

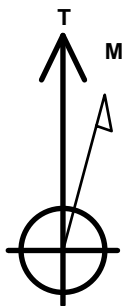
PDC Energy Inc. DJ Basin

Well Name: **Challenger 3N (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 1364549.80 3257809.41 40.330400 -104.575260
Original Well Elev WELL @ 4798.0ft (Original Well Elev)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 1358'FNL & 2431'FWL, Sec.8	1.0	0.0	0.0	Point
BHL 625'FNL & 150'FWL, Sec.7	6828.0	665.3	-7316.8	Point
LPL 641'FNL & 1900'FWL, Sec.8	6828.0	713.0	-529.7	Point
WP1 (3N)	6828.0	685.0	-6843.9	Point



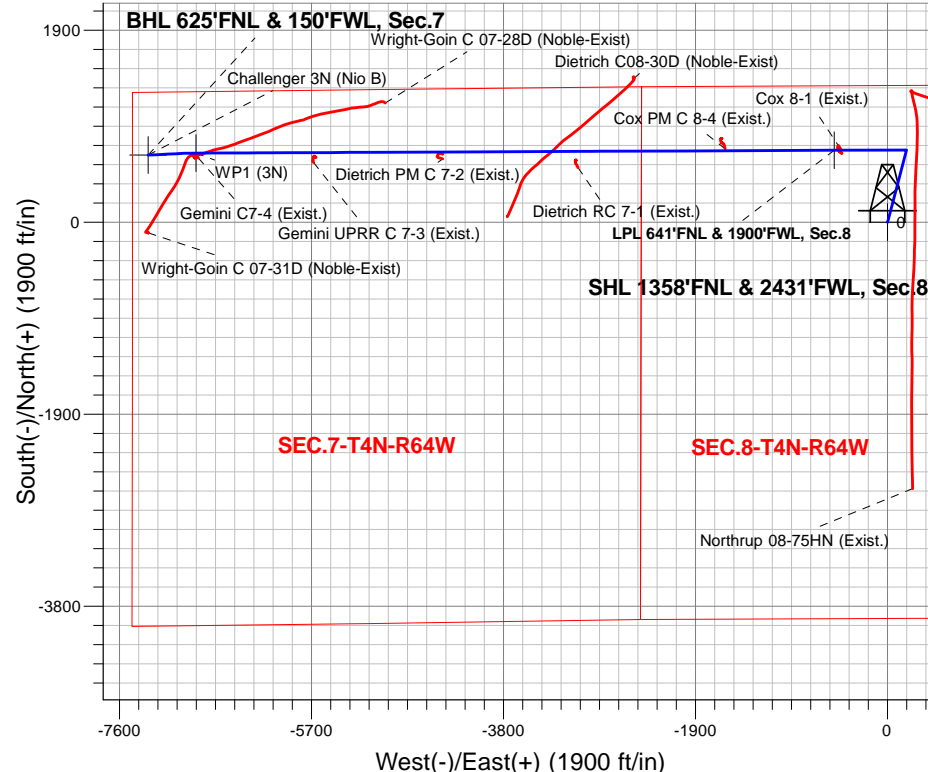
Azimuths to True North
Magnetic North: 7.81°

Magnetic Field
Strength: 52373.6snT
Dip Angle: 66.78°
Date: 6/28/2018
Model: IGRF2010

Challenger 4N64W8 Pad Sec.8-T4N-R64W
Challenger 3N (Nio B)
Plan #1 (6-27-18)
15:47 July 02 2018

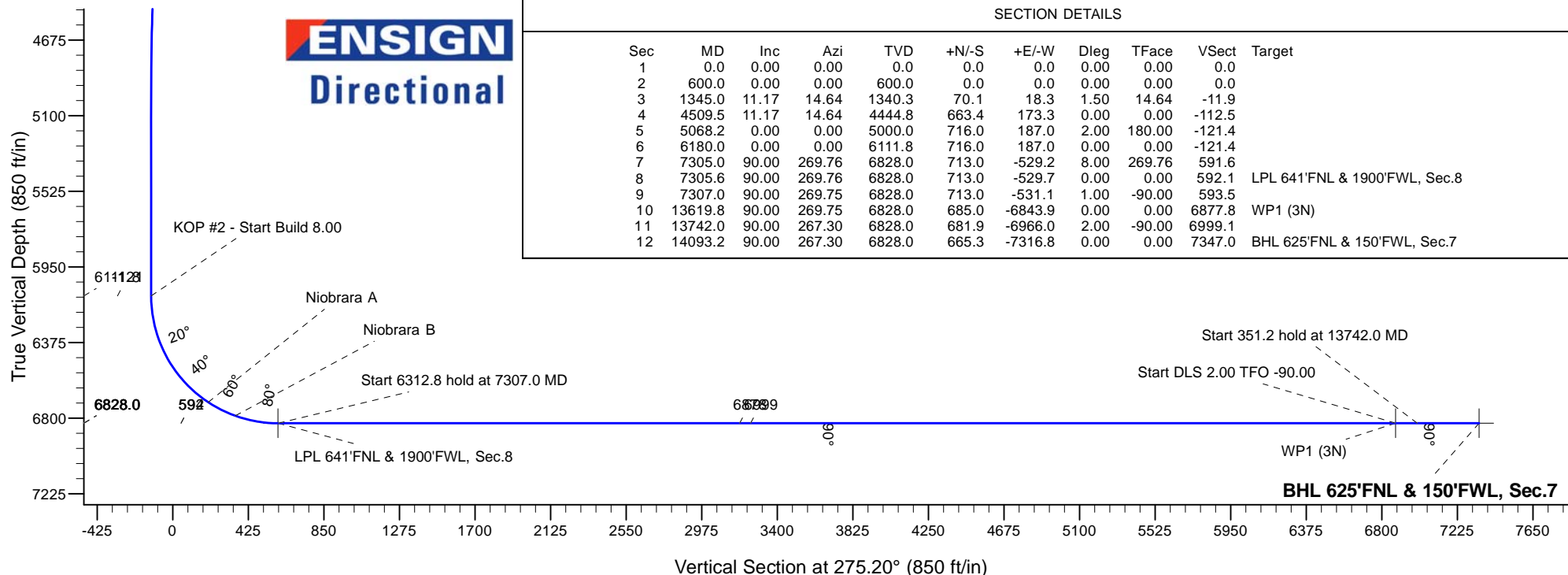
ANNOTATIONS

TVD	MD	Annotation
600.0	600.0	KOP - Start Build 1.50
4444.8	4509.5	Start Drop -2.00
6111.8	6180.0	KOP #2 - Start Build 8.00
6828.0	7305.6	Start DLS 1.00 TFO -90.00
6828.0	7307.0	Start 6312.8 hold at 7307.0 MD
6828.0	13619.8	Start DLS 2.00 TFO -90.00
6828.0	13742.0	Start 351.2 hold at 13742.0 MD
6828.0	14093.2	TD at 14093.2



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	
3	1345.0	11.17	14.64	1340.3	70.1	18.3	1.50	14.64	-11.9	
4	4509.5	11.17	14.64	4444.8	663.4	173.3	0.00	0.00	-112.5	
5	5068.2	0.00	0.00	5000.0	716.0	187.0	2.00	180.00	-121.4	
6	6180.0	0.00	0.00	6111.8	716.0	187.0	0.00	0.00	-121.4	
7	7305.0	90.00	269.76	6828.0	713.0	-529.2	8.00	269.76	591.6	
8	7305.6	90.00	269.76	6828.0	713.0	-529.7	0.00	0.00	592.1	LPL 641'FNL & 1900'FWL, Sec.8
9	7307.0	90.00	269.75	6828.0	713.0	-531.1	1.00	-90.00	593.5	
10	13619.8	90.00	269.75	6828.0	685.0	-6843.9	0.00	0.00	6877.8	WP1 (3N)
11	13742.0	90.00	267.30	6828.0	681.9	-6966.0	2.00	-90.00	6999.1	
12	14093.2	90.00	267.30	6828.0	665.3	-7316.8	0.00	0.00	7347.0	BHL 625'FNL & 150'FWL, Sec.7



PDC Energy Inc. DJ Basin

SEC.8-T4N-R64W

Challenger 4N64W8 Pad Sec.8-T4N-R64W

Challenger 3N (Nio B)

Wellbore #1

Plan #1 (6-27-18)

Anticollision Report

02 July, 2018

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Challenger 3N (Nio B)
Project:	SEC.8-T4N-R64W	TVD Reference:	WELL @ 4798.0ft (Original Well Elev)
Reference Site:	Challenger 4N64W8 Pad Sec.8-T4N-R64W	MD Reference:	WELL @ 4798.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Challenger 3N (Nio B)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (6-27-18)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (6-27-18)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0 ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.45 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	7/2/2018		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	14,092.8	Plan #1 (6-27-18) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Challenger 4N64W8 Pad Sec.8-T4N-R64W						
Challenger 1N (Nio B) - Wellbore #1 - Plan #1 (6-27-18)	200.0	199.0	29.1	28.3	35.396	CC, ES
Challenger 1N (Nio B) - Wellbore #1 - Plan #1 (6-27-18)	5,068.2	5,031.9	418.8	370.0	8.578	SF
Challenger 2N (Nio C) - Wellbore #1 - Plan #1 (6-27-18)	400.0	400.0	14.6	12.6	7.561	CC
Challenger 2N (Nio C) - Wellbore #1 - Plan #1 (6-27-18)	14,000.0	14,108.3	285.2	-198.6	0.589	Level 1, SF
Challenger 2N (Nio C) - Wellbore #1 - Plan #1 (6-27-18)	14,093.2	14,198.7	288.6	-200.5	0.590	Level 1, ES
Challenger 4N (Nio C) - Wellbore #1 - Plan #1 (6-27-18)	600.0	600.0	14.6	11.5	4.811	CC
Challenger 4N (Nio C) - Wellbore #1 - Plan #1 (6-27-18)	14,093.2	14,130.2	266.3	-222.9	0.544	Level 1, ES, SF
Challenger 5N (Nio B) - Wellbore #1 - Plan #1 (6-27-18)	600.0	601.0	29.1	26.1	9.614	CC
Challenger 5N (Nio B) - Wellbore #1 - Plan #1 (6-27-18)	14,093.2	14,048.6	487.0	-17.6	0.965	Level 1, ES, SF
Challenger 6N (Nio C) - Wellbore #1 - Plan #1 (6-28-18)	600.0	601.0	43.7	40.7	14.421	CC, ES
Challenger 6N (Nio C) - Wellbore #1 - Plan #1 (6-28-18)	900.0	900.7	55.2	50.5	11.748	SF
Challenger 7N (Nio B) - Wellbore #1 - Plan #1 (6-28-18)	600.0	601.0	61.9	58.9	20.430	CC, ES
Challenger 7N (Nio B) - Wellbore #1 - Plan #1 (6-28-18)	900.0	900.7	73.4	68.7	15.621	SF
Challenger 8N (Nio C) - Wellbore #1 - Plan #1 (6-28-18)	600.0	601.0	76.5	73.5	25.237	CC, ES
Challenger 8N (Nio C) - Wellbore #1 - Plan #1 (6-28-18)	1,000.0	1,000.0	96.9	91.6	18.443	SF
Challenger 9N (Nio B) - Wellbore #1 - Plan #1 (6-28-18)	600.0	602.0	91.1	88.0	30.016	CC, ES
Challenger 9N (Nio B) - Wellbore #1 - Plan #1 (6-28-18)	900.0	900.0	103.8	99.1	22.241	SF
Dietrich C07-18 Pad Sec.7-T4N-R64W						
Dietrich C08-30D (Noble-Exist) - Wellbore #1 - Wellbore						Out of range
Existing Wells Sec.7-T4N-R64W (GRID)						
Dietrich PM C 7-2 (Exist.) - Wellbore #1 - Wellbore #1	11,216.8	6,860.5	57.0	-114.7	0.332	Level 1, CC, ES, SF
Dietrich RC 7-1 (Exist.) - Wellbore #1 - Wellbore #1	9,847.6	6,825.4	146.9	21.1	1.168	Level 2, CC, ES, SF
Gemini C7-4 (Exist.) - Wellbore #1 - Wellbore #1	13,619.8	6,856.8	30.5	-221.8	0.121	Level 1, CC, ES, SF
Gemini UPRR C 7-3 (Exist.) - Wellbore #1 - Wellbore #1	12,464.6	6,881.6	83.1	-130.3	0.389	Level 1, CC, ES, SF
Existing Wells Sec.8-T4N-R64W (GRID)						
Cox 8-1 (Exist.) - Wellbore #1 - Wellbore #1	7,251.1	6,799.2	30.3	-11.5	0.724	Level 1, CC, ES, SF
Cox PM C 8-4 (Exist.) - Wellbore #1 - Wellbore #1	8,388.6	6,819.3	43.1	-32.7	0.569	Level 1, CC, ES, SF
Northrup 08-75HN (Exist.) - Wellbore #1 - Wellbore #1	6,650.0	7,304.8	433.0	396.1	11.723	SF
Northrup 08-75HN (Exist.) - Wellbore #1 - Wellbore #1	6,729.6	7,312.6	421.3	386.8	12.198	CC, ES
Wright-Goin Pad Sec.7-T4N-R64W						
Wright-Goin C 07-28D (Noble-Exist) - Wright-Goin C 7-28	11,765.4	7,223.0	499.9	278.7	2.260	CC, ES, SF
Wright-Goin C 07-31D (Noble-Exist) - Wright goin C7-31D						Out of range