



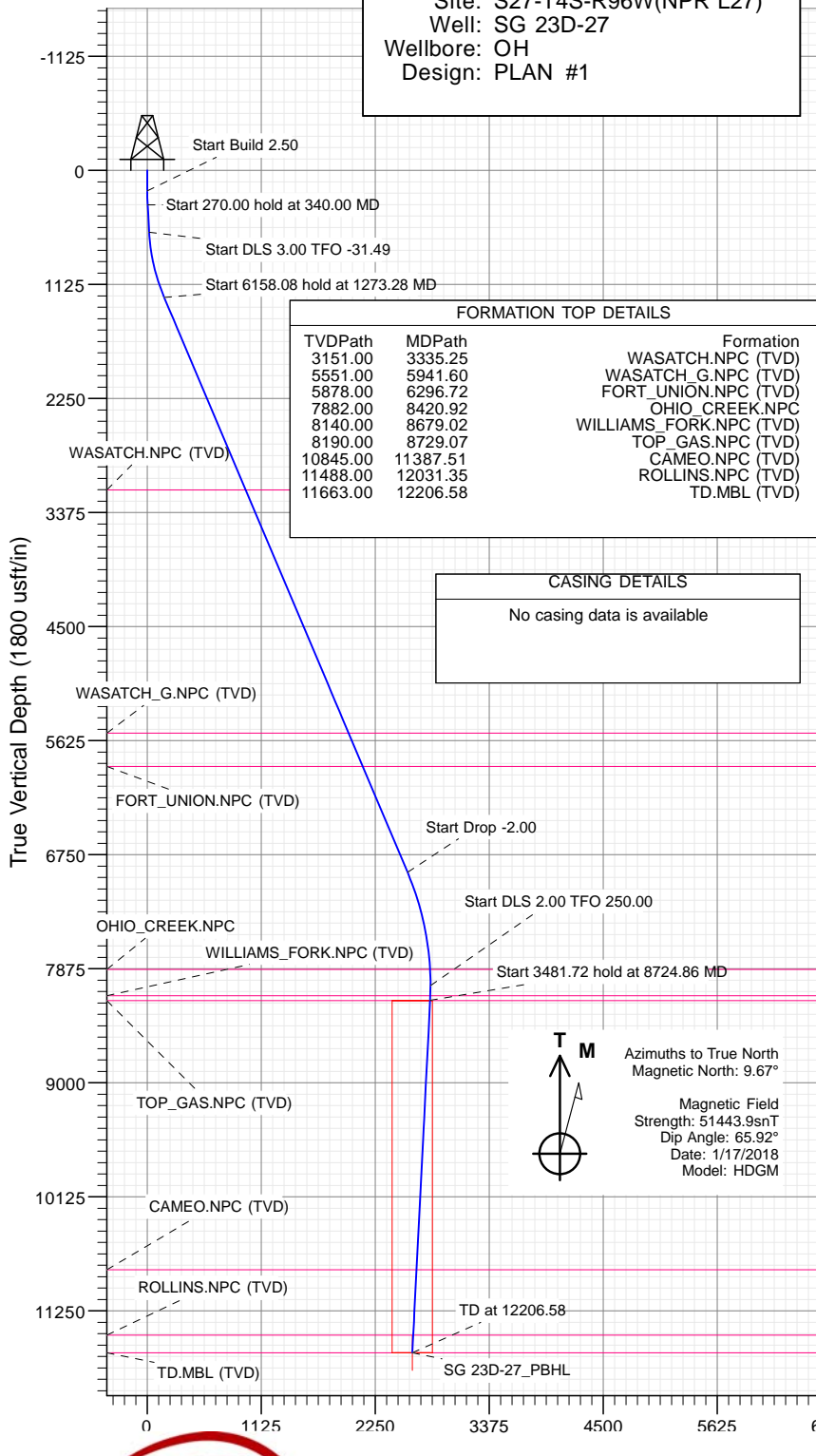
SECTION DETAILS

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	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	340.00	3.50	91.00	339.91	-0.07	4.27	2.50	91.00	3.80	
4	610.00	3.50	91.00	609.41	-0.36	20.75	0.00	0.00	18.47	
5	1273.28	22.95	63.88	1252.29	56.80	158.51	3.00	-31.49	167.32	
6	7431.36	22.95	63.88	6922.81	1114.14	2314.70	0.00	0.00	0.00	0.002568.81
7	8579.00	0.00	0.00	8040.00	1214.00	2518.35	2.00	180.00	2795.62	
8	8724.86	2.92	250.00	8185.80	1212.73	2514.86	2.00	250.00	2791.93	
9	12206.58	2.92	250.00	11663.00	1152.13	2348.35	0.00	0.00	2615.75	SG 23D-27_PBHL

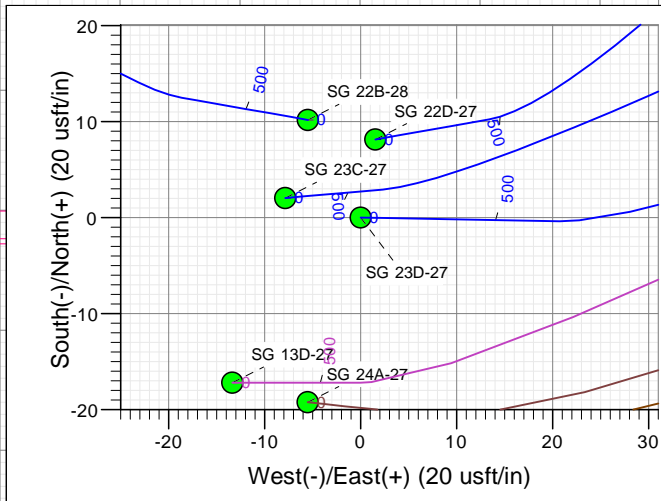
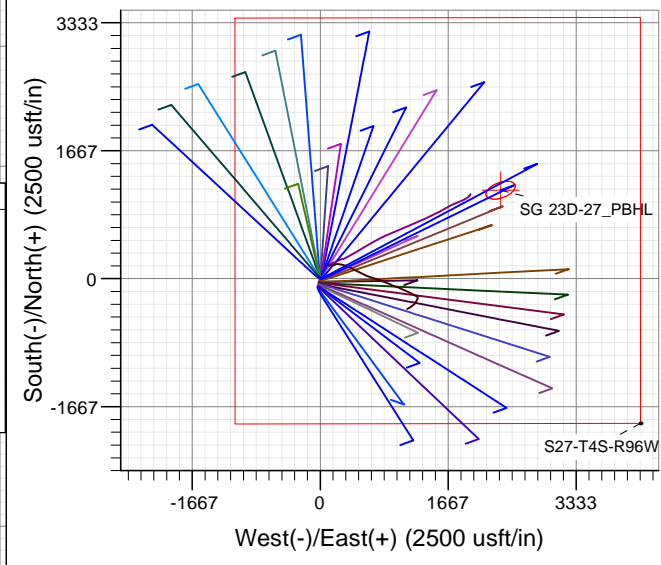
Project: Garfield County, CO (UTM 12N)  
 Site: S27-T4S-R96W(NPR L27)  
 Well: SG 23D-27  
 Wellbore: OH  
 Design: PLAN #1

PLAN #1  
 SG 23D-27  
 KB-30' @ 8136.00usft (Original Well Elev)  
 Ground Level @ 8106.00  
 NAD 1927 - Western US  
 Well SG 23D-27 - Slot SG 23D-27, True North

Type	Target	Azimuth	Origin	Type	N/S	E/W	From
TD	No Target (Freehand)	Slot	Slot				TVD
SG 23D-27_PBHL		53.87	1152.13		0.00	0.00	0.00
					+E/-W	Latitude	Longitude
					2348.35	39.674436	-108.151213



CASING DETAILS  
 No casing data is available



T M  
 Azimuths to True North  
 Magnetic North: 9.67°  
 Magnetic Field  
 Strength: 51443.9snT  
 Dip Angle: 65.92°  
 Date: 1/17/2018  
 Model: HDGM

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well SG 23D-27 - Slot SG 23D-27
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	KB=30' @ 8136.00usft (Original Well Elev)
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	KB=30' @ 8136.00usft (Original Well Elev)
<b>Site:</b>	S27-T4S-R96W(NPR L27)	<b>North Reference:</b>	True
<b>Well:</b>	SG 23D-27	<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)		

<b>Site</b>	S27-T4S-R96W(NPR L27)				
<b>Site Position:</b>		<b>Northing:</b>	14,419,012.30 usft	<b>Latitude:</b>	39.671302
<b>From:</b>	Map	<b>Easting:</b>	2,439,764.30 usft	<b>Longitude:</b>	-108.159572
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16"	<b>Grid Convergence:</b>	1.81 °

<b>Well</b>	SG 23D-27 - Slot SG 23D-27					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	14,419,002.30 usft	<b>Latitude:</b>	39.671274
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	2,439,770.10 usft	<b>Longitude:</b>	-108.159552
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	8,106.00 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>
	HDGM	1/17/2018	(°)	(°)	(nT)
			9.67	65.92	51,443.90000000

<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	63.87

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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
340.00	3.50	91.00	339.91	-0.07	4.27	2.50	2.50	0.00	91.00	
610.00	3.50	91.00	609.41	-0.36	20.75	0.00	0.00	0.00	0.00	
1,273.28	22.95	63.88	1,252.29	56.80	158.51	3.00	2.93	-4.09	-31.49	
7,431.36	22.95	63.88	6,922.81	1,114.14	2,314.70	0.00	0.00	0.00	0.00	
8,579.00	0.00	0.00	8,040.00	1,214.00	2,518.35	2.00	-2.00	0.00	180.00	
8,724.86	2.92	250.00	8,185.80	1,212.73	2,514.86	2.00	2.00	-75.41	250.00	
12,206.58	2.92	250.00	11,663.00	1,152.13	2,348.35	0.00	0.00	0.00	0.00	SG 23D-27_PBHL

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well SG 23D-27 - Slot SG 23D-27
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	KB=30' @ 8136.00usft (Original Well Elev)
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	KB=30' @ 8136.00usft (Original Well Elev)
<b>Site:</b>	S27-T4S-R96W(NPR L27)	<b>North Reference:</b>	True
<b>Well:</b>	SG 23D-27	<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	Start Build 2.50
300.00	2.50	91.00	299.97	-0.04	2.18	1.94	2.50	2.50	
340.00	3.50	91.00	339.91	-0.07	4.27	3.80	2.50	2.50	Start 270.00 hold at 340.00 MD
400.00	3.50	91.00	399.80	-0.14	7.94	7.06	0.00	0.00	
500.00	3.50	91.00	499.61	-0.25	14.04	12.50	0.00	0.00	
600.00	3.50	91.00	599.43	-0.35	20.14	17.93	0.00	0.00	
610.00	3.50	91.00	609.41	-0.36	20.75	18.47	0.00	0.00	Start DLS 3.00 TFO -31.49
700.00	5.97	77.32	699.10	0.62	28.07	25.47	3.00	2.75	
800.00	8.87	71.35	798.25	4.23	40.46	38.18	3.00	2.90	
900.00	11.83	68.32	896.61	10.48	57.29	56.05	3.00	2.95	
1,000.00	14.80	66.50	993.92	19.36	78.53	79.03	3.00	2.97	
1,100.00	17.78	65.27	1,089.89	30.84	104.11	107.05	3.00	2.98	
1,200.00	20.76	64.39	1,184.28	44.89	133.96	140.04	3.00	2.99	
1,273.28	22.95	63.88	1,252.29	56.80	158.51	167.32	3.00	2.99	Start 6158.08 hold at 1273.28 MD
1,300.00	22.95	63.88	1,276.89	61.39	167.86	177.74	0.00	0.00	
1,400.00	22.95	63.88	1,368.98	78.56	202.88	216.74	0.00	0.00	
1,500.00	22.95	63.88	1,461.06	95.73	237.89	255.74	0.00	0.00	
1,600.00	22.95	63.88	1,553.14	112.90	272.90	294.73	0.00	0.00	
1,700.00	22.95	63.88	1,645.22	130.07	307.92	333.73	0.00	0.00	
1,800.00	22.95	63.88	1,737.31	147.24	342.93	372.73	0.00	0.00	
1,900.00	22.95	63.88	1,829.39	164.41	377.95	411.73	0.00	0.00	
2,000.00	22.95	63.88	1,921.47	181.58	412.96	450.72	0.00	0.00	
2,100.00	22.95	63.88	2,013.55	198.75	447.97	489.72	0.00	0.00	
2,200.00	22.95	63.88	2,105.64	215.92	482.99	528.72	0.00	0.00	
2,300.00	22.95	63.88	2,197.72	233.09	518.00	567.71	0.00	0.00	
2,400.00	22.95	63.88	2,289.80	250.26	553.02	606.71	0.00	0.00	
2,500.00	22.95	63.88	2,381.88	267.43	588.03	645.71	0.00	0.00	
2,600.00	22.95	63.88	2,473.97	284.60	623.04	684.71	0.00	0.00	
2,700.00	22.95	63.88	2,566.05	301.77	658.06	723.70	0.00	0.00	
2,800.00	22.95	63.88	2,658.13	318.94	693.07	762.70	0.00	0.00	
2,900.00	22.95	63.88	2,750.21	336.11	728.09	801.70	0.00	0.00	
3,000.00	22.95	63.88	2,842.30	353.28	763.10	840.70	0.00	0.00	
3,100.00	22.95	63.88	2,934.38	370.45	798.12	879.69	0.00	0.00	
3,200.00	22.95	63.88	3,026.46	387.62	833.13	918.69	0.00	0.00	
3,300.00	22.95	63.88	3,118.54	404.79	868.14	957.69	0.00	0.00	
3,335.25	22.95	63.88	3,151.00	410.84	880.48	971.43	0.00	0.00	WASATCH.NPC (TVD)
3,400.00	22.95	63.88	3,210.63	421.96	903.16	996.69	0.00	0.00	
3,500.00	22.95	63.88	3,302.71	439.13	938.17	1,035.68	0.00	0.00	
3,600.00	22.95	63.88	3,394.79	456.30	973.19	1,074.68	0.00	0.00	
3,700.00	22.95	63.88	3,486.88	473.47	1,008.20	1,113.68	0.00	0.00	
3,800.00	22.95	63.88	3,578.96	490.64	1,043.21	1,152.67	0.00	0.00	
3,900.00	22.95	63.88	3,671.04	507.81	1,078.23	1,191.67	0.00	0.00	
4,000.00	22.95	63.88	3,763.12	524.98	1,113.24	1,230.67	0.00	0.00	
4,100.00	22.95	63.88	3,855.21	542.15	1,148.26	1,269.67	0.00	0.00	
4,200.00	22.95	63.88	3,947.29	559.32	1,183.27	1,308.66	0.00	0.00	
4,300.00	22.95	63.88	4,039.37	576.49	1,218.28	1,347.66	0.00	0.00	
4,400.00	22.95	63.88	4,131.45	593.66	1,253.30	1,386.66	0.00	0.00	
4,500.00	22.95	63.88	4,223.54	610.83	1,288.31	1,425.66	0.00	0.00	
4,600.00	22.95	63.88	4,315.62	628.00	1,323.33	1,464.65	0.00	0.00	
4,700.00	22.95	63.88	4,407.70	645.17	1,358.34	1,503.65	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well SG 23D-27 - Slot SG 23D-27
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	KB=30' @ 8136.00usft (Original Well Elev)
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	KB=30' @ 8136.00usft (Original Well Elev)
<b>Site:</b>	S27-T4S-R96W(NPR L27)	<b>North Reference:</b>	True
<b>Well:</b>	SG 23D-27	<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
4,800.00	22.95	63.88	4,499.78	662.34	1,393.35	1,542.65	0.00	0.00	
4,900.00	22.95	63.88	4,591.87	679.51	1,428.37	1,581.64	0.00	0.00	
5,000.00	22.95	63.88	4,683.95	696.68	1,463.38	1,620.64	0.00	0.00	
5,100.00	22.95	63.88	4,776.03	713.85	1,498.40	1,659.64	0.00	0.00	
5,200.00	22.95	63.88	4,868.11	731.02	1,533.41	1,698.64	0.00	0.00	
5,300.00	22.95	63.88	4,960.20	748.19	1,568.43	1,737.63	0.00	0.00	
5,400.00	22.95	63.88	5,052.28	765.35	1,603.44	1,776.63	0.00	0.00	
5,500.00	22.95	63.88	5,144.36	782.52	1,638.45	1,815.63	0.00	0.00	
5,600.00	22.95	63.88	5,236.45	799.69	1,673.47	1,854.63	0.00	0.00	
5,700.00	22.95	63.88	5,328.53	816.86	1,708.48	1,893.62	0.00	0.00	
5,800.00	22.95	63.88	5,420.61	834.03	1,743.50	1,932.62	0.00	0.00	
5,900.00	22.95	63.88	5,512.69	851.20	1,778.51	1,971.62	0.00	0.00	
5,941.60	22.95	63.88	5,551.00	858.35	1,793.08	1,987.84	0.00	0.00	WASATCH_G.NPC (TVD)
6,000.00	22.95	63.88	5,604.78	868.37	1,813.52	2,010.62	0.00	0.00	
6,100.00	22.95	63.88	5,696.86	885.54	1,848.54	2,049.61	0.00	0.00	
6,200.00	22.95	63.88	5,788.94	902.71	1,883.55	2,088.61	0.00	0.00	
6,296.72	22.95	63.88	5,878.00	919.32	1,917.42	2,126.33	0.00	0.00	FORT_UNION.NPC (TVD)
6,300.00	22.95	63.88	5,881.02	919.88	1,918.57	2,127.61	0.00	0.00	
6,400.00	22.95	63.88	5,973.11	937.05	1,953.58	2,166.60	0.00	0.00	
6,500.00	22.95	63.88	6,065.19	954.22	1,988.59	2,205.60	0.00	0.00	
6,600.00	22.95	63.88	6,157.27	971.39	2,023.61	2,244.60	0.00	0.00	
6,700.00	22.95	63.88	6,249.35	988.56	2,058.62	2,283.60	0.00	0.00	
6,800.00	22.95	63.88	6,341.44	1,005.73	2,093.64	2,322.59	0.00	0.00	
6,900.00	22.95	63.88	6,433.52	1,022.90	2,128.65	2,361.59	0.00	0.00	
7,000.00	22.95	63.88	6,525.60	1,040.07	2,163.66	2,400.59	0.00	0.00	
7,100.00	22.95	63.88	6,617.68	1,057.24	2,198.68	2,439.59	0.00	0.00	
7,200.00	22.95	63.88	6,709.77	1,074.41	2,233.69	2,478.58	0.00	0.00	
7,300.00	22.95	63.88	6,801.85	1,091.58	2,268.71	2,517.58	0.00	0.00	
7,400.00	22.95	63.88	6,893.93	1,108.75	2,303.72	2,556.58	0.00	0.00	
7,431.36	22.95	63.88	6,922.81	1,114.14	2,314.70	2,568.81	0.00	0.00	Start Drop -2.00
7,500.00	21.58	63.88	6,986.33	1,125.59	2,338.05	2,594.82	2.00	-2.00	
7,600.00	19.58	63.88	7,079.94	1,141.06	2,369.61	2,629.96	2.00	-2.00	
7,700.00	17.58	63.88	7,174.73	1,155.09	2,398.22	2,661.83	2.00	-2.00	
7,800.00	15.58	63.88	7,270.56	1,167.65	2,423.84	2,690.36	2.00	-2.00	
7,900.00	13.58	63.88	7,367.34	1,178.74	2,446.44	2,715.53	2.00	-2.00	
8,000.00	11.58	63.88	7,464.93	1,188.33	2,465.99	2,737.31	2.00	-2.00	
8,100.00	9.58	63.88	7,563.23	1,196.41	2,482.48	2,755.67	2.00	-2.00	
8,200.00	7.58	63.88	7,662.10	1,202.98	2,495.87	2,770.59	2.00	-2.00	
8,300.00	5.58	63.88	7,761.44	1,208.02	2,506.16	2,782.05	2.00	-2.00	
8,400.00	3.58	63.88	7,861.12	1,211.54	2,513.33	2,790.03	2.00	-2.00	
8,420.92	3.16	63.88	7,882.00	1,212.08	2,514.44	2,791.26	2.00	-2.00	OHIO_CREEK.NPC
8,500.00	1.58	63.88	7,961.01	1,213.52	2,517.37	2,794.53	2.00	-2.00	
8,579.00	0.00	0.00	8,040.00	1,214.00	2,518.35	2,795.62	2.00	-2.00	Start DLS 2.00 TFO 250.00
8,600.00	0.42	250.00	8,061.00	1,213.97	2,518.28	2,795.55	2.00	2.00	
8,679.02	2.00	250.00	8,140.00	1,213.40	2,516.71	2,793.89	2.00	2.00	WILLIAMS_FORK.NPC (TVD)
8,700.00	2.42	250.00	8,160.96	1,213.13	2,515.95	2,793.08	2.00	2.00	
8,724.86	2.92	250.00	8,185.80	1,212.73	2,514.86	2,791.93	2.00	2.00	Start 3481.72 hold at 8724.86 MD
8,729.07	2.92	250.00	8,190.00	1,212.66	2,514.66	2,791.72	0.00	0.00	TOP_GAS.NPC (TVD)
8,800.00	2.92	250.00	8,260.84	1,211.42	2,511.27	2,788.13	0.00	0.00	
8,900.00	2.92	250.00	8,360.71	1,209.68	2,506.49	2,783.07	0.00	0.00	
9,000.00	2.92	250.00	8,460.58	1,207.94	2,501.70	2,778.01	0.00	0.00	
9,100.00	2.92	250.00	8,560.45	1,206.20	2,496.92	2,772.95	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well SG 23D-27 - Slot SG 23D-27
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	KB=30' @ 8136.00usft (Original Well Elev)
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	KB=30' @ 8136.00usft (Original Well Elev)
<b>Site:</b>	S27-T4S-R96W(NPR L27)	<b>North Reference:</b>	True
<b>Well:</b>	SG 23D-27	<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
9,200.00	2.92	250.00	8,660.32	1,204.46	2,492.14	2,767.89	0.00	0.00	
9,300.00	2.92	250.00	8,760.19	1,202.72	2,487.36	2,762.83	0.00	0.00	
9,400.00	2.92	250.00	8,860.06	1,200.98	2,482.57	2,757.77	0.00	0.00	
9,500.00	2.92	250.00	8,959.93	1,199.24	2,477.79	2,752.71	0.00	0.00	
9,600.00	2.92	250.00	9,059.80	1,197.50	2,473.01	2,747.65	0.00	0.00	
9,700.00	2.92	250.00	9,159.67	1,195.76	2,468.23	2,742.59	0.00	0.00	
9,800.00	2.92	250.00	9,259.54	1,194.02	2,463.44	2,737.53	0.00	0.00	
9,900.00	2.92	250.00	9,359.41	1,192.28	2,458.66	2,732.47	0.00	0.00	
10,000.00	2.92	250.00	9,459.28	1,190.54	2,453.88	2,727.41	0.00	0.00	
10,100.00	2.92	250.00	9,559.15	1,188.80	2,449.10	2,722.35	0.00	0.00	
10,200.00	2.92	250.00	9,659.02	1,187.05	2,444.32	2,717.29	0.00	0.00	
10,300.00	2.92	250.00	9,758.89	1,185.31	2,439.53	2,712.23	0.00	0.00	
10,400.00	2.92	250.00	9,858.77	1,183.57	2,434.75	2,707.17	0.00	0.00	
10,500.00	2.92	250.00	9,958.64	1,181.83	2,429.97	2,702.11	0.00	0.00	
10,600.00	2.92	250.00	10,058.51	1,180.09	2,425.19	2,697.05	0.00	0.00	
10,700.00	2.92	250.00	10,158.38	1,178.35	2,420.40	2,691.99	0.00	0.00	
10,800.00	2.92	250.00	10,258.25	1,176.61	2,415.62	2,686.93	0.00	0.00	
10,900.00	2.92	250.00	10,358.12	1,174.87	2,410.84	2,681.87	0.00	0.00	
11,000.00	2.92	250.00	10,457.99	1,173.13	2,406.06	2,676.81	0.00	0.00	
11,100.00	2.92	250.00	10,557.86	1,171.39	2,401.27	2,671.75	0.00	0.00	
11,200.00	2.92	250.00	10,657.73	1,169.65	2,396.49	2,666.69	0.00	0.00	
11,300.00	2.92	250.00	10,757.60	1,167.91	2,391.71	2,661.63	0.00	0.00	
11,387.51	2.92	250.00	10,845.00	1,166.38	2,387.52	2,657.20	0.00	0.00	CAMEO.NPC (TVD)
11,400.00	2.92	250.00	10,857.47	1,166.17	2,386.93	2,656.57	0.00	0.00	
11,500.00	2.92	250.00	10,957.34	1,164.43	2,382.14	2,651.51	0.00	0.00	
11,600.00	2.92	250.00	11,057.21	1,162.69	2,377.36	2,646.45	0.00	0.00	
11,700.00	2.92	250.00	11,157.08	1,160.95	2,372.58	2,641.39	0.00	0.00	
11,800.00	2.92	250.00	11,256.95	1,159.21	2,367.80	2,636.33	0.00	0.00	
11,900.00	2.92	250.00	11,356.82	1,157.46	2,363.02	2,631.27	0.00	0.00	
12,000.00	2.92	250.00	11,456.69	1,155.72	2,358.23	2,626.21	0.00	0.00	
12,031.35	2.92	250.00	11,488.00	1,155.18	2,356.73	2,624.62	0.00	0.00	ROLLINS.NPC (TVD)
12,100.00	2.92	250.00	11,556.56	1,153.98	2,353.45	2,621.15	0.00	0.00	
12,200.00	2.92	250.00	11,656.43	1,152.24	2,348.67	2,616.09	0.00	0.00	
12,206.58	2.92	250.00	11,663.00	1,152.13	2,348.35	2,615.75	0.00	0.00	TD at 12206.58 - TD.MBL (TVD) - SG 23D-27_I

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SG 23D-27_PBHL	0.00	0.00	11,663.00	1,152.13	2,348.35	14,420,228.20	2,442,080.80	39.674436	-108.151213
- hit/miss target - Shape - plan hits target center - Ellipse (radii L200.00 W100.00 on 250.00 azi)									

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well SG 23D-27 - Slot SG 23D-27
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	KB=30' @ 8136.00usft (Original Well Elev)
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	KB=30' @ 8136.00usft (Original Well Elev)
<b>Site:</b>	S27-T4S-R96W(NPR L27)	<b>North Reference:</b>	True
<b>Well:</b>	SG 23D-27	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,335.25	3,151.00	WASATCH.NPC (TVD)				
5,941.60	5,551.00	WASATCH_G.NPC (TVD)				
6,296.72	5,878.00	FORT_UNION.NPC (TVD)				
8,420.92	7,882.00	OHIO_CREEK.NPC				
8,679.02	8,140.00	WILLIAMS_FORK.NPC (TVD)				
8,729.07	8,190.00	TOP_GAS.NPC (TVD)				
11,387.51	10,845.00	CAMEO.NPC (TVD)				
12,031.35	11,488.00	ROLLINS.NPC (TVD)				
12,206.58	11,663.00	TD.MBL (TVD)				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
200.00	200.00	0.00	0.00	Start Build 2.50	
340.00	339.91	-0.07	4.27	Start 270.00 hold at 340.00 MD	
610.00	609.41	-0.36	20.75	Start DLS 3.00 TFO -31.49	
1,273.28	1,252.29	56.80	158.51	Start 6158.08 hold at 1273.28 MD	
7,431.36	6,922.81	1,114.14	2,314.70	Start Drop -2.00	
8,579.00	8,040.00	1,214.00	2,518.35	Start DLS 2.00 TFO 250.00	
8,724.86	8,185.80	1,212.73	2,514.86	Start 3481.72 hold at 8724.86 MD	
12,206.58	11,663.00	1,152.13	2,348.35	TD at 12206.58	