

# PDC Energy Inc. DJ Basin

Well Name: **Daisy 31F-332**

Surface Location: Daisy 5N64W31F Pad Sec.31-T5N-R64W

North American Datum 1983 , US State Plane 1983, Colorado Northern Zone

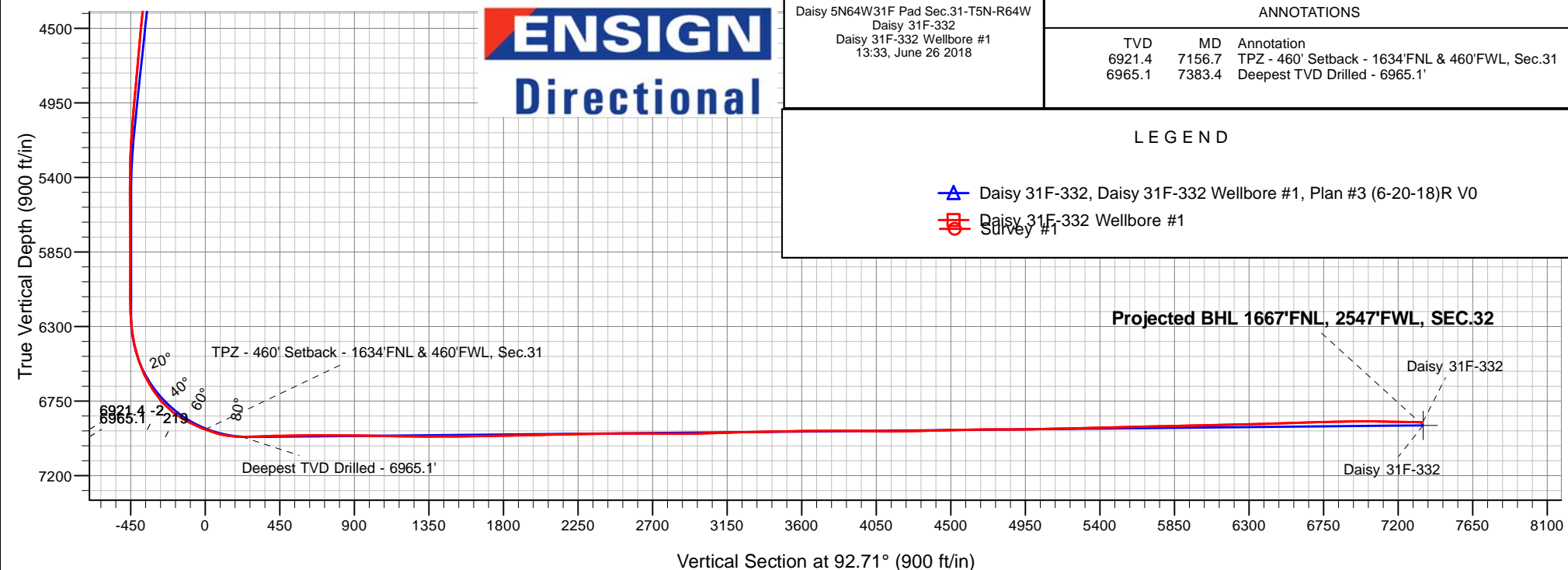
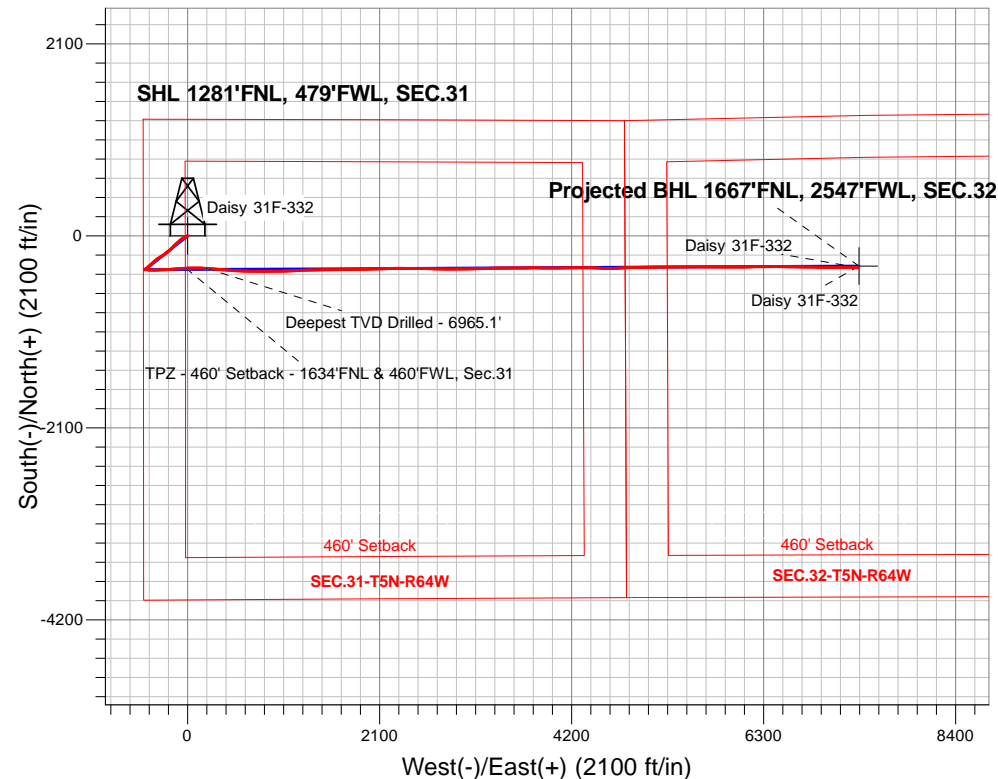
Ground Elevation: 4775.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1375018.2732507	14.13	40.359335	-104.600327	

Original Well Elev WELL @ 4798.0ft (Original Well Elev)

## FINAL SURVEY

**Projected Bottom Hole Location**  
**14,525'MD 6878'TVD 347'S & 7340'E of SHL**  
**88.7 degree Incl @ 90.5 degree AZM**





## **PDC Energy Inc. DJ Basin**

**SEC.31-T5N-R64W**

**Daisy 5N64W31F Pad Sec.31-T5N-R64W**

**Daisy 31F-332**

**Daisy 31F-332 Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**26 June, 2018**

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Daisy 31F-332
<b>Project:</b>	SEC.31-T5N-R64W	<b>TVD Reference:</b>	WELL @ 4798.0ft (Original Well Elev)
<b>Site:</b>	Daisy 5N64W31F Pad Sec.31-T5N-R64W	<b>MD Reference:</b>	WELL @ 4798.0ft (Original Well Elev)
<b>Well:</b>	Daisy 31F-332	<b>North Reference:</b>	True
<b>Wellbore:</b>	Daisy 31F-332 Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Daisy 31F-332 Wellbore #1	<b>Database:</b>	US_EDM

<b>Project</b>	SEC.31-T5N-R64W, Weld County, CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site	Daisy 5N64W31F Pad Sec.31-T5N-R64W				
Site Position:		Northing:	1,375,063.36 usft	Latitude:	40.359460
From:	Lat/Long	Easting:	3,250,679.51 usft	Longitude:	-104.600450
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.58 °

Well	Daisy 31F-332					
Well Position	+N/-S	0.0 ft	Northing:	1,375,018.27 usft	Latitude:	40.359335
	+E/-W	0.0 ft	Easting:	3,250,714.14 usft	Longitude:	-104.600328
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,775.0 ft

<b>Wellbore</b>	Daisy 31F-332 Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	6/20/2018	8.20	66.87	52,239

<b>Design</b>	Daisy 31F-332 Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	92.71	

<b>Survey Program</b>	<b>Date</b>	6/26/2018			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
154.0	14,525.0	Survey #1 (Daisy 31F-332 Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
154.0	0.30	276.40	154.0	0.0	-0.4	-0.4	0.19	0.19	0.00	
249.0	0.40	330.80	249.0	0.4	-0.8	-0.8	0.35	0.11	57.26	
345.0	0.60	269.90	345.0	0.7	-1.5	-1.5	0.56	0.21	-63.44	
440.0	0.50	271.30	440.0	0.7	-2.4	-2.4	0.11	-0.11	1.47	
536.0	0.60	263.30	536.0	0.6	-3.3	-3.3	0.13	0.10	-8.33	
631.0	0.70	260.30	631.0	0.5	-4.4	-4.4	0.11	0.11	-3.16	
727.0	0.70	246.40	727.0	0.1	-5.5	-5.5	0.18	0.00	-14.48	
822.0	1.80	237.80	821.9	-0.9	-7.3	-7.2	1.17	1.16	-9.05	
918.0	3.30	237.90	917.9	-3.2	-10.9	-10.7	1.56	1.56	0.10	

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Daisy 31F-332
<b>Project:</b>	SEC.31-T5N-R64W	<b>TVD Reference:</b>	WELL @ 4798.0ft (Original Well Elev)
<b>Site:</b>	Daisy 5N64W31F Pad Sec.31-T5N-R64W	<b>MD Reference:</b>	WELL @ 4798.0ft (Original Well Elev)
<b>Well:</b>	Daisy 31F-332	<b>North Reference:</b>	True
<b>Wellbore:</b>	Daisy 31F-332 Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Daisy 31F-332 Wellbore #1	<b>Database:</b>	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)	
1,013.0	3.00	240.60	1,012.7	-5.8	-15.4	-15.1	0.35	-0.32	2.84	
1,109.0	2.40	218.10	1,108.6	-8.7	-18.8	-18.4	1.26	-0.63	-23.44	
1,205.0	1.90	247.60	1,204.5	-10.9	-21.5	-21.0	1.25	-0.52	30.73	
1,300.0	3.30	238.50	1,299.4	-12.9	-25.3	-24.7	1.53	1.47	-9.58	
1,396.0	5.30	244.60	1,395.2	-16.2	-31.7	-30.9	2.13	2.08	6.35	
1,492.0	7.00	248.80	1,490.6	-20.2	-41.1	-40.1	1.83	1.77	4.38	
1,593.0	8.00	239.40	1,590.7	-26.0	-52.9	-51.6	1.56	0.99	-9.31	
1,680.0	6.90	234.60	1,677.0	-32.2	-62.4	-60.8	1.45	-1.26	-5.52	
1,776.0	8.70	232.80	1,772.1	-39.9	-72.9	-70.9	1.89	1.88	-1.88	
1,871.0	8.40	231.10	1,866.1	-48.6	-84.0	-81.6	0.41	-0.32	-1.79	
1,967.0	7.90	228.30	1,961.1	-57.4	-94.4	-91.6	0.66	-0.52	-2.92	
2,062.0	9.50	230.00	2,055.0	-66.8	-105.3	-102.0	1.71	1.68	1.79	
2,158.0	9.10	227.80	2,149.7	-77.0	-117.0	-113.2	0.56	-0.42	-2.29	
2,254.0	8.50	224.60	2,244.6	-87.1	-127.6	-123.3	0.81	-0.63	-3.33	
2,349.0	7.70	219.30	2,338.7	-97.0	-136.5	-131.8	1.15	-0.84	-5.58	
2,445.0	9.30	227.00	2,433.6	-107.3	-146.3	-141.0	2.04	1.67	8.02	
2,541.0	9.10	225.10	2,528.4	-117.9	-157.3	-151.6	0.38	-0.21	-1.98	
2,636.0	8.40	221.10	2,622.3	-128.5	-167.2	-160.9	0.98	-0.74	-4.21	
2,732.0	7.80	220.20	2,717.3	-138.7	-176.0	-169.3	0.64	-0.63	-0.94	
2,828.0	10.50	233.40	2,812.1	-148.9	-187.2	-180.0	3.55	2.81	13.75	
2,923.0	10.60	232.10	2,905.5	-159.5	-201.1	-193.3	0.27	0.11	-1.37	
3,019.0	9.80	232.30	3,000.0	-169.9	-214.5	-206.3	0.83	-0.83	0.21	
3,114.0	9.00	231.40	3,093.7	-179.5	-226.7	-218.0	0.86	-0.84	-0.95	
3,209.0	8.40	230.60	3,187.6	-188.5	-237.9	-228.7	0.64	-0.63	-0.84	
3,305.0	7.70	230.90	3,282.6	-197.0	-248.3	-238.7	0.73	-0.73	0.31	
3,400.0	7.00	230.70	3,376.9	-204.7	-257.7	-247.8	0.74	-0.74	-0.21	
3,496.0	8.40	243.70	3,472.0	-211.5	-268.5	-258.2	2.32	1.46	13.54	
3,592.0	7.30	239.40	3,567.1	-217.7	-280.1	-269.5	1.30	-1.15	-4.48	
3,687.0	7.60	236.00	3,661.3	-224.3	-290.5	-279.6	0.56	0.32	-3.58	
3,783.0	11.30	235.50	3,756.0	-233.2	-303.5	-292.1	3.86	3.85	-0.52	
3,878.0	11.10	234.80	3,849.2	-243.7	-318.6	-306.8	0.25	-0.21	-0.74	
3,974.0	11.10	233.70	3,943.4	-254.5	-333.6	-321.2	0.22	0.00	-1.15	
4,069.0	10.70	233.00	4,036.7	-265.2	-348.1	-335.1	0.44	-0.42	-0.74	
4,165.0	9.70	232.10	4,131.1	-275.6	-361.6	-348.1	1.05	-1.04	-0.94	
4,260.0	9.10	231.10	4,224.9	-285.2	-373.7	-359.8	0.65	-0.63	-1.05	
4,356.0	8.90	225.80	4,319.7	-295.2	-384.9	-370.6	0.89	-0.21	-5.52	
4,452.0	8.40	225.50	4,414.6	-305.2	-395.3	-380.4	0.52	-0.52	-0.31	
4,547.0	7.70	226.30	4,508.7	-314.5	-404.8	-389.5	0.75	-0.74	0.84	
4,642.0	7.00	223.00	4,602.9	-323.1	-413.4	-397.6	0.86	-0.74	-3.47	
4,738.0	7.60	231.30	4,698.1	-331.4	-422.3	-406.2	1.26	0.63	8.65	
4,834.0	7.20	230.70	4,793.3	-339.2	-431.9	-415.4	0.42	-0.42	-0.63	
4,930.0	6.50	233.60	4,888.6	-346.2	-441.0	-424.1	0.81	-0.73	3.02	
5,026.0	6.40	234.30	4,984.0	-352.5	-449.7	-432.5	0.13	-0.10	0.73	
5,121.0	5.60	232.10	5,078.5	-358.5	-457.6	-440.2	0.88	-0.84	-2.32	

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<b>Wellbore:</b>	Daisy 31F-332 Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Daisy 31F-332 Wellbore #1	<b>Database:</b>	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)
5,217.0	5.00	229.90	5,174.1	-364.1	-464.5	-446.8	0.66	-0.63	-2.29
5,312.0	2.90	231.30	5,268.8	-368.2	-469.6	-451.6	2.21	-2.21	1.47
5,408.0	1.00	253.80	5,364.8	-370.0	-472.3	-454.3	2.10	-1.98	23.44
5,504.0	0.50	33.50	5,460.8	-369.9	-472.8	-454.8	1.48	-0.52	145.52
5,599.0	0.20	50.90	5,555.8	-369.4	-472.5	-454.5	0.33	-0.32	18.32
5,695.0	0.30	75.70	5,651.8	-369.2	-472.1	-454.1	0.15	0.10	25.83
5,790.0	0.30	125.10	5,746.8	-369.3	-471.7	-453.7	0.26	0.00	52.00
5,885.0	0.40	153.00	5,841.8	-369.8	-471.3	-453.3	0.20	0.11	29.37
5,980.0	0.30	254.80	5,936.8	-370.1	-471.4	-453.4	0.58	-0.11	107.16
6,075.0	0.40	338.10	6,031.8	-369.9	-471.8	-453.8	0.50	0.11	87.68
6,170.0	0.40	45.30	6,126.8	-369.3	-471.7	-453.7	0.47	0.00	70.74
6,266.0	2.50	95.70	6,222.7	-369.3	-469.3	-451.4	2.36	2.19	52.50
6,362.0	6.90	86.60	6,318.4	-369.2	-461.5	-443.5	4.63	4.58	-9.48
6,457.0	12.70	97.70	6,412.0	-370.2	-445.4	-427.4	6.39	6.11	11.68
6,553.0	17.00	95.90	6,504.7	-373.1	-421.0	-402.9	4.50	4.48	-1.88
6,649.0	26.60	89.80	6,593.8	-374.5	-385.5	-367.3	10.26	10.00	-6.35
6,744.0	32.10	89.80	6,676.6	-374.3	-338.9	-320.8	5.79	5.79	0.00
6,839.0	41.10	86.60	6,752.8	-372.4	-282.4	-264.5	9.68	9.47	-3.37
6,935.0	51.80	85.40	6,818.8	-367.5	-213.1	-195.5	11.18	11.15	-1.25
7,030.0	62.40	85.50	6,870.3	-361.1	-133.7	-116.5	11.16	11.16	0.11
7,125.0	68.20	85.50	6,910.0	-354.4	-47.7	-30.9	6.11	6.11	0.00
7,156.7	69.58	86.58	6,921.4	-352.3	-18.2	-1.5	5.38	4.35	3.39
TPZ - 460' Setback - 1634'FNL & 460'FWL, Sec.31									
7,221.0	72.40	88.70	6,942.4	-349.8	42.6	59.0	5.38	4.38	3.30
7,316.0	84.80	92.80	6,961.1	-351.1	135.5	151.9	13.72	13.05	4.32
7,383.4	88.44	93.83	6,965.1	-355.0	202.6	219.2	5.62	5.40	1.53
Deepest TVD Drilled - 6965.1'									
7,440.0	91.50	94.70	6,965.1	-359.2	259.1	275.8	5.62	5.40	1.53
7,536.0	91.50	94.30	6,962.6	-366.8	354.7	371.7	0.42	0.00	-0.42
7,631.0	91.30	94.20	6,960.3	-373.8	449.4	466.6	0.24	-0.21	-0.11
7,727.0	90.70	94.50	6,958.6	-381.1	545.2	562.6	0.70	-0.63	0.31
7,822.0	90.50	91.30	6,957.6	-385.9	640.0	657.5	3.37	-0.21	-3.37
7,918.0	90.00	89.90	6,957.2	-386.9	736.0	753.5	1.55	-0.52	-1.46
8,013.0	89.30	89.80	6,957.8	-386.6	831.0	848.3	0.74	-0.74	-0.11
8,108.0	89.20	90.50	6,959.0	-386.9	926.0	943.2	0.74	-0.11	0.74
8,203.0	89.20	87.80	6,960.4	-385.5	1,021.0	1,038.0	2.84	0.00	-2.84
8,298.0	89.20	87.70	6,961.7	-381.7	1,115.9	1,132.7	0.11	0.00	-0.11
8,395.0	89.00	88.20	6,963.2	-378.3	1,212.8	1,229.3	0.56	-0.21	0.52
8,490.0	90.20	88.40	6,963.9	-375.5	1,307.8	1,324.0	1.28	1.26	0.21
8,586.0	90.30	88.40	6,963.5	-372.8	1,403.7	1,419.8	0.10	0.10	0.00
8,681.0	90.00	87.80	6,963.2	-369.6	1,498.7	1,514.5	0.71	-0.32	-0.63
8,776.0	90.70	89.60	6,962.6	-367.5	1,593.6	1,609.2	2.03	0.74	1.89
8,872.0	91.40	89.60	6,960.9	-366.8	1,689.6	1,705.1	0.73	0.73	0.00

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<b>Wellbore:</b>	Daisy 31F-332 Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Daisy 31F-332 Wellbore #1	<b>Database:</b>	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)
8,967.0	91.10	89.90	6,958.8	-366.4	1,784.6	1,799.9	0.45	-0.32	0.32
9,063.0	91.30	89.60	6,956.8	-366.0	1,880.6	1,895.8	0.38	0.21	-0.31
9,159.0	91.30	88.70	6,954.6	-364.5	1,976.5	1,991.6	0.94	0.00	-0.94
9,254.0	91.00	87.80	6,952.7	-361.6	2,071.5	2,086.3	1.00	-0.32	-0.95
9,349.0	91.10	87.50	6,951.0	-357.8	2,166.4	2,180.9	0.33	0.11	-0.32
9,445.0	90.70	89.90	6,949.4	-355.6	2,262.3	2,276.6	2.53	-0.42	2.50
9,541.0	91.10	90.10	6,947.9	-355.6	2,358.3	2,372.5	0.47	0.42	0.21
9,636.0	90.30	90.80	6,946.8	-356.3	2,453.3	2,467.4	1.12	-0.84	0.74
9,732.0	90.60	90.50	6,946.0	-357.4	2,549.3	2,563.3	0.44	0.31	-0.31
9,827.0	89.90	90.60	6,945.6	-358.3	2,644.3	2,658.3	0.74	-0.74	0.11
9,923.0	89.30	91.50	6,946.3	-360.1	2,740.3	2,754.2	1.13	-0.63	0.94
10,019.0	89.00	91.20	6,947.7	-362.3	2,836.2	2,850.2	0.44	-0.31	-0.31
10,114.0	91.40	89.80	6,947.4	-363.2	2,931.2	2,945.1	2.92	2.53	-1.47
10,209.0	91.70	88.40	6,944.8	-361.7	3,026.2	3,039.9	1.51	0.32	-1.47
10,305.0	91.80	88.70	6,941.9	-359.3	3,122.1	3,135.6	0.33	0.10	0.31
10,401.0	91.80	88.90	6,938.9	-357.2	3,218.0	3,231.3	0.21	0.00	0.21
10,497.0	91.50	88.70	6,936.1	-355.2	3,314.0	3,327.1	0.38	-0.31	-0.21
10,592.0	91.10	89.10	6,933.9	-353.4	3,408.9	3,421.8	0.60	-0.42	0.42
10,688.0	90.60	88.90	6,932.5	-351.7	3,504.9	3,517.6	0.56	-0.52	-0.21
10,784.0	91.20	89.40	6,931.0	-350.3	3,600.9	3,613.4	0.81	0.63	0.52
10,879.0	90.10	89.60	6,929.9	-349.5	3,695.9	3,708.3	1.18	-1.16	0.21
10,975.0	90.00	89.80	6,929.8	-349.0	3,791.9	3,804.1	0.23	-0.10	0.21
11,071.0	89.40	90.80	6,930.3	-349.5	3,887.9	3,900.0	1.21	-0.63	1.04
11,166.0	89.10	90.80	6,931.6	-350.8	3,982.8	3,995.0	0.32	-0.32	0.00
11,262.0	89.00	90.50	6,933.2	-351.9	4,078.8	4,090.9	0.33	-0.10	-0.31
11,357.0	91.30	88.20	6,932.9	-350.8	4,173.8	4,185.7	3.42	2.42	-2.42
11,453.0	91.50	88.70	6,930.6	-348.2	4,269.7	4,281.4	0.56	0.21	0.52
11,549.0	91.30	90.60	6,928.2	-347.6	4,365.7	4,377.3	1.99	-0.21	1.98
11,644.0	91.50	92.80	6,925.9	-350.5	4,460.6	4,472.2	2.32	0.21	2.32
11,740.0	91.20	93.80	6,923.7	-356.0	4,556.4	4,568.2	1.09	-0.31	1.04
11,835.0	90.70	86.80	6,922.1	-356.5	4,651.4	4,663.0	7.39	-0.53	-7.37
11,931.0	89.60	85.90	6,921.8	-350.4	4,747.2	4,758.4	1.48	-1.15	-0.94
12,026.0	89.80	87.80	6,922.3	-345.1	4,842.0	4,852.9	2.01	0.21	2.00
12,122.0	91.30	89.60	6,921.4	-343.0	4,938.0	4,948.7	2.44	1.56	1.88
12,217.0	91.50	89.20	6,919.1	-342.0	5,033.0	5,043.5	0.47	0.21	-0.42
12,313.0	91.00	89.60	6,917.0	-341.0	5,128.9	5,139.3	0.67	-0.52	0.42
12,408.0	91.40	90.10	6,915.0	-340.7	5,223.9	5,234.2	0.67	0.42	0.53
12,504.0	91.40	89.20	6,912.7	-340.1	5,319.9	5,330.0	0.94	0.00	-0.94
12,599.0	91.50	89.40	6,910.2	-339.0	5,414.8	5,424.8	0.24	0.11	0.21
12,695.0	91.10	89.80	6,908.1	-338.3	5,510.8	5,520.6	0.59	-0.42	0.42
12,790.0	91.60	90.30	6,905.8	-338.4	5,605.8	5,615.5	0.74	0.53	0.53
12,885.0	91.50	90.50	6,903.3	-339.0	5,700.7	5,710.4	0.24	-0.11	0.21
12,981.0	91.30	90.10	6,900.9	-339.5	5,796.7	5,806.3	0.47	-0.21	-0.42
13,077.0	91.20	90.10	6,898.8	-339.7	5,892.7	5,902.2	0.10	-0.10	0.00

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Daisy 31F-332
<b>Project:</b>	SEC.31-T5N-R64W	<b>TVD Reference:</b>	WELL @ 4798.0ft (Original Well Elev)
<b>Site:</b>	Daisy 5N64W31F Pad Sec.31-T5N-R64W	<b>MD Reference:</b>	WELL @ 4798.0ft (Original Well Elev)
<b>Well:</b>	Daisy 31F-332	<b>North Reference:</b>	True
<b>Wellbore:</b>	Daisy 31F-332 Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Daisy 31F-332 Wellbore #1	<b>Database:</b>	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)	
13,172.0	90.80	89.80	6,897.2	-339.6	5,987.7	5,997.0	0.53	-0.42	-0.32	
13,267.0	91.60	89.40	6,895.2	-339.0	6,082.7	6,091.9	0.94	0.84	-0.42	
13,363.0	91.50	89.40	6,892.6	-338.0	6,178.6	6,187.7	0.10	-0.10	0.00	
13,459.0	91.50	89.20	6,890.1	-336.8	6,274.6	6,283.5	0.21	0.00	-0.21	
13,554.0	91.10	89.40	6,887.9	-335.6	6,369.5	6,378.3	0.47	-0.42	0.21	
13,650.0	92.10	90.50	6,885.2	-335.5	6,465.5	6,474.1	1.55	1.04	1.15	
13,746.0	91.60	90.50	6,882.1	-336.4	6,561.4	6,570.0	0.52	-0.52	0.00	
13,841.0	91.80	91.00	6,879.3	-337.6	6,656.4	6,664.9	0.57	0.21	0.53	
13,937.0	92.20	91.90	6,876.0	-340.1	6,752.3	6,760.8	1.03	0.42	0.94	
14,033.0	90.70	91.00	6,873.5	-342.5	6,848.2	6,856.8	1.82	-1.56	-0.94	
14,128.0	90.70	91.50	6,872.4	-344.6	6,943.2	6,951.7	0.53	0.00	0.53	
14,223.0	89.20	90.10	6,872.5	-345.9	7,038.2	7,046.7	2.16	-1.58	-1.47	
14,319.0	88.80	90.10	6,874.1	-346.1	7,134.2	7,142.6	0.42	-0.42	0.00	
14,414.0	89.00	90.30	6,876.0	-346.4	7,229.2	7,237.5	0.30	0.21	0.21	
14,465.0	88.70	90.50	6,877.0	-346.7	7,280.1	7,288.4	0.71	-0.59	0.39	
14,525.0	88.70	90.50	6,878.3	-347.3	7,340.1	7,348.3	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SHL 1281'FNL, 479'FWL	0.00	0.00	1.0	0.0	0.0	1,375,018.29	3,250,714.14	40.359335	-104.600328	
- hit/miss target										
- survey hits target center										
- Point										
BHL 1648'FNL, 2550'FM	0.00	0.00	6,897.0	-328.7	7,342.8	1,374,764.09	3,258,059.62	40.358430	-104.573980	
- survey misses target center by 26.5ft at 14525.0ft MD (6878.3 TVD, -347.3 N, 7340.1 E)										
- Point										

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
7,156.7	6,921.4	-352.3	-18.2	TPZ - 460' Setback - 1634'FNL & 460'FWL, Sec.31	
7,383.4	6,965.1	-355.0	202.6	Deepest TVD Drilled - 6965.1'	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_