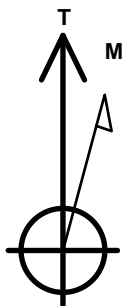


PDC Energy Inc. DJ Basin

Well Name: **Challenger 5N (Nio B)**
 Surface Location: Challenger 4N64W8 Pad Sec.8-T4N-R64W
 North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
 Ground Elevation: 4776.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1364520.66 3257809.71 40.330320 -104.575260
 Original Well Elev WELL @ 4799.0ft (Original Well Elev)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 1388'FNL & 2431'FWL, Sec.8	1.0	0.0	0.0	Point
BHL 1112'FNL & 150'FWL, Sec.7	6839.0	207.5	-7316.9	Point
LPL 1112'FNL & 1900'FWL, Sec.8	6839.0	273.2	-532.5	Point



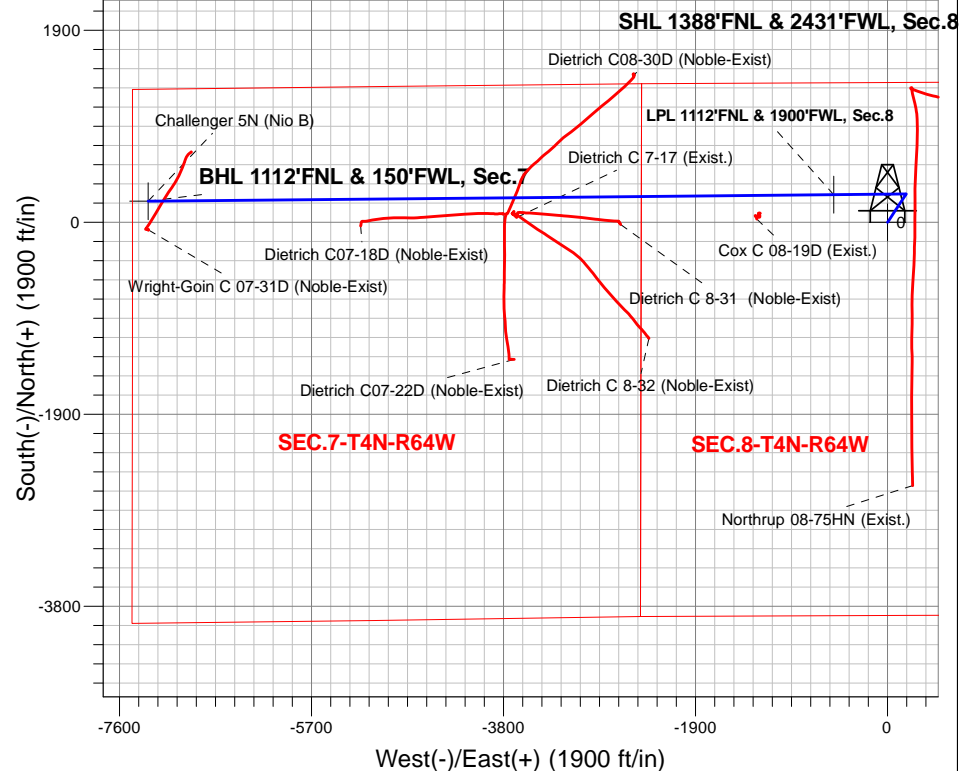
Azimuths to True North
 Magnetic North: 7.81°

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

Challenger 4N64W8 Pad Sec.8-T4N-R64W
 Challenger 5N (Nio B)
 Plan #1 (6-27-18)
 15:00, June 29 2018

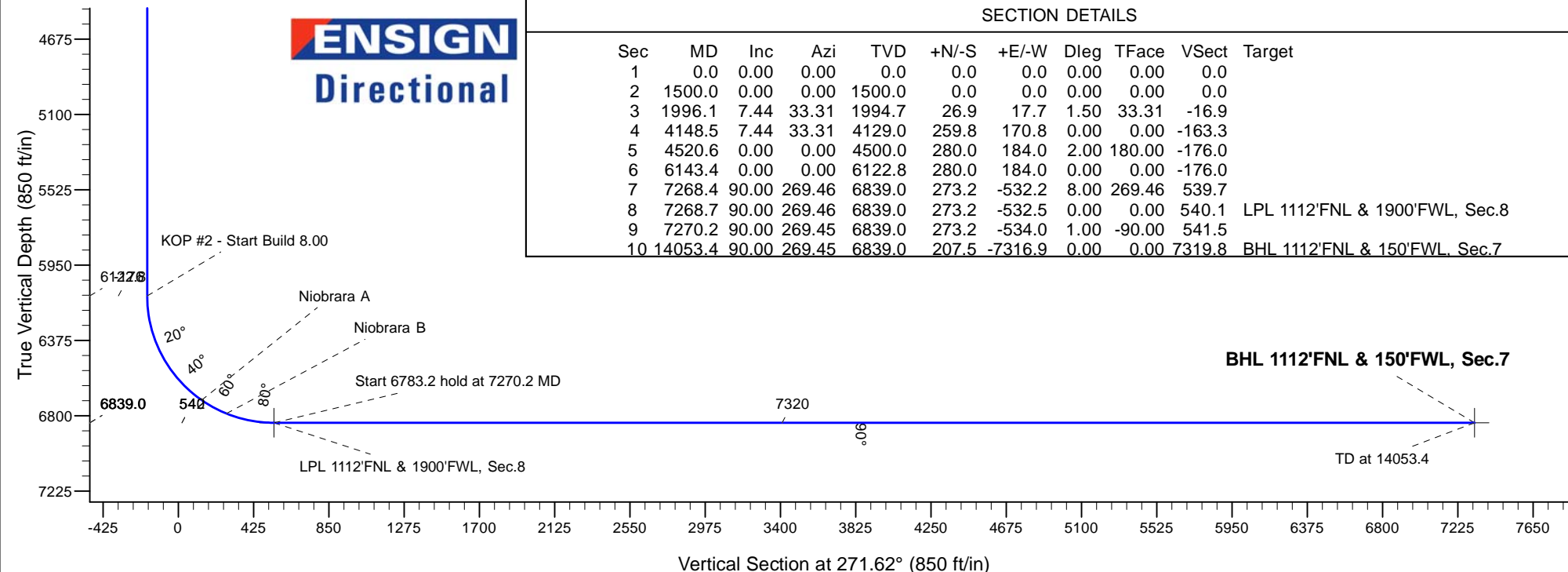
ANNOTATIONS

TVD	MD	Annotation
1500.0	1500.0	KOP - Start Build 1.50
4129.0	4148.5	Start Drop -2.00
6122.8	6143.4	KOP #2 - Start Build 8.00
6839.0	7268.7	Start DLS 1.00 TFO -90.00
6839.0	7270.2	Start 6783.2 hold at 7270.2 MD
6839.0	14053.4	TD at 14053.4



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	1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0	
3	1996.1	7.44	33.31	1994.7	26.9	17.7	1.50	33.31	-16.9	
4	4148.5	7.44	33.31	4129.0	259.8	170.8	0.00	0.00	-163.3	
5	4520.6	0.00	0.00	4500.0	280.0	184.0	2.00	180.00	-176.0	
6	6143.4	0.00	0.00	6122.8	280.0	184.0	0.00	0.00	-176.0	
7	7268.4	90.00	269.46	6839.0	273.2	-532.2	8.00	269.46	539.7	
8	7268.7	90.00	269.46	6839.0	273.2	-532.5	0.00	0.00	540.1	LPL 1112'FNL & 1900'FWL, Sec.8
9	7270.2	90.00	269.45	6839.0	273.2	-534.0	1.00	-90.00	541.5	
10	14053.4	90.00	269.45	6839.0	207.5	-7316.9	0.00	0.00	7319.8	BHL 1112'FNL & 150'FWL, Sec.7



PDC Energy Inc. DJ Basin

SEC.8-T4N-R64W

Challenger 4N64W8 Pad Sec.8-T4N-R64W

Challenger 5N (Nio B)

Wellbore #1

Plan #1 (6-27-18)

Anticollision Report

29 June, 2018

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Challenger 5N (Nio B)
Project:	SEC.8-T4N-R64W	TVD Reference:	WELL @ 4799.0ft (Original Well Elev)
Reference Site:	Challenger 4N64W8 Pad Sec.8-T4N-R64W	MD Reference:	WELL @ 4799.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Challenger 5N (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	6/29/2018		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	14,053.4	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	198.0	58.3	57.5	71.035	CC, ES
Challenger 1N (Nio B) - Wellbore #1 - Plan #1 (6-27-18)	800.0	784.5	103.8	99.6	24.635	SF
Challenger 2N (Nio C) - Wellbore #1 - Plan #1 (6-27-18)	400.0	399.0	43.7	41.8	22.715	CC, ES
Challenger 2N (Nio C) - Wellbore #1 - Plan #1 (6-27-18)	700.0	695.1	55.1	51.5	15.405	SF
Challenger 3N (Nio B) - Wellbore #1 - Plan #1 (6-27-18)	600.0	599.0	29.1	26.1	9.631	CC
Challenger 3N (Nio B) - Wellbore #1 - Plan #1 (6-27-18)	14,053.4	14,096.8	487.0	-19.7	0.961	Level 1, ES, SF
Challenger 4N (Nio C) - Wellbore #1 - Plan #1 (6-27-18)	1,000.0	999.0	14.6	9.3	2.787	CC
Challenger 4N (Nio C) - Wellbore #1 - Plan #1 (6-27-18)	14,053.4	14,132.7	237.7	-253.1	0.484	Level 1, ES, SF
Challenger 6N (Nio C) - Wellbore #1 - Plan #1 (6-28-18)	1,500.0	1,500.0	14.6	6.6	1.825	CC
Challenger 6N (Nio C) - Wellbore #1 - Plan #1 (6-28-18)	14,053.4	14,100.7	254.9	-239.1	0.516	Level 1, ES, SF
Challenger 7N (Nio B) - Wellbore #1 - Plan #1 (6-28-18)	1,300.0	1,300.0	32.8	25.9	4.763	CC, ES
Challenger 7N (Nio B) - Wellbore #1 - Plan #1 (6-28-18)	1,400.0	1,399.3	33.8	26.4	4.560	SF
Challenger 8N (Nio C) - Wellbore #1 - Plan #1 (6-28-18)	1,000.0	1,000.0	47.4	42.1	9.053	CC, ES
Challenger 8N (Nio C) - Wellbore #1 - Plan #1 (6-28-18)	1,200.0	1,197.6	52.1	45.9	8.354	SF
Challenger 9N (Nio B) - Wellbore #1 - Plan #1 (6-28-18)	766.3	767.3	61.9	58.0	15.689	CC
Challenger 9N (Nio B) - Wellbore #1 - Plan #1 (6-28-18)	800.0	801.0	61.9	57.8	14.987	ES
Challenger 9N (Nio B) - Wellbore #1 - Plan #1 (6-28-18)	1,100.0	1,095.8	73.2	67.6	12.985	SF
Dietrich C Pad Sec.7-T4N-R64W						
Dietrich C 8-31 (Noble-Exist) - Dietrich C 8-31 - Dietrich	9,387.5	6,991.1	262.0	139.4	2.138	CC
Dietrich C 8-31 (Noble-Exist) - Dietrich C 8-31 - Dietrich	9,400.0	6,991.0	262.3	139.3	2.133	ES, SF
Dietrich C 8-32 (Noble-Exist) - Dietrich C 8-32 - Dietrich C						Out of range
Dietrich C07-18 Pad Sec.7-T4N-R64W						
Dietrich C07-18D (Noble-Exist) - Wellbore #1 - Wellbore	11,949.0	7,085.6	238.2	20.3	1.093	Level 2, CC, ES, SF
Dietrich C07-22D (Noble-Exist) - Wellbore #1 - Wellbore						Out of range
Dietrich C08-30D (Noble-Exist) - Wellbore #1 - Wellbore						Out of range
Existing Wells Sec.7-T4N-R64W (GRID)						
Dietrich C 7-17 (Exist.) - Wellbore #1 - Wellbore #1	10,425.2	6,847.2	179.7	35.7	1.248	Level 2, CC, ES, SF
Existing Wells Sec.8-T4N-R64W (GRID)						
Cox C 08-19D (Exist.) - Wellbore #1 - Wellbore #1	8,039.2	6,823.3	209.8	145.5	3.265	CC, ES, SF
Northrup 08-75HN (Exist.) - Wellbore #1 - Wellbore #1	6,600.0	7,790.6	419.5	380.1	10.666	SF
Northrup 08-75HN (Exist.) - Wellbore #1 - Wellbore #1	6,693.6	7,790.9	402.8	366.4	11.060	CC, ES
Wright-Goin Pad Sec.7-T4N-R64W						
Wright-Goin C 07-31D (Noble-Exist) - Wright goin C7-31D	14,053.4	6,993.9	282.0	8.3	1.030	Level 2, CC, ES, SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation