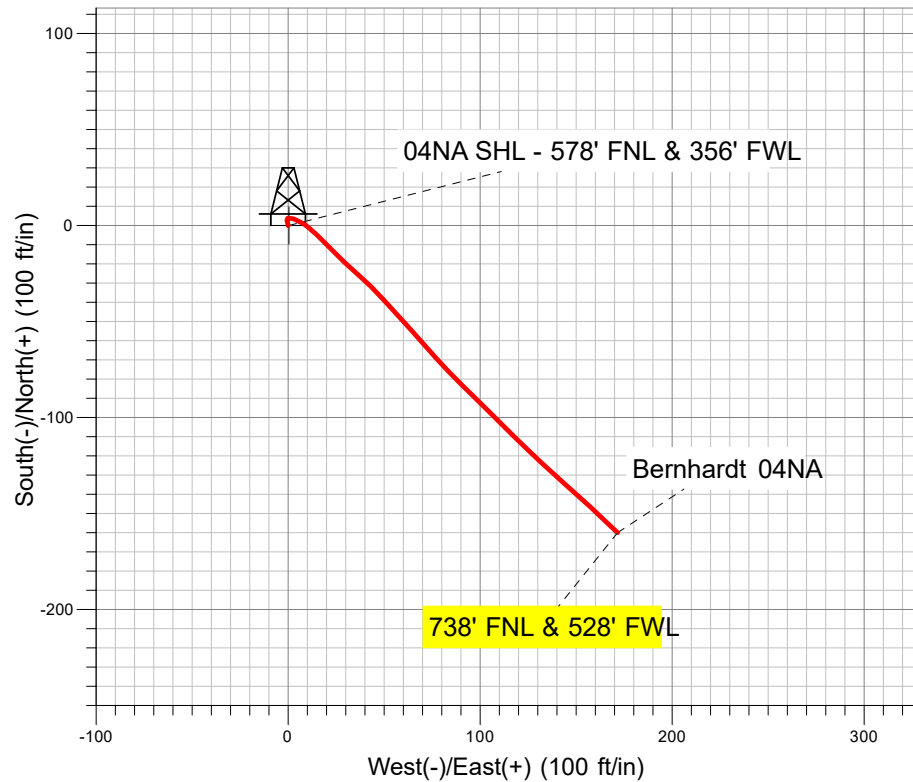




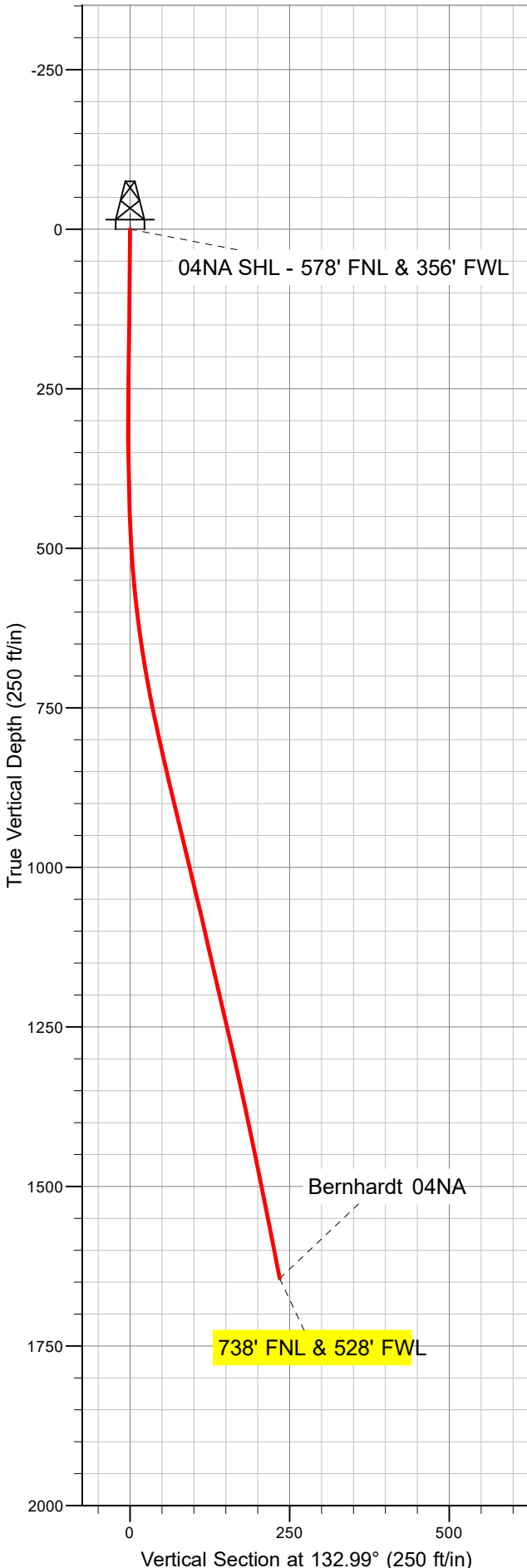
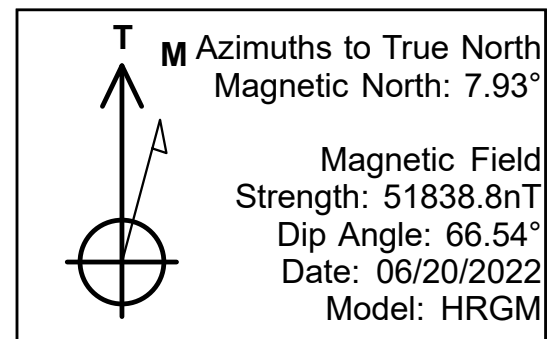
**Well Name:** Bernhardt 04NA  
Surface Location: Bernhardt 4-18  
North American Datum 1983 US State Plane 1983 Colorado Northern Zone  
Ground Elevation: 4736.0  
+N/-S +E/-W Northing Easting Latitude Longitude  
0.0 0.0 1359258.25 3187264.22 40.317618 -104.828432  
Ensign 122 - RKB 13' (As Built) 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 04NA  
Plan: Bernhardt 04NA





# **PDC Energy Inc. DJ Basin**

**SEC.18-T4N-R66W**

**Bernhardt 4-18**

**Bernhardt 04NA**

**Bernhardt 04NA**

**Design: Bernhardt 04NA**

## **Standard Survey Report**

**05 July, 2022**

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Bernhardt 04NA
<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 04NA	<b>North Reference:</b>	True
<b>Wellbore:</b>	Bernhardt 04NA	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Bernhardt 04NA	<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 04NA					
Well Position	+N/-S	0.0 ft	Northing:	1,359,258.25 usfl	Latitude:	40.317618
	+E/-W	0.0 ft	Easting:	3,187,264.22 usfl	Longitude:	-104.828432
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,736.0 ft

<b>Wellbore</b>	Bernhardt 04NA				
<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	51,838.78329517

Design	Bernhardt 04NA				
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	132.99	

<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	1,669.0	Survey #1 (Bernhardt 04NA)	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	0.97	347.89	146.0	1.2	-0.3	-1.0	0.66	0.66	0.00	
238.0	1.06	347.01	238.0	2.8	-0.6	-2.4	0.10	0.10	-0.96	
329.0	0.79	70.86	329.0	3.8	-0.2	-2.8	1.38	-0.30	92.14	
444.0	2.29	103.56	443.9	3.5	2.8	-0.4	1.46	1.30	28.43	
531.0	4.48	120.96	530.8	1.4	7.4	4.4	2.75	2.52	20.00	
619.0	7.30	133.97	618.3	-4.3	14.3	13.4	3.53	3.20	14.78	
706.0	10.38	135.20	704.3	-13.7	23.9	26.8	3.55	3.54	1.41	
791.0	12.13	131.50	787.6	-25.0	35.9	43.3	2.23	2.06	-4.35	

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Bernhardt 04NA
<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 04NA	<b>North Reference:</b>	True
<b>Wellbore:</b>	Bernhardt 04NA	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Bernhardt 04NA	<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	13.63	137.31	872.4	-38.6	49.7	62.7	2.28	1.72	6.68
965.0	13.45	138.18	957.0	-53.7	63.4	83.0	0.31	-0.21	1.00
1,050.0	13.81	138.18	1,039.6	-68.6	76.8	103.0	0.42	0.42	0.00
1,135.0	12.75	134.67	1,122.3	-82.8	90.2	122.4	1.57	-1.25	-4.13
1,221.0	13.01	134.14	1,206.2	-96.2	103.9	141.6	0.33	0.30	-0.62
1,308.0	13.37	135.02	1,290.9	-110.1	118.1	161.4	0.47	0.41	1.01
1,395.0	11.87	132.91	1,375.8	-123.3	131.7	180.4	1.80	-1.72	-2.43
1,482.0	11.52	131.33	1,461.0	-135.1	144.8	198.1	0.55	-0.40	-1.82
1,569.0	11.34	132.73	1,546.3	-146.7	157.6	215.3	0.38	-0.21	1.61
1,609.0	11.08	133.61	1,585.5	-152.0	163.3	223.1	0.78	-0.65	2.20
1,669.0	11.08	133.61	1,644.4	-160.0	171.6	234.6	0.00	0.00	0.00
738' FNL & 528' FWL									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,669.0	1,644.4	-160.0	171.6	738' FNL & 528' FWL

Checked By: _____	Approved By: _____	Date: _____
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