

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_RICKS 34-15 PAD

Ricks 11-15

Ricks 11-15

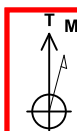
Plan: RICKS 11-15 (wp02)

Standard Planning Report

11 November, 2010



Project: COLORADO NORTHERN ZONE - 83
 Site: WELD_RICKS 34-15 PAD
 Well: Ricks 11-15
 Wellbore: Ricks 11-15
 Section:
 SHL:
 Design: RICKS 11-15 (wp02)
 Latitude: 40.131989
 Longitude: -104.657666
 GL: 4875.00
 KB: WELL @ 4875.00ft (Original Well Elev)



Azimuths to True North
 Magnetic North: 8.86°
 Magnetic Field
 Strength: 53064.5nT
 Dip Angle: 66.87°
 Date: 11/10/2010
 Model: IGRF2010



Weatherford®

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3975.00	4273.37	PRKMN TOP
4475.00	4824.89	SX TOP
6880.00	7343.29	NIO TOP
7165.00	7628.29	CODELL TOP
7248.00	7711.29	GRNHRN TOP
7615.00	8078.29	JSND TOP

WELL DETAILS: Ricks 11-15

+N/-S	+E/-W	Northing	Ground Level:	4875.00	Latitude	Longitude	Slot
0.00	0.00	1292045.96	Easting	3235522.63	40.131989	-104.657666	

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

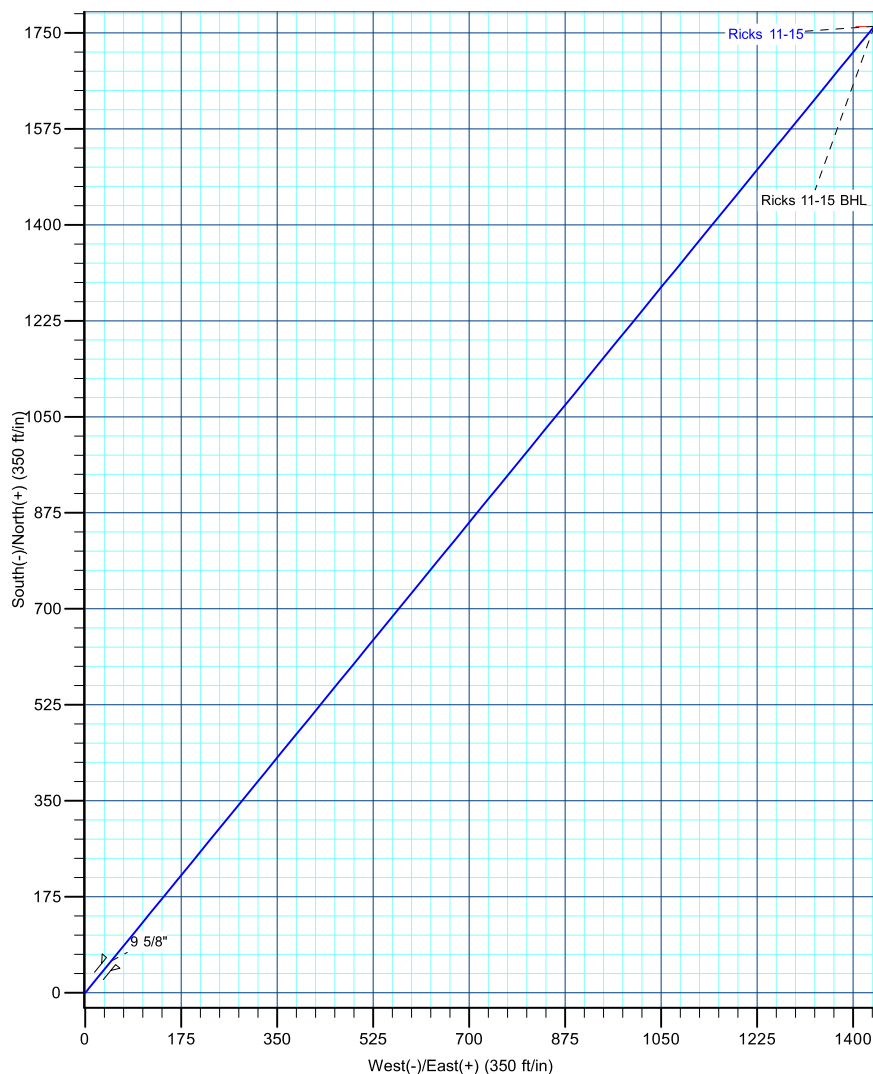
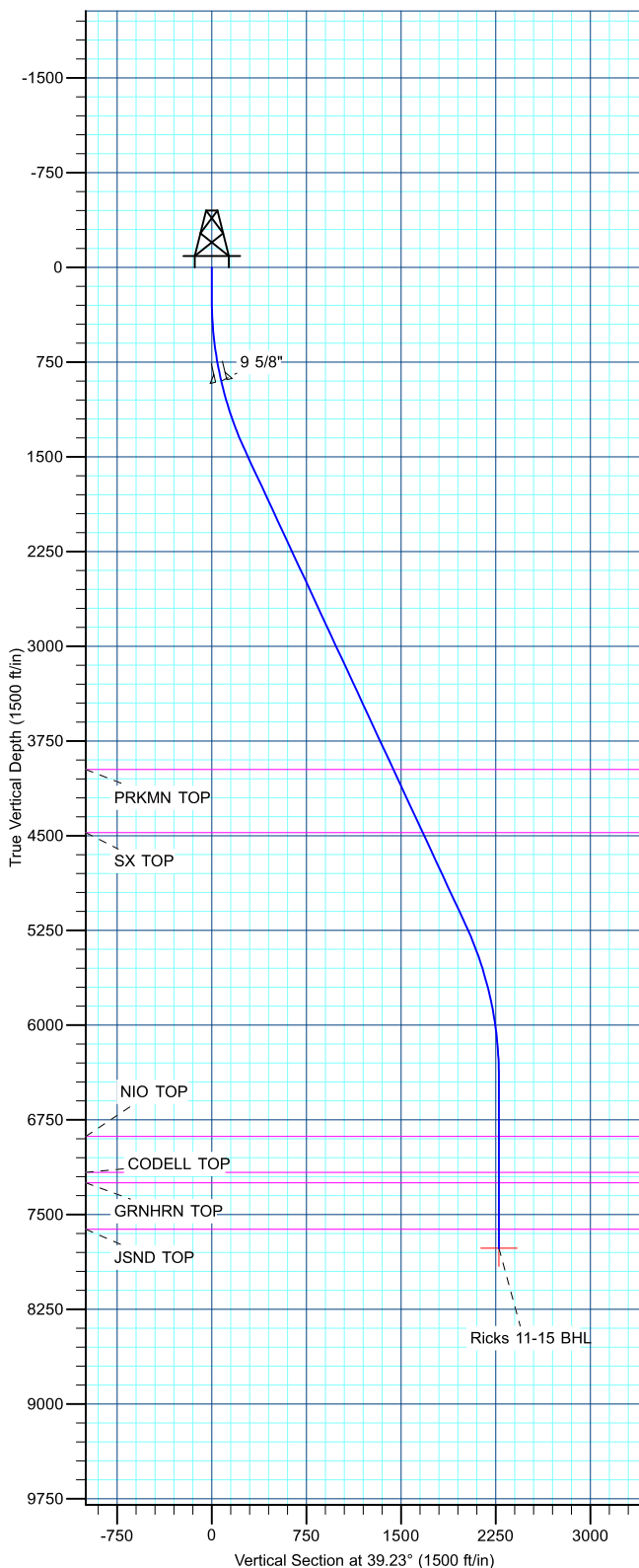
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Point	Shape
Ricks 11-15 BHL	7765.00	1762.06	1438.78	40.136826	-104.652520		

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	1498.13	24.96	39.23	1459.02	207.29	169.26	2.00	39.23	267.62	
4	5620.16	24.96	39.23	5195.98	1554.77	1269.52	0.00	0.00	2007.23	
5	6868.29	0.00	0.00	6405.00	1762.06	1438.78	2.00	180.00	2274.85	
6	8228.29	0.00	0.00	7765.00	1762.06	1438.78	0.00	0.00	2274.85	Ricks 11-15 BHL

CASING DETAILS

TVD	MD	Name	Size
900.00	905.71	9 5/8"	9-5/8



Database:	edm5000p	Local Co-ordinate Reference:	Well Ricks 11-15
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4875.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4875.00ft (Original Well Elev)
Site:	WELD_RICKS 34-15 PAD	North Reference:	True
Well:	Ricks 11-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	Ricks 11-15		
Design:	RICKS 11-15 (wp02)		

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_RICKS 34-15 PAD			
Site Position:		Northing:	1,292,045.96 ft	Latitude:	40.131989
From:	Lat/Long	Easting:	3,235,522.63 ft	Longitude:	-104.657666
Position Uncertainty:	0.00 ft	Slot Radius:	0 "	Grid Convergence:	0.54 °

Well	Ricks 11-15					
Well Position	+N/-S	0.00 ft	Northing:	1,292,045.96 ft	Latitude:	40.131989
	+E/-W	0.00 ft	Easting:	3,235,522.63 ft	Longitude:	-104.657666
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,875.00 ft

Wellbore	Ricks 11-15				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/10/2010	8.86	66.87	53,064

Design	RICKS 11-15 (wp02)			
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	39.23

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	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,498.13	24.96	39.23	1,459.02	207.29	169.26	2.00	2.00	0.00	39.23	
5,620.16	24.96	39.23	5,195.98	1,554.77	1,269.52	0.00	0.00	0.00	0.00	
6,868.29	0.00	0.00	6,405.00	1,762.06	1,438.78	2.00	-2.00	0.00	180.00	
8,228.29	0.00	0.00	7,765.00	1,762.06	1,438.78	0.00	0.00	0.00	0.00	Ricks 11-15 BHL

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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4875.00ft (Original Well Elev)
Site:	WELD_RICKS 34-15 PAD	North Reference:	True
Well:	Ricks 11-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	Ricks 11-15		
Design:	RICKS 11-15 (wp02)		

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
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	1.00	39.23	300.00	0.34	0.28	0.44	2.00	2.00	0.00
400.00	3.00	39.23	399.93	3.04	2.48	3.93	2.00	2.00	0.00
500.00	5.00	39.23	499.68	8.44	6.89	10.90	2.00	2.00	0.00
600.00	7.00	39.23	599.13	16.54	13.51	21.35	2.00	2.00	0.00
700.00	9.00	39.23	698.15	27.32	22.31	35.27	2.00	2.00	0.00
800.00	11.00	39.23	796.63	40.77	33.29	52.63	2.00	2.00	0.00
900.00	13.00	39.23	894.44	56.87	46.44	73.42	2.00	2.00	0.00
905.71	13.11	39.23	900.00	57.87	47.25	74.71	2.00	2.00	0.00
9 5/8"									
1,000.00	15.00	39.23	991.46	75.61	61.74	97.62	2.00	2.00	0.00
1,100.00	17.00	39.23	1,087.58	96.96	79.17	125.18	2.00	2.00	0.00
1,200.00	19.00	39.23	1,182.68	120.90	98.71	156.08	2.00	2.00	0.00
1,300.00	21.00	39.23	1,276.65	147.39	120.35	190.28	2.00	2.00	0.00
1,400.00	23.00	39.23	1,369.36	176.40	144.04	227.74	2.00	2.00	0.00
1,498.13	24.96	39.23	1,459.02	207.29	169.26	267.62	2.00	2.00	0.00
1,500.00	24.96	39.23	1,460.71	207.90	169.76	268.41	0.00	0.00	0.00
1,600.00	24.96	39.23	1,551.37	240.59	196.45	310.61	0.00	0.00	0.00
1,700.00	24.96	39.23	1,642.03	273.28	223.14	352.81	0.00	0.00	0.00
1,800.00	24.96	39.23	1,732.69	305.97	249.84	395.02	0.00	0.00	0.00
1,900.00	24.96	39.23	1,823.35	338.66	276.53	437.22	0.00	0.00	0.00
2,000.00	24.96	39.23	1,914.00	371.35	303.22	479.42	0.00	0.00	0.00
2,100.00	24.96	39.23	2,004.66	404.04	329.91	521.62	0.00	0.00	0.00
2,200.00	24.96	39.23	2,095.32	436.73	356.60	563.83	0.00	0.00	0.00
2,300.00	24.96	39.23	2,185.98	469.42	383.30	606.03	0.00	0.00	0.00
2,400.00	24.96	39.23	2,276.64	502.11	409.99	648.23	0.00	0.00	0.00
2,500.00	24.96	39.23	2,367.30	534.80	436.68	690.44	0.00	0.00	0.00
2,600.00	24.96	39.23	2,457.95	567.49	463.37	732.64	0.00	0.00	0.00
2,700.00	24.96	39.23	2,548.61	600.18	490.06	774.84	0.00	0.00	0.00
2,800.00	24.96	39.23	2,639.27	632.87	516.76	817.04	0.00	0.00	0.00
2,900.00	24.96	39.23	2,729.93	665.56	543.45	859.25	0.00	0.00	0.00
3,000.00	24.96	39.23	2,820.59	698.25	570.14	901.45	0.00	0.00	0.00
3,100.00	24.96	39.23	2,911.25	730.94	596.83	943.65	0.00	0.00	0.00
3,200.00	24.96	39.23	3,001.90	763.63	623.53	985.86	0.00	0.00	0.00
3,300.00	24.96	39.23	3,092.56	796.32	650.22	1,028.06	0.00	0.00	0.00
3,400.00	24.96	39.23	3,183.22	829.01	676.91	1,070.26	0.00	0.00	0.00
3,500.00	24.96	39.23	3,273.88	861.70	703.60	1,112.46	0.00	0.00	0.00
3,600.00	24.96	39.23	3,364.54	894.39	730.29	1,154.67	0.00	0.00	0.00
3,700.00	24.96	39.23	3,455.19	927.08	756.99	1,196.87	0.00	0.00	0.00
3,800.00	24.96	39.23	3,545.85	959.76	783.68	1,239.07	0.00	0.00	0.00
3,900.00	24.96	39.23	3,636.51	992.45	810.37	1,281.27	0.00	0.00	0.00
4,000.00	24.96	39.23	3,727.17	1,025.14	837.06	1,323.48	0.00	0.00	0.00
4,100.00	24.96	39.23	3,817.83	1,057.83	863.75	1,365.68	0.00	0.00	0.00
4,200.00	24.96	39.23	3,908.49	1,090.52	890.45	1,407.88	0.00	0.00	0.00
4,273.37	24.96	39.23	3,975.00	1,114.51	910.03	1,438.85	0.00	0.00	0.00
PRKMN TOP									
4,300.00	24.96	39.23	3,999.14	1,123.21	917.14	1,450.09	0.00	0.00	0.00
4,400.00	24.96	39.23	4,089.80	1,155.90	943.83	1,492.29	0.00	0.00	0.00
4,500.00	24.96	39.23	4,180.46	1,188.59	970.52	1,534.49	0.00	0.00	0.00
4,600.00	24.96	39.23	4,271.12	1,221.28	997.21	1,576.69	0.00	0.00	0.00
4,700.00	24.96	39.23	4,361.78	1,253.97	1,023.91	1,618.90	0.00	0.00	0.00

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Site:	WELD_RICKS 34-15 PAD	North Reference:	True
Well:	Ricks 11-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	Ricks 11-15		
Design:	RICKS 11-15 (wp02)		

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)
4,800.00	24.96	39.23	4,452.44	1,286.66	1,050.60	1,661.10	0.00	0.00	0.00
4,824.89	24.96	39.23	4,475.00	1,294.80	1,057.24	1,671.60	0.00	0.00	0.00
SX TOP									
4,900.00	24.96	39.23	4,543.09	1,319.35	1,077.29	1,703.30	0.00	0.00	0.00
5,000.00	24.96	39.23	4,633.75	1,352.04	1,103.98	1,745.51	0.00	0.00	0.00
5,100.00	24.96	39.23	4,724.41	1,384.73	1,130.67	1,787.71	0.00	0.00	0.00
5,200.00	24.96	39.23	4,815.07	1,417.42	1,157.37	1,829.91	0.00	0.00	0.00
5,300.00	24.96	39.23	4,905.73	1,450.11	1,184.06	1,872.11	0.00	0.00	0.00
5,400.00	24.96	39.23	4,996.39	1,482.80	1,210.75	1,914.32	0.00	0.00	0.00
5,500.00	24.96	39.23	5,087.04	1,515.49	1,237.44	1,956.52	0.00	0.00	0.00
5,600.00	24.96	39.23	5,177.70	1,548.18	1,264.13	1,998.72	0.00	0.00	0.00
5,620.16	24.96	39.23	5,195.98	1,554.77	1,269.52	2,007.23	0.00	0.00	0.00
5,700.00	23.37	39.23	5,268.82	1,580.08	1,290.19	2,039.91	2.00	-2.00	0.00
5,800.00	21.37	39.23	5,361.29	1,609.56	1,314.25	2,077.96	2.00	-2.00	0.00
5,900.00	19.37	39.23	5,455.04	1,636.51	1,336.26	2,112.76	2.00	-2.00	0.00
6,000.00	17.37	39.23	5,549.94	1,660.92	1,356.19	2,144.27	2.00	-2.00	0.00
6,100.00	15.37	39.23	5,645.88	1,682.74	1,374.01	2,172.44	2.00	-2.00	0.00
6,200.00	13.37	39.23	5,742.75	1,701.96	1,389.70	2,197.25	2.00	-2.00	0.00
6,300.00	11.37	39.23	5,840.43	1,718.54	1,403.24	2,218.67	2.00	-2.00	0.00
6,400.00	9.37	39.23	5,938.79	1,732.48	1,414.62	2,236.66	2.00	-2.00	0.00
6,500.00	7.37	39.23	6,037.72	1,743.75	1,423.83	2,251.21	2.00	-2.00	0.00
6,600.00	5.37	39.23	6,137.10	1,752.34	1,430.84	2,262.30	2.00	-2.00	0.00
6,700.00	3.37	39.23	6,236.80	1,758.23	1,435.65	2,269.91	2.00	-2.00	0.00
6,800.00	1.37	39.23	6,336.71	1,761.43	1,438.26	2,274.04	2.00	-2.00	0.00
6,868.29	0.00	0.00	6,405.00	1,762.06	1,438.78	2,274.85	2.00	-2.00	0.00
6,900.00	0.00	0.00	6,436.71	1,762.06	1,438.78	2,274.85	0.00	0.00	0.00
7,000.00	0.00	0.00	6,536.71	1,762.06	1,438.78	2,274.85	0.00	0.00	0.00
7,100.00	0.00	0.00	6,636.71	1,762.06	1,438.78	2,274.85	0.00	0.00	0.00
7,200.00	0.00	0.00	6,736.71	1,762.06	1,438.78	2,274.85	0.00	0.00	0.00
7,300.00	0.00	0.00	6,836.71	1,762.06	1,438.78	2,274.85	0.00	0.00	0.00
7,343.29	0.00	0.00	6,880.00	1,762.06	1,438.78	2,274.85	0.00	0.00	0.00
NIO TOP									
7,400.00	0.00	0.00	6,936.71	1,762.06	1,438.78	2,274.85	0.00	0.00	0.00
7,500.00	0.00	0.00	7,036.71	1,762.06	1,438.78	2,274.85	0.00	0.00	0.00
7,600.00	0.00	0.00	7,136.71	1,762.06	1,438.78	2,274.85	0.00	0.00	0.00
7,628.29	0.00	0.00	7,165.00	1,762.06	1,438.78	2,274.85	0.00	0.00	0.00
CODELL TOP									
7,700.00	0.00	0.00	7,236.71	1,762.06	1,438.78	2,274.85	0.00	0.00	0.00
7,711.29	0.00	0.00	7,248.00	1,762.06	1,438.78	2,274.85	0.00	0.00	0.00
GRNHRN TOP									
7,800.00	0.00	0.00	7,336.71	1,762.06	1,438.78	2,274.85	0.00	0.00	0.00
7,900.00	0.00	0.00	7,436.71	1,762.06	1,438.78	2,274.85	0.00	0.00	0.00
8,000.00	0.00	0.00	7,536.71	1,762.06	1,438.78	2,274.85	0.00	0.00	0.00
8,078.29	0.00	0.00	7,615.00	1,762.06	1,438.78	2,274.85	0.00	0.00	0.00
JSND TOP									
8,100.00	0.00	0.00	7,636.71	1,762.06	1,438.78	2,274.85	0.00	0.00	0.00
8,200.00	0.00	0.00	7,736.71	1,762.06	1,438.78	2,274.85	0.00	0.00	0.00
8,228.29	0.00	0.00	7,765.00	1,762.06	1,438.78	2,274.85	0.00	0.00	0.00
Ricks 11-15 BHL									

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Site:	WELD_RICKS 34-15 PAD	North Reference:	True
Well:	Ricks 11-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	Ricks 11-15		
Design:	RICKS 11-15 (wp02)		

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									
Ricks 11-15 BHL	0.00	0.00	7,765.00	1,762.06	1,438.78	1,293,821.61	3,236,944.61	40.136826	-104.652520
- plan hits target center									
- Point									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
905.71	900.00	9 5/8"	9-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,273.37	3,975.00	PRKMN TOP		0.00	
4,824.89	4,475.00	SX TOP		0.00	
7,343.29	6,880.00	NIO TOP		0.00	
7,628.29	7,165.00	CODELL TOP		0.00	
7,711.29	7,248.00	GRNHRN TOP		0.00	
8,078.29	7,615.00	JSND TOP		0.00	