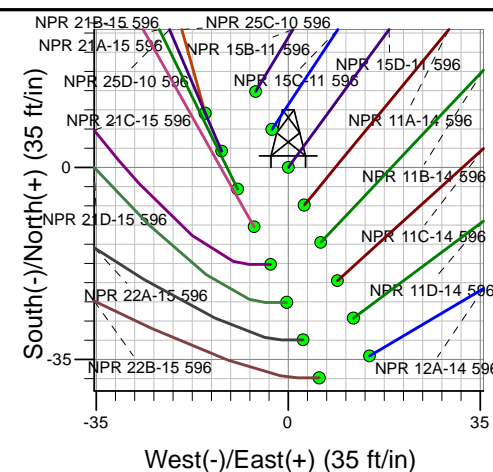
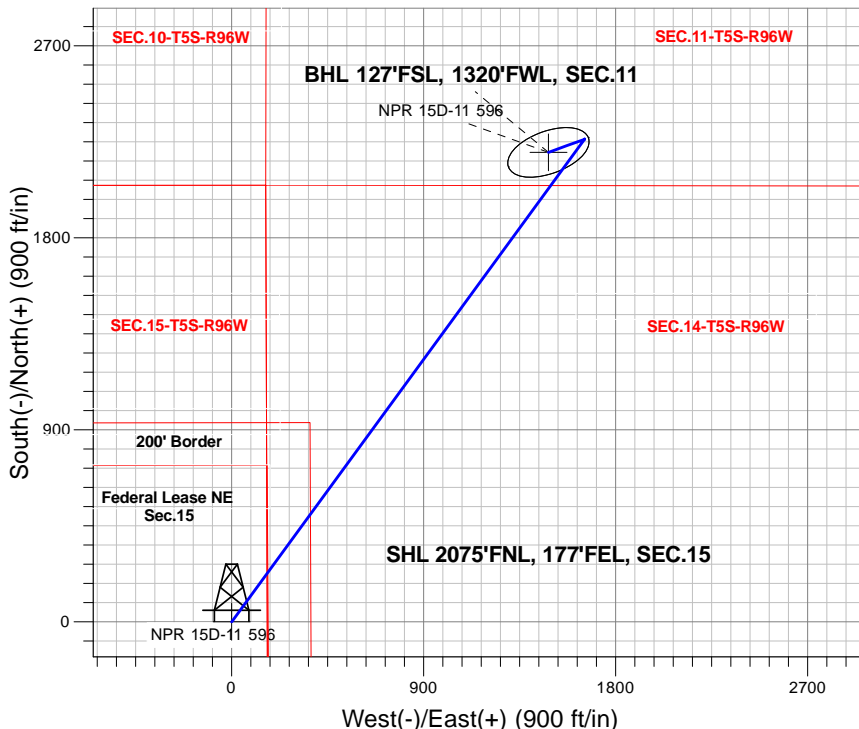


Caerus Oil and Gas LLC



NPR 15D-11 596
 Plan #1 (11-30-17)
 13:40, December 18 2017



Azimuths to True North
 Magnetic North: 9.63°

Magnetic Field
 Strength: 51521.1snT
 Dip Angle: 65.85°
 Date: 12/18/2017
 Model: HDGM

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
SHL 2075'FNL, 177'FEL, SEC.15	1.0	0.0	0.0	39.616662	-108.146071	Point
BHL 127'FSL, 1320'FWL, SEC.11	9417.0	2200.1	1484.1	39.622702	-108.140803	Ellipse (Radii: L200.0 W100.0)

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	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	1454.2	31.63	36.18	1401.5	229.0	167.4	3.00	36.18	283.5	
4	5716.2	31.63	36.18	5030.5	2033.0	1486.7	0.00	0.00	2516.8	
5	6770.4	0.00	0.00	6032.0	2262.0	1654.1	3.00	180.00	2800.2	
6	7091.5	3.21	250.00	6352.9	2258.9	1645.7	1.00	250.00	2792.9	
7	10160.4	3.21	250.00	9417.0	2200.1	1484.1	0.00	0.00	2653.9	BHL 127'FSL, 1320'FWL, SEC.11



Caerus Oil and Gas LLC

SEC.15-T5S-R96W

NPR H15 596 South Pad Sec.15-T5S-R96W

NPR 15D-11 596

Wellbore #1

Plan: Plan #1 (11-30-17)

Standard Planning Report

18 December, 2017

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 15D-11 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 6453.0ft (Original Well Elev)
Project:	SEC.15-T5S-R96W	MD Reference:	WELL @ 6453.0ft (Original Well Elev)
Site:	NPR H15 596 South Pad Sec.15-T5S-R96W	North Reference:	True
Well:	NPR 15D-11 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-30-17)		

Project	SEC.15-T5S-R96W, Garfield County, CO		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		Using Well Reference Point
Map Zone:	Zone 12N (114 W to 108 W)		Using geodetic scale factor

Site		NPR H15 596 South Pad Sec.15-T5S-R96W			
Site Position:		Northing:	14,399,246.79 usft	Latitude:	39.616700
From:	Lat/Long	Easting:	2,444,190.74 usft	Longitude:	-108.146093
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	1.82

Well	NPR 15D-11 596					
Well Position	+N/-S	-13.8 ft	Northing:	14,399,233.18 usft	Latitude:	39.616662
	+E/-W	5.9 ft	Easting:	2,444,197.12 usft	Longitude:	-108.146071
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	6,429.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/18/2017	9.63	65.85	51,521

Design	Plan #1 (11-30-17)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	34.00

Plan Sections										
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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,454.2	31.63	36.18	1,401.5	229.0	167.4	3.00	3.00	0.00	36.18	
5,716.2	31.63	36.18	5,030.5	2,033.0	1,486.7	0.00	0.00	0.00	0.00	
6,770.4	0.00	0.00	6,032.0	2,262.0	1,654.1	3.00	-3.00	0.00	180.00	
7,091.5	3.21	250.00	6,352.9	2,258.9	1,645.7	1.00	1.00	-34.26	250.00	
10,160.4	3.21	250.00	9,417.0	2,200.1	1,484.1	0.00	0.00	0.00	0.00	BHL 127°FSL, 1320°F

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 15D-11 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 6453.0ft (Original Well Elev)
Project:	SEC.15-T5S-R96W	MD Reference:	WELL @ 6453.0ft (Original Well Elev)
Site:	NPR H15 596 South Pad Sec.15-T5S-R96W	North Reference:	True
Well:	NPR 15D-11 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-30-17)		

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)
0.0	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
SHL 2075'FNL, 177'FEL, SEC.15									
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
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	3.00	36.18	500.0	2.1	1.5	2.6	3.00	3.00	0.00
600.0	6.00	36.18	599.6	8.4	6.2	10.5	3.00	3.00	0.00
700.0	9.00	36.18	698.8	19.0	13.9	23.5	3.00	3.00	0.00
800.0	12.00	36.18	797.1	33.7	24.6	41.7	3.00	3.00	0.00
900.0	15.00	36.18	894.3	52.5	38.4	65.0	3.00	3.00	0.00
1,000.0	18.00	36.18	990.2	75.5	55.2	93.4	3.00	3.00	0.00
1,085.6	20.57	36.18	1,071.0	98.3	71.9	121.7	3.00	3.00	0.00
WASATCH.NPC									
1,100.0	21.00	36.18	1,084.4	102.4	74.9	126.8	3.00	3.00	0.00
1,200.0	24.00	36.18	1,176.8	133.3	97.5	165.0	3.00	3.00	0.00
1,300.0	27.00	36.18	1,267.1	168.0	122.9	208.0	3.00	3.00	0.00
1,400.0	30.00	36.18	1,354.9	206.5	151.0	255.7	3.00	3.00	0.00
1,454.2	31.63	36.18	1,401.5	229.0	167.4	283.5	3.00	3.00	0.00
1,500.0	31.63	36.18	1,440.5	248.3	181.6	307.4	0.00	0.00	0.00
1,600.0	31.63	36.18	1,525.6	290.7	212.6	359.8	0.00	0.00	0.00
1,700.0	31.63	36.18	1,610.8	333.0	243.5	412.2	0.00	0.00	0.00
1,800.0	31.63	36.18	1,695.9	375.3	274.5	464.6	0.00	0.00	0.00
1,900.0	31.63	36.18	1,781.1	417.7	305.4	517.0	0.00	0.00	0.00
2,000.0	31.63	36.18	1,866.2	460.0	336.4	569.4	0.00	0.00	0.00
2,100.0	31.63	36.18	1,951.4	502.3	367.3	621.8	0.00	0.00	0.00
2,200.0	31.63	36.18	2,036.5	544.6	398.3	674.2	0.00	0.00	0.00
2,300.0	31.63	36.18	2,121.7	587.0	429.2	726.6	0.00	0.00	0.00
2,400.0	31.63	36.18	2,206.8	629.3	460.2	779.0	0.00	0.00	0.00
2,500.0	31.63	36.18	2,292.0	671.6	491.1	831.4	0.00	0.00	0.00
2,600.0	31.63	36.18	2,377.1	714.0	522.1	883.8	0.00	0.00	0.00
2,700.0	31.63	36.18	2,462.2	756.3	553.0	936.2	0.00	0.00	0.00
2,744.3	31.63	36.18	2,500.0	775.0	566.8	959.5	0.00	0.00	0.00
9 5/8"									
2,800.0	31.63	36.18	2,547.4	798.6	584.0	988.6	0.00	0.00	0.00
2,900.0	31.63	36.18	2,632.5	840.9	614.9	1,041.0	0.00	0.00	0.00
3,000.0	31.63	36.18	2,717.7	883.3	645.9	1,093.4	0.00	0.00	0.00
3,100.0	31.63	36.18	2,802.8	925.6	676.9	1,145.8	0.00	0.00	0.00
3,200.0	31.63	36.18	2,888.0	967.9	707.8	1,198.2	0.00	0.00	0.00
3,300.0	31.63	36.18	2,973.1	1,010.3	738.8	1,250.7	0.00	0.00	0.00
3,400.0	31.63	36.18	3,058.3	1,052.6	769.7	1,303.1	0.00	0.00	0.00
3,500.0	31.63	36.18	3,143.4	1,094.9	800.7	1,355.5	0.00	0.00	0.00
3,600.0	31.63	36.18	3,228.6	1,137.2	831.6	1,407.9	0.00	0.00	0.00
3,700.0	31.63	36.18	3,313.7	1,179.6	862.6	1,460.3	0.00	0.00	0.00
3,800.0	31.63	36.18	3,398.9	1,221.9	893.5	1,512.7	0.00	0.00	0.00
3,884.7	31.63	36.18	3,471.0	1,257.8	919.7	1,557.0	0.00	0.00	0.00
WASATCH_G.NPC									
3,900.0	31.63	36.18	3,484.0	1,264.2	924.5	1,565.1	0.00	0.00	0.00
4,000.0	31.63	36.18	3,569.2	1,306.6	955.4	1,617.5	0.00	0.00	0.00
4,100.0	31.63	36.18	3,654.3	1,348.9	986.4	1,669.9	0.00	0.00	0.00
4,200.0	31.63	36.18	3,739.5	1,391.2	1,017.3	1,722.3	0.00	0.00	0.00
4,300.0	31.63	36.18	3,824.6	1,433.5	1,048.3	1,774.7	0.00	0.00	0.00
4,351.0	31.63	36.18	3,868.0	1,455.1	1,064.1	1,801.4	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 15D-11 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 6453.0ft (Original Well Elev)
Project:	SEC.15-T5S-R96W	MD Reference:	WELL @ 6453.0ft (Original Well Elev)
Site:	NPR H15 596 South Pad Sec.15-T5S-R96W	North Reference:	True
Well:	NPR 15D-11 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-30-17)		

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)
FORT_UNION.NPC									
4,400.0	31.63	36.18	3,909.8	1,475.9	1,079.3	1,827.1	0.00	0.00	0.00
4,500.0	31.63	36.18	3,994.9	1,518.2	1,110.2	1,879.5	0.00	0.00	0.00
4,600.0	31.63	36.18	4,080.1	1,560.5	1,141.2	1,931.9	0.00	0.00	0.00
4,700.0	31.63	36.18	4,165.2	1,602.9	1,172.1	1,984.3	0.00	0.00	0.00
4,800.0	31.63	36.18	4,250.4	1,645.2	1,203.1	2,036.7	0.00	0.00	0.00
4,900.0	31.63	36.18	4,335.5	1,687.5	1,234.0	2,089.1	0.00	0.00	0.00
5,000.0	31.63	36.18	4,420.7	1,729.8	1,265.0	2,141.5	0.00	0.00	0.00
5,100.0	31.63	36.18	4,505.8	1,772.2	1,295.9	2,193.9	0.00	0.00	0.00
5,200.0	31.63	36.18	4,590.9	1,814.5	1,326.9	2,246.3	0.00	0.00	0.00
5,300.0	31.63	36.18	4,676.1	1,856.8	1,357.8	2,298.7	0.00	0.00	0.00
5,400.0	31.63	36.18	4,761.2	1,899.2	1,388.8	2,351.1	0.00	0.00	0.00
5,500.0	31.63	36.18	4,846.4	1,941.5	1,419.7	2,403.5	0.00	0.00	0.00
5,600.0	31.63	36.18	4,931.5	1,983.8	1,450.7	2,455.9	0.00	0.00	0.00
5,700.0	31.63	36.18	5,016.7	2,026.1	1,481.6	2,508.3	0.00	0.00	0.00
5,716.2	31.63	36.18	5,030.5	2,033.0	1,486.7	2,516.8	0.00	0.00	0.00
5,800.0	29.11	36.18	5,102.8	2,067.2	1,511.7	2,559.1	3.00	-3.00	0.00
5,900.0	26.11	36.18	5,191.4	2,104.6	1,539.0	2,605.4	3.00	-3.00	0.00
6,000.0	23.11	36.18	5,282.3	2,138.2	1,563.6	2,647.0	3.00	-3.00	0.00
6,100.0	20.11	36.18	5,375.2	2,168.0	1,585.3	2,683.8	3.00	-3.00	0.00
6,200.0	17.11	36.18	5,470.0	2,193.7	1,604.2	2,715.7	3.00	-3.00	0.00
6,300.0	14.11	36.18	5,566.3	2,215.4	1,620.1	2,742.6	3.00	-3.00	0.00
6,400.0	11.11	36.18	5,663.9	2,233.1	1,633.0	2,764.4	3.00	-3.00	0.00
6,500.0	8.11	36.18	5,762.5	2,246.5	1,642.8	2,781.1	3.00	-3.00	0.00
6,592.2	5.35	36.18	5,854.0	2,255.3	1,649.2	2,791.9	3.00	-3.00	0.00
OHIO_CREEK.MBL									
6,600.0	5.11	36.18	5,861.8	2,255.8	1,649.6	2,792.6	3.00	-3.00	0.00
6,700.0	2.11	36.18	5,961.6	2,260.9	1,653.3	2,798.9	3.00	-3.00	0.00
6,770.4	0.00	0.00	6,032.0	2,262.0	1,654.1	2,800.2	3.00	-3.00	0.00
6,800.0	0.30	250.00	6,061.6	2,261.9	1,654.0	2,800.2	1.00	1.00	0.00
6,820.5	0.50	250.00	6,082.0	2,261.9	1,653.9	2,800.0	1.00	1.00	0.00
WILLIAMS_FORK.MBL									
6,870.5	1.00	250.00	6,132.0	2,261.7	1,653.3	2,799.5	1.00	1.00	0.00
TOP_GAS.MBL									
6,900.0	1.30	250.00	6,161.5	2,261.5	1,652.7	2,799.0	1.00	1.00	0.00
7,000.0	2.30	250.00	6,261.5	2,260.4	1,649.8	2,796.5	1.00	1.00	0.00
7,091.5	3.21	250.00	6,352.9	2,258.9	1,645.7	2,792.9	1.00	1.00	0.00
7,100.0	3.21	250.00	6,361.4	2,258.7	1,645.2	2,792.6	0.00	0.00	0.00
7,200.0	3.21	250.00	6,461.2	2,256.8	1,639.9	2,788.0	0.00	0.00	0.00
7,300.0	3.21	250.00	6,561.1	2,254.9	1,634.7	2,783.5	0.00	0.00	0.00
7,400.0	3.21	250.00	6,660.9	2,253.0	1,629.4	2,779.0	0.00	0.00	0.00
7,500.0	3.21	250.00	6,760.7	2,251.1	1,624.2	2,774.4	0.00	0.00	0.00
7,600.0	3.21	250.00	6,860.6	2,249.2	1,618.9	2,769.9	0.00	0.00	0.00
7,700.0	3.21	250.00	6,960.4	2,247.2	1,613.6	2,765.4	0.00	0.00	0.00
7,800.0	3.21	250.00	7,060.3	2,245.3	1,608.4	2,760.8	0.00	0.00	0.00
7,900.0	3.21	250.00	7,160.1	2,243.4	1,603.1	2,756.3	0.00	0.00	0.00
8,000.0	3.21	250.00	7,260.0	2,241.5	1,597.8	2,751.8	0.00	0.00	0.00
8,100.0	3.21	250.00	7,359.8	2,239.6	1,592.6	2,747.3	0.00	0.00	0.00
8,200.0	3.21	250.00	7,459.6	2,237.7	1,587.3	2,742.7	0.00	0.00	0.00
8,300.0	3.21	250.00	7,559.5	2,235.7	1,582.1	2,738.2	0.00	0.00	0.00
8,400.0	3.21	250.00	7,659.3	2,233.8	1,576.8	2,733.7	0.00	0.00	0.00
8,500.0	3.21	250.00	7,759.2	2,231.9	1,571.5	2,729.1	0.00	0.00	0.00
8,600.0	3.21	250.00	7,859.0	2,230.0	1,566.3	2,724.6	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 15D-11 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 6453.0ft (Original Well Elev)
Project:	SEC.15-T5S-R96W	MD Reference:	WELL @ 6453.0ft (Original Well Elev)
Site:	NPR H15 596 South Pad Sec.15-T5S-R96W	North Reference:	True
Well:	NPR 15D-11 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-30-17)		

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)
8,700.0	3.21	250.00	7,958.9	2,228.1	1,561.0	2,720.1	0.00	0.00	0.00
8,800.0	3.21	250.00	8,058.7	2,226.2	1,555.7	2,715.5	0.00	0.00	0.00
8,900.0	3.21	250.00	8,158.5	2,224.3	1,550.5	2,711.0	0.00	0.00	0.00
9,000.0	3.21	250.00	8,258.4	2,222.3	1,545.2	2,706.5	0.00	0.00	0.00
9,100.0	3.21	250.00	8,358.2	2,220.4	1,540.0	2,701.9	0.00	0.00	0.00
9,200.0	3.21	250.00	8,458.1	2,218.5	1,534.7	2,697.4	0.00	0.00	0.00
9,300.0	3.21	250.00	8,557.9	2,216.6	1,529.4	2,692.9	0.00	0.00	0.00
9,364.2	3.21	250.00	8,622.0	2,215.4	1,526.0	2,690.0	0.00	0.00	0.00
CAMEO.MBL									
9,400.0	3.21	250.00	8,657.8	2,214.7	1,524.2	2,688.4	0.00	0.00	0.00
9,500.0	3.21	250.00	8,757.6	2,212.8	1,518.9	2,683.8	0.00	0.00	0.00
9,600.0	3.21	250.00	8,857.4	2,210.9	1,513.6	2,679.3	0.00	0.00	0.00
9,700.0	3.21	250.00	8,957.3	2,208.9	1,508.4	2,674.8	0.00	0.00	0.00
9,800.0	3.21	250.00	9,057.1	2,207.0	1,503.1	2,670.2	0.00	0.00	0.00
9,900.0	3.21	250.00	9,157.0	2,205.1	1,497.9	2,665.7	0.00	0.00	0.00
9,985.2	3.21	250.00	9,242.0	2,203.5	1,493.4	2,661.8	0.00	0.00	0.00
ROLLINS.MBL									
10,000.0	3.21	250.00	9,256.8	2,203.2	1,492.6	2,661.2	0.00	0.00	0.00
10,100.0	3.21	250.00	9,356.7	2,201.3	1,487.3	2,656.6	0.00	0.00	0.00
10,160.4	3.21	250.00	9,417.0	2,200.1	1,484.1	2,653.9	0.00	0.00	0.00
TD.MBL - BHL 127'FSL, 1320'FWL, SEC.11									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL 2075'FNL, 177'FEL - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	14,399,233.18	2,444,197.12	39.616662	-108.146071
BHL 127'FSL, 1320'FWL - plan hits target center - Ellipse (radii L200.0 W100.0 on 250.00 azi)	0.00	0.00	9,417.0	2,200.1	1,484.1	14,401,480.10	2,445,611.09	39.622702	-108.140803

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
2,744.3	2,500.0	9 5/8"	9-5/8	12-1/4	

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 15D-11 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 6453.0ft (Original Well Elev)
Project:	SEC.15-T5S-R96W	MD Reference:	WELL @ 6453.0ft (Original Well Elev)
Site:	NPR H15 596 South Pad Sec.15-T5S-R96W	North Reference:	True
Well:	NPR 15D-11 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-30-17)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,085.6	1,071.0	WASATCH.NPC		0.00		
3,884.7	3,471.0	WASATCH_G.NPC		0.00		
4,351.0	3,868.0	FORT_UNION.NPC		0.00		
6,592.2	5,854.0	OHIO_CREEK.MBL		0.00		
6,820.5	6,082.0	WILLIAMS_FORK.MBL		0.00		
6,870.5	6,132.0	TOP_GAS.MBL		0.00		
9,364.2	8,622.0	CAMEO.MBL		0.00		
9,985.2	9,242.0	ROLLINS.MBL		0.00		
10,160.4	9,417.0	TD.MBL		0.00		