

# PDC Energy Inc. DJ Basin

Well Name: **J Clark 9C (Codell)**

Surface Location: Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W

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

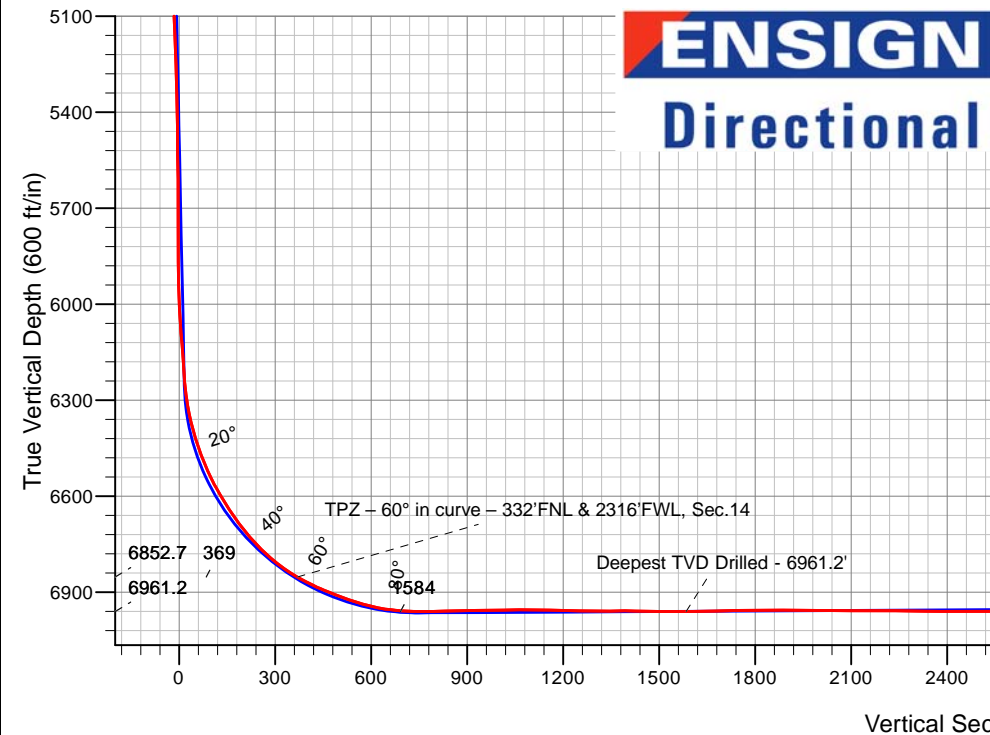
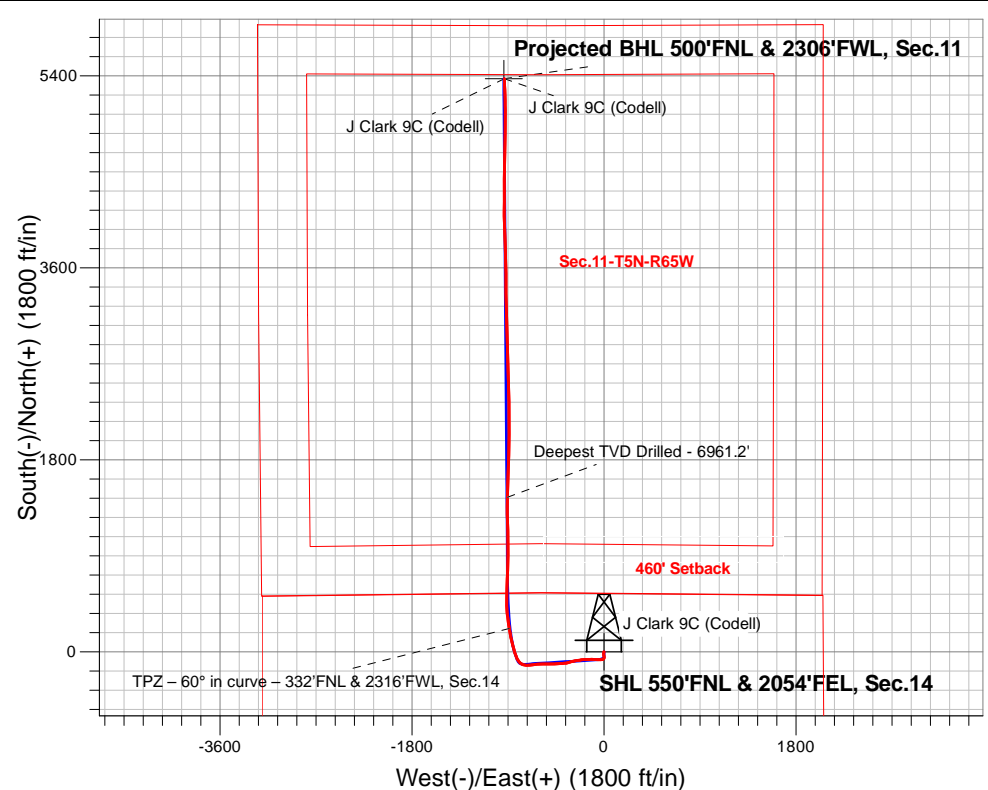
Ground Elevation: 4615.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1391636.24	3242710.95	40.405169	-104.628458	

Original Well Elev WELL @ 4638.0ft (Original Well Elev)

## FINAL SURVEY

**Projected Bottom Hole Location**  
**12,226'MD 6917'TVD 5373'N & 934'W of SHL**  
**91.5 degree Incl @ 358.3 degree AZM**



**ENSIGN**  
**Directional**

Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W  
J Clark 9C (Codell)  
J Clark 9C (Codell) Wellbore #1  
11:10, July 23 2018

### ANNOTATIONS

TVD	MD	Annotation
6852.7	7048.6	TPZ - 60° in curve - 332'FNL & 2316'FWL, Sec.14
6961.2	8300.0	Deepest TVD Drilled - 6961.2'

### LEGEND

- J Clark 9C (Codell), J Clark 9C (Codell) Wellbore #1, Plan #2 (7-17-18) V0
- J Clark 9C (Codell) Wellbore #1
- Survey #1

**Projected BHL 500'FNL & 2306'FWL, Sec.11**

J Clark 9C (Codell)

J Clark 9C (Codell)



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

**SEC.14-T5N-R65W**

**Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W**

**J Clark 9C (Codell)**

**J Clark 9C (Codell) Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**23 July, 2018**

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well J Clark 9C (Codell)
<b>Project:</b>	SEC.14-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4638.0ft (Original Well Elev)
<b>Site:</b>	Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W	<b>MD Reference:</b>	WELL @ 4638.0ft (Original Well Elev)
<b>Well:</b>	J Clark 9C (Codell)	<b>North Reference:</b>	True
<b>Wellbore:</b>	J Clark 9C (Codell) Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	J Clark 9C (Codell) Wellbore #1	<b>Database:</b>	US_EDM

<b>Project</b>	SEC.14-T5N-R65W, Weld County, Colorado		
<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		Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W						
Site Position:		Northing:	1,391,636.42	usft	Latitude:	40.405168		
From:	Lat/Long	Easting:	3,242,770.94	usft	Longitude:	-104.628243		
Position Uncertainty:	0.0	ft	Slot Radius:	13-3/16	"	Grid Convergence:	0.56	°

Well	J Clark 9C (Codell)					
Well Position	+N/-S	0.0 ft	Northing:	1,391,636.24 usft	Latitude:	40.405169
	+E/-W	0.0 ft	Easting:	3,242,710.95 usft	Longitude:	-104.628459
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,615.0 ft

<b>Wellbore</b>	J Clark 9C (Codell) 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	7/17/2018	8.10	66.87	52,229

<b>Design</b>	J Clark 9C (Codell) 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	350.07	

<b>Survey Program</b>	<b>Date</b>	7/23/2018			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
152.0	12,226.0	Survey #1 (J Clark 9C (Codell) Wellbore #	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	
152.0	0.40	260.70	152.0	-0.1	-0.5	0.0	0.26	0.26	0.00	
248.0	0.90	240.80	248.0	-0.5	-1.5	-0.2	0.56	0.52	-20.73	
343.0	0.90	228.20	343.0	-1.4	-2.7	-0.9	0.21	0.00	-13.26	
438.0	1.60	190.70	438.0	-3.2	-3.5	-2.5	1.10	0.74	-39.47	
534.0	1.40	197.60	533.9	-5.6	-4.1	-4.8	0.28	-0.21	7.19	
629.0	2.10	185.10	628.9	-8.4	-4.6	-7.5	0.84	0.74	-13.16	
724.0	2.40	184.90	723.8	-12.2	-5.0	-11.1	0.32	0.32	-0.21	
820.0	2.40	176.00	819.7	-16.2	-5.0	-15.1	0.39	0.00	-9.27	
915.0	2.00	170.20	914.7	-19.8	-4.6	-18.7	0.48	-0.42	-6.11	

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well J Clark 9C (Codell)
<b>Project:</b>	SEC.14-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4638.0ft (Original Well Elev)
<b>Site:</b>	Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W	<b>MD Reference:</b>	WELL @ 4638.0ft (Original Well Elev)
<b>Well:</b>	J Clark 9C (Codell)	<b>North Reference:</b>	True
<b>Wellbore:</b>	J Clark 9C (Codell) Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	J Clark 9C (Codell) 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)
1,010.0	2.20	184.90	1,009.6	-23.2	-4.4	-22.1	0.60	0.21	15.47
1,106.0	1.80	167.50	1,105.5	-26.5	-4.3	-25.4	0.75	-0.42	-18.13
1,201.0	2.00	179.80	1,200.5	-29.7	-3.9	-28.5	0.48	0.21	12.95
1,296.0	1.90	155.80	1,295.4	-32.8	-3.3	-31.7	0.86	-0.11	-25.26
1,391.0	1.80	158.90	1,390.4	-35.6	-2.1	-34.7	0.15	-0.11	3.26
1,486.0	1.80	163.50	1,485.3	-38.4	-1.1	-37.6	0.15	0.00	4.84
1,582.0	2.30	183.40	1,581.3	-41.8	-0.8	-41.0	0.90	0.52	20.73
1,625.0	2.80	191.30	1,624.2	-43.7	-1.1	-42.8	1.42	1.16	18.37
1,775.0	4.20	144.90	1,774.0	-51.8	1.4	-51.2	2.03	0.93	-30.93
1,871.0	4.90	212.00	1,869.7	-58.1	1.2	-57.4	5.27	0.73	69.90
1,967.0	5.50	225.40	1,965.3	-64.8	-4.2	-63.1	1.41	0.63	13.96
2,061.0	5.40	243.50	2,058.9	-70.0	-11.4	-66.9	1.82	-0.11	19.26
2,156.0	6.20	263.50	2,153.4	-72.5	-20.5	-67.9	2.27	0.84	21.05
2,252.0	6.90	266.30	2,248.8	-73.5	-31.4	-67.0	0.80	0.73	2.92
2,347.0	8.50	272.50	2,343.0	-73.6	-44.1	-64.8	1.90	1.68	6.53
2,443.0	9.70	274.10	2,437.7	-72.7	-59.3	-61.4	1.28	1.25	1.67
2,539.0	9.20	271.60	2,532.4	-71.9	-75.0	-57.9	0.67	-0.52	-2.60
2,634.0	11.30	272.50	2,625.9	-71.3	-91.9	-54.3	2.22	2.21	0.95
2,730.0	11.60	271.40	2,720.0	-70.6	-111.0	-50.4	0.39	0.31	-1.15
2,825.0	10.80	268.40	2,813.2	-70.6	-129.4	-47.3	1.04	-0.84	-3.16
2,921.0	9.80	265.30	2,907.7	-71.5	-146.5	-45.2	1.19	-1.04	-3.23
3,017.0	12.10	270.70	3,001.9	-72.1	-164.7	-42.6	2.62	2.40	5.63
3,208.0	10.30	264.90	3,189.3	-73.4	-201.8	-37.5	1.11	-0.94	-3.04
3,304.0	9.20	257.00	3,283.9	-75.9	-217.8	-37.2	1.80	-1.15	-8.23
3,399.0	12.10	263.20	3,377.2	-78.7	-235.1	-37.0	3.28	3.05	6.53
3,494.0	11.30	261.20	3,470.3	-81.3	-254.2	-36.3	0.94	-0.84	-2.11
3,590.0	10.50	258.80	3,564.5	-84.5	-272.1	-36.3	0.96	-0.83	-2.50
3,686.0	10.50	257.00	3,658.9	-88.1	-289.2	-37.0	0.34	0.00	-1.88
3,781.0	10.60	255.40	3,752.3	-92.3	-306.0	-38.2	0.33	0.11	-1.68
3,876.0	10.30	254.40	3,845.7	-96.8	-322.7	-39.7	0.37	-0.32	-1.05
3,972.0	9.80	251.70	3,940.3	-101.7	-338.7	-41.7	0.72	-0.52	-2.81
4,067.0	10.80	263.90	4,033.8	-105.1	-355.2	-42.3	2.52	1.05	12.84
4,162.0	10.90	265.60	4,127.1	-106.8	-373.0	-40.9	0.35	0.11	1.79
4,258.0	10.10	261.40	4,221.4	-108.7	-390.4	-39.8	1.15	-0.83	-4.38
4,354.0	11.80	268.40	4,315.7	-110.3	-408.6	-38.2	2.25	1.77	7.29
4,449.0	11.50	267.90	4,408.7	-110.9	-427.7	-35.5	0.33	-0.32	-0.53
4,545.0	10.60	267.20	4,503.0	-111.7	-446.1	-33.1	0.95	-0.94	-0.73
4,641.0	9.60	264.60	4,597.5	-112.8	-462.9	-31.4	1.14	-1.04	-2.71
4,736.0	12.30	272.10	4,690.7	-113.2	-480.9	-28.6	3.21	2.84	7.89
4,832.0	12.00	271.90	4,784.6	-112.5	-501.1	-24.5	0.32	-0.31	-0.21
4,928.0	11.30	268.80	4,878.6	-112.4	-520.5	-21.0	0.98	-0.73	-3.23
5,024.0	11.00	267.90	4,972.8	-112.9	-539.0	-18.3	0.36	-0.31	-0.94
5,119.0	9.80	267.70	5,066.2	-113.6	-556.2	-16.0	1.26	-1.26	-0.21
5,214.0	12.60	271.10	5,159.4	-113.7	-574.6	-12.9	3.03	2.95	3.58

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well J Clark 9C (Codell)
<b>Project:</b>	SEC.14-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4638.0ft (Original Well Elev)
<b>Site:</b>	Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W	<b>MD Reference:</b>	WELL @ 4638.0ft (Original Well Elev)
<b>Well:</b>	J Clark 9C (Codell)	<b>North Reference:</b>	True
<b>Wellbore:</b>	J Clark 9C (Codell) Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	J Clark 9C (Codell) 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)
5,310.0	12.30	268.10	5,253.2	-113.8	-595.3	-9.5	0.74	-0.31	-3.13
5,405.0	10.70	266.90	5,346.3	-114.6	-614.2	-7.1	1.70	-1.68	-1.26
5,501.0	9.80	263.70	5,440.7	-116.0	-631.2	-5.5	1.11	-0.94	-3.33
5,597.0	11.80	262.80	5,535.0	-118.2	-649.1	-4.5	2.09	2.08	-0.94
5,692.0	11.70	263.50	5,628.0	-120.5	-668.3	-3.5	0.18	-0.11	0.74
5,884.0	9.40	260.00	5,816.8	-125.4	-703.1	-2.3	1.24	-1.20	-1.82
6,008.0	8.20	265.30	5,939.3	-127.9	-721.9	-1.5	1.17	-0.97	4.27
6,103.0	9.50	286.20	6,033.2	-126.2	-736.2	2.6	3.63	1.37	22.00
6,198.0	8.60	287.60	6,127.0	-121.9	-750.5	9.3	0.98	-0.95	1.47
6,293.0	7.20	290.20	6,221.1	-117.7	-762.8	15.6	1.52	-1.47	2.74
6,389.0	14.10	302.50	6,315.4	-109.3	-778.4	26.5	7.53	7.19	12.81
6,485.0	19.00	318.00	6,407.5	-91.4	-798.7	47.6	6.83	5.10	16.15
6,581.0	23.30	332.60	6,497.0	-62.9	-817.9	79.0	7.05	4.48	15.21
6,676.0	29.30	345.80	6,582.2	-23.6	-832.3	120.2	8.79	6.32	13.89
6,771.0	35.30	343.30	6,662.5	25.2	-845.9	170.7	6.47	6.32	-2.63
6,867.0	41.40	345.60	6,737.7	82.6	-861.8	229.9	6.52	6.35	2.40
6,963.0	50.90	349.50	6,804.2	150.2	-876.5	299.0	10.32	9.90	4.06
7,048.6	60.00	350.23	6,852.7	219.5	-888.9	369.4	10.65	10.63	0.85
TPZ - 60° in curve - 332°FNL & 2316°FNL, Sec.14									
7,058.0	61.00	350.30	6,857.3	227.6	-890.2	377.6	10.65	10.63	0.76
7,154.0	67.90	352.50	6,898.7	313.1	-903.1	464.1	7.48	7.19	2.29
7,249.0	72.10	356.10	6,931.2	401.9	-912.0	553.1	5.68	4.42	3.79
7,344.0	81.50	1.20	6,952.9	494.3	-914.1	644.4	11.19	9.89	5.37
7,439.0	89.60	1.90	6,960.2	588.9	-911.5	737.2	8.56	8.53	0.74
7,534.0	91.80	2.10	6,959.1	683.8	-908.2	830.1	2.33	2.32	0.21
7,629.0	90.70	1.90	6,957.0	778.7	-904.9	923.0	1.18	-1.16	-0.21
7,724.0	90.70	1.60	6,955.8	873.7	-902.0	1,016.1	0.32	0.00	-0.32
7,820.0	89.70	0.00	6,955.5	969.6	-900.6	1,110.4	1.97	-1.04	-1.67
7,916.0	87.90	358.60	6,957.5	1,065.6	-901.8	1,205.1	2.38	-1.88	-1.46
8,011.0	90.50	358.60	6,958.8	1,160.6	-904.1	1,299.0	2.74	2.74	0.00
8,106.0	89.80	358.30	6,958.6	1,255.5	-906.7	1,393.0	0.80	-0.74	-0.32
8,202.0	88.10	0.50	6,960.4	1,351.5	-907.7	1,487.7	2.90	-1.77	2.29
8,298.0	90.90	1.20	6,961.2	1,447.5	-906.3	1,582.0	3.01	2.92	0.73
8,300.0	90.92	1.20	6,961.2	1,449.5	-906.2	1,584.0	0.95	0.95	-0.11
Deepest TVD Drilled - 6961.2'									
8,393.0	91.80	1.10	6,959.0	1,542.4	-904.4	1,675.2	0.95	0.95	-0.11
8,489.0	91.00	2.80	6,956.6	1,638.3	-901.1	1,769.1	1.96	-0.83	1.77
8,585.0	89.50	2.30	6,956.2	1,734.2	-896.8	1,862.9	1.65	-1.56	-0.52
8,680.0	89.30	1.90	6,957.2	1,829.2	-893.3	1,955.8	0.47	-0.21	-0.42
8,776.0	89.80	0.50	6,957.9	1,925.1	-891.3	2,050.0	1.55	0.52	-1.46
8,872.0	90.20	0.00	6,957.9	2,021.1	-890.9	2,144.5	0.67	0.42	-0.52
8,968.0	89.30	359.30	6,958.4	2,117.1	-891.5	2,239.1	1.19	-0.94	-0.73
9,063.0	89.10	359.70	6,959.7	2,212.1	-892.3	2,332.8	0.47	-0.21	0.42

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well J Clark 9C (Codell)
<b>Project:</b>	SEC.14-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4638.0ft (Original Well Elev)
<b>Site:</b>	Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W	<b>MD Reference:</b>	WELL @ 4638.0ft (Original Well Elev)
<b>Well:</b>	J Clark 9C (Codell)	<b>North Reference:</b>	True
<b>Wellbore:</b>	J Clark 9C (Codell) Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	J Clark 9C (Codell) 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)
9,159.0	90.30	0.50	6,960.2	2,308.1	-892.2	2,427.4	1.50	1.25	0.83
9,255.0	89.70	358.80	6,960.2	2,404.1	-892.7	2,522.0	1.88	-0.63	-1.77
9,350.0	89.90	358.60	6,960.5	2,499.1	-894.9	2,615.9	0.30	0.21	-0.21
9,446.0	90.00	359.00	6,960.6	2,595.1	-896.9	2,710.8	0.43	0.10	0.42
9,542.0	89.70	358.40	6,960.9	2,691.0	-899.1	2,805.7	0.70	-0.31	-0.63
9,637.0	90.70	358.30	6,960.5	2,786.0	-901.8	2,899.8	1.06	1.05	-0.11
9,732.0	91.20	357.70	6,959.0	2,880.9	-905.1	2,993.8	0.82	0.53	-0.63
9,828.0	91.40	357.70	6,956.8	2,976.8	-909.0	3,089.0	0.21	0.21	0.00
9,923.0	91.60	357.70	6,954.3	3,071.7	-912.8	3,183.1	0.21	0.21	0.00
10,019.0	91.90	357.60	6,951.4	3,167.6	-916.7	3,278.2	0.33	0.31	-0.10
10,114.0	90.00	359.30	6,949.8	3,262.5	-919.3	3,372.2	2.68	-2.00	1.79
10,210.0	89.80	359.70	6,949.9	3,358.5	-920.1	3,466.9	0.47	-0.21	0.42
10,305.0	90.20	0.20	6,949.9	3,453.5	-920.2	3,560.5	0.67	0.42	0.53
10,401.0	91.40	359.00	6,948.6	3,549.5	-920.9	3,655.1	1.77	1.25	-1.25
10,496.0	91.50	358.60	6,946.2	3,644.5	-922.9	3,749.0	0.43	0.11	-0.42
10,592.0	92.30	359.00	6,943.0	3,740.4	-924.9	3,843.8	0.93	0.83	0.42
10,687.0	92.10	358.30	6,939.4	3,835.3	-927.1	3,937.7	0.77	-0.21	-0.74
10,782.0	91.90	357.70	6,936.1	3,930.2	-930.4	4,031.7	0.67	-0.21	-0.63
10,878.0	92.00	357.00	6,932.8	4,026.0	-934.9	4,126.9	0.74	0.10	-0.73
10,974.0	90.20	0.70	6,930.9	4,122.0	-936.8	4,221.7	4.29	-1.88	3.85
11,069.0	89.70	0.70	6,931.0	4,217.0	-935.6	4,315.1	0.53	-0.53	0.00
11,164.0	89.50	0.00	6,931.7	4,311.9	-935.1	4,408.6	0.77	-0.21	-0.74
11,260.0	89.40	0.20	6,932.6	4,407.9	-934.9	4,503.1	0.23	-0.10	0.21
11,451.0	91.70	1.10	6,930.8	4,598.9	-932.7	4,690.9	1.29	1.20	0.47
11,547.0	91.90	1.60	6,927.8	4,694.8	-930.5	4,785.0	0.56	0.21	0.52
11,642.0	91.90	0.70	6,924.6	4,789.8	-928.6	4,878.1	0.95	0.00	-0.95
11,738.0	91.50	1.10	6,921.8	4,885.7	-927.1	4,972.4	0.59	-0.42	0.42
11,834.0	89.30	0.50	6,921.1	4,981.7	-925.7	5,066.7	2.38	-2.29	-0.63
12,024.0	90.80	357.90	6,920.9	5,171.6	-928.4	5,254.3	1.58	0.79	-1.37
12,120.0	90.60	358.80	6,919.8	5,267.6	-931.1	5,349.3	0.96	-0.21	0.94
12,169.0	91.50	358.30	6,918.9	5,316.6	-932.4	5,397.7	2.10	1.84	-1.02
12,226.0	91.50	358.30	6,917.4	5,373.5	-934.1	5,454.1	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
- hit/miss target									
- Shape									
SHL 550'FNL & 2054'FE	0.00	0.00	1.0	0.0	0.0	1,391,636.27	3,242,710.95	40.405169	-104.628459
- survey hits target center									
- Point									
BHL 500'FNL & 2300'FM	0.00	0.00	6,938.0	5,373.8	-940.4	1,397,000.33	3,241,717.79	40.419920	-104.631836
- survey misses target center by 21.6ft at 12225.9ft MD (6917.4 TVD, 5373.5 N, -934.1 E)									
- Point									

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well J Clark 9C (Codell)
<b>Project:</b>	SEC.14-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4638.0ft (Original Well Elev)
<b>Site:</b>	Clark 5N65W14 1-21 Pad Sec.14-T5N-R65W	<b>MD Reference:</b>	WELL @ 4638.0ft (Original Well Elev)
<b>Well:</b>	J Clark 9C (Codell)	<b>North Reference:</b>	True
<b>Wellbore:</b>	J Clark 9C (Codell) Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	J Clark 9C (Codell) Wellbore #1	<b>Database:</b>	US_EDM

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
7,048.6	6,852.7	219.5	-888.9	TPZ – 60° in curve – 332'FNL & 2316'FWL, Sec.14
8,300.0	6,961.2	1,449.5	-906.2	Deepest TVD Drilled - 6961.2'

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------