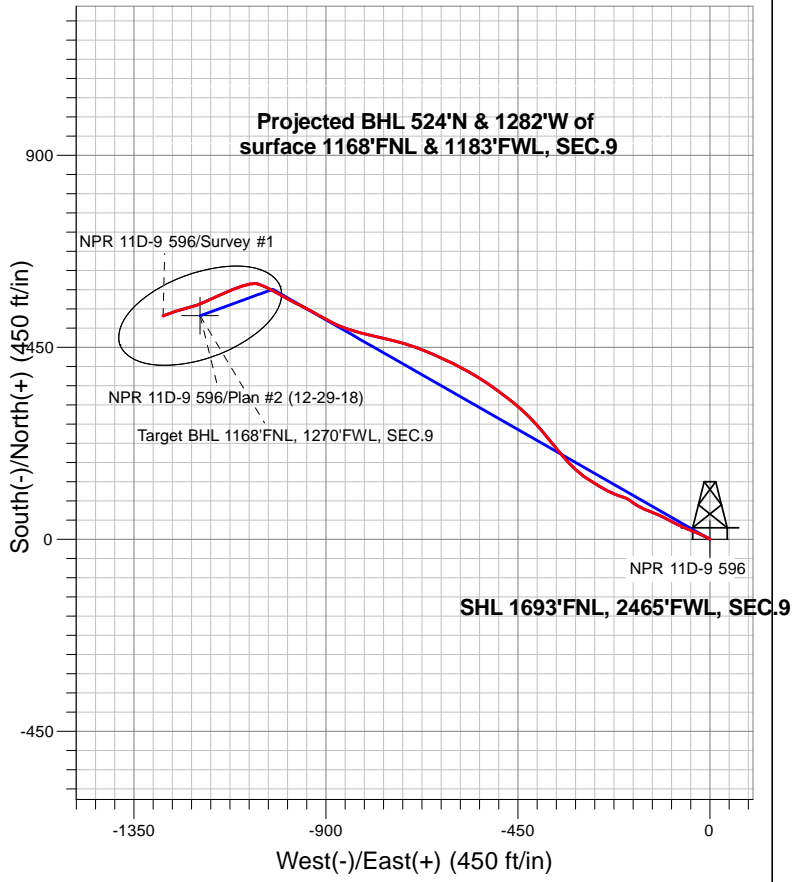
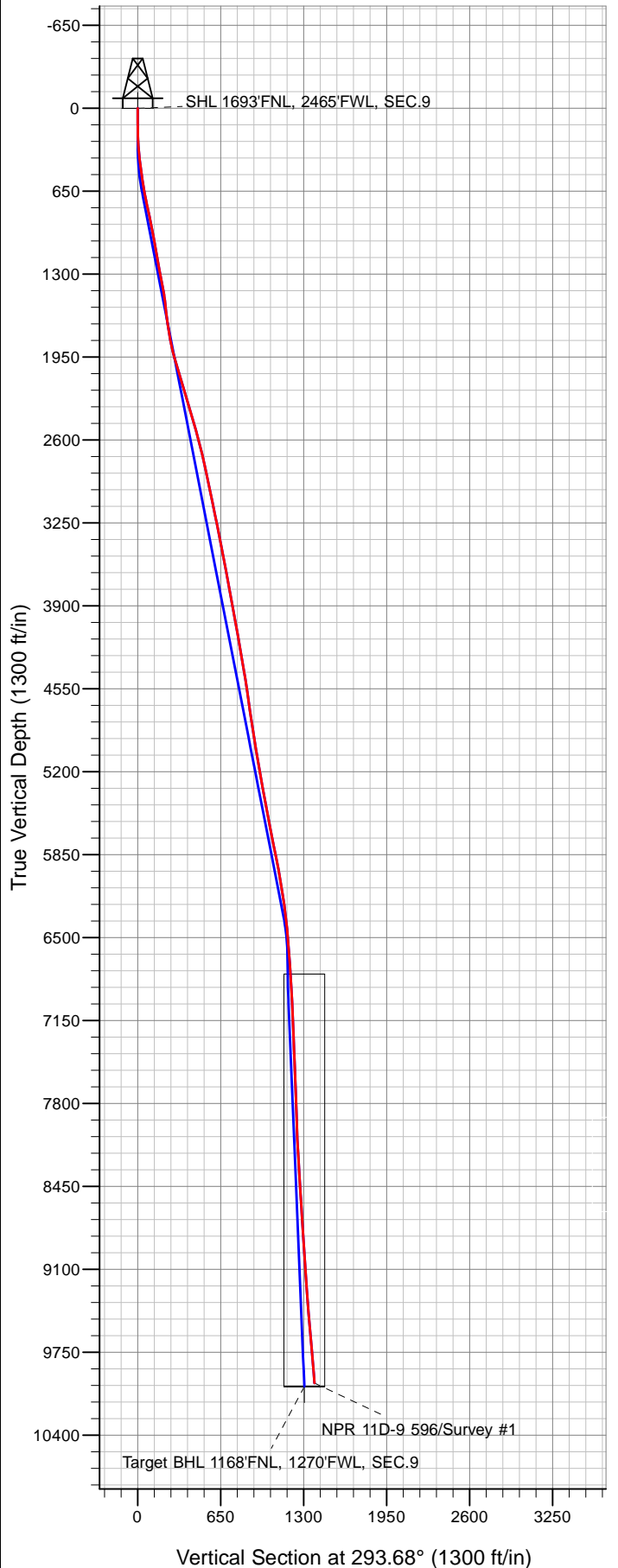


**Caerus Oil and Gas LLC**



**LEGEND**

- NPR 11D-9 596, NPR 11D-9 596 Wellbore #1, Plan #2 (12-29-18) V0
- NPR 11D-9 596 Wellbore #1
- Survey #1

**Final Survey Plot**

**Projected Final Survey -  
 10,126'MD & 9992' TVD @ 1384.31'VS  
 6.2 deg Inc 249.6 deg AZ**

Project: SEC.9-T5S-R96W  
 Site: NPR G09 596 Pad Sec.9-T5S-R96W  
 Well: NPR 11D-9 596  
 Plan: NPR 11D-9 596 Wellbore #1



## **Caerus Oil and Gas LLC**

**SEC.9-T5S-R96W**

**NPR G09 596 Pad Sec.9-T5S-R96W**

**NPR 11D-9 596**

**NPR 11D-9 596 Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**09 January, 2019**

<b>Company:</b>	Caerus Oil and Gas LLC	<b>Local Co-ordinate Reference:</b>	Well NPR 11D-9 596
<b>Project:</b>	SEC.9-T5S-R96W	<b>TVD Reference:</b>	WELL @ 7670.0ft (Original Well Elev)
<b>Site:</b>	NPR G09 596 Pad Sec.9-T5S-R96W	<b>MD Reference:</b>	WELL @ 7670.0ft (Original Well Elev)
<b>Well:</b>	NPR 11D-9 596	<b>North Reference:</b>	True
<b>Wellbore:</b>	NPR 11D-9 596 Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	NPR 11D-9 596 Wellbore #1	<b>Database:</b>	US_EDM

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

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

<b>Well</b>	NPR 11D-9 596					
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	14,404,638.67 usft	<b>Latitude:</b>	39.632191
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	2,436,111.11 usft	<b>Longitude:</b>	-108.174145
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	0.0 ft	<b>Ground Level:</b>	7,640.0 ft

<b>Wellbore</b>	NPR 11D-9 596 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>
	HDGM	12/29/2018	9.53	65.80	51,395

<b>Design</b>	NPR 11D-9 596 Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<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		293.68

<b>Survey Program</b>	<b>Date</b>	1/9/2019			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
120.0	10,126.0	Survey #1 (NPR 11D-9 596 Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
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	
<b>SHL 1693'FNL, 2465'FWL, SEC.9</b>										
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00	
211.0	1.70	306.90	211.0	0.8	-1.1	1.3	1.87	1.87	0.00	
303.0	3.90	303.50	302.9	3.4	-4.8	5.7	2.40	2.39	-3.70	
394.0	6.10	291.60	393.5	6.8	-11.9	13.6	2.66	2.42	-13.08	
486.0	8.60	294.10	484.8	11.5	-22.7	25.4	2.74	2.72	2.72	
578.0	8.60	293.80	575.7	17.0	-35.3	39.1	0.05	0.00	-0.33	
673.0	10.30	291.40	669.4	23.0	-49.7	54.7	1.84	1.79	-2.53	
767.0	11.50	294.00	761.7	29.9	-66.0	72.5	1.38	1.28	2.77	

<b>Company:</b>	Caerus Oil and Gas LLC	<b>Local Co-ordinate Reference:</b>	Well NPR 11D-9 596
<b>Project:</b>	SEC.9-T5S-R96W	<b>TVD Reference:</b>	WELL @ 7670.0ft (Original Well Elev)
<b>Site:</b>	NPR G09 596 Pad Sec.9-T5S-R96W	<b>MD Reference:</b>	WELL @ 7670.0ft (Original Well Elev)
<b>Well:</b>	NPR 11D-9 596	<b>North Reference:</b>	True
<b>Wellbore:</b>	NPR 11D-9 596 Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	NPR 11D-9 596 Wellbore #1	<b>Database:</b>	US_EDM

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)
862.0	12.40	297.10	854.7	38.4	-83.8	92.1	1.16	0.95	3.26
956.0	11.50	298.10	946.6	47.4	-101.0	111.6	0.98	-0.96	1.06
1,050.0	10.20	296.00	1,039.0	55.5	-116.8	129.2	1.45	-1.38	-2.23
1,144.0	8.90	291.00	1,131.7	61.7	-131.0	144.8	1.64	-1.38	-5.32
1,239.0	10.50	291.00	1,225.3	67.4	-146.0	160.8	1.68	1.68	0.00
1,333.0	11.50	296.70	1,317.6	74.7	-162.4	178.7	1.57	1.06	6.06
1,428.0	10.80	306.80	1,410.8	84.3	-177.9	196.8	2.18	-0.74	10.63
1,522.0	7.40	302.50	1,503.6	92.8	-190.1	211.4	3.69	-3.62	-4.57
1,616.0	6.40	289.30	1,596.9	97.8	-200.2	222.6	1.99	-1.06	-14.04
1,711.0	7.80	285.90	1,691.2	101.3	-211.4	234.3	1.54	1.47	-3.58
1,805.0	10.30	295.40	1,784.0	106.7	-225.1	249.0	3.09	2.66	10.11
1,900.0	12.70	296.70	1,877.1	115.0	-242.1	267.9	2.54	2.53	1.37
1,994.0	16.30	301.00	1,968.1	126.5	-262.6	291.3	3.99	3.83	4.57
2,089.0	17.00	303.60	2,059.1	141.0	-285.6	318.2	1.08	0.74	2.74
2,183.0	17.50	309.30	2,148.9	157.6	-308.0	345.4	1.87	0.53	6.06
2,278.0	17.70	317.50	2,239.4	177.3	-328.8	372.3	2.62	0.21	8.63
2,372.0	17.80	319.30	2,329.0	198.7	-347.9	398.4	0.59	0.11	1.91
2,426.0	18.10	320.00	2,380.3	211.4	-358.6	413.3	0.68	0.56	1.30
2,590.0	17.70	320.50	2,536.4	250.1	-390.9	458.4	0.26	-0.24	0.30
2,684.0	15.80	317.80	2,626.4	270.7	-408.5	482.9	2.18	-2.02	-2.87
2,779.0	14.30	315.50	2,718.2	288.6	-425.5	505.6	1.70	-1.58	-2.42
2,873.0	12.80	311.30	2,809.5	303.8	-441.4	526.3	1.91	-1.60	-4.47
2,967.0	12.20	309.40	2,901.3	316.9	-456.9	545.7	0.77	-0.64	-2.02
3,062.0	12.10	308.40	2,994.2	329.5	-472.5	565.0	0.25	-0.11	-1.05
3,156.0	12.00	306.30	3,086.1	341.4	-488.1	584.1	0.48	-0.11	-2.23
3,251.0	12.00	306.30	3,179.0	353.1	-504.0	603.4	0.00	0.00	0.00
3,345.0	11.70	303.90	3,271.0	364.2	-519.8	622.3	0.61	-0.32	-2.55
3,440.0	11.40	302.10	3,364.1	374.6	-535.7	641.1	0.49	-0.32	-1.89
3,534.0	10.80	301.50	3,456.4	384.1	-551.1	659.0	0.65	-0.64	-0.64
3,629.0	10.80	299.00	3,549.7	393.1	-566.5	676.7	0.49	0.00	-2.63
3,723.0	10.90	297.70	3,642.0	401.5	-582.1	694.3	0.28	0.11	-1.38
3,817.0	10.60	297.80	3,734.3	409.6	-597.6	711.8	0.32	-0.32	0.11
3,912.0	10.50	296.00	3,827.7	417.5	-613.1	729.1	0.36	-0.11	-1.89
4,006.0	10.20	294.40	3,920.2	424.7	-628.4	746.0	0.44	-0.32	-1.70
4,100.0	10.20	293.30	4,012.7	431.4	-643.6	762.7	0.21	0.00	-1.17
4,195.0	10.10	292.00	4,106.2	437.9	-659.0	779.4	0.26	-0.11	-1.37
4,289.0	10.10	291.70	4,198.8	444.0	-674.3	795.9	0.06	0.00	-0.32
4,384.0	9.70	289.60	4,292.4	449.8	-689.6	812.2	0.57	-0.42	-2.21
4,478.0	9.50	287.70	4,385.0	454.8	-704.5	827.8	0.40	-0.21	-2.02
4,573.0	9.40	286.70	4,478.8	459.4	-719.4	843.3	0.20	-0.11	-1.05
4,667.0	8.90	285.00	4,571.6	463.5	-733.7	858.1	0.60	-0.53	-1.81
4,762.0	8.40	283.40	4,665.5	467.0	-747.6	872.2	0.58	-0.53	-1.68
4,856.0	8.20	281.70	4,758.5	469.9	-760.8	885.5	0.34	-0.21	-1.81

<b>Company:</b>	Caerus Oil and Gas LLC	<b>Local Co-ordinate Reference:</b>	Well NPR 11D-9 596
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<b>Site:</b>	NPR G09 596 Pad Sec.9-T5S-R96W	<b>MD Reference:</b>	WELL @ 7670.0ft (Original Well Elev)
<b>Well:</b>	NPR 11D-9 596	<b>North Reference:</b>	True
<b>Wellbore:</b>	NPR 11D-9 596 Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	NPR 11D-9 596 Wellbore #1	<b>Database:</b>	US_EDM

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)	
4,951.0	8.30	284.30	4,852.5	473.0	-774.1	898.9	0.41	0.11	2.74	
5,045.0	8.70	284.50	4,945.5	476.5	-787.6	912.6	0.43	0.43	0.21	
5,139.0	9.50	283.10	5,038.3	480.0	-802.0	927.3	0.88	0.85	-1.49	
5,234.0	10.20	284.00	5,131.9	483.8	-817.8	943.3	0.75	0.74	0.95	
5,328.0	10.30	284.90	5,224.4	488.0	-834.0	959.8	0.20	0.11	0.96	
5,423.0	10.30	289.00	5,317.9	492.9	-850.2	976.6	0.77	0.00	4.32	
5,517.0	10.50	292.30	5,410.3	498.9	-866.1	993.6	0.67	0.21	3.51	
5,611.0	10.60	297.20	5,502.7	506.1	-881.7	1,010.8	0.96	0.11	5.21	
5,800.0	11.30	299.30	5,688.3	523.1	-913.3	1,046.5	0.43	0.37	1.11	
5,895.0	11.20	298.30	5,781.5	532.1	-929.6	1,065.0	0.23	-0.11	-1.05	
5,989.0	11.40	297.40	5,873.6	540.7	-945.9	1,083.4	0.28	0.21	-0.96	
6,084.0	10.60	295.00	5,966.9	548.7	-962.1	1,101.5	0.97	-0.84	-2.53	
6,178.0	9.80	299.00	6,059.4	556.2	-976.9	1,118.1	1.14	-0.85	4.26	
6,272.0	9.10	300.20	6,152.1	563.8	-990.4	1,133.4	0.77	-0.74	1.28	
6,366.0	7.90	298.70	6,245.1	570.7	-1,002.5	1,147.3	1.30	-1.28	-1.60	
6,461.0	6.30	297.20	6,339.4	576.2	-1,012.8	1,159.0	1.70	-1.68	-1.58	
6,650.0	5.10	297.50	6,527.4	584.8	-1,029.5	1,177.7	0.64	-0.63	0.16	
6,744.0	4.40	298.10	6,621.1	588.4	-1,036.4	1,185.5	0.75	-0.74	0.64	
6,838.0	3.40	297.00	6,714.9	591.4	-1,042.0	1,191.8	1.07	-1.06	-1.17	
6,933.0	3.90	292.20	6,809.7	593.9	-1,047.5	1,197.9	0.62	0.53	-5.05	
7,028.0	3.50	291.50	6,904.5	596.2	-1,053.2	1,204.0	0.42	-0.42	-0.74	
7,122.0	2.60	290.10	6,998.4	598.0	-1,057.9	1,209.0	0.96	-0.96	-1.49	
7,406.0	2.50	265.70	7,282.1	599.7	-1,070.1	1,220.9	0.38	-0.04	-8.59	
7,501.0	2.50	262.80	7,377.0	599.3	-1,074.3	1,224.5	0.13	0.00	-3.05	
7,596.0	2.50	257.60	7,471.9	598.6	-1,078.3	1,228.0	0.24	0.00	-5.47	
7,879.0	2.80	250.00	7,754.6	594.9	-1,090.9	1,237.9	0.16	0.11	-2.69	
8,068.0	3.00	250.80	7,943.4	591.7	-1,099.9	1,244.9	0.11	0.11	0.42	
8,351.0	4.30	248.40	8,225.8	585.4	-1,116.7	1,257.8	0.46	0.46	-0.85	
8,634.0	5.40	249.50	8,507.8	576.8	-1,139.1	1,274.8	0.39	0.39	0.39	
8,729.0	5.40	245.60	8,602.4	573.4	-1,147.3	1,281.0	0.39	0.00	-4.11	
8,823.0	5.30	243.70	8,695.9	569.6	-1,155.2	1,286.8	0.22	-0.11	-2.02	
9,107.0	5.50	247.50	8,978.7	558.6	-1,179.6	1,304.6	0.14	0.07	1.34	
9,385.0	5.50	248.30	9,255.4	548.6	-1,204.3	1,323.2	0.03	0.00	0.29	
9,573.0	6.20	256.50	9,442.4	542.9	-1,222.5	1,337.6	0.58	0.37	4.36	
9,856.0	6.90	251.10	9,723.6	533.8	-1,253.4	1,362.3	0.33	0.25	-1.91	
10,051.0	6.20	249.60	9,917.3	526.3	-1,274.4	1,378.5	0.37	-0.36	-0.77	
10,126.0	6.20	249.60	9,991.9	523.5	-1,282.0	1,384.3	0.00	0.00	0.00	
Target BHL 1168'FNL, 1270'FWL, SEC.9										

<b>Company:</b>	Caerus Oil and Gas LLC	<b>Local Co-ordinate Reference:</b>	Well NPR 11D-9 596
<b>Project:</b>	SEC.9-T5S-R96W	<b>TVD Reference:</b>	WELL @ 7670.0ft (Original Well Elev)
<b>Site:</b>	NPR G09 596 Pad Sec.9-T5S-R96W	<b>MD Reference:</b>	WELL @ 7670.0ft (Original Well Elev)
<b>Well:</b>	NPR 11D-9 596	<b>North Reference:</b>	True
<b>Wellbore:</b>	NPR 11D-9 596 Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	NPR 11D-9 596 Wellbore #1	<b>Database:</b>	US_EDM

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 1693'FNL, 2465'FM - survey hits target center - Point	0.00	0.00	1.0	0.0	0.0	14,404,638.67	2,436,111.11	39.632191	-108.174145
Target BHL 1168'FNL, 1' - survey misses target center by 91.3ft at 10126.0ft MD (9991.9 TVD, 523.5 N, -1282.0 E) - Ellipse (radii L200.0 W100.0 on 250.00 azi)	0.00	0.00	10,019.0	524.0	-1,194.8	14,405,125.02	2,434,899.98	39.633630	-108.178388

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_