



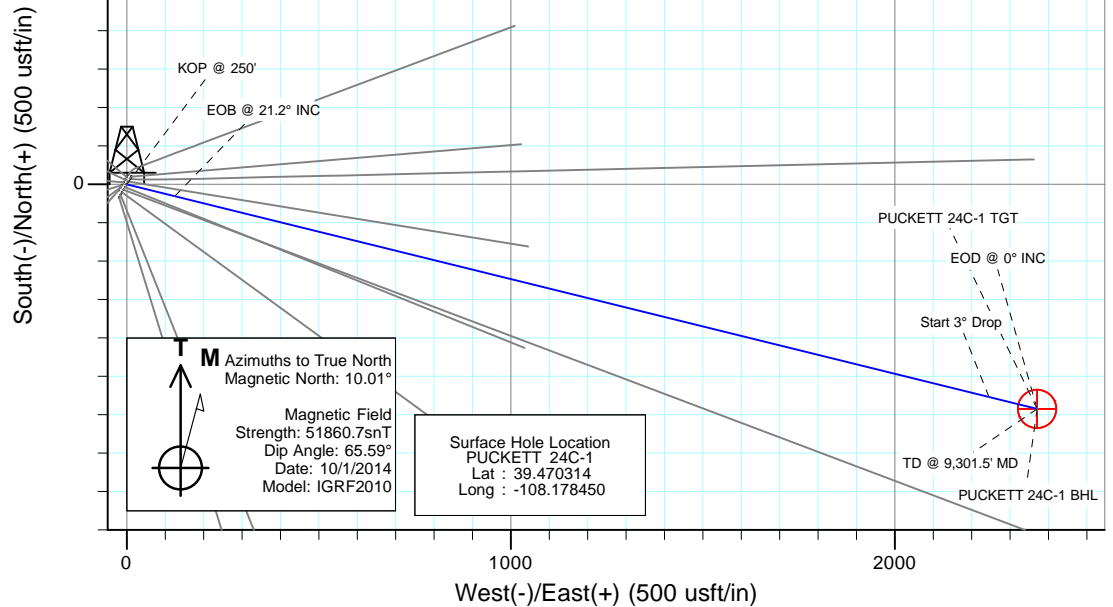
Project: Garfield County, CO  
Site: S2-T7S-R97W (Puckett Pad P2)  
Well: PUCKETT 24C-1  
Wellbore: DD  
Design: Plan #1



Plan #1  
PUCKETT 24C-1  
145XXX; SC  
KB=22' @ 8446.0usft  
Ground Elevation @ 8424.0  
NAD 1927 (NADCON CONUS)  
Well PUCKETT 24C-1, True North

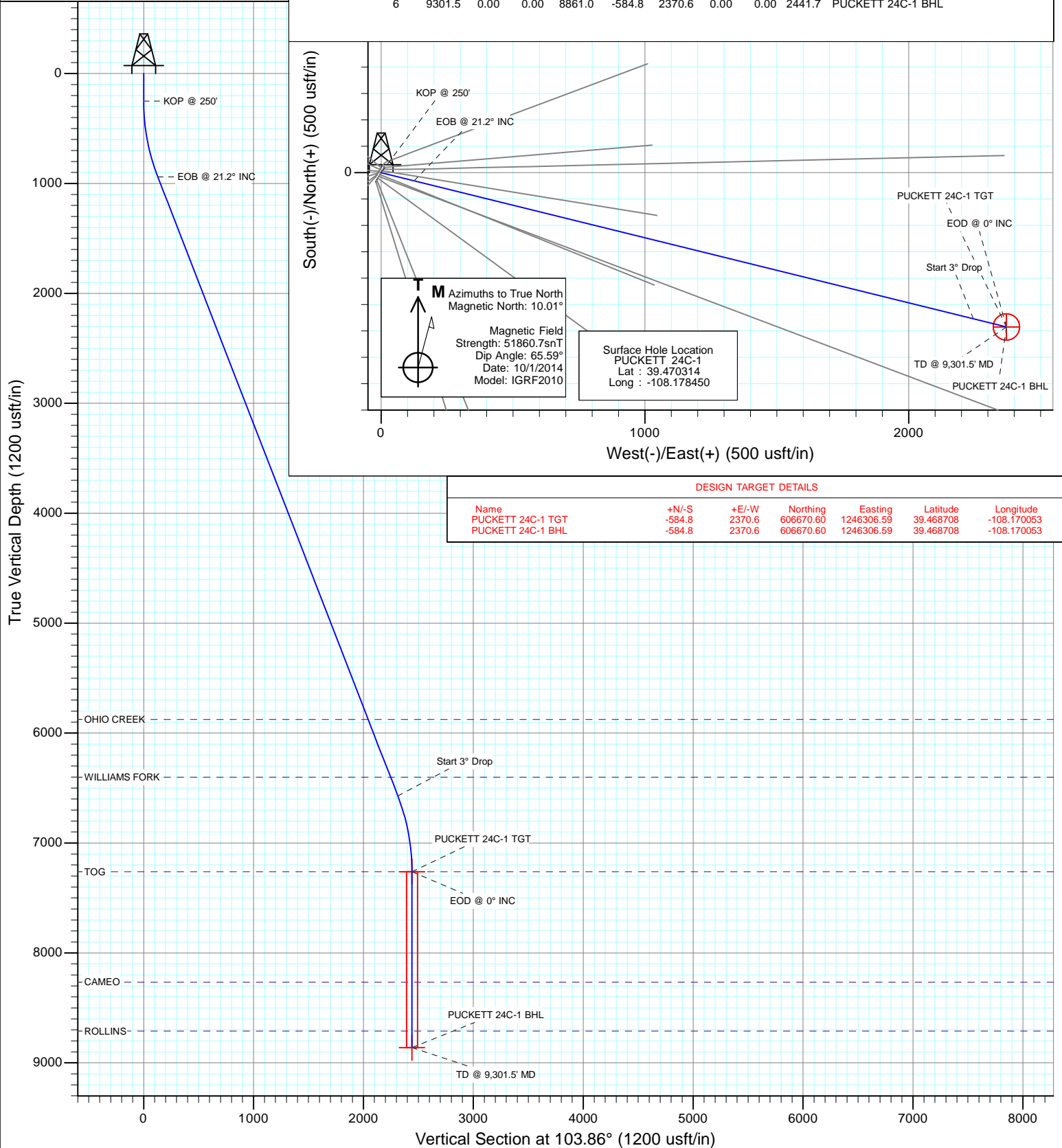
#### SECTION DETAILS

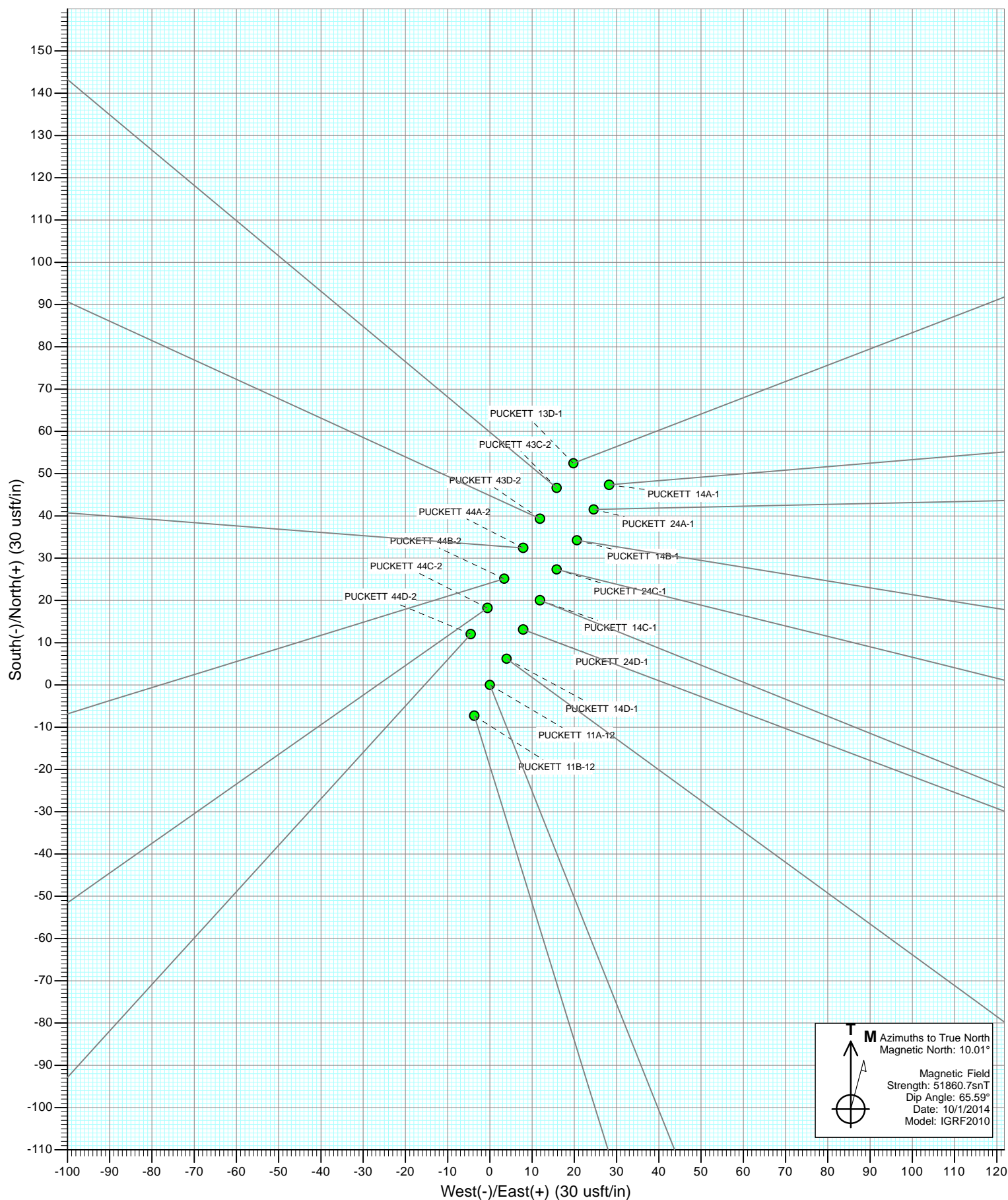
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.0	
3	956.5	21.20	103.86	940.5	-30.9	125.4	3.00	103.86	129.2	
4	6995.0	21.20	103.86	6570.5	-553.9	2245.2	0.00	0.00	2312.5	PUCKETT 24C-1 TGT
5	7701.5	0.00	0.00	7261.0	-584.8	2370.6	3.00	180.00	2441.7	PUCKETT 24C-1 BHL
6	9301.5	0.00	0.00	8861.0	-584.8	2370.6	0.00	0.00	2441.7	

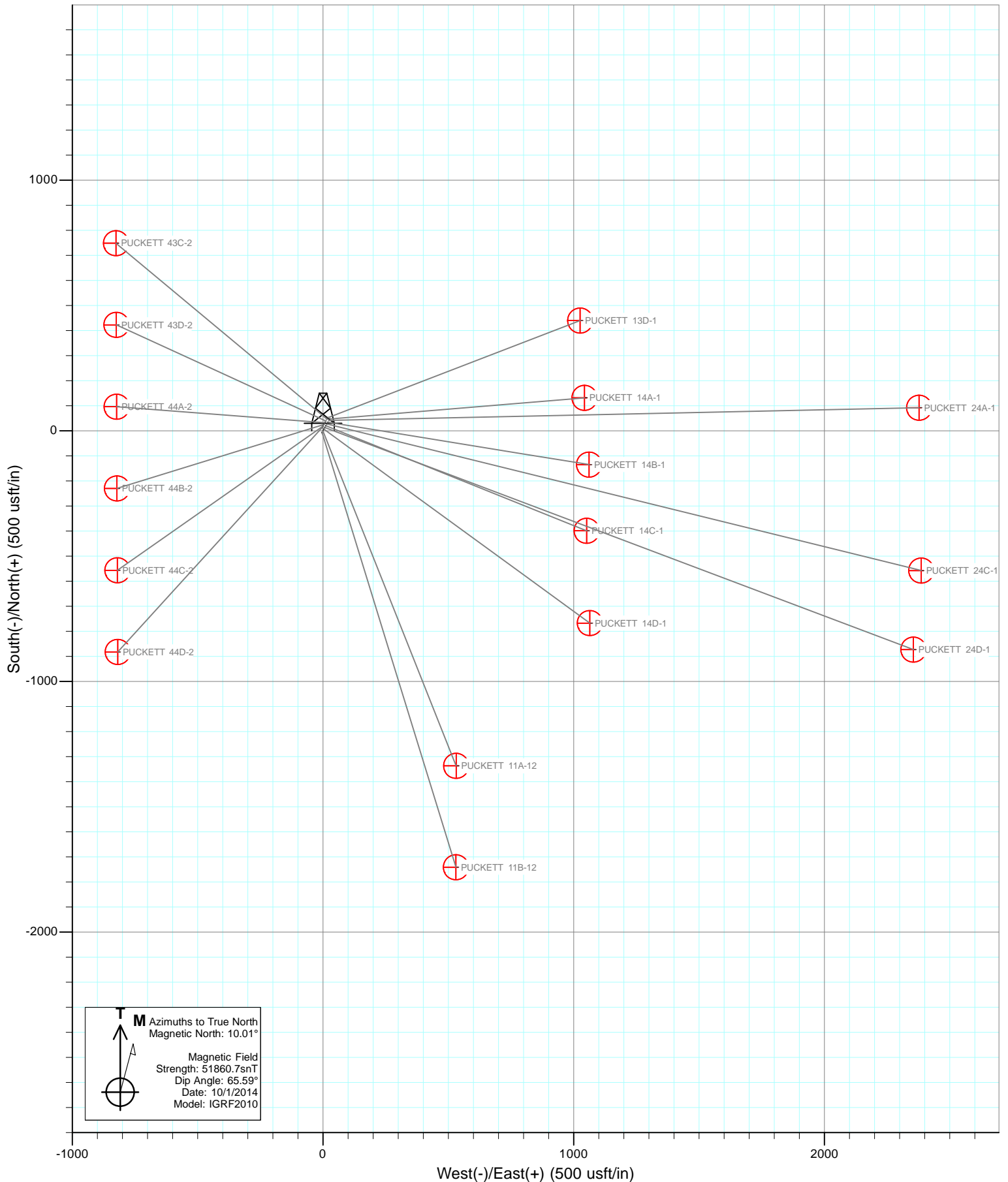


#### DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PUCKETT 24C-1 TGT	-584.8	2370.6	606670.60	1246306.59	39.468708	-108.170053
PUCKETT 24C-1 BHL	-584.8	2370.6	606670.60	1246306.59	39.468708	-108.170053







# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 24C-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		S2-T7S-R97W (Puckett Pad P2)			
Site Position:		Northing:	607,291.06 usft	Latitude:	39.470219
From:	Lat/Long	Easting:	1,243,933.75 usft	Longitude:	-108.178519
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.69 °

Well	PUCKETT 24C-1					
Well Position	+N/-S	0.0 usft	Northing:	607,325.07 usft	Latitude:	39.470314
	+E/-W	0.0 usft	Easting:	1,243,954.24 usft	Longitude:	-108.178450
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,424.0 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 (nT)</b>
	IGRF2010	10/1/2014	10.00	65.59	51,861

<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) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	103.86	

<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	
250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.00	0.00	
956.5	21.20	103.86	940.5	-30.9	125.4	3.00	3.00	0.00	103.86	
6,995.0	21.20	103.86	6,570.5	-553.9	2,245.2	0.00	0.00	0.00	0.00	
7,701.5	0.00	0.00	7,261.0	-584.8	2,370.6	3.00	-3.00	0.00	180.00	PUCKETT 24C-1 TG1
9,301.5	0.00	0.00	8,861.0	-584.8	2,370.6	0.00	0.00	0.00	0.00	PUCKETT 24C-1 BHL

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 24C-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	
250.0	0.00	0.00	250.0	0.0	0.0	0.0	0.00	0.00	KOP @ 250'
300.0	1.50	103.86	300.0	-0.2	0.6	0.7	3.00	3.00	
400.0	4.50	103.86	399.8	-1.4	5.7	5.9	3.00	3.00	
500.0	7.50	103.86	499.3	-3.9	15.9	16.3	3.00	3.00	
600.0	10.50	103.86	598.0	-7.7	31.0	32.0	3.00	3.00	
700.0	13.50	103.86	695.8	-12.6	51.2	52.8	3.00	3.00	
800.0	16.50	103.86	792.4	-18.8	76.4	78.6	3.00	3.00	
900.0	19.50	103.86	887.5	-26.2	106.4	109.5	3.00	3.00	
956.5	21.20	103.86	940.5	-30.9	125.4	129.2	3.00	3.00	EOB @ 21.2° INC
1,000.0	21.20	103.86	981.1	-34.7	140.7	144.9	0.00	0.00	
1,100.0	21.20	103.86	1,074.3	-43.4	175.8	181.1	0.00	0.00	
1,200.0	21.20	103.86	1,167.5	-52.0	210.9	217.2	0.00	0.00	
1,300.0	21.20	103.86	1,260.8	-60.7	246.0	253.4	0.00	0.00	
1,400.0	21.20	103.86	1,354.0	-69.4	281.1	289.5	0.00	0.00	
1,500.0	21.20	103.86	1,447.2	-78.0	316.2	325.7	0.00	0.00	
1,600.0	21.20	103.86	1,540.5	-86.7	351.3	361.9	0.00	0.00	
1,700.0	21.20	103.86	1,633.7	-95.3	386.4	398.0	0.00	0.00	
1,800.0	21.20	103.86	1,726.9	-104.0	421.5	434.2	0.00	0.00	
1,900.0	21.20	103.86	1,820.2	-112.7	456.6	470.3	0.00	0.00	
2,000.0	21.20	103.86	1,913.4	-121.3	491.7	506.5	0.00	0.00	
2,100.0	21.20	103.86	2,006.6	-130.0	526.8	542.6	0.00	0.00	
2,200.0	21.20	103.86	2,099.9	-138.6	561.9	578.8	0.00	0.00	
2,300.0	21.20	103.86	2,193.1	-147.3	597.1	615.0	0.00	0.00	
2,400.0	21.20	103.86	2,286.3	-156.0	632.2	651.1	0.00	0.00	
2,500.0	21.20	103.86	2,379.6	-164.6	667.3	687.3	0.00	0.00	
2,600.0	21.20	103.86	2,472.8	-173.3	702.4	723.4	0.00	0.00	
2,700.0	21.20	103.86	2,566.0	-181.9	737.5	759.6	0.00	0.00	
2,800.0	21.20	103.86	2,659.3	-190.6	772.6	795.7	0.00	0.00	
2,900.0	21.20	103.86	2,752.5	-199.3	807.7	831.9	0.00	0.00	
3,000.0	21.20	103.86	2,845.7	-207.9	842.8	868.0	0.00	0.00	
3,100.0	21.20	103.86	2,939.0	-216.6	877.9	904.2	0.00	0.00	
3,200.0	21.20	103.86	3,032.2	-225.2	913.0	940.4	0.00	0.00	
3,300.0	21.20	103.86	3,125.5	-233.9	948.1	976.5	0.00	0.00	
3,400.0	21.20	103.86	3,218.7	-242.6	983.2	1,012.7	0.00	0.00	
3,500.0	21.20	103.86	3,311.9	-251.2	1,018.3	1,048.8	0.00	0.00	
3,600.0	21.20	103.86	3,405.2	-259.9	1,053.4	1,085.0	0.00	0.00	
3,700.0	21.20	103.86	3,498.4	-268.5	1,088.5	1,121.1	0.00	0.00	
3,800.0	21.20	103.86	3,591.6	-277.2	1,123.6	1,157.3	0.00	0.00	
3,900.0	21.20	103.86	3,684.9	-285.9	1,158.7	1,193.5	0.00	0.00	
4,000.0	21.20	103.86	3,778.1	-294.5	1,193.8	1,229.6	0.00	0.00	
4,100.0	21.20	103.86	3,871.3	-303.2	1,228.9	1,265.8	0.00	0.00	
4,200.0	21.20	103.86	3,964.6	-311.8	1,264.0	1,301.9	0.00	0.00	
4,300.0	21.20	103.86	4,057.8	-320.5	1,299.1	1,338.1	0.00	0.00	
4,400.0	21.20	103.86	4,151.0	-329.2	1,334.2	1,374.2	0.00	0.00	
4,500.0	21.20	103.86	4,244.3	-337.8	1,369.3	1,410.4	0.00	0.00	
4,600.0	21.20	103.86	4,337.5	-346.5	1,404.4	1,446.5	0.00	0.00	
4,700.0	21.20	103.86	4,430.7	-355.1	1,439.5	1,482.7	0.00	0.00	
4,800.0	21.20	103.86	4,524.0	-363.8	1,474.6	1,518.9	0.00	0.00	
4,900.0	21.20	103.86	4,617.2	-372.5	1,509.8	1,555.0	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 24C-1
<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 24C-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	21.20	103.86	4,710.4	-381.1	1,544.9	1,591.2	0.00	0.00	
5,100.0	21.20	103.86	4,803.7	-389.8	1,580.0	1,627.3	0.00	0.00	
5,200.0	21.20	103.86	4,896.9	-398.4	1,615.1	1,663.5	0.00	0.00	
5,300.0	21.20	103.86	4,990.1	-407.1	1,650.2	1,699.6	0.00	0.00	
5,400.0	21.20	103.86	5,083.4	-415.8	1,685.3	1,735.8	0.00	0.00	
5,500.0	21.20	103.86	5,176.6	-424.4	1,720.4	1,772.0	0.00	0.00	
5,600.0	21.20	103.86	5,269.9	-433.1	1,755.5	1,808.1	0.00	0.00	
5,700.0	21.20	103.86	5,363.1	-441.7	1,790.6	1,844.3	0.00	0.00	
5,800.0	21.20	103.86	5,456.3	-450.4	1,825.7	1,880.4	0.00	0.00	
5,900.0	21.20	103.86	5,549.6	-459.1	1,860.8	1,916.6	0.00	0.00	
6,000.0	21.20	103.86	5,642.8	-467.7	1,895.9	1,952.7	0.00	0.00	
6,100.0	21.20	103.86	5,736.0	-476.4	1,931.0	1,988.9	0.00	0.00	
6,200.0	21.20	103.86	5,829.3	-485.0	1,966.1	2,025.0	0.00	0.00	
6,250.1	21.20	103.86	5,876.0	-489.4	1,983.7	2,043.2	0.00	0.00	OHIO CREEK
6,300.0	21.20	103.86	5,922.5	-493.7	2,001.2	2,061.2	0.00	0.00	
6,400.0	21.20	103.86	6,015.7	-502.4	2,036.3	2,097.4	0.00	0.00	
6,500.0	21.20	103.86	6,109.0	-511.0	2,071.4	2,133.5	0.00	0.00	
6,600.0	21.20	103.86	6,202.2	-519.7	2,106.5	2,169.7	0.00	0.00	
6,700.0	21.20	103.86	6,295.4	-528.3	2,141.6	2,205.8	0.00	0.00	
6,800.0	21.20	103.86	6,388.7	-537.0	2,176.7	2,242.0	0.00	0.00	
6,813.2	21.20	103.86	6,401.0	-538.1	2,181.4	2,246.8	0.00	0.00	WILLIAMS FORK
6,900.0	21.20	103.86	6,481.9	-545.7	2,211.8	2,278.1	0.00	0.00	
6,995.0	21.20	103.86	6,570.5	-553.9	2,245.2	2,312.5	0.00	0.00	Start 3° Drop
7,000.0	21.05	103.86	6,575.1	-554.3	2,246.9	2,314.3	3.00	-3.00	
7,100.0	18.05	103.86	6,669.4	-562.3	2,279.4	2,347.7	3.00	-3.00	
7,200.0	15.05	103.86	6,765.2	-569.2	2,307.1	2,376.2	3.00	-3.00	
7,300.0	12.05	103.86	6,862.4	-574.8	2,329.8	2,399.6	3.00	-3.00	
7,400.0	9.05	103.86	6,960.7	-579.1	2,347.6	2,417.9	3.00	-3.00	
7,500.0	6.05	103.86	7,059.8	-582.3	2,360.3	2,431.1	3.00	-3.00	
7,600.0	3.05	103.86	7,159.5	-584.2	2,368.0	2,439.0	3.00	-3.00	
7,701.5	0.00	0.00	7,261.0	-584.8	2,370.6	2,441.7	3.00	-3.00	EOD @ 0° INC - TOG
7,800.0	0.00	0.00	7,359.5	-584.8	2,370.6	2,441.7	0.00	0.00	
7,900.0	0.00	0.00	7,459.5	-584.8	2,370.6	2,441.7	0.00	0.00	
8,000.0	0.00	0.00	7,559.5	-584.8	2,370.6	2,441.7	0.00	0.00	
8,100.0	0.00	0.00	7,659.5	-584.8	2,370.6	2,441.7	0.00	0.00	
8,200.0	0.00	0.00	7,759.5	-584.8	2,370.6	2,441.7	0.00	0.00	
8,300.0	0.00	0.00	7,859.5	-584.8	2,370.6	2,441.7	0.00	0.00	
8,400.0	0.00	0.00	7,959.5	-584.8	2,370.6	2,441.7	0.00	0.00	
8,500.0	0.00	0.00	8,059.5	-584.8	2,370.6	2,441.7	0.00	0.00	
8,600.0	0.00	0.00	8,159.5	-584.8	2,370.6	2,441.7	0.00	0.00	
8,700.0	0.00	0.00	8,259.5	-584.8	2,370.6	2,441.7	0.00	0.00	
8,706.5	0.00	0.00	8,266.0	-584.8	2,370.6	2,441.7	0.00	0.00	CAMEO
8,800.0	0.00	0.00	8,359.5	-584.8	2,370.6	2,441.7	0.00	0.00	
8,900.0	0.00	0.00	8,459.5	-584.8	2,370.6	2,441.7	0.00	0.00	
9,000.0	0.00	0.00	8,559.5	-584.8	2,370.6	2,441.7	0.00	0.00	
9,100.0	0.00	0.00	8,659.5	-584.8	2,370.6	2,441.7	0.00	0.00	
9,151.5	0.00	0.00	8,711.0	-584.8	2,370.6	2,441.7	0.00	0.00	ROLLINS
9,200.0	0.00	0.00	8,759.5	-584.8	2,370.6	2,441.7	0.00	0.00	
9,301.5	0.00	0.00	8,861.0	-584.8	2,370.6	2,441.7	0.00	0.00	TD @ 9,301.5' MD

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 24C-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<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 24C-1 TGT	0.00	0.00	7,261.0	-584.8	2,370.6	606,670.60	1,246,306.59	39.468708	-108.170053
- plan hits target center									
- Point									
PUCKETT 24C-1 BHL	0.00	0.00	8,861.0	-584.8	2,370.6	606,670.60	1,246,306.59	39.468708	-108.170053
- plan hits target center									
- Circle (radius 50.0)									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
6,250.1	5,876.0	OHIO CREEK				
6,813.2	6,401.0	WILLIAMS FORK				
7,701.5	7,261.0	TOG				
8,706.5	8,266.0	CAMEO				
9,151.5	8,711.0	ROLLINS				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S	+E/-W	Comment	
(usft)	(usft)	(usft)	(usft)		
250.0	250.0	0.0	0.0	KOP @ 250'	
956.5	940.5	-30.9	125.4	EOB @ 21.2° INC	
6,995.0	6,570.5	-553.9	2,245.2	Start 3° Drop	
7,701.5	7,261.0	-584.8	2,370.6	EOD @ 0° INC	
9,301.5	8,861.0	-584.8	2,370.6	TD @ 9,301.5' MD	

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

**Garfield County, CO**

**S2-T7S-R97W (Puckett Pad P2)**

**PUCKETT 24C-1**

**DD**

**Plan #1**

## **Anticollision Report**

**01 October, 2014**



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Reference Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 24C-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	10/1/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	9,301.5	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 24C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Reference Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 24C-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	Offset	Distance		Separation Factor	Warning
	Measured Depth (usft)	Measured Depth (usft)	Between Centres (usft)	Between Ellipses (usft)		
NENW Sec 12-T7S-R97W						
Puckett 21A-12D - DD - DD						Out of range
Puckett 21B-12D - DD - DD						Out of range
S2-T7S-R97W (Puckett Pad P2)						
PUCKETT 11A-12 - DD - Plan #1	200.0	200.0	31.6	30.9	50.512	CC
PUCKETT 11A-12 - DD - Plan #1	227.8	227.8	31.6	30.8	42.229	ES
PUCKETT 11A-12 - DD - Plan #1	600.0	594.1	60.3	57.6	22.606	SF
PUCKETT 11B-12 - DD - Plan #1	200.0	200.0	39.7	39.1	63.561	CC, ES
PUCKETT 11B-12 - DD - Plan #1	1,000.0	971.5	179.5	172.9	27.187	SF
PUCKETT 13D-1 - DD - Plan #1	200.0	200.0	25.4	24.8	40.700	CC, ES
PUCKETT 13D-1 - DD - Plan #1	800.0	795.2	76.5	72.3	18.301	SF
PUCKETT 14A-1 - DD - Plan #1	416.6	416.4	22.4	20.8	14.152	CC, ES
PUCKETT 14A-1 - DD - Plan #1	600.0	599.0	31.0	28.4	11.854	SF
PUCKETT 14B-1 - DD - Plan #1	357.1	357.0	7.9	6.6	5.976	CC, ES
PUCKETT 14B-1 - DD - Plan #1	400.0	399.8	8.4	6.9	5.511	SF
PUCKETT 14C-1 - DD - Plan #1	200.0	200.0	8.3	7.7	13.264	CC
PUCKETT 14C-1 - DD - Plan #1	300.0	300.0	8.5	7.4	7.927	ES
PUCKETT 14C-1 - DD - Plan #1	400.0	400.0	10.9	9.4	7.006	SF
PUCKETT 14D-1 - DD - Plan #1	200.0	200.0	24.2	23.6	38.770	CC
PUCKETT 14D-1 - DD - Plan #1	300.0	300.0	24.4	23.3	22.835	ES
PUCKETT 14D-1 - DD - Plan #1	800.0	799.0	54.6	50.4	12.857	SF
PUCKETT 24A-1 - DD - Plan #1	359.5	359.3	16.3	15.0	12.305	CC
PUCKETT 24A-1 - DD - Plan #1	400.0	399.7	16.4	14.9	10.960	ES
PUCKETT 24A-1 - DD - Plan #1	2,600.0	2,591.1	199.6	170.2	6.785	SF
PUCKETT 24D-1 - DD - Plan #1	300.0	300.1	16.2	15.1	15.328	CC, ES
PUCKETT 24D-1 - DD - Plan #1	4,800.0	4,793.5	199.2	135.0	3.106	SF
PUCKETT 43C-2 - DD - Plan #1	200.0	200.0	19.3	18.7	30.887	CC
PUCKETT 43C-2 - DD - Plan #1	300.0	299.8	19.6	18.5	18.336	ES
PUCKETT 43C-2 - DD - Plan #1	400.0	398.5	24.9	23.3	15.960	SF
PUCKETT 43D-2 - DD - Plan #1	200.0	200.0	12.7	12.0	20.249	CC
PUCKETT 43D-2 - DD - Plan #1	300.0	300.0	13.0	11.9	12.109	ES
PUCKETT 43D-2 - DD - Plan #1	400.0	399.2	17.8	16.2	11.177	SF
PUCKETT 44A-2 - DD - Plan #1	200.0	200.0	9.4	8.8	15.050	CC
PUCKETT 44A-2 - DD - Plan #1	228.0	228.0	9.5	8.7	12.643	ES
PUCKETT 44A-2 - DD - Plan #1	300.0	300.0	10.0	8.9	9.208	SF
PUCKETT 44B-2 - DD - Plan #1	200.0	200.0	12.6	12.0	20.186	CC
PUCKETT 44B-2 - DD - Plan #1	228.1	228.1	12.7	12.0	16.906	ES
PUCKETT 44B-2 - DD - Plan #1	400.0	399.1	19.6	17.9	11.985	SF
PUCKETT 44C-2 - DD - Plan #1	200.0	200.0	18.7	18.1	29.988	CC
PUCKETT 44C-2 - DD - Plan #1	239.1	239.1	18.9	18.1	23.587	ES
PUCKETT 44C-2 - DD - Plan #1	400.0	398.2	27.3	25.7	17.147	SF
PUCKETT 44D-2 - DD - Plan #1	200.0	200.0	25.4	24.8	40.713	CC, ES
PUCKETT 44D-2 - DD - Plan #1	400.0	396.9	37.0	35.4	23.430	SF

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Reference Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 24C-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 S2-T7S-R97W (Puckett Pad P2) - PUCKETT 11A-12 - 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	-149.94	-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	180.028		
200.0	200.0	200.0	200.0	0.3	0.3	-149.94	-27.3	-15.8	31.6	30.9	0.62	50.512 CC		
227.8	227.8	227.8	227.8	0.4	0.4	106.38	-27.3	-15.8	31.6	30.8	0.75	42.229 ES		
300.0	300.0	299.5	299.5	0.5	0.5	106.40	-27.9	-15.6	32.1	31.1	1.06	30.426		
400.0	399.8	398.3	398.1	0.7	0.7	107.72	-32.7	-13.7	36.8	35.3	1.49	24.690		
500.0	499.3	496.6	495.9	1.0	1.0	109.52	-42.1	-9.9	46.2	44.2	2.02	22.840		
600.0	598.0	594.1	592.2	1.3	1.3	111.08	-56.0	-4.4	60.3	57.6	2.67	22.606 SF		
700.0	695.8	691.1	687.3	1.7	1.6	112.36	-74.2	2.8	78.8	75.4	3.44	22.903		
800.0	792.4	788.7	782.6	2.2	2.1	115.11	-93.5	10.5	100.1	95.7	4.33	23.107		
900.0	887.5	885.4	877.1	2.8	2.5	118.81	-112.7	18.1	124.0	118.6	5.33	23.273		
1,000.0	981.1	981.2	970.7	3.5	2.9	122.92	-131.6	25.6	150.8	144.4	6.38	23.643		
1,100.0	1,074.3	1,076.8	1,064.1	4.2	3.3	126.29	-150.5	33.1	178.7	171.3	7.41	24.134		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Reference Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 24C-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 S2-T7S-R97W (Puckett Pad P2) - PUCKETT 11B-12 - 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	-150.63	-34.6	-19.5	39.7					
100.0	100.0	100.0	100.0	0.1	0.1	-150.63	-34.6	-19.5	39.7	39.5	0.18	226.538		
200.0	200.0	200.0	200.0	0.3	0.3	-150.63	-34.6	-19.5	39.7	39.1	0.62	63.561	CC, ES	
300.0	300.0	298.5	298.5	0.5	0.5	103.79	-37.0	-18.7	41.7	40.6	1.05	39.727		
400.0	399.8	396.6	396.3	0.7	0.7	103.18	-44.3	-16.5	48.4	46.9	1.50	32.215		
500.0	499.3	494.0	492.8	1.0	1.0	104.00	-56.2	-12.8	60.0	57.9	2.04	29.340		
600.0	598.0	590.3	587.6	1.3	1.4	105.36	-72.6	-7.8	76.4	73.7	2.70	28.305		
700.0	695.8	685.1	679.9	1.7	1.8	106.71	-93.2	-1.4	97.5	94.1	3.48	28.005		
800.0	792.4	780.6	772.0	2.2	2.3	108.24	-117.4	6.0	122.8	118.4	4.41	27.845		
900.0	887.5	876.5	864.4	2.8	2.8	110.81	-141.9	13.5	150.1	144.6	5.46	27.505		
1,000.0	981.1	971.5	956.0	3.5	3.3	114.10	-166.2	21.0	179.5	172.9	6.60	27.187	SF	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Reference Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 24C-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 S2-T7S-R97W (Puckett Pad P2) - PUCKETT 13D-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	8.94	25.1	4.0	25.4					
100.0	100.0	100.0	100.0	0.1	0.1	8.94	25.1	4.0	25.4	25.3	0.18	145.060		
200.0	200.0	200.0	200.0	0.3	0.3	8.94	25.1	4.0	25.4	24.8	0.62	40.700 CC, ES		
300.0	300.0	299.1	299.1	0.5	0.5	-94.67	26.2	4.9	26.7	25.7	1.07	25.044		
400.0	399.8	397.6	397.4	0.7	0.8	-97.79	31.1	9.0	32.8	31.2	1.53	21.441		
500.0	499.3	497.1	496.2	1.0	1.0	-101.94	38.5	16.8	42.5	40.5	2.05	20.776		
600.0	598.0	597.2	595.3	1.3	1.3	-104.65	44.7	29.6	52.4	49.8	2.64	19.849		
700.0	695.8	696.5	693.4	1.7	1.6	-109.17	50.2	44.3	63.2	59.9	3.37	18.790		
800.0	792.4	795.2	790.9	2.2	2.0	-115.82	55.6	58.8	76.5	72.3	4.18	18.301 SF		
900.0	887.5	893.1	887.6	2.8	2.3	-123.04	61.1	73.3	93.4	88.3	5.05	18.501		
1,000.0	981.1	990.1	983.3	3.5	2.7	-129.89	66.4	87.6	114.3	108.4	5.90	19.378		
1,100.0	1,074.3	1,086.9	1,078.9	4.2	3.0	-135.05	71.8	101.9	136.9	130.3	6.67	20.542		
1,200.0	1,167.5	1,183.6	1,174.4	4.9	3.4	-138.73	77.2	116.2	160.4	153.0	7.40	21.670		
1,300.0	1,260.8	1,280.4	1,270.0	5.7	3.7	-141.48	82.5	130.5	184.2	176.1	8.12	22.691		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Reference Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 24C-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 S2-T7S-R97W (Puckett Pad P2) - PUCKETT 14A-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	31.81	20.0	12.4	23.6					
100.0	100.0	100.0	100.0	0.1	0.1	31.81	20.0	12.4	23.6	23.4	0.18	134.427		
200.0	200.0	200.0	200.0	0.3	0.3	31.81	20.0	12.4	23.6	22.9	0.62	37.717		
300.0	300.0	300.0	300.0	0.5	0.5	-73.58	20.0	12.4	23.4	22.3	1.07	21.876		
400.0	399.8	399.8	399.8	0.7	0.8	-86.50	20.0	12.4	22.5	21.0	1.50	14.925		
416.6	416.4	416.4	416.4	0.8	0.8	-90.00	20.0	12.4	22.4	20.8	1.58	14.152 CC, ES		
500.0	499.3	499.3	499.3	1.0	1.0	-110.38	20.1	13.1	24.2	22.2	2.01	12.039		
600.0	598.0	599.0	598.9	1.3	1.2	-128.11	20.5	18.2	31.0	28.4	2.61	11.854 SF		
700.0	695.8	699.1	698.4	1.7	1.4	-137.29	21.4	28.6	40.9	37.7	3.26	12.547		
800.0	792.4	798.8	797.0	2.2	1.7	-142.15	22.6	43.3	53.2	49.2	3.94	13.485		
900.0	887.5	897.3	894.3	2.8	2.0	-147.14	23.8	58.4	69.7	65.0	4.65	14.981		
1,000.0	981.1	994.9	990.7	3.5	2.3	-151.71	25.1	73.3	90.6	85.3	5.29	17.116		
1,100.0	1,074.3	1,092.2	1,087.0	4.2	2.7	-154.86	26.3	88.2	112.7	106.8	5.86	19.235		
1,200.0	1,167.5	1,189.6	1,183.2	4.9	3.0	-156.97	27.5	103.1	134.9	128.5	6.42	21.003		
1,300.0	1,260.8	1,287.0	1,279.4	5.7	3.3	-158.49	28.8	118.0	157.3	150.3	7.00	22.486		
1,400.0	1,354.0	1,384.4	1,375.7	6.4	3.7	-159.63	30.0	132.9	179.8	172.2	7.58	23.723		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Reference Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 24C-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 S2-T7S-R97W (Puckett Pad P2) - PUCKETT 14B-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	34.74	6.9	4.8	8.4					
100.0	100.0	100.0	100.0	0.1	0.1	34.74	6.9	4.8	8.4	8.2	0.18	48.037		
200.0	200.0	200.0	200.0	0.3	0.3	34.74	6.9	4.8	8.4	7.8	0.62	13.478		
300.0	300.0	300.0	300.0	0.5	0.5	-73.39	6.9	4.8	8.2	7.1	1.07	7.685		
357.1	357.0	357.0	357.0	0.7	0.7	-90.00	6.9	4.8	7.9	6.6	1.32	5.976 CC, ES		
400.0	399.8	399.8	399.8	0.7	0.8	-110.08	6.9	4.8	8.4	6.9	1.52	5.511 SF		
500.0	499.3	499.9	499.8	1.0	1.0	-142.98	6.5	7.4	13.4	11.3	2.12	6.329		
600.0	598.0	600.3	599.9	1.3	1.2	-154.83	5.2	15.2	20.6	17.8	2.73	7.542		
700.0	695.8	701.1	699.9	1.7	1.5	-159.65	3.1	28.2	28.2	24.9	3.33	8.471		
800.0	792.4	800.6	798.1	2.2	1.8	-163.15	0.6	43.7	38.4	34.5	3.95	9.732		
900.0	887.5	899.3	895.6	2.8	2.1	-166.55	-1.9	59.1	53.8	49.2	4.58	11.745		
1,000.0	981.1	997.3	992.3	3.5	2.4	-169.17	-4.4	74.3	73.8	68.7	5.14	14.369		
1,100.0	1,074.3	1,095.0	1,088.8	4.2	2.8	-170.80	-6.8	89.6	94.8	89.1	5.62	16.868		
1,200.0	1,167.5	1,192.8	1,185.4	4.9	3.1	-171.84	-9.3	104.8	115.8	109.6	6.12	18.921		
1,300.0	1,260.8	1,290.5	1,281.9	5.7	3.5	-172.56	-11.8	120.1	136.8	130.1	6.63	20.633		
1,400.0	1,354.0	1,388.3	1,378.4	6.4	3.8	-173.09	-14.3	135.3	157.8	150.6	7.16	22.049		
1,500.0	1,447.2	1,486.0	1,475.0	7.1	4.2	-173.50	-16.7	150.5	178.8	171.1	7.69	23.249		
1,600.0	1,540.5	1,583.8	1,571.5	7.9	4.5	-173.82	-19.2	165.8	199.9	191.6	8.23	24.271		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Reference Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 24C-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 S2-T7S-R97W (Puckett Pad P2) - PUCKETT 14C-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	-151.52	-7.3	-4.0	8.3				
100.0	100.0	100.0	100.0	0.1	0.1	-151.52	-7.3	-4.0	8.3	8.1	0.18	47.273	
200.0	200.0	200.0	200.0	0.3	0.3	-151.52	-7.3	-4.0	8.3	7.7	0.62	13.264 CC	
234.3	234.3	234.3	234.3	0.4	0.4	105.65	-7.3	-4.0	8.3	7.6	0.78	10.718	
300.0	300.0	300.0	300.0	0.5	0.5	108.90	-7.3	-4.0	8.5	7.4	1.07	7.927 ES	
400.0	399.8	400.0	400.0	0.7	0.8	132.07	-7.5	-3.3	10.9	9.4	1.56	7.006 SF	
500.0	499.3	500.3	500.2	1.0	1.0	144.88	-9.5	1.5	15.4	13.3	2.12	7.263	
600.0	598.0	600.9	600.2	1.3	1.2	149.96	-13.4	11.3	20.7	18.0	2.72	7.598	
700.0	695.8	701.4	699.4	1.7	1.5	151.85	-19.2	25.7	26.6	23.2	3.36	7.922	
800.0	792.4	800.9	797.5	2.2	1.8	155.60	-25.4	41.1	36.2	32.2	4.04	8.970	
900.0	887.5	899.7	895.0	2.8	2.2	159.92	-31.6	56.4	50.8	46.1	4.72	10.761	
1,000.0	981.1	997.8	991.7	3.5	2.6	163.49	-37.7	71.6	70.0	64.6	5.32	13.143	
1,100.0	1,074.3	1,095.7	1,088.2	4.2	2.9	165.72	-43.8	86.8	90.1	84.3	5.85	15.409	
1,200.0	1,167.5	1,193.6	1,184.8	4.9	3.3	167.13	-49.9	101.9	110.3	104.0	6.39	17.279	
1,300.0	1,260.8	1,291.5	1,281.3	5.7	3.7	168.10	-56.0	117.1	130.6	123.7	6.94	18.828	
1,400.0	1,354.0	1,389.4	1,377.8	6.4	4.0	168.81	-62.2	132.3	150.9	143.4	7.50	20.123	
1,500.0	1,447.2	1,487.3	1,474.4	7.1	4.4	169.36	-68.3	147.4	171.2	163.2	8.07	21.217	
1,600.0	1,540.5	1,585.2	1,570.9	7.9	4.8	169.79	-74.4	162.6	191.6	182.9	8.65	22.150	



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Reference Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 24C-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 S2-T7S-R97W (Puckett Pad P2) - PUCKETT 14D-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	-150.70	-21.1	-11.9	24.2					
100.0	100.0	100.0	100.0	0.1	0.1	-150.70	-21.1	-11.9	24.2	24.1	0.18	138.180		
200.0	200.0	200.0	200.0	0.3	0.3	-150.70	-21.1	-11.9	24.2	23.6	0.62	38.770 CC		
230.5	230.5	230.5	230.5	0.4	0.4	105.72	-21.1	-11.9	24.3	23.5	0.76	31.919		
300.0	300.0	300.0	300.0	0.5	0.5	106.92	-21.1	-11.9	24.4	23.3	1.07	22.835 ES		
400.0	399.8	399.9	399.8	0.7	0.7	112.12	-22.7	-9.7	26.3	24.8	1.51	17.403		
500.0	499.3	499.8	499.5	1.0	1.0	115.52	-27.3	-3.4	30.3	28.3	2.02	15.013		
600.0	598.0	599.8	598.6	1.3	1.2	117.12	-35.0	7.1	36.3	33.7	2.63	13.791		
700.0	695.8	699.6	696.7	1.7	1.6	117.64	-45.6	21.7	44.3	40.9	3.38	13.101		
800.0	792.4	799.0	794.2	2.2	2.0	121.22	-57.0	37.3	54.6	50.4	4.25	12.857 SF		
900.0	887.5	897.9	891.2	2.8	2.4	127.17	-68.3	52.9	68.2	63.0	5.18	13.158		
1,000.0	981.1	996.0	987.4	3.5	2.8	133.52	-79.6	68.3	85.4	79.3	6.08	14.040		
1,100.0	1,074.3	1,093.9	1,083.5	4.2	3.2	138.17	-90.8	83.7	104.0	97.1	6.91	15.062		
1,200.0	1,167.5	1,191.9	1,179.6	4.9	3.6	141.40	-102.1	99.1	123.1	115.4	7.70	15.980		
1,300.0	1,260.8	1,289.9	1,275.7	5.7	4.0	143.77	-113.3	114.5	142.4	133.9	8.49	16.776		
1,400.0	1,354.0	1,387.8	1,371.8	6.4	4.4	145.56	-124.5	130.0	161.9	152.6	9.27	17.465		
1,500.0	1,447.2	1,485.8	1,467.9	7.1	4.9	146.98	-135.8	145.4	181.5	171.5	10.05	18.062		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Reference Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 24C-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 S2-T7S-R97W (Puckett Pad P2) - PUCKETT 24A-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	31.65	14.2	8.8	16.7				
100.0	100.0	100.0	100.0	0.1	0.1	31.65	14.2	8.8	16.7	16.5	0.18	95.145	
200.0	200.0	200.0	200.0	0.3	0.3	31.65	14.2	8.8	16.7	16.1	0.62	26.695	
300.0	300.0	300.0	300.0	0.5	0.5	-74.38	14.2	8.8	16.5	15.4	1.07	15.438	
359.5	359.4	359.3	359.3	0.7	0.7	-79.84	14.1	9.7	16.3	15.0	1.32	12.305 CC	
400.0	399.8	399.7	399.6	0.7	0.8	-83.73	14.0	11.3	16.4	14.9	1.49	10.960 ES	
500.0	499.3	499.5	499.1	1.0	1.0	-93.04	13.3	19.1	17.5	15.5	1.98	8.864	
600.0	598.0	599.2	598.0	1.3	1.3	-100.80	12.6	32.1	20.2	17.7	2.58	7.860	
700.0	695.8	699.0	696.1	1.7	1.6	-106.10	12.2	50.1	24.8	21.5	3.32	7.489	
800.0	792.4	798.8	793.2	2.2	2.0	-109.10	12.2	73.3	31.1	26.9	4.21	7.393	
900.0	887.5	898.6	888.9	2.8	2.5	-110.53	12.5	101.5	39.0	33.8	5.28	7.393	
1,000.0	981.1	998.3	982.9	3.5	3.2	-110.59	13.2	134.6	48.3	41.8	6.53	7.396	
1,100.0	1,074.3	1,097.8	1,076.2	4.2	3.8	-109.54	14.0	169.5	57.7	49.8	7.88	7.324	
1,200.0	1,167.5	1,197.4	1,169.4	4.9	4.5	-108.78	14.8	204.4	67.2	57.9	9.27	7.247	
1,300.0	1,260.8	1,296.9	1,262.6	5.7	5.2	-108.21	15.6	239.2	76.6	65.9	10.67	7.177	
1,400.0	1,354.0	1,396.5	1,355.9	6.4	5.9	-107.77	16.4	274.1	86.1	74.0	12.09	7.116	
1,500.0	1,447.2	1,496.0	1,449.1	7.1	6.6	-107.41	17.2	309.0	95.5	82.0	13.52	7.064	
1,600.0	1,540.5	1,595.6	1,542.3	7.9	7.4	-107.12	18.0	343.9	105.0	90.0	14.96	7.019	
1,700.0	1,633.7	1,695.1	1,635.6	8.6	8.1	-106.87	18.8	378.8	114.4	98.0	16.39	6.980	
1,800.0	1,726.9	1,794.7	1,728.8	9.4	8.8	-106.67	19.6	413.7	123.9	106.1	17.84	6.947	
1,900.0	1,820.2	1,894.2	1,822.0	10.1	9.5	-106.49	20.5	448.6	133.4	114.1	19.28	6.917	
2,000.0	1,913.4	1,993.8	1,915.3	10.9	10.2	-106.33	21.3	483.5	142.8	122.1	20.73	6.891	
2,100.0	2,006.6	2,093.3	2,008.5	11.6	10.9	-106.20	22.1	518.4	152.3	130.1	22.17	6.868	
2,200.0	2,099.9	2,192.9	2,101.7	12.4	11.7	-106.08	22.9	553.3	161.8	138.1	23.62	6.848	
2,300.0	2,193.1	2,292.4	2,195.0	13.1	12.4	-105.97	23.7	588.1	171.2	146.2	25.07	6.830	
2,400.0	2,286.3	2,392.0	2,288.2	13.9	13.1	-105.88	24.5	623.0	180.7	154.2	26.52	6.813	
2,500.0	2,379.6	2,491.5	2,381.4	14.7	13.8	-105.79	25.3	657.9	190.2	162.2	27.97	6.798	
2,600.0	2,472.8	2,591.1	2,474.6	15.4	14.5	-105.72	26.1	692.8	199.6	170.2	29.42	6.785 SF	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Reference Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 24C-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 S2-T7S-R97W (Puckett Pad P2) - PUCKETT 24D-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	-150.91	-14.2	-7.9	16.3					
100.0	100.0	100.0	100.0	0.1	0.1	-150.91	-14.2	-7.9	16.3	16.1	0.18	92.725		
200.0	200.0	200.0	200.0	0.3	0.3	-150.91	-14.2	-7.9	16.3	15.6	0.62	26.016		
281.0	281.0	281.1	281.1	0.5	0.5	102.16	-14.8	-6.3	16.3	15.3	0.97	16.698		
300.0	300.0	300.1	300.0	0.5	0.5	98.27	-15.1	-5.5	16.2	15.1	1.05	15.328	CC, ES	
400.0	399.8	400.0	399.6	0.7	0.8	89.17	-17.9	1.9	16.9	15.4	1.50	11.290		
500.0	499.3	499.7	498.5	1.0	1.0	81.46	-22.5	14.1	18.7	16.6	2.04	9.150		
600.0	598.0	599.4	596.5	1.3	1.4	75.70	-28.9	31.0	21.3	18.6	2.71	7.863		
700.0	695.8	698.8	693.2	1.7	1.9	71.78	-37.1	52.7	24.6	21.1	3.51	7.014		
800.0	792.4	798.1	788.4	2.2	2.4	69.33	-47.0	79.0	28.6	24.1	4.46	6.405		
900.0	887.5	897.3	881.9	2.8	3.0	67.95	-58.7	109.9	33.1	27.5	5.58	5.929		
1,000.0	981.1	997.1	974.9	3.5	3.8	69.34	-71.4	143.7	37.4	30.5	6.89	5.426		
1,100.0	1,074.3	1,097.0	1,068.0	4.2	4.5	71.55	-84.3	177.7	41.4	33.1	8.29	4.995		
1,200.0	1,167.5	1,196.9	1,161.1	4.9	5.2	73.36	-97.1	211.6	45.5	35.8	9.73	4.674		
1,300.0	1,260.8	1,296.8	1,254.2	5.7	6.0	74.86	-109.9	245.5	49.6	38.4	11.20	4.430		
1,400.0	1,354.0	1,396.7	1,347.2	6.4	6.7	76.14	-122.7	279.5	53.8	41.1	12.69	4.240		
1,500.0	1,447.2	1,496.6	1,440.3	7.1	7.5	77.23	-135.5	313.4	58.0	43.8	14.18	4.088		
1,600.0	1,540.5	1,596.5	1,533.4	7.9	8.2	78.18	-148.3	347.4	62.2	46.5	15.68	3.965		
1,700.0	1,633.7	1,696.4	1,626.5	8.6	9.0	79.01	-161.1	381.3	66.4	49.2	17.19	3.863		
1,800.0	1,726.9	1,796.3	1,719.6	9.4	9.7	79.73	-173.9	415.2	70.6	51.9	18.69	3.777		
1,900.0	1,820.2	1,896.2	1,812.7	10.1	10.5	80.38	-186.8	449.2	74.8	54.6	20.20	3.705		
2,000.0	1,913.4	1,996.1	1,905.8	10.9	11.2	80.95	-199.6	483.1	79.1	57.4	21.72	3.642		
2,100.0	2,006.6	2,096.1	1,998.9	11.6	12.0	81.47	-212.4	517.1	83.3	60.1	23.23	3.588		
2,200.0	2,099.9	2,196.0	2,092.0	12.4	12.8	81.94	-225.2	551.0	87.6	62.9	24.74	3.540		
2,300.0	2,193.1	2,295.9	2,185.0	13.1	13.5	82.36	-238.0	584.9	91.9	65.6	26.26	3.499		
2,400.0	2,286.3	2,395.8	2,278.1	13.9	14.3	82.75	-250.8	618.9	96.1	68.4	27.77	3.461		
2,500.0	2,379.6	2,495.7	2,371.2	14.7	15.0	83.10	-263.6	652.8	100.4	71.1	29.29	3.428		
2,600.0	2,472.8	2,595.6	2,464.3	15.4	15.8	83.42	-276.4	686.7	104.7	73.9	30.80	3.398		
2,700.0	2,566.0	2,695.5	2,557.4	16.2	16.5	83.72	-289.2	720.7	109.0	76.6	32.32	3.371		
2,800.0	2,659.3	2,795.4	2,650.5	16.9	17.3	84.00	-302.1	754.6	113.2	79.4	33.83	3.347		
2,900.0	2,752.5	2,895.3	2,743.6	17.7	18.1	84.26	-314.9	788.6	117.5	82.2	35.35	3.325		
3,000.0	2,845.7	2,995.2	2,836.7	18.4	18.8	84.49	-327.7	822.5	121.8	84.9	36.86	3.304		
3,100.0	2,939.0	3,095.1	2,929.7	19.2	19.6	84.72	-340.5	856.4	126.1	87.7	38.38	3.285		
3,200.0	3,032.2	3,195.0	3,022.8	19.9	20.3	84.92	-353.3	890.4	130.4	90.5	39.90	3.268		
3,300.0	3,125.5	3,294.9	3,115.9	20.7	21.1	85.12	-366.1	924.3	134.7	93.3	41.41	3.252		
3,400.0	3,218.7	3,394.8	3,209.0	21.4	21.9	85.30	-378.9	958.3	139.0	96.0	42.93	3.237		
3,500.0	3,311.9	3,494.8	3,302.1	22.2	22.6	85.47	-391.7	992.2	143.3	98.8	44.44	3.224		
3,600.0	3,405.2	3,594.7	3,395.2	23.0	23.4	85.63	-404.5	1,026.1	147.6	101.6	45.96	3.211		
3,700.0	3,498.4	3,694.6	3,488.3	23.7	24.1	85.78	-417.4	1,060.1	151.9	104.4	47.47	3.199		
3,800.0	3,591.6	3,794.5	3,581.4	24.5	24.9	85.93	-430.2	1,094.0	156.1	107.2	48.99	3.188		
3,900.0	3,684.9	3,894.4	3,674.5	25.2	25.7	86.06	-443.0	1,128.0	160.4	109.9	50.50	3.177		
4,000.0	3,778.1	3,994.3	3,767.5	26.0	26.4	86.19	-455.8	1,161.9	164.7	112.7	52.02	3.167		
4,100.0	3,871.3	4,094.2	3,860.6	26.7	27.2	86.31	-468.6	1,195.8	169.0	115.5	53.53	3.158		
4,200.0	3,964.6	4,194.1	3,953.7	27.5	27.9	86.43	-481.4	1,229.8	173.3	118.3	55.04	3.149		
4,300.0	4,057.8	4,294.0	4,046.8	28.2	28.7	86.54	-494.2	1,263.7	177.6	121.1	56.56	3.141		
4,400.0	4,151.0	4,393.9	4,139.9	29.0	29.5	86.65	-507.0	1,297.6	181.9	123.9	58.07	3.133		
4,500.0	4,244.3	4,493.8	4,233.0	29.8	30.2	86.75	-519.9	1,331.6	186.3	126.7	59.59	3.126		
4,600.0	4,337.5	4,593.7	4,326.1	30.5	31.0	86.84	-532.7	1,365.5	190.6	129.5	61.10	3.119		
4,700.0	4,430.7	4,693.6	4,419.2	31.3	31.7	86.94	-545.5	1,399.5	194.9	132.2	62.61	3.112		
4,800.0	4,524.0	4,793.5	4,512.2	32.0	32.5	87.02	-558.3	1,433.4	199.2	135.0	64.13	3.106	SF	

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

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Reference Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 24C-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 S2-T7S-R97W (Puckett Pad P2) - PUCKETT 43C-2 - 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	0.00	19.3	0.0	19.3					
100.0	100.0	100.0	100.0	0.1	0.1	0.00	19.3	0.0	19.3	19.1	0.18	110.084		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	19.3	0.0	19.3	18.7	0.62	30.887 CC		
243.5	243.5	243.5	243.5	0.4	0.4	-104.57	19.3	0.0	19.4	18.5	0.82	23.682		
300.0	300.0	299.8	299.8	0.5	0.5	-106.06	19.4	-0.1	19.6	18.5	1.07	18.336 ES		
400.0	399.8	398.5	398.4	0.7	0.8	-124.25	21.9	-3.1	24.9	23.3	1.56	15.960 SF		
500.0	499.3	495.2	494.7	1.0	1.0	-142.35	27.4	-9.7	40.7	38.5	2.21	18.464		
600.0	598.0	588.5	587.1	1.3	1.3	-152.13	35.7	-19.7	67.7	64.8	2.89	23.428		
700.0	695.8	682.0	679.4	1.7	1.6	-157.33	45.4	-31.3	102.3	98.7	3.53	28.961		
800.0	792.4	773.6	769.7	2.2	1.9	-160.45	54.9	-42.7	141.9	137.7	4.15	34.221		
900.0	887.5	862.9	857.9	2.8	2.2	-162.54	64.2	-53.8	186.3	181.5	4.76	39.169		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Reference Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 24C-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> S2-T7S-R97W (Puckett Pad P2) - PUCKETT 43D-2 - 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	-18.20	12.0	-4.0	12.7				
100.0	100.0	100.0	100.0	0.1	0.1	-18.20	12.0	-4.0	12.7	12.5	0.18	72.170	
200.0	200.0	200.0	200.0	0.3	0.3	-18.20	12.0	-4.0	12.7	12.0	0.62	20.249 CC	
229.8	229.8	229.8	229.8	0.4	0.4	-122.50	12.0	-4.0	12.7	12.0	0.76	16.787	
300.0	300.0	300.0	300.0	0.5	0.5	-124.49	12.0	-4.0	13.0	11.9	1.07	12.109 ES	
400.0	399.8	399.2	399.2	0.7	0.8	-141.72	12.6	-5.3	17.8	16.2	1.60	11.177 SF	
500.0	499.3	496.6	496.4	1.0	1.0	-157.91	15.2	-11.0	33.1	30.8	2.24	14.785	
600.0	598.0	590.9	590.0	1.3	1.2	-165.40	19.7	-20.7	59.1	56.2	2.91	20.322	
700.0	695.8	685.0	683.2	1.7	1.5	-168.93	25.1	-32.4	92.6	89.1	3.54	26.167	
800.0	792.4	777.2	774.6	2.2	1.8	-170.89	30.3	-43.8	131.1	126.9	4.14	31.638	
900.0	887.5	867.2	863.8	2.8	2.1	-172.13	35.4	-55.0	174.3	169.6	4.74	36.762	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Reference Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 24C-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 S2-T7S-R97W (Puckett Pad P2) - PUCKETT 44A-2 - 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	-57.20	5.1	-7.9	9.4					
100.0	100.0	100.0	100.0	0.1	0.1	-57.20	5.1	-7.9	9.4	9.2	0.18	53.641		
200.0	200.0	200.0	200.0	0.3	0.3	-57.20	5.1	-7.9	9.4	8.8	0.62	15.050 CC		
228.0	228.0	228.0	228.0	0.4	0.4	-161.26	5.1	-7.9	9.5	8.7	0.75	12.643 ES		
300.0	300.0	300.0	300.0	0.5	0.5	-162.26	5.1	-7.9	10.0	8.9	1.09	9.208 SF		
400.0	399.8	399.7	399.7	0.7	0.8	-168.50	5.1	-8.1	15.2	13.6	1.64	9.304		
500.0	499.3	497.6	497.5	1.0	1.0	-175.19	5.4	-11.8	29.3	27.0	2.24	13.042		
600.0	598.0	592.5	592.1	1.3	1.2	-178.86	6.0	-20.2	53.4	50.5	2.89	18.484		
700.0	695.8	686.5	685.3	1.7	1.4	179.37	6.9	-31.8	85.9	82.4	3.53	24.315		
800.0	792.4	779.1	777.2	2.2	1.7	178.59	7.8	-43.3	123.5	119.4	4.14	29.799		
900.0	887.5	869.7	867.1	2.8	2.0	178.21	8.7	-54.5	165.9	161.1	4.75	34.906		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Reference Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 24C-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> S2-T7S-R97W (Puckett Pad P2) - PUCKETT 44B-2 - 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	-100.00	-2.2	-12.4	12.6				
100.0	100.0	100.0	100.0	0.1	0.1	-100.00	-2.2	-12.4	12.6	12.4	0.18	71.945	
200.0	200.0	200.0	200.0	0.3	0.3	-100.00	-2.2	-12.4	12.6	12.0	0.62	20.186 CC	
228.1	228.1	228.1	228.1	0.4	0.4	156.33	-2.2	-12.4	12.7	12.0	0.75	16.906 ES	
300.0	300.0	300.0	300.0	0.5	0.5	157.28	-2.2	-12.4	13.2	12.1	1.09	12.152	
400.0	399.8	399.1	399.1	0.7	0.7	162.51	-2.6	-13.8	19.6	17.9	1.63	11.985 SF	
500.0	499.3	496.4	496.2	1.0	1.0	164.97	-4.5	-19.8	35.8	33.5	2.25	15.928	
600.0	598.0	591.4	590.5	1.3	1.2	165.62	-7.6	-30.0	61.5	58.6	2.91	21.178	
700.0	695.8	686.1	684.5	1.7	1.5	166.27	-11.2	-41.6	93.6	90.0	3.53	26.478	
800.0	792.4	779.0	776.6	2.2	1.8	167.00	-14.7	-53.0	130.4	126.2	4.17	31.300	
900.0	887.5	869.9	866.8	2.8	2.0	167.67	-18.2	-64.1	171.9	167.1	4.80	35.796	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Reference Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 24C-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													S2-T7S-R97W (Puckett Pad P2) - PUCKETT 44C-2 - 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	-119.09	-9.1	-16.4	18.7								
100.0	100.0	100.0	100.0	0.1	0.1	-119.09	-9.1	-16.4	18.7	18.6	0.18	106.879					
200.0	200.0	200.0	200.0	0.3	0.3	-119.09	-9.1	-16.4	18.7	18.1	0.62	29.988	CC				
239.1	239.1	239.1	239.1	0.4	0.4	137.46	-9.1	-16.4	18.9	18.1	0.80	23.587	ES				
300.0	300.0	299.7	299.7	0.5	0.5	138.30	-9.2	-16.5	19.4	18.3	1.08	18.011					
400.0	399.8	398.2	398.1	0.7	0.7	144.40	-11.4	-19.6	27.3	25.7	1.59	17.147	SF				
500.0	499.3	494.9	494.4	1.0	1.0	149.20	-16.4	-26.7	44.6	42.4	2.21	20.182					
600.0	598.0	589.7	588.3	1.3	1.2	151.76	-23.8	-37.3	70.9	68.1	2.88	24.615					
700.0	695.8	684.4	682.0	1.7	1.5	153.83	-31.9	-48.8	102.8	99.3	3.54	29.073					
800.0	792.4	777.4	773.9	2.2	1.9	155.63	-39.7	-60.1	139.2	135.0	4.21	33.083					
900.0	887.5	868.4	864.0	2.8	2.2	157.14	-47.5	-71.1	180.2	175.4	4.90	36.797					



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Reference Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 24C-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> S2-T7S-R97W (Puckett Pad P2) - PUCKETT 44D-2 - 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						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	-126.97	-15.3	-20.3	25.4					
100.0	100.0	100.0	100.0	0.1	0.1	-126.97	-15.3	-20.3	25.4	25.3	0.18	145.106		
200.0	200.0	200.0	200.0	0.3	0.3	-126.97	-15.3	-20.3	25.4	24.8	0.62	40.713 CC, ES		
300.0	300.0	299.0	299.0	0.5	0.5	129.63	-16.4	-21.3	27.3	26.2	1.07	25.582		
400.0	399.8	396.9	396.6	0.7	0.7	133.67	-21.0	-25.5	37.0	35.4	1.58	23.430 SF		
500.0	499.3	492.9	492.0	1.0	1.0	137.88	-29.2	-33.0	55.4	53.3	2.19	25.321		
600.0	598.0	586.7	584.6	1.3	1.3	140.74	-40.5	-43.3	82.3	79.5	2.87	28.729		
700.0	695.8	681.2	677.6	1.7	1.6	143.23	-52.9	-54.6	114.7	111.1	3.55	32.316		
800.0	792.4	774.1	768.9	2.2	2.0	145.51	-65.1	-65.7	151.3	147.0	4.27	35.461		
900.0	887.5	865.0	858.4	2.8	2.4	147.49	-77.1	-76.6	192.1	187.1	5.02	38.308		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	KB=22' @ 8446.0usft
<b>Reference Site:</b>	S2-T7S-R97W (Puckett Pad P2)	<b>MD Reference:</b>	KB=22' @ 8446.0usft
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PUCKETT 24C-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 Depths are relative to KB=22' @ 8446.0usft  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °

Coordinates are relative to: PUCKETT 24C-1  
Coordinate System is US State Plane 1927 (Exact solution), Colorado Central 502  
Grid Convergence at Surface is: -1.69°

