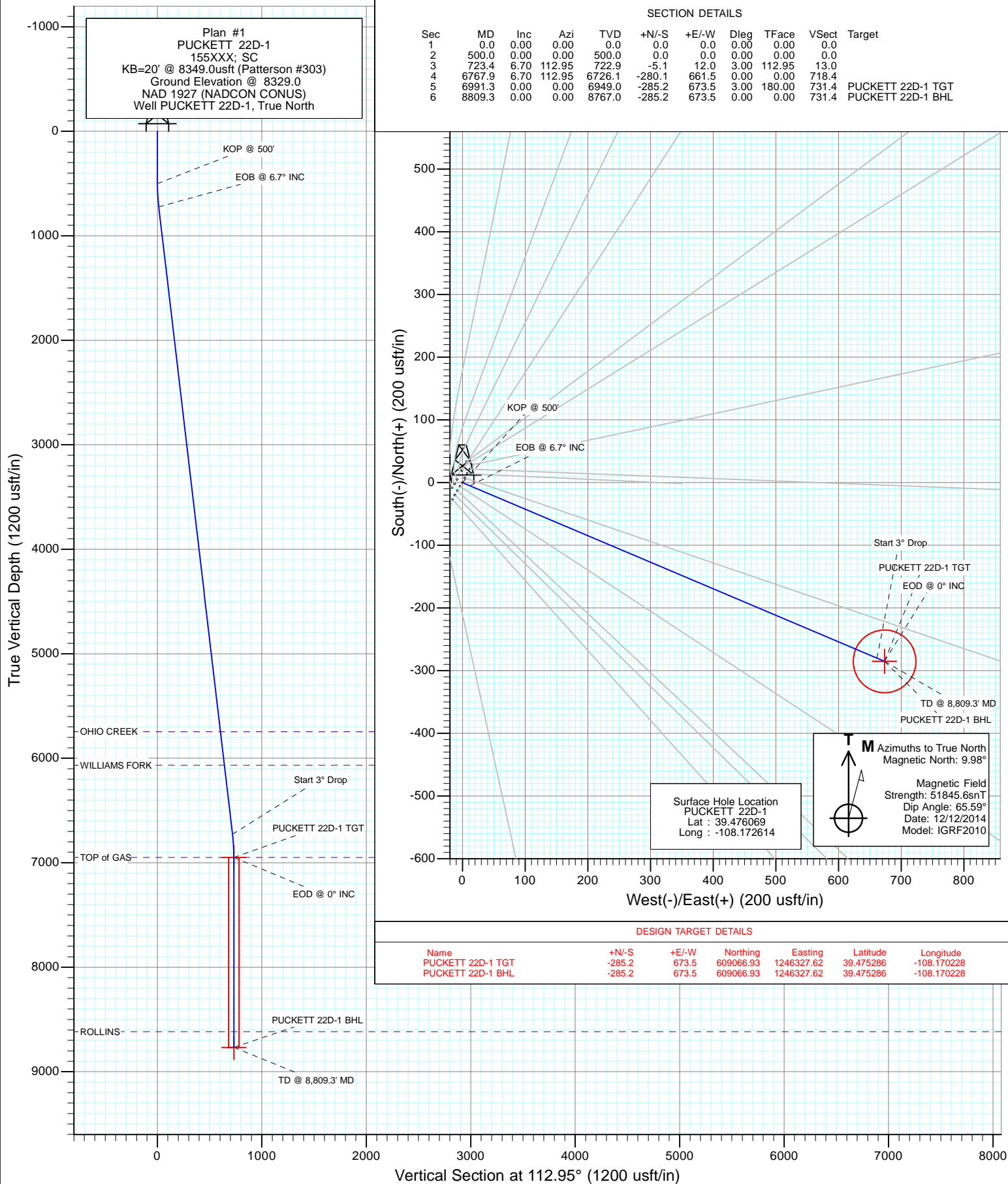
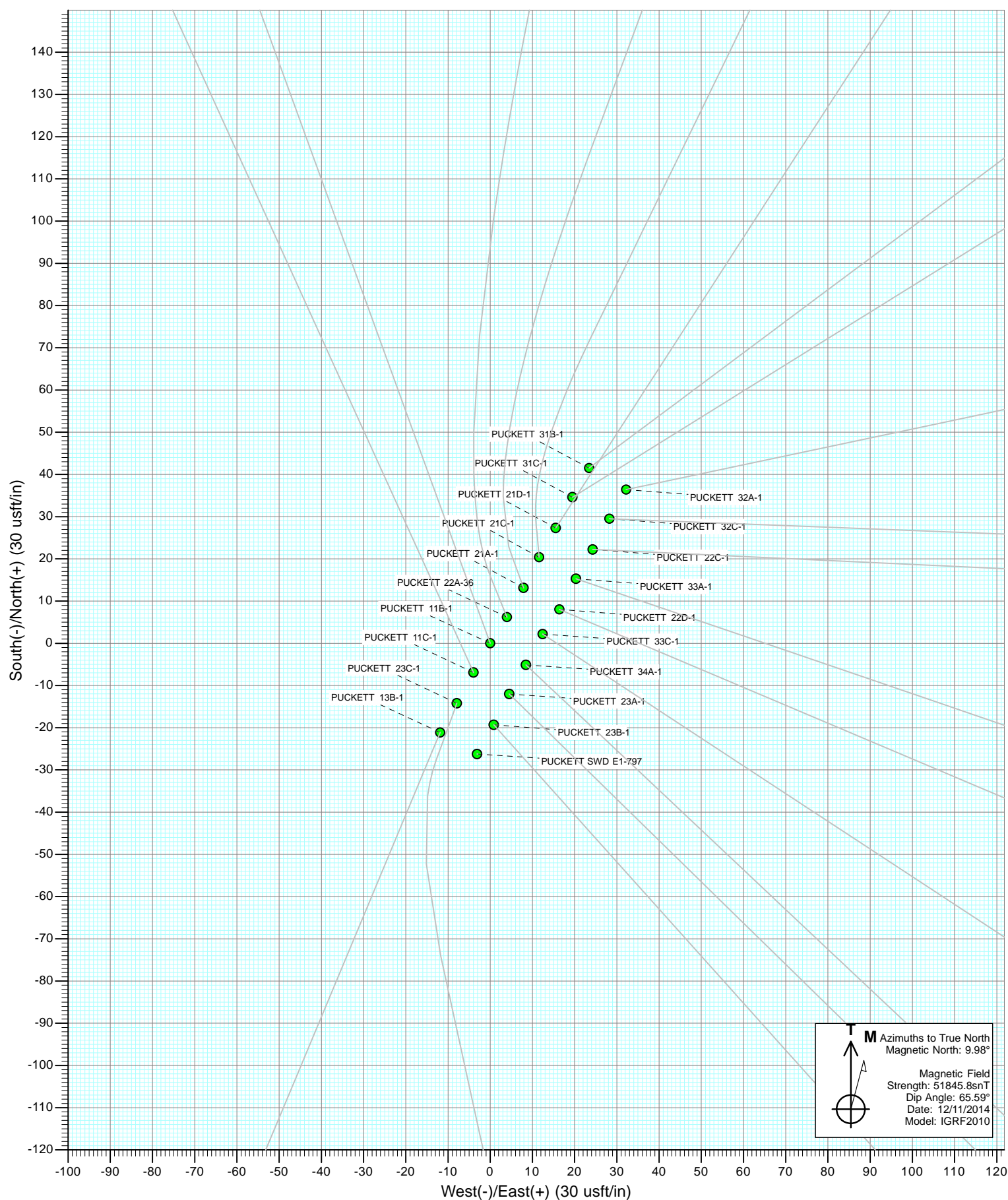
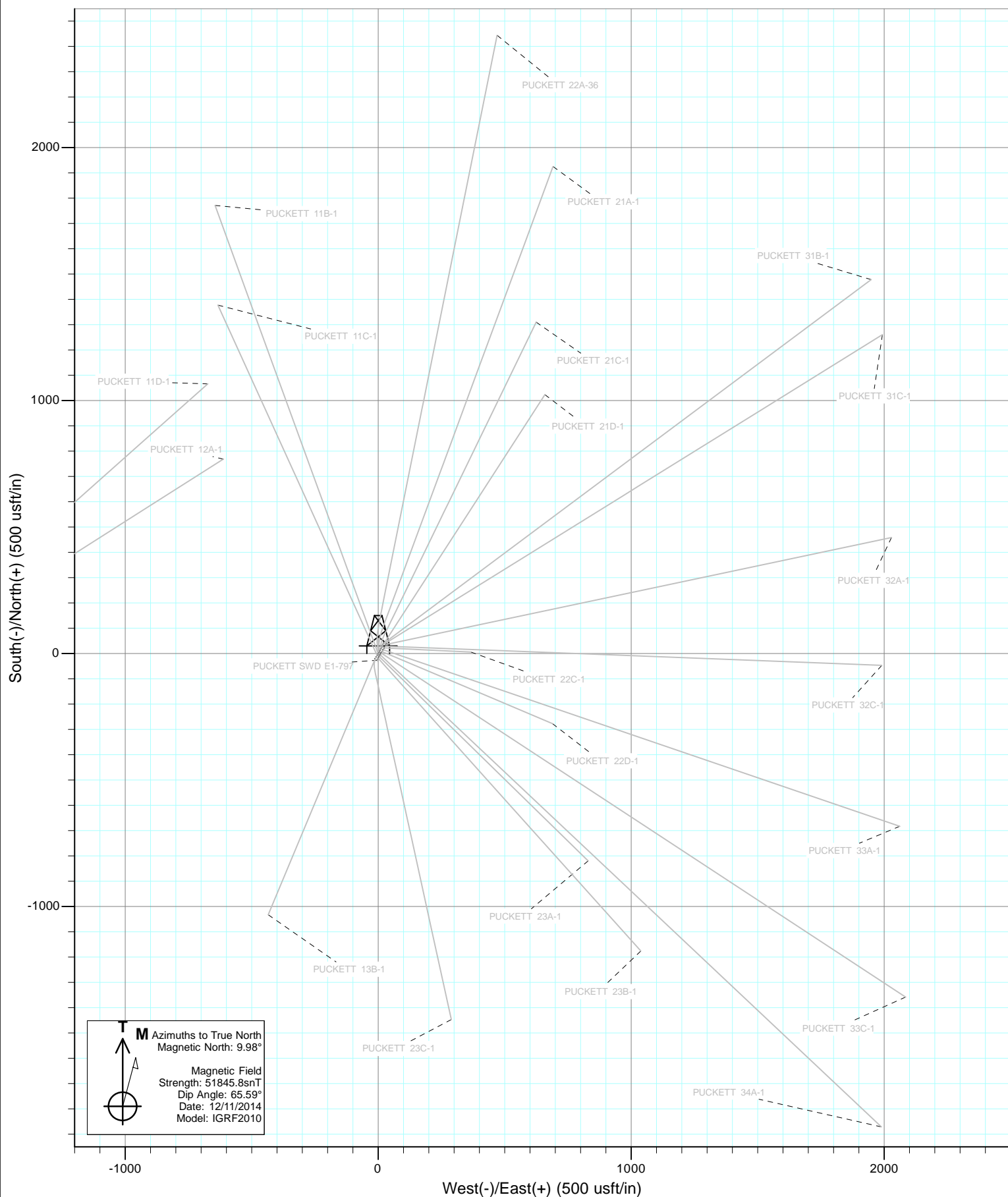




Project: Garfield County, CO
 Site: S1-T7S-R97W (Mesa E1 797)
 Well: PUCKETT 22D-1
 Wellbore: DD
 Design: Plan #1

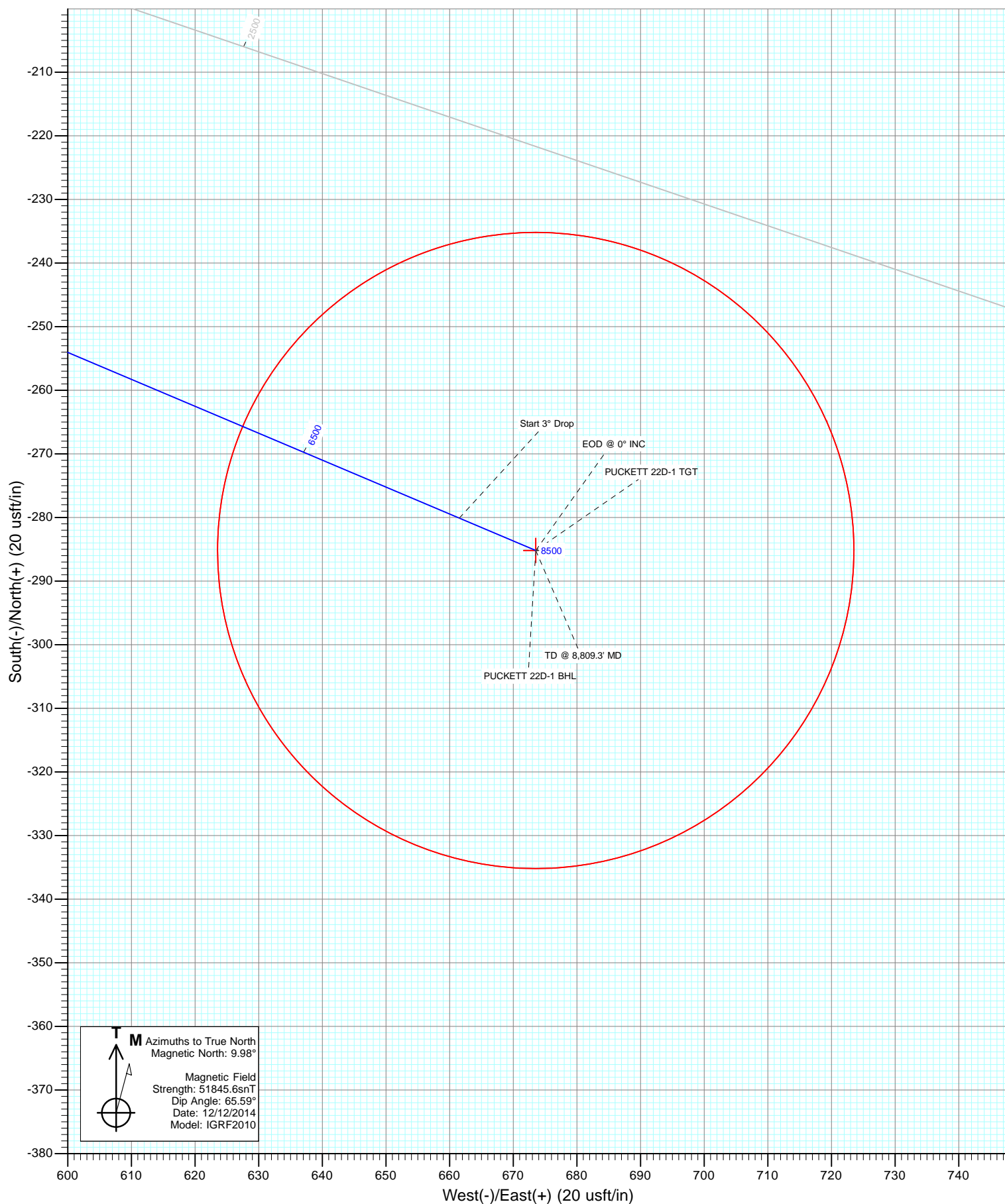








Project: Garfield County, CO
Site: S1-T7S-R97W (Mesa E1 797)
Well: PUCKETT 22D-1
Wellbore: DD
Design: Plan #1



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Company:	Caerus Oil & Gas (NAD 27)	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Project:	Garfield County, CO	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site:	S1-T7S-R97W (Mesa E1 797)	North Reference:	True
Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Project	Garfield County, CO		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	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 22D-1					
Well Position	+N/-S	0.0 usft	Northing:	609,371.79 usft	Latitude:	39.476069
	+E/-W	0.0 usft	Easting:	1,245,662.75 usft	Longitude:	-108.172614
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,329.0 usft

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

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	112.95

Plan Sections										
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	
723.4	6.70	112.95	722.9	-5.1	12.0	3.00	3.00	0.00	112.95	
6,767.9	6.70	112.95	6,726.1	-280.1	661.5	0.00	0.00	0.00	0.00	
6,991.3	0.00	0.00	6,949.0	-285.2	673.5	3.00	-3.00	0.00	180.00	PUCKETT 22D-1 TG1
8,809.3	0.00	0.00	8,767.0	-285.2	673.5	0.00	0.00	0.00	0.00	PUCKETT 22D-1 BHL

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Company:	Caerus Oil & Gas (NAD 27)	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Project:	Garfield County, CO	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site:	S1-T7S-R97W (Mesa E1 797)	North Reference:	True
Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	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	112.95	600.0	-1.0	2.4	2.6	3.00	3.00	
700.0	6.00	112.95	699.6	-4.1	9.6	10.5	3.00	3.00	
723.4	6.70	112.95	722.9	-5.1	12.0	13.0	3.00	3.00	EOB @ 6.7° INC
800.0	6.70	112.95	799.0	-8.6	20.2	22.0	0.00	0.00	
900.0	6.70	112.95	898.3	-13.1	31.0	33.7	0.00	0.00	
1,000.0	6.70	112.95	997.6	-17.7	41.7	45.3	0.00	0.00	
1,100.0	6.70	112.95	1,096.9	-22.2	52.5	57.0	0.00	0.00	
1,200.0	6.70	112.95	1,196.2	-26.8	63.2	68.7	0.00	0.00	
1,300.0	6.70	112.95	1,295.6	-31.3	74.0	80.3	0.00	0.00	
1,400.0	6.70	112.95	1,394.9	-35.9	84.7	92.0	0.00	0.00	
1,500.0	6.70	112.95	1,494.2	-40.4	95.5	103.7	0.00	0.00	
1,600.0	6.70	112.95	1,593.5	-45.0	106.2	115.3	0.00	0.00	
1,700.0	6.70	112.95	1,692.8	-49.5	117.0	127.0	0.00	0.00	
1,800.0	6.70	112.95	1,792.1	-54.1	127.7	138.7	0.00	0.00	
1,900.0	6.70	112.95	1,891.5	-58.6	138.4	150.3	0.00	0.00	
2,000.0	6.70	112.95	1,990.8	-63.2	149.2	162.0	0.00	0.00	
2,100.0	6.70	112.95	2,090.1	-67.7	159.9	173.7	0.00	0.00	
2,200.0	6.70	112.95	2,189.4	-72.3	170.7	185.4	0.00	0.00	
2,300.0	6.70	112.95	2,288.7	-76.8	181.4	197.0	0.00	0.00	
2,400.0	6.70	112.95	2,388.0	-81.4	192.2	208.7	0.00	0.00	
2,500.0	6.70	112.95	2,487.4	-85.9	202.9	220.4	0.00	0.00	
2,600.0	6.70	112.95	2,586.7	-90.5	213.7	232.0	0.00	0.00	
2,700.0	6.70	112.95	2,686.0	-95.0	224.4	243.7	0.00	0.00	
2,800.0	6.70	112.95	2,785.3	-99.6	235.2	255.4	0.00	0.00	
2,900.0	6.70	112.95	2,884.6	-104.1	245.9	267.0	0.00	0.00	
3,000.0	6.70	112.95	2,983.9	-108.7	256.6	278.7	0.00	0.00	
3,100.0	6.70	112.95	3,083.3	-113.2	267.4	290.4	0.00	0.00	
3,200.0	6.70	112.95	3,182.6	-117.8	278.1	302.0	0.00	0.00	
3,300.0	6.70	112.95	3,281.9	-122.3	288.9	313.7	0.00	0.00	
3,400.0	6.70	112.95	3,381.2	-126.9	299.6	325.4	0.00	0.00	
3,500.0	6.70	112.95	3,480.5	-131.4	310.4	337.0	0.00	0.00	
3,600.0	6.70	112.95	3,579.8	-136.0	321.1	348.7	0.00	0.00	
3,700.0	6.70	112.95	3,679.2	-140.5	331.9	360.4	0.00	0.00	
3,800.0	6.70	112.95	3,778.5	-145.1	342.6	372.1	0.00	0.00	
3,900.0	6.70	112.95	3,877.8	-149.6	353.4	383.7	0.00	0.00	
4,000.0	6.70	112.95	3,977.1	-154.2	364.1	395.4	0.00	0.00	
4,100.0	6.70	112.95	4,076.4	-158.7	374.8	407.1	0.00	0.00	
4,200.0	6.70	112.95	4,175.7	-163.3	385.6	418.7	0.00	0.00	
4,300.0	6.70	112.95	4,275.1	-167.8	396.3	430.4	0.00	0.00	
4,400.0	6.70	112.95	4,374.4	-172.4	407.1	442.1	0.00	0.00	
4,500.0	6.70	112.95	4,473.7	-176.9	417.8	453.7	0.00	0.00	
4,600.0	6.70	112.95	4,573.0	-181.5	428.6	465.4	0.00	0.00	
4,700.0	6.70	112.95	4,672.3	-186.0	439.3	477.1	0.00	0.00	
4,800.0	6.70	112.95	4,771.6	-190.6	450.1	488.7	0.00	0.00	
4,900.0	6.70	112.95	4,871.0	-195.1	460.8	500.4	0.00	0.00	
5,000.0	6.70	112.95	4,970.3	-199.7	471.6	512.1	0.00	0.00	

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 22D-1
Wellbore: DD
Design: Plan #1

Local Co-ordinate Reference: Well PUCKETT 22D-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

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	6.70	112.95	5,069.6	-204.2	482.3	523.8	0.00	0.00	
5,200.0	6.70	112.95	5,168.9	-208.8	493.0	535.4	0.00	0.00	
5,300.0	6.70	112.95	5,268.2	-213.3	503.8	547.1	0.00	0.00	
5,400.0	6.70	112.95	5,367.5	-217.8	514.5	558.8	0.00	0.00	
5,500.0	6.70	112.95	5,466.9	-222.4	525.3	570.4	0.00	0.00	
5,600.0	6.70	112.95	5,566.2	-226.9	536.0	582.1	0.00	0.00	
5,700.0	6.70	112.95	5,665.5	-231.5	546.8	593.8	0.00	0.00	
5,781.1	6.70	112.95	5,746.0	-235.2	555.5	603.2	0.00	0.00	OHIO CREEK
5,800.0	6.70	112.95	5,764.8	-236.0	557.5	605.4	0.00	0.00	
5,900.0	6.70	112.95	5,864.1	-240.6	568.3	617.1	0.00	0.00	
6,000.0	6.70	112.95	5,963.4	-245.1	579.0	628.8	0.00	0.00	
6,100.0	6.70	112.95	6,062.8	-249.7	589.8	640.4	0.00	0.00	
6,104.3	6.70	112.95	6,067.0	-249.9	590.2	640.9	0.00	0.00	WILLIAMS FORK
6,200.0	6.70	112.95	6,162.1	-254.2	600.5	652.1	0.00	0.00	
6,300.0	6.70	112.95	6,261.4	-258.8	611.2	663.8	0.00	0.00	
6,400.0	6.70	112.95	6,360.7	-263.3	622.0	675.4	0.00	0.00	
6,500.0	6.70	112.95	6,460.0	-267.9	632.7	687.1	0.00	0.00	
6,600.0	6.70	112.95	6,559.3	-272.4	643.5	698.8	0.00	0.00	
6,700.0	6.70	112.95	6,658.7	-277.0	654.2	710.5	0.00	0.00	
6,767.9	6.70	112.95	6,726.1	-280.1	661.5	718.4	0.00	0.00	Start 3° Drop
6,800.0	5.74	112.95	6,758.0	-281.4	664.7	721.9	3.00	-3.00	
6,900.0	2.74	112.95	6,857.7	-284.3	671.5	729.2	3.00	-3.00	
6,991.3	0.00	0.00	6,949.0	-285.2	673.5	731.4	3.00	-3.00	EOD @ 0° INC - TOP of GAS
7,000.0	0.00	0.00	6,957.7	-285.2	673.5	731.4	0.00	0.00	
7,100.0	0.00	0.00	7,057.7	-285.2	673.5	731.4	0.00	0.00	
7,200.0	0.00	0.00	7,157.7	-285.2	673.5	731.4	0.00	0.00	
7,300.0	0.00	0.00	7,257.7	-285.2	673.5	731.4	0.00	0.00	
7,400.0	0.00	0.00	7,357.7	-285.2	673.5	731.4	0.00	0.00	
7,500.0	0.00	0.00	7,457.7	-285.2	673.5	731.4	0.00	0.00	
7,600.0	0.00	0.00	7,557.7	-285.2	673.5	731.4	0.00	0.00	
7,700.0	0.00	0.00	7,657.7	-285.2	673.5	731.4	0.00	0.00	
7,800.0	0.00	0.00	7,757.7	-285.2	673.5	731.4	0.00	0.00	
7,900.0	0.00	0.00	7,857.7	-285.2	673.5	731.4	0.00	0.00	
8,000.0	0.00	0.00	7,957.7	-285.2	673.5	731.4	0.00	0.00	
8,100.0	0.00	0.00	8,057.7	-285.2	673.5	731.4	0.00	0.00	
8,200.0	0.00	0.00	8,157.7	-285.2	673.5	731.4	0.00	0.00	
8,300.0	0.00	0.00	8,257.7	-285.2	673.5	731.4	0.00	0.00	
8,400.0	0.00	0.00	8,357.7	-285.2	673.5	731.4	0.00	0.00	
8,500.0	0.00	0.00	8,457.7	-285.2	673.5	731.4	0.00	0.00	
8,600.0	0.00	0.00	8,557.7	-285.2	673.5	731.4	0.00	0.00	
8,659.3	0.00	0.00	8,617.0	-285.2	673.5	731.4	0.00	0.00	ROLLINS
8,700.0	0.00	0.00	8,657.7	-285.2	673.5	731.4	0.00	0.00	
8,809.3	0.00	0.00	8,767.0	-285.2	673.5	731.4	0.00	0.00	TD @ 8,809.3' MD

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Company:	Caerus Oil & Gas (NAD 27)	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Project:	Garfield County, CO	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site:	S1-T7S-R97W (Mesa E1 797)	North Reference:	True
Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	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 22D-1 BHL	0.00	0.00	8,767.0	-285.2	673.5	609,066.93	1,246,327.62	39.475286	-108.170228
- plan hits target center									
- Circle (radius 50.0)									
PUCKETT 22D-1 TGT	0.00	0.00	6,949.0	-285.2	673.5	609,066.93	1,246,327.62	39.475286	-108.170228
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
5,781.1	5,746.0	OHIO CREEK				
6,104.3	6,067.0	WILLIAMS FORK				
6,991.3	6,949.0	TOP of GAS				
8,659.3	8,617.0	ROLLINS				

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'	
723.4	722.9	-5.1	12.0	EOB @ 6.7° INC	
6,767.9	6,726.1	-280.1	661.5	Start 3° Drop	
6,991.3	6,949.0	-285.2	673.5	EOD @ 0° INC	
8,809.3	8,767.0	-285.2	673.5	TD @ 8,809.3' MD	

Caerus Oil & Gas (NAD 27)

Garfield County, CO

S1-T7S-R97W (Mesa E1 797)

PUCKETT 22D-1

DD

Plan #1

Anticollision Report

16 December, 2014

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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	8,809.3	Plan #1 (DD)	ISCWSA MWD	MWD - Standard

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference	Offset	Distance		Separation	Warning
	Measured Depth (usft)	Measured Depth (usft)	Between Centres (usft)	Between Ellipses (usft)		
Offset Well - Wellbore - Design						
S1-T7S-R97W (Mesa E1 797)						
PUCKETT 11B-1 - DD - Plan #1	285.6	285.6	18.1	17.1	17.806	CC
PUCKETT 11B-1 - DD - Plan #1	300.0	300.0	18.1	17.1	16.737	ES
PUCKETT 11B-1 - DD - Plan #1	400.0	399.5	20.0	18.5	12.838	SF
PUCKETT 11C-1 - DD - Plan #1	465.7	465.8	24.7	22.8	13.468	CC, ES
PUCKETT 11C-1 - DD - Plan #1	500.0	500.0	24.8	22.9	12.472	SF
PUCKETT 13B-1 - DD - Plan #1	200.0	200.0	40.6	39.9	64.464	CC, ES
PUCKETT 13B-1 - DD - Plan #1	500.0	491.9	62.5	60.5	31.413	SF
PUCKETT 21A-1 - HZ - Plan #1	300.0	300.0	9.9	8.8	9.163	CC, ES
PUCKETT 21A-1 - HZ - Plan #1	400.0	399.5	12.0	10.5	7.857	SF
PUCKETT 21C-1 - DD - Plan #1	333.4	333.4	13.3	12.1	10.804	CC, ES
PUCKETT 21C-1 - DD - Plan #1	400.0	399.7	13.9	12.4	9.102	SF
PUCKETT 21D-1 - DD - Plan #1	400.0	400.0	19.3	17.8	12.642	CC, ES
PUCKETT 21D-1 - DD - Plan #1	500.0	499.1	21.5	19.5	10.879	SF
PUCKETT 22A-36 - DD - Plan #1	255.9	255.9	12.6	11.7	14.253	CC
PUCKETT 22A-36 - DD - Plan #1	300.0	300.0	12.6	11.5	11.671	ES
PUCKETT 22A-36 - DD - Plan #1	400.0	399.6	14.1	12.6	9.176	SF
PUCKETT 22C-1 - DD - Plan #1	581.5	581.5	16.2	13.8	6.934	CC
PUCKETT 22C-1 - DD - Plan #1	600.0	600.0	16.2	13.8	6.714	ES
PUCKETT 22C-1 - DD - Plan #1	700.0	699.7	18.2	15.3	6.387	SF
PUCKETT 23A-1 - DD - Plan #1	500.0	500.0	23.3	21.3	11.769	CC, ES
PUCKETT 23A-1 - DD - Plan #1	800.0	798.9	31.8	28.5	9.628	SF
PUCKETT 23B-1 - DD - Plan #1	400.0	400.0	31.4	29.9	20.561	CC, ES
PUCKETT 23B-1 - DD - Plan #1	700.0	697.1	41.7	38.9	14.740	SF
PUCKETT 23C-1 - DD - Plan #1	300.0	300.0	32.9	31.8	30.506	CC, ES
PUCKETT 23C-1 - DD - Plan #1	500.0	496.3	42.3	40.4	21.923	SF
PUCKETT 31B-1 - DD - Plan #1	200.0	200.0	34.2	33.6	54.405	CC, ES
PUCKETT 31B-1 - DD - Plan #1	500.0	493.7	53.8	51.8	26.628	SF
PUCKETT 31C-1 - DD - Plan #1	234.1	234.1	26.8	26.0	34.204	CC, ES
PUCKETT 31C-1 - DD - Plan #1	500.0	496.5	38.9	36.9	19.524	SF
PUCKETT 32A-1 - DD - Plan #1	200.0	200.0	32.5	31.9	51.641	CC, ES
PUCKETT 32A-1 - DD - Plan #1	500.0	495.1	47.6	45.6	23.849	SF
PUCKETT 32C-1 - DD - Plan #1	300.0	300.0	24.5	23.5	22.745	CC, ES
PUCKETT 32C-1 - DD - Plan #1	500.0	498.1	30.6	28.7	15.563	SF
PUCKETT 33A-1 - DD - Plan #1	317.6	317.6	8.3	7.1	7.152	CC, ES
PUCKETT 33A-1 - DD - Plan #1	400.0	399.9	8.7	7.1	5.701	SF
PUCKETT 33C-1 - DD - Plan #1	263.2	263.2	7.0	6.1	7.729	CC
PUCKETT 33C-1 - DD - Plan #1	300.0	300.0	7.1	6.0	6.601	ES
PUCKETT 33C-1 - DD - Plan #1	400.0	399.7	9.1	7.6	6.048	SF
PUCKETT 34A-1 - DD - Plan #1	400.0	400.0	15.3	13.8	10.022	CC, ES
PUCKETT 34A-1 - DD - Plan #1	600.0	599.1	19.4	17.1	8.178	SF
PUCKETT SWD E1-797 - VH - Plan #1	500.0	500.0	39.4	37.4	19.917	CC
PUCKETT SWD E1-797 - VH - Plan #1	600.0	600.0	39.8	37.4	16.488	ES
PUCKETT SWD E1-797 - VH - Plan #1	800.0	799.0	47.3	43.9	14.090	SF

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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-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	-116.08	-8.0	-16.4	18.2					
100.0	100.0	100.0	100.0	0.1	0.1	-116.08	-8.0	-16.4	18.2	18.0	0.18	101.374		
200.0	200.0	200.0	200.0	0.3	0.3	-116.08	-8.0	-16.4	18.2	17.6	0.63	28.964		
285.6	285.6	285.6	285.6	0.5	0.5	-110.04	-6.2	-17.0	18.1	17.1	1.02	17.806 CC		
300.0	300.0	300.0	300.0	0.5	0.5	-107.83	-5.6	-17.3	18.1	17.1	1.08	16.737 ES		
400.0	400.0	399.5	399.1	0.8	0.8	-84.93	1.8	-19.9	20.0	18.5	1.56	12.838 SF		
500.0	500.0	497.9	496.7	1.0	1.1	-60.46	13.8	-24.3	28.1	26.1	2.05	13.753		
600.0	600.0	594.3	591.5	1.2	1.4	-159.10	30.1	-30.2	45.9	43.3	2.60	17.639		
700.0	699.6	687.4	682.1	1.4	1.8	-153.19	50.1	-37.5	73.9	70.8	3.17	23.356		
800.0	799.0	777.2	768.4	1.7	2.2	-150.80	73.3	-46.0	109.6	106.0	3.68	29.822		
900.0	898.3	869.8	857.0	1.9	2.8	-149.39	98.8	-55.3	147.2	143.1	4.16	35.391		
1,000.0	997.6	962.4	945.5	2.2	3.3	-148.56	124.3	-64.5	184.9	180.2	4.65	39.762		

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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-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	-126.31	-14.9	-20.3	25.2					
100.0	100.0	100.0	100.0	0.1	0.1	-126.31	-14.9	-20.3	25.2	25.0	0.18	140.263		
200.0	200.0	200.0	200.0	0.3	0.3	-126.31	-14.9	-20.3	25.2	24.6	0.63	40.075		
300.0	300.0	300.0	300.0	0.5	0.5	-126.31	-14.9	-20.3	25.2	24.1	1.08	23.377		
400.0	400.0	400.2	400.1	0.8	0.8	-122.98	-13.6	-20.9	25.0	23.4	1.53	16.319		
465.7	465.7	465.8	465.7	0.9	0.9	-114.44	-10.2	-22.5	24.7	22.8	1.83	13.468 CC, ES		
500.0	500.0	500.0	499.8	1.0	1.0	-107.91	-7.6	-23.6	24.8	22.9	1.99	12.472 SF		
600.0	600.0	598.5	597.6	1.2	1.3	164.16	2.9	-28.4	31.2	28.7	2.49	12.490		
700.0	699.6	694.5	692.2	1.4	1.6	-177.11	17.5	-35.1	50.2	47.1	3.08	16.303		
800.0	799.0	787.0	782.5	1.7	1.9	-167.71	35.7	-43.3	79.2	75.6	3.58	22.127		
900.0	898.3	881.3	874.0	1.9	2.3	-162.71	56.3	-52.7	111.4	107.4	4.05	27.483		
1,000.0	997.6	975.6	965.6	2.2	2.8	-159.95	77.0	-62.1	144.1	139.6	4.53	31.843		
1,100.0	1,096.9	1,070.0	1,057.2	2.5	3.2	-158.20	97.6	-71.5	176.9	171.9	5.01	35.330		

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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							
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	-135.91	-29.1	-28.2	40.6					
100.0	100.0	100.0	100.0	0.1	0.1	-135.91	-29.1	-28.2	40.6	40.4	0.18	225.623		
200.0	200.0	200.0	200.0	0.3	0.3	-135.91	-29.1	-28.2	40.6	39.9	0.63	64.464	CC, ES	
300.0	300.0	298.0	297.9	0.5	0.5	-137.13	-31.5	-29.2	43.0	41.9	1.05	40.800		
400.0	400.0	395.4	395.1	0.8	0.7	-140.09	-38.4	-32.1	50.2	48.7	1.49	33.623		
500.0	500.0	491.9	490.8	1.0	1.0	-143.47	-49.7	-36.8	62.5	60.5	1.99	31.413	SF	
600.0	600.0	586.8	584.2	1.2	1.3	101.91	-65.2	-43.3	80.3	77.8	2.48	32.416		
700.0	699.6	680.5	675.5	1.4	1.7	102.75	-84.5	-51.4	103.8	100.8	2.99	34.699		
800.0	799.0	776.9	769.1	1.7	2.2	105.02	-105.9	-60.3	129.8	126.3	3.53	36.793		
900.0	898.3	873.4	862.7	1.9	2.7	106.71	-127.3	-69.2	156.0	151.9	4.09	38.166		
1,000.0	997.6	969.8	956.3	2.2	3.1	107.92	-148.6	-78.1	182.3	177.6	4.67	39.036		

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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-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	-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	399.5	399.5	0.8	0.8	-51.15	7.5	-9.4	12.0	10.5	1.53	7.857 SF		
500.0	500.0	498.6	498.2	1.0	1.0	-38.93	14.8	-11.9	19.1	17.1	2.00	9.551		
600.0	600.0	597.2	596.1	1.2	1.3	-142.51	26.4	-13.3	31.9	29.4	2.50	12.748		
700.0	699.6	694.1	691.8	1.4	1.6	-137.24	41.9	-11.9	51.4	48.4	3.01	17.063		
800.0	799.0	789.2	784.8	1.7	1.9	-133.82	61.0	-7.9	76.4	72.9	3.51	21.751		
900.0	898.3	882.3	875.0	1.9	2.3	-130.09	83.5	-1.4	104.5	100.5	4.03	25.898		
1,000.0	997.6	973.3	961.9	2.2	2.8	-126.47	108.8	7.4	135.8	131.2	4.60	29.555		
1,100.0	1,096.9	1,067.2	1,050.9	2.5	3.3	-123.50	136.8	17.8	169.2	164.0	5.18	32.656		

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 21C-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-21.18	12.4	-4.8	13.3					
100.0	100.0	100.0	100.0	0.1	0.1	-21.18	12.4	-4.8	13.3	13.1	0.18	73.861		
200.0	200.0	200.0	200.0	0.3	0.3	-21.18	12.4	-4.8	13.3	12.7	0.63	21.103		
300.0	300.0	300.0	300.0	0.5	0.5	-21.18	12.4	-4.8	13.3	12.2	1.08	12.310		
333.4	333.4	333.4	333.4	0.6	0.6	-21.18	12.4	-4.8	13.3	12.1	1.23	10.804 CC, ES		
400.0	400.0	399.7	399.7	0.8	0.8	-20.44	13.0	-4.9	13.9	12.4	1.53	9.102 SF		
500.0	500.0	498.7	498.6	1.0	1.0	-16.29	18.1	-5.3	19.0	17.0	1.98	9.574		
600.0	600.0	597.2	596.6	1.2	1.2	-127.61	28.0	-5.3	30.2	27.8	2.48	12.210		
700.0	699.6	694.7	693.1	1.4	1.5	-126.64	41.4	-2.1	47.4	44.4	2.97	15.983		
800.0	799.0	790.8	787.4	1.7	1.8	-125.20	57.9	4.4	69.3	65.9	3.47	20.002		
900.0	898.3	887.0	881.3	1.9	2.2	-122.57	77.2	13.7	93.5	89.5	4.00	23.389		
1,000.0	997.6	983.9	975.7	2.2	2.6	-120.89	96.8	23.2	118.0	113.4	4.55	25.950		
1,100.0	1,096.9	1,080.9	1,070.2	2.5	3.0	-119.79	116.4	32.7	142.5	137.4	5.11	27.876		
1,200.0	1,196.2	1,177.8	1,164.6	2.8	3.4	-119.01	135.9	42.2	167.1	161.4	5.69	29.357		
1,300.0	1,295.6	1,274.7	1,259.1	3.1	3.9	-118.43	155.5	51.7	191.7	185.4	6.28	30.525		

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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	-2.51	19.3	-0.8	19.3					
100.0	100.0	100.0	100.0	0.1	0.1	-2.51	19.3	-0.8	19.3	19.1	0.18	107.460		
200.0	200.0	200.0	200.0	0.3	0.3	-2.51	19.3	-0.8	19.3	18.7	0.63	30.703		
300.0	300.0	300.0	300.0	0.5	0.5	-2.51	19.3	-0.8	19.3	18.2	1.08	17.910		
400.0	400.0	400.0	400.0	0.8	0.8	-2.51	19.3	-0.8	19.3	17.8	1.53	12.642 CC, ES		
500.0	500.0	499.1	499.0	1.0	1.0	1.46	21.5	0.5	21.5	19.5	1.98	10.879 SF		
600.0	600.0	597.7	597.3	1.2	1.2	-108.14	27.9	4.7	29.1	26.7	2.44	11.941		
700.0	699.6	695.1	693.9	1.4	1.5	-109.57	38.4	11.5	42.9	40.0	2.92	14.682		
800.0	799.0	791.8	789.1	1.7	1.8	-111.35	52.7	20.7	62.1	58.6	3.45	17.993		
900.0	898.3	889.7	885.3	1.9	2.1	-112.04	68.1	30.7	82.2	78.3	3.98	20.656		
1,000.0	997.6	987.7	981.5	2.2	2.5	-112.46	83.5	40.6	102.4	97.9	4.53	22.590		
1,100.0	1,096.9	1,085.6	1,077.8	2.5	2.9	-112.74	98.9	50.6	122.6	117.5	5.10	24.034		
1,200.0	1,196.2	1,183.6	1,174.0	2.8	3.2	-112.94	114.2	60.5	142.8	137.1	5.68	25.142		
1,300.0	1,295.6	1,281.5	1,270.2	3.1	3.6	-113.09	129.6	70.4	163.0	156.7	6.27	26.011		
1,400.0	1,394.9	1,379.5	1,366.4	3.4	4.0	-113.21	145.0	80.4	183.1	176.3	6.86	26.713		

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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-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	-98.32	-1.8	-12.4	12.6					
100.0	100.0	100.0	100.0	0.1	0.1	-98.32	-1.8	-12.4	12.6	12.4	0.18	69.810		
200.0	200.0	200.0	200.0	0.3	0.3	-98.32	-1.8	-12.4	12.6	11.9	0.63	19.946		
255.9	255.9	255.9	255.9	0.4	0.4	-98.32	-1.8	-12.4	12.6	11.7	0.88	14.253 CC		
300.0	300.0	300.0	300.0	0.5	0.5	-97.60	-1.7	-12.5	12.6	11.5	1.08	11.671 ES		
400.0	400.0	399.6	399.5	0.8	0.8	-82.03	2.0	-13.9	14.1	12.6	1.54	9.176 SF		
500.0	500.0	498.8	498.3	1.0	1.0	-59.05	10.3	-17.2	20.2	18.1	2.01	10.007		
600.0	600.0	597.2	595.8	1.2	1.3	-154.97	23.3	-19.7	33.2	30.6	2.52	13.135		
700.0	699.6	693.5	690.5	1.4	1.6	-146.06	40.6	-20.3	54.5	51.5	3.06	17.825		
800.0	799.0	787.3	782.0	1.7	2.0	-141.18	61.7	-19.2	82.3	78.8	3.56	23.117		
900.0	898.3	878.9	870.1	1.9	2.4	-137.11	86.2	-16.4	113.6	109.5	4.08	27.859		
1,000.0	997.6	968.0	954.7	2.2	2.9	-133.60	113.8	-12.2	148.5	143.8	4.63	32.092		
1,100.0	1,096.9	1,054.2	1,035.3	2.5	3.4	-130.58	144.0	-6.7	186.9	181.7	5.18	36.058		

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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	29.09	14.2	7.9	16.3					
100.0	100.0	100.0	100.0	0.1	0.1	29.09	14.2	7.9	16.3	16.1	0.18	90.405		
200.0	200.0	200.0	200.0	0.3	0.3	29.09	14.2	7.9	16.3	15.6	0.63	25.830		
300.0	300.0	300.0	300.0	0.5	0.5	29.09	14.2	7.9	16.3	15.2	1.08	15.067		
400.0	400.0	400.0	400.0	0.8	0.8	29.09	14.2	7.9	16.3	14.7	1.53	10.636		
500.0	500.0	500.0	500.0	1.0	1.0	29.09	14.2	7.9	16.3	14.3	1.98	8.219		
581.5	581.5	581.5	581.5	1.2	1.2	-90.00	14.2	7.9	16.2	13.8	2.33	6.934 CC		
600.0	600.0	600.0	600.0	1.2	1.2	-93.10	14.2	7.9	16.2	13.8	2.41	6.714 ES		
700.0	699.6	699.7	699.6	1.4	1.4	-110.11	14.1	10.5	18.2	15.3	2.85	6.387 SF		
800.0	799.0	799.5	799.3	1.7	1.6	-123.68	13.8	16.0	22.8	19.5	3.31	6.892		
900.0	898.3	899.2	898.9	1.9	1.9	-132.58	13.6	21.4	28.4	24.6	3.77	7.521		
1,000.0	997.6	999.0	998.5	2.2	2.1	-138.48	13.3	26.9	34.4	30.1	4.23	8.124		
1,100.0	1,096.9	1,098.8	1,098.1	2.5	2.3	-142.59	13.1	32.3	40.6	36.0	4.69	8.662		
1,200.0	1,196.2	1,198.5	1,197.7	2.8	2.5	-145.60	12.8	37.8	47.1	41.9	5.15	9.132		
1,300.0	1,295.6	1,298.3	1,297.3	3.1	2.8	-147.88	12.6	43.3	53.6	48.0	5.62	9.540		
1,400.0	1,394.9	1,398.1	1,397.0	3.4	3.0	-149.66	12.3	48.7	60.2	54.1	6.08	9.893		
1,500.0	1,494.2	1,497.8	1,496.6	3.7	3.2	-151.09	12.0	54.2	66.8	60.2	6.55	10.201		
1,600.0	1,593.5	1,597.6	1,596.2	4.0	3.5	-152.26	11.8	59.7	73.5	66.4	7.01	10.471		
1,700.0	1,692.8	1,697.4	1,695.8	4.3	3.7	-153.24	11.5	65.1	80.1	72.7	7.48	10.709		
1,800.0	1,792.1	1,797.1	1,795.4	4.6	4.0	-154.06	11.3	70.6	86.8	78.9	7.95	10.920		
1,900.0	1,891.5	1,896.9	1,895.1	4.9	4.2	-154.77	11.0	76.0	93.6	85.1	8.42	11.109		
2,000.0	1,990.8	1,996.7	1,994.7	5.2	4.5	-155.38	10.8	81.5	100.3	91.4	8.89	11.277		
2,100.0	2,090.1	2,096.4	2,094.3	5.5	4.7	-155.92	10.5	87.0	107.1	97.7	9.37	11.430		
2,200.0	2,189.4	2,196.2	2,193.9	5.8	4.9	-156.39	10.3	92.4	113.8	104.0	9.84	11.568		
2,300.0	2,288.7	2,296.0	2,293.5	6.2	5.2	-156.81	10.0	97.9	120.6	110.3	10.31	11.693		
2,400.0	2,388.0	2,395.7	2,393.1	6.5	5.4	-157.18	9.7	103.4	127.3	116.6	10.78	11.808		
2,500.0	2,487.4	2,495.5	2,492.8	6.8	5.7	-157.52	9.5	108.8	134.1	122.8	11.26	11.913		
2,600.0	2,586.7	2,595.3	2,592.4	7.1	5.9	-157.82	9.2	114.3	140.9	129.2	11.73	12.010		
2,700.0	2,686.0	2,695.0	2,692.0	7.4	6.2	-158.10	9.0	119.8	147.7	135.5	12.20	12.099		
2,800.0	2,785.3	2,794.8	2,791.6	7.7	6.4	-158.35	8.7	125.2	154.4	141.8	12.68	12.182		
2,900.0	2,884.6	2,894.6	2,891.2	8.0	6.6	-158.58	8.5	130.7	161.2	148.1	13.15	12.259		
3,000.0	2,983.9	2,994.3	2,990.8	8.3	6.9	-158.79	8.2	136.1	168.0	154.4	13.63	12.330		
3,100.0	3,083.3	3,094.1	3,090.5	8.7	7.1	-158.99	8.0	141.6	174.8	160.7	14.10	12.397		
3,200.0	3,182.6	3,193.9	3,190.1	9.0	7.4	-159.17	7.7	147.1	181.6	167.0	14.57	12.460		
3,300.0	3,281.9	3,293.6	3,289.7	9.3	7.6	-159.34	7.4	152.5	188.4	173.3	15.05	12.519		
3,400.0	3,381.2	3,393.4	3,389.3	9.6	7.9	-159.49	7.2	158.0	195.2	179.7	15.52	12.574		

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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-ISCSWA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-149.38	-20.0	-11.9	23.3					
100.0	100.0	100.0	100.0	0.1	0.1	-149.38	-20.0	-11.9	23.3	23.1	0.18	129.458		
200.0	200.0	200.0	200.0	0.3	0.3	-149.38	-20.0	-11.9	23.3	22.6	0.63	36.988		
300.0	300.0	300.0	300.0	0.5	0.5	-149.38	-20.0	-11.9	23.3	22.2	1.08	21.576		
400.0	400.0	400.0	400.0	0.8	0.8	-149.38	-20.0	-11.9	23.3	21.7	1.53	15.230		
500.0	500.0	500.0	500.0	1.0	1.0	-149.38	-20.0	-11.9	23.3	21.3	1.98	11.769	CC, ES	
600.0	600.0	599.7	599.7	1.2	1.2	97.78	-21.9	-10.0	24.2	21.9	2.39	10.142		
700.0	699.6	699.3	699.0	1.4	1.4	98.06	-27.3	-4.4	27.2	24.3	2.81	9.663		
800.0	799.0	798.9	797.6	1.7	1.6	95.77	-36.3	4.8	31.8	28.5	3.30	9.628	SF	
900.0	898.3	898.2	895.4	1.9	1.9	87.50	-48.6	17.4	38.1	34.3	3.86	9.880		
1,000.0	997.6	997.8	993.3	2.2	2.3	80.69	-61.6	30.6	45.5	41.1	4.44	10.242		
1,100.0	1,096.9	1,097.4	1,091.2	2.5	2.7	75.82	-74.5	43.9	53.3	48.3	5.03	10.600		
1,200.0	1,196.2	1,197.0	1,189.1	2.8	3.0	72.21	-87.4	57.1	61.4	55.8	5.62	10.934		
1,300.0	1,295.6	1,296.6	1,286.9	3.1	3.4	69.44	-100.4	70.3	69.7	63.5	6.20	11.236		
1,400.0	1,394.9	1,396.3	1,384.8	3.4	3.8	67.27	-113.3	83.5	78.1	71.3	6.79	11.506		
1,500.0	1,494.2	1,495.9	1,482.7	3.7	4.2	65.53	-126.2	96.7	86.6	79.2	7.37	11.746		
1,600.0	1,593.5	1,595.5	1,580.5	4.0	4.6	64.09	-139.2	110.0	95.2	87.2	7.96	11.960		
1,700.0	1,692.8	1,695.1	1,678.4	4.3	5.0	62.89	-152.1	123.2	103.8	95.2	8.54	12.150		
1,800.0	1,792.1	1,794.7	1,776.3	4.6	5.5	61.88	-165.0	136.4	112.4	103.3	9.13	12.321		
1,900.0	1,891.5	1,894.3	1,874.2	4.9	5.9	61.01	-178.0	149.6	121.1	111.4	9.71	12.474		
2,000.0	1,990.8	1,993.9	1,972.0	5.2	6.3	60.26	-190.9	162.9	129.8	119.5	10.29	12.612		
2,100.0	2,090.1	2,093.5	2,069.9	5.5	6.7	59.60	-203.8	176.1	138.5	127.7	10.88	12.738		
2,200.0	2,189.4	2,193.1	2,167.8	5.8	7.1	59.02	-216.8	189.3	147.3	135.8	11.46	12.852		
2,300.0	2,288.7	2,292.7	2,265.7	6.2	7.5	58.51	-229.7	202.5	156.0	144.0	12.04	12.956		
2,400.0	2,388.0	2,392.3	2,363.5	6.5	7.9	58.05	-242.6	215.8	164.8	152.2	12.63	13.052		
2,500.0	2,487.4	2,491.9	2,461.4	6.8	8.4	57.64	-255.6	229.0	173.6	160.4	13.21	13.140		
2,600.0	2,586.7	2,591.5	2,559.3	7.1	8.8	57.26	-268.5	242.2	182.4	168.6	13.79	13.221		
2,700.0	2,686.0	2,691.1	2,657.2	7.4	9.2	56.92	-281.4	255.4	191.2	176.8	14.38	13.296		
2,800.0	2,785.3	2,790.7	2,755.0	7.7	9.6	56.61	-294.4	268.7	200.0	185.0	14.96	13.366		

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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-ISCWSA 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	-150.39	-27.3	-15.5	31.4				
100.0	100.0	100.0	100.0	0.1	0.1	-150.39	-27.3	-15.5	31.4	31.2	0.18	174.766	
200.0	200.0	200.0	200.0	0.3	0.3	-150.39	-27.3	-15.5	31.4	30.8	0.63	49.933	
300.0	300.0	300.0	300.0	0.5	0.5	-150.39	-27.3	-15.5	31.4	30.3	1.08	29.128	
400.0	400.0	400.0	400.0	0.8	0.8	-150.39	-27.3	-15.5	31.4	29.9	1.53	20.561 CC, ES	
500.0	500.0	499.4	499.3	1.0	1.0	-154.74	-29.2	-13.8	32.3	30.4	1.96	16.523	
600.0	600.0	598.4	598.1	1.2	1.2	84.93	-35.0	-8.6	35.8	33.4	2.37	15.076	
700.0	699.6	697.1	695.9	1.4	1.4	80.15	-44.5	-0.1	41.7	38.9	2.83	14.740 SF	
800.0	799.0	795.3	792.5	1.7	1.7	76.18	-57.7	11.7	50.3	46.9	3.37	14.933	
900.0	898.3	893.0	887.5	1.9	2.1	70.13	-74.3	26.6	62.3	58.4	3.94	15.798	
1,000.0	997.6	991.8	983.4	2.2	2.6	65.23	-92.3	42.8	76.0	71.5	4.52	16.801	
1,100.0	1,096.9	1,090.7	1,079.3	2.5	3.1	61.84	-110.3	58.9	90.1	85.0	5.10	17.655	
1,200.0	1,196.2	1,189.6	1,175.2	2.8	3.6	59.37	-128.3	75.1	104.4	98.7	5.68	18.372	
1,300.0	1,295.6	1,288.5	1,271.1	3.1	4.0	57.50	-146.3	91.2	118.9	112.6	6.26	18.979	
1,400.0	1,394.9	1,387.4	1,366.9	3.4	4.5	56.03	-164.3	107.4	133.4	126.6	6.84	19.492	
1,500.0	1,494.2	1,486.3	1,462.8	3.7	5.1	54.86	-182.3	123.5	148.0	140.6	7.43	19.933	
1,600.0	1,593.5	1,585.1	1,558.7	4.0	5.6	53.89	-200.3	139.7	162.7	154.7	8.01	20.315	
1,700.0	1,692.8	1,684.0	1,654.6	4.3	6.1	53.09	-218.3	155.8	177.4	168.8	8.59	20.648	
1,800.0	1,792.1	1,782.9	1,750.5	4.6	6.6	52.40	-236.3	172.0	192.1	183.0	9.18	20.940	

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 23C-1 - DD - Plan #1													Offset Site Error: 0.0 usft	
Survey Program: 0-ISWWSA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-132.47	-22.2	-24.3	32.9					
100.0	100.0	100.0	100.0	0.1	0.1	-132.47	-22.2	-24.3	32.9	32.7	0.18	183.035		
200.0	200.0	200.0	200.0	0.3	0.3	-132.47	-22.2	-24.3	32.9	32.3	0.63	52.296		
300.0	300.0	300.0	300.0	0.5	0.5	-132.47	-22.2	-24.3	32.9	31.8	1.08	30.506 CC, ES		
400.0	400.0	398.4	398.4	0.8	0.7	-134.38	-24.6	-25.1	35.2	33.7	1.50	23.465		
500.0	500.0	496.3	496.0	1.0	1.0	-138.82	-31.7	-27.7	42.3	40.4	1.93	21.923 SF		
600.0	600.0	594.4	593.3	1.2	1.2	105.02	-43.3	-31.1	54.4	52.0	2.41	22.594		
700.0	699.6	692.5	690.2	1.4	1.5	103.10	-58.9	-31.6	69.3	66.4	2.87	24.100		
800.0	799.0	790.0	785.7	1.7	1.9	101.18	-78.2	-28.9	86.3	82.9	3.41	25.322		
900.0	898.3	888.0	881.1	1.9	2.3	98.28	-100.1	-24.2	104.4	100.4	3.98	26.206		
1,000.0	997.6	986.2	976.7	2.2	2.7	96.20	-122.0	-19.3	122.7	118.1	4.58	26.800		
1,100.0	1,096.9	1,084.5	1,072.3	2.5	3.2	94.66	-144.0	-14.5	141.2	136.0	5.20	27.152		
1,200.0	1,196.2	1,182.7	1,167.9	2.8	3.6	93.47	-166.0	-9.7	159.7	153.9	5.83	27.406		
1,300.0	1,295.6	1,280.9	1,263.5	3.1	4.1	92.54	-187.9	-4.9	178.2	171.8	6.46	27.589		
1,400.0	1,394.9	1,379.1	1,359.2	3.4	4.5	91.78	-209.9	-0.1	196.9	189.8	7.10	27.726		

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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-ISCWSA 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	11.89	33.5	7.1	34.2								
100.0	100.0	100.0	100.0	0.1	0.1	11.89	33.5	7.1	34.2	34.1	0.18	190.419					
200.0	200.0	200.0	200.0	0.3	0.3	11.89	33.5	7.1	34.2	33.6	0.63	54.405	CC, ES				
300.0	300.0	298.6	298.5	0.5	0.5	14.56	35.0	9.1	36.2	35.1	1.08	33.659					
400.0	400.0	396.6	396.3	0.8	0.8	20.98	39.6	15.2	42.5	41.0	1.54	27.639					
500.0	500.0	493.7	492.5	1.0	1.0	28.13	47.0	25.1	53.8	51.8	2.02	26.628	SF				
600.0	600.0	589.4	586.7	1.2	1.4	-80.39	57.2	38.8	69.9	67.3	2.54	27.495					
700.0	699.6	683.7	678.6	1.4	1.8	-79.57	69.9	55.9	89.8	86.7	3.05	29.432					
800.0	799.0	776.3	767.6	1.7	2.3	-80.25	85.1	76.2	113.5	109.9	3.62	31.369					
900.0	898.3	866.7	853.2	1.9	2.8	-80.16	102.4	99.4	141.6	137.4	4.23	33.498					
1,000.0	997.6	957.5	937.9	2.2	3.4	-79.60	122.0	125.6	173.5	168.6	4.87	35.653					

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													S1-T7S-R97W (Mesa E1 797) - PUCKETT 31C-1 - DD - Plan #1		Offset Site Error:		0.0 usft
Survey Program:													0-ISWWSA MWD		Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor					
0.0	0.0	0.0	0.0	0.0	0.0	6.66	26.6	3.1	26.8								
100.0	100.0	100.0	100.0	0.1	0.1	6.66	26.6	3.1	26.8	26.6	0.18	148.849					
200.0	200.0	200.0	200.0	0.3	0.3	6.66	26.6	3.1	26.8	26.1	0.63	42.528					
234.1	234.1	234.1	234.1	0.4	0.4	6.66	26.6	3.1	26.8	26.0	0.78	34.204	CC, ES				
300.0	300.0	299.6	299.6	0.5	0.5	7.72	26.9	3.7	27.2	26.1	1.08	25.250					
400.0	400.0	398.4	398.3	0.8	0.8	15.11	29.6	8.0	30.7	29.2	1.53	20.130					
500.0	500.0	496.5	495.8	1.0	1.0	25.39	35.0	16.6	38.9	36.9	1.99	19.524	SF				
600.0	600.0	593.4	591.6	1.2	1.3	-81.00	42.8	29.3	52.1	49.6	2.51	20.796					
700.0	699.6	689.2	685.4	1.4	1.7	-79.44	53.1	45.8	69.2	66.2	3.01	22.971					
800.0	799.0	783.5	776.6	1.7	2.1	-79.67	65.6	66.0	90.0	86.4	3.58	25.148					
900.0	898.3	875.8	864.7	1.9	2.6	-78.96	80.2	89.4	115.1	110.9	4.19	27.491					
1,000.0	997.6	966.6	950.0	2.2	3.2	-77.75	96.7	115.9	144.4	139.6	4.82	29.942					
1,100.0	1,096.9	1,061.7	1,038.6	2.5	3.8	-76.68	114.8	145.0	175.3	169.8	5.47	32.027					

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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	29.10	28.4	15.8	32.5					
100.0	100.0	100.0	100.0	0.1	0.1	29.10	28.4	15.8	32.5	32.3	0.18	180.742		
200.0	200.0	200.0	200.0	0.3	0.3	29.10	28.4	15.8	32.5	31.9	0.63	51.641	CC, ES	
300.0	300.0	299.1	299.1	0.5	0.5	30.96	28.7	17.2	33.5	32.4	1.07	31.202		
400.0	400.0	397.6	397.4	0.8	0.8	37.99	30.0	23.4	38.2	36.6	1.52	25.028		
500.0	500.0	495.1	494.2	1.0	1.0	46.82	32.3	34.5	47.6	45.6	2.00	23.849	SF	
600.0	600.0	591.7	589.4	1.2	1.3	-60.07	35.7	50.1	61.1	58.6	2.52	24.294		
700.0	699.6	687.2	682.7	1.4	1.7	-57.90	39.9	70.3	76.8	73.8	3.03	25.313		
800.0	799.0	781.7	773.8	1.7	2.2	-57.37	45.1	94.6	95.1	91.5	3.60	26.439		
900.0	898.3	876.3	863.9	1.9	2.7	-56.30	51.1	123.1	117.4	113.2	4.19	27.988		
1,000.0	997.6	973.6	956.2	2.2	3.3	-55.42	57.4	153.1	140.6	135.8	4.80	29.286		
1,100.0	1,096.9	1,070.8	1,048.5	2.5	4.0	-54.78	63.8	183.2	163.8	158.3	5.42	30.241		
1,200.0	1,196.2	1,168.1	1,140.8	2.8	4.6	-54.31	70.1	213.2	187.0	180.9	6.04	30.978		

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S1-T7S-R97W (Mesa E1 797) - PUCKETT 32C-1 - DD - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	28.89	21.5	11.9	24.5					
100.0	100.0	100.0	100.0	0.1	0.1	28.89	21.5	11.9	24.5	24.4	0.18	136.471		
200.0	200.0	200.0	200.0	0.3	0.3	28.89	21.5	11.9	24.5	23.9	0.63	38.992		
300.0	300.0	300.0	300.0	0.5	0.5	28.89	21.5	11.9	24.5	23.5	1.08	22.745 CC, ES		
400.0	400.0	399.3	399.3	0.8	0.8	34.02	21.4	14.4	25.8	24.3	1.52	16.999		
500.0	500.0	498.1	497.8	1.0	1.0	46.37	21.1	22.1	30.6	28.7	1.97	15.563 SF		
600.0	600.0	596.2	595.0	1.2	1.2	-56.42	20.6	34.8	39.2	36.8	2.45	15.979		
700.0	699.6	693.7	690.9	1.4	1.6	-51.64	19.9	52.3	49.7	46.7	2.97	16.747		
800.0	799.0	790.4	785.0	1.7	2.0	-49.01	19.1	74.4	62.4	58.9	3.51	17.766		
900.0	898.3	885.7	876.5	1.9	2.5	-45.80	18.0	100.9	79.6	75.5	4.08	19.499		
1,000.0	997.6	983.3	969.4	2.2	3.0	-43.02	16.9	130.7	99.5	94.9	4.66	21.352		
1,100.0	1,096.9	1,081.2	1,062.6	2.5	3.6	-41.15	15.7	160.7	119.6	114.4	5.24	22.851		
1,200.0	1,196.2	1,179.0	1,155.8	2.8	4.2	-39.82	14.6	190.6	139.9	134.0	5.81	24.057		
1,300.0	1,295.6	1,276.9	1,249.0	3.1	4.8	-38.83	13.4	220.5	160.1	153.7	6.40	25.027		
1,400.0	1,394.9	1,374.8	1,342.2	3.4	5.4	-38.06	12.2	250.5	180.4	173.4	6.99	25.829		

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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		Total		Separation		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	28.50	7.3	4.0	8.3					
100.0	100.0	100.0	100.0	0.1	0.1	28.50	7.3	4.0	8.3	8.1	0.18	46.068		
200.0	200.0	200.0	200.0	0.3	0.3	28.50	7.3	4.0	8.3	7.7	0.63	13.162		
300.0	300.0	300.0	300.0	0.5	0.5	28.50	7.3	4.0	8.3	7.2	1.08	7.678		
317.6	317.6	317.6	317.6	0.6	0.6	28.50	7.3	4.0	8.3	7.1	1.16	7.152 CC, ES		
400.0	400.0	399.9	399.9	0.8	0.8	38.13	6.8	5.3	8.7	7.1	1.52	5.701 SF		
500.0	500.0	499.4	499.1	1.0	1.0	67.71	4.7	11.5	12.4	10.5	1.96	6.354		
600.0	600.0	598.3	597.3	1.2	1.2	-28.46	1.0	22.4	20.3	17.8	2.43	8.335		
700.0	699.6	696.7	694.3	1.4	1.5	-22.02	-4.4	38.1	28.9	26.0	2.94	9.829		
800.0	799.0	794.4	789.7	1.7	1.9	-18.46	-11.3	58.3	39.2	35.8	3.43	11.430		
900.0	898.3	890.9	882.7	1.9	2.4	-15.32	-19.7	82.7	54.4	50.5	3.93	13.857		
1,000.0	997.6	985.9	972.8	2.2	3.0	-12.95	-29.3	111.1	74.6	70.1	4.44	16.780		
1,100.0	1,096.9	1,083.3	1,064.6	2.5	3.6	-11.36	-40.0	142.1	96.9	92.0	4.96	19.522		
1,200.0	1,196.2	1,180.8	1,156.3	2.8	4.2	-10.37	-50.6	173.1	119.3	113.8	5.49	21.746		
1,300.0	1,295.6	1,278.2	1,248.1	3.1	4.9	-9.70	-61.2	204.2	141.8	135.8	6.02	23.562		
1,400.0	1,394.9	1,375.7	1,339.8	3.4	5.6	-9.20	-71.8	235.2	164.2	157.7	6.56	25.051		
1,500.0	1,494.2	1,473.1	1,431.6	3.7	6.2	-8.83	-82.4	266.2	186.7	179.6	7.10	26.301		

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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-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	-145.88	-5.8	-4.0	7.0					
100.0	100.0	100.0	100.0	0.1	0.1	-145.88	-5.8	-4.0	7.0	6.9	0.18	39.180		
200.0	200.0	200.0	200.0	0.3	0.3	-145.88	-5.8	-4.0	7.0	6.4	0.63	11.194		
263.2	263.2	263.2	263.2	0.5	0.5	-146.25	-5.9	-3.9	7.0	6.1	0.91	7.729 CC		
300.0	300.0	300.0	300.0	0.5	0.5	-151.19	-6.2	-3.4	7.1	6.0	1.07	6.601 ES		
400.0	400.0	399.7	399.5	0.8	0.7	174.00	-9.0	1.0	9.1	7.6	1.51	6.048 SF		
500.0	500.0	498.6	497.9	1.0	1.0	146.96	-14.7	9.6	17.7	15.7	1.98	8.900		
600.0	600.0	596.6	594.7	1.2	1.3	24.81	-23.0	22.3	30.1	27.7	2.46	12.256		
700.0	699.6	693.9	689.9	1.4	1.7	22.19	-34.0	39.0	43.0	40.1	2.97	14.482		
800.0	799.0	790.4	783.2	1.7	2.2	21.22	-47.5	59.5	57.5	54.0	3.47	16.580		
900.0	898.3	885.2	873.6	1.9	2.7	20.04	-63.3	83.6	76.7	72.7	3.97	19.305		
1,000.0	997.6	978.1	960.6	2.2	3.3	18.91	-81.0	110.7	100.7	96.2	4.50	22.390		
1,100.0	1,096.9	1,073.5	1,048.9	2.5	4.0	17.99	-100.9	140.9	127.7	122.7	5.04	25.345		
1,200.0	1,196.2	1,169.8	1,138.0	2.8	4.8	17.38	-120.9	171.4	154.8	149.2	5.57	27.806		
1,300.0	1,295.6	1,266.0	1,227.0	3.1	5.5	16.95	-140.9	202.0	181.9	175.8	6.11	29.754		

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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-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	-148.94	-13.1	-7.9	15.3					
100.0	100.0	100.0	100.0	0.1	0.1	-148.94	-13.1	-7.9	15.3	15.1	0.18	85.190		
200.0	200.0	200.0	200.0	0.3	0.3	-148.94	-13.1	-7.9	15.3	14.7	0.63	24.340		
300.0	300.0	300.0	300.0	0.5	0.5	-148.94	-13.1	-7.9	15.3	14.2	1.08	14.198		
400.0	400.0	400.0	400.0	0.8	0.8	-148.94	-13.1	-7.9	15.3	13.8	1.53	10.022 CC, ES		
500.0	500.0	499.7	499.7	1.0	1.0	-158.05	-14.9	-6.0	16.1	14.1	1.96	8.204		
600.0	600.0	599.1	598.8	1.2	1.2	75.08	-20.2	-0.4	19.4	17.1	2.38	8.178 SF		
700.0	699.6	698.2	697.0	1.4	1.4	68.00	-29.1	9.0	25.1	22.3	2.84	8.843		
800.0	799.0	796.8	794.0	1.7	1.8	63.23	-41.3	22.0	33.1	29.8	3.36	9.863		
900.0	898.3	894.4	888.9	1.9	2.2	56.38	-56.8	38.4	45.2	41.3	3.90	11.591		
1,000.0	997.6	990.6	981.2	2.2	2.6	50.02	-75.2	58.0	62.0	57.6	4.45	13.941		
1,100.0	1,096.9	1,084.8	1,070.2	2.5	3.2	44.95	-96.4	80.5	83.7	78.7	4.99	16.756		
1,200.0	1,196.2	1,176.7	1,155.5	2.8	3.9	41.08	-119.9	105.5	110.1	104.6	5.54	19.880		
1,300.0	1,295.6	1,267.8	1,238.3	3.1	4.6	38.12	-145.9	133.0	141.0	134.9	6.09	23.147		
1,400.0	1,394.9	1,362.3	1,323.9	3.4	5.4	36.03	-173.5	162.4	173.2	166.6	6.64	26.078		

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	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	-150.37	-34.2	-19.5	39.4					
100.0	100.0	100.0	100.0	0.1	0.1	-150.37	-34.2	-19.5	39.4	39.2	0.18	219.086		
200.0	200.0	200.0	200.0	0.3	0.3	-150.37	-34.2	-19.5	39.4	38.8	0.63	62.596		
300.0	300.0	300.0	300.0	0.5	0.5	-150.37	-34.2	-19.5	39.4	38.3	1.08	36.514		
400.0	400.0	400.0	400.0	0.8	0.8	-150.37	-34.2	-19.5	39.4	37.9	1.53	25.775		
500.0	500.0	500.0	500.0	1.0	1.0	-150.37	-34.2	-19.5	39.4	37.4	1.98	19.917 CC		
600.0	600.0	600.0	600.0	1.2	1.2	100.42	-34.2	-19.5	39.8	37.4	2.41	16.488 ES		
700.0	699.6	699.6	699.6	1.4	1.4	110.93	-34.2	-19.5	41.9	39.1	2.87	14.625		
800.0	799.0	799.0	799.0	1.7	1.7	124.00	-34.2	-19.5	47.3	43.9	3.36	14.090 SF		
900.0	898.3	898.3	898.3	1.9	1.9	134.15	-34.2	-19.5	54.7	50.9	3.84	14.249		
1,000.0	997.6	997.6	997.6	2.2	2.1	141.72	-34.2	-19.5	63.4	59.1	4.31	14.706		
1,100.0	1,096.9	1,096.9	1,096.9	2.5	2.3	147.39	-34.2	-19.5	73.0	68.2	4.78	15.271		
1,200.0	1,196.2	1,196.2	1,196.2	2.8	2.6	151.73	-34.2	-19.5	83.0	77.8	5.24	15.851		
1,300.0	1,295.6	1,295.6	1,295.6	3.1	2.8	155.11	-34.2	-19.5	93.5	87.8	5.70	16.407		
1,400.0	1,394.9	1,394.9	1,394.9	3.4	3.0	157.81	-34.2	-19.5	104.2	98.1	6.16	16.924		
1,500.0	1,494.2	1,494.2	1,494.2	3.7	3.2	160.00	-34.2	-19.5	115.1	108.5	6.62	17.397		
1,600.0	1,593.5	1,593.5	1,593.5	4.0	3.4	161.81	-34.2	-19.5	126.1	119.1	7.08	17.828		
1,700.0	1,692.8	1,692.8	1,692.8	4.3	3.7	163.33	-34.2	-19.5	137.3	129.8	7.54	18.219		
1,800.0	1,792.1	1,792.1	1,792.1	4.6	3.9	164.62	-34.2	-19.5	148.5	140.5	8.00	18.574		
1,900.0	1,891.5	1,891.5	1,891.5	4.9	4.1	165.73	-34.2	-19.5	159.8	151.3	8.46	18.898		
2,000.0	1,990.8	1,990.8	1,990.8	5.2	4.3	166.70	-34.2	-19.5	171.1	162.2	8.92	19.193		
2,100.0	2,090.1	2,090.1	2,090.1	5.5	4.6	167.54	-34.2	-19.5	182.5	173.1	9.38	19.462		
2,200.0	2,189.4	2,189.4	2,189.4	5.8	4.8	168.28	-34.2	-19.5	193.9	184.1	9.84	19.710		

Cathedral Energy Services

Anticollision Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 22D-1
Project:	Garfield County, CO	TVD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Reference Site:	S1-T7S-R97W (Mesa E1 797)	MD Reference:	KB=20' @ 8349.0usft (Patterson #303)
Site Error:	0.0usft	North Reference:	True
Reference Well:	PUCKETT 22D-1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	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 22D-1
Coordinate System is US State Plane 1927 (Exact solution), Colorado Central 502
Grid Convergence at Surface is: -1.69°

