.60	2,962.59	149.089	CC
EXIST HZ FRANKLIN C17-69HN - Wellbore #1 - Wellbor	2,800.00	3,292.74	2,983.73	2,962.45	140.253	ES
EXIST HZ FRANKLIN C17-69HN - Wellbore #1 - Wellbor	12,900.00	10,846.00	3,770.42	3,498.55	13.869	SF
EXIST HZ JAGGED 11N - Wellbore #1 - Wellbore #1	6,800.00	10,490.93	4,032.67	3,890.31	28.326	SF
EXIST HZ JAGGED 11N - Wellbore #1 - Wellbore #1	7,350.00	10,281.00	3,987.09	3,850.57	29.205	ES
EXIST HZ JAGGED 11N - Wellbore #1 - Wellbore #1	7,386.90	10,252.89	3,986.85	3,851.17	29.384	CC
EXIST HZ JAGGED 12N - Wellbore #1 - Wellbore #1	6,850.00	10,642.32	3,784.89	3,635.95	25.413	SF
EXIST HZ JAGGED 12N - Wellbore #1 - Wellbore #1	7,100.00	10,502.60	3,764.07	3,619.55	26.045	ES
EXIST HZ JAGGED 12N - Wellbore #1 - Wellbore #1	8,727.20	8,794.43	3,744.19	3,638.18	35.318	CC
EXIST HZ MARK ALTER C16-79HN - Wellbore #1 - Well	13,447.71	10,666.43	5.02	-79.08	0.060	Level 3, CC, ES, SF

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

Anticollision Report

Company:	PDC ENERGY	Local Co-ordinate Reference:	Well DRAKE 17N
Project:	WELD COUNTY, COLORADO (TRUE)	TVD Reference:	KB 23ft @ 4757.00usft
Reference Site:	SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)	MD Reference:	KB 23ft @ 4757.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	DRAKE 17N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
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
SW NE SEC. 8 T4N R64W 6th P.M. (HEN)						
EXIST HZ SANDY HILLS PC C17-67HN - Wellbore #1 -	1,618.72	1,589.28	620.03	613.66	97.438	CC, ES
EXIST HZ SANDY HILLS PC C17-67HN - Wellbore #1 -	13,100.00	11,004.00	2,391.06	2,112.06	8.570	SF
EXIST HZ STOCKLEY C15-79HN - Wellbore #1 - Wellb	18,467.08	7,692.38	425.42	358.69	6.376	CC, ES, SF
EXIST VERT CPC HARLESS 17-1 - Wellbore #1 - Wellb	12,641.59	6,846.13	3,063.07	2,912.76	20.378	CC
EXIST VERT CPC HARLESS 17-1 - Wellbore #1 - Wellb	12,700.00	6,844.92	3,063.63	2,911.76	20.173	ES
EXIST VERT CPC HARLESS 17-1 - Wellbore #1 - Wellb	13,400.00	6,831.21	3,155.54	2,989.74	19.033	SF
EXIST VERT HARLESS PM C 17-2 - Wellbore #1 - Desi	1,000.00	981.10	2,665.59	2,644.13	124.236	CC
EXIST VERT HARLESS PM C 17-2 - Wellbore #1 - Desi	11,500.00	6,770.50	2,794.89	2,540.86	11.002	ES
EXIST VERT HARLESS PM C 17-2 - Wellbore #1 - Desi	11,900.00	6,766.35	2,837.63	2,574.78	10.796	SF
EXIST VERT NGL C1A - Wellbore #1 - Design #1	13,090.69	6,734.91	3,871.24	3,575.41	13.086	CC
EXIST VERT NGL C1A - Wellbore #1 - Design #1	13,200.00	6,733.77	3,872.79	3,574.08	12.965	ES
EXIST VERT NGL C1A - Wellbore #1 - Design #1	13,900.00	6,726.52	3,954.93	3,641.26	12.609	SF
EXIST VERT ROHR 15-414 - Wellbore #1 - Wellbore #1	18,467.08	6,603.60	3,210.02	2,912.08	10.774	CC, ES, SF
EXIST VERT ROHR C 15-19 - Wellbore #1 - Wellbore #1	18,467.08	6,609.45	2,761.76	2,498.92	10.507	CC, ES, SF
EXIST VERT RYANN STATE C 16-1 - Wellbore #1 - Wel	17,611.35	6,738.04	2,839.44	2,553.46	9.929	CC
EXIST VERT RYANN STATE C 16-1 - Wellbore #1 - Wel	17,700.00	6,736.54	2,840.82	2,551.89	9.832	ES
EXIST VERT RYANN STATE C 16-1 - Wellbore #1 - Wel	18,100.00	6,729.80	2,881.17	2,582.84	9.658	SF
EXIST VERT STATE 16-314 - Wellbore #1 - Design #1	15,371.92	6,683.52	3,172.80	2,815.51	8.880	CC
EXIST VERT STATE 16-314 - Wellbore #1 - Design #1	15,500.00	6,682.19	3,175.38	2,814.85	8.807	ES
EXIST VERT STATE 16-314 - Wellbore #1 - Design #1	15,800.00	6,679.08	3,201.55	2,835.01	8.735	SF
EXIST VERT STATE 16-414 - Wellbore #1 - Design #1	14,648.09	6,698.50	2,505.12	2,167.47	7.419	CC
EXIST VERT STATE 16-414 - Wellbore #1 - Design #1	14,700.00	6,697.96	2,505.66	2,166.66	7.391	ES
EXIST VERT STATE 16-414 - Wellbore #1 - Design #1	14,900.00	6,695.89	2,517.76	2,174.49	7.335	SF
HEN 21N - ORIGINAL WELLBORE - PROPOSAL #1	17,031.39	13,909.78	3,887.44	3,441.97	8.726	CC
HEN 21N - ORIGINAL WELLBORE - PROPOSAL #1	17,200.00	14,078.29	3,892.40	3,437.55	8.558	ES
HEN 21N - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	15,342.35	3,979.56	3,454.22	7.575	SF
HEN 22N - ORIGINAL WELLBORE - PROPOSAL #1	17,031.31	13,949.68	3,646.83	3,200.76	8.175	CC
HEN 22N - ORIGINAL WELLBORE - PROPOSAL #1	17,200.00	14,118.27	3,651.80	3,196.34	8.018	ES
HEN 22N - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	15,382.33	3,739.01	3,213.03	7.109	SF

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

Anticollision Report

Company:	PDC ENERGY	Local Co-ordinate Reference:	Well DRAKE 17N
Project:	WELD COUNTY, COLORADO (TRUE)	TVD Reference:	KB 23ft @ 4757.00usft
Reference Site:	SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)	MD Reference:	KB 23ft @ 4757.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	DRAKE 17N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
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
SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)						
ABDN DD SH C17-24D - Wellbore #1 - Wellbore #1	10,646.98	7,018.14	276.35	163.82	2.456	CC, ES, SF
ABDN DD STATE C 16-20D - Wellbore #1 - Wellbore #1	14,615.55	6,758.33	919.94	701.67	4.215	CC, ES
ABDN DD STATE C 16-20D - Wellbore #1 - Wellbore #1	14,700.00	6,758.01	923.81	703.89	4.201	SF
ABDN HZ FRICK C #17-79HN - ORIGINAL WELLBORE	3,463.58	3,356.84	899.86	868.37	28.576	CC
ABDN HZ FRICK C #17-79HN - ORIGINAL WELLBORE	3,500.00	3,384.18	900.18	868.24	28.177	ES
ABDN HZ FRICK C #17-79HN - ORIGINAL WELLBORE	8,900.00	6,317.06	1,874.47	1,802.53	26.057	SF
ABDN HZ FRICK C #17-79HN - SIDETRACK - SIDETRA	3,468.22	3,362.49	895.90	864.35	28.399	CC
ABDN HZ FRICK C #17-79HN - SIDETRACK - SIDETRA	3,500.00	3,385.91	896.16	864.21	28.052	ES
ABDN HZ FRICK C #17-79HN - SIDETRACK - SIDETRA	8,900.00	6,318.63	1,867.67	1,795.75	25.969	SF
ABDN VERT ANGELA C17-25 - Wellbore #1 - Design #1	9,382.15	6,799.35	219.90	17.74	1.088	Level 3, CC, ES, SF
ABDN VERT CHENOWETH 21-4 - Wellbore #1 - Wellbo	14,291.60	6,742.16	2,361.85	2,166.75	12.106	CC
ABDN VERT CHENOWETH 21-4 - Wellbore #1 - Wellbo	14,400.00	6,738.63	2,364.33	2,166.43	11.947	ES
ABDN VERT CHENOWETH 21-4 - Wellbore #1 - Wellbo	14,700.00	6,728.18	2,396.87	2,193.50	11.786	SF
ABDN VERT CHENOWTH #1 - Wellbore #1 - Design #1	15,313.37	6,721.86	2,614.53	2,258.02	7.334	CC
ABDN VERT CHENOWTH #1 - Wellbore #1 - Design #1	15,400.00	6,720.97	2,615.96	2,257.15	7.291	ES
ABDN VERT CHENOWTH #1 - Wellbore #1 - Design #1	15,600.00	6,718.89	2,630.19	2,267.08	7.244	SF
ABDN VERT CLEMONS 13-15 - Wellbore #1 - Wellbore	18,467.08	6,627.94	941.99	848.80	10.108	CC, ES, SF
ABDN VERT FRICK #32-18 - Wellbore #1 - Wellbore #1	6,765.77	6,210.86	1,898.14	1,844.75	35.549	CC, ES, SF
ABDN VERT FRICK C18-2 - Wellbore #1 - Wellbore #1	4,871.82	4,467.13	2,853.46	2,813.83	71.992	CC
ABDN VERT FRICK C18-2 - Wellbore #1 - Wellbore #1	5,000.00	4,578.00	2,854.43	2,813.36	69.500	ES
ABDN VERT FRICK C18-2 - Wellbore #1 - Wellbore #1	6,800.00	6,223.04	2,933.87	2,882.21	56.794	SF
ABDN VERT FRICK C18-8 - Wellbore #1 - Wellbore #1	3,766.20	3,452.17	961.26	934.22	35.544	CC
ABDN VERT FRICK C18-8 - Wellbore #1 - Wellbore #1	3,800.00	3,484.21	961.38	933.95	35.056	ES
ABDN VERT FRICK C18-8 - Wellbore #1 - Wellbore #1	8,200.00	6,818.68	1,556.42	1,504.16	29.787	SF
ABDN VERT HARLESS PM C17-8 - Wellbore #1 - Wellb	12,592.23	6,721.71	1,518.26	1,369.31	10.193	CC
ABDN VERT HARLESS PM C17-8 - Wellbore #1 - Wellb	12,600.00	6,721.70	1,518.28	1,369.12	10.179	ES
ABDN VERT HARLESS PM C17-8 - Wellbore #1 - Wellb	12,800.00	6,721.32	1,532.41	1,379.27	10.007	SF
ABDN VERT MARY MILLS #41-18 - Wellbore #1 - Wellb	2,491.17	2,412.50	2,270.94	2,258.34	180.121	CC
ABDN VERT MARY MILLS #41-18 - Wellbore #1 - Wellb	2,500.00	2,418.46	2,270.95	2,258.25	178.762	ES
ABDN VERT MARY MILLS #41-18 - Wellbore #1 - Wellb	9,500.00	6,666.31	3,599.24	3,532.87	54.230	SF
ABDN VERT OCOMA C17-10 - Wellbore #1 - Wellbore #	11,410.84	6,736.22	256.43	139.00	2.184	CC, ES, SF
ABDN VERT OCOMA C17-11 - Wellbore #1 - Wellbore #	10,049.43	6,754.52	516.93	433.52	6.197	CC, ES
ABDN VERT OCOMA C17-11 - Wellbore #1 - Wellbore #	10,100.00	6,753.25	519.40	434.38	6.109	SF
ABDN VERT OCOMA C17-13 - Wellbore #1 - Design #1	8,547.80	6,814.00	984.57	797.45	5.262	CC, ES, SF
ABDN VERT OCOMA C17-16 - Wellbore #1 - Wellbore #	12,706.15	6,764.05	910.80	759.01	6.001	CC, ES
ABDN VERT OCOMA C17-16 - Wellbore #1 - Wellbore #	12,800.00	6,765.60	915.62	762.32	5.973	SF
ABDN VERT OCOMA C17-23 - Wellbore #1 - Wellbore #	12,046.07	6,731.59	134.09	0.07	1.001	Level 3, CC, ES, SF
ABDN VERT OCOMA C17-9 - Wellbore #1 - Wellbore #1	12,642.98	6,717.57	348.41	198.22	2.320	CC, ES, SF
ABDN VERT OCOMA-UPRR C7-15 - Wellbore #1 - Desi	3,443.39	3,257.39	3,960.31	3,872.90	45.308	CC
ABDN VERT OCOMA-UPRR C7-15 - Wellbore #1 - Desi	3,800.00	3,561.04	3,964.72	3,867.24	40.671	ES
ABDN VERT OCOMA-UPRR C7-15 - Wellbore #1 - Desi	7,450.00	6,782.68	4,292.51	4,108.39	23.314	SF
ABDN VERT OCOMA-UPRR C7-16 - Wellbore #1 - Well	1,035.19	1,076.18	3,243.80	3,240.92	1,128.218	CC
ABDN VERT OCOMA-UPRR C7-16 - Wellbore #1 - Well	1,100.00	1,135.91	3,243.87	3,240.86	1,074.983	ES
ABDN VERT OCOMA-UPRR C7-16 - Wellbore #1 - Well	10,800.00	6,887.24	5,294.28	5,209.58	62.510	SF
ABDN VERT RITER C18-10 - Wellbore #1 - Wellbore #1	6,751.55	6,183.86	949.07	903.97	21.044	CC, ES, SF
ABDN VERT RITER C18-16 - Wellbore #1 - Wellbore #1	7,150.00	6,536.60	1,076.11	1,025.42	21.227	SF
ABDN VERT RITER C18-16 - Wellbore #1 - Wellbore #1	7,600.00	6,854.50	1,005.45	961.78	23.026	ES
ABDN VERT RITER C18-16 - Wellbore #1 - Wellbore #1	7,619.74	6,860.22	1,005.25	962.00	23.243	CC
ABDN VERT RYANN STATE C16-22 - Wellbore #1 - Des	17,320.22	6,653.01	957.05	547.84	2.339	CC, ES
ABDN VERT RYANN STATE C16-22 - Wellbore #1 - Des	17,400.00	6,652.18	960.37	548.05	2.329	SF
ABDN VERT RYANN STATE C16-24 - Wellbore #1 - We	16,143.97	6,667.62	283.50	40.57	1.167	Level 3, CC, ES, SF
ABDN VERT SANDY HILLS FARM C17-4 - Wellbore #1	743.83	747.82	1,669.01	1,667.03	842.940	CC

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

Anticollision Report

Company:	PDC ENERGY	Local Co-ordinate Reference:	Well DRAKE 17N
Project:	WELD COUNTY, COLORADO (TRUE)	TVD Reference:	KB 23ft @ 4757.00usft
Reference Site:	SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)	MD Reference:	KB 23ft @ 4757.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	DRAKE 17N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
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
SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)						
ABDN VERT SANDY HILLS FARM C17-4 - Wellbore #1	1,000.00	1,000.72	1,669.40	1,666.81	644.114	ES
ABDN VERT SANDY HILLS FARM C17-4 - Wellbore #1	10,300.00	6,918.56	3,343.32	3,259.91	40.083	SF
ABDN VERT SCHNEIDER #43-18 - Wellbore #1 - Wellbo	5,160.38	4,657.42	151.98	109.02	3.538	CC, ES, SF
ABDN VERT SCHNEIDER/DIC/COLTON #34-18 - Wellb	6,740.83	6,165.84	1,467.21	1,322.16	10.115	CC
ABDN VERT SCHNEIDER/DIC/COLTON #34-18 - Wellb	6,750.00	6,175.01	1,467.25	1,322.01	10.102	ES
ABDN VERT SCHNEIDER/DIC/COLTON #34-18 - Wellb	6,900.00	6,323.71	1,479.80	1,331.68	9.990	SF
ABDN VERT STATE 16-1214 - Wellbore #1 - Design #1	14,241.31	6,701.98	151.25	-174.16	0.465	Level 3, CC, ES, SF
ABDN VERT STATE 16-614 - Wellbore #1 - Design #1	15,575.60	6,678.15	1,524.92	1,162.09	4.203	CC
ABDN VERT STATE 16-614 - Wellbore #1 - Design #1	15,600.00	6,677.89	1,525.11	1,161.69	4.196	ES
ABDN VERT STATE 16-614 - Wellbore #1 - Design #1	15,700.00	6,676.86	1,529.98	1,164.80	4.190	SF
ABDN VERT STATE 16-714 - Wellbore #1 - Design #1	16,546.99	6,654.06	1,233.79	847.55	3.194	SF
ABDN VERT STATE 16-714 - Wellbore #1 - Design #1	16,580.36	6,653.72	1,233.14	847.23	3.195	CC, ES
ABDN VERT STATE 16-814 - Wellbore #1 - Wellbore #1	17,999.79	6,614.98	1,792.21	1,495.61	6.042	CC
ABDN VERT STATE 16-814 - Wellbore #1 - Wellbore #1	18,100.00	6,613.43	1,795.01	1,494.90	5.981	ES
ABDN VERT STATE 16-814 - Wellbore #1 - Wellbore #1	18,200.00	6,611.89	1,803.35	1,500.86	5.962	SF
ABDN VERT STATE 16-914 - Wellbore #1 - Design #1	18,170.60	6,655.11	321.29	-109.10	0.747	Level 3, CC
ABDN VERT STATE 16-914 - Wellbore #1 - Design #1	18,200.00	6,654.80	322.64	-111.32	0.743	Level 3, ES, SF
ABDN VERT STATE A 14-16 - Wellbore #1 - Design #1	14,397.05	4,414.00	2,372.49	2,271.43	23.476	CC
ABDN VERT STATE A 14-16 - Wellbore #1 - Design #1	14,400.00	4,414.00	2,372.50	2,271.39	23.466	ES
ABDN VERT STATE A 14-16 - Wellbore #1 - Design #1	15,600.00	4,414.00	2,660.04	2,527.69	20.099	SF
ABDN VERT STATE A 14-16X - Wellbore #1 - Wellbore #	14,388.53	6,687.43	723.03	525.05	3.652	CC
ABDN VERT STATE A 14-16X - Wellbore #1 - Wellbore #	14,400.00	6,687.33	723.12	524.84	3.647	ES, SF
ABDN VERT UPRR 36 PAN AM B #1 - Wellbore #1 - De	8,787.67	6,814.52	981.14	789.99	5.133	CC, ES
ABDN VERT UPRR 36 PAN AM B #1 - Wellbore #1 - De	8,800.00	6,814.39	981.22	790.05	5.133	SF
ABDN VERT UPRR OCOMA C17-12 - Wellbore #1 - We	8,652.76	6,790.71	383.83	330.12	7.147	CC, ES
ABDN VERT UPRR OCOMA C17-12 - Wellbore #1 - We	8,700.00	6,788.34	386.72	330.54	6.884	SF
DRAKE 01N - ORIGINAL WELLBORE - PROPOSAL #1	214.91	219.91	239.94	239.24	342.346	CC
DRAKE 01N - ORIGINAL WELLBORE - PROPOSAL #1	300.00	304.66	239.95	238.86	221.642	ES
DRAKE 01N - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	18,614.15	3,499.92	2,880.99	5.655	SF
DRAKE 02N - ORIGINAL WELLBORE - PROPOSAL #1	315.28	319.28	224.92	223.77	195.620	CC
DRAKE 02N - ORIGINAL WELLBORE - PROPOSAL #1	400.00	403.76	224.93	223.40	147.007	ES
DRAKE 02N - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	18,499.88	3,280.31	2,660.65	5.294	SF
DRAKE 03N - ORIGINAL WELLBORE - PROPOSAL #1	415.28	419.28	209.95	208.35	131.272	CC
DRAKE 03N - ORIGINAL WELLBORE - PROPOSAL #1	500.00	503.79	209.95	207.97	106.057	ES
DRAKE 03N - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	18,529.66	3,062.74	2,443.85	4.949	SF
DRAKE 04NA - ORIGINAL WELLBORE - PROPOSAL #1	515.28	519.28	194.97	192.93	95.162	CC
DRAKE 04NA - ORIGINAL WELLBORE - PROPOSAL #1	600.00	603.84	194.98	192.55	80.264	ES
DRAKE 04NA - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	18,360.83	2,792.84	2,173.46	4.509	SF
DRAKE 05N - ORIGINAL WELLBORE - PROPOSAL #1	615.64	618.64	179.97	177.47	72.052	CC
DRAKE 05N - ORIGINAL WELLBORE - PROPOSAL #1	700.00	702.89	179.97	177.09	62.563	ES
DRAKE 05N - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	18,346.83	2,624.27	2,004.82	4.236	SF
DRAKE 06N - ORIGINAL WELLBORE - PROPOSAL #1	715.64	718.64	165.03	162.08	55.993	CC
DRAKE 06N - ORIGINAL WELLBORE - PROPOSAL #1	800.00	802.91	165.03	161.70	49.616	ES
DRAKE 06N - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	18,381.94	2,406.76	1,787.95	3.889	SF
DRAKE 07N - ORIGINAL WELLBORE - PROPOSAL #1	815.99	817.99	149.99	146.59	44.164	CC
DRAKE 07N - ORIGINAL WELLBORE - PROPOSAL #1	900.00	901.96	149.99	146.21	39.746	ES
DRAKE 07N - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	18,275.99	2,186.85	1,567.53	3.531	SF
DRAKE 08N - ORIGINAL WELLBORE - PROPOSAL #1	915.99	917.99	134.98	131.13	35.098	CC
DRAKE 08N - ORIGINAL WELLBORE - PROPOSAL #1	1,000.00	1,001.97	134.98	130.75	31.961	ES
DRAKE 08N - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	18,337.99	1,969.25	1,350.82	3.184	SF
DRAKE 09NA - ORIGINAL WELLBORE - PROPOSAL #1	1,000.00	1,001.00	120.00	115.78	28.429	CC, ES
DRAKE 09NA - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	18,195.13	1,750.24	1,130.86	2.826	SF

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

Anticollision Report

Company:	PDC ENERGY	Local Co-ordinate Reference:	Well DRAKE 17N
Project:	WELD COUNTY, COLORADO (TRUE)	TVD Reference:	KB 23ft @ 4757.00usft
Reference Site:	SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)	MD Reference:	KB 23ft @ 4757.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	DRAKE 17N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
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
SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)						
DRAKE 10N - ORIGINAL WELLBORE - PROPOSAL #1	1,000.00	1,001.00	105.03	100.81	24.882	CC, ES
DRAKE 10N - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	18,243.45	1,530.85	911.45	2.472	SF
DRAKE 11N - ORIGINAL WELLBORE - PROPOSAL #1	1,000.00	1,001.00	89.98	85.76	21.318	CC, ES
DRAKE 11N - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	18,338.55	1,313.76	694.20	2.120	SF
DRAKE 12N - ORIGINAL WELLBORE - PROPOSAL #1	1,000.00	1,000.00	75.01	70.79	17.780	CC, ES
DRAKE 12N - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	18,273.96	1,093.48	473.71	1.764	SF
DRAKE 13N - ORIGINAL WELLBORE - PROPOSAL #1	1,000.00	1,000.00	60.00	55.78	14.222	CC, ES
DRAKE 13N - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	18,354.64	877.18	262.34	1.427	Level 3, SF
DRAKE 14NA - ORIGINAL WELLBORE - PROPOSAL #1	1,000.00	1,000.00	44.99	40.77	10.665	CC
DRAKE 14NA - ORIGINAL WELLBORE - PROPOSAL #1	17,200.00	17,011.48	567.63	31.45	1.059	Level 3, ES, SF
DRAKE 15N - ORIGINAL WELLBORE - PROPOSAL #1	1,000.00	1,000.00	30.06	25.84	7.124	CC
DRAKE 15N - ORIGINAL WELLBORE - PROPOSAL #1	17,100.00	17,000.71	342.81	-196.58	0.636	Level 3, SF
DRAKE 15N - ORIGINAL WELLBORE - PROPOSAL #1	17,200.00	17,100.61	347.19	-196.96	0.638	Level 3, ES
DRAKE 16N - ORIGINAL WELLBORE - PROPOSAL #1	1,000.00	1,000.00	15.01	10.79	3.558	CC
DRAKE 16N - ORIGINAL WELLBORE - PROPOSAL #1	17,100.00	17,106.62	150.20	-113.23	0.557	Level 3, SF
DRAKE 16N - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	18,469.43	229.65	-149.50	0.606	Level 3, ES
DRAKE 18N - ORIGINAL WELLBORE - PROPOSAL #1	900.00	899.00	14.97	11.21	3.975	CC
DRAKE 18N - ORIGINAL WELLBORE - PROPOSAL #1	18,466.68	18,584.07	231.17	-138.12	0.626	Level 3, ES, SF
DRAKE 19NA - ORIGINAL WELLBORE - PROPOSAL #1	800.00	799.00	29.95	26.63	9.027	CC
DRAKE 19NA - ORIGINAL WELLBORE - PROPOSAL #1	18,466.68	18,523.56	442.92	-76.73	0.852	Level 3, ES, SF
DRAKE 20N - ORIGINAL WELLBORE - PROPOSAL #1	700.00	699.00	44.96	42.09	15.675	CC
DRAKE 20N - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	18,629.88	656.11	40.43	1.066	Level 3, ES, SF
DRAKE 21N - ORIGINAL WELLBORE - PROPOSAL #1	600.00	600.00	60.01	57.59	24.788	CC, ES
DRAKE 21N - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	18,755.39	878.38	270.13	1.444	Level 3, SF
DRAKE 22N - ORIGINAL WELLBORE - PROPOSAL #1	500.00	500.00	74.94	72.97	38.017	CC, ES
DRAKE 22N - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	18,786.52	1,093.53	478.55	1.778	SF
DRAKE 23N - ORIGINAL WELLBORE - PROPOSAL #1	400.00	399.00	89.98	88.47	59.223	CC, ES
DRAKE 23N - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	18,757.30	1,314.84	705.13	2.157	SF
DRAKE 24N - ORIGINAL WELLBORE - PROPOSAL #1	300.00	299.00	104.99	103.92	98.136	CC, ES
DRAKE 24N - ORIGINAL WELLBORE - PROPOSAL #1	18,467.08	18,931.07	1,455.57	840.84	2.368	SF
EXIST DD CRICKET C22-30D - Wellbore #1 - Wellbore #	18,467.08	6,752.05	1,739.02	1,413.99	5.350	CC, ES, SF
EXIST DD FRANKLIN #C18-27D - Wellbore #1 - Wellbor	1,065.42	1,129.31	3,122.40	3,118.54	809.942	CC
EXIST DD FRANKLIN #C18-27D - Wellbore #1 - Wellbor	1,100.00	1,162.56	3,122.44	3,118.44	781.316	ES
EXIST DD FRANKLIN #C18-27D - Wellbore #1 - Wellbor	8,800.00	6,925.59	4,082.17	4,001.77	50.773	SF
EXIST DD NEI C17-33D - Wellbore #1 - Wellbore #1	5,963.57	5,965.31	233.70	148.61	2.747	CC, ES, SF
EXIST DD NEI C18-21D - Wellbore #1 - Wellbore #1	6,742.42	6,275.09	1,769.89	1,704.63	27.121	CC, ES
EXIST DD NEI C18-21D - Wellbore #1 - Wellbore #1	6,800.00	6,321.45	1,771.89	1,706.54	27.113	SF
EXIST DD NEI C18-22D - Wellbore #1 - Wellbore #1	5,689.72	5,507.43	1,071.55	993.94	13.806	CC
EXIST DD NEI C18-22D - Wellbore #1 - Wellbore #1	5,700.00	5,514.53	1,071.57	993.82	13.782	ES
EXIST DD NEI C18-22D - Wellbore #1 - Wellbore #1	6,800.00	6,543.42	1,104.18	1,021.93	13.425	SF
EXIST DD NEI C18-23D - Wellbore #1 - Wellbore #1	6,621.25	6,541.45	501.93	432.95	7.277	CC
EXIST DD NEI C18-23D - Wellbore #1 - Wellbore #1	6,640.83	6,561.39	502.01	432.89	7.262	ES
EXIST DD NEI C18-23D - Wellbore #1 - Wellbore #1	6,750.00	6,673.12	502.76	433.06	7.213	SF
EXIST DD NEI C18-24D - Wellbore #1 - Wellbore #1	6,756.99	6,411.72	1,428.28	1,376.92	27.807	CC, ES
EXIST DD NEI C18-24D - Wellbore #1 - Wellbore #1	6,800.00	6,453.91	1,429.57	1,378.12	27.785	SF
EXIST DD OSTER C19-27D - Wellbore #1 - Wellbore #1	6,211.73	5,972.65	1,296.21	1,256.22	32.418	CC, ES
EXIST DD OSTER C19-27D - Wellbore #1 - Wellbore #1	6,800.00	6,516.48	1,397.71	1,351.59	30.308	SF
EXIST DD PLUSS C17-32D - Wellbore #1 - Wellbore #1	3,000.79	2,982.18	455.38	432.15	19.602	CC, ES
EXIST DD PLUSS C17-32D - Wellbore #1 - Wellbore #1	8,500.00	6,943.17	970.33	899.00	13.603	SF
EXIST DD SH FARMS C17-3 - Wellbore #1 - Wellbore #1	825.94	826.02	772.47	769.03	224.300	CC, ES
EXIST DD SH FARMS C17-3 - Wellbore #1 - Wellbore #1	11,300.00	6,863.72	3,280.64	3,150.08	25.129	SF
EXIST DD SH FARMS C17-6 - Wellbore #1 - Wellbore #1	1,016.93	1,015.85	769.66	765.96	207.674	CC, ES

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

Anticollision Report

Company:	PDC ENERGY	Local Co-ordinate Reference:	Well DRAKE 17N
Project:	WELD COUNTY, COLORADO (TRUE)	TVD Reference:	KB 23ft @ 4757.00usft
Reference Site:	SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)	MD Reference:	KB 23ft @ 4757.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	DRAKE 17N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	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)						
EXIST DD SH FARMS C17-6 - Wellbore #1 - Wellbore #1	10,500.00	6,880.98	1,615.64	1,504.56	14.545	SF
EXIST HZ COLLINS 18Q-221 - Wellbore #1 - Wellbore #	6,988.07	8,397.31	1,363.17	1,305.99	23.841	CC
EXIST HZ COLLINS 18Q-221 - Wellbore #1 - Wellbore #	7,000.00	8,397.19	1,363.32	1,305.92	23.748	ES
EXIST HZ COLLINS 18Q-221 - Wellbore #1 - Wellbore #	7,150.00	8,395.80	1,390.70	1,330.81	23.221	SF
EXIST HZ COLLINS 18Q-301 - Wellbore #1 - Wellbore #	6,981.88	8,528.05	1,644.20	1,584.66	27.614	CC, ES
EXIST HZ COLLINS 18Q-301 - Wellbore #1 - Wellbore #	7,150.00	8,526.16	1,672.15	1,610.22	27.000	SF
EXIST HZ COLLINS 18T-201 - Wellbore #1 - Wellbore #	7,138.44	8,207.86	621.11	570.95	12.383	CC
EXIST HZ COLLINS 18T-201 - Wellbore #1 - Wellbore #	7,150.00	8,207.87	621.31	570.53	12.235	ES
EXIST HZ COLLINS 18T-201 - Wellbore #1 - Wellbore #	7,300.00	8,208.09	659.01	601.75	11.508	SF
EXIST HZ COLLINS 18T-221 - ORIGINAL WELLBORE -	7,250.00	7,227.00	979.09	924.06	17.793	SF
EXIST HZ COLLINS 18T-221 - ORIGINAL WELLBORE -	7,400.00	7,227.00	964.69	911.80	18.240	ES
EXIST HZ COLLINS 18T-221 - ORIGINAL WELLBORE -	7,401.42	7,227.00	964.69	911.82	18.249	CC
EXIST HZ COLLINS 18T-221 - SIDETRACK - SIDETRAC	7,354.60	8,120.60	205.43	167.98	5.485	CC
EXIST HZ COLLINS 18T-221 - SIDETRACK - SIDETRAC	7,400.00	8,122.59	211.77	165.66	4.593	ES
EXIST HZ COLLINS 18T-221 - SIDETRACK - SIDETRAC	7,450.00	8,124.97	232.10	178.00	4.291	SF
EXIST HZ COLLINS 18T-321 - Wellbore #1 - Wellbore #	7,286.38	8,356.24	390.77	348.54	9.253	CC
EXIST HZ COLLINS 18T-321 - Wellbore #1 - Wellbore #	7,300.00	8,355.67	391.14	347.64	8.992	ES
EXIST HZ COLLINS 18T-321 - Wellbore #1 - Wellbore #	7,400.00	8,351.24	415.43	363.78	8.042	SF
EXIST HZ COLLINS 18T-341 - Wellbore #1 - Wellbore #	7,107.03	8,313.70	875.99	823.50	16.690	CC, ES
EXIST HZ COLLINS 18T-341 - Wellbore #1 - Wellbore #	7,250.00	8,306.01	901.46	844.70	15.882	SF
EXIST HZ FRICK PC C17-65HN - Wellbore #1 - Wellbor	3,871.49	3,698.54	547.95	512.57	15.488	CC
EXIST HZ FRICK PC C17-65HN - Wellbore #1 - Wellbor	3,900.00	3,719.99	548.23	512.55	15.365	ES
EXIST HZ FRICK PC C17-65HN - Wellbore #1 - Wellbor	12,844.70	11,373.00	848.78	555.70	2.896	SF
EXIST HZ STOCKLEY C22-79HN - Wellbore #1 - Wellbo	18,467.08	6,167.94	1,686.30	1,386.50	5.625	CC, ES, SF
EXIST VERT CHENOWETH #21-2 - Wellbore #1 - Desig	16,351.09	6,693.10	2,403.35	2,021.58	6.295	CC
EXIST VERT CHENOWETH #21-2 - Wellbore #1 - Desig	16,400.00	6,692.59	2,404.26	2,020.47	6.264	ES
EXIST VERT CHENOWETH #21-2 - Wellbore #1 - Desig	16,800.00	6,688.43	2,447.09	2,051.07	6.179	SF
EXIST VERT CLEMONS #15-1 - Wellbore #1 - Wellbore #	18,467.08	6,611.83	1,377.15	1,155.16	6.204	CC, ES, SF
EXIST VERT CPC-HARLESS #17-2 - Wellbore #1 - Well	11,529.12	6,715.17	1,687.58	1,567.10	14.006	CC
EXIST VERT CPC-HARLESS #17-2 - Wellbore #1 - Well	11,600.00	6,713.18	1,689.07	1,566.72	13.806	ES
EXIST VERT CPC-HARLESS #17-2 - Wellbore #1 - Well	11,800.00	6,707.61	1,709.17	1,582.80	13.525	SF
EXIST VERT MORIAH #17-15 - Wellbore #1 - Wellbore #	12,003.78	6,753.43	2,131.09	1,997.86	15.995	CC
EXIST VERT MORIAH #17-15 - Wellbore #1 - Wellbore #	12,100.00	6,755.19	2,133.26	1,997.53	15.716	ES
EXIST VERT MORIAH #17-15 - Wellbore #1 - Wellbore #	12,400.00	6,761.09	2,167.61	2,026.00	15.308	SF
EXIST VERT OCOMA C17-15 - Wellbore #1 - Wellbore #	11,316.52	6,778.23	1,131.22	1,016.29	9.843	CC, ES
EXIST VERT OCOMA C17-15 - Wellbore #1 - Wellbore #	11,400.00	6,779.75	1,134.30	1,017.75	9.733	SF
EXIST VERT RYANN STATE C16-21 - Wellbore #1 - Des	16,380.06	6,679.79	481.45	101.97	1.269	Level 3, CC, ES, SF
EXIST VERT RYANN STATE C16-23 - Wellbore #1 - Des	17,737.36	6,657.65	425.29	5.44	1.013	Level 3, CC, ES, SF
EXIST VERT RYANN STATE C16-25 - Wellbore #1 - Des	15,027.57	6,689.83	250.37	-97.03	0.721	Level 3, CC, ES, SF
EXIST VERT RYANN STATE C21-27 - Wellbore #1 - We	17,569.06	6,652.49	1,627.67	1,342.87	5.715	CC
EXIST VERT RYANN STATE C21-27 - Wellbore #1 - We	17,600.00	6,652.39	1,627.97	1,342.79	5.709	ES, SF
EXIST VERT SANDY HILLS FARM C17-5 - Wellbore #1	1,937.12	1,888.95	539.34	532.35	77.227	CC, ES
EXIST VERT SANDY HILLS FARM C17-5 - Wellbore #1	9,300.00	6,809.03	1,762.07	1,695.39	26.426	SF
EXIST VERT SH FARMS C17-19 - Wellbore #1 - Wellbo	0.00	0.00	791.68			
EXIST VERT SH FARMS C17-19 - Wellbore #1 - Wellbo	1,000.00	981.28	793.58	790.93	298.551	ES
EXIST VERT SH FARMS C17-19 - Wellbore #1 - Wellbo	10,100.00	6,785.48	2,156.99	2,074.52	26.154	SF
EXIST VERT STATE 16-1014 - Wellbore #1 - Design #1	17,024.37	6,677.10	100.18	-301.27	0.250	Level 3, CC
EXIST VERT STATE 16-1014 - Wellbore #1 - Design #1	17,024.47	6,677.10	100.18	-301.35	0.249	Level 3, ES, SF
EXIST VERT STATE 16-1114 - Wellbore #1 - Design #1	15,373.87	6,685.24	474.75	117.32	1.328	Level 3, CC, ES, SF
EXIST VERT STATE 16-1414 - Wellbore #1 - Design #1	15,219.42	6,694.84	1,208.25	854.87	3.419	CC, ES
EXIST VERT STATE 16-1414 - Wellbore #1 - Design #1	15,300.00	6,694.00	1,210.93	855.80	3.410	SF
EXIST VERT STATE 16-1514 - Wellbore #1 - Design #1	16,769.90	6,665.75	1,072.27	678.46	2.723	CC

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

Anticollision Report

Company:	PDC ENERGY	Local Co-ordinate Reference:	Well DRAKE 17N
Project:	WELD COUNTY, COLORADO (TRUE)	TVD Reference:	KB 23ft @ 4757.00usft
Reference Site:	SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)	MD Reference:	KB 23ft @ 4757.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	DRAKE 17N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
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
SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)						
EXIST VERT STATE 16-1514 - Wellbore #1 - Design #1	16,800.00	6,665.43	1,072.53	677.19	2.713	ES
EXIST VERT STATE 16-1514 - Wellbore #1 - Design #1	16,900.00	6,664.39	1,077.19	678.68	2.703	SF
EXIST VERT STATE 16-1614 - Wellbore #1 - Design #1	18,254.16	6,649.24	1,013.14	577.90	2.328	CC, ES, SF
EXIST VERT STATE 16-514 - Wellbore #1 - Wellbore #1	14,284.52	6,700.00	1,676.56	1,481.40	8.591	CC
EXIST VERT STATE 16-514 - Wellbore #1 - Wellbore #1	14,300.00	6,700.00	1,676.63	1,481.07	8.573	ES
EXIST VERT STATE 16-514 - Wellbore #1 - Wellbore #1	14,500.00	6,696.32	1,690.35	1,491.24	8.489	SF
EXIST VERT STATE A 41-16 - Wellbore #1 - Design #1	17,529.72	6,630.82	2,224.27	1,809.52	5.363	CC
EXIST VERT STATE A 41-16 - Wellbore #1 - Design #1	17,600.00	6,630.09	2,225.38	1,808.15	5.334	ES
EXIST VERT STATE A 41-16 - Wellbore #1 - Design #1	17,800.00	6,627.99	2,240.63	1,818.15	5.304	SF
EXIST VERT THOUTT #1 - Wellbore #1 - Wellbore #1	18,150.78	6,642.50	2,432.95	2,132.11	8.087	CC
EXIST VERT THOUTT #1 - Wellbore #1 - Wellbore #1	18,200.00	6,642.91	2,433.45	2,131.74	8.065	ES
EXIST VERT THOUTT #1 - Wellbore #1 - Wellbore #1	18,300.00	6,643.73	2,437.53	2,134.46	8.043	SF
EXIST VERT UPRR OCOMA C17-4 - Wellbore #1 - Desi	10,162.70	6,777.26	1,044.26	824.02	4.741	CC, ES
EXIST VERT UPRR OCOMA C17-4 - Wellbore #1 - Desi	10,200.00	6,776.87	1,044.93	824.07	4.731	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													Rule Assigned:		Offset Well Error:	0.00 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning			
0.00	0.00	17,189.54	6,852.97	0.00	268.21	179.02	-3,102.49	53.12	7,538.22							
100.00	100.00	17,190.29	6,852.97	0.09	268.23	179.03	-3,102.49	52.36	7,447.20	7,309.25	137.95	53.985				
200.00	200.00	17,191.04	6,852.98	0.31	268.25	179.05	-3,102.49	51.61	7,356.41	7,217.45	138.96	52.939				
300.00	300.00	17,191.80	6,852.98	0.54	268.27	179.06	-3,102.49	50.85	7,265.86	7,125.85	140.01	51.897				
400.00	400.00	17,192.55	6,852.99	0.76	268.29	179.07	-3,102.50	50.10	7,175.56	7,034.48	141.09	50.860				
500.00	500.00	17,193.31	6,852.99	0.99	268.31	179.09	-3,102.50	49.34	7,085.53	6,943.33	142.20	49.829				
600.00	600.00	17,194.06	6,853.00	1.21	268.33	179.10	-3,102.50	48.59	6,995.77	6,852.42	143.34	48.805				
700.00	700.00	17,194.82	6,853.00	1.44	268.35	179.12	-3,102.50	47.84	6,906.28	6,761.76	144.52	47.787				
800.00	800.00	17,195.57	6,853.01	1.66	268.37	179.13	-3,102.50	47.08	6,817.09	6,671.34	145.75	46.774				
900.00	900.00	17,196.33	6,853.02	1.88	268.39	179.14	-3,102.50	46.33	6,728.20	6,581.19	147.01	45.766				
1,000.00	1,000.00	17,197.08	6,853.02	2.11	268.41	179.16	-3,102.50	45.57	6,639.63	6,491.32	148.32	44.767				
1,100.00	1,099.95	17,200.01	6,853.04	2.31	268.50	-62.22	-3,102.50	42.64	6,550.76	6,401.10	149.66	43.772				
1,200.00	1,199.63	17,207.30	6,853.10	2.51	268.70	-67.58	-3,102.50	35.35	6,461.09	6,310.06	151.03	42.780				
1,300.00	1,298.77	17,218.93	6,853.19	2.73	269.01	-73.27	-3,102.51	23.73	6,370.84	6,218.41	152.42	41.797				
1,400.00	1,397.08	17,234.85	6,853.31	3.00	269.45	-79.21	-3,102.51	7.80	6,280.20	6,126.36	153.84	40.823				
1,500.00	1,494.31	17,255.04	6,853.46	3.34	270.01	-85.27	-3,102.52	-12.38	6,189.37	6,034.10	155.27	39.862				
1,600.00	1,590.18	17,279.42	6,853.64	3.77	270.68	-91.33	-3,102.53	-36.77	6,098.57	5,941.84	156.72	38.913				
1,700.00	1,684.43	17,307.94	6,853.86	4.30	271.46	-97.25	-3,102.54	-65.29	6,007.99	5,849.79	158.20	37.977				
1,800.00	1,776.81	17,340.52	6,854.10	4.94	272.35	-102.92	-3,102.56	-97.87	5,917.84	5,758.13	159.71	37.054				
1,900.00	1,867.06	17,377.08	6,854.38	5.70	273.36	-108.26	-3,102.57	-134.42	5,828.33	5,667.10	161.24	36.148				
2,000.00	1,954.93	17,417.49	6,854.69	6.58	274.47	-113.22	-3,102.59	-174.83	5,739.67	5,576.87	162.79	35.258				
2,054.13	2,001.42	17,440.95	6,854.86	7.10	275.11	-115.74	-3,102.60	-198.29	5,692.09	5,528.45	163.64	34.783				
2,100.00	2,040.48	17,461.28	6,855.02	7.57	275.67	-115.57	-3,102.61	-218.62	5,651.93	5,487.55	164.38	34.383				
2,200.00	2,125.63	17,505.62	6,855.35	8.60	276.89	-115.20	-3,102.62	-262.95	5,564.41	5,398.39	166.02	33.516				
2,300.00	2,210.78	17,549.95	6,855.69	9.66	278.11	-114.81	-3,102.64	-307.29	5,476.97	5,309.24	167.72	32.655				
2,400.00	2,295.93	17,594.29	6,856.02	10.73	279.33	-114.42	-3,102.66	-351.62	5,389.59	5,220.13	169.46	31.804				
2,500.00	2,381.08	17,638.62	6,856.35	11.81	280.55	-114.01	-3,102.68	-395.95	5,302.29	5,131.03	171.26	30.961				
2,600.00	2,466.23	17,682.95	6,856.69	12.90	281.77	-113.59	-3,102.70	-440.29	5,215.07	5,041.99	173.09	30.130				

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