

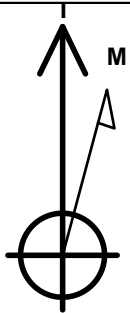
# PETROLEUM DEVELOPMENT CORP DJ Basin

Well Name: **Paul 27X-404**

Surface Location: Paul 5N67W27D Pad Sec.27-T5N-R67W  
 North American Datum 1983 , US State Plane 1983, Colorado Northern Zone  
 Ground Elevation: 4928.0  
 +N/-S+E/-W Northing Easting Longitude Slot  
 0.0 0.0 1377005.623174523.91 40.366590 -104.873670  
 RKB - 23' WELL @ 4951.0ft (RKB - 23')

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 1155'FSL & 1084'FEL	1.0	0.0	0.0	Point
BHL 1165'FSL & 75'FWL	7107.0	7.6	-3965.3	Point
LP - 1163'FSL & 829'FEL	7189.5	7.6	255.1	Point



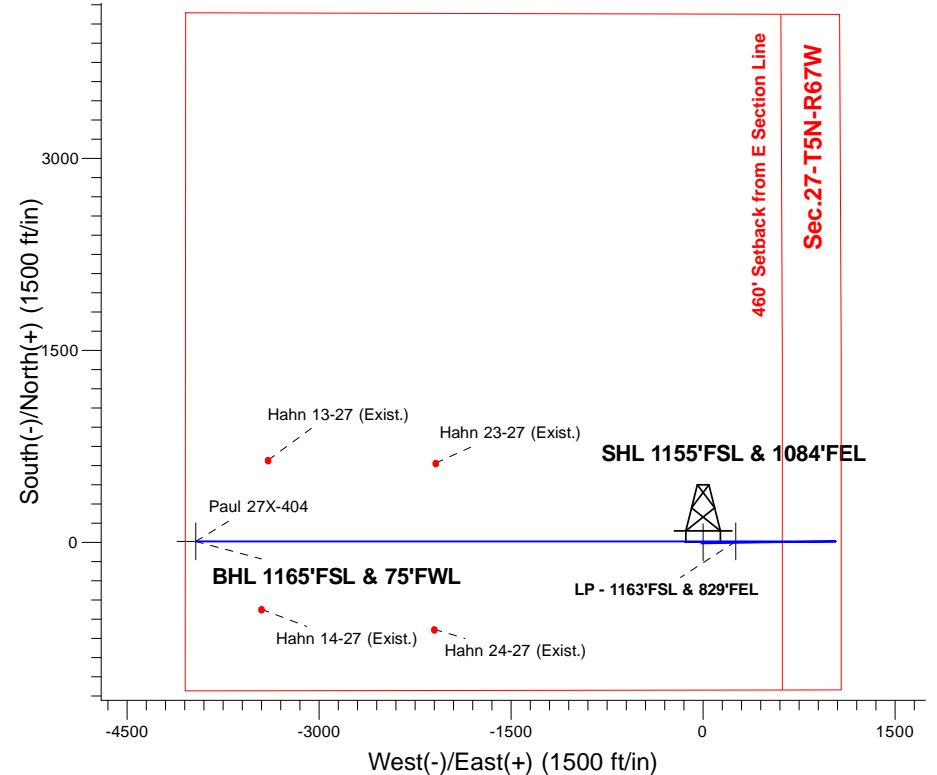
Azimuths to True North  
 Magnetic North: 8.25°

Magnetic Field  
 Strength: 52581.3nT  
 Dip Angle: 66.83°  
 Date: 5/24/2016  
 Model: IGRF2010

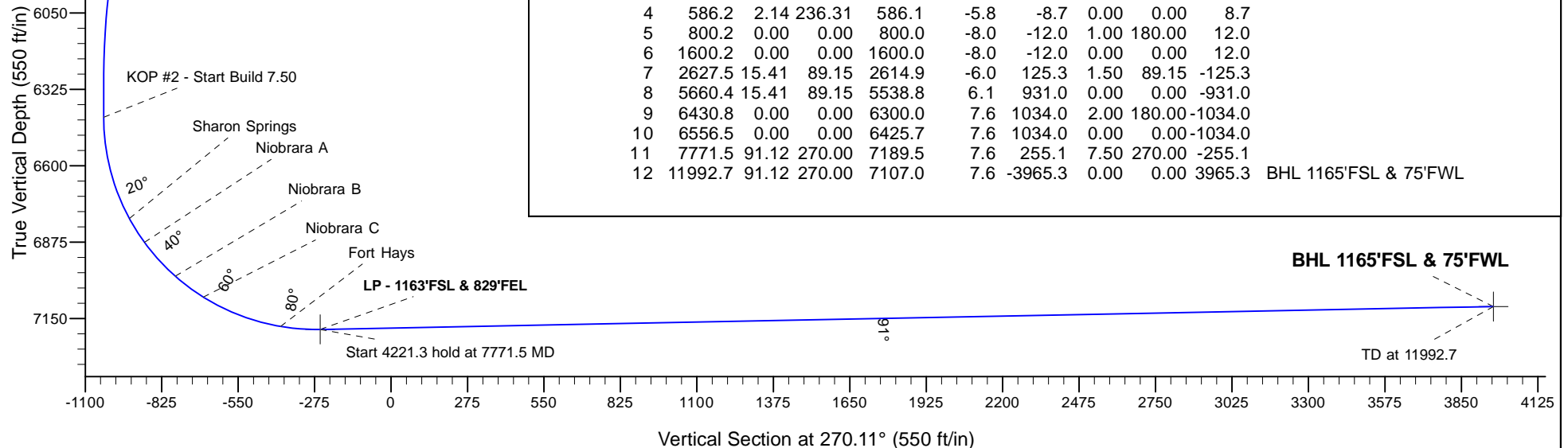
Paul 5N67W27D Pad Sec.27-T5N-R67W  
 Paul 27X-404  
 Plan #1 (5-24-16)  
 10:18, May 26 2016

## ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	KOP Nudge - Start Build 1.00
1600.0	1600.2	KOP - Start Build 1.50
5538.8	5660.4	Start Drop -2.00
6425.7	6556.5	KOP #2 - Start Build 7.50
7189.5	7771.5	Start 4221.3 hold at 7771.5 MD
7107.0	11992.7	TD at 11992.7



## ENSIGN Directional



## 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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	414.0	2.14	236.31	413.9	-2.2	-3.3	1.00	236.31	3.3	
4	586.2	2.14	236.31	586.1	-5.8	-8.7	0.00	0.00	8.7	
5	800.2	0.00	0.00	800.0	-8.0	-12.0	1.00	180.00	12.0	
6	1600.2	0.00	0.00	1600.0	-8.0	-12.0	0.00	0.00	12.0	
7	2627.5	15.41	89.15	2614.9	-6.0	125.3	1.50	89.15	-125.3	
8	5660.4	15.41	89.15	5538.8	6.1	931.0	0.00	0.00	-931.0	
9	6430.8	0.00	0.00	6300.0	7.6	1034.0	2.00	180.00	-1034.0	
10	6556.5	0.00	0.00	6425.7	7.6	1034.0	0.00	0.00	-1034.0	
11	7771.5	91.12	270.00	7189.5	7.6	255.1	7.50	270.00	-255.1	
12	11992.7	91.12	270.00	7107.0	7.6	-3965.3	0.00	0.00	3965.3	BHL 1165'FSL & 75'FWL



# **PETROLEUM DEVELOPMENT CORP DJ Basin**

**SEC.27-T5N-R67W**

**Paul 5N67W27D Pad Sec.27-T5N-R67W**

**Paul 27X-404**

**Wellbore #1**

**Plan: Plan #1 (5-24-16)**

## **Standard Planning Report**

**26 May, 2016**

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Paul 27X-404
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>TVD Reference:</b>	WELL @ 4951.0ft (RKB - 23')
<b>Project:</b>	SEC.27-T5N-R67W	<b>MD Reference:</b>	WELL @ 4951.0ft (RKB - 23')
<b>Site:</b>	Paul 5N67W27D Pad Sec.27-T5N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Paul 27X-404	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (5-24-16)		

<b>Project</b>	SEC.27-T5N-R67W, Weld County, CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

<b>Site</b>	Paul 5N67W27D Pad Sec.27-T5N-R67W		
<b>Site Position:</b>		<b>Northing:</b>	1,377,056.10 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,174,448.32 usft
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	40.366730
		<b>Longitude:</b>	-104.873940
		<b>Grid Convergence:</b>	0.40 °

<b>Well</b>	Paul 27X-404		
<b>Well Position</b>	<b>+N/-S</b>	-51.0 ft	<b>Northing:</b>
	<b>+E/-W</b>	75.2 ft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b>	0.0 ft
		<b>Latitude:</b>	40.366590
		<b>Longitude:</b>	-104.873670
		<b>Ground Level:</b>	4,928.0 ft

<b>Wellbore</b>	Wellbore #1		
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>
	IGRF2010	5/24/2016	8.25
			<b>Dip Angle (°)</b>
			66.83
			<b>Field Strength (nT)</b>
			52,581

<b>Design</b>	Plan #1 (5-24-16)		
<b>Audit Notes:</b>			
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>
			0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>
	(ft)	(ft)	(ft)
	0.0	0.0	0.0
			<b>Direction (°)</b>
			270.11

<b>Plan Sections</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
414.0	2.14	236.31	413.9	-2.2	-3.3	1.00	1.00	0.00	236.31	
586.2	2.14	236.31	586.1	-5.8	-8.7	0.00	0.00	0.00	0.00	
800.2	0.00	0.00	800.0	-8.0	-12.0	1.00	-1.00	0.00	180.00	
1,600.2	0.00	0.00	1,600.0	-8.0	-12.0	0.00	0.00	0.00	0.00	
2,627.5	15.41	89.15	2,614.9	-6.0	125.3	1.50	1.50	0.00	89.15	
5,660.4	15.41	89.15	5,538.8	6.1	931.0	0.00	0.00	0.00	0.00	
6,430.8	0.00	0.00	6,300.0	7.6	1,034.0	2.00	-2.00	0.00	180.00	
6,556.5	0.00	0.00	6,425.7	7.6	1,034.0	0.00	0.00	0.00	0.00	
7,771.5	91.12	270.00	7,189.5	7.6	255.1	7.50	7.50	0.00	270.00	
11,992.7	91.12	270.00	7,107.0	7.6	-3,965.3	0.00	0.00	0.00	0.00	BHL 1165'FSL & 75'F