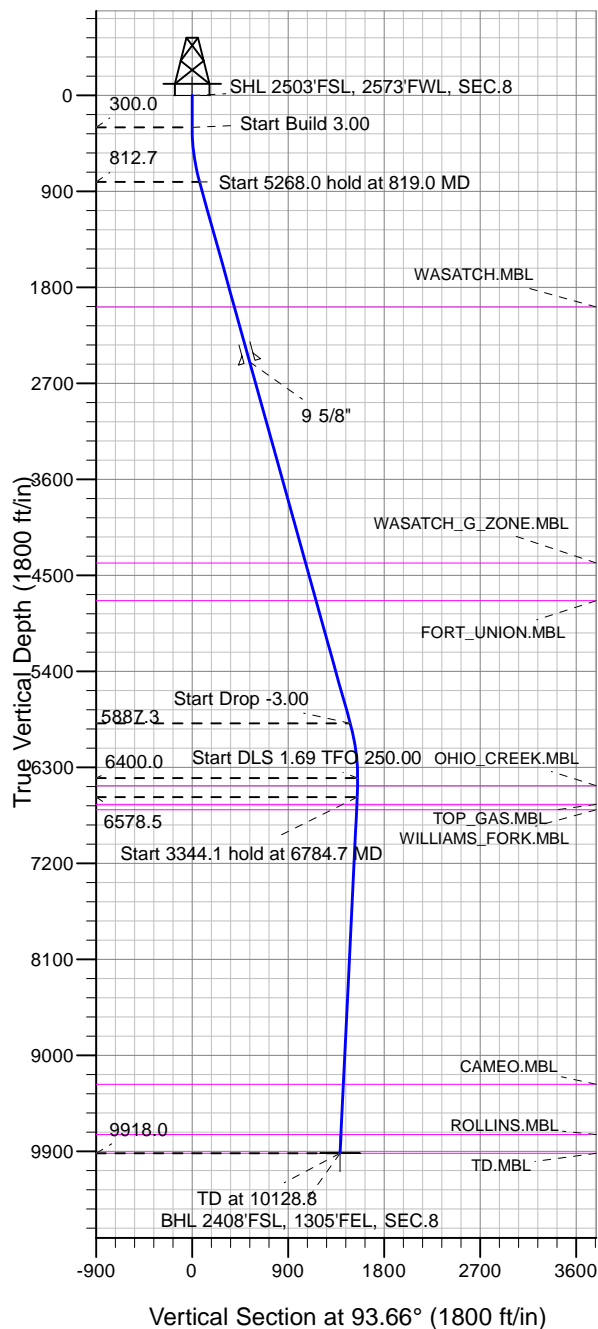
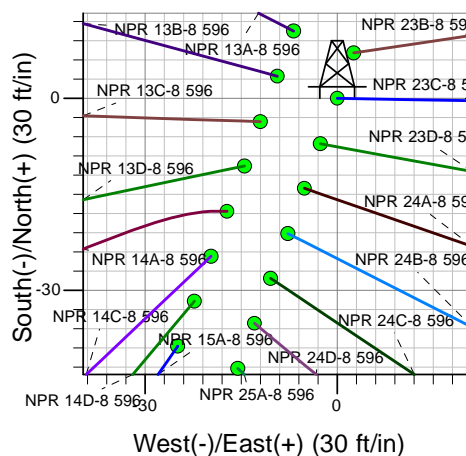
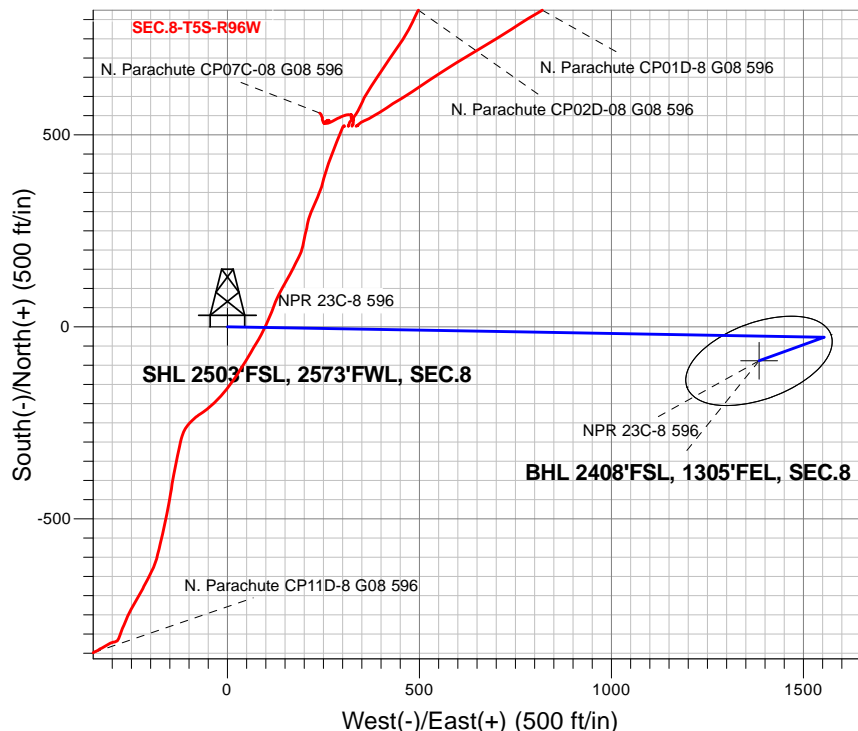


Well Name: **NPR 23C-8 596**
 Surface Location: NPR K08 596 South Pad Sec.8-T5S-R96W
 NAD 1927 - Western US , Universal Transverse Mercator (US Survey Feet)
 Zone 12N (114 W to 108 W)
 Ground Elevation: 7763.0
 +N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 14403383.46 2430994.44 39.629189 -108.192435
 Original Well Elev WELL @ 7787.0ft (Original Well Elev)



Caerus Oil and Gas LLC



NPR 23C-8 596
 Plan #1 (1-31-18)
 8:28, February 05 2018



Azimuths to True North
 Magnetic North: 9.63°

Magnetic Field
 Strength: 51499.8snT
 Dip Angle: 65.85°
 Date: 2/5/2018
 Model: HDGM

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
SHL 2503'FSL, 2573'FWL, SEC.8	1.0	0.0	0.0	39.629189	-108.192435	Point
BHL 2408'FSL, 1305'FEL, SEC.8	9918.0	-88.7	1384.2	39.628945	-108.187521	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	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	819.0	15.57	90.99	812.7	-1.2	70.1	3.00	90.99	70.0	
4	6087.0	15.57	90.99	5887.3	-25.6	1484.0	0.00	0.00	1482.6	
5	6606.1	0.00	0.00	6400.0	-26.8	1554.1	3.00	180.00	1552.6	
6	6784.7	3.02	250.00	6578.5	-28.4	1549.7	1.69	250.00	1548.3	
7	10128.8	3.02	250.00	9918.0	-88.7	1384.2	0.00	0.00	1387.1	BHL 2408'FSL, 1305'FEL, SEC.8



Caerus Oil and Gas LLC

SEC.8-T5S-R96W

NPR K08 596 South Pad Sec.8-T5S-R96W

NPR 23C-8 596

Wellbore #1

Plan: Plan #1 (1-31-18)

Standard Planning Report

05 February, 2018

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 23C-8 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 7787.0ft (Original Well Elev)
Project:	SEC.8-T5S-R96W	MD Reference:	WELL @ 7787.0ft (Original Well Elev)
Site:	NPR K08 596 South Pad Sec.8-T5S-R96W	North Reference:	True
Well:	NPR 23C-8 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-31-18)		

Project	SEC.8-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 K08 596 South Pad Sec.8-T5S-R96W			
Site Position:		Northing:	14,403,393.78 usft	Latitude: 39.629218
From:	Lat/Long	Easting:	2,430,987.33 usft	Longitude: -108.192460
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence: 1.79 °

Well	NPR 23C-8 596					
Well Position	+N/-S	-10.5 ft	Northing:	14,403,383.46 usft	Latitude:	39.629189
	+E/-W	6.8 ft	Easting:	2,430,994.45 usft	Longitude:	-108.192436
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	7,763.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	2/5/2018	9.63	65.85	51,500

Design	Plan #1 (1-31-18)			
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	93.66

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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
819.0	15.57	90.99	812.7	-1.2	70.1	3.00	3.00	0.00	90.99	
6,087.0	15.57	90.99	5,887.3	-25.6	1,484.0	0.00	0.00	0.00	0.00	
6,606.1	0.00	0.00	6,400.0	-26.8	1,554.1	3.00	-3.00	0.00	180.00	
6,784.7	3.02	250.00	6,578.5	-28.4	1,549.7	1.69	1.69	-61.58	250.00	
10,128.8	3.02	250.00	9,918.0	-88.7	1,384.2	0.00	0.00	0.00	0.00	BHL 2408'FSL, 1305'I

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 23C-8 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 7787.0ft (Original Well Elev)
Project:	SEC.8-T5S-R96W	MD Reference:	WELL @ 7787.0ft (Original Well Elev)
Site:	NPR K08 596 South Pad Sec.8-T5S-R96W	North Reference:	True
Well:	NPR 23C-8 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-31-18)		

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 2503'FSL, 2573'FWL, SEC.8									
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	3.00	90.99	400.0	0.0	2.6	2.6	3.00	3.00	0.00
500.0	6.00	90.99	499.6	-0.2	10.5	10.5	3.00	3.00	0.00
600.0	9.00	90.99	598.8	-0.4	23.5	23.5	3.00	3.00	0.00
700.0	12.00	90.99	697.1	-0.7	41.7	41.7	3.00	3.00	0.00
800.0	15.00	90.99	794.3	-1.1	65.1	65.0	3.00	3.00	0.00
819.0	15.57	90.99	812.7	-1.2	70.1	70.0	3.00	3.00	0.00
900.0	15.57	90.99	890.7	-1.6	91.8	91.7	0.00	0.00	0.00
1,000.0	15.57	90.99	987.0	-2.0	118.7	118.5	0.00	0.00	0.00
1,100.0	15.57	90.99	1,083.3	-2.5	145.5	145.4	0.00	0.00	0.00
1,200.0	15.57	90.99	1,179.7	-3.0	172.3	172.2	0.00	0.00	0.00
1,300.0	15.57	90.99	1,276.0	-3.4	199.2	199.0	0.00	0.00	0.00
1,400.0	15.57	90.99	1,372.3	-3.9	226.0	225.8	0.00	0.00	0.00
1,500.0	15.57	90.99	1,468.6	-4.4	252.9	252.6	0.00	0.00	0.00
1,600.0	15.57	90.99	1,565.0	-4.8	279.7	279.4	0.00	0.00	0.00
1,700.0	15.57	90.99	1,661.3	-5.3	306.5	306.2	0.00	0.00	0.00
1,800.0	15.57	90.99	1,757.6	-5.8	333.4	333.1	0.00	0.00	0.00
1,900.0	15.57	90.99	1,854.0	-6.2	360.2	359.9	0.00	0.00	0.00
2,000.0	15.57	90.99	1,950.3	-6.7	387.1	386.7	0.00	0.00	0.00
2,036.0	15.57	90.99	1,985.0	-6.8	396.7	396.4	0.00	0.00	0.00
WASATCH.MBL									
2,100.0	15.57	90.99	2,046.6	-7.1	413.9	413.5	0.00	0.00	0.00
2,200.0	15.57	90.99	2,142.9	-7.6	440.7	440.3	0.00	0.00	0.00
2,300.0	15.57	90.99	2,239.3	-8.1	467.6	467.1	0.00	0.00	0.00
2,400.0	15.57	90.99	2,335.6	-8.5	494.4	493.9	0.00	0.00	0.00
2,500.0	15.57	90.99	2,431.9	-9.0	521.3	520.8	0.00	0.00	0.00
2,570.7	15.57	90.99	2,500.0	-9.3	540.2	539.7	0.00	0.00	0.00
9 5/8"									
2,600.0	15.57	90.99	2,528.3	-9.5	548.1	547.6	0.00	0.00	0.00
2,700.0	15.57	90.99	2,624.6	-9.9	574.9	574.4	0.00	0.00	0.00
2,800.0	15.57	90.99	2,720.9	-10.4	601.8	601.2	0.00	0.00	0.00
2,900.0	15.57	90.99	2,817.3	-10.9	628.6	628.0	0.00	0.00	0.00
3,000.0	15.57	90.99	2,913.6	-11.3	655.5	654.8	0.00	0.00	0.00
3,100.0	15.57	90.99	3,009.9	-11.8	682.3	681.7	0.00	0.00	0.00
3,200.0	15.57	90.99	3,106.2	-12.2	709.1	708.5	0.00	0.00	0.00
3,300.0	15.57	90.99	3,202.6	-12.7	736.0	735.3	0.00	0.00	0.00
3,400.0	15.57	90.99	3,298.9	-13.2	762.8	762.1	0.00	0.00	0.00
3,500.0	15.57	90.99	3,395.2	-13.6	789.7	788.9	0.00	0.00	0.00
3,600.0	15.57	90.99	3,491.6	-14.1	816.5	815.7	0.00	0.00	0.00
3,700.0	15.57	90.99	3,587.9	-14.6	843.3	842.5	0.00	0.00	0.00
3,800.0	15.57	90.99	3,684.2	-15.0	870.2	869.4	0.00	0.00	0.00
3,900.0	15.57	90.99	3,780.6	-15.5	897.0	896.2	0.00	0.00	0.00
4,000.0	15.57	90.99	3,876.9	-15.9	923.9	923.0	0.00	0.00	0.00
4,100.0	15.57	90.99	3,973.2	-16.4	950.7	949.8	0.00	0.00	0.00
4,200.0	15.57	90.99	4,069.5	-16.9	977.5	976.6	0.00	0.00	0.00
4,300.0	15.57	90.99	4,165.9	-17.3	1,004.4	1,003.4	0.00	0.00	0.00
4,400.0	15.57	90.99	4,262.2	-17.8	1,031.2	1,030.2	0.00	0.00	0.00
4,500.0	15.57	90.99	4,358.5	-18.3	1,058.1	1,057.1	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 23C-8 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 7787.0ft (Original Well Elev)
Project:	SEC.8-T5S-R96W	MD Reference:	WELL @ 7787.0ft (Original Well Elev)
Site:	NPR K08 596 South Pad Sec.8-T5S-R96W	North Reference:	True
Well:	NPR 23C-8 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-31-18)		

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)
4,527.5	15.57	90.99	4,385.0	-18.4	1,065.4	1,064.4	0.00	0.00	0.00
WASATCH_G_ZONE.MBL									
4,600.0	15.57	90.99	4,454.9	-18.7	1,084.9	1,083.9	0.00	0.00	0.00
4,700.0	15.57	90.99	4,551.2	-19.2	1,111.7	1,110.7	0.00	0.00	0.00
4,800.0	15.57	90.99	4,647.5	-19.7	1,138.6	1,137.5	0.00	0.00	0.00
4,892.9	15.57	90.99	4,737.0	-20.1	1,163.5	1,162.4	0.00	0.00	0.00
FORT_UNION.MBL									
4,900.0	15.57	90.99	4,743.8	-20.1	1,165.4	1,164.3	0.00	0.00	0.00
5,000.0	15.57	90.99	4,840.2	-20.6	1,192.3	1,191.1	0.00	0.00	0.00
5,100.0	15.57	90.99	4,936.5	-21.0	1,219.1	1,217.9	0.00	0.00	0.00
5,200.0	15.57	90.99	5,032.8	-21.5	1,245.9	1,244.8	0.00	0.00	0.00
5,300.0	15.57	90.99	5,129.2	-22.0	1,272.8	1,271.6	0.00	0.00	0.00
5,400.0	15.57	90.99	5,225.5	-22.4	1,299.6	1,298.4	0.00	0.00	0.00
5,500.0	15.57	90.99	5,321.8	-22.9	1,326.5	1,325.2	0.00	0.00	0.00
5,600.0	15.57	90.99	5,418.2	-23.4	1,353.3	1,352.0	0.00	0.00	0.00
5,700.0	15.57	90.99	5,514.5	-23.8	1,380.1	1,378.8	0.00	0.00	0.00
5,800.0	15.57	90.99	5,610.8	-24.3	1,407.0	1,405.6	0.00	0.00	0.00
5,900.0	15.57	90.99	5,707.1	-24.8	1,433.8	1,432.5	0.00	0.00	0.00
6,000.0	15.57	90.99	5,803.5	-25.2	1,460.7	1,459.3	0.00	0.00	0.00
6,087.0	15.57	90.99	5,887.3	-25.6	1,484.0	1,482.6	0.00	0.00	0.00
6,100.0	15.18	90.99	5,899.8	-25.7	1,487.4	1,486.0	3.00	-3.00	0.00
6,200.0	12.18	90.99	5,997.0	-26.1	1,511.1	1,509.7	3.00	-3.00	0.00
6,300.0	9.18	90.99	6,095.2	-26.4	1,529.6	1,528.2	3.00	-3.00	0.00
6,400.0	6.18	90.99	6,194.3	-26.6	1,543.0	1,541.5	3.00	-3.00	0.00
6,500.0	3.18	90.99	6,294.0	-26.8	1,551.2	1,549.7	3.00	-3.00	0.00
6,600.0	0.18	90.99	6,393.9	-26.8	1,554.1	1,552.6	3.00	-3.00	0.00
6,606.1	0.00	0.00	6,400.0	-26.8	1,554.1	1,552.6	3.00	-3.00	0.00
6,679.1	1.23	250.00	6,473.0	-27.1	1,553.4	1,551.9	1.69	1.69	0.00
OHIO_CREEK.MBL									
6,700.0	1.59	250.00	6,493.9	-27.3	1,552.9	1,551.4	1.69	1.69	0.00
6,784.7	3.02	250.00	6,578.5	-28.4	1,549.7	1,548.3	1.69	1.69	0.00
6,800.0	3.02	250.00	6,593.8	-28.7	1,548.9	1,547.6	0.00	0.00	0.00
6,853.3	3.02	250.00	6,647.0	-29.7	1,546.3	1,545.0	0.00	0.00	0.00
TOP_GAS.MBL									
6,900.0	3.02	250.00	6,693.7	-30.5	1,544.0	1,542.8	0.00	0.00	0.00
6,903.3	3.02	250.00	6,697.0	-30.6	1,543.8	1,542.6	0.00	0.00	0.00
WILLIAMS_FORK.MBL									
7,000.0	3.02	250.00	6,793.5	-32.3	1,539.0	1,537.9	0.00	0.00	0.00
7,100.0	3.02	250.00	6,893.4	-34.1	1,534.1	1,533.1	0.00	0.00	0.00
7,200.0	3.02	250.00	6,993.3	-35.9	1,529.1	1,528.3	0.00	0.00	0.00
7,300.0	3.02	250.00	7,093.1	-37.7	1,524.2	1,523.5	0.00	0.00	0.00
7,400.0	3.02	250.00	7,193.0	-39.5	1,519.2	1,518.7	0.00	0.00	0.00
7,500.0	3.02	250.00	7,292.8	-41.3	1,514.3	1,513.8	0.00	0.00	0.00
7,600.0	3.02	250.00	7,392.7	-43.1	1,509.3	1,509.0	0.00	0.00	0.00
7,700.0	3.02	250.00	7,492.6	-44.9	1,504.4	1,504.2	0.00	0.00	0.00
7,800.0	3.02	250.00	7,592.4	-46.7	1,499.5	1,499.4	0.00	0.00	0.00
7,900.0	3.02	250.00	7,692.3	-48.5	1,494.5	1,494.5	0.00	0.00	0.00
8,000.0	3.02	250.00	7,792.1	-50.3	1,489.6	1,489.7	0.00	0.00	0.00
8,100.0	3.02	250.00	7,892.0	-52.1	1,484.6	1,484.9	0.00	0.00	0.00
8,200.0	3.02	250.00	7,991.9	-53.9	1,479.7	1,480.1	0.00	0.00	0.00
8,300.0	3.02	250.00	8,091.7	-55.7	1,474.7	1,475.3	0.00	0.00	0.00
8,400.0	3.02	250.00	8,191.6	-57.5	1,469.8	1,470.4	0.00	0.00	0.00
8,500.0	3.02	250.00	8,291.5	-59.3	1,464.8	1,465.6	0.00	0.00	0.00
8,600.0	3.02	250.00	8,391.3	-61.1	1,459.9	1,460.8	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 23C-8 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 7787.0ft (Original Well Elev)
Project:	SEC.8-T5S-R96W	MD Reference:	WELL @ 7787.0ft (Original Well Elev)
Site:	NPR K08 596 South Pad Sec.8-T5S-R96W	North Reference:	True
Well:	NPR 23C-8 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-31-18)		

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	3.02	250.00	8,491.2	-62.9	1,454.9	1,456.0	0.00	0.00	0.00	
8,800.0	3.02	250.00	8,591.0	-64.7	1,450.0	1,451.2	0.00	0.00	0.00	
8,900.0	3.02	250.00	8,690.9	-66.5	1,445.0	1,446.3	0.00	0.00	0.00	
9,000.0	3.02	250.00	8,790.8	-68.3	1,440.1	1,441.5	0.00	0.00	0.00	
9,100.0	3.02	250.00	8,890.6	-70.1	1,435.1	1,436.7	0.00	0.00	0.00	
9,200.0	3.02	250.00	8,990.5	-71.9	1,430.2	1,431.9	0.00	0.00	0.00	
9,300.0	3.02	250.00	9,090.3	-73.7	1,425.2	1,427.0	0.00	0.00	0.00	
9,400.0	3.02	250.00	9,190.2	-75.5	1,420.3	1,422.2	0.00	0.00	0.00	
9,480.9	3.02	250.00	9,271.0	-77.0	1,416.3	1,418.3	0.00	0.00	0.00	
CAMEO.MBL										
9,500.0	3.02	250.00	9,290.1	-77.3	1,415.3	1,417.4	0.00	0.00	0.00	
9,600.0	3.02	250.00	9,389.9	-79.1	1,410.4	1,412.6	0.00	0.00	0.00	
9,700.0	3.02	250.00	9,489.8	-80.9	1,405.5	1,407.8	0.00	0.00	0.00	
9,800.0	3.02	250.00	9,589.7	-82.7	1,400.5	1,402.9	0.00	0.00	0.00	
9,900.0	3.02	250.00	9,689.5	-84.5	1,395.6	1,398.1	0.00	0.00	0.00	
9,953.6	3.02	250.00	9,743.0	-85.5	1,392.9	1,395.5	0.00	0.00	0.00	
ROLLINS.MBL										
10,000.0	3.02	250.00	9,789.4	-86.3	1,390.6	1,393.3	0.00	0.00	0.00	
10,100.0	3.02	250.00	9,889.2	-88.1	1,385.7	1,388.5	0.00	0.00	0.00	
10,128.8	3.02	250.00	9,918.0	-88.7	1,384.2	1,387.1	0.00	0.00	0.00	
TD.MBL - BHL 2408'FSL, 1305'FEL, SEC.8										

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL 2503'FSL, 2573'FW - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	14,403,383.46	2,430,994.45	39.629189	-108.192436
BHL 2408'FSL, 1305'FE - plan hits target center - Ellipse (radii L200.0 W100.0 on 250.00 azi)	0.00	0.00	9,918.0	-88.7	1,384.2	14,403,338.11	2,432,381.22	39.628945	-108.187521

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (")	Hole Diameter (")
2,570.7	2,500.0	9 5/8"		9-5/8	12-1/4

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 23C-8 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 7787.0ft (Original Well Elev)
Project:	SEC.8-T5S-R96W	MD Reference:	WELL @ 7787.0ft (Original Well Elev)
Site:	NPR K08 596 South Pad Sec.8-T5S-R96W	North Reference:	True
Well:	NPR 23C-8 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-31-18)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,036.0	1,985.0	WASATCH.MBL		0.00		
4,527.5	4,385.0	WASATCH_G_ZONE.MBL		0.00		
4,892.9	4,737.0	FORT_UNION.MBL		0.00		
6,679.1	6,473.0	OHIO_CREEK.MBL		0.00		
6,853.3	6,647.0	TOP_GAS.MBL		0.00		
6,903.3	6,697.0	WILLIAMS_FORK.MBL		0.00		
9,480.9	9,271.0	CAMEO.MBL		0.00		
9,953.6	9,743.0	ROLLINS.MBL		0.00		
10,128.8	9,918.0	TD.MBL		0.00		