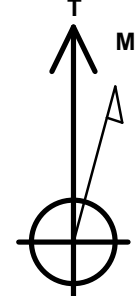




Project: WELD COUNTY, COLORADO (TRUE)
 Site: SW NW SEC. 33 T5N R65W 6th P.M. (BROSS)
 Well: BROSS FEDERAL 8N
 Wellbore: ORIGINAL WELLBORE
 Design: PROPOSAL #3



Azimuths to True North
 Magnetic North: 8.02°

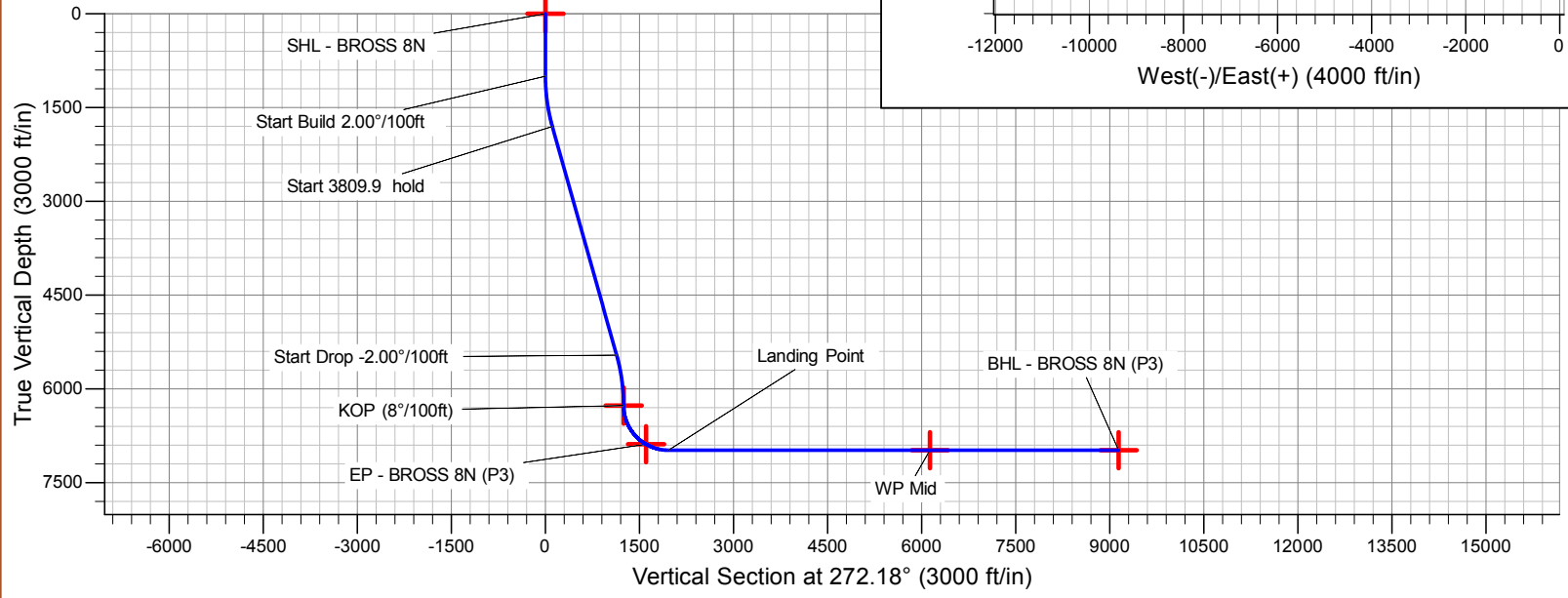
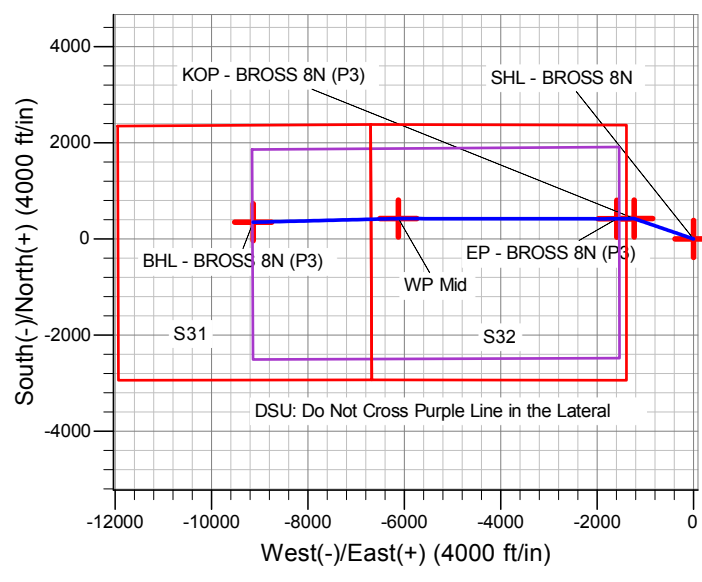
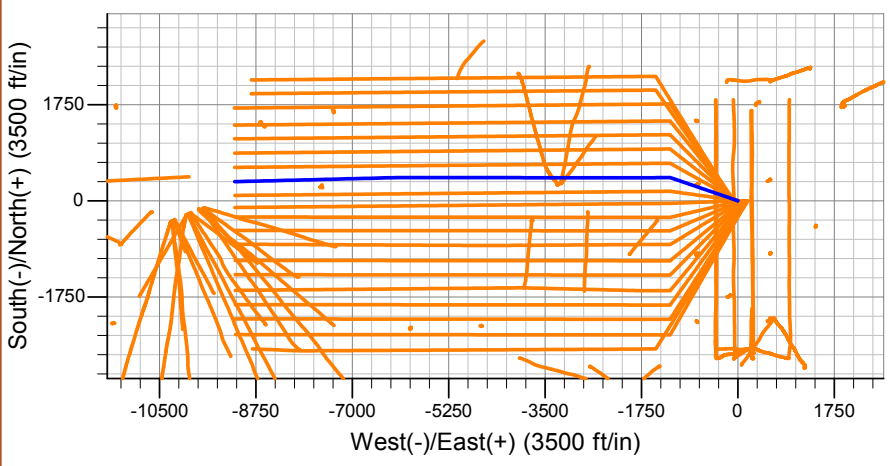
Magnetic Field
 Strength: 52228.7nT
 Dip Angle: 66.80°
 Date: 10/16/2018
 Model: IGRF2015

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	V Sect	Departure	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.0	SHL: 2372ft FNL & 1390ft FWL of Sec 33
1000.0	0.00	0.00	1000.0	0.0	0.0	0.0	0.0	Start Build 2.00°/100ft
1816.4	16.33	288.95	1805.4	37.5	-109.3	110.6	115.5	Start 3809.9 hold
5626.3	16.33	288.95	5461.7	385.3	-1122.3	1136.1	1186.6	Start Drop -2.00°/100ft
6442.7	0.00	0.00	6267.0	422.8	-1231.6	1246.8	1302.1	KOP (8°/100ft)
7192.4	60.01	269.46	6887.0	419.4	-1589.6	1604.4	1660.2	EP: 1950ft FNL & 200ft FEL of Sec 32
7567.3	90.00	270.06	6982.9	418.0	-1947.6	1962.1	2018.2	Landing Point
11741.2	90.00	270.06	6983.0	422.7	-6121.5	6133.2	6192.1	End of Tangent
11790.7	90.00	268.58	6983.0	422.2	-6171.0	6182.6	6241.6	EOT to 268.58
14755.5	90.00	268.56	6983.0	347.6	-9134.8	9141.4	9206.3	BHL: 1950ft FNL & 2447ft FEL of Sec31

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL - BROSS 8N	0.0	0.0	0.0	1373804.71	3230508.54	40.3565442	-104.6728702
KOP - BROSS 8N (P3)	6267.0	422.8	-1231.6	1374215.94	3229273.13	40.3577045	-104.6772892
EP - BROSS 8N (P3)	6887.0	419.4	-1589.6	1374209.21	3228915.13	40.3576952	-104.6785740
WP Mid	6983.0	422.7	-6121.5	1374170.30	3224383.62	40.3577024	-104.6948350
BHL - BROSS 8N (P3)	6983.0	347.6	-9134.8	1374067.04	3221371.26	40.3574936	-104.7056471



PDC ENERGY

**WELD COUNTY, COLORADO (TRUE)
SW NW SEC. 33 T5N R65W 6th P.M. (BROSS)
BROSS FEDERAL 8N**

**ORIGINAL WELLBORE
PROPOSAL #3**

Anticollision Report

19 March, 2019



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well BROSS FEDERAL 8N
Project:	WELD COUNTY, COLORADO (TRUE)	TVD Reference:	KB 23 @ 4688.0ft
Reference Site:	SW NW SEC. 33 T5N R65W 6th P.M. (BROSS)	MD Reference:	KB 23 @ 4688.0ft
Site Error:	0.0 ft	North Reference:	True
Reference Well:	BROSS FEDERAL 8N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM
Reference Design:	PROPOSAL #3	Offset TVD Reference:	Offset Datum

Reference	PROPOSAL #3		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum ellipse separation of 1,000.0 ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	3/19/2019		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	14,755.5	PROPOSAL #3 (ORIGINAL WELLBORE)	MWD	MWD - Standard

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
SW NW SEC. 33 T5N R65W 6th P.M. (BROSS)						
ABDN DD ALLES 33-01 - Wellbore #1 - Wellbore #1	304.1	276.1	3,097.7	3,096.9	3,774.603	CC
ABDN DD ALLES 33-01 - Wellbore #1 - Wellbore #1	800.0	759.4	3,098.8	3,096.6	1,419.405	ES
ABDN DD ALLES 33-01 - Wellbore #1 - Wellbore #1	6,750.0	5,600.0	4,397.7	4,376.4	206.413	SF
ABDN DD ALLES F 33-27D - Wellbore #1 - Wellbore #1	100.0	72.4	2,526.8	2,526.7	10,000.000	CC
ABDN DD ALLES F 33-27D - Wellbore #1 - Wellbore #1	200.0	163.1	2,527.1	2,526.7	5,641.754	ES
ABDN DD ALLES F 33-27D - Wellbore #1 - Wellbore #1	7,300.0	6,900.0	4,677.5	4,648.3	160.075	SF
ABDN DD SYLVESTER 31-5H5 (PLAN) - Wellbore #1 - [14,755.5	6,140.3	1,744.1	1,685.8	29.944	CC, ES, SF
ABDN HZ SAUER F33-77-1HN - Wellbore #1 - Wellbore	998.3	977.4	2,709.7	2,705.8	694.400	CC
ABDN HZ SAUER F33-77-1HN - Wellbore #1 - Wellbore	1,000.0	978.5	2,709.7	2,705.8	693.302	ES
ABDN HZ SAUER F33-77-1HN - Wellbore #1 - Wellbore	7,700.0	7,131.0	3,339.5	3,290.7	68.497	SF
ABDN VERT ALLES 2 - Wellbore #1 - Wellbore #1	138.8	109.8	2,561.6	2,561.4	10,000.000	CC
ABDN VERT ALLES 2 - Wellbore #1 - Wellbore #1	200.0	164.0	2,561.7	2,561.3	6,364.726	ES
ABDN VERT ALLES 2 - Wellbore #1 - Wellbore #1	7,100.0	6,860.4	3,685.9	3,659.4	139.012	SF
ABDN VERT ALLES 33-8 - Wellbore #1 - Wellbore #1	754.4	721.4	3,449.0	3,447.0	1,727.763	CC
ABDN VERT ALLES 33-8 - Wellbore #1 - Wellbore #1	900.0	857.2	3,449.3	3,446.9	1,470.618	ES
ABDN VERT ALLES 33-8 - Wellbore #1 - Wellbore #1	7,000.0	6,741.7	4,874.1	4,853.4	235.584	SF
ABDN VERT BAINBRIDGE 1 - Wellbore #1 - Design #1	8,984.7	6,952.9	1,236.7	1,017.6	5.644	CC
ABDN VERT BAINBRIDGE 1 - Wellbore #1 - Design #1	9,000.0	6,952.9	1,236.8	1,017.2	5.632	ES
ABDN VERT BAINBRIDGE 1 - Wellbore #1 - Design #1	9,100.0	6,952.9	1,242.1	1,019.6	5.583	SF
ABDN VERT FISCHER 33-2 - Wellbore #1 - Wellbore #1	241.4	219.4	3,948.4	3,947.8	6,288.311	CC
ABDN VERT FISCHER 33-2 - Wellbore #1 - Wellbore #1	800.0	768.7	3,949.7	3,947.5	1,803.499	ES
ABDN VERT FISCHER 33-2 - Wellbore #1 - Wellbore #1	10,200.0	6,917.1	8,329.1	8,291.7	222.771	SF
ABDN VERT GUSTAFSON 1 - Wellbore #1 - Design #1	8,953.6	6,965.9	209.4	-9.0	0.959	Level 1, CC, ES, SF
ABDN VERT ISHIGURO 4 - Wellbore #1 - Wellbore #1	14,755.5	6,950.0	2,549.8	2,420.9	19.788	CC, ES, SF
ABDN VERT KEISER 1 - Wellbore #1 - Wellbore #1	1,032.8	1,020.7	1,123.4	1,120.7	413.581	CC, ES
ABDN VERT KEISER 1 - Wellbore #1 - Wellbore #1	6,700.0	6,400.0	2,325.8	2,305.7	115.805	SF
ABDN VERT MAC-BAIN 2 - Wellbore #1 - Design #1	7,675.8	6,971.9	53.4	-132.1	0.288	Level 1, CC, ES, SF
ABDN VERT SAUER 1 - Wellbore #1 - Wellbore #1	1,464.1	1,448.6	2,326.4	2,322.3	574.338	CC
ABDN VERT SAUER 1 - Wellbore #1 - Wellbore #1	1,600.0	1,584.3	2,326.6	2,322.1	514.771	ES
ABDN VERT SAUER 1 - Wellbore #1 - Wellbore #1	8,600.0	6,945.7	3,461.0	3,408.9	66.514	SF
ABDN VERT STEWART 1 - Wellbore #1 - Wellbore #1	11,553.5	7,000.0	2,728.0	2,575.7	17.912	CC
ABDN VERT STEWART 1 - Wellbore #1 - Wellbore #1	11,600.0	7,000.0	2,728.4	2,575.0	17.780	ES
ABDN VERT STEWART 1 - Wellbore #1 - Wellbore #1	12,200.0	7,000.0	2,792.5	2,628.2	16.997	SF
ABDN VERT SYLVESTER 1 - Wellbore #1 - Wellbore #1	14,755.5	6,900.0	3,374.7	3,186.3	17.915	CC, ES, SF
ABDN VERT SYLVESTER 31-6H5 - Wellbore #1 - Desig	14,755.5	6,971.0	820.2	645.4	4.692	CC, ES, SF
BROSS FEDERAL 10N - ORIGINAL WELLBORE - PRO	1,000.0	1,000.0	30.0	25.8	7.105	CC

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

PDC Energy
Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well BROSS FEDERAL 8N
Project:	WELD COUNTY, COLORADO (TRUE)	TVD Reference:	KB 23 @ 4688.0ft
Reference Site:	SW NW SEC. 33 T5N R65W 6th P.M. (BROSS)	MD Reference:	KB 23 @ 4688.0ft
Site Error:	0.0 ft	North Reference:	True
Reference Well:	BROSS FEDERAL 8N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM
Reference Design:	PROPOSAL #3	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
SW NW SEC. 33 T5N R65W 6th P.M. (BROSS)						
BROSS FEDERAL 10N - ORIGINAL WELLBORE - PRO	14,755.5	14,747.4	470.1	-9.8	0.979	Level 1, ES, SF
BROSS FEDERAL 11N - ORIGINAL WELLBORE - PRO	1,000.0	1,000.0	45.0	40.8	10.662	CC, ES
BROSS FEDERAL 11N - ORIGINAL WELLBORE - PRO	14,755.5	14,700.8	646.9	168.9	1.353	Level 3, SF
BROSS FEDERAL 12N - ORIGINAL WELLBORE - PRO	1,000.0	1,000.0	60.0	55.8	14.216	CC, ES
BROSS FEDERAL 12N - ORIGINAL WELLBORE - PRO	14,755.5	14,794.3	888.7	408.2	1.850	SF
BROSS FEDERAL 13N - ORIGINAL WELLBORE - PRO	1,000.0	1,000.0	75.0	70.8	17.770	CC
BROSS FEDERAL 13N - ORIGINAL WELLBORE - PRO	1,100.0	1,102.3	75.1	70.5	16.187	ES
BROSS FEDERAL 13N - ORIGINAL WELLBORE - PRO	14,755.5	14,763.6	1,140.2	660.2	2.376	SF
BROSS FEDERAL 14N - ORIGINAL WELLBORE - PRO	1,213.6	1,220.3	85.1	80.0	16.784	CC, ES
BROSS FEDERAL 14N - ORIGINAL WELLBORE - PRO	14,755.5	14,886.8	1,433.5	953.0	2.983	SF
BROSS FEDERAL 15N - ORIGINAL WELLBORE - PRO	1,209.6	1,217.8	94.2	89.1	18.598	CC, ES
BROSS FEDERAL 15N - ORIGINAL WELLBORE - PRO	14,755.5	14,886.8	1,694.5	1,214.1	3.527	SF
BROSS FEDERAL 16N - ORIGINAL WELLBORE - PRO	1,175.5	1,184.1	104.7	99.7	21.073	CC, ES
BROSS FEDERAL 16N - ORIGINAL WELLBORE - PRO	14,755.5	15,027.0	1,978.4	1,497.9	4.118	SF
BROSS FEDERAL 17N - ORIGINAL WELLBORE - PRO	1,135.0	1,143.7	116.1	111.3	23.825	CC, ES
BROSS FEDERAL 17N - ORIGINAL WELLBORE - PRO	14,755.5	15,062.0	2,239.1	1,758.5	4.658	SF
BROSS FEDERAL 18N - ORIGINAL WELLBORE - PRO	1,090.4	1,098.8	129.0	124.2	26.940	CC
BROSS FEDERAL 18N - ORIGINAL WELLBORE - PRO	1,100.0	1,108.2	129.0	124.2	26.615	ES
BROSS FEDERAL 18N - ORIGINAL WELLBORE - PRO	14,755.5	15,219.5	2,498.3	2,017.5	5.196	SF
BROSS FEDERAL 19N - ORIGINAL WELLBORE - PRO	1,041.4	1,049.0	143.8	139.0	30.465	CC, ES
BROSS FEDERAL 19N - ORIGINAL WELLBORE - PRO	14,755.5	15,283.7	2,783.9	2,303.0	5.790	SF
BROSS FEDERAL 1N - ORIGINAL WELLBORE - PROP	300.0	300.0	105.0	103.9	97.949	CC, ES
BROSS FEDERAL 1N - ORIGINAL WELLBORE - PROP	14,600.0	14,624.2	1,855.1	1,390.3	3.991	SF
BROSS FEDERAL 20N - ORIGINAL WELLBORE - PRO	1,017.3	1,025.9	153.0	148.1	31.459	CC, ES
BROSS FEDERAL 20N - ORIGINAL WELLBORE - PRO	14,755.5	14,966.1	3,059.5	2,588.2	6.491	SF
BROSS FEDERAL 2N - ORIGINAL WELLBORE - PROP	400.0	400.0	90.0	88.5	59.141	CC, ES
BROSS FEDERAL 2N - ORIGINAL WELLBORE - PROP	14,600.0	14,595.5	1,604.7	1,140.1	3.454	SF
BROSS FEDERAL 3N - ORIGINAL WELLBORE - PROP	500.0	500.0	75.0	73.0	38.047	CC, ES
BROSS FEDERAL 3N - ORIGINAL WELLBORE - PROP	14,755.5	14,947.2	1,342.3	864.4	2.809	SF
BROSS FEDERAL 4N - ORIGINAL WELLBORE - PROP	600.0	600.0	60.0	57.6	24.788	CC, ES
BROSS FEDERAL 4N - ORIGINAL WELLBORE - PROP	14,755.5	14,924.4	1,029.8	551.3	2.152	SF
BROSS FEDERAL 5N - ORIGINAL WELLBORE - PROP	700.0	700.0	45.0	42.1	15.682	CC, ES
BROSS FEDERAL 5N - ORIGINAL WELLBORE - PROP	14,755.5	14,795.4	783.7	306.7	1.643	SF
BROSS FEDERAL 6N - ORIGINAL WELLBORE - PROP	800.0	800.0	30.0	26.7	9.042	CC, ES
BROSS FEDERAL 6N - ORIGINAL WELLBORE - PROP	14,755.5	14,815.8	520.1	41.2	1.086	Level 2, SF
BROSS FEDERAL 7N - ORIGINAL WELLBORE - PROP	900.0	900.0	15.0	11.3	3.985	CC
BROSS FEDERAL 7N - ORIGINAL WELLBORE - PROP	14,755.5	14,707.1	270.6	-191.8	0.585	Level 1, ES, SF
BROSS FEDERAL 9N - ORIGINAL WELLBORE - PROP	1,000.0	1,000.0	15.0	10.7	3.547	CC
BROSS FEDERAL 9N - ORIGINAL WELLBORE - PROP	14,755.5	14,672.3	261.1	-199.1	0.567	Level 1, ES, SF
EXIST DD ALEXANDER F 34-33 - Wellbore #1 - Wellbor	977.0	959.0	3,387.1	3,383.6	957.289	CC
EXIST DD ALEXANDER F 34-33 - Wellbore #1 - Wellbor	1,000.0	971.4	3,387.1	3,383.5	937.142	ES
EXIST DD ALEXANDER F 34-33 - Wellbore #1 - Wellbor	7,200.0	6,935.0	5,802.1	5,767.1	156.760	SF
EXIST DD ALLES F 33-28D - Wellbore #1 - Wellbore #1	902.7	877.8	2,244.7	2,242.2	899.716	CC, ES
EXIST DD ALLES F 33-28D - Wellbore #1 - Wellbore #1	7,550.0	6,850.0	3,798.2	3,763.5	109.552	SF
EXIST DD ALLES F 33-29D - Wellbore #1 - Wellbore #1	6,467.7	6,401.2	2,037.4	2,006.5	65.904	CC, ES
EXIST DD ALLES F 33-29D - Wellbore #1 - Wellbore #1	7,450.0	7,100.0	2,378.9	2,339.4	60.279	SF
EXIST DD BALLFIELD Y6 7-7-31 - Wellbore #1 - Wellbo	13,000.0	7,194.6	2,624.3	2,387.0	11.058	SF
EXIST DD BALLFIELD Y6 7-7-31 - Wellbore #1 - Wellbo	13,199.9	6,944.0	2,618.9	2,384.7	11.179	CC
EXIST DD BALLFIELD Y6 7-7-31 - Wellbore #1 - Wellbo	13,200.0	6,943.9	2,618.9	2,384.7	11.179	ES
EXIST DD COLE X6 4-8-31 - Wellbore #1 - Wellbore #1	14,400.0	6,830.3	3,163.9	2,910.5	12.485	SF
EXIST DD COLE X6 4-8-31 - Wellbore #1 - Wellbore #1	14,755.5	6,142.4	3,109.4	2,866.3	12.790	CC, ES
EXIST DD COMMON Z2 2-2-6 - Wellbore #1 - Wellbore	14,755.5	5,768.4	4,236.0	4,011.8	18.896	CC, ES, SF

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

Company:	PDC ENERGY	Local Co-ordinate Reference:	Well BROSS FEDERAL 8N
Project:	WELD COUNTY, COLORADO (TRUE)	TVD Reference:	KB 23 @ 4688.0ft
Reference Site:	SW NW SEC. 33 T5N R65W 6th P.M. (BROSS)	MD Reference:	KB 23 @ 4688.0ft
Site Error:	0.0 ft	North Reference:	True
Reference Well:	BROSS FEDERAL 8N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM
Reference Design:	PROPOSAL #3	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
SW NW SEC. 33 T5N R65W 6th P.M. (BROSS)						
EXIST DD CONNELL X3 3-7-31 - Wellbore #1 - Wellbore	14,755.5	7,360.4	2,844.2	2,593.0	11.323	CC, ES, SF
EXIST DD DICKENS F 32-17D - Wellbore #1 - Wellbore	8,207.5	7,103.8	753.5	675.2	9.622	CC, ES
EXIST DD DICKENS F 32-17D - Wellbore #1 - Wellbore	8,300.0	7,103.1	759.2	679.0	9.470	SF
EXIST DD DICKENS F 32-27D - Wellbore #1 - Wellbore	8,320.7	7,448.9	2,025.5	1,941.0	23.956	CC
EXIST DD DICKENS F 32-27D - Wellbore #1 - Wellbore	8,400.0	7,447.7	2,027.1	1,940.8	23.482	ES
EXIST DD DICKENS F 32-27D - Wellbore #1 - Wellbore	9,200.0	7,434.4	2,208.1	2,105.2	21.452	SF
EXIST DD DICKENS F 32-28D - Wellbore #1 - Wellbore	9,605.5	7,367.5	1,892.3	1,772.0	15.728	CC
EXIST DD DICKENS F 32-28D - Wellbore #1 - Wellbore	9,700.0	7,368.7	1,894.6	1,770.6	15.279	ES
EXIST DD DICKENS F 32-28D - Wellbore #1 - Wellbore	10,200.0	7,374.8	1,983.5	1,843.8	14.205	SF
EXIST DD DOVE HILL Z1 #2-6-31 (PLAN) - Wellbore #1	14,755.5	7,228.2	2,710.1	2,502.8	13.072	CC, ES, SF
EXIST DD ELLIS Y #5-1-6 - Wellbore #1 - Wellbore #1	14,571.3	5,959.6	3,692.7	3,479.9	17.354	CC, ES
EXIST DD ELLIS Y #5-1-6 - Wellbore #1 - Wellbore #1	14,700.0	5,915.5	3,694.8	3,481.0	17.278	SF
EXIST DD FARMERS Y7 6-6-31 - Wellbore #1 - Wellbore	13,638.9	7,442.6	1,763.1	1,517.9	7.191	CC, ES
EXIST DD FARMERS Y7 6-6-31 - Wellbore #1 - Wellbore	13,700.0	7,439.8	1,764.2	1,518.5	7.180	SF
EXIST DD GOODNER Y4 7-1-6 - Wellbore #1 - Wellbore	13,319.7	6,354.4	3,427.5	3,208.2	15.627	CC, ES
EXIST DD GOODNER Y4 7-1-6 - Wellbore #1 - Wellbore	13,400.0	6,334.0	3,428.4	3,208.8	15.617	SF
EXIST DD HUMAN BEAN Y2 5-7-31 - Wellbore #1 - Wel	14,314.9	7,143.3	2,560.4	2,304.7	10.010	CC, ES
EXIST DD HUMAN BEAN Y2 5-7-31 - Wellbore #1 - Wel	14,500.0	7,124.5	2,567.1	2,309.5	9.966	SF
EXIST DD ISHIGURO 30-31 - Wellbore #1 - Wellbore #1	14,755.5	7,276.6	3,350.9	3,181.6	19.795	CC, ES, SF
EXIST DD JOHNSON X1 1-1-6 - Wellbore #1 - Wellbore	14,755.5	5,549.4	4,030.6	3,827.6	19.854	CC, ES, SF
EXIST DD LASALLE 14-29 - Wellbore #1 - Wellbore #1	10,377.4	6,461.4	2,404.3	2,276.5	18.815	CC
EXIST DD LASALLE 14-29 - Wellbore #1 - Wellbore #1	10,400.0	6,458.6	2,404.4	2,276.0	18.731	ES
EXIST DD LASALLE 14-29 - Wellbore #1 - Wellbore #1	11,000.0	6,381.0	2,482.0	2,342.0	17.738	SF
EXIST DD LASALLE PARK Y5 5-5-31 (PLAN) - Wellbore	14,381.8	7,239.9	1,494.2	1,236.5	5.799	CC
EXIST DD LASALLE PARK Y5 5-5-31 (PLAN) - Wellbore	14,400.0	7,239.9	1,494.3	1,236.4	5.795	ES, SF
EXIST DD MAIN Y3 6-8-31 - Wellbore #1 - Wellbore #1	13,876.1	6,758.9	2,962.8	2,723.5	12.384	CC
EXIST DD MAIN Y3 6-8-31 - Wellbore #1 - Wellbore #1	13,900.0	6,753.6	2,962.9	2,723.5	12.376	ES
EXIST DD MAIN Y3 6-8-31 - Wellbore #1 - Wellbore #1	14,000.0	6,732.0	2,965.3	2,725.3	12.357	SF
EXIST DD MCCOUTCHENS Y8 7-5-31 - Wellbore #1 - V	12,953.9	7,513.0	1,225.0	985.7	5.118	CC, ES
EXIST DD MCCOUTCHENS Y8 7-5-31 - Wellbore #1 - V	13,000.0	7,512.4	1,225.9	986.3	5.117	SF
EXIST DD RE-1 X7 4-6-31 - Wellbore #1 - Wellbore #1	14,755.5	7,229.4	2,064.3	1,804.0	7.930	CC, ES, SF
EXIST DD SANDAU X4 3-1-6 - Wellbore #1 - Wellbore #	14,755.5	5,952.3	3,623.8	3,389.0	15.438	CC, ES, SF
EXIST DD SAUER G04-28D - Wellbore #1 - Wellbore #1	668.2	656.2	2,230.3	2,228.2	1,094.264	CC
EXIST DD SAUER G04-28D - Wellbore #1 - Wellbore #1	700.0	677.3	2,230.4	2,228.2	1,036.770	ES
EXIST DD SAUER G04-28D - Wellbore #1 - Wellbore #1	9,300.0	7,188.7	5,992.5	5,927.2	91.748	SF
EXIST DD SAUER G04-29D - Wellbore #1 - Wellbore #1	100.0	72.9	2,223.3	2,223.1	10,000.000	CC
EXIST DD SAUER G04-29D - Wellbore #1 - Wellbore #1	200.0	166.6	2,223.4	2,223.0	4,830.390	ES
EXIST DD SAUER G04-29D - Wellbore #1 - Wellbore #1	9,400.0	7,062.7	5,141.4	5,080.7	84.689	SF
EXIST DD STEWARTS Z4 #6-2-6 - Wellbore #1 - Wellbo	14,173.2	5,921.7	4,092.9	3,892.4	20.416	CC
EXIST DD STEWARTS Z4 #6-2-6 - Wellbore #1 - Wellbo	14,200.0	5,916.4	4,093.0	3,892.2	20.380	ES
EXIST DD STEWARTS Z4 #6-2-6 - Wellbore #1 - Wellbo	14,755.5	5,798.0	4,132.0	3,925.8	20.038	SF
EXIST DD STROHAUER F 32-21D - Wellbore #1 - Wellb	9,344.9	7,144.6	782.1	675.9	7.363	CC, ES
EXIST DD STROHAUER F 32-21D - Wellbore #1 - Wellb	9,400.0	7,143.5	784.1	676.8	7.308	SF
EXIST DD STROHAUER F 32-22D - Wellbore #1 - Wellb	8,347.2	7,181.8	625.6	545.3	7.793	CC, ES
EXIST DD STROHAUER F 32-22D - Wellbore #1 - Wellb	8,400.0	7,181.3	627.8	546.7	7.741	SF
EXIST DD STROHAUER F 33-32D - Wellbore #1 - Wellb	7,059.6	6,891.8	779.8	729.9	15.626	CC, ES
EXIST DD STROHAUER F 33-32D - Wellbore #1 - Wellb	7,250.0	6,993.6	796.3	743.6	15.113	SF
EXIST DD STROHAUER PC G04-30D - Wellbore #1 - W	4,801.9	4,921.0	3,371.3	3,335.5	94.113	CC
EXIST DD STROHAUER PC G04-30D - Wellbore #1 - W	4,900.0	4,982.4	3,371.9	3,335.4	92.229	ES
EXIST DD STROHAUER PC G04-30D - Wellbore #1 - W	9,300.0	7,031.2	4,114.2	4,023.0	45.124	SF
EXIST DD STROHAUER PC G05-27D - Wellbore #1 - W	8,304.7	7,058.2	3,435.1	3,354.3	42.508	CC
EXIST DD STROHAUER PC G05-27D - Wellbore #1 - W	8,400.0	7,058.0	3,436.4	3,353.4	41.418	ES

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

PDC Energy
Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well BROSS FEDERAL 8N
Project:	WELD COUNTY, COLORADO (TRUE)	TVD Reference:	KB 23 @ 4688.0ft
Reference Site:	SW NW SEC. 33 T5N R65W 6th P.M. (BROSS)	MD Reference:	KB 23 @ 4688.0ft
Site Error:	0.0 ft	North Reference:	True
Reference Well:	BROSS FEDERAL 8N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM
Reference Design:	PROPOSAL #3	Offset TVD Reference:	Offset Datum

Summary						
Site Name Offset Well - Wellbore - Design	Reference	Offset	Distance		Separation Factor	Warning
	Measured Depth (ft)	Measured Depth (ft)	Between Centres (ft)	Between Ellipses (ft)		
SW NW SEC. 33 T5N R65W 6th P.M. (BROSS)						
EXIST DD STROHAUER PC G05-27D - Wellbore #1 - W	9,900.0	7,058.0	3,787.4	3,678.0	34.599	SF
EXIST DD STROHAUER PC G05-28D - Wellbore #1 - W	9,582.2	7,338.2	3,281.9	3,145.2	24.012	CC
EXIST DD STROHAUER PC G05-28D - Wellbore #1 - W	9,700.0	7,338.0	3,284.0	3,144.8	23.587	ES
EXIST DD STROHAUER PC G05-28D - Wellbore #1 - W	10,500.0	7,337.0	3,407.8	3,255.7	22.411	SF
EXIST DD SYLVESTER F 31-20D - Wellbore #1 - Wellbc	14,755.5	7,070.0	1,602.3	1,495.8	15.044	CC, ES, SF
EXIST DD SYLVESTER F 31-32D - Wellbore #1 - Wellbc	14,755.5	7,072.8	2,984.4	2,900.2	35.441	CC, ES, SF
EXIST DD VALLEY PACK X5 3-5-31 - Wellbore #1 - Wel	14,755.5	7,037.8	1,531.4	1,314.2	7.049	CC, ES, SF
EXIST HZ SAUER F33-76-1HN - Wellbore #1 - Wellbore	6,596.5	9,851.6	2,227.2	2,153.1	30.073	CC
EXIST HZ SAUER F33-76-1HN - Wellbore #1 - Wellbore	6,600.0	9,851.6	2,227.2	2,153.1	30.061	ES
EXIST HZ SAUER F33-76-1HN - Wellbore #1 - Wellbore	6,700.0	9,852.0	2,237.0	2,162.2	29.882	SF
EXIST HZ SAUER F33-77-1HC - Wellbore #1 - Wellbore	6,685.9	9,997.5	1,619.1	1,546.1	22.157	CC, ES
EXIST HZ SAUER F33-77-1HC - Wellbore #1 - Wellbore	6,800.0	9,994.8	1,632.1	1,557.6	21.907	SF
EXIST HZ SAUER F33-77-1HNX - Wellbore #1 - Wellbor	6,615.5	9,784.6	1,542.0	1,466.4	20.401	CC, ES
EXIST HZ SAUER F33-77-1HNX - Wellbore #1 - Wellbor	6,700.0	9,782.8	1,549.3	1,472.9	20.285	SF
EXIST HZ SAUER F33-77HN - Wellbore #1 - Wellbore #	6,699.0	9,974.3	1,265.6	1,190.9	16.952	CC
EXIST HZ SAUER F33-77HN - Wellbore #1 - Wellbore #	6,700.0	9,974.3	1,265.6	1,190.9	16.948	ES
EXIST HZ SAUER F33-77HN - Wellbore #1 - Wellbore #	6,800.0	9,976.0	1,276.7	1,200.3	16.726	SF
EXIST HZ SAUER F33-78-1HC - OH - OH	703.1	699.1	2,706.5	2,704.0	1,073.873	CC
EXIST HZ SAUER F33-78-1HC - OH - OH	900.0	875.4	2,706.9	2,703.6	811.194	ES
EXIST HZ SAUER F33-78-1HC - OH - OH	8,400.0	7,188.0	3,788.5	3,724.7	59.316	SF
EXIST HZ SAUER F33-78-1HC - SDTCK - SDTCK	6,780.1	9,895.3	1,013.3	943.7	14.551	CC
EXIST HZ SAUER F33-78-1HC - SDTCK - SDTCK	6,800.0	9,894.1	1,013.8	943.6	14.452	ES
EXIST HZ SAUER F33-78-1HC - SDTCK - SDTCK	6,900.0	9,887.0	1,030.2	957.9	14.242	SF
EXIST HZ SAUER F33-78-1HN - Wellbore #1 - Wellbore	6,686.1	9,719.9	919.3	844.9	12.344	CC
EXIST HZ SAUER F33-78-1HN - Wellbore #1 - Wellbore	6,700.0	9,719.4	919.6	844.8	12.301	ES
EXIST HZ SAUER F33-78-1HN - Wellbore #1 - Wellbore	6,750.0	9,717.9	924.4	848.8	12.221	SF
EXIST VERT ALEXANDER 33-2 - Wellbore #1 - Design #	1,000.0	978.0	2,413.3	2,392.5	115.813	CC
EXIST VERT ALEXANDER 33-2 - Wellbore #1 - Design #	1,100.0	1,078.0	2,415.0	2,392.0	104.696	ES
EXIST VERT ALEXANDER 33-2 - Wellbore #1 - Design #	6,900.0	6,671.9	3,831.0	3,679.9	25.356	SF
EXIST VERT ALEXANDER F 33-1 - Wellbore #1 - Desigr	1,000.0	983.0	3,368.6	3,347.1	156.504	CC
EXIST VERT ALEXANDER F 33-1 - Wellbore #1 - Desigr	1,100.0	1,083.0	3,370.4	3,346.6	141.888	ES
EXIST VERT ALEXANDER F 33-1 - Wellbore #1 - Desigr	6,950.0	6,715.9	4,834.3	4,682.0	31.736	SF
EXIST VERT ALEXANDER F 33-21 - Wellbore #1 - Wellt	100.0	67.5	1,480.4	1,480.3	10,000.000	CC
EXIST VERT ALEXANDER F 33-21 - Wellbore #1 - Wellt	1,000.0	965.9	1,481.5	1,478.9	560.304	ES
EXIST VERT ALEXANDER F 33-21 - Wellbore #1 - Wellt	6,900.0	6,664.7	2,920.0	2,900.9	153.103	SF
EXIST VERT ALEXANDER F 33-24 - Wellbore #1 - Desigr	1,000.0	983.0	1,993.8	1,972.9	95.444	CC
EXIST VERT ALEXANDER F 33-24 - Wellbore #1 - Desigr	1,100.0	1,083.0	1,995.4	1,972.2	86.308	ES
EXIST VERT ALEXANDER F 33-24 - Wellbore #1 - Desigr	6,900.0	6,676.9	3,319.5	3,166.9	21.754	SF
EXIST VERT ALLES 3 - Wellbore #1 - Wellbore #1	1,037.8	1,014.6	704.9	702.2	263.195	CC, ES
EXIST VERT ALLES 3 - Wellbore #1 - Wellbore #1	6,600.0	6,400.0	1,780.2	1,760.6	90.990	SF
EXIST VERT ALLES 33-3 - Wellbore #1 - Wellbore #1	2,121.5	2,067.1	1,825.2	1,818.4	268.442	CC
EXIST VERT ALLES 33-3 - Wellbore #1 - Wellbore #1	2,200.0	2,140.9	1,825.4	1,818.1	252.144	ES
EXIST VERT ALLES 33-3 - Wellbore #1 - Wellbore #1	6,900.0	6,709.2	2,152.1	2,122.8	73.345	SF
EXIST VERT ALLES 33-4 - Wellbore #1 - Wellbore #1	4,242.7	4,109.9	35.1	15.5	1.793	CC, ES, SF
EXIST VERT ALLES 33-7H5 - Wellbore #1 - Design #1	1,000.0	983.0	2,011.5	1,990.6	96.291	CC
EXIST VERT ALLES 33-7H5 - Wellbore #1 - Design #1	1,100.0	1,083.0	2,012.9	1,989.8	87.070	ES
EXIST VERT ALLES 33-7H5 - Wellbore #1 - Design #1	6,800.0	6,592.7	3,252.4	3,101.7	21.588	SF
EXIST VERT ALLES F 33-22 - Wellbore #1 - Design #1	1,000.0	981.0	2,513.2	2,492.3	120.427	CC
EXIST VERT ALLES F 33-22 - Wellbore #1 - Design #1	1,100.0	1,081.0	2,514.9	2,491.8	108.879	ES
EXIST VERT ALLES F 33-22 - Wellbore #1 - Design #1	6,850.0	6,633.7	3,892.1	3,741.9	25.924	SF
EXIST VERT ALLES F33-18 - Wellbore #1 - Design #1	1,000.0	989.0	1,788.1	1,767.2	85.343	CC
EXIST VERT ALLES F33-18 - Wellbore #1 - Design #1	1,100.0	1,089.0	1,789.0	1,765.8	77.177	ES

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

PDC Energy
Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well BROSS FEDERAL 8N
Project:	WELD COUNTY, COLORADO (TRUE)	TVD Reference:	KB 23 @ 4688.0ft
Reference Site:	SW NW SEC. 33 T5N R65W 6th P.M. (BROSS)	MD Reference:	KB 23 @ 4688.0ft
Site Error:	0.0 ft	North Reference:	True
Reference Well:	BROSS FEDERAL 8N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM
Reference Design:	PROPOSAL #3	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
SW NW SEC. 33 T5N R65W 6th P.M. (BROSS)						
EXIST VERT ALLES F33-18 - Wellbore #1 - Design #1	6,750.0	6,554.0	2,766.1	2,613.8	18.160	SF
EXIST VERT BOSTRON #2 - Wellbore #1 - Design #1	7,630.4	6,970.9	1,388.6	1,204.2	7.529	CC, ES
EXIST VERT BOSTRON #2 - Wellbore #1 - Design #1	7,800.0	6,970.9	1,398.9	1,211.5	7.463	SF
EXIST VERT BOSTRON 1 - Wellbore #1 - Design #1	5,113.2	4,559.0	3,532.5	3,420.4	31.520	CC, ES
EXIST VERT BOSTRON 1 - Wellbore #1 - Design #1	10,400.0	4,559.0	3,902.2	3,750.5	25.736	SF
EXIST VERT BOSTRON 32-3 - Wellbore #1 - Design #1	8,906.8	6,971.4	1,459.1	1,241.9	6.718	CC, ES
EXIST VERT BOSTRON 32-3 - Wellbore #1 - Design #1	9,100.0	6,971.4	1,471.9	1,251.0	6.665	SF
EXIST VERT CONLIN FED 1 - Wellbore #1 - Design #1	11,741.2	6,959.0	30.1	-264.9	0.102	Level 1, ES
EXIST VERT CONLIN FED 1 - Wellbore #1 - Design #1	11,742.3	6,959.0	30.0	-264.9	0.102	Level 1, CC, SF
EXIST VERT DICKENS F 32-07X - Wellbore #1 - Wellbo	8,888.9	6,977.1	121.8	42.5	1.537	CC, ES, SF
EXIST VERT EWING 1 - Wellbore #1 - Design #1	11,646.9	6,966.0	1,042.7	750.4	3.567	CC, ES
EXIST VERT EWING 1 - Wellbore #1 - Design #1	11,700.0	6,966.0	1,044.1	750.8	3.560	SF
EXIST VERT EWING 32-31 - Wellbore #1 - Design #1	10,133.4	6,962.0	1,205.3	954.9	4.813	CC, ES
EXIST VERT EWING 32-31 - Wellbore #1 - Design #1	10,200.0	6,962.0	1,207.1	955.4	4.795	SF
EXIST VERT FISHER 1 - Wellbore #1 - Design #1	1,000.0	984.0	2,987.7	2,966.8	142.953	CC
EXIST VERT FISHER 1 - Wellbore #1 - Design #1	1,100.0	1,084.0	2,989.2	2,966.1	129.240	ES
EXIST VERT FISHER 1 - Wellbore #1 - Design #1	7,050.0	6,788.1	4,349.6	4,192.9	27.746	SF
EXIST VERT HAYES FED 31-8H5 - Wellbore #1 - Wellbo	13,171.8	6,970.7	100.5	-96.7	0.509	Level 1, CC, ES, SF
EXIST VERT HAYS 2 - Wellbore #1 - Design #1	10,216.4	6,954.0	1,097.1	844.4	4.343	CC, ES
EXIST VERT HAYS 2 - Wellbore #1 - Design #1	10,300.0	6,954.0	1,100.2	845.1	4.313	SF
EXIST VERT HAYS 31-1H5 - Wellbore #1 - Wellbore #1	12,946.7	6,890.9	1,270.6	1,079.9	6.663	CC
EXIST VERT HAYS 31-1H5 - Wellbore #1 - Wellbore #1	13,000.0	6,895.0	1,271.7	1,079.3	6.607	ES
EXIST VERT HAYS 31-1H5 - Wellbore #1 - Wellbore #1	13,100.0	6,903.0	1,279.8	1,084.9	6.567	SF
EXIST VERT HAYS 31-2H5 - Wellbore #1 - Wellbore #1	14,180.5	6,954.6	990.9	765.1	4.389	CC
EXIST VERT HAYS 31-2H5 - Wellbore #1 - Wellbore #1	14,200.0	6,954.5	991.1	764.6	4.376	ES
EXIST VERT HAYS 31-2H5 - Wellbore #1 - Wellbore #1	14,300.0	6,954.3	998.1	769.4	4.363	SF
EXIST VERT HAYS, THURMAN 1 - Wellbore #1 - Desigr	11,850.0	6,943.0	1,258.5	961.0	4.230	CC
EXIST VERT HAYS, THURMAN 1 - Wellbore #1 - Desigr	11,900.0	6,943.0	1,259.5	960.3	4.210	ES
EXIST VERT HAYS, THURMAN 1 - Wellbore #1 - Desigr	12,000.0	6,943.0	1,267.4	965.6	4.200	SF
EXIST VERT HOLMES F 32-06 - Wellbore #1 - Design #	10,156.7	6,959.0	108.7	-142.3	0.433	Level 1, CC, ES, SF
EXIST VERT J ALLES 1 - Wellbore #1 - Wellbore #1	5,715.1	5,513.9	1,132.6	1,104.1	39.749	CC
EXIST VERT J ALLES 1 - Wellbore #1 - Wellbore #1	5,800.0	5,592.6	1,132.9	1,104.1	39.287	ES
EXIST VERT J ALLES 1 - Wellbore #1 - Wellbore #1	6,900.0	6,652.3	1,207.6	1,174.9	36.991	SF
EXIST VERT KEISER 2 - Wellbore #1 - Wellbore #1	2,694.4	2,615.6	1,140.0	1,129.8	111.490	CC
EXIST VERT KEISER 2 - Wellbore #1 - Wellbore #1	2,800.0	2,715.7	1,140.5	1,129.6	105.062	ES
EXIST VERT KEISER 2 - Wellbore #1 - Wellbore #1	7,192.4	6,855.9	1,634.2	1,603.4	53.188	SF
EXIST VERT MCBAIN (BAINBRIDGE) 1 - Wellbore #1 -	7,686.3	6,940.9	1,493.0	1,307.6	8.050	CC
EXIST VERT MCBAIN (BAINBRIDGE) 1 - Wellbore #1 -	7,700.0	6,940.9	1,493.1	1,307.2	8.034	ES
EXIST VERT MCBAIN (BAINBRIDGE) 1 - Wellbore #1 -	8,000.0	6,940.9	1,525.6	1,332.1	7.883	SF
EXIST VERT SAUER 33-2 - Wellbore #1 - Wellbore #1	100.0	73.1	2,210.9	2,210.8	10,000.000	CC
EXIST VERT SAUER 33-2 - Wellbore #1 - Wellbore #1	1,000.0	972.5	2,211.0	2,208.5	891.012	ES
EXIST VERT SAUER 33-2 - Wellbore #1 - Wellbore #1	8,600.0	6,971.4	4,372.8	4,331.8	106.666	SF
EXIST VERT SAUER F 33-25 - Wellbore #1 - Wellbore #	1,020.5	997.7	1,715.4	1,712.6	614.911	CC, ES
EXIST VERT SAUER F 33-25 - Wellbore #1 - Wellbore #	7,900.0	7,000.0	3,006.9	2,969.8	81.100	SF
EXIST VERT SAUER F 33-33 - Wellbore #1 - Design #1	3,559.7	3,468.4	1,927.7	1,844.8	23.240	CC
EXIST VERT SAUER F 33-33 - Wellbore #1 - Design #1	4,200.0	4,082.9	1,936.1	1,837.1	19.543	ES
EXIST VERT SAUER F 33-33 - Wellbore #1 - Design #1	7,350.0	6,940.2	2,113.9	1,939.1	12.095	SF
EXIST VERT STENZEL 1-31 - Wellbore #1 - Design #1	14,755.5	6,946.3	1,887.0	1,552.9	5.649	CC, ES, SF
EXIST VERT STEWART 2 - Wellbore #1 - Wellbore #1	10,271.8	6,272.0	2,781.3	2,667.6	24.461	CC
EXIST VERT STEWART 2 - Wellbore #1 - Wellbore #1	10,300.0	6,272.0	2,781.5	2,667.1	24.318	ES
EXIST VERT STEWART 2 - Wellbore #1 - Wellbore #1	11,000.0	6,272.0	2,875.0	2,747.9	22.610	SF
EXIST VERT STROHAUER 32-1 - Wellbore #1 - Design	7,736.2	6,971.9	2,528.3	2,341.3	13.521	CC

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

Company:	PDC ENERGY	Local Co-ordinate Reference:	Well BROSS FEDERAL 8N
Project:	WELD COUNTY, COLORADO (TRUE)	TVD Reference:	KB 23 @ 4688.0ft
Reference Site:	SW NW SEC. 33 T5N R65W 6th P.M. (BROSS)	MD Reference:	KB 23 @ 4688.0ft
Site Error:	0.0 ft	North Reference:	True
Reference Well:	BROSS FEDERAL 8N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM
Reference Design:	PROPOSAL #3	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
SW NW SEC. 33 T5N R65W 6th P.M. (BROSS)						
EXIST VERT STROHAUER 32-1 - Wellbore #1 - Design	7,800.0	6,971.9	2,529.1	2,340.7	13.426	ES
EXIST VERT STROHAUER 32-1 - Wellbore #1 - Design	8,300.0	6,971.9	2,590.4	2,391.9	13.055	SF
EXIST VERT STROHAUER F #33-23 - Wellbore #1 - De	1,000.0	985.0	3,134.0	3,112.4	145.465	CC
EXIST VERT STROHAUER F #33-23 - Wellbore #1 - De	1,100.0	1,085.0	3,135.7	3,111.9	131.893	ES
EXIST VERT STROHAUER F #33-23 - Wellbore #1 - De	6,950.0	6,717.9	4,552.1	4,398.7	29.675	SF
EXIST VERT STROHAUER F 32-24 - Wellbore #1 - Des	9,491.5	6,978.9	2,035.3	1,802.2	8.733	CC
EXIST VERT STROHAUER F 32-24 - Wellbore #1 - Des	9,500.0	6,978.9	2,035.3	1,802.1	8.726	ES
EXIST VERT STROHAUER F 32-24 - Wellbore #1 - Des	9,800.0	6,978.9	2,058.5	1,819.2	8.600	SF
EXIST VERT STROHAUER F32-23 - Wellbore #1 - Desi	8,401.7	6,977.9	2,085.2	1,881.3	10.226	CC, ES
EXIST VERT STROHAUER F32-23 - Wellbore #1 - Desi	8,800.0	6,977.9	2,122.9	1,911.0	10.017	SF
EXIST VERT SYLVESTER 31-12H5 - Wellbore #1 - Des	14,755.5	6,974.0	2,426.4	2,166.6	9.337	CC, ES, SF
EXIST VERT SYLVESTER F 31-33 - Wellbore #1 - Desig	14,755.5	6,970.0	3,266.3	2,983.6	11.554	CC, ES, SF