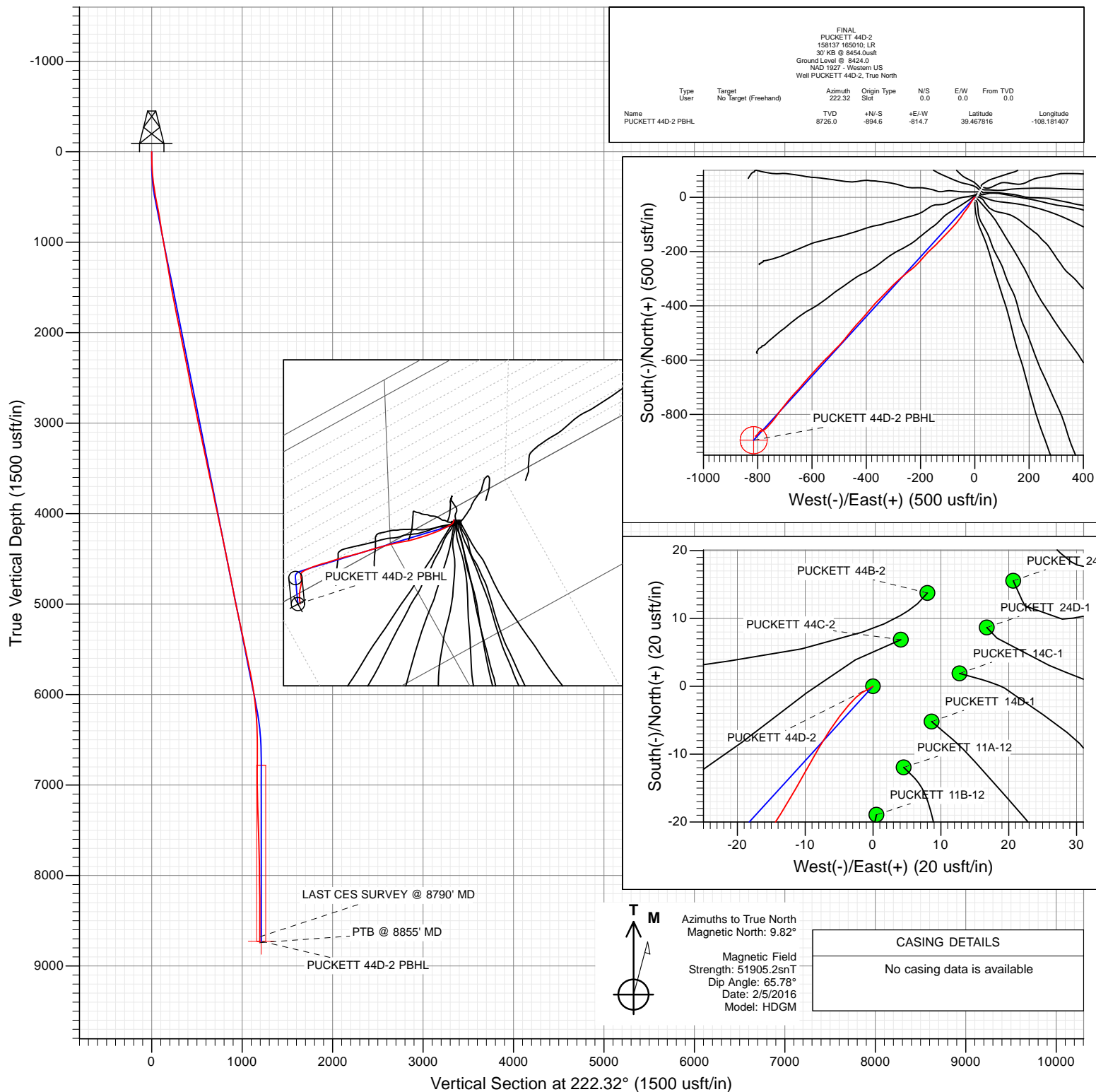




Project: Garfield County, CO (UTM 12N)  
 Site: S2-T7S-R97W (P2)  
 Well: PUCKETT 44D-2  
 Wellbore: OH  
 Design: FINAL



WELL DETAILS: PUCKETT 44D-2

Ground Level: 8424.0  
 +N/-S +E/-W Northing Easting Latitude Longitude  
 0.0 0.0 14345630.20 2436729.10 39.470271 -108.178522



## Survey Report

<b>Company:</b>	Caerus Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 44D-2
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>TVD Reference:</b>	30' KB @ 8454.0usft
<b>Site:</b>	S2-T7S-R97W (P2)	<b>MD Reference:</b>	30' KB @ 8454.0usft
<b>Well:</b>	PUCKETT 44D-2	<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 (UTM 12N)		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 - Western US		
<b>Map Zone:</b>	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 44D-2					
Well Position	+N/-S	0.0 usft	Northing:	14,345,630.20 usft	Latitude:	39.470271
	+E/-W	0.0 usft	Easting:	2,436,729.10 usft	Longitude:	-108.178522
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,424.0 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	2/5/2016	9.82	65.78	51,905

<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) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	222.32	

<b>Survey Program</b>	<b>Date</b>	2/16/2016			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
134.0	8,855.0	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		
134.0	1.60	239.89	134.0	-0.9	-1.6	1.8	1.19	1.19		
227.0	4.40	217.39	226.8	-4.4	-4.9	6.6	3.21	3.01		
318.0	6.70	208.50	317.4	-11.9	-9.6	15.2	2.69	2.53		
410.0	9.10	212.70	408.5	-22.7	-16.1	27.6	2.68	2.61		
503.0	10.40	212.90	500.2	-35.9	-24.6	43.1	1.40	1.40		
595.0	11.20	218.60	590.6	-49.9	-34.7	60.2	1.45	0.87		
690.0	10.10	213.50	683.9	-64.1	-45.0	77.7	1.52	-1.16		
785.0	9.40	214.90	777.6	-77.4	-54.1	93.6	0.78	-0.74		
879.0	9.30	217.20	870.3	-89.7	-63.0	108.8	0.41	-0.11		
974.0	9.30	222.60	964.1	-101.5	-72.9	124.1	0.92	0.00		
1,068.0	9.70	223.90	1,056.8	-112.8	-83.5	139.6	0.48	0.43		
1,163.0	10.70	224.50	1,150.3	-124.8	-95.2	156.4	1.06	1.05		

## Survey Report

<b>Company:</b>	Caerus Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 44D-2
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>TVD Reference:</b>	30' KB @ 8454.0usft
<b>Site:</b>	S2-T7S-R97W (P2)	<b>MD Reference:</b>	30' KB @ 8454.0usft
<b>Well:</b>	PUCKETT 44D-2	<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
1,258.0	10.20	224.50	1,243.7	-137.1	-107.3	173.6	0.53	-0.53	
1,352.0	9.40	222.50	1,336.3	-148.7	-118.3	189.6	0.92	-0.85	
1,446.0	9.20	224.00	1,429.1	-159.8	-128.8	204.8	0.33	-0.21	
1,541.0	10.20	225.20	1,522.7	-171.2	-140.0	220.8	1.07	1.05	
1,635.0	11.00	226.90	1,615.1	-183.2	-152.4	238.1	0.91	0.85	
1,730.0	11.30	225.60	1,708.3	-195.9	-165.7	256.4	0.41	0.32	
1,825.0	11.50	222.70	1,801.5	-209.3	-178.8	275.2	0.64	0.21	
1,919.0	11.50	221.10	1,893.6	-223.3	-191.3	293.9	0.34	0.00	
2,014.0	11.30	221.80	1,986.7	-237.4	-203.7	312.7	0.26	-0.21	
2,108.0	11.20	226.20	2,078.9	-250.5	-216.5	331.0	0.92	-0.11	
2,203.0	12.40	231.80	2,171.9	-263.2	-231.1	350.3	1.74	1.26	
2,297.0	11.40	230.70	2,263.9	-275.4	-246.3	369.4	1.09	-1.06	
2,392.0	10.90	230.60	2,357.1	-287.0	-260.5	387.6	0.53	-0.53	
2,485.0	10.70	228.70	2,448.4	-298.3	-273.7	404.9	0.44	-0.22	
2,596.0	10.30	226.40	2,557.6	-311.9	-288.7	425.0	0.52	-0.36	
2,690.0	12.30	226.90	2,649.7	-324.6	-302.1	443.4	2.13	2.13	
2,785.0	12.00	224.10	2,742.6	-338.6	-316.3	463.3	0.70	-0.32	
2,879.0	11.50	222.20	2,834.6	-352.5	-329.4	482.5	0.67	-0.53	
2,974.0	11.20	224.80	2,927.8	-366.1	-342.3	501.1	0.62	-0.32	
3,069.0	11.50	226.50	3,020.9	-379.2	-355.7	519.8	0.47	0.32	
3,163.0	12.60	220.70	3,112.9	-393.4	-369.1	539.4	1.74	1.17	
3,258.0	12.20	220.40	3,205.6	-408.9	-382.4	559.8	0.43	-0.42	
3,352.0	12.20	220.00	3,297.5	-424.1	-395.2	579.6	0.09	0.00	
3,447.0	11.30	220.70	3,390.5	-438.8	-407.7	599.0	0.96	-0.95	
3,542.0	12.20	222.20	3,483.5	-453.3	-420.6	618.3	1.00	0.95	
3,636.0	11.40	224.00	3,575.5	-467.3	-433.7	637.5	0.94	-0.85	
3,731.0	12.60	218.20	3,668.5	-482.2	-446.6	657.3	1.79	1.26	
3,825.0	12.00	220.40	3,760.3	-497.7	-459.3	677.3	0.81	-0.64	
3,920.0	11.30	217.20	3,853.4	-512.7	-471.3	696.4	1.00	-0.74	
4,014.0	12.50	222.20	3,945.3	-527.5	-483.7	715.7	1.68	1.28	
4,109.0	12.10	222.50	4,038.2	-542.5	-497.4	736.0	0.43	-0.42	
4,203.0	11.50	224.00	4,130.2	-556.5	-510.5	755.2	0.72	-0.64	
4,298.0	11.40	225.00	4,223.3	-570.0	-523.7	774.0	0.23	-0.11	
4,392.0	11.90	222.90	4,315.3	-583.6	-536.9	793.0	0.70	0.53	
4,487.0	11.30	224.20	4,408.4	-597.5	-550.1	812.1	0.69	-0.63	
4,581.0	12.10	226.40	4,500.5	-610.9	-563.6	831.1	0.97	0.85	
4,676.0	11.80	220.60	4,593.4	-625.1	-577.1	850.8	1.30	-0.32	
4,770.0	10.50	223.20	4,685.6	-638.7	-589.3	869.0	1.48	-1.38	
4,865.0	10.70	222.00	4,779.0	-651.5	-601.1	886.4	0.31	0.21	
4,959.0	10.90	221.30	4,871.3	-664.7	-612.8	904.0	0.25	0.21	
5,054.0	12.00	220.00	4,964.4	-679.0	-625.1	922.9	1.19	1.16	
5,149.0	11.30	221.50	5,057.5	-693.5	-637.6	942.1	0.80	-0.74	
5,243.0	12.60	221.60	5,149.4	-708.1	-650.5	961.5	1.38	1.38	
5,338.0	12.00	222.10	5,242.3	-723.2	-664.0	981.8	0.64	-0.63	
5,432.0	11.20	223.50	5,334.3	-737.0	-676.8	1,000.7	0.90	-0.85	
5,526.0	12.40	219.50	5,426.4	-751.5	-689.5	1,019.9	1.54	1.28	
5,621.0	12.50	217.10	5,519.1	-767.5	-702.2	1,040.3	0.55	0.11	
5,716.0	11.80	215.60	5,612.0	-783.6	-714.1	1,060.2	0.81	-0.74	
5,810.0	11.00	217.00	5,704.1	-798.6	-725.1	1,078.7	0.90	-0.85	
5,905.0	10.80	217.10	5,797.4	-812.9	-735.9	1,096.5	0.21	-0.21	
5,999.0	9.30	219.30	5,890.0	-825.8	-746.0	1,112.9	1.65	-1.60	
6,094.0	8.70	220.60	5,983.8	-837.2	-755.6	1,127.8	0.67	-0.63	
6,189.0	6.90	225.20	6,077.9	-846.7	-764.3	1,140.6	2.00	-1.89	

## Survey Report

<b>Company:</b>	Caerus Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 44D-2
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>TVD Reference:</b>	30' KB @ 8454.0usft
<b>Site:</b>	S2-T7S-R97W (P2)	<b>MD Reference:</b>	30' KB @ 8454.0usft
<b>Well:</b>	PUCKETT 44D-2	<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
6,283.0	5.40	231.70	6,171.4	-853.4	-771.8	1,150.6	1.76	-1.60	
6,378.0	3.90	245.60	6,266.1	-857.5	-778.2	1,158.0	1.96	-1.58	
6,472.0	2.70	240.50	6,359.9	-860.0	-783.1	1,163.1	1.31	-1.28	
6,567.0	1.70	244.70	6,454.8	-861.7	-786.3	1,166.5	1.07	-1.05	
6,661.0	0.90	307.80	6,548.8	-861.8	-788.1	1,167.8	1.62	-0.85	
6,756.0	0.60	354.80	6,643.8	-860.8	-788.8	1,167.6	0.69	-0.32	
6,851.0	0.70	24.10	6,738.8	-859.8	-788.6	1,166.7	0.36	0.11	
6,945.0	0.50	70.60	6,832.8	-859.2	-787.9	1,165.8	0.54	-0.21	
7,040.0	0.40	17.00	6,927.8	-858.7	-787.5	1,165.1	0.44	-0.11	
7,134.0	0.40	229.00	7,021.8	-858.6	-787.6	1,165.1	0.82	0.00	
7,229.0	2.20	223.30	7,116.8	-860.2	-789.1	1,167.3	1.90	1.89	
7,323.0	2.40	228.10	7,210.7	-862.8	-791.8	1,171.0	0.30	0.21	
7,418.0	2.10	226.30	7,305.6	-865.3	-794.5	1,174.8	0.32	-0.32	
7,607.0	1.50	216.90	7,494.5	-869.7	-798.5	1,180.7	0.35	-0.32	
7,796.0	1.10	211.20	7,683.5	-873.2	-801.0	1,184.9	0.22	-0.21	
7,985.0	1.30	226.30	7,872.4	-876.2	-803.5	1,188.8	0.20	0.11	
8,174.0	0.50	212.90	8,061.4	-878.4	-805.4	1,191.8	0.43	-0.42	
8,363.0	0.60	216.40	8,250.4	-879.9	-806.5	1,193.6	0.06	0.05	
8,552.0	0.20	2.80	8,439.4	-880.4	-807.1	1,194.3	0.41	-0.21	
8,790.0	0.30	291.10	8,677.4	-879.7	-807.6	1,194.2	0.13	0.04	LAST CES SURVEY @ 8790' MD
8,855.0	0.30	291.10	8,742.4	-879.6	-807.9	1,194.3	0.00	0.00	PTB @ 8855' MD

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PUCKETT 44D-2 PBHL	0.00	0.00	8,726.0	-894.6	-814.7	14,344,710.50	2,435,942.80	39.467816	-108.181407
- hit/miss target									
- Shape									
- actual wellpath misses target center by 16.5usft at 8838.6usft MD (8726.0 TVD, -879.6 N, -807.9 E)									
- Circle (radius 50.0)									

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
8,790.0	8,677.4	-879.7	-807.6	LAST CES SURVEY @ 8790' MD	
8,855.0	8,742.4	-879.6	-807.9	PTB @ 8855' MD	

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