

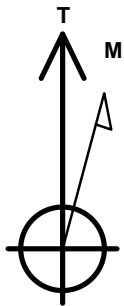
# Caerus Oil and Gas LLC

Well Name: **Riggs 35-761-0561XCDH**

Surface Location: Riggs OP 35-761 Pad Sec.35-T7N-R61W  
 North American Datum 1983 , US State Plane 1983, Colorado Northern Zone  
 Ground Elevation: 4769.0  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1436867.25 3369068.87 40.525017 -104.172349  
 RKB - 30' WELL @ 4799.0ft (RKB - 30')

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 250'FSL, 1513'FEL, SEC.35	1.0	0.0	0.0	Point
BHL 460'FSL, 2086'FEL, SEC.11	6439.0	-10285.4	-463.1	Point
LPL 460'FNL, 2086'FEL, SEC.2	6513.0	-712.2	-565.2	Point



Azimuths to True North  
 Magnetic North: 7.83°

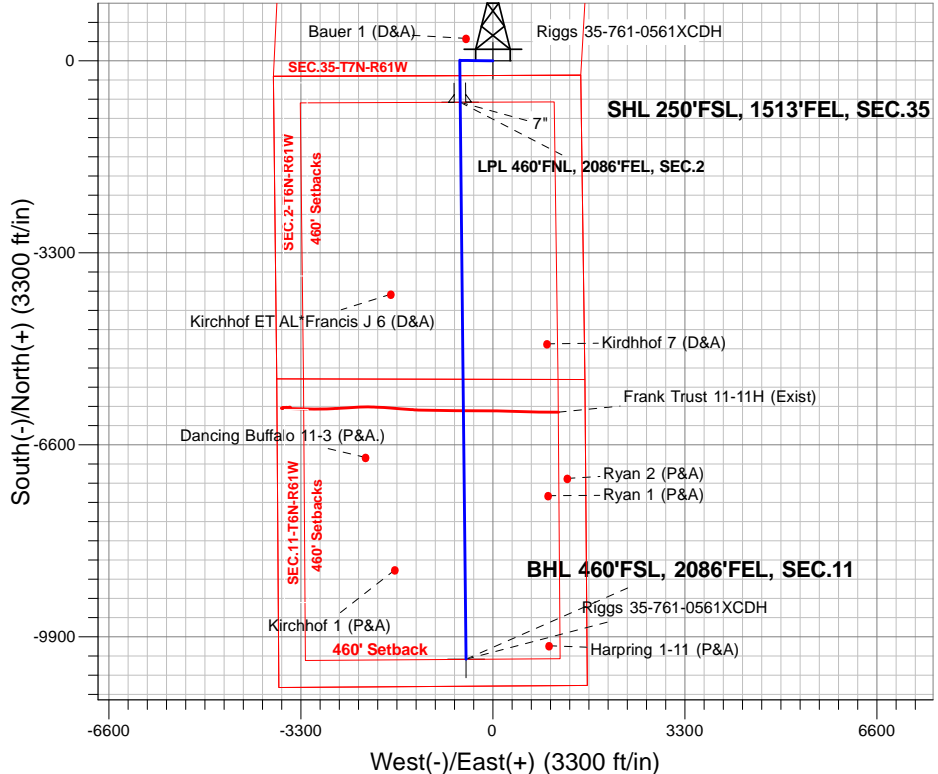
Magnetic Field  
 Strength: 52698.5snT  
 Dip Angle: 67.06°  
 Date: 9/29/2016  
 Model: IGRF2010

Riggs OP 35-761 Pad Sec.35-T7N-R61W  
 Riggs 35-761-0561XCDH  
 Plan #1 (9-29-16)  
 10:01, October 04 2016

## ANNOTATIONS

TVD	MD	Annotation
800.0	800.0	KOP - Start Build 1.50
5226.9	5262.1	Start Drop -2.00
5797.0	5833.2	Start Build 8.00
6513.0	6963.5	Start DLS 0.50 TFO -0.08
6513.0	6964.0	Start 9573.5 hold at 6964.0 MD
6439.0	16537.5	TD at 16537.5

South(-)/North(+) (3300 ft/in)

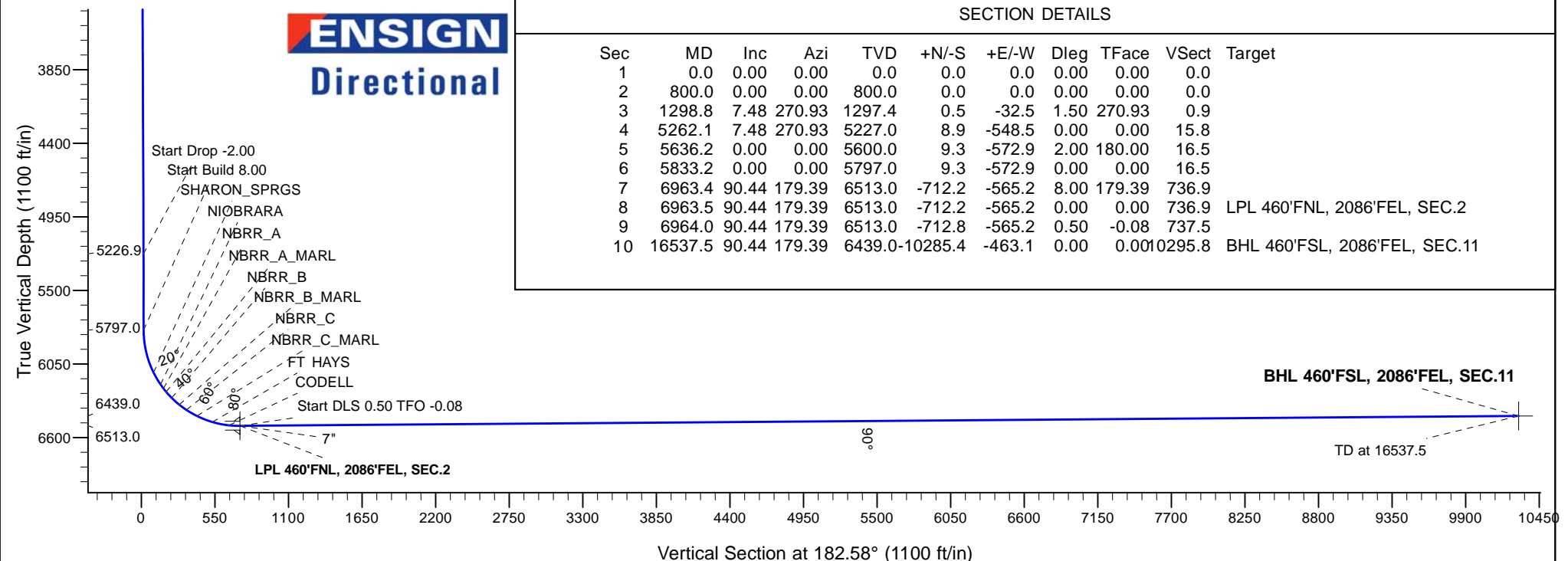


West(-)/East(+) (3300 ft/in)

## 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	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	1298.8	7.48	270.93	1297.4	0.5	-32.5	1.50	270.93	0.9	
4	5262.1	7.48	270.93	5227.0	8.9	-548.5	0.00	0.00	15.8	
5	5636.2	0.00	0.00	5600.0	9.3	-572.9	2.00	180.00	16.5	
6	5833.2	0.00	0.00	5797.0	9.3	-572.9	0.00	0.00	16.5	
7	6963.4	90.44	179.39	6513.0	-712.2	-565.2	8.00	179.39	736.9	
8	6963.5	90.44	179.39	6513.0	-712.2	-565.2	0.00	0.00	736.9	LPL 460'FNL, 2086'FEL, SEC.2
9	6964.0	90.44	179.39	6513.0	-712.8	-565.2	0.50	-0.08	737.5	
10	16537.5	90.44	179.39	6439.0-10285.4	-463.1	0.00	0.00	10295.8		BHL 460'FSL, 2086'FEL, SEC.11

**ENSIGN**  
 Directional





## **Caerus Oil and Gas LLC**

**SEC.35-T7N-R61W**

**Riggs OP 35-761 Pad Sec.35-T7N-R61W**

**Riggs 35-761-0561XCDH**

**Wellbore #1**

**Plan: Plan #1 (9-29-16)**

## **Standard Planning Report**

**04 October, 2016**

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Riggs 35-761-0561XCDH
<b>Company:</b>	Caerus Oil and Gas LLC	<b>TVD Reference:</b>	WELL @ 4799.0ft (RKB - 30')
<b>Project:</b>	SEC.35-T7N-R61W	<b>MD Reference:</b>	WELL @ 4799.0ft (RKB - 30')
<b>Site:</b>	Riggs OP 35-761 Pad Sec.35-T7N-R61W	<b>North Reference:</b>	True
<b>Well:</b>	Riggs 35-761-0561XCDH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (9-29-16)		

<b>Project</b>	SEC.35-T7N-R61W, Weld County, CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site	Riggs OP 35-761 Pad Sec.35-T7N-R61W				
Site Position:		Northing:	1,436,866.61 usft	Latitude:	40.525017
From:	Lat/Long	Easting:	3,369,023.84 usft	Longitude:	-104.172511
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.86

Well	Riggs 35-761-0561XCDH					
Well Position	+N/-S	0.0 ft	Northing:	1,436,867.25 usft	Latitude:	40.525017
	+E/-W	45.0 ft	Easting:	3,369,068.87 usft	Longitude:	-104.172349
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,769.0 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>
	IGRF2010	9/29/2016	7.83	67.06	52,699

<b>Design</b>	Plan #1 (9-29-16)			
<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	182.58

<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	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,298.8	7.48	270.93	1,297.4	0.5	-32.5	1.50	1.50	0.00	270.93	
5,262.1	7.48	270.93	5,227.0	8.9	-548.5	0.00	0.00	0.00	0.00	
5,636.2	0.00	0.00	5,600.0	9.3	-572.9	2.00	-2.00	0.00	180.00	
5,833.2	0.00	0.00	5,797.0	9.3	-572.9	0.00	0.00	0.00	0.00	
6,963.4	90.44	179.39	6,513.0	-712.2	-565.2	8.00	8.00	0.00	179.39	
6,963.5	90.44	179.39	6,513.0	-712.2	-565.2	0.00	0.00	0.00	0.00	LPL 460'FNL, 2086'FI
6,964.0	90.44	179.39	6,513.0	-712.8	-565.2	0.50	0.50	0.00	-0.08	
16,537.5	90.44	179.39	6,439.0	-10,285.4	-463.1	0.00	0.00	0.00	0.00	BHL 460'FSL, 2086'FI

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Riggs 35-761-0561XCDH
<b>Company:</b>	Caerus Oil and Gas LLC	<b>TVD Reference:</b>	WELL @ 4799.0ft (RKB - 30')
<b>Project:</b>	SEC.35-T7N-R61W	<b>MD Reference:</b>	WELL @ 4799.0ft (RKB - 30')
<b>Site:</b>	Riggs OP 35-761 Pad Sec.35-T7N-R61W	<b>North Reference:</b>	True
<b>Well:</b>	Riggs 35-761-0561XCDH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (9-29-16)		

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
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	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP - Start Build 1.50</b>									
900.0	1.50	270.93	900.0	0.0	-1.3	0.0	1.50	1.50	0.00
1,000.0	3.00	270.93	999.9	0.1	-5.2	0.2	1.50	1.50	0.00
1,100.0	4.50	270.93	1,099.7	0.2	-11.8	0.3	1.50	1.50	0.00
1,200.0	6.00	270.93	1,199.3	0.3	-20.9	0.6	1.50	1.50	0.00
1,298.8	7.48	270.93	1,297.4	0.5	-32.5	0.9	1.50	1.50	0.00
1,300.0	7.48	270.93	1,298.6	0.5	-32.7	0.9	0.00	0.00	0.00
1,400.0	7.48	270.93	1,397.7	0.7	-45.7	1.3	0.00	0.00	0.00
1,500.0	7.48	270.93	1,496.9	1.0	-58.7	1.7	0.00	0.00	0.00
1,600.0	7.48	270.93	1,596.0	1.2	-71.7	2.1	0.00	0.00	0.00
1,700.0	7.48	270.93	1,695.2	1.4	-84.8	2.4	0.00	0.00	0.00
1,800.0	7.48	270.93	1,794.3	1.6	-97.8	2.8	0.00	0.00	0.00
1,900.0	7.48	270.93	1,893.5	1.8	-110.8	3.2	0.00	0.00	0.00
2,000.0	7.48	270.93	1,992.6	2.0	-123.8	3.6	0.00	0.00	0.00
2,100.0	7.48	270.93	2,091.8	2.2	-136.8	3.9	0.00	0.00	0.00
2,200.0	7.48	270.93	2,190.9	2.4	-149.8	4.3	0.00	0.00	0.00
2,300.0	7.48	270.93	2,290.1	2.6	-162.9	4.7	0.00	0.00	0.00
2,400.0	7.48	270.93	2,389.2	2.9	-175.9	5.1	0.00	0.00	0.00
2,500.0	7.48	270.93	2,488.4	3.1	-188.9	5.4	0.00	0.00	0.00
2,600.0	7.48	270.93	2,587.5	3.3	-201.9	5.8	0.00	0.00	0.00
2,700.0	7.48	270.93	2,686.7	3.5	-214.9	6.2	0.00	0.00	0.00
2,800.0	7.48	270.93	2,785.8	3.7	-228.0	6.6	0.00	0.00	0.00
2,900.0	7.48	270.93	2,885.0	3.9	-241.0	6.9	0.00	0.00	0.00
3,000.0	7.48	270.93	2,984.1	4.1	-254.0	7.3	0.00	0.00	0.00
3,100.0	7.48	270.93	3,083.2	4.3	-267.0	7.7	0.00	0.00	0.00
3,200.0	7.48	270.93	3,182.4	4.5	-280.0	8.1	0.00	0.00	0.00
3,206.7	7.48	270.93	3,189.0	4.6	-280.9	8.1	0.00	0.00	0.00
<b>RICHARD_SD</b>									
3,300.0	7.48	270.93	3,281.5	4.8	-293.1	8.4	0.00	0.00	0.00
3,400.0	7.48	270.93	3,380.7	5.0	-306.1	8.8	0.00	0.00	0.00
3,500.0	7.48	270.93	3,479.8	5.2	-319.1	9.2	0.00	0.00	0.00
3,600.0	7.48	270.93	3,579.0	5.4	-332.1	9.6	0.00	0.00	0.00
3,700.0	7.48	270.93	3,678.1	5.6	-345.1	9.9	0.00	0.00	0.00
3,800.0	7.48	270.93	3,777.3	5.8	-358.2	10.3	0.00	0.00	0.00
3,900.0	7.48	270.93	3,876.4	6.0	-371.2	10.7	0.00	0.00	0.00
4,000.0	7.48	270.93	3,975.6	6.2	-384.2	11.0	0.00	0.00	0.00
4,100.0	7.48	270.93	4,074.7	6.4	-397.2	11.4	0.00	0.00	0.00
4,200.0	7.48	270.93	4,173.9	6.7	-410.2	11.8	0.00	0.00	0.00
4,300.0	7.48	270.93	4,273.0	6.9	-423.3	12.2	0.00	0.00	0.00
4,400.0	7.48	270.93	4,372.2	7.1	-436.3	12.5	0.00	0.00	0.00
4,500.0	7.48	270.93	4,471.3	7.3	-449.3	12.9	0.00	0.00	0.00
4,600.0	7.48	270.93	4,570.5	7.5	-462.3	13.3	0.00	0.00	0.00
4,700.0	7.48	270.93	4,669.6	7.7	-475.3	13.7	0.00	0.00	0.00
4,800.0	7.48	270.93	4,768.8	7.9	-488.3	14.0	0.00	0.00	0.00
4,900.0	7.48	270.93	4,867.9	8.1	-501.4	14.4	0.00	0.00	0.00

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Riggs 35-761-0561XCDH
<b>Company:</b>	Caerus Oil and Gas LLC	<b>TVD Reference:</b>	WELL @ 4799.0ft (RKB - 30')
<b>Project:</b>	SEC.35-T7N-R61W	<b>MD Reference:</b>	WELL @ 4799.0ft (RKB - 30')
<b>Site:</b>	Riggs OP 35-761 Pad Sec.35-T7N-R61W	<b>North Reference:</b>	True
<b>Well:</b>	Riggs 35-761-0561XCDH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (9-29-16)		

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)
5,000.0	7.48	270.93	4,967.1	8.4	-514.4	14.8	0.00	0.00	0.00
5,100.0	7.48	270.93	5,066.2	8.6	-527.4	15.2	0.00	0.00	0.00
5,200.0	7.48	270.93	5,165.4	8.8	-540.4	15.5	0.00	0.00	0.00
5,262.1	7.48	270.93	5,226.9	8.9	-548.5	15.8	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,300.0	6.72	270.93	5,264.6	9.0	-553.2	15.9	2.00	-2.00	0.00
5,400.0	4.72	270.93	5,364.0	9.1	-563.2	16.2	2.00	-2.00	0.00
5,500.0	2.72	270.93	5,463.8	9.2	-569.7	16.4	2.00	-2.00	0.00
5,600.0	0.72	270.93	5,563.8	9.3	-572.7	16.5	2.00	-2.00	0.00
5,636.2	0.00	0.00	5,600.0	9.3	-572.9	16.5	2.00	-2.00	0.00
5,700.0	0.00	0.00	5,663.8	9.3	-572.9	16.5	0.00	0.00	0.00
5,800.0	0.00	0.00	5,763.8	9.3	-572.9	16.5	0.00	0.00	0.00
5,833.2	0.00	0.00	5,797.0	9.3	-572.9	16.5	0.00	0.00	0.00
<b>Start Build 8.00</b>									
5,900.0	5.34	179.39	5,863.7	6.2	-572.9	19.6	8.00	8.00	0.00
6,000.0	13.35	179.39	5,962.3	-10.0	-572.7	35.8	8.00	8.00	0.00
6,100.0	21.35	179.39	6,057.6	-39.8	-572.4	65.5	8.00	8.00	0.00
6,161.6	26.28	179.39	6,114.0	-64.7	-572.1	90.4	8.00	8.00	0.00
<b>SHARON_SPRGS</b>									
6,200.0	29.35	179.39	6,147.9	-82.6	-571.9	108.2	8.00	8.00	0.00
6,266.1	34.64	179.39	6,204.0	-117.6	-571.5	143.2	8.00	8.00	0.00
<b>NIOBRARA</b>									
6,300.0	37.35	179.39	6,231.4	-137.5	-571.3	163.1	8.00	8.00	0.00
6,303.3	37.61	179.39	6,234.0	-139.5	-571.3	165.1	8.00	8.00	0.00
<b>NBRR_A</b>									
6,334.1	40.08	179.39	6,258.0	-158.8	-571.1	184.4	8.00	8.00	0.00
<b>NBRR_A_MARL</b>									
6,396.6	45.08	179.39	6,304.0	-201.1	-570.7	226.6	8.00	8.00	0.00
<b>NBRR_B</b>									
6,400.0	45.35	179.39	6,306.4	-203.5	-570.6	229.0	8.00	8.00	0.00
6,471.4	51.07	179.39	6,354.0	-256.8	-570.1	282.2	8.00	8.00	0.00
<b>NBRR_B_MARL</b>									
6,500.0	53.36	179.39	6,371.5	-279.4	-569.8	304.7	8.00	8.00	0.00
6,539.2	56.49	179.39	6,394.0	-311.4	-569.5	336.7	8.00	8.00	0.00
<b>NBRR_C</b>									
6,600.0	61.36	179.39	6,425.4	-363.5	-568.9	388.7	8.00	8.00	0.00
6,629.5	63.72	179.39	6,439.0	-389.7	-568.6	414.8	8.00	8.00	0.00
<b>NBRR_C_MARL</b>									
6,700.0	69.36	179.39	6,467.1	-454.3	-568.0	479.4	8.00	8.00	0.00
6,753.4	73.63	179.39	6,484.0	-504.9	-567.4	529.9	8.00	8.00	0.00
<b>FT HAYS</b>									
6,800.0	77.36	179.39	6,495.7	-550.0	-566.9	575.0	8.00	8.00	0.00
6,882.0	83.92	179.39	6,509.0	-630.9	-566.1	655.7	8.00	8.00	0.00
<b>CODELL</b>									
6,900.0	85.36	179.39	6,510.7	-648.8	-565.9	673.6	8.00	8.00	0.00
6,963.5	90.44	179.39	6,513.0	-712.2	-565.2	736.9	8.00	8.00	0.00
<b>Start DLS 0.50 TFO -0.08</b>									
6,964.0	90.44	179.39	6,513.0	-712.7	-565.2	737.4	0.53	0.53	0.00
<b>Start 9573.5 hold at 6964.0 MD</b>									
7,000.0	90.44	179.39	6,512.7	-748.7	-564.8	773.4	0.00	0.00	0.00
7,100.0	90.44	179.39	6,511.9	-848.7	-563.7	873.2	0.00	0.00	0.00
7,200.0	90.44	179.39	6,511.2	-948.7	-562.7	973.1	0.00	0.00	0.00

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Riggs 35-761-0561XCDH
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<b>Project:</b>	SEC.35-T7N-R61W	<b>MD Reference:</b>	WELL @ 4799.0ft (RKB - 30')
<b>Site:</b>	Riggs OP 35-761 Pad Sec.35-T7N-R61W	<b>North Reference:</b>	True
<b>Well:</b>	Riggs 35-761-0561XCDH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (9-29-16)		

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)
7,300.0	90.44	179.39	6,510.4	-1,048.7	-561.6	1,072.9	0.00	0.00	0.00
7,400.0	90.44	179.39	6,509.6	-1,148.7	-560.5	1,172.8	0.00	0.00	0.00
7,500.0	90.44	179.39	6,508.9	-1,248.7	-559.5	1,272.6	0.00	0.00	0.00
7,600.0	90.44	179.39	6,508.1	-1,348.7	-558.4	1,372.4	0.00	0.00	0.00
7,700.0	90.44	179.39	6,507.3	-1,448.7	-557.3	1,472.3	0.00	0.00	0.00
7,800.0	90.44	179.39	6,506.5	-1,548.7	-556.3	1,572.1	0.00	0.00	0.00
7,900.0	90.44	179.39	6,505.8	-1,648.7	-555.2	1,672.0	0.00	0.00	0.00
8,000.0	90.44	179.39	6,505.0	-1,748.6	-554.1	1,771.8	0.00	0.00	0.00
8,100.0	90.44	179.39	6,504.2	-1,848.6	-553.1	1,871.6	0.00	0.00	0.00
8,200.0	90.44	179.39	6,503.4	-1,948.6	-552.0	1,971.5	0.00	0.00	0.00
8,300.0	90.44	179.39	6,502.7	-2,048.6	-550.9	2,071.3	0.00	0.00	0.00
8,400.0	90.44	179.39	6,501.9	-2,148.6	-549.9	2,171.2	0.00	0.00	0.00
8,500.0	90.44	179.39	6,501.1	-2,248.6	-548.8	2,271.0	0.00	0.00	0.00
8,600.0	90.44	179.39	6,500.4	-2,348.6	-547.7	2,370.9	0.00	0.00	0.00
8,700.0	90.44	179.39	6,499.6	-2,448.6	-546.7	2,470.7	0.00	0.00	0.00
8,800.0	90.44	179.39	6,498.8	-2,548.6	-545.6	2,570.5	0.00	0.00	0.00
8,900.0	90.44	179.39	6,498.0	-2,648.6	-544.5	2,670.4	0.00	0.00	0.00
9,000.0	90.44	179.39	6,497.3	-2,748.6	-543.5	2,770.2	0.00	0.00	0.00
9,100.0	90.44	179.39	6,496.5	-2,848.6	-542.4	2,870.1	0.00	0.00	0.00
9,200.0	90.44	179.39	6,495.7	-2,948.5	-541.3	2,969.9	0.00	0.00	0.00
9,300.0	90.44	179.39	6,494.9	-3,048.5	-540.3	3,069.8	0.00	0.00	0.00
9,400.0	90.44	179.39	6,494.2	-3,148.5	-539.2	3,169.6	0.00	0.00	0.00
9,500.0	90.44	179.39	6,493.4	-3,248.5	-538.1	3,269.4	0.00	0.00	0.00
9,600.0	90.44	179.39	6,492.6	-3,348.5	-537.1	3,369.3	0.00	0.00	0.00
9,700.0	90.44	179.39	6,491.8	-3,448.5	-536.0	3,469.1	0.00	0.00	0.00
9,800.0	90.44	179.39	6,491.1	-3,548.5	-534.9	3,569.0	0.00	0.00	0.00
9,900.0	90.44	179.39	6,490.3	-3,648.5	-533.9	3,668.8	0.00	0.00	0.00
10,000.0	90.44	179.39	6,489.5	-3,748.5	-532.8	3,768.6	0.00	0.00	0.00
10,100.0	90.44	179.39	6,488.8	-3,848.5	-531.7	3,868.5	0.00	0.00	0.00
10,200.0	90.44	179.39	6,488.0	-3,948.5	-530.7	3,968.3	0.00	0.00	0.00
10,300.0	90.44	179.39	6,487.2	-4,048.4	-529.6	4,068.2	0.00	0.00	0.00
10,400.0	90.44	179.39	6,486.4	-4,148.4	-528.5	4,168.0	0.00	0.00	0.00
10,500.0	90.44	179.39	6,485.7	-4,248.4	-527.5	4,267.9	0.00	0.00	0.00
10,600.0	90.44	179.39	6,484.9	-4,348.4	-526.4	4,367.7	0.00	0.00	0.00
10,700.0	90.44	179.39	6,484.1	-4,448.4	-525.3	4,467.5	0.00	0.00	0.00
10,800.0	90.44	179.39	6,483.3	-4,548.4	-524.3	4,567.4	0.00	0.00	0.00
10,900.0	90.44	179.39	6,482.6	-4,648.4	-523.2	4,667.2	0.00	0.00	0.00
11,000.0	90.44	179.39	6,481.8	-4,748.4	-522.1	4,767.1	0.00	0.00	0.00
11,100.0	90.44	179.39	6,481.0	-4,848.4	-521.1	4,866.9	0.00	0.00	0.00
11,200.0	90.44	179.39	6,480.3	-4,948.4	-520.0	4,966.8	0.00	0.00	0.00
11,300.0	90.44	179.39	6,479.5	-5,048.4	-518.9	5,066.6	0.00	0.00	0.00
11,400.0	90.44	179.39	6,478.7	-5,148.4	-517.9	5,166.4	0.00	0.00	0.00
11,500.0	90.44	179.39	6,477.9	-5,248.3	-516.8	5,266.3	0.00	0.00	0.00
11,600.0	90.44	179.39	6,477.2	-5,348.3	-515.7	5,366.1	0.00	0.00	0.00
11,700.0	90.44	179.39	6,476.4	-5,448.3	-514.7	5,466.0	0.00	0.00	0.00
11,800.0	90.44	179.39	6,475.6	-5,548.3	-513.6	5,565.8	0.00	0.00	0.00
11,900.0	90.44	179.39	6,474.8	-5,648.3	-512.5	5,665.6	0.00	0.00	0.00
12,000.0	90.44	179.39	6,474.1	-5,748.3	-511.5	5,765.5	0.00	0.00	0.00
12,100.0	90.44	179.39	6,473.3	-5,848.3	-510.4	5,865.3	0.00	0.00	0.00
12,200.0	90.44	179.39	6,472.5	-5,948.3	-509.3	5,965.2	0.00	0.00	0.00
12,300.0	90.44	179.39	6,471.8	-6,048.3	-508.3	6,065.0	0.00	0.00	0.00
12,400.0	90.44	179.39	6,471.0	-6,148.3	-507.2	6,164.9	0.00	0.00	0.00
12,500.0	90.44	179.39	6,470.2	-6,248.3	-506.1	6,264.7	0.00	0.00	0.00
12,600.0	90.44	179.39	6,469.4	-6,348.2	-505.1	6,364.5	0.00	0.00	0.00

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Riggs 35-761-0561XCDH
<b>Company:</b>	Caerus Oil and Gas LLC	<b>TVD Reference:</b>	WELL @ 4799.0ft (RKB - 30')
<b>Project:</b>	SEC.35-T7N-R61W	<b>MD Reference:</b>	WELL @ 4799.0ft (RKB - 30')
<b>Site:</b>	Riggs OP 35-761 Pad Sec.35-T7N-R61W	<b>North Reference:</b>	True
<b>Well:</b>	Riggs 35-761-0561XCDH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (9-29-16)		

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)
12,700.0	90.44	179.39	6,468.7	-6,448.2	-504.0	6,464.4	0.00	0.00	0.00
12,800.0	90.44	179.39	6,467.9	-6,548.2	-502.9	6,564.2	0.00	0.00	0.00
12,900.0	90.44	179.39	6,467.1	-6,648.2	-501.9	6,664.1	0.00	0.00	0.00
13,000.0	90.44	179.39	6,466.3	-6,748.2	-500.8	6,763.9	0.00	0.00	0.00
13,100.0	90.44	179.39	6,465.6	-6,848.2	-499.7	6,863.8	0.00	0.00	0.00
13,200.0	90.44	179.39	6,464.8	-6,948.2	-498.7	6,963.6	0.00	0.00	0.00
13,300.0	90.44	179.39	6,464.0	-7,048.2	-497.6	7,063.4	0.00	0.00	0.00
13,400.0	90.44	179.39	6,463.3	-7,148.2	-496.5	7,163.3	0.00	0.00	0.00
13,500.0	90.44	179.39	6,462.5	-7,248.2	-495.5	7,263.1	0.00	0.00	0.00
13,600.0	90.44	179.39	6,461.7	-7,348.2	-494.4	7,363.0	0.00	0.00	0.00
13,700.0	90.44	179.39	6,460.9	-7,448.2	-493.3	7,462.8	0.00	0.00	0.00
13,800.0	90.44	179.39	6,460.2	-7,548.1	-492.3	7,562.6	0.00	0.00	0.00
13,900.0	90.44	179.39	6,459.4	-7,648.1	-491.2	7,662.5	0.00	0.00	0.00
14,000.0	90.44	179.39	6,458.6	-7,748.1	-490.1	7,762.3	0.00	0.00	0.00
14,100.0	90.44	179.39	6,457.8	-7,848.1	-489.1	7,862.2	0.00	0.00	0.00
14,200.0	90.44	179.39	6,457.1	-7,948.1	-488.0	7,962.0	0.00	0.00	0.00
14,300.0	90.44	179.39	6,456.3	-8,048.1	-486.9	8,061.9	0.00	0.00	0.00
14,400.0	90.44	179.39	6,455.5	-8,148.1	-485.9	8,161.7	0.00	0.00	0.00
14,500.0	90.44	179.39	6,454.7	-8,248.1	-484.8	8,261.5	0.00	0.00	0.00
14,600.0	90.44	179.39	6,454.0	-8,348.1	-483.7	8,361.4	0.00	0.00	0.00
14,700.0	90.44	179.39	6,453.2	-8,448.1	-482.7	8,461.2	0.00	0.00	0.00
14,800.0	90.44	179.39	6,452.4	-8,548.1	-481.6	8,561.1	0.00	0.00	0.00
14,900.0	90.44	179.39	6,451.7	-8,648.1	-480.5	8,660.9	0.00	0.00	0.00
15,000.0	90.44	179.39	6,450.9	-8,748.0	-479.5	8,760.8	0.00	0.00	0.00
15,100.0	90.44	179.39	6,450.1	-8,848.0	-478.4	8,860.6	0.00	0.00	0.00
15,200.0	90.44	179.39	6,449.3	-8,948.0	-477.3	8,960.4	0.00	0.00	0.00
15,300.0	90.44	179.39	6,448.6	-9,048.0	-476.3	9,060.3	0.00	0.00	0.00
15,400.0	90.44	179.39	6,447.8	-9,148.0	-475.2	9,160.1	0.00	0.00	0.00
15,500.0	90.44	179.39	6,447.0	-9,248.0	-474.1	9,260.0	0.00	0.00	0.00
15,600.0	90.44	179.39	6,446.2	-9,348.0	-473.1	9,359.8	0.00	0.00	0.00
15,700.0	90.44	179.39	6,445.5	-9,448.0	-472.0	9,459.6	0.00	0.00	0.00
15,800.0	90.44	179.39	6,444.7	-9,548.0	-470.9	9,559.5	0.00	0.00	0.00
15,900.0	90.44	179.39	6,443.9	-9,648.0	-469.9	9,659.3	0.00	0.00	0.00
16,000.0	90.44	179.39	6,443.2	-9,748.0	-468.8	9,759.2	0.00	0.00	0.00
16,100.0	90.44	179.39	6,442.4	-9,847.9	-467.7	9,859.0	0.00	0.00	0.00
16,200.0	90.44	179.39	6,441.6	-9,947.9	-466.7	9,958.9	0.00	0.00	0.00
16,300.0	90.44	179.39	6,440.8	-10,047.9	-465.6	10,058.7	0.00	0.00	0.00
16,400.0	90.44	179.39	6,440.1	-10,147.9	-464.5	10,158.5	0.00	0.00	0.00
16,500.0	90.44	179.39	6,439.3	-10,247.9	-463.5	10,258.4	0.00	0.00	0.00
16,537.5	90.44	179.39	6,439.0	-10,285.4	-463.1	10,295.8	0.00	0.00	0.00
TD at 16537.5									

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Riggs 35-761-0561XCDH
<b>Company:</b>	Caerus Oil and Gas LLC	<b>TVD Reference:</b>	WELL @ 4799.0ft (RKB - 30')
<b>Project:</b>	SEC.35-T7N-R61W	<b>MD Reference:</b>	WELL @ 4799.0ft (RKB - 30')
<b>Site:</b>	Riggs OP 35-761 Pad Sec.35-T7N-R61W	<b>North Reference:</b>	True
<b>Well:</b>	Riggs 35-761-0561XCDH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (9-29-16)		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
SHL 250'FSL, 1513'FEL - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,436,867.28	3,369,068.87	40.525017	-104.172349
BHL 460'FSL, 2086'FEL - plan hits target center - Point	0.00	0.00	6,439.0	-10,285.4	-463.1	1,426,576.41	3,368,759.85	40.496785	-104.174014
LPL 460'FNL, 2086'FEL, - plan hits target center - Point	0.00	0.00	6,513.0	-712.2	-565.2	1,436,146.68	3,368,514.41	40.523062	-104.174382

Casing Points				
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter
(ft)	(ft)		(")	(")
6,963.5	6,513.0	7"	7	8-3/4

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(ft)	(ft)			(°)	(°)
3,206.7	3,189.0	RICHARD_SD		0.00	
6,161.6	6,114.0	SHARON_SPRGS		0.00	
6,266.1	6,204.0	NIOBRARA		0.00	
6,303.3	6,234.0	NBRR_A		0.00	
6,334.1	6,258.0	NBRR_A_MARL		0.00	
6,396.6	6,304.0	NBRR_B		0.00	
6,471.4	6,354.0	NBRR_B_MARL		0.00	
6,539.2	6,394.0	NBRR_C		0.00	
6,629.5	6,439.0	NBRR_C_MARL		0.00	
6,753.4	6,484.0	FT HAYS		0.00	
6,882.0	6,509.0	CODELL		0.00	

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	
800.0	800.0	0.0	0.0	KOP - Start Build 1.50
5,262.1	5,226.9	8.9	-548.5	Start Drop -2.00
5,833.2	5,797.0	9.3	-572.9	Start Build 8.00
6,963.5	6,513.0	-712.2	-565.2	Start DLS 0.50 TFO -0.08
6,964.0	6,513.0	-712.7	-565.2	Start 9573.5 hold at 6964.0 MD
16,537.5	6,439.0	-10,285.4	-463.1	TD at 16537.5