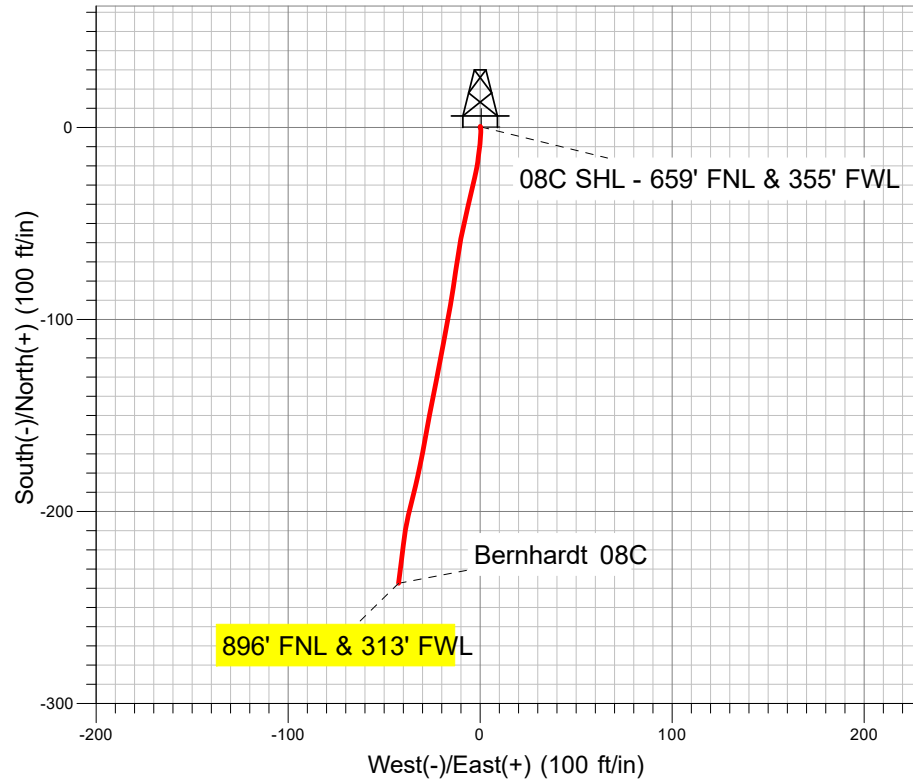
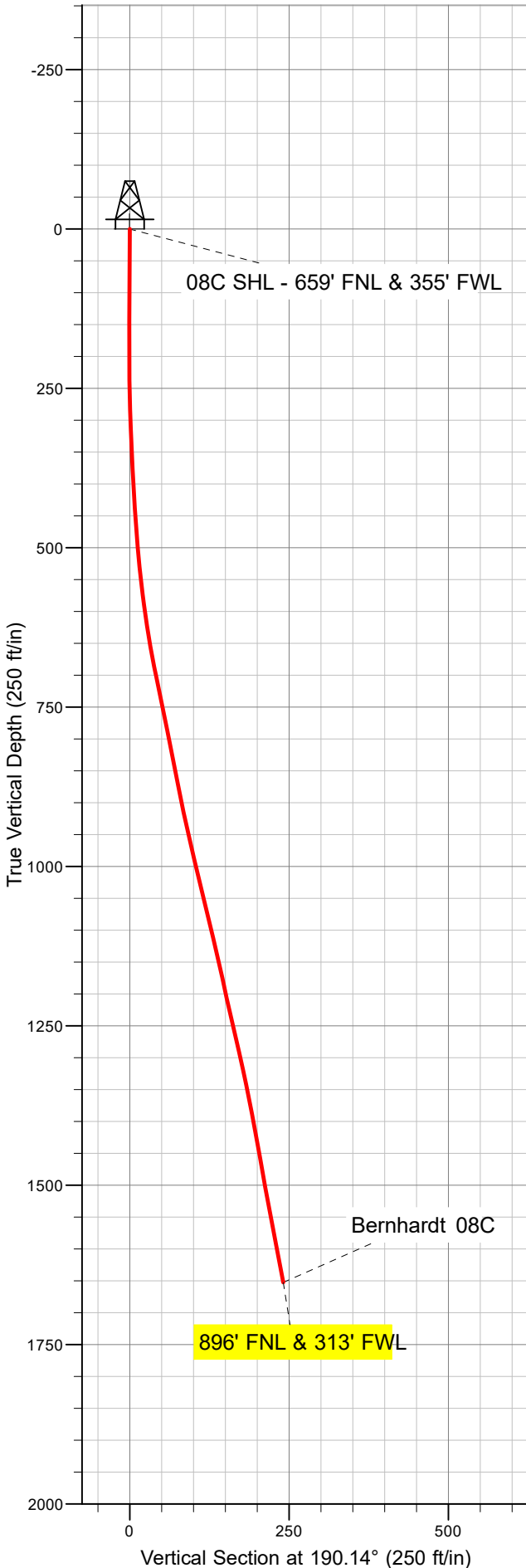




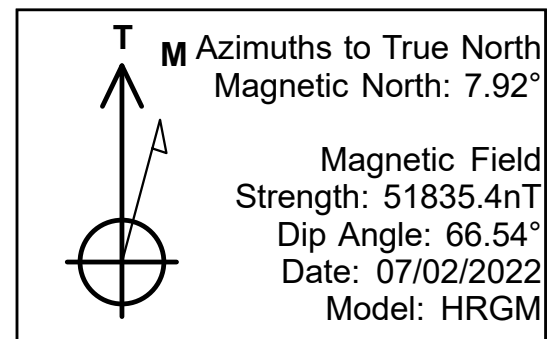
**Well Name:** Bernhardt 08C  
Surface Location: Bernhardt 4-18  
North American Datum 1983 US State Plane 1983 Colorado Northern Zone  
Ground Elevation: 4736.0  
+N/-S +E/-W Northing Easting Latitude Longitude  
0.0 0.0 1359177.74 3187263.86 40.317397 -104.828435  
Ensign 122 - RKB 13' (As Built) WE:: @ 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 08C  
Plan: Bernhardt 08C





# **PDC Energy Inc. DJ Basin**

**SEC.18-T4N-R66W**

**Bernhardt 4-18**

**Bernhardt 08C**

**Bernhardt 08C**

**Design: Bernhardt 08C**

## **Standard Survey Report**

**05 July, 2022**

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Bernhardt 08C
<b>Project:</b>	SEC.18-T4N-R66W	<b>TVD Reference:</b>	WE:: @ 4749.0ft (Ensign 122 - RKB 13' (As Built))
<b>Site:</b>	Bernhardt 4-18	<b>MD Reference:</b>	WE:: @ 4749.0ft (Ensign 122 - RKB 13' (As Built))
<b>Well:</b>	Bernhardt 08C	<b>North Reference:</b>	True
<b>Wellbore:</b>	Bernhardt 08C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Bernhardt 08C	<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 08C					
Well Position	+N/-S	0.0 ft	Northing:	1,359,177.74 usft	Latitude:	40.317397
	+E/-W	0.0 ft	Easting:	3,187,263.86 usft	Longitude:	-104.828435
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,736.0 ft	

<b>Wellbore</b>	Bernhardt 08C				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HRGM	07/02/2022	7.92	66.54	51,835.41764595

Design	Bernhardt 08C				
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	190.14	

<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	1,676.0	Survey #1 (Bernhardt 08C)	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	0.53	9.86	146.0	0.7	0.1	-0.7	0.36	0.36	0.00	
238.0	0.97	172.99	238.0	0.3	0.3	-0.4	1.61	0.48	177.32	
329.0	2.46	179.84	329.0	-2.4	0.4	2.3	1.65	1.64	7.53	
444.0	3.69	187.40	443.8	-8.5	-0.1	8.4	1.12	1.07	6.57	
531.0	5.63	186.52	530.5	-15.6	-0.9	15.5	2.23	2.23	-1.01	
619.0	8.71	192.68	617.8	-26.4	-2.9	26.4	3.60	3.50	7.00	
706.0	11.70	193.38	703.4	-41.4	-6.4	41.8	3.44	3.44	0.80	
791.0	11.34	191.62	786.7	-57.9	-10.1	58.8	0.59	-0.42	-2.07	

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Bernhardt 08C
<b>Project:</b>	SEC.18-T4N-R66W	<b>TVD Reference:</b>	WE:: @ 4749.0ft (Ensign 122 - RKB 13' (As Built))
<b>Site:</b>	Bernhardt 4-18	<b>MD Reference:</b>	WE:: @ 4749.0ft (Ensign 122 - RKB 13' (As Built))
<b>Well:</b>	Bernhardt 08C	<b>North Reference:</b>	True
<b>Wellbore:</b>	Bernhardt 08C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Bernhardt 08C	<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	11.17	186.88	872.0	-74.7	-12.8	75.8	1.08	-0.20	-5.45	
965.0	12.84	190.04	957.1	-92.6	-15.5	93.8	2.06	1.92	3.63	
1,050.0	14.07	190.74	1,039.8	-112.0	-19.1	113.6	1.46	1.45	0.82	
1,135.0	12.66	191.09	1,122.5	-131.3	-22.8	133.3	1.66	-1.66	0.41	
1,221.0	12.84	190.57	1,206.4	-150.0	-26.3	152.2	0.25	0.21	-0.60	
1,308.0	12.93	190.57	1,291.2	-169.0	-29.9	171.6	0.10	0.10	0.00	
1,395.0	10.99	193.91	1,376.3	-186.6	-33.7	189.7	2.37	-2.23	3.84	
1,482.0	9.85	193.20	1,461.8	-201.9	-37.4	205.4	1.32	-1.31	-0.82	
1,569.0	10.90	186.52	1,547.4	-217.4	-40.0	221.0	1.83	1.21	-7.68	
1,616.0	10.82	187.05	1,593.6	-226.2	-41.0	229.8	0.27	-0.17	1.13	
1,676.0	10.82	187.05	1,652.5	-237.3	-42.4	241.1	0.00	0.00	0.00	
896' FNL & 313' FWL										

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,676.0	1,652.5	-237.3	-42.4	896' FNL & 313' FWL	

Checked By: _____	Approved By: _____	Date: _____
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