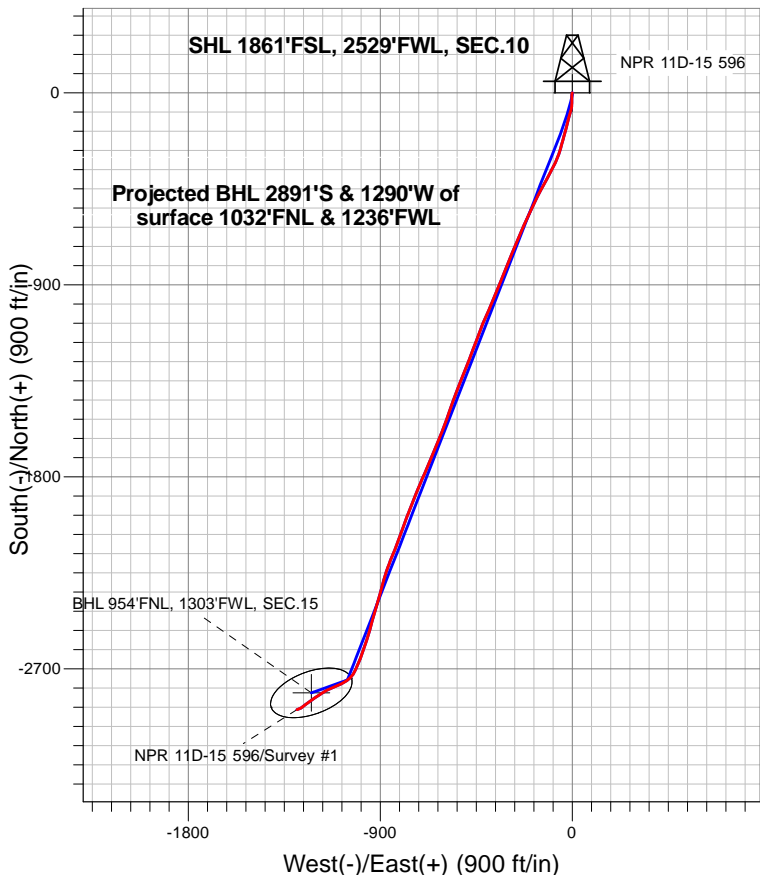


## Caerus Oil and Gas LLC



### LEGEND

- ✚ NPR 11D-15 596, NPR 11D-15 596 Wellbore #1, Plan #1 (11-14-17) VO
- ✚ NPR 11D-15 596 Wellbore #1
- Survey #1

## Final Survey Plot

**Projected Final Survey -**  
**10,100'MD & 9,307' TVD @ 906.62'VS**  
**3.8 deg Inc 249.9 deg AZ**

Project: SEC.10-T5S-R96W  
 Site: K10 596 Pad Sec.10-T5S-R96W  
 Well: NPR 11D-15 596  
 Plan: NPR 11D-15 596 Wellbore #1



## **Caerus Oil and Gas LLC**

**SEC.10-T5S-R96W**

**K10 596 Pad Sec.10-T5S-R96W**

**NPR 11D-15 596**

**NPR 11D-15 596 Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**11 April, 2018**

<b>Company:</b>	Caerus Oil and Gas LLC	<b>Local Co-ordinate Reference:</b>	Well NPR 11D-15 596
<b>Project:</b>	SEC.10-T5S-R96W	<b>TVD Reference:</b>	WELL @ 6733.0ft (Original Well Elev)
<b>Site:</b>	K10 596 Pad Sec.10-T5S-R96W	<b>MD Reference:</b>	WELL @ 6733.0ft (Original Well Elev)
<b>Well:</b>	NPR 11D-15 596	<b>North Reference:</b>	True
<b>Wellbore:</b>	NPR 11D-15 596 Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	NPR 11D-15 596 Wellbore #1	<b>Database:</b>	US_EDM

<b>Project</b>	SEC.10-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	K10 596 Pad Sec.10-T5S-R96W				
Site Position:		Northing:	14,403,140.13 usft	Latitude:	39.627619
From:	Lat/Long	Easting:	2,441,439.81 usft	Longitude:	-108.155411
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	1.82 °

Well	NPR 11D-15 596					
Well Position	+N/-S	0.0 ft	Northing:	14,403,083.67 usft	Latitude:	39.627458
	+E/-W	0.0 ft	Easting:	2,441,510.39 usft	Longitude:	-108.155167
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	6,709.0 ft

<b>Wellbore</b>	NPR 11D-15 596 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	1/2/2018	9.59	65.64	51,635

<b>Design</b>	NPR 11D-15 596 Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<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	203.50	

<b>Survey Program</b>	<b>Date</b>	4/11/2018			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
100.0	10,100.0	Survey #1 (NPR 11D-15 596 Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
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 1861'FSL, 2529'FWL, SEC.10</b>										
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00	
292.0	5.60	189.90	291.7	-9.2	-1.6	9.1	2.92	2.92	0.00	
384.0	9.00	175.70	382.9	-20.8	-1.8	19.8	4.16	3.70	-15.43	
477.0	12.00	180.60	474.4	-37.8	-1.4	35.2	3.36	3.23	5.27	
570.0	13.10	184.10	565.2	-57.9	-2.3	54.0	1.44	1.18	3.76	
665.0	13.70	193.30	657.6	-79.6	-5.6	75.3	2.33	0.63	9.68	
760.0	15.30	198.10	749.6	-102.5	-12.1	98.8	2.11	1.68	5.05	
854.0	17.20	193.20	839.8	-127.8	-19.1	124.8	2.49	2.02	-5.21	

<b>Company:</b>	Caerus Oil and Gas LLC	<b>Local Co-ordinate Reference:</b>	Well NPR 11D-15 596
<b>Project:</b>	SEC.10-T5S-R96W	<b>TVD Reference:</b>	WELL @ 6733.0ft (Original Well Elev)
<b>Site:</b>	K10 596 Pad Sec.10-T5S-R96W	<b>MD Reference:</b>	WELL @ 6733.0ft (Original Well Elev)
<b>Well:</b>	NPR 11D-15 596	<b>North Reference:</b>	True
<b>Wellbore:</b>	NPR 11D-15 596 Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	NPR 11D-15 596 Wellbore #1	<b>Database:</b>	US_EDM

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)
949.0	18.30	193.70	930.3	-156.0	-25.9	153.4	1.17	1.16	0.53
1,044.0	20.40	196.40	1,019.9	-186.4	-34.1	184.5	2.40	2.21	2.84
1,138.0	23.00	194.70	1,107.2	-219.8	-43.4	218.9	2.85	2.77	-1.81
1,233.0	25.80	195.90	1,193.7	-257.7	-53.7	257.7	2.99	2.95	1.26
1,327.0	29.00	200.10	1,277.2	-298.8	-67.2	300.8	3.98	3.40	4.47
1,421.0	32.80	207.10	1,357.9	-342.9	-86.6	349.0	5.56	4.04	7.45
1,516.0	36.10	208.80	1,436.2	-390.3	-111.8	402.5	3.62	3.47	1.79
1,611.0	34.80	208.80	1,513.6	-438.6	-138.4	457.4	1.37	-1.37	0.00
1,705.0	33.70	205.50	1,591.3	-485.6	-162.5	510.2	2.30	-1.17	-3.51
1,800.0	33.10	205.60	1,670.6	-532.8	-185.1	562.4	0.63	-0.63	0.11
1,894.0	31.60	204.00	1,750.0	-578.5	-206.2	612.7	1.84	-1.60	-1.70
Last Survey - 1894' MD									
2,030.0	32.40	205.20	1,865.3	-644.0	-236.2	684.8	0.75	0.59	0.88
2,124.0	31.80	203.30	1,945.0	-689.5	-256.7	734.7	1.25	-0.64	-2.02
2,219.0	29.40	201.40	2,026.7	-734.2	-275.1	783.1	2.72	-2.53	-2.00
2,313.0	30.60	202.00	2,108.1	-777.9	-292.5	830.0	1.32	1.28	0.64
2,408.0	31.80	201.30	2,189.4	-823.7	-310.7	879.2	1.32	1.26	-0.74
2,502.0	31.60	202.00	2,269.4	-869.6	-328.9	928.6	0.45	-0.21	0.74
2,597.0	32.60	202.60	2,349.9	-916.3	-348.0	979.1	1.10	1.05	0.63
2,692.0	34.70	203.50	2,428.9	-964.7	-368.7	1,031.7	2.27	2.21	0.95
2,786.0	33.60	204.40	2,506.7	-1,012.9	-390.1	1,084.5	1.29	-1.17	0.96
2,881.0	32.60	201.90	2,586.3	-1,060.6	-410.5	1,136.3	1.78	-1.05	-2.63
2,975.0	33.70	200.80	2,665.0	-1,108.5	-429.2	1,187.7	1.33	1.17	-1.17
3,070.0	33.50	200.30	2,744.1	-1,157.7	-447.6	1,240.2	0.36	-0.21	-0.53
3,164.0	32.40	201.20	2,823.0	-1,205.5	-465.7	1,291.3	1.28	-1.17	0.96
3,259.0	33.50	201.20	2,902.7	-1,253.7	-484.4	1,342.9	1.16	1.16	0.00
3,353.0	32.30	201.60	2,981.7	-1,301.2	-503.1	1,393.9	1.30	-1.28	0.43
3,448.0	32.90	202.10	3,061.7	-1,348.7	-522.1	1,445.1	0.69	0.63	0.53
3,543.0	34.60	199.80	3,140.7	-1,398.0	-541.0	1,497.8	2.24	1.79	-2.42
3,637.0	35.20	200.20	3,217.8	-1,448.6	-559.4	1,551.5	0.68	0.64	0.43
3,732.0	34.30	199.80	3,295.8	-1,499.4	-577.9	1,605.5	0.98	-0.95	-0.42
3,826.0	34.10	199.90	3,373.6	-1,549.1	-595.8	1,658.2	0.22	-0.21	0.11
3,921.0	32.90	201.00	3,452.8	-1,598.3	-614.1	1,710.6	1.42	-1.26	1.16
4,016.0	32.20	203.50	3,532.9	-1,645.6	-633.5	1,761.7	1.60	-0.74	2.63
4,110.0	33.30	202.70	3,611.9	-1,692.3	-653.4	1,812.5	1.26	1.17	-0.85
4,204.0	32.60	202.70	3,690.8	-1,739.5	-673.1	1,863.7	0.74	-0.74	0.00
4,299.0	32.10	202.70	3,771.1	-1,786.4	-692.8	1,914.5	0.53	-0.53	0.00
4,393.0	30.70	203.90	3,851.3	-1,831.4	-712.1	1,963.5	1.63	-1.49	1.28
4,488.0	30.70	201.60	3,933.0	-1,876.1	-730.9	2,011.9	1.24	0.00	-2.42
4,582.0	31.60	201.30	4,013.4	-1,921.4	-748.7	2,060.5	0.97	0.96	-0.32
4,677.0	31.20	201.70	4,094.5	-1,967.4	-766.8	2,110.0	0.47	-0.42	0.42
4,772.0	30.10	199.90	4,176.2	-2,012.7	-784.0	2,158.4	1.51	-1.16	-1.89
4,866.0	30.20	199.00	4,257.5	-2,057.2	-799.7	2,205.5	0.49	0.11	-0.96

<b>Company:</b>	Caerus Oil and Gas LLC	<b>Local Co-ordinate Reference:</b>	Well NPR 11D-15 596
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<b>Site:</b>	K10 596 Pad Sec.10-T5S-R96W	<b>MD Reference:</b>	WELL @ 6733.0ft (Original Well Elev)
<b>Well:</b>	NPR 11D-15 596	<b>North Reference:</b>	True
<b>Wellbore:</b>	NPR 11D-15 596 Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	NPR 11D-15 596 Wellbore #1	<b>Database:</b>	US_EDM

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)
4,961.0	29.90	200.50	4,339.8	-2,102.0	-815.8	2,252.9	0.85	-0.32	1.58
5,056.0	30.40	202.70	4,421.9	-2,146.3	-833.4	2,300.6	1.28	0.53	2.32
5,150.0	31.90	201.90	4,502.4	-2,191.3	-851.8	2,349.2	1.66	1.60	-0.85
5,244.0	33.20	198.80	4,581.6	-2,238.7	-869.4	2,399.7	2.25	1.38	-3.30
5,339.0	33.00	195.00	4,661.2	-2,288.3	-884.4	2,451.2	2.19	-0.21	-4.00
5,434.0	32.40	196.10	4,741.1	-2,337.8	-898.2	2,502.0	0.89	-0.63	1.16
5,528.0	31.90	196.10	4,820.7	-2,385.8	-912.1	2,551.7	0.53	-0.53	0.00
5,622.0	29.40	195.50	4,901.6	-2,432.0	-925.1	2,599.1	2.68	-2.66	-0.64
5,717.0	28.00	195.50	4,984.9	-2,475.9	-937.3	2,644.3	1.47	-1.47	0.00
5,811.0	25.40	195.30	5,068.9	-2,516.6	-948.5	2,686.1	2.77	-2.77	-0.21
5,906.0	22.60	198.50	5,155.7	-2,553.6	-959.7	2,724.5	3.25	-2.95	3.37
6,001.0	21.90	198.50	5,243.6	-2,587.7	-971.1	2,760.3	0.74	-0.74	0.00
6,095.0	19.20	199.20	5,331.6	-2,618.9	-981.8	2,793.2	2.88	-2.87	0.74
6,190.0	16.10	199.90	5,422.1	-2,646.1	-991.4	2,821.9	3.27	-3.26	0.74
6,285.0	15.20	202.20	5,513.6	-2,670.0	-1,000.6	2,847.5	1.15	-0.95	2.42
6,380.0	12.90	205.00	5,605.7	-2,691.1	-1,009.8	2,870.6	2.52	-2.42	2.95
6,474.0	10.50	205.40	5,697.8	-2,708.4	-1,017.9	2,889.6	2.55	-2.55	0.43
6,569.0	7.70	210.60	5,791.6	-2,721.7	-1,024.8	2,904.6	3.07	-2.95	5.47
6,663.0	6.50	223.10	5,884.9	-2,731.0	-1,031.7	2,915.9	2.07	-1.28	13.30
6,758.0	4.50	220.10	5,979.4	-2,737.8	-1,037.7	2,924.5	2.13	-2.11	-3.16
6,852.0	3.90	222.80	6,073.2	-2,742.9	-1,042.3	2,931.1	0.67	-0.64	2.87
6,947.0	3.00	228.60	6,168.0	-2,747.0	-1,046.4	2,936.4	1.01	-0.95	6.11
7,041.0	3.80	231.70	6,261.8	-2,750.5	-1,050.6	2,941.3	0.87	0.85	3.30
7,136.0	4.40	235.10	6,356.6	-2,754.6	-1,056.1	2,947.2	0.68	0.63	3.58
7,231.0	4.40	239.60	6,451.3	-2,758.5	-1,062.2	2,953.3	0.36	0.00	4.74
7,325.0	5.10	237.30	6,545.0	-2,762.6	-1,068.9	2,959.6	0.77	0.74	-2.45
7,420.0	5.30	239.50	6,639.6	-2,767.1	-1,076.2	2,966.7	0.30	0.21	2.32
7,514.0	5.80	243.40	6,733.2	-2,771.4	-1,084.2	2,973.9	0.67	0.53	4.15
7,609.0	6.00	247.00	6,827.6	-2,775.5	-1,093.0	2,981.1	0.44	0.21	3.79
7,703.0	6.60	250.10	6,921.1	-2,779.2	-1,102.6	2,988.4	0.73	0.64	3.30
7,798.0	7.40	246.80	7,015.4	-2,783.5	-1,113.4	2,996.6	0.94	0.84	-3.47
7,892.0	7.90	247.40	7,108.5	-2,788.4	-1,124.9	3,005.7	0.54	0.53	0.64
7,987.0	7.50	244.00	7,202.7	-2,793.6	-1,136.5	3,015.1	0.64	-0.42	-3.58
8,081.0	7.40	241.70	7,295.9	-2,799.2	-1,147.4	3,024.5	0.33	-0.11	-2.45
8,176.0	6.50	238.00	7,390.2	-2,804.9	-1,157.3	3,033.8	1.06	-0.95	-3.89
8,270.0	5.90	242.00	7,483.6	-2,810.0	-1,166.1	3,041.9	0.79	-0.64	4.26
8,365.0	5.20	238.30	7,578.2	-2,814.6	-1,174.1	3,049.3	0.83	-0.74	-3.89
8,460.0	5.70	235.30	7,672.8	-2,819.5	-1,181.6	3,056.8	0.61	0.53	-3.16
8,554.0	6.00	236.40	7,766.3	-2,824.9	-1,189.5	3,064.9	0.34	0.32	1.17
8,649.0	5.00	233.80	7,860.8	-2,830.1	-1,197.0	3,072.7	1.08	-1.05	-2.74
8,743.0	4.30	245.10	7,954.5	-2,834.0	-1,203.5	3,078.8	1.22	-0.74	12.02
8,838.0	4.40	237.90	8,049.3	-2,837.4	-1,209.8	3,084.5	0.58	0.11	-7.58
8,932.0	4.40	234.20	8,143.0	-2,841.4	-1,215.8	3,090.6	0.30	0.00	-3.94

<b>Company:</b>	Caerus Oil and Gas LLC	<b>Local Co-ordinate Reference:</b>	Well NPR 11D-15 596
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<b>Site:</b>	K10 596 Pad Sec.10-T5S-R96W	<b>MD Reference:</b>	WELL @ 6733.0ft (Original Well Elev)
<b>Well:</b>	NPR 11D-15 596	<b>North Reference:</b>	True
<b>Wellbore:</b>	NPR 11D-15 596 Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	NPR 11D-15 596 Wellbore #1	<b>Database:</b>	US_EDM

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)
9,027.0	4.40	234.70	8,237.7	-2,845.7	-1,221.8	3,096.8	0.04	0.00	0.53
9,121.0	4.70	231.10	8,331.4	-2,850.2	-1,227.7	3,103.3	0.44	0.32	-3.83
9,216.0	4.80	233.10	8,426.1	-2,855.0	-1,233.9	3,110.2	0.20	0.11	2.11
9,311.0	4.30	229.40	8,520.8	-2,859.7	-1,239.8	3,116.9	0.61	-0.53	-3.89
9,405.0	3.90	238.50	8,614.5	-2,863.7	-1,245.2	3,122.7	0.81	-0.43	9.68
9,500.0	4.50	229.50	8,709.3	-2,867.8	-1,250.8	3,128.7	0.94	0.63	-9.47
9,595.0	4.60	226.00	8,804.0	-2,872.9	-1,256.3	3,135.5	0.31	0.11	-3.68
9,689.0	4.80	233.40	8,897.7	-2,877.8	-1,262.2	3,142.4	0.68	0.21	7.87
9,784.0	5.30	241.30	8,992.3	-2,882.3	-1,269.3	3,149.4	0.90	0.53	8.32
9,879.0	4.20	247.40	9,087.0	-2,885.7	-1,276.3	3,155.3	1.27	-1.16	6.42
9,973.0	3.70	248.80	9,180.7	-2,888.2	-1,282.3	3,159.9	0.54	-0.53	1.49
10,040.0	3.80	249.90	9,247.6	-2,889.7	-1,286.4	3,163.0	0.18	0.15	1.64
10,074.6	3.80	249.90	9,282.1	-2,890.5	-1,288.6	3,164.6	0.00	0.00	0.00
<b>BHL 954'FNL, 1303'FWL, SEC.15</b>									
10,100.0	3.80	249.90	9,307.5	-2,891.1	-1,290.2	3,165.7	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
SHL 1861'FSL, 2529'FW	0.00	0.00	1.0	0.0	0.0	14,403,083.67	2,441,510.39	39.627458	-108.155167
- survey hits target center									
- Point									
BHL 954'FNL, 1303'FWL	0.00	0.00	9,288.0	-2,812.8	-1,223.0	14,400,232.65	2,440,376.78	39.619736	-108.159508
- survey misses target center by 101.9ft at 10074.6ft MD (9282.1 TVD, -2890.5 N, -1288.6 E)									
- Ellipse (radii L200.0 W100.0 on 250.00 azi)									

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,894.0	1,750.0	-578.5	-206.2	Last Survey - 1894' MD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_