

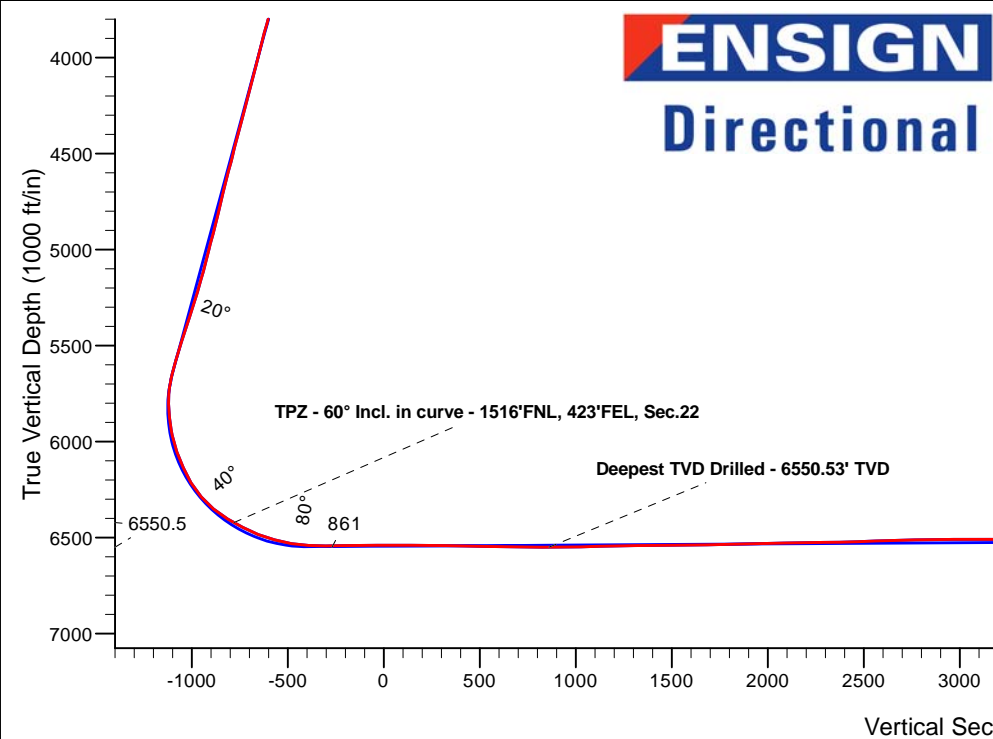
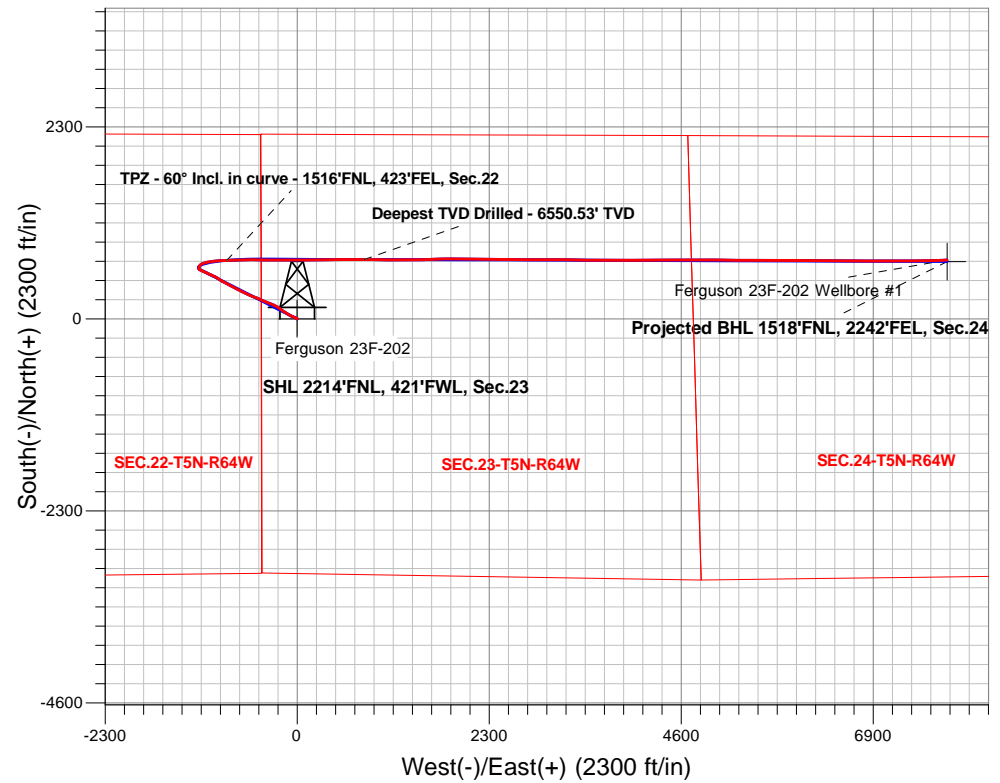
PDC Energy Inc. DJ Basin

Well Name: **Ferguson 23F-202**

Surface Location: Ferguson 5N64W23F Pad Sec.23-T5N-R64W
 North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
 Ground Elevation: 4575.0
 +N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1384951.03 3271629.51 40.385993 -104.524888
 Original Well Elev WELL @ 4598.0ft (Original Well Elev)

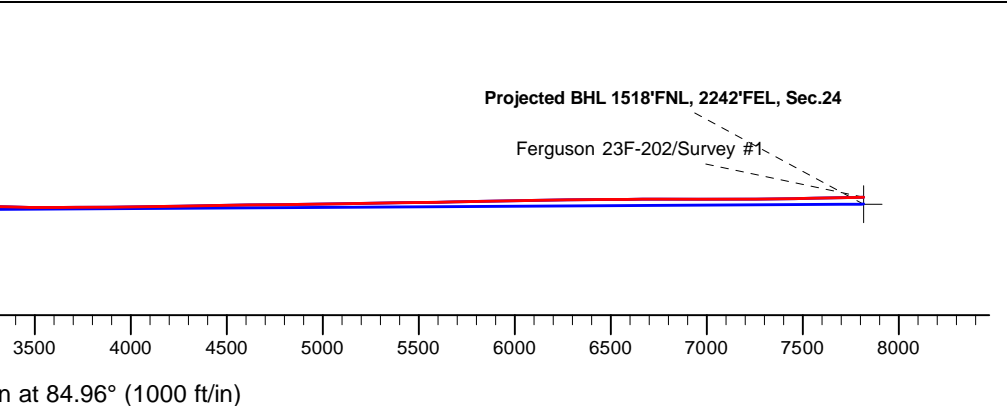
FINAL SURVEY

Projected Bottom Hole Location
15,399'MD 6462'TVD 704'N & 7785'E of SHL
91.29 degree Incl @ 87.53 degree AZM



Ferguson 5N64W23F Pad Sec.23-T5N-R64W Ferguson 23F-202 Ferguson 23F-202 Wellbore #1 7:36, March 19 2020	ANNOTATIONS		
	TVD	MD	Annotation
	6422.7	6744.6	TPZ - 60° Incl. in curve - 1516'FNL, 423'FEL, Sec.22
	6550.5	8413.0	Deepest TVD Drilled - 6550.53' TVD

LEGEND	
	Ferguson 23F-202, Ferguson 23F-202 Wellbore #1, Plan #2 (3-15-20) V0
	Ferguson 23F-202 Wellbore #1
	Survey #1





PDC Energy Inc. DJ Basin

SEC.23-T5N-R64W

Ferguson 5N64W23F Pad Sec.23-T5N-R64W

Ferguson 23F-202

Ferguson 23F-202 Wellbore #1

Survey: Survey #1

Standard Survey Report

19 March, 2020



Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Ferguson 23F-202
Project:	SEC.23-T5N-R64W	TVD Reference:	WELL @ 4598.0ft (Original Well Elev)
Site:	Ferguson 5N64W23F Pad Sec.23-T5N-R64W	MD Reference:	WELL @ 4598.0ft (Original Well Elev)
Well:	Ferguson 23F-202	North Reference:	True
Wellbore:	Ferguson 23F-202 Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Ferguson 23F-202 Wellbore #1	Database:	US_EDM

Project	SEC.23-T5N-R64W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Ferguson 5N64W23F Pad Sec.23-T5N-R64W				
Site Position:		Northing:	1,385,011.05 usft	Latitude:	40.386157
From:	Lat/Long	Easting:	3,271,629.53 usft	Longitude:	-104.524886
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.63 °

Well	Ferguson 23F-202					
Well Position	+N/-S	0.0 ft	Northing:	1,384,951.03 usft	Latitude:	40.385993
	+E/-W	0.0 ft	Easting:	3,271,629.52 usft	Longitude:	-104.524888
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,575.0 ft

Wellbore	Ferguson 23F-202 Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	3/15/2020	7.97	66.85	52,049

Design	Ferguson 23F-202 Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	84.96	

Survey Program	Date	3/19/2020		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
155.0	15,399.0	Survey #1 (Ferguson 23F-202 Wellbore #1)	MWD	MWD - Standard

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
155.0	0.40	68.50	155.0	0.2	0.5	0.5	0.26	0.26	0.00	
250.0	0.30	272.20	250.0	0.3	0.6	0.6	0.72	-0.11	-164.53	
345.0	0.40	305.10	345.0	0.5	0.0	0.1	0.23	0.11	34.63	
441.0	0.60	301.80	441.0	1.0	-0.7	-0.6	0.21	0.21	-3.44	
536.0	0.40	268.40	536.0	1.2	-1.4	-1.3	0.36	-0.21	-35.16	
631.0	0.70	288.60	631.0	1.4	-2.3	-2.2	0.37	0.32	21.26	
726.0	0.50	324.60	726.0	1.9	-3.1	-2.9	0.44	-0.21	37.89	
821.0	0.70	302.80	821.0	2.6	-3.8	-3.6	0.32	0.21	-22.95	
916.0	0.40	308.60	916.0	3.1	-4.6	-4.3	0.32	-0.32	6.11	

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Ferguson 23F-202
Project:	SEC.23-T5N-R64W	TVD Reference:	WELL @ 4598.0ft (Original Well Elev)
Site:	Ferguson 5N64W23F Pad Sec.23-T5N-R64W	MD Reference:	WELL @ 4598.0ft (Original Well Elev)
Well:	Ferguson 23F-202	North Reference:	True
Wellbore:	Ferguson 23F-202 Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Ferguson 23F-202 Wellbore #1	Database:	US_EDM

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
1,011.0	0.50	327.20	1,011.0	3.7	-5.0	-4.7	0.19	0.11	19.58	
1,106.0	2.20	306.50	1,105.9	5.1	-6.7	-6.3	1.83	1.79	-21.79	
1,201.0	4.50	294.70	1,200.8	7.7	-11.6	-10.9	2.51	2.42	-12.42	
1,297.0	6.20	294.90	1,296.3	11.5	-19.7	-18.6	1.77	1.77	0.21	
1,392.0	7.40	292.80	1,390.7	16.0	-30.0	-28.5	1.29	1.26	-2.21	
1,487.0	8.00	290.90	1,484.8	20.8	-41.8	-39.8	0.69	0.63	-2.00	
1,581.0	10.00	295.60	1,577.7	26.6	-55.3	-52.7	2.27	2.13	5.00	
1,634.0	10.10	297.20	1,629.8	30.7	-63.6	-60.6	0.56	0.19	3.02	
1,754.0	10.19	295.98	1,748.0	40.2	-82.5	-78.6	0.19	0.08	-1.02	
1,843.0	11.55	300.24	1,835.4	48.1	-97.2	-92.6	1.77	1.53	4.79	
1,932.0	13.87	303.75	1,922.2	58.5	-113.8	-108.2	2.75	2.61	3.94	
2,022.0	15.64	302.62	2,009.2	71.1	-133.0	-126.3	1.99	1.97	-1.26	
2,111.0	14.75	301.88	2,095.1	83.5	-152.7	-144.8	1.02	-1.00	-0.83	
2,201.0	16.19	305.92	2,181.8	96.9	-172.6	-163.4	2.00	1.60	4.49	
2,291.0	17.78	307.09	2,267.9	112.6	-193.7	-183.1	1.81	1.77	1.30	
2,381.0	16.68	306.11	2,353.9	128.5	-215.1	-203.0	1.26	-1.22	-1.09	
2,471.0	17.36	297.83	2,439.9	142.4	-237.5	-224.0	2.79	0.76	-9.20	
2,561.0	16.55	296.85	2,526.0	154.4	-260.8	-246.2	0.95	-0.90	-1.09	
2,669.0	18.88	293.99	2,628.9	168.5	-290.5	-274.5	2.30	2.16	-2.65	
2,759.0	18.53	293.34	2,714.2	180.1	-316.9	-299.9	0.45	-0.39	-0.72	
2,849.0	17.23	292.23	2,799.8	190.8	-342.4	-324.3	1.49	-1.44	-1.23	
2,939.0	16.70	291.48	2,885.9	200.6	-366.7	-347.7	0.64	-0.59	-0.83	
3,028.0	15.79	289.99	2,971.3	209.4	-390.0	-370.1	1.12	-1.02	-1.67	
3,118.0	16.48	290.47	3,057.8	218.0	-413.5	-392.7	0.78	0.77	0.53	
3,207.0	16.68	296.17	3,143.1	228.1	-436.8	-415.1	1.84	0.22	6.40	
3,297.0	18.37	294.38	3,228.9	239.6	-461.3	-438.5	1.97	1.88	-1.99	
3,387.0	17.38	291.60	3,314.6	250.4	-486.7	-462.8	1.45	-1.10	-3.09	
3,477.0	16.28	289.83	3,400.7	259.7	-511.1	-486.3	1.35	-1.22	-1.97	
3,567.0	18.69	294.68	3,486.6	270.0	-536.0	-510.3	3.13	2.68	5.39	
3,657.0	18.51	294.35	3,571.9	281.9	-562.2	-535.2	0.23	-0.20	-0.37	
3,747.0	18.67	293.89	3,657.2	293.6	-588.4	-560.3	0.24	0.18	-0.51	
3,837.0	18.46	293.60	3,742.5	305.1	-614.6	-585.4	0.25	-0.23	-0.32	
3,927.0	17.34	293.66	3,828.1	316.2	-639.9	-609.7	1.24	-1.24	0.07	
4,016.0	16.19	292.73	3,913.3	326.3	-663.5	-632.3	1.33	-1.29	-1.04	
4,106.0	16.99	296.60	3,999.6	337.1	-686.8	-654.6	1.52	0.89	4.30	
4,195.0	17.98	300.96	4,084.5	350.0	-710.3	-676.8	1.84	1.11	4.90	
4,285.0	16.22	300.59	4,170.5	363.5	-733.0	-698.2	1.96	-1.96	-0.41	
4,375.0	17.73	300.03	4,256.6	376.8	-755.7	-719.7	1.69	1.68	-0.62	
4,465.0	18.91	297.29	4,342.0	390.3	-780.5	-743.2	1.62	1.31	-3.04	
4,555.0	16.90	297.29	4,427.6	403.0	-805.1	-766.6	2.23	-2.23	0.00	
4,644.0	15.54	296.75	4,513.1	414.3	-827.2	-787.7	1.54	-1.53	-0.61	
4,734.0	18.23	297.74	4,599.2	426.3	-850.5	-809.7	3.01	2.99	1.10	
4,824.0	16.38	295.42	4,685.1	438.3	-874.4	-832.5	2.19	-2.06	-2.58	
4,914.0	14.77	299.10	4,771.8	449.3	-895.9	-853.0	2.10	-1.79	4.09	

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Well:	Ferguson 23F-202	North Reference:	True
Wellbore:	Ferguson 23F-202 Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Ferguson 23F-202 Wellbore #1	Database:	US_EDM

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,004.0	17.80	302.81	4,858.2	462.3	-917.5	-873.3	3.56	3.37	4.12	
5,094.0	19.40	303.72	4,943.5	478.1	-941.5	-895.8	1.81	1.78	1.01	
5,183.0	17.18	302.79	5,028.0	493.4	-964.8	-917.7	2.52	-2.49	-1.04	
5,273.0	17.20	294.32	5,114.0	506.1	-988.1	-939.8	2.78	0.02	-9.41	
5,362.0	18.45	294.95	5,198.7	517.5	-1,012.9	-963.5	1.42	1.40	0.71	
5,452.0	20.50	293.86	5,283.6	529.8	-1,040.2	-989.6	2.31	2.28	-1.21	
5,541.0	19.91	293.32	5,367.1	542.1	-1,068.4	-1,016.6	0.70	-0.66	-0.61	
5,631.0	20.30	294.16	5,451.6	554.6	-1,096.7	-1,043.7	0.54	0.43	0.93	
5,721.0	19.37	295.65	5,536.3	567.5	-1,124.4	-1,070.2	1.18	-1.03	1.66	
5,810.0	17.50	295.10	5,620.7	579.5	-1,149.8	-1,094.5	2.11	-2.10	-0.62	
5,899.0	14.31	312.05	5,706.3	592.6	-1,170.1	-1,113.6	6.30	-3.58	19.04	
5,989.0	10.18	357.15	5,794.5	608.0	-1,178.8	-1,120.8	11.20	-4.59	50.11	
6,078.0	14.25	21.68	5,881.5	626.1	-1,175.1	-1,115.6	7.31	4.57	27.56	
6,167.0	15.24	44.09	5,967.6	644.7	-1,162.9	-1,101.8	6.46	1.11	25.18	
6,257.0	21.21	63.60	6,053.1	660.4	-1,140.1	-1,077.7	9.40	6.63	21.68	
6,348.0	24.55	74.31	6,137.0	672.9	-1,107.1	-1,043.7	5.85	3.67	11.77	
6,437.0	30.30	80.63	6,216.0	681.5	-1,067.1	-1,003.1	7.23	6.46	7.10	
6,527.0	41.17	84.90	6,288.9	687.9	-1,015.0	-950.7	12.39	12.08	4.74	
6,617.0	50.89	86.59	6,351.4	692.6	-950.5	-886.0	10.88	10.80	1.88	
6,707.0	58.39	86.56	6,403.4	697.0	-877.3	-812.7	8.33	8.33	-0.03	
6,744.6	60.00	86.92	6,422.7	698.8	-845.1	-780.4	4.35	4.28	0.95	
TPZ - 60° Incl. in curve - 1516'FNL, 423'FEL, Sec.22										
6,797.0	62.24	87.40	6,448.0	701.1	-799.2	-734.6	4.35	4.28	0.92	
6,886.0	69.00	86.89	6,484.7	705.1	-718.3	-653.6	7.61	7.60	-0.57	
6,976.0	74.43	89.27	6,512.9	708.0	-633.0	-568.3	6.53	6.03	2.64	
7,066.0	81.07	90.89	6,532.0	707.8	-545.1	-480.8	7.58	7.38	1.80	
7,156.0	87.10	91.49	6,541.3	706.0	-455.6	-391.8	6.73	6.70	0.67	
7,246.0	90.20	90.38	6,543.4	704.5	-365.7	-302.4	3.66	3.44	-1.23	
7,335.0	90.72	89.95	6,542.7	704.2	-276.7	-213.7	0.76	0.58	-0.48	
7,425.0	91.12	90.58	6,541.2	703.8	-186.7	-124.1	0.83	0.44	0.70	
7,515.0	90.22	90.10	6,540.2	703.3	-96.7	-34.5	1.13	-1.00	-0.53	
7,605.0	89.76	89.25	6,540.2	703.8	-6.7	55.2	1.07	-0.51	-0.94	
7,694.0	89.64	89.36	6,540.7	704.9	82.3	143.9	0.18	-0.13	0.12	
7,784.0	89.21	89.38	6,541.6	705.9	172.3	233.6	0.48	-0.48	0.02	
7,874.0	89.29	89.27	6,542.7	706.9	262.3	323.4	0.15	0.09	-0.12	
7,964.0	89.15	89.30	6,544.0	708.1	352.3	413.1	0.16	-0.16	0.03	
8,054.0	88.61	89.25	6,545.7	709.2	442.2	502.8	0.60	-0.60	-0.06	
8,144.0	88.76	89.04	6,547.8	710.5	532.2	592.6	0.29	0.17	-0.23	
8,234.0	89.41	89.95	6,549.2	711.3	622.2	682.3	1.24	0.72	1.01	
8,324.0	89.01	89.67	6,550.5	711.6	712.2	771.9	0.54	-0.44	-0.31	
8,413.0	90.92	90.29	6,550.5	711.7	801.2	860.6	2.26	2.15	0.70	
Deepest TVD Drilled - 6550.53' TVD										
8,503.0	90.95	91.11	6,549.1	710.6	891.2	950.1	0.91	0.03	0.91	

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Design:	Ferguson 23F-202 Wellbore #1	Database:	US_EDM

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,593.0	91.29	91.41	6,547.3	708.6	981.1	1,039.6	0.50	0.38	0.33
8,682.0	91.33	90.93	6,545.3	706.8	1,070.1	1,128.0	0.54	0.04	-0.54
8,772.0	91.07	90.57	6,543.4	705.6	1,160.1	1,217.5	0.49	-0.29	-0.40
8,861.0	90.45	89.95	6,542.2	705.2	1,249.0	1,306.1	0.99	-0.70	-0.70
8,950.0	90.16	89.60	6,541.7	705.5	1,338.0	1,394.8	0.51	-0.33	-0.39
9,039.0	90.99	88.46	6,540.8	707.0	1,427.0	1,483.6	1.58	0.93	-1.28
9,129.0	90.45	87.65	6,539.7	710.1	1,517.0	1,573.5	1.08	-0.60	-0.90
9,219.0	90.88	88.53	6,538.7	713.1	1,606.9	1,663.3	1.09	0.48	0.98
9,308.0	91.48	89.32	6,536.8	714.8	1,695.9	1,752.1	1.11	0.67	0.89
9,398.0	91.59	88.49	6,534.4	716.5	1,785.8	1,841.8	0.93	0.12	-0.92
9,487.0	91.32	91.11	6,532.2	716.8	1,874.8	1,930.5	2.96	-0.30	2.94
9,577.0	91.02	90.92	6,530.3	715.2	1,964.7	2,020.0	0.39	-0.33	-0.21
9,666.0	90.97	89.85	6,528.8	714.6	2,053.7	2,108.6	1.20	-0.06	-1.20
9,755.0	91.13	89.24	6,527.1	715.3	2,142.7	2,197.3	0.71	0.18	-0.69
9,845.0	90.66	91.89	6,525.7	714.4	2,232.7	2,286.8	2.99	-0.52	2.94
9,934.0	90.76	91.08	6,524.6	712.1	2,321.7	2,375.2	0.92	0.11	-0.91
10,024.0	91.51	90.55	6,522.8	710.8	2,411.6	2,464.7	1.02	0.83	-0.59
10,114.0	92.35	90.36	6,519.8	710.1	2,501.6	2,554.3	0.96	0.93	-0.21
10,205.0	92.44	89.62	6,516.0	710.1	2,592.5	2,644.8	0.82	0.10	-0.81
10,294.0	92.09	91.14	6,512.5	709.5	2,681.4	2,733.4	1.75	-0.39	1.71
10,384.0	89.89	90.53	6,510.9	708.2	2,771.4	2,822.9	2.54	-2.44	-0.68
10,474.0	90.18	90.09	6,510.9	707.7	2,861.4	2,912.5	0.59	0.32	-0.49
10,564.0	90.36	89.60	6,510.5	708.0	2,951.4	3,002.2	0.58	0.20	-0.54
10,653.0	90.92	89.18	6,509.5	708.9	3,040.4	3,090.9	0.79	0.63	-0.47
10,742.0	89.07	90.69	6,509.5	709.0	3,129.4	3,179.5	2.68	-2.08	1.70
10,832.0	89.01	90.48	6,511.0	708.1	3,219.3	3,269.1	0.24	-0.07	-0.23
10,922.0	88.77	90.28	6,512.7	707.5	3,309.3	3,358.7	0.35	-0.27	-0.22
11,012.0	88.61	90.05	6,514.8	707.3	3,399.3	3,448.3	0.31	-0.18	-0.26
11,101.0	90.38	91.70	6,515.6	705.9	3,488.3	3,536.8	2.72	1.99	1.85
11,191.0	90.29	91.33	6,515.0	703.5	3,578.3	3,626.2	0.42	-0.10	-0.41
11,281.0	90.39	90.68	6,514.5	701.9	3,668.2	3,715.7	0.73	0.11	-0.72
11,370.0	90.46	90.28	6,513.8	701.2	3,757.2	3,804.3	0.46	0.08	-0.45
11,460.0	90.25	89.94	6,513.3	701.0	3,847.2	3,893.9	0.44	-0.23	-0.38
11,549.0	90.01	89.34	6,513.1	701.6	3,936.2	3,982.6	0.73	-0.27	-0.67
11,639.0	91.39	91.05	6,512.0	701.3	4,026.2	4,072.2	2.44	1.53	1.90
11,728.0	90.97	90.31	6,510.2	700.2	4,115.2	4,160.8	0.96	-0.47	-0.83
11,819.0	90.88	89.43	6,508.7	700.4	4,206.2	4,251.4	0.97	-0.10	-0.97
11,909.0	91.00	89.22	6,507.2	701.5	4,296.2	4,341.2	0.27	0.13	-0.23
11,998.0	90.94	88.75	6,505.7	703.1	4,385.1	4,429.9	0.53	-0.07	-0.53
12,088.0	91.23	88.61	6,504.0	705.1	4,475.1	4,519.7	0.36	0.32	-0.16
12,178.0	90.89	90.43	6,502.3	705.9	4,565.1	4,609.4	2.06	-0.38	2.02
12,268.0	90.70	89.98	6,501.1	705.6	4,655.1	4,699.0	0.54	-0.21	-0.50
12,357.0	90.64	89.49	6,500.0	706.0	4,744.1	4,787.7	0.55	-0.07	-0.55
12,447.0	90.33	89.40	6,499.3	706.9	4,834.0	4,877.4	0.36	-0.34	-0.10

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Ferguson 23F-202
Project:	SEC.23-T5N-R64W	TVD Reference:	WELL @ 4598.0ft (Original Well Elev)
Site:	Ferguson 5N64W23F Pad Sec.23-T5N-R64W	MD Reference:	WELL @ 4598.0ft (Original Well Elev)
Well:	Ferguson 23F-202	North Reference:	True
Wellbore:	Ferguson 23F-202 Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Ferguson 23F-202 Wellbore #1	Database:	US_EDM

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
12,537.0	91.04	91.74	6,498.2	706.0	4,924.0	4,967.0	2.72	0.79	2.60	
12,626.0	90.88	91.58	6,496.7	703.4	5,013.0	5,055.4	0.25	-0.18	-0.18	
12,716.0	91.02	90.73	6,495.2	701.6	5,102.9	5,144.8	0.96	0.16	-0.94	
12,806.0	90.87	89.62	6,493.7	701.3	5,192.9	5,234.5	1.24	-0.17	-1.23	
12,896.0	91.01	89.20	6,492.3	702.2	5,282.9	5,324.2	0.49	0.16	-0.47	
12,986.0	91.00	91.24	6,490.7	701.9	5,372.9	5,413.8	2.27	-0.01	2.27	
13,075.0	90.69	90.60	6,489.4	700.4	5,461.9	5,502.3	0.80	-0.35	-0.72	
13,165.0	91.00	90.03	6,488.0	700.0	5,551.9	5,591.9	0.72	0.34	-0.63	
13,255.0	91.01	89.39	6,486.5	700.4	5,641.8	5,681.6	0.71	0.01	-0.71	
13,345.0	91.07	88.95	6,484.8	701.7	5,731.8	5,771.3	0.49	0.07	-0.49	
13,435.0	91.13	91.49	6,483.1	701.4	5,821.8	5,860.9	2.82	0.07	2.82	
13,525.0	91.29	90.93	6,481.2	699.5	5,911.8	5,950.3	0.65	0.18	-0.62	
13,615.0	91.07	90.47	6,479.4	698.4	6,001.7	6,039.9	0.57	-0.24	-0.51	
13,706.0	91.33	89.72	6,477.4	698.2	6,092.7	6,130.5	0.87	0.29	-0.82	
13,795.0	90.47	91.37	6,476.0	697.4	6,181.7	6,219.0	2.09	-0.97	1.85	
13,885.0	90.47	90.55	6,475.3	695.9	6,271.7	6,308.6	0.91	0.00	-0.91	
13,975.0	90.55	90.12	6,474.5	695.3	6,361.7	6,398.2	0.49	0.09	-0.48	
14,064.0	90.53	90.70	6,473.7	694.7	6,450.7	6,486.7	0.65	-0.02	0.65	
14,154.0	90.25	90.41	6,473.1	693.8	6,540.7	6,576.3	0.45	-0.31	-0.32	
14,244.0	90.10	90.28	6,472.8	693.3	6,630.7	6,665.9	0.22	-0.17	-0.14	
14,333.0	90.02	89.98	6,472.7	693.1	6,719.7	6,754.6	0.35	-0.09	-0.34	
14,423.0	89.90	89.36	6,472.8	693.6	6,809.6	6,844.3	0.70	-0.13	-0.69	
14,513.0	89.94	90.98	6,472.9	693.3	6,899.6	6,933.9	1.80	0.04	1.80	
14,602.0	90.01	90.38	6,472.9	692.3	6,988.6	7,022.4	0.68	0.08	-0.67	
14,692.0	89.85	90.02	6,473.0	692.0	7,078.6	7,112.1	0.44	-0.18	-0.40	
14,781.0	90.36	89.76	6,472.9	692.1	7,167.6	7,200.7	0.64	0.57	-0.29	
14,871.0	90.91	89.46	6,471.9	692.7	7,257.6	7,290.4	0.70	0.61	-0.33	
14,961.0	90.92	88.88	6,470.4	694.1	7,347.6	7,380.2	0.64	0.01	-0.64	
15,050.0	90.85	89.61	6,469.1	695.2	7,436.6	7,468.9	0.82	-0.08	0.82	
15,139.0	90.88	89.19	6,467.7	696.2	7,525.6	7,557.6	0.47	0.03	-0.47	
15,229.0	91.40	88.78	6,465.9	697.8	7,615.5	7,647.4	0.74	0.58	-0.46	
15,318.0	91.25	87.27	6,463.9	700.8	7,704.5	7,736.2	1.70	-0.17	-1.70	
15,339.0	91.29	87.53	6,463.4	701.8	7,725.4	7,757.2	1.25	0.19	1.24	
15,399.0	91.29	87.53	6,462.0	704.4	7,785.4	7,817.1	0.00	0.00	0.00	

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Site:	Ferguson 5N64W23F Pad Sec.23-T5N-R64W	MD Reference:	WELL @ 4598.0ft (Original Well Elev)
Well:	Ferguson 23F-202	North Reference:	True
Wellbore:	Ferguson 23F-202 Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Ferguson 23F-202 Wellbore #1	Database:	US_EDM

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL 2214'FNL, 421'FWL - hit/miss target - Shape - Point	0.00	0.00	1.0	0.0	0.0	1,384,951.05	3,271,629.52	40.385993	-104.524888
Projected BHL 1518'FNL - survey misses target center by 40.2ft at 15399.0ft MD (6462.0 TVD, 704.4 N, 7785.4 E) - Point	0.00	0.00	6,498.0	686.5	7,787.5	1,385,723.14	3,279,408.70	40.387874	-104.496933

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
6,744.6	6,422.7	698.8	-845.1	TPZ - 60° Incl. in curve - 1516'FNL, 423'FEL, Sec.22
8,413.0	6,550.5	711.7	801.2	Deepest TVD Drilled - 6550.53' TVD

Checked By: _____ Approved By: _____ Date: _____