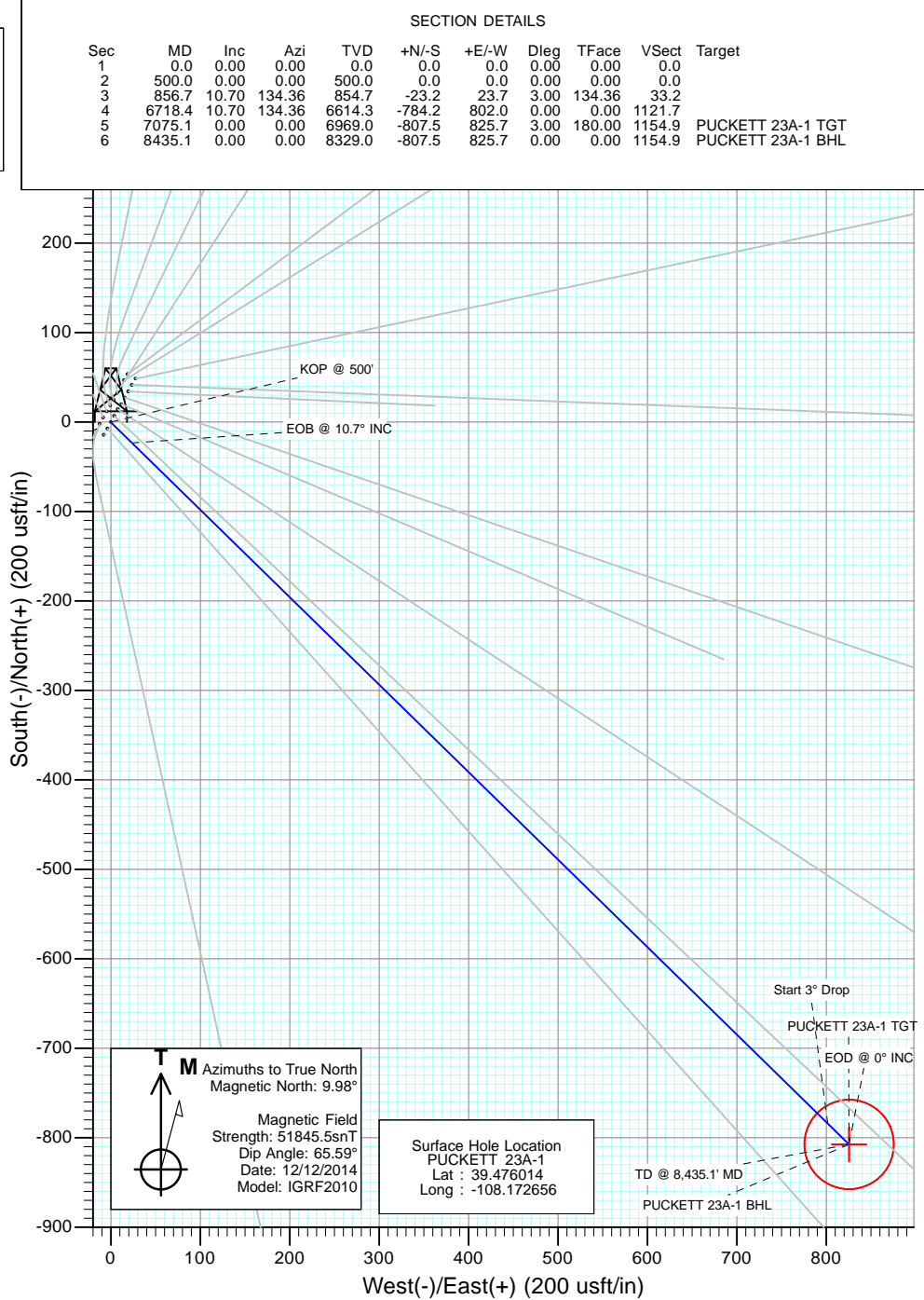
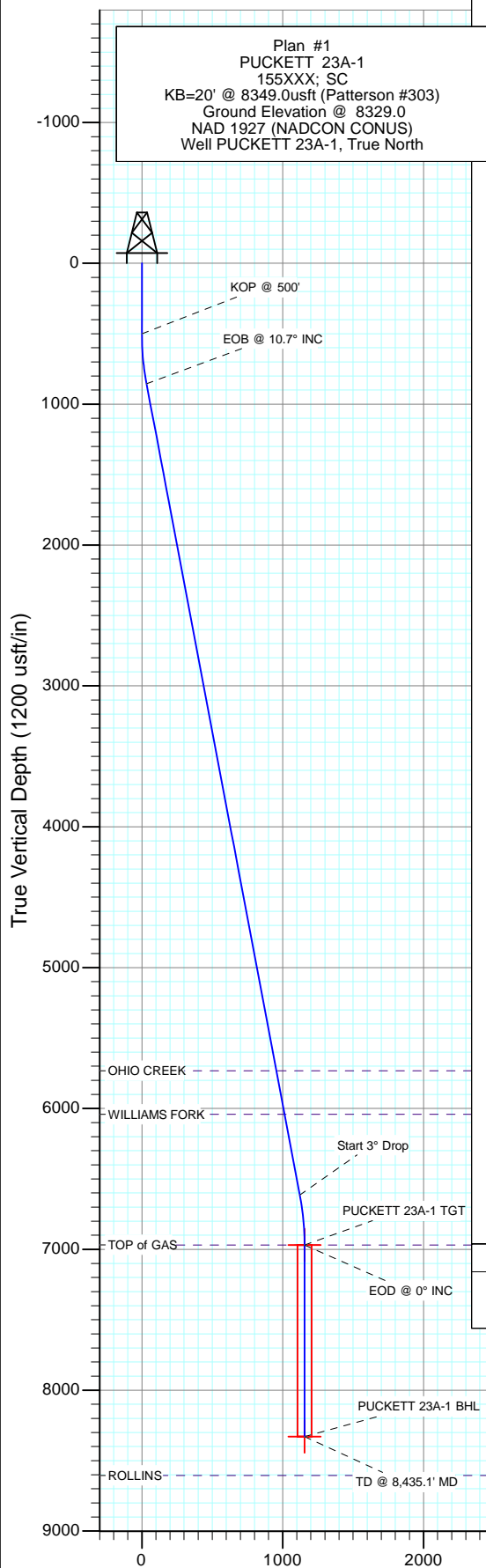


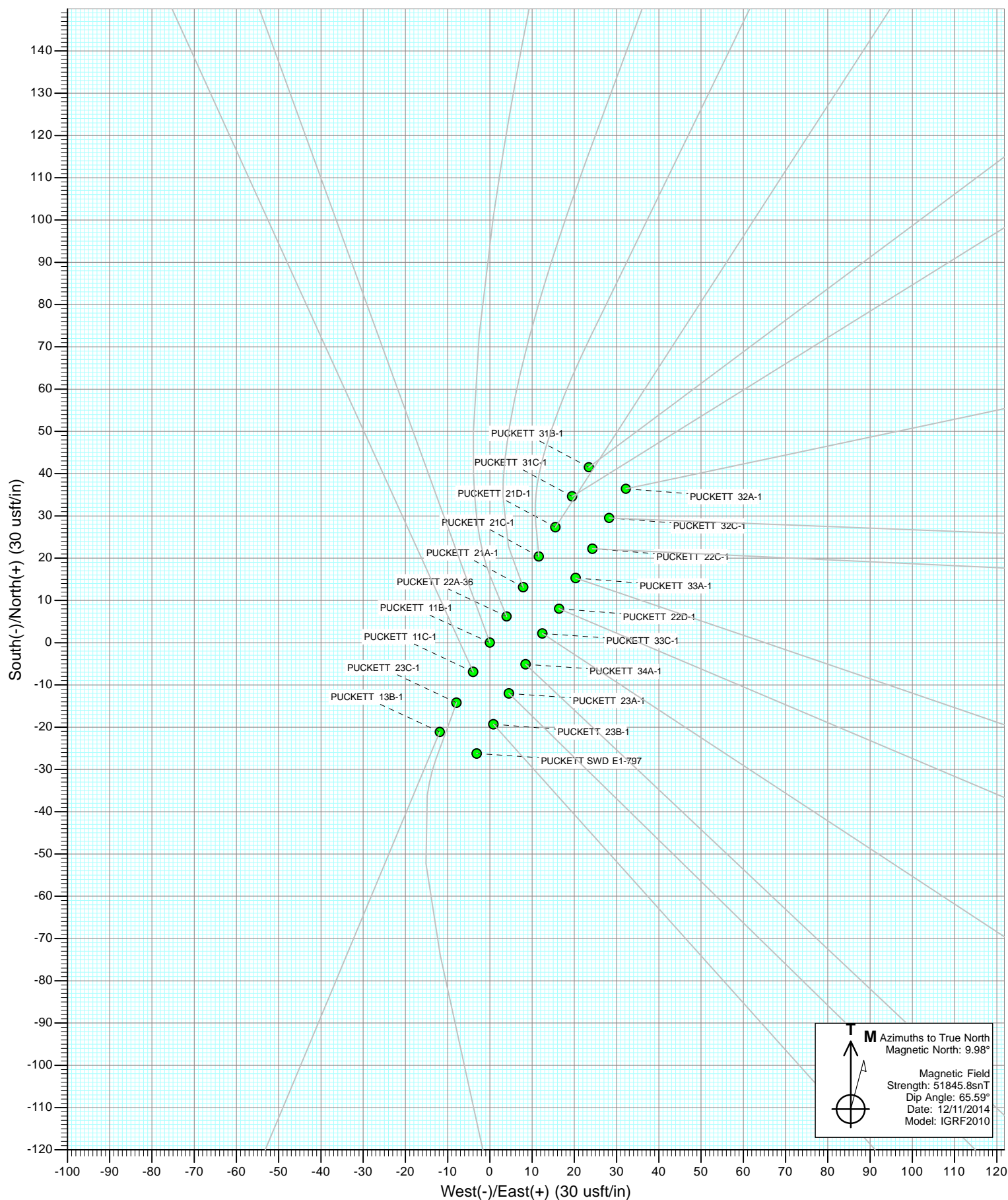


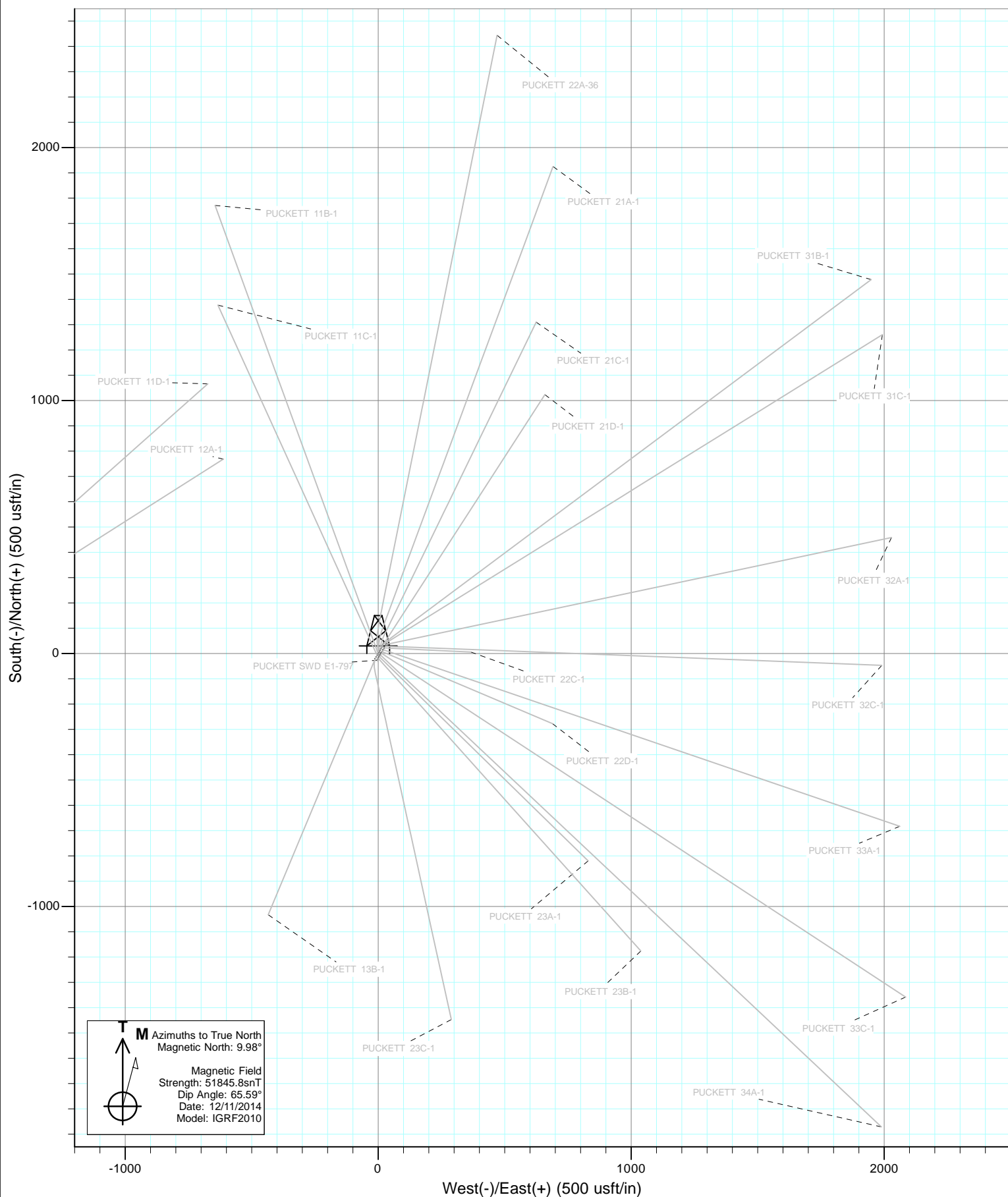
Project: Garfield County, CO  
Site: S1-T7S-R97W (Mesa E1 797)  
Well: PUCKETT 23A-1  
Wellbore: DD  
Design: Plan #1

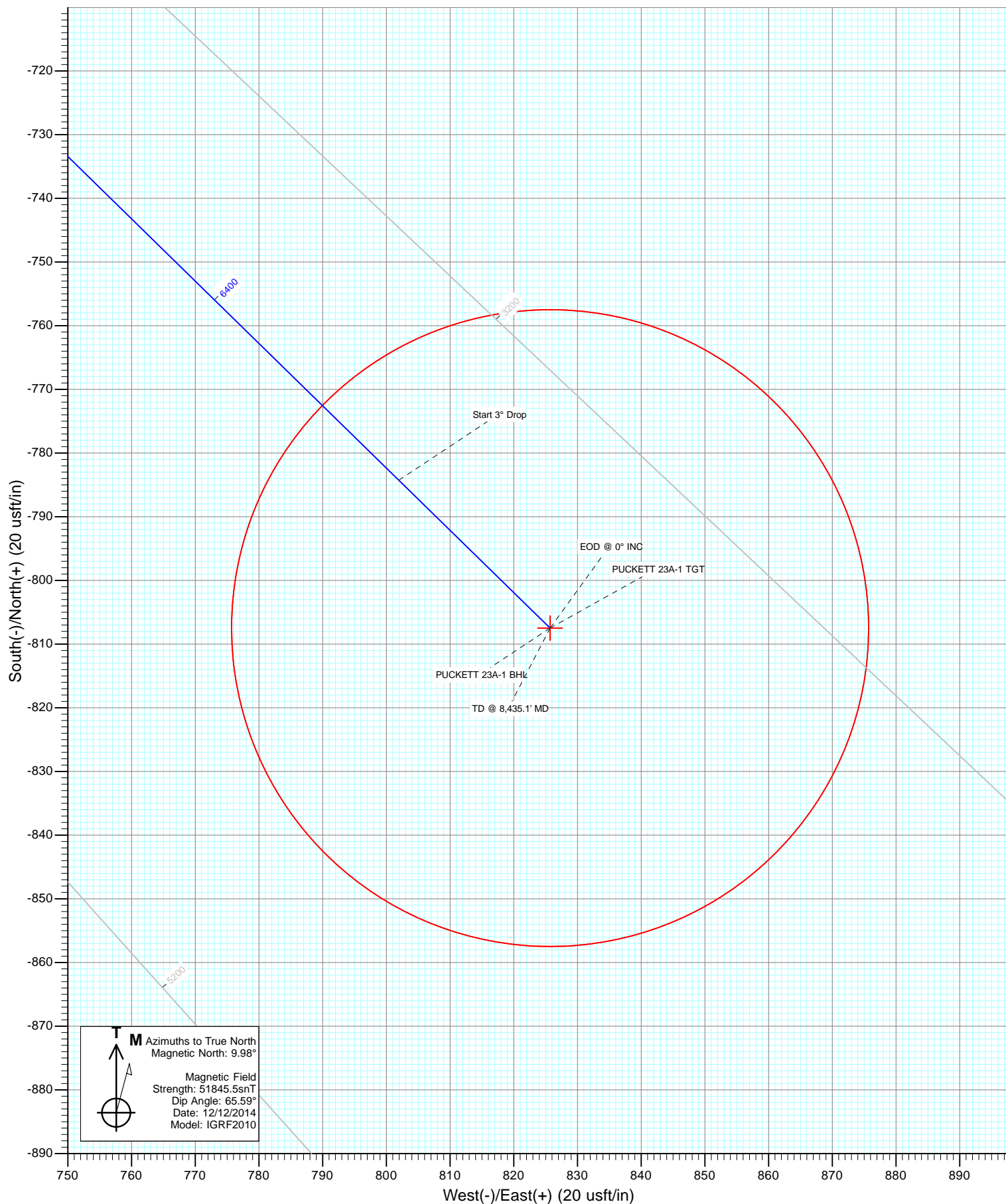


DESIGN TARGET DETAILS					
Name	+N/-S	+E/-W	Northing	Latitude	Longitude
PUCKETT 23A-1 TGT	-807.5	825.7	608520.70	39.473797	-108.169731
PUCKETT 23A-1 BHL	-807.5	825.7	608520.70	39.473797	-108.169731

Vertical Section at 134.36° (1200 usft/in)







# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-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 23A-1					
Well Position	+N/-S	0.0 usft	Northing:	609,352.11 usft	Latitude:	39.476014
	+E/-W	0.0 usft	Easting:	1,245,650.31 usft	Longitude:	-108.172656
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,329.0 usft

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

<b>Design</b>	Plan #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	134.36

<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	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
856.7	10.70	134.36	854.7	-23.2	23.7	3.00	3.00	0.00	134.36	
6,718.4	10.70	134.36	6,614.3	-784.2	802.0	0.00	0.00	0.00	0.00	
7,075.1	0.00	0.00	6,969.0	-807.5	825.7	3.00	-3.00	0.00	180.00	PUCKETT 23A-1 TG1
8,435.1	0.00	0.00	8,329.0	-807.5	825.7	0.00	0.00	0.00	0.00	PUCKETT 23A-1 BHL

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	KOP @ 500'
600.0	3.00	134.36	600.0	-1.8	1.9	2.6	3.00	3.00	
700.0	6.00	134.36	699.6	-7.3	7.5	10.5	3.00	3.00	
800.0	9.00	134.36	798.8	-16.4	16.8	23.5	3.00	3.00	
856.7	10.70	134.36	854.7	-23.2	23.7	33.2	3.00	3.00	EOB @ 10.7° INC
900.0	10.70	134.36	897.2	-28.8	29.5	41.3	0.00	0.00	
1,000.0	10.70	134.36	995.4	-41.8	42.8	59.8	0.00	0.00	
1,100.0	10.70	134.36	1,093.7	-54.8	56.0	78.4	0.00	0.00	
1,200.0	10.70	134.36	1,192.0	-67.8	69.3	97.0	0.00	0.00	
1,300.0	10.70	134.36	1,290.2	-80.8	82.6	115.5	0.00	0.00	
1,400.0	10.70	134.36	1,388.5	-93.8	95.9	134.1	0.00	0.00	
1,500.0	10.70	134.36	1,486.7	-106.7	109.2	152.7	0.00	0.00	
1,600.0	10.70	134.36	1,585.0	-119.7	122.4	171.2	0.00	0.00	
1,700.0	10.70	134.36	1,683.3	-132.7	135.7	189.8	0.00	0.00	
1,800.0	10.70	134.36	1,781.5	-145.7	149.0	208.4	0.00	0.00	
1,900.0	10.70	134.36	1,879.8	-158.7	162.3	226.9	0.00	0.00	
2,000.0	10.70	134.36	1,978.0	-171.7	175.5	245.5	0.00	0.00	
2,100.0	10.70	134.36	2,076.3	-184.6	188.8	264.1	0.00	0.00	
2,200.0	10.70	134.36	2,174.6	-197.6	202.1	282.7	0.00	0.00	
2,300.0	10.70	134.36	2,272.8	-210.6	215.4	301.2	0.00	0.00	
2,400.0	10.70	134.36	2,371.1	-223.6	228.6	319.8	0.00	0.00	
2,500.0	10.70	134.36	2,469.3	-236.6	241.9	338.4	0.00	0.00	
2,600.0	10.70	134.36	2,567.6	-249.6	255.2	356.9	0.00	0.00	
2,700.0	10.70	134.36	2,665.9	-262.5	268.5	375.5	0.00	0.00	
2,800.0	10.70	134.36	2,764.1	-275.5	281.7	394.1	0.00	0.00	
2,900.0	10.70	134.36	2,862.4	-288.5	295.0	412.6	0.00	0.00	
3,000.0	10.70	134.36	2,960.7	-301.5	308.3	431.2	0.00	0.00	
3,100.0	10.70	134.36	3,058.9	-314.5	321.6	449.8	0.00	0.00	
3,200.0	10.70	134.36	3,157.2	-327.5	334.9	468.4	0.00	0.00	
3,300.0	10.70	134.36	3,255.4	-340.4	348.1	486.9	0.00	0.00	
3,400.0	10.70	134.36	3,353.7	-353.4	361.4	505.5	0.00	0.00	
3,500.0	10.70	134.36	3,452.0	-366.4	374.7	524.1	0.00	0.00	
3,600.0	10.70	134.36	3,550.2	-379.4	388.0	542.6	0.00	0.00	
3,700.0	10.70	134.36	3,648.5	-392.4	401.2	561.2	0.00	0.00	
3,800.0	10.70	134.36	3,746.7	-405.4	414.5	579.8	0.00	0.00	
3,900.0	10.70	134.36	3,845.0	-418.3	427.8	598.3	0.00	0.00	
4,000.0	10.70	134.36	3,943.3	-431.3	441.1	616.9	0.00	0.00	
4,100.0	10.70	134.36	4,041.5	-444.3	454.3	635.5	0.00	0.00	
4,200.0	10.70	134.36	4,139.8	-457.3	467.6	654.0	0.00	0.00	
4,300.0	10.70	134.36	4,238.0	-470.3	480.9	672.6	0.00	0.00	
4,400.0	10.70	134.36	4,336.3	-483.3	494.2	691.2	0.00	0.00	
4,500.0	10.70	134.36	4,434.6	-496.2	507.4	709.8	0.00	0.00	
4,600.0	10.70	134.36	4,532.8	-509.2	520.7	728.3	0.00	0.00	
4,700.0	10.70	134.36	4,631.1	-522.2	534.0	746.9	0.00	0.00	
4,800.0	10.70	134.36	4,729.3	-535.2	547.3	765.5	0.00	0.00	
4,900.0	10.70	134.36	4,827.6	-548.2	560.6	784.0	0.00	0.00	
5,000.0	10.70	134.36	4,925.9	-561.2	573.8	802.6	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 23A-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 23A-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	10.70	134.36	5,024.1	-574.1	587.1	821.2	0.00	0.00	
5,200.0	10.70	134.36	5,122.4	-587.1	600.4	839.7	0.00	0.00	
5,300.0	10.70	134.36	5,220.6	-600.1	613.7	858.3	0.00	0.00	
5,400.0	10.70	134.36	5,318.9	-613.1	626.9	876.9	0.00	0.00	
5,500.0	10.70	134.36	5,417.2	-626.1	640.2	895.5	0.00	0.00	
5,600.0	10.70	134.36	5,515.4	-639.0	653.5	914.0	0.00	0.00	
5,700.0	10.70	134.36	5,613.7	-652.0	666.8	932.6	0.00	0.00	
5,800.0	10.70	134.36	5,712.0	-665.0	680.0	951.2	0.00	0.00	
5,820.4	10.70	134.36	5,732.0	-667.7	682.8	954.9	0.00	0.00	OHIO CREEK
5,900.0	10.70	134.36	5,810.2	-678.0	693.3	969.7	0.00	0.00	
6,000.0	10.70	134.36	5,908.5	-691.0	706.6	988.3	0.00	0.00	
6,100.0	10.70	134.36	6,006.7	-704.0	719.9	1,006.9	0.00	0.00	
6,134.9	10.70	134.36	6,041.0	-708.5	724.5	1,013.3	0.00	0.00	WILLIAMS FORK
6,200.0	10.70	134.36	6,105.0	-716.9	733.1	1,025.4	0.00	0.00	
6,300.0	10.70	134.36	6,203.3	-729.9	746.4	1,044.0	0.00	0.00	
6,400.0	10.70	134.36	6,301.5	-742.9	759.7	1,062.6	0.00	0.00	
6,500.0	10.70	134.36	6,399.8	-755.9	773.0	1,081.1	0.00	0.00	
6,600.0	10.70	134.36	6,498.0	-768.9	786.3	1,099.7	0.00	0.00	
6,700.0	10.70	134.36	6,596.3	-781.9	799.5	1,118.3	0.00	0.00	
6,718.4	10.70	134.36	6,614.3	-784.2	802.0	1,121.7	0.00	0.00	Start 3° Drop
6,800.0	8.25	134.36	6,694.9	-793.6	811.6	1,135.1	3.00	-3.00	
6,900.0	5.25	134.36	6,794.2	-801.9	820.0	1,146.9	3.00	-3.00	
7,000.0	2.25	134.36	6,893.9	-806.4	824.7	1,153.4	3.00	-3.00	
7,075.1	0.00	0.00	6,969.0	-807.5	825.7	1,154.9	3.00	-3.00	EOD @ 0° INC - TOP of GAS
7,100.0	0.00	0.00	6,993.9	-807.5	825.7	1,154.9	0.00	0.00	
7,200.0	0.00	0.00	7,093.9	-807.5	825.7	1,154.9	0.00	0.00	
7,300.0	0.00	0.00	7,193.9	-807.5	825.7	1,154.9	0.00	0.00	
7,400.0	0.00	0.00	7,293.9	-807.5	825.7	1,154.9	0.00	0.00	
7,500.0	0.00	0.00	7,393.9	-807.5	825.7	1,154.9	0.00	0.00	
7,600.0	0.00	0.00	7,493.9	-807.5	825.7	1,154.9	0.00	0.00	
7,700.0	0.00	0.00	7,593.9	-807.5	825.7	1,154.9	0.00	0.00	
7,800.0	0.00	0.00	7,693.9	-807.5	825.7	1,154.9	0.00	0.00	
7,900.0	0.00	0.00	7,793.9	-807.5	825.7	1,154.9	0.00	0.00	
8,000.0	0.00	0.00	7,893.9	-807.5	825.7	1,154.9	0.00	0.00	
8,100.0	0.00	0.00	7,993.9	-807.5	825.7	1,154.9	0.00	0.00	
8,200.0	0.00	0.00	8,093.9	-807.5	825.7	1,154.9	0.00	0.00	
8,300.0	0.00	0.00	8,193.9	-807.5	825.7	1,154.9	0.00	0.00	
8,400.0	0.00	0.00	8,293.9	-807.5	825.7	1,154.9	0.00	0.00	
8,435.1	0.00	0.00	8,329.0	-807.5	825.7	1,154.9	0.00	0.00	TD @ 8,435.1' MD

# Cathedral Energy Services

## Planning Report

**Database:** USA EDM 5000 Multi Users DB  
**Company:** Caerus Oil & Gas (NAD 27)  
**Project:** Garfield County, CO  
**Site:** S1-T7S-R97W (Mesa E1 797)  
**Well:** PUCKETT 23A-1  
**Wellbore:** DD  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well PUCKETT 23A-1  
**TVD Reference:** KB=20' @ 8349.0usft (Patterson #303)  
**MD Reference:** KB=20' @ 8349.0usft (Patterson #303)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
PUCKETT 23A-1 BHL	0.00	0.00	8,329.0	-807.5	825.7	608,520.70	1,246,451.92	39.473797	-108.169731
- plan hits target center									
- Circle (radius 50.0)									
PUCKETT 23A-1 TGT	0.00	0.00	6,969.0	-807.5	825.7	608,520.70	1,246,451.92	39.473797	-108.169731
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
5,820.4	5,732.0	OHIO CREEK				
6,134.9	6,041.0	WILLIAMS FORK				
7,075.1	6,969.0	TOP of GAS				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S	+E/-W	Comment	
(usft)	(usft)	(usft)	(usft)		
500.0	500.0	0.0	0.0	KOP @ 500'	
856.7	854.7	-23.2	23.7	EOB @ 10.7° INC	
6,718.4	6,614.3	-784.2	802.0	Start 3° Drop	
7,075.1	6,969.0	-807.5	825.7	EOD @ 0° INC	
8,435.1	8,329.0	-807.5	825.7	TD @ 8,435.1' MD	



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

**Garfield County, CO**

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

**PUCKETT 23A-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 23A-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 23A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

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

Survey Tool Program		Date	12/12/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	8,435.1	Plan #1 (DD)	ISCWSA MWD	MWD - Standard	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-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)		
S1-T7S-R97W (Mesa E1 797)						
PUCKETT 11B-1 - DD - Plan #1	200.0	200.0	12.8	12.2	20.402	CC, ES
PUCKETT 11B-1 - DD - Plan #1	300.0	299.2	15.4	14.4	14.284	SF
PUCKETT 11C-1 - DD - Plan #1	300.0	300.0	9.9	8.8	9.163	CC, ES
PUCKETT 11C-1 - DD - Plan #1	400.0	399.6	11.1	9.6	7.274	SF
PUCKETT 13B-1 - DD - Plan #1	200.0	200.0	18.7	18.1	29.768	CC, ES
PUCKETT 13B-1 - DD - Plan #1	400.0	397.8	27.6	26.1	18.415	SF
PUCKETT 21A-1 - HZ - Plan #1	300.0	300.0	25.4	24.3	23.505	CC, ES
PUCKETT 21A-1 - HZ - Plan #1	500.0	497.0	34.8	32.8	17.521	SF
PUCKETT 21C-1 - DD - Plan #1	333.4	333.4	33.2	31.9	26.995	CC, ES
PUCKETT 21C-1 - DD - Plan #1	500.0	497.3	38.7	36.8	19.599	SF
PUCKETT 21D-1 - DD - Plan #1	400.0	400.0	40.8	39.3	26.726	CC, ES
PUCKETT 21D-1 - DD - Plan #1	600.0	595.2	51.9	49.4	21.294	SF
PUCKETT 22A-36 - DD - Plan #1	255.6	255.6	18.2	17.3	20.731	CC
PUCKETT 22A-36 - DD - Plan #1	300.0	299.8	18.4	17.3	17.045	ES
PUCKETT 22A-36 - DD - Plan #1	400.0	398.7	22.1	20.5	14.443	SF
PUCKETT 22C-1 - DD - Plan #1	500.0	500.0	39.5	37.6	19.986	CC, ES
PUCKETT 22C-1 - DD - Plan #1	800.0	798.5	51.5	48.2	15.466	SF
PUCKETT 22D-1 - DD - Plan #1	500.0	500.0	23.3	21.3	11.769	CC, ES
PUCKETT 22D-1 - DD - Plan #1	800.0	799.4	31.8	28.5	9.595	SF
PUCKETT 23B-1 - DD - Plan #1	400.0	400.0	8.2	6.6	5.339	CC, ES
PUCKETT 23B-1 - DD - Plan #1	500.0	499.8	9.4	7.5	4.821	SF
PUCKETT 23C-1 - DD - Plan #1	300.0	300.0	12.6	11.5	11.690	CC, ES
PUCKETT 23C-1 - DD - Plan #1	400.0	399.6	14.1	12.6	9.377	SF
PUCKETT 31B-1 - DD - Plan #1	200.0	200.0	56.8	56.2	90.221	CC, ES
PUCKETT 31B-1 - DD - Plan #1	600.0	585.1	93.7	91.2	36.940	SF
PUCKETT 31C-1 - DD - Plan #1	233.6	233.6	49.0	48.2	62.751	CC, ES
PUCKETT 31C-1 - DD - Plan #1	600.0	589.7	76.0	73.5	30.397	SF
PUCKETT 32A-1 - DD - Plan #1	200.0	200.0	55.8	55.1	88.621	CC, ES
PUCKETT 32A-1 - DD - Plan #1	600.0	588.6	83.8	81.3	33.325	SF
PUCKETT 32C-1 - DD - Plan #1	300.0	300.0	47.8	46.7	44.316	CC, ES
PUCKETT 32C-1 - DD - Plan #1	700.0	691.1	74.2	71.3	25.116	SF
PUCKETT 33A-1 - DD - Plan #1	300.0	300.0	31.6	30.5	29.250	CC
PUCKETT 33A-1 - DD - Plan #1	400.0	399.7	31.9	30.4	21.014	ES
PUCKETT 33A-1 - DD - Plan #1	600.0	597.5	39.7	37.3	16.393	SF
PUCKETT 33C-1 - DD - Plan #1	317.2	317.2	16.2	15.1	14.167	CC, ES
PUCKETT 33C-1 - DD - Plan #1	400.0	399.8	16.9	15.4	11.210	SF
PUCKETT 34A-1 - DD - Plan #1	484.4	484.5	7.7	5.8	4.094	CC
PUCKETT 34A-1 - DD - Plan #1	500.0	500.0	7.8	5.8	3.973	ES, SF
PUCKETT SWD E1-797 - VH - Plan #1	630.9	630.8	15.5	12.9	6.094	CC, ES
PUCKETT SWD E1-797 - VH - Plan #1	700.0	699.6	16.6	13.7	5.821	SF

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 11B-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-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	-20.59	12.0	-4.5	12.8					
100.0	100.0	100.0	100.0	0.1	0.1	-20.59	12.0	-4.5	12.8	12.7	0.18	71.409		
200.0	200.0	200.0	200.0	0.3	0.3	-20.59	12.0	-4.5	12.8	12.2	0.63	20.402 CC, ES		
300.0	300.0	299.2	299.2	0.5	0.5	-20.49	14.4	-5.4	15.4	14.4	1.08	14.284 SF		
400.0	400.0	398.0	397.6	0.8	0.8	-20.33	21.7	-8.0	23.2	21.7	1.55	14.970		
500.0	500.0	495.6	494.4	1.0	1.1	-20.21	33.5	-12.3	36.1	34.1	2.04	17.669		
600.0	600.0	591.2	588.5	1.2	1.4	-155.38	49.5	-18.2	56.3	53.7	2.59	21.763		
700.0	699.6	683.3	678.1	1.4	1.8	-156.85	69.2	-25.3	86.0	82.8	3.14	27.336		
800.0	798.8	770.8	762.4	1.6	2.2	-158.05	91.6	-33.5	124.6	120.9	3.73	33.424		
900.0	897.2	860.2	847.8	2.0	2.7	-159.25	116.2	-42.4	169.3	165.0	4.24	39.896		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-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	-58.95	5.1	-8.5	9.9					
100.0	100.0	100.0	100.0	0.1	0.1	-58.95	5.1	-8.5	9.9	9.7	0.18	54.976		
200.0	200.0	200.0	200.0	0.3	0.3	-58.95	5.1	-8.5	9.9	9.3	0.63	15.707		
300.0	300.0	300.0	300.0	0.5	0.5	-58.95	5.1	-8.5	9.9	8.8	1.08	9.163 CC, ES		
400.0	400.0	399.6	399.6	0.8	0.8	-54.68	6.4	-9.1	11.1	9.6	1.53	7.274 SF		
500.0	500.0	498.8	498.5	1.0	1.0	-43.68	12.3	-11.7	17.1	15.1	1.99	8.570		
600.0	600.0	596.6	595.7	1.2	1.3	-171.08	22.7	-16.4	30.9	28.4	2.51	12.292		
700.0	699.6	691.6	689.3	1.4	1.5	-168.55	37.0	-23.0	54.8	51.7	3.07	17.870		
800.0	798.8	782.5	778.1	1.6	1.9	-167.65	54.7	-31.0	88.2	84.6	3.64	24.212		
900.0	897.2	873.7	866.7	2.0	2.3	-167.49	74.7	-40.1	128.4	124.3	4.16	30.880		
1,000.0	995.4	964.9	955.2	2.3	2.7	-167.55	94.7	-49.2	169.4	164.8	4.59	36.906		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 13B-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-119.08	-9.1	-16.4	18.7					
100.0	100.0	100.0	100.0	0.1	0.1	-119.08	-9.1	-16.4	18.7	18.6	0.18	104.189		
200.0	200.0	200.0	200.0	0.3	0.3	-119.08	-9.1	-16.4	18.7	18.1	0.63	29.768 CC, ES		
300.0	300.0	299.1	299.1	0.5	0.5	-123.47	-11.5	-17.4	20.8	19.8	1.06	19.738		
400.0	400.0	397.8	397.4	0.8	0.7	-132.39	-18.5	-20.3	27.6	26.1	1.50	18.415 SF		
500.0	500.0	495.3	494.2	1.0	1.0	-140.15	-30.1	-25.2	39.7	37.7	2.00	19.887		
600.0	600.0	591.5	588.8	1.2	1.4	82.35	-46.0	-31.8	56.6	54.2	2.48	22.881		
700.0	699.6	686.9	681.7	1.4	1.8	83.33	-65.9	-40.1	77.6	74.6	2.98	26.062		
800.0	798.8	784.3	776.3	1.6	2.2	86.43	-87.5	-49.1	99.5	96.0	3.53	28.199		
900.0	897.2	881.4	870.5	2.0	2.7	90.73	-109.0	-58.1	121.7	117.5	4.19	29.076		
1,000.0	995.4	978.5	964.7	2.3	3.2	94.30	-130.5	-67.1	144.5	139.6	4.91	29.423		
1,100.0	1,093.7	1,075.5	1,058.9	2.7	3.7	96.90	-152.0	-76.1	167.7	162.0	5.67	29.574		
1,200.0	1,192.0	1,172.6	1,153.1	3.1	4.1	98.86	-173.5	-85.0	191.1	184.6	6.45	29.635		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-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	7.68	25.1	3.4	25.4					
100.0	100.0	100.0	100.0	0.1	0.1	7.68	25.1	3.4	25.4	25.2	0.18	141.031		
200.0	200.0	200.0	200.0	0.3	0.3	7.68	25.1	3.4	25.4	24.7	0.63	40.295		
300.0	300.0	300.0	300.0	0.5	0.5	7.68	25.1	3.4	25.4	24.3	1.08	23.505 CC, ES		
400.0	400.0	398.7	398.7	0.8	0.8	5.22	27.5	2.5	27.7	26.1	1.53	18.136		
500.0	500.0	497.0	496.7	1.0	1.0	-0.07	34.7	0.0	34.8	32.8	1.99	17.521 SF		
600.0	600.0	594.3	593.3	1.2	1.2	-138.02	46.1	-1.5	48.5	46.0	2.49	19.450		
700.0	699.6	689.7	687.4	1.4	1.5	-139.90	61.2	-0.2	70.0	67.0	3.00	23.303		
800.0	798.8	782.2	778.0	1.6	1.9	-140.62	79.5	3.6	99.1	95.5	3.55	27.894		
900.0	897.2	871.4	864.5	2.0	2.3	-140.91	100.7	9.6	135.1	131.0	4.09	32.986		
1,000.0	995.4	958.0	947.3	2.3	2.7	-140.52	124.3	17.6	174.8	170.2	4.63	37.796		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-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-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	12.28	32.4	7.1	33.2					
100.0	100.0	100.0	100.0	0.1	0.1	12.28	32.4	7.1	33.2	33.0	0.18	184.502		
200.0	200.0	200.0	200.0	0.3	0.3	12.28	32.4	7.1	33.2	32.5	0.63	52.715		
300.0	300.0	300.0	300.0	0.5	0.5	12.28	32.4	7.1	33.2	32.1	1.08	30.750		
333.4	333.4	333.4	333.4	0.6	0.6	12.28	32.4	7.1	33.2	31.9	1.23	26.995 CC, ES		
400.0	400.0	399.2	399.2	0.8	0.8	11.96	33.0	7.0	33.8	32.3	1.53	22.135		
500.0	500.0	497.3	497.1	1.0	1.0	9.78	38.1	6.6	38.7	36.8	1.98	19.599 SF		
600.0	600.0	594.6	594.0	1.2	1.2	-128.74	47.7	6.5	50.1	47.7	2.47	20.301		
700.0	699.6	690.5	688.9	1.4	1.5	-131.79	60.8	9.5	68.9	66.0	2.96	23.289		
800.0	798.8	784.2	781.0	1.6	1.8	-133.41	76.7	15.7	94.9	91.4	3.50	27.101		
900.0	897.2	877.4	871.9	2.0	2.2	-134.56	95.3	24.6	126.8	122.7	4.06	31.250		
1,000.0	995.4	971.8	964.0	2.3	2.5	-135.61	114.4	33.9	159.6	155.0	4.59	34.767		
1,100.0	1,093.7	1,066.3	1,056.0	2.7	2.9	-136.30	133.4	43.1	192.4	187.3	5.15	37.369		



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-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)	+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	15.64	39.3	11.0	40.8					
100.0	100.0	100.0	100.0	0.1	0.1	15.64	39.3	11.0	40.8	40.7	0.18	227.172		
200.0	200.0	200.0	200.0	0.3	0.3	15.64	39.3	11.0	40.8	40.2	0.63	64.906		
300.0	300.0	300.0	300.0	0.5	0.5	15.64	39.3	11.0	40.8	39.8	1.08	37.862		
400.0	400.0	400.0	400.0	0.8	0.8	15.64	39.3	11.0	40.8	39.3	1.53	26.726 CC, ES		
500.0	500.0	497.9	497.9	1.0	1.0	16.62	41.4	12.4	43.3	41.3	1.97	21.945		
600.0	600.0	595.2	594.9	1.2	1.2	-117.70	47.7	16.4	51.9	49.4	2.44	21.294 SF		
700.0	699.6	691.0	689.9	1.4	1.5	-120.07	57.9	23.0	67.8	64.8	2.92	23.184		
800.0	798.8	785.7	783.1	1.6	1.8	-122.96	71.8	32.0	90.9	87.4	3.47	26.170		
900.0	897.2	881.7	877.4	2.0	2.1	-126.38	86.9	41.7	118.0	114.0	4.03	29.273		
1,000.0	995.4	977.5	971.6	2.3	2.4	-129.03	101.9	51.4	146.0	141.4	4.59	31.803		
1,100.0	1,093.7	1,073.4	1,065.7	2.7	2.8	-130.83	117.0	61.2	174.1	168.9	5.17	33.695		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 22A-36 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-1.78	18.2	-0.6	18.2					
100.0	100.0	100.0	100.0	0.1	0.1	-1.78	18.2	-0.6	18.2	18.0	0.18	101.355		
200.0	200.0	200.0	200.0	0.3	0.3	-1.78	18.2	-0.6	18.2	17.6	0.63	28.958		
255.6	255.6	255.6	255.6	0.4	0.4	-1.78	18.2	-0.6	18.2	17.3	0.88	20.731 CC		
300.0	300.0	299.8	299.8	0.5	0.5	-1.95	18.4	-0.6	18.4	17.3	1.08	17.045 ES		
400.0	400.0	398.7	398.6	0.8	0.8	-5.38	21.9	-2.1	22.1	20.5	1.53	14.443 SF		
500.0	500.0	497.0	496.5	1.0	1.0	-9.96	30.2	-5.3	30.8	28.8	2.00	15.414		
600.0	600.0	594.2	592.8	1.2	1.3	-146.24	42.9	-7.8	46.3	43.8	2.52	18.401		
700.0	699.6	688.9	686.0	1.4	1.6	-146.94	59.7	-8.5	70.2	67.2	3.04	23.065		
800.0	798.8	780.3	775.1	1.6	2.0	-147.00	79.9	-7.5	102.2	98.6	3.60	28.362		
900.0	897.2	867.7	859.4	2.0	2.4	-146.95	103.0	-5.0	141.4	137.3	4.14	34.168		
1,000.0	995.4	952.0	939.6	2.3	2.8	-146.51	128.6	-1.2	184.7	180.0	4.65	39.743		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-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	29.99	34.2	19.8	39.5					
100.0	100.0	100.0	100.0	0.1	0.1	29.99	34.2	19.8	39.5	39.4	0.18	219.844		
200.0	200.0	200.0	200.0	0.3	0.3	29.99	34.2	19.8	39.5	38.9	0.63	62.813		
300.0	300.0	300.0	300.0	0.5	0.5	29.99	34.2	19.8	39.5	38.5	1.08	36.641		
400.0	400.0	400.0	400.0	0.8	0.8	29.99	34.2	19.8	39.5	38.0	1.53	25.864		
500.0	500.0	500.0	500.0	1.0	1.0	29.99	34.2	19.8	39.5	37.6	1.98	19.986 CC, ES		
600.0	600.0	600.0	600.0	1.2	1.2	-107.96	34.2	19.8	40.3	37.9	2.41	16.708		
700.0	699.6	699.0	699.0	1.4	1.4	-114.45	34.1	22.3	44.0	41.2	2.84	15.487		
800.0	798.8	798.5	798.3	1.6	1.6	-121.69	33.9	27.8	51.5	48.2	3.33	15.466 SF		
900.0	897.2	897.5	897.1	2.0	1.9	-130.48	33.6	33.2	62.6	58.7	3.86	16.227		
1,000.0	995.4	996.4	995.9	2.3	2.1	-137.08	33.4	38.6	75.3	70.9	4.36	17.283		
1,100.0	1,093.7	1,095.2	1,094.6	2.7	2.3	-141.74	33.1	44.0	88.7	83.9	4.85	18.288		
1,200.0	1,192.0	1,194.1	1,193.3	3.1	2.5	-145.16	32.9	49.4	102.6	97.3	5.34	19.196		
1,300.0	1,290.2	1,293.0	1,292.0	3.4	2.8	-147.76	32.6	54.8	116.7	110.9	5.84	20.000		
1,400.0	1,388.5	1,391.8	1,390.8	3.8	3.0	-149.79	32.3	60.3	131.1	124.7	6.33	20.707		
1,500.0	1,486.7	1,490.7	1,489.5	4.2	3.2	-151.43	32.1	65.7	145.5	138.7	6.82	21.327		
1,600.0	1,585.0	1,589.6	1,588.2	4.7	3.5	-152.77	31.8	71.1	160.1	152.7	7.32	21.873		
1,700.0	1,683.3	1,688.5	1,686.9	5.1	3.7	-153.88	31.6	76.5	174.7	166.9	7.81	22.356		
1,800.0	1,781.5	1,787.3	1,785.7	5.5	3.9	-154.83	31.3	81.9	189.4	181.0	8.31	22.786		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-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-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	30.62	20.0	11.9	23.3					
100.0	100.0	100.0	100.0	0.1	0.1	30.62	20.0	11.9	23.3	23.1	0.18	129.458		
200.0	200.0	200.0	200.0	0.3	0.3	30.62	20.0	11.9	23.3	22.6	0.63	36.988		
300.0	300.0	300.0	300.0	0.5	0.5	30.62	20.0	11.9	23.3	22.2	1.08	21.576		
400.0	400.0	400.0	400.0	0.8	0.8	30.62	20.0	11.9	23.3	21.7	1.53	15.230		
500.0	500.0	500.0	500.0	1.0	1.0	30.62	20.0	11.9	23.3	21.3	1.98	11.769	CC, ES	
600.0	600.0	599.8	599.8	1.2	1.2	-103.60	19.0	14.3	24.2	21.9	2.39	10.136		
700.0	699.6	699.6	699.2	1.4	1.4	-103.24	16.0	21.5	27.2	24.3	2.81	9.652		
800.0	798.8	799.4	798.4	1.6	1.7	-105.46	11.5	32.0	31.8	28.5	3.32	9.595	SF	
900.0	897.2	899.1	897.4	2.0	1.9	-113.72	7.0	42.8	38.2	34.3	3.89	9.805		
1,000.0	995.4	998.7	996.3	2.3	2.2	-120.52	2.4	53.5	45.5	41.0	4.48	10.154		
1,100.0	1,093.7	1,098.3	1,095.2	2.7	2.5	-125.39	-2.1	64.2	53.3	48.3	5.07	10.514		
1,200.0	1,192.0	1,197.9	1,194.2	3.1	2.8	-128.99	-6.6	74.9	61.4	55.8	5.66	10.856		
1,300.0	1,290.2	1,297.5	1,293.1	3.4	3.1	-131.75	-11.2	85.6	69.7	63.5	6.24	11.166		
1,400.0	1,388.5	1,397.1	1,392.0	3.8	3.4	-133.92	-15.7	96.3	78.1	71.3	6.83	11.445		
1,500.0	1,486.7	1,496.7	1,490.9	4.2	3.7	-135.67	-20.2	107.0	86.6	79.2	7.41	11.693		
1,600.0	1,585.0	1,596.3	1,589.9	4.7	4.0	-137.10	-24.8	117.7	95.2	87.2	7.99	11.914		
1,700.0	1,683.3	1,695.9	1,688.8	5.1	4.3	-138.30	-29.3	128.4	103.8	95.2	8.57	12.111		
1,800.0	1,781.5	1,795.6	1,787.7	5.5	4.6	-139.31	-33.8	139.1	112.5	103.3	9.15	12.287		
1,900.0	1,879.8	1,895.2	1,886.6	5.9	4.9	-140.18	-38.4	149.8	121.1	111.4	9.73	12.445		
2,000.0	1,978.0	1,994.8	1,985.6	6.3	5.2	-140.93	-42.9	160.5	129.9	119.5	10.32	12.587		
2,100.0	2,076.3	2,094.4	2,084.5	6.7	5.5	-141.58	-47.4	171.2	138.6	127.7	10.90	12.716		
2,200.0	2,174.6	2,194.0	2,183.4	7.1	5.8	-142.16	-52.0	181.9	147.3	135.8	11.48	12.834		
2,300.0	2,272.8	2,293.6	2,282.4	7.6	6.1	-142.68	-56.5	192.6	156.1	144.0	12.06	12.941		
2,400.0	2,371.1	2,393.2	2,381.3	8.0	6.4	-143.14	-61.0	203.3	164.8	152.2	12.64	13.039		
2,500.0	2,469.3	2,492.8	2,480.2	8.4	6.8	-143.55	-65.6	214.0	173.6	160.4	13.22	13.129		
2,600.0	2,567.6	2,592.4	2,579.1	8.8	7.1	-143.92	-70.1	224.7	182.4	168.6	13.81	13.212		
2,700.0	2,665.9	2,692.0	2,678.1	9.2	7.4	-144.26	-74.6	235.4	191.2	176.8	14.39	13.289		
2,800.0	2,764.1	2,791.6	2,777.0	9.6	7.7	-144.57	-79.2	246.1	200.0	185.0	14.97	13.360		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-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	-153.28	-7.3	-3.7	8.2				
100.0	100.0	100.0	100.0	0.1	0.1	-153.28	-7.3	-3.7	8.2	8.0	0.18	45.385	
200.0	200.0	200.0	200.0	0.3	0.3	-153.28	-7.3	-3.7	8.2	7.5	0.63	12.967	
300.0	300.0	300.0	300.0	0.5	0.5	-153.28	-7.3	-3.7	8.2	7.1	1.08	7.564	
400.0	400.0	400.0	400.0	0.8	0.8	-153.28	-7.3	-3.7	8.2	6.6	1.53	5.339 CC, ES	
500.0	500.0	499.8	499.7	1.0	1.0	-168.18	-9.2	-1.9	9.4	7.5	1.96	4.821 SF	
600.0	600.0	599.2	598.8	1.2	1.2	39.50	-15.0	3.3	13.3	10.9	2.39	5.575	
700.0	699.6	698.4	697.1	1.4	1.4	31.12	-24.6	11.9	18.0	15.1	2.86	6.293	
800.0	798.8	797.3	794.4	1.6	1.7	27.07	-37.9	23.8	23.0	19.6	3.39	6.796	
900.0	897.2	896.2	890.7	2.0	2.2	24.86	-54.9	39.0	28.5	24.6	3.92	7.271	
1,000.0	995.4	996.0	987.5	2.3	2.6	23.10	-73.1	55.3	34.6	30.2	4.41	7.838	
1,100.0	1,093.7	1,095.8	1,084.2	2.7	3.1	21.87	-91.2	71.6	40.7	35.8	4.92	8.272	
1,200.0	1,192.0	1,195.6	1,181.0	3.1	3.6	20.96	-109.4	87.9	46.9	41.4	5.44	8.609	
1,300.0	1,290.2	1,295.4	1,277.8	3.4	4.1	20.26	-127.6	104.2	53.0	47.1	5.97	8.878	
1,400.0	1,388.5	1,395.2	1,374.6	3.8	4.6	19.71	-145.7	120.5	59.2	52.7	6.51	9.093	
1,500.0	1,486.7	1,495.1	1,471.3	4.2	5.1	19.26	-163.9	136.8	65.3	58.3	7.05	9.270	
1,600.0	1,585.0	1,594.9	1,568.1	4.7	5.6	18.89	-182.1	153.1	71.5	63.9	7.59	9.418	
1,700.0	1,683.3	1,694.7	1,664.9	5.1	6.1	18.58	-200.2	169.4	77.7	69.5	8.14	9.542	
1,800.0	1,781.5	1,794.5	1,761.7	5.5	6.6	18.31	-218.4	185.7	83.9	75.2	8.69	9.648	
1,900.0	1,879.8	1,894.3	1,858.5	5.9	7.2	18.08	-236.6	202.0	90.0	80.8	9.24	9.740	
2,000.0	1,978.0	1,994.1	1,955.2	6.3	7.7	17.88	-254.7	218.3	96.2	86.4	9.80	9.819	
2,100.0	2,076.3	2,093.9	2,052.0	6.7	8.2	17.71	-272.9	234.6	102.4	92.0	10.35	9.889	
2,200.0	2,174.6	2,193.7	2,148.8	7.1	8.7	17.55	-291.1	250.9	108.6	97.6	10.91	9.951	
2,300.0	2,272.8	2,293.5	2,245.6	7.6	9.2	17.41	-309.3	267.2	114.7	103.3	11.47	10.006	
2,400.0	2,371.1	2,393.3	2,342.4	8.0	9.7	17.29	-327.4	283.5	120.9	108.9	12.02	10.055	
2,500.0	2,469.3	2,493.1	2,439.1	8.4	10.3	17.17	-345.6	299.8	127.1	114.5	12.58	10.099	
2,600.0	2,567.6	2,593.0	2,535.9	8.8	10.8	17.07	-363.8	316.1	133.3	120.1	13.14	10.139	
2,700.0	2,665.9	2,692.8	2,632.7	9.2	11.3	16.98	-381.9	332.4	139.4	125.7	13.70	10.176	
2,800.0	2,764.1	2,792.6	2,729.5	9.6	11.8	16.89	-400.1	348.7	145.6	131.4	14.26	10.209	
2,900.0	2,862.4	2,892.4	2,826.2	10.1	12.4	16.81	-418.3	365.0	151.8	137.0	14.82	10.240	
3,000.0	2,960.7	2,992.2	2,923.0	10.5	12.9	16.74	-436.4	381.3	158.0	142.6	15.39	10.268	
3,100.0	3,058.9	3,092.0	3,019.8	10.9	13.4	16.67	-454.6	397.6	164.2	148.2	15.95	10.294	
3,200.0	3,157.2	3,191.8	3,116.6	11.3	13.9	16.61	-472.8	413.9	170.3	153.8	16.51	10.318	
3,300.0	3,255.4	3,291.6	3,213.4	11.7	14.4	16.55	-490.9	430.2	176.5	159.5	17.07	10.341	
3,400.0	3,353.7	3,391.4	3,310.1	12.2	15.0	16.50	-509.1	446.5	182.7	165.1	17.63	10.362	
3,500.0	3,452.0	3,491.2	3,406.9	12.6	15.5	16.45	-527.3	462.8	188.9	170.7	18.19	10.382	
3,600.0	3,550.2	3,591.0	3,503.7	13.0	16.0	16.40	-545.4	479.1	195.1	176.3	18.76	10.400	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 23C-1 - DD - Plan #1												Offset Site Error: 0.0 usft	
Survey Program: 0-ISCSWA MWD												Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-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	70.141	
200.0	200.0	200.0	200.0	0.3	0.3	-100.00	-2.2	-12.4	12.6	12.0	0.63	20.040	
300.0	300.0	300.0	300.0	0.5	0.5	-100.00	-2.2	-12.4	12.6	11.5	1.08	11.690 CC, ES	
400.0	400.0	399.6	399.5	0.8	0.7	-109.18	-4.6	-13.3	14.1	12.6	1.50	9.377 SF	
500.0	500.0	498.6	498.3	1.0	1.0	-126.70	-11.9	-15.9	20.0	18.0	1.93	10.322	
600.0	600.0	597.5	596.4	1.2	1.2	89.27	-23.8	-19.3	30.7	28.3	2.40	12.784	
700.0	699.6	696.5	694.1	1.4	1.5	84.94	-39.6	-19.7	42.6	39.7	2.85	14.910	
800.0	798.8	795.2	790.7	1.6	1.9	82.54	-59.3	-16.8	55.1	51.7	3.40	16.191	
900.0	897.2	894.3	887.2	2.0	2.3	82.45	-81.4	-12.0	67.7	63.7	4.06	16.682	
1,000.0	995.4	993.5	983.8	2.3	2.7	83.10	-103.6	-7.1	80.3	75.5	4.78	16.783	
1,100.0	1,093.7	1,092.7	1,080.3	2.7	3.2	83.58	-125.8	-2.3	92.8	87.3	5.55	16.729	
1,200.0	1,192.0	1,191.9	1,176.9	3.1	3.7	83.95	-148.0	2.6	105.4	99.1	6.34	16.630	
1,300.0	1,290.2	1,291.1	1,273.5	3.4	4.1	84.24	-170.2	7.5	118.0	110.8	7.14	16.516	
1,400.0	1,388.5	1,390.3	1,370.0	3.8	4.6	84.47	-192.4	12.3	130.6	122.6	7.96	16.402	
1,500.0	1,486.7	1,489.5	1,466.6	4.2	5.1	84.66	-214.6	17.2	143.1	134.3	8.78	16.295	
1,600.0	1,585.0	1,588.7	1,563.2	4.7	5.6	84.82	-236.7	22.1	155.7	146.1	9.61	16.196	
1,700.0	1,683.3	1,687.9	1,659.7	5.1	6.0	84.96	-258.9	26.9	168.3	157.8	10.45	16.107	
1,800.0	1,781.5	1,787.1	1,756.3	5.5	6.5	85.08	-281.1	31.8	180.8	169.6	11.29	16.025	
1,900.0	1,879.8	1,886.3	1,852.9	5.9	7.0	85.18	-303.3	36.7	193.4	181.3	12.13	15.952	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-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-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	19.46	53.5	18.9	56.8								
100.0	100.0	100.0	100.0	0.1	0.1	19.46	53.5	18.9	56.8	56.6	0.18	315.772					
200.0	200.0	200.0	200.0	0.3	0.3	19.46	53.5	18.9	56.8	56.2	0.63	90.221	CC, ES				
300.0	300.0	297.5	297.5	0.5	0.5	20.80	55.0	20.9	58.9	57.8	1.07	54.826					
400.0	400.0	394.5	394.2	0.8	0.8	24.30	59.5	26.8	65.5	64.0	1.54	42.607					
500.0	500.0	490.5	489.4	1.0	1.0	28.74	66.7	36.6	76.8	74.8	2.01	38.240					
600.0	600.0	585.1	582.5	1.2	1.4	-102.32	76.7	49.9	93.7	91.2	2.54	36.940	SF				
700.0	699.6	677.8	672.8	1.4	1.8	-101.40	89.1	66.6	116.2	113.2	3.04	38.183					
800.0	798.8	768.1	759.7	1.6	2.2	-101.73	103.7	86.1	144.1	140.5	3.61	39.911					
900.0	897.2	855.6	842.8	2.0	2.7	-102.89	120.2	108.2	177.1	172.8	4.25	41.641					

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-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-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	17.79	46.6	15.0	49.0					
100.0	100.0	100.0	100.0	0.1	0.1	17.79	46.6	15.0	49.0	48.8	0.18	272.277		
200.0	200.0	200.0	200.0	0.3	0.3	17.79	46.6	15.0	49.0	48.3	0.63	77.793		
233.6	233.6	233.6	233.6	0.4	0.4	17.79	46.6	15.0	49.0	48.2	0.78	62.751 CC, ES		
300.0	300.0	299.0	299.0	0.5	0.5	18.27	46.9	15.5	49.4	48.4	1.08	45.992		
400.0	400.0	396.8	396.7	0.8	0.8	21.72	49.6	19.8	53.5	52.0	1.53	35.070		
500.0	500.0	493.9	493.2	1.0	1.0	27.20	54.8	28.2	62.0	60.0	1.99	31.163		
600.0	600.0	589.7	587.9	1.2	1.3	-102.86	62.5	40.6	76.0	73.5	2.50	30.397 SF		
700.0	699.6	684.0	680.2	1.4	1.7	-101.44	72.5	56.7	95.8	92.7	3.01	31.858		
800.0	798.8	776.1	769.5	1.6	2.1	-101.59	84.6	76.1	120.8	117.2	3.58	33.782		
900.0	897.2	865.7	855.1	2.0	2.6	-102.62	98.5	98.5	150.9	146.6	4.23	35.695		
1,000.0	995.4	953.8	938.0	2.3	3.1	-103.24	114.3	123.9	185.1	180.1	4.94	37.472		



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 32A-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	29.74	48.4	27.7	55.8					
100.0	100.0	100.0	100.0	0.1	0.1	29.74	48.4	27.7	55.8	55.6	0.18	310.174		
200.0	200.0	200.0	200.0	0.3	0.3	29.74	48.4	27.7	55.8	55.1	0.63	88.621	CC, ES	
300.0	300.0	298.5	298.5	0.5	0.5	30.80	48.7	29.0	56.7	55.7	1.07	52.933		
400.0	400.0	396.2	396.0	0.8	0.8	35.11	50.0	35.2	61.3	59.7	1.52	40.190		
500.0	500.0	493.0	492.1	1.0	1.0	41.34	52.3	46.0	70.1	68.1	1.99	35.231		
600.0	600.0	588.6	586.4	1.2	1.3	-87.81	55.6	61.4	83.8	81.3	2.51	33.325	SF	
700.0	699.6	683.0	678.6	1.4	1.7	-85.43	59.7	81.1	101.8	98.8	3.03	33.617		
800.0	798.8	775.8	768.2	1.6	2.2	-84.80	64.7	104.8	123.6	120.0	3.61	34.190		
900.0	897.2	868.8	856.8	2.0	2.7	-85.36	70.6	132.6	148.9	144.5	4.31	34.573		
1,000.0	995.4	965.3	948.3	2.3	3.3	-86.19	76.9	162.4	175.0	170.0	5.06	34.592		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-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-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	29.73	41.5	23.7	47.8					
100.0	100.0	100.0	100.0	0.1	0.1	29.73	41.5	23.7	47.8	47.6	0.18	265.898		
200.0	200.0	200.0	200.0	0.3	0.3	29.73	41.5	23.7	47.8	47.2	0.63	75.971		
300.0	300.0	300.0	300.0	0.5	0.5	29.73	41.5	23.7	47.8	46.7	1.08	44.316 CC, ES		
400.0	400.0	398.8	398.7	0.8	0.8	32.38	41.4	26.3	49.1	47.5	1.52	32.335		
500.0	500.0	497.0	496.7	1.0	1.0	39.46	41.1	33.9	53.4	51.4	1.97	27.123		
600.0	600.0	594.5	593.3	1.2	1.2	-87.71	40.6	46.4	61.9	59.4	2.45	25.254		
700.0	699.6	691.1	688.4	1.4	1.6	-83.60	40.0	63.6	74.2	71.3	2.96	25.116 SF		
800.0	798.8	786.7	781.5	1.6	2.0	-81.74	39.1	85.4	89.9	86.4	3.54	25.365		
900.0	897.2	881.2	872.3	2.0	2.5	-81.26	38.1	111.4	108.7	104.4	4.24	25.623		
1,000.0	995.4	978.4	964.8	2.3	3.0	-80.64	37.0	141.1	129.7	124.6	5.02	25.842		
1,100.0	1,093.7	1,076.2	1,057.9	2.7	3.6	-80.18	35.8	171.0	150.7	144.9	5.82	25.889		
1,200.0	1,192.0	1,173.9	1,151.0	3.1	4.2	-79.83	34.7	200.9	171.7	165.1	6.64	25.844		
1,300.0	1,290.2	1,271.7	1,244.0	3.4	4.8	-79.55	33.5	230.8	192.7	185.3	7.48	25.758		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-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	30.06	27.3	15.8	31.6					
100.0	100.0	100.0	100.0	0.1	0.1	30.06	27.3	15.8	31.6	31.4	0.18	175.502		
200.0	200.0	200.0	200.0	0.3	0.3	30.06	27.3	15.8	31.6	30.9	0.63	50.144		
300.0	300.0	300.0	300.0	0.5	0.5	30.06	27.3	15.8	31.6	30.5	1.08	29.250 CC		
400.0	400.0	399.7	399.7	0.8	0.8	32.64	26.8	17.2	31.9	30.4	1.52	21.014 ES		
500.0	500.0	499.0	498.7	1.0	1.0	43.27	24.8	23.3	34.0	32.1	1.96	17.385		
600.0	600.0	597.5	596.6	1.2	1.2	-79.41	21.0	34.2	39.7	37.3	2.42	16.393 SF		
700.0	699.6	695.6	693.2	1.4	1.5	-72.29	15.7	49.7	48.5	45.6	2.93	16.582		
800.0	798.8	792.9	788.3	1.6	1.9	-68.62	8.9	69.8	59.6	56.1	3.52	16.959		
900.0	897.2	889.6	881.4	2.0	2.4	-66.92	0.5	94.2	72.8	68.6	4.20	17.312		
1,000.0	995.4	985.2	972.2	2.3	3.0	-64.31	-9.2	122.7	89.4	84.5	4.95	18.068		
1,100.0	1,093.7	1,083.4	1,064.6	2.7	3.6	-61.73	-19.9	154.0	108.0	102.2	5.72	18.873		
1,200.0	1,192.0	1,181.6	1,157.0	3.1	4.3	-59.90	-30.6	185.2	126.6	120.2	6.49	19.506		
1,300.0	1,290.2	1,279.7	1,249.5	3.4	4.9	-58.55	-41.3	216.5	145.4	138.2	7.27	20.003		
1,400.0	1,388.5	1,377.9	1,341.9	3.8	5.6	-57.50	-52.0	247.8	164.3	156.2	8.05	20.399		
1,500.0	1,486.7	1,476.1	1,434.4	4.2	6.3	-56.67	-62.7	279.0	183.2	174.3	8.84	20.724		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 33C-1 - DD - Plan #1													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCWSA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	29.10	14.2	7.9	16.3					
100.0	100.0	100.0	100.0	0.1	0.1	29.10	14.2	7.9	16.3	16.1	0.18	90.382		
200.0	200.0	200.0	200.0	0.3	0.3	29.10	14.2	7.9	16.3	15.6	0.63	25.824		
300.0	300.0	300.0	300.0	0.5	0.5	31.41	13.8	8.5	16.2	15.1	1.07	15.165		
317.2	317.2	317.2	317.2	0.6	0.6	33.27	13.6	8.9	16.2	15.1	1.14	14.167 CC, ES		
400.0	400.0	399.8	399.6	0.8	0.7	49.40	11.0	12.8	16.9	15.4	1.51	11.210 SF		
500.0	500.0	498.7	498.0	1.0	1.0	76.04	5.3	21.4	22.2	20.2	1.97	11.253		
600.0	600.0	596.8	594.9	1.2	1.3	-41.97	-3.0	34.2	32.7	30.2	2.48	13.195		
700.0	699.6	694.2	690.2	1.4	1.7	-35.00	-14.0	50.9	44.9	41.9	3.00	14.977		
800.0	798.8	790.9	783.7	1.6	2.2	-31.93	-27.5	71.5	57.8	54.2	3.58	16.158		
900.0	897.2	886.9	875.2	2.0	2.7	-30.57	-43.5	95.9	71.5	67.3	4.18	17.108		
1,000.0	995.4	981.6	963.8	2.3	3.4	-28.99	-61.7	123.6	89.1	84.3	4.77	18.685		
1,100.0	1,093.7	1,078.9	1,053.9	2.7	4.1	-27.43	-82.0	154.5	109.6	104.2	5.38	20.366		
1,200.0	1,192.0	1,176.7	1,144.4	3.1	4.8	-26.34	-102.3	185.5	130.2	124.2	5.99	21.748		
1,300.0	1,290.2	1,274.5	1,234.9	3.4	5.6	-25.56	-122.7	216.5	150.8	144.2	6.61	22.806		
1,400.0	1,388.5	1,372.4	1,325.4	3.8	6.3	-24.96	-143.0	247.5	171.5	164.3	7.24	23.674		
1,500.0	1,486.7	1,470.2	1,415.9	4.2	7.1	-24.49	-163.4	278.6	192.2	184.3	7.88	24.388		

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## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 34A-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	29.76	6.9	4.0	8.0					
100.0	100.0	100.0	100.0	0.1	0.1	29.76	6.9	4.0	8.0	7.8	0.18	44.276		
200.0	200.0	200.0	200.0	0.3	0.3	29.76	6.9	4.0	8.0	7.3	0.63	12.650		
300.0	300.0	300.0	300.0	0.5	0.5	29.76	6.9	4.0	8.0	6.9	1.08	7.379		
400.0	400.0	400.0	400.0	0.8	0.8	29.76	6.9	4.0	8.0	6.4	1.53	5.209		
484.4	484.4	484.5	484.4	1.0	0.9	43.33	5.6	5.3	7.7	5.8	1.89	4.094 CC		
500.0	500.0	500.0	500.0	1.0	1.0	48.86	5.1	5.9	7.8	5.8	1.96	3.973 ES, SF		
600.0	600.0	599.7	599.3	1.2	1.2	-53.58	-0.2	11.5	9.8	7.4	2.38	4.124		
700.0	699.6	699.1	697.9	1.4	1.4	-36.46	-9.1	21.0	13.7	10.9	2.86	4.790		
800.0	798.8	798.3	795.4	1.6	1.8	-27.67	-21.5	34.1	18.3	14.9	3.40	5.374		
900.0	897.2	897.1	891.5	2.0	2.2	-22.29	-37.2	50.8	23.6	19.6	3.94	5.981		
1,000.0	995.4	995.3	985.7	2.3	2.7	-16.70	-56.2	70.9	33.1	28.7	4.44	7.460		
1,100.0	1,093.7	1,092.1	1,077.1	2.7	3.3	-12.32	-78.1	94.3	47.8	42.8	4.95	9.655		
1,200.0	1,192.0	1,187.3	1,165.2	3.1	3.9	-9.38	-102.8	120.4	67.5	62.0	5.48	12.316		
1,300.0	1,290.2	1,282.3	1,251.4	3.4	4.7	-7.43	-130.0	149.4	91.6	85.6	6.03	15.189		
1,400.0	1,388.5	1,379.1	1,339.0	3.8	5.5	-6.23	-158.3	179.4	116.6	110.0	6.59	17.697		
1,500.0	1,486.7	1,475.9	1,426.6	4.2	6.3	-5.45	-186.6	209.4	141.6	134.4	7.16	19.772		
1,600.0	1,585.0	1,572.7	1,514.2	4.7	7.2	-4.91	-214.9	239.4	166.6	158.9	7.74	21.523		
1,700.0	1,683.3	1,669.5	1,601.8	5.1	8.0	-4.51	-243.1	269.5	191.6	183.3	8.33	23.012		

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## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-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)	+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	-151.79	-14.2	-7.6	16.1					
100.0	100.0	100.0	100.0	0.1	0.1	-151.79	-14.2	-7.6	16.1	15.9	0.18	89.675		
200.0	200.0	200.0	200.0	0.3	0.3	-151.79	-14.2	-7.6	16.1	15.5	0.63	25.621		
300.0	300.0	300.0	300.0	0.5	0.5	-151.79	-14.2	-7.6	16.1	15.0	1.08	14.946		
400.0	400.0	400.0	400.0	0.8	0.8	-151.79	-14.2	-7.6	16.1	14.6	1.53	10.550		
500.0	500.0	500.0	500.0	1.0	1.0	-151.79	-14.2	-7.6	16.1	14.1	1.98	8.152		
600.0	600.0	600.0	600.0	1.2	1.2	83.13	-14.2	-7.6	15.6	13.2	2.41	6.482		
630.9	630.8	630.8	630.8	1.3	1.3	90.00	-14.2	-7.6	15.5	12.9	2.54	6.094 CC, ES		
700.0	699.6	699.6	699.6	1.4	1.4	111.00	-14.2	-7.6	16.6	13.7	2.85	5.821 SF		
800.0	798.8	798.8	798.8	1.6	1.7	140.51	-14.2	-7.6	24.5	21.1	3.42	7.180		
900.0	897.2	897.2	897.2	2.0	1.9	156.80	-14.2	-7.6	39.9	35.9	3.96	10.078		
1,000.0	995.4	995.4	995.4	2.3	2.1	164.10	-14.2	-7.6	57.5	53.1	4.41	13.030		
1,100.0	1,093.7	1,093.7	1,093.7	2.7	2.3	167.96	-14.2	-7.6	75.5	70.7	4.86	15.542		
1,200.0	1,192.0	1,192.0	1,192.0	3.1	2.5	170.33	-14.2	-7.6	93.8	88.5	5.31	17.654		
1,300.0	1,290.2	1,290.2	1,290.2	3.4	2.8	171.92	-14.2	-7.6	112.1	106.4	5.77	19.435		
1,400.0	1,388.5	1,388.5	1,388.5	3.8	3.0	173.07	-14.2	-7.6	130.5	124.3	6.23	20.950		
1,500.0	1,486.7	1,486.7	1,486.7	4.2	3.2	173.93	-14.2	-7.6	149.0	142.3	6.70	22.249		
1,600.0	1,585.0	1,585.0	1,585.0	4.7	3.4	174.60	-14.2	-7.6	167.5	160.3	7.16	23.374		
1,700.0	1,683.3	1,683.3	1,683.3	5.1	3.6	175.14	-14.2	-7.6	186.0	178.3	7.64	24.356		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 23A-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 23A-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 23A-1  
Coordinate System is US State Plane 1927 (Exact solution), Colorado Central 502  
Grid Convergence at Surface is: -1.69°

