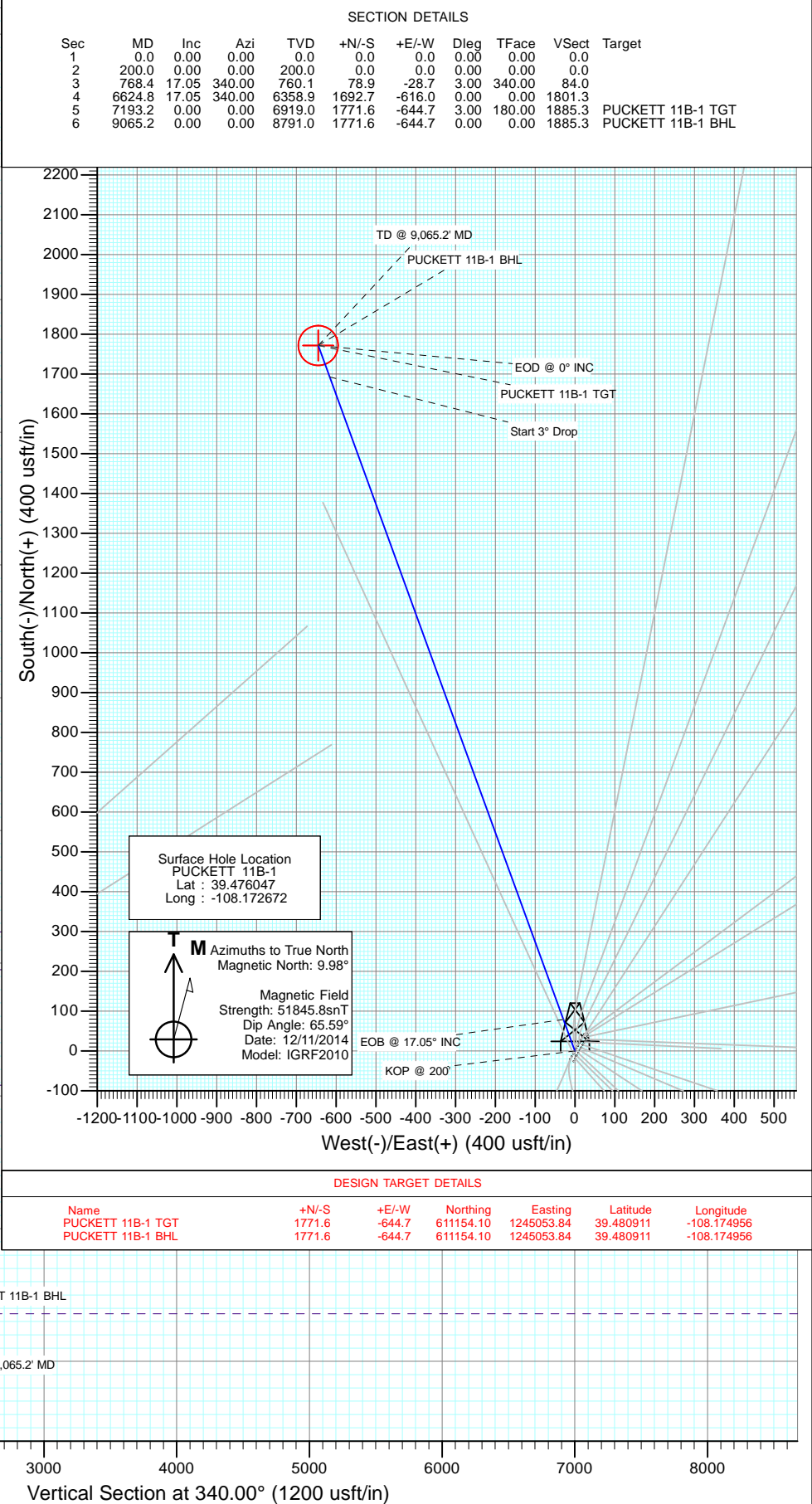
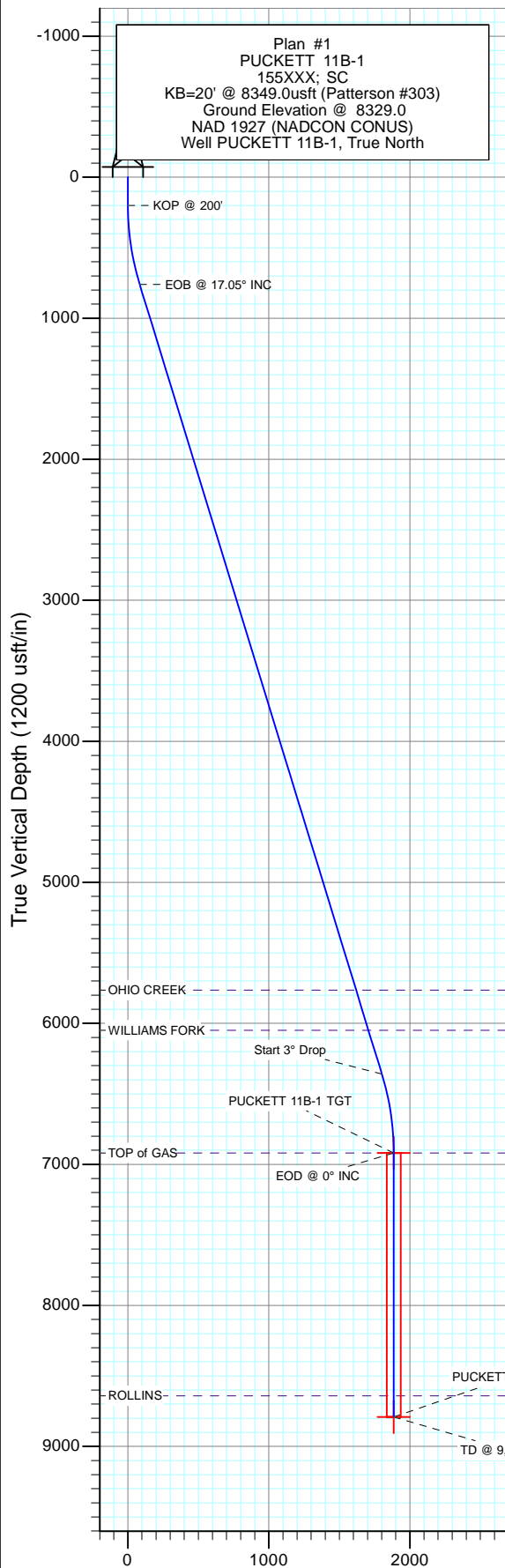
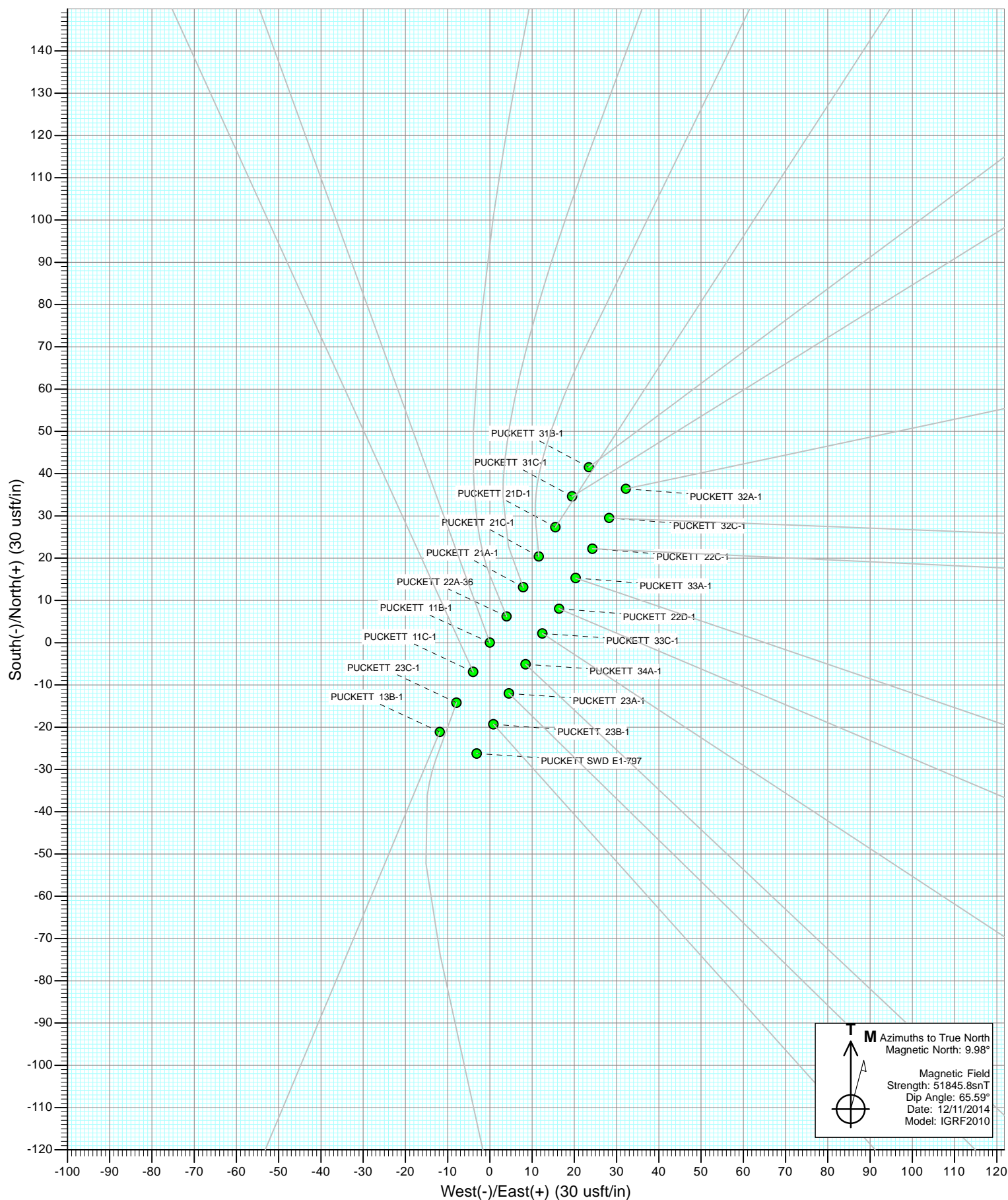
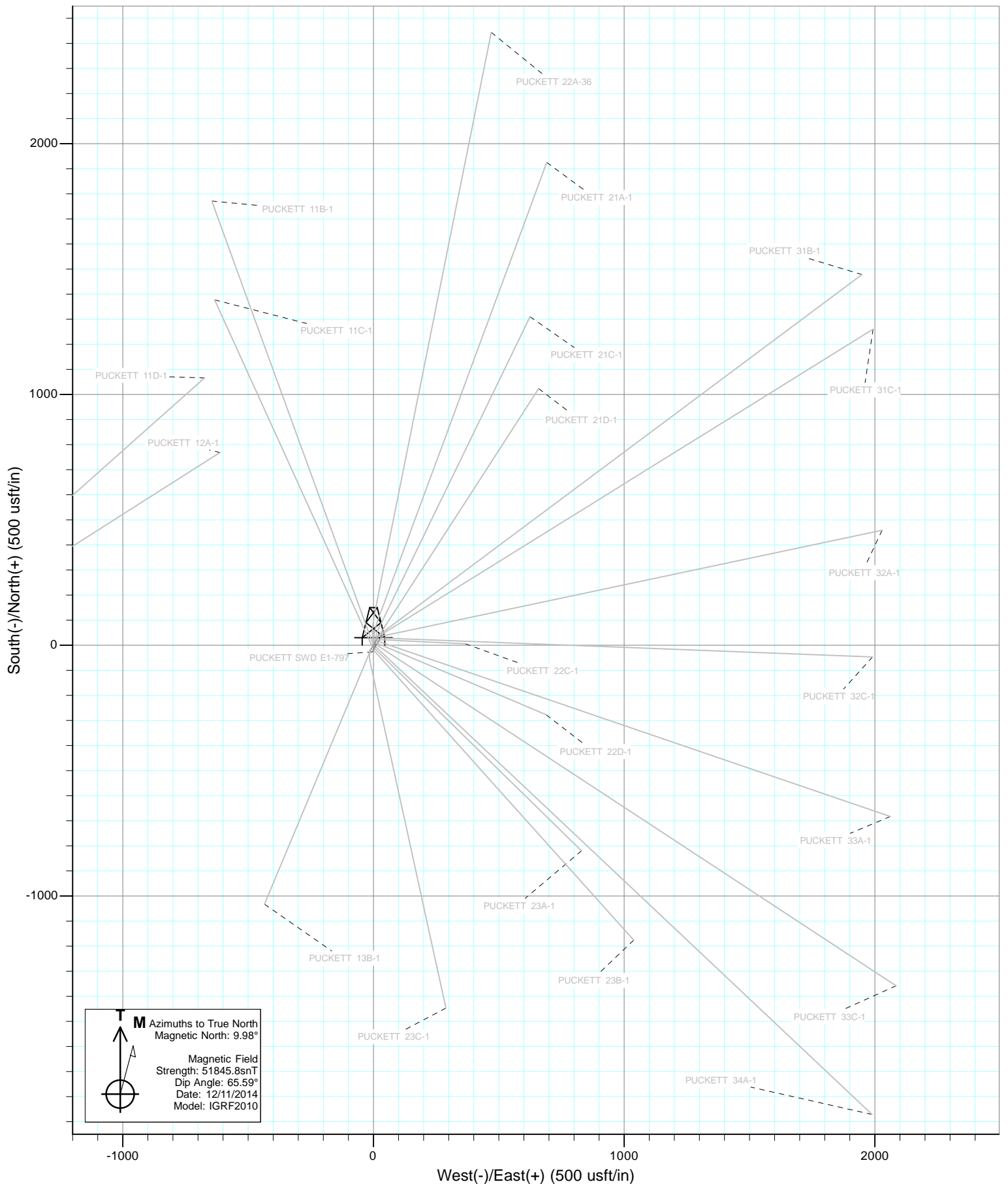




Project: Garfield County, CO  
Site: S1-T7S-R97W (Mesa E1 797)  
Well: PUCKETT 11B-1  
Wellbore: DD  
Design: Plan #1

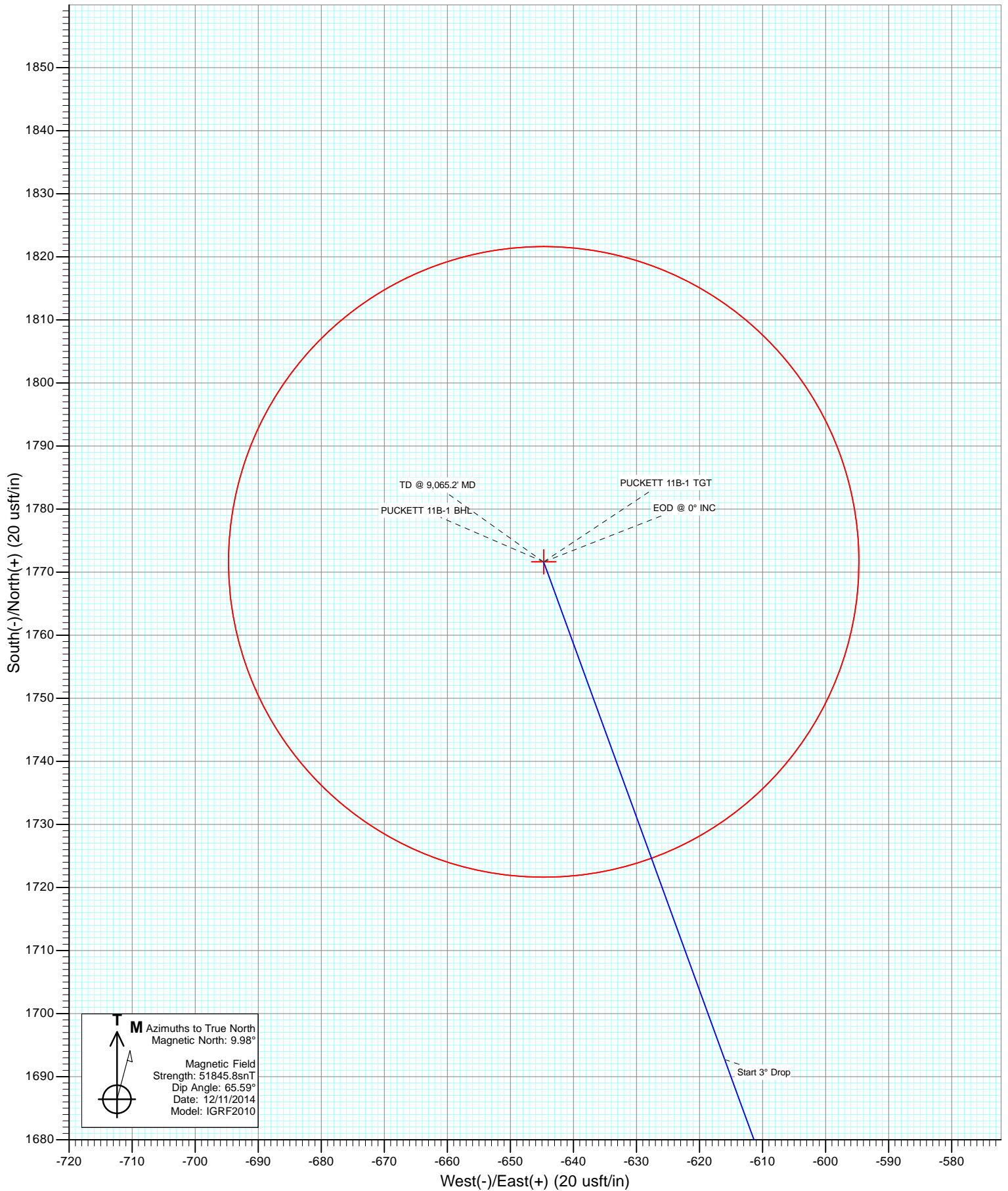








Project: Garfield County, CO  
Site: S1-T7S-R97W (Mesa E1 797)  
Well: PUCKETT 11B-1  
Wellbore: DD  
Design: Plan #1



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

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

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

Well	PUCKETT 11B-1					
Well Position	+N/-S	0.0 usft	Northing:	609,364.26 usft	Latitude:	39.476047
	+E/-W	0.0 usft	Easting:	1,245,646.15 usft	Longitude:	-108.172672
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,329.0 usft

<b>Wellbore</b>	DD				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
			(°)	(°)	(nT)
	IGRF2010	12/11/2014	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	340.00	

<b>Plan Sections</b>										
<b>Measured Depth</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical Depth</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Dogleg Rate</b>	<b>Build Rate</b>	<b>Turn Rate</b>	<b>TFO</b>	<b>Target</b>
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
768.4	17.05	340.00	760.1	78.9	-28.7	3.00	3.00	0.00	340.00	
6,624.8	17.05	340.00	6,358.9	1,692.7	-616.0	0.00	0.00	0.00	0.00	
7,193.2	0.00	0.00	6,919.0	1,771.6	-644.7	3.00	-3.00	0.00	180.00	PUCKETT 11B-1 TG1
9,065.2	0.00	0.00	8,791.0	1,771.6	-644.7	0.00	0.00	0.00	0.00	PUCKETT 11B-1 BHL

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-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	KOP @ 200'
300.0	3.00	340.00	300.0	2.5	-0.9	2.6	3.00	3.00	
400.0	6.00	340.00	399.6	9.8	-3.6	10.5	3.00	3.00	
500.0	9.00	340.00	498.8	22.1	-8.0	23.5	3.00	3.00	
600.0	12.00	340.00	597.1	39.2	-14.3	41.7	3.00	3.00	
700.0	15.00	340.00	694.3	61.2	-22.3	65.1	3.00	3.00	
768.4	17.05	340.00	760.1	78.9	-28.7	84.0	3.00	3.00	EOB @ 17.05° INC
800.0	17.05	340.00	790.3	87.6	-31.9	93.2	0.00	0.00	
900.0	17.05	340.00	885.9	115.2	-41.9	122.6	0.00	0.00	
1,000.0	17.05	340.00	981.5	142.7	-51.9	151.9	0.00	0.00	
1,100.0	17.05	340.00	1,077.1	170.3	-62.0	181.2	0.00	0.00	
1,200.0	17.05	340.00	1,172.7	197.8	-72.0	210.5	0.00	0.00	
1,300.0	17.05	340.00	1,268.3	225.4	-82.0	239.9	0.00	0.00	
1,400.0	17.05	340.00	1,363.9	252.9	-92.0	269.2	0.00	0.00	
1,500.0	17.05	340.00	1,459.5	280.5	-102.1	298.5	0.00	0.00	
1,600.0	17.05	340.00	1,555.1	308.1	-112.1	327.8	0.00	0.00	
1,700.0	17.05	340.00	1,650.7	335.6	-122.1	357.2	0.00	0.00	
1,800.0	17.05	340.00	1,746.3	363.2	-132.2	386.5	0.00	0.00	
1,900.0	17.05	340.00	1,841.9	390.7	-142.2	415.8	0.00	0.00	
2,000.0	17.05	340.00	1,937.5	418.3	-152.2	445.1	0.00	0.00	
2,100.0	17.05	340.00	2,033.1	445.8	-162.2	474.5	0.00	0.00	
2,200.0	17.05	340.00	2,128.7	473.4	-172.3	503.8	0.00	0.00	
2,300.0	17.05	340.00	2,224.3	501.0	-182.3	533.1	0.00	0.00	
2,400.0	17.05	340.00	2,319.9	528.5	-192.3	562.4	0.00	0.00	
2,500.0	17.05	340.00	2,415.5	556.1	-202.4	591.8	0.00	0.00	
2,600.0	17.05	340.00	2,511.1	583.6	-212.4	621.1	0.00	0.00	
2,700.0	17.05	340.00	2,606.7	611.2	-222.4	650.4	0.00	0.00	
2,800.0	17.05	340.00	2,702.3	638.7	-232.4	679.7	0.00	0.00	
2,900.0	17.05	340.00	2,797.9	666.3	-242.5	709.1	0.00	0.00	
3,000.0	17.05	340.00	2,893.5	693.9	-252.5	738.4	0.00	0.00	
3,100.0	17.05	340.00	2,989.1	721.4	-262.5	767.7	0.00	0.00	
3,200.0	17.05	340.00	3,084.7	749.0	-272.6	797.0	0.00	0.00	
3,300.0	17.05	340.00	3,180.3	776.5	-282.6	826.4	0.00	0.00	
3,400.0	17.05	340.00	3,276.0	804.1	-292.6	855.7	0.00	0.00	
3,500.0	17.05	340.00	3,371.6	831.6	-302.6	885.0	0.00	0.00	
3,600.0	17.05	340.00	3,467.2	859.2	-312.7	914.3	0.00	0.00	
3,700.0	17.05	340.00	3,562.8	886.8	-322.7	943.6	0.00	0.00	
3,800.0	17.05	340.00	3,658.4	914.3	-332.7	973.0	0.00	0.00	
3,900.0	17.05	340.00	3,754.0	941.9	-342.7	1,002.3	0.00	0.00	
4,000.0	17.05	340.00	3,849.6	969.4	-352.8	1,031.6	0.00	0.00	
4,100.0	17.05	340.00	3,945.2	997.0	-362.8	1,060.9	0.00	0.00	
4,200.0	17.05	340.00	4,040.8	1,024.5	-372.8	1,090.3	0.00	0.00	
4,300.0	17.05	340.00	4,136.4	1,052.1	-382.9	1,119.6	0.00	0.00	
4,400.0	17.05	340.00	4,232.0	1,079.7	-392.9	1,148.9	0.00	0.00	
4,500.0	17.05	340.00	4,327.6	1,107.2	-402.9	1,178.2	0.00	0.00	
4,600.0	17.05	340.00	4,423.2	1,134.8	-412.9	1,207.6	0.00	0.00	
4,700.0	17.05	340.00	4,518.8	1,162.3	-423.0	1,236.9	0.00	0.00	
4,800.0	17.05	340.00	4,614.4	1,189.9	-433.0	1,266.2	0.00	0.00	
4,900.0	17.05	340.00	4,710.0	1,217.4	-443.0	1,295.5	0.00	0.00	
5,000.0	17.05	340.00	4,805.6	1,245.0	-453.1	1,324.9	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 11B-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 11B-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
5,100.0	17.05	340.00	4,901.2	1,272.6	-463.1	1,354.2	0.00	0.00	
5,200.0	17.05	340.00	4,996.8	1,300.1	-473.1	1,383.5	0.00	0.00	
5,300.0	17.05	340.00	5,092.4	1,327.7	-483.1	1,412.8	0.00	0.00	
5,400.0	17.05	340.00	5,188.0	1,355.2	-493.2	1,442.2	0.00	0.00	
5,500.0	17.05	340.00	5,283.6	1,382.8	-503.2	1,471.5	0.00	0.00	
5,600.0	17.05	340.00	5,379.2	1,410.3	-513.2	1,500.8	0.00	0.00	
5,700.0	17.05	340.00	5,474.8	1,437.9	-523.3	1,530.1	0.00	0.00	
5,800.0	17.05	340.00	5,570.4	1,465.5	-533.3	1,559.5	0.00	0.00	
5,900.0	17.05	340.00	5,666.0	1,493.0	-543.3	1,588.8	0.00	0.00	
6,000.0	17.05	340.00	5,761.6	1,520.6	-553.3	1,618.1	0.00	0.00	
6,002.5	17.05	340.00	5,764.0	1,521.3	-553.6	1,618.8	0.00	0.00	OHIO CREEK
6,100.0	17.05	340.00	5,857.2	1,548.1	-563.4	1,647.4	0.00	0.00	
6,200.0	17.05	340.00	5,952.9	1,575.7	-573.4	1,676.8	0.00	0.00	
6,300.0	17.05	340.00	6,048.5	1,603.2	-583.4	1,706.1	0.00	0.00	
6,300.6	17.05	340.00	6,049.0	1,603.4	-583.5	1,706.3	0.00	0.00	WILLIAMS FORK
6,400.0	17.05	340.00	6,144.1	1,630.8	-593.4	1,735.4	0.00	0.00	
6,500.0	17.05	340.00	6,239.7	1,658.4	-603.5	1,764.7	0.00	0.00	
6,600.0	17.05	340.00	6,335.3	1,685.9	-613.5	1,794.1	0.00	0.00	
6,624.8	17.05	340.00	6,358.9	1,692.7	-616.0	1,801.3	0.00	0.00	Start 3° Drop
6,700.0	14.80	340.00	6,431.3	1,712.1	-623.0	1,822.0	3.00	-3.00	
6,800.0	11.80	340.00	6,528.6	1,733.7	-630.9	1,845.0	3.00	-3.00	
6,900.0	8.80	340.00	6,627.0	1,750.5	-637.0	1,862.8	3.00	-3.00	
7,000.0	5.80	340.00	6,726.2	1,762.5	-641.4	1,875.5	3.00	-3.00	
7,100.0	2.80	340.00	6,825.9	1,769.5	-643.9	1,883.0	3.00	-3.00	
7,193.2	0.00	0.00	6,919.0	1,771.6	-644.7	1,885.3	3.00	-3.00	EOD @ 0° INC - TOP of GAS
7,200.0	0.00	0.00	6,925.8	1,771.6	-644.7	1,885.3	0.00	0.00	
7,300.0	0.00	0.00	7,025.8	1,771.6	-644.7	1,885.3	0.00	0.00	
7,400.0	0.00	0.00	7,125.8	1,771.6	-644.7	1,885.3	0.00	0.00	
7,500.0	0.00	0.00	7,225.8	1,771.6	-644.7	1,885.3	0.00	0.00	
7,600.0	0.00	0.00	7,325.8	1,771.6	-644.7	1,885.3	0.00	0.00	
7,700.0	0.00	0.00	7,425.8	1,771.6	-644.7	1,885.3	0.00	0.00	
7,800.0	0.00	0.00	7,525.8	1,771.6	-644.7	1,885.3	0.00	0.00	
7,900.0	0.00	0.00	7,625.8	1,771.6	-644.7	1,885.3	0.00	0.00	
8,000.0	0.00	0.00	7,725.8	1,771.6	-644.7	1,885.3	0.00	0.00	
8,100.0	0.00	0.00	7,825.8	1,771.6	-644.7	1,885.3	0.00	0.00	
8,200.0	0.00	0.00	7,925.8	1,771.6	-644.7	1,885.3	0.00	0.00	
8,300.0	0.00	0.00	8,025.8	1,771.6	-644.7	1,885.3	0.00	0.00	
8,400.0	0.00	0.00	8,125.8	1,771.6	-644.7	1,885.3	0.00	0.00	
8,500.0	0.00	0.00	8,225.8	1,771.6	-644.7	1,885.3	0.00	0.00	
8,600.0	0.00	0.00	8,325.8	1,771.6	-644.7	1,885.3	0.00	0.00	
8,700.0	0.00	0.00	8,425.8	1,771.6	-644.7	1,885.3	0.00	0.00	
8,800.0	0.00	0.00	8,525.8	1,771.6	-644.7	1,885.3	0.00	0.00	
8,900.0	0.00	0.00	8,625.8	1,771.6	-644.7	1,885.3	0.00	0.00	
8,915.2	0.00	0.00	8,641.0	1,771.6	-644.7	1,885.3	0.00	0.00	ROLLINS
9,000.0	0.00	0.00	8,725.8	1,771.6	-644.7	1,885.3	0.00	0.00	
9,065.2	0.00	0.00	8,791.0	1,771.6	-644.7	1,885.3	0.00	0.00	TD @ 9,065.2' MD

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-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 11B-1 TGT	0.00	0.00	6,919.0	1,771.6	-644.7	611,154.10	1,245,053.84	39.480911	-108.174956
- plan hits target center									
- Point									
PUCKETT 11B-1 BHL	0.00	0.00	8,791.0	1,771.6	-644.7	611,154.10	1,245,053.84	39.480911	-108.174956
- plan hits target center									
- Circle (radius 50.0)									

Formations						
Measured Depth	Vertical Depth					
(usft)	(usft)	Name	Lithology	Dip	Dip Direction	
				(°)	(°)	
6,002.5	5,764.0	OHIO CREEK				
6,300.6	6,049.0	WILLIAMS FORK				
7,193.2	6,919.0	TOP of GAS				
8,915.2	8,641.0	ROLLINS				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S	+E/-W	Comment	
		(usft)	(usft)		
200.0	200.0	0.0	0.0	KOP @ 200'	
768.4	760.1	78.9	-28.7	EOB @ 17.05° INC	
6,624.8	6,358.9	1,692.7	-616.0	Start 3° Drop	
7,193.2	6,919.0	1,771.6	-644.7	EOD @ 0° INC	
9,065.2	8,791.0	1,771.6	-644.7	TD @ 9,065.2' MD	



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

**Garfield County, CO**

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

**PUCKETT 11B-1**

**DD**

**Plan #1**

## **Anticollision Report**

**16 December, 2014**

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-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>Reference</b>	Plan #1		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.0usft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 200.0usft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b>	12/12/2014		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	9,065.2	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 11B-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 11B-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	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
S1-T7S-R97W (Mesa E1 797)						
PUCKETT 11C-1 - DD - Plan #1	200.0	200.0	8.0	7.3	12.663	CC, ES
PUCKETT 11C-1 - DD - Plan #1	300.0	300.0	9.9	8.7	8.663	SF
PUCKETT 13B-1 - DD - Plan #1	200.0	200.0	24.2	23.6	38.492	CC, ES
PUCKETT 13B-1 - DD - Plan #1	400.0	395.7	42.2	40.5	24.446	SF
PUCKETT 21A-1 - HZ - Plan #1	434.3	433.8	11.9	10.2	6.913	CC, ES
PUCKETT 21A-1 - HZ - Plan #1	500.0	499.4	12.5	10.4	5.979	SF
PUCKETT 21C-1 - DD - Plan #1	434.8	433.9	18.5	16.8	10.710	CC, ES
PUCKETT 21C-1 - DD - Plan #1	600.0	597.7	25.5	22.8	9.383	SF
PUCKETT 21D-1 - DD - Plan #1	450.6	449.3	24.8	23.0	13.717	CC, ES
PUCKETT 21D-1 - DD - Plan #1	500.0	497.8	26.0	23.9	12.663	SF
PUCKETT 22A-36 - DD - Plan #1	356.8	356.7	5.8	4.4	4.296	CC, ES
PUCKETT 22A-36 - DD - Plan #1	500.0	499.9	8.1	5.8	3.630	SF
PUCKETT 22C-1 - DD - Plan #1	419.3	418.8	30.4	28.8	18.498	CC, ES
PUCKETT 22C-1 - DD - Plan #1	600.0	597.1	42.1	39.3	15.020	SF
PUCKETT 22D-1 - DD - Plan #1	285.9	285.9	18.1	17.1	17.846	CC
PUCKETT 22D-1 - DD - Plan #1	300.0	300.0	18.1	17.1	16.810	ES
PUCKETT 22D-1 - DD - Plan #1	500.0	498.8	28.2	25.9	12.513	SF
PUCKETT 23A-1 - DD - Plan #1	200.0	200.0	12.8	12.2	20.402	CC, ES
PUCKETT 23A-1 - DD - Plan #1	400.0	399.6	23.3	21.5	13.112	SF
PUCKETT 23B-1 - DD - Plan #1	200.0	200.0	19.3	18.7	30.710	CC, ES
PUCKETT 23B-1 - DD - Plan #1	400.0	399.6	29.5	27.7	16.652	SF
PUCKETT 23C-1 - DD - Plan #1	200.0	200.0	16.3	15.6	25.836	CC, ES
PUCKETT 23C-1 - DD - Plan #1	400.0	398.3	27.0	25.2	15.701	SF
PUCKETT 31B-1 - DD - Plan #1	200.0	200.0	47.7	47.0	75.750	CC, ES
PUCKETT 31B-1 - DD - Plan #1	600.0	585.3	74.7	72.0	27.610	SF
PUCKETT 31C-1 - DD - Plan #1	332.0	330.4	38.5	37.2	30.458	CC, ES
PUCKETT 31C-1 - DD - Plan #1	500.0	493.6	46.0	44.0	22.207	SF
PUCKETT 32A-1 - DD - Plan #1	260.5	259.8	48.4	47.5	53.361	CC, ES
PUCKETT 32A-1 - DD - Plan #1	500.0	491.1	61.7	59.6	29.620	SF
PUCKETT 32C-1 - DD - Plan #1	359.2	358.1	39.1	37.7	28.669	CC, ES
PUCKETT 32C-1 - DD - Plan #1	500.0	494.4	46.9	44.8	22.684	SF
PUCKETT 33A-1 - DD - Plan #1	342.1	341.8	24.5	23.2	19.212	CC, ES
PUCKETT 33A-1 - DD - Plan #1	400.0	398.8	25.8	24.2	16.729	SF
PUCKETT 33C-1 - DD - Plan #1	200.0	200.0	12.6	12.0	20.038	CC
PUCKETT 33C-1 - DD - Plan #1	212.2	212.2	12.6	11.9	18.436	ES
PUCKETT 33C-1 - DD - Plan #1	300.0	299.6	13.9	12.8	12.773	SF
PUCKETT 34A-1 - DD - Plan #1	200.0	200.0	9.9	9.3	15.715	CC, ES
PUCKETT 34A-1 - DD - Plan #1	300.0	300.0	12.0	10.9	10.490	SF
PUCKETT SWD E1-797 - VH - Plan #1	200.0	200.0	26.4	25.8	41.968	CC, ES
PUCKETT SWD E1-797 - VH - Plan #1	500.0	498.8	48.6	46.2	20.424	SF
S2-T7S-R97W (Puckett Pad H2)						
PUCKETT 11D-1 - DD - Plan #1						Out of range
PUCKETT 12A-1 - DD - Plan #1						Out of range

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 11C-1 - DD - Plan #1													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCSWA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-150.27	-6.9	-4.0	8.0					
100.0	100.0	100.0	100.0	0.1	0.1	-150.27	-6.9	-4.0	8.0	7.8	0.18	44.320		
200.0	200.0	200.0	200.0	0.3	0.3	-150.27	-6.9	-4.0	8.0	7.3	0.63	12.663 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-141.91	-6.9	-4.0	9.9	8.7	1.14	8.663 SF		
400.0	399.6	400.2	400.2	0.8	0.8	-156.31	-5.6	-4.6	15.4	13.7	1.74	8.895		
500.0	498.8	500.9	500.6	1.1	1.0	-161.99	0.4	-7.3	21.7	19.4	2.34	9.285		
600.0	597.1	601.9	600.9	1.4	1.3	-164.28	11.3	-12.2	28.2	25.3	2.95	9.556		
700.0	694.3	703.2	700.8	1.9	1.6	-165.03	27.1	-19.4	34.8	31.2	3.58	9.714		
800.0	790.3	804.6	799.6	2.4	2.0	-164.92	47.6	-28.7	41.2	37.1	4.18	9.865		
900.0	885.9	904.4	896.5	2.9	2.4	-164.49	69.4	-38.6	47.1	42.4	4.71	10.000		
1,000.0	981.5	1,004.3	993.4	3.5	2.9	-164.15	91.3	-48.6	52.9	47.7	5.27	10.044		
1,100.0	1,077.1	1,104.1	1,090.3	4.1	3.4	-163.89	113.1	-58.5	58.8	52.9	5.86	10.037		
1,200.0	1,172.7	1,203.9	1,187.2	4.6	3.8	-163.67	135.0	-68.4	64.6	58.2	6.46	10.007		
1,300.0	1,268.3	1,303.8	1,284.1	5.2	4.3	-163.48	156.8	-78.4	70.5	63.4	7.07	9.962		
1,400.0	1,363.9	1,403.6	1,381.0	5.8	4.8	-163.33	178.7	-88.3	76.3	68.6	7.70	9.910		
1,500.0	1,459.5	1,503.4	1,477.9	6.4	5.3	-163.20	200.5	-98.2	82.2	73.8	8.34	9.857		
1,600.0	1,555.1	1,603.2	1,574.8	7.0	5.8	-163.08	222.4	-108.1	88.0	79.0	8.98	9.805		
1,700.0	1,650.7	1,703.1	1,671.7	7.6	6.3	-162.98	244.2	-118.1	93.9	84.3	9.62	9.755		
1,800.0	1,746.3	1,802.9	1,768.6	8.2	6.8	-162.89	266.1	-128.0	99.7	89.5	10.27	9.707		
1,900.0	1,841.9	1,902.7	1,865.5	8.7	7.3	-162.81	287.9	-137.9	105.6	94.7	10.93	9.662		
2,000.0	1,937.5	2,002.6	1,962.4	9.3	7.8	-162.74	309.8	-147.8	111.4	99.8	11.58	9.620		
2,100.0	2,033.1	2,102.4	2,059.3	9.9	8.3	-162.68	331.6	-157.8	117.3	105.0	12.24	9.581		
2,200.0	2,128.7	2,202.2	2,156.2	10.5	8.8	-162.62	353.5	-167.7	123.1	110.2	12.90	9.544		
2,300.0	2,224.3	2,302.0	2,253.1	11.1	9.2	-162.57	375.3	-177.6	129.0	115.4	13.56	9.510		
2,400.0	2,319.9	2,401.9	2,350.0	11.7	9.7	-162.52	397.2	-187.6	134.8	120.6	14.23	9.478		
2,500.0	2,415.5	2,501.7	2,446.9	12.3	10.2	-162.47	419.0	-197.5	140.7	125.8	14.89	9.448		
2,600.0	2,511.1	2,601.5	2,543.8	12.9	10.7	-162.43	440.9	-207.4	146.5	131.0	15.56	9.420		
2,700.0	2,606.7	2,701.4	2,640.7	13.5	11.2	-162.40	462.7	-217.3	152.4	136.2	16.22	9.394		
2,800.0	2,702.3	2,801.2	2,737.6	14.0	11.7	-162.36	484.6	-227.3	158.2	141.4	16.89	9.370		
2,900.0	2,797.9	2,901.0	2,834.5	14.6	12.2	-162.33	506.4	-237.2	164.1	146.5	17.56	9.347		
3,000.0	2,893.5	3,000.8	2,931.4	15.2	12.7	-162.30	528.3	-247.1	169.9	151.7	18.22	9.325		
3,100.0	2,989.1	3,100.7	3,028.3	15.8	13.2	-162.27	550.1	-257.1	175.8	156.9	18.89	9.305		
3,200.0	3,084.7	3,200.5	3,125.2	16.4	13.7	-162.24	572.0	-267.0	181.7	162.1	19.56	9.286		
3,300.0	3,180.3	3,300.3	3,222.1	17.0	14.2	-162.22	593.8	-276.9	187.5	167.3	20.23	9.268		
3,400.0	3,276.0	3,400.2	3,319.0	17.6	14.7	-162.20	615.7	-286.8	193.4	172.5	20.90	9.251		
3,500.0	3,371.6	3,500.0	3,415.9	18.2	15.2	-162.18	637.5	-296.8	199.2	177.6	21.57	9.235		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 13B-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-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	24.0	0.18	134.723		
200.0	200.0	200.0	200.0	0.3	0.3	-150.70	-21.1	-11.9	24.2	23.6	0.63	38.492 CC, ES		
300.0	300.0	298.5	298.5	0.5	0.5	-135.13	-23.5	-12.8	28.6	27.5	1.12	25.494		
400.0	399.6	395.7	395.3	0.8	0.7	-142.68	-30.4	-15.7	42.2	40.5	1.73	24.446 SF		
500.0	498.8	490.2	489.1	1.1	1.0	-148.02	-41.4	-20.3	65.4	63.0	2.39	27.395		
600.0	597.1	580.9	578.4	1.4	1.3	-151.06	-56.1	-26.4	97.9	94.8	3.07	31.882		
700.0	694.3	667.1	662.5	1.9	1.7	-152.71	-73.6	-33.8	138.9	135.1	3.77	36.844		
800.0	790.3	755.3	748.1	2.4	2.1	-154.10	-93.1	-41.9	185.8	181.4	4.40	42.253		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 21A-1 - HZ - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	31.08	13.1	7.9	15.3					
100.0	100.0	100.0	100.0	0.1	0.1	31.08	13.1	7.9	15.3	15.1	0.18	85.146		
200.0	200.0	200.0	200.0	0.3	0.3	31.08	13.1	7.9	15.3	14.7	0.63	24.327		
300.0	300.0	300.0	300.0	0.5	0.5	59.59	13.1	7.9	13.8	12.7	1.10	12.522		
400.0	399.6	399.6	399.5	0.8	0.8	81.63	15.6	7.0	12.0	10.5	1.55	7.766		
434.3	433.7	433.8	433.7	0.9	0.9	90.23	17.5	6.3	11.9	10.2	1.72	6.913 CC, ES		
500.0	498.8	499.4	499.0	1.1	1.0	106.40	22.9	4.4	12.5	10.4	2.09	5.979 SF		
600.0	597.1	598.8	597.7	1.4	1.3	124.50	34.7	3.1	17.9	15.2	2.77	6.477		
700.0	694.3	697.8	695.4	1.9	1.6	130.88	50.6	4.6	28.8	25.3	3.50	8.241		
800.0	790.3	796.3	791.7	2.4	1.9	131.72	70.6	8.9	44.2	39.9	4.28	10.335		
900.0	885.9	894.1	886.3	2.9	2.4	128.41	94.6	16.0	61.5	56.4	5.13	11.978		
1,000.0	981.5	991.2	978.9	3.5	2.9	123.15	122.2	25.8	80.4	74.3	6.15	13.071		
1,100.0	1,077.1	1,089.0	1,071.6	4.1	3.4	118.93	151.4	36.5	100.5	93.2	7.24	13.866		
1,200.0	1,172.7	1,186.8	1,164.3	4.6	4.0	116.12	180.5	47.3	120.8	112.5	8.35	14.468		
1,300.0	1,268.3	1,284.5	1,256.9	5.2	4.6	114.13	209.7	58.1	141.4	132.0	9.47	14.936		
1,400.0	1,363.9	1,382.3	1,349.6	5.8	5.2	112.64	238.9	68.9	162.1	151.6	10.59	15.309		
1,500.0	1,459.5	1,480.0	1,442.3	6.4	5.8	111.49	268.1	79.6	182.9	171.2	11.72	15.615		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 21C-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	29.57	20.4	11.6	23.5					
100.0	100.0	100.0	100.0	0.1	0.1	29.57	20.4	11.6	23.5	23.3	0.18	130.423		
200.0	200.0	200.0	200.0	0.3	0.3	29.57	20.4	11.6	23.5	22.8	0.63	37.264		
300.0	300.0	300.0	300.0	0.5	0.5	54.84	20.4	11.6	21.8	20.7	1.11	19.674		
400.0	399.6	399.4	399.4	0.8	0.8	73.43	21.0	11.5	18.8	17.2	1.56	12.021		
434.8	434.2	433.9	433.9	0.9	0.8	81.95	22.2	11.4	18.5	16.8	1.73	10.710 CC, ES		
500.0	498.8	498.7	498.6	1.1	1.0	97.80	26.2	11.1	19.5	17.5	2.06	9.474		
600.0	597.1	597.7	597.1	1.4	1.2	116.57	36.1	11.0	25.5	22.8	2.72	9.383 SF		
700.0	694.3	695.9	694.2	1.9	1.5	126.60	49.6	14.3	38.3	34.9	3.46	11.097		
800.0	790.3	793.1	789.7	2.4	1.8	130.44	66.4	21.0	57.0	52.8	4.22	13.501		
900.0	885.9	890.5	884.6	2.9	2.2	130.55	85.9	30.4	78.0	73.0	5.00	15.606		
1,000.0	981.5	988.2	979.9	3.5	2.6	130.48	105.6	40.0	99.1	93.3	5.82	17.023		
1,100.0	1,077.1	1,085.9	1,075.1	4.1	3.0	130.43	125.4	49.6	120.2	113.6	6.68	18.009		
1,200.0	1,172.7	1,183.7	1,170.4	4.6	3.5	130.40	145.1	59.2	141.4	133.8	7.55	18.722		
1,300.0	1,268.3	1,281.4	1,265.6	5.2	3.9	130.37	164.9	68.8	162.5	154.0	8.44	19.256		
1,400.0	1,363.9	1,379.2	1,360.9	5.8	4.3	130.35	184.6	78.3	183.6	174.3	9.34	19.665		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 21D-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	29.61	27.3	15.5	31.4					
100.0	100.0	100.0	100.0	0.1	0.1	29.61	27.3	15.5	31.4	31.2	0.18	174.743		
200.0	200.0	200.0	200.0	0.3	0.3	29.61	27.3	15.5	31.4	30.8	0.63	49.927		
300.0	300.0	300.0	300.0	0.5	0.5	53.48	27.3	15.5	29.8	28.7	1.11	26.781		
400.0	399.6	399.6	399.6	0.8	0.8	67.64	27.3	15.5	25.9	24.3	1.58	16.383		
450.6	449.9	449.3	449.3	0.9	0.9	79.88	27.9	15.9	24.8	23.0	1.81	13.717 CC, ES		
500.0	498.8	497.8	497.8	1.1	1.0	93.23	29.4	16.9	26.0	23.9	2.05	12.663 SF		
600.0	597.1	595.8	595.4	1.4	1.2	114.64	35.7	21.0	35.4	32.7	2.71	13.103		
700.0	694.3	693.2	692.1	1.9	1.5	125.20	46.2	27.7	52.2	48.8	3.43	15.201		
800.0	790.3	790.1	787.5	2.4	1.8	129.75	60.5	36.9	74.0	69.9	4.18	17.704		
900.0	885.9	887.4	883.0	2.9	2.1	132.30	75.7	46.8	97.1	92.2	4.90	19.834		
1,000.0	981.5	984.6	978.5	3.5	2.5	133.87	91.0	56.7	120.3	114.7	5.63	21.359		
1,100.0	1,077.1	1,081.8	1,074.0	4.1	2.8	134.93	106.3	66.5	143.6	137.2	6.39	22.469		
1,200.0	1,172.7	1,179.1	1,169.5	4.6	3.2	135.69	121.5	76.4	166.9	159.7	7.16	23.296		
1,300.0	1,268.3	1,276.3	1,265.1	5.2	3.6	136.27	136.8	86.3	190.2	182.3	7.95	23.932		



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 22A-36 - DD - Plan #1													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCWSA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	32.53	6.2	4.0	7.3					
100.0	100.0	100.0	100.0	0.1	0.1	32.53	6.2	4.0	7.3	7.2	0.18	40.873		
200.0	200.0	200.0	200.0	0.3	0.3	32.53	6.2	4.0	7.3	6.7	0.63	11.678		
300.0	300.0	299.9	299.9	0.5	0.5	70.92	6.3	3.9	6.2	5.1	1.09	5.663		
356.8	356.7	356.7	356.7	0.7	0.7	92.18	7.8	3.3	5.8	4.4	1.34	4.296 CC, ES		
400.0	399.6	399.9	399.8	0.8	0.8	108.62	10.0	2.4	6.0	4.4	1.57	3.833		
500.0	498.8	499.9	499.4	1.1	1.0	137.04	18.5	-0.9	8.1	5.8	2.22	3.630 SF		
600.0	597.1	599.9	598.4	1.4	1.3	144.41	31.8	-3.4	13.3	10.4	2.87	4.631		
700.0	694.3	699.7	696.6	1.9	1.6	141.62	49.9	-3.9	21.7	18.1	3.55	6.110		
800.0	790.3	799.2	793.5	2.4	2.0	136.89	72.6	-2.5	33.1	28.8	4.31	7.683		
900.0	885.9	898.4	888.7	2.9	2.5	129.23	99.9	0.7	45.4	40.1	5.22	8.690		
1,000.0	981.5	996.8	981.8	3.5	3.1	119.91	131.5	5.8	58.8	52.5	6.37	9.241		
1,100.0	1,077.1	1,094.2	1,072.2	4.1	3.7	110.54	167.1	12.7	74.8	67.2	7.64	9.792		
1,200.0	1,172.7	1,192.1	1,162.5	4.6	4.4	103.60	204.1	20.1	92.9	84.0	8.91	10.425		
1,300.0	1,268.3	1,289.9	1,252.7	5.2	5.1	98.94	241.2	27.6	111.8	101.7	10.13	11.036		
1,400.0	1,363.9	1,387.8	1,343.0	5.8	5.8	95.63	278.3	35.0	131.2	119.9	11.33	11.585		
1,500.0	1,459.5	1,485.7	1,433.2	6.4	6.5	93.18	315.4	42.5	151.0	138.5	12.51	12.067		
1,600.0	1,555.1	1,583.5	1,523.5	7.0	7.2	91.30	352.5	49.9	170.9	157.3	13.69	12.490		
1,700.0	1,650.7	1,681.4	1,613.7	7.6	7.9	89.82	389.5	57.4	191.0	176.2	14.85	12.860		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 22C-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-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	47.54	22.2	24.3	32.9					
100.0	100.0	100.0	100.0	0.1	0.1	47.54	22.2	24.3	32.9	32.7	0.18	183.018		
200.0	200.0	200.0	200.0	0.3	0.3	47.54	22.2	24.3	32.9	32.3	0.63	52.291		
300.0	300.0	300.0	300.0	0.5	0.5	71.89	22.2	24.3	32.0	30.9	1.09	29.401		
400.0	399.6	399.6	399.6	0.8	0.8	86.04	22.2	24.3	30.5	28.9	1.55	19.709		
419.3	418.8	418.8	418.8	0.8	0.8	90.00	22.2	24.3	30.4	28.8	1.64	18.498 CC, ES		
500.0	498.8	498.8	498.8	1.1	1.0	109.56	22.2	24.3	32.3	30.2	2.09	15.459		
600.0	597.1	597.1	597.1	1.4	1.2	133.16	22.2	24.3	42.1	39.3	2.80	15.020 SF		
700.0	694.3	691.9	691.9	1.9	1.4	147.48	22.1	26.5	62.5	59.0	3.52	17.766		
800.0	790.3	786.8	786.6	2.4	1.6	154.71	21.9	31.6	91.5	87.3	4.13	22.133		
900.0	885.9	881.6	881.3	2.9	1.8	158.82	21.6	36.8	122.3	117.7	4.60	26.617		
1,000.0	981.5	976.5	976.0	3.5	2.0	161.28	21.4	42.0	153.6	148.5	5.06	30.343		
1,100.0	1,077.1	1,071.3	1,070.7	4.1	2.2	162.91	21.1	47.2	184.9	179.4	5.53	33.417		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 22D-1 - DD - Plan #1												Offset Site Error:	0.0 usft
Survey Program: 0-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	63.92	8.0	16.4	18.2				
100.0	100.0	100.0	100.0	0.1	0.1	63.92	8.0	16.4	18.2	18.0	0.18	101.374	
200.0	200.0	200.0	200.0	0.3	0.3	63.92	8.0	16.4	18.2	17.6	0.63	28.964	
285.9	285.9	285.9	285.9	0.5	0.5	90.00	8.0	16.4	18.1	17.1	1.02	17.846 CC	
300.0	300.0	300.0	300.0	0.5	0.5	92.17	8.0	16.4	18.1	17.1	1.08	16.810 ES	
400.0	399.6	399.6	399.6	0.8	0.8	115.08	8.0	16.4	20.0	18.4	1.59	12.614	
500.0	498.8	498.8	498.8	1.1	1.0	139.63	8.0	16.4	28.2	25.9	2.25	12.513 SF	
600.0	597.1	595.0	595.0	1.4	1.2	153.64	7.1	18.5	46.0	43.0	2.93	15.683	
700.0	694.3	688.1	687.8	1.9	1.4	159.16	4.4	24.9	74.1	70.5	3.59	20.632	
800.0	790.3	780.0	779.1	2.4	1.6	161.44	0.4	34.5	110.2	106.0	4.18	26.353	
900.0	885.9	872.6	871.1	2.9	1.8	162.83	-3.9	44.4	147.8	143.2	4.62	31.993	
1,000.0	981.5	965.2	963.1	3.5	2.1	163.66	-8.1	54.4	185.4	180.3	5.08	36.515	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 23A-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-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	159.41	-12.0	4.5	12.8					
100.0	100.0	100.0	100.0	0.1	0.1	159.41	-12.0	4.5	12.8	12.7	0.18	71.409		
200.0	200.0	200.0	200.0	0.3	0.3	159.41	-12.0	4.5	12.8	12.2	0.63	20.402 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	179.50	-12.0	4.5	15.5	14.3	1.17	13.187		
400.0	399.6	399.6	399.6	0.8	0.8	179.67	-12.0	4.5	23.3	21.5	1.78	13.112 SF		
500.0	498.8	498.8	498.8	1.1	1.0	179.79	-12.0	4.5	36.4	34.0	2.39	15.190		
600.0	597.1	594.6	594.5	1.4	1.2	178.80	-13.7	6.2	56.8	53.7	3.01	18.864		
700.0	694.3	686.8	686.5	1.9	1.4	177.12	-18.4	11.0	86.6	83.0	3.64	23.815		
800.0	790.3	774.5	773.6	2.4	1.6	175.64	-25.8	18.6	125.2	121.0	4.20	29.821		
900.0	885.9	858.5	856.4	2.9	1.8	174.41	-35.5	28.5	168.9	164.2	4.64	36.414		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 23B-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						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	177.49	-19.3	0.8	19.3					
100.0	100.0	100.0	100.0	0.1	0.1	177.49	-19.3	0.8	19.3	19.1	0.18	107.486		
200.0	200.0	200.0	200.0	0.3	0.3	177.49	-19.3	0.8	19.3	18.7	0.63	30.710 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-164.56	-19.3	0.8	21.8	20.7	1.17	18.723		
400.0	399.6	399.6	399.6	0.8	0.8	-168.58	-19.3	0.8	29.5	27.7	1.77	16.652 SF		
500.0	498.8	496.8	496.8	1.1	1.0	-173.56	-21.1	2.5	44.5	42.2	2.39	18.651		
600.0	597.1	591.1	590.7	1.4	1.2	-178.06	-26.4	7.2	69.4	66.3	3.03	22.918		
700.0	694.3	681.1	680.1	1.9	1.4	178.86	-34.7	14.6	103.7	100.0	3.67	28.250		
800.0	790.3	766.0	763.8	2.4	1.6	176.81	-45.3	24.2	146.7	142.5	4.24	34.619		
900.0	885.9	846.9	842.8	2.9	1.9	175.38	-58.0	35.6	194.6	189.9	4.67	41.647		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> S1-T7S-R97W (Mesa E1 797) - PUCKETT 23C-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	-150.92	-14.2	-7.9	16.3				
100.0	100.0	100.0	100.0	0.1	0.1	-150.92	-14.2	-7.9	16.3	16.1	0.18	90.427	
200.0	200.0	200.0	200.0	0.3	0.3	-150.92	-14.2	-7.9	16.3	15.6	0.63	25.836 CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	-137.16	-14.2	-7.9	18.1	17.0	1.13	15.982	
400.0	399.6	398.3	398.3	0.8	0.7	-148.59	-16.6	-8.8	27.0	25.2	1.72	15.701 SF	
500.0	498.8	494.6	494.3	1.1	0.9	-155.29	-23.5	-11.3	46.0	43.6	2.36	19.437	
600.0	597.1	588.0	586.9	1.4	1.2	-158.76	-34.4	-14.6	74.4	71.3	3.04	24.483	
700.0	694.3	677.3	675.1	1.9	1.4	-162.26	-48.2	-15.3	111.3	107.6	3.69	30.123	
800.0	790.3	761.4	757.7	2.4	1.8	-165.32	-64.1	-13.7	156.3	152.0	4.28	36.478	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 31B-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	29.44	41.5	23.4	47.7					
100.0	100.0	100.0	100.0	0.1	0.1	29.44	41.5	23.4	47.7	47.5	0.18	265.123		
200.0	200.0	200.0	200.0	0.3	0.3	29.44	41.5	23.4	47.7	47.0	0.63	75.750	CC, ES	
300.0	300.0	297.7	297.6	0.5	0.5	52.91	43.0	25.4	48.4	47.3	1.10	43.829		
400.0	399.6	394.8	394.5	0.8	0.8	62.49	47.5	31.4	51.6	50.0	1.59	32.419		
500.0	498.8	490.8	489.7	1.1	1.0	75.26	54.7	41.1	59.7	57.6	2.10	28.407		
600.0	597.1	585.3	582.7	1.4	1.4	87.34	64.7	54.5	74.7	72.0	2.71	27.610	SF	
700.0	694.3	677.7	672.8	1.9	1.8	96.62	77.1	71.1	97.1	93.7	3.44	28.246		
800.0	790.3	767.8	759.5	2.4	2.2	103.24	91.6	90.6	126.3	122.1	4.28	29.527		
900.0	885.9	855.8	843.0	2.9	2.7	107.20	108.2	112.8	160.7	155.5	5.17	31.068		
1,000.0	981.5	943.5	924.9	3.5	3.3	109.04	126.9	137.9	198.7	192.6	6.10	32.578		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 31C-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISWWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	29.38	34.6	19.5	39.7					
100.0	100.0	100.0	100.0	0.1	0.1	29.38	34.6	19.5	39.7	39.5	0.18	220.804		
200.0	200.0	200.0	200.0	0.3	0.3	29.38	34.6	19.5	39.7	39.1	0.63	63.087		
300.0	300.0	299.1	299.1	0.5	0.5	52.76	34.9	20.0	38.6	37.5	1.11	34.903		
332.0	331.9	330.4	330.4	0.6	0.6	55.69	35.5	20.9	38.5	37.2	1.26	30.458 CC, ES		
400.0	399.6	396.8	396.7	0.8	0.8	64.82	37.6	24.3	39.4	37.8	1.57	25.041		
500.0	498.8	493.6	492.9	1.1	1.0	82.00	42.8	32.7	46.0	44.0	2.07	22.207 SF		
600.0	597.1	588.8	587.0	1.4	1.3	97.11	50.4	44.9	61.1	58.4	2.70	22.652		
700.0	694.3	681.9	678.2	1.9	1.6	107.21	60.3	60.8	84.6	81.1	3.44	24.585		
800.0	790.3	772.4	765.9	2.4	2.1	113.51	72.1	79.8	115.3	111.1	4.26	27.095		
900.0	885.9	860.9	850.6	2.9	2.5	116.78	85.7	101.8	150.9	145.8	5.09	29.641		
1,000.0	981.5	947.3	932.0	3.5	3.1	117.91	101.0	126.4	189.7	183.8	5.96	31.857		



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 32A-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	41.47	36.4	32.2	48.6					
100.0	100.0	100.0	100.0	0.1	0.1	41.47	36.4	32.2	48.6	48.4	0.18	270.239		
200.0	200.0	200.0	200.0	0.3	0.3	41.47	36.4	32.2	48.6	48.0	0.63	77.211		
260.5	260.5	259.8	259.8	0.5	0.4	62.68	36.5	32.5	48.4	47.5	0.91	53.361	CC, ES	
300.0	300.0	298.4	298.4	0.5	0.5	65.12	36.7	33.6	48.6	47.5	1.09	44.781		
400.0	399.6	395.6	395.3	0.8	0.8	76.49	38.0	39.6	51.7	50.2	1.55	33.392		
500.0	498.8	491.1	490.2	1.1	1.0	91.44	40.2	50.3	61.7	59.6	2.08	29.620	SF	
600.0	597.1	584.2	582.1	1.4	1.3	104.47	43.4	65.1	80.9	78.2	2.73	29.631		
700.0	694.3	674.3	670.2	1.9	1.7	113.55	47.3	83.6	109.5	106.0	3.46	31.607		
800.0	790.3	760.7	753.7	2.4	2.1	119.60	51.9	105.2	146.3	142.1	4.23	34.568		
900.0	885.9	844.8	834.0	2.9	2.6	123.37	57.0	129.7	188.5	183.5	4.98	37.851		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 32C-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	43.74	29.5	28.2	40.8					
100.0	100.0	100.0	100.0	0.1	0.1	43.74	29.5	28.2	40.8	40.6	0.18	227.063		
200.0	200.0	200.0	200.0	0.3	0.3	43.74	29.5	28.2	40.8	40.2	0.63	64.875		
300.0	300.0	300.0	300.0	0.5	0.5	67.15	29.5	28.2	39.7	38.6	1.09	36.341		
359.2	359.1	358.1	358.1	0.7	0.7	73.43	29.5	29.1	39.1	37.7	1.36	28.669	CC, ES	
400.0	399.6	398.0	397.9	0.8	0.8	80.10	29.4	30.7	39.5	38.0	1.54	25.706		
500.0	498.8	494.4	494.1	1.1	1.0	100.33	29.1	38.1	46.9	44.8	2.07	22.684	SF	
600.0	597.1	588.4	587.3	1.4	1.2	117.19	28.7	49.9	65.8	63.1	2.76	23.875		
700.0	694.3	678.9	676.4	1.9	1.5	127.37	28.0	65.7	95.6	92.1	3.49	27.363		
800.0	790.3	765.3	760.7	2.4	1.9	133.26	27.3	84.6	134.4	130.2	4.21	31.950		
900.0	885.9	848.6	841.1	2.9	2.3	136.53	26.5	106.4	178.5	173.7	4.84	36.898		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 33A-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	53.04	15.3	20.3	25.4					
100.0	100.0	100.0	100.0	0.1	0.1	53.04	15.3	20.3	25.4	25.3	0.18	141.456		
200.0	200.0	200.0	200.0	0.3	0.3	53.04	15.3	20.3	25.4	24.8	0.63	40.416		
300.0	300.0	300.0	300.0	0.5	0.5	78.85	15.3	20.3	24.8	23.7	1.08	22.904		
342.1	342.0	341.8	341.8	0.7	0.6	85.09	15.3	20.4	24.5	23.2	1.27	19.212 CC, ES		
400.0	399.6	398.8	398.8	0.8	0.8	98.55	14.8	21.7	25.8	24.2	1.54	16.729 SF		
500.0	498.8	495.7	495.5	1.1	1.0	123.60	12.8	27.5	36.9	34.7	2.17	17.022		
600.0	597.1	589.7	588.9	1.4	1.2	138.16	9.4	37.7	60.5	57.6	2.89	20.932		
700.0	694.3	679.8	677.8	1.9	1.5	145.02	4.7	51.4	94.3	90.7	3.59	26.259		
800.0	790.3	765.2	761.3	2.4	1.8	148.50	-1.0	68.1	136.7	132.5	4.23	32.306		
900.0	885.9	846.9	840.4	2.9	2.2	150.28	-7.6	87.4	184.0	179.2	4.76	38.620		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													S1-T7S-R97W (Mesa E1 797) - PUCKETT 33C-1 - DD - Plan #1		Offset Site Error:		0.0 usft
Survey Program:													0-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	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 CC					
212.2	212.2	212.2	212.2	0.3	0.3	100.21	2.2	12.4	12.6	11.9	0.68	18.436 ES					
300.0	300.0	299.6	299.6	0.5	0.5	112.52	1.8	13.0	13.9	12.8	1.09	12.773 SF					
400.0	399.6	398.0	397.8	0.8	0.7	136.96	-1.0	17.2	23.5	21.8	1.68	13.999					
500.0	498.8	493.8	493.2	1.1	1.0	149.47	-6.3	25.4	44.3	41.9	2.36	18.766					
600.0	597.1	586.0	584.3	1.4	1.3	154.65	-14.0	37.1	75.0	72.0	3.04	24.724					
700.0	694.3	673.4	669.9	1.9	1.6	156.95	-23.5	51.5	114.9	111.2	3.70	31.024					
800.0	790.3	755.4	749.5	2.4	2.0	158.16	-34.3	68.0	162.8	158.5	4.30	37.826					

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> S1-T7S-R97W (Mesa E1 797) - PUCKETT 34A-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	121.10	-5.1	8.5	9.9				
100.0	100.0	100.0	100.0	0.1	0.1	121.10	-5.1	8.5	9.9	9.7	0.18	55.002	
200.0	200.0	200.0	200.0	0.3	0.3	121.10	-5.1	8.5	9.9	9.3	0.63	15.715 CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	148.91	-5.1	8.5	12.0	10.9	1.15	10.490 SF	
400.0	399.6	399.6	399.6	0.8	0.8	161.02	-5.1	8.5	19.2	17.4	1.75	10.951	
500.0	498.8	497.1	497.1	1.1	1.0	167.39	-6.8	10.3	34.2	31.9	2.38	14.421	
600.0	597.1	591.7	591.4	1.4	1.2	169.27	-11.7	15.5	59.2	56.2	3.01	19.659	
700.0	694.3	682.1	681.1	1.9	1.4	169.60	-19.4	23.6	93.6	89.9	3.66	25.592	
800.0	790.3	767.5	765.3	2.4	1.7	169.52	-29.3	34.1	136.5	132.3	4.23	32.281	
900.0	885.9	848.9	844.8	2.9	2.0	169.27	-41.1	46.7	184.3	179.6	4.67	39.450	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT SWD E1-797 - VH - 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)	Offset Wellbore Centre +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	-173.25	-26.2	-3.1	26.4				
100.0	100.0	100.0	100.0	0.1	0.1	-173.25	-26.2	-3.1	26.4	26.2	0.18	146.888	
200.0	200.0	200.0	200.0	0.3	0.3	-173.25	-26.2	-3.1	26.4	25.8	0.63	41.968 CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	-155.57	-26.2	-3.1	28.8	27.6	1.16	24.856	
400.0	399.6	399.6	399.6	0.8	0.8	-160.66	-26.2	-3.1	36.1	34.3	1.76	20.541	
500.0	498.8	498.8	498.8	1.1	1.0	-165.67	-26.2	-3.1	48.6	46.2	2.38	20.424 SF	
600.0	597.1	597.1	597.1	1.4	1.2	-169.46	-26.2	-3.1	66.4	63.4	3.01	22.081	
700.0	694.3	694.3	694.3	1.9	1.4	-172.10	-26.2	-3.1	89.5	85.8	3.63	24.618	
800.0	790.3	790.3	790.3	2.4	1.6	-173.92	-26.2	-3.1	117.4	113.2	4.19	28.003	
900.0	885.9	885.9	885.9	2.9	1.9	-175.14	-26.2	-3.1	146.6	142.0	4.63	31.697	
1,000.0	981.5	981.5	981.5	3.5	2.1	-175.95	-26.2	-3.1	175.9	170.8	5.08	34.646	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 11B-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 11B-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=20' @ 8349.0usft (Patterson #303)  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °

Coordinates are relative to: PUCKETT 11B-1  
Coordinate System is US State Plane 1927 (Exact solution), Colorado Central 502  
Grid Convergence at Surface is: -1.69°

