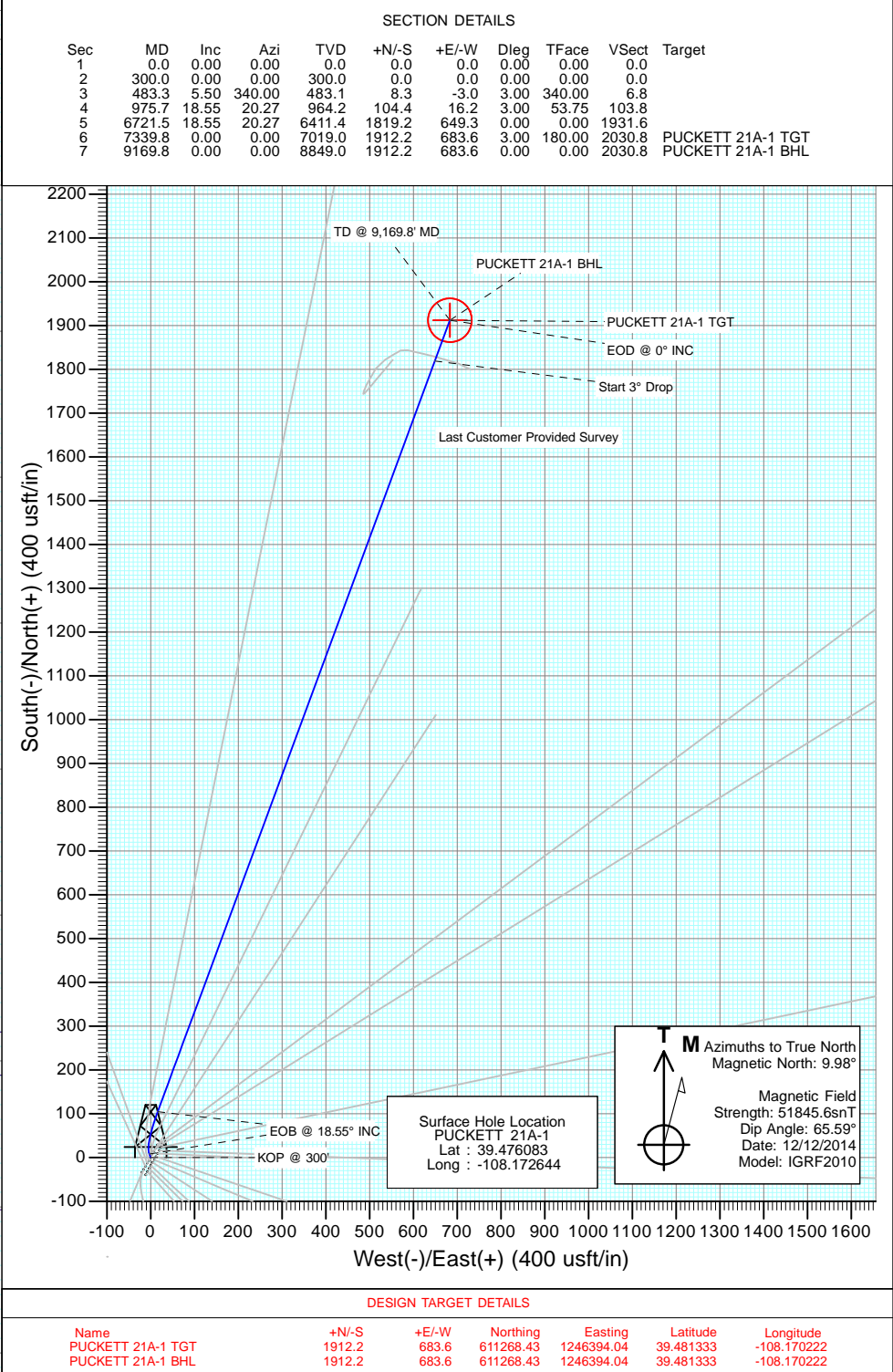
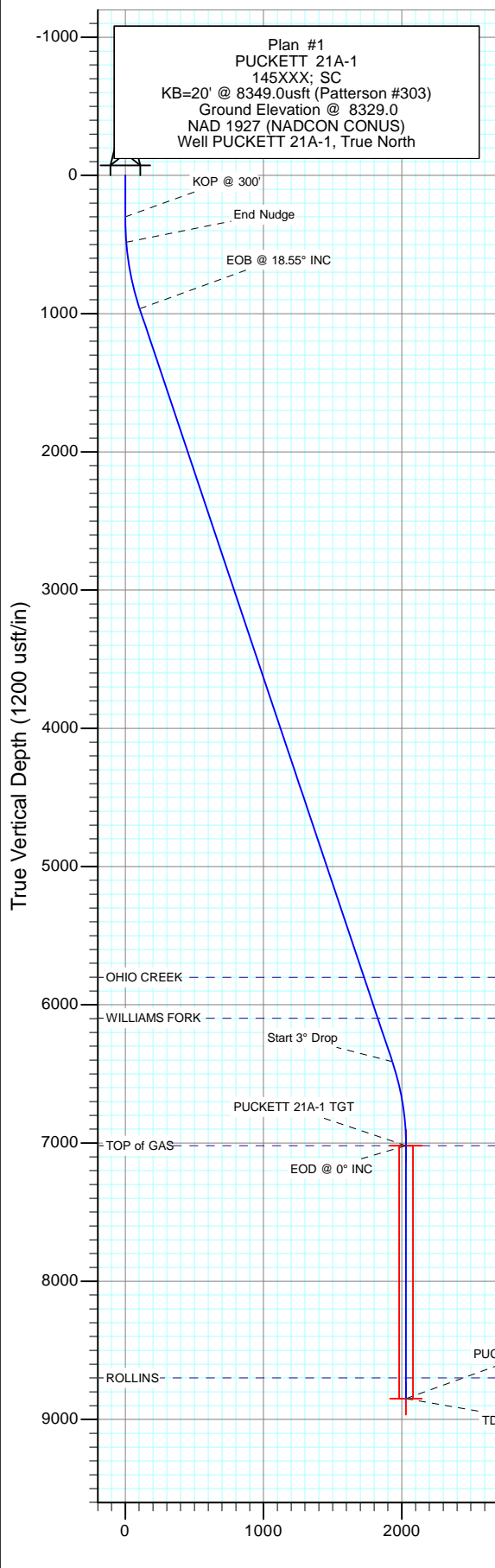
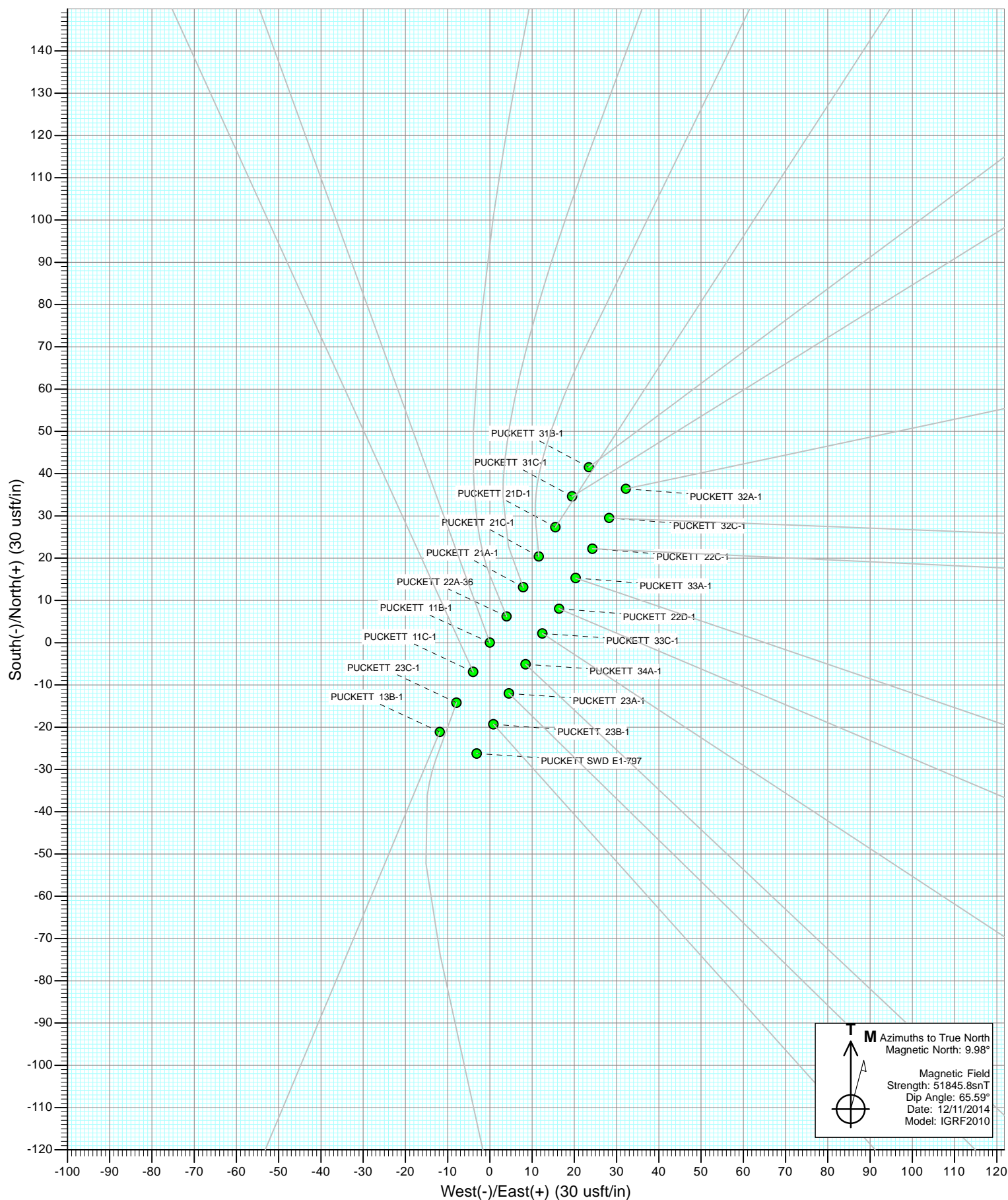
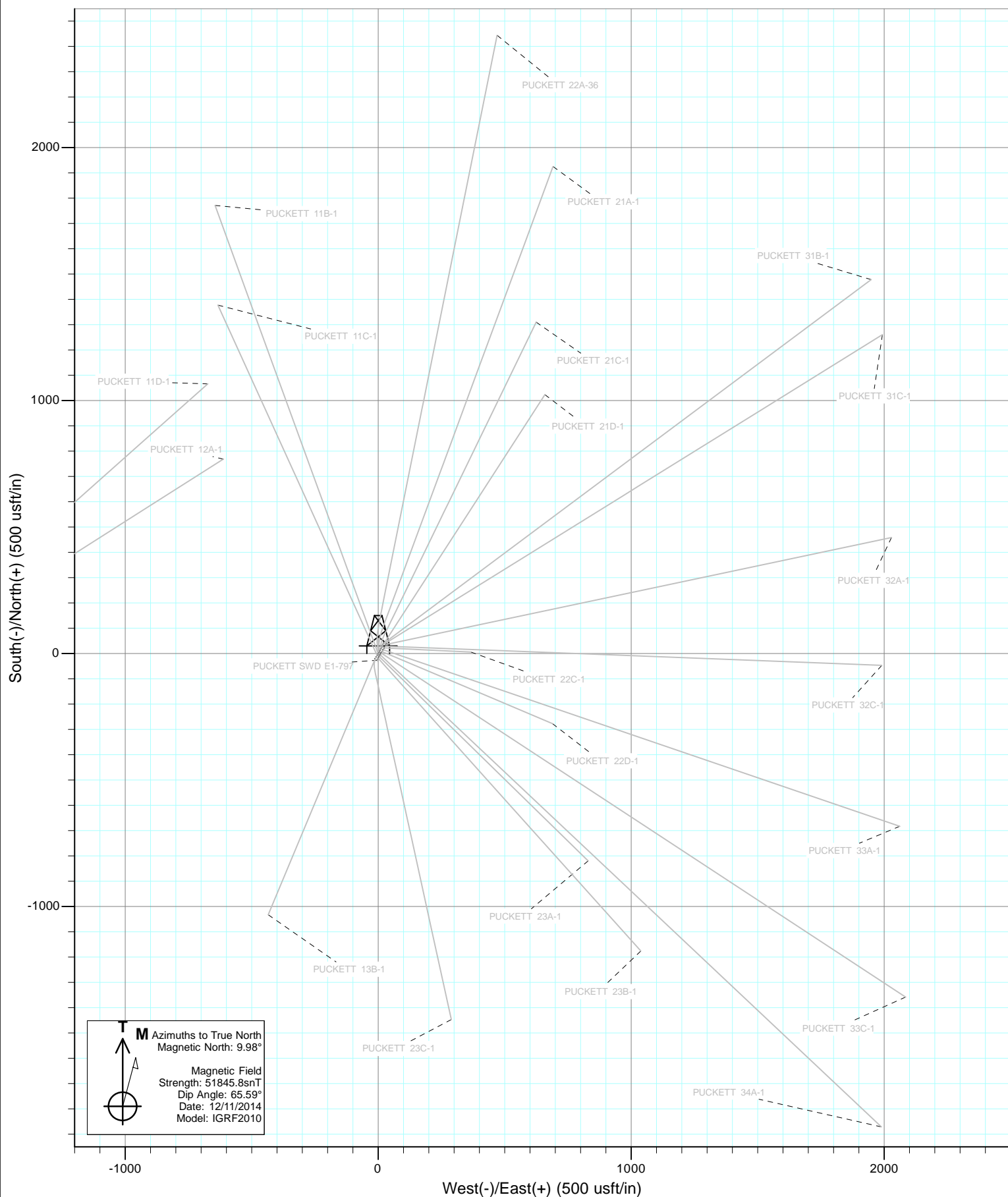




Project: Garfield County, CO  
 Site: S1-T7S-R97W (Mesa E1 797)  
 Well: PUCKETT 21A-1  
 Wellbore: HZ  
 Design: Plan #1

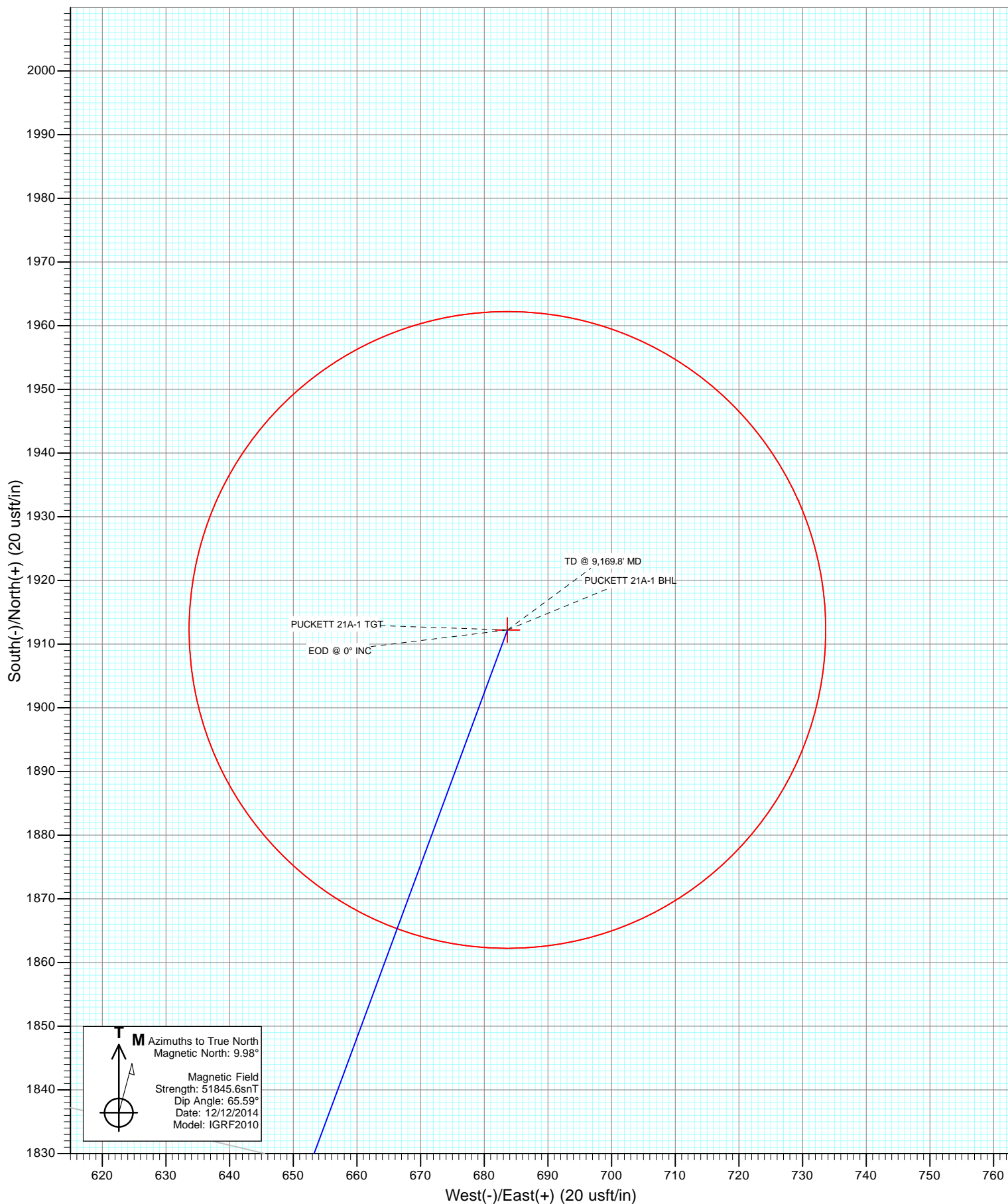








Project: Garfield County, CO  
Site: S1-T7S-R97W (Mesa E1 797)  
Well: PUCKETT 21A-1  
Wellbore: HZ  
Design: Plan #1



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<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 21A-1					
Well Position	+N/-S	0.0 usft	Northing:	609,377.13 usft	Latitude:	39.476083
	+E/-W	0.0 usft	Easting:	1,245,654.44 usft	Longitude:	-108.172644
Position Uncertainty	0.0 usft		Wellhead Elevation:	0.0 usft	Ground Level:	8,329.0 usft

<b>Wellbore</b>	HZ				
<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	19.67

<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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
483.3	5.50	340.00	483.1	8.3	-3.0	3.00	3.00	0.00	340.00	
975.7	18.55	20.27	964.2	104.4	16.2	3.00	2.65	8.18	53.75	
6,721.5	18.55	20.27	6,411.4	1,819.2	649.3	0.00	0.00	0.00	0.00	
7,339.8	0.00	0.00	7,019.0	1,912.2	683.6	3.00	-3.00	0.00	180.00	PUCKETT 21A-1 TG1
9,169.8	0.00	0.00	8,849.0	1,912.2	683.6	0.00	0.00	0.00	0.00	PUCKETT 21A-1 BHL

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<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	KOP @ 300'
400.0	3.00	340.00	400.0	2.5	-0.9	2.0	3.00	3.00	
483.3	5.50	340.00	483.1	8.3	-3.0	6.8	3.00	3.00	End Nudge
500.0	5.81	343.99	499.6	9.8	-3.5	8.1	3.00	1.86	
600.0	8.08	0.51	598.9	21.7	-4.8	18.8	3.00	2.27	
700.0	10.71	9.42	697.6	37.9	-3.3	34.6	3.00	2.63	
800.0	13.49	14.78	795.3	58.4	1.2	55.4	3.00	2.79	
900.0	16.36	18.31	892.0	83.0	8.6	81.1	3.00	2.86	
975.7	18.55	20.27	964.2	104.4	16.2	103.8	3.00	2.90	EOB @ 18.55° INC
1,000.0	18.55	20.27	987.2	111.7	18.8	111.5	0.00	0.00	
1,100.0	18.55	20.27	1,082.0	141.5	29.9	143.3	0.00	0.00	
1,200.0	18.55	20.27	1,176.8	171.4	40.9	175.1	0.00	0.00	
1,300.0	18.55	20.27	1,271.6	201.2	51.9	206.9	0.00	0.00	
1,400.0	18.55	20.27	1,366.4	231.1	62.9	238.8	0.00	0.00	
1,500.0	18.55	20.27	1,461.2	260.9	73.9	270.6	0.00	0.00	
1,600.0	18.55	20.27	1,556.0	290.7	84.9	302.4	0.00	0.00	
1,700.0	18.55	20.27	1,650.8	320.6	96.0	334.2	0.00	0.00	
1,800.0	18.55	20.27	1,745.6	350.4	107.0	366.0	0.00	0.00	
1,900.0	18.55	20.27	1,840.4	380.3	118.0	397.8	0.00	0.00	
2,000.0	18.55	20.27	1,935.3	410.1	129.0	429.6	0.00	0.00	
2,100.0	18.55	20.27	2,030.1	440.0	140.0	461.4	0.00	0.00	
2,200.0	18.55	20.27	2,124.9	469.8	151.1	493.2	0.00	0.00	
2,300.0	18.55	20.27	2,219.7	499.6	162.1	525.0	0.00	0.00	
2,400.0	18.55	20.27	2,314.5	529.5	173.1	556.9	0.00	0.00	
2,500.0	18.55	20.27	2,409.3	559.3	184.1	588.7	0.00	0.00	
2,600.0	18.55	20.27	2,504.1	589.2	195.1	620.5	0.00	0.00	
2,700.0	18.55	20.27	2,598.9	619.0	206.2	652.3	0.00	0.00	
2,800.0	18.55	20.27	2,693.7	648.9	217.2	684.1	0.00	0.00	
2,900.0	18.55	20.27	2,788.5	678.7	228.2	715.9	0.00	0.00	
3,000.0	18.55	20.27	2,883.3	708.6	239.2	747.7	0.00	0.00	
3,100.0	18.55	20.27	2,978.1	738.4	250.2	779.5	0.00	0.00	
3,200.0	18.55	20.27	3,072.9	768.2	261.3	811.3	0.00	0.00	
3,300.0	18.55	20.27	3,167.7	798.1	272.3	843.2	0.00	0.00	
3,400.0	18.55	20.27	3,262.5	827.9	283.3	875.0	0.00	0.00	
3,500.0	18.55	20.27	3,357.3	857.8	294.3	906.8	0.00	0.00	
3,600.0	18.55	20.27	3,452.1	887.6	305.3	938.6	0.00	0.00	
3,700.0	18.55	20.27	3,546.9	917.5	316.3	970.4	0.00	0.00	
3,800.0	18.55	20.27	3,641.7	947.3	327.4	1,002.2	0.00	0.00	
3,900.0	18.55	20.27	3,736.5	977.1	338.4	1,034.0	0.00	0.00	
4,000.0	18.55	20.27	3,831.3	1,007.0	349.4	1,065.8	0.00	0.00	
4,100.0	18.55	20.27	3,926.2	1,036.8	360.4	1,097.6	0.00	0.00	
4,200.0	18.55	20.27	4,021.0	1,066.7	371.4	1,129.5	0.00	0.00	
4,300.0	18.55	20.27	4,115.8	1,096.5	382.5	1,161.3	0.00	0.00	
4,400.0	18.55	20.27	4,210.6	1,126.4	393.5	1,193.1	0.00	0.00	
4,500.0	18.55	20.27	4,305.4	1,156.2	404.5	1,224.9	0.00	0.00	
4,600.0	18.55	20.27	4,400.2	1,186.0	415.5	1,256.7	0.00	0.00	
4,700.0	18.55	20.27	4,495.0	1,215.9	426.5	1,288.5	0.00	0.00	
4,800.0	18.55	20.27	4,589.8	1,245.7	437.6	1,320.3	0.00	0.00	
4,900.0	18.55	20.27	4,684.6	1,275.6	448.6	1,352.1	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 21A-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 21A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<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	18.55	20.27	4,779.4	1,305.4	459.6	1,383.9	0.00	0.00	
5,100.0	18.55	20.27	4,874.2	1,335.3	470.6	1,415.8	0.00	0.00	
5,200.0	18.55	20.27	4,969.0	1,365.1	481.6	1,447.6	0.00	0.00	
5,300.0	18.55	20.27	5,063.8	1,394.9	492.7	1,479.4	0.00	0.00	
5,400.0	18.55	20.27	5,158.6	1,424.8	503.7	1,511.2	0.00	0.00	
5,500.0	18.55	20.27	5,253.4	1,454.6	514.7	1,543.0	0.00	0.00	
5,600.0	18.55	20.27	5,348.2	1,484.5	525.7	1,574.8	0.00	0.00	
5,700.0	18.55	20.27	5,443.0	1,514.3	536.7	1,606.6	0.00	0.00	
5,800.0	18.55	20.27	5,537.8	1,544.2	547.7	1,638.4	0.00	0.00	
5,900.0	18.55	20.27	5,632.6	1,574.0	558.8	1,670.2	0.00	0.00	
6,000.0	18.55	20.27	5,727.4	1,603.9	569.8	1,702.1	0.00	0.00	
6,077.6	18.55	20.27	5,801.0	1,627.0	578.3	1,726.7	0.00	0.00	OHIO CREEK
6,100.0	18.55	20.27	5,822.2	1,633.7	580.8	1,733.9	0.00	0.00	
6,200.0	18.55	20.27	5,917.1	1,663.5	591.8	1,765.7	0.00	0.00	
6,300.0	18.55	20.27	6,011.9	1,693.4	602.8	1,797.5	0.00	0.00	
6,389.8	18.55	20.27	6,097.0	1,720.2	612.7	1,826.1	0.00	0.00	WILLIAMS FORK
6,400.0	18.55	20.27	6,106.7	1,723.2	613.9	1,829.3	0.00	0.00	
6,500.0	18.55	20.27	6,201.5	1,753.1	624.9	1,861.1	0.00	0.00	
6,600.0	18.55	20.27	6,296.3	1,782.9	635.9	1,892.9	0.00	0.00	
6,700.0	18.55	20.27	6,391.1	1,812.8	646.9	1,924.7	0.00	0.00	
6,721.5	18.55	20.27	6,411.4	1,819.2	649.3	1,931.6	0.00	0.00	Start 3° Drop
6,800.0	16.19	20.27	6,486.4	1,841.2	657.4	1,955.0	3.00	-3.00	
6,900.0	13.19	20.27	6,583.1	1,864.9	666.2	1,980.4	3.00	-3.00	
7,000.0	10.19	20.27	6,681.0	1,884.0	673.2	2,000.6	3.00	-3.00	
7,100.0	7.19	20.27	6,779.8	1,898.1	678.4	2,015.7	3.00	-3.00	
7,200.0	4.19	20.27	6,879.3	1,907.4	681.9	2,025.7	3.00	-3.00	
7,300.0	1.19	20.27	6,979.2	1,911.8	683.5	2,030.4	3.00	-3.00	
7,339.8	0.00	0.00	7,019.0	1,912.2	683.6	2,030.8	3.00	-3.00	EOD @ 0° INC - TOP of GAS
7,400.0	0.00	0.00	7,079.2	1,912.2	683.6	2,030.8	0.00	0.00	
7,500.0	0.00	0.00	7,179.2	1,912.2	683.6	2,030.8	0.00	0.00	
7,600.0	0.00	0.00	7,279.2	1,912.2	683.6	2,030.8	0.00	0.00	
7,700.0	0.00	0.00	7,379.2	1,912.2	683.6	2,030.8	0.00	0.00	
7,800.0	0.00	0.00	7,479.2	1,912.2	683.6	2,030.8	0.00	0.00	
7,900.0	0.00	0.00	7,579.2	1,912.2	683.6	2,030.8	0.00	0.00	
8,000.0	0.00	0.00	7,679.2	1,912.2	683.6	2,030.8	0.00	0.00	
8,100.0	0.00	0.00	7,779.2	1,912.2	683.6	2,030.8	0.00	0.00	
8,200.0	0.00	0.00	7,879.2	1,912.2	683.6	2,030.8	0.00	0.00	
8,300.0	0.00	0.00	7,979.2	1,912.2	683.6	2,030.8	0.00	0.00	
8,400.0	0.00	0.00	8,079.2	1,912.2	683.6	2,030.8	0.00	0.00	
8,500.0	0.00	0.00	8,179.2	1,912.2	683.6	2,030.8	0.00	0.00	
8,600.0	0.00	0.00	8,279.2	1,912.2	683.6	2,030.8	0.00	0.00	
8,700.0	0.00	0.00	8,379.2	1,912.2	683.6	2,030.8	0.00	0.00	
8,800.0	0.00	0.00	8,479.2	1,912.2	683.6	2,030.8	0.00	0.00	
8,900.0	0.00	0.00	8,579.2	1,912.2	683.6	2,030.8	0.00	0.00	
9,000.0	0.00	0.00	8,679.2	1,912.2	683.6	2,030.8	0.00	0.00	
9,019.8	0.00	0.00	8,699.0	1,912.2	683.6	2,030.8	0.00	0.00	ROLLINS
9,100.0	0.00	0.00	8,779.2	1,912.2	683.6	2,030.8	0.00	0.00	
9,169.8	0.00	0.00	8,849.0	1,912.2	683.6	2,030.8	0.00	0.00	TD @ 9,169.8' MD

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	Plan #1		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
PUCKETT 21A-1 BHL	0.00	0.00	8,849.0	1,912.2	683.6	611,268.43	1,246,394.04	39.481333	-108.170222
- plan hits target center									
- Circle (radius 50.0)									
PUCKETT 21A-1 TGT	0.00	0.00	7,019.0	1,912.2	683.6	611,268.43	1,246,394.04	39.481333	-108.170222
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
6,077.6	5,801.0	OHIO CREEK				
6,389.8	6,097.0	WILLIAMS FORK				
7,339.8	7,019.0	TOP of GAS				
9,019.8	8,699.0	ROLLINS				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
300.0	300.0	0.0	0.0	KOP @ 300'
483.3	483.1	8.3	-3.0	End Nudge
975.7	964.2	104.4	16.2	EOB @ 18.55° INC
6,721.5	6,411.4	1,819.2	649.3	Start 3° Drop
7,339.8	7,019.0	1,912.2	683.6	EOD @ 0° INC
9,169.8	8,849.0	1,912.2	683.6	TD @ 9,169.8' MD



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

**Garfield County, CO**

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

**PUCKETT 21A-1**

**HZ**

**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 21A-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 21A-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>	HZ	<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	9,169.8	Plan #1 (HZ)	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 21A-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 21A-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>	HZ	<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)		
Puckett 241-1						
Puckett 241-1 - STK - Plan #1	6,529.8	6,101.7	118.1	70.1	2.461	CC, ES, SF
S1-T7S-R97W (Mesa E1 797)						
PUCKETT 11B-1 - DD - Plan #1	434.0	434.5	12.0	10.2	6.930	CC, ES
PUCKETT 11B-1 - DD - Plan #1	500.0	500.3	12.5	10.4	6.035	SF
PUCKETT 11C-1 - DD - Plan #1	300.0	300.0	23.3	22.2	21.576	CC, ES
PUCKETT 11C-1 - DD - Plan #1	700.0	702.4	34.1	30.8	10.351	SF
PUCKETT 13B-1 - DD - Plan #1	200.0	200.0	39.5	38.9	62.813	CC, ES
PUCKETT 13B-1 - DD - Plan #1	500.0	490.2	69.8	67.6	32.396	SF
PUCKETT 21C-1 - DD - Plan #1	433.1	432.8	6.9	5.2	4.075	CC, ES
PUCKETT 21C-1 - DD - Plan #1	700.0	698.9	9.9	6.8	3.204	SF
PUCKETT 21D-1 - DD - Plan #1	462.9	462.3	13.5	11.6	7.337	CC, ES
PUCKETT 21D-1 - DD - Plan #1	500.0	499.0	14.1	12.2	7.101	SF
PUCKETT 22A-36 - DD - Plan #1	535.9	536.5	6.8	4.6	3.062	CC
PUCKETT 22A-36 - DD - Plan #1	600.0	600.7	7.1	4.5	2.730	ES
PUCKETT 22A-36 - DD - Plan #1	700.0	700.9	8.6	5.4	2.671	SF
PUCKETT 22C-1 - DD - Plan #1	408.9	408.8	18.5	16.9	11.791	CC, ES
PUCKETT 22C-1 - DD - Plan #1	600.0	598.9	24.7	22.2	9.764	SF
PUCKETT 22D-1 - DD - Plan #1	300.0	300.0	9.9	8.8	9.163	CC, ES
PUCKETT 22D-1 - DD - Plan #1	400.0	400.0	12.0	10.5	7.636	SF
PUCKETT 23A-1 - DD - Plan #1	300.0	300.0	25.4	24.3	23.505	CC, ES
PUCKETT 23A-1 - DD - Plan #1	500.0	499.6	35.0	32.8	16.277	SF
PUCKETT 23B-1 - DD - Plan #1	300.0	300.0	33.2	32.1	30.755	CC, ES
PUCKETT 23B-1 - DD - Plan #1	500.0	498.1	44.2	42.1	20.729	SF
PUCKETT 23C-1 - DD - Plan #1	300.0	300.0	31.6	30.5	29.258	CC, ES
PUCKETT 23C-1 - DD - Plan #1	400.0	398.2	35.9	34.3	23.191	SF
PUCKETT 31B-1 - DD - Plan #1	200.0	200.0	32.4	31.7	51.437	CC, ES
PUCKETT 31B-1 - DD - Plan #1	1,400.0	1,360.0	199.2	189.2	19.762	SF
PUCKETT 31C-1 - DD - Plan #1	233.6	233.6	24.4	23.6	31.278	CC, ES
PUCKETT 31C-1 - DD - Plan #1	500.0	495.8	35.1	33.1	17.349	SF
PUCKETT 32A-1 - DD - Plan #1	200.0	200.0	33.6	33.0	53.463	CC, ES
PUCKETT 32A-1 - DD - Plan #1	500.0	493.6	49.9	47.9	24.681	SF
PUCKETT 32C-1 - DD - Plan #1	300.0	300.0	26.1	25.0	24.199	CC, ES
PUCKETT 32C-1 - DD - Plan #1	500.0	496.5	34.7	32.7	17.399	SF
PUCKETT 33A-1 - DD - Plan #1	300.0	300.0	12.6	11.5	11.689	CC, ES
PUCKETT 33A-1 - DD - Plan #1	400.0	399.4	14.7	13.2	9.619	SF
PUCKETT 33C-1 - DD - Plan #1	234.0	234.0	11.8	11.0	15.126	CC, ES
PUCKETT 33C-1 - DD - Plan #1	300.0	299.7	12.4	11.3	11.570	SF
PUCKETT 34A-1 - DD - Plan #1	300.0	300.0	18.2	17.2	16.897	CC, ES
PUCKETT 34A-1 - DD - Plan #1	400.0	400.0	20.7	19.1	13.044	SF
PUCKETT SWD E1-797 - VH - Plan #1	300.0	300.0	40.9	39.8	37.866	CC, ES
PUCKETT SWD E1-797 - VH - Plan #1	600.0	598.9	61.4	58.7	22.719	SF

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Puckett 241-1 - Puckett 241-1 - STK - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 510-, 6750-													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		
6,100.0	5,822.3	5,698.5	5,692.7	34.6	10.6	-34.70	1,823.1	537.5	194.3	159.3	34.98	5.555		
6,200.0	5,917.1	5,792.4	5,786.6	35.2	10.8	-42.25	1,820.9	533.4	167.9	130.1	37.77	4.444		
6,300.0	6,011.9	5,886.7	5,880.8	35.8	11.0	-52.34	1,818.1	529.4	144.8	103.6	41.19	3.515		
6,400.0	6,106.7	5,980.6	5,974.5	36.5	11.2	-65.47	1,814.7	525.3	127.4	82.6	44.80	2.843		
6,500.0	6,201.5	6,074.0	6,067.7	37.1	11.4	-81.36	1,810.7	521.3	118.6	71.0	47.53	2.495		
6,529.8	6,229.7	6,101.7	6,095.3	37.3	11.4	-86.40	1,809.4	520.1	118.1	70.1	47.98	2.461	CC, ES, SF	
6,600.0	6,296.3	6,166.9	6,160.4	37.7	11.5	-98.19	1,806.0	517.2	120.9	72.7	48.24	2.507		
6,700.0	6,391.1	6,259.3	6,252.6	38.4	11.7	-113.42	1,800.7	513.3	134.4	87.4	46.97	2.860		
6,800.0	6,486.4	6,352.1	6,345.1	38.9	11.9	-125.70	1,794.9	509.3	155.4	110.6	44.82	3.467		
6,900.0	6,583.1	6,446.4	6,439.1	39.3	12.1	-134.27	1,788.6	505.4	178.4	135.5	42.92	4.157		
8,400.0	8,079.2	7,975.9	7,963.9	41.2	14.4	-127.62	1,793.2	529.2	195.7	152.7	43.07	4.544		
8,500.0	8,179.2	8,075.5	8,063.1	41.3	14.6	-127.05	1,799.8	534.8	187.2	143.7	43.56	4.298		
8,600.0	8,279.2	8,174.4	8,161.6	41.4	14.7	-126.44	1,806.4	540.3	178.8	134.7	44.06	4.058		
8,700.0	8,379.2	8,271.2	8,258.2	41.5	14.9	-125.87	1,811.9	544.9	171.6	127.0	44.54	3.852		
8,800.0	8,479.2	8,368.3	8,355.1	41.6	15.0	-125.40	1,816.2	548.5	166.0	121.0	44.98	3.690		
8,900.0	8,579.2	8,465.5	8,452.2	41.7	15.2	-125.05	1,819.2	551.1	162.0	116.6	45.40	3.569		
9,000.0	8,679.2	8,562.9	8,549.5	41.8	15.3	-124.83	1,821.0	552.5	159.7	114.0	45.76	3.491		
9,100.0	8,779.2	8,660.5	8,647.2	41.9	15.5	-124.77	1,821.5	553.0	159.1	113.0	46.08	3.452		
9,169.8	8,849.0	8,730.3	8,717.0	41.9	15.6	-124.77	1,821.5	553.0	159.1	112.8	46.29	3.437		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<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-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	-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		
300.0	300.0	300.4	300.4	0.5	0.5	-140.37	-10.6	-8.8	13.8	12.7	1.08	12.782		
400.0	400.0	400.5	400.1	0.8	0.8	-98.25	-3.2	-11.5	12.0	10.5	1.55	7.770		
434.0	433.9	434.5	433.9	0.9	0.9	-91.61	0.4	-12.8	12.0	10.2	1.72	6.930 CC, ES		
500.0	499.6	500.3	499.1	1.0	1.1	-77.44	9.0	-16.0	12.5	10.4	2.07	6.035 SF		
600.0	598.9	599.7	596.8	1.3	1.4	-75.66	26.0	-22.2	18.0	15.3	2.64	6.801		
700.0	697.6	698.3	692.7	1.6	1.8	-77.84	47.6	-30.0	28.9	25.6	3.29	8.787		
800.0	795.3	796.3	786.7	1.9	2.4	-81.91	73.5	-39.4	44.2	40.2	4.05	10.923		
900.0	892.0	894.7	880.8	2.4	2.9	-88.40	100.6	-49.3	61.5	56.6	4.96	12.407		
1,000.0	987.2	992.7	974.4	2.9	3.5	-95.37	127.6	-59.1	80.6	74.5	6.03	13.352		
1,100.0	1,082.0	1,090.4	1,067.9	3.5	4.0	-99.58	154.5	-68.9	100.6	93.4	7.16	14.047		
1,200.0	1,176.8	1,188.2	1,161.4	4.1	4.6	-102.38	181.5	-78.7	121.0	112.7	8.29	14.593		
1,300.0	1,271.6	1,285.9	1,254.8	4.7	5.1	-104.37	208.4	-88.5	141.6	132.2	9.42	15.030		
1,400.0	1,366.4	1,383.7	1,348.3	5.3	5.7	-105.85	235.3	-98.3	162.3	151.7	10.55	15.385		
1,500.0	1,461.2	1,481.4	1,441.7	5.9	6.3	-107.00	262.3	-108.1	183.1	171.4	11.68	15.677		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<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	-149.38	-20.0	-11.9	23.3				
100.0	100.0	100.0	100.0	0.1	0.1	-149.38	-20.0	-11.9	23.3	23.1	0.18	129.458	
200.0	200.0	200.0	200.0	0.3	0.3	-149.38	-20.0	-11.9	23.3	22.6	0.63	36.988	
300.0	300.0	300.0	300.0	0.5	0.5	-149.38	-20.0	-11.9	23.3	22.2	1.08	21.576	CC, ES
400.0	400.0	400.5	400.5	0.8	0.8	-131.29	-18.7	-12.5	24.1	22.5	1.56	15.486	
500.0	499.6	501.3	501.1	1.0	1.0	-136.53	-12.6	-15.2	25.4	23.3	2.08	12.198	
600.0	598.9	602.1	601.1	1.3	1.3	-147.49	-1.8	-20.2	28.1	25.5	2.66	10.585	
700.0	697.6	702.4	700.0	1.6	1.6	-144.55	13.8	-27.2	34.1	30.8	3.29	10.351	SF
800.0	795.3	801.9	797.0	1.9	2.0	-137.42	33.9	-36.3	44.9	40.9	4.03	11.139	
900.0	892.0	900.4	892.6	2.4	2.4	-133.99	55.4	-46.1	61.3	56.5	4.87	12.603	
1,000.0	987.2	998.1	987.4	2.9	2.9	-133.81	76.8	-55.9	82.4	76.7	5.75	14.342	
1,100.0	1,082.0	1,095.6	1,082.0	3.5	3.3	-133.20	98.1	-65.5	104.8	98.2	6.62	15.823	
1,200.0	1,176.8	1,193.0	1,176.6	4.1	3.8	-132.81	119.5	-75.2	127.2	119.7	7.53	16.892	
1,300.0	1,271.6	1,290.5	1,271.2	4.7	4.3	-132.53	140.8	-84.9	149.6	141.1	8.46	17.688	
1,400.0	1,366.4	1,387.9	1,365.8	5.3	4.7	-132.33	162.1	-94.6	172.0	162.6	9.40	18.302	
1,500.0	1,461.2	1,485.4	1,460.4	5.9	5.2	-132.17	183.5	-104.3	194.3	184.0	10.34	18.786	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<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-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	-150.01	-34.2	-19.8	39.5					
100.0	100.0	100.0	100.0	0.1	0.1	-150.01	-34.2	-19.8	39.5	39.4	0.18	219.844		
200.0	200.0	200.0	200.0	0.3	0.3	-150.01	-34.2	-19.8	39.5	38.9	0.63	62.813 CC, ES		
300.0	300.0	297.9	297.9	0.5	0.5	-150.44	-36.6	-20.7	42.1	41.0	1.06	39.709		
400.0	400.0	395.1	394.7	0.8	0.7	-133.41	-43.4	-23.6	51.5	49.9	1.56	32.886		
500.0	499.6	490.2	489.1	1.0	1.0	-142.28	-54.5	-28.2	69.8	67.6	2.15	32.396 SF		
600.0	598.9	582.1	579.5	1.3	1.3	-161.84	-69.4	-34.4	97.7	94.9	2.79	34.996		
700.0	697.6	670.0	665.3	1.6	1.7	-171.75	-87.3	-41.9	135.0	131.5	3.44	39.269		
800.0	795.3	760.0	752.6	1.9	2.1	-177.27	-107.3	-50.3	178.6	174.6	4.04	44.247		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<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		Total		Separation		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			
0.0	0.0	0.0	0.0	0.0	0.0	26.74	7.3	3.7	8.2					
100.0	100.0	100.0	100.0	0.1	0.1	26.74	7.3	3.7	8.2	8.0	0.18	45.362		
200.0	200.0	200.0	200.0	0.3	0.3	26.74	7.3	3.7	8.2	7.5	0.63	12.961		
300.0	300.0	300.0	300.0	0.5	0.5	26.74	7.3	3.7	8.2	7.1	1.08	7.560		
400.0	400.0	399.8	399.8	0.8	0.8	59.47	7.9	3.6	7.1	5.5	1.54	4.594		
433.1	433.0	432.8	432.8	0.9	0.8	64.95	9.1	3.5	6.9	5.2	1.70	4.075 CC, ES		
500.0	499.6	499.6	499.4	1.0	1.0	79.64	13.1	3.2	7.4	5.4	2.00	3.729		
600.0	598.9	599.3	598.6	1.3	1.2	79.16	23.1	3.2	8.1	5.6	2.50	3.248		
700.0	697.6	698.9	697.2	1.6	1.5	85.99	36.9	6.6	9.9	6.8	3.08	3.204 SF		
800.0	795.3	798.5	795.0	1.9	1.8	92.89	54.3	13.6	13.0	9.2	3.77	3.445		
900.0	892.0	898.3	892.3	2.4	2.2	102.11	74.4	23.3	17.0	12.4	4.57	3.715		
1,000.0	987.2	997.9	989.3	2.9	2.7	120.40	94.5	33.0	22.4	17.1	5.33	4.201		
1,100.0	1,082.0	1,097.4	1,086.3	3.5	3.1	134.46	114.6	42.8	30.2	24.2	5.95	5.070		
1,200.0	1,176.8	1,196.9	1,183.2	4.1	3.5	142.49	134.7	52.6	39.0	32.5	6.53	5.975		
1,300.0	1,271.6	1,296.4	1,280.2	4.7	4.0	147.50	154.8	62.3	48.3	41.2	7.11	6.803		
1,400.0	1,366.4	1,395.9	1,377.1	5.3	4.4	150.87	174.9	72.1	57.9	50.2	7.69	7.534		
1,500.0	1,461.2	1,495.4	1,474.1	5.9	4.9	153.29	195.0	81.8	67.6	59.3	8.28	8.171		
1,600.0	1,556.0	1,594.8	1,571.0	6.5	5.3	155.09	215.1	91.6	77.4	68.5	8.87	8.726		
1,700.0	1,650.8	1,694.3	1,668.0	7.1	5.8	156.49	235.2	101.4	87.3	77.8	9.47	9.212		
1,800.0	1,745.6	1,793.8	1,764.9	7.7	6.2	157.60	255.3	111.1	97.2	87.1	10.08	9.639		
1,900.0	1,840.4	1,893.3	1,861.9	8.3	6.7	158.51	275.4	120.9	107.1	96.4	10.69	10.017		
2,000.0	1,935.3	1,992.8	1,958.9	9.0	7.2	159.27	295.5	130.6	117.0	105.7	11.31	10.352		
2,100.0	2,030.1	2,092.3	2,055.8	9.6	7.6	159.90	315.6	140.4	127.0	115.1	11.92	10.651		
2,200.0	2,124.9	2,191.8	2,152.8	10.2	8.1	160.45	335.7	150.2	137.0	124.4	12.54	10.920		
2,300.0	2,219.7	2,291.3	2,249.7	10.8	8.6	160.92	355.8	159.9	147.0	133.8	13.17	11.163		
2,400.0	2,314.5	2,390.8	2,346.7	11.4	9.0	161.33	375.9	169.7	157.0	143.2	13.79	11.382		
2,500.0	2,409.3	2,490.3	2,443.6	12.1	9.5	161.69	396.0	179.5	167.0	152.6	14.42	11.583		
2,600.0	2,504.1	2,589.8	2,540.6	12.7	9.9	162.01	416.1	189.2	177.0	161.9	15.04	11.765		
2,700.0	2,598.9	2,689.3	2,637.5	13.3	10.4	162.29	436.2	199.0	187.0	171.3	15.67	11.933		
2,800.0	2,693.7	2,788.8	2,734.5	13.9	10.9	162.55	456.3	208.7	197.0	180.7	16.30	12.087		



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<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-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	28.22	14.2	7.6	16.1					
100.0	100.0	100.0	100.0	0.1	0.1	28.22	14.2	7.6	16.1	15.9	0.18	89.652		
200.0	200.0	200.0	200.0	0.3	0.3	28.22	14.2	7.6	16.1	15.5	0.63	25.615		
300.0	300.0	300.0	300.0	0.5	0.5	28.22	14.2	7.6	16.1	15.0	1.08	14.942		
400.0	400.0	400.0	400.0	0.8	0.8	55.98	14.2	7.6	14.5	13.0	1.55	9.369		
462.9	462.7	462.3	462.3	0.9	0.9	67.42	15.1	8.2	13.5	11.6	1.84	7.337 CC, ES		
500.0	499.6	499.0	499.0	1.0	1.0	78.26	16.4	9.0	14.1	12.2	1.99	7.101 SF		
600.0	598.9	598.1	597.8	1.3	1.2	85.50	22.8	13.2	18.1	15.6	2.48	7.303		
700.0	697.6	697.3	696.1	1.6	1.5	90.34	33.6	20.2	23.9	20.8	3.04	7.837		
800.0	795.3	796.8	794.0	1.9	1.8	93.80	48.4	29.7	30.2	26.5	3.72	8.117		
900.0	892.0	896.3	891.8	2.4	2.1	102.46	64.0	39.8	36.5	32.0	4.50	8.108		
1,000.0	987.2	995.4	989.1	2.9	2.5	115.24	79.6	49.9	44.7	39.4	5.32	8.397		
1,100.0	1,082.0	1,094.3	1,086.3	3.5	2.9	126.52	95.1	59.9	55.5	49.4	6.06	9.151		
1,200.0	1,176.8	1,193.3	1,183.5	4.1	3.3	133.96	110.7	69.9	67.6	60.9	6.73	10.045		
1,300.0	1,271.6	1,292.2	1,280.7	4.7	3.7	139.08	126.2	80.0	80.6	73.2	7.38	10.926		
1,400.0	1,366.4	1,391.2	1,377.9	5.3	4.0	142.77	141.7	90.0	94.0	86.0	8.01	11.740		
1,500.0	1,461.2	1,490.1	1,475.1	5.9	4.4	145.53	157.3	100.1	107.8	99.1	8.64	12.473		
1,600.0	1,556.0	1,589.0	1,572.3	6.5	4.8	147.66	172.8	110.1	121.7	112.4	9.27	13.127		
1,700.0	1,650.8	1,688.0	1,669.5	7.1	5.2	149.36	188.4	120.1	135.7	125.8	9.90	13.710		
1,800.0	1,745.6	1,786.9	1,766.7	7.7	5.6	150.73	203.9	130.2	149.8	139.3	10.53	14.230		
1,900.0	1,840.4	1,885.8	1,863.9	8.3	6.0	151.87	219.4	140.2	164.1	152.9	11.16	14.695		
2,000.0	1,935.3	1,984.8	1,961.1	9.0	6.4	152.83	235.0	150.3	178.3	166.5	11.80	15.113		
2,100.0	2,030.1	2,083.7	2,058.3	9.6	6.8	153.65	250.5	160.3	192.6	180.2	12.44	15.489		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<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	-150.25	-6.9	-4.0	8.0					
100.0	100.0	100.0	100.0	0.1	0.1	-150.25	-6.9	-4.0	8.0	7.8	0.18	44.298		
200.0	200.0	200.0	200.0	0.3	0.3	-150.25	-6.9	-4.0	8.0	7.3	0.63	12.657		
300.0	300.0	300.1	300.1	0.5	0.5	-149.31	-6.8	-4.0	7.9	6.8	1.08	7.291		
400.0	400.0	400.3	400.2	0.8	0.8	-120.51	-3.1	-5.5	7.2	5.7	1.55	4.674		
500.0	499.6	500.5	499.9	1.0	1.0	-113.94	5.4	-8.8	6.9	4.9	2.04	3.388		
535.9	535.3	536.5	535.7	1.1	1.1	-116.53	9.7	-9.9	6.8	4.6	2.24	3.062 CC		
600.0	598.9	600.7	599.3	1.3	1.3	-115.09	18.8	-11.3	7.1	4.5	2.59	2.730 ES		
700.0	697.6	700.9	697.8	1.6	1.6	-105.48	37.0	-11.8	8.6	5.4	3.22	2.671 SF		
800.0	795.3	801.0	795.2	1.9	2.0	-96.57	60.0	-10.4	11.7	7.8	3.96	2.967		
900.0	892.0	901.0	891.2	2.4	2.5	-91.21	87.6	-7.1	16.4	11.5	4.84	3.381		
1,000.0	987.2	1,000.9	985.6	2.9	3.1	-87.52	119.8	-1.8	22.3	16.4	5.88	3.784		
1,100.0	1,082.0	1,100.5	1,078.0	3.5	3.8	-77.33	156.3	5.2	29.0	22.1	6.91	4.195		
1,200.0	1,176.8	1,200.0	1,169.8	4.1	4.4	-68.92	194.0	12.8	36.7	28.9	7.87	4.669		
1,300.0	1,271.6	1,299.6	1,261.7	4.7	5.2	-63.50	231.8	20.4	45.0	36.2	8.81	5.108		
1,400.0	1,366.4	1,399.2	1,353.5	5.3	5.9	-59.79	269.5	28.0	53.5	43.8	9.74	5.494		
1,500.0	1,461.2	1,498.8	1,445.4	5.9	6.6	-57.10	307.3	35.6	62.2	51.5	10.68	5.826		
1,600.0	1,556.0	1,598.4	1,537.2	6.5	7.3	-55.08	345.0	43.1	71.0	59.4	11.62	6.112		
1,700.0	1,650.8	1,698.0	1,629.0	7.1	8.0	-53.50	382.7	50.7	79.9	67.3	12.56	6.359		
1,800.0	1,745.6	1,797.6	1,720.9	7.7	8.8	-52.24	420.5	58.3	88.8	75.3	13.51	6.573		
1,900.0	1,840.4	1,897.1	1,812.7	8.3	9.5	-51.20	458.2	65.9	97.8	83.3	14.46	6.760		
2,000.0	1,935.3	1,996.7	1,904.6	9.0	10.2	-50.35	495.9	73.5	106.7	91.3	15.41	6.925		
2,100.0	2,030.1	2,096.3	1,996.4	9.6	11.0	-49.62	533.7	81.1	115.7	99.4	16.37	7.070		
2,200.0	2,124.9	2,195.9	2,088.3	10.2	11.7	-49.00	571.4	88.6	124.7	107.4	17.33	7.199		
2,300.0	2,219.7	2,295.5	2,180.1	10.8	12.5	-48.46	609.1	96.2	133.8	115.5	18.28	7.315		
2,400.0	2,314.5	2,395.1	2,272.0	11.4	13.2	-47.99	646.9	103.8	142.8	123.5	19.24	7.420		
2,500.0	2,409.3	2,494.7	2,363.8	12.1	13.9	-47.58	684.6	111.4	151.8	131.6	20.21	7.514		
2,600.0	2,504.1	2,594.2	2,455.7	12.7	14.7	-47.22	722.3	119.0	160.9	139.7	21.17	7.599		
2,700.0	2,598.9	2,693.8	2,547.5	13.3	15.4	-46.89	760.1	126.5	169.9	147.8	22.13	7.677		
2,800.0	2,693.7	2,793.4	2,639.3	13.9	16.2	-46.59	797.8	134.1	179.0	155.9	23.10	7.749		
2,900.0	2,788.5	2,893.0	2,731.2	14.6	16.9	-46.33	835.6	141.7	188.1	164.0	24.07	7.814		
3,000.0	2,883.3	2,992.6	2,823.0	15.2	17.6	-46.09	873.3	149.3	197.1	172.1	25.03	7.875		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<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	60.92	9.1	16.4	18.7					
100.0	100.0	100.0	100.0	0.1	0.1	60.92	9.1	16.4	18.7	18.6	0.18	104.189		
200.0	200.0	200.0	200.0	0.3	0.3	60.92	9.1	16.4	18.7	18.1	0.63	29.768		
300.0	300.0	300.0	300.0	0.5	0.5	60.92	9.1	16.4	18.7	17.7	1.08	17.365		
400.0	400.0	400.0	400.0	0.8	0.8	88.95	9.1	16.4	18.5	17.0	1.53	12.110		
408.9	408.8	408.8	408.8	0.8	0.8	89.82	9.1	16.4	18.5	16.9	1.57	11.791	CC, ES	
500.0	499.6	499.6	499.6	1.0	1.0	107.99	9.1	16.4	19.9	17.9	2.00	9.929		
600.0	598.9	598.9	598.9	1.3	1.2	119.96	9.1	16.4	24.7	22.2	2.53	9.764	SF	
700.0	697.6	696.4	696.4	1.6	1.4	132.47	9.0	18.8	36.4	33.3	3.11	11.716		
800.0	795.3	794.1	794.0	1.9	1.6	139.44	8.7	24.1	54.7	51.0	3.70	14.768		
900.0	892.0	891.0	890.6	2.4	1.8	144.83	8.5	29.4	77.4	73.1	4.31	17.944		
1,000.0	987.2	986.5	986.1	2.9	2.1	149.61	8.3	34.7	104.6	99.7	4.91	21.307		
1,100.0	1,082.0	1,081.7	1,081.1	3.5	2.3	154.21	8.0	39.9	133.9	128.5	5.42	24.685		
1,200.0	1,176.8	1,176.9	1,176.2	4.1	2.5	157.15	7.8	45.1	163.7	157.7	5.93	27.578		
1,300.0	1,271.6	1,272.1	1,271.2	4.7	2.7	159.19	7.5	50.3	193.7	187.3	6.45	30.035		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<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-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	121.05	-5.1	8.5	9.9					
100.0	100.0	100.0	100.0	0.1	0.1	121.05	-5.1	8.5	9.9	9.7	0.18	54.976		
200.0	200.0	200.0	200.0	0.3	0.3	121.05	-5.1	8.5	9.9	9.3	0.63	15.707		
300.0	300.0	300.0	300.0	0.5	0.5	121.05	-5.1	8.5	9.9	8.8	1.08	9.163 CC, ES		
400.0	400.0	400.0	400.0	0.8	0.8	148.88	-5.1	8.5	12.0	10.5	1.58	7.636 SF		
500.0	499.6	499.6	499.6	1.0	1.0	157.15	-5.1	8.5	19.1	17.0	2.13	8.978		
600.0	598.9	597.7	597.6	1.3	1.2	149.74	-6.1	10.8	31.9	29.3	2.63	12.113		
700.0	697.6	694.1	693.7	1.6	1.4	145.72	-8.9	17.5	51.4	48.2	3.17	16.216		
800.0	795.3	790.2	789.2	1.9	1.6	143.56	-13.2	27.7	76.6	72.8	3.75	20.439		
900.0	892.0	885.8	884.2	2.4	1.9	143.61	-17.6	37.9	105.1	100.7	4.35	24.164		
1,000.0	987.2	980.2	977.9	2.9	2.1	145.25	-21.9	48.1	137.0	132.1	4.97	27.581		
1,100.0	1,082.0	1,074.2	1,071.3	3.5	2.4	148.18	-26.1	58.2	170.4	164.9	5.54	30.779		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<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-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	-172.32	-25.1	-3.4	25.4					
100.0	100.0	100.0	100.0	0.1	0.1	-172.32	-25.1	-3.4	25.4	25.2	0.18	141.031		
200.0	200.0	200.0	200.0	0.3	0.3	-172.32	-25.1	-3.4	25.4	24.7	0.63	40.295		
300.0	300.0	300.0	300.0	0.5	0.5	-172.32	-25.1	-3.4	25.4	24.3	1.08	23.505 CC, ES		
400.0	400.0	400.0	400.0	0.8	0.8	-154.81	-25.1	-3.4	27.7	26.1	1.58	17.502		
500.0	499.6	499.6	499.6	1.0	1.0	-164.12	-25.1	-3.4	35.0	32.8	2.15	16.277 SF		
600.0	598.9	597.1	597.1	1.3	1.2	175.62	-26.9	-1.6	48.7	46.0	2.69	18.119		
700.0	697.6	692.5	692.1	1.6	1.4	164.53	-31.9	3.5	70.4	67.1	3.24	21.746		
800.0	795.3	784.9	783.9	1.9	1.6	157.97	-40.0	11.8	99.6	95.8	3.80	26.179		
900.0	892.0	874.8	872.4	2.4	1.9	153.69	-50.7	22.8	135.9	131.5	4.40	30.855		
1,000.0	987.2	966.0	962.0	2.9	2.2	151.98	-62.5	34.9	176.8	171.8	4.99	35.402		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<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-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	-167.72	-32.4	-7.1	33.2					
100.0	100.0	100.0	100.0	0.1	0.1	-167.72	-32.4	-7.1	33.2	33.0	0.18	184.527		
200.0	200.0	200.0	200.0	0.3	0.3	-167.72	-32.4	-7.1	33.2	32.6	0.63	52.722		
300.0	300.0	300.0	300.0	0.5	0.5	-167.72	-32.4	-7.1	33.2	32.1	1.08	30.755 CC, ES		
400.0	400.0	400.0	400.0	0.8	0.8	-149.95	-32.4	-7.1	35.4	33.8	1.58	22.439		
500.0	499.6	498.1	498.0	1.0	1.0	-161.41	-34.3	-5.4	44.2	42.1	2.13	20.729 SF		
600.0	598.9	594.3	593.9	1.3	1.2	175.31	-39.8	-0.5	61.8	59.1	2.69	22.959		
700.0	697.6	687.8	686.7	1.6	1.4	162.87	-48.5	7.4	87.8	84.5	3.26	26.925		
800.0	795.3	777.9	775.4	1.9	1.7	155.74	-60.2	17.8	121.3	117.5	3.84	31.591		
900.0	892.0	863.9	859.4	2.4	2.0	151.22	-74.2	30.4	162.0	157.5	4.45	36.401		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<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-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	-149.95	-27.3	-15.8	31.6				
100.0	100.0	100.0	100.0	0.1	0.1	-149.95	-27.3	-15.8	31.6	31.4	0.18	175.546	
200.0	200.0	200.0	200.0	0.3	0.3	-149.95	-27.3	-15.8	31.6	30.9	0.63	50.156	
300.0	300.0	300.0	300.0	0.5	0.5	-149.95	-27.3	-15.8	31.6	30.5	1.08	29.258 CC, ES	
400.0	400.0	398.2	398.1	0.8	0.7	-133.71	-29.7	-16.7	35.9	34.3	1.55	23.191 SF	
500.0	499.6	495.0	494.6	1.0	0.9	-144.85	-36.7	-19.2	49.3	47.2	2.11	23.394	
600.0	598.9	589.9	588.9	1.3	1.2	-165.85	-47.8	-22.5	72.4	69.7	2.73	26.498	
700.0	697.6	682.2	680.0	1.6	1.5	-178.06	-62.2	-23.2	103.6	100.3	3.33	31.118	
800.0	795.3	770.6	766.7	1.9	1.8	174.06	-79.2	-21.2	142.3	138.3	3.92	36.328	
900.0	892.0	857.7	851.6	2.4	2.1	168.64	-98.4	-17.2	187.6	183.1	4.49	41.748	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<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-ISCSWA MWD												<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
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	Warning
0.0	0.0	0.0	0.0	0.0	0.0	28.66	28.4	15.5	32.4				
100.0	100.0	100.0	100.0	0.1	0.1	28.66	28.4	15.5	32.4	32.2	0.18	180.029	
200.0	200.0	200.0	200.0	0.3	0.3	28.66	28.4	15.5	32.4	31.7	0.63	51.437	CC, ES
300.0	300.0	298.4	298.4	0.5	0.5	30.40	29.9	17.6	34.7	33.7	1.08	32.156	
400.0	400.0	396.3	396.0	0.8	0.8	57.25	34.4	23.6	40.5	38.9	1.56	25.948	
500.0	499.6	493.2	492.1	1.0	1.0	64.48	41.8	33.5	49.5	47.5	2.06	24.100	
600.0	598.9	589.2	586.5	1.3	1.4	58.10	52.0	47.2	61.5	58.9	2.59	23.705	
700.0	697.6	684.5	679.3	1.6	1.8	57.02	65.0	64.5	75.2	72.0	3.19	23.575	
800.0	795.3	778.9	770.1	1.9	2.3	57.86	80.5	85.3	90.5	86.7	3.87	23.371	
900.0	892.0	872.7	858.8	2.4	2.8	59.36	98.5	109.5	107.3	102.6	4.67	22.953	
1,000.0	987.2	968.1	947.8	2.9	3.5	61.82	119.2	137.2	125.0	119.4	5.61	22.268	
1,100.0	1,082.0	1,066.1	1,038.9	3.5	4.2	65.71	140.8	166.1	142.9	136.3	6.64	21.513	
1,200.0	1,176.8	1,164.1	1,130.0	4.1	4.9	68.73	162.4	195.1	161.4	153.7	7.74	20.857	
1,300.0	1,271.6	1,262.0	1,221.1	4.7	5.6	71.12	184.0	224.0	180.2	171.3	8.90	20.255	
1,400.0	1,366.4	1,360.0	1,312.1	5.3	6.3	73.07	205.5	252.9	199.2	189.2	10.08	19.762	SF



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<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-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	28.31	21.5	11.6	24.4					
100.0	100.0	100.0	100.0	0.1	0.1	28.31	21.5	11.6	24.4	24.2	0.18	135.719		
200.0	200.0	200.0	200.0	0.3	0.3	28.31	21.5	11.6	24.4	23.8	0.63	38.777		
233.6	233.6	233.6	233.6	0.4	0.4	28.31	21.5	11.6	24.4	23.6	0.78	31.278 CC, ES		
300.0	300.0	299.4	299.4	0.5	0.5	29.04	21.8	12.1	25.0	23.9	1.08	23.185		
400.0	400.0	398.1	397.9	0.8	0.8	58.03	24.5	16.4	28.1	26.6	1.54	18.232		
500.0	499.6	495.8	495.1	1.0	1.0	70.35	29.8	25.0	35.1	33.1	2.02	17.349 SF		
600.0	598.9	592.7	590.8	1.3	1.3	67.77	37.7	37.6	46.1	43.5	2.55	18.093		
700.0	697.6	688.8	684.9	1.6	1.7	68.81	48.0	54.2	59.7	56.6	3.13	19.060		
800.0	795.3	784.0	777.1	1.9	2.1	70.74	60.6	74.6	75.6	71.8	3.82	19.799		
900.0	892.0	878.5	867.2	2.4	2.6	72.72	75.6	98.6	93.6	89.0	4.64	20.173		
1,000.0	987.2	972.9	955.8	2.9	3.2	75.15	92.8	126.3	113.6	108.0	5.62	20.226		
1,100.0	1,082.0	1,070.4	1,046.7	3.5	3.9	78.68	111.3	156.2	134.6	127.9	6.69	20.111		
1,200.0	1,176.8	1,167.9	1,137.7	4.1	4.6	81.25	129.8	186.0	155.9	148.1	7.83	19.917		
1,300.0	1,271.6	1,265.4	1,228.6	4.7	5.3	83.20	148.4	215.8	177.5	168.5	9.00	19.723		
1,400.0	1,366.4	1,362.8	1,319.6	5.3	6.0	84.73	166.9	245.6	199.3	189.1	10.19	19.551		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<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 32A-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							
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	Warning
0.0	0.0	0.0	0.0	0.0	0.0	46.18	23.3	24.3	33.6				
100.0	100.0	100.0	100.0	0.1	0.1	46.18	23.3	24.3	33.6	33.5	0.18	187.121	
200.0	200.0	200.0	200.0	0.3	0.3	46.18	23.3	24.3	33.6	33.0	0.63	53.463 CC, ES	
300.0	300.0	298.9	298.8	0.5	0.5	47.42	23.6	25.7	34.9	33.8	1.07	32.475	
400.0	400.0	396.9	396.6	0.8	0.8	75.35	24.9	31.8	39.8	38.3	1.53	25.978	
500.0	499.6	493.6	492.7	1.0	1.0	84.64	27.2	42.7	49.9	47.9	2.02	24.681 SF	
600.0	598.9	588.9	586.7	1.3	1.3	80.15	30.4	58.1	64.7	62.2	2.54	25.496	
700.0	697.6	682.7	678.4	1.6	1.7	80.56	34.6	77.7	83.3	80.1	3.11	26.748	
800.0	795.3	775.1	767.5	1.9	2.2	82.35	39.6	101.2	105.5	101.7	3.78	27.914	
900.0	892.0	867.4	855.4	2.4	2.7	84.46	45.4	128.8	131.1	126.5	4.57	28.672	
1,000.0	987.2	962.8	946.0	2.9	3.3	87.93	51.6	158.3	157.3	151.8	5.49	28.640	
1,100.0	1,082.0	1,058.1	1,036.4	3.5	3.9	92.61	57.8	187.7	184.4	177.9	6.50	28.372	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<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-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	51.12	16.4	20.3	26.1					
100.0	100.0	100.0	100.0	0.1	0.1	51.12	16.4	20.3	26.1	25.9	0.18	145.191		
200.0	200.0	200.0	200.0	0.3	0.3	51.12	16.4	20.3	26.1	25.5	0.63	41.483		
300.0	300.0	300.0	300.0	0.5	0.5	51.12	16.4	20.3	26.1	25.0	1.08	24.199 CC, ES		
400.0	400.0	398.8	398.8	0.8	0.8	79.70	16.3	22.9	27.5	26.0	1.52	18.119		
500.0	499.6	496.5	496.2	1.0	1.0	95.09	16.0	30.4	34.7	32.7	1.99	17.399 SF		
600.0	598.9	592.7	591.5	1.3	1.2	95.62	15.5	42.7	48.5	46.0	2.50	19.391		
700.0	697.6	687.2	684.5	1.6	1.6	98.52	14.9	59.4	68.0	65.0	3.07	22.169		
800.0	795.3	779.7	774.6	1.9	1.9	101.13	14.1	80.2	92.9	89.2	3.72	24.979		
900.0	892.0	870.0	861.6	2.4	2.4	103.03	13.1	104.7	122.6	118.2	4.47	27.439		
1,000.0	987.2	962.2	949.4	2.9	2.9	105.50	12.0	132.7	156.0	150.7	5.34	29.238		
1,100.0	1,082.0	1,055.4	1,038.2	3.5	3.5	109.31	10.9	161.3	190.4	184.1	6.25	30.474		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<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 33A-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	80.04	2.2	12.4	12.6					
100.0	100.0	100.0	100.0	0.1	0.1	80.04	2.2	12.4	12.6	12.4	0.18	70.132		
200.0	200.0	200.0	200.0	0.3	0.3	80.04	2.2	12.4	12.6	12.0	0.63	20.038		
300.0	300.0	300.0	300.0	0.5	0.5	80.04	2.2	12.4	12.6	11.5	1.08	11.689 CC, ES		
400.0	400.0	399.4	399.4	0.8	0.8	112.78	1.7	13.8	14.7	13.2	1.53	9.619 SF		
500.0	499.6	497.6	497.3	1.0	1.0	129.02	-0.3	19.8	25.5	23.5	2.06	12.390		
600.0	598.9	593.9	593.0	1.3	1.2	124.44	-3.9	30.3	43.9	41.3	2.57	17.065		
700.0	697.6	688.0	685.9	1.6	1.5	122.71	-8.9	45.0	68.3	65.1	3.14	21.769		
800.0	795.3	779.6	775.3	1.9	1.9	121.92	-15.2	63.4	98.4	94.6	3.76	26.165		
900.0	892.0	868.1	860.8	2.4	2.3	121.38	-22.6	85.0	134.0	129.6	4.46	30.063		
1,000.0	987.2	953.5	942.2	2.9	2.8	121.65	-31.0	109.4	174.9	169.6	5.23	33.421		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<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-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	157.55	-10.9	4.5	11.8					
100.0	100.0	100.0	100.0	0.1	0.1	157.55	-10.9	4.5	11.8	11.6	0.18	65.779		
200.0	200.0	200.0	200.0	0.3	0.3	157.55	-10.9	4.5	11.8	11.2	0.63	18.794		
234.0	234.0	234.0	234.0	0.4	0.4	157.55	-10.9	4.5	11.8	11.0	0.78	15.126 CC, ES		
300.0	300.0	299.7	299.7	0.5	0.5	155.86	-11.3	5.1	12.4	11.3	1.07	11.570 SF		
400.0	400.0	398.7	398.6	0.8	0.7	168.19	-14.1	9.4	19.5	17.9	1.59	12.304		
500.0	499.6	495.9	495.2	1.0	1.0	159.84	-19.6	17.7	36.6	34.4	2.18	16.808		
600.0	598.9	590.6	588.8	1.3	1.3	143.25	-27.5	29.8	61.1	58.4	2.70	22.661		
700.0	697.6	682.4	678.7	1.6	1.6	135.80	-37.7	45.3	91.8	88.5	3.26	28.189		
800.0	795.3	770.6	764.2	1.9	2.1	131.94	-49.6	63.5	128.5	124.6	3.87	33.238		
900.0	892.0	855.1	845.0	2.4	2.5	129.60	-63.1	84.0	171.0	166.4	4.53	37.726		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<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-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	178.23	-18.2	0.6	18.2					
100.0	100.0	100.0	100.0	0.1	0.1	178.23	-18.2	0.6	18.2	18.0	0.18	101.380		
200.0	200.0	200.0	200.0	0.3	0.3	178.23	-18.2	0.6	18.2	17.6	0.63	28.966		
300.0	300.0	300.0	300.0	0.5	0.5	178.23	-18.2	0.6	18.2	17.2	1.08	16.897 CC, ES		
400.0	400.0	400.0	400.0	0.8	0.8	-164.02	-18.2	0.6	20.7	19.1	1.59	13.044 SF		
500.0	499.6	498.4	498.4	1.0	1.0	-175.19	-20.0	2.4	30.4	28.2	2.15	14.141		
600.0	598.9	595.0	594.7	1.3	1.2	164.00	-25.0	7.8	48.6	45.9	2.68	18.133		
700.0	697.6	689.0	687.9	1.6	1.4	154.07	-33.2	16.5	74.4	71.2	3.23	23.011		
800.0	795.3	779.8	777.3	1.9	1.7	148.69	-44.0	28.0	107.3	103.5	3.81	28.143		
900.0	892.0	866.6	862.0	2.4	2.0	145.32	-57.1	41.9	147.1	142.7	4.43	33.186		
1,000.0	987.2	949.1	941.6	2.9	2.4	143.68	-72.0	57.6	193.2	188.1	5.07	38.085		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<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 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	-164.37	-39.3	-11.0	40.9					
100.0	100.0	100.0	100.0	0.1	0.1	-164.37	-39.3	-11.0	40.9	40.7	0.18	227.196		
200.0	200.0	200.0	200.0	0.3	0.3	-164.37	-39.3	-11.0	40.9	40.2	0.63	64.913		
300.0	300.0	300.0	300.0	0.5	0.5	-164.37	-39.3	-11.0	40.9	39.8	1.08	37.866 CC, ES		
400.0	400.0	400.0	400.0	0.8	0.8	-146.36	-39.3	-11.0	43.0	41.4	1.57	27.307		
500.0	499.6	499.6	499.6	1.0	1.0	-155.21	-39.3	-11.0	49.7	47.6	2.13	23.326		
600.0	598.9	598.9	598.9	1.3	1.2	-174.70	-39.3	-11.0	61.4	58.7	2.70	22.719 SF		
700.0	697.6	697.6	697.6	1.6	1.4	176.24	-39.3	-11.0	77.6	74.4	3.27	23.746		
800.0	795.3	795.3	795.3	1.9	1.7	172.15	-39.3	-11.0	98.5	94.6	3.84	25.629		
900.0	892.0	892.0	892.0	2.4	1.9	170.43	-39.3	-11.0	123.9	119.5	4.42	28.035		
1,000.0	987.2	987.2	987.2	2.9	2.1	170.42	-39.3	-11.0	153.9	149.0	4.97	30.984		
1,100.0	1,082.0	1,082.0	1,082.0	3.5	2.3	172.06	-39.3	-11.0	185.4	180.0	5.42	34.204		

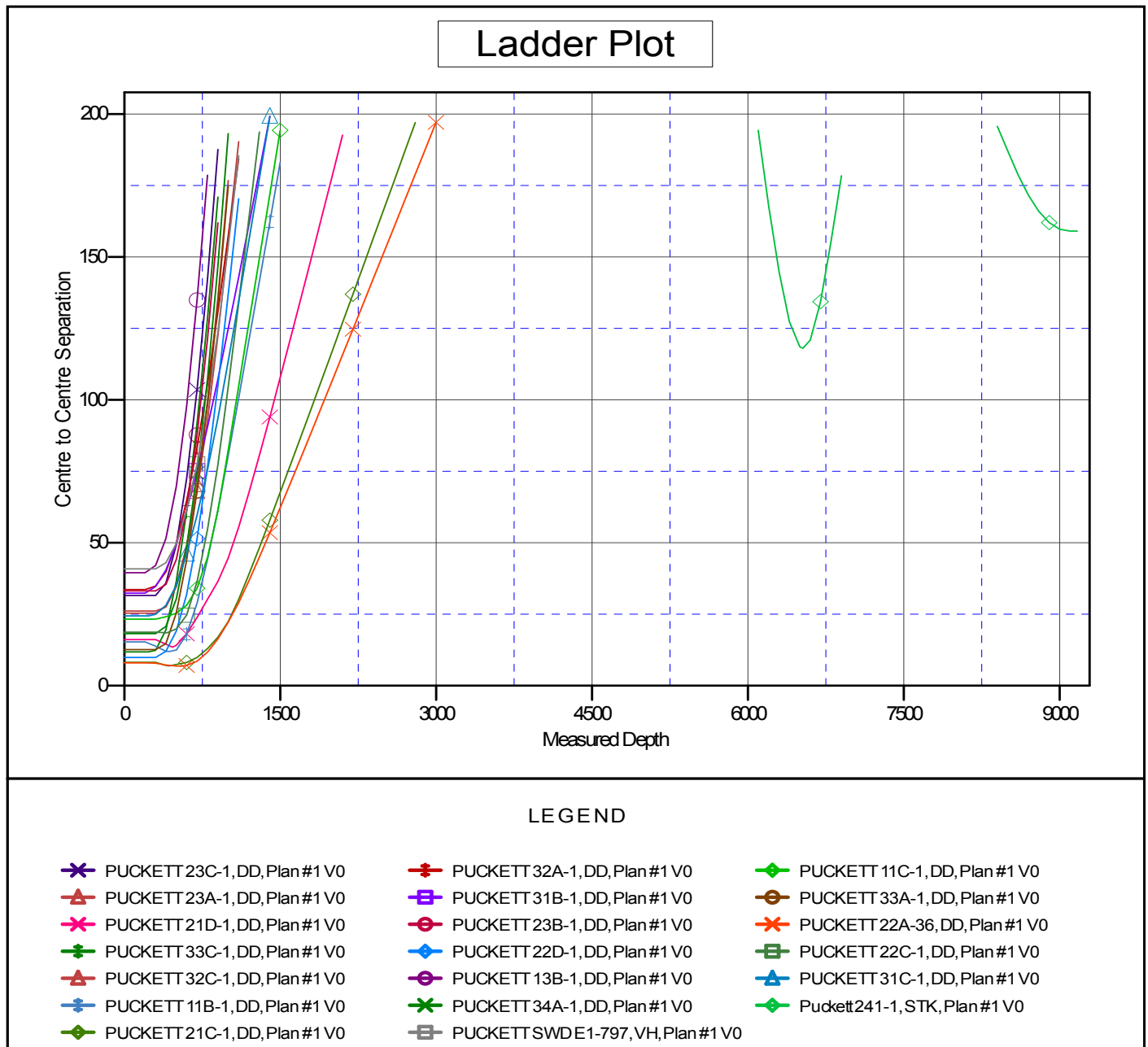
# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-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 21A-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>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	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 21A-1  
Coordinate System is US State Plane 1927 (Exact solution), Colorado Central 502  
Grid Convergence at Surface is: -1.69°



CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation