PDC ENERGY

WELD COUNTY, COLORADO
SE SW SEC. 21 T4N R67W 6th P.M.
WALTERS 21P-434

ORIGINAL WELLBORE
PROPOSAL #1

Anticollision Report

26 March, 2016

total

Anticollision Report

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	11,886.1	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	10,007.8	7,586.1	347.3	233.6	3.054	CC, ES, SF
EXIST DD RYLAND 20YD - Wellbore #1 - Wellbore #1	193.4	195.9	718.3	717.8	1,420.646	CC
EXIST DD RYLAND 20YD - Wellbore #1 - Wellbore #1	200.0	201.8	718.3	717.8	1,347.952	ES
EXIST DD RYLAND 20YD - Wellbore #1 - Wellbore #1	10,100.0	7,720.5	871.6	756.0	7.544	SF
EXIST DD RYLAND 33-20D - Wellbore #1 - Wellbore #1	11,808.4	7,368.5	1,056.9	913.8	7.384	CC, ES
EXIST DD RYLAND 33-20D - Wellbore #1 - Wellbore #1	11,886.1	7,367.3	1,059.8	914.5	7.294	SF
EXIST DD RYLAND 34-20D - Wellbore #1 - Wellbore #1	11,822.7	7,285.2	264.6	121.9	1.855	CC, ES, SF
EXIST DD RYLAND 43-20D - Wellbore #1 - Wellbore #1	10,546.7	7,476.7	1,054.5	935.5	8.864	CC
EXIST DD RYLAND 43-20D - Wellbore #1 - Wellbore #1	10,600.0	7,476.8	1,055.8	935.4	8.768	ES
EXIST DD RYLAND 43-20D - Wellbore #1 - Wellbore #1	10,800.0	7,477.4	1,084.4	958.5	8.612	SF
EXIST DD RYLAND 44-20D - Wellbore #1 - Wellbore #1	10,550.3	7,426.3	252.8	134.0	2.127	CC, ES, SF
EXIST DD WALTERS #21ODU - Wellbore #1 - Wellbore	734.0	743.6	759.0	756.6	325.479	CC, ES
EXIST DD WALTERS #21ODU - Wellbore #1 - Wellbore	9,600.0	7,483.2	2,737.4	2,647.7	30.506	SF
EXIST DD WALTERS 21LDU - Wellbore #1 - Wellbore #	0.0	0.0	707.1			
EXIST DD WALTERS 21LDU - Wellbore #1 - Wellbore #	200.0	199.5	707.6	707.0	1,330.991	ES
EXIST DD WALTERS 21LDU - Wellbore #1 - Wellbore #	8,900.0	7,501.4	946.4	880.5	14.369	SF
EXIST DD WALTERS 21QDU - Wellbore #1 - Wellbore #	2,304.1	2,485.2	491.2	474.6	29.602	CC, ES
EXIST DD WALTERS 21QDU - Wellbore #1 - Wellbore #	3,700.0	3,833.6	646.6	612.3	18.851	SF
EXIST DD WALTERS 23-21DU - Wellbore #1 - Wellbore	0.0	0.0	747.2			
EXIST DD WALTERS 23-21DU - Wellbore #1 - Wellbore	300.0	299.7	747.7	746.9	871.233	ES
EXIST DD WALTERS 23-21DU - Wellbore #1 - Wellbore	8,600.0	7,369.4	1,366.4	1,308.5	23.588	SF
EXIST DD WALTERS 24-21DU - Wellbore #1 - Wellbore	7,920.4	7,397.3	325.3	282.6	7.619	CC, ES
EXIST DD WALTERS 24-21DU - Wellbore #1 - Wellbore	8,000.0	7,397.8	334.9	290.8	7.581	SF
EXIST DD WEDCO #13-21DU - Wellbore #1 - Wellbore	0.0	2.5	754.7			
EXIST DD WEDCO #13-21DU - Wellbore #1 - Wellbore	700.0	700.6	755.6	753.4	347.531	ES
EXIST DD WEDCO #13-21DU - Wellbore #1 - Wellbore	9,600.0	7,465.7	1,031.0	940.3	11.374	SF
EXIST DD WEDCO 14-21DU - Wellbore #1 - Wellbore #	9,265.9	7,475.3	270.2	189.1	3.331	CC, ES
EXIST DD WEDCO 14-21DU - Wellbore #1 - Wellbore #	9,300.0	7,475.3	272.4	190.4	3.321	SF
EXIST VERT BUNYAN #1 - Wellbore #1 - Wellbore #1	8,344.5	7,200.0	778.3	741.7	21.262	CC, ES
EXIST VERT BUNYAN #1 - Wellbore #1 - Wellbore #1	8,800.0	7,200.0	901.8	854.2	18.916	SF
EXIST VERT EVANS-STROH 20-1 - Wellbore #1 - Desig	11,489.4	7,272.4	284.1	19.9	1.075	Level 2, CC
EXIST VERT EVANS-STROH 20-1 - Wellbore #1 - Desig	11,500.0	7,272.5	284.3	19.8	1.075	Level 2, ES, SF
WALTERS 21P-204 - ORIGINAL WELLBORE - PROPOS	400.0	400.0	29.9	28.3	19.361	CC, ES
WALTERS 21P-204 - ORIGINAL WELLBORE - PROPOS	11,886.1	11,683.0	506.2	275.7	2.196	SF
WALTERS 21P-234 - ORIGINAL WELLBORE - PROPOS	566.3	567.3	14.9	12.6	6.514	CC
WALTERS 21P-234 - ORIGINAL WELLBORE - PROPOS	600.0	601.0	14.9	12.5	6.111	ES
WALTERS 21P-234 - ORIGINAL WELLBORE - PROPOS	11,886.1	11,688.0	314.0	139.7	1.801	SF

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-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	500.0	500.0	14.9	12.9	7.497	CC
WALTERS 21P-304 - ORIGINAL WELLBORE - PROPOS	600.0	599.9	15.3	12.9	6.306	ES
WALTERS 21P-304 - ORIGINAL WELLBORE - PROPOS	11,886.1	11,781.6	240.5	20.7	1.094	Level 2, SF
WALTERS 21P-314 - ORIGINAL WELLBORE - PROPOS	300.0	299.0	44.8	43.7	41.066	CC, ES
WALTERS 21P-314 - ORIGINAL WELLBORE - PROPOS	11,886.1	11,797.1	727.6	473.2	2.860	SF
WALTERS 21Q-214 - ORIGINAL WELLBORE - PROPO	366.3	367.3	45.2	43.8	32.409	CC
WALTERS 21Q-214 - ORIGINAL WELLBORE - PROPO	400.0	401.0	45.2	43.6	29.239	ES
WALTERS 21Q-214 - ORIGINAL WELLBORE - PROPO	11,886.1	11,711.5	647.0	405.1	2.675	SF
WALTERS 21Q-304 - ORIGINAL WELLBORE - PROPO	266.3	267.3	60.1	59.2	63.643	CC
WALTERS 21Q-304 - ORIGINAL WELLBORE - PROPO	300.0	301.0	60.1	59.0	54.864	ES
WALTERS 21Q-304 - ORIGINAL WELLBORE - PROPO	11,886.1	11,828.8	811.2	555.5	3.173	SF
WALTERS 21Q-314 - ORIGINAL WELLBORE - PROPO	466.3	467.3	29.9	28.0	16.205	CC
WALTERS 21Q-314 - ORIGINAL WELLBORE - PROPO	500.0	501.0	29.9	27.9	14.977	ES
WALTERS 21Q-314 - ORIGINAL WELLBORE - PROPO	11,886.1	11,800.2	421.9	175.1	1.710	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	2.5	2.5	0.0	0.0	-50.03	475.1	-566.8	739.6				
100.0	100.0	101.8	101.8	0.1	0.1	-50.10	474.4	-567.4	739.6	739.4	0.18	4,081.147	
200.0	200.0	194.4	194.3	0.3	0.2	-50.28	472.9	-569.1	740.0	739.5	0.53	1,385.710	
300.0	300.0	276.0	275.9	0.5	0.4	-50.47	472.1	-572.1	742.2	741.3	0.94	791.965	
400.0	400.0	354.2	354.0	0.8	0.6	-50.66	472.8	-576.7	747.3	746.0	1.34	557.455	
500.0	500.0	436.3	435.7	1.0	0.8	-50.83	475.0	-583.0	755.0	753.2	1.77	426.545	
600.0	600.0	518.0	517.0	1.2	1.0	-51.04	478.0	-591.3	765.1	762.9	2.22	344.603	
700.0	700.0	611.0	609.2	1.4	1.3	-51.45	480.7	-603.3	777.0	774.2	2.73	284.889	
800.0	800.0	709.5	706.6	1.7	1.6	-148.69	481.5	-617.9	790.7	787.5	3.14	251.440	
900.0	899.8	814.0	809.9	1.9	2.0	-149.44	481.2	-633.7	807.0	803.4	3.62	222.898	
1,000.0	999.5	916.0	910.6	2.1	2.3	-150.37	478.5	-649.1	825.2	821.1	4.11	200.858	
1,100.0	1,098.7	984.0	977.6	2.3	2.6	-151.04	476.2	-661.2	848.4	843.8	4.53	187.367	
1,200.0	1,197.5	1,068.0	1,059.7	2.6	2.9	-152.06	472.9	-678.5	877.0	871.9	5.04	174.030	
1,300.0	1,295.6	1,136.5	1,126.3	3.0	3.3	-152.89	470.0	-694.4	910.9	905.4	5.52	165.070	
1,400.0	1,393.4	1,200.7	1,188.3	3.3	3.6	-153.97	468.0	-710.7	949.2	943.2	6.00	158.201	
1,500.0	1,491.3	1,263.0	1,248.0	3.7	3.9	-155.01	466.3	-728.4	990.6	984.2	6.49	152.750	
1,600.0	1,589.1	1,331.1	1,312.8	4.1	4.3	-156.13	464.5	-749.4	1,034.6	1,027.6	7.00	147.697	
1,700.0	1,686.9	1,407.5	1,385.0	4.6	4.8	-157.34	462.4	-774.2	1,080.2	1,072.7	7.55	143.004	
1,800.0	1,784.7	1,480.2	1,453.4	5.0	5.3	-158.50	459.3	-798.7	1,127.0	1,118.9	8.09	139.324	
1,900.0	1,882.5	1,543.0	1,512.0	5.4	5.8	-159.46	456.6	-821.0	1,175.7	1,167.1	8.59	136.841	
2,000.0	1,980.3	1,599.6	1,564.4	5.9	6.2	-160.31	454.3	-842.3	1,226.5	1,217.5	9.09	134.979	
2,100.0	2,078.1	1,662.5	1,622.1	6.3	6.7	-161.22	451.8	-867.2	1,279.5	1,269.9	9.60	133.292	
2,200.0	2,176.0	1,746.4	1,698.8	6.7	7.4	-162.38	448.1	-900.9	1,333.4	1,323.2	10.18	131.025	
2,300.0	2,273.8	1,849.6	1,793.5	7.2	8.2	-163.72	442.6	-941.7	1,386.7	1,375.9	10.77	128.736	
2,400.0	2,371.6	1,963.8	1,899.0	7.6	9.0	-165.02	436.9	-985.0	1,439.2	1,427.8	11.37	126.573	
2,500.0	2,469.4	2,049.9	1,979.1	8.1	9.6	-165.96	431.2	-1,016.2	1,490.0	1,478.1	11.89	125.282	
2,600.0	2,567.2	2,109.0	2,033.9	8.5	10.0	-166.53	428.3	-1,038.2	1,542.4	1,530.0	12.34	124.942	
2,700.0	2,665.0	2,261.1	2,175.8	9.0	11.0	-167.78	423.2	-1,092.4	1,594.3	1,581.2	13.03	122.351	
2,800.0	2,762.8	2,341.0	2,251.3	9.4	11.6	-168.37	420.0	-1,118.7	1,643.6	1,630.1	13.51	121.650	

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-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
2,900.0	2,860.7	2,403.5	2,309.9	9.9	12.0	-168.79	418.4	-1,140.0	1,694.3	1,680.3	13.95	121.411	
3,000.0	2,958.5	2,475.0	2,376.9	10.3	12.5	-169.26	416.4	-1,165.1	1,746.0	1,731.5	14.43	120.972	
3,100.0	3,056.3	2,563.6	2,459.6	10.8	13.1	-169.86	412.7	-1,196.7	1,798.0	1,783.0	14.97	120.136	
3,200.0	3,154.1	2,641.7	2,532.4	11.3	13.7	-170.38	408.9	-1,224.7	1,850.1	1,834.6	15.46	119.668	
3,300.0	3,251.9	2,719.6	2,605.0	11.7	14.3	-170.85	405.8	-1,252.6	1,902.6	1,886.7	15.95	119.318	
3,400.0	3,349.7	2,840.9	2,718.5	12.2	15.1	-171.47	402.6	-1,295.3	1,955.0	1,938.5	16.54	118.230	
3,500.0	3,447.5	2,941.0	2,812.8	12.6	15.7	-171.96	399.4	-1,328.8	2,005.6	1,988.6	17.06	117.553	
3,600.0	3,545.4	2,994.2	2,862.8	13.1	16.1	-172.21	397.7	-1,346.8	2,056.8	2,039.4	17.48	117.701	
3,700.0	3,643.2	3,043.8	2,909.2	13.5	16.5	-172.42	396.8	-1,364.4	2,109.7	2,091.8	17.88	117.980	
3,800.0	3,741.0	3,113.0	2,973.7	14.0	17.0	-172.69	395.9	-1,389.5	2,163.5	2,145.1	18.35	117.928	
3,900.0	3,838.8	3,244.8	3,096.7	14.5	17.9	-173.26	391.7	-1,436.5	2,216.2	2,197.2	18.98	116.778	
4,000.0	3,936.6	3,292.9	3,141.6	14.9	18.3	-173.46	389.8	-1,453.8	2,269.2	2,249.8	19.38	117.080	
4,009.8	3,946.2	3,313.0	3,160.2	15.0	18.4	-173.55	389.1	-1,461.2	2,274.6	2,255.1	19.46	116.855	
4,100.0	4,034.7	3,406.4	3,247.2	15.3	19.1	-174.04	385.4	-1,495.1	2,321.7	2,301.7	20.05	115.785	
4,200.0	4,133.4	3,519.9	3,353.3	15.6	19.9	-174.58	380.1	-1,535.0	2,369.9	2,349.2	20.69	114.562	
4,300.0	4,232.6	3,666.1	3,491.0	15.8	20.9	-175.15	373.1	-1,583.6	2,413.3	2,391.9	21.40	112.776	
4,400.0	4,332.2	3,779.0	3,597.8	16.1	21.6	-175.59	366.3	-1,619.7	2,452.2	2,430.2	22.00	111.461	
4,500.0	4,432.1	3,868.6	3,682.6	16.2	22.2	-175.92	361.1	-1,648.0	2,487.5	2,465.0	22.51	110.493	
4,600.0	4,532.0	3,910.9	3,722.5	16.4	22.5	-176.09	358.4	-1,661.8	2,520.7	2,497.8	22.87	110.215	
4,609.8	4,541.8	3,914.9	3,726.2	16.4	22.5	-79.42	358.1	-1,663.1	2,523.9	2,485.8	38.09	66.259	
4,700.0	4,632.0	3,965.0	3,773.0	16.5	22.8	-79.57	354.9	-1,680.8	2,554.0	2,515.5	38.55	66.255	
4,800.0	4,732.0	4,029.3	3,832.8	16.6	23.3	-79.78	350.5	-1,704.2	2,588.7	2,549.6	39.15	66.116	
4,900.0	4,832.0	4,096.5	3,895.1	16.7	23.8	-79.99	345.5	-1,728.8	2,623.9	2,584.1	39.79	65.939	
5,000.0	4,932.0	4,151.0	3,945.4	16.9	24.3	-80.16	341.7	-1,749.5	2,660.4	2,620.1	40.34	65.945	
5,100.0	5,032.0	4,386.4	4,166.0	17.0	25.9	-80.70	331.5	-1,830.7	2,692.0	2,649.9	42.11	63.935	
5,200.0	5,132.0	4,431.0	4,208.0	17.1	26.2	-80.77	330.7	-1,845.7	2,725.1	2,682.5	42.54	64.061	
5,300.0	5,232.0	4,505.1	4,277.4	17.3	26.7	-80.91	328.5	-1,871.5	2,759.2	2,716.0	43.21	63.856	
5,400.0	5,332.0	4,643.3	4,406.8	17.4	27.7	-81.20	322.9	-1,919.8	2,793.3	2,749.0	44.32	63.020	
5,500.0	5,432.0	4,762.5	4,518.9	17.6	28.5	-81.41	319.3	-1,960.1	2,826.4	2,781.1	45.27	62.439	
5,600.0	5,532.0	4,843.8	4,595.6	17.7	29.0	-81.55	316.5	-1,986.8	2,858.6	2,812.7	45.96	62.200	
5,700.0	5,632.0	4,896.6	4,645.2	17.9	29.4	-81.64	314.9	-2,004.9	2,892.2	2,845.7	46.46	62.244	
5,800.0	5,732.0	4,989.0	4,731.8	18.0	30.0	-81.79	312.3	-2,037.0	2,926.2	2,879.0	47.26	61.915	
5,900.0	5,832.0	5,618.9	5,335.3	18.2	33.6	-82.68	291.9	-2,211.2	2,961.3	2,910.4	50.94	58.137	
6,000.0	5,932.0	5,975.5	5,688.5	18.3	34.6	-83.07	277.5	-2,257.1	2,972.9	2,920.8	52.10	57.060	
6,100.0	6,032.0	6,303.4	6,015.9	18.5	35.1	-83.18	273.4	-2,273.1	2,978.1	2,925.3	52.75	56.452	
6,200.0	6,132.0	6,403.7	6,116.2	18.6	35.2	-83.19	273.2	-2,273.7	2,978.7	2,925.7	53.00	56.207	
6,300.0	6,232.0	6,504.4	6,216.9	18.8	35.2	-83.19	272.9	-2,274.4	2,979.3	2,926.1	53.24	55.962	
6,400.0	6,332.0	6,605.9	6,318.4	18.9	35.3	-83.20	272.6	-2,275.0	2,979.9	2,926.4	53.48	55.715	
6,500.0	6,432.0	6,708.8	6,421.2	19.1	35.4	-83.21	272.2	-2,275.6	2,980.4	2,926.7	53.73	55.466	
6,600.0	6,532.0	6,813.5	6,526.0	19.2	35.5	-83.22	271.7	-2,276.0	2,980.8	2,926.8	53.99	55.215	
6,637.8	6,569.8	6,853.0	6,565.5	19.3	35.5	-83.22	271.6	-2,276.1	2,980.9	2,926.8	54.08	55.119	
6,650.0	6,582.0	6,865.1	6,577.6	19.3	35.6	6.78	271.5	-2,276.2	2,980.8	2,946.8	34.04	87.576	
6,700.0	6,632.0	6,914.2	6,626.7	19.4	35.6	6.80	271.3	-2,276.3	2,978.3	2,944.0	34.29	86.846	
6,750.0	6,681.6	6,963.0	6,675.5	19.4	35.6	6.87	271.1	-2,276.5	2,972.4	2,938.0	34.42	86.354	
6,800.0	6,730.6	7,011.2	6,723.7	19.4	35.7	6.98	270.9	-2,276.6	2,963.1	2,928.7	34.42	86.093	
6,850.0	6,778.9	7,059.3	6,771.8	19.3	35.7	7.13	270.7	-2,276.8	2,950.5	2,916.2	34.29	86.052	
6,900.0	6,826.2	7,107.1	6,819.6	19.3	35.8	7.34	270.5	-2,277.0	2,934.5	2,900.4	34.03	86.225	
6,950.0	6,872.2	7,153.6	6,866.1	19.2	35.8	7.60	270.3	-2,277.2	2,915.2	2,881.6	33.66	86.607	
7,000.0	6,916.8	7,198.7	6,911.2	19.2	35.8	7.93	270.1	-2,277.3	2,892.9	2,859.7	33.18	87.189	
7,050.0	6,959.6	7,243.2	6,955.7	19.1	35.9	8.33	269.8	-2,277.5	2,867.4	2,834.8	32.60	87.947	
7,100.0	7,000.6	7,287.5	7,000.0	19.0	35.9	8.82	269.5	-2,277.6	2,839.1	2,807.1	31.95	88.848	
7,150.0	7,039.5	7,329.4	7,041.9	19.0	36.0	9.43	269.3	-2,277.6	2,807.9	2,776.6	31.25	89.858	

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-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	7,076.0	7,368.8	7,081.3	19.0	36.0	10.18	269.0	-2,277.7	2,774.0	2,743.5	30.52	90.903	
7,250.0	7,110.1	7,405.5	7,118.0	19.0	36.0	11.10	268.7	-2,277.6	2,737.7	2,707.9	29.80	91.864	
7,300.0	7,141.6	7,438.1	7,150.5	19.1	36.1	12.25	268.5	-2,277.6	2,699.2	2,670.0	29.16	92.564	
7,350.0	7,170.3	7,467.5	7,179.9	19.2	36.1	13.69	268.3	-2,277.5	2,658.5	2,629.8	28.67	92.714	
7,400.0	7,196.1	7,493.8	7,206.3	19.4	36.1	15.56	268.0	-2,277.5	2,616.0	2,587.5	28.47	91.897	
7,450.0	7,218.8	7,517.0	7,229.5	19.7	36.1	18.01	267.8	-2,277.5	2,571.8	2,543.0	28.72	89.551	
7,500.0	7,238.3	7,537.0	7,249.5	20.0	36.1	21.36	267.6	-2,277.4	2,526.1	2,496.4	29.71	85.020	
7,550.0	7,254.6	7,553.6	7,266.1	20.5	36.2	26.09	267.5	-2,277.4	2,479.3	2,447.4	31.89	77.748	
7,600.0	7,267.6	7,566.8	7,279.3	21.0	36.2	33.09	267.3	-2,277.4	2,431.4	2,395.5	35.92	67.696	
7,650.0	7,277.1	7,576.5	7,289.0	21.5	36.2	43.94	267.2	-2,277.3	2,382.8	2,340.2	42.60	55.934	
7,700.0	7,283.3	7,582.6	7,295.1	22.2	36.2	60.98	267.1	-2,277.3	2,333.7	2,282.0	51.74	45.106	
7,750.0	7,285.9	7,585.2	7,297.7	22.9	36.2	84.90	267.1	-2,277.3	2,284.4	2,225.7	58.63	38.962	
7,760.9	7,286.0	7,585.3	7,297.8	23.0	36.2	90.55	267.1	-2,277.3	2,273.6	2,214.6	59.02	38.524	
7,800.0	7,286.1	7,585.3	7,297.8	23.6	36.2	90.55	267.1	-2,277.3	2,235.0	2,175.3	59.62	37.489	
7,900.0	7,286.4	7,585.3	7,297.8	25.3	36.2	90.55	267.1	-2,277.3	2,136.2	2,074.9	61.30	34.852	
8,000.0	7,286.6	7,585.4	7,297.8	27.2	36.2	90.56	267.1	-2,277.3	2,037.6	1,974.5	63.16	32.261	
8,100.0	7,286.9	7,585.4	7,297.9	29.2	36.2	90.56	267.1	-2,277.3	1,939.2	1,874.0	65.18	29.751	
8,200.0	7,287.2	7,585.4	7,297.9	31.3	36.2	90.57	267.1	-2,277.3	1,840.9	1,773.5	67.32	27.345	
8,300.0	7,287.4	7,585.5	7,297.9	33.6	36.2	90.58	267.1	-2,277.3	1,742.8	1,673.2	69.56	25.054	
8,400.0	7,287.7	7,585.5	7,298.0	35.9	36.2	90.58	267.1	-2,277.3	1,644.9	1,573.0	71.88	22.884	
8,500.0	7,288.0	7,585.5	7,298.0	38.3	36.2	90.59	267.1	-2,277.3	1,547.3	1,473.0	74.26	20.835	
8,600.0	7,288.2	7,585.6	7,298.0	40.7	36.2	90.59	267.1	-2,277.3	1,450.0	1,373.3	76.70	18.904	
8,700.0	7,288.5	7,585.6	7,298.1	43.2	36.2	90.60	267.1	-2,277.3	1,353.1	1,274.0	79.19	17.088	
8,800.0	7,288.8	7,585.6	7,298.1	45.7	36.2	90.60	267.1	-2,277.3	1,256.8	1,175.0	81.71	15.381	
8,900.0	7,289.0	7,585.7	7,298.1	48.3	36.2	90.61	267.1	-2,277.3	1,161.0	1,076.7	84.26	13.778	
9,000.0	7,289.3	7,585.7	7,298.2	50.9	36.2	90.61	267.1	-2,277.3	1,066.0	979.1	86.84	12.275	
9,100.0	7,289.6	7,585.7	7,298.2	53.5	36.2	90.62	267.1	-2,277.3	972.0	882.5	89.44	10.867	
9,200.0	7,289.8	7,585.8	7,298.2	56.1	36.2	90.62	267.1	-2,277.3	879.3	787.2	92.07	9.551	
9,300.0	7,290.1	7,585.8	7,298.3	58.7	36.2	90.63	267.1	-2,277.3	788.4	693.7	94.71	8.325	
9,400.0	7,290.4	7,585.8	7,298.3	61.4	36.2	90.63	267.1	-2,277.3	700.0	602.7	97.36	7.190	
9,500.0	7,290.6	7,585.9	7,298.4	64.1	36.2	90.64	267.1	-2,277.3	615.2	515.2	100.03	6.150	
9,600.0	7,290.9	7,585.9	7,298.4	66.7	36.2	90.65	267.1	-2,277.3	535.7	432.9	102.71	5.215	
9,700.0	7,291.2	7,585.9	7,298.4	69.4	36.2	90.65	267.1	-2,277.3	464.1	358.7	105.40	4.403	
9,800.0	7,291.4	7,586.0	7,298.5	72.1	36.2	90.66	267.1	-2,277.3	404.7	296.6	108.10	3.744	
9,900.0	7,291.7	7,586.0	7,298.5	74.8	36.2	90.66	267.1	-2,277.3	363.6	252.8	110.81	3.282	
10,000.0	7,292.0	7,586.1	7,298.5	77.5	36.2	90.67	267.1	-2,277.3	347.4	233.9	113.52	3.060	
10,007.8	7,292.0	7,586.1	7,298.5	77.8	36.2	90.67	267.1	-2,277.3	347.3	233.6	113.73	3.054	CC, ES, SF
10,100.0	7,292.2	7,586.1	7,298.6	80.3	36.2	90.67	267.1	-2,277.3	359.3	243.1	116.24	3.091	
10,200.0	7,292.5	7,586.1	7,298.6	83.0	36.2	90.68	267.1	-2,277.3	396.9	278.0	118.97	3.337	
10,300.0	7,292.8	7,586.2	7,298.6	85.7	36.2	90.69	267.1	-2,277.3	453.9	332.2	121.70	3.729	
10,400.0	7,293.0	7,586.2	7,298.7	88.5	36.2	90.69	267.1	-2,277.3	523.9	399.4	124.43	4.210	
10,500.0	7,293.3	7,586.2	7,298.7	91.2	36.2	90.70	267.1	-2,277.3	602.4	475.2	127.17	4.737	
10,600.0	7,293.6	7,586.3	7,298.7	93.9	36.2	90.70	267.1	-2,277.3	686.5	556.6	129.92	5.284	
10,700.0	7,293.8	7,586.3	7,298.8	96.7	36.2	90.71	267.1	-2,277.3	774.4	641.8	132.67	5.837	
10,800.0	7,294.1	7,586.3	7,298.8	99.4	36.2	90.71	267.1	-2,277.3	865.0	729.6	135.42	6.387	
10,900.0	7,294.4	7,586.4	7,298.8	102.2	36.2	90.72	267.1	-2,277.3	957.4	819.2	138.17	6.929	
11,000.0	7,294.6	7,586.4	7,298.9	105.0	36.2	90.73	267.1	-2,277.3	1,051.2	910.3	140.93	7.459	
11,100.0	7,294.9	7,586.4	7,298.9	107.7	36.2	90.73	267.1	-2,277.3	1,146.1	1,002.4	143.69	7.976	
11,200.0	7,295.2	7,586.5	7,298.9	110.5	36.2	90.74	267.1	-2,277.3	1,241.7	1,095.3	146.45	8.479	
11,300.0	7,295.4	7,586.5	7,299.0	113.2	36.2	90.74	267.1	-2,277.3	1,338.0	1,188.8	149.22	8.967	
11,400.0	7,295.7	7,586.5	7,299.0	116.0	36.2	90.75	267.1	-2,277.3	1,434.9	1,282.9	151.99	9.441	
11,500.0	7,296.0	7,586.6	7,299.0	118.8	36.2	90.76	267.1	-2,277.3	1,532.1	1,377.3	154.75	9.900	

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-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
11,600.0	7,296.2	7,586.6	7,299.1	121.6	36.2	90.76	267.1	-2,277.3	1,629.6	1,472.1	157.52	10.345	
11,700.0	7,296.5	7,586.6	7,299.1	124.3	36.2	90.77	267.1	-2,277.3	1,727.5	1,567.2	160.30	10.777	
11,800.0	7,296.8	7,586.7	7,299.2	127.1	36.2	90.78	267.1	-2,277.3	1,825.5	1,662.5	163.07	11.195	
11,886.1	7,297.0	7,586.7	7,299.2	129.5	36.2	90.78	267.1	-2,277.3	1,910.2	1,744.7	165.46	11.544	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	2.6	2.6	0.0	0.0	-54.75	414.9	-587.2	719.0				
100.0	100.0	105.8	105.8	0.1	0.1	-54.76	414.8	-587.0	718.8	718.6	0.18	4,101.816	
193.4	193.4	195.9	195.9	0.3	0.2	-54.78	414.3	-586.8	718.3	717.8	0.51	1,420.646	CC
200.0	200.0	201.8	201.8	0.3	0.2	-54.78	414.3	-586.9	718.3	717.8	0.53	1,347.952	ES
300.0	300.0	286.3	286.3	0.5	0.4	-54.90	413.5	-588.4	719.4	718.4	0.94	766.471	
400.0	400.0	368.4	368.3	0.8	0.6	-55.17	412.4	-592.8	722.9	721.6	1.35	535.570	
500.0	500.0	456.1	455.7	1.0	0.8	-55.61	410.7	-600.0	728.7	726.9	1.79	407.020	
600.0	600.0	551.1	549.9	1.2	1.1	-56.34	406.6	-610.6	735.5	733.2	2.27	323.917	
700.0	700.0	653.1	650.8	1.4	1.4	-57.36	399.7	-623.9	742.8	740.0	2.79	266.699	
800.0	800.0	756.2	752.7	1.7	1.8	-155.17	390.5	-637.3	750.6	747.3	3.36	223.638	
900.0	899.8	832.1	827.0	1.9	2.1	-156.26	381.6	-649.8	763.7	759.8	3.83	199.145	
1,000.0	999.5	924.9	916.8	2.1	2.5	-157.98	367.3	-668.5	782.0	777.5	4.46	175.362	
1,100.0	1,098.7	1,014.0	1,002.0	2.3	3.0	-159.85	350.9	-688.4	805.0	799.9	5.11	157.548	
1,200.0	1,197.5	1,091.7	1,075.8	2.6	3.5	-161.55	335.3	-707.1	833.2	827.5	5.73	145.357	
1,300.0	1,295.6	1,172.9	1,152.3	3.0	4.0	-163.39	318.0	-728.0	866.9	860.5	6.39	135.715	
1,400.0	1,393.4	1,256.5	1,230.5	3.3	4.6	-165.52	298.7	-750.6	903.9	896.9	7.08	127.608	
1,500.0	1,491.3	1,337.1	1,305.5	3.7	5.2	-167.51	279.2	-772.9	942.5	934.7	7.78	121.148	
1,600.0	1,589.1	1,413.3	1,375.8	4.1	5.8	-169.33	260.0	-794.7	983.0	974.5	8.43	116.560	
1,700.0	1,686.9	1,489.5	1,446.2	4.6	6.3	-171.02	241.1	-817.3	1,025.3	1,016.3	9.06	113.112	
1,800.0	1,784.7	1,567.3	1,517.3	5.0	6.9	-172.73	220.5	-841.0	1,069.2	1,059.5	9.71	110.142	
1,900.0	1,882.5	1,638.3	1,581.5	5.4	7.5	-174.29	200.1	-863.5	1,114.8	1,104.5	10.36	107.575	
2,000.0	1,980.3	1,717.4	1,652.7	5.9	8.1	-175.93	177.3	-889.1	1,162.1	1,151.1	11.03	105.396	
2,100.0	2,078.1	1,796.3	1,724.1	6.3	8.7	-177.41	155.3	-914.7	1,210.2	1,198.5	11.66	103.795	
2,200.0	2,176.0	1,874.3	1,794.5	6.7	9.3	-178.78	133.8	-940.4	1,259.5	1,247.2	12.27	102.613	
2,300.0	2,273.8	1,972.3	1,883.7	7.2	10.1	179.72	108.3	-972.0	1,308.8	1,295.8	12.96	101.001	
2,400.0	2,371.6	2,055.0	1,959.2	7.6	10.7	178.56	87.3	-998.1	1,358.1	1,344.5	13.56	100.178	
2,500.0	2,469.4	2,118.0	2,016.4	8.1	11.2	177.69	70.3	-1,018.6	1,408.6	1,394.5	14.11	99.853	
2,600.0	2,567.2	2,205.6	2,095.3	8.5	11.9	176.48	45.5	-1,047.7	1,460.1	1,445.3	14.77	98.856	
2,700.0	2,665.0	2,315.4	2,194.6	9.0	12.8	175.10	14.7	-1,082.7	1,511.0	1,495.5	15.50	97.510	
2,800.0	2,762.8	2,387.9	2,260.5	9.4	13.3	174.28	-5.0	-1,105.5	1,561.8	1,545.7	16.06	97.256	
2,900.0	2,860.7	2,461.4	2,327.5	9.9	13.9	173.52	-24.1	-1,129.1	1,613.4	1,596.7	16.64	96.971	
3,000.0	2,958.5	2,550.7	2,408.6	10.3	14.6	172.64	-47.9	-1,158.1	1,665.6	1,648.3	17.29	96.345	
3,100.0	3,056.3	2,649.6	2,498.5	10.8	15.4	171.69	-74.8	-1,189.1	1,717.1	1,699.1	17.98	95.509	
3,200.0	3,154.1	2,732.2	2,573.4	11.3	16.0	170.89	-98.8	-1,214.5	1,768.6	1,750.0	18.60	95.071	
3,300.0	3,251.9	2,812.7	2,646.3	11.7	16.7	170.16	-122.1	-1,239.5	1,820.5	1,801.3	19.22	94.704	
3,400.0	3,349.7	2,907.1	2,731.7	12.2	17.4	169.34	-149.6	-1,268.5	1,872.5	1,852.6	19.90	94.105	
3,500.0	3,447.5	2,993.5	2,810.2	12.6	18.1	168.63	-174.9	-1,294.4	1,924.0	1,903.4	20.54	93.672	
3,600.0	3,545.4	3,063.0	2,873.1	13.1	18.7	168.08	-195.2	-1,315.9	1,976.5	1,955.4	21.12	93.599	
3,700.0	3,643.2	3,112.2	2,917.5	13.5	19.1	167.72	-209.2	-1,331.8	2,030.1	2,008.5	21.60	93.983	
3,800.0	3,741.0	3,248.9	3,041.7	14.0	20.2	166.88	-245.3	-1,376.1	2,084.2	2,061.8	22.43	92.935	
3,900.0	3,838.8	3,342.0	3,127.0	14.5	20.9	166.32	-270.2	-1,403.9	2,135.9	2,112.8	23.07	92.589	
4,000.0	3,936.6	3,395.6	3,176.1	14.9	21.3	166.02	-284.3	-1,420.1	2,188.2	2,164.6	23.56	92.867	
4,009.8	3,946.2	3,399.9	3,180.0	15.0	21.3	166.00	-285.4	-1,421.5	2,193.4	2,169.8	23.61	92.911	
4,100.0	4,034.7	3,455.8	3,230.9	15.3	21.7	165.98	-299.7	-1,439.7	2,240.9	2,216.6	24.25	92.409	
4,200.0	4,133.4	3,566.3	3,332.0	15.6	22.6	165.71	-327.1	-1,474.7	2,289.9	2,264.8	25.09	91.279	
4,300.0	4,232.6	3,632.3	3,392.3	15.8	23.1	165.64	-343.7	-1,495.9	2,336.7	2,311.0	25.72	90.868	
4,400.0	4,332.2	3,715.0	3,467.9	16.1	23.8	165.49	-364.0	-1,522.6	2,380.7	2,354.3	26.37	90.281	
4,500.0	4,432.1	3,781.8	3,528.9	16.2	24.3	165.40	-380.2	-1,544.7	2,422.3	2,395.4	26.92	89.981	
4,600.0	4,532.0	3,900.0	3,636.5	16.4	25.3	165.03	-409.4	-1,583.7	2,461.1	2,433.4	27.64	89.039	
4,609.8	4,541.8	3,900.0	3,636.5	16.4	25.3	-98.26	-409.4	-1,583.7	2,464.7	2,426.3	38.32	64.311	
4,700.0	4,632.0	3,960.4	3,691.5	16.5	25.8	-98.57	-424.9	-1,603.3	2,497.9	2,459.0	38.92	64.185	
4,800.0	4,732.0	4,015.7	3,741.3	16.6	26.2	-98.86	-439.7	-1,622.2	2,536.5	2,497.0	39.50	64.210	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
4,900.0	4,832.0	4,086.0	3,804.3	16.7	26.8	-99.24	-459.4	-1,646.4	2,575.9	2,535.7	40.23	64.024	
5,000.0	4,932.0	4,139.0	3,851.5	16.9	27.3	-99.53	-474.6	-1,665.0	2,616.5	2,575.7	40.84	64.069	
5,100.0	5,032.0	4,198.2	3,903.8	17.0	27.9	-99.85	-491.8	-1,686.8	2,658.6	2,617.1	41.50	64.060	
5,200.0	5,132.0	4,400.4	4,084.5	17.1	29.6	-100.83	-547.4	-1,758.7	2,699.5	2,656.1	43.36	62.261	
5,300.0	5,232.0	4,459.0	4,137.4	17.3	30.1	-101.09	-562.8	-1,778.5	2,738.6	2,694.6	43.97	62.282	
5,400.0	5,332.0	4,529.2	4,200.5	17.4	30.7	-101.40	-581.6	-1,802.7	2,778.6	2,733.9	44.71	62.150	
5,500.0	5,432.0	4,690.9	4,346.0	17.6	32.0	-102.11	-625.6	-1,857.8	2,818.2	2,772.0	46.21	60.994	
5,600.0	5,532.0	4,766.3	4,414.1	17.7	32.7	-102.45	-646.7	-1,882.6	2,857.1	2,810.2	46.97	60.824	
5,700.0	5,632.0	4,925.0	4,557.3	17.9	34.0	-103.14	-691.6	-1,934.1	2,896.2	2,847.8	48.42	59.813	
5,800.0	5,732.0	4,984.0	4,611.1	18.0	34.5	-103.37	-707.0	-1,952.7	2,933.7	2,884.7	49.04	59.821	
5,900.0	5,832.0	5,055.2	4,675.6	18.2	35.0	-103.64	-725.8	-1,976.3	2,972.6	2,922.9	49.77	59.728	
6,000.0	5,932.0	5,499.7	5,088.0	18.3	38.2	-105.15	-834.0	-2,100.3	3,006.1	2,953.1	53.03	56.684	
6,100.0	6,032.0	6,242.1	5,814.4	18.5	41.1	-106.19	-921.9	-2,214.2	3,025.8	2,969.7	56.11	53.925	
6,200.0	6,132.0	6,450.1	6,022.0	18.6	41.4	-106.28	-929.0	-2,223.4	3,030.8	2,974.2	56.60	53.548	
6,300.0	6,232.0	6,580.6	6,152.4	18.8	41.5	-106.31	-931.9	-2,226.8	3,033.9	2,976.9	56.92	53.299	
6,400.0	6,332.0	6,695.4	6,267.2	18.9	41.7	-106.33	-933.9	-2,229.1	3,036.3	2,979.1	57.21	53.072	
6,500.0	6,432.0	6,818.8	6,390.6	19.1	41.8	-106.35	-935.2	-2,231.0	3,038.0	2,980.6	57.50	52.838	
6,600.0	6,532.0	6,920.8	6,492.6	19.2	41.9	-106.36	-936.5	-2,232.2	3,039.5	2,981.7	57.76	52.622	
6,637.8	6,569.8	6,959.7	6,531.5	19.3	41.9	-106.37	-937.0	-2,232.6	3,040.0	2,982.1	57.86	52.540	
6,650.0	6,582.0	6,972.3	6,544.1	19.3	41.9	-16.37	-937.1	-2,232.7	3,040.0	3,000.1	39.96	76.076	
6,700.0	6,632.0	7,028.1	6,599.8	19.4	42.0	-16.44	-937.8	-2,233.2	3,038.2	2,998.0	40.20	75.584	
6,750.0	6,681.6	7,081.2	6,653.0	19.4	42.0	-16.60	-938.3	-2,233.6	3,032.9	2,992.6	40.22	75.408	
6,800.0	6,730.6	7,125.7	6,697.5	19.4	42.0	-16.86	-938.7	-2,234.0	3,024.3	2,984.2	40.03	75.544	
6,850.0	6,778.9	7,171.6	6,743.4	19.3	42.1	-17.21	-939.1	-2,234.5	3,012.5	2,972.8	39.66	75.963	
6,900.0	6,826.2	7,228.1	6,799.9	19.3	42.1	-17.71	-939.5	-2,235.1	2,997.4	2,958.3	39.11	76.636	
6,950.0	6,872.2	7,276.5	6,848.2	19.2	42.2	-18.32	-939.8	-2,235.4	2,979.2	2,940.7	38.40	77.574	
7,000.0	6,916.8	7,316.8	6,888.5	19.2	42.2	-19.05	-940.0	-2,235.7	2,957.9	2,920.3	37.56	78.753	
7,050.0	6,959.6	7,357.6	6,929.3	19.1	42.3	-19.94	-940.3	-2,236.1	2,933.7	2,897.1	36.62	80.114	
7,100.0	7,000.6	7,407.8	6,979.5	19.0	42.3	-21.08	-940.6	-2,236.5	2,906.8	2,871.1	35.64	81.551	
7,150.0	7,039.5	7,452.8	7,024.6	19.0	42.3	-22.44	-940.9	-2,236.8	2,877.0	2,842.3	34.69	82.938	
7,200.0	7,076.0	7,488.8	7,060.5	19.0	42.4	-24.03	-941.0	-2,237.0	2,844.7	2,810.9	33.84	84.061	
7,250.0	7,110.1	7,522.4	7,094.1	19.0	42.4	-25.94	-941.1	-2,237.2	2,810.1	2,776.9	33.23	84.573	
7,300.0	7,141.6	7,557.0	7,128.7	19.1	42.4	-28.29	-941.1	-2,237.4	2,773.4	2,740.4	33.02	83.999	
7,350.0	7,170.3	7,590.9	7,162.7	19.2	42.4	-31.18	-941.2	-2,237.6	2,734.6	2,701.2	33.40	81.865	
7,400.0	7,196.1	7,621.2	7,192.9	19.4	42.5	-34.70	-941.3	-2,237.6	2,694.1	2,659.5	34.58	77.910	
7,450.0	7,218.8	7,644.6	7,216.4	19.7	42.5	-38.95	-941.4	-2,237.6	2,652.0	2,615.3	36.66	72.338	
7,500.0	7,238.3	7,663.7	7,235.5	20.0	42.5	-44.12	-941.5	-2,237.6	2,608.5	2,568.8	39.71	65.682	
7,550.0	7,254.6	7,679.7	7,251.4	20.5	42.5	-50.41	-941.6	-2,237.6	2,564.0	2,520.3	43.66	58.727	
7,600.0	7,267.6	7,692.4	7,264.2	21.0	42.5	-57.96	-941.6	-2,237.6	2,518.6	2,470.4	48.17	52.281	
7,650.0	7,277.1	7,701.8	7,273.6	21.5	42.5	-66.79	-941.6	-2,237.7	2,472.6	2,419.9	52.65	46.964	
7,700.0	7,283.3	7,707.9	7,279.6	22.2	42.5	-76.64	-941.7	-2,237.7	2,426.2	2,369.9	56.24	43.136	
7,750.0	7,285.9	7,710.5	7,282.3	22.9	42.5	-86.97	-941.7	-2,237.7	2,379.6	2,321.4	58.17	40.907	
7,760.9	7,286.0	7,710.6	7,282.4	23.0	42.5	-89.21	-941.7	-2,237.7	2,369.4	2,311.1	58.32	40.627	
7,800.0	7,286.1	7,710.8	7,282.6	23.6	42.5	-89.22	-941.7	-2,237.7	2,333.0	2,274.1	58.92	39.597	
7,900.0	7,286.4	7,711.2	7,283.0	25.3	42.5	-89.24	-941.7	-2,237.7	2,240.4	2,179.8	60.60	36.971	
8,000.0	7,286.6	7,711.6	7,283.4	27.2	42.5	-89.27	-941.7	-2,237.7	2,148.4	2,086.0	62.46	34.395	
8,100.0	7,286.9	7,712.0	7,283.8	29.2	42.5	-89.30	-941.7	-2,237.7	2,057.2	1,992.7	64.48	31.904	
8,200.0	7,287.2	7,712.4	7,284.2	31.3	42.5	-89.32	-941.7	-2,237.7	1,966.9	1,900.2	66.62	29.522	
8,300.0	7,287.4	7,712.8	7,284.6	33.6	42.5	-89.35	-941.7	-2,237.7	1,877.5	1,808.6	68.86	27.264	
8,400.0	7,287.7	7,713.3	7,285.0	35.9	42.5	-89.38	-941.7	-2,237.7	1,789.2	1,718.0	71.18	25.136	
8,500.0	7,288.0	7,713.7	7,285.4	38.3	42.5	-89.41	-941.7	-2,237.7	1,702.2	1,628.7	73.57	23.139	
8,600.0	7,288.2	7,714.1	7,285.8	40.7	42.5	-89.43	-941.7	-2,237.7	1,616.8	1,540.8	76.00	21.273	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
8,700.0	7,288.5	7,714.5	7,286.3	43.2	42.5	-89.46	-941.7	-2,237.7	1,533.1	1,454.6	78.49	19.533	
8,800.0	7,288.8	7,714.9	7,286.7	45.7	42.5	-89.49	-941.7	-2,237.7	1,451.5	1,370.5	81.01	17.918	
8,900.0	7,289.0	7,715.3	7,287.1	48.3	42.5	-89.52	-941.7	-2,237.7	1,372.3	1,288.7	83.56	16.422	
9,000.0	7,289.3	7,715.8	7,287.5	50.9	42.5	-89.54	-941.7	-2,237.7	1,296.0	1,209.8	86.14	15.045	
9,100.0	7,289.6	7,716.2	7,287.9	53.5	42.5	-89.57	-941.7	-2,237.7	1,223.1	1,134.3	88.74	13.782	
9,200.0	7,289.8	7,716.6	7,288.4	56.1	42.5	-89.60	-941.7	-2,237.7	1,154.2	1,062.9	91.37	12.633	
9,300.0	7,290.1	7,717.0	7,288.8	58.7	42.5	-89.63	-941.7	-2,237.7	1,090.2	996.2	94.01	11.598	
9,400.0	7,290.4	7,717.5	7,289.2	61.4	42.5	-89.66	-941.7	-2,237.7	1,032.0	935.3	96.66	10.677	
9,500.0	7,290.6	7,717.9	7,289.6	64.1	42.5	-89.69	-941.7	-2,237.7	980.5	881.2	99.33	9.871	
9,600.0	7,290.9	7,718.3	7,290.1	66.7	42.5	-89.71	-941.7	-2,237.7	936.9	834.9	102.01	9.185	
9,700.0	7,291.2	7,718.8	7,290.5	69.4	42.5	-89.74	-941.7	-2,237.7	902.3	797.6	104.70	8.618	
9,800.0	7,291.4	7,719.2	7,290.9	72.1	42.5	-89.77	-941.7	-2,237.7	877.8	770.4	107.39	8.173	
9,900.0	7,291.7	7,719.6	7,291.4	74.8	42.5	-89.80	-941.7	-2,237.7	864.2	754.1	110.10	7.849	
9,968.1	7,291.9	7,719.9	7,291.7	76.7	42.5	-89.82	-941.7	-2,237.7	861.5	749.6	111.95	7.696	
10,000.0	7,292.0	7,720.1	7,291.8	77.5	42.5	-89.83	-941.7	-2,237.7	862.1	749.3	112.81	7.642	
10,100.0	7,292.2	7,720.5	7,292.3	80.3	42.5	-89.86	-941.7	-2,237.7	871.6	756.0	115.53	7.544 SF	
10,200.0	7,292.5	7,721.0	7,292.7	83.0	42.5	-89.89	-941.7	-2,237.7	892.2	773.9	118.26	7.544	
10,300.0	7,292.8	7,721.4	7,293.1	85.7	42.5	-89.92	-941.7	-2,237.7	923.2	802.2	120.99	7.631	
10,400.0	7,293.0	7,721.8	7,293.6	88.5	42.5	-89.95	-941.7	-2,237.7	963.7	840.0	123.73	7.789	
10,500.0	7,293.3	7,722.0	7,293.8	91.2	42.5	-89.96	-941.7	-2,237.7	1,012.5	886.0	126.47	8.006	
10,600.0	7,293.6	7,722.0	7,293.8	93.9	42.5	-89.96	-941.7	-2,237.7	1,068.4	939.2	129.21	8.268	
10,700.0	7,293.8	7,722.0	7,293.8	96.7	42.5	-89.96	-941.7	-2,237.7	1,130.4	998.5	131.96	8.566	
10,800.0	7,294.1	7,722.0	7,293.8	99.4	42.5	-89.96	-941.7	-2,237.7	1,197.6	1,062.9	134.71	8.890	
10,900.0	7,294.4	7,722.0	7,293.8	102.2	42.5	-89.96	-941.7	-2,237.7	1,269.1	1,131.6	137.47	9.232	
11,000.0	7,294.6	7,722.0	7,293.8	105.0	42.5	-89.96	-941.7	-2,237.7	1,344.2	1,204.0	140.23	9.586	
11,100.0	7,294.9	7,722.0	7,293.8	107.7	42.5	-89.96	-941.7	-2,237.7	1,422.4	1,279.4	142.99	9.948	
11,200.0	7,295.2	7,722.0	7,293.8	110.5	42.5	-89.96	-941.7	-2,237.7	1,503.2	1,357.5	145.75	10.314	
11,300.0	7,295.4	7,722.0	7,293.8	113.2	42.5	-89.96	-941.7	-2,237.7	1,586.2	1,437.7	148.52	10.680	
11,400.0	7,295.7	7,722.0	7,293.8	116.0	42.5	-89.96	-941.7	-2,237.7	1,671.1	1,519.8	151.28	11.046	
11,500.0	7,296.0	7,726.2	7,298.0	118.8	42.6	-90.24	-941.7	-2,237.7	1,757.5	1,603.4	154.04	11.409	
11,600.0	7,296.2	7,726.6	7,298.3	121.6	42.6	-90.26	-941.7	-2,237.7	1,845.3	1,688.5	156.81	11.767	
11,700.0	7,296.5	7,726.9	7,298.7	124.3	42.6	-90.29	-941.7	-2,237.7	1,934.3	1,774.7	159.59	12.121	
11,800.0	7,296.8	7,727.3	7,299.1	127.1	42.6	-90.31	-941.7	-2,237.7	2,024.3	1,862.0	162.36	12.468	
11,886.1	7,297.0	7,727.6	7,299.4	129.5	42.6	-90.33	-941.7	-2,237.7	2,102.6	1,937.8	164.75	12.762	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	-88.58	98.7	-3,981.3	3,982.7				
100.0	100.0	56.6	56.6	0.1	0.1	-88.58	98.7	-3,981.3	3,982.5	3,982.3	0.16	N/A	
200.0	200.0	153.2	153.2	0.3	0.2	-88.58	98.6	-3,981.4	3,982.6	3,982.1	0.49	8,105.237	
300.0	300.0	249.9	249.9	0.5	0.3	-88.58	98.6	-3,981.5	3,982.8	3,981.9	0.82	4,839.373	
400.0	400.0	346.6	346.6	0.8	0.4	-88.58	98.5	-3,981.8	3,983.0	3,981.9	1.15	3,449.630	
500.0	500.0	443.2	443.2	1.0	0.5	-88.58	98.4	-3,982.1	3,983.4	3,981.9	1.49	2,680.137	
600.0	600.0	539.9	539.9	1.2	0.6	-88.59	98.2	-3,982.5	3,983.8	3,982.0	1.82	2,191.443	
700.0	700.0	640.8	640.8	1.4	0.8	-88.59	98.2	-3,983.0	3,984.3	3,982.0	2.22	1,791.891	
800.0	800.0	752.9	752.9	1.7	1.0	174.73	98.5	-3,983.4	3,986.3	3,983.7	2.65	1,502.537	
900.0	899.8	834.5	834.5	1.9	1.2	174.72	98.5	-3,983.7	3,991.9	3,988.9	3.03	1,318.870	
1,000.0	999.5	930.9	930.9	2.1	1.4	174.71	98.4	-3,984.3	4,001.2	3,997.8	3.44	1,163.297	
1,100.0	1,098.7	1,036.0	1,036.0	2.3	1.6	174.71	98.5	-3,984.9	4,014.0	4,010.1	3.87	1,038.406	
1,200.0	1,197.5	1,122.0	1,121.9	2.6	1.8	174.70	98.4	-3,985.5	4,030.2	4,026.0	4.26	945.551	
1,300.0	1,295.6	1,211.7	1,211.7	3.0	2.0	174.68	98.6	-3,986.4	4,050.1	4,045.5	4.67	866.861	
1,400.0	1,393.4	1,316.7	1,316.7	3.3	2.2	174.72	99.0	-3,987.4	4,071.8	4,066.7	5.12	795.676	
1,500.0	1,491.3	1,424.1	1,424.1	3.7	2.4	174.75	99.3	-3,988.1	4,093.2	4,087.6	5.57	735.047	
1,600.0	1,589.1	1,511.6	1,511.6	4.1	2.6	174.78	99.8	-3,988.8	4,114.7	4,108.7	5.99	686.694	
1,700.0	1,686.9	1,608.0	1,608.0	4.6	2.8	174.82	100.5	-3,989.6	4,136.2	4,129.8	6.44	642.218	
1,800.0	1,784.7	1,693.3	1,693.2	5.0	3.0	174.84	100.9	-3,990.5	4,158.0	4,151.1	6.87	605.450	
1,900.0	1,882.5	1,937.7	1,937.6	5.4	3.5	174.98	106.3	-3,989.3	4,178.4	4,170.8	7.61	549.126	
2,000.0	1,980.3	2,023.9	2,023.4	5.9	3.7	175.10	113.3	-3,987.1	4,196.9	4,188.8	8.05	521.384	
2,100.0	2,078.1	2,065.0	2,064.3	6.3	3.8	175.17	117.6	-3,986.2	4,216.1	4,207.7	8.40	501.998	
2,200.0	2,176.0	2,117.8	2,116.7	6.7	3.9	175.28	124.0	-3,985.6	4,236.4	4,227.7	8.78	482.269	
2,300.0	2,273.8	2,158.0	2,156.5	7.2	4.0	175.36	129.3	-3,985.9	4,258.3	4,249.2	9.14	465.861	
2,400.0	2,371.6	2,233.7	2,231.4	7.6	4.2	175.53	140.6	-3,987.1	4,281.1	4,271.5	9.59	446.259	
2,500.0	2,469.4	2,345.0	2,340.9	8.1	4.5	175.82	160.5	-3,988.1	4,303.5	4,293.3	10.15	423.988	
2,600.0	2,567.2	2,413.0	2,407.3	8.5	4.7	176.03	174.8	-3,988.6	4,326.2	4,315.5	10.62	407.413	
2,700.0	2,665.0	2,439.0	2,432.6	9.0	4.8	176.12	180.8	-3,989.1	4,350.3	4,339.3	10.96	396.879	
2,800.0	2,762.8	2,500.7	2,492.4	9.4	5.0	176.34	196.2	-3,990.9	4,375.4	4,364.0	11.44	382.381	
2,900.0	2,860.7	2,552.0	2,541.5	9.9	5.2	176.54	210.5	-3,993.0	4,401.8	4,389.9	11.90	369.969	
3,000.0	2,958.5	2,626.0	2,612.1	10.3	5.5	176.85	232.7	-3,996.3	4,429.0	4,416.5	12.46	355.475	
3,100.0	3,056.3	2,695.7	2,678.4	10.8	5.8	177.14	254.0	-3,999.7	4,456.8	4,443.8	13.01	342.633	
3,200.0	3,154.1	2,810.5	2,787.9	11.3	6.3	177.59	287.6	-4,005.6	4,484.9	4,471.1	13.72	326.833	
3,300.0	3,251.9	3,026.1	2,995.2	11.7	7.2	178.38	346.7	-4,012.7	4,511.0	4,496.2	14.85	303.694	
3,400.0	3,349.7	3,150.6	3,115.6	12.2	7.8	178.80	378.3	-4,015.0	4,536.0	4,520.3	15.63	290.171	
3,500.0	3,447.5	3,232.9	3,195.1	12.6	8.1	179.08	399.4	-4,016.4	4,561.0	4,544.8	16.24	280.782	
3,600.0	3,545.4	3,318.8	3,278.3	13.1	8.5	179.35	420.6	-4,018.3	4,586.5	4,569.7	16.87	271.890	
3,700.0	3,643.2	3,470.5	3,425.4	13.5	9.2	179.82	457.8	-4,020.9	4,611.9	4,594.1	17.77	259.559	
3,800.0	3,741.0	3,562.0	3,514.0	14.0	9.6	-179.89	480.7	-4,021.6	4,636.3	4,617.9	18.43	251.555	
3,900.0	3,838.8	3,631.3	3,581.0	14.5	9.9	-179.66	498.4	-4,022.3	4,661.2	4,642.2	19.00	245.293	
4,000.0	3,936.6	3,691.9	3,639.5	14.9	10.2	-179.47	514.1	-4,023.3	4,686.9	4,667.4	19.54	239.843	
4,009.8	3,946.2	3,697.8	3,645.2	15.0	10.2	-179.45	515.6	-4,023.4	4,689.5	4,669.9	19.59	239.326	
4,100.0	4,034.7	3,749.0	3,694.5	15.3	10.5	-179.29	529.4	-4,024.6	4,712.1	4,691.9	20.11	234.302	
4,200.0	4,133.4	3,820.0	3,762.6	15.6	10.8	-179.05	549.1	-4,026.6	4,734.5	4,713.8	20.72	228.539	
4,300.0	4,232.6	3,889.4	3,829.2	15.8	11.2	-178.83	568.6	-4,028.8	4,754.2	4,733.0	21.29	223.305	
4,400.0	4,332.2	3,967.7	3,904.2	16.1	11.6	-178.58	590.8	-4,031.7	4,771.1	4,749.3	21.88	218.092	
4,500.0	4,432.1	4,217.0	4,143.7	16.2	12.8	-177.78	659.7	-4,038.9	4,784.7	4,761.5	23.24	205.862	
4,600.0	4,532.0	4,289.9	4,213.6	16.4	13.2	-177.54	680.4	-4,039.3	4,792.1	4,768.3	23.75	201.735	
4,609.8	4,541.8	4,310.0	4,232.9	16.4	13.3	-80.78	686.2	-4,039.5	4,792.7	4,766.8	25.90	185.015	
4,700.0	4,632.0	4,404.0	4,322.8	16.5	13.8	-80.46	713.7	-4,040.2	4,797.9	4,771.6	26.29	182.470	
4,800.0	4,732.0	4,460.8	4,376.8	16.6	14.1	-80.26	731.0	-4,040.6	4,803.9	4,777.3	26.60	180.610	
4,900.0	4,832.0	4,519.8	4,432.8	16.7	14.5	-80.04	749.7	-4,041.3	4,810.9	4,784.0	26.91	178.760	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
5,000.0	4,932.0	4,593.0	4,502.3	16.9	14.9	-79.77	772.6	-4,042.7	4,818.6	4,791.3	27.28	176.663	
5,100.0	5,032.0	4,666.7	4,572.3	17.0	15.3	-79.51	795.6	-4,044.4	4,826.9	4,799.2	27.65	174.600	
5,200.0	5,132.0	4,741.8	4,643.5	17.1	15.7	-79.24	819.2	-4,046.5	4,835.9	4,807.8	28.02	172.556	
5,300.0	5,232.0	4,817.8	4,715.9	17.3	16.1	-78.97	842.2	-4,049.1	4,845.4	4,817.0	28.41	170.557	
5,400.0	5,332.0	5,087.1	4,976.6	17.4	17.4	-78.22	908.6	-4,058.3	4,854.4	4,825.0	29.36	165.361	
5,500.0	5,432.0	5,219.5	5,107.3	17.6	17.9	-77.99	929.6	-4,062.2	4,860.6	4,830.7	29.85	162.852	
5,600.0	5,532.0	5,549.6	5,435.5	17.7	18.8	-77.60	963.6	-4,065.1	4,862.7	4,831.9	30.74	158.197	
5,700.0	5,632.0	5,643.6	5,529.3	17.9	19.0	-77.53	969.7	-4,064.9	4,863.8	4,832.8	31.08	156.516	
5,800.0	5,732.0	5,735.9	5,621.4	18.0	19.1	-77.48	974.7	-4,065.1	4,865.2	4,833.8	31.41	154.899	
5,900.0	5,832.0	5,827.8	5,713.3	18.2	19.3	-77.44	977.8	-4,065.7	4,866.7	4,834.9	31.74	153.339	
6,000.0	5,932.0	5,994.0	5,879.5	18.3	19.5	-77.42	980.1	-4,067.7	4,868.5	4,836.3	32.20	151.197	
6,100.0	6,032.0	6,091.3	5,976.8	18.5	19.7	-77.43	979.1	-4,068.2	4,868.7	4,836.2	32.52	149.717	
6,200.0	6,132.0	6,195.4	6,080.8	18.6	19.8	-77.44	978.6	-4,068.5	4,868.9	4,836.1	32.85	148.199	
6,300.0	6,232.0	6,275.0	6,160.5	18.8	19.9	-77.44	978.4	-4,068.9	4,869.3	4,836.2	33.15	146.890	
6,400.0	6,332.0	6,345.4	6,230.9	18.9	20.0	-77.45	978.0	-4,069.6	4,870.3	4,836.8	33.43	145.666	
6,500.0	6,432.0	6,425.3	6,310.8	19.1	20.1	-77.46	977.5	-4,071.0	4,871.7	4,838.0	33.74	144.393	
6,600.0	6,532.0	6,555.0	6,440.4	19.2	20.2	-77.47	977.0	-4,073.0	4,873.3	4,839.1	34.14	142.762	
6,637.8	6,569.8	6,590.5	6,476.0	19.3	20.3	-77.47	976.9	-4,073.4	4,873.6	4,839.4	34.26	142.253	
6,650.0	6,582.0	6,601.5	6,486.9	19.3	20.3	12.53	976.9	-4,073.6	4,873.7	4,839.2	34.52	141.201	
6,700.0	6,632.0	6,649.0	6,534.4	19.4	20.4	12.57	976.9	-4,074.1	4,871.7	4,837.2	34.49	141.241	
6,750.0	6,681.6	6,686.9	6,572.3	19.4	20.4	12.67	976.8	-4,074.6	4,866.4	4,832.1	34.31	141.831	
6,800.0	6,730.6	6,727.0	6,612.4	19.4	20.5	12.84	976.7	-4,075.3	4,857.9	4,823.9	33.99	142.910	
6,850.0	6,778.9	6,792.8	6,678.2	19.3	20.6	13.10	976.4	-4,076.4	4,846.0	4,812.4	33.57	144.351	
6,900.0	6,826.2	6,857.6	6,743.0	19.3	20.6	13.45	976.1	-4,077.1	4,830.6	4,797.6	33.02	146.287	
6,950.0	6,872.2	6,902.0	6,787.4	19.2	20.7	13.88	975.9	-4,077.5	4,811.9	4,779.6	32.33	148.837	
7,000.0	6,916.8	6,951.4	6,836.8	19.2	20.8	14.42	975.6	-4,078.0	4,790.2	4,758.7	31.55	151.853	
7,050.0	6,959.6	7,009.7	6,895.1	19.1	20.8	15.10	975.4	-4,078.5	4,765.4	4,734.7	30.69	155.271	
7,100.0	7,000.6	7,047.8	6,933.2	19.0	20.9	15.90	975.3	-4,078.7	4,737.6	4,707.9	29.75	159.239	
7,150.0	7,039.5	7,078.8	6,964.2	19.0	20.9	16.85	975.4	-4,078.8	4,707.2	4,678.5	28.77	163.593	
7,200.0	7,076.0	7,117.0	7,002.4	19.0	21.0	18.03	975.5	-4,079.1	4,674.3	4,646.5	27.82	168.026	
7,250.0	7,110.1	7,150.3	7,035.7	19.0	21.0	19.45	975.8	-4,079.4	4,639.0	4,612.1	26.92	172.318	
7,300.0	7,141.6	7,195.8	7,081.2	19.1	21.1	21.28	976.1	-4,079.5	4,601.4	4,575.2	26.18	175.740	
7,350.0	7,170.3	7,309.5	7,194.9	19.2	21.3	24.10	976.7	-4,078.8	4,561.5	4,535.6	25.88	176.260	
7,400.0	7,196.1	7,340.9	7,226.3	19.4	21.3	27.06	976.7	-4,078.3	4,519.4	4,493.7	25.74	175.582	
7,450.0	7,218.8	7,368.4	7,253.7	19.7	21.4	30.84	976.8	-4,077.9	4,475.8	4,449.7	26.10	171.511	
7,500.0	7,238.3	7,391.7	7,277.1	20.0	21.4	35.75	976.8	-4,077.4	4,430.7	4,403.6	27.11	163.428	
7,550.0	7,254.6	7,401.0	7,286.4	20.5	21.4	41.96	976.8	-4,077.3	4,384.6	4,355.7	28.84	152.005	
7,600.0	7,267.6	7,416.1	7,301.5	21.0	21.4	50.41	976.8	-4,077.0	4,337.5	4,306.0	31.48	137.800	
7,650.0	7,277.1	7,422.7	7,308.1	21.5	21.4	61.23	976.8	-4,076.9	4,289.8	4,255.2	34.61	123.963	
7,700.0	7,283.3	7,426.7	7,312.1	22.2	21.4	74.68	976.8	-4,076.8	4,241.6	4,204.1	37.45	113.250	
7,750.0	7,285.9	7,428.1	7,313.4	22.9	21.4	89.82	976.8	-4,076.8	4,193.2	4,154.4	38.80	108.063	
7,760.9	7,286.0	7,428.0	7,313.4	23.0	21.4	93.15	976.8	-4,076.8	4,182.7	4,143.9	38.82	107.758	
7,800.0	7,286.1	7,427.6	7,312.9	23.6	21.4	93.13	976.8	-4,076.8	4,144.9	4,105.5	39.41	105.163	
7,900.0	7,286.4	7,426.5	7,311.8	25.3	21.4	93.06	976.8	-4,076.8	4,048.3	4,007.2	41.09	98.516	
8,000.0	7,286.6	7,425.3	7,310.7	27.2	21.4	93.00	976.8	-4,076.8	3,951.8	3,908.9	42.96	91.994	
8,100.0	7,286.9	7,424.2	7,309.5	29.2	21.4	92.94	976.8	-4,076.8	3,855.6	3,810.6	44.98	85.726	
8,200.0	7,287.2	7,423.0	7,308.4	31.3	21.4	92.88	976.8	-4,076.8	3,759.5	3,712.4	47.12	79.793	
8,300.0	7,287.4	7,421.8	7,307.2	33.6	21.4	92.81	976.8	-4,076.9	3,663.7	3,614.3	49.35	74.232	
8,400.0	7,287.7	7,420.7	7,306.0	35.9	21.4	92.75	976.8	-4,076.9	3,568.1	3,516.4	51.67	69.050	
8,500.0	7,288.0	7,419.5	7,304.8	38.3	21.4	92.68	976.8	-4,076.9	3,472.7	3,418.6	54.06	64.240	
8,600.0	7,288.2	7,418.2	7,303.6	40.7	21.4	92.62	976.8	-4,076.9	3,377.6	3,321.1	56.50	59.784	
8,700.0	7,288.5	7,417.0	7,302.4	43.2	21.4	92.55	976.8	-4,077.0	3,282.8	3,223.8	58.98	55.658	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
8,800.0	7,288.8	7,415.8	7,301.1	45.7	21.4	92.48	976.8	-4,077.0	3,188.3	3,126.8	61.50	51.840	
8,900.0	7,289.0	7,414.5	7,299.8	48.3	21.4	92.42	976.8	-4,077.0	3,094.1	3,030.0	64.06	48.304	
9,000.0	7,289.3	7,413.2	7,298.6	50.9	21.4	92.35	976.8	-4,077.0	3,000.3	2,933.7	66.64	45.026	
9,100.0	7,289.6	7,411.9	7,297.3	53.5	21.4	92.28	976.8	-4,077.0	2,907.0	2,837.7	69.24	41.984	
9,200.0	7,289.8	7,410.6	7,296.0	56.1	21.4	92.21	976.8	-4,077.1	2,814.0	2,742.2	71.86	39.158	
9,300.0	7,290.1	7,409.3	7,294.6	58.7	21.4	92.13	976.8	-4,077.1	2,721.6	2,647.1	74.50	36.530	
9,400.0	7,290.4	7,401.0	7,286.4	61.4	21.4	91.68	976.8	-4,077.3	2,629.8	2,552.6	77.17	34.077	
9,500.0	7,290.6	7,401.0	7,286.4	64.1	21.4	91.68	976.8	-4,077.3	2,538.6	2,458.7	79.84	31.796	
9,600.0	7,290.9	7,401.0	7,286.4	66.7	21.4	91.68	976.8	-4,077.3	2,448.0	2,365.5	82.52	29.666	
9,700.0	7,291.2	7,401.0	7,286.4	69.4	21.4	91.68	976.8	-4,077.3	2,358.2	2,273.0	85.21	27.676	
9,800.0	7,291.4	7,401.0	7,286.4	72.1	21.4	91.68	976.8	-4,077.3	2,269.3	2,181.4	87.91	25.815	
9,900.0	7,291.7	7,400.9	7,286.3	74.8	21.4	91.68	976.8	-4,077.3	2,181.3	2,090.7	90.61	24.073	
10,000.0	7,292.0	7,399.1	7,284.5	77.5	21.4	91.58	976.8	-4,077.3	2,094.4	2,001.1	93.33	22.441	
10,100.0	7,292.2	7,397.3	7,282.6	80.3	21.4	91.48	976.8	-4,077.3	2,008.7	1,912.6	96.05	20.913	
10,200.0	7,292.5	7,395.5	7,280.8	83.0	21.4	91.39	976.8	-4,077.4	1,924.4	1,825.6	98.78	19.482	
10,300.0	7,292.8	7,393.7	7,279.1	85.7	21.4	91.29	976.8	-4,077.4	1,841.7	1,740.1	101.51	18.142	
10,400.0	7,293.0	7,391.9	7,277.3	88.5	21.4	91.19	976.8	-4,077.4	1,760.7	1,656.5	104.25	16.889	
10,500.0	7,293.3	7,390.2	7,275.5	91.2	21.4	91.10	976.8	-4,077.5	1,681.8	1,574.8	107.00	15.718	
10,600.0	7,293.6	7,388.4	7,273.8	93.9	21.4	91.00	976.8	-4,077.5	1,605.3	1,495.5	109.74	14.627	
10,700.0	7,293.8	7,386.7	7,272.1	96.7	21.4	90.91	976.8	-4,077.5	1,531.4	1,418.9	112.49	13.613	
10,800.0	7,294.1	7,385.0	7,270.3	99.4	21.4	90.82	976.8	-4,077.6	1,460.7	1,345.5	115.25	12.674	
10,900.0	7,294.4	7,383.3	7,268.6	102.2	21.4	90.72	976.8	-4,077.6	1,393.6	1,275.6	118.01	11.809	
11,000.0	7,294.6	7,381.6	7,267.0	105.0	21.4	90.63	976.8	-4,077.6	1,330.6	1,209.8	120.77	11.018	
11,100.0	7,294.9	7,379.9	7,265.3	107.7	21.4	90.54	976.8	-4,077.6	1,272.3	1,148.8	123.53	10.300	
11,200.0	7,295.2	7,378.3	7,263.6	110.5	21.4	90.45	976.8	-4,077.7	1,219.5	1,093.2	126.29	9.656	
11,300.0	7,295.4	7,376.6	7,262.0	113.2	21.4	90.36	976.8	-4,077.7	1,172.8	1,043.8	129.06	9.088	
11,400.0	7,295.7	7,375.0	7,260.4	116.0	21.4	90.27	976.8	-4,077.7	1,133.1	1,001.2	131.83	8.595	
11,500.0	7,296.0	7,373.4	7,258.7	118.8	21.4	90.19	976.8	-4,077.8	1,101.0	966.4	134.60	8.180	
11,600.0	7,296.2	7,371.8	7,257.1	121.6	21.4	90.10	976.8	-4,077.8	1,077.3	939.9	137.37	7.842	
11,700.0	7,296.5	7,370.2	7,255.6	124.3	21.4	90.01	976.8	-4,077.8	1,062.5	922.3	140.14	7.582	
11,800.0	7,296.8	7,368.6	7,254.0	127.1	21.4	89.93	976.8	-4,077.9	1,057.0	914.1	142.91	7.396	
11,808.4	7,296.8	7,368.5	7,253.8	127.3	21.4	89.92	976.8	-4,077.9	1,056.9	913.8	143.15	7.384	CC, ES
11,886.1	7,297.0	7,367.3	7,252.6	129.5	21.4	89.86	976.8	-4,077.9	1,059.8	914.5	145.30	7.294	SF

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	-89.52	33.5	-3,977.1	3,977.5				
100.0	100.0	58.5	58.5	0.1	0.1	-89.52	33.5	-3,977.1	3,977.2	3,977.1	0.16	N/A	
200.0	200.0	158.5	158.5	0.3	0.2	-89.52	33.5	-3,977.1	3,977.2	3,976.7	0.50	8,003.623	
300.0	300.0	258.5	258.5	0.5	0.3	-89.52	33.5	-3,977.1	3,977.2	3,976.4	0.83	4,779.899	
400.0	400.0	358.5	358.5	0.8	0.4	-89.52	33.5	-3,977.1	3,977.2	3,976.1	1.17	3,407.440	
500.0	500.0	458.5	458.5	1.0	0.5	-89.52	33.5	-3,977.1	3,977.2	3,975.7	1.50	2,647.313	
600.0	600.0	558.5	558.5	1.2	0.6	-89.52	33.5	-3,977.1	3,977.2	3,975.4	1.84	2,164.467	
617.7	617.7	576.2	576.2	1.3	0.7	-89.52	33.5	-3,977.1	3,977.2	3,975.3	1.91	2,078.347	
700.0	700.0	656.0	656.0	1.4	0.8	-89.52	33.4	-3,977.1	3,977.3	3,975.0	2.26	1,757.510	
800.0	800.0	750.4	750.4	1.7	1.0	173.79	33.4	-3,977.2	3,979.1	3,976.4	2.67	1,491.701	
900.0	899.8	854.0	854.0	1.9	1.2	173.79	33.6	-3,977.4	3,984.5	3,981.4	3.09	1,289.219	
1,000.0	999.5	954.9	954.9	2.1	1.4	173.79	33.7	-3,977.5	3,993.3	3,989.8	3.50	1,140.036	
1,100.0	1,098.7	1,056.8	1,056.8	2.3	1.6	173.78	33.4	-3,977.6	4,005.4	4,001.5	3.91	1,023.215	
1,200.0	1,197.5	1,152.5	1,152.5	2.6	1.8	173.76	33.1	-3,977.6	4,021.0	4,016.7	4.32	930.369	
1,300.0	1,295.6	1,254.0	1,254.0	3.0	2.0	173.74	32.7	-3,977.6	4,040.0	4,035.2	4.75	850.761	
1,400.0	1,393.4	1,348.0	1,348.0	3.3	2.2	173.77	32.6	-3,977.7	4,060.7	4,055.5	5.18	784.142	
1,500.0	1,491.3	1,434.5	1,434.5	3.7	2.4	173.80	32.3	-3,978.0	4,081.7	4,076.1	5.60	729.319	
1,600.0	1,589.1	1,512.1	1,512.1	4.1	2.6	173.82	31.9	-3,978.4	4,103.0	4,097.0	6.00	683.445	
1,700.0	1,686.9	1,590.2	1,590.2	4.6	2.7	173.84	31.8	-3,979.3	4,124.7	4,118.3	6.42	642.638	
1,800.0	1,784.7	1,708.7	1,708.7	5.0	3.0	173.88	32.1	-3,980.8	4,146.7	4,139.8	6.92	599.610	
1,900.0	1,882.5	1,794.9	1,794.8	5.4	3.2	173.91	32.6	-3,981.6	4,168.3	4,160.9	7.35	567.355	
2,000.0	1,980.3	1,893.9	1,893.9	5.9	3.4	173.95	33.1	-3,982.7	4,190.1	4,182.3	7.81	536.740	
2,100.0	2,078.1	2,002.0	2,002.0	6.3	3.6	173.98	32.9	-3,983.7	4,211.6	4,203.3	8.28	508.710	
2,200.0	2,176.0	2,081.7	2,081.7	6.7	3.8	174.01	32.9	-3,984.4	4,233.2	4,224.5	8.70	486.430	
2,300.0	2,273.8	2,168.2	2,168.1	7.2	4.0	174.03	33.1	-3,985.6	4,255.3	4,246.1	9.14	465.391	
2,400.0	2,371.6	2,283.0	2,282.9	7.6	4.2	174.07	33.0	-3,987.2	4,277.3	4,267.6	9.64	443.772	
2,500.0	2,469.4	2,367.2	2,367.2	8.1	4.4	174.09	32.7	-3,988.2	4,299.2	4,289.1	10.07	426.794	
2,600.0	2,567.2	2,442.9	2,442.8	8.5	4.5	174.10	31.8	-3,989.5	4,321.5	4,311.0	10.49	411.795	
2,700.0	2,665.0	2,681.7	2,681.3	9.0	5.0	174.01	20.6	-3,990.5	4,342.5	4,331.3	11.25	386.104	
2,800.0	2,762.8	2,751.0	2,750.3	9.4	5.2	173.95	14.5	-3,989.8	4,362.2	4,350.6	11.66	374.039	
2,900.0	2,860.7	2,825.9	2,824.8	9.9	5.4	173.86	6.2	-3,989.6	4,382.5	4,370.4	12.10	362.141	
3,000.0	2,958.5	2,888.4	2,886.7	10.3	5.5	173.77	-2.4	-3,989.9	4,403.4	4,390.9	12.52	351.695	
3,100.0	3,056.3	2,938.0	2,935.7	10.8	5.6	173.68	-10.1	-3,990.5	4,425.2	4,412.3	12.91	342.736	
3,200.0	3,154.1	3,032.0	3,028.3	11.3	5.9	173.50	-25.9	-3,992.3	4,447.7	4,434.3	13.43	331.194	
3,300.0	3,251.9	3,087.6	3,083.0	11.7	6.0	173.38	-35.8	-3,993.7	4,470.8	4,456.9	13.86	322.656	
3,400.0	3,349.7	3,178.9	3,172.7	12.2	6.3	173.19	-52.9	-3,996.6	4,494.4	4,480.1	14.38	312.546	
3,500.0	3,447.5	3,266.5	3,258.8	12.6	6.5	173.02	-68.2	-3,999.2	4,518.0	4,503.1	14.89	303.511	
3,600.0	3,545.4	3,349.8	3,340.9	13.1	6.8	172.87	-81.9	-4,002.0	4,542.1	4,526.7	15.38	295.316	
3,700.0	3,643.2	3,472.0	3,461.4	13.5	7.1	172.65	-102.1	-4,006.0	4,566.0	4,550.0	16.00	285.430	
3,800.0	3,741.0	3,557.6	3,545.7	14.0	7.4	172.49	-116.8	-4,008.4	4,589.7	4,573.2	16.53	277.687	
3,900.0	3,838.8	3,672.9	3,659.1	14.5	7.8	172.26	-137.4	-4,012.0	4,613.6	4,596.4	17.16	268.802	
4,000.0	3,936.6	3,739.7	3,724.7	14.9	8.0	172.13	-149.9	-4,013.9	4,637.4	4,619.7	17.66	262.626	
4,009.8	3,946.2	3,745.4	3,730.3	15.0	8.0	172.11	-151.0	-4,014.1	4,639.8	4,622.1	17.70	262.083	
4,100.0	4,034.7	3,816.2	3,799.6	15.3	8.2	172.01	-165.5	-4,016.7	4,660.6	4,642.4	18.22	255.862	
4,200.0	4,133.4	3,929.7	3,910.5	15.6	8.7	171.80	-189.4	-4,020.6	4,680.3	4,661.5	18.86	248.147	
4,300.0	4,232.6	4,007.8	3,986.9	15.8	8.9	171.67	-205.4	-4,023.2	4,696.7	4,677.3	19.34	242.796	
4,400.0	4,332.2	4,061.0	4,038.9	16.1	9.1	171.59	-215.9	-4,025.4	4,710.4	4,690.7	19.71	238.979	
4,500.0	4,432.1	4,155.0	4,131.1	16.2	9.4	171.42	-233.9	-4,029.8	4,721.3	4,701.1	20.19	233.832	
4,600.0	4,532.0	4,230.2	4,204.7	16.4	9.7	171.27	-248.4	-4,033.7	4,729.2	4,708.6	20.60	229.599	
4,609.8	4,541.8	4,238.5	4,212.9	16.4	9.7	-92.06	-250.1	-4,034.1	4,729.8	4,705.0	24.79	190.829	
4,700.0	4,632.0	4,332.2	4,304.6	16.5	10.1	-92.28	-268.6	-4,039.0	4,735.3	4,710.2	25.12	188.512	
4,800.0	4,732.0	4,426.6	4,397.0	16.6	10.4	-92.50	-286.9	-4,043.9	4,741.4	4,715.9	25.47	186.120	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	4,832.0	4,570.4	4,538.5	16.7	10.9	-92.80	-311.9	-4,050.7	4,746.9	4,721.0	25.94	182.963	
5,000.0	4,932.0	4,670.1	4,637.3	16.9	11.2	-92.95	-324.5	-4,055.4	4,752.3	4,726.0	26.31	180.651	
5,100.0	5,032.0	4,956.5	4,923.2	17.0	11.8	-93.07	-335.1	-4,064.9	4,756.1	4,729.1	27.05	175.818	
5,200.0	5,132.0	5,064.5	5,031.2	17.1	12.0	-93.06	-334.4	-4,066.2	4,757.3	4,729.9	27.41	173.584	
5,300.0	5,232.0	5,175.3	5,141.9	17.3	12.2	-93.05	-333.8	-4,067.6	4,758.5	4,730.7	27.77	171.357	
5,400.0	5,332.0	5,266.2	5,232.9	17.4	12.3	-93.05	-333.4	-4,068.6	4,759.6	4,731.5	28.10	169.409	
5,500.0	5,432.0	5,388.7	5,355.3	17.6	12.5	-93.04	-332.6	-4,069.9	4,760.6	4,732.1	28.49	167.125	
5,600.0	5,532.0	5,493.9	5,460.6	17.7	12.7	-93.03	-332.0	-4,070.6	4,761.2	4,732.4	28.84	165.087	
5,700.0	5,632.0	5,585.3	5,551.9	17.9	12.9	-93.03	-331.7	-4,071.3	4,762.0	4,732.8	29.17	163.239	
5,800.0	5,732.0	5,685.4	5,652.0	18.0	13.1	-93.03	-331.7	-4,072.0	4,762.7	4,733.2	29.52	161.321	
5,900.0	5,832.0	5,778.0	5,744.6	18.2	13.2	-93.03	-331.7	-4,072.9	4,763.7	4,733.8	29.86	159.523	
6,000.0	5,932.0	5,883.7	5,850.3	18.3	13.4	-93.03	-331.7	-4,073.8	4,764.5	4,734.3	30.23	157.614	
6,100.0	6,032.0	5,983.5	5,950.1	18.5	13.6	-93.03	-332.4	-4,074.7	4,765.4	4,734.8	30.59	155.798	
6,200.0	6,132.0	6,075.8	6,042.4	18.6	13.8	-93.05	-333.5	-4,075.4	4,766.3	4,735.4	30.93	154.088	
6,300.0	6,232.0	6,165.0	6,131.6	18.8	14.0	-93.06	-334.5	-4,076.4	4,767.4	4,736.2	31.27	152.443	
6,400.0	6,332.0	6,258.8	6,225.4	18.9	14.2	-93.07	-335.6	-4,077.5	4,768.7	4,737.1	31.63	150.782	
6,500.0	6,432.0	6,374.9	6,341.4	19.1	14.4	-93.09	-336.9	-4,079.0	4,770.1	4,738.0	32.03	148.942	
6,600.0	6,532.0	6,464.2	6,430.7	19.2	14.6	-93.10	-338.1	-4,079.9	4,771.1	4,738.7	32.37	147.387	
6,637.8	6,569.8	6,494.1	6,460.6	19.3	14.6	-93.10	-338.4	-4,080.2	4,771.6	4,739.1	32.49	146.846	
6,650.0	6,582.0	6,507.3	6,473.9	19.3	14.6	-3.10	-338.5	-4,080.4	4,771.7	4,742.3	29.39	162.340	
6,700.0	6,632.0	6,561.6	6,528.2	19.4	14.8	-3.12	-339.0	-4,081.1	4,769.8	4,740.3	29.41	162.170	
6,750.0	6,681.6	6,612.1	6,578.7	19.4	14.8	-3.15	-339.4	-4,081.8	4,764.3	4,735.0	29.30	162.578	
6,800.0	6,730.6	6,659.1	6,625.6	19.4	14.9	-3.20	-339.7	-4,082.3	4,755.5	4,726.4	29.07	163.565	
6,850.0	6,778.9	6,706.1	6,672.6	19.3	15.0	-3.27	-340.1	-4,083.0	4,743.2	4,714.5	28.73	165.098	
6,900.0	6,826.2	6,752.8	6,719.3	19.3	15.1	-3.36	-340.4	-4,083.6	4,727.6	4,699.4	28.28	167.193	
6,950.0	6,872.2	6,801.4	6,767.9	19.2	15.2	-3.47	-340.5	-4,084.3	4,708.8	4,681.1	27.72	169.841	
7,000.0	6,916.8	6,851.1	6,817.5	19.2	15.3	-3.62	-340.6	-4,084.9	4,686.7	4,659.6	27.08	173.062	
7,050.0	6,959.6	6,901.7	6,868.2	19.1	15.4	-3.79	-340.8	-4,085.5	4,661.5	4,635.2	26.36	176.860	
7,100.0	7,000.6	6,951.5	6,918.0	19.0	15.5	-4.01	-340.9	-4,086.0	4,633.3	4,607.8	25.56	181.259	
7,150.0	7,039.5	6,982.7	6,949.1	19.0	15.6	-4.26	-341.0	-4,086.2	4,602.3	4,577.6	24.68	186.487	
7,200.0	7,076.0	7,008.3	6,974.7	19.0	15.6	-4.56	-341.1	-4,086.5	4,568.7	4,545.0	23.75	192.362	
7,250.0	7,110.1	7,032.3	6,998.8	19.0	15.7	-4.94	-341.3	-4,086.9	4,532.7	4,509.9	22.81	198.751	
7,300.0	7,141.6	7,054.0	7,020.5	19.1	15.7	-5.40	-341.4	-4,087.2	4,494.5	4,472.6	21.87	205.504	
7,350.0	7,170.3	7,076.1	7,042.6	19.2	15.7	-5.98	-341.6	-4,087.6	4,454.1	4,433.1	20.98	212.277	
7,400.0	7,196.1	7,095.6	7,062.0	19.4	15.8	-6.73	-341.9	-4,088.0	4,411.9	4,391.7	20.18	218.678	
7,450.0	7,218.8	7,112.9	7,079.3	19.7	15.8	-7.72	-342.1	-4,088.4	4,367.9	4,348.4	19.50	223.996	
7,500.0	7,238.3	7,128.0	7,094.5	20.0	15.9	-9.07	-342.3	-4,088.7	4,322.5	4,303.5	19.02	227.209	
7,550.0	7,254.6	7,148.0	7,114.4	20.5	15.9	-11.05	-342.6	-4,089.2	4,275.7	4,256.8	18.87	226.547	
7,600.0	7,267.6	7,152.9	7,119.4	21.0	15.9	-13.98	-342.7	-4,089.3	4,227.9	4,208.7	19.17	220.515	
7,650.0	7,277.1	7,164.9	7,131.4	21.5	15.9	-19.14	-342.9	-4,089.6	4,179.1	4,158.7	20.46	204.309	
7,700.0	7,283.3	7,173.1	7,139.5	22.2	15.9	-29.61	-343.1	-4,089.8	4,129.8	4,105.8	24.01	171.988	
7,750.0	7,285.9	7,177.4	7,143.8	22.9	16.0	-56.63	-343.1	-4,089.9	4,080.1	4,046.9	33.18	122.986	
7,760.9	7,286.0	7,177.8	7,144.2	23.0	16.0	-67.10	-343.1	-4,089.9	4,069.2	4,033.5	35.69	114.017	
7,800.0	7,286.1	7,178.9	7,145.3	23.6	16.0	-67.32	-343.2	-4,089.9	4,030.2	3,993.9	36.29	111.065	
7,900.0	7,286.4	7,181.8	7,148.3	25.3	16.0	-67.86	-343.2	-4,090.0	3,930.4	3,892.5	37.96	103.548	
8,000.0	7,286.6	7,184.7	7,151.2	27.2	16.0	-68.41	-343.2	-4,090.0	3,830.7	3,790.9	39.81	96.223	
8,100.0	7,286.9	7,187.6	7,154.1	29.2	16.0	-68.96	-343.3	-4,090.1	3,731.0	3,689.2	41.82	89.222	
8,200.0	7,287.2	7,190.5	7,156.9	31.3	16.0	-69.51	-343.3	-4,090.2	3,631.3	3,587.3	43.95	82.628	
8,300.0	7,287.4	7,193.4	7,159.8	33.6	16.0	-70.06	-343.4	-4,090.2	3,531.6	3,485.4	46.18	76.472	
8,400.0	7,287.7	7,196.2	7,162.6	35.9	16.0	-70.61	-343.4	-4,090.3	3,431.9	3,383.4	48.50	70.758	
8,500.0	7,288.0	7,199.1	7,165.5	38.3	16.0	-71.17	-343.5	-4,090.4	3,332.3	3,281.4	50.90	65.472	
8,600.0	7,288.2	7,201.9	7,168.3	40.7	16.0	-71.72	-343.5	-4,090.4	3,232.6	3,179.3	53.35	60.591	

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-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	7,288.5	7,204.7	7,171.1	43.2	16.0	-72.27	-343.6	-4,090.5	3,133.0	3,077.1	55.86	56.086	
8,800.0	7,288.8	7,207.5	7,173.9	45.7	16.0	-72.83	-343.6	-4,090.6	3,033.4	2,975.0	58.41	51.928	
8,900.0	7,289.0	7,210.2	7,176.7	48.3	16.0	-73.38	-343.6	-4,090.6	2,933.8	2,872.8	61.01	48.088	
9,000.0	7,289.3	7,213.0	7,179.4	50.9	16.0	-73.94	-343.7	-4,090.7	2,834.3	2,770.6	63.64	44.537	
9,100.0	7,289.6	7,215.8	7,182.2	53.5	16.0	-74.49	-343.7	-4,090.8	2,734.8	2,668.5	66.30	41.250	
9,200.0	7,289.8	7,218.5	7,184.9	56.1	16.0	-75.05	-343.8	-4,090.8	2,635.3	2,566.3	68.98	38.201	
9,300.0	7,290.1	7,221.2	7,187.6	58.7	16.0	-75.60	-343.8	-4,090.9	2,535.8	2,464.1	71.69	35.370	
9,400.0	7,290.4	7,223.9	7,190.3	61.4	16.0	-76.16	-343.8	-4,090.9	2,436.4	2,362.0	74.42	32.737	
9,500.0	7,290.6	7,226.6	7,193.0	64.1	16.1	-76.71	-343.9	-4,091.0	2,337.1	2,259.9	77.17	30.284	
9,600.0	7,290.9	7,229.3	7,195.7	66.7	16.1	-77.27	-343.9	-4,091.1	2,237.8	2,157.8	79.94	27.994	
9,700.0	7,291.2	7,232.0	7,198.4	69.4	16.1	-77.82	-344.0	-4,091.1	2,138.5	2,055.8	82.72	25.854	
9,800.0	7,291.4	7,234.6	7,201.0	72.1	16.1	-78.37	-344.0	-4,091.2	2,039.4	1,953.9	85.51	23.850	
9,900.0	7,291.7	7,237.3	7,203.7	74.8	16.1	-78.93	-344.0	-4,091.2	1,940.3	1,852.0	88.31	21.971	
10,000.0	7,292.0	7,239.9	7,206.3	77.5	16.1	-79.48	-344.1	-4,091.3	1,841.3	1,750.2	91.12	20.207	
10,100.0	7,292.2	7,242.5	7,208.9	80.3	16.1	-80.04	-344.1	-4,091.4	1,742.4	1,648.5	93.95	18.547	
10,200.0	7,292.5	7,245.4	7,211.8	83.0	16.1	-80.63	-344.1	-4,091.4	1,643.7	1,546.9	96.78	16.983	
10,300.0	7,292.8	7,248.1	7,214.5	85.7	16.1	-81.22	-344.2	-4,091.5	1,545.1	1,445.5	99.62	15.510	
10,400.0	7,293.0	7,250.8	7,217.2	88.5	16.1	-81.80	-344.2	-4,091.5	1,446.7	1,344.3	102.47	14.119	
10,500.0	7,293.3	7,253.5	7,219.9	91.2	16.1	-82.37	-344.3	-4,091.6	1,348.6	1,243.3	105.31	12.806	
10,600.0	7,293.6	7,256.2	7,222.6	93.9	16.1	-82.93	-344.3	-4,091.7	1,250.7	1,142.5	108.15	11.564	
10,700.0	7,293.8	7,258.7	7,225.1	96.7	16.1	-83.48	-344.3	-4,091.7	1,153.2	1,042.2	110.99	10.390	
10,800.0	7,294.1	7,261.3	7,227.7	99.4	16.1	-84.03	-344.4	-4,091.8	1,056.1	942.3	113.83	9.278	
10,900.0	7,294.4	7,263.8	7,230.2	102.2	16.1	-84.57	-344.4	-4,091.8	959.7	843.0	116.67	8.225	
11,000.0	7,294.6	7,266.3	7,232.7	105.0	16.1	-85.10	-344.4	-4,091.9	864.0	744.5	119.51	7.230	
11,100.0	7,294.9	7,268.7	7,235.1	107.7	16.1	-85.62	-344.5	-4,091.9	769.4	647.1	122.34	6.290	
11,200.0	7,295.2	7,271.1	7,237.5	110.5	16.1	-86.14	-344.5	-4,092.0	676.4	551.3	125.17	5.404	
11,300.0	7,295.4	7,273.4	7,239.8	113.2	16.1	-86.65	-344.5	-4,092.0	585.7	457.7	127.99	4.576	
11,400.0	7,295.7	7,275.8	7,242.2	116.0	16.2	-87.15	-344.6	-4,092.1	498.6	367.8	130.81	3.812	
11,500.0	7,296.0	7,278.1	7,244.4	118.8	16.2	-87.64	-344.6	-4,092.1	417.2	283.6	133.62	3.123	
11,600.0	7,296.2	7,280.3	7,246.7	121.6	16.2	-88.13	-344.6	-4,092.1	345.8	209.4	136.43	2.535	
11,700.0	7,296.5	7,282.5	7,248.9	124.3	16.2	-88.61	-344.7	-4,092.2	291.6	152.4	139.23	2.095	
11,800.0	7,296.8	7,284.7	7,251.1	127.1	16.2	-89.08	-344.7	-4,092.2	265.5	123.5	142.02	1.870	
11,822.7	7,296.8	7,285.2	7,251.6	127.7	16.2	-89.19	-344.7	-4,092.2	264.6	121.9	142.66	1.855	CC, ES, SF
11,886.1	7,297.0	7,286.6	7,253.0	129.5	16.2	-89.49	-344.7	-4,092.3	272.1	127.6	144.43	1.884	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	-88.89	76.8	-3,979.0	3,980.0				
100.0	100.0	59.0	59.0	0.1	0.1	-88.89	76.8	-3,979.0	3,979.8	3,979.6	0.16	N/A	
200.0	200.0	159.8	159.8	0.3	0.2	-88.89	76.9	-3,979.0	3,979.8	3,979.3	0.50	7,982.924	
300.0	300.0	260.6	260.6	0.5	0.3	-88.89	76.9	-3,979.0	3,979.7	3,978.9	0.83	4,767.886	
400.0	400.0	361.4	361.4	0.8	0.4	-88.89	77.0	-3,978.9	3,979.7	3,978.5	1.17	3,398.944	
500.0	500.0	462.2	462.2	1.0	0.5	-88.89	77.0	-3,978.8	3,979.6	3,978.1	1.51	2,640.710	
600.0	600.0	563.0	563.0	1.2	0.6	-88.89	77.2	-3,978.7	3,979.5	3,977.6	1.84	2,159.040	
700.0	700.0	1,309.2	1,304.7	1.4	2.5	-88.50	102.9	-3,921.3	3,975.5	3,971.5	3.94	1,009.046	
800.0	800.0	1,760.0	1,739.6	1.7	4.7	175.90	170.6	-3,825.5	3,954.7	3,949.2	5.51	717.763	
900.0	899.8	1,855.3	1,829.9	1.9	5.2	176.23	189.5	-3,801.4	3,934.9	3,928.8	6.11	644.077	
1,000.0	999.5	1,953.2	1,922.5	2.1	5.8	176.57	209.5	-3,776.9	3,919.0	3,912.2	6.74	581.806	
1,100.0	1,098.7	2,036.8	2,001.4	2.3	6.3	176.87	227.1	-3,755.8	3,906.3	3,899.0	7.31	534.389	
1,200.0	1,197.5	2,096.0	2,057.5	2.6	6.6	177.09	239.6	-3,741.4	3,898.2	3,890.4	7.77	501.460	
1,300.0	1,295.6	2,170.5	2,128.3	3.0	7.0	177.34	254.8	-3,723.9	3,894.5	3,886.2	8.28	470.135	
1,400.0	1,393.4	2,376.0	2,323.4	3.3	8.2	177.99	293.6	-3,672.4	3,890.7	3,881.2	9.42	412.804	
1,500.0	1,491.3	2,455.5	2,398.6	3.7	8.7	178.26	309.3	-3,651.7	3,886.5	3,876.5	10.04	387.084	
1,600.0	1,589.1	2,613.8	2,547.8	4.1	9.7	178.80	341.5	-3,609.8	3,882.0	3,870.9	11.07	350.689	
1,700.0	1,686.9	2,690.3	2,619.6	4.6	10.2	179.07	357.9	-3,589.1	3,877.0	3,865.3	11.72	330.894	
1,800.0	1,784.7	2,751.0	2,676.7	5.0	10.6	179.29	371.0	-3,573.2	3,873.2	3,860.9	12.28	315.348	
1,900.0	1,882.5	2,792.0	2,715.4	5.4	10.8	179.44	379.7	-3,563.0	3,870.6	3,857.9	12.73	303.947	
2,000.0	1,980.3	2,844.0	2,764.8	5.9	11.1	179.62	390.5	-3,550.8	3,869.5	3,856.2	13.24	292.208	
2,100.0	2,078.1	2,975.7	2,889.7	6.3	11.9	-179.92	418.1	-3,519.6	3,868.5	3,854.3	14.16	273.138	
2,200.0	2,176.0	3,054.2	2,964.1	6.7	12.4	-179.64	434.8	-3,500.8	3,867.5	3,852.6	14.82	260.962	
2,271.7	2,246.1	3,101.0	3,008.6	7.1	12.6	-179.48	444.6	-3,489.9	3,867.2	3,852.0	15.24	253.798	
2,300.0	2,273.8	3,125.0	3,031.4	7.2	12.8	-179.40	449.5	-3,484.4	3,867.3	3,851.8	15.43	250.637	
2,400.0	2,371.6	3,199.9	3,102.7	7.6	13.2	-179.14	464.9	-3,467.6	3,867.8	3,851.8	16.06	240.861	
2,500.0	2,469.4	3,340.0	3,236.5	8.1	14.0	-178.69	491.7	-3,435.7	3,868.2	3,851.2	16.99	227.674	
2,600.0	2,567.2	3,437.6	3,329.8	8.5	14.5	-178.40	509.1	-3,413.1	3,868.1	3,850.4	17.71	218.364	
2,700.0	2,665.0	3,568.6	3,454.7	9.0	15.3	-177.98	534.1	-3,382.4	3,868.1	3,849.4	18.64	207.566	
2,800.0	2,762.8	3,661.1	3,542.6	9.4	15.8	-177.68	551.9	-3,359.9	3,867.3	3,847.9	19.37	199.638	
2,900.0	2,860.7	3,778.4	3,654.3	9.9	16.5	-177.30	574.2	-3,331.7	3,866.8	3,846.6	20.23	191.153	
3,000.0	2,958.5	3,899.4	3,769.2	10.3	17.3	-176.91	596.9	-3,301.5	3,865.5	3,844.4	21.12	183.021	
3,100.0	3,056.3	3,967.0	3,833.4	10.8	17.7	-176.69	609.9	-3,284.7	3,864.6	3,842.8	21.74	177.749	
3,159.3	3,114.3	4,010.5	3,874.8	11.1	17.9	-176.55	618.3	-3,274.2	3,864.4	3,842.3	22.13	174.650	
3,200.0	3,154.1	4,036.9	3,899.9	11.3	18.1	-176.46	623.4	-3,267.9	3,864.5	3,842.1	22.37	172.734	
3,300.0	3,251.9	4,129.6	3,988.3	11.7	18.6	-176.16	641.0	-3,246.2	3,865.1	3,842.0	23.11	167.233	
3,400.0	3,349.7	4,341.0	4,189.5	12.2	19.9	-175.49	680.3	-3,194.6	3,865.3	3,840.8	24.49	157.806	
3,500.0	3,447.5	4,402.0	4,247.2	12.6	20.3	-175.29	692.0	-3,178.7	3,863.7	3,838.6	25.09	153.980	
3,600.0	3,545.4	4,493.1	4,333.7	13.1	20.8	-175.00	709.2	-3,155.9	3,863.0	3,837.2	25.86	149.393	
3,700.0	3,643.2	4,610.7	4,444.8	13.5	21.6	-174.59	732.8	-3,125.6	3,862.0	3,835.2	26.79	144.134	
3,800.0	3,741.0	4,692.4	4,522.0	14.0	22.1	-174.32	749.1	-3,104.5	3,861.0	3,833.5	27.53	140.273	
3,900.0	3,838.8	4,787.3	4,612.0	14.5	22.7	-174.00	767.9	-3,080.3	3,860.6	3,832.3	28.33	136.256	
3,969.0	3,906.3	4,841.0	4,662.7	14.8	23.0	-173.81	778.6	-3,066.7	3,860.4	3,831.6	28.83	133.913	
4,000.0	3,936.6	4,860.9	4,681.6	14.9	23.1	-173.74	782.6	-3,061.7	3,860.4	3,831.4	29.03	132.998	
4,009.8	3,946.2	4,867.2	4,687.5	15.0	23.2	-173.72	783.9	-3,060.2	3,860.5	3,831.4	29.09	132.712	
4,100.0	4,034.7	4,924.9	4,742.2	15.3	23.5	-173.52	795.7	-3,046.0	3,859.8	3,830.1	29.72	129.889	
4,200.0	4,133.4	4,999.0	4,812.7	15.6	24.0	-173.26	810.7	-3,028.5	3,856.7	3,826.3	30.41	126.823	
4,300.0	4,232.6	5,076.8	4,886.8	15.8	24.4	-172.97	826.0	-3,010.7	3,850.9	3,819.8	31.07	123.923	
4,400.0	4,332.2	5,197.8	5,002.5	16.1	25.1	-172.55	848.3	-2,983.0	3,841.6	3,809.6	31.93	120.324	
4,500.0	4,432.1	5,321.1	5,120.1	16.2	25.8	-172.08	871.0	-2,953.8	3,828.1	3,795.3	32.77	116.800	
4,600.0	4,532.0	5,373.0	5,169.5	16.4	26.1	-171.84	881.0	-2,941.3	3,811.4	3,778.2	33.19	114.824	
4,609.8	4,541.8	5,400.0	5,195.1	16.4	26.3	-75.05	886.1	-2,934.9	3,809.5	3,773.9	35.62	106.946	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
4,700.0	4,632.0	5,466.0	5,258.4	16.5	26.7	-74.82	898.0	-2,920.2	3,793.7	3,757.8	35.94	105.552	
4,800.0	4,732.0	5,494.5	5,285.9	16.6	26.8	-74.72	902.7	-2,914.2	3,777.2	3,741.0	36.15	104.484	
4,900.0	4,832.0	5,560.0	5,349.3	16.7	27.1	-74.52	913.0	-2,901.4	3,762.1	3,725.6	36.47	103.163	
5,000.0	4,932.0	5,597.6	5,385.9	16.9	27.3	-74.41	918.5	-2,894.7	3,748.2	3,711.5	36.70	102.142	
5,100.0	5,032.0	5,653.0	5,440.0	17.0	27.5	-74.26	925.9	-2,885.5	3,735.6	3,698.6	36.97	101.036	
5,200.0	5,132.0	5,739.0	5,524.4	17.1	27.9	-74.06	935.6	-2,872.4	3,723.9	3,686.6	37.32	99.787	
5,300.0	5,232.0	5,802.9	5,587.4	17.3	28.1	-73.93	941.7	-2,863.2	3,712.7	3,675.1	37.61	98.720	
5,400.0	5,332.0	5,864.0	5,647.7	17.4	28.3	-73.81	947.3	-2,855.2	3,702.5	3,664.6	37.89	97.723	
5,500.0	5,432.0	5,933.0	5,715.9	17.6	28.5	-73.68	953.6	-2,846.9	3,693.4	3,655.2	38.18	96.738	
5,600.0	5,532.0	5,995.2	5,777.5	17.7	28.7	-73.57	959.2	-2,840.1	3,685.2	3,646.8	38.45	95.848	
5,700.0	5,632.0	6,060.9	5,842.5	17.9	28.9	-73.45	965.1	-2,833.3	3,677.9	3,639.1	38.72	94.987	
5,800.0	5,732.0	6,119.0	5,900.2	18.0	29.1	-73.35	969.8	-2,828.0	3,671.5	3,632.6	38.98	94.201	
5,900.0	5,832.0	6,193.0	5,973.8	18.2	29.3	-73.25	975.0	-2,822.3	3,666.1	3,626.9	39.25	93.405	
6,000.0	5,932.0	6,259.4	6,040.0	18.3	29.4	-73.18	978.7	-2,818.0	3,661.6	3,622.1	39.51	92.681	
6,100.0	6,032.0	6,327.6	6,108.0	18.5	29.5	-73.12	981.4	-2,814.7	3,658.0	3,618.2	39.77	91.987	
6,200.0	6,132.0	6,399.0	6,179.4	18.6	29.6	-73.09	982.7	-2,812.1	3,655.1	3,615.1	40.03	91.314	
6,300.0	6,232.0	6,476.2	6,256.6	18.8	29.7	-73.07	983.1	-2,810.2	3,652.9	3,612.6	40.29	90.660	
6,400.0	6,332.0	6,557.7	6,338.0	18.9	29.8	-73.06	983.4	-2,808.8	3,651.4	3,610.8	40.56	90.023	
6,500.0	6,432.0	6,637.2	6,417.6	19.1	29.9	-73.06	983.3	-2,808.0	3,650.3	3,609.5	40.82	89.418	
6,600.0	6,532.0	6,719.6	6,500.0	19.2	30.0	-73.07	982.7	-2,807.8	3,649.9	3,608.8	41.09	88.829	
6,637.8	6,569.8	6,753.1	6,533.5	19.3	30.0	-73.07	982.5	-2,807.8	3,649.8	3,608.6	41.19	88.606	
6,650.0	6,582.0	6,764.0	6,544.3	19.3	30.0	16.93	982.4	-2,807.8	3,649.7	3,608.6	41.07	88.868	
6,700.0	6,632.0	6,809.1	6,589.4	19.4	30.1	16.99	982.1	-2,807.8	3,647.2	3,606.3	40.92	89.123	
6,750.0	6,681.6	6,854.1	6,634.4	19.4	30.1	17.15	981.8	-2,808.0	3,641.4	3,600.8	40.65	89.575	
6,800.0	6,730.6	6,901.2	6,681.5	19.4	30.1	17.41	981.5	-2,808.2	3,632.4	3,592.1	40.26	90.213	
6,850.0	6,778.9	6,948.5	6,728.9	19.3	30.2	17.76	981.0	-2,808.4	3,620.2	3,580.4	39.77	91.028	
6,900.0	6,826.2	6,985.4	6,765.7	19.3	30.2	18.22	980.6	-2,808.7	3,604.8	3,565.6	39.17	92.034	
6,950.0	6,872.2	7,018.0	6,798.3	19.2	30.2	18.78	980.3	-2,809.0	3,586.5	3,548.0	38.48	93.197	
7,000.0	6,916.8	7,054.0	6,834.3	19.2	30.2	19.48	980.0	-2,809.5	3,565.3	3,527.6	37.75	94.452	
7,050.0	6,959.6	7,085.1	6,865.4	19.1	30.3	20.32	979.7	-2,810.1	3,541.3	3,504.4	36.98	95.776	
7,100.0	7,000.6	7,119.9	6,900.2	19.0	30.3	21.34	979.4	-2,810.8	3,514.7	3,478.4	36.22	97.045	
7,150.0	7,039.5	7,156.6	6,936.9	19.0	30.3	22.58	979.0	-2,811.6	3,485.4	3,449.9	35.51	98.142	
7,200.0	7,076.0	7,209.7	6,990.0	19.0	30.3	24.18	978.2	-2,812.7	3,453.5	3,418.5	34.96	98.774	
7,250.0	7,110.1	7,255.2	7,035.5	19.0	30.4	26.10	977.3	-2,813.5	3,419.1	3,384.5	34.58	98.864	
7,300.0	7,141.6	7,291.0	7,071.2	19.1	30.4	28.36	976.7	-2,814.0	3,382.5	3,348.0	34.44	98.216	
7,350.0	7,170.3	7,323.5	7,103.7	19.2	30.4	31.12	976.2	-2,814.5	3,343.8	3,309.2	34.63	96.546	
7,400.0	7,196.1	7,350.0	7,130.2	19.4	30.4	34.44	975.9	-2,814.8	3,303.4	3,268.1	35.24	93.734	
7,450.0	7,218.8	7,371.8	7,152.1	19.7	30.4	38.48	975.6	-2,815.1	3,261.4	3,225.1	36.34	89.741	
7,500.0	7,238.3	7,390.8	7,171.0	20.0	30.5	43.44	975.3	-2,815.3	3,218.1	3,180.1	38.00	84.694	
7,550.0	7,254.6	7,406.7	7,187.0	20.5	30.5	49.50	975.1	-2,815.5	3,173.6	3,133.4	40.19	78.963	
7,600.0	7,267.6	7,419.6	7,199.8	21.0	30.5	56.85	974.9	-2,815.7	3,128.2	3,085.4	42.79	73.098	
7,650.0	7,277.1	7,431.2	7,211.5	21.5	30.5	65.62	974.7	-2,815.9	3,082.1	3,036.6	45.53	67.697	
7,700.0	7,283.3	7,446.8	7,227.0	22.2	30.5	75.95	974.5	-2,816.1	3,035.6	2,987.7	47.94	63.324	
7,750.0	7,285.9	7,453.6	7,233.8	22.9	30.5	86.72	974.4	-2,816.1	2,988.9	2,939.5	49.36	60.554	
7,760.9	7,286.0	7,454.0	7,234.3	23.0	30.5	89.04	974.4	-2,816.1	2,978.7	2,929.2	49.51	60.158	
7,800.0	7,286.1	7,454.9	7,235.1	23.6	30.5	89.09	974.4	-2,816.1	2,942.1	2,892.0	50.11	58.710	
7,900.0	7,286.4	7,456.8	7,237.1	25.3	30.5	89.20	974.4	-2,816.1	2,849.0	2,797.2	51.79	55.008	
8,000.0	7,286.6	7,458.6	7,238.8	27.2	30.5	89.29	974.4	-2,816.1	2,756.3	2,702.7	53.66	51.368	
8,100.0	7,286.9	7,460.2	7,240.4	29.2	30.5	89.38	974.4	-2,816.2	2,664.2	2,608.6	55.68	47.851	
8,200.0	7,287.2	7,461.6	7,241.8	31.3	30.5	89.45	974.4	-2,816.2	2,572.7	2,514.9	57.82	44.496	
8,300.0	7,287.4	7,462.9	7,243.1	33.6	30.5	89.52	974.4	-2,816.2	2,481.8	2,421.8	60.06	41.324	
8,400.0	7,287.7	7,464.1	7,244.3	35.9	30.5	89.59	974.3	-2,816.2	2,391.7	2,329.3	62.38	38.342	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
8,500.0	7,288.0	7,465.2	7,245.4	38.3	30.5	89.65	974.3	-2,816.2	2,302.4	2,237.6	64.76	35.550	
8,600.0	7,288.2	7,466.2	7,246.4	40.7	30.5	89.70	974.3	-2,816.2	2,213.9	2,146.7	67.20	32.944	
8,700.0	7,288.5	7,467.1	7,247.3	43.2	30.5	89.75	974.3	-2,816.2	2,126.5	2,056.9	69.69	30.516	
8,800.0	7,288.8	7,468.0	7,248.2	45.7	30.5	89.80	974.3	-2,816.2	2,040.3	1,968.1	72.21	28.256	
8,900.0	7,289.0	7,468.8	7,249.0	48.3	30.5	89.84	974.3	-2,816.2	1,955.4	1,880.6	74.76	26.155	
9,000.0	7,289.3	7,469.5	7,249.7	50.9	30.5	89.88	974.3	-2,816.2	1,871.9	1,794.6	77.34	24.204	
9,100.0	7,289.6	7,470.2	7,250.4	53.5	30.5	89.92	974.3	-2,816.2	1,790.2	1,710.3	79.94	22.393	
9,200.0	7,289.8	7,470.8	7,251.0	56.1	30.5	89.95	974.3	-2,816.2	1,710.4	1,627.8	82.57	20.715	
9,300.0	7,290.1	7,471.4	7,251.6	58.7	30.5	89.99	974.3	-2,816.2	1,632.8	1,547.6	85.21	19.163	
9,400.0	7,290.4	7,472.0	7,252.2	61.4	30.5	90.02	974.3	-2,816.2	1,557.8	1,470.0	87.86	17.730	
9,500.0	7,290.6	7,472.5	7,252.7	64.1	30.5	90.05	974.3	-2,816.2	1,485.8	1,395.2	90.53	16.412	
9,600.0	7,290.9	7,473.0	7,253.2	66.7	30.5	90.07	974.3	-2,816.2	1,417.1	1,323.9	93.21	15.203	
9,700.0	7,291.2	7,473.5	7,253.7	69.4	30.5	90.10	974.3	-2,816.2	1,352.3	1,256.4	95.90	14.102	
9,800.0	7,291.4	7,473.9	7,254.2	72.1	30.5	90.12	974.3	-2,816.2	1,292.1	1,193.5	98.60	13.104	
9,900.0	7,291.7	7,474.4	7,254.6	74.8	30.5	90.15	974.3	-2,816.2	1,237.0	1,135.7	101.31	12.210	
10,000.0	7,292.0	7,474.8	7,255.0	77.5	30.5	90.17	974.3	-2,816.2	1,187.8	1,083.7	104.02	11.419	
10,100.0	7,292.2	7,475.2	7,255.4	80.3	30.5	90.19	974.3	-2,816.2	1,145.2	1,038.4	106.74	10.729	
10,200.0	7,292.5	7,475.5	7,255.7	83.0	30.5	90.21	974.3	-2,816.2	1,110.0	1,000.5	109.47	10.140	
10,300.0	7,292.8	7,475.9	7,256.1	85.7	30.5	90.23	974.3	-2,816.2	1,082.9	970.7	112.20	9.652	
10,400.0	7,293.0	7,476.2	7,256.4	88.5	30.5	90.24	974.3	-2,816.2	1,064.6	949.7	114.93	9.263	
10,500.0	7,293.3	7,476.5	7,256.7	91.2	30.5	90.26	974.3	-2,816.2	1,055.5	937.8	117.67	8.970	
10,546.7	7,293.4	7,476.7	7,256.9	92.5	30.5	90.27	974.3	-2,816.2	1,054.5	935.5	118.96	8.864	CC
10,600.0	7,293.6	7,476.8	7,257.0	93.9	30.5	90.28	974.3	-2,816.2	1,055.8	935.4	120.42	8.768	ES
10,700.0	7,293.8	7,477.1	7,257.3	96.7	30.5	90.29	974.3	-2,816.2	1,065.5	942.4	123.17	8.651	
10,800.0	7,294.1	7,477.4	7,257.6	99.4	30.5	90.31	974.3	-2,816.2	1,084.4	958.5	125.92	8.612	SF
10,900.0	7,294.4	7,477.6	7,257.9	102.2	30.5	90.32	974.3	-2,816.2	1,112.1	983.4	128.67	8.642	
11,000.0	7,294.6	7,477.9	7,258.1	105.0	30.5	90.34	974.3	-2,816.2	1,147.8	1,016.3	131.43	8.733	
11,100.0	7,294.9	7,478.1	7,258.4	107.7	30.5	90.35	974.3	-2,816.2	1,190.8	1,056.6	134.19	8.874	
11,200.0	7,295.2	7,478.4	7,258.6	110.5	30.5	90.36	974.3	-2,816.2	1,240.4	1,103.5	136.95	9.057	
11,300.0	7,295.4	7,478.6	7,258.8	113.2	30.5	90.38	974.3	-2,816.2	1,295.9	1,156.2	139.72	9.275	
11,400.0	7,295.7	7,478.8	7,259.0	116.0	30.5	90.39	974.3	-2,816.2	1,356.4	1,214.0	142.49	9.520	
11,500.0	7,296.0	7,479.0	7,259.2	118.8	30.5	90.40	974.3	-2,816.2	1,421.5	1,276.2	145.25	9.786	
11,600.0	7,296.2	7,479.2	7,259.4	121.6	30.5	90.41	974.3	-2,816.2	1,490.4	1,342.4	148.03	10.068	
11,700.0	7,296.5	7,479.4	7,259.6	124.3	30.5	90.42	974.3	-2,816.2	1,562.7	1,411.9	150.80	10.363	
11,800.0	7,296.8	7,479.6	7,259.8	127.1	30.5	90.43	974.3	-2,816.2	1,637.9	1,484.3	153.57	10.665	
11,886.1	7,297.0	7,479.8	7,260.0	129.5	30.5	90.44	974.3	-2,816.2	1,704.7	1,548.7	155.96	10.930	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	-89.20	55.7	-3,976.5	3,977.1				
100.0	100.0	49.8	49.8	0.1	0.1	-89.20	55.7	-3,976.6	3,977.0	3,976.8	0.15	N/A	
200.0	200.0	135.0	135.0	0.3	0.2	-89.19	56.0	-3,976.9	3,977.4	3,976.9	0.48	8,368.341	
300.0	300.0	220.1	220.1	0.5	0.3	-89.18	56.6	-3,977.6	3,978.2	3,977.4	0.80	4,992.833	
400.0	400.0	305.2	305.2	0.8	0.3	-89.17	57.5	-3,978.6	3,979.3	3,978.2	1.12	3,558.524	
500.0	500.0	390.4	390.3	1.0	0.4	-89.16	58.7	-3,979.8	3,980.8	3,979.4	1.44	2,765.034	
600.0	600.0	475.5	475.4	1.2	0.5	-89.14	60.1	-3,981.4	3,982.7	3,981.0	1.76	2,261.447	
700.0	700.0	599.0	598.9	1.4	0.7	-89.10	62.7	-3,984.3	3,985.2	3,983.1	2.13	1,874.289	
800.0	800.0	766.1	766.0	1.7	1.0	174.25	65.1	-3,985.2	3,987.5	3,984.9	2.66	1,499.503	
900.0	899.8	2,033.4	2,011.1	1.9	5.1	173.53	5.9	-3,798.9	3,976.6	3,970.7	5.86	678.972	
1,000.0	999.5	2,096.0	2,070.8	2.1	5.4	173.50	0.1	-3,781.0	3,956.3	3,950.1	6.24	634.108	
1,100.0	1,098.7	2,189.0	2,159.8	2.3	5.9	173.45	-7.3	-3,754.9	3,940.0	3,933.3	6.70	588.318	
1,200.0	1,197.5	2,296.8	2,262.9	2.6	6.5	173.38	-16.0	-3,724.8	3,927.2	3,920.0	7.22	543.893	
1,300.0	1,295.6	2,435.8	2,395.5	3.0	7.3	173.24	-30.2	-3,685.5	3,917.7	3,909.8	7.88	497.311	
1,400.0	1,393.4	2,572.3	2,524.9	3.3	8.1	173.06	-46.0	-3,645.0	3,908.2	3,899.6	8.59	454.764	
1,500.0	1,491.3	2,657.0	2,605.1	3.7	8.7	172.94	-56.2	-3,619.8	3,898.6	3,889.5	9.13	427.035	
1,600.0	1,589.1	2,719.8	2,664.7	4.1	9.0	172.85	-63.6	-3,601.4	3,889.7	3,880.2	9.59	405.804	
1,700.0	1,686.9	2,787.6	2,729.3	4.6	9.4	172.76	-71.4	-3,582.3	3,881.9	3,871.8	10.06	385.812	
1,800.0	1,784.7	2,897.7	2,834.4	5.0	10.0	172.62	-83.1	-3,551.7	3,874.5	3,863.8	10.68	362.733	
1,900.0	1,882.5	2,990.2	2,922.7	5.4	10.5	172.52	-91.7	-3,525.5	3,866.6	3,855.3	11.25	343.819	
2,000.0	1,980.3	3,062.0	2,991.3	5.9	10.9	172.45	-98.4	-3,505.6	3,859.4	3,847.6	11.74	328.694	
2,100.0	2,078.1	3,180.7	3,105.1	6.3	11.6	172.33	-109.3	-3,473.3	3,852.7	3,840.3	12.40	310.747	
2,200.0	2,176.0	3,265.3	3,185.8	6.7	12.1	172.22	-118.0	-3,449.6	3,845.2	3,832.2	12.95	296.837	
2,300.0	2,273.8	3,312.0	3,230.5	7.2	12.4	172.17	-122.8	-3,437.0	3,838.9	3,825.5	13.38	286.871	
2,400.0	2,371.6	3,389.7	3,305.2	7.6	12.8	172.09	-129.9	-3,416.8	3,833.4	3,819.5	13.90	275.787	
2,500.0	2,469.4	3,556.0	3,465.0	8.1	13.7	171.93	-144.5	-3,373.2	3,828.0	3,813.2	14.72	259.978	
2,600.0	2,567.2	3,673.7	3,577.6	8.5	14.4	171.81	-155.1	-3,340.7	3,820.8	3,805.4	15.40	248.164	
2,700.0	2,665.0	3,887.9	3,781.3	9.0	15.7	171.55	-176.9	-3,278.3	3,812.2	3,795.8	16.45	231.735	
2,800.0	2,762.8	3,967.0	3,856.1	9.4	16.2	171.43	-186.0	-3,254.3	3,802.3	3,785.2	17.03	223.328	
2,900.0	2,860.7	4,022.9	3,909.1	9.9	16.5	171.36	-192.3	-3,237.7	3,793.2	3,775.7	17.50	216.716	
3,000.0	2,958.5	4,111.8	3,993.9	10.3	17.1	171.24	-201.9	-3,212.4	3,785.2	3,767.1	18.11	209.060	
3,100.0	3,056.3	4,232.8	4,108.8	10.8	17.8	171.08	-214.7	-3,177.1	3,776.6	3,757.8	18.83	200.553	
3,200.0	3,154.1	4,341.0	4,211.7	11.3	18.5	170.95	-225.7	-3,145.1	3,767.6	3,748.1	19.51	193.107	
3,300.0	3,251.9	4,408.6	4,275.9	11.7	18.9	170.86	-232.8	-3,125.4	3,759.0	3,739.0	20.04	187.600	
3,400.0	3,349.7	4,559.7	4,419.6	12.2	19.9	170.67	-248.2	-3,081.2	3,750.5	3,729.6	20.88	179.592	
3,500.0	3,447.5	4,670.3	4,524.5	12.6	20.6	170.54	-259.1	-3,048.1	3,741.2	3,719.6	21.58	173.356	
3,600.0	3,545.4	4,765.9	4,615.1	13.1	21.2	170.42	-268.3	-3,018.8	3,731.2	3,709.0	22.22	167.926	
3,700.0	3,643.2	4,851.6	4,696.5	13.5	21.7	170.32	-276.2	-2,993.3	3,722.0	3,699.2	22.82	163.119	
3,800.0	3,741.0	4,905.0	4,747.2	14.0	22.1	170.26	-281.3	-2,977.3	3,713.0	3,689.7	23.30	159.389	
3,900.0	3,838.8	4,999.0	4,836.8	14.5	22.6	170.15	-290.2	-2,950.4	3,705.1	3,681.1	23.92	154.879	
4,000.0	3,936.6	4,999.0	4,836.8	14.9	22.6	170.15	-290.2	-2,950.4	3,698.6	3,674.4	24.20	152.846	
4,009.8	3,946.2	4,999.0	4,836.8	15.0	22.6	170.15	-290.2	-2,950.4	3,698.1	3,673.9	24.23	152.655	
4,100.0	4,034.7	5,056.7	4,892.3	15.3	22.9	170.07	-295.2	-2,935.4	3,692.3	3,667.7	24.65	149.773	
4,200.0	4,133.4	5,092.0	4,926.5	15.6	23.1	170.01	-298.1	-2,926.9	3,684.3	3,659.4	24.97	147.545	
4,300.0	4,232.6	5,133.5	4,966.8	15.8	23.3	169.93	-301.2	-2,917.6	3,674.6	3,649.3	25.26	145.447	
4,400.0	4,332.2	5,186.0	5,018.1	16.1	23.5	169.83	-304.8	-2,906.9	3,663.2	3,637.7	25.56	143.333	
4,500.0	4,432.1	5,244.0	5,074.9	16.2	23.8	169.73	-308.4	-2,895.8	3,649.7	3,623.8	25.83	141.321	
4,600.0	4,532.0	5,307.7	5,137.3	16.4	24.0	169.60	-312.3	-2,883.8	3,633.2	3,607.1	26.08	139.299	
4,609.8	4,541.8	5,312.0	5,141.6	16.4	24.0	-93.73	-312.5	-2,883.0	3,631.5	3,592.6	38.92	93.311	
4,700.0	4,632.0	5,373.0	5,201.5	16.5	24.3	-93.80	-316.1	-2,872.6	3,616.3	3,577.1	39.24	92.150	
4,800.0	4,732.0	5,373.0	5,201.5	16.6	24.3	-93.80	-316.1	-2,872.6	3,600.8	3,561.4	39.37	91.449	
4,900.0	4,832.0	5,435.1	5,262.8	16.7	24.5	-93.86	-319.5	-2,863.4	3,586.6	3,547.0	39.69	90.364	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
5,000.0	4,932.0	5,466.0	5,293.4	16.9	24.6	-93.89	-321.1	-2,859.5	3,574.3	3,534.4	39.92	89.542	
5,100.0	5,032.0	5,522.9	5,349.9	17.0	24.7	-93.94	-323.6	-2,853.0	3,563.4	3,523.2	40.19	88.656	
5,200.0	5,132.0	5,560.0	5,386.8	17.1	24.8	-93.96	-325.0	-2,849.4	3,554.1	3,513.7	40.42	87.921	
5,300.0	5,232.0	5,616.1	5,442.7	17.3	25.0	-94.00	-326.8	-2,844.8	3,546.3	3,505.6	40.68	87.181	
5,400.0	5,332.0	5,668.8	5,495.3	17.4	25.1	-94.02	-328.2	-2,841.3	3,539.9	3,499.0	40.92	86.504	
5,500.0	5,432.0	5,746.0	5,572.3	17.6	25.2	-94.06	-330.0	-2,837.0	3,534.5	3,493.3	41.20	85.789	
5,600.0	5,532.0	5,816.5	5,642.8	17.7	25.3	-94.08	-331.2	-2,833.7	3,529.8	3,488.3	41.46	85.139	
5,700.0	5,632.0	5,888.1	5,714.3	17.9	25.4	-94.10	-332.1	-2,830.8	3,525.9	3,484.2	41.72	84.520	
5,800.0	5,732.0	5,956.9	5,783.0	18.0	25.5	-94.11	-332.7	-2,828.6	3,522.8	3,480.8	41.96	83.947	
5,900.0	5,832.0	6,025.0	5,851.1	18.2	25.6	-94.12	-333.1	-2,827.1	3,520.6	3,478.4	42.21	83.417	
6,000.0	5,932.0	6,119.0	5,945.1	18.3	25.7	-94.13	-333.6	-2,825.6	3,519.0	3,476.6	42.47	82.854	
6,100.0	6,032.0	6,226.1	6,052.2	18.5	25.9	-94.14	-334.0	-2,823.7	3,517.3	3,474.5	42.76	82.256	
6,200.0	6,132.0	6,306.0	6,132.1	18.6	26.0	-94.14	-333.9	-2,822.6	3,516.0	3,472.9	43.01	81.739	
6,300.0	6,232.0	6,389.3	6,215.4	18.8	26.1	-94.14	-333.7	-2,822.0	3,515.1	3,471.9	43.27	81.241	
6,400.0	6,332.0	6,477.4	6,303.5	18.9	26.2	-94.13	-333.5	-2,821.5	3,514.6	3,471.1	43.53	80.746	
6,500.0	6,432.0	6,570.9	6,397.0	19.1	26.3	-94.13	-333.1	-2,821.3	3,514.3	3,470.6	43.79	80.253	
6,600.0	6,532.0	6,680.0	6,506.1	19.2	26.4	-94.12	-332.8	-2,820.9	3,514.0	3,469.9	44.07	79.728	
6,637.8	6,569.8	6,716.2	6,542.3	19.3	26.4	-94.12	-332.7	-2,820.8	3,513.8	3,469.6	44.18	79.540	
6,650.0	6,582.0	6,726.0	6,552.1	19.3	26.4	-4.12	-332.7	-2,820.7	3,513.6	3,481.1	32.48	108.177	
6,700.0	6,632.0	6,773.0	6,599.1	19.4	26.5	-4.14	-332.7	-2,820.6	3,510.9	3,478.7	32.28	108.761	
6,750.0	6,681.6	6,811.3	6,637.3	19.4	26.5	-4.18	-332.7	-2,820.7	3,504.9	3,472.9	31.95	109.710	
6,800.0	6,730.6	6,857.1	6,683.2	19.4	26.6	-4.25	-332.9	-2,820.7	3,495.5	3,463.9	31.51	110.949	
6,850.0	6,778.9	6,909.2	6,735.2	19.3	26.6	-4.35	-333.1	-2,820.8	3,482.6	3,451.7	30.96	112.481	
6,900.0	6,826.2	6,961.0	6,787.1	19.3	26.7	-4.48	-333.2	-2,820.7	3,466.4	3,436.1	30.31	114.352	
6,950.0	6,872.2	7,006.3	6,832.4	19.2	26.7	-4.64	-333.3	-2,820.7	3,446.9	3,417.4	29.56	116.610	
7,000.0	6,916.8	7,049.4	6,875.4	19.2	26.8	-4.84	-333.3	-2,820.7	3,424.3	3,395.6	28.72	119.235	
7,050.0	6,959.6	7,094.4	6,920.5	19.1	26.8	-5.09	-333.3	-2,820.7	3,398.6	3,370.8	27.82	122.186	
7,100.0	7,000.6	7,137.8	6,963.9	19.0	26.9	-5.39	-333.4	-2,820.6	3,370.0	3,343.1	26.86	125.463	
7,150.0	7,039.5	7,179.2	7,005.2	19.0	26.9	-5.77	-333.5	-2,820.5	3,338.6	3,312.7	25.88	129.017	
7,200.0	7,076.0	7,218.1	7,044.2	19.0	27.0	-6.22	-333.4	-2,820.4	3,304.5	3,279.6	24.89	132.760	
7,250.0	7,110.1	7,252.9	7,079.0	19.0	27.0	-6.77	-333.3	-2,820.3	3,267.9	3,244.0	23.93	136.548	
7,300.0	7,141.6	7,282.6	7,108.6	19.1	27.0	-7.46	-333.2	-2,820.3	3,229.1	3,206.1	23.04	140.133	
7,350.0	7,170.3	7,309.6	7,135.7	19.2	27.1	-8.34	-333.2	-2,820.2	3,188.3	3,166.0	22.28	143.081	
7,400.0	7,196.1	7,335.0	7,161.1	19.4	27.1	-9.48	-333.1	-2,820.2	3,145.5	3,123.8	21.73	144.781	
7,450.0	7,218.8	7,361.0	7,187.0	19.7	27.1	-11.02	-333.1	-2,820.1	3,101.1	3,079.6	21.49	144.336	
7,500.0	7,238.3	7,384.3	7,210.4	20.0	27.1	-13.18	-333.1	-2,820.0	3,055.1	3,033.4	21.71	140.739	
7,550.0	7,254.6	7,403.6	7,229.7	20.5	27.2	-16.36	-333.1	-2,819.9	3,008.0	2,985.3	22.65	132.773	
7,600.0	7,267.6	7,418.8	7,244.8	21.0	27.2	-21.37	-333.0	-2,819.8	2,959.8	2,934.9	24.85	119.112	
7,650.0	7,277.1	7,429.8	7,255.8	21.5	27.2	-30.18	-333.0	-2,819.8	2,910.8	2,881.4	29.43	98.898	
7,700.0	7,283.3	7,436.6	7,262.7	22.2	27.2	-47.87	-333.0	-2,819.7	2,861.4	2,822.8	38.55	74.226	
7,750.0	7,285.9	7,439.3	7,265.3	22.9	27.2	-83.45	-333.0	-2,819.7	2,811.6	2,762.6	48.98	57.408	
7,760.9	7,286.0	7,439.3	7,265.4	23.0	27.2	-93.05	-333.0	-2,819.7	2,800.8	2,751.5	49.24	56.878	
7,800.0	7,286.1	7,439.1	7,265.2	23.6	27.2	-93.01	-333.0	-2,819.7	2,761.8	2,712.0	49.84	55.413	
7,900.0	7,286.4	7,438.6	7,264.6	25.3	27.2	-92.88	-333.0	-2,819.7	2,662.3	2,610.7	51.52	51.671	
8,000.0	7,286.6	7,438.0	7,264.1	27.2	27.2	-92.76	-333.0	-2,819.7	2,562.7	2,509.3	53.39	47.998	
8,100.0	7,286.9	7,437.5	7,263.6	29.2	27.2	-92.64	-333.0	-2,819.7	2,463.2	2,407.8	55.41	44.451	
8,200.0	7,287.2	7,437.0	7,263.0	31.3	27.2	-92.52	-333.0	-2,819.7	2,363.8	2,306.2	57.56	41.068	
8,300.0	7,287.4	7,436.5	7,262.5	33.6	27.2	-92.41	-333.0	-2,819.7	2,264.4	2,204.6	59.80	37.865	
8,400.0	7,287.7	7,436.0	7,262.0	35.9	27.2	-92.29	-333.0	-2,819.7	2,165.1	2,102.9	62.12	34.851	
8,500.0	7,288.0	7,435.5	7,261.5	38.3	27.2	-92.18	-333.0	-2,819.7	2,065.8	2,001.3	64.51	32.021	
8,600.0	7,288.2	7,435.0	7,261.0	40.7	27.2	-92.07	-333.0	-2,819.7	1,966.6	1,899.6	66.95	29.371	
8,700.0	7,288.5	7,434.5	7,260.5	43.2	27.2	-91.96	-333.0	-2,819.7	1,867.4	1,798.0	69.44	26.892	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
8,800.0	7,288.8	7,434.0	7,260.1	45.7	27.2	-91.85	-333.0	-2,819.7	1,768.4	1,696.4	71.97	24.572	
8,900.0	7,289.0	7,433.5	7,259.6	48.3	27.2	-91.74	-333.0	-2,819.7	1,669.5	1,595.0	74.52	22.402	
9,000.0	7,289.3	7,433.0	7,259.1	50.9	27.2	-91.63	-333.0	-2,819.7	1,570.7	1,493.6	77.11	20.371	
9,100.0	7,289.6	7,432.6	7,258.6	53.5	27.2	-91.52	-333.0	-2,819.7	1,472.1	1,392.4	79.71	18.468	
9,200.0	7,289.8	7,432.1	7,258.2	56.1	27.2	-91.42	-333.0	-2,819.7	1,373.7	1,291.4	82.34	16.683	
9,300.0	7,290.1	7,431.6	7,257.7	58.7	27.2	-91.31	-333.0	-2,819.7	1,275.6	1,190.6	84.98	15.009	
9,400.0	7,290.4	7,431.2	7,257.3	61.4	27.2	-91.21	-333.0	-2,819.7	1,177.7	1,090.1	87.64	13.438	
9,500.0	7,290.6	7,430.7	7,256.8	64.1	27.2	-91.11	-333.0	-2,819.7	1,080.3	989.9	90.31	11.961	
9,600.0	7,290.9	7,430.3	7,256.4	66.7	27.2	-91.01	-333.0	-2,819.8	983.3	890.3	93.00	10.574	
9,700.0	7,291.2	7,429.9	7,255.9	69.4	27.2	-90.91	-333.0	-2,819.8	887.0	791.4	95.69	9.270	
9,800.0	7,291.4	7,429.4	7,255.5	72.1	27.2	-90.81	-333.0	-2,819.8	791.7	693.3	98.39	8.047	
9,900.0	7,291.7	7,429.0	7,255.1	74.8	27.2	-90.72	-333.0	-2,819.8	697.7	596.6	101.10	6.901	
10,000.0	7,292.0	7,428.6	7,254.7	77.5	27.2	-90.62	-333.0	-2,819.8	605.6	501.7	103.81	5.833	
10,100.0	7,292.2	7,428.2	7,254.2	80.3	27.2	-90.53	-333.0	-2,819.8	516.4	409.9	106.54	4.847	
10,200.0	7,292.5	7,427.8	7,253.8	83.0	27.2	-90.43	-333.0	-2,819.8	432.0	322.7	109.27	3.953	
10,300.0	7,292.8	7,427.3	7,253.4	85.7	27.2	-90.34	-333.0	-2,819.8	355.7	243.7	112.00	3.176	
10,400.0	7,293.0	7,426.9	7,253.0	88.5	27.2	-90.25	-333.0	-2,819.8	294.1	179.4	114.74	2.563	
10,500.0	7,293.3	7,426.5	7,252.6	91.2	27.2	-90.16	-333.0	-2,819.8	257.8	140.3	117.48	2.194	
10,550.3	7,293.4	7,426.3	7,252.4	92.6	27.2	-90.11	-333.0	-2,819.8	252.8	134.0	118.86	2.127	CC, ES, SF
10,600.0	7,293.6	7,426.1	7,252.2	93.9	27.2	-90.07	-333.0	-2,819.8	257.7	137.5	120.22	2.143	
10,700.0	7,293.8	7,425.8	7,251.8	96.7	27.2	-89.98	-333.0	-2,819.8	293.9	170.9	122.97	2.390	
10,800.0	7,294.1	7,425.4	7,251.4	99.4	27.2	-89.89	-333.0	-2,819.8	355.4	229.7	125.73	2.827	
10,900.0	7,294.4	7,425.0	7,251.1	102.2	27.2	-89.80	-333.0	-2,819.8	431.6	303.1	128.48	3.359	
11,000.0	7,294.6	7,424.6	7,250.7	105.0	27.2	-89.72	-333.0	-2,819.8	515.9	384.7	131.24	3.931	
11,100.0	7,294.9	7,424.2	7,250.3	107.7	27.2	-89.63	-333.0	-2,819.8	605.1	471.1	134.00	4.516	
11,200.0	7,295.2	7,423.9	7,249.9	110.5	27.2	-89.55	-333.0	-2,819.8	697.2	560.4	136.76	5.098	
11,300.0	7,295.4	7,423.5	7,249.6	113.2	27.2	-89.47	-333.0	-2,819.8	791.2	651.7	139.52	5.671	
11,400.0	7,295.7	7,423.1	7,249.2	116.0	27.2	-89.39	-333.0	-2,819.8	886.6	744.3	142.29	6.231	
11,500.0	7,296.0	7,422.8	7,248.8	118.8	27.2	-89.30	-333.0	-2,819.8	982.8	837.8	145.06	6.775	
11,600.0	7,296.2	7,422.4	7,248.5	121.6	27.2	-89.22	-333.0	-2,819.8	1,079.8	931.9	147.82	7.304	
11,700.0	7,296.5	7,422.1	7,248.1	124.3	27.2	-89.15	-333.0	-2,819.8	1,177.2	1,026.6	150.59	7.817	
11,800.0	7,296.8	7,421.7	7,247.8	127.1	27.2	-89.07	-333.0	-2,819.8	1,275.1	1,121.7	153.36	8.314	
11,886.1	7,297.0	7,421.4	7,247.5	129.5	27.2	-89.00	-333.0	-2,819.8	1,359.6	1,203.8	155.75	8.729	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	2.5	2.5	0.0	0.0	-45.62	533.7	-545.4	763.1				
100.0	100.0	103.7	103.7	0.1	0.1	-45.62	533.6	-545.3	763.0	762.8	0.21	3,713.457	
200.0	200.0	205.0	205.0	0.3	0.2	-45.63	533.4	-545.2	762.7	762.2	0.54	1,423.439	
300.0	300.0	306.2	306.2	0.5	0.3	-45.64	532.9	-545.1	762.3	761.5	0.87	880.075	
400.0	400.0	407.4	407.4	0.8	0.4	-45.66	532.4	-544.9	761.8	760.6	1.20	636.622	
500.0	500.0	508.6	508.6	1.0	0.5	-45.69	531.6	-544.6	761.1	759.5	1.53	498.414	
600.0	600.0	609.8	609.8	1.2	0.6	-45.72	530.7	-544.2	760.2	758.3	1.86	409.288	
700.0	700.0	710.7	710.6	1.4	0.8	-45.76	529.6	-543.8	759.1	756.9	2.20	345.834	
734.0	734.0	743.6	743.6	1.5	0.8	-142.45	529.5	-543.5	759.0	756.6	2.33	325.479	CC, ES
800.0	800.0	808.8	808.8	1.7	1.0	-142.41	530.1	-542.1	759.6	757.0	2.60	291.833	
900.0	899.8	915.5	915.3	1.9	1.2	-142.20	533.2	-537.2	762.5	759.5	3.02	252.114	
1,000.0	999.5	1,015.8	1,015.1	2.1	1.4	-141.83	538.6	-529.1	767.4	763.9	3.47	221.170	
1,100.0	1,098.7	1,102.6	1,101.2	2.3	1.6	-141.39	545.8	-520.8	776.1	772.2	3.92	198.059	
1,200.0	1,197.5	1,190.5	1,187.8	2.6	1.9	-140.77	556.6	-510.9	789.2	784.7	4.43	178.161	
1,300.0	1,295.6	1,283.4	1,279.0	3.0	2.2	-140.09	570.4	-499.6	806.0	801.0	5.02	160.697	
1,400.0	1,393.4	1,382.7	1,376.3	3.3	2.6	-139.58	586.0	-486.5	824.3	818.6	5.68	145.157	
1,500.0	1,491.3	1,474.1	1,465.4	3.7	3.0	-139.04	601.7	-473.8	843.1	836.8	6.36	132.574	
1,600.0	1,589.1	1,572.2	1,560.3	4.1	3.4	-138.28	620.8	-458.2	862.4	855.3	7.13	120.916	
1,700.0	1,686.9	1,677.7	1,661.3	4.6	4.0	-137.22	643.7	-438.1	881.5	873.5	8.01	110.000	
1,800.0	1,784.7	1,778.9	1,757.5	5.0	4.6	-136.09	666.3	-416.3	899.7	890.8	8.93	100.782	
1,900.0	1,882.5	1,873.8	1,847.4	5.4	5.1	-135.01	688.3	-395.2	918.5	908.7	9.82	93.552	
2,000.0	1,980.3	1,972.6	1,941.2	5.9	5.6	-133.98	710.7	-373.8	937.5	926.7	10.73	87.399	
2,100.0	2,078.1	2,073.2	2,036.5	6.3	6.2	-132.93	733.6	-351.4	956.5	944.8	11.68	81.912	
2,200.0	2,176.0	2,171.7	2,130.1	6.7	6.8	-131.97	755.5	-329.6	975.4	962.8	12.60	77.415	
2,300.0	2,273.8	2,261.9	2,216.1	7.2	7.3	-131.20	775.0	-310.7	994.8	981.4	13.46	73.929	
2,400.0	2,371.6	2,370.5	2,319.5	7.6	7.9	-130.28	798.9	-287.6	1,014.6	1,000.1	14.45	70.220	
2,500.0	2,469.4	2,472.7	2,416.9	8.1	8.5	-129.45	820.3	-265.3	1,033.3	1,017.9	15.40	67.090	
2,600.0	2,567.2	2,557.2	2,497.6	8.5	8.9	-128.82	838.1	-247.4	1,052.7	1,036.5	16.26	64.755	
2,700.0	2,665.0	2,642.6	2,578.7	9.0	9.5	-128.15	857.3	-229.2	1,073.4	1,056.3	17.14	62.630	
2,800.0	2,762.8	2,730.9	2,662.7	9.4	10.0	-127.50	877.8	-211.1	1,095.2	1,077.1	18.03	60.758	
2,900.0	2,860.7	2,816.0	2,743.8	9.9	10.4	-126.94	897.6	-194.8	1,117.9	1,099.0	18.87	59.243	
3,000.0	2,958.5	2,912.1	2,835.8	10.3	11.0	-126.41	919.9	-178.0	1,141.5	1,121.7	19.77	57.747	
3,100.0	3,056.3	3,046.3	2,963.8	10.8	11.7	-125.60	950.2	-151.4	1,163.5	1,142.6	20.90	55.670	
3,200.0	3,154.1	3,130.8	3,044.2	11.3	12.2	-125.06	968.8	-133.5	1,184.5	1,162.8	21.78	54.391	
3,300.0	3,251.9	3,221.9	3,130.8	11.7	12.8	-124.49	989.6	-114.4	1,206.5	1,183.8	22.70	53.154	
3,400.0	3,349.7	3,335.2	3,238.4	12.2	13.4	-123.78	1,015.3	-89.7	1,228.0	1,204.3	23.75	51.707	
3,500.0	3,447.5	3,433.8	3,331.8	12.6	14.0	-123.14	1,037.2	-67.2	1,248.9	1,224.1	24.74	50.488	
3,600.0	3,545.4	3,523.4	3,416.5	13.1	14.6	-122.56	1,057.8	-46.5	1,270.5	1,244.8	25.68	49.469	
3,700.0	3,643.2	3,636.8	3,523.4	13.5	15.3	-121.79	1,083.8	-19.0	1,291.6	1,264.9	26.79	48.216	
3,800.0	3,741.0	3,729.9	3,611.0	14.0	15.9	-121.15	1,104.8	4.6	1,312.2	1,284.4	27.78	47.243	
3,900.0	3,838.8	3,805.9	3,682.5	14.5	16.4	-120.64	1,122.6	23.3	1,334.0	1,305.4	28.66	46.541	
4,000.0	3,936.6	3,871.0	3,743.0	14.9	16.9	-120.15	1,139.5	40.4	1,357.7	1,328.2	29.50	46.027	
4,009.8	3,946.2	3,885.5	3,756.4	15.0	17.0	-120.04	1,143.4	44.3	1,360.1	1,330.5	29.64	45.895	
4,100.0	4,034.7	3,953.0	3,818.9	15.3	17.5	-119.88	1,162.1	61.7	1,382.4	1,352.0	30.45	45.405	
4,200.0	4,133.4	4,028.6	3,888.9	15.6	18.0	-119.66	1,183.7	80.3	1,407.1	1,375.9	31.25	45.022	
4,300.0	4,232.6	4,157.0	4,008.2	15.8	18.9	-118.87	1,220.1	110.9	1,430.7	1,398.4	32.32	44.263	
4,400.0	4,332.2	4,302.3	4,145.0	16.1	19.8	-117.85	1,255.3	144.8	1,449.0	1,415.6	33.38	43.409	
4,500.0	4,432.1	4,399.3	4,236.1	16.2	20.4	-117.08	1,277.7	169.4	1,464.7	1,430.5	34.15	42.890	
4,600.0	4,532.0	4,495.2	4,326.1	16.4	21.1	-116.22	1,300.1	193.6	1,479.5	1,444.7	34.85	42.454	
4,609.8	4,541.8	4,505.0	4,335.5	16.4	21.1	-19.44	1,302.3	196.0	1,480.9	1,455.1	25.82	57.357	
4,700.0	4,632.0	4,573.1	4,399.9	16.5	21.6	-18.67	1,317.8	211.5	1,494.2	1,467.9	26.28	56.851	
4,800.0	4,732.0	4,665.2	4,487.1	16.6	22.1	-17.67	1,339.8	231.4	1,510.8	1,483.9	26.89	56.180	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
4,900.0	4,832.0	4,844.7	4,659.2	16.7	23.1	-15.97	1,376.3	267.0	1,525.1	1,497.2	27.87	54.722	
5,000.0	4,932.0	4,960.7	4,771.5	16.9	23.6	-14.98	1,394.7	289.3	1,535.5	1,506.9	28.52	53.838	
5,100.0	5,032.0	5,065.3	4,873.0	17.0	24.1	-14.12	1,411.1	308.8	1,546.2	1,517.1	29.12	53.089	
5,200.0	5,132.0	5,192.7	4,997.5	17.1	24.7	-13.22	1,428.5	329.4	1,555.9	1,526.1	29.78	52.240	
5,300.0	5,232.0	5,311.5	5,114.5	17.3	25.1	-12.57	1,441.9	344.4	1,564.1	1,533.8	30.36	51.525	
5,400.0	5,332.0	5,433.0	5,234.8	17.4	25.5	-12.04	1,453.3	356.8	1,571.1	1,540.2	30.90	50.847	
5,500.0	5,432.0	5,559.0	5,360.1	17.6	25.8	-11.60	1,462.6	367.1	1,576.7	1,545.3	31.41	50.193	
5,600.0	5,532.0	5,681.1	5,481.8	17.7	26.0	-11.30	1,468.8	374.4	1,580.5	1,548.6	31.87	49.596	
5,700.0	5,632.0	5,780.5	5,581.0	17.9	26.2	-11.11	1,473.1	379.0	1,583.8	1,551.6	32.26	49.101	
5,800.0	5,732.0	5,874.6	5,675.0	18.0	26.4	-10.98	1,477.0	381.9	1,587.4	1,554.7	32.63	48.653	
5,900.0	5,832.0	5,986.0	5,786.3	18.2	26.5	-10.91	1,481.4	383.0	1,591.1	1,558.0	33.01	48.197	
6,000.0	5,932.0	6,100.4	5,900.7	18.3	26.7	-10.89	1,484.3	382.8	1,593.5	1,560.1	33.38	47.739	
6,100.0	6,032.0	6,219.7	6,020.0	18.5	26.8	-10.90	1,485.9	382.3	1,595.0	1,561.2	33.74	47.275	
6,200.0	6,132.0	6,322.7	6,122.9	18.6	26.9	-10.91	1,486.7	381.7	1,595.8	1,561.7	34.07	46.844	
6,300.0	6,232.0	6,426.4	6,226.6	18.8	27.0	-10.93	1,487.3	381.3	1,596.4	1,562.0	34.40	46.414	
6,400.0	6,332.0	6,528.1	6,328.3	18.9	27.1	-10.93	1,487.6	381.0	1,596.8	1,562.1	34.72	45.987	
6,500.0	6,432.0	6,629.9	6,430.1	19.1	27.2	-10.94	1,487.9	380.7	1,597.2	1,562.1	35.05	45.569	
6,600.0	6,532.0	6,734.0	6,534.3	19.2	27.3	-10.97	1,487.9	380.0	1,597.3	1,561.9	35.38	45.150	
6,637.8	6,569.8	6,773.3	6,573.5	19.3	27.3	-10.98	1,487.9	379.7	1,597.3	1,561.8	35.50	44.993	
6,650.0	6,582.0	6,786.0	6,586.3	19.3	27.3	79.02	1,487.9	379.6	1,597.3	1,554.2	43.10	37.061	
6,700.0	6,632.0	6,838.3	6,638.5	19.4	27.4	79.15	1,487.7	379.2	1,596.7	1,553.5	43.19	36.971	
6,750.0	6,681.6	6,888.2	6,688.4	19.4	27.4	79.44	1,487.4	378.7	1,595.4	1,552.2	43.21	36.921	
6,800.0	6,730.6	6,936.7	6,736.9	19.4	27.5	79.90	1,487.2	378.3	1,593.6	1,550.4	43.18	36.908	
6,850.0	6,778.9	6,985.0	6,785.2	19.3	27.5	80.52	1,487.0	377.8	1,591.2	1,548.1	43.09	36.925	
6,900.0	6,826.2	7,032.3	6,832.5	19.3	27.6	81.27	1,486.8	377.3	1,588.3	1,545.4	42.96	36.969	
6,950.0	6,872.2	7,080.3	6,880.4	19.2	27.6	82.18	1,486.6	376.9	1,585.1	1,542.3	42.80	37.032	
7,000.0	6,916.8	7,126.9	6,927.1	19.2	27.6	83.21	1,486.4	376.6	1,581.7	1,539.0	42.62	37.109	
7,050.0	6,959.6	7,168.9	6,969.1	19.1	27.7	84.26	1,486.1	376.3	1,578.1	1,535.7	42.44	37.189	
7,100.0	7,000.6	7,208.8	7,009.0	19.0	27.7	85.35	1,486.0	376.1	1,574.7	1,532.5	42.25	37.267	
7,150.0	7,039.5	7,247.2	7,047.4	19.0	27.7	86.47	1,485.8	375.8	1,571.6	1,529.5	42.09	37.336	
7,200.0	7,076.0	7,283.8	7,084.0	19.0	27.8	87.59	1,485.7	375.7	1,569.0	1,527.0	41.97	37.386	
7,250.0	7,110.1	7,317.8	7,118.0	19.0	27.8	88.66	1,485.5	375.7	1,567.0	1,525.1	41.89	37.407	
7,300.0	7,141.6	7,348.8	7,148.9	19.1	27.9	89.63	1,485.4	375.8	1,565.8	1,523.9	41.88	37.389	
7,332.3	7,160.5	7,367.3	7,167.4	19.2	27.9	90.20	1,485.4	375.8	1,565.6	1,523.7	41.92	37.346	
7,350.0	7,170.3	7,376.9	7,177.1	19.2	27.9	90.49	1,485.4	375.8	1,565.7	1,523.7	41.95	37.325	
7,400.0	7,196.1	7,402.1	7,202.3	19.4	27.9	91.20	1,485.3	375.9	1,566.7	1,524.6	42.11	37.208	
7,450.0	7,218.8	7,424.3	7,224.5	19.7	27.9	91.74	1,485.2	375.9	1,569.0	1,526.6	42.36	37.037	
7,500.0	7,238.3	7,443.4	7,243.6	20.0	28.0	92.08	1,485.2	376.0	1,572.7	1,530.0	42.72	36.810	
7,550.0	7,254.6	7,459.2	7,259.4	20.5	28.0	92.21	1,485.2	376.1	1,577.9	1,534.7	43.19	36.535	
7,600.0	7,267.6	7,471.7	7,271.9	21.0	28.0	92.10	1,485.1	376.1	1,584.7	1,541.0	43.75	36.220	
7,650.0	7,277.1	7,480.7	7,280.9	21.5	28.0	91.75	1,485.1	376.2	1,593.1	1,548.7	44.40	35.880	
7,700.0	7,283.3	7,486.4	7,286.6	22.2	28.0	91.14	1,485.1	376.2	1,603.1	1,557.9	45.12	35.532	
7,750.0	7,285.9	7,488.7	7,288.9	22.9	28.0	90.28	1,485.1	376.2	1,614.6	1,568.7	45.87	35.196	
7,760.9	7,286.0	7,488.7	7,288.9	23.0	28.0	90.06	1,485.1	376.2	1,617.3	1,571.2	46.04	35.126	
7,800.0	7,286.1	7,488.6	7,288.8	23.6	28.0	90.05	1,485.1	376.2	1,627.5	1,580.9	46.64	34.896	
7,900.0	7,286.4	7,488.3	7,288.5	25.3	28.0	90.04	1,485.1	376.2	1,657.7	1,609.4	48.32	34.308	
8,000.0	7,286.6	7,488.0	7,288.2	27.2	28.0	90.03	1,485.1	376.2	1,693.3	1,643.1	50.18	33.741	
8,100.0	7,286.9	7,487.7	7,287.8	29.2	28.0	90.02	1,485.1	376.2	1,733.9	1,681.7	52.20	33.214	
8,200.0	7,287.2	7,487.3	7,287.5	31.3	28.0	90.00	1,485.1	376.2	1,779.2	1,724.8	54.34	32.739	
8,300.0	7,287.4	7,487.0	7,287.2	33.6	28.0	89.99	1,485.1	376.2	1,828.8	1,772.2	56.58	32.321	
8,400.0	7,287.7	7,486.7	7,286.9	35.9	28.0	89.98	1,485.1	376.2	1,882.5	1,823.6	58.90	31.959	
8,500.0	7,288.0	7,486.4	7,286.6	38.3	28.0	89.97	1,485.1	376.2	1,939.8	1,878.5	61.29	31.651	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
8,600.0	7,288.2	7,486.1	7,286.3	40.7	28.0	89.96	1,485.1	376.2	2,000.5	1,936.8	63.73	31.392	
8,700.0	7,288.5	7,485.8	7,286.0	43.2	28.0	89.95	1,485.1	376.2	2,064.3	1,998.1	66.21	31.177	
8,800.0	7,288.8	7,485.5	7,285.7	45.7	28.0	89.94	1,485.1	376.2	2,130.8	2,062.1	68.73	31.001	
8,900.0	7,289.0	7,485.2	7,285.4	48.3	28.0	89.93	1,485.1	376.2	2,199.9	2,128.6	71.29	30.860	
9,000.0	7,289.3	7,484.9	7,285.1	50.9	28.0	89.91	1,485.1	376.2	2,271.3	2,197.4	73.87	30.748	
9,100.0	7,289.6	7,484.6	7,284.8	53.5	28.0	89.90	1,485.1	376.2	2,344.7	2,268.3	76.47	30.662	
9,200.0	7,289.8	7,484.3	7,284.5	56.1	28.0	89.89	1,485.1	376.2	2,420.1	2,341.0	79.09	30.599	
9,300.0	7,290.1	7,484.0	7,284.2	58.7	28.0	89.88	1,485.1	376.2	2,497.2	2,415.5	81.73	30.554	
9,400.0	7,290.4	7,483.7	7,283.9	61.4	28.0	89.87	1,485.1	376.2	2,575.9	2,491.5	84.39	30.525	
9,500.0	7,290.6	7,483.5	7,283.6	64.1	28.0	89.86	1,485.1	376.2	2,656.0	2,568.9	87.06	30.509	
9,600.0	7,290.9	7,483.2	7,283.4	66.7	28.0	89.85	1,485.1	376.2	2,737.4	2,647.7	89.73	30.506	SF
9,700.0	7,291.2	7,482.9	7,283.1	69.4	28.0	89.84	1,485.1	376.2	2,820.0	2,727.6	92.42	30.512	
9,800.0	7,291.4	7,482.6	7,282.8	72.1	28.0	89.83	1,485.1	376.2	2,903.7	2,808.6	95.12	30.526	
9,900.0	7,291.7	7,482.3	7,282.5	74.8	28.0	89.82	1,485.1	376.2	2,988.5	2,890.6	97.83	30.547	
10,000.0	7,292.0	7,482.1	7,282.3	77.5	28.0	89.81	1,485.1	376.2	3,074.1	2,973.5	100.54	30.574	
10,100.0	7,292.2	7,481.8	7,282.0	80.3	28.0	89.80	1,485.1	376.2	3,160.6	3,057.3	103.27	30.606	
10,200.0	7,292.5	7,481.5	7,281.7	83.0	28.0	89.79	1,485.1	376.2	3,247.8	3,141.8	105.99	30.642	
10,300.0	7,292.8	7,481.3	7,281.5	85.7	28.0	89.78	1,485.1	376.2	3,335.8	3,227.1	108.72	30.681	
10,400.0	7,293.0	7,481.0	7,281.2	88.5	28.0	89.77	1,485.1	376.2	3,424.4	3,313.0	111.46	30.723	
10,500.0	7,293.3	7,480.7	7,280.9	91.2	28.0	89.76	1,485.1	376.2	3,513.7	3,399.4	114.20	30.767	
10,600.0	7,293.6	7,480.5	7,280.7	93.9	28.0	89.75	1,485.1	376.2	3,603.5	3,486.5	116.95	30.813	
10,700.0	7,293.8	7,480.2	7,280.4	96.7	28.0	89.75	1,485.1	376.2	3,693.8	3,574.1	119.69	30.860	
10,800.0	7,294.1	7,480.0	7,280.2	99.4	28.0	89.74	1,485.1	376.2	3,784.6	3,662.1	122.45	30.908	
10,900.0	7,294.4	7,479.7	7,279.9	102.2	28.0	89.73	1,485.1	376.2	3,875.9	3,750.7	125.20	30.957	
11,000.0	7,294.6	7,479.5	7,279.7	105.0	28.0	89.72	1,485.1	376.2	3,967.5	3,839.6	127.96	31.006	
11,100.0	7,294.9	7,479.2	7,279.4	107.7	28.0	89.71	1,485.1	376.2	4,059.6	3,928.9	130.72	31.056	
11,200.0	7,295.2	7,479.0	7,279.2	110.5	28.0	89.70	1,485.1	376.2	4,152.1	4,018.6	133.48	31.106	
11,300.0	7,295.4	7,478.7	7,278.9	113.2	28.0	89.69	1,485.1	376.2	4,244.9	4,108.6	136.25	31.156	
11,400.0	7,295.7	7,478.5	7,278.7	116.0	28.0	89.68	1,485.1	376.2	4,338.0	4,199.0	139.01	31.205	
11,500.0	7,296.0	7,478.2	7,278.4	118.8	28.0	89.67	1,485.1	376.2	4,431.4	4,289.6	141.78	31.255	
11,600.0	7,296.2	7,478.0	7,278.2	121.6	28.0	89.67	1,485.1	376.2	4,525.1	4,380.5	144.55	31.304	
11,700.0	7,296.5	7,477.8	7,278.0	124.3	28.0	89.66	1,485.1	376.2	4,619.0	4,471.7	147.33	31.352	
11,800.0	7,296.8	7,477.5	7,277.7	127.1	28.0	89.65	1,485.1	376.1	4,713.2	4,563.1	150.10	31.400	
11,886.1	7,297.0	7,477.3	7,277.5	129.5	28.0	89.64	1,485.1	376.1	4,794.6	4,642.1	152.49	31.442	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	-57.88	376.0	-598.9	707.1				
100.0	100.0	101.0	101.0	0.1	0.1	-57.89	375.9	-599.1	707.3	707.0	0.20	3,478.497	
200.0	200.0	199.5	199.5	0.3	0.2	-57.93	375.7	-599.6	707.6	707.0	0.53	1,330.991	ES
300.0	300.0	298.1	298.1	0.5	0.3	-57.99	375.3	-600.4	708.1	707.2	0.86	823.458	
400.0	400.0	396.6	396.6	0.8	0.4	-58.08	374.8	-601.6	708.8	707.6	1.19	596.556	
500.0	500.0	495.1	495.1	1.0	0.5	-58.19	374.1	-603.1	709.8	708.2	1.52	468.032	
600.0	600.0	593.6	593.6	1.2	0.6	-58.32	373.3	-604.9	710.9	709.1	1.84	385.366	
700.0	700.0	692.1	692.0	1.4	0.7	-58.47	372.4	-607.1	712.3	710.1	2.17	327.775	
800.0	800.0	812.3	812.1	1.7	1.0	-155.60	368.3	-609.6	713.9	711.2	2.65	269.028	
900.0	899.8	922.0	921.4	1.9	1.3	-156.53	359.2	-613.0	717.1	714.0	3.13	228.938	
1,000.0	999.5	1,048.0	1,046.1	2.1	1.7	-158.17	341.8	-616.0	720.4	716.7	3.71	194.365	
1,100.0	1,098.7	1,148.5	1,144.8	2.3	2.0	-159.90	323.0	-618.8	725.5	721.2	4.27	169.776	
1,200.0	1,197.5	1,257.1	1,250.5	2.6	2.5	-162.16	298.4	-623.2	734.0	729.1	4.94	148.506	
1,300.0	1,295.6	1,355.1	1,344.9	3.0	3.0	-164.49	272.5	-627.6	745.8	740.1	5.63	132.430	
1,400.0	1,393.4	1,466.7	1,451.7	3.3	3.6	-167.31	240.4	-631.4	758.8	752.4	6.44	117.775	
1,500.0	1,491.3	1,547.5	1,528.5	3.7	4.0	-169.42	215.6	-634.8	773.4	766.3	7.13	108.509	
1,600.0	1,589.1	1,636.0	1,612.2	4.1	4.6	-171.75	187.3	-639.8	790.4	782.5	7.90	100.074	
1,700.0	1,686.9	1,746.3	1,716.5	4.6	5.2	-174.55	151.6	-644.7	807.7	799.0	8.76	92.207	
1,800.0	1,784.7	1,826.0	1,791.6	5.0	5.6	-176.52	125.5	-648.4	826.6	817.2	9.45	87.464	
1,900.0	1,882.5	1,934.5	1,894.1	5.4	6.3	-179.08	90.0	-652.7	846.3	836.0	10.30	82.128	
2,000.0	1,980.3	2,020.1	1,975.0	5.9	6.8	179.01	62.2	-656.1	867.2	856.1	11.03	78.646	
2,100.0	2,078.1	2,123.0	2,072.1	6.3	7.4	176.79	28.4	-659.3	888.5	876.6	11.86	74.901	
2,200.0	2,176.0	2,202.3	2,147.0	6.7	7.8	175.17	2.6	-662.3	911.4	898.9	12.56	72.558	
2,300.0	2,273.8	2,297.2	2,236.8	7.2	8.4	173.32	-28.1	-666.3	935.8	922.5	13.35	70.100	
2,400.0	2,371.6	2,381.0	2,315.8	7.6	8.9	171.72	-55.8	-669.9	961.2	947.1	14.11	68.120	
2,500.0	2,469.4	2,455.1	2,385.4	8.1	9.4	170.34	-80.9	-674.0	988.7	973.9	14.83	66.658	
2,600.0	2,567.2	2,543.3	2,468.0	8.5	9.9	168.74	-111.2	-680.2	1,018.5	1,002.9	15.65	65.098	
2,700.0	2,665.0	2,640.2	2,558.4	9.0	10.6	167.02	-145.4	-686.6	1,048.8	1,032.3	16.52	63.492	
2,800.0	2,762.8	2,741.6	2,652.9	9.4	11.3	165.29	-181.7	-692.4	1,079.1	1,061.7	17.41	61.972	
2,900.0	2,860.7	2,841.7	2,746.6	9.9	11.9	163.73	-216.6	-697.4	1,109.3	1,091.1	18.26	60.754	
3,000.0	2,958.5	2,921.0	2,821.2	10.3	12.4	162.61	-243.1	-701.6	1,140.3	1,121.3	18.98	60.070	
3,100.0	3,056.3	3,009.9	2,904.5	10.8	12.9	161.39	-273.5	-707.0	1,172.5	1,152.7	19.80	59.233	
3,200.0	3,154.1	3,101.9	2,990.7	11.3	13.5	160.17	-305.2	-712.4	1,205.3	1,184.6	20.61	58.477	
3,300.0	3,251.9	3,217.4	3,099.7	11.7	14.2	158.82	-343.0	-718.8	1,237.8	1,216.3	21.50	57.582	
3,400.0	3,349.7	3,301.5	3,179.4	12.2	14.7	157.93	-369.4	-723.1	1,269.8	1,247.6	22.23	57.118	
3,500.0	3,447.5	3,390.8	3,264.1	12.6	15.2	157.05	-397.3	-728.1	1,302.6	1,279.7	22.99	56.663	
3,600.0	3,545.4	3,510.2	3,378.0	13.1	15.8	156.01	-432.6	-734.4	1,334.9	1,311.1	23.86	55.952	
3,700.0	3,643.2	3,600.7	3,464.5	13.5	16.3	155.28	-458.9	-738.3	1,366.6	1,342.0	24.60	55.557	
3,800.0	3,741.0	3,685.0	3,545.1	14.0	16.8	154.63	-483.3	-742.5	1,398.9	1,373.6	25.31	55.267	
3,900.0	3,838.8	3,767.8	3,624.3	14.5	17.3	154.03	-507.2	-747.3	1,432.0	1,406.0	26.01	55.049	
4,000.0	3,936.6	3,839.0	3,692.2	14.9	17.7	153.54	-528.0	-752.0	1,466.2	1,439.6	26.67	54.967	
4,009.8	3,946.2	3,845.7	3,698.6	15.0	17.7	153.49	-530.0	-752.5	1,469.7	1,442.9	26.74	54.964	
4,100.0	4,034.7	3,925.1	3,773.8	15.3	18.2	153.19	-554.4	-758.4	1,500.6	1,473.1	27.49	54.583	
4,200.0	4,133.4	4,033.0	3,876.2	15.6	18.8	152.64	-587.8	-765.7	1,531.9	1,503.5	28.35	54.033	
4,300.0	4,232.6	4,129.9	3,968.1	15.8	19.4	152.12	-617.8	-771.5	1,559.7	1,530.6	29.11	53.580	
4,400.0	4,332.2	4,227.5	4,061.0	16.1	19.9	151.55	-647.5	-777.6	1,584.7	1,554.9	29.82	53.146	
4,500.0	4,432.1	4,320.1	4,149.1	16.2	20.4	151.00	-674.9	-783.5	1,607.0	1,576.6	30.45	52.784	
4,600.0	4,532.0	4,410.1	4,235.2	16.4	20.9	150.46	-700.7	-789.9	1,626.9	1,595.9	31.02	52.450	
4,609.8	4,541.8	4,418.9	4,243.5	16.4	21.0	-112.91	-703.3	-790.5	1,628.7	1,598.9	29.80	54.649	
4,700.0	4,632.0	4,511.9	4,332.3	16.5	21.5	-113.71	-730.6	-796.9	1,645.4	1,615.0	30.38	54.156	
4,800.0	4,732.0	4,593.0	4,409.4	16.6	22.0	-114.42	-755.0	-802.2	1,664.2	1,633.3	30.94	53.796	
4,900.0	4,832.0	4,730.7	4,540.4	16.7	22.8	-115.61	-796.6	-810.7	1,683.3	1,651.6	31.77	52.984	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
5,000.0	4,932.0	4,911.6	4,714.6	16.9	23.7	-117.01	-844.9	-816.6	1,698.4	1,665.7	32.71	51.915	
5,100.0	5,032.0	4,998.5	4,798.6	17.0	24.1	-117.65	-867.0	-818.0	1,711.8	1,678.6	33.23	51.514	
5,200.0	5,132.0	5,138.6	4,934.8	17.1	24.7	-118.57	-899.4	-820.6	1,724.7	1,690.7	33.94	50.818	
5,300.0	5,232.0	5,297.5	5,091.3	17.3	25.3	-119.34	-927.1	-822.9	1,734.4	1,699.8	34.61	50.107	
5,400.0	5,332.0	5,412.4	5,205.1	17.4	25.6	-119.77	-942.9	-824.2	1,742.2	1,707.1	35.10	49.642	
5,500.0	5,432.0	5,537.3	5,329.3	17.6	26.0	-120.12	-956.3	-826.3	1,749.1	1,713.5	35.57	49.176	
5,600.0	5,532.0	5,681.1	5,472.7	17.7	26.2	-120.34	-965.6	-829.1	1,754.1	1,718.1	36.02	48.704	
5,700.0	5,632.0	5,805.9	5,597.4	17.9	26.4	-120.35	-967.4	-831.5	1,756.4	1,720.0	36.36	48.309	
5,800.0	5,732.0	5,912.7	5,704.3	18.0	26.5	-120.31	-967.5	-833.9	1,758.4	1,721.7	36.66	47.968	
5,900.0	5,832.0	6,019.4	5,810.9	18.2	26.6	-120.28	-967.5	-835.8	1,759.9	1,722.9	36.95	47.624	
6,000.0	5,932.0	6,123.2	5,914.7	18.3	26.7	-120.26	-967.6	-837.2	1,761.1	1,723.9	37.25	47.280	
6,100.0	6,032.0	6,225.7	6,017.2	18.5	26.8	-120.25	-967.8	-838.3	1,762.2	1,724.6	37.54	46.936	
6,200.0	6,132.0	6,325.6	6,117.1	18.6	26.9	-120.24	-968.2	-839.2	1,763.2	1,725.3	37.84	46.595	
6,300.0	6,232.0	6,429.3	6,220.8	18.8	27.0	-120.24	-968.7	-840.0	1,764.1	1,725.9	38.14	46.248	
6,400.0	6,332.0	6,533.5	6,325.0	18.9	27.1	-120.24	-968.9	-840.7	1,764.7	1,726.3	38.44	45.903	
6,500.0	6,432.0	6,631.8	6,423.3	19.1	27.2	-120.23	-968.9	-841.3	1,765.3	1,726.5	38.74	45.567	
6,600.0	6,532.0	6,725.4	6,516.8	19.2	27.3	-120.21	-968.9	-842.2	1,766.1	1,727.0	39.03	45.244	
6,637.8	6,569.8	6,763.0	6,554.5	19.3	27.3	-120.21	-969.0	-842.6	1,766.5	1,727.3	39.15	45.121	
6,650.0	6,582.0	6,773.2	6,564.7	19.3	27.3	-30.21	-969.0	-842.7	1,766.5	1,726.7	39.82	44.361	
6,700.0	6,632.0	6,826.5	6,617.9	19.4	27.4	-30.32	-969.2	-843.2	1,764.8	1,724.9	39.87	44.269	
6,750.0	6,681.6	6,877.3	6,668.7	19.4	27.4	-30.62	-969.5	-843.5	1,760.0	1,720.2	39.74	44.286	
6,800.0	6,730.6	6,924.9	6,716.3	19.4	27.5	-31.10	-969.7	-843.9	1,752.2	1,712.8	39.46	44.407	
6,850.0	6,778.9	6,973.1	6,764.6	19.3	27.5	-31.77	-969.9	-844.4	1,741.6	1,702.5	39.03	44.618	
6,900.0	6,826.2	7,021.7	6,813.2	19.3	27.6	-32.65	-970.1	-844.8	1,728.1	1,689.6	38.48	44.906	
6,950.0	6,872.2	7,069.6	6,861.1	19.2	27.6	-33.77	-970.2	-845.2	1,711.8	1,673.9	37.83	45.251	
7,000.0	6,916.8	7,116.4	6,907.9	19.2	27.7	-35.13	-970.3	-845.6	1,692.8	1,655.7	37.10	45.625	
7,050.0	6,959.6	7,160.1	6,951.6	19.1	27.7	-36.74	-970.2	-845.9	1,671.2	1,634.9	36.34	45.992	
7,100.0	7,000.6	7,201.0	6,992.4	19.0	27.8	-38.63	-970.2	-846.3	1,647.3	1,611.7	35.58	46.297	
7,150.0	7,039.5	7,240.8	7,032.3	19.0	27.8	-40.85	-970.3	-846.5	1,621.2	1,586.3	34.89	46.465	
7,200.0	7,076.0	7,280.4	7,071.9	19.0	27.9	-43.46	-970.3	-846.8	1,593.0	1,558.6	34.33	46.399	
7,250.0	7,110.1	7,317.3	7,108.8	19.0	27.9	-46.45	-970.2	-847.0	1,562.9	1,528.9	33.97	46.012	
7,300.0	7,141.6	7,350.3	7,141.7	19.1	27.9	-49.80	-970.1	-847.1	1,531.2	1,497.3	33.85	45.233	
7,350.0	7,170.3	7,380.2	7,171.6	19.2	28.0	-53.53	-970.1	-847.2	1,498.1	1,464.1	34.03	44.026	
7,400.0	7,196.1	7,406.9	7,198.4	19.4	28.0	-57.63	-970.1	-847.2	1,463.9	1,429.4	34.50	42.426	
7,450.0	7,218.8	7,429.7	7,221.2	19.7	28.0	-62.01	-970.1	-847.2	1,428.8	1,393.5	35.24	40.543	
7,500.0	7,238.3	7,449.2	7,240.6	20.0	28.1	-66.62	-970.1	-847.2	1,393.1	1,356.9	36.17	38.518	
7,550.0	7,254.6	7,465.4	7,256.8	20.5	28.1	-71.36	-970.1	-847.2	1,357.1	1,319.9	37.18	36.495	
7,600.0	7,267.6	7,478.3	7,269.8	21.0	28.1	-76.10	-970.1	-847.2	1,321.0	1,282.8	38.19	34.589	
7,650.0	7,277.1	7,487.9	7,279.3	21.5	28.1	-80.70	-970.1	-847.2	1,285.1	1,246.0	39.10	32.865	
7,700.0	7,283.3	7,494.0	7,285.5	22.2	28.1	-85.05	-970.1	-847.2	1,249.8	1,209.9	39.88	31.341	
7,750.0	7,285.9	7,496.7	7,288.2	22.9	28.1	-89.04	-970.0	-847.2	1,215.3	1,174.8	40.51	30.001	
7,760.9	7,286.0	7,496.8	7,288.3	23.0	28.1	-89.85	-970.0	-847.2	1,207.9	1,167.3	40.63	29.730	
7,800.0	7,286.1	7,497.0	7,288.4	23.6	28.1	-89.86	-970.0	-847.2	1,181.8	1,140.6	41.23	28.666	
7,900.0	7,286.4	7,497.4	7,288.8	25.3	28.1	-89.88	-970.0	-847.2	1,118.5	1,075.6	42.90	26.070	
8,000.0	7,286.6	7,497.8	7,289.2	27.2	28.1	-89.91	-970.0	-847.2	1,060.9	1,016.2	44.77	23.697	
8,100.0	7,286.9	7,498.2	7,289.6	29.2	28.1	-89.93	-970.0	-847.2	1,010.0	963.2	46.79	21.586	
8,200.0	7,287.2	7,498.6	7,290.0	31.3	28.1	-89.96	-970.0	-847.2	966.7	917.8	48.93	19.757	
8,300.0	7,287.4	7,499.0	7,290.4	33.6	28.1	-89.98	-970.0	-847.2	932.2	881.0	51.17	18.218	
8,400.0	7,287.7	7,499.4	7,290.8	35.9	28.1	-90.01	-970.0	-847.2	907.4	853.9	53.49	16.966	
8,500.0	7,288.0	7,499.8	7,291.2	38.3	28.1	-90.04	-970.0	-847.2	893.2	837.4	55.87	15.988	
8,577.7	7,288.2	7,500.1	7,291.5	40.2	28.1	-90.06	-970.0	-847.2	889.8	832.1	57.77	15.405	
8,600.0	7,288.2	7,500.2	7,291.6	40.7	28.1	-90.06	-970.0	-847.2	890.1	831.8	58.31	15.266	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
8,700.0	7,288.5	7,500.6	7,292.0	43.2	28.1	-90.09	-970.0	-847.2	898.2	837.4	60.79	14.775	
8,800.0	7,288.8	7,501.0	7,292.4	45.7	28.1	-90.11	-970.0	-847.2	917.2	853.9	63.31	14.487	
8,900.0	7,289.0	7,501.4	7,292.8	48.3	28.1	-90.14	-970.0	-847.2	946.4	880.5	65.87	14.369	SF
9,000.0	7,289.3	7,501.8	7,293.2	50.9	28.1	-90.17	-970.0	-847.2	985.0	916.5	68.44	14.391	
9,100.0	7,289.6	7,502.2	7,293.6	53.5	28.1	-90.19	-970.0	-847.2	1,031.8	960.8	71.05	14.523	
9,200.0	7,289.8	7,502.6	7,294.0	56.1	28.1	-90.22	-970.0	-847.2	1,085.8	1,012.2	73.67	14.740	
9,300.0	7,290.1	7,503.0	7,294.5	58.7	28.1	-90.24	-970.0	-847.2	1,146.1	1,069.8	76.31	15.019	
9,400.0	7,290.4	7,503.4	7,294.9	61.4	28.1	-90.27	-970.0	-847.2	1,211.6	1,132.6	78.96	15.344	
9,500.0	7,290.6	7,503.8	7,295.3	64.1	28.1	-90.30	-970.0	-847.2	1,281.6	1,199.9	81.63	15.700	
9,600.0	7,290.9	7,504.2	7,295.7	66.7	28.1	-90.32	-970.0	-847.2	1,355.3	1,271.0	84.31	16.076	
9,700.0	7,291.2	7,504.7	7,296.1	69.4	28.1	-90.35	-970.0	-847.2	1,432.3	1,345.3	87.00	16.463	
9,800.0	7,291.4	7,505.1	7,296.5	72.1	28.1	-90.38	-970.0	-847.2	1,511.9	1,422.2	89.70	16.856	
9,900.0	7,291.7	7,505.5	7,296.9	74.8	28.1	-90.41	-970.0	-847.2	1,593.8	1,501.4	92.40	17.249	
10,000.0	7,292.0	7,505.9	7,297.4	77.5	28.1	-90.43	-970.0	-847.2	1,677.7	1,582.6	95.11	17.639	
10,100.0	7,292.2	7,506.3	7,297.8	80.3	28.1	-90.46	-970.0	-847.2	1,763.3	1,665.4	97.83	18.023	
10,200.0	7,292.5	7,506.8	7,298.2	83.0	28.1	-90.49	-970.0	-847.2	1,850.3	1,749.7	100.56	18.400	
10,300.0	7,292.8	7,507.2	7,298.6	85.7	28.1	-90.51	-970.0	-847.2	1,938.6	1,835.3	103.29	18.768	
10,400.0	7,293.0	7,507.6	7,299.1	88.5	28.1	-90.54	-970.0	-847.2	2,027.9	1,921.9	106.03	19.127	
10,500.0	7,293.3	7,508.0	7,299.5	91.2	28.1	-90.57	-970.0	-847.2	2,118.2	2,009.5	108.77	19.475	
10,600.0	7,293.6	7,508.5	7,299.9	93.9	28.1	-90.60	-970.0	-847.2	2,209.4	2,097.9	111.51	19.814	
10,700.0	7,293.8	7,508.9	7,300.3	96.7	28.1	-90.62	-970.0	-847.2	2,301.3	2,187.0	114.26	20.141	
10,800.0	7,294.1	7,509.3	7,300.8	99.4	28.1	-90.65	-970.0	-847.2	2,393.8	2,276.8	117.01	20.459	
10,900.0	7,294.4	7,509.7	7,301.2	102.2	28.1	-90.68	-970.0	-847.3	2,486.9	2,367.2	119.76	20.766	
11,000.0	7,294.6	7,510.2	7,301.6	105.0	28.1	-90.71	-970.0	-847.3	2,580.6	2,458.0	122.52	21.063	
11,100.0	7,294.9	7,510.6	7,302.1	107.7	28.1	-90.74	-970.0	-847.3	2,674.6	2,549.4	125.28	21.350	
11,200.0	7,295.2	7,511.0	7,302.5	110.5	28.1	-90.76	-970.0	-847.3	2,769.1	2,641.1	128.04	21.628	
11,300.0	7,295.4	7,511.5	7,302.9	113.2	28.1	-90.79	-970.0	-847.3	2,864.0	2,733.2	130.80	21.896	
11,400.0	7,295.7	7,511.9	7,303.4	116.0	28.1	-90.82	-970.0	-847.3	2,959.2	2,825.7	133.57	22.156	
11,500.0	7,296.0	7,512.4	7,303.8	118.8	28.1	-90.85	-970.0	-847.3	3,054.8	2,918.4	136.33	22.407	
11,600.0	7,296.2	7,512.8	7,304.3	121.6	28.1	-90.88	-970.0	-847.3	3,150.5	3,011.4	139.10	22.649	
11,700.0	7,296.5	7,513.2	7,304.7	124.3	28.1	-90.91	-970.0	-847.3	3,246.6	3,104.7	141.87	22.884	
11,800.0	7,296.8	7,513.7	7,305.1	127.1	28.1	-90.94	-970.0	-847.3	3,342.9	3,198.2	144.64	23.111	
11,886.1	7,297.0	7,514.1	7,305.5	129.5	28.1	-90.96	-970.0	-847.3	3,426.0	3,278.9	147.03	23.301	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	2.5	2.5	0.0	0.0	-53.20	434.3	-580.5	725.0				
100.0	100.0	103.7	103.7	0.1	0.1	-53.24	433.9	-580.7	724.9	724.7	0.17	4,169.292	
200.0	200.0	205.1	205.0	0.3	0.2	-53.33	432.7	-581.2	724.6	724.1	0.56	1,298.576	
300.0	300.0	324.2	324.2	0.5	0.5	-53.45	430.6	-580.8	723.3	722.3	1.04	694.958	
400.0	400.0	471.2	470.9	0.8	0.9	-53.52	424.3	-573.9	717.0	715.4	1.61	445.918	
500.0	500.0	607.6	606.2	1.0	1.2	-53.56	414.1	-560.8	704.8	702.6	2.22	317.255	
600.0	600.0	724.5	721.5	1.2	1.6	-53.74	401.2	-546.8	688.6	685.7	2.85	241.775	
700.0	700.0	836.9	831.9	1.4	2.1	-54.28	384.3	-534.4	670.8	667.3	3.49	192.326	
800.0	800.0	972.3	963.6	1.7	2.7	-152.26	358.0	-516.5	650.2	646.4	3.80	171.189	
900.0	899.8	1,107.0	1,092.3	1.9	3.5	-154.07	325.7	-493.5	627.0	622.6	4.46	140.641	
1,000.0	999.5	1,217.4	1,196.1	2.1	4.2	-156.12	294.5	-472.3	602.9	597.8	5.10	118.197	
1,100.0	1,098.7	1,316.6	1,288.9	2.3	4.9	-158.23	265.9	-452.4	581.5	575.8	5.73	101.549	
1,200.0	1,197.5	1,407.0	1,373.7	2.6	5.4	-160.19	241.0	-433.4	563.8	557.5	6.31	89.334	
1,300.0	1,295.6	1,498.1	1,459.7	3.0	5.9	-162.27	217.1	-415.3	551.8	544.9	6.92	79.748	
1,400.0	1,393.4	1,599.4	1,555.2	3.3	6.6	-164.70	189.8	-395.5	542.2	534.5	7.67	70.656	
1,500.0	1,491.3	1,697.1	1,646.7	3.7	7.2	-167.33	161.4	-376.5	532.8	524.4	8.47	62.899	
1,600.0	1,589.1	1,802.5	1,745.3	4.1	7.9	-170.28	130.5	-355.6	524.3	514.9	9.36	56.020	
1,700.0	1,686.9	1,908.2	1,843.6	4.6	8.7	-173.31	99.1	-332.5	514.8	504.5	10.31	49.912	
1,800.0	1,784.7	1,996.3	1,925.6	5.0	9.2	-175.83	73.7	-312.8	506.5	495.3	11.16	45.392	
1,900.0	1,882.5	2,092.6	2,015.3	5.4	9.9	-178.74	45.4	-292.4	500.5	488.4	12.12	41.299	
2,000.0	1,980.3	2,188.5	2,104.4	5.9	10.6	178.15	15.8	-272.3	495.8	482.7	13.18	37.615	
2,100.0	2,078.1	2,283.6	2,192.8	6.3	11.3	175.09	-12.9	-252.4	492.9	478.7	14.24	34.606	
2,200.0	2,176.0	2,379.1	2,281.9	6.7	11.9	172.08	-41.0	-232.5	491.6	476.3	15.31	32.102	
2,300.0	2,273.8	2,481.8	2,377.2	7.2	12.7	168.73	-72.0	-210.3	491.2	474.6	16.55	29.682	
2,304.1	2,277.8	2,485.2	2,380.4	7.2	12.7	168.62	-73.0	-209.6	491.2	474.6	16.59	29.602	CC, ES
2,400.0	2,371.6	2,568.0	2,456.9	7.6	13.3	165.75	-99.6	-192.3	493.1	475.4	17.69	27.871	
2,500.0	2,469.4	2,668.6	2,548.6	8.1	14.1	161.91	-135.2	-171.3	497.3	478.2	19.11	26.017	
2,600.0	2,567.2	2,762.4	2,633.0	8.5	14.9	158.14	-170.4	-150.6	502.9	482.3	20.56	24.461	
2,700.0	2,665.0	2,854.3	2,715.9	9.0	15.7	154.56	-204.7	-130.4	511.0	489.0	21.93	23.297	
2,800.0	2,762.8	2,941.4	2,795.4	9.4	16.3	151.52	-235.5	-112.7	522.1	499.0	23.16	22.545	
2,900.0	2,860.7	3,046.2	2,891.4	9.9	17.1	148.08	-271.7	-91.2	534.6	510.0	24.59	21.740	
3,000.0	2,958.5	3,147.9	2,983.7	10.3	17.9	144.72	-307.7	-68.6	547.6	521.5	26.04	21.030	
3,100.0	3,056.3	3,253.5	3,080.2	10.8	18.7	141.58	-342.3	-43.5	559.7	532.2	27.42	20.409	
3,200.0	3,154.1	3,343.0	3,163.2	11.3	19.4	139.28	-369.9	-23.8	573.6	545.0	28.57	20.077	
3,300.0	3,251.9	3,447.4	3,260.0	11.7	20.1	136.77	-401.5	-1.0	588.5	558.6	29.83	19.727	
3,400.0	3,349.7	3,552.1	3,357.4	12.2	20.9	134.46	-431.3	23.2	602.2	571.1	31.06	19.386	
3,500.0	3,447.5	3,651.9	3,450.3	12.6	21.6	132.38	-459.2	46.4	616.3	584.1	32.24	19.119	
3,600.0	3,545.4	3,747.4	3,539.8	13.1	22.2	130.60	-484.7	68.2	630.7	597.4	33.32	18.928	
3,700.0	3,643.2	3,833.6	3,620.8	13.5	22.8	129.14	-507.7	86.6	646.6	612.3	34.30	18.851	SF
3,800.0	3,741.0	3,913.7	3,696.2	14.0	23.3	127.90	-529.7	102.1	665.2	629.9	35.24	18.873	
3,900.0	3,838.8	3,997.3	3,773.9	14.5	23.9	126.47	-555.8	118.2	686.7	650.5	36.23	18.956	
4,000.0	3,936.6	4,106.6	3,875.6	14.9	24.6	124.70	-590.0	139.3	708.8	671.4	37.39	18.956	
4,009.8	3,946.2	4,119.0	3,887.1	15.0	24.7	124.49	-593.9	142.0	710.9	673.3	37.52	18.946	
4,100.0	4,034.7	4,208.7	3,969.7	15.3	25.4	123.14	-621.9	162.8	728.3	689.8	38.52	18.907	
4,200.0	4,133.4	4,307.1	4,061.2	15.6	26.1	121.70	-651.4	183.6	746.9	707.4	39.48	18.918	
4,300.0	4,232.6	4,399.0	4,147.2	15.8	26.7	120.33	-678.0	202.4	763.9	723.6	40.32	18.947	
4,400.0	4,332.2	4,493.2	4,234.9	16.1	27.4	118.71	-706.2	221.8	780.7	739.6	41.11	18.990	
4,500.0	4,432.1	4,594.1	4,328.8	16.2	28.1	116.77	-736.3	243.4	796.4	754.5	41.85	19.028	
4,600.0	4,532.0	4,677.2	4,406.2	16.4	28.7	115.13	-760.9	261.1	811.6	769.1	42.43	19.128	
4,609.8	4,541.8	4,684.7	4,413.1	16.4	28.7	-148.34	-763.3	262.7	813.1	784.5	28.63	28.402	
4,700.0	4,632.0	4,761.4	4,483.7	16.5	29.3	-150.27	-787.9	279.7	828.8	799.4	29.44	28.154	
4,800.0	4,732.0	4,855.5	4,570.8	16.6	30.0	-152.46	-817.7	299.4	847.6	817.2	30.44	27.842	

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-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
4,900.0	4,832.0	4,958.4	4,667.0	16.7	30.7	-154.59	-848.7	318.8	867.1	835.6	31.51	27.516	
5,000.0	4,932.0	5,050.6	4,754.3	16.9	31.2	-156.19	-874.5	333.4	886.7	854.2	32.45	27.322	
5,100.0	5,032.0	5,158.6	4,856.6	17.0	31.9	-157.94	-904.6	349.8	907.1	873.6	33.52	27.061	
5,200.0	5,132.0	5,284.7	4,977.5	17.1	32.6	-159.73	-935.8	367.9	925.5	890.9	34.67	26.699	
5,300.0	5,232.0	5,420.3	5,109.5	17.3	33.2	-161.19	-962.6	383.3	940.5	904.8	35.70	26.343	
5,400.0	5,332.0	5,551.0	5,238.3	17.4	33.6	-162.20	-982.2	394.3	952.2	915.7	36.54	26.057	
5,500.0	5,432.0	5,694.4	5,380.6	17.6	34.0	-162.94	-996.7	402.6	960.2	923.0	37.25	25.777	
5,600.0	5,532.0	5,835.0	5,520.9	17.7	34.2	-163.36	-1,003.3	408.1	963.6	925.8	37.78	25.505	
5,700.0	5,632.0	5,946.2	5,632.1	17.9	34.3	-163.54	-1,004.9	410.6	964.2	926.1	38.14	25.280	
5,800.0	5,732.0	6,040.3	5,726.1	18.0	34.4	-163.53	-1,005.3	410.3	964.8	926.4	38.43	25.107	
5,900.0	5,832.0	6,137.9	5,823.8	18.2	34.5	-163.46	-1,006.0	409.0	965.8	927.1	38.71	24.951	
6,000.0	5,932.0	6,236.5	5,922.4	18.3	34.6	-163.40	-1,006.8	407.6	967.0	928.0	38.99	24.797	
6,100.0	6,032.0	6,337.1	6,023.0	18.5	34.6	-163.32	-1,007.7	406.1	968.3	929.0	39.28	24.648	
6,200.0	6,132.0	6,440.6	6,126.5	18.6	34.7	-163.27	-1,008.4	405.0	969.2	929.7	39.58	24.488	
6,300.0	6,232.0	6,539.3	6,225.1	18.8	34.8	-163.25	-1,009.1	404.3	970.1	930.2	39.88	24.324	
6,400.0	6,332.0	6,639.5	6,325.4	18.9	34.9	-163.22	-1,009.9	403.6	971.1	930.9	40.19	24.164	
6,500.0	6,432.0	6,741.6	6,427.4	19.1	35.0	-163.21	-1,010.7	403.2	971.9	931.4	40.50	23.998	
6,600.0	6,532.0	6,842.0	6,527.8	19.2	35.0	-163.21	-1,011.3	402.9	972.6	931.8	40.81	23.831	
6,637.8	6,569.8	6,879.1	6,565.0	19.3	35.1	-163.20	-1,011.6	402.8	972.9	932.0	40.93	23.769	
6,650.0	6,582.0	6,891.1	6,576.9	19.3	35.1	-73.20	-1,011.7	402.7	973.0	924.3	48.67	19.992	
6,700.0	6,632.0	6,939.7	6,625.5	19.4	35.1	-73.36	-1,012.0	402.5	972.6	923.9	48.73	19.961	
6,750.0	6,681.6	6,989.1	6,674.9	19.4	35.2	-73.78	-1,012.4	402.1	971.4	922.7	48.66	19.963	
6,800.0	6,730.6	7,038.2	6,724.0	19.4	35.2	-74.47	-1,012.8	401.8	969.2	920.7	48.47	19.995	
6,850.0	6,778.9	7,085.5	6,771.3	19.3	35.3	-75.39	-1,013.2	401.4	966.3	918.1	48.19	20.053	
6,900.0	6,826.2	7,131.7	6,817.5	19.3	35.3	-76.52	-1,013.6	401.1	962.7	914.9	47.81	20.135	
6,950.0	6,872.2	7,179.8	6,865.6	19.2	35.3	-77.93	-1,014.1	400.8	958.6	911.2	47.35	20.243	
7,000.0	6,916.8	7,226.9	6,912.7	19.2	35.4	-79.52	-1,014.4	400.3	954.1	907.2	46.85	20.367	
7,050.0	6,959.6	7,268.9	6,954.7	19.1	35.4	-81.15	-1,014.6	399.9	949.5	903.2	46.33	20.494	
7,100.0	7,000.6	7,308.8	6,994.6	19.0	35.4	-82.86	-1,014.9	399.6	945.2	899.4	45.82	20.627	
7,150.0	7,039.5	7,349.1	7,034.9	19.0	35.5	-84.69	-1,015.2	399.3	941.4	896.0	45.32	20.770	
7,200.0	7,076.0	7,388.2	7,074.0	19.0	35.5	-86.55	-1,015.4	399.1	938.2	893.4	44.87	20.912	
7,250.0	7,110.1	7,423.9	7,109.7	19.0	35.5	-88.31	-1,015.5	399.0	936.1	891.7	44.50	21.039	
7,296.7	7,139.6	7,452.8	7,138.6	19.1	35.6	-89.73	-1,015.6	398.9	935.4	891.2	44.27	21.133	
7,300.0	7,141.6	7,454.8	7,140.6	19.1	35.6	-89.82	-1,015.6	398.9	935.5	891.2	44.25	21.140	
7,350.0	7,170.3	7,482.8	7,168.6	19.2	35.6	-91.15	-1,015.8	398.8	936.5	892.3	44.13	21.220	
7,400.0	7,196.1	7,508.0	7,193.8	19.4	35.6	-92.23	-1,015.9	398.8	939.4	895.3	44.16	21.275	
7,450.0	7,218.8	7,530.6	7,216.4	19.7	35.6	-93.04	-1,016.0	398.8	944.6	900.2	44.33	21.306	
7,500.0	7,238.3	7,550.1	7,235.9	20.0	35.7	-93.54	-1,016.1	398.8	952.0	907.3	44.67	21.311	
7,550.0	7,254.6	7,566.4	7,252.2	20.5	35.7	-93.68	-1,016.2	398.8	961.8	916.7	45.17	21.294	
7,600.0	7,267.6	7,579.4	7,265.1	21.0	35.7	-93.42	-1,016.3	398.8	974.2	928.4	45.81	21.266	
7,650.0	7,277.1	7,588.9	7,274.7	21.5	35.7	-92.76	-1,016.3	398.8	988.9	942.4	46.56	21.238	
7,700.0	7,283.3	7,595.0	7,280.8	22.2	35.7	-91.67	-1,016.3	398.8	1,006.0	958.7	47.39	21.228	
7,750.0	7,285.9	7,597.6	7,283.4	22.9	35.7	-90.15	-1,016.4	398.8	1,025.4	977.2	48.24	21.256	
7,760.9	7,286.0	7,597.7	7,283.5	23.0	35.7	-89.77	-1,016.4	398.8	1,029.9	981.5	48.42	21.269	
7,800.0	7,286.1	7,597.8	7,283.6	23.6	35.7	-89.77	-1,016.4	398.8	1,046.8	997.8	49.02	21.354	
7,900.0	7,286.4	7,598.1	7,283.9	25.3	35.7	-89.79	-1,016.4	398.8	1,095.2	1,044.5	50.70	21.602	
8,000.0	7,286.6	7,598.3	7,284.1	27.2	35.7	-89.80	-1,016.4	398.8	1,150.3	1,097.7	52.56	21.883	
8,100.0	7,286.9	7,598.6	7,284.4	29.2	35.7	-89.82	-1,016.4	398.8	1,211.1	1,156.5	54.58	22.188	
8,200.0	7,287.2	7,598.8	7,284.6	31.3	35.7	-89.83	-1,016.4	398.8	1,276.9	1,220.2	56.72	22.511	
8,300.0	7,287.4	7,599.1	7,284.9	33.6	35.7	-89.85	-1,016.4	398.8	1,346.9	1,287.9	58.96	22.843	
8,400.0	7,287.7	7,599.4	7,285.1	35.9	35.7	-89.86	-1,016.4	398.8	1,420.5	1,359.2	61.28	23.180	
8,500.0	7,288.0	7,599.6	7,285.4	38.3	35.7	-89.88	-1,016.4	398.8	1,497.2	1,433.5	63.67	23.516	

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-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
8,600.0	7,288.2	7,599.9	7,285.7	40.7	35.7	-89.90	-1,016.4	398.8	1,576.4	1,510.3	66.10	23.848	
8,700.0	7,288.5	7,600.1	7,285.9	43.2	35.7	-89.91	-1,016.4	398.8	1,658.0	1,589.4	68.59	24.173	
8,800.0	7,288.8	7,600.4	7,286.2	45.7	35.7	-89.93	-1,016.4	398.8	1,741.4	1,670.3	71.11	24.489	
8,900.0	7,289.0	7,600.6	7,286.4	48.3	35.7	-89.94	-1,016.4	398.8	1,826.5	1,752.9	73.66	24.796	
9,000.0	7,289.3	7,600.9	7,286.7	50.9	35.7	-89.96	-1,016.4	398.8	1,913.1	1,836.8	76.24	25.092	
9,100.0	7,289.6	7,601.1	7,286.9	53.5	35.7	-89.97	-1,016.4	398.8	2,000.9	1,922.0	78.84	25.377	
9,200.0	7,289.8	7,601.4	7,287.2	56.1	35.7	-89.99	-1,016.4	398.8	2,089.8	2,008.3	81.47	25.652	
9,300.0	7,290.1	7,601.6	7,287.4	58.7	35.7	-90.00	-1,016.4	398.8	2,179.6	2,095.5	84.11	25.915	
9,400.0	7,290.4	7,601.9	7,287.7	61.4	35.7	-90.02	-1,016.4	398.8	2,270.4	2,183.6	86.76	26.168	
9,500.0	7,290.6	7,602.1	7,287.9	64.1	35.7	-90.04	-1,016.4	398.8	2,361.8	2,272.4	89.43	26.410	
9,600.0	7,290.9	7,602.4	7,288.2	66.7	35.7	-90.05	-1,016.4	398.8	2,454.0	2,361.8	92.11	26.642	
9,700.0	7,291.2	7,602.6	7,288.4	69.4	35.7	-90.07	-1,016.4	398.8	2,546.7	2,451.9	94.80	26.864	
9,800.0	7,291.4	7,602.9	7,288.7	72.1	35.7	-90.08	-1,016.4	398.8	2,639.9	2,542.4	97.50	27.077	
9,900.0	7,291.7	7,603.1	7,288.9	74.8	35.7	-90.10	-1,016.4	398.8	2,733.7	2,633.5	100.20	27.281	
10,000.0	7,292.0	7,603.4	7,289.2	77.5	35.7	-90.11	-1,016.4	398.8	2,827.8	2,724.9	102.92	27.477	
10,100.0	7,292.2	7,603.6	7,289.4	80.3	35.7	-90.13	-1,016.4	398.8	2,922.4	2,816.7	105.64	27.664	
10,200.0	7,292.5	7,603.9	7,289.7	83.0	35.7	-90.14	-1,016.4	398.8	3,017.3	2,908.9	108.36	27.844	
10,300.0	7,292.8	7,604.1	7,289.9	85.7	35.7	-90.16	-1,016.4	398.8	3,112.5	3,001.4	111.09	28.017	
10,400.0	7,293.0	7,604.4	7,290.2	88.5	35.7	-90.18	-1,016.4	398.8	3,208.0	3,094.2	113.83	28.182	
10,500.0	7,293.3	7,604.7	7,290.5	91.2	35.7	-90.19	-1,016.4	398.8	3,303.8	3,187.2	116.57	28.341	
10,600.0	7,293.6	7,604.9	7,290.7	93.9	35.7	-90.21	-1,016.4	398.8	3,399.8	3,280.5	119.32	28.494	
10,700.0	7,293.8	7,605.2	7,291.0	96.7	35.7	-90.22	-1,016.4	398.8	3,496.0	3,374.0	122.06	28.641	
10,800.0	7,294.1	7,605.4	7,291.2	99.4	35.7	-90.24	-1,016.4	398.8	3,592.5	3,467.7	124.81	28.783	
10,900.0	7,294.4	7,605.7	7,291.5	102.2	35.7	-90.25	-1,016.4	398.8	3,689.1	3,561.6	127.57	28.919	
11,000.0	7,294.6	7,605.9	7,291.7	105.0	35.7	-90.27	-1,016.4	398.8	3,785.9	3,655.6	130.33	29.050	
11,100.0	7,294.9	7,606.2	7,292.0	107.7	35.7	-90.29	-1,016.4	398.8	3,882.9	3,749.8	133.09	29.176	
11,200.0	7,295.2	7,606.4	7,292.2	110.5	35.7	-90.30	-1,016.4	398.8	3,980.0	3,844.2	135.85	29.298	
11,300.0	7,295.4	7,606.7	7,292.5	113.2	35.7	-90.32	-1,016.4	398.8	4,077.3	3,938.7	138.61	29.415	
11,400.0	7,295.7	7,606.9	7,292.7	116.0	35.7	-90.33	-1,016.4	398.8	4,174.7	4,033.3	141.38	29.528	
11,500.0	7,296.0	7,607.2	7,293.0	118.8	35.7	-90.35	-1,016.4	398.8	4,272.2	4,128.1	144.15	29.638	
11,600.0	7,296.2	7,607.5	7,293.2	121.6	35.7	-90.37	-1,016.4	398.8	4,369.8	4,222.9	146.92	29.743	
11,700.0	7,296.5	7,607.7	7,293.5	124.3	35.7	-90.38	-1,016.4	398.8	4,467.6	4,317.9	149.69	29.845	
11,800.0	7,296.8	7,608.0	7,293.8	127.1	35.7	-90.40	-1,016.4	398.8	4,565.4	4,412.9	152.46	29.944	
11,886.1	7,297.0	7,608.2	7,294.0	129.5	35.7	-90.41	-1,016.4	398.8	4,649.7	4,494.9	154.85	30.026	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	-48.50	495.1	-559.6	747.2				
100.0	100.0	101.6	101.6	0.1	0.1	-48.50	495.1	-559.6	747.2	747.0	0.20	3,685.322	
200.0	200.0	200.7	200.7	0.3	0.2	-48.50	495.2	-559.8	747.4	746.9	0.53	1,408.896	
300.0	300.0	299.7	299.7	0.5	0.3	-48.50	495.4	-560.0	747.7	746.9	0.86	871.233 ES	
400.0	400.0	398.8	398.8	0.8	0.4	-48.51	495.7	-560.4	748.1	747.0	1.19	630.835	
500.0	500.0	497.9	497.9	1.0	0.5	-48.51	496.0	-560.8	748.7	747.2	1.51	494.616	
600.0	600.0	597.0	597.0	1.2	0.6	-48.52	496.4	-561.4	749.4	747.5	1.84	406.952	
700.0	700.0	696.1	696.1	1.4	0.7	-48.53	496.8	-562.0	750.2	748.0	2.17	345.834	
800.0	800.0	793.4	793.4	1.7	0.9	-145.27	497.4	-562.8	752.6	750.0	2.59	290.474	
900.0	899.8	893.1	893.1	1.9	1.1	-145.44	498.1	-563.8	758.1	755.1	3.01	252.099	
1,000.0	999.5	990.7	990.7	2.1	1.4	-145.73	498.8	-565.0	766.7	763.3	3.43	223.741	
1,100.0	1,098.7	1,092.8	1,092.7	2.3	1.6	-146.17	499.1	-566.6	778.2	774.3	3.86	201.650	
1,200.0	1,197.5	1,200.0	1,199.9	2.6	1.8	-146.58	500.8	-565.9	791.8	787.5	4.30	184.116	
1,300.0	1,295.6	1,305.5	1,305.2	3.0	2.0	-146.71	505.7	-561.1	807.3	802.5	4.76	169.631	
1,400.0	1,393.4	1,398.4	1,397.6	3.3	2.2	-146.80	512.4	-554.6	824.0	818.7	5.23	157.413	
1,500.0	1,491.3	1,487.1	1,485.6	3.7	2.4	-146.73	521.4	-547.9	842.1	836.3	5.74	146.661	
1,600.0	1,589.1	1,584.7	1,581.9	4.1	2.7	-146.40	534.4	-538.6	860.6	854.3	6.31	136.345	
1,700.0	1,686.9	1,690.0	1,685.2	4.6	3.0	-145.84	550.7	-526.3	879.0	872.0	6.95	126.478	
1,800.0	1,784.7	1,784.5	1,777.5	5.0	3.4	-145.24	566.3	-513.4	896.6	889.0	7.60	117.993	
1,900.0	1,882.5	1,883.5	1,873.8	5.4	3.7	-144.51	584.6	-499.4	915.3	907.0	8.29	110.356	
2,000.0	1,980.3	2,002.4	1,989.6	5.9	4.2	-143.71	604.9	-481.7	932.6	923.5	9.07	102.777	
2,100.0	2,078.1	2,082.5	2,067.3	6.3	4.5	-143.14	619.0	-468.9	949.6	939.9	9.75	97.440	
2,200.0	2,176.0	2,178.4	2,160.3	6.7	4.9	-142.43	637.4	-454.1	968.2	957.7	10.50	92.253	
2,300.0	2,273.8	2,281.4	2,260.3	7.2	5.4	-141.73	656.5	-438.1	986.5	975.2	11.28	87.441	
2,400.0	2,371.6	2,382.5	2,358.3	7.6	5.8	-141.04	675.2	-421.9	1,004.4	992.3	12.09	83.058	
2,500.0	2,469.4	2,483.9	2,456.5	8.1	6.3	-140.35	694.0	-405.1	1,022.2	1,009.3	12.92	79.131	
2,600.0	2,567.2	2,592.6	2,561.4	8.5	6.8	-139.55	714.4	-385.3	1,039.2	1,025.4	13.81	75.248	
2,700.0	2,665.0	2,681.7	2,647.2	9.0	7.3	-138.87	731.7	-368.6	1,056.4	1,041.8	14.61	72.286	
2,800.0	2,762.8	2,771.8	2,734.3	9.4	7.7	-138.28	749.0	-353.1	1,074.6	1,059.2	15.40	69.775	
2,900.0	2,860.7	2,867.8	2,827.5	9.9	8.1	-137.77	766.4	-338.2	1,093.3	1,077.1	16.20	67.499	
3,000.0	2,958.5	2,968.4	2,925.1	10.3	8.6	-137.23	784.8	-322.3	1,112.0	1,095.0	17.03	65.294	
3,100.0	3,056.3	3,065.6	3,019.5	10.8	9.0	-136.75	802.2	-307.2	1,130.7	1,112.8	17.84	63.371	
3,200.0	3,154.1	3,157.8	3,109.5	11.3	9.4	-136.40	817.7	-294.4	1,149.7	1,131.1	18.61	61.789	
3,300.0	3,251.9	3,267.5	3,216.6	11.7	9.9	-136.02	836.3	-279.5	1,169.1	1,149.6	19.44	60.135	
3,400.0	3,349.7	3,394.0	3,340.7	12.2	10.4	-135.72	853.6	-262.5	1,185.9	1,165.6	20.31	58.383	
3,500.0	3,447.5	3,497.7	3,442.7	12.6	10.8	-135.54	866.2	-248.4	1,201.6	1,180.6	21.08	57.003	
3,600.0	3,545.4	3,626.9	3,569.5	13.1	11.3	-135.25	881.0	-228.4	1,215.5	1,193.6	21.97	55.320	
3,700.0	3,643.2	3,714.9	3,655.9	13.5	11.6	-135.06	890.5	-214.5	1,228.9	1,206.2	22.70	54.146	
3,800.0	3,741.0	3,790.3	3,730.0	14.0	11.9	-134.92	899.4	-203.7	1,243.9	1,220.6	23.36	53.248	
3,900.0	3,838.8	3,872.0	3,810.2	14.5	12.2	-134.77	910.3	-192.9	1,260.8	1,236.7	24.05	52.413	
4,000.0	3,936.6	3,950.6	3,887.2	14.9	12.6	-134.58	922.3	-182.3	1,279.1	1,254.3	24.76	51.659	
4,009.8	3,946.2	3,965.0	3,901.2	15.0	12.6	-134.54	924.7	-180.3	1,280.9	1,256.1	24.86	51.531	
4,100.0	4,034.7	4,049.5	3,983.8	15.3	13.0	-134.50	938.2	-169.0	1,297.0	1,271.4	25.54	50.779	
4,200.0	4,133.4	4,157.9	4,090.2	15.6	13.4	-134.35	954.2	-155.3	1,312.0	1,285.7	26.28	49.929	
4,300.0	4,232.6	4,252.0	4,182.5	15.8	13.8	-134.12	967.8	-143.5	1,324.6	1,297.6	26.92	49.201	
4,400.0	4,332.2	4,359.9	4,288.3	16.1	14.2	-133.66	983.6	-129.2	1,334.4	1,306.8	27.61	48.340	
4,500.0	4,432.1	4,458.7	4,385.3	16.2	14.6	-133.14	997.6	-116.5	1,342.0	1,313.8	28.21	47.575	
4,600.0	4,532.0	4,563.7	4,488.6	16.4	15.0	-132.52	1,011.0	-104.2	1,346.8	1,318.0	28.77	46.820	
4,609.8	4,541.8	4,573.0	4,497.9	16.4	15.0	-35.78	1,012.1	-103.3	1,347.1	1,323.2	23.89	56.380	
4,700.0	4,632.0	4,668.6	4,592.7	16.5	15.3	-35.27	1,021.6	-95.5	1,350.2	1,326.0	24.22	55.749	
4,800.0	4,732.0	4,775.6	4,699.1	16.6	15.6	-34.82	1,030.2	-88.4	1,353.0	1,328.4	24.59	55.031	
4,900.0	4,832.0	4,892.9	4,816.0	16.7	15.9	-34.46	1,037.1	-82.8	1,355.1	1,330.2	24.97	54.270	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
5,000.0	4,932.0	5,006.4	4,929.5	16.9	16.1	-34.24	1,040.7	-79.0	1,355.9	1,330.6	25.34	53.513	
5,100.0	5,032.0	5,106.9	5,029.9	17.0	16.2	-34.16	1,042.1	-77.6	1,356.3	1,330.6	25.68	52.816	
5,200.0	5,132.0	5,207.4	5,130.4	17.1	16.4	-34.12	1,042.9	-77.0	1,356.6	1,330.6	26.02	52.131	
5,300.0	5,232.0	5,306.9	5,229.9	17.3	16.5	-34.09	1,043.5	-76.7	1,356.9	1,330.5	26.37	51.464	
5,400.0	5,332.0	5,406.1	5,329.1	17.4	16.7	-34.08	1,044.0	-76.6	1,357.3	1,330.6	26.71	50.812	
5,500.0	5,432.0	5,504.9	5,427.9	17.6	16.8	-34.07	1,044.5	-76.6	1,357.7	1,330.7	27.06	50.175	
5,600.0	5,532.0	5,607.8	5,530.8	17.7	16.9	-34.07	1,044.9	-76.9	1,358.2	1,330.7	27.42	49.539	
5,700.0	5,632.0	5,713.6	5,636.6	17.9	17.1	-34.08	1,044.8	-77.2	1,358.2	1,330.4	27.78	48.894	
5,800.0	5,732.0	5,816.7	5,739.6	18.0	17.2	-34.10	1,044.2	-77.4	1,357.9	1,329.8	28.14	48.263	
5,900.0	5,832.0	5,919.0	5,842.0	18.2	17.4	-34.13	1,043.5	-77.7	1,357.5	1,329.0	28.49	47.642	
6,000.0	5,932.0	6,018.6	5,941.6	18.3	17.5	-34.15	1,042.7	-77.9	1,356.9	1,328.1	28.84	47.045	
6,100.0	6,032.0	6,117.8	6,040.7	18.5	17.6	-34.18	1,042.0	-78.1	1,356.4	1,327.2	29.19	46.463	
6,200.0	6,132.0	6,214.2	6,137.2	18.6	17.7	-34.20	1,041.4	-78.3	1,356.1	1,326.6	29.54	45.903	
6,276.5	6,208.6	6,288.1	6,211.1	18.7	17.8	-34.22	1,041.1	-78.7	1,356.0	1,326.2	29.81	45.488	
6,300.0	6,232.0	6,311.1	6,234.1	18.8	17.9	-34.23	1,041.0	-78.8	1,356.0	1,326.1	29.89	45.361	
6,400.0	6,332.0	6,410.0	6,332.9	18.9	18.0	-34.25	1,040.8	-79.3	1,356.1	1,325.9	30.25	44.825	
6,500.0	6,432.0	6,509.3	6,432.3	19.1	18.1	-34.26	1,040.7	-79.7	1,356.3	1,325.7	30.62	44.301	
6,600.0	6,532.0	6,610.1	6,533.0	19.2	18.3	-34.28	1,040.5	-80.2	1,356.4	1,325.4	30.98	43.779	
6,637.8	6,569.8	6,648.1	6,571.1	19.3	18.3	-34.29	1,040.4	-80.4	1,356.4	1,325.3	31.12	43.585	
6,650.0	6,582.0	6,660.4	6,583.4	19.3	18.4	55.71	1,040.4	-80.5	1,356.4	1,320.9	35.53	38.172	
6,700.0	6,632.0	6,710.9	6,633.9	19.4	18.4	55.88	1,040.2	-80.8	1,355.0	1,319.3	35.63	38.032	
6,750.0	6,681.6	6,761.1	6,684.1	19.4	18.5	56.31	1,040.0	-81.1	1,351.6	1,315.9	35.67	37.889	
6,800.0	6,730.6	6,810.8	6,733.8	19.4	18.6	56.98	1,039.8	-81.4	1,346.3	1,310.6	35.68	37.736	
6,850.0	6,778.9	6,859.7	6,782.6	19.3	18.6	57.91	1,039.5	-81.7	1,339.1	1,303.4	35.65	37.566	
6,900.0	6,826.2	6,907.2	6,830.2	19.3	18.7	59.09	1,039.3	-82.1	1,330.2	1,294.6	35.60	37.368	
6,950.0	6,872.2	6,953.6	6,876.5	19.2	18.8	60.51	1,039.0	-82.3	1,319.7	1,284.2	35.54	37.133	
7,000.0	6,916.8	6,998.4	6,921.4	19.2	18.8	62.16	1,038.8	-82.6	1,307.8	1,272.3	35.49	36.849	
7,050.0	6,959.6	7,041.6	6,964.6	19.1	18.9	64.03	1,038.6	-82.8	1,294.5	1,259.1	35.46	36.509	
7,100.0	7,000.6	7,083.6	7,006.5	19.0	19.0	66.11	1,038.4	-83.0	1,280.3	1,244.8	35.46	36.102	
7,150.0	7,039.5	7,123.4	7,046.3	19.0	19.0	68.36	1,038.2	-83.1	1,265.2	1,229.6	35.51	35.632	
7,200.0	7,076.0	7,160.7	7,083.7	19.0	19.1	70.74	1,038.0	-83.1	1,249.4	1,213.9	35.60	35.101	
7,250.0	7,110.1	7,195.5	7,118.4	19.0	19.1	73.20	1,037.8	-83.2	1,233.4	1,197.7	35.73	34.517	
7,300.0	7,141.6	7,227.4	7,150.4	19.1	19.2	75.68	1,037.6	-83.1	1,217.4	1,181.4	35.92	33.889	
7,350.0	7,170.3	7,256.3	7,179.2	19.2	19.2	78.13	1,037.5	-83.1	1,201.6	1,165.4	36.16	33.228	
7,400.0	7,196.1	7,282.1	7,205.0	19.4	19.3	80.47	1,037.4	-83.0	1,186.4	1,150.0	36.45	32.547	
7,450.0	7,218.8	7,304.8	7,227.7	19.7	19.3	82.67	1,037.3	-83.0	1,172.1	1,135.3	36.79	31.856	
7,500.0	7,238.3	7,324.3	7,247.2	20.0	19.3	84.66	1,037.2	-82.9	1,158.9	1,121.7	37.19	31.163	
7,550.0	7,254.6	7,340.4	7,263.4	20.5	19.3	86.40	1,037.1	-82.9	1,147.2	1,109.6	37.64	30.476	
7,600.0	7,267.6	7,353.2	7,276.2	21.0	19.4	87.86	1,037.0	-82.8	1,137.2	1,099.0	38.16	29.800	
7,650.0	7,277.1	7,362.6	7,285.5	21.5	19.4	88.99	1,037.0	-82.8	1,129.0	1,090.3	38.74	29.143	
7,700.0	7,283.3	7,368.5	7,291.4	22.2	19.4	89.78	1,037.0	-82.7	1,122.9	1,083.5	39.38	28.512	
7,750.0	7,285.9	7,370.9	7,293.8	22.9	19.4	90.22	1,036.9	-82.7	1,118.9	1,078.9	40.08	27.915	
7,760.9	7,286.0	7,370.9	7,293.9	23.0	19.4	90.27	1,036.9	-82.7	1,118.4	1,078.1	40.24	27.790	
7,800.0	7,286.1	7,370.9	7,293.8	23.6	19.4	90.27	1,036.9	-82.7	1,117.2	1,076.4	40.84	27.355	
7,813.2	7,286.1	7,370.8	7,293.8	23.9	19.4	90.26	1,036.9	-82.7	1,117.2	1,076.1	41.06	27.206	
7,900.0	7,286.4	7,370.7	7,293.6	25.3	19.4	90.26	1,036.9	-82.7	1,120.5	1,078.0	42.52	26.352	
8,000.0	7,286.6	7,370.5	7,293.5	27.2	19.4	90.25	1,036.9	-82.7	1,132.7	1,088.3	44.39	25.518	
8,100.0	7,286.9	7,370.3	7,293.3	29.2	19.4	90.24	1,036.9	-82.7	1,153.4	1,107.0	46.41	24.854	
8,200.0	7,287.2	7,370.1	7,293.1	31.3	19.4	90.23	1,036.9	-82.7	1,182.2	1,133.7	48.55	24.352	
8,300.0	7,287.4	7,370.0	7,292.9	33.6	19.4	90.22	1,036.9	-82.7	1,218.6	1,167.8	50.79	23.995	
8,400.0	7,287.7	7,369.8	7,292.7	35.9	19.4	90.21	1,036.9	-82.7	1,261.9	1,208.8	53.10	23.762	
8,500.0	7,288.0	7,369.6	7,292.6	38.3	19.4	90.20	1,036.9	-82.7	1,311.4	1,255.9	55.49	23.633	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
8,600.0	7,288.2	7,369.4	7,292.4	40.7	19.4	90.19	1,036.9	-82.7	1,366.4	1,308.5	57.93	23.588	SF
8,700.0	7,288.5	7,369.3	7,292.2	43.2	19.4	90.18	1,036.9	-82.7	1,426.3	1,365.9	60.41	23.610	
8,800.0	7,288.8	7,369.1	7,292.1	45.7	19.4	90.18	1,036.9	-82.7	1,490.6	1,427.6	62.93	23.684	
8,900.0	7,289.0	7,368.9	7,291.9	48.3	19.4	90.17	1,037.0	-82.7	1,558.6	1,493.1	65.49	23.800	
9,000.0	7,289.3	7,368.8	7,291.7	50.9	19.4	90.16	1,037.0	-82.7	1,629.9	1,561.8	68.07	23.945	
9,100.0	7,289.6	7,368.6	7,291.5	53.5	19.4	90.15	1,037.0	-82.7	1,704.1	1,633.4	70.67	24.113	
9,200.0	7,289.8	7,368.4	7,291.4	56.1	19.4	90.14	1,037.0	-82.7	1,780.8	1,707.5	73.29	24.297	
9,300.0	7,290.1	7,368.2	7,291.2	58.7	19.4	90.13	1,037.0	-82.7	1,859.7	1,783.8	75.93	24.491	
9,400.0	7,290.4	7,368.1	7,291.0	61.4	19.4	90.12	1,037.0	-82.7	1,940.6	1,862.0	78.59	24.693	
9,500.0	7,290.6	7,367.9	7,290.9	64.1	19.4	90.12	1,037.0	-82.7	2,023.2	1,941.9	81.26	24.899	
9,600.0	7,290.9	7,367.7	7,290.7	66.7	19.4	90.11	1,037.0	-82.7	2,107.3	2,023.3	83.94	25.106	
9,700.0	7,291.2	7,367.6	7,290.5	69.4	19.4	90.10	1,037.0	-82.7	2,192.7	2,106.1	86.63	25.312	
9,800.0	7,291.4	7,367.4	7,290.4	72.1	19.4	90.09	1,037.0	-82.8	2,279.3	2,190.0	89.32	25.517	
9,900.0	7,291.7	7,367.3	7,290.2	74.8	19.4	90.08	1,037.0	-82.8	2,367.0	2,275.0	92.03	25.719	
10,000.0	7,292.0	7,367.1	7,290.0	77.5	19.4	90.07	1,037.0	-82.8	2,455.6	2,360.9	94.75	25.918	
10,100.0	7,292.2	7,366.9	7,289.9	80.3	19.4	90.07	1,037.0	-82.8	2,545.1	2,447.6	97.47	26.112	
10,200.0	7,292.5	7,366.8	7,289.7	83.0	19.4	90.06	1,037.0	-82.8	2,635.3	2,535.1	100.19	26.302	
10,300.0	7,292.8	7,366.6	7,289.6	85.7	19.4	90.05	1,037.0	-82.8	2,726.2	2,623.3	102.92	26.487	
10,400.0	7,293.0	7,366.5	7,289.4	88.5	19.4	90.04	1,037.0	-82.8	2,817.7	2,712.0	105.66	26.667	
10,500.0	7,293.3	7,366.3	7,289.3	91.2	19.4	90.03	1,037.0	-82.8	2,909.8	2,801.4	108.40	26.842	
10,600.0	7,293.6	7,366.1	7,289.1	93.9	19.4	90.03	1,037.0	-82.8	3,002.3	2,891.2	111.15	27.013	
10,700.0	7,293.8	7,366.0	7,288.9	96.7	19.4	90.02	1,037.0	-82.8	3,095.4	2,981.5	113.90	27.178	
10,800.0	7,294.1	7,365.8	7,288.8	99.4	19.4	90.01	1,037.0	-82.8	3,188.9	3,072.2	116.65	27.338	
10,900.0	7,294.4	7,365.7	7,288.6	102.2	19.4	90.00	1,037.0	-82.8	3,282.7	3,163.3	119.40	27.493	
11,000.0	7,294.6	7,365.5	7,288.5	105.0	19.4	89.99	1,037.0	-82.8	3,376.9	3,254.7	122.16	27.643	
11,100.0	7,294.9	7,365.4	7,288.3	107.7	19.4	89.99	1,037.0	-82.8	3,471.4	3,346.5	124.92	27.789	
11,200.0	7,295.2	7,365.2	7,288.2	110.5	19.4	89.98	1,037.0	-82.8	3,566.3	3,438.6	127.68	27.931	
11,300.0	7,295.4	7,365.1	7,288.0	113.2	19.4	89.97	1,037.0	-82.8	3,661.4	3,530.9	130.45	28.068	
11,400.0	7,295.7	7,364.9	7,287.9	116.0	19.4	89.96	1,037.0	-82.8	3,756.7	3,623.5	133.22	28.200	
11,500.0	7,296.0	7,364.8	7,287.7	118.8	19.4	89.96	1,037.0	-82.8	3,852.3	3,716.3	135.98	28.329	
11,600.0	7,296.2	7,364.6	7,287.6	121.6	19.4	89.95	1,037.0	-82.8	3,948.1	3,809.4	138.76	28.454	
11,700.0	7,296.5	7,364.5	7,287.4	124.3	19.4	89.94	1,037.0	-82.8	4,044.1	3,902.6	141.53	28.575	
11,800.0	7,296.8	7,364.3	7,287.3	127.1	19.4	89.93	1,037.0	-82.8	4,140.3	3,996.0	144.30	28.692	
11,886.1	7,297.0	7,364.2	7,287.1	129.5	19.4	89.93	1,037.0	-82.8	4,223.3	4,076.6	146.69	28.790	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	2.5	2.5	0.0	0.0	-56.30	395.6	-593.3	713.1				
100.0	100.0	103.4	103.4	0.1	0.1	-56.31	395.6	-593.3	713.1	712.9	0.21	3,475.322	
200.0	200.0	204.2	204.2	0.3	0.2	-56.31	395.5	-593.2	712.9	712.4	0.54	1,331.811	
300.0	300.0	305.0	305.0	0.5	0.3	-56.31	395.2	-593.0	712.6	711.7	0.87	823.451	
400.0	400.0	405.9	405.9	0.8	0.4	-56.32	394.9	-592.7	712.2	711.0	1.20	595.733	
500.0	500.0	506.7	506.7	1.0	0.5	-56.33	394.5	-592.3	711.7	710.1	1.53	466.484	
600.0	600.0	607.5	607.5	1.2	0.6	-56.34	394.1	-591.8	711.0	709.2	1.86	383.156	
700.0	700.0	708.3	708.3	1.4	0.7	-56.36	393.5	-591.3	710.3	708.1	2.19	324.943	
727.4	727.4	735.9	735.9	1.5	0.8	-153.05	393.3	-591.1	710.1	707.9	2.27	312.626	
800.0	800.0	808.6	808.6	1.7	0.9	-153.11	392.9	-590.6	711.0	708.4	2.58	275.770	
900.0	899.8	917.1	917.1	1.9	1.2	-153.34	391.6	-589.7	714.3	711.3	3.01	237.387	
1,000.0	999.5	1,038.4	1,038.2	2.1	1.4	-153.94	386.5	-587.9	718.6	715.1	3.49	206.178	
1,100.0	1,098.7	1,162.1	1,161.5	2.3	1.7	-154.94	376.7	-584.5	723.0	719.0	3.99	181.388	
1,200.0	1,197.5	1,285.6	1,284.1	2.6	2.1	-156.24	362.5	-578.6	727.3	722.7	4.51	161.226	
1,300.0	1,295.6	1,396.9	1,394.1	3.0	2.5	-157.59	347.6	-571.3	732.5	727.5	5.03	145.575	
1,400.0	1,393.4	1,503.9	1,499.6	3.3	2.8	-159.06	331.3	-563.6	738.2	732.7	5.58	132.246	
1,500.0	1,491.3	1,612.9	1,606.6	3.7	3.2	-160.74	311.9	-556.2	743.6	737.4	6.16	120.648	
1,600.0	1,589.1	1,729.3	1,720.2	4.1	3.7	-162.58	289.1	-546.0	746.9	740.1	6.80	109.788	
1,700.0	1,686.9	1,843.1	1,830.7	4.6	4.2	-164.51	264.1	-534.9	748.9	741.4	7.48	100.062	
1,800.0	1,784.7	1,961.4	1,945.0	5.0	4.8	-166.47	237.4	-520.2	749.0	740.8	8.19	91.484	
1,900.0	1,882.5	2,061.6	2,041.4	5.4	5.3	-168.17	213.8	-506.5	748.1	739.3	8.83	84.710	
1,948.3	1,929.8	2,106.8	2,084.9	5.6	5.5	-168.95	203.0	-500.4	748.0	738.8	9.13	81.911	
2,000.0	1,980.3	2,155.0	2,131.3	5.9	5.7	-169.77	191.8	-494.0	748.1	738.7	9.44	79.212	
2,100.0	2,078.1	2,246.0	2,219.2	6.3	6.1	-171.23	171.5	-482.0	749.4	739.4	10.03	74.696	
2,200.0	2,176.0	2,335.5	2,305.8	6.7	6.5	-172.68	151.7	-471.3	752.6	741.9	10.64	70.708	
2,300.0	2,273.8	2,442.7	2,409.4	7.2	7.0	-174.46	127.2	-458.4	756.0	744.6	11.39	66.373	
2,400.0	2,371.6	2,547.2	2,509.8	7.6	7.6	-176.29	101.6	-445.0	758.9	746.7	12.19	62.269	
2,500.0	2,469.4	2,646.3	2,604.4	8.1	8.1	-178.16	75.3	-432.1	762.1	749.1	13.00	58.607	
2,600.0	2,567.2	2,742.4	2,696.0	8.5	8.7	179.97	48.8	-419.8	765.9	752.1	13.81	55.453	
2,700.0	2,665.0	2,835.2	2,784.8	9.0	9.2	178.25	24.2	-407.9	770.9	756.3	14.57	52.901	
2,800.0	2,762.8	2,926.1	2,872.0	9.4	9.6	176.68	1.3	-396.7	777.3	762.0	15.31	50.760	
2,900.0	2,860.7	3,018.1	2,960.4	9.9	10.1	175.12	-21.8	-386.2	785.1	769.1	16.09	48.809	
3,000.0	2,958.5	3,111.5	3,050.3	10.3	10.5	173.58	-45.0	-375.9	794.1	777.3	16.88	47.059	
3,100.0	3,056.3	3,206.8	3,142.5	10.8	11.0	172.17	-66.8	-365.7	804.1	786.4	17.65	45.556	
3,200.0	3,154.1	3,301.8	3,234.6	11.3	11.4	170.86	-87.7	-355.8	814.8	796.3	18.41	44.246	
3,300.0	3,251.9	3,402.6	3,332.6	11.7	11.9	169.58	-109.0	-345.4	826.0	806.8	19.20	43.014	
3,400.0	3,349.7	3,496.0	3,423.6	12.2	12.3	168.49	-127.7	-335.6	837.3	817.4	19.95	41.971	
3,500.0	3,447.5	3,603.7	3,528.6	12.6	12.7	167.30	-148.8	-324.6	849.3	828.5	20.77	40.883	
3,600.0	3,545.4	3,699.4	3,621.8	13.1	13.2	166.25	-167.7	-313.8	860.5	839.0	21.56	39.918	
3,700.0	3,643.2	3,803.1	3,722.4	13.5	13.7	165.02	-190.1	-302.1	872.2	849.8	22.44	38.874	
3,800.0	3,741.0	3,907.2	3,822.7	14.0	14.2	163.67	-214.6	-289.1	883.4	860.0	23.38	37.784	
3,900.0	3,838.8	3,994.0	3,906.2	14.5	14.7	162.53	-235.9	-278.4	895.3	871.1	24.23	36.944	
4,000.0	3,936.6	4,092.7	4,001.3	14.9	15.2	161.27	-259.9	-266.8	908.2	883.1	25.15	36.113	
4,009.8	3,946.2	4,102.5	4,010.7	15.0	15.2	161.15	-262.2	-265.7	909.5	884.3	25.23	36.041	
4,100.0	4,034.7	4,193.8	4,099.3	15.3	15.7	160.24	-281.6	-255.2	919.9	893.8	26.05	35.312	
4,200.0	4,133.4	4,292.6	4,195.2	15.6	16.1	159.23	-302.0	-243.7	928.2	901.3	26.88	34.527	
4,300.0	4,232.6	4,383.1	4,283.2	15.8	16.6	158.26	-320.6	-233.7	934.3	906.6	27.64	33.801	
4,400.0	4,332.2	4,483.2	4,381.0	16.1	17.0	157.22	-339.3	-223.3	937.6	909.2	28.37	33.046	
4,500.0	4,432.1	4,581.4	4,477.4	16.2	17.4	156.24	-355.4	-213.8	938.0	909.0	29.02	32.326	
4,600.0	4,532.0	4,689.4	4,584.0	16.4	17.7	155.24	-370.0	-203.8	935.1	905.5	29.62	31.568	
4,609.8	4,541.8	4,700.6	4,595.1	16.4	17.8	-108.17	-371.2	-202.8	934.6	908.3	26.31	35.519	
4,700.0	4,632.0	4,789.3	4,683.1	16.5	18.0	-108.75	-378.6	-195.1	929.5	903.0	26.56	34.997	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
4,800.0	4,732.0	4,873.1	4,766.5	16.6	18.2	-109.21	-384.4	-189.2	925.1	898.3	26.82	34.488	
4,900.0	4,832.0	4,955.8	4,849.1	16.7	18.4	-109.54	-388.7	-185.6	922.7	895.6	27.09	34.059	
5,000.0	4,932.0	5,048.6	4,941.7	16.9	18.5	-109.77	-392.0	-183.4	921.7	894.3	27.38	33.665	
5,100.0	5,032.0	5,148.1	5,041.2	17.0	18.7	-109.89	-393.5	-181.9	920.8	893.1	27.69	33.260	
5,200.0	5,132.0	5,243.7	5,136.8	17.1	18.8	-109.97	-394.5	-181.1	920.4	892.4	27.99	32.880	
5,282.4	5,214.5	5,323.9	5,217.0	17.3	18.9	-110.03	-395.4	-180.7	920.3	892.0	28.25	32.578	
5,300.0	5,232.0	5,341.0	5,234.1	17.3	18.9	-110.04	-395.6	-180.7	920.3	892.0	28.30	32.515	
5,400.0	5,332.0	5,437.7	5,330.8	17.4	19.0	-110.10	-396.5	-180.5	920.5	891.9	28.62	32.166	
5,500.0	5,432.0	5,530.9	5,423.9	17.6	19.2	-110.14	-397.4	-180.9	921.2	892.3	28.93	31.847	
5,600.0	5,532.0	5,626.4	5,519.5	17.7	19.3	-110.19	-398.7	-182.0	922.7	893.5	29.24	31.556	
5,700.0	5,632.0	5,732.2	5,625.2	17.9	19.4	-110.27	-400.3	-183.0	924.2	894.6	29.57	31.249	
5,800.0	5,732.0	5,838.0	5,731.0	18.0	19.6	-110.37	-402.0	-183.1	924.8	894.9	29.91	30.919	
5,900.0	5,832.0	5,939.4	5,832.4	18.2	19.7	-110.43	-403.2	-182.9	925.1	894.8	30.24	30.588	
6,000.0	5,932.0	6,040.4	5,933.4	18.3	19.8	-110.47	-403.8	-182.9	925.2	894.7	30.58	30.257	
6,100.0	6,032.0	6,138.0	6,031.0	18.5	20.0	-110.49	-404.2	-183.1	925.5	894.6	30.91	29.939	
6,200.0	6,132.0	6,235.6	6,128.6	18.6	20.1	-110.50	-404.6	-183.5	926.1	894.8	31.25	29.634	
6,300.0	6,232.0	6,338.2	6,231.2	18.8	20.2	-110.52	-405.0	-183.9	926.6	895.0	31.60	29.324	
6,400.0	6,332.0	6,438.9	6,331.9	18.9	20.3	-110.54	-405.4	-184.0	926.9	894.9	31.94	29.015	
6,500.0	6,432.0	6,536.7	6,429.7	19.1	20.5	-110.55	-405.7	-184.4	927.3	895.0	32.29	28.720	
6,600.0	6,532.0	6,636.3	6,529.3	19.2	20.6	-110.55	-405.9	-184.9	927.8	895.2	32.64	28.429	
6,637.8	6,569.8	6,673.6	6,566.6	19.3	20.7	-110.55	-405.9	-185.1	928.0	895.3	32.77	28.322	
6,650.0	6,582.0	6,685.6	6,578.6	19.3	20.7	-20.55	-406.0	-185.2	928.0	891.6	36.44	25.465	
6,700.0	6,632.0	6,735.2	6,628.2	19.4	20.7	-20.66	-406.0	-185.5	925.9	889.5	36.41	25.431	
6,750.0	6,681.6	6,784.7	6,677.7	19.4	20.8	-20.94	-406.1	-185.8	920.6	884.3	36.26	25.388	
6,800.0	6,730.6	6,832.2	6,725.2	19.4	20.9	-21.40	-406.2	-186.2	912.1	876.1	36.00	25.335	
6,850.0	6,778.9	6,878.9	6,771.9	19.3	20.9	-22.03	-406.2	-186.7	900.5	864.8	35.64	25.266	
6,900.0	6,826.2	6,927.9	6,820.9	19.3	21.0	-22.89	-406.1	-187.2	885.8	850.6	35.20	25.163	
6,950.0	6,872.2	6,975.9	6,868.9	19.2	21.0	-24.01	-406.1	-187.6	868.0	833.3	34.70	25.013	
7,000.0	6,916.8	7,020.6	6,913.6	19.2	21.1	-25.38	-406.1	-187.9	847.4	813.2	34.17	24.801	
7,050.0	6,959.6	7,063.5	6,956.5	19.1	21.2	-27.07	-406.2	-188.2	824.0	790.3	33.62	24.505	
7,100.0	7,000.6	7,104.9	6,997.9	19.0	21.2	-29.13	-406.2	-188.5	798.0	764.9	33.12	24.094	
7,150.0	7,039.5	7,144.1	7,037.1	19.0	21.3	-31.62	-406.3	-188.8	769.7	736.9	32.71	23.533	
7,200.0	7,076.0	7,181.6	7,074.6	19.0	21.3	-34.63	-406.2	-189.0	739.1	706.7	32.44	22.784	
7,250.0	7,110.1	7,216.9	7,109.9	19.0	21.4	-38.24	-406.2	-189.2	706.7	674.3	32.39	21.816	
7,300.0	7,141.6	7,249.5	7,142.4	19.1	21.4	-42.51	-406.1	-189.4	672.6	640.0	32.61	20.623	
7,350.0	7,170.3	7,278.8	7,171.8	19.2	21.4	-47.43	-406.0	-189.5	637.1	604.0	33.12	19.235	
7,400.0	7,196.1	7,305.0	7,198.0	19.4	21.5	-53.01	-405.9	-189.6	600.7	566.8	33.91	17.717	
7,450.0	7,218.8	7,328.1	7,221.1	19.7	21.5	-59.11	-405.8	-189.7	563.8	529.0	34.89	16.160	
7,500.0	7,238.3	7,348.0	7,241.0	20.0	21.5	-65.48	-405.8	-189.7	527.0	491.0	35.95	14.657	
7,550.0	7,254.6	7,364.5	7,257.4	20.5	21.6	-71.77	-405.7	-189.8	490.7	453.7	36.96	13.275	
7,600.0	7,267.6	7,377.5	7,270.5	21.0	21.6	-77.62	-405.6	-189.8	455.6	417.8	37.84	12.041	
7,650.0	7,277.1	7,387.2	7,280.2	21.5	21.6	-82.69	-405.6	-189.9	422.7	384.2	38.58	10.956	
7,700.0	7,283.3	7,393.5	7,286.5	22.2	21.6	-86.73	-405.6	-189.9	392.9	353.7	39.25	10.012	
7,750.0	7,285.9	7,396.3	7,289.3	22.9	21.6	-89.62	-405.5	-189.9	367.3	327.4	39.90	9.205	
7,760.9	7,286.0	7,396.4	7,289.4	23.0	21.6	-90.08	-405.5	-189.9	362.3	322.3	40.05	9.048	
7,800.0	7,286.1	7,396.6	7,289.6	23.6	21.6	-90.12	-405.5	-189.9	346.9	306.3	40.64	8.535	
7,900.0	7,286.4	7,397.2	7,290.2	25.3	21.6	-90.22	-405.5	-189.9	326.0	283.7	42.32	7.703	
7,920.4	7,286.4	7,397.3	7,290.3	25.7	21.6	-90.24	-405.5	-189.9	325.3	282.6	42.70	7.619	CC, ES
8,000.0	7,286.6	7,397.8	7,290.8	27.2	21.6	-90.32	-405.5	-189.9	334.9	290.8	44.18	7.581	SF
8,100.0	7,286.9	7,398.3	7,291.3	29.2	21.6	-90.42	-405.5	-189.9	371.6	325.4	46.20	8.044	
8,200.0	7,287.2	7,398.9	7,291.9	31.3	21.6	-90.52	-405.5	-189.9	429.0	380.7	48.34	8.875	
8,300.0	7,287.4	7,399.5	7,292.5	33.6	21.6	-90.63	-405.5	-189.9	500.0	449.4	50.58	9.885	

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-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
8,400.0	7,287.7	7,400.1	7,293.0	35.9	21.6	-90.73	-405.5	-189.9	579.6	526.7	52.89	10.957	
8,500.0	7,288.0	7,400.6	7,293.6	38.3	21.6	-90.83	-405.5	-189.9	664.7	609.4	55.28	12.025	
8,600.0	7,288.2	7,401.2	7,294.2	40.7	21.6	-90.93	-405.5	-189.9	753.5	695.8	57.71	13.056	
8,700.0	7,288.5	7,401.8	7,294.8	43.2	21.6	-91.03	-405.5	-189.9	844.8	784.6	60.19	14.035	
8,800.0	7,288.8	7,402.3	7,295.3	45.7	21.6	-91.13	-405.5	-189.9	937.9	875.1	62.71	14.956	
8,900.0	7,289.0	7,402.9	7,295.9	48.3	21.6	-91.23	-405.5	-189.9	1,032.2	967.0	65.26	15.818	
9,000.0	7,289.3	7,403.5	7,296.5	50.9	21.6	-91.33	-405.5	-189.9	1,127.6	1,059.7	67.83	16.623	
9,100.0	7,289.6	7,404.1	7,297.0	53.5	21.6	-91.43	-405.5	-189.9	1,223.7	1,153.2	70.43	17.374	
9,200.0	7,289.8	7,404.6	7,297.6	56.1	21.6	-91.53	-405.5	-189.9	1,320.3	1,247.3	73.05	18.074	
9,300.0	7,290.1	7,405.2	7,298.2	58.7	21.6	-91.63	-405.5	-189.9	1,417.5	1,341.8	75.68	18.729	
9,400.0	7,290.4	7,405.8	7,298.8	61.4	21.6	-91.74	-405.5	-189.9	1,515.0	1,436.6	78.33	19.340	
9,500.0	7,290.6	7,406.4	7,299.3	64.1	21.6	-91.84	-405.5	-189.9	1,612.8	1,531.8	80.99	19.912	
9,600.0	7,290.9	7,406.9	7,299.9	66.7	21.6	-91.94	-405.5	-189.9	1,710.8	1,627.2	83.67	20.448	
9,700.0	7,291.2	7,407.5	7,300.5	69.4	21.6	-92.04	-405.5	-189.9	1,809.1	1,722.8	86.35	20.951	
9,800.0	7,291.4	7,408.1	7,301.1	72.1	21.6	-92.14	-405.5	-189.9	1,907.6	1,818.5	89.04	21.423	
9,900.0	7,291.7	7,408.7	7,301.6	74.8	21.6	-92.24	-405.5	-189.9	2,006.2	1,914.4	91.74	21.868	
10,000.0	7,292.0	7,409.2	7,302.2	77.5	21.6	-92.35	-405.5	-189.9	2,104.9	2,010.5	94.44	22.287	
10,100.0	7,292.2	7,409.8	7,302.8	80.3	21.6	-92.45	-405.5	-189.9	2,203.7	2,106.6	97.15	22.683	
10,200.0	7,292.5	7,410.4	7,303.4	83.0	21.6	-92.55	-405.5	-189.9	2,302.7	2,202.8	99.87	23.057	
10,300.0	7,292.8	7,411.0	7,304.0	85.7	21.6	-92.65	-405.5	-189.9	2,401.7	2,299.1	102.59	23.411	
10,400.0	7,293.0	7,411.5	7,304.5	88.5	21.6	-92.75	-405.5	-189.9	2,500.8	2,395.5	105.31	23.746	
10,500.0	7,293.3	7,412.1	7,305.1	91.2	21.6	-92.85	-405.5	-189.9	2,600.0	2,492.0	108.04	24.065	
10,600.0	7,293.6	7,412.7	7,305.7	93.9	21.6	-92.96	-405.5	-189.9	2,699.3	2,588.5	110.77	24.367	
10,700.0	7,293.8	7,413.3	7,306.3	96.7	21.6	-93.06	-405.5	-189.9	2,798.6	2,685.1	113.51	24.655	
10,800.0	7,294.1	7,413.9	7,306.8	99.4	21.6	-93.16	-405.5	-189.9	2,897.9	2,781.7	116.25	24.929	
10,900.0	7,294.4	7,414.4	7,307.4	102.2	21.6	-93.26	-405.5	-189.9	2,997.3	2,878.3	118.99	25.191	
11,000.0	7,294.6	7,415.0	7,308.0	105.0	21.6	-93.37	-405.5	-189.9	3,096.7	2,975.0	121.73	25.440	
11,100.0	7,294.9	7,415.6	7,308.6	107.7	21.6	-93.47	-405.5	-189.9	3,196.2	3,071.7	124.47	25.679	
11,200.0	7,295.2	7,416.2	7,309.2	110.5	21.6	-93.57	-405.5	-189.9	3,295.7	3,168.5	127.21	25.907	
11,300.0	7,295.4	7,416.8	7,309.8	113.2	21.6	-93.67	-405.5	-190.0	3,395.2	3,265.2	129.96	26.125	
11,400.0	7,295.7	7,417.3	7,310.3	116.0	21.6	-93.78	-405.5	-190.0	3,494.8	3,362.0	132.71	26.335	
11,500.0	7,296.0	7,417.9	7,310.9	118.8	21.6	-93.88	-405.5	-190.0	3,594.3	3,458.9	135.45	26.536	
11,600.0	7,296.2	7,418.5	7,311.5	121.6	21.6	-93.98	-405.5	-190.0	3,693.9	3,555.7	138.20	26.728	
11,700.0	7,296.5	7,419.1	7,312.1	124.3	21.6	-94.09	-405.5	-190.0	3,793.5	3,652.6	140.95	26.914	
11,800.0	7,296.8	7,419.7	7,312.7	127.1	21.6	-94.19	-405.4	-190.0	3,893.2	3,749.5	143.70	27.092	
11,886.1	7,297.0	7,420.2	7,313.2	129.5	21.6	-94.28	-405.4	-190.0	3,979.0	3,833.0	146.07	27.241	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	2.5	2.5	0.0	0.0	-47.07	514.0	-552.6	754.7				
100.0	100.0	102.2	102.2	0.1	0.1	-47.08	514.0	-552.7	754.7	754.5	0.20	3,709.045	
200.0	200.0	202.0	202.0	0.3	0.2	-47.10	513.8	-552.9	754.8	754.3	0.53	1,418.958	
300.0	300.0	301.7	301.7	0.5	0.3	-47.14	513.5	-553.3	754.9	754.0	0.86	877.378	
400.0	400.0	401.5	401.4	0.8	0.4	-47.19	513.1	-553.9	755.0	753.8	1.19	635.081	
500.0	500.0	501.2	501.2	1.0	0.5	-47.26	512.5	-554.6	755.2	753.6	1.52	497.709	
600.0	600.0	600.9	600.9	1.2	0.6	-47.34	511.9	-555.5	755.4	753.5	1.85	409.248	
700.0	700.0	700.6	700.6	1.4	0.7	-47.43	511.1	-556.5	755.6	753.4	2.17	347.531	ES
800.0	800.0	799.7	799.7	1.7	0.9	-144.28	510.3	-557.6	757.3	754.7	2.60	291.476	
900.0	899.8	898.8	898.8	1.9	1.2	-144.56	509.5	-558.8	761.9	758.9	3.01	252.800	
1,000.0	999.5	986.0	985.9	2.1	1.3	-144.82	510.0	-559.8	770.3	766.9	3.41	225.994	
1,100.0	1,098.7	1,063.9	1,063.8	2.3	1.5	-145.00	512.4	-561.2	783.6	779.9	3.80	206.354	
1,200.0	1,197.5	1,136.6	1,136.4	2.6	1.7	-145.20	516.0	-564.1	802.8	798.6	4.21	190.826	
1,300.0	1,295.6	1,206.8	1,206.2	3.0	1.8	-145.48	520.1	-569.4	828.0	823.3	4.64	178.611	
1,400.0	1,393.4	1,276.0	1,274.8	3.3	2.0	-146.13	524.9	-576.9	857.7	852.6	5.08	168.826	
1,500.0	1,491.3	1,359.0	1,356.8	3.7	2.2	-146.94	531.2	-588.2	890.1	884.6	5.56	160.097	
1,600.0	1,589.1	1,431.0	1,427.7	4.1	2.5	-147.69	536.4	-599.8	924.4	918.4	6.02	153.678	
1,700.0	1,686.9	1,497.6	1,493.0	4.6	2.7	-148.43	540.8	-612.1	960.5	954.1	6.47	148.561	
1,800.0	1,784.7	1,559.2	1,553.0	5.0	3.0	-149.09	545.8	-625.3	999.8	992.8	6.91	144.681	
1,900.0	1,882.5	1,626.6	1,618.2	5.4	3.2	-149.80	551.9	-641.1	1,041.5	1,034.1	7.38	141.201	
2,000.0	1,980.3	1,692.4	1,681.4	5.9	3.6	-150.48	558.3	-658.0	1,085.3	1,077.5	7.84	138.451	
2,100.0	2,078.1	1,760.1	1,746.1	6.3	3.9	-151.17	565.0	-676.9	1,131.2	1,122.9	8.30	136.215	
2,200.0	2,176.0	1,833.5	1,815.9	6.7	4.3	-151.89	572.7	-698.3	1,178.6	1,169.8	8.78	134.211	
2,300.0	2,273.8	1,918.0	1,896.1	7.2	4.8	-152.65	581.9	-723.2	1,226.6	1,217.4	9.28	132.200	
2,400.0	2,371.6	2,021.3	1,994.3	7.6	5.4	-153.58	591.5	-753.9	1,274.2	1,264.4	9.80	130.037	
2,500.0	2,469.4	2,094.1	2,063.5	8.1	5.8	-154.19	598.2	-775.5	1,322.0	1,311.8	10.25	128.918	
2,600.0	2,567.2	2,184.2	2,149.0	8.5	6.4	-154.89	607.0	-802.5	1,370.4	1,359.6	10.75	127.443	
2,700.0	2,665.0	2,273.4	2,233.7	9.0	6.9	-155.56	614.9	-829.3	1,418.6	1,407.4	11.24	126.217	
2,800.0	2,762.8	2,361.2	2,317.1	9.4	7.4	-156.17	622.8	-855.5	1,466.9	1,455.1	11.72	125.165	
2,900.0	2,860.7	2,452.1	2,403.6	9.9	7.9	-156.73	631.8	-882.1	1,515.1	1,502.9	12.21	124.108	
3,000.0	2,958.5	2,520.0	2,468.2	10.3	8.3	-157.07	639.6	-901.6	1,563.6	1,550.9	12.66	123.537	
3,100.0	3,056.3	2,570.0	2,515.5	10.8	8.6	-157.30	645.8	-916.5	1,613.7	1,600.6	13.07	123.486	
3,200.0	3,154.1	2,645.8	2,586.8	11.3	9.1	-157.62	656.1	-939.8	1,664.9	1,651.4	13.55	122.877	
3,300.0	3,251.9	2,723.6	2,659.8	11.7	9.7	-157.92	667.4	-964.1	1,717.0	1,703.0	14.03	122.384	
3,400.0	3,349.7	2,860.9	2,789.3	12.2	10.5	-158.36	687.7	-1,005.4	1,768.2	1,753.6	14.63	120.885	
3,500.0	3,447.5	2,934.8	2,859.3	12.6	11.0	-158.59	698.0	-1,026.8	1,818.3	1,803.2	15.09	120.523	
3,600.0	3,545.4	3,036.3	2,955.3	13.1	11.6	-158.89	712.1	-1,056.2	1,868.3	1,852.7	15.61	119.665	
3,700.0	3,643.2	3,146.7	3,060.3	13.5	12.3	-159.19	726.9	-1,087.2	1,917.4	1,901.3	16.15	118.748	
3,800.0	3,741.0	3,245.1	3,154.1	14.0	12.9	-159.47	739.1	-1,114.2	1,965.5	1,948.9	16.66	117.992	
3,900.0	3,838.8	3,316.8	3,222.4	14.5	13.3	-159.66	748.1	-1,134.0	2,014.0	1,996.9	17.12	117.658	
4,000.0	3,936.6	3,408.0	3,309.2	14.9	13.9	-159.92	759.1	-1,159.7	2,062.7	2,045.1	17.63	117.026	
4,009.8	3,946.2	3,408.0	3,309.2	15.0	13.9	-159.92	759.1	-1,159.7	2,067.5	2,049.9	17.65	117.108	
4,100.0	4,034.7	3,472.4	3,370.4	15.3	14.3	-160.41	766.8	-1,178.2	2,110.7	2,092.6	18.10	116.625	
4,200.0	4,133.4	3,554.9	3,448.7	15.6	14.8	-160.90	777.6	-1,202.2	2,156.6	2,138.0	18.58	116.048	
4,300.0	4,232.6	3,681.2	3,568.6	15.8	15.6	-161.36	794.1	-1,238.0	2,199.0	2,179.8	19.16	114.775	
4,400.0	4,332.2	3,841.6	3,722.7	16.1	16.4	-161.71	813.9	-1,278.0	2,234.2	2,214.4	19.80	112.856	
4,500.0	4,432.1	3,916.8	3,794.8	16.2	16.9	-161.93	823.7	-1,296.6	2,267.1	2,246.9	20.21	112.184	
4,600.0	4,532.0	3,999.3	3,874.0	16.4	17.3	-162.08	835.4	-1,317.0	2,297.5	2,276.8	20.63	111.374	
4,609.8	4,541.8	4,007.0	3,881.3	16.4	17.4	-65.41	836.5	-1,319.0	2,300.3	2,267.0	33.34	68.992	
4,700.0	4,632.0	4,094.9	3,965.4	16.5	17.9	-65.35	849.0	-1,341.3	2,326.5	2,292.6	33.96	68.514	
4,800.0	4,732.0	4,239.4	4,104.2	16.6	18.7	-65.31	867.4	-1,376.9	2,354.2	2,319.3	34.88	67.498	
4,900.0	4,832.0	4,337.8	4,199.1	16.7	19.2	-65.34	877.1	-1,401.4	2,380.9	2,345.3	35.54	66.991	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
5,000.0	4,932.0	4,530.2	4,385.4	16.9	20.2	-65.42	894.3	-1,446.1	2,405.9	2,369.2	36.64	65.668	
5,100.0	5,032.0	4,831.2	4,680.9	17.0	21.3	-65.54	912.9	-1,499.7	2,424.7	2,386.8	37.95	63.891	
5,200.0	5,132.0	5,111.2	4,959.1	17.1	22.1	-65.62	922.7	-1,528.9	2,435.8	2,397.0	38.82	62.738	
5,300.0	5,232.0	5,324.8	5,172.5	17.3	22.4	-65.66	925.0	-1,538.1	2,439.5	2,400.2	39.31	62.057	
5,400.0	5,332.0	5,432.1	5,279.7	17.4	22.5	-65.68	925.1	-1,540.9	2,441.9	2,402.4	39.60	61.672	
5,500.0	5,432.0	5,533.8	5,381.4	17.6	22.7	-65.71	924.9	-1,543.4	2,444.1	2,404.3	39.87	61.297	
5,600.0	5,532.0	5,645.1	5,492.7	17.7	22.8	-65.75	924.2	-1,546.1	2,446.1	2,405.9	40.16	60.903	
5,700.0	5,632.0	5,753.8	5,601.3	17.9	22.9	-65.79	923.3	-1,548.3	2,447.6	2,407.2	40.45	60.514	
5,800.0	5,732.0	5,859.4	5,706.9	18.0	23.1	-65.83	922.6	-1,550.1	2,448.9	2,408.2	40.72	60.136	
5,900.0	5,832.0	5,978.3	5,825.8	18.2	23.2	-65.86	921.8	-1,551.4	2,449.6	2,408.6	41.01	59.731	
6,000.0	5,932.0	6,086.0	5,933.5	18.3	23.3	-65.88	920.9	-1,552.0	2,449.8	2,408.5	41.28	59.344	
6,100.0	6,032.0	6,187.4	6,034.9	18.5	23.4	-65.90	920.0	-1,552.4	2,449.8	2,408.2	41.54	58.968	
6,191.5	6,123.5	6,278.5	6,126.0	18.6	23.5	-65.92	919.2	-1,552.8	2,449.8	2,408.0	41.79	58.628	
6,200.0	6,132.0	6,287.0	6,134.5	18.6	23.5	-65.93	919.1	-1,552.8	2,449.8	2,408.0	41.81	58.597	
6,300.0	6,232.0	6,387.3	6,234.8	18.8	23.6	-65.95	918.2	-1,553.2	2,449.8	2,407.7	42.07	58.225	
6,400.0	6,332.0	6,492.8	6,340.3	18.9	23.8	-65.98	916.9	-1,553.6	2,449.6	2,407.3	42.35	57.845	
6,500.0	6,432.0	6,594.1	6,441.6	19.1	23.9	-66.01	915.7	-1,553.9	2,449.4	2,406.8	42.62	57.470	
6,600.0	6,532.0	6,693.3	6,540.8	19.2	24.0	-66.04	914.6	-1,554.1	2,449.1	2,406.2	42.89	57.100	
6,637.8	6,569.8	6,729.9	6,577.4	19.3	24.0	-66.04	914.2	-1,554.1	2,449.0	2,406.0	42.99	56.962	
6,650.0	6,582.0	6,741.8	6,589.3	19.3	24.0	23.96	914.1	-1,554.2	2,448.9	2,418.8	30.06	81.455	
6,700.0	6,632.0	6,791.0	6,638.4	19.4	24.1	24.05	913.7	-1,554.2	2,446.4	2,416.2	30.25	80.874	
6,750.0	6,681.6	6,840.3	6,687.7	19.4	24.1	24.29	913.2	-1,554.4	2,440.8	2,410.5	30.34	80.436	
6,800.0	6,730.6	6,888.6	6,736.0	19.4	24.2	24.66	912.6	-1,554.6	2,432.0	2,401.7	30.35	80.128	
6,850.0	6,778.9	6,935.9	6,783.3	19.3	24.3	25.18	911.9	-1,554.8	2,420.2	2,389.9	30.28	79.919	
6,900.0	6,826.2	6,985.0	6,832.4	19.3	24.3	25.87	911.3	-1,555.1	2,405.3	2,375.2	30.16	79.754	
6,950.0	6,872.2	7,033.7	6,881.1	19.2	24.4	26.74	910.5	-1,555.3	2,387.5	2,357.5	30.00	79.589	
7,000.0	6,916.8	7,074.1	6,921.5	19.2	24.4	27.77	909.7	-1,555.6	2,366.8	2,337.0	29.81	79.403	
7,050.0	6,959.6	7,112.1	6,959.5	19.1	24.5	29.01	909.0	-1,555.9	2,343.4	2,313.8	29.63	79.080	
7,100.0	7,000.6	7,151.1	6,998.5	19.0	24.5	30.51	908.3	-1,556.3	2,317.6	2,288.0	29.53	78.478	
7,150.0	7,039.5	7,191.5	7,038.8	19.0	24.6	32.32	907.6	-1,556.7	2,289.2	2,259.7	29.56	77.447	
7,200.0	7,076.0	7,229.4	7,076.8	19.0	24.6	34.47	907.0	-1,557.1	2,258.6	2,228.8	29.77	75.879	
7,250.0	7,110.1	7,264.6	7,112.0	19.0	24.6	36.98	906.4	-1,557.4	2,225.8	2,195.5	30.22	73.658	
7,300.0	7,141.6	7,297.2	7,144.6	19.1	24.7	39.94	905.8	-1,557.7	2,191.0	2,160.0	30.98	70.728	
7,350.0	7,170.3	7,326.9	7,174.3	19.2	24.7	43.38	905.2	-1,558.0	2,154.5	2,122.4	32.10	67.123	
7,400.0	7,196.1	7,353.6	7,200.9	19.4	24.8	47.37	904.7	-1,558.2	2,116.5	2,082.9	33.60	62.991	
7,450.0	7,218.8	7,377.1	7,224.4	19.7	24.8	51.94	904.3	-1,558.4	2,077.1	2,041.7	35.47	58.569	
7,500.0	7,238.3	7,397.4	7,244.7	20.0	24.8	57.13	903.9	-1,558.5	2,036.7	1,999.1	37.62	54.144	
7,550.0	7,254.6	7,414.4	7,261.7	20.5	24.8	62.88	903.6	-1,558.7	1,995.4	1,955.5	39.92	49.991	
7,600.0	7,267.6	7,428.8	7,276.1	21.0	24.9	69.16	903.4	-1,558.8	1,953.5	1,911.3	42.18	46.314	
7,650.0	7,277.1	7,439.4	7,286.8	21.5	24.9	75.74	903.2	-1,558.8	1,911.3	1,867.1	44.19	43.255	
7,700.0	7,283.3	7,446.4	7,293.7	22.2	24.9	82.40	903.1	-1,558.9	1,868.9	1,823.1	45.75	40.846	
7,750.0	7,285.9	7,449.5	7,296.9	22.9	24.9	88.90	903.0	-1,558.9	1,826.6	1,779.8	46.79	39.035	
7,760.9	7,286.0	7,449.7	7,297.1	23.0	24.9	90.26	903.0	-1,558.9	1,817.4	1,770.5	46.95	38.710	
7,800.0	7,286.1	7,450.1	7,297.4	23.6	24.9	90.29	903.0	-1,558.9	1,784.7	1,737.1	47.55	37.534	
7,900.0	7,286.4	7,451.0	7,298.4	25.3	24.9	90.34	903.0	-1,558.9	1,702.1	1,652.9	49.23	34.576	
8,000.0	7,286.6	7,451.9	7,299.3	27.2	24.9	90.39	903.0	-1,558.9	1,621.5	1,570.4	51.09	31.736	
8,100.0	7,286.9	7,452.9	7,300.2	29.2	24.9	90.45	902.9	-1,558.9	1,543.2	1,490.0	53.11	29.054	
8,200.0	7,287.2	7,453.8	7,301.1	31.3	24.9	90.50	902.9	-1,558.9	1,467.5	1,412.2	55.25	26.558	
8,300.0	7,287.4	7,454.7	7,302.0	33.6	24.9	90.55	902.9	-1,558.9	1,394.8	1,337.3	57.49	24.261	
8,400.0	7,287.7	7,455.6	7,302.9	35.9	24.9	90.60	902.9	-1,558.9	1,325.8	1,266.0	59.81	22.165	
8,500.0	7,288.0	7,456.4	7,303.8	38.3	24.9	90.65	902.9	-1,558.9	1,260.9	1,198.7	62.20	20.272	
8,600.0	7,288.2	7,457.3	7,304.7	40.7	24.9	90.71	902.9	-1,558.9	1,200.8	1,136.2	64.64	18.577	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	7,288.5	7,458.2	7,305.5	43.2	24.9	90.76	902.8	-1,559.0	1,146.3	1,079.2	67.12	17.078	
8,800.0	7,288.8	7,459.1	7,306.4	45.7	24.9	90.81	902.8	-1,559.0	1,098.2	1,028.6	69.64	15.769	
8,900.0	7,289.0	7,459.9	7,307.3	48.3	24.9	90.86	902.8	-1,559.0	1,057.5	985.3	72.20	14.647	
9,000.0	7,289.3	7,460.8	7,308.1	50.9	24.9	90.91	902.8	-1,559.0	1,024.8	950.1	74.78	13.706	
9,100.0	7,289.6	7,461.6	7,309.0	53.5	24.9	90.96	902.8	-1,559.0	1,001.2	923.8	77.38	12.939	
9,200.0	7,289.8	7,462.4	7,309.8	56.1	24.9	91.00	902.8	-1,559.0	987.2	907.2	80.00	12.340	
9,289.5	7,290.1	7,463.2	7,310.5	58.5	24.9	91.05	902.7	-1,559.0	983.1	900.7	82.36	11.936	
9,300.0	7,290.1	7,463.3	7,310.6	58.7	24.9	91.05	902.7	-1,559.0	983.2	900.5	82.64	11.897	
9,400.0	7,290.4	7,464.1	7,311.5	61.4	24.9	91.10	902.7	-1,559.0	989.3	904.0	85.29	11.599	
9,500.0	7,290.6	7,464.9	7,312.3	64.1	24.9	91.15	902.7	-1,559.0	1,005.4	917.4	87.96	11.430	
9,600.0	7,290.9	7,465.7	7,313.1	66.7	24.9	91.20	902.7	-1,559.0	1,031.0	940.3	90.64	11.374 SF	
9,700.0	7,291.2	7,466.5	7,313.9	69.4	24.9	91.24	902.7	-1,559.0	1,065.4	972.0	93.33	11.415	
9,800.0	7,291.4	7,467.4	7,314.7	72.1	24.9	91.29	902.7	-1,559.0	1,107.7	1,011.7	96.02	11.536	
9,900.0	7,291.7	7,468.1	7,315.5	74.8	24.9	91.34	902.7	-1,559.0	1,157.2	1,058.5	98.73	11.721	
10,000.0	7,292.0	7,468.9	7,316.3	77.5	24.9	91.38	902.6	-1,559.0	1,213.0	1,111.5	101.44	11.957	
10,100.0	7,292.2	7,469.7	7,317.1	80.3	24.9	91.43	902.6	-1,559.0	1,274.1	1,169.9	104.16	12.232	
10,200.0	7,292.5	7,470.5	7,317.8	83.0	24.9	91.47	902.6	-1,559.0	1,339.9	1,233.0	106.88	12.536	
10,300.0	7,292.8	7,471.3	7,318.6	85.7	24.9	91.52	902.6	-1,559.0	1,409.8	1,300.2	109.61	12.861	
10,400.0	7,293.0	7,472.0	7,319.4	88.5	24.9	91.56	902.6	-1,559.0	1,483.1	1,370.8	112.35	13.201	
10,500.0	7,293.3	7,472.8	7,320.1	91.2	24.9	91.61	902.6	-1,559.0	1,559.4	1,444.3	115.09	13.550	
10,600.0	7,293.6	7,473.6	7,320.9	93.9	24.9	91.65	902.6	-1,559.0	1,638.2	1,520.4	117.83	13.903	
10,700.0	7,293.8	7,474.3	7,321.7	96.7	24.9	91.70	902.5	-1,559.0	1,719.3	1,598.7	120.57	14.259	
10,800.0	7,294.1	7,475.1	7,322.4	99.4	24.9	91.74	902.5	-1,559.0	1,802.2	1,678.9	123.32	14.614	
10,900.0	7,294.4	7,475.8	7,323.1	102.2	24.9	91.78	902.5	-1,559.0	1,886.8	1,760.7	126.07	14.966	
11,000.0	7,294.6	7,476.5	7,323.9	105.0	24.9	91.83	902.5	-1,559.1	1,972.8	1,844.0	128.83	15.314	
11,100.0	7,294.9	7,477.3	7,324.6	107.7	24.9	91.87	902.5	-1,559.1	2,060.1	1,928.5	131.58	15.656	
11,200.0	7,295.2	7,478.0	7,325.3	110.5	24.9	91.91	902.5	-1,559.1	2,148.5	2,014.2	134.34	15.993	
11,300.0	7,295.4	7,478.7	7,326.0	113.2	24.9	91.95	902.5	-1,559.1	2,237.9	2,100.8	137.10	16.323	
11,400.0	7,295.7	7,479.4	7,326.8	116.0	24.9	91.99	902.4	-1,559.1	2,328.2	2,188.3	139.87	16.646	
11,500.0	7,296.0	7,480.1	7,327.5	118.8	24.9	92.04	902.4	-1,559.1	2,419.2	2,276.5	142.63	16.961	
11,600.0	7,296.2	7,480.8	7,328.2	121.6	24.9	92.08	902.4	-1,559.1	2,510.9	2,365.5	145.40	17.269	
11,700.0	7,296.5	7,481.5	7,328.9	124.3	24.9	92.12	902.4	-1,559.1	2,603.2	2,455.0	148.17	17.569	
11,800.0	7,296.8	7,482.2	7,329.6	127.1	24.9	92.16	902.4	-1,559.1	2,696.0	2,545.1	150.93	17.862	
11,886.1	7,297.0	7,482.8	7,330.2	129.5	24.9	92.19	902.4	-1,559.1	2,776.4	2,623.1	153.32	18.109	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	2.5	2.5	0.0	0.0	-51.61	454.7	-573.8	732.1				
100.0	100.0	101.9	101.9	0.1	0.1	-51.61	454.6	-573.9	732.1	731.9	0.20	3,605.542	
200.0	200.0	201.3	201.3	0.3	0.2	-51.62	454.6	-574.1	732.3	731.7	0.53	1,378.782	
300.0	300.0	300.8	300.8	0.5	0.3	-51.64	454.5	-574.4	732.5	731.6	0.86	852.565	
400.0	400.0	400.2	400.2	0.8	0.4	-51.67	454.5	-574.8	732.7	731.5	1.19	617.220	
500.0	500.0	499.6	499.6	1.0	0.5	-51.70	454.3	-575.3	733.1	731.6	1.52	483.831	
600.0	600.0	599.0	599.0	1.2	0.6	-51.74	454.2	-576.0	733.5	731.7	1.84	397.962	
700.0	700.0	698.4	698.4	1.4	0.7	-51.79	454.0	-576.8	734.0	731.9	2.17	338.076	
800.0	800.0	789.9	789.9	1.7	0.9	-148.65	453.3	-578.6	736.6	734.0	2.59	284.574	
900.0	899.8	890.0	889.9	1.9	1.2	-149.14	450.8	-582.5	742.7	739.6	3.02	245.563	
1,000.0	999.5	983.0	982.6	2.1	1.4	-149.87	446.5	-587.9	752.0	748.5	3.46	217.112	
1,100.0	1,098.7	1,077.0	1,076.0	2.3	1.6	-150.93	440.0	-596.0	765.5	761.6	3.94	194.199	
1,200.0	1,197.5	1,158.3	1,156.4	2.6	1.9	-152.04	432.8	-605.4	783.8	779.4	4.42	177.269	
1,300.0	1,295.6	1,248.5	1,245.2	3.0	2.2	-153.49	423.4	-618.0	806.8	801.9	4.96	162.652	
1,400.0	1,393.4	1,329.0	1,324.1	3.3	2.5	-155.12	413.4	-631.1	833.0	827.5	5.51	151.265	
1,500.0	1,491.3	1,434.2	1,426.4	3.7	3.0	-157.29	398.5	-649.9	860.6	854.5	6.15	139.965	
1,600.0	1,589.1	1,518.2	1,507.8	4.1	3.4	-159.07	384.1	-665.1	888.2	881.4	6.74	131.743	
1,700.0	1,686.9	1,614.2	1,599.9	4.6	3.9	-161.17	365.4	-684.3	917.4	910.0	7.42	123.583	
1,800.0	1,784.7	1,697.9	1,679.9	5.0	4.3	-163.02	347.1	-701.4	947.3	939.2	8.05	117.639	
1,900.0	1,882.5	1,777.1	1,755.4	5.4	4.7	-164.67	330.4	-718.4	979.2	970.5	8.66	113.105	
2,000.0	1,980.3	1,864.3	1,838.6	5.9	5.2	-166.37	312.6	-737.5	1,012.8	1,003.6	9.27	109.277	
2,100.0	2,078.1	1,949.9	1,920.4	6.3	5.6	-167.92	295.3	-756.0	1,047.1	1,037.2	9.86	106.160	
2,200.0	2,176.0	2,024.3	1,991.3	6.7	6.0	-169.19	280.7	-773.0	1,083.3	1,072.9	10.43	103.900	
2,300.0	2,273.8	2,115.9	2,078.5	7.2	6.5	-170.68	262.6	-794.5	1,120.7	1,109.6	11.08	101.127	
2,400.0	2,371.6	2,222.6	2,180.2	7.6	7.1	-172.32	240.9	-818.2	1,157.5	1,145.7	11.76	98.414	
2,500.0	2,469.4	2,305.5	2,259.3	8.1	7.6	-173.50	224.2	-836.4	1,194.7	1,182.4	12.34	96.834	
2,600.0	2,567.2	2,385.1	2,335.3	8.5	8.0	-174.56	208.7	-854.4	1,233.1	1,220.1	12.91	95.492	
2,700.0	2,665.0	2,476.0	2,422.0	9.0	8.5	-175.72	190.5	-874.9	1,271.8	1,258.3	13.53	93.978	
2,800.0	2,762.8	2,544.1	2,486.8	9.4	8.9	-176.56	176.8	-890.8	1,311.7	1,297.6	14.07	93.231	
2,900.0	2,860.7	2,627.4	2,565.8	9.9	9.4	-177.52	160.5	-911.5	1,353.4	1,338.8	14.66	92.314	
3,000.0	2,958.5	2,719.8	2,653.4	10.3	10.0	-178.54	142.1	-934.2	1,395.1	1,379.9	15.28	91.290	
3,100.0	3,056.3	2,828.0	2,756.3	10.8	10.6	-179.65	120.7	-960.2	1,436.8	1,420.8	15.95	90.094	
3,200.0	3,154.1	2,911.1	2,835.6	11.3	11.1	179.58	104.9	-979.3	1,477.8	1,461.3	16.52	89.479	
3,300.0	3,251.9	3,009.8	2,929.5	11.7	11.7	178.66	84.9	-1,002.5	1,519.5	1,502.3	17.16	88.531	
3,400.0	3,349.7	3,099.2	3,014.3	12.2	12.2	177.82	65.4	-1,022.8	1,560.7	1,542.9	17.78	87.793	
3,500.0	3,447.5	3,186.1	3,096.9	12.6	12.7	177.07	47.3	-1,042.8	1,602.3	1,584.0	18.36	87.253	
3,600.0	3,545.4	3,267.0	3,174.2	13.1	13.2	176.47	32.2	-1,061.4	1,644.4	1,625.5	18.92	86.909	
3,700.0	3,643.2	3,362.8	3,265.6	13.5	13.7	175.80	14.5	-1,084.0	1,687.1	1,667.5	19.53	86.365	
3,800.0	3,741.0	3,451.8	3,350.3	14.0	14.3	175.15	-3.7	-1,104.1	1,729.1	1,708.9	20.14	85.870	
3,900.0	3,838.8	3,518.5	3,413.7	14.5	14.7	174.67	-17.7	-1,119.9	1,772.1	1,751.4	20.66	85.765	
4,000.0	3,936.6	3,592.0	3,483.2	14.9	15.1	174.18	-32.5	-1,138.3	1,816.6	1,795.3	21.22	85.609	
4,009.8	3,946.2	3,592.0	3,483.2	15.0	15.1	174.18	-32.5	-1,138.3	1,820.9	1,799.7	21.25	85.708	
4,100.0	4,034.7	3,641.8	3,530.3	15.3	15.5	173.97	-42.0	-1,151.5	1,861.1	1,839.3	21.76	85.526	
4,200.0	4,133.4	3,708.5	3,593.4	15.6	15.9	173.72	-53.4	-1,170.0	1,904.0	1,881.6	22.32	85.292	
4,300.0	4,232.6	3,789.5	3,669.7	15.8	16.4	173.40	-67.1	-1,193.2	1,944.5	1,921.6	22.90	84.896	
4,400.0	4,332.2	3,887.1	3,761.3	16.1	17.1	172.93	-86.3	-1,221.0	1,982.1	1,958.5	23.53	84.227	
4,500.0	4,432.1	4,012.5	3,878.9	16.2	17.9	172.25	-112.8	-1,255.2	2,015.4	1,991.2	24.23	83.192	
4,600.0	4,532.0	4,125.8	3,985.6	16.4	18.6	171.66	-136.8	-1,284.9	2,044.6	2,019.8	24.84	82.323	
4,609.8	4,541.8	4,137.1	3,996.3	16.4	18.6	-91.71	-139.2	-1,287.8	2,047.3	2,015.1	32.11	63.749	
4,700.0	4,632.0	4,198.1	4,053.8	16.5	19.0	-92.06	-151.6	-1,303.6	2,071.9	2,039.3	32.59	63.579	
4,800.0	4,732.0	4,271.6	4,123.2	16.6	19.5	-92.43	-165.3	-1,324.1	2,100.7	2,067.5	33.16	63.341	
4,900.0	4,832.0	4,390.6	4,235.1	16.7	20.2	-93.08	-189.8	-1,356.2	2,129.2	2,095.2	34.04	62.556	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
5,000.0	4,932.0	4,574.0	4,409.1	16.9	21.3	-94.00	-225.9	-1,401.5	2,155.5	2,120.3	35.21	61.210	
5,100.0	5,032.0	4,775.0	4,602.1	17.0	22.4	-94.93	-263.6	-1,442.6	2,177.8	2,141.4	36.36	59.894	
5,200.0	5,132.0	4,930.4	4,753.2	17.1	23.1	-95.54	-288.9	-1,468.7	2,196.1	2,158.9	37.18	59.074	
5,300.0	5,232.0	5,068.1	4,887.7	17.3	23.7	-96.03	-309.7	-1,489.7	2,213.1	2,175.2	37.88	58.427	
5,400.0	5,332.0	5,349.0	5,165.4	17.4	24.6	-96.70	-338.9	-1,518.2	2,223.7	2,184.8	38.87	57.206	
5,500.0	5,432.0	5,622.5	5,438.6	17.6	25.0	-96.86	-346.0	-1,526.9	2,226.7	2,187.2	39.45	56.448	
5,600.0	5,532.0	5,720.4	5,536.5	17.7	25.0	-96.83	-345.1	-1,526.7	2,226.5	2,186.8	39.68	56.104	
5,618.5	5,550.6	5,737.0	5,553.1	17.7	25.1	-96.83	-345.0	-1,526.7	2,226.4	2,186.7	39.73	56.043	
5,700.0	5,632.0	5,804.8	5,620.9	17.9	25.1	-96.82	-344.7	-1,527.0	2,226.7	2,186.8	39.92	55.778	
5,800.0	5,732.0	5,905.5	5,721.5	18.0	25.2	-96.82	-344.6	-1,527.7	2,227.4	2,187.2	40.18	55.433	
5,900.0	5,832.0	5,998.8	5,814.8	18.2	25.3	-96.82	-344.9	-1,528.3	2,228.1	2,187.6	40.44	55.095	
6,000.0	5,932.0	6,094.9	5,911.0	18.3	25.4	-96.83	-345.4	-1,529.2	2,229.1	2,188.4	40.71	54.753	
6,100.0	6,032.0	6,199.4	6,015.5	18.5	25.6	-96.85	-346.1	-1,530.2	2,230.1	2,189.1	40.99	54.399	
6,200.0	6,132.0	6,303.0	6,119.0	18.6	25.7	-96.86	-346.8	-1,530.9	2,230.8	2,189.6	41.28	54.048	
6,300.0	6,232.0	6,406.5	6,222.5	18.8	25.8	-96.88	-347.4	-1,531.5	2,231.4	2,189.9	41.56	53.698	
6,400.0	6,332.0	6,507.7	6,323.8	18.9	25.9	-96.88	-347.7	-1,531.9	2,231.9	2,190.1	41.83	53.352	
6,500.0	6,432.0	6,604.7	6,420.7	19.1	26.0	-96.88	-347.8	-1,532.4	2,232.5	2,190.3	42.11	53.015	
6,600.0	6,532.0	6,699.4	6,515.5	19.2	26.1	-96.89	-348.0	-1,533.1	2,233.2	2,190.8	42.39	52.684	
6,637.8	6,569.8	6,737.2	6,553.2	19.3	26.1	-96.89	-348.1	-1,533.5	2,233.6	2,191.1	42.50	52.556	
6,650.0	6,582.0	6,749.4	6,565.5	19.3	26.2	-6.89	-348.1	-1,533.6	2,233.6	2,199.2	34.36	65.007	
6,700.0	6,632.0	6,800.8	6,616.9	19.4	26.2	-6.92	-348.2	-1,534.0	2,231.4	2,196.9	34.45	64.771	
6,750.0	6,681.6	6,852.4	6,668.5	19.4	26.3	-7.00	-348.3	-1,534.3	2,225.7	2,191.3	34.39	64.723	
6,800.0	6,730.6	6,906.7	6,722.7	19.4	26.3	-7.12	-348.3	-1,534.7	2,216.6	2,182.4	34.18	64.855	
6,850.0	6,778.9	6,959.3	6,775.3	19.3	26.4	-7.30	-348.4	-1,534.8	2,203.9	2,170.1	33.82	65.173	
6,900.0	6,826.2	7,008.0	6,824.0	19.3	26.4	-7.53	-348.5	-1,535.0	2,187.9	2,154.6	33.31	65.684	
6,950.0	6,872.2	7,054.3	6,870.3	19.2	26.5	-7.82	-348.5	-1,535.0	2,168.6	2,136.0	32.67	66.387	
7,000.0	6,916.8	7,096.8	6,912.9	19.2	26.5	-8.19	-348.6	-1,535.1	2,146.2	2,114.3	31.90	67.285	
7,050.0	6,959.6	7,138.1	6,954.2	19.1	26.6	-8.63	-348.9	-1,535.3	2,120.9	2,089.8	31.02	68.374	
7,100.0	7,000.6	7,179.7	6,995.7	19.0	26.6	-9.19	-349.1	-1,535.4	2,092.6	2,062.5	30.05	69.636	
7,150.0	7,039.5	7,219.1	7,035.1	19.0	26.7	-9.86	-349.3	-1,535.5	2,061.5	2,032.5	29.01	71.057	
7,200.0	7,076.0	7,258.3	7,074.4	19.0	26.7	-10.70	-349.5	-1,535.6	2,027.9	1,999.9	27.94	72.581	
7,250.0	7,110.1	7,295.3	7,111.3	19.0	26.8	-11.74	-349.7	-1,535.6	1,991.7	1,964.8	26.87	74.123	
7,300.0	7,141.6	7,328.5	7,144.5	19.1	26.8	-13.04	-349.8	-1,535.6	1,953.2	1,927.3	25.86	75.522	
7,350.0	7,170.3	7,356.9	7,172.9	19.2	26.8	-14.65	-350.0	-1,535.6	1,912.7	1,887.7	25.00	76.510	
7,400.0	7,196.1	7,382.4	7,198.5	19.4	26.9	-16.73	-350.1	-1,535.5	1,870.3	1,845.9	24.40	76.635	
7,450.0	7,218.8	7,405.0	7,221.0	19.7	26.9	-19.46	-350.1	-1,535.5	1,826.2	1,801.9	24.26	75.262	
7,500.0	7,238.3	7,424.8	7,240.9	20.0	26.9	-23.16	-350.2	-1,535.5	1,780.7	1,755.9	24.86	71.637	
7,550.0	7,254.6	7,441.6	7,257.6	20.5	26.9	-28.33	-350.3	-1,535.5	1,734.0	1,707.5	26.57	65.251	
7,600.0	7,267.6	7,454.9	7,270.9	21.0	27.0	-35.82	-350.3	-1,535.5	1,686.3	1,656.4	29.90	56.398	
7,650.0	7,277.1	7,464.7	7,280.7	21.5	27.0	-46.96	-350.4	-1,535.5	1,637.9	1,602.7	35.19	46.547	
7,700.0	7,283.3	7,470.9	7,286.9	22.2	27.0	-63.30	-350.4	-1,535.5	1,589.0	1,547.3	41.72	38.091	
7,750.0	7,285.9	7,473.5	7,289.6	22.9	27.0	-84.53	-350.4	-1,535.5	1,539.8	1,493.7	46.10	33.403	
7,760.9	7,286.0	7,473.6	7,289.7	23.0	27.0	-89.40	-350.4	-1,535.5	1,529.1	1,482.8	46.33	33.005	
7,800.0	7,286.1	7,473.7	7,289.7	23.6	27.0	-89.41	-350.4	-1,535.5	1,490.6	1,443.7	46.93	31.764	
7,900.0	7,286.4	7,473.8	7,289.8	25.3	27.0	-89.43	-350.4	-1,535.5	1,392.4	1,343.8	48.61	28.646	
8,000.0	7,286.6	7,473.9	7,289.9	27.2	27.0	-89.46	-350.4	-1,535.5	1,294.5	1,244.0	50.47	25.647	
8,100.0	7,286.9	7,474.0	7,290.0	29.2	27.0	-89.48	-350.4	-1,535.5	1,196.8	1,144.4	52.49	22.801	
8,200.0	7,287.2	7,474.1	7,290.1	31.3	27.0	-89.50	-350.4	-1,535.5	1,099.7	1,045.0	54.63	20.129	
8,300.0	7,287.4	7,474.2	7,290.3	33.6	27.0	-89.53	-350.4	-1,535.5	1,003.0	946.2	56.87	17.637	
8,400.0	7,287.7	7,474.3	7,290.4	35.9	27.0	-89.55	-350.4	-1,535.5	907.1	847.9	59.19	15.326	
8,500.0	7,288.0	7,474.4	7,290.5	38.3	27.0	-89.57	-350.4	-1,535.5	812.2	750.6	61.57	13.191	
8,600.0	7,288.2	7,474.6	7,290.6	40.7	27.0	-89.60	-350.4	-1,535.5	718.7	654.7	64.01	11.227	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
8,700.0	7,288.5	7,474.7	7,290.7	43.2	27.0	-89.62	-350.4	-1,535.5	627.1	560.6	66.50	9.431	
8,800.0	7,288.8	7,474.8	7,290.8	45.7	27.0	-89.64	-350.4	-1,535.5	538.6	469.6	69.02	7.804	
8,900.0	7,289.0	7,474.9	7,290.9	48.3	27.0	-89.67	-350.4	-1,535.5	454.9	383.3	71.57	6.356	
9,000.0	7,289.3	7,475.0	7,291.0	50.9	27.0	-89.69	-350.4	-1,535.5	379.1	305.0	74.15	5.113	
9,100.0	7,289.6	7,475.1	7,291.1	53.5	27.0	-89.71	-350.4	-1,535.5	317.1	240.4	76.75	4.132	
9,200.0	7,289.8	7,475.2	7,291.2	56.1	27.0	-89.74	-350.4	-1,535.5	278.2	198.8	79.38	3.504	
9,265.9	7,290.0	7,475.3	7,291.3	57.8	27.0	-89.75	-350.4	-1,535.5	270.2	189.1	81.12	3.331	CC, ES
9,300.0	7,290.1	7,475.3	7,291.4	58.7	27.0	-89.76	-350.4	-1,535.5	272.4	190.4	82.02	3.321	SF
9,400.0	7,290.4	7,475.4	7,291.5	61.4	27.0	-89.78	-350.4	-1,535.5	301.7	217.0	84.67	3.563	
9,500.0	7,290.6	7,475.5	7,291.6	64.1	27.0	-89.80	-350.4	-1,535.5	357.5	270.2	87.34	4.093	
9,600.0	7,290.9	7,475.6	7,291.7	66.7	27.0	-89.83	-350.4	-1,535.5	429.7	339.7	90.02	4.773	
9,700.0	7,291.2	7,475.7	7,291.8	69.4	27.0	-89.85	-350.4	-1,535.5	511.3	418.6	92.71	5.515	
9,800.0	7,291.4	7,475.9	7,291.9	72.1	27.0	-89.87	-350.4	-1,535.5	598.5	503.1	95.41	6.274	
9,900.0	7,291.7	7,476.0	7,292.0	74.8	27.0	-89.89	-350.4	-1,535.5	689.2	591.1	98.11	7.025	
10,000.0	7,292.0	7,476.1	7,292.1	77.5	27.0	-89.92	-350.4	-1,535.5	782.2	681.4	100.83	7.758	
10,100.0	7,292.2	7,476.2	7,292.2	80.3	27.0	-89.94	-350.4	-1,535.5	876.7	773.2	103.55	8.467	
10,200.0	7,292.5	7,476.3	7,292.3	83.0	27.0	-89.96	-350.4	-1,535.5	972.4	866.1	106.27	9.150	
10,300.0	7,292.8	7,476.4	7,292.4	85.7	27.0	-89.98	-350.4	-1,535.5	1,068.8	959.8	109.01	9.805	
10,400.0	7,293.0	7,476.5	7,292.5	88.5	27.0	-90.01	-350.4	-1,535.5	1,165.8	1,054.1	111.74	10.433	
10,500.0	7,293.3	7,476.6	7,292.6	91.2	27.0	-90.03	-350.4	-1,535.5	1,263.3	1,148.8	114.48	11.035	
10,600.0	7,293.6	7,476.7	7,292.7	93.9	27.0	-90.05	-350.4	-1,535.5	1,361.2	1,243.9	117.23	11.611	
10,700.0	7,293.8	7,476.8	7,292.8	96.7	27.0	-90.07	-350.4	-1,535.5	1,459.3	1,339.3	119.98	12.163	
10,800.0	7,294.1	7,476.9	7,292.9	99.4	27.0	-90.10	-350.4	-1,535.5	1,557.7	1,435.0	122.73	12.692	
10,900.0	7,294.4	7,477.0	7,293.0	102.2	27.0	-90.12	-350.4	-1,535.5	1,656.3	1,530.8	125.48	13.199	
11,000.0	7,294.6	7,477.1	7,293.1	105.0	27.0	-90.14	-350.4	-1,535.5	1,755.0	1,626.8	128.24	13.685	
11,100.0	7,294.9	7,477.2	7,293.2	107.7	27.0	-90.16	-350.4	-1,535.5	1,853.9	1,722.9	131.00	14.152	
11,200.0	7,295.2	7,477.3	7,293.3	110.5	27.0	-90.18	-350.4	-1,535.5	1,952.9	1,819.1	133.76	14.599	
11,300.0	7,295.4	7,477.4	7,293.4	113.2	27.0	-90.21	-350.4	-1,535.5	2,051.9	1,915.4	136.53	15.030	
11,400.0	7,295.7	7,477.5	7,293.6	116.0	27.0	-90.23	-350.4	-1,535.5	2,151.1	2,011.8	139.29	15.443	
11,500.0	7,296.0	7,477.6	7,293.7	118.8	27.0	-90.25	-350.4	-1,535.5	2,250.3	2,108.3	142.06	15.841	
11,600.0	7,296.2	7,477.7	7,293.8	121.6	27.0	-90.27	-350.4	-1,535.5	2,349.7	2,204.8	144.83	16.223	
11,700.0	7,296.5	7,477.8	7,293.9	124.3	27.0	-90.29	-350.4	-1,535.5	2,449.0	2,301.4	147.60	16.592	
11,800.0	7,296.8	7,477.9	7,294.0	127.1	27.0	-90.32	-350.4	-1,535.5	2,548.4	2,398.1	150.38	16.947	
11,886.1	7,297.0	7,478.0	7,294.0	129.5	27.0	-90.33	-350.4	-1,535.5	2,634.1	2,481.3	152.77	17.242	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	-37.63	693.3	-534.5	875.5				
100.0	100.0	86.2	86.2	0.1	0.1	-37.63	693.3	-534.5	875.4	875.3	0.15	5,746.246	
200.0	200.0	186.5	186.5	0.3	0.1	-37.65	693.3	-534.8	875.6	875.1	0.47	1,868.450	
300.0	300.0	288.3	288.3	0.5	0.2	-37.68	693.0	-535.2	875.6	874.8	0.78	1,125.159	
351.6	351.6	339.1	339.1	0.7	0.3	-37.69	692.9	-535.3	875.6	874.7	0.93	943.351	
400.0	400.0	386.3	386.3	0.8	0.3	-37.71	692.7	-535.6	875.6	874.5	1.07	820.788	
500.0	500.0	488.6	488.5	1.0	0.4	-37.78	692.1	-536.4	875.7	874.3	1.36	642.571	
535.9	535.9	523.4	523.4	1.1	0.4	-37.80	691.9	-536.6	875.6	874.2	1.47	597.547	
600.0	600.0	583.9	583.9	1.2	0.4	-37.84	691.6	-537.2	875.8	874.1	1.64	532.394	
700.0	700.0	681.5	681.5	1.4	0.5	-37.92	691.3	-538.5	876.3	874.4	1.92	455.571	
800.0	800.0	788.9	788.9	1.7	0.5	-134.73	691.0	-539.5	877.9	875.8	2.16	407.352	
900.0	899.8	886.6	886.6	1.9	0.6	-134.99	690.3	-540.3	881.5	879.1	2.40	366.728	
1,000.0	999.5	989.4	989.4	2.1	0.6	-135.42	689.2	-541.6	887.7	885.0	2.67	332.692	
1,100.0	1,098.7	1,088.1	1,088.1	2.3	0.7	-135.94	688.1	-542.5	896.2	893.2	2.95	304.165	
1,200.0	1,197.5	1,180.4	1,180.3	2.6	0.7	-136.49	687.4	-543.5	907.6	904.4	3.24	279.719	
1,300.0	1,295.6	1,280.8	1,280.8	3.0	0.8	-137.20	686.9	-544.8	922.2	918.6	3.57	258.249	
1,400.0	1,393.4	1,375.5	1,375.4	3.3	0.8	-138.12	686.2	-546.1	938.0	934.2	3.89	240.962	
1,500.0	1,491.3	1,478.2	1,478.1	3.7	0.8	-139.06	685.8	-547.3	954.3	950.0	4.22	226.037	
1,600.0	1,589.1	1,572.9	1,572.8	4.1	0.9	-139.91	684.9	-548.4	970.3	965.8	4.55	213.073	
1,700.0	1,686.9	1,669.5	1,669.4	4.6	0.9	-140.77	684.1	-549.9	987.0	982.1	4.89	201.741	
1,800.0	1,784.7	1,763.8	1,763.6	5.0	0.9	-141.57	683.5	-551.3	1,003.9	998.7	5.23	191.907	
1,900.0	1,882.5	1,860.8	1,860.7	5.4	1.0	-142.33	683.6	-552.5	1,021.4	1,015.8	5.57	183.307	
2,000.0	1,980.3	1,960.0	1,959.8	5.9	1.0	-143.09	683.4	-553.8	1,038.9	1,033.0	5.91	175.779	
2,100.0	2,078.1	2,059.5	2,059.3	6.3	1.1	-143.86	682.7	-555.4	1,056.4	1,050.2	6.25	168.902	
2,200.0	2,176.0	2,159.9	2,159.7	6.7	1.1	-144.60	682.1	-556.6	1,073.9	1,067.3	6.61	162.545	
2,300.0	2,273.8	2,256.0	2,255.8	7.2	1.2	-145.27	681.5	-557.5	1,091.4	1,084.4	6.96	156.909	
2,400.0	2,371.6	2,349.0	2,348.8	7.6	1.2	-145.91	681.1	-558.8	1,109.3	1,102.0	7.30	151.950	
2,500.0	2,469.4	2,445.4	2,445.2	8.1	1.3	-146.56	680.7	-560.4	1,127.8	1,120.2	7.64	147.538	
2,600.0	2,567.2	2,546.2	2,546.0	8.5	1.3	-147.21	680.2	-562.0	1,146.2	1,138.2	7.99	143.527	
2,700.0	2,665.0	2,644.0	2,643.8	9.0	1.4	-147.83	679.7	-563.3	1,164.5	1,156.2	8.32	139.891	
2,800.0	2,762.8	2,738.4	2,738.1	9.4	1.4	-148.40	679.2	-564.7	1,183.2	1,174.5	8.66	136.633	
2,900.0	2,860.7	2,832.6	2,832.3	9.9	1.5	-148.96	678.9	-566.3	1,202.2	1,193.2	8.99	133.673	
3,000.0	2,958.5	2,926.6	2,926.4	10.3	1.5	-149.49	678.9	-568.1	1,221.6	1,212.3	9.33	130.964	
3,100.0	3,056.3	3,022.2	3,021.9	10.8	1.6	-150.01	679.1	-570.0	1,241.4	1,231.7	9.66	128.505	
3,200.0	3,154.1	3,123.2	3,122.9	11.3	1.6	-150.55	679.3	-571.9	1,261.2	1,251.2	9.99	126.242	
3,300.0	3,251.9	3,221.8	3,221.4	11.7	1.6	-151.06	679.1	-573.7	1,280.8	1,270.4	10.32	124.137	
3,400.0	3,349.7	3,312.5	3,312.1	12.2	1.7	-151.51	679.3	-575.4	1,300.7	1,290.1	10.64	122.229	
3,500.0	3,447.5	3,400.0	3,399.6	12.6	1.7	-151.91	680.1	-577.2	1,321.3	1,310.3	10.97	120.486	
3,600.0	3,545.4	3,496.1	3,495.7	13.1	1.8	-152.33	681.3	-579.4	1,342.3	1,331.0	11.30	118.823	
3,700.0	3,643.2	3,589.0	3,588.6	13.5	1.8	-152.73	682.5	-581.8	1,363.7	1,352.1	11.63	117.305	
3,800.0	3,741.0	3,684.4	3,683.9	14.0	1.8	-153.12	684.0	-584.4	1,385.4	1,373.5	11.95	115.914	
3,900.0	3,838.8	3,780.2	3,779.7	14.5	1.9	-153.49	685.9	-586.9	1,407.3	1,395.0	12.28	114.612	
4,000.0	3,936.6	3,877.2	3,876.6	14.9	1.9	-153.85	687.9	-589.5	1,429.3	1,416.7	12.60	113.402	
4,009.8	3,946.2	3,886.7	3,886.1	15.0	1.9	-153.88	688.0	-589.8	1,431.4	1,418.8	12.64	113.288	
4,100.0	4,034.7	3,974.7	3,974.0	15.3	1.9	-154.36	689.4	-592.4	1,450.1	1,437.2	12.86	112.733	
4,200.0	4,133.4	4,082.5	4,081.8	15.6	2.0	-154.83	690.7	-595.4	1,467.6	1,454.5	13.08	112.239	
4,300.0	4,232.6	4,194.6	4,193.9	15.8	2.0	-155.17	692.1	-597.5	1,481.2	1,467.9	13.28	111.574	
4,400.0	4,332.2	4,293.8	4,293.1	16.1	2.0	-155.39	693.2	-598.9	1,491.1	1,477.7	13.46	110.797	
4,500.0	4,432.1	4,392.6	4,391.8	16.2	2.1	-155.53	694.4	-600.3	1,498.0	1,484.4	13.63	109.938	
4,600.0	4,532.0	4,499.2	4,498.5	16.4	2.1	-155.58	695.5	-601.7	1,501.6	1,487.8	13.79	108.916	
4,609.8	4,541.8	4,509.7	4,509.0	16.4	2.1	-58.89	695.6	-601.8	1,501.7	1,484.2	17.49	85.845	
4,700.0	4,632.0	4,605.8	4,605.0	16.5	2.1	-58.88	696.4	-602.6	1,502.8	1,485.1	17.63	85.254	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
4,800.0	4,732.0	4,700.1	4,699.3	16.6	2.2	-58.88	697.0	-603.5	1,503.9	1,486.1	17.78	84.585	
4,900.0	4,832.0	4,800.0	4,799.2	16.7	2.2	-58.90	697.4	-605.0	1,505.5	1,487.5	17.94	83.928	
5,000.0	4,932.0	4,899.2	4,898.4	16.9	2.2	-58.91	697.9	-606.5	1,507.0	1,488.9	18.10	83.281	
5,100.0	5,032.0	5,004.5	5,003.7	17.0	2.3	-58.91	698.7	-607.6	1,508.2	1,490.0	18.26	82.614	
5,200.0	5,132.0	5,102.8	5,101.9	17.1	2.3	-58.90	699.4	-608.4	1,509.4	1,490.9	18.42	81.956	
5,300.0	5,232.0	5,201.2	5,200.4	17.3	2.3	-58.91	699.7	-609.6	1,510.6	1,492.0	18.58	81.300	
5,400.0	5,332.0	5,313.8	5,312.9	17.4	2.3	-58.93	699.9	-610.7	1,511.4	1,492.7	18.73	80.678	
5,500.0	5,432.0	5,422.8	5,422.0	17.6	2.3	-58.93	699.8	-610.8	1,511.5	1,492.6	18.89	80.025	
5,600.0	5,532.0	5,520.4	5,519.6	17.7	2.3	-58.93	699.8	-610.7	1,511.4	1,492.4	19.04	79.393	
5,603.2	5,535.2	5,523.6	5,522.7	17.7	2.3	-58.93	699.8	-610.7	1,511.4	1,492.3	19.04	79.373	
5,700.0	5,632.0	5,618.3	5,617.4	17.9	2.3	-58.92	700.1	-610.6	1,511.5	1,492.3	19.19	78.774	
5,800.0	5,732.0	5,717.1	5,716.2	18.0	2.3	-58.92	700.1	-610.8	1,511.6	1,492.3	19.34	78.156	
5,900.0	5,832.0	5,815.4	5,814.6	18.2	2.4	-58.95	699.5	-611.4	1,511.9	1,492.4	19.50	77.526	
6,000.0	5,932.0	5,911.4	5,910.5	18.3	2.4	-58.98	699.1	-612.2	1,512.4	1,492.7	19.68	76.843	
6,100.0	6,032.0	6,008.8	6,008.0	18.5	2.4	-59.00	699.1	-613.0	1,513.1	1,493.2	19.86	76.187	
6,200.0	6,132.0	6,123.7	6,122.9	18.6	2.4	-59.01	699.0	-613.4	1,513.4	1,493.3	20.02	75.580	
6,300.0	6,232.0	6,230.9	6,230.0	18.8	2.4	-59.02	698.6	-612.9	1,512.7	1,492.5	20.19	74.941	
6,400.0	6,332.0	6,322.8	6,321.9	18.9	2.4	-59.01	698.4	-612.6	1,512.3	1,492.0	20.35	74.333	
6,427.8	6,359.8	6,348.3	6,347.4	19.0	2.4	-59.01	698.4	-612.6	1,512.3	1,491.9	20.39	74.169	
6,500.0	6,432.0	6,416.9	6,416.1	19.1	2.4	-59.01	698.6	-612.6	1,512.4	1,491.9	20.51	73.755	
6,600.0	6,532.0	6,523.5	6,522.6	19.2	2.4	-59.01	698.6	-612.6	1,512.4	1,491.7	20.67	73.172	
6,637.8	6,569.8	6,563.7	6,562.9	19.3	2.4	-59.01	698.4	-612.5	1,512.3	1,491.6	20.73	72.947	
6,650.0	6,582.0	6,576.7	6,575.9	19.3	2.4	30.99	698.4	-612.5	1,512.2	1,494.4	17.80	84.972	
6,700.0	6,632.0	6,628.3	6,627.4	19.4	2.4	31.14	698.0	-612.4	1,509.7	1,491.9	17.83	84.695	
6,750.0	6,681.6	6,678.2	6,677.3	19.4	2.4	31.48	697.6	-612.4	1,504.2	1,486.3	17.89	84.100	
6,800.0	6,730.6	6,727.5	6,726.7	19.4	2.4	32.02	697.2	-612.3	1,495.8	1,477.8	17.97	83.222	
6,850.0	6,778.9	6,776.1	6,775.2	19.3	2.4	32.77	696.8	-612.2	1,484.5	1,466.4	18.08	82.095	
6,900.0	6,826.2	6,821.7	6,820.8	19.3	2.4	33.72	696.3	-612.2	1,470.4	1,452.2	18.21	80.759	
6,950.0	6,872.2	6,864.3	6,863.4	19.2	2.5	34.90	695.9	-612.3	1,453.7	1,435.4	18.34	79.246	
7,000.0	6,916.8	6,905.6	6,904.8	19.2	2.5	36.32	695.5	-612.5	1,434.5	1,416.0	18.50	77.560	
7,050.0	6,959.6	6,945.5	6,944.6	19.1	2.5	38.00	695.2	-612.7	1,413.0	1,394.3	18.67	75.693	
7,100.0	7,000.6	6,983.8	6,982.9	19.0	2.5	39.99	694.9	-613.0	1,389.2	1,370.3	18.87	73.630	
7,150.0	7,039.5	7,022.1	7,021.2	19.0	2.5	42.33	694.6	-613.4	1,363.4	1,344.3	19.11	71.336	
7,200.0	7,076.0	7,059.6	7,058.7	19.0	2.5	45.06	694.4	-613.7	1,335.6	1,316.2	19.41	68.809	
7,250.0	7,110.1	7,094.5	7,093.6	19.0	2.5	48.16	694.3	-614.0	1,306.1	1,286.4	19.77	66.082	
7,300.0	7,141.6	7,126.5	7,125.7	19.1	2.5	51.65	694.3	-614.1	1,275.2	1,255.0	20.18	63.202	
7,350.0	7,170.3	7,155.7	7,154.8	19.2	2.5	55.50	694.3	-614.2	1,243.0	1,222.3	20.63	60.241	
7,400.0	7,196.1	7,181.7	7,180.8	19.4	2.5	59.66	694.3	-614.2	1,209.8	1,188.7	21.12	57.280	
7,450.0	7,218.8	7,200.0	7,199.1	19.7	2.5	63.82	694.4	-614.2	1,176.0	1,154.4	21.61	54.417	
7,500.0	7,238.3	7,200.0	7,199.1	20.0	2.5	67.19	694.4	-614.2	1,142.1	1,120.0	22.08	51.717	
7,550.0	7,254.6	7,200.0	7,199.1	20.5	2.5	70.60	694.4	-614.2	1,108.4	1,085.8	22.58	49.075	
7,600.0	7,267.6	7,200.0	7,199.1	21.0	2.5	74.01	694.4	-614.2	1,075.0	1,051.9	23.11	46.508	
7,650.0	7,277.1	7,200.0	7,199.1	21.5	2.5	77.37	694.4	-614.2	1,042.2	1,018.6	23.68	44.019	
7,700.0	7,283.3	7,200.0	7,199.1	22.2	2.5	80.63	694.4	-614.2	1,010.3	986.0	24.28	41.609	
7,750.0	7,285.9	7,200.0	7,199.1	22.9	2.5	83.75	694.4	-614.2	979.4	954.4	24.94	39.276	
7,760.9	7,286.0	7,200.0	7,199.1	23.0	2.5	84.40	694.4	-614.2	972.8	947.7	25.09	38.779	
7,800.0	7,286.1	7,200.0	7,199.1	23.6	2.5	84.40	694.4	-614.2	949.9	924.2	25.68	36.987	
7,900.0	7,286.4	7,200.0	7,199.1	25.3	2.5	84.40	694.4	-614.2	896.3	868.9	27.35	32.769	
8,000.0	7,286.6	7,200.0	7,199.1	27.2	2.5	84.40	694.4	-614.2	851.2	821.9	29.21	29.139	
8,100.0	7,286.9	7,200.0	7,199.1	29.2	2.5	84.40	694.4	-614.2	815.8	784.6	31.22	26.132	
8,200.0	7,287.2	7,200.0	7,199.1	31.3	2.5	84.40	694.4	-614.2	791.6	758.3	33.35	23.736	
8,300.0	7,287.4	7,200.0	7,199.1	33.6	2.5	84.40	694.4	-614.2	779.6	744.0	35.58	21.911	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
8,344.5	7,287.5	7,200.0	7,199.1	34.6	2.5	84.40	694.4	-614.2	778.3	741.7	36.61	21.262	CC, ES
8,400.0	7,287.7	7,200.0	7,199.1	35.9	2.5	84.40	694.4	-614.2	780.3	742.4	37.89	20.594	
8,500.0	7,288.0	7,200.0	7,199.1	38.3	2.5	84.40	694.4	-614.2	793.7	753.4	40.26	19.713	
8,600.0	7,288.2	7,200.0	7,199.1	40.7	2.5	84.40	694.4	-614.2	819.2	776.5	42.69	19.188	
8,700.0	7,288.5	7,200.0	7,199.1	43.2	2.5	84.40	694.4	-614.2	855.7	810.5	45.17	18.945	
8,800.0	7,288.8	7,200.0	7,199.1	45.7	2.5	84.40	694.4	-614.2	901.8	854.2	47.68	18.916	SF
8,900.0	7,289.0	7,200.0	7,199.1	48.3	2.5	84.40	694.4	-614.2	956.2	906.0	50.22	19.042	
9,000.0	7,289.3	7,200.0	7,199.1	50.9	2.5	84.40	694.4	-614.2	1,017.6	964.8	52.79	19.277	
9,100.0	7,289.6	7,200.0	7,199.1	53.5	2.5	84.40	694.4	-614.2	1,084.7	1,029.3	55.38	19.587	
9,200.0	7,289.8	7,200.0	7,199.1	56.1	2.5	84.40	694.4	-614.2	1,156.6	1,098.6	57.99	19.944	
9,300.0	7,290.1	7,200.0	7,199.1	58.7	2.5	84.40	694.4	-614.2	1,232.4	1,171.8	60.62	20.330	
9,400.0	7,290.4	7,200.0	7,199.1	61.4	2.5	84.40	694.4	-614.2	1,311.5	1,248.2	63.26	20.730	
9,500.0	7,290.6	7,200.0	7,199.1	64.1	2.5	84.40	694.4	-614.2	1,393.2	1,327.3	65.92	21.135	
9,600.0	7,290.9	7,200.0	7,199.1	66.7	2.5	84.40	694.4	-614.2	1,477.2	1,408.6	68.59	21.537	
9,700.0	7,291.2	7,200.0	7,199.1	69.4	2.5	84.40	694.4	-614.2	1,563.1	1,491.8	71.27	21.933	
9,800.0	7,291.4	7,200.0	7,199.1	72.1	2.5	84.40	694.4	-614.2	1,650.6	1,576.6	73.95	22.319	
9,900.0	7,291.7	7,200.0	7,199.1	74.8	2.5	84.40	694.4	-614.2	1,739.4	1,662.7	76.65	22.693	
10,000.0	7,292.0	7,200.0	7,199.1	77.5	2.5	84.40	694.4	-614.2	1,829.4	1,750.0	79.35	23.054	
10,100.0	7,292.2	7,200.0	7,199.1	80.3	2.5	84.40	694.4	-614.2	1,920.3	1,838.3	82.06	23.401	
10,200.0	7,292.5	7,200.0	7,199.1	83.0	2.5	84.40	694.4	-614.2	2,012.1	1,927.4	84.78	23.735	
10,300.0	7,292.8	7,200.0	7,199.1	85.7	2.5	84.40	694.4	-614.2	2,104.7	2,017.2	87.50	24.055	
10,400.0	7,293.0	7,200.0	7,199.1	88.5	2.5	84.40	694.4	-614.2	2,197.9	2,107.7	90.22	24.362	
10,500.0	7,293.3	7,200.0	7,199.1	91.2	2.5	84.40	694.4	-614.2	2,291.7	2,198.8	92.95	24.655	
10,600.0	7,293.6	7,200.0	7,199.1	93.9	2.5	84.40	694.4	-614.2	2,386.0	2,290.3	95.68	24.937	
10,700.0	7,293.8	7,200.0	7,199.1	96.7	2.5	84.40	694.4	-614.2	2,480.8	2,382.4	98.42	25.206	
10,800.0	7,294.1	7,200.0	7,199.1	99.4	2.5	84.40	694.4	-614.2	2,575.9	2,474.8	101.16	25.463	
10,900.0	7,294.4	7,200.0	7,199.1	102.2	2.5	84.40	694.4	-614.2	2,671.4	2,567.5	103.90	25.710	
11,000.0	7,294.6	7,200.0	7,199.1	105.0	2.5	84.40	694.4	-614.2	2,767.2	2,660.6	106.65	25.947	
11,100.0	7,294.9	7,200.0	7,199.1	107.7	2.5	84.40	694.4	-614.2	2,863.3	2,753.9	109.40	26.173	
11,200.0	7,295.2	7,200.0	7,199.1	110.5	2.5	84.40	694.4	-614.2	2,959.7	2,847.5	112.15	26.390	
11,300.0	7,295.4	7,200.0	7,199.1	113.2	2.5	84.40	694.4	-614.2	3,056.3	2,941.4	114.90	26.599	
11,400.0	7,295.7	7,200.0	7,199.1	116.0	2.5	84.40	694.4	-614.2	3,153.1	3,035.4	117.66	26.798	
11,500.0	7,296.0	7,200.0	7,199.1	118.8	2.5	84.41	694.4	-614.2	3,250.1	3,129.7	120.42	26.990	
11,600.0	7,296.2	7,200.0	7,199.1	121.6	2.5	84.41	694.4	-614.2	3,347.3	3,224.1	123.18	27.175	
11,700.0	7,296.5	7,200.0	7,199.1	124.3	2.5	84.41	694.4	-614.2	3,444.6	3,318.7	125.94	27.352	
11,800.0	7,296.8	7,200.0	7,199.1	127.1	2.5	84.41	694.4	-614.2	3,542.1	3,413.4	128.70	27.522	
11,886.1	7,297.0	7,200.0	7,199.1	129.5	2.5	84.41	694.4	-614.2	3,626.2	3,495.1	131.08	27.664	

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-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	-86.89	203.9	-3,758.9	3,764.5				
100.0	100.0	76.5	76.5	0.1	0.7	-86.89	203.9	-3,758.9	3,764.5	3,763.6	0.83	4,532.625	
200.0	200.0	176.5	176.5	0.3	2.8	-86.89	203.9	-3,758.9	3,764.5	3,761.4	3.08	1,224.102	
300.0	300.0	276.5	276.5	0.5	4.9	-86.89	203.9	-3,758.9	3,764.5	3,759.0	5.44	691.527	
400.0	400.0	376.5	376.5	0.8	6.9	-86.89	203.9	-3,758.9	3,764.5	3,756.7	7.72	487.607	
500.0	500.0	476.5	476.5	1.0	9.0	-86.89	203.9	-3,758.9	3,764.5	3,754.5	9.98	377.301	
600.0	600.0	576.5	576.5	1.2	11.0	-86.89	203.9	-3,758.9	3,764.5	3,752.2	12.23	307.898	
700.0	700.0	676.5	676.5	1.4	13.0	-86.89	203.9	-3,758.9	3,764.5	3,750.0	14.47	260.136	
800.0	800.0	776.5	776.5	1.7	15.0	176.42	203.9	-3,758.9	3,766.2	3,749.5	16.69	225.674	
900.0	899.8	876.3	876.3	1.9	17.1	176.41	203.9	-3,758.9	3,771.4	3,752.5	18.87	199.880	
1,000.0	999.5	976.0	976.0	2.1	19.1	176.41	203.9	-3,758.9	3,780.1	3,759.1	21.02	179.865	
1,100.0	1,098.7	1,075.2	1,075.2	2.3	21.1	176.41	203.9	-3,758.9	3,792.3	3,769.2	23.12	164.002	
1,200.0	1,197.5	1,174.0	1,174.0	2.6	23.1	176.40	203.9	-3,758.9	3,807.9	3,782.7	25.18	151.223	
1,300.0	1,295.6	1,272.1	1,272.1	3.0	25.0	176.40	203.9	-3,758.9	3,826.9	3,799.8	27.18	140.802	
1,400.0	1,393.4	1,369.9	1,369.9	3.3	27.0	176.42	203.9	-3,758.9	3,847.7	3,818.3	29.34	131.130	
1,500.0	1,491.3	1,467.8	1,467.8	3.7	29.0	176.44	203.9	-3,758.9	3,868.4	3,836.9	31.51	122.767	
1,600.0	1,589.1	1,565.6	1,565.6	4.1	30.9	176.45	203.9	-3,758.9	3,889.2	3,855.5	33.68	115.467	
1,700.0	1,686.9	1,663.4	1,663.4	4.6	32.9	176.47	203.9	-3,758.9	3,909.9	3,874.1	35.86	109.041	
1,800.0	1,784.7	1,761.2	1,761.2	5.0	34.9	176.49	203.9	-3,758.9	3,930.7	3,892.7	38.04	103.343	
1,900.0	1,882.5	1,859.0	1,859.0	5.4	36.8	176.51	203.9	-3,758.9	3,951.5	3,911.2	40.22	98.257	
2,000.0	1,980.3	1,956.8	1,956.8	5.9	38.8	176.53	203.9	-3,758.9	3,972.2	3,929.8	42.40	93.691	
2,100.0	2,078.1	2,054.6	2,054.6	6.3	40.8	176.55	203.9	-3,758.9	3,993.0	3,948.4	44.58	89.568	
2,200.0	2,176.0	2,152.5	2,152.5	6.7	42.7	176.56	203.9	-3,758.9	4,013.7	3,966.9	46.76	85.828	
2,300.0	2,273.8	2,250.3	2,250.3	7.2	44.7	176.58	203.9	-3,758.9	4,034.5	3,985.5	48.95	82.420	
2,400.0	2,371.6	2,348.1	2,348.1	7.6	46.7	176.60	203.9	-3,758.9	4,055.2	4,004.1	51.14	79.302	
2,500.0	2,469.4	2,445.9	2,445.9	8.1	48.6	176.62	203.9	-3,758.9	4,076.0	4,022.7	53.32	76.438	
2,600.0	2,567.2	2,543.7	2,543.7	8.5	50.6	176.63	203.9	-3,758.9	4,096.7	4,041.2	55.51	73.799	
2,700.0	2,665.0	2,641.5	2,641.5	9.0	52.6	176.65	203.9	-3,758.9	4,117.5	4,059.8	57.70	71.360	
2,800.0	2,762.8	2,739.3	2,739.3	9.4	54.5	176.67	203.9	-3,758.9	4,138.3	4,078.4	59.89	69.099	
2,900.0	2,860.7	2,837.2	2,837.2	9.9	56.5	176.68	203.9	-3,758.9	4,159.0	4,096.9	62.08	66.996	
3,000.0	2,958.5	2,935.0	2,935.0	10.3	58.5	176.70	203.9	-3,758.9	4,179.8	4,115.5	64.27	65.036	
3,100.0	3,056.3	3,032.8	3,032.8	10.8	60.4	176.72	203.9	-3,758.9	4,200.5	4,134.1	66.46	63.205	
3,200.0	3,154.1	3,130.6	3,130.6	11.3	62.4	176.73	203.9	-3,758.9	4,221.3	4,152.6	68.65	61.491	
3,300.0	3,251.9	3,228.4	3,228.4	11.7	64.4	176.75	203.9	-3,758.9	4,242.0	4,171.2	70.84	59.882	
3,400.0	3,349.7	3,326.2	3,326.2	12.2	66.3	176.77	203.9	-3,758.9	4,262.8	4,189.8	73.03	58.370	
3,500.0	3,447.5	3,424.0	3,424.0	12.6	68.3	176.78	203.9	-3,758.9	4,283.6	4,208.3	75.22	56.946	
3,600.0	3,545.4	3,521.9	3,521.9	13.1	70.3	176.80	203.9	-3,758.9	4,304.3	4,226.9	77.41	55.602	
3,700.0	3,643.2	3,619.7	3,619.7	13.5	72.3	176.81	203.9	-3,758.9	4,325.1	4,245.5	79.60	54.332	
3,800.0	3,741.0	3,717.5	3,717.5	14.0	74.2	176.83	203.9	-3,758.9	4,345.8	4,264.0	81.80	53.130	
3,900.0	3,838.8	3,815.3	3,815.3	14.5	76.2	176.84	203.9	-3,758.9	4,366.6	4,282.6	83.99	51.991	
4,000.0	3,936.6	3,913.1	3,913.1	14.9	78.2	176.86	203.9	-3,758.9	4,387.4	4,301.2	86.18	50.909	
4,009.8	3,946.2	3,922.7	3,922.7	15.0	78.3	176.86	203.9	-3,758.9	4,389.4	4,303.0	86.39	50.806	
4,100.0	4,034.7	4,011.2	4,011.2	15.3	80.1	176.89	203.9	-3,758.9	4,406.7	4,317.9	88.84	49.602	
4,200.0	4,133.4	4,109.9	4,109.9	15.6	82.1	176.92	203.9	-3,758.9	4,422.7	4,331.2	91.46	48.357	
4,300.0	4,232.6	4,209.1	4,209.1	15.8	84.1	176.94	203.9	-3,758.9	4,435.2	4,341.2	93.98	47.191	
4,400.0	4,332.2	4,308.7	4,308.7	16.1	86.1	176.96	203.9	-3,758.9	4,444.2	4,347.8	96.41	46.097	
4,500.0	4,432.1	4,408.6	4,408.6	16.2	88.1	176.97	203.9	-3,758.9	4,449.8	4,351.1	98.73	45.072	
4,600.0	4,532.0	4,508.5	4,508.5	16.4	90.1	176.97	203.9	-3,758.9	4,451.9	4,351.0	100.93	44.109	
4,609.8	4,541.8	4,518.3	4,518.3	16.4	90.3	-86.34	203.9	-3,758.9	4,451.9	4,345.2	106.67	41.735	
4,700.0	4,632.0	4,608.5	4,608.5	16.5	92.1	-86.34	203.9	-3,758.9	4,451.9	4,343.3	108.59	40.996	
4,800.0	4,732.0	4,708.5	4,708.5	16.6	94.1	-86.34	203.9	-3,758.9	4,451.9	4,341.2	110.73	40.203	
4,900.0	4,832.0	4,808.5	4,808.5	16.7	96.2	-86.34	203.9	-3,758.9	4,451.9	4,339.0	112.88	39.440	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
5,000.0	4,932.0	4,908.5	4,908.5	16.9	98.2	-86.34	203.9	-3,758.9	4,451.9	4,336.9	115.02	38.705	
5,100.0	5,032.0	5,008.5	5,008.5	17.0	100.2	-86.34	203.9	-3,758.9	4,451.9	4,334.7	117.17	37.996	
5,200.0	5,132.0	5,108.5	5,108.5	17.1	102.2	-86.34	203.9	-3,758.9	4,451.9	4,332.6	119.32	37.311	
5,300.0	5,232.0	5,208.5	5,208.5	17.3	104.2	-86.34	203.9	-3,758.9	4,451.9	4,330.4	121.47	36.651	
5,400.0	5,332.0	5,308.5	5,308.5	17.4	106.2	-86.34	203.9	-3,758.9	4,451.9	4,328.3	123.62	36.013	
5,500.0	5,432.0	5,408.5	5,408.5	17.6	108.2	-86.34	203.9	-3,758.9	4,451.9	4,326.1	125.77	35.396	
5,600.0	5,532.0	5,508.5	5,508.5	17.7	110.2	-86.34	203.9	-3,758.9	4,451.9	4,324.0	127.93	34.800	
5,700.0	5,632.0	5,608.5	5,608.5	17.9	112.2	-86.34	203.9	-3,758.9	4,451.9	4,321.8	130.09	34.223	
5,800.0	5,732.0	5,708.5	5,708.5	18.0	114.3	-86.34	203.9	-3,758.9	4,451.9	4,319.7	132.24	33.664	
5,900.0	5,832.0	5,808.5	5,808.5	18.2	116.3	-86.34	203.9	-3,758.9	4,451.9	4,317.5	134.41	33.123	
6,000.0	5,932.0	5,908.5	5,908.5	18.3	118.3	-86.34	203.9	-3,758.9	4,451.9	4,315.3	136.57	32.599	
6,100.0	6,032.0	6,008.5	6,008.5	18.5	120.3	-86.34	203.9	-3,758.9	4,451.9	4,313.2	138.73	32.090	
6,200.0	6,132.0	6,108.5	6,108.5	18.6	122.3	-86.34	203.9	-3,758.9	4,451.9	4,311.0	140.90	31.597	
6,300.0	6,232.0	6,208.5	6,208.5	18.8	124.3	-86.34	203.9	-3,758.9	4,451.9	4,308.8	143.06	31.119	
6,400.0	6,332.0	6,308.5	6,308.5	18.9	126.3	-86.34	203.9	-3,758.9	4,451.9	4,306.7	145.23	30.654	
6,500.0	6,432.0	6,408.5	6,408.5	19.1	128.3	-86.34	203.9	-3,758.9	4,451.9	4,304.5	147.40	30.203	
6,600.0	6,532.0	6,508.5	6,508.5	19.2	130.3	-86.34	203.9	-3,758.9	4,451.9	4,302.3	149.57	29.765	
6,637.8	6,569.8	6,546.3	6,546.3	19.3	131.1	-86.34	203.9	-3,758.9	4,451.9	4,301.5	150.39	29.603	
6,650.0	6,582.0	6,558.5	6,558.5	19.3	131.4	3.66	203.9	-3,758.9	4,451.8	4,305.7	146.06	30.479	
6,700.0	6,632.0	6,608.5	6,608.5	19.4	132.4	3.68	203.9	-3,758.9	4,449.2	4,302.7	146.53	30.364	
6,750.0	6,681.6	6,658.1	6,658.1	19.4	133.4	3.71	203.9	-3,758.9	4,443.1	4,296.9	146.28	30.375	
6,800.0	6,730.6	6,707.1	6,707.1	19.4	134.3	3.77	203.9	-3,758.9	4,433.6	4,288.3	145.29	30.515	
6,850.0	6,778.9	6,755.4	6,755.4	19.3	135.3	3.85	203.9	-3,758.9	4,420.7	4,277.2	143.57	30.791	
6,900.0	6,826.2	6,802.7	6,802.7	19.3	136.3	3.96	203.9	-3,758.9	4,404.5	4,263.4	141.12	31.212	
6,950.0	6,872.2	6,848.7	6,848.7	19.2	137.2	4.10	203.9	-3,758.9	4,385.0	4,247.1	137.93	31.792	
7,000.0	6,916.8	6,893.3	6,893.3	19.2	138.1	4.27	203.9	-3,758.9	4,362.4	4,228.4	134.02	32.550	
7,050.0	6,959.6	6,936.1	6,936.1	19.1	138.9	4.48	203.9	-3,758.9	4,336.7	4,207.3	129.42	33.510	
7,100.0	7,000.6	6,977.1	6,977.1	19.0	139.8	4.73	203.9	-3,758.9	4,308.1	4,184.0	124.14	34.704	
7,150.0	7,039.5	7,016.0	7,016.0	19.0	140.6	5.04	203.9	-3,758.9	4,276.8	4,158.5	118.23	36.173	
7,200.0	7,076.0	7,052.5	7,052.5	19.0	141.3	5.42	203.9	-3,758.9	4,242.8	4,131.0	111.74	37.970	
7,250.0	7,110.1	7,086.6	7,086.6	19.0	142.0	5.89	203.9	-3,758.9	4,206.3	4,101.6	104.74	40.160	
7,300.0	7,141.6	7,118.1	7,118.1	19.1	142.6	6.47	203.9	-3,758.9	4,167.6	4,070.2	97.32	42.822	
7,350.0	7,170.3	7,146.8	7,146.8	19.2	143.2	7.22	203.9	-3,758.9	4,126.7	4,037.1	89.63	46.042	
7,400.0	7,196.1	7,172.6	7,172.6	19.4	143.7	8.18	203.9	-3,758.9	4,084.0	4,002.1	81.87	49.883	
7,450.0	7,218.8	7,195.3	7,195.3	19.7	144.2	9.46	203.9	-3,758.9	4,039.6	3,965.1	74.42	54.279	
7,500.0	7,238.3	7,214.8	7,214.8	20.0	144.6	11.25	203.9	-3,758.9	3,993.7	3,925.7	67.99	58.743	
7,550.0	7,254.6	7,231.1	7,231.1	20.5	144.9	13.85	203.9	-3,758.9	3,946.5	3,882.5	64.00	61.665	
7,600.0	7,267.6	7,244.1	7,244.1	21.0	145.1	17.97	203.9	-3,758.9	3,898.4	3,833.0	65.41	59.595	
7,650.0	7,277.1	7,253.6	7,253.6	21.5	145.3	25.27	203.9	-3,758.9	3,849.4	3,771.6	77.82	49.463	
7,700.0	7,283.3	7,259.8	7,259.8	22.2	145.5	40.58	203.9	-3,758.9	3,800.0	3,688.7	111.22	34.166	
7,750.0	7,285.9	7,262.4	7,262.4	22.9	145.5	76.79	203.9	-3,758.9	3,750.2	3,586.1	164.03	22.862	
7,760.9	7,286.0	7,262.5	7,262.5	23.0	145.5	88.01	203.9	-3,758.9	3,739.3	3,570.9	168.44	22.199	
7,800.0	7,286.1	7,262.6	7,262.6	23.6	145.5	88.03	203.9	-3,758.9	3,700.3	3,531.3	169.05	21.889	
7,900.0	7,286.4	7,262.9	7,262.9	25.3	145.5	88.08	203.9	-3,758.9	3,600.6	3,429.9	170.73	21.089	
8,000.0	7,286.6	7,263.1	7,263.1	27.2	145.5	88.14	203.9	-3,758.9	3,500.9	3,328.3	172.61	20.282	
8,100.0	7,286.9	7,263.4	7,263.4	29.2	145.5	88.19	203.9	-3,758.9	3,401.3	3,226.6	174.64	19.476	
8,200.0	7,287.2	7,263.7	7,263.7	31.3	145.5	88.24	203.9	-3,758.9	3,301.6	3,124.9	176.79	18.676	
8,300.0	7,287.4	7,263.9	7,263.9	33.6	145.5	88.29	203.9	-3,758.9	3,202.0	3,023.0	179.04	17.885	
8,400.0	7,287.7	7,264.2	7,264.2	35.9	145.5	88.35	203.9	-3,758.9	3,102.4	2,921.1	181.37	17.106	
8,500.0	7,288.0	7,264.5	7,264.5	38.3	145.5	88.40	203.9	-3,758.9	3,002.9	2,819.1	183.76	16.341	
8,600.0	7,288.2	7,264.7	7,264.7	40.7	145.6	88.45	203.9	-3,758.9	2,903.3	2,717.1	186.21	15.592	
8,700.0	7,288.5	7,265.0	7,265.0	43.2	145.6	88.51	203.9	-3,758.9	2,803.8	2,615.1	188.70	14.859	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
8,800.0	7,288.8	7,265.3	7,265.3	45.7	145.6	88.56	203.9	-3,758.9	2,704.4	2,513.1	191.23	14.142	
8,900.0	7,289.0	7,265.5	7,265.5	48.3	145.6	88.61	203.9	-3,758.9	2,604.9	2,411.1	193.80	13.442	
9,000.0	7,289.3	7,265.8	7,265.8	50.9	145.6	88.67	203.9	-3,758.9	2,505.6	2,309.2	196.38	12.758	
9,100.0	7,289.6	7,266.1	7,266.1	53.5	145.6	88.72	203.9	-3,758.9	2,406.2	2,207.2	199.00	12.092	
9,200.0	7,289.8	7,266.3	7,266.3	56.1	145.6	88.77	203.9	-3,758.9	2,307.0	2,105.3	201.63	11.442	
9,300.0	7,290.1	7,266.6	7,266.6	58.7	145.6	88.82	203.9	-3,758.9	2,207.8	2,003.5	204.28	10.808	
9,400.0	7,290.4	7,266.9	7,266.9	61.4	145.6	88.88	203.9	-3,758.9	2,108.6	1,901.7	206.94	10.190	
9,500.0	7,290.6	7,267.1	7,267.1	64.1	145.6	88.93	203.9	-3,758.9	2,009.6	1,800.0	209.62	9.587	
9,600.0	7,290.9	7,267.4	7,267.4	66.7	145.6	88.98	203.9	-3,758.9	1,910.6	1,698.3	212.31	8.999	
9,700.0	7,291.2	7,267.7	7,267.7	69.4	145.6	89.04	203.9	-3,758.9	1,811.8	1,596.8	215.00	8.427	
9,800.0	7,291.4	7,267.9	7,267.9	72.1	145.6	89.09	203.9	-3,758.9	1,713.1	1,495.4	217.71	7.869	
9,900.0	7,291.7	7,268.2	7,268.2	74.8	145.6	89.15	203.9	-3,758.9	1,614.6	1,394.2	220.43	7.325	
10,000.0	7,292.0	7,268.5	7,268.5	77.5	145.6	89.20	203.9	-3,758.9	1,516.3	1,293.1	223.15	6.795	
10,100.0	7,292.2	7,268.7	7,268.7	80.3	145.6	89.25	203.9	-3,758.9	1,418.2	1,192.3	225.88	6.278	
10,200.0	7,292.5	7,269.0	7,269.0	83.0	145.6	89.31	203.9	-3,758.9	1,320.3	1,091.7	228.61	5.775	
10,300.0	7,292.8	7,269.3	7,269.3	85.7	145.6	89.36	203.9	-3,758.9	1,222.9	991.5	231.35	5.286	
10,400.0	7,293.0	7,269.5	7,269.5	88.5	145.7	89.41	203.9	-3,758.9	1,125.8	891.7	234.10	4.809	
10,500.0	7,293.3	7,269.8	7,269.8	91.2	145.7	89.47	203.9	-3,758.9	1,029.4	792.5	236.84	4.346	
10,600.0	7,293.6	7,270.1	7,270.1	93.9	145.7	89.52	203.9	-3,758.9	933.7	694.1	239.60	3.897	
10,700.0	7,293.8	7,270.3	7,270.3	96.7	145.7	89.57	203.9	-3,758.9	839.0	596.6	242.35	3.462	
10,800.0	7,294.1	7,270.6	7,270.6	99.4	145.7	89.63	203.9	-3,758.9	745.7	500.5	245.11	3.042	
10,900.0	7,294.4	7,270.9	7,270.9	102.2	145.7	89.68	203.9	-3,758.9	654.3	406.4	247.87	2.640	
11,000.0	7,294.6	7,271.1	7,271.1	105.0	145.7	89.74	203.9	-3,758.9	565.9	315.3	250.64	2.258	
11,100.0	7,294.9	7,271.4	7,271.4	107.7	145.7	89.79	203.9	-3,758.9	482.0	228.6	253.40	1.902	
11,200.0	7,295.2	7,271.7	7,271.7	110.5	145.7	89.84	203.9	-3,758.9	405.5	149.4	256.17	1.583	
11,300.0	7,295.4	7,271.9	7,271.9	113.2	145.7	89.90	203.9	-3,758.9	341.4	82.5	258.94	1.319	Level 3
11,400.0	7,295.7	7,272.2	7,272.2	116.0	145.7	89.95	203.9	-3,758.9	297.8	36.1	261.72	1.138	Level 2
11,489.4	7,295.9	7,272.4	7,272.4	118.5	145.7	90.00	203.9	-3,758.9	284.1	19.9	264.20	1.075	Level 2, CC
11,500.0	7,296.0	7,272.5	7,272.5	118.8	145.7	90.01	203.9	-3,758.9	284.3	19.8	264.49	1.075	Level 2, ES, SF
11,600.0	7,296.2	7,272.7	7,272.7	121.6	145.7	90.06	203.9	-3,758.9	304.9	37.6	267.27	1.141	Level 2
11,700.0	7,296.5	7,273.0	7,273.0	124.3	145.7	90.11	203.9	-3,758.9	353.6	83.6	270.04	1.310	Level 3
11,800.0	7,296.8	7,273.3	7,273.3	127.1	145.7	90.17	203.9	-3,758.9	420.9	148.1	272.82	1.543	
11,886.1	7,297.0	7,273.5	7,273.5	129.5	145.7	90.21	203.9	-3,758.9	487.9	212.7	275.22	1.773	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	0.54	29.9	0.3	29.9				
100.0	100.0	100.0	100.0	0.1	0.1	0.54	29.9	0.3	29.9	29.7	0.19	153.656	
200.0	200.0	200.0	200.0	0.3	0.3	0.54	29.9	0.3	29.9	29.2	0.64	46.392	
300.0	300.0	300.0	300.0	0.5	0.5	0.54	29.9	0.3	29.9	28.8	1.09	27.320	
400.0	400.0	400.0	400.0	0.8	0.8	0.54	29.9	0.3	29.9	28.3	1.54	19.361	CC, ES
500.0	500.0	499.5	499.5	1.0	1.0	3.42	30.6	1.8	30.7	28.7	1.99	15.461	
600.0	600.0	598.7	598.6	1.2	1.2	11.12	32.9	6.5	33.6	31.1	2.43	13.821	
700.0	700.0	697.5	697.0	1.4	1.4	21.09	36.7	14.1	39.4	36.5	2.88	13.680	
800.0	800.0	795.8	794.5	1.7	1.7	-67.78	41.9	24.8	48.3	45.0	3.34	14.455	
900.0	899.8	893.6	891.1	1.9	2.0	-63.72	48.5	38.4	59.2	55.4	3.80	15.586	
1,000.0	999.5	990.9	986.7	2.1	2.4	-61.99	56.6	54.8	71.5	67.2	4.28	16.709	
1,100.0	1,098.7	1,089.9	1,083.6	2.3	2.7	-62.13	65.7	73.3	84.0	79.2	4.81	17.469	
1,200.0	1,197.5	1,189.2	1,180.7	2.6	3.2	-64.08	74.8	91.8	94.9	89.5	5.40	17.591	
1,300.0	1,295.6	1,288.6	1,277.9	3.0	3.6	-67.34	83.8	110.4	104.6	98.5	6.07	17.233	
1,400.0	1,393.4	1,387.9	1,375.0	3.3	4.0	-71.02	92.9	128.9	114.0	107.2	6.82	16.714	
1,500.0	1,491.3	1,487.2	1,472.2	3.7	4.4	-74.13	102.0	147.5	123.8	116.2	7.61	16.268	
1,600.0	1,589.1	1,586.5	1,569.3	4.1	4.9	-76.78	111.1	166.0	133.9	125.5	8.43	15.890	
1,700.0	1,686.9	1,685.8	1,666.4	4.6	5.3	-79.05	120.2	184.6	144.3	135.0	9.27	15.573	
1,800.0	1,784.7	1,785.1	1,763.6	5.0	5.7	-81.02	129.3	203.1	154.8	144.7	10.12	15.307	
1,900.0	1,882.5	1,884.4	1,860.7	5.4	6.2	-82.73	138.4	221.6	165.6	154.6	10.98	15.083	
2,000.0	1,980.3	1,983.8	1,957.9	5.9	6.6	-84.24	147.5	240.2	176.4	164.6	11.84	14.893	
2,100.0	2,078.1	2,083.1	2,055.0	6.3	7.1	-85.57	156.6	258.7	187.3	174.6	12.72	14.732	
2,200.0	2,176.0	2,182.4	2,152.1	6.7	7.5	-86.75	165.7	277.3	198.4	184.8	13.59	14.593	
2,300.0	2,273.8	2,281.7	2,249.3	7.2	8.0	-87.81	174.8	295.8	209.5	195.0	14.47	14.474	
2,400.0	2,371.6	2,381.0	2,346.4	7.6	8.4	-88.76	183.9	314.4	220.7	205.3	15.36	14.370	
2,500.0	2,469.4	2,480.3	2,443.6	8.1	8.9	-89.62	192.9	332.9	231.9	215.6	16.24	14.279	
2,600.0	2,567.2	2,579.6	2,540.7	8.5	9.3	-90.40	202.0	351.4	243.2	226.0	17.12	14.200	
2,700.0	2,665.0	2,678.9	2,637.8	9.0	9.8	-91.11	211.1	370.0	254.5	236.5	18.01	14.129	
2,800.0	2,762.8	2,778.2	2,735.0	9.4	10.2	-91.76	220.2	388.5	265.8	246.9	18.90	14.067	
2,900.0	2,860.7	2,877.5	2,832.1	9.9	10.7	-92.36	229.3	407.1	277.2	257.4	19.78	14.011	
3,000.0	2,958.5	2,976.9	2,929.3	10.3	11.1	-92.91	238.4	425.6	288.6	267.9	20.67	13.961	
3,100.0	3,056.3	3,076.2	3,026.4	10.8	11.6	-93.42	247.5	444.2	300.0	278.5	21.56	13.916	
3,200.0	3,154.1	3,175.5	3,123.5	11.3	12.0	-93.89	256.6	462.7	311.5	289.1	22.45	13.876	
3,300.0	3,251.9	3,274.8	3,220.7	11.7	12.5	-94.33	265.7	481.3	323.0	299.6	23.34	13.839	
3,400.0	3,349.7	3,374.1	3,317.8	12.2	12.9	-94.73	274.8	499.8	334.5	310.2	24.23	13.805	
3,500.0	3,447.5	3,473.4	3,415.0	12.6	13.4	-95.11	283.9	518.3	346.0	320.9	25.12	13.775	
3,600.0	3,545.4	3,572.7	3,512.1	13.1	13.8	-95.47	293.0	536.9	357.5	331.5	26.01	13.747	
3,700.0	3,643.2	3,672.0	3,609.2	13.5	14.3	-95.80	302.0	555.4	369.0	342.1	26.89	13.721	
3,800.0	3,741.0	3,771.3	3,706.4	14.0	14.7	-96.12	311.1	574.0	380.6	352.8	27.78	13.698	
3,900.0	3,838.8	3,870.6	3,803.5	14.5	15.2	-96.41	320.2	592.5	392.1	363.5	28.67	13.676	
4,000.0	3,936.6	3,970.0	3,900.7	14.9	15.6	-96.69	329.3	611.1	403.7	374.1	29.56	13.656	
4,009.8	3,946.2	3,979.7	3,910.1	15.0	15.7	-96.72	330.2	612.9	404.8	375.2	29.65	13.654	
4,100.0	4,034.7	4,070.0	3,998.5	15.3	16.1	-96.96	338.5	629.7	415.1	384.7	30.39	13.659	
4,200.0	4,133.4	4,176.1	4,102.8	15.6	16.4	-97.02	347.2	647.5	425.1	394.1	31.02	13.705	
4,300.0	4,232.6	4,282.7	4,208.1	15.8	16.7	-97.03	354.2	661.8	433.2	401.6	31.56	13.726	
4,400.0	4,332.2	4,389.5	4,314.3	16.1	17.0	-96.98	359.5	672.6	439.2	407.2	32.01	13.719	
4,500.0	4,432.1	4,496.6	4,421.1	16.2	17.2	-96.89	363.0	679.8	443.1	410.7	32.38	13.684	
4,600.0	4,532.0	4,603.9	4,528.2	16.4	17.3	-96.74	364.8	683.5	445.1	412.4	32.67	13.623	
4,609.8	4,541.8	4,614.4	4,538.7	16.4	17.4	-0.03	364.9	683.7	445.1	421.8	23.36	19.055	
4,700.0	4,632.0	4,707.7	4,632.0	16.5	17.5	0.01	365.1	684.0	445.3	421.6	23.67	18.813	
4,800.0	4,732.0	4,807.7	4,732.0	16.6	17.6	0.01	365.1	684.0	445.3	421.3	24.01	18.542	
4,900.0	4,832.0	4,907.7	4,832.0	16.7	17.7	0.01	365.1	684.0	445.3	420.9	24.36	18.276	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
5,000.0	4,932.0	5,007.7	4,932.0	16.9	17.8	0.01	365.1	684.0	445.3	420.6	24.72	18.015	
5,100.0	5,032.0	5,107.7	5,032.0	17.0	18.0	0.01	365.1	684.0	445.3	420.2	25.07	17.759	
5,200.0	5,132.0	5,207.7	5,132.0	17.1	18.1	0.01	365.1	684.0	445.3	419.8	25.43	17.508	
5,300.0	5,232.0	5,307.7	5,232.0	17.3	18.2	0.01	365.1	684.0	445.3	419.5	25.79	17.262	
5,400.0	5,332.0	5,407.7	5,332.0	17.4	18.4	0.01	365.1	684.0	445.3	419.1	26.16	17.022	
5,500.0	5,432.0	5,507.7	5,432.0	17.6	18.5	0.01	365.1	684.0	445.3	418.7	26.53	16.786	
5,600.0	5,532.0	5,607.7	5,532.0	17.7	18.7	0.01	365.1	684.0	445.3	418.4	26.90	16.555	
5,700.0	5,632.0	5,707.7	5,632.0	17.9	18.8	0.01	365.1	684.0	445.3	418.0	27.27	16.329	
5,800.0	5,732.0	5,807.7	5,732.0	18.0	18.9	0.01	365.1	684.0	445.3	417.6	27.64	16.108	
5,900.0	5,832.0	5,907.7	5,832.0	18.2	19.1	0.01	365.1	684.0	445.3	417.3	28.02	15.892	
6,000.0	5,932.0	6,007.7	5,932.0	18.3	19.2	0.01	365.1	684.0	445.3	416.9	28.40	15.680	
6,100.0	6,032.0	6,107.7	6,032.0	18.5	19.4	0.01	365.1	684.0	445.3	416.5	28.78	15.473	
6,200.0	6,132.0	6,207.7	6,132.0	18.6	19.5	0.01	365.1	684.0	445.3	416.1	29.16	15.270	
6,300.0	6,232.0	6,307.7	6,232.0	18.8	19.7	0.01	365.1	684.0	445.3	415.7	29.55	15.071	
6,400.0	6,332.0	6,407.7	6,332.0	18.9	19.8	0.01	365.1	684.0	445.3	415.3	29.93	14.876	
6,442.8	6,374.9	6,450.5	6,374.9	19.0	19.9	-0.01	365.1	683.8	445.3	415.2	30.09	14.796	
6,500.0	6,432.0	6,507.4	6,431.7	19.1	19.9	-0.46	365.1	680.4	445.3	415.0	30.27	14.709	
6,600.0	6,532.0	6,604.5	6,527.3	19.2	19.9	-2.54	365.1	664.1	445.7	415.2	30.51	14.607	
6,637.8	6,569.8	6,639.7	6,561.3	19.3	19.9	-3.71	365.1	655.0	446.3	415.7	30.59	14.588	
6,650.0	6,582.0	6,650.0	6,571.2	19.3	19.9	85.90	365.1	652.1	446.5	408.1	38.47	11.607	
6,700.0	6,632.0	6,696.5	6,615.1	19.4	19.8	84.16	365.1	636.9	447.8	409.3	38.50	11.632	
6,750.0	6,681.6	6,741.2	6,656.4	19.4	19.8	82.49	365.1	619.7	449.4	411.0	38.46	11.684	
6,800.0	6,730.6	6,785.3	6,695.9	19.4	19.7	80.88	365.1	600.2	451.4	413.0	38.38	11.762	
6,850.0	6,778.9	6,828.8	6,733.6	19.3	19.6	79.31	365.1	578.7	453.6	415.4	38.24	11.863	
6,900.0	6,826.2	6,871.7	6,769.5	19.3	19.5	77.82	365.1	555.2	456.2	418.1	38.07	11.983	
6,950.0	6,872.2	6,914.0	6,803.6	19.2	19.5	76.39	365.1	529.9	458.9	421.0	37.86	12.119	
7,000.0	6,916.8	6,956.0	6,835.7	19.2	19.4	75.03	365.1	503.0	461.7	424.1	37.64	12.266	
7,050.0	6,959.6	7,000.0	6,867.7	19.1	19.3	73.68	365.1	472.8	464.6	427.2	37.40	12.423	
7,100.0	7,000.6	7,038.5	6,894.1	19.0	19.3	72.54	365.1	444.7	467.6	430.4	37.19	12.574	
7,150.0	7,039.5	7,079.2	6,920.3	19.0	19.3	71.42	365.1	413.6	470.6	433.6	36.99	12.720	
7,200.0	7,076.0	7,119.6	6,944.5	19.0	19.3	70.38	365.1	381.3	473.5	436.7	36.84	12.853	
7,250.0	7,110.1	7,159.7	6,966.8	19.0	19.3	69.43	365.1	348.0	476.3	439.6	36.75	12.962	
7,300.0	7,141.6	7,200.0	6,987.2	19.1	19.4	68.55	365.1	313.2	479.0	442.3	36.73	13.042	
7,350.0	7,170.3	7,239.1	7,005.1	19.2	19.6	67.78	365.1	278.5	481.5	444.7	36.82	13.078	
7,400.0	7,196.1	7,278.5	7,021.2	19.4	19.7	67.09	365.1	242.5	483.9	446.8	37.02	13.069	
7,450.0	7,218.8	7,317.7	7,035.3	19.7	20.0	66.49	365.1	205.9	485.9	448.6	37.35	13.011	
7,500.0	7,238.3	7,356.7	7,047.2	20.0	20.3	65.98	365.1	168.7	487.8	450.0	37.81	12.901	
7,550.0	7,254.6	7,400.0	7,058.1	20.5	20.6	65.53	365.1	126.9	489.3	450.9	38.44	12.729	
7,600.0	7,267.6	7,434.5	7,065.0	21.0	21.0	65.22	365.1	93.1	490.5	451.4	39.16	12.527	
7,650.0	7,277.1	7,473.3	7,070.7	21.5	21.5	64.98	365.1	54.7	491.4	451.4	40.04	12.273	
7,700.0	7,283.3	7,512.0	7,074.4	22.2	21.9	64.82	365.1	16.2	492.0	451.0	41.06	11.984	
7,750.0	7,285.9	7,550.0	7,075.9	22.9	22.5	64.75	365.1	-21.8	492.3	450.1	42.18	11.671	
7,760.9	7,286.0	7,559.0	7,076.0	23.0	22.6	64.75	365.1	-30.8	492.3	449.9	42.45	11.597	
7,800.0	7,286.1	7,596.7	7,075.8	23.6	23.2	64.72	365.1	-68.5	492.4	448.9	43.51	11.317	
7,900.0	7,286.4	7,696.7	7,075.4	25.3	24.8	64.64	365.1	-168.5	492.7	446.2	46.54	10.587	
8,000.0	7,286.6	7,796.7	7,074.9	27.2	26.7	64.57	365.1	-268.5	493.1	443.2	49.90	9.880	
8,100.0	7,286.9	7,896.7	7,074.4	29.2	28.7	64.49	365.1	-368.5	493.4	439.8	53.54	9.216	
8,200.0	7,287.2	7,996.7	7,073.9	31.3	30.8	64.41	365.1	-468.5	493.7	436.3	57.39	8.602	
8,300.0	7,287.4	8,096.7	7,073.4	33.6	33.1	64.33	365.1	-568.5	494.0	432.6	61.42	8.044	
8,400.0	7,287.7	8,196.7	7,072.9	35.9	35.4	64.25	365.1	-668.5	494.4	428.8	65.59	7.537	
8,500.0	7,288.0	8,296.7	7,072.4	38.3	37.8	64.17	365.1	-768.5	494.7	424.8	69.87	7.080	
8,600.0	7,288.2	8,396.7	7,072.0	40.7	40.3	64.09	365.1	-868.5	495.0	420.8	74.25	6.667	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
8,700.0	7,288.5	8,496.7	7,071.5	43.2	42.8	64.02	365.1	-968.5	495.3	416.6	78.71	6.294	
8,800.0	7,288.8	8,596.7	7,071.0	45.7	45.3	63.94	365.1	-1,068.5	495.7	412.4	83.22	5.956	
8,900.0	7,289.0	8,696.7	7,070.5	48.3	47.8	63.86	365.1	-1,168.5	496.0	408.2	87.79	5.650	
9,000.0	7,289.3	8,796.7	7,070.0	50.9	50.4	63.78	365.1	-1,268.5	496.3	403.9	92.41	5.371	
9,100.0	7,289.6	8,896.7	7,069.5	53.5	53.0	63.70	365.1	-1,368.5	496.7	399.6	97.06	5.117	
9,200.0	7,289.8	8,996.7	7,069.0	56.1	55.7	63.63	365.1	-1,468.5	497.0	395.3	101.74	4.885	
9,300.0	7,290.1	9,096.7	7,068.6	58.7	58.3	63.55	365.1	-1,568.4	497.3	390.9	106.45	4.672	
9,400.0	7,290.4	9,196.7	7,068.1	61.4	61.0	63.47	365.1	-1,668.4	497.7	386.5	111.17	4.476	
9,500.0	7,290.6	9,296.7	7,067.6	64.1	63.6	63.39	365.1	-1,768.4	498.0	382.1	115.92	4.296	
9,600.0	7,290.9	9,396.7	7,067.1	66.7	66.3	63.32	365.1	-1,868.4	498.3	377.7	120.68	4.129	
9,700.0	7,291.2	9,496.7	7,066.6	69.4	69.0	63.24	365.1	-1,968.4	498.7	373.2	125.46	3.975	
9,800.0	7,291.4	9,596.7	7,066.1	72.1	71.7	63.16	365.1	-2,068.4	499.0	368.8	130.24	3.831	
9,900.0	7,291.7	9,696.7	7,065.6	74.8	74.4	63.09	365.1	-2,168.4	499.4	364.3	135.03	3.698	
10,000.0	7,292.0	9,796.7	7,065.2	77.5	77.1	63.01	365.1	-2,268.4	499.7	359.9	139.83	3.574	
10,100.0	7,292.2	9,896.7	7,064.7	80.3	79.9	62.93	365.1	-2,368.4	500.0	355.4	144.64	3.457	
10,200.0	7,292.5	9,996.7	7,064.2	83.0	82.6	62.86	365.1	-2,468.4	500.4	350.9	149.45	3.348	
10,300.0	7,292.8	10,096.7	7,063.7	85.7	85.3	62.78	365.1	-2,568.4	500.7	346.5	154.26	3.246	
10,400.0	7,293.0	10,196.7	7,063.2	88.5	88.1	62.70	365.1	-2,668.4	501.1	342.0	159.08	3.150	
10,500.0	7,293.3	10,296.7	7,062.7	91.2	90.8	62.63	365.1	-2,768.4	501.4	337.5	163.89	3.059	
10,600.0	7,293.6	10,396.7	7,062.2	93.9	93.6	62.55	365.1	-2,868.4	501.7	333.0	168.71	2.974	
10,700.0	7,293.8	10,496.7	7,061.8	96.7	96.3	62.47	365.1	-2,968.4	502.1	328.6	173.53	2.893	
10,800.0	7,294.1	10,596.7	7,061.3	99.4	99.1	62.40	365.1	-3,068.4	502.4	324.1	178.35	2.817	
10,900.0	7,294.4	10,696.6	7,060.8	102.2	101.8	62.32	365.1	-3,168.4	502.8	319.6	183.17	2.745	
11,000.0	7,294.6	10,796.6	7,060.3	105.0	104.6	62.24	365.1	-3,268.4	503.1	315.2	187.98	2.677	
11,100.0	7,294.9	10,896.6	7,059.8	107.7	107.3	62.17	365.1	-3,368.4	503.5	310.7	192.80	2.611	
11,200.0	7,295.2	10,996.6	7,059.3	110.5	110.1	62.09	365.1	-3,468.4	503.8	306.2	197.61	2.550	
11,300.0	7,295.4	11,096.6	7,058.9	113.2	112.9	62.02	365.1	-3,568.4	504.2	301.8	202.42	2.491	
11,400.0	7,295.7	11,196.6	7,058.4	116.0	115.6	61.94	365.1	-3,668.4	504.5	297.3	207.23	2.435	
11,500.0	7,296.0	11,296.6	7,057.9	118.8	118.4	61.87	365.1	-3,768.4	504.9	292.9	212.03	2.381	
11,600.0	7,296.2	11,396.6	7,057.4	121.6	121.2	61.79	365.1	-3,868.4	505.2	288.4	216.83	2.330	
11,700.0	7,296.5	11,496.6	7,056.9	124.3	124.0	61.71	365.1	-3,968.4	505.6	284.0	221.63	2.281	
11,800.0	7,296.8	11,596.6	7,056.4	127.1	126.7	61.64	365.1	-4,068.3	506.0	279.5	226.43	2.235	
11,886.1	7,297.0	11,683.0	7,056.0	129.5	129.1	61.57	365.0	-4,154.7	506.2	275.7	230.56	2.196 SF	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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-234 - 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	1.0	1.0	0.0	0.0	-180.00	-14.9	0.0	14.9				
100.0	100.0	101.0	101.0	0.1	0.1	-180.00	-14.9	0.0	14.9	14.7	0.20	75.947	
200.0	200.0	201.0	201.0	0.3	0.3	-180.00	-14.9	0.0	14.9	14.3	0.65	23.114	
300.0	300.0	301.0	301.0	0.5	0.5	-180.00	-14.9	0.0	14.9	13.8	1.10	13.631	
400.0	400.0	401.0	401.0	0.8	0.8	-180.00	-14.9	0.0	14.9	13.4	1.55	9.666	
500.0	500.0	501.0	501.0	1.0	1.0	-180.00	-14.9	0.0	14.9	12.9	1.99	7.488	
566.3	566.3	567.3	567.3	1.1	1.1	-180.00	-14.9	0.0	14.9	12.6	2.29	6.514	CC
600.0	600.0	601.0	601.0	1.2	1.2	180.00	-14.9	0.0	14.9	12.5	2.44	6.111	ES
700.0	700.0	700.8	700.7	1.4	1.4	173.93	-15.6	1.7	15.7	12.8	2.88	5.446	
800.0	800.0	800.4	800.2	1.7	1.6	67.66	-17.4	6.5	17.9	14.6	3.29	5.451	
900.0	899.8	900.0	899.5	1.9	1.9	61.78	-20.6	14.7	21.2	17.5	3.70	5.736	
1,000.0	999.5	999.2	997.9	2.1	2.1	58.77	-24.9	25.9	25.4	21.2	4.15	6.120	
1,100.0	1,098.7	1,098.4	1,095.9	2.3	2.4	57.68	-30.4	40.4	30.2	25.6	4.64	6.521	
1,200.0	1,197.5	1,197.4	1,193.1	2.6	2.7	57.77	-37.2	58.0	35.7	30.5	5.18	6.895	
1,300.0	1,295.6	1,297.3	1,290.8	3.0	3.1	60.21	-44.6	77.3	40.7	34.9	5.81	7.001	
1,400.0	1,393.4	1,397.1	1,388.5	3.3	3.5	64.16	-52.0	96.7	44.9	38.4	6.54	6.871	
1,500.0	1,491.3	1,497.0	1,486.1	3.7	3.9	67.41	-59.5	116.1	49.4	42.1	7.32	6.746	
1,600.0	1,589.1	1,596.9	1,583.8	4.1	4.4	70.12	-66.9	135.5	53.9	45.8	8.13	6.633	
1,700.0	1,686.9	1,696.7	1,681.5	4.6	4.8	72.40	-74.3	154.9	58.6	49.6	8.97	6.533	
1,800.0	1,784.7	1,796.6	1,779.2	5.0	5.2	74.34	-81.8	174.3	63.3	53.5	9.83	6.446	
1,900.0	1,882.5	1,896.5	1,876.9	5.4	5.7	76.01	-89.2	193.7	68.2	57.5	10.70	6.371	
2,000.0	1,980.3	1,996.3	1,974.6	5.9	6.1	77.46	-96.7	213.1	73.0	61.4	11.58	6.305	
2,100.0	2,078.1	2,096.2	2,072.2	6.3	6.6	78.73	-104.1	232.5	77.9	65.4	12.47	6.249	
2,200.0	2,176.0	2,196.1	2,169.9	6.7	7.0	79.85	-111.5	251.9	82.8	69.5	13.36	6.199	
2,300.0	2,273.8	2,295.9	2,267.6	7.2	7.5	80.84	-119.0	271.2	87.8	73.5	14.26	6.156	
2,400.0	2,371.6	2,395.8	2,365.3	7.6	7.9	81.72	-126.4	290.6	92.8	77.6	15.16	6.118	
2,500.0	2,469.4	2,495.7	2,463.0	8.1	8.4	82.52	-133.8	310.0	97.8	81.7	16.07	6.084	
2,600.0	2,567.2	2,595.5	2,560.6	8.5	8.8	83.24	-141.3	329.4	102.8	85.8	16.98	6.055	
2,700.0	2,665.0	2,695.4	2,658.3	9.0	9.3	83.89	-148.7	348.8	107.8	89.9	17.89	6.028	
2,800.0	2,762.8	2,795.3	2,756.0	9.4	9.8	84.48	-156.1	368.2	112.9	94.1	18.80	6.004	
2,900.0	2,860.7	2,895.1	2,853.7	9.9	10.2	85.02	-163.6	387.6	117.9	98.2	19.71	5.982	
3,000.0	2,958.5	2,995.0	2,951.4	10.3	10.7	85.52	-171.0	407.0	123.0	102.4	20.63	5.963	
3,100.0	3,056.3	3,094.9	3,049.1	10.8	11.1	85.98	-178.5	426.4	128.1	106.5	21.54	5.945	
3,200.0	3,154.1	3,194.7	3,146.7	11.3	11.6	86.40	-185.9	445.8	133.1	110.7	22.46	5.929	
3,300.0	3,251.9	3,294.6	3,244.4	11.7	12.1	86.79	-193.3	465.2	138.2	114.9	23.37	5.915	
3,400.0	3,349.7	3,394.5	3,342.1	12.2	12.5	87.16	-200.8	484.6	143.3	119.0	24.29	5.901	
3,500.0	3,447.5	3,494.3	3,439.8	12.6	13.0	87.50	-208.2	503.9	148.4	123.2	25.21	5.889	
3,600.0	3,545.4	3,594.2	3,537.5	13.1	13.4	87.81	-215.6	523.3	153.5	127.4	26.12	5.877	
3,700.0	3,643.2	3,694.1	3,635.2	13.5	13.9	88.11	-223.1	542.7	158.6	131.6	27.04	5.867	
3,800.0	3,741.0	3,793.9	3,732.8	14.0	14.4	88.39	-230.5	562.1	163.8	135.8	27.96	5.857	
3,900.0	3,838.8	3,893.8	3,830.5	14.5	14.8	88.65	-238.0	581.5	168.9	140.0	28.88	5.848	
4,000.0	3,936.6	3,993.7	3,928.2	14.9	15.3	88.89	-245.4	600.9	174.0	144.2	29.80	5.839	
4,009.8	3,946.2	4,003.4	3,937.8	15.0	15.3	88.92	-246.1	602.8	174.5	144.6	29.89	5.839	
4,100.0	4,034.7	4,093.5	4,025.9	15.3	15.7	88.76	-252.8	620.3	179.1	148.5	30.63	5.849	
4,200.0	4,133.4	4,193.9	4,124.1	15.6	16.2	87.63	-260.2	639.6	184.4	153.1	31.28	5.893	
4,300.0	4,232.6	4,295.7	4,224.3	15.8	16.5	86.28	-266.7	656.6	189.0	157.3	31.76	5.952	
4,400.0	4,332.2	4,397.7	4,325.2	16.1	16.8	84.95	-272.0	670.2	192.9	160.8	32.14	6.002	
4,500.0	4,432.1	4,499.9	4,426.8	16.2	17.0	83.62	-275.9	680.5	196.1	163.6	32.44	6.045	
4,600.0	4,532.0	4,602.3	4,529.0	16.4	17.2	82.27	-278.6	687.5	198.5	165.8	32.64	6.080	
4,609.8	4,541.8	4,612.3	4,539.0	16.4	17.2	178.82	-278.8	688.0	198.7	175.6	23.08	8.607	
4,700.0	4,632.0	4,705.0	4,631.6	16.5	17.3	177.96	-280.0	691.0	199.9	176.4	23.50	8.504	
4,800.0	4,732.0	4,806.5	4,733.0	16.6	17.5	177.82	-280.1	691.5	200.1	176.2	23.86	8.384	

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-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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-234 - 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	4,832.0	4,906.5	4,833.0	16.7	17.6	177.82	-280.1	691.5	200.1	175.9	24.21	8.266	
5,000.0	4,932.0	5,006.5	4,933.0	16.9	17.7	177.82	-280.1	691.5	200.1	175.5	24.55	8.150	
5,100.0	5,032.0	5,106.5	5,033.0	17.0	17.8	177.82	-280.1	691.5	200.1	175.2	24.90	8.036	
5,200.0	5,132.0	5,206.5	5,133.0	17.1	18.0	177.82	-280.1	691.5	200.1	174.8	25.25	7.924	
5,300.0	5,232.0	5,306.5	5,233.0	17.3	18.1	177.82	-280.1	691.5	200.1	174.5	25.60	7.815	
5,400.0	5,332.0	5,406.5	5,333.0	17.4	18.2	177.82	-280.1	691.5	200.1	174.1	25.96	7.707	
5,500.0	5,432.0	5,506.5	5,433.0	17.6	18.4	177.82	-280.1	691.5	200.1	173.8	26.32	7.602	
5,600.0	5,532.0	5,606.5	5,533.0	17.7	18.5	177.82	-280.1	691.5	200.1	173.4	26.68	7.499	
5,700.0	5,632.0	5,706.5	5,633.0	17.9	18.6	177.82	-280.1	691.5	200.1	173.0	27.05	7.397	
5,800.0	5,732.0	5,806.5	5,733.0	18.0	18.8	177.82	-280.1	691.5	200.1	172.7	27.42	7.298	
5,900.0	5,832.0	5,906.5	5,833.0	18.2	18.9	177.82	-280.1	691.5	200.1	172.3	27.79	7.201	
6,000.0	5,932.0	6,006.5	5,933.0	18.3	19.0	177.82	-280.1	691.5	200.1	171.9	28.16	7.106	
6,100.0	6,032.0	6,106.5	6,033.0	18.5	19.2	177.82	-280.1	691.5	200.1	171.5	28.53	7.012	
6,200.0	6,132.0	6,206.5	6,133.0	18.6	19.3	177.82	-280.1	691.5	200.1	171.2	28.91	6.921	
6,300.0	6,232.0	6,306.5	6,233.0	18.8	19.5	177.82	-280.1	691.5	200.1	170.8	29.29	6.832	
6,400.0	6,332.0	6,406.5	6,333.0	18.9	19.6	177.82	-280.1	691.5	200.1	170.4	29.67	6.744	
6,500.0	6,432.0	6,507.0	6,433.4	19.1	19.7	178.91	-280.1	687.7	200.0	170.1	29.92	6.684	
6,530.8	6,462.9	6,537.7	6,463.9	19.1	19.7	-180.00	-280.1	683.9	199.9	170.0	29.91	6.684	
6,600.0	6,532.0	6,605.0	6,529.9	19.2	19.7	-176.31	-280.1	671.0	200.4	170.5	29.83	6.717	
6,637.8	6,569.8	6,640.5	6,564.2	19.3	19.7	-173.67	-280.1	661.7	201.3	171.5	29.78	6.759	
6,650.0	6,582.0	6,651.9	6,575.0	19.3	19.7	-82.72	-280.1	658.4	201.7	163.0	38.70	5.211	
6,700.0	6,632.0	6,697.7	6,618.3	19.4	19.6	-78.94	-280.1	643.2	204.0	165.2	38.80	5.258	
6,750.0	6,681.6	6,742.8	6,659.8	19.4	19.6	-75.31	-280.1	625.7	207.2	168.5	38.77	5.345	
6,800.0	6,730.6	6,787.1	6,699.5	19.4	19.5	-71.87	-280.1	605.8	211.1	172.5	38.61	5.468	
6,850.0	6,778.9	6,830.9	6,737.3	19.3	19.4	-68.64	-280.1	583.9	215.7	177.3	38.34	5.626	
6,900.0	6,826.2	6,874.0	6,773.3	19.3	19.4	-65.63	-280.1	560.1	220.7	182.7	37.96	5.814	
6,950.0	6,872.2	6,916.6	6,807.3	19.2	19.3	-62.84	-280.1	534.5	226.1	188.6	37.49	6.031	
7,000.0	6,916.8	6,958.7	6,839.4	19.2	19.3	-60.29	-280.1	507.2	231.7	194.8	36.94	6.273	
7,050.0	6,959.6	7,000.0	6,869.2	19.1	19.2	-57.97	-280.1	478.7	237.5	201.1	36.34	6.536	
7,100.0	7,000.6	7,041.6	6,897.6	19.0	19.2	-55.84	-280.1	448.3	243.3	207.6	35.69	6.815	
7,150.0	7,039.5	7,082.4	6,923.7	19.0	19.2	-53.92	-280.1	416.9	249.0	213.9	35.04	7.105	
7,200.0	7,076.0	7,122.9	6,947.7	19.0	19.3	-52.20	-280.1	384.3	254.6	220.2	34.40	7.401	
7,250.0	7,110.1	7,163.1	6,969.7	19.0	19.4	-50.67	-280.1	350.7	259.9	226.1	33.78	7.693	
7,300.0	7,141.6	7,200.0	6,988.3	19.1	19.5	-49.38	-280.1	318.8	265.0	231.8	33.24	7.972	
7,350.0	7,170.3	7,242.7	7,007.6	19.2	19.7	-48.11	-280.1	280.8	269.7	236.9	32.77	8.230	
7,400.0	7,196.1	7,282.1	7,023.4	19.4	19.9	-47.06	-280.1	244.7	274.0	241.6	32.42	8.452	
7,450.0	7,218.8	7,321.3	7,037.2	19.7	20.2	-46.16	-280.1	207.9	277.9	245.7	32.21	8.630	
7,500.0	7,238.3	7,360.4	7,048.9	20.0	20.5	-45.40	-280.1	170.6	281.4	249.2	32.14	8.753	
7,550.0	7,254.6	7,400.0	7,058.6	20.5	20.8	-44.76	-280.1	132.3	284.3	252.1	32.25	8.815	
7,600.0	7,267.6	7,438.2	7,066.0	21.0	21.3	-44.27	-280.1	94.8	286.7	254.2	32.54	8.810	
7,650.0	7,277.1	7,477.0	7,071.4	21.5	21.7	-43.88	-280.1	56.4	288.6	255.6	33.02	8.740	
7,700.0	7,283.3	7,515.6	7,074.7	22.2	22.2	-43.62	-280.1	17.9	289.9	256.2	33.67	8.609	
7,750.0	7,285.9	7,554.3	7,076.0	22.9	22.8	-43.47	-280.1	-20.7	290.6	256.1	34.49	8.425	
7,760.9	7,286.0	7,562.9	7,076.0	23.0	22.9	-43.46	-280.1	-29.4	290.7	256.0	34.70	8.378	
7,800.0	7,286.1	7,602.1	7,075.8	23.6	23.5	-43.42	-280.1	-68.5	290.9	255.4	35.54	8.185	
7,900.0	7,286.4	7,702.1	7,075.3	25.3	25.1	-43.32	-280.1	-168.5	291.4	253.6	37.89	7.693	
8,000.0	7,286.6	7,802.1	7,074.8	27.2	27.0	-43.22	-280.1	-268.5	292.0	251.5	40.48	7.214	
8,100.0	7,286.9	7,902.1	7,074.4	29.2	29.0	-43.12	-280.1	-368.5	292.5	249.3	43.27	6.761	
8,200.0	7,287.2	8,002.1	7,073.9	31.3	31.2	-43.02	-280.1	-468.5	293.1	246.9	46.21	6.342	
8,300.0	7,287.4	8,102.1	7,073.4	33.6	33.4	-42.92	-280.1	-568.5	293.6	244.3	49.29	5.958	
8,400.0	7,287.7	8,202.0	7,072.9	35.9	35.8	-42.82	-280.1	-668.5	294.2	241.7	52.46	5.608	
8,500.0	7,288.0	8,302.0	7,072.4	38.3	38.2	-42.72	-280.1	-768.5	294.7	239.0	55.72	5.290	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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-234 - 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	7,288.2	8,402.0	7,071.9	40.7	40.6	-42.62	-280.1	-868.5	295.3	236.2	59.04	5.001	
8,700.0	7,288.5	8,502.0	7,071.4	43.2	43.1	-42.52	-280.1	-968.5	295.8	233.4	62.41	4.740	
8,800.0	7,288.8	8,602.0	7,071.0	45.7	45.6	-42.42	-280.1	-1,068.5	296.4	230.6	65.83	4.502	
8,900.0	7,289.0	8,702.0	7,070.5	48.3	48.2	-42.33	-280.1	-1,168.5	296.9	227.7	69.28	4.286	
9,000.0	7,289.3	8,802.0	7,070.0	50.9	50.8	-42.23	-280.1	-1,268.5	297.5	224.7	72.76	4.089	
9,100.0	7,289.6	8,902.0	7,069.5	53.5	53.4	-42.13	-280.1	-1,368.5	298.1	221.8	76.26	3.908	
9,200.0	7,289.8	9,002.0	7,069.0	56.1	56.0	-42.03	-280.1	-1,468.4	298.6	218.8	79.78	3.743	
9,300.0	7,290.1	9,102.0	7,068.5	58.7	58.7	-41.94	-280.1	-1,568.4	299.2	215.9	83.31	3.591	
9,400.0	7,290.4	9,202.0	7,068.1	61.4	61.3	-41.84	-280.1	-1,668.4	299.7	212.9	86.85	3.451	
9,500.0	7,290.6	9,302.0	7,067.6	64.1	64.0	-41.75	-280.1	-1,768.4	300.3	209.9	90.40	3.322	
9,600.0	7,290.9	9,402.0	7,067.1	66.7	66.7	-41.65	-280.1	-1,868.4	300.9	206.9	93.96	3.202	
9,700.0	7,291.2	9,502.0	7,066.6	69.4	69.4	-41.56	-280.1	-1,968.4	301.4	203.9	97.51	3.091	
9,800.0	7,291.4	9,602.0	7,066.1	72.1	72.1	-41.46	-280.1	-2,068.4	302.0	200.9	101.07	2.988	
9,900.0	7,291.7	9,702.0	7,065.6	74.8	74.8	-41.37	-280.1	-2,168.4	302.5	197.9	104.63	2.891	
10,000.0	7,292.0	9,802.0	7,065.2	77.5	77.5	-41.28	-280.1	-2,268.4	303.1	194.9	108.19	2.802	
10,100.0	7,292.2	9,902.0	7,064.7	80.3	80.2	-41.18	-280.1	-2,368.4	303.7	191.9	111.75	2.718	
10,200.0	7,292.5	10,002.0	7,064.2	83.0	83.0	-41.09	-280.1	-2,468.4	304.2	188.9	115.30	2.639	
10,300.0	7,292.8	10,102.0	7,063.7	85.7	85.7	-41.00	-280.1	-2,568.4	304.8	186.0	118.85	2.565	
10,400.0	7,293.0	10,202.0	7,063.2	88.5	88.4	-40.90	-280.1	-2,668.4	305.4	183.0	122.39	2.495	
10,500.0	7,293.3	10,302.0	7,062.7	91.2	91.2	-40.81	-280.1	-2,768.4	305.9	180.0	125.93	2.429	
10,600.0	7,293.6	10,402.0	7,062.3	93.9	93.9	-40.72	-280.1	-2,868.4	306.5	177.0	129.47	2.367	
10,700.0	7,293.8	10,502.0	7,061.8	96.7	96.7	-40.63	-280.1	-2,968.4	307.1	174.1	133.00	2.309	
10,800.0	7,294.1	10,602.0	7,061.3	99.4	99.4	-40.54	-280.1	-3,068.4	307.7	171.1	136.52	2.254	
10,900.0	7,294.4	10,702.0	7,060.8	102.2	102.2	-40.45	-280.1	-3,168.4	308.2	168.2	140.03	2.201	
11,000.0	7,294.6	10,802.0	7,060.3	105.0	104.9	-40.36	-280.1	-3,268.4	308.8	165.3	143.54	2.151	
11,100.0	7,294.9	10,902.0	7,059.8	107.7	107.7	-40.27	-280.1	-3,368.4	309.4	162.3	147.04	2.104	
11,200.0	7,295.2	11,002.0	7,059.3	110.5	110.5	-40.18	-280.1	-3,468.4	309.9	159.4	150.54	2.059	
11,300.0	7,295.4	11,102.0	7,058.9	113.2	113.2	-40.09	-280.1	-3,568.4	310.5	156.5	154.02	2.016	
11,400.0	7,295.7	11,202.0	7,058.4	116.0	116.0	-40.00	-280.1	-3,668.4	311.1	153.6	157.50	1.975	
11,500.0	7,296.0	11,302.0	7,057.9	118.8	118.8	-39.91	-280.1	-3,768.4	311.7	150.7	160.97	1.936	
11,600.0	7,296.2	11,402.0	7,057.4	121.6	121.5	-39.82	-280.1	-3,868.4	312.3	147.8	164.43	1.899	
11,700.0	7,296.5	11,502.0	7,056.9	124.3	124.3	-39.74	-280.1	-3,968.3	312.8	145.0	167.88	1.863	
11,800.0	7,296.8	11,601.8	7,056.4	127.1	127.1	-39.65	-280.1	-4,068.2	313.4	142.1	171.32	1.829	
11,886.1	7,297.0	11,688.0	7,056.0	129.5	129.5	-39.57	-280.2	-4,154.4	314.0	139.7	174.28	1.801	SF

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	1.07	14.9	0.3	14.9				
100.0	100.0	100.0	100.0	0.1	0.1	1.07	14.9	0.3	14.9	14.7	0.19	76.838	
200.0	200.0	200.0	200.0	0.3	0.3	1.07	14.9	0.3	14.9	14.3	0.64	23.199	
300.0	300.0	300.0	300.0	0.5	0.5	1.07	14.9	0.3	14.9	13.8	1.09	13.662	
400.0	400.0	400.0	400.0	0.8	0.8	1.07	14.9	0.3	14.9	13.4	1.54	9.682	
500.0	500.0	500.0	500.0	1.0	1.0	1.07	14.9	0.3	14.9	12.9	1.99	7.497	CC
600.0	600.0	599.9	599.9	1.2	1.2	7.49	15.2	2.0	15.3	12.9	2.43	6.306	ES
700.0	700.0	699.5	699.3	1.4	1.4	24.07	16.0	7.1	17.5	14.7	2.87	6.109	
800.0	800.0	798.8	798.3	1.7	1.7	-58.05	17.3	15.7	22.4	19.1	3.31	6.786	
900.0	899.8	897.8	896.6	1.9	1.9	-50.45	19.1	27.5	28.9	25.1	3.74	7.711	
1,000.0	999.5	996.6	994.1	2.1	2.2	-46.82	21.5	42.7	36.1	31.9	4.20	8.603	
1,100.0	1,098.7	1,095.1	1,090.8	2.3	2.6	-45.38	24.3	61.2	44.0	39.3	4.69	9.383	
1,200.0	1,197.5	1,194.8	1,188.4	2.6	2.9	-46.05	27.4	81.6	51.1	45.9	5.24	9.764	
1,300.0	1,295.6	1,294.6	1,286.0	3.0	3.4	-49.18	30.6	102.1	55.9	50.0	5.86	9.539	
1,400.0	1,393.4	1,394.5	1,383.7	3.3	3.8	-53.18	33.7	122.7	59.7	53.2	6.57	9.087	
1,500.0	1,491.3	1,494.3	1,481.3	3.7	4.2	-56.68	36.9	143.2	63.8	56.5	7.34	8.698	
1,600.0	1,589.1	1,594.2	1,579.0	4.1	4.6	-59.75	40.0	163.7	68.2	60.0	8.14	8.369	
1,700.0	1,686.9	1,694.0	1,676.7	4.6	5.1	-62.45	43.2	184.2	72.6	63.7	8.98	8.091	
1,800.0	1,784.7	1,793.9	1,774.3	5.0	5.5	-64.83	46.3	204.7	77.3	67.4	9.83	7.858	
1,900.0	1,882.5	1,893.7	1,872.0	5.4	6.0	-66.93	49.5	225.2	82.0	71.3	10.70	7.661	
2,000.0	1,980.3	1,993.5	1,969.7	5.9	6.4	-68.81	52.6	245.7	86.8	75.3	11.59	7.494	
2,100.0	2,078.1	2,093.4	2,067.3	6.3	6.8	-70.49	55.8	266.2	91.8	79.3	12.48	7.352	
2,200.0	2,176.0	2,193.2	2,165.0	6.7	7.3	-71.99	58.9	286.7	96.8	83.4	13.38	7.231	
2,300.0	2,273.8	2,293.1	2,262.6	7.2	7.7	-73.35	62.1	307.3	101.8	87.5	14.29	7.127	
2,400.0	2,371.6	2,392.9	2,360.3	7.6	8.2	-74.57	65.2	327.8	106.9	91.7	15.20	7.037	
2,500.0	2,469.4	2,492.8	2,458.0	8.1	8.6	-75.69	68.4	348.3	112.1	96.0	16.11	6.958	
2,600.0	2,567.2	2,592.6	2,555.6	8.5	9.1	-76.70	71.5	368.8	117.3	100.3	17.02	6.890	
2,700.0	2,665.0	2,692.5	2,653.3	9.0	9.6	-77.63	74.7	389.3	122.5	104.6	17.94	6.829	
2,800.0	2,762.8	2,792.3	2,751.0	9.4	10.0	-78.49	77.8	409.8	127.8	108.9	18.85	6.776	
2,900.0	2,860.7	2,892.1	2,848.6	9.9	10.5	-79.27	81.0	430.3	133.0	113.3	19.77	6.728	
3,000.0	2,958.5	2,992.0	2,946.3	10.3	10.9	-80.00	84.1	450.8	138.3	117.6	20.69	6.686	
3,100.0	3,056.3	3,091.8	3,044.0	10.8	11.4	-80.67	87.3	471.4	143.7	122.1	21.61	6.648	
3,200.0	3,154.1	3,191.7	3,141.6	11.3	11.8	-81.30	90.4	491.9	149.0	126.5	22.53	6.614	
3,300.0	3,251.9	3,291.5	3,239.3	11.7	12.3	-81.88	93.6	512.4	154.4	130.9	23.45	6.583	
3,400.0	3,349.7	3,391.4	3,337.0	12.2	12.7	-82.42	96.7	532.9	159.7	135.4	24.37	6.555	
3,500.0	3,447.5	3,491.2	3,434.6	12.6	13.2	-82.93	99.9	553.4	165.1	139.8	25.29	6.530	
3,600.0	3,545.4	3,591.1	3,532.3	13.1	13.6	-83.40	103.0	573.9	170.5	144.3	26.21	6.507	
3,700.0	3,643.2	3,690.9	3,629.9	13.5	14.1	-83.85	106.2	594.4	175.9	148.8	27.13	6.486	
3,800.0	3,741.0	3,790.7	3,727.6	14.0	14.6	-84.27	109.3	614.9	181.4	153.3	28.05	6.466	
3,900.0	3,838.8	3,891.8	3,826.6	14.5	15.0	-84.82	112.4	635.2	186.6	157.7	28.94	6.447	
4,000.0	3,936.6	3,993.9	3,927.1	14.9	15.3	-86.26	115.1	652.5	190.8	161.0	29.78	6.407	
4,009.8	3,946.2	4,003.9	3,937.0	15.0	15.3	-86.46	115.3	654.0	191.2	161.3	29.86	6.402	
4,100.0	4,034.7	4,095.7	4,028.0	15.3	15.6	-88.30	117.2	666.2	194.1	163.6	30.53	6.360	
4,200.0	4,133.4	4,197.4	4,129.2	15.6	15.8	-90.23	118.7	676.3	196.7	165.6	31.11	6.324	
4,300.0	4,232.6	4,298.9	4,230.5	15.8	16.0	-92.09	119.7	682.9	198.6	167.0	31.60	6.286	
4,400.0	4,332.2	4,400.2	4,331.7	16.1	16.1	-93.89	120.2	686.0	199.7	167.8	31.98	6.245	
4,500.0	4,432.1	4,500.6	4,432.1	16.2	16.2	-95.43	120.2	686.2	200.2	167.9	32.29	6.201	
4,600.0	4,532.0	4,600.5	4,532.0	16.4	16.4	-96.03	120.2	686.2	200.4	167.9	32.56	6.157	
4,609.8	4,541.8	4,610.3	4,541.8	16.4	16.4	0.65	120.2	686.2	200.4	178.6	21.84	9.178	
4,700.0	4,632.0	4,700.5	4,632.0	16.5	16.5	0.65	120.2	686.2	200.4	178.3	22.17	9.043	
4,800.0	4,732.0	4,800.5	4,732.0	16.6	16.6	0.65	120.2	686.2	200.4	177.9	22.53	8.895	
4,900.0	4,832.0	4,900.5	4,832.0	16.7	16.8	0.65	120.2	686.2	200.4	177.5	22.90	8.752	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
5,000.0	4,932.0	5,000.5	4,932.0	16.9	16.9	0.65	120.2	686.2	200.4	177.2	23.28	8.612	
5,100.0	5,032.0	5,100.5	5,032.0	17.0	17.0	0.65	120.2	686.2	200.4	176.8	23.65	8.475	
5,200.0	5,132.0	5,200.5	5,132.0	17.1	17.2	0.65	120.2	686.2	200.4	176.4	24.03	8.342	
5,300.0	5,232.0	5,300.5	5,232.0	17.3	17.3	0.65	120.2	686.2	200.4	176.0	24.41	8.212	
5,400.0	5,332.0	5,400.5	5,332.0	17.4	17.5	0.65	120.2	686.2	200.4	175.7	24.79	8.086	
5,500.0	5,432.0	5,500.5	5,432.0	17.6	17.6	0.65	120.2	686.2	200.4	175.3	25.18	7.962	
5,600.0	5,532.0	5,600.5	5,532.0	17.7	17.8	0.65	120.2	686.2	200.4	174.9	25.56	7.842	
5,700.0	5,632.0	5,700.5	5,632.0	17.9	17.9	0.65	120.2	686.2	200.4	174.5	25.95	7.724	
5,800.0	5,732.0	5,800.5	5,732.0	18.0	18.0	0.65	120.2	686.2	200.4	174.1	26.34	7.610	
5,900.0	5,832.0	5,900.5	5,832.0	18.2	18.2	0.65	120.2	686.2	200.4	173.7	26.73	7.498	
6,000.0	5,932.0	6,000.5	5,932.0	18.3	18.4	0.65	120.2	686.2	200.4	173.3	27.13	7.389	
6,100.0	6,032.0	6,100.5	6,032.0	18.5	18.5	0.65	120.2	686.2	200.4	172.9	27.52	7.283	
6,200.0	6,132.0	6,200.5	6,132.0	18.6	18.7	0.65	120.2	686.2	200.4	172.5	27.92	7.179	
6,300.0	6,232.0	6,300.5	6,232.0	18.8	18.8	0.65	120.2	686.2	200.4	172.1	28.32	7.078	
6,400.0	6,332.0	6,400.5	6,332.0	18.9	19.0	0.65	120.2	686.2	200.4	171.7	28.72	6.979	
6,500.0	6,432.0	6,500.5	6,432.0	19.1	19.1	0.65	120.2	686.2	200.4	171.3	29.12	6.883	
6,581.1	6,513.1	6,581.7	6,513.1	19.2	19.2	0.15	120.2	684.4	200.4	171.0	29.43	6.810	
6,600.0	6,532.0	6,600.5	6,531.9	19.2	19.3	-0.30	120.2	682.8	200.4	170.9	29.50	6.794	
6,637.8	6,569.8	6,637.9	6,569.0	19.3	19.3	-1.61	120.2	678.3	200.5	170.9	29.65	6.764	
6,650.0	6,582.0	6,650.0	6,580.9	19.3	19.3	87.87	120.2	676.4	200.6	162.1	38.43	5.219	
6,700.0	6,632.0	6,698.5	6,628.5	19.4	19.3	85.81	120.2	666.7	201.0	162.6	38.43	5.229	
6,750.0	6,681.6	6,746.8	6,675.0	19.4	19.2	83.77	120.2	654.0	201.7	163.3	38.36	5.257	
6,800.0	6,730.6	6,794.6	6,720.2	19.4	19.2	81.79	120.2	638.3	202.6	164.3	38.23	5.299	
6,850.0	6,778.9	6,841.9	6,763.8	19.3	19.1	79.87	120.2	619.9	203.7	165.6	38.03	5.355	
6,900.0	6,826.2	6,888.9	6,805.7	19.3	19.0	78.03	120.2	598.8	205.0	167.2	37.79	5.424	
6,950.0	6,872.2	6,935.4	6,845.8	19.2	19.0	76.26	120.2	575.2	206.4	168.9	37.52	5.503	
7,000.0	6,916.8	6,981.6	6,884.0	19.2	18.9	74.59	120.2	549.2	208.0	170.8	37.22	5.590	
7,050.0	6,959.6	7,027.5	6,920.3	19.1	18.8	73.01	120.2	521.0	209.7	172.8	36.91	5.682	
7,100.0	7,000.6	7,073.1	6,954.4	19.0	18.8	71.53	120.2	490.8	211.5	174.8	36.61	5.776	
7,150.0	7,039.5	7,118.4	6,986.3	19.0	18.8	70.15	120.2	458.8	213.2	176.9	36.34	5.868	
7,200.0	7,076.0	7,163.4	7,016.0	19.0	18.8	68.88	120.2	424.9	215.0	178.9	36.11	5.954	
7,250.0	7,110.1	7,208.2	7,043.3	19.0	18.9	67.72	120.2	389.5	216.7	180.8	35.95	6.029	
7,300.0	7,141.6	7,250.0	7,066.8	19.1	19.0	66.71	120.2	354.8	218.4	182.6	35.88	6.089	
7,350.0	7,170.3	7,297.0	7,090.8	19.2	19.2	65.71	120.2	314.4	220.0	184.1	35.92	6.126	
7,400.0	7,196.1	7,341.2	7,110.8	19.4	19.5	64.86	120.2	275.0	221.5	185.4	36.08	6.138	
7,450.0	7,218.8	7,385.2	7,128.3	19.7	19.8	64.13	120.2	234.6	222.8	186.4	36.39	6.124	
7,500.0	7,238.3	7,429.1	7,143.3	20.0	20.1	63.50	120.2	193.4	224.0	187.2	36.84	6.080	
7,550.0	7,254.6	7,472.9	7,155.6	20.5	20.5	62.97	120.2	151.4	225.0	187.6	37.45	6.009	
7,600.0	7,267.6	7,516.5	7,165.4	21.0	21.0	62.55	120.2	108.9	225.9	187.7	38.22	5.911	
7,650.0	7,277.1	7,560.1	7,172.6	21.5	21.5	62.24	120.2	65.9	226.5	187.4	39.13	5.789	
7,700.0	7,283.3	7,603.7	7,177.1	22.2	22.1	62.03	120.2	22.6	227.0	186.8	40.18	5.648	
7,750.0	7,285.9	7,650.0	7,179.0	22.9	22.8	61.91	120.2	-23.7	227.2	185.8	41.41	5.487	
7,752.6	7,285.9	7,650.0	7,179.0	22.9	22.8	61.91	120.2	-23.7	227.2	185.7	41.44	5.482	
7,760.9	7,286.0	7,656.7	7,179.0	23.0	22.9	61.91	120.2	-30.4	227.2	185.6	41.64	5.456	
7,800.0	7,286.1	7,695.4	7,178.9	23.6	23.5	61.85	120.2	-69.1	227.3	184.6	42.69	5.325	
7,900.0	7,286.4	7,795.4	7,178.5	25.3	25.2	61.71	120.2	-169.1	227.6	182.0	45.63	4.988	
8,000.0	7,286.6	7,895.4	7,178.1	27.2	27.0	61.57	120.2	-269.1	227.9	179.0	48.89	4.662	
8,100.0	7,286.9	7,995.4	7,177.8	29.2	29.1	61.43	120.2	-369.1	228.2	175.8	52.41	4.354	
8,200.0	7,287.2	8,095.4	7,177.4	31.3	31.2	61.30	120.2	-469.1	228.5	172.4	56.14	4.070	
8,300.0	7,287.4	8,195.4	7,177.0	33.6	33.5	61.16	120.2	-569.1	228.8	168.8	60.04	3.811	
8,400.0	7,287.7	8,295.4	7,176.7	35.9	35.8	61.02	120.2	-669.1	229.1	165.1	64.06	3.577	
8,500.0	7,288.0	8,395.4	7,176.3	38.3	38.2	60.88	120.2	-769.1	229.4	161.2	68.19	3.364	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	7,288.2	8,495.4	7,175.9	40.7	40.6	60.74	120.2	-869.1	229.7	157.3	72.41	3.173	
8,700.0	7,288.5	8,595.4	7,175.6	43.2	43.1	60.61	120.2	-969.1	230.0	153.4	76.70	2.999	
8,800.0	7,288.8	8,695.4	7,175.2	45.7	45.6	60.47	120.2	-1,069.1	230.4	149.3	81.04	2.843	
8,900.0	7,289.0	8,795.4	7,174.9	48.3	48.2	60.33	120.2	-1,169.1	230.7	145.2	85.43	2.700	
9,000.0	7,289.3	8,895.4	7,174.5	50.9	50.8	60.20	120.2	-1,269.1	231.0	141.1	89.85	2.571	
9,100.0	7,289.6	8,995.4	7,174.1	53.5	53.4	60.06	120.2	-1,369.1	231.3	137.0	94.30	2.453	
9,200.0	7,289.8	9,095.4	7,173.8	56.1	56.0	59.93	120.2	-1,469.1	231.6	132.8	98.78	2.345	
9,300.0	7,290.1	9,195.4	7,173.4	58.7	58.6	59.79	120.2	-1,569.1	231.9	128.6	103.28	2.246	
9,400.0	7,290.4	9,295.4	7,173.0	61.4	61.3	59.66	120.2	-1,669.1	232.2	124.5	107.79	2.155	
9,500.0	7,290.6	9,395.4	7,172.7	64.1	64.0	59.52	120.2	-1,769.1	232.6	120.2	112.31	2.071	
9,600.0	7,290.9	9,495.4	7,172.3	66.7	66.7	59.39	120.2	-1,869.1	232.9	116.0	116.84	1.993	
9,700.0	7,291.2	9,595.4	7,171.9	69.4	69.3	59.26	120.2	-1,969.1	233.2	111.8	121.38	1.921	
9,800.0	7,291.4	9,695.4	7,171.6	72.1	72.0	59.12	120.2	-2,069.1	233.5	107.6	125.92	1.854	
9,900.0	7,291.7	9,795.4	7,171.2	74.8	74.8	58.99	120.2	-2,169.1	233.8	103.4	130.47	1.792	
10,000.0	7,292.0	9,895.4	7,170.8	77.5	77.5	58.86	120.2	-2,269.1	234.2	99.2	135.01	1.734	
10,100.0	7,292.2	9,995.4	7,170.5	80.3	80.2	58.73	120.2	-2,369.1	234.5	94.9	139.56	1.680	
10,200.0	7,292.5	10,095.4	7,170.1	83.0	82.9	58.59	120.2	-2,469.1	234.8	90.7	144.10	1.630	
10,300.0	7,292.8	10,195.4	7,169.7	85.7	85.6	58.46	120.2	-2,569.1	235.2	86.5	148.64	1.582	
10,400.0	7,293.0	10,295.4	7,169.4	88.5	88.4	58.33	120.2	-2,669.1	235.5	82.3	153.17	1.537	
10,500.0	7,293.3	10,395.4	7,169.0	91.2	91.1	58.20	120.2	-2,769.1	235.8	78.1	157.70	1.495	Level 3
10,600.0	7,293.6	10,495.4	7,168.7	93.9	93.9	58.07	120.2	-2,869.1	236.1	73.9	162.23	1.456	Level 3
10,700.0	7,293.8	10,595.4	7,168.3	96.7	96.6	57.94	120.2	-2,969.1	236.5	69.7	166.75	1.418	Level 3
10,800.0	7,294.1	10,695.4	7,167.9	99.4	99.4	57.81	120.2	-3,069.1	236.8	65.6	171.26	1.383	Level 3
10,900.0	7,294.4	10,795.4	7,167.6	102.2	102.1	57.68	120.2	-3,169.1	237.2	61.4	175.77	1.349	Level 3
11,000.0	7,294.6	10,895.4	7,167.2	105.0	104.9	57.55	120.2	-3,269.1	237.5	57.2	180.27	1.317	Level 3
11,100.0	7,294.9	10,995.4	7,166.8	107.7	107.7	57.42	120.2	-3,369.0	237.8	53.1	184.76	1.287	Level 3
11,200.0	7,295.2	11,095.4	7,166.5	110.5	110.4	57.29	120.2	-3,469.0	238.2	48.9	189.24	1.259	Level 3
11,300.0	7,295.4	11,195.4	7,166.1	113.2	113.2	57.17	120.2	-3,569.0	238.5	44.8	193.72	1.231	Level 2
11,400.0	7,295.7	11,295.4	7,165.7	116.0	116.0	57.04	120.2	-3,669.0	238.9	40.7	198.18	1.205	Level 2
11,500.0	7,296.0	11,395.4	7,165.4	118.8	118.7	56.91	120.2	-3,769.0	239.2	36.6	202.64	1.180	Level 2
11,600.0	7,296.2	11,495.4	7,165.0	121.6	121.5	56.78	120.2	-3,869.0	239.5	32.5	207.08	1.157	Level 2
11,700.0	7,296.5	11,595.4	7,164.6	124.3	124.3	56.66	120.2	-3,969.0	239.9	28.4	211.52	1.134	Level 2
11,800.0	7,296.8	11,695.4	7,164.3	127.1	127.0	56.53	120.2	-4,069.0	240.2	24.3	215.95	1.112	Level 2
11,886.1	7,297.0	11,781.6	7,164.0	129.5	129.4	56.43	120.2	-4,155.3	240.5	20.7	219.77	1.094	Level 2, SF

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	0.71	44.8	0.6	44.8				
100.0	100.0	99.0	99.0	0.1	0.1	0.71	44.8	0.6	44.8	44.6	0.19	231.650	
200.0	200.0	199.0	199.0	0.3	0.3	0.71	44.8	0.6	44.8	44.2	0.64	69.834	
300.0	300.0	299.0	299.0	0.5	0.5	0.71	44.8	0.6	44.8	43.7	1.09	41.066	CC, ES
400.0	400.0	397.9	397.9	0.8	0.8	2.27	45.9	1.8	46.0	44.4	1.54	29.938	
500.0	500.0	496.6	496.5	1.0	1.0	6.55	49.2	5.6	49.6	47.6	1.98	25.028	
600.0	600.0	594.9	594.4	1.2	1.2	12.36	54.8	12.0	56.2	53.8	2.44	23.050	
700.0	700.0	692.4	691.2	1.4	1.5	18.44	62.4	20.8	66.3	63.3	2.92	22.703	
800.0	800.0	789.2	786.9	1.7	1.8	-73.69	72.1	32.0	79.4	76.0	3.38	23.513	
900.0	899.8	885.3	881.3	1.9	2.1	-71.51	83.9	45.5	94.7	90.9	3.84	24.691	
1,000.0	999.5	983.6	977.4	2.1	2.5	-71.10	97.3	60.9	111.0	106.7	4.33	25.636	
1,100.0	1,098.7	1,082.3	1,074.0	2.3	2.9	-72.24	110.7	76.4	126.2	121.4	4.86	25.949	
1,200.0	1,197.5	1,181.1	1,170.6	2.6	3.4	-74.45	124.2	91.9	140.6	135.1	5.46	25.744	
1,300.0	1,295.6	1,279.8	1,267.1	3.0	3.8	-77.47	137.7	107.4	154.3	148.2	6.13	25.161	
1,400.0	1,393.4	1,378.4	1,363.6	3.3	4.2	-80.81	151.1	122.9	168.3	161.4	6.88	24.470	
1,500.0	1,491.3	1,477.0	1,460.0	3.7	4.7	-83.63	164.6	138.4	182.6	175.0	7.65	23.873	
1,600.0	1,589.1	1,575.6	1,556.4	4.1	5.1	-86.03	178.0	153.9	197.4	189.0	8.45	23.368	
1,700.0	1,686.9	1,674.2	1,652.9	4.6	5.5	-88.10	191.5	169.3	212.5	203.2	9.26	22.943	
1,800.0	1,784.7	1,772.8	1,749.3	5.0	6.0	-89.89	204.9	184.8	227.8	217.7	10.08	22.585	
1,900.0	1,882.5	1,871.3	1,845.7	5.4	6.4	-91.46	218.4	200.3	243.3	232.3	10.92	22.282	
2,000.0	1,980.3	1,969.9	1,942.2	5.9	6.8	-92.84	231.8	215.7	258.9	247.1	11.75	22.024	
2,100.0	2,078.1	2,068.5	2,038.6	6.3	7.3	-94.06	245.3	231.2	274.7	262.1	12.60	21.804	
2,200.0	2,176.0	2,167.1	2,135.0	6.7	7.7	-95.15	258.7	246.7	290.6	277.1	13.44	21.615	
2,300.0	2,273.8	2,265.7	2,231.5	7.2	8.2	-96.13	272.2	262.2	306.5	292.2	14.29	21.451	
2,400.0	2,371.6	2,364.3	2,327.9	7.6	8.6	-97.01	285.6	277.6	322.6	307.4	15.14	21.308	
2,500.0	2,469.4	2,462.9	2,424.3	8.1	9.0	-97.81	299.1	293.1	338.7	322.7	15.99	21.183	
2,600.0	2,567.2	2,561.5	2,520.8	8.5	9.5	-98.53	312.5	308.6	354.9	338.0	16.84	21.073	
2,700.0	2,665.0	2,660.0	2,617.2	9.0	9.9	-99.19	325.9	324.1	371.1	353.4	17.69	20.975	
2,800.0	2,762.8	2,758.6	2,713.6	9.4	10.4	-99.80	339.4	339.5	387.4	368.8	18.55	20.888	
2,900.0	2,860.7	2,857.2	2,810.1	9.9	10.8	-100.36	352.8	355.0	403.7	384.3	19.40	20.810	
3,000.0	2,958.5	2,955.8	2,906.5	10.3	11.3	-100.87	366.3	370.5	420.0	399.8	20.25	20.740	
3,100.0	3,056.3	3,054.4	3,002.9	10.8	11.7	-101.35	379.7	386.0	436.4	415.3	21.11	20.677	
3,200.0	3,154.1	3,153.0	3,099.4	11.3	12.1	-101.79	393.2	401.4	452.8	430.9	21.96	20.620	
3,300.0	3,251.9	3,251.6	3,195.8	11.7	12.6	-102.20	406.6	416.9	469.3	446.4	22.81	20.568	
3,400.0	3,349.7	3,350.2	3,292.2	12.2	13.0	-102.58	420.1	432.4	485.7	462.0	23.67	20.521	
3,500.0	3,447.5	3,448.7	3,388.7	12.6	13.5	-102.94	433.5	447.9	502.2	477.7	24.52	20.478	
3,600.0	3,545.4	3,547.3	3,485.1	13.1	13.9	-103.27	447.0	463.3	518.7	493.3	25.38	20.438	
3,700.0	3,643.2	3,645.9	3,581.5	13.5	14.4	-103.59	460.4	478.8	535.2	508.9	26.23	20.401	
3,800.0	3,741.0	3,744.5	3,678.0	14.0	14.8	-103.88	473.9	494.3	551.7	524.6	27.09	20.368	
3,900.0	3,838.8	3,843.1	3,774.4	14.5	15.3	-104.16	487.3	509.8	568.2	540.3	27.94	20.337	
4,000.0	3,936.6	3,941.7	3,870.8	14.9	15.7	-104.42	500.8	525.2	584.8	556.0	28.80	20.308	
4,009.8	3,946.2	3,951.3	3,880.2	15.0	15.7	-104.45	502.1	526.7	586.4	557.5	28.88	20.305	
4,100.0	4,034.7	4,040.4	3,967.3	15.3	16.1	-104.82	514.2	540.7	601.0	571.4	29.61	20.295	
4,200.0	4,133.4	4,139.1	4,064.0	15.6	16.6	-104.92	527.7	556.2	616.3	586.0	30.32	20.325	
4,300.0	4,232.6	4,237.9	4,160.6	15.8	17.0	-104.69	541.2	571.7	630.8	599.8	30.98	20.361	
4,400.0	4,332.2	4,336.6	4,257.1	16.1	17.5	-104.18	554.6	587.2	644.4	612.9	31.58	20.407	
4,500.0	4,432.1	4,435.0	4,353.4	16.2	17.9	-103.39	568.1	602.7	657.4	625.3	32.12	20.470	
4,600.0	4,532.0	4,533.1	4,449.3	16.4	18.4	-102.35	581.4	618.1	669.9	637.3	32.59	20.557	
4,609.8	4,541.8	4,542.7	4,458.7	16.4	18.4	-5.54	582.7	619.6	671.1	645.9	25.16	26.670	
4,700.0	4,632.0	4,631.6	4,545.7	16.5	18.8	-4.27	594.9	633.5	682.3	656.6	25.71	26.537	
4,800.0	4,732.0	4,746.9	4,658.9	16.6	19.2	-2.84	609.0	649.8	693.8	667.5	26.33	26.350	
4,900.0	4,832.0	4,863.8	4,774.5	16.7	19.5	-1.73	620.2	662.7	703.0	676.1	26.89	26.147	

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-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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
5,000.0	4,932.0	4,981.8	4,891.9	16.9	19.8	-0.95	628.4	672.1	709.8	682.4	27.39	25.915	
5,100.0	5,032.0	5,100.8	5,010.6	17.0	20.0	-0.48	633.5	678.0	714.0	686.2	27.83	25.653	
5,200.0	5,132.0	5,220.1	5,129.9	17.1	20.2	-0.31	635.3	680.1	715.5	687.3	28.21	25.366	
5,300.0	5,232.0	5,321.3	5,231.0	17.3	20.3	-0.31	635.3	680.1	715.5	687.0	28.54	25.075	
5,400.0	5,332.0	5,421.3	5,331.0	17.4	20.4	-0.31	635.3	680.1	715.5	686.6	28.87	24.783	
5,500.0	5,432.0	5,521.3	5,431.0	17.6	20.5	-0.31	635.3	680.1	715.5	686.3	29.21	24.496	
5,600.0	5,532.0	5,621.3	5,531.0	17.7	20.7	-0.31	635.3	680.1	715.5	686.0	29.55	24.214	
5,700.0	5,632.0	5,721.3	5,631.0	17.9	20.8	-0.31	635.3	680.1	715.5	685.6	29.89	23.935	
5,800.0	5,732.0	5,821.3	5,731.0	18.0	20.9	-0.31	635.3	680.1	715.5	685.3	30.24	23.661	
5,900.0	5,832.0	5,921.3	5,831.0	18.2	21.0	-0.31	635.3	680.1	715.5	684.9	30.59	23.391	
6,000.0	5,932.0	6,021.3	5,931.0	18.3	21.2	-0.31	635.3	680.1	715.5	684.6	30.94	23.126	
6,100.0	6,032.0	6,121.3	6,031.0	18.5	21.3	-0.31	635.3	680.1	715.5	684.2	31.29	22.864	
6,200.0	6,132.0	6,221.3	6,131.0	18.6	21.4	-0.31	635.3	680.1	715.5	683.9	31.65	22.607	
6,300.0	6,232.0	6,321.3	6,231.0	18.8	21.6	-0.31	635.3	680.1	715.5	683.5	32.01	22.354	
6,400.0	6,332.0	6,421.3	6,331.0	18.9	21.7	-0.31	635.3	680.1	715.5	683.2	32.37	22.105	
6,500.0	6,432.0	6,521.3	6,431.0	19.1	21.9	-0.31	635.3	680.1	715.5	682.8	32.73	21.860	
6,524.4	6,456.4	6,545.7	6,455.4	19.1	21.9	-0.31	635.3	680.1	715.5	682.7	32.82	21.801	
6,600.0	6,532.0	6,620.7	6,530.4	19.2	22.0	-0.56	635.3	676.9	715.5	682.5	33.06	21.645	
6,637.8	6,569.8	6,657.7	6,567.1	19.3	22.0	-0.92	635.3	672.4	715.6	682.5	33.15	21.587	
6,650.0	6,582.0	6,669.6	6,578.9	19.3	22.0	88.94	635.3	670.6	715.6	676.7	38.89	18.402	
6,700.0	6,632.0	6,717.9	6,626.3	19.4	22.0	88.37	635.3	661.2	715.8	676.8	38.97	18.369	
6,750.0	6,681.6	6,765.8	6,672.5	19.4	21.9	87.81	635.3	648.7	716.0	677.1	38.99	18.364	
6,800.0	6,730.6	6,813.3	6,717.4	19.4	21.9	87.26	635.3	633.3	716.3	677.4	38.97	18.384	
6,850.0	6,778.9	6,860.3	6,760.8	19.3	21.8	86.73	635.3	615.1	716.7	677.8	38.90	18.426	
6,900.0	6,826.2	6,907.0	6,802.5	19.3	21.7	86.21	635.3	594.3	717.1	678.3	38.79	18.486	
6,950.0	6,872.2	6,953.3	6,842.6	19.2	21.6	85.71	635.3	571.1	717.5	678.9	38.66	18.559	
7,000.0	6,916.8	7,000.0	6,881.3	19.2	21.5	85.23	635.3	545.1	718.0	679.5	38.52	18.639	
7,050.0	6,959.6	7,045.0	6,916.9	19.1	21.4	84.78	635.3	517.7	718.5	680.1	38.38	18.719	
7,100.0	7,000.6	7,090.3	6,951.1	19.0	21.3	84.35	635.3	487.8	719.0	680.8	38.26	18.791	
7,150.0	7,039.5	7,135.4	6,983.1	19.0	21.2	83.95	635.3	456.0	719.6	681.4	38.18	18.847	
7,200.0	7,076.0	7,180.3	7,012.9	19.0	21.1	83.57	635.3	422.5	720.1	681.9	38.15	18.876	
7,250.0	7,110.1	7,224.9	7,040.4	19.0	21.0	83.23	635.3	387.4	720.6	682.4	38.19	18.869	
7,300.0	7,141.6	7,269.3	7,065.5	19.1	21.0	82.91	635.3	350.7	721.1	682.7	38.32	18.817	
7,350.0	7,170.3	7,313.6	7,088.3	19.2	20.9	82.63	635.3	312.8	721.5	682.9	38.56	18.714	
7,400.0	7,196.1	7,357.7	7,108.5	19.4	20.9	82.37	635.3	273.6	721.9	683.0	38.91	18.553	
7,450.0	7,218.8	7,400.0	7,125.7	19.7	20.9	82.16	635.3	235.0	722.3	682.9	39.39	18.337	
7,500.0	7,238.3	7,445.4	7,141.6	20.0	21.0	81.97	635.3	192.4	722.6	682.6	40.03	18.050	
7,550.0	7,254.6	7,489.2	7,154.2	20.5	21.2	81.82	635.3	150.5	722.9	682.1	40.81	17.713	
7,600.0	7,267.6	7,532.8	7,164.3	21.0	21.4	81.70	635.3	108.1	723.1	681.4	41.73	17.329	
7,650.0	7,277.1	7,576.4	7,171.8	21.5	21.7	81.62	635.3	65.1	723.2	680.5	42.77	16.909	
7,700.0	7,283.3	7,620.0	7,176.7	22.2	22.1	81.58	635.3	21.8	723.3	679.4	43.94	16.461	
7,750.0	7,285.9	7,663.6	7,178.9	22.9	22.6	81.57	635.3	-21.7	723.3	678.1	45.21	15.998	
7,760.9	7,286.0	7,673.0	7,179.0	23.0	22.7	81.57	635.3	-31.1	723.3	677.8	45.50	15.896	
7,764.4	7,286.0	7,676.1	7,179.0	23.1	22.8	81.57	635.3	-34.2	723.3	677.7	45.60	15.862	
7,800.0	7,286.1	7,711.0	7,178.9	23.6	23.2	81.56	635.3	-69.1	723.4	676.7	46.65	15.504	
7,900.0	7,286.4	7,811.0	7,178.5	25.3	24.8	81.51	635.3	-169.1	723.4	673.5	49.91	14.495	
8,000.0	7,286.6	7,911.0	7,178.2	27.2	26.6	81.46	635.3	-269.1	723.5	670.0	53.53	13.516	
8,100.0	7,286.9	8,011.0	7,177.8	29.2	28.6	81.41	635.3	-369.1	723.6	666.2	57.47	12.592	
8,200.0	7,287.2	8,111.0	7,177.4	31.3	30.7	81.36	635.3	-469.1	723.7	662.1	61.65	11.739	
8,300.0	7,287.4	8,211.0	7,177.1	33.6	32.9	81.31	635.3	-569.1	723.8	657.8	66.03	10.961	
8,400.0	7,287.7	8,311.0	7,176.7	35.9	35.2	81.26	635.3	-669.1	723.9	653.3	70.58	10.256	
8,500.0	7,288.0	8,411.0	7,176.3	38.3	37.6	81.21	635.3	-769.1	724.0	648.7	75.26	9.620	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	7,288.2	8,511.0	7,176.0	40.7	40.0	81.16	635.3	-869.1	724.1	644.1	80.06	9.045	
8,700.0	7,288.5	8,611.0	7,175.6	43.2	42.5	81.11	635.3	-969.1	724.2	639.3	84.94	8.526	
8,800.0	7,288.8	8,711.0	7,175.2	45.7	45.0	81.06	635.3	-1,069.1	724.3	634.4	89.90	8.057	
8,900.0	7,289.0	8,811.0	7,174.9	48.3	47.5	81.01	635.3	-1,169.1	724.4	629.5	94.92	7.631	
9,000.0	7,289.3	8,911.0	7,174.5	50.9	50.1	80.96	635.3	-1,269.1	724.5	624.5	100.00	7.245	
9,100.0	7,289.6	9,011.0	7,174.1	53.5	52.7	80.91	635.3	-1,369.1	724.6	619.5	105.12	6.893	
9,200.0	7,289.8	9,111.0	7,173.8	56.1	55.3	80.87	635.3	-1,469.1	724.7	614.4	110.29	6.571	
9,300.0	7,290.1	9,211.0	7,173.4	58.7	57.9	80.82	635.3	-1,569.1	724.8	609.3	115.48	6.276	
9,400.0	7,290.4	9,311.0	7,173.0	61.4	60.6	80.77	635.3	-1,669.1	724.9	604.2	120.71	6.005	
9,500.0	7,290.6	9,411.0	7,172.7	64.1	63.3	80.72	635.3	-1,769.1	725.0	599.0	125.96	5.756	
9,600.0	7,290.9	9,511.0	7,172.3	66.7	65.9	80.67	635.3	-1,869.1	725.1	593.9	131.23	5.525	
9,700.0	7,291.2	9,611.0	7,171.9	69.4	68.6	80.62	635.3	-1,969.1	725.2	588.7	136.52	5.312	
9,800.0	7,291.4	9,711.0	7,171.6	72.1	71.3	80.57	635.3	-2,069.1	725.3	583.5	141.83	5.114	
9,900.0	7,291.7	9,811.0	7,171.2	74.8	74.0	80.52	635.3	-2,169.1	725.4	578.3	147.15	4.930	
10,000.0	7,292.0	9,911.0	7,170.9	77.5	76.7	80.47	635.3	-2,269.1	725.5	573.0	152.49	4.758	
10,100.0	7,292.2	10,011.0	7,170.5	80.3	79.4	80.42	635.3	-2,369.1	725.6	567.8	157.84	4.597	
10,200.0	7,292.5	10,111.0	7,170.1	83.0	82.2	80.37	635.3	-2,469.1	725.7	562.5	163.20	4.447	
10,300.0	7,292.8	10,211.0	7,169.8	85.7	84.9	80.32	635.3	-2,569.1	725.8	557.3	168.57	4.306	
10,400.0	7,293.0	10,311.0	7,169.4	88.5	87.6	80.28	635.3	-2,669.1	725.9	552.0	173.94	4.173	
10,500.0	7,293.3	10,411.0	7,169.0	91.2	90.4	80.23	635.3	-2,769.1	726.0	546.7	179.33	4.049	
10,600.0	7,293.6	10,511.0	7,168.7	93.9	93.1	80.18	635.3	-2,869.1	726.1	541.4	184.72	3.931	
10,700.0	7,293.8	10,611.0	7,168.3	96.7	95.8	80.13	635.3	-2,969.1	726.3	536.1	190.12	3.820	
10,800.0	7,294.1	10,711.0	7,167.9	99.4	98.6	80.08	635.3	-3,069.1	726.4	530.8	195.52	3.715	
10,900.0	7,294.4	10,811.0	7,167.6	102.2	101.3	80.03	635.3	-3,169.1	726.5	525.5	200.92	3.616	
11,000.0	7,294.6	10,911.0	7,167.2	105.0	104.1	79.98	635.3	-3,269.0	726.6	520.2	206.33	3.521	
11,100.0	7,294.9	11,011.0	7,166.9	107.7	106.9	79.93	635.3	-3,369.0	726.7	514.9	211.75	3.432	
11,200.0	7,295.2	11,111.0	7,166.5	110.5	109.6	79.88	635.3	-3,469.0	726.8	509.6	217.16	3.347	
11,300.0	7,295.4	11,211.0	7,166.1	113.2	112.4	79.83	635.3	-3,569.0	726.9	504.3	222.58	3.266	
11,400.0	7,295.7	11,311.0	7,165.8	116.0	115.1	79.79	635.3	-3,669.0	727.0	499.0	228.01	3.189	
11,500.0	7,296.0	11,411.0	7,165.4	118.8	117.9	79.74	635.3	-3,769.0	727.1	493.7	233.43	3.115	
11,600.0	7,296.2	11,510.9	7,165.1	121.6	120.7	79.69	635.3	-3,869.0	727.2	488.4	238.86	3.045	
11,700.0	7,296.5	11,610.9	7,164.7	124.3	123.5	79.64	635.3	-3,969.0	727.4	483.1	244.29	2.977	
11,800.0	7,296.8	11,710.9	7,164.3	127.1	126.2	79.59	635.3	-4,069.0	727.5	477.8	249.72	2.913	
11,886.1	7,297.0	11,797.1	7,164.0	129.5	128.6	79.55	635.3	-4,155.2	727.6	473.2	254.40	2.860 SF	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	1.0	1.0	0.0	0.0	-179.65	-45.2	-0.3	45.2				
100.0	100.0	101.0	101.0	0.1	0.1	-179.65	-45.2	-0.3	45.2	45.0	0.20	229.697	
200.0	200.0	201.0	201.0	0.3	0.3	-179.65	-45.2	-0.3	45.2	44.5	0.65	69.908	
300.0	300.0	301.0	301.0	0.5	0.5	-179.65	-45.2	-0.3	45.2	44.1	1.10	41.228	
366.3	366.3	367.3	367.3	0.7	0.7	-179.65	-45.2	-0.3	45.2	43.8	1.39	32.409	CC
400.0	400.0	401.0	401.0	0.8	0.8	-179.65	-45.2	-0.3	45.2	43.6	1.55	29.239	ES
500.0	500.0	500.0	500.0	1.0	1.0	178.75	-46.3	1.0	46.4	44.4	1.97	23.527	
600.0	600.0	598.6	598.4	1.2	1.2	174.49	-49.8	4.8	50.1	47.7	2.39	20.945	
700.0	700.0	696.8	696.3	1.4	1.4	168.72	-55.5	11.1	56.8	54.0	2.84	20.024	
800.0	800.0	794.5	793.2	1.7	1.7	67.20	-63.4	19.8	66.2	62.9	3.27	20.244	
900.0	899.8	891.7	889.3	1.9	2.0	64.63	-73.5	30.8	77.4	73.7	3.71	20.852	
1,000.0	999.5	988.4	984.3	2.1	2.3	63.62	-85.7	44.2	90.1	85.9	4.19	21.535	
1,100.0	1,098.7	1,087.2	1,080.9	2.3	2.7	63.99	-99.6	59.4	103.1	98.4	4.70	21.929	
1,200.0	1,197.5	1,186.5	1,178.0	2.6	3.1	65.82	-113.5	74.6	114.7	109.4	5.28	21.730	
1,300.0	1,295.6	1,285.7	1,275.1	3.0	3.6	68.77	-127.4	89.9	125.1	119.2	5.94	21.074	
1,400.0	1,393.4	1,384.9	1,372.1	3.3	4.0	72.13	-141.3	105.1	135.3	128.6	6.67	20.273	
1,500.0	1,491.3	1,484.1	1,469.1	3.7	4.4	75.01	-155.2	120.4	145.9	138.4	7.45	19.578	
1,600.0	1,589.1	1,583.3	1,566.1	4.1	4.9	77.50	-169.1	135.6	156.8	148.5	8.26	18.983	
1,700.0	1,686.9	1,682.4	1,663.1	4.6	5.3	79.66	-183.0	150.8	168.0	158.9	9.09	18.478	
1,800.0	1,784.7	1,781.6	1,760.2	5.0	5.8	81.55	-196.9	166.1	179.3	169.4	9.94	18.049	
1,900.0	1,882.5	1,880.8	1,857.2	5.4	6.2	83.22	-210.8	181.3	190.8	180.1	10.79	17.683	
2,000.0	1,980.3	1,980.0	1,954.2	5.9	6.7	84.69	-224.7	196.6	202.5	190.9	11.66	17.371	
2,100.0	2,078.1	2,079.2	2,051.2	6.3	7.1	86.01	-238.6	211.8	214.3	201.8	12.53	17.102	
2,200.0	2,176.0	2,178.4	2,148.2	6.7	7.6	87.18	-252.5	227.0	226.2	212.8	13.41	16.869	
2,300.0	2,273.8	2,277.6	2,245.3	7.2	8.1	88.24	-266.4	242.3	238.2	223.9	14.29	16.666	
2,400.0	2,371.6	2,376.8	2,342.3	7.6	8.5	89.20	-280.3	257.5	250.2	235.1	15.18	16.489	
2,500.0	2,469.4	2,476.0	2,439.3	8.1	9.0	90.07	-294.2	272.8	262.4	246.3	16.06	16.332	
2,600.0	2,567.2	2,575.1	2,536.3	8.5	9.4	90.86	-308.1	288.0	274.5	257.6	16.95	16.194	
2,700.0	2,665.0	2,674.3	2,633.3	9.0	9.9	91.58	-322.0	303.2	286.7	268.9	17.84	16.070	
2,800.0	2,762.8	2,773.5	2,730.4	9.4	10.3	92.25	-335.9	318.5	299.0	280.3	18.73	15.960	
2,900.0	2,860.7	2,872.7	2,827.4	9.9	10.8	92.86	-349.8	333.7	311.3	291.7	19.63	15.861	
3,000.0	2,958.5	2,971.9	2,924.4	10.3	11.3	93.43	-363.7	349.0	323.6	303.1	20.52	15.772	
3,100.0	3,056.3	3,071.1	3,021.4	10.8	11.7	93.95	-377.6	364.2	336.0	314.5	21.41	15.690	
3,200.0	3,154.1	3,170.3	3,118.4	11.3	12.2	94.44	-391.5	379.5	348.3	326.0	22.31	15.617	
3,300.0	3,251.9	3,269.5	3,215.5	11.7	12.6	94.90	-405.4	394.7	360.7	337.5	23.20	15.549	
3,400.0	3,349.7	3,368.6	3,312.5	12.2	13.1	95.32	-419.3	409.9	373.2	349.1	24.09	15.488	
3,500.0	3,447.5	3,467.8	3,409.5	12.6	13.6	95.72	-433.2	425.2	385.6	360.6	24.99	15.431	
3,600.0	3,545.4	3,567.0	3,506.5	13.1	14.0	96.09	-447.1	440.4	398.1	372.2	25.88	15.379	
3,700.0	3,643.2	3,666.2	3,603.5	13.5	14.5	96.44	-461.0	455.7	410.5	383.8	26.78	15.331	
3,800.0	3,741.0	3,765.4	3,700.6	14.0	14.9	96.77	-474.9	470.9	423.0	395.4	27.67	15.287	
3,900.0	3,838.8	3,864.6	3,797.6	14.5	15.4	97.08	-488.8	486.1	435.5	407.0	28.57	15.245	
4,000.0	3,936.6	3,963.8	3,894.6	14.9	15.9	97.37	-502.7	501.4	448.1	418.6	29.46	15.207	
4,009.8	3,946.2	3,973.5	3,904.1	15.0	15.9	97.40	-504.0	502.9	449.3	419.7	29.55	15.203	
4,100.0	4,034.7	4,063.0	3,991.7	15.3	16.3	97.69	-516.6	516.6	460.4	430.1	30.30	15.194	
4,200.0	4,133.4	4,162.3	4,088.7	15.6	16.8	97.60	-530.5	531.9	472.3	441.3	31.01	15.229	
4,300.0	4,232.6	4,261.4	4,185.7	15.8	17.3	97.11	-544.4	547.1	483.7	452.1	31.65	15.283	
4,400.0	4,332.2	4,360.4	4,282.5	16.1	17.7	96.25	-558.2	562.3	494.9	462.7	32.22	15.361	
4,500.0	4,432.1	4,459.0	4,379.0	16.2	18.2	95.04	-572.1	577.5	505.9	473.2	32.71	15.469	
4,600.0	4,532.0	4,557.1	4,474.9	16.4	18.6	93.53	-585.8	592.5	517.1	484.0	33.11	15.617	
4,609.8	4,541.8	4,566.6	4,484.3	16.4	18.7	-169.95	-587.1	594.0	518.2	493.4	24.73	20.956	
4,700.0	4,632.0	4,654.9	4,570.6	16.5	19.1	-171.64	-599.5	607.6	528.6	503.2	25.40	20.811	
4,800.0	4,732.0	4,752.7	4,666.3	16.6	19.5	-173.44	-613.2	622.6	540.7	514.5	26.16	20.664	

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-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	4,832.0	4,850.5	4,762.0	16.7	20.0	-175.16	-626.9	637.6	553.3	526.3	26.95	20.532	
5,000.0	4,932.0	4,951.1	4,860.4	16.9	20.4	-176.85	-641.0	653.0	566.3	538.6	27.74	20.412	
5,100.0	5,032.0	5,064.1	4,971.5	17.0	20.8	-178.43	-654.8	668.2	578.1	549.6	28.49	20.290	
5,200.0	5,132.0	5,178.6	5,084.8	17.1	21.1	-179.63	-665.7	680.2	587.5	558.4	29.14	20.165	
5,300.0	5,232.0	5,294.2	5,199.8	17.3	21.4	179.52	-673.7	688.9	594.4	564.7	29.69	20.019	
5,400.0	5,332.0	5,410.6	5,316.0	17.4	21.6	179.01	-678.5	694.2	598.6	568.5	30.16	19.852	
5,500.0	5,432.0	5,527.4	5,432.7	17.6	21.7	178.84	-680.2	696.0	600.1	569.6	30.53	19.655	
5,600.0	5,532.0	5,627.7	5,533.0	17.7	21.8	178.84	-680.2	696.0	600.1	569.2	30.85	19.451	
5,700.0	5,632.0	5,727.7	5,633.0	17.9	21.9	178.84	-680.2	696.0	600.1	568.9	31.17	19.255	
5,800.0	5,732.0	5,827.7	5,733.0	18.0	22.0	178.84	-680.2	696.0	600.1	568.6	31.48	19.061	
5,900.0	5,832.0	5,927.7	5,833.0	18.2	22.1	178.84	-680.2	696.0	600.1	568.3	31.80	18.869	
6,000.0	5,932.0	6,027.7	5,933.0	18.3	22.2	178.84	-680.2	696.0	600.1	568.0	32.13	18.679	
6,100.0	6,032.0	6,127.7	6,033.0	18.5	22.4	178.84	-680.2	696.0	600.1	567.6	32.45	18.492	
6,200.0	6,132.0	6,227.7	6,133.0	18.6	22.5	178.84	-680.2	696.0	600.1	567.3	32.78	18.306	
6,300.0	6,232.0	6,327.7	6,233.0	18.8	22.6	178.84	-680.2	696.0	600.1	567.0	33.11	18.123	
6,400.0	6,332.0	6,427.7	6,333.0	18.9	22.7	178.84	-680.2	696.0	600.1	566.7	33.45	17.943	
6,500.0	6,432.0	6,528.7	6,433.9	19.1	22.8	179.21	-680.2	692.2	600.0	566.3	33.71	17.799	
6,557.9	6,489.9	6,586.3	6,490.9	19.2	22.8	180.00	-680.2	683.9	600.0	566.2	33.76	17.770	
6,600.0	6,532.0	6,627.2	6,530.9	19.2	22.8	-179.18	-680.2	675.3	600.0	566.3	33.76	17.774	
6,637.8	6,569.8	6,663.0	6,565.4	19.3	22.7	-178.28	-680.2	665.9	600.3	566.5	33.73	17.795	
6,650.0	6,582.0	6,674.4	6,576.3	19.3	22.7	-87.96	-680.2	662.5	600.4	561.4	39.03	15.383	
6,700.0	6,632.0	6,720.4	6,619.7	19.4	22.7	-86.66	-680.2	647.2	601.1	561.9	39.19	15.339	
6,750.0	6,681.6	6,765.7	6,661.4	19.4	22.6	-85.38	-680.2	629.4	602.1	562.8	39.29	15.325	
6,800.0	6,730.6	6,810.3	6,701.2	19.4	22.5	-84.14	-680.2	609.4	603.4	564.0	39.33	15.339	
6,850.0	6,778.9	6,854.2	6,739.1	19.3	22.4	-82.93	-680.2	587.3	604.9	565.6	39.33	15.379	
6,900.0	6,826.2	6,900.0	6,777.2	19.3	22.4	-81.70	-680.2	561.9	606.7	567.4	39.29	15.442	
6,950.0	6,872.2	6,940.3	6,809.2	19.2	22.3	-80.63	-680.2	537.5	608.6	569.4	39.21	15.522	
7,000.0	6,916.8	6,982.5	6,841.3	19.2	22.2	-79.54	-680.2	510.0	610.7	571.6	39.10	15.618	
7,050.0	6,959.6	7,024.3	6,871.4	19.1	22.1	-78.51	-680.2	481.0	612.8	573.9	38.98	15.722	
7,100.0	7,000.6	7,065.6	6,899.4	19.0	22.0	-77.53	-680.2	450.7	615.1	576.2	38.86	15.830	
7,150.0	7,039.5	7,106.6	6,925.5	19.0	22.0	-76.61	-680.2	419.1	617.4	578.6	38.75	15.934	
7,200.0	7,076.0	7,150.0	6,951.1	19.0	21.9	-75.70	-680.2	384.0	619.7	581.0	38.67	16.026	
7,250.0	7,110.1	7,187.4	6,971.4	19.0	21.9	-74.94	-680.2	352.6	621.9	583.3	38.64	16.096	
7,300.0	7,141.6	7,227.4	6,991.2	19.1	21.8	-74.21	-680.2	317.9	624.1	585.4	38.67	16.137	
7,350.0	7,170.3	7,267.1	7,009.0	19.2	21.8	-73.53	-680.2	282.3	626.1	587.3	38.79	16.142	
7,400.0	7,196.1	7,306.6	7,024.7	19.4	21.8	-72.93	-680.2	246.1	628.1	589.1	39.00	16.103	
7,450.0	7,218.8	7,350.0	7,039.6	19.7	21.9	-72.35	-680.2	205.4	629.8	590.5	39.35	16.005	
7,500.0	7,238.3	7,385.1	7,049.8	20.0	22.0	-71.92	-680.2	171.9	631.4	591.6	39.79	15.869	
7,550.0	7,254.6	7,424.0	7,059.2	20.5	22.1	-71.52	-680.2	134.0	632.8	592.4	40.38	15.672	
7,600.0	7,267.6	7,462.9	7,066.5	21.0	22.3	-71.19	-680.2	95.9	633.9	592.9	41.10	15.426	
7,650.0	7,277.1	7,500.0	7,071.6	21.5	22.5	-70.94	-680.2	59.1	634.9	592.9	41.92	15.143	
7,700.0	7,283.3	7,540.3	7,074.9	22.2	22.8	-70.75	-680.2	18.9	635.5	592.6	42.93	14.805	
7,750.0	7,285.9	7,579.0	7,076.0	22.9	23.2	-70.64	-680.2	-19.7	636.0	591.9	44.02	14.446	
7,760.9	7,286.0	7,588.7	7,076.0	23.0	23.3	-70.62	-680.2	-29.4	636.0	591.7	44.29	14.359	
7,800.0	7,286.1	7,627.8	7,075.8	23.6	23.8	-70.60	-680.2	-68.5	636.1	590.7	45.44	13.999	
7,900.0	7,286.4	7,727.8	7,075.3	25.3	25.2	-70.53	-680.2	-168.5	636.4	587.8	48.60	13.093	
8,000.0	7,286.6	7,827.8	7,074.8	27.2	27.0	-70.47	-680.2	-268.5	636.6	584.5	52.12	12.215	
8,100.0	7,286.9	7,927.8	7,074.3	29.2	29.0	-70.40	-680.2	-368.5	636.9	580.9	55.91	11.390	
8,200.0	7,287.2	8,027.8	7,073.8	31.3	31.2	-70.34	-680.2	-468.5	637.1	577.2	59.94	10.630	
8,300.0	7,287.4	8,127.8	7,073.3	33.6	33.4	-70.28	-680.2	-568.5	637.4	573.2	64.14	9.937	
8,400.0	7,287.7	8,227.8	7,072.8	35.9	35.7	-70.21	-680.2	-668.5	637.6	569.1	68.49	9.309	
8,500.0	7,288.0	8,327.8	7,072.3	38.3	38.1	-70.15	-680.2	-768.5	637.9	564.9	72.97	8.742	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	7,288.2	8,427.8	7,071.9	40.7	40.6	-70.09	-680.2	-868.5	638.1	560.6	77.54	8.230	
8,700.0	7,288.5	8,527.8	7,071.4	43.2	43.1	-70.02	-680.2	-968.5	638.4	556.2	82.19	7.767	
8,800.0	7,288.8	8,627.8	7,070.9	45.7	45.6	-69.96	-680.2	-1,068.5	638.7	551.7	86.91	7.348	
8,900.0	7,289.0	8,727.8	7,070.4	48.3	48.2	-69.89	-680.2	-1,168.5	638.9	547.2	91.69	6.968	
9,000.0	7,289.3	8,827.8	7,069.9	50.9	50.8	-69.83	-680.2	-1,268.5	639.2	542.7	96.51	6.623	
9,100.0	7,289.6	8,927.8	7,069.4	53.5	53.4	-69.77	-680.2	-1,368.4	639.4	538.1	101.38	6.308	
9,200.0	7,289.8	9,027.8	7,068.9	56.1	56.0	-69.70	-680.2	-1,468.4	639.7	533.4	106.27	6.019	
9,300.0	7,290.1	9,127.8	7,068.4	58.7	58.6	-69.64	-680.2	-1,568.4	640.0	528.8	111.20	5.755	
9,400.0	7,290.4	9,227.7	7,068.0	61.4	61.3	-69.58	-680.2	-1,668.4	640.2	524.1	116.15	5.512	
9,500.0	7,290.6	9,327.7	7,067.5	64.1	64.0	-69.52	-680.2	-1,768.4	640.5	519.4	121.13	5.288	
9,600.0	7,290.9	9,427.7	7,067.0	66.7	66.7	-69.45	-680.2	-1,868.4	640.7	514.6	126.12	5.081	
9,700.0	7,291.2	9,527.7	7,066.5	69.4	69.4	-69.39	-680.2	-1,968.4	641.0	509.9	131.12	4.889	
9,800.0	7,291.4	9,627.7	7,066.0	72.1	72.1	-69.33	-680.2	-2,068.4	641.3	505.1	136.14	4.710	
9,900.0	7,291.7	9,727.7	7,065.5	74.8	74.8	-69.26	-680.2	-2,168.4	641.5	500.4	141.17	4.544	
10,000.0	7,292.0	9,827.7	7,065.0	77.5	77.5	-69.20	-680.2	-2,268.4	641.8	495.6	146.21	4.390	
10,100.0	7,292.2	9,927.7	7,064.6	80.3	80.2	-69.14	-680.2	-2,368.4	642.1	490.8	151.26	4.245	
10,200.0	7,292.5	10,027.7	7,064.1	83.0	82.9	-69.08	-680.2	-2,468.4	642.3	486.0	156.32	4.109	
10,300.0	7,292.8	10,127.7	7,063.6	85.7	85.7	-69.01	-680.2	-2,568.4	642.6	481.2	161.38	3.982	
10,400.0	7,293.0	10,227.7	7,063.1	88.5	88.4	-68.95	-680.2	-2,668.4	642.9	476.4	166.45	3.862	
10,500.0	7,293.3	10,327.7	7,062.6	91.2	91.1	-68.89	-680.2	-2,768.4	643.2	471.6	171.52	3.750	
10,600.0	7,293.6	10,427.7	7,062.2	93.9	93.9	-68.83	-680.2	-2,868.4	643.4	466.8	176.59	3.644	
10,700.0	7,293.8	10,527.7	7,061.7	96.7	96.6	-68.76	-680.2	-2,968.4	643.7	462.0	181.67	3.543	
10,800.0	7,294.1	10,627.7	7,061.2	99.4	99.4	-68.70	-680.2	-3,068.4	644.0	457.2	186.75	3.448	
10,900.0	7,294.4	10,727.7	7,060.7	102.2	102.1	-68.64	-680.2	-3,168.4	644.2	452.4	191.83	3.358	
11,000.0	7,294.6	10,827.7	7,060.2	105.0	104.9	-68.58	-680.2	-3,268.4	644.5	447.6	196.92	3.273	
11,100.0	7,294.9	10,927.7	7,059.7	107.7	107.7	-68.52	-680.2	-3,368.4	644.8	442.8	202.00	3.192	
11,200.0	7,295.2	11,027.7	7,059.3	110.5	110.4	-68.46	-680.2	-3,468.4	645.1	438.0	207.09	3.115	
11,300.0	7,295.4	11,127.7	7,058.8	113.2	113.2	-68.39	-680.2	-3,568.4	645.3	433.2	212.17	3.042	
11,400.0	7,295.7	11,227.7	7,058.3	116.0	116.0	-68.33	-680.2	-3,668.4	645.6	428.4	217.25	2.972	
11,500.0	7,296.0	11,327.7	7,057.8	118.8	118.7	-68.27	-680.2	-3,768.4	645.9	423.6	222.34	2.905	
11,600.0	7,296.2	11,427.7	7,057.4	121.6	121.5	-68.21	-680.2	-3,868.4	646.2	418.8	227.42	2.841	
11,700.0	7,296.5	11,527.7	7,056.9	124.3	124.3	-68.15	-680.2	-3,968.4	646.5	414.0	232.50	2.780	
11,800.0	7,296.8	11,627.7	7,056.4	127.1	127.0	-68.09	-680.2	-4,068.4	646.7	409.2	237.58	2.722	
11,886.1	7,297.0	11,711.5	7,056.0	129.5	129.4	-68.04	-680.2	-4,152.1	647.0	405.1	241.90	2.675 SF	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	1.0	1.0	0.0	0.0	-179.73	-60.1	-0.3	60.1				
100.0	100.0	101.0	101.0	0.1	0.1	-179.73	-60.1	-0.3	60.1	59.9	0.20	305.601	
200.0	200.0	201.0	201.0	0.3	0.3	-179.73	-60.1	-0.3	60.1	59.5	0.65	93.009	
266.3	266.3	267.3	267.3	0.5	0.5	-179.73	-60.1	-0.3	60.1	59.2	0.94	63.643	CC
300.0	300.0	301.0	301.0	0.5	0.5	-179.73	-60.1	-0.3	60.1	59.0	1.10	54.864	ES
400.0	400.0	400.0	400.0	0.8	0.8	179.21	-61.4	0.9	61.4	59.9	1.52	40.393	
500.0	500.0	497.5	497.4	1.0	1.0	176.38	-65.3	4.1	65.5	63.6	1.94	33.699	
600.0	600.0	595.2	594.7	1.2	1.2	172.39	-71.7	9.6	72.6	70.2	2.40	30.301	
700.0	700.0	692.2	691.0	1.4	1.4	168.01	-80.5	17.1	82.9	80.0	2.88	28.773	
800.0	800.0	788.6	786.2	1.7	1.8	67.81	-91.8	26.7	96.0	92.7	3.29	29.152	
900.0	899.8	884.2	880.2	1.9	2.1	66.01	-105.3	38.2	111.0	107.3	3.75	29.638	
1,000.0	999.5	982.4	976.3	2.1	2.5	65.61	-120.8	51.4	126.6	122.4	4.23	29.942	
1,100.0	1,098.7	1,081.4	1,073.0	2.3	2.9	66.56	-136.5	64.7	140.9	136.1	4.75	29.650	
1,200.0	1,197.5	1,180.4	1,169.8	2.6	3.4	68.51	-152.2	78.1	153.9	148.5	5.33	28.858	
1,300.0	1,295.6	1,279.3	1,266.6	3.0	3.8	71.26	-167.8	91.4	165.9	159.9	5.99	27.694	
1,400.0	1,393.4	1,378.1	1,363.3	3.3	4.3	74.38	-183.5	104.7	177.9	171.2	6.72	26.457	
1,500.0	1,491.3	1,477.0	1,460.0	3.7	4.7	77.09	-199.1	118.0	190.3	182.8	7.50	25.391	
1,600.0	1,589.1	1,575.8	1,556.7	4.1	5.2	79.47	-214.8	131.4	203.1	194.8	8.30	24.486	
1,700.0	1,686.9	1,674.6	1,653.3	4.6	5.6	81.57	-230.5	144.7	216.3	207.1	9.12	23.720	
1,800.0	1,784.7	1,773.5	1,750.0	5.0	6.1	83.43	-246.1	158.0	229.6	219.7	9.95	23.071	
1,900.0	1,882.5	1,872.3	1,846.7	5.4	6.5	85.08	-261.8	171.3	243.2	232.4	10.80	22.518	
2,000.0	1,980.3	1,971.2	1,943.4	5.9	7.0	86.56	-277.4	184.6	256.9	245.3	11.66	22.044	
2,100.0	2,078.1	2,070.0	2,040.1	6.3	7.4	87.88	-293.1	198.0	270.8	258.3	12.52	21.636	
2,200.0	2,176.0	2,168.9	2,136.7	6.7	7.9	89.08	-308.7	211.3	284.9	271.5	13.39	21.283	
2,300.0	2,273.8	2,267.7	2,233.4	7.2	8.3	90.16	-324.4	224.6	299.0	284.8	14.26	20.976	
2,400.0	2,371.6	2,366.5	2,330.1	7.6	8.8	91.15	-340.0	237.9	313.3	298.1	15.13	20.706	
2,500.0	2,469.4	2,465.4	2,426.8	8.1	9.3	92.05	-355.7	251.2	327.6	311.6	16.01	20.468	
2,600.0	2,567.2	2,564.2	2,523.5	8.5	9.7	92.88	-371.3	264.6	342.0	325.1	16.88	20.257	
2,700.0	2,665.0	2,663.1	2,620.2	9.0	10.2	93.63	-387.0	277.9	356.4	338.7	17.76	20.069	
2,800.0	2,762.8	2,761.9	2,716.8	9.4	10.6	94.33	-402.6	291.2	371.0	352.3	18.64	19.901	
2,900.0	2,860.7	2,860.8	2,813.5	9.9	11.1	94.98	-418.3	304.5	385.5	366.0	19.52	19.750	
3,000.0	2,958.5	2,959.6	2,910.2	10.3	11.6	95.58	-433.9	317.9	400.1	379.7	20.40	19.614	
3,100.0	3,056.3	3,058.4	3,006.9	10.8	12.0	96.14	-449.6	331.2	414.8	393.5	21.28	19.490	
3,200.0	3,154.1	3,157.3	3,103.6	11.3	12.5	96.66	-465.2	344.5	429.5	407.3	22.16	19.378	
3,300.0	3,251.9	3,256.1	3,200.3	11.7	12.9	97.14	-480.9	357.8	444.2	421.2	23.05	19.275	
3,400.0	3,349.7	3,355.0	3,296.9	12.2	13.4	97.59	-496.5	371.1	459.0	435.0	23.93	19.181	
3,500.0	3,447.5	3,453.8	3,393.6	12.6	13.8	98.02	-512.2	384.5	473.7	448.9	24.81	19.095	
3,600.0	3,545.4	3,552.7	3,490.3	13.1	14.3	98.42	-527.9	397.8	488.5	462.8	25.69	19.015	
3,700.0	3,643.2	3,651.5	3,587.0	13.5	14.8	98.80	-543.5	411.1	503.3	476.8	26.57	18.942	
3,800.0	3,741.0	3,750.3	3,683.7	14.0	15.2	99.15	-559.2	424.4	518.2	490.7	27.46	18.874	
3,900.0	3,838.8	3,849.2	3,780.3	14.5	15.7	99.49	-574.8	437.7	533.0	504.7	28.34	18.811	
4,000.0	3,936.6	3,948.0	3,877.0	14.9	16.1	99.80	-590.5	451.1	547.9	518.7	29.22	18.752	
4,009.8	3,946.2	3,957.7	3,886.5	15.0	16.2	99.83	-592.0	452.4	549.4	520.1	29.31	18.747	
4,100.0	4,034.7	4,046.9	3,973.8	15.3	16.6	100.22	-606.1	464.4	562.6	532.5	30.05	18.719	
4,200.0	4,133.4	4,145.9	4,070.6	15.6	17.1	100.31	-621.8	477.7	576.6	545.8	30.76	18.743	
4,300.0	4,232.6	4,244.9	4,167.4	15.8	17.5	100.05	-637.5	491.1	590.1	558.7	31.41	18.786	
4,400.0	4,332.2	4,343.7	4,264.0	16.1	18.0	99.49	-653.1	504.4	603.0	571.0	31.99	18.851	
4,500.0	4,432.1	4,442.2	4,360.4	16.2	18.4	98.63	-668.7	517.6	615.5	583.0	32.49	18.943	
4,600.0	4,532.0	4,540.3	4,456.3	16.4	18.9	97.50	-684.3	530.9	627.8	594.9	32.92	19.069	
4,609.8	4,541.8	4,549.8	4,465.7	16.4	18.9	-165.93	-685.8	532.2	629.0	603.7	25.36	24.806	
4,700.0	4,632.0	4,638.1	4,552.0	16.5	19.4	-167.28	-699.7	544.0	640.3	614.3	25.98	24.647	
4,800.0	4,732.0	4,735.9	4,647.7	16.6	19.8	-168.72	-715.2	557.2	653.1	626.5	26.68	24.479	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	4,832.0	4,833.7	4,743.4	16.7	20.3	-170.10	-730.7	570.4	666.4	639.0	27.40	24.323	
5,000.0	4,932.0	4,931.5	4,839.0	16.9	20.7	-171.44	-746.2	583.6	680.0	651.9	28.13	24.179	
5,100.0	5,032.0	5,029.3	4,934.7	17.0	21.2	-172.71	-761.7	596.8	694.0	665.2	28.86	24.048	
5,200.0	5,132.0	5,127.2	5,030.4	17.1	21.6	-173.94	-777.2	610.0	708.4	678.8	29.60	23.929	
5,300.0	5,232.0	5,225.0	5,126.1	17.3	22.1	-175.13	-792.7	623.1	723.0	692.7	30.35	23.821	
5,400.0	5,332.0	5,322.8	5,221.7	17.4	22.5	-176.26	-808.2	636.3	738.0	706.9	31.10	23.725	
5,500.0	5,432.0	5,420.6	5,317.4	17.6	23.0	-177.35	-823.7	649.5	753.2	721.3	31.86	23.640	
5,600.0	5,532.0	5,529.0	5,423.5	17.7	23.4	-178.49	-840.5	663.8	768.4	735.8	32.62	23.554	
5,700.0	5,632.0	5,652.8	5,545.6	17.9	23.8	-179.52	-856.4	677.3	781.1	747.8	33.31	23.452	
5,800.0	5,732.0	5,778.3	5,670.1	18.0	24.1	179.73	-868.4	687.6	790.7	756.8	33.90	23.322	
5,900.0	5,832.0	5,904.9	5,796.3	18.2	24.3	179.25	-876.3	694.3	797.0	762.6	34.41	23.162	
6,000.0	5,932.0	6,032.3	5,923.5	18.3	24.5	179.03	-879.9	697.4	799.9	765.1	34.82	22.972	
6,100.0	6,032.0	6,141.8	6,033.0	18.5	24.6	179.02	-880.2	697.6	800.1	765.0	35.15	22.762	
6,200.0	6,132.0	6,241.8	6,133.0	18.6	24.7	179.02	-880.2	697.6	800.1	764.7	35.46	22.565	
6,300.0	6,232.0	6,341.8	6,233.0	18.8	24.8	179.02	-880.2	697.6	800.1	764.4	35.77	22.370	
6,400.0	6,332.0	6,441.8	6,333.0	18.9	24.9	179.02	-880.2	697.6	800.1	764.0	36.08	22.177	
6,500.0	6,432.0	6,541.8	6,433.0	19.1	25.0	179.02	-880.2	697.6	800.1	763.7	36.39	21.985	
6,600.0	6,532.0	6,643.0	6,534.1	19.2	25.1	179.27	-880.2	694.1	800.1	763.4	36.66	21.824	
6,637.8	6,569.8	6,680.8	6,571.6	19.3	25.1	179.61	-880.2	689.3	800.0	763.3	36.71	21.792	
6,650.0	6,582.0	6,693.0	6,583.6	19.3	25.1	-90.26	-880.2	687.4	800.0	760.7	39.31	20.350	
6,673.8	6,605.8	6,716.6	6,606.8	19.3	25.1	-90.00	-880.2	683.0	800.0	760.6	39.37	20.320	
6,700.0	6,632.0	6,742.4	6,632.0	19.4	25.1	-89.72	-880.2	677.3	800.0	760.6	39.43	20.290	
6,750.0	6,681.6	6,791.3	6,679.1	19.4	25.0	-89.19	-880.2	664.2	800.1	760.6	39.49	20.262	
6,800.0	6,730.6	6,839.7	6,724.7	19.4	25.0	-88.66	-880.2	648.0	800.2	760.7	39.50	20.261	
6,850.0	6,778.9	6,887.7	6,768.7	19.3	24.9	-88.14	-880.2	629.0	800.4	761.0	39.46	20.285	
6,900.0	6,826.2	6,935.2	6,811.0	19.3	24.8	-87.64	-880.2	607.3	800.7	761.3	39.39	20.328	
6,950.0	6,872.2	6,982.3	6,851.4	19.2	24.7	-87.14	-880.2	583.1	801.0	761.7	39.29	20.386	
7,000.0	6,916.8	7,029.0	6,889.7	19.2	24.6	-86.66	-880.2	556.5	801.4	762.2	39.18	20.452	
7,050.0	6,959.6	7,075.3	6,926.0	19.1	24.5	-86.20	-880.2	527.7	801.8	762.7	39.07	20.521	
7,100.0	7,000.6	7,121.3	6,960.1	19.0	24.4	-85.76	-880.2	496.8	802.2	763.3	38.98	20.582	
7,150.0	7,039.5	7,166.9	6,991.9	19.0	24.3	-85.33	-880.2	464.1	802.7	763.8	38.91	20.629	
7,200.0	7,076.0	7,212.3	7,021.4	19.0	24.3	-84.93	-880.2	429.7	803.2	764.3	38.90	20.650	
7,250.0	7,110.1	7,257.3	7,048.5	19.0	24.2	-84.56	-880.2	393.7	803.7	764.7	38.95	20.636	
7,300.0	7,141.6	7,300.0	7,072.0	19.1	24.1	-84.22	-880.2	358.1	804.2	765.1	39.07	20.581	
7,350.0	7,170.3	7,346.7	7,095.2	19.2	24.0	-83.88	-880.2	317.6	804.6	765.3	39.32	20.464	
7,400.0	7,196.1	7,391.1	7,114.8	19.4	23.9	-83.58	-880.2	277.8	805.1	765.4	39.68	20.291	
7,450.0	7,218.8	7,435.2	7,131.8	19.7	23.9	-83.31	-880.2	237.0	805.5	765.4	40.16	20.057	
7,500.0	7,238.3	7,479.2	7,146.3	20.0	23.8	-83.06	-880.2	195.5	805.9	765.1	40.78	19.763	
7,550.0	7,254.6	7,523.1	7,158.1	20.5	23.8	-82.85	-880.2	153.2	806.3	764.8	41.53	19.413	
7,600.0	7,267.6	7,566.8	7,167.3	21.0	23.8	-82.67	-880.2	110.5	806.6	764.2	42.42	19.014	
7,650.0	7,277.1	7,610.4	7,173.8	21.5	23.8	-82.52	-880.2	67.4	806.9	763.4	43.44	18.575	
7,700.0	7,283.3	7,654.0	7,177.7	22.2	23.9	-82.41	-880.2	24.0	807.1	762.5	44.58	18.106	
7,750.0	7,285.9	7,699.2	7,179.0	22.9	24.1	-82.32	-880.2	-21.2	807.2	761.4	45.85	17.608	
7,760.9	7,286.0	7,708.0	7,179.0	23.0	24.1	-82.31	-880.2	-30.0	807.3	761.1	46.13	17.499	
7,800.0	7,286.1	7,747.2	7,178.8	23.6	24.4	-82.29	-880.2	-69.1	807.3	760.0	47.32	17.060	
7,900.0	7,286.4	7,847.1	7,178.5	25.3	25.6	-82.25	-880.2	-169.1	807.4	756.8	50.61	15.952	
8,000.0	7,286.6	7,947.1	7,178.1	27.2	27.2	-82.20	-880.2	-269.1	807.5	753.2	54.28	14.876	
8,100.0	7,286.9	8,047.1	7,177.7	29.2	29.2	-82.16	-880.2	-369.1	807.6	749.3	58.25	13.863	
8,200.0	7,287.2	8,147.1	7,177.4	31.3	31.3	-82.11	-880.2	-469.1	807.6	745.2	62.47	12.929	
8,300.0	7,287.4	8,247.1	7,177.0	33.6	33.6	-82.07	-880.2	-569.1	807.7	740.8	66.88	12.078	
8,400.0	7,287.7	8,347.1	7,176.6	35.9	35.9	-82.03	-880.2	-669.1	807.8	736.4	71.45	11.306	
8,500.0	7,288.0	8,447.1	7,176.3	38.3	38.3	-81.98	-880.2	-769.1	807.9	731.7	76.15	10.609	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	7,288.2	8,547.1	7,175.9	40.7	40.7	-81.94	-880.2	-869.1	808.0	727.0	80.96	9.980	
8,700.0	7,288.5	8,647.1	7,175.5	43.2	43.2	-81.89	-880.2	-969.1	808.1	722.2	85.86	9.411	
8,800.0	7,288.8	8,747.1	7,175.2	45.7	45.7	-81.85	-880.2	-1,069.1	808.2	717.3	90.83	8.897	
8,900.0	7,289.0	8,847.1	7,174.8	48.3	48.3	-81.81	-880.2	-1,169.1	808.3	712.4	95.87	8.431	
9,000.0	7,289.3	8,947.1	7,174.4	50.9	50.9	-81.76	-880.2	-1,269.1	808.3	707.4	100.96	8.006	
9,100.0	7,289.6	9,047.1	7,174.1	53.5	53.5	-81.72	-880.2	-1,369.1	808.4	702.3	106.10	7.620	
9,200.0	7,289.8	9,147.1	7,173.7	56.1	56.1	-81.67	-880.2	-1,469.1	808.5	697.3	111.27	7.266	
9,300.0	7,290.1	9,247.1	7,173.4	58.7	58.7	-81.63	-880.2	-1,569.1	808.6	692.1	116.48	6.942	
9,400.0	7,290.4	9,347.1	7,173.0	61.4	61.4	-81.58	-880.2	-1,669.1	808.7	687.0	121.72	6.644	
9,500.0	7,290.6	9,447.1	7,172.6	64.1	64.1	-81.54	-880.2	-1,769.1	808.8	681.8	126.98	6.369	
9,600.0	7,290.9	9,547.1	7,172.3	66.7	66.7	-81.50	-880.2	-1,869.1	808.9	676.6	132.27	6.116	
9,700.0	7,291.2	9,647.1	7,171.9	69.4	69.4	-81.45	-880.2	-1,969.1	809.0	671.4	137.57	5.881	
9,800.0	7,291.4	9,747.1	7,171.5	72.1	72.1	-81.41	-880.2	-2,069.1	809.1	666.2	142.89	5.662	
9,900.0	7,291.7	9,847.1	7,171.2	74.8	74.8	-81.36	-880.2	-2,169.1	809.2	661.0	148.23	5.459	
10,000.0	7,292.0	9,947.1	7,170.8	77.5	77.5	-81.32	-880.2	-2,269.1	809.3	655.7	153.58	5.270	
10,100.0	7,292.2	10,047.1	7,170.4	80.3	80.3	-81.28	-880.2	-2,369.1	809.4	650.4	158.94	5.092	
10,200.0	7,292.5	10,147.1	7,170.1	83.0	83.0	-81.23	-880.2	-2,469.1	809.5	645.2	164.31	4.926	
10,300.0	7,292.8	10,247.1	7,169.7	85.7	85.7	-81.19	-880.2	-2,569.1	809.6	639.9	169.69	4.771	
10,400.0	7,293.0	10,347.1	7,169.4	88.5	88.4	-81.14	-880.2	-2,669.1	809.7	634.6	175.08	4.624	
10,500.0	7,293.3	10,447.1	7,169.0	91.2	91.2	-81.10	-880.2	-2,769.1	809.8	629.3	180.48	4.487	
10,600.0	7,293.6	10,547.1	7,168.6	93.9	93.9	-81.06	-880.2	-2,869.1	809.9	624.0	185.88	4.357	
10,700.0	7,293.8	10,647.1	7,168.3	96.7	96.7	-81.01	-880.2	-2,969.1	810.0	618.7	191.29	4.234	
10,800.0	7,294.1	10,747.1	7,167.9	99.4	99.4	-80.97	-880.2	-3,069.1	810.1	613.3	196.71	4.118	
10,900.0	7,294.4	10,847.1	7,167.5	102.2	102.2	-80.92	-880.2	-3,169.1	810.2	608.0	202.13	4.008	
11,000.0	7,294.6	10,947.1	7,167.2	105.0	104.9	-80.88	-880.2	-3,269.1	810.3	602.7	207.55	3.904	
11,100.0	7,294.9	11,047.1	7,166.8	107.7	107.7	-80.84	-880.2	-3,369.1	810.4	597.4	212.98	3.805	
11,200.0	7,295.2	11,147.1	7,166.5	110.5	110.4	-80.79	-880.2	-3,469.1	810.5	592.0	218.41	3.711	
11,300.0	7,295.4	11,247.1	7,166.1	113.2	113.2	-80.75	-880.2	-3,569.1	810.6	586.7	223.85	3.621	
11,400.0	7,295.7	11,347.1	7,165.7	116.0	116.0	-80.70	-880.2	-3,669.1	810.7	581.4	229.29	3.536	
11,500.0	7,296.0	11,447.1	7,165.4	118.8	118.7	-80.66	-880.2	-3,769.1	810.8	576.0	234.73	3.454	
11,600.0	7,296.2	11,547.1	7,165.0	121.6	121.5	-80.62	-880.2	-3,869.0	810.9	570.7	240.17	3.376	
11,700.0	7,296.5	11,647.1	7,164.7	124.3	124.3	-80.57	-880.2	-3,969.0	811.0	565.4	245.62	3.302	
11,800.0	7,296.8	11,747.1	7,164.3	127.1	127.0	-80.53	-880.2	-4,069.0	811.1	560.0	251.06	3.231	
11,839.1	7,296.9	11,786.2	7,164.2	128.2	128.1	-80.51	-880.2	-4,108.2	811.1	557.9	253.20	3.203	
11,886.1	7,297.0	11,828.8	7,164.0	129.5	129.3	-80.49	-880.2	-4,150.8	811.2	555.5	255.63	3.173	SF

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	1.0	1.0	0.0	0.0	180.00	-29.9	0.0	29.9				
100.0	100.0	101.0	101.0	0.1	0.1	180.00	-29.9	0.0	29.9	29.7	0.20	151.894	
200.0	200.0	201.0	201.0	0.3	0.3	180.00	-29.9	0.0	29.9	29.2	0.65	46.229	
300.0	300.0	301.0	301.0	0.5	0.5	180.00	-29.9	0.0	29.9	28.8	1.10	27.263	
400.0	400.0	401.0	401.0	0.8	0.8	180.00	-29.9	0.0	29.9	28.3	1.55	19.332	
466.3	466.3	467.3	467.3	0.9	0.9	180.00	-29.9	0.0	29.9	28.0	1.84	16.205	CC
500.0	500.0	501.0	501.0	1.0	1.0	180.00	-29.9	0.0	29.9	27.9	1.99	14.977	ES
600.0	600.0	600.4	600.4	1.2	1.2	177.26	-30.8	1.5	30.9	28.5	2.42	12.743	
700.0	700.0	699.5	699.4	1.4	1.4	170.18	-33.7	5.8	34.2	31.4	2.84	12.022	
800.0	800.0	798.4	797.8	1.7	1.6	66.69	-38.3	13.0	39.9	36.6	3.27	12.201	
900.0	899.8	896.9	895.6	1.9	1.9	62.90	-44.8	23.0	47.2	43.5	3.70	12.749	
1,000.0	999.5	995.1	992.6	2.1	2.2	61.21	-53.1	35.8	55.7	51.5	4.16	13.390	
1,100.0	1,098.7	1,092.9	1,088.7	2.3	2.5	60.88	-63.2	51.3	65.3	60.7	4.66	14.015	
1,200.0	1,197.5	1,192.3	1,185.9	2.6	2.9	62.09	-74.4	68.6	74.9	69.7	5.23	14.329	
1,300.0	1,295.6	1,291.9	1,283.3	3.0	3.3	65.16	-85.7	85.9	83.0	77.1	5.88	14.120	
1,400.0	1,393.4	1,391.4	1,380.7	3.3	3.7	68.81	-97.0	103.3	90.7	84.1	6.62	13.707	
1,500.0	1,491.3	1,491.0	1,478.1	3.7	4.2	71.89	-108.3	120.6	98.7	91.3	7.40	13.339	
1,600.0	1,589.1	1,590.5	1,575.4	4.1	4.6	74.50	-119.5	138.0	106.9	98.7	8.21	13.020	
1,700.0	1,686.9	1,690.1	1,672.8	4.6	5.1	76.74	-130.8	155.3	115.3	106.3	9.05	12.746	
1,800.0	1,784.7	1,789.6	1,770.2	5.0	5.5	78.66	-142.1	172.7	123.9	114.0	9.90	12.512	
1,900.0	1,882.5	1,889.2	1,867.6	5.4	5.9	80.34	-153.4	190.0	132.6	121.8	10.77	12.312	
2,000.0	1,980.3	1,988.7	1,964.9	5.9	6.4	81.81	-164.7	207.4	141.4	129.7	11.64	12.140	
2,100.0	2,078.1	2,088.3	2,062.3	6.3	6.9	83.11	-175.9	224.7	150.2	137.7	12.53	11.993	
2,200.0	2,176.0	2,187.8	2,159.7	6.7	7.3	84.27	-187.2	242.1	159.2	145.8	13.42	11.865	
2,300.0	2,273.8	2,287.4	2,257.1	7.2	7.8	85.30	-198.5	259.4	168.2	153.9	14.31	11.753	
2,400.0	2,371.6	2,386.9	2,354.5	7.6	8.2	86.22	-209.8	276.8	177.2	162.0	15.20	11.656	
2,500.0	2,469.4	2,486.5	2,451.8	8.1	8.7	87.06	-221.0	294.1	186.3	170.2	16.10	11.570	
2,600.0	2,567.2	2,586.0	2,549.2	8.5	9.1	87.81	-232.3	311.5	195.4	178.4	17.00	11.494	
2,700.0	2,665.0	2,685.6	2,646.6	9.0	9.6	88.50	-243.6	328.8	204.6	186.7	17.90	11.426	
2,800.0	2,762.8	2,785.2	2,744.0	9.4	10.1	89.14	-254.9	346.2	213.7	194.9	18.81	11.365	
2,900.0	2,860.7	2,884.7	2,841.3	9.9	10.5	89.71	-266.1	363.5	222.9	203.2	19.71	11.311	
3,000.0	2,958.5	2,984.3	2,938.7	10.3	11.0	90.25	-277.4	380.9	232.2	211.5	20.61	11.262	
3,100.0	3,056.3	3,083.8	3,036.1	10.8	11.4	90.74	-288.7	398.2	241.4	219.9	21.52	11.217	
3,200.0	3,154.1	3,183.4	3,133.5	11.3	11.9	91.20	-300.0	415.6	250.6	228.2	22.43	11.176	
3,300.0	3,251.9	3,282.9	3,230.9	11.7	12.4	91.62	-311.2	432.9	259.9	236.6	23.33	11.140	
3,400.0	3,349.7	3,382.5	3,328.2	12.2	12.8	92.01	-322.5	450.3	269.2	245.0	24.24	11.106	
3,500.0	3,447.5	3,482.0	3,425.6	12.6	13.3	92.38	-333.8	467.7	278.5	253.3	25.15	11.075	
3,600.0	3,545.4	3,581.6	3,523.0	13.1	13.7	92.73	-345.1	485.0	287.8	261.7	26.05	11.046	
3,700.0	3,643.2	3,681.1	3,620.4	13.5	14.2	93.05	-356.3	502.4	297.1	270.2	26.96	11.020	
3,800.0	3,741.0	3,780.7	3,717.7	14.0	14.7	93.35	-367.6	519.7	306.4	278.6	27.87	10.995	
3,900.0	3,838.8	3,880.2	3,815.1	14.5	15.1	93.64	-378.9	537.1	315.8	287.0	28.78	10.972	
4,000.0	3,936.6	3,979.8	3,912.5	14.9	15.6	93.91	-390.2	554.4	325.1	295.4	29.69	10.951	
4,009.8	3,946.2	3,989.5	3,922.0	15.0	15.6	93.93	-391.3	556.1	326.0	296.3	29.78	10.949	
4,100.0	4,034.7	4,079.3	4,009.9	15.3	16.0	94.08	-401.4	571.8	334.4	303.8	30.53	10.953	
4,200.0	4,133.4	4,178.9	4,107.2	15.6	16.5	93.69	-412.7	589.1	343.4	312.1	31.23	10.995	
4,300.0	4,232.6	4,278.2	4,204.4	15.8	17.0	92.76	-424.0	606.4	352.3	320.4	31.85	11.058	
4,400.0	4,332.2	4,377.3	4,301.4	16.1	17.4	91.34	-435.2	623.7	361.2	328.8	32.39	11.150	
4,500.0	4,432.1	4,476.2	4,398.1	16.2	17.9	89.47	-446.4	640.9	370.4	337.5	32.83	11.283	
4,600.0	4,532.0	4,581.2	4,501.2	16.4	18.2	87.29	-457.2	657.6	379.3	346.2	33.07	11.467	
4,609.8	4,541.8	4,591.5	4,511.4	16.4	18.3	-176.23	-458.2	659.0	380.1	355.9	24.17	15.722	
4,700.0	4,632.0	4,687.2	4,606.0	16.5	18.5	-178.10	-466.0	671.1	387.0	362.2	24.81	15.600	
4,800.0	4,732.0	4,794.3	4,712.3	16.6	18.8	-179.65	-472.8	681.5	393.1	367.7	25.43	15.457	

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-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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	4,832.0	4,902.2	4,819.9	16.7	19.0	179.32	-477.4	688.6	397.4	371.5	25.97	15.306	
5,000.0	4,932.0	5,010.5	4,928.1	16.9	19.1	178.79	-479.8	692.3	399.7	373.3	26.40	15.141	
5,100.0	5,032.0	5,115.5	5,033.0	17.0	19.3	178.71	-480.2	692.9	400.1	373.3	26.75	14.956	
5,200.0	5,132.0	5,215.5	5,133.0	17.1	19.4	178.71	-480.2	692.9	400.1	373.0	27.08	14.776	
5,300.0	5,232.0	5,315.5	5,233.0	17.3	19.5	178.71	-480.2	692.9	400.1	372.7	27.40	14.599	
5,400.0	5,332.0	5,415.5	5,333.0	17.4	19.6	178.71	-480.2	692.9	400.1	372.3	27.73	14.425	
5,500.0	5,432.0	5,515.5	5,433.0	17.6	19.7	178.71	-480.2	692.9	400.1	372.0	28.07	14.253	
5,600.0	5,532.0	5,615.5	5,533.0	17.7	19.8	178.71	-480.2	692.9	400.1	371.7	28.41	14.084	
5,700.0	5,632.0	5,715.5	5,633.0	17.9	20.0	178.71	-480.2	692.9	400.1	371.3	28.75	13.917	
5,800.0	5,732.0	5,815.5	5,733.0	18.0	20.1	178.71	-480.2	692.9	400.1	371.0	29.09	13.753	
5,900.0	5,832.0	5,915.5	5,833.0	18.2	20.2	178.71	-480.2	692.9	400.1	370.6	29.44	13.591	
6,000.0	5,932.0	6,015.5	5,933.0	18.3	20.3	178.71	-480.2	692.9	400.1	370.3	29.79	13.432	
6,100.0	6,032.0	6,115.5	6,033.0	18.5	20.5	178.71	-480.2	692.9	400.1	369.9	30.14	13.275	
6,200.0	6,132.0	6,215.5	6,133.0	18.6	20.6	178.71	-480.2	692.9	400.1	369.6	30.49	13.121	
6,300.0	6,232.0	6,315.5	6,233.0	18.8	20.7	178.71	-480.2	692.9	400.1	369.2	30.85	12.970	
6,400.0	6,332.0	6,415.5	6,333.0	18.9	20.9	178.71	-480.2	692.9	400.1	368.9	31.21	12.821	
6,500.0	6,432.0	6,515.5	6,433.0	19.1	21.0	178.71	-480.2	692.9	400.1	368.5	31.57	12.674	
6,600.0	6,532.0	6,616.1	6,533.6	19.2	21.1	179.21	-480.2	689.4	400.0	368.2	31.84	12.561	
6,637.8	6,569.8	6,653.8	6,570.9	19.3	21.1	179.89	-480.2	684.7	400.0	368.1	31.88	12.546	
6,643.1	6,575.1	6,659.0	6,576.1	19.3	21.1	-90.00	-480.2	683.9	400.0	361.3	38.64	10.350	
6,650.0	6,582.0	6,665.9	6,582.9	19.3	21.1	-89.85	-480.2	682.8	400.0	361.3	38.67	10.343	
6,700.0	6,632.0	6,715.0	6,630.9	19.4	21.1	-88.79	-480.2	672.9	400.1	361.3	38.81	10.308	
6,750.0	6,681.6	6,763.6	6,677.8	19.4	21.0	-87.74	-480.2	659.9	400.3	361.4	38.89	10.292	
6,800.0	6,730.6	6,811.7	6,723.2	19.4	21.0	-86.70	-480.2	643.9	400.7	361.7	38.92	10.295	
6,850.0	6,778.9	6,859.4	6,767.0	19.3	20.9	-85.69	-480.2	625.1	401.1	362.2	38.90	10.313	
6,900.0	6,826.2	6,906.7	6,809.1	19.3	20.8	-84.70	-480.2	603.6	401.7	362.9	38.83	10.345	
6,950.0	6,872.2	6,953.5	6,849.3	19.2	20.8	-83.74	-480.2	579.6	402.4	363.7	38.73	10.389	
7,000.0	6,916.8	7,000.0	6,887.6	19.2	20.7	-82.82	-480.2	553.3	403.2	364.6	38.62	10.441	
7,050.0	6,959.6	7,046.1	6,923.9	19.1	20.6	-81.93	-480.2	524.8	404.0	365.5	38.49	10.497	
7,100.0	7,000.6	7,091.9	6,957.9	19.0	20.5	-81.08	-480.2	494.2	404.9	366.6	38.37	10.552	
7,150.0	7,039.5	7,137.4	6,989.8	19.0	20.5	-80.28	-480.2	461.7	405.9	367.6	38.28	10.602	
7,200.0	7,076.0	7,182.6	7,019.3	19.0	20.4	-79.53	-480.2	427.5	406.8	368.6	38.23	10.640	
7,250.0	7,110.1	7,227.5	7,046.5	19.0	20.4	-78.83	-480.2	391.8	407.8	369.5	38.25	10.662	
7,300.0	7,141.6	7,272.2	7,071.2	19.1	20.4	-78.18	-480.2	354.6	408.7	370.4	38.34	10.661	
7,350.0	7,170.3	7,316.6	7,093.5	19.2	20.5	-77.58	-480.2	316.1	409.6	371.1	38.52	10.633	
7,400.0	7,196.1	7,360.9	7,113.2	19.4	20.6	-77.04	-480.2	276.5	410.5	371.7	38.82	10.573	
7,450.0	7,218.8	7,405.0	7,130.4	19.7	20.7	-76.55	-480.2	235.9	411.3	372.0	39.25	10.480	
7,500.0	7,238.3	7,450.0	7,145.4	20.0	20.9	-76.12	-480.2	193.5	412.0	372.2	39.81	10.349	
7,550.0	7,254.6	7,492.7	7,157.1	20.5	21.2	-75.76	-480.2	152.4	412.7	372.2	40.51	10.186	
7,600.0	7,267.6	7,536.4	7,166.5	21.0	21.6	-75.45	-480.2	109.8	413.2	371.9	41.36	9.992	
7,650.0	7,277.1	7,580.0	7,173.3	21.5	22.0	-75.21	-480.2	66.7	413.7	371.4	42.34	9.772	
7,700.0	7,283.3	7,623.5	7,177.5	22.2	22.4	-75.03	-480.2	23.4	414.0	370.6	43.44	9.531	
7,750.0	7,285.9	7,667.0	7,179.0	22.9	23.0	-74.91	-480.2	-20.0	414.3	369.6	44.65	9.277	
7,760.9	7,286.0	7,676.9	7,179.0	23.0	23.1	-74.89	-480.2	-30.0	414.3	369.4	44.94	9.219	
7,800.0	7,286.1	7,716.1	7,178.8	23.6	23.7	-74.85	-480.2	-69.1	414.4	368.3	46.11	8.987	
7,900.0	7,286.4	7,816.1	7,178.5	25.3	25.3	-74.77	-480.2	-169.1	414.5	365.2	49.34	8.401	
8,000.0	7,286.6	7,916.1	7,178.1	27.2	27.1	-74.69	-480.2	-269.1	414.7	361.8	52.94	7.833	
8,100.0	7,286.9	8,016.1	7,177.7	29.2	29.1	-74.60	-480.2	-369.1	414.9	358.0	56.83	7.300	
8,200.0	7,287.2	8,116.1	7,177.4	31.3	31.3	-74.52	-480.2	-469.1	415.0	354.1	60.95	6.810	
8,300.0	7,287.4	8,216.1	7,177.0	33.6	33.5	-74.43	-480.2	-569.1	415.2	350.0	65.25	6.363	
8,400.0	7,287.7	8,316.1	7,176.6	35.9	35.8	-74.35	-480.2	-669.1	415.4	345.7	69.71	5.959	
8,500.0	7,288.0	8,416.1	7,176.3	38.3	38.2	-74.27	-480.2	-769.1	415.5	341.3	74.28	5.594	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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

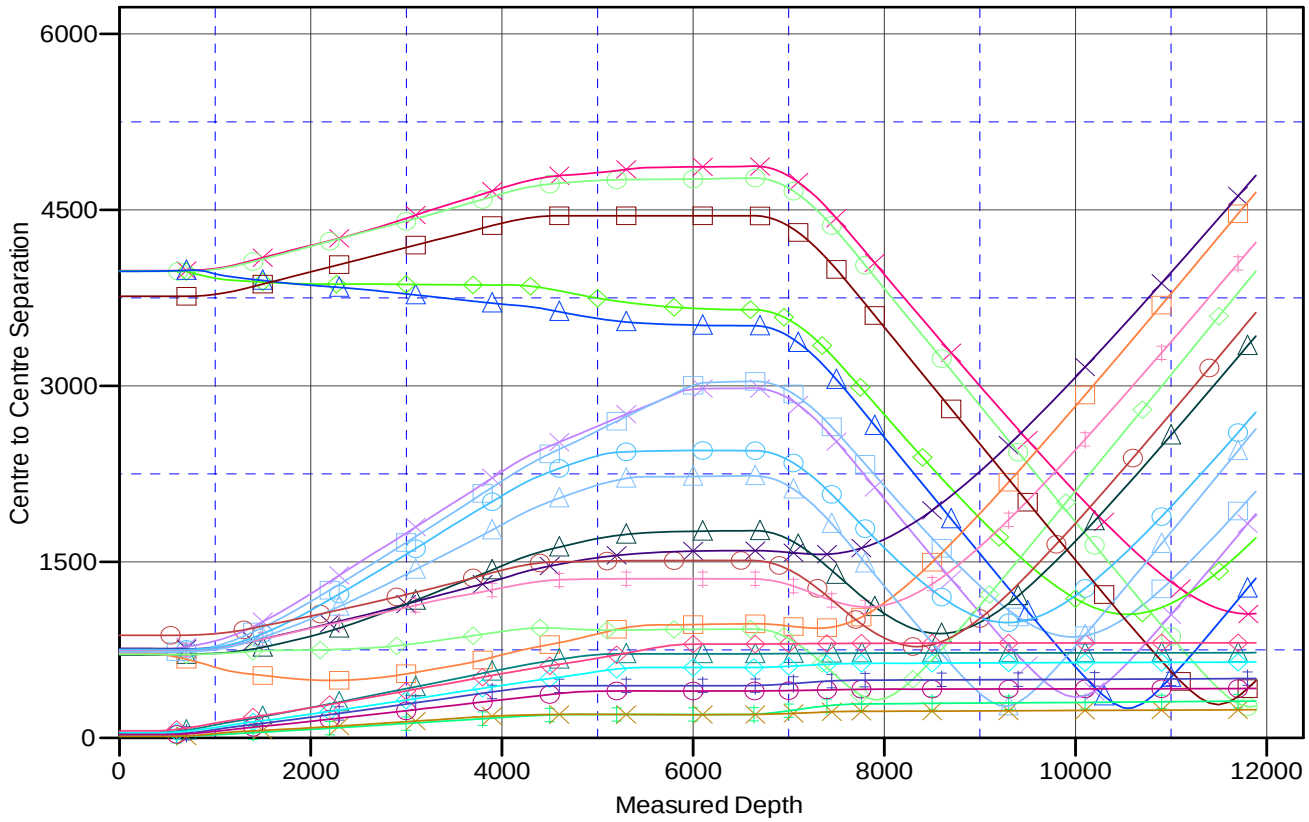
Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,600.0	7,288.2	8,516.1	7,175.9	40.7	40.7	-74.18	-480.2	-869.1	415.7	336.8	78.96	5.265	
8,700.0	7,288.5	8,616.1	7,175.5	43.2	43.2	-74.10	-480.2	-969.1	415.9	332.2	83.72	4.968	
8,800.0	7,288.8	8,716.0	7,175.2	45.7	45.7	-74.01	-480.2	-1,069.1	416.1	327.5	88.54	4.699	
8,900.0	7,289.0	8,816.0	7,174.8	48.3	48.3	-73.93	-480.2	-1,169.1	416.2	322.8	93.43	4.455	
9,000.0	7,289.3	8,916.0	7,174.4	50.9	50.8	-73.85	-480.2	-1,269.1	416.4	318.1	98.36	4.234	
9,100.0	7,289.6	9,016.0	7,174.1	53.5	53.5	-73.76	-480.2	-1,369.1	416.6	313.3	103.33	4.032	
9,200.0	7,289.8	9,116.0	7,173.7	56.1	56.1	-73.68	-480.2	-1,469.1	416.8	308.4	108.34	3.847	
9,300.0	7,290.1	9,216.0	7,173.3	58.7	58.7	-73.60	-480.2	-1,569.1	416.9	303.6	113.37	3.678	
9,400.0	7,290.4	9,316.0	7,173.0	61.4	61.4	-73.51	-480.2	-1,669.1	417.1	298.7	118.43	3.522	
9,500.0	7,290.6	9,416.0	7,172.6	64.1	64.1	-73.43	-480.2	-1,769.1	417.3	293.8	123.52	3.379	
9,600.0	7,290.9	9,516.0	7,172.3	66.7	66.7	-73.35	-480.2	-1,869.1	417.5	288.9	128.61	3.246	
9,700.0	7,291.2	9,616.0	7,171.9	69.4	69.4	-73.27	-480.2	-1,969.1	417.7	283.9	133.73	3.123	
9,800.0	7,291.4	9,716.0	7,171.5	72.1	72.1	-73.18	-480.2	-2,069.1	417.9	279.0	138.85	3.009	
9,900.0	7,291.7	9,816.0	7,171.2	74.8	74.8	-73.10	-480.2	-2,169.1	418.0	274.0	143.99	2.903	
10,000.0	7,292.0	9,916.0	7,170.8	77.5	77.6	-73.02	-480.2	-2,269.1	418.2	269.1	149.14	2.804	
10,100.0	7,292.2	10,016.0	7,170.4	80.3	80.3	-72.94	-480.2	-2,369.1	418.4	264.1	154.30	2.712	
10,200.0	7,292.5	10,116.0	7,170.1	83.0	83.0	-72.85	-480.2	-2,469.1	418.6	259.1	159.46	2.625	
10,300.0	7,292.8	10,216.0	7,169.7	85.7	85.7	-72.77	-480.2	-2,569.1	418.8	254.2	164.63	2.544	
10,400.0	7,293.0	10,316.0	7,169.3	88.5	88.5	-72.69	-480.2	-2,669.1	419.0	249.2	169.80	2.467	
10,500.0	7,293.3	10,416.0	7,169.0	91.2	91.2	-72.61	-480.2	-2,769.1	419.2	244.2	174.97	2.396	
10,600.0	7,293.6	10,516.0	7,168.6	93.9	94.0	-72.52	-480.2	-2,869.1	419.3	239.2	180.15	2.328	
10,700.0	7,293.8	10,616.0	7,168.3	96.7	96.7	-72.44	-480.2	-2,969.1	419.5	234.2	185.34	2.264	
10,800.0	7,294.1	10,716.0	7,167.9	99.4	99.5	-72.36	-480.2	-3,069.1	419.7	229.2	190.52	2.203	
10,900.0	7,294.4	10,816.0	7,167.5	102.2	102.2	-72.28	-480.2	-3,169.1	419.9	224.2	195.70	2.146	
11,000.0	7,294.6	10,916.0	7,167.2	105.0	105.0	-72.20	-480.2	-3,269.1	420.1	219.2	200.89	2.091	
11,100.0	7,294.9	11,016.0	7,166.8	107.7	107.7	-72.12	-480.2	-3,369.1	420.3	214.2	206.07	2.040	
11,200.0	7,295.2	11,116.0	7,166.5	110.5	110.5	-72.03	-480.2	-3,469.1	420.5	209.2	211.26	1.990	
11,300.0	7,295.4	11,216.0	7,166.1	113.2	113.3	-71.95	-480.2	-3,569.0	420.7	204.2	216.45	1.944	
11,400.0	7,295.7	11,316.0	7,165.7	116.0	116.0	-71.87	-480.2	-3,669.0	420.9	199.3	221.63	1.899	
11,500.0	7,296.0	11,416.0	7,165.4	118.8	118.8	-71.79	-480.2	-3,769.0	421.1	194.3	226.81	1.857	
11,600.0	7,296.2	11,516.0	7,165.0	121.6	121.6	-71.71	-480.2	-3,869.0	421.3	189.3	231.99	1.816	
11,700.0	7,296.5	11,616.0	7,164.7	124.3	124.3	-71.63	-480.2	-3,969.0	421.5	184.3	237.17	1.777	
11,800.0	7,296.8	11,716.0	7,164.3	127.1	127.1	-71.55	-480.2	-4,069.0	421.7	179.3	242.35	1.740	
11,886.1	7,297.0	11,800.2	7,164.0	129.5	129.5	-71.48	-480.2	-4,153.2	421.9	175.1	246.76	1.710 SF	

Company:	PDC ENERGY	**Local Co-ordinate Reference:**	Well WALTERS 21P-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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 @ 4951.5usft (Original Well E
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: WALTERS 21P-434
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

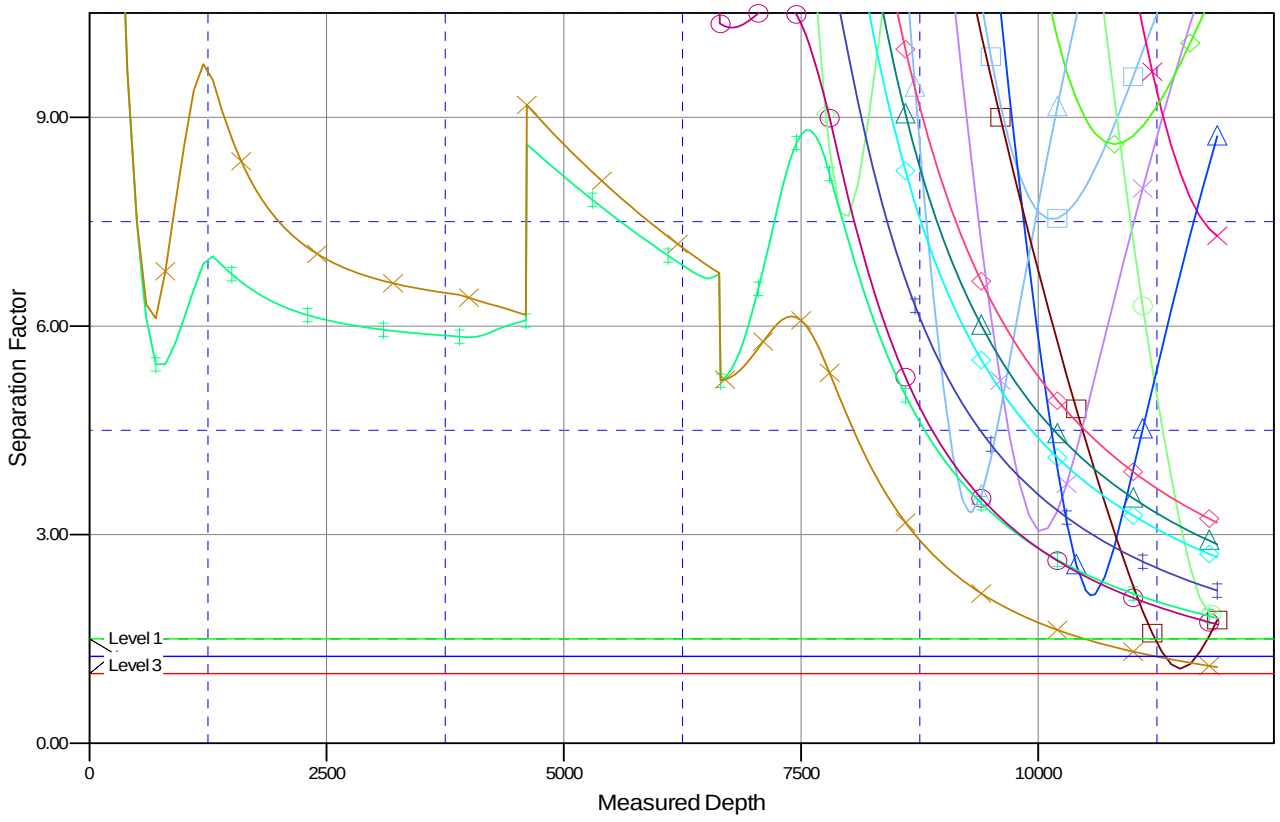
)XD, Wellbore #1, Wellbore #1 V0
)YD, Wellbore #1, Wellbore #1 V0
3-20D, Wellbore #1, Wellbore #1 V0
1-20D, Wellbore #1, Wellbore #1 V0
3-20D, Wellbore #1, Wellbore #1 V0
1-20D, Wellbore #1, Wellbore #1 V0
#21ODU, Wellbore #1, Wellbore #1 V0
21LDU, Wellbore #1, Wellbore #1 V0
EXIST DD WALTERS 21QDU, 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-234, ORIGINAL WEI
WALTERS 21P-304, ORIGINAL WEI
WALTERS 21P-314, 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-434
Project:	WELD COUNTY, COLORADO	**TVD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Reference Site:	SE SW SEC. 21 T4N R67W 6th P.M.	**MD Reference:**	KB-EST @ 4951.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	WALTERS 21P-434	**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 @ 4951.5usft (Original Well E
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: WALTERS 21P-434
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.39°

Separation Factor Plot



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-234, ORIGINAL WEI
WALTERS 21P-304, ORIGINAL WEI
WALTERS 21P-314, ORIGINAL WEI
WALTERS 21Q-214, ORIGINAL WE
WALTERS 21Q-304, ORIGINAL WE
WALTERS 21Q-314, ORIGINAL WE