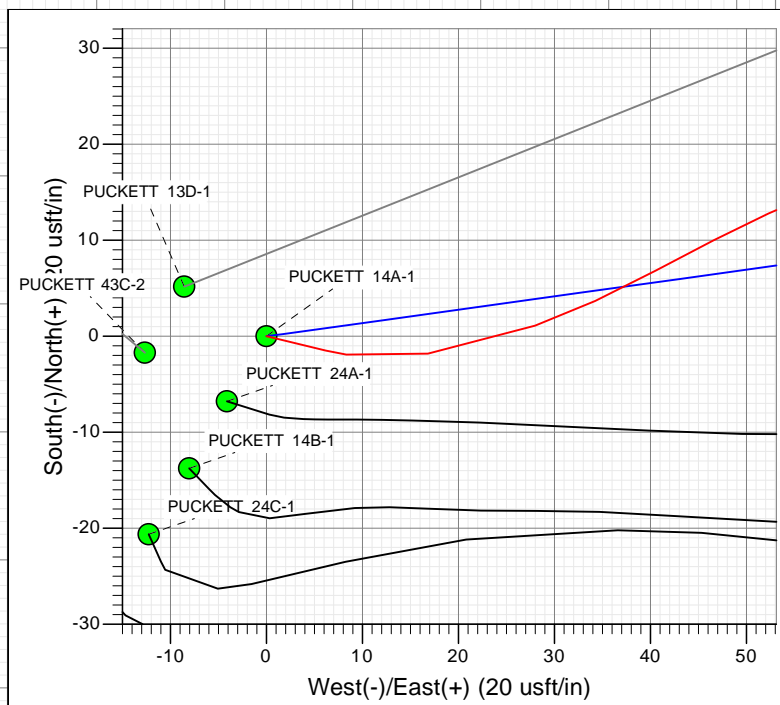
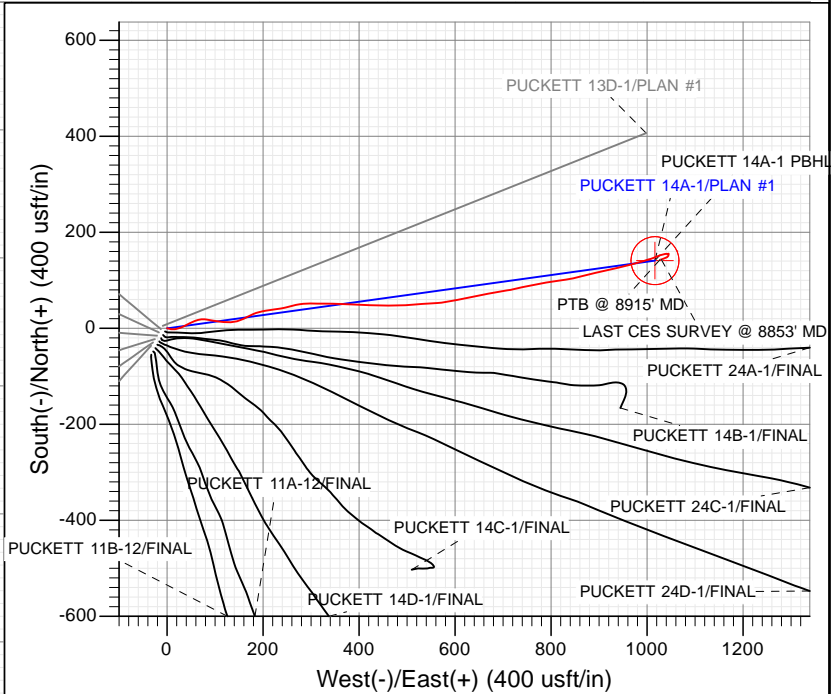
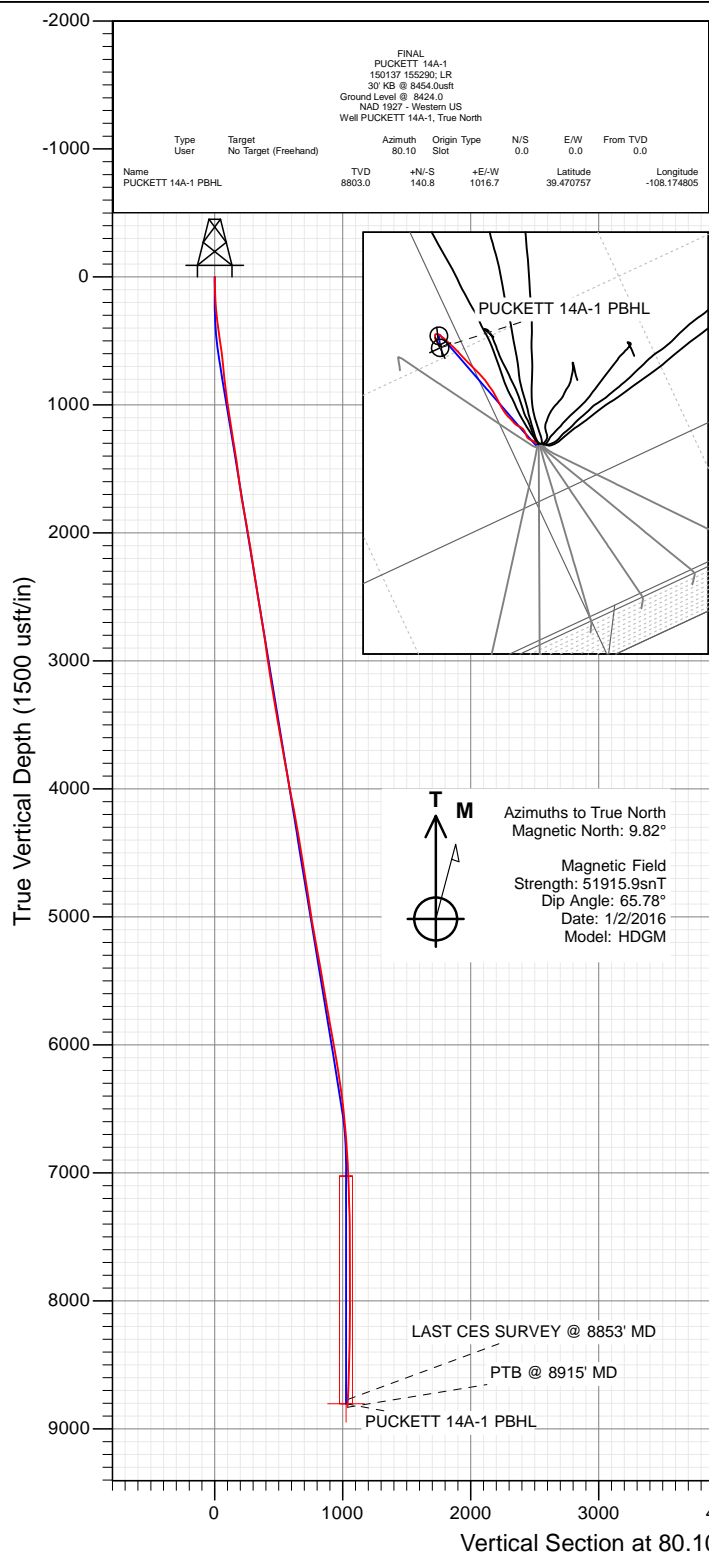




Project: Garfield County, CO (UTM 12N)  
 Site: S2-T7S-R97W (P2)  
 Well: PUCKETT 14A-1  
 Wellbore: OH  
 Design: FINAL



WELL DETAILS: PUCKETT 14A-1

Ground Level: 8424.0  
 +N/-S 0.0 +E/-W 0.0 Northing 14345667.40 Easting 2436760.90 Latitude 39.470370 Longitude -108.178405



## Survey Report

<b>Company:</b>	Caerus Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 14A-1
<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 14A-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 (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 14A-1					
Well Position	+N/-S	0.0 usft	Northing:	14,345,667.40 usft	Latitude:	39.470370
	+E/-W	0.0 usft	Easting:	2,436,760.90 usft	Longitude:	-108.178405
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	1/2/2016	9.82	65.78	51,916

<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	80.10	

<b>Survey Program</b>	<b>Date</b>	1/7/2016			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
197.0	8,915.0	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		
197.0	3.70	103.50	196.9	-1.5	6.2	5.8	1.88	1.88		
228.0	4.40	98.90	227.8	-1.9	8.3	7.9	2.49	2.26		
320.0	6.30	82.70	319.4	-1.8	16.8	16.3	2.62	2.07		
412.0	8.20	69.80	410.7	1.1	28.0	27.8	2.71	2.07		
505.0	8.90	61.50	502.6	6.8	40.5	41.1	1.52	0.75		
597.0	7.60	65.00	593.7	12.8	52.3	53.7	1.51	-1.41		
692.0	6.50	72.60	688.0	17.1	63.1	65.1	1.52	-1.16		
786.0	5.80	88.50	781.4	18.8	73.0	75.1	1.95	-0.74		
881.0	6.90	98.70	875.8	18.0	83.4	85.3	1.65	1.16		
976.0	7.80	99.30	970.1	16.1	95.4	96.8	0.95	0.95		
1,070.0	9.00	98.40	1,063.0	14.0	109.0	109.8	1.28	1.28		
1,165.0	9.90	92.80	1,156.8	12.5	124.5	124.8	1.35	0.95		

## Survey Report

<b>Company:</b>	Caerus Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 14A-1
<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 14A-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
1,259.0	9.70	80.10	1,249.4	13.5	140.4	140.6	2.30	-0.21	
1,354.0	9.10	66.00	1,343.1	17.9	155.1	155.9	2.50	-0.63	
1,448.0	8.20	61.60	1,436.1	24.1	167.8	169.4	1.19	-0.96	
1,543.0	7.90	67.40	1,530.1	29.9	179.8	182.2	0.91	-0.32	
1,637.0	8.20	76.00	1,623.2	34.0	192.2	195.2	1.32	0.32	
1,732.0	9.10	81.90	1,717.1	36.7	206.3	209.5	1.33	0.95	
1,826.0	9.90	81.40	1,809.8	38.9	221.6	225.0	0.86	0.85	
1,921.0	10.30	80.60	1,903.4	41.5	238.1	241.7	0.45	0.42	
2,016.0	9.50	75.10	1,996.9	44.9	254.0	258.0	1.30	-0.84	
2,110.0	9.10	76.50	2,089.7	48.7	268.7	273.1	0.49	-0.43	
2,205.0	9.20	84.70	2,183.5	51.1	283.6	288.2	1.38	0.11	
2,299.0	9.50	90.40	2,276.3	51.8	298.8	303.3	1.04	0.32	
2,393.0	8.30	91.10	2,369.1	51.6	313.4	317.6	1.28	-1.28	
2,484.0	8.90	90.50	2,459.1	51.4	327.0	331.0	0.67	0.66	
2,599.0	9.80	91.80	2,572.6	51.0	345.7	349.3	0.80	0.78	
2,693.0	9.00	89.80	2,665.3	50.8	361.0	364.4	0.92	-0.85	
2,788.0	9.50	93.10	2,759.1	50.4	376.3	379.3	0.77	0.53	
2,883.0	9.40	93.80	2,852.8	49.5	391.9	394.5	0.16	-0.11	
2,977.0	8.10	90.30	2,945.7	48.9	406.1	408.5	1.49	-1.38	
3,167.0	8.80	93.40	3,133.6	48.0	434.0	435.8	0.44	0.37	
3,261.0	9.80	91.30	3,226.4	47.4	449.2	450.7	1.12	1.06	
3,356.0	9.60	89.20	3,320.0	47.3	465.2	466.4	0.43	-0.21	
3,450.0	9.10	88.00	3,412.8	47.7	480.5	481.5	0.57	-0.53	
3,545.0	10.70	87.10	3,506.4	48.4	496.8	497.7	1.69	1.68	
3,639.0	10.50	86.20	3,598.8	49.4	514.1	514.9	0.28	-0.21	
3,734.0	10.20	86.30	3,692.2	50.5	531.1	531.9	0.32	-0.32	
3,828.0	10.20	86.10	3,784.7	51.6	547.7	548.4	0.04	0.00	
3,923.0	9.40	86.20	3,878.3	52.7	563.8	564.5	0.84	-0.84	
4,018.0	11.00	80.90	3,971.8	54.6	580.5	581.3	1.95	1.68	
4,112.0	11.00	78.90	4,064.1	57.8	598.2	599.2	0.41	0.00	
4,207.0	10.50	76.80	4,157.5	61.5	615.5	616.9	0.67	-0.53	
4,301.0	10.40	79.50	4,249.9	65.0	632.2	633.9	0.53	-0.11	
4,396.0	9.60	80.30	4,343.4	67.9	648.4	650.4	0.85	-0.84	
4,490.0	9.40	78.60	4,436.2	70.7	663.7	665.9	0.37	-0.21	
4,584.0	8.90	78.50	4,529.0	73.7	678.3	680.9	0.53	-0.53	
4,679.0	9.80	79.50	4,622.7	76.6	693.5	696.3	0.96	0.95	
4,773.0	8.80	83.20	4,715.5	79.0	708.5	711.5	1.24	-1.06	
4,868.0	8.90	75.80	4,809.3	81.6	722.8	726.1	1.20	0.11	
4,963.0	7.90	78.50	4,903.3	84.7	736.3	739.9	1.13	-1.05	
5,057.0	8.60	77.40	4,996.3	87.5	749.5	753.4	0.76	0.74	
5,152.0	10.40	78.90	5,090.0	90.7	764.9	769.1	1.91	1.89	
5,247.0	10.50	79.60	5,183.5	94.0	781.8	786.3	0.17	0.11	
5,341.0	10.40	81.80	5,275.9	96.7	798.6	803.4	0.44	-0.11	
5,435.0	10.00	82.40	5,368.4	99.0	815.1	820.0	0.44	-0.43	
5,530.0	9.30	80.90	5,462.1	101.3	830.9	835.9	0.78	-0.74	
5,624.0	10.10	77.00	5,554.7	104.4	846.4	851.7	1.10	0.85	
5,719.0	9.70	76.90	5,648.3	108.1	862.3	868.0	0.42	-0.42	
5,814.0	9.10	74.90	5,742.0	111.8	877.4	883.5	0.72	-0.63	
5,908.0	10.60	78.00	5,834.6	115.6	893.0	899.6	1.69	1.60	
6,003.0	10.50	77.30	5,928.0	119.3	910.0	916.9	0.17	-0.11	
6,097.0	10.20	76.00	6,020.5	123.2	926.4	933.8	0.40	-0.32	
6,192.0	9.40	77.60	6,114.1	126.9	942.2	949.9	0.89	-0.84	
6,286.0	8.80	76.20	6,206.9	130.2	956.6	964.8	0.68	-0.64	

## Survey Report

<b>Company:</b>	Caerus Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 14A-1
<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 14A-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
6,381.0	8.00	74.40	6,300.9	133.8	970.1	978.6	0.89	-0.84	
6,476.0	7.30	74.20	6,395.1	137.2	982.2	991.2	0.74	-0.74	
6,570.0	6.60	73.20	6,488.4	140.4	993.1	1,002.5	0.76	-0.74	
6,665.0	5.70	72.20	6,582.8	143.4	1,002.9	1,012.6	0.95	-0.95	
6,759.0	5.50	72.30	6,676.4	146.2	1,011.6	1,021.7	0.21	-0.21	
6,854.0	3.70	69.90	6,771.1	148.6	1,018.8	1,029.2	1.91	-1.89	
6,948.0	3.30	69.50	6,864.9	150.6	1,024.2	1,034.8	0.43	-0.43	
7,043.0	2.80	68.50	6,959.8	152.4	1,028.9	1,039.8	0.53	-0.53	
7,138.0	2.60	76.40	7,054.7	153.8	1,033.2	1,044.2	0.44	-0.21	
7,232.0	2.00	83.00	7,148.6	154.5	1,036.9	1,048.0	0.70	-0.64	
7,327.0	1.40	82.70	7,243.5	154.8	1,039.7	1,050.8	0.63	-0.63	
7,421.0	1.20	87.30	7,337.5	155.0	1,041.8	1,052.9	0.24	-0.21	
7,516.0	0.60	82.60	7,432.5	155.1	1,043.3	1,054.4	0.64	-0.63	
7,610.0	0.40	96.00	7,526.5	155.2	1,044.1	1,055.2	0.25	-0.21	
7,705.0	0.30	76.30	7,621.5	155.2	1,044.7	1,055.8	0.16	-0.11	
7,799.0	0.20	63.00	7,715.5	155.3	1,045.1	1,056.2	0.12	-0.11	
7,894.0	0.10	170.90	7,810.5	155.3	1,045.2	1,056.4	0.26	-0.11	
7,988.0	0.20	207.00	7,904.5	155.1	1,045.2	1,056.3	0.14	0.11	
8,083.0	0.40	174.90	7,999.5	154.6	1,045.1	1,056.1	0.27	0.21	
8,178.0	0.70	184.80	8,094.5	153.7	1,045.1	1,056.0	0.33	0.32	
8,272.0	1.00	197.00	8,188.5	152.3	1,044.8	1,055.4	0.37	0.32	
8,367.0	1.10	204.10	8,283.5	150.7	1,044.2	1,054.5	0.17	0.11	
8,461.0	1.30	223.30	8,377.5	149.1	1,043.1	1,053.2	0.47	0.21	
8,556.0	1.80	243.50	8,472.4	147.7	1,041.0	1,050.9	0.77	0.53	
8,650.0	2.30	249.60	8,566.4	146.3	1,037.9	1,047.6	0.58	0.53	
8,745.0	2.50	248.00	8,661.3	144.9	1,034.2	1,043.7	0.22	0.21	
8,853.0	2.50	254.10	8,769.2	143.4	1,029.8	1,039.1	0.25	0.00	LAST CES SURVEY @ 8853' MD
8,915.0	2.50	254.10	8,831.1	142.6	1,027.2	1,036.4	0.00	0.00	PTB @ 8915' MD

### Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PUCKETT 14A-1 PBHL	0.00	0.00	8,803.0	140.8	1,016.7	14,345,840.00	2,437,772.70	39.470757	-108.174805
- hit/miss target									
- Shape									
- actual wellpath misses target center by 11.8usft at 8887.4usft MD (8803.5 TVD, 143.0 N, 1028.3 E)									
- Circle (radius 50.0)									

### Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,853.0	8,769.2	143.4	1,029.8	LAST CES SURVEY @ 8853' MD
8,915.0	8,831.1	142.6	1,027.2	PTB @ 8915' MD

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