PDC ENERGY

WELD COUNTY, COLORADO
SE SW SEC. 21 T4N R67W 6th P.M.
WALTERS 21P-234

ORIGINAL WELLBORE
PROPOSAL #1

Anticollision Report

26 March, 2016

total

Anticollision Report

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
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 100.0usft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 us	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 26/03/2016

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	11,688.2	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
SE SW SEC. 21 T4N R67W 6th P.M.						
EXIST DD RYLAND 20XD - Wellbore #1 - Wellbore #1	9,811.2	7,357.8	549.2	435.7	4.837	CC, ES
EXIST DD RYLAND 20XD - Wellbore #1 - Wellbore #1	9,900.0	7,357.4	556.3	440.4	4.798	SF
EXIST DD RYLAND 20YD - Wellbore #1 - Wellbore #1	9,770.6	7,493.4	660.9	549.2	5.916	CC
EXIST DD RYLAND 20YD - Wellbore #1 - Wellbore #1	9,800.0	7,493.4	661.5	549.0	5.880	ES
EXIST DD RYLAND 20YD - Wellbore #1 - Wellbore #1	9,900.0	7,493.5	673.4	558.2	5.844	SF
EXIST DD RYLAND 33-20D - Wellbore #1 - Wellbore #1	11,612.8	7,120.0	1,255.7	1,113.0	8.798	CC, ES
EXIST DD RYLAND 33-20D - Wellbore #1 - Wellbore #1	11,688.2	7,120.1	1,258.0	1,113.2	8.686	SF
EXIST DD RYLAND 34-20D - Wellbore #1 - Wellbore #1	11,620.7	7,046.9	61.2	-80.8	0.431	Level 1, CC, ES, SF
EXIST DD RYLAND 43-20D - Wellbore #1 - Wellbore #1	10,347.1	7,262.7	1,257.5	1,138.9	10.598	CC
EXIST DD RYLAND 43-20D - Wellbore #1 - Wellbore #1	10,400.0	7,263.2	1,258.6	1,138.5	10.480	ES
EXIST DD RYLAND 43-20D - Wellbore #1 - Wellbore #1	10,700.0	7,266.2	1,306.1	1,177.7	10.176	SF
EXIST DD RYLAND 44-20D - Wellbore #1 - Wellbore #1	10,354.1	7,193.9	53.3	-65.3	0.450	Level 1, CC, ES, SF
EXIST DD WALTERS #21ODU - Wellbore #1 - Wellbore	631.7	641.1	770.5	768.6	394.357	CC, ES
EXIST DD WALTERS #21ODU - Wellbore #1 - Wellbore	10,300.0	7,277.2	3,604.4	3,490.5	31.660	SF
EXIST DD WALTERS 21LDU - Wellbore #1 - Wellbore #	8,380.3	7,282.6	690.1	632.8	12.043	CC
EXIST DD WALTERS 21LDU - Wellbore #1 - Wellbore #	8,400.0	7,282.7	690.4	632.6	11.948	ES
EXIST DD WALTERS 21LDU - Wellbore #1 - Wellbore #	8,600.0	7,282.8	724.2	661.4	11.531	SF
EXIST DD WALTERS 21QDU - Wellbore #1 - Wellbore #	2,658.8	2,851.7	484.5	463.4	22.915	CC
EXIST DD WALTERS 21QDU - Wellbore #1 - Wellbore #	2,700.0	2,886.5	484.9	463.2	22.364	ES
EXIST DD WALTERS 21QDU - Wellbore #1 - Wellbore #	4,500.0	4,643.2	640.6	596.4	14.490	SF
EXIST DD WALTERS 23-21DU - Wellbore #1 - Wellbore	0.0	0.0	757.1			
EXIST DD WALTERS 23-21DU - Wellbore #1 - Wellbore	300.0	298.7	757.7	756.8	883.790	ES
EXIST DD WALTERS 23-21DU - Wellbore #1 - Wellbore	8,900.0	7,156.2	1,839.7	1,769.5	26.214	SF
EXIST DD WALTERS 24-21DU - Wellbore #1 - Wellbore	7,722.6	7,183.9	126.1	84.0	2.992	CC, ES, SF
EXIST DD WEDCO #13-21DU - Wellbore #1 - Wellbore	0.0	1.5	765.0			
EXIST DD WEDCO #13-21DU - Wellbore #1 - Wellbore	600.0	600.0	765.6	763.7	414.853	ES
EXIST DD WEDCO #13-21DU - Wellbore #1 - Wellbore	9,600.0	7,245.4	1,291.7	1,196.1	13.506	SF
EXIST DD WEDCO 14-21DU - Wellbore #1 - Wellbore #	9,069.1	7,253.8	69.3	-11.5	0.858	Level 1, CC, ES, SF
EXIST VERT BUNYAN #1 - Wellbore #1 - Wellbore #1	100.0	85.2	887.3	887.2	5,843.502	CC
EXIST VERT BUNYAN #1 - Wellbore #1 - Wellbore #1	600.0	583.0	887.6	886.0	540.578	ES
EXIST VERT BUNYAN #1 - Wellbore #1 - Wellbore #1	8,800.0	7,065.5	1,172.9	1,120.2	22.241	SF
EXIST VERT EVANS-STROH 20-1 - Wellbore #1 - Desig	11,292.5	7,033.4	484.1	224.7	1.866	CC
EXIST VERT EVANS-STROH 20-1 - Wellbore #1 - Desig	11,300.0	7,033.4	484.1	224.5	1.865	ES, SF
WALTERS 21P-204 - ORIGINAL WELLBORE - PROPOS	400.0	399.0	44.8	43.3	29.083	CC, ES
WALTERS 21P-204 - ORIGINAL WELLBORE - PROPOS	11,688.2	11,683.2	645.2	386.6	2.495	SF
WALTERS 21P-304 - ORIGINAL WELLBORE - PROPOS	500.0	499.0	29.9	27.9	15.010	CC
WALTERS 21P-304 - ORIGINAL WELLBORE - PROPOS	600.0	598.8	30.2	27.8	12.429	ES

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 WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
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
SE SW SEC. 21 T4N R67W 6th P.M.						
WALTERS 21P-304 - ORIGINAL WELLBORE - PROPOS	11,688.2	11,781.3	414.9	164.5	1.657	SF
WALTERS 21P-314 - ORIGINAL WELLBORE - PROPOS	300.0	298.0	59.7	58.7	54.866	CC, ES
WALTERS 21P-314 - ORIGINAL WELLBORE - PROPOS	11,688.2	11,796.9	922.1	665.9	3.600	SF
WALTERS 21P-434 - ORIGINAL WELLBORE - PROPOS	600.0	599.0	14.9	12.5	6.122	CC, ES
WALTERS 21P-434 - ORIGINAL WELLBORE - PROPOS	11,688.2	11,884.4	313.9	139.7	1.801	SF
WALTERS 21Q-214 - ORIGINAL WELLBORE - PROPO	400.0	400.0	30.2	28.7	19.597	CC, ES
WALTERS 21Q-214 - ORIGINAL WELLBORE - PROPO	11,688.2	11,711.5	400.0	141.2	1.546	SF
WALTERS 21Q-304 - ORIGINAL WELLBORE - PROPO	300.0	300.0	45.2	44.1	41.305	CC, ES
WALTERS 21Q-304 - ORIGINAL WELLBORE - PROPO	11,688.2	11,828.8	609.7	355.1	2.395	SF
WALTERS 21Q-314 - ORIGINAL WELLBORE - PROPO	500.0	500.0	14.9	12.9	7.496	CC
WALTERS 21Q-314 - ORIGINAL WELLBORE - PROPO	11,688.2	11,800.2	227.3	-2.7	0.988	Level 1, ES, SF

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 20XD - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 usft

Survey Program: 152-MWD

Offset Well Error: 0.0 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
0.0	0.0	1.5	1.5	0.0	0.0	-49.16	490.0	-566.8	749.3				
100.0	100.0	101.0	101.0	0.1	0.1	-49.23	489.4	-567.4	749.3	749.1	0.18	4,173.677	
200.0	200.0	193.7	193.7	0.3	0.2	-49.40	487.8	-569.1	749.6	749.1	0.53	1,408.271	
300.0	300.0	275.2	275.1	0.5	0.4	-49.59	487.0	-572.1	751.7	750.8	0.94	802.986	
400.0	400.0	353.2	352.9	0.8	0.6	-49.78	487.7	-576.6	756.8	755.4	1.34	563.935	
500.0	500.0	435.1	434.6	1.0	0.8	-49.96	489.9	-582.9	764.4	762.6	1.78	430.582	
600.0	600.0	518.0	517.0	1.2	1.0	-50.18	493.0	-591.3	774.4	772.2	2.23	346.774	
700.0	700.0	607.8	606.1	1.4	1.3	-161.51	495.6	-602.8	787.8	785.2	2.66	295.850	
800.0	799.8	707.6	704.7	1.6	1.6	-162.16	496.4	-617.6	804.9	801.7	3.13	257.517	
900.0	899.5	811.2	807.1	1.9	2.0	-162.94	496.2	-633.3	824.9	821.3	3.60	229.073	
1,000.0	998.7	914.0	908.7	2.1	2.3	-163.86	493.5	-648.8	846.9	842.8	4.09	207.091	
1,100.0	1,097.5	984.0	977.6	2.4	2.6	-164.55	491.2	-661.2	874.1	869.6	4.51	193.604	
1,200.0	1,195.6	1,064.1	1,055.8	2.7	2.9	-165.47	488.0	-677.7	906.8	901.8	5.01	181.040	
1,200.1	1,195.8	1,064.2	1,055.9	2.7	2.9	-165.47	488.0	-677.7	906.9	901.9	5.01	181.024	
1,300.0	1,293.4	1,132.5	1,122.4	3.1	3.2	-166.45	485.1	-693.4	943.3	937.8	5.49	171.898	
1,400.0	1,391.3	1,196.7	1,184.4	3.5	3.6	-167.33	483.1	-709.6	982.5	976.5	5.96	164.811	
1,500.0	1,489.1	1,263.0	1,248.0	4.0	3.9	-168.24	481.2	-728.4	1,024.6	1,018.1	6.45	158.777	
1,600.0	1,586.9	1,326.7	1,308.6	4.4	4.3	-169.11	479.6	-748.0	1,069.0	1,062.1	6.95	153.827	
1,700.0	1,684.7	1,403.2	1,380.9	4.8	4.8	-170.14	477.4	-772.8	1,115.1	1,107.6	7.50	148.755	
1,800.0	1,782.5	1,477.5	1,450.9	5.3	5.3	-171.14	474.4	-797.8	1,162.1	1,154.0	8.04	144.573	
1,900.0	1,880.3	1,543.0	1,512.0	5.7	5.8	-172.01	471.6	-821.0	1,210.8	1,202.2	8.55	141.578	
2,000.0	1,978.1	1,597.8	1,562.7	6.1	6.2	-172.71	469.3	-841.5	1,261.5	1,252.5	9.04	139.520	
2,100.0	2,075.9	1,660.4	1,620.2	6.6	6.7	-173.51	466.8	-866.3	1,314.3	1,304.8	9.56	137.470	
2,200.0	2,173.8	1,745.4	1,697.9	7.0	7.4	-174.54	463.1	-900.5	1,367.9	1,357.8	10.16	134.613	
2,300.0	2,271.6	1,850.1	1,793.9	7.5	8.2	-175.74	457.5	-941.9	1,420.9	1,410.1	10.79	131.655	
2,400.0	2,369.4	1,967.2	1,902.2	8.0	9.0	-176.90	451.6	-986.2	1,473.0	1,461.5	11.44	128.783	
2,500.0	2,467.2	2,051.5	1,980.6	8.4	9.6	-177.71	446.0	-1,016.8	1,523.3	1,511.3	11.98	127.115	
2,600.0	2,565.0	2,110.8	2,035.5	8.9	10.0	-178.21	443.2	-1,038.8	1,575.2	1,562.7	12.45	126.499	
2,700.0	2,662.8	2,266.2	2,180.7	9.3	11.1	-179.31	437.9	-1,094.1	1,626.6	1,613.4	13.20	123.191	
2,800.0	2,760.6	2,342.1	2,252.2	9.8	11.6	-179.79	434.9	-1,119.1	1,675.4	1,661.7	13.70	122.304	
2,900.0	2,858.5	2,404.5	2,310.9	10.2	12.0	179.86	433.3	-1,140.4	1,725.7	1,711.6	14.16	121.844	
3,000.0	2,956.3	2,477.6	2,379.3	10.7	12.5	179.44	431.3	-1,166.0	1,776.9	1,762.3	14.67	121.110	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
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Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 20XD - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 152-MWD — **Offset Well Error:** 0.0 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
3,100.0	3,054.1	2,568.0	2,463.7	11.2	13.2	178.90	427.4	-1,198.2	1,828.3	1,813.0	15.25	119.911	
3,200.0	3,151.9	2,646.9	2,537.2	11.6	13.7	178.44	423.6	-1,226.5	1,879.8	1,864.0	15.78	119.151	
3,300.0	3,249.7	2,723.8	2,608.9	12.1	14.3	178.04	420.6	-1,254.1	1,931.7	1,915.4	16.29	118.583	
3,400.0	3,347.5	2,848.4	2,725.6	12.5	15.1	177.49	417.3	-1,297.9	1,983.4	1,966.5	16.94	117.103	
3,500.0	3,445.3	2,941.0	2,812.8	13.0	15.7	177.10	414.3	-1,328.8	2,033.4	2,015.9	17.48	116.329	
3,600.0	3,543.2	2,997.0	2,865.4	13.5	16.1	176.87	412.5	-1,347.7	2,084.0	2,066.1	17.92	116.277	
3,700.0	3,641.0	3,047.3	2,912.4	13.9	16.5	176.69	411.7	-1,365.6	2,136.3	2,118.0	18.35	116.416	
3,800.0	3,738.8	3,116.7	2,977.1	14.4	17.0	176.45	410.8	-1,390.9	2,189.6	2,170.7	18.84	116.200	
3,900.0	3,836.6	3,250.6	3,102.2	14.8	18.0	175.95	406.4	-1,438.6	2,241.4	2,221.9	19.54	114.719	
4,000.0	3,934.4	3,313.0	3,160.2	15.3	18.4	175.71	404.0	-1,461.2	2,293.9	2,273.9	20.01	114.634	
4,100.0	4,032.2	3,420.2	3,260.0	15.8	19.2	175.31	399.7	-1,500.0	2,346.6	2,326.0	20.63	113.759	
4,159.1	4,090.0	3,482.8	3,318.6	16.0	19.6	175.09	396.8	-1,522.1	2,377.2	2,356.2	20.98	113.283	
4,200.0	4,130.1	3,535.9	3,368.3	16.2	20.0	174.95	394.3	-1,540.5	2,397.8	2,376.5	21.32	112.480	
4,300.0	4,228.5	3,682.4	3,506.4	16.5	21.0	174.56	387.1	-1,588.9	2,444.8	2,422.7	22.15	110.375	
4,400.0	4,327.5	3,786.2	3,604.6	16.8	21.6	174.31	380.9	-1,621.9	2,487.4	2,464.6	22.83	108.974	
4,500.0	4,426.9	3,872.0	3,685.8	17.0	22.2	174.12	375.8	-1,649.1	2,526.7	2,503.2	23.42	107.906	
4,600.0	4,526.6	3,913.3	3,724.8	17.2	22.5	174.06	373.1	-1,662.6	2,563.8	2,540.0	23.84	107.549	
4,700.0	4,626.6	3,965.0	3,773.0	17.3	22.8	173.96	369.8	-1,680.8	2,599.8	2,575.5	24.26	107.152	
4,759.3	4,685.8	3,994.0	3,800.0	17.4	23.1	-75.12	367.9	-1,691.3	2,620.3	2,581.1	39.17	66.897	
4,800.0	4,726.5	4,035.6	3,838.6	17.5	23.4	-75.28	365.0	-1,706.4	2,634.1	2,594.6	39.52	66.655	
4,900.0	4,826.5	4,099.7	3,898.1	17.6	23.9	-75.52	360.2	-1,730.0	2,668.2	2,628.1	40.12	66.515	
5,000.0	4,926.5	4,258.8	4,045.5	17.7	25.0	-76.06	350.4	-1,788.9	2,703.7	2,662.3	41.39	65.315	
5,100.0	5,026.5	4,384.0	4,163.7	17.8	25.9	-76.36	346.5	-1,829.9	2,734.7	2,692.4	42.34	64.595	
5,200.0	5,126.5	4,431.0	4,208.0	18.0	26.2	-76.46	345.6	-1,845.7	2,767.1	2,724.3	42.77	64.692	
5,300.0	5,226.5	4,504.8	4,277.1	18.1	26.7	-76.64	343.4	-1,871.4	2,800.6	2,757.1	43.43	64.488	
5,400.0	5,326.5	4,641.2	4,404.8	18.2	27.7	-76.99	337.9	-1,919.1	2,834.0	2,789.4	44.51	63.672	
5,500.0	5,426.5	4,758.2	4,514.8	18.3	28.5	-77.25	334.3	-1,958.6	2,866.5	2,821.0	45.42	63.110	
5,600.0	5,526.5	4,842.6	4,594.5	18.5	29.0	-77.44	331.5	-1,986.4	2,898.1	2,852.0	46.12	62.841	
5,700.0	5,626.5	4,896.0	4,644.6	18.6	29.4	-77.55	329.9	-2,004.7	2,931.0	2,884.4	46.62	62.874	
5,800.0	5,726.5	4,989.0	4,731.8	18.8	30.0	-77.75	327.2	-2,037.0	2,964.5	2,917.1	47.40	62.537	
5,900.0	5,826.5	5,042.4	4,781.7	18.9	30.4	-77.87	325.5	-2,055.9	2,998.7	2,950.8	47.93	62.561	
6,000.0	5,926.5	5,969.1	5,682.1	19.0	34.6	-79.29	292.6	-2,256.6	3,010.4	2,958.3	52.17	57.703	
6,100.0	6,026.5	6,297.3	6,009.8	19.2	35.1	-79.42	288.4	-2,273.0	3,015.8	2,963.0	52.82	57.092	
6,200.0	6,126.5	6,397.7	6,110.2	19.3	35.1	-79.43	288.1	-2,273.7	3,016.4	2,963.4	53.06	56.852	
6,300.0	6,226.5	6,498.3	6,210.8	19.5	35.2	-79.44	287.9	-2,274.3	3,017.0	2,963.7	53.29	56.611	
6,400.0	6,326.5	6,600.0	6,312.5	19.6	35.3	-79.44	287.5	-2,275.0	3,017.6	2,964.0	53.53	56.368	
6,433.3	6,359.8	6,633.9	6,346.4	19.7	35.4	-79.45	287.4	-2,275.2	3,017.7	2,964.1	53.61	56.287	
6,450.0	6,376.5	6,650.9	6,363.4	19.7	35.4	10.55	287.4	-2,275.3	3,017.6	2,983.2	34.44	87.621	
6,500.0	6,426.5	6,702.7	6,415.2	19.7	35.4	10.60	287.1	-2,275.5	3,015.0	2,980.3	34.67	86.974	
6,550.0	6,476.0	6,754.7	6,467.2	19.7	35.5	10.71	286.9	-2,275.8	3,008.9	2,974.1	34.77	86.540	
6,600.0	6,525.0	6,806.1	6,518.5	19.7	35.5	10.88	286.7	-2,276.0	2,999.4	2,964.6	34.75	86.316	
6,650.0	6,573.3	6,856.4	6,568.9	19.7	35.5	11.13	286.5	-2,276.1	2,986.5	2,951.9	34.61	86.296	
6,700.0	6,620.4	6,902.8	6,615.3	19.6	35.6	11.46	286.3	-2,276.3	2,970.3	2,936.0	34.35	86.480	
6,750.0	6,666.3	6,948.0	6,660.4	19.6	35.6	11.87	286.1	-2,276.4	2,951.0	2,917.0	33.98	86.845	
6,800.0	6,710.7	6,991.7	6,704.2	19.5	35.7	12.38	285.9	-2,276.6	2,928.5	2,895.0	33.52	87.365	
6,850.0	6,753.4	7,033.7	6,746.2	19.4	35.7	13.00	285.8	-2,276.7	2,903.1	2,870.1	32.99	88.008	
6,900.0	6,794.2	7,074.9	6,787.4	19.3	35.7	13.77	285.6	-2,276.9	2,874.9	2,842.5	32.41	88.710	
6,950.0	6,832.9	7,114.2	6,826.7	19.3	35.8	14.69	285.4	-2,277.0	2,843.9	2,812.1	31.81	89.390	
7,000.0	6,869.2	7,151.1	6,863.6	19.2	35.8	15.82	285.3	-2,277.2	2,810.3	2,779.1	31.25	89.918	
7,050.0	6,903.1	7,185.6	6,898.0	19.2	35.8	17.21	285.1	-2,277.3	2,774.4	2,743.6	30.79	90.098	
7,100.0	6,934.3	7,217.3	6,929.8	19.2	35.9	18.92	284.9	-2,277.4	2,736.2	2,705.7	30.52	89.653	
7,150.0	6,962.8	7,247.5	6,960.0	19.3	35.9	21.06	284.7	-2,277.5	2,696.0	2,665.4	30.57	88.201	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 20XD - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 152-MWD — **Offset Well Error:** 0.0 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
7,200.0	6,988.3	7,275.0	6,987.4	19.5	35.9	23.78	284.5	-2,277.6	2,653.9	2,622.8	31.10	85.340	
7,250.0	7,010.7	7,299.1	7,011.6	19.7	35.9	27.29	284.4	-2,277.6	2,610.2	2,577.9	32.33	80.739	
7,300.0	7,029.9	7,319.8	7,032.3	20.0	36.0	31.88	284.3	-2,277.6	2,565.2	2,530.6	34.53	74.297	
7,350.0	7,045.9	7,337.0	7,049.4	20.4	36.0	38.01	284.1	-2,277.6	2,518.9	2,480.9	37.97	66.339	
7,400.0	7,058.6	7,350.5	7,063.0	20.8	36.0	46.27	284.1	-2,277.7	2,471.7	2,428.9	42.85	57.689	
7,450.0	7,067.8	7,360.4	7,072.9	21.4	36.0	57.34	284.0	-2,277.7	2,423.8	2,374.9	48.90	49.566	
7,500.0	7,073.6	7,366.5	7,079.0	22.0	36.0	71.48	283.9	-2,277.7	2,375.5	2,320.7	54.85	43.310	
7,550.0	7,076.0	7,369.0	7,081.5	22.7	36.0	87.70	283.9	-2,277.7	2,326.9	2,268.6	58.34	39.886	
7,561.7	7,076.0	7,369.1	7,081.5	22.9	36.0	91.56	283.9	-2,277.7	2,315.5	2,257.0	58.59	39.521	
7,600.0	7,075.8	7,368.8	7,081.3	23.4	36.0	91.54	283.9	-2,277.7	2,278.4	2,219.2	59.18	38.499	
7,700.0	7,075.3	7,368.3	7,080.8	25.1	36.0	91.48	283.9	-2,277.7	2,181.5	2,120.6	60.88	35.835	
7,800.0	7,074.8	7,367.8	7,080.3	27.0	36.0	91.43	283.9	-2,277.7	2,084.8	2,022.1	62.76	33.221	
7,900.0	7,074.4	7,367.3	7,079.8	29.0	36.0	91.37	283.9	-2,277.7	1,988.6	1,923.8	64.79	30.694	
8,000.0	7,073.9	7,366.7	7,079.2	31.1	36.0	91.32	283.9	-2,277.7	1,892.6	1,825.7	66.94	28.274	
8,100.0	7,073.4	7,366.2	7,078.7	33.4	36.0	91.26	283.9	-2,277.7	1,797.2	1,728.0	69.19	25.975	
8,200.0	7,072.9	7,365.7	7,078.2	35.7	36.0	91.21	284.0	-2,277.7	1,702.2	1,630.7	71.52	23.802	
8,300.0	7,072.4	7,365.2	7,077.7	38.1	36.0	91.16	284.0	-2,277.7	1,607.9	1,534.0	73.91	21.755	
8,400.0	7,071.9	7,364.7	7,077.2	40.6	36.0	91.10	284.0	-2,277.7	1,514.3	1,438.0	76.36	19.832	
8,500.0	7,071.5	7,364.2	7,076.7	43.1	36.0	91.05	284.0	-2,277.7	1,421.6	1,342.7	78.85	18.029	
8,600.0	7,071.0	7,363.7	7,076.2	45.6	36.0	91.00	284.0	-2,277.7	1,329.9	1,248.5	81.38	16.343	
8,700.0	7,070.5	7,363.2	7,075.7	48.1	36.0	90.94	284.0	-2,277.7	1,239.5	1,155.6	83.94	14.768	
8,800.0	7,070.0	7,362.7	7,075.2	50.7	36.0	90.89	284.0	-2,277.7	1,150.7	1,064.2	86.52	13.300	
8,900.0	7,069.5	7,362.2	7,074.7	53.3	36.0	90.84	284.0	-2,277.7	1,063.9	974.8	89.13	11.937	
9,000.0	7,069.0	7,361.7	7,074.2	56.0	36.0	90.79	284.0	-2,277.7	979.6	887.9	91.76	10.677	
9,100.0	7,068.6	7,361.2	7,073.7	58.6	36.0	90.74	284.0	-2,277.7	898.6	804.2	94.40	9.519	
9,200.0	7,068.1	7,360.7	7,073.2	61.3	36.0	90.69	284.0	-2,277.7	821.7	724.7	97.06	8.466	
9,300.0	7,067.6	7,360.2	7,072.7	63.9	36.0	90.64	284.0	-2,277.7	750.3	650.6	99.73	7.524	
9,400.0	7,067.1	7,359.7	7,072.2	66.6	36.0	90.59	284.0	-2,277.7	686.1	583.7	102.41	6.699	
9,500.0	7,066.6	7,359.3	7,071.7	69.3	36.0	90.53	284.0	-2,277.7	631.3	526.2	105.11	6.006	
9,600.0	7,066.1	7,358.8	7,071.3	72.0	36.0	90.48	284.0	-2,277.7	588.4	480.6	107.81	5.458	
9,700.0	7,065.6	7,358.3	7,070.8	74.7	36.0	90.44	284.0	-2,277.7	560.4	449.9	110.52	5.070	
9,800.0	7,065.2	7,357.8	7,070.3	77.5	36.0	90.39	284.0	-2,277.7	549.3	436.1	113.23	4.851	
9,811.2	7,065.1	7,357.8	7,070.3	77.8	36.0	90.38	284.0	-2,277.7	549.2	435.7	113.54	4.837	CC, ES
9,900.0	7,064.7	7,357.4	7,069.8	80.2	36.0	90.34	284.0	-2,277.7	556.3	440.4	115.95	4.798	SF
10,000.0	7,064.2	7,356.9	7,069.4	82.9	36.0	90.29	284.0	-2,277.7	580.8	462.1	118.68	4.893	
10,100.0	7,063.7	7,356.4	7,068.9	85.6	36.0	90.24	284.0	-2,277.7	620.5	499.1	121.42	5.111	
10,200.0	7,063.2	7,356.0	7,068.4	88.4	36.0	90.19	284.0	-2,277.7	672.9	548.7	124.15	5.420	
10,300.0	7,062.7	7,355.5	7,068.0	91.1	36.0	90.14	284.0	-2,277.7	735.2	608.3	126.90	5.794	
10,400.0	7,062.3	7,355.0	7,067.5	93.9	36.0	90.09	284.0	-2,277.7	805.2	675.5	129.64	6.211	
10,500.0	7,061.8	7,354.6	7,067.1	96.6	36.0	90.05	284.0	-2,277.7	880.9	748.5	132.39	6.654	
10,600.0	7,061.3	7,354.1	7,066.6	99.4	36.0	90.00	284.0	-2,277.7	961.1	826.0	135.14	7.112	
10,700.0	7,060.8	7,353.7	7,066.1	102.1	36.0	89.95	284.0	-2,277.7	1,044.8	906.9	137.90	7.576	
10,800.0	7,060.3	7,353.2	7,065.7	104.9	36.0	89.90	284.0	-2,277.7	1,131.1	990.4	140.66	8.041	
10,900.0	7,059.8	7,352.8	7,065.2	107.6	36.0	89.86	284.0	-2,277.7	1,219.4	1,076.0	143.42	8.503	
11,000.0	7,059.4	7,352.3	7,064.8	110.4	36.0	89.81	284.0	-2,277.7	1,309.5	1,163.3	146.18	8.958	
11,100.0	7,058.9	7,351.9	7,064.4	113.2	36.0	89.76	284.0	-2,277.7	1,400.9	1,252.0	148.95	9.405	
11,200.0	7,058.4	7,351.4	7,063.9	115.9	36.0	89.72	284.0	-2,277.7	1,493.4	1,341.7	151.71	9.844	
11,300.0	7,057.9	7,351.0	7,063.5	118.7	36.0	89.67	284.0	-2,277.7	1,586.8	1,432.3	154.48	10.272	
11,400.0	7,057.4	7,350.6	7,063.0	121.5	36.0	89.63	284.1	-2,277.7	1,681.0	1,523.8	157.25	10.690	
11,500.0	7,056.9	7,350.1	7,062.6	124.3	36.0	89.58	284.1	-2,277.7	1,775.8	1,615.8	160.03	11.097	
11,600.0	7,056.5	7,349.7	7,062.2	127.0	36.0	89.54	284.1	-2,277.7	1,871.2	1,708.4	162.80	11.494	
11,688.2	7,056.0	7,349.3	7,061.8	129.5	36.0	89.50	284.1	-2,277.7	1,955.6	1,790.4	165.25	11.835	

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 WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 20YD - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 156-MWD — **Offset Well Error:** 0.0 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
0.0	0.0	1.5	1.5	0.0	0.0	-53.79	429.9	-587.2	727.7				
100.0	100.0	104.9	104.9	0.1	0.1	-53.80	429.7	-587.0	727.5	727.3	0.17	4,167.048	
195.2	195.2	196.7	196.7	0.3	0.2	-53.82	429.2	-586.8	727.1	726.6	0.51	1,421.626	
200.0	200.0	201.0	201.0	0.3	0.2	-53.82	429.2	-586.9	727.1	726.5	0.53	1,368.997	
300.0	300.0	285.7	285.7	0.5	0.4	-53.94	428.4	-588.4	728.0	727.1	0.94	777.746	
400.0	400.0	367.8	367.6	0.8	0.6	-54.21	427.4	-592.7	731.5	730.2	1.35	543.119	
500.0	500.0	455.6	455.1	1.0	0.8	-54.64	425.7	-600.0	737.1	735.3	1.79	411.530	
600.0	600.0	550.9	549.8	1.2	1.1	-55.38	421.6	-610.6	743.8	741.5	2.28	325.794	
700.0	700.0	653.1	650.8	1.4	1.4	-167.37	414.6	-623.9	752.5	749.7	2.81	267.661	
800.0	799.8	756.2	752.7	1.6	1.8	-168.54	405.5	-637.3	763.7	760.4	3.33	229.027	
900.0	899.5	831.9	826.8	1.9	2.1	-169.64	396.6	-649.7	780.2	776.4	3.81	204.513	
1,000.0	998.7	925.0	916.8	2.1	2.5	-171.32	382.2	-668.5	802.0	797.5	4.44	180.566	
1,100.0	1,097.5	1,014.0	1,002.0	2.4	3.0	-173.12	365.8	-688.4	828.4	823.4	5.09	162.763	
1,200.0	1,195.6	1,091.8	1,075.9	2.7	3.5	-174.76	350.2	-707.2	860.1	854.3	5.71	150.590	
1,200.1	1,195.8	1,091.9	1,076.0	2.7	3.5	-174.76	350.2	-707.2	860.1	854.4	5.71	150.576	
1,300.0	1,293.4	1,174.0	1,153.3	3.1	4.0	-176.58	332.7	-728.3	895.2	888.8	6.40	139.981	
1,400.0	1,391.3	1,259.7	1,233.4	3.5	4.6	-178.47	312.9	-751.4	931.9	924.8	7.12	130.925	
1,500.0	1,489.1	1,341.8	1,309.7	4.0	5.2	179.76	293.0	-774.2	969.7	961.9	7.84	123.656	
1,600.0	1,586.9	1,419.3	1,381.4	4.4	5.8	178.14	273.4	-796.5	1,009.3	1,000.8	8.53	118.379	
1,700.0	1,684.7	1,497.3	1,453.3	4.8	6.4	176.62	254.1	-819.6	1,050.5	1,041.3	9.20	114.203	
1,800.0	1,782.5	1,573.0	1,522.5	5.3	6.9	175.13	233.8	-842.8	1,093.0	1,083.2	9.87	110.777	
1,900.0	1,880.3	1,650.3	1,592.3	5.7	7.6	173.61	211.6	-867.3	1,137.0	1,126.4	10.61	107.182	
2,000.0	1,978.1	1,733.3	1,667.1	6.1	8.2	172.08	187.8	-894.3	1,182.5	1,171.1	11.34	104.312	
2,100.0	2,075.9	1,811.0	1,737.3	6.6	8.8	170.77	166.1	-919.5	1,228.7	1,216.7	12.02	102.259	
2,200.0	2,173.8	1,895.8	1,813.9	7.0	9.5	169.45	143.0	-947.4	1,276.0	1,263.3	12.72	100.307	
2,300.0	2,271.6	1,991.7	1,901.5	7.5	10.2	168.15	118.4	-978.2	1,323.1	1,309.7	13.46	98.320	
2,400.0	2,369.4	2,071.1	1,973.9	8.0	10.8	167.15	98.0	-1,003.3	1,370.4	1,356.3	14.12	97.076	
2,500.0	2,467.2	2,138.9	2,035.2	8.4	11.4	166.27	79.3	-1,025.6	1,419.0	1,404.2	14.75	96.218	
2,600.0	2,565.0	2,237.9	2,124.4	8.9	12.2	165.04	51.4	-1,058.2	1,468.0	1,452.5	15.54	94.454	
2,700.0	2,662.8	2,339.8	2,216.8	9.3	12.9	163.88	22.9	-1,090.3	1,516.1	1,499.8	16.31	92.951	
2,800.0	2,760.6	2,411.0	2,281.6	9.8	13.5	163.16	3.9	-1,112.9	1,564.8	1,547.8	16.93	92.401	
2,900.0	2,858.5	2,488.0	2,351.6	10.2	14.1	162.43	-16.2	-1,137.8	1,614.2	1,596.6	17.60	91.703	
3,000.0	2,956.3	2,592.6	2,446.7	10.7	14.9	161.48	-44.2	-1,171.3	1,663.7	1,645.3	18.41	90.392	
3,100.0	3,054.1	2,689.0	2,534.2	11.2	15.7	160.61	-71.3	-1,201.2	1,712.5	1,693.3	19.17	89.338	
3,200.0	3,151.9	2,767.1	2,605.0	11.6	16.3	159.92	-94.0	-1,225.3	1,761.4	1,741.6	19.85	88.719	
3,300.0	3,249.7	2,855.9	2,685.4	12.1	17.0	159.17	-119.8	-1,252.8	1,810.7	1,790.1	20.59	87.946	
3,400.0	3,347.5	2,960.7	2,780.5	12.5	17.9	158.33	-150.4	-1,284.6	1,859.7	1,838.3	21.40	86.916	
3,500.0	3,445.3	3,024.0	2,837.9	13.0	18.4	157.85	-168.9	-1,303.7	1,908.7	1,886.7	22.01	86.717	
3,600.0	3,543.2	3,083.7	2,891.8	13.5	18.8	157.41	-186.3	-1,322.5	1,959.1	1,936.4	22.61	86.661	
3,700.0	3,641.0	3,156.0	2,957.2	13.9	19.4	156.95	-206.0	-1,346.3	2,010.6	1,987.3	23.26	86.442	
3,800.0	3,738.8	3,310.2	3,097.8	14.4	20.6	156.06	-246.8	-1,394.5	2,060.7	2,036.5	24.25	84.977	
3,900.0	3,836.6	3,375.5	3,157.7	14.8	21.1	155.70	-264.1	-1,413.9	2,109.8	2,084.9	24.85	84.896	
4,000.0	3,934.4	3,435.0	3,212.0	15.3	21.6	155.40	-279.5	-1,432.9	2,160.5	2,135.0	25.43	84.957	
4,100.0	4,032.2	3,528.0	3,296.9	15.8	22.3	154.98	-302.8	-1,462.7	2,211.5	2,185.4	26.15	84.579	
4,159.1	4,090.0	3,574.3	3,339.4	16.0	22.7	154.78	-314.2	-1,477.2	2,241.4	2,214.9	26.54	84.469	
4,200.0	4,130.1	3,599.7	3,362.6	16.2	22.9	154.87	-320.6	-1,485.3	2,262.1	2,235.2	26.86	84.221	
4,300.0	4,228.5	3,683.7	3,439.3	16.5	23.5	154.96	-341.5	-1,512.5	2,311.1	2,283.4	27.68	83.495	
4,400.0	4,327.5	3,753.0	3,502.6	16.8	24.1	155.09	-358.2	-1,535.0	2,357.4	2,329.0	28.39	83.029	
4,500.0	4,426.9	3,823.2	3,566.4	17.0	24.6	155.17	-375.4	-1,558.7	2,402.2	2,373.1	29.07	82.646	
4,600.0	4,526.6	3,936.7	3,670.0	17.2	25.6	154.96	-403.8	-1,595.5	2,442.8	2,412.9	29.89	81.727	
4,700.0	4,626.6	3,993.0	3,720.9	17.3	26.0	155.00	-418.6	-1,614.3	2,482.1	2,451.7	30.42	81.599	
4,759.3	4,685.8	4,024.5	3,749.2	17.4	26.3	-94.00	-427.2	-1,625.2	2,504.6	2,465.8	38.81	64.544	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 20YD - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 156-MWD — **Offset Well Error:** 0.0 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
4,800.0	4,726.5	4,057.9	3,779.2	17.5	26.6	-94.21	-436.5	-1,636.7	2,519.9	2,480.8	39.13	64.398	
4,900.0	4,826.5	4,117.7	3,832.6	17.6	27.1	-94.58	-453.5	-1,657.4	2,558.1	2,518.3	39.76	64.333	
5,000.0	4,926.5	4,179.0	3,886.9	17.7	27.7	-94.97	-471.3	-1,679.7	2,597.9	2,557.5	40.42	64.270	
5,100.0	5,026.5	4,266.9	3,964.6	17.8	28.5	-95.49	-496.3	-1,712.2	2,638.5	2,597.2	41.31	63.864	
5,200.0	5,126.5	4,446.2	4,125.8	18.0	30.0	-96.46	-544.5	-1,774.2	2,676.2	2,633.3	42.89	62.395	
5,300.0	5,226.5	4,504.1	4,178.0	18.1	30.5	-96.76	-559.8	-1,793.9	2,714.2	2,670.7	43.50	62.392	
5,400.0	5,326.5	4,652.7	4,311.5	18.2	31.7	-97.52	-600.3	-1,845.3	2,753.3	2,708.5	44.87	61.362	
5,500.0	5,426.5	4,731.2	4,382.5	18.3	32.4	-97.92	-621.9	-1,871.0	2,790.5	2,744.9	45.64	61.145	
5,600.0	5,526.5	4,807.6	4,451.2	18.5	33.0	-98.32	-643.7	-1,896.2	2,828.3	2,781.9	46.41	60.945	
5,700.0	5,626.5	4,958.9	4,588.3	18.6	34.3	-99.06	-685.5	-1,944.7	2,864.8	2,817.1	47.75	59.994	
5,800.0	5,726.5	5,018.0	4,641.9	18.8	34.7	-99.32	-701.0	-1,963.9	2,901.9	2,853.5	48.36	60.003	
5,900.0	5,826.5	5,308.5	4,907.6	18.9	37.0	-100.62	-779.4	-2,051.3	2,938.5	2,887.8	50.69	57.968	
6,000.0	5,926.5	5,548.9	5,135.0	19.0	38.4	-101.35	-828.0	-2,112.0	2,967.3	2,915.0	52.31	56.722	
6,100.0	6,026.5	6,251.4	5,823.6	19.2	41.1	-102.46	-907.4	-2,214.7	2,983.3	2,928.2	55.11	54.134	
6,200.0	6,126.5	6,447.4	6,019.3	19.3	41.4	-102.55	-914.0	-2,223.3	2,988.2	2,932.6	55.58	53.767	
6,300.0	6,226.5	6,577.8	6,149.6	19.5	41.5	-102.59	-917.0	-2,226.7	2,991.1	2,935.2	55.90	53.512	
6,400.0	6,326.5	6,690.5	6,262.3	19.6	41.6	-102.62	-918.9	-2,229.1	2,993.5	2,937.4	56.18	53.281	
6,433.3	6,359.8	6,733.2	6,305.0	19.7	41.7	-102.62	-919.4	-2,229.8	2,994.2	2,937.9	56.28	53.201	
6,450.0	6,376.5	6,755.3	6,327.1	19.7	41.7	-12.62	-919.6	-2,230.2	2,994.3	2,952.6	41.76	71.698	
6,500.0	6,426.5	6,814.2	6,386.0	19.7	41.8	-12.68	-920.2	-2,231.0	2,992.2	2,950.3	41.95	71.328	
6,550.0	6,476.0	6,865.1	6,436.9	19.7	41.8	-12.82	-920.8	-2,231.6	2,986.7	2,944.8	41.92	71.256	
6,600.0	6,525.0	6,915.4	6,487.2	19.7	41.9	-13.03	-921.5	-2,232.1	2,977.8	2,936.1	41.67	71.460	
6,650.0	6,573.3	6,965.0	6,536.8	19.7	41.9	-13.33	-922.1	-2,232.6	2,965.5	2,924.3	41.22	71.936	
6,700.0	6,620.4	7,016.8	6,588.6	19.6	42.0	-13.73	-922.7	-2,233.1	2,949.9	2,909.3	40.59	72.677	
6,750.0	6,666.3	7,068.3	6,640.1	19.6	42.0	-14.24	-923.2	-2,233.6	2,931.1	2,891.3	39.78	73.685	
6,800.0	6,710.7	7,109.0	6,680.7	19.5	42.0	-14.84	-923.6	-2,233.9	2,909.2	2,870.4	38.80	74.971	
6,850.0	6,753.4	7,147.9	6,719.6	19.4	42.1	-15.56	-924.0	-2,234.3	2,884.4	2,846.7	37.70	76.507	
6,900.0	6,794.2	7,191.7	6,763.5	19.3	42.1	-16.47	-924.3	-2,234.7	2,856.7	2,820.2	36.51	78.247	
6,950.0	6,832.9	7,237.4	6,809.2	19.3	42.1	-17.59	-924.6	-2,235.1	2,826.3	2,791.0	35.28	80.113	
7,000.0	6,869.2	7,274.8	6,846.6	19.2	42.2	-18.92	-924.8	-2,235.4	2,793.2	2,759.2	34.07	81.977	
7,050.0	6,903.1	7,305.8	6,877.6	19.2	42.2	-20.50	-925.0	-2,235.6	2,757.8	2,724.9	32.99	83.594	
7,100.0	6,934.3	7,334.5	6,906.3	19.2	42.2	-22.43	-925.2	-2,235.9	2,720.3	2,688.1	32.17	84.558	
7,150.0	6,962.8	7,364.1	6,935.9	19.3	42.3	-24.84	-925.4	-2,236.2	2,680.7	2,648.9	31.81	84.270	
7,200.0	6,988.3	7,395.0	6,966.8	19.5	42.3	-27.93	-925.6	-2,236.5	2,639.3	2,607.1	32.17	82.034	
7,250.0	7,010.7	7,422.1	6,993.8	19.7	42.3	-31.83	-925.8	-2,236.6	2,596.3	2,562.8	33.52	77.462	
7,300.0	7,029.9	7,444.8	7,016.6	20.0	42.3	-36.79	-925.9	-2,236.8	2,551.8	2,515.7	36.08	70.736	
7,350.0	7,045.9	7,460.6	7,032.4	20.4	42.3	-43.04	-926.0	-2,236.8	2,506.2	2,466.3	39.90	62.811	
7,400.0	7,058.6	7,473.2	7,045.0	20.8	42.4	-51.06	-926.0	-2,236.9	2,459.6	2,414.8	44.89	54.791	
7,450.0	7,067.8	7,482.5	7,054.3	21.4	42.4	-61.13	-926.1	-2,236.9	2,412.4	2,362.0	50.43	47.834	
7,500.0	7,073.6	7,488.5	7,060.2	22.0	42.4	-73.21	-926.1	-2,237.0	2,364.7	2,309.5	55.25	42.798	
7,550.0	7,076.0	7,491.0	7,062.8	22.7	42.4	-86.51	-926.1	-2,237.0	2,316.9	2,259.1	57.74	40.123	
7,561.7	7,076.0	7,491.1	7,062.9	22.9	42.4	-89.66	-926.1	-2,237.0	2,305.6	2,247.7	57.87	39.843	
7,600.0	7,075.8	7,491.2	7,062.9	23.4	42.4	-89.66	-926.1	-2,237.0	2,269.0	2,210.5	58.46	38.814	
7,700.0	7,075.3	7,491.3	7,063.0	25.1	42.4	-89.67	-926.1	-2,237.0	2,173.5	2,113.4	60.15	36.134	
7,800.0	7,074.8	7,491.4	7,063.1	27.0	42.4	-89.68	-926.1	-2,237.0	2,078.5	2,016.4	62.03	33.506	
7,900.0	7,074.4	7,491.5	7,063.2	29.0	42.4	-89.69	-926.1	-2,237.0	1,983.9	1,919.8	64.06	30.968	
8,000.0	7,073.9	7,491.6	7,063.3	31.1	42.4	-89.70	-926.1	-2,237.0	1,889.9	1,823.7	66.22	28.541	
8,100.0	7,073.4	7,491.7	7,063.4	33.4	42.4	-89.71	-926.1	-2,237.0	1,796.6	1,728.1	68.47	26.240	
8,200.0	7,072.9	7,491.8	7,063.5	35.7	42.4	-89.71	-926.1	-2,237.0	1,704.0	1,633.2	70.80	24.069	
8,300.0	7,072.4	7,491.9	7,063.6	38.1	42.4	-89.72	-926.1	-2,237.0	1,612.3	1,539.1	73.19	22.029	
8,400.0	7,071.9	7,492.0	7,063.7	40.6	42.4	-89.73	-926.1	-2,237.0	1,521.6	1,446.0	75.64	20.118	
8,500.0	7,071.5	7,492.1	7,063.8	43.1	42.4	-89.74	-926.1	-2,237.0	1,432.2	1,354.1	78.13	18.332	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 20YD - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 156-MWD — **Offset Well Error:** 0.0 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
8,600.0	7,071.0	7,492.2	7,063.9	45.6	42.4	-89.75	-926.1	-2,237.0	1,344.3	1,263.6	80.66	16.667	
8,700.0	7,070.5	7,492.3	7,064.0	48.1	42.4	-89.76	-926.1	-2,237.0	1,258.2	1,174.9	83.21	15.119	
8,800.0	7,070.0	7,492.4	7,064.1	50.7	42.4	-89.77	-926.1	-2,237.0	1,174.2	1,088.4	85.80	13.686	
8,900.0	7,069.5	7,492.5	7,064.2	53.3	42.4	-89.78	-926.1	-2,237.0	1,093.0	1,004.6	88.41	12.364	
9,000.0	7,069.0	7,492.6	7,064.3	56.0	42.4	-89.79	-926.1	-2,237.0	1,015.2	924.1	91.03	11.152	
9,100.0	7,068.6	7,492.7	7,064.4	58.6	42.4	-89.79	-926.1	-2,237.0	941.5	847.9	93.68	10.051	
9,200.0	7,068.1	7,492.8	7,064.5	61.3	42.4	-89.80	-926.1	-2,237.0	873.1	776.8	96.34	9.063	
9,300.0	7,067.6	7,492.9	7,064.7	63.9	42.4	-89.81	-926.1	-2,237.0	811.3	712.3	99.01	8.194	
9,400.0	7,067.1	7,493.0	7,064.8	66.6	42.4	-89.82	-926.1	-2,237.0	757.7	656.0	101.69	7.451	
9,500.0	7,066.6	7,493.1	7,064.9	69.3	42.4	-89.83	-926.1	-2,237.0	714.1	609.8	104.38	6.841	
9,600.0	7,066.1	7,493.2	7,065.0	72.0	42.4	-89.84	-926.1	-2,237.0	682.6	575.5	107.09	6.374	
9,700.0	7,065.6	7,493.3	7,065.1	74.7	42.4	-89.85	-926.1	-2,237.0	664.6	554.9	109.80	6.054	
9,770.6	7,065.3	7,493.4	7,065.2	76.7	42.4	-89.86	-926.1	-2,237.0	660.9	549.2	111.71	5.916	CC
9,800.0	7,065.2	7,493.4	7,065.2	77.5	42.4	-89.86	-926.1	-2,237.0	661.5	549.0	112.51	5.880	ES
9,900.0	7,064.7	7,493.5	7,065.3	80.2	42.4	-89.87	-926.1	-2,237.0	673.4	558.2	115.23	5.844	SF
10,000.0	7,064.2	7,493.7	7,065.4	82.9	42.4	-89.88	-926.1	-2,237.0	699.6	581.6	117.96	5.930	
10,100.0	7,063.7	7,493.8	7,065.5	85.6	42.4	-89.89	-926.1	-2,237.0	738.4	617.7	120.70	6.118	
10,200.0	7,063.2	7,493.9	7,065.6	88.4	42.4	-89.90	-926.1	-2,237.0	788.1	664.7	123.43	6.385	
10,300.0	7,062.7	7,494.0	7,065.7	91.1	42.4	-89.91	-926.1	-2,237.0	846.8	720.6	126.18	6.711	
10,400.0	7,062.3	7,494.1	7,065.9	93.9	42.4	-89.92	-926.1	-2,237.0	912.6	783.7	128.92	7.079	
10,500.0	7,061.8	7,494.2	7,066.0	96.6	42.4	-89.93	-926.1	-2,237.0	984.3	852.6	131.67	7.475	
10,600.0	7,061.3	7,494.3	7,066.1	99.4	42.4	-89.94	-926.1	-2,237.0	1,060.5	926.1	134.43	7.889	
10,700.0	7,060.8	7,494.4	7,066.2	102.1	42.4	-89.95	-926.1	-2,237.0	1,140.4	1,003.2	137.18	8.313	
10,800.0	7,060.3	7,494.6	7,066.3	104.9	42.4	-89.96	-926.1	-2,237.0	1,223.3	1,083.3	139.94	8.741	
10,900.0	7,059.8	7,494.7	7,066.4	107.6	42.4	-89.97	-926.1	-2,237.0	1,308.6	1,165.9	142.70	9.170	
11,000.0	7,059.4	7,494.8	7,066.5	110.4	42.4	-89.98	-926.1	-2,237.0	1,395.8	1,250.3	145.47	9.595	
11,100.0	7,058.9	7,494.9	7,066.7	113.2	42.4	-89.99	-926.1	-2,237.0	1,484.6	1,336.4	148.23	10.015	
11,200.0	7,058.4	7,495.0	7,066.8	115.9	42.4	-90.00	-926.1	-2,237.0	1,574.8	1,423.8	151.00	10.429	
11,300.0	7,057.9	7,495.1	7,066.9	118.7	42.4	-90.01	-926.1	-2,237.0	1,666.1	1,512.3	153.77	10.835	
11,400.0	7,057.4	7,495.3	7,067.0	121.5	42.4	-90.02	-926.1	-2,237.0	1,758.3	1,601.8	156.54	11.232	
11,500.0	7,056.9	7,495.4	7,067.1	124.3	42.4	-90.03	-926.1	-2,237.0	1,851.4	1,692.1	159.32	11.621	
11,600.0	7,056.5	7,495.5	7,067.3	127.0	42.4	-90.04	-926.1	-2,237.0	1,945.1	1,783.0	162.09	12.000	
11,688.2	7,056.0	7,495.6	7,067.3	129.5	42.4	-90.05	-926.1	-2,237.0	2,028.3	1,863.7	164.54	12.327	

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 WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 33-20D - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 568-MWD — **Offset Well Error:** 0.0 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
0.0	0.0	0.0	0.0	0.0	0.0	-88.37	113.6	-3,981.3	3,983.1				
100.0	100.0	55.6	55.6	0.1	0.1	-88.37	113.6	-3,981.3	3,982.9	3,982.7	0.16	N/A	
200.0	200.0	152.3	152.3	0.3	0.2	-88.37	113.6	-3,981.4	3,983.0	3,982.5	0.49	8,122.439	
300.0	300.0	248.9	248.9	0.5	0.3	-88.37	113.5	-3,981.5	3,983.2	3,982.3	0.82	4,845.405	
400.0	400.0	345.6	345.6	0.8	0.4	-88.37	113.4	-3,981.8	3,983.4	3,982.3	1.15	3,452.645	
500.0	500.0	442.3	442.3	1.0	0.5	-88.37	113.3	-3,982.1	3,983.8	3,982.3	1.49	2,681.927	
600.0	600.0	539.0	538.9	1.2	0.6	-88.37	113.2	-3,982.5	3,984.2	3,982.4	1.82	2,192.620	
700.0	700.0	639.7	639.7	1.4	0.8	160.64	113.2	-3,983.0	3,986.3	3,984.1	2.21	1,806.377	
800.0	799.8	751.6	751.6	1.6	1.0	160.64	113.4	-3,983.4	3,991.6	3,988.9	2.63	1,520.493	
900.0	899.5	833.4	833.4	1.9	1.2	160.61	113.4	-3,983.6	4,000.1	3,997.1	3.01	1,330.820	
1,000.0	998.7	929.0	929.0	2.1	1.4	160.59	113.4	-3,984.3	4,012.3	4,008.9	3.43	1,170.902	
1,100.0	1,097.5	1,034.5	1,034.5	2.4	1.6	160.56	113.4	-3,984.9	4,027.7	4,023.8	3.87	1,041.296	
1,200.0	1,195.6	1,119.4	1,119.4	2.7	1.8	160.51	113.4	-3,985.5	4,046.4	4,042.1	4.28	944.341	
1,200.1	1,195.8	1,119.5	1,119.5	2.7	1.8	160.51	113.4	-3,985.5	4,046.4	4,042.1	4.29	944.220	
1,300.0	1,293.4	1,208.4	1,208.4	3.1	1.9	160.60	113.6	-3,986.3	4,067.0	4,062.2	4.72	861.020	
1,400.0	1,391.3	1,313.0	1,313.0	3.5	2.2	160.71	114.0	-3,987.3	4,087.6	4,082.4	5.20	786.712	
1,500.0	1,489.1	1,421.0	1,421.0	4.0	2.4	160.82	114.3	-3,988.1	4,108.0	4,102.3	5.68	723.737	
1,600.0	1,586.9	1,508.0	1,507.9	4.4	2.6	160.91	114.7	-3,988.8	4,128.4	4,122.3	6.13	673.943	
1,700.0	1,684.7	1,604.7	1,604.7	4.8	2.8	161.02	115.4	-3,989.6	4,149.0	4,142.4	6.60	628.398	
1,800.0	1,782.5	1,690.0	1,690.0	5.3	3.0	161.10	115.8	-3,990.5	4,169.7	4,162.7	7.06	590.901	
1,900.0	1,880.3	1,929.1	1,929.0	5.7	3.5	161.39	120.8	-3,989.5	4,189.4	4,181.6	7.81	536.271	
2,000.0	1,978.1	2,016.5	2,016.1	6.1	3.6	161.57	127.5	-3,987.2	4,207.0	4,198.7	8.28	508.192	
2,100.0	2,075.9	2,065.0	2,064.3	6.6	3.8	161.68	132.6	-3,986.2	4,225.3	4,216.7	8.67	487.442	
2,200.0	2,173.8	2,112.6	2,111.5	7.0	3.9	161.80	138.3	-3,985.6	4,244.8	4,235.7	9.07	468.207	
2,300.0	2,271.6	2,158.0	2,156.5	7.5	4.0	161.93	144.3	-3,985.9	4,265.8	4,256.4	9.46	451.019	
2,400.0	2,369.4	2,218.3	2,216.1	8.0	4.1	162.10	153.1	-3,986.8	4,287.9	4,278.0	9.89	433.366	
2,500.0	2,467.2	2,345.0	2,340.9	8.4	4.5	162.51	175.4	-3,988.1	4,309.9	4,299.4	10.51	410.255	
2,600.0	2,565.0	2,400.9	2,395.6	8.9	4.6	162.71	187.1	-3,988.5	4,332.0	4,321.0	10.96	395.354	
2,700.0	2,662.8	2,439.0	2,432.6	9.3	4.8	162.86	195.7	-3,989.1	4,355.4	4,344.0	11.36	383.517	
2,800.0	2,760.6	2,485.8	2,478.0	9.8	4.9	163.05	207.2	-3,990.4	4,380.0	4,368.2	11.80	371.066	
2,900.0	2,858.5	2,532.0	2,522.4	10.2	5.1	163.25	219.7	-3,992.1	4,406.0	4,393.7	12.25	359.705	
3,000.0	2,956.3	2,593.7	2,581.4	10.7	5.4	163.54	237.8	-3,994.9	4,432.9	4,420.1	12.77	347.003	
3,100.0	3,054.1	2,663.6	2,647.8	11.2	5.7	163.87	259.1	-3,998.1	4,460.5	4,447.2	13.33	334.561	
3,200.0	3,151.9	2,747.9	2,728.1	11.6	6.0	164.26	284.5	-4,002.5	4,488.8	4,474.8	13.94	321.982	
3,300.0	3,249.7	2,957.9	2,929.5	12.1	6.9	165.17	343.5	-4,011.0	4,516.1	4,501.1	15.02	300.635	
3,400.0	3,347.5	3,113.5	3,079.7	12.5	7.6	165.79	383.9	-4,014.4	4,541.6	4,525.7	15.91	285.409	
3,500.0	3,445.3	3,199.1	3,162.4	13.0	8.0	166.13	405.7	-4,015.8	4,566.7	4,550.2	16.54	276.108	
3,600.0	3,543.2	3,281.0	3,241.7	13.5	8.3	166.44	426.3	-4,017.4	4,592.3	4,575.2	17.15	267.715	
3,700.0	3,641.0	3,374.3	3,332.2	13.9	8.7	166.78	449.2	-4,019.5	4,618.2	4,600.4	17.80	259.389	
3,800.0	3,738.8	3,526.8	3,479.9	14.4	9.4	167.34	486.7	-4,021.4	4,643.3	4,624.6	18.70	248.254	
3,900.0	3,836.6	3,601.4	3,552.1	14.8	9.8	167.62	505.7	-4,021.9	4,668.3	4,649.0	19.30	241.933	
4,000.0	3,934.4	3,656.0	3,604.8	15.3	10.0	167.82	519.7	-4,022.7	4,694.1	4,674.3	19.81	237.006	
4,100.0	4,032.2	3,719.4	3,666.0	15.8	10.3	168.06	536.3	-4,023.9	4,720.7	4,700.4	20.36	231.856	
4,159.1	4,090.0	3,749.0	3,694.5	16.0	10.5	168.18	544.4	-4,024.6	4,736.8	4,716.2	20.65	229.346	
4,200.0	4,130.1	3,780.8	3,725.0	16.2	10.6	168.34	553.1	-4,025.4	4,747.9	4,727.0	20.93	226.895	
4,300.0	4,228.5	3,843.0	3,784.7	16.5	10.9	168.68	570.5	-4,027.3	4,773.0	4,751.6	21.47	222.261	
4,400.0	4,327.5	3,915.3	3,854.1	16.8	11.3	169.04	590.9	-4,029.8	4,795.5	4,773.5	22.05	217.493	
4,500.0	4,426.9	4,001.6	3,936.8	17.0	11.8	169.42	615.3	-4,033.0	4,815.2	4,792.6	22.65	212.552	
4,600.0	4,526.6	4,252.9	4,178.2	17.2	13.0	170.31	684.7	-4,039.0	4,830.3	4,806.3	23.98	201.437	
4,700.0	4,626.6	4,310.0	4,232.9	17.3	13.3	170.54	701.1	-4,039.5	4,840.9	4,816.5	24.40	198.403	
4,759.3	4,685.8	4,404.0	4,322.8	17.4	13.8	-78.14	728.6	-4,040.2	4,845.6	4,818.4	27.19	178.235	
4,800.0	4,726.5	4,404.0	4,322.8	17.5	13.8	-78.14	728.6	-4,040.2	4,848.5	4,821.2	27.23	178.026	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 33-20D - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 568-MWD — **Offset Well Error:** 0.0 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
4,900.0	4,826.5	4,474.6	4,390.0	17.6	14.2	-77.89	750.2	-4,040.7	4,856.0	4,828.4	27.59	176.010	
5,000.0	4,926.5	4,541.2	4,453.1	17.7	14.6	-77.65	771.4	-4,041.7	4,864.5	4,836.6	27.94	174.133	
5,100.0	5,026.5	4,617.4	4,525.5	17.8	15.0	-77.38	795.1	-4,043.2	4,873.6	4,845.3	28.32	172.099	
5,200.0	5,126.5	4,687.0	4,591.6	18.0	15.4	-77.13	817.0	-4,044.9	4,883.4	4,854.7	28.68	170.245	
5,300.0	5,226.5	4,764.6	4,665.3	18.1	15.9	-76.86	841.1	-4,047.3	4,893.8	4,864.7	29.08	168.266	
5,400.0	5,326.5	4,841.4	4,738.5	18.2	16.3	-76.60	864.0	-4,050.1	4,904.6	4,875.1	29.48	166.379	
5,500.0	5,426.5	5,165.4	5,053.8	18.3	17.7	-75.81	936.6	-4,060.6	4,912.8	4,882.2	30.60	160.536	
5,600.0	5,526.5	5,529.3	5,415.2	18.5	18.7	-75.36	977.0	-4,065.2	4,916.7	4,885.1	31.61	155.564	
5,700.0	5,626.5	5,626.7	5,512.4	18.6	18.9	-75.29	983.6	-4,064.9	4,918.1	4,886.2	31.94	153.961	
5,800.0	5,726.5	5,719.5	5,605.1	18.8	19.1	-75.23	988.8	-4,065.0	4,919.7	4,887.4	32.27	152.445	
5,900.0	5,826.5	5,809.0	5,694.5	18.9	19.3	-75.19	992.3	-4,065.5	4,921.3	4,888.7	32.59	151.013	
6,000.0	5,926.5	5,902.0	5,787.5	19.0	19.4	-75.17	994.4	-4,066.8	4,923.1	4,890.2	32.91	149.596	
6,100.0	6,026.5	6,087.0	5,972.5	19.2	19.7	-75.18	994.1	-4,068.1	4,923.4	4,890.1	33.38	147.510	
6,200.0	6,126.5	6,181.0	6,066.5	19.3	19.8	-75.19	993.6	-4,068.5	4,923.6	4,889.9	33.68	146.178	
6,300.0	6,226.5	6,275.0	6,160.5	19.5	19.9	-75.19	993.3	-4,068.9	4,924.0	4,890.0	33.99	144.855	
6,400.0	6,326.5	6,341.6	6,227.1	19.6	20.0	-75.20	993.0	-4,069.6	4,924.9	4,890.6	34.26	143.747	
6,433.3	6,359.8	6,368.0	6,253.4	19.7	20.0	-75.20	992.8	-4,070.0	4,925.3	4,890.9	34.36	143.353	
6,450.0	6,376.5	6,379.1	6,264.5	19.7	20.0	14.80	992.7	-4,070.2	4,925.3	4,891.5	33.79	145.780	
6,500.0	6,426.5	6,420.5	6,306.0	19.7	20.1	14.84	992.5	-4,070.9	4,923.3	4,889.5	33.73	145.961	
6,550.0	6,476.0	6,462.0	6,347.4	19.7	20.1	14.97	992.3	-4,071.6	4,917.9	4,884.4	33.53	146.687	
6,600.0	6,525.0	6,546.5	6,431.9	19.7	20.2	15.20	992.0	-4,072.9	4,909.1	4,875.9	33.23	147.716	
6,650.0	6,573.3	6,593.4	6,478.8	19.7	20.3	15.50	991.8	-4,073.5	4,896.8	4,864.0	32.76	149.483	
6,700.0	6,620.4	6,635.3	6,520.7	19.6	20.3	15.90	991.8	-4,074.0	4,881.3	4,849.2	32.15	151.832	
6,750.0	6,666.3	6,674.4	6,559.8	19.6	20.4	16.39	991.8	-4,074.5	4,862.8	4,831.3	31.42	154.757	
6,800.0	6,710.7	6,711.4	6,596.8	19.5	20.4	17.00	991.7	-4,075.0	4,841.2	4,810.6	30.59	158.248	
6,850.0	6,753.4	6,751.4	6,636.8	19.4	20.5	17.75	991.5	-4,075.7	4,816.8	4,787.1	29.69	162.245	
6,900.0	6,794.2	6,821.0	6,706.4	19.3	20.6	18.75	991.2	-4,076.7	4,789.4	4,760.6	28.77	166.461	
6,950.0	6,832.9	6,865.1	6,750.5	19.3	20.6	19.89	991.0	-4,077.1	4,759.1	4,731.3	27.81	171.131	
7,000.0	6,869.2	6,900.6	6,786.0	19.2	20.7	21.24	990.8	-4,077.5	4,726.3	4,699.5	26.87	175.897	
7,050.0	6,903.1	6,935.1	6,820.5	19.2	20.7	22.88	990.6	-4,077.9	4,691.2	4,665.2	26.02	180.263	
7,100.0	6,934.3	6,976.9	6,862.3	19.2	20.8	24.95	990.4	-4,078.2	4,653.8	4,628.5	25.37	183.423	
7,150.0	6,962.8	7,014.7	6,900.1	19.3	20.8	27.49	990.3	-4,078.5	4,614.4	4,589.4	25.00	184.600	
7,200.0	6,988.3	7,038.3	6,923.6	19.5	20.9	30.53	990.2	-4,078.6	4,573.2	4,548.2	24.98	183.070	
7,250.0	7,010.7	7,056.1	6,941.5	19.7	20.9	34.30	990.2	-4,078.7	4,530.3	4,504.9	25.46	177.940	
7,300.0	7,029.9	7,071.5	6,956.9	20.0	20.9	39.04	990.3	-4,078.8	4,486.2	4,459.6	26.56	168.898	
7,350.0	7,045.9	7,084.4	6,969.7	20.4	20.9	45.04	990.3	-4,078.9	4,440.8	4,412.5	28.36	156.601	
7,400.0	7,058.6	7,094.6	6,980.0	20.8	21.0	52.65	990.4	-4,079.0	4,394.6	4,363.8	30.81	142.637	
7,450.0	7,067.8	7,102.2	6,987.6	21.4	21.0	62.12	990.4	-4,079.0	4,347.6	4,313.9	33.65	129.190	
7,500.0	7,073.6	7,107.1	6,992.5	22.0	21.0	73.47	990.4	-4,079.0	4,300.1	4,263.8	36.30	118.464	
7,550.0	7,076.0	7,117.0	7,002.4	22.7	21.0	86.45	990.5	-4,079.1	4,252.4	4,214.4	37.97	111.984	
7,561.7	7,076.0	7,117.0	7,002.4	22.9	21.0	89.47	990.5	-4,079.1	4,241.2	4,203.1	38.14	111.201	
7,600.0	7,075.8	7,117.0	7,002.4	23.4	21.0	89.47	990.5	-4,079.1	4,204.7	4,165.9	38.73	108.563	
7,700.0	7,075.3	7,117.0	7,002.4	25.1	21.0	89.47	990.5	-4,079.1	4,109.4	4,068.9	40.42	101.655	
7,800.0	7,074.8	7,117.0	7,002.4	27.0	21.0	89.47	990.5	-4,079.1	4,014.3	3,971.9	42.31	94.886	
7,900.0	7,074.4	7,117.0	7,002.4	29.0	21.0	89.47	990.5	-4,079.1	3,919.4	3,875.1	44.34	88.399	
8,000.0	7,073.9	7,117.0	7,002.4	31.1	21.0	89.47	990.5	-4,079.1	3,824.8	3,778.3	46.49	82.271	
8,100.0	7,073.4	7,117.0	7,002.4	33.4	21.0	89.47	990.5	-4,079.1	3,730.5	3,681.7	48.74	76.538	
8,200.0	7,072.9	7,117.0	7,002.4	35.7	21.0	89.47	990.5	-4,079.1	3,636.5	3,585.4	51.07	71.206	
8,300.0	7,072.4	7,117.0	7,002.4	38.1	21.0	89.47	990.5	-4,079.1	3,542.8	3,489.3	53.46	66.265	
8,400.0	7,071.9	7,117.0	7,002.4	40.6	21.0	89.47	990.5	-4,079.1	3,449.5	3,393.6	55.91	61.696	
8,500.0	7,071.5	7,117.0	7,002.4	43.1	21.0	89.47	990.5	-4,079.1	3,356.5	3,298.1	58.40	57.472	
8,600.0	7,071.0	7,117.0	7,002.4	45.6	21.0	89.47	990.5	-4,079.1	3,264.0	3,203.1	60.93	53.569	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 33-20D - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 568-MWD — **Offset Well Error:** 0.0 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
8,700.0	7,070.5	7,117.0	7,002.4	48.1	21.0	89.47	990.5	-4,079.1	3,171.9	3,108.4	63.49	49.960	
8,800.0	7,070.0	7,117.0	7,002.4	50.7	21.0	89.47	990.5	-4,079.1	3,080.4	3,014.3	66.08	46.619	
8,900.0	7,069.5	7,117.0	7,002.4	53.3	21.0	89.47	990.5	-4,079.1	2,989.3	2,920.6	68.68	43.523	
9,000.0	7,069.0	7,117.0	7,002.4	56.0	21.0	89.47	990.5	-4,079.1	2,898.9	2,827.6	71.31	40.651	
9,100.0	7,068.6	7,117.0	7,002.4	58.6	21.0	89.47	990.5	-4,079.1	2,809.1	2,735.1	73.96	37.983	
9,200.0	7,068.1	7,117.0	7,002.4	61.3	21.0	89.47	990.5	-4,079.1	2,720.0	2,643.4	76.62	35.502	
9,300.0	7,067.6	7,117.0	7,002.4	63.9	21.0	89.47	990.5	-4,079.1	2,631.7	2,552.4	79.29	33.192	
9,400.0	7,067.1	7,117.0	7,002.4	66.6	21.0	89.47	990.5	-4,079.1	2,544.3	2,462.3	81.97	31.039	
9,500.0	7,066.6	7,117.0	7,002.4	69.3	21.0	89.47	990.5	-4,079.1	2,457.8	2,373.1	84.66	29.030	
9,600.0	7,066.1	7,117.0	7,002.4	72.0	21.0	89.47	990.5	-4,079.1	2,372.4	2,285.0	87.37	27.155	
9,700.0	7,065.6	7,117.0	7,002.4	74.7	21.0	89.47	990.5	-4,079.1	2,288.1	2,198.1	90.07	25.403	
9,800.0	7,065.2	7,117.0	7,002.4	77.5	21.0	89.47	990.5	-4,079.1	2,205.2	2,112.4	92.79	23.766	
9,900.0	7,064.7	7,117.0	7,002.4	80.2	21.0	89.47	990.5	-4,079.1	2,123.8	2,028.3	95.51	22.235	
10,000.0	7,064.2	7,117.0	7,002.4	82.9	21.0	89.47	990.5	-4,079.1	2,044.0	1,945.8	98.24	20.806	
10,100.0	7,063.7	7,117.0	7,002.4	85.6	21.0	89.47	990.5	-4,079.1	1,966.1	1,865.1	100.98	19.470	
10,200.0	7,063.2	7,117.0	7,002.4	88.4	21.0	89.47	990.5	-4,079.1	1,890.2	1,786.5	103.72	18.225	
10,300.0	7,062.7	7,117.0	7,002.4	91.1	21.0	89.47	990.5	-4,079.1	1,816.7	1,710.2	106.46	17.065	
10,400.0	7,062.3	7,117.0	7,002.4	93.9	21.0	89.47	990.5	-4,079.1	1,745.8	1,636.6	109.21	15.986	
10,500.0	7,061.8	7,117.0	7,002.4	96.6	21.0	89.47	990.5	-4,079.1	1,677.8	1,565.9	111.96	14.987	
10,600.0	7,061.3	7,117.0	7,002.4	99.4	21.0	89.47	990.5	-4,079.1	1,613.3	1,498.5	114.71	14.064	
10,700.0	7,060.8	7,117.1	7,002.5	102.1	21.0	89.48	990.5	-4,079.1	1,552.4	1,435.0	117.47	13.216	
10,800.0	7,060.3	7,117.5	7,002.8	104.9	21.0	89.50	990.5	-4,079.1	1,495.8	1,375.6	120.23	12.442	
10,900.0	7,059.8	7,117.8	7,003.2	107.6	21.0	89.51	990.5	-4,079.1	1,443.9	1,320.9	122.99	11.740	
11,000.0	7,059.4	7,118.1	7,003.5	110.4	21.0	89.52	990.5	-4,079.1	1,397.3	1,271.5	125.75	11.111	
11,100.0	7,058.9	7,118.4	7,003.8	113.2	21.0	89.54	990.5	-4,079.1	1,356.4	1,227.9	128.52	10.554	
11,200.0	7,058.4	7,118.7	7,004.1	115.9	21.0	89.55	990.5	-4,079.1	1,321.8	1,190.5	131.29	10.068	
11,300.0	7,057.9	7,119.0	7,004.4	118.7	21.0	89.57	990.5	-4,079.1	1,294.1	1,160.0	134.06	9.653	
11,400.0	7,057.4	7,119.3	7,004.7	121.5	21.0	89.58	990.5	-4,079.1	1,273.6	1,136.8	136.83	9.308	
11,500.0	7,056.9	7,119.6	7,005.0	124.3	21.0	89.59	990.5	-4,079.1	1,260.8	1,121.2	139.61	9.031	
11,600.0	7,056.5	7,119.9	7,005.3	127.0	21.0	89.61	990.5	-4,079.1	1,255.8	1,113.4	142.38	8.820	
11,612.8	7,056.4	7,120.0	7,005.3	127.4	21.0	89.61	990.5	-4,079.1	1,255.7	1,113.0	142.74	8.798	CC, ES
11,688.2	7,056.0	7,120.1	7,005.5	129.5	21.0	89.62	990.5	-4,079.1	1,258.0	1,113.2	144.83	8.686	SF

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 34-20D - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 561-MWD — **Offset Well Error:** 0.0 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
0.0	0.0	0.0	0.0	0.0	0.0	-89.30	48.4	-3,977.1	3,977.6				
100.0	100.0	57.5	57.5	0.1	0.1	-89.30	48.4	-3,977.1	3,977.4	3,977.2	0.16	N/A	
200.0	200.0	157.5	157.5	0.3	0.2	-89.30	48.4	-3,977.1	3,977.4	3,976.9	0.50	8,021.750	
300.0	300.0	257.5	257.5	0.5	0.3	-89.30	48.4	-3,977.1	3,977.4	3,976.6	0.83	4,786.433	
400.0	400.0	357.5	357.5	0.8	0.4	-89.30	48.4	-3,977.1	3,977.4	3,976.2	1.17	3,410.797	
500.0	500.0	457.5	457.5	1.0	0.5	-89.30	48.4	-3,977.1	3,977.4	3,975.9	1.50	2,649.362	
600.0	600.0	557.5	557.5	1.2	0.6	-89.30	48.4	-3,977.1	3,977.4	3,975.6	1.84	2,165.852	
700.0	700.0	655.0	655.0	1.4	0.8	159.71	48.4	-3,977.1	3,979.0	3,976.8	2.25	1,771.760	
800.0	799.8	749.3	749.3	1.6	1.0	159.70	48.3	-3,977.2	3,984.1	3,981.4	2.64	1,509.363	
900.0	899.5	852.4	852.4	1.9	1.2	159.69	48.6	-3,977.4	3,992.5	3,989.4	3.07	1,301.396	
1,000.0	998.7	953.2	953.2	2.1	1.4	159.67	48.7	-3,977.5	4,004.0	4,000.5	3.49	1,147.338	
1,100.0	1,097.5	1,054.5	1,054.5	2.4	1.6	159.64	48.3	-3,977.6	4,018.7	4,014.8	3.92	1,026.248	
1,200.0	1,195.6	1,150.0	1,150.0	2.7	1.8	159.60	48.1	-3,977.6	4,036.7	4,032.3	4.35	928.817	
1,200.1	1,195.8	1,150.1	1,150.1	2.7	1.8	159.60	48.1	-3,977.6	4,036.7	4,032.4	4.35	928.696	
1,300.0	1,293.4	1,254.0	1,254.0	3.1	2.0	159.71	47.6	-3,977.6	4,056.2	4,051.4	4.81	843.197	
1,400.0	1,391.3	1,338.2	1,338.2	3.5	2.2	159.79	47.5	-3,977.7	4,075.8	4,070.6	5.25	776.433	
1,500.0	1,489.1	1,431.6	1,431.6	4.0	2.4	159.88	47.2	-3,978.0	4,095.7	4,090.0	5.71	717.189	
1,600.0	1,586.9	1,509.7	1,509.7	4.4	2.6	159.96	46.8	-3,978.4	4,115.9	4,109.7	6.15	669.518	
1,700.0	1,684.7	1,587.5	1,587.5	4.8	2.7	160.03	46.7	-3,979.3	4,136.5	4,130.0	6.59	627.624	
1,800.0	1,782.5	1,703.0	1,703.0	5.3	3.0	160.15	47.0	-3,980.8	4,157.5	4,150.3	7.11	584.680	
1,900.0	1,880.3	1,791.8	1,791.8	5.7	3.2	160.25	47.5	-3,981.5	4,178.0	4,170.4	7.58	551.527	
2,000.0	1,978.1	1,890.3	1,890.3	6.1	3.4	160.35	48.0	-3,982.7	4,198.7	4,190.7	8.06	520.849	
2,100.0	2,075.9	2,002.0	2,002.0	6.6	3.6	160.46	47.9	-3,983.7	4,219.2	4,210.7	8.57	492.433	
2,200.0	2,173.8	2,079.1	2,079.0	7.0	3.8	160.53	47.9	-3,984.4	4,239.8	4,230.8	9.01	470.383	
2,300.0	2,271.6	2,165.2	2,165.2	7.5	4.0	160.61	48.0	-3,985.6	4,260.8	4,251.4	9.48	449.450	
2,400.0	2,369.4	2,282.0	2,281.9	8.0	4.2	160.72	47.9	-3,987.2	4,281.8	4,271.8	10.00	427.984	
2,500.0	2,467.2	2,364.9	2,364.9	8.4	4.4	160.80	47.7	-3,988.2	4,302.7	4,292.3	10.46	411.244	
2,600.0	2,565.0	2,442.0	2,441.9	8.9	4.5	160.85	46.8	-3,989.5	4,324.0	4,313.1	10.91	396.250	
2,700.0	2,662.8	2,685.5	2,685.1	9.3	5.0	160.92	35.3	-3,990.4	4,343.9	4,332.2	11.70	371.271	
2,800.0	2,760.6	2,751.0	2,750.3	9.8	5.2	160.91	29.5	-3,989.8	4,362.4	4,350.3	12.13	359.506	
2,900.0	2,858.5	2,844.0	2,842.7	10.2	5.4	160.85	18.8	-3,989.7	4,381.5	4,368.9	12.64	346.545	
3,000.0	2,956.3	2,897.7	2,895.9	10.7	5.5	160.79	11.2	-3,990.0	4,401.2	4,388.1	13.07	336.684	
3,100.0	3,054.1	2,962.6	2,960.0	11.2	5.7	160.71	0.8	-3,990.9	4,421.6	4,408.1	13.53	326.696	
3,200.0	3,151.9	3,032.0	3,028.3	11.6	5.9	160.62	-11.0	-3,992.3	4,442.7	4,428.7	14.02	316.955	
3,300.0	3,249.7	3,103.2	3,098.3	12.1	6.1	160.52	-23.7	-3,994.2	4,464.4	4,449.9	14.52	307.499	
3,400.0	3,347.5	3,208.6	3,201.8	12.5	6.4	160.35	-43.3	-3,997.5	4,486.5	4,471.4	15.11	296.875	
3,500.0	3,445.3	3,282.3	3,274.4	13.0	6.6	160.26	-55.9	-3,999.7	4,508.6	4,493.0	15.61	288.838	
3,600.0	3,543.2	3,375.6	3,366.4	13.5	6.8	160.14	-71.2	-4,002.9	4,531.2	4,515.1	16.17	280.306	
3,700.0	3,641.0	3,500.0	3,489.0	13.9	7.2	159.98	-91.9	-4,006.8	4,553.4	4,536.6	16.83	270.630	
3,800.0	3,738.8	3,577.4	3,565.2	14.4	7.4	159.88	-105.3	-4,009.1	4,575.6	4,558.2	17.37	263.432	
3,900.0	3,836.6	3,687.0	3,673.0	14.8	7.8	159.73	-125.0	-4,012.4	4,597.7	4,579.7	18.02	255.118	
4,000.0	3,934.4	3,759.2	3,743.8	15.3	8.0	159.62	-138.8	-4,014.6	4,620.0	4,601.4	18.57	248.792	
4,100.0	4,032.2	3,859.9	3,842.2	15.8	8.4	159.44	-159.7	-4,018.2	4,642.8	4,623.6	19.23	241.373	
4,159.1	4,090.0	3,924.2	3,905.1	16.0	8.6	159.33	-173.3	-4,020.4	4,656.1	4,636.5	19.64	237.061	
4,200.0	4,130.1	3,967.5	3,947.4	16.2	8.8	159.32	-182.2	-4,021.8	4,665.1	4,645.1	19.92	234.212	
4,300.0	4,228.5	4,028.7	4,007.3	16.5	9.0	159.35	-194.6	-4,024.0	4,685.0	4,664.6	20.38	229.877	
4,400.0	4,327.5	4,095.7	4,072.9	16.8	9.2	159.36	-207.6	-4,026.9	4,702.5	4,681.6	20.84	225.681	
4,500.0	4,426.9	4,171.9	4,147.7	17.0	9.5	159.32	-222.2	-4,030.7	4,717.3	4,696.0	21.30	221.446	
4,600.0	4,526.6	4,261.7	4,235.6	17.2	9.8	159.22	-239.8	-4,035.3	4,729.3	4,707.5	21.80	216.934	
4,700.0	4,626.6	4,363.9	4,335.7	17.3	10.2	159.05	-259.8	-4,040.6	4,738.1	4,715.8	22.31	212.335	
4,759.3	4,685.8	4,419.1	4,389.7	17.4	10.4	-90.06	-270.5	-4,043.5	4,741.8	4,716.1	25.65	184.889	
4,800.0	4,726.5	4,478.7	4,448.2	17.5	10.6	-90.20	-281.8	-4,046.5	4,743.9	4,718.1	25.83	183.656	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 34-20D - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 561-MWD — **Offset Well Error:** 0.0 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
4,900.0	4,826.5	4,589.6	4,557.5	17.6	10.9	-90.42	-299.7	-4,051.6	4,748.6	4,722.4	26.20	181.217	
5,000.0	4,926.5	4,684.4	4,651.5	17.7	11.2	-90.55	-310.9	-4,056.1	4,753.5	4,726.9	26.54	179.101	
5,100.0	5,026.5	4,943.9	4,910.5	17.8	11.8	-90.66	-320.2	-4,064.7	4,757.1	4,729.9	27.22	174.793	
5,200.0	5,126.5	5,057.5	5,024.2	18.0	12.0	-90.65	-319.5	-4,066.1	4,758.3	4,730.7	27.58	172.548	
5,300.0	5,226.5	5,166.3	5,132.9	18.1	12.2	-90.65	-318.9	-4,067.5	4,759.6	4,731.6	27.93	170.404	
5,400.0	5,326.5	5,259.6	5,226.2	18.2	12.3	-90.64	-318.5	-4,068.5	4,760.7	4,732.4	28.26	168.481	
5,500.0	5,426.5	5,379.7	5,346.3	18.3	12.5	-90.63	-317.8	-4,069.8	4,761.7	4,733.1	28.64	166.278	
5,600.0	5,526.5	5,487.4	5,454.0	18.5	12.7	-90.62	-317.1	-4,070.5	4,762.4	4,733.4	28.99	164.261	
5,700.0	5,626.5	5,577.9	5,544.5	18.6	12.9	-90.62	-316.8	-4,071.2	4,763.2	4,733.8	29.32	162.469	
5,800.0	5,726.5	5,679.8	5,646.4	18.8	13.1	-90.62	-316.7	-4,072.0	4,763.9	4,734.3	29.67	160.575	
5,900.0	5,826.5	5,770.7	5,737.3	18.9	13.2	-90.62	-316.8	-4,072.8	4,764.9	4,734.9	30.00	158.840	
6,000.0	5,926.5	5,877.7	5,844.3	19.0	13.4	-90.62	-316.7	-4,073.8	4,765.7	4,735.4	30.36	156.958	
6,100.0	6,026.5	5,978.9	5,945.5	19.2	13.6	-90.63	-317.4	-4,074.6	4,766.6	4,735.8	30.72	155.169	
6,200.0	6,126.5	6,072.2	6,038.8	19.3	13.8	-90.64	-318.5	-4,075.4	4,767.4	4,736.3	31.06	153.487	
6,300.0	6,226.5	6,161.0	6,127.6	19.5	14.0	-90.65	-319.5	-4,076.3	4,768.5	4,737.1	31.40	151.883	
6,400.0	6,326.5	6,254.8	6,221.4	19.6	14.1	-90.67	-320.6	-4,077.5	4,769.7	4,738.0	31.74	150.258	
6,433.3	6,359.8	6,285.9	6,252.5	19.7	14.2	-90.67	-321.0	-4,077.9	4,770.2	4,738.3	31.86	149.726	
6,450.0	6,376.5	6,301.6	6,268.1	19.7	14.2	-0.67	-321.1	-4,078.1	4,770.2	4,740.9	29.36	162.498	
6,500.0	6,426.5	6,369.2	6,335.7	19.7	14.4	-0.68	-321.9	-4,078.9	4,767.9	4,738.5	29.38	162.277	
6,550.0	6,476.0	6,421.5	6,388.1	19.7	14.5	-0.70	-322.6	-4,079.4	4,762.0	4,732.7	29.26	162.773	
6,600.0	6,525.0	6,459.9	6,426.4	19.7	14.6	-0.72	-323.1	-4,079.8	4,752.7	4,723.7	28.98	163.986	
6,650.0	6,573.3	6,499.4	6,465.9	19.7	14.6	-0.74	-323.5	-4,080.3	4,740.1	4,711.5	28.59	165.766	
6,700.0	6,620.4	6,550.4	6,516.9	19.6	14.7	-0.76	-324.0	-4,081.0	4,724.1	4,696.0	28.12	168.016	
6,750.0	6,666.3	6,598.6	6,565.1	19.6	14.8	-0.79	-324.4	-4,081.6	4,704.9	4,677.4	27.53	170.909	
6,800.0	6,710.7	6,641.4	6,607.9	19.5	14.9	-0.83	-324.7	-4,082.1	4,682.5	4,655.7	26.83	174.503	
6,850.0	6,753.4	6,682.7	6,649.2	19.4	15.0	-0.87	-325.0	-4,082.7	4,657.1	4,631.0	26.05	178.787	
6,900.0	6,794.2	6,722.7	6,689.2	19.3	15.1	-0.93	-325.3	-4,083.2	4,628.7	4,603.5	25.19	183.785	
6,950.0	6,832.9	6,760.6	6,727.1	19.3	15.1	-0.99	-325.5	-4,083.7	4,597.6	4,573.3	24.26	189.524	
7,000.0	6,869.2	6,799.5	6,766.0	19.2	15.2	-1.06	-325.5	-4,084.2	4,563.8	4,540.5	23.29	195.958	
7,050.0	6,903.1	6,837.5	6,804.0	19.2	15.3	-1.16	-325.6	-4,084.7	4,527.4	4,505.1	22.30	203.062	
7,100.0	6,934.3	6,873.0	6,839.5	19.2	15.4	-1.27	-325.7	-4,085.2	4,488.8	4,467.5	21.30	210.749	
7,150.0	6,962.8	6,907.5	6,874.0	19.3	15.4	-1.42	-325.8	-4,085.5	4,448.0	4,427.7	20.33	218.783	
7,200.0	6,988.3	6,938.5	6,905.0	19.5	15.5	-1.62	-325.9	-4,085.8	4,405.2	4,385.8	19.42	226.874	
7,250.0	7,010.7	6,961.0	6,927.5	19.7	15.5	-1.88	-326.0	-4,086.0	4,360.8	4,342.2	18.59	234.622	
7,300.0	7,029.9	6,977.8	6,944.3	20.0	15.6	-2.23	-326.0	-4,086.2	4,314.8	4,296.9	17.88	241.284	
7,350.0	7,045.9	6,989.6	6,956.0	20.4	15.6	-2.75	-326.1	-4,086.3	4,267.6	4,250.3	17.35	245.981	
7,400.0	7,058.6	6,999.0	6,965.5	20.8	15.6	-3.58	-326.1	-4,086.4	4,219.4	4,202.4	17.04	247.582	
7,450.0	7,067.8	7,006.1	6,972.5	21.4	15.6	-5.12	-326.2	-4,086.5	4,170.4	4,153.4	17.05	244.566	
7,500.0	7,073.6	7,010.7	6,977.2	22.0	15.6	-8.92	-326.2	-4,086.6	4,120.9	4,103.1	17.74	232.263	
7,550.0	7,076.0	7,012.8	6,979.3	22.7	15.6	-31.10	-326.2	-4,086.6	4,071.0	4,046.2	24.79	164.222	
7,561.7	7,076.0	7,013.0	6,979.5	22.9	15.6	-60.58	-326.2	-4,086.6	4,059.2	4,025.2	34.00	119.402	
7,600.0	7,075.8	7,013.2	6,979.7	23.4	15.6	-60.75	-326.2	-4,086.6	4,021.0	3,986.4	34.56	116.357	
7,700.0	7,075.3	7,013.8	6,980.3	25.1	15.6	-61.19	-326.2	-4,086.6	3,921.0	3,884.8	36.16	108.430	
7,800.0	7,074.8	7,014.5	6,980.9	27.0	15.6	-61.64	-326.2	-4,086.6	3,821.0	3,783.1	37.94	100.712	
7,900.0	7,074.4	7,015.1	6,981.6	29.0	15.6	-62.11	-326.2	-4,086.6	3,721.0	3,681.2	39.86	93.343	
8,000.0	7,073.9	7,015.7	6,982.2	31.1	15.6	-62.58	-326.2	-4,086.6	3,621.0	3,579.1	41.91	86.400	
8,100.0	7,073.4	7,016.4	6,982.9	33.4	15.6	-63.06	-326.2	-4,086.6	3,521.1	3,477.0	44.06	79.915	
8,200.0	7,072.9	7,017.0	6,983.5	35.7	15.6	-63.56	-326.2	-4,086.6	3,421.1	3,374.8	46.30	73.893	
8,300.0	7,072.4	7,017.7	6,984.2	38.1	15.6	-64.06	-326.2	-4,086.7	3,321.1	3,272.5	48.61	68.318	
8,400.0	7,071.9	7,018.4	6,984.9	40.6	15.6	-64.58	-326.2	-4,086.7	3,221.1	3,170.1	50.99	63.168	
8,500.0	7,071.5	7,019.1	6,985.5	43.1	15.6	-65.11	-326.2	-4,086.7	3,121.1	3,067.7	53.43	58.412	
8,600.0	7,071.0	7,019.8	6,986.2	45.6	15.6	-65.65	-326.2	-4,086.7	3,021.2	2,965.2	55.93	54.020	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 34-20D - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 561-MWD — **Offset Well Error:** 0.0 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
8,700.0	7,070.5	7,020.5	6,986.9	48.1	15.6	-66.21	-326.2	-4,086.7	2,921.2	2,862.7	58.47	49.963	
8,800.0	7,070.0	7,021.2	6,987.7	50.7	15.6	-66.78	-326.2	-4,086.7	2,821.2	2,760.2	61.05	46.210	
8,900.0	7,069.5	7,021.9	6,988.4	53.3	15.6	-67.36	-326.2	-4,086.7	2,721.3	2,657.6	63.68	42.735	
9,000.0	7,069.0	7,022.7	6,989.1	56.0	15.6	-67.95	-326.3	-4,086.7	2,621.3	2,554.9	66.34	39.513	
9,100.0	7,068.6	7,023.4	6,989.9	58.6	15.6	-68.56	-326.3	-4,086.7	2,521.3	2,452.3	69.04	36.521	
9,200.0	7,068.1	7,024.2	6,990.6	61.3	15.6	-69.18	-326.3	-4,086.7	2,421.3	2,349.6	71.77	33.739	
9,300.0	7,067.6	7,024.9	6,991.4	63.9	15.6	-69.82	-326.3	-4,086.8	2,321.4	2,246.9	74.53	31.149	
9,400.0	7,067.1	7,025.7	6,992.2	66.6	15.6	-70.47	-326.3	-4,086.8	2,221.4	2,144.1	77.31	28.733	
9,500.0	7,066.6	7,026.5	6,993.0	69.3	15.6	-71.14	-326.3	-4,086.8	2,121.5	2,041.3	80.13	26.476	
9,600.0	7,066.1	7,027.3	6,993.8	72.0	15.6	-71.82	-326.3	-4,086.8	2,021.5	1,938.6	82.97	24.366	
9,700.0	7,065.6	7,028.1	6,994.6	74.7	15.6	-72.52	-326.3	-4,086.8	1,921.6	1,835.7	85.83	22.389	
9,800.0	7,065.2	7,029.0	6,995.5	77.5	15.7	-73.24	-326.3	-4,086.8	1,821.6	1,732.9	88.71	20.535	
9,900.0	7,064.7	7,029.8	6,996.3	80.2	15.7	-73.97	-326.3	-4,086.8	1,721.7	1,630.1	91.61	18.793	
10,000.0	7,064.2	7,030.7	6,997.2	82.9	15.7	-74.72	-326.3	-4,086.8	1,621.8	1,527.2	94.53	17.156	
10,100.0	7,063.7	7,031.6	6,998.0	85.6	15.7	-75.49	-326.3	-4,086.9	1,521.8	1,424.4	97.47	15.614	
10,200.0	7,063.2	7,032.5	6,998.9	88.4	15.7	-76.28	-326.3	-4,086.9	1,421.9	1,321.5	100.41	14.161	
10,300.0	7,062.7	7,033.4	6,999.8	91.1	15.7	-77.08	-326.3	-4,086.9	1,322.0	1,218.7	103.37	12.789	
10,400.0	7,062.3	7,034.3	7,000.8	93.9	15.7	-77.90	-326.3	-4,086.9	1,222.2	1,115.8	106.34	11.493	
10,500.0	7,061.8	7,035.2	7,001.7	96.6	15.7	-78.74	-326.3	-4,086.9	1,122.3	1,013.0	109.31	10.267	
10,600.0	7,061.3	7,036.2	7,002.6	99.4	15.7	-79.60	-326.3	-4,086.9	1,022.5	910.2	112.29	9.106	
10,700.0	7,060.8	7,037.1	7,003.6	102.1	15.7	-80.48	-326.4	-4,086.9	922.7	807.4	115.26	8.005	
10,800.0	7,060.3	7,038.1	7,004.6	104.9	15.7	-81.38	-326.4	-4,087.0	822.9	704.7	118.23	6.960	
10,900.0	7,059.8	7,039.1	7,005.6	107.6	15.7	-82.30	-326.4	-4,087.0	723.3	602.1	121.20	5.967	
11,000.0	7,059.4	7,040.1	7,006.6	110.4	15.7	-83.24	-326.4	-4,087.0	623.7	499.5	124.16	5.023	
11,100.0	7,058.9	7,041.2	7,007.6	113.2	15.7	-84.20	-326.4	-4,087.0	524.3	397.2	127.10	4.125	
11,200.0	7,058.4	7,042.2	7,008.7	115.9	15.7	-85.18	-326.4	-4,087.0	425.1	295.1	130.03	3.269	
11,300.0	7,057.9	7,043.3	7,009.8	118.7	15.7	-86.18	-326.4	-4,087.0	326.5	193.5	132.93	2.456	
11,400.0	7,057.4	7,044.4	7,010.9	121.5	15.7	-87.20	-326.4	-4,087.1	229.0	93.2	135.81	1.686	
11,500.0	7,056.9	7,045.5	7,012.0	124.3	15.7	-88.24	-326.4	-4,087.1	135.3	-3.3	138.65	0.976	Level 1
11,600.0	7,056.5	7,046.6	7,013.1	127.0	15.7	-89.30	-326.4	-4,087.1	64.6	-76.8	141.46	0.457	Level 1
11,620.7	7,056.4	7,046.9	7,013.3	127.6	15.7	-89.52	-326.4	-4,087.1	61.2	-80.8	142.04	0.431	Level 1, CC, ES, SF
11,688.2	7,056.0	7,047.6	7,014.1	129.5	15.7	-90.25	-326.4	-4,087.1	91.1	-52.8	143.91	0.633	Level 1

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 43-20D - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 599-MWD — **Offset Well Error:** 0.0 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
0.0	0.0	0.0	0.0	0.0	0.0	-88.68	91.8	-3,979.0	3,980.3				
100.0	100.0	58.0	58.0	0.1	0.1	-88.68	91.8	-3,979.0	3,980.1	3,979.9	0.16	N/A	
200.0	200.0	158.8	158.8	0.3	0.2	-88.68	91.8	-3,979.0	3,980.1	3,979.6	0.50	8,001.839	
300.0	300.0	259.6	259.6	0.5	0.3	-88.68	91.8	-3,979.0	3,980.0	3,979.2	0.83	4,774.871	
400.0	400.0	360.4	360.4	0.8	0.4	-88.68	91.9	-3,978.9	3,980.0	3,978.8	1.17	3,402.617	
500.0	500.0	461.2	461.2	1.0	0.5	-88.68	92.0	-3,978.8	3,979.9	3,978.4	1.51	2,643.002	
600.0	600.0	562.0	562.0	1.2	0.6	-88.67	92.1	-3,978.7	3,979.8	3,977.9	1.84	2,160.622	
700.0	700.0	1,305.3	1,300.9	1.4	2.5	160.84	117.4	-3,921.9	3,977.7	3,974.0	3.74	1,064.544	
800.0	799.8	1,756.1	1,735.9	1.6	4.6	162.09	184.8	-3,826.5	3,960.4	3,954.9	5.47	724.567	
900.0	899.5	1,852.6	1,827.3	1.9	5.2	162.53	203.9	-3,802.1	3,943.7	3,937.7	6.08	648.855	
1,000.0	998.7	1,947.5	1,917.1	2.1	5.8	162.96	223.3	-3,778.4	3,930.8	3,924.1	6.70	586.662	
1,100.0	1,097.5	2,034.2	1,999.0	2.4	6.3	163.36	241.5	-3,756.4	3,921.1	3,913.8	7.30	536.973	
1,200.0	1,195.6	2,096.0	2,057.5	2.7	6.6	163.64	254.5	-3,741.4	3,915.8	3,908.0	7.79	502.414	
1,200.1	1,195.8	2,096.0	2,057.5	2.7	6.6	163.64	254.5	-3,741.4	3,915.8	3,908.0	7.79	502.395	
1,300.0	1,293.4	2,164.4	2,122.6	3.1	7.0	163.92	268.5	-3,725.3	3,913.2	3,904.8	8.33	469.497	
1,400.0	1,391.3	2,376.0	2,323.4	3.5	8.2	164.75	308.5	-3,672.4	3,908.9	3,899.4	9.53	410.009	
1,500.0	1,489.1	2,449.0	2,392.4	4.0	8.6	165.04	322.9	-3,653.4	3,904.3	3,894.1	10.14	384.896	
1,600.0	1,586.9	2,602.0	2,536.7	4.4	9.6	165.68	354.0	-3,613.0	3,899.5	3,888.3	11.17	349.044	
1,700.0	1,684.7	2,683.1	2,612.8	4.8	10.2	166.03	371.2	-3,591.0	3,894.2	3,882.3	11.87	328.120	
1,800.0	1,782.5	2,751.0	2,676.7	5.3	10.6	166.32	385.9	-3,573.2	3,889.9	3,877.4	12.49	311.346	
1,900.0	1,880.3	2,785.0	2,708.8	5.7	10.8	166.47	393.2	-3,564.7	3,886.9	3,874.0	12.93	300.561	
2,000.0	1,978.1	2,844.0	2,764.8	6.1	11.1	166.71	405.4	-3,550.8	3,885.5	3,872.0	13.49	287.929	
2,100.0	2,075.9	2,959.6	2,874.5	6.6	11.8	167.20	429.6	-3,523.5	3,884.5	3,870.1	14.36	270.601	
2,200.0	2,173.8	3,031.0	2,942.1	7.0	12.2	167.50	444.8	-3,506.3	3,883.4	3,868.4	15.00	258.900	
2,285.6	2,257.5	3,096.4	3,004.2	7.4	12.6	167.78	458.5	-3,491.0	3,883.0	3,867.4	15.56	249.541	
2,300.0	2,271.6	3,105.7	3,013.0	7.5	12.7	167.82	460.5	-3,488.8	3,883.0	3,867.4	15.65	248.170	
2,400.0	2,369.4	3,181.8	3,085.5	8.0	13.1	168.13	476.2	-3,471.6	3,883.5	3,867.2	16.30	238.270	
2,500.0	2,467.2	3,319.2	3,216.6	8.4	13.9	168.68	502.9	-3,440.5	3,884.2	3,867.0	17.24	225.285	
2,600.0	2,565.0	3,417.0	3,310.2	8.9	14.4	169.05	520.3	-3,417.9	3,884.3	3,866.3	17.98	216.039	
2,700.0	2,662.8	3,517.3	3,405.9	9.3	15.0	169.44	539.1	-3,394.6	3,884.6	3,865.8	18.75	207.145	
2,800.0	2,760.6	3,640.9	3,523.4	9.8	15.7	169.93	563.0	-3,364.8	3,884.2	3,864.5	19.67	197.501	
2,900.0	2,858.5	3,741.4	3,619.1	10.2	16.3	170.33	582.2	-3,340.7	3,884.2	3,863.7	20.45	189.891	
3,000.0	2,956.3	3,874.0	3,745.1	10.7	17.1	170.85	607.1	-3,307.9	3,883.5	3,862.1	21.42	181.343	
3,100.0	3,054.1	3,950.7	3,817.9	11.2	17.6	171.15	621.7	-3,288.8	3,882.9	3,860.8	22.10	175.732	
3,124.4	3,077.9	3,967.0	3,833.4	11.3	17.7	171.22	624.8	-3,284.7	3,882.9	3,860.6	22.25	174.519	
3,200.0	3,151.9	4,016.5	3,880.5	11.6	18.0	171.42	634.4	-3,272.7	3,883.1	3,860.4	22.72	170.942	
3,300.0	3,249.7	4,094.9	3,955.1	12.1	18.4	171.73	649.5	-3,254.3	3,884.3	3,860.9	23.40	166.020	
3,400.0	3,347.5	4,214.5	4,069.4	12.5	19.1	172.18	671.1	-3,226.2	3,885.5	3,861.2	24.28	160.009	
3,500.0	3,445.3	4,381.3	4,227.6	13.0	20.1	172.85	703.0	-3,184.0	3,885.0	3,859.6	25.46	152.574	
3,554.5	3,498.7	4,413.4	4,258.0	13.2	20.3	172.97	709.1	-3,175.8	3,884.9	3,859.1	25.79	150.650	
3,600.0	3,543.2	4,446.1	4,289.1	13.5	20.5	173.10	715.1	-3,167.7	3,885.0	3,858.9	26.09	148.902	
3,700.0	3,641.0	4,566.2	4,402.8	13.9	21.3	173.59	738.8	-3,137.1	3,885.1	3,858.1	27.04	143.694	
3,770.6	3,710.1	4,638.3	4,470.9	14.2	21.7	173.89	753.3	-3,118.4	3,885.0	3,857.4	27.65	140.533	
3,800.0	3,738.8	4,660.9	4,492.3	14.4	21.9	173.99	757.8	-3,112.5	3,885.1	3,857.2	27.85	139.484	
3,900.0	3,836.6	4,744.4	4,571.4	14.8	22.4	174.33	774.3	-3,091.3	3,885.6	3,857.0	28.60	135.861	
4,000.0	3,934.4	4,833.0	4,655.2	15.3	23.0	174.69	791.9	-3,068.7	3,886.4	3,857.0	29.38	132.280	
4,100.0	4,032.2	4,905.0	4,723.4	15.8	23.4	174.99	806.5	-3,050.8	3,888.0	3,857.9	30.07	129.298	
4,159.1	4,090.0	4,933.3	4,750.2	16.0	23.6	175.11	812.3	-3,044.0	3,889.4	3,859.0	30.39	127.979	
4,200.0	4,130.1	4,959.2	4,774.8	16.2	23.7	175.22	817.6	-3,037.8	3,890.3	3,859.6	30.68	126.788	
4,300.0	4,228.5	5,034.2	4,846.2	16.5	24.2	175.52	832.6	-3,020.5	3,890.7	3,859.3	31.41	123.878	
4,400.0	4,327.5	5,142.1	4,949.2	16.8	24.8	175.92	853.3	-2,995.8	3,887.9	3,855.7	32.26	120.527	
4,500.0	4,426.9	5,277.7	5,078.8	17.0	25.6	176.41	877.7	-2,964.2	3,881.2	3,847.9	33.21	116.854	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 43-20D - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 599-MWD — **Offset Well Error:** 0.0 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
4,600.0	4,526.6	5,373.0	5,169.5	17.2	26.1	176.77	895.9	-2,941.3	3,870.6	3,836.6	33.93	114.064	
4,700.0	4,626.6	5,423.0	5,217.2	17.3	26.4	176.94	905.3	-2,929.6	3,857.3	3,823.0	34.33	112.367	
4,759.3	4,685.8	5,466.0	5,258.4	17.4	26.7	-71.93	912.9	-2,920.2	3,848.4	3,812.1	36.29	106.060	
4,800.0	4,726.5	5,466.0	5,258.4	17.5	26.7	-71.93	912.9	-2,920.2	3,842.1	3,805.8	36.33	105.748	
4,900.0	4,826.5	5,527.2	5,317.5	17.6	27.0	-71.73	922.9	-2,907.7	3,827.6	3,790.9	36.62	104.510	
5,000.0	4,926.5	5,560.0	5,349.3	17.7	27.1	-71.63	927.9	-2,901.4	3,814.3	3,777.5	36.84	103.540	
5,100.0	5,026.5	5,653.0	5,440.0	17.8	27.5	-71.37	940.9	-2,885.5	3,802.3	3,765.1	37.20	102.214	
5,200.0	5,126.5	5,713.2	5,499.1	18.0	27.8	-71.22	947.9	-2,876.2	3,791.1	3,753.6	37.47	101.177	
5,300.0	5,226.5	5,787.9	5,572.6	18.1	28.0	-71.06	955.2	-2,865.3	3,780.4	3,742.6	37.78	100.072	
5,400.0	5,326.5	5,840.0	5,624.0	18.2	28.2	-70.96	960.1	-2,858.3	3,770.6	3,732.6	38.03	99.150	
5,500.0	5,426.5	5,910.2	5,693.4	18.3	28.5	-70.82	966.5	-2,849.6	3,761.9	3,723.6	38.31	98.188	
5,600.0	5,526.5	5,977.9	5,760.4	18.5	28.7	-70.70	972.5	-2,841.9	3,754.1	3,715.5	38.59	97.290	
5,700.0	5,626.5	6,046.5	5,828.3	18.6	28.9	-70.57	978.8	-2,834.7	3,747.2	3,708.3	38.86	96.436	
5,800.0	5,726.5	6,119.0	5,900.2	18.8	29.1	-70.45	984.7	-2,828.0	3,741.2	3,702.0	39.13	95.610	
5,900.0	5,826.5	6,179.5	5,960.4	18.9	29.2	-70.36	989.0	-2,823.3	3,736.0	3,696.7	39.37	94.891	
6,000.0	5,926.5	6,248.9	6,029.5	19.0	29.4	-70.28	993.1	-2,818.7	3,731.7	3,692.1	39.63	94.171	
6,100.0	6,026.5	6,318.0	6,098.4	19.2	29.5	-70.22	996.0	-2,815.1	3,728.3	3,688.4	39.88	93.487	
6,200.0	6,126.5	6,399.0	6,179.4	19.3	29.6	-70.18	997.6	-2,812.1	3,725.5	3,685.3	40.15	92.795	
6,300.0	6,226.5	6,470.9	6,251.2	19.5	29.7	-70.16	998.0	-2,810.3	3,723.3	3,682.9	40.40	92.168	
6,400.0	6,326.5	6,552.0	6,332.3	19.6	29.8	-70.15	998.3	-2,808.9	3,721.8	3,681.1	40.66	91.540	
6,433.3	6,359.8	6,586.0	6,366.3	19.7	29.9	-70.15	998.4	-2,808.4	3,721.4	3,680.6	40.75	91.314	
6,450.0	6,376.5	6,586.0	6,366.3	19.7	29.9	19.86	998.4	-2,808.4	3,721.0	3,680.0	40.96	90.847	
6,500.0	6,426.5	6,632.8	6,413.1	19.7	29.9	19.96	998.3	-2,808.0	3,717.8	3,677.0	40.81	91.103	
6,550.0	6,476.0	6,680.0	6,460.3	19.7	29.9	20.17	998.0	-2,807.8	3,711.5	3,670.9	40.54	91.559	
6,600.0	6,525.0	6,713.9	6,494.3	19.7	30.0	20.47	997.7	-2,807.8	3,702.0	3,661.9	40.13	92.247	
6,650.0	6,573.3	6,756.6	6,536.9	19.7	30.0	20.89	997.4	-2,807.8	3,689.5	3,649.9	39.63	93.090	
6,700.0	6,620.4	6,799.0	6,579.3	19.6	30.0	21.45	997.1	-2,807.8	3,673.9	3,634.8	39.05	94.086	
6,750.0	6,666.3	6,840.6	6,620.9	19.6	30.1	22.14	996.8	-2,807.9	3,655.3	3,616.9	38.40	95.203	
6,800.0	6,710.7	6,882.3	6,662.6	19.5	30.1	22.99	996.6	-2,808.1	3,633.8	3,596.1	37.70	96.386	
6,850.0	6,753.4	6,924.9	6,705.2	19.4	30.2	24.04	996.2	-2,808.3	3,609.5	3,572.5	37.00	97.558	
6,900.0	6,794.2	6,961.0	6,741.3	19.3	30.2	25.26	995.8	-2,808.5	3,582.5	3,546.2	36.32	98.648	
6,950.0	6,832.9	6,991.7	6,772.0	19.3	30.2	26.70	995.5	-2,808.7	3,553.0	3,517.3	35.70	99.526	
7,000.0	6,869.2	7,017.6	6,798.0	19.2	30.2	28.40	995.2	-2,809.0	3,521.2	3,486.0	35.20	100.023	
7,050.0	6,903.1	7,054.0	6,834.3	19.2	30.2	30.51	994.9	-2,809.5	3,487.2	3,452.3	34.95	99.779	
7,100.0	6,934.3	7,066.7	6,847.0	19.2	30.3	32.81	994.8	-2,809.8	3,451.2	3,416.3	34.88	98.948	
7,150.0	6,962.8	7,091.6	6,871.9	19.3	30.3	35.71	994.6	-2,810.2	3,413.4	3,378.2	35.21	96.940	
7,200.0	6,988.3	7,114.2	6,894.5	19.5	30.3	39.17	994.4	-2,810.6	3,373.8	3,337.9	35.96	93.829	
7,250.0	7,010.7	7,134.3	6,914.6	19.7	30.3	43.31	994.2	-2,811.1	3,332.8	3,295.6	37.16	89.687	
7,300.0	7,029.9	7,154.3	6,934.6	20.0	30.3	48.30	993.9	-2,811.5	3,290.4	3,251.6	38.85	84.701	
7,350.0	7,045.9	7,178.5	6,958.8	20.4	30.3	54.41	993.6	-2,812.1	3,247.0	3,206.0	41.01	79.175	
7,400.0	7,058.6	7,197.8	6,978.1	20.8	30.3	61.53	993.3	-2,812.4	3,202.6	3,159.2	43.39	73.804	
7,450.0	7,067.8	7,212.1	6,992.4	21.4	30.3	69.57	993.1	-2,812.7	3,157.6	3,111.9	45.71	69.073	
7,500.0	7,073.6	7,221.6	7,001.8	22.0	30.3	78.30	992.9	-2,812.9	3,112.2	3,064.5	47.63	65.341	
7,550.0	7,076.0	7,226.1	7,006.3	22.7	30.4	87.30	992.8	-2,813.0	3,066.6	3,017.7	48.87	62.749	
7,561.7	7,076.0	7,226.4	7,006.7	22.9	30.4	89.39	992.8	-2,813.0	3,055.9	3,006.8	49.05	62.301	
7,600.0	7,075.8	7,227.1	7,007.4	23.4	30.4	89.42	992.8	-2,813.0	3,021.1	2,971.4	49.64	60.858	
7,700.0	7,075.3	7,228.9	7,009.2	25.1	30.4	89.51	992.8	-2,813.0	2,930.4	2,879.1	51.34	57.083	
7,800.0	7,074.8	7,230.7	7,011.0	27.0	30.4	89.59	992.7	-2,813.1	2,840.4	2,787.2	53.22	53.374	
7,900.0	7,074.4	7,232.4	7,012.7	29.0	30.4	89.67	992.7	-2,813.1	2,751.1	2,695.9	55.25	49.794	
8,000.0	7,073.9	7,234.2	7,014.4	31.1	30.4	89.75	992.7	-2,813.1	2,662.6	2,605.2	57.40	46.384	
8,100.0	7,073.4	7,235.8	7,016.1	33.4	30.4	89.82	992.6	-2,813.2	2,574.9	2,515.2	59.65	43.164	
8,200.0	7,072.9	7,237.5	7,017.8	35.7	30.4	89.90	992.6	-2,813.2	2,488.1	2,426.1	61.98	40.141	

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 WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 43-20D - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 599-MWD — **Offset Well Error:** 0.0 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
8,300.0	7,072.4	7,239.1	7,019.4	38.1	30.4	89.97	992.6	-2,813.2	2,402.4	2,338.0	64.38	37.316	
8,400.0	7,071.9	7,240.7	7,021.0	40.6	30.4	90.04	992.5	-2,813.2	2,317.8	2,250.9	66.83	34.684	
8,500.0	7,071.5	7,242.0	7,022.3	43.1	30.4	90.10	992.5	-2,813.3	2,234.4	2,165.1	69.32	32.235	
8,600.0	7,071.0	7,243.3	7,023.5	45.6	30.4	90.16	992.5	-2,813.3	2,152.5	2,080.7	71.85	29.960	
8,700.0	7,070.5	7,244.5	7,024.7	48.1	30.4	90.21	992.5	-2,813.3	2,072.2	1,997.8	74.41	27.850	
8,800.0	7,070.0	7,245.7	7,025.9	50.7	30.4	90.27	992.4	-2,813.3	1,993.6	1,916.6	76.99	25.894	
8,900.0	7,069.5	7,246.9	7,027.1	53.3	30.4	90.32	992.4	-2,813.3	1,917.1	1,837.5	79.60	24.084	
9,000.0	7,069.0	7,248.0	7,028.3	56.0	30.4	90.38	992.4	-2,813.4	1,842.8	1,760.5	82.23	22.411	
9,100.0	7,068.6	7,249.2	7,029.5	58.6	30.4	90.43	992.4	-2,813.4	1,771.0	1,686.1	84.87	20.867	
9,200.0	7,068.1	7,250.3	7,030.6	61.3	30.4	90.48	992.3	-2,813.4	1,702.1	1,614.5	87.53	19.446	
9,300.0	7,067.6	7,251.5	7,031.7	63.9	30.4	90.53	992.3	-2,813.4	1,636.3	1,546.1	90.20	18.141	
9,400.0	7,067.1	7,252.6	7,032.9	66.6	30.4	90.58	992.3	-2,813.4	1,574.2	1,481.4	92.88	16.949	
9,500.0	7,066.6	7,253.7	7,034.0	69.3	30.4	90.64	992.3	-2,813.5	1,516.2	1,420.6	95.57	15.864	
9,600.0	7,066.1	7,254.8	7,035.1	72.0	30.4	90.69	992.3	-2,813.5	1,462.7	1,364.4	98.28	14.883	
9,700.0	7,065.6	7,255.9	7,036.2	74.7	30.4	90.74	992.2	-2,813.5	1,414.2	1,313.2	100.98	14.004	
9,800.0	7,065.2	7,257.0	7,037.2	77.5	30.4	90.78	992.2	-2,813.5	1,371.4	1,267.7	103.70	13.224	
9,900.0	7,064.7	7,258.0	7,038.3	80.2	30.4	90.83	992.2	-2,813.5	1,334.6	1,228.2	106.42	12.541	
10,000.0	7,064.2	7,259.1	7,039.3	82.9	30.4	90.88	992.2	-2,813.5	1,304.5	1,195.4	109.15	11.952	
10,100.0	7,063.7	7,260.1	7,040.4	85.6	30.4	90.93	992.2	-2,813.6	1,281.6	1,169.7	111.88	11.455	
10,200.0	7,063.2	7,261.2	7,041.4	88.4	30.4	90.98	992.1	-2,813.6	1,266.1	1,151.5	114.62	11.046	
10,300.0	7,062.7	7,262.2	7,042.4	91.1	30.4	91.02	992.1	-2,813.6	1,258.4	1,141.0	117.36	10.723	
10,347.1	7,062.5	7,262.7	7,042.9	92.4	30.4	91.04	992.1	-2,813.6	1,257.5	1,138.9	118.65	10.598	CC
10,400.0	7,062.3	7,263.2	7,043.4	93.9	30.4	91.07	992.1	-2,813.6	1,258.6	1,138.5	120.10	10.480	ES
10,500.0	7,061.8	7,264.2	7,044.4	96.6	30.4	91.11	992.1	-2,813.6	1,266.8	1,143.9	122.85	10.312	
10,600.0	7,061.3	7,265.2	7,045.4	99.4	30.4	91.16	992.1	-2,813.6	1,282.7	1,157.1	125.60	10.212	
10,700.0	7,060.8	7,266.2	7,046.4	102.1	30.4	91.20	992.0	-2,813.7	1,306.1	1,177.7	128.36	10.176	SF
10,800.0	7,060.3	7,267.1	7,047.4	104.9	30.4	91.25	992.0	-2,813.7	1,336.6	1,205.5	131.11	10.194	
10,900.0	7,059.8	7,268.1	7,048.3	107.6	30.4	91.29	992.0	-2,813.7	1,373.7	1,239.8	133.87	10.261	
11,000.0	7,059.4	7,269.0	7,049.3	110.4	30.4	91.33	992.0	-2,813.7	1,416.9	1,280.3	136.63	10.370	
11,100.0	7,058.9	7,270.0	7,050.2	113.2	30.4	91.38	992.0	-2,813.7	1,465.7	1,326.3	139.40	10.514	
11,200.0	7,058.4	7,270.9	7,051.2	115.9	30.4	91.42	992.0	-2,813.7	1,519.5	1,377.3	142.16	10.688	
11,300.0	7,057.9	7,271.8	7,052.1	118.7	30.4	91.46	991.9	-2,813.7	1,577.8	1,432.8	144.93	10.886	
11,400.0	7,057.4	7,272.8	7,053.0	121.5	30.4	91.50	991.9	-2,813.8	1,640.1	1,492.4	147.70	11.104	
11,500.0	7,056.9	7,273.7	7,053.9	124.3	30.4	91.54	991.9	-2,813.8	1,706.0	1,555.5	150.47	11.338	
11,600.0	7,056.5	7,274.6	7,054.8	127.0	30.4	91.59	991.9	-2,813.8	1,775.1	1,621.9	153.24	11.584	
11,688.2	7,056.0	7,275.3	7,055.6	129.5	30.4	91.62	991.9	-2,813.8	1,838.4	1,682.7	155.68	11.809	

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 WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 44-20D - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 599-MWD — **Offset Well Error:** 0.0 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
0.0	0.0	0.0	0.0	0.0	0.0	-88.98	70.6	-3,976.5	3,977.4				
100.0	100.0	48.9	48.9	0.1	0.1	-88.98	70.7	-3,976.6	3,977.2	3,977.1	0.15	N/A	
200.0	200.0	134.0	134.0	0.3	0.2	-88.98	71.0	-3,976.9	3,977.6	3,977.2	0.47	8,403.368	
300.0	300.0	219.1	219.1	0.5	0.3	-88.97	71.6	-3,977.6	3,978.4	3,977.6	0.79	5,009.340	
400.0	400.0	304.2	304.2	0.8	0.3	-88.96	72.4	-3,978.5	3,979.6	3,978.4	1.12	3,568.960	
500.0	500.0	389.3	389.3	1.0	0.4	-88.94	73.6	-3,979.8	3,981.1	3,979.6	1.44	2,772.573	
600.0	600.0	474.4	474.3	1.2	0.5	-88.92	75.0	-3,981.4	3,983.0	3,981.2	1.76	2,267.317	
700.0	700.0	599.0	598.9	1.4	0.7	160.12	77.6	-3,984.3	3,987.1	3,985.0	2.11	1,887.895	
800.0	799.8	764.9	764.7	1.6	1.0	160.16	80.0	-3,985.2	3,992.6	3,990.0	2.63	1,517.617	
900.0	899.5	2,035.4	2,013.0	1.9	5.1	159.93	20.6	-3,798.3	3,984.4	3,978.6	5.82	684.268	
1,000.0	998.7	2,107.2	2,081.6	2.1	5.5	160.01	14.1	-3,777.8	3,966.9	3,960.7	6.24	636.050	
1,100.0	1,097.5	2,189.0	2,159.8	2.4	5.9	160.08	7.6	-3,754.9	3,953.1	3,946.5	6.68	592.063	
1,200.0	1,195.6	2,301.1	2,267.1	2.7	6.5	160.13	-1.5	-3,723.5	3,942.7	3,935.5	7.23	545.093	
1,200.1	1,195.8	2,301.3	2,267.2	2.7	6.5	160.13	-1.5	-3,723.5	3,942.7	3,935.4	7.23	545.035	
1,300.0	1,293.4	2,456.0	2,414.7	3.1	7.4	160.06	-17.5	-3,679.6	3,933.6	3,925.6	7.99	492.531	
1,400.0	1,391.3	2,578.3	2,530.5	3.5	8.2	159.99	-31.8	-3,643.2	3,922.8	3,914.1	8.67	452.244	
1,500.0	1,489.1	2,657.0	2,605.1	4.0	8.7	159.94	-41.2	-3,619.8	3,912.0	3,902.7	9.21	424.680	
1,600.0	1,586.9	2,723.6	2,668.3	4.4	9.0	159.90	-49.1	-3,600.3	3,901.8	3,892.1	9.70	402.114	
1,700.0	1,684.7	2,792.7	2,734.2	4.8	9.4	159.85	-57.0	-3,580.9	3,892.7	3,882.5	10.21	381.384	
1,800.0	1,782.5	2,908.4	2,844.6	5.3	10.1	159.80	-69.2	-3,548.7	3,884.0	3,873.2	10.86	357.505	
1,900.0	1,880.3	2,993.9	2,926.2	5.7	10.5	159.78	-77.1	-3,524.4	3,874.8	3,863.4	11.43	339.115	
2,000.0	1,978.1	3,066.5	2,995.6	6.1	11.0	159.76	-83.8	-3,504.4	3,866.3	3,854.4	11.95	323.658	
2,100.0	2,075.9	3,197.6	3,121.2	6.6	11.7	159.72	-96.1	-3,468.5	3,858.3	3,845.6	12.66	304.754	
2,200.0	2,173.8	3,269.0	3,189.3	7.0	12.1	159.69	-103.5	-3,448.6	3,849.5	3,836.3	13.19	291.816	
2,300.0	2,271.6	3,312.0	3,230.5	7.5	12.4	159.67	-107.9	-3,437.0	3,841.9	3,828.2	13.63	281.875	
2,400.0	2,369.4	3,406.0	3,320.9	8.0	12.9	159.65	-116.2	-3,412.6	3,835.2	3,820.9	14.22	269.746	
2,500.0	2,467.2	3,569.8	3,478.2	8.4	13.8	159.62	-130.9	-3,369.5	3,828.2	3,813.1	15.04	254.460	
2,600.0	2,565.0	3,679.0	3,582.7	8.9	14.4	159.59	-140.6	-3,339.2	3,819.6	3,803.9	15.70	243.303	
2,700.0	2,662.8	3,895.7	3,788.7	9.3	15.7	159.50	-162.9	-3,275.9	3,809.4	3,792.6	16.76	227.331	
2,800.0	2,760.6	3,967.0	3,856.1	9.8	16.2	159.45	-171.1	-3,254.3	3,798.0	3,780.7	17.32	219.334	
2,900.0	2,858.5	4,027.4	3,913.4	10.2	16.6	159.42	-177.9	-3,236.4	3,787.5	3,769.7	17.83	212.461	
3,000.0	2,956.3	4,129.2	4,010.4	10.7	17.2	159.37	-188.9	-3,207.3	3,778.1	3,759.6	18.49	204.374	
3,100.0	3,054.1	4,240.1	4,115.8	11.2	17.9	159.32	-200.4	-3,175.0	3,767.9	3,748.8	19.18	196.471	
3,200.0	3,151.9	4,341.0	4,211.7	11.6	18.5	159.27	-210.7	-3,145.1	3,757.5	3,737.6	19.84	189.426	
3,300.0	3,249.7	4,413.3	4,280.4	12.1	19.0	159.24	-218.3	-3,124.0	3,747.4	3,727.0	20.39	183.769	
3,400.0	3,347.5	4,567.2	4,426.7	12.5	19.9	159.17	-234.0	-3,078.9	3,737.2	3,715.9	21.24	175.952	
3,500.0	3,445.3	4,685.1	4,538.5	13.0	20.7	159.12	-245.6	-3,043.6	3,726.3	3,704.3	21.96	169.672	
3,600.0	3,543.2	4,770.8	4,619.8	13.5	21.2	159.09	-253.9	-3,017.4	3,714.8	3,692.2	22.57	164.614	
3,700.0	3,641.0	4,862.1	4,706.5	13.9	21.8	159.07	-262.3	-2,990.2	3,704.1	3,680.9	23.19	159.739	
3,800.0	3,738.8	4,934.8	4,775.5	14.4	22.2	159.04	-269.2	-2,968.4	3,693.3	3,669.6	23.74	155.549	
3,900.0	3,836.6	4,999.0	4,836.8	14.8	22.6	159.02	-275.2	-2,950.4	3,684.1	3,659.8	24.27	151.807	
4,000.0	3,934.4	4,999.0	4,836.8	15.3	22.6	159.02	-275.2	-2,950.4	3,676.3	3,651.7	24.57	149.619	
4,100.0	4,032.2	5,059.6	4,895.1	15.8	22.9	159.01	-280.5	-2,934.7	3,669.9	3,644.9	25.07	146.407	
4,159.1	4,090.0	5,092.0	4,926.5	16.0	23.1	159.00	-283.2	-2,926.9	3,667.0	3,641.7	25.35	144.668	
4,200.0	4,130.1	5,092.0	4,926.5	16.2	23.1	158.99	-283.2	-2,926.9	3,665.1	3,639.6	25.45	143.986	
4,300.0	4,228.5	5,135.8	4,969.0	16.5	23.3	158.94	-286.5	-2,917.1	3,659.2	3,633.4	25.79	141.902	
4,400.0	4,327.5	5,186.0	5,018.1	16.8	23.5	158.87	-289.8	-2,906.9	3,651.9	3,625.8	26.11	139.882	
4,500.0	4,426.9	5,249.9	5,080.7	17.0	23.8	158.78	-293.8	-2,894.7	3,642.6	3,616.1	26.43	137.825	
4,600.0	4,526.6	5,310.6	5,140.1	17.2	24.0	158.66	-297.5	-2,883.3	3,630.5	3,603.8	26.71	135.921	
4,700.0	4,626.6	5,373.0	5,201.5	17.3	24.3	158.51	-301.2	-2,872.6	3,616.8	3,589.9	26.97	134.121	
4,759.3	4,685.8	5,373.0	5,201.5	17.4	24.3	-90.58	-301.2	-2,872.6	3,607.7	3,567.8	39.94	90.322	
4,800.0	4,726.5	5,373.0	5,201.5	17.5	24.3	-90.58	-301.2	-2,872.6	3,601.7	3,561.7	39.99	90.058	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 44-20D - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 599-MWD — **Offset Well Error:** 0.0 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
4,900.0	4,826.5	5,437.1	5,264.9	17.6	24.5	-90.64	-304.7	-2,863.2	3,587.3	3,546.9	40.31	88.987	
5,000.0	4,926.5	5,466.0	5,293.4	17.7	24.6	-90.66	-306.2	-2,859.5	3,574.7	3,534.2	40.53	88.204	
5,100.0	5,026.5	5,524.0	5,351.0	17.8	24.7	-90.70	-308.8	-2,852.9	3,563.6	3,522.8	40.80	87.338	
5,200.0	5,126.5	5,560.0	5,386.8	18.0	24.8	-90.73	-310.1	-2,849.4	3,554.1	3,513.1	41.02	86.633	
5,300.0	5,226.5	5,616.0	5,442.6	18.1	25.0	-90.76	-311.9	-2,844.8	3,546.0	3,504.8	41.27	85.916	
5,400.0	5,326.5	5,668.0	5,494.5	18.2	25.1	-90.78	-313.2	-2,841.4	3,539.5	3,498.0	41.51	85.266	
5,500.0	5,426.5	5,746.0	5,572.3	18.3	25.2	-90.81	-315.0	-2,837.0	3,533.9	3,492.1	41.79	84.573	
5,600.0	5,526.5	5,814.1	5,640.4	18.5	25.3	-90.83	-316.3	-2,833.8	3,529.1	3,487.1	42.04	83.954	
5,700.0	5,626.5	5,885.2	5,711.4	18.6	25.4	-90.84	-317.1	-2,830.9	3,525.1	3,482.8	42.29	83.360	
5,800.0	5,726.5	5,953.7	5,779.8	18.8	25.5	-90.85	-317.7	-2,828.7	3,521.9	3,479.4	42.53	82.810	
5,900.0	5,826.5	6,025.0	5,851.1	18.9	25.6	-90.86	-318.1	-2,827.1	3,519.7	3,476.9	42.77	82.294	
6,000.0	5,926.5	6,114.0	5,940.1	19.0	25.7	-90.87	-318.7	-2,825.7	3,518.0	3,475.0	43.02	81.767	
6,100.0	6,026.5	6,212.0	6,038.1	19.2	25.9	-90.88	-319.0	-2,823.9	3,516.3	3,473.0	43.30	81.216	
6,200.0	6,126.5	6,306.0	6,132.1	19.3	26.0	-90.88	-319.0	-2,822.6	3,514.9	3,471.3	43.56	80.690	
6,300.0	6,226.5	6,383.0	6,209.1	19.5	26.1	-90.87	-318.8	-2,822.1	3,514.0	3,470.2	43.80	80.229	
6,400.0	6,326.5	6,471.1	6,297.2	19.6	26.2	-90.87	-318.6	-2,821.6	3,513.5	3,469.4	44.05	79.756	
6,433.3	6,359.8	6,500.7	6,326.8	19.7	26.2	-90.87	-318.5	-2,821.5	3,513.4	3,469.2	44.14	79.601	
6,450.0	6,376.5	6,516.6	6,342.7	19.7	26.2	-0.87	-318.4	-2,821.4	3,513.1	3,481.2	31.94	109.994	
6,500.0	6,426.5	6,564.0	6,390.1	19.7	26.2	-0.87	-318.2	-2,821.3	3,510.1	3,478.4	31.71	110.696	
6,550.0	6,476.0	6,618.5	6,444.5	19.7	26.3	-0.88	-318.1	-2,821.2	3,503.6	3,472.3	31.36	111.724	
6,600.0	6,525.0	6,678.5	6,504.6	19.7	26.4	-0.89	-317.9	-2,820.9	3,493.6	3,462.7	30.89	113.090	
6,650.0	6,573.3	6,717.9	6,543.9	19.7	26.4	-0.91	-317.8	-2,820.7	3,480.1	3,449.8	30.27	114.964	
6,700.0	6,620.4	6,755.9	6,582.0	19.6	26.5	-0.93	-317.7	-2,820.7	3,463.4	3,433.9	29.53	117.267	
6,750.0	6,666.3	6,796.4	6,622.4	19.6	26.5	-0.97	-317.7	-2,820.6	3,443.6	3,414.9	28.70	119.997	
6,800.0	6,710.7	6,838.3	6,664.3	19.5	26.5	-1.01	-317.8	-2,820.7	3,420.7	3,392.9	27.77	123.181	
6,850.0	6,753.4	6,880.6	6,706.7	19.4	26.6	-1.07	-318.0	-2,820.7	3,394.8	3,368.0	26.76	126.848	
6,900.0	6,794.2	6,925.7	6,751.8	19.3	26.6	-1.13	-318.2	-2,820.8	3,365.9	3,340.2	25.70	130.992	
6,950.0	6,832.9	6,967.5	6,793.6	19.3	26.7	-1.22	-318.3	-2,820.7	3,334.2	3,309.6	24.58	135.668	
7,000.0	6,869.2	7,002.5	6,828.6	19.2	26.7	-1.31	-318.3	-2,820.7	3,299.9	3,276.4	23.42	140.891	
7,050.0	6,903.1	7,035.2	6,861.3	19.2	26.7	-1.43	-318.3	-2,820.7	3,263.1	3,240.8	22.26	146.559	
7,100.0	6,934.3	7,066.5	6,892.6	19.2	26.8	-1.58	-318.3	-2,820.7	3,224.0	3,202.9	21.14	152.514	
7,150.0	6,962.8	7,096.7	6,922.8	19.3	26.8	-1.78	-318.4	-2,820.7	3,182.9	3,162.8	20.08	158.486	
7,200.0	6,988.3	7,123.8	6,949.9	19.5	26.8	-2.03	-318.4	-2,820.6	3,139.9	3,120.8	19.14	164.090	
7,250.0	7,010.7	7,147.5	6,973.6	19.7	26.9	-2.37	-318.5	-2,820.6	3,095.2	3,076.9	18.34	168.730	
7,300.0	7,029.9	7,167.6	6,993.7	20.0	26.9	-2.85	-318.5	-2,820.6	3,049.0	3,031.3	17.76	171.640	
7,350.0	7,045.9	7,184.2	7,010.3	20.4	26.9	-3.57	-318.5	-2,820.5	3,001.6	2,984.2	17.46	171.914	
7,400.0	7,058.6	7,197.4	7,023.4	20.8	26.9	-4.76	-318.5	-2,820.5	2,953.3	2,935.7	17.53	168.496	
7,450.0	7,067.8	7,206.9	7,033.0	21.4	26.9	-7.07	-318.5	-2,820.5	2,904.1	2,885.9	18.21	159.508	
7,500.0	7,073.6	7,212.8	7,038.9	22.0	26.9	-13.37	-318.5	-2,820.5	2,854.5	2,833.6	20.81	137.146	
7,550.0	7,076.0	7,215.1	7,041.2	22.7	26.9	-65.16	-318.5	-2,820.5	2,804.5	2,759.3	45.26	61.964	
7,561.7	7,076.0	7,215.1	7,041.2	22.9	26.9	-111.68	-318.5	-2,820.5	2,792.8	2,747.3	45.45	61.444	
7,600.0	7,075.8	7,214.8	7,040.9	23.4	26.9	-111.40	-318.5	-2,820.5	2,754.5	2,708.5	46.08	59.775	
7,700.0	7,075.3	7,214.0	7,040.1	25.1	26.9	-110.66	-318.5	-2,820.5	2,654.6	2,606.7	47.88	55.445	
7,800.0	7,074.8	7,213.2	7,039.3	27.0	26.9	-109.92	-318.5	-2,820.5	2,554.6	2,504.7	49.86	51.234	
7,900.0	7,074.4	7,212.5	7,038.5	29.0	26.9	-109.18	-318.5	-2,820.5	2,454.6	2,402.6	52.00	47.206	
8,000.0	7,073.9	7,211.7	7,037.7	31.1	26.9	-108.43	-318.5	-2,820.5	2,354.6	2,300.4	54.26	43.394	
8,100.0	7,073.4	7,210.9	7,037.0	33.4	26.9	-107.67	-318.5	-2,820.5	2,254.7	2,198.0	56.63	39.815	
8,200.0	7,072.9	7,210.1	7,036.2	35.7	26.9	-106.91	-318.5	-2,820.5	2,154.7	2,095.6	59.08	36.469	
8,300.0	7,072.4	7,209.4	7,035.4	38.1	26.9	-106.15	-318.5	-2,820.5	2,054.7	1,993.1	61.61	33.352	
8,400.0	7,071.9	7,208.6	7,034.7	40.6	26.9	-105.38	-318.5	-2,820.5	1,954.8	1,890.6	64.19	30.451	
8,500.0	7,071.5	7,207.8	7,033.9	43.1	26.9	-104.61	-318.5	-2,820.5	1,854.8	1,788.0	66.83	27.755	
8,600.0	7,071.0	7,207.0	7,033.1	45.6	26.9	-103.84	-318.5	-2,820.5	1,754.9	1,685.4	69.51	25.248	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD RYLAND 44-20D - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 599-MWD — **Offset Well Error:** 0.0 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
8,700.0	7,070.5	7,206.3	7,032.4	48.1	26.9	-103.06	-318.5	-2,820.5	1,654.9	1,582.7	72.22	22.915	
8,800.0	7,070.0	7,205.5	7,031.6	50.7	26.9	-102.28	-318.5	-2,820.5	1,555.0	1,480.0	74.96	20.744	
8,900.0	7,069.5	7,204.8	7,030.8	53.3	26.9	-101.50	-318.5	-2,820.5	1,455.0	1,377.3	77.73	18.720	
9,000.0	7,069.0	7,204.0	7,030.1	56.0	26.9	-100.72	-318.5	-2,820.5	1,355.1	1,274.6	80.51	16.831	
9,100.0	7,068.6	7,203.3	7,029.3	58.6	26.9	-99.93	-318.5	-2,820.5	1,255.2	1,171.9	83.32	15.066	
9,200.0	7,068.1	7,202.5	7,028.6	61.3	26.9	-99.14	-318.5	-2,820.5	1,155.3	1,069.2	86.13	13.413	
9,300.0	7,067.6	7,201.7	7,027.8	63.9	26.9	-98.35	-318.5	-2,820.5	1,055.4	966.5	88.95	11.865	
9,400.0	7,067.1	7,201.0	7,027.1	66.6	26.9	-97.56	-318.5	-2,820.5	955.6	863.8	91.78	10.411	
9,500.0	7,066.6	7,200.2	7,026.3	69.3	26.9	-96.77	-318.5	-2,820.5	855.7	761.1	94.62	9.044	
9,600.0	7,066.1	7,199.5	7,025.6	72.0	26.9	-95.98	-318.5	-2,820.5	756.0	658.5	97.45	7.757	
9,700.0	7,065.6	7,198.8	7,024.8	74.7	26.9	-95.19	-318.5	-2,820.5	656.3	556.0	100.28	6.544	
9,800.0	7,065.2	7,198.0	7,024.1	77.5	26.9	-94.40	-318.5	-2,820.5	556.6	453.5	103.11	5.399	
9,900.0	7,064.7	7,197.3	7,023.3	80.2	26.9	-93.61	-318.5	-2,820.5	457.2	351.3	105.93	4.316	
10,000.0	7,064.2	7,196.5	7,022.6	82.9	26.9	-92.82	-318.5	-2,820.5	358.1	249.3	108.74	3.293	
10,100.0	7,063.7	7,195.8	7,021.9	85.6	26.9	-92.03	-318.5	-2,820.5	259.6	148.1	111.54	2.328	
10,200.0	7,063.2	7,195.1	7,021.1	88.4	26.9	-91.24	-318.5	-2,820.5	163.1	48.7	114.33	1.426	Level 3
10,300.0	7,062.7	7,194.3	7,020.4	91.1	26.9	-90.46	-318.5	-2,820.5	76.0	-41.1	117.11	0.649	Level 1
10,354.1	7,062.5	7,193.9	7,020.0	92.6	26.9	-90.03	-318.5	-2,820.5	53.3	-65.3	118.60	0.450	Level 1, CC, ES, SF
10,400.0	7,062.3	7,193.6	7,019.7	93.9	26.9	-89.67	-318.5	-2,820.5	70.4	-49.5	119.87	0.587	Level 1
10,500.0	7,061.8	7,192.9	7,019.0	96.6	26.9	-88.89	-318.5	-2,820.5	155.3	32.7	122.61	1.267	Level 3
10,600.0	7,061.3	7,192.2	7,018.2	99.4	26.9	-88.11	-318.5	-2,820.5	251.6	126.3	125.33	2.008	
10,700.0	7,060.8	7,191.4	7,017.5	102.1	26.9	-87.34	-318.5	-2,820.5	350.0	221.9	128.04	2.733	
10,800.0	7,060.3	7,190.7	7,016.8	104.9	26.9	-86.56	-318.5	-2,820.5	449.1	318.3	130.72	3.435	
10,900.0	7,059.8	7,190.0	7,016.1	107.6	26.9	-85.79	-318.5	-2,820.5	548.5	415.1	133.38	4.112	
11,000.0	7,059.4	7,189.3	7,015.3	110.4	26.9	-85.03	-318.5	-2,820.5	648.1	512.1	136.01	4.765	
11,100.0	7,058.9	7,188.6	7,014.6	113.2	26.9	-84.27	-318.5	-2,820.5	747.8	609.2	138.62	5.395	
11,200.0	7,058.4	7,187.8	7,013.9	115.9	26.9	-83.51	-318.5	-2,820.5	847.6	706.4	141.20	6.002	
11,300.0	7,057.9	7,187.1	7,013.2	118.7	26.9	-82.75	-318.5	-2,820.5	947.4	803.6	143.76	6.590	
11,400.0	7,057.4	7,186.4	7,012.5	121.5	26.9	-82.00	-318.5	-2,820.5	1,047.2	900.9	146.28	7.159	
11,500.0	7,056.9	7,185.7	7,011.8	124.3	26.9	-81.26	-318.5	-2,820.5	1,147.1	998.3	148.78	7.710	
11,600.0	7,056.5	7,185.0	7,011.1	127.0	26.9	-80.52	-318.5	-2,820.5	1,247.0	1,095.8	151.25	8.245	
11,688.2	7,056.0	7,184.4	7,010.4	129.5	26.9	-79.87	-318.5	-2,820.5	1,335.1	1,181.7	153.39	8.704	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WALTERS #21ODU - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 703-MWD — **Offset Well Error:** 0.0 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
0.0	0.0	1.5	1.5	0.0	0.0	-44.83	548.6	-545.4	773.6				
100.0	100.0	102.8	102.8	0.1	0.1	-44.83	548.6	-545.3	773.5	773.3	0.20	3,787.009	
200.0	200.0	204.0	204.0	0.3	0.2	-44.84	548.3	-545.2	773.3	772.7	0.53	1,446.763	
300.0	300.0	305.2	305.2	0.5	0.3	-44.85	547.9	-545.1	772.9	772.0	0.86	893.789	
400.0	400.0	406.5	406.5	0.8	0.4	-44.87	547.3	-544.9	772.3	771.1	1.19	646.317	
500.0	500.0	507.7	507.7	1.0	0.5	-44.90	546.5	-544.6	771.6	770.0	1.53	505.905	
600.0	600.0	608.9	608.9	1.2	0.6	-44.93	545.6	-544.2	770.7	768.8	1.86	415.390	
631.7	631.7	641.1	641.0	1.3	0.7	-155.93	545.3	-544.1	770.5	768.6	1.95	394.357	CC, ES
700.0	700.0	709.8	709.8	1.4	0.7	-155.99	544.5	-543.8	771.2	769.1	2.17	354.622	
800.0	799.8	807.4	807.4	1.6	1.0	-156.01	545.0	-542.2	775.2	772.6	2.57	301.075	
900.0	899.5	913.7	913.5	1.9	1.2	-155.82	548.1	-537.4	781.9	778.9	3.00	260.517	
1,000.0	998.7	1,013.7	1,013.1	2.1	1.4	-155.41	553.4	-529.3	791.1	787.7	3.45	229.234	
1,100.0	1,097.5	1,099.4	1,098.0	2.4	1.6	-154.93	560.4	-521.2	804.6	800.7	3.90	206.202	
1,200.0	1,195.6	1,185.4	1,182.9	2.7	1.9	-154.25	570.9	-511.5	822.9	818.4	4.41	186.638	
1,200.1	1,195.8	1,185.6	1,183.0	2.7	1.9	-154.25	570.9	-511.5	822.9	818.5	4.41	186.613	
1,300.0	1,293.4	1,276.1	1,271.9	3.1	2.2	-153.62	584.2	-500.5	843.9	838.9	4.98	169.441	
1,400.0	1,391.3	1,375.4	1,369.1	3.5	2.6	-152.87	599.7	-487.5	865.1	859.5	5.62	153.853	
1,500.0	1,489.1	1,464.4	1,455.9	4.0	2.9	-152.14	614.9	-475.2	887.0	880.7	6.27	141.512	
1,600.0	1,586.9	1,560.0	1,548.6	4.4	3.4	-151.23	633.2	-460.3	909.4	902.5	7.00	129.998	
1,700.0	1,684.7	1,661.5	1,645.9	4.8	3.9	-150.05	655.1	-441.4	932.1	924.3	7.82	119.192	
1,800.0	1,782.5	1,764.8	1,744.1	5.3	4.5	-148.74	678.0	-419.4	954.0	945.3	8.71	109.565	
1,900.0	1,880.3	1,856.5	1,831.0	5.7	5.0	-147.56	699.3	-399.0	976.5	966.9	9.55	102.240	
2,000.0	1,978.1	1,954.3	1,923.9	6.1	5.5	-146.39	721.5	-377.8	999.3	988.9	10.42	95.918	
2,100.0	2,075.9	2,052.8	2,017.2	6.6	6.1	-145.25	743.9	-356.0	1,022.3	1,011.0	11.31	90.363	
2,200.0	2,173.8	2,151.5	2,110.8	7.0	6.7	-144.16	766.0	-333.9	1,045.4	1,033.1	12.21	85.607	
2,300.0	2,271.6	2,242.5	2,197.6	7.5	7.2	-143.26	785.7	-314.7	1,068.7	1,055.6	13.04	81.961	
2,400.0	2,369.4	2,342.8	2,293.2	8.0	7.7	-142.32	807.7	-293.7	1,092.7	1,078.8	13.94	78.406	
2,500.0	2,467.2	2,449.0	2,394.2	8.4	8.3	-141.33	830.4	-270.2	1,115.9	1,101.0	14.88	74.989	
2,600.0	2,565.0	2,535.4	2,476.8	8.9	8.8	-140.61	848.3	-252.1	1,139.2	1,123.5	15.71	72.520	
2,700.0	2,662.8	2,617.9	2,555.3	9.3	9.3	-139.90	866.6	-234.4	1,163.9	1,147.3	16.53	70.405	
2,800.0	2,760.6	2,703.4	2,636.6	9.8	9.8	-139.20	886.3	-216.7	1,189.7	1,172.4	17.37	68.497	
2,900.0	2,858.5	2,788.9	2,717.9	10.2	10.3	-138.56	906.3	-199.7	1,216.5	1,198.3	18.19	66.890	
3,000.0	2,956.3	2,877.4	2,802.6	10.7	10.8	-138.00	926.8	-184.2	1,244.2	1,225.2	19.00	65.474	
3,100.0	3,054.1	3,004.9	2,924.3	11.2	11.5	-137.18	956.2	-160.1	1,271.6	1,251.6	20.04	63.440	
3,200.0	3,151.9	3,100.7	3,015.6	11.6	12.0	-136.53	977.0	-139.9	1,296.9	1,275.9	20.94	61.924	
3,300.0	3,249.7	3,187.1	3,097.7	12.1	12.6	-135.94	996.6	-121.6	1,323.1	1,301.3	21.80	60.703	
3,400.0	3,347.5	3,292.3	3,197.7	12.5	13.2	-135.25	1,020.6	-99.3	1,349.6	1,326.9	22.76	59.302	
3,500.0	3,445.3	3,399.7	3,299.5	13.0	13.8	-134.53	1,044.6	-75.0	1,375.3	1,351.5	23.75	57.908	
3,600.0	3,543.2	3,481.1	3,376.6	13.5	14.3	-133.98	1,062.9	-56.2	1,401.2	1,376.6	24.61	56.947	
3,700.0	3,641.0	3,586.5	3,476.1	13.9	15.0	-133.26	1,087.4	-31.4	1,427.6	1,402.0	25.62	55.731	
3,800.0	3,738.8	3,694.7	3,578.0	14.4	15.7	-132.50	1,111.8	-4.3	1,453.1	1,426.4	26.66	54.505	
3,900.0	3,836.6	3,778.0	3,656.3	14.8	16.2	-131.93	1,130.9	16.5	1,479.2	1,451.6	27.55	53.696	
4,000.0	3,934.4	3,838.6	3,713.0	15.3	16.7	-131.51	1,145.8	31.7	1,506.8	1,478.5	28.32	53.210	
4,100.0	4,032.2	3,908.2	3,777.4	15.8	17.2	-130.97	1,164.6	50.3	1,536.3	1,507.2	29.15	52.700	
4,159.1	4,090.0	3,951.2	3,817.2	16.0	17.5	-130.65	1,176.5	61.3	1,554.5	1,524.9	29.66	52.412	
4,200.0	4,130.1	3,980.9	3,844.8	16.2	17.7	-130.65	1,184.9	68.7	1,567.2	1,537.2	30.02	52.207	
4,300.0	4,228.5	4,058.0	3,916.1	16.5	18.2	-130.54	1,207.3	87.4	1,597.8	1,566.9	30.85	51.788	
4,400.0	4,327.5	4,236.1	4,082.6	16.8	19.4	-129.61	1,254.8	129.2	1,624.7	1,592.5	32.20	50.465	
4,500.0	4,426.9	4,351.4	4,191.2	17.0	20.1	-129.02	1,281.5	157.1	1,646.1	1,613.0	33.13	49.686	
4,600.0	4,526.6	4,439.6	4,273.9	17.2	20.7	-128.51	1,302.2	179.8	1,665.5	1,631.6	33.89	49.142	
4,700.0	4,626.6	4,525.0	4,354.4	17.3	21.3	-128.00	1,321.8	200.6	1,683.2	1,648.6	34.56	48.706	
4,759.3	4,685.8	4,576.4	4,403.0	17.4	21.6	-16.69	1,333.5	212.2	1,693.1	1,664.7	28.36	59.703	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WALTERS #21ODU - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 703-MWD — **Offset Well Error:** 0.0 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
4,800.0	4,726.5	4,603.1	4,428.3	17.5	21.7	-16.43	1,339.9	218.1	1,700.1	1,671.5	28.54	59.569	
4,900.0	4,826.5	4,750.7	4,568.7	17.6	22.6	-15.14	1,373.4	248.3	1,717.2	1,687.8	29.35	58.510	
5,000.0	4,926.5	4,928.8	4,740.6	17.7	23.5	-13.74	1,404.6	283.2	1,729.2	1,699.0	30.21	57.239	
5,100.0	5,026.5	5,022.5	4,831.3	17.8	23.9	-13.05	1,419.5	301.0	1,740.5	1,709.8	30.72	56.654	
5,200.0	5,126.5	5,152.1	4,957.7	18.0	24.5	-12.20	1,438.3	323.3	1,751.1	1,719.8	31.35	55.858	
5,300.0	5,226.5	5,278.3	5,081.8	18.1	25.0	-11.54	1,453.4	340.6	1,760.1	1,728.2	31.91	55.150	
5,400.0	5,326.5	5,404.1	5,206.2	18.2	25.4	-11.03	1,465.7	354.1	1,767.7	1,735.3	32.43	54.504	
5,500.0	5,426.5	5,534.0	5,335.2	18.3	25.7	-10.61	1,475.9	365.3	1,773.8	1,740.9	32.92	53.875	
5,600.0	5,526.5	5,665.5	5,466.3	18.5	26.0	-10.31	1,483.1	373.6	1,778.0	1,744.6	33.37	53.279	
5,700.0	5,626.5	5,766.6	5,567.1	18.6	26.2	-10.13	1,487.4	378.4	1,781.4	1,747.7	33.73	52.808	
5,800.0	5,726.5	5,860.9	5,661.3	18.8	26.4	-10.01	1,491.4	381.6	1,785.0	1,750.9	34.08	52.379	
5,900.0	5,826.5	5,968.6	5,768.8	18.9	26.5	-9.94	1,495.8	382.9	1,788.8	1,754.3	34.44	51.946	
6,000.0	5,926.5	6,088.5	5,888.7	19.0	26.7	-9.92	1,498.9	382.8	1,791.4	1,756.6	34.79	51.487	
6,100.0	6,026.5	6,211.3	6,011.5	19.2	26.8	-9.93	1,500.8	382.4	1,792.9	1,757.8	35.14	51.027	
6,200.0	6,126.5	6,314.7	6,114.9	19.3	26.9	-9.94	1,501.6	381.8	1,793.7	1,758.3	35.45	50.606	
6,300.0	6,226.5	6,418.5	6,218.7	19.5	27.0	-9.95	1,502.2	381.3	1,794.4	1,758.6	35.76	50.185	
6,400.0	6,326.5	6,521.1	6,321.3	19.6	27.1	-9.96	1,502.5	381.1	1,794.8	1,758.7	36.07	49.765	
6,433.3	6,359.8	6,553.4	6,353.6	19.7	27.1	-9.96	1,502.6	381.0	1,794.9	1,758.7	36.17	49.631	
6,450.0	6,376.5	6,569.7	6,369.9	19.7	27.1	80.04	1,502.7	380.9	1,795.0	1,752.8	42.18	42.551	
6,500.0	6,426.5	6,622.5	6,422.7	19.7	27.2	80.15	1,502.9	380.7	1,794.6	1,752.4	42.27	42.454	
6,550.0	6,476.0	6,675.1	6,475.3	19.7	27.2	80.43	1,502.9	380.4	1,793.7	1,751.4	42.31	42.397	
6,600.0	6,525.0	6,726.1	6,526.3	19.7	27.3	80.86	1,502.9	380.0	1,792.1	1,749.8	42.29	42.377	
6,650.0	6,573.3	6,776.5	6,576.7	19.7	27.3	81.44	1,502.8	379.7	1,789.9	1,747.7	42.23	42.388	
6,700.0	6,620.4	6,826.3	6,626.5	19.6	27.4	82.16	1,502.7	379.3	1,787.3	1,745.2	42.13	42.425	
6,750.0	6,666.3	6,873.5	6,673.7	19.6	27.4	82.98	1,502.4	378.9	1,784.4	1,742.4	42.00	42.481	
6,800.0	6,710.7	6,917.5	6,717.7	19.5	27.5	83.86	1,502.3	378.4	1,781.2	1,739.4	41.86	42.551	
6,850.0	6,753.4	6,960.1	6,760.3	19.4	27.5	84.81	1,502.1	378.0	1,778.1	1,736.4	41.71	42.626	
6,900.0	6,794.2	7,001.0	6,801.2	19.3	27.5	85.81	1,501.9	377.6	1,775.0	1,733.4	41.57	42.698	
6,950.0	6,832.9	7,040.0	6,840.2	19.3	27.6	86.82	1,501.8	377.3	1,772.2	1,730.7	41.45	42.757	
7,000.0	6,869.2	7,078.3	6,878.5	19.2	27.6	87.86	1,501.6	376.9	1,769.7	1,728.4	41.36	42.793	
7,050.0	6,903.1	7,113.9	6,914.1	19.2	27.6	88.85	1,501.4	376.6	1,767.8	1,726.5	41.31	42.795	
7,100.0	6,934.3	7,145.6	6,945.8	19.2	27.7	89.75	1,501.2	376.4	1,766.6	1,725.3	41.32	42.750	
7,140.0	6,957.3	7,167.9	6,968.1	19.3	27.7	90.36	1,501.1	376.3	1,766.3	1,724.9	41.40	42.668	
7,150.0	6,962.8	7,173.2	6,973.4	19.3	27.7	90.50	1,501.1	376.3	1,766.3	1,724.9	41.42	42.649	
7,200.0	6,988.3	7,198.0	6,998.2	19.5	27.7	91.13	1,500.9	376.1	1,767.1	1,725.5	41.59	42.486	
7,250.0	7,010.7	7,219.8	7,020.0	19.7	27.7	91.61	1,500.8	376.0	1,769.0	1,727.1	41.86	42.259	
7,300.0	7,029.9	7,238.8	7,039.0	20.0	27.7	91.92	1,500.8	375.9	1,772.2	1,729.9	42.23	41.967	
7,350.0	7,045.9	7,254.7	7,054.9	20.4	27.8	92.05	1,500.7	375.8	1,776.7	1,734.0	42.69	41.615	
7,400.0	7,058.6	7,267.1	7,067.3	20.8	27.8	91.96	1,500.7	375.8	1,782.6	1,739.3	43.25	41.214	
7,450.0	7,067.8	7,276.2	7,076.4	21.4	27.8	91.66	1,500.6	375.8	1,789.9	1,746.0	43.89	40.779	
7,500.0	7,073.6	7,281.9	7,082.1	22.0	27.8	91.13	1,500.6	375.7	1,798.7	1,754.1	44.60	40.329	
7,550.0	7,076.0	7,284.3	7,084.5	22.7	27.8	90.37	1,500.6	375.7	1,808.8	1,763.5	45.35	39.886	
7,561.7	7,076.0	7,284.3	7,084.5	22.9	27.8	90.16	1,500.6	375.7	1,811.4	1,765.9	45.53	39.785	
7,600.0	7,075.8	7,284.2	7,084.4	23.4	27.8	90.16	1,500.6	375.7	1,820.3	1,774.2	46.12	39.469	
7,700.0	7,075.3	7,283.9	7,084.1	25.1	27.8	90.15	1,500.6	375.7	1,847.2	1,799.4	47.82	38.632	
7,800.0	7,074.8	7,283.6	7,083.8	27.0	27.8	90.14	1,500.6	375.7	1,879.0	1,829.3	49.70	37.809	
7,900.0	7,074.4	7,283.3	7,083.5	29.0	27.8	90.13	1,500.6	375.7	1,915.4	1,863.7	51.73	37.029	
8,000.0	7,073.9	7,283.0	7,083.2	31.1	27.8	90.12	1,500.6	375.7	1,956.4	1,902.5	53.88	36.310	
8,100.0	7,073.4	7,282.7	7,082.9	33.4	27.8	90.11	1,500.6	375.7	2,001.5	1,945.3	56.13	35.657	
8,200.0	7,072.9	7,282.4	7,082.6	35.7	27.8	90.10	1,500.6	375.7	2,050.4	1,992.0	58.46	35.074	
8,300.0	7,072.4	7,282.1	7,082.3	38.1	27.8	90.09	1,500.6	375.7	2,103.0	2,042.2	60.85	34.559	
8,400.0	7,071.9	7,281.9	7,082.1	40.6	27.8	90.08	1,500.6	375.7	2,159.0	2,095.7	63.30	34.107	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WALTERS #21ODU - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 703-MWD — **Offset Well Error:** 0.0 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
8,500.0	7,071.5	7,281.6	7,081.8	43.1	27.8	90.08	1,500.6	375.7	2,218.0	2,152.2	65.79	33.713	
8,600.0	7,071.0	7,281.3	7,081.5	45.6	27.8	90.07	1,500.6	375.7	2,279.9	2,211.6	68.32	33.371	
8,700.0	7,070.5	7,281.0	7,081.2	48.1	27.8	90.06	1,500.6	375.7	2,344.5	2,273.6	70.88	33.077	
8,800.0	7,070.0	7,280.8	7,081.0	50.7	27.8	90.05	1,500.6	375.7	2,411.4	2,337.9	73.46	32.824	
8,900.0	7,069.5	7,280.5	7,080.7	53.3	27.8	90.04	1,500.6	375.7	2,480.6	2,404.5	76.07	32.608	
9,000.0	7,069.0	7,280.3	7,080.4	56.0	27.8	90.03	1,500.6	375.7	2,551.8	2,473.1	78.70	32.424	
9,100.0	7,068.6	7,280.0	7,080.2	58.6	27.8	90.02	1,500.6	375.7	2,624.9	2,543.6	81.34	32.269	
9,200.0	7,068.1	7,279.7	7,079.9	61.3	27.8	90.02	1,500.6	375.7	2,699.8	2,615.7	84.00	32.138	
9,300.0	7,067.6	7,279.5	7,079.7	63.9	27.8	90.01	1,500.6	375.7	2,776.2	2,689.5	86.68	32.029	
9,400.0	7,067.1	7,279.3	7,079.4	66.6	27.8	90.00	1,500.6	375.7	2,854.0	2,764.7	89.36	31.939	
9,500.0	7,066.6	7,279.0	7,079.2	69.3	27.8	89.99	1,500.6	375.7	2,933.3	2,841.2	92.05	31.865	
9,600.0	7,066.1	7,278.8	7,079.0	72.0	27.8	89.98	1,500.6	375.7	3,013.7	2,919.0	94.75	31.806	
9,700.0	7,065.6	7,278.5	7,078.7	74.7	27.8	89.98	1,500.6	375.7	3,095.3	2,997.8	97.46	31.759	
9,800.0	7,065.2	7,278.3	7,078.5	77.5	27.8	89.97	1,500.6	375.7	3,177.9	3,077.8	100.18	31.723	
9,900.0	7,064.7	7,278.1	7,078.3	80.2	27.8	89.96	1,500.6	375.8	3,261.6	3,158.7	102.90	31.696	
10,000.0	7,064.2	7,277.8	7,078.0	82.9	27.8	89.95	1,500.6	375.8	3,346.1	3,240.4	105.63	31.677	
10,100.0	7,063.7	7,277.6	7,077.8	85.6	27.8	89.95	1,500.6	375.8	3,431.4	3,323.0	108.36	31.665	
10,200.0	7,063.2	7,277.4	7,077.6	88.4	27.8	89.94	1,500.6	375.8	3,517.5	3,406.4	111.10	31.660	
10,300.0	7,062.7	7,277.2	7,077.3	91.1	27.8	89.93	1,500.6	375.8	3,604.4	3,490.5	113.85	31.660 SF	
10,400.0	7,062.3	7,276.9	7,077.1	93.9	27.8	89.92	1,500.6	375.8	3,691.9	3,575.3	116.59	31.665	
10,500.0	7,061.8	7,276.7	7,076.9	96.6	27.8	89.92	1,500.6	375.8	3,780.0	3,660.7	119.34	31.673	
10,600.0	7,061.3	7,276.5	7,076.7	99.4	27.8	89.91	1,500.6	375.8	3,868.7	3,746.6	122.10	31.686	
10,700.0	7,060.8	7,276.3	7,076.5	102.1	27.8	89.90	1,500.6	375.8	3,957.9	3,833.1	124.85	31.701	
10,800.0	7,060.3	7,276.1	7,076.3	104.9	27.8	89.90	1,500.6	375.8	4,047.7	3,920.1	127.61	31.719	
10,900.0	7,059.8	7,275.9	7,076.1	107.6	27.8	89.89	1,500.6	375.8	4,137.9	4,007.5	130.37	31.739	
11,000.0	7,059.4	7,275.7	7,075.9	110.4	27.8	89.88	1,500.6	375.8	4,228.5	4,095.4	133.14	31.761	
11,100.0	7,058.9	7,275.5	7,075.7	113.2	27.8	89.88	1,500.6	375.8	4,319.6	4,183.7	135.90	31.784	
11,200.0	7,058.4	7,275.3	7,075.5	115.9	27.8	89.87	1,500.6	375.8	4,411.1	4,272.4	138.67	31.809	
11,300.0	7,057.9	7,275.1	7,075.3	118.7	27.8	89.86	1,500.6	375.8	4,502.9	4,361.4	141.44	31.835	
11,400.0	7,057.4	7,274.9	7,075.1	121.5	27.8	89.86	1,500.6	375.8	4,595.0	4,450.8	144.21	31.862	
11,500.0	7,056.9	7,274.7	7,074.9	124.3	27.8	89.85	1,500.6	375.8	4,687.5	4,540.5	146.99	31.890	
11,600.0	7,056.5	7,274.5	7,074.7	127.0	27.8	89.85	1,500.6	375.8	4,780.3	4,630.5	149.76	31.919	
11,688.2	7,056.0	7,274.3	7,074.5	129.5	27.8	89.84	1,500.6	375.8	4,862.3	4,710.1	152.21	31.945	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WALTERS 21LDU - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 703-MWD — **Offset Well Error:** 0.0 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
0.0	0.0	0.0	0.0	0.0	0.0	-56.87	390.9	-598.9	715.2				
100.0	100.0	100.0	100.0	0.1	0.1	-56.88	390.8	-599.1	715.3	715.1	0.20	3,526.446	
200.0	200.0	198.6	198.6	0.3	0.2	-56.92	390.6	-599.6	715.6	715.1	0.53	1,345.952	
300.0	300.0	297.2	297.2	0.5	0.3	-56.98	390.2	-600.4	716.1	715.2	0.86	832.199	
400.0	400.0	395.7	395.7	0.8	0.4	-57.06	389.7	-601.6	716.8	715.6	1.19	602.705	
500.0	500.0	494.2	494.2	1.0	0.5	-57.17	389.1	-603.1	717.7	716.2	1.52	472.761	
600.0	600.0	592.8	592.7	1.2	0.6	-57.30	388.3	-604.9	718.8	717.0	1.85	389.198	
700.0	700.0	691.2	691.1	1.4	0.7	-168.46	387.3	-607.1	721.9	719.7	2.17	332.770	
800.0	799.8	812.1	811.9	1.6	1.0	-168.92	383.3	-609.6	727.0	724.4	2.63	276.643	
900.0	899.5	922.7	922.1	1.9	1.3	-169.79	374.0	-613.0	733.9	730.7	3.11	235.983	
1,000.0	998.7	1,050.2	1,048.3	2.1	1.7	-171.27	356.3	-616.1	740.8	737.1	3.69	200.982	
1,100.0	1,097.5	1,151.3	1,147.6	2.4	2.0	-172.80	337.4	-618.9	749.6	745.4	4.25	176.208	
1,200.0	1,195.6	1,262.9	1,256.0	2.7	2.5	-174.84	311.9	-623.5	761.7	756.8	4.93	154.384	
1,200.1	1,195.8	1,263.0	1,256.2	2.7	2.5	-174.84	311.8	-623.5	761.8	756.8	4.94	154.357	
1,300.0	1,293.4	1,363.3	1,352.8	3.1	3.0	-176.91	285.1	-627.9	775.1	769.4	5.66	137.008	
1,400.0	1,391.3	1,474.8	1,459.5	3.5	3.6	-179.27	252.9	-631.7	787.4	781.0	6.48	121.603	
1,500.0	1,489.1	1,558.4	1,538.8	4.0	4.1	178.88	227.1	-635.4	801.2	794.0	7.19	111.445	
1,600.0	1,586.9	1,653.2	1,628.4	4.4	4.7	176.75	196.7	-640.8	816.8	808.8	8.01	102.005	
1,700.0	1,684.7	1,759.4	1,728.8	4.8	5.3	174.45	162.3	-645.2	832.0	823.2	8.87	93.783	
1,800.0	1,782.5	1,847.5	1,812.0	5.3	5.8	172.58	133.4	-649.5	848.9	839.3	9.64	88.055	
1,900.0	1,880.3	1,951.1	1,909.8	5.7	6.4	170.48	99.6	-653.3	865.8	855.3	10.51	82.413	
2,000.0	1,978.1	2,045.1	1,998.6	6.1	6.9	168.66	69.0	-657.0	884.0	872.7	11.32	78.074	
2,100.0	2,075.9	2,141.7	2,089.8	6.6	7.5	166.85	37.2	-659.9	902.2	890.0	12.17	74.109	
2,200.0	2,173.8	2,226.5	2,170.0	7.0	8.0	165.33	9.7	-663.4	922.2	909.2	12.95	71.190	
2,300.0	2,271.6	2,322.3	2,260.4	7.5	8.5	163.69	-21.3	-667.4	943.2	929.3	13.82	68.255	
2,400.0	2,369.4	2,407.1	2,340.3	8.0	9.1	162.23	-49.7	-671.1	965.0	950.4	14.65	65.864	
2,500.0	2,467.2	2,479.5	2,408.2	8.4	9.5	161.01	-74.2	-675.7	989.4	974.0	15.42	64.151	
2,600.0	2,565.0	2,578.7	2,501.0	8.9	10.2	159.35	-108.7	-682.6	1,015.2	998.8	16.38	61.959	
2,700.0	2,662.8	2,679.3	2,594.9	9.3	10.8	157.70	-144.5	-689.0	1,041.0	1,023.7	17.36	59.956	
2,800.0	2,760.6	2,781.9	2,690.5	9.8	11.5	156.09	-181.1	-694.4	1,066.7	1,048.4	18.34	58.175	
2,900.0	2,858.5	2,874.0	2,777.0	10.2	12.1	154.81	-212.4	-699.0	1,092.5	1,073.3	19.21	56.878	
3,000.0	2,956.3	2,957.3	2,855.3	10.7	12.6	153.71	-240.5	-703.8	1,119.6	1,099.6	20.04	55.882	
3,100.0	3,054.1	3,051.7	2,943.8	11.2	13.2	152.48	-273.0	-709.4	1,147.5	1,126.5	20.97	54.732	
3,200.0	3,151.9	3,149.4	3,035.4	11.6	13.8	151.29	-306.2	-715.2	1,175.8	1,153.9	21.87	53.756	
3,300.0	3,249.7	3,254.8	3,135.2	12.1	14.4	150.17	-339.7	-720.7	1,203.3	1,180.5	22.78	52.817	
3,400.0	3,347.5	3,341.9	3,217.7	12.5	14.9	149.30	-367.3	-725.3	1,231.4	1,207.8	23.60	52.168	
3,500.0	3,445.3	3,442.3	3,313.1	13.0	15.5	148.41	-397.7	-731.1	1,260.0	1,235.5	24.48	51.474	
3,600.0	3,543.2	3,551.4	3,417.4	13.5	16.1	147.53	-429.6	-736.1	1,287.5	1,262.1	25.37	50.738	
3,700.0	3,641.0	3,639.3	3,501.4	13.9	16.6	146.86	-455.2	-740.2	1,315.1	1,288.9	26.17	50.253	
3,800.0	3,738.8	3,723.9	3,582.3	14.4	17.0	146.25	-479.6	-744.7	1,343.6	1,316.7	26.95	49.859	
3,900.0	3,836.6	3,805.2	3,660.0	14.8	17.5	145.70	-503.0	-749.7	1,373.0	1,345.3	27.71	49.544	
4,000.0	3,934.4	3,880.4	3,731.4	15.3	17.9	145.16	-525.7	-755.1	1,403.8	1,375.3	28.46	49.326	
4,100.0	4,032.2	3,985.1	3,830.8	15.8	18.5	144.42	-558.0	-762.6	1,435.0	1,405.7	29.37	48.862	
4,159.1	4,090.0	4,051.5	3,893.8	16.0	18.9	143.96	-578.6	-766.9	1,453.1	1,423.2	29.93	48.558	
4,200.0	4,130.1	4,090.1	3,930.4	16.2	19.1	143.83	-590.6	-769.1	1,465.3	1,435.0	30.30	48.362	
4,300.0	4,228.5	4,184.2	4,019.7	16.5	19.7	143.50	-619.4	-774.9	1,493.3	1,462.2	31.13	47.968	
4,400.0	4,327.5	4,278.8	4,109.8	16.8	20.2	143.10	-648.0	-780.7	1,518.8	1,486.9	31.92	47.589	
4,500.0	4,426.9	4,367.7	4,194.7	17.0	20.7	142.72	-673.6	-786.9	1,542.1	1,509.5	32.62	47.279	
4,600.0	4,526.6	4,463.6	4,286.2	17.2	21.2	142.20	-701.4	-793.7	1,563.3	1,529.9	33.31	46.924	
4,700.0	4,626.6	4,559.4	4,377.5	17.3	21.8	141.58	-729.8	-800.0	1,581.7	1,547.7	33.98	46.548	
4,759.3	4,685.8	4,607.0	4,422.6	17.4	22.1	-107.78	-744.4	-803.2	1,591.8	1,562.0	29.73	53.534	
4,800.0	4,726.5	4,657.9	4,470.9	17.5	22.4	-108.29	-760.2	-806.5	1,598.5	1,568.5	30.02	53.245	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WALTERS 21LDU - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 703-MWD — **Offset Well Error:** 0.0 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
4,900.0	4,826.5	4,817.2	4,623.4	17.6	23.2	-109.74	-805.6	-814.5	1,613.0	1,582.2	30.85	52.291	
5,000.0	4,926.5	4,950.2	4,751.9	17.7	23.9	-110.85	-839.7	-817.2	1,623.9	1,592.4	31.51	51.538	
5,100.0	5,026.5	5,054.5	4,852.9	17.8	24.4	-111.68	-865.8	-819.1	1,635.0	1,602.9	32.06	50.999	
5,200.0	5,126.5	5,187.4	4,982.7	18.0	24.9	-112.57	-893.9	-821.5	1,644.9	1,612.2	32.67	50.341	
5,300.0	5,226.5	5,324.1	5,117.6	18.1	25.4	-113.25	-916.0	-823.2	1,652.3	1,619.1	33.23	49.721	
5,400.0	5,326.5	5,432.0	5,224.5	18.2	25.7	-113.69	-930.4	-824.4	1,658.7	1,625.0	33.67	49.258	
5,500.0	5,426.5	5,550.9	5,342.8	18.3	26.0	-114.05	-942.6	-826.5	1,664.5	1,630.4	34.12	48.787	
5,600.0	5,526.5	5,682.2	5,473.8	18.5	26.2	-114.27	-950.7	-829.1	1,668.8	1,634.3	34.53	48.326	
5,700.0	5,626.5	5,800.0	5,591.6	18.6	26.4	-114.29	-952.5	-831.4	1,671.2	1,636.3	34.87	47.925	
5,800.0	5,726.5	5,905.5	5,697.1	18.8	26.5	-114.26	-952.5	-833.8	1,673.3	1,638.1	35.17	47.571	
5,900.0	5,826.5	6,012.4	5,803.9	18.9	26.6	-114.23	-952.5	-835.7	1,674.9	1,639.4	35.48	47.209	
6,000.0	5,926.5	6,116.8	5,908.3	19.0	26.7	-114.21	-952.7	-837.1	1,676.2	1,640.4	35.78	46.848	
6,100.0	6,026.5	6,219.6	6,011.1	19.2	26.8	-114.20	-952.8	-838.2	1,677.3	1,641.2	36.08	46.486	
6,200.0	6,126.5	6,319.8	6,111.3	19.3	26.9	-114.20	-953.3	-839.2	1,678.3	1,641.9	36.38	46.129	
6,300.0	6,226.5	6,423.2	6,214.7	19.5	27.0	-114.21	-953.7	-840.0	1,679.2	1,642.5	36.69	45.766	
6,400.0	6,326.5	6,526.8	6,318.3	19.6	27.1	-114.20	-953.9	-840.7	1,679.9	1,642.9	37.00	45.405	
6,433.3	6,359.8	6,561.4	6,352.9	19.7	27.1	-114.20	-953.9	-840.9	1,680.1	1,643.0	37.10	45.285	
6,450.0	6,376.5	6,576.0	6,367.5	19.7	27.1	-24.21	-953.9	-841.0	1,680.0	1,638.6	41.36	40.615	
6,500.0	6,426.5	6,625.6	6,417.1	19.7	27.2	-24.32	-953.9	-841.3	1,677.6	1,636.2	41.36	40.565	
6,550.0	6,476.0	6,672.4	6,463.8	19.7	27.2	-24.58	-953.9	-841.6	1,672.1	1,631.0	41.17	40.616	
6,600.0	6,525.0	6,718.3	6,509.8	19.7	27.3	-25.00	-954.0	-842.1	1,663.6	1,622.8	40.81	40.760	
6,650.0	6,573.3	6,763.7	6,555.1	19.7	27.3	-25.58	-954.1	-842.6	1,652.1	1,611.8	40.30	40.994	
6,700.0	6,620.4	6,814.5	6,605.9	19.6	27.4	-26.38	-954.2	-843.1	1,637.6	1,598.0	39.65	41.297	
6,750.0	6,666.3	6,863.0	6,654.5	19.6	27.4	-27.38	-954.5	-843.5	1,620.1	1,581.2	38.88	41.667	
6,800.0	6,710.7	6,906.0	6,697.4	19.5	27.5	-28.58	-954.7	-843.8	1,599.7	1,561.7	38.01	42.090	
6,850.0	6,753.4	6,949.0	6,740.5	19.4	27.5	-30.04	-954.9	-844.2	1,576.7	1,539.6	37.07	42.535	
6,900.0	6,794.2	6,989.4	6,780.9	19.3	27.6	-31.78	-955.0	-844.5	1,551.2	1,515.1	36.10	42.963	
6,950.0	6,832.9	7,029.3	6,820.8	19.3	27.6	-33.86	-955.1	-844.9	1,523.2	1,488.0	35.17	43.309	
7,000.0	6,869.2	7,067.1	6,858.5	19.2	27.6	-36.31	-955.3	-845.2	1,493.0	1,458.7	34.33	43.488	
7,050.0	6,903.1	7,102.4	6,893.9	19.2	27.7	-39.17	-955.3	-845.5	1,460.8	1,427.1	33.66	43.395	
7,100.0	6,934.3	7,135.0	6,926.5	19.2	27.7	-42.50	-955.3	-845.7	1,426.7	1,393.5	33.24	42.915	
7,150.0	6,962.8	7,163.7	6,955.2	19.3	27.7	-46.30	-955.3	-846.0	1,391.0	1,357.9	33.15	41.964	
7,200.0	6,988.3	7,189.4	6,980.9	19.5	27.8	-50.61	-955.3	-846.2	1,354.0	1,320.6	33.43	40.506	
7,250.0	7,010.7	7,212.1	7,003.5	19.7	27.8	-55.44	-955.3	-846.3	1,316.0	1,281.9	34.09	38.606	
7,300.0	7,029.9	7,231.8	7,023.3	20.0	27.8	-60.73	-955.3	-846.5	1,277.0	1,242.0	35.06	36.422	
7,350.0	7,045.9	7,249.1	7,040.5	20.4	27.8	-66.43	-955.3	-846.6	1,237.5	1,201.3	36.23	34.156	
7,400.0	7,058.6	7,262.8	7,054.2	20.8	27.9	-72.30	-955.3	-846.7	1,197.8	1,160.3	37.42	32.006	
7,450.0	7,067.8	7,272.8	7,064.3	21.4	27.9	-78.13	-955.3	-846.7	1,158.0	1,119.5	38.48	30.090	
7,500.0	7,073.6	7,279.3	7,070.7	22.0	27.9	-83.72	-955.3	-846.8	1,118.5	1,079.2	39.32	28.447	
7,550.0	7,076.0	7,282.0	7,073.4	22.7	27.9	-88.87	-955.3	-846.8	1,079.7	1,039.8	39.91	27.053	
7,561.7	7,076.0	7,282.1	7,073.6	22.9	27.9	-90.00	-955.3	-846.8	1,070.7	1,030.7	40.02	26.756	
7,600.0	7,075.8	7,282.1	7,073.6	23.4	27.9	-90.00	-955.3	-846.8	1,041.7	1,001.1	40.61	25.654	
7,700.0	7,075.3	7,282.2	7,073.6	25.1	27.9	-90.01	-955.3	-846.8	969.1	926.8	42.30	22.909	
7,800.0	7,074.8	7,282.3	7,073.7	27.0	27.9	-90.01	-955.3	-846.8	901.7	857.5	44.18	20.409	
7,900.0	7,074.4	7,282.3	7,073.8	29.0	27.9	-90.02	-955.3	-846.8	840.8	794.6	46.21	18.194	
8,000.0	7,073.9	7,282.4	7,073.9	31.1	27.9	-90.03	-955.3	-846.8	788.0	739.6	48.37	16.292	
8,100.0	7,073.4	7,282.5	7,073.9	33.4	27.9	-90.03	-955.3	-846.8	744.9	694.3	50.62	14.716	
8,200.0	7,072.9	7,282.5	7,074.0	35.7	27.9	-90.04	-955.3	-846.8	713.3	660.4	52.95	13.472	
8,300.0	7,072.4	7,282.6	7,074.1	38.1	27.9	-90.04	-955.3	-846.8	694.8	639.5	55.34	12.555	
8,380.3	7,072.0	7,282.6	7,074.1	40.1	27.9	-90.05	-955.3	-846.8	690.1	632.8	57.31	12.043	CC
8,400.0	7,071.9	7,282.7	7,074.1	40.6	27.9	-90.05	-955.3	-846.8	690.4	632.6	57.79	11.948	ES
8,500.0	7,071.5	7,282.7	7,074.2	43.1	27.9	-90.05	-955.3	-846.8	700.4	640.1	60.28	11.620	

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 WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WALTERS 21LDU - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 703-MWD — **Offset Well Error:** 0.0 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
8,600.0	7,071.0	7,282.8	7,074.2	45.6	27.9	-90.06	-955.3	-846.8	724.2	661.4	62.81	11.531	SF
8,700.0	7,070.5	7,282.9	7,074.3	48.1	27.9	-90.06	-955.3	-846.8	760.6	695.2	65.36	11.636	
8,800.0	7,070.0	7,282.9	7,074.4	50.7	27.9	-90.07	-955.3	-846.8	807.7	739.8	67.95	11.887	
8,900.0	7,069.5	7,283.0	7,074.4	53.3	27.9	-90.08	-955.3	-846.8	863.9	793.3	70.56	12.244	
9,000.0	7,069.0	7,283.0	7,074.5	56.0	27.9	-90.08	-955.3	-846.8	927.5	854.3	73.19	12.673	
9,100.0	7,068.6	7,283.1	7,074.6	58.6	27.9	-90.09	-955.3	-846.8	997.1	921.3	75.83	13.149	
9,200.0	7,068.1	7,283.2	7,074.6	61.3	27.9	-90.09	-955.3	-846.8	1,071.5	993.0	78.49	13.652	
9,300.0	7,067.6	7,283.2	7,074.7	63.9	27.9	-90.10	-955.3	-846.8	1,149.8	1,068.6	81.16	14.167	
9,400.0	7,067.1	7,283.3	7,074.8	66.6	27.9	-90.10	-955.3	-846.8	1,231.2	1,147.4	83.84	14.685	
9,500.0	7,066.6	7,283.4	7,074.8	69.3	27.9	-90.11	-955.3	-846.8	1,315.3	1,228.7	86.54	15.199	
9,600.0	7,066.1	7,283.4	7,074.9	72.0	27.9	-90.11	-955.3	-846.8	1,401.4	1,312.1	89.24	15.704	
9,700.0	7,065.6	7,283.5	7,074.9	74.7	27.9	-90.12	-955.3	-846.8	1,489.2	1,397.3	91.95	16.196	
9,800.0	7,065.2	7,283.6	7,075.0	77.5	27.9	-90.12	-955.3	-846.8	1,578.5	1,483.8	94.66	16.675	
9,900.0	7,064.7	7,283.6	7,075.1	80.2	27.9	-90.13	-955.3	-846.8	1,669.0	1,571.6	97.39	17.138	
10,000.0	7,064.2	7,283.7	7,075.1	82.9	27.9	-90.13	-955.3	-846.8	1,760.6	1,660.4	100.12	17.585	
10,100.0	7,063.7	7,283.7	7,075.2	85.6	27.9	-90.14	-955.3	-846.8	1,853.0	1,750.1	102.85	18.016	
10,200.0	7,063.2	7,283.8	7,075.3	88.4	27.9	-90.14	-955.3	-846.8	1,946.1	1,840.5	105.59	18.431	
10,300.0	7,062.7	7,283.9	7,075.3	91.1	27.9	-90.15	-955.3	-846.8	2,039.9	1,931.6	108.33	18.831	
10,400.0	7,062.3	7,283.9	7,075.4	93.9	27.9	-90.15	-955.3	-846.8	2,134.3	2,023.2	111.08	19.215	
10,500.0	7,061.8	7,284.0	7,075.4	96.6	27.9	-90.16	-955.3	-846.8	2,229.2	2,115.3	113.83	19.584	
10,600.0	7,061.3	7,284.0	7,075.5	99.4	27.9	-90.16	-955.3	-846.8	2,324.5	2,207.9	116.58	19.939	
10,700.0	7,060.8	7,284.1	7,075.6	102.1	27.9	-90.17	-955.3	-846.8	2,420.1	2,300.8	119.34	20.280	
10,800.0	7,060.3	7,284.2	7,075.6	104.9	27.9	-90.17	-955.3	-846.8	2,516.2	2,394.1	122.10	20.608	
10,900.0	7,059.8	7,284.2	7,075.7	107.6	27.9	-90.18	-955.3	-846.8	2,612.5	2,487.6	124.86	20.924	
11,000.0	7,059.4	7,284.3	7,075.7	110.4	27.9	-90.18	-955.3	-846.8	2,709.0	2,581.4	127.62	21.227	
11,100.0	7,058.9	7,284.3	7,075.8	113.2	27.9	-90.19	-955.3	-846.8	2,805.9	2,675.5	130.39	21.519	
11,200.0	7,058.4	7,284.4	7,075.8	115.9	27.9	-90.19	-955.3	-846.8	2,902.9	2,769.7	133.16	21.801	
11,300.0	7,057.9	7,284.4	7,075.9	118.7	27.9	-90.20	-955.3	-846.8	3,000.1	2,864.2	135.93	22.072	
11,400.0	7,057.4	7,284.5	7,076.0	121.5	27.9	-90.20	-955.3	-846.8	3,097.5	2,958.8	138.70	22.333	
11,500.0	7,056.9	7,284.6	7,076.0	124.3	27.9	-90.21	-955.3	-846.8	3,195.1	3,053.6	141.47	22.585	
11,600.0	7,056.5	7,284.6	7,076.1	127.0	27.9	-90.21	-955.3	-846.8	3,292.8	3,148.5	144.25	22.828	
11,688.2	7,056.0	7,284.6	7,076.1	129.5	27.9	-90.21	-955.3	-846.8	3,379.0	3,232.4	146.69	23.035	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WALTERS 21QDU - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 148-MWD — **Offset Well Error:** 0.0 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
0.0	0.0	1.5	1.5	0.0	0.0	-52.27	449.2	-580.5	734.0				
100.0	100.0	102.8	102.8	0.1	0.1	-52.30	448.8	-580.7	733.9	733.7	0.17	4,238.621	
200.0	200.0	204.2	204.2	0.3	0.2	-52.39	447.7	-581.2	733.6	733.1	0.56	1,319.009	
300.0	300.0	323.4	323.4	0.5	0.5	-52.51	445.5	-580.8	732.4	731.3	1.04	704.862	
400.0	400.0	471.1	470.7	0.8	0.9	-52.57	439.2	-573.9	726.0	724.4	1.60	452.646	
500.0	500.0	608.1	606.7	1.0	1.2	-52.58	429.0	-560.7	713.8	711.6	2.21	323.150	
600.0	600.0	725.5	722.5	1.2	1.6	-52.73	416.0	-546.7	697.5	694.7	2.82	247.319	
700.0	700.0	839.5	834.5	1.4	2.1	-164.37	398.8	-534.1	681.3	678.1	3.17	214.618	
800.0	799.8	976.9	968.0	1.6	2.7	-165.57	371.9	-515.8	663.9	660.2	3.76	176.482	
900.0	899.5	1,113.9	1,098.8	1.9	3.5	-167.15	338.8	-492.2	644.0	639.6	4.43	145.468	
1,000.0	998.7	1,224.7	1,202.9	2.1	4.3	-168.84	307.4	-470.8	623.4	618.4	5.06	123.208	
1,100.0	1,097.5	1,325.3	1,297.0	2.4	4.9	-170.51	278.4	-450.6	605.8	600.1	5.67	106.856	
1,200.0	1,195.6	1,414.8	1,381.0	2.7	5.5	-171.95	253.9	-431.8	592.0	585.8	6.22	95.116	
1,200.1	1,195.8	1,414.9	1,381.2	2.7	5.5	-171.95	253.8	-431.8	592.0	585.8	6.22	95.102	
1,300.0	1,293.4	1,508.2	1,469.3	3.1	6.0	-173.44	229.4	-413.3	582.1	575.3	6.84	85.134	
1,400.0	1,391.3	1,612.3	1,567.3	3.5	6.7	-175.27	201.0	-393.0	572.4	564.8	7.57	75.649	
1,500.0	1,489.1	1,710.2	1,659.1	4.0	7.3	-177.22	172.5	-374.0	562.4	554.1	8.31	67.652	
1,600.0	1,586.9	1,820.2	1,761.8	4.4	8.0	-179.50	140.1	-351.9	552.5	543.3	9.17	60.265	
1,700.0	1,684.7	1,924.3	1,858.5	4.8	8.8	178.33	109.4	-328.8	541.1	531.1	10.04	53.873	
1,800.0	1,782.5	2,011.9	1,940.2	5.3	9.4	176.51	84.2	-309.5	531.0	520.2	10.82	49.055	
1,900.0	1,880.3	2,112.3	2,033.7	5.7	10.0	174.20	54.2	-288.3	522.1	510.4	11.76	44.389	
2,000.0	1,978.1	2,209.1	2,123.5	6.1	10.8	171.79	24.4	-268.0	513.9	501.2	12.77	40.242	
2,100.0	2,075.9	2,304.5	2,212.3	6.6	11.4	169.45	-4.1	-248.0	507.0	493.2	13.77	36.813	
2,200.0	2,173.8	2,403.6	2,304.7	7.0	12.1	167.00	-33.3	-227.3	501.1	486.3	14.84	33.774	
2,300.0	2,271.6	2,503.9	2,397.7	7.5	12.8	164.36	-63.9	-205.5	495.2	479.1	16.02	30.911	
2,400.0	2,369.4	2,597.0	2,483.6	8.0	13.5	161.60	-94.5	-186.5	491.4	474.1	17.25	28.491	
2,500.0	2,467.2	2,702.7	2,579.3	8.4	14.4	157.96	-133.0	-163.8	487.6	468.8	18.79	25.949	
2,600.0	2,565.0	2,797.4	2,664.5	8.9	15.2	154.52	-168.7	-142.8	485.0	464.7	20.29	23.907	
2,658.8	2,622.5	2,851.7	2,713.5	9.1	15.6	152.57	-188.8	-131.0	484.5	463.4	21.14	22.915	CC
2,700.0	2,662.8	2,886.5	2,745.1	9.3	15.9	151.36	-201.4	-123.6	484.9	463.2	21.68	22.364	ES
2,800.0	2,760.6	2,981.0	2,831.8	9.8	16.6	148.32	-234.1	-105.0	488.0	464.9	23.09	21.134	
2,900.0	2,858.5	3,085.7	2,927.3	10.2	17.4	144.90	-270.7	-82.6	491.2	466.5	24.70	19.890	
3,000.0	2,956.3	3,193.4	3,025.2	10.7	18.3	141.39	-308.2	-57.9	494.5	468.2	26.35	18.769	
3,100.0	3,054.1	3,284.8	3,109.1	11.2	19.0	138.77	-337.1	-36.3	497.9	470.2	27.69	17.980	
3,200.0	3,151.9	3,380.1	3,197.5	11.6	19.6	136.27	-366.2	-15.8	503.9	474.9	29.03	17.356	
3,300.0	3,249.7	3,487.9	3,297.6	12.1	20.4	133.58	-398.3	8.3	509.9	479.5	30.48	16.732	
3,400.0	3,347.5	3,587.2	3,390.1	12.5	21.1	131.26	-426.3	31.4	515.4	483.6	31.81	16.204	
3,500.0	3,445.3	3,686.0	3,482.2	13.0	21.8	129.08	-453.5	54.3	521.4	488.3	33.10	15.752	
3,600.0	3,543.2	3,779.0	3,569.4	13.5	22.4	127.20	-478.2	75.2	528.4	494.1	34.28	15.416	
3,700.0	3,641.0	3,865.2	3,650.5	13.9	23.0	125.59	-501.2	92.8	537.7	502.3	35.36	15.205	
3,800.0	3,738.8	3,949.9	3,730.0	14.4	23.5	123.96	-525.7	109.0	549.9	513.4	36.47	15.077	
3,900.0	3,836.6	4,045.1	3,818.4	14.8	24.2	121.96	-555.9	127.2	564.3	526.6	37.69	14.972	
4,000.0	3,934.4	4,163.9	3,928.4	15.3	25.1	119.49	-593.0	152.5	577.4	538.3	39.10	14.768	
4,100.0	4,032.2	4,253.5	4,011.3	15.8	25.7	117.69	-620.6	172.4	590.2	549.9	40.24	14.665	
4,159.1	4,090.0	4,314.1	4,067.8	16.0	26.1	116.62	-638.5	185.0	598.2	557.3	40.94	14.613	
4,200.0	4,130.1	4,354.1	4,105.2	16.2	26.4	116.04	-650.0	193.2	603.6	562.2	41.39	14.584	
4,300.0	4,228.5	4,445.9	4,190.9	16.5	27.0	114.53	-677.1	212.0	616.8	574.4	42.36	14.560	
4,400.0	4,327.5	4,547.3	4,285.2	16.8	27.8	112.53	-707.6	233.4	629.2	585.8	43.35	14.513	
4,500.0	4,426.9	4,643.2	4,374.6	17.0	28.4	110.49	-735.7	253.7	640.6	596.4	44.21	14.490	SF
4,600.0	4,526.6	4,728.6	4,453.5	17.2	29.1	108.40	-762.4	272.5	653.0	608.1	44.92	14.537	
4,700.0	4,626.6	4,820.0	4,537.9	17.3	29.7	105.99	-791.6	292.1	666.7	621.1	45.57	14.631	
4,759.3	4,685.8	4,875.7	4,589.5	17.4	30.1	-144.49	-809.0	303.5	675.2	646.9	28.23	23.917	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WALTERS 21QDU - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 148-MWD — **Offset Well Error:** 0.0 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
4,800.0	4,726.5	4,914.7	4,625.9	17.5	30.4	-145.60	-820.9	311.0	681.2	652.5	28.65	23.773	
4,900.0	4,826.5	5,010.9	4,716.7	17.6	31.0	-148.01	-848.4	327.3	696.6	666.9	29.69	23.459	
5,000.0	4,926.5	5,102.2	4,803.1	17.7	31.6	-150.10	-874.2	341.2	713.6	682.9	30.71	23.233	
5,100.0	5,026.5	5,216.5	4,911.9	17.8	32.2	-152.48	-904.6	358.4	730.3	698.3	31.95	22.858	
5,200.0	5,126.5	5,335.8	5,026.9	18.0	32.8	-154.55	-931.8	374.3	745.2	712.0	33.13	22.494	
5,300.0	5,226.5	5,455.0	5,143.6	18.1	33.3	-156.10	-953.4	386.6	757.5	723.3	34.14	22.189	
5,400.0	5,326.5	5,576.2	5,263.1	18.2	33.7	-157.27	-970.4	396.1	767.3	732.3	34.99	21.927	
5,500.0	5,426.5	5,705.8	5,392.0	18.3	34.0	-158.10	-982.6	403.2	774.0	738.3	35.71	21.676	
5,600.0	5,526.5	5,833.3	5,519.2	18.5	34.2	-158.59	-988.4	408.0	776.8	740.6	36.25	21.432	
5,700.0	5,626.5	5,941.4	5,627.3	18.6	34.3	-158.81	-989.9	410.6	777.2	740.6	36.62	21.223	
5,800.0	5,726.5	6,034.8	5,720.7	18.8	34.4	-158.81	-990.4	410.4	777.8	740.9	36.91	21.072	
5,900.0	5,826.5	6,132.9	5,818.8	18.9	34.5	-158.74	-991.0	409.0	778.9	741.7	37.19	20.945	
6,000.0	5,926.5	6,231.8	5,917.6	19.0	34.6	-158.66	-991.8	407.7	780.1	742.7	37.47	20.819	
6,100.0	6,026.5	6,332.0	6,017.8	19.2	34.6	-158.58	-992.7	406.1	781.5	743.8	37.76	20.699	
6,200.0	6,126.5	6,435.2	6,121.1	19.3	34.7	-158.52	-993.4	405.0	782.6	744.5	38.05	20.567	
6,300.0	6,226.5	6,534.5	6,220.3	19.5	34.8	-158.49	-994.1	404.3	783.5	745.1	38.35	20.428	
6,400.0	6,326.5	6,634.6	6,320.4	19.6	34.9	-158.47	-995.0	403.6	784.5	745.9	38.66	20.293	
6,433.3	6,359.8	6,668.6	6,354.4	19.7	34.9	-158.47	-995.2	403.5	784.8	746.1	38.77	20.246	
6,450.0	6,376.5	6,685.6	6,371.4	19.7	34.9	-68.48	-995.4	403.4	784.9	734.7	50.16	15.649	
6,500.0	6,426.5	6,736.3	6,422.1	19.7	34.9	-68.72	-995.7	403.2	784.2	734.1	50.18	15.630	
6,550.0	6,476.0	6,786.3	6,472.1	19.7	35.0	-69.30	-996.1	403.1	782.3	732.3	50.03	15.635	
6,600.0	6,525.0	6,835.3	6,521.1	19.7	35.0	-70.20	-996.4	402.9	779.2	729.4	49.75	15.663	
6,650.0	6,573.3	6,882.9	6,568.8	19.7	35.1	-71.39	-996.7	402.8	775.1	725.7	49.33	15.712	
6,700.0	6,620.4	6,929.2	6,615.0	19.6	35.1	-72.84	-997.0	402.5	770.1	721.3	48.80	15.780	
6,750.0	6,666.3	6,974.8	6,660.6	19.6	35.2	-74.56	-997.3	402.2	764.6	716.4	48.19	15.868	
6,800.0	6,710.7	7,019.3	6,705.1	19.5	35.2	-76.50	-997.7	401.9	758.7	711.2	47.51	15.972	
6,850.0	6,753.4	7,061.8	6,747.6	19.4	35.2	-78.60	-998.0	401.6	752.8	706.0	46.79	16.088	
6,900.0	6,794.2	7,102.0	6,787.8	19.3	35.3	-80.80	-998.4	401.3	747.1	701.0	46.08	16.213	
6,950.0	6,832.9	7,140.3	6,826.1	19.3	35.3	-83.04	-998.8	401.1	742.1	696.7	45.40	16.347	
7,000.0	6,869.2	7,178.5	6,864.3	19.2	35.3	-85.38	-999.1	400.8	738.1	693.3	44.75	16.493	
7,050.0	6,903.1	7,214.3	6,900.1	19.2	35.4	-87.62	-999.4	400.5	735.3	691.1	44.20	16.638	
7,099.8	6,934.2	7,246.0	6,931.8	19.2	35.4	-89.62	-999.5	400.1	734.3	690.6	43.78	16.772	
7,100.0	6,934.3	7,246.1	6,931.9	19.2	35.4	-89.62	-999.5	400.1	734.3	690.6	43.78	16.772	
7,150.0	6,962.8	7,274.0	6,959.8	19.3	35.4	-91.31	-999.7	399.9	735.5	691.9	43.54	16.892	
7,200.0	6,988.3	7,298.9	6,984.7	19.5	35.4	-92.68	-999.9	399.7	739.1	695.6	43.47	17.001	
7,250.0	7,010.7	7,322.0	7,007.8	19.7	35.5	-93.76	-1,000.0	399.5	745.5	701.9	43.58	17.105	
7,300.0	7,029.9	7,341.2	7,027.0	20.0	35.5	-94.38	-1,000.2	399.4	754.7	710.8	43.90	17.191	
7,350.0	7,045.9	7,358.2	7,044.0	20.4	35.5	-94.62	-1,000.3	399.3	767.0	722.6	44.40	17.272	
7,400.0	7,058.6	7,371.6	7,057.4	20.8	35.5	-94.35	-1,000.4	399.2	782.2	737.1	45.08	17.350	
7,450.0	7,067.8	7,381.6	7,067.4	21.4	35.5	-93.55	-1,000.5	399.2	800.3	754.4	45.90	17.435	
7,500.0	7,073.6	7,387.9	7,073.7	22.0	35.5	-92.20	-1,000.5	399.1	821.2	774.4	46.81	17.544	
7,550.0	7,076.0	7,390.5	7,076.3	22.7	35.5	-90.29	-1,000.5	399.1	844.6	796.9	47.73	17.697	
7,561.7	7,076.0	7,390.6	7,076.4	22.9	35.5	-89.76	-1,000.5	399.1	850.4	802.5	47.93	17.742	
7,600.0	7,075.8	7,390.6	7,076.4	23.4	35.5	-89.76	-1,000.5	399.1	870.3	821.8	48.52	17.936	
7,700.0	7,075.3	7,390.6	7,076.4	25.1	35.5	-89.76	-1,000.5	399.1	927.6	877.4	50.22	18.473	
7,800.0	7,074.8	7,390.6	7,076.4	27.0	35.5	-89.76	-1,000.5	399.1	991.8	939.7	52.10	19.037	
7,900.0	7,074.4	7,390.6	7,076.4	29.0	35.5	-89.76	-1,000.5	399.1	1,061.5	1,007.4	54.13	19.610	
8,000.0	7,073.9	7,390.6	7,076.4	31.1	35.5	-89.76	-1,000.5	399.1	1,135.7	1,079.4	56.28	20.179	
8,100.0	7,073.4	7,390.6	7,076.4	33.4	35.5	-89.76	-1,000.5	399.1	1,213.7	1,155.1	58.53	20.734	
8,200.0	7,072.9	7,390.6	7,076.4	35.7	35.5	-89.76	-1,000.5	399.1	1,294.6	1,233.8	60.86	21.271	
8,300.0	7,072.4	7,390.6	7,076.4	38.1	35.5	-89.76	-1,000.5	399.1	1,378.1	1,314.9	63.26	21.786	
8,400.0	7,071.9	7,390.7	7,076.4	40.6	35.5	-89.76	-1,000.5	399.1	1,463.7	1,398.0	65.70	22.277	

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 WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WALTERS 21QDU - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 148-MWD — **Offset Well Error:** 0.0 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
8,500.0	7,071.5	7,390.7	7,076.5	43.1	35.5	-89.76	-1,000.5	399.1	1,550.9	1,482.7	68.20	22.743	
8,600.0	7,071.0	7,390.7	7,076.5	45.6	35.5	-89.76	-1,000.5	399.1	1,639.7	1,569.0	70.72	23.184	
8,700.0	7,070.5	7,390.7	7,076.5	48.1	35.5	-89.76	-1,000.5	399.1	1,729.6	1,656.4	73.28	23.602	
8,800.0	7,070.0	7,390.7	7,076.5	50.7	35.5	-89.76	-1,000.5	399.1	1,820.6	1,744.8	75.87	23.997	
8,900.0	7,069.5	7,390.7	7,076.5	53.3	35.5	-89.76	-1,000.5	399.1	1,912.6	1,834.1	78.48	24.371	
9,000.0	7,069.0	7,390.7	7,076.5	56.0	35.5	-89.76	-1,000.5	399.1	2,005.2	1,924.1	81.10	24.724	
9,100.0	7,068.6	7,390.7	7,076.5	58.6	35.5	-89.76	-1,000.5	399.1	2,098.6	2,014.8	83.75	25.058	
9,200.0	7,068.1	7,390.7	7,076.5	61.3	35.5	-89.76	-1,000.5	399.1	2,192.5	2,106.1	86.41	25.374	
9,300.0	7,067.6	7,390.7	7,076.5	63.9	35.5	-89.76	-1,000.5	399.1	2,287.0	2,197.9	89.08	25.674	
9,400.0	7,067.1	7,390.7	7,076.5	66.6	35.5	-89.76	-1,000.5	399.1	2,381.9	2,290.1	91.76	25.957	
9,500.0	7,066.6	7,390.7	7,076.5	69.3	35.5	-89.76	-1,000.5	399.1	2,477.2	2,382.8	94.46	26.226	
9,600.0	7,066.1	7,390.7	7,076.5	72.0	35.5	-89.76	-1,000.5	399.1	2,572.9	2,475.7	97.16	26.481	
9,700.0	7,065.6	7,390.7	7,076.5	74.7	35.5	-89.76	-1,000.5	399.1	2,668.9	2,569.0	99.87	26.724	
9,800.0	7,065.2	7,390.7	7,076.5	77.5	35.5	-89.76	-1,000.5	399.1	2,765.1	2,662.5	102.58	26.955	
9,900.0	7,064.7	7,390.7	7,076.5	80.2	35.5	-89.76	-1,000.5	399.1	2,861.6	2,756.3	105.31	27.174	
10,000.0	7,064.2	7,390.7	7,076.5	82.9	35.5	-89.76	-1,000.5	399.1	2,958.4	2,850.4	108.04	27.384	
10,100.0	7,063.7	7,390.7	7,076.5	85.6	35.5	-89.76	-1,000.5	399.1	3,055.4	2,944.6	110.77	27.583	
10,200.0	7,063.2	7,390.7	7,076.5	88.4	35.5	-89.76	-1,000.5	399.1	3,152.5	3,039.0	113.51	27.773	
10,300.0	7,062.7	7,390.7	7,076.5	91.1	35.5	-89.76	-1,000.5	399.1	3,249.8	3,133.6	116.25	27.955	
10,400.0	7,062.3	7,390.7	7,076.5	93.9	35.5	-89.76	-1,000.5	399.1	3,347.3	3,228.3	119.00	28.129	
10,500.0	7,061.8	7,390.7	7,076.5	96.6	35.5	-89.76	-1,000.5	399.1	3,444.9	3,323.2	121.75	28.296	
10,600.0	7,061.3	7,390.7	7,076.5	99.4	35.5	-89.76	-1,000.5	399.1	3,542.7	3,418.2	124.50	28.455	
10,700.0	7,060.8	7,390.7	7,076.5	102.1	35.5	-89.76	-1,000.5	399.1	3,640.6	3,513.3	127.26	28.608	
10,800.0	7,060.3	7,390.7	7,076.5	104.9	35.5	-89.76	-1,000.5	399.1	3,738.6	3,608.6	130.02	28.755	
10,900.0	7,059.8	7,390.7	7,076.5	107.6	35.5	-89.76	-1,000.5	399.1	3,836.7	3,703.9	132.78	28.895	
11,000.0	7,059.4	7,390.7	7,076.5	110.4	35.5	-89.76	-1,000.5	399.1	3,934.9	3,799.3	135.54	29.030	
11,100.0	7,058.9	7,390.7	7,076.5	113.2	35.5	-89.76	-1,000.5	399.1	4,033.2	3,894.8	138.31	29.160	
11,200.0	7,058.4	7,390.7	7,076.5	115.9	35.5	-89.76	-1,000.5	399.1	4,131.5	3,990.4	141.08	29.285	
11,300.0	7,057.9	7,390.7	7,076.5	118.7	35.5	-89.76	-1,000.5	399.1	4,230.0	4,086.1	143.85	29.406	
11,400.0	7,057.4	7,390.7	7,076.5	121.5	35.5	-89.76	-1,000.5	399.1	4,328.5	4,181.9	146.62	29.522	
11,500.0	7,056.9	7,390.7	7,076.5	124.3	35.5	-89.76	-1,000.5	399.1	4,427.1	4,277.7	149.39	29.633	
11,600.0	7,056.5	7,390.7	7,076.5	127.0	35.5	-89.76	-1,000.5	399.1	4,525.7	4,373.5	152.17	29.741	
11,688.2	7,056.0	7,390.7	7,076.5	129.5	35.5	-89.76	-1,000.5	399.1	4,612.7	4,458.1	154.62	29.833	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WALTERS 23-21DU - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 704-MWD — **Offset Well Error:** 0.0 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
0.0	0.0	0.0	0.0	0.0	0.0	-47.65	510.0	-559.6	757.1				
100.0	100.0	100.6	100.6	0.1	0.1	-47.65	510.1	-559.6	757.2	757.0	0.20	3,752.833	
200.0	200.0	199.6	199.6	0.3	0.2	-47.65	510.2	-559.8	757.4	756.9	0.53	1,430.258	
300.0	300.0	298.7	298.7	0.5	0.3	-47.66	510.3	-560.0	757.7	756.8	0.86	883.790	ES
400.0	400.0	397.8	397.8	0.8	0.4	-47.66	510.6	-560.4	758.1	756.9	1.19	639.712	
500.0	500.0	496.9	496.9	1.0	0.5	-47.67	510.9	-560.8	758.7	757.2	1.51	501.477	
600.0	600.0	595.9	595.9	1.2	0.6	-47.67	511.3	-561.4	759.3	757.5	1.84	412.541	
700.0	700.0	695.0	695.0	1.4	0.7	-158.69	511.7	-562.0	761.8	759.6	2.15	353.488	
800.0	799.8	792.1	792.1	1.6	0.9	-158.80	512.3	-562.8	767.7	765.1	2.57	299.139	
900.0	899.5	891.5	891.5	1.9	1.1	-158.97	513.1	-563.8	777.0	774.0	2.99	260.017	
1,000.0	998.7	988.6	988.6	2.1	1.3	-159.22	513.7	-565.0	789.7	786.3	3.41	231.486	
1,100.0	1,097.5	1,090.1	1,090.0	2.4	1.6	-159.56	514.0	-566.5	805.7	801.9	3.85	209.537	
1,200.0	1,195.6	1,196.3	1,196.2	2.7	1.8	-159.82	515.6	-566.0	824.3	820.0	4.28	192.418	
1,200.1	1,195.8	1,196.4	1,196.4	2.7	1.8	-159.82	515.6	-566.0	824.3	820.0	4.28	192.398	
1,300.0	1,293.4	1,300.9	1,300.6	3.1	2.0	-159.89	520.4	-561.4	843.5	838.8	4.73	178.158	
1,400.0	1,391.3	1,393.6	1,392.8	3.5	2.2	-159.71	526.9	-555.0	862.4	857.2	5.19	166.061	
1,500.0	1,489.1	1,479.6	1,478.2	4.0	2.4	-159.42	535.5	-548.6	882.8	877.2	5.67	155.599	
1,600.0	1,586.9	1,575.3	1,572.6	4.4	2.7	-158.87	548.0	-539.6	903.9	897.7	6.21	145.458	
1,700.0	1,684.7	1,677.4	1,672.8	4.8	3.0	-158.12	563.6	-527.9	925.0	918.2	6.81	135.769	
1,800.0	1,782.5	1,773.5	1,766.8	5.3	3.3	-157.32	579.3	-515.0	945.6	938.1	7.44	127.148	
1,900.0	1,880.3	1,867.2	1,857.9	5.7	3.7	-156.45	596.6	-501.7	967.2	959.1	8.08	119.687	
2,000.0	1,978.1	1,984.8	1,972.5	6.1	4.1	-155.45	616.9	-484.5	988.0	979.1	8.82	111.959	
2,100.0	2,075.9	2,069.4	2,054.7	6.6	4.5	-154.71	631.5	-470.9	1,008.0	998.5	9.48	106.350	
2,200.0	2,173.8	2,159.3	2,141.8	7.0	4.9	-153.90	648.7	-457.0	1,029.8	1,019.7	10.17	101.281	
2,300.0	2,271.6	2,261.6	2,241.1	7.5	5.3	-153.04	667.8	-441.2	1,051.6	1,040.7	10.92	96.314	
2,400.0	2,369.4	2,361.9	2,338.3	8.0	5.7	-152.22	686.3	-425.2	1,073.1	1,061.5	11.69	91.832	
2,500.0	2,467.2	2,461.2	2,434.5	8.4	6.2	-151.41	704.7	-408.9	1,094.6	1,082.1	12.46	87.816	
2,600.0	2,565.0	2,568.0	2,537.7	8.9	6.7	-150.53	724.7	-390.0	1,115.5	1,102.2	13.30	83.849	
2,700.0	2,662.8	2,661.0	2,627.3	9.3	7.2	-149.71	742.6	-372.4	1,136.5	1,122.4	14.10	80.598	
2,800.0	2,760.6	2,748.0	2,711.2	9.8	7.6	-149.02	759.4	-357.0	1,158.3	1,143.5	14.84	78.045	
2,900.0	2,858.5	2,842.6	2,802.9	10.2	8.0	-148.39	776.8	-342.0	1,180.7	1,165.2	15.60	75.708	
3,000.0	2,956.3	2,941.2	2,898.7	10.7	8.5	-147.78	794.8	-326.7	1,203.3	1,186.9	16.38	73.452	
3,100.0	3,054.1	3,040.2	2,994.8	11.2	8.9	-147.18	812.7	-311.0	1,225.8	1,208.6	17.18	71.370	
3,200.0	3,151.9	3,133.6	3,085.9	11.6	9.3	-146.71	828.6	-297.6	1,248.5	1,230.5	17.91	69.701	
3,300.0	3,249.7	3,223.0	3,173.1	12.1	9.7	-146.31	843.9	-285.6	1,271.7	1,253.0	18.63	68.266	
3,400.0	3,347.5	3,367.2	3,314.4	12.5	10.3	-145.78	865.1	-266.1	1,292.9	1,273.4	19.55	66.134	
3,500.0	3,445.3	3,474.2	3,419.6	13.0	10.7	-145.47	878.3	-251.6	1,312.4	1,292.1	20.30	64.647	
3,600.0	3,543.2	3,605.4	3,548.4	13.5	11.2	-145.05	893.5	-231.9	1,330.6	1,309.4	21.17	62.856	
3,700.0	3,641.0	3,697.7	3,639.0	13.9	11.6	-144.75	903.6	-217.1	1,347.6	1,325.7	21.89	61.572	
3,800.0	3,738.8	3,778.0	3,717.9	14.4	11.9	-144.53	912.8	-205.4	1,365.9	1,343.3	22.54	60.593	
3,900.0	3,836.6	3,844.3	3,783.0	14.8	12.1	-144.35	921.3	-196.5	1,385.9	1,362.8	23.14	59.882	
4,000.0	3,934.4	3,922.4	3,859.6	15.3	12.4	-144.11	932.8	-186.2	1,407.7	1,383.8	23.81	59.125	
4,100.0	4,032.2	4,014.1	3,949.2	15.8	12.8	-143.80	947.6	-173.6	1,430.4	1,405.8	24.54	58.292	
4,159.1	4,090.0	4,076.7	4,010.5	16.0	13.1	-143.62	957.3	-165.5	1,443.8	1,418.8	25.00	57.751	
4,200.0	4,130.1	4,122.5	4,055.4	16.2	13.3	-143.60	964.1	-159.7	1,452.6	1,427.3	25.33	57.347	
4,300.0	4,228.5	4,218.9	4,150.1	16.5	13.6	-143.53	977.9	-147.7	1,472.1	1,446.0	26.02	56.567	
4,400.0	4,327.5	4,324.8	4,253.9	16.8	14.1	-143.30	993.4	-134.0	1,488.9	1,462.1	26.74	55.690	
4,500.0	4,426.9	4,421.8	4,349.0	17.0	14.5	-143.00	1,007.4	-121.1	1,502.6	1,475.2	27.38	54.884	
4,600.0	4,526.6	4,534.1	4,459.5	17.2	14.9	-142.57	1,022.4	-107.4	1,513.3	1,485.3	28.02	54.007	
4,700.0	4,626.6	4,639.5	4,563.8	17.3	15.2	-142.21	1,033.9	-97.6	1,520.8	1,492.3	28.54	53.289	
4,759.3	4,685.8	4,711.0	4,634.8	17.4	15.4	-30.99	1,040.2	-92.4	1,523.6	1,497.4	26.21	58.140	
4,800.0	4,726.5	4,754.2	4,677.8	17.5	15.5	-30.83	1,043.6	-89.6	1,525.0	1,498.6	26.35	57.876	

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 WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WALTERS 23-21DU - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 704-MWD — **Offset Well Error:** 0.0 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
4,900.0	4,826.5	4,872.9	4,796.1	17.6	15.8	-30.49	1,051.0	-83.6	1,527.8	1,501.1	26.72	57.171	
5,000.0	4,926.5	4,995.9	4,919.0	17.7	16.1	-30.27	1,055.4	-79.3	1,529.1	1,502.0	27.09	56.436	
5,100.0	5,026.5	5,098.4	5,021.5	17.8	16.2	-30.19	1,056.9	-77.7	1,529.6	1,502.2	27.42	55.788	
5,200.0	5,126.5	5,199.7	5,122.7	18.0	16.4	-30.15	1,057.8	-77.1	1,530.0	1,502.3	27.74	55.153	
5,300.0	5,226.5	5,299.3	5,222.3	18.1	16.5	-30.13	1,058.4	-76.7	1,530.4	1,502.3	28.06	54.533	
5,400.0	5,326.5	5,398.7	5,321.7	18.2	16.7	-30.12	1,058.9	-76.6	1,530.8	1,502.4	28.39	53.923	
5,500.0	5,426.5	5,497.6	5,420.6	18.3	16.8	-30.11	1,059.4	-76.6	1,531.2	1,502.5	28.71	53.325	
5,600.0	5,526.5	5,600.5	5,523.4	18.5	16.9	-30.11	1,059.8	-76.9	1,531.7	1,502.6	29.05	52.727	
5,700.0	5,626.5	5,707.4	5,630.4	18.6	17.1	-30.12	1,059.7	-77.1	1,531.7	1,502.4	29.39	52.114	
5,800.0	5,726.5	5,811.3	5,734.2	18.8	17.2	-30.14	1,059.2	-77.4	1,531.4	1,501.7	29.73	51.512	
5,900.0	5,826.5	5,914.1	5,837.0	18.9	17.3	-30.16	1,058.5	-77.7	1,530.9	1,500.9	30.07	50.920	
6,000.0	5,926.5	6,013.6	5,936.6	19.0	17.5	-30.18	1,057.7	-77.9	1,530.4	1,500.0	30.39	50.350	
6,100.0	6,026.5	6,112.8	6,035.8	19.2	17.6	-30.20	1,057.0	-78.0	1,529.8	1,499.1	30.72	49.793	
6,200.0	6,126.5	6,209.0	6,131.9	19.3	17.7	-30.22	1,056.4	-78.3	1,529.4	1,498.4	31.05	49.254	
6,300.0	6,226.5	6,305.4	6,228.3	19.5	17.9	-30.24	1,056.0	-78.8	1,529.3	1,497.9	31.38	48.732	
6,319.4	6,245.9	6,324.4	6,247.4	19.5	17.9	-30.25	1,055.9	-78.9	1,529.3	1,497.9	31.45	48.630	
6,400.0	6,326.5	6,403.8	6,326.8	19.6	18.0	-30.26	1,055.7	-79.3	1,529.3	1,497.6	31.72	48.212	
6,433.3	6,359.8	6,436.6	6,359.6	19.7	18.0	-30.27	1,055.7	-79.4	1,529.4	1,497.5	31.83	48.042	
6,450.0	6,376.5	6,453.1	6,376.1	19.7	18.1	59.74	1,055.6	-79.5	1,529.3	1,495.0	34.27	44.631	
6,500.0	6,426.5	6,502.8	6,425.8	19.7	18.1	59.92	1,055.6	-79.7	1,527.9	1,493.6	34.36	44.473	
6,550.0	6,476.0	6,552.9	6,475.9	19.7	18.2	60.34	1,055.6	-79.9	1,524.8	1,490.4	34.41	44.311	
6,600.0	6,525.0	6,602.5	6,525.5	19.7	18.3	60.99	1,055.5	-80.1	1,519.9	1,485.5	34.43	44.140	
6,650.0	6,573.3	6,651.3	6,574.3	19.7	18.3	61.87	1,055.4	-80.4	1,513.4	1,479.0	34.44	43.951	
6,700.0	6,620.4	6,699.2	6,622.2	19.6	18.4	62.98	1,055.2	-80.7	1,505.4	1,471.0	34.43	43.730	
6,750.0	6,666.3	6,745.9	6,668.9	19.6	18.5	64.30	1,055.0	-81.0	1,496.0	1,461.6	34.42	43.469	
6,800.0	6,710.7	6,791.1	6,714.0	19.5	18.5	65.82	1,054.8	-81.3	1,485.3	1,450.9	34.42	43.158	
6,850.0	6,753.4	6,834.5	6,757.5	19.4	18.6	67.53	1,054.6	-81.6	1,473.5	1,439.0	34.44	42.787	
6,900.0	6,794.2	6,875.8	6,798.8	19.3	18.7	69.39	1,054.4	-81.9	1,460.8	1,426.3	34.49	42.355	
6,950.0	6,832.9	6,914.7	6,837.7	19.3	18.7	71.38	1,054.2	-82.1	1,447.4	1,412.8	34.58	41.860	
7,000.0	6,869.2	6,951.4	6,874.3	19.2	18.8	73.46	1,054.0	-82.3	1,433.5	1,398.8	34.71	41.304	
7,050.0	6,903.1	6,985.5	6,908.5	19.2	18.8	75.59	1,053.8	-82.5	1,419.4	1,384.6	34.88	40.694	
7,100.0	6,934.3	7,017.0	6,939.9	19.2	18.9	77.74	1,053.6	-82.7	1,405.4	1,370.3	35.10	40.037	
7,150.0	6,962.8	7,045.8	6,968.7	19.3	18.9	79.85	1,053.5	-82.8	1,391.6	1,356.3	35.37	39.344	
7,200.0	6,988.3	7,071.8	6,994.8	19.5	18.9	81.87	1,053.4	-82.9	1,378.4	1,342.7	35.69	38.622	
7,250.0	7,010.7	7,094.7	7,017.7	19.7	19.0	83.77	1,053.2	-83.0	1,366.0	1,329.9	36.06	37.882	
7,300.0	7,029.9	7,114.3	7,037.3	20.0	19.0	85.48	1,053.2	-83.1	1,354.6	1,318.1	36.48	37.131	
7,350.0	7,045.9	7,130.6	7,053.6	20.4	19.0	86.97	1,053.1	-83.1	1,344.4	1,307.4	36.96	36.376	
7,400.0	7,058.6	7,143.5	7,066.4	20.8	19.0	88.22	1,053.0	-83.1	1,335.7	1,298.2	37.50	35.621	
7,450.0	7,067.8	7,152.9	7,075.8	21.4	19.1	89.19	1,053.0	-83.1	1,328.6	1,290.5	38.10	34.875	
7,500.0	7,073.6	7,158.7	7,081.7	22.0	19.1	89.87	1,052.9	-83.1	1,323.3	1,284.5	38.76	34.145	
7,550.0	7,076.0	7,161.1	7,084.1	22.7	19.1	90.25	1,052.9	-83.1	1,319.8	1,280.4	39.47	33.441	
7,561.7	7,076.0	7,161.2	7,084.1	22.9	19.1	90.30	1,052.9	-83.1	1,319.3	1,279.6	39.64	33.280	
7,600.0	7,075.8	7,161.0	7,084.0	23.4	19.1	90.29	1,052.9	-83.1	1,318.2	1,278.0	40.23	32.766	
7,616.7	7,075.7	7,161.0	7,083.9	23.7	19.1	90.29	1,052.9	-83.1	1,318.1	1,277.6	40.51	32.535	
7,700.0	7,075.3	7,160.6	7,083.6	25.1	19.1	90.28	1,052.9	-83.1	1,320.8	1,278.8	41.93	31.502	
7,800.0	7,074.8	7,160.3	7,083.2	27.0	19.1	90.26	1,052.9	-83.1	1,330.8	1,287.0	43.81	30.379	
7,900.0	7,074.4	7,159.9	7,082.8	29.0	19.1	90.24	1,052.9	-83.1	1,348.2	1,302.4	45.84	29.413	
8,000.0	7,073.9	7,159.5	7,082.5	31.1	19.1	90.23	1,052.9	-83.1	1,372.7	1,324.7	47.99	28.605	
8,100.0	7,073.4	7,159.1	7,082.1	33.4	19.1	90.21	1,052.9	-83.1	1,404.0	1,353.7	50.24	27.945	
8,200.0	7,072.9	7,158.7	7,081.7	35.7	19.1	90.19	1,052.9	-83.1	1,441.4	1,388.9	52.57	27.420	
8,300.0	7,072.4	7,158.4	7,081.3	38.1	19.1	90.18	1,052.9	-83.1	1,484.7	1,429.8	54.96	27.014	
8,400.0	7,071.9	7,158.0	7,081.0	40.6	19.1	90.16	1,052.9	-83.1	1,533.3	1,475.9	57.41	26.709	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WALTERS 23-21DU - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 704-MWD — **Offset Well Error:** 0.0 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
8,500.0	7,071.5	7,157.6	7,080.6	43.1	19.1	90.15	1,052.9	-83.1	1,586.7	1,526.8	59.90	26.490	
8,600.0	7,071.0	7,157.3	7,080.2	45.6	19.1	90.13	1,052.9	-83.1	1,644.5	1,582.1	62.43	26.343	
8,700.0	7,070.5	7,156.9	7,079.9	48.1	19.1	90.11	1,052.9	-83.1	1,706.2	1,641.2	64.99	26.254	
8,800.0	7,070.0	7,156.5	7,079.5	50.7	19.1	90.10	1,052.9	-83.1	1,771.4	1,703.8	67.57	26.215	
8,900.0	7,069.5	7,156.2	7,079.1	53.3	19.1	90.08	1,052.9	-83.1	1,839.7	1,769.5	70.18	26.214	SF
9,000.0	7,069.0	7,155.8	7,078.8	56.0	19.1	90.07	1,052.9	-83.1	1,910.8	1,838.0	72.81	26.244	
9,100.0	7,068.6	7,155.5	7,078.4	58.6	19.1	90.05	1,052.9	-83.1	1,984.4	1,908.9	75.45	26.300	
9,200.0	7,068.1	7,155.1	7,078.1	61.3	19.1	90.04	1,052.9	-83.1	2,060.2	1,982.1	78.11	26.376	
9,300.0	7,067.6	7,154.8	7,077.7	63.9	19.1	90.02	1,052.9	-83.1	2,138.0	2,057.2	80.78	26.467	
9,400.0	7,067.1	7,154.4	7,077.4	66.6	19.1	90.01	1,052.9	-83.1	2,217.6	2,134.1	83.46	26.570	
9,500.0	7,066.6	7,154.1	7,077.0	69.3	19.1	89.99	1,053.0	-83.1	2,298.8	2,212.6	86.16	26.682	
9,600.0	7,066.1	7,153.7	7,076.7	72.0	19.1	89.98	1,053.0	-83.1	2,381.4	2,292.5	88.86	26.800	
9,700.0	7,065.6	7,153.4	7,076.4	74.7	19.1	89.96	1,053.0	-83.1	2,465.3	2,373.7	91.57	26.923	
9,800.0	7,065.2	7,153.1	7,076.0	77.5	19.1	89.95	1,053.0	-83.1	2,550.4	2,456.1	94.28	27.050	
9,900.0	7,064.7	7,152.7	7,075.7	80.2	19.1	89.93	1,053.0	-83.1	2,636.5	2,539.5	97.01	27.179	
10,000.0	7,064.2	7,152.4	7,075.3	82.9	19.1	89.92	1,053.0	-83.1	2,723.5	2,623.8	99.73	27.308	
10,100.0	7,063.7	7,152.1	7,075.0	85.6	19.1	89.90	1,053.0	-83.1	2,811.5	2,709.0	102.47	27.438	
10,200.0	7,063.2	7,151.7	7,074.7	88.4	19.1	89.89	1,053.0	-83.1	2,900.2	2,795.0	105.21	27.567	
10,300.0	7,062.7	7,151.4	7,074.3	91.1	19.1	89.87	1,053.0	-83.1	2,989.6	2,881.6	107.95	27.695	
10,400.0	7,062.3	7,151.1	7,074.0	93.9	19.1	89.86	1,053.0	-83.1	3,079.7	2,969.0	110.69	27.821	
10,500.0	7,061.8	7,150.7	7,073.7	96.6	19.1	89.85	1,053.0	-83.1	3,170.3	3,056.9	113.44	27.946	
10,600.0	7,061.3	7,150.4	7,073.4	99.4	19.1	89.83	1,053.0	-83.1	3,261.5	3,145.3	116.20	28.069	
10,700.0	7,060.8	7,150.1	7,073.0	102.1	19.1	89.82	1,053.0	-83.1	3,353.2	3,234.3	118.95	28.190	
10,800.0	7,060.3	7,149.8	7,072.7	104.9	19.1	89.80	1,053.0	-83.1	3,445.4	3,323.7	121.71	28.308	
10,900.0	7,059.8	7,149.5	7,072.4	107.6	19.1	89.79	1,053.0	-83.1	3,538.0	3,413.5	124.47	28.424	
11,000.0	7,059.4	7,149.1	7,072.1	110.4	19.1	89.78	1,053.0	-83.1	3,631.0	3,503.8	127.24	28.537	
11,100.0	7,058.9	7,148.8	7,071.8	113.2	19.1	89.76	1,053.0	-83.1	3,724.4	3,594.4	130.00	28.648	
11,200.0	7,058.4	7,148.5	7,071.5	115.9	19.1	89.75	1,053.0	-83.1	3,818.1	3,685.3	132.77	28.757	
11,300.0	7,057.9	7,148.2	7,071.2	118.7	19.1	89.74	1,053.0	-83.1	3,912.1	3,776.5	135.54	28.862	
11,400.0	7,057.4	7,147.9	7,070.8	121.5	19.1	89.72	1,053.0	-83.1	4,006.4	3,868.0	138.31	28.966	
11,500.0	7,056.9	7,147.6	7,070.5	124.3	19.1	89.71	1,053.0	-83.1	4,100.9	3,959.8	141.09	29.067	
11,600.0	7,056.5	7,147.3	7,070.2	127.0	19.1	89.70	1,053.0	-83.1	4,195.7	4,051.9	143.86	29.165	
11,688.2	7,056.0	7,147.0	7,069.9	129.5	19.1	89.68	1,053.0	-83.1	4,279.5	4,133.2	146.31	29.250	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WALTERS 24-21DU - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 usft

Survey Program: 735-MWD

Offset Well Error: 0.0 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
0.0	0.0	1.5	1.5	0.0	0.0	-55.32	410.6	-593.3	721.5				
100.0	100.0	102.4	102.4	0.1	0.1	-55.32	410.5	-593.3	721.5	721.3	0.20	3,535.910	
200.0	200.0	203.2	203.2	0.3	0.2	-55.32	410.4	-593.2	721.3	720.8	0.53	1,350.594	
300.0	300.0	304.1	304.1	0.5	0.3	-55.33	410.2	-593.0	721.0	720.1	0.86	834.420	
400.0	400.0	404.9	404.9	0.8	0.4	-55.33	409.9	-592.7	720.6	719.4	1.19	603.463	
500.0	500.0	505.7	505.7	1.0	0.5	-55.34	409.5	-592.3	720.1	718.5	1.52	472.448	
600.0	600.0	606.6	606.6	1.2	0.6	-55.35	409.0	-591.8	719.4	717.6	1.85	388.008	
621.6	621.6	628.3	628.3	1.3	0.7	-166.34	408.9	-591.7	719.3	717.4	1.92	374.531	
700.0	700.0	707.4	707.4	1.4	0.7	-166.38	408.4	-591.3	720.3	718.2	2.17	332.428	
800.0	799.8	807.6	807.6	1.6	0.9	-166.47	407.8	-590.7	724.6	722.0	2.55	284.077	
900.0	899.5	916.1	916.1	1.9	1.2	-166.65	406.5	-589.8	731.7	728.7	2.99	245.056	
1,000.0	998.7	1,038.2	1,038.1	2.1	1.4	-167.12	401.5	-587.9	740.0	736.6	3.46	213.672	
1,100.0	1,097.5	1,163.3	1,162.7	2.4	1.7	-167.91	391.5	-584.4	748.7	744.7	3.96	188.858	
1,200.0	1,195.6	1,288.3	1,286.7	2.7	2.1	-168.92	377.1	-578.4	757.2	752.7	4.49	168.764	
1,200.1	1,195.8	1,288.5	1,286.9	2.7	2.1	-168.92	377.1	-578.4	757.2	752.7	4.49	168.740	
1,300.0	1,293.4	1,400.6	1,397.8	3.1	2.5	-169.92	362.0	-571.1	765.1	760.0	5.02	152.451	
1,400.0	1,391.3	1,509.0	1,504.6	3.5	2.8	-170.97	345.4	-563.3	771.6	766.0	5.56	138.697	
1,500.0	1,489.1	1,621.7	1,615.2	4.0	3.3	-172.25	325.2	-555.5	777.4	771.2	6.14	126.520	
1,600.0	1,586.9	1,739.4	1,730.1	4.4	3.7	-173.62	302.0	-545.1	780.7	774.0	6.78	115.215	
1,700.0	1,684.7	1,857.0	1,844.1	4.8	4.3	-175.12	275.8	-533.4	782.4	774.9	7.46	104.898	
1,800.0	1,782.5	1,974.5	1,957.6	5.3	4.8	-176.54	249.4	-518.4	781.7	773.6	8.14	96.047	
1,900.0	1,880.3	2,075.3	2,054.5	5.7	5.3	-177.81	225.4	-504.7	780.1	771.3	8.77	88.949	
2,000.0	1,978.1	2,168.6	2,144.4	6.1	5.7	-178.98	203.6	-492.2	779.2	769.8	9.36	83.202	
2,032.5	2,009.9	2,198.6	2,173.4	6.3	5.9	-179.34	196.8	-488.2	779.1	769.6	9.55	81.563	
2,100.0	2,075.9	2,258.9	2,231.7	6.6	6.1	179.96	183.6	-480.3	779.4	769.5	9.94	78.401	
2,200.0	2,173.8	2,353.1	2,322.9	7.0	6.5	178.82	162.7	-469.2	781.2	770.6	10.57	73.934	
2,300.0	2,271.6	2,463.0	2,428.9	7.5	7.1	177.44	137.4	-455.8	782.6	771.3	11.32	69.135	
2,400.0	2,369.4	2,569.4	2,531.1	8.0	7.7	175.98	110.8	-442.1	783.1	771.0	12.12	64.620	
2,500.0	2,467.2	2,670.6	2,627.6	8.4	8.3	174.46	83.6	-429.0	783.4	770.5	12.94	60.544	
2,600.0	2,565.0	2,766.6	2,719.2	8.9	8.8	172.98	57.2	-416.6	784.2	770.5	13.73	57.101	
2,700.0	2,662.8	2,857.8	2,806.4	9.3	9.3	171.67	33.4	-405.0	786.0	771.6	14.47	54.326	
2,800.0	2,760.6	2,949.3	2,894.3	9.8	9.7	170.41	10.4	-394.0	789.3	774.0	15.21	51.878	
2,900.0	2,858.5	3,043.3	2,984.6	10.2	10.2	169.12	-13.2	-383.3	793.6	777.6	16.00	49.590	
3,000.0	2,956.3	3,135.5	3,073.5	10.7	10.7	167.91	-35.7	-373.3	799.0	782.2	16.78	47.607	
3,100.0	3,054.1	3,231.1	3,166.1	11.2	11.1	166.80	-57.3	-363.1	805.3	787.7	17.55	45.876	
3,200.0	3,151.9	3,325.5	3,257.6	11.6	11.5	165.76	-77.9	-353.3	812.3	794.0	18.32	44.350	
3,300.0	3,249.7	3,428.2	3,357.5	12.1	12.0	164.73	-99.2	-342.7	819.7	800.6	19.11	42.885	
3,400.0	3,347.5	3,517.6	3,444.7	12.5	12.4	163.90	-117.0	-333.4	827.5	807.7	19.84	41.707	
3,500.0	3,445.3	3,630.6	3,554.9	13.0	12.9	162.90	-139.1	-321.5	835.4	814.7	20.69	40.366	
3,600.0	3,543.2	3,726.6	3,648.3	13.5	13.3	162.04	-158.3	-310.9	842.8	821.3	21.49	39.220	
3,700.0	3,641.0	3,838.1	3,756.1	13.9	13.9	160.88	-183.3	-297.8	849.7	827.3	22.44	37.865	
3,800.0	3,738.8	3,937.9	3,852.3	14.4	14.4	159.76	-207.0	-285.2	855.9	832.5	23.37	36.621	
3,900.0	3,836.6	4,030.1	3,940.9	14.8	14.9	158.69	-229.9	-274.2	863.1	838.8	24.27	35.558	
4,000.0	3,934.4	4,126.8	4,034.2	15.3	15.4	157.65	-252.7	-262.9	870.8	845.7	25.17	34.597	
4,100.0	4,032.2	4,226.1	4,130.7	15.8	15.8	156.80	-273.2	-251.5	879.1	853.1	26.04	33.765	
4,159.1	4,090.0	4,285.6	4,188.5	16.0	16.1	156.29	-285.6	-244.5	883.9	857.3	26.56	33.284	
4,200.0	4,130.1	4,321.6	4,223.4	16.2	16.3	156.00	-293.1	-240.4	887.1	860.2	26.90	32.982	
4,300.0	4,228.5	4,413.9	4,313.3	16.5	16.7	155.25	-311.7	-230.5	893.6	865.9	27.68	32.280	
4,400.0	4,327.5	4,508.9	4,406.3	16.8	17.1	154.52	-328.7	-220.8	897.5	869.1	28.41	31.590	
4,500.0	4,426.9	4,605.0	4,500.6	17.0	17.4	153.79	-344.0	-211.6	898.9	869.8	29.07	30.918	
4,600.0	4,526.6	4,705.4	4,599.8	17.2	17.8	153.12	-356.7	-202.4	897.5	867.8	29.66	30.258	
4,700.0	4,626.6	4,797.2	4,690.9	17.3	18.0	152.65	-364.3	-194.5	893.2	863.1	30.10	29.674	

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 WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WALTERS 24-21DU - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 735-MWD — **Offset Well Error:** 0.0 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
4,759.3	4,685.8	4,846.6	4,740.1	17.4	18.2	-96.63	-367.8	-190.8	889.8	861.5	28.28	31.470	
4,800.0	4,726.5	4,877.8	4,771.2	17.5	18.2	-96.77	-369.8	-188.9	887.6	859.3	28.37	31.290	
4,900.0	4,826.5	4,958.1	4,851.3	17.6	18.4	-97.06	-373.9	-185.5	884.0	855.4	28.61	30.899	
5,000.0	4,926.5	5,047.4	4,940.5	17.7	18.5	-97.29	-377.0	-183.4	882.1	853.3	28.87	30.559	
5,100.0	5,026.5	5,144.0	5,037.1	17.8	18.7	-97.39	-378.6	-182.0	880.9	851.7	29.15	30.220	
5,200.0	5,126.5	5,239.4	5,132.5	18.0	18.8	-97.46	-379.5	-181.2	880.1	850.7	29.43	29.903	
5,300.0	5,226.5	5,336.9	5,229.9	18.1	18.9	-97.54	-380.6	-180.7	879.8	850.0	29.72	29.600	
5,365.8	5,292.3	5,400.7	5,293.8	18.2	19.0	-97.58	-381.2	-180.5	879.7	849.8	29.91	29.408	
5,400.0	5,326.5	5,433.2	5,326.3	18.2	19.0	-97.60	-381.6	-180.5	879.7	849.7	30.01	29.313	
5,500.0	5,426.5	5,526.8	5,419.9	18.3	19.2	-97.65	-382.4	-180.9	880.2	849.9	30.30	29.053	
5,600.0	5,526.5	5,622.8	5,515.9	18.5	19.3	-97.72	-383.7	-181.9	881.5	850.9	30.58	28.823	
5,700.0	5,626.5	5,728.7	5,621.7	18.6	19.4	-97.82	-385.3	-183.0	882.7	851.8	30.89	28.578	
5,800.0	5,726.5	5,834.1	5,727.1	18.8	19.6	-97.93	-387.0	-183.1	883.0	851.8	31.20	28.306	
5,900.0	5,826.5	5,934.8	5,827.8	18.9	19.7	-98.00	-388.2	-183.0	883.1	851.6	31.50	28.030	
6,000.0	5,926.5	6,034.7	5,927.7	19.0	19.8	-98.05	-388.9	-182.9	883.1	851.3	31.82	27.754	
6,100.0	6,026.5	6,131.5	6,024.5	19.2	20.0	-98.07	-389.2	-183.0	883.3	851.2	32.13	27.489	
6,200.0	6,126.5	6,229.9	6,122.9	19.3	20.1	-98.09	-389.6	-183.5	883.8	851.3	32.45	27.234	
6,300.0	6,226.5	6,332.5	6,225.5	19.5	20.2	-98.12	-390.1	-183.9	884.2	851.4	32.78	26.976	
6,400.0	6,326.5	6,433.2	6,326.2	19.6	20.3	-98.14	-390.5	-184.0	884.4	851.3	33.11	26.715	
6,433.3	6,359.8	6,465.4	6,358.4	19.7	20.4	-98.15	-390.6	-184.1	884.5	851.3	33.21	26.632	
6,450.0	6,376.5	6,481.6	6,374.6	19.7	20.4	-8.15	-390.6	-184.1	884.4	848.8	35.63	24.819	
6,500.0	6,426.5	6,530.5	6,423.5	19.7	20.5	-8.21	-390.7	-184.4	881.7	846.2	35.54	24.808	
6,550.0	6,476.0	6,580.2	6,473.3	19.7	20.5	-8.35	-390.8	-184.6	875.7	840.3	35.32	24.795	
6,600.0	6,525.0	6,628.9	6,521.9	19.7	20.6	-8.56	-390.9	-184.8	866.2	831.2	34.96	24.778	
6,650.0	6,573.3	6,676.3	6,569.3	19.7	20.7	-8.86	-391.0	-185.1	853.4	818.9	34.47	24.757	
6,700.0	6,620.4	6,723.2	6,616.2	19.6	20.7	-9.24	-391.0	-185.4	837.3	803.5	33.87	24.723	
6,750.0	6,666.3	6,769.3	6,662.3	19.6	20.8	-9.75	-391.1	-185.7	818.1	784.9	33.16	24.667	
6,800.0	6,710.7	6,812.9	6,705.9	19.5	20.8	-10.38	-391.2	-186.0	795.7	763.3	32.37	24.582	
6,850.0	6,753.4	6,854.1	6,747.1	19.4	20.9	-11.15	-391.2	-186.4	770.4	738.9	31.50	24.456	
6,900.0	6,794.2	6,894.5	6,787.5	19.3	20.9	-12.12	-391.2	-186.8	742.4	711.8	30.60	24.263	
6,950.0	6,832.9	6,934.9	6,827.9	19.3	21.0	-13.37	-391.2	-187.3	711.6	681.9	29.69	23.963	
7,000.0	6,869.2	6,972.9	6,865.9	19.2	21.0	-14.95	-391.2	-187.6	678.1	649.3	28.84	23.514	
7,050.0	6,903.1	7,007.1	6,900.1	19.2	21.1	-16.94	-391.2	-187.8	642.3	614.2	28.09	22.864	
7,100.0	6,934.3	7,038.6	6,931.6	19.2	21.1	-19.48	-391.2	-188.0	604.3	576.7	27.54	21.938	
7,150.0	6,962.8	7,067.3	6,960.3	19.3	21.2	-22.78	-391.3	-188.2	564.3	537.0	27.32	20.654	
7,200.0	6,988.3	7,093.2	6,986.1	19.5	21.2	-27.10	-391.3	-188.4	522.7	495.1	27.58	18.948	
7,250.0	7,010.7	7,115.9	7,008.9	19.7	21.2	-32.76	-391.3	-188.6	479.6	451.1	28.50	16.827	
7,300.0	7,029.9	7,135.5	7,028.5	20.0	21.3	-40.10	-391.3	-188.7	435.4	405.2	30.19	14.423	
7,350.0	7,045.9	7,151.9	7,044.9	20.4	21.3	-49.33	-391.3	-188.8	390.4	357.8	32.55	11.994	
7,400.0	7,058.6	7,164.9	7,057.9	20.8	21.3	-60.10	-391.3	-188.9	345.1	309.9	35.14	9.821	
7,450.0	7,067.8	7,174.6	7,067.6	21.4	21.3	-71.30	-391.3	-189.0	299.9	262.6	37.28	8.046	
7,500.0	7,073.6	7,180.8	7,073.8	22.0	21.3	-81.25	-391.3	-189.0	255.8	217.2	38.59	6.627	
7,550.0	7,076.0	7,183.5	7,076.5	22.7	21.3	-88.65	-391.3	-189.0	213.8	174.4	39.31	5.437	
7,561.7	7,076.0	7,183.6	7,076.6	22.9	21.3	-89.94	-391.3	-189.0	204.4	164.9	39.44	5.182	
7,600.0	7,075.8	7,183.7	7,076.7	23.4	21.3	-89.97	-391.3	-189.0	175.9	135.8	40.03	4.393	
7,700.0	7,075.3	7,183.8	7,076.8	25.1	21.3	-90.04	-391.3	-189.0	128.1	86.4	41.73	3.070	
7,722.6	7,075.2	7,183.9	7,076.8	25.5	21.3	-90.05	-391.3	-189.0	126.1	84.0	42.15	2.992	CC, ES, SF
7,800.0	7,074.8	7,184.0	7,077.0	27.0	21.3	-90.11	-391.3	-189.0	148.0	104.4	43.61	3.393	
7,900.0	7,074.4	7,184.1	7,077.1	29.0	21.3	-90.18	-391.3	-189.0	217.7	172.0	45.63	4.770	
8,000.0	7,073.9	7,184.3	7,077.3	31.1	21.3	-90.25	-391.3	-189.0	304.7	256.9	47.78	6.377	
8,100.0	7,073.4	7,184.4	7,077.4	33.4	21.3	-90.31	-391.3	-189.0	397.9	347.9	50.03	7.953	
8,200.0	7,072.9	7,184.6	7,077.6	35.7	21.3	-90.38	-391.3	-189.0	493.8	441.4	52.36	9.431	

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 WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WALTERS 24-21DU - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 usft

Survey Program: 735-MWD

Offset Well Error: 0.0 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
8,300.0	7,072.4	7,184.7	7,077.7	38.1	21.3	-90.45	-391.3	-189.0	591.0	536.3	54.75	10.795	
8,400.0	7,071.9	7,184.9	7,077.9	40.6	21.3	-90.52	-391.3	-189.0	689.0	631.8	57.20	12.047	
8,500.0	7,071.5	7,185.0	7,078.0	43.1	21.3	-90.58	-391.3	-189.0	787.6	727.9	59.68	13.196	
8,600.0	7,071.0	7,185.2	7,078.1	45.6	21.3	-90.65	-391.3	-189.0	886.4	824.2	62.21	14.249	
8,700.0	7,070.5	7,185.3	7,078.3	48.1	21.3	-90.71	-391.3	-189.0	985.5	920.7	64.77	15.216	
8,800.0	7,070.0	7,185.4	7,078.4	50.7	21.3	-90.78	-391.3	-189.0	1,084.8	1,017.4	67.35	16.107	
8,900.0	7,069.5	7,185.6	7,078.6	53.3	21.3	-90.84	-391.3	-189.0	1,184.1	1,114.2	69.95	16.927	
9,000.0	7,069.0	7,185.7	7,078.7	56.0	21.3	-90.91	-391.3	-189.0	1,283.6	1,211.0	72.58	17.686	
9,100.0	7,068.6	7,185.9	7,078.9	58.6	21.3	-90.97	-391.3	-189.0	1,383.2	1,307.9	75.22	18.388	
9,200.0	7,068.1	7,186.0	7,079.0	61.3	21.3	-91.04	-391.3	-189.0	1,482.8	1,404.9	77.88	19.040	
9,300.0	7,067.6	7,186.2	7,079.1	63.9	21.3	-91.10	-391.3	-189.0	1,582.4	1,501.9	80.54	19.647	
9,400.0	7,067.1	7,186.3	7,079.3	66.6	21.3	-91.16	-391.3	-189.0	1,682.1	1,598.9	83.22	20.213	
9,500.0	7,066.6	7,186.4	7,079.4	69.3	21.3	-91.23	-391.3	-189.0	1,781.9	1,696.0	85.91	20.741	
9,600.0	7,066.1	7,186.6	7,079.6	72.0	21.3	-91.29	-391.3	-189.0	1,881.6	1,793.0	88.61	21.235	
9,700.0	7,065.6	7,186.7	7,079.7	74.7	21.3	-91.35	-391.3	-189.0	1,981.4	1,890.1	91.31	21.699	
9,800.0	7,065.2	7,186.8	7,079.8	77.5	21.3	-91.41	-391.3	-189.0	2,081.2	1,987.2	94.03	22.134	
9,900.0	7,064.7	7,187.0	7,080.0	80.2	21.3	-91.48	-391.3	-189.1	2,181.1	2,084.3	96.75	22.544	
10,000.0	7,064.2	7,187.1	7,080.1	82.9	21.3	-91.54	-391.3	-189.1	2,280.9	2,181.4	99.47	22.931	
10,100.0	7,063.7	7,187.2	7,080.2	85.6	21.3	-91.60	-391.3	-189.1	2,380.7	2,278.6	102.20	23.296	
10,200.0	7,063.2	7,187.4	7,080.4	88.4	21.3	-91.66	-391.3	-189.1	2,480.6	2,375.7	104.93	23.640	
10,300.0	7,062.7	7,187.5	7,080.5	91.1	21.3	-91.72	-391.3	-189.1	2,580.5	2,472.8	107.67	23.967	
10,400.0	7,062.3	7,187.6	7,080.6	93.9	21.3	-91.78	-391.3	-189.1	2,680.4	2,570.0	110.41	24.277	
10,500.0	7,061.8	7,187.8	7,080.8	96.6	21.3	-91.84	-391.3	-189.1	2,780.3	2,667.1	113.15	24.571	
10,600.0	7,061.3	7,187.9	7,080.9	99.4	21.3	-91.90	-391.3	-189.1	2,880.2	2,764.3	115.90	24.850	
10,700.0	7,060.8	7,188.0	7,081.0	102.1	21.3	-91.95	-391.3	-189.1	2,980.1	2,861.4	118.65	25.116	
10,800.0	7,060.3	7,188.2	7,081.2	104.9	21.3	-92.01	-391.3	-189.1	3,080.0	2,958.6	121.40	25.370	
10,900.0	7,059.8	7,188.3	7,081.3	107.6	21.3	-92.07	-391.3	-189.1	3,179.9	3,055.7	124.16	25.612	
11,000.0	7,059.4	7,188.4	7,081.4	110.4	21.3	-92.13	-391.3	-189.1	3,279.8	3,152.9	126.91	25.843	
11,100.0	7,058.9	7,188.5	7,081.5	113.2	21.3	-92.19	-391.3	-189.1	3,379.8	3,250.1	129.67	26.064	
11,200.0	7,058.4	7,188.7	7,081.7	115.9	21.3	-92.24	-391.3	-189.1	3,479.7	3,347.3	132.43	26.275	
11,300.0	7,057.9	7,188.8	7,081.8	118.7	21.3	-92.30	-391.3	-189.1	3,579.6	3,444.4	135.20	26.477	
11,400.0	7,057.4	7,188.9	7,081.9	121.5	21.3	-92.36	-391.3	-189.1	3,679.6	3,541.6	137.96	26.671	
11,500.0	7,056.9	7,189.0	7,082.0	124.3	21.3	-92.41	-391.3	-189.1	3,779.5	3,638.8	140.73	26.857	
11,600.0	7,056.5	7,189.2	7,082.2	127.0	21.3	-92.47	-391.3	-189.1	3,879.5	3,736.0	143.49	27.036	
11,688.2	7,056.0	7,189.3	7,082.2	129.5	21.3	-92.52	-391.3	-189.1	3,967.6	3,821.6	145.93	27.188	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WEDCO #13-21DU - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 705-MWD — **Offset Well Error:** 0.0 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
0.0	0.0	1.5	1.5	0.0	0.0	-46.25	529.0	-552.6	765.0				
100.0	100.0	101.3	101.3	0.1	0.1	-46.26	528.9	-552.7	765.0	764.8	0.20	3,776.555	
200.0	200.0	201.0	201.0	0.3	0.2	-46.28	528.7	-552.9	765.0	764.5	0.53	1,440.416	
300.0	300.0	300.8	300.8	0.5	0.3	-46.32	528.4	-553.3	765.1	764.3	0.86	890.000	
400.0	400.0	400.5	400.5	0.8	0.4	-46.37	528.0	-553.9	765.2	764.0	1.19	644.002	
500.0	500.0	500.3	500.3	1.0	0.5	-46.43	527.5	-554.6	765.4	763.9	1.52	504.598	
600.0	600.0	600.0	600.0	1.2	0.6	-46.51	526.8	-555.4	765.6	763.7	1.85	414.853	ES
700.0	700.0	699.7	699.7	1.4	0.7	-157.63	526.1	-556.5	767.4	765.2	2.17	354.406	
800.0	799.8	798.6	798.6	1.6	0.9	-157.84	525.3	-557.6	772.5	769.9	2.57	300.297	
900.0	899.5	892.0	892.0	1.9	1.1	-158.09	524.5	-558.8	781.0	778.0	2.98	261.818	
1,000.0	998.7	986.0	985.9	2.1	1.3	-158.34	524.9	-559.8	793.5	790.1	3.40	233.500	
1,100.0	1,097.5	1,061.0	1,060.9	2.4	1.5	-158.46	527.2	-561.1	811.3	807.5	3.79	214.154	
1,200.0	1,195.6	1,132.7	1,132.4	2.7	1.6	-158.59	530.7	-563.9	835.2	831.0	4.20	198.911	
1,200.1	1,195.8	1,132.8	1,132.5	2.7	1.6	-158.59	530.7	-563.9	835.2	831.0	4.20	198.893	
1,300.0	1,293.4	1,201.8	1,201.2	3.1	1.8	-158.98	534.7	-569.0	863.7	859.1	4.61	187.188	
1,400.0	1,391.3	1,266.0	1,265.0	3.5	2.0	-159.38	539.1	-575.7	895.2	890.2	5.03	177.943	
1,500.0	1,489.1	1,342.6	1,340.7	4.0	2.2	-159.90	544.8	-585.8	929.3	923.8	5.48	169.622	
1,600.0	1,586.9	1,423.3	1,420.1	4.4	2.4	-160.50	550.8	-598.5	965.2	959.3	5.93	162.714	
1,700.0	1,684.7	1,491.3	1,486.9	4.8	2.7	-161.07	555.3	-610.9	1,002.6	996.3	6.36	157.581	
1,800.0	1,782.5	1,545.0	1,539.2	5.3	2.9	-161.52	559.5	-622.1	1,043.0	1,036.3	6.76	154.209	
1,900.0	1,880.3	1,618.0	1,609.9	5.7	3.2	-162.12	566.1	-639.0	1,085.8	1,078.5	7.22	150.307	
2,000.0	1,978.1	1,683.5	1,672.9	6.1	3.5	-162.66	572.3	-655.7	1,130.6	1,122.9	7.67	147.485	
2,100.0	2,075.9	1,749.6	1,736.1	6.6	3.9	-163.21	578.9	-673.9	1,177.3	1,169.2	8.11	145.191	
2,200.0	2,173.8	1,825.0	1,807.8	7.0	4.3	-163.82	586.7	-695.8	1,225.5	1,216.9	8.58	142.891	
2,300.0	2,271.6	1,904.6	1,883.4	7.5	4.8	-164.41	595.4	-719.3	1,274.4	1,265.4	9.05	140.873	
2,400.0	2,369.4	2,011.0	1,984.5	8.0	5.4	-165.20	605.6	-750.8	1,323.0	1,313.4	9.57	138.262	
2,500.0	2,467.2	2,083.3	2,053.2	8.4	5.8	-165.72	612.1	-772.3	1,371.4	1,361.4	10.01	136.969	
2,600.0	2,565.0	2,170.8	2,136.2	8.9	6.3	-166.28	620.7	-798.4	1,420.5	1,410.0	10.50	135.327	
2,700.0	2,662.8	2,261.0	2,221.9	9.3	6.8	-166.86	628.8	-825.6	1,469.4	1,458.4	10.98	133.807	
2,800.0	2,760.6	2,348.5	2,305.0	9.8	7.3	-167.38	636.6	-851.7	1,518.2	1,506.8	11.46	132.532	
2,900.0	2,858.5	2,437.0	2,389.2	10.2	7.8	-167.84	645.1	-877.8	1,567.1	1,555.2	11.93	131.324	
3,000.0	2,956.3	2,509.1	2,457.9	10.7	8.2	-168.14	653.2	-898.4	1,616.2	1,603.8	12.38	130.542	
3,100.0	3,054.1	2,570.0	2,515.5	11.2	8.6	-168.38	660.8	-916.5	1,666.6	1,653.8	12.81	130.152	
3,200.0	3,151.9	2,631.0	2,572.9	11.6	9.0	-168.59	669.0	-935.2	1,718.4	1,705.2	13.24	129.792	
3,300.0	3,249.7	2,703.6	2,641.1	12.1	9.5	-168.82	679.4	-957.9	1,771.1	1,757.4	13.70	129.282	
3,400.0	3,347.5	2,833.3	2,763.1	12.5	10.4	-169.16	698.8	-997.4	1,823.7	1,809.5	14.28	127.701	
3,500.0	3,445.3	2,917.3	2,842.7	13.0	10.9	-169.37	710.5	-1,021.7	1,874.4	1,859.6	14.75	127.061	
3,600.0	3,543.2	3,011.5	2,931.9	13.5	11.5	-169.60	723.6	-1,049.1	1,925.3	1,910.1	15.25	126.232	
3,700.0	3,641.0	3,120.6	3,035.4	13.9	12.1	-169.84	738.4	-1,080.0	1,975.4	1,959.6	15.78	125.197	
3,800.0	3,738.8	3,221.0	3,131.1	14.4	12.7	-170.06	751.1	-1,107.6	2,024.4	2,008.2	16.28	124.323	
3,900.0	3,836.6	3,300.0	3,206.4	14.8	13.2	-170.23	760.8	-1,129.3	2,073.4	2,056.7	16.75	123.787	
4,000.0	3,934.4	3,389.0	3,291.2	15.3	13.7	-170.42	771.8	-1,154.3	2,122.8	2,105.6	17.25	123.091	
4,100.0	4,032.2	3,457.5	3,356.3	15.8	14.2	-170.58	779.9	-1,173.9	2,172.4	2,154.7	17.69	122.794	
4,159.1	4,090.0	3,501.0	3,397.6	16.0	14.4	-170.67	785.4	-1,186.5	2,202.2	2,184.2	17.96	122.593	
4,200.0	4,130.1	3,528.8	3,423.9	16.2	14.6	-170.80	789.1	-1,194.6	2,222.6	2,204.4	18.17	122.310	
4,300.0	4,228.5	3,637.9	3,527.4	16.5	15.3	-171.15	803.3	-1,226.1	2,270.3	2,251.5	18.75	121.070	
4,400.0	4,327.5	3,822.7	3,704.5	16.8	16.3	-171.48	826.5	-1,273.4	2,311.5	2,292.0	19.49	118.608	
4,500.0	4,426.9	3,888.2	3,767.4	17.0	16.7	-171.64	834.8	-1,289.5	2,349.2	2,329.3	19.92	117.962	
4,600.0	4,526.6	3,967.0	3,843.0	17.2	17.1	-171.77	845.7	-1,309.0	2,384.4	2,364.1	20.36	117.123	
4,700.0	4,626.6	4,047.5	3,920.1	17.3	17.6	-171.88	857.2	-1,329.2	2,417.0	2,396.2	20.78	116.299	
4,759.3	4,685.8	4,129.4	3,998.4	17.4	18.1	-60.95	868.8	-1,349.9	2,434.7	2,399.4	35.33	68.913	
4,800.0	4,726.5	4,193.7	4,060.2	17.5	18.4	-60.95	877.3	-1,365.6	2,446.0	2,410.3	35.73	68.459	

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 WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WEDCO #13-21DU - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 705-MWD — **Offset Well Error:** 0.0 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
4,900.0	4,826.5	4,310.1	4,172.3	17.6	19.0	-61.04	889.3	-1,394.5	2,472.7	2,436.2	36.48	67.789	
5,000.0	4,926.5	4,474.8	4,331.5	17.7	19.9	-61.17	904.7	-1,433.9	2,498.4	2,460.9	37.44	66.725	
5,100.0	5,026.5	4,785.4	4,635.6	17.8	21.2	-61.41	925.6	-1,493.1	2,518.8	2,479.9	38.85	64.826	
5,200.0	5,126.5	5,073.2	4,921.2	18.0	22.0	-61.54	936.7	-1,526.1	2,530.8	2,491.0	39.79	63.610	
5,300.0	5,226.5	5,317.1	5,164.8	18.1	22.4	-61.61	939.9	-1,537.9	2,535.0	2,494.7	40.33	62.861	
5,400.0	5,326.5	5,424.9	5,272.6	18.2	22.5	-61.63	940.0	-1,540.7	2,537.4	2,496.8	40.60	62.497	
5,500.0	5,426.5	5,527.9	5,375.5	18.3	22.7	-61.67	939.8	-1,543.2	2,539.5	2,498.6	40.87	62.141	
5,600.0	5,526.5	5,639.5	5,487.1	18.5	22.8	-61.71	939.1	-1,546.0	2,541.4	2,500.2	41.14	61.767	
5,700.0	5,626.5	5,748.6	5,596.1	18.6	22.9	-61.75	938.3	-1,548.2	2,542.8	2,501.3	41.41	61.398	
5,800.0	5,726.5	5,852.8	5,700.3	18.8	23.1	-61.78	937.6	-1,550.0	2,544.0	2,502.3	41.68	61.042	
5,900.0	5,826.5	5,972.7	5,820.2	18.9	23.2	-61.81	936.7	-1,551.4	2,544.6	2,502.7	41.95	60.655	
6,000.0	5,926.5	6,080.9	5,928.4	19.0	23.3	-61.84	935.8	-1,552.0	2,544.8	2,502.6	42.21	60.287	
6,100.0	6,026.5	6,182.7	6,030.2	19.2	23.4	-61.86	935.0	-1,552.4	2,544.7	2,502.2	42.46	59.928	
6,200.0	6,126.5	6,282.2	6,129.6	19.3	23.5	-61.88	934.1	-1,552.8	2,544.6	2,501.9	42.71	59.574	
6,300.0	6,226.5	6,383.0	6,230.4	19.5	23.6	-61.90	933.1	-1,553.2	2,544.5	2,501.6	42.97	59.219	
6,400.0	6,326.5	6,488.6	6,336.1	19.6	23.8	-61.93	931.9	-1,553.6	2,544.3	2,501.1	43.23	58.854	
6,433.3	6,359.8	6,522.4	6,369.9	19.7	23.8	-61.94	931.5	-1,553.7	2,544.2	2,500.9	43.32	58.735	
6,450.0	6,376.5	6,539.4	6,386.9	19.7	23.8	28.06	931.3	-1,553.7	2,544.0	2,514.9	29.14	87.293	
6,500.0	6,426.5	6,589.9	6,437.4	19.7	23.9	28.19	930.7	-1,553.8	2,541.2	2,511.9	29.32	86.684	
6,550.0	6,476.0	6,639.5	6,487.0	19.7	23.9	28.46	930.1	-1,554.0	2,535.4	2,506.0	29.41	86.209	
6,600.0	6,525.0	6,687.7	6,535.1	19.7	24.0	28.90	929.6	-1,554.1	2,526.6	2,497.2	29.43	85.851	
6,650.0	6,573.3	6,734.0	6,581.4	19.7	24.0	29.50	929.1	-1,554.1	2,514.8	2,485.4	29.39	85.575	
6,700.0	6,620.4	6,780.2	6,627.7	19.6	24.1	30.29	928.8	-1,554.2	2,500.1	2,470.8	29.30	85.316	
6,750.0	6,666.3	6,826.6	6,674.0	19.6	24.1	31.28	928.3	-1,554.3	2,482.6	2,453.4	29.21	85.003	
6,800.0	6,710.7	6,871.0	6,718.4	19.5	24.2	32.47	927.7	-1,554.5	2,462.4	2,433.3	29.12	84.560	
6,850.0	6,753.4	6,912.9	6,760.3	19.4	24.2	33.89	927.2	-1,554.7	2,439.6	2,410.5	29.08	83.879	
6,900.0	6,794.2	6,953.5	6,800.9	19.3	24.3	35.58	926.7	-1,554.9	2,414.3	2,385.2	29.15	82.825	
6,950.0	6,832.9	6,995.0	6,842.4	19.3	24.3	37.59	926.1	-1,555.1	2,386.7	2,357.3	29.38	81.235	
7,000.0	6,869.2	7,034.0	6,881.5	19.2	24.4	39.94	925.4	-1,555.3	2,356.9	2,327.1	29.82	79.032	
7,050.0	6,903.1	7,065.3	6,912.7	19.2	24.4	42.57	924.8	-1,555.5	2,325.1	2,294.6	30.49	76.246	
7,100.0	6,934.3	7,093.3	6,940.7	19.2	24.4	45.58	924.3	-1,555.7	2,291.6	2,260.1	31.46	72.850	
7,150.0	6,962.8	7,119.0	6,966.4	19.3	24.5	49.01	923.8	-1,556.0	2,256.5	2,223.7	32.73	68.940	
7,200.0	6,988.3	7,143.5	6,990.9	19.5	24.5	52.92	923.4	-1,556.2	2,220.0	2,185.7	34.32	64.681	
7,250.0	7,010.7	7,166.9	7,014.3	19.7	24.5	57.33	923.0	-1,556.5	2,182.4	2,146.2	36.19	60.306	
7,300.0	7,029.9	7,187.0	7,034.4	20.0	24.6	62.18	922.6	-1,556.7	2,143.8	2,105.6	38.22	56.098	
7,350.0	7,045.9	7,203.8	7,051.2	20.4	24.6	67.39	922.3	-1,556.8	2,104.5	2,064.3	40.27	52.255	
7,400.0	7,058.6	7,217.2	7,064.6	20.8	24.6	72.87	922.1	-1,557.0	2,064.8	2,022.5	42.22	48.904	
7,450.0	7,067.8	7,227.1	7,074.5	21.4	24.6	78.48	922.0	-1,557.0	2,024.7	1,980.8	43.92	46.101	
7,500.0	7,073.6	7,233.5	7,080.9	22.0	24.6	84.06	921.8	-1,557.1	1,984.7	1,939.4	45.27	43.837	
7,550.0	7,076.0	7,236.4	7,083.8	22.7	24.6	89.45	921.8	-1,557.1	1,944.9	1,898.7	46.24	42.058	
7,561.7	7,076.0	7,236.5	7,083.9	22.9	24.6	90.67	921.8	-1,557.1	1,935.6	1,889.2	46.42	41.701	
7,600.0	7,075.8	7,236.7	7,084.1	23.4	24.6	90.67	921.8	-1,557.1	1,905.6	1,858.6	47.01	40.538	
7,700.0	7,075.3	7,237.1	7,084.5	25.1	24.6	90.70	921.8	-1,557.1	1,828.4	1,779.7	48.70	37.542	
7,800.0	7,074.8	7,237.6	7,084.9	27.0	24.6	90.72	921.8	-1,557.1	1,753.5	1,703.0	50.58	34.666	
7,900.0	7,074.4	7,238.0	7,085.4	29.0	24.6	90.74	921.8	-1,557.1	1,681.3	1,628.7	52.62	31.954	
8,000.0	7,073.9	7,238.4	7,085.8	31.1	24.6	90.76	921.8	-1,557.2	1,612.0	1,557.3	54.77	29.434	
8,100.0	7,073.4	7,238.9	7,086.3	33.4	24.6	90.78	921.8	-1,557.2	1,546.1	1,489.1	57.02	27.116	
8,200.0	7,072.9	7,239.3	7,086.7	35.7	24.6	90.80	921.7	-1,557.2	1,484.0	1,424.7	59.35	25.006	
8,300.0	7,072.4	7,239.7	7,087.1	38.1	24.6	90.82	921.7	-1,557.2	1,426.3	1,364.5	61.74	23.100	
8,400.0	7,071.9	7,240.2	7,087.6	40.6	24.6	90.84	921.7	-1,557.2	1,373.4	1,309.2	64.19	21.395	
8,500.0	7,071.5	7,240.6	7,088.0	43.1	24.6	90.86	921.7	-1,557.2	1,325.9	1,259.2	66.68	19.884	
8,600.0	7,071.0	7,241.1	7,088.4	45.6	24.6	90.89	921.7	-1,557.2	1,284.5	1,215.3	69.21	18.559	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WEDCO #13-21DU - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 705-MWD — **Offset Well Error:** 0.0 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
8,700.0	7,070.5	7,241.5	7,088.9	48.1	24.6	90.91	921.7	-1,557.2	1,249.7	1,177.9	71.77	17.413	
8,800.0	7,070.0	7,241.9	7,089.3	50.7	24.6	90.93	921.7	-1,557.2	1,222.1	1,147.8	74.35	16.437	
8,900.0	7,069.5	7,242.4	7,089.7	53.3	24.6	90.95	921.7	-1,557.2	1,202.3	1,125.3	76.96	15.622	
9,000.0	7,069.0	7,242.8	7,090.2	56.0	24.6	90.97	921.7	-1,557.2	1,190.5	1,110.9	79.59	14.958	
9,090.7	7,068.6	7,243.2	7,090.6	58.4	24.6	90.99	921.7	-1,557.2	1,187.1	1,105.1	81.99	14.479	
9,100.0	7,068.6	7,243.2	7,090.6	58.6	24.6	90.99	921.7	-1,557.2	1,187.1	1,104.9	82.23	14.436	
9,200.0	7,068.1	7,243.7	7,091.1	61.3	24.6	91.01	921.7	-1,557.2	1,192.1	1,107.2	84.89	14.042	
9,300.0	7,067.6	7,244.1	7,091.5	63.9	24.6	91.03	921.7	-1,557.2	1,205.4	1,117.8	87.56	13.766	
9,400.0	7,067.1	7,244.5	7,091.9	66.6	24.6	91.05	921.7	-1,557.2	1,226.7	1,136.4	90.24	13.593	
9,500.0	7,066.6	7,245.0	7,092.4	69.3	24.6	91.07	921.6	-1,557.2	1,255.6	1,162.7	92.94	13.511	
9,600.0	7,066.1	7,245.4	7,092.8	72.0	24.6	91.10	921.6	-1,557.2	1,291.7	1,196.1	95.64	13.506 SF	
9,700.0	7,065.6	7,245.8	7,093.2	74.7	24.6	91.12	921.6	-1,557.2	1,334.3	1,236.0	98.35	13.567	
9,800.0	7,065.2	7,246.3	7,093.7	77.5	24.6	91.14	921.6	-1,557.2	1,382.8	1,281.8	101.06	13.683	
9,900.0	7,064.7	7,246.7	7,094.1	80.2	24.6	91.16	921.6	-1,557.2	1,436.7	1,332.9	103.79	13.843	
10,000.0	7,064.2	7,247.1	7,094.5	82.9	24.6	91.18	921.6	-1,557.2	1,495.3	1,388.8	106.51	14.039	
10,100.0	7,063.7	7,247.6	7,095.0	85.6	24.6	91.20	921.6	-1,557.2	1,558.1	1,448.9	109.25	14.263	
10,200.0	7,063.2	7,248.0	7,095.4	88.4	24.6	91.22	921.6	-1,557.2	1,624.7	1,512.7	111.98	14.508	
10,300.0	7,062.7	7,248.5	7,095.8	91.1	24.6	91.24	921.6	-1,557.2	1,694.6	1,579.8	114.73	14.771	
10,400.0	7,062.3	7,248.9	7,096.3	93.9	24.6	91.26	921.6	-1,557.2	1,767.3	1,649.8	117.47	15.045	
10,500.0	7,061.8	7,249.3	7,096.7	96.6	24.6	91.28	921.6	-1,557.3	1,842.6	1,722.4	120.22	15.327	
10,600.0	7,061.3	7,249.8	7,097.1	99.4	24.6	91.31	921.6	-1,557.3	1,920.2	1,797.2	122.97	15.615	
10,700.0	7,060.8	7,250.2	7,097.6	102.1	24.6	91.33	921.6	-1,557.3	1,999.7	1,874.0	125.73	15.905	
10,800.0	7,060.3	7,250.6	7,098.0	104.9	24.6	91.35	921.5	-1,557.3	2,081.1	1,952.6	128.49	16.197	
10,900.0	7,059.8	7,251.1	7,098.4	107.6	24.6	91.37	921.5	-1,557.3	2,164.0	2,032.7	131.25	16.488	
11,000.0	7,059.4	7,251.5	7,098.9	110.4	24.6	91.39	921.5	-1,557.3	2,248.2	2,114.2	134.01	16.777	
11,100.0	7,058.9	7,251.9	7,099.3	113.2	24.6	91.41	921.5	-1,557.3	2,333.8	2,197.0	136.77	17.063	
11,200.0	7,058.4	7,252.4	7,099.8	115.9	24.6	91.43	921.5	-1,557.3	2,420.4	2,280.8	139.54	17.345	
11,300.0	7,057.9	7,252.8	7,100.2	118.7	24.6	91.45	921.5	-1,557.3	2,508.0	2,365.7	142.31	17.624	
11,400.0	7,057.4	7,253.2	7,100.6	121.5	24.6	91.47	921.5	-1,557.3	2,596.5	2,451.5	145.08	17.897	
11,500.0	7,056.9	7,253.7	7,101.1	124.3	24.6	91.49	921.5	-1,557.3	2,685.9	2,538.0	147.85	18.166	
11,600.0	7,056.5	7,254.1	7,101.5	127.0	24.6	91.52	921.5	-1,557.3	2,775.9	2,625.3	150.63	18.429	
11,688.2	7,056.0	7,254.5	7,101.8	129.5	24.6	91.53	921.5	-1,557.3	2,855.9	2,702.8	153.07	18.657	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WEDCO 14-21DU - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 704-MWD — **Offset Well Error:** 0.0 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
0.0	0.0	0.0	0.0	0.0	0.0	-50.70	469.6	-573.8	741.5				
100.0	100.0	100.9	100.9	0.1	0.1	-50.71	469.6	-573.9	741.5	741.3	0.20	3,668.737	
200.0	200.0	200.3	200.3	0.3	0.2	-50.72	469.5	-574.0	741.6	741.1	0.53	1,398.672	
300.0	300.0	299.8	299.8	0.5	0.3	-50.74	469.5	-574.4	741.8	741.0	0.86	864.234	
400.0	400.0	399.2	399.2	0.8	0.4	-50.76	469.4	-574.8	742.1	740.9	1.19	625.459	
500.0	500.0	498.6	498.6	1.0	0.5	-50.80	469.3	-575.3	742.4	740.9	1.51	490.192	
600.0	600.0	598.0	598.0	1.2	0.6	-50.84	469.1	-576.0	742.9	741.0	1.84	403.139	
700.0	700.0	697.4	697.4	1.4	0.7	-161.90	469.0	-576.8	745.0	742.9	2.16	345.099	
800.0	799.8	788.9	788.9	1.6	0.9	-162.10	468.3	-578.6	751.1	748.5	2.56	292.861	
900.0	899.5	890.0	889.9	1.9	1.2	-162.58	465.7	-582.5	760.8	757.8	3.01	252.948	
1,000.0	998.7	983.0	982.6	2.1	1.4	-163.26	461.4	-587.9	774.2	770.8	3.45	224.347	
1,100.0	1,097.5	1,077.0	1,076.0	2.4	1.6	-164.21	454.9	-596.0	792.0	788.0	3.93	201.469	
1,200.0	1,195.6	1,156.8	1,154.9	2.7	1.9	-165.19	447.9	-605.2	814.5	810.1	4.40	184.929	
1,200.1	1,195.8	1,156.9	1,155.1	2.7	1.9	-165.19	447.9	-605.2	814.5	810.1	4.40	184.909	
1,300.0	1,293.4	1,247.4	1,244.2	3.1	2.2	-166.59	438.5	-617.9	840.2	835.3	4.94	170.060	
1,400.0	1,391.3	1,328.9	1,323.9	3.5	2.5	-167.94	428.4	-631.1	867.2	861.7	5.48	158.204	
1,500.0	1,489.1	1,437.1	1,429.3	4.0	3.0	-169.80	412.9	-650.4	895.4	889.2	6.13	146.056	
1,600.0	1,586.9	1,521.7	1,511.2	4.4	3.4	-171.31	398.4	-665.8	923.1	916.3	6.72	137.276	
1,700.0	1,684.7	1,622.6	1,608.0	4.8	3.9	-173.22	378.5	-686.0	952.0	944.6	7.44	128.021	
1,800.0	1,782.5	1,705.3	1,686.9	5.3	4.3	-174.80	360.5	-703.0	981.3	973.3	8.07	121.595	
1,900.0	1,880.3	1,785.3	1,763.2	5.7	4.8	-176.24	343.6	-720.1	1,012.5	1,003.8	8.69	116.488	
2,000.0	1,978.1	1,875.3	1,849.1	6.1	5.2	-177.75	325.3	-739.9	1,045.2	1,035.9	9.33	111.971	
2,100.0	2,075.9	1,958.9	1,928.9	6.6	5.6	-179.06	308.4	-758.0	1,078.4	1,068.4	9.95	108.388	
2,200.0	2,173.8	2,036.4	2,002.8	7.0	6.1	179.78	293.2	-775.9	1,113.4	1,102.9	10.56	105.457	
2,300.0	2,271.6	2,134.1	2,095.8	7.5	6.6	178.39	273.9	-798.7	1,149.3	1,138.0	11.28	101.920	
2,400.0	2,369.4	2,237.0	2,194.0	8.0	7.2	177.00	252.9	-821.4	1,184.4	1,172.4	11.99	98.797	
2,500.0	2,467.2	2,319.7	2,272.9	8.4	7.7	175.97	236.4	-839.6	1,220.0	1,207.4	12.61	96.758	
2,600.0	2,565.0	2,404.6	2,354.0	8.9	8.1	174.97	219.8	-858.9	1,256.7	1,243.5	13.25	94.833	
2,700.0	2,662.8	2,496.0	2,441.0	9.3	8.7	173.93	201.3	-879.4	1,293.5	1,279.6	13.93	92.864	
2,800.0	2,760.6	2,569.0	2,510.4	9.8	9.1	173.14	186.8	-897.0	1,332.0	1,317.5	14.53	91.661	
2,900.0	2,858.5	2,651.4	2,588.6	10.2	9.6	172.28	170.7	-917.5	1,371.7	1,356.5	15.17	90.415	
3,000.0	2,956.3	2,742.9	2,675.4	10.7	10.1	171.37	152.4	-939.9	1,411.3	1,395.5	15.85	89.042	
3,100.0	3,054.1	2,854.7	2,781.8	11.2	10.8	170.36	130.6	-966.3	1,450.5	1,433.9	16.60	87.400	
3,200.0	3,151.9	2,932.0	2,855.5	11.6	11.2	169.71	115.7	-984.2	1,489.6	1,472.4	17.20	86.624	
3,300.0	3,249.7	3,043.9	2,961.8	12.1	11.9	168.74	92.4	-1,010.2	1,528.8	1,510.8	17.98	85.031	
3,400.0	3,347.5	3,127.0	3,040.7	12.5	12.4	168.03	74.4	-1,029.2	1,567.7	1,549.1	18.63	84.154	
3,500.0	3,445.3	3,213.7	3,123.3	13.0	12.9	167.38	57.0	-1,049.1	1,607.1	1,587.9	19.27	83.394	
3,600.0	3,543.2	3,290.6	3,196.7	13.5	13.3	166.87	42.8	-1,067.0	1,647.2	1,627.3	19.87	82.914	
3,700.0	3,641.0	3,406.0	3,306.7	13.9	14.0	166.12	20.7	-1,093.8	1,687.4	1,666.7	20.63	81.788	
3,800.0	3,738.8	3,478.7	3,375.9	14.4	14.4	165.62	5.6	-1,110.4	1,727.2	1,705.9	21.24	81.330	
3,900.0	3,836.6	3,543.5	3,437.3	14.8	14.8	165.19	-7.9	-1,126.0	1,768.2	1,746.4	21.81	81.070	
4,000.0	3,934.4	3,592.0	3,483.2	15.3	15.1	164.89	-17.6	-1,138.3	1,810.9	1,788.6	22.32	81.149	
4,100.0	4,032.2	3,664.3	3,551.6	15.8	15.6	164.48	-31.0	-1,157.6	1,855.0	1,832.1	22.91	80.970	
4,159.1	4,090.0	3,703.7	3,588.8	16.0	15.8	164.29	-37.7	-1,168.7	1,881.7	1,858.5	23.24	80.953	
4,200.0	4,130.1	3,735.8	3,619.1	16.2	16.1	164.25	-43.1	-1,177.8	1,900.1	1,876.6	23.54	80.724	
4,300.0	4,228.5	3,824.3	3,702.5	16.5	16.6	164.05	-58.5	-1,203.1	1,943.3	1,919.1	24.26	80.099	
4,400.0	4,327.5	3,941.7	3,812.4	16.8	17.4	163.57	-82.9	-1,236.2	1,983.1	1,958.0	25.08	79.054	
4,500.0	4,426.9	4,055.9	3,919.8	17.0	18.1	163.08	-107.1	-1,266.7	2,018.5	1,992.6	25.85	78.098	
4,600.0	4,526.6	4,152.0	4,010.4	17.2	18.7	162.68	-127.4	-1,291.6	2,050.1	2,023.6	26.49	77.400	
4,700.0	4,626.6	4,216.8	4,071.5	17.3	19.1	162.49	-140.2	-1,308.7	2,079.4	2,052.4	26.95	77.152	
4,759.3	4,685.8	4,258.9	4,111.2	17.4	19.4	-86.67	-148.0	-1,320.5	2,096.1	2,063.4	32.69	64.125	
4,800.0	4,726.5	4,316.6	4,165.5	17.5	19.8	-87.01	-159.3	-1,336.4	2,107.2	2,074.1	33.08	63.695	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WEDCO 14-21DU - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 704-MWD — **Offset Well Error:** 0.0 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
4,900.0	4,826.5	4,428.0	4,270.3	17.6	20.5	-87.70	-182.5	-1,366.1	2,133.5	2,099.6	33.86	63.011	
5,000.0	4,926.5	4,615.9	4,449.1	17.7	21.6	-88.75	-219.2	-1,410.9	2,156.8	2,121.8	34.98	61.654	
5,100.0	5,026.5	4,821.6	4,647.3	17.8	22.6	-89.77	-256.8	-1,450.9	2,176.0	2,139.9	36.06	60.342	
5,200.0	5,126.5	4,954.9	4,777.1	18.0	23.2	-90.33	-277.7	-1,472.6	2,192.4	2,155.7	36.74	59.677	
5,300.0	5,226.5	5,138.4	4,956.8	18.1	23.9	-91.02	-304.1	-1,499.0	2,207.6	2,170.0	37.56	58.778	
5,400.0	5,326.5	5,362.0	5,178.5	18.2	24.6	-91.55	-324.9	-1,519.0	2,216.4	2,178.1	38.31	57.856	
5,500.0	5,426.5	5,612.8	5,428.8	18.3	25.0	-91.70	-331.1	-1,526.9	2,219.3	2,180.5	38.84	57.141	
5,600.0	5,526.5	5,712.9	5,529.0	18.5	25.0	-91.68	-330.2	-1,526.7	2,219.2	2,180.1	39.08	56.788	
5,614.7	5,541.2	5,726.7	5,542.7	18.5	25.1	-91.68	-330.1	-1,526.7	2,219.2	2,180.1	39.11	56.737	
5,700.0	5,626.5	5,798.9	5,615.0	18.6	25.1	-91.67	-329.7	-1,526.9	2,219.4	2,180.1	39.31	56.455	
5,800.0	5,726.5	5,898.5	5,714.6	18.8	25.2	-91.66	-329.7	-1,527.7	2,220.2	2,180.6	39.57	56.105	
5,900.0	5,826.5	5,993.6	5,809.7	18.9	25.3	-91.67	-329.9	-1,528.3	2,220.8	2,181.0	39.83	55.756	
6,000.0	5,926.5	6,089.8	5,905.9	19.0	25.4	-91.68	-330.4	-1,529.2	2,221.7	2,181.6	40.10	55.407	
6,100.0	6,026.5	6,194.0	6,010.1	19.2	25.5	-91.70	-331.2	-1,530.1	2,222.7	2,182.3	40.38	55.045	
6,200.0	6,126.5	6,297.4	6,113.5	19.3	25.7	-91.72	-331.9	-1,530.9	2,223.4	2,182.7	40.66	54.687	
6,300.0	6,226.5	6,400.7	6,216.8	19.5	25.8	-91.73	-332.4	-1,531.4	2,224.0	2,183.0	40.94	54.329	
6,400.0	6,326.5	6,501.7	6,317.7	19.6	25.9	-91.74	-332.8	-1,531.9	2,224.4	2,183.2	41.21	53.976	
6,433.3	6,359.8	6,534.4	6,350.4	19.7	25.9	-91.74	-332.8	-1,532.1	2,224.6	2,183.3	41.30	53.860	
6,450.0	6,376.5	6,550.8	6,366.9	19.7	25.9	-1.74	-332.8	-1,532.1	2,224.5	2,189.2	35.32	62.981	
6,500.0	6,426.5	6,598.6	6,414.7	19.7	26.0	-1.75	-332.8	-1,532.4	2,221.8	2,186.5	35.37	62.823	
6,550.0	6,476.0	6,644.8	6,460.8	19.7	26.0	-1.77	-332.9	-1,532.7	2,215.8	2,180.5	35.26	62.848	
6,600.0	6,525.0	6,692.1	6,508.1	19.7	26.1	-1.81	-333.0	-1,533.1	2,206.4	2,171.4	34.99	63.049	
6,650.0	6,573.3	6,740.4	6,556.4	19.7	26.1	-1.85	-333.1	-1,533.5	2,193.6	2,159.0	34.59	63.424	
6,700.0	6,620.4	6,788.6	6,604.6	19.6	26.2	-1.92	-333.3	-1,533.9	2,177.4	2,143.4	34.03	63.982	
6,750.0	6,666.3	6,836.1	6,652.2	19.6	26.3	-1.99	-333.3	-1,534.2	2,158.0	2,124.6	33.34	64.730	
6,800.0	6,710.7	6,884.1	6,700.2	19.5	26.3	-2.09	-333.4	-1,534.5	2,135.3	2,102.8	32.51	65.671	
6,850.0	6,753.4	6,931.5	6,747.6	19.4	26.4	-2.21	-333.4	-1,534.8	2,109.5	2,077.9	31.57	66.816	
6,900.0	6,794.2	6,974.5	6,790.6	19.3	26.4	-2.36	-333.5	-1,534.9	2,080.7	2,050.2	30.52	68.182	
6,950.0	6,832.9	7,014.2	6,830.2	19.3	26.5	-2.54	-333.6	-1,535.0	2,049.1	2,019.8	29.37	69.776	
7,000.0	6,869.2	7,050.9	6,866.9	19.2	26.5	-2.76	-333.6	-1,535.0	2,014.9	1,986.8	28.14	71.599	
7,050.0	6,903.1	7,083.8	6,899.8	19.2	26.5	-3.03	-333.7	-1,535.1	1,978.3	1,951.4	26.86	73.644	
7,100.0	6,934.3	7,114.1	6,930.2	19.2	26.6	-3.38	-333.8	-1,535.2	1,939.3	1,913.8	25.56	75.881	
7,150.0	6,962.8	7,142.1	6,958.2	19.3	26.6	-3.82	-333.9	-1,535.3	1,898.3	1,874.1	24.26	78.243	
7,200.0	6,988.3	7,167.9	6,984.0	19.5	26.6	-4.41	-334.1	-1,535.3	1,855.4	1,832.4	23.02	80.604	
7,250.0	7,010.7	7,190.7	7,006.7	19.7	26.7	-5.19	-334.2	-1,535.4	1,810.9	1,789.0	21.88	82.749	
7,300.0	7,029.9	7,210.2	7,026.2	20.0	26.7	-6.29	-334.3	-1,535.5	1,764.8	1,743.9	20.94	84.294	
7,350.0	7,045.9	7,226.4	7,042.5	20.4	26.7	-7.93	-334.4	-1,535.5	1,717.5	1,697.2	20.31	84.561	
7,400.0	7,058.6	7,240.1	7,056.2	20.8	26.7	-10.62	-334.5	-1,535.5	1,669.3	1,649.0	20.29	82.265	
7,450.0	7,067.8	7,250.1	7,066.1	21.4	26.7	-15.68	-334.5	-1,535.6	1,620.2	1,598.5	21.64	74.869	
7,500.0	7,073.6	7,256.4	7,072.4	22.0	26.7	-28.03	-334.5	-1,535.6	1,570.6	1,543.4	27.24	57.660	
7,550.0	7,076.0	7,258.9	7,075.0	22.7	26.7	-73.89	-334.5	-1,535.6	1,520.7	1,476.1	44.61	34.087	
7,561.7	7,076.0	7,259.0	7,075.0	22.9	26.7	-93.98	-334.5	-1,535.6	1,509.0	1,463.4	45.57	33.114	
7,600.0	7,075.8	7,258.9	7,074.9	23.4	26.7	-93.87	-334.5	-1,535.6	1,470.8	1,424.6	46.17	31.857	
7,700.0	7,075.3	7,258.5	7,074.5	25.1	26.7	-93.57	-334.5	-1,535.6	1,370.9	1,323.0	47.88	28.631	
7,800.0	7,074.8	7,258.1	7,074.2	27.0	26.7	-93.28	-334.5	-1,535.6	1,271.0	1,221.2	49.78	25.532	
7,900.0	7,074.4	7,257.8	7,073.8	29.0	26.7	-92.98	-334.5	-1,535.6	1,171.2	1,119.4	51.83	22.595	
8,000.0	7,073.9	7,257.4	7,073.5	31.1	26.7	-92.69	-334.5	-1,535.6	1,071.4	1,017.4	54.00	19.839	
8,100.0	7,073.4	7,257.1	7,073.1	33.4	26.7	-92.41	-334.5	-1,535.6	971.6	915.3	56.27	17.266	
8,200.0	7,072.9	7,256.7	7,072.8	35.7	26.7	-92.12	-334.5	-1,535.6	871.9	813.3	58.62	14.874	
8,300.0	7,072.4	7,256.4	7,072.4	38.1	26.7	-91.84	-334.5	-1,535.6	772.3	711.2	61.03	12.653	
8,400.0	7,071.9	7,256.1	7,072.1	40.6	26.7	-91.56	-334.5	-1,535.6	672.7	609.2	63.49	10.595	
8,500.0	7,071.5	7,255.7	7,071.8	43.1	26.7	-91.28	-334.5	-1,535.6	573.3	507.3	66.00	8.687	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST DD WEDCO 14-21DU - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 704-MWD — **Offset Well Error:** 0.0 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
8,600.0	7,071.0	7,255.4	7,071.4	45.6	26.7	-91.00	-334.5	-1,535.6	474.2	405.7	68.54	6.919	
8,700.0	7,070.5	7,255.0	7,071.1	48.1	26.7	-90.73	-334.5	-1,535.6	375.6	304.5	71.12	5.281	
8,800.0	7,070.0	7,254.7	7,070.8	50.7	26.7	-90.45	-334.5	-1,535.6	277.9	204.2	73.71	3.770	
8,900.0	7,069.5	7,254.4	7,070.4	53.3	26.7	-90.18	-334.5	-1,535.6	182.8	106.5	76.33	2.395	
9,000.0	7,069.0	7,254.1	7,070.1	56.0	26.7	-89.92	-334.5	-1,535.6	97.9	18.9	78.97	1.240	Level 2
9,069.1	7,068.7	7,253.8	7,069.9	57.8	26.7	-89.73	-334.5	-1,535.6	69.3	-11.5	80.80	0.858	Level 1, CC, ES, SF
9,100.0	7,068.6	7,253.7	7,069.8	58.6	26.7	-89.65	-334.5	-1,535.6	75.9	-5.7	81.62	0.930	Level 1
9,200.0	7,068.1	7,253.4	7,069.5	61.3	26.7	-89.39	-334.5	-1,535.6	148.1	63.8	84.28	1.757	
9,300.0	7,067.6	7,253.1	7,069.1	63.9	26.7	-89.12	-334.5	-1,535.6	241.0	154.1	86.96	2.772	
9,400.0	7,067.1	7,252.8	7,068.8	66.6	26.7	-88.87	-334.5	-1,535.6	338.0	248.4	89.64	3.771	
9,500.0	7,066.6	7,252.5	7,068.5	69.3	26.7	-88.61	-334.5	-1,535.6	436.4	344.1	92.34	4.726	
9,600.0	7,066.1	7,252.2	7,068.2	72.0	26.7	-88.35	-334.5	-1,535.6	535.4	440.3	95.03	5.633	
9,700.0	7,065.6	7,251.9	7,067.9	74.7	26.7	-88.10	-334.5	-1,535.6	634.7	536.9	97.74	6.493	
9,800.0	7,065.2	7,251.6	7,067.6	77.5	26.7	-87.85	-334.5	-1,535.6	734.1	633.7	100.45	7.309	
9,900.0	7,064.7	7,251.3	7,067.3	80.2	26.7	-87.60	-334.5	-1,535.6	833.7	730.6	103.16	8.082	
10,000.0	7,064.2	7,251.0	7,067.0	82.9	26.7	-87.35	-334.5	-1,535.6	933.4	827.6	105.87	8.816	
10,100.0	7,063.7	7,250.7	7,066.7	85.6	26.7	-87.10	-334.5	-1,535.6	1,033.2	924.6	108.59	9.514	
10,200.0	7,063.2	7,250.4	7,066.4	88.4	26.7	-86.86	-334.5	-1,535.6	1,133.0	1,021.7	111.31	10.178	
10,300.0	7,062.7	7,250.1	7,066.1	91.1	26.7	-86.62	-334.5	-1,535.6	1,232.8	1,118.8	114.03	10.811	
10,400.0	7,062.3	7,249.8	7,065.8	93.9	26.7	-86.38	-334.5	-1,535.6	1,332.7	1,215.9	116.76	11.414	
10,500.0	7,061.8	7,249.5	7,065.5	96.6	26.7	-86.14	-334.5	-1,535.6	1,432.5	1,313.1	119.48	11.990	
10,600.0	7,061.3	7,249.2	7,065.2	99.4	26.7	-85.90	-334.5	-1,535.6	1,532.4	1,410.2	122.20	12.540	
10,700.0	7,060.8	7,248.9	7,065.0	102.1	26.7	-85.67	-334.5	-1,535.6	1,632.3	1,507.4	124.92	13.067	
10,800.0	7,060.3	7,248.6	7,064.7	104.9	26.7	-85.44	-334.5	-1,535.6	1,732.2	1,604.6	127.64	13.571	
10,900.0	7,059.8	7,248.4	7,064.4	107.6	26.7	-85.21	-334.5	-1,535.6	1,832.2	1,701.8	130.36	14.054	
11,000.0	7,059.4	7,248.1	7,064.1	110.4	26.7	-84.98	-334.5	-1,535.6	1,932.1	1,799.0	133.08	14.518	
11,100.0	7,058.9	7,247.8	7,063.8	113.2	26.7	-84.75	-334.5	-1,535.6	2,032.0	1,896.2	135.80	14.963	
11,200.0	7,058.4	7,247.5	7,063.6	115.9	26.7	-84.53	-334.5	-1,535.6	2,132.0	1,993.5	138.52	15.391	
11,300.0	7,057.9	7,247.3	7,063.3	118.7	26.7	-84.30	-334.5	-1,535.6	2,231.9	2,090.7	141.23	15.803	
11,400.0	7,057.4	7,247.0	7,063.0	121.5	26.7	-84.08	-334.5	-1,535.6	2,331.9	2,187.9	143.95	16.199	
11,500.0	7,056.9	7,246.7	7,062.8	124.3	26.7	-83.86	-334.5	-1,535.6	2,431.8	2,285.2	146.66	16.581	
11,600.0	7,056.5	7,246.5	7,062.5	127.0	26.7	-83.65	-334.5	-1,535.5	2,531.8	2,382.4	149.37	16.950	
11,688.2	7,056.0	7,246.2	7,062.2	129.5	26.7	-83.46	-334.5	-1,535.5	2,619.9	2,468.2	151.76	17.264	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST VERT BUNYAN #1 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 100-GYD_CT — **Offset Well Error:** 0.0 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
0.0	0.0	0.0	0.0	0.0	0.0	-37.04	708.2	-534.5	887.4				
100.0	100.0	85.2	85.2	0.1	0.1	-37.04	708.3	-534.5	887.3	887.2	0.15	5,843.502	CC
200.0	200.0	185.5	185.5	0.3	0.1	-37.06	708.2	-534.8	887.5	887.0	0.47	1,898.331	
300.0	300.0	287.3	287.3	0.5	0.2	-37.09	708.0	-535.2	887.5	886.7	0.78	1,142.714	
354.4	354.4	340.9	340.9	0.7	0.3	-37.10	707.9	-535.3	887.4	886.5	0.93	949.345	
400.0	400.0	385.4	385.4	0.8	0.3	-37.12	707.7	-535.6	887.5	886.4	1.07	833.128	
500.0	500.0	487.6	487.6	1.0	0.4	-37.18	707.1	-536.4	887.5	886.2	1.36	652.362	
538.3	538.3	524.8	524.8	1.1	0.4	-37.20	706.9	-536.6	887.5	886.0	1.47	603.867	
600.0	600.0	583.0	583.0	1.2	0.4	-37.25	706.6	-537.2	887.6	886.0	1.64	540.578	ES
700.0	700.0	680.5	680.5	1.4	0.5	-148.34	706.3	-538.5	889.7	887.8	1.89	470.961	
800.0	799.8	787.8	787.8	1.6	0.5	-148.54	706.0	-539.5	894.5	892.3	2.14	418.059	
900.0	899.5	885.3	885.3	1.9	0.6	-148.82	705.2	-540.3	901.8	899.4	2.40	375.329	
1,000.0	998.7	987.7	987.7	2.1	0.6	-149.22	704.2	-541.5	912.2	909.6	2.68	339.926	
1,100.0	1,097.5	1,086.1	1,086.0	2.4	0.7	-149.67	703.1	-542.5	925.5	922.5	2.98	310.772	
1,200.0	1,195.6	1,177.7	1,177.6	2.7	0.7	-150.12	702.3	-543.5	942.1	938.9	3.29	286.164	
1,200.1	1,195.8	1,177.8	1,177.7	2.7	0.7	-150.12	702.3	-543.5	942.2	938.9	3.29	286.134	
1,300.0	1,293.4	1,277.6	1,277.5	3.1	0.8	-150.83	701.9	-544.8	960.8	957.2	3.59	267.385	
1,400.0	1,391.3	1,372.4	1,372.4	3.5	0.8	-151.48	701.2	-546.1	979.4	975.5	3.90	251.319	
1,500.0	1,489.1	1,475.0	1,474.9	4.0	0.8	-152.15	700.7	-547.3	998.3	994.1	4.20	237.510	
1,600.0	1,586.9	1,570.2	1,570.1	4.4	0.9	-152.76	699.8	-548.3	1,016.9	1,012.4	4.51	225.466	
1,700.0	1,684.7	1,666.6	1,666.4	4.8	0.9	-153.37	699.1	-549.8	1,036.0	1,031.2	4.82	214.846	
1,800.0	1,782.5	1,760.8	1,760.6	5.3	0.9	-153.93	698.5	-551.2	1,055.2	1,050.1	5.13	205.533	
1,900.0	1,880.3	1,857.4	1,857.3	5.7	1.0	-154.46	698.5	-552.5	1,075.0	1,069.5	5.45	197.316	
2,000.0	1,978.1	1,957.0	1,956.8	6.1	1.0	-154.99	698.4	-553.8	1,094.6	1,088.9	5.76	190.058	
2,100.0	2,075.9	2,056.7	2,056.5	6.6	1.1	-155.53	697.7	-555.4	1,114.2	1,108.1	6.08	183.355	
2,200.0	2,173.8	2,157.1	2,156.9	7.0	1.1	-156.05	697.0	-556.6	1,133.6	1,127.2	6.40	177.043	
2,300.0	2,271.6	2,253.3	2,253.2	7.5	1.2	-156.51	696.5	-557.5	1,153.0	1,146.3	6.73	171.392	
2,400.0	2,369.4	2,346.3	2,346.1	8.0	1.2	-156.95	696.1	-558.7	1,172.8	1,165.8	7.05	166.379	
2,500.0	2,467.2	2,442.5	2,442.3	8.4	1.3	-157.41	695.7	-560.4	1,193.0	1,185.6	7.37	161.873	
2,600.0	2,565.0	2,543.5	2,543.2	8.9	1.3	-157.86	695.2	-562.0	1,213.1	1,205.4	7.69	157.732	
2,700.0	2,662.8	2,641.5	2,641.3	9.3	1.4	-158.29	694.6	-563.3	1,233.0	1,225.0	8.01	153.948	
2,800.0	2,760.6	2,735.7	2,735.5	9.8	1.4	-158.69	694.2	-564.7	1,253.2	1,244.9	8.32	150.539	
2,900.0	2,858.5	2,829.8	2,829.5	10.2	1.5	-159.07	693.9	-566.3	1,273.7	1,265.1	8.64	147.413	
3,000.0	2,956.3	2,923.5	2,923.3	10.7	1.5	-159.44	693.8	-568.0	1,294.6	1,285.6	8.96	144.529	
3,100.0	3,054.1	3,018.6	3,018.3	11.2	1.6	-159.80	694.1	-569.9	1,315.7	1,306.5	9.27	141.891	
3,200.0	3,151.9	3,120.0	3,119.7	11.6	1.6	-160.17	694.2	-571.8	1,336.8	1,327.2	9.59	139.437	
3,300.0	3,249.7	3,219.1	3,218.8	12.1	1.6	-160.53	694.0	-573.6	1,357.7	1,347.8	9.90	137.139	
3,400.0	3,347.5	3,309.0	3,308.6	12.5	1.7	-160.83	694.2	-575.3	1,378.9	1,368.7	10.21	135.056	
3,500.0	3,445.3	3,400.0	3,399.6	13.0	1.7	-161.12	695.0	-577.2	1,400.7	1,390.2	10.52	133.133	
3,600.0	3,543.2	3,491.5	3,491.1	13.5	1.7	-161.39	696.1	-579.3	1,422.9	1,412.1	10.84	131.299	
3,700.0	3,641.0	3,584.2	3,583.7	13.9	1.8	-161.66	697.4	-581.7	1,445.5	1,434.4	11.15	129.600	
3,800.0	3,738.8	3,678.9	3,678.4	14.4	1.8	-161.93	698.9	-584.3	1,468.4	1,456.9	11.47	128.030	
3,900.0	3,836.6	3,774.0	3,773.5	14.8	1.9	-162.18	700.7	-586.8	1,491.4	1,479.6	11.78	126.558	
4,000.0	3,934.4	3,871.2	3,870.7	15.3	1.9	-162.42	702.7	-589.3	1,514.5	1,502.4	12.10	125.178	
4,100.0	4,032.2	3,969.3	3,968.6	15.8	1.9	-162.68	704.3	-592.2	1,537.6	1,525.2	12.41	123.883	
4,159.1	4,090.0	4,030.5	4,029.8	16.0	1.9	-162.84	705.0	-594.1	1,551.2	1,538.6	12.60	123.150	
4,200.0	4,130.1	4,075.5	4,074.8	16.2	2.0	-163.01	705.6	-595.3	1,560.2	1,547.5	12.70	122.870	
4,300.0	4,228.5	4,186.4	4,185.7	16.5	2.0	-163.34	706.9	-597.4	1,579.4	1,566.5	12.92	122.273	
4,400.0	4,327.5	4,286.0	4,285.2	16.8	2.0	-163.57	708.1	-598.8	1,594.8	1,581.7	13.12	121.570	
4,500.0	4,426.9	4,384.3	4,383.5	17.0	2.1	-163.75	709.2	-600.2	1,607.0	1,593.7	13.30	120.797	
4,600.0	4,526.6	4,490.3	4,489.5	17.2	2.1	-163.87	710.3	-601.6	1,615.7	1,602.2	13.48	119.902	
4,700.0	4,626.6	4,598.0	4,597.2	17.3	2.1	-163.93	711.3	-602.5	1,620.6	1,606.9	13.63	118.874	

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 WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST VERT BUNYAN #1 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 100-GYD_CT — **Offset Well Error:** 0.0 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
4,759.3	4,685.8	4,654.3	4,653.5	17.4	2.2	-52.96	711.7	-603.0	1,621.8	1,602.8	19.00	85.341	
4,800.0	4,726.5	4,692.8	4,692.1	17.5	2.2	-52.96	711.9	-603.4	1,622.3	1,603.2	19.06	85.112	
4,900.0	4,826.5	4,787.5	4,786.7	17.6	2.2	-52.98	712.3	-604.8	1,623.8	1,604.6	19.20	84.553	
5,000.0	4,926.5	4,891.1	4,890.3	17.7	2.2	-53.00	712.8	-606.4	1,625.3	1,606.0	19.35	83.993	
5,100.0	5,026.5	4,996.1	4,995.3	17.8	2.3	-53.00	713.6	-607.5	1,626.6	1,607.1	19.50	83.418	
5,200.0	5,126.5	5,095.2	5,094.4	18.0	2.3	-53.00	714.3	-608.3	1,627.7	1,608.0	19.65	82.847	
5,300.0	5,226.5	5,194.1	5,193.3	18.1	2.3	-53.01	714.7	-609.5	1,628.8	1,609.0	19.80	82.274	
5,400.0	5,326.5	5,306.4	5,305.5	18.2	2.3	-53.03	714.8	-610.6	1,629.7	1,609.8	19.94	81.734	
5,500.0	5,426.5	5,416.7	5,415.9	18.3	2.3	-53.04	714.7	-610.8	1,629.8	1,609.7	20.08	81.164	
5,597.2	5,523.8	5,511.1	5,510.3	18.5	2.3	-53.04	714.7	-610.7	1,629.7	1,609.5	20.21	80.633	
5,600.0	5,526.5	5,513.8	5,513.0	18.5	2.3	-53.04	714.7	-610.7	1,629.7	1,609.5	20.22	80.618	
5,700.0	5,626.5	5,611.2	5,610.4	18.6	2.3	-53.03	715.0	-610.6	1,629.8	1,609.4	20.35	80.081	
5,800.0	5,726.5	5,711.2	5,710.3	18.8	2.3	-53.03	715.1	-610.7	1,630.0	1,609.5	20.49	79.537	
5,900.0	5,826.5	5,810.6	5,809.7	18.9	2.4	-53.06	714.5	-611.4	1,630.1	1,609.5	20.64	78.982	
6,000.0	5,926.5	5,905.6	5,904.8	19.0	2.4	-53.09	714.0	-612.2	1,630.5	1,609.7	20.81	78.363	
6,100.0	6,026.5	6,000.8	5,999.9	19.2	2.4	-53.11	714.0	-613.0	1,631.1	1,610.2	20.98	77.764	
6,200.0	6,126.5	6,116.9	6,116.0	19.3	2.4	-53.12	714.0	-613.4	1,631.5	1,610.3	21.13	77.224	
6,300.0	6,226.5	6,225.8	6,225.0	19.5	2.4	-53.12	713.5	-613.0	1,630.8	1,609.6	21.28	76.650	
6,400.0	6,326.5	6,316.8	6,316.0	19.6	2.4	-53.12	713.3	-612.6	1,630.4	1,609.0	21.42	76.105	
6,433.3	6,359.8	6,347.1	6,346.3	19.7	2.4	-53.12	713.3	-612.6	1,630.4	1,608.9	21.47	75.930	
6,437.7	6,364.3	6,351.2	6,350.3	19.7	2.4	36.88	713.3	-612.6	1,630.3	1,613.3	17.01	95.869	
6,450.0	6,376.5	6,362.4	6,361.5	19.7	2.4	36.89	713.3	-612.6	1,630.2	1,613.2	17.01	95.850	
6,500.0	6,426.5	6,409.2	6,408.4	19.7	2.4	37.06	713.5	-612.6	1,628.0	1,611.0	17.02	95.636	
6,550.0	6,476.0	6,462.6	6,461.8	19.7	2.4	37.46	713.6	-612.6	1,623.0	1,605.9	17.06	95.125	
6,600.0	6,525.0	6,515.4	6,514.6	19.7	2.4	38.07	713.5	-612.6	1,615.1	1,598.0	17.12	94.319	
6,650.0	6,573.3	6,567.3	6,566.5	19.7	2.4	38.92	713.3	-612.5	1,604.5	1,587.3	17.21	93.234	
6,700.0	6,620.4	6,617.0	6,616.1	19.6	2.4	40.01	713.0	-612.5	1,591.1	1,573.8	17.32	91.883	
6,750.0	6,666.3	6,663.3	6,662.4	19.6	2.4	41.33	712.7	-612.4	1,575.3	1,557.8	17.45	90.280	
6,800.0	6,710.7	6,708.1	6,707.3	19.5	2.4	42.91	712.3	-612.3	1,557.1	1,539.5	17.61	88.434	
6,850.0	6,753.4	6,751.2	6,750.4	19.4	2.4	44.77	711.9	-612.3	1,536.6	1,518.8	17.80	86.333	
6,900.0	6,794.2	6,792.4	6,791.5	19.3	2.4	46.92	711.5	-612.2	1,514.1	1,496.1	18.03	83.966	
6,950.0	6,832.9	6,828.9	6,828.0	19.3	2.5	49.32	711.2	-612.2	1,489.8	1,471.5	18.31	81.361	
7,000.0	6,869.2	6,862.7	6,861.8	19.2	2.5	52.00	710.8	-612.3	1,463.9	1,445.3	18.64	78.524	
7,050.0	6,903.1	6,894.3	6,893.5	19.2	2.5	54.97	710.6	-612.4	1,436.6	1,417.6	19.03	75.494	
7,100.0	6,934.3	6,923.7	6,922.8	19.2	2.5	58.20	710.3	-612.6	1,408.1	1,388.7	19.47	72.336	
7,150.0	6,962.8	6,950.5	6,949.6	19.3	2.5	61.68	710.1	-612.8	1,378.7	1,358.8	19.94	69.129	
7,200.0	6,988.3	6,974.7	6,973.8	19.5	2.5	65.34	709.9	-613.0	1,348.7	1,328.2	20.45	65.949	
7,250.0	7,010.7	7,000.0	6,999.1	19.7	2.5	69.29	709.7	-613.2	1,318.2	1,297.3	20.98	62.834	
7,300.0	7,029.9	7,015.5	7,014.7	20.0	2.5	72.97	709.6	-613.4	1,287.7	1,266.2	21.50	59.882	
7,350.0	7,045.9	7,031.8	7,030.9	20.4	2.5	76.77	709.5	-613.5	1,257.2	1,235.2	22.04	57.032	
7,400.0	7,058.6	7,044.7	7,043.8	20.8	2.5	80.41	709.4	-613.6	1,227.3	1,204.7	22.61	54.281	
7,450.0	7,067.8	7,054.2	7,053.3	21.4	2.5	83.79	709.4	-613.7	1,198.1	1,174.8	23.22	51.600	
7,500.0	7,073.6	7,060.2	7,059.3	22.0	2.5	86.86	709.3	-613.7	1,169.9	1,146.0	23.89	48.977	
7,550.0	7,076.0	7,062.8	7,062.0	22.7	2.5	89.56	709.3	-613.8	1,143.0	1,118.4	24.62	46.432	
7,561.7	7,076.0	7,063.0	7,062.1	22.9	2.5	90.14	709.3	-613.8	1,136.9	1,112.1	24.80	45.849	
7,600.0	7,075.8	7,063.0	7,062.2	23.4	2.5	90.15	709.3	-613.8	1,117.7	1,092.3	25.39	44.026	
7,700.0	7,075.3	7,063.3	7,062.4	25.1	2.5	90.16	709.3	-613.8	1,072.3	1,045.2	27.08	39.594	
7,800.0	7,074.8	7,063.5	7,062.6	27.0	2.5	90.17	709.3	-613.8	1,034.6	1,005.6	28.96	35.720	
7,900.0	7,074.4	7,063.7	7,062.8	29.0	2.5	90.18	709.3	-613.8	1,005.4	974.4	31.00	32.438	
8,000.0	7,073.9	7,063.9	7,063.0	31.1	2.5	90.20	709.3	-613.8	985.6	952.4	33.15	29.733	
8,100.0	7,073.4	7,064.1	7,063.2	33.4	2.5	90.21	709.3	-613.8	975.7	940.3	35.40	27.562	
8,147.3	7,073.2	7,064.2	7,063.3	34.5	2.5	90.21	709.3	-613.8	974.5	938.0	36.50	26.699	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST VERT BUNYAN #1 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 100-GYD_CT — **Offset Well Error:** 0.0 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
8,200.0	7,072.9	7,064.3	7,063.4	35.7	2.5	90.22	709.3	-613.8	975.9	938.2	37.73	25.868	
8,300.0	7,072.4	7,064.5	7,063.6	38.1	2.5	90.23	709.3	-613.8	986.4	946.3	40.12	24.585	
8,400.0	7,071.9	7,064.7	7,063.8	40.6	2.5	90.25	709.3	-613.8	1,006.7	964.2	42.57	23.649	
8,500.0	7,071.5	7,064.9	7,064.0	43.1	2.5	90.26	709.3	-613.8	1,036.4	991.3	45.06	22.999	
8,600.0	7,071.0	7,065.1	7,064.2	45.6	2.5	90.27	709.3	-613.8	1,074.5	1,026.9	47.59	22.579	
8,700.0	7,070.5	7,065.3	7,064.4	48.1	2.5	90.28	709.3	-613.8	1,120.3	1,070.2	50.15	22.340	
8,800.0	7,070.0	7,065.5	7,064.6	50.7	2.5	90.29	709.3	-613.8	1,172.9	1,120.2	52.73	22.241	SF
8,900.0	7,069.5	7,065.7	7,064.8	53.3	2.5	90.30	709.3	-613.8	1,231.3	1,176.0	55.34	22.249	
9,000.0	7,069.0	7,065.9	7,065.0	56.0	2.5	90.31	709.3	-613.8	1,294.9	1,236.9	57.97	22.337	
9,100.0	7,068.6	7,066.1	7,065.2	58.6	2.5	90.32	709.3	-613.8	1,362.8	1,302.2	60.61	22.483	
9,200.0	7,068.1	7,066.3	7,065.4	61.3	2.5	90.34	709.3	-613.8	1,434.5	1,371.2	63.27	22.671	
9,300.0	7,067.6	7,066.4	7,065.6	63.9	2.5	90.35	709.3	-613.8	1,509.4	1,443.5	65.95	22.889	
9,400.0	7,067.1	7,066.6	7,065.7	66.6	2.5	90.36	709.3	-613.8	1,587.1	1,518.5	68.63	23.126	
9,500.0	7,066.6	7,066.8	7,065.9	69.3	2.5	90.37	709.3	-613.8	1,667.2	1,595.8	71.32	23.375	
9,600.0	7,066.1	7,067.0	7,066.1	72.0	2.5	90.38	709.3	-613.8	1,749.3	1,675.2	74.02	23.631	
9,700.0	7,065.6	7,067.2	7,066.3	74.7	2.5	90.39	709.3	-613.8	1,833.2	1,756.4	76.73	23.890	
9,800.0	7,065.2	7,067.3	7,066.4	77.5	2.5	90.40	709.3	-613.8	1,918.6	1,839.1	79.45	24.149	
9,900.0	7,064.7	7,067.5	7,066.6	80.2	2.5	90.41	709.3	-613.8	2,005.4	1,923.2	82.17	24.404	
10,000.0	7,064.2	7,067.7	7,066.8	82.9	2.5	90.42	709.3	-613.8	2,093.3	2,008.4	84.90	24.656	
10,100.0	7,063.7	7,067.8	7,067.0	85.6	2.5	90.43	709.3	-613.8	2,182.3	2,094.7	87.64	24.903	
10,200.0	7,063.2	7,068.0	7,067.1	88.4	2.5	90.44	709.3	-613.8	2,272.3	2,181.9	90.37	25.143	
10,300.0	7,062.7	7,068.2	7,067.3	91.1	2.5	90.45	709.3	-613.8	2,363.0	2,269.9	93.12	25.377	
10,400.0	7,062.3	7,068.3	7,067.5	93.9	2.5	90.46	709.3	-613.8	2,454.4	2,358.6	95.86	25.603	
10,500.0	7,061.8	7,068.5	7,067.6	96.6	2.5	90.47	709.3	-613.8	2,546.5	2,447.9	98.61	25.823	
10,600.0	7,061.3	7,068.7	7,067.8	99.4	2.5	90.48	709.3	-613.8	2,639.2	2,537.8	101.37	26.036	
10,700.0	7,060.8	7,068.8	7,067.9	102.1	2.5	90.49	709.3	-613.8	2,732.4	2,628.2	104.12	26.242	
10,800.0	7,060.3	7,069.0	7,068.1	104.9	2.5	90.50	709.3	-613.8	2,826.0	2,719.1	106.88	26.440	
10,900.0	7,059.8	7,069.1	7,068.3	107.6	2.5	90.51	709.3	-613.8	2,920.1	2,810.4	109.64	26.632	
11,000.0	7,059.4	7,069.3	7,068.4	110.4	2.5	90.51	709.3	-613.8	3,014.5	2,902.1	112.41	26.818	
11,100.0	7,058.9	7,069.5	7,068.6	113.2	2.5	90.52	709.3	-613.8	3,109.3	2,994.2	115.17	26.997	
11,200.0	7,058.4	7,069.6	7,068.7	115.9	2.5	90.53	709.3	-613.8	3,204.4	3,086.5	117.94	27.170	
11,300.0	7,057.9	7,069.8	7,068.9	118.7	2.5	90.54	709.3	-613.8	3,299.8	3,179.1	120.71	27.336	
11,400.0	7,057.4	7,069.9	7,069.0	121.5	2.5	90.55	709.3	-613.8	3,395.5	3,272.0	123.48	27.498	
11,500.0	7,056.9	7,070.1	7,069.2	124.3	2.5	90.56	709.3	-613.8	3,491.4	3,365.2	126.26	27.653	
11,600.0	7,056.5	7,070.2	7,069.3	127.0	2.5	90.57	709.3	-613.8	3,587.6	3,458.5	129.03	27.803	
11,688.2	7,056.0	7,070.3	7,069.4	129.5	2.5	90.58	709.3	-613.8	3,672.5	3,541.0	131.48	27.932	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST VERT EVANS-STROH 20-1 - Wellbore #1 - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-INC

Offset Well Error: 0.0 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
0.0	0.0	0.0	0.0	0.0	0.0	-86.67	218.9	-3,758.9	3,765.4				
100.0	100.0	75.5	75.5	0.1	0.7	-86.67	218.9	-3,758.9	3,765.3	3,764.5	0.82	4,586.572	
200.0	200.0	175.5	175.5	0.3	2.7	-86.67	218.9	-3,758.9	3,765.3	3,762.2	3.05	1,233.787	
300.0	300.0	275.5	275.5	0.5	4.9	-86.67	218.9	-3,758.9	3,765.3	3,759.9	5.42	694.336	
400.0	400.0	375.5	375.5	0.8	6.9	-86.67	218.9	-3,758.9	3,765.3	3,757.6	7.70	489.009	
500.0	500.0	475.5	475.5	1.0	9.0	-86.67	218.9	-3,758.9	3,765.3	3,755.3	9.96	378.154	
600.0	600.0	575.5	575.5	1.2	11.0	-86.67	218.9	-3,758.9	3,765.3	3,753.1	12.21	308.477	
700.0	700.0	675.5	675.5	1.4	13.0	162.35	218.9	-3,758.9	3,767.0	3,752.5	14.43	261.138	
800.0	799.8	775.3	775.3	1.6	15.0	162.34	218.9	-3,758.9	3,771.9	3,755.3	16.61	227.097	
900.0	899.5	875.0	875.0	1.9	17.0	162.33	218.9	-3,758.9	3,780.2	3,761.5	18.77	201.398	
1,000.0	998.7	974.2	974.2	2.1	19.0	162.32	218.9	-3,758.9	3,791.9	3,771.0	20.90	181.438	
1,100.0	1,097.5	1,073.0	1,073.0	2.4	21.0	162.30	218.9	-3,758.9	3,806.8	3,783.8	22.99	165.589	
1,200.0	1,195.6	1,171.1	1,171.1	2.7	23.0	162.27	218.9	-3,758.9	3,825.0	3,800.0	25.03	152.788	
1,200.1	1,195.8	1,171.3	1,171.3	2.7	23.0	162.27	218.9	-3,758.9	3,825.0	3,800.0	25.04	152.771	
1,300.0	1,293.4	1,268.9	1,268.9	3.1	25.0	162.36	218.9	-3,758.9	3,844.8	3,817.6	27.22	141.262	
1,400.0	1,391.3	1,366.8	1,366.8	3.5	26.9	162.46	218.9	-3,758.9	3,864.7	3,835.3	29.41	131.417	
1,500.0	1,489.1	1,464.6	1,464.6	4.0	28.9	162.55	218.9	-3,758.9	3,884.6	3,853.0	31.60	122.916	
1,600.0	1,586.9	1,562.4	1,562.4	4.4	30.9	162.64	218.9	-3,758.9	3,904.5	3,870.7	33.80	115.507	
1,700.0	1,684.7	1,660.2	1,660.2	4.8	32.8	162.73	218.9	-3,758.9	3,924.4	3,888.4	36.01	108.994	
1,800.0	1,782.5	1,758.0	1,758.0	5.3	34.8	162.82	218.9	-3,758.9	3,944.3	3,906.0	38.21	103.227	
1,900.0	1,880.3	1,855.8	1,855.8	5.7	36.8	162.91	218.9	-3,758.9	3,964.2	3,923.8	40.42	98.085	
2,000.0	1,978.1	1,953.6	1,953.6	6.1	38.7	163.00	218.9	-3,758.9	3,984.1	3,941.5	42.62	93.472	
2,100.0	2,075.9	2,051.4	2,051.4	6.6	40.7	163.08	218.9	-3,758.9	4,004.0	3,959.2	44.83	89.312	
2,200.0	2,173.8	2,149.3	2,149.3	7.0	42.7	163.17	218.9	-3,758.9	4,024.0	3,976.9	47.04	85.541	
2,300.0	2,271.6	2,247.1	2,247.1	7.5	44.6	163.26	218.9	-3,758.9	4,043.9	3,994.6	49.25	82.108	
2,400.0	2,369.4	2,344.9	2,344.9	8.0	46.6	163.34	218.9	-3,758.9	4,063.9	4,012.4	51.46	78.969	
2,500.0	2,467.2	2,442.7	2,442.7	8.4	48.6	163.42	218.9	-3,758.9	4,083.8	4,030.1	53.67	76.089	
2,600.0	2,565.0	2,540.5	2,540.5	8.9	50.5	163.51	218.9	-3,758.9	4,103.8	4,047.9	55.88	73.436	
2,700.0	2,662.8	2,638.3	2,638.3	9.3	52.5	163.59	218.9	-3,758.9	4,123.8	4,065.7	58.09	70.985	
2,800.0	2,760.6	2,736.1	2,736.1	9.8	54.5	163.67	218.9	-3,758.9	4,143.8	4,083.4	60.30	68.714	
2,900.0	2,858.5	2,834.0	2,834.0	10.2	56.4	163.75	218.9	-3,758.9	4,163.7	4,101.2	62.52	66.603	
3,000.0	2,956.3	2,931.8	2,931.8	10.7	58.4	163.83	218.9	-3,758.9	4,183.8	4,119.0	64.73	64.637	
3,100.0	3,054.1	3,029.6	3,029.6	11.2	60.4	163.91	218.9	-3,758.9	4,203.8	4,136.8	66.94	62.801	
3,200.0	3,151.9	3,127.4	3,127.4	11.6	62.4	163.99	218.9	-3,758.9	4,223.8	4,154.6	69.15	61.082	
3,300.0	3,249.7	3,225.2	3,225.2	12.1	64.3	164.06	218.9	-3,758.9	4,243.8	4,172.4	71.36	59.471	
3,400.0	3,347.5	3,323.0	3,323.0	12.5	66.3	164.14	218.9	-3,758.9	4,263.8	4,190.3	73.57	57.956	
3,500.0	3,445.3	3,420.8	3,420.8	13.0	68.3	164.22	218.9	-3,758.9	4,283.9	4,208.1	75.78	56.530	
3,600.0	3,543.2	3,518.7	3,518.7	13.5	70.2	164.29	218.9	-3,758.9	4,303.9	4,225.9	77.99	55.184	
3,700.0	3,641.0	3,616.5	3,616.5	13.9	72.2	164.37	218.9	-3,758.9	4,324.0	4,243.8	80.20	53.914	
3,800.0	3,738.8	3,714.3	3,714.3	14.4	74.2	164.44	218.9	-3,758.9	4,344.0	4,261.6	82.41	52.711	
3,900.0	3,836.6	3,812.1	3,812.1	14.8	76.1	164.51	218.9	-3,758.9	4,364.1	4,279.5	84.62	51.572	
4,000.0	3,934.4	3,909.9	3,909.9	15.3	78.1	164.58	218.9	-3,758.9	4,384.2	4,297.4	86.83	50.491	
4,100.0	4,032.2	4,007.7	4,007.7	15.8	80.1	164.66	218.9	-3,758.9	4,404.3	4,315.2	89.04	49.463	
4,159.1	4,090.0	4,065.5	4,065.5	16.0	81.2	164.70	218.9	-3,758.9	4,416.1	4,325.8	90.35	48.880	
4,200.0	4,130.1	4,105.6	4,105.6	16.2	82.0	164.77	218.9	-3,758.9	4,424.1	4,332.6	91.46	48.374	
4,300.0	4,228.5	4,204.0	4,204.0	16.5	84.0	164.92	218.9	-3,758.9	4,441.2	4,347.1	94.09	47.202	
4,400.0	4,327.5	4,303.0	4,303.0	16.8	86.0	165.04	218.9	-3,758.9	4,454.9	4,358.3	96.64	46.098	
4,500.0	4,426.9	4,402.4	4,402.4	17.0	88.0	165.13	218.9	-3,758.9	4,465.3	4,366.2	99.10	45.059	
4,600.0	4,526.6	4,502.1	4,502.1	17.2	90.0	165.19	218.9	-3,758.9	4,472.4	4,370.9	101.46	44.082	
4,700.0	4,626.6	4,602.1	4,602.1	17.3	92.0	165.22	218.9	-3,758.9	4,476.1	4,372.4	103.70	43.164	
4,759.3	4,685.8	4,661.3	4,661.3	17.4	93.2	-83.79	218.9	-3,758.9	4,476.7	4,366.4	110.23	40.611	
4,800.0	4,726.5	4,702.0	4,702.0	17.5	94.0	-83.79	218.9	-3,758.9	4,476.7	4,365.6	111.10	40.294	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST VERT EVANS-STROH 20-1 - Wellbore #1 - Design #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-INC — **Offset Well Error:** 0.0 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
4,900.0	4,826.5	4,802.0	4,802.0	17.6	96.0	-83.79	218.9	-3,758.9	4,476.7	4,363.4	113.24	39.534	
5,000.0	4,926.5	4,902.0	4,902.0	17.7	98.0	-83.79	218.9	-3,758.9	4,476.7	4,361.3	115.37	38.801	
5,100.0	5,026.5	5,002.0	5,002.0	17.8	100.1	-83.79	218.9	-3,758.9	4,476.7	4,359.2	117.51	38.095	
5,200.0	5,126.5	5,102.0	5,102.0	18.0	102.1	-83.79	218.9	-3,758.9	4,476.7	4,357.0	119.65	37.413	
5,300.0	5,226.5	5,202.0	5,202.0	18.1	104.1	-83.79	218.9	-3,758.9	4,476.7	4,354.9	121.80	36.755	
5,400.0	5,326.5	5,302.0	5,302.0	18.2	106.1	-83.79	218.9	-3,758.9	4,476.7	4,352.7	123.94	36.119	
5,500.0	5,426.5	5,402.0	5,402.0	18.3	108.1	-83.79	218.9	-3,758.9	4,476.7	4,350.6	126.09	35.504	
5,600.0	5,526.5	5,502.0	5,502.0	18.5	110.1	-83.79	218.9	-3,758.9	4,476.7	4,348.4	128.24	34.909	
5,700.0	5,626.5	5,602.0	5,602.0	18.6	112.1	-83.79	218.9	-3,758.9	4,476.7	4,346.3	130.39	34.334	
5,800.0	5,726.5	5,702.0	5,702.0	18.8	114.1	-83.79	218.9	-3,758.9	4,476.7	4,344.1	132.54	33.776	
5,900.0	5,826.5	5,802.0	5,802.0	18.9	116.1	-83.79	218.9	-3,758.9	4,476.7	4,342.0	134.69	33.236	
6,000.0	5,926.5	5,902.0	5,902.0	19.0	118.2	-83.79	218.9	-3,758.9	4,476.7	4,339.8	136.85	32.713	
6,100.0	6,026.5	6,002.0	6,002.0	19.2	120.2	-83.79	218.9	-3,758.9	4,476.7	4,337.7	139.00	32.205	
6,200.0	6,126.5	6,102.0	6,102.0	19.3	122.2	-83.79	218.9	-3,758.9	4,476.7	4,335.5	141.16	31.713	
6,300.0	6,226.5	6,202.0	6,202.0	19.5	124.2	-83.79	218.9	-3,758.9	4,476.7	4,333.4	143.32	31.235	
6,400.0	6,326.5	6,302.0	6,302.0	19.6	126.2	-83.79	218.9	-3,758.9	4,476.7	4,331.2	145.48	30.771	
6,433.3	6,359.8	6,335.3	6,335.3	19.7	126.9	-83.79	218.9	-3,758.9	4,476.7	4,330.5	146.20	30.620	
6,450.0	6,376.5	6,352.0	6,352.0	19.7	127.2	6.21	218.9	-3,758.9	4,476.5	4,334.5	141.94	31.538	
6,500.0	6,426.5	6,402.0	6,402.0	19.7	128.2	6.24	218.9	-3,758.9	4,473.6	4,331.2	142.35	31.426	
6,550.0	6,476.0	6,451.5	6,451.5	19.7	129.2	6.30	218.9	-3,758.9	4,467.2	4,325.2	142.07	31.444	
6,600.0	6,525.0	6,500.5	6,500.5	19.7	130.2	6.41	218.9	-3,758.9	4,457.5	4,316.4	141.07	31.597	
6,650.0	6,573.3	6,548.8	6,548.8	19.7	131.2	6.55	218.9	-3,758.9	4,444.3	4,304.9	139.37	31.889	
6,700.0	6,620.4	6,595.9	6,595.9	19.6	132.1	6.73	218.9	-3,758.9	4,427.9	4,290.9	136.95	32.333	
6,750.0	6,666.3	6,641.8	6,641.8	19.6	133.0	6.97	218.9	-3,758.9	4,408.2	4,274.4	133.82	32.940	
6,800.0	6,710.7	6,686.2	6,686.2	19.5	133.9	7.26	218.9	-3,758.9	4,385.4	4,255.3	130.02	33.729	
6,850.0	6,753.4	6,728.9	6,728.9	19.4	134.8	7.62	218.9	-3,758.9	4,359.5	4,234.0	125.55	34.723	
6,900.0	6,794.2	6,769.7	6,769.7	19.3	135.6	8.05	218.9	-3,758.9	4,330.8	4,210.3	120.47	35.950	
6,950.0	6,832.9	6,808.4	6,808.4	19.3	136.4	8.58	218.9	-3,758.9	4,299.3	4,184.5	114.82	37.444	
7,000.0	6,869.2	6,844.7	6,844.7	19.2	137.1	9.23	218.9	-3,758.9	4,265.2	4,156.5	108.69	39.242	
7,050.0	6,903.1	6,878.6	6,878.6	19.2	137.8	10.03	218.9	-3,758.9	4,228.7	4,126.5	102.19	41.381	
7,100.0	6,934.3	6,909.8	6,909.8	19.2	138.4	11.02	218.9	-3,758.9	4,189.9	4,094.4	95.49	43.877	
7,150.0	6,962.8	6,938.3	6,938.3	19.3	139.0	12.28	218.9	-3,758.9	4,149.1	4,060.2	88.86	46.691	
7,200.0	6,988.3	6,963.8	6,963.8	19.5	139.5	13.90	218.9	-3,758.9	4,106.4	4,023.6	82.73	49.638	
7,250.0	7,010.7	6,986.2	6,986.2	19.7	140.0	16.05	218.9	-3,758.9	4,062.0	3,984.2	77.82	52.201	
7,300.0	7,029.9	7,005.4	7,005.4	20.0	140.3	18.99	218.9	-3,758.9	4,016.2	3,940.8	75.37	53.289	
7,350.0	7,045.9	7,021.4	7,021.4	20.4	140.7	23.20	218.9	-3,758.9	3,969.2	3,891.8	77.39	51.291	
7,400.0	7,058.6	7,034.1	7,034.1	20.8	140.9	29.58	218.9	-3,758.9	3,921.2	3,834.5	86.74	45.208	
7,450.0	7,067.8	7,043.3	7,043.3	21.4	141.1	39.92	218.9	-3,758.9	3,872.4	3,765.7	106.75	36.276	
7,500.0	7,073.6	7,049.1	7,049.1	22.0	141.2	57.52	218.9	-3,758.9	3,823.2	3,685.1	138.07	27.691	
7,550.0	7,076.0	7,051.5	7,051.5	22.7	141.3	84.90	218.9	-3,758.9	3,773.7	3,610.5	163.20	23.123	
7,561.7	7,076.0	7,051.5	7,051.5	22.9	141.3	92.14	218.9	-3,758.9	3,762.0	3,598.1	163.97	22.944	
7,600.0	7,075.8	7,051.3	7,051.3	23.4	141.3	92.11	218.9	-3,758.9	3,724.1	3,559.5	164.56	22.631	
7,700.0	7,075.3	7,050.8	7,050.8	25.1	141.3	92.06	218.9	-3,758.9	3,625.0	3,458.7	166.25	21.805	
7,800.0	7,074.8	7,050.3	7,050.3	27.0	141.2	92.00	218.9	-3,758.9	3,525.9	3,357.8	168.12	20.972	
7,900.0	7,074.4	7,049.9	7,049.9	29.0	141.2	91.94	218.9	-3,758.9	3,426.8	3,256.7	170.15	20.141	
8,000.0	7,073.9	7,049.4	7,049.4	31.1	141.2	91.89	218.9	-3,758.9	3,327.9	3,155.6	172.29	19.315	
8,100.0	7,073.4	7,048.9	7,048.9	33.4	141.2	91.83	218.9	-3,758.9	3,229.0	3,054.4	174.54	18.500	
8,200.0	7,072.9	7,048.4	7,048.4	35.7	141.2	91.77	218.9	-3,758.9	3,130.1	2,953.3	176.86	17.698	
8,300.0	7,072.4	7,047.9	7,047.9	38.1	141.2	91.71	218.9	-3,758.9	3,031.4	2,852.1	179.25	16.912	
8,400.0	7,071.9	7,047.4	7,047.4	40.6	141.2	91.66	218.9	-3,758.9	2,932.7	2,751.0	181.69	16.141	
8,500.0	7,071.5	7,047.0	7,047.0	43.1	141.2	91.60	218.9	-3,758.9	2,834.1	2,650.0	184.17	15.388	
8,600.0	7,071.0	7,046.5	7,046.5	45.6	141.2	91.54	218.9	-3,758.9	2,735.7	2,549.0	186.70	14.653	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - EXIST VERT EVANS-STROH 20-1 - Wellbore #1 - Design #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-INC — **Offset Well Error:** 0.0 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
8,700.0	7,070.5	7,046.0	7,046.0	48.1	141.2	91.48	218.9	-3,758.9	2,637.3	2,448.1	189.25	13.936	
8,800.0	7,070.0	7,045.5	7,045.5	50.7	141.1	91.43	218.9	-3,758.9	2,539.1	2,347.2	191.83	13.236	
8,900.0	7,069.5	7,045.0	7,045.0	53.3	141.1	91.37	218.9	-3,758.9	2,441.0	2,246.5	194.43	12.555	
9,000.0	7,069.0	7,044.5	7,044.5	56.0	141.1	91.31	218.9	-3,758.9	2,343.0	2,146.0	197.05	11.891	
9,100.0	7,068.6	7,044.1	7,044.1	58.6	141.1	91.26	218.9	-3,758.9	2,245.3	2,045.6	199.69	11.244	
9,200.0	7,068.1	7,043.6	7,043.6	61.3	141.1	91.20	218.9	-3,758.9	2,147.8	1,945.4	202.34	10.615	
9,300.0	7,067.6	7,043.1	7,043.1	63.9	141.1	91.14	218.9	-3,758.9	2,050.5	1,845.5	205.01	10.002	
9,400.0	7,067.1	7,042.6	7,042.6	66.6	141.1	91.08	218.9	-3,758.9	1,953.4	1,745.8	207.68	9.406	
9,500.0	7,066.6	7,042.1	7,042.1	69.3	141.1	91.03	218.9	-3,758.9	1,856.7	1,646.3	210.37	8.826	
9,600.0	7,066.1	7,041.6	7,041.6	72.0	141.1	90.97	218.9	-3,758.9	1,760.4	1,547.3	213.06	8.262	
9,700.0	7,065.6	7,041.1	7,041.1	74.7	141.1	90.91	218.9	-3,758.9	1,664.5	1,448.7	215.77	7.714	
9,800.0	7,065.2	7,040.7	7,040.7	77.5	141.0	90.86	218.9	-3,758.9	1,569.0	1,350.6	218.48	7.182	
9,900.0	7,064.7	7,040.2	7,040.2	80.2	141.0	90.80	218.9	-3,758.9	1,474.2	1,253.1	221.19	6.665	
10,000.0	7,064.2	7,039.7	7,039.7	82.9	141.0	90.74	218.9	-3,758.9	1,380.2	1,156.3	223.91	6.164	
10,100.0	7,063.7	7,039.2	7,039.2	85.6	141.0	90.68	218.9	-3,758.9	1,287.0	1,060.4	226.64	5.679	
10,200.0	7,063.2	7,038.7	7,038.7	88.4	141.0	90.63	218.9	-3,758.9	1,195.0	965.6	229.37	5.210	
10,300.0	7,062.7	7,038.2	7,038.2	91.1	141.0	90.57	218.9	-3,758.9	1,104.3	872.2	232.10	4.758	
10,400.0	7,062.3	7,037.8	7,037.8	93.9	141.0	90.51	218.9	-3,758.9	1,015.3	780.5	234.84	4.323	
10,500.0	7,061.8	7,037.3	7,037.3	96.6	141.0	90.45	218.9	-3,758.9	928.7	691.1	237.58	3.909	
10,600.0	7,061.3	7,036.8	7,036.8	99.4	141.0	90.40	218.9	-3,758.9	844.9	604.6	240.33	3.516	
10,700.0	7,060.8	7,036.3	7,036.3	102.1	141.0	90.34	218.9	-3,758.9	765.1	522.0	243.08	3.148	
10,800.0	7,060.3	7,035.8	7,035.8	104.9	141.0	90.28	218.9	-3,758.9	690.6	444.8	245.83	2.809	
10,900.0	7,059.8	7,035.3	7,035.3	107.6	140.9	90.22	218.9	-3,758.9	623.2	374.6	248.58	2.507	
11,000.0	7,059.4	7,034.9	7,034.9	110.4	140.9	90.17	218.9	-3,758.9	565.6	314.3	251.34	2.250	
11,100.0	7,058.9	7,034.4	7,034.4	113.2	140.9	90.11	218.9	-3,758.9	520.9	266.9	254.09	2.050	
11,200.0	7,058.4	7,033.9	7,033.9	115.9	140.9	90.05	218.9	-3,758.9	492.8	236.0	256.85	1.919	
11,292.5	7,057.9	7,033.4	7,033.4	118.5	140.9	90.00	218.9	-3,758.9	484.1	224.7	259.41	1.866	CC
11,300.0	7,057.9	7,033.4	7,033.4	118.7	140.9	90.00	218.9	-3,758.9	484.1	224.5	259.61	1.865	ES, SF
11,400.0	7,057.4	7,032.9	7,032.9	121.5	140.9	89.94	218.9	-3,758.9	495.9	233.5	262.37	1.890	
11,500.0	7,056.9	7,032.4	7,032.4	124.3	140.9	89.88	218.9	-3,758.9	526.7	261.5	265.14	1.986	
11,600.0	7,056.5	7,032.0	7,032.0	127.0	140.9	89.82	218.9	-3,758.9	573.5	305.6	267.90	2.141	
11,688.2	7,056.0	7,031.5	7,031.5	129.5	140.9	89.77	218.9	-3,758.9	625.2	354.9	270.34	2.313	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21P-204 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
0.0	0.0	0.0	0.0	0.0	0.0	0.36	44.8	0.3	44.8				
100.0	100.0	99.0	99.0	0.1	0.1	0.36	44.8	0.3	44.8	44.6	0.19	231.637	
200.0	200.0	199.0	199.0	0.3	0.3	0.36	44.8	0.3	44.8	44.2	0.64	69.830	
300.0	300.0	299.0	299.0	0.5	0.5	0.36	44.8	0.3	44.8	43.7	1.09	41.064	
400.0	400.0	399.0	399.0	0.8	0.8	0.36	44.8	0.3	44.8	43.3	1.54	29.083	CC, ES
500.0	500.0	498.3	498.3	1.0	1.0	2.25	45.6	1.8	45.6	43.6	1.98	22.994	
600.0	600.0	597.3	597.2	1.2	1.2	7.60	47.8	6.4	48.3	45.8	2.43	19.887	
700.0	700.0	696.0	695.4	1.4	1.4	-97.51	51.5	14.0	53.7	50.8	2.87	18.708	
800.0	799.8	794.2	793.0	1.6	1.7	-93.62	56.7	24.6	62.2	58.9	3.32	18.710	
900.0	899.5	891.9	889.5	1.9	2.0	-91.45	63.4	38.1	73.4	69.6	3.82	19.224	
1,000.0	998.7	989.0	984.9	2.1	2.4	-90.52	71.4	54.5	87.1	82.8	4.37	19.955	
1,100.0	1,097.5	1,087.6	1,081.3	2.4	2.7	-90.90	80.4	72.9	102.4	97.4	4.98	20.546	
1,200.0	1,195.6	1,186.3	1,177.9	2.7	3.1	-92.81	89.4	91.3	117.8	112.1	5.67	20.762	
1,200.1	1,195.8	1,186.5	1,178.0	2.7	3.1	-92.82	89.4	91.3	117.8	112.1	5.67	20.762	
1,300.0	1,293.4	1,285.0	1,274.4	3.1	3.6	-95.27	98.5	109.7	133.4	127.0	6.42	20.776	
1,400.0	1,391.3	1,383.6	1,370.8	3.5	4.0	-97.22	107.5	128.1	149.3	142.1	7.20	20.732	
1,500.0	1,489.1	1,482.2	1,467.3	4.0	4.4	-98.79	116.5	146.5	165.3	157.3	8.00	20.665	
1,600.0	1,586.9	1,580.8	1,563.7	4.4	4.8	-100.08	125.5	164.9	181.4	172.6	8.81	20.590	
1,700.0	1,684.7	1,679.4	1,660.2	4.8	5.3	-101.16	134.6	183.4	197.6	188.0	9.63	20.515	
1,800.0	1,782.5	1,778.1	1,756.7	5.3	5.7	-102.07	143.6	201.8	213.8	203.4	10.46	20.443	
1,900.0	1,880.3	1,876.7	1,853.1	5.7	6.2	-102.86	152.6	220.2	230.1	218.8	11.29	20.376	
2,000.0	1,978.1	1,975.3	1,949.6	6.1	6.6	-103.55	161.7	238.6	246.4	234.3	12.13	20.314	
2,100.0	2,075.9	2,073.9	2,046.1	6.6	7.0	-104.14	170.7	257.0	262.8	249.8	12.97	20.257	
2,200.0	2,173.8	2,172.5	2,142.5	7.0	7.5	-104.67	179.7	275.4	279.2	265.4	13.82	20.205	
2,300.0	2,271.6	2,271.1	2,239.0	7.5	7.9	-105.14	188.7	293.8	295.6	280.9	14.66	20.158	
2,400.0	2,369.4	2,369.8	2,335.4	8.0	8.4	-105.56	197.8	312.3	312.0	296.5	15.51	20.114	
2,500.0	2,467.2	2,468.4	2,431.9	8.4	8.8	-105.94	206.8	330.7	328.4	312.1	16.36	20.074	
2,600.0	2,565.0	2,567.0	2,528.4	8.9	9.3	-106.28	215.8	349.1	344.9	327.6	17.21	20.037	
2,700.0	2,662.8	2,665.6	2,624.8	9.3	9.7	-106.59	224.9	367.5	361.3	343.2	18.06	20.004	
2,800.0	2,760.6	2,764.2	2,721.3	9.8	10.1	-106.88	233.9	385.9	377.8	358.9	18.91	19.972	
2,900.0	2,858.5	2,862.9	2,817.8	10.2	10.6	-107.14	242.9	404.3	394.2	374.5	19.77	19.944	
3,000.0	2,956.3	2,961.5	2,914.2	10.7	11.0	-107.38	251.9	422.8	410.7	390.1	20.62	19.917	
3,100.0	3,054.1	3,060.1	3,010.7	11.2	11.5	-107.60	261.0	441.2	427.2	405.7	21.48	19.892	
3,200.0	3,151.9	3,158.7	3,107.1	11.6	11.9	-107.80	270.0	459.6	443.7	421.4	22.33	19.869	
3,300.0	3,249.7	3,257.3	3,203.6	12.1	12.4	-107.99	279.0	478.0	460.2	437.0	23.19	19.847	
3,400.0	3,347.5	3,356.0	3,300.1	12.5	12.8	-108.17	288.0	496.4	476.7	452.6	24.04	19.827	
3,500.0	3,445.3	3,454.6	3,396.5	13.0	13.3	-108.34	297.1	514.8	493.2	468.3	24.90	19.808	
3,600.0	3,543.2	3,553.2	3,493.0	13.5	13.7	-108.49	306.1	533.2	509.7	483.9	25.76	19.790	
3,700.0	3,641.0	3,651.8	3,589.5	13.9	14.2	-108.63	315.1	551.7	526.2	499.6	26.61	19.773	
3,800.0	3,738.8	3,750.4	3,685.9	14.4	14.6	-108.77	324.2	570.1	542.7	515.2	27.47	19.758	
3,900.0	3,836.6	3,849.1	3,782.4	14.8	15.1	-108.90	333.2	588.5	559.2	530.9	28.33	19.743	
4,000.0	3,934.4	3,947.7	3,878.9	15.3	15.5	-109.02	342.2	606.9	575.8	546.6	29.18	19.729	
4,100.0	4,032.2	4,046.3	3,975.3	15.8	16.0	-109.13	351.2	625.3	592.3	562.2	30.04	19.715	
4,159.1	4,090.0	4,109.3	4,037.1	16.0	16.2	-109.24	356.8	636.7	601.9	571.3	30.53	19.712	
4,200.0	4,130.1	4,154.0	4,081.0	16.2	16.3	-109.47	360.4	644.0	608.1	577.2	30.83	19.723	
4,300.0	4,228.5	4,263.7	4,189.3	16.5	16.7	-110.00	368.0	659.5	621.2	589.8	31.46	19.747	
4,400.0	4,327.5	4,373.8	4,298.6	16.8	16.9	-110.47	373.7	671.2	631.5	599.5	32.00	19.733	
4,500.0	4,426.9	4,484.3	4,408.8	17.0	17.2	-110.90	377.7	679.2	638.9	606.4	32.46	19.681	
4,600.0	4,526.6	4,595.0	4,519.3	17.2	17.3	-111.28	379.7	683.3	643.3	610.5	32.84	19.593	
4,700.0	4,626.6	4,701.2	4,625.6	17.3	17.5	-111.60	380.0	684.0	645.0	611.9	33.12	19.473	
4,759.3	4,685.8	4,760.4	4,684.8	17.4	17.5	-0.67	380.0	684.0	645.3	620.3	24.95	25.861	
4,800.0	4,726.5	4,801.2	4,725.5	17.5	17.6	-0.67	380.0	684.0	645.3	620.2	25.08	25.723	

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 WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21P-204 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
4,900.0	4,826.5	4,901.2	4,825.5	17.6	17.7	-0.67	380.0	684.0	645.3	619.8	25.41	25.391	
5,000.0	4,926.5	5,001.2	4,925.5	17.7	17.8	-0.67	380.0	684.0	645.3	619.5	25.75	25.063	
5,100.0	5,026.5	5,101.2	5,025.5	17.8	18.0	-0.67	380.0	684.0	645.3	619.2	26.08	24.740	
5,200.0	5,126.5	5,201.2	5,125.5	18.0	18.1	-0.67	380.0	684.0	645.3	618.8	26.42	24.423	
5,300.0	5,226.5	5,301.2	5,225.5	18.1	18.2	-0.67	380.0	684.0	645.3	618.5	26.76	24.111	
5,400.0	5,326.5	5,401.2	5,325.5	18.2	18.4	-0.67	380.0	684.0	645.3	618.1	27.11	23.803	
5,500.0	5,426.5	5,501.2	5,425.5	18.3	18.5	-0.67	380.0	684.0	645.3	617.8	27.46	23.501	
5,600.0	5,526.5	5,601.2	5,525.5	18.5	18.6	-0.67	380.0	684.0	645.3	617.4	27.81	23.204	
5,700.0	5,626.5	5,701.2	5,625.5	18.6	18.8	-0.67	380.0	684.0	645.3	617.1	28.16	22.912	
5,800.0	5,726.5	5,801.2	5,725.5	18.8	18.9	-0.67	380.0	684.0	645.3	616.7	28.52	22.626	
5,900.0	5,826.5	5,901.2	5,825.5	18.9	19.1	-0.67	380.0	684.0	645.3	616.4	28.88	22.344	
6,000.0	5,926.5	6,001.2	5,925.5	19.0	19.2	-0.67	380.0	684.0	645.3	616.0	29.24	22.068	
6,100.0	6,026.5	6,101.2	6,025.5	19.2	19.4	-0.67	380.0	684.0	645.3	615.6	29.60	21.796	
6,200.0	6,126.5	6,201.2	6,125.5	19.3	19.5	-0.67	380.0	684.0	645.3	615.3	29.97	21.529	
6,300.0	6,226.5	6,301.2	6,225.5	19.5	19.7	-0.67	380.0	684.0	645.3	614.9	30.34	21.268	
6,400.0	6,326.5	6,401.2	6,325.5	19.6	19.8	-0.67	380.0	684.0	645.3	614.5	30.71	21.011	
6,433.3	6,359.8	6,434.4	6,358.8	19.7	19.9	-0.67	380.0	684.0	645.3	614.4	30.83	20.926	
6,450.0	6,376.5	6,451.0	6,375.4	19.7	19.9	89.33	380.0	683.8	645.3	607.1	38.14	16.917	
6,500.0	6,426.5	6,500.5	6,424.8	19.7	19.9	89.34	380.0	681.0	645.3	607.0	38.22	16.880	
6,550.0	6,476.0	6,550.0	6,473.9	19.7	19.9	89.36	380.0	674.8	645.3	607.0	38.25	16.870	
6,600.0	6,525.0	6,599.5	6,522.4	19.7	19.9	89.37	380.0	665.3	645.2	607.0	38.22	16.884	
6,650.0	6,573.3	6,649.0	6,570.2	19.7	19.9	89.39	380.0	652.4	645.2	607.1	38.14	16.919	
6,700.0	6,620.4	6,698.6	6,617.0	19.6	19.8	89.41	380.0	636.2	645.2	607.2	38.02	16.971	
6,750.0	6,666.3	6,748.1	6,662.6	19.6	19.8	89.43	380.0	616.8	645.2	607.4	37.88	17.036	
6,800.0	6,710.7	6,797.7	6,706.8	19.5	19.7	89.46	380.0	594.3	645.2	607.5	37.71	17.109	
6,850.0	6,753.4	6,847.3	6,749.3	19.4	19.6	89.49	380.0	568.8	645.2	607.7	37.55	17.182	
6,900.0	6,794.2	6,896.9	6,790.0	19.3	19.5	89.52	380.0	540.4	645.2	607.8	37.41	17.248	
6,950.0	6,832.9	6,946.5	6,828.6	19.3	19.4	89.56	380.0	509.2	645.2	607.9	37.30	17.298	
7,000.0	6,869.2	6,996.2	6,865.0	19.2	19.3	89.59	380.0	475.5	645.2	608.0	37.25	17.322	
7,050.0	6,903.1	7,045.9	6,899.0	19.2	19.3	89.63	380.0	439.2	645.2	607.9	37.27	17.310	
7,100.0	6,934.3	7,095.6	6,930.4	19.2	19.3	89.67	380.0	400.7	645.2	607.8	37.40	17.252	
7,150.0	6,962.8	7,145.4	6,959.0	19.3	19.3	89.71	380.0	360.0	645.2	607.6	37.64	17.140	
7,200.0	6,988.3	7,195.1	6,984.8	19.5	19.4	89.75	380.0	317.5	645.2	607.2	38.03	16.967	
7,250.0	7,010.7	7,245.0	7,007.6	19.7	19.6	89.80	380.0	273.2	645.2	606.7	38.56	16.733	
7,300.0	7,029.9	7,294.8	7,027.3	20.0	19.8	89.84	380.0	227.4	645.2	606.0	39.25	16.438	
7,350.0	7,045.9	7,344.7	7,043.8	20.4	20.2	89.89	380.0	180.3	645.2	605.1	40.10	16.089	
7,400.0	7,058.6	7,394.6	7,056.9	20.8	20.6	89.94	380.0	132.1	645.2	604.1	41.11	15.694	
7,450.0	7,067.8	7,444.6	7,066.7	21.4	21.1	89.98	380.0	83.1	645.2	602.9	42.27	15.265	
7,467.5	7,070.3	7,462.1	7,069.3	21.6	21.3	90.00	380.0	65.9	645.2	602.5	42.71	15.105	
7,500.0	7,073.6	7,494.6	7,073.0	22.0	21.7	90.03	380.0	33.5	645.2	601.6	43.56	14.812	
7,550.0	7,076.0	7,544.6	7,075.8	22.7	22.4	90.08	380.0	-16.4	645.2	600.2	44.97	14.348	
7,561.7	7,076.0	7,556.4	7,076.0	22.9	22.6	90.09	380.0	-28.2	645.2	599.9	45.31	14.239	
7,600.0	7,075.8	7,594.7	7,075.9	23.4	23.1	90.09	380.0	-66.4	645.2	598.7	46.48	13.880	
7,700.0	7,075.3	7,694.7	7,075.4	25.1	24.8	90.09	380.0	-166.4	645.2	595.4	49.85	12.942	
7,800.0	7,074.8	7,794.7	7,074.9	27.0	26.6	90.09	380.0	-266.4	645.2	591.6	53.60	12.038	
7,900.0	7,074.4	7,894.7	7,074.4	29.0	28.7	90.09	380.0	-366.4	645.2	587.6	57.65	11.193	
8,000.0	7,073.9	7,994.7	7,073.9	31.1	30.8	90.09	380.0	-466.4	645.2	583.3	61.94	10.417	
8,100.0	7,073.4	8,094.7	7,073.4	33.4	33.1	90.09	380.0	-566.4	645.2	578.8	66.43	9.712	
8,200.0	7,072.9	8,194.7	7,072.9	35.7	35.4	90.09	380.0	-666.4	645.2	574.1	71.08	9.077	
8,300.0	7,072.4	8,294.7	7,072.5	38.1	37.8	90.09	380.0	-766.4	645.2	569.3	75.87	8.504	
8,400.0	7,071.9	8,394.7	7,072.0	40.6	40.2	90.09	380.0	-866.4	645.2	564.5	80.76	7.989	
8,500.0	7,071.5	8,494.7	7,071.5	43.1	42.7	90.09	380.0	-966.4	645.2	559.5	85.74	7.525	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21P-204 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
8,600.0	7,071.0	8,594.7	7,071.0	45.6	45.2	90.09	380.0	-1,066.4	645.2	554.4	90.79	7.106	
8,700.0	7,070.5	8,694.7	7,070.5	48.1	47.8	90.09	380.0	-1,166.4	645.2	549.3	95.91	6.727	
8,800.0	7,070.0	8,794.7	7,070.0	50.7	50.4	90.09	380.0	-1,266.4	645.2	544.1	101.08	6.383	
8,900.0	7,069.5	8,894.7	7,069.5	53.3	53.0	90.09	380.0	-1,366.4	645.2	538.9	106.29	6.070	
9,000.0	7,069.0	8,994.7	7,069.1	56.0	55.6	90.09	380.0	-1,466.4	645.2	533.7	111.55	5.784	
9,100.0	7,068.6	9,094.7	7,068.6	58.6	58.3	90.09	380.0	-1,566.4	645.2	528.4	116.84	5.522	
9,200.0	7,068.1	9,194.7	7,068.1	61.3	60.9	90.09	380.0	-1,666.4	645.2	523.1	122.15	5.282	
9,300.0	7,067.6	9,294.7	7,067.6	63.9	63.6	90.09	380.0	-1,766.4	645.2	517.7	127.50	5.061	
9,400.0	7,067.1	9,394.7	7,067.1	66.6	66.3	90.09	380.0	-1,866.4	645.2	512.3	132.86	4.856	
9,500.0	7,066.6	9,494.7	7,066.6	69.3	69.0	90.09	380.0	-1,966.4	645.2	507.0	138.25	4.667	
9,600.0	7,066.1	9,594.7	7,066.1	72.0	71.7	90.09	380.0	-2,066.4	645.2	501.6	143.65	4.491	
9,700.0	7,065.6	9,694.7	7,065.7	74.7	74.4	90.09	380.0	-2,166.4	645.2	496.1	149.07	4.328	
9,800.0	7,065.2	9,794.7	7,065.2	77.5	77.1	90.09	380.0	-2,266.4	645.2	490.7	154.50	4.176	
9,900.0	7,064.7	9,894.7	7,064.7	80.2	79.8	90.09	380.0	-2,366.4	645.2	485.3	159.95	4.034	
10,000.0	7,064.2	9,994.7	7,064.2	82.9	82.5	90.09	380.0	-2,466.4	645.2	479.8	165.41	3.901	
10,100.0	7,063.7	10,094.7	7,063.7	85.6	85.3	90.09	380.0	-2,566.4	645.2	474.3	170.88	3.776	
10,200.0	7,063.2	10,194.7	7,063.2	88.4	88.0	90.09	380.0	-2,666.4	645.2	468.9	176.35	3.659	
10,300.0	7,062.7	10,294.7	7,062.7	91.1	90.8	90.09	380.0	-2,766.4	645.2	463.4	181.84	3.548	
10,400.0	7,062.3	10,394.7	7,062.3	93.9	93.5	90.09	380.0	-2,866.4	645.2	457.9	187.33	3.444	
10,500.0	7,061.8	10,494.7	7,061.8	96.6	96.3	90.09	380.0	-2,966.4	645.2	452.4	192.83	3.346	
10,600.0	7,061.3	10,594.7	7,061.3	99.4	99.0	90.09	380.0	-3,066.4	645.2	446.9	198.34	3.253	
10,700.0	7,060.8	10,694.7	7,060.8	102.1	101.8	90.09	380.0	-3,166.4	645.2	441.4	203.85	3.165	
10,800.0	7,060.3	10,794.7	7,060.3	104.9	104.5	90.09	380.0	-3,266.4	645.2	435.8	209.37	3.082	
10,900.0	7,059.8	10,894.7	7,059.8	107.6	107.3	90.09	380.0	-3,366.4	645.2	430.3	214.90	3.002	
11,000.0	7,059.4	10,994.7	7,059.3	110.4	110.0	90.09	380.0	-3,466.4	645.2	424.8	220.42	2.927	
11,100.0	7,058.9	11,094.7	7,058.9	113.2	112.8	90.09	380.0	-3,566.4	645.2	419.3	225.96	2.855	
11,200.0	7,058.4	11,194.7	7,058.4	115.9	115.6	90.09	380.0	-3,666.4	645.2	413.7	231.49	2.787	
11,300.0	7,057.9	11,294.7	7,057.9	118.7	118.4	90.09	380.0	-3,766.4	645.2	408.2	237.04	2.722	
11,400.0	7,057.4	11,394.7	7,057.4	121.5	121.1	90.09	380.0	-3,866.4	645.2	402.6	242.58	2.660	
11,500.0	7,056.9	11,494.7	7,056.9	124.3	123.9	90.09	380.0	-3,966.4	645.2	397.1	248.13	2.600	
11,600.0	7,056.5	11,594.7	7,056.4	127.0	126.7	90.09	380.0	-4,066.4	645.2	391.5	253.68	2.543	
11,688.2	7,056.0	11,683.2	7,056.0	129.5	129.1	90.09	380.0	-4,154.9	645.2	386.6	258.58	2.495 SF	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21P-304 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
0.0	0.0	0.0	0.0	0.0	0.0	0.54	29.9	0.3	29.9				
100.0	100.0	99.0	99.0	0.1	0.1	0.54	29.9	0.3	29.9	29.7	0.19	154.428	
200.0	200.0	199.0	199.0	0.3	0.3	0.54	29.9	0.3	29.9	29.2	0.64	46.554	
300.0	300.0	299.0	299.0	0.5	0.5	0.54	29.9	0.3	29.9	28.8	1.09	27.376	
400.0	400.0	399.0	399.0	0.8	0.8	0.54	29.9	0.3	29.9	28.3	1.54	19.389	
500.0	500.0	499.0	499.0	1.0	1.0	0.54	29.9	0.3	29.9	27.9	1.99	15.010	CC
600.0	600.0	598.8	598.8	1.2	1.2	3.73	30.1	2.0	30.2	27.8	2.43	12.429	ES
700.0	700.0	698.4	698.3	1.4	1.4	-101.15	30.9	7.1	32.0	29.2	2.85	11.226	
800.0	799.8	797.9	797.4	1.6	1.7	-96.18	32.2	15.6	35.9	32.6	3.29	10.928	
900.0	899.5	897.1	895.8	1.9	1.9	-92.72	34.0	27.4	41.8	38.0	3.77	11.089	
1,000.0	998.7	996.1	993.6	2.1	2.2	-90.61	36.4	42.6	49.4	45.1	4.30	11.479	
1,100.0	1,097.5	1,094.7	1,090.5	2.4	2.6	-89.49	39.2	61.1	58.8	53.9	4.92	11.948	
1,200.0	1,195.6	1,194.1	1,187.7	2.7	2.9	-90.16	42.3	81.5	69.1	63.5	5.62	12.284	
1,200.1	1,195.8	1,194.3	1,187.8	2.7	2.9	-90.17	42.3	81.5	69.1	63.5	5.62	12.284	
1,300.0	1,293.4	1,293.6	1,285.0	3.1	3.4	-92.08	45.5	101.9	79.4	73.0	6.39	12.428	
1,400.0	1,391.3	1,393.0	1,382.2	3.5	3.8	-93.55	48.6	122.3	89.9	82.7	7.19	12.494	
1,500.0	1,489.1	1,492.4	1,479.5	4.0	4.2	-94.72	51.7	142.8	100.3	92.3	8.02	12.518	
1,600.0	1,586.9	1,591.9	1,576.7	4.4	4.6	-95.66	54.9	163.2	110.8	102.0	8.85	12.519	
1,700.0	1,684.7	1,691.3	1,674.0	4.8	5.1	-96.44	58.0	183.6	121.4	111.7	9.70	12.508	
1,800.0	1,782.5	1,790.7	1,771.3	5.3	5.5	-97.10	61.2	204.1	131.9	121.4	10.56	12.490	
1,900.0	1,880.3	1,890.2	1,868.5	5.7	5.9	-97.66	64.3	224.5	142.5	131.0	11.43	12.469	
2,000.0	1,978.1	1,989.6	1,965.8	6.1	6.4	-98.14	67.4	244.9	153.0	140.8	12.30	12.447	
2,100.0	2,075.9	2,089.0	2,063.0	6.6	6.8	-98.56	70.6	265.3	163.6	150.5	13.17	12.424	
2,200.0	2,173.8	2,188.4	2,160.3	7.0	7.3	-98.93	73.7	285.8	174.2	160.2	14.05	12.402	
2,300.0	2,271.6	2,287.9	2,257.6	7.5	7.7	-99.25	76.8	306.2	184.8	169.9	14.93	12.380	
2,400.0	2,369.4	2,387.3	2,354.8	8.0	8.2	-99.55	80.0	326.6	195.4	179.6	15.81	12.360	
2,500.0	2,467.2	2,486.7	2,452.1	8.4	8.6	-99.81	83.1	347.0	206.0	189.3	16.70	12.340	
2,600.0	2,565.0	2,586.2	2,549.3	8.9	9.1	-100.04	86.2	367.5	216.6	199.1	17.58	12.322	
2,700.0	2,662.8	2,685.6	2,646.6	9.3	9.5	-100.26	89.4	387.9	227.2	208.8	18.47	12.305	
2,800.0	2,760.6	2,785.0	2,743.9	9.8	10.0	-100.45	92.5	408.3	237.9	218.5	19.36	12.288	
2,900.0	2,858.5	2,884.5	2,841.1	10.2	10.4	-100.63	95.7	428.8	248.5	228.2	20.25	12.273	
3,000.0	2,956.3	2,983.9	2,938.4	10.7	10.9	-100.79	98.8	449.2	259.1	238.0	21.14	12.259	
3,100.0	3,054.1	3,083.3	3,035.6	11.2	11.3	-100.94	101.9	469.6	269.7	247.7	22.03	12.245	
3,200.0	3,151.9	3,182.8	3,132.9	11.6	11.8	-101.08	105.1	490.0	280.4	257.4	22.92	12.232	
3,300.0	3,249.7	3,282.2	3,230.2	12.1	12.2	-101.21	108.2	510.5	291.0	267.2	23.81	12.220	
3,400.0	3,347.5	3,381.6	3,327.4	12.5	12.7	-101.33	111.3	530.9	301.6	276.9	24.70	12.209	
3,500.0	3,445.3	3,481.1	3,424.7	13.0	13.1	-101.44	114.5	551.3	312.2	286.6	25.60	12.198	
3,600.0	3,543.2	3,580.5	3,521.9	13.5	13.6	-101.55	117.6	571.7	322.9	296.4	26.49	12.187	
3,700.0	3,641.0	3,679.9	3,619.2	13.9	14.1	-101.64	120.7	592.2	333.5	306.1	27.39	12.178	
3,800.0	3,738.8	3,779.4	3,716.5	14.4	14.5	-101.73	123.9	612.6	344.1	315.8	28.28	12.168	
3,900.0	3,836.6	3,880.4	3,815.4	14.8	14.9	-101.87	127.0	633.0	354.7	325.5	29.15	12.166	
4,000.0	3,934.4	3,983.6	3,917.0	15.3	15.3	-102.48	129.8	650.9	364.3	334.4	29.93	12.175	
4,100.0	4,032.2	4,086.7	4,019.0	15.8	15.5	-103.59	131.9	665.1	373.1	342.4	30.64	12.174	
4,159.1	4,090.0	4,147.4	4,079.4	16.0	15.7	-104.48	133.0	671.8	377.9	346.8	31.04	12.173	
4,200.0	4,130.1	4,189.3	4,121.1	16.2	15.8	-105.21	133.6	675.7	381.0	349.7	31.29	12.176	
4,300.0	4,228.5	4,291.7	4,223.3	16.5	16.0	-106.92	134.6	682.6	387.5	355.8	31.76	12.200	
4,400.0	4,327.5	4,393.9	4,325.4	16.8	16.1	-108.58	135.1	685.9	392.6	360.4	32.15	12.213	
4,500.0	4,426.9	4,494.4	4,425.9	17.0	16.2	-110.09	135.2	686.2	396.2	363.8	32.45	12.210	
4,600.0	4,526.6	4,594.1	4,525.6	17.2	16.4	-111.12	135.2	686.2	398.8	366.1	32.73	12.185	
4,700.0	4,626.6	4,694.1	4,625.6	17.3	16.5	-111.66	135.2	686.2	400.2	367.2	32.99	12.131	
4,759.3	4,685.8	4,753.3	4,684.8	17.4	16.6	-0.76	135.2	686.2	400.4	376.9	23.51	17.032	
4,800.0	4,726.5	4,794.1	4,725.5	17.5	16.6	-0.76	135.2	686.2	400.4	376.8	23.65	16.930	

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 WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21P-304 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
4,900.0	4,826.5	4,894.1	4,825.5	17.6	16.8	-0.76	135.2	686.2	400.4	376.4	24.00	16.685	
5,000.0	4,926.5	4,994.1	4,925.5	17.7	16.9	-0.76	135.2	686.2	400.4	376.1	24.35	16.445	
5,100.0	5,026.5	5,094.1	5,025.5	17.8	17.0	-0.76	135.2	686.2	400.4	375.7	24.70	16.209	
5,200.0	5,126.5	5,194.1	5,125.5	18.0	17.2	-0.76	135.2	686.2	400.4	375.3	25.06	15.978	
5,300.0	5,226.5	5,294.1	5,225.5	18.1	17.3	-0.76	135.2	686.2	400.4	375.0	25.42	15.752	
5,400.0	5,326.5	5,394.1	5,325.5	18.2	17.4	-0.76	135.2	686.2	400.4	374.6	25.78	15.530	
5,500.0	5,426.5	5,494.1	5,425.5	18.3	17.6	-0.76	135.2	686.2	400.4	374.3	26.15	15.313	
5,600.0	5,526.5	5,594.1	5,525.5	18.5	17.7	-0.76	135.2	686.2	400.4	373.9	26.52	15.101	
5,700.0	5,626.5	5,694.1	5,625.5	18.6	17.9	-0.76	135.2	686.2	400.4	373.5	26.89	14.893	
5,800.0	5,726.5	5,794.1	5,725.5	18.8	18.0	-0.76	135.2	686.2	400.4	373.1	27.26	14.689	
5,900.0	5,826.5	5,894.1	5,825.5	18.9	18.2	-0.76	135.2	686.2	400.4	372.8	27.63	14.490	
6,000.0	5,926.5	5,994.1	5,925.5	19.0	18.3	-0.76	135.2	686.2	400.4	372.4	28.01	14.295	
6,100.0	6,026.5	6,094.1	6,025.5	19.2	18.5	-0.76	135.2	686.2	400.4	372.0	28.39	14.104	
6,200.0	6,126.5	6,194.1	6,125.5	19.3	18.7	-0.76	135.2	686.2	400.4	371.6	28.77	13.917	
6,300.0	6,226.5	6,294.1	6,225.5	19.5	18.8	-0.76	135.2	686.2	400.4	371.3	29.15	13.734	
6,400.0	6,326.5	6,394.1	6,325.5	19.6	19.0	-0.76	135.2	686.2	400.4	370.9	29.54	13.555	
6,433.3	6,359.8	6,427.3	6,358.8	19.7	19.0	-0.76	135.2	686.2	400.4	370.7	29.67	13.496	
6,450.0	6,376.5	6,444.1	6,375.5	19.7	19.0	89.27	135.2	686.2	400.4	362.4	38.00	10.536	
6,500.0	6,426.5	6,494.0	6,425.5	19.7	19.1	89.68	135.2	686.2	400.4	362.2	38.14	10.498	
6,520.6	6,446.9	6,514.4	6,445.9	19.7	19.2	90.00	135.2	686.2	400.4	362.2	38.19	10.484	
6,550.0	6,476.0	6,543.6	6,475.1	19.7	19.2	90.58	135.2	686.1	400.4	362.1	38.26	10.465	
6,600.0	6,525.0	6,593.6	6,525.0	19.7	19.2	91.60	135.2	683.5	400.5	362.2	38.32	10.452	
6,650.0	6,573.3	6,644.1	6,575.2	19.7	19.3	92.63	135.2	677.3	400.8	362.5	38.32	10.460	
6,700.0	6,620.4	6,695.2	6,625.3	19.6	19.3	93.65	135.2	667.5	401.2	362.9	38.26	10.485	
6,750.0	6,666.3	6,746.8	6,675.1	19.6	19.2	94.65	135.2	654.0	401.7	363.6	38.16	10.528	
6,800.0	6,710.7	6,799.0	6,724.3	19.5	19.2	95.63	135.2	636.7	402.4	364.3	38.01	10.584	
6,850.0	6,753.4	6,851.7	6,772.6	19.4	19.1	96.59	135.2	615.7	403.1	365.2	37.84	10.651	
6,900.0	6,794.2	6,905.0	6,819.7	19.3	19.0	97.51	135.2	590.9	403.9	366.2	37.66	10.725	
6,950.0	6,832.9	6,958.8	6,865.4	19.3	18.9	98.40	135.2	562.3	404.8	367.3	37.49	10.799	
7,000.0	6,869.2	7,013.2	6,909.2	19.2	18.9	99.25	135.2	530.1	405.7	368.4	37.34	10.866	
7,050.0	6,903.1	7,068.1	6,950.8	19.2	18.8	100.05	135.2	494.2	406.7	369.4	37.25	10.919	
7,100.0	6,934.3	7,123.6	6,989.8	19.2	18.8	100.80	135.2	454.9	407.7	370.4	37.24	10.949	
7,150.0	6,962.8	7,179.5	7,026.1	19.3	18.9	101.49	135.2	412.3	408.6	371.3	37.33	10.947	
7,200.0	6,988.3	7,236.0	7,059.1	19.5	19.0	102.12	135.2	366.6	409.6	372.0	37.56	10.905	
7,250.0	7,010.7	7,292.8	7,088.7	19.7	19.2	102.69	135.2	318.1	410.5	372.5	37.94	10.818	
7,300.0	7,029.9	7,350.1	7,114.5	20.0	19.5	103.19	135.2	267.0	411.3	372.8	38.50	10.683	
7,350.0	7,045.9	7,407.6	7,136.3	20.4	19.9	103.61	135.2	213.7	412.0	372.7	39.25	10.496	
7,400.0	7,058.6	7,465.5	7,153.7	20.8	20.5	103.96	135.2	158.5	412.6	372.4	40.19	10.265	
7,450.0	7,067.8	7,523.7	7,166.8	21.4	21.1	104.24	135.2	101.9	413.1	371.8	41.32	9.997	
7,500.0	7,073.6	7,582.0	7,175.2	22.0	21.8	104.43	135.2	44.2	413.4	370.8	42.62	9.701	
7,550.0	7,076.0	7,640.4	7,178.8	22.7	22.6	104.55	135.2	-14.1	413.6	369.6	44.07	9.386	
7,561.7	7,076.0	7,654.2	7,179.0	22.9	22.8	104.56	135.2	-27.9	413.7	369.2	44.42	9.312	
7,600.0	7,075.8	7,693.1	7,178.9	23.4	23.4	104.57	135.2	-66.8	413.7	368.1	45.58	9.076	
7,700.0	7,075.3	7,793.1	7,178.5	25.1	25.1	104.59	135.2	-166.8	413.7	364.9	48.85	8.468	
7,800.0	7,074.8	7,893.1	7,178.1	27.0	27.0	104.60	135.2	-266.8	413.7	361.2	52.49	7.882	
7,900.0	7,074.4	7,993.1	7,177.8	29.0	29.0	104.62	135.2	-366.8	413.8	357.4	56.41	7.334	
8,000.0	7,073.9	8,093.1	7,177.4	31.1	31.2	104.63	135.2	-466.8	413.8	353.2	60.58	6.831	
8,100.0	7,073.4	8,193.1	7,177.1	33.4	33.4	104.65	135.2	-566.8	413.8	348.9	64.92	6.374	
8,200.0	7,072.9	8,293.1	7,176.7	35.7	35.7	104.67	135.2	-666.8	413.9	344.4	69.43	5.961	
8,300.0	7,072.4	8,393.1	7,176.3	38.1	38.1	104.68	135.2	-766.8	413.9	339.8	74.06	5.589	
8,400.0	7,071.9	8,493.1	7,176.0	40.6	40.6	104.70	135.2	-866.8	413.9	335.1	78.79	5.254	
8,500.0	7,071.5	8,593.1	7,175.6	43.1	43.0	104.71	135.2	-966.8	413.9	330.3	83.61	4.951	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21P-304 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
8,600.0	7,071.0	8,693.1	7,175.2	45.6	45.6	104.73	135.2	-1,066.8	414.0	325.5	88.49	4.678	
8,700.0	7,070.5	8,793.1	7,174.9	48.1	48.1	104.75	135.2	-1,166.8	414.0	320.6	93.44	4.431	
8,800.0	7,070.0	8,893.1	7,174.5	50.7	50.7	104.76	135.2	-1,266.8	414.0	315.6	98.44	4.206	
8,900.0	7,069.5	8,993.1	7,174.1	53.3	53.3	104.78	135.2	-1,366.8	414.1	310.6	103.49	4.001	
9,000.0	7,069.0	9,093.1	7,173.8	56.0	55.9	104.79	135.2	-1,466.8	414.1	305.5	108.57	3.814	
9,100.0	7,068.6	9,193.1	7,173.4	58.6	58.6	104.81	135.2	-1,566.8	414.1	300.5	113.68	3.643	
9,200.0	7,068.1	9,293.1	7,173.0	61.3	61.2	104.83	135.2	-1,666.8	414.2	295.3	118.82	3.486	
9,300.0	7,067.6	9,393.1	7,172.7	63.9	63.9	104.84	135.2	-1,766.8	414.2	290.2	123.98	3.341	
9,400.0	7,067.1	9,493.1	7,172.3	66.6	66.6	104.86	135.2	-1,866.8	414.2	285.1	129.17	3.207	
9,500.0	7,066.6	9,593.1	7,171.9	69.3	69.3	104.87	135.2	-1,966.8	414.3	279.9	134.37	3.083	
9,600.0	7,066.1	9,693.1	7,171.6	72.0	72.0	104.89	135.2	-2,066.8	414.3	274.7	139.59	2.968	
9,700.0	7,065.6	9,793.1	7,171.2	74.7	74.7	104.90	135.2	-2,166.8	414.3	269.5	144.83	2.861	
9,800.0	7,065.2	9,893.1	7,170.9	77.5	77.4	104.92	135.2	-2,266.8	414.3	264.3	150.08	2.761	
9,900.0	7,064.7	9,993.1	7,170.5	80.2	80.1	104.94	135.2	-2,366.8	414.4	259.0	155.34	2.668	
10,000.0	7,064.2	10,093.1	7,170.1	82.9	82.9	104.95	135.2	-2,466.8	414.4	253.8	160.61	2.580	
10,100.0	7,063.7	10,193.1	7,169.8	85.6	85.6	104.97	135.2	-2,566.8	414.4	248.5	165.89	2.498	
10,200.0	7,063.2	10,293.1	7,169.4	88.4	88.3	104.98	135.2	-2,666.8	414.5	243.3	171.17	2.421	
10,300.0	7,062.7	10,393.1	7,169.0	91.1	91.1	105.00	135.2	-2,766.8	414.5	238.0	176.47	2.349	
10,400.0	7,062.3	10,493.1	7,168.7	93.9	93.8	105.02	135.2	-2,866.8	414.5	232.8	181.77	2.280	
10,500.0	7,061.8	10,593.1	7,168.3	96.6	96.6	105.03	135.2	-2,966.8	414.6	227.5	187.08	2.216	
10,600.0	7,061.3	10,693.1	7,167.9	99.4	99.3	105.05	135.2	-3,066.8	414.6	222.2	192.40	2.155	
10,700.0	7,060.8	10,793.1	7,167.6	102.1	102.1	105.06	135.2	-3,166.8	414.6	216.9	197.72	2.097	
10,800.0	7,060.3	10,893.1	7,167.2	104.9	104.8	105.08	135.2	-3,266.8	414.7	211.6	203.04	2.042	
10,900.0	7,059.8	10,993.1	7,166.8	107.6	107.6	105.10	135.2	-3,366.8	414.7	206.3	208.37	1.990	
11,000.0	7,059.4	11,093.1	7,166.5	110.4	110.4	105.11	135.2	-3,466.8	414.7	201.0	213.70	1.941	
11,100.0	7,058.9	11,193.1	7,166.1	113.2	113.1	105.13	135.2	-3,566.8	414.7	195.7	219.04	1.893	
11,200.0	7,058.4	11,293.1	7,165.7	115.9	115.9	105.14	135.2	-3,666.8	414.8	190.4	224.38	1.849	
11,300.0	7,057.9	11,393.1	7,165.4	118.7	118.7	105.16	135.2	-3,766.8	414.8	185.1	229.72	1.806	
11,400.0	7,057.4	11,493.1	7,165.0	121.5	121.4	105.18	135.2	-3,866.8	414.8	179.8	235.06	1.765	
11,500.0	7,056.9	11,593.1	7,164.7	124.3	124.2	105.19	135.2	-3,966.8	414.9	174.5	240.41	1.726	
11,600.0	7,056.5	11,693.1	7,164.3	127.0	127.0	105.21	135.2	-4,066.8	414.9	169.1	245.76	1.688	
11,688.2	7,056.0	11,781.3	7,164.0	129.5	129.4	105.23	135.2	-4,155.0	414.9	164.5	250.47	1.657 SF	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21P-314 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
0.0	0.0	0.0	0.0	0.0	0.0	0.54	59.7	0.6	59.8				
100.0	100.0	98.0	98.0	0.1	0.1	0.54	59.7	0.6	59.7	59.6	0.19	310.417	
200.0	200.0	198.0	198.0	0.3	0.3	0.54	59.7	0.6	59.7	59.1	0.64	93.436	
300.0	300.0	298.0	298.0	0.5	0.5	0.54	59.7	0.6	59.7	58.7	1.09	54.866	CC, ES
400.0	400.0	396.6	396.6	0.8	0.8	1.68	60.8	1.8	60.9	59.3	1.53	39.708	
500.0	500.0	495.0	494.8	1.0	1.0	4.96	64.1	5.6	64.4	62.4	1.98	32.525	
600.0	600.0	592.9	592.4	1.2	1.2	9.67	69.6	11.9	70.8	68.3	2.43	29.072	
700.0	700.0	690.2	689.0	1.4	1.5	-97.06	77.2	20.6	80.6	77.7	2.90	27.787	
800.0	799.8	786.9	784.5	1.6	1.8	-94.65	86.8	31.7	93.8	90.4	3.36	27.907	
900.0	899.5	882.6	878.6	1.9	2.1	-93.60	98.5	45.1	110.1	106.2	3.86	28.550	
1,000.0	998.7	980.3	974.2	2.1	2.5	-93.74	111.8	60.4	128.5	124.1	4.40	29.199	
1,100.0	1,097.5	1,078.5	1,070.2	2.4	2.9	-95.11	125.2	75.8	147.3	142.3	5.00	29.446	
1,200.0	1,195.6	1,176.3	1,165.9	2.7	3.3	-97.29	138.5	91.2	166.5	160.9	5.67	29.377	
1,200.1	1,195.8	1,176.5	1,166.1	2.7	3.3	-97.29	138.5	91.2	166.6	160.9	5.67	29.377	
1,300.0	1,293.4	1,274.1	1,261.5	3.1	3.8	-99.85	151.8	106.5	186.4	180.0	6.39	29.147	
1,400.0	1,391.3	1,371.8	1,357.1	3.5	4.2	-101.92	165.2	121.9	206.5	199.3	7.14	28.900	
1,500.0	1,489.1	1,469.5	1,452.6	4.0	4.6	-103.63	178.5	137.2	226.8	218.9	7.91	28.672	
1,600.0	1,586.9	1,567.2	1,548.2	4.4	5.0	-105.05	191.8	152.5	247.3	238.6	8.69	28.464	
1,700.0	1,684.7	1,664.9	1,643.8	4.8	5.5	-106.26	205.1	167.9	267.9	258.4	9.47	28.279	
1,800.0	1,782.5	1,762.6	1,739.4	5.3	5.9	-107.29	218.5	183.2	288.6	278.4	10.27	28.115	
1,900.0	1,880.3	1,860.3	1,834.9	5.7	6.3	-108.19	231.8	198.5	309.4	298.4	11.06	27.971	
2,000.0	1,978.1	1,958.0	1,930.5	6.1	6.8	-108.97	245.1	213.9	330.3	318.4	11.86	27.843	
2,100.0	2,075.9	2,055.7	2,026.1	6.6	7.2	-109.66	258.5	229.2	351.2	338.5	12.66	27.730	
2,200.0	2,173.8	2,153.4	2,121.6	7.0	7.7	-110.27	271.8	244.5	372.1	358.7	13.47	27.629	
2,300.0	2,271.6	2,251.1	2,217.2	7.5	8.1	-110.82	285.1	259.9	393.1	378.9	14.28	27.539	
2,400.0	2,369.4	2,348.8	2,312.8	8.0	8.5	-111.31	298.4	275.2	414.1	399.1	15.08	27.458	
2,500.0	2,467.2	2,446.5	2,408.4	8.4	9.0	-111.76	311.8	290.6	435.2	419.3	15.89	27.385	
2,600.0	2,565.0	2,544.3	2,503.9	8.9	9.4	-112.16	325.1	305.9	456.3	439.6	16.70	27.319	
2,700.0	2,662.8	2,642.0	2,599.5	9.3	9.8	-112.53	338.4	321.2	477.3	459.8	17.51	27.259	
2,800.0	2,760.6	2,739.7	2,695.1	9.8	10.3	-112.86	351.7	336.6	498.5	480.1	18.32	27.204	
2,900.0	2,858.5	2,837.4	2,790.6	10.2	10.7	-113.17	365.1	351.9	519.6	500.4	19.13	27.154	
3,000.0	2,956.3	2,935.1	2,886.2	10.7	11.2	-113.46	378.4	367.2	540.7	520.8	19.95	27.107	
3,100.0	3,054.1	3,032.8	2,981.8	11.2	11.6	-113.72	391.7	382.6	561.8	541.1	20.76	27.065	
3,200.0	3,151.9	3,130.5	3,077.4	11.6	12.0	-113.97	405.1	397.9	583.0	561.4	21.57	27.026	
3,300.0	3,249.7	3,228.2	3,172.9	12.1	12.5	-114.19	418.4	413.2	604.2	581.8	22.39	26.989	
3,400.0	3,347.5	3,325.9	3,268.5	12.5	12.9	-114.40	431.7	428.6	625.3	602.1	23.20	26.955	
3,500.0	3,445.3	3,423.6	3,364.1	13.0	13.4	-114.60	445.0	443.9	646.5	622.5	24.01	26.924	
3,600.0	3,543.2	3,521.3	3,459.6	13.5	13.8	-114.79	458.4	459.3	667.7	642.9	24.83	26.895	
3,700.0	3,641.0	3,619.0	3,555.2	13.9	14.2	-114.96	471.7	474.6	688.9	663.3	25.64	26.867	
3,800.0	3,738.8	3,716.7	3,650.8	14.4	14.7	-115.13	485.0	489.9	710.1	683.6	26.46	26.841	
3,900.0	3,836.6	3,814.4	3,746.4	14.8	15.1	-115.28	498.3	505.3	731.3	704.0	27.27	26.817	
4,000.0	3,934.4	3,912.2	3,841.9	15.3	15.6	-115.43	511.7	520.6	752.5	724.4	28.09	26.794	
4,100.0	4,032.2	4,009.9	3,937.5	15.8	16.0	-115.56	525.0	535.9	773.7	744.8	28.90	26.773	
4,159.1	4,090.0	4,067.6	3,994.0	16.0	16.3	-115.64	532.9	545.0	786.3	756.9	29.38	26.761	
4,200.0	4,130.1	4,107.6	4,033.1	16.2	16.4	-115.83	538.3	551.3	794.8	765.1	29.71	26.751	
4,300.0	4,228.5	4,205.6	4,129.0	16.5	16.9	-116.12	551.7	566.7	814.7	784.2	30.44	26.761	
4,400.0	4,327.5	4,303.8	4,225.0	16.8	17.3	-116.15	565.1	582.1	833.1	801.9	31.13	26.760	
4,500.0	4,426.9	4,402.1	4,321.2	17.0	17.8	-115.97	578.5	597.5	850.0	818.2	31.77	26.753	
4,600.0	4,526.6	4,500.4	4,417.3	17.2	18.2	-115.56	591.9	612.9	865.4	833.1	32.36	26.744	
4,700.0	4,626.6	4,598.5	4,513.2	17.3	18.7	-114.96	605.3	628.3	879.6	846.7	32.90	26.737	
4,759.3	4,685.8	4,663.5	4,576.9	17.4	18.9	-3.46	614.0	638.4	887.3	860.0	27.25	32.557	
4,800.0	4,726.5	4,713.0	4,625.5	17.5	19.1	-2.98	620.1	645.3	892.0	864.5	27.48	32.464	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21P-314 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
4,900.0	4,826.5	4,835.9	4,746.9	17.6	19.5	-2.01	632.8	659.9	901.9	873.9	27.97	32.244	
5,000.0	4,926.5	4,960.3	4,870.4	17.7	19.8	-1.31	642.1	670.7	909.2	880.7	28.43	31.984	
5,100.0	5,026.5	5,085.7	4,995.5	17.8	20.0	-0.88	648.0	677.4	913.7	884.9	28.84	31.687	
5,200.0	5,126.5	5,211.6	5,121.4	18.0	20.2	-0.72	650.2	680.0	915.5	886.3	29.20	31.356	
5,300.0	5,226.5	5,314.8	5,224.5	18.1	20.3	-0.72	650.2	680.1	915.5	886.0	29.51	31.028	
5,400.0	5,326.5	5,414.8	5,324.5	18.2	20.4	-0.72	650.2	680.1	915.5	885.7	29.82	30.699	
5,500.0	5,426.5	5,514.8	5,424.5	18.3	20.5	-0.72	650.2	680.1	915.5	885.4	30.14	30.374	
5,600.0	5,526.5	5,614.8	5,524.5	18.5	20.7	-0.72	650.2	680.1	915.5	885.1	30.46	30.052	
5,700.0	5,626.5	5,714.8	5,624.5	18.6	20.8	-0.72	650.2	680.1	915.5	884.7	30.79	29.735	
5,800.0	5,726.5	5,814.8	5,724.5	18.8	20.9	-0.72	650.2	680.1	915.5	884.4	31.12	29.421	
5,900.0	5,826.5	5,914.8	5,824.5	18.9	21.0	-0.72	650.2	680.1	915.5	884.1	31.45	29.110	
6,000.0	5,926.5	6,014.8	5,924.5	19.0	21.2	-0.72	650.2	680.1	915.5	883.7	31.78	28.804	
6,100.0	6,026.5	6,114.8	6,024.5	19.2	21.3	-0.72	650.2	680.1	915.5	883.4	32.12	28.502	
6,200.0	6,126.5	6,214.8	6,124.5	19.3	21.4	-0.72	650.2	680.1	915.5	883.1	32.46	28.203	
6,300.0	6,226.5	6,314.8	6,224.5	19.5	21.6	-0.72	650.2	680.1	915.5	882.7	32.80	27.909	
6,400.0	6,326.5	6,414.8	6,324.5	19.6	21.7	-0.72	650.2	680.1	915.5	882.4	33.15	27.618	
6,433.3	6,359.8	6,448.0	6,357.8	19.7	21.8	-0.72	650.2	680.1	915.5	882.3	33.26	27.522	
6,450.0	6,376.5	6,464.8	6,374.5	19.7	21.8	89.30	650.2	680.1	915.5	877.1	38.42	23.828	
6,500.0	6,426.5	6,514.7	6,424.5	19.7	21.9	89.48	650.2	680.1	915.5	877.0	38.53	23.759	
6,550.0	6,476.0	6,564.2	6,474.0	19.7	21.9	89.87	650.2	680.0	915.4	876.9	38.60	23.719	
6,563.9	6,489.7	6,577.9	6,487.7	19.7	21.9	90.00	650.2	679.6	915.4	876.8	38.60	23.716	
6,600.0	6,525.0	6,613.8	6,523.5	19.7	22.0	90.33	650.2	677.5	915.5	876.9	38.60	23.715	
6,650.0	6,573.3	6,663.9	6,573.2	19.7	22.0	90.79	650.2	671.5	915.5	877.0	38.55	23.748	
6,700.0	6,620.4	6,714.5	6,622.9	19.6	22.0	91.24	650.2	661.9	915.7	877.2	38.46	23.811	
6,750.0	6,666.3	6,765.7	6,672.3	19.6	21.9	91.69	650.2	648.7	915.9	877.5	38.32	23.901	
6,800.0	6,710.7	6,817.4	6,721.2	19.5	21.9	92.14	650.2	631.8	916.1	877.9	38.15	24.012	
6,850.0	6,753.4	6,869.6	6,769.2	19.4	21.8	92.57	650.2	611.2	916.4	878.4	37.97	24.135	
6,900.0	6,794.2	6,922.5	6,816.1	19.3	21.7	93.00	650.2	586.9	916.7	878.9	37.79	24.261	
6,950.0	6,832.9	6,975.9	6,861.5	19.3	21.6	93.41	650.2	558.8	917.1	879.5	37.62	24.378	
7,000.0	6,869.2	7,029.9	6,905.2	19.2	21.4	93.81	650.2	527.1	917.5	880.0	37.49	24.472	
7,050.0	6,903.1	7,084.4	6,946.8	19.2	21.3	94.19	650.2	491.8	917.9	880.5	37.42	24.528	
7,100.0	6,934.3	7,139.5	6,985.9	19.2	21.2	94.55	650.2	453.0	918.4	880.9	37.44	24.528	
7,150.0	6,962.8	7,195.2	7,022.3	19.3	21.1	94.89	650.2	411.0	918.8	881.3	37.57	24.455	
7,200.0	6,988.3	7,251.3	7,055.6	19.5	21.0	95.20	650.2	365.8	919.3	881.4	37.84	24.295	
7,250.0	7,010.7	7,307.9	7,085.5	19.7	20.9	95.49	650.2	317.8	919.7	881.4	38.27	24.034	
7,300.0	7,029.9	7,364.9	7,111.6	20.0	20.9	95.75	650.2	267.1	920.1	881.2	38.87	23.670	
7,350.0	7,045.9	7,422.3	7,133.8	20.4	21.0	95.97	650.2	214.2	920.5	880.8	39.66	23.210	
7,400.0	7,058.6	7,480.1	7,151.8	20.8	21.1	96.16	650.2	159.3	920.8	880.2	40.63	22.662	
7,450.0	7,067.8	7,538.2	7,165.4	21.4	21.4	96.32	650.2	102.8	921.1	879.3	41.78	22.043	
7,500.0	7,073.6	7,596.5	7,174.4	22.0	21.9	96.44	650.2	45.2	921.3	878.2	43.10	21.374	
7,550.0	7,076.0	7,655.0	7,178.6	22.7	22.5	96.52	650.2	-13.1	921.4	876.8	44.57	20.673	
7,561.7	7,076.0	7,668.7	7,178.9	22.9	22.7	96.54	650.2	-26.8	921.4	876.5	44.94	20.505	
7,600.0	7,075.8	7,708.7	7,178.9	23.4	23.2	96.55	650.2	-66.8	921.5	875.3	46.11	19.984	
7,700.0	7,075.3	7,808.7	7,178.5	25.1	24.7	96.56	650.2	-166.8	921.5	872.1	49.39	18.657	
7,800.0	7,074.8	7,908.7	7,178.2	27.0	26.5	96.56	650.2	-266.8	921.5	868.4	53.04	17.372	
7,900.0	7,074.4	8,008.7	7,177.8	29.0	28.5	96.57	650.2	-366.8	921.5	864.5	57.01	16.163	
8,000.0	7,073.9	8,108.7	7,177.4	31.1	30.6	96.58	650.2	-466.8	921.5	860.3	61.23	15.050	
8,100.0	7,073.4	8,208.7	7,177.1	33.4	32.8	96.58	650.2	-566.8	921.5	855.9	65.65	14.036	
8,200.0	7,072.9	8,308.7	7,176.7	35.7	35.1	96.59	650.2	-666.8	921.5	851.3	70.24	13.119	
8,300.0	7,072.4	8,408.7	7,176.3	38.1	37.5	96.60	650.2	-766.8	921.6	846.6	74.97	12.293	
8,400.0	7,071.9	8,508.7	7,176.0	40.6	39.9	96.61	650.2	-866.8	921.6	841.8	79.80	11.549	
8,500.0	7,071.5	8,608.7	7,175.6	43.1	42.4	96.61	650.2	-966.8	921.6	836.9	84.72	10.877	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21P-314 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
8,600.0	7,071.0	8,708.7	7,175.2	45.6	44.9	96.62	650.2	-1,066.8	921.6	831.9	89.73	10.271	
8,700.0	7,070.5	8,808.7	7,174.9	48.1	47.5	96.63	650.2	-1,166.8	921.6	826.8	94.79	9.722	
8,800.0	7,070.0	8,908.7	7,174.5	50.7	50.0	96.64	650.2	-1,266.8	921.6	821.7	99.91	9.224	
8,900.0	7,069.5	9,008.7	7,174.1	53.3	52.6	96.64	650.2	-1,366.8	921.6	816.6	105.08	8.771	
9,000.0	7,069.0	9,108.7	7,173.8	56.0	55.3	96.65	650.2	-1,466.8	921.7	811.4	110.29	8.357	
9,100.0	7,068.6	9,208.7	7,173.4	58.6	57.9	96.66	650.3	-1,566.8	921.7	806.1	115.53	7.978	
9,200.0	7,068.1	9,308.7	7,173.0	61.3	60.5	96.67	650.3	-1,666.8	921.7	800.9	120.80	7.630	
9,300.0	7,067.6	9,408.7	7,172.7	63.9	63.2	96.67	650.3	-1,766.8	921.7	795.6	126.10	7.309	
9,400.0	7,067.1	9,508.7	7,172.3	66.6	65.9	96.68	650.3	-1,866.8	921.7	790.3	131.42	7.013	
9,500.0	7,066.6	9,608.7	7,172.0	69.3	68.6	96.69	650.3	-1,966.8	921.7	785.0	136.77	6.739	
9,600.0	7,066.1	9,708.7	7,171.6	72.0	71.2	96.69	650.3	-2,066.8	921.7	779.6	142.13	6.485	
9,700.0	7,065.6	9,808.7	7,171.2	74.7	74.0	96.70	650.3	-2,166.8	921.8	774.3	147.50	6.249	
9,800.0	7,065.2	9,908.7	7,170.9	77.5	76.7	96.71	650.3	-2,266.8	921.8	768.9	152.89	6.029	
9,900.0	7,064.7	10,008.7	7,170.5	80.2	79.4	96.72	650.3	-2,366.8	921.8	763.5	158.29	5.823	
10,000.0	7,064.2	10,108.7	7,170.1	82.9	82.1	96.72	650.3	-2,466.8	921.8	758.1	163.71	5.631	
10,100.0	7,063.7	10,208.7	7,169.8	85.6	84.8	96.73	650.3	-2,566.8	921.8	752.7	169.13	5.450	
10,200.0	7,063.2	10,308.7	7,169.4	88.4	87.6	96.74	650.3	-2,666.8	921.8	747.3	174.57	5.281	
10,300.0	7,062.7	10,408.7	7,169.0	91.1	90.3	96.75	650.3	-2,766.8	921.8	741.8	180.01	5.121	
10,400.0	7,062.3	10,508.7	7,168.7	93.9	93.0	96.75	650.3	-2,866.8	921.9	736.4	185.46	4.971	
10,500.0	7,061.8	10,608.7	7,168.3	96.6	95.8	96.76	650.3	-2,966.8	921.9	731.0	190.92	4.829	
10,600.0	7,061.3	10,708.7	7,168.0	99.4	98.5	96.77	650.3	-3,066.8	921.9	725.5	196.38	4.694	
10,700.0	7,060.8	10,808.7	7,167.6	102.1	101.3	96.78	650.3	-3,166.8	921.9	720.0	201.86	4.567	
10,800.0	7,060.3	10,908.7	7,167.2	104.9	104.0	96.78	650.3	-3,266.8	921.9	714.6	207.33	4.447	
10,900.0	7,059.8	11,008.7	7,166.9	107.6	106.8	96.79	650.3	-3,366.8	921.9	709.1	212.81	4.332	
11,000.0	7,059.4	11,108.7	7,166.5	110.4	109.6	96.80	650.3	-3,466.8	922.0	703.7	218.30	4.223	
11,100.0	7,058.9	11,208.7	7,166.1	113.2	112.3	96.81	650.3	-3,566.8	922.0	698.2	223.79	4.120	
11,200.0	7,058.4	11,308.7	7,165.8	115.9	115.1	96.81	650.3	-3,666.8	922.0	692.7	229.28	4.021	
11,300.0	7,057.9	11,408.7	7,165.4	118.7	117.9	96.82	650.3	-3,766.8	922.0	687.2	234.78	3.927	
11,400.0	7,057.4	11,508.7	7,165.1	121.5	120.6	96.83	650.3	-3,866.8	922.0	681.7	240.28	3.837	
11,500.0	7,056.9	11,608.7	7,164.7	124.3	123.4	96.84	650.3	-3,966.8	922.0	676.2	245.78	3.751	
11,600.0	7,056.5	11,708.7	7,164.3	127.0	126.2	96.84	650.3	-4,066.8	922.0	670.8	251.29	3.669	
11,688.2	7,056.0	11,796.9	7,164.0	129.5	128.6	96.85	650.3	-4,154.9	922.1	665.9	256.15	3.600 SF	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21P-434 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
0.0	0.0	0.0	0.0	0.0	0.0	0.00	14.9	0.0	15.0				
100.0	100.0	99.0	99.0	0.1	0.1	0.00	14.9	0.0	14.9	14.7	0.19	77.211	
200.0	200.0	199.0	199.0	0.3	0.3	0.00	14.9	0.0	14.9	14.3	0.64	23.276	
300.0	300.0	299.0	299.0	0.5	0.5	0.00	14.9	0.0	14.9	13.8	1.09	13.688	
400.0	400.0	399.0	399.0	0.8	0.8	0.00	14.9	0.0	14.9	13.4	1.54	9.694	
500.0	500.0	499.0	499.0	1.0	1.0	0.00	14.9	0.0	14.9	12.9	1.99	7.505	
600.0	600.0	599.0	599.0	1.2	1.2	0.00	14.9	0.0	14.9	12.5	2.44	6.122	CC, ES
700.0	700.0	699.0	699.0	1.4	1.4	-116.95	14.9	0.0	15.6	12.8	2.87	5.447	
800.0	799.8	799.1	799.1	1.6	1.7	-126.56	14.7	1.7	17.9	14.6	3.28	5.451	
900.0	899.5	899.3	899.2	1.9	1.9	-132.45	14.1	6.9	21.2	17.5	3.70	5.741	
1,000.0	998.7	999.6	999.1	2.1	2.1	-135.42	13.1	15.5	25.4	21.3	4.14	6.133	
1,100.0	1,097.5	1,100.0	1,098.7	2.4	2.3	-136.45	11.7	27.7	30.3	25.6	4.63	6.545	
1,200.0	1,195.6	1,200.5	1,197.9	2.7	2.6	-136.26	9.9	43.3	35.8	30.6	5.17	6.929	
1,200.1	1,195.8	1,200.6	1,198.1	2.7	2.6	-136.26	9.9	43.3	35.8	30.6	5.17	6.930	
1,300.0	1,293.4	1,301.0	1,296.6	3.1	3.0	-133.69	7.6	62.4	40.8	35.0	5.81	7.019	
1,400.0	1,391.3	1,400.9	1,394.3	3.5	3.3	-129.76	5.2	83.0	45.0	38.5	6.54	6.886	
1,500.0	1,489.1	1,500.8	1,492.0	4.0	3.7	-126.52	2.8	103.6	49.5	42.1	7.32	6.758	
1,600.0	1,586.9	1,600.6	1,589.7	4.4	4.1	-123.82	0.4	124.3	54.0	45.9	8.13	6.642	
1,700.0	1,684.7	1,700.5	1,687.4	4.8	4.6	-121.55	-2.1	144.9	58.7	49.7	8.97	6.541	
1,800.0	1,782.5	1,800.4	1,785.1	5.3	5.0	-119.61	-4.5	165.5	63.4	53.6	9.83	6.452	
1,900.0	1,880.3	1,900.2	1,882.7	5.7	5.4	-117.95	-6.9	186.1	68.2	57.5	10.70	6.376	
2,000.0	1,978.1	2,000.1	1,980.4	6.1	5.9	-116.50	-9.3	206.7	73.1	61.5	11.59	6.310	
2,100.0	2,075.9	2,100.0	2,078.1	6.6	6.3	-115.23	-11.7	227.4	78.0	65.5	12.47	6.252	
2,200.0	2,173.8	2,199.8	2,175.8	7.0	6.7	-114.12	-14.1	248.0	82.9	69.6	13.37	6.202	
2,300.0	2,271.6	2,299.7	2,273.5	7.5	7.2	-113.13	-16.6	268.6	87.9	73.6	14.27	6.159	
2,400.0	2,369.4	2,399.6	2,371.2	8.0	7.6	-112.25	-19.0	289.2	92.9	77.7	15.17	6.120	
2,500.0	2,467.2	2,499.4	2,468.8	8.4	8.1	-111.45	-21.4	309.8	97.9	81.8	16.08	6.087	
2,600.0	2,565.0	2,599.3	2,566.5	8.9	8.5	-110.74	-23.8	330.5	102.9	85.9	16.99	6.057	
2,700.0	2,662.8	2,699.2	2,664.2	9.3	9.0	-110.09	-26.2	351.1	107.9	90.0	17.90	6.030	
2,800.0	2,760.6	2,799.0	2,761.9	9.8	9.4	-109.49	-28.7	371.7	113.0	94.2	18.81	6.006	
2,900.0	2,858.5	2,898.9	2,859.6	10.2	9.9	-108.95	-31.1	392.3	118.0	98.3	19.72	5.984	
3,000.0	2,956.3	2,998.8	2,957.3	10.7	10.3	-108.46	-33.5	413.0	123.1	102.4	20.64	5.964	
3,100.0	3,054.1	3,098.6	3,054.9	11.2	10.8	-108.00	-35.9	433.6	128.2	106.6	21.55	5.947	
3,200.0	3,151.9	3,198.5	3,152.6	11.6	11.2	-107.58	-38.3	454.2	133.2	110.8	22.47	5.930	
3,300.0	3,249.7	3,298.4	3,250.3	12.1	11.7	-107.19	-40.7	474.8	138.3	114.9	23.38	5.916	
3,400.0	3,347.5	3,398.2	3,348.0	12.5	12.2	-106.82	-43.2	495.4	143.4	119.1	24.30	5.902	
3,500.0	3,445.3	3,498.1	3,445.7	13.0	12.6	-106.48	-45.6	516.1	148.5	123.3	25.22	5.890	
3,600.0	3,543.2	3,598.0	3,543.4	13.5	13.1	-106.17	-48.0	536.7	153.6	127.5	26.14	5.878	
3,700.0	3,641.0	3,697.8	3,641.0	13.9	13.5	-105.87	-50.4	557.3	158.7	131.7	27.05	5.868	
3,800.0	3,738.8	3,797.7	3,738.7	14.4	14.0	-105.59	-52.8	577.9	163.9	135.9	27.97	5.858	
3,900.0	3,836.6	3,897.6	3,836.4	14.8	14.4	-105.33	-55.3	598.6	169.0	140.1	28.89	5.849	
4,000.0	3,934.4	3,997.4	3,934.1	15.3	14.9	-105.09	-57.7	619.2	174.1	144.3	29.81	5.840	
4,100.0	4,032.2	4,097.2	4,031.9	15.8	15.3	-105.28	-59.9	638.5	179.2	148.6	30.64	5.850	
4,159.1	4,090.0	4,156.1	4,090.0	16.0	15.5	-105.90	-61.1	648.3	182.3	151.3	31.04	5.873	
4,200.0	4,130.1	4,196.8	4,130.2	16.2	15.6	-106.49	-61.8	654.4	184.4	153.1	31.29	5.894	
4,300.0	4,228.5	4,296.2	4,228.9	16.5	15.8	-107.90	-63.3	666.9	189.0	157.3	31.76	5.952	
4,400.0	4,327.5	4,395.5	4,327.8	16.8	16.0	-109.27	-64.3	675.9	192.9	160.8	32.14	6.001	
4,500.0	4,426.9	4,494.7	4,426.8	17.0	16.2	-110.62	-65.0	681.6	196.0	163.6	32.44	6.043	
4,600.0	4,526.6	4,593.7	4,525.8	17.2	16.3	-111.97	-65.3	683.9	198.4	165.7	32.64	6.078	
4,700.0	4,626.6	4,693.5	4,625.6	17.3	16.5	-112.99	-65.3	683.9	199.8	167.0	32.82	6.089	
4,759.3	4,685.8	4,752.8	4,684.8	17.4	16.5	-2.18	-65.3	683.9	200.1	176.4	23.70	8.441	
4,800.0	4,726.5	4,793.5	4,725.5	17.5	16.6	-2.18	-65.3	683.9	200.1	176.2	23.84	8.392	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21P-434 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
4,900.0	4,826.5	4,893.5	4,825.5	17.6	16.7	-2.18	-65.3	683.9	200.1	175.9	24.18	8.274	
5,000.0	4,926.5	4,993.5	4,925.5	17.7	16.9	-2.18	-65.3	683.9	200.1	175.6	24.53	8.157	
5,100.0	5,026.5	5,093.5	5,025.5	17.8	17.0	-2.18	-65.3	683.9	200.1	175.2	24.88	8.043	
5,200.0	5,126.5	5,193.5	5,125.5	18.0	17.1	-2.18	-65.3	683.9	200.1	174.9	25.23	7.932	
5,300.0	5,226.5	5,293.5	5,225.5	18.1	17.3	-2.18	-65.3	683.9	200.1	174.5	25.58	7.822	
5,400.0	5,326.5	5,393.5	5,325.5	18.2	17.4	-2.18	-65.3	683.9	200.1	174.1	25.94	7.714	
5,500.0	5,426.5	5,493.5	5,425.5	18.3	17.6	-2.18	-65.3	683.9	200.1	173.8	26.30	7.609	
5,600.0	5,526.5	5,593.5	5,525.5	18.5	17.7	-2.18	-65.3	683.9	200.1	173.4	26.66	7.505	
5,700.0	5,626.5	5,693.5	5,625.5	18.6	17.8	-2.18	-65.3	683.9	200.1	173.1	27.02	7.404	
5,800.0	5,726.5	5,793.5	5,725.5	18.8	18.0	-2.18	-65.3	683.9	200.1	172.7	27.39	7.304	
5,900.0	5,826.5	5,893.5	5,825.5	18.9	18.1	-2.18	-65.3	683.9	200.1	172.3	27.76	7.207	
6,000.0	5,926.5	5,993.5	5,925.5	19.0	18.3	-2.18	-65.3	683.9	200.1	171.9	28.13	7.112	
6,100.0	6,026.5	6,093.5	6,025.5	19.2	18.4	-2.18	-65.3	683.9	200.1	171.6	28.51	7.018	
6,200.0	6,126.5	6,193.5	6,125.5	19.3	18.6	-2.18	-65.3	683.9	200.1	171.2	28.88	6.927	
6,300.0	6,226.5	6,293.5	6,225.5	19.5	18.8	-2.18	-65.3	683.9	200.1	170.8	29.26	6.837	
6,400.0	6,326.5	6,393.5	6,325.5	19.6	18.9	-2.18	-65.3	683.9	200.1	170.4	29.64	6.750	
6,433.3	6,359.8	6,426.8	6,358.8	19.7	19.0	-2.18	-65.3	683.9	200.1	170.3	29.77	6.721	
6,450.0	6,376.5	6,443.5	6,375.5	19.7	19.0	87.88	-65.3	683.9	200.1	162.3	37.80	5.293	
6,500.0	6,426.5	6,493.4	6,425.5	19.7	19.1	88.72	-65.3	683.9	200.0	162.0	37.99	5.264	
6,537.7	6,463.9	6,530.8	6,462.9	19.7	19.1	90.00	-65.3	683.9	199.9	161.8	38.16	5.240	
6,550.0	6,476.0	6,543.0	6,475.0	19.7	19.2	90.54	-65.3	683.9	199.9	161.7	38.22	5.231	
6,600.0	6,525.0	6,592.0	6,524.0	19.7	19.2	93.27	-65.3	683.9	200.3	161.8	38.46	5.208	
6,650.0	6,573.3	6,640.3	6,572.3	19.7	19.3	96.80	-65.3	683.9	201.5	162.8	38.64	5.214	
6,700.0	6,620.4	6,690.3	6,622.3	19.6	19.4	100.74	-65.3	682.0	203.8	165.1	38.70	5.268	
6,750.0	6,666.3	6,741.5	6,673.2	19.6	19.4	104.58	-65.3	676.4	207.2	168.6	38.57	5.372	
6,800.0	6,710.7	6,793.8	6,724.6	19.5	19.4	108.27	-65.3	667.0	211.5	173.2	38.27	5.526	
6,850.0	6,753.4	6,847.4	6,776.5	19.4	19.3	111.78	-65.3	653.4	216.6	178.8	37.82	5.728	
6,900.0	6,794.2	6,902.3	6,828.4	19.3	19.3	115.08	-65.3	635.6	222.4	185.2	37.22	5.976	
6,950.0	6,832.9	6,958.6	6,880.0	19.3	19.2	118.16	-65.3	613.2	228.8	192.3	36.51	6.266	
7,000.0	6,869.2	7,016.3	6,931.0	19.2	19.1	121.00	-65.3	586.2	235.5	199.8	35.72	6.592	
7,050.0	6,903.1	7,075.5	6,980.8	19.2	19.1	123.60	-65.3	554.2	242.4	207.5	34.90	6.947	
7,100.0	6,934.3	7,136.2	7,028.9	19.2	19.0	125.96	-65.3	517.4	249.4	215.3	34.08	7.319	
7,150.0	6,962.8	7,198.3	7,074.8	19.3	19.0	128.06	-65.3	475.5	256.3	223.0	33.31	7.694	
7,200.0	6,988.3	7,261.9	7,117.9	19.5	19.0	129.93	-65.3	428.7	262.9	230.3	32.66	8.051	
7,250.0	7,010.7	7,327.0	7,157.5	19.7	19.1	131.56	-65.3	377.1	269.1	236.9	32.15	8.370	
7,300.0	7,029.9	7,393.4	7,192.8	20.0	19.4	132.95	-65.3	320.9	274.7	242.9	31.84	8.628	
7,350.0	7,045.9	7,461.0	7,223.4	20.4	19.8	134.12	-65.3	260.6	279.7	247.9	31.78	8.800	
7,400.0	7,058.6	7,529.7	7,248.4	20.8	20.3	135.05	-65.3	196.7	283.8	251.8	31.99	8.871	
7,450.0	7,067.8	7,599.3	7,267.4	21.4	21.0	135.76	-65.3	129.7	287.0	254.5	32.48	8.836	
7,500.0	7,073.6	7,669.6	7,279.9	22.0	21.8	136.25	-65.3	60.6	289.3	256.0	33.28	8.692	
7,550.0	7,076.0	7,740.3	7,285.6	22.7	22.7	136.51	-65.3	-9.8	290.5	256.2	34.36	8.456	
7,561.7	7,076.0	7,756.9	7,286.0	22.9	23.0	136.54	-65.3	-26.5	290.7	256.0	34.65	8.389	
7,600.0	7,075.8	7,796.4	7,286.1	23.4	23.6	136.58	-65.3	-65.9	290.9	255.4	35.48	8.198	
7,700.0	7,075.3	7,896.3	7,286.4	25.1	25.3	136.68	-65.3	-165.9	291.4	253.6	37.82	7.705	
7,800.0	7,074.8	7,996.3	7,286.6	27.0	27.1	136.78	-65.3	-265.9	292.0	251.6	40.41	7.225	
7,900.0	7,074.4	8,096.3	7,286.9	29.0	29.1	136.88	-65.3	-365.9	292.5	249.3	43.20	6.772	
8,000.0	7,073.9	8,196.3	7,287.2	31.1	31.3	136.98	-65.3	-465.9	293.1	246.9	46.14	6.352	
8,100.0	7,073.4	8,296.3	7,287.4	33.4	33.5	137.08	-65.3	-565.9	293.6	244.4	49.21	5.967	
8,200.0	7,072.9	8,396.3	7,287.7	35.7	35.8	137.18	-65.3	-665.9	294.2	241.8	52.38	5.616	
8,300.0	7,072.4	8,496.3	7,287.9	38.1	38.2	137.28	-65.3	-765.9	294.7	239.1	55.64	5.297	
8,400.0	7,071.9	8,596.3	7,288.2	40.6	40.6	137.38	-65.3	-865.9	295.3	236.3	58.96	5.008	
8,500.0	7,071.5	8,696.3	7,288.5	43.1	43.1	137.48	-65.3	-965.8	295.8	233.5	62.33	4.746	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21P-434 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
8,600.0	7,071.0	8,796.3	7,288.7	45.6	45.6	137.57	-65.3	-1,065.8	296.4	230.6	65.75	4.508	
8,700.0	7,070.5	8,896.3	7,289.0	48.1	48.2	137.67	-65.3	-1,165.8	296.9	227.7	69.20	4.291	
8,800.0	7,070.0	8,996.3	7,289.3	50.7	50.8	137.77	-65.3	-1,265.8	297.5	224.8	72.68	4.093	
8,900.0	7,069.5	9,096.3	7,289.5	53.3	53.4	137.87	-65.3	-1,365.8	298.0	221.9	76.18	3.912	
9,000.0	7,069.0	9,196.3	7,289.8	56.0	56.0	137.96	-65.3	-1,465.8	298.6	218.9	79.70	3.747	
9,100.0	7,068.6	9,296.3	7,290.1	58.6	58.6	138.06	-65.3	-1,565.8	299.2	215.9	83.23	3.594	
9,200.0	7,068.1	9,396.3	7,290.3	61.3	61.3	138.15	-65.3	-1,665.8	299.7	212.9	86.77	3.454	
9,300.0	7,067.6	9,496.3	7,290.6	63.9	64.0	138.25	-65.3	-1,765.8	300.3	210.0	90.32	3.325	
9,400.0	7,067.1	9,596.3	7,290.9	66.6	66.6	138.34	-65.3	-1,865.8	300.8	207.0	93.87	3.205	
9,500.0	7,066.6	9,696.3	7,291.1	69.3	69.3	138.44	-65.3	-1,965.8	301.4	204.0	97.43	3.093	
9,600.0	7,066.1	9,796.3	7,291.4	72.0	72.0	138.53	-65.3	-2,065.8	302.0	201.0	100.99	2.990	
9,700.0	7,065.6	9,896.3	7,291.7	74.7	74.7	138.63	-65.3	-2,165.8	302.5	198.0	104.55	2.894	
9,800.0	7,065.2	9,996.3	7,291.9	77.5	77.4	138.72	-65.3	-2,265.8	303.1	195.0	108.11	2.804	
9,900.0	7,064.7	10,096.3	7,292.2	80.2	80.2	138.81	-65.2	-2,365.8	303.7	192.0	111.67	2.719	
10,000.0	7,064.2	10,196.3	7,292.5	82.9	82.9	138.91	-65.2	-2,465.8	304.2	189.0	115.22	2.640	
10,100.0	7,063.7	10,296.3	7,292.7	85.6	85.6	139.00	-65.2	-2,565.8	304.8	186.0	118.77	2.566	
10,200.0	7,063.2	10,396.3	7,293.0	88.4	88.4	139.09	-65.2	-2,665.8	305.4	183.0	122.31	2.496	
10,300.0	7,062.7	10,496.3	7,293.3	91.1	91.1	139.18	-65.2	-2,765.8	305.9	180.1	125.86	2.431	
10,400.0	7,062.3	10,596.3	7,293.5	93.9	93.8	139.28	-65.2	-2,865.8	306.5	177.1	129.39	2.369	
10,500.0	7,061.8	10,696.3	7,293.8	96.6	96.6	139.37	-65.2	-2,965.8	307.1	174.1	132.92	2.310	
10,600.0	7,061.3	10,796.3	7,294.1	99.4	99.3	139.46	-65.2	-3,065.8	307.6	171.2	136.44	2.255	
10,700.0	7,060.8	10,896.3	7,294.3	102.1	102.1	139.55	-65.2	-3,165.8	308.2	168.3	139.96	2.202	
10,800.0	7,060.3	10,996.3	7,294.6	104.9	104.9	139.64	-65.2	-3,265.8	308.8	165.3	143.47	2.152	
10,900.0	7,059.8	11,096.2	7,294.9	107.6	107.6	139.73	-65.2	-3,365.8	309.4	162.4	146.97	2.105	
11,000.0	7,059.4	11,196.2	7,295.1	110.4	110.4	139.82	-65.2	-3,465.8	309.9	159.5	150.46	2.060	
11,100.0	7,058.9	11,296.2	7,295.4	113.2	113.1	139.91	-65.2	-3,565.8	310.5	156.6	153.95	2.017	
11,200.0	7,058.4	11,396.2	7,295.7	115.9	115.9	140.00	-65.2	-3,665.8	311.1	153.7	157.42	1.976	
11,300.0	7,057.9	11,496.2	7,296.0	118.7	118.7	140.09	-65.2	-3,765.8	311.7	150.8	160.89	1.937	
11,400.0	7,057.4	11,596.2	7,296.2	121.5	121.4	140.17	-65.2	-3,865.7	312.2	147.9	164.35	1.900	
11,500.0	7,056.9	11,696.2	7,296.5	124.3	124.2	140.26	-65.2	-3,965.7	312.8	145.0	167.81	1.864	
11,600.0	7,056.5	11,796.2	7,296.8	127.0	127.0	140.35	-65.2	-4,065.7	313.4	142.2	171.25	1.830	
11,688.2	7,056.0	11,884.4	7,297.0	129.5	129.4	140.43	-65.2	-4,153.9	313.9	139.7	174.28	1.801	SF

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21Q-214 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
0.0	0.0	0.0	0.0	0.0	0.0	-179.47	-30.2	-0.3	30.2				
100.0	100.0	100.0	100.0	0.1	0.1	-179.47	-30.2	-0.3	30.2	30.0	0.19	155.530	
200.0	200.0	200.0	200.0	0.3	0.3	-179.47	-30.2	-0.3	30.2	29.6	0.64	46.958	
300.0	300.0	300.0	300.0	0.5	0.5	-179.47	-30.2	-0.3	30.2	29.1	1.09	27.653	
400.0	400.0	400.0	400.0	0.8	0.8	-179.47	-30.2	-0.3	30.2	28.7	1.54	19.597	CC, ES
500.0	500.0	499.3	499.2	1.0	1.0	178.19	-31.4	1.0	31.4	29.5	1.97	15.954	
600.0	600.0	598.3	598.1	1.2	1.2	172.18	-34.9	4.8	35.2	32.8	2.39	14.732	
700.0	700.0	697.0	696.5	1.4	1.4	55.58	-40.6	11.1	41.2	38.4	2.81	14.655	
800.0	799.8	795.4	794.2	1.6	1.7	52.57	-48.6	19.9	48.3	45.1	3.24	14.926	
900.0	899.5	893.5	891.1	1.9	2.0	51.33	-58.8	31.1	56.3	52.6	3.69	15.246	
1,000.0	998.7	991.4	987.2	2.1	2.3	51.24	-71.2	44.7	65.0	60.8	4.19	15.531	
1,100.0	1,097.5	1,090.8	1,084.5	2.4	2.7	52.50	-85.1	59.9	73.4	68.6	4.74	15.469	
1,200.0	1,195.6	1,190.5	1,182.0	2.7	3.1	55.52	-99.1	75.3	79.7	74.3	5.38	14.818	
1,200.1	1,195.8	1,190.7	1,182.1	2.7	3.1	55.53	-99.1	75.3	79.7	74.3	5.38	14.817	
1,300.0	1,293.4	1,290.2	1,279.5	3.1	3.6	59.18	-113.1	90.6	85.3	79.2	6.10	13.980	
1,400.0	1,391.3	1,389.9	1,377.0	3.5	4.0	62.37	-127.1	105.9	91.3	84.4	6.88	13.269	
1,500.0	1,489.1	1,489.6	1,474.6	4.0	4.5	65.16	-141.0	121.2	97.5	89.8	7.69	12.673	
1,600.0	1,586.9	1,589.3	1,572.1	4.4	4.9	67.62	-155.0	136.5	103.9	95.3	8.53	12.175	
1,700.0	1,684.7	1,689.0	1,669.6	4.8	5.4	69.79	-169.0	151.9	110.4	101.0	9.39	11.758	
1,800.0	1,782.5	1,788.8	1,767.1	5.3	5.8	71.71	-182.9	167.2	117.1	106.9	10.27	11.408	
1,900.0	1,880.3	1,888.5	1,864.7	5.7	6.3	73.43	-196.9	182.5	123.9	112.8	11.15	11.111	
2,000.0	1,978.1	1,988.2	1,962.2	6.1	6.7	74.96	-210.9	197.8	130.9	118.8	12.05	10.859	
2,100.0	2,075.9	2,087.9	2,059.7	6.6	7.2	76.34	-224.9	213.1	137.9	124.9	12.95	10.643	
2,200.0	2,173.8	2,187.6	2,157.2	7.0	7.6	77.58	-238.8	228.5	144.9	131.1	13.86	10.457	
2,300.0	2,271.6	2,287.3	2,254.7	7.5	8.1	78.71	-252.8	243.8	152.1	137.3	14.77	10.295	
2,400.0	2,369.4	2,387.0	2,352.3	8.0	8.6	79.74	-266.8	259.1	159.3	143.6	15.69	10.153	
2,500.0	2,467.2	2,486.7	2,449.8	8.4	9.0	80.68	-280.7	274.4	166.5	149.9	16.60	10.029	
2,600.0	2,565.0	2,586.4	2,547.3	8.9	9.5	81.54	-294.7	289.7	173.8	156.3	17.52	9.919	
2,700.0	2,662.8	2,686.1	2,644.8	9.3	9.9	82.33	-308.7	305.1	181.1	162.6	18.44	9.821	
2,800.0	2,760.6	2,785.8	2,742.4	9.8	10.4	83.06	-322.7	320.4	188.4	169.1	19.36	9.733	
2,900.0	2,858.5	2,885.5	2,839.9	10.2	10.9	83.73	-336.6	335.7	195.8	175.5	20.28	9.655	
3,000.0	2,956.3	2,985.2	2,937.4	10.7	11.3	84.36	-350.6	351.0	203.2	182.0	21.20	9.584	
3,100.0	3,054.1	3,084.9	3,034.9	11.2	11.8	84.94	-364.6	366.3	210.6	188.5	22.12	9.520	
3,200.0	3,151.9	3,184.6	3,132.4	11.6	12.2	85.48	-378.5	381.7	218.1	195.0	23.05	9.462	
3,300.0	3,249.7	3,284.3	3,230.0	12.1	12.7	85.99	-392.5	397.0	225.5	201.6	23.97	9.409	
3,400.0	3,347.5	3,384.0	3,327.5	12.5	13.2	86.46	-406.5	412.3	233.0	208.1	24.89	9.361	
3,500.0	3,445.3	3,483.7	3,425.0	13.0	13.6	86.91	-420.5	427.6	240.5	214.7	25.81	9.316	
3,600.0	3,543.2	3,583.4	3,522.5	13.5	14.1	87.32	-434.4	442.9	248.0	221.2	26.74	9.275	
3,700.0	3,641.0	3,683.1	3,620.1	13.9	14.6	87.72	-448.4	458.3	255.5	227.8	27.66	9.238	
3,800.0	3,738.8	3,782.8	3,717.6	14.4	15.0	88.09	-462.4	473.6	263.0	234.4	28.58	9.203	
3,900.0	3,836.6	3,882.5	3,815.1	14.8	15.5	88.44	-476.3	488.9	270.6	241.1	29.50	9.170	
4,000.0	3,934.4	3,982.2	3,912.6	15.3	16.0	88.77	-490.3	504.2	278.1	247.7	30.43	9.140	
4,100.0	4,032.2	4,081.9	4,010.2	15.8	16.4	89.08	-504.3	519.5	285.7	254.3	31.35	9.112	
4,159.1	4,090.0	4,140.8	4,067.8	16.0	16.7	89.26	-512.5	528.6	290.1	258.2	31.89	9.097	
4,200.0	4,130.1	4,181.6	4,107.7	16.2	16.9	89.38	-518.3	534.9	293.2	261.0	32.24	9.094	
4,300.0	4,228.5	4,281.3	4,205.2	16.5	17.3	89.21	-532.2	550.2	300.8	267.9	32.98	9.122	
4,400.0	4,327.5	4,380.9	4,302.6	16.8	17.8	88.41	-546.2	565.5	308.5	274.9	33.62	9.177	
4,500.0	4,426.9	4,480.2	4,399.7	17.0	18.3	87.04	-560.1	580.7	316.5	282.3	34.16	9.266	
4,600.0	4,526.6	4,579.2	4,496.5	17.2	18.7	85.14	-574.0	595.9	324.9	290.4	34.58	9.397	
4,700.0	4,626.6	4,677.6	4,592.9	17.3	19.2	82.80	-587.8	611.1	334.2	299.3	34.87	9.584	
4,759.3	4,685.8	4,735.7	4,649.7	17.4	19.5	-167.80	-595.9	620.0	340.3	314.6	25.66	13.261	
4,800.0	4,726.5	4,775.6	4,688.6	17.5	19.6	-169.00	-601.5	626.1	344.7	318.6	26.08	13.216	

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 WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21Q-214 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
4,900.0	4,826.5	4,873.4	4,784.3	17.6	20.1	-171.81	-615.2	641.1	356.1	329.0	27.12	13.130	
5,000.0	4,926.5	4,974.7	4,883.5	17.7	20.5	-174.50	-629.2	656.5	368.2	340.0	28.18	13.067	
5,100.0	5,026.5	5,081.9	4,989.1	17.8	20.9	-176.77	-641.7	670.2	379.0	349.9	29.10	13.023	
5,200.0	5,126.5	5,190.3	5,096.5	18.0	21.1	-178.47	-651.7	681.2	387.8	358.0	29.88	12.979	
5,300.0	5,226.5	5,299.8	5,205.4	18.1	21.4	-179.67	-659.0	689.2	394.4	363.9	30.53	12.920	
5,400.0	5,326.5	5,409.9	5,315.3	18.2	21.6	179.61	-663.6	694.2	398.5	367.5	31.03	12.842	
5,500.0	5,426.5	5,520.3	5,425.7	18.3	21.7	179.35	-665.2	696.0	400.1	368.6	31.41	12.736	
5,600.0	5,526.5	5,621.2	5,526.5	18.5	21.8	179.35	-665.2	696.0	400.1	368.3	31.71	12.615	
5,700.0	5,626.5	5,721.2	5,626.5	18.6	21.9	179.35	-665.2	696.0	400.1	368.1	32.01	12.498	
5,800.0	5,726.5	5,821.2	5,726.5	18.8	22.0	179.35	-665.2	696.0	400.1	367.8	32.31	12.381	
5,900.0	5,826.5	5,921.2	5,826.5	18.9	22.1	179.35	-665.2	696.0	400.1	367.4	32.61	12.266	
6,000.0	5,926.5	6,021.2	5,926.5	19.0	22.2	179.35	-665.2	696.0	400.1	367.1	32.92	12.152	
6,100.0	6,026.5	6,121.2	6,026.5	19.2	22.3	179.35	-665.2	696.0	400.1	366.8	33.23	12.039	
6,200.0	6,126.5	6,221.2	6,126.5	19.3	22.5	179.35	-665.2	696.0	400.1	366.5	33.54	11.926	
6,300.0	6,226.5	6,321.2	6,226.5	19.5	22.6	179.35	-665.2	696.0	400.1	366.2	33.86	11.815	
6,400.0	6,326.5	6,421.2	6,326.5	19.6	22.7	179.35	-665.2	696.0	400.1	365.9	34.18	11.705	
6,433.3	6,359.8	6,454.5	6,359.8	19.7	22.7	179.35	-665.2	696.0	400.1	365.8	34.28	11.669	
6,450.0	6,376.5	6,471.3	6,376.7	19.7	22.7	-90.65	-665.2	695.8	400.1	361.6	38.46	10.403	
6,500.0	6,426.5	6,521.6	6,426.9	19.7	22.8	-90.64	-665.2	692.9	400.1	361.5	38.53	10.382	
6,550.0	6,476.0	6,571.9	6,476.8	19.7	22.8	-90.64	-665.2	686.4	400.1	361.5	38.55	10.378	
6,600.0	6,525.0	6,622.3	6,526.1	19.7	22.8	-90.63	-665.2	676.5	400.1	361.5	38.51	10.388	
6,650.0	6,573.3	6,672.6	6,574.5	19.7	22.7	-90.62	-665.2	663.1	400.1	361.6	38.43	10.411	
6,700.0	6,620.4	6,722.9	6,622.0	19.6	22.7	-90.60	-665.2	646.3	400.1	361.8	38.30	10.445	
6,750.0	6,666.3	6,773.2	6,668.1	19.6	22.6	-90.58	-665.2	626.3	400.1	361.9	38.15	10.486	
6,800.0	6,710.7	6,823.4	6,712.7	19.5	22.5	-90.56	-665.2	603.1	400.1	362.1	37.99	10.531	
6,850.0	6,753.4	6,873.7	6,755.5	19.4	22.4	-90.54	-665.2	576.8	400.1	362.2	37.82	10.577	
6,900.0	6,794.2	6,924.0	6,796.4	19.3	22.3	-90.51	-665.2	547.6	400.1	362.4	37.68	10.618	
6,950.0	6,832.9	6,974.2	6,835.1	19.3	22.2	-90.49	-665.2	515.6	400.1	362.5	37.57	10.649	
7,000.0	6,869.2	7,024.4	6,871.5	19.2	22.1	-90.45	-665.2	480.9	400.0	362.5	37.52	10.663	
7,050.0	6,903.1	7,074.7	6,905.3	19.2	22.0	-90.42	-665.2	443.9	400.0	362.5	37.55	10.654	
7,100.0	6,934.3	7,124.9	6,936.5	19.2	21.9	-90.39	-665.2	404.5	400.0	362.4	37.68	10.617	
7,150.0	6,962.8	7,175.0	6,964.8	19.3	21.9	-90.35	-665.2	363.1	400.0	362.1	37.93	10.546	
7,200.0	6,988.3	7,225.2	6,990.2	19.5	21.8	-90.31	-665.2	319.8	400.0	361.7	38.32	10.439	
7,250.0	7,010.7	7,275.3	7,012.4	19.7	21.8	-90.27	-665.2	274.9	400.0	361.2	38.86	10.294	
7,300.0	7,029.9	7,325.4	7,031.4	20.0	21.9	-90.23	-665.2	228.5	400.0	360.5	39.56	10.112	
7,350.0	7,045.9	7,375.5	7,047.2	20.4	21.9	-90.18	-665.2	181.0	400.0	359.6	40.42	9.898	
7,400.0	7,058.6	7,425.6	7,059.5	20.8	22.1	-90.14	-665.2	132.5	400.0	358.6	41.43	9.656	
7,450.0	7,067.8	7,475.7	7,068.5	21.4	22.3	-90.10	-665.2	83.2	400.0	357.4	42.59	9.393	
7,500.0	7,073.6	7,525.7	7,074.0	22.0	22.7	-90.05	-665.2	33.5	400.0	356.2	43.88	9.117	
7,550.0	7,076.0	7,575.7	7,076.0	22.7	23.1	-90.01	-665.2	-16.4	400.0	354.8	45.28	8.836	
7,556.2	7,076.0	7,581.9	7,076.0	22.8	23.2	-90.00	-665.2	-22.6	400.0	354.6	45.45	8.801	
7,561.7	7,076.0	7,587.5	7,076.0	22.9	23.3	-90.00	-665.2	-28.2	400.0	354.4	45.62	8.769	
7,600.0	7,075.8	7,625.7	7,075.8	23.4	23.7	-90.00	-665.2	-66.4	400.0	353.2	46.81	8.546	
7,700.0	7,075.3	7,725.7	7,075.3	25.1	25.2	-90.00	-665.2	-166.4	400.0	349.9	50.17	7.974	
7,800.0	7,074.8	7,825.7	7,074.8	27.0	27.0	-89.99	-665.2	-266.4	400.0	346.1	53.92	7.420	
7,900.0	7,074.4	7,925.7	7,074.3	29.0	29.0	-89.99	-665.2	-366.4	400.0	342.1	57.97	6.901	
8,000.0	7,073.9	8,025.7	7,073.8	31.1	31.1	-89.99	-665.2	-466.4	400.0	337.8	62.26	6.425	
8,100.0	7,073.4	8,125.7	7,073.3	33.4	33.4	-89.99	-665.2	-566.4	400.0	333.3	66.75	5.993	
8,200.0	7,072.9	8,225.7	7,072.8	35.7	35.7	-89.99	-665.2	-666.4	400.0	328.6	71.40	5.603	
8,300.0	7,072.4	8,325.7	7,072.4	38.1	38.1	-89.99	-665.2	-766.4	400.0	323.9	76.18	5.251	
8,400.0	7,071.9	8,425.7	7,071.9	40.6	40.5	-89.99	-665.2	-866.4	400.0	319.0	81.07	4.935	
8,500.0	7,071.5	8,525.7	7,071.4	43.1	43.0	-89.99	-665.2	-966.4	400.0	314.0	86.05	4.649	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21Q-214 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
8,600.0	7,071.0	8,625.7	7,070.9	45.6	45.6	-89.99	-665.2	-1,066.4	400.0	308.9	91.10	4.391	
8,700.0	7,070.5	8,725.7	7,070.4	48.1	48.1	-89.99	-665.2	-1,166.4	400.0	303.8	96.21	4.158	
8,800.0	7,070.0	8,825.7	7,069.9	50.7	50.7	-89.99	-665.2	-1,266.4	400.0	298.7	101.38	3.946	
8,900.0	7,069.5	8,925.7	7,069.4	53.3	53.3	-89.99	-665.2	-1,366.4	400.0	293.4	106.59	3.753	
9,000.0	7,069.0	9,025.7	7,068.9	56.0	56.0	-89.99	-665.2	-1,466.4	400.0	288.2	111.85	3.577	
9,100.0	7,068.6	9,125.7	7,068.5	58.6	58.6	-89.99	-665.2	-1,566.4	400.0	282.9	117.13	3.415	
9,200.0	7,068.1	9,225.7	7,068.0	61.3	61.3	-89.99	-665.2	-1,666.4	400.0	277.6	122.45	3.267	
9,300.0	7,067.6	9,325.7	7,067.5	63.9	63.9	-89.98	-665.2	-1,766.4	400.0	272.2	127.79	3.130	
9,400.0	7,067.1	9,425.7	7,067.0	66.6	66.6	-89.98	-665.2	-1,866.4	400.0	266.9	133.15	3.004	
9,500.0	7,066.6	9,525.7	7,066.5	69.3	69.3	-89.98	-665.2	-1,966.4	400.0	261.5	138.54	2.888	
9,600.0	7,066.1	9,625.7	7,066.0	72.0	72.0	-89.98	-665.2	-2,066.4	400.0	256.1	143.94	2.779	
9,700.0	7,065.6	9,725.7	7,065.5	74.7	74.7	-89.98	-665.2	-2,166.4	400.0	250.7	149.36	2.678	
9,800.0	7,065.2	9,825.7	7,065.1	77.5	77.4	-89.98	-665.2	-2,266.4	400.0	245.2	154.79	2.584	
9,900.0	7,064.7	9,925.7	7,064.6	80.2	80.1	-89.98	-665.2	-2,366.4	400.0	239.8	160.23	2.497	
10,000.0	7,064.2	10,025.7	7,064.1	82.9	82.9	-89.98	-665.2	-2,466.4	400.0	234.3	165.69	2.414	
10,100.0	7,063.7	10,125.7	7,063.6	85.6	85.6	-89.98	-665.2	-2,566.4	400.0	228.9	171.16	2.337	
10,200.0	7,063.2	10,225.7	7,063.1	88.4	88.3	-89.98	-665.2	-2,666.4	400.0	223.4	176.63	2.265	
10,300.0	7,062.7	10,325.7	7,062.6	91.1	91.1	-89.99	-665.2	-2,766.4	400.0	217.9	182.12	2.197	
10,400.0	7,062.3	10,425.7	7,062.2	93.9	93.8	-89.99	-665.2	-2,866.4	400.0	212.4	187.61	2.132	
10,500.0	7,061.8	10,525.7	7,061.7	96.6	96.6	-89.99	-665.2	-2,966.4	400.0	206.9	193.11	2.072	
10,600.0	7,061.3	10,625.7	7,061.2	99.4	99.3	-89.99	-665.2	-3,066.4	400.0	201.4	198.62	2.014	
10,700.0	7,060.8	10,725.7	7,060.7	102.1	102.1	-89.99	-665.2	-3,166.4	400.0	195.9	204.13	1.960	
10,800.0	7,060.3	10,825.7	7,060.2	104.9	104.8	-89.99	-665.2	-3,266.4	400.0	190.4	209.65	1.908	
10,900.0	7,059.8	10,925.7	7,059.8	107.6	107.6	-89.99	-665.2	-3,366.4	400.0	184.9	215.17	1.859	
11,000.0	7,059.4	11,025.7	7,059.3	110.4	110.4	-89.99	-665.2	-3,466.4	400.0	179.3	220.70	1.813	
11,100.0	7,058.9	11,125.7	7,058.8	113.2	113.1	-89.99	-665.2	-3,566.4	400.0	173.8	226.23	1.768	
11,200.0	7,058.4	11,225.7	7,058.3	115.9	115.9	-89.99	-665.2	-3,666.4	400.0	168.3	231.77	1.726	
11,300.0	7,057.9	11,325.7	7,057.8	118.7	118.7	-89.99	-665.2	-3,766.4	400.0	162.7	237.31	1.686	
11,400.0	7,057.4	11,425.7	7,057.4	121.5	121.4	-89.99	-665.2	-3,866.4	400.0	157.2	242.85	1.647	
11,500.0	7,056.9	11,525.7	7,056.9	124.3	124.2	-89.99	-665.2	-3,966.4	400.0	151.6	248.40	1.610	
11,600.0	7,056.5	11,625.7	7,056.4	127.0	127.0	-89.99	-665.2	-4,066.4	400.0	146.1	253.95	1.575	
11,660.2	7,056.2	11,685.9	7,056.1	128.7	128.7	-89.99	-665.2	-4,126.6	400.0	142.7	257.29	1.555	
11,688.2	7,056.0	11,711.5	7,056.0	129.5	129.4	-90.00	-665.2	-4,152.1	400.0	141.2	258.78	1.546	SF

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21Q-304 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
0.0	0.0	0.0	0.0	0.0	0.0	-179.65	-45.2	-0.3	45.2				
100.0	100.0	100.0	100.0	0.1	0.1	-179.65	-45.2	-0.3	45.2	45.0	0.19	232.310	
200.0	200.0	200.0	200.0	0.3	0.3	-179.65	-45.2	-0.3	45.2	44.5	0.64	70.139	
300.0	300.0	300.0	300.0	0.5	0.5	-179.65	-45.2	-0.3	45.2	44.1	1.09	41.305	CC, ES
400.0	400.0	398.8	398.8	0.8	0.7	178.98	-46.5	0.8	46.5	45.0	1.52	30.612	
500.0	500.0	497.3	497.2	1.0	1.0	175.32	-50.3	4.1	50.6	48.6	1.94	26.026	
600.0	600.0	595.4	594.9	1.2	1.2	170.42	-56.8	9.6	57.8	55.4	2.40	24.093	
700.0	700.0	693.0	691.8	1.4	1.4	55.40	-65.7	17.2	67.4	64.5	2.82	23.858	
800.0	799.8	790.1	787.8	1.6	1.8	53.33	-77.0	26.8	78.2	74.9	3.26	23.980	
900.0	899.5	886.9	882.8	1.9	2.1	52.60	-90.8	38.5	90.0	86.3	3.73	24.150	
1,000.0	998.7	985.8	979.5	2.1	2.5	53.07	-106.4	51.9	101.7	97.4	4.24	23.998	
1,100.0	1,097.5	1,085.2	1,076.8	2.4	3.0	54.87	-122.2	65.3	111.3	106.5	4.80	23.193	
1,200.0	1,195.6	1,184.7	1,174.1	2.7	3.4	57.79	-137.9	78.7	119.2	113.8	5.44	21.898	
1,200.1	1,195.8	1,184.9	1,174.3	2.7	3.4	57.79	-138.0	78.7	119.2	113.8	5.45	21.896	
1,300.0	1,293.4	1,284.2	1,271.4	3.1	3.8	61.14	-153.7	92.1	126.6	120.4	6.17	20.509	
1,400.0	1,391.3	1,383.7	1,368.7	3.5	4.3	64.11	-169.4	105.5	134.3	127.3	6.94	19.343	
1,500.0	1,489.1	1,483.2	1,466.0	4.0	4.7	66.76	-185.2	118.9	142.3	134.6	7.75	18.366	
1,600.0	1,586.9	1,582.6	1,563.3	4.4	5.2	69.12	-200.9	132.3	150.6	142.1	8.58	17.551	
1,700.0	1,684.7	1,682.1	1,660.6	4.8	5.6	71.23	-216.7	145.7	159.2	149.7	9.44	16.868	
1,800.0	1,782.5	1,781.6	1,757.9	5.3	6.1	73.13	-232.4	159.1	167.9	157.6	10.31	16.294	
1,900.0	1,880.3	1,881.0	1,855.2	5.7	6.6	74.83	-248.2	172.5	176.8	165.6	11.19	15.807	
2,000.0	1,978.1	1,980.5	1,952.5	6.1	7.0	76.38	-264.0	185.9	185.9	173.8	12.07	15.392	
2,100.0	2,075.9	2,080.0	2,049.8	6.6	7.5	77.77	-279.7	199.3	195.0	182.0	12.97	15.036	
2,200.0	2,173.8	2,179.5	2,147.1	7.0	7.9	79.05	-295.5	212.7	204.3	190.4	13.87	14.728	
2,300.0	2,271.6	2,278.9	2,244.4	7.5	8.4	80.21	-311.2	226.1	213.6	198.9	14.78	14.460	
2,400.0	2,369.4	2,378.4	2,341.7	8.0	8.9	81.27	-327.0	239.5	223.1	207.4	15.68	14.225	
2,500.0	2,467.2	2,477.9	2,439.0	8.4	9.3	82.25	-342.7	252.9	232.6	216.0	16.59	14.018	
2,600.0	2,565.0	2,577.3	2,536.3	8.9	9.8	83.15	-358.5	266.3	242.2	224.7	17.50	13.835	
2,700.0	2,662.8	2,676.8	2,633.6	9.3	10.2	83.98	-374.2	279.7	251.8	233.4	18.42	13.672	
2,800.0	2,760.6	2,776.3	2,730.9	9.8	10.7	84.75	-390.0	293.1	261.5	242.1	19.33	13.527	
2,900.0	2,858.5	2,875.8	2,828.2	10.2	11.2	85.47	-405.7	306.6	271.2	250.9	20.24	13.396	
3,000.0	2,956.3	2,975.2	2,925.5	10.7	11.6	86.13	-421.5	320.0	280.9	259.8	21.16	13.278	
3,100.0	3,054.1	3,074.7	3,022.8	11.2	12.1	86.75	-437.2	333.4	290.7	268.7	22.07	13.171	
3,200.0	3,151.9	3,174.2	3,120.1	11.6	12.5	87.33	-453.0	346.8	300.6	277.6	22.99	13.074	
3,300.0	3,249.7	3,273.6	3,217.4	12.1	13.0	87.88	-468.7	360.2	310.4	286.5	23.90	12.986	
3,400.0	3,347.5	3,373.1	3,314.7	12.5	13.5	88.39	-484.5	373.6	320.3	295.5	24.82	12.905	
3,500.0	3,445.3	3,472.6	3,412.0	13.0	13.9	88.87	-500.2	387.0	330.2	304.4	25.73	12.831	
3,600.0	3,543.2	3,572.1	3,509.3	13.5	14.4	89.32	-516.0	400.4	340.1	313.5	26.65	12.762	
3,700.0	3,641.0	3,671.5	3,606.6	13.9	14.9	89.75	-531.7	413.8	350.0	322.5	27.56	12.699	
3,800.0	3,738.8	3,771.0	3,703.9	14.4	15.3	90.15	-547.5	427.2	360.0	331.5	28.48	12.641	
3,900.0	3,836.6	3,870.5	3,801.2	14.8	15.8	90.53	-563.2	440.6	370.0	340.6	29.39	12.587	
4,000.0	3,934.4	3,969.9	3,898.5	15.3	16.2	90.89	-579.0	454.0	380.0	349.7	30.31	12.537	
4,100.0	4,032.2	4,069.4	3,995.8	15.8	16.7	91.23	-594.7	467.4	390.0	358.8	31.22	12.490	
4,159.1	4,090.0	4,128.2	4,053.3	16.0	17.0	91.43	-604.1	475.3	395.9	364.1	31.76	12.464	
4,200.0	4,130.1	4,168.9	4,093.1	16.2	17.2	91.60	-610.5	480.8	400.0	367.9	32.12	12.455	
4,300.0	4,228.5	4,268.4	4,190.4	16.5	17.6	91.66	-626.3	494.2	409.9	377.1	32.86	12.477	
4,400.0	4,327.5	4,367.8	4,287.6	16.8	18.1	91.26	-642.0	507.6	419.8	386.3	33.52	12.525	
4,500.0	4,426.9	4,467.0	4,384.7	17.0	18.6	90.41	-657.7	521.0	429.7	395.6	34.09	12.605	
4,600.0	4,526.6	4,565.9	4,481.4	17.2	19.0	89.17	-673.4	534.3	439.7	405.2	34.57	12.721	
4,700.0	4,626.6	4,664.3	4,577.7	17.3	19.5	87.57	-689.0	547.6	450.2	415.3	34.95	12.882	
4,759.3	4,685.8	4,722.4	4,634.5	17.4	19.7	-162.55	-698.2	555.4	456.7	430.8	25.89	17.641	
4,800.0	4,726.5	4,762.2	4,673.4	17.5	19.9	-163.43	-704.5	560.8	461.4	435.1	26.24	17.583	

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 WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21Q-304 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
4,900.0	4,826.5	4,860.1	4,769.1	17.6	20.4	-165.51	-720.0	574.0	473.2	446.1	27.11	17.457	
5,000.0	4,926.5	4,957.9	4,864.8	17.7	20.8	-167.49	-735.4	587.1	485.6	457.6	27.99	17.351	
5,100.0	5,026.5	5,055.7	4,960.5	17.8	21.3	-169.37	-750.9	600.3	498.6	469.7	28.88	17.265	
5,200.0	5,126.5	5,153.5	5,056.1	18.0	21.8	-171.16	-766.4	613.5	512.1	482.3	29.78	17.199	
5,300.0	5,226.5	5,251.3	5,151.8	18.1	22.2	-172.85	-781.9	626.7	526.1	495.4	30.67	17.152	
5,400.0	5,326.5	5,349.1	5,247.5	18.2	22.7	-174.46	-797.4	639.9	540.5	508.9	31.57	17.123	
5,500.0	5,426.5	5,446.9	5,343.2	18.3	23.1	-175.98	-812.9	653.1	555.3	522.9	32.46	17.109	
5,600.0	5,526.5	5,556.5	5,450.6	18.5	23.5	-177.52	-829.4	667.1	569.8	536.5	33.32	17.101	
5,700.0	5,626.5	5,672.6	5,565.1	18.6	23.8	-178.78	-843.6	679.2	581.8	547.7	34.07	17.078	
5,800.0	5,726.5	5,790.0	5,681.7	18.8	24.1	-179.69	-854.4	688.3	590.9	556.2	34.70	17.028	
5,900.0	5,826.5	5,908.4	5,799.8	18.9	24.3	179.72	-861.5	694.4	596.9	561.7	35.22	16.949	
6,000.0	5,926.5	6,027.4	5,918.6	19.0	24.5	179.44	-864.9	697.3	599.8	564.2	35.63	16.837	
6,100.0	6,026.5	6,135.3	6,026.5	19.2	24.6	179.42	-865.3	697.6	600.1	564.2	35.94	16.696	
6,200.0	6,126.5	6,235.3	6,126.5	19.3	24.7	179.42	-865.3	697.6	600.1	563.9	36.23	16.562	
6,300.0	6,226.5	6,335.3	6,226.5	19.5	24.8	179.42	-865.3	697.6	600.1	563.6	36.53	16.429	
6,400.0	6,326.5	6,435.3	6,326.5	19.6	24.9	179.42	-865.3	697.6	600.1	563.3	36.82	16.297	
6,433.3	6,359.8	6,468.6	6,359.8	19.7	24.9	179.42	-865.3	697.6	600.1	563.2	36.92	16.253	
6,450.0	6,376.5	6,485.3	6,376.5	19.7	25.0	-90.60	-865.3	697.6	600.1	561.2	38.86	15.442	
6,500.0	6,426.5	6,535.2	6,426.5	19.7	25.0	-90.88	-865.3	697.6	600.1	561.2	38.91	15.425	
6,550.0	6,476.0	6,585.1	6,476.3	19.7	25.1	-91.46	-865.3	697.5	600.3	561.4	38.85	15.452	
6,600.0	6,525.0	6,636.0	6,527.1	19.7	25.1	-92.14	-865.3	694.7	600.5	561.8	38.72	15.509	
6,650.0	6,573.3	6,687.3	6,578.0	19.7	25.1	-92.81	-865.3	688.3	600.8	562.3	38.54	15.589	
6,700.0	6,620.4	6,739.3	6,628.9	19.6	25.1	-93.47	-865.3	678.1	601.2	562.9	38.32	15.688	
6,750.0	6,666.3	6,791.7	6,679.5	19.6	25.0	-94.11	-865.3	664.1	601.6	563.6	38.07	15.803	
6,800.0	6,710.7	6,844.8	6,729.4	19.5	25.0	-94.73	-865.3	646.2	602.2	564.4	37.80	15.929	
6,850.0	6,753.4	6,898.3	6,778.3	19.4	24.9	-95.34	-865.3	624.4	602.7	565.2	37.53	16.060	
6,900.0	6,794.2	6,952.5	6,826.0	19.3	24.8	-95.92	-865.3	598.7	603.3	566.1	37.27	16.187	
6,950.0	6,832.9	7,007.1	6,872.0	19.3	24.7	-96.47	-865.3	569.2	604.0	566.9	37.05	16.302	
7,000.0	6,869.2	7,062.3	6,916.0	19.2	24.6	-96.99	-865.3	536.0	604.6	567.7	36.88	16.393	
7,050.0	6,903.1	7,118.0	6,957.7	19.2	24.5	-97.47	-865.3	499.1	605.3	568.5	36.80	16.448	
7,100.0	6,934.3	7,174.2	6,996.8	19.2	24.3	-97.91	-865.3	458.7	605.9	569.1	36.82	16.455	
7,150.0	6,962.8	7,230.8	7,032.8	19.3	24.2	-98.32	-865.3	415.1	606.5	569.5	36.98	16.402	
7,200.0	6,988.3	7,287.8	7,065.5	19.5	24.1	-98.67	-865.3	368.4	607.0	569.8	37.29	16.281	
7,250.0	7,010.7	7,345.2	7,094.5	19.7	24.0	-98.98	-865.3	318.9	607.5	569.8	37.77	16.086	
7,300.0	7,029.9	7,402.9	7,119.6	20.0	23.9	-99.24	-865.3	267.0	608.0	569.5	38.44	15.817	
7,350.0	7,045.9	7,460.8	7,140.5	20.4	23.8	-99.45	-865.3	213.0	608.3	569.0	39.31	15.476	
7,400.0	7,058.6	7,519.0	7,157.1	20.8	23.8	-99.61	-865.3	157.2	608.6	568.2	40.36	15.078	
7,450.0	7,067.8	7,577.3	7,169.1	21.4	23.8	-99.71	-865.3	100.2	608.8	567.2	41.60	14.635	
7,500.0	7,073.6	7,635.7	7,176.4	22.0	23.9	-99.75	-865.3	42.3	608.9	565.9	42.99	14.164	
7,550.0	7,076.0	7,694.1	7,179.0	22.7	24.1	-99.74	-865.3	-16.1	608.8	564.3	44.51	13.679	
7,560.9	7,076.0	7,705.7	7,179.0	22.8	24.1	-99.74	-865.3	-27.7	608.8	564.0	44.85	13.575	
7,561.7	7,076.0	7,706.6	7,179.0	22.9	24.1	-99.74	-865.3	-28.6	608.8	564.0	44.88	13.567	
7,600.0	7,075.8	7,744.8	7,178.8	23.4	24.4	-99.74	-865.3	-66.8	608.8	562.8	46.03	13.226	
7,700.0	7,075.3	7,844.8	7,178.5	25.1	25.5	-99.75	-865.3	-166.8	608.9	559.6	49.31	12.347	
7,800.0	7,074.8	7,944.8	7,178.1	27.0	27.2	-99.76	-865.3	-266.8	608.9	555.9	52.98	11.494	
7,900.0	7,074.4	8,044.8	7,177.7	29.0	29.2	-99.77	-865.3	-366.8	608.9	552.0	56.94	10.693	
8,000.0	7,073.9	8,144.8	7,177.4	31.1	31.3	-99.79	-865.3	-466.8	608.9	547.8	61.16	9.957	
8,100.0	7,073.4	8,244.8	7,177.0	33.4	33.5	-99.80	-865.3	-566.8	608.9	543.4	65.57	9.287	
8,200.0	7,072.9	8,344.8	7,176.6	35.7	35.8	-99.81	-865.3	-666.8	609.0	538.8	70.14	8.682	
8,300.0	7,072.4	8,444.8	7,176.3	38.1	38.2	-99.82	-865.3	-766.8	609.0	534.1	74.84	8.137	
8,400.0	7,071.9	8,544.8	7,175.9	40.6	40.7	-99.83	-865.3	-866.8	609.0	529.4	79.65	7.646	
8,500.0	7,071.5	8,644.8	7,175.5	43.1	43.2	-99.84	-865.3	-966.8	609.0	524.5	84.55	7.203	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21Q-304 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
8,600.0	7,071.0	8,744.8	7,175.2	45.6	45.7	-99.85	-865.3	-1,066.8	609.0	519.5	89.52	6.803	
8,700.0	7,070.5	8,844.8	7,174.8	48.1	48.2	-99.86	-865.3	-1,166.8	609.1	514.5	94.56	6.441	
8,800.0	7,070.0	8,944.8	7,174.5	50.7	50.8	-99.87	-865.3	-1,266.8	609.1	509.4	99.65	6.112	
8,900.0	7,069.5	9,044.8	7,174.1	53.3	53.4	-99.89	-865.3	-1,366.8	609.1	504.3	104.78	5.813	
9,000.0	7,069.0	9,144.8	7,173.7	56.0	56.0	-99.90	-865.3	-1,466.8	609.1	499.2	109.96	5.540	
9,100.0	7,068.6	9,244.8	7,173.4	58.6	58.7	-99.91	-865.3	-1,566.8	609.1	494.0	115.16	5.289	
9,200.0	7,068.1	9,344.8	7,173.0	61.3	61.3	-99.92	-865.3	-1,666.8	609.2	488.8	120.40	5.060	
9,300.0	7,067.6	9,444.8	7,172.6	63.9	64.0	-99.93	-865.3	-1,766.8	609.2	483.5	125.66	4.848	
9,400.0	7,067.1	9,544.8	7,172.3	66.6	66.7	-99.94	-865.3	-1,866.8	609.2	478.3	130.95	4.652	
9,500.0	7,066.6	9,644.8	7,171.9	69.3	69.4	-99.95	-865.3	-1,966.8	609.2	473.0	136.25	4.471	
9,600.0	7,066.1	9,744.8	7,171.5	72.0	72.1	-99.96	-865.3	-2,066.8	609.2	467.7	141.57	4.303	
9,700.0	7,065.6	9,844.8	7,171.2	74.7	74.8	-99.97	-865.3	-2,166.8	609.3	462.4	146.91	4.147	
9,800.0	7,065.2	9,944.8	7,170.8	77.5	77.5	-99.99	-865.3	-2,266.8	609.3	457.0	152.26	4.002	
9,900.0	7,064.7	10,044.8	7,170.5	80.2	80.2	-100.00	-865.3	-2,366.8	609.3	451.7	157.62	3.866	
10,000.0	7,064.2	10,144.8	7,170.1	82.9	82.9	-100.01	-865.3	-2,466.8	609.3	446.3	163.00	3.738	
10,100.0	7,063.7	10,244.8	7,169.7	85.6	85.6	-100.02	-865.3	-2,566.8	609.3	441.0	168.38	3.619	
10,200.0	7,063.2	10,344.8	7,169.4	88.4	88.4	-100.03	-865.3	-2,666.8	609.4	435.6	173.77	3.507	
10,300.0	7,062.7	10,444.8	7,169.0	91.1	91.1	-100.04	-865.3	-2,766.8	609.4	430.2	179.17	3.401	
10,400.0	7,062.3	10,544.8	7,168.6	93.9	93.9	-100.05	-865.2	-2,866.8	609.4	424.8	184.58	3.302	
10,500.0	7,061.8	10,644.8	7,168.3	96.6	96.6	-100.06	-865.2	-2,966.8	609.4	419.4	190.00	3.208	
10,600.0	7,061.3	10,744.8	7,167.9	99.4	99.4	-100.08	-865.2	-3,066.8	609.4	414.0	195.42	3.119	
10,700.0	7,060.8	10,844.8	7,167.6	102.1	102.1	-100.09	-865.2	-3,166.8	609.5	408.6	200.85	3.034	
10,800.0	7,060.3	10,944.8	7,167.2	104.9	104.9	-100.10	-865.2	-3,266.8	609.5	403.2	206.28	2.955	
10,900.0	7,059.8	11,044.8	7,166.8	107.6	107.6	-100.11	-865.2	-3,366.8	609.5	397.8	211.72	2.879	
11,000.0	7,059.4	11,144.8	7,166.5	110.4	110.4	-100.12	-865.2	-3,466.8	609.5	392.4	217.16	2.807	
11,100.0	7,058.9	11,244.8	7,166.1	113.2	113.1	-100.13	-865.2	-3,566.8	609.5	386.9	222.61	2.738	
11,200.0	7,058.4	11,344.8	7,165.7	115.9	115.9	-100.14	-865.2	-3,666.8	609.6	381.5	228.05	2.673	
11,300.0	7,057.9	11,444.8	7,165.4	118.7	118.7	-100.16	-865.2	-3,766.8	609.6	376.1	233.51	2.611	
11,400.0	7,057.4	11,544.8	7,165.0	121.5	121.4	-100.17	-865.2	-3,866.8	609.6	370.6	238.96	2.551	
11,500.0	7,056.9	11,644.8	7,164.7	124.3	124.2	-100.18	-865.2	-3,966.8	609.6	365.2	244.42	2.494	
11,600.0	7,056.5	11,744.8	7,164.3	127.0	127.0	-100.19	-865.2	-4,066.8	609.6	359.8	249.88	2.440	
11,652.1	7,056.2	11,796.9	7,164.1	128.5	128.4	-100.20	-865.2	-4,118.9	609.7	356.9	252.73	2.412	
11,688.2	7,056.0	11,828.8	7,164.0	129.5	129.3	-100.20	-865.2	-4,150.8	609.7	355.1	254.58	2.395	SF

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21Q-314 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-14.9	0.0	14.9				
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-14.9	0.0	14.9	14.7	0.19	76.825	
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-14.9	0.0	14.9	14.3	0.64	23.195	
300.0	300.0	300.0	300.0	0.5	0.5	180.00	-14.9	0.0	14.9	13.8	1.09	13.660	
400.0	400.0	400.0	400.0	0.8	0.8	180.00	-14.9	0.0	14.9	13.4	1.54	9.680	
500.0	500.0	500.0	500.0	1.0	1.0	180.00	-14.9	0.0	14.9	12.9	1.99	7.496	CC
600.0	600.0	599.7	599.7	1.2	1.2	174.77	-15.9	1.5	16.0	13.5	2.42	6.588	
700.0	700.0	699.2	699.0	1.4	1.4	55.95	-18.7	5.8	18.6	15.8	2.83	6.575	
800.0	799.8	798.6	798.1	1.6	1.6	51.51	-23.4	13.0	22.0	18.7	3.24	6.790	
900.0	899.5	897.9	896.6	1.9	1.9	49.47	-30.0	23.1	25.9	22.3	3.68	7.056	
1,000.0	998.7	997.0	994.5	2.1	2.2	49.00	-38.4	36.1	30.4	26.2	4.15	7.315	
1,100.0	1,097.5	1,096.0	1,091.7	2.4	2.5	49.51	-48.6	51.8	35.3	30.6	4.69	7.534	
1,200.0	1,195.6	1,195.8	1,189.4	2.7	2.9	52.11	-59.9	69.2	39.5	34.2	5.31	7.442	
1,200.1	1,195.8	1,196.0	1,189.5	2.7	2.9	52.12	-59.9	69.2	39.5	34.2	5.31	7.442	
1,300.0	1,293.4	1,295.7	1,287.1	3.1	3.3	56.17	-71.2	86.6	42.7	36.7	6.03	7.093	
1,400.0	1,391.3	1,395.6	1,384.8	3.5	3.8	59.63	-82.5	104.0	46.2	39.4	6.80	6.791	
1,500.0	1,489.1	1,495.6	1,482.5	4.0	4.2	62.61	-93.9	121.4	49.8	42.1	7.61	6.536	
1,600.0	1,586.9	1,595.5	1,580.3	4.4	4.6	65.18	-105.2	138.8	53.4	45.0	8.45	6.321	
1,700.0	1,684.7	1,695.4	1,678.0	4.8	5.1	67.42	-116.5	156.3	57.2	47.9	9.32	6.142	
1,800.0	1,782.5	1,795.3	1,775.7	5.3	5.5	69.38	-127.8	173.7	61.1	50.9	10.20	5.990	
1,900.0	1,880.3	1,895.2	1,873.4	5.7	6.0	71.10	-139.1	191.1	65.0	53.9	11.09	5.863	
2,000.0	1,978.1	1,995.1	1,971.2	6.1	6.4	72.62	-150.4	208.5	69.0	57.0	11.99	5.754	
2,100.0	2,075.9	2,095.0	2,068.9	6.6	6.9	73.98	-161.7	225.9	73.0	60.1	12.90	5.661	
2,200.0	2,173.8	2,194.9	2,166.6	7.0	7.3	75.20	-173.1	243.3	77.1	63.3	13.81	5.581	
2,300.0	2,271.6	2,294.8	2,264.3	7.5	7.8	76.29	-184.4	260.7	81.2	66.4	14.73	5.512	
2,400.0	2,369.4	2,394.7	2,362.0	8.0	8.3	77.28	-195.7	278.1	85.3	69.6	15.64	5.451	
2,500.0	2,467.2	2,494.6	2,459.8	8.4	8.7	78.18	-207.0	295.6	89.4	72.9	16.57	5.398	
2,600.0	2,565.0	2,594.5	2,557.5	8.9	9.2	78.99	-218.3	313.0	93.6	76.1	17.49	5.351	
2,700.0	2,662.8	2,694.4	2,655.2	9.3	9.6	79.74	-229.6	330.4	97.8	79.3	18.41	5.309	
2,800.0	2,760.6	2,794.3	2,752.9	9.8	10.1	80.43	-241.0	347.8	101.9	82.6	19.34	5.272	
2,900.0	2,858.5	2,894.2	2,850.7	10.2	10.6	81.06	-252.3	365.2	106.2	85.9	20.26	5.239	
3,000.0	2,956.3	2,994.1	2,948.4	10.7	11.0	81.65	-263.6	382.6	110.4	89.2	21.19	5.209	
3,100.0	3,054.1	3,094.0	3,046.1	11.2	11.5	82.19	-274.9	400.0	114.6	92.5	22.12	5.182	
3,200.0	3,151.9	3,193.9	3,143.8	11.6	11.9	82.69	-286.2	417.4	118.8	95.8	23.04	5.157	
3,300.0	3,249.7	3,293.8	3,241.5	12.1	12.4	83.16	-297.5	434.9	123.1	99.1	23.97	5.135	
3,400.0	3,347.5	3,393.7	3,339.3	12.5	12.9	83.59	-308.9	452.3	127.3	102.4	24.90	5.114	
3,500.0	3,445.3	3,493.7	3,437.0	13.0	13.3	84.00	-320.2	469.7	131.6	105.8	25.83	5.095	
3,600.0	3,543.2	3,593.6	3,534.7	13.5	13.8	84.38	-331.5	487.1	135.9	109.1	26.76	5.078	
3,700.0	3,641.0	3,693.5	3,632.4	13.9	14.3	84.74	-342.8	504.5	140.1	112.4	27.68	5.062	
3,800.0	3,738.8	3,793.4	3,730.2	14.4	14.7	85.08	-354.1	521.9	144.4	115.8	28.61	5.047	
3,900.0	3,836.6	3,893.3	3,827.9	14.8	15.2	85.40	-365.4	539.3	148.7	119.2	29.54	5.033	
4,000.0	3,934.4	3,993.2	3,925.6	15.3	15.6	85.70	-376.7	556.7	153.0	122.5	30.47	5.021	
4,100.0	4,032.2	4,093.1	4,023.3	15.8	16.1	85.99	-388.1	574.2	157.3	125.9	31.40	5.009	
4,159.1	4,090.0	4,152.1	4,081.1	16.0	16.4	86.15	-394.8	584.4	159.8	127.9	31.95	5.002	
4,200.0	4,130.1	4,193.0	4,121.1	16.2	16.6	86.19	-399.4	591.6	161.6	129.3	32.29	5.003	
4,300.0	4,228.5	4,292.9	4,218.7	16.5	17.0	85.44	-410.7	609.0	166.1	133.1	33.00	5.033	
4,400.0	4,327.5	4,392.6	4,316.3	16.8	17.5	83.59	-422.0	626.3	171.0	137.4	33.57	5.094	
4,500.0	4,426.9	4,492.4	4,414.0	17.0	18.0	80.75	-433.3	643.7	176.6	142.7	33.96	5.201	
4,600.0	4,526.6	4,594.2	4,514.0	17.2	18.3	77.66	-443.5	659.4	182.4	148.3	34.11	5.348	
4,700.0	4,626.6	4,696.5	4,615.2	17.3	18.6	74.69	-451.8	672.2	188.1	153.9	34.14	5.509	
4,759.3	4,685.8	4,757.3	4,675.5	17.4	18.7	-176.04	-455.8	678.3	191.3	165.7	25.63	7.465	
4,800.0	4,726.5	4,799.2	4,717.2	17.5	18.8	-177.16	-458.1	681.9	193.4	167.4	26.00	7.438	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21Q-314 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 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
4,900.0	4,826.5	4,902.6	4,820.3	17.6	19.0	-179.17	-462.5	688.6	197.4	170.6	26.75	7.379	
5,000.0	4,926.5	5,006.4	4,924.0	17.7	19.1	179.79	-464.8	692.2	199.6	172.3	27.29	7.315	
5,100.0	5,026.5	5,109.0	5,026.5	17.8	19.3	179.60	-465.2	692.9	200.0	172.4	27.65	7.236	
5,200.0	5,126.5	5,209.0	5,126.5	18.0	19.4	179.60	-465.2	692.9	200.0	172.1	27.95	7.156	
5,300.0	5,226.5	5,309.0	5,226.5	18.1	19.5	179.60	-465.2	692.9	200.0	171.8	28.26	7.078	
5,400.0	5,326.5	5,409.0	5,326.5	18.2	19.6	179.60	-465.2	692.9	200.0	171.5	28.58	7.000	
5,500.0	5,426.5	5,509.0	5,426.5	18.3	19.7	179.60	-465.2	692.9	200.0	171.1	28.89	6.924	
5,600.0	5,526.5	5,609.0	5,526.5	18.5	19.8	179.60	-465.2	692.9	200.0	170.8	29.21	6.848	
5,700.0	5,626.5	5,709.0	5,626.5	18.6	20.0	179.60	-465.2	692.9	200.0	170.5	29.54	6.773	
5,800.0	5,726.5	5,809.0	5,726.5	18.8	20.1	179.60	-465.2	692.9	200.0	170.2	29.86	6.699	
5,900.0	5,826.5	5,909.0	5,826.5	18.9	20.2	179.60	-465.2	692.9	200.0	169.8	30.19	6.625	
6,000.0	5,926.5	6,009.0	5,926.5	19.0	20.3	179.60	-465.2	692.9	200.0	169.5	30.53	6.553	
6,100.0	6,026.5	6,109.0	6,026.5	19.2	20.5	179.60	-465.2	692.9	200.0	169.2	30.86	6.482	
6,200.0	6,126.5	6,209.0	6,126.5	19.3	20.6	179.60	-465.2	692.9	200.0	168.8	31.20	6.411	
6,300.0	6,226.5	6,309.0	6,226.5	19.5	20.7	179.60	-465.2	692.9	200.0	168.5	31.54	6.342	
6,400.0	6,326.5	6,409.0	6,326.5	19.6	20.9	179.60	-465.2	692.9	200.0	168.2	31.89	6.274	
6,433.3	6,359.8	6,442.2	6,359.8	19.7	20.9	179.60	-465.2	692.9	200.0	168.0	32.00	6.251	
6,450.0	6,376.5	6,459.0	6,376.5	19.7	20.9	-90.46	-465.2	692.9	200.0	161.8	38.20	5.237	
6,500.0	6,426.5	6,508.9	6,426.5	19.7	21.0	-91.29	-465.2	692.9	200.1	161.9	38.18	5.240	
6,550.0	6,476.0	6,558.7	6,476.2	19.7	21.1	-93.05	-465.2	692.8	200.3	162.3	37.98	5.275	
6,600.0	6,525.0	6,609.2	6,526.6	19.7	21.1	-95.07	-465.2	690.0	200.8	163.2	37.67	5.332	
6,650.0	6,573.3	6,660.2	6,577.3	19.7	21.1	-97.07	-465.2	683.7	201.6	164.3	37.30	5.405	
6,700.0	6,620.4	6,711.7	6,627.8	19.6	21.1	-99.03	-465.2	673.6	202.6	165.7	36.89	5.492	
6,750.0	6,666.3	6,763.9	6,678.0	19.6	21.0	-100.93	-465.2	659.8	203.8	167.4	36.44	5.593	
6,800.0	6,710.7	6,816.5	6,727.6	19.5	21.0	-102.77	-465.2	642.1	205.2	169.2	35.97	5.705	
6,850.0	6,753.4	6,869.7	6,776.3	19.4	20.9	-104.53	-465.2	620.6	206.8	171.3	35.50	5.825	
6,900.0	6,794.2	6,923.5	6,823.7	19.3	20.8	-106.20	-465.2	595.3	208.4	173.4	35.04	5.949	
6,950.0	6,832.9	6,977.8	6,869.5	19.3	20.7	-107.78	-465.2	566.2	210.2	175.6	34.61	6.073	
7,000.0	6,869.2	7,032.6	6,913.5	19.2	20.6	-109.25	-465.2	533.3	212.0	177.8	34.25	6.190	
7,050.0	6,903.1	7,088.0	6,955.1	19.2	20.5	-110.61	-465.2	496.9	213.9	179.9	33.97	6.295	
7,100.0	6,934.3	7,143.8	6,994.1	19.2	20.5	-111.85	-465.2	457.0	215.7	181.9	33.81	6.379	
7,150.0	6,962.8	7,200.2	7,030.2	19.3	20.4	-112.97	-465.2	413.7	217.4	183.6	33.78	6.436	
7,200.0	6,988.3	7,256.9	7,063.0	19.5	20.4	-113.97	-465.2	367.5	219.0	185.1	33.92	6.456	
7,250.0	7,010.7	7,314.0	7,092.2	19.7	20.5	-114.84	-465.2	318.4	220.5	186.3	34.26	6.437	
7,300.0	7,029.9	7,371.5	7,117.6	20.0	20.6	-115.57	-465.2	266.8	221.8	187.0	34.79	6.377	
7,350.0	7,045.9	7,429.3	7,138.9	20.4	20.8	-116.18	-465.2	213.1	222.9	187.4	35.52	6.276	
7,400.0	7,058.6	7,487.3	7,155.8	20.8	21.2	-116.65	-465.2	157.7	223.8	187.4	36.46	6.138	
7,450.0	7,067.8	7,545.5	7,168.2	21.4	21.6	-116.98	-465.2	100.8	224.5	186.9	37.60	5.970	
7,500.0	7,073.6	7,603.8	7,175.9	22.0	22.2	-117.18	-465.2	43.0	224.9	186.0	38.92	5.778	
7,550.0	7,076.0	7,662.2	7,179.0	22.7	22.9	-117.25	-465.2	-15.3	225.0	184.6	40.40	5.569	
7,560.8	7,076.0	7,674.6	7,179.0	22.8	23.1	-117.24	-465.2	-27.6	225.0	184.3	40.74	5.523	
7,561.7	7,076.0	7,675.5	7,179.0	22.9	23.1	-117.24	-465.2	-28.6	225.0	184.2	40.76	5.519	
7,600.0	7,075.8	7,713.8	7,178.8	23.4	23.6	-117.25	-465.2	-66.8	225.0	183.2	41.82	5.381	
7,700.0	7,075.3	7,813.8	7,178.5	25.1	25.2	-117.28	-465.2	-166.8	225.1	180.3	44.81	5.022	
7,800.0	7,074.8	7,913.8	7,178.1	27.0	27.1	-117.30	-465.2	-266.8	225.1	177.0	48.16	4.675	
7,900.0	7,074.4	8,013.8	7,177.7	29.0	29.1	-117.33	-465.2	-366.8	225.2	173.4	51.77	4.349	
8,000.0	7,073.9	8,113.8	7,177.4	31.1	31.2	-117.36	-465.2	-466.8	225.2	169.6	55.61	4.050	
8,100.0	7,073.4	8,213.8	7,177.0	33.4	33.5	-117.38	-465.2	-566.8	225.3	165.7	59.62	3.778	
8,200.0	7,072.9	8,313.8	7,176.6	35.7	35.8	-117.41	-465.2	-666.8	225.3	161.6	63.78	3.533	
8,300.0	7,072.4	8,413.8	7,176.3	38.1	38.2	-117.44	-465.2	-766.8	225.4	157.3	68.05	3.312	
8,400.0	7,071.9	8,513.8	7,175.9	40.6	40.6	-117.46	-465.2	-866.8	225.4	153.0	72.41	3.113	
8,500.0	7,071.5	8,613.8	7,175.5	43.1	43.1	-117.49	-465.2	-966.8	225.5	148.6	76.86	2.934	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Offset Design SE SW SEC. 21 T4N R67W 6th P.M. - WALTERS 21Q-314 - ORIGINAL WELLBORE - PROPOSAL #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

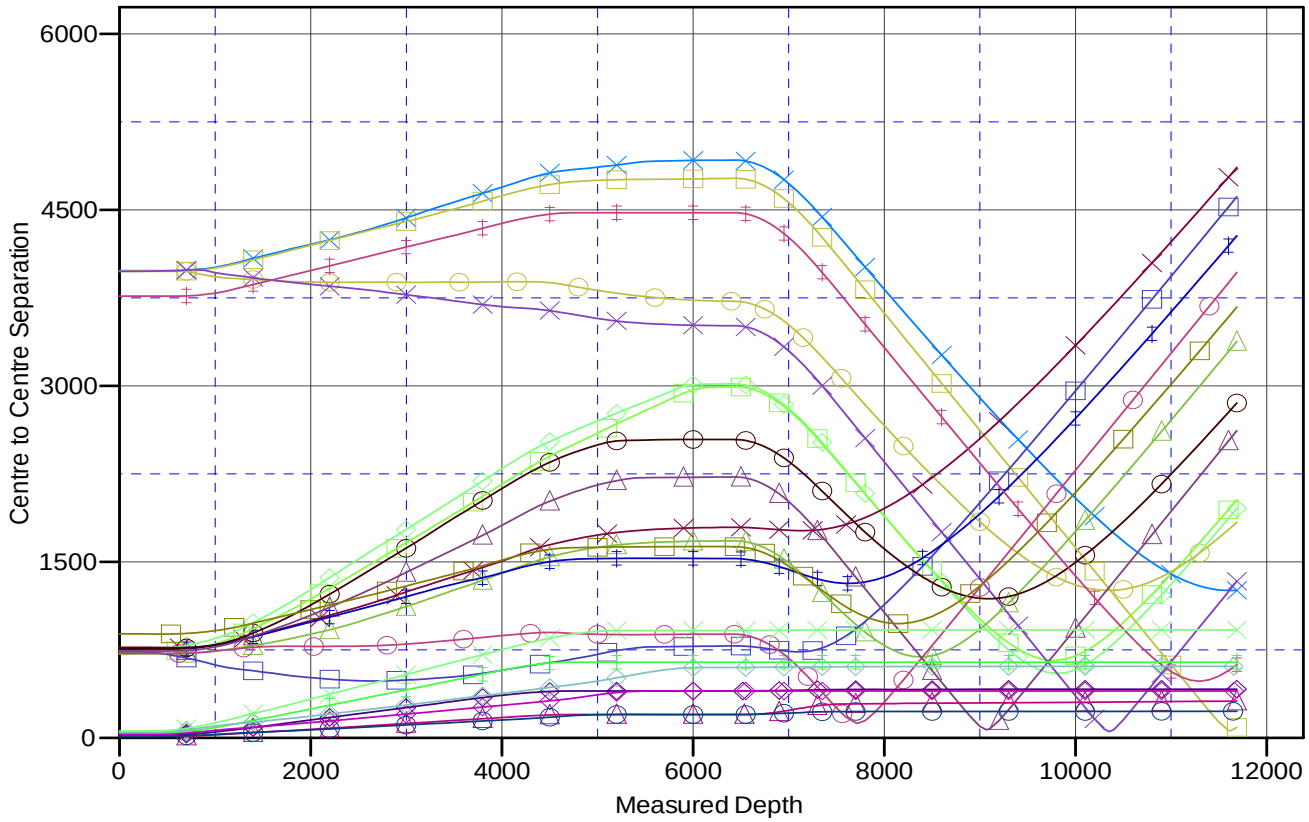
Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,600.0	7,071.0	8,713.8	7,175.2	45.6	45.6	-117.52	-465.2	-1,066.8	225.6	144.2	81.36	2.772	
8,700.0	7,070.5	8,813.8	7,174.8	48.1	48.2	-117.54	-465.2	-1,166.8	225.6	139.7	85.93	2.626	
8,800.0	7,070.0	8,913.8	7,174.4	50.7	50.8	-117.57	-465.2	-1,266.8	225.7	135.1	90.54	2.492	
8,900.0	7,069.5	9,013.8	7,174.1	53.3	53.4	-117.60	-465.2	-1,366.8	225.7	130.5	95.18	2.371	
9,000.0	7,069.0	9,113.8	7,173.7	56.0	56.0	-117.62	-465.2	-1,466.8	225.8	125.9	99.86	2.261	
9,100.0	7,068.6	9,213.8	7,173.4	58.6	58.7	-117.65	-465.2	-1,566.8	225.8	121.3	104.57	2.159	
9,200.0	7,068.1	9,313.8	7,173.0	61.3	61.3	-117.68	-465.2	-1,666.8	225.9	116.6	109.31	2.066	
9,300.0	7,067.6	9,413.8	7,172.6	63.9	64.0	-117.70	-465.2	-1,766.8	225.9	111.9	114.06	1.981	
9,400.0	7,067.1	9,513.8	7,172.3	66.6	66.7	-117.73	-465.2	-1,866.8	226.0	107.2	118.83	1.902	
9,500.0	7,066.6	9,613.8	7,171.9	69.3	69.4	-117.76	-465.2	-1,966.8	226.0	102.4	123.62	1.829	
9,600.0	7,066.1	9,713.8	7,171.5	72.0	72.1	-117.78	-465.2	-2,066.8	226.1	97.7	128.42	1.761	
9,700.0	7,065.6	9,813.8	7,171.2	74.7	74.8	-117.81	-465.2	-2,166.8	226.2	92.9	133.23	1.697	
9,800.0	7,065.2	9,913.8	7,170.8	77.5	77.5	-117.84	-465.2	-2,266.8	226.2	88.2	138.06	1.639	
9,900.0	7,064.7	10,013.7	7,170.4	80.2	80.2	-117.87	-465.2	-2,366.8	226.3	83.4	142.89	1.584	
10,000.0	7,064.2	10,113.7	7,170.1	82.9	82.9	-117.89	-465.2	-2,466.8	226.3	78.6	147.73	1.532	
10,100.0	7,063.7	10,213.7	7,169.7	85.6	85.7	-117.92	-465.2	-2,566.8	226.4	73.8	152.58	1.484	Level 3
10,200.0	7,063.2	10,313.7	7,169.4	88.4	88.4	-117.95	-465.2	-2,666.8	226.4	69.0	157.43	1.438	Level 3
10,300.0	7,062.7	10,413.7	7,169.0	91.1	91.2	-117.98	-465.2	-2,766.8	226.5	64.2	162.29	1.396	Level 3
10,400.0	7,062.3	10,513.7	7,168.6	93.9	93.9	-118.00	-465.2	-2,866.8	226.6	59.4	167.16	1.355	Level 3
10,500.0	7,061.8	10,613.7	7,168.3	96.6	96.6	-118.03	-465.2	-2,966.8	226.6	54.6	172.02	1.317	Level 3
10,600.0	7,061.3	10,713.7	7,167.9	99.4	99.4	-118.06	-465.2	-3,066.8	226.7	49.8	176.89	1.281	Level 3
10,700.0	7,060.8	10,813.7	7,167.5	102.1	102.2	-118.09	-465.2	-3,166.8	226.7	45.0	181.77	1.247	Level 2
10,800.0	7,060.3	10,913.7	7,167.2	104.9	104.9	-118.11	-465.2	-3,266.8	226.8	40.1	186.65	1.215	Level 2
10,900.0	7,059.8	11,013.7	7,166.8	107.6	107.7	-118.14	-465.2	-3,366.8	226.8	35.3	191.52	1.184	Level 2
11,000.0	7,059.4	11,113.7	7,166.5	110.4	110.4	-118.17	-465.2	-3,466.8	226.9	30.5	196.41	1.155	Level 2
11,100.0	7,058.9	11,213.7	7,166.1	113.2	113.2	-118.20	-465.2	-3,566.8	227.0	25.7	201.29	1.128	Level 2
11,200.0	7,058.4	11,313.7	7,165.7	115.9	116.0	-118.22	-465.2	-3,666.8	227.0	20.8	206.17	1.101	Level 2
11,300.0	7,057.9	11,413.7	7,165.4	118.7	118.7	-118.25	-465.2	-3,766.8	227.1	16.0	211.06	1.076	Level 2
11,400.0	7,057.4	11,513.7	7,165.0	121.5	121.5	-118.28	-465.2	-3,866.8	227.1	11.2	215.94	1.052	Level 2
11,500.0	7,056.9	11,613.7	7,164.7	124.3	124.3	-118.31	-465.2	-3,966.8	227.2	6.4	220.83	1.029	Level 2
11,600.0	7,056.5	11,713.7	7,164.3	127.0	127.1	-118.33	-465.2	-4,066.8	227.3	1.5	225.71	1.007	Level 2
11,649.5	7,056.2	11,763.3	7,164.1	128.4	128.4	-118.35	-465.2	-4,116.3	227.3	-0.9	228.13	0.996	Level 1
11,688.2	7,056.0	11,800.2	7,164.0	129.5	129.5	-118.37	-465.2	-4,153.2	227.3	-2.7	229.96	0.988	Level 1, ES, SF

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB-EST @ 4952.5usft (Original Well E
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: WALTERS 21P-234
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.39°

Ladder Plot



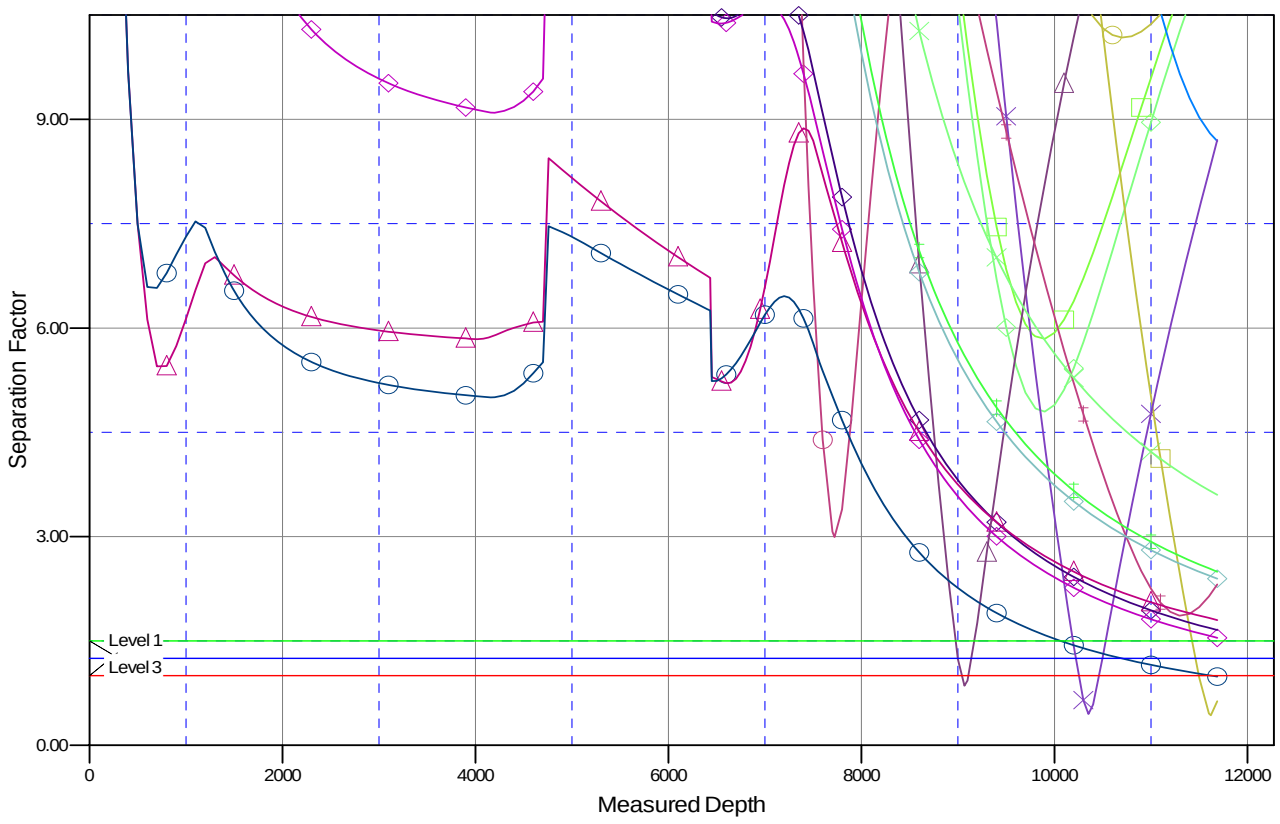
L E G E N D

)XD, Wellbore #1, Wellbore #1 V0
)YD, Wellbore #1, Wellbore #1 V0
3-20D, Wellbore #1, Wellbore #1 V0
1-20D, Wellbore #1, Wellbore #1 V0
3-20D, Wellbore #1, Wellbore #1 V0
1-20D, Wellbore #1, Wellbore #1 V0
¥21ODU, Wellbore #1, Wellbore #1 V0
21LDU, Wellbore #1, Wellbore #1 V0
EXIST DD WALTERS 21QDU, Wellbore #1, Wellbore #1 V0
EXIST DD WALTERS 23-21DU, Wellbore #1, Wellbore #1 V0
EXIST DD WALTERS 24-21DU, Wellbore #1, Wellbore #1 V0
EXIST DD WEDCO #13-21DU, Wellbore #1, Wellbore #1 V0
EXIST DD WEDCO 14-21DU, Wellbore #1, Wellbore #1 V0
EXIST VERT BUNYAN #1, Wellbore #1, Wellbore #1 V0
EXIST VERT EVANS-STROH 20-1, Wellbore #1, Design #1 V0
WALTERS 21P-204, ORIGINAL WELLBORE, PROPOSAL #1 V0
WALTERS 21P-304, ORIGINAL WEI
WALTERS 21P-314, ORIGINAL WEI
WALTERS 21P-434, ORIGINAL WEI
WALTERS 21Q-214, ORIGINAL WE
WALTERS 21Q-304, ORIGINAL WE
WALTERS 21Q-314, ORIGINAL WE

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-234
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4952.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-234	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB-EST @ 4952.5usft (Original Well E
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: WALTERS 21P-234
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.39°



LEGEND

)XD, Wellbore #1, Wellbore #1 V0
)YD, Wellbore #1, Wellbore #1 V0
3-20D, Wellbore #1, Wellbore #1 V0
1-20D, Wellbore #1, Wellbore #1 V0
3-20D, Wellbore #1, Wellbore #1 V0
1-20D, Wellbore #1, Wellbore #1 V0
#21ODU, Wellbore #1, Wellbore #1 V0
21LDU, Wellbore #1, Wellbore #1 V0
EXIST DD WALTERS 21QDU, Wellbore #1, Wellbore #1 V0
EXIST DD WALTERS 23-21DU, Wellbore #1, Wellbore #1 V0
EXIST DD WALTERS 24-21DU, Wellbore #1, Wellbore #1 V0
EXIST DD WEDCO #13-21DU, Wellbore #1, Wellbore #1 V0
EXIST DD WEDCO 14-21DU, Wellbore #1, Wellbore #1 V0
EXIST VERT BUNYAN #1, Wellbore #1, Wellbore #1 V0
EXIST VERT EVANS-STROH 20-1, Wellbore #1, Design #1 V0
WALTERS 21P-204, ORIGINAL WELLBORE, PROPOSAL #1 V0
WALTERS 21P-304, ORIGINAL WEI
WALTERS 21P-314, ORIGINAL WEI
WALTERS 21P-434, ORIGINAL WEI
WALTERS 21Q-214, ORIGINAL WE
WALTERS 21Q-304, ORIGINAL WE
WALTERS 21Q-314, ORIGINAL WE