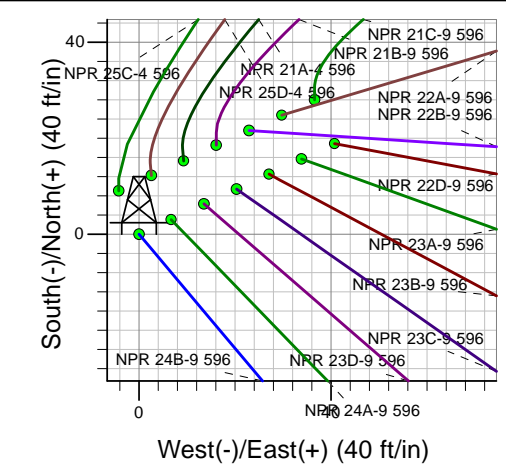
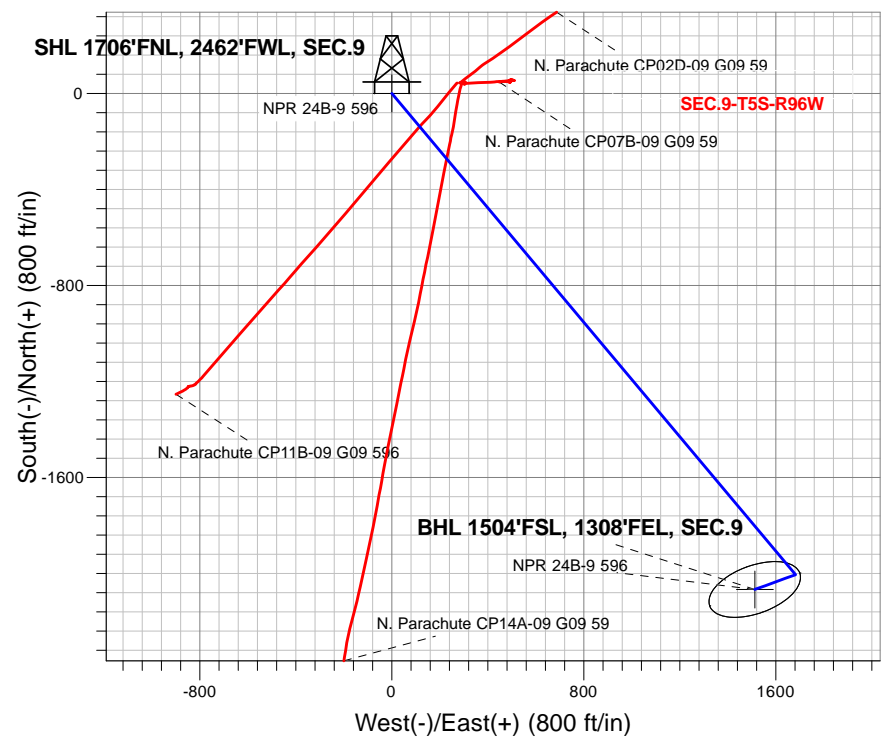
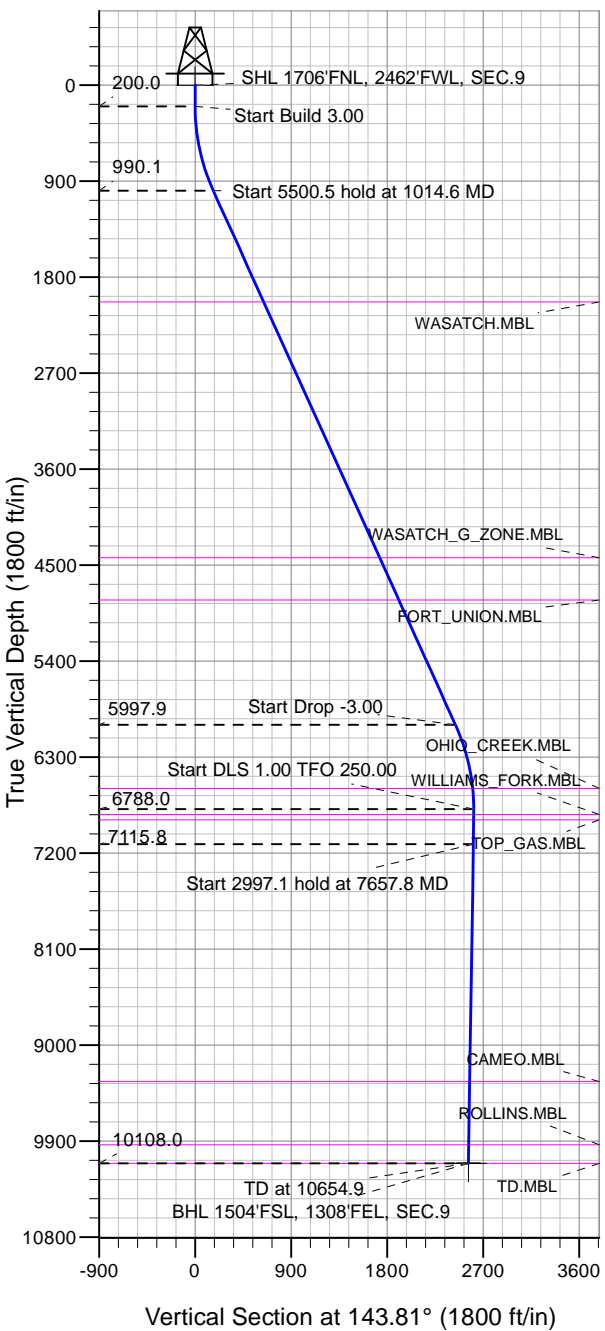


Caerus Oil and Gas LLC



NPR 24B-9 596
 Plan #1 (1-15-18)
 11:51, January 19 2018

Azimuths to True North
 Magnetic North: 9.63°

Magnetic Field
 Strength: 51502.8snT
 Dip Angle: 65.85°
 Date: 1/19/2018
 Model: HDGM

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
SHL 1706'FNL, 2462'FWL, SEC.9	1.0	0.0	0.0	39.632158	-108.174154	Point
BHL 1504'FSL, 1308'FEL, SEC.9	10108.0	-2067.3	1512.7	39.626482	-108.168784	Ellipse (Radii: L200.0 W100.0)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	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	1014.6	24.44	140.00	990.1	-131.1	110.0	3.00	140.00	170.7	
4	6515.1	24.44	140.00	5997.9	-1874.4	1572.7	0.00	0.00	2441.4	
5	7329.8	0.00	0.00	6788.0	-2005.4	1682.7	3.00	180.00	2612.1	
6	7657.8	3.28	250.00	7115.8	-2008.6	1673.9	1.00	250.00	2609.5	
7	10654.9	3.28	250.00	10108.0	-2067.3	1512.7	0.00	0.00	2561.7	BHL 1504'FSL, 1308'FEL, SEC.9



Directional

Caerus Oil and Gas LLC

SEC.9-T5S-R96W

NPR G09 596 Pad Sec.9-T5S-R96W

NPR 24B-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 24B-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 24B-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 24B-9 596					
Well Position	+N/-S	33.0 ft	Northing:	14,404,626.36 usft	Latitude:	39.632158
	+E/-W	95.0 ft	Easting:	2,436,108.93 usft	Longitude:	-108.174155
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	143.81

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	
1,014.6	24.44	140.00	990.1	-131.1	110.0	3.00	3.00	0.00	140.00	
6,515.1	24.44	140.00	5,997.9	-1,874.4	1,572.7	0.00	0.00	0.00	0.00	
7,329.8	0.00	0.00	6,788.0	-2,005.4	1,682.7	3.00	-3.00	0.00	180.00	
7,657.8	3.28	250.00	7,115.8	-2,008.6	1,673.9	1.00	1.00	-33.54	250.00	
10,654.9	3.28	250.00	10,108.0	-2,067.3	1,512.7	0.00	0.00	0.00	0.00	BHL 1504'FSL, 1308'I

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 24B-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 24B-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 1706'FNL, 2462'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	140.00	300.0	-2.0	1.7	2.6	3.00	3.00	0.00	
400.0	6.00	140.00	399.6	-8.0	6.7	10.4	3.00	3.00	0.00	
500.0	9.00	140.00	498.8	-18.0	15.1	23.5	3.00	3.00	0.00	
600.0	12.00	140.00	597.1	-32.0	26.8	41.6	3.00	3.00	0.00	
700.0	15.00	140.00	694.3	-49.9	41.8	64.9	3.00	3.00	0.00	
800.0	18.00	140.00	790.2	-71.6	60.1	93.3	3.00	3.00	0.00	
900.0	21.00	140.00	884.4	-97.2	81.5	126.6	3.00	3.00	0.00	
1,000.0	24.00	140.00	976.8	-126.5	106.1	164.8	3.00	3.00	0.00	
1,014.6	24.44	140.00	990.1	-131.1	110.0	170.7	3.00	3.00	0.00	
1,100.0	24.44	140.00	1,067.9	-158.1	132.7	206.0	0.00	0.00	0.00	
1,200.0	24.44	140.00	1,158.9	-189.8	159.3	247.3	0.00	0.00	0.00	
1,300.0	24.44	140.00	1,250.0	-221.5	185.9	288.5	0.00	0.00	0.00	
1,400.0	24.44	140.00	1,341.0	-253.2	212.5	329.8	0.00	0.00	0.00	
1,500.0	24.44	140.00	1,432.0	-284.9	239.1	371.1	0.00	0.00	0.00	
1,600.0	24.44	140.00	1,523.1	-316.6	265.7	412.4	0.00	0.00	0.00	
1,700.0	24.44	140.00	1,614.1	-348.3	292.2	453.7	0.00	0.00	0.00	
1,800.0	24.44	140.00	1,705.2	-380.0	318.8	494.9	0.00	0.00	0.00	
1,900.0	24.44	140.00	1,796.2	-411.7	345.4	536.2	0.00	0.00	0.00	
2,000.0	24.44	140.00	1,887.2	-443.4	372.0	577.5	0.00	0.00	0.00	
2,100.0	24.44	140.00	1,978.3	-475.1	398.6	618.8	0.00	0.00	0.00	
2,159.0	24.44	140.00	2,032.0	-493.8	414.3	643.1	0.00	0.00	0.00	
WASATCH.MBL										
2,200.0	24.44	140.00	2,069.3	-506.8	425.2	660.1	0.00	0.00	0.00	
2,300.0	24.44	140.00	2,160.4	-538.5	451.8	701.3	0.00	0.00	0.00	
2,400.0	24.44	140.00	2,251.4	-570.1	478.4	742.6	0.00	0.00	0.00	
2,500.0	24.44	140.00	2,342.4	-601.8	505.0	783.9	0.00	0.00	0.00	
2,600.0	24.44	140.00	2,433.5	-633.5	531.6	825.2	0.00	0.00	0.00	
2,700.0	24.44	140.00	2,524.5	-665.2	558.2	866.5	0.00	0.00	0.00	
2,800.0	24.44	140.00	2,615.6	-696.9	584.8	907.7	0.00	0.00	0.00	
2,900.0	24.44	140.00	2,706.6	-728.6	611.4	949.0	0.00	0.00	0.00	
3,000.0	24.44	140.00	2,797.6	-760.3	637.9	990.3	0.00	0.00	0.00	
3,100.0	24.44	140.00	2,888.7	-792.0	664.5	1,031.6	0.00	0.00	0.00	
3,200.0	24.44	140.00	2,979.7	-823.7	691.1	1,072.9	0.00	0.00	0.00	
3,300.0	24.44	140.00	3,070.8	-855.4	717.7	1,114.1	0.00	0.00	0.00	
3,400.0	24.44	140.00	3,161.8	-887.1	744.3	1,155.4	0.00	0.00	0.00	
3,500.0	24.44	140.00	3,252.9	-918.8	770.9	1,196.7	0.00	0.00	0.00	
3,600.0	24.44	140.00	3,343.9	-950.5	797.5	1,238.0	0.00	0.00	0.00	
3,700.0	24.44	140.00	3,434.9	-982.2	824.1	1,279.3	0.00	0.00	0.00	
3,800.0	24.44	140.00	3,526.0	-1,013.8	850.7	1,320.5	0.00	0.00	0.00	
3,900.0	24.44	140.00	3,617.0	-1,045.5	877.3	1,361.8	0.00	0.00	0.00	
4,000.0	24.44	140.00	3,708.1	-1,077.2	903.9	1,403.1	0.00	0.00	0.00	
4,100.0	24.44	140.00	3,799.1	-1,108.9	930.5	1,444.4	0.00	0.00	0.00	
4,200.0	24.44	140.00	3,890.1	-1,140.6	957.1	1,485.7	0.00	0.00	0.00	
4,300.0	24.44	140.00	3,981.2	-1,172.3	983.7	1,526.9	0.00	0.00	0.00	
4,400.0	24.44	140.00	4,072.2	-1,204.0	1,010.2	1,568.2	0.00	0.00	0.00	
4,500.0	24.44	140.00	4,163.3	-1,235.7	1,036.8	1,609.5	0.00	0.00	0.00	
4,600.0	24.44	140.00	4,254.3	-1,267.4	1,063.4	1,650.8	0.00	0.00	0.00	
4,700.0	24.44	140.00	4,345.3	-1,299.1	1,090.0	1,692.1	0.00	0.00	0.00	
4,795.2	24.44	140.00	4,432.0	-1,329.2	1,115.3	1,731.4	0.00	0.00	0.00	

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 24B-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 24B-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)
WASATCH_G_ZONE.MBL									
4,800.0	24.44	140.00	4,436.4	-1,330.8	1,116.6	1,733.3	0.00	0.00	0.00
4,900.0	24.44	140.00	4,527.4	-1,362.5	1,143.2	1,774.6	0.00	0.00	0.00
5,000.0	24.44	140.00	4,618.5	-1,394.2	1,169.8	1,815.9	0.00	0.00	0.00
5,100.0	24.44	140.00	4,709.5	-1,425.9	1,196.4	1,857.2	0.00	0.00	0.00
5,200.0	24.44	140.00	4,800.5	-1,457.5	1,223.0	1,898.5	0.00	0.00	0.00
5,229.1	24.44	140.00	4,827.0	-1,466.8	1,230.7	1,910.5	0.00	0.00	0.00
FORT_UNION.MBL									
5,300.0	24.44	140.00	4,891.6	-1,489.2	1,249.6	1,939.7	0.00	0.00	0.00
5,400.0	24.44	140.00	4,982.6	-1,520.9	1,276.2	1,981.0	0.00	0.00	0.00
5,500.0	24.44	140.00	5,073.7	-1,552.6	1,302.8	2,022.3	0.00	0.00	0.00
5,600.0	24.44	140.00	5,164.7	-1,584.3	1,329.4	2,063.6	0.00	0.00	0.00
5,700.0	24.44	140.00	5,255.7	-1,616.0	1,355.9	2,104.9	0.00	0.00	0.00
5,800.0	24.44	140.00	5,346.8	-1,647.7	1,382.5	2,146.1	0.00	0.00	0.00
5,900.0	24.44	140.00	5,437.8	-1,679.4	1,409.1	2,187.4	0.00	0.00	0.00
6,000.0	24.44	140.00	5,528.9	-1,711.1	1,435.7	2,228.7	0.00	0.00	0.00
6,100.0	24.44	140.00	5,619.9	-1,742.8	1,462.3	2,270.0	0.00	0.00	0.00
6,200.0	24.44	140.00	5,710.9	-1,774.5	1,488.9	2,311.3	0.00	0.00	0.00
6,300.0	24.44	140.00	5,802.0	-1,806.2	1,515.5	2,352.6	0.00	0.00	0.00
6,400.0	24.44	140.00	5,893.0	-1,837.9	1,542.1	2,393.8	0.00	0.00	0.00
6,500.0	24.44	140.00	5,984.1	-1,869.5	1,568.7	2,435.1	0.00	0.00	0.00
6,515.1	24.44	140.00	5,997.9	-1,874.4	1,572.7	2,441.4	0.00	0.00	0.00
6,600.0	21.89	140.00	6,075.9	-1,899.9	1,594.2	2,474.7	3.00	-3.00	0.00
6,700.0	18.89	140.00	6,169.6	-1,926.6	1,616.6	2,509.4	3.00	-3.00	0.00
6,800.0	15.89	140.00	6,265.0	-1,949.5	1,635.8	2,539.3	3.00	-3.00	0.00
6,900.0	12.89	140.00	6,361.9	-1,968.5	1,651.8	2,564.1	3.00	-3.00	0.00
7,000.0	9.89	140.00	6,459.9	-1,983.7	1,664.4	2,583.8	3.00	-3.00	0.00
7,100.0	6.89	140.00	6,558.8	-1,994.9	1,673.8	2,598.3	3.00	-3.00	0.00
7,134.4	5.86	140.00	6,593.0	-1,997.8	1,676.3	2,602.1	3.00	-3.00	0.00
OHIO_CREEK.MBL									
7,200.0	3.89	140.00	6,658.3	-2,002.1	1,679.9	2,607.7	3.00	-3.00	0.00
7,300.0	0.89	140.00	6,758.2	-2,005.3	1,682.6	2,611.9	3.00	-3.00	0.00
7,329.8	0.00	0.00	6,788.0	-2,005.4	1,682.7	2,612.1	3.00	-3.00	0.00
7,379.8	0.50	250.00	6,838.0	-2,005.5	1,682.5	2,612.0	1.00	1.00	0.00
WILLIAMS_FORK.MBL									
7,400.0	0.70	250.00	6,858.2	-2,005.6	1,682.3	2,612.0	1.00	1.00	0.00
7,429.8	1.00	250.00	6,888.0	-2,005.7	1,681.9	2,611.9	1.00	1.00	0.00
TOP_GAS.MBL									
7,500.0	1.70	250.00	6,958.2	-2,006.3	1,680.3	2,611.4	1.00	1.00	0.00
7,600.0	2.70	250.00	7,058.1	-2,007.6	1,676.7	2,610.3	1.00	1.00	0.00
7,657.8	3.28	250.00	7,115.8	-2,008.6	1,673.9	2,609.5	1.00	1.00	0.00
7,700.0	3.28	250.00	7,158.0	-2,009.5	1,671.6	2,608.8	0.00	0.00	0.00
7,800.0	3.28	250.00	7,257.8	-2,011.4	1,666.2	2,607.2	0.00	0.00	0.00
7,900.0	3.28	250.00	7,357.7	-2,013.4	1,660.9	2,605.6	0.00	0.00	0.00
8,000.0	3.28	250.00	7,457.5	-2,015.3	1,655.5	2,604.0	0.00	0.00	0.00
8,100.0	3.28	250.00	7,557.3	-2,017.3	1,650.1	2,602.4	0.00	0.00	0.00
8,200.0	3.28	250.00	7,657.2	-2,019.3	1,644.7	2,600.8	0.00	0.00	0.00
8,300.0	3.28	250.00	7,757.0	-2,021.2	1,639.3	2,599.2	0.00	0.00	0.00
8,400.0	3.28	250.00	7,856.8	-2,023.2	1,634.0	2,597.6	0.00	0.00	0.00
8,500.0	3.28	250.00	7,956.7	-2,025.1	1,628.6	2,596.0	0.00	0.00	0.00
8,600.0	3.28	250.00	8,056.5	-2,027.1	1,623.2	2,594.4	0.00	0.00	0.00
8,700.0	3.28	250.00	8,156.4	-2,029.0	1,617.8	2,592.9	0.00	0.00	0.00
8,800.0	3.28	250.00	8,256.2	-2,031.0	1,612.5	2,591.3	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 24B-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 24B-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)	
8,900.0	3.28	250.00	8,356.0	-2,033.0	1,607.1	2,589.7	0.00	0.00	0.00	
9,000.0	3.28	250.00	8,455.9	-2,034.9	1,601.7	2,588.1	0.00	0.00	0.00	
9,100.0	3.28	250.00	8,555.7	-2,036.9	1,596.3	2,586.5	0.00	0.00	0.00	
9,200.0	3.28	250.00	8,655.5	-2,038.8	1,591.0	2,584.9	0.00	0.00	0.00	
9,300.0	3.28	250.00	8,755.4	-2,040.8	1,585.6	2,583.3	0.00	0.00	0.00	
9,400.0	3.28	250.00	8,855.2	-2,042.7	1,580.2	2,581.7	0.00	0.00	0.00	
9,500.0	3.28	250.00	8,955.0	-2,044.7	1,574.8	2,580.1	0.00	0.00	0.00	
9,600.0	3.28	250.00	9,054.9	-2,046.7	1,569.5	2,578.5	0.00	0.00	0.00	
9,700.0	3.28	250.00	9,154.7	-2,048.6	1,564.1	2,576.9	0.00	0.00	0.00	
9,800.0	3.28	250.00	9,254.5	-2,050.6	1,558.7	2,575.3	0.00	0.00	0.00	
9,887.6	3.28	250.00	9,342.0	-2,052.3	1,554.0	2,573.9	0.00	0.00	0.00	
CAMEO.MBL										
9,900.0	3.28	250.00	9,354.4	-2,052.5	1,553.3	2,573.7	0.00	0.00	0.00	
10,000.0	3.28	250.00	9,454.2	-2,054.5	1,547.9	2,572.1	0.00	0.00	0.00	
10,100.0	3.28	250.00	9,554.1	-2,056.4	1,542.6	2,570.5	0.00	0.00	0.00	
10,200.0	3.28	250.00	9,653.9	-2,058.4	1,537.2	2,568.9	0.00	0.00	0.00	
10,300.0	3.28	250.00	9,753.7	-2,060.4	1,531.8	2,567.3	0.00	0.00	0.00	
10,400.0	3.28	250.00	9,853.6	-2,062.3	1,526.4	2,565.7	0.00	0.00	0.00	
10,479.6	3.28	250.00	9,933.0	-2,063.9	1,522.2	2,564.5	0.00	0.00	0.00	
ROLLINS.MBL										
10,500.0	3.28	250.00	9,953.4	-2,064.3	1,521.1	2,564.1	0.00	0.00	0.00	
10,600.0	3.28	250.00	10,053.2	-2,066.2	1,515.7	2,562.5	0.00	0.00	0.00	
10,654.9	3.28	250.00	10,108.0	-2,067.3	1,512.7	2,561.7	0.00	0.00	0.00	
TD.MBL - BHL 1504'FSL, 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 1706'FNL, 2462'FM - hit/miss target - Shape - Point	0.00	0.00	1.0	0.0	0.0	14,404,626.36	2,436,108.93	39.632158	-108.174155	
BHL 1504'FSL, 1308'FEI - plan hits target center - Ellipse (radii L200.0 W100.0 on 250.00 azi)	0.00	0.00	10,108.0	-2,067.3	1,512.7	14,402,607.03	2,437,686.48	39.626482	-108.168784	

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 24B-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 24B-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 (°)	
2,159.0	2,032.0	WASATCH.MBL		0.00		
4,795.2	4,432.0	WASATCH_G_ZONE.MBL		0.00		
5,229.1	4,827.0	FORT_UNION.MBL		0.00		
7,134.4	6,593.0	OHIO_CREEK.MBL		0.00		
7,379.8	6,838.0	WILLIAMS_FORK.MBL		0.00		
7,429.8	6,888.0	TOP_GAS.MBL		0.00		
9,887.6	9,342.0	CAMEO.MBL		0.00		
10,479.6	9,933.0	ROLLINS.MBL		0.00		
10,654.9	10,108.0	TD.MBL		0.00		