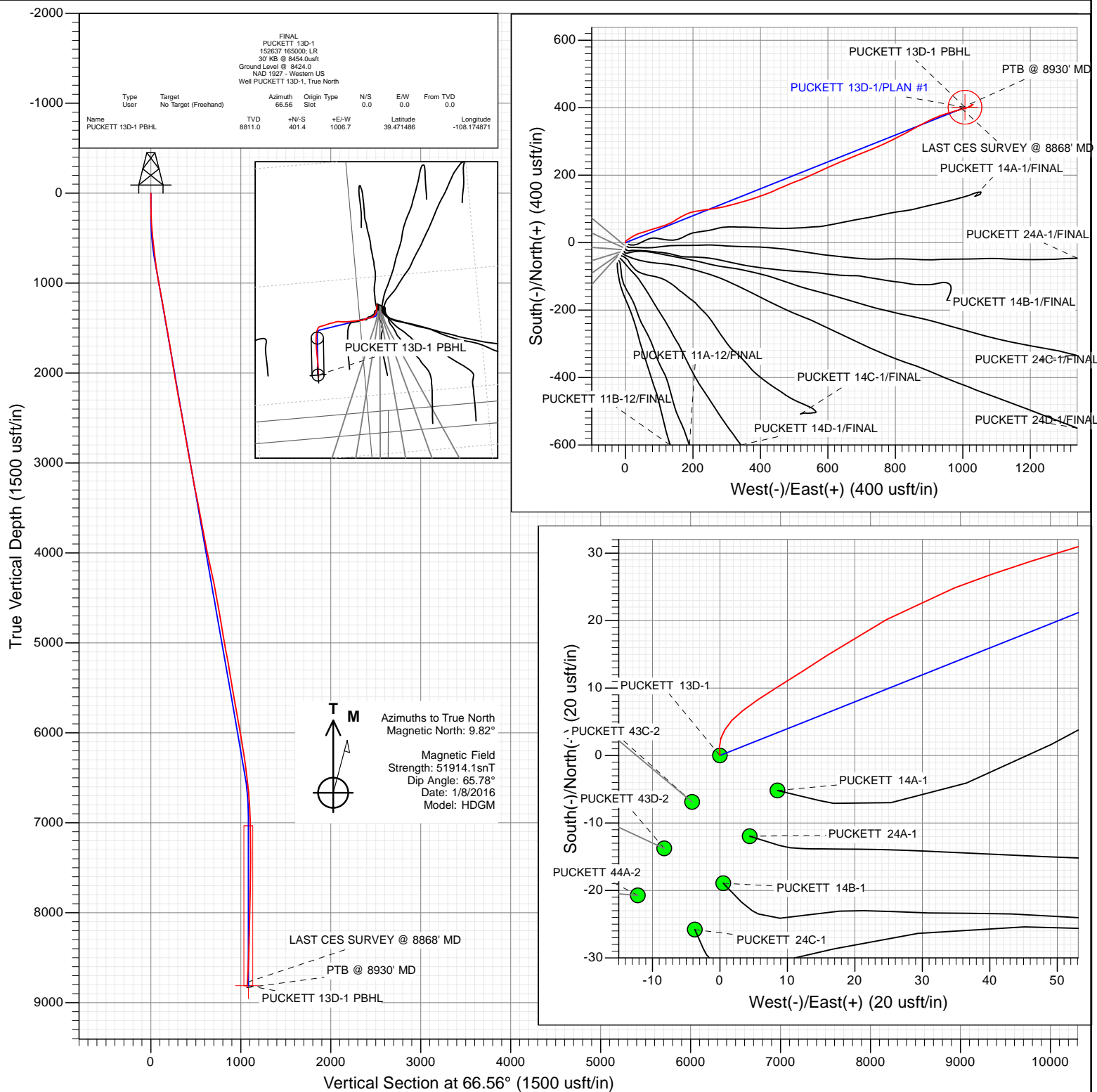




Project: Garfield County, CO (UTM 12N)
Site: S2-T7S-R97W (P2)
Well: PUCKETT 13D-1
Wellbore: OH
Design: FINAL



WELL DETAILS: PUCKETT 13D-1

Ground Level:	8424.0				
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	14345672.30	2436752.20	39.470385	-108.178436



Survey Report

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well PUCKETT 13D-1
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	30' KB @ 8454.0usft
Site:	S2-T7S-R97W (P2)	MD Reference:	30' KB @ 8454.0usft
Well:	PUCKETT 13D-1	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Project	Garfield County, CO (UTM 12N)		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		
Map Zone:	Zone 12N (114 W to 108 W)		

Site		S2-T7S-R97W (P2)			
Site Position:		Northing:	14,345,665.30 usft	Latitude:	39.470366
From:	Map	Easting:	2,436,748.30 usft	Longitude:	-108.178450
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.79 °

Well		PUCKETT 13D-1				
Well Position	+N/-S	0.0 usft	Northing:	14,345,672.30 usft	Latitude:	39.470385
	+E/-W	0.0 usft	Easting:	2,436,752.20 usft	Longitude:	-108.178436
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,424.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	1/8/2016	9.82	65.78	51,914

Design	FINAL				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	66.56	

Survey Program	Date	1/13/2016			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
136.0	8,930.0	Survey #1 (OH)	MWD+HDGM	OWSG MWD + HDGM	

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	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
136.0	1.20	358.50	136.0	1.4	0.0	0.5	0.88	0.88		
228.0	2.00	29.10	228.0	3.8	0.7	2.2	1.24	0.87		
320.0	3.00	52.20	319.9	6.7	3.4	5.8	1.52	1.09		
412.0	4.80	58.20	411.7	10.2	8.6	11.9	2.00	1.96		
505.0	6.10	56.70	504.2	14.9	16.0	20.6	1.41	1.40		
597.0	6.60	61.10	595.7	20.2	24.7	30.7	0.76	0.54		
692.0	6.80	68.70	690.0	24.9	34.7	41.8	0.96	0.21		
786.0	8.00	72.70	783.2	28.8	46.2	53.8	1.39	1.28		
881.0	9.10	73.30	877.2	32.9	59.7	67.9	1.16	1.16		
976.0	9.80	69.60	970.9	37.9	74.5	83.4	0.98	0.74		
1,070.0	10.00	72.30	1,063.5	43.2	89.7	99.5	0.54	0.21		
1,165.0	10.40	75.70	1,157.0	47.8	105.9	116.2	0.76	0.42		

Survey Report

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well PUCKETT 13D-1
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	30' KB @ 8454.0usft
Site:	S2-T7S-R97W (P2)	MD Reference:	30' KB @ 8454.0usft
Well:	PUCKETT 13D-1	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	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
1,259.0	11.00	69.10	1,249.4	53.1	122.5	133.5	1.45	0.64	
1,354.0	10.50	59.60	1,342.7	60.7	138.4	151.2	1.94	-0.53	
1,448.0	9.70	57.40	1,435.2	69.3	152.5	167.5	0.94	-0.85	
1,543.0	9.10	62.30	1,529.0	77.1	165.9	182.9	1.05	-0.63	
1,637.0	9.20	64.90	1,621.8	83.8	179.3	197.8	0.45	0.11	
1,732.0	9.10	72.90	1,715.6	89.2	193.3	212.9	1.34	-0.11	
1,826.0	9.10	79.30	1,808.4	92.8	207.7	227.5	1.08	0.00	
1,921.0	9.80	82.00	1,902.1	95.3	223.1	242.6	0.87	0.74	
2,016.0	10.20	82.90	1,995.7	97.5	239.5	258.5	0.45	0.42	
2,110.0	10.70	81.90	2,088.1	99.7	256.4	274.9	0.57	0.53	
2,205.0	10.40	79.70	2,181.5	102.5	273.5	291.7	0.53	-0.32	
2,299.0	10.30	76.20	2,274.0	106.0	290.1	308.3	0.68	-0.11	
2,393.0	10.50	75.90	2,366.4	110.1	306.5	325.0	0.22	0.21	
2,484.0	9.90	75.60	2,456.0	114.1	322.1	340.9	0.66	-0.66	
2,599.0	9.50	73.10	2,569.3	119.3	340.8	360.1	0.51	-0.35	
2,693.0	10.50	74.20	2,661.9	123.9	356.5	376.3	1.08	1.06	
2,788.0	10.10	72.90	2,755.4	128.7	372.8	393.2	0.49	-0.42	
2,882.0	10.50	71.20	2,847.9	133.9	388.7	409.9	0.53	0.43	
2,977.0	9.60	70.10	2,941.4	139.4	404.4	426.4	0.97	-0.95	
3,072.0	11.00	69.50	3,034.9	145.2	420.3	443.4	1.48	1.47	
3,167.0	10.10	66.40	3,128.3	151.7	436.4	460.8	1.12	-0.95	
3,261.0	10.30	64.70	3,220.8	158.6	451.6	477.4	0.38	0.21	
3,356.0	11.50	67.60	3,314.1	165.9	468.0	495.4	1.39	1.26	
3,450.0	11.40	66.20	3,406.2	173.2	485.2	514.0	0.31	-0.11	
3,545.0	11.00	69.50	3,499.4	180.1	502.3	532.5	0.80	-0.42	
3,639.0	10.00	68.60	3,591.8	186.3	518.3	549.6	1.08	-1.06	
3,734.0	11.00	67.20	3,685.2	192.8	534.3	566.9	1.09	1.05	
3,828.0	10.80	64.30	3,777.5	200.1	550.5	584.7	0.62	-0.21	
3,923.0	10.10	65.80	3,870.9	207.4	566.1	601.9	0.79	-0.74	
4,017.0	12.00	66.80	3,963.2	214.6	582.6	619.9	2.03	2.02	
4,112.0	12.20	64.80	4,056.1	222.7	600.8	639.8	0.49	0.21	
4,207.0	12.10	66.20	4,149.0	231.0	619.0	659.8	0.33	-0.11	
4,301.0	12.10	66.90	4,240.9	238.9	637.1	679.5	0.16	0.00	
4,395.0	11.40	66.90	4,332.9	246.4	654.7	698.7	0.74	-0.74	
4,490.0	10.90	67.10	4,426.1	253.6	671.6	717.0	0.53	-0.53	
4,584.0	10.40	68.60	4,518.5	260.1	687.7	734.4	0.61	-0.53	
4,679.0	10.40	68.70	4,611.9	266.4	703.6	751.5	0.02	0.00	
4,773.0	9.10	69.30	4,704.6	272.1	718.5	767.4	1.39	-1.38	
4,868.0	9.20	66.30	4,798.4	277.8	732.5	782.5	0.51	0.11	
4,963.0	9.50	66.10	4,892.1	284.0	746.6	798.0	0.32	0.32	
5,057.0	10.80	66.10	4,984.6	290.7	761.7	814.5	1.38	1.38	
5,152.0	10.70	64.70	5,078.0	298.1	777.9	832.2	0.29	-0.11	
5,246.0	9.70	64.60	5,170.5	305.2	792.9	848.9	1.06	-1.06	
5,341.0	10.00	62.20	5,264.1	312.5	807.4	865.1	0.54	0.32	
5,435.0	9.90	62.60	5,356.7	320.0	821.8	881.3	0.13	-0.11	
5,530.0	9.20	61.60	5,450.3	327.4	835.8	897.0	0.76	-0.74	
5,624.0	10.20	61.70	5,543.0	334.9	849.7	912.8	1.06	1.06	
5,719.0	10.10	60.80	5,636.5	343.0	864.4	929.5	0.20	-0.11	
5,814.0	9.80	60.80	5,730.1	351.0	878.7	945.8	0.32	-0.32	
5,908.0	10.10	63.90	5,822.7	358.5	893.1	962.0	0.65	0.32	
6,003.0	9.60	64.60	5,916.3	365.6	907.7	978.2	0.54	-0.53	
6,097.0	10.10	67.60	6,008.9	372.1	922.4	994.3	0.76	0.53	
6,192.0	9.90	71.30	6,102.4	377.9	937.9	1,010.8	0.71	-0.21	

Survey Report

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well PUCKETT 13D-1
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	30' KB @ 8454.0usft
Site:	S2-T7S-R97W (P2)	MD Reference:	30' KB @ 8454.0usft
Well:	PUCKETT 13D-1	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	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
6,286.0	9.30	72.30	6,195.1	382.8	952.7	1,026.4	0.66	-0.64	
6,381.0	8.20	72.90	6,289.0	387.1	966.5	1,040.8	1.16	-1.16	
6,476.0	7.60	74.70	6,383.1	390.7	979.1	1,053.7	0.68	-0.63	
6,570.0	6.90	74.30	6,476.4	393.9	990.5	1,065.5	0.75	-0.74	
6,665.0	6.00	77.10	6,570.8	396.6	1,000.8	1,076.0	1.00	-0.95	
6,759.0	5.00	69.20	6,664.3	399.1	1,009.5	1,084.9	1.33	-1.06	
6,854.0	4.80	66.70	6,759.0	402.2	1,017.0	1,093.0	0.31	-0.21	
6,948.0	3.20	64.00	6,852.7	404.9	1,022.9	1,099.6	1.71	-1.70	
7,043.0	1.40	46.70	6,947.7	406.8	1,026.2	1,103.3	2.01	-1.89	
7,138.0	0.90	49.80	7,042.6	408.1	1,027.6	1,105.1	0.53	-0.53	
7,232.0	0.80	59.10	7,136.6	408.9	1,028.7	1,106.5	0.18	-0.11	
7,327.0	0.50	75.20	7,231.6	409.4	1,029.7	1,107.5	0.37	-0.32	
7,421.0	0.20	79.40	7,325.6	409.5	1,030.2	1,108.1	0.32	-0.32	
7,516.0	0.30	273.00	7,420.6	409.5	1,030.2	1,108.1	0.52	0.11	
7,610.0	0.60	270.90	7,514.6	409.6	1,029.4	1,107.4	0.32	0.32	
7,705.0	0.70	243.60	7,609.6	409.3	1,028.4	1,106.4	0.34	0.11	
7,799.0	0.90	223.70	7,703.6	408.5	1,027.4	1,105.1	0.36	0.21	
7,894.0	1.40	226.30	7,798.6	407.2	1,026.0	1,103.3	0.53	0.53	
7,988.0	1.50	220.10	7,892.6	405.4	1,024.4	1,101.1	0.20	0.11	
8,083.0	1.50	226.40	7,987.5	403.6	1,022.7	1,098.9	0.17	0.00	
8,178.0	1.30	239.50	8,082.5	402.2	1,020.9	1,096.6	0.40	-0.21	
8,272.0	1.10	252.80	8,176.5	401.4	1,019.1	1,094.7	0.36	-0.21	
8,367.0	1.10	255.60	8,271.5	400.9	1,017.3	1,092.9	0.06	0.00	
8,461.0	1.60	265.40	8,365.4	400.6	1,015.2	1,090.7	0.58	0.53	
8,556.0	2.40	267.30	8,460.4	400.4	1,011.8	1,087.6	0.84	0.84	
8,650.0	3.00	265.10	8,554.3	400.1	1,007.4	1,083.4	0.65	0.64	
8,839.0	3.10	261.70	8,743.0	398.9	997.4	1,073.8	0.11	0.05	
8,868.0	3.20	259.40	8,772.0	398.7	995.9	1,072.3	0.56	0.34	LAST CES SURVEY @ 8868' MD
8,930.0	3.20	259.40	8,833.9	398.0	992.5	1,068.9	0.00	0.00	PTB @ 8930' MD

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PUCKETT 13D-1 PBHL	0.00	0.00	8,811.0	401.4	1,006.7	14,346,105.00	2,437,745.80	39.471486	-108.174871
- actual wellpath misses target center by 13.3usft at 8906.4usft MD (8810.3 TVD, 398.3 N, 993.8 E)									
- Circle (radius 50.0)									

Design Annotations

	Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
			+N/-S (usft)	+E/-W (usft)	
	8,868.0	8,772.0	398.7	995.9	LAST CES SURVEY @ 8868' MD
	8,930.0	8,833.9	398.0	992.5	PTB @ 8930' MD

Checked By: _____ Approved By: _____ Date: _____