

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_REI 8-5 PAD

REI 26-5

REI 26-5

Plan: REI 26-5 (wp01)

Standard Planning Report

17 December, 2010



Project: COLORADO NORTHERN ZONE - 83
Site: WELD_REI 8-5 PAD
Well: REI 26-5
Wellbore: REI 26-5
Section:
SHL:
Design: REI 26-5 (wp01)
Latitude: 40.256264
Longitude: -104.679827
GL: 4853.00
KB: WELL @ 4853.00ft (Original Well Elev)



Azimuths to True North
Magnetic North: 8.87°

Magnetic Field
Strength: 53117.1nT
Dip Angle: 66.97°
Date: 12/17/2010
Model: IGRF2010



Weatherford

FORMATION TOP DETAILS

TVDPPath	MDPath	Formation	
4153.00	4452.14	PK	0.00
4403.00	4726.73	SX	0.00
6925.00	7317.39	NIO	0.00
7218.00	7610.39	CD	0.00
7285.00	7677.39	GH	0.00
7663.00	8055.39	J	0.00

WELL DETAILS: REI 26-5

+N/-S	+E/-W	Northing	Ground Level: Easting	4853.00 Latitude	Longitude	Slot
0.00	0.00	1337257.19	3228907.72	40.256264	-104.679827	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

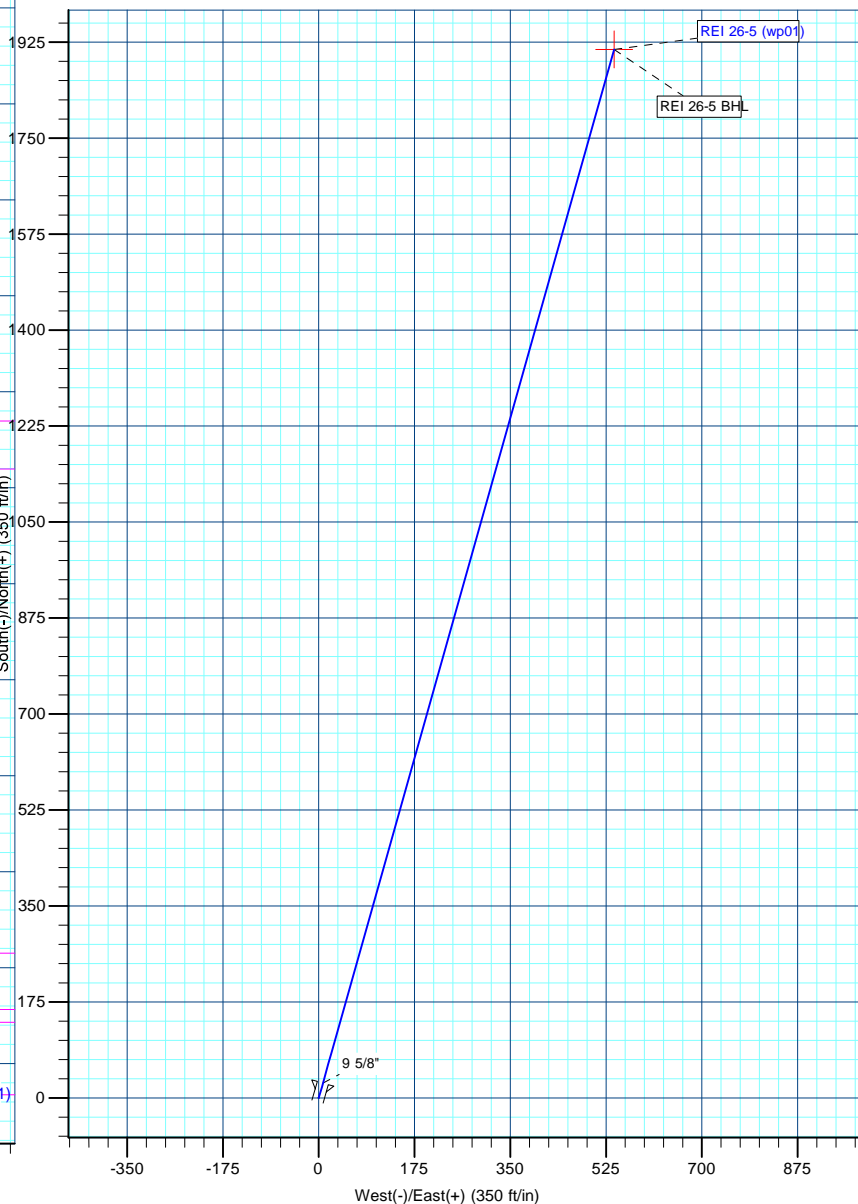
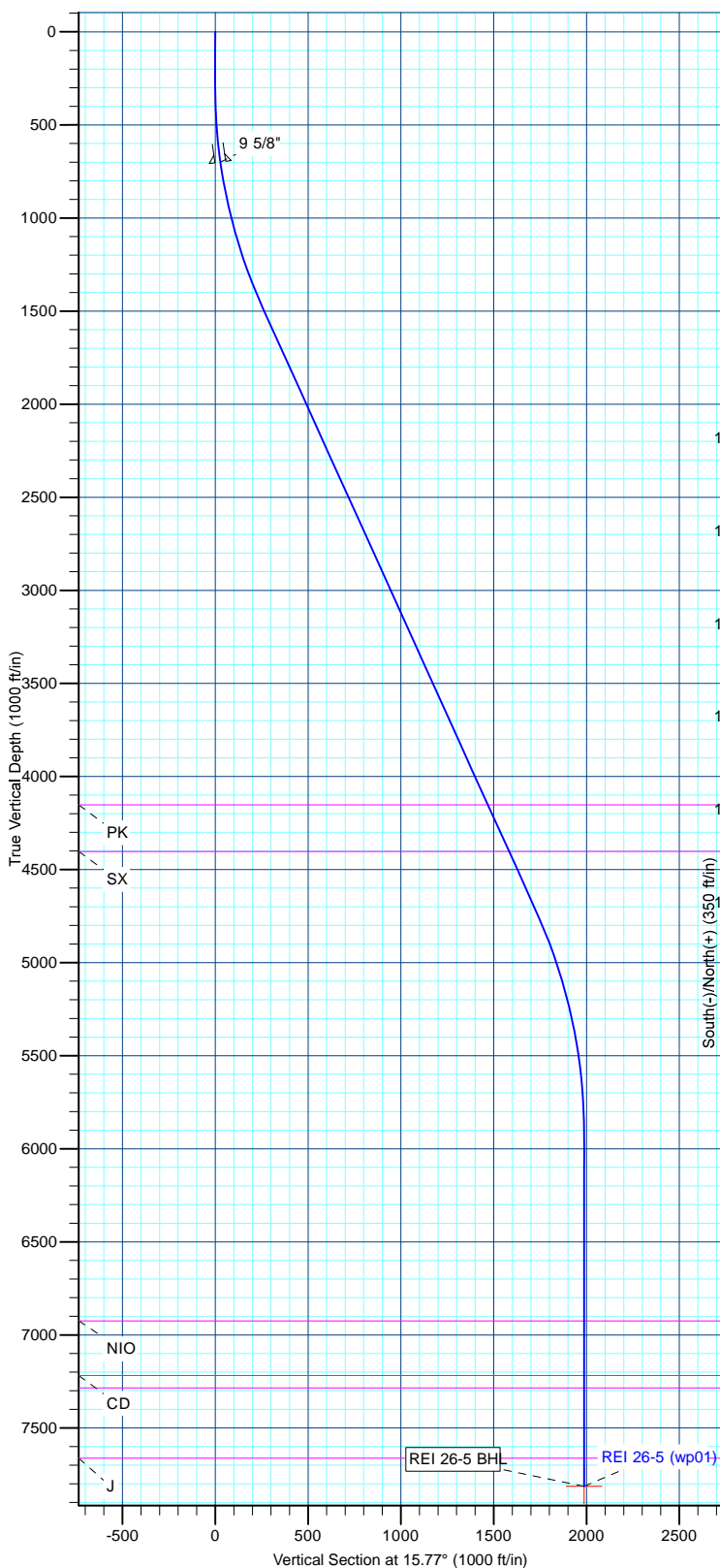
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Point	Shape
REI 26-5 BHL	7813.00	1911.79	539.74	40.261512	-104.677893		

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
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	
1521.67	24.43	15.77	1484.98	246.91	69.71	2.00	15.77	256.56	
5083.72	24.43	15.77	4728.02	1664.88	470.03	0.00	0.00	1729.96	
6305.39	0.00	0.00	5913.00	1911.79	539.74	2.00	180.00	1986.52	
8205.39	0.00	0.00	7813.00	1911.79	539.74	0.00	0.00	1986.52	REI 26-5 BHL

CASING DETAILS

TVD	MD	Name	Size
700.00	701.31	9 5/8"	9-5/8



Database:	edm5000p	Local Co-ordinate Reference:	Well REI 26-5
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4853.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4853.00ft (Original Well Elev)
Site:	WELD_REI 8-5 PAD	North Reference:	True
Well:	REI 26-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	REI 26-5		
Design:	REI 26-5 (wp01)		

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

Site		WELD_REI 8-5 PAD			
Site Position:		Northing:	1,337,247.00 ft	Latitude:	40.256236
From:	Lat/Long	Easting:	3,228,907.81 ft	Longitude:	-104.679827
Position Uncertainty:	0.00 ft	Slot Radius:	0 "	Grid Convergence:	0.53 °

Well	REI 26-5					
Well Position	+N-S	10.19 ft	Northing:	1,337,257.19 ft	Latitude:	40.256264
	+E-W	0.00 ft	Easting:	3,228,907.72 ft	Longitude:	-104.679827
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,853.00 ft

Wellbore	REI 26-5				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/17/2010	8.87	66.97	53,117

Design	REI 26-5 (wp01)			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N-S (ft)	+E-W (ft)	Direction (°)
	0.00	0.00	0.00	15.77

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	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	
1,521.67	24.43	15.77	1,484.98	246.91	69.71	2.00	2.00	0.00	15.77	
5,083.72	24.43	15.77	4,728.02	1,664.88	470.03	0.00	0.00	0.00	0.00	
6,305.39	0.00	0.00	5,913.00	1,911.79	539.74	2.00	-2.00	0.00	180.00	
8,205.39	0.00	0.00	7,813.00	1,911.79	539.74	0.00	0.00	0.00	0.00	REI 26-5 BHL

Database:	edm5000p	Local Co-ordinate Reference:	Well REI 26-5
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4853.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4853.00ft (Original Well Elev)
Site:	WELD_REI 8-5 PAD	North Reference:	True
Well:	REI 26-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	REI 26-5		
Design:	REI 26-5 (wp01)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
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	15.77	399.98	1.68	0.47	1.75	2.00	2.00	0.00
500.00	4.00	15.77	499.84	6.72	1.90	6.98	2.00	2.00	0.00
600.00	6.00	15.77	599.45	15.10	4.26	15.69	2.00	2.00	0.00
700.00	8.00	15.77	698.70	26.83	7.58	27.88	2.00	2.00	0.00
701.31	8.03	15.77	700.00	27.01	7.62	28.06	2.00	2.00	0.00
9 5/8"									
800.00	10.00	15.77	797.47	41.89	11.83	43.52	2.00	2.00	0.00
900.00	12.00	15.77	895.62	60.25	17.01	62.60	2.00	2.00	0.00
1,000.00	14.00	15.77	993.06	81.90	23.12	85.10	2.00	2.00	0.00
1,100.00	16.00	15.77	1,089.64	106.80	30.15	110.98	2.00	2.00	0.00
1,200.00	18.00	15.77	1,185.27	134.94	38.10	140.21	2.00	2.00	0.00
1,300.00	20.00	15.77	1,279.82	166.27	46.94	172.77	2.00	2.00	0.00
1,400.00	22.00	15.77	1,373.17	200.76	56.68	208.60	2.00	2.00	0.00
1,500.00	24.00	15.77	1,465.21	238.36	67.29	247.67	2.00	2.00	0.00
1,521.67	24.43	15.77	1,484.98	246.91	69.71	256.56	2.00	2.00	0.00
1,600.00	24.43	15.77	1,556.29	278.09	78.51	288.96	0.00	0.00	0.00
1,700.00	24.43	15.77	1,647.34	317.90	89.75	330.33	0.00	0.00	0.00
1,800.00	24.43	15.77	1,738.38	357.71	100.99	371.69	0.00	0.00	0.00
1,900.00	24.43	15.77	1,829.43	397.52	112.23	413.05	0.00	0.00	0.00
2,000.00	24.43	15.77	1,920.47	437.32	123.47	454.42	0.00	0.00	0.00
2,100.00	24.43	15.77	2,011.51	477.13	134.70	495.78	0.00	0.00	0.00
2,200.00	24.43	15.77	2,102.56	516.94	145.94	537.14	0.00	0.00	0.00
2,300.00	24.43	15.77	2,193.60	556.75	157.18	578.51	0.00	0.00	0.00
2,400.00	24.43	15.77	2,284.65	596.55	168.42	619.87	0.00	0.00	0.00
2,500.00	24.43	15.77	2,375.69	636.36	179.66	661.24	0.00	0.00	0.00
2,600.00	24.43	15.77	2,466.73	676.17	190.90	702.60	0.00	0.00	0.00
2,700.00	24.43	15.77	2,557.78	715.98	202.14	743.96	0.00	0.00	0.00
2,800.00	24.43	15.77	2,648.82	755.78	213.37	785.33	0.00	0.00	0.00
2,900.00	24.43	15.77	2,739.87	795.59	224.61	826.69	0.00	0.00	0.00
3,000.00	24.43	15.77	2,830.91	835.40	235.85	868.05	0.00	0.00	0.00
3,100.00	24.43	15.77	2,921.96	875.21	247.09	909.42	0.00	0.00	0.00
3,200.00	24.43	15.77	3,013.00	915.01	258.33	950.78	0.00	0.00	0.00
3,300.00	24.43	15.77	3,104.04	954.82	269.57	992.14	0.00	0.00	0.00
3,400.00	24.43	15.77	3,195.09	994.63	280.81	1,033.51	0.00	0.00	0.00
3,500.00	24.43	15.77	3,286.13	1,034.44	292.04	1,074.87	0.00	0.00	0.00
3,600.00	24.43	15.77	3,377.18	1,074.24	303.28	1,116.24	0.00	0.00	0.00
3,700.00	24.43	15.77	3,468.22	1,114.05	314.52	1,157.60	0.00	0.00	0.00
3,800.00	24.43	15.77	3,559.27	1,153.86	325.76	1,198.96	0.00	0.00	0.00
3,900.00	24.43	15.77	3,650.31	1,193.67	337.00	1,240.33	0.00	0.00	0.00
4,000.00	24.43	15.77	3,741.35	1,233.48	348.24	1,281.69	0.00	0.00	0.00
4,100.00	24.43	15.77	3,832.40	1,273.28	359.47	1,323.05	0.00	0.00	0.00
4,200.00	24.43	15.77	3,923.44	1,313.09	370.71	1,364.42	0.00	0.00	0.00
4,300.00	24.43	15.77	4,014.49	1,352.90	381.95	1,405.78	0.00	0.00	0.00
4,400.00	24.43	15.77	4,105.53	1,392.71	393.19	1,447.14	0.00	0.00	0.00
4,452.14	24.43	15.77	4,153.00	1,413.46	399.05	1,468.71	0.00	0.00	0.00
PK									
4,500.00	24.43	15.77	4,196.58	1,432.51	404.43	1,488.51	0.00	0.00	0.00
4,600.00	24.43	15.77	4,287.62	1,472.32	415.67	1,529.87	0.00	0.00	0.00
4,700.00	24.43	15.77	4,378.66	1,512.13	426.91	1,571.24	0.00	0.00	0.00
4,726.73	24.43	15.77	4,403.00	1,522.77	429.91	1,582.29	0.00	0.00	0.00

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Well:	REI 26-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	REI 26-5		
Design:	REI 26-5 (wp01)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
SX									
4,800.00	24.43	15.77	4,469.71	1,551.94	438.14	1,612.60	0.00	0.00	0.00
4,900.00	24.43	15.77	4,560.75	1,591.74	449.38	1,653.96	0.00	0.00	0.00
5,000.00	24.43	15.77	4,651.80	1,631.55	460.62	1,695.33	0.00	0.00	0.00
5,083.72	24.43	15.77	4,728.02	1,664.88	470.03	1,729.96	0.00	0.00	0.00
5,100.00	24.11	15.77	4,742.86	1,671.32	471.85	1,736.65	2.00	-2.00	0.00
5,200.00	22.11	15.77	4,834.83	1,709.09	482.51	1,775.89	2.00	-2.00	0.00
5,300.00	20.11	15.77	4,928.12	1,743.74	492.30	1,811.90	2.00	-2.00	0.00
5,400.00	18.11	15.77	5,022.60	1,775.24	501.19	1,844.64	2.00	-2.00	0.00
5,500.00	16.11	15.77	5,118.17	1,803.55	509.18	1,874.05	2.00	-2.00	0.00
5,600.00	14.11	15.77	5,214.71	1,828.64	516.26	1,900.11	2.00	-2.00	0.00
5,700.00	12.11	15.77	5,312.10	1,850.46	522.42	1,922.79	2.00	-2.00	0.00
5,800.00	10.11	15.77	5,410.22	1,869.00	527.66	1,942.06	2.00	-2.00	0.00
5,900.00	8.11	15.77	5,508.96	1,884.23	531.96	1,957.88	2.00	-2.00	0.00
6,000.00	6.11	15.77	5,608.18	1,896.14	535.32	1,970.26	2.00	-2.00	0.00
6,100.00	4.11	15.77	5,707.78	1,904.71	537.74	1,979.16	2.00	-2.00	0.00
6,200.00	2.11	15.77	5,807.63	1,909.93	539.21	1,984.58	2.00	-2.00	0.00
6,305.39	0.00	0.00	5,913.00	1,911.79	539.74	1,986.52	2.00	-2.00	0.00
6,400.00	0.00	0.00	6,007.61	1,911.79	539.74	1,986.52	0.00	0.00	0.00
6,500.00	0.00	0.00	6,107.61	1,911.79	539.74	1,986.52	0.00	0.00	0.00
6,600.00	0.00	0.00	6,207.61	1,911.79	539.74	1,986.52	0.00	0.00	0.00
6,700.00	0.00	0.00	6,307.61	1,911.79	539.74	1,986.52	0.00	0.00	0.00
6,800.00	0.00	0.00	6,407.61	1,911.79	539.74	1,986.52	0.00	0.00	0.00
6,900.00	0.00	0.00	6,507.61	1,911.79	539.74	1,986.52	0.00	0.00	0.00
7,000.00	0.00	0.00	6,607.61	1,911.79	539.74	1,986.52	0.00	0.00	0.00
7,100.00	0.00	0.00	6,707.61	1,911.79	539.74	1,986.52	0.00	0.00	0.00
7,200.00	0.00	0.00	6,807.61	1,911.79	539.74	1,986.52	0.00	0.00	0.00
7,300.00	0.00	0.00	6,907.61	1,911.79	539.74	1,986.52	0.00	0.00	0.00
7,317.39	0.00	0.00	6,925.00	1,911.79	539.74	1,986.52	0.00	0.00	0.00
NIO									
7,400.00	0.00	0.00	7,007.61	1,911.79	539.74	1,986.52	0.00	0.00	0.00
7,500.00	0.00	0.00	7,107.61	1,911.79	539.74	1,986.52	0.00	0.00	0.00
7,600.00	0.00	0.00	7,207.61	1,911.79	539.74	1,986.52	0.00	0.00	0.00
7,610.39	0.00	0.00	7,218.00	1,911.79	539.74	1,986.52	0.00	0.00	0.00
CD									
7,677.39	0.00	0.00	7,285.00	1,911.79	539.74	1,986.52	0.00	0.00	0.00
GH									
7,700.00	0.00	0.00	7,307.61	1,911.79	539.74	1,986.52	0.00	0.00	0.00
7,800.00	0.00	0.00	7,407.61	1,911.79	539.74	1,986.52	0.00	0.00	0.00
7,900.00	0.00	0.00	7,507.61	1,911.79	539.74	1,986.52	0.00	0.00	0.00
8,000.00	0.00	0.00	7,607.61	1,911.79	539.74	1,986.52	0.00	0.00	0.00
8,055.39	0.00	0.00	7,663.00	1,911.79	539.74	1,986.52	0.00	0.00	0.00
J									
8,100.00	0.00	0.00	7,707.61	1,911.79	539.74	1,986.52	0.00	0.00	0.00
8,205.39	0.00	0.00	7,813.00	1,911.79	539.74	1,986.52	0.00	0.00	0.00
REI 26-5 BHL									

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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4853.00ft (Original Well Elev)
Site:	WELD_REI 8-5 PAD	North Reference:	True
Well:	REI 26-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	REI 26-5		
Design:	REI 26-5 (wp01)		

Design Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
REI 26-5 BHL	0.00	0.00	7,813.00	1,911.79	539.74	1,339,173.89	3,229,429.75	40.261512	-104.677893
- plan hits target center									
- Point									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
701.31	700.00	9 5/8"	9-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,452.14	4,153.00	PK		0.00	
4,726.73	4,403.00	SX		0.00	
7,317.39	6,925.00	NIO		0.00	
7,610.39	7,218.00	CD		0.00	
7,677.39	7,285.00	GH		0.00	
8,055.39	7,663.00	J		0.00	