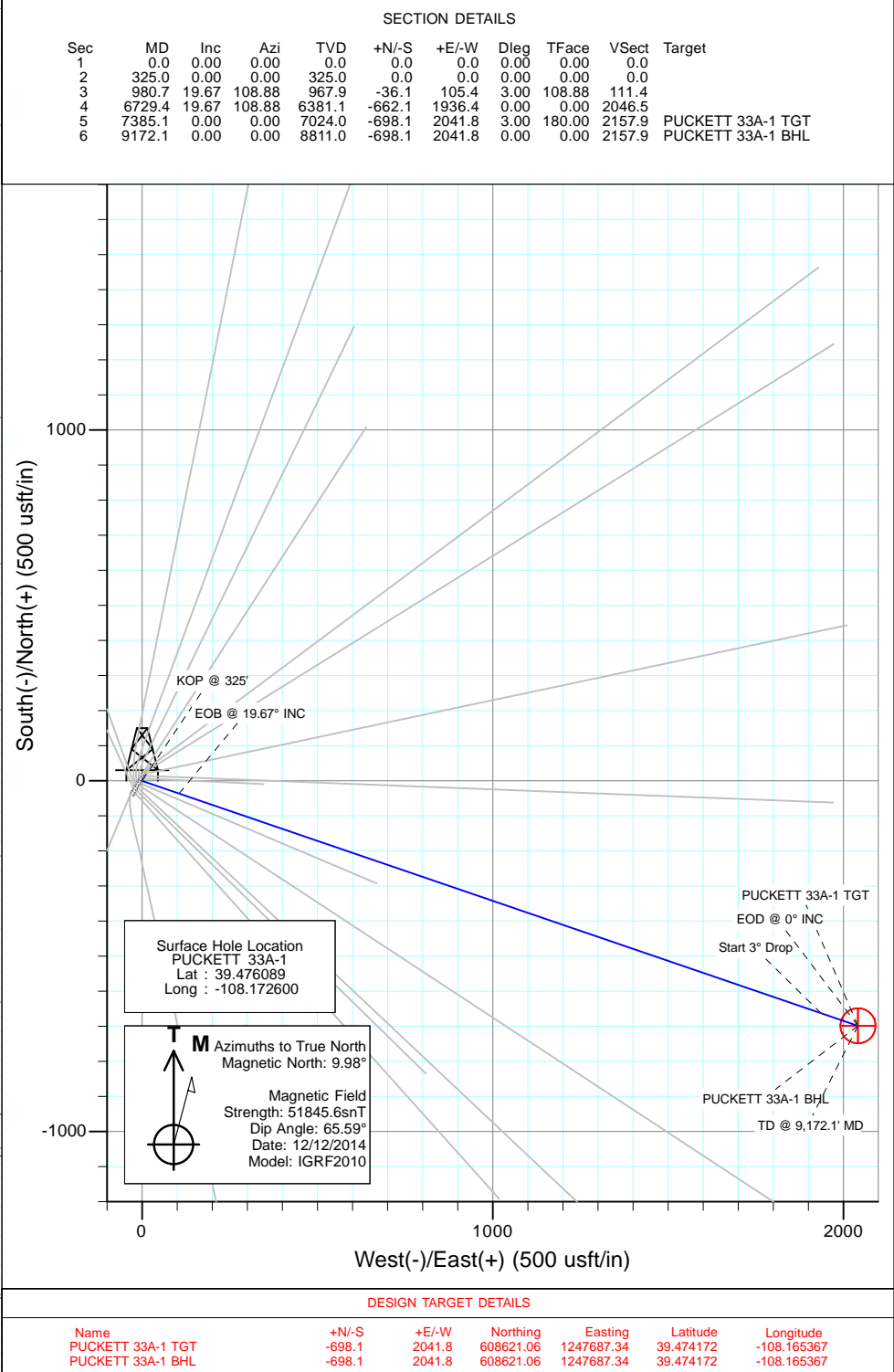
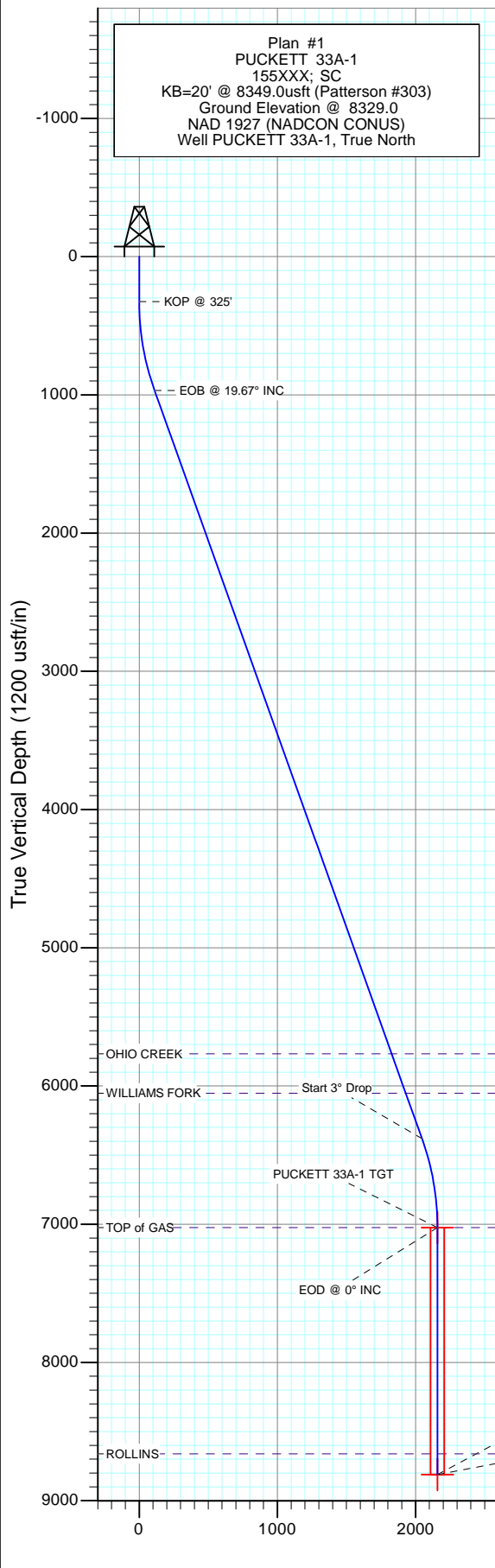
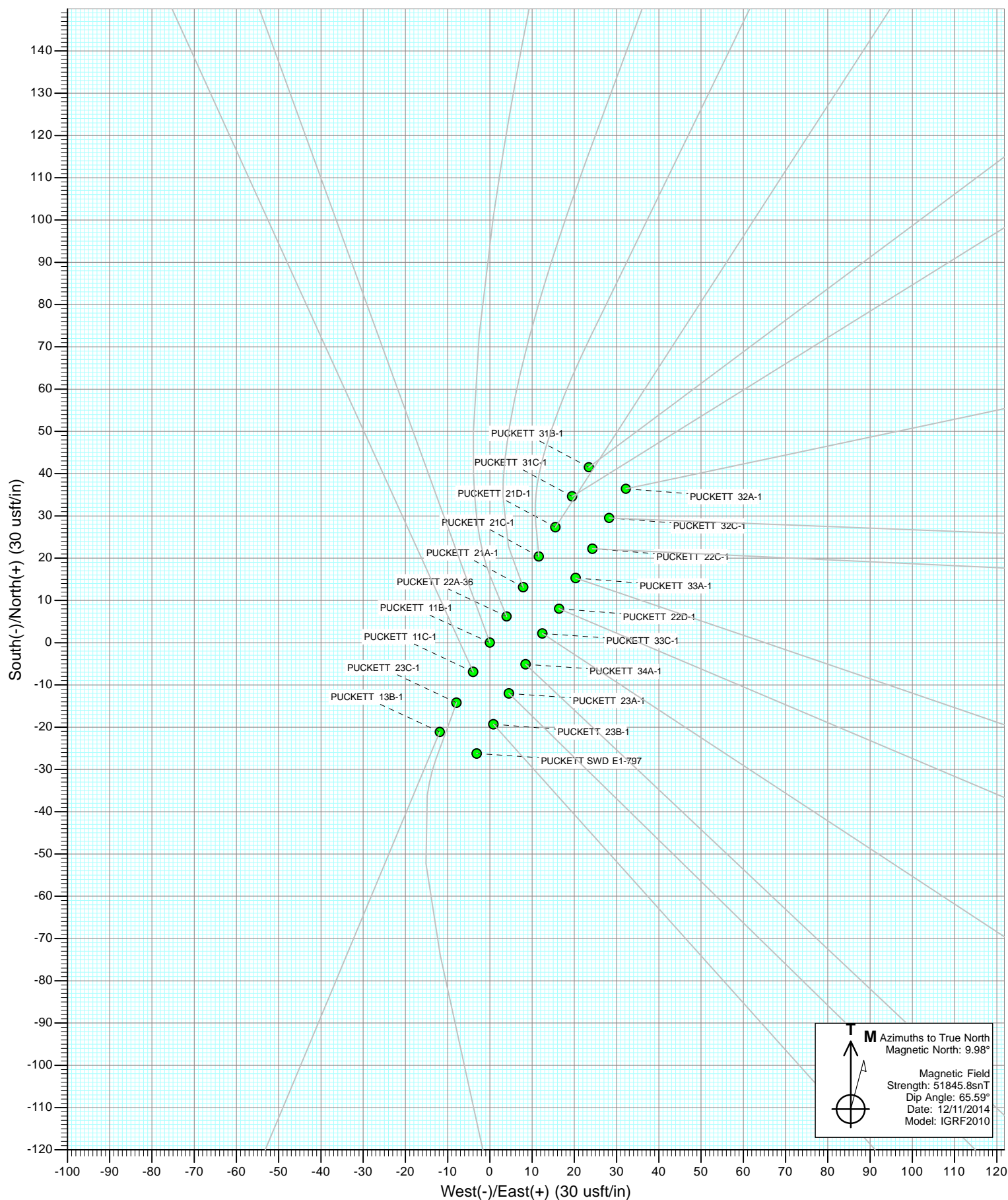
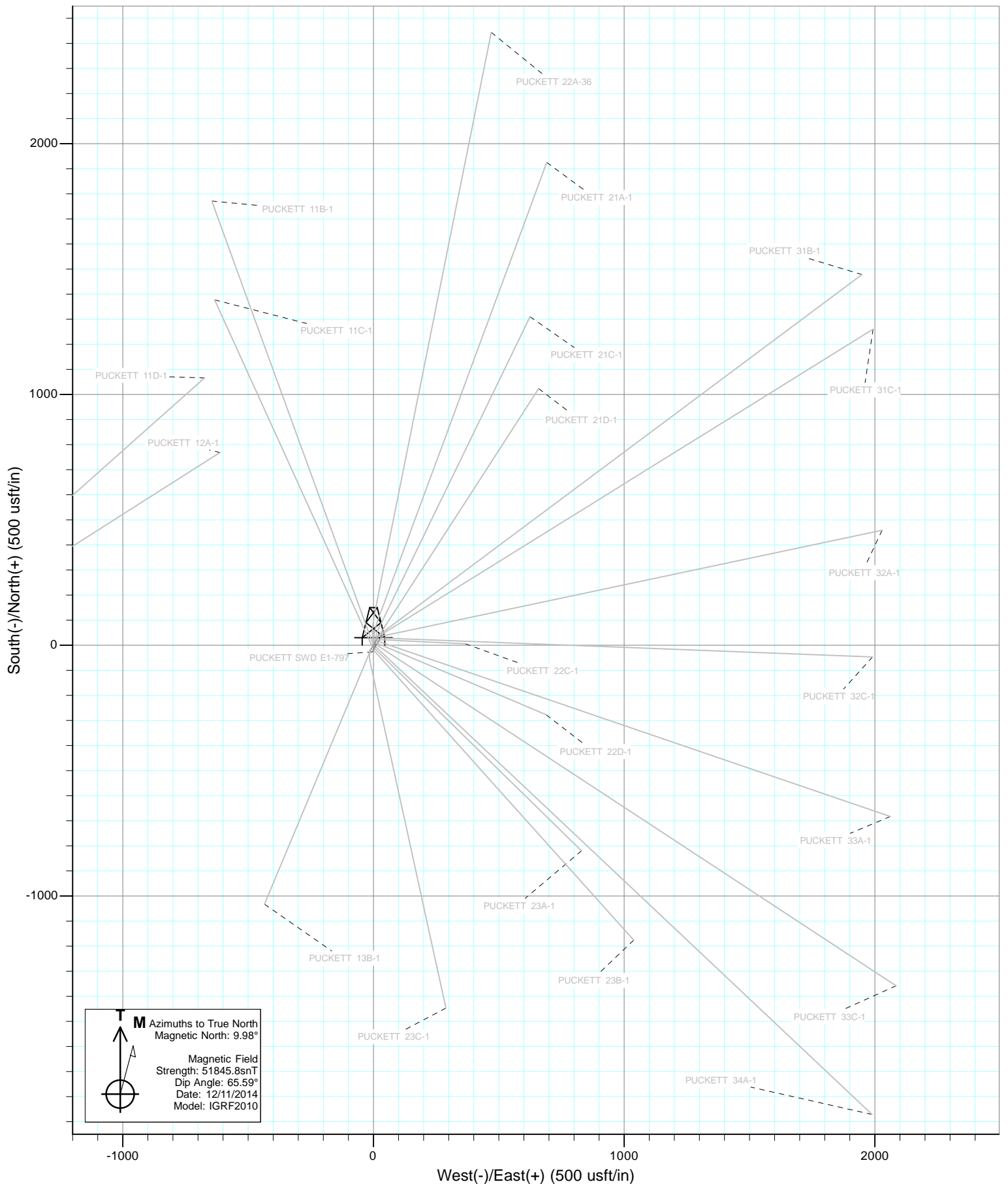




Project: Garfield County, CO  
 Site: S1-T7S-R97W (Mesa E1 797)  
 Well: PUCKETT 33A-1  
 Wellbore: DD  
 Design: Plan #1

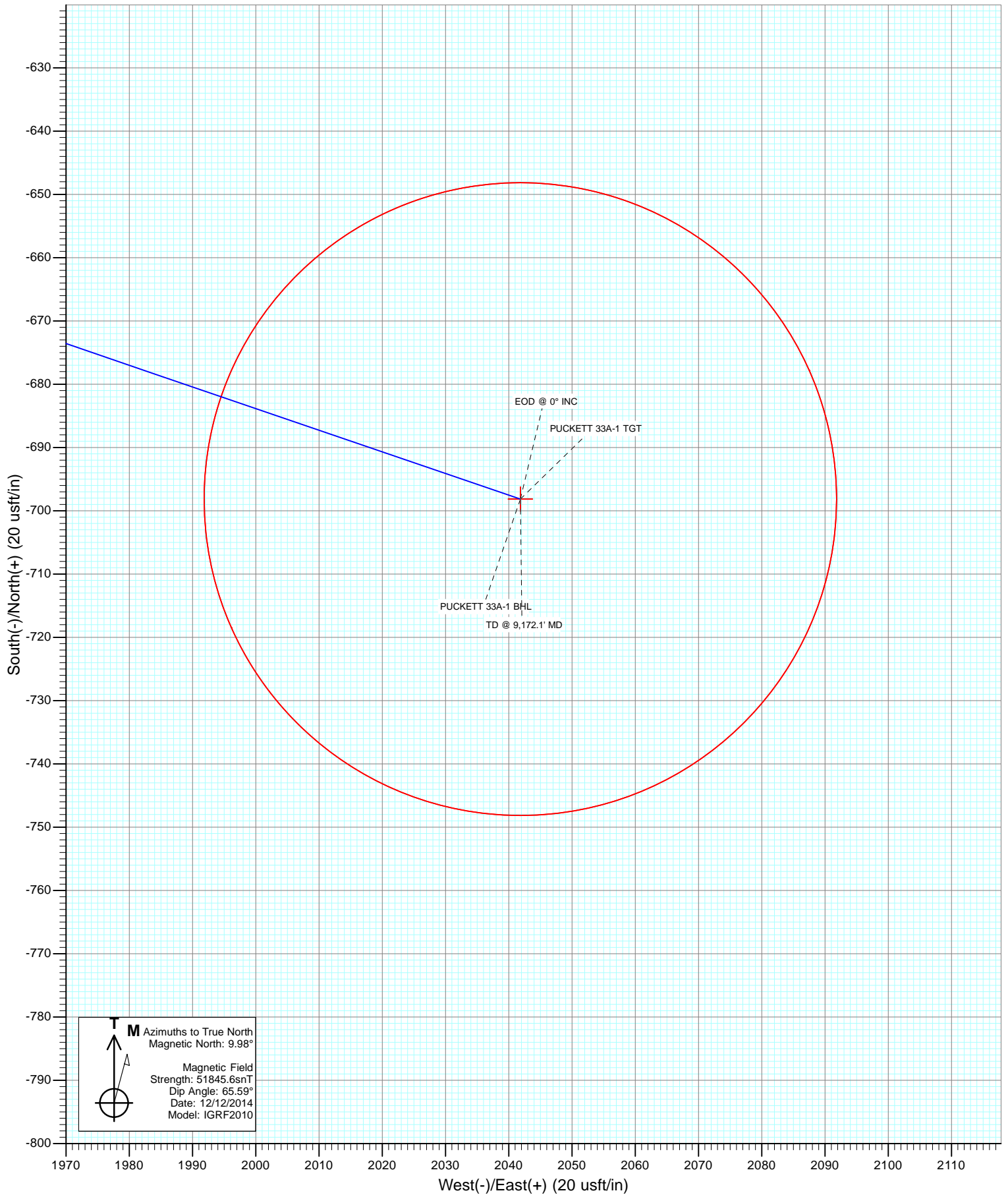








Project: Garfield County, CO  
Site: S1-T7S-R97W (Mesa E1 797)  
Well: PUCKETT 33A-1  
Wellbore: DD  
Design: Plan #1



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

<b>Project</b>	Garfield County, CO		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Colorado Central 502		

Site		S1-T7S-R97W (Mesa E1 797)			
Site Position:		Northing:	609,370.34 usft	Latitude:	39.476064
From:	Lat/Long	Easting:	1,245,650.28 usft	Longitude:	-108.172658
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	-1.69 °

Well	PUCKETT 33A-1					
Well Position	+N/-S	0.0 usft	Northing:	609,378.95 usft	Latitude:	39.476089
	+E/-W	0.0 usft	Easting:	1,245,666.92 usft	Longitude:	-108.172600
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,329.0 usft

<b>Wellbore</b>	DD				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
			(°)	(°)	(nT)
	IGRF2010	12/12/2014	9.98	65.59	51,846

<b>Design</b>	Plan #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	108.88

<b>Plan Sections</b>										
<b>Measured Depth</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical Depth</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Dogleg Rate</b>	<b>Build Rate</b>	<b>Turn Rate</b>	<b>TFO</b>	<b>Target</b>
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
325.0	0.00	0.00	325.0	0.0	0.0	0.00	0.00	0.00	0.00	
980.7	19.67	108.88	967.9	-36.1	105.4	3.00	3.00	0.00	108.88	
6,729.4	19.67	108.88	6,381.1	-662.1	1,936.4	0.00	0.00	0.00	0.00	
7,385.1	0.00	0.00	7,024.0	-698.1	2,041.8	3.00	-3.00	0.00	180.00	PUCKETT 33A-1 TG1
9,172.1	0.00	0.00	8,811.0	-698.1	2,041.8	0.00	0.00	0.00	0.00	PUCKETT 33A-1 BHL

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<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
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
325.0	0.00	0.00	325.0	0.0	0.0	0.0	0.00	0.00	KOP @ 325'
400.0	2.25	108.88	400.0	-0.5	1.4	1.5	3.00	3.00	
500.0	5.25	108.88	499.8	-2.6	7.6	8.0	3.00	3.00	
600.0	8.25	108.88	599.1	-6.4	18.7	19.8	3.00	3.00	
700.0	11.25	108.88	697.6	-11.9	34.7	36.7	3.00	3.00	
800.0	14.25	108.88	795.1	-19.0	55.6	58.8	3.00	3.00	
900.0	17.25	108.88	891.4	-27.8	81.3	85.9	3.00	3.00	
980.7	19.67	108.88	967.9	-36.1	105.4	111.4	3.00	3.00	EOB @ 19.67° INC
1,000.0	19.67	108.88	986.1	-38.2	111.6	118.0	0.00	0.00	
1,100.0	19.67	108.88	1,080.2	-49.1	143.5	151.6	0.00	0.00	
1,200.0	19.67	108.88	1,174.4	-59.9	175.3	185.3	0.00	0.00	
1,300.0	19.67	108.88	1,268.6	-70.8	207.2	218.9	0.00	0.00	
1,400.0	19.67	108.88	1,362.7	-81.7	239.0	252.6	0.00	0.00	
1,500.0	19.67	108.88	1,456.9	-92.6	270.9	286.3	0.00	0.00	
1,600.0	19.67	108.88	1,551.1	-103.5	302.7	319.9	0.00	0.00	
1,700.0	19.67	108.88	1,645.2	-114.4	334.6	353.6	0.00	0.00	
1,800.0	19.67	108.88	1,739.4	-125.3	366.4	387.2	0.00	0.00	
1,900.0	19.67	108.88	1,833.6	-136.2	398.3	420.9	0.00	0.00	
2,000.0	19.67	108.88	1,927.7	-147.1	430.1	454.6	0.00	0.00	
2,100.0	19.67	108.88	2,021.9	-157.9	462.0	488.2	0.00	0.00	
2,200.0	19.67	108.88	2,116.0	-168.8	493.8	521.9	0.00	0.00	
2,300.0	19.67	108.88	2,210.2	-179.7	525.7	555.5	0.00	0.00	
2,400.0	19.67	108.88	2,304.4	-190.6	557.5	589.2	0.00	0.00	
2,500.0	19.67	108.88	2,398.5	-201.5	589.4	622.8	0.00	0.00	
2,600.0	19.67	108.88	2,492.7	-212.4	621.2	656.5	0.00	0.00	
2,700.0	19.67	108.88	2,586.9	-223.3	653.1	690.2	0.00	0.00	
2,800.0	19.67	108.88	2,681.0	-234.2	684.9	723.8	0.00	0.00	
2,900.0	19.67	108.88	2,775.2	-245.1	716.8	757.5	0.00	0.00	
3,000.0	19.67	108.88	2,869.4	-256.0	748.6	791.1	0.00	0.00	
3,100.0	19.67	108.88	2,963.5	-266.8	780.4	824.8	0.00	0.00	
3,200.0	19.67	108.88	3,057.7	-277.7	812.3	858.5	0.00	0.00	
3,300.0	19.67	108.88	3,151.9	-288.6	844.1	892.1	0.00	0.00	
3,400.0	19.67	108.88	3,246.0	-299.5	876.0	925.8	0.00	0.00	
3,500.0	19.67	108.88	3,340.2	-310.4	907.8	959.4	0.00	0.00	
3,600.0	19.67	108.88	3,434.4	-321.3	939.7	993.1	0.00	0.00	
3,700.0	19.67	108.88	3,528.5	-332.2	971.5	1,026.8	0.00	0.00	
3,800.0	19.67	108.88	3,622.7	-343.1	1,003.4	1,060.4	0.00	0.00	
3,900.0	19.67	108.88	3,716.8	-354.0	1,035.2	1,094.1	0.00	0.00	
4,000.0	19.67	108.88	3,811.0	-364.9	1,067.1	1,127.7	0.00	0.00	
4,100.0	19.67	108.88	3,905.2	-375.7	1,098.9	1,161.4	0.00	0.00	
4,200.0	19.67	108.88	3,999.3	-386.6	1,130.8	1,195.1	0.00	0.00	
4,300.0	19.67	108.88	4,093.5	-397.5	1,162.6	1,228.7	0.00	0.00	
4,400.0	19.67	108.88	4,187.7	-408.4	1,194.5	1,262.4	0.00	0.00	
4,500.0	19.67	108.88	4,281.8	-419.3	1,226.3	1,296.0	0.00	0.00	
4,600.0	19.67	108.88	4,376.0	-430.2	1,258.2	1,329.7	0.00	0.00	
4,700.0	19.67	108.88	4,470.2	-441.1	1,290.0	1,363.4	0.00	0.00	
4,800.0	19.67	108.88	4,564.3	-452.0	1,321.9	1,397.0	0.00	0.00	
4,900.0	19.67	108.88	4,658.5	-462.9	1,353.7	1,430.7	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 PUCKETT 33A-1
<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<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
5,000.0	19.67	108.88	4,752.7	-473.7	1,385.6	1,464.3	0.00	0.00	
5,100.0	19.67	108.88	4,846.8	-484.6	1,417.4	1,498.0	0.00	0.00	
5,200.0	19.67	108.88	4,941.0	-495.5	1,449.3	1,531.7	0.00	0.00	
5,300.0	19.67	108.88	5,035.2	-506.4	1,481.1	1,565.3	0.00	0.00	
5,400.0	19.67	108.88	5,129.3	-517.3	1,513.0	1,599.0	0.00	0.00	
5,500.0	19.67	108.88	5,223.5	-528.2	1,544.8	1,632.6	0.00	0.00	
5,600.0	19.67	108.88	5,317.7	-539.1	1,576.7	1,666.3	0.00	0.00	
5,700.0	19.67	108.88	5,411.8	-550.0	1,608.5	1,700.0	0.00	0.00	
5,800.0	19.67	108.88	5,506.0	-560.9	1,640.4	1,733.6	0.00	0.00	
5,900.0	19.67	108.88	5,600.1	-571.8	1,672.2	1,767.3	0.00	0.00	
6,000.0	19.67	108.88	5,694.3	-582.6	1,704.1	1,800.9	0.00	0.00	
6,077.2	19.67	108.88	5,767.0	-591.1	1,728.7	1,826.9	0.00	0.00	OHIO CREEK
6,100.0	19.67	108.88	5,788.5	-593.5	1,735.9	1,834.6	0.00	0.00	
6,200.0	19.67	108.88	5,882.6	-604.4	1,767.8	1,868.3	0.00	0.00	
6,300.0	19.67	108.88	5,976.8	-615.3	1,799.6	1,901.9	0.00	0.00	
6,379.9	19.67	108.88	6,052.0	-624.0	1,825.1	1,928.8	0.00	0.00	WILLIAMS FORK
6,400.0	19.67	108.88	6,071.0	-626.2	1,831.5	1,935.6	0.00	0.00	
6,500.0	19.67	108.88	6,165.1	-637.1	1,863.3	1,969.2	0.00	0.00	
6,600.0	19.67	108.88	6,259.3	-648.0	1,895.2	2,002.9	0.00	0.00	
6,700.0	19.67	108.88	6,353.5	-658.9	1,927.0	2,036.6	0.00	0.00	
6,729.4	19.67	108.88	6,381.1	-662.1	1,936.4	2,046.5	0.00	0.00	Start 3° Drop
6,800.0	17.55	108.88	6,448.1	-669.4	1,957.7	2,069.0	3.00	-3.00	
6,900.0	14.55	108.88	6,544.1	-678.3	1,983.9	2,096.6	3.00	-3.00	
7,000.0	11.55	108.88	6,641.6	-685.6	2,005.2	2,119.2	3.00	-3.00	
7,100.0	8.55	108.88	6,740.0	-691.3	2,021.8	2,136.7	3.00	-3.00	
7,200.0	5.55	108.88	6,839.2	-695.2	2,033.4	2,148.9	3.00	-3.00	
7,300.0	2.55	108.88	6,939.0	-697.5	2,040.1	2,156.0	3.00	-3.00	
7,385.1	0.00	0.00	7,024.0	-698.1	2,041.8	2,157.9	3.00	-3.00	EOD @ 0° INC - TOP of GAS
7,400.0	0.00	0.00	7,038.9	-698.1	2,041.8	2,157.9	0.00	0.00	
7,500.0	0.00	0.00	7,138.9	-698.1	2,041.8	2,157.9	0.00	0.00	
7,600.0	0.00	0.00	7,238.9	-698.1	2,041.8	2,157.9	0.00	0.00	
7,700.0	0.00	0.00	7,338.9	-698.1	2,041.8	2,157.9	0.00	0.00	
7,800.0	0.00	0.00	7,438.9	-698.1	2,041.8	2,157.9	0.00	0.00	
7,900.0	0.00	0.00	7,538.9	-698.1	2,041.8	2,157.9	0.00	0.00	
8,000.0	0.00	0.00	7,638.9	-698.1	2,041.8	2,157.9	0.00	0.00	
8,100.0	0.00	0.00	7,738.9	-698.1	2,041.8	2,157.9	0.00	0.00	
8,200.0	0.00	0.00	7,838.9	-698.1	2,041.8	2,157.9	0.00	0.00	
8,300.0	0.00	0.00	7,938.9	-698.1	2,041.8	2,157.9	0.00	0.00	
8,400.0	0.00	0.00	8,038.9	-698.1	2,041.8	2,157.9	0.00	0.00	
8,500.0	0.00	0.00	8,138.9	-698.1	2,041.8	2,157.9	0.00	0.00	
8,600.0	0.00	0.00	8,238.9	-698.1	2,041.8	2,157.9	0.00	0.00	
8,700.0	0.00	0.00	8,338.9	-698.1	2,041.8	2,157.9	0.00	0.00	
8,800.0	0.00	0.00	8,438.9	-698.1	2,041.8	2,157.9	0.00	0.00	
8,900.0	0.00	0.00	8,538.9	-698.1	2,041.8	2,157.9	0.00	0.00	
9,000.0	0.00	0.00	8,638.9	-698.1	2,041.8	2,157.9	0.00	0.00	
9,022.1	0.00	0.00	8,661.0	-698.1	2,041.8	2,157.9	0.00	0.00	ROLLINS
9,100.0	0.00	0.00	8,738.9	-698.1	2,041.8	2,157.9	0.00	0.00	
9,172.1	0.00	0.00	8,811.0	-698.1	2,041.8	2,157.9	0.00	0.00	TD @ 9,172.1' MD

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
PUCKETT 33A-1 TGT	0.00	0.00	7,024.0	-698.1	2,041.8	608,621.06	1,247,687.34	39.474172	-108.165367
- plan hits target center									
- Point									
PUCKETT 33A-1 BHL	0.00	0.00	8,811.0	-698.1	2,041.8	608,621.06	1,247,687.34	39.474172	-108.165367
- plan hits target center									
- Circle (radius 50.0)									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
6,077.2	5,767.0	OHIO CREEK				
6,379.9	6,052.0	WILLIAMS FORK				
7,385.1	7,024.0	TOP of GAS				
9,022.1	8,661.0	ROLLINS				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
325.0	325.0	0.0	0.0	KOP @ 325'
980.7	967.9	-36.1	105.4	EOB @ 19.67° INC
6,729.4	6,381.1	-662.1	1,936.4	Start 3° Drop
7,385.1	7,024.0	-698.1	2,041.8	EOD @ 0° INC
9,172.1	8,811.0	-698.1	2,041.8	TD @ 9,172.1' MD



# **Caerus Oil & Gas (NAD 27)**

**Garfield County, CO**

**S1-T7S-R97W (Mesa E1 797)**

**PUCKETT 33A-1**

**DD**

**Plan #1**

## **Anticollision Report**

**16 December, 2014**

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 200.0usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	12/12/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	9,172.1	Plan #1 (DD)	ISCWSA MWD	MWD - Standard	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

### Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance		Separation Factor	Warning
			Between Centres (usft)	Between Ellipses (usft)		
S1-T7S-R97W (Mesa E1 797)						
PUCKETT 11B-1 - DD - Plan #1	333.9	334.2	24.6	23.4	19.919	CC, ES
PUCKETT 11B-1 - DD - Plan #1	400.0	400.0	25.8	24.2	16.498	SF
PUCKETT 11C-1 - DD - Plan #1	300.0	300.0	32.9	31.8	30.500	CC
PUCKETT 11C-1 - DD - Plan #1	400.0	400.3	33.3	31.7	21.785	ES
PUCKETT 11C-1 - DD - Plan #1	500.0	499.7	37.3	35.2	18.196	SF
PUCKETT 13B-1 - DD - Plan #1	200.0	200.0	48.6	48.0	77.222	CC, ES
PUCKETT 13B-1 - DD - Plan #1	500.0	490.4	73.3	71.3	36.470	SF
PUCKETT 21A-1 - HZ - Plan #1	300.0	300.0	12.6	11.5	11.689	CC, ES
PUCKETT 21A-1 - HZ - Plan #1	400.0	399.7	14.7	13.2	9.485	SF
PUCKETT 21C-1 - DD - Plan #1	300.0	300.0	10.1	9.1	9.390	CC, ES
PUCKETT 21C-1 - DD - Plan #1	400.0	399.8	12.0	10.4	7.695	SF
PUCKETT 21D-1 - DD - Plan #1	300.0	300.0	12.9	11.9	12.000	CC, ES
PUCKETT 21D-1 - DD - Plan #1	400.0	400.0	14.0	12.4	9.087	SF
PUCKETT 22A-36 - DD - Plan #1	300.0	300.0	18.7	17.6	17.341	CC
PUCKETT 22A-36 - DD - Plan #1	320.0	320.1	18.7	17.6	16.030	ES
PUCKETT 22A-36 - DD - Plan #1	400.0	399.9	19.9	18.3	12.889	SF
PUCKETT 22C-1 - DD - Plan #1	400.7	400.7	7.8	6.3	5.154	CC, ES
PUCKETT 22C-1 - DD - Plan #1	500.0	499.8	10.2	8.2	5.066	SF
PUCKETT 22D-1 - DD - Plan #1	300.0	300.0	8.3	7.2	7.678	CC
PUCKETT 22D-1 - DD - Plan #1	400.0	400.0	8.7	7.1	5.689	ES, SF
PUCKETT 23A-1 - DD - Plan #1	300.0	300.0	31.6	30.5	29.250	CC
PUCKETT 23A-1 - DD - Plan #1	400.0	400.0	31.9	30.4	20.984	ES
PUCKETT 23A-1 - DD - Plan #1	700.0	699.5	48.7	45.6	15.773	SF
PUCKETT 23B-1 - DD - Plan #1	300.0	300.0	39.7	38.6	36.804	CC
PUCKETT 23B-1 - DD - Plan #1	400.0	400.0	40.0	38.5	26.340	ES
PUCKETT 23B-1 - DD - Plan #1	1,600.0	1,586.0	196.9	184.9	16.359	SF
PUCKETT 23C-1 - DD - Plan #1	300.0	300.0	40.8	39.8	37.847	CC, ES
PUCKETT 23C-1 - DD - Plan #1	500.0	495.2	53.6	51.7	27.214	SF
PUCKETT 31B-1 - DD - Plan #1	200.0	200.0	26.4	25.8	41.961	CC, ES
PUCKETT 31B-1 - DD - Plan #1	500.0	495.3	45.0	42.9	22.128	SF
PUCKETT 31C-1 - DD - Plan #1	234.9	234.9	19.3	18.5	24.578	CC, ES
PUCKETT 31C-1 - DD - Plan #1	400.0	399.0	23.0	21.5	15.116	SF
PUCKETT 32A-1 - DD - Plan #1	200.0	200.0	24.2	23.6	38.480	CC, ES
PUCKETT 32A-1 - DD - Plan #1	1,600.0	1,575.4	197.1	183.2	14.181	SF
PUCKETT 32C-1 - DD - Plan #1	300.0	300.0	16.3	15.2	15.067	CC, ES
PUCKETT 32C-1 - DD - Plan #1	2,300.0	2,288.7	173.9	151.2	7.660	SF
PUCKETT 33C-1 - DD - Plan #1	242.2	242.2	15.3	14.5	18.691	CC
PUCKETT 33C-1 - DD - Plan #1	300.0	300.0	15.3	14.3	14.338	ES
PUCKETT 33C-1 - DD - Plan #1	2,400.0	2,385.7	195.1	170.6	7.960	SF
PUCKETT 34A-1 - DD - Plan #1	300.0	300.0	23.6	22.5	21.871	CC
PUCKETT 34A-1 - DD - Plan #1	400.0	400.0	23.9	22.4	15.749	ES
PUCKETT 34A-1 - DD - Plan #1	1,500.0	1,491.8	146.1	133.3	11.429	SF
PUCKETT SWD E1-797 - VH - Plan #1	300.0	300.0	47.7	46.6	44.191	CC
PUCKETT SWD E1-797 - VH - Plan #1	400.0	400.0	48.0	46.4	31.587	ES
PUCKETT SWD E1-797 - VH - Plan #1	700.0	697.6	65.3	62.1	20.758	SF

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 11B-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-126.96	-15.3	-20.3	25.4					
100.0	100.0	100.0	100.0	0.1	0.1	-126.96	-15.3	-20.3	25.4	25.3	0.18	141.456		
200.0	200.0	200.0	200.0	0.3	0.3	-126.96	-15.3	-20.3	25.4	24.8	0.63	40.416		
300.0	300.0	300.3	300.3	0.5	0.5	-121.13	-12.8	-21.2	24.8	23.7	1.08	22.883		
333.9	333.9	334.2	334.1	0.6	0.6	135.14	-10.9	-21.9	24.6	23.4	1.24	19.919 CC, ES		
400.0	400.0	400.0	399.6	0.8	0.8	149.94	-5.5	-23.9	25.8	24.2	1.56	16.498 SF		
500.0	499.8	497.7	496.5	1.0	1.1	175.25	6.5	-28.2	37.1	34.9	2.18	16.984		
600.0	599.1	592.4	589.6	1.2	1.4	-169.88	22.5	-34.1	60.9	58.0	2.84	21.464		
700.0	697.6	683.0	677.9	1.5	1.8	-162.56	41.8	-41.1	95.0	91.5	3.47	27.334		
800.0	795.1	768.7	760.3	2.0	2.2	-158.62	63.7	-49.1	137.9	133.7	4.11	33.518		
900.0	891.4	855.7	843.5	2.5	2.7	-156.41	87.7	-57.8	187.0	182.2	4.74	39.431		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 11C-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-132.46	-22.2	-24.3	32.9					
100.0	100.0	100.0	100.0	0.1	0.1	-132.46	-22.2	-24.3	32.9	32.7	0.18	183.001		
200.0	200.0	200.0	200.0	0.3	0.3	-132.46	-22.2	-24.3	32.9	32.3	0.63	52.286		
300.0	300.0	300.0	300.0	0.5	0.5	-132.46	-22.2	-24.3	32.9	31.8	1.08	30.500 CC		
315.9	315.9	315.9	315.9	0.6	0.6	118.74	-22.2	-24.3	32.9	31.8	1.15	28.639		
400.0	400.0	400.3	400.3	0.8	0.8	123.32	-20.9	-24.9	33.3	31.7	1.53	21.785 ES		
500.0	499.8	499.7	499.5	1.0	1.0	141.62	-14.9	-27.6	37.3	35.2	2.05	18.196 SF		
600.0	599.1	596.7	595.8	1.2	1.3	162.77	-4.6	-32.3	51.1	48.4	2.70	18.901		
700.0	697.6	690.2	688.0	1.5	1.5	177.22	9.5	-38.7	77.0	73.7	3.38	22.821		
800.0	795.1	779.1	774.8	2.0	1.9	-174.33	26.7	-46.5	113.7	109.7	4.02	28.257		
900.0	891.4	867.6	860.7	2.5	2.3	-169.39	46.0	-55.3	158.3	153.6	4.65	34.022		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 13B-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-138.53	-36.4	-32.2	48.6					
100.0	100.0	100.0	100.0	0.1	0.1	-138.53	-36.4	-32.2	48.6	48.4	0.18	270.278		
200.0	200.0	200.0	200.0	0.3	0.3	-138.53	-36.4	-32.2	48.6	48.0	0.63	77.222 CC, ES		
300.0	300.0	297.6	297.5	0.5	0.5	-139.44	-38.7	-33.1	51.0	50.0	1.05	48.488		
400.0	400.0	394.6	394.3	0.8	0.7	110.58	-45.6	-36.0	58.8	57.3	1.51	38.920		
500.0	499.8	490.4	489.2	1.0	1.0	112.03	-56.7	-40.7	73.3	71.3	2.01	36.470 SF		
600.0	599.1	584.1	581.6	1.2	1.3	114.55	-71.9	-47.0	94.5	91.9	2.58	36.564		
700.0	697.6	675.9	671.0	1.5	1.7	117.05	-90.8	-54.9	122.4	119.1	3.25	37.616		
800.0	795.1	770.3	762.6	2.0	2.2	119.78	-111.7	-63.6	154.5	150.5	3.99	38.684		
900.0	891.4	863.3	852.9	2.5	2.6	122.60	-132.3	-72.2	189.7	184.8	4.82	39.369		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 21A-1 - HZ - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-99.96	-2.2	-12.4	12.6					
100.0	100.0	100.0	100.0	0.1	0.1	-99.96	-2.2	-12.4	12.6	12.4	0.18	70.132		
200.0	200.0	200.0	200.0	0.3	0.3	-99.96	-2.2	-12.4	12.6	12.0	0.63	20.038		
300.0	300.0	300.0	300.0	0.5	0.5	-99.96	-2.2	-12.4	12.6	11.5	1.08	11.689 CC, ES		
400.0	400.0	399.7	399.7	0.8	0.8	163.99	0.3	-13.3	14.7	13.2	1.55	9.485 SF		
500.0	499.8	498.5	498.1	1.0	1.0	-175.58	7.5	-15.9	25.6	23.5	2.14	11.990		
600.0	599.1	596.5	595.5	1.2	1.3	-163.24	19.1	-17.3	44.2	41.5	2.72	16.265		
700.0	697.6	692.9	690.6	1.5	1.6	-155.53	34.4	-15.9	69.0	65.6	3.32	20.786		
800.0	795.1	787.0	782.6	2.0	1.9	-150.28	53.3	-11.9	99.7	95.8	3.95	25.213		
900.0	891.4	878.3	871.1	2.5	2.3	-146.42	75.1	-5.6	136.2	131.6	4.64	29.349		
1,000.0	986.1	966.7	955.6	3.1	2.7	-143.53	99.6	2.8	178.2	172.8	5.38	33.100		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 21C-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-59.75	5.1	-8.8	10.1					
100.0	100.0	100.0	100.0	0.1	0.1	-59.75	5.1	-8.8	10.1	10.0	0.18	56.339		
200.0	200.0	200.0	200.0	0.3	0.3	-59.75	5.1	-8.8	10.1	9.5	0.63	16.097		
300.0	300.0	300.0	300.0	0.5	0.5	-59.75	5.1	-8.8	10.1	9.1	1.08	9.390 CC, ES		
400.0	400.0	399.8	399.8	0.8	0.8	-167.46	5.8	-8.8	12.0	10.4	1.55	7.695 SF		
500.0	499.8	498.7	498.6	1.0	1.0	-160.06	10.9	-9.3	21.6	19.5	2.10	10.299		
600.0	599.1	596.9	596.2	1.2	1.2	-154.36	20.7	-9.3	39.1	36.4	2.68	14.585		
700.0	697.6	694.1	692.5	1.5	1.5	-149.60	34.0	-6.1	61.6	58.4	3.26	18.876		
800.0	795.1	789.8	786.5	2.0	1.8	-145.73	50.5	0.4	89.2	85.3	3.90	22.855		
900.0	891.4	884.1	878.5	2.5	2.2	-143.00	69.3	9.4	121.5	116.9	4.60	26.388		
1,000.0	986.1	977.3	969.2	3.1	2.6	-142.30	88.1	18.6	157.8	152.4	5.34	29.551		
1,100.0	1,080.2	1,070.0	1,059.6	3.7	3.0	-142.55	106.9	27.7	195.3	189.3	6.05	32.300		



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 21D-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISWWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-21.76	12.0	-4.8	12.9					
100.0	100.0	100.0	100.0	0.1	0.1	-21.76	12.0	-4.8	12.9	12.8	0.18	72.000		
200.0	200.0	200.0	200.0	0.3	0.3	-21.76	12.0	-4.8	12.9	12.3	0.63	20.571		
300.0	300.0	300.0	300.0	0.5	0.5	-21.76	12.0	-4.8	12.9	11.9	1.08	12.000 CC, ES		
400.0	400.0	400.0	400.0	0.8	0.8	-135.21	12.0	-4.8	14.0	12.4	1.54	9.087 SF		
500.0	499.8	499.4	499.3	1.0	1.0	-141.87	14.2	-3.4	20.1	18.0	2.04	9.821		
600.0	599.1	598.1	597.7	1.2	1.2	-141.93	20.6	0.8	32.5	29.9	2.60	12.493		
700.0	697.6	695.4	694.3	1.5	1.5	-140.09	31.2	7.6	51.0	47.8	3.20	15.931		
800.0	795.1	791.5	788.8	2.0	1.8	-138.29	45.4	16.8	75.5	71.6	3.87	19.504		
900.0	891.4	887.3	882.9	2.5	2.1	-138.49	60.4	26.5	104.2	99.6	4.58	22.728		
1,000.0	986.1	981.8	975.7	3.1	2.5	-139.89	75.3	36.1	136.7	131.3	5.33	25.663		
1,100.0	1,080.2	1,075.8	1,068.1	3.7	2.8	-141.46	90.0	45.6	170.5	164.5	6.03	28.290		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 22A-36 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-119.06	-9.1	-16.4	18.7					
100.0	100.0	100.0	100.0	0.1	0.1	-119.06	-9.1	-16.4	18.7	18.6	0.18	104.164		
200.0	200.0	200.0	200.0	0.3	0.3	-119.06	-9.1	-16.4	18.7	18.1	0.63	29.761		
300.0	300.0	300.0	300.0	0.5	0.5	-118.56	-8.9	-16.4	18.7	17.6	1.08	17.341 CC		
320.0	320.0	320.1	320.0	0.6	0.6	133.86	-8.6	-16.6	18.7	17.6	1.17	16.030 ES		
400.0	400.0	399.9	399.8	0.8	0.8	147.02	-5.3	-17.9	19.9	18.3	1.54	12.889 SF		
500.0	499.8	498.6	498.1	1.0	1.0	172.12	3.0	-21.2	29.3	27.2	2.13	13.749		
600.0	599.1	596.3	594.9	1.2	1.3	-170.88	15.9	-23.6	48.0	45.3	2.75	17.469		
700.0	697.6	691.5	688.6	1.5	1.6	-160.88	32.9	-24.3	74.6	71.2	3.37	22.161		
800.0	795.1	783.7	778.5	2.0	2.0	-154.63	53.5	-23.2	108.4	104.4	4.01	27.048		
900.0	891.4	872.5	864.0	2.5	2.4	-150.35	77.1	-20.6	148.8	144.1	4.68	31.773		
1,000.0	986.1	957.4	944.7	3.1	2.8	-147.31	103.0	-16.8	195.3	189.9	5.39	36.250		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 22C-1 - DD - Plan #1												Offset Site Error:	0.0 usft
Survey Program: 0-ISWWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	29.71	6.9	4.0	8.0				
100.0	100.0	100.0	100.0	0.1	0.1	29.71	6.9	4.0	8.0	7.8	0.18	44.342	
200.0	200.0	200.0	200.0	0.3	0.3	29.71	6.9	4.0	8.0	7.3	0.63	12.669	
300.0	300.0	300.0	300.0	0.5	0.5	29.71	6.9	4.0	8.0	6.9	1.08	7.390	
400.0	400.0	400.0	400.0	0.8	0.8	-89.81	6.9	4.0	7.8	6.3	1.52	5.164	
400.7	400.7	400.7	400.7	0.8	0.8	-90.00	6.9	4.0	7.8	6.3	1.52	5.154 CC, ES	
500.0	499.8	499.8	499.8	1.0	1.0	-129.63	6.9	4.0	10.2	8.2	2.01	5.066 SF	
600.0	599.1	599.1	599.1	1.2	1.2	-156.58	6.9	4.0	19.9	17.2	2.63	7.567	
700.0	697.6	699.1	699.1	1.5	1.4	-165.22	6.8	6.5	33.9	30.7	3.21	10.556	
800.0	795.1	797.8	797.6	2.0	1.6	-168.33	6.6	11.9	50.7	46.9	3.77	13.434	
900.0	891.4	895.3	895.0	2.5	1.8	-170.56	6.3	17.3	72.6	68.3	4.36	16.671	
1,000.0	986.1	991.6	991.1	3.1	2.1	-172.16	6.1	22.5	99.6	94.7	4.91	20.266	
1,100.0	1,080.2	1,087.3	1,086.7	3.7	2.3	-173.23	5.8	27.8	128.2	122.8	5.35	23.944	
1,200.0	1,174.4	1,183.1	1,182.4	4.4	2.5	-173.91	5.6	33.0	156.9	151.0	5.81	26.979	
1,300.0	1,268.6	1,278.9	1,278.0	5.1	2.7	-174.38	5.3	38.3	185.5	179.2	6.29	29.501	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 22D-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-151.50	-7.3	-4.0	8.3					
100.0	100.0	100.0	100.0	0.1	0.1	-151.50	-7.3	-4.0	8.3	8.1	0.18	46.068		
200.0	200.0	200.0	200.0	0.3	0.3	-151.50	-7.3	-4.0	8.3	7.7	0.63	13.162		
300.0	300.0	300.0	300.0	0.5	0.5	-151.50	-7.3	-4.0	8.3	7.2	1.08	7.678 CC		
317.1	317.1	317.1	317.1	0.6	0.6	100.01	-7.3	-4.0	8.3	7.1	1.15	7.184		
400.0	400.0	400.0	400.0	0.8	0.8	109.26	-7.3	-4.0	8.7	7.1	1.52	5.689 ES, SF		
500.0	499.8	499.8	499.8	1.0	1.0	138.88	-7.3	-4.0	12.4	10.4	2.04	6.112		
600.0	599.1	600.0	600.0	1.2	1.2	155.68	-8.3	-1.5	20.4	17.7	2.61	7.802		
700.0	697.6	700.8	700.4	1.5	1.4	162.09	-11.4	5.8	29.1	25.9	3.17	9.179		
800.0	795.1	800.5	799.5	2.0	1.7	165.66	-15.9	16.4	39.6	35.9	3.75	10.558		
900.0	891.4	899.3	897.6	2.5	1.9	168.79	-20.4	27.0	55.2	50.8	4.36	12.665		
1,000.0	986.1	997.1	994.7	3.1	2.2	171.16	-24.8	37.5	75.8	70.9	4.94	15.363		
1,100.0	1,080.2	1,094.5	1,091.5	3.7	2.5	172.69	-29.3	47.9	98.2	92.8	5.40	18.186		
1,200.0	1,174.4	1,192.0	1,188.2	4.4	2.8	173.66	-33.7	58.4	120.6	114.7	5.88	20.508		
1,300.0	1,268.6	1,289.4	1,285.0	5.1	3.0	174.33	-38.1	68.9	143.0	136.7	6.38	22.432		
1,400.0	1,362.7	1,386.8	1,381.8	5.7	3.3	174.81	-42.6	79.4	165.5	158.6	6.88	24.041		
1,500.0	1,456.9	1,484.3	1,478.6	6.4	3.6	175.18	-47.0	89.8	187.9	180.5	7.40	25.395		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 23A-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-149.94	-27.3	-15.8	31.6					
100.0	100.0	100.0	100.0	0.1	0.1	-149.94	-27.3	-15.8	31.6	31.4	0.18	175.502		
200.0	200.0	200.0	200.0	0.3	0.3	-149.94	-27.3	-15.8	31.6	30.9	0.63	50.144		
300.0	300.0	300.0	300.0	0.5	0.5	-149.94	-27.3	-15.8	31.6	30.5	1.08	29.250 CC		
400.0	400.0	400.0	400.0	0.8	0.8	103.77	-27.3	-15.8	31.9	30.4	1.52	20.984 ES		
500.0	499.8	499.8	499.8	1.0	1.0	114.45	-27.3	-15.8	34.0	32.0	1.98	17.159		
600.0	599.1	599.5	599.4	1.2	1.2	126.07	-29.1	-14.0	39.8	37.3	2.51	15.852		
700.0	697.6	699.5	699.2	1.5	1.4	133.03	-34.6	-8.4	48.7	45.6	3.09	15.773 SF		
800.0	795.1	799.8	798.6	2.0	1.6	136.45	-43.7	1.0	60.1	56.3	3.74	16.047		
900.0	891.4	899.6	896.8	2.5	1.9	137.97	-56.1	13.6	73.5	69.1	4.48	16.403		
1,000.0	986.1	998.0	993.5	3.1	2.3	140.58	-68.9	26.7	90.6	85.3	5.28	17.159		
1,100.0	1,080.2	1,096.2	1,089.9	3.7	2.7	143.11	-81.6	39.7	109.2	103.1	6.02	18.126		
1,200.0	1,174.4	1,194.3	1,186.4	4.4	3.0	144.89	-94.4	52.8	127.9	121.1	6.77	18.879		
1,300.0	1,268.6	1,292.5	1,282.9	5.1	3.4	146.22	-107.1	65.8	146.6	139.1	7.53	19.473		
1,400.0	1,362.7	1,390.7	1,379.3	5.7	3.8	147.25	-119.9	78.8	165.5	157.2	8.30	19.949		
1,500.0	1,456.9	1,488.9	1,475.8	6.4	4.2	148.07	-132.6	91.9	184.4	175.3	9.07	20.337		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 23B-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance				Total		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-150.62	-34.6	-19.5	39.7					
100.0	100.0	100.0	100.0	0.1	0.1	-150.62	-34.6	-19.5	39.7	39.5	0.18	220.826		
200.0	200.0	200.0	200.0	0.3	0.3	-150.62	-34.6	-19.5	39.7	39.1	0.63	63.093		
300.0	300.0	300.0	300.0	0.5	0.5	-150.62	-34.6	-19.5	39.7	38.6	1.08	36.804 CC		
400.0	400.0	400.0	400.0	0.8	0.8	102.56	-34.6	-19.5	40.0	38.5	1.52	26.340 ES		
500.0	499.8	499.4	499.3	1.0	1.0	107.75	-36.5	-17.8	42.3	40.4	1.95	21.707		
600.0	599.1	598.8	598.4	1.2	1.2	111.88	-42.3	-12.6	47.6	45.2	2.45	19.470		
700.0	697.6	698.2	697.0	1.5	1.4	114.62	-51.9	-4.0	55.7	52.6	3.05	18.236		
800.0	795.1	797.4	794.6	2.0	1.7	116.10	-65.3	8.0	66.4	62.6	3.80	17.481		
900.0	891.4	896.4	890.9	2.5	2.2	116.78	-82.2	23.3	79.6	74.9	4.70	16.946		
1,000.0	986.1	995.1	986.6	3.1	2.6	119.07	-100.2	39.4	95.2	89.5	5.72	16.651		
1,100.0	1,080.2	1,093.6	1,082.1	3.7	3.1	121.71	-118.1	55.5	111.9	105.1	6.76	16.557		
1,200.0	1,174.4	1,192.1	1,177.6	4.4	3.6	123.67	-136.1	71.5	128.7	120.9	7.81	16.491		
1,300.0	1,268.6	1,290.6	1,273.1	5.1	4.1	125.17	-154.0	87.6	145.7	136.8	8.86	16.444		
1,400.0	1,362.7	1,389.1	1,368.6	5.7	4.6	126.35	-171.9	103.7	162.7	152.8	9.92	16.407		
1,500.0	1,456.9	1,487.6	1,464.1	6.4	5.1	127.32	-189.8	119.8	179.8	168.8	10.98	16.380		
1,600.0	1,551.1	1,586.0	1,559.6	7.1	5.6	128.11	-207.8	135.9	196.9	184.9	12.04	16.359 SF		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 23C-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-136.26	-29.5	-28.2	40.8					
100.0	100.0	100.0	100.0	0.1	0.1	-136.26	-29.5	-28.2	40.8	40.7	0.18	227.082		
200.0	200.0	200.0	200.0	0.3	0.3	-136.26	-29.5	-28.2	40.8	40.2	0.63	64.881		
300.0	300.0	300.0	300.0	0.5	0.5	-136.26	-29.5	-28.2	40.8	39.8	1.08	37.847 CC, ES		
400.0	400.0	398.0	397.9	0.8	0.7	115.17	-31.9	-29.1	43.8	42.3	1.50	29.130		
500.0	499.8	495.2	494.9	1.0	0.9	117.83	-38.9	-31.6	53.6	51.7	1.97	27.214 SF		
600.0	599.1	592.8	591.7	1.2	1.2	120.77	-50.4	-35.0	69.8	67.3	2.53	27.632		
700.0	697.6	690.9	688.6	1.5	1.5	122.08	-65.9	-35.6	89.1	86.0	3.15	28.333		
800.0	795.1	788.6	784.3	2.0	1.9	122.35	-85.2	-32.9	111.1	107.2	3.88	28.607		
900.0	891.4	885.6	878.7	2.5	2.3	122.73	-106.8	-28.2	135.6	130.9	4.74	28.615		
1,000.0	986.1	981.6	972.2	3.1	2.7	124.39	-128.3	-23.5	163.0	157.3	5.69	28.632		
1,100.0	1,080.2	1,077.2	1,065.3	3.7	3.1	126.41	-149.7	-18.8	191.5	184.9	6.67	28.707		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> S1-T7S-R97W (Mesa E1 797) - PUCKETT 31B-1 - DD - Plan #1													<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-ISWWSA MWD													<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	6.75	26.2	3.1	26.4					
100.0	100.0	100.0	100.0	0.1	0.1	6.75	26.2	3.1	26.4	26.2	0.18	146.863		
200.0	200.0	200.0	200.0	0.3	0.3	6.75	26.2	3.1	26.4	25.8	0.63	41.961	CC, ES	
300.0	300.0	299.0	298.9	0.5	0.5	10.53	27.8	5.2	28.3	27.2	1.08	26.237		
400.0	400.0	397.5	397.1	0.8	0.8	-91.91	32.3	11.3	34.4	32.8	1.54	22.262		
500.0	499.8	495.3	494.1	1.0	1.1	-90.22	39.8	21.4	45.0	42.9	2.03	22.128	SF	
600.0	599.1	592.0	589.2	1.2	1.4	-91.20	50.2	35.2	59.8	57.2	2.60	23.030		
700.0	697.6	687.4	682.1	1.5	1.8	-93.09	63.2	52.7	78.7	75.5	3.26	24.137		
800.0	795.1	781.2	772.3	2.0	2.3	-95.04	78.7	73.4	101.9	97.9	4.06	25.125		
900.0	891.4	873.2	859.3	2.5	2.8	-96.74	96.4	97.2	129.3	124.3	4.99	25.922		
1,000.0	986.1	965.6	945.5	3.1	3.5	-98.46	116.5	124.1	160.4	154.3	6.06	26.454		
1,100.0	1,080.2	1,060.2	1,033.4	3.7	4.1	-100.57	137.3	152.0	192.3	185.1	7.22	26.635		



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 31C-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISWWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-2.51	19.3	-0.8	19.3					
100.0	100.0	100.0	100.0	0.1	0.1	-2.51	19.3	-0.8	19.3	19.1	0.18	107.460		
200.0	200.0	200.0	200.0	0.3	0.3	-2.51	19.3	-0.8	19.3	18.7	0.63	30.703		
234.9	234.9	234.9	234.9	0.4	0.4	-2.51	19.3	-0.8	19.3	18.5	0.79	24.578 CC, ES		
300.0	300.0	299.7	299.7	0.5	0.5	-0.87	19.6	-0.3	19.7	18.6	1.08	18.251		
400.0	400.0	399.0	398.9	0.8	0.8	-102.03	22.4	4.1	23.0	21.5	1.52	15.116 SF		
500.0	499.8	497.8	497.1	1.0	1.0	-98.66	27.8	12.8	30.9	28.9	2.00	15.436		
600.0	599.1	595.8	593.9	1.2	1.3	-98.42	35.8	25.7	43.1	40.5	2.56	16.804		
700.0	697.6	692.7	688.8	1.5	1.7	-99.34	46.3	42.5	59.3	56.1	3.23	18.369		
800.0	795.1	788.4	781.3	2.0	2.1	-100.48	59.1	63.2	79.7	75.6	4.03	19.780		
900.0	891.4	882.6	871.1	2.5	2.7	-101.50	74.1	87.3	104.0	99.1	4.97	20.938		
1,000.0	986.1	976.0	958.7	3.1	3.3	-102.47	91.2	114.8	132.3	126.2	6.05	21.842		
1,100.0	1,080.2	1,071.5	1,047.8	3.7	3.9	-103.77	109.3	144.1	161.7	154.4	7.23	22.363		
1,200.0	1,174.4	1,167.0	1,136.9	4.4	4.6	-104.67	127.5	173.3	191.2	182.7	8.44	22.662		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 32A-1 - DD - Plan #1													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCSWA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	29.31	21.1	11.9	24.2					
100.0	100.0	100.0	100.0	0.1	0.1	29.31	21.1	11.9	24.2	24.0	0.18	134.678		
200.0	200.0	200.0	200.0	0.3	0.3	29.31	21.1	11.9	24.2	23.6	0.63	38.480 CC, ES		
300.0	300.0	299.3	299.3	0.5	0.5	31.79	21.4	13.3	25.2	24.1	1.07	23.487		
400.0	400.0	398.2	397.9	0.8	0.8	-70.74	22.7	19.5	29.5	28.0	1.52	19.393		
500.0	499.8	496.6	495.7	1.0	1.0	-68.53	25.1	30.7	36.3	34.3	2.01	18.100		
600.0	599.1	594.6	592.3	1.2	1.4	-69.12	28.5	46.7	45.3	42.7	2.57	17.642		
700.0	697.6	691.9	687.3	1.5	1.8	-71.06	32.9	67.4	56.4	53.1	3.23	17.458		
800.0	795.1	788.7	780.5	2.0	2.2	-73.47	38.2	92.6	69.7	65.7	4.03	17.282		
900.0	891.4	886.0	873.1	2.5	2.8	-76.22	44.4	122.1	84.9	79.9	5.01	16.962		
1,000.0	986.1	984.6	966.6	3.1	3.4	-80.73	50.9	152.6	99.9	93.7	6.16	16.222		
1,100.0	1,080.2	1,083.1	1,060.1	3.7	4.0	-85.16	57.3	183.0	115.2	107.8	7.41	15.553		
1,200.0	1,174.4	1,181.5	1,153.5	4.4	4.7	-88.54	63.7	213.4	131.1	122.4	8.69	15.081		
1,300.0	1,268.6	1,280.0	1,246.9	5.1	5.3	-91.19	70.2	243.8	147.3	137.3	9.99	14.745		
1,400.0	1,362.7	1,378.5	1,340.4	5.7	5.9	-93.31	76.6	274.2	163.7	152.4	11.29	14.501		
1,500.0	1,456.9	1,477.0	1,433.8	6.4	6.5	-95.04	83.0	304.6	180.3	167.7	12.59	14.319		
1,600.0	1,551.1	1,575.4	1,527.2	7.1	7.2	-96.49	89.4	335.1	197.1	183.2	13.90	14.181 SF		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 32C-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	29.09	14.2	7.9	16.3					
100.0	100.0	100.0	100.0	0.1	0.1	29.09	14.2	7.9	16.3	16.1	0.18	90.405		
200.0	200.0	200.0	200.0	0.3	0.3	29.09	14.2	7.9	16.3	15.6	0.63	25.830		
300.0	300.0	300.0	300.0	0.5	0.5	29.09	14.2	7.9	16.3	15.2	1.08	15.067 CC, ES		
400.0	400.0	399.6	399.5	0.8	0.8	-76.85	14.1	10.5	17.2	15.7	1.51	11.401		
500.0	499.8	499.1	498.7	1.0	1.0	-75.58	13.8	18.3	19.6	17.6	1.96	10.019		
600.0	599.1	598.4	597.2	1.2	1.3	-76.08	13.3	31.2	23.4	20.9	2.49	9.400		
700.0	697.6	697.6	694.8	1.5	1.6	-77.55	12.6	49.1	28.5	25.4	3.14	9.097		
800.0	795.1	796.6	791.1	2.0	2.0	-79.37	11.7	72.1	35.1	31.2	3.94	8.899		
900.0	891.4	895.4	885.8	2.5	2.5	-81.17	10.6	99.9	43.1	38.1	4.93	8.727		
1,000.0	986.1	995.0	980.6	3.1	3.1	-85.50	9.5	130.4	51.5	45.4	6.11	8.421		
1,100.0	1,080.2	1,094.5	1,075.4	3.7	3.7	-90.37	8.3	160.8	60.1	52.7	7.37	8.149		
1,200.0	1,174.4	1,194.0	1,170.1	4.4	4.3	-94.01	7.1	191.2	69.0	60.4	8.65	7.977		
1,300.0	1,268.6	1,293.6	1,264.9	5.1	4.9	-96.80	5.9	221.7	78.2	68.3	9.94	7.867		
1,400.0	1,362.7	1,393.1	1,359.6	5.7	5.6	-99.00	4.7	252.1	87.5	76.3	11.22	7.796		
1,500.0	1,456.9	1,492.6	1,454.3	6.4	6.2	-100.78	3.6	282.5	96.9	84.4	12.51	7.749		
1,600.0	1,551.1	1,592.1	1,549.1	7.1	6.8	-102.24	2.4	313.0	106.4	92.6	13.79	7.717		
1,700.0	1,645.2	1,691.6	1,643.8	7.8	7.4	-103.46	1.2	343.4	115.9	100.9	15.07	7.696		
1,800.0	1,739.4	1,791.1	1,738.6	8.5	8.1	-104.50	0.0	373.8	125.5	109.2	16.34	7.682		
1,900.0	1,833.6	1,890.7	1,833.3	9.2	8.7	-105.39	-1.2	404.3	135.2	117.5	17.62	7.672		
2,000.0	1,927.7	1,990.2	1,928.0	9.9	9.3	-106.16	-2.3	434.7	144.8	125.9	18.89	7.666		
2,100.0	2,021.9	2,089.7	2,022.8	10.6	9.9	-106.83	-3.5	465.1	154.5	134.3	20.16	7.662		
2,200.0	2,116.0	2,189.2	2,117.5	11.3	10.6	-107.43	-4.7	495.6	164.2	142.7	21.43	7.660		
2,300.0	2,210.2	2,288.7	2,212.3	12.0	11.2	-107.96	-5.9	526.0	173.9	151.2	22.70	7.660 SF		
2,400.0	2,304.4	2,388.2	2,307.0	12.7	11.8	-108.43	-7.0	556.4	183.6	159.6	23.97	7.660		
2,500.0	2,398.5	2,487.8	2,401.7	13.4	12.5	-108.86	-8.2	586.9	193.3	168.1	25.23	7.661		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 33C-1 - DD - Plan #1													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCWSA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-148.92	-13.1	-7.9	15.3					
100.0	100.0	100.0	100.0	0.1	0.1	-148.92	-13.1	-7.9	15.3	15.1	0.18	85.146		
200.0	200.0	200.0	200.0	0.3	0.3	-148.92	-13.1	-7.9	15.3	14.7	0.63	24.327		
242.2	242.2	242.2	242.2	0.4	0.4	-148.92	-13.1	-7.9	15.3	14.5	0.82	18.691 CC		
300.0	300.0	300.0	300.0	0.5	0.5	-151.36	-13.5	-7.4	15.3	14.3	1.07	14.338 ES		
400.0	400.0	399.7	399.6	0.8	0.7	86.56	-16.3	-3.0	16.5	15.0	1.49	11.046		
500.0	499.8	499.3	498.6	1.0	1.0	76.46	-22.0	5.7	19.6	17.6	1.96	9.995		
600.0	599.1	598.6	596.6	1.2	1.3	70.73	-30.5	18.6	24.2	21.7	2.52	9.630		
700.0	697.6	697.6	693.5	1.5	1.7	68.11	-41.7	35.7	30.2	27.0	3.19	9.469		
800.0	795.1	796.3	788.9	2.0	2.2	67.35	-55.7	57.0	37.2	33.2	3.99	9.327		
900.0	891.4	894.7	882.5	2.5	2.8	67.63	-72.2	82.2	45.3	40.4	4.96	9.142		
1,000.0	986.1	993.1	974.5	3.1	3.4	68.40	-91.4	111.5	54.5	48.4	6.11	8.927		
1,100.0	1,080.2	1,092.3	1,066.3	3.7	4.2	68.62	-112.1	142.9	64.5	57.2	7.34	8.792		
1,200.0	1,174.4	1,191.8	1,158.3	4.4	4.9	68.79	-132.8	174.5	74.6	66.0	8.61	8.663		
1,300.0	1,268.6	1,291.3	1,250.4	5.1	5.7	68.92	-153.5	206.0	84.6	74.7	9.90	8.548		
1,400.0	1,362.7	1,390.8	1,342.4	5.7	6.5	69.02	-174.2	237.6	94.7	83.5	11.20	8.449		
1,500.0	1,456.9	1,490.2	1,434.5	6.4	7.3	69.10	-194.9	269.1	104.7	92.2	12.52	8.365		
1,600.0	1,551.1	1,589.7	1,526.5	7.1	8.0	69.17	-215.6	300.7	114.8	100.9	13.84	8.292		
1,700.0	1,645.2	1,689.2	1,618.6	7.8	8.8	69.23	-236.3	332.2	124.8	109.6	15.17	8.230		
1,800.0	1,739.4	1,788.7	1,710.7	8.5	9.6	69.27	-257.0	363.8	134.8	118.4	16.49	8.175		
1,900.0	1,833.6	1,888.2	1,802.7	9.2	10.4	69.32	-277.7	395.4	144.9	127.1	17.83	8.128		
2,000.0	1,927.7	1,987.7	1,894.8	9.9	11.2	69.35	-298.4	426.9	154.9	135.8	19.16	8.086		
2,100.0	2,021.9	2,087.2	1,986.8	10.6	12.0	69.38	-319.1	458.5	165.0	144.5	20.50	8.049		
2,200.0	2,116.0	2,186.7	2,078.9	11.3	12.7	69.41	-339.8	490.0	175.0	153.2	21.83	8.016		
2,300.0	2,210.2	2,286.2	2,170.9	12.0	13.5	69.44	-360.5	521.6	185.1	161.9	23.17	7.986		
2,400.0	2,304.4	2,385.7	2,263.0	12.7	14.3	69.46	-381.2	553.1	195.1	170.6	24.51	7.960 SF		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 34A-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-149.84	-20.4	-11.9	23.6					
100.0	100.0	100.0	100.0	0.1	0.1	-149.84	-20.4	-11.9	23.6	23.4	0.18	131.227		
200.0	200.0	200.0	200.0	0.3	0.3	-149.84	-20.4	-11.9	23.6	23.0	0.63	37.494		
300.0	300.0	300.0	300.0	0.5	0.5	-149.84	-20.4	-11.9	23.6	22.5	1.08	21.871 CC		
300.2	300.2	300.2	300.2	0.5	0.5	-149.84	-20.4	-11.9	23.6	22.5	1.08	21.851		
400.0	400.0	400.0	400.0	0.8	0.8	104.74	-20.4	-11.9	23.9	22.4	1.52	15.749 ES		
500.0	499.8	499.8	499.7	1.0	1.0	112.86	-22.2	-10.0	26.3	24.3	1.96	13.420		
600.0	599.1	599.6	599.3	1.2	1.2	118.28	-27.5	-4.3	31.2	28.8	2.46	12.672		
700.0	697.6	699.6	698.3	1.5	1.4	121.00	-36.5	5.2	38.4	35.4	3.07	12.509		
800.0	795.1	799.4	796.5	2.0	1.8	121.84	-48.9	18.4	47.7	43.9	3.81	12.543		
900.0	891.4	899.2	893.5	2.5	2.2	121.56	-64.9	35.4	59.1	54.4	4.69	12.585		
1,000.0	986.1	998.7	989.0	3.1	2.7	120.70	-84.2	55.9	72.3	66.6	5.75	12.576		
1,100.0	1,080.2	1,098.2	1,082.7	3.7	3.3	117.83	-106.9	80.0	85.9	78.9	6.96	12.342		
1,200.0	1,174.4	1,197.1	1,174.1	4.4	4.0	112.77	-132.8	107.5	99.5	91.2	8.34	11.935		
1,300.0	1,268.6	1,295.3	1,263.2	5.1	4.8	106.82	-161.2	137.6	114.1	104.3	9.83	11.614		
1,400.0	1,362.7	1,393.6	1,352.1	5.7	5.6	102.02	-189.9	168.1	129.8	118.4	11.32	11.467		
1,500.0	1,456.9	1,491.8	1,441.0	6.4	6.5	98.26	-218.6	198.6	146.1	133.3	12.78	11.429 SF		
1,600.0	1,551.1	1,590.1	1,529.9	7.1	7.3	95.27	-247.2	229.0	162.9	148.7	14.23	11.448		
1,700.0	1,645.2	1,688.3	1,618.8	7.8	8.2	92.84	-275.9	259.5	180.1	164.4	15.66	11.498		
1,800.0	1,739.4	1,786.6	1,707.7	8.5	9.0	90.83	-304.6	290.0	197.5	180.4	17.08	11.564		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 33A-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Reference Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	KB=20' @ 8349.0usft (Patterson #303)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 33A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> S1-T7S-R97W (Mesa E1 797) - PUCKETT SWD E1-797 - VH - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISWWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-150.57	-41.5	-23.4	47.7					
100.0	100.0	100.0	100.0	0.1	0.1	-150.57	-41.5	-23.4	47.7	47.5	0.18	265.146		
200.0	200.0	200.0	200.0	0.3	0.3	-150.57	-41.5	-23.4	47.7	47.0	0.63	75.756		
300.0	300.0	300.0	300.0	0.5	0.5	-150.57	-41.5	-23.4	47.7	46.6	1.08	44.191 CC		
400.0	400.0	400.0	400.0	0.8	0.8	102.28	-41.5	-23.4	48.0	46.4	1.52	31.587 ES		
500.0	499.8	499.8	499.8	1.0	1.0	109.59	-41.5	-23.4	49.8	47.8	1.98	25.200		
600.0	599.1	599.1	599.1	1.2	1.2	121.04	-41.5	-23.4	54.9	52.3	2.51	21.817		
700.0	697.6	697.6	697.6	1.5	1.4	133.55	-41.5	-23.4	65.3	62.1	3.14	20.758 SF		
800.0	795.1	795.1	795.1	2.0	1.7	144.38	-41.5	-23.4	82.2	78.4	3.82	21.530		
900.0	891.4	891.4	891.4	2.5	1.9	152.59	-41.5	-23.4	105.6	101.1	4.49	23.546		
1,000.0	986.1	986.1	986.1	3.1	2.1	158.55	-41.5	-23.4	135.1	130.0	5.11	26.446		
1,100.0	1,080.2	1,080.2	1,080.2	3.7	2.3	162.76	-41.5	-23.4	167.1	161.5	5.60	29.855		
1,200.0	1,174.4	1,174.4	1,174.4	4.4	2.5	165.61	-41.5	-23.4	199.6	193.5	6.08	32.838		

# Cathedral Energy Services

## Anticollision Report

**Company:** Caerus Oil & Gas (NAD 27)  
**Project:** Garfield County, CO  
**Reference Site:** S1-T7S-R97W (Mesa E1 797)  
**Site Error:** 0.0usft  
**Reference Well:** PUCKETT 33A-1  
**Well Error:** 0.0usft  
**Reference Wellbore:** DD  
**Reference Design:** Plan #1

**Local Co-ordinate Reference:** Well PUCKETT 33A-1  
**TVD Reference:** KB=20' @ 8349.0usft (Patterson #303)  
**MD Reference:** KB=20' @ 8349.0usft (Patterson #303)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** USA EDM 5000 Multi Users DB  
**Offset TVD Reference:** Offset Datum

Reference Depths are relative to KB=20' @ 8349.0usft (Patterson #303)  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.500000 °

Coordinates are relative to: PUCKETT 33A-1  
 Coordinate System is US State Plane 1927 (Exact solution), Colorado Central 502  
 Grid Convergence at Surface is: -1.69°

