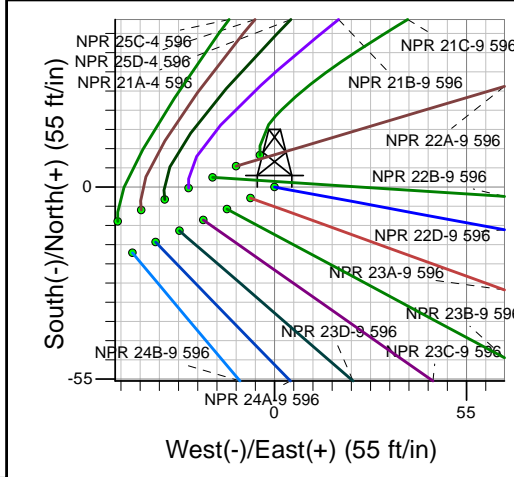
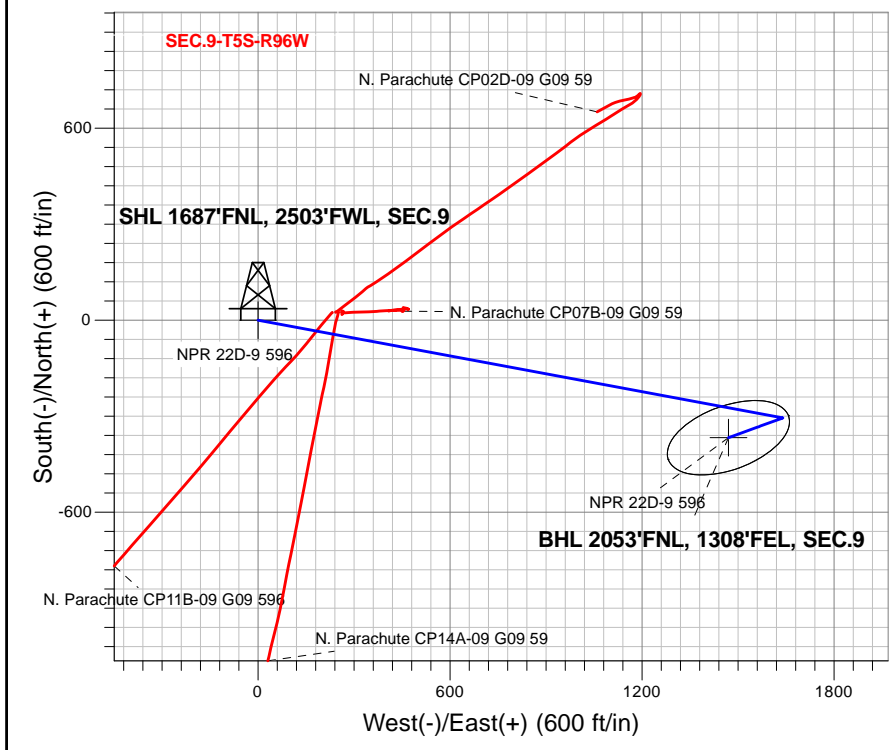
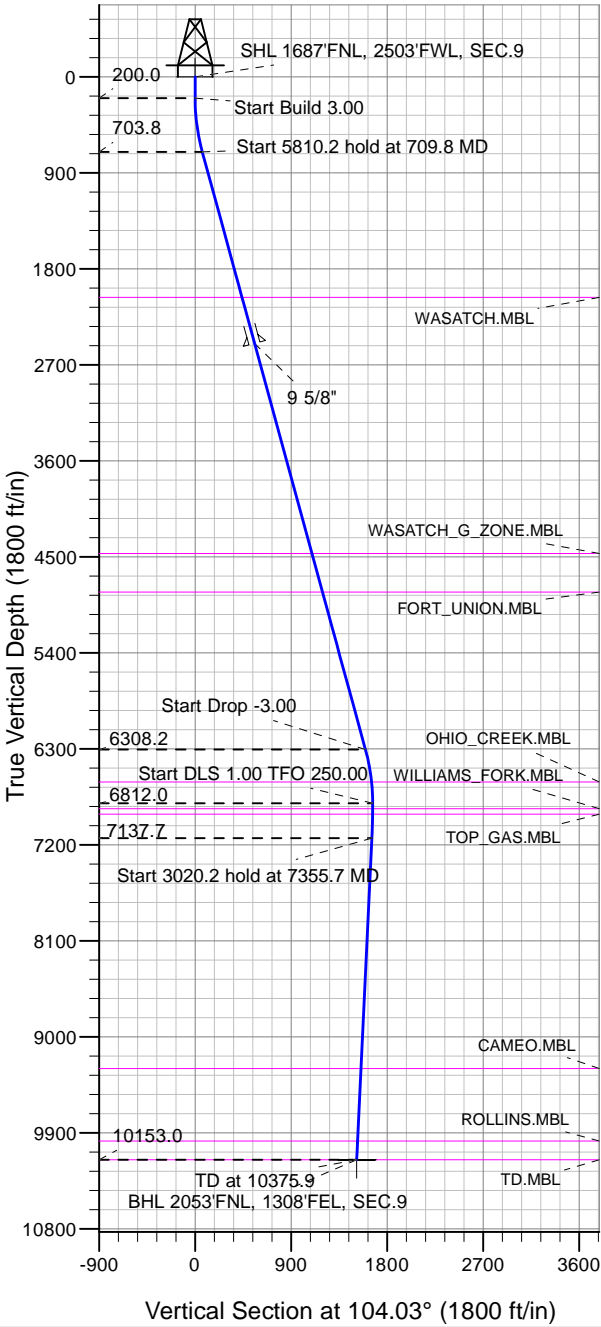


Caerus Oil and Gas LLC



NPR 22D-9 596
 Plan #1 (1-15-18)
 8:22, January 19 2018

Azimuths to True North
 Magnetic North: 9.63°
 Magnetic Field
 Strength: 51502.8nT
 Dip Angle: 65.85°
 Date: 1/19/2018
 Model: HDGM

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
SHL 1687'FNL, 2503'FWL, SEC.9	1.0	0.0	0.0	39.632210	-108.174010	Point
BHL 2053'FNL, 1308'FEL, SEC.9	10153.0	-367.3	1469.8	39.631201	-108.168792	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	709.8	15.30	100.55	703.8	-12.4	66.5	3.00	100.55	67.5	
4	6520.0	15.30	100.55	6308.2	-293.0	1573.3	0.00	0.00	1597.4	
5	7029.9	0.00	0.00	6812.0	-305.4	1639.8	3.00	180.00	1664.9	
6	7355.7	3.26	250.00	7137.7	-308.6	1631.1	1.00	250.00	1657.2	
7	10375.9	3.26	250.00	10153.0	-367.3	1469.8	0.00	0.00	1515.0	BHL 2053'FNL, 1308'FEL, SEC.9



Directional

Caerus Oil and Gas LLC

SEC.9-T5S-R96W

NPR G09 596 Pad Sec.9-T5S-R96W

NPR 22D-9 596

Wellbore #1

Plan: Plan #1 (1-15-18)

Standard Planning Report

19 January, 2018

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 22D-9 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 7670.0ft (Original Well Elev)
Project:	SEC.9-T5S-R96W	MD Reference:	WELL @ 7670.0ft (Original Well Elev)
Site:	NPR G09 596 Pad Sec.9-T5S-R96W	North Reference:	True
Well:	NPR 22D-9 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-15-18)		

Project	SEC.9-T5S-R96W, Garfield County, CO		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		Using Well Reference Point
Map Zone:	Zone 12N (114 W to 108 W)		Using geodetic scale factor

Site	NPR G09 596 Pad Sec.9-T5S-R96W				
Site Position:	Northing:	14,404,590.33 usft	Latitude:	39.632067	
From: Lat/Long	Easting:	2,436,015.01 usft	Longitude:	-108.174492	
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	1.80 °

Well	NPR 22D-9 596					
Well Position	+N/-S	51.9 ft	Northing:	14,404,646.50 usft	Latitude:	39.632210
	+E/-W	135.7 ft	Easting:	2,436,149.03 usft	Longitude:	-108.174010
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	7,640.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	1/19/2018	9.63	65.85	51,503

Design	Plan #1 (1-15-18)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	104.03

Plan Sections										
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	
709.8	15.30	100.55	703.8	-12.4	66.5	3.00	3.00	0.00	100.55	
6,520.0	15.30	100.55	6,308.2	-293.0	1,573.3	0.00	0.00	0.00	0.00	
7,029.9	0.00	0.00	6,812.0	-305.4	1,639.8	3.00	-3.00	0.00	180.00	
7,355.7	3.26	250.00	7,137.7	-308.6	1,631.1	1.00	1.00	-33.76	250.00	
10,375.9	3.26	250.00	10,153.0	-367.3	1,469.8	0.00	0.00	0.00	0.00	BHL 2053'FNL, 1308'

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 22D-9 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 7670.0ft (Original Well Elev)
Project:	SEC.9-T5S-R96W	MD Reference:	WELL @ 7670.0ft (Original Well Elev)
Site:	NPR G09 596 Pad Sec.9-T5S-R96W	North Reference:	True
Well:	NPR 22D-9 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-15-18)		

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
SHL 1687'FNL, 2503'FWL, SEC.9									
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	100.55	300.0	-0.5	2.6	2.6	3.00	3.00	0.00
400.0	6.00	100.55	399.6	-1.9	10.3	10.4	3.00	3.00	0.00
500.0	9.00	100.55	498.8	-4.3	23.1	23.5	3.00	3.00	0.00
600.0	12.00	100.55	597.1	-7.6	41.0	41.7	3.00	3.00	0.00
700.0	15.00	100.55	694.3	-11.9	64.0	65.0	3.00	3.00	0.00
709.8	15.30	100.55	703.8	-12.4	66.5	67.5	3.00	3.00	0.00
800.0	15.30	100.55	790.8	-16.7	89.9	91.3	0.00	0.00	0.00
900.0	15.30	100.55	887.2	-21.6	115.8	117.6	0.00	0.00	0.00
1,000.0	15.30	100.55	983.7	-26.4	141.8	143.9	0.00	0.00	0.00
1,100.0	15.30	100.55	1,080.1	-31.2	167.7	170.3	0.00	0.00	0.00
1,200.0	15.30	100.55	1,176.6	-36.1	193.6	196.6	0.00	0.00	0.00
1,300.0	15.30	100.55	1,273.1	-40.9	219.6	222.9	0.00	0.00	0.00
1,400.0	15.30	100.55	1,369.5	-45.7	245.5	249.2	0.00	0.00	0.00
1,500.0	15.30	100.55	1,466.0	-50.6	271.4	275.6	0.00	0.00	0.00
1,600.0	15.30	100.55	1,562.4	-55.4	297.4	301.9	0.00	0.00	0.00
1,700.0	15.30	100.55	1,658.9	-60.2	323.3	328.2	0.00	0.00	0.00
1,800.0	15.30	100.55	1,755.4	-65.0	349.2	354.6	0.00	0.00	0.00
1,900.0	15.30	100.55	1,851.8	-69.9	375.2	380.9	0.00	0.00	0.00
2,000.0	15.30	100.55	1,948.3	-74.7	401.1	407.2	0.00	0.00	0.00
2,100.0	15.30	100.55	2,044.7	-79.5	427.0	433.6	0.00	0.00	0.00
2,125.2	15.30	100.55	2,069.0	-80.8	433.5	440.2	0.00	0.00	0.00
WASATCH.MBL									
2,200.0	15.30	100.55	2,141.2	-84.4	453.0	459.9	0.00	0.00	0.00
2,300.0	15.30	100.55	2,237.6	-89.2	478.9	486.2	0.00	0.00	0.00
2,400.0	15.30	100.55	2,334.1	-94.0	504.8	512.6	0.00	0.00	0.00
2,500.0	15.30	100.55	2,430.6	-98.9	530.8	538.9	0.00	0.00	0.00
2,572.0	15.30	100.55	2,500.0	-102.3	549.4	557.8	0.00	0.00	0.00
9 5/8"									
2,600.0	15.30	100.55	2,527.0	-103.7	556.7	565.2	0.00	0.00	0.00
2,700.0	15.30	100.55	2,623.5	-108.5	582.6	591.6	0.00	0.00	0.00
2,800.0	15.30	100.55	2,719.9	-113.4	608.6	617.9	0.00	0.00	0.00
2,900.0	15.30	100.55	2,816.4	-118.2	634.5	644.2	0.00	0.00	0.00
3,000.0	15.30	100.55	2,912.8	-123.0	660.4	670.5	0.00	0.00	0.00
3,100.0	15.30	100.55	3,009.3	-127.8	686.4	696.9	0.00	0.00	0.00
3,200.0	15.30	100.55	3,105.8	-132.7	712.3	723.2	0.00	0.00	0.00
3,300.0	15.30	100.55	3,202.2	-137.5	738.2	749.5	0.00	0.00	0.00
3,400.0	15.30	100.55	3,298.7	-142.3	764.2	775.9	0.00	0.00	0.00
3,500.0	15.30	100.55	3,395.1	-147.2	790.1	802.2	0.00	0.00	0.00
3,600.0	15.30	100.55	3,491.6	-152.0	816.0	828.5	0.00	0.00	0.00
3,700.0	15.30	100.55	3,588.1	-156.8	842.0	854.9	0.00	0.00	0.00
3,800.0	15.30	100.55	3,684.5	-161.7	867.9	881.2	0.00	0.00	0.00
3,900.0	15.30	100.55	3,781.0	-166.5	893.8	907.5	0.00	0.00	0.00
4,000.0	15.30	100.55	3,877.4	-171.3	919.8	933.9	0.00	0.00	0.00
4,100.0	15.30	100.55	3,973.9	-176.1	945.7	960.2	0.00	0.00	0.00
4,200.0	15.30	100.55	4,070.3	-181.0	971.6	986.5	0.00	0.00	0.00
4,300.0	15.30	100.55	4,166.8	-185.8	997.6	1,012.8	0.00	0.00	0.00
4,400.0	15.30	100.55	4,263.3	-190.6	1,023.5	1,039.2	0.00	0.00	0.00
4,500.0	15.30	100.55	4,359.7	-195.5	1,049.4	1,065.5	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 22D-9 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 7670.0ft (Original Well Elev)
Project:	SEC.9-T5S-R96W	MD Reference:	WELL @ 7670.0ft (Original Well Elev)
Site:	NPR G09 596 Pad Sec.9-T5S-R96W	North Reference:	True
Well:	NPR 22D-9 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-15-18)		

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)	
4,600.0	15.30	100.55	4,456.2	-200.3	1,075.4	1,091.8	0.00	0.00	0.00	
4,613.3	15.30	100.55	4,469.0	-200.9	1,078.8	1,095.3	0.00	0.00	0.00	
WASATCH_G_ZONE.MBL										
4,700.0	15.30	100.55	4,552.6	-205.1	1,101.3	1,118.2	0.00	0.00	0.00	
4,800.0	15.30	100.55	4,649.1	-210.0	1,127.2	1,144.5	0.00	0.00	0.00	
4,900.0	15.30	100.55	4,745.5	-214.8	1,153.2	1,170.8	0.00	0.00	0.00	
4,988.6	15.30	100.55	4,831.0	-219.1	1,176.1	1,194.2	0.00	0.00	0.00	
FORT_UNION.MBL										
5,000.0	15.30	100.55	4,842.0	-219.6	1,179.1	1,197.2	0.00	0.00	0.00	
5,100.0	15.30	100.55	4,938.5	-224.4	1,205.0	1,223.5	0.00	0.00	0.00	
5,200.0	15.30	100.55	5,034.9	-229.3	1,231.0	1,249.8	0.00	0.00	0.00	
5,300.0	15.30	100.55	5,131.4	-234.1	1,256.9	1,276.2	0.00	0.00	0.00	
5,400.0	15.30	100.55	5,227.8	-238.9	1,282.8	1,302.5	0.00	0.00	0.00	
5,500.0	15.30	100.55	5,324.3	-243.8	1,308.8	1,328.8	0.00	0.00	0.00	
5,600.0	15.30	100.55	5,420.7	-248.6	1,334.7	1,355.1	0.00	0.00	0.00	
5,700.0	15.30	100.55	5,517.2	-253.4	1,360.6	1,381.5	0.00	0.00	0.00	
5,800.0	15.30	100.55	5,613.7	-258.3	1,386.6	1,407.8	0.00	0.00	0.00	
5,900.0	15.30	100.55	5,710.1	-263.1	1,412.5	1,434.1	0.00	0.00	0.00	
6,000.0	15.30	100.55	5,806.6	-267.9	1,438.4	1,460.5	0.00	0.00	0.00	
6,100.0	15.30	100.55	5,903.0	-272.8	1,464.4	1,486.8	0.00	0.00	0.00	
6,200.0	15.30	100.55	5,999.5	-277.6	1,490.3	1,513.1	0.00	0.00	0.00	
6,300.0	15.30	100.55	6,096.0	-282.4	1,516.2	1,539.5	0.00	0.00	0.00	
6,400.0	15.30	100.55	6,192.4	-287.2	1,542.2	1,565.8	0.00	0.00	0.00	
6,500.0	15.30	100.55	6,288.9	-292.1	1,568.1	1,592.1	0.00	0.00	0.00	
6,520.0	15.30	100.55	6,308.2	-293.0	1,573.3	1,597.4	0.00	0.00	0.00	
6,600.0	12.90	100.55	6,385.7	-296.6	1,592.4	1,616.8	3.00	-3.00	0.00	
6,700.0	9.90	100.55	6,483.8	-300.2	1,611.9	1,636.6	3.00	-3.00	0.00	
6,800.0	6.90	100.55	6,582.7	-302.9	1,626.2	1,651.1	3.00	-3.00	0.00	
6,828.5	6.04	100.55	6,611.0	-303.5	1,629.4	1,654.3	3.00	-3.00	0.00	
OHIO_CREEK.MBL										
6,900.0	3.90	100.55	6,682.2	-304.6	1,635.5	1,660.5	3.00	-3.00	0.00	
7,000.0	0.90	100.55	6,782.1	-305.4	1,639.6	1,664.7	3.00	-3.00	0.00	
7,029.9	0.00	0.00	6,812.0	-305.4	1,639.8	1,664.9	3.00	-3.00	0.00	
7,079.9	0.50	250.00	6,862.0	-305.5	1,639.6	1,664.7	1.00	1.00	0.00	
WILLIAMS_FORK.MBL										
7,100.0	0.70	250.00	6,882.1	-305.6	1,639.4	1,664.6	1.00	1.00	0.00	
7,129.9	1.00	250.00	6,912.0	-305.7	1,639.0	1,664.2	1.00	1.00	0.00	
TOP_GAS.MBL										
7,200.0	1.70	250.00	6,982.1	-306.3	1,637.4	1,662.8	1.00	1.00	0.00	
7,300.0	2.70	250.00	7,082.0	-307.6	1,633.8	1,659.6	1.00	1.00	0.00	
7,355.7	3.26	250.00	7,137.7	-308.6	1,631.1	1,657.2	1.00	1.00	0.00	
7,400.0	3.26	250.00	7,181.9	-309.5	1,628.7	1,655.2	0.00	0.00	0.00	
7,500.0	3.26	250.00	7,281.7	-311.4	1,623.4	1,650.5	0.00	0.00	0.00	
7,600.0	3.26	250.00	7,381.6	-313.3	1,618.0	1,645.7	0.00	0.00	0.00	
7,700.0	3.26	250.00	7,481.4	-315.3	1,612.7	1,641.0	0.00	0.00	0.00	
7,800.0	3.26	250.00	7,581.2	-317.2	1,607.4	1,636.3	0.00	0.00	0.00	
7,900.0	3.26	250.00	7,681.1	-319.2	1,602.0	1,631.6	0.00	0.00	0.00	
8,000.0	3.26	250.00	7,780.9	-321.1	1,596.7	1,626.9	0.00	0.00	0.00	
8,100.0	3.26	250.00	7,880.7	-323.1	1,591.3	1,622.2	0.00	0.00	0.00	
8,200.0	3.26	250.00	7,980.6	-325.0	1,586.0	1,617.5	0.00	0.00	0.00	
8,300.0	3.26	250.00	8,080.4	-327.0	1,580.7	1,612.8	0.00	0.00	0.00	
8,400.0	3.26	250.00	8,180.3	-328.9	1,575.3	1,608.1	0.00	0.00	0.00	
8,500.0	3.26	250.00	8,280.1	-330.8	1,570.0	1,603.3	0.00	0.00	0.00	
8,600.0	3.26	250.00	8,379.9	-332.8	1,564.6	1,598.6	0.00	0.00	0.00	

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 22D-9 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 7670.0ft (Original Well Elev)
Project:	SEC.9-T5S-R96W	MD Reference:	WELL @ 7670.0ft (Original Well Elev)
Site:	NPR G09 596 Pad Sec.9-T5S-R96W	North Reference:	True
Well:	NPR 22D-9 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-15-18)		

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	3.26	250.00	8,479.8	-334.7	1,559.3	1,593.9	0.00	0.00	0.00	
8,800.0	3.26	250.00	8,579.6	-336.7	1,553.9	1,589.2	0.00	0.00	0.00	
8,900.0	3.26	250.00	8,679.5	-338.6	1,548.6	1,584.5	0.00	0.00	0.00	
9,000.0	3.26	250.00	8,779.3	-340.6	1,543.3	1,579.8	0.00	0.00	0.00	
9,100.0	3.26	250.00	8,879.1	-342.5	1,537.9	1,575.1	0.00	0.00	0.00	
9,200.0	3.26	250.00	8,979.0	-344.5	1,532.6	1,570.4	0.00	0.00	0.00	
9,300.0	3.26	250.00	9,078.8	-346.4	1,527.2	1,565.7	0.00	0.00	0.00	
9,400.0	3.26	250.00	9,178.6	-348.3	1,521.9	1,560.9	0.00	0.00	0.00	
9,500.0	3.26	250.00	9,278.5	-350.3	1,516.6	1,556.2	0.00	0.00	0.00	
9,519.5	3.26	250.00	9,298.0	-350.7	1,515.5	1,555.3	0.00	0.00	0.00	
CAMEO.MBL										
9,600.0	3.26	250.00	9,378.3	-352.2	1,511.2	1,551.5	0.00	0.00	0.00	
9,700.0	3.26	250.00	9,478.2	-354.2	1,505.9	1,546.8	0.00	0.00	0.00	
9,800.0	3.26	250.00	9,578.0	-356.1	1,500.5	1,542.1	0.00	0.00	0.00	
9,900.0	3.26	250.00	9,677.8	-358.1	1,495.2	1,537.4	0.00	0.00	0.00	
10,000.0	3.26	250.00	9,777.7	-360.0	1,489.8	1,532.7	0.00	0.00	0.00	
10,100.0	3.26	250.00	9,877.5	-361.9	1,484.5	1,528.0	0.00	0.00	0.00	
10,200.0	3.26	250.00	9,977.4	-363.9	1,479.2	1,523.3	0.00	0.00	0.00	
10,200.6	3.26	250.00	9,978.0	-363.9	1,479.1	1,523.2	0.00	0.00	0.00	
ROLLINS.MBL										
10,300.0	3.26	250.00	10,077.2	-365.8	1,473.8	1,518.5	0.00	0.00	0.00	
10,375.9	3.26	250.00	10,153.0	-367.3	1,469.8	1,515.0	0.00	0.00	0.00	
TD.MBL - BHL 2053'FNL, 1308'FEL, SEC.9										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SHL 1687'FNL, 2503'FW - hit/miss target - Shape - Point	0.00	0.00	1.0	0.0	0.0	14,404,646.50	2,436,149.03	39.632210	-108.174010	
BHL 2053'FNL, 1308'FE - plan hits target center - Ellipse (radii L200.0 W100.0 on 250.0 azi)	0.00	0.00	10,153.0	-367.3	1,469.8	14,404,325.53	2,437,630.11	39.631201	-108.168792	

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")		
2,572.0	2,500.0	9 5/8"	9-5/8	12-1/4		

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 22D-9 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 7670.0ft (Original Well Elev)
Project:	SEC.9-T5S-R96W	MD Reference:	WELL @ 7670.0ft (Original Well Elev)
Site:	NPR G09 596 Pad Sec.9-T5S-R96W	North Reference:	True
Well:	NPR 22D-9 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-15-18)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,125.2	2,069.0	WASATCH.MBL		0.00		
4,613.3	4,469.0	WASATCH_G_ZONE.MBL		0.00		
4,988.6	4,831.0	FORT_UNION.MBL		0.00		
6,828.5	6,611.0	OHIO_CREEK.MBL		0.00		
7,079.9	6,862.0	WILLIAMS_FORK.MBL		0.00		
7,129.9	6,912.0	TOP_GAS.MBL		0.00		
9,519.5	9,298.0	CAMEO.MBL		0.00		
10,200.6	9,978.0	ROLLINS.MBL		0.00		
10,375.9	10,153.0	TD.MBL		0.00		