



# SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	275.00	0.00	0.00	275.00	0.00	0.00	0.00	0.00	0.00	
3	375.00	3.00	145.00	374.95	-2.14	1.50	3.00	145.00	2.01	
4	695.00	3.00	145.00	694.52	-15.86	11.11	0.00	0.00	14.85	
5	2077.85	43.69	103.33	1939.85	-162.10	518.96	3.00	-43.88	543.25	
6	4860.19	43.69	103.33	3951.80	-605.33	2389.01	0.00	0.00	2464.24	
7	6316.46	0.00	0.00	5271.00	-727.29	2903.57	3.00	180.00	2992.82	
8	6398.16	1.63	250.00	5352.68	-727.69	2902.48	2.00	250.00	2991.87	
9	9529.75	1.63	250.00	8483.00	-758.24	2818.57	0.00	0.00	2918.78	NPR 15A-3_696_PBHL

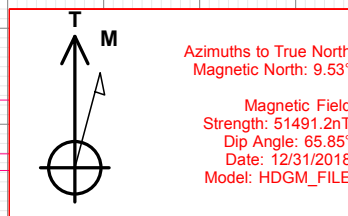
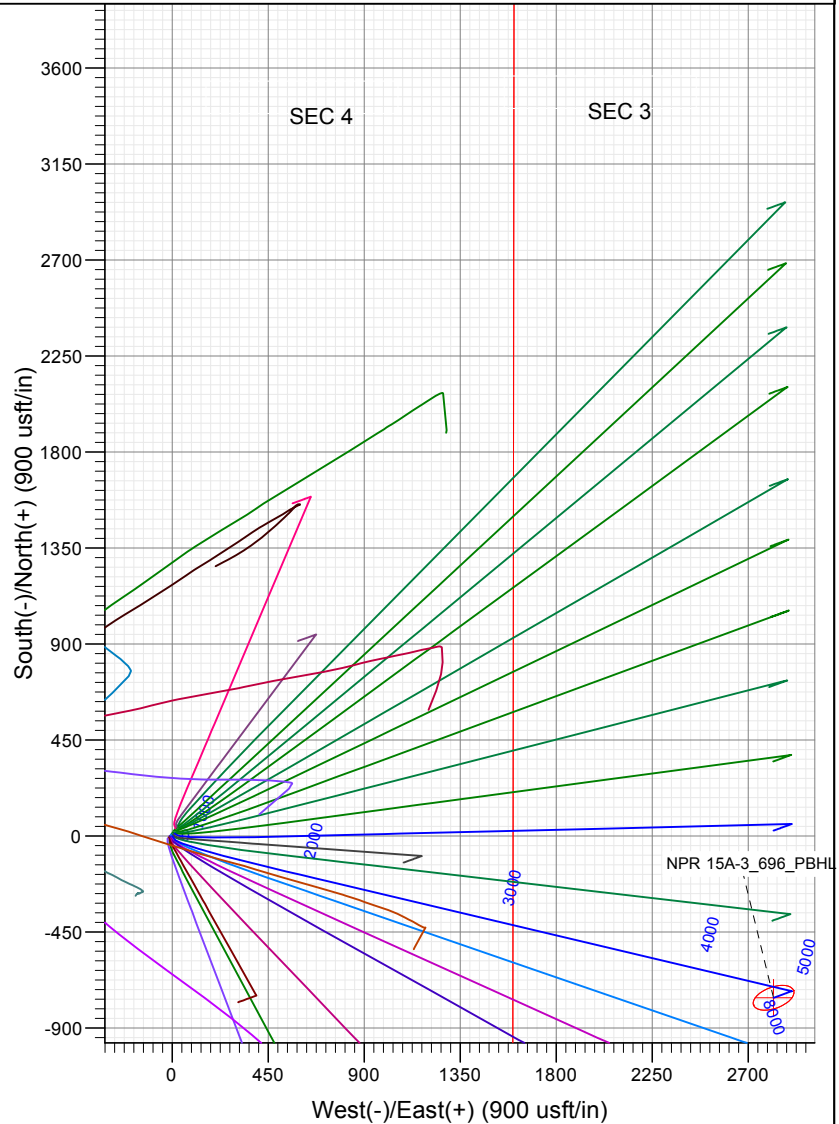
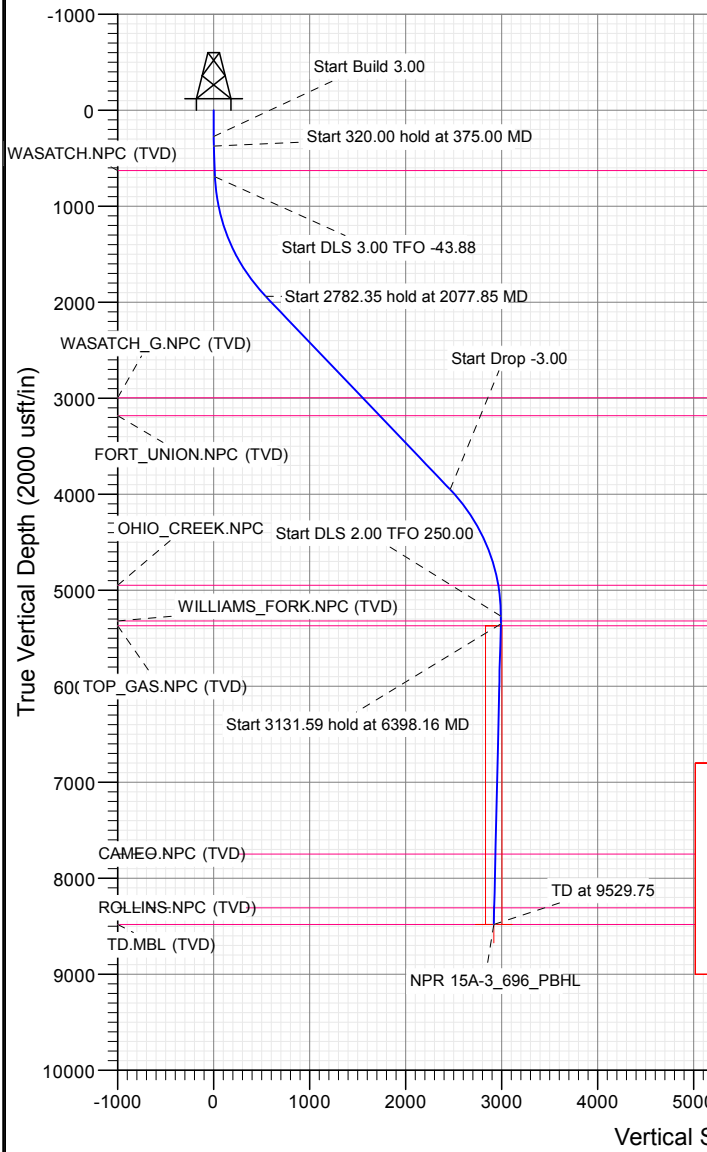
PLAN #1  
NPR 15A-3\_696  
GL+KB=30' @ 6037.00usft  
Ground Level @ 6007.00  
NAD 1927 - Western US  
Well NPR 15A-3\_696 - Slot B8, True North

Type	Target	Azimuth	Origin Type	N/S	E/W	From TVD
TD	No Target (Freehand)	105.06	Slot	0.00	0.00	0.00

Name: NPR 15A-3\_696\_PBHL

TVD	+N/-S	+E/-W	Latitude	Longitude
8483.00	-758.24	2818.57	39.548684	-108.097400

Project: Garfield County, CO (UTM 12N)  
Site: SEC 4 T6S R96W NPR 004 696 PAD  
Well: NPR 15A-3\_696  
Wellbore: OH  
Design: PLAN #1



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
629.00	629.39	WASATCH.NPC (TVD)
2997.00	3539.79	WASATCH_G.NPC (TVD)
3182.00	3795.63	FORT_UNION.NPC (TVD)
4949.00	5992.92	OHIO_CREEK.NPC
5321.00	6366.47	WILLIAMS_FORK.NPC (TVD)
5371.00	6416.48	TOP_GAS.NPC (TVD)
7749.00	8795.45	CAMEO.NPC (TVD)
8308.00	9354.68	ROLLINS.NPC (TVD)
8483.00	9529.75	TD.MBL (TVD)



WELL DETAILS: NPR 15A-3\_696

6007.00  
+N/-S 0.00 +E/-W 0.00 Northing 14375582.50 Easting 2455865.40 Latitude 39.550765 Longitude -108.107391

B8



## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well NPR 15A-3_696 - Slot B8
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	GL+KB=30' @ 6037.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	GL+KB=30' @ 6037.00usft
<b>Site:</b>	SEC 4 T6S R96W NPR O04 696 PAD	<b>North Reference:</b>	True
<b>Well:</b>	NPR 15A-3_696	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

<b>Project</b>	Garfield County, CO (UTM 12N)		
<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		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

Site		SEC 4 T6S R96W NPR O04 696 PAD			
Site Position:		Northing:	14,375,630.76 usft	Latitude:	39.550895
From:	Map	Easting:	2,455,888.50 usft	Longitude:	-108.107304
Position Uncertainty:	3.28 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.84 °

Well	NPR 15A-3_696 - Slot B8					
Well Position	+N/-S	0.00 usft	Northing:	14,375,582.50 usft	Latitude:	39.550765
	+E/-W	0.00 usft	Easting:	2,455,865.40 usft	Longitude:	-108.107391
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	6,007.00 usft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
			(°)	(°)	(nT)
	HDGM_FILE	12/31/2018	9.53	65.85	51,491.20000000

<b>Design</b>	PLAN #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	105.06

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
275.00	0.00	0.00	275.00	0.00	0.00	0.00	0.00	0.00	0.00	
375.00	3.00	145.00	374.95	-2.14	1.50	3.00	3.00	0.00	145.00	
695.00	3.00	145.00	694.52	-15.86	11.11	0.00	0.00	0.00	0.00	
2,077.85	43.69	103.33	1,939.85	-162.10	518.96	3.00	2.94	-3.01	-43.88	
4,860.19	43.69	103.33	3,951.80	-605.33	2,389.01	0.00	0.00	0.00	0.00	
6,316.46	0.00	0.00	5,271.00	-727.29	2,903.57	3.00	-3.00	0.00	180.00	
6,398.16	1.63	250.00	5,352.68	-727.69	2,902.48	2.00	2.00	-134.65	250.00	
9,529.75	1.63	250.00	8,483.00	-758.24	2,818.57	0.00	0.00	0.00	0.00	NPR 15A-3_696_PBT

# Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well NPR 15A-3_696 - Slot B8
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	GL+KB=30' @ 6037.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	GL+KB=30' @ 6037.00usft
<b>Site:</b>	SEC 4 T6S R96W NPR 004 696 PAD	<b>North Reference:</b>	True
<b>Well:</b>	NPR 15A-3_696	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

## Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
275.00	0.00	0.00	275.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.00
300.00	0.75	145.00	300.00	-0.13	0.09	0.13	3.00	3.00	
375.00	3.00	145.00	374.95	-2.14	1.50	2.01	3.00	3.00	Start 320.00 hold at 375.00 MD
400.00	3.00	145.00	399.92	-3.22	2.25	3.01	0.00	0.00	
500.00	3.00	145.00	499.78	-7.50	5.25	7.02	0.00	0.00	
600.00	3.00	145.00	599.65	-11.79	8.26	11.03	0.00	0.00	
629.39	3.00	145.00	629.00	-13.05	9.14	12.21	0.00	0.00	WASATCH.NPC (TVD)
695.00	3.00	145.00	694.52	-15.86	11.11	14.85	0.00	0.00	Start DLS 3.00 TFO -43.88
700.00	3.11	143.08	699.51	-16.08	11.26	15.05	3.00	2.20	
800.00	5.70	122.47	799.21	-20.92	17.09	21.93	3.00	2.59	
900.00	8.57	115.10	898.43	-26.74	28.03	34.01	3.00	2.86	
1,000.00	11.50	111.43	996.89	-33.55	44.06	51.26	3.00	2.93	
1,100.00	14.46	109.25	1,094.32	-41.31	65.13	73.62	3.00	2.96	
1,200.00	17.43	107.79	1,190.46	-50.01	91.18	101.04	3.00	2.97	
1,300.00	20.41	106.75	1,285.05	-59.61	122.16	133.45	3.00	2.98	
1,400.00	23.40	105.97	1,377.82	-70.11	157.96	170.75	3.00	2.99	
1,500.00	26.39	105.35	1,468.51	-81.46	198.49	212.83	3.00	2.99	
1,600.00	29.38	104.85	1,556.89	-93.63	243.64	259.60	3.00	2.99	
1,700.00	32.37	104.44	1,642.71	-106.60	293.29	310.91	3.00	2.99	
1,800.00	35.37	104.09	1,725.73	-120.32	347.29	366.63	3.00	2.99	
1,900.00	38.36	103.79	1,805.73	-134.76	405.51	426.60	3.00	2.99	
2,000.00	41.36	103.52	1,882.48	-149.88	467.79	490.66	3.00	3.00	
2,077.85	43.69	103.33	1,939.85	-162.10	518.96	543.25	3.00	3.00	Start 2782.35 hold at 2077.85 MD
2,100.00	43.69	103.33	1,955.87	-165.63	533.85	558.55	0.00	0.00	
2,200.00	43.69	103.33	2,028.19	-181.56	601.06	627.59	0.00	0.00	
2,300.00	43.69	103.33	2,100.50	-197.49	668.27	696.63	0.00	0.00	
2,400.00	43.69	103.33	2,172.81	-213.42	735.48	765.67	0.00	0.00	
2,500.00	43.69	103.33	2,245.12	-229.35	802.69	834.72	0.00	0.00	
2,600.00	43.69	103.33	2,317.43	-245.28	869.91	903.76	0.00	0.00	
2,700.00	43.69	103.33	2,389.74	-261.21	937.12	972.80	0.00	0.00	
2,800.00	43.69	103.33	2,462.05	-277.14	1,004.33	1,041.84	0.00	0.00	
2,900.00	43.69	103.33	2,534.36	-293.07	1,071.54	1,110.88	0.00	0.00	
3,000.00	43.69	103.33	2,606.67	-309.00	1,138.75	1,179.93	0.00	0.00	
3,100.00	43.69	103.33	2,678.98	-324.93	1,205.96	1,248.97	0.00	0.00	
3,200.00	43.69	103.33	2,751.30	-340.86	1,273.17	1,318.01	0.00	0.00	
3,300.00	43.69	103.33	2,823.61	-356.79	1,340.38	1,387.05	0.00	0.00	
3,400.00	43.69	103.33	2,895.92	-372.72	1,407.59	1,456.09	0.00	0.00	
3,500.00	43.69	103.33	2,968.23	-388.65	1,474.81	1,525.14	0.00	0.00	
3,539.79	43.69	103.33	2,997.00	-394.99	1,501.55	1,552.61	0.00	0.00	WASATCH_G.NPC (TVD)
3,600.00	43.69	103.33	3,040.54	-404.58	1,542.02	1,594.18	0.00	0.00	
3,700.00	43.69	103.33	3,112.85	-420.51	1,609.23	1,663.22	0.00	0.00	
3,795.63	43.69	103.33	3,182.00	-435.74	1,673.50	1,729.24	0.00	0.00	FORT_UNION.NPC (TVD)
3,800.00	43.69	103.33	3,185.16	-436.44	1,676.44	1,732.26	0.00	0.00	
3,900.00	43.69	103.33	3,257.47	-452.37	1,743.65	1,801.30	0.00	0.00	
4,000.00	43.69	103.33	3,329.78	-468.30	1,810.86	1,870.35	0.00	0.00	
4,100.00	43.69	103.33	3,402.10	-484.23	1,878.07	1,939.39	0.00	0.00	
4,200.00	43.69	103.33	3,474.41	-500.16	1,945.28	2,008.43	0.00	0.00	
4,300.00	43.69	103.33	3,546.72	-516.09	2,012.49	2,077.47	0.00	0.00	
4,400.00	43.69	103.33	3,619.03	-532.02	2,079.71	2,146.51	0.00	0.00	

# Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well NPR 15A-3_696 - Slot B8
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	GL+KB=30' @ 6037.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	GL+KB=30' @ 6037.00usft
<b>Site:</b>	SEC 4 T6S R96W NPR 004 696 PAD	<b>North Reference:</b>	True
<b>Well:</b>	NPR 15A-3_696	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

## Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
4,500.00	43.69	103.33	3,691.34	-547.95	2,146.92	2,215.56	0.00	0.00	
4,600.00	43.69	103.33	3,763.65	-563.88	2,214.13	2,284.60	0.00	0.00	
4,700.00	43.69	103.33	3,835.96	-579.81	2,281.34	2,353.64	0.00	0.00	
4,800.00	43.69	103.33	3,908.27	-595.74	2,348.55	2,422.68	0.00	0.00	
4,860.19	43.69	103.33	3,951.80	-605.33	2,389.01	2,464.24	0.00	0.00	Start Drop -3.00
4,900.00	42.49	103.33	3,980.87	-611.61	2,415.47	2,491.42	3.00	-3.00	
5,000.00	39.49	103.33	4,056.34	-626.73	2,479.29	2,556.98	3.00	-3.00	
5,100.00	36.49	103.33	4,135.14	-640.93	2,539.18	2,618.51	3.00	-3.00	
5,200.00	33.49	103.33	4,217.05	-654.15	2,594.98	2,675.82	3.00	-3.00	
5,300.00	30.49	103.33	4,301.85	-666.37	2,646.53	2,728.77	3.00	-3.00	
5,400.00	27.49	103.33	4,389.31	-677.55	2,693.69	2,777.22	3.00	-3.00	
5,500.00	24.49	103.33	4,479.18	-687.66	2,736.33	2,821.02	3.00	-3.00	
5,600.00	21.49	103.33	4,571.22	-696.66	2,774.33	2,860.06	3.00	-3.00	
5,700.00	18.49	103.33	4,665.19	-704.55	2,807.60	2,894.24	3.00	-3.00	
5,800.00	15.49	103.33	4,760.81	-711.29	2,836.03	2,923.45	3.00	-3.00	
5,900.00	12.49	103.33	4,857.83	-716.86	2,859.56	2,947.61	3.00	-3.00	
5,992.92	9.71	103.33	4,949.00	-720.99	2,876.97	2,965.49	3.00	-3.00	OHIO_CREEK.NPC
6,000.00	9.49	103.33	4,955.98	-721.26	2,878.12	2,966.67	3.00	-3.00	
6,100.00	6.49	103.33	5,055.00	-724.47	2,891.65	2,980.57	3.00	-3.00	
6,200.00	3.49	103.33	5,154.61	-726.48	2,900.12	2,989.27	3.00	-3.00	
6,300.00	0.49	103.33	5,254.54	-727.28	2,903.50	2,992.75	3.00	-3.00	
6,316.46	0.00	0.00	5,271.00	-727.29	2,903.57	2,992.82	3.00	-3.00	Start DLS 2.00 TFO 250.00
6,366.47	1.00	250.00	5,321.00	-727.44	2,903.16	2,992.46	2.00	2.00	WILLIAMS_FORK.NPC (TVD)
6,398.16	1.63	250.00	5,352.68	-727.69	2,902.48	2,991.87	2.00	2.00	Start 3131.59 hold at 6398.16 MD
6,400.00	1.63	250.00	5,354.53	-727.71	2,902.43	2,991.82	0.00	0.00	
6,416.48	1.63	250.00	5,371.00	-727.87	2,901.98	2,991.44	0.00	0.00	TOP_GAS.NPC (TVD)
6,500.00	1.63	250.00	5,454.48	-728.69	2,899.75	2,989.49	0.00	0.00	
6,600.00	1.63	250.00	5,554.44	-729.66	2,897.07	2,987.16	0.00	0.00	
6,700.00	1.63	250.00	5,654.40	-730.64	2,894.39	2,984.82	0.00	0.00	
6,800.00	1.63	250.00	5,754.36	-731.61	2,891.71	2,982.49	0.00	0.00	
6,900.00	1.63	250.00	5,854.32	-732.59	2,889.03	2,980.16	0.00	0.00	
7,000.00	1.63	250.00	5,954.28	-733.56	2,886.35	2,977.82	0.00	0.00	
7,100.00	1.63	250.00	6,054.24	-734.54	2,883.67	2,975.49	0.00	0.00	
7,200.00	1.63	250.00	6,154.20	-735.51	2,880.99	2,973.15	0.00	0.00	
7,300.00	1.63	250.00	6,254.16	-736.49	2,878.31	2,970.82	0.00	0.00	
7,400.00	1.63	250.00	6,354.12	-737.47	2,875.63	2,968.49	0.00	0.00	
7,500.00	1.63	250.00	6,454.08	-738.44	2,872.95	2,966.15	0.00	0.00	
7,600.00	1.63	250.00	6,554.04	-739.42	2,870.28	2,963.82	0.00	0.00	
7,700.00	1.63	250.00	6,654.00	-740.39	2,867.60	2,961.48	0.00	0.00	
7,800.00	1.63	250.00	6,753.96	-741.37	2,864.92	2,959.15	0.00	0.00	
7,900.00	1.63	250.00	6,853.92	-742.34	2,862.24	2,956.82	0.00	0.00	
8,000.00	1.63	250.00	6,953.87	-743.32	2,859.56	2,954.48	0.00	0.00	
8,100.00	1.63	250.00	7,053.83	-744.29	2,856.88	2,952.15	0.00	0.00	
8,200.00	1.63	250.00	7,153.79	-745.27	2,854.20	2,949.81	0.00	0.00	
8,300.00	1.63	250.00	7,253.75	-746.24	2,851.52	2,947.48	0.00	0.00	
8,400.00	1.63	250.00	7,353.71	-747.22	2,848.84	2,945.15	0.00	0.00	
8,500.00	1.63	250.00	7,453.67	-748.19	2,846.16	2,942.81	0.00	0.00	
8,600.00	1.63	250.00	7,553.63	-749.17	2,843.48	2,940.48	0.00	0.00	
8,700.00	1.63	250.00	7,653.59	-750.14	2,840.80	2,938.15	0.00	0.00	
8,795.45	1.63	250.00	7,749.00	-751.08	2,838.25	2,935.92	0.00	0.00	CAMEO.NPC (TVD)
8,800.00	1.63	250.00	7,753.55	-751.12	2,838.12	2,935.81	0.00	0.00	
8,900.00	1.63	250.00	7,853.51	-752.10	2,835.45	2,933.48	0.00	0.00	

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well NPR 15A-3_696 - Slot B8
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	GL+KB=30' @ 6037.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	GL+KB=30' @ 6037.00usft
<b>Site:</b>	SEC 4 T6S R96W NPR 004 696 PAD	<b>North Reference:</b>	True
<b>Well:</b>	NPR 15A-3_696	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
9,000.00	1.63	250.00	7,953.47	-753.07	2,832.77	2,931.14	0.00	0.00	
9,100.00	1.63	250.00	8,053.43	-754.05	2,830.09	2,928.81	0.00	0.00	
9,200.00	1.63	250.00	8,153.39	-755.02	2,827.41	2,926.48	0.00	0.00	
9,300.00	1.63	250.00	8,253.35	-756.00	2,824.73	2,924.14	0.00	0.00	
9,354.68	1.63	250.00	8,308.00	-756.53	2,823.26	2,922.87	0.00	0.00	ROLLINS.NPC (TVD)
9,400.00	1.63	250.00	8,353.31	-756.97	2,822.05	2,921.81	0.00	0.00	
9,500.00	1.63	250.00	8,453.26	-757.95	2,819.37	2,919.47	0.00	0.00	
9,529.75	1.63	250.00	8,483.00	-758.24	2,818.57	2,918.78	0.00	0.00	TD at 9529.75 - TD.MBL (TVD) - NPR 15A-3_696

### Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
NPR 15A-3_696_PBHL	0.00	0.00	8,483.00	-758.24	2,818.57	14,374,915.30	2,458,706.90	39.548684	-108.097400
- plan hits target center									
- Ellipse (radii L100.00 W50.00 on 250.00 azi)									

### Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
629.39	629.00	WASATCH.NPC (TVD)			
3,539.79	2,997.00	WASATCH_G.NPC (TVD)			
3,795.63	3,182.00	FORT_UNION.NPC (TVD)			
5,992.92	4,949.00	OHIO_CREEK.NPC			
6,366.47	5,321.00	WILLIAMS_FORK.NPC (TVD)			
6,416.48	5,371.00	TOP_GAS.NPC (TVD)			
8,795.45	7,749.00	CAMEO.NPC (TVD)			
9,354.68	8,308.00	ROLLINS.NPC (TVD)			
9,529.75	8,483.00	TD.MBL (TVD)			

### Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
275.00	275.00	0.00	0.00	Start Build 3.00
375.00	374.95	-2.14	1.50	Start 320.00 hold at 375.00 MD
695.00	694.52	-15.86	11.11	Start DLS 3.00 TFO -43.88
2,077.85	1,939.85	-162.10	518.96	Start 2782.35 hold at 2077.85 MD
4,860.19	3,951.80	-605.33	2,389.01	Start Drop -3.00
6,316.46	5,271.00	-727.29	2,903.57	Start DLS 2.00 TFO 250.00
6,398.16	5,352.68	-727.69	2,902.48	Start 3131.59 hold at 6398.16 MD
9,529.75	8,483.00	-758.24	2,818.57	TD at 9529.75