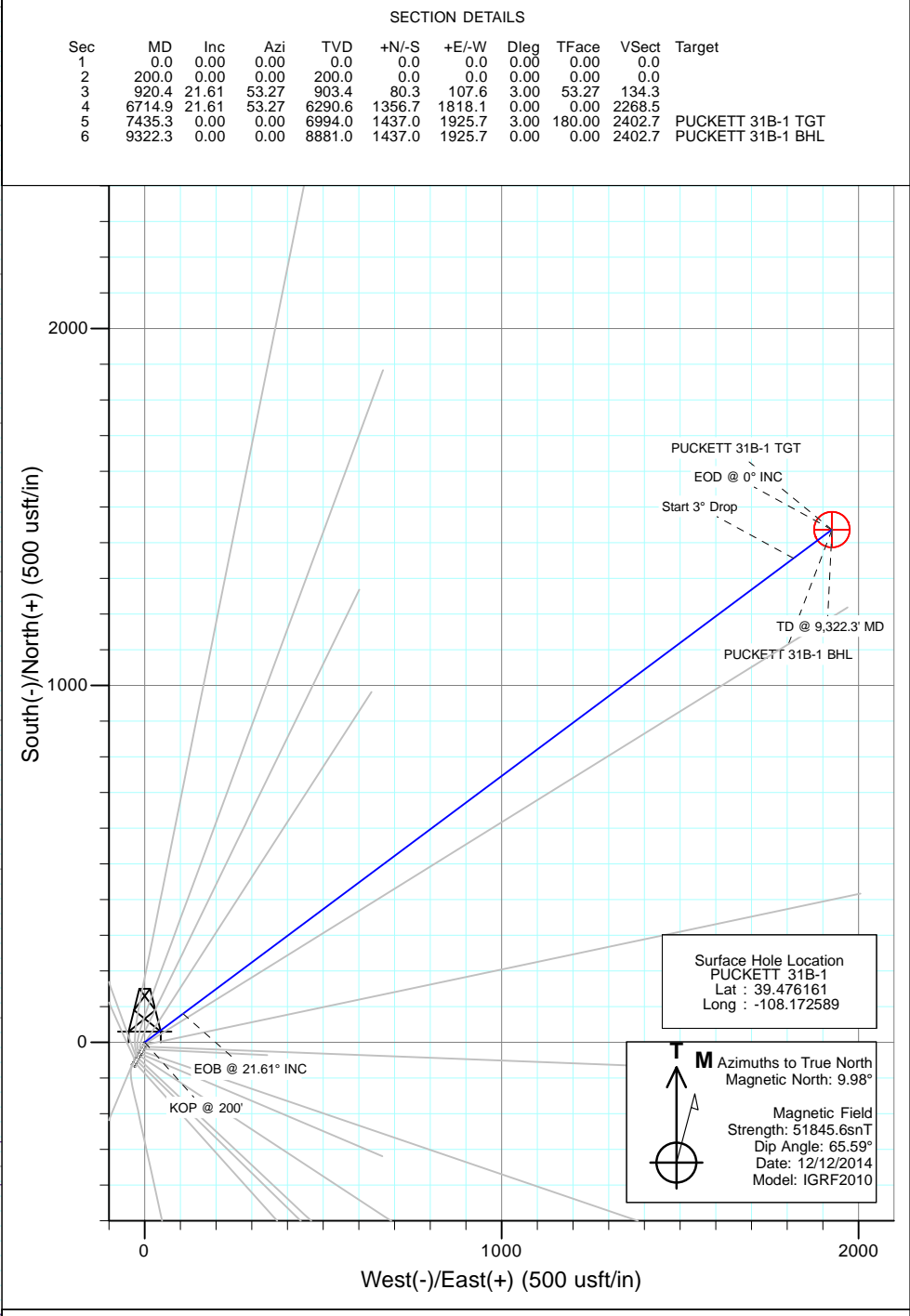
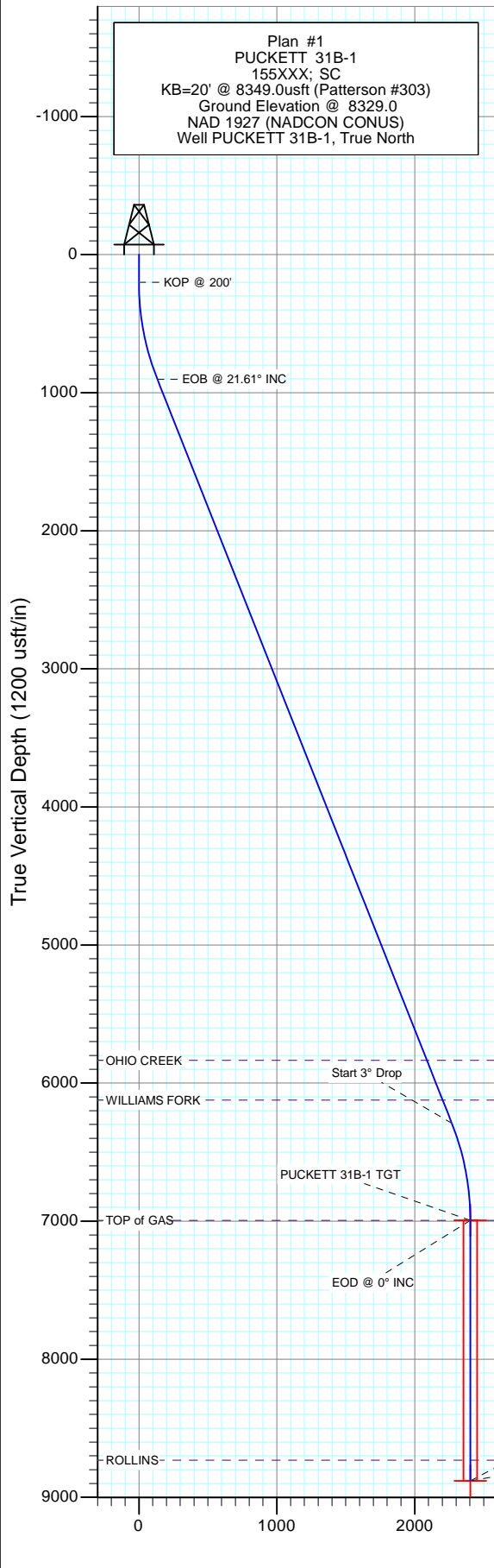


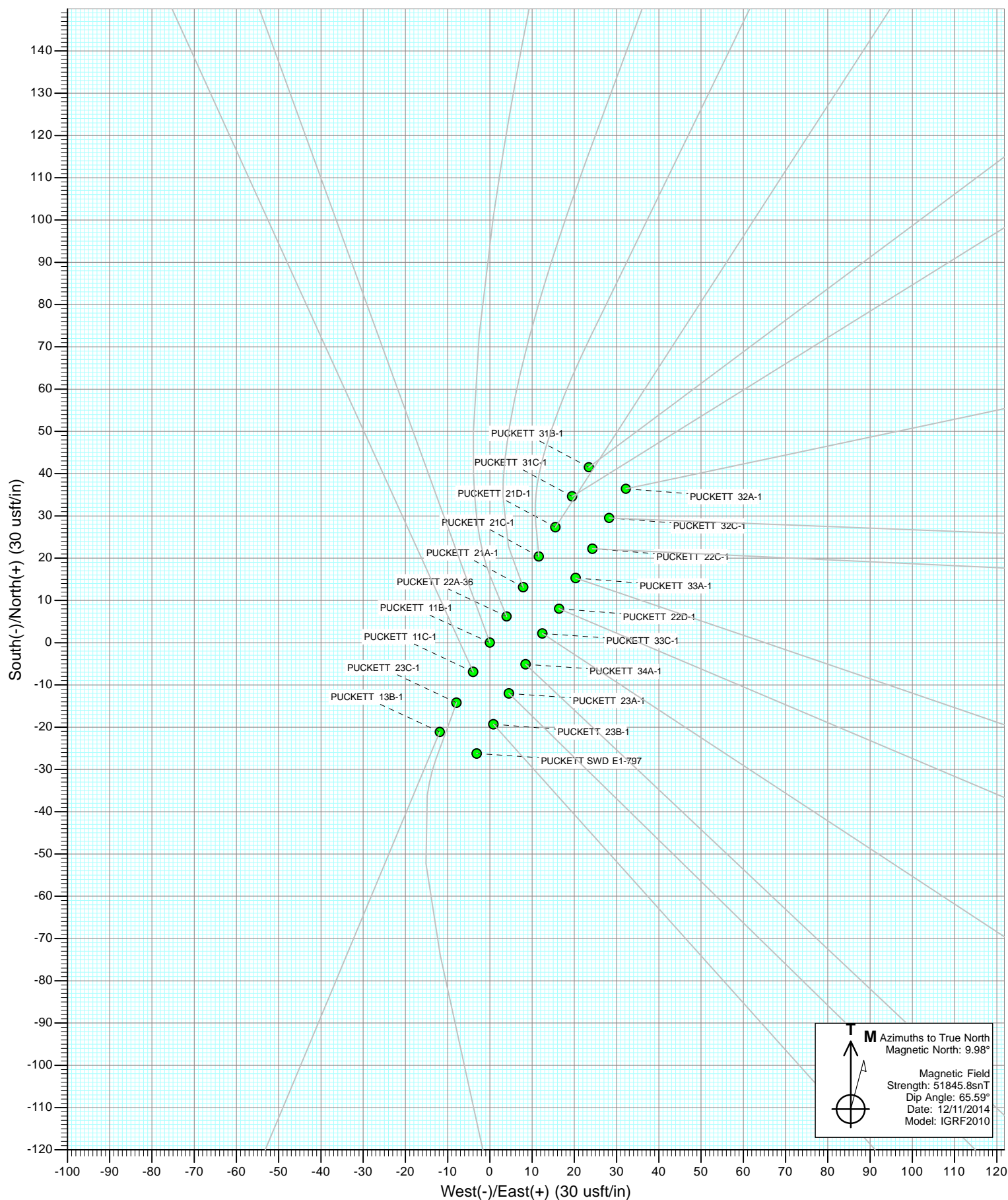


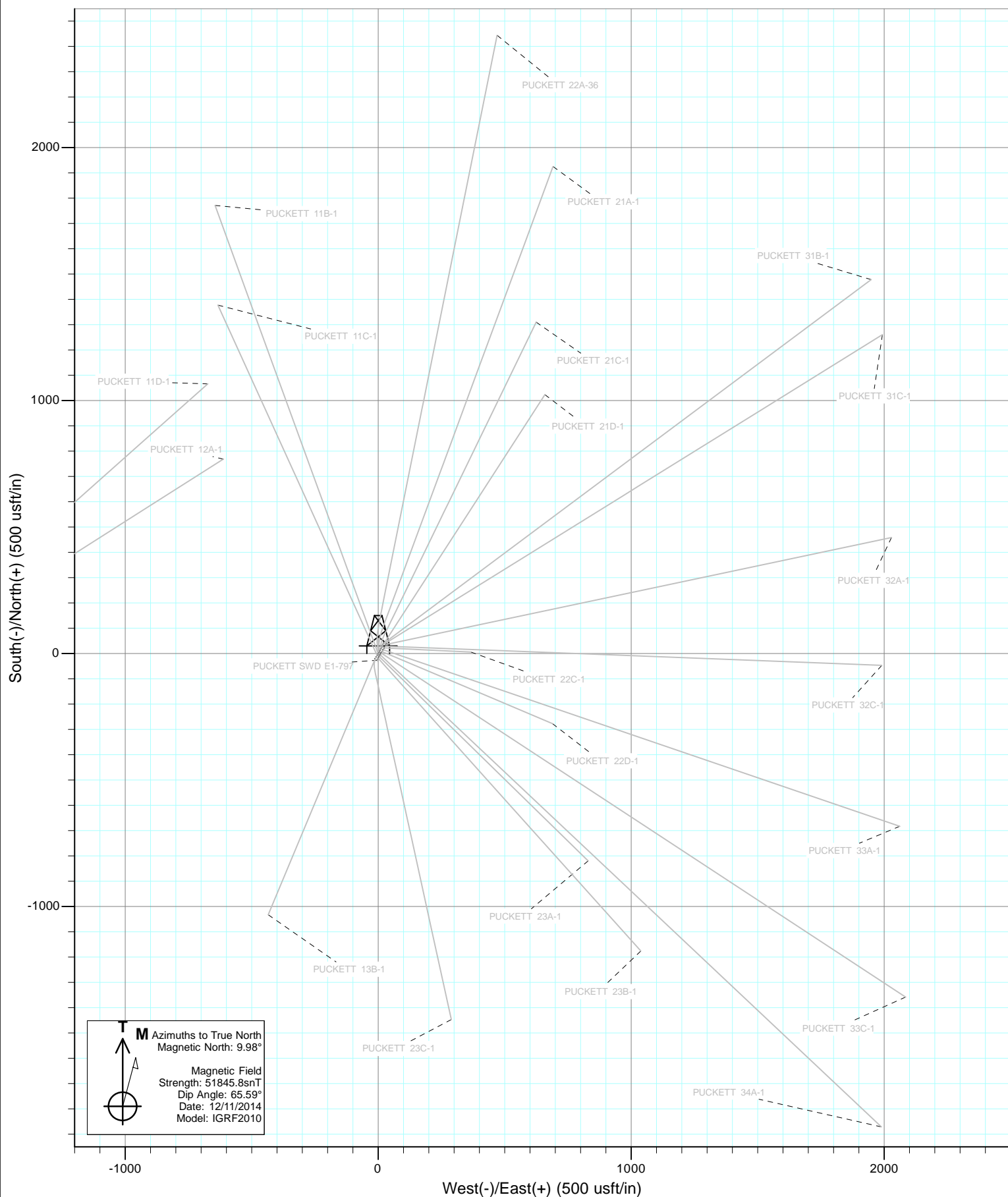
Project: Garfield County, CO  
 Site: S1-T7S-R97W (Mesa E1 797)  
 Well: PUCKETT 31B-1  
 Wellbore: DD  
 Design: Plan #1



DESIGN TARGET DETAILS

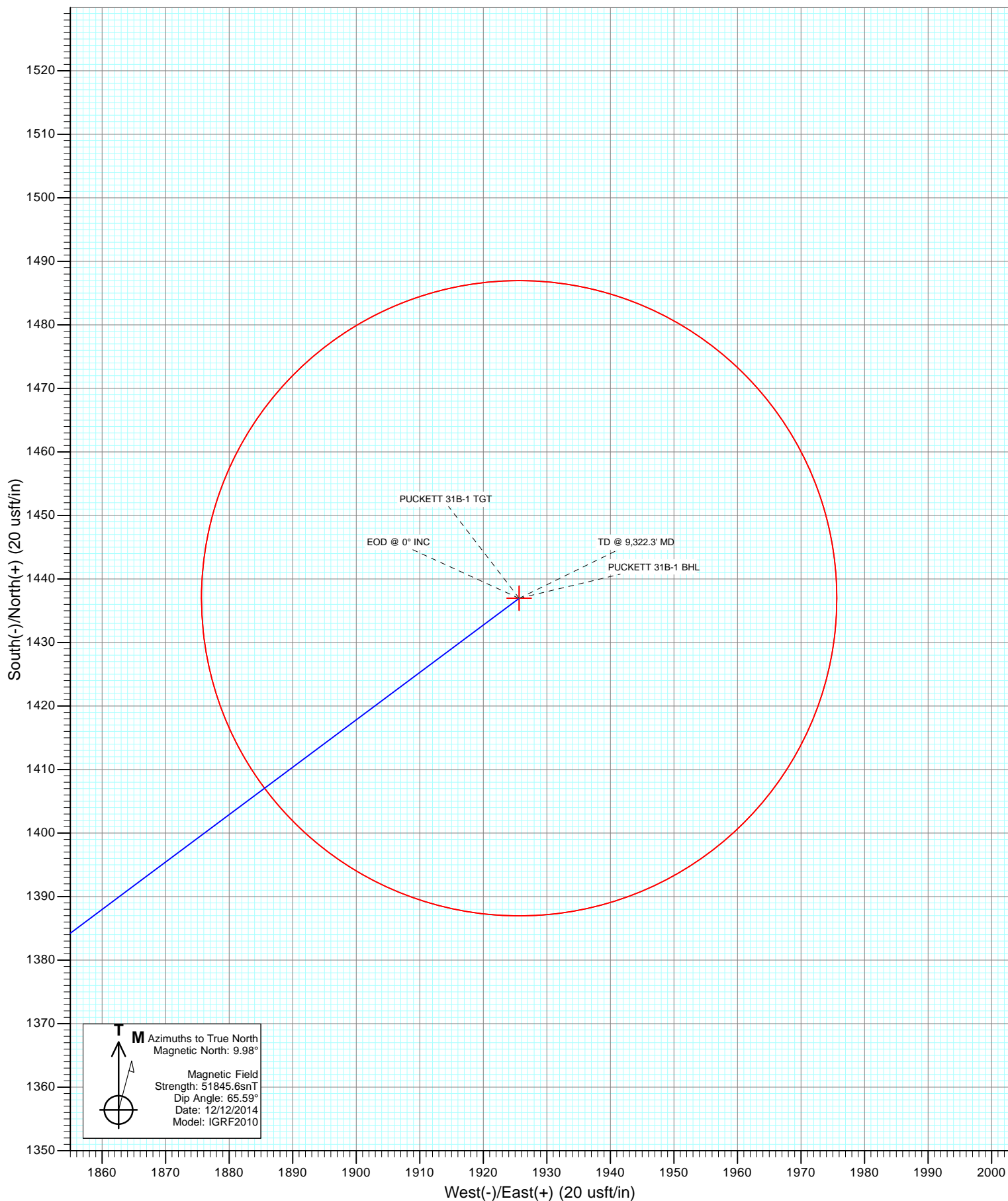
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PUCKETT 31B-1 TGT	1437.0	1925.7	610784.79	1247637.88	39.480106	-108.165767
PUCKETT 31B-1 BHL	1437.0	1925.7	610784.79	1247637.88	39.480106	-108.165767







Project: Garfield County, CO  
Site: S1-T7S-R97W (Mesa E1 797)  
Well: PUCKETT 31B-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 31B-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 31B-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 31B-1					
Well Position	+N/-S	0.0 usft	Northing:	609,405.07 usft	Latitude:	39.476161
	+E/-W	0.0 usft	Easting:	1,245,670.79 usft	Longitude:	-108.172589
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	53.27	

<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	
920.4	21.61	53.27	903.4	80.3	107.6	3.00	3.00	0.00	53.27	
6,714.9	21.61	53.27	6,290.6	1,356.7	1,818.1	0.00	0.00	0.00	0.00	
7,435.3	0.00	0.00	6,994.0	1,437.0	1,925.7	3.00	-3.00	0.00	180.00	PUCKETT 31B-1 TG1
9,322.3	0.00	0.00	8,881.0	1,437.0	1,925.7	0.00	0.00	0.00	0.00	PUCKETT 31B-1 BHL

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-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	53.27	300.0	1.6	2.1	2.6	3.00	3.00	
400.0	6.00	53.27	399.6	6.3	8.4	10.5	3.00	3.00	
500.0	9.00	53.27	498.8	14.1	18.8	23.5	3.00	3.00	
600.0	12.00	53.27	597.1	25.0	33.4	41.7	3.00	3.00	
700.0	15.00	53.27	694.3	38.9	52.2	65.1	3.00	3.00	
800.0	18.00	53.27	790.2	55.9	74.9	93.5	3.00	3.00	
900.0	21.00	53.27	884.4	75.9	101.7	126.9	3.00	3.00	
920.4	21.61	53.27	903.4	80.3	107.6	134.3	3.00	3.00	EOB @ 21.61° INC
1,000.0	21.61	53.27	977.4	97.8	131.1	163.6	0.00	0.00	
1,100.0	21.61	53.27	1,070.4	119.9	160.6	200.4	0.00	0.00	
1,200.0	21.61	53.27	1,163.4	141.9	190.1	237.2	0.00	0.00	
1,300.0	21.61	53.27	1,256.4	163.9	219.7	274.1	0.00	0.00	
1,400.0	21.61	53.27	1,349.3	185.9	249.2	310.9	0.00	0.00	
1,500.0	21.61	53.27	1,442.3	208.0	278.7	347.7	0.00	0.00	
1,600.0	21.61	53.27	1,535.3	230.0	308.2	384.6	0.00	0.00	
1,700.0	21.61	53.27	1,628.2	252.0	337.7	421.4	0.00	0.00	
1,800.0	21.61	53.27	1,721.2	274.1	367.3	458.2	0.00	0.00	
1,900.0	21.61	53.27	1,814.2	296.1	396.8	495.1	0.00	0.00	
2,000.0	21.61	53.27	1,907.1	318.1	426.3	531.9	0.00	0.00	
2,100.0	21.61	53.27	2,000.1	340.1	455.8	568.7	0.00	0.00	
2,200.0	21.61	53.27	2,093.1	362.2	485.3	605.6	0.00	0.00	
2,300.0	21.61	53.27	2,186.1	384.2	514.8	642.4	0.00	0.00	
2,400.0	21.61	53.27	2,279.0	406.2	544.4	679.2	0.00	0.00	
2,500.0	21.61	53.27	2,372.0	428.2	573.9	716.1	0.00	0.00	
2,600.0	21.61	53.27	2,465.0	450.3	603.4	752.9	0.00	0.00	
2,700.0	21.61	53.27	2,557.9	472.3	632.9	789.7	0.00	0.00	
2,800.0	21.61	53.27	2,650.9	494.3	662.4	826.5	0.00	0.00	
2,900.0	21.61	53.27	2,743.9	516.4	692.0	863.4	0.00	0.00	
3,000.0	21.61	53.27	2,836.8	538.4	721.5	900.2	0.00	0.00	
3,100.0	21.61	53.27	2,929.8	560.4	751.0	937.0	0.00	0.00	
3,200.0	21.61	53.27	3,022.8	582.4	780.5	973.9	0.00	0.00	
3,300.0	21.61	53.27	3,115.8	604.5	810.0	1,010.7	0.00	0.00	
3,400.0	21.61	53.27	3,208.7	626.5	839.5	1,047.5	0.00	0.00	
3,500.0	21.61	53.27	3,301.7	648.5	869.1	1,084.4	0.00	0.00	
3,600.0	21.61	53.27	3,394.7	670.6	898.6	1,121.2	0.00	0.00	
3,700.0	21.61	53.27	3,487.6	692.6	928.1	1,158.0	0.00	0.00	
3,800.0	21.61	53.27	3,580.6	714.6	957.6	1,194.9	0.00	0.00	
3,900.0	21.61	53.27	3,673.6	736.6	987.1	1,231.7	0.00	0.00	
4,000.0	21.61	53.27	3,766.5	758.7	1,016.7	1,268.5	0.00	0.00	
4,100.0	21.61	53.27	3,859.5	780.7	1,046.2	1,305.4	0.00	0.00	
4,200.0	21.61	53.27	3,952.5	802.7	1,075.7	1,342.2	0.00	0.00	
4,300.0	21.61	53.27	4,045.5	824.7	1,105.2	1,379.0	0.00	0.00	
4,400.0	21.61	53.27	4,138.4	846.8	1,134.7	1,415.9	0.00	0.00	
4,500.0	21.61	53.27	4,231.4	868.8	1,164.3	1,452.7	0.00	0.00	
4,600.0	21.61	53.27	4,324.4	890.8	1,193.8	1,489.5	0.00	0.00	
4,700.0	21.61	53.27	4,417.3	912.9	1,223.3	1,526.3	0.00	0.00	
4,800.0	21.61	53.27	4,510.3	934.9	1,252.8	1,563.2	0.00	0.00	
4,900.0	21.61	53.27	4,603.3	956.9	1,282.3	1,600.0	0.00	0.00	
5,000.0	21.61	53.27	4,696.2	978.9	1,311.8	1,636.8	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 31B-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 31B-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	21.61	53.27	4,789.2	1,001.0	1,341.4	1,673.7	0.00	0.00	
5,200.0	21.61	53.27	4,882.2	1,023.0	1,370.9	1,710.5	0.00	0.00	
5,300.0	21.61	53.27	4,975.2	1,045.0	1,400.4	1,747.3	0.00	0.00	
5,400.0	21.61	53.27	5,068.1	1,067.0	1,429.9	1,784.2	0.00	0.00	
5,500.0	21.61	53.27	5,161.1	1,089.1	1,459.4	1,821.0	0.00	0.00	
5,600.0	21.61	53.27	5,254.1	1,111.1	1,489.0	1,857.8	0.00	0.00	
5,700.0	21.61	53.27	5,347.0	1,133.1	1,518.5	1,894.7	0.00	0.00	
5,800.0	21.61	53.27	5,440.0	1,155.2	1,548.0	1,931.5	0.00	0.00	
5,900.0	21.61	53.27	5,533.0	1,177.2	1,577.5	1,968.3	0.00	0.00	
6,000.0	21.61	53.27	5,625.9	1,199.2	1,607.0	2,005.2	0.00	0.00	
6,100.0	21.61	53.27	5,718.9	1,221.2	1,636.5	2,042.0	0.00	0.00	
6,200.0	21.61	53.27	5,811.9	1,243.3	1,666.1	2,078.8	0.00	0.00	
6,224.9	21.61	53.27	5,835.0	1,248.7	1,673.4	2,088.0	0.00	0.00	OHIO CREEK
6,300.0	21.61	53.27	5,904.9	1,265.3	1,695.6	2,115.7	0.00	0.00	
6,400.0	21.61	53.27	5,997.8	1,287.3	1,725.1	2,152.5	0.00	0.00	
6,500.0	21.61	53.27	6,090.8	1,309.4	1,754.6	2,189.3	0.00	0.00	
6,534.6	21.61	53.27	6,123.0	1,317.0	1,764.8	2,202.1	0.00	0.00	WILLIAMS FORK
6,600.0	21.61	53.27	6,183.8	1,331.4	1,784.1	2,226.1	0.00	0.00	
6,700.0	21.61	53.27	6,276.7	1,353.4	1,813.7	2,263.0	0.00	0.00	
6,714.9	21.61	53.27	6,290.6	1,356.7	1,818.1	2,268.5	0.00	0.00	Start 3° Drop
6,800.0	19.06	53.27	6,370.4	1,374.4	1,841.8	2,298.0	3.00	-3.00	
6,900.0	16.06	53.27	6,465.7	1,392.4	1,865.9	2,328.2	3.00	-3.00	
7,000.0	13.06	53.27	6,562.5	1,407.4	1,886.1	2,353.3	3.00	-3.00	
7,100.0	10.06	53.27	6,660.4	1,419.4	1,902.1	2,373.4	3.00	-3.00	
7,200.0	7.06	53.27	6,759.3	1,428.3	1,914.1	2,388.2	3.00	-3.00	
7,300.0	4.06	53.27	6,858.8	1,434.1	1,921.8	2,397.9	3.00	-3.00	
7,400.0	1.06	53.27	6,958.7	1,436.8	1,925.4	2,402.4	3.00	-3.00	
7,435.3	0.00	0.00	6,994.0	1,437.0	1,925.7	2,402.7	3.00	-3.00	EOD @ 0° INC - TOP of GAS
7,500.0	0.00	0.00	7,058.7	1,437.0	1,925.7	2,402.7	0.00	0.00	
7,600.0	0.00	0.00	7,158.7	1,437.0	1,925.7	2,402.7	0.00	0.00	
7,700.0	0.00	0.00	7,258.7	1,437.0	1,925.7	2,402.7	0.00	0.00	
7,800.0	0.00	0.00	7,358.7	1,437.0	1,925.7	2,402.7	0.00	0.00	
7,900.0	0.00	0.00	7,458.7	1,437.0	1,925.7	2,402.7	0.00	0.00	
8,000.0	0.00	0.00	7,558.7	1,437.0	1,925.7	2,402.7	0.00	0.00	
8,100.0	0.00	0.00	7,658.7	1,437.0	1,925.7	2,402.7	0.00	0.00	
8,200.0	0.00	0.00	7,758.7	1,437.0	1,925.7	2,402.7	0.00	0.00	
8,300.0	0.00	0.00	7,858.7	1,437.0	1,925.7	2,402.7	0.00	0.00	
8,400.0	0.00	0.00	7,958.7	1,437.0	1,925.7	2,402.7	0.00	0.00	
8,500.0	0.00	0.00	8,058.7	1,437.0	1,925.7	2,402.7	0.00	0.00	
8,600.0	0.00	0.00	8,158.7	1,437.0	1,925.7	2,402.7	0.00	0.00	
8,700.0	0.00	0.00	8,258.7	1,437.0	1,925.7	2,402.7	0.00	0.00	
8,800.0	0.00	0.00	8,358.7	1,437.0	1,925.7	2,402.7	0.00	0.00	
8,900.0	0.00	0.00	8,458.7	1,437.0	1,925.7	2,402.7	0.00	0.00	
9,000.0	0.00	0.00	8,558.7	1,437.0	1,925.7	2,402.7	0.00	0.00	
9,100.0	0.00	0.00	8,658.7	1,437.0	1,925.7	2,402.7	0.00	0.00	
9,172.3	0.00	0.00	8,731.0	1,437.0	1,925.7	2,402.7	0.00	0.00	ROLLINS
9,200.0	0.00	0.00	8,758.7	1,437.0	1,925.7	2,402.7	0.00	0.00	
9,300.0	0.00	0.00	8,858.7	1,437.0	1,925.7	2,402.7	0.00	0.00	
9,322.3	0.00	0.00	8,881.0	1,437.0	1,925.7	2,402.7	0.00	0.00	TD @ 9,322.3' MD

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-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 31B-1 BHL	0.00	0.00	8,881.0	1,437.0	1,925.7	610,784.79	1,247,637.88	39.480106	-108.165767
- plan hits target center									
- Circle (radius 50.0)									
PUCKETT 31B-1 TGT	0.00	0.00	6,994.0	1,437.0	1,925.7	610,784.79	1,247,637.88	39.480106	-108.165767
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
6,224.9	5,835.0	OHIO CREEK				
6,534.6	6,123.0	WILLIAMS FORK				
7,435.3	6,994.0	TOP of GAS				
9,172.3	8,731.0	ROLLINS				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
200.0	200.0	0.0	0.0	KOP @ 200'
920.4	903.4	80.3	107.6	EOB @ 21.61° INC
6,714.9	6,290.6	1,356.7	1,818.1	Start 3° Drop
7,435.3	6,994.0	1,437.0	1,925.7	EOD @ 0° INC
9,322.3	8,881.0	1,437.0	1,925.7	TD @ 9,322.3' MD



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

**Garfield County, CO**

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

**PUCKETT 31B-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 31B-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 31B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

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

Survey Tool Program		Date	12/12/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	9,322.3	Plan #1 (DD)	ISCWSA MWD	MWD - Standard	

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<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 31B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

### Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance		Separation Factor	Warning
			Between Centres (usft)	Between Ellipses (usft)		
S1-T7S-R97W (Mesa E1 797)						
PUCKETT 11B-1 - DD - Plan #1	100.0	100.0	47.7	47.5	265.123	CC
PUCKETT 11B-1 - DD - Plan #1	200.0	200.0	47.7	47.0	75.750	ES
PUCKETT 11B-1 - DD - Plan #1	600.0	600.3	76.2	73.1	24.421	SF
PUCKETT 11C-1 - DD - Plan #1	200.0	200.0	55.6	55.0	88.412	CC, ES
PUCKETT 11C-1 - DD - Plan #1	600.0	601.2	88.5	85.5	29.332	SF
PUCKETT 13B-1 - DD - Plan #1	200.0	200.0	71.9	71.3	114.242	CC, ES
PUCKETT 13B-1 - DD - Plan #1	500.0	483.0	115.6	113.2	47.869	SF
PUCKETT 21A-1 - HZ - Plan #1	200.0	200.0	32.4	31.7	51.437	CC, ES
PUCKETT 21A-1 - HZ - Plan #1	1,300.0	1,303.1	184.1	174.9	19.920	SF
PUCKETT 21C-1 - DD - Plan #1	200.0	200.0	24.2	23.6	38.486	CC, ES
PUCKETT 21C-1 - DD - Plan #1	500.0	501.0	42.8	40.5	18.086	SF
PUCKETT 21D-1 - DD - Plan #1	200.0	200.0	16.3	15.6	25.824	CC, ES
PUCKETT 21D-1 - DD - Plan #1	400.0	399.6	26.2	24.4	14.874	SF
PUCKETT 22A-36 - DD - Plan #1	200.0	200.0	40.3	39.7	64.092	CC, ES
PUCKETT 22A-36 - DD - Plan #1	1,200.0	1,199.8	194.4	185.7	22.405	SF
PUCKETT 22C-1 - DD - Plan #1	200.0	200.0	19.3	18.7	30.696	CC, ES
PUCKETT 22C-1 - DD - Plan #1	400.0	399.6	26.6	24.9	15.707	SF
PUCKETT 22D-1 - DD - Plan #1	200.0	200.0	34.2	33.6	54.405	CC, ES
PUCKETT 22D-1 - DD - Plan #1	500.0	498.8	54.2	51.8	23.158	SF
PUCKETT 23A-1 - DD - Plan #1	200.0	200.0	56.8	56.2	90.221	CC, ES
PUCKETT 23A-1 - DD - Plan #1	600.0	596.1	94.8	91.9	32.058	SF
PUCKETT 23B-1 - DD - Plan #1	200.0	200.0	64.9	64.3	103.097	CC, ES
PUCKETT 23B-1 - DD - Plan #1	600.0	593.7	105.5	102.6	35.920	SF
PUCKETT 23C-1 - DD - Plan #1	200.0	200.0	63.9	63.3	101.586	CC, ES
PUCKETT 23C-1 - DD - Plan #1	500.0	489.9	95.5	93.1	40.359	SF
PUCKETT 31C-1 - DD - Plan #1	200.0	200.0	8.0	7.3	12.663	CC, ES
PUCKETT 31C-1 - DD - Plan #1	6,400.0	6,402.9	197.9	116.2	2.421	SF
PUCKETT 32A-1 - DD - Plan #1	249.1	249.0	10.0	9.2	11.759	CC, ES
PUCKETT 32A-1 - DD - Plan #1	400.0	399.3	12.7	11.2	8.243	SF
PUCKETT 32C-1 - DD - Plan #1	200.0	200.0	12.9	12.3	20.565	CC, ES
PUCKETT 32C-1 - DD - Plan #1	400.0	399.7	18.4	16.8	11.258	SF
PUCKETT 33A-1 - DD - Plan #1	200.0	200.0	26.4	25.8	41.961	CC, ES
PUCKETT 33A-1 - DD - Plan #1	500.0	499.0	45.2	42.9	19.895	SF
PUCKETT 33C-1 - DD - Plan #1	200.0	200.0	40.8	40.2	64.906	CC, ES
PUCKETT 33C-1 - DD - Plan #1	500.0	496.8	64.4	62.1	28.172	SF
PUCKETT 34A-1 - DD - Plan #1	200.0	200.0	49.0	48.3	77.807	CC, ES
PUCKETT 34A-1 - DD - Plan #1	600.0	595.0	88.6	85.7	30.181	SF
PUCKETT SWD E1-797 - VH - Plan #1	200.0	200.0	72.8	72.1	115.609	CC, ES
PUCKETT SWD E1-797 - VH - Plan #1	700.0	694.3	132.6	128.9	36.632	SF

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 11B-1 - DD - Plan #1													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCWSA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-150.56	-41.5	-23.4	47.7					
100.0	100.0	100.0	100.0	0.1	0.1	-150.56	-41.5	-23.4	47.7	47.5	0.18	265.123 CC		
200.0	200.0	200.0	200.0	0.3	0.3	-150.56	-41.5	-23.4	47.7	47.0	0.63	75.750 ES		
300.0	300.0	301.5	301.5	0.5	0.5	159.86	-39.0	-24.4	48.4	47.3	1.16	41.886		
400.0	399.6	402.5	402.1	0.8	0.8	169.99	-31.4	-27.1	51.8	50.1	1.76	29.372		
500.0	498.8	502.2	501.0	1.1	1.1	-176.56	-19.1	-31.6	60.4	58.0	2.43	24.891		
600.0	597.1	600.3	597.3	1.4	1.4	-163.87	-2.2	-37.7	76.2	73.1	3.12	24.421 SF		
700.0	694.3	696.1	690.5	1.9	1.8	-153.97	18.7	-45.3	99.6	95.8	3.86	25.844		
800.0	790.2	789.6	780.3	2.4	2.3	-146.83	43.2	-54.3	130.2	125.5	4.66	27.949		
900.0	884.4	882.5	869.1	3.0	2.8	-142.65	68.8	-63.6	166.1	160.6	5.54	29.996		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-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-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	-150.52	-48.4	-27.4	55.6					
100.0	100.0	100.0	100.0	0.1	0.1	-150.52	-48.4	-27.4	55.6	55.5	0.18	309.443		
200.0	200.0	200.0	200.0	0.3	0.3	-150.52	-48.4	-27.4	55.6	55.0	0.63	88.412 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	157.22	-48.4	-27.4	58.0	56.9	1.16	50.211		
400.0	399.6	401.0	401.0	0.8	0.8	160.99	-47.1	-28.0	64.6	62.8	1.75	36.978		
500.0	498.8	501.8	501.5	1.1	1.0	168.68	-41.0	-30.8	74.2	71.8	2.37	31.308		
600.0	597.1	601.2	600.2	1.4	1.3	178.05	-30.3	-35.6	88.5	85.5	3.02	29.332 SF		
700.0	694.3	698.7	696.3	1.9	1.6	-172.86	-15.3	-42.5	109.0	105.4	3.69	29.550		
800.0	790.2	793.7	789.1	2.4	1.9	-165.05	3.7	-51.1	136.4	132.0	4.40	30.991		
900.0	884.4	886.9	879.5	3.0	2.3	-159.54	24.1	-60.3	170.1	165.0	5.15	33.009		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-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 13B-1 - DD - Plan #1													<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-ISWWSA MWD													<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-150.61	-62.6	-35.3	71.9					
100.0	100.0	100.0	100.0	0.1	0.1	-150.61	-62.6	-35.3	71.9	71.7	0.18	399.846		
200.0	200.0	200.0	200.0	0.3	0.3	-150.61	-62.6	-35.3	71.9	71.3	0.63	114.242	CC, ES	
300.0	300.0	296.2	296.1	0.5	0.5	156.61	-64.9	-36.2	76.8	75.6	1.15	67.023		
400.0	399.6	390.9	390.6	0.8	0.7	157.75	-71.4	-39.0	91.4	89.7	1.76	51.896		
500.0	498.8	483.0	482.0	1.1	1.0	158.95	-82.0	-43.4	115.6	113.2	2.42	47.869	SF	
600.0	597.1	571.2	568.9	1.4	1.3	159.90	-95.8	-49.1	149.0	145.9	3.08	48.346		
700.0	694.3	654.6	650.3	1.9	1.6	160.52	-112.3	-56.0	191.1	187.3	3.76	50.783		

# Cathedral Energy Services

## Anticollision Report

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<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 31B-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-ISWWSA MWD												Offset Well Error:	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	-151.34	-28.4	-15.5	32.4				
100.0	100.0	100.0	100.0	0.1	0.1	-151.34	-28.4	-15.5	32.4	32.2	0.18	180.029	
200.0	200.0	200.0	200.0	0.3	0.3	-151.34	-28.4	-15.5	32.4	31.7	0.63	51.437 CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	157.16	-28.4	-15.5	34.8	33.6	1.16	30.077	
400.0	399.6	400.8	400.8	0.8	0.8	164.35	-25.9	-16.4	40.6	38.9	1.75	23.217	
500.0	498.8	501.3	500.9	1.1	1.0	176.09	-18.5	-19.1	50.0	47.6	2.37	21.076	
600.0	597.1	602.8	601.7	1.4	1.3	-173.37	-6.3	-20.4	62.4	59.4	3.00	20.783	
700.0	694.3	704.5	702.0	1.9	1.6	-165.15	10.3	-18.6	76.7	73.1	3.65	21.027	
800.0	790.2	806.4	801.5	2.4	2.0	-158.53	31.4	-13.9	92.8	88.5	4.36	21.288	
900.0	884.4	908.4	900.0	3.0	2.4	-153.04	56.9	-6.1	110.6	105.4	5.18	21.347	
1,000.0	977.4	1,009.2	995.9	3.7	3.0	-148.39	86.0	4.3	128.7	122.6	6.05	21.256	
1,100.0	1,070.4	1,107.1	1,088.8	4.4	3.5	-144.71	115.3	15.1	146.7	139.7	7.04	20.854	
1,200.0	1,163.4	1,205.1	1,181.7	5.1	4.1	-141.84	144.5	25.9	165.3	157.2	8.11	20.373	
1,300.0	1,256.4	1,303.1	1,274.5	5.9	4.7	-139.55	173.7	36.7	184.1	174.9	9.24	19.920 SF	

# Cathedral Energy Services

## Anticollision Report

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<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 31B-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-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	-150.69	-21.1	-11.9	24.2					
100.0	100.0	100.0	100.0	0.1	0.1	-150.69	-21.1	-11.9	24.2	24.0	0.18	134.701		
200.0	200.0	200.0	200.0	0.3	0.3	-150.69	-21.1	-11.9	24.2	23.6	0.63	38.486 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	158.30	-21.1	-11.9	26.6	25.5	1.16	23.016		
400.0	399.6	400.3	400.3	0.8	0.8	163.91	-20.5	-11.9	33.6	31.8	1.75	19.161		
500.0	498.8	501.0	500.9	1.1	1.0	173.58	-15.2	-12.4	42.8	40.5	2.37	18.086 SF		
600.0	597.1	602.2	601.5	1.4	1.3	-176.37	-4.9	-12.3	54.8	51.9	2.98	18.398		
700.0	694.3	704.2	702.4	1.9	1.5	-169.16	9.4	-8.7	68.1	64.5	3.60	18.913		
800.0	790.2	806.7	803.0	2.4	1.9	-163.75	27.5	-1.2	82.2	78.0	4.26	19.295		
900.0	884.4	905.9	899.7	3.0	2.3	-160.07	47.5	8.5	98.6	93.6	4.98	19.783		
1,000.0	977.4	1,003.9	995.2	3.7	2.7	-158.19	67.3	18.1	118.4	112.7	5.65	20.953		
1,100.0	1,070.4	1,101.8	1,090.6	4.4	3.1	-156.89	87.1	27.7	138.4	132.0	6.35	21.808		
1,200.0	1,163.4	1,199.7	1,186.0	5.1	3.5	-155.92	106.9	37.3	158.4	151.3	7.08	22.374		
1,300.0	1,256.4	1,297.7	1,281.5	5.9	4.0	-155.16	126.7	46.9	178.5	170.6	7.84	22.754		
1,400.0	1,349.3	1,395.6	1,376.9	6.6	4.4	-154.56	146.4	56.5	198.6	190.0	8.63	23.015		



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-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	-150.90	-14.2	-7.9	16.3					
100.0	100.0	100.0	100.0	0.1	0.1	-150.90	-14.2	-7.9	16.3	16.1	0.18	90.382		
200.0	200.0	200.0	200.0	0.3	0.3	-150.90	-14.2	-7.9	16.3	15.6	0.63	25.824 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	159.10	-14.2	-7.9	18.7	17.5	1.16	16.123		
400.0	399.6	399.6	399.6	0.8	0.8	165.18	-14.2	-7.9	26.2	24.4	1.76	14.874 SF		
500.0	498.8	500.7	500.6	1.1	1.0	170.89	-12.0	-6.5	36.4	34.0	2.37	15.367		
600.0	597.1	602.2	601.8	1.4	1.2	176.40	-5.2	-2.1	46.9	43.9	2.97	15.800		
700.0	694.3	704.1	702.8	1.9	1.5	-178.24	6.1	5.2	57.9	54.3	3.57	16.213		
800.0	790.2	804.8	801.9	2.4	1.8	-173.34	21.3	15.0	70.2	66.0	4.19	16.754		
900.0	884.4	903.3	898.6	3.0	2.2	-170.26	36.7	25.0	87.3	82.4	4.84	18.015		
1,000.0	977.4	1,001.1	994.7	3.7	2.5	-168.61	52.1	34.9	107.9	102.5	5.39	20.014		
1,100.0	1,070.4	1,098.9	1,090.8	4.4	2.9	-167.51	67.4	44.8	128.7	122.8	5.95	21.647		
1,200.0	1,163.4	1,196.6	1,186.8	5.1	3.3	-166.72	82.8	54.8	149.6	143.0	6.53	22.898		
1,300.0	1,256.4	1,294.4	1,282.9	5.9	3.7	-166.12	98.1	64.7	170.4	163.3	7.14	23.877		
1,400.0	1,349.3	1,392.2	1,378.9	6.6	4.1	-165.66	113.5	74.6	191.3	183.6	7.76	24.642		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-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	-151.13	-35.3	-19.5	40.3					
100.0	100.0	100.0	100.0	0.1	0.1	-151.13	-35.3	-19.5	40.3	40.2	0.18	224.320		
200.0	200.0	200.0	200.0	0.3	0.3	-151.13	-35.3	-19.5	40.3	39.7	0.63	64.092 CC, ES		
300.0	300.0	300.3	300.3	0.5	0.5	157.21	-35.2	-19.5	42.6	41.5	1.15	36.916		
400.0	399.6	401.3	401.2	0.8	0.8	164.67	-31.4	-21.0	47.9	46.1	1.75	27.356		
500.0	498.8	501.9	501.4	1.1	1.0	176.23	-22.8	-24.4	56.9	54.5	2.38	23.912		
600.0	597.1	603.2	601.7	1.4	1.3	-172.76	-9.2	-26.8	69.5	66.4	3.03	22.955		
700.0	694.3	704.2	701.0	1.9	1.6	-163.52	9.3	-27.3	85.1	81.4	3.70	23.005		
800.0	790.2	804.8	798.9	2.4	2.1	-155.89	32.5	-25.8	103.8	99.3	4.45	23.345		
900.0	884.4	905.0	895.0	3.0	2.5	-149.58	60.4	-22.4	125.5	120.2	5.31	23.622		
1,000.0	977.4	1,004.8	989.3	3.7	3.1	-144.27	92.8	-17.1	148.8	142.5	6.27	23.740		
1,100.0	1,070.4	1,103.5	1,080.7	4.4	3.8	-139.00	129.0	-10.1	171.2	163.8	7.42	23.082		
1,200.0	1,163.4	1,199.8	1,169.6	5.1	4.4	-134.68	165.5	-2.7	194.4	185.7	8.68	22.405 SF		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-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 22C-1 - DD - Plan #1													<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-ISWWSA MWD													<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	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	107.435		
200.0	200.0	200.0	200.0	0.3	0.3	177.49	-19.3	0.8	19.3	18.7	0.63	30.696 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	130.12	-19.3	0.8	20.9	19.8	1.12	18.710		
400.0	399.6	399.6	399.6	0.8	0.8	143.01	-19.3	0.8	26.6	24.9	1.70	15.707 SF		
500.0	498.8	498.8	498.8	1.1	1.0	154.80	-19.3	0.8	37.9	35.6	2.34	16.214		
600.0	597.1	597.1	597.1	1.4	1.2	162.75	-19.3	0.8	55.0	52.0	2.99	18.410		
700.0	694.3	696.7	696.6	1.9	1.4	166.34	-19.4	3.3	76.1	72.5	3.61	21.101		
800.0	790.2	793.8	793.6	2.4	1.6	167.54	-19.7	8.6	100.6	96.4	4.22	23.839		
900.0	884.4	889.3	889.0	3.0	1.8	168.67	-19.9	13.8	130.0	125.2	4.85	26.810		
1,000.0	977.4	983.8	983.3	3.7	2.0	169.70	-20.1	19.0	162.9	157.5	5.35	30.458		
1,100.0	1,070.4	1,078.1	1,077.5	4.4	2.3	170.41	-20.4	24.2	195.8	190.0	5.83	33.602		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-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 22D-1 - DD - Plan #1													<b>Offset Site Error:</b> 0.0 usft
Survey Program: 0-ISWWSA MWD													<b>Offset Well Error:</b> 0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-168.11	-33.5	-7.1	34.2				
100.0	100.0	100.0	100.0	0.1	0.1	-168.11	-33.5	-7.1	34.2	34.1	0.18	190.419	
200.0	200.0	200.0	200.0	0.3	0.3	-168.11	-33.5	-7.1	34.2	33.6	0.63	54.405 CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	141.32	-33.5	-7.1	36.2	35.1	1.13	31.939	
400.0	399.6	399.6	399.6	0.8	0.8	147.81	-33.5	-7.1	42.7	40.9	1.71	24.898	
500.0	498.8	498.8	498.8	1.1	1.0	155.03	-33.5	-7.1	54.2	51.8	2.34	23.158 SF	
600.0	597.1	597.7	597.7	1.4	1.2	159.08	-34.5	-4.8	70.7	67.7	2.96	23.875	
700.0	694.3	696.3	696.0	1.9	1.4	159.36	-37.4	2.2	91.2	87.7	3.58	25.492	
800.0	790.2	793.4	792.5	2.4	1.6	158.48	-41.8	12.5	116.0	111.7	4.24	27.362	
900.0	884.4	889.0	887.4	3.0	1.9	158.47	-46.1	22.8	145.3	140.4	4.94	29.441	
1,000.0	977.4	983.6	981.3	3.7	2.2	159.05	-50.4	32.9	177.9	172.3	5.53	32.154	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-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-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	-160.54	-53.5	-18.9	56.8								
100.0	100.0	100.0	100.0	0.1	0.1	-160.54	-53.5	-18.9	56.8	56.6	0.18	315.772					
200.0	200.0	200.0	200.0	0.3	0.3	-160.54	-53.5	-18.9	56.8	56.2	0.63	90.221	CC, ES				
300.0	300.0	300.0	300.0	0.5	0.5	147.57	-53.5	-18.9	59.0	57.8	1.14	51.550					
400.0	399.6	399.6	399.6	0.8	0.8	151.14	-53.5	-18.9	65.7	64.0	1.72	38.129					
500.0	498.8	498.8	498.8	1.1	1.0	155.65	-53.5	-18.9	77.4	75.1	2.34	33.074					
600.0	597.1	596.1	596.1	1.4	1.2	158.53	-55.2	-17.2	94.8	91.9	2.96	32.058	SF				
700.0	694.3	692.3	691.9	1.9	1.4	158.85	-60.3	-12.0	118.2	114.6	3.58	32.968					
800.0	790.2	786.6	785.5	2.4	1.6	157.77	-68.5	-3.6	147.2	143.0	4.25	34.633					
900.0	884.4	879.0	876.6	3.0	1.9	156.05	-79.7	7.8	181.8	176.8	4.98	36.529					

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-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-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	-159.63	-60.8	-22.6	64.9					
100.0	100.0	100.0	100.0	0.1	0.1	-159.63	-60.8	-22.6	64.9	64.7	0.18	360.838		
200.0	200.0	200.0	200.0	0.3	0.3	-159.63	-60.8	-22.6	64.9	64.3	0.63	103.097	CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	148.28	-60.8	-22.6	67.1	66.0	1.14	58.600		
400.0	399.6	399.6	399.6	0.8	0.8	151.38	-60.8	-22.6	73.9	72.2	1.72	42.841		
500.0	498.8	497.3	497.2	1.1	1.0	153.78	-62.7	-20.9	86.4	84.1	2.32	37.266		
600.0	597.1	593.7	593.4	1.4	1.2	154.04	-68.1	-16.0	105.5	102.6	2.94	35.920	SF	
700.0	694.3	688.4	687.3	1.9	1.4	153.03	-77.0	-8.1	130.8	127.2	3.60	36.362		
800.0	790.2	780.7	778.1	2.4	1.7	151.41	-89.0	2.7	162.3	158.0	4.32	37.583		
900.0	884.4	870.0	865.3	3.0	2.0	149.57	-103.7	15.8	199.9	194.8	5.11	39.111		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-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-ISCWSA MWD													<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-150.65	-55.7	-31.3	63.9					
100.0	100.0	100.0	100.0	0.1	0.1	-150.65	-55.7	-31.3	63.9	63.8	0.18	355.549		
200.0	200.0	200.0	200.0	0.3	0.3	-150.65	-55.7	-31.3	63.9	63.3	0.63	101.586 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	156.97	-55.7	-31.3	66.3	65.2	1.16	57.393		
400.0	399.6	395.9	395.9	0.8	0.7	158.77	-58.0	-32.2	76.1	74.3	1.74	43.805		
500.0	498.8	489.9	489.6	1.1	0.9	160.39	-64.6	-34.6	95.5	93.1	2.37	40.359 SF		
600.0	597.1	582.7	581.7	1.4	1.2	161.31	-75.2	-37.9	123.9	120.9	3.03	40.937		
700.0	694.3	674.6	672.5	1.9	1.4	160.79	-89.3	-38.8	158.7	155.0	3.67	43.276		
800.0	790.2	763.6	759.9	2.4	1.8	159.48	-106.1	-37.0	199.2	194.9	4.34	45.912		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-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	-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	300.2	300.2	0.5	0.5	160.73	-6.6	-3.4	9.8	8.7	1.15	8.518		
400.0	399.6	400.7	400.5	0.8	0.8	162.75	-3.8	1.1	12.4	10.7	1.73	7.205		
500.0	498.8	501.3	500.6	1.1	1.0	162.42	1.8	10.1	15.2	12.9	2.32	6.545		
600.0	597.1	602.1	600.1	1.4	1.3	160.81	10.2	23.5	18.1	15.1	2.94	6.148		
700.0	694.3	703.0	698.8	1.9	1.7	158.48	21.3	41.5	21.1	17.5	3.60	5.862		
800.0	790.2	804.0	796.3	2.4	2.2	155.73	35.2	63.8	24.3	20.0	4.32	5.614		
900.0	884.4	905.1	892.3	3.0	2.8	152.77	51.8	90.6	27.7	22.5	5.16	5.367		
1,000.0	977.4	1,005.7	986.4	3.7	3.5	148.98	70.6	120.8	30.4	24.4	6.06	5.025		
1,100.0	1,070.4	1,105.6	1,079.6	4.4	4.2	145.30	89.6	151.4	32.9	25.8	7.09	4.646		
1,200.0	1,163.4	1,205.6	1,172.8	5.1	4.9	142.14	108.6	182.0	35.6	27.3	8.23	4.319		
1,300.0	1,256.4	1,305.5	1,266.1	5.9	5.6	139.43	127.6	212.6	38.3	28.8	9.45	4.048		
1,400.0	1,349.3	1,405.5	1,359.3	6.6	6.3	137.08	146.6	243.2	41.0	30.3	10.73	3.826		
1,500.0	1,442.3	1,505.4	1,452.6	7.3	7.0	135.03	165.6	273.7	43.9	31.8	12.04	3.644		
1,600.0	1,535.3	1,605.4	1,545.8	8.0	7.7	133.23	184.6	304.3	46.8	33.4	13.38	3.495		
1,700.0	1,628.2	1,705.3	1,639.0	8.8	8.4	131.64	203.6	334.9	49.7	35.0	14.75	3.370		
1,800.0	1,721.2	1,805.2	1,732.3	9.5	9.1	130.23	222.6	365.5	52.7	36.5	16.13	3.266		
1,900.0	1,814.2	1,905.2	1,825.5	10.3	9.9	128.97	241.6	396.1	55.7	38.1	17.52	3.178		
2,000.0	1,907.1	2,005.1	1,918.7	11.0	10.6	127.84	260.6	426.7	58.7	39.8	18.92	3.102		
2,100.0	2,000.1	2,105.1	2,012.0	11.7	11.3	126.82	279.6	457.2	61.7	41.4	20.32	3.037		
2,200.0	2,093.1	2,205.0	2,105.2	12.5	12.0	125.89	298.6	487.8	64.8	43.0	21.74	2.980		
2,300.0	2,186.1	2,305.0	2,198.5	13.2	12.8	125.05	317.6	518.4	67.8	44.7	23.15	2.930		
2,400.0	2,279.0	2,404.9	2,291.7	13.9	13.5	124.29	336.6	549.0	70.9	46.4	24.57	2.887		
2,500.0	2,372.0	2,504.9	2,384.9	14.7	14.2	123.58	355.6	579.6	74.0	48.0	25.99	2.848		
2,600.0	2,465.0	2,604.8	2,478.2	15.4	14.9	122.94	374.6	610.2	77.1	49.7	27.42	2.813		
2,700.0	2,557.9	2,704.8	2,571.4	16.2	15.7	122.34	393.6	640.7	80.2	51.4	28.84	2.782		
2,800.0	2,650.9	2,804.7	2,664.6	16.9	16.4	121.79	412.6	671.3	83.4	53.1	30.27	2.754		
2,900.0	2,743.9	2,904.7	2,757.9	17.6	17.1	121.28	431.6	701.9	86.5	54.8	31.70	2.729		
3,000.0	2,836.8	3,004.6	2,851.1	18.4	17.8	120.80	450.6	732.5	89.6	56.5	33.13	2.706		
3,100.0	2,929.8	3,104.6	2,944.4	19.1	18.6	120.36	469.6	763.1	92.8	58.2	34.56	2.685		
3,200.0	3,022.8	3,204.5	3,037.6	19.8	19.3	119.94	488.6	793.7	95.9	59.9	35.98	2.666		
3,300.0	3,115.8	3,304.5	3,130.8	20.6	20.0	119.55	507.6	824.2	99.1	61.7	37.41	2.648		
3,400.0	3,208.7	3,404.4	3,224.1	21.3	20.7	119.19	526.6	854.8	102.2	63.4	38.84	2.632		
3,500.0	3,301.7	3,504.4	3,317.3	22.1	21.5	118.85	545.6	885.4	105.4	65.1	40.28	2.617		
3,600.0	3,394.7	3,604.3	3,410.6	22.8	22.2	118.52	564.6	916.0	108.6	66.9	41.71	2.603		
3,700.0	3,487.6	3,704.3	3,503.8	23.5	22.9	118.22	583.6	946.6	111.7	68.6	43.14	2.590		
3,800.0	3,580.6	3,804.2	3,597.0	24.3	23.7	117.93	602.6	977.1	114.9	70.3	44.57	2.578		
3,900.0	3,673.6	3,904.2	3,690.3	25.0	24.4	117.66	621.6	1,007.7	118.1	72.1	46.00	2.567		
4,000.0	3,766.5	4,004.1	3,783.5	25.8	25.1	117.40	640.6	1,038.3	121.3	73.8	47.43	2.557		
4,100.0	3,859.5	4,104.1	3,876.7	26.5	25.8	117.16	659.6	1,068.9	124.4	75.6	48.86	2.547		
4,200.0	3,952.5	4,204.0	3,970.0	27.2	26.6	116.92	678.6	1,099.5	127.6	77.3	50.29	2.538		
4,300.0	4,045.5	4,304.0	4,063.2	28.0	27.3	116.70	697.6	1,130.1	130.8	79.1	51.72	2.529		
4,400.0	4,138.4	4,403.9	4,156.5	28.7	28.0	116.49	716.6	1,160.6	134.0	80.8	53.15	2.521		
4,500.0	4,231.4	4,503.8	4,249.7	29.5	28.7	116.29	735.6	1,191.2	137.2	82.6	54.58	2.513		
4,600.0	4,324.4	4,603.8	4,342.9	30.2	29.5	116.10	754.6	1,221.8	140.4	84.3	56.01	2.506		
4,700.0	4,417.3	4,703.7	4,436.2	30.9	30.2	115.92	773.6	1,252.4	143.5	86.1	57.44	2.499		
4,800.0	4,510.3	4,803.7	4,529.4	31.7	30.9	115.74	792.6	1,283.0	146.7	87.9	58.88	2.492		
4,900.0	4,603.3	4,903.6	4,622.7	32.4	31.7	115.57	811.5	1,313.6	149.9	89.6	60.31	2.486		
5,000.0	4,696.2	5,003.6	4,715.9	33.2	32.4	115.41	830.5	1,344.1	153.1	91.4	61.74	2.480		
5,100.0	4,789.2	5,103.5	4,809.1	33.9	33.1	115.26	849.5	1,374.7	156.3	93.1	63.17	2.475		

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



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-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-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		
5,200.0	4,882.2	5,203.5	4,902.4	34.6	33.8	115.11	868.5	1,405.3	159.5	94.9	64.60	2.469		
5,300.0	4,975.2	5,303.4	4,995.6	35.4	34.6	114.97	887.5	1,435.9	162.7	96.7	66.03	2.464		
5,400.0	5,068.1	5,403.4	5,088.8	36.1	35.3	114.83	906.5	1,466.5	165.9	98.4	67.46	2.459		
5,500.0	5,161.1	5,503.3	5,182.1	36.9	36.0	114.70	925.5	1,497.1	169.1	100.2	68.89	2.455		
5,600.0	5,254.1	5,603.3	5,275.3	37.6	36.7	114.57	944.5	1,527.6	172.3	102.0	70.32	2.450		
5,700.0	5,347.0	5,703.2	5,368.6	38.3	37.5	114.45	963.5	1,558.2	175.5	103.8	71.75	2.446		
5,800.0	5,440.0	5,803.2	5,461.8	39.1	38.2	114.33	982.5	1,588.8	178.7	105.5	73.18	2.442		
5,900.0	5,533.0	5,903.1	5,555.0	39.8	38.9	114.22	1,001.5	1,619.4	181.9	107.3	74.61	2.438		
6,000.0	5,625.9	6,003.1	5,648.3	40.5	39.7	114.11	1,020.5	1,650.0	185.1	109.1	76.04	2.434		
6,100.0	5,718.9	6,103.0	5,741.5	41.3	40.4	114.00	1,039.5	1,680.6	188.3	110.8	77.47	2.431		
6,200.0	5,811.9	6,203.0	5,834.7	42.0	41.1	113.90	1,058.5	1,711.1	191.5	112.6	78.90	2.427		
6,300.0	5,904.9	6,302.9	5,928.0	42.8	41.8	113.80	1,077.5	1,741.7	194.7	114.4	80.33	2.424		
6,400.0	5,997.8	6,402.9	6,021.2	43.5	42.6	113.71	1,096.5	1,772.3	197.9	116.2	81.76	2.421 SF		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-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-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	120.27	-5.1	8.8	10.1					
100.0	100.0	100.0	100.0	0.1	0.1	120.27	-5.1	8.8	10.1	10.0	0.18	56.352		
200.0	200.0	200.0	200.0	0.3	0.3	120.27	-5.1	8.8	10.1	9.5	0.63	16.101		
249.1	249.1	249.0	249.0	0.4	0.4	69.75	-5.1	8.9	10.0	9.2	0.85	11.759 CC, ES		
300.0	300.0	299.7	299.7	0.5	0.5	74.93	-4.8	10.2	10.3	9.2	1.07	9.577		
400.0	399.6	399.3	399.1	0.8	0.8	86.53	-3.5	16.5	12.7	11.2	1.54	8.243 SF		
500.0	498.8	498.9	497.9	1.1	1.0	95.23	-1.1	27.9	17.7	15.6	2.10	8.388		
600.0	597.1	598.3	595.9	1.4	1.4	100.19	2.4	44.3	25.1	22.3	2.81	8.932		
700.0	694.3	697.5	692.6	1.9	1.8	102.75	6.9	65.6	34.8	31.1	3.66	9.502		
800.0	790.2	796.4	787.9	2.4	2.3	103.99	12.4	91.7	46.7	42.0	4.68	9.980		
900.0	884.4	895.2	881.8	3.0	2.9	105.31	18.8	121.8	60.6	54.7	5.86	10.338		
1,000.0	977.4	994.0	975.5	3.7	3.5	108.57	25.3	152.4	75.7	68.5	7.13	10.614		
1,100.0	1,070.4	1,092.7	1,069.2	4.4	4.1	110.88	31.7	182.9	90.9	82.5	8.40	10.825		
1,200.0	1,163.4	1,191.5	1,163.0	5.1	4.7	112.51	38.2	213.4	106.3	96.6	9.68	10.986		
1,300.0	1,256.4	1,290.3	1,256.7	5.9	5.3	113.74	44.6	243.9	121.7	110.8	10.95	11.114		
1,400.0	1,349.3	1,389.1	1,350.4	6.6	6.0	114.69	51.1	274.4	137.2	125.0	12.24	11.216		
1,500.0	1,442.3	1,487.8	1,444.1	7.3	6.6	115.44	57.5	304.9	152.7	139.2	13.52	11.300		
1,600.0	1,535.3	1,586.6	1,537.8	8.0	7.3	116.06	64.0	335.4	168.3	153.5	14.80	11.370		
1,700.0	1,628.2	1,685.4	1,631.6	8.8	7.9	116.57	70.4	365.9	183.8	167.7	16.08	11.429		
1,800.0	1,721.2	1,784.1	1,725.3	9.5	8.5	117.00	76.9	396.4	199.4	182.0	17.37	11.480		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-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	158.24	-12.0	4.8	12.9					
100.0	100.0	100.0	100.0	0.1	0.1	158.24	-12.0	4.8	12.9	12.8	0.18	71.976		
200.0	200.0	200.0	200.0	0.3	0.3	158.24	-12.0	4.8	12.9	12.3	0.63	20.565 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	115.45	-12.0	4.8	13.9	12.8	1.10	12.644		
400.0	399.6	399.7	399.6	0.8	0.8	129.65	-12.1	7.4	18.4	16.8	1.63	11.258 SF		
500.0	498.8	499.4	499.0	1.1	1.0	134.30	-12.4	15.2	26.7	24.5	2.22	12.025		
600.0	597.1	598.9	597.7	1.4	1.3	134.24	-12.9	28.1	38.3	35.4	2.87	13.320		
700.0	694.3	698.0	695.2	1.9	1.6	132.50	-13.6	46.1	52.9	49.3	3.62	14.622		
800.0	790.2	796.6	791.0	2.4	2.0	130.32	-14.5	69.0	70.7	66.2	4.49	15.726		
900.0	884.4	894.5	884.9	3.0	2.5	128.12	-15.6	96.5	91.6	86.1	5.52	16.583		
1,000.0	977.4	991.8	977.6	3.7	3.1	127.14	-16.7	126.3	114.7	108.0	6.63	17.290		
1,100.0	1,070.4	1,089.1	1,070.2	4.4	3.7	126.60	-17.9	156.0	137.8	130.0	7.78	17.713		
1,200.0	1,163.4	1,186.3	1,162.8	5.1	4.3	126.21	-19.0	185.8	161.0	152.0	8.96	17.965		
1,300.0	1,256.4	1,283.6	1,255.4	5.9	4.9	125.92	-20.2	215.5	184.1	174.0	10.16	18.125		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-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-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	-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	146.863		
200.0	200.0	200.0	200.0	0.3	0.3	-173.25	-26.2	-3.1	26.4	25.8	0.63	41.961	CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	137.30	-26.2	-3.1	28.3	27.1	1.13	25.052		
400.0	399.6	399.6	399.6	0.8	0.8	143.63	-26.7	-1.7	34.5	32.8	1.69	20.419		
500.0	498.8	499.0	498.8	1.1	1.0	145.04	-28.8	4.4	45.2	42.9	2.27	19.895	SF	
600.0	597.1	597.8	596.9	1.4	1.2	143.63	-32.5	15.3	60.3	57.4	2.91	20.728		
700.0	694.3	695.7	693.4	1.9	1.5	141.18	-37.8	30.8	79.7	76.0	3.62	21.997		
800.0	790.2	792.4	787.8	2.4	1.9	138.55	-44.6	50.7	103.4	99.0	4.44	23.280		
900.0	884.4	887.6	879.5	3.0	2.4	136.03	-52.8	74.7	131.6	126.2	5.39	24.398		
1,000.0	977.4	981.4	968.6	3.7	2.9	133.88	-62.4	102.6	163.0	156.5	6.41	25.409		
1,100.0	1,070.4	1,076.0	1,057.6	4.4	3.5	131.82	-72.7	132.7	195.0	187.4	7.53	25.892		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-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	-164.36	-39.3	-11.0	40.8					
100.0	100.0	100.0	100.0	0.1	0.1	-164.36	-39.3	-11.0	40.8	40.7	0.18	227.172		
200.0	200.0	200.0	200.0	0.3	0.3	-164.36	-39.3	-11.0	40.8	40.2	0.63	64.906 CC, ES		
300.0	300.0	299.6	299.6	0.5	0.5	143.62	-39.7	-10.5	43.1	42.0	1.13	38.169		
400.0	399.6	398.6	398.5	0.8	0.7	143.12	-42.5	-6.2	50.9	49.2	1.68	30.322		
500.0	498.8	496.8	496.1	1.1	1.0	141.06	-48.1	2.3	64.4	62.1	2.28	28.172 SF		
600.0	597.1	593.7	591.8	1.4	1.3	138.55	-56.3	14.8	83.5	80.5	2.96	28.251		
700.0	694.3	688.7	684.9	1.9	1.7	136.17	-66.9	30.9	108.3	104.6	3.71	29.170		
800.0	790.2	781.6	774.8	2.4	2.1	134.06	-79.7	50.5	138.6	134.0	4.57	30.330		
900.0	884.4	871.9	861.0	3.0	2.6	132.21	-94.4	72.9	174.3	168.7	5.54	31.477		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-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-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	-162.21	-46.6	-15.0	49.0					
100.0	100.0	100.0	100.0	0.1	0.1	-162.21	-46.6	-15.0	49.0	48.8	0.18	272.326		
200.0	200.0	200.0	200.0	0.3	0.3	-162.21	-46.6	-15.0	49.0	48.3	0.63	77.807 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	146.19	-46.6	-15.0	51.1	50.0	1.14	44.763		
400.0	399.6	399.6	399.6	0.8	0.8	150.42	-46.6	-15.0	57.8	56.1	1.72	33.577		
500.0	498.8	497.8	497.8	1.1	1.0	153.53	-48.3	-13.1	70.1	67.8	2.32	30.243		
600.0	597.1	595.0	594.6	1.4	1.2	153.79	-53.4	-7.7	88.6	85.7	2.94	30.181 SF		
700.0	694.3	690.5	689.4	1.9	1.4	152.52	-61.7	1.1	113.0	109.4	3.60	31.411		
800.0	790.2	783.9	781.4	2.4	1.7	150.62	-73.0	13.0	143.3	138.9	4.32	33.129		
900.0	884.4	874.6	869.8	3.0	2.1	148.54	-86.9	27.8	179.3	174.2	5.13	34.951		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31B-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 31B-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	-158.61	-67.7	-26.5	72.8				
100.0	100.0	100.0	100.0	0.1	0.1	-158.61	-67.7	-26.5	72.8	72.6	0.18	404.632	
200.0	200.0	200.0	200.0	0.3	0.3	-158.61	-67.7	-26.5	72.8	72.1	0.63	115.609	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	149.14	-67.7	-26.5	75.0	73.8	1.15	65.430	
400.0	399.6	399.6	399.6	0.8	0.8	151.86	-67.7	-26.5	81.8	80.1	1.73	47.406	
500.0	498.8	498.8	498.8	1.1	1.0	155.48	-67.7	-26.5	93.6	91.2	2.34	39.971	
600.0	597.1	597.1	597.1	1.4	1.2	159.22	-67.7	-26.5	110.4	107.4	2.98	37.110	
700.0	694.3	694.3	694.3	1.9	1.4	162.59	-67.7	-26.5	132.6	128.9	3.62	36.632	SF
800.0	790.2	790.2	790.2	2.4	1.6	165.41	-67.7	-26.5	159.9	155.7	4.26	37.534	
900.0	884.4	884.4	884.4	3.0	1.9	167.69	-67.7	-26.5	192.5	187.6	4.90	39.289	

# Cathedral Energy Services

## Anticollision Report

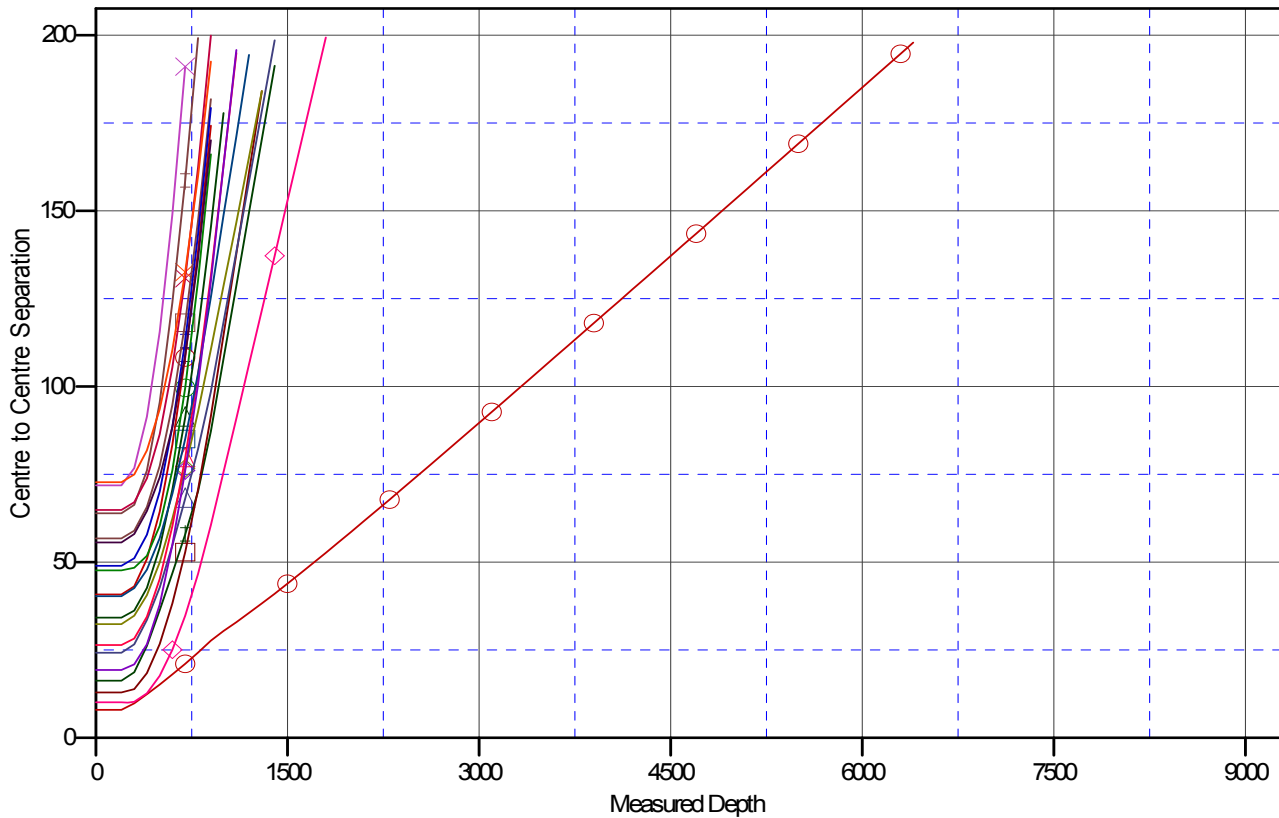
**Company:** Caerus Oil & Gas (NAD 27)  
**Project:** Garfield County, CO  
**Reference Site:** S1-T7S-R97W (Mesa E1 797)  
**Site Error:** 0.0usft  
**Reference Well:** PUCKETT 31B-1  
**Well Error:** 0.0usft  
**Reference Wellbore:** DD  
**Reference Design:** Plan #1

**Local Co-ordinate Reference:** Well PUCKETT 31B-1  
**TVD Reference:** KB=20' @ 8349.0usft (Patterson #303)  
**MD Reference:** KB=20' @ 8349.0usft (Patterson #303)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** USA EDM 5000 Multi Users DB  
**Offset TVD Reference:** Offset Datum

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

Coordinates are relative to: PUCKETT 31B-1  
 Coordinate System is US State Plane 1927 (Exact solution), Colorado Central 502  
 Grid Convergence at Surface is: -1.69°

### Ladder Plot



### LEGEND

- |                               |                               |                                   |
|-------------------------------|-------------------------------|-----------------------------------|
| PUCKETT 23C-1, DD, Plan #1 V0 | PUCKETT 31C-1, DD, Plan #1 V0 | PUCKETT SWDE1-797, VH, Plan #1 V0 |
| PUCKETT 23A-1, DD, Plan #1 V0 | PUCKETT 32A-1, DD, Plan #1 V0 | PUCKETT 11C-1, DD, Plan #1 V0     |
| PUCKETT 21D-1, DD, Plan #1 V0 | PUCKETT 23B-1, DD, Plan #1 V0 | PUCKETT 33A-1, DD, Plan #1 V0     |
| PUCKETT 33C-1, DD, Plan #1 V0 | PUCKETT 22D-1, DD, Plan #1 V0 | PUCKETT 22A-36, DD, Plan #1 V0    |
| PUCKETT 32C-1, DD, Plan #1 V0 | PUCKETT 13B-1, DD, Plan #1 V0 | PUCKETT 22C-1, DD, Plan #1 V0     |
| PUCKETT 11B-1, DD, Plan #1 V0 | PUCKETT 34A-1, DD, Plan #1 V0 |                                   |
| PUCKETT 21C-1, DD, Plan #1 V0 | PUCKETT 21A-1, HZ, Plan #1 V0 |                                   |