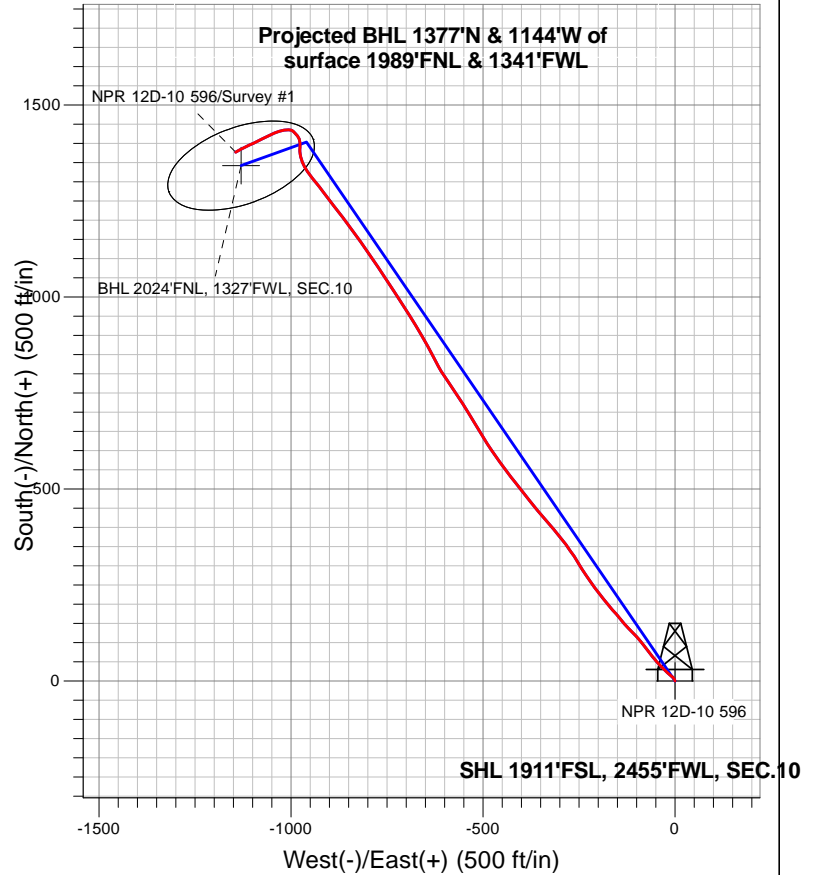


## Caerus Oil and Gas LLC



### LEGEND

- NPR 12D-10 596, NPR 12D-10 596 Wellbore #1, Plan #1 (7-09-18)R VO
- NPR 12D-10 596 Wellbore #1
- Survey #1

## Final Survey Plot

**Projected Final Survey -**  
**9,715'MD & 9430' TVD @ 1790.10'VS**  
**7.0 deg Inc 242.1 deg AZ**

Project: SEC.10-T5S-R96W  
Site: K10 596 Pad Sec.10-T5S-R96W  
Well: NPR 12D-10 596  
Plan: NPR 12D-10 596 Wellbore #1



## **Caerus Oil and Gas LLC**

**SEC.10-T5S-R96W**

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

**NPR 12D-10 596**

**NPR 12D-10 596 Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**19 July, 2018**

<b>Company:</b>	Caerus Oil and Gas LLC	<b>Local Co-ordinate Reference:</b>	Well NPR 12D-10 596
<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 12D-10 596	<b>North Reference:</b>	True
<b>Wellbore:</b>	NPR 12D-10 596 Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	NPR 12D-10 596 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:	-108.175411 °
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	1.82 °

Well	NPR 12D-10 596					
Well Position	+N/-S	0.0 ft	Northing:	14,403,131.94 usft	Latitude:	39.627597
	+E/-W	0.0 ft	Easting:	2,441,434.43 usft	Longitude:	-108.155437
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	6,709.0 ft

Wellbore					
NPR 12D-10 596 Wellbore #1					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/9/2018	9.53	65.62	51,584

Design	NPR 12D-10 596 Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	319.91	

Survey Program		Date	7/19/2018		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
120.0	9,715.0	Survey #1 (NPR 12D-10 596 Wellbore #1)	MWD	MWD - Standard	

Survey									
	Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build 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 1911'FSL, 2455'FWL, SEC.10									
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
301.0	2.40	341.30	300.9	3.6	-1.2	3.5	1.33	1.33	0.00
393.0	2.60	318.10	392.9	7.0	-3.2	7.4	1.11	0.22	-25.22
485.0	4.00	309.20	484.7	10.5	-7.1	12.6	1.62	1.52	-9.67
578.0	5.40	310.70	577.4	15.5	-12.9	20.2	1.51	1.51	1.61
670.0	8.90	313.70	668.7	23.2	-21.4	31.5	3.82	3.80	3.26
763.0	12.20	315.30	760.1	35.2	-33.5	48.5	3.56	3.55	1.72
855.0	14.60	319.30	849.6	50.9	-47.9	69.7	2.80	2.61	4.35

<b>Company:</b>	Caerus Oil and Gas LLC	<b>Local Co-ordinate Reference:</b>	Well NPR 12D-10 596
<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 12D-10 596	<b>North Reference:</b>	True
<b>Wellbore:</b>	NPR 12D-10 596 Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	NPR 12D-10 596 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)
947.0	17.40	322.00	938.0	70.5	-63.9	95.1	3.15	3.04	2.93
1,041.0	19.40	322.30	1,027.2	93.9	-82.1	124.7	2.13	2.13	0.32
1,135.0	17.50	316.60	1,116.4	116.5	-101.4	154.5	2.79	-2.02	-6.06
1,230.0	16.80	316.60	1,207.1	136.9	-120.6	182.4	0.74	-0.74	0.00
1,324.0	20.20	319.50	1,296.3	159.1	-140.5	212.2	3.75	3.62	3.09
1,419.0	22.20	319.50	1,384.8	185.2	-162.8	246.6	2.11	2.11	0.00
1,513.0	23.00	321.30	1,471.6	213.1	-185.8	282.7	1.13	0.85	1.91
1,608.0	23.80	323.50	1,558.8	243.0	-208.8	320.4	1.25	0.84	2.32
1,702.0	24.60	326.00	1,644.5	274.4	-231.1	358.8	1.38	0.85	2.66
1,797.0	24.50	328.90	1,731.0	307.7	-252.3	397.9	1.27	-0.11	3.05
1,891.0	23.80	325.50	1,816.7	340.0	-273.1	436.0	1.66	-0.74	-3.62
1,985.0	22.80	321.40	1,903.1	369.9	-295.2	473.1	2.03	-1.06	-4.36
2,080.0	22.30	319.00	1,990.8	397.9	-318.5	509.5	1.10	-0.53	-2.53
2,174.0	22.20	320.10	2,077.8	425.0	-341.6	545.1	0.46	-0.11	1.17
2,269.0	22.30	320.20	2,165.7	452.6	-364.7	581.1	0.11	0.11	0.11
2,325.0	22.60	321.80	2,217.5	469.2	-378.1	602.5	1.22	0.54	2.86
2,491.0	21.10	321.20	2,371.6	517.6	-416.6	664.2	0.91	-0.90	-0.36
2,586.0	19.90	323.00	2,460.5	543.8	-437.0	697.5	1.43	-1.26	1.89
2,681.0	19.40	324.60	2,550.0	569.6	-455.9	729.3	0.77	-0.53	1.68
2,776.0	18.10	325.40	2,640.0	594.6	-473.4	759.7	1.39	-1.37	0.84
2,869.0	17.20	327.20	2,728.6	618.0	-489.1	787.8	1.13	-0.97	1.94
2,964.0	17.50	328.90	2,819.3	642.1	-504.1	815.8	0.62	0.32	1.79
3,058.0	18.40	328.80	2,908.7	666.9	-519.0	844.4	0.96	0.96	-0.11
3,152.0	18.40	329.10	2,997.9	692.3	-534.3	873.7	0.10	0.00	0.32
3,247.0	18.80	327.50	3,087.9	718.1	-550.3	903.7	0.68	0.42	-1.68
3,341.0	19.30	326.60	3,176.8	743.8	-567.0	934.1	0.62	0.53	-0.96
3,436.0	18.90	325.60	3,266.6	769.6	-584.3	965.0	0.54	-0.42	-1.05
3,530.0	17.90	326.00	3,355.7	794.1	-601.0	994.6	1.07	-1.06	0.43
3,624.0	18.00	331.40	3,445.2	818.9	-616.0	1,023.2	1.77	0.11	5.74
3,719.0	18.70	333.60	3,535.3	845.4	-629.8	1,052.3	1.04	0.74	2.32
3,813.0	18.60	331.00	3,624.4	872.0	-643.8	1,081.7	0.89	-0.11	-2.77
3,908.0	19.40	329.50	3,714.2	898.8	-659.1	1,112.1	0.99	0.84	-1.58
4,002.0	20.30	328.80	3,802.7	926.2	-675.5	1,143.6	0.99	0.96	-0.74
4,096.0	18.80	327.90	3,891.2	953.0	-692.0	1,174.7	1.63	-1.60	-0.96
4,191.0	19.60	327.30	3,980.9	979.4	-708.7	1,205.7	0.87	0.84	-0.63
4,285.0	20.50	326.70	4,069.2	1,006.4	-726.3	1,237.7	0.98	0.96	-0.64
4,380.0	19.90	327.30	4,158.4	1,033.9	-744.2	1,270.2	0.67	-0.63	0.63
4,475.0	18.60	325.50	4,248.1	1,060.0	-761.5	1,301.3	1.50	-1.37	-1.89
4,569.0	17.60	326.90	4,337.4	1,084.3	-777.7	1,330.4	1.16	-1.06	1.49
4,664.0	18.10	326.00	4,427.9	1,108.6	-793.8	1,359.3	0.60	0.53	-0.95
4,758.0	18.20	324.20	4,517.2	1,132.6	-810.6	1,388.4	0.61	0.11	-1.91
4,853.0	17.40	323.80	4,607.6	1,156.1	-827.6	1,417.4	0.85	-0.84	-0.42
4,947.0	16.30	324.00	4,697.6	1,178.1	-843.7	1,444.6	1.17	-1.17	0.21

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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 12D-10 596	<b>North Reference:</b>	True
<b>Wellbore:</b>	NPR 12D-10 596 Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	NPR 12D-10 596 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)	
5,042.0	15.90	323.00	4,788.9	1,199.3	-859.4	1,470.9	0.51	-0.42	-1.05	
5,136.0	15.30	322.40	4,879.4	1,219.4	-874.7	1,496.1	0.66	-0.64	-0.64	
5,231.0	14.20	322.00	4,971.3	1,238.5	-889.5	1,520.3	1.16	-1.16	-0.42	
5,325.0	13.90	322.70	5,062.5	1,256.5	-903.4	1,543.1	0.37	-0.32	0.74	
5,419.0	13.70	322.70	5,153.8	1,274.4	-917.0	1,565.5	0.21	-0.21	0.00	
5,514.0	13.00	322.20	5,246.2	1,291.8	-930.4	1,587.4	0.75	-0.74	-0.53	
5,608.0	11.90	322.20	5,338.0	1,307.8	-942.8	1,607.7	1.17	-1.17	0.00	
5,703.0	10.30	323.50	5,431.2	1,322.4	-953.9	1,625.9	1.70	-1.68	1.37	
5,798.0	8.60	328.50	5,524.9	1,335.2	-962.6	1,641.4	1.99	-1.79	5.26	
5,892.0	7.10	337.70	5,618.0	1,346.6	-968.5	1,653.9	2.08	-1.60	9.79	
5,987.0	5.80	343.20	5,712.4	1,356.6	-972.1	1,663.9	1.51	-1.37	5.79	
6,081.0	4.80	346.40	5,806.0	1,365.0	-974.4	1,671.8	1.11	-1.06	3.40	
6,176.0	4.00	348.40	5,900.7	1,372.1	-976.0	1,678.3	0.86	-0.84	2.11	
6,270.0	4.10	355.00	5,994.5	1,378.7	-977.0	1,683.9	0.51	0.11	7.02	
6,365.0	2.70	8.60	6,089.3	1,384.3	-976.9	1,688.1	1.69	-1.47	14.32	
6,459.0	3.10	4.10	6,183.2	1,389.0	-976.4	1,691.4	0.49	0.43	-4.79	
6,553.0	2.60	356.70	6,277.1	1,393.7	-976.4	1,695.0	0.66	-0.53	-7.87	
6,648.0	2.50	359.50	6,372.0	1,397.9	-976.5	1,698.3	0.17	-0.11	2.95	
6,743.0	2.20	354.80	6,466.9	1,401.8	-976.7	1,701.4	0.38	-0.32	-4.95	
6,837.0	1.50	1.80	6,560.9	1,404.8	-976.8	1,703.8	0.78	-0.74	7.45	
6,932.0	1.80	343.00	6,655.8	1,407.5	-977.2	1,706.1	0.65	0.32	-19.79	
7,026.0	2.40	336.80	6,749.8	1,410.7	-978.4	1,709.3	0.68	0.64	-6.60	
7,121.0	1.70	327.70	6,844.7	1,413.7	-980.0	1,712.6	0.81	-0.74	-9.58	
7,216.0	1.40	341.40	6,939.7	1,416.0	-981.1	1,715.1	0.50	-0.32	14.42	
7,405.0	1.10	331.20	7,128.6	1,419.8	-982.7	1,719.0	0.20	-0.16	-5.40	
7,594.0	1.40	316.10	7,317.6	1,423.0	-985.2	1,723.1	0.23	0.16	-7.99	
7,783.0	1.40	299.80	7,506.5	1,425.8	-988.8	1,727.6	0.21	0.00	-8.62	
7,873.0	1.40	312.80	7,596.5	1,427.1	-990.5	1,729.7	0.35	0.00	14.44	
7,967.0	1.60	321.80	7,690.5	1,428.9	-992.2	1,732.1	0.33	0.21	9.57	
8,156.0	3.30	299.60	7,879.3	1,433.7	-998.5	1,739.9	1.01	0.90	-11.75	
8,251.0	4.20	271.60	7,974.1	1,435.2	-1,004.4	1,744.8	2.12	0.95	-29.47	
8,345.0	4.70	264.40	8,067.8	1,434.9	-1,011.7	1,749.2	0.80	0.53	-7.66	
8,440.0	4.60	259.60	8,162.5	1,433.8	-1,019.3	1,753.3	0.42	-0.11	-5.05	
8,535.0	5.00	257.20	8,257.2	1,432.2	-1,027.1	1,757.1	0.47	0.42	-2.53	
8,629.0	5.20	250.00	8,350.8	1,429.8	-1,035.1	1,760.4	0.71	0.21	-7.66	
8,724.0	5.60	248.80	8,445.4	1,426.7	-1,043.4	1,763.4	0.44	0.42	-1.26	
8,818.0	6.00	243.60	8,538.9	1,422.8	-1,052.1	1,766.1	0.70	0.43	-5.53	
8,913.0	6.00	243.00	8,633.4	1,418.4	-1,061.0	1,768.4	0.07	0.00	-0.63	
9,008.0	5.90	244.60	8,727.9	1,414.0	-1,069.8	1,770.7	0.20	-0.11	1.68	
9,102.0	6.00	243.50	8,821.4	1,409.8	-1,078.6	1,773.1	0.16	0.11	-1.17	
Last Survey Drilled - 9102' MD										
9,197.0	6.30	243.00	8,915.8	1,405.2	-1,087.7	1,775.5	0.32	0.32	-0.53	
9,291.0	6.80	244.30	9,009.2	1,400.4	-1,097.3	1,778.0	0.55	0.53	1.38	

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<b>Well:</b>	NPR 12D-10 596	<b>North Reference:</b>	True
<b>Wellbore:</b>	NPR 12D-10 596 Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	NPR 12D-10 596 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)
9,386.0	7.10	245.50	9,103.5	1,395.6	-1,107.7	1,781.0	0.35	0.32	1.26
9,574.0	7.20	241.50	9,290.0	1,385.1	-1,128.6	1,786.5	0.27	0.05	-2.13
9,640.0	7.00	242.10	9,355.5	1,381.3	-1,135.8	1,788.2	0.32	-0.30	0.91
9,715.0	7.00	242.10	9,430.0	1,377.0	-1,143.9	1,790.1	0.00	0.00	0.00
BHL 2024'FNL, 1327'FWL, SEC.10									

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
9,102.0	8,821.4	1,409.8	-1,078.6	Last Survey Drilled - 9102' MD

Checked By: _____	Approved By: _____	Date: _____
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