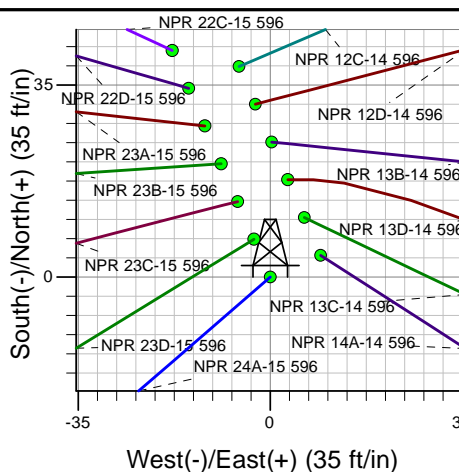
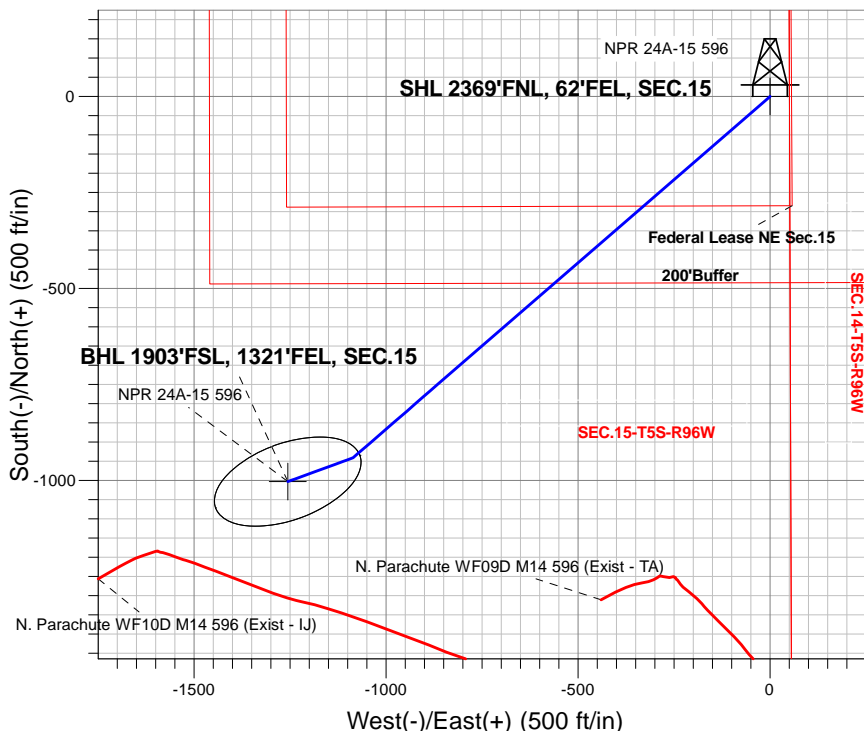
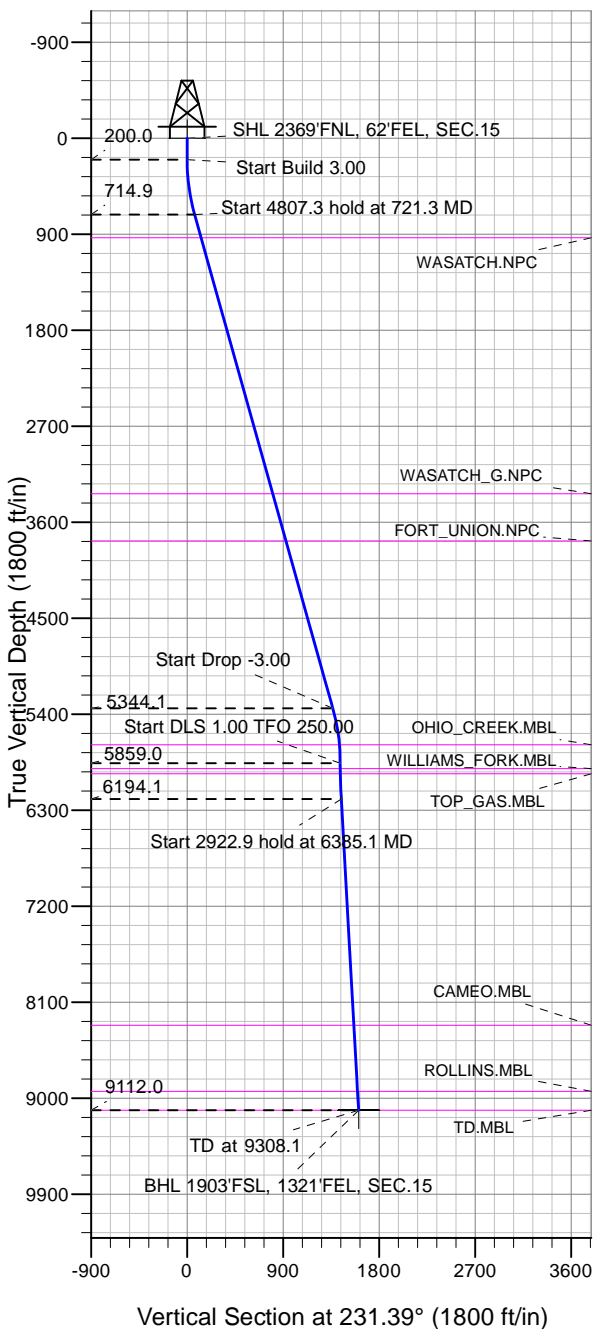


Well Name: **NPR 24A-15 596**  
 Surface Location: NPR H15 596 North Pad Sec.15-T5S-R96W  
 NAD 1927 - Western US , Universal Transverse Mercator (US Survey Feet) Zone 12N (114 W to 108 W)  
 Ground Elevation: 6429.0  
 +N/-S+E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 14398942.83 2444322.78 39.615855 -108.145658  
 Original Well Elev WELL @ 6453.0ft (Original Well Elev)

### Caerus Oil and Gas LLC



NPR 24A-15 596  
 Plan #1 (12-01-17)  
 9:22, 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 2369'FNL, 62'FEL, SEC.15	1.0	0.0	0.0	39.615855	-108.145658	Point
BHL 1903'FSL, 1321'FEL, SEC.15	9112.0	-1003.1	-1256.1	39.613101	-108.150117	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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	721.3	15.64	229.09	714.9	-46.3	-53.4	3.00	229.09	70.6	
4	5528.6	15.64	229.09	5344.1	-894.9	-1032.9	0.00	0.00	1365.5	
5	6049.9	0.00	0.00	5859.0	-941.2	-1086.3	3.00	180.00	1436.2	
6	6385.1	3.35	250.00	6194.1	-944.6	-1095.5	1.00	250.00	1445.5	
7	9308.1	3.35	250.00	9112.0	-1003.1	-1256.1	0.00	0.00	1607.5	BHL 1903'FSL, 1321'FEL, SEC.15



## **Caerus Oil and Gas LLC**

**SEC.15-T5S-R96W**

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

**NPR 24A-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 24A-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 24A-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 24A-15 596					
Well Position	+N/-S	-45.3 ft	Northing:	14,398,942.83 usft	Latitude:	39.615855
	+E/-W	8.7 ft	Easting:	2,444,322.78 usft	Longitude:	-108.145659
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) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	231.39

<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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
721.3	15.64	229.09	714.9	-46.3	-53.4	3.00	3.00	0.00	229.09	
5,528.6	15.64	229.09	5,344.1	-894.9	-1,032.9	0.00	0.00	0.00	0.00	
6,049.9	0.00	0.00	5,859.0	-941.2	-1,086.3	3.00	-3.00	0.00	180.00	
6,385.1	3.35	250.00	6,194.1	-944.6	-1,095.5	1.00	1.00	-32.81	250.00	
9,308.1	3.35	250.00	9,112.0	-1,003.1	-1,256.1	0.00	0.00	0.00	0.00	BHL 1903'FSL, 1321'I

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well NPR 24A-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 24A-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 2369'FNL, 62'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	3.00	229.09	300.0	-1.7	-2.0	2.6	3.00	3.00	0.00
400.0	6.00	229.09	399.6	-6.9	-7.9	10.5	3.00	3.00	0.00
500.0	9.00	229.09	498.8	-15.4	-17.8	23.5	3.00	3.00	0.00
600.0	12.00	229.09	597.1	-27.3	-31.5	41.7	3.00	3.00	0.00
700.0	15.00	229.09	694.3	-42.6	-49.2	65.0	3.00	3.00	0.00
721.3	15.64	229.09	714.9	-46.3	-53.4	70.6	3.00	3.00	0.00
800.0	15.64	229.09	790.6	-60.2	-69.5	91.8	0.00	0.00	0.00
900.0	15.64	229.09	886.9	-77.8	-89.8	118.8	0.00	0.00	0.00
946.8	15.64	229.09	932.0	-86.1	-99.4	131.4	0.00	0.00	0.00
<b>WASATCH.NPC</b>									
1,000.0	15.64	229.09	983.2	-95.5	-110.2	145.7	0.00	0.00	0.00
1,100.0	15.64	229.09	1,079.5	-113.2	-130.6	172.7	0.00	0.00	0.00
1,200.0	15.64	229.09	1,175.8	-130.8	-151.0	199.6	0.00	0.00	0.00
1,300.0	15.64	229.09	1,272.1	-148.5	-171.3	226.5	0.00	0.00	0.00
1,400.0	15.64	229.09	1,368.4	-166.1	-191.7	253.5	0.00	0.00	0.00
1,500.0	15.64	229.09	1,464.7	-183.8	-212.1	280.4	0.00	0.00	0.00
1,600.0	15.64	229.09	1,561.0	-201.4	-232.5	307.3	0.00	0.00	0.00
1,700.0	15.64	229.09	1,657.3	-219.1	-252.8	334.3	0.00	0.00	0.00
1,800.0	15.64	229.09	1,753.6	-236.7	-273.2	361.2	0.00	0.00	0.00
1,900.0	15.64	229.09	1,849.9	-254.4	-293.6	388.1	0.00	0.00	0.00
2,000.0	15.64	229.09	1,946.2	-272.0	-314.0	415.1	0.00	0.00	0.00
2,100.0	15.64	229.09	2,042.5	-289.7	-334.3	442.0	0.00	0.00	0.00
2,200.0	15.64	229.09	2,138.8	-307.3	-354.7	469.0	0.00	0.00	0.00
2,300.0	15.64	229.09	2,235.1	-325.0	-375.1	495.9	0.00	0.00	0.00
2,400.0	15.64	229.09	2,331.4	-342.6	-395.5	522.8	0.00	0.00	0.00
2,500.0	15.64	229.09	2,427.7	-360.3	-415.8	549.8	0.00	0.00	0.00
2,600.0	15.64	229.09	2,524.0	-377.9	-436.2	576.7	0.00	0.00	0.00
2,700.0	15.64	229.09	2,620.3	-395.6	-456.6	603.6	0.00	0.00	0.00
2,800.0	15.64	229.09	2,716.6	-413.3	-476.9	630.6	0.00	0.00	0.00
2,900.0	15.64	229.09	2,812.9	-430.9	-497.3	657.5	0.00	0.00	0.00
3,000.0	15.64	229.09	2,909.2	-448.6	-517.7	684.4	0.00	0.00	0.00
3,100.0	15.64	229.09	3,005.5	-466.2	-538.1	711.4	0.00	0.00	0.00
3,200.0	15.64	229.09	3,101.8	-483.9	-558.4	738.3	0.00	0.00	0.00
3,300.0	15.64	229.09	3,198.1	-501.5	-578.8	765.2	0.00	0.00	0.00
3,400.0	15.64	229.09	3,294.4	-519.2	-599.2	792.2	0.00	0.00	0.00
3,439.1	15.64	229.09	3,332.0	-526.1	-607.2	802.7	0.00	0.00	0.00
<b>WASATCH_G.NPC</b>									
3,500.0	15.64	229.09	3,390.7	-536.8	-619.6	819.1	0.00	0.00	0.00
3,600.0	15.64	229.09	3,487.0	-554.5	-639.9	846.1	0.00	0.00	0.00
3,700.0	15.64	229.09	3,583.3	-572.1	-660.3	873.0	0.00	0.00	0.00
3,800.0	15.64	229.09	3,679.6	-589.8	-680.7	899.9	0.00	0.00	0.00
3,898.1	15.64	229.09	3,774.0	-607.1	-700.7	926.3	0.00	0.00	0.00
<b>FORT_UNION.NPC</b>									
3,900.0	15.64	229.09	3,775.9	-607.4	-701.1	926.9	0.00	0.00	0.00
4,000.0	15.64	229.09	3,872.2	-625.1	-721.4	953.8	0.00	0.00	0.00
4,100.0	15.64	229.09	3,968.5	-642.7	-741.8	980.7	0.00	0.00	0.00
4,200.0	15.64	229.09	4,064.8	-660.4	-762.2	1,007.7	0.00	0.00	0.00
4,300.0	15.64	229.09	4,161.1	-678.0	-782.6	1,034.6	0.00	0.00	0.00
4,400.0	15.64	229.09	4,257.4	-695.7	-802.9	1,061.5	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 24A-15 596
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 North Pad Sec.15-T5S-R96W	North Reference:	True
Well:	NPR 24A-15 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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)
4,500.0	15.64	229.09	4,353.7	-713.4	-823.3	1,088.5	0.00	0.00	0.00
4,600.0	15.64	229.09	4,450.0	-731.0	-843.7	1,115.4	0.00	0.00	0.00
4,700.0	15.64	229.09	4,546.3	-748.7	-864.1	1,142.4	0.00	0.00	0.00
4,800.0	15.64	229.09	4,642.6	-766.3	-884.4	1,169.3	0.00	0.00	0.00
4,900.0	15.64	229.09	4,738.8	-784.0	-904.8	1,196.2	0.00	0.00	0.00
5,000.0	15.64	229.09	4,835.1	-801.6	-925.2	1,223.2	0.00	0.00	0.00
5,100.0	15.64	229.09	4,931.4	-819.3	-945.5	1,250.1	0.00	0.00	0.00
5,200.0	15.64	229.09	5,027.7	-836.9	-965.9	1,277.0	0.00	0.00	0.00
5,300.0	15.64	229.09	5,124.0	-854.6	-986.3	1,304.0	0.00	0.00	0.00
5,400.0	15.64	229.09	5,220.3	-872.2	-1,006.7	1,330.9	0.00	0.00	0.00
5,500.0	15.64	229.09	5,316.6	-889.9	-1,027.0	1,357.8	0.00	0.00	0.00
5,528.6	15.64	229.09	5,344.1	-894.9	-1,032.9	1,365.5	0.00	0.00	0.00
5,600.0	13.50	229.09	5,413.3	-906.7	-1,046.4	1,383.5	3.00	-3.00	0.00
5,700.0	10.50	229.09	5,511.1	-920.3	-1,062.1	1,404.3	3.00	-3.00	0.00
5,800.0	7.50	229.09	5,609.8	-930.5	-1,074.0	1,419.9	3.00	-3.00	0.00
5,876.6	5.20	229.09	5,686.0	-936.1	-1,080.4	1,428.3	3.00	-3.00	0.00
OHIO_CREEK.MBL									
5,900.0	4.50	229.09	5,709.3	-937.4	-1,081.9	1,430.3	3.00	-3.00	0.00
6,000.0	1.50	229.09	5,809.1	-940.8	-1,085.8	1,435.5	3.00	-3.00	0.00
6,049.9	0.00	0.00	5,859.0	-941.2	-1,086.3	1,436.2	3.00	-3.00	0.00
6,099.9	0.50	250.00	5,909.0	-941.3	-1,086.5	1,436.4	1.00	1.00	0.00
WILLIAMS_FORK.MBL									
6,100.0	0.50	250.00	5,909.1	-941.3	-1,086.5	1,436.4	1.00	1.00	0.00
6,149.9	1.00	250.00	5,959.0	-941.5	-1,087.1	1,437.0	1.00	1.00	0.00
TOP_GAS.MBL									
6,200.0	1.50	250.00	6,009.1	-941.9	-1,088.1	1,438.1	1.00	1.00	0.00
6,300.0	2.50	250.00	6,109.0	-943.1	-1,091.4	1,441.4	1.00	1.00	0.00
6,385.1	3.35	250.00	6,194.1	-944.6	-1,095.5	1,445.5	1.00	1.00	0.00
6,400.0	3.35	250.00	6,208.9	-944.9	-1,096.3	1,446.3	0.00	0.00	0.00
6,500.0	3.35	250.00	6,308.7	-946.9	-1,101.8	1,451.8	0.00	0.00	0.00
6,600.0	3.35	250.00	6,408.6	-948.9	-1,107.3	1,457.4	0.00	0.00	0.00
6,700.0	3.35	250.00	6,508.4	-950.9	-1,112.8	1,462.9	0.00	0.00	0.00
6,800.0	3.35	250.00	6,608.2	-952.9	-1,118.3	1,468.5	0.00	0.00	0.00
6,900.0	3.35	250.00	6,708.1	-954.9	-1,123.8	1,474.0	0.00	0.00	0.00
7,000.0	3.35	250.00	6,807.9	-956.9	-1,129.3	1,479.6	0.00	0.00	0.00
7,100.0	3.35	250.00	6,907.7	-958.9	-1,134.8	1,485.1	0.00	0.00	0.00
7,200.0	3.35	250.00	7,007.5	-960.9	-1,140.3	1,490.6	0.00	0.00	0.00
7,300.0	3.35	250.00	7,107.4	-962.9	-1,145.8	1,496.2	0.00	0.00	0.00
7,400.0	3.35	250.00	7,207.2	-964.9	-1,151.3	1,501.7	0.00	0.00	0.00
7,500.0	3.35	250.00	7,307.0	-966.9	-1,156.8	1,507.3	0.00	0.00	0.00
7,600.0	3.35	250.00	7,406.9	-968.9	-1,162.3	1,512.8	0.00	0.00	0.00
7,700.0	3.35	250.00	7,506.7	-970.9	-1,167.8	1,518.4	0.00	0.00	0.00
7,800.0	3.35	250.00	7,606.5	-972.9	-1,173.3	1,523.9	0.00	0.00	0.00
7,900.0	3.35	250.00	7,706.3	-974.9	-1,178.8	1,529.4	0.00	0.00	0.00
8,000.0	3.35	250.00	7,806.2	-976.9	-1,184.3	1,535.0	0.00	0.00	0.00
8,100.0	3.35	250.00	7,906.0	-978.9	-1,189.8	1,540.5	0.00	0.00	0.00
8,200.0	3.35	250.00	8,005.8	-980.9	-1,195.2	1,546.1	0.00	0.00	0.00
8,300.0	3.35	250.00	8,105.7	-982.9	-1,200.7	1,551.6	0.00	0.00	0.00
8,400.0	3.35	250.00	8,205.5	-984.9	-1,206.2	1,557.2	0.00	0.00	0.00
8,500.0	3.35	250.00	8,305.3	-986.9	-1,211.7	1,562.7	0.00	0.00	0.00
8,510.7	3.35	250.00	8,316.0	-987.1	-1,212.3	1,563.3	0.00	0.00	0.00
CAMEO.MBL									
8,600.0	3.35	250.00	8,405.1	-988.9	-1,217.2	1,568.2	0.00	0.00	0.00

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well NPR 24A-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 24A-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)
8,700.0	3.35	250.00	8,505.0	-990.9	-1,222.7	1,573.8	0.00	0.00	0.00
8,800.0	3.35	250.00	8,604.8	-992.9	-1,228.2	1,579.3	0.00	0.00	0.00
8,900.0	3.35	250.00	8,704.6	-994.9	-1,233.7	1,584.9	0.00	0.00	0.00
9,000.0	3.35	250.00	8,804.5	-996.9	-1,239.2	1,590.4	0.00	0.00	0.00
9,100.0	3.35	250.00	8,904.3	-998.9	-1,244.7	1,595.9	0.00	0.00	0.00
9,131.8	3.35	250.00	8,936.0	-999.5	-1,246.4	1,597.7	0.00	0.00	0.00
ROLLINS.MBL									
9,200.0	3.35	250.00	9,004.1	-1,000.9	-1,250.2	1,601.5	0.00	0.00	0.00
9,300.0	3.35	250.00	9,103.9	-1,002.9	-1,255.7	1,607.0	0.00	0.00	0.00
9,308.1	3.35	250.00	9,112.0	-1,003.1	-1,256.1	1,607.5	0.00	0.00	0.00
TD.MBL - BHL 1903'FSL, 1321'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 2369'FNL, 62'FEL, - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	14,398,942.83	2,444,322.78	39.615855	-108.145659
BHL 1903'FSL, 1321'FEI - plan hits target center - Ellipse (radii L200.0 W100.0 on 250.00 azi)	0.00	0.00	9,112.0	-1,003.1	-1,256.1	14,397,900.01	2,443,098.74	39.613101	-108.150117

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
946.8	932.0	WASATCH.NPC		0.00		
3,439.1	3,332.0	WASATCH_G.NPC		0.00		
3,898.1	3,774.0	FORT_UNION.NPC		0.00		
5,876.6	5,686.0	OHIO_CREEK.MBL		0.00		
6,099.9	5,909.0	WILLIAMS_FORK.MBL		0.00		
6,149.9	5,959.0	TOP_GAS.MBL		0.00		
8,510.7	8,316.0	CAMEO.MBL		0.00		
9,131.8	8,936.0	ROLLINS.MBL		0.00		
9,308.1	9,112.0	TD.MBL		0.00		



## **Caerus Oil and Gas LLC**

**SEC.15-T5S-R96W**

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

**NPR 24A-15 596**

**Wellbore #1**

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

## **Anticollision Report**

**18 December, 2017**