



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	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	400.00	3.00	101.00	399.93	-0.75	3.85	2.00	101.00	3.92	
4	580.00	3.00	101.00	579.68	-2.55	13.10	0.00	0.00	13.34	
5	1375.41	26.86	97.32	1342.71	-29.81	214.65	3.00	-4.11	216.67	
6	7345.42	26.86	97.32	6668.86	-373.50	2889.54	0.00	0.002912	5.1	
7	8688.18	0.00	0.00	7963.00	-412.87	3195.99	2.00	180.0032	21.36	
8	8833.38	2.90	250.00	8108.13	-414.13	3192.53	2.00	250.0032	18.14	
9	12331.74	2.90	250.00	11602.00	-474.74	3025.99	0.00	0.003063	0.00	SG 24D-27_PBHL

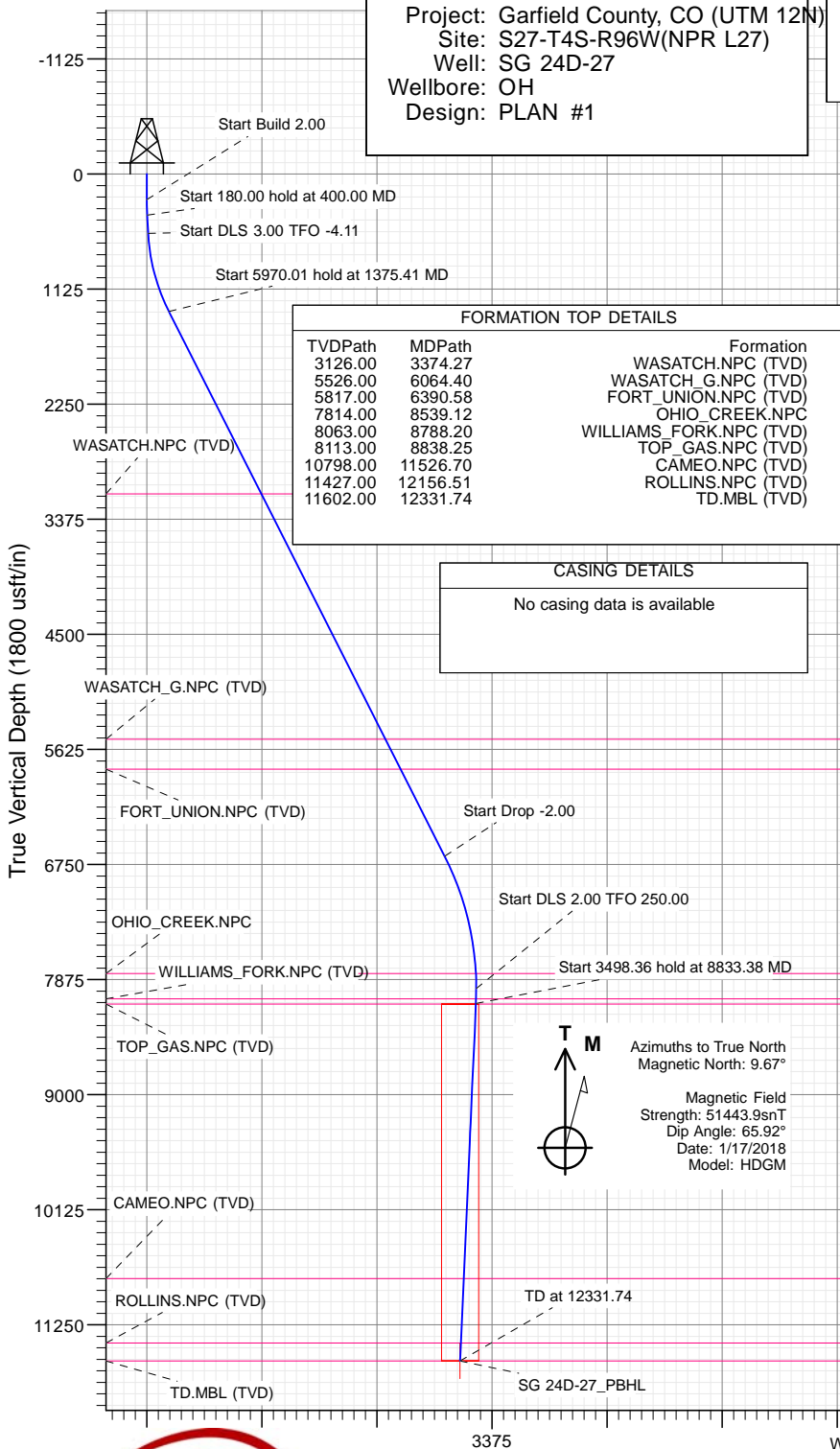
Project: Garfield County, CO (UTM 12N)
Site: S27-T4S-R96W(NPR L27)
Well: SG 24D-27
Wellbore: OH
Design: PLAN #1

FORMATION TOP DETAILS

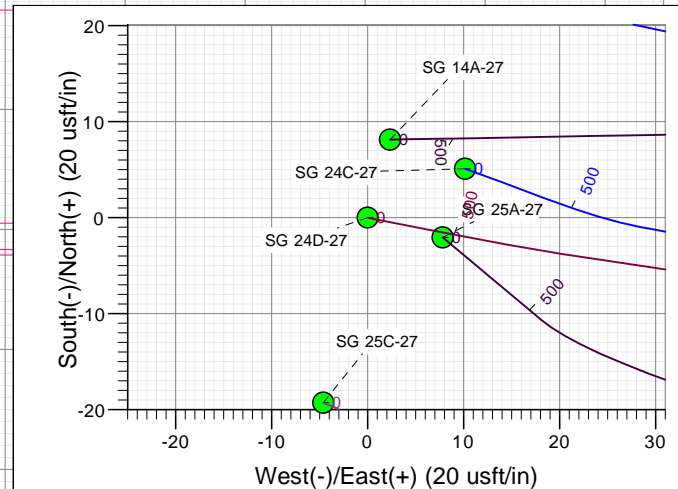
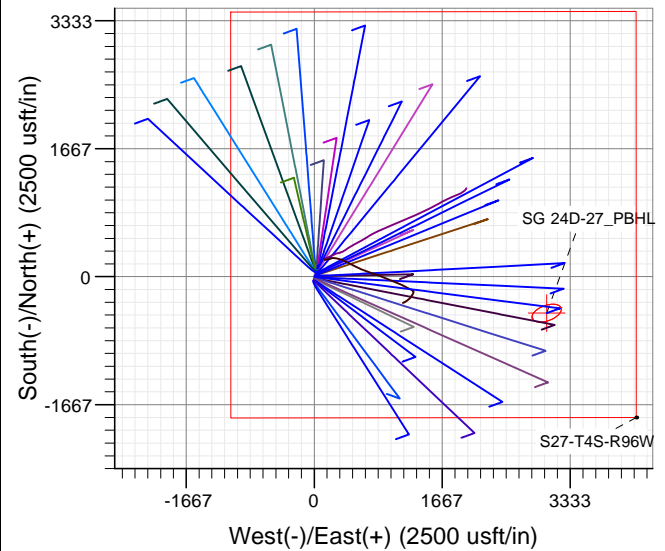
TVDPath	MDPath	Formation
3126.00	3374.27	WASATCH.NPC (TVD)
5526.00	6064.40	WASATCH_G.NPC (TVD)
5817.00	6390.58	FORT_UNION.NPC (TVD)
7814.00	8539.12	OHIO_CREEK.NPC
8063.00	8788.20	WILLIAMS_FORK.NPC (TVD)
8113.00	8838.25	TOP_GAS.NPC (TVD)
10798.00	11526.70	CAMEO.NPC (TVD)
11427.00	12156.51	ROLLINS.NPC (TVD)
11602.00	12331.74	TD.MBL (TVD)

CASING DETAILS

No casing data is available



PLAN #1									
SG 24D-27									
KB-30 @ 3135.00000 (Original Well Elev)									
Ground Level @ 8106.00									
NAD 1927 - Western US									
Well SG 24D-27 - Slot SG 24D-27, True North									
Type TD	Target No Target (Freehand)	Azimuth 98.92	Origin Slot	Type N/S	E/W 0.00	From TVD	0.00		
Name SG 24D-27_PBHL		TVD 11602.00	+N/-S -474.74	+E/-W 3025.99	Latitude 39.669829	Longitude -108.148888			



WELL DETAILS: SG 24D-27

12375

CATHEDRAL

+N/-S 0.00 +E/-W 0.00 Northing 14418950.00 Easting 2439749.00

8106.00 Latitude 39.671133 Longitude -108.159633 SG 24D-27



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well SG 24D-27 - Slot SG 24D-27
Company:	Caerus Oil & Gas	TVD Reference:	KB=30' @ 8136.00usft (Original Well Elev)
Project:	Garfield County, CO (UTM 12N)	MD Reference:	KB=30' @ 8136.00usft (Original Well Elev)
Site:	S27-T4S-R96W(NPR L27)	North Reference:	True
Well:	SG 24D-27	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		S27-T4S-R96W(NPR L27)			
Site Position:		Northing:	14,419,012.30 usft	Latitude:	39.671302
From:	Map	Easting:	2,439,764.30 usft	Longitude:	-108.159572
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	1.81 °

Well	SG 24D-27 - Slot SG 24D-27					
Well Position	+N/-S	0.00 usft	Northing:	14,418,950.00 usft	Latitude:	39.671133
	+E/-W	0.00 usft	Easting:	2,439,749.00 usft	Longitude:	-108.159633
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	8,106.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	1/17/2018	9.67	65.92	51,443.90000000

Design	PLAN #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	98.92

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	
400.00	3.00	101.00	399.93	-0.75	3.85	2.00	2.00	0.00	101.00	
580.00	3.00	101.00	579.68	-2.55	13.10	0.00	0.00	0.00	0.00	
1,375.41	26.86	97.32	1,342.71	-29.81	214.65	3.00	3.00	-0.46	-4.11	
7,345.42	26.86	97.32	6,668.86	-373.50	2,889.54	0.00	0.00	0.00	0.00	
8,688.18	0.00	0.00	7,963.00	-412.87	3,195.99	2.00	-2.00	0.00	180.00	
8,833.38	2.90	250.00	8,108.13	-414.13	3,192.53	2.00	2.00	-75.76	250.00	
12,331.74	2.90	250.00	11,602.00	-474.74	3,025.99	0.00	0.00	0.00	0.00	SG 24D-27_PBHL

Cathedral Energy Services

Planning Report

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Company:	Caerus Oil & Gas	TVD Reference:	KB=30' @ 8136.00usft (Original Well Elev)
Project:	Garfield County, CO (UTM 12N)	MD Reference:	KB=30' @ 8136.00usft (Original Well Elev)
Site:	S27-T4S-R96W(NPR L27)	North Reference:	True
Well:	SG 24D-27	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	
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 2.00
300.00	1.00	101.00	300.00	-0.08	0.43	0.44	2.00	2.00	
400.00	3.00	101.00	399.93	-0.75	3.85	3.92	2.00	2.00	Start 180.00 hold at 400.00 MD
500.00	3.00	101.00	499.79	-1.75	8.99	9.15	0.00	0.00	
580.00	3.00	101.00	579.68	-2.55	13.10	13.34	0.00	0.00	Start DLS 3.00 TFO -4.11
600.00	3.60	100.32	599.65	-2.76	14.23	14.49	3.00	2.99	
700.00	6.60	98.76	699.24	-4.20	23.00	23.37	3.00	3.00	
800.00	9.59	98.17	798.24	-6.25	36.93	37.45	3.00	3.00	
900.00	12.59	97.86	896.36	-8.93	55.98	56.69	3.00	3.00	
1,000.00	15.59	97.67	993.34	-12.21	80.11	81.03	3.00	3.00	
1,100.00	18.59	97.54	1,088.91	-16.10	109.24	110.41	3.00	3.00	
1,200.00	21.59	97.44	1,182.81	-20.57	143.30	144.75	3.00	3.00	
1,300.00	24.59	97.37	1,274.79	-25.63	182.19	183.96	3.00	3.00	
1,375.41	26.86	97.32	1,342.71	-29.81	214.65	216.67	3.00	3.00	Start 5970.01 hold at 1375.41 MD
1,400.00	26.86	97.32	1,364.66	-31.22	225.67	227.78	0.00	0.00	
1,500.00	26.86	97.32	1,453.87	-36.98	270.47	272.94	0.00	0.00	
1,600.00	26.86	97.32	1,543.09	-42.74	315.28	318.09	0.00	0.00	
1,700.00	26.86	97.32	1,632.30	-48.50	360.08	363.25	0.00	0.00	
1,800.00	26.86	97.32	1,721.52	-54.25	404.89	408.41	0.00	0.00	
1,900.00	26.86	97.32	1,810.73	-60.01	449.69	453.56	0.00	0.00	
2,000.00	26.86	97.32	1,899.95	-65.77	494.50	498.72	0.00	0.00	
2,100.00	26.86	97.32	1,989.16	-71.52	539.31	543.87	0.00	0.00	
2,200.00	26.86	97.32	2,078.38	-77.28	584.11	589.03	0.00	0.00	
2,300.00	26.86	97.32	2,167.59	-83.04	628.92	634.19	0.00	0.00	
2,400.00	26.86	97.32	2,256.81	-88.79	673.72	679.34	0.00	0.00	
2,500.00	26.86	97.32	2,346.02	-94.55	718.53	724.50	0.00	0.00	
2,600.00	26.86	97.32	2,435.24	-100.31	763.33	769.66	0.00	0.00	
2,700.00	26.86	97.32	2,524.45	-106.06	808.14	814.81	0.00	0.00	
2,800.00	26.86	97.32	2,613.67	-111.82	852.94	859.97	0.00	0.00	
2,900.00	26.86	97.32	2,702.88	-117.58	897.75	905.12	0.00	0.00	
3,000.00	26.86	97.32	2,792.10	-123.33	942.56	950.28	0.00	0.00	
3,100.00	26.86	97.32	2,881.31	-129.09	987.36	995.44	0.00	0.00	
3,200.00	26.86	97.32	2,970.53	-134.85	1,032.17	1,040.59	0.00	0.00	
3,300.00	26.86	97.32	3,059.74	-140.61	1,076.97	1,085.75	0.00	0.00	
3,374.27	26.86	97.32	3,126.00	-144.88	1,110.25	1,119.29	0.00	0.00	WASATCH.NPC (TVD)
3,400.00	26.86	97.32	3,148.96	-146.36	1,121.78	1,130.91	0.00	0.00	
3,500.00	26.86	97.32	3,238.17	-152.12	1,166.58	1,176.06	0.00	0.00	
3,600.00	26.86	97.32	3,327.39	-157.88	1,211.39	1,221.22	0.00	0.00	
3,700.00	26.86	97.32	3,416.60	-163.63	1,256.19	1,266.38	0.00	0.00	
3,800.00	26.86	97.32	3,505.82	-169.39	1,301.00	1,311.53	0.00	0.00	
3,900.00	26.86	97.32	3,595.03	-175.15	1,345.81	1,356.69	0.00	0.00	
4,000.00	26.86	97.32	3,684.25	-180.90	1,390.61	1,401.84	0.00	0.00	
4,100.00	26.86	97.32	3,773.46	-186.66	1,435.42	1,447.00	0.00	0.00	
4,200.00	26.86	97.32	3,862.68	-192.42	1,480.22	1,492.16	0.00	0.00	
4,300.00	26.86	97.32	3,951.89	-198.17	1,525.03	1,537.31	0.00	0.00	
4,400.00	26.86	97.32	4,041.11	-203.93	1,569.83	1,582.47	0.00	0.00	
4,500.00	26.86	97.32	4,130.32	-209.69	1,614.64	1,627.63	0.00	0.00	
4,600.00	26.86	97.32	4,219.54	-215.45	1,659.44	1,672.78	0.00	0.00	
4,700.00	26.86	97.32	4,308.75	-221.20	1,704.25	1,717.94	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well SG 24D-27 - Slot SG 24D-27
Company:	Caerus Oil & Gas	TVD Reference:	KB=30' @ 8136.00usft (Original Well Elev)
Project:	Garfield County, CO (UTM 12N)	MD Reference:	KB=30' @ 8136.00usft (Original Well Elev)
Site:	S27-T4S-R96W(NPR L27)	North Reference:	True
Well:	SG 24D-27	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
4,800.00	26.86	97.32	4,397.97	-226.96	1,749.05	1,763.10	0.00	0.00	
4,900.00	26.86	97.32	4,487.18	-232.72	1,793.86	1,808.25	0.00	0.00	
5,000.00	26.86	97.32	4,576.40	-238.47	1,838.67	1,853.41	0.00	0.00	
5,100.00	26.86	97.32	4,665.61	-244.23	1,883.47	1,898.56	0.00	0.00	
5,200.00	26.86	97.32	4,754.83	-249.99	1,928.28	1,943.72	0.00	0.00	
5,300.00	26.86	97.32	4,844.04	-255.74	1,973.08	1,988.88	0.00	0.00	
5,400.00	26.86	97.32	4,933.26	-261.50	2,017.89	2,034.03	0.00	0.00	
5,500.00	26.86	97.32	5,022.47	-267.26	2,062.69	2,079.19	0.00	0.00	
5,600.00	26.86	97.32	5,111.69	-273.01	2,107.50	2,124.35	0.00	0.00	
5,700.00	26.86	97.32	5,200.90	-278.77	2,152.30	2,169.50	0.00	0.00	
5,800.00	26.86	97.32	5,290.12	-284.53	2,197.11	2,214.66	0.00	0.00	
5,900.00	26.86	97.32	5,379.33	-290.28	2,241.92	2,259.82	0.00	0.00	
6,000.00	26.86	97.32	5,468.55	-296.04	2,286.72	2,304.97	0.00	0.00	
6,064.40	26.86	97.32	5,526.00	-299.75	2,315.57	2,334.05	0.00	0.00	WASATCH_G.NPC (TVD)
6,100.00	26.86	97.32	5,557.76	-301.80	2,331.53	2,350.13	0.00	0.00	
6,200.00	26.86	97.32	5,646.98	-307.56	2,376.33	2,395.28	0.00	0.00	
6,300.00	26.86	97.32	5,736.19	-313.31	2,421.14	2,440.44	0.00	0.00	
6,390.58	26.86	97.32	5,817.00	-318.53	2,461.72	2,481.34	0.00	0.00	FORT_UNION.NPC (TVD)
6,400.00	26.86	97.32	5,825.41	-319.07	2,465.94	2,485.60	0.00	0.00	
6,500.00	26.86	97.32	5,914.62	-324.83	2,510.75	2,530.75	0.00	0.00	
6,600.00	26.86	97.32	6,003.84	-330.58	2,555.55	2,575.91	0.00	0.00	
6,700.00	26.86	97.32	6,093.05	-336.34	2,600.36	2,621.07	0.00	0.00	
6,800.00	26.86	97.32	6,182.27	-342.10	2,645.16	2,666.22	0.00	0.00	
6,900.00	26.86	97.32	6,271.48	-347.85	2,689.97	2,711.38	0.00	0.00	
7,000.00	26.86	97.32	6,360.70	-353.61	2,734.78	2,756.54	0.00	0.00	
7,100.00	26.86	97.32	6,449.91	-359.37	2,779.58	2,801.69	0.00	0.00	
7,200.00	26.86	97.32	6,539.13	-365.12	2,824.39	2,846.85	0.00	0.00	
7,300.00	26.86	97.32	6,628.34	-370.88	2,869.19	2,892.00	0.00	0.00	
7,345.42	26.86	97.32	6,668.86	-373.50	2,889.54	2,912.51	0.00	0.00	Start Drop -2.00
7,400.00	25.76	97.32	6,717.79	-376.58	2,913.54	2,936.70	2.00	-2.00	
7,500.00	23.76	97.32	6,808.59	-381.92	2,955.08	2,978.56	2.00	-2.00	
7,600.00	21.76	97.32	6,900.80	-386.85	2,993.46	3,017.24	2.00	-2.00	
7,700.00	19.76	97.32	6,994.30	-391.36	3,028.62	3,052.68	2.00	-2.00	
7,800.00	17.76	97.32	7,088.98	-395.46	3,060.52	3,084.83	2.00	-2.00	
7,900.00	15.76	97.32	7,184.72	-399.14	3,089.13	3,113.66	2.00	-2.00	
8,000.00	13.76	97.32	7,281.42	-402.39	3,114.40	3,139.13	2.00	-2.00	
8,100.00	11.76	97.32	7,378.94	-405.20	3,136.31	3,161.21	2.00	-2.00	
8,200.00	9.76	97.32	7,477.18	-407.58	3,154.83	3,179.88	2.00	-2.00	
8,300.00	7.76	97.32	7,576.00	-409.52	3,169.94	3,195.11	2.00	-2.00	
8,400.00	5.76	97.32	7,675.30	-411.02	3,181.63	3,206.88	2.00	-2.00	
8,500.00	3.76	97.32	7,774.95	-412.08	3,189.86	3,215.18	2.00	-2.00	
8,539.12	2.98	97.32	7,814.00	-412.38	3,192.14	3,217.48	2.00	-2.00	OHIO_CREEK.NPC
8,600.00	1.76	97.32	7,874.83	-412.70	3,194.64	3,220.00	2.00	-2.00	
8,688.18	0.00	0.00	7,963.00	-412.87	3,195.99	3,221.36	2.00	-2.00	Start DLS 2.00 TFO 250.00
8,700.00	0.24	250.00	7,974.82	-412.88	3,195.97	3,221.34	2.00	2.00	
8,788.20	2.00	250.00	8,063.00	-413.47	3,194.35	3,219.83	2.00	2.00	WILLIAMS_FORK.NPC (TVD)
8,800.00	2.24	250.00	8,074.79	-413.62	3,193.94	3,219.45	2.00	2.00	
8,833.38	2.90	250.00	8,108.13	-414.13	3,192.53	3,218.14	2.00	2.00	Start 3498.36 hold at 8833.38 MD
8,838.25	2.90	250.00	8,113.00	-414.21	3,192.30	3,217.92	0.00	0.00	TOP_GAS.NPC (TVD)
8,900.00	2.90	250.00	8,174.67	-415.28	3,189.36	3,215.19	0.00	0.00	
9,000.00	2.90	250.00	8,274.54	-417.01	3,184.60	3,210.75	0.00	0.00	
9,100.00	2.90	250.00	8,374.41	-418.75	3,179.84	3,206.32	0.00	0.00	

Cathedral Energy Services

Planning Report

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Company:	Caerus Oil & Gas	TVD Reference:	KB=30' @ 8136.00usft (Original Well Elev)
Project:	Garfield County, CO (UTM 12N)	MD Reference:	KB=30' @ 8136.00usft (Original Well Elev)
Site:	S27-T4S-R96W(NPR L27)	North Reference:	True
Well:	SG 24D-27	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
9,200.00	2.90	250.00	8,474.28	-420.48	3,175.08	3,201.88	0.00	0.00	
9,300.00	2.90	250.00	8,574.16	-422.21	3,170.32	3,197.45	0.00	0.00	
9,400.00	2.90	250.00	8,674.03	-423.94	3,165.56	3,193.01	0.00	0.00	
9,500.00	2.90	250.00	8,773.90	-425.68	3,160.80	3,188.58	0.00	0.00	
9,600.00	2.90	250.00	8,873.77	-427.41	3,156.04	3,184.14	0.00	0.00	
9,700.00	2.90	250.00	8,973.64	-429.14	3,151.28	3,179.71	0.00	0.00	
9,800.00	2.90	250.00	9,073.51	-430.87	3,146.52	3,175.27	0.00	0.00	
9,900.00	2.90	250.00	9,173.38	-432.61	3,141.75	3,170.84	0.00	0.00	
10,000.00	2.90	250.00	9,273.26	-434.34	3,136.99	3,166.40	0.00	0.00	
10,100.00	2.90	250.00	9,373.13	-436.07	3,132.23	3,161.97	0.00	0.00	
10,200.00	2.90	250.00	9,473.00	-437.81	3,127.47	3,157.54	0.00	0.00	
10,300.00	2.90	250.00	9,572.87	-439.54	3,122.71	3,153.10	0.00	0.00	
10,400.00	2.90	250.00	9,672.74	-441.27	3,117.95	3,148.67	0.00	0.00	
10,500.00	2.90	250.00	9,772.61	-443.00	3,113.19	3,144.23	0.00	0.00	
10,600.00	2.90	250.00	9,872.49	-444.74	3,108.43	3,139.80	0.00	0.00	
10,700.00	2.90	250.00	9,972.36	-446.47	3,103.67	3,135.36	0.00	0.00	
10,800.00	2.90	250.00	10,072.23	-448.20	3,098.91	3,130.93	0.00	0.00	
10,900.00	2.90	250.00	10,172.10	-449.93	3,094.15	3,126.49	0.00	0.00	
11,000.00	2.90	250.00	10,271.97	-451.67	3,089.39	3,122.06	0.00	0.00	
11,100.00	2.90	250.00	10,371.84	-453.40	3,084.63	3,117.62	0.00	0.00	
11,200.00	2.90	250.00	10,471.72	-455.13	3,079.87	3,113.19	0.00	0.00	
11,300.00	2.90	250.00	10,571.59	-456.86	3,075.10	3,108.75	0.00	0.00	
11,400.00	2.90	250.00	10,671.46	-458.60	3,070.34	3,104.32	0.00	0.00	
11,500.00	2.90	250.00	10,771.33	-460.33	3,065.58	3,099.89	0.00	0.00	
11,526.70	2.90	250.00	10,798.00	-460.79	3,064.31	3,098.70	0.00	0.00	CAMEO.NPC (TVD)
11,600.00	2.90	250.00	10,871.20	-462.06	3,060.82	3,095.45	0.00	0.00	
11,700.00	2.90	250.00	10,971.07	-463.79	3,056.06	3,091.02	0.00	0.00	
11,800.00	2.90	250.00	11,070.95	-465.53	3,051.30	3,086.58	0.00	0.00	
11,900.00	2.90	250.00	11,170.82	-467.26	3,046.54	3,082.15	0.00	0.00	
12,000.00	2.90	250.00	11,270.69	-468.99	3,041.78	3,077.71	0.00	0.00	
12,100.00	2.90	250.00	11,370.56	-470.72	3,037.02	3,073.28	0.00	0.00	
12,156.51	2.90	250.00	11,427.00	-471.70	3,034.33	3,070.77	0.00	0.00	ROLLINS.NPC (TVD)
12,200.00	2.90	250.00	11,470.43	-472.46	3,032.26	3,068.84	0.00	0.00	
12,300.00	2.90	250.00	11,570.30	-474.19	3,027.50	3,064.41	0.00	0.00	
12,331.74	2.90	250.00	11,602.00	-474.74	3,025.99	3,063.00	0.00	0.00	TD at 12331.74 - TD.MBL (TVD) - SG 24D-27_I

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SG 24D-27_PBHL	0.00	0.00	11,602.00	-474.74	3,025.99	14,418,571.30	2,442,788.50	39.669829	-108.148888
- hit/miss target									
- Shape									
- plan hits target center									
- Ellipse (radii L200.00 W100.00 on 250.00 azi)									

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well SG 24D-27 - Slot SG 24D-27
Company:	Caerus Oil & Gas	TVD Reference:	KB=30' @ 8136.00usft (Original Well Elev)
Project:	Garfield County, CO (UTM 12N)	MD Reference:	KB=30' @ 8136.00usft (Original Well Elev)
Site:	S27-T4S-R96W(NPR L27)	North Reference:	True
Well:	SG 24D-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,374.27	3,126.00	WASATCH.NPC (TVD)				
6,064.40	5,526.00	WASATCH_G.NPC (TVD)				
6,390.58	5,817.00	FORT_UNION.NPC (TVD)				
8,539.12	7,814.00	OHIO_CREEK.NPC				
8,788.20	8,063.00	WILLIAMS_FORK.NPC (TVD)				
8,838.25	8,113.00	TOP_GAS.NPC (TVD)				
11,526.70	10,798.00	CAMEO.NPC (TVD)				
12,156.51	11,427.00	ROLLINS.NPC (TVD)				
12,331.74	11,602.00	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 2.00	
400.00	399.93	-0.75	3.85	Start 180.00 hold at 400.00 MD	
580.00	579.68	-2.55	13.10	Start DLS 3.00 TFO -4.11	
1,375.41	1,342.71	-29.81	214.65	Start 5970.01 hold at 1375.41 MD	
7,345.42	6,668.86	-373.50	2,889.54	Start Drop -2.00	
8,688.18	7,963.00	-412.87	3,195.99	Start DLS 2.00 TFO 250.00	
8,833.38	8,108.13	-414.13	3,192.53	Start 3498.36 hold at 8833.38 MD	
12,331.74	11,602.00	-474.74	3,025.99	TD at 12331.74	