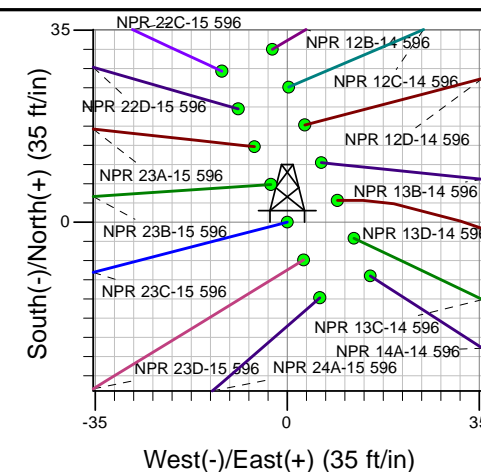
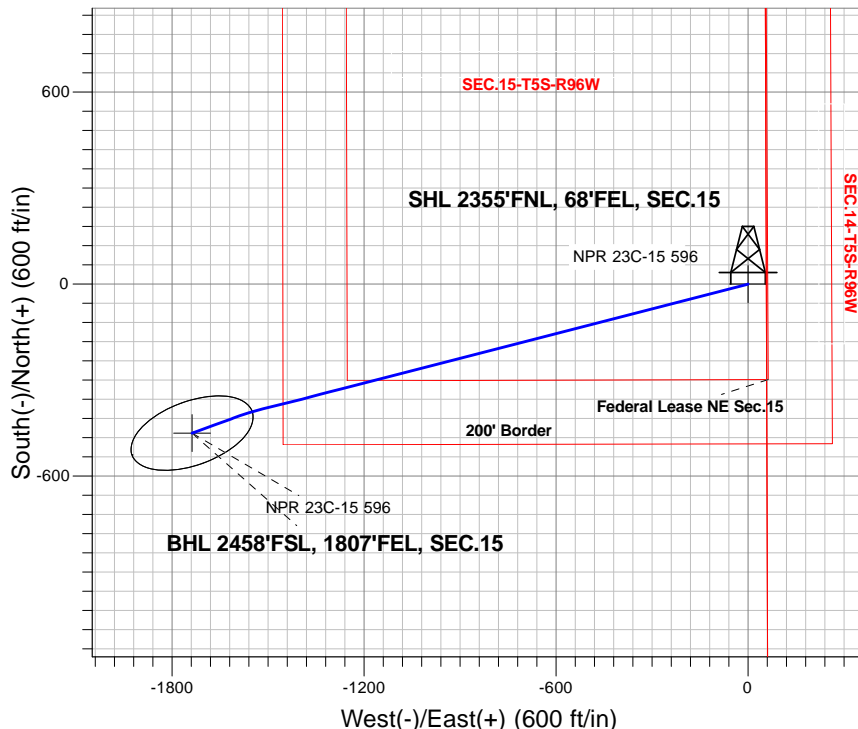


### Caerus Oil and Gas LLC



NPR 23C-15 596  
 Plan #1 (12-01-17)  
 8:44, December 18 2017



Azimuths to True North  
 Magnetic North: 9.63°  
 Magnetic Field  
 Strength: 51521.4snT  
 Dip Angle: 65.85°  
 Date: 12/18/2017  
 Model: HDGM

#### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
SHL 2355'FNL, 68'FEL, SEC.15	1.0	0.0	0.0	39.615893	-108.145679	Point
BHL 2458'FSL, 1807'FEL, SEC.15	9099.0	-465.5	-1737.5	39.614614	-108.151846	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	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	908.8	18.26	255.56	898.5	-24.0	-93.2	3.00	255.56	96.2	
4	5460.0	18.26	255.56	5220.5	-379.6	-1474.3	0.00	0.00	1522.4	
5	6068.8	0.00	0.00	5819.0	-403.6	-1567.5	3.00	180.00	1618.6	
6	6401.2	3.32	250.00	6151.3	-406.9	-1576.6	1.00	250.00	1628.2	
7	9353.9	3.32	250.00	9099.0	-465.5	-1737.5	0.00	0.00	1798.8	BHL 2458'FSL, 1807'FEL, SEC.15



## **Caerus Oil and Gas LLC**

**SEC.15-T5S-R96W**

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

**NPR 23C-15 596**

**Wellbore #1**

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

## **Standard Planning Report**

**18 December, 2017**

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well NPR 23C-15 596
<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 23C-15 596	<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

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

Well	NPR 23C-15 596					
Well Position	+N/-S	-31.5 ft	Northing:	14,398,956.40 usft	Latitude:	39.615893
	+E/-W	2.7 ft	Easting:	2,444,316.40 usft	Longitude:	-108.145680
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	12/18/2017	9.63	65.85	51,521

<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)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	255.00

<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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
908.8	18.26	255.56	898.5	-24.0	-93.2	3.00	3.00	0.00	255.56	
5,460.0	18.26	255.56	5,220.5	-379.6	-1,474.3	0.00	0.00	0.00	0.00	
6,068.8	0.00	0.00	5,819.0	-403.6	-1,567.5	3.00	-3.00	0.00	180.00	
6,401.2	3.32	250.00	6,151.3	-406.9	-1,576.6	1.00	1.00	-33.08	250.00	
9,353.9	3.32	250.00	9,099.0	-465.5	-1,737.5	0.00	0.00	0.00	0.00	BHL 2458'FSL, 1807'I

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well NPR 23C-15 596
<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 23C-15 596	<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 2355'FNL, 68'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	3.00	255.56	400.0	-0.7	-2.5	2.6	3.00	3.00	0.00
500.0	6.00	255.56	499.6	-2.6	-10.1	10.5	3.00	3.00	0.00
600.0	9.00	255.56	598.8	-5.9	-22.8	23.5	3.00	3.00	0.00
700.0	12.00	255.56	697.1	-10.4	-40.4	41.7	3.00	3.00	0.00
800.0	15.00	255.56	794.3	-16.2	-63.0	65.1	3.00	3.00	0.00
900.0	18.00	255.56	890.2	-23.3	-90.5	93.5	3.00	3.00	0.00
908.8	18.26	255.56	898.5	-24.0	-93.2	96.2	3.00	3.00	0.00
934.6	18.26	255.56	923.0	-26.0	-101.0	104.3	0.00	0.00	0.00
<b>WASATCH.NPC</b>									
1,000.0	18.26	255.56	985.1	-31.1	-120.9	124.8	0.00	0.00	0.00
1,100.0	18.26	255.56	1,080.1	-38.9	-151.2	156.1	0.00	0.00	0.00
1,200.0	18.26	255.56	1,175.1	-46.7	-181.5	187.5	0.00	0.00	0.00
1,300.0	18.26	255.56	1,270.0	-54.6	-211.9	218.8	0.00	0.00	0.00
1,400.0	18.26	255.56	1,365.0	-62.4	-242.2	250.1	0.00	0.00	0.00
1,500.0	18.26	255.56	1,460.0	-70.2	-272.6	281.5	0.00	0.00	0.00
1,600.0	18.26	255.56	1,554.9	-78.0	-302.9	312.8	0.00	0.00	0.00
1,700.0	18.26	255.56	1,649.9	-85.8	-333.3	344.1	0.00	0.00	0.00
1,800.0	18.26	255.56	1,744.9	-93.6	-363.6	375.5	0.00	0.00	0.00
1,900.0	18.26	255.56	1,839.8	-101.4	-394.0	406.8	0.00	0.00	0.00
2,000.0	18.26	255.56	1,934.8	-109.3	-424.3	438.1	0.00	0.00	0.00
2,100.0	18.26	255.56	2,029.7	-117.1	-454.7	469.5	0.00	0.00	0.00
2,200.0	18.26	255.56	2,124.7	-124.9	-485.0	500.8	0.00	0.00	0.00
2,300.0	18.26	255.56	2,219.7	-132.7	-515.4	532.2	0.00	0.00	0.00
2,400.0	18.26	255.56	2,314.6	-140.5	-545.7	563.5	0.00	0.00	0.00
2,500.0	18.26	255.56	2,409.6	-148.3	-576.1	594.8	0.00	0.00	0.00
2,595.2	18.26	255.56	2,500.0	-155.8	-605.0	624.7	0.00	0.00	0.00
<b>9 5/8"</b>									
2,600.0	18.26	255.56	2,504.6	-156.1	-606.4	626.2	0.00	0.00	0.00
2,700.0	18.26	255.56	2,599.5	-164.0	-636.8	657.5	0.00	0.00	0.00
2,800.0	18.26	255.56	2,694.5	-171.8	-667.1	688.8	0.00	0.00	0.00
2,900.0	18.26	255.56	2,789.4	-179.6	-697.4	720.2	0.00	0.00	0.00
3,000.0	18.26	255.56	2,884.4	-187.4	-727.8	751.5	0.00	0.00	0.00
3,100.0	18.26	255.56	2,979.4	-195.2	-758.1	782.8	0.00	0.00	0.00
3,200.0	18.26	255.56	3,074.3	-203.0	-788.5	814.2	0.00	0.00	0.00
3,300.0	18.26	255.56	3,169.3	-210.9	-818.8	845.5	0.00	0.00	0.00
3,400.0	18.26	255.56	3,264.3	-218.7	-849.2	876.8	0.00	0.00	0.00
3,461.9	18.26	255.56	3,323.0	-223.5	-868.0	896.2	0.00	0.00	0.00
<b>WASATCH_G.NPC</b>									
3,500.0	18.26	255.56	3,359.2	-226.5	-879.5	908.2	0.00	0.00	0.00
3,600.0	18.26	255.56	3,454.2	-234.3	-909.9	939.5	0.00	0.00	0.00
3,700.0	18.26	255.56	3,549.2	-242.1	-940.2	970.9	0.00	0.00	0.00
3,800.0	18.26	255.56	3,644.1	-249.9	-970.6	1,002.2	0.00	0.00	0.00
3,900.0	18.26	255.56	3,739.1	-257.7	-1,000.9	1,033.5	0.00	0.00	0.00
3,943.1	18.26	255.56	3,780.0	-261.1	-1,014.0	1,047.0	0.00	0.00	0.00
<b>FORT_UNION.NPC</b>									
4,000.0	18.26	255.56	3,834.0	-265.6	-1,031.3	1,064.9	0.00	0.00	0.00
4,100.0	18.26	255.56	3,929.0	-273.4	-1,061.6	1,096.2	0.00	0.00	0.00
4,200.0	18.26	255.56	4,024.0	-281.2	-1,092.0	1,127.5	0.00	0.00	0.00

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well NPR 23C-15 596
<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 23C-15 596	<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	18.26	255.56	4,118.9	-289.0	-1,122.3	1,158.9	0.00	0.00	0.00
4,400.0	18.26	255.56	4,213.9	-296.8	-1,152.7	1,190.2	0.00	0.00	0.00
4,500.0	18.26	255.56	4,308.9	-304.6	-1,183.0	1,221.5	0.00	0.00	0.00
4,600.0	18.26	255.56	4,403.8	-312.4	-1,213.4	1,252.9	0.00	0.00	0.00
4,700.0	18.26	255.56	4,498.8	-320.3	-1,243.7	1,284.2	0.00	0.00	0.00
4,800.0	18.26	255.56	4,593.7	-328.1	-1,274.0	1,315.5	0.00	0.00	0.00
4,900.0	18.26	255.56	4,688.7	-335.9	-1,304.4	1,346.9	0.00	0.00	0.00
5,000.0	18.26	255.56	4,783.7	-343.7	-1,334.7	1,378.2	0.00	0.00	0.00
5,100.0	18.26	255.56	4,878.6	-351.5	-1,365.1	1,409.6	0.00	0.00	0.00
5,200.0	18.26	255.56	4,973.6	-359.3	-1,395.4	1,440.9	0.00	0.00	0.00
5,300.0	18.26	255.56	5,068.6	-367.1	-1,425.8	1,472.2	0.00	0.00	0.00
5,400.0	18.26	255.56	5,163.5	-375.0	-1,456.1	1,503.6	0.00	0.00	0.00
5,460.0	18.26	255.56	5,220.5	-379.6	-1,474.3	1,522.4	0.00	0.00	0.00
5,500.0	17.06	255.56	5,258.6	-382.7	-1,486.1	1,534.5	3.00	-3.00	0.00
5,600.0	14.06	255.56	5,354.9	-389.4	-1,512.1	1,561.3	3.00	-3.00	0.00
5,700.0	11.06	255.56	5,452.5	-394.8	-1,533.1	1,583.1	3.00	-3.00	0.00
5,800.0	8.06	255.56	5,551.1	-398.9	-1,549.2	1,599.7	3.00	-3.00	0.00
5,898.5	5.11	255.56	5,649.0	-401.7	-1,560.2	1,611.0	3.00	-3.00	0.00
OHIO_CREEK.MBL									
5,900.0	5.06	255.56	5,650.5	-401.8	-1,560.3	1,611.1	3.00	-3.00	0.00
6,000.0	2.06	255.56	5,750.3	-403.3	-1,566.3	1,617.3	3.00	-3.00	0.00
6,068.8	0.00	0.00	5,819.0	-403.6	-1,567.5	1,618.6	3.00	-3.00	0.00
6,100.0	0.31	250.00	5,850.2	-403.7	-1,567.6	1,618.6	1.00	1.00	0.00
6,118.8	0.50	250.00	5,869.0	-403.7	-1,567.7	1,618.8	1.00	1.00	0.00
WILLIAMS_FORK.MBL									
6,168.8	1.00	250.00	5,919.0	-403.9	-1,568.3	1,619.4	1.00	1.00	0.00
TOP_GAS.MBL									
6,200.0	1.31	250.00	5,950.2	-404.1	-1,568.9	1,620.1	1.00	1.00	0.00
6,300.0	2.31	250.00	6,050.2	-405.2	-1,571.9	1,623.2	1.00	1.00	0.00
6,400.0	3.31	250.00	6,150.1	-406.9	-1,576.5	1,628.1	1.00	1.00	0.00
6,401.2	3.32	250.00	6,151.3	-406.9	-1,576.6	1,628.2	1.00	1.00	0.00
6,500.0	3.32	250.00	6,249.9	-408.9	-1,581.9	1,633.9	0.00	0.00	0.00
6,600.0	3.32	250.00	6,349.7	-410.9	-1,587.4	1,639.6	0.00	0.00	0.00
6,700.0	3.32	250.00	6,449.6	-412.9	-1,592.8	1,645.4	0.00	0.00	0.00
6,800.0	3.32	250.00	6,549.4	-414.8	-1,598.3	1,651.2	0.00	0.00	0.00
6,900.0	3.32	250.00	6,649.2	-416.8	-1,603.7	1,657.0	0.00	0.00	0.00
7,000.0	3.32	250.00	6,749.0	-418.8	-1,609.2	1,662.8	0.00	0.00	0.00
7,100.0	3.32	250.00	6,848.9	-420.8	-1,614.6	1,668.5	0.00	0.00	0.00
7,200.0	3.32	250.00	6,948.7	-422.8	-1,620.1	1,674.3	0.00	0.00	0.00
7,300.0	3.32	250.00	7,048.5	-424.8	-1,625.5	1,680.1	0.00	0.00	0.00
7,400.0	3.32	250.00	7,148.4	-426.7	-1,631.0	1,685.9	0.00	0.00	0.00
7,500.0	3.32	250.00	7,248.2	-428.7	-1,636.4	1,691.6	0.00	0.00	0.00
7,600.0	3.32	250.00	7,348.0	-430.7	-1,641.9	1,697.4	0.00	0.00	0.00
7,700.0	3.32	250.00	7,447.9	-432.7	-1,647.3	1,703.2	0.00	0.00	0.00
7,800.0	3.32	250.00	7,547.7	-434.7	-1,652.8	1,709.0	0.00	0.00	0.00
7,900.0	3.32	250.00	7,647.5	-436.7	-1,658.2	1,714.8	0.00	0.00	0.00
8,000.0	3.32	250.00	7,747.4	-438.6	-1,663.7	1,720.5	0.00	0.00	0.00
8,100.0	3.32	250.00	7,847.2	-440.6	-1,669.1	1,726.3	0.00	0.00	0.00
8,200.0	3.32	250.00	7,947.0	-442.6	-1,674.6	1,732.1	0.00	0.00	0.00
8,300.0	3.32	250.00	8,046.9	-444.6	-1,680.0	1,737.9	0.00	0.00	0.00
8,400.0	3.32	250.00	8,146.7	-446.6	-1,685.5	1,743.6	0.00	0.00	0.00
8,500.0	3.32	250.00	8,246.5	-448.6	-1,690.9	1,749.4	0.00	0.00	0.00
8,557.6	3.32	250.00	8,304.0	-449.7	-1,694.1	1,752.8	0.00	0.00	0.00

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well NPR 23C-15 596
<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 23C-15 596	<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)
CAMEO.MBL									
8,600.0	3.32	250.00	8,346.4	-450.5	-1,696.4	1,755.2	0.00	0.00	0.00
8,700.0	3.32	250.00	8,446.2	-452.5	-1,701.8	1,761.0	0.00	0.00	0.00
8,800.0	3.32	250.00	8,546.0	-454.5	-1,707.3	1,766.8	0.00	0.00	0.00
8,900.0	3.32	250.00	8,645.9	-456.5	-1,712.7	1,772.5	0.00	0.00	0.00
9,000.0	3.32	250.00	8,745.7	-458.5	-1,718.2	1,778.3	0.00	0.00	0.00
9,100.0	3.32	250.00	8,845.5	-460.5	-1,723.6	1,784.1	0.00	0.00	0.00
9,178.6	3.32	250.00	8,924.0	-462.0	-1,727.9	1,788.6	0.00	0.00	0.00
ROLLINS.MBL									
9,200.0	3.32	250.00	8,945.3	-462.4	-1,729.1	1,789.9	0.00	0.00	0.00
9,300.0	3.32	250.00	9,045.2	-464.4	-1,734.5	1,795.6	0.00	0.00	0.00
9,353.9	3.32	250.00	9,099.0	-465.5	-1,737.5	1,798.8	0.00	0.00	0.00
TD.MBL - BHL 2458°FSL, 1807°FEL, SEC.15									

## 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 2355'FNL, 68'FEL, - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	14,398,956.40	2,444,316.40	39.615893	-108.145680
BHL 2458'FSL, 1807'FE - plan hits target center - Ellipse (radii L200.0 W100.0 on 250.00 azi)	0.00	0.00	9,099.0	-465.5	-1,737.5	14,398,435.76	2,442,594.00	39.614615	-108.151847

## Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
2,595.2	2,500.0	9 5/8"	9-5/8	12-1/4

## Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
934.6	923.0	WASATCH.NPC		0.00	
3,461.9	3,323.0	WASATCH_G.NPC		0.00	
3,943.1	3,780.0	FORT_UNION.NPC		0.00	
5,898.5	5,649.0	OHIO_CREEK.MBL		0.00	
6,118.8	5,869.0	WILLIAMS_FORK.MBL		0.00	
6,168.8	5,919.0	TOP_GAS.MBL		0.00	
8,557.6	8,304.0	CAMEO.MBL		0.00	
9,178.6	8,924.0	ROLLINS.MBL		0.00	
9,353.9	9,099.0	TD.MBL		0.00	



## **Caerus Oil and Gas LLC**

**SEC.15-T5S-R96W**

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

**NPR 23C-15 596**

**Wellbore #1**

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

## **Anticollision Report**

**18 December, 2017**