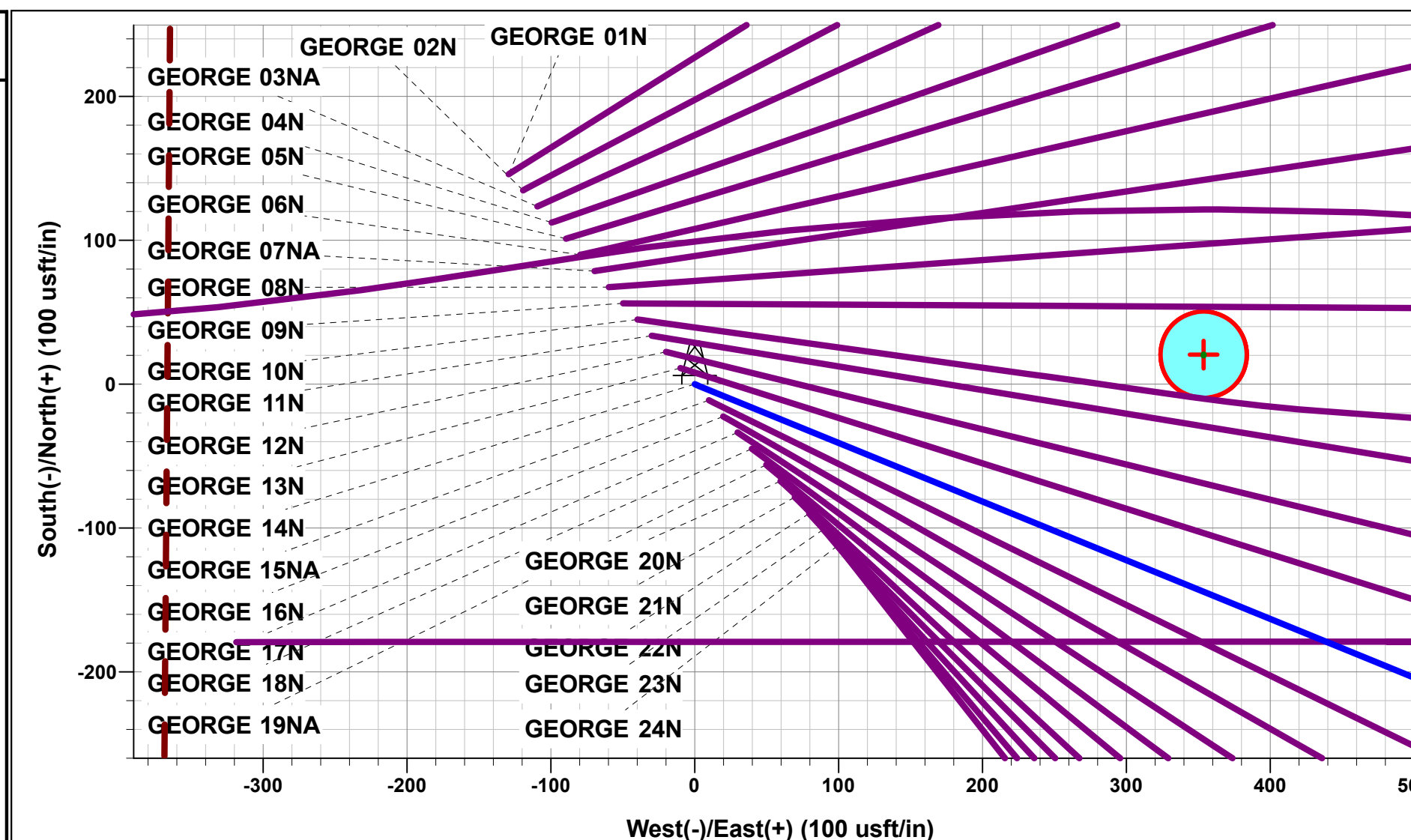
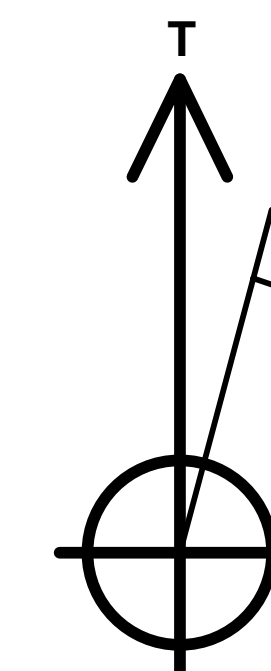


MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Dep	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL: 1917ft FNL & 2265ft FEL of Sec 21
1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	START NUDGE (4°/100ft BUR)
2240.69	37.63	112.18	2174.52	-112.50	275.89	-258.98	297.95	EOB TO 37.63° INC
5836.41	37.63	112.18	5022.30	-941.37	2308.68	-2167.13	2493.23	END OF TANGENT
6777.10	0.00	0.00	5896.82	-1053.87	2584.57	-2426.11	2791.17	EOD TO VERTICAL
6877.10	0.00	0.00	5996.82	-1053.87	2584.57	-2426.11	2791.17	KOP (8°/100ft BUR)
7814.60	75.00	269.98	6688.62	-1054.06	2053.74	-1899.73	3322.01	EP: 2310ft FSL & 200ft FEL of Sec 21
7996.35	89.54	269.98	6713.00	-1054.12	1874.12	-1721.62	3501.62	HZ LANDING POINT
17957.14	89.54	269.98	6792.97	-1057.68	-8086.35	8155.23	13462.09	BHL: 2311ft FSL & 200ft FWL of Sec 20

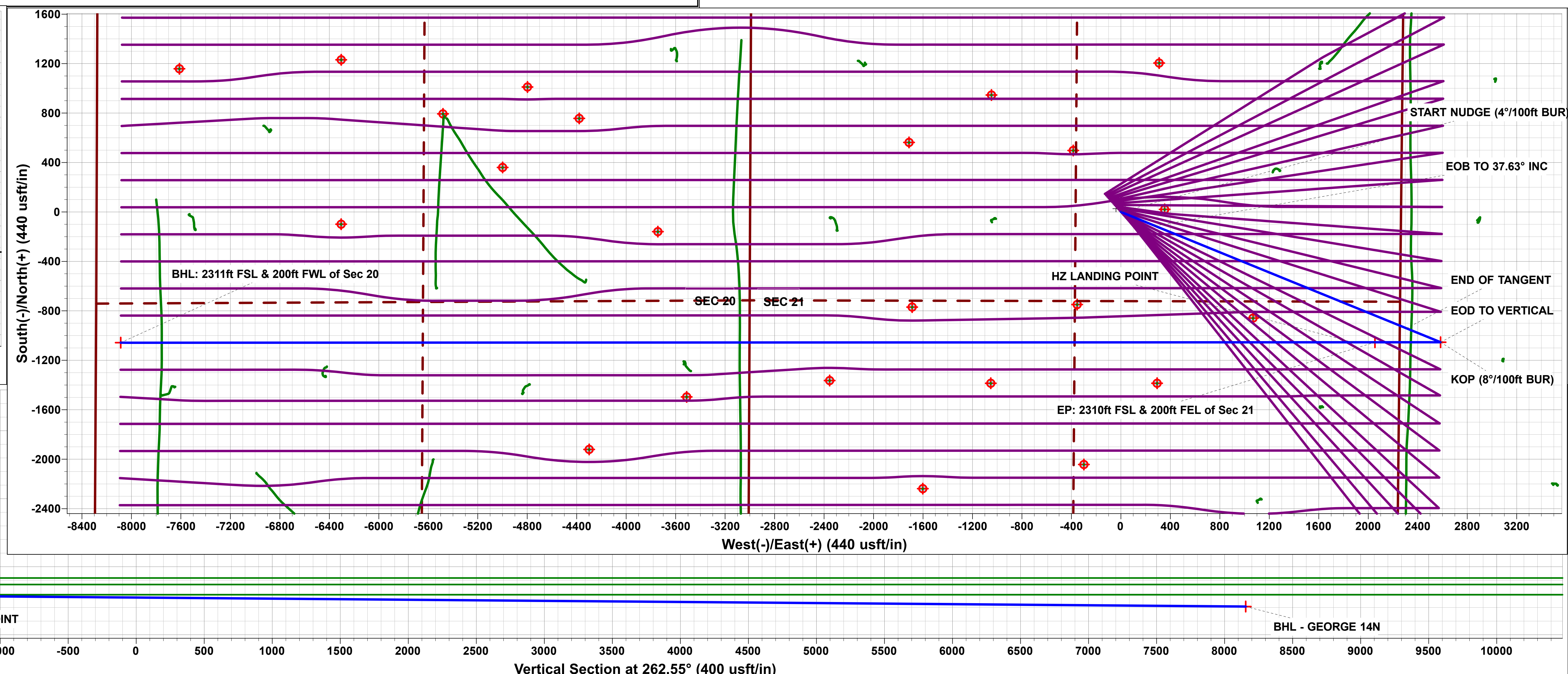
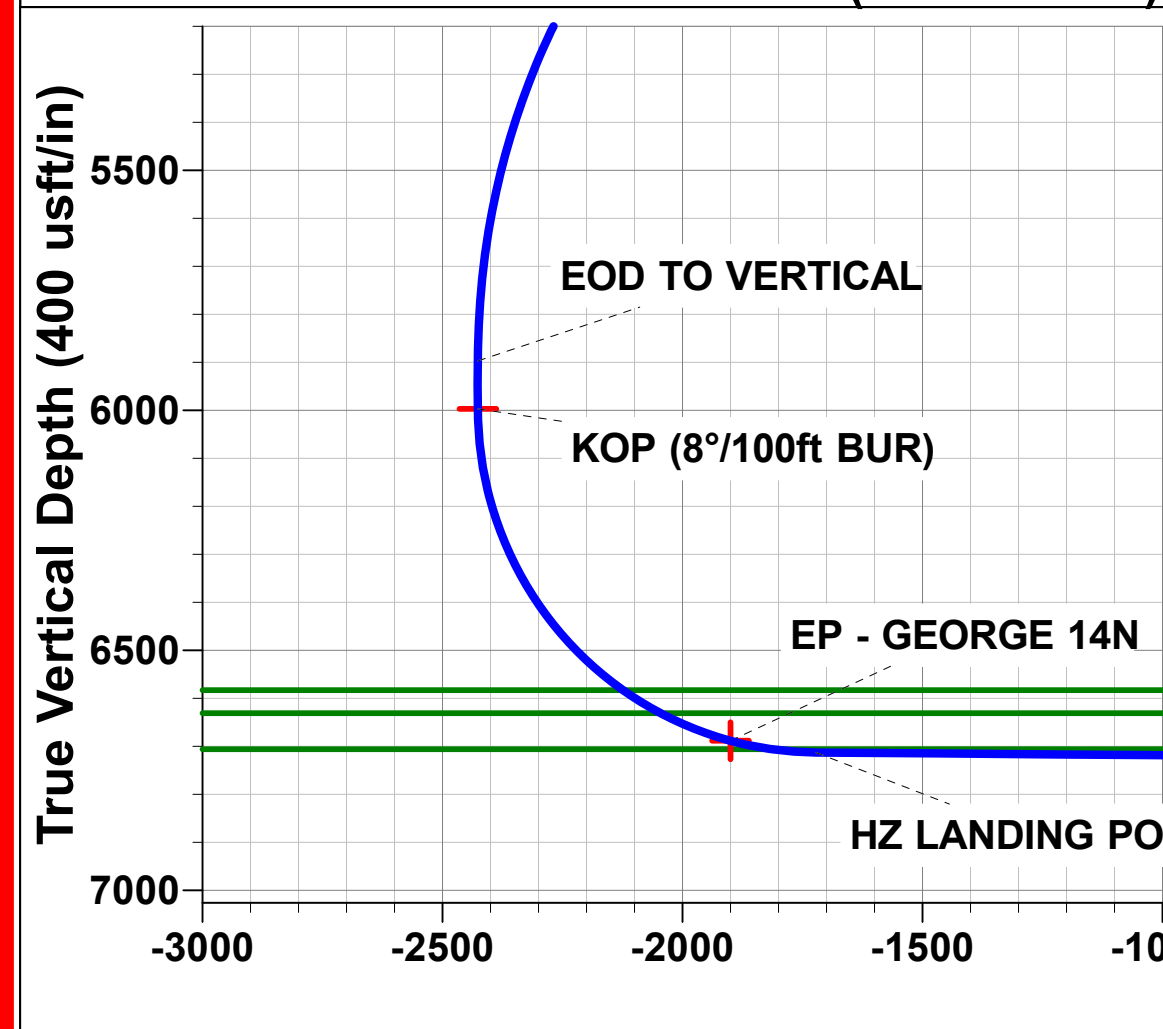
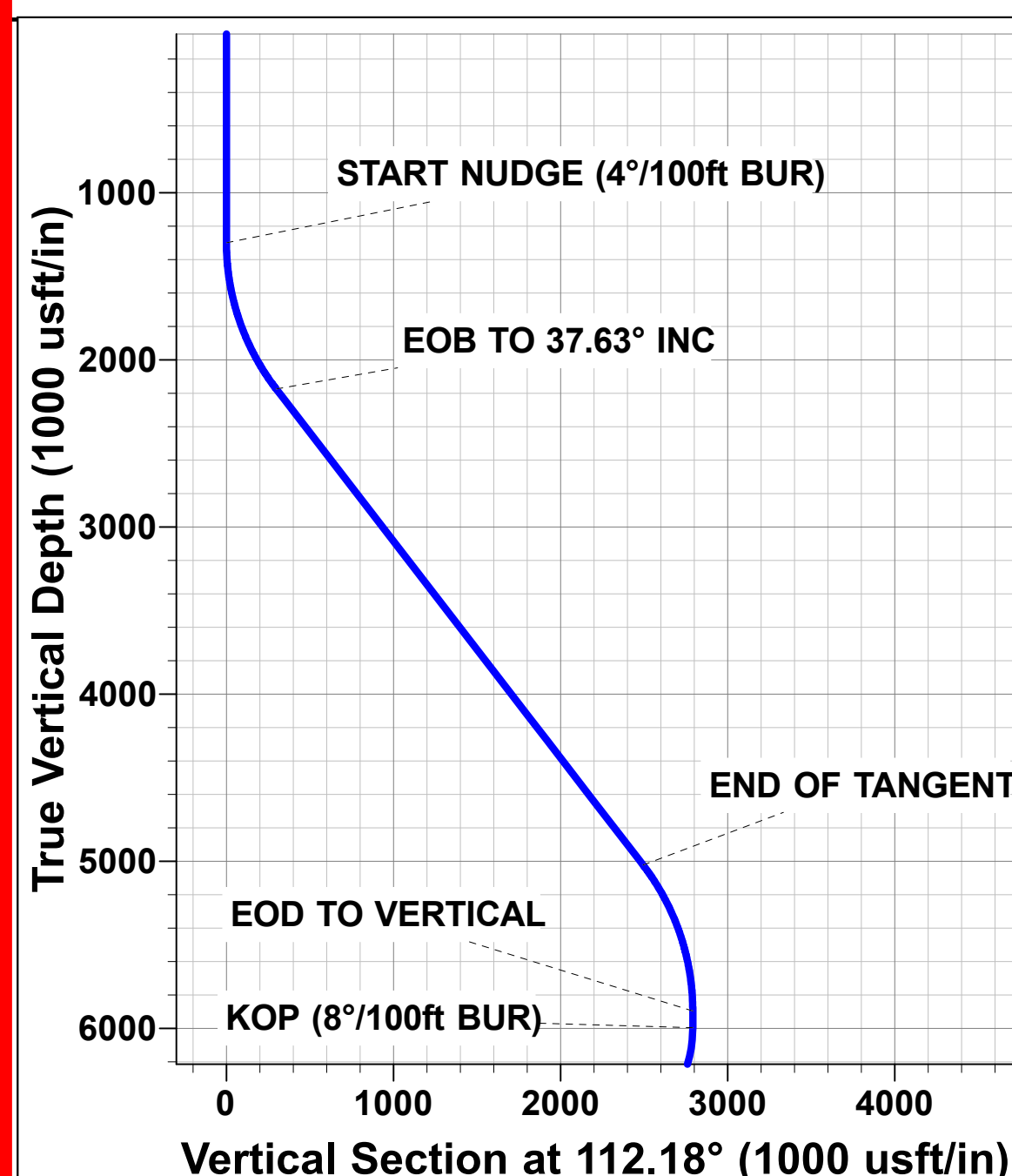


BHL: 2311ft FSL & 200ft FWL of Sec 20



**Magnetic Field
Strength: 51929.3nT
Dip Angle: 66.61°
Date: 2021-05-28
Model: IGRF2020**

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL - GEORGE 14N	6793.00	-1057.41	-8086.35	1352358.63	3255661.02	40.296997	-104.583417
EP - GEORGE 14N	6688.62	-1054.06	2053.74	1352470.10	3265800.18	40.297010	-104.547066
KOP - GEORGE 14N	5996.82	-1053.87	2584.57	1352475.95	3266330.90	40.297010	-104.545163



PDC ENERGY

**WELD COUNTY, COLORADO (TRUE)
SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)
GEORGE 14N**

**ORIGINAL WELLBORE
PROPOSAL #1**

Anticollision Report

29 May, 2021

Anticollision Report

Company:	PDC ENERGY	Local Co-ordinate Reference:	Well GEORGE 14N
Project:	WELD COUNTY, COLORADO (TRUE)	TVD Reference:	KB 23ft @ 4743.00usft
Reference Site:	SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)	MD Reference:	KB 23ft @ 4743.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	GEORGE 14N	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	2021-05-29		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	17,957.14	PROPOSAL #1 (ORIGINAL WELLBORE)	MWD	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						
SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)						
ABDN DD BALBOA C20-24D - Wellbore #1 - Wellbore #	15,432.33	6,979.99	946.62	699.44	3.830	CC, ES
ABDN DD BALBOA C20-24D - Wellbore #1 - Wellbore #	15,500.00	6,979.34	949.03	700.52	3.819	SF
ABDN DD DINNEL C27-28D - Wellbore #1 - Wellbore #1	6,767.28	5,913.77	3,240.81	3,198.96	77.429	CC, ES
ABDN DD DINNEL C27-28D - Wellbore #1 - Wellbore #1	6,950.00	6,105.71	3,244.41	3,202.16	76.785	SF
ABDN DD DINNEL C27-29D - Wellbore #1 - Wellbore #1	6,804.68	5,951.77	2,387.90	2,339.23	49.060	CC, ES
ABDN DD DINNEL C27-29D - Wellbore #1 - Wellbore #1	6,877.10	6,023.04	2,387.95	2,339.23	49.017	SF
ABDN DD HANSCOME C28-29D - Wellbore #1 - Wellbo	11,534.44	6,899.19	2,233.12	2,080.78	14.659	CC
ABDN DD HANSCOME C28-29D - Wellbore #1 - Wellbo	11,600.00	6,898.05	2,234.08	2,080.56	14.552	ES
ABDN DD HANSCOME C28-29D - Wellbore #1 - Wellbo	11,900.00	6,894.00	2,262.83	2,105.35	14.369	SF
ABDN DD LEONARD C21-16 - Wellbore #1 - Wellbore #	8,000.00	6,696.16	1,781.91	1,705.41	23.293	SF
ABDN DD LEONARD C21-16 - Wellbore #1 - Wellbore #	8,175.76	6,702.73	1,773.24	1,697.34	23.365	CC, ES
ABDN VERT BALBOA 20-3 - Wellbore #1 - Wellbore #1	14,650.65	6,768.13	339.64	128.98	1.612	CC, ES, SF
ABDN VERT BALBOA C20-2 - Wellbore #1 - Design #1	13,381.58	6,748.23	439.80	129.60	1.418	Level 3, CC, ES, SF
ABDN VERT CHENOWETH #2 - Wellbore #1 - Wellbore	17,525.67	6,839.03	1,641.65	1,352.54	5.678	CC, ES
ABDN VERT CHENOWETH #2 - Wellbore #1 - Wellbore	17,600.00	6,840.08	1,643.33	1,352.69	5.654	SF
ABDN VERT CPC OSTER 19-1 - Wellbore #1 - Wellbore	17,957.14	6,913.50	2,462.58	2,182.65	8.797	CC, ES, SF
ABDN VERT HANSCOME C21-18 - Wellbore #1 - Desig	1,300.00	1,275.00	628.94	600.87	22.407	CC, ES
ABDN VERT HANSCOME C21-18 - Wellbore #1 - Desig	10,500.00	6,708.10	1,571.11	1,333.59	6.615	SF
ABDN VERT HANSCOME C21-19 - Wellbore #1 - Desig	11,582.82	6,728.79	1,617.69	1,354.29	6.142	CC
ABDN VERT HANSCOME C21-19 - Wellbore #1 - Desig	11,600.00	6,728.93	1,617.79	1,353.86	6.130	ES
ABDN VERT HANSCOME C21-19 - Wellbore #1 - Desig	11,800.00	6,730.53	1,632.21	1,363.35	6.071	SF
ABDN VERT HANSCOME C28-1 - Wellbore #1 - Design	10,929.71	6,750.55	2,969.17	2,721.28	11.978	CC
ABDN VERT HANSCOME C28-1 - Wellbore #1 - Design	11,000.00	6,751.11	2,970.00	2,720.69	11.913	ES
ABDN VERT HANSCOME C28-1 - Wellbore #1 - Design	11,500.00	6,755.13	3,023.44	2,765.51	11.722	SF
ABDN VERT HIGHLAND 11-20 - Wellbore #1 - Wellbore	16,291.84	6,785.31	195.77	-47.54	0.805	Level 3, CC, ES, SF
ABDN VERT JOHNSON C29-29 - Wellbore #1 - Design	16,898.35	6,839.47	2,488.83	2,081.60	6.112	CC
ABDN VERT JOHNSON C29-29 - Wellbore #1 - Design	17,000.00	6,840.28	2,490.91	2,081.27	6.081	ES
ABDN VERT JOHNSON C29-29 - Wellbore #1 - Design	17,100.00	6,841.08	2,496.99	2,085.48	6.068	SF
ABDN VERT LEONARD #1 - Wellbore #1 - Wellbore #1	9,636.47	6,658.57	1,688.49	1,603.24	19.805	CC, ES
ABDN VERT LEONARD #1 - Wellbore #1 - Wellbore #1	9,900.00	6,664.84	1,708.92	1,621.42	19.529	SF
ABDN VERT LEONARD 21-1414 - Wellbore #1 - Design	10,935.60	6,751.59	1,664.96	1,416.98	6.714	CC, ES
ABDN VERT LEONARD 21-1414 - Wellbore #1 - Design	11,100.00	6,752.91	1,673.06	1,422.69	6.682	SF
ABDN VERT LEONARD 21-614 - Wellbore #1 - Wellbore	10,919.37	6,731.84	983.08	869.26	8.637	CC, ES
ABDN VERT LEONARD 21-614 - Wellbore #1 - Wellbore	11,100.00	6,732.10	999.54	881.40	8.461	SF
ABDN VERT PREBISH #1 - Wellbore #1 - Design #1	16,173.98	6,789.65	2,287.85	1,901.42	5.920	CC
ABDN VERT PREBISH #1 - Wellbore #1 - Design #1	16,200.00	6,789.86	2,287.99	1,900.82	5.910	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 GEORGE 14N
Project:	WELD COUNTY, COLORADO (TRUE)	TVD Reference:	KB 23ft @ 4743.00usft
Reference Site:	SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)	MD Reference:	KB 23ft @ 4743.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	GEORGE 14N	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. 21 T4N R64W 6th P.M. (GEORGE)						
ABDN VERT PREBISH #1 - Wellbore #1 - Design #1	16,400.00	6,791.46	2,298.98	1,907.32	5.870	SF
ABDN VERT PREBISH #2 - Wellbore #1 - Wellbore #1	17,403.75	6,830.79	1,037.26	751.33	3.628	CC, ES
ABDN VERT PREBISH #2 - Wellbore #1 - Wellbore #1	17,500.00	6,830.52	1,041.71	754.45	3.626	SF
ABDN VERT TODD #1 - Wellbore #1 - Wellbore #1	13,507.28	6,667.27	2,367.12	2,186.79	13.126	CC
ABDN VERT TODD #1 - Wellbore #1 - Wellbore #1	13,600.00	6,667.80	2,368.94	2,186.06	12.954	ES
ABDN VERT TODD #1 - Wellbore #1 - Wellbore #1	13,900.00	6,669.47	2,399.48	2,210.49	12.696	SF
ABDN VERT TODD #2 - Wellbore #1 - Design #1	14,869.08	6,762.17	1,416.39	1,065.98	4.042	CC
ABDN VERT TODD #2 - Wellbore #1 - Design #1	14,900.00	6,762.42	1,416.73	1,065.42	4.033	ES
ABDN VERT TODD #2 - Wellbore #1 - Design #1	15,000.00	6,763.23	1,422.43	1,069.04	4.025	SF
ABDN VERT UPRC #29-4H - Wellbore #1 - Design #1	17,643.55	6,853.45	2,971.04	2,543.03	6.942	CC
ABDN VERT UPRC #29-4H - Wellbore #1 - Design #1	17,700.00	6,853.90	2,971.58	2,542.12	6.919	ES
ABDN VERT UPRC #29-4H - Wellbore #1 - Design #1	17,957.14	6,856.00	2,987.81	2,553.25	6.875	SF
ABDN VERT VICTOR C19-9 - Wellbore #1 - Wellbore #1	17,957.14	6,853.15	892.50	836.91	16.056	CC, ES, SF
ABDN VERT VICTOR C29-4 - Wellbore #1 - Design #1	17,494.83	4,554.00	3,754.52	3,455.28	12.547	CC
ABDN VERT VICTOR C29-4 - Wellbore #1 - Design #1	17,600.00	4,554.00	3,755.99	3,454.59	12.462	ES
ABDN VERT VICTOR C29-4 - Wellbore #1 - Design #1	17,957.14	4,554.00	3,783.10	3,475.46	12.297	SF
EXIST DD CHENOWETH C20-25D - Wellbore #1 - Wellb	16,860.09	7,079.28	1,057.51	763.53	3.597	CC, ES, SF
EXIST DD HANSCOME C28-28D - Wellbore #1 - Wellbo	10,170.92	6,757.41	2,359.61	2,250.83	21.691	CC
EXIST DD HANSCOME C28-28D - Wellbore #1 - Wellbo	10,200.00	6,757.39	2,359.79	2,250.53	21.597	ES
EXIST DD HANSCOME C28-28D - Wellbore #1 - Wellbo	10,700.00	6,757.14	2,418.20	2,302.22	20.849	SF
EXIST DD HANSCOME C28-30D - Wellbore #1 - Wellbo	12,815.52	6,904.82	2,212.41	2,034.22	12.416	CC, ES
EXIST DD HANSCOME C28-30D - Wellbore #1 - Wellbo	13,100.00	6,913.06	2,230.62	2,048.12	12.223	SF
EXIST DD HANSCOME C29-27D - Wellbore #1 - Wellbo	14,200.74	6,897.94	2,168.36	1,952.71	10.055	CC
EXIST DD HANSCOME C29-27D - Wellbore #1 - Wellbo	14,300.00	6,898.08	2,170.63	1,952.50	9.951	ES
EXIST DD HANSCOME C29-27D - Wellbore #1 - Wellbo	14,500.00	6,898.37	2,188.91	1,967.19	9.873	SF
EXIST DD LONG C20-21D - Wellbore #1 - Wellbore #1	15,403.60	6,998.70	438.82	192.89	1.784	CC, ES, SF
EXIST DD LONG C20-22D - Wellbore #1 - Wellbore #1	14,197.07	7,064.00	493.70	271.86	2.226	CC
EXIST DD LONG C20-22D - Wellbore #1 - Wellbore #1	14,200.00	7,064.00	493.71	271.58	2.223	ES, SF
EXIST DD NOVACEK C28-27D - Wellbore #1 - Wellbore	8,969.92	6,806.78	2,390.90	2,302.16	26.941	CC
EXIST DD NOVACEK C28-27D - Wellbore #1 - Wellbore	9,000.00	6,807.03	2,391.09	2,302.03	26.848	ES
EXIST DD NOVACEK C28-27D - Wellbore #1 - Wellbore	9,500.00	6,811.04	2,448.96	2,354.79	26.005	SF
EXIST HZ HANSCOME C21-79HN - Wellbore #1 - Wellb	12,952.09	8,419.15	45.18	-22.42	0.668	Level 3, CC, ES, SF
EXIST HZ KLINGENBERG C20-780 - SIDETRACK - SID	17,600.00	9,028.67	406.98	303.58	3.936	SF
EXIST HZ KLINGENBERG C20-780 - SIDETRACK - SID	17,629.14	9,028.51	405.93	303.29	3.955	CC, ES
EXIST HZ KLINGENBERG C20-780 - VERTICAL PILOT	17,652.90	6,847.46	2,049.93	1,745.11	6.725	CC
EXIST HZ KLINGENBERG C20-780 - VERTICAL PILOT	17,700.00	6,847.61	2,050.48	1,744.52	6.702	ES
EXIST HZ KLINGENBERG C20-780 - VERTICAL PILOT	17,800.00	6,847.91	2,055.21	1,747.44	6.678	SF
EXIST HZ THOMPSON C28-79HN - Wellbore #1 - Wellb	12,836.33	10,884.00	2,831.64	2,656.33	16.152	CC
EXIST HZ THOMPSON C28-79HN - Wellbore #1 - Wellb	12,900.00	10,884.00	2,832.36	2,655.93	16.053	ES
EXIST HZ THOMPSON C28-79HN - Wellbore #1 - Wellb	13,900.00	10,884.00	3,024.83	2,822.10	14.921	SF
EXIST VERT API #20-614 - Wellbore #1 - Design #1	16,174.79	6,800.66	958.13	571.48	2.478	CC
EXIST VERT API #20-614 - Wellbore #1 - Design #1	16,200.00	6,800.86	958.46	571.10	2.474	ES, SF
EXIST VERT API 20-414 - Wellbore #1 - Design #1	17,482.20	6,833.15	2,215.82	1,792.67	5.236	CC
EXIST VERT API 20-414 - Wellbore #1 - Design #1	17,500.00	6,833.30	2,215.89	1,792.23	5.230	ES
EXIST VERT API 20-414 - Wellbore #1 - Design #1	17,700.00	6,834.90	2,226.50	1,798.58	5.203	SF
EXIST VERT BALBOA 20-1 - Wellbore #1 - Design #1	13,517.74	6,772.32	1,589.84	1,275.51	5.058	CC, ES
EXIST VERT BALBOA 20-1 - Wellbore #1 - Design #1	13,600.00	6,772.99	1,591.97	1,276.04	5.039	SF
EXIST VERT BALBOA C20-23 - Wellbore #1 - Design #1	14,170.15	6,769.56	864.54	532.84	2.606	CC, ES
EXIST VERT BALBOA C20-23 - Wellbore #1 - Design #1	14,200.00	6,769.80	865.05	532.92	2.605	SF
EXIST VERT BALBOA C20-4 - Wellbore #1 - Design #1	14,982.39	6,793.08	1,661.92	1,307.97	4.695	CC
EXIST VERT BALBOA C20-4 - Wellbore #1 - Design #1	15,000.00	6,793.23	1,662.01	1,307.65	4.690	ES
EXIST VERT BALBOA C20-4 - Wellbore #1 - Design #1	15,100.00	6,794.03	1,666.08	1,309.90	4.678	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 GEORGE 14N
Project:	WELD COUNTY, COLORADO (TRUE)	TVD Reference:	KB 23ft @ 4743.00usft
Reference Site:	SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)	MD Reference:	KB 23ft @ 4743.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	GEORGE 14N	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. 21 T4N R64W 6th P.M. (GEORGE)						
EXIST VERT BALBOA C20-9X - Wellbore #1 - Wellbore	13,399.66	6,741.71	165.23	-8.04	0.954	Level 3, CC, ES, SF
EXIST VERT BORYS C22-20 - Wellbore #1 - Design #1	6,877.10	5,934.82	1,268.55	1,102.25	7.628	CC
EXIST VERT BORYS C22-20 - Wellbore #1 - Design #1	6,900.00	5,957.72	1,268.89	1,102.12	7.609	ES
EXIST VERT BORYS C22-20 - Wellbore #1 - Design #1	7,000.00	6,057.12	1,278.24	1,109.60	7.580	SF
EXIST VERT CANTRELL #1 - Wellbore #1 - Design #1	6,877.10	5,916.82	1,686.92	1,545.72	11.947	CC
EXIST VERT CANTRELL #1 - Wellbore #1 - Design #1	6,900.00	5,939.72	1,687.28	1,545.59	11.908	ES
EXIST VERT CANTRELL #1 - Wellbore #1 - Design #1	7,050.00	6,088.05	1,707.16	1,562.37	11.790	SF
EXIST VERT CANTRELL 22-12 - Wellbore #1 - Wellbore	6,770.63	5,814.32	525.60	503.19	23.452	CC, ES
EXIST VERT CANTRELL 22-12 - Wellbore #1 - Wellbore	6,900.00	5,944.92	526.25	503.71	23.339	SF
EXIST VERT CONRAD #1 - Wellbore #1 - Design #1	6,877.10	5,909.82	2,863.09	2,682.06	15.815	CC
EXIST VERT CONRAD #1 - Wellbore #1 - Design #1	6,900.00	5,932.72	2,863.31	2,681.81	15.776	ES
EXIST VERT CONRAD #1 - Wellbore #1 - Design #1	7,150.00	6,176.17	2,893.49	2,707.57	15.563	SF
EXIST VERT CPC-JOHNSON 29-1 - Wellbore #1 - Desig	13,416.81	6,781.51	2,819.05	2,507.21	9.040	CC
EXIST VERT CPC-JOHNSON 29-1 - Wellbore #1 - Desig	13,500.00	6,782.18	2,820.28	2,506.48	8.988	ES
EXIST VERT CPC-JOHNSON 29-1 - Wellbore #1 - Desig	13,800.00	6,784.59	2,844.98	2,525.44	8.903	SF
EXIST VERT DARLENE DINNEL #1 - Wellbore #1 - Des	6,877.10	5,928.82	2,318.29	2,168.44	15.470	CC
EXIST VERT DARLENE DINNEL #1 - Wellbore #1 - Des	6,900.00	5,951.72	2,318.55	2,168.22	15.424	ES
EXIST VERT DARLENE DINNEL #1 - Wellbore #1 - Des	7,100.00	6,148.14	2,342.52	2,188.79	15.238	SF
EXIST VERT HAMLIN C21-22 - Wellbore #1 - Design #1	8,802.27	6,681.47	195.88	-5.59	0.972	Level 3, CC, ES, SF
EXIST VERT HANSCOME 28-4 - Wellbore #1 - Wellbore	12,267.25	6,777.59	3,094.44	2,947.04	20.994	CC
EXIST VERT HANSCOME 28-4 - Wellbore #1 - Wellbore	12,300.00	6,777.98	3,094.61	2,946.46	20.888	ES
EXIST VERT HANSCOME 28-4 - Wellbore #1 - Wellbore	13,000.00	6,785.84	3,180.00	3,019.58	19.823	SF
EXIST VERT HANSCOME C21-20 - Wellbore #1 - Desig	11,558.28	6,743.59	285.78	22.96	1.087	Level 3, CC, ES, SF
EXIST VERT HANSCOME C21-21 - Wellbore #1 - Desig	10,224.05	6,726.88	306.02	75.29	1.326	Level 3, CC, ES, SF
EXIST VERT HANSCOME C21-24 - Wellbore #1 - Desig	10,170.13	6,727.45	988.01	758.19	4.299	CC, ES
EXIST VERT HANSCOME C21-24 - Wellbore #1 - Desig	10,200.00	6,727.69	988.46	758.43	4.297	SF
EXIST VERT HERBST #1 - Wellbore #1 - Wellbore #1	6,880.82	5,935.36	1,662.95	1,606.67	29.548	CC, ES, SF
EXIST VERT HERBST 22-614 - Wellbore #1 - Design #1	6,877.10	5,927.82	1,810.82	1,631.29	10.086	CC
EXIST VERT HERBST 22-614 - Wellbore #1 - Design #1	6,900.00	5,950.72	1,811.07	1,631.07	10.062	ES
EXIST VERT HERBST 22-614 - Wellbore #1 - Design #1	7,050.00	6,099.05	1,824.84	1,642.13	9.988	SF
EXIST VERT HERBST C22-25 - Wellbore #1 - Wellbore	6,755.15	5,785.01	1,463.34	1,426.52	39.749	CC, ES
EXIST VERT HERBST C22-25 - Wellbore #1 - Wellbore	6,777.10	5,807.08	1,463.48	1,426.65	39.736	SF
EXIST VERT HERBST C27-30 - Wellbore #1 - Design #1	7,374.41	6,408.12	2,489.80	2,302.38	13.284	CC
EXIST VERT HERBST C27-30 - Wellbore #1 - Design #1	7,400.00	6,427.49	2,489.86	2,302.23	13.270	ES
EXIST VERT HERBST C27-30 - Wellbore #1 - Design #1	7,600.00	6,556.08	2,495.53	2,306.77	13.220	SF
EXIST VERT HERBST, CONRAD #1 - Wellbore #1 - Des	6,877.10	5,934.82	3,402.16	3,240.24	21.011	CC
EXIST VERT HERBST, CONRAD #1 - Wellbore #1 - Des	6,900.00	5,957.72	3,402.34	3,239.95	20.952	ES
EXIST VERT HERBST, CONRAD #1 - Wellbore #1 - Des	7,200.00	6,246.89	3,437.24	3,270.16	20.573	SF
EXIST VERT HIGHLAND 12-20 - Wellbore #1 - Wellbore	17,519.81	6,797.05	357.73	69.01	1.239	Level 3, CC, ES, SF
EXIST VERT JOHNSON C29-28 - Wellbore #1 - Design	15,713.59	6,810.95	2,156.95	1,782.90	5.767	CC
EXIST VERT JOHNSON C29-28 - Wellbore #1 - Design	15,800.00	6,811.65	2,158.68	1,782.66	5.741	ES
EXIST VERT JOHNSON C29-28 - Wellbore #1 - Design	15,900.00	6,812.45	2,164.99	1,787.20	5.731	SF
EXIST VERT JOHNSON R C29-2 - Wellbore #1 - Design	14,863.14	6,815.13	2,929.77	2,578.47	8.340	CC
EXIST VERT JOHNSON R C29-2 - Wellbore #1 - Design	14,900.00	6,815.42	2,930.00	2,577.78	8.319	ES
EXIST VERT JOHNSON R C29-2 - Wellbore #1 - Design	15,200.00	6,817.83	2,949.07	2,590.68	8.229	SF
EXIST VERT JOHNSTON #22-4 - Wellbore #1 - Wellbor	5,583.33	4,700.00	2,140.06	2,083.93	38.131	CC
EXIST VERT JOHNSTON #22-4 - Wellbore #1 - Wellbor	5,700.00	4,818.62	2,140.51	2,082.69	37.022	ES
EXIST VERT JOHNSTON #22-4 - Wellbore #1 - Wellbor	6,912.45	5,973.76	2,161.27	2,096.67	33.453	SF
EXIST VERT JULIE C21-25 - Wellbore #1 - Design #1	11,472.70	6,767.91	1,182.76	921.33	4.524	CC
EXIST VERT JULIE C21-25 - Wellbore #1 - Design #1	11,500.00	6,768.13	1,183.08	921.23	4.518	ES, SF
EXIST VERT KLEIN #1 - Wellbore #1 - Design #1	12,217.76	6,771.89	1,652.39	1,372.06	5.894	CC, ES
EXIST VERT KLEIN #1 - Wellbore #1 - Design #1	12,400.00	6,773.35	1,662.41	1,379.18	5.869	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 GEORGE 14N
Project:	WELD COUNTY, COLORADO (TRUE)	TVD Reference:	KB 23ft @ 4743.00usft
Reference Site:	SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)	MD Reference:	KB 23ft @ 4743.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	GEORGE 14N	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. 21 T4N R64W 6th P.M. (GEORGE)						
EXIST VERT KLEIN 21-12 - Wellbore #1 - Design #1	12,225.52	6,747.95	308.10	28.21	1.101	Level 3, CC, ES, SF
EXIST VERT LEHFELDT C27-04 - Wellbore #1 - Design	6,877.10	5,940.82	3,175.38	2,997.42	17.843	CC
EXIST VERT LEHFELDT C27-04 - Wellbore #1 - Design	7,100.00	6,160.14	3,176.80	2,994.92	17.467	ES
EXIST VERT LEHFELDT C27-04 - Wellbore #1 - Design	7,550.00	6,519.00	3,199.45	3,013.09	17.168	SF
EXIST VERT LEONARD #2 - Wellbore #1 - Wellbore #1	12,161.54	6,721.75	905.73	760.89	6.253	CC
EXIST VERT LEONARD #2 - Wellbore #1 - Wellbore #1	12,200.00	6,722.04	906.55	760.49	6.207	ES
EXIST VERT LEONARD #2 - Wellbore #1 - Wellbore #1	12,300.00	6,722.81	916.25	768.47	6.200	SF
EXIST VERT LEONARD #3 - Wellbore #1 - Design #1	10,922.79	6,756.49	330.52	82.92	1.335	Level 3, CC, ES, SF
EXIST VERT LEONARD #4 - Wellbore #1 - Design #1	2,276.58	2,174.94	152.57	100.86	2.950	CC, ES
EXIST VERT LEONARD #4 - Wellbore #1 - Design #1	2,300.00	2,193.49	153.24	100.88	2.927	SF
EXIST VERT LEONARD 21-10 - Wellbore #1 - Design #1	9,578.22	6,705.70	331.02	114.33	1.528	CC, ES, SF
EXIST VERT LEONARD 21-1614 - Wellbore #1 - Wellbor	8,772.26	6,680.52	1,286.78	1,216.54	18.320	CC, ES, SF
EXIST VERT LONG C20-17 - Wellbore #1 - Design #1	14,249.62	6,741.20	1,813.15	1,479.84	5.440	CC
EXIST VERT LONG C20-17 - Wellbore #1 - Design #1	14,300.00	6,741.61	1,813.85	1,479.10	5.419	ES
EXIST VERT LONG C20-17 - Wellbore #1 - Design #1	14,400.00	6,742.41	1,819.37	1,482.30	5.398	SF
EXIST VERT LONG C20-18 - Wellbore #1 - Design #1	15,351.39	6,776.05	1,850.19	1,486.48	5.087	CC
EXIST VERT LONG C20-18 - Wellbore #1 - Design #1	15,400.00	6,776.44	1,850.83	1,485.75	5.070	ES
EXIST VERT LONG C20-18 - Wellbore #1 - Design #1	15,500.00	6,777.24	1,856.15	1,488.84	5.053	SF
EXIST VERT LYMAN #1 - Wellbore #1 - Wellbore #1	6,991.16	6,085.01	1,029.38	964.04	15.755	CC, ES, SF
EXIST VERT NIX #1 - Wellbore #1 - Design #1	8,334.88	6,665.71	3,100.13	2,903.12	15.736	CC, ES
EXIST VERT NIX #1 - Wellbore #1 - Design #1	8,600.00	6,667.84	3,111.44	2,913.20	15.695	SF
EXIST VERT NOVACEK #1 - Wellbore #1 - Design #1	9,604.24	6,709.91	2,972.22	2,754.52	13.653	CC, ES
EXIST VERT NOVACEK #1 - Wellbore #1 - Design #1	10,100.00	6,713.89	3,013.28	2,788.51	13.406	SF
EXIST VERT OSTER PM C19-8 - Wellbore #1 - Design #1	17,957.14	6,858.00	1,191.69	824.21	3.243	CC, ES, SF
EXIST VERT PREBISH C20-19 - Wellbore #1 - Wellbore	16,746.15	6,800.00	1,712.93	1,445.45	6.404	CC
EXIST VERT PREBISH C20-19 - Wellbore #1 - Wellbore	16,800.00	6,800.00	1,713.78	1,444.86	6.373	ES
EXIST VERT PREBISH C20-19 - Wellbore #1 - Wellbore	16,900.00	6,800.00	1,719.83	1,449.05	6.351	SF
EXIST VERT THOUTT #2 - Wellbore #1 - Wellbore #1	8,200.00	6,832.53	532.95	467.62	8.157	SF
EXIST VERT THOUTT #2 - Wellbore #1 - Wellbore #1	8,257.12	6,832.93	529.88	466.12	8.310	CC, ES
EXIST VERT TODD #20-2 - Wellbore #1 - Design #1	14,667.88	6,757.56	2,067.30	1,722.43	5.994	CC
EXIST VERT TODD #20-2 - Wellbore #1 - Design #1	14,700.00	6,757.82	2,067.54	1,721.75	5.979	ES
EXIST VERT TODD #20-2 - Wellbore #1 - Design #1	14,900.00	6,759.42	2,080.28	1,730.02	5.939	SF
EXIST VERT TODD 20-8 - Wellbore #1 - Design #1	13,614.12	6,747.10	896.95	580.53	2.835	CC, ES
EXIST VERT TODD 20-8 - Wellbore #1 - Design #1	13,700.00	6,747.79	901.06	582.68	2.830	SF
EXIST VERT TRAVELERS 21-814 - Wellbore #1 - Wellbo	3,452.63	3,074.58	800.37	774.80	31.301	CC
EXIST VERT TRAVELERS 21-814 - Wellbore #1 - Wellbo	3,500.00	3,112.38	800.89	774.66	30.533	ES
EXIST VERT TRAVELERS 21-814 - Wellbore #1 - Wellbo	9,000.00	6,648.47	1,424.51	1,348.47	18.735	SF
EXIST VERT VICTOR C19-16 - Wellbore #1 - Design #1	17,957.14	6,871.00	1,852.29	1,452.11	4.629	CC, ES, SF
GEORGE 01N - ORIGINAL WELLBORE - PROPOSAL #	650.86	649.81	192.37	189.60	69.632	CC
GEORGE 01N - ORIGINAL WELLBORE - PROPOSAL #	700.00	697.90	192.60	189.56	63.319	ES
GEORGE 01N - ORIGINAL WELLBORE - PROPOSAL #	17,957.14	18,121.45	2,849.09	2,256.38	4.807	SF
GEORGE 02N - ORIGINAL WELLBORE - PROPOSAL #	804.91	804.94	174.85	171.35	49.944	CC, ES
GEORGE 02N - ORIGINAL WELLBORE - PROPOSAL #	17,957.14	18,000.00	2,628.84	2,035.36	4.430	SF
GEORGE 03NA - ORIGINAL WELLBORE - PROPOSAL	931.54	932.23	157.67	153.58	38.508	CC, ES
GEORGE 03NA - ORIGINAL WELLBORE - PROPOSAL	17,957.14	17,952.53	2,410.79	1,817.21	4.061	SF
GEORGE 04N - ORIGINAL WELLBORE - PROPOSAL #	1,064.32	1,066.96	138.82	134.09	29.358	CC, ES
GEORGE 04N - ORIGINAL WELLBORE - PROPOSAL #	17,957.14	17,988.98	2,114.19	1,520.01	3.558	SF
GEORGE 05N - ORIGINAL WELLBORE - PROPOSAL #	1,162.59	1,165.17	122.71	117.56	23.856	CC, ES
GEORGE 05N - ORIGINAL WELLBORE - PROPOSAL #	17,957.14	17,909.84	1,971.91	1,376.60	3.312	SF
GEORGE 06N - ORIGINAL WELLBORE - PROPOSAL #	1,266.92	1,270.67	105.25	99.65	18.790	CC, ES
GEORGE 06N - ORIGINAL WELLBORE - PROPOSAL #	17,957.14	17,950.05	1,753.62	1,158.36	2.946	SF
GEORGE 07NA - ORIGINAL WELLBORE - PROPOSAL	1,340.66	1,345.10	88.60	82.73	15.091	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 GEORGE 14N
Project:	WELD COUNTY, COLORADO (TRUE)	TVD Reference:	KB 23ft @ 4743.00usft
Reference Site:	SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)	MD Reference:	KB 23ft @ 4743.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	GEORGE 14N	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. 21 T4N R64W 6th P.M. (GEORGE)						
GEORGE 07NA - ORIGINAL WELLBORE - PROPOSAL	17,957.14	17,841.50	1,535.26	939.10	2.575	SF
GEORGE 08N - ORIGINAL WELLBORE - PROPOSAL #	1,400.34	1,405.51	74.72	68.67	12.339	CC, ES
GEORGE 08N - ORIGINAL WELLBORE - PROPOSAL #	17,957.14	17,878.45	1,314.72	717.62	2.202	SF
GEORGE 09N - ORIGINAL WELLBORE - PROPOSAL #	1,300.00	1,300.00	75.04	69.47	13.478	CC, ES
GEORGE 09N - ORIGINAL WELLBORE - PROPOSAL #	17,957.14	18,050.99	1,096.40	496.90	1.829	SF
GEORGE 10N - ORIGINAL WELLBORE - PROPOSAL #	1,300.00	1,300.00	60.03	54.47	10.783	CC, ES
GEORGE 10N - ORIGINAL WELLBORE - PROPOSAL #	17,957.14	17,973.12	876.61	276.82	1.462	Level 3, SF
GEORGE 11N - ORIGINAL WELLBORE - PROPOSAL #	0.00	0.00	45.03			
GEORGE 11N - ORIGINAL WELLBORE - PROPOSAL #	1,300.00	1,300.00	45.04	39.47	8.089	ES
GEORGE 11N - ORIGINAL WELLBORE - PROPOSAL #	17,957.14	18,000.53	659.18	67.86	1.115	Level 3, SF
GEORGE 12N - ORIGINAL WELLBORE - PROPOSAL #	1,300.00	1,300.00	30.03	24.46	5.394	CC
GEORGE 12N - ORIGINAL WELLBORE - PROPOSAL #	15,500.00	15,484.05	339.74	-107.22	0.760	Level 3, SF
GEORGE 12N - ORIGINAL WELLBORE - PROPOSAL #	17,957.14	17,953.18	438.65	-120.21	0.785	Level 3, ES
GEORGE 13N - ORIGINAL WELLBORE - PROPOSAL #	1,300.00	1,300.00	15.03	9.46	2.699	CC
GEORGE 13N - ORIGINAL WELLBORE - PROPOSAL #	17,950.59	17,993.79	224.99	-185.98	0.547	Level 3, ES, SF
GEORGE 15NA - ORIGINAL WELLBORE - PROPOSAL	1,200.00	1,199.00	14.96	9.84	2.924	CC
GEORGE 15NA - ORIGINAL WELLBORE - PROPOSAL	17,957.14	17,950.83	230.01	-144.78	0.614	Level 3, ES, SF
GEORGE 16N - ORIGINAL WELLBORE - PROPOSAL #	1,100.00	1,099.00	29.96	25.29	6.420	CC
GEORGE 16N - ORIGINAL WELLBORE - PROPOSAL #	17,957.14	18,062.11	441.04	-85.73	0.837	Level 3, ES, SF
GEORGE 17N - ORIGINAL WELLBORE - PROPOSAL #	1,000.00	999.00	44.91	40.70	10.652	CC, ES
GEORGE 17N - ORIGINAL WELLBORE - PROPOSAL #	17,957.14	18,037.04	657.58	62.16	1.104	Level 3, SF
GEORGE 18N - ORIGINAL WELLBORE - PROPOSAL #	900.00	899.00	59.93	56.16	15.908	CC, ES
GEORGE 18N - ORIGINAL WELLBORE - PROPOSAL #	17,957.14	18,138.02	877.79	285.41	1.482	Level 3, SF
GEORGE 19NA - ORIGINAL WELLBORE - PROPOSAL	800.00	798.00	74.93	71.61	22.601	CC, ES
GEORGE 19NA - ORIGINAL WELLBORE - PROPOSAL	17,957.14	18,103.37	1,097.41	503.34	1.847	SF
GEORGE 20N - ORIGINAL WELLBORE - PROPOSAL #	700.00	698.00	89.96	87.09	31.390	CC, ES
GEORGE 20N - ORIGINAL WELLBORE - PROPOSAL #	17,957.14	18,248.91	1,315.32	721.93	2.217	SF
GEORGE 21N - ORIGINAL WELLBORE - PROPOSAL #	600.00	598.00	104.91	102.50	43.420	CC, ES
GEORGE 21N - ORIGINAL WELLBORE - PROPOSAL #	17,957.14	18,241.70	1,533.77	940.18	2.584	SF
GEORGE 22N - ORIGINAL WELLBORE - PROPOSAL #	500.00	497.00	119.95	117.99	61.061	CC, ES
GEORGE 22N - ORIGINAL WELLBORE - PROPOSAL #	17,957.14	18,298.35	1,752.91	1,159.31	2.953	SF
GEORGE 23N - ORIGINAL WELLBORE - PROPOSAL #	400.00	397.00	134.91	133.39	89.053	CC, ES
GEORGE 23N - ORIGINAL WELLBORE - PROPOSAL #	17,957.14	18,424.98	1,972.34	1,379.84	3.329	SF
GEORGE 24N - ORIGINAL WELLBORE - PROPOSAL #	300.00	296.00	149.89	148.83	140.989	CC, ES
GEORGE 24N - ORIGINAL WELLBORE - PROPOSAL #	17,957.14	18,457.95	2,191.06	1,599.35	3.703	SF

Anticollision Report

Company:	PDC ENERGY	Local Co-ordinate Reference:	Well GEORGE 14N
Project:	WELD COUNTY, COLORADO (TRUE)	TVD Reference:	KB 23ft @ 4743.00usft
Reference Site:	SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)	MD Reference:	KB 23ft @ 4743.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	GEORGE 14N	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
Offset Well - Wellbore - Design						
SW NW SEC. 17 T4N R64W 6th P.M. (DRAKE)						
ABDN VERT CHENOWETH 21-4 - Wellbore #1 - Wellbo	11,936.26	6,676.90	2,253.05	2,114.13	16.219	CC
ABDN VERT CHENOWETH 21-4 - Wellbore #1 - Wellbo	12,000.00	6,678.54	2,253.95	2,113.23	16.017	ES
ABDN VERT CHENOWETH 21-4 - Wellbore #1 - Wellbo	12,400.00	6,688.29	2,300.24	2,151.01	15.414	SF
ABDN VERT CHENOWETH #1 - Wellbore #1 - Design #1	1,300.00	1,286.00	1,410.56	1,382.23	49.791	CC, ES
ABDN VERT CHENOWETH #1 - Wellbore #1 - Design #1	11,200.00	6,724.72	2,021.04	1,766.92	7.953	SF
DRAKE 23N - ORIGINAL WELLBORE - PROPOSAL #1	7,750.00	18,757.30	3,306.85	2,944.23	9.119	SF
DRAKE 23N - ORIGINAL WELLBORE - PROPOSAL #1	7,800.00	18,735.79	3,306.21	2,943.68	9.120	ES
DRAKE 23N - ORIGINAL WELLBORE - PROPOSAL #1	17,957.14	8,580.96	3,300.96	2,958.45	9.638	CC
DRAKE 24N - ORIGINAL WELLBORE - PROPOSAL #1	7,750.00	18,931.07	3,161.70	2,796.54	8.658	SF
DRAKE 24N - ORIGINAL WELLBORE - PROPOSAL #1	17,957.14	8,751.81	3,081.70	2,736.58	8.929	CC, ES
EXIST DD CRICKET C22-30D - Wellbore #1 - Wellbore #	100.00	56.70	2,052.68	2,052.53	10,000.000	CC
EXIST DD CRICKET C22-30D - Wellbore #1 - Wellbore #	200.00	152.80	2,052.88	2,052.40	4,237.809	ES
EXIST DD CRICKET C22-30D - Wellbore #1 - Wellbore #	8,700.00	6,778.71	3,063.22	2,977.62	35.782	SF
EXIST HZ STOCKLEY C22-79HN - Wellbore #1 - Wellbo	7,584.87	9,437.14	148.09	103.62	3.330	CC
EXIST HZ STOCKLEY C22-79HN - Wellbore #1 - Wellbo	7,600.00	9,437.54	149.01	101.33	3.125	ES
EXIST HZ STOCKLEY C22-79HN - Wellbore #1 - Wellbo	7,700.00	9,440.34	194.62	121.64	2.667	SF
EXIST VERT CHENOWETH #21-2 - Wellbore #1 - Desig	1,300.00	1,268.00	1,243.53	1,215.63	44.575	CC
EXIST VERT CHENOWETH #21-2 - Wellbore #1 - Desig	1,500.00	1,467.35	1,245.50	1,213.18	38.535	ES
EXIST VERT CHENOWETH #21-2 - Wellbore #1 - Desig	10,000.00	6,697.08	2,301.51	2,075.02	10.161	SF
EXIST VERT RYANN STATE C21-27 - Wellbore #1 - We	2,349.54	2,286.30	2,350.75	2,340.49	229.068	CC
EXIST VERT RYANN STATE C21-27 - Wellbore #1 - We	2,400.00	2,325.83	2,350.95	2,340.03	215.291	ES
EXIST VERT RYANN STATE C21-27 - Wellbore #1 - We	10,200.00	6,666.27	3,369.05	3,274.47	35.620	SF
EXIST VERT THOUTT #1 - Wellbore #1 - Wellbore #1	3,515.83	3,154.77	1,732.20	1,705.61	65.162	CC
EXIST VERT THOUTT #1 - Wellbore #1 - Wellbore #1	3,600.00	3,225.00	1,732.91	1,705.16	62.443	ES
EXIST VERT THOUTT #1 - Wellbore #1 - Wellbore #1	9,100.00	6,656.26	2,366.18	2,289.05	30.680	SF

Offset Design: SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE) - ABDN DD BALBOA C20-24D - Wellbore #1 - Wellbore #1													Offset Site Error: 0.00 usft
Survey Program: 378-MWD													Offset Well Error: 0.00 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	Offset Wellbore Centre +E-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	35.82	35.82	0.00	0.04	-118.54	-3,206.53	-5,895.10	6,710.74				
100.00	100.00	135.33	135.33	0.09	0.15	-118.54	-3,206.57	-5,895.09	6,710.75	6,710.51	0.24	N/A	
200.00	200.00	1,519.01	1,498.78	0.31	4.38	-117.42	-3,031.05	-5,842.69	6,702.16	6,697.84	4.32	1,551.157	
300.00	300.00	1,589.00	1,566.12	0.54	4.72	-117.30	-3,012.57	-5,837.93	6,683.58	6,678.83	4.75	1,407.254	
400.00	400.00	1,664.97	1,639.32	0.76	5.06	-117.16	-2,992.89	-5,832.85	6,665.40	6,660.18	5.22	1,277.992	
500.00	500.00	1,787.93	1,757.89	0.99	5.65	-116.95	-2,961.58	-5,823.88	6,646.92	6,641.03	5.90	1,127.107	
600.00	600.00	1,845.00	1,812.91	1.21	5.93	-116.85	-2,946.93	-5,820.06	6,628.92	6,622.58	6.34	1,046.301	
700.00	700.00	1,910.27	1,875.88	1.44	6.24	-116.74	-2,930.24	-5,816.03	6,611.50	6,604.69	6.81	970.953	
800.00	800.00	2,074.44	2,034.51	1.66	7.02	-116.46	-2,889.50	-5,804.61	6,593.87	6,586.20	7.68	859.132	
900.00	900.00	2,227.52	2,182.15	1.88	7.80	-116.21	-2,851.00	-5,792.34	6,575.12	6,566.60	8.52	771.519	
1,000.00	1,000.00	2,325.84	2,276.67	2.11	8.31	-116.03	-2,825.02	-5,784.67	6,556.10	6,546.94	9.16	715.627	
1,100.00	1,100.00	2,409.05	2,356.70	2.33	8.74	-115.88	-2,803.18	-5,778.28	6,537.31	6,527.57	9.74	671.490	
1,200.00	1,200.00	2,505.12	2,449.03	2.56	9.23	-115.70	-2,777.56	-5,771.24	6,518.70	6,508.33	10.37	628.573	
1,300.00	1,300.00	2,670.71	2,607.85	2.78	10.12	-115.39	-2,732.68	-5,757.86	6,499.09	6,487.77	11.32	574.247	
1,400.00	1,399.92	2,799.23	2,730.72	2.99	10.83	133.23	-2,696.31	-5,747.88	6,481.88	6,469.77	12.11	535.362	
1,500.00	1,499.35	2,871.00	2,799.29	3.20	11.22	133.80	-2,675.91	-5,742.24	6,469.28	6,456.65	12.64	512.007	
1,600.00	1,597.81	2,957.00	2,881.49	3.44	11.69	134.28	-2,651.54	-5,735.50	6,461.74	6,448.48	13.26	487.341	
1,683.56	1,679.00	2,988.69	2,911.80	3.69	11.86	134.45	-2,642.58	-5,733.13	6,459.65	6,446.01	13.64	473.472	

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