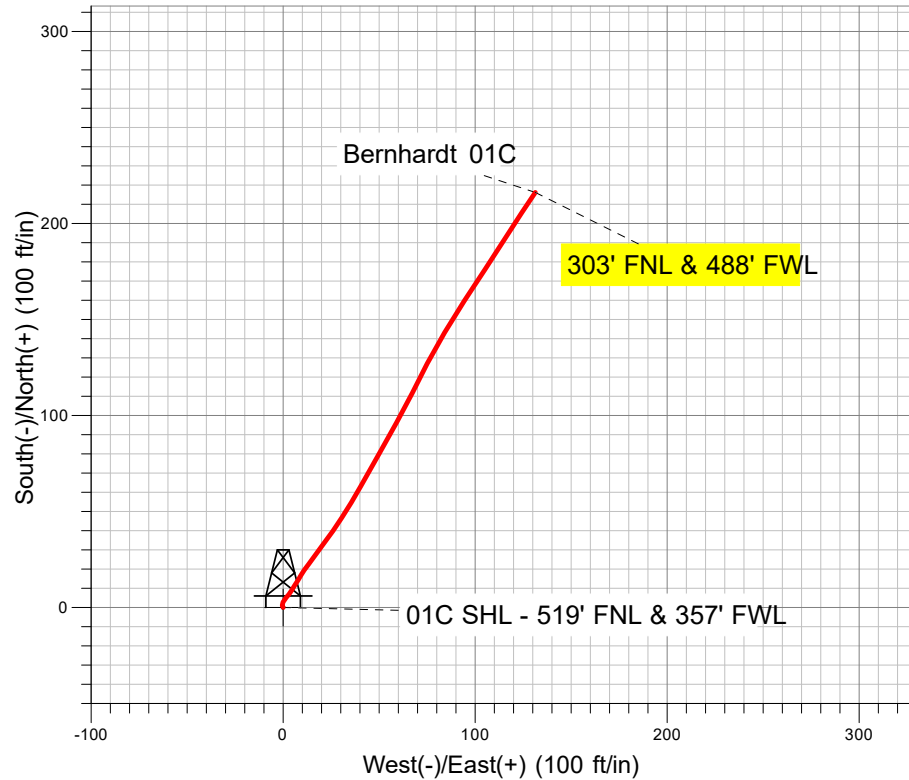
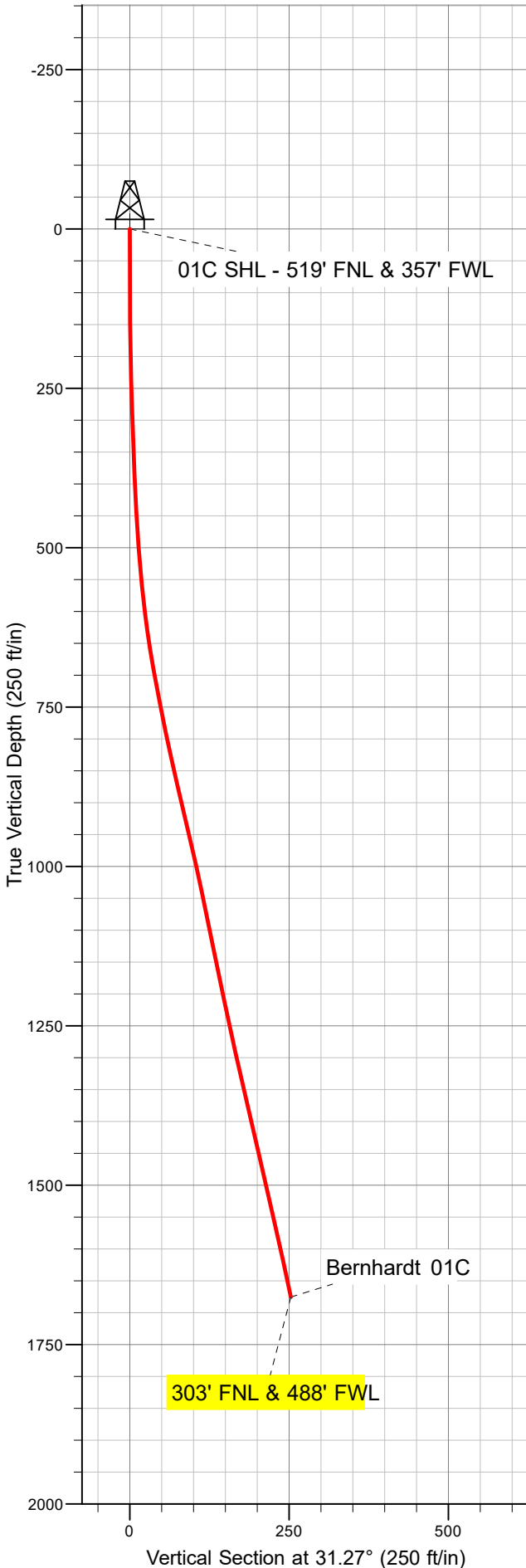




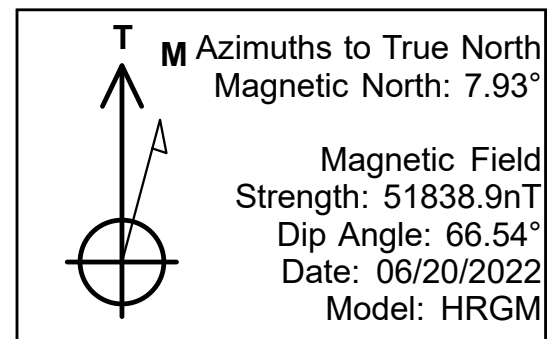
**Well Name:** Bernhardt 01C  
Surface Location: Bernhardt 4-18  
North American Datum 1983 US State Plane 1983 Colorado Northern Zone  
Ground Elevation: 4736.0  
+N/-S +E/-W Northing Easting Latitude Longitude  
0.0 0.0 1359317.64 3187264.47 40.317781 -104.828429  
Ensign 122 - RKB 13' (As Built) WELL @ 4749.0ft (Ensign 122 - RKB 13' (As Built))

## PDC Energy Inc. DJ Basin

# Final Survey Plot



Project: SEC.18-T4N-R66W  
Site: Bernhardt 4-18  
Well: Bernhardt 01C  
Plan: Bernhardt 01C





# **PDC Energy Inc. DJ Basin**

**SEC.18-T4N-R66W**

**Bernhardt 4-18**

**Bernhardt 01C**

**Bernhardt 01C**

**Design: Bernhardt 01C**

## **Standard Survey Report**

**05 July, 2022**

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Bernhardt 01C
<b>Project:</b>	SEC.18-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4749.0ft (Ensign 122 - RKB 13' (As Built))
<b>Site:</b>	Bernhardt 4-18	<b>MD Reference:</b>	WELL @ 4749.0ft (Ensign 122 - RKB 13' (As Built))
<b>Well:</b>	Bernhardt 01C	<b>North Reference:</b>	True
<b>Wellbore:</b>	Bernhardt 01C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Bernhardt 01C	<b>Database:</b>	US_EDM

<b>Project</b>	SEC.18-T4N-R66W		
<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		Bernhardt 4-18			
Site Position:		Northing:	1,359,288.20 usft	Latitude:	40.317700
From:	Lat/Long	Easting:	3,187,272.84 usft	Longitude:	-104.828400
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.43 °

Well	Bernhardt 01C					
Well Position	+N/-S	0.0 ft	Northing:	1,359,317.64 usf	Latitude:	40.317781
	+E/-W	0.0 ft	Easting:	3,187,264.47 usf	Longitude:	-104.828429
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,736.0 ft

<b>Wellbore</b>	Bernhardt 01C				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HRGM	06/20/2022	7.93	66.54	51,838.88137367

<b>Design</b>	Bernhardt 01C				
<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	31.27	

<b>Survey Program</b>	<b>Date</b>	07/05/2022			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
146.0	1,701.0	Survey #1 (Bernhardt 01C)	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	
146.0	0.88	335.06	146.0	1.0	-0.5	0.6	0.60	0.60	0.00	
238.0	1.76	30.96	238.0	2.9	0.0	2.4	1.59	0.96	60.76	
329.0	1.93	39.92	328.9	5.2	1.7	5.3	0.37	0.19	9.85	
444.0	3.08	34.12	443.8	9.3	4.6	10.3	1.02	1.00	-5.04	
531.0	4.92	29.90	530.6	14.5	7.8	16.4	2.14	2.11	-4.85	
619.0	7.83	35.88	618.0	22.6	13.2	26.2	3.39	3.31	6.80	
706.0	10.30	36.76	704.0	33.6	21.3	39.8	2.84	2.84	1.01	
791.0	11.80	33.42	787.4	47.0	30.7	56.1	1.92	1.76	-3.93	

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Bernhardt 01C
<b>Project:</b>	SEC.18-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4749.0ft (Ensign 122 - RKB 13' (As Built))
<b>Site:</b>	Bernhardt 4-18	<b>MD Reference:</b>	WELL @ 4749.0ft (Ensign 122 - RKB 13' (As Built))
<b>Well:</b>	Bernhardt 01C	<b>North Reference:</b>	True
<b>Wellbore:</b>	Bernhardt 01C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Bernhardt 01C	<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)
878.0	13.19	29.02	872.3	63.1	40.4	74.9	1.94	1.60	-5.06
965.0	13.19	29.73	957.0	80.4	50.1	94.7	0.19	0.00	0.82
1,050.0	11.87	29.20	1,040.0	96.4	59.2	113.1	1.56	-1.55	-0.62
1,136.0	11.34	26.04	1,124.2	111.7	67.2	130.4	0.96	-0.62	-3.67
1,221.0	12.05	27.97	1,207.5	127.1	75.0	147.6	0.95	0.84	2.27
1,308.0	12.57	30.96	1,292.5	143.2	84.2	166.1	0.95	0.60	3.44
1,395.0	13.19	32.19	1,377.3	159.7	94.3	185.5	0.78	0.71	1.41
1,483.0	12.93	34.12	1,463.0	176.4	105.2	205.4	0.58	-0.30	2.19
1,570.0	12.93	32.36	1,547.8	192.7	115.9	224.8	0.45	0.00	-2.02
1,641.0	12.22	33.59	1,617.1	205.6	124.3	240.3	1.07	-1.00	1.73
1,701.0	12.22	33.59	1,675.7	216.2	131.3	253.0	0.00	0.00	0.00
303' FNL & 488' FWL									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,701.0	1,675.7	216.2	131.3	303' FNL & 488' FWL

Checked By: _____	Approved By: _____	Date: _____
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