

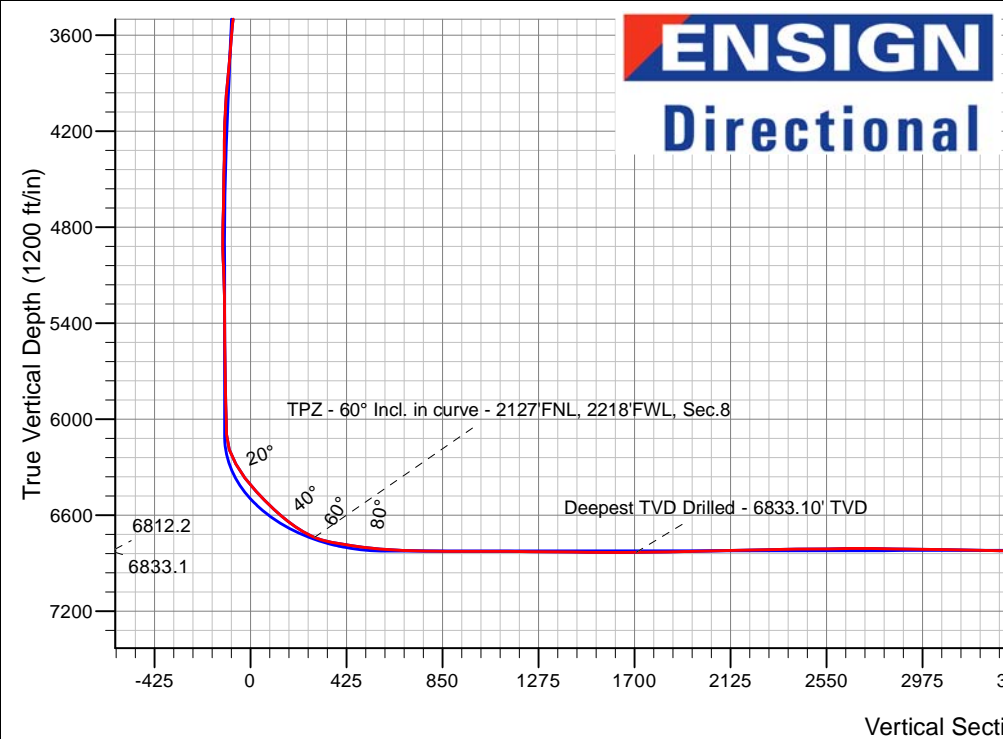
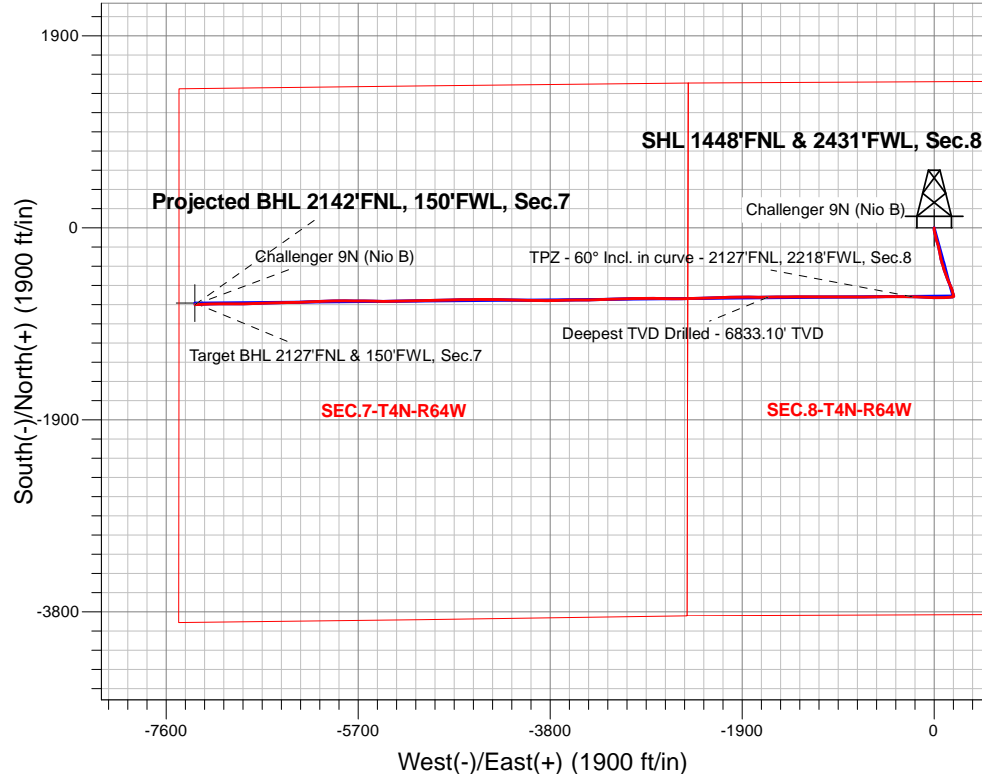
PDC Energy Inc. DJ Basin

Well Name: **Challenger 9N (Nio B)**

Surface Location: Challenger 4N64W8 Pad Sec.8-T4N-R64W
 North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
 Ground Elevation: 4775.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1364458.72 3257810.36 40.330150 -104.575260
 WELL @ 4798.0ft

FINAL SURVEY

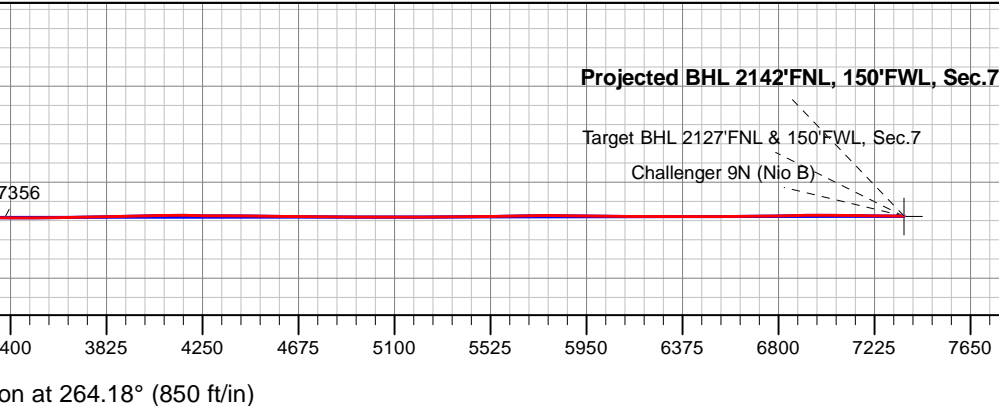
Projected Bottom Hole Location
14,047'MD 6812'TVD 760'S & 7317'W of SHL
89.80 degree Incl @ 268.06 degree AZM



Challenger 4N64W8 Pad Sec.8-T4N-R64W
 Challenger 9N (Nio B)
 Challenger 9N (Nio B) Wellbore #1
 9:32, March 21 2019

ANNOTATIONS		
TVD	MD	Annotation
6738.6	6930.8	TPZ - 60° Incl. in curve - 2127'FNL, 2218'FWL, Sec.8
6833.1	8373.0	Deepest TVD Drilled - 6833.10' TVD
6812.2	14047.0	Projected BHL 2142'FNL, 150'FWL, Sec.7

LEGEND	
	Challenger 9N (Nio B), Challenger 9N (Nio B) Wellbore #1, Plan #3 (3-15-19) V0
	Challenger 9N (Nio B) Wellbore #1
	Survey #1





PDC Energy Inc. DJ Basin

SEC.8-T4N-R64W

Challenger 4N64W8 Pad Sec.8-T4N-R64W

Challenger 9N (Nio B)

Challenger 9N (Nio B) Wellbore #1

Survey: Survey #1

Standard Survey Report

21 March, 2019



Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Challenger 9N (Nio B)
Project:	SEC.8-T4N-R64W	TVD Reference:	WELL @ 4798.0ft
Site:	Challenger 4N64W8 Pad Sec.8-T4N-R64W	MD Reference:	WELL @ 4798.0ft
Well:	Challenger 9N (Nio B)	North Reference:	True
Wellbore:	Challenger 9N (Nio B) Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Challenger 9N (Nio B) Wellbore #1	Database:	US_EDM

Project	SEC.8-T4N-R64W, Weld County, Colorado		
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	Challenger 4N64W8 Pad Sec.8-T4N-R64W				
Site Position:		Northing:	1,364,578.94 usft	Latitude:	40.330480
From:	Lat/Long	Easting:	3,257,809.10 usft	Longitude:	-104.575260
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.60 °

Well	Challenger 9N (Nio B)					
Well Position	+N/-S	0.0 ft	Northing:	1,364,458.72 usft	Latitude:	40.330150
	+E/-W	0.0 ft	Easting:	3,257,810.36 usft	Longitude:	-104.575260
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,775.0 ft

Wellbore	Challenger 9N (Nio B) Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	3/15/2019	8.17	66.82	52,164

Design	Challenger 9N (Nio B) 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	264.18	

Survey Program	Date	3/21/2019			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
154.0	14,047.0	Survey #1 (Challenger 9N (Nio B) Wellbor	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	210.60	1.0	0.0	0.0	0.0	0.19	0.19	0.00	
SHL 1448'FNL & 2431'FWL, Sec.8										
154.0	0.30	210.60	154.0	-0.3	-0.2	0.2	0.19	0.19	0.00	
250.0	2.00	204.90	250.0	-2.1	-1.0	1.2	1.77	1.77	-5.94	
345.0	3.20	183.20	344.9	-6.2	-1.9	2.5	1.61	1.26	-22.84	
440.0	4.90	177.40	439.6	-12.9	-1.8	3.1	1.84	1.79	-6.11	
535.0	5.60	170.70	534.2	-21.6	-0.9	3.1	0.98	0.74	-7.05	
630.0	5.60	168.30	628.8	-30.7	0.8	2.3	0.25	0.00	-2.53	
725.0	5.40	163.70	723.4	-39.5	3.0	1.1	0.51	-0.21	-4.84	
820.0	6.80	166.80	817.8	-49.3	5.5	-0.5	1.51	1.47	3.26	

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Challenger 9N (Nio B)
Project:	SEC.8-T4N-R64W	TVD Reference:	WELL @ 4798.0ft
Site:	Challenger 4N64W8 Pad Sec.8-T4N-R64W	MD Reference:	WELL @ 4798.0ft
Well:	Challenger 9N (Nio B)	North Reference:	True
Wellbore:	Challenger 9N (Nio B) Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Challenger 9N (Nio B) 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)
916.0	7.40	166.00	913.1	-60.8	8.3	-2.1	0.63	0.63	-0.83
1,010.0	7.20	168.20	1,006.3	-72.4	11.0	-3.6	0.37	-0.21	2.34
1,106.0	7.10	168.60	1,101.6	-84.1	13.4	-4.8	0.12	-0.10	0.42
1,201.0	8.00	168.00	1,195.7	-96.4	15.9	-6.1	0.95	0.95	-0.63
1,296.0	7.80	165.20	1,289.8	-109.1	18.9	-7.8	0.46	-0.21	-2.95
1,392.0	7.70	162.10	1,385.0	-121.5	22.6	-10.1	0.45	-0.10	-3.23
1,486.0	7.60	162.20	1,478.1	-133.4	26.4	-12.8	0.11	-0.11	0.11
1,580.0	7.00	164.30	1,571.4	-144.8	29.9	-15.0	0.70	-0.64	2.23
1,770.0	8.86	159.14	1,759.5	-169.7	38.2	-20.8	1.05	0.98	-2.72
1,865.0	11.98	168.54	1,853.0	-186.2	42.8	-23.7	3.73	3.28	9.89
1,960.0	11.81	168.62	1,945.9	-205.4	46.6	-25.6	0.18	-0.18	0.08
2,054.0	11.80	169.20	2,037.9	-224.2	50.3	-27.4	0.13	-0.01	0.62
2,148.0	11.67	169.64	2,130.0	-243.0	53.9	-28.9	0.17	-0.14	0.47
2,338.0	11.02	169.07	2,316.3	-279.7	60.8	-32.1	0.35	-0.34	-0.30
2,433.0	10.82	166.80	2,409.5	-297.3	64.5	-34.0	0.50	-0.21	-2.39
2,527.0	10.81	165.78	2,501.9	-314.5	68.7	-36.5	0.20	-0.01	-1.09
2,623.0	10.61	165.09	2,596.2	-331.7	73.2	-39.2	0.25	-0.21	-0.72
2,718.0	10.43	164.33	2,689.6	-348.5	77.7	-42.0	0.24	-0.19	-0.80
2,813.0	10.22	162.42	2,783.1	-364.8	82.6	-45.2	0.42	-0.22	-2.01
2,908.0	10.32	163.02	2,876.5	-381.0	87.6	-48.6	0.15	0.11	0.63
3,004.0	9.97	163.17	2,971.0	-397.1	92.6	-51.8	0.37	-0.36	0.16
3,100.0	9.76	162.67	3,065.6	-412.9	97.4	-55.1	0.24	-0.22	-0.52
3,195.0	11.67	160.70	3,159.0	-429.6	103.0	-58.9	2.05	2.01	-2.07
3,291.0	13.35	160.22	3,252.7	-449.2	109.9	-63.8	1.75	1.75	-0.50
3,482.0	12.81	158.95	3,438.7	-489.7	125.0	-74.7	0.32	-0.28	-0.66
3,578.0	12.23	158.69	3,532.4	-509.1	132.5	-80.2	0.61	-0.60	-0.27
3,673.0	11.74	157.14	3,625.4	-527.4	139.9	-85.8	0.62	-0.52	-1.63
3,769.0	11.52	156.49	3,719.4	-545.2	147.5	-91.5	0.27	-0.23	-0.68
3,865.0	11.38	156.39	3,813.5	-562.7	155.2	-97.3	0.15	-0.15	-0.10
3,961.0	11.82	156.78	3,907.5	-580.4	162.8	-103.2	0.47	0.46	0.41
4,057.0	11.48	158.18	4,001.6	-598.3	170.3	-108.8	0.46	-0.35	1.46
4,151.0	9.49	163.27	4,094.0	-614.4	176.0	-112.8	2.33	-2.12	5.41
4,246.0	7.80	166.55	4,187.9	-628.2	179.7	-115.1	1.85	-1.78	3.45
4,342.0	4.11	167.08	4,283.4	-637.9	182.0	-116.4	3.84	-3.84	0.55
4,437.0	3.62	167.62	4,378.1	-644.1	183.4	-117.2	0.52	-0.52	0.57
4,532.0	3.68	163.75	4,473.0	-650.0	184.9	-118.1	0.27	0.06	-4.07
4,628.0	3.43	162.16	4,568.8	-655.7	186.6	-119.2	0.28	-0.26	-1.66
4,724.0	3.28	161.61	4,664.6	-661.0	188.4	-120.4	0.16	-0.16	-0.57
4,819.0	3.05	160.51	4,759.5	-666.0	190.1	-121.6	0.25	-0.24	-1.16
4,914.0	5.09	159.06	4,854.2	-672.3	192.4	-123.3	2.15	2.15	-1.53
5,010.0	2.08	221.81	4,950.0	-677.6	192.8	-123.1	4.72	-3.14	65.36
5,105.0	1.80	274.32	5,045.0	-678.7	190.2	-120.4	1.83	-0.29	55.27
5,201.0	1.44	268.02	5,141.0	-678.7	187.5	-117.7	0.42	-0.38	-6.56

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Challenger 9N (Nio B)
Project:	SEC.8-T4N-R64W	TVD Reference:	WELL @ 4798.0ft
Site:	Challenger 4N64W8 Pad Sec.8-T4N-R64W	MD Reference:	WELL @ 4798.0ft
Well:	Challenger 9N (Nio B)	North Reference:	True
Wellbore:	Challenger 9N (Nio B) Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Challenger 9N (Nio B) 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)	
5,296.0	0.76	207.80	5,235.9	-679.3	186.0	-116.2	1.32	-0.72	-63.39	
5,392.0	0.67	208.00	5,331.9	-680.3	185.4	-115.5	0.09	-0.09	0.21	
5,488.0	0.53	220.30	5,427.9	-681.1	184.9	-114.9	0.20	-0.15	12.81	
5,583.0	0.51	219.97	5,522.9	-681.8	184.3	-114.3	0.02	-0.02	-0.35	
5,679.0	0.60	248.80	5,618.9	-682.3	183.6	-113.5	0.30	0.09	30.03	
5,774.0	0.64	244.82	5,713.9	-682.7	182.6	-112.5	0.06	0.04	-4.19	
5,869.0	0.83	241.51	5,808.9	-683.3	181.5	-111.4	0.20	0.20	-3.48	
5,965.0	0.91	274.54	5,904.9	-683.5	180.2	-110.0	0.52	0.08	34.41	
6,060.0	1.16	273.29	5,999.9	-683.4	178.4	-108.3	0.26	0.26	-1.32	
6,156.0	1.10	264.05	6,095.9	-683.5	176.6	-106.4	0.20	-0.06	-9.63	
6,252.0	13.44	264.41	6,190.9	-684.7	164.5	-94.3	12.85	12.85	0.38	
6,347.0	21.43	268.41	6,281.5	-686.2	136.1	-65.9	8.50	8.41	4.21	
6,443.0	28.92	265.04	6,368.3	-688.7	95.4	-25.1	7.94	7.80	-3.51	
6,538.0	32.43	268.08	6,450.0	-691.6	47.0	23.3	4.04	3.69	3.20	
6,633.0	36.25	273.45	6,528.4	-690.7	-6.5	76.5	5.13	4.02	5.65	
6,728.0	40.11	272.59	6,603.1	-687.6	-65.1	134.5	4.10	4.06	-0.91	
6,824.0	45.35	271.81	6,673.6	-685.2	-130.2	199.0	5.49	5.46	-0.81	
6,919.0	57.80	273.40	6,732.5	-681.7	-204.4	272.4	13.17	13.11	1.67	
6,930.8	60.00	272.86	6,738.6	-681.1	-214.5	282.4	19.05	18.64	-4.60	
TPZ - 60° Incl. in curve - 2127'FNL, 2218'FWL, Sec.8										
7,015.0	75.74	269.52	6,770.2	-679.7	-292.2	359.6	19.05	18.69	-3.96	
7,110.0	77.60	270.31	6,792.2	-679.8	-384.6	451.5	2.12	1.96	0.83	
7,205.0	82.41	269.75	6,808.6	-679.8	-478.2	544.6	5.10	5.06	-0.59	
7,260.8	84.40	269.33	6,815.0	-680.2	-533.6	599.8	3.65	3.57	-0.75	
LPL 2127'FNL & 1900'FWL, Sec.8										
7,301.0	85.84	269.03	6,818.5	-680.8	-573.6	639.7	3.65	3.57	-0.75	
7,396.0	88.43	269.35	6,823.2	-682.1	-668.5	734.2	2.75	2.73	0.34	
7,491.0	88.29	268.75	6,825.9	-683.7	-763.4	828.8	0.65	-0.15	-0.63	
7,614.0	90.24	270.21	6,827.5	-684.8	-886.4	951.3	1.98	1.59	1.19	
7,810.0	89.83	271.33	6,827.4	-682.2	-1,082.4	1,146.0	0.61	-0.21	0.57	
7,898.0	89.49	270.32	6,827.9	-680.9	-1,170.4	1,233.4	1.21	-0.39	-1.15	
8,088.0	89.10	269.46	6,830.2	-681.3	-1,360.4	1,422.4	0.50	-0.21	-0.45	
8,183.0	88.99	268.74	6,831.8	-682.8	-1,455.3	1,517.0	0.77	-0.12	-0.76	
8,278.0	90.01	269.11	6,832.7	-684.5	-1,550.3	1,611.7	1.14	1.07	0.39	
8,373.0	89.45	269.01	6,833.1	-686.1	-1,645.3	1,706.4	0.60	-0.59	-0.11	
Deepest TVD Drilled - 6833.10' TVD										
8,467.0	91.45	269.86	6,832.4	-687.0	-1,739.3	1,800.0	2.31	2.13	0.90	
8,563.0	91.77	270.77	6,829.7	-686.5	-1,835.3	1,895.4	1.00	0.33	0.95	
8,657.0	92.10	269.76	6,826.5	-686.1	-1,929.2	1,988.8	1.13	0.35	-1.07	
8,752.0	92.05	268.85	6,823.1	-687.2	-2,024.1	2,083.4	0.96	-0.05	-0.96	
8,847.0	92.66	268.28	6,819.2	-689.6	-2,119.0	2,178.0	0.88	0.64	-0.60	
8,943.0	91.71	268.17	6,815.5	-692.6	-2,214.9	2,273.7	1.00	-0.99	-0.11	
9,037.0	90.78	267.89	6,813.4	-695.8	-2,308.8	2,367.5	1.03	-0.99	-0.30	
9,133.0	90.76	267.76	6,812.2	-699.4	-2,404.7	2,463.2	0.14	-0.02	-0.14	

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Challenger 9N (Nio B)
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Site:	Challenger 4N64W8 Pad Sec.8-T4N-R64W	MD Reference:	WELL @ 4798.0ft
Well:	Challenger 9N (Nio B)	North Reference:	True
Wellbore:	Challenger 9N (Nio B) Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Challenger 9N (Nio B) 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)	
9,228.0	90.62	270.56	6,811.0	-700.8	-2,499.7	2,557.9	2.95	-0.15	2.95	
9,323.0	91.18	269.93	6,809.5	-700.4	-2,594.7	2,652.3	0.89	0.59	-0.66	
9,418.0	89.01	271.15	6,809.4	-699.5	-2,689.7	2,746.7	2.62	-2.28	1.28	
9,513.0	88.48	270.44	6,811.4	-698.2	-2,784.7	2,841.1	0.93	-0.56	-0.75	
9,608.0	89.04	269.93	6,813.5	-697.9	-2,879.6	2,935.5	0.80	0.59	-0.54	
9,704.0	88.64	268.77	6,815.4	-699.0	-2,975.6	3,031.1	1.28	-0.42	-1.21	
9,799.0	88.66	268.51	6,817.7	-701.2	-3,070.6	3,125.8	0.27	0.02	-0.27	
9,894.0	88.85	268.01	6,819.7	-704.1	-3,165.5	3,220.6	0.56	0.20	-0.53	
9,989.0	88.78	267.65	6,821.7	-707.7	-3,260.4	3,315.3	0.39	-0.07	-0.38	
10,085.0	88.96	267.42	6,823.6	-711.9	-3,356.3	3,411.2	0.30	0.19	-0.24	
10,180.0	90.67	269.76	6,823.9	-714.2	-3,451.3	3,505.9	3.05	1.80	2.46	
10,274.0	91.24	269.78	6,822.3	-714.6	-3,545.2	3,599.4	0.61	0.61	0.02	
10,370.0	91.28	269.00	6,820.2	-715.6	-3,641.2	3,695.0	0.81	0.04	-0.81	
10,465.0	91.46	268.58	6,818.0	-717.6	-3,736.2	3,789.7	0.48	0.19	-0.44	
10,561.0	91.81	268.39	6,815.2	-720.1	-3,832.1	3,885.3	0.41	0.36	-0.20	
10,656.0	92.11	271.81	6,812.0	-720.0	-3,927.0	3,979.8	3.61	0.32	3.60	
10,752.0	91.69	271.79	6,808.8	-717.0	-4,022.9	4,074.9	0.44	-0.44	-0.02	
10,846.0	88.87	272.42	6,808.3	-713.5	-4,116.8	4,168.0	3.07	-3.00	0.67	
10,942.0	89.36	270.95	6,809.8	-710.7	-4,212.8	4,263.1	1.61	0.51	-1.53	
11,038.0	89.50	270.51	6,810.8	-709.5	-4,308.8	4,358.5	0.48	0.15	-0.46	
11,133.0	89.41	270.14	6,811.7	-708.9	-4,403.8	4,452.9	0.40	-0.09	-0.39	
11,229.0	89.35	269.72	6,812.7	-709.0	-4,499.8	4,548.5	0.44	-0.06	-0.44	
11,324.0	88.92	269.45	6,814.1	-709.7	-4,594.8	4,643.0	0.53	-0.45	-0.28	
11,420.0	89.24	268.83	6,815.7	-711.2	-4,690.7	4,738.6	0.73	0.33	-0.65	
11,515.0	88.94	268.51	6,817.2	-713.4	-4,785.7	4,833.3	0.46	-0.32	-0.34	
11,610.0	89.20	267.86	6,818.7	-716.4	-4,880.6	4,928.1	0.74	0.27	-0.68	
11,706.0	89.90	269.26	6,819.5	-718.8	-4,976.6	5,023.8	1.63	0.73	1.46	
11,801.0	90.10	269.57	6,819.5	-719.8	-5,071.6	5,118.4	0.39	0.21	0.33	
11,897.0	90.56	268.87	6,818.9	-721.1	-5,167.6	5,214.0	0.87	0.48	-0.73	
11,992.0	90.72	268.53	6,817.9	-723.2	-5,262.5	5,308.7	0.40	0.17	-0.36	
12,087.0	90.76	268.01	6,816.7	-726.1	-5,357.5	5,403.5	0.55	0.04	-0.55	
12,183.0	90.87	270.85	6,815.3	-727.0	-5,453.5	5,499.1	2.96	0.11	2.96	
12,278.0	91.79	270.97	6,813.1	-725.5	-5,548.4	5,593.4	0.98	0.97	0.13	
12,373.0	91.90	270.63	6,810.0	-724.2	-5,643.4	5,687.7	0.38	0.12	-0.36	
12,468.0	89.49	270.69	6,808.9	-723.1	-5,738.4	5,782.1	2.54	-2.54	0.06	
12,564.0	89.25	270.14	6,809.9	-722.4	-5,834.3	5,877.5	0.63	-0.25	-0.57	
12,658.0	89.08	269.00	6,811.3	-723.1	-5,928.3	5,971.1	1.23	-0.18	-1.21	
12,753.0	89.34	268.40	6,812.6	-725.3	-6,023.3	6,065.8	0.69	0.27	-0.63	
12,848.0	89.19	267.69	6,813.8	-728.5	-6,118.2	6,160.6	0.76	-0.16	-0.75	
12,944.0	88.96	266.10	6,815.4	-733.7	-6,214.1	6,256.4	1.67	-0.24	-1.66	
13,040.0	90.06	269.58	6,816.2	-737.3	-6,310.0	6,352.2	3.80	1.15	3.63	
13,135.0	90.45	269.02	6,815.8	-738.5	-6,405.0	6,446.8	0.72	0.41	-0.59	
13,231.0	90.71	268.43	6,814.8	-740.6	-6,501.0	6,542.5	0.67	0.27	-0.61	

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Challenger 9N (Nio B)
Project:	SEC.8-T4N-R64W	TVD Reference:	WELL @ 4798.0ft
Site:	Challenger 4N64W8 Pad Sec.8-T4N-R64W	MD Reference:	WELL @ 4798.0ft
Well:	Challenger 9N (Nio B)	North Reference:	True
Wellbore:	Challenger 9N (Nio B) Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Challenger 9N (Nio B) Wellbore #1	Database:	US_EDM

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)
13,327.0	90.80	267.75	6,813.5	-743.8	-6,596.9	6,638.3	0.71	0.09	-0.71
13,422.0	90.82	267.04	6,812.2	-748.2	-6,691.8	6,733.1	0.75	0.02	-0.75
13,517.0	91.14	270.09	6,810.6	-750.5	-6,786.7	6,827.8	3.23	0.34	3.21
13,613.0	91.58	269.67	6,808.3	-750.7	-6,882.7	6,923.3	0.63	0.46	-0.44
13,708.0	89.17	269.82	6,807.7	-751.2	-6,977.7	7,017.9	2.54	-2.54	0.16
13,804.0	89.02	268.78	6,809.2	-752.3	-7,073.7	7,113.5	1.09	-0.16	-1.08
13,899.0	89.08	268.06	6,810.8	-754.9	-7,168.6	7,208.2	0.76	0.06	-0.76
14,047.0	89.80	268.06	6,812.2	-760.0	-7,316.5	7,355.9	0.49	0.49	0.00

Projected BHL 2142'FNL, 150'FWL, Sec.7 - Target BHL 2127'FNL & 150'FWL, Sec.7

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL 1448'FNL & 2431'F' - hit/miss target - Shape - Point	0.00	0.00	1.0	0.0	0.0	1,364,458.73	3,257,810.36	40.330150	-104.575260
Target BHL 2127'FNL & - survey misses target center by 14.9ft at 14047.0ft MD (6812.2 TVD, -760.0 N, -7316.5 E) - Point	0.00	0.00	6,815.0	-745.3	-7,317.0	1,363,637.16	3,250,501.86	40.328101	-104.601503

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
6,930.8	6,738.6	-681.1	-214.5	TPZ - 60° Incl. in curve - 2127'FNL, 2218'FWL, Sec.8
8,373.0	6,833.1	-686.1	-1,645.3	Deepest TVD Drilled - 6833.10' TVD
14,047.0	6,812.2	-760.0	-7,316.5	Projected BHL 2142'FNL, 150'FWL, Sec.7

Checked By: _____ Approved By: _____ Date: _____