

# Caerus Oil and Gas LLC

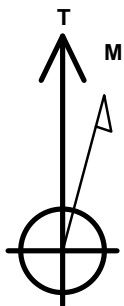
Well Name: **Terrell 25-761-0460AH**

Surface Location: Terrell N 24 761 Pad Sec.24-T7N-R61W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
Ground Elevation: 5018.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1448283.58	3372467.84	40.556210	-104.159503	
RKB - 30' WELL @ 5048.0ft (RKB - 30')						

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 1040'FSL, 1731'FWL, SEC.24	1.0	0.0	0.0	Point
BHL 460'FSL, 2561'FWL, SEC.25	6378.0	-5882.3	504.2	Point
LPL 460'FNL, 2561'FWL, SEC.25	6413.0	-1497.0	779.5	Point



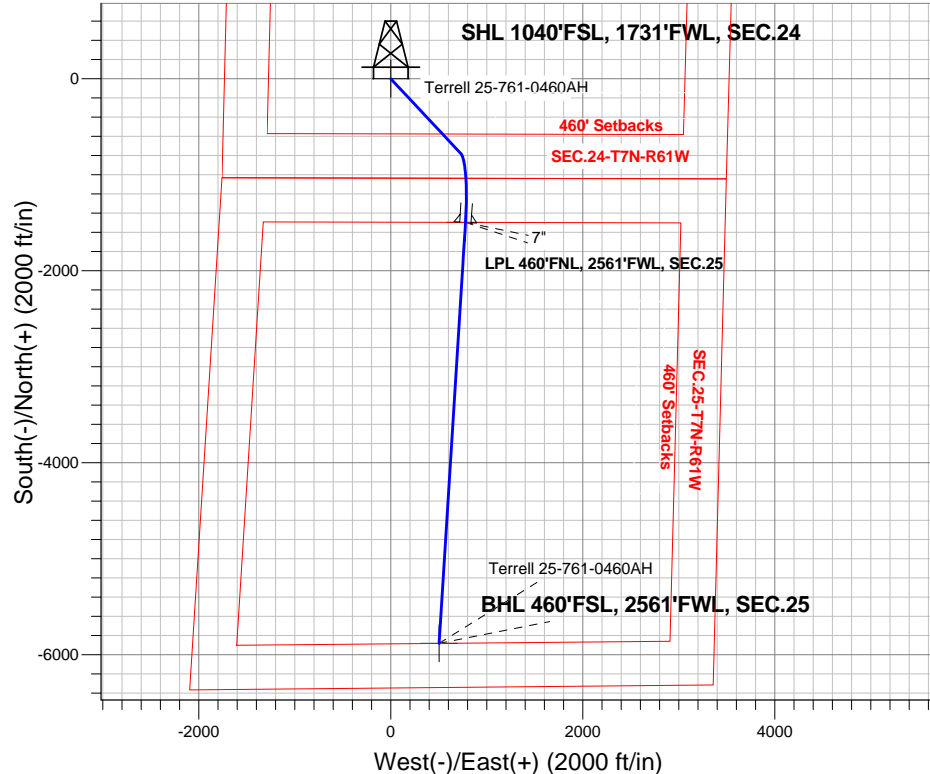
Azimuths to True North  
Magnetic North: 8.00°

Magnetic Field  
Strength: 52844.1 snT  
Dip Angle: 67.13°  
Date: 7/8/2015  
Model: IGRF2010

Terrell N 24 761 Pad Sec.24-T7N-R61W  
Terrell 25-761-0460AH  
Plan #1 (7-07-15)  
12:04, July 08 2015

## ANNOTATIONS

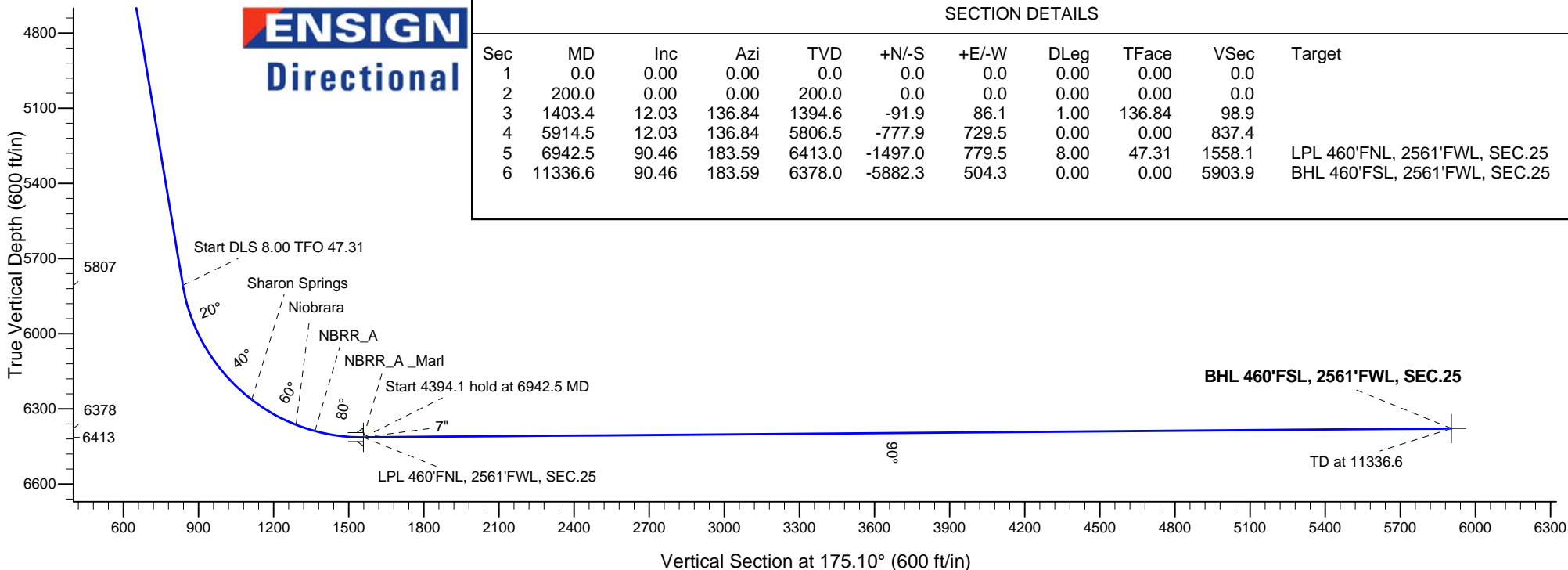
TVD	MD	Annotation
200.0	200.0	KOP - Start Build 1.00
1394.6	1403.4	Start 4511.1 hold at 1403.4 MD
5806.5	5914.5	Start DLS 8.00 TFO 47.31
6413.0	6942.5	Start 4394.1 hold at 6942.5 MD
6378.0	11336.6	TD at 11336.6



**ENSIGN**  
Directional

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	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	1403.4	12.03	136.84	1394.6	-91.9	86.1	1.00	136.84	98.9	
4	5914.5	12.03	136.84	5806.5	-777.9	729.5	0.00	0.00	837.4	
5	6942.5	90.46	183.59	6413.0	-1497.0	779.5	8.00	47.31	1558.1	LPL 460'FNL, 2561'FWL, SEC.25
6	11336.6	90.46	183.59	6378.0	-5882.3	504.3	0.00	0.00	5903.9	BHL 460'FSL, 2561'FWL, SEC.25





## **Caerus Oil and Gas LLC**

**SEC.24-T7N-R61W**

**Terrell N 24 761 Pad Sec.24-T7N-R61W**

**Terrell 25-761-0460AH**

**Wellbore #1**

**Plan: Plan #1 (7-07-15)**

## **Standard Planning Report**

**08 July, 2015**

<b>Database:</b>	EDMNEW	<b>Local Co-ordinate Reference:</b>	Well Terrell 25-761-0460AH
<b>Company:</b>	Caerus Oil and Gas LLC	<b>TVD Reference:</b>	WELL @ 5048.0ft (RKB - 30')
<b>Project:</b>	SEC.24-T7N-R61W	<b>MD Reference:</b>	WELL @ 5048.0ft (RKB - 30')
<b>Site:</b>	Terrell N 24 761 Pad Sec.24-T7N-R61W	<b>North Reference:</b>	True
<b>Well:</b>	Terrell 25-761-0460AH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (7-07-15)		

<b>Project</b>	SEC.24-T7N-R61W, Weld County, Colorado		
<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

Site	Terrell N 24 761 Pad Sec.24-T7N-R61W				
Site Position:		Northing:	1,448,285.39ft	Latitude:	40.556223
From:	Lat/Long	Easting:	3,372,273.00ft	Longitude:	-104.160204
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.87 °

Well	Terrell 25-761-0460AH					
Well Position	+N-S	-4.8 ft	Northing:	1,448,283.58 ft	Latitude:	40.556210
	+E-W	194.8 ft	Easting:	3,372,467.84 ft	Longitude:	-104.159503
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,018.0ft

<b>Wellbore</b>	Wellbore #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	7/8/2015	8.00	67.13	52,844

<b>Design</b>	Plan #1 (7-07-15)			
<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) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	175.10

<b>Plan Sections</b>										
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
0.0	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	
1,403.4	12.03	136.84	1,394.6	-91.9	86.1	1.00	1.00	0.00	136.84	
5,914.5	12.03	136.84	5,806.5	-777.9	729.5	0.00	0.00	0.00	0.00	
6,942.5	90.46	183.59	6,413.0	-1,497.0	779.5	8.00	7.63	4.55	47.31	LPL 460'FNL, 2561
11,336.6	90.46	183.59	6,378.0	-5,882.3	504.3	0.00	0.00	0.00	0.00	BHL 460'FSL, 2561

**Database:** EDMNEW  
**Company:** Caerus Oil and Gas LLC  
**Project:** SEC.24-T7N-R61W  
**Site:** Terrell N 24 761 Pad Sec.24-T7N-R61W  
**Well:** Terrell 25-761-0460AH  
**Wellbore:** Wellbore #1  
**Design:** Plan #1 (7-07-15)

**Local Co-ordinate Reference:** Well Terrell 25-761-0460AH  
**TVD Reference:** WELL @ 5048.0ft (RKB - 30')  
**MD Reference:** WELL @ 5048.0ft (RKB - 30')  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

#### 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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>SHL 1040'FSL, 1731'FWL, SEC.24</b>									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP - Start Build 1.00</b>									
300.0	1.00	136.84	300.0	-0.6	0.6	0.7	1.00	1.00	0.00
400.0	2.00	136.84	400.0	-2.5	2.4	2.7	1.00	1.00	0.00
500.0	3.00	136.84	499.9	-5.7	5.4	6.2	1.00	1.00	0.00
600.0	4.00	136.84	599.7	-10.2	9.5	11.0	1.00	1.00	0.00
700.0	5.00	136.84	699.4	-15.9	14.9	17.1	1.00	1.00	0.00
800.0	6.00	136.84	798.9	-22.9	21.5	24.6	1.00	1.00	0.00
900.0	7.00	136.84	898.3	-31.2	29.2	33.5	1.00	1.00	0.00
1,000.0	8.00	136.84	997.4	-40.7	38.1	43.8	1.00	1.00	0.00
1,100.0	9.00	136.84	1,096.3	-51.5	48.3	55.4	1.00	1.00	0.00
1,200.0	10.00	136.84	1,194.9	-63.5	59.5	68.3	1.00	1.00	0.00
1,300.0	11.00	136.84	1,293.3	-76.8	72.0	82.7	1.00	1.00	0.00
1,400.0	12.00	136.84	1,391.2	-91.3	85.6	98.3	1.00	1.00	0.00
1,403.4	12.03	136.84	1,394.6	-91.9	86.1	98.9	1.00	1.00	0.00
<b>Start 4511.1 hold at 1403.4 MD</b>									
1,500.0	12.03	136.84	1,489.0	-106.5	99.9	114.7	0.00	0.00	0.00
1,600.0	12.03	136.84	1,586.9	-121.7	114.2	131.1	0.00	0.00	0.00
1,700.0	12.03	136.84	1,684.7	-137.0	128.4	147.4	0.00	0.00	0.00
1,800.0	12.03	136.84	1,782.5	-152.2	142.7	163.8	0.00	0.00	0.00
1,900.0	12.03	136.84	1,880.3	-167.4	157.0	180.2	0.00	0.00	0.00
2,000.0	12.03	136.84	1,978.1	-182.6	171.2	196.5	0.00	0.00	0.00
2,100.0	12.03	136.84	2,075.9	-197.8	185.5	212.9	0.00	0.00	0.00
2,200.0	12.03	136.84	2,173.7	-213.0	199.7	229.3	0.00	0.00	0.00
2,300.0	12.03	136.84	2,271.5	-228.2	214.0	245.7	0.00	0.00	0.00
2,400.0	12.03	136.84	2,369.3	-243.4	228.3	262.0	0.00	0.00	0.00
2,500.0	12.03	136.84	2,467.1	-258.6	242.5	278.4	0.00	0.00	0.00
2,600.0	12.03	136.84	2,564.9	-273.8	256.8	294.8	0.00	0.00	0.00
2,700.0	12.03	136.84	2,662.7	-289.0	271.0	311.1	0.00	0.00	0.00
2,800.0	12.03	136.84	2,760.5	-304.3	285.3	327.5	0.00	0.00	0.00
2,900.0	12.03	136.84	2,858.3	-319.5	299.6	343.9	0.00	0.00	0.00
3,000.0	12.03	136.84	2,956.1	-334.7	313.8	360.3	0.00	0.00	0.00
3,100.0	12.03	136.84	3,053.9	-349.9	328.1	376.6	0.00	0.00	0.00
3,200.0	12.03	136.84	3,151.7	-365.1	342.4	393.0	0.00	0.00	0.00
3,300.0	12.03	136.84	3,249.5	-380.3	356.6	409.4	0.00	0.00	0.00
3,400.0	12.03	136.84	3,347.3	-395.5	370.9	425.7	0.00	0.00	0.00
3,500.0	12.03	136.84	3,445.1	-410.7	385.1	442.1	0.00	0.00	0.00
3,513.2	12.03	136.84	3,458.0	-412.7	387.0	444.3	0.00	0.00	0.00
<b>Richard_SD</b>									
3,600.0	12.03	136.84	3,542.9	-425.9	399.4	458.5	0.00	0.00	0.00
3,700.0	12.03	136.84	3,640.7	-441.1	413.7	474.9	0.00	0.00	0.00
3,800.0	12.03	136.84	3,738.5	-456.3	427.9	491.2	0.00	0.00	0.00
3,900.0	12.03	136.84	3,836.3	-471.5	442.2	507.6	0.00	0.00	0.00
4,000.0	12.03	136.84	3,934.1	-486.8	456.4	524.0	0.00	0.00	0.00
4,100.0	12.03	136.84	4,031.9	-502.0	470.7	540.3	0.00	0.00	0.00
4,200.0	12.03	136.84	4,129.7	-517.2	485.0	556.7	0.00	0.00	0.00
4,300.0	12.03	136.84	4,227.5	-532.4	499.2	573.1	0.00	0.00	0.00
4,400.0	12.03	136.84	4,325.3	-547.6	513.5	589.5	0.00	0.00	0.00
4,500.0	12.03	136.84	4,423.1	-562.8	527.8	605.8	0.00	0.00	0.00
4,530.6	12.03	136.84	4,453.0	-567.4	532.1	610.8	0.00	0.00	0.00

COMPASS 2003.21 Build 46

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)	
8,800.0	90.46	183.59	6,398.2	-3,350.8	663.2	3,395.2	0.00	0.00	0.00	
8,900.0	90.46	183.59	6,397.4	-3,450.6	656.9	3,494.1	0.00	0.00	0.00	
9,000.0	90.46	183.59	6,396.6	-3,550.4	650.6	3,593.0	0.00	0.00	0.00	
9,100.0	90.46	183.59	6,395.8	-3,650.2	644.4	3,691.9	0.00	0.00	0.00	
9,200.0	90.46	183.59	6,395.0	-3,750.0	638.1	3,790.8	0.00	0.00	0.00	
9,300.0	90.46	183.59	6,394.2	-3,849.8	631.8	3,889.7	0.00	0.00	0.00	
9,400.0	90.46	183.59	6,393.4	-3,949.6	625.6	3,988.6	0.00	0.00	0.00	
9,500.0	90.46	183.59	6,392.6	-4,049.4	619.3	4,087.5	0.00	0.00	0.00	
9,600.0	90.46	183.59	6,391.8	-4,149.2	613.1	4,186.4	0.00	0.00	0.00	
9,700.0	90.46	183.59	6,391.0	-4,249.0	606.8	4,285.3	0.00	0.00	0.00	
9,800.0	90.46	183.59	6,390.2	-4,348.8	600.5	4,384.2	0.00	0.00	0.00	
9,900.0	90.46	183.59	6,389.4	-4,448.6	594.3	4,483.1	0.00	0.00	0.00	
10,000.0	90.46	183.59	6,388.6	-4,548.4	588.0	4,582.0	0.00	0.00	0.00	
10,100.0	90.46	183.59	6,387.8	-4,648.2	581.7	4,680.9	0.00	0.00	0.00	
10,200.0	90.46	183.59	6,387.1	-4,748.0	575.5	4,779.8	0.00	0.00	0.00	
10,300.0	90.46	183.59	6,386.3	-4,847.8	569.2	4,878.7	0.00	0.00	0.00	
10,400.0	90.46	183.59	6,385.5	-4,947.6	563.0	4,977.6	0.00	0.00	0.00	
10,500.0	90.46	183.59	6,384.7	-5,047.4	556.7	5,076.5	0.00	0.00	0.00	
10,600.0	90.46	183.59	6,383.9	-5,147.2	550.4	5,175.4	0.00	0.00	0.00	
10,700.0	90.46	183.59	6,383.1	-5,247.0	544.2	5,274.3	0.00	0.00	0.00	
10,800.0	90.46	183.59	6,382.3	-5,346.8	537.9	5,373.2	0.00	0.00	0.00	
10,900.0	90.46	183.59	6,381.5	-5,446.6	531.6	5,472.1	0.00	0.00	0.00	
11,000.0	90.46	183.59	6,380.7	-5,546.4	525.4	5,571.0	0.00	0.00	0.00	
11,100.0	90.46	183.59	6,379.9	-5,646.2	519.1	5,669.9	0.00	0.00	0.00	
11,200.0	90.46	183.59	6,379.1	-5,746.0	512.9	5,768.8	0.00	0.00	0.00	
11,300.0	90.46	183.59	6,378.3	-5,845.8	506.6	5,867.7	0.00	0.00	0.00	
11,336.6	90.46	183.59	6,378.0	-5,882.3	504.3	5,903.9	0.00	0.00	0.00	
TD at 11336.6 - BHL 460'FSL, 2561'FWL, SEC.25										

Casing Points						
	Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (")	Hole Diameter (")
	6,942.5	6,413.0	7"		7	7-1/2

<b>Database:</b>	EDMNEW	<b>Local Co-ordinate Reference:</b>	Well Terrell 25-761-0460AH
<b>Company:</b>	Caerus Oil and Gas LLC	<b>TVD Reference:</b>	WELL @ 5048.0ft (RKB - 30')
<b>Project:</b>	SEC.24-T7N-R61W	<b>MD Reference:</b>	WELL @ 5048.0ft (RKB - 30')
<b>Site:</b>	Terrell N 24 761 Pad Sec.24-T7N-R61W	<b>North Reference:</b>	True
<b>Well:</b>	Terrell 25-761-0460AH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (7-07-15)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,513.2	3,458.0	Richard_SD				
4,530.6	4,453.0	Sussex				
6,461.7	6,263.0	Sharon Springs				
6,665.8	6,363.0	Niobrara		0.00		
6,745.7	6,388.0	NBRR_A		0.00		
6,942.5	6,413.0	NBRR_A_Marl		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
200.0	200.0	0.0	0.0	KOP - Start Build 1.00	
1,403.4	1,394.6	-91.9	86.1	Start 4511.1 hold at 1403.4 MD	
5,914.5	5,806.5	-777.9	729.5	Start DLS 8.00 TFO 47.31	
6,942.5	6,413.0	-1,497.0	779.5	Start 4394.1 hold at 6942.5 MD	
11,336.6	6,378.0	-5,882.3	504.3	TD at 11336.6	