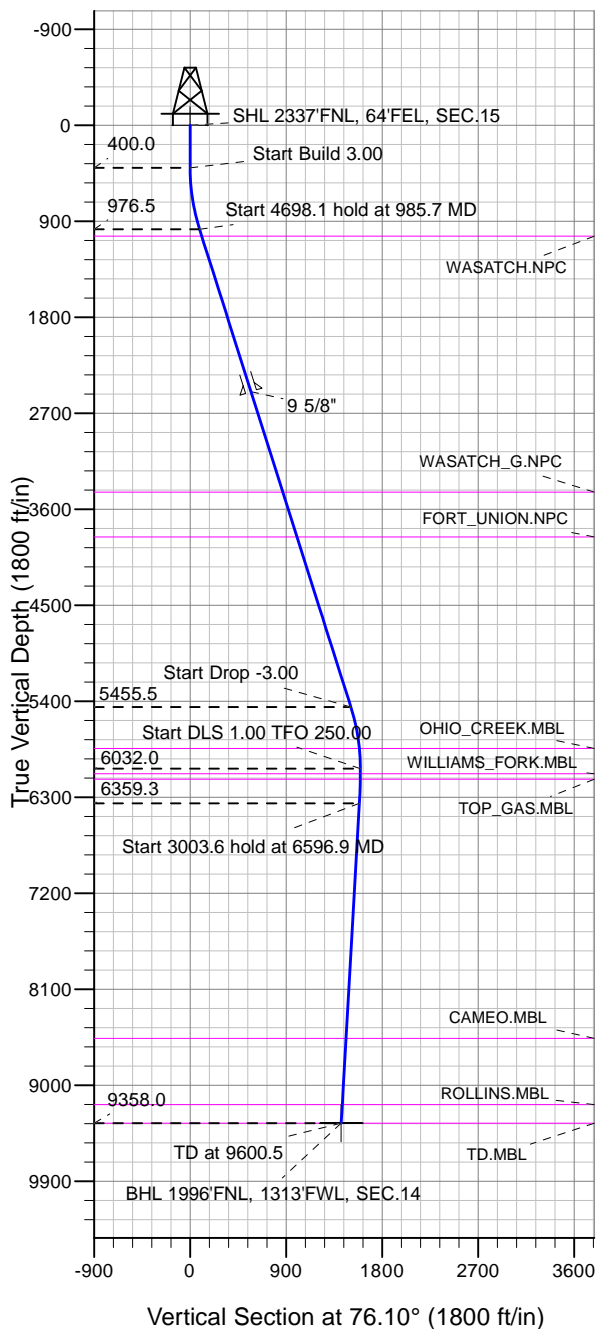
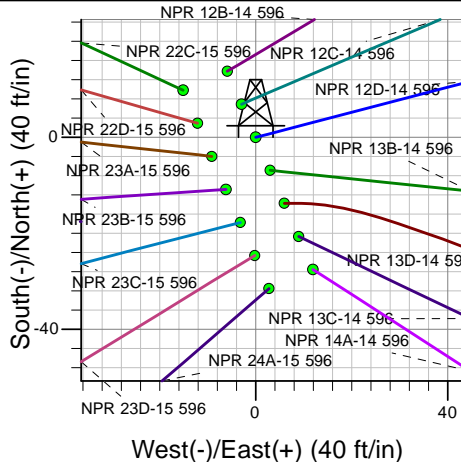
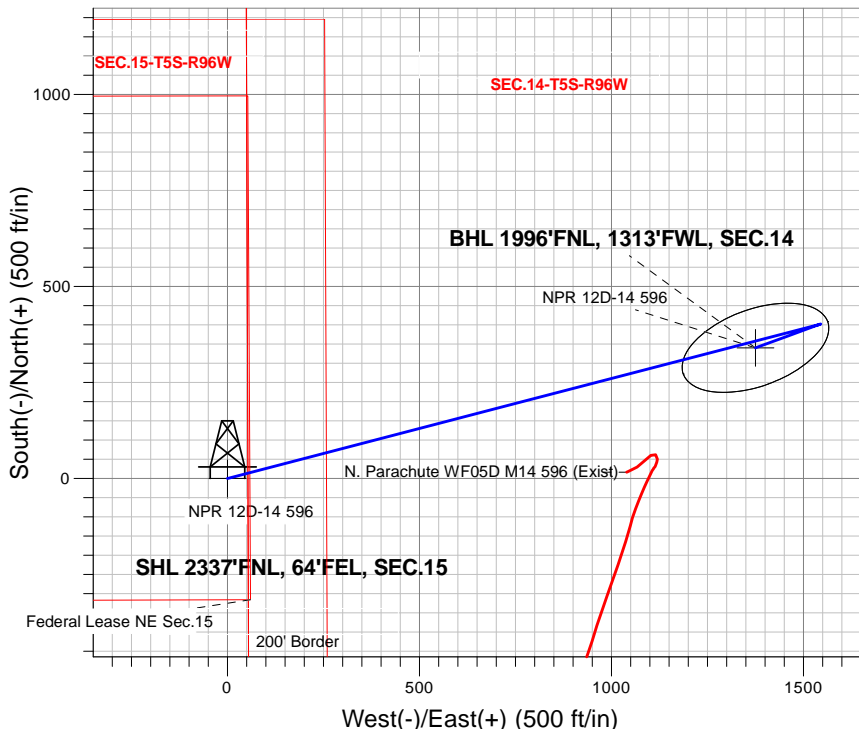


Well Name: **NPR 12D-14 596**  
 Surface Location: NPR H15 596 North Pad Sec.15-T5S-R96W  
 NAD 1927 - Western US , Universal Transverse Mercator (US Survey Feet)  
 Zone 12N (114 W to 108 W)  
 Ground Elevation: 6429.0  
 +N/-S+E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 14398974.24 2444319.04 39.615941 -108.145668  
 Original Well Elev WELL @ 6453.0ft (Original Well Elev)



### Caerus Oil and Gas LLC



NPR 12D-14 596  
 Plan #1 (12-01-17)  
 9:26, December 15 2017



Azimuths to True North  
 Magnetic North: 9.63°  
 Magnetic Field  
 Strength: 51522.3snT  
 Dip Angle: 65.85°  
 Date: 12/15/2017  
 Model: HDGM

#### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
SHL 2337'FNL, 64'FEL, SEC.15	1.0	0.0	0.0	39.615941	-108.145668	Point
BHL 1996'FNL, 1313'FWL, SEC.14	9358.0	340.2	1375.0	39.616875	-108.140787	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	985.7	17.57	75.41	976.5	22.4	86.2	3.00	75.41	89.1	
4	5683.8	17.57	75.41	5455.5	379.6	1458.8	0.00	0.00	1507.2	
5	6269.5	0.00	0.00	6032.0	402.1	1545.0	3.00	180.00	1596.3	
6	6596.9	3.27	250.00	6359.3	398.9	1536.2	1.00	250.00	1587.0	
7	9600.5	3.27	250.00	9358.0	340.2	1375.0	0.00	0.00	1416.4	BHL 1996'FNL, 1313'FWL, SEC.14



## **Caerus Oil and Gas LLC**

**SEC.15-T5S-R96W**

**NPR H15 596 North Pad Sec.15-T5S-R96W**

**NPR 12D-14 596**

**Wellbore #1**

**Plan: Plan #1 (12-01-17)**

## **Standard Planning Report**

**15 December, 2017**

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well NPR 12D-14 596
<b>Company:</b>	Caerus Oil and Gas LLC	<b>TVD Reference:</b>	WELL @ 6453.0ft (Original Well Elev)
<b>Project:</b>	SEC.15-T5S-R96W	<b>MD Reference:</b>	WELL @ 6453.0ft (Original Well Elev)
<b>Site:</b>	NPR H15 596 North Pad Sec.15-T5S-R96W	<b>North Reference:</b>	True
<b>Well:</b>	NPR 12D-14 596	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (12-01-17)		

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

<b>Site</b>	NPR H15 596 North Pad Sec.15-T5S-R96W			
<b>Site Position:</b>		<b>Northing:</b>	14,398,987.82 usft	<b>Latitude:</b> 39.615979
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,444,312.67 usft	<b>Longitude:</b> -108.145689
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b> 1.82 °

Well	NPR 12D-14 596					
Well Position	+N/-S	-13.8 ft	Northing:	14,398,974.24 usft	Latitude:	39.615941
	+E/-W	5.9 ft	Easting:	2,444,319.05 usft	Longitude:	-108.145668
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	6,429.0 ft

<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>
	HDGM	12/15/2017	9.63	65.85	51,522

<b>Design</b>	Plan #1 (12-01-17)			
<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	76.10

<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
0.0	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	
985.7	17.57	75.41	976.5	22.4	86.2	3.00	3.00	0.00	75.41	
5,683.8	17.57	75.41	5,455.5	379.6	1,458.8	0.00	0.00	0.00	0.00	
6,269.5	0.00	0.00	6,032.0	402.1	1,545.0	3.00	-3.00	0.00	180.00	
6,596.9	3.27	250.00	6,359.3	398.9	1,536.2	1.00	1.00	-33.59	250.00	
9,600.5	3.27	250.00	9,358.0	340.2	1,375.0	0.00	0.00	0.00	0.00	BHL 1996°FNL, 1313'

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well NPR 12D-14 596
<b>Company:</b>	Caerus Oil and Gas LLC	<b>TVD Reference:</b>	WELL @ 6453.0ft (Original Well Elev)
<b>Project:</b>	SEC.15-T5S-R96W	<b>MD Reference:</b>	WELL @ 6453.0ft (Original Well Elev)
<b>Site:</b>	NPR H15 596 North Pad Sec.15-T5S-R96W	<b>North Reference:</b>	True
<b>Well:</b>	NPR 12D-14 596	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (12-01-17)		

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
<b>SHL 2337'FNL, 64'FEL, SEC.15</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
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	75.41	500.0	0.7	2.5	2.6	3.00	3.00	0.00
600.0	6.00	75.41	599.6	2.6	10.1	10.5	3.00	3.00	0.00
700.0	9.00	75.41	698.8	5.9	22.8	23.5	3.00	3.00	0.00
800.0	12.00	75.41	797.1	10.5	40.4	41.7	3.00	3.00	0.00
900.0	15.00	75.41	894.3	16.4	63.0	65.1	3.00	3.00	0.00
985.7	17.57	75.41	976.5	22.4	86.2	89.1	3.00	3.00	0.00
1,000.0	17.57	75.41	990.2	23.5	90.4	93.4	0.00	0.00	0.00
1,053.3	17.57	75.41	1,041.0	27.6	106.0	109.5	0.00	0.00	0.00
<b>WASATCH.NPC</b>									
1,100.0	17.57	75.41	1,085.5	31.1	119.6	123.6	0.00	0.00	0.00
1,200.0	17.57	75.41	1,180.9	38.7	148.8	153.8	0.00	0.00	0.00
1,300.0	17.57	75.41	1,276.2	46.3	178.1	184.0	0.00	0.00	0.00
1,400.0	17.57	75.41	1,371.5	53.9	207.3	214.2	0.00	0.00	0.00
1,500.0	17.57	75.41	1,466.9	61.5	236.5	244.3	0.00	0.00	0.00
1,600.0	17.57	75.41	1,562.2	69.1	265.7	274.5	0.00	0.00	0.00
1,700.0	17.57	75.41	1,657.5	76.7	294.9	304.7	0.00	0.00	0.00
1,800.0	17.57	75.41	1,752.9	84.4	324.1	334.9	0.00	0.00	0.00
1,900.0	17.57	75.41	1,848.2	92.0	353.3	365.1	0.00	0.00	0.00
2,000.0	17.57	75.41	1,943.5	99.6	382.6	395.3	0.00	0.00	0.00
2,100.0	17.57	75.41	2,038.9	107.2	411.8	425.5	0.00	0.00	0.00
2,200.0	17.57	75.41	2,134.2	114.8	441.0	455.6	0.00	0.00	0.00
2,300.0	17.57	75.41	2,229.5	122.4	470.2	485.8	0.00	0.00	0.00
2,400.0	17.57	75.41	2,324.9	130.0	499.4	516.0	0.00	0.00	0.00
2,500.0	17.57	75.41	2,420.2	137.6	528.6	546.2	0.00	0.00	0.00
2,583.7	17.57	75.41	2,500.0	143.9	553.1	571.5	0.00	0.00	0.00
<b>9 5/8"</b>									
2,600.0	17.57	75.41	2,515.5	145.2	557.9	576.4	0.00	0.00	0.00
2,700.0	17.57	75.41	2,610.9	152.8	587.1	606.6	0.00	0.00	0.00
2,800.0	17.57	75.41	2,706.2	160.4	616.3	636.8	0.00	0.00	0.00
2,900.0	17.57	75.41	2,801.6	168.0	645.5	666.9	0.00	0.00	0.00
3,000.0	17.57	75.41	2,896.9	175.6	674.7	697.1	0.00	0.00	0.00
3,100.0	17.57	75.41	2,992.2	183.2	703.9	727.3	0.00	0.00	0.00
3,200.0	17.57	75.41	3,087.6	190.8	733.1	757.5	0.00	0.00	0.00
3,300.0	17.57	75.41	3,182.9	198.4	762.4	787.7	0.00	0.00	0.00
3,400.0	17.57	75.41	3,278.2	206.0	791.6	817.9	0.00	0.00	0.00
3,500.0	17.57	75.41	3,373.6	213.6	820.8	848.1	0.00	0.00	0.00
3,570.7	17.57	75.41	3,441.0	219.0	841.5	869.4	0.00	0.00	0.00
<b>WASATCH_G.NPC</b>									
3,600.0	17.57	75.41	3,468.9	221.2	850.0	878.2	0.00	0.00	0.00
3,700.0	17.57	75.41	3,564.2	228.8	879.2	908.4	0.00	0.00	0.00
3,800.0	17.57	75.41	3,659.6	236.4	908.4	938.6	0.00	0.00	0.00
3,900.0	17.57	75.41	3,754.9	244.0	937.6	968.8	0.00	0.00	0.00
4,000.0	17.57	75.41	3,850.2	251.6	966.9	999.0	0.00	0.00	0.00
4,010.2	17.57	75.41	3,860.0	252.4	969.9	1,002.1	0.00	0.00	0.00
<b>FORT_UNION.NPC</b>									
4,100.0	17.57	75.41	3,945.6	259.2	996.1	1,029.2	0.00	0.00	0.00
4,200.0	17.57	75.41	4,040.9	266.8	1,025.3	1,059.4	0.00	0.00	0.00

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well NPR 12D-14 596
<b>Company:</b>	Caerus Oil and Gas LLC	<b>TVD Reference:</b>	WELL @ 6453.0ft (Original Well Elev)
<b>Project:</b>	SEC.15-T5S-R96W	<b>MD Reference:</b>	WELL @ 6453.0ft (Original Well Elev)
<b>Site:</b>	NPR H15 596 North Pad Sec.15-T5S-R96W	<b>North Reference:</b>	True
<b>Well:</b>	NPR 12D-14 596	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (12-01-17)		

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)
4,300.0	17.57	75.41	4,136.2	274.4	1,054.5	1,089.5	0.00	0.00	0.00
4,400.0	17.57	75.41	4,231.6	282.0	1,083.7	1,119.7	0.00	0.00	0.00
4,500.0	17.57	75.41	4,326.9	289.6	1,112.9	1,149.9	0.00	0.00	0.00
4,600.0	17.57	75.41	4,422.2	297.2	1,142.1	1,180.1	0.00	0.00	0.00
4,700.0	17.57	75.41	4,517.6	304.8	1,171.4	1,210.3	0.00	0.00	0.00
4,800.0	17.57	75.41	4,612.9	312.4	1,200.6	1,240.5	0.00	0.00	0.00
4,900.0	17.57	75.41	4,708.2	320.0	1,229.8	1,270.7	0.00	0.00	0.00
5,000.0	17.57	75.41	4,803.6	327.6	1,259.0	1,300.8	0.00	0.00	0.00
5,100.0	17.57	75.41	4,898.9	335.2	1,288.2	1,331.0	0.00	0.00	0.00
5,200.0	17.57	75.41	4,994.2	342.8	1,317.4	1,361.2	0.00	0.00	0.00
5,300.0	17.57	75.41	5,089.6	350.5	1,346.7	1,391.4	0.00	0.00	0.00
5,400.0	17.57	75.41	5,184.9	358.1	1,375.9	1,421.6	0.00	0.00	0.00
5,500.0	17.57	75.41	5,280.3	365.7	1,405.1	1,451.8	0.00	0.00	0.00
5,600.0	17.57	75.41	5,375.6	373.3	1,434.3	1,482.0	0.00	0.00	0.00
5,683.8	17.57	75.41	5,455.5	379.6	1,458.8	1,507.2	0.00	0.00	0.00
5,700.0	17.08	75.41	5,470.9	380.8	1,463.4	1,512.1	3.00	-3.00	0.00
5,800.0	14.08	75.41	5,567.3	387.6	1,489.4	1,538.9	3.00	-3.00	0.00
5,900.0	11.08	75.41	5,664.8	393.1	1,510.5	1,560.7	3.00	-3.00	0.00
6,000.0	8.08	75.41	5,763.4	397.3	1,526.6	1,577.4	3.00	-3.00	0.00
6,081.2	5.65	75.41	5,844.0	399.7	1,536.0	1,587.1	3.00	-3.00	0.00
<b>OHIO_CREEK.MBL</b>									
6,100.0	5.08	75.41	5,862.8	400.2	1,537.7	1,588.8	3.00	-3.00	0.00
6,200.0	2.08	75.41	5,962.6	401.8	1,543.8	1,595.1	3.00	-3.00	0.00
6,269.5	0.00	0.00	6,032.0	402.1	1,545.0	1,596.3	3.00	-3.00	0.00
6,300.0	0.31	250.00	6,062.5	402.0	1,544.9	1,596.3	1.00	1.00	0.00
6,319.5	0.50	250.00	6,082.0	402.0	1,544.8	1,596.1	1.00	1.00	0.00
<b>WILLIAMS_FORK.MBL</b>									
6,369.5	1.00	250.00	6,132.0	401.8	1,544.2	1,595.5	1.00	1.00	0.00
<b>TOP_GAS.MBL</b>									
6,400.0	1.31	250.00	6,162.5	401.6	1,543.6	1,594.9	1.00	1.00	0.00
6,500.0	2.31	250.00	6,262.5	400.5	1,540.6	1,591.7	1.00	1.00	0.00
6,596.9	3.27	250.00	6,359.3	398.9	1,536.2	1,587.0	1.00	1.00	0.00
6,600.0	3.27	250.00	6,362.4	398.8	1,536.0	1,586.9	0.00	0.00	0.00
6,700.0	3.27	250.00	6,462.2	396.9	1,530.7	1,581.2	0.00	0.00	0.00
6,800.0	3.27	250.00	6,562.0	394.9	1,525.3	1,575.5	0.00	0.00	0.00
6,900.0	3.27	250.00	6,661.9	392.9	1,519.9	1,569.8	0.00	0.00	0.00
7,000.0	3.27	250.00	6,761.7	391.0	1,514.6	1,564.1	0.00	0.00	0.00
7,100.0	3.27	250.00	6,861.5	389.0	1,509.2	1,558.5	0.00	0.00	0.00
7,200.0	3.27	250.00	6,961.4	387.1	1,503.8	1,552.8	0.00	0.00	0.00
7,300.0	3.27	250.00	7,061.2	385.1	1,498.5	1,547.1	0.00	0.00	0.00
7,400.0	3.27	250.00	7,161.1	383.2	1,493.1	1,541.4	0.00	0.00	0.00
7,500.0	3.27	250.00	7,260.9	381.2	1,487.7	1,535.7	0.00	0.00	0.00
7,600.0	3.27	250.00	7,360.7	379.3	1,482.4	1,530.1	0.00	0.00	0.00
7,700.0	3.27	250.00	7,460.6	377.3	1,477.0	1,524.4	0.00	0.00	0.00
7,800.0	3.27	250.00	7,560.4	375.4	1,471.6	1,518.7	0.00	0.00	0.00
7,900.0	3.27	250.00	7,660.2	373.4	1,466.3	1,513.0	0.00	0.00	0.00
8,000.0	3.27	250.00	7,760.1	371.5	1,460.9	1,507.4	0.00	0.00	0.00
8,100.0	3.27	250.00	7,859.9	369.5	1,455.5	1,501.7	0.00	0.00	0.00
8,200.0	3.27	250.00	7,959.7	367.5	1,450.2	1,496.0	0.00	0.00	0.00
8,300.0	3.27	250.00	8,059.6	365.6	1,444.8	1,490.3	0.00	0.00	0.00
8,400.0	3.27	250.00	8,159.4	363.6	1,439.4	1,484.6	0.00	0.00	0.00
8,500.0	3.27	250.00	8,259.3	361.7	1,434.1	1,479.0	0.00	0.00	0.00
8,600.0	3.27	250.00	8,359.1	359.7	1,428.7	1,473.3	0.00	0.00	0.00

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well NPR 12D-14 596
<b>Company:</b>	Caerus Oil and Gas LLC	<b>TVD Reference:</b>	WELL @ 6453.0ft (Original Well Elev)
<b>Project:</b>	SEC.15-T5S-R96W	<b>MD Reference:</b>	WELL @ 6453.0ft (Original Well Elev)
<b>Site:</b>	NPR H15 596 North Pad Sec.15-T5S-R96W	<b>North Reference:</b>	True
<b>Well:</b>	NPR 12D-14 596	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (12-01-17)		

### Planned Survey

[illegible]

## 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 2337'FNL, 64'FEL, - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	14,398,974.24	2,444,319.05	39.615941	-108.145668
BHL 1996'FNL, 1313'FW - plan hits target center - Ellipse (radii L200.0 W100.0 on 250.00 azi)	0.00	0.00	9,358.0	340.2	1,375.0	14,399,358.07	2,445,682.99	39.616875	-108.140788

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
2,583.7	2,500.0	9 5/8"	9-5/8	12-1/4

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well NPR 12D-14 596
<b>Company:</b>	Caerus Oil and Gas LLC	<b>TVD Reference:</b>	WELL @ 6453.0ft (Original Well Elev)
<b>Project:</b>	SEC.15-T5S-R96W	<b>MD Reference:</b>	WELL @ 6453.0ft (Original Well Elev)
<b>Site:</b>	NPR H15 596 North Pad Sec.15-T5S-R96W	<b>North Reference:</b>	True
<b>Well:</b>	NPR 12D-14 596	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (12-01-17)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,053.3	1,041.0	WASATCH.NPC		0.00		
3,570.7	3,441.0	WASATCH_G.NPC		0.00		
4,010.2	3,860.0	FORT_UNION.NPC		0.00		
6,081.2	5,844.0	OHIO_CREEK.MBL		0.00		
6,319.5	6,082.0	WILLIAMS_FORK.MBL		0.00		
6,369.5	6,132.0	TOP_GAS.MBL		0.00		
8,803.2	8,562.0	CAMEO.MBL		0.00		
9,424.3	9,182.0	ROLLINS.MBL		0.00		
9,600.5	9,358.0	TD.MBL		0.00		