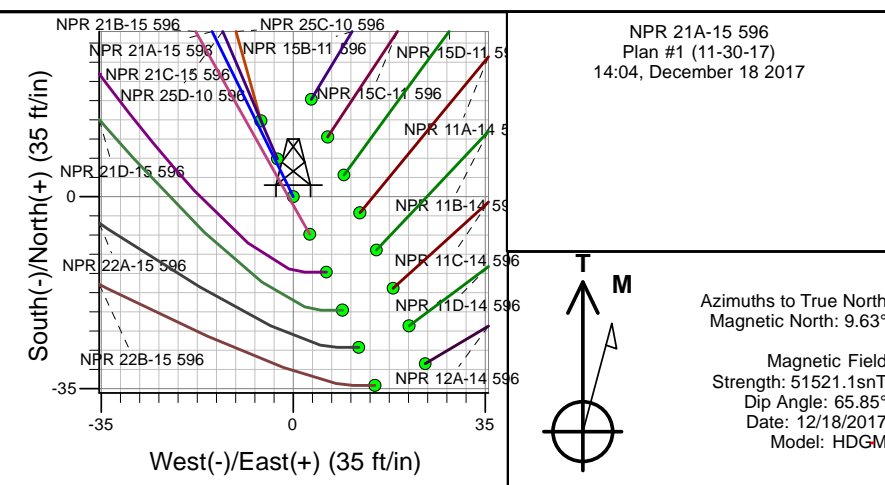
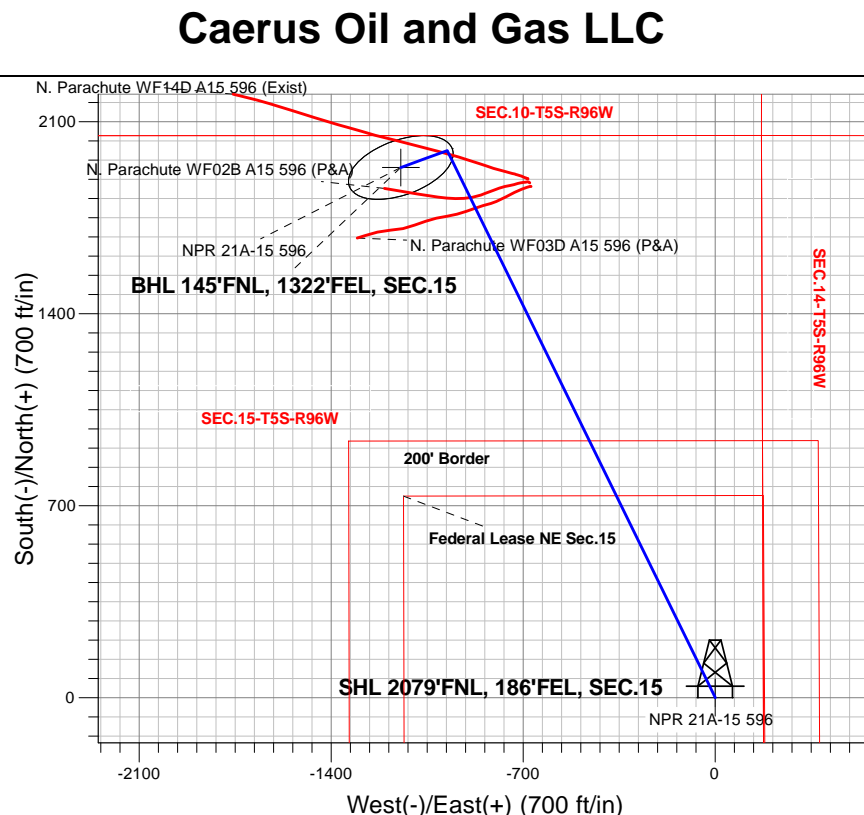
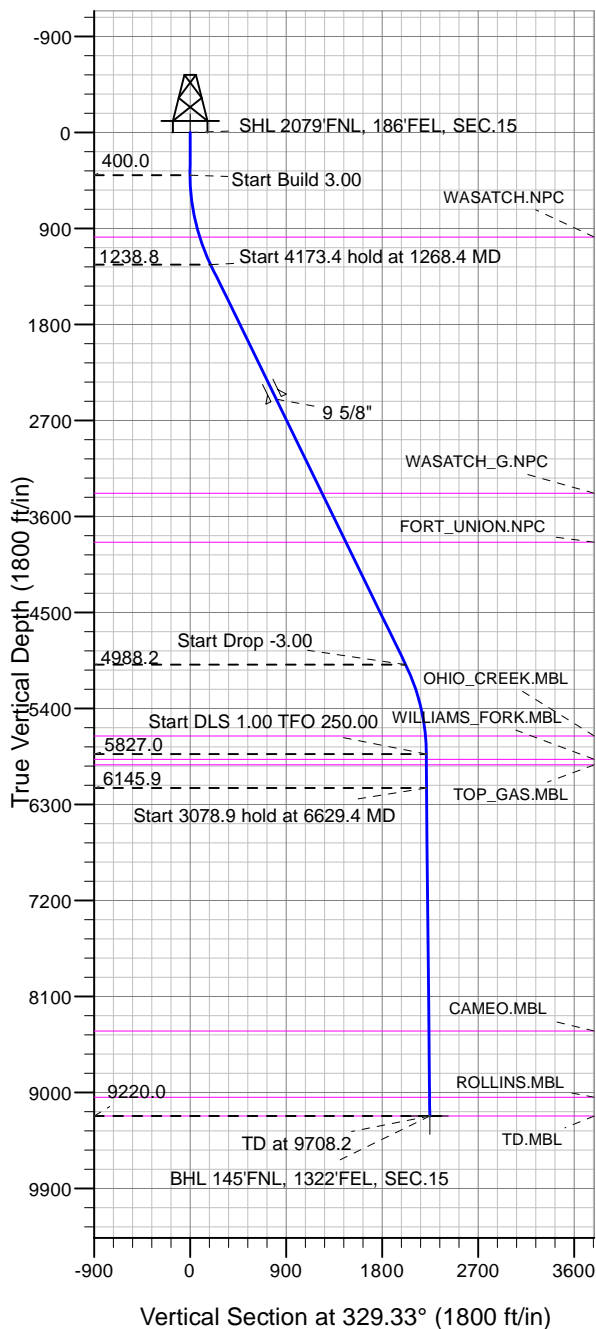


Well Name: **NPR 21A-15 596**
 Surface Location: NPR H15 596 South Pad Sec.15-T5S-R96W
 NAD 1927 - Western US , Universal Transverse Mercator (US Survey Feet) Zone 12N (114 W to 108 W)
 Ground Elevation: 6429.0
 +N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 14399228.92 2444188.01 39.616651 -108.146104
 Original Well Elev WELL @ 6453.0ft (Original Well Elev)



DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
SHL 2079'FNL, 186'FEL, SEC.15	1.0	0.0	0.0	39.616651	-108.146104	Point
BHL 145'FNL, 1322'FEL, SEC.15	9220.0	1933.1	-1146.4	39.621958	-108.150173	Ellipse (Radii: L200.0 W100.0)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	1268.4	26.05	333.90	1238.8	174.3	-85.4	3.00	333.90	193.4	
4	5441.9	26.05	333.90	4988.2	1820.4	-891.6	0.00	0.00	2020.6	
5	6310.3	0.00	0.00	5827.0	1994.7	-977.0	3.00	180.00	2214.0	
6	6629.4	3.19	250.00	6145.9	1991.7	-985.3	1.00	250.00	2215.7	
7	9708.2	3.19	250.00	9220.0	1933.1	-1146.4	0.00	0.00	2247.4	BHL 145'FNL, 1322'FEL, SEC.15



Caerus Oil and Gas LLC

SEC.15-T5S-R96W

NPR H15 596 South Pad Sec.15-T5S-R96W

NPR 21A-15 596

Wellbore #1

Plan: Plan #1 (11-30-17)

Standard Planning Report

18 December, 2017

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 21A-15 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 6453.0ft (Original Well Elev)
Project:	SEC.15-T5S-R96W	MD Reference:	WELL @ 6453.0ft (Original Well Elev)
Site:	NPR H15 596 South Pad Sec.15-T5S-R96W	North Reference:	True
Well:	NPR 21A-15 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-30-17)		

Project	SEC.15-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 H15 596 South Pad Sec.15-T5S-R96W				
Site Position:		Northing:	14,399,246.79 usft	Latitude:	39.616700
From:	Lat/Long	Easting:	2,444,190.74 usft	Longitude:	-108.146093
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	1.82

Well	NPR 21A-15 596					
Well Position	+N/-S	-17.8 ft	Northing:	14,399,228.92 usft	Latitude:	39.616651
	+E/-W	-3.3 ft	Easting:	2,444,188.01 usft	Longitude:	-108.146104
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	6,429.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/18/2017	9.63	65.85	51,521

Design	Plan #1 (11-30-17)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	329.33

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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,268.4	26.05	333.90	1,238.8	174.3	-85.4	3.00	3.00	0.00	333.90	
5,441.9	26.05	333.90	4,988.2	1,820.4	-891.6	0.00	0.00	0.00	0.00	
6,310.3	0.00	0.00	5,827.0	1,994.7	-977.0	3.00	-3.00	0.00	180.00	
6,629.4	3.19	250.00	6,145.9	1,991.7	-985.3	1.00	1.00	-34.47	250.00	
9,708.2	3.19	250.00	9,220.0	1,933.1	-1,146.4	0.00	0.00	0.00	0.00	BHL 145°FNL, 1322°F

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 21A-15 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 6453.0ft (Original Well Elev)
Project:	SEC.15-T5S-R96W	MD Reference:	WELL @ 6453.0ft (Original Well Elev)
Site:	NPR H15 596 South Pad Sec.15-T5S-R96W	North Reference:	True
Well:	NPR 21A-15 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-30-17)		

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 2079'FNL, 186'FEL, SEC.15									
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	3.00	333.90	500.0	2.4	-1.2	2.6	3.00	3.00	0.00
600.0	6.00	333.90	599.6	9.4	-4.6	10.4	3.00	3.00	0.00
700.0	9.00	333.90	698.8	21.1	-10.3	23.4	3.00	3.00	0.00
800.0	12.00	333.90	797.1	37.5	-18.4	41.6	3.00	3.00	0.00
900.0	15.00	333.90	894.3	58.4	-28.6	64.9	3.00	3.00	0.00
991.4	17.74	333.90	982.0	81.6	-40.0	90.5	3.00	3.00	0.00
WASATCH.NPC									
1,000.0	18.00	333.90	990.2	83.9	-41.1	93.2	3.00	3.00	0.00
1,100.0	21.00	333.90	1,084.4	113.9	-55.8	126.4	3.00	3.00	0.00
1,200.0	24.00	333.90	1,176.8	148.3	-72.6	164.6	3.00	3.00	0.00
1,268.4	26.05	333.90	1,238.8	174.3	-85.4	193.4	3.00	3.00	0.00
1,300.0	26.05	333.90	1,267.2	186.7	-91.5	207.3	0.00	0.00	0.00
1,400.0	26.05	333.90	1,357.0	226.2	-110.8	251.0	0.00	0.00	0.00
1,500.0	26.05	333.90	1,446.9	265.6	-130.1	294.8	0.00	0.00	0.00
1,600.0	26.05	333.90	1,536.7	305.1	-149.4	338.6	0.00	0.00	0.00
1,700.0	26.05	333.90	1,626.5	344.5	-168.7	382.4	0.00	0.00	0.00
1,800.0	26.05	333.90	1,716.4	383.9	-188.1	426.2	0.00	0.00	0.00
1,900.0	26.05	333.90	1,806.2	423.4	-207.4	469.9	0.00	0.00	0.00
2,000.0	26.05	333.90	1,896.0	462.8	-226.7	513.7	0.00	0.00	0.00
2,100.0	26.05	333.90	1,985.9	502.3	-246.0	557.5	0.00	0.00	0.00
2,200.0	26.05	333.90	2,075.7	541.7	-265.3	601.3	0.00	0.00	0.00
2,300.0	26.05	333.90	2,165.6	581.2	-284.7	645.1	0.00	0.00	0.00
2,400.0	26.05	333.90	2,255.4	620.6	-304.0	688.9	0.00	0.00	0.00
2,500.0	26.05	333.90	2,345.2	660.1	-323.3	732.6	0.00	0.00	0.00
2,600.0	26.05	333.90	2,435.1	699.5	-342.6	776.4	0.00	0.00	0.00
2,672.3	26.05	333.90	2,500.0	728.0	-356.6	808.0	0.00	0.00	0.00
9 5/8"									
2,700.0	26.05	333.90	2,524.9	738.9	-361.9	820.2	0.00	0.00	0.00
2,800.0	26.05	333.90	2,614.8	778.4	-381.2	864.0	0.00	0.00	0.00
2,900.0	26.05	333.90	2,704.6	817.8	-400.6	907.8	0.00	0.00	0.00
3,000.0	26.05	333.90	2,794.4	857.3	-419.9	951.5	0.00	0.00	0.00
3,100.0	26.05	333.90	2,884.3	896.7	-439.2	995.3	0.00	0.00	0.00
3,200.0	26.05	333.90	2,974.1	936.2	-458.5	1,039.1	0.00	0.00	0.00
3,300.0	26.05	333.90	3,063.9	975.6	-477.8	1,082.9	0.00	0.00	0.00
3,400.0	26.05	333.90	3,153.8	1,015.0	-497.2	1,126.7	0.00	0.00	0.00
3,500.0	26.05	333.90	3,243.6	1,054.5	-516.5	1,170.4	0.00	0.00	0.00
3,600.0	26.05	333.90	3,333.5	1,093.9	-535.8	1,214.2	0.00	0.00	0.00
3,654.0	26.05	333.90	3,382.0	1,115.2	-546.2	1,237.9	0.00	0.00	0.00
WASATCH_G.NPC									
3,700.0	26.05	333.90	3,423.3	1,133.4	-555.1	1,258.0	0.00	0.00	0.00
3,800.0	26.05	333.90	3,513.1	1,172.8	-574.4	1,301.8	0.00	0.00	0.00
3,900.0	26.05	333.90	3,603.0	1,212.3	-593.8	1,345.6	0.00	0.00	0.00
4,000.0	26.05	333.90	3,692.8	1,251.7	-613.1	1,389.3	0.00	0.00	0.00
4,100.0	26.05	333.90	3,782.7	1,291.1	-632.4	1,433.1	0.00	0.00	0.00
4,164.9	26.05	333.90	3,841.0	1,316.8	-644.9	1,461.5	0.00	0.00	0.00
FORT_UNION.NPC									
4,200.0	26.05	333.90	3,872.5	1,330.6	-651.7	1,476.9	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 21A-15 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 6453.0ft (Original Well Elev)
Project:	SEC.15-T5S-R96W	MD Reference:	WELL @ 6453.0ft (Original Well Elev)
Site:	NPR H15 596 South Pad Sec.15-T5S-R96W	North Reference:	True
Well:	NPR 21A-15 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-30-17)		

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)
4,300.0	26.05	333.90	3,962.3	1,370.0	-671.0	1,520.7	0.00	0.00	0.00
4,400.0	26.05	333.90	4,052.2	1,409.5	-690.4	1,564.5	0.00	0.00	0.00
4,500.0	26.05	333.90	4,142.0	1,448.9	-709.7	1,608.2	0.00	0.00	0.00
4,600.0	26.05	333.90	4,231.9	1,488.4	-729.0	1,652.0	0.00	0.00	0.00
4,700.0	26.05	333.90	4,321.7	1,527.8	-748.3	1,695.8	0.00	0.00	0.00
4,800.0	26.05	333.90	4,411.5	1,567.2	-767.6	1,739.6	0.00	0.00	0.00
4,900.0	26.05	333.90	4,501.4	1,606.7	-787.0	1,783.4	0.00	0.00	0.00
5,000.0	26.05	333.90	4,591.2	1,646.1	-806.3	1,827.1	0.00	0.00	0.00
5,100.0	26.05	333.90	4,681.0	1,685.6	-825.6	1,870.9	0.00	0.00	0.00
5,200.0	26.05	333.90	4,770.9	1,725.0	-844.9	1,914.7	0.00	0.00	0.00
5,300.0	26.05	333.90	4,860.7	1,764.5	-864.2	1,958.5	0.00	0.00	0.00
5,400.0	26.05	333.90	4,950.6	1,803.9	-883.5	2,002.3	0.00	0.00	0.00
5,441.9	26.05	333.90	4,988.2	1,820.4	-891.6	2,020.6	0.00	0.00	0.00
5,500.0	24.31	333.90	5,040.8	1,842.6	-902.5	2,045.2	3.00	-3.00	0.00
5,600.0	21.31	333.90	5,133.0	1,877.4	-919.6	2,083.9	3.00	-3.00	0.00
5,700.0	18.31	333.90	5,227.0	1,907.9	-934.5	2,117.7	3.00	-3.00	0.00
5,800.0	15.31	333.90	5,322.7	1,933.8	-947.2	2,146.5	3.00	-3.00	0.00
5,900.0	12.31	333.90	5,419.8	1,955.3	-957.7	2,170.3	3.00	-3.00	0.00
6,000.0	9.31	333.90	5,518.1	1,972.1	-965.9	2,189.0	3.00	-3.00	0.00
6,100.0	6.31	333.90	5,617.1	1,984.3	-971.9	2,202.5	3.00	-3.00	0.00
6,140.1	5.11	333.90	5,657.0	1,987.9	-973.7	2,206.5	3.00	-3.00	0.00
OHIO_CREEK.MBL									
6,200.0	3.31	333.90	5,716.8	1,991.8	-975.6	2,210.9	3.00	-3.00	0.00
6,300.0	0.31	333.90	5,816.7	1,994.7	-977.0	2,214.0	3.00	-3.00	0.00
6,310.3	0.00	0.00	5,827.0	1,994.7	-977.0	2,214.0	3.00	-3.00	0.00
6,360.3	0.50	250.00	5,877.0	1,994.6	-977.2	2,214.1	1.00	1.00	0.00
WILLIAMS_FORK.MBL									
6,400.0	0.90	250.00	5,916.7	1,994.5	-977.7	2,214.2	1.00	1.00	0.00
6,410.3	1.00	250.00	5,927.0	1,994.4	-977.8	2,214.2	1.00	1.00	0.00
TOP_GAS.MBL									
6,500.0	1.90	250.00	6,016.7	1,993.6	-980.0	2,214.6	1.00	1.00	0.00
6,600.0	2.90	250.00	6,116.6	1,992.2	-983.9	2,215.4	1.00	1.00	0.00
6,629.4	3.19	250.00	6,145.9	1,991.7	-985.3	2,215.7	1.00	1.00	0.00
6,700.0	3.19	250.00	6,216.4	1,990.3	-989.0	2,216.4	0.00	0.00	0.00
6,800.0	3.19	250.00	6,316.3	1,988.4	-994.3	2,217.4	0.00	0.00	0.00
6,900.0	3.19	250.00	6,416.1	1,986.5	-999.5	2,218.5	0.00	0.00	0.00
7,000.0	3.19	250.00	6,516.0	1,984.6	-1,004.7	2,219.5	0.00	0.00	0.00
7,100.0	3.19	250.00	6,615.8	1,982.7	-1,010.0	2,220.5	0.00	0.00	0.00
7,200.0	3.19	250.00	6,715.6	1,980.8	-1,015.2	2,221.6	0.00	0.00	0.00
7,300.0	3.19	250.00	6,815.5	1,978.9	-1,020.4	2,222.6	0.00	0.00	0.00
7,400.0	3.19	250.00	6,915.3	1,977.0	-1,025.7	2,223.6	0.00	0.00	0.00
7,500.0	3.19	250.00	7,015.2	1,975.1	-1,030.9	2,224.7	0.00	0.00	0.00
7,600.0	3.19	250.00	7,115.0	1,973.2	-1,036.1	2,225.7	0.00	0.00	0.00
7,700.0	3.19	250.00	7,214.9	1,971.3	-1,041.3	2,226.7	0.00	0.00	0.00
7,800.0	3.19	250.00	7,314.7	1,969.4	-1,046.6	2,227.8	0.00	0.00	0.00
7,900.0	3.19	250.00	7,414.6	1,967.5	-1,051.8	2,228.8	0.00	0.00	0.00
8,000.0	3.19	250.00	7,514.4	1,965.6	-1,057.0	2,229.8	0.00	0.00	0.00
8,100.0	3.19	250.00	7,614.2	1,963.7	-1,062.3	2,230.8	0.00	0.00	0.00
8,200.0	3.19	250.00	7,714.1	1,961.8	-1,067.5	2,231.9	0.00	0.00	0.00
8,300.0	3.19	250.00	7,813.9	1,959.9	-1,072.7	2,232.9	0.00	0.00	0.00
8,400.0	3.19	250.00	7,913.8	1,958.0	-1,078.0	2,233.9	0.00	0.00	0.00
8,500.0	3.19	250.00	8,013.6	1,956.1	-1,083.2	2,235.0	0.00	0.00	0.00
8,600.0	3.19	250.00	8,113.5	1,954.2	-1,088.4	2,236.0	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 21A-15 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 6453.0ft (Original Well Elev)
Project:	SEC.15-T5S-R96W	MD Reference:	WELL @ 6453.0ft (Original Well Elev)
Site:	NPR H15 596 South Pad Sec.15-T5S-R96W	North Reference:	True
Well:	NPR 21A-15 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-30-17)		

Planned Survey

[illegible]

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 2079'FNL, 186'FEL - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	14,399,228.92	2,444,188.01	39.616651	-108.146104
BHL 145'FNL, 1322'FEL - plan hits target center - Ellipse (radii L200.0 W100.0 on 250.00 azi)	0.00	0.00	9,220.0	1,933.1	-1,146.4	14,401,125.21	2,442,980.38	39.621958	-108.150174

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
2,672.3	2,500.0	9 5/8"	9-5/8	12-1/4

Database:	US_EDM	Local Co-ordinate Reference:	Well NPR 21A-15 596
Company:	Caerus Oil and Gas LLC	TVD Reference:	WELL @ 6453.0ft (Original Well Elev)
Project:	SEC.15-T5S-R96W	MD Reference:	WELL @ 6453.0ft (Original Well Elev)
Site:	NPR H15 596 South Pad Sec.15-T5S-R96W	North Reference:	True
Well:	NPR 21A-15 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-30-17)		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
991.4	982.0	WASATCH.NPC		0.00	
3,654.0	3,382.0	WASATCH_G.NPC		0.00	
4,164.9	3,841.0	FORT_UNION.NPC		0.00	
6,140.1	5,657.0	OHIO_CREEK.MBL		0.00	
6,360.3	5,877.0	WILLIAMS_FORK.MBL		0.00	
6,410.3	5,927.0	TOP_GAS.MBL		0.00	
8,912.0	8,425.0	CAMEO.MBL		0.00	
9,533.0	9,045.0	ROLLINS.MBL		0.00	
9,708.2	9,220.0	TD.MBL		0.00	