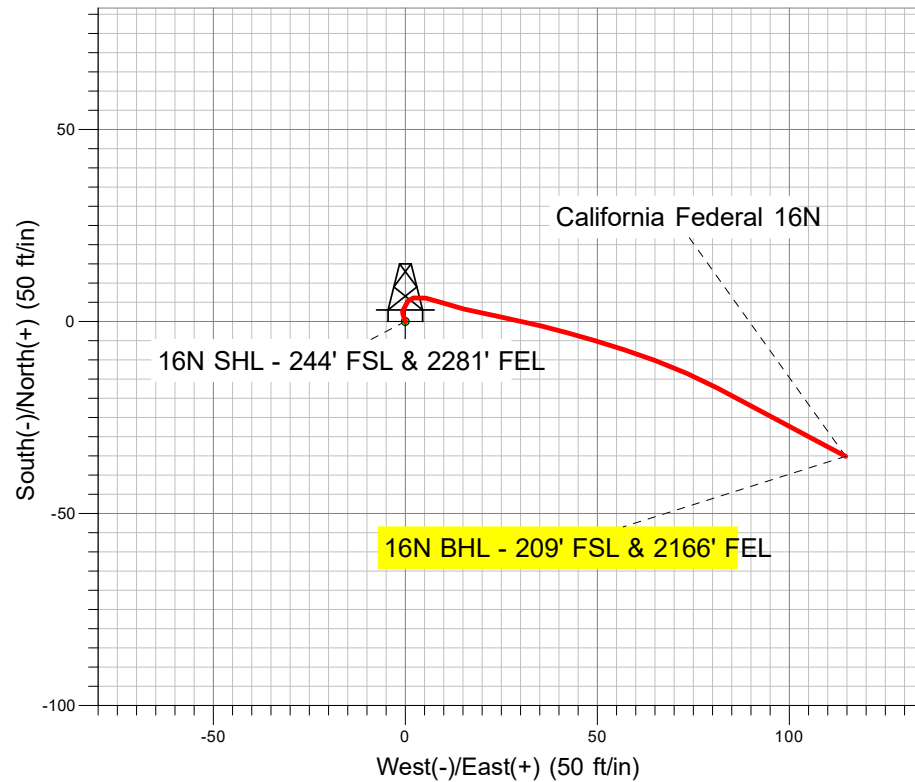




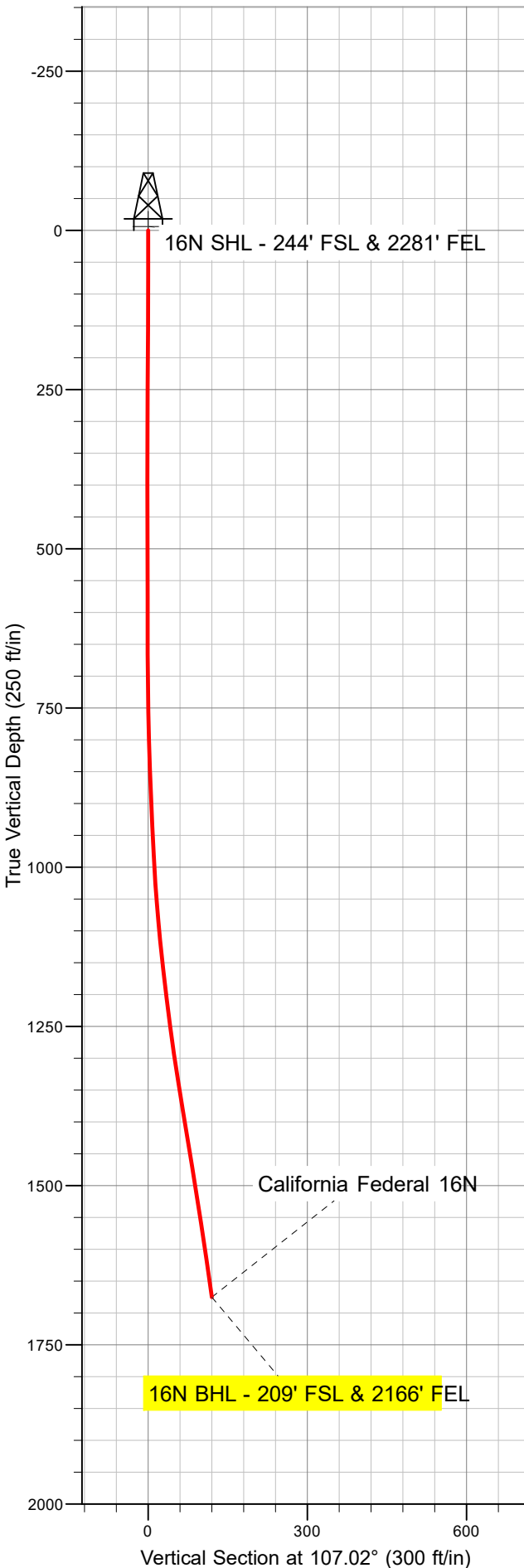
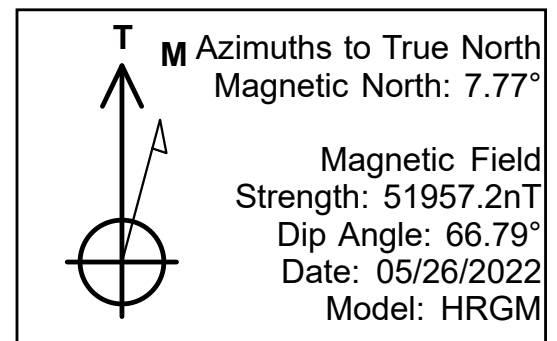
**Well Name:** California Federal 16N  
Surface Location: California Pad  
North American Datum 1983 US State Plane 1983 Colorado Northern Zone  
Ground Elevation: 4900.0  
+N/-S +E/-W Northing Easting Latitude Longitude  
0.0 0.0 1450951.36 3210160.36 40.568800 -104.743520  
ICON - RKB 5' WELL @ 4905.0ft (ICON - RKB 5')

## PDC Energy Inc. DJ Basin

# Final Survey Plot



Project: SEC.14-T7N-R66W  
Site: California Pad  
Well: California Federal 16N  
Plan: California Federal 16N





# **PDC Energy Inc. DJ Basin**

**SEC.14-T7N-R66W**

**California Pad**

**California Federal 16N**

**California Federal 16N**

**Design: California Federal 16N**

## **Standard Survey Report**

**17 June, 2022**

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well California Federal 16N
<b>Project:</b>	SEC.14-T7N-R66W	<b>TVD Reference:</b>	WELL @ 4905.0ft (ICON - RKB 5')
<b>Site:</b>	California Pad	<b>MD Reference:</b>	WELL @ 4905.0ft (ICON - RKB 5')
<b>Well:</b>	California Federal 16N	<b>North Reference:</b>	True
<b>Wellbore:</b>	California Federal 16N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	California Federal 16N	<b>Database:</b>	US_EDM

<b>Project</b>	SEC.14-T7N-R66W, 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		
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site		California Pad			
Site Position:		Northing:	1,450,951.37 usft	Latitude:	40.568800
From:	Lat/Long	Easting:	3,210,160.36 usft	Longitude:	-104.743520
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.49 °

Well	California Federal 16N					
Well Position	+N/-S	0.0 ft	Northing:	1,450,951.36 usf	Latitude:	40.568800
	+E/-W	0.0 ft	Easting:	3,210,160.36 usf	Longitude:	-104.743520
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,900.0 ft

<b>Wellbore</b>	California Federal 16N				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HRGM	05/26/2022	7.77	66.79	51,957.24538366

<b>Design</b>	California Federal 16N				
<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	107.02	

<b>Survey Program</b>	<b>Date</b>	06/17/2022			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
66.0	1,684.9	Survey #1 (California Federal 16N)	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
66.0	0.40	340.00	66.0	0.2	-0.1	-0.1	0.61	0.61	0.00
156.0	0.40	346.70	156.0	0.8	-0.3	-0.5	0.05	0.00	7.44
246.0	0.40	346.30	246.0	1.4	-0.4	-0.8	0.00	0.00	-0.44
306.0	0.60	331.90	306.0	1.9	-0.6	-1.1	0.39	0.33	-24.00
396.0	0.50	13.00	396.0	2.7	-0.7	-1.5	0.44	-0.11	45.67
486.0	0.70	40.80	486.0	3.5	-0.3	-1.3	0.39	0.22	30.89
576.0	0.60	14.80	576.0	4.4	0.2	-1.1	0.34	-0.11	-28.89
666.0	0.80	35.00	666.0	5.3	0.7	-0.9	0.35	0.22	22.44
756.0	1.40	73.50	756.0	6.2	2.1	0.2	1.02	0.67	42.78

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well California Federal 16N
<b>Project:</b>	SEC.14-T7N-R66W	<b>TVD Reference:</b>	WELL @ 4905.0ft (ICON - RKB 5')
<b>Site:</b>	California Pad	<b>MD Reference:</b>	WELL @ 4905.0ft (ICON - RKB 5')
<b>Well:</b>	California Federal 16N	<b>North Reference:</b>	True
<b>Wellbore:</b>	California Federal 16N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	California Federal 16N	<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)	
846.0	2.80	99.90	845.9	6.1	5.3	3.3	1.85	1.56	29.33	
936.0	2.90	110.40	935.8	4.9	9.6	7.7	0.59	0.11	11.67	
1,026.0	4.50	104.30	1,025.6	3.3	15.2	13.5	1.83	1.78	-6.78	
1,116.0	6.90	100.40	1,115.1	1.4	23.9	22.4	2.70	2.67	-4.33	
1,206.0	8.40	104.40	1,204.3	-1.2	35.6	34.4	1.77	1.67	4.44	
1,296.0	9.90	106.00	1,293.2	-5.0	49.4	48.7	1.69	1.67	1.78	
1,386.0	11.30	110.30	1,381.7	-10.1	65.1	65.2	1.79	1.56	4.78	
1,476.0	11.40	117.30	1,469.9	-17.3	81.3	82.8	1.53	0.11	7.78	
1,566.0	10.50	118.70	1,558.3	-25.3	96.4	99.6	1.04	-1.00	1.56	
1,624.0	9.90	118.00	1,615.3	-30.2	105.4	109.6	1.06	-1.03	-1.21	
1,684.9	9.90	118.00	1,675.3	-35.1	114.7	119.9	0.00	0.00	0.00	
16N BHL - 209' FSL & 2166' FEL										

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,684.9	1,675.3	-35.1	114.7	16N BHL - 209' FSL & 2166' FEL	

Checked By: _____	Approved By: _____	Date: _____
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