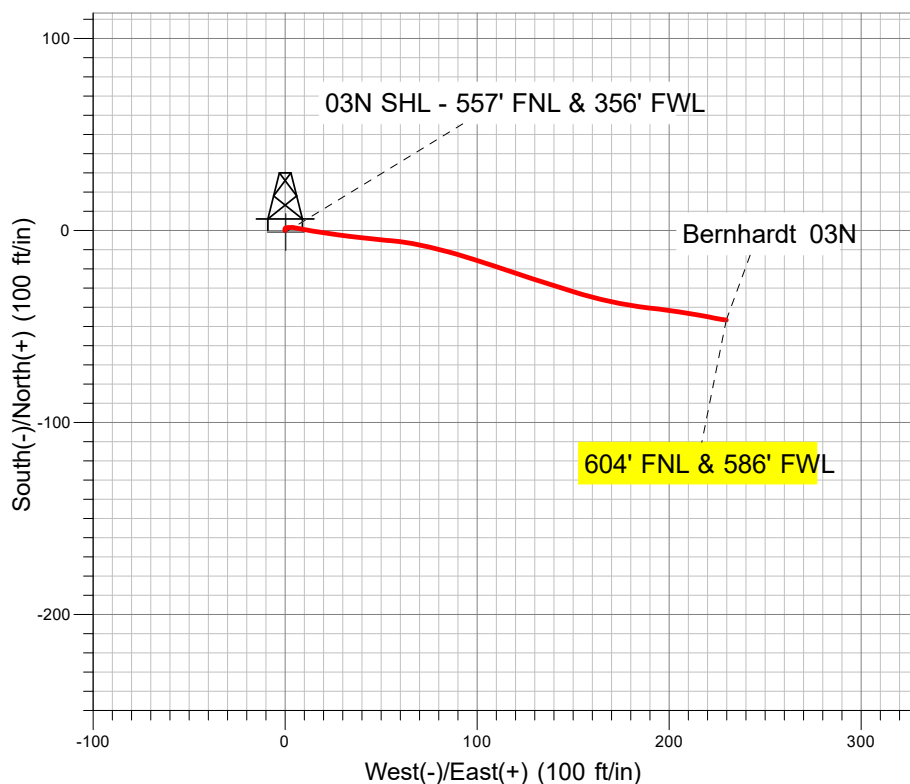




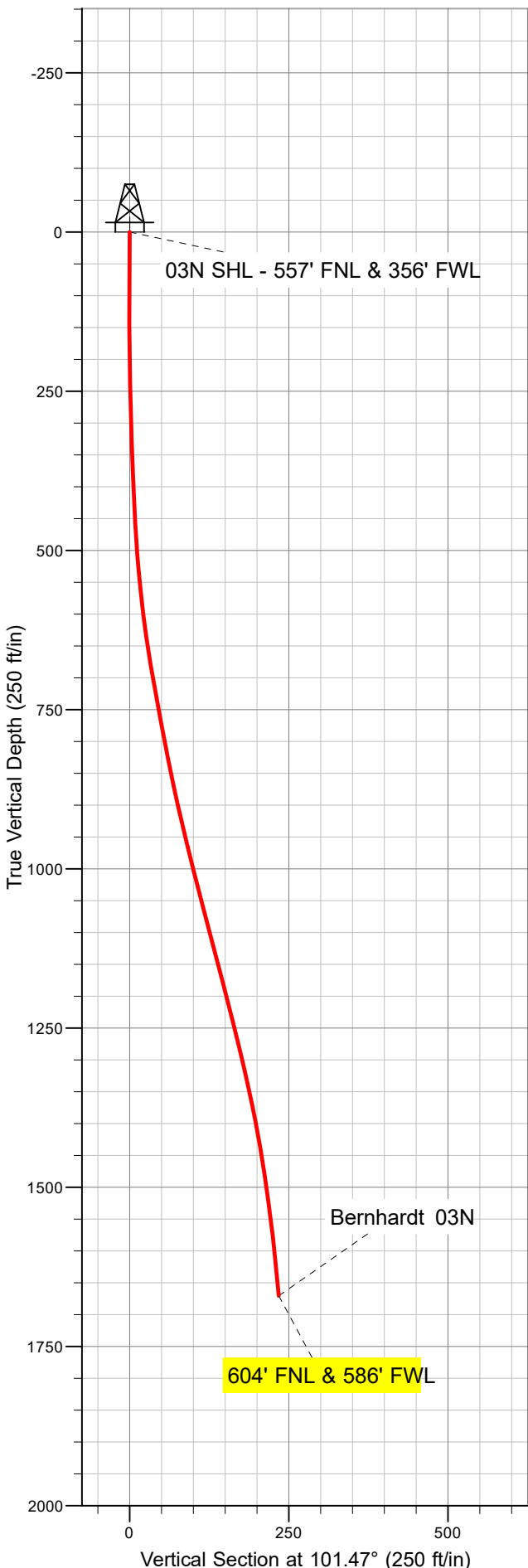
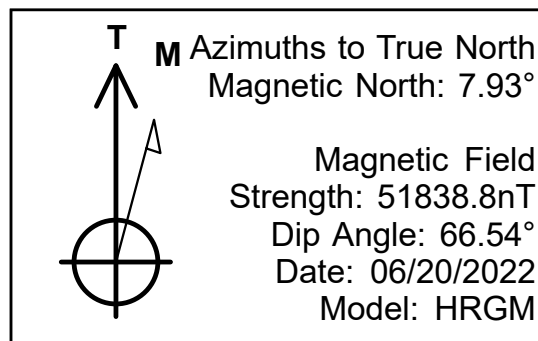
Well Name: Bernhardt 03N
Surface Location: Bernhardt 4-18
North American Datum 1983 US State Plane 1983 Colorado Northern Zone
Ground Elevation: 4736.0
+N/-S +E/-W Northing Easting Latitude Longitude
0.0 0.0 1359279.02 3187264.48 40.317675 -104.828430
Ensign 122 - RKB 13' (As Built) WELL @ 4749.0ft (Ensign 122 - RKB 13' (As Built))

PDC Energy Inc. DJ Basin

Final Survey Plot



Project: SEC.18-T4N-R66W
Site: Bernhardt 4-18
Well: Bernhardt 03N
Plan: Bernhardt 03N





PDC Energy Inc. DJ Basin

SEC.18-T4N-R66W

Bernhardt 4-18

Bernhardt 03N

Bernhardt 03N

Design: Bernhardt 03N

Standard Survey Report

05 July, 2022

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Bernhardt 03N
Project:	SEC.18-T4N-R66W	TVD Reference:	WELL @ 4749.0ft (Ensign 122 - RKB 13' (As Built))
Site:	Bernhardt 4-18	MD Reference:	WELL @ 4749.0ft (Ensign 122 - RKB 13' (As Built))
Well:	Bernhardt 03N	North Reference:	True
Wellbore:	Bernhardt 03N	Survey Calculation Method:	Minimum Curvature
Design:	Bernhardt 03N	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 03N					
Well Position	+N/-S	0.0 ft	Northing:	1,359,279.02 usf	Latitude:	40.317675
	+E/-W	0.0 ft	Easting:	3,187,264.49 usf	Longitude:	-104.828430
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,736.0 ft

Wellbore	Bernhardt 03N				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HRGM	06/20/2022	7.93	66.54	51,838.81770996

Design	Bernhardt 03N				
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	101.47	

Survey Program	Date	07/05/2022			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
146.0	1,694.0	Survey #1 (Bernhardt 03N)	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	354.39	146.0	0.9	-0.1	-0.3	0.48	0.48	0.00	
238.0	1.58	84.75	238.0	1.6	1.1	0.8	1.88	0.96	98.22	
329.0	1.85	90.55	328.9	1.7	3.8	3.4	0.35	0.30	6.37	
444.0	2.90	105.31	443.8	0.9	8.5	8.2	1.05	0.91	12.83	
531.0	5.10	98.28	530.6	-0.3	14.5	14.2	2.59	2.53	-8.08	
619.0	7.47	98.46	618.1	-1.7	24.0	23.8	2.69	2.69	0.20	
706.0	10.38	96.88	704.0	-3.4	37.4	37.3	3.36	3.34	-1.82	
791.0	10.73	94.94	787.6	-5.0	52.8	52.8	0.59	0.41	-2.28	

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Bernhardt 03N
Project:	SEC.18-T4N-R66W	TVD Reference:	WELL @ 4749.0ft (Ensign 122 - RKB 13' (As Built))
Site:	Bernhardt 4-18	MD Reference:	WELL @ 4749.0ft (Ensign 122 - RKB 13' (As Built))
Well:	Bernhardt 03N	North Reference:	True
Wellbore:	Bernhardt 03N	Survey Calculation Method:	Minimum Curvature
Design:	Bernhardt 03N	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	12.05	101.09	872.9	-7.5	69.8	69.9	2.06	1.52	7.07
965.0	13.81	106.02	957.7	-12.1	88.7	89.4	2.39	2.02	5.67
1,050.0	14.60	108.83	1,040.1	-18.4	108.6	110.1	1.23	0.93	3.31
1,135.0	14.86	108.13	1,122.3	-25.2	129.1	131.5	0.37	0.31	-0.82
1,221.0	14.60	106.89	1,205.5	-31.8	150.0	153.3	0.48	-0.30	-1.44
1,308.0	13.70	102.15	1,289.8	-37.1	170.5	174.5	1.69	-1.03	-5.45
1,395.0	11.40	96.35	1,374.7	-40.3	189.1	193.4	3.01	-2.64	-6.67
1,482.0	9.20	98.46	1,460.3	-42.2	204.6	208.9	2.57	-2.53	2.43
1,569.0	7.12	100.22	1,546.4	-44.2	216.8	221.2	2.41	-2.39	2.02
1,634.0	5.98	101.97	1,611.0	-45.6	224.0	228.6	1.78	-1.75	2.69
1,694.0	5.02	97.00	1,670.7	-46.6	229.7	234.4	1.78	-1.60	-8.28
604' FNL & 586' FWL									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,694.0	1,670.7	-46.6	229.7	604' FNL & 586' FWL

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------