

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well NPR 24A-3 596
Company:	Caerus Oil & Gas	TVD Reference:	GL+KB @ 8361.00usft (Original Well Elev)
Project:	Garfield County, CO (UTM 12N)	MD Reference:	GL+KB @ 8361.00usft (Original Well Elev)
Site:	S3-T5S R96W NPR A03 596 PAD (H&P330)	North Reference:	True
Well:	NPR 24A-3 596	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		S3-T5S R96W NPR A03 596 PAD (H&P330)			
Site Position:		Northing:	14,410,524.00 usft	Latitude:	39.647700
From:	Map	Easting:	2,443,431.60 usft	Longitude:	-108.147513
Position Uncertainty:	3.28 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.82 °

Well	NPR 24A-3 596					
Well Position	+N/-S	0.00 usft	Northing:	14,410,500.30 usft	Latitude:	39.647633
	+E/-W	0.00 usft	Easting:	2,443,449.90 usft	Longitude:	-108.147451
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	8,331.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	HDGM_FILE	5/10/2018	9.65	65.90	51,422.60000000

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	208.05

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	205.90	349.95	-2.35	-1.14	3.00	3.00	0.00	205.90	
530.00	3.00	205.90	529.71	-10.83	-5.26	0.00	0.00	0.00	0.00	
856.86	12.81	205.90	853.07	-51.21	-24.86	3.00	3.00	0.00	0.00	
7,644.30	12.81	205.90	7,471.69	-1,404.54	-681.92	0.00	0.00	0.00	0.00	
8,071.16	0.00	0.00	7,895.00	-1,447.28	-702.67	3.00	-3.00	0.00	180.00	
8,147.43	1.53	250.00	7,971.26	-1,447.62	-703.62	2.00	2.00	-144.22	250.00	
11,507.36	1.53	250.00	11,330.00	-1,478.21	-787.67	0.00	0.00	0.00	0.00	NPR 24A-3 596_PBH

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Well:	NPR 24A-3 596	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
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	205.90	299.99	-0.59	-0.29	0.65	3.00	3.00	
350.00	3.00	205.90	349.95	-2.35	-1.14	2.62	3.00	3.00	Start 180.00 hold at 350.00 MD
400.00	3.00	205.90	399.89	-4.71	-2.29	5.23	0.00	0.00	
500.00	3.00	205.90	499.75	-9.42	-4.57	10.46	0.00	0.00	
530.00	3.00	205.90	529.71	-10.83	-5.26	12.03	0.00	0.00	Start DLS 3.00 TFO 0.00
600.00	5.10	205.90	599.53	-15.28	-7.42	16.97	3.00	3.00	
700.00	8.10	205.90	698.85	-25.61	-12.44	28.45	3.00	3.00	
800.00	11.10	205.90	797.44	-40.61	-19.72	45.12	3.00	3.00	
856.86	12.81	205.90	853.07	-51.21	-24.86	56.88	3.00	3.00	Start 6787.44 hold at 856.86 MD
900.00	12.81	205.90	895.14	-59.81	-29.04	66.44	0.00	0.00	
1,000.00	12.81	205.90	992.65	-79.75	-38.72	88.59	0.00	0.00	
1,100.00	12.81	205.90	1,090.16	-99.69	-48.40	110.74	0.00	0.00	
1,200.00	12.81	205.90	1,187.67	-119.63	-58.08	132.89	0.00	0.00	
1,300.00	12.81	205.90	1,285.19	-139.56	-67.76	155.04	0.00	0.00	
1,400.00	12.81	205.90	1,382.70	-159.50	-77.44	177.18	0.00	0.00	
1,500.00	12.81	205.90	1,480.21	-179.44	-87.12	199.33	0.00	0.00	
1,600.00	12.81	205.90	1,577.72	-199.38	-96.80	221.48	0.00	0.00	
1,700.00	12.81	205.90	1,675.24	-219.32	-106.48	243.63	0.00	0.00	
1,800.00	12.81	205.90	1,772.75	-239.26	-116.16	265.78	0.00	0.00	
1,900.00	12.81	205.90	1,870.26	-259.20	-125.84	287.93	0.00	0.00	
2,000.00	12.81	205.90	1,967.78	-279.14	-135.52	310.08	0.00	0.00	
2,100.00	12.81	205.90	2,065.29	-299.07	-145.21	332.23	0.00	0.00	
2,200.00	12.81	205.90	2,162.80	-319.01	-154.89	354.38	0.00	0.00	
2,300.00	12.81	205.90	2,260.31	-338.95	-164.57	376.52	0.00	0.00	
2,400.00	12.81	205.90	2,357.83	-358.89	-174.25	398.67	0.00	0.00	
2,500.00	12.81	205.90	2,455.34	-378.83	-183.93	420.82	0.00	0.00	
2,600.00	12.81	205.90	2,552.85	-398.77	-193.61	442.97	0.00	0.00	
2,700.00	12.81	205.90	2,650.36	-418.71	-203.29	465.12	0.00	0.00	
2,800.00	12.81	205.90	2,747.88	-438.65	-212.97	487.27	0.00	0.00	
2,900.00	12.81	205.90	2,845.39	-458.59	-222.65	509.42	0.00	0.00	
3,000.00	12.81	205.90	2,942.90	-478.52	-232.33	531.57	0.00	0.00	
3,100.00	12.81	205.90	3,040.42	-498.46	-242.01	553.72	0.00	0.00	
3,161.10	12.81	205.90	3,100.00	-510.65	-247.93	567.25	0.00	0.00	WASATCH.MBL (TVD)
3,200.00	12.81	205.90	3,137.93	-518.40	-251.69	575.86	0.00	0.00	
3,300.00	12.81	205.90	3,235.44	-538.34	-261.37	598.01	0.00	0.00	
3,400.00	12.81	205.90	3,332.95	-558.28	-271.05	620.16	0.00	0.00	
3,500.00	12.81	205.90	3,430.47	-578.22	-280.73	642.31	0.00	0.00	
3,600.00	12.81	205.90	3,527.98	-598.16	-290.41	664.46	0.00	0.00	
3,700.00	12.81	205.90	3,625.49	-618.10	-300.09	686.61	0.00	0.00	
3,800.00	12.81	205.90	3,723.00	-638.03	-309.77	708.76	0.00	0.00	
3,900.00	12.81	205.90	3,820.52	-657.97	-319.45	730.91	0.00	0.00	
4,000.00	12.81	205.90	3,918.03	-677.91	-329.14	753.06	0.00	0.00	
4,100.00	12.81	205.90	4,015.54	-697.85	-338.82	775.20	0.00	0.00	
4,200.00	12.81	205.90	4,113.06	-717.79	-348.50	797.35	0.00	0.00	
4,300.00	12.81	205.90	4,210.57	-737.73	-358.18	819.50	0.00	0.00	
4,400.00	12.81	205.90	4,308.08	-757.67	-367.86	841.65	0.00	0.00	
4,500.00	12.81	205.90	4,405.59	-777.61	-377.54	863.80	0.00	0.00	
4,600.00	12.81	205.90	4,503.11	-797.54	-387.22	885.95	0.00	0.00	

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Well:	NPR 24A-3 596	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
4,700.00	12.81	205.90	4,600.62	-817.48	-396.90	908.10	0.00	0.00	
4,800.00	12.81	205.90	4,698.13	-837.42	-406.58	930.25	0.00	0.00	
4,900.00	12.81	205.90	4,795.64	-857.36	-416.26	952.40	0.00	0.00	
5,000.00	12.81	205.90	4,893.16	-877.30	-425.94	974.54	0.00	0.00	
5,100.00	12.81	205.90	4,990.67	-897.24	-435.62	996.69	0.00	0.00	
5,200.00	12.81	205.90	5,088.18	-917.18	-445.30	1,018.84	0.00	0.00	
5,300.00	12.81	205.90	5,185.70	-937.12	-454.98	1,040.99	0.00	0.00	
5,400.00	12.81	205.90	5,283.21	-957.06	-464.66	1,063.14	0.00	0.00	
5,500.00	12.81	205.90	5,380.72	-976.99	-474.34	1,085.29	0.00	0.00	
5,591.56	12.81	205.90	5,470.00	-995.25	-483.21	1,105.57	0.00	0.00	WASATCH_G_ZONE.MBL (TVD)
5,600.00	12.81	205.90	5,478.23	-996.93	-484.02	1,107.44	0.00	0.00	
5,700.00	12.81	205.90	5,575.75	-1,016.87	-493.70	1,129.59	0.00	0.00	
5,800.00	12.81	205.90	5,673.26	-1,036.81	-503.38	1,151.74	0.00	0.00	
5,899.21	12.81	205.90	5,770.00	-1,056.59	-512.99	1,173.71	0.00	0.00	FORT_UNION.MBL (TVD)
5,900.00	12.81	205.90	5,770.77	-1,056.75	-513.07	1,173.88	0.00	0.00	
6,000.00	12.81	205.90	5,868.28	-1,076.69	-522.75	1,196.03	0.00	0.00	
6,100.00	12.81	205.90	5,965.80	-1,096.63	-532.43	1,218.18	0.00	0.00	
6,200.00	12.81	205.90	6,063.31	-1,116.57	-542.11	1,240.33	0.00	0.00	
6,300.00	12.81	205.90	6,160.82	-1,136.50	-551.79	1,262.48	0.00	0.00	
6,400.00	12.81	205.90	6,258.34	-1,156.44	-561.47	1,284.63	0.00	0.00	
6,500.00	12.81	205.90	6,355.85	-1,176.38	-571.15	1,306.78	0.00	0.00	
6,600.00	12.81	205.90	6,453.36	-1,196.32	-580.83	1,328.93	0.00	0.00	
6,700.00	12.81	205.90	6,550.87	-1,216.26	-590.51	1,351.08	0.00	0.00	
6,800.00	12.81	205.90	6,648.39	-1,236.20	-600.19	1,373.22	0.00	0.00	
6,900.00	12.81	205.90	6,745.90	-1,256.14	-609.87	1,395.37	0.00	0.00	
7,000.00	12.81	205.90	6,843.41	-1,276.08	-619.55	1,417.52	0.00	0.00	
7,100.00	12.81	205.90	6,940.92	-1,296.01	-629.23	1,439.67	0.00	0.00	
7,200.00	12.81	205.90	7,038.44	-1,315.95	-638.91	1,461.82	0.00	0.00	
7,300.00	12.81	205.90	7,135.95	-1,335.89	-648.59	1,483.97	0.00	0.00	
7,400.00	12.81	205.90	7,233.46	-1,355.83	-658.27	1,506.12	0.00	0.00	
7,500.00	12.81	205.90	7,330.98	-1,375.77	-667.95	1,528.27	0.00	0.00	
7,600.00	12.81	205.90	7,428.49	-1,395.71	-677.63	1,550.42	0.00	0.00	
7,644.30	12.81	205.90	7,471.69	-1,404.54	-681.92	1,560.23	0.00	0.00	Start Drop -3.00
7,700.00	11.13	205.90	7,526.17	-1,414.93	-686.97	1,571.77	3.00	-3.00	
7,800.00	8.13	205.90	7,624.75	-1,429.99	-694.28	1,588.49	3.00	-3.00	
7,900.00	5.13	205.90	7,724.07	-1,440.38	-699.32	1,600.04	3.00	-3.00	
7,925.02	4.38	205.90	7,749.00	-1,442.25	-700.23	1,602.11	3.00	-3.00	OHIO_CREEK.MBL (TVD)
8,000.00	2.13	205.90	7,823.86	-1,446.08	-702.09	1,606.37	3.00	-3.00	
8,071.16	0.00	0.00	7,895.00	-1,447.28	-702.67	1,607.70	3.00	-3.00	Start DLS 2.00 TFO 250.00
8,100.00	0.58	250.00	7,923.84	-1,447.32	-702.81	1,607.81	2.00	2.00	
8,147.43	1.53	250.00	7,971.26	-1,447.62	-703.62	1,608.45	2.00	2.00	Start 3359.93 hold at 8147.43 MD
8,171.18	1.53	250.00	7,995.00	-1,447.84	-704.22	1,608.92	0.00	0.00	WILLIAMS_FORK.MBL (TVD)
8,200.00	1.53	250.00	8,023.81	-1,448.10	-704.94	1,609.49	0.00	0.00	
8,221.19	1.53	250.00	8,045.00	-1,448.29	-705.47	1,609.91	0.00	0.00	TOP_GAS.MBL (TVD)
8,300.00	1.53	250.00	8,123.78	-1,449.01	-707.44	1,611.47	0.00	0.00	
8,400.00	1.53	250.00	8,223.74	-1,449.92	-709.94	1,613.45	0.00	0.00	
8,500.00	1.53	250.00	8,323.71	-1,450.83	-712.44	1,615.43	0.00	0.00	
8,600.00	1.53	250.00	8,423.67	-1,451.74	-714.95	1,617.41	0.00	0.00	
8,700.00	1.53	250.00	8,523.64	-1,452.65	-717.45	1,619.39	0.00	0.00	
8,800.00	1.53	250.00	8,623.60	-1,453.56	-719.95	1,621.37	0.00	0.00	
8,900.00	1.53	250.00	8,723.57	-1,454.47	-722.45	1,623.35	0.00	0.00	
9,000.00	1.53	250.00	8,823.53	-1,455.39	-724.95	1,625.33	0.00	0.00	

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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	1.53	250.00	8,923.49	-1,456.30	-727.45	1,627.31	0.00	0.00	
9,200.00	1.53	250.00	9,023.46	-1,457.21	-729.95	1,629.29	0.00	0.00	
9,300.00	1.53	250.00	9,123.42	-1,458.12	-732.46	1,631.27	0.00	0.00	
9,400.00	1.53	250.00	9,223.39	-1,459.03	-734.96	1,633.25	0.00	0.00	
9,500.00	1.53	250.00	9,323.35	-1,459.94	-737.46	1,635.23	0.00	0.00	
9,600.00	1.53	250.00	9,423.32	-1,460.85	-739.96	1,637.21	0.00	0.00	
9,700.00	1.53	250.00	9,523.28	-1,461.76	-742.46	1,639.19	0.00	0.00	
9,800.00	1.53	250.00	9,623.25	-1,462.67	-744.96	1,641.17	0.00	0.00	
9,900.00	1.53	250.00	9,723.21	-1,463.58	-747.47	1,643.15	0.00	0.00	
10,000.00	1.53	250.00	9,823.18	-1,464.49	-749.97	1,645.13	0.00	0.00	
10,100.00	1.53	250.00	9,923.14	-1,465.40	-752.47	1,647.11	0.00	0.00	
10,200.00	1.53	250.00	10,023.10	-1,466.31	-754.97	1,649.09	0.00	0.00	
10,300.00	1.53	250.00	10,123.07	-1,467.22	-757.47	1,651.07	0.00	0.00	
10,400.00	1.53	250.00	10,223.03	-1,468.13	-759.97	1,653.05	0.00	0.00	
10,500.00	1.53	250.00	10,323.00	-1,469.04	-762.47	1,655.03	0.00	0.00	
10,600.00	1.53	250.00	10,422.96	-1,469.95	-764.98	1,657.01	0.00	0.00	
10,700.00	1.53	250.00	10,522.93	-1,470.86	-767.48	1,658.99	0.00	0.00	
10,800.00	1.53	250.00	10,622.89	-1,471.77	-769.98	1,660.97	0.00	0.00	
10,807.11	1.53	250.00	10,630.00	-1,471.84	-770.16	1,661.11	0.00	0.00	CAMEO.MBL (TVD)
10,900.00	1.53	250.00	10,722.86	-1,472.68	-772.48	1,662.95	0.00	0.00	
11,000.00	1.53	250.00	10,822.82	-1,473.60	-774.98	1,664.93	0.00	0.00	
11,100.00	1.53	250.00	10,922.79	-1,474.51	-777.48	1,666.91	0.00	0.00	
11,200.00	1.53	250.00	11,022.75	-1,475.42	-779.99	1,668.89	0.00	0.00	
11,300.00	1.53	250.00	11,122.71	-1,476.33	-782.49	1,670.87	0.00	0.00	
11,357.31	1.53	250.00	11,180.00	-1,476.85	-783.92	1,672.01	0.00	0.00	ROLLINS.MBL (TVD)
11,400.00	1.53	250.00	11,222.68	-1,477.24	-784.99	1,672.85	0.00	0.00	
11,500.00	1.53	250.00	11,322.64	-1,478.15	-787.49	1,674.83	0.00	0.00	
11,507.36	1.53	250.00	11,330.00	-1,478.21	-787.67	1,674.98	0.00	0.00	TD at 11507.36 - TD.MBL (TVD) - NPR 24A-3 5

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
NPR 24A-3 596_PBHL	0.00	0.00	11,330.00	-1,478.21	-787.67	14,408,997.80	2,442,709.60	39.643576	-108.150247
- hit/miss target									
- Shape									
- plan hits target center									
- Ellipse (radii L100.00 W50.00 on 250.00 azi)									

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well NPR 24A-3 596
Company:	Caerus Oil & Gas	TVD Reference:	GL+KB @ 8361.00usft (Original Well Elev)
Project:	Garfield County, CO (UTM 12N)	MD Reference:	GL+KB @ 8361.00usft (Original Well Elev)
Site:	S3-T5S R96W NPR A03 596 PAD (H&P330)	North Reference:	True
Well:	NPR 24A-3 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,161.10	3,100.00	WASATCH.MBL (TVD)				
5,591.56	5,470.00	WASATCH_G_ZONE.MBL (TVD)				
5,899.21	5,770.00	FORT_UNION.MBL (TVD)				
7,925.02	7,749.00	OHIO_CREEK.MBL (TVD)				
8,171.18	7,995.00	WILLIAMS_FORK.MBL (TVD)				
8,221.19	8,045.00	TOP_GAS.MBL (TVD)				
10,807.11	10,630.00	CAMEO.MBL (TVD)				
11,357.31	11,180.00	ROLLINS.MBL (TVD)				
11,507.36	11,330.00	TD.MBL (TVD)				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
250.00	250.00	0.00	0.00	Start Build 3.00	
350.00	349.95	-2.35	-1.14	Start 180.00 hold at 350.00 MD	
530.00	529.71	-10.83	-5.26	Start DLS 3.00 TFO 0.00	
856.86	853.07	-51.21	-24.86	Start 6787.44 hold at 856.86 MD	
7,644.30	7,471.69	-1,404.54	-681.92	Start Drop -3.00	
8,071.16	7,895.00	-1,447.28	-702.67	Start DLS 2.00 TFO 250.00	
8,147.43	7,971.26	-1,447.62	-703.62	Start 3359.93 hold at 8147.43 MD	
11,507.36	11,330.00	-1,478.21	-787.67	TD at 11507.36	