

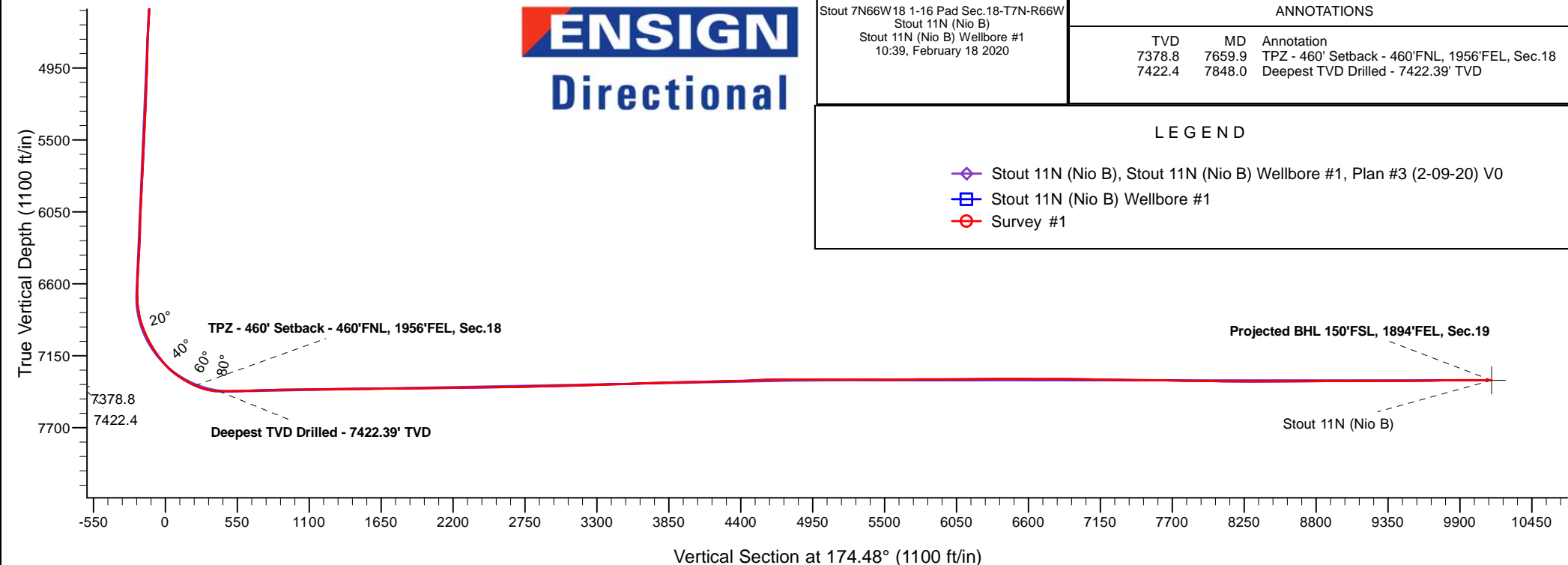
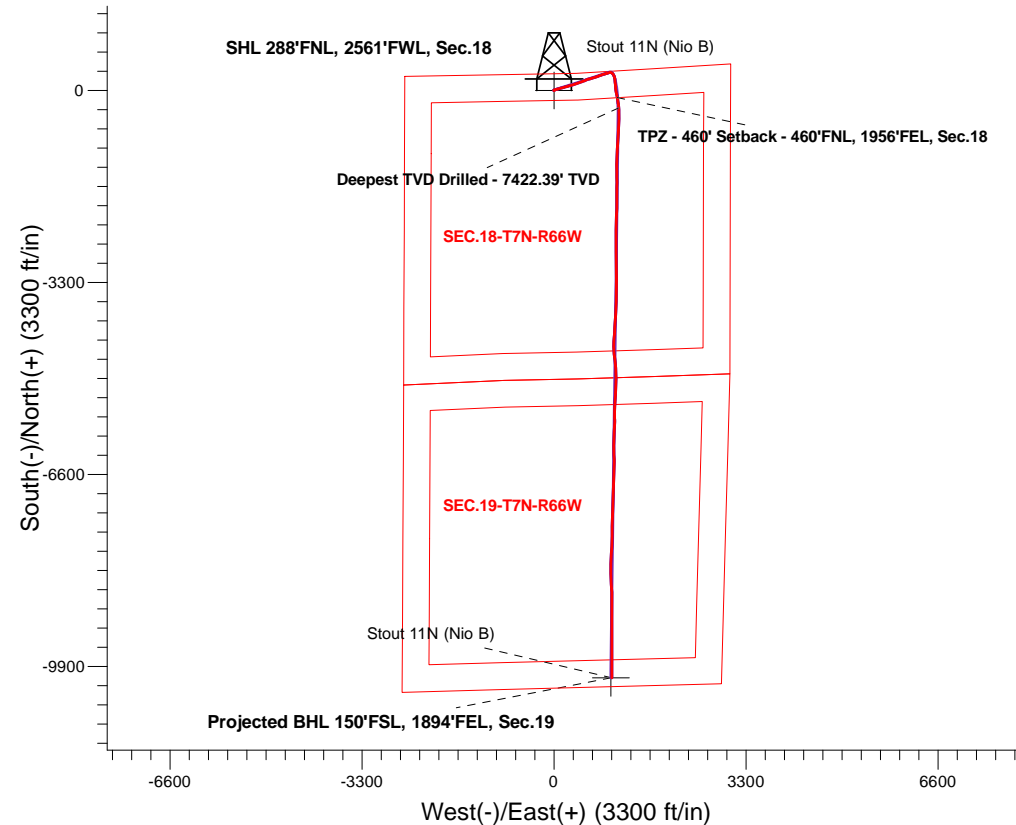
PDC Energy Inc. DJ Basin

Well Name: **Stout 11N (Nio B)**

Surface Location: Stout 7N66W18 1-16 Pad Sec.18-T7N-R66W
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
Ground Elevation: 5080.0
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1455180.173188161.10 40.580895 -104.822588
Original Well Elev WELL @ 5103.0ft (Original Well Elev)

FINAL SURVEY

Projected Bottom Hole Location
17,650'MD 7337'TVD 10095'S & 991'E of SHL
90.20 degree Incl @ 179.90 degree AZM



Stout 7N66W18 1-16 Pad Sec.18-T7N-R66W
Stout 11N (Nio B)
Stout 11N (Nio B) Wellbore #1
10:39, February 18 2020

ANNOTATIONS

TVD	MD	Annotation
7378.8	7659.9	TPZ - 460' Setback - 460°FNL, 1956°FEL, Sec.18
7422.4	7848.0	Deepest TVD Drilled - 7422.39' TVD

LEGEND

- Stout 11N (Nio B), Stout 11N (Nio B) Wellbore #1, Plan #3 (2-09-20) V0
- Stout 11N (Nio B) Wellbore #1
- Survey #1



PDC Energy Inc. DJ Basin

SEC.18-T7N-R66W

Stout 7N66W18 1-16 Pad Sec.18-T7N-R66W

Stout 11N (Nio B)

Stout 11N (Nio B) Wellbore #1

Survey: Survey #1

Standard Survey Report

18 February, 2020

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Stout 11N (Nio B)
Project:	SEC.18-T7N-R66W	TVD Reference:	WELL @ 5103.0ft (Original Well Elev)
Site:	Stout 7N66W18 1-16 Pad Sec.18-T7N-R66W	MD Reference:	WELL @ 5103.0ft (Original Well Elev)
Well:	Stout 11N (Nio B)	North Reference:	True
Wellbore:	Stout 11N (Nio B) Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Stout 11N (Nio B) Wellbore #1	Database:	US_EDM

Project	SEC.18-T7N-R66W, 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	Stout 7N66W18 1-16 Pad Sec.18-T7N-R66W				
Site Position:		Northing:	1,455,176.08 usft	Latitude:	40.580888
From:	Lat/Long	Easting:	3,187,991.19 usft	Longitude:	-104.823200
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.44 °

Well	Stout 11N (Nio B)					
Well Position	+N/-S	0.0 ft	Northing:	1,455,180.18 usft	Latitude:	40.580896
	+E/-W	0.0 ft	Easting:	3,188,161.10 usft	Longitude:	-104.822588
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	5,080.0 ft

Wellbore	Stout 11N (Nio B) Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/6/2019	7.95	66.93	52,252

Design	Stout 11N (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	174.48	

Survey Program	Date	2/18/2020			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
154.0	17,650.0	Survey #1 (Stout 11N (Nio B) 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	
154.0	0.57	278.23	154.0	0.1	-0.8	-0.2	0.37	0.37	0.00	
249.0	0.92	297.66	249.0	0.5	-1.9	-0.7	0.45	0.37	20.45	
344.0	0.31	319.19	344.0	1.1	-2.7	-1.3	0.68	-0.64	22.66	
440.0	0.53	297.92	440.0	1.5	-3.3	-1.8	0.28	0.23	-22.16	
535.0	0.75	282.45	535.0	1.8	-4.3	-2.2	0.29	0.23	-16.28	
630.0	0.31	97.27	630.0	1.9	-4.7	-2.4	1.11	-0.46	184.02	
725.0	0.44	68.35	725.0	2.0	-4.1	-2.4	0.24	0.14	-30.44	
819.0	0.70	85.05	819.0	2.2	-3.2	-2.5	0.33	0.28	17.77	
914.0	0.75	78.46	914.0	2.4	-2.0	-2.6	0.10	0.05	-6.94	

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Stout 11N (Nio B)
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Site:	Stout 7N66W18 1-16 Pad Sec.18-T7N-R66W	MD Reference:	WELL @ 5103.0ft (Original Well Elev)
Well:	Stout 11N (Nio B)	North Reference:	True
Wellbore:	Stout 11N (Nio B) Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Stout 11N (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)	
1,009.0	0.48	71.51	1,009.0	2.6	-1.0	-2.7	0.29	-0.28	-7.32	
1,104.0	0.66	58.16	1,103.9	3.1	-0.1	-3.0	0.23	0.19	-14.05	
1,199.0	1.01	46.91	1,198.9	3.9	0.9	-3.8	0.41	0.37	-11.84	
1,294.0	1.67	41.46	1,293.9	5.5	2.5	-5.3	0.71	0.69	-5.74	
1,389.0	2.33	63.08	1,388.9	7.4	5.1	-6.9	1.04	0.69	22.76	
1,484.0	3.34	68.88	1,483.7	9.3	9.4	-8.4	1.10	1.06	6.11	
1,579.0	4.62	72.66	1,578.5	11.4	15.6	-9.9	1.37	1.35	3.98	
1,630.0	5.23	73.98	1,629.3	12.7	19.8	-10.7	1.22	1.20	2.59	
1,758.0	7.23	76.72	1,756.6	16.2	33.3	-12.9	1.58	1.56	2.14	
1,848.0	7.10	76.83	1,845.9	18.7	44.2	-14.4	0.15	-0.14	0.12	
1,937.0	9.45	80.69	1,933.9	21.2	56.8	-15.6	2.71	2.64	4.34	
2,026.0	11.28	73.79	2,021.5	24.8	72.4	-17.7	2.48	2.06	-7.75	
2,116.0	10.84	74.45	2,109.8	29.5	89.0	-20.8	0.51	-0.49	0.73	
2,206.0	10.50	74.31	2,198.2	34.0	105.0	-23.7	0.38	-0.38	-0.16	
2,295.0	9.77	74.35	2,285.9	38.2	120.1	-26.5	0.82	-0.82	0.04	
2,385.0	10.26	74.66	2,374.5	42.4	135.2	-29.2	0.55	0.54	0.34	
2,563.0	9.72	73.58	2,549.8	50.8	164.9	-34.7	0.32	-0.30	-0.61	
2,653.0	10.97	74.21	2,638.3	55.3	180.4	-37.7	1.39	1.39	0.70	
2,743.0	11.89	75.28	2,726.5	60.0	197.6	-40.7	1.05	1.02	1.19	
2,833.0	11.53	74.03	2,814.7	64.8	215.2	-43.8	0.49	-0.40	-1.39	
2,922.0	10.95	72.62	2,901.9	69.8	231.8	-47.2	0.72	-0.65	-1.58	
3,012.0	10.90	71.92	2,990.3	75.0	248.1	-50.8	0.16	-0.06	-0.78	
3,101.0	13.59	76.42	3,077.3	80.1	266.3	-54.1	3.20	3.02	5.06	
3,190.0	12.81	74.45	3,163.9	85.2	285.9	-57.2	1.01	-0.88	-2.21	
3,280.0	11.56	73.92	3,251.9	90.3	304.2	-60.6	1.39	-1.39	-0.59	
3,371.0	10.34	72.80	3,341.2	95.3	320.8	-64.0	1.36	-1.34	-1.23	
3,460.0	11.43	70.82	3,428.6	100.5	336.7	-67.7	1.29	1.22	-2.22	
3,550.0	10.04	70.32	3,517.1	106.1	352.5	-71.7	1.55	-1.54	-0.56	
3,640.0	11.27	73.14	3,605.5	111.3	368.3	-75.3	1.48	1.37	3.13	
3,730.0	11.69	74.67	3,693.7	116.3	385.5	-78.6	0.58	0.47	1.70	
3,820.0	12.05	71.39	3,781.8	121.7	403.2	-82.3	0.85	0.40	-3.64	
3,909.0	11.62	68.71	3,868.9	127.9	420.4	-86.8	0.78	-0.48	-3.01	
3,998.0	10.66	68.02	3,956.2	134.2	436.4	-91.6	1.09	-1.08	-0.78	
4,087.0	12.40	68.83	4,043.4	140.8	452.9	-96.5	1.96	1.96	0.91	
4,177.0	12.85	67.08	4,131.2	148.1	471.2	-102.1	0.66	0.50	-1.94	
4,266.0	13.15	71.40	4,218.0	155.2	489.9	-107.4	1.14	0.34	4.85	
4,356.0	13.12	71.29	4,305.6	161.8	509.2	-112.0	0.04	-0.03	-0.12	
4,446.0	11.91	67.53	4,393.5	168.6	527.5	-117.0	1.62	-1.34	-4.18	
4,535.0	11.95	67.75	4,480.6	175.6	544.5	-122.4	0.07	0.04	0.25	
4,624.0	11.22	66.45	4,567.7	182.5	561.0	-127.7	0.87	-0.82	-1.46	
4,714.0	11.20	72.12	4,656.0	188.7	577.3	-132.3	1.22	-0.02	6.30	
4,803.0	10.40	70.97	4,743.4	194.0	593.2	-136.0	0.93	-0.90	-1.29	
4,893.0	10.70	78.21	4,831.9	198.4	609.0	-138.8	1.51	0.33	8.04	
4,983.0	9.69	78.58	4,920.5	201.6	624.6	-140.5	1.12	-1.12	0.41	

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Well:	Stout 11N (Nio B)	North Reference:	True
Wellbore:	Stout 11N (Nio B) Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Stout 11N (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)
5,072.0	10.41	73.95	5,008.1	205.3	639.7	-142.7	1.22	0.81	-5.20
5,161.0	11.47	72.38	5,095.5	210.2	655.8	-146.1	1.24	1.19	-1.76
5,251.0	12.66	72.69	5,183.5	215.8	673.8	-150.0	1.32	1.32	0.34
5,340.0	12.24	72.81	5,270.4	221.5	692.1	-153.9	0.47	-0.47	0.13
5,430.0	11.20	72.66	5,358.6	226.9	709.6	-157.6	1.16	-1.16	-0.17
5,519.0	11.47	73.35	5,445.8	232.0	726.3	-161.0	0.34	0.30	0.78
5,609.0	11.41	68.56	5,534.0	237.9	743.2	-165.2	1.06	-0.07	-5.32
5,698.0	9.66	66.28	5,621.5	244.1	758.2	-170.0	2.02	-1.97	-2.56
5,787.0	10.46	72.95	5,709.2	249.5	772.8	-173.9	1.59	0.90	7.49
5,877.0	11.47	69.76	5,797.5	254.9	789.0	-177.8	1.31	1.12	-3.54
5,966.0	9.96	68.01	5,885.0	260.9	804.4	-182.2	1.74	-1.70	-1.97
6,056.0	11.55	68.54	5,973.4	267.1	820.0	-186.9	1.77	1.77	0.59
6,146.0	12.83	73.10	6,061.4	273.3	838.0	-191.4	1.78	1.42	5.07
6,235.0	12.38	76.97	6,148.2	278.3	856.7	-194.6	1.07	-0.51	4.35
6,325.0	11.88	76.24	6,236.2	282.7	875.1	-197.2	0.58	-0.56	-0.81
6,414.0	11.70	71.30	6,323.3	287.8	892.5	-200.5	1.15	-0.20	-5.55
6,503.0	12.01	70.28	6,410.4	293.8	909.8	-204.8	0.42	0.35	-1.15
6,593.0	12.66	70.56	6,498.4	300.2	927.9	-209.5	0.73	0.72	0.31
6,683.0	11.11	70.01	6,586.4	306.5	945.4	-214.1	1.73	-1.72	-0.61
6,773.0	9.41	82.58	6,675.0	310.4	960.8	-216.5	3.11	-1.89	13.97
6,862.0	14.23	108.97	6,762.1	307.8	978.4	-212.2	8.01	5.42	29.65
6,952.0	17.31	126.36	6,848.8	296.2	999.7	-198.6	6.23	3.42	19.32
7,042.0	23.28	145.83	6,933.3	273.5	1,020.5	-174.0	9.93	6.63	21.63
7,131.0	27.10	162.94	7,013.9	239.5	1,036.3	-138.7	9.20	4.29	19.22
7,220.0	30.87	172.83	7,091.8	197.5	1,045.1	-95.9	6.84	4.24	11.11
7,310.0	37.19	175.05	7,166.3	147.4	1,050.4	-45.6	7.16	7.02	2.47
7,400.0	44.40	176.78	7,234.4	88.8	1,054.5	13.1	8.11	8.01	1.92
7,489.0	53.80	173.40	7,292.6	21.9	1,060.4	80.3	10.94	10.56	-3.80
7,579.0	59.46	168.91	7,342.1	-52.3	1,072.0	155.3	7.54	6.29	-4.99
7,659.9	66.59	168.69	7,378.8	-123.0	1,086.0	227.0	8.81	8.81	-0.27
TPZ - 460' Setback - 460'FNL, 1956'FEL, Sec.18									
7,669.0	67.39	168.67	7,382.4	-131.2	1,087.7	235.3	8.81	8.81	-0.25
7,758.0	76.22	171.62	7,410.1	-214.4	1,102.1	319.5	10.41	9.92	3.31
7,848.0	88.11	174.81	7,422.4	-302.8	1,112.5	408.5	13.67	13.21	3.54
Deepest TVD Drilled - 7422.39' TVD									
7,938.0	92.19	178.50	7,422.1	-392.6	1,117.8	498.4	6.11	4.53	4.10
8,028.0	91.54	181.90	7,419.2	-482.5	1,117.5	587.9	3.84	-0.72	3.78
8,144.0	91.84	182.53	7,415.8	-598.4	1,113.0	702.8	0.60	0.26	0.54
8,233.0	91.14	183.08	7,413.5	-687.3	1,108.6	790.8	1.00	-0.79	0.62
8,323.0	91.16	183.69	7,411.7	-777.1	1,103.3	879.7	0.68	0.02	0.68
8,412.0	91.21	184.71	7,409.8	-865.8	1,096.8	967.4	1.15	0.06	1.15
8,501.0	90.53	182.57	7,408.5	-954.6	1,091.2	1,055.2	2.52	-0.76	-2.40
8,591.0	90.66	183.26	7,407.6	-1,044.5	1,086.6	1,144.3	0.78	0.14	0.77

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Design:	Stout 11N (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)
8,681.0	90.60	182.71	7,406.6	-1,134.4	1,081.9	1,233.3	0.61	-0.07	-0.61
8,770.0	90.53	179.22	7,405.7	-1,223.4	1,080.4	1,321.7	3.92	-0.08	-3.92
8,860.0	90.95	179.87	7,404.5	-1,313.3	1,081.1	1,411.3	0.86	0.47	0.72
8,948.0	90.49	181.16	7,403.4	-1,401.3	1,080.3	1,498.8	1.56	-0.52	1.47
9,038.0	90.58	179.47	7,402.6	-1,491.3	1,079.8	1,588.3	1.88	0.10	-1.88
9,128.0	90.47	179.59	7,401.8	-1,581.3	1,080.6	1,678.0	0.18	-0.12	0.13
9,218.0	90.46	180.83	7,401.0	-1,671.3	1,080.2	1,767.5	1.38	-0.01	1.38
9,307.0	90.41	180.21	7,400.3	-1,760.3	1,079.4	1,856.0	0.70	-0.06	-0.70
9,397.0	90.83	180.15	7,399.4	-1,850.3	1,079.2	1,945.6	0.47	0.47	-0.07
9,487.0	90.73	180.63	7,398.1	-1,940.3	1,078.5	2,035.1	0.54	-0.11	0.53
9,577.0	90.82	180.97	7,396.9	-2,030.3	1,077.3	2,124.5	0.39	0.10	0.38
9,666.0	90.33	182.73	7,396.0	-2,119.2	1,074.4	2,212.8	2.05	-0.55	1.98
9,755.0	90.73	182.39	7,395.2	-2,208.1	1,070.4	2,300.9	0.59	0.45	-0.38
9,844.0	91.24	180.45	7,393.7	-2,297.1	1,068.2	2,389.2	2.25	0.57	-2.18
9,934.0	90.96	178.48	7,392.0	-2,387.1	1,069.1	2,478.9	2.21	-0.31	-2.19
10,024.0	90.70	180.65	7,390.6	-2,477.0	1,069.8	2,568.5	2.43	-0.29	2.41
10,114.0	90.72	179.53	7,389.5	-2,567.0	1,069.6	2,658.1	1.24	0.02	-1.24
10,203.0	90.85	181.46	7,388.3	-2,656.0	1,068.8	2,746.6	2.17	0.15	2.17
10,293.0	91.74	179.86	7,386.3	-2,746.0	1,067.8	2,836.0	2.03	0.99	-1.78
10,382.0	91.31	181.29	7,383.9	-2,834.9	1,066.9	2,924.5	1.68	-0.48	1.61
10,472.0	91.64	178.67	7,381.6	-2,924.9	1,066.9	3,014.0	2.93	0.37	-2.91
10,562.0	91.93	179.46	7,378.8	-3,014.8	1,068.4	3,103.7	0.93	0.32	0.88
10,651.0	91.73	178.38	7,375.9	-3,103.8	1,070.1	3,192.4	1.23	-0.22	-1.21
10,741.0	91.65	176.78	7,373.3	-3,193.7	1,073.9	3,282.2	1.78	-0.09	-1.78
10,831.0	91.34	179.12	7,370.9	-3,283.6	1,077.1	3,372.0	2.62	-0.34	2.60
10,921.0	91.59	183.12	7,368.6	-3,373.5	1,075.3	3,461.3	4.45	0.28	4.44
11,010.0	92.13	181.49	7,365.8	-3,462.4	1,071.8	3,549.5	1.93	0.61	-1.83
11,099.0	91.44	182.39	7,363.0	-3,551.3	1,068.8	3,637.7	1.27	-0.78	1.01
11,189.0	92.39	181.27	7,360.0	-3,641.2	1,065.9	3,726.9	1.63	1.06	-1.24
11,279.0	91.52	183.00	7,356.9	-3,731.1	1,062.5	3,816.0	2.15	-0.97	1.92
11,369.0	91.98	180.51	7,354.2	-3,821.0	1,059.8	3,905.2	2.81	0.51	-2.77
11,459.0	91.12	182.91	7,351.7	-3,910.9	1,057.1	3,994.5	2.83	-0.96	2.67
11,548.0	90.81	185.80	7,350.2	-3,999.6	1,050.3	4,082.1	3.27	-0.35	3.25
11,638.0	91.59	183.44	7,348.3	-4,089.3	1,043.1	4,170.7	2.76	0.87	-2.62
11,728.0	91.48	182.09	7,345.9	-4,179.2	1,038.7	4,259.7	1.50	-0.12	-1.50
11,818.0	91.11	185.63	7,343.9	-4,268.9	1,032.7	4,348.5	3.95	-0.41	3.93
11,907.0	92.18	181.67	7,341.3	-4,357.7	1,027.0	4,436.3	4.61	1.20	-4.45
11,997.0	92.18	177.73	7,337.9	-4,447.6	1,027.5	4,525.8	4.37	0.00	-4.38
12,087.0	92.41	173.47	7,334.3	-4,537.2	1,034.4	4,615.7	4.74	0.26	-4.73
12,176.0	90.19	172.17	7,332.3	-4,625.5	1,045.5	4,704.7	2.89	-2.49	-1.46
12,266.0	89.67	176.09	7,332.4	-4,715.0	1,054.7	4,794.7	4.39	-0.58	4.36
12,355.0	89.96	178.87	7,332.7	-4,803.9	1,058.6	4,883.5	3.14	0.33	3.12
12,445.0	89.96	178.07	7,332.7	-4,893.9	1,061.0	4,973.3	0.89	0.00	-0.89
12,535.0	90.13	177.32	7,332.7	-4,983.8	1,064.7	5,063.2	0.85	0.19	-0.83

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Stout 11N (Nio B)
Project:	SEC.18-T7N-R66W	TVD Reference:	WELL @ 5103.0ft (Original Well Elev)
Site:	Stout 7N66W18 1-16 Pad Sec.18-T7N-R66W	MD Reference:	WELL @ 5103.0ft (Original Well Elev)
Well:	Stout 11N (Nio B)	North Reference:	True
Wellbore:	Stout 11N (Nio B) Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Stout 11N (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)
12,624.0	89.57	181.23	7,332.9	-5,072.8	1,065.8	5,151.8	4.44	-0.63	4.39
12,714.0	89.98	184.99	7,333.3	-5,162.6	1,060.9	5,240.8	4.20	0.46	4.18
12,803.0	89.91	185.66	7,333.3	-5,251.3	1,052.6	5,328.2	0.76	-0.08	0.75
12,893.0	89.86	183.50	7,333.5	-5,341.0	1,045.5	5,416.8	2.40	-0.06	-2.40
12,982.0	90.01	181.31	7,333.6	-5,429.9	1,041.7	5,504.9	2.47	0.17	-2.46
13,071.0	90.20	181.31	7,333.5	-5,518.9	1,039.7	5,593.3	0.21	0.21	0.00
13,161.0	91.54	178.24	7,332.1	-5,608.8	1,040.0	5,682.9	3.72	1.49	-3.41
13,251.0	90.11	179.78	7,330.8	-5,698.8	1,041.6	5,772.6	2.33	-1.59	1.71
13,341.0	89.84	182.69	7,330.8	-5,788.8	1,039.7	5,862.0	3.25	-0.30	3.23
13,431.0	90.08	183.67	7,330.9	-5,878.6	1,034.7	5,950.9	1.12	0.27	1.09
13,521.0	89.71	183.60	7,331.1	-5,968.5	1,029.0	6,039.8	0.42	-0.41	-0.08
13,610.0	91.04	181.38	7,330.5	-6,057.4	1,025.1	6,127.9	2.91	1.49	-2.49
13,700.0	91.94	178.12	7,328.1	-6,147.3	1,025.5	6,217.5	3.76	1.00	-3.62
13,789.0	89.87	176.69	7,326.7	-6,236.2	1,029.5	6,306.3	2.83	-2.33	-1.61
13,879.0	89.71	176.93	7,327.1	-6,326.1	1,034.5	6,396.3	0.32	-0.18	0.27
13,969.0	89.11	180.27	7,328.0	-6,416.0	1,036.7	6,486.0	3.77	-0.67	3.71
14,058.0	89.50	182.76	7,329.1	-6,505.0	1,034.4	6,574.3	2.83	0.44	2.80
14,149.0	89.88	183.32	7,329.6	-6,595.8	1,029.5	6,664.3	0.74	0.42	0.62
14,239.0	90.96	182.38	7,328.9	-6,685.7	1,025.1	6,753.4	1.59	1.20	-1.04
14,329.0	89.28	181.31	7,328.7	-6,775.7	1,022.2	6,842.6	2.21	-1.87	-1.19
14,418.0	89.20	183.47	7,329.9	-6,864.6	1,018.5	6,930.7	2.43	-0.09	2.43
14,508.0	89.53	182.45	7,330.9	-6,954.5	1,013.8	7,019.8	1.19	0.37	-1.13
14,597.0	89.43	180.36	7,331.7	-7,043.4	1,011.6	7,108.1	2.35	-0.11	-2.35
14,686.0	88.98	181.19	7,332.9	-7,132.4	1,010.4	7,196.5	1.06	-0.51	0.93
14,775.0	89.07	181.12	7,334.5	-7,221.4	1,008.6	7,284.9	0.13	0.10	-0.08
14,865.0	89.05	182.81	7,335.9	-7,311.3	1,005.5	7,374.1	1.88	-0.02	1.88
14,954.0	89.56	182.03	7,337.0	-7,400.2	1,001.8	7,462.3	1.05	0.57	-0.88
15,043.0	89.57	179.46	7,337.7	-7,489.2	1,000.6	7,550.7	2.89	0.01	-2.89
15,133.0	88.92	180.25	7,338.9	-7,579.2	1,000.9	7,640.3	1.14	-0.72	0.88
15,222.0	88.88	181.61	7,340.6	-7,668.2	999.4	7,728.8	1.53	-0.04	1.53
15,312.0	89.44	181.05	7,341.9	-7,758.1	997.3	7,818.1	0.88	0.62	-0.62
15,401.0	89.20	182.72	7,343.0	-7,847.1	994.4	7,906.4	1.90	-0.27	1.88
15,491.0	89.18	184.36	7,344.2	-7,936.9	988.8	7,995.2	1.82	-0.02	1.82
15,581.0	89.09	184.44	7,345.6	-8,026.6	981.9	8,083.9	0.13	-0.10	0.09
15,670.0	89.69	182.63	7,346.5	-8,115.4	976.4	8,171.7	2.14	0.67	-2.03
15,760.0	89.76	180.41	7,347.0	-8,205.4	974.1	8,261.1	2.47	0.08	-2.47
15,850.0	89.76	176.79	7,347.3	-8,295.4	976.3	8,350.8	4.02	0.00	-4.02
15,939.0	90.41	176.99	7,347.2	-8,384.2	981.1	8,439.7	0.76	0.73	0.22
16,029.0	90.32	176.84	7,346.6	-8,474.1	985.9	8,529.6	0.19	-0.10	-0.17
16,118.0	90.40	177.46	7,346.1	-8,563.0	990.4	8,618.5	0.70	0.09	0.70
16,208.0	90.36	180.17	7,345.5	-8,652.9	992.2	8,708.3	3.01	-0.04	3.01
16,298.0	90.36	179.13	7,344.9	-8,742.9	992.8	8,797.9	1.16	0.00	-1.16
16,387.0	90.11	180.85	7,344.6	-8,831.9	992.8	8,886.5	1.95	-0.28	1.93

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Stout 11N (Nio B)
Project:	SEC.18-T7N-R66W	TVD Reference:	WELL @ 5103.0ft (Original Well Elev)
Site:	Stout 7N66W18 1-16 Pad Sec.18-T7N-R66W	MD Reference:	WELL @ 5103.0ft (Original Well Elev)
Well:	Stout 11N (Nio B)	North Reference:	True
Wellbore:	Stout 11N (Nio B) Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Stout 11N (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)	
16,476.0	90.38	180.24	7,344.2	-8,920.9	991.9	8,975.0	0.75	0.30	-0.69	
16,566.0	90.35	179.57	7,343.6	-9,010.9	992.1	9,064.6	0.75	-0.03	-0.74	
16,655.0	90.18	179.66	7,343.2	-9,099.9	992.7	9,153.2	0.22	-0.19	0.10	
16,745.0	90.20	179.94	7,342.9	-9,189.9	993.0	9,242.8	0.31	0.02	0.31	
16,834.0	90.36	179.85	7,342.5	-9,278.9	993.2	9,331.4	0.21	0.18	-0.10	
16,924.0	90.07	179.88	7,342.1	-9,368.9	993.4	9,421.0	0.32	-0.32	0.03	
17,013.0	90.21	180.16	7,341.9	-9,457.9	993.3	9,509.6	0.35	0.16	0.31	
17,103.0	90.55	179.62	7,341.3	-9,547.9	993.5	9,599.2	0.71	0.38	-0.60	
17,192.0	90.83	179.93	7,340.2	-9,636.9	993.9	9,687.8	0.47	0.31	0.35	
17,282.0	91.24	179.99	7,338.6	-9,726.9	993.9	9,777.4	0.46	0.46	0.07	
17,371.0	90.12	180.26	7,337.6	-9,815.9	993.7	9,866.0	1.29	-1.26	0.30	
17,461.0	90.12	180.74	7,337.4	-9,905.9	992.9	9,955.5	0.53	0.00	0.53	
17,550.0	89.96	180.06	7,337.3	-9,994.9	992.3	10,044.0	0.78	-0.18	-0.76	
17,624.0	90.20	179.90	7,337.2	-10,068.9	992.4	10,117.6	0.39	0.32	-0.22	
17,650.0	90.20	179.90	7,337.1	-10,094.9	992.4	10,143.5	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
SHL 288'FNL, 2561'FWL	0.00	0.00	1.0	0.0	0.0	1,455,180.19	3,188,161.10	40.580896	-104.822588	
- survey hits target center										
- Point										
Projected BHL 150'FSL,	0.00	0.00	7,338.0	-10,094.8	976.3	1,445,093.39	3,189,214.47	40.553187	-104.819075	
- survey misses target center by 16.1ft at 17649.9ft MD (7337.1 TVD, -10094.8 N, 992.4 E)										
- Point										

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
7,659.9	7,378.8	-123.0	1,086.0	TPZ - 460' Setback - 460'FNL, 1956'FEL, Sec.18	
7,848.0	7,422.4	-302.8	1,112.5	Deepest TVD Drilled - 7422.39' TVD	

Checked By: _____	Approved By: _____	Date: _____
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