

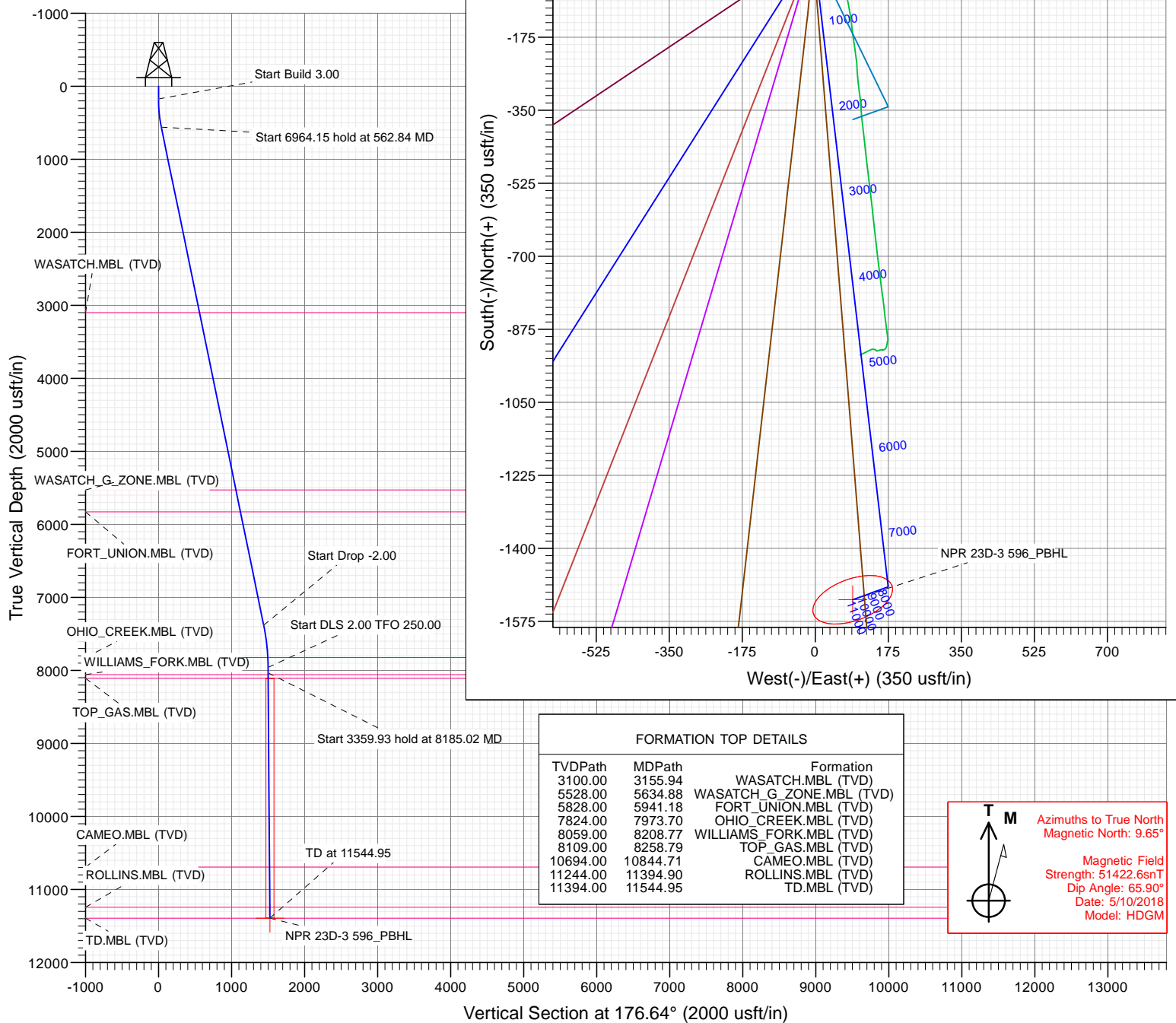


SECTION DETAILS

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	
2	175.00	0.00	0.00	175.00	0.00	0.00	0.00	0.00	0.00	
3	562.84	11.64	173.33	560.18	-38.98	4.56	3.00	173.33	39.18	
4	7526.99	11.64	173.33	7381.23-1434.01	167.69	0.00	0.00	0.00	1441.37	
5	8108.75	0.00	0.00	7959.00-1492.47	174.53	2.00	180.00	1500.14		
6	8185.02	1.53	250.00	8035.26-1492.82	173.58	2.00	250.00	1500.43		
7	11544.95	1.53	250.00	11394.00-1523.41	89.53	0.00	0.00	1526.04		NPR 23D-3 596_PBHL

PLAN #1 NPR 23D-3 596 GL+KB @ 8381.00 (Original Well Elev) Ground Level @ 8331.00 NAD 1987 - Western US Well NPR 23D-3 596, True North						
Type TD	Target No Target (Freehand)	Azimuth 176.64	Origin Type Slot	N/S 0.00	E/W 0.00	From TVD 0.00
Name NPR 23D-3 596_PBHL	TVD 11394.00	+N/-S -1523.41	+E/-W 89.53	Latitude 39.643408	Longitude -108.147092	

Project: Garfield County, CO (UTM 12N)
Site: NPR A03 596 PAD
Well: NPR 23D-3 596
Wellbore: OH
Design: PLAN #1



CATHEDRAL

WELL DETAILS: NPR 23D-3 596

8331.00
+N/-S 0.00 +E/-W 0.00 Northing 14410484.50 Easting 2443462.20 Latitude 39.647589 Longitude -108.147409

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well NPR 23D-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:	NPR A03 596 PAD	North Reference:	True
Well:	NPR 23D-3 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

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		NPR A03 596 PAD			
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 23D-3 596					
Well Position	+N/-S	0.00 usft	Northing:	14,410,484.50 usft	Latitude:	39.647589
	+E/-W	0.00 usft	Easting:	2,443,462.20 usft	Longitude:	-108.147409
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	5/10/2018	9.65	65.90	51,422.60000000

Design	PLAN #1			
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	176.64

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	
175.00	0.00	0.00	175.00	0.00	0.00	0.00	0.00	0.00	0.00	
562.84	11.64	173.33	560.18	-38.98	4.56	3.00	3.00	0.00	173.33	
7,526.99	11.64	173.33	7,381.23	-1,434.01	167.69	0.00	0.00	0.00	0.00	
8,108.75	0.00	0.00	7,959.00	-1,492.47	174.53	2.00	-2.00	0.00	180.00	
8,185.02	1.53	250.00	8,035.26	-1,492.82	173.58	2.00	2.00	-144.23	250.00	
11,544.95	1.53	250.00	11,394.00	-1,523.41	89.53	0.00	0.00	0.00	0.00	NPR 23D-3 596_PBH

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well NPR 23D-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:	NPR A03 596 PAD	North Reference:	True
Well:	NPR 23D-3 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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	
175.00	0.00	0.00	175.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.00
200.00	0.75	173.33	200.00	-0.16	0.02	0.16	3.00	3.00	
300.00	3.75	173.33	299.91	-4.06	0.47	4.08	3.00	3.00	
400.00	6.75	173.33	399.48	-13.15	1.54	13.22	3.00	3.00	
500.00	9.75	173.33	498.43	-27.40	3.20	27.54	3.00	3.00	
562.84	11.64	173.33	560.18	-38.98	4.56	39.18	3.00	3.00	Start 6964.15 hold at 562.84 MD
600.00	11.64	173.33	596.58	-46.42	5.43	46.66	0.00	0.00	
700.00	11.64	173.33	694.52	-66.45	7.77	66.80	0.00	0.00	
800.00	11.64	173.33	792.47	-86.49	10.11	86.93	0.00	0.00	
900.00	11.64	173.33	890.41	-106.52	12.46	107.06	0.00	0.00	
1,000.00	11.64	173.33	988.36	-126.55	14.80	127.20	0.00	0.00	
1,100.00	11.64	173.33	1,086.30	-146.58	17.14	147.33	0.00	0.00	
1,200.00	11.64	173.33	1,184.25	-166.61	19.48	167.47	0.00	0.00	
1,300.00	11.64	173.33	1,282.19	-186.64	21.83	187.60	0.00	0.00	
1,400.00	11.64	173.33	1,380.14	-206.68	24.17	207.74	0.00	0.00	
1,500.00	11.64	173.33	1,478.08	-226.71	26.51	227.87	0.00	0.00	
1,600.00	11.64	173.33	1,576.03	-246.74	28.85	248.01	0.00	0.00	
1,700.00	11.64	173.33	1,673.97	-266.77	31.20	268.14	0.00	0.00	
1,800.00	11.64	173.33	1,771.92	-286.80	33.54	288.27	0.00	0.00	
1,900.00	11.64	173.33	1,869.86	-306.83	35.88	308.41	0.00	0.00	
2,000.00	11.64	173.33	1,967.81	-326.86	38.22	328.54	0.00	0.00	
2,100.00	11.64	173.33	2,065.75	-346.90	40.57	348.68	0.00	0.00	
2,200.00	11.64	173.33	2,163.70	-366.93	42.91	368.81	0.00	0.00	
2,300.00	11.64	173.33	2,261.64	-386.96	45.25	388.95	0.00	0.00	
2,400.00	11.64	173.33	2,359.59	-406.99	47.59	409.08	0.00	0.00	
2,500.00	11.64	173.33	2,457.53	-427.02	49.94	429.22	0.00	0.00	
2,600.00	11.64	173.33	2,555.48	-447.05	52.28	449.35	0.00	0.00	
2,700.00	11.64	173.33	2,653.42	-467.09	54.62	469.49	0.00	0.00	
2,800.00	11.64	173.33	2,751.37	-487.12	56.96	489.62	0.00	0.00	
2,900.00	11.64	173.33	2,849.31	-507.15	59.31	509.75	0.00	0.00	
3,000.00	11.64	173.33	2,947.26	-527.18	61.65	529.89	0.00	0.00	
3,100.00	11.64	173.33	3,045.20	-547.21	63.99	550.02	0.00	0.00	
3,155.94	11.64	173.33	3,100.00	-558.42	65.30	561.29	0.00	0.00	WASATCH.MBL (TVD)
3,200.00	11.64	173.33	3,143.15	-567.24	66.33	570.16	0.00	0.00	
3,300.00	11.64	173.33	3,241.09	-587.27	68.68	590.29	0.00	0.00	
3,400.00	11.64	173.33	3,339.04	-607.31	71.02	610.43	0.00	0.00	
3,500.00	11.64	173.33	3,436.99	-627.34	73.36	630.56	0.00	0.00	
3,600.00	11.64	173.33	3,534.93	-647.37	75.70	650.70	0.00	0.00	
3,700.00	11.64	173.33	3,632.88	-667.40	78.05	670.83	0.00	0.00	
3,800.00	11.64	173.33	3,730.82	-687.43	80.39	690.96	0.00	0.00	
3,900.00	11.64	173.33	3,828.77	-707.46	82.73	711.10	0.00	0.00	
4,000.00	11.64	173.33	3,926.71	-727.50	85.07	731.23	0.00	0.00	
4,100.00	11.64	173.33	4,024.66	-747.53	87.42	751.37	0.00	0.00	
4,200.00	11.64	173.33	4,122.60	-767.56	89.76	771.50	0.00	0.00	
4,300.00	11.64	173.33	4,220.55	-787.59	92.10	791.64	0.00	0.00	
4,400.00	11.64	173.33	4,318.49	-807.62	94.44	811.77	0.00	0.00	
4,500.00	11.64	173.33	4,416.44	-827.65	96.79	831.91	0.00	0.00	
4,600.00	11.64	173.33	4,514.38	-847.68	99.13	852.04	0.00	0.00	
4,700.00	11.64	173.33	4,612.33	-867.72	101.47	872.17	0.00	0.00	
4,800.00	11.64	173.33	4,710.27	-887.75	103.81	892.31	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well NPR 23D-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:	NPR A03 596 PAD	North Reference:	True
Well:	NPR 23D-3 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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
4,900.00	11.64	173.33	4,808.22	-907.78	106.16	912.44	0.00	0.00	
5,000.00	11.64	173.33	4,906.16	-927.81	108.50	932.58	0.00	0.00	
5,100.00	11.64	173.33	5,004.11	-947.84	110.84	952.71	0.00	0.00	
5,200.00	11.64	173.33	5,102.05	-967.87	113.18	972.85	0.00	0.00	
5,300.00	11.64	173.33	5,200.00	-987.91	115.53	992.98	0.00	0.00	
5,400.00	11.64	173.33	5,297.94	-1,007.94	117.87	1,013.12	0.00	0.00	
5,500.00	11.64	173.33	5,395.89	-1,027.97	120.21	1,033.25	0.00	0.00	
5,600.00	11.64	173.33	5,493.83	-1,048.00	122.55	1,053.38	0.00	0.00	
5,634.88	11.64	173.33	5,528.00	-1,054.99	123.37	1,060.41	0.00	0.00	WASATCH_G_ZONE.MBL (TVD)
5,700.00	11.64	173.33	5,591.78	-1,068.03	124.90	1,073.52	0.00	0.00	
5,800.00	11.64	173.33	5,689.72	-1,088.06	127.24	1,093.65	0.00	0.00	
5,900.00	11.64	173.33	5,787.67	-1,108.09	129.58	1,113.79	0.00	0.00	
5,941.18	11.64	173.33	5,828.00	-1,116.34	130.55	1,122.08	0.00	0.00	FORT_UNION.MBL (TVD)
6,000.00	11.64	173.33	5,885.61	-1,128.13	131.92	1,133.92	0.00	0.00	
6,100.00	11.64	173.33	5,983.56	-1,148.16	134.27	1,154.06	0.00	0.00	
6,200.00	11.64	173.33	6,081.50	-1,168.19	136.61	1,174.19	0.00	0.00	
6,300.00	11.64	173.33	6,179.45	-1,188.22	138.95	1,194.33	0.00	0.00	
6,400.00	11.64	173.33	6,277.39	-1,208.25	141.29	1,214.46	0.00	0.00	
6,500.00	11.64	173.33	6,375.34	-1,228.28	143.64	1,234.59	0.00	0.00	
6,600.00	11.64	173.33	6,473.28	-1,248.32	145.98	1,254.73	0.00	0.00	
6,700.00	11.64	173.33	6,571.23	-1,268.35	148.32	1,274.86	0.00	0.00	
6,800.00	11.64	173.33	6,669.17	-1,288.38	150.66	1,295.00	0.00	0.00	
6,900.00	11.64	173.33	6,767.12	-1,308.41	153.01	1,315.13	0.00	0.00	
7,000.00	11.64	173.33	6,865.07	-1,328.44	155.35	1,335.27	0.00	0.00	
7,100.00	11.64	173.33	6,963.01	-1,348.47	157.69	1,355.40	0.00	0.00	
7,200.00	11.64	173.33	7,060.96	-1,368.50	160.03	1,375.54	0.00	0.00	
7,300.00	11.64	173.33	7,158.90	-1,388.54	162.38	1,395.67	0.00	0.00	
7,400.00	11.64	173.33	7,256.85	-1,408.57	164.72	1,415.81	0.00	0.00	
7,500.00	11.64	173.33	7,354.79	-1,428.60	167.06	1,435.94	0.00	0.00	
7,526.99	11.64	173.33	7,381.23	-1,434.01	167.69	1,441.37	0.00	0.00	Start Drop -2.00
7,600.00	10.18	173.33	7,452.92	-1,447.72	169.30	1,455.16	2.00	-2.00	
7,700.00	8.18	173.33	7,551.63	-1,463.56	171.15	1,471.08	2.00	-2.00	
7,800.00	6.18	173.33	7,650.84	-1,475.97	172.60	1,483.55	2.00	-2.00	
7,900.00	4.18	173.33	7,750.43	-1,484.92	173.65	1,492.55	2.00	-2.00	
7,973.70	2.70	173.33	7,824.00	-1,489.31	174.16	1,496.97	2.00	-2.00	OHIO_CREEK.MBL (TVD)
8,000.00	2.18	173.33	7,850.27	-1,490.42	174.29	1,498.08	2.00	-2.00	
8,100.00	0.18	173.33	7,950.25	-1,492.46	174.53	1,500.13	2.00	-2.00	
8,108.75	0.00	0.00	7,959.00	-1,492.48	174.53	1,500.14	2.00	-2.00	Start DLS 2.00 TFO 250.00
8,185.02	1.53	250.00	8,035.26	-1,492.82	173.58	1,500.43	2.00	2.00	Start 3359.93 hold at 8185.02 MD
8,200.00	1.53	250.00	8,050.23	-1,492.96	173.20	1,500.55	0.00	0.00	
8,208.77	1.53	250.00	8,059.00	-1,493.04	172.98	1,500.62	0.00	0.00	WILLIAMS_FORK.MBL (TVD)
8,258.79	1.53	250.00	8,109.00	-1,493.49	171.73	1,501.00	0.00	0.00	TOP_GAS.MBL (TVD)
8,300.00	1.53	250.00	8,150.20	-1,493.87	170.70	1,501.31	0.00	0.00	
8,400.00	1.53	250.00	8,250.16	-1,494.78	168.20	1,502.07	0.00	0.00	
8,500.00	1.53	250.00	8,350.13	-1,495.69	165.70	1,502.84	0.00	0.00	
8,600.00	1.53	250.00	8,450.09	-1,496.60	163.20	1,503.60	0.00	0.00	
8,700.00	1.53	250.00	8,550.05	-1,497.51	160.69	1,504.36	0.00	0.00	
8,800.00	1.53	250.00	8,650.02	-1,498.42	158.19	1,505.12	0.00	0.00	
8,900.00	1.53	250.00	8,749.98	-1,499.33	155.69	1,505.88	0.00	0.00	
9,000.00	1.53	250.00	8,849.95	-1,500.24	153.19	1,506.65	0.00	0.00	
9,100.00	1.53	250.00	8,949.91	-1,501.15	150.69	1,507.41	0.00	0.00	
9,200.00	1.53	250.00	9,049.88	-1,502.06	148.19	1,508.17	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well NPR 23D-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:	NPR A03 596 PAD	North Reference:	True
Well:	NPR 23D-3 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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
9,300.00	1.53	250.00	9,149.84	-1,502.97	145.69	1,508.93	0.00	0.00	
9,400.00	1.53	250.00	9,249.81	-1,503.88	143.18	1,509.69	0.00	0.00	
9,500.00	1.53	250.00	9,349.77	-1,504.80	140.68	1,510.46	0.00	0.00	
9,600.00	1.53	250.00	9,449.74	-1,505.71	138.18	1,511.22	0.00	0.00	
9,700.00	1.53	250.00	9,549.70	-1,506.62	135.68	1,511.98	0.00	0.00	
9,800.00	1.53	250.00	9,649.66	-1,507.53	133.18	1,512.74	0.00	0.00	
9,900.00	1.53	250.00	9,749.63	-1,508.44	130.68	1,513.51	0.00	0.00	
10,000.00	1.53	250.00	9,849.59	-1,509.35	128.18	1,514.27	0.00	0.00	
10,100.00	1.53	250.00	9,949.56	-1,510.26	125.68	1,515.03	0.00	0.00	
10,200.00	1.53	250.00	10,049.52	-1,511.17	123.17	1,515.79	0.00	0.00	
10,300.00	1.53	250.00	10,149.49	-1,512.08	120.67	1,516.55	0.00	0.00	
10,400.00	1.53	250.00	10,249.45	-1,512.99	118.17	1,517.32	0.00	0.00	
10,500.00	1.53	250.00	10,349.42	-1,513.90	115.67	1,518.08	0.00	0.00	
10,600.00	1.53	250.00	10,449.38	-1,514.81	113.17	1,518.84	0.00	0.00	
10,700.00	1.53	250.00	10,549.35	-1,515.72	110.67	1,519.60	0.00	0.00	
10,800.00	1.53	250.00	10,649.31	-1,516.63	108.17	1,520.37	0.00	0.00	
10,844.71	1.53	250.00	10,694.00	-1,517.04	107.05	1,520.71	0.00	0.00	CAMEO.MBL (TVD)
10,900.00	1.53	250.00	10,749.27	-1,517.54	105.66	1,521.13	0.00	0.00	
11,000.00	1.53	250.00	10,849.24	-1,518.45	103.16	1,521.89	0.00	0.00	
11,100.00	1.53	250.00	10,949.20	-1,519.36	100.66	1,522.65	0.00	0.00	
11,200.00	1.53	250.00	11,049.17	-1,520.27	98.16	1,523.41	0.00	0.00	
11,300.00	1.53	250.00	11,149.13	-1,521.18	95.66	1,524.18	0.00	0.00	
11,394.90	1.53	250.00	11,244.00	-1,522.05	93.29	1,524.90	0.00	0.00	ROLLINS.MBL (TVD)
11,400.00	1.53	250.00	11,249.10	-1,522.09	93.16	1,524.94	0.00	0.00	
11,500.00	1.53	250.00	11,349.06	-1,523.01	90.66	1,525.70	0.00	0.00	
11,544.95	1.53	250.00	11,394.00	-1,523.41	89.53	1,526.04	0.00	0.00	TD at 11544.95 - NPR 23D-3 596_PBHL

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 23D-3 596_PBHL	0.00	0.00	11,394.00	-1,523.41	89.53	14,408,964.70	2,443,600.10	39.643408	-108.147092
- plan hits target center									
- Ellipse (radii L100.00 W50.00 on 250.00 azi)									

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well NPR 23D-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:	NPR A03 596 PAD	North Reference:	True
Well:	NPR 23D-3 596	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,155.94	3,100.00	WASATCH.MBL (TVD)				
5,634.88	5,528.00	WASATCH_G_ZONE.MBL (TVD)				
5,941.18	5,828.00	FORT_UNION.MBL (TVD)				
7,973.70	7,824.00	OHIO_CREEK.MBL (TVD)				
8,208.77	8,059.00	WILLIAMS_FORK.MBL (TVD)				
8,258.79	8,109.00	TOP_GAS.MBL (TVD)				
10,844.71	10,694.00	CAMEO.MBL (TVD)				
11,394.90	11,244.00	ROLLINS.MBL (TVD)				
11,544.95	11,394.00	TD.MBL (TVD)				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
175.00	175.00	0.00	0.00	Start Build 3.00	
562.84	560.18	-38.98	4.56	Start 6964.15 hold at 562.84 MD	
7,526.99	7,381.23	-1,434.01	167.69	Start Drop -2.00	
8,108.75	7,959.00	-1,492.48	174.53	Start DLS 2.00 TFO 250.00	
8,185.02	8,035.26	-1,492.82	173.58	Start 3359.93 hold at 8185.02 MD	
11,544.95	11,394.00	-1,523.41	89.53	TD at 11544.95	