



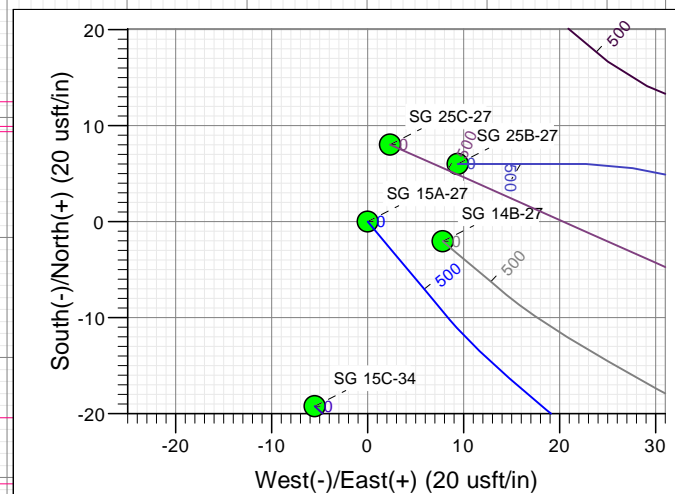
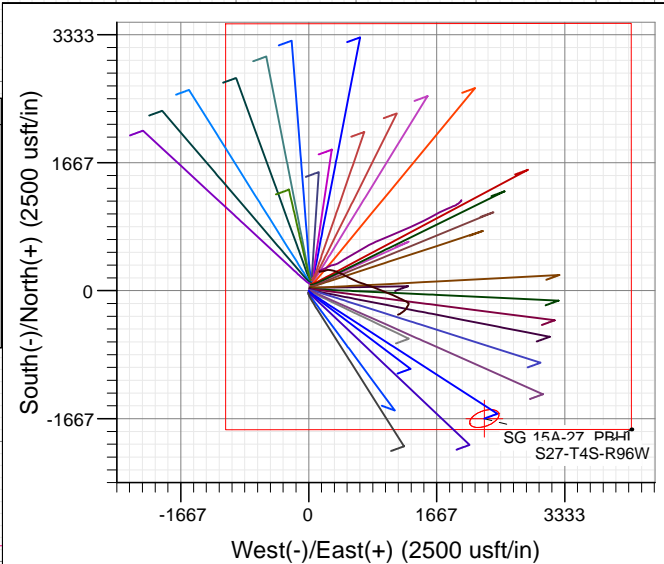
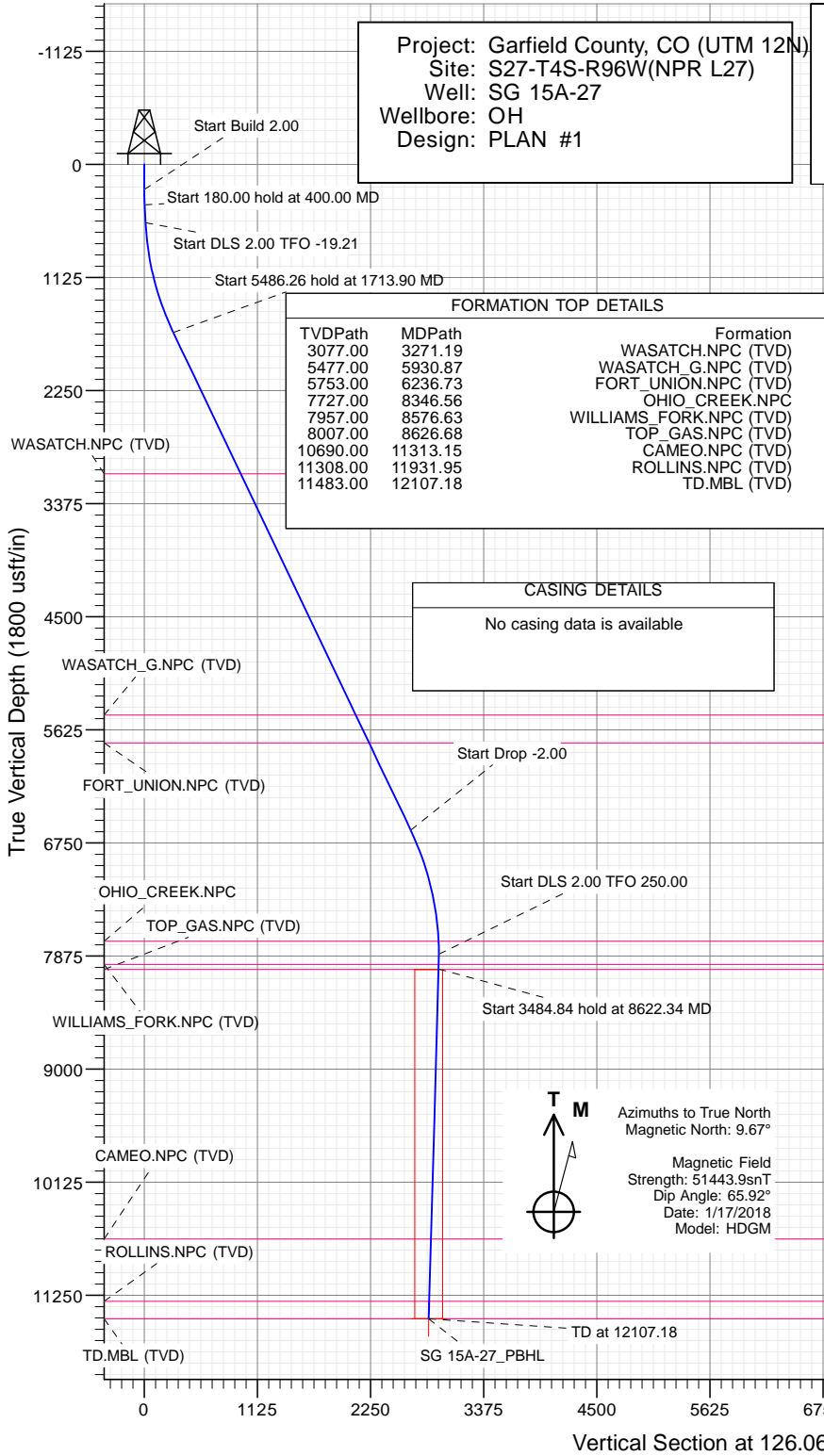
## SECTION DETAILS

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	140.00	399.93	-3.01	2.52	2.00	140.00	3.81	
4	580.00	3.00	140.00	579.68	-10.22	8.58	0.00	0.00	12.95	
5	1713.90	25.53	122.88	1671.75	-167.67	235.82	2.00	-19.21	289.33	
6	7200.16	25.53	122.88	6622.37	-1451.30	2221.44	0.00	0.00	0.00	0.002650.09
7	8476.61	0.00	0.00	7857.00	-1603.15	2456.33	2.00	180.00	2929.36	
8	8622.34	2.91	250.00	8002.67	-1604.42	2452.85	2.00	250.00	2927.29	
9	12107.18	2.91	250.00	11483.00	-1665.02	2286.33	0.00	0.00	2828.36	SG 15A-27_PBHL

Project: Garfield County, CO (UTM 12N)  
Site: S27-T4S-R96W(NPR L27)  
Well: SG 15A-27  
Wellbore: OH  
Design: PLAN #1

PLAN #1  
SG 15A-27  
KB-30' @ 8136.00sft (Original Well Elev)  
Ground Level @ 8106.00  
NAD 1927 - Western US  
Well SG 15A-27 - Slot SG 15A-27, True North

Type	Target	Azimuth	Origin Type	N/S	E/W	From TVD
TD	No Target (Freehand)	126.06	Slot	0.00	0.00	0.00
Name		TVD	+N/-S	+E/-W	Latitude	Longitude
SG 15A-27_PBHL		11483.00	-1665.02	2286.33	39.66488	-108.15139



## WELL DETAILS: SG 15A-27

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	SG 15A-27
0.00	0.00	14418922.50	2439742.90	39.671058	-108.159658	

CATHEDRAL



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well SG 15A-27 - Slot SG 15A-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 15A-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)		

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 15A-27 - Slot SG 15A-27					
Well Position	+N/-S	0.00 usft	Northing:	14,418,922.50 usft	Latitude:	39.671058
	+E/-W	0.00 usft	Easting:	2,439,742.90 usft	Longitude:	-108.159658
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	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>
			(°)	(°)	(nT)
	HDGM	1/17/2018	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	126.06

<b>Plan Sections</b>										
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	140.00	399.93	-3.01	2.52	2.00	2.00	0.00	140.00	
580.00	3.00	140.00	579.68	-10.22	8.58	0.00	0.00	0.00	0.00	
1,713.90	25.53	122.88	1,671.75	-167.67	235.82	2.00	1.99	-1.51	-19.21	
7,200.16	25.53	122.88	6,622.37	-1,451.30	2,221.44	0.00	0.00	0.00	0.00	
8,476.61	0.00	0.00	7,857.00	-1,603.15	2,456.33	2.00	-2.00	0.00	180.00	
8,622.34	2.91	250.00	8,002.67	-1,604.42	2,452.85	2.00	2.00	-75.48	250.00	
12,107.18	2.91	250.00	11,483.00	-1,665.02	2,286.33	0.00	0.00	0.00	0.00	SG 15A-27_PBHL

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well SG 15A-27 - Slot SG 15A-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 15A-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	
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	140.00	300.00	-0.33	0.28	0.42	2.00	2.00	
400.00	3.00	140.00	399.93	-3.01	2.52	3.81	2.00	2.00	Start 180.00 hold at 400.00 MD
500.00	3.00	140.00	499.79	-7.02	5.89	8.89	0.00	0.00	
580.00	3.00	140.00	579.68	-10.22	8.58	12.95	0.00	0.00	Start DLS 2.00 TFO -19.21
600.00	3.38	137.77	599.65	-11.06	9.31	14.04	2.00	1.90	
700.00	5.33	131.46	699.36	-16.32	14.77	21.55	2.00	1.94	
800.00	7.30	128.54	798.75	-23.35	23.22	32.51	2.00	1.97	
900.00	9.29	126.86	897.70	-32.15	34.64	46.93	2.00	1.99	
1,000.00	11.28	125.77	996.09	-42.70	49.03	64.78	2.00	1.99	
1,100.00	13.27	125.00	1,093.80	-55.00	66.37	86.03	2.00	1.99	
1,200.00	15.26	124.43	1,190.71	-69.03	86.63	110.66	2.00	2.00	
1,300.00	17.26	123.99	1,286.70	-84.77	109.79	138.65	2.00	2.00	
1,400.00	19.26	123.64	1,381.66	-102.20	135.82	169.96	2.00	2.00	
1,500.00	21.26	123.35	1,475.48	-121.30	164.69	204.54	2.00	2.00	
1,600.00	23.25	123.11	1,568.02	-142.06	196.37	242.36	2.00	2.00	
1,700.00	25.25	122.91	1,659.19	-164.43	230.82	283.38	2.00	2.00	
1,713.90	25.53	122.88	1,671.75	-167.67	235.82	289.33	2.00	2.00	Start 5486.26 hold at 1713.90 MD
1,800.00	25.53	122.88	1,749.44	-187.81	266.98	326.38	0.00	0.00	
1,900.00	25.53	122.88	1,839.68	-211.21	303.17	369.41	0.00	0.00	
2,000.00	25.53	122.88	1,929.92	-234.61	339.37	412.44	0.00	0.00	
2,100.00	25.53	122.88	2,020.15	-258.00	375.56	455.47	0.00	0.00	
2,200.00	25.53	122.88	2,110.39	-281.40	411.75	498.50	0.00	0.00	
2,300.00	25.53	122.88	2,200.63	-304.80	447.95	541.53	0.00	0.00	
2,400.00	25.53	122.88	2,290.86	-328.19	484.14	584.56	0.00	0.00	
2,500.00	25.53	122.88	2,381.10	-351.59	520.33	627.59	0.00	0.00	
2,600.00	25.53	122.88	2,471.34	-374.99	556.52	670.62	0.00	0.00	
2,700.00	25.53	122.88	2,561.57	-398.39	592.72	713.65	0.00	0.00	
2,800.00	25.53	122.88	2,651.81	-421.78	628.91	756.68	0.00	0.00	
2,900.00	25.53	122.88	2,742.05	-445.18	665.10	799.71	0.00	0.00	
3,000.00	25.53	122.88	2,832.28	-468.58	701.29	842.74	0.00	0.00	
3,100.00	25.53	122.88	2,922.52	-491.98	737.49	885.77	0.00	0.00	
3,200.00	25.53	122.88	3,012.76	-515.37	773.68	928.81	0.00	0.00	
3,271.19	25.53	122.88	3,077.00	-532.03	799.45	959.44	0.00	0.00	WASATCH.NPC (TVD)
3,300.00	25.53	122.88	3,102.99	-538.77	809.87	971.84	0.00	0.00	
3,400.00	25.53	122.88	3,193.23	-562.17	846.06	1,014.87	0.00	0.00	
3,500.00	25.53	122.88	3,283.47	-585.56	882.26	1,057.90	0.00	0.00	
3,600.00	25.53	122.88	3,373.70	-608.96	918.45	1,100.93	0.00	0.00	
3,700.00	25.53	122.88	3,463.94	-632.36	954.64	1,143.96	0.00	0.00	
3,800.00	25.53	122.88	3,554.18	-655.76	990.83	1,186.99	0.00	0.00	
3,900.00	25.53	122.88	3,644.41	-679.15	1,027.03	1,230.02	0.00	0.00	
4,000.00	25.53	122.88	3,734.65	-702.55	1,063.22	1,273.05	0.00	0.00	
4,100.00	25.53	122.88	3,824.89	-725.95	1,099.41	1,316.08	0.00	0.00	
4,200.00	25.53	122.88	3,915.12	-749.35	1,135.60	1,359.11	0.00	0.00	
4,300.00	25.53	122.88	4,005.36	-772.74	1,171.80	1,402.14	0.00	0.00	
4,400.00	25.53	122.88	4,095.60	-796.14	1,207.99	1,445.17	0.00	0.00	
4,500.00	25.53	122.88	4,185.83	-819.54	1,244.18	1,488.20	0.00	0.00	
4,600.00	25.53	122.88	4,276.07	-842.94	1,280.38	1,531.23	0.00	0.00	
4,700.00	25.53	122.88	4,366.31	-866.33	1,316.57	1,574.26	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 15A-27 - Slot SG 15A-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 15A-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	25.53	122.88	4,456.54	-889.73	1,352.76	1,617.29	0.00	0.00	
4,900.00	25.53	122.88	4,546.78	-913.13	1,388.95	1,660.32	0.00	0.00	
5,000.00	25.53	122.88	4,637.02	-936.52	1,425.15	1,703.35	0.00	0.00	
5,100.00	25.53	122.88	4,727.25	-959.92	1,461.34	1,746.38	0.00	0.00	
5,200.00	25.53	122.88	4,817.49	-983.32	1,497.53	1,789.41	0.00	0.00	
5,300.00	25.53	122.88	4,907.73	-1,006.72	1,533.72	1,832.44	0.00	0.00	
5,400.00	25.53	122.88	4,997.96	-1,030.11	1,569.92	1,875.47	0.00	0.00	
5,500.00	25.53	122.88	5,088.20	-1,053.51	1,606.11	1,918.50	0.00	0.00	
5,600.00	25.53	122.88	5,178.44	-1,076.91	1,642.30	1,961.53	0.00	0.00	
5,700.00	25.53	122.88	5,268.67	-1,100.31	1,678.49	2,004.56	0.00	0.00	
5,800.00	25.53	122.88	5,358.91	-1,123.70	1,714.69	2,047.60	0.00	0.00	
5,900.00	25.53	122.88	5,449.15	-1,147.10	1,750.88	2,090.63	0.00	0.00	
5,930.87	25.53	122.88	5,477.00	-1,154.32	1,762.05	2,103.91	0.00	0.00	WASATCH_G.NPC (TVD)
6,000.00	25.53	122.88	5,539.38	-1,170.50	1,787.07	2,133.66	0.00	0.00	
6,100.00	25.53	122.88	5,629.62	-1,193.89	1,823.26	2,176.69	0.00	0.00	
6,200.00	25.53	122.88	5,719.86	-1,217.29	1,859.46	2,219.72	0.00	0.00	
6,236.73	25.53	122.88	5,753.00	-1,225.89	1,872.75	2,235.52	0.00	0.00	FORT_UNION.NPC (TVD)
6,300.00	25.53	122.88	5,810.09	-1,240.69	1,895.65	2,262.75	0.00	0.00	
6,400.00	25.53	122.88	5,900.33	-1,264.09	1,931.84	2,305.78	0.00	0.00	
6,500.00	25.53	122.88	5,990.57	-1,287.48	1,968.04	2,348.81	0.00	0.00	
6,600.00	25.53	122.88	6,080.80	-1,310.88	2,004.23	2,391.84	0.00	0.00	
6,700.00	25.53	122.88	6,171.04	-1,334.28	2,040.42	2,434.87	0.00	0.00	
6,800.00	25.53	122.88	6,261.28	-1,357.68	2,076.61	2,477.90	0.00	0.00	
6,900.00	25.53	122.88	6,351.51	-1,381.07	2,112.81	2,520.93	0.00	0.00	
7,000.00	25.53	122.88	6,441.75	-1,404.47	2,149.00	2,563.96	0.00	0.00	
7,100.00	25.53	122.88	6,531.99	-1,427.87	2,185.19	2,606.99	0.00	0.00	
7,200.00	25.53	122.88	6,622.22	-1,451.27	2,221.38	2,650.02	0.00	0.00	
7,200.16	25.53	122.88	6,622.37	-1,451.30	2,221.44	2,650.09	0.00	0.00	Start Drop -2.00
7,300.00	23.53	122.88	6,713.19	-1,473.81	2,256.25	2,691.48	2.00	-2.00	
7,400.00	21.53	122.88	6,805.55	-1,494.61	2,288.43	2,729.73	2.00	-2.00	
7,500.00	19.53	122.88	6,899.20	-1,513.65	2,317.88	2,764.75	2.00	-2.00	
7,600.00	17.53	122.88	6,994.01	-1,530.90	2,344.57	2,796.48	2.00	-2.00	
7,700.00	15.53	122.88	7,089.87	-1,546.35	2,368.47	2,824.89	2.00	-2.00	
7,800.00	13.53	122.88	7,186.66	-1,559.97	2,389.54	2,849.95	2.00	-2.00	
7,900.00	11.53	122.88	7,284.28	-1,571.75	2,407.76	2,871.61	2.00	-2.00	
8,000.00	9.53	122.88	7,382.59	-1,581.68	2,423.11	2,889.86	2.00	-2.00	
8,100.00	7.53	122.88	7,481.47	-1,589.73	2,435.57	2,904.67	2.00	-2.00	
8,200.00	5.53	122.88	7,580.82	-1,595.91	2,445.12	2,916.03	2.00	-2.00	
8,300.00	3.53	122.88	7,680.50	-1,600.20	2,451.76	2,923.92	2.00	-2.00	
8,346.56	2.60	122.88	7,727.00	-1,601.55	2,453.85	2,926.41	2.00	-2.00	OHIO_CREEK.NPC
8,400.00	1.53	122.88	7,780.40	-1,602.59	2,455.47	2,928.33	2.00	-2.00	
8,476.61	0.00	0.00	7,857.00	-1,603.15	2,456.33	2,929.36	2.00	-2.00	Start DLS 2.00 TFO 250.00
8,500.00	0.47	250.00	7,880.39	-1,603.18	2,456.24	2,929.30	2.00	2.00	
8,576.63	2.00	250.00	7,957.00	-1,603.75	2,454.69	2,928.38	2.00	2.00	WILLIAMS_FORK.NPC (TVD)
8,600.00	2.47	250.00	7,980.35	-1,604.06	2,453.83	2,927.87	2.00	2.00	
8,622.34	2.91	250.00	8,002.67	-1,604.42	2,452.85	2,927.29	2.00	2.00	Start 3484.84 hold at 8622.34 MD
8,626.68	2.91	250.00	8,007.00	-1,604.49	2,452.64	2,927.16	0.00	0.00	TOP_GAS.NPC (TVD)
8,700.00	2.91	250.00	8,080.23	-1,605.77	2,449.14	2,925.08	0.00	0.00	
8,800.00	2.91	250.00	8,180.10	-1,607.51	2,444.36	2,922.24	0.00	0.00	
8,900.00	2.91	250.00	8,279.97	-1,609.25	2,439.58	2,919.40	0.00	0.00	
9,000.00	2.91	250.00	8,379.84	-1,610.98	2,434.80	2,916.56	0.00	0.00	
9,100.00	2.91	250.00	8,479.71	-1,612.72	2,430.02	2,913.73	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 15A-27 - Slot SG 15A-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 15A-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	2.91	250.00	8,579.58	-1,614.46	2,425.25	2,910.89	0.00	0.00	
9,300.00	2.91	250.00	8,679.45	-1,616.20	2,420.47	2,908.05	0.00	0.00	
9,400.00	2.91	250.00	8,779.32	-1,617.94	2,415.69	2,905.21	0.00	0.00	
9,500.00	2.91	250.00	8,879.19	-1,619.68	2,410.91	2,902.37	0.00	0.00	
9,600.00	2.91	250.00	8,979.06	-1,621.42	2,406.13	2,899.53	0.00	0.00	
9,700.00	2.91	250.00	9,078.93	-1,623.16	2,401.35	2,896.69	0.00	0.00	
9,800.00	2.91	250.00	9,178.80	-1,624.90	2,396.58	2,893.85	0.00	0.00	
9,900.00	2.91	250.00	9,278.68	-1,626.64	2,391.80	2,891.02	0.00	0.00	
10,000.00	2.91	250.00	9,378.55	-1,628.37	2,387.02	2,888.18	0.00	0.00	
10,100.00	2.91	250.00	9,478.42	-1,630.11	2,382.24	2,885.34	0.00	0.00	
10,200.00	2.91	250.00	9,578.29	-1,631.85	2,377.46	2,882.50	0.00	0.00	
10,300.00	2.91	250.00	9,678.16	-1,633.59	2,372.69	2,879.66	0.00	0.00	
10,400.00	2.91	250.00	9,778.03	-1,635.33	2,367.91	2,876.82	0.00	0.00	
10,500.00	2.91	250.00	9,877.90	-1,637.07	2,363.13	2,873.98	0.00	0.00	
10,600.00	2.91	250.00	9,977.77	-1,638.81	2,358.35	2,871.14	0.00	0.00	
10,700.00	2.91	250.00	10,077.64	-1,640.55	2,353.57	2,868.30	0.00	0.00	
10,800.00	2.91	250.00	10,177.51	-1,642.29	2,348.79	2,865.47	0.00	0.00	
10,900.00	2.91	250.00	10,277.38	-1,644.02	2,344.02	2,862.63	0.00	0.00	
11,000.00	2.91	250.00	10,377.25	-1,645.76	2,339.24	2,859.79	0.00	0.00	
11,100.00	2.91	250.00	10,477.12	-1,647.50	2,334.46	2,856.95	0.00	0.00	
11,200.00	2.91	250.00	10,576.99	-1,649.24	2,329.68	2,854.11	0.00	0.00	
11,300.00	2.91	250.00	10,676.86	-1,650.98	2,324.90	2,851.27	0.00	0.00	
11,313.15	2.91	250.00	10,690.00	-1,651.21	2,324.27	2,850.90	0.00	0.00	CAMEO.NPC (TVD)
11,400.00	2.91	250.00	10,776.73	-1,652.72	2,320.12	2,848.43	0.00	0.00	
11,500.00	2.91	250.00	10,876.61	-1,654.46	2,315.35	2,845.59	0.00	0.00	
11,600.00	2.91	250.00	10,976.48	-1,656.20	2,310.57	2,842.76	0.00	0.00	
11,700.00	2.91	250.00	11,076.35	-1,657.94	2,305.79	2,839.92	0.00	0.00	
11,800.00	2.91	250.00	11,176.22	-1,659.68	2,301.01	2,837.08	0.00	0.00	
11,900.00	2.91	250.00	11,276.09	-1,661.41	2,296.23	2,834.24	0.00	0.00	
11,931.95	2.91	250.00	11,308.00	-1,661.97	2,294.71	2,833.33	0.00	0.00	ROLLINS.NPC (TVD)
12,000.00	2.91	250.00	11,375.96	-1,663.15	2,291.46	2,831.40	0.00	0.00	
12,100.00	2.91	250.00	11,475.83	-1,664.89	2,286.68	2,828.56	0.00	0.00	
12,107.18	2.91	250.00	11,483.00	-1,665.02	2,286.33	2,828.36	0.00	0.00	TD at 12107.18 - TD.MBL (TVD) - SG 15A-27_f

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SG 15A-27_PBHL	0.00	0.00	11,483.00	-1,665.02	2,286.33	14,417,330.70	2,442,080.80	39.666488	-108.151539
- 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 15A-27 - Slot SG 15A-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 15A-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 (°)	
3,271.19	3,077.00	WASATCH.NPC (TVD)				
5,930.87	5,477.00	WASATCH_G.NPC (TVD)				
6,236.73	5,753.00	FORT_UNION.NPC (TVD)				
8,346.56	7,727.00	OHIO_CREEK.NPC				
8,576.63	7,957.00	WILLIAMS_FORK.NPC (TVD)				
8,626.68	8,007.00	TOP_GAS.NPC (TVD)				
11,313.15	10,690.00	CAMEO.NPC (TVD)				
11,931.95	11,308.00	ROLLINS.NPC (TVD)				
12,107.18	11,483.00	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	-3.01	2.52	Start 180.00 hold at 400.00 MD	
580.00	579.68	-10.22	8.58	Start DLS 2.00 TFO -19.21	
1,713.90	1,671.75	-167.67	235.82	Start 5486.26 hold at 1713.90 MD	
7,200.16	6,622.37	-1,451.30	2,221.44	Start Drop -2.00	
8,476.61	7,857.00	-1,603.15	2,456.33	Start DLS 2.00 TFO 250.00	
8,622.34	8,002.67	-1,604.42	2,452.85	Start 3484.84 hold at 8622.34 MD	
12,107.18	11,483.00	-1,665.02	2,286.33	TD at 12107.18	