

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_PCHR PAD**

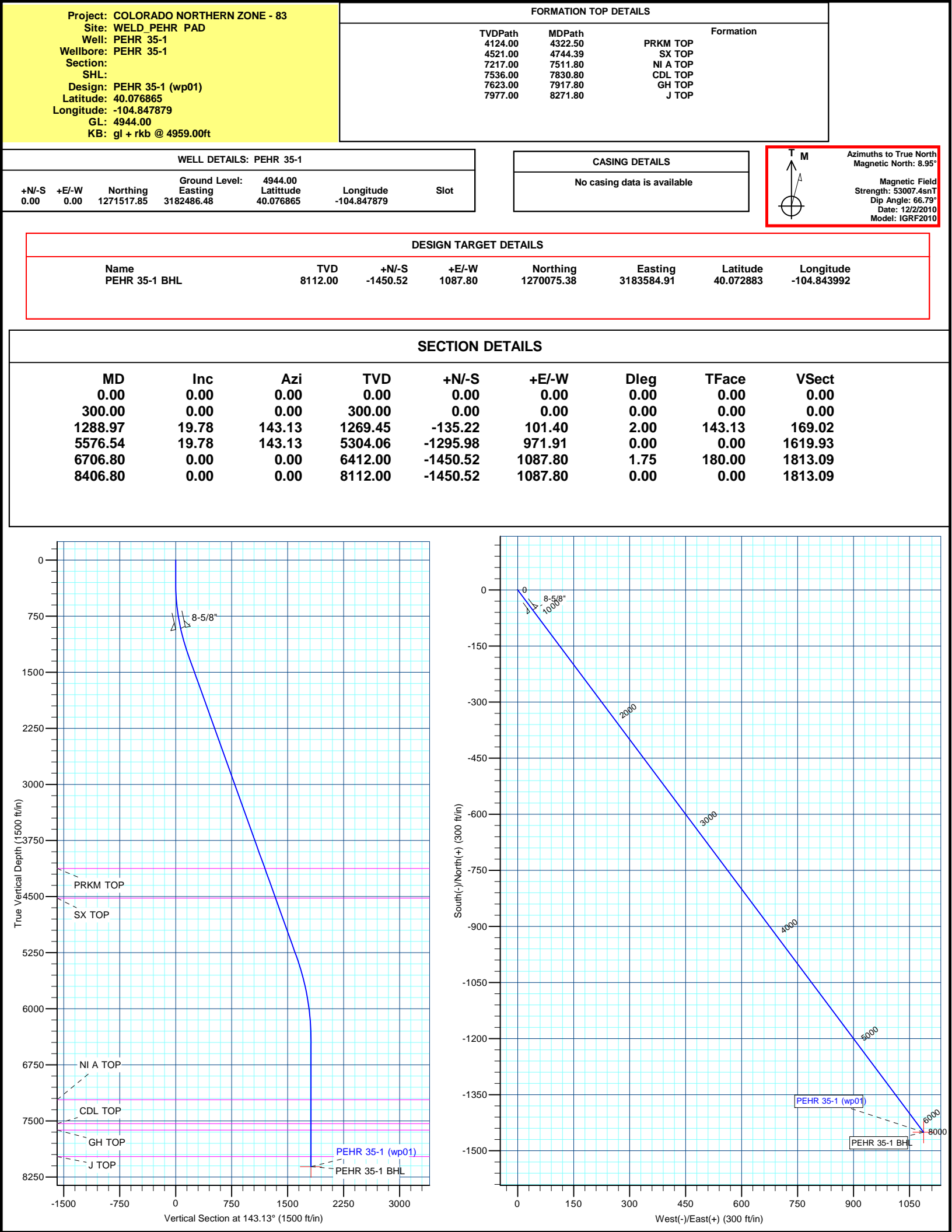
**PEHR 35-1**

**PEHR 35-1**

**Plan: PEHR 35-1 (wp01)**

## **Standard Planning Report**

**09 November, 2011**



# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well PEHR 35-1
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	gl + rkb @ 4959.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	gl + rkb @ 4959.00ft
<b>Site:</b>	WELD_PEHR PAD	<b>North Reference:</b>	True
<b>Well:</b>	PEHR 35-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	PEHR 35-1		
<b>Design:</b>	PEHR 35-1 (wp01)		

<b>Project</b>	COLORADO NORTHERN ZONE - 83		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

<b>Site</b>	WELD_PEHR PAD			
<b>Site Position:</b>		<b>Northing:</b>	1,271,518.67 usft	<b>Latitude:</b> 40.076867
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,182,496.55 usft	<b>Longitude:</b> -104.847843
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	0 "	<b>Grid Convergence:</b> 0.42 °

<b>Well</b>	PEHR 35-1			
<b>Well Position</b>	<b>+N/-S</b>	-0.74 ft	<b>Northing:</b>	1,271,517.85 usft
	<b>+E/-W</b>	-10.07 ft	<b>Easting:</b>	3,182,486.48 usft
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b> 4,944.00 ft

<b>Wellbore</b>	PEHR 35-1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	12/2/2010	8.95	66.79	53,007

<b>Design</b>	PEHR 35-1 (wp01)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	143.13

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,288.97	19.78	143.13	1,269.45	-135.22	101.40	2.00	2.00	0.00	143.13	
5,576.54	19.78	143.13	5,304.06	-1,295.98	971.91	0.00	0.00	0.00	0.00	
6,706.80	0.00	0.00	6,412.00	-1,450.52	1,087.80	1.75	-1.75	0.00	180.00	
8,406.80	0.00	0.00	8,112.00	-1,450.52	1,087.80	0.00	0.00	0.00	0.00	PEHR 35-1 BHL

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<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	gl + rkb @ 4959.00ft
<b>Site:</b>	WELD_PEHR PAD	<b>North Reference:</b>	True
<b>Well:</b>	PEHR 35-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	PEHR 35-1		
<b>Design:</b>	PEHR 35-1 (wp01)		

Planned 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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	2.00	143.13	399.98	-1.40	1.05	1.75	2.00	2.00	0.00
500.00	4.00	143.13	499.84	-5.58	4.19	6.98	2.00	2.00	0.00
600.00	6.00	143.13	599.45	-12.56	9.42	15.69	2.00	2.00	0.00
700.00	8.00	143.13	698.70	-22.30	16.73	27.88	2.00	2.00	0.00
800.00	10.00	143.13	797.47	-34.82	26.11	43.52	2.00	2.00	0.00
900.00	12.00	143.13	895.62	-50.08	37.56	62.60	2.00	2.00	0.00
919.82	12.40	143.13	915.00	-53.43	40.07	66.79	2.00	2.00	0.00
8-5/8"									
1,000.00	14.00	143.13	993.06	-68.08	51.06	85.10	2.00	2.00	0.00
1,100.00	16.00	143.13	1,089.64	-88.78	66.58	110.98	2.00	2.00	0.00
1,200.00	18.00	143.13	1,185.27	-112.17	84.12	140.21	2.00	2.00	0.00
1,288.97	19.78	143.13	1,269.45	-135.22	101.40	169.02	2.00	2.00	0.00
1,300.00	19.78	143.13	1,279.82	-138.20	103.64	172.75	0.00	0.00	0.00
1,400.00	19.78	143.13	1,373.92	-165.28	123.95	206.59	0.00	0.00	0.00
1,500.00	19.78	143.13	1,468.02	-192.35	144.25	240.43	0.00	0.00	0.00
1,600.00	19.78	143.13	1,562.12	-219.42	164.55	274.27	0.00	0.00	0.00
1,700.00	19.78	143.13	1,656.22	-246.49	184.85	308.11	0.00	0.00	0.00
1,800.00	19.78	143.13	1,750.32	-273.57	205.16	341.95	0.00	0.00	0.00
1,900.00	19.78	143.13	1,844.42	-300.64	225.46	375.79	0.00	0.00	0.00
2,000.00	19.78	143.13	1,938.52	-327.71	245.76	409.63	0.00	0.00	0.00
2,100.00	19.78	143.13	2,032.62	-354.78	266.07	443.47	0.00	0.00	0.00
2,200.00	19.78	143.13	2,126.73	-381.86	286.37	477.31	0.00	0.00	0.00
2,300.00	19.78	143.13	2,220.83	-408.93	306.67	511.15	0.00	0.00	0.00
2,400.00	19.78	143.13	2,314.93	-436.00	326.97	544.99	0.00	0.00	0.00
2,500.00	19.78	143.13	2,409.03	-463.08	347.28	578.83	0.00	0.00	0.00
2,600.00	19.78	143.13	2,503.13	-490.15	367.58	612.67	0.00	0.00	0.00
2,700.00	19.78	143.13	2,597.23	-517.22	387.88	646.51	0.00	0.00	0.00
2,800.00	19.78	143.13	2,691.33	-544.29	408.19	680.35	0.00	0.00	0.00
2,900.00	19.78	143.13	2,785.43	-571.37	428.49	714.19	0.00	0.00	0.00
3,000.00	19.78	143.13	2,879.53	-598.44	448.79	748.03	0.00	0.00	0.00
3,100.00	19.78	143.13	2,973.63	-625.51	469.09	781.87	0.00	0.00	0.00
3,200.00	19.78	143.13	3,067.73	-652.59	489.40	815.71	0.00	0.00	0.00
3,300.00	19.78	143.13	3,161.83	-679.66	509.70	849.55	0.00	0.00	0.00
3,400.00	19.78	143.13	3,255.93	-706.73	530.00	883.39	0.00	0.00	0.00
3,500.00	19.78	143.13	3,350.03	-733.80	550.31	917.23	0.00	0.00	0.00
3,600.00	19.78	143.13	3,444.13	-760.88	570.61	951.07	0.00	0.00	0.00
3,700.00	19.78	143.13	3,538.23	-787.95	590.91	984.91	0.00	0.00	0.00
3,800.00	19.78	143.13	3,632.33	-815.02	611.22	1,018.75	0.00	0.00	0.00
3,900.00	19.78	143.13	3,726.43	-842.10	631.52	1,052.59	0.00	0.00	0.00
4,000.00	19.78	143.13	3,820.53	-869.17	651.82	1,086.43	0.00	0.00	0.00
4,100.00	19.78	143.13	3,914.63	-896.24	672.12	1,120.27	0.00	0.00	0.00
4,200.00	19.78	143.13	4,008.73	-923.31	692.43	1,154.11	0.00	0.00	0.00
4,300.00	19.78	143.13	4,102.83	-950.39	712.73	1,187.95	0.00	0.00	0.00
4,322.50	19.78	143.13	4,124.00	-956.48	717.30	1,195.56	0.00	0.00	0.00
PRKM TOP									
4,400.00	19.78	143.13	4,196.93	-977.46	733.03	1,221.79	0.00	0.00	0.00
4,500.00	19.78	143.13	4,291.03	-1,004.53	753.34	1,255.63	0.00	0.00	0.00
4,600.00	19.78	143.13	4,385.13	-1,031.61	773.64	1,289.47	0.00	0.00	0.00
4,700.00	19.78	143.13	4,479.23	-1,058.68	793.94	1,323.31	0.00	0.00	0.00
4,744.39	19.78	143.13	4,521.00	-1,070.69	802.95	1,338.33	0.00	0.00	0.00

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<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	gl + rkb @ 4959.00ft
<b>Site:</b>	WELD_PEHR PAD	<b>North Reference:</b>	True
<b>Well:</b>	PEHR 35-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	PEHR 35-1		
<b>Design:</b>	PEHR 35-1 (wp01)		

Planned 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)
<b>SX TOP</b>									
4,800.00	19.78	143.13	4,573.33	-1,085.75	814.24	1,357.15	0.00	0.00	0.00
4,900.00	19.78	143.13	4,667.43	-1,112.82	834.55	1,390.99	0.00	0.00	0.00
5,000.00	19.78	143.13	4,761.53	-1,139.90	854.85	1,424.83	0.00	0.00	0.00
5,100.00	19.78	143.13	4,855.63	-1,166.97	875.15	1,458.67	0.00	0.00	0.00
5,200.00	19.78	143.13	4,949.73	-1,194.04	895.46	1,492.51	0.00	0.00	0.00
5,300.00	19.78	143.13	5,043.83	-1,221.11	915.76	1,526.35	0.00	0.00	0.00
5,400.00	19.78	143.13	5,137.93	-1,248.19	936.06	1,560.19	0.00	0.00	0.00
5,500.00	19.78	143.13	5,232.03	-1,275.26	956.36	1,594.03	0.00	0.00	0.00
5,576.54	19.78	143.13	5,304.06	-1,295.98	971.91	1,619.93	0.00	0.00	0.00
5,600.00	19.37	143.13	5,326.16	-1,302.27	976.62	1,627.79	1.75	-1.75	0.00
5,700.00	17.62	143.13	5,420.99	-1,327.65	995.65	1,659.51	1.75	-1.75	0.00
5,800.00	15.87	143.13	5,516.75	-1,350.69	1,012.93	1,688.32	1.75	-1.75	0.00
5,900.00	14.12	143.13	5,613.34	-1,371.39	1,028.46	1,714.19	1.75	-1.75	0.00
6,000.00	12.37	143.13	5,710.68	-1,389.72	1,042.20	1,737.09	1.75	-1.75	0.00
6,100.00	10.62	143.13	5,808.67	-1,405.66	1,054.16	1,757.02	1.75	-1.75	0.00
6,200.00	8.87	143.13	5,907.22	-1,419.20	1,064.31	1,773.94	1.75	-1.75	0.00
6,300.00	7.12	143.13	6,006.25	-1,430.32	1,072.65	1,787.85	1.75	-1.75	0.00
6,400.00	5.37	143.13	6,105.65	-1,439.03	1,079.18	1,798.73	1.75	-1.75	0.00
6,500.00	3.62	143.13	6,205.34	-1,445.29	1,083.88	1,806.56	1.75	-1.75	0.00
6,600.00	1.87	143.13	6,305.22	-1,449.12	1,086.75	1,811.35	1.75	-1.75	0.00
6,700.00	0.12	143.13	6,405.20	-1,450.51	1,087.79	1,813.08	1.75	-1.75	0.00
6,706.80	0.00	0.00	6,412.00	-1,450.52	1,087.80	1,813.09	1.75	-1.75	0.00
6,800.00	0.00	0.00	6,505.20	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
6,900.00	0.00	0.00	6,605.20	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
7,000.00	0.00	0.00	6,705.20	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
7,100.00	0.00	0.00	6,805.20	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
7,200.00	0.00	0.00	6,905.20	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
7,300.00	0.00	0.00	7,005.20	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
7,400.00	0.00	0.00	7,105.20	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
7,500.00	0.00	0.00	7,205.20	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
7,511.80	0.00	0.00	7,217.00	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
<b>NI A TOP</b>									
7,600.00	0.00	0.00	7,305.20	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
7,700.00	0.00	0.00	7,405.20	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
7,800.00	0.00	0.00	7,505.20	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
7,830.80	0.00	0.00	7,536.00	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
<b>CDL TOP</b>									
7,900.00	0.00	0.00	7,605.20	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
7,917.80	0.00	0.00	7,623.00	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
<b>GH TOP</b>									
8,000.00	0.00	0.00	7,705.20	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
8,100.00	0.00	0.00	7,805.20	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
8,200.00	0.00	0.00	7,905.20	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
8,271.80	0.00	0.00	7,977.00	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
<b>J TOP</b>									
8,300.00	0.00	0.00	8,005.20	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
8,400.00	0.00	0.00	8,105.20	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
8,406.80	0.00	0.00	8,112.00	-1,450.52	1,087.80	1,813.09	0.00	0.00	0.00
<b>PEHR 35-1 BHL</b>									

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<b>Site:</b>	WELD_PEHR PAD	<b>North Reference:</b>	True
<b>Well:</b>	PEHR 35-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	PEHR 35-1		
<b>Design:</b>	PEHR 35-1 (wp01)		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
PEHR 35-1 BHL	0.00	0.00	8,112.00	-1,450.52	1,087.80	1,270,075.38	3,183,584.91	40.072883	-104.843992
- plan hits target center									
- Point									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(ft)	(ft)			(")	(")
919.82	915.00	8-5/8"		8-5/8	11

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
4,322.50	4,124.00	PRKM TOP				
4,744.39	4,521.00	SX TOP				
7,511.80	7,217.00	NI A TOP				
7,830.80	7,536.00	CDL TOP				
7,917.80	7,623.00	GH TOP				
8,271.80	7,977.00	J TOP				