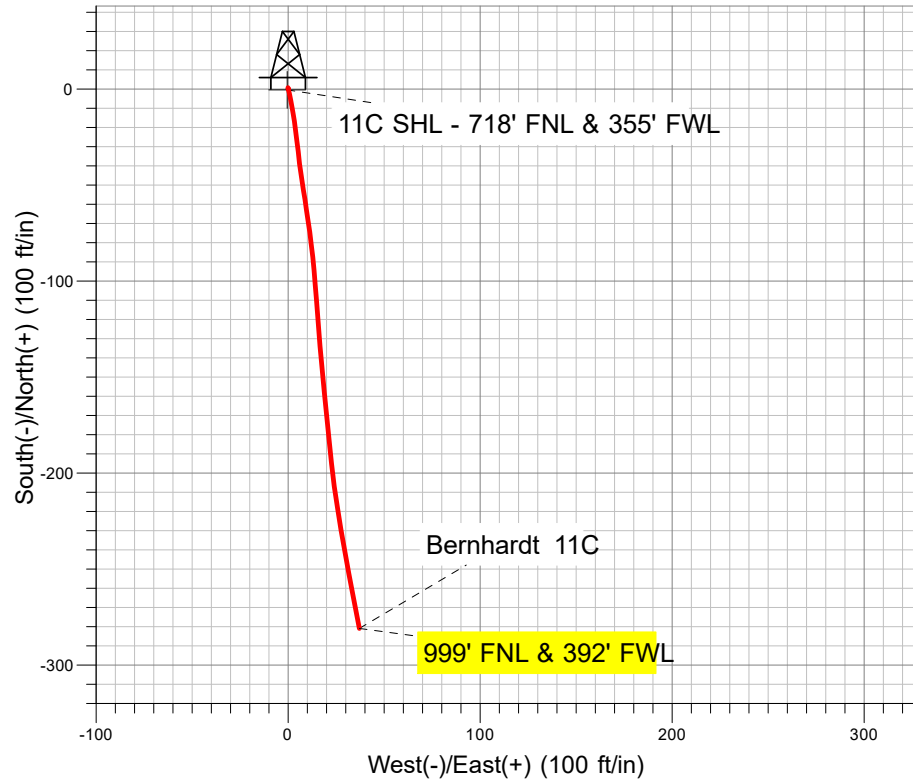




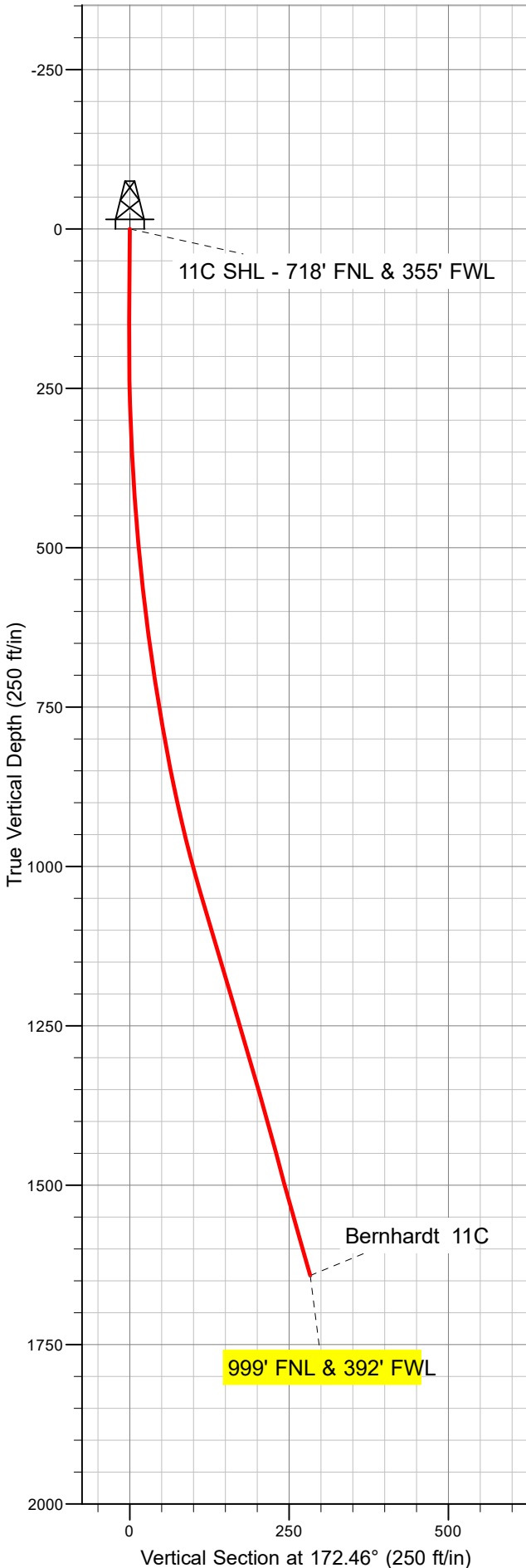
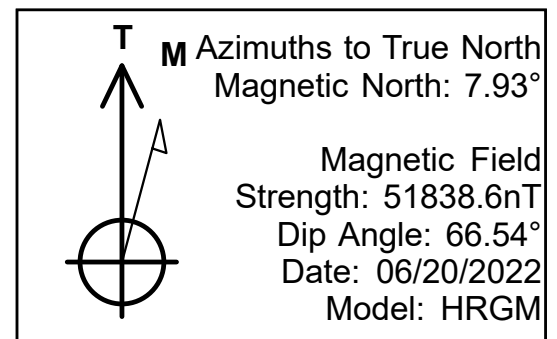
Well Name: Bernhardt 11C
Surface Location: Bernhardt 4-18
North American Datum 1983 US State Plane 1983 Colorado Northern Zone
Ground Elevation: 4735.0
+N/-S +E/-W Northing Easting Latitude Longitude
0.0 0.0 1359118.73 3187264.53 40.317235 -104.828434
Ensign 122 - RKB 13' (As Built) WELL @ 4748.0ft (Ensign 122 - RKB 13' (As Built))

PDC Energy Inc. DJ Basin

Final Survey Plot



Project: SEC.18-T4N-R66W
Site: Bernhardt 4-18
Well: Bernhardt 11C
Plan: Bernhardt 11C





PDC Energy Inc. DJ Basin

SEC.18-T4N-R66W

Bernhardt 4-18

Bernhardt 11C

Bernhardt 11C

Design: Bernhardt 11C

Standard Survey Report

05 July, 2022

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Bernhardt 11C
Project:	SEC.18-T4N-R66W	TVD Reference:	WELL @ 4748.0ft (Ensign 122 - RKB 13' (As Built))
Site:	Bernhardt 4-18	MD Reference:	WELL @ 4748.0ft (Ensign 122 - RKB 13' (As Built))
Well:	Bernhardt 11C	North Reference:	True
Wellbore:	Bernhardt 11C	Survey Calculation Method:	Minimum Curvature
Design:	Bernhardt 11C	Database:	US_EDM

Project	SEC.18-T4N-R66W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	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 11C					
Well Position	+N/-S	0.0 ft	Northing:	1,359,118.73 usfl	Latitude:	40.317235
	+E/-W	0.0 ft	Easting:	3,187,264.53 usfl	Longitude:	-104.828435
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,735.0 ft

Wellbore	Bernhardt 11C				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HRGM	06/20/2022	7.93	66.54	51,838.56240701

Design	Bernhardt 11C				
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	172.46	

Survey Program	Date	07/05/2022			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
146.0	1,676.0	Survey #1 (Bernhardt 11C)	MWD	MWD - Standard	

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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
146.0	0.70	358.09	146.0	0.9	0.0	-0.9	0.48	0.48	0.00	
238.0	1.41	171.93	238.0	0.3	0.1	-0.3	2.29	0.77	188.96	
329.0	2.55	166.13	328.9	-2.7	0.8	2.8	1.27	1.25	-6.37	
444.0	4.13	169.82	443.7	-9.3	2.1	9.5	1.39	1.37	3.21	
531.0	5.72	172.64	530.4	-16.7	3.2	17.0	1.85	1.83	3.24	
619.0	7.39	172.46	617.8	-26.6	4.5	27.0	1.90	1.90	-0.20	
706.0	8.88	173.69	704.0	-38.9	6.0	39.3	1.72	1.71	1.41	
791.0	9.67	170.35	787.8	-52.4	7.9	53.0	1.12	0.93	-3.93	

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Bernhardt 11C
Project:	SEC.18-T4N-R66W	TVD Reference:	WELL @ 4748.0ft (Ensign 122 - RKB 13' (As Built))
Site:	Bernhardt 4-18	MD Reference:	WELL @ 4748.0ft (Ensign 122 - RKB 13' (As Built))
Well:	Bernhardt 11C	North Reference:	True
Wellbore:	Bernhardt 11C	Survey Calculation Method:	Minimum Curvature
Design:	Bernhardt 11C	Database:	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	11.70	171.76	873.3	-68.4	10.4	69.1	2.35	2.33	1.62
965.0	13.89	173.69	958.2	-87.5	12.8	88.4	2.56	2.52	2.22
1,050.0	16.62	176.15	1,040.2	-109.7	14.7	110.7	3.30	3.21	2.89
1,135.0	16.27	174.92	1,121.7	-133.7	16.6	134.8	0.58	-0.41	-1.45
1,221.0	16.62	174.39	1,204.2	-158.0	18.9	159.1	0.44	0.41	-0.62
1,308.0	16.62	174.39	1,287.5	-182.7	21.3	184.0	0.00	0.00	0.00
1,395.0	15.74	172.46	1,371.1	-206.8	24.1	208.2	1.19	-1.01	-2.22
1,482.0	14.77	169.82	1,455.0	-229.4	27.6	231.1	1.37	-1.11	-3.03
1,569.0	16.00	170.00	1,538.9	-252.2	31.6	254.1	1.41	1.41	0.21
1,616.0	15.83	168.77	1,584.1	-264.8	34.0	267.0	0.80	-0.36	-2.62
1,676.0	15.83	168.77	1,641.8	-280.9	37.2	283.3	0.00	0.00	0.00
999' FNL & 392' FWL									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,676.0	1,641.8	-280.9	37.2	999' FNL & 392' FWL

Checked By: _____	Approved By: _____	Date: _____
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