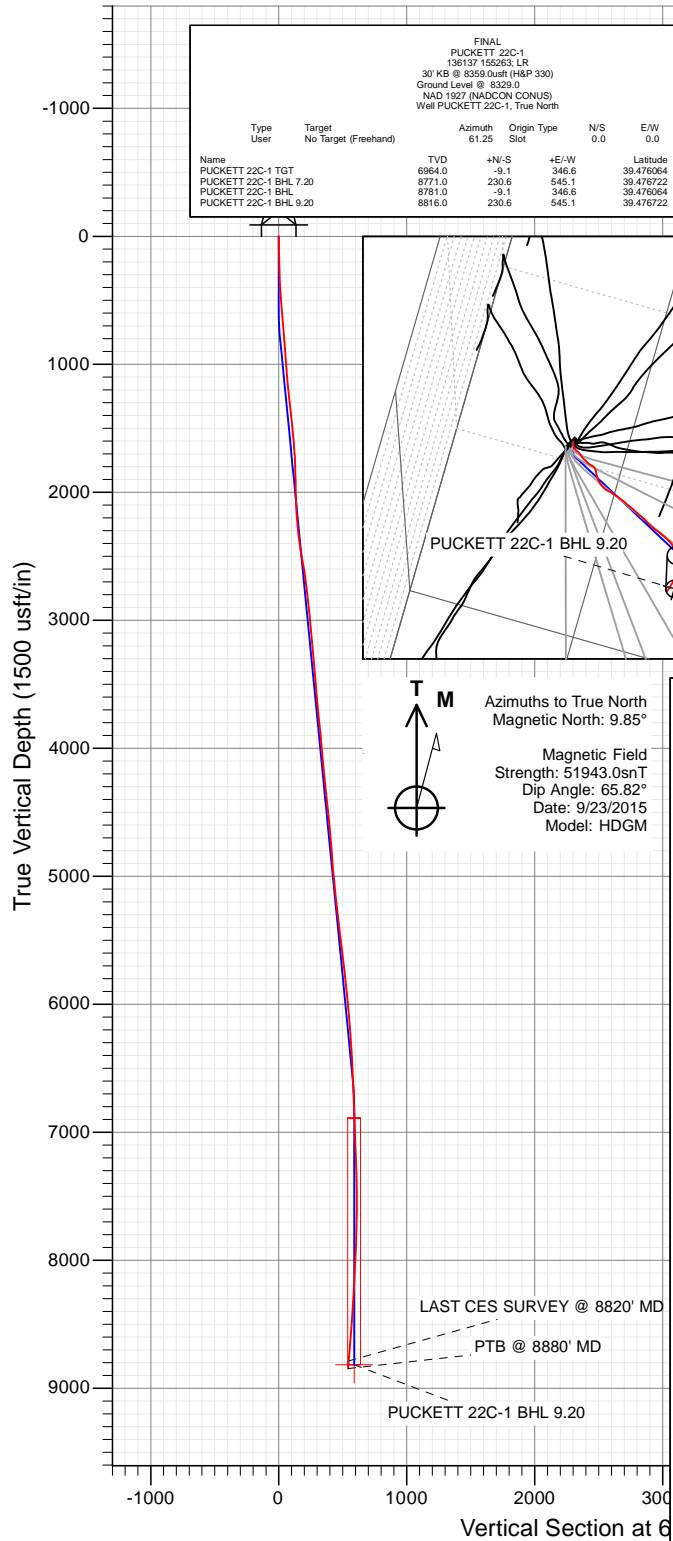
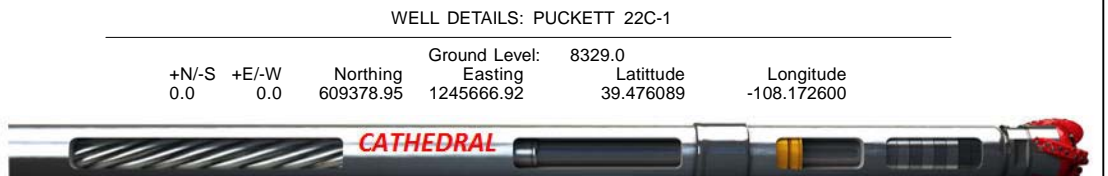
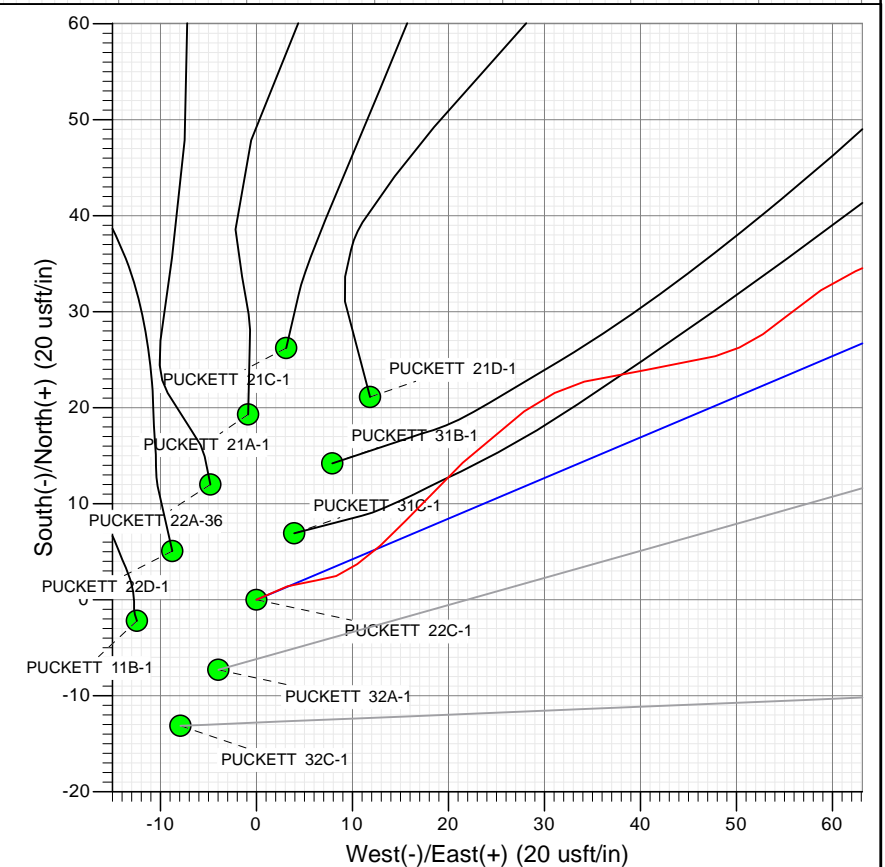
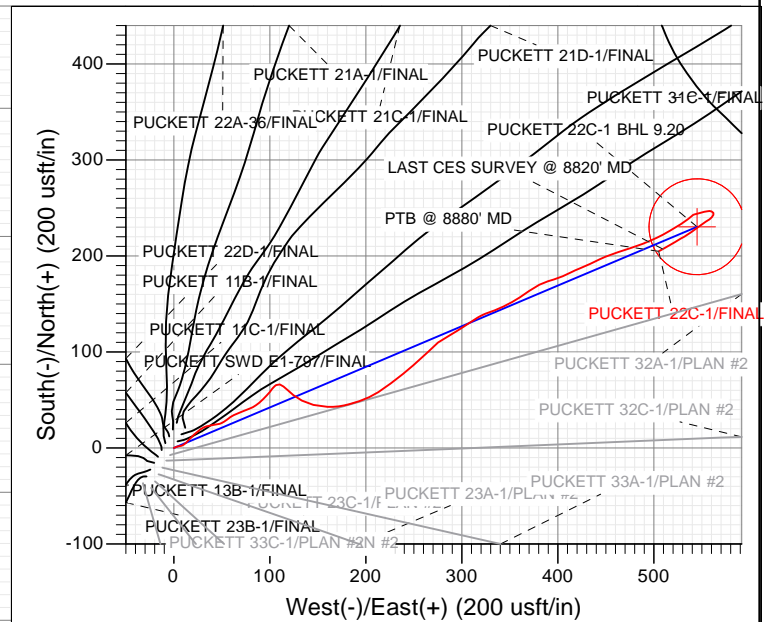
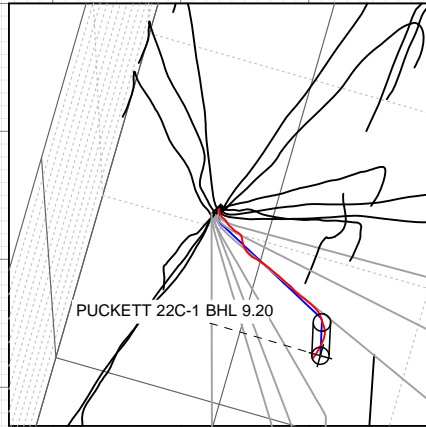




Project: Garfield County, CO  
 Site: S1-T7S-R97W (Mesa E1 797)  
 Well: PUCKETT 22C-1  
 Wellbore: OH  
 Design: FINAL



Type	Target	Origin	Type	N/S	E/W	From
FINAL	No Target (Freehand)	61.25	Slot	0.0	0.0	0.0
Name						
PUCKETT 22C-1 TGT		6964.0	+N/-S	+E/-W	Latitude	Longitude
PUCKETT 22C-1 BHL 7.20		8771.0	-9.1	346.6	39.476064	-108.171372
PUCKETT 22C-1 BHL 9.20		8781.0	-9.1	346.6	39.476064	-108.170669
PUCKETT 22C-1 BHL 9.20		8816.0	-9.1	346.6	39.476722	-108.170669



## Survey Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 22C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	30' KB @ 8359.0usft (H&P 330)
<b>Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	30' KB @ 8359.0usft (H&P 330)
<b>Well:</b>	PUCKETT 22C-1	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

<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 22C-1					
Well Position	+N/-S	0.0 usft	Northing:	609,378.95 usft	Latitude:	39.476089
	+E/-W	0.0 usft	Easting:	1,245,666.92 usft	Longitude:	-108.172600
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,329.0 usft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	9/23/2015	9.85	65.82	51,943

<b>Design</b>	FINAL				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<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	61.25	

<b>Survey Program</b>	<b>Date</b>	9/30/2015			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
225.0	8,880.0	Survey #1 (OH)	MWD+HDGM	OWSG MWD + HDGM	

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usf)</b>	<b>Build Rate (°/100u)</b>	<b>Formations / Comments</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
225.0	1.80	66.50	225.0	1.4	3.2	3.5	0.80	0.80		
316.0	2.30	87.80	315.9	2.0	6.4	6.6	0.99	0.55		
407.0	3.50	55.20	406.8	3.7	10.5	11.0	2.19	1.32		
499.0	5.10	43.20	498.5	8.3	15.6	17.7	1.99	1.74		
591.0	5.40	45.90	590.1	14.3	21.5	25.7	0.42	0.33		
685.0	4.80	54.70	683.8	19.6	27.9	33.9	1.05	-0.64		
780.0	3.80	75.10	778.5	22.7	34.2	40.9	1.91	-1.05		
874.0	4.20	83.10	872.3	24.0	40.6	47.1	0.73	0.43		
969.0	4.70	74.90	967.0	25.4	47.8	54.1	0.85	0.53		
1,064.0	5.80	49.40	1,061.6	29.5	55.2	62.6	2.69	1.16		
1,158.0	4.80	65.70	1,155.2	34.2	62.4	71.2	1.91	-1.06		
1,253.0	5.70	68.00	1,249.8	37.6	70.4	79.8	0.97	0.95		

## Survey Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 22C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	30' KB @ 8359.0usft (H&P 330)
<b>Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	30' KB @ 8359.0usft (H&P 330)
<b>Well:</b>	PUCKETT 22C-1	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

### Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
1,347.0	6.20	68.10	1,343.3	41.3	79.4	89.5	0.53	0.53	
1,442.0	7.30	50.10	1,437.7	47.1	88.8	100.5	2.50	1.16	
1,537.0	6.30	41.60	1,532.0	54.8	96.9	111.3	1.49	-1.05	
1,631.0	4.40	36.00	1,625.6	61.6	102.5	119.5	2.09	-2.02	
1,726.0	2.80	63.10	1,720.4	65.6	106.7	125.1	2.41	-1.68	
1,821.0	2.20	104.50	1,815.3	66.2	110.5	128.7	1.95	-0.63	
1,915.0	3.30	128.70	1,909.2	64.1	114.4	131.1	1.68	1.17	
2,010.0	3.90	134.30	2,004.0	60.1	118.8	133.1	0.73	0.63	
2,104.0	5.60	127.30	2,097.7	55.1	124.8	135.9	1.91	1.81	
2,199.0	7.10	119.10	2,192.1	49.4	133.6	140.9	1.84	1.58	
2,293.0	8.60	104.10	2,285.2	44.9	145.5	149.1	2.69	1.60	
2,388.0	9.40	92.50	2,379.1	42.8	160.1	161.0	2.08	0.84	
2,495.0	9.80	76.50	2,484.6	44.6	177.7	177.2	2.51	0.37	
2,592.0	10.10	71.70	2,580.1	49.2	193.8	193.5	0.91	0.31	
2,687.0	8.10	60.40	2,673.9	55.1	207.5	208.4	2.81	-2.11	
2,781.0	6.50	54.70	2,767.2	61.4	217.6	220.3	1.87	-1.70	
2,876.0	5.70	53.80	2,861.6	67.3	225.8	230.4	0.85	-0.84	
2,970.0	5.70	52.20	2,955.2	72.9	233.3	239.6	0.17	0.00	
3,065.0	5.50	50.90	3,049.7	78.7	240.5	248.7	0.25	-0.21	
3,160.0	5.50	49.00	3,144.3	84.6	247.5	257.7	0.19	0.00	
3,254.0	5.30	48.30	3,237.9	90.4	254.1	266.3	0.22	-0.21	
3,349.0	5.10	47.80	3,332.5	96.1	260.6	274.7	0.22	-0.21	
3,443.0	4.90	46.90	3,426.1	101.7	266.6	282.6	0.23	-0.21	
3,538.0	4.60	44.90	3,520.8	107.2	272.2	290.2	0.36	-0.32	
3,633.0	5.80	58.80	3,615.4	112.4	279.0	298.7	1.82	1.26	
3,727.0	5.50	59.90	3,708.9	117.1	287.0	307.9	0.34	-0.32	
3,822.0	5.60	57.30	3,803.5	121.9	294.8	317.1	0.28	0.11	
3,916.0	5.40	56.30	3,897.1	126.8	302.4	326.1	0.24	-0.21	
4,011.0	5.20	58.50	3,991.7	131.5	309.8	334.8	0.30	-0.21	
4,105.0	4.70	57.70	4,085.3	135.8	316.6	342.9	0.54	-0.53	
4,200.0	6.30	68.30	4,179.9	139.8	324.8	352.0	1.99	1.68	
4,295.0	6.00	68.60	4,274.3	143.6	334.2	362.1	0.32	-0.32	
4,389.0	6.30	64.70	4,367.8	147.6	343.5	372.1	0.55	0.32	
4,483.0	5.90	62.00	4,461.3	152.0	352.4	382.1	0.52	-0.43	
4,578.0	5.60	55.50	4,555.8	156.9	360.5	391.6	0.75	-0.32	
4,672.0	5.40	56.20	4,649.3	162.0	368.0	400.5	0.22	-0.21	
4,767.0	4.60	53.40	4,744.0	166.8	374.8	408.8	0.88	-0.84	
4,861.0	4.40	70.50	4,837.7	170.2	381.2	416.1	1.44	-0.21	
4,956.0	4.40	67.00	4,932.4	172.8	388.0	423.3	0.28	0.00	
5,050.0	5.90	73.30	5,026.0	175.6	395.9	431.6	1.70	1.60	
5,145.0	5.80	67.90	5,120.5	178.9	405.1	441.1	0.59	-0.11	
5,240.0	5.70	61.60	5,215.1	182.9	413.7	450.6	0.67	-0.11	
5,334.0	7.20	67.90	5,308.5	187.3	423.2	461.2	1.76	1.60	
5,429.0	6.80	65.60	5,402.8	191.9	433.9	472.7	0.51	-0.42	
5,523.0	6.60	62.70	5,496.1	196.7	443.7	483.6	0.42	-0.21	
5,618.0	7.20	72.00	5,590.4	201.0	454.2	494.9	1.33	0.63	
5,712.0	7.00	71.80	5,683.7	204.6	465.3	506.3	0.21	-0.21	
5,807.0	6.50	69.70	5,778.1	208.3	475.8	517.4	0.59	-0.53	
5,902.0	6.10	70.80	5,872.5	211.8	485.6	527.7	0.44	-0.42	
5,996.0	5.70	67.50	5,966.0	215.3	494.7	537.2	0.56	-0.43	
6,091.0	5.10	65.20	6,060.6	218.8	502.9	546.1	0.67	-0.63	
6,185.0	4.40	60.60	6,154.2	222.4	509.8	553.9	0.85	-0.74	
6,280.0	4.20	59.70	6,249.0	225.9	516.0	561.0	0.22	-0.21	

## Survey Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 22C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	30' KB @ 8359.0usft (H&P 330)
<b>Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	30' KB @ 8359.0usft (H&P 330)
<b>Well:</b>	PUCKETT 22C-1	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

### Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf	Build Rate (°/100u	Formations / Comments
6,374.0	3.60	60.00	6,342.7	229.1	521.5	567.4	0.64	-0.64	
6,469.0	3.10	57.40	6,437.6	232.0	526.2	573.0	0.55	-0.53	
6,564.0	2.50	55.10	6,532.5	234.6	530.1	577.6	0.64	-0.63	
6,658.0	2.40	55.10	6,626.4	236.9	533.4	581.6	0.11	-0.11	
6,753.0	2.30	56.50	6,721.3	239.1	536.6	585.5	0.12	-0.11	
6,847.0	1.60	35.30	6,815.3	241.2	539.0	588.5	1.06	-0.74	
6,942.0	1.80	63.60	6,910.2	242.9	541.1	591.2	0.90	0.21	
7,036.0	2.80	79.80	7,004.1	244.0	544.6	594.8	1.26	1.06	
7,131.0	2.50	71.90	7,099.0	245.0	548.9	599.1	0.50	-0.32	
7,226.0	2.20	75.90	7,194.0	246.1	552.6	602.9	0.36	-0.32	
7,320.0	1.60	85.60	7,287.9	246.7	555.7	605.8	0.72	-0.64	
7,415.0	1.30	86.40	7,382.9	246.8	558.1	608.0	0.32	-0.32	
7,509.0	1.60	111.70	7,476.8	246.4	560.4	609.8	0.74	0.32	
7,604.0	1.30	151.70	7,571.8	245.0	562.1	610.6	1.09	-0.32	
7,698.0	1.50	201.00	7,665.8	242.9	562.2	609.7	1.26	0.21	
7,793.0	2.00	223.90	7,760.7	240.5	560.6	607.2	0.89	0.53	
7,887.0	2.10	232.80	7,854.7	238.3	558.1	603.9	0.35	0.11	
7,982.0	2.20	240.30	7,949.6	236.3	555.1	600.4	0.31	0.11	
8,076.0	2.60	235.90	8,043.5	234.3	551.8	596.4	0.47	0.43	
8,171.0	3.00	233.20	8,138.4	231.6	548.0	591.8	0.44	0.42	
8,266.0	3.60	230.80	8,233.3	228.2	543.7	586.4	0.65	0.63	
8,360.0	3.60	237.20	8,327.1	224.7	538.9	580.6	0.43	0.00	
8,455.0	4.20	241.80	8,421.9	221.5	533.3	574.1	0.71	0.63	
8,549.0	3.70	235.70	8,515.6	218.1	527.8	567.7	0.69	-0.53	
8,644.0	4.60	240.70	8,610.4	214.5	522.0	560.8	1.02	0.95	
8,738.0	4.70	239.30	8,704.1	210.7	515.4	553.2	0.16	0.11	
8,820.0	4.80	241.10	8,785.8	207.3	509.5	546.4	0.22	0.12	LAST CES SURVEY @ 8820' MD
8,880.0	4.80	241.10	8,845.6	204.9	505.1	541.4	0.00	0.00	PTB @ 8880' MD

## Survey Report

<b>Company:</b>	Caerus Oil & Gas (NAD 27)	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 22C-1
<b>Project:</b>	Garfield County, CO	<b>TVD Reference:</b>	30' KB @ 8359.0usft (H&P 330)
<b>Site:</b>	S1-T7S-R97W (Mesa E1 797)	<b>MD Reference:</b>	30' KB @ 8359.0usft (H&P 330)
<b>Well:</b>	PUCKETT 22C-1	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
PUCKETT 22C-1 BHL 9	0.00	0.00	8,816.0	230.6	545.1	609,593.40	1,246,218.56	39.476722	-108.170669
- actual wellpath misses target center by 52.2usft at 8820.0usft MD (8785.8 TVD, 207.3 N, 509.5 E)									
- Circle (radius 50.0)									
PUCKETT 22C-1 BHL 7	0.00	0.00	8,771.0	230.6	545.1	609,593.40	1,246,218.56	39.476722	-108.170669
- actual wellpath misses target center by 41.2usft at 8801.7usft MD (8767.6 TVD, 208.1 N, 510.8 E)									
- Circle (radius 50.0)									
PUCKETT 22C-1 BHL	0.00	0.00	8,781.0	-9.1	346.6	609,359.66	1,246,013.15	39.476064	-108.171372
- actual wellpath misses target center by 270.9usft at 8820.0usft MD (8785.8 TVD, 207.3 N, 509.5 E)									
- Circle (radius 50.0)									
PUCKETT 22C-1 TGT	0.00	0.00	6,964.0	-9.1	346.6	609,359.66	1,246,013.15	39.476064	-108.171372
- actual wellpath misses target center by 319.8usft at 6985.5usft MD (6953.7 TVD, 243.5 N, 542.5 E)									
- Point									

Design Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S	+E/-W	Comment	
(usft)	(usft)	(usft)	(usft)		
8,820.0	8,785.8	207.3	509.5	LAST CES SURVEY @ 8820' MD	
8,880.0	8,845.6	204.9	505.1	PTB @ 8880' MD	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_