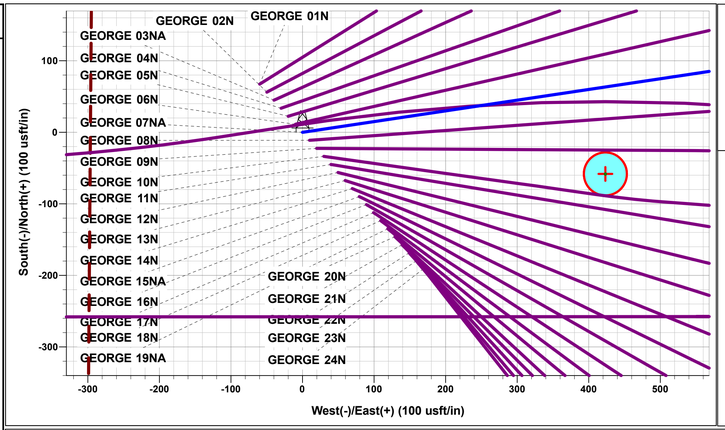
PDC ENERGY

Project: WELD COUNTY, COLORADO (TRUE)
Site: SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)
Well: GEORGE 07NA
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: 1839ft FNL & 2336ft FEL of Sec 21
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	START NUDGE (3°/100ft BUR)
2100.63	36.02	81.48	2023.10	54.06	361.10	-357.97	365.12	EOB TO 36.02° INC
5450.70	36.02	81.48	4732.71	345.77	2309.39	-2289.42	2335.14	END OF TANGENT
6651.33	0.00	0.00	5855.81	399.83	2670.49	-2647.39	2700.26	EOD TO VERTICAL
6751.33	0.00	0.00	5955.81	399.83	2670.49	-2647.39	2700.26	KOP (8°/100ft BUR)
7688.83	75.00	269.99	6647.61	399.74	2139.66	-2117.21	3231.09	EP: 1434ft FNL & 200ft FEL of Sec 21
7872.74	89.71	269.99	6672.00	399.71	1957.88	-1935.66	3412.86	HZ LANDING POINT
9772.67	89.71	269.99	6681.53	399.40	57.98	-38.11	5312.77	END OF TANGENT
9909.70	89.71	267.25	6682.22	396.11	-79.00	98.54	5449.80	EOT TO 267.25° AZ
10009.70	89.71	267.25	6682.72	391.31	-178.88	198.06	5549.80	END OF TANGENT
10146.70	89.71	269.99	6683.40	388.01	-315.83	334.67	5686.79	EOT TO 269.99° AZ
10282.20	89.71	272.70	6684.08	391.19	-451.27	470.11	5822.29	EOT TO 272.70° AZ
10382.20	89.71	272.70	6684.58	395.90	-551.16	570.11	5922.29	END OF TANGENT
10517.70	89.71	269.99	6685.26	399.08	-686.61	705.55	6057.78	EOT TO 269.99° AZ
17841.50	89.71	269.99	6722.00	397.56	-8010.31	8020.17	13381.49	BHL: 1435ft FNL & 200ft FWL of Sec 20

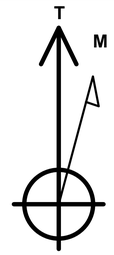


PROPOSED LOCAL COORDINATES:

SHL: 1839ft FNL & 2336ft FEL of Sec 21

EP: 1434ft FNL & 200ft FEL of Sec 21

BHL: 1435ft FNL & 200ft FWL of Sec 20

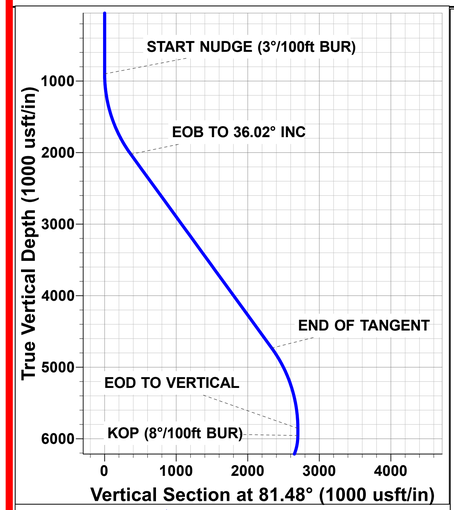


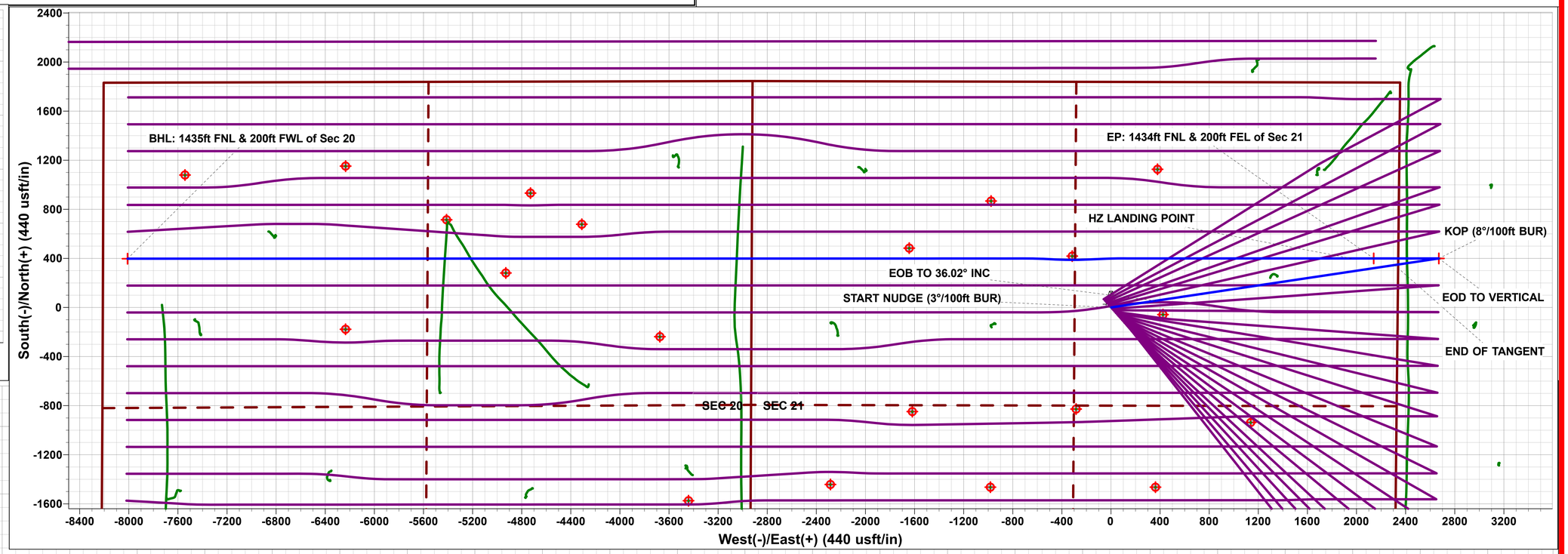
Azimuths to True North
Magnetic North: 7.73°

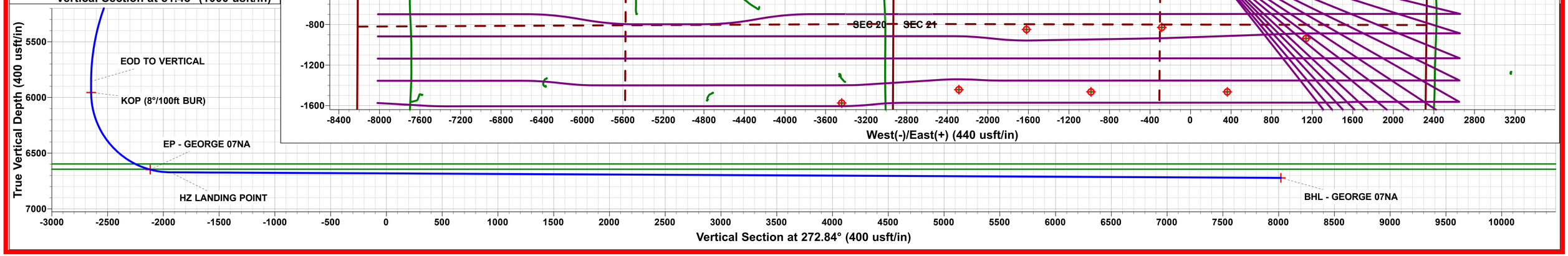
Magnetic Field
Strength: 51929.4nT
Dip Angle: 66.61°
Date: 2021-05-28
Model: IGRF2020

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL - GEORGE 07NA	6722.00	397.56	-8010.31	1353892.19	3255651.19	40.301207	-104.583396
EP - GEORGE 07NA	6647.61	399.74	2139.66	1354002.58	3265800.13	40.301217	-104.547007
KOP - GEORGE 07NA	5955.81	399.83	2670.49	1354008.32	3266330.91	40.301217	-104.545104







PDC ENERGY

WELD COUNTY, COLORADO (TRUE)
SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)
GEORGE 07NA

ORIGINAL WELLBORE
PROPOSAL #1

Anticollision Report

29 May, 2021

Anticollision Report

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well GEORGE 07NA
Project:	WELD COUNTY, COLORADO (TRUE)	**TVD Reference:**	KB 23ft @ 4742.00usft
Reference Site:	SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)	**MD Reference:**	KB 23ft @ 4742.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	GEORGE 07NA	**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	17,841.36	PROPOSAL #1 (ORIGINAL WELLBORE)	MWD	MWD - Standard

Summary

Site Name Offset Well - Wellbore - Design	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 DD BALBOA C20-24D - Wellbore #1 - Wellbore #	15,323.91	6,951.58	2,481.17	2,235.08	10.083	CC
ABDN DD BALBOA C20-24D - Wellbore #1 - Wellbore #	15,400.00	6,950.94	2,482.33	2,234.06	9.998	ES
ABDN DD BALBOA C20-24D - Wellbore #1 - Wellbore #	15,700.00	6,948.50	2,509.51	2,254.78	9.852	SF
ABDN DD DINNEL C27-28D - Wellbore #1 - Wellbore #1	6,629.98	5,862.88	4,407.88	4,337.85	62.942	CC
ABDN DD DINNEL C27-28D - Wellbore #1 - Wellbore #1	6,651.33	5,885.63	4,407.93	4,337.85	62.898	ES
ABDN DD DINNEL C27-28D - Wellbore #1 - Wellbore #1	6,800.00	6,041.69	4,409.34	4,338.96	62.650	SF
ABDN DD DINNEL C27-29D - Wellbore #1 - Wellbore #1	6,740.73	5,973.57	3,833.27	3,770.61	61.180	CC
ABDN DD DINNEL C27-29D - Wellbore #1 - Wellbore #1	6,751.33	5,983.40	3,833.27	3,770.61	61.175	ES, SF
ABDN DD HANSCOME C28-29D - Wellbore #1 - Wellbo	1,226.95	1,417.00	3,650.83	3,645.95	747.730	CC
ABDN DD HANSCOME C28-29D - Wellbore #1 - Wellbo	11,500.00	6,803.17	3,765.90	3,612.88	24.611	ES
ABDN DD HANSCOME C28-29D - Wellbore #1 - Wellbo	12,500.00	6,777.63	3,914.93	3,743.46	22.832	SF
ABDN DD LEONARD C21-16 - Wellbore #1 - Wellbore #	3,243.65	2,929.76	3,005.83	2,976.72	103.264	CC
ABDN DD LEONARD C21-16 - Wellbore #1 - Wellbore #	3,300.00	2,975.00	3,006.04	2,976.08	100.330	ES
ABDN DD LEONARD C21-16 - Wellbore #1 - Wellbore #	9,500.00	6,681.13	3,603.17	3,511.53	39.322	SF
ABDN VERT BALBOA 20-3 - Wellbore #1 - Wellbore #1	14,541.68	6,700.00	1,872.76	1,663.11	8.933	CC
ABDN VERT BALBOA 20-3 - Wellbore #1 - Wellbore #1	14,600.00	6,700.00	1,873.67	1,662.53	8.874	ES
ABDN VERT BALBOA 20-3 - Wellbore #1 - Wellbore #1	14,800.00	6,700.00	1,890.49	1,675.98	8.813	SF
ABDN VERT BALBOA C20-2 - Wellbore #1 - Design #1	13,272.68	6,692.02	1,973.10	1,665.04	6.405	CC
ABDN VERT BALBOA C20-2 - Wellbore #1 - Design #1	13,300.00	6,692.15	1,973.29	1,664.49	6.390	ES
ABDN VERT BALBOA C20-2 - Wellbore #1 - Design #1	13,500.00	6,693.15	1,986.15	1,673.12	6.345	SF
ABDN VERT CHENOWETH #2 - Wellbore #1 - Wellbore	17,416.07	6,773.54	3,175.87	2,887.91	11.029	CC
ABDN VERT CHENOWETH #2 - Wellbore #1 - Wellbore	17,500.00	6,774.47	3,176.98	2,886.80	10.948	ES
ABDN VERT CHENOWETH #2 - Wellbore #1 - Wellbore	17,841.50	6,778.42	3,203.99	2,907.11	10.792	SF
ABDN VERT CPC OSTER 19-1 - Wellbore #1 - Wellbore	17,841.50	6,795.07	1,152.79	971.75	6.368	CC, ES, SF
ABDN VERT HANSCOME C21-18 - Wellbore #1 - Desig	10,146.70	6,659.40	30.36	-197.36	0.133	Level 3, CC, ES, SF
ABDN VERT HANSCOME C21-19 - Wellbore #1 - Desig	11,474.33	6,678.04	84.72	-175.78	0.325	Level 3, CC, ES, SF
ABDN VERT HANSCOME C28-1 - Wellbore #1 - Design	900.00	915.00	4,220.40	4,200.42	211.235	CC
ABDN VERT HANSCOME C28-1 - Wellbore #1 - Design	1,000.00	1,014.95	4,221.38	4,199.17	190.081	ES
ABDN VERT HANSCOME C28-1 - Wellbore #1 - Design	12,200.00	6,708.66	4,708.66	4,434.04	17.146	SF
ABDN VERT HIGHLAND 11-20 - Wellbore #1 - Wellbore	16,182.85	6,732.47	1,730.01	1,475.97	6.810	CC
ABDN VERT HIGHLAND 11-20 - Wellbore #1 - Wellbore	16,200.00	6,732.56	1,730.10	1,475.59	6.798	ES
ABDN VERT HIGHLAND 11-20 - Wellbore #1 - Wellbore	16,300.00	6,733.10	1,733.98	1,477.35	6.757	SF
ABDN VERT JOHNSON C29-29 - Wellbore #1 - Design	16,789.00	6,772.57	4,022.79	3,618.02	9.939	CC
ABDN VERT JOHNSON C29-29 - Wellbore #1 - Design	16,900.00	6,773.13	4,024.32	3,616.58	9.870	ES
ABDN VERT JOHNSON C29-29 - Wellbore #1 - Design	17,400.00	6,775.63	4,068.92	3,650.66	9.728	SF
ABDN VERT LEONARD #1 - Wellbore #1 - Wellbore #1	1,023.09	1,002.57	2,803.32	2,800.58	1,025.011	CC

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

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well GEORGE 07NA
Project:	WELD COUNTY, COLORADO (TRUE)	**TVD Reference:**	KB 23ft @ 4742.00usft
Reference Site:	SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)	**MD Reference:**	KB 23ft @ 4742.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	GEORGE 07NA	**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 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 LEONARD #1 - Wellbore #1 - Wellbore #1	1,100.00	1,077.03	2,803.41	2,800.48	956.474	ES
ABDN VERT LEONARD #1 - Wellbore #1 - Wellbore #1	10,800.00	6,586.19	3,462.16	3,356.17	32.667	SF
ABDN VERT LEONARD 21-14I4 - Wellbore #1 - Design	900.00	916.00	2,970.35	2,950.41	148.968	CC
ABDN VERT LEONARD 21-14I4 - Wellbore #1 - Design	1,000.00	1,015.95	2,971.58	2,949.42	134.047	ES
ABDN VERT LEONARD 21-14I4 - Wellbore #1 - Design	11,500.00	6,706.16	3,267.96	3,007.62	12.553	SF
ABDN VERT LEONARD 21-6I4 - Wellbore #1 - Wellbore	10,810.99	6,662.56	548.95	436.12	4.865	CC, ES, SF
ABDN VERT PREBISH #1 - Wellbore #1 - Design #1	16,065.53	6,724.96	754.02	369.99	1.963	CC, ES
ABDN VERT PREBISH #1 - Wellbore #1 - Design #1	16,100.00	6,725.13	754.81	370.28	1.963	SF
ABDN VERT PREBISH #2 - Wellbore #1 - Wellbore #1	17,295.73	6,768.56	497.00	212.15	1.745	CC
ABDN VERT PREBISH #2 - Wellbore #1 - Wellbore #1	17,300.00	6,768.54	497.02	212.05	1.744	ES, SF
ABDN VERT TODD #1 - Wellbore #1 - Wellbore #1	13,399.26	6,643.96	832.93	653.59	4.644	CC
ABDN VERT TODD #1 - Wellbore #1 - Wellbore #1	13,400.00	6,643.97	832.93	653.57	4.644	ES, SF
ABDN VERT TODD #2 - Wellbore #1 - Design #1	14,760.49	6,701.45	117.19	-230.36	0.337	Level 3, CC, ES, SF
ABDN VERT UPRC #29-4H - Wellbore #1 - Design #1	17,534.10	6,784.30	4,505.14	4,079.64	10.588	CC
ABDN VERT UPRC #29-4H - Wellbore #1 - Design #1	17,700.00	6,785.12	4,508.19	4,078.29	10.487	ES
ABDN VERT UPRC #29-4H - Wellbore #1 - Design #1	17,841.50	6,786.00	4,515.37	4,082.06	10.421	SF
ABDN VERT VICTOR C19-9 - Wellbore #1 - Wellbore #1	17,841.50	6,806.69	1,962.98	1,698.74	7.429	CC, ES, SF
ABDN VERT VICTOR C29-4 - Wellbore #1 - Design #1	17,392.69	4,554.00	5,025.19	4,687.92	14.900	CC
ABDN VERT VICTOR C29-4 - Wellbore #1 - Design #1	17,500.00	4,554.00	5,026.34	4,686.43	14.788	ES
ABDN VERT VICTOR C29-4 - Wellbore #1 - Design #1	17,841.50	4,554.00	5,045.05	4,697.56	14.519	SF
EXIST DD CHENOWETH C20-25D - Wellbore #1 - Wellb	16,750.98	7,032.13	2,592.09	2,299.08	8.846	CC
EXIST DD CHENOWETH C20-25D - Wellbore #1 - Wellb	16,800.00	7,032.50	2,592.55	2,298.54	8.818	ES
EXIST DD CHENOWETH C20-25D - Wellbore #1 - Wellb	17,000.00	7,033.98	2,604.02	2,307.04	8.768	SF
EXIST DD HANSCOME C28-28D - Wellbore #1 - Wellbo	0.00	6.96	3,667.36			
EXIST DD HANSCOME C28-28D - Wellbore #1 - Wellbo	900.00	899.70	3,668.06	3,665.13	1,251.611	ES
EXIST DD HANSCOME C28-28D - Wellbore #1 - Wellbo	11,700.00	6,712.92	4,223.00	4,085.45	30.701	SF
EXIST DD HANSCOME C28-30D - Wellbore #1 - Wellbo	12,705.09	6,827.98	3,745.98	3,568.91	21.155	CC
EXIST DD HANSCOME C28-30D - Wellbore #1 - Wellbo	12,800.00	6,831.96	3,747.18	3,567.78	20.888	ES
EXIST DD HANSCOME C28-30D - Wellbore #1 - Wellbo	13,700.00	6,867.26	3,875.75	3,680.07	19.807	SF
EXIST DD HANSCOME C29-27D - Wellbore #1 - Wellbo	14,091.87	6,842.00	3,701.93	3,487.45	17.260	CC
EXIST DD HANSCOME C29-27D - Wellbore #1 - Wellbo	14,200.00	6,842.00	3,703.51	3,486.00	17.027	ES
EXIST DD HANSCOME C29-27D - Wellbore #1 - Wellbo	15,000.00	6,842.00	3,811.69	3,577.79	16.296	SF
EXIST DD LONG C20-21D - Wellbore #1 - Wellbore #1	15,295.48	6,941.62	1,095.09	850.22	4.472	CC
EXIST DD LONG C20-21D - Wellbore #1 - Wellbore #1	15,300.00	6,941.59	1,095.10	850.09	4.470	ES
EXIST DD LONG C20-21D - Wellbore #1 - Wellbore #1	15,400.00	6,941.04	1,100.07	853.16	4.455	SF
EXIST DD LONG C20-22D - Wellbore #1 - Wellbore #1	14,088.73	7,059.48	1,040.87	819.05	4.692	CC
EXIST DD LONG C20-22D - Wellbore #1 - Wellbore #1	14,100.00	7,059.33	1,040.93	819.04	4.691	ES, SF
EXIST DD NOVACEK C28-27D - Wellbore #1 - Wellbore	2,120.52	1,624.54	3,202.45	3,189.67	250.549	CC
EXIST DD NOVACEK C28-27D - Wellbore #1 - Wellbore	2,200.00	1,662.00	3,203.18	3,189.29	230.561	ES
EXIST DD NOVACEK C28-27D - Wellbore #1 - Wellbore	10,800.00	6,785.19	4,376.71	4,256.37	36.369	SF
EXIST HZ HANSCOME C21-79HN - Wellbore #1 - Wellb	12,879.10	9,955.59	7.90	-69.82	0.102	Level 3, CC, ES, SF
EXIST HZ KLINGENBERG C20-780 - SIDETRACK - SID	17,564.11	10,175.00	601.05	416.49	3.257	CC, ES, SF
EXIST HZ KLINGENBERG C20-780 - VERTICAL PILOT	17,543.97	6,772.95	3,583.80	3,280.24	11.806	CC
EXIST HZ KLINGENBERG C20-780 - VERTICAL PILOT	17,600.00	6,772.98	3,584.24	3,279.16	11.749	ES
EXIST HZ KLINGENBERG C20-780 - VERTICAL PILOT	17,841.50	6,773.29	3,595.89	3,285.19	11.574	SF
EXIST HZ THOMPSON C28-79HN - Wellbore #1 - Wellb	12,727.34	10,884.00	4,364.84	4,190.44	25.028	CC
EXIST HZ THOMPSON C28-79HN - Wellbore #1 - Wellb	12,800.00	10,884.00	4,365.45	4,189.45	24.803	ES
EXIST HZ THOMPSON C28-79HN - Wellbore #1 - Wellb	14,800.00	10,884.00	4,831.95	4,604.17	21.213	SF
EXIST VERT API #20-6I4 - Wellbore #1 - Design #1	16,066.09	6,735.96	575.69	191.43	1.498	Level 3, CC, ES, SF
EXIST VERT API 20-4I4 - Wellbore #1 - Design #1	17,373.71	6,764.49	681.76	261.08	1.621	CC, ES
EXIST VERT API 20-4I4 - Wellbore #1 - Design #1	17,400.00	6,764.63	682.26	261.27	1.621	SF
EXIST VERT BALBOA 20-1 - Wellbore #1 - Design #1	13,408.62	6,715.70	3,123.17	2,811.06	10.007	CC

Anticollision Report

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well GEORGE 07NA
Project:	WELD COUNTY, COLORADO (TRUE)	**TVD Reference:**	KB 23ft @ 4742.00usft
Reference Site:	SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)	**MD Reference:**	KB 23ft @ 4742.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	GEORGE 07NA	**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 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 20-1 - Wellbore #1 - Design #1	13,500.00	6,716.15	3,124.51	2,809.99	9.934	ES
EXIST VERT BALBOA 20-1 - Wellbore #1 - Design #1	13,900.00	6,718.15	3,161.59	2,838.53	9.786	SF
EXIST VERT BALBOA C20-23 - Wellbore #1 - Design #1	14,061.16	6,710.95	2,397.99	2,068.54	7.279	CC
EXIST VERT BALBOA C20-23 - Wellbore #1 - Design #1	14,100.00	6,711.15	2,398.30	2,067.81	7.257	ES
EXIST VERT BALBOA C20-23 - Wellbore #1 - Design #1	14,300.00	6,712.15	2,409.85	2,074.90	7.195	SF
EXIST VERT BALBOA C20-4 - Wellbore #1 - Design #1	14,873.23	6,732.01	3,195.52	2,843.90	9.088	CC
EXIST VERT BALBOA C20-4 - Wellbore #1 - Design #1	15,000.00	6,732.64	3,198.03	2,843.10	9.010	ES
EXIST VERT BALBOA C20-4 - Wellbore #1 - Design #1	15,300.00	6,734.14	3,223.89	2,862.64	8.924	SF
EXIST VERT BALBOA C20-9X - Wellbore #1 - Wellbore	13,289.29	6,649.78	1,696.40	1,520.34	9.636	CC
EXIST VERT BALBOA C20-9X - Wellbore #1 - Wellbore	13,300.00	6,649.96	1,696.43	1,520.08	9.620	ES
EXIST VERT BALBOA C20-9X - Wellbore #1 - Wellbore	13,500.00	6,653.34	1,709.43	1,529.01	9.475	SF
EXIST VERT BORYS C22-20 - Wellbore #1 - Design #1	6,751.33	5,894.81	1,549.54	1,383.48	9.331	CC, ES
EXIST VERT BORYS C22-20 - Wellbore #1 - Design #1	6,900.00	6,042.41	1,561.00	1,392.23	9.250	SF
EXIST VERT CANTRELL #1 - Wellbore #1 - Design #1	6,751.33	5,876.81	2,510.24	2,340.26	14.768	CC, ES
EXIST VERT CANTRELL #1 - Wellbore #1 - Design #1	7,000.00	6,120.51	2,538.15	2,363.84	14.561	SF
EXIST VERT CANTRELL 22-12 - Wellbore #1 - Wellbore	6,585.41	5,709.18	1,752.30	1,690.99	28.579	CC
EXIST VERT CANTRELL 22-12 - Wellbore #1 - Wellbore	6,600.00	5,723.63	1,752.31	1,690.98	28.570	ES
EXIST VERT CANTRELL 22-12 - Wellbore #1 - Wellbore	6,751.33	5,879.23	1,752.87	1,691.43	28.533	SF
EXIST VERT CONRAD #1 - Wellbore #1 - Design #1	6,751.33	5,869.81	1,838.12	1,694.32	12.783	CC, ES
EXIST VERT CONRAD #1 - Wellbore #1 - Design #1	6,900.00	6,017.41	1,852.02	1,705.35	12.628	SF
EXIST VERT CPC-JOHNSON 29-1 - Wellbore #1 - Desig	13,307.47	6,725.19	4,352.37	4,042.74	14.057	CC
EXIST VERT CPC-JOHNSON 29-1 - Wellbore #1 - Desig	13,400.00	6,725.65	4,353.35	4,041.27	13.949	ES
EXIST VERT CPC-JOHNSON 29-1 - Wellbore #1 - Desig	14,300.00	6,730.15	4,464.10	4,132.79	13.474	SF
EXIST VERT DARLENE DINNEL #1 - Wellbore #1 - Des	6,751.33	5,888.81	3,569.09	3,393.37	20.311	CC
EXIST VERT DARLENE DINNEL #1 - Wellbore #1 - Des	6,800.00	5,937.44	3,569.83	3,393.14	20.203	ES
EXIST VERT DARLENE DINNEL #1 - Wellbore #1 - Des	7,150.00	6,267.21	3,619.08	3,436.80	19.854	SF
EXIST VERT HAMLIN C21-22 - Wellbore #1 - Design #1	3,157.16	2,840.64	1,095.32	1,015.86	13.786	CC
EXIST VERT HAMLIN C21-22 - Wellbore #1 - Design #1	3,200.00	2,875.29	1,095.61	1,014.88	13.572	ES
EXIST VERT HAMLIN C21-22 - Wellbore #1 - Design #1	8,800.00	6,639.65	1,341.03	1,137.41	6.586	SF
EXIST VERT HANSCOME 28-4 - Wellbore #1 - Wellbore	12,157.49	6,722.89	4,627.23	4,480.93	31.627	CC
EXIST VERT HANSCOME 28-4 - Wellbore #1 - Wellbore	12,300.00	6,724.82	4,629.42	4,479.45	30.869	ES
EXIST VERT HANSCOME 28-4 - Wellbore #1 - Wellbore	13,900.00	6,743.64	4,944.39	4,764.22	27.442	SF
EXIST VERT HANSCOME C21-20 - Wellbore #1 - Desig	11,449.55	6,692.91	1,247.18	986.12	4.777	CC
EXIST VERT HANSCOME C21-20 - Wellbore #1 - Desig	11,500.00	6,693.16	1,248.20	985.87	4.758	ES
EXIST VERT HANSCOME C21-20 - Wellbore #1 - Desig	11,600.00	6,693.66	1,256.23	992.06	4.756	SF
EXIST VERT HANSCOME C21-21 - Wellbore #1 - Desig	900.00	897.00	874.94	855.35	44.647	CC
EXIST VERT HANSCOME C21-21 - Wellbore #1 - Desig	1,000.00	996.95	876.15	854.33	40.143	ES
EXIST VERT HANSCOME C21-21 - Wellbore #1 - Desig	10,200.00	6,680.67	1,219.02	987.83	5.273	SF
EXIST VERT HANSCOME C21-24 - Wellbore #1 - Desig	900.00	898.00	2,133.96	2,114.35	108.837	CC
EXIST VERT HANSCOME C21-24 - Wellbore #1 - Desig	1,100.00	1,097.63	2,136.64	2,112.58	88.808	ES
EXIST VERT HANSCOME C21-24 - Wellbore #1 - Desig	10,517.70	6,683.26	2,561.73	2,324.34	10.792	SF
EXIST VERT HERBST #1 - Wellbore #1 - Wellbore #1	5,856.09	5,029.99	3,173.90	3,114.93	53.829	CC
EXIST VERT HERBST #1 - Wellbore #1 - Wellbore #1	5,900.00	5,065.62	3,173.97	3,114.67	53.528	ES
EXIST VERT HERBST #1 - Wellbore #1 - Wellbore #1	6,800.00	5,940.81	3,181.17	3,119.27	51.391	SF
EXIST VERT HERBST 22-6I4 - Wellbore #1 - Design #1	6,751.33	5,887.81	1,215.25	1,071.27	8.441	CC, ES
EXIST VERT HERBST 22-6I4 - Wellbore #1 - Design #1	6,850.00	5,986.17	1,221.95	1,075.97	8.371	SF
EXIST VERT HERBST C22-25 - Wellbore #1 - Wellbore	6,591.24	5,712.23	2,823.01	2,762.01	46.282	CC, ES
EXIST VERT HERBST C22-25 - Wellbore #1 - Wellbore	6,751.33	5,866.74	2,824.21	2,763.12	46.230	SF
EXIST VERT HERBST C27-30 - Wellbore #1 - Design #1	4,753.91	4,123.14	3,951.02	3,824.26	31.168	CC
EXIST VERT HERBST C27-30 - Wellbore #1 - Design #1	5,100.00	4,403.06	3,956.26	3,819.22	28.870	ES
EXIST VERT HERBST C27-30 - Wellbore #1 - Design #1	7,850.00	6,625.53	4,054.12	3,860.57	20.946	SF
EXIST VERT HERBST, CONRAD #1 - Wellbore #1 - Des	6,751.33	5,894.81	4,796.05	4,618.44	27.004	CC

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

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well GEORGE 07NA
Project:	WELD COUNTY, COLORADO (TRUE)	**TVD Reference:**	KB 23ft @ 4742.00usft
Reference Site:	SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)	**MD Reference:**	KB 23ft @ 4742.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	GEORGE 07NA	**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 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 HERBST, CONRAD #1 - Wellbore #1 - Des	6,800.00	5,943.44	4,796.61	4,618.02	26.859	ES
EXIST VERT HERBST, CONRAD #1 - Wellbore #1 - Des	7,350.00	6,426.16	4,881.02	4,694.21	26.127	SF
EXIST VERT HIGHLAND 12-20 - Wellbore #1 - Wellbore	17,411.27	6,733.21	1,892.04	1,604.31	6.576	CC
EXIST VERT HIGHLAND 12-20 - Wellbore #1 - Wellbore	17,500.00	6,733.12	1,894.12	1,604.29	6.535	ES
EXIST VERT HIGHLAND 12-20 - Wellbore #1 - Wellbore	17,600.00	6,733.02	1,901.43	1,610.13	6.528	SF
EXIST VERT JOHNSON C29-28 - Wellbore #1 - Design	15,604.32	6,747.66	3,690.69	3,319.02	9.930	CC
EXIST VERT JOHNSON C29-28 - Wellbore #1 - Design	15,700.00	6,748.14	3,691.93	3,317.70	9.866	ES
EXIST VERT JOHNSON C29-28 - Wellbore #1 - Design	16,200.00	6,750.63	3,738.45	3,353.75	9.718	SF
EXIST VERT JOHNSON R C29-2 - Wellbore #1 - Design	14,753.74	6,754.41	4,463.35	4,114.38	12.790	CC
EXIST VERT JOHNSON R C29-2 - Wellbore #1 - Design	14,900.00	6,755.14	4,465.74	4,112.89	12.656	ES
EXIST VERT JOHNSON R C29-2 - Wellbore #1 - Design	15,700.00	6,759.14	4,562.55	4,193.02	12.347	SF
EXIST VERT JOHNSTON #22-4 - Wellbore #1 - Wellbor	6,764.68	5,897.76	723.77	677.81	15.748	CC, ES, SF
EXIST VERT JULIE C21-25 - Wellbore #1 - Design #1	11,363.70	6,717.48	2,715.72	2,456.29	10.468	CC
EXIST VERT JULIE C21-25 - Wellbore #1 - Design #1	11,400.00	6,717.67	2,715.96	2,455.60	10.432	ES
EXIST VERT JULIE C21-25 - Wellbore #1 - Design #1	11,800.00	6,719.66	2,750.54	2,481.49	10.223	SF
EXIST VERT KLEIN #1 - Wellbore #1 - Design #1	12,108.65	6,719.20	3,185.48	2,907.26	11.449	CC
EXIST VERT KLEIN #1 - Wellbore #1 - Design #1	12,200.00	6,719.66	3,186.79	2,906.21	11.358	ES
EXIST VERT KLEIN #1 - Wellbore #1 - Design #1	12,700.00	6,722.16	3,239.90	2,948.70	11.126	SF
EXIST VERT KLEIN 21-12 - Wellbore #1 - Design #1	12,116.66	6,695.24	1,841.20	1,563.20	6.623	CC
EXIST VERT KLEIN 21-12 - Wellbore #1 - Design #1	12,200.00	6,695.66	1,843.08	1,562.99	6.580	ES
EXIST VERT KLEIN 21-12 - Wellbore #1 - Design #1	12,300.00	6,696.16	1,850.30	1,568.13	6.557	SF
EXIST VERT LEHFELDT C27-04 - Wellbore #1 - Design	5,053.95	4,356.81	4,668.46	4,532.95	34.450	CC
EXIST VERT LEHFELDT C27-04 - Wellbore #1 - Design	7,100.00	6,235.87	4,709.14	4,524.43	25.495	ES
EXIST VERT LEHFELDT C27-04 - Wellbore #1 - Design	7,800.00	6,612.95	4,763.25	4,570.22	24.676	SF
EXIST VERT LEONARD #2 - Wellbore #1 - Wellbore #1	12,052.90	6,664.18	627.17	483.39	4.362	CC, ES
EXIST VERT LEONARD #2 - Wellbore #1 - Wellbore #1	12,100.00	6,664.40	628.94	484.22	4.346	SF
EXIST VERT LEONARD #3 - Wellbore #1 - Design #1	900.00	921.00	1,763.43	1,743.34	87.774	CC
EXIST VERT LEONARD #3 - Wellbore #1 - Design #1	10,900.00	6,708.17	1,865.35	1,617.38	7.522	ES
EXIST VERT LEONARD #3 - Wellbore #1 - Design #1	11,100.00	6,709.17	1,885.19	1,633.33	7.485	SF
EXIST VERT LEONARD #4 - Wellbore #1 - Design #1	2,177.08	2,057.93	120.18	69.38	2.366	CC, ES
EXIST VERT LEONARD #4 - Wellbore #1 - Design #1	9,407.39	6,652.70	457.60	243.53	2.138	SF
EXIST VERT LEONARD 21-10 - Wellbore #1 - Design #1	1,638.93	1,601.63	1,501.82	1,465.46	41.309	CC
EXIST VERT LEONARD 21-10 - Wellbore #1 - Design #1	1,800.00	1,748.06	1,503.31	1,462.82	37.127	ES
EXIST VERT LEONARD 21-10 - Wellbore #1 - Design #1	9,700.00	6,662.17	1,878.08	1,658.03	8.535	SF
EXIST VERT LEONARD 21-16I4 - Wellbore #1 - Wellbor	2,887.14	2,639.29	2,550.35	2,530.24	126.786	CC
EXIST VERT LEONARD 21-16I4 - Wellbore #1 - Wellbor	3,000.00	2,735.23	2,551.14	2,529.50	117.896	ES
EXIST VERT LEONARD 21-16I4 - Wellbore #1 - Wellbor	9,772.67	6,631.18	3,029.39	2,944.11	35.521	SF
EXIST VERT LONG C20-17 - Wellbore #1 - Design #1	14,141.12	6,682.35	279.68	-51.17	0.845	Level 3, CC, ES, SF
EXIST VERT LONG C20-18 - Wellbore #1 - Design #1	15,242.87	6,713.85	316.52	-44.69	0.876	Level 3, CC, ES, SF
EXIST VERT LYMAN #1 - Wellbore #1 - Wellbore #1	6,491.02	5,600.00	613.35	555.91	10.680	CC
EXIST VERT LYMAN #1 - Wellbore #1 - Wellbore #1	6,500.00	5,608.37	613.36	555.88	10.671	ES
EXIST VERT LYMAN #1 - Wellbore #1 - Wellbore #1	6,600.00	5,703.66	615.02	557.16	10.631	SF
EXIST VERT NIX #1 - Wellbore #1 - Design #1	3,115.28	2,794.77	4,424.21	4,346.21	56.727	CC
EXIST VERT NIX #1 - Wellbore #1 - Design #1	3,500.00	3,105.94	4,429.99	4,340.59	49.555	ES
EXIST VERT NIX #1 - Wellbore #1 - Design #1	10,009.70	6,633.72	4,956.94	4,735.40	22.375	SF
EXIST VERT NOVACEK #1 - Wellbore #1 - Design #1	900.00	885.00	4,119.37	4,099.99	212.612	CC
EXIST VERT NOVACEK #1 - Wellbore #1 - Design #1	1,400.00	1,379.31	4,124.22	4,093.57	134.575	ES
EXIST VERT NOVACEK #1 - Wellbore #1 - Design #1	11,000.00	6,672.67	4,749.59	4,504.86	19.408	SF
EXIST VERT OSTER PM C19-8 - Wellbore #1 - Design #	17,841.50	6,788.00	880.98	593.84	3.068	CC, ES, SF
EXIST VERT PREBISH C20-19 - Wellbore #1 - Wellbore	16,638.58	6,760.43	178.14	-86.57	0.673	Level 3, CC, ES, SF
EXIST VERT THOUTT #2 - Wellbore #1 - Wellbore #1	3,867.18	3,562.86	1,883.16	1,849.72	56.314	CC
EXIST VERT THOUTT #2 - Wellbore #1 - Wellbore #1	3,900.00	3,589.09	1,883.26	1,849.38	55.577	ES

Anticollision Report

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well GEORGE 07NA
Project:	WELD COUNTY, COLORADO (TRUE)	**TVD Reference:**	KB 23ft @ 4742.00usft
Reference Site:	SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)	**MD Reference:**	KB 23ft @ 4742.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	GEORGE 07NA	**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 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 THOUTT #2 - Wellbore #1 - Wellbore #1	8,700.00	6,787.16	2,134.85	2,065.18	30.642	SF
EXIST VERT TODD #20-2 - Wellbore #1 - Design #1	14,559.41	6,697.44	533.75	191.18	1.558	CC, ES, SF
EXIST VERT TODD 20-8 - Wellbore #1 - Design #1	13,505.45	6,690.18	636.39	322.17	2.025	CC, ES, SF
EXIST VERT TRAVELERS 21-8I4 - Wellbore #1 - Wellbo	3,786.89	3,329.09	70.47	38.19	2.183	CC, ES, SF
EXIST VERT VICTOR C19-16 - Wellbore #1 - Design #1	17,841.50	6,801.00	3,293.95	2,870.86	7.785	CC, ES, SF
GEORGE 01N - ORIGINAL WELLBORE - PROPOSAL #	539.40	538.01	88.77	86.60	40.881	CC, ES
GEORGE 01N - ORIGINAL WELLBORE - PROPOSAL #	17,841.50	18,121.45	1,322.00	736.39	2.257	SF
GEORGE 02N - ORIGINAL WELLBORE - PROPOSAL #	662.53	661.35	72.84	70.12	26.730	CC, ES
GEORGE 02N - ORIGINAL WELLBORE - PROPOSAL #	17,841.50	18,000.00	1,097.12	507.59	1.861	SF
GEORGE 03NA - ORIGINAL WELLBORE - PROPOSAL	761.75	760.56	57.33	54.17	18.130	CC, ES
GEORGE 03NA - ORIGINAL WELLBORE - PROPOSAL	17,841.50	17,952.53	876.43	284.30	1.480	Level 3, SF
GEORGE 04N - ORIGINAL WELLBORE - PROPOSAL #	855.80	855.56	41.62	38.04	11.633	CC, ES
GEORGE 04N - ORIGINAL WELLBORE - PROPOSAL #	17,841.50	17,988.98	594.07	73.94	1.142	Level 3, SF
GEORGE 05N - ORIGINAL WELLBORE - PROPOSAL #	917.25	916.76	27.29	23.46	7.115	CC
GEORGE 05N - ORIGINAL WELLBORE - PROPOSAL #	17,800.00	17,869.69	441.40	-71.84	0.860	Level 3, ES, SF
GEORGE 06N - ORIGINAL WELLBORE - PROPOSAL #	973.79	974.08	13.30	9.22	3.261	CC
GEORGE 06N - ORIGINAL WELLBORE - PROPOSAL #	17,800.00	17,921.02	253.82	-53.05	0.827	Level 3, ES, SF
GEORGE 08N - ORIGINAL WELLBORE - PROPOSAL #	1,088.90	1,088.54	12.71	8.12	2.770	CC
GEORGE 08N - ORIGINAL WELLBORE - PROPOSAL #	17,841.50	17,877.31	224.72	-181.06	0.554	Level 3, ES, SF
GEORGE 09N - ORIGINAL WELLBORE - PROPOSAL #	1,149.84	1,150.13	25.13	20.25	5.148	CC
GEORGE 09N - ORIGINAL WELLBORE - PROPOSAL #	17,841.50	18,048.73	453.02	-14.25	0.970	Level 3, ES, SF
GEORGE 10N - ORIGINAL WELLBORE - PROPOSAL #	1,206.27	1,205.96	37.71	32.56	7.325	CC, ES
GEORGE 10N - ORIGINAL WELLBORE - PROPOSAL #	17,841.50	17,970.18	659.18	68.36	1.116	Level 3, SF
GEORGE 11N - ORIGINAL WELLBORE - PROPOSAL #	1,253.54	1,252.53	50.31	44.93	9.338	CC, ES
GEORGE 11N - ORIGINAL WELLBORE - PROPOSAL #	17,841.50	17,996.41	884.55	298.68	1.510	SF
GEORGE 12N - ORIGINAL WELLBORE - PROPOSAL #	1,295.40	1,293.58	62.91	57.31	11.231	CC
GEORGE 12N - ORIGINAL WELLBORE - PROPOSAL #	1,300.00	1,298.08	62.92	57.29	11.185	ES
GEORGE 12N - ORIGINAL WELLBORE - PROPOSAL #	17,841.50	17,948.62	1,096.60	499.97	1.838	SF
GEORGE 13N - ORIGINAL WELLBORE - PROPOSAL #	1,333.43	1,330.72	75.48	69.66	12.976	CC, ES
GEORGE 13N - ORIGINAL WELLBORE - PROPOSAL #	17,841.50	17,993.86	1,320.02	726.87	2.225	SF
GEORGE 14N - ORIGINAL WELLBORE - PROPOSAL #	1,345.10	1,340.66	88.60	82.73	15.091	CC, ES
GEORGE 14N - ORIGINAL WELLBORE - PROPOSAL #	17,841.50	17,956.57	1,535.26	939.12	2.575	SF
GEORGE 15NA - ORIGINAL WELLBORE - PROPOSAL	1,305.72	1,297.38	105.67	100.06	18.836	CC, ES
GEORGE 15NA - ORIGINAL WELLBORE - PROPOSAL	17,841.50	17,944.74	1,752.75	1,156.49	2.940	SF
GEORGE 16N - ORIGINAL WELLBORE - PROPOSAL #	1,218.70	1,208.86	126.46	121.31	24.566	CC, ES
GEORGE 16N - ORIGINAL WELLBORE - PROPOSAL #	17,841.50	18,062.11	1,975.50	1,381.47	3.326	SF
GEORGE 17N - ORIGINAL WELLBORE - PROPOSAL #	1,078.69	1,071.46	147.40	142.88	32.619	CC, ES
GEORGE 17N - ORIGINAL WELLBORE - PROPOSAL #	17,841.50	18,029.46	2,191.49	1,596.74	3.685	SF
GEORGE 18N - ORIGINAL WELLBORE - PROPOSAL #	900.00	900.00	164.93	161.16	43.756	CC, ES
GEORGE 18N - ORIGINAL WELLBORE - PROPOSAL #	17,841.50	18,130.51	2,413.00	1,820.09	4.070	SF
GEORGE 19NA - ORIGINAL WELLBORE - PROPOSAL	800.00	799.00	179.93	176.61	54.236	CC, ES
GEORGE 19NA - ORIGINAL WELLBORE - PROPOSAL	17,841.50	18,103.37	2,629.15	2,034.99	4.425	SF
GEORGE 20N - ORIGINAL WELLBORE - PROPOSAL #	700.00	699.00	194.96	192.09	67.978	CC, ES
GEORGE 20N - ORIGINAL WELLBORE - PROPOSAL #	17,841.50	18,241.26	2,850.51	2,258.33	4.814	SF
GEORGE 21N - ORIGINAL WELLBORE - PROPOSAL #	600.00	599.00	209.92	207.50	86.797	CC, ES
GEORGE 21N - ORIGINAL WELLBORE - PROPOSAL #	17,841.50	18,233.77	3,067.69	2,475.67	5.182	SF
GEORGE 22N - ORIGINAL WELLBORE - PROPOSAL #	500.00	498.00	224.96	222.99	114.382	CC, ES
GEORGE 22N - ORIGINAL WELLBORE - PROPOSAL #	17,841.50	18,290.48	3,286.68	2,694.71	5.552	SF
GEORGE 23N - ORIGINAL WELLBORE - PROPOSAL #	400.00	398.00	239.91	238.39	158.131	CC, ES
GEORGE 23N - ORIGINAL WELLBORE - PROPOSAL #	17,841.50	18,417.31	3,507.35	2,916.43	5.935	SF
GEORGE 24N - ORIGINAL WELLBORE - PROPOSAL #	300.00	297.00	254.90	253.83	239.250	CC, ES
GEORGE 24N - ORIGINAL WELLBORE - PROPOSAL #	17,841.50	18,450.24	3,724.83	3,134.67	6.312	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 GEORGE 07NA
Project:	WELD COUNTY, COLORADO (TRUE)	**TVD Reference:**	KB 23ft @ 4742.00usft
Reference Site:	SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)	**MD Reference:**	KB 23ft @ 4742.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	GEORGE 07NA	**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 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 CHENOWETH 21-4 - Wellbore #1 - Wellbo	11,827.20	6,643.65	719.59	581.69	5.218	CC, ES, SF
ABDN VERT CHENOWTH #1 - Wellbore #1 - Design #1	10,807.89	6,673.71	468.18	223.16	1.911	CC, ES, SF
DRAKE 23N - ORIGINAL WELLBORE - PROPOSAL #1	7,688.83	18,739.37	1,777.63	1,415.89	4.914	SF
DRAKE 23N - ORIGINAL WELLBORE - PROPOSAL #1	7,700.00	18,728.54	1,777.42	1,415.89	4.916	ES
DRAKE 23N - ORIGINAL WELLBORE - PROPOSAL #1	17,821.45	8,609.05	1,770.95	1,430.69	5.205	CC
DRAKE 24N - ORIGINAL WELLBORE - PROPOSAL #1	7,650.00	18,931.07	1,630.88	1,265.69	4.466	SF
DRAKE 24N - ORIGINAL WELLBORE - PROPOSAL #1	17,821.44	8,779.94	1,548.86	1,205.44	4.510	CC
DRAKE 24N - ORIGINAL WELLBORE - PROPOSAL #1	17,841.50	8,759.88	1,549.08	1,205.34	4.506	ES
EXIST DD CRICKET C22-30D - Wellbore #1 - Wellbore #	7,400.00	6,568.58	1,353.97	1,277.46	17.699	SF
EXIST DD CRICKET C22-30D - Wellbore #1 - Wellbore #	7,539.62	6,649.39	1,348.89	1,273.14	17.807	CC, ES
EXIST HZ STOCKLEY C22-79HN - Wellbore #1 - Wellbo	7,492.19	7,898.12	176.67	148.42	6.254	CC
EXIST HZ STOCKLEY C22-79HN - Wellbore #1 - Wellbo	7,500.00	7,898.01	176.89	147.97	6.118	ES
EXIST HZ STOCKLEY C22-79HN - Wellbore #1 - Wellbo	7,600.00	7,896.55	213.72	172.63	5.201	SF
EXIST VERT CHENOWETH #21-2 - Wellbore #1 - Desig	9,451.84	6,648.92	726.39	511.57	3.381	CC, ES, SF
EXIST VERT RYANN STATE C21-27 - Wellbore #1 - We	8,675.50	6,619.22	1,524.34	1,454.07	21.694	CC
EXIST VERT RYANN STATE C21-27 - Wellbore #1 - We	8,700.00	6,619.16	1,524.54	1,454.03	21.624	ES
EXIST VERT RYANN STATE C21-27 - Wellbore #1 - We	8,900.00	6,618.68	1,540.78	1,468.71	21.378	SF
EXIST VERT THOUTT #1 - Wellbore #1 - Wellbore #1	8,152.62	6,619.66	679.93	615.99	10.634	CC, ES, 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

Rule Assigned:

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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	36.80	36.80	0.00	0.04	-119.42	-3,285.20	-5,825.53	6,688.00				
100.00	100.00	136.26	136.26	0.09	0.15	-119.42	-3,285.24	-5,825.51	6,688.00	6,687.77	0.24	N/A	
200.00	200.00	1,530.37	1,509.71	0.31	4.43	-118.29	-3,106.71	-5,772.32	6,677.66	6,673.31	4.35	1,535.169	
300.00	300.00	1,596.37	1,573.21	0.54	4.75	-118.17	-3,089.31	-5,767.87	6,658.86	6,654.10	4.76	1,399.700	
400.00	400.00	1,689.60	1,663.08	0.76	5.18	-118.01	-3,065.28	-5,761.59	6,640.42	6,635.13	5.29	1,255.616	
500.00	500.00	1,796.22	1,765.88	0.99	5.69	-117.84	-3,038.14	-5,753.71	6,621.60	6,615.70	5.90	1,121.452	
600.00	600.00	1,845.00	1,812.91	1.21	5.93	-117.75	-3,025.60	-5,750.48	6,603.41	6,597.11	6.31	1,047.002	
700.00	700.00	1,931.00	1,895.90	1.44	6.34	-117.60	-3,003.68	-5,745.18	6,585.76	6,578.90	6.86	959.898	
800.00	800.00	2,128.42	2,086.66	1.66	7.29	-117.28	-2,954.94	-5,730.68	6,567.65	6,559.80	7.85	836.274	
900.00	900.00	2,250.11	2,203.87	1.88	7.92	-117.07	-2,923.73	-5,721.00	6,548.51	6,539.93	8.58	763.502	
1,000.00	999.95	2,339.54	2,289.85	2.10	8.38	161.77	-2,900.09	-5,714.03	6,531.63	6,522.48	9.15	713.583	
1,100.00	1,099.63	2,424.62	2,371.67	2.32	8.82	162.05	-2,877.71	-5,707.55	6,519.95	6,510.25	9.71	671.740	
1,200.00	1,198.77	2,574.55	2,515.69	2.56	9.60	162.44	-2,837.60	-5,696.21	6,513.23	6,502.68	10.56	616.961	
1,298.12	1,295.25	2,682.09	2,618.75	2.84	10.18	162.71	-2,808.19	-5,687.39	6,510.65	6,499.39	11.26	578.251	
1,300.00	1,297.08	2,683.25	2,619.86	2.85	10.19	162.71	-2,807.87	-5,687.30	6,510.65	6,499.39	11.27	577.757	
1,400.00	1,394.31	2,808.05	2,739.14	3.20	10.88	163.01	-2,772.47	-5,677.61	6,513.12	6,501.03	12.09	538.630	
1,500.00	1,490.18	2,889.36	2,816.85	3.64	11.32	163.16	-2,749.40	-5,671.22	6,520.63	6,507.88	12.75	511.545	
1,600.00	1,584.43	2,957.00	2,881.49	4.19	11.69	163.24	-2,730.21	-5,665.92	6,533.36	6,519.99	13.37	488.675	
1,700.00	1,676.81	3,001.65	2,924.21	4.85	11.93	163.21	-2,717.64	-5,662.65	6,551.78	6,537.86	13.92	470.650	
1,800.00	1,767.06	3,042.00	2,962.93	5.64	12.15	163.11	-2,706.57	-5,660.07	6,576.13	6,561.65	14.48	454.065	
1,900.00	1,854.93	3,198.91	3,113.55	6.55	12.98	163.35	-2,663.91	-5,649.52	6,605.49	6,589.91	15.58	424.016	
2,000.00	1,940.18	3,242.54	3,155.38	7.59	13.21	163.19	-2,651.90	-5,646.45	6,639.37	6,623.15	16.21	409.527	
2,100.00	2,022.59	3,299.00	3,209.74	8.77	13.51	163.01	-2,637.05	-5,642.87	6,678.92	6,661.99	16.93	394.605	
2,100.63	2,023.10	3,299.00	3,209.74	8.77	13.51	163.01	-2,637.05	-5,642.87	6,679.18	6,662.25	16.93	394.552	

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