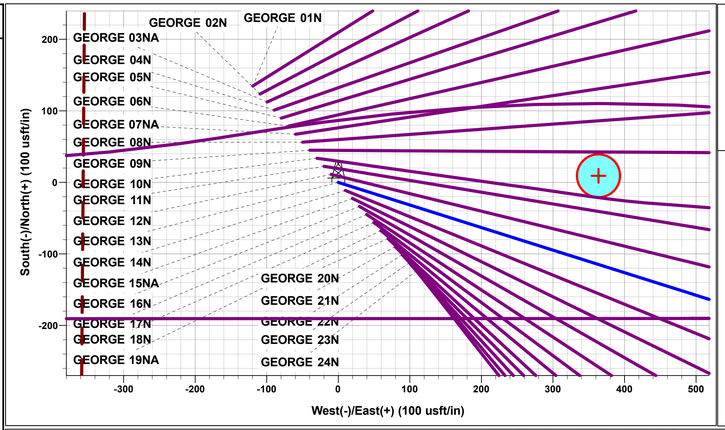
PDC ENERGY

Project: WELD COUNTY, COLORADO (TRUE)
Site: SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)
Well: GEORGE 13N
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: 1906ft FNL & 2275ft FEL of Sec 21
1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00	START NUDGE (4°/100ft BUR)
2325.07	37.00	107.51	2262.09	-86.79	275.11	-264.52	288.47	EOB TO 37° INC
5890.81	37.00	107.51	5109.72	-732.42	2321.74	-2232.36	2434.53	END OF TANGENT
6815.88	0.00	0.00	5971.81	-819.21	2596.85	-2496.88	2723.00	EOD TO VERTICAL
6915.88	0.00	0.00	6071.81	-819.21	2596.85	-2496.88	2723.00	KOP (8°/100ft BUR)
7853.38	75.00	269.98	6763.60	-819.40	2066.02	-1968.94	3253.83	EP *NEW*: 2556ft FSL & 200ft FEL of Sec 21
8037.00	89.69	269.98	6787.99	-819.46	1884.53	-1788.44	3435.32	HZ LANDING POINT
8843.42	89.69	269.98	6792.36	-819.75	1078.12	-986.43	4241.73	END OF TANGENT
8942.39	89.69	268.00	6792.89	-821.50	979.17	-887.84	4340.70	EOT TO 268° AZ
10216.04	89.69	268.00	6799.82	-865.95	-293.68	382.68	5614.33	END OF TANGENT
10266.04	89.69	269.00	6800.09	-867.26	-343.66	432.52	5664.33	EOT TO 269° AZ
11550.59	89.69	269.00	6807.07	-889.67	-1628.00	1712.15	6948.86	END OF TANGENT
11599.59	89.69	269.98	6807.34	-890.11	-1677.00	1760.93	6997.86	EOT TO 269.98° AZ
11903.09	89.69	276.05	6808.99	-874.16	-1979.93	2060.52	7301.35	EOT TO 276.05° AZ
12003.09	89.69	276.05	6809.53	-863.62	-2079.37	2158.32	7401.35	END OF TANGENT
12306.58	89.68	269.98	6811.19	-847.66	-2382.30	2457.91	7704.84	EOT TO 269.98° AZ
17999.44	89.68	269.98	6842.84	-849.65	-8075.07	8119.64	13397.61	BHL: 2530ft FSL & 200ft FWL of Sec 20

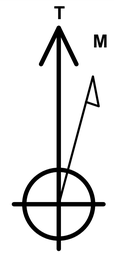


PROPOSED LOCAL COORDINATES:

SHL: 1906ft FNL & 2275ft FEL of Sec 21

EP *NEW*: 2556ft FSL & 200ft FEL of Sec 21

BHL: 2530ft FSL & 200ft FWL of Sec 20

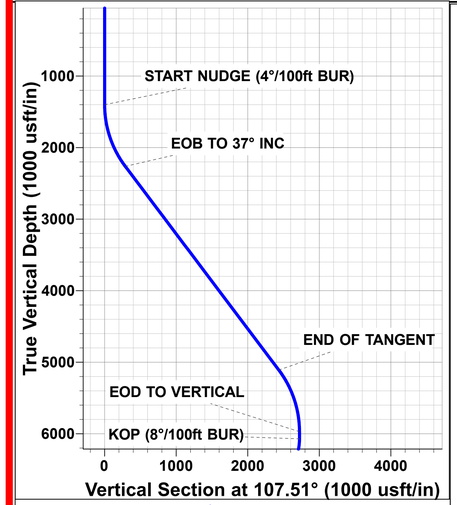


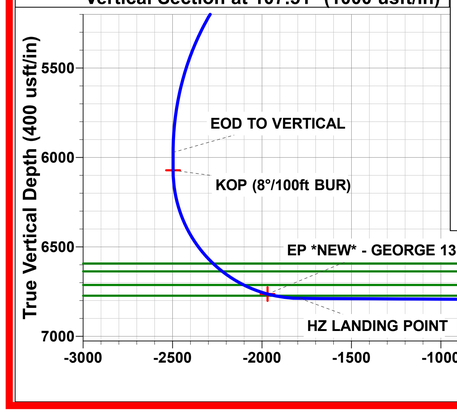
Azimuths to True North
Magnetic North: 7.73°

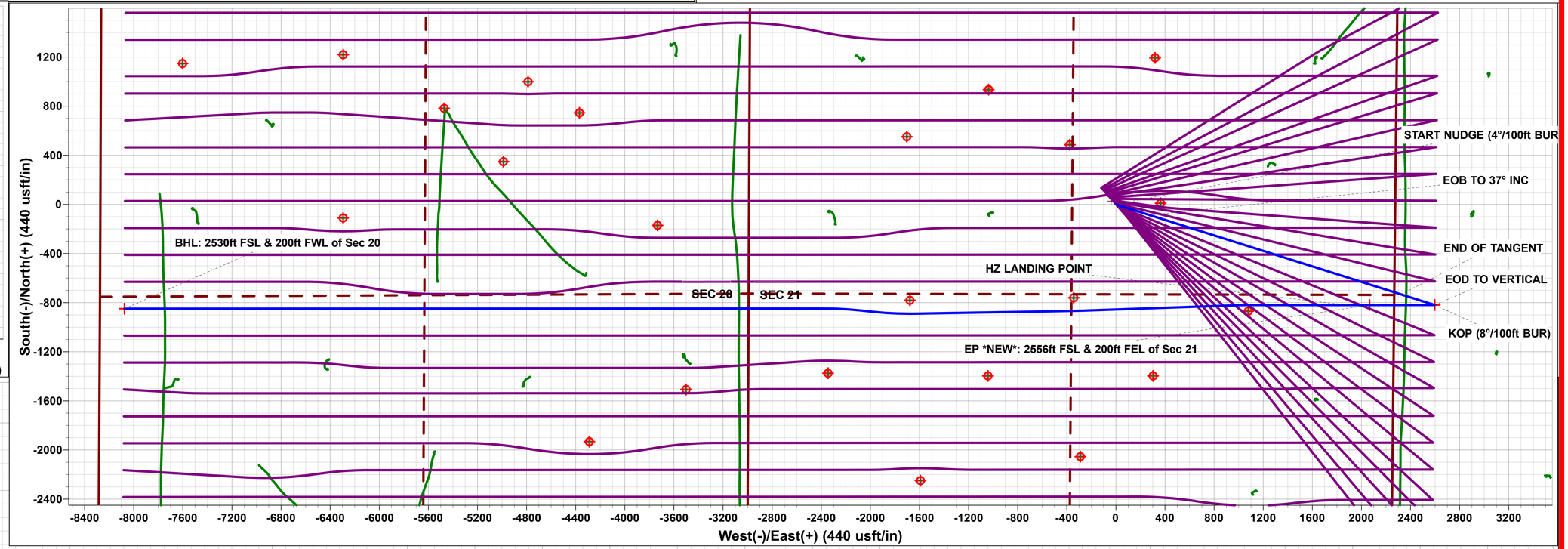
Magnetic Field
Strength: 51929.3nT
Dip Angle: 66.61°
Date: 2021-05-28
Model: IGRF2020

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL - GEORGE 13N	6843.00	-849.58	-8075.06	1352577.71	3255660.07	40.297599	-104.583413
EP *NEW* - GEORGE 13N	6763.60	-819.40	2066.02	1352716.02	3265799.82	40.297685	-104.547057
KOP - GEORGE 13N	6071.81	-819.21	2596.85	1352721.87	3266330.60	40.297685	-104.545154







PDC ENERGY

WELD COUNTY, COLORADO (TRUE)
SW NE SEC. 21 T4N R64W 6th P.M. (GEORGE)
GEORGE 13N

ORIGINAL WELLBORE
PROPOSAL #1

Anticollision Report

29 May, 2021

Anticollision Report

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well GEORGE 13N
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 13N	**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	17,999.40	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 #	15,475.05	7,034.81	1,165.09	917.78	4.711	CC
ABDN DD BALBOA C20-24D - Wellbore #1 - Wellbore #	15,500.00	7,034.55	1,165.36	917.34	4.699	ES
ABDN DD BALBOA C20-24D - Wellbore #1 - Wellbore #	15,600.00	7,033.49	1,171.77	922.09	4.693	SF
ABDN DD DINNEL C27-28D - Wellbore #1 - Wellbore #1	6,808.41	5,996.29	3,409.32	3,362.04	72.107	CC
ABDN DD DINNEL C27-28D - Wellbore #1 - Wellbore #1	6,815.88	6,004.22	3,409.34	3,362.04	72.080	ES
ABDN DD DINNEL C27-28D - Wellbore #1 - Wellbore #1	7,000.00	6,195.40	3,413.43	3,365.77	71.623	SF
ABDN DD DINNEL C27-29D - Wellbore #1 - Wellbore #1	6,918.79	6,106.05	2,613.28	2,561.04	50.019	CC, ES, SF
ABDN DD HANSCOME C28-29D - Wellbore #1 - Wellbo	11,586.15	6,969.53	2,410.37	2,257.75	15.794	CC
ABDN DD HANSCOME C28-29D - Wellbore #1 - Wellbo	11,600.00	6,969.21	2,410.44	2,257.54	15.765	ES
ABDN DD HANSCOME C28-29D - Wellbore #1 - Wellbo	11,900.00	6,962.16	2,447.65	2,289.68	15.494	SF
ABDN DD LEONARD C21-16 - Wellbore #1 - Wellbore #	8,218.57	6,776.61	2,019.70	1,943.34	26.447	CC, ES, SF
ABDN VERT BALBOA 20-3 - Wellbore #1 - Wellbore #1	14,694.25	6,826.43	559.21	348.44	2.653	CC
ABDN VERT BALBOA 20-3 - Wellbore #1 - Wellbore #1	14,700.00	6,826.45	559.24	348.38	2.652	ES, SF
ABDN VERT BALBOA C20-2 - Wellbore #1 - Design #1	13,425.36	6,809.41	659.05	347.51	2.115	CC, ES, SF
ABDN VERT CHENOWETH #2 - Wellbore #1 - Wellbore	17,569.67	6,890.45	1,860.82	1,571.62	6.434	CC
ABDN VERT CHENOWETH #2 - Wellbore #1 - Wellbore	17,600.00	6,890.81	1,861.07	1,571.11	6.418	ES
ABDN VERT CHENOWETH #2 - Wellbore #1 - Wellbore	17,700.00	6,891.97	1,865.38	1,573.55	6.392	SF
ABDN VERT CPC OSTER 19-1 - Wellbore #1 - Wellbore	17,999.44	6,963.43	2,256.92	1,980.83	8.175	CC, ES, SF
ABDN VERT HANSCOME C21-18 - Wellbore #1 - Desig	1,400.00	1,375.00	613.94	583.63	20.258	CC, ES
ABDN VERT HANSCOME C21-18 - Wellbore #1 - Desig	10,400.00	6,775.82	1,359.21	1,123.74	5.772	SF
ABDN VERT HANSCOME C21-19 - Wellbore #1 - Desig	11,650.60	6,794.62	1,440.93	1,175.45	5.428	CC
ABDN VERT HANSCOME C21-19 - Wellbore #1 - Desig	11,700.00	6,794.89	1,441.35	1,174.61	5.404	ES
ABDN VERT HANSCOME C21-19 - Wellbore #1 - Desig	11,900.00	6,795.97	1,451.61	1,181.42	5.373	SF
ABDN VERT HANSCOME C28-1 - Wellbore #1 - Design	11,025.70	6,818.22	3,155.57	2,905.10	12.599	CC
ABDN VERT HANSCOME C28-1 - Wellbore #1 - Design	11,100.00	6,818.62	3,156.44	2,904.41	12.524	ES
ABDN VERT HANSCOME C28-1 - Wellbore #1 - Design	11,599.59	6,821.34	3,207.74	2,946.56	12.282	SF
ABDN VERT HIGHLAND 11-20 - Wellbore #1 - Wellbore	16,335.74	6,840.92	414.73	159.56	1.625	CC, ES, SF
ABDN VERT JOHNSON C29-29 - Wellbore #1 - Design	16,942.04	6,891.96	2,708.11	2,299.78	6.632	CC
ABDN VERT JOHNSON C29-29 - Wellbore #1 - Design	17,000.00	6,892.29	2,708.73	2,298.92	6.610	ES
ABDN VERT JOHNSON C29-29 - Wellbore #1 - Design	17,200.00	6,893.40	2,720.37	2,306.49	6.573	SF
ABDN VERT LEONARD #1 - Wellbore #1 - Wellbore #1	9,745.26	6,736.16	1,907.59	1,821.24	22.090	CC, ES
ABDN VERT LEONARD #1 - Wellbore #1 - Wellbore #1	10,100.00	6,744.89	1,940.28	1,850.30	21.564	SF
ABDN VERT LEONARD 21-14I4 - Wellbore #1 - Design	11,009.30	6,819.13	1,851.44	1,601.42	7.405	CC, ES
ABDN VERT LEONARD 21-14I4 - Wellbore #1 - Design	11,200.00	6,820.17	1,861.24	1,608.09	7.352	SF
ABDN VERT LEONARD 21-6I4 - Wellbore #1 - Wellbore	10,947.28	6,795.60	795.04	681.64	7.011	CC, ES
ABDN VERT LEONARD 21-6I4 - Wellbore #1 - Wellbore	11,000.00	6,795.46	796.79	681.75	6.926	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 13N
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 13N	**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 PREBISH #1 - Wellbore #1 - Design #1	16,217.73	6,843.94	2,068.57	1,681.01	5.337	CC
ABDN VERT PREBISH #1 - Wellbore #1 - Design #1	16,300.00	6,844.39	2,070.21	1,680.51	5.312	ES
ABDN VERT PREBISH #1 - Wellbore #1 - Design #1	16,400.00	6,844.95	2,076.59	1,684.91	5.302	SF
ABDN VERT PREBISH #2 - Wellbore #1 - Wellbore #1	17,446.89	6,880.20	818.33	532.38	2.862	CC, ES
ABDN VERT PREBISH #2 - Wellbore #1 - Wellbore #1	17,500.00	6,879.86	820.05	533.40	2.861	SF
ABDN VERT TODD #1 - Wellbore #1 - Wellbore #1	13,551.03	6,732.69	2,149.24	1,968.82	11.912	CC
ABDN VERT TODD #1 - Wellbore #1 - Wellbore #1	13,600.00	6,732.80	2,149.80	1,968.04	11.828	ES
ABDN VERT TODD #1 - Wellbore #1 - Wellbore #1	13,900.00	6,733.50	2,177.39	1,989.72	11.602	SF
ABDN VERT TODD #2 - Wellbore #1 - Design #1	14,912.84	6,819.68	1,197.13	845.51	3.405	CC, ES
ABDN VERT TODD #2 - Wellbore #1 - Design #1	15,000.00	6,820.17	1,200.30	846.75	3.395	SF
ABDN VERT UPRC #29-4H - Wellbore #1 - Design #1	17,687.24	6,904.11	3,190.33	2,761.26	7.435	CC
ABDN VERT UPRC #29-4H - Wellbore #1 - Design #1	17,800.00	6,904.73	3,192.32	2,760.39	7.391	ES
ABDN VERT UPRC #29-4H - Wellbore #1 - Design #1	17,999.44	6,906.00	3,205.64	2,769.64	7.352	SF
ABDN VERT VICTOR C19-9 - Wellbore #1 - Wellbore #1	17,999.44	6,900.00	971.54	867.11	9.303	CC, ES, SF
ABDN VERT VICTOR C29-4 - Wellbore #1 - Design #1	17,543.90	4,554.00	3,960.32	3,655.67	12.999	CC
ABDN VERT VICTOR C29-4 - Wellbore #1 - Design #1	17,600.00	4,554.00	3,960.72	3,654.85	12.949	ES
ABDN VERT VICTOR C29-4 - Wellbore #1 - Design #1	17,999.44	4,554.00	3,986.58	3,673.20	12.721	SF
EXIST DD CHENOWETH C20-25D - Wellbore #1 - Wellb	16,903.92	7,133.41	1,276.25	982.09	4.339	CC, ES, SF
EXIST DD HANSCOME C28-28D - Wellbore #1 - Wellbo	10,260.74	6,826.96	2,558.96	2,449.05	23.283	CC
EXIST DD HANSCOME C28-28D - Wellbore #1 - Wellbo	10,300.00	6,826.84	2,559.33	2,448.71	23.137	ES
EXIST DD HANSCOME C28-28D - Wellbore #1 - Wellbo	10,900.00	6,824.96	2,638.74	2,519.44	22.118	SF
EXIST DD HANSCOME C28-30D - Wellbore #1 - Wellbo	12,860.01	6,972.68	2,430.73	2,252.36	13.627	CC
EXIST DD HANSCOME C28-30D - Wellbore #1 - Wellbo	12,900.00	6,973.27	2,431.06	2,251.85	13.565	ES
EXIST DD HANSCOME C28-30D - Wellbore #1 - Wellbo	13,200.00	6,977.68	2,454.39	2,270.35	13.336	SF
EXIST DD HANSCOME C29-27D - Wellbore #1 - Wellbo	14,244.07	6,956.75	2,387.48	2,171.72	11.065	CC
EXIST DD HANSCOME C29-27D - Wellbore #1 - Wellbo	14,300.00	6,956.63	2,388.14	2,170.86	10.991	ES
EXIST DD HANSCOME C29-27D - Wellbore #1 - Wellbo	14,600.00	6,955.98	2,413.87	2,190.58	10.810	SF
EXIST DD LONG C20-21D - Wellbore #1 - Wellbore #1	15,446.69	7,055.71	219.84	-25.02	0.898	Level 3, CC, ES, SF
EXIST DD LONG C20-22D - Wellbore #1 - Wellbore #1	14,239.86	7,129.55	276.98	57.86	1.264	Level 3, CC, ES, SF
EXIST DD NOVACEK C28-27D - Wellbore #1 - Wellbore	9,101.97	6,881.07	2,630.69	2,540.42	29.144	CC, ES
EXIST DD NOVACEK C28-27D - Wellbore #1 - Wellbore	9,900.00	6,883.56	2,749.06	2,649.60	27.638	SF
EXIST HZ HANSCOME C21-79HN - Wellbore #1 - Wellb	12,994.04	8,638.29	105.95	36.97	1.536	CC
EXIST HZ HANSCOME C21-79HN - Wellbore #1 - Wellb	13,000.00	8,638.30	106.12	36.64	1.527	ES, SF
EXIST HZ KLINGENBERG C20-780 - SIDETRACK - SID	17,600.00	9,232.15	359.57	253.76	3.398	SF
EXIST HZ KLINGENBERG C20-780 - SIDETRACK - SID	17,673.38	9,234.47	352.01	248.60	3.404	CC, ES
EXIST HZ KLINGENBERG C20-780 - VERTICAL PILOT	17,696.35	6,897.43	2,269.38	1,964.42	7.442	CC
EXIST HZ KLINGENBERG C20-780 - VERTICAL PILOT	17,700.00	6,897.43	2,269.39	1,964.33	7.439	ES
EXIST HZ KLINGENBERG C20-780 - VERTICAL PILOT	17,900.00	6,897.57	2,278.50	1,969.44	7.372	SF
EXIST HZ THOMPSON C28-79HN - Wellbore #1 - Wellb	12,879.81	10,884.00	3,052.03	2,876.74	17.412	CC
EXIST HZ THOMPSON C28-79HN - Wellbore #1 - Wellb	12,900.00	10,884.00	3,052.09	2,876.44	17.376	ES
EXIST HZ THOMPSON C28-79HN - Wellbore #1 - Wellb	14,100.00	10,884.00	3,286.90	3,079.82	15.873	SF
EXIST VERT API #20-6I4 - Wellbore #1 - Design #1	16,218.53	6,854.94	738.86	351.06	1.905	CC, ES, SF
EXIST VERT API 20-4I4 - Wellbore #1 - Design #1	17,525.93	6,884.21	1,996.54	1,572.31	4.706	CC
EXIST VERT API 20-4I4 - Wellbore #1 - Design #1	17,600.00	6,884.62	1,997.91	1,571.80	4.689	ES
EXIST VERT API 20-4I4 - Wellbore #1 - Design #1	17,700.00	6,885.18	2,004.11	1,576.18	4.683	SF
EXIST VERT BALBOA 20-1 - Wellbore #1 - Design #1	13,561.50	6,833.17	1,809.09	1,493.48	5.732	CC
EXIST VERT BALBOA 20-1 - Wellbore #1 - Design #1	13,600.00	6,833.38	1,809.50	1,493.00	5.717	ES
EXIST VERT BALBOA 20-1 - Wellbore #1 - Design #1	13,700.00	6,833.94	1,814.39	1,495.98	5.698	SF
EXIST VERT BALBOA C20-23 - Wellbore #1 - Design #1	14,213.91	6,828.80	1,083.79	750.84	3.255	CC, ES
EXIST VERT BALBOA C20-23 - Wellbore #1 - Design #1	14,300.00	6,829.28	1,087.21	753.00	3.253	SF
EXIST VERT BALBOA C20-4 - Wellbore #1 - Design #1	15,026.12	6,850.31	1,881.18	1,526.03	5.297	CC
EXIST VERT BALBOA C20-4 - Wellbore #1 - Design #1	15,100.00	6,850.72	1,882.63	1,525.79	5.276	ES

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well GEORGE 13N
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 13N	**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 C20-4 - Wellbore #1 - Design #1	15,200.00	6,851.28	1,889.20	1,530.66	5.269	SF
EXIST VERT BALBOA C20-9X - Wellbore #1 - Wellbore	13,444.14	6,793.45	386.51	209.30	2.181	CC, ES, SF
EXIST VERT BORYS C22-20 - Wellbore #1 - Design #1	6,915.88	6,009.81	1,191.90	1,036.30	7.660	CC, ES
EXIST VERT BORYS C22-20 - Wellbore #1 - Design #1	7,000.00	6,093.74	1,196.72	1,039.44	7.609	SF
EXIST VERT CANTRELL #1 - Wellbore #1 - Design #1	6,915.88	5,991.81	1,756.38	1,615.72	12.486	CC, ES
EXIST VERT CANTRELL #1 - Wellbore #1 - Design #1	7,100.00	6,173.91	1,778.39	1,634.05	12.320	SF
EXIST VERT CANTRELL 22-12 - Wellbore #1 - Wellbore	6,813.20	5,894.34	639.64	610.31	21.806	CC, ES
EXIST VERT CANTRELL 22-12 - Wellbore #1 - Wellbore	6,915.88	5,996.10	639.87	610.42	21.725	SF
EXIST VERT CONRAD #1 - Wellbore #1 - Design #1	6,915.88	5,984.81	2,666.20	2,487.35	14.908	CC
EXIST VERT CONRAD #1 - Wellbore #1 - Design #1	6,950.00	6,018.92	2,666.71	2,487.18	14.853	ES
EXIST VERT CONRAD #1 - Wellbore #1 - Design #1	7,150.00	6,214.78	2,690.19	2,507.13	14.696	SF
EXIST VERT CPC-JOHNSON 29-1 - Wellbore #1 - Desig	13,460.56	6,842.61	3,038.31	2,725.18	9.703	CC
EXIST VERT CPC-JOHNSON 29-1 - Wellbore #1 - Desig	13,500.00	6,842.83	3,038.56	2,724.45	9.674	ES
EXIST VERT CPC-JOHNSON 29-1 - Wellbore #1 - Desig	13,900.00	6,845.05	3,069.92	2,747.62	9.525	SF
EXIST VERT DARLENE DINNEL #1 - Wellbore #1 - Des	6,915.88	6,003.81	2,498.17	2,340.95	15.890	CC
EXIST VERT DARLENE DINNEL #1 - Wellbore #1 - Des	6,950.00	6,037.92	2,498.70	2,340.79	15.824	ES
EXIST VERT DARLENE DINNEL #1 - Wellbore #1 - Des	7,150.00	6,233.78	2,522.95	2,361.74	15.649	SF
EXIST VERT HAMLIN C21-22 - Wellbore #1 - Design #1	8,843.42	6,754.36	50.04	-150.53	0.249	Level 3, ES, SF
EXIST VERT HAMLIN C21-22 - Wellbore #1 - Design #1	8,843.45	6,754.36	50.04	-150.51	0.249	Level 3, CC
EXIST VERT HANSCOME 28-4 - Wellbore #1 - Wellbore	11,960.23	6,849.63	3,312.01	3,173.69	23.944	CC
EXIST VERT HANSCOME 28-4 - Wellbore #1 - Wellbore	12,400.00	6,852.39	3,315.22	3,165.67	22.168	ES
EXIST VERT HANSCOME 28-4 - Wellbore #1 - Wellbore	13,200.00	6,857.04	3,431.13	3,267.53	20.973	SF
EXIST VERT HANSCOME C21-20 - Wellbore #1 - Desig	11,600.42	6,809.34	109.24	-154.34	0.414	Level 3, CC, ES, SF
EXIST VERT HANSCOME C21-21 - Wellbore #1 - Desig	10,264.07	6,796.08	107.08	-123.37	0.465	Level 3, CC
EXIST VERT HANSCOME C21-21 - Wellbore #1 - Desig	10,266.04	6,796.09	107.10	-123.89	0.464	Level 3, ES, SF
EXIST VERT HANSCOME C21-24 - Wellbore #1 - Desig	10,242.24	6,796.96	1,187.82	956.06	5.125	CC, ES
EXIST VERT HANSCOME C21-24 - Wellbore #1 - Desig	10,300.00	6,797.27	1,189.60	957.24	5.120	SF
EXIST VERT HERBST #1 - Wellbore #1 - Wellbore #1	6,861.33	5,950.53	1,905.07	1,847.03	32.824	CC, ES
EXIST VERT HERBST #1 - Wellbore #1 - Wellbore #1	6,915.88	6,000.00	1,905.15	1,847.08	32.809	SF
EXIST VERT HERBST 22-6I4 - Wellbore #1 - Design #1	6,915.88	6,002.81	1,635.29	1,460.00	9.329	CC
EXIST VERT HERBST 22-6I4 - Wellbore #1 - Design #1	6,950.00	6,036.92	1,635.90	1,459.92	9.296	ES
EXIST VERT HERBST 22-6I4 - Wellbore #1 - Design #1	7,050.00	6,136.15	1,644.61	1,466.82	9.250	SF
EXIST VERT HERBST C22-25 - Wellbore #1 - Wellbore	6,798.40	5,868.30	1,662.58	1,619.05	38.190	CC
EXIST VERT HERBST C22-25 - Wellbore #1 - Wellbore	6,800.00	5,870.04	1,662.58	1,619.05	38.189	ES
EXIST VERT HERBST C22-25 - Wellbore #1 - Wellbore	6,915.88	5,988.66	1,663.44	1,619.85	38.166	SF
EXIST VERT HERBST C27-30 - Wellbore #1 - Design #1	7,416.95	6,485.99	2,735.71	2,546.46	14.455	CC
EXIST VERT HERBST C27-30 - Wellbore #1 - Design #1	7,450.00	6,510.78	2,735.80	2,546.23	14.431	ES
EXIST VERT HERBST C27-30 - Wellbore #1 - Design #1	7,700.00	6,661.40	2,744.53	2,553.19	14.344	SF
EXIST VERT HERBST, CONRAD #1 - Wellbore #1 - Des	6,915.88	6,009.81	3,618.45	3,451.35	21.654	CC
EXIST VERT HERBST, CONRAD #1 - Wellbore #1 - Des	6,950.00	6,043.92	3,618.82	3,451.03	21.567	ES
EXIST VERT HERBST, CONRAD #1 - Wellbore #1 - Des	7,300.00	6,375.78	3,665.07	3,492.02	21.179	SF
EXIST VERT HIGHLAND 12-20 - Wellbore #1 - Wellbore	17,563.14	6,848.66	576.83	287.98	1.997	CC, ES, SF
EXIST VERT JOHNSON C29-28 - Wellbore #1 - Design	15,757.31	6,866.38	2,376.22	2,001.01	6.333	CC
EXIST VERT JOHNSON C29-28 - Wellbore #1 - Design	15,800.00	6,866.61	2,376.60	2,000.32	6.316	ES
EXIST VERT JOHNSON C29-28 - Wellbore #1 - Design	16,000.00	6,867.73	2,388.58	2,008.38	6.282	SF
EXIST VERT JOHNSON R C29-2 - Wellbore #1 - Design	14,906.87	6,872.65	3,149.03	2,796.53	8.933	CC
EXIST VERT JOHNSON R C29-2 - Wellbore #1 - Design	15,000.00	6,873.17	3,150.41	2,795.57	8.878	ES
EXIST VERT JOHNSON R C29-2 - Wellbore #1 - Design	15,300.00	6,874.83	3,173.47	2,812.48	8.791	SF
EXIST VERT JOHNSTON #22-4 - Wellbore #1 - Wellbor	6,945.25	6,038.92	1,920.03	1,856.05	30.010	CC, ES
EXIST VERT JOHNSTON #22-4 - Wellbore #1 - Wellbor	6,950.00	6,043.55	1,920.03	1,856.05	30.009	SF
EXIST VERT JULIE C21-25 - Wellbore #1 - Design #1	11,538.07	6,834.01	1,360.14	1,096.88	5.167	CC
EXIST VERT JULIE C21-25 - Wellbore #1 - Design #1	11,550.59	6,834.07	1,360.19	1,096.71	5.162	ES

Anticollision Report

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well GEORGE 13N
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 13N	**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 JULIE C21-25 - Wellbore #1 - Design #1	11,600.00	6,834.34	1,361.97	1,097.67	5.153	SF
EXIST VERT KLEIN #1 - Wellbore #1 - Design #1	12,176.74	6,835.47	1,870.61	1,590.99	6.690	CC
EXIST VERT KLEIN #1 - Wellbore #1 - Design #1	12,300.00	6,836.16	1,872.02	1,589.49	6.626	ES
EXIST VERT KLEIN #1 - Wellbore #1 - Design #1	12,400.00	6,836.71	1,876.75	1,592.32	6.598	SF
EXIST VERT KLEIN 21-12 - Wellbore #1 - Design #1	12,260.91	6,811.94	527.05	245.75	1.874	CC, ES, SF
EXIST VERT LEHFELDT C27-04 - Wellbore #1 - Design	6,915.88	6,015.81	3,421.06	3,241.11	19.011	CC
EXIST VERT LEHFELDT C27-04 - Wellbore #1 - Design	7,150.00	6,245.78	3,422.52	3,238.40	18.588	ES
EXIST VERT LEHFELDT C27-04 - Wellbore #1 - Design	7,650.00	6,627.96	3,449.58	3,260.20	18.215	SF
EXIST VERT LEONARD #2 - Wellbore #1 - Wellbore #1	12,224.91	6,785.32	687.72	542.15	4.724	CC, ES, SF
EXIST VERT LEONARD #3 - Wellbore #1 - Design #1	10,973.68	6,823.94	517.41	268.17	2.076	CC, ES, SF
EXIST VERT LEONARD #4 - Wellbore #1 - Design #1	2,417.48	2,307.89	118.25	63.22	2.149	CC, ES, SF
EXIST VERT LEONARD 21-10 - Wellbore #1 - Design #1	9,638.87	6,776.68	551.49	333.02	2.524	CC, ES, SF
EXIST VERT LEONARD 21-16I4 - Wellbore #1 - Wellbor	8,813.05	6,749.90	1,533.70	1,463.12	21.729	CC, ES
EXIST VERT LEONARD 21-16I4 - Wellbore #1 - Wellbor	8,942.39	6,749.70	1,537.44	1,466.40	21.641	SF
EXIST VERT LONG C20-17 - Wellbore #1 - Design #1	14,293.40	6,800.24	1,593.89	1,259.34	4.764	CC
EXIST VERT LONG C20-17 - Wellbore #1 - Design #1	14,300.00	6,800.28	1,593.90	1,259.16	4.762	ES
EXIST VERT LONG C20-17 - Wellbore #1 - Design #1	14,400.00	6,800.83	1,597.45	1,260.28	4.738	SF
EXIST VERT LONG C20-18 - Wellbore #1 - Design #1	15,395.15	6,832.36	1,630.92	1,266.03	4.470	CC
EXIST VERT LONG C20-18 - Wellbore #1 - Design #1	15,400.00	6,832.39	1,630.93	1,265.90	4.468	ES
EXIST VERT LONG C20-18 - Wellbore #1 - Design #1	15,500.00	6,832.95	1,634.29	1,266.89	4.448	SF
EXIST VERT LYMAN #1 - Wellbore #1 - Wellbore #1	7,000.00	6,116.82	794.85	731.06	12.460	ES, SF
EXIST VERT LYMAN #1 - Wellbore #1 - Wellbore #1	7,001.78	6,118.42	794.85	731.06	12.461	CC
EXIST VERT NIX #1 - Wellbore #1 - Design #1	8,376.07	6,739.83	3,346.04	3,147.23	16.830	CC
EXIST VERT NIX #1 - Wellbore #1 - Design #1	8,400.00	6,739.96	3,346.13	3,147.19	16.820	ES
EXIST VERT NIX #1 - Wellbore #1 - Design #1	9,000.00	6,743.21	3,400.07	3,196.68	16.717	SF
EXIST VERT NOVACEK #1 - Wellbore #1 - Design #1	9,756.10	6,781.32	3,190.22	2,969.13	14.430	CC
EXIST VERT NOVACEK #1 - Wellbore #1 - Design #1	9,800.00	6,781.56	3,190.52	2,968.73	14.385	ES
EXIST VERT NOVACEK #1 - Wellbore #1 - Design #1	10,300.00	6,784.27	3,237.26	3,007.84	14.110	SF
EXIST VERT OSTER PM C19-8 - Wellbore #1 - Design #	17,999.44	6,908.00	1,020.12	682.75	3.024	CC, ES, SF
EXIST VERT PREBISH C20-19 - Wellbore #1 - Wellbore	16,788.96	6,854.37	1,494.66	1,227.15	5.587	CC
EXIST VERT PREBISH C20-19 - Wellbore #1 - Wellbore	16,800.00	6,854.26	1,494.70	1,226.89	5.581	ES
EXIST VERT PREBISH C20-19 - Wellbore #1 - Wellbore	16,900.00	6,853.23	1,498.78	1,228.95	5.555	SF
EXIST VERT THOUTT #2 - Wellbore #1 - Wellbore #1	8,200.00	6,905.69	782.33	717.17	12.007	SF
EXIST VERT THOUTT #2 - Wellbore #1 - Wellbore #1	8,298.22	6,906.11	776.14	711.83	12.069	CC, ES
EXIST VERT TODD #20-2 - Wellbore #1 - Design #1	14,711.66	6,815.56	1,848.03	1,501.95	5.340	CC
EXIST VERT TODD #20-2 - Wellbore #1 - Design #1	14,800.00	6,816.05	1,850.14	1,501.77	5.311	ES
EXIST VERT TODD #20-2 - Wellbore #1 - Design #1	14,900.00	6,816.61	1,857.61	1,507.31	5.303	SF
EXIST VERT TODD 20-8 - Wellbore #1 - Design #1	13,657.90	6,807.71	677.70	359.99	2.133	CC, ES
EXIST VERT TODD 20-8 - Wellbore #1 - Design #1	13,700.00	6,807.94	679.01	360.32	2.131	SF
EXIST VERT TRAVELERS 21-8I4 - Wellbore #1 - Wellbo	3,697.57	3,301.48	705.16	677.66	25.647	CC
EXIST VERT TRAVELERS 21-8I4 - Wellbore #1 - Wellbo	3,700.00	3,303.35	705.16	677.63	25.615	ES
EXIST VERT TRAVELERS 21-8I4 - Wellbore #1 - Wellbo	8,900.00	6,721.95	1,154.72	1,081.37	15.743	SF
EXIST VERT VICTOR C19-16 - Wellbore #1 - Design #1	17,999.44	6,921.00	2,050.25	1,642.18	5.024	CC, ES, SF
GEORGE 01N - ORIGINAL WELLBORE - PROPOSAL #	637.34	636.08	177.54	174.85	66.120	CC, ES
GEORGE 01N - ORIGINAL WELLBORE - PROPOSAL #	17,999.44	18,121.45	2,629.21	2,036.27	4.434	SF
GEORGE 02N - ORIGINAL WELLBORE - PROPOSAL #	787.97	787.63	160.25	156.85	47.118	CC
GEORGE 02N - ORIGINAL WELLBORE - PROPOSAL #	800.00	799.39	160.27	156.80	46.211	ES
GEORGE 02N - ORIGINAL WELLBORE - PROPOSAL #	17,999.44	18,000.00	2,410.37	1,817.01	4.062	SF
GEORGE 03NA - ORIGINAL WELLBORE - PROPOSAL	911.83	912.02	143.31	139.34	36.095	CC, ES
GEORGE 03NA - ORIGINAL WELLBORE - PROPOSAL	17,999.44	17,952.53	2,193.70	1,600.71	3.699	SF
GEORGE 04N - ORIGINAL WELLBORE - PROPOSAL #	1,040.91	1,042.86	124.91	120.33	27.256	CC, ES
GEORGE 04N - ORIGINAL WELLBORE - PROPOSAL #	17,999.44	17,988.98	1,894.27	1,299.76	3.186	SF

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well GEORGE 13N
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 13N	**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)						
GEORGE 05N - ORIGINAL WELLBORE - PROPOSAL #	1,136.57	1,138.41	109.05	104.06	21.876	CC, ES
GEORGE 05N - ORIGINAL WELLBORE - PROPOSAL #	17,999.44	17,909.84	1,753.96	1,159.10	2.949	SF
GEORGE 06N - ORIGINAL WELLBORE - PROPOSAL #	1,237.19	1,240.07	92.07	86.65	16.979	CC, ES
GEORGE 06N - ORIGINAL WELLBORE - PROPOSAL #	17,999.44	17,950.05	1,533.67	938.00	2.575	SF
GEORGE 07NA - ORIGINAL WELLBORE - PROPOSAL	1,330.72	1,333.44	75.48	69.66	12.976	CC, ES
GEORGE 07NA - ORIGINAL WELLBORE - PROPOSAL	17,999.44	17,841.50	1,320.03	726.73	2.225	SF
GEORGE 08N - ORIGINAL WELLBORE - PROPOSAL #	1,411.62	1,414.05	59.67	53.54	9.722	CC, ES
GEORGE 08N - ORIGINAL WELLBORE - PROPOSAL #	17,999.44	17,878.45	1,097.71	502.63	1.845	SF
GEORGE 09N - ORIGINAL WELLBORE - PROPOSAL #	1,400.00	1,400.00	60.01	53.99	9.973	CC, ES
GEORGE 09N - ORIGINAL WELLBORE - PROPOSAL #	17,999.44	18,050.99	876.39	276.03	1.460	Level 3, SF
GEORGE 10N - ORIGINAL WELLBORE - PROPOSAL #	1,400.00	1,400.00	45.01	38.99	7.480	CC, ES
GEORGE 10N - ORIGINAL WELLBORE - PROPOSAL #	17,999.44	17,973.12	661.00	77.15	1.132	Level 3, SF
GEORGE 11N - ORIGINAL WELLBORE - PROPOSAL #	0.00	0.00	30.00			
GEORGE 11N - ORIGINAL WELLBORE - PROPOSAL #	17,999.44	18,000.53	438.19	-160.52	0.732	Level 3, ES, SF
GEORGE 12N - ORIGINAL WELLBORE - PROPOSAL #	1,400.00	1,400.00	15.00	8.99	2.493	CC
GEORGE 12N - ORIGINAL WELLBORE - PROPOSAL #	15,700.00	15,639.15	150.12	-92.37	0.613	Level 3, SF
GEORGE 12N - ORIGINAL WELLBORE - PROPOSAL #	17,999.44	17,953.18	230.01	-139.02	0.623	Level 3, ES
GEORGE 14N - ORIGINAL WELLBORE - PROPOSAL #	1,300.00	1,300.00	15.03	9.46	2.699	CC
GEORGE 14N - ORIGINAL WELLBORE - PROPOSAL #	17,999.44	17,957.14	224.73	-185.15	0.548	Level 3, ES, SF
GEORGE 15NA - ORIGINAL WELLBORE - PROPOSAL	1,200.00	1,199.00	29.99	24.87	5.862	CC
GEORGE 15NA - ORIGINAL WELLBORE - PROPOSAL	17,999.44	17,949.85	454.32	-10.33	0.978	Level 3, ES, SF
GEORGE 16N - ORIGINAL WELLBORE - PROPOSAL #	1,100.00	1,099.00	44.99	40.32	9.641	CC, ES
GEORGE 16N - ORIGINAL WELLBORE - PROPOSAL #	17,999.44	18,062.11	657.29	60.57	1.102	Level 3, SF
GEORGE 17N - ORIGINAL WELLBORE - PROPOSAL #	1,000.00	999.00	59.94	55.73	14.216	CC, ES
GEORGE 17N - ORIGINAL WELLBORE - PROPOSAL #	17,999.44	18,035.98	879.16	286.59	1.484	Level 3, SF
GEORGE 18N - ORIGINAL WELLBORE - PROPOSAL #	900.00	899.00	74.95	71.19	19.897	CC, ES
GEORGE 18N - ORIGINAL WELLBORE - PROPOSAL #	17,999.44	18,137.03	1,095.46	500.18	1.840	SF
GEORGE 19NA - ORIGINAL WELLBORE - PROPOSAL	800.00	798.00	89.96	86.64	27.134	CC, ES
GEORGE 19NA - ORIGINAL WELLBORE - PROPOSAL	17,999.44	18,103.37	1,319.60	727.07	2.227	SF
GEORGE 20N - ORIGINAL WELLBORE - PROPOSAL #	700.00	698.00	104.99	102.12	36.635	CC, ES
GEORGE 20N - ORIGINAL WELLBORE - PROPOSAL #	17,999.44	18,247.87	1,533.65	939.43	2.581	SF
GEORGE 21N - ORIGINAL WELLBORE - PROPOSAL #	600.00	598.00	119.94	117.53	49.640	CC, ES
GEORGE 21N - ORIGINAL WELLBORE - PROPOSAL #	17,999.44	18,240.73	1,754.14	1,160.93	2.957	SF
GEORGE 22N - ORIGINAL WELLBORE - PROPOSAL #	500.00	497.00	134.98	133.02	68.712	CC, ES
GEORGE 22N - ORIGINAL WELLBORE - PROPOSAL #	17,999.44	18,297.29	1,973.25	1,379.98	3.326	SF
GEORGE 23N - ORIGINAL WELLBORE - PROPOSAL #	400.00	397.00	149.94	148.42	98.973	CC, ES
GEORGE 23N - ORIGINAL WELLBORE - PROPOSAL #	17,999.44	18,423.93	2,190.92	1,598.06	3.695	SF
GEORGE 24N - ORIGINAL WELLBORE - PROPOSAL #	300.00	296.00	164.92	163.86	155.125	CC, ES
GEORGE 24N - ORIGINAL WELLBORE - PROPOSAL #	17,999.44	18,456.90	2,411.18	1,819.62	4.076	SF

Anticollision Report

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well GEORGE 13N
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 13N	**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	12,116.62	6,735.86	2,045.47	1,902.94	14.351	CC, ES
ABDN VERT CHENOWETH 21-4 - Wellbore #1 - Wellbo	12,400.00	6,740.78	2,077.32	1,929.64	14.066	SF
ABDN VERT CHENOWTH #1 - Wellbore #1 - Design #1	1,400.00	1,386.00	1,395.63	1,365.06	45.657	CC, ES
ABDN VERT CHENOWTH #1 - Wellbore #1 - Design #1	11,200.00	6,791.17	1,834.07	1,580.03	7.220	SF
DRAKE 23N - ORIGINAL WELLBORE - PROPOSAL #1	7,800.00	18,757.30	3,059.01	2,695.90	8.425	ES, SF
DRAKE 23N - ORIGINAL WELLBORE - PROPOSAL #1	8,844.42	17,734.70	3,058.34	2,713.73	8.875	CC
DRAKE 24N - ORIGINAL WELLBORE - PROPOSAL #1	7,809.27	18,931.07	2,915.49	2,549.93	7.975	SF
DRAKE 24N - ORIGINAL WELLBORE - PROPOSAL #1	17,999.44	8,753.00	2,863.26	2,518.42	8.303	CC, ES
EXIST DD CRICKET C22-30D - Wellbore #1 - Wellbore #	3,030.37	2,335.52	2,051.83	2,031.12	99.096	CC
EXIST DD CRICKET C22-30D - Wellbore #1 - Wellbore #	3,100.00	2,389.00	2,052.43	2,030.62	94.079	ES
EXIST DD CRICKET C22-30D - Wellbore #1 - Wellbore #	8,400.00	6,843.19	2,726.25	2,644.59	33.384	SF
EXIST HZ STOCKLEY C22-79HN - Wellbore #1 - Wellbo	7,581.88	9,190.09	90.13	48.66	2.173	CC
EXIST HZ STOCKLEY C22-79HN - Wellbore #1 - Wellbo	7,600.00	9,190.59	92.16	45.16	1.961	ES
EXIST HZ STOCKLEY C22-79HN - Wellbore #1 - Wellbo	7,650.00	9,192.05	115.50	49.84	1.759	SF
EXIST VERT CHENOWETH #21-2 - Wellbore #1 - Desig	1,400.00	1,368.00	1,235.17	1,205.03	40.988	CC
EXIST VERT CHENOWETH #21-2 - Wellbore #1 - Desig	1,800.00	1,762.82	1,238.86	1,199.83	31.735	ES
EXIST VERT CHENOWETH #21-2 - Wellbore #1 - Desig	9,900.00	6,766.10	2,069.57	1,844.93	9.213	SF
EXIST VERT RYANN STATE C21-27 - Wellbore #1 - We	2,777.87	2,637.32	2,301.12	2,286.33	155.607	CC
EXIST VERT RYANN STATE C21-27 - Wellbore #1 - We	2,900.00	2,731.60	2,302.38	2,285.93	140.040	ES
EXIST VERT RYANN STATE C21-27 - Wellbore #1 - We	9,900.00	6,737.43	3,041.94	2,953.36	34.341	SF
EXIST VERT THOUTT #1 - Wellbore #1 - Wellbore #1	3,917.21	3,518.56	1,627.01	1,596.36	53.078	CC
EXIST VERT THOUTT #1 - Wellbore #1 - Wellbore #1	4,000.00	3,581.22	1,627.84	1,596.07	51.231	ES
EXIST VERT THOUTT #1 - Wellbore #1 - Wellbore #1	8,900.00	6,726.39	2,056.12	1,982.89	28.080	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	35.82	35.82	0.00	0.04	-118.67	-3,217.79	-5,885.14	6,707.39				
100.00	100.00	135.32	135.32	0.09	0.15	-118.67	-3,217.83	-5,885.13	6,707.40	6,707.16	0.24	N/A	
200.00	200.00	1,520.54	1,500.26	0.31	4.39	-117.54	-3,041.90	-5,832.62	6,698.58	6,694.26	4.32	1,548.936	
300.00	300.00	1,589.00	1,566.12	0.54	4.72	-117.42	-3,023.83	-5,827.97	6,679.97	6,675.22	4.75	1,407.342	
400.00	400.00	1,666.87	1,641.15	0.76	5.07	-117.29	-3,003.66	-5,822.76	6,661.75	6,656.53	5.22	1,276.292	
500.00	500.00	1,789.04	1,758.96	0.99	5.65	-117.08	-2,972.56	-5,813.84	6,643.23	6,637.33	5.90	1,126.336	
600.00	600.00	1,845.00	1,812.91	1.21	5.93	-116.98	-2,958.19	-5,810.10	6,625.20	6,618.87	6.33	1,046.385	
700.00	700.00	1,912.05	1,877.61	1.44	6.25	-116.86	-2,941.05	-5,805.96	6,607.74	6,600.93	6.81	970.007	
800.00	800.00	2,076.43	2,036.43	1.66	7.03	-116.59	-2,900.27	-5,794.50	6,590.05	6,582.38	7.68	858.327	
900.00	900.00	2,230.52	2,185.04	1.88	7.81	-116.33	-2,861.47	-5,782.14	6,571.25	6,562.72	8.53	770.433	
1,000.00	1,000.00	2,327.66	2,278.42	2.11	8.32	-116.15	-2,835.80	-5,774.57	6,552.18	6,543.01	9.16	715.102	
1,100.00	1,100.00	2,411.03	2,358.61	2.33	8.75	-116.00	-2,813.91	-5,768.17	6,533.35	6,523.61	9.74	670.980	
1,200.00	1,200.00	2,507.56	2,451.37	2.56	9.24	-115.83	-2,788.17	-5,761.10	6,514.70	6,504.32	10.37	627.999	
1,300.00	1,300.00	2,672.20	2,609.28	2.78	10.13	-115.52	-2,743.52	-5,747.79	6,495.01	6,483.70	11.32	573.964	
1,400.00	1,400.00	2,773.95	2,706.57	3.01	10.69	-115.31	-2,714.82	-5,739.89	6,475.41	6,463.40	12.01	539.259	
1,500.00	1,499.92	2,871.00	2,799.29	3.22	11.22	137.86	-2,687.17	-5,732.28	6,458.21	6,445.56	12.66	510.234	
1,600.00	1,599.35	2,957.00	2,881.49	3.42	11.69	138.40	-2,662.80	-5,725.54	6,446.33	6,433.08	13.25	486.519	
1,700.00	1,697.81	2,996.61	2,919.38	3.66	11.91	138.68	-2,651.63	-5,722.61	6,440.32	6,426.65	13.67	471.234	
1,745.33	1,742.00	3,011.81	2,933.95	3.80	11.99	138.75	-2,647.42	-5,721.58	6,439.67	6,425.81	13.86	464.572	
1,800.00	1,794.82	3,042.00	2,962.93	3.97	12.15	138.83	-2,639.16	-5,719.68	6,440.65	6,426.50	14.15	455.085	

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