

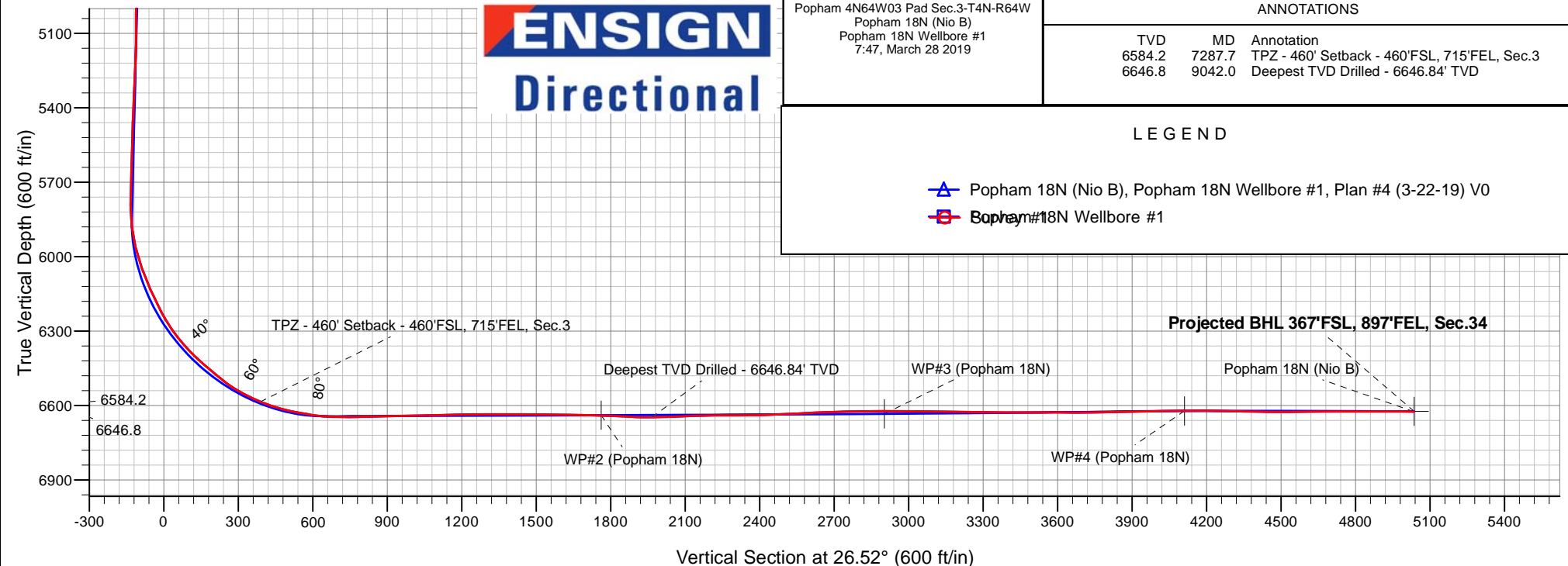
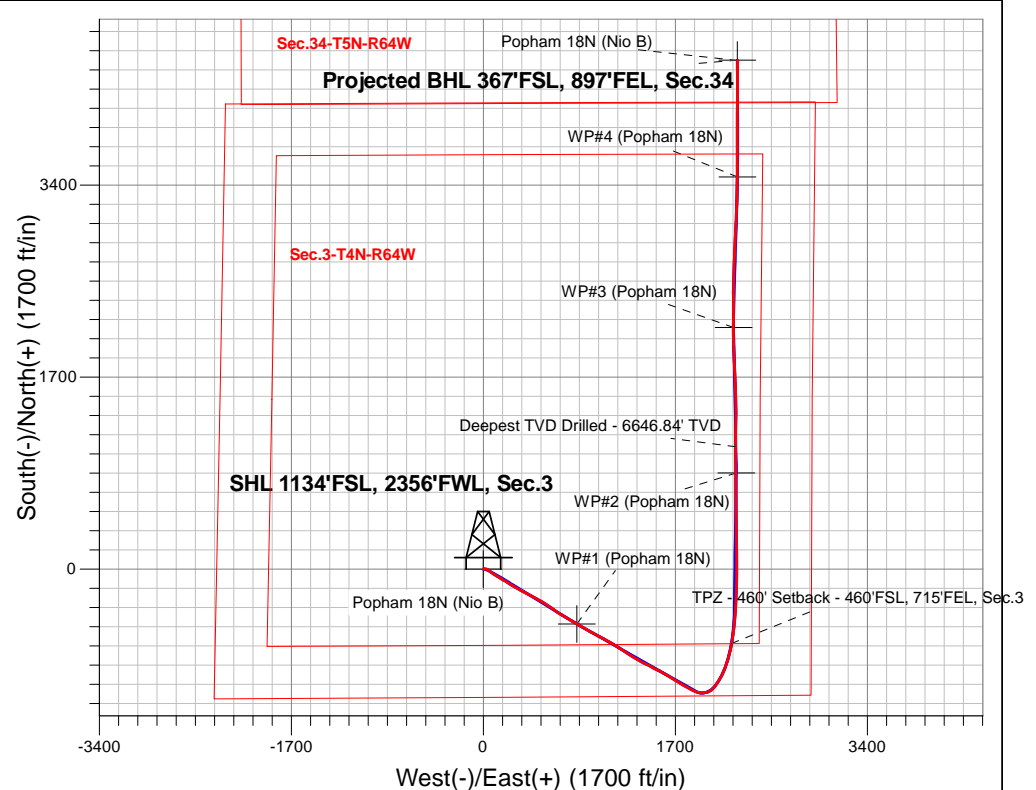
PDC Energy Inc. DJ Basin

Well Name: **Popham 18N (Nio B)**

Surface Location: Popham 4N64W03 Pad Sec.3-T4N-R64W
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
Ground Elevation: 4662.0
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1367153.393268306.32 40.337240 -104.537510
WELL @ 4685.0ft

FINAL SURVEY

Projected Bottom Hole Location
12,464'MD 6624'TVD 4504'N & 2251'E of SHL
89.7 degree Incl @ 0.30 degree AZM





PDC Energy Inc. DJ Basin

SEC.3-T4N-R64W

Popham 4N64W03 Pad Sec.3-T4N-R64W

Popham 18N (Nio B)

Popham 18N Wellbore #1

Survey: Survey #1

Standard Survey Report

28 March, 2019

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Popham 18N (Nio B)
Project:	SEC.3-T4N-R64W	TVD Reference:	WELL @ 4685.0ft
Site:	Popham 4N64W03 Pad Sec.3-T4N-R64W	MD Reference:	WELL @ 4685.0ft
Well:	Popham 18N (Nio B)	North Reference:	True
Wellbore:	Popham 18N Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Popham 18N Wellbore #1	Database:	US_EDM

Project	SEC.3-T4N-R64W, Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Popham 4N64W03 Pad Sec.3-T4N-R64W				
Site Position:		Northing:	1,367,183.37 usft	Latitude:	40.337327
From:	Lat/Long	Easting:	3,268,156.99 usft	Longitude:	-104.538045
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.62 °

Well	Popham 18N (Nio B)					
Well Position	+N/-S	0.0 ft	Northing:	1,367,153.39 usft	Latitude:	40.337240
	+E/-W	0.0 ft	Easting:	3,268,306.33 usft	Longitude:	-104.537510
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,662.0 ft

Wellbore	Popham 18N Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	3/22/2019	8.15	66.85	52,169

Design	Popham 18N Wellbore #1				
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	26.52	

Survey Program	Date	3/28/2019			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
157.0	12,464.0	Survey #1 (Popham 18N Wellbore #1)	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	
1.0	0.00	66.47	1.0	0.0	0.0	0.0	0.41	0.41	0.00	
SHL 1134'FSL, 2356'FWL, Sec.3										
157.0	0.64	66.47	157.0	0.4	0.8	0.7	0.41	0.41	0.00	
252.0	0.59	55.68	252.0	0.8	1.7	1.5	0.13	-0.05	-11.36	
347.0	0.26	64.93	347.0	1.2	2.3	2.1	0.35	-0.35	9.74	
442.0	0.28	39.14	442.0	1.5	2.6	2.5	0.13	0.02	-27.15	
537.0	1.59	99.96	537.0	1.4	4.1	3.1	1.55	1.38	64.02	
633.0	2.42	98.61	632.9	0.9	7.4	4.1	0.87	0.86	-1.41	
728.0	4.72	89.04	727.7	0.7	13.3	6.5	2.49	2.42	-10.07	
823.0	5.95	99.22	822.3	-0.1	22.1	9.8	1.63	1.29	10.72	

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Popham 18N (Nio B)
Project:	SEC.3-T4N-R64W	TVD Reference:	WELL @ 4685.0ft
Site:	Popham 4N64W03 Pad Sec.3-T4N-R64W	MD Reference:	WELL @ 4685.0ft
Well:	Popham 18N (Nio B)	North Reference:	True
Wellbore:	Popham 18N Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Popham 18N Wellbore #1	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)
918.0	6.76	110.53	916.7	-2.8	32.2	11.8	1.57	0.85	11.91
1,013.0	7.99	121.97	1,010.9	-8.3	43.0	11.8	2.01	1.29	12.04
1,109.0	9.74	129.56	1,105.8	-17.0	54.9	9.3	2.19	1.82	7.91
1,204.0	11.85	128.27	1,199.1	-28.1	68.8	5.5	2.24	2.22	-1.36
1,299.0	14.36	124.67	1,291.6	-40.9	86.1	1.9	2.78	2.64	-3.79
1,394.0	17.81	122.83	1,382.9	-55.5	108.0	-1.4	3.67	3.63	-1.94
1,489.0	18.29	121.74	1,473.2	-71.2	132.9	-4.4	0.62	0.51	-1.15
1,595.0	18.50	119.80	1,573.8	-88.3	161.6	-6.8	0.61	0.20	-1.83
1,676.0	17.47	119.19	1,650.9	-100.6	183.4	-8.1	1.29	-1.27	-0.75
1,772.0	20.98	122.86	1,741.5	-117.0	210.4	-10.7	3.87	3.66	3.82
1,867.0	24.20	122.88	1,829.2	-136.8	241.1	-14.7	3.39	3.39	0.02
1,963.0	26.10	119.47	1,916.1	-157.8	276.0	-18.0	2.49	1.98	-3.55
2,058.0	25.18	117.62	2,001.7	-177.5	312.1	-19.5	1.28	-0.97	-1.95
2,153.0	26.77	119.59	2,087.1	-197.4	348.6	-21.0	1.90	1.67	2.07
2,247.0	25.72	117.36	2,171.4	-217.3	385.1	-22.5	1.53	-1.12	-2.37
2,342.0	24.34	117.80	2,257.5	-235.9	420.8	-23.2	1.47	-1.45	0.46
2,437.0	26.12	118.83	2,343.5	-255.1	456.4	-24.5	1.93	1.87	1.08
2,533.0	24.85	117.42	2,430.1	-274.6	492.8	-25.6	1.47	-1.32	-1.47
2,628.0	27.52	123.67	2,515.4	-295.9	528.8	-28.7	4.04	2.81	6.58
2,723.0	27.32	121.88	2,599.7	-319.6	565.6	-33.5	0.89	-0.21	-1.88
2,818.0	26.60	125.89	2,684.4	-343.6	601.4	-39.0	2.06	-0.76	4.22
2,914.0	26.41	125.33	2,770.3	-368.5	636.2	-45.7	0.33	-0.20	-0.58
3,009.0	26.20	122.46	2,855.5	-392.0	671.1	-51.2	1.36	-0.22	-3.02
3,105.0	25.75	122.23	2,941.8	-414.5	706.6	-55.4	0.48	-0.47	-0.24
3,200.0	25.07	121.08	3,027.6	-435.9	741.3	-59.1	0.88	-0.72	-1.21
3,295.0	23.75	118.79	3,114.1	-455.5	775.3	-61.4	1.71	-1.39	-2.41
3,390.0	24.45	120.68	3,200.8	-474.8	809.0	-63.6	1.10	0.74	1.99
3,457.2	23.38	119.24	3,262.2	-488.4	832.6	-65.3	1.82	-1.60	-2.14
WP#1 (Popham 18N)									
3,486.0	22.92	118.59	3,288.7	-493.8	842.5	-65.7	1.82	-1.58	-2.27
3,581.0	26.81	123.98	3,374.9	-514.7	876.5	-69.2	4.74	4.09	5.67
3,677.0	25.53	118.41	3,461.1	-536.6	912.7	-72.7	2.88	-1.33	-5.80
3,773.0	24.53	117.80	3,548.1	-555.8	948.5	-73.8	1.08	-1.04	-0.64
3,868.0	24.37	117.77	3,634.5	-574.1	983.3	-74.7	0.17	-0.17	-0.03
3,965.0	24.65	117.86	3,722.8	-592.9	1,018.9	-75.6	0.29	0.29	0.09
4,060.0	24.54	117.08	3,809.2	-611.1	1,054.0	-76.3	0.36	-0.12	-0.82
4,156.0	25.17	120.79	3,896.3	-630.6	1,089.3	-78.0	1.75	0.66	3.86
4,251.0	24.14	118.91	3,982.6	-650.4	1,123.6	-80.3	1.36	-1.08	-1.98
4,347.0	25.24	122.94	4,069.9	-671.0	1,158.0	-83.4	2.09	1.15	4.20
4,442.0	23.98	122.94	4,156.2	-692.5	1,191.2	-87.8	1.33	-1.33	0.00
4,538.0	23.01	122.48	4,244.3	-713.2	1,223.4	-92.0	1.03	-1.01	-0.48
4,633.0	23.67	122.21	4,331.5	-733.3	1,255.2	-95.8	0.70	0.69	-0.28
4,729.0	26.95	123.52	4,418.3	-755.6	1,289.6	-100.4	3.47	3.42	1.36

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Popham 18N (Nio B)
Project:	SEC.3-T4N-R64W	TVD Reference:	WELL @ 4685.0ft
Site:	Popham 4N64W03 Pad Sec.3-T4N-R64W	MD Reference:	WELL @ 4685.0ft
Well:	Popham 18N (Nio B)	North Reference:	True
Wellbore:	Popham 18N Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Popham 18N Wellbore #1	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)
4,824.0	25.45	122.36	4,503.5	-778.4	1,324.8	-105.1	1.67	-1.58	-1.22
4,920.0	23.94	118.70	4,590.7	-798.8	1,359.3	-107.9	2.24	-1.57	-3.81
5,015.0	22.86	118.12	4,677.9	-816.8	1,392.5	-109.1	1.16	-1.14	-0.61
5,111.0	25.29	118.66	4,765.6	-835.4	1,427.0	-110.4	2.54	2.53	0.56
5,206.0	26.76	115.46	4,850.9	-854.3	1,464.1	-110.8	2.14	1.55	-3.37
5,302.0	26.66	118.13	4,936.7	-873.8	1,502.6	-111.0	1.25	-0.10	2.78
5,397.0	25.93	117.21	5,021.9	-893.3	1,539.9	-111.9	0.88	-0.77	-0.97
5,492.0	23.90	115.70	5,108.0	-911.2	1,575.7	-111.8	2.24	-2.14	-1.59
5,587.0	23.27	121.12	5,195.1	-929.2	1,609.1	-113.1	2.38	-0.66	5.71
5,682.0	23.66	123.04	5,282.2	-949.3	1,641.1	-116.7	0.90	0.41	2.02
5,778.0	24.89	122.00	5,369.7	-970.5	1,674.4	-120.9	1.36	1.28	-1.08
5,873.0	27.94	120.49	5,454.8	-992.4	1,710.6	-124.3	3.29	3.21	-1.59
5,967.0	27.59	119.74	5,538.0	-1,014.4	1,748.4	-127.1	0.53	-0.37	-0.80
6,062.0	28.66	119.26	5,621.8	-1,036.4	1,787.4	-129.4	1.15	1.13	-0.51
6,157.0	26.51	120.01	5,706.0	-1,058.2	1,825.7	-131.8	2.29	-2.26	0.79
6,251.0	24.35	117.66	5,790.9	-1,077.7	1,861.0	-133.4	2.54	-2.30	-2.50
6,347.0	27.41	104.67	5,877.3	-1,092.5	1,899.9	-129.3	6.69	3.19	-13.53
6,441.0	28.94	89.34	5,960.3	-1,097.7	1,943.7	-114.4	7.85	1.63	-16.31
6,537.0	25.59	69.88	6,045.8	-1,090.3	1,986.5	-88.7	9.87	-3.49	-20.27
6,632.0	26.19	49.58	6,131.4	-1,069.6	2,021.8	-54.4	9.31	0.63	-21.37
6,728.0	27.71	35.07	6,217.1	-1,037.5	2,050.7	-12.8	7.01	1.58	-15.11
6,822.0	35.35	34.36	6,297.1	-997.1	2,078.7	35.8	8.14	8.13	-0.76
6,917.0	42.83	27.79	6,370.8	-945.8	2,109.3	95.4	8.99	7.87	-6.92
7,012.0	50.20	20.40	6,436.2	-882.9	2,137.2	164.1	9.58	7.76	-7.78
7,107.0	50.45	17.79	6,496.9	-813.8	2,161.1	236.6	2.13	0.26	-2.75
7,201.0	63.51	11.84	6,548.0	-737.7	2,180.9	313.5	14.86	13.89	-6.33
7,287.7	67.11	10.73	6,584.2	-660.5	2,196.3	389.5	4.31	4.15	-1.28
TPZ - 460' Setback - 460'FSL, 715'FEL, Sec.3									
7,296.0	67.45	10.63	6,587.4	-653.0	2,197.7	396.9	4.31	4.15	-1.24
7,392.0	78.35	8.03	6,615.6	-562.6	2,212.5	484.4	11.64	11.35	-2.71
7,488.0	79.85	5.64	6,633.8	-469.0	2,223.7	573.1	2.90	1.56	-2.49
7,573.5	86.50	4.19	6,643.9	-384.5	2,231.0	652.0	7.96	7.78	-1.70
LPL 737'FSL, 690'FEL, Sec.3									
7,583.0	87.24	4.03	6,644.4	-375.0	2,231.6	660.8	7.96	7.78	-1.68
7,678.0	90.96	2.17	6,645.9	-280.2	2,236.8	747.9	4.38	3.92	-1.96
7,800.0	91.20	1.90	6,643.6	-158.3	2,241.1	858.9	0.30	0.20	-0.22
7,895.0	91.20	0.64	6,641.7	-63.3	2,243.2	944.8	1.33	0.00	-1.33
7,992.0	90.87	0.12	6,639.9	33.7	2,243.8	1,031.9	0.63	-0.34	-0.54
8,087.0	91.19	359.18	6,638.2	128.6	2,243.3	1,116.6	1.05	0.34	-0.99
8,183.0	91.01	358.39	6,636.3	224.6	2,241.2	1,201.6	0.84	-0.19	-0.82
8,278.0	89.95	0.24	6,635.6	319.6	2,240.1	1,286.1	2.24	-1.12	1.95
8,374.0	90.20	359.19	6,635.4	415.6	2,239.6	1,371.8	1.12	0.26	-1.09
8,469.0	89.69	358.49	6,635.5	510.6	2,237.7	1,455.9	0.91	-0.54	-0.74
8,565.0	89.43	359.87	6,636.3	606.6	2,236.3	1,541.2	1.46	-0.27	1.44

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Well:	Popham 18N (Nio B)	North Reference:	True
Wellbore:	Popham 18N Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Popham 18N Wellbore #1	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)
8,660.0	89.46	0.35	6,637.2	701.6	2,236.5	1,626.3	0.51	0.03	0.51
8,756.0	88.79	359.62	6,638.6	797.5	2,236.5	1,712.1	1.03	-0.70	-0.76
8,810.3	88.40	359.13	6,640.0	851.9	2,235.9	1,760.5	1.15	-0.72	-0.91
WP#2 (Popham 18N)									
8,851.0	88.11	358.76	6,641.2	892.5	2,235.1	1,796.5	1.15	-0.72	-0.91
8,947.0	87.45	358.78	6,644.9	988.4	2,233.1	1,881.4	0.69	-0.69	0.02
9,042.0	90.25	0.34	6,646.8	1,083.4	2,232.3	1,966.1	3.37	2.95	1.64
Deepest TVD Drilled - 6646.84' TVD									
9,138.0	92.21	1.10	6,644.8	1,179.3	2,233.6	2,052.5	2.19	2.04	0.79
9,233.0	91.89	0.62	6,641.4	1,274.3	2,235.0	2,138.0	0.61	-0.34	-0.51
9,329.0	90.18	0.04	6,639.6	1,370.2	2,235.5	2,224.2	1.88	-1.78	-0.60
9,425.0	89.83	359.57	6,639.6	1,466.2	2,235.2	2,309.9	0.61	-0.36	-0.49
9,520.0	91.39	358.61	6,638.6	1,561.2	2,233.7	2,394.2	1.93	1.64	-1.01
9,616.0	92.22	357.71	6,635.6	1,657.1	2,230.6	2,478.7	1.27	0.86	-0.94
9,711.0	92.34	356.96	6,631.8	1,751.9	2,226.2	2,561.5	0.80	0.13	-0.79
9,807.0	92.08	356.15	6,628.1	1,847.7	2,220.4	2,644.7	0.89	-0.27	-0.84
9,902.0	92.37	357.96	6,624.4	1,942.5	2,215.6	2,727.3	1.93	0.31	1.91
9,997.0	90.76	358.99	6,621.8	2,037.4	2,213.0	2,811.1	2.01	-1.69	1.08
10,093.0	89.24	0.95	6,621.8	2,133.4	2,213.0	2,897.0	2.58	-1.58	2.04
10,098.3	89.24	0.94	6,621.9	2,138.7	2,213.1	2,901.8	0.19	0.04	-0.19
WP#3 (Popham 18N)									
10,188.0	89.28	0.77	6,623.1	2,228.4	2,214.4	2,982.6	0.19	0.04	-0.19
10,284.0	89.41	359.69	6,624.2	2,324.4	2,214.8	3,068.7	1.13	0.14	-1.13
10,380.0	89.15	358.78	6,625.4	2,420.4	2,213.5	3,154.0	0.99	-0.27	-0.95
10,475.0	89.92	2.45	6,626.1	2,515.3	2,214.5	3,239.4	3.95	0.81	3.86
10,570.0	89.51	1.70	6,626.6	2,610.3	2,218.0	3,325.9	0.90	-0.43	-0.79
10,666.0	89.56	1.47	6,627.4	2,706.2	2,220.6	3,413.0	0.25	0.05	-0.24
10,762.0	90.32	2.64	6,627.5	2,802.2	2,224.1	3,500.3	1.45	0.79	1.22
10,857.0	89.84	3.16	6,627.4	2,897.0	2,228.9	3,587.4	0.74	-0.51	0.55
10,952.0	89.22	2.67	6,628.1	2,991.9	2,233.7	3,674.4	0.83	-0.65	-0.52
11,048.0	91.52	2.72	6,627.5	3,087.8	2,238.2	3,762.3	2.40	2.40	0.05
11,143.0	91.12	1.90	6,625.3	3,182.7	2,242.0	3,848.9	0.96	-0.42	-0.86
11,238.0	90.91	1.51	6,623.6	3,277.6	2,244.9	3,935.1	0.47	-0.22	-0.41
11,334.0	90.76	0.70	6,622.2	3,373.6	2,246.7	4,021.8	0.86	-0.16	-0.84
11,430.0	90.37	0.78	6,621.3	3,469.6	2,248.0	4,108.2	0.41	-0.41	0.08
11,432.3	90.36	0.77	6,621.3	3,471.9	2,248.0	4,110.3	0.81	-0.60	-0.55
WP#4 (Popham 18N)									
11,525.0	89.80	0.26	6,621.2	3,564.6	2,248.8	4,193.6	0.81	-0.60	-0.55
11,621.0	89.17	359.73	6,622.0	3,660.6	2,248.8	4,279.5	0.86	-0.66	-0.55
11,716.0	88.59	359.60	6,623.9	3,755.6	2,248.3	4,364.3	0.63	-0.61	-0.14
11,812.0	89.85	0.17	6,625.2	3,851.6	2,248.1	4,450.1	1.44	1.31	0.59
11,908.0	90.31	0.18	6,625.0	3,947.6	2,248.4	4,536.1	0.48	0.48	0.01
12,003.0	90.39	0.34	6,624.5	4,042.6	2,248.8	4,621.3	0.19	0.08	0.17
12,099.0	90.10	0.24	6,624.1	4,138.6	2,249.3	4,707.4	0.32	-0.30	-0.10

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Popham 18N (Nio B)
Project:	SEC.3-T4N-R64W	TVD Reference:	WELL @ 4685.0ft
Site:	Popham 4N64W03 Pad Sec.3-T4N-R64W	MD Reference:	WELL @ 4685.0ft
Well:	Popham 18N (Nio B)	North Reference:	True
Wellbore:	Popham 18N Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Popham 18N Wellbore #1	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)	
12,194.0	90.13	0.08	6,623.9	4,233.6	2,249.5	4,792.5	0.17	0.03	-0.17	
12,290.0	90.07	0.42	6,623.7	4,329.6	2,250.0	4,878.6	0.36	-0.06	0.35	
12,404.0	89.70	0.30	6,623.9	4,443.6	2,250.7	4,980.9	0.34	-0.32	-0.11	
12,464.0	89.70	0.30	6,624.2	4,503.6	2,251.0	5,034.8	0.00	0.00	0.00	
Projected BHL 367°FSL, 897°FEL, Sec.34										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SHL 1134°FSL, 2356°FWD - hit/miss target - Shape - Point	0.00	0.00	1.0	0.0	0.0	1,367,153.36	3,268,306.33	40.337240	-104.537510	
WP#1 (Popham 18N) - survey misses target center by 6.8ft at 3457.2ft MD (3262.3 TVD, -488.4 N, 832.6 E) - Point	0.00	0.00	3,264.9	-486.3	826.7	1,366,676.10	3,269,138.22	40.335905	-104.534545	
WP#4 (Popham 18N) - survey misses target center by 2.6ft at 11432.3ft MD (6621.3 TVD, 3471.9 N, 2248.0 E) - Point	0.00	0.00	6,621.2	3,471.9	2,250.6	1,370,649.34	3,270,519.05	40.346770	-104.529436	
Projected BHL 367°FSL, - survey misses target center by 4.0ft at 12464.0ft MD (6624.2 TVD, 4503.6 N, 2251.0 E) - Point	0.00	0.00	6,623.0	4,506.5	2,248.5	1,371,683.80	3,270,505.67	40.349610	-104.529443	
WP#3 (Popham 18N) - survey misses target center by 12.0ft at 10098.3ft MD (6621.9 TVD, 2138.7 N, 2213.1 E) - Point	0.00	0.00	6,633.7	2,138.5	2,215.1	1,369,315.72	3,270,498.03	40.343110	-104.529564	
WP#2 (Popham 18N) - survey misses target center by 3.2ft at 8810.3ft MD (6640.0 TVD, 851.9 N, 2235.9 E) - Point	0.00	0.00	6,638.9	851.9	2,238.9	1,368,029.54	3,270,535.79	40.339578	-104.529479	

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
7,287.7	6,584.2	-660.5	2,196.3	TPZ - 460' Setback - 460°FSL, 715°FEL, Sec.3	
9,042.0	6,646.8	1,083.4	2,232.3	Deepest TVD Drilled - 6646.84' TVD	

Checked By: _____	Approved By: _____	Date: _____
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