



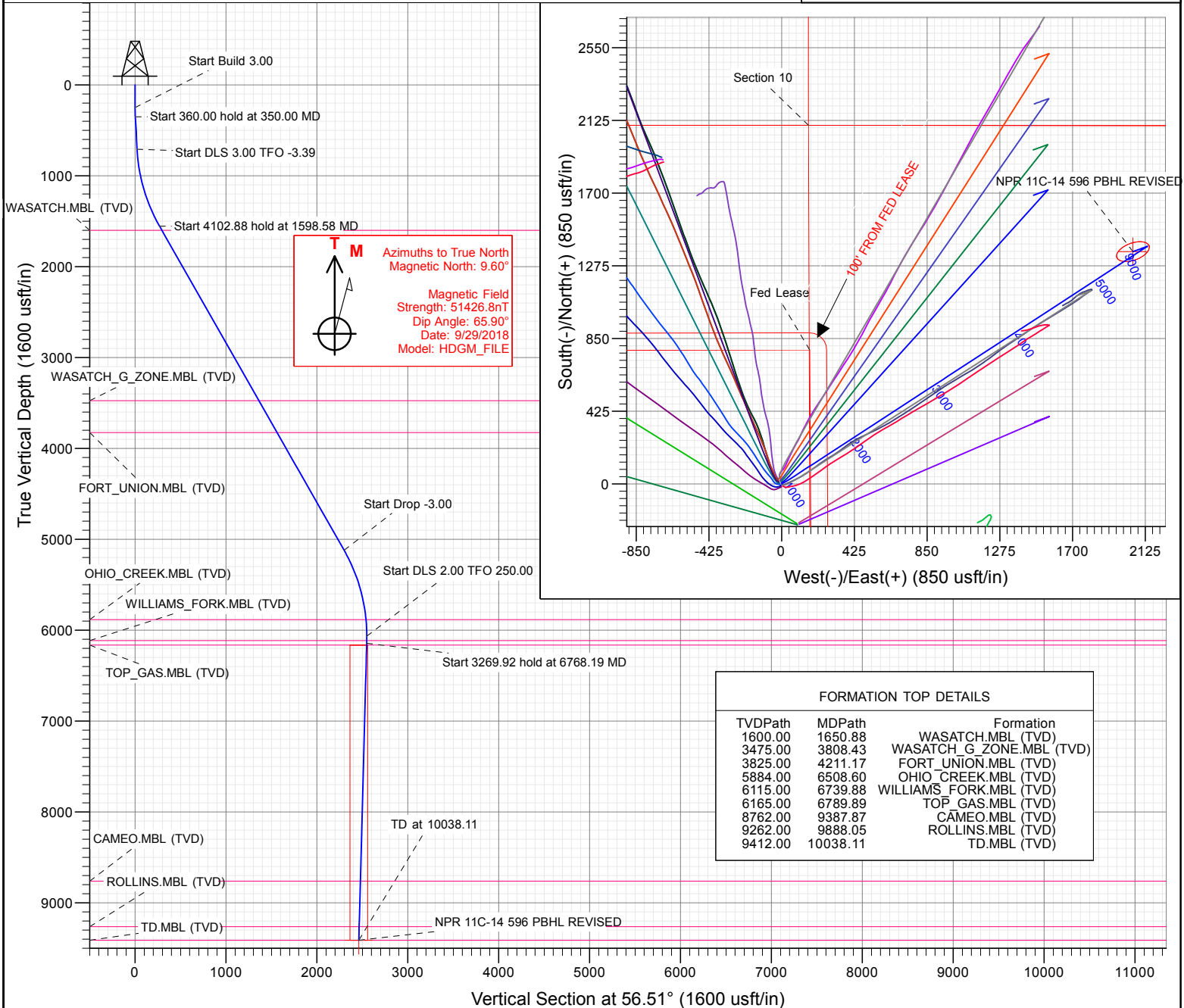
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Target
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	350.00	3.00	60.00	349.95	1.31	2.27	3.00	60.00	2.61	
4	710.00	3.00	60.00	709.46	10.73	18.58	0.00	0.00	21.42	
5	1598.58	29.65	56.93	1554.55	144.73	226.68	3.00	-3.39	268.91	
6	5701.46	29.65	56.93	5120.12	1252.43	1927.66	0.00	0.00	298.71	
7	6689.88	0.00	0.00	6065.00	1388.91	2137.25	3.00	180.00	2548.82	
8	6768.19	1.57	250.00	6143.31	1388.55	2136.24	2.00	250.00	2547.78	
9	10038.11	1.57	250.00	9412.00	1357.98	2052.25	0.00	0.00	2460.87	NPR 11C-14 596 PBHL REVISED

PLAN #2
NPR 11C-14 596
GL + KB @ 6459.00usft
Ground Level @ 6429.00
NAD 1927 - Western US
Well NPR 11C-14 596 - Slot NPR 11C-14 596, True North

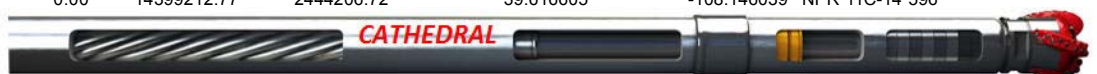
Project: Garfield County, CO (UTM 12N)
Site: S15-T5S-R96W NPR H15 596 (POD 1) (H&P 330)
Well: NPR 11C-14 596
WellboreOH
Design: PLAN #2

Type	Target	Azimuth	Origin	Type	N/S	E/W	From	TVD
TD	No Target (Freehand)	56.51	Slot		0.00	0.00		0.00
Name		TVD	+N/-S	+E/-W	Latitude	Longitude		
NPR 11C-14 596 PBHL REVISED		9412.00	1357.98	2052.25	39.620332	-108.138757		



WELL DETAILS: NPR 11C-14 596

+N/-S 0.00 +E/-W 0.00 Northing 14399212.77 Easting 2444206.72 Latitude 39.616605 Longitude -108.146039 NPR 11C-14 596



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well NPR 11C-14 596 - Slot NPR 11C-14 596
Company:	Caerus Oil & Gas	TVD Reference:	GL + KB @ 6459.00usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	GL + KB @ 6459.00usft
Site:	S15-T5S-R96W NPR H15 596 (POD 1) (H&P 330)	North Reference:	True
Well:	NPR 11C-14 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

Project	Garfield County, CO (UTM 12N)		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		
Map Zone:	Zone 12N (114 W to 108 W)		

Site		S15-T5S-R96W NPR H15 596 (POD 1) (H&P 330)			
Site Position:		Northing:		14,399,246.77 usft	
From:		Easting:		2,444,190.72 usft	
Position Uncertainty:		Slot Radius:		13-3/16 "	
Map		Latitude:		39.616700	
0.00 usft		Longitude:		-108.146092	
		Grid Convergence:		1.82 °	

Well	NPR 11C-14 596 - Slot NPR 11C-14 596					
Well Position	+N/-S	0.00 usft	Northing:	14,399,212.77 usft	Latitude:	39.616605
	+E/-W	0.00 usft	Easting:	2,444,206.72 usft	Longitude:	-108.146039
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	6,429.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	HDGM_FILE	9/29/2018	9.60	65.90	51,426.80000000

Design	PLAN #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	56.51

Plan Sections										
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	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
350.00	3.00	60.00	349.95	1.31	2.27	3.00	3.00	0.00	60.00	
710.00	3.00	60.00	709.46	10.73	18.58	0.00	0.00	0.00	0.00	
1,598.58	29.65	56.93	1,554.55	144.73	226.68	3.00	3.00	-0.35	-3.39	
5,701.46	29.65	56.93	5,120.12	1,252.43	1,927.66	0.00	0.00	0.00	0.00	
6,689.88	0.00	0.00	6,065.00	1,388.91	2,137.25	3.00	-3.00	0.00	180.00	
6,768.19	1.57	250.00	6,143.31	1,388.55	2,136.24	2.00	2.00	-140.45	250.00	
10,038.11	1.57	250.00	9,412.00	1,357.98	2,052.25	0.00	0.00	0.00	0.00	NPR 11C-14 596 PBH

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: Caerus Oil & Gas
Project: Garfield County, CO (UTM 12N)
Site: S15-T5S-R96W NPR H15 596 (POD 1) (H&P 330)
Well: NPR 11C-14 596
Wellbore: OH
Design: PLAN #2

Local Co-ordinate Reference: Well NPR 11C-14 596 - Slot NPR 11C-14 596
TVD Reference: GL + KB @ 6459.00usft
MD Reference: GL + KB @ 6459.00usft
North Reference: True
Survey Calculation Method: Minimum Curvature

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	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.00
300.00	1.50	60.00	299.99	0.33	0.57	0.65	3.00	3.00	
350.00	3.00	60.00	349.95	1.31	2.27	2.61	3.00	3.00	Start 360.00 hold at 350.00 MD
400.00	3.00	60.00	399.89	2.62	4.53	5.22	0.00	0.00	
500.00	3.00	60.00	499.75	5.23	9.07	10.45	0.00	0.00	
600.00	3.00	60.00	599.61	7.85	13.60	15.67	0.00	0.00	
700.00	3.00	60.00	699.47	10.47	18.13	20.90	0.00	0.00	
710.00	3.00	60.00	709.46	10.73	18.58	21.42	0.00	0.00	Start DLS 3.00 TFO -3.39
800.00	5.70	58.39	799.19	14.25	24.43	28.24	3.00	3.00	
900.00	8.70	57.77	898.39	20.88	35.05	40.76	3.00	3.00	
1,000.00	11.70	57.47	996.80	30.37	50.00	58.45	3.00	3.00	
1,100.00	14.70	57.29	1,094.15	42.67	69.22	81.28	3.00	3.00	
1,200.00	17.70	57.17	1,190.17	57.77	92.67	109.16	3.00	3.00	
1,300.00	20.70	57.09	1,284.60	75.62	120.28	142.04	3.00	3.00	
1,400.00	23.70	57.02	1,377.18	96.16	151.98	179.81	3.00	3.00	
1,500.00	26.70	56.97	1,467.66	119.35	187.68	222.37	3.00	3.00	
1,598.58	29.65	56.93	1,554.55	144.73	226.68	268.91	3.00	3.00	Start 4102.88 hold at 1598.58 MD
1,600.00	29.65	56.93	1,555.78	145.11	227.27	269.61	0.00	0.00	
1,650.88	29.65	56.93	1,600.00	158.85	248.37	294.79	0.00	0.00	WASATCH.MBL (TVD)
1,700.00	29.65	56.93	1,642.69	172.11	268.73	319.09	0.00	0.00	
1,800.00	29.65	56.93	1,729.59	199.11	310.19	368.56	0.00	0.00	
1,900.00	29.65	56.93	1,816.49	226.11	351.65	418.03	0.00	0.00	
2,000.00	29.65	56.93	1,903.40	253.11	393.10	467.50	0.00	0.00	
2,100.00	29.65	56.93	1,990.30	280.10	434.56	516.98	0.00	0.00	
2,200.00	29.65	56.93	2,077.21	307.10	476.02	566.45	0.00	0.00	
2,300.00	29.65	56.93	2,164.11	334.10	517.48	615.92	0.00	0.00	
2,400.00	29.65	56.93	2,251.01	361.10	558.94	665.39	0.00	0.00	
2,500.00	29.65	56.93	2,337.92	388.10	600.40	714.87	0.00	0.00	
2,600.00	29.65	56.93	2,424.82	415.10	641.85	764.34	0.00	0.00	
2,700.00	29.65	56.93	2,511.73	442.09	683.31	813.81	0.00	0.00	
2,800.00	29.65	56.93	2,598.63	469.09	724.77	863.28	0.00	0.00	
2,900.00	29.65	56.93	2,685.54	496.09	766.23	912.76	0.00	0.00	
3,000.00	29.65	56.93	2,772.44	523.09	807.69	962.23	0.00	0.00	
3,100.00	29.65	56.93	2,859.34	550.09	849.14	1,011.70	0.00	0.00	
3,200.00	29.65	56.93	2,946.25	577.08	890.60	1,061.18	0.00	0.00	
3,300.00	29.65	56.93	3,033.15	604.08	932.06	1,110.65	0.00	0.00	
3,400.00	29.65	56.93	3,120.06	631.08	973.52	1,160.12	0.00	0.00	
3,500.00	29.65	56.93	3,206.96	658.08	1,014.98	1,209.59	0.00	0.00	
3,600.00	29.65	56.93	3,293.86	685.08	1,056.43	1,259.07	0.00	0.00	
3,700.00	29.65	56.93	3,380.77	712.07	1,097.89	1,308.54	0.00	0.00	
3,800.00	29.65	56.93	3,467.67	739.07	1,139.35	1,358.01	0.00	0.00	
3,808.43	29.65	56.93	3,475.00	741.35	1,142.85	1,362.18	0.00	0.00	WASATCH_G_ZONE.MBL (TVD)
3,900.00	29.65	56.93	3,554.58	766.07	1,180.81	1,407.48	0.00	0.00	
4,000.00	29.65	56.93	3,641.48	793.07	1,222.27	1,456.96	0.00	0.00	
4,100.00	29.65	56.93	3,728.38	820.07	1,263.73	1,506.43	0.00	0.00	
4,200.00	29.65	56.93	3,815.29	847.06	1,305.18	1,555.90	0.00	0.00	
4,211.17	29.65	56.93	3,825.00	850.08	1,309.82	1,561.43	0.00	0.00	FORT_UNION.MBL (TVD)
4,300.00	29.65	56.93	3,902.19	874.06	1,346.64	1,605.37	0.00	0.00	
4,400.00	29.65	56.93	3,989.10	901.06	1,388.10	1,654.85	0.00	0.00	

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: Caerus Oil & Gas
Project: Garfield County, CO (UTM 12N)
Site: S15-T5S-R96W NPR H15 596 (POD 1) (H&P 330)
Well: NPR 11C-14 596
Wellbore: OH
Design: PLAN #2

Local Co-ordinate Reference: Well NPR 11C-14 596 - Slot NPR 11C-14 596
TVD Reference: GL + KB @ 6459.00usft
MD Reference: GL + KB @ 6459.00usft
North Reference: True
Survey Calculation Method: Minimum Curvature

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	29.65	56.93	4,076.00	928.06	1,429.56	1,704.32	0.00	0.00	
4,600.00	29.65	56.93	4,162.91	955.06	1,471.02	1,753.79	0.00	0.00	
4,700.00	29.65	56.93	4,249.81	982.05	1,512.47	1,803.27	0.00	0.00	
4,800.00	29.65	56.93	4,336.71	1,009.05	1,553.93	1,852.74	0.00	0.00	
4,900.00	29.65	56.93	4,423.62	1,036.05	1,595.39	1,902.21	0.00	0.00	
5,000.00	29.65	56.93	4,510.52	1,063.05	1,636.85	1,951.68	0.00	0.00	
5,100.00	29.65	56.93	4,597.43	1,090.05	1,678.31	2,001.16	0.00	0.00	
5,200.00	29.65	56.93	4,684.33	1,117.04	1,719.77	2,050.63	0.00	0.00	
5,300.00	29.65	56.93	4,771.23	1,144.04	1,761.22	2,100.10	0.00	0.00	
5,400.00	29.65	56.93	4,858.14	1,171.04	1,802.68	2,149.57	0.00	0.00	
5,500.00	29.65	56.93	4,945.04	1,198.04	1,844.14	2,199.05	0.00	0.00	
5,600.00	29.65	56.93	5,031.95	1,225.04	1,885.60	2,248.52	0.00	0.00	
5,700.00	29.65	56.93	5,118.85	1,252.03	1,927.06	2,297.99	0.00	0.00	
5,701.46	29.65	56.93	5,120.12	1,252.43	1,927.66	2,298.71	0.00	0.00	Start Drop -3.00
5,800.00	26.70	56.93	5,206.97	1,277.82	1,966.65	2,345.23	3.00	-3.00	
5,900.00	23.70	56.93	5,297.45	1,301.04	2,002.32	2,387.80	3.00	-3.00	
6,000.00	20.70	56.93	5,390.03	1,321.66	2,033.97	2,425.57	3.00	-3.00	
6,100.00	17.70	56.93	5,484.46	1,339.60	2,061.52	2,458.45	3.00	-3.00	
6,200.00	14.70	56.93	5,580.48	1,354.82	2,084.89	2,486.34	3.00	-3.00	
6,300.00	11.70	56.93	5,677.83	1,367.27	2,104.02	2,509.16	3.00	-3.00	
6,400.00	8.70	56.93	5,776.24	1,376.93	2,118.85	2,526.86	3.00	-3.00	
6,500.00	5.70	56.93	5,875.44	1,383.77	2,129.35	2,539.39	3.00	-3.00	
6,508.60	5.44	56.93	5,884.00	1,384.22	2,130.05	2,540.22	3.00	-3.00	OHIO_CREEK.MBL (TVD)
6,600.00	2.70	56.93	5,975.16	1,387.76	2,135.48	2,546.70	3.00	-3.00	
6,689.88	0.00	0.00	6,065.00	1,388.91	2,137.25	2,548.82	3.00	-3.00	Start DLS 2.00 TFO 250.00
6,700.00	0.20	250.00	6,075.12	1,388.91	2,137.23	2,548.80	2.00	2.00	
6,739.88	1.00	250.00	6,115.00	1,388.77	2,136.84	2,548.39	2.00	2.00	WILLIAMS_FORK.MBL (TVD)
6,768.19	1.57	250.00	6,143.31	1,388.55	2,136.24	2,547.78	2.00	2.00	Start 3269.92 hold at 6768.19 MD
6,789.89	1.57	250.00	6,165.00	1,388.35	2,135.69	2,547.20	0.00	0.00	TOP_GAS.MBL (TVD)
6,800.00	1.57	250.00	6,175.10	1,388.25	2,135.43	2,546.93	0.00	0.00	
6,900.00	1.57	250.00	6,275.06	1,387.32	2,132.86	2,544.27	0.00	0.00	
7,000.00	1.57	250.00	6,375.03	1,386.38	2,130.29	2,541.62	0.00	0.00	
7,100.00	1.57	250.00	6,474.99	1,385.45	2,127.72	2,538.96	0.00	0.00	
7,200.00	1.57	250.00	6,574.95	1,384.51	2,125.15	2,536.30	0.00	0.00	
7,300.00	1.57	250.00	6,674.92	1,383.58	2,122.58	2,533.64	0.00	0.00	
7,400.00	1.57	250.00	6,774.88	1,382.64	2,120.02	2,530.98	0.00	0.00	
7,500.00	1.57	250.00	6,874.84	1,381.71	2,117.45	2,528.33	0.00	0.00	
7,600.00	1.57	250.00	6,974.80	1,380.77	2,114.88	2,525.67	0.00	0.00	
7,700.00	1.57	250.00	7,074.77	1,379.84	2,112.31	2,523.01	0.00	0.00	
7,800.00	1.57	250.00	7,174.73	1,378.90	2,109.74	2,520.35	0.00	0.00	
7,900.00	1.57	250.00	7,274.69	1,377.97	2,107.17	2,517.70	0.00	0.00	
8,000.00	1.57	250.00	7,374.65	1,377.04	2,104.60	2,515.04	0.00	0.00	
8,100.00	1.57	250.00	7,474.62	1,376.10	2,102.04	2,512.38	0.00	0.00	
8,200.00	1.57	250.00	7,574.58	1,375.17	2,099.47	2,509.72	0.00	0.00	
8,300.00	1.57	250.00	7,674.54	1,374.23	2,096.90	2,507.06	0.00	0.00	
8,400.00	1.57	250.00	7,774.50	1,373.30	2,094.33	2,504.41	0.00	0.00	
8,500.00	1.57	250.00	7,874.47	1,372.36	2,091.76	2,501.75	0.00	0.00	
8,600.00	1.57	250.00	7,974.43	1,371.43	2,089.19	2,499.09	0.00	0.00	
8,700.00	1.57	250.00	8,074.39	1,370.49	2,086.62	2,496.43	0.00	0.00	
8,800.00	1.57	250.00	8,174.35	1,369.56	2,084.05	2,493.77	0.00	0.00	
8,900.00	1.57	250.00	8,274.32	1,368.62	2,081.49	2,491.12	0.00	0.00	
9,000.00	1.57	250.00	8,374.28	1,367.69	2,078.92	2,488.46	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well NPR 11C-14 596 - Slot NPR 11C-14 596
Company:	Caerus Oil & Gas	TVD Reference:	GL + KB @ 6459.00usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	GL + KB @ 6459.00usft
Site:	S15-T5S-R96W NPR H15 596 (POD 1) (H&P 330)	North Reference:	True
Well:	NPR 11C-14 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

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
9,100.00	1.57	250.00	8,474.24	1,366.75	2,076.35	2,485.80	0.00	0.00	
9,200.00	1.57	250.00	8,574.21	1,365.82	2,073.78	2,483.14	0.00	0.00	
9,300.00	1.57	250.00	8,674.17	1,364.88	2,071.21	2,480.48	0.00	0.00	
9,387.87	1.57	250.00	8,762.00	1,364.06	2,068.95	2,478.15	0.00	0.00	CAMEO.MBL (TVD)
9,400.00	1.57	250.00	8,774.13	1,363.95	2,068.64	2,477.83	0.00	0.00	
9,500.00	1.57	250.00	8,874.09	1,363.01	2,066.07	2,475.17	0.00	0.00	
9,600.00	1.57	250.00	8,974.06	1,362.08	2,063.51	2,472.51	0.00	0.00	
9,700.00	1.57	250.00	9,074.02	1,361.15	2,060.94	2,469.85	0.00	0.00	
9,800.00	1.57	250.00	9,173.98	1,360.21	2,058.37	2,467.19	0.00	0.00	
9,888.05	1.57	250.00	9,262.00	1,359.39	2,056.11	2,464.85	0.00	0.00	ROLLINS.MBL (TVD)
9,900.00	1.57	250.00	9,273.94	1,359.28	2,055.80	2,464.54	0.00	0.00	
10,000.00	1.57	250.00	9,373.91	1,358.34	2,053.23	2,461.88	0.00	0.00	
10,038.11	1.57	250.00	9,412.00	1,357.98	2,052.25	2,460.87	0.00	0.00	TD at 10038.11 - TD.MBL (TVD) - NPR 11C-14

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
NPR 11C-14 596 PBHL I - plan hits target center - Ellipse (radii L100.00 W50.00 on 250.00 azi)	0.00	0.00	9,412.00	1,357.98	2,052.25	14,400,635.28	2,446,214.79	39.620332	-108.138757

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,650.88	1,600.00	WASATCH.MBL (TVD)			
3,808.43	3,475.00	WASATCH_G_ZONE.MBL (TVD)			
4,211.17	3,825.00	FORT_UNION.MBL (TVD)			
6,508.60	5,884.00	OHIO_CREEK.MBL (TVD)			
6,739.88	6,115.00	WILLIAMS_FORK.MBL (TVD)			
6,789.89	6,165.00	TOP_GAS.MBL (TVD)			
9,387.87	8,762.00	CAMEO.MBL (TVD)			
9,888.05	9,262.00	ROLLINS.MBL (TVD)			
10,038.11	9,412.00	TD.MBL (TVD)			

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well NPR 11C-14 596 - Slot NPR 11C-14 596
Company:	Caerus Oil & Gas	TVD Reference:	GL + KB @ 6459.00usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	GL + KB @ 6459.00usft
Site:	S15-T5S-R96W NPR H15 596 (POD 1) (H&P 330)	North Reference:	True
Well:	NPR 11C-14 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
250.00	250.00	0.00	0.00	Start Build 3.00
350.00	349.95	1.31	2.27	Start 360.00 hold at 350.00 MD
710.00	709.46	10.73	18.58	Start DLS 3.00 TFO -3.39
1,598.58	1,554.55	144.73	226.68	Start 4102.88 hold at 1598.58 MD
5,701.46	5,120.12	1,252.43	1,927.66	Start Drop -3.00
6,689.88	6,065.00	1,388.91	2,137.25	Start DLS 2.00 TFO 250.00
6,768.19	6,143.31	1,388.55	2,136.24	Start 3269.92 hold at 6768.19 MD
10,038.11	9,412.00	1,357.98	2,052.25	TD at 10038.11