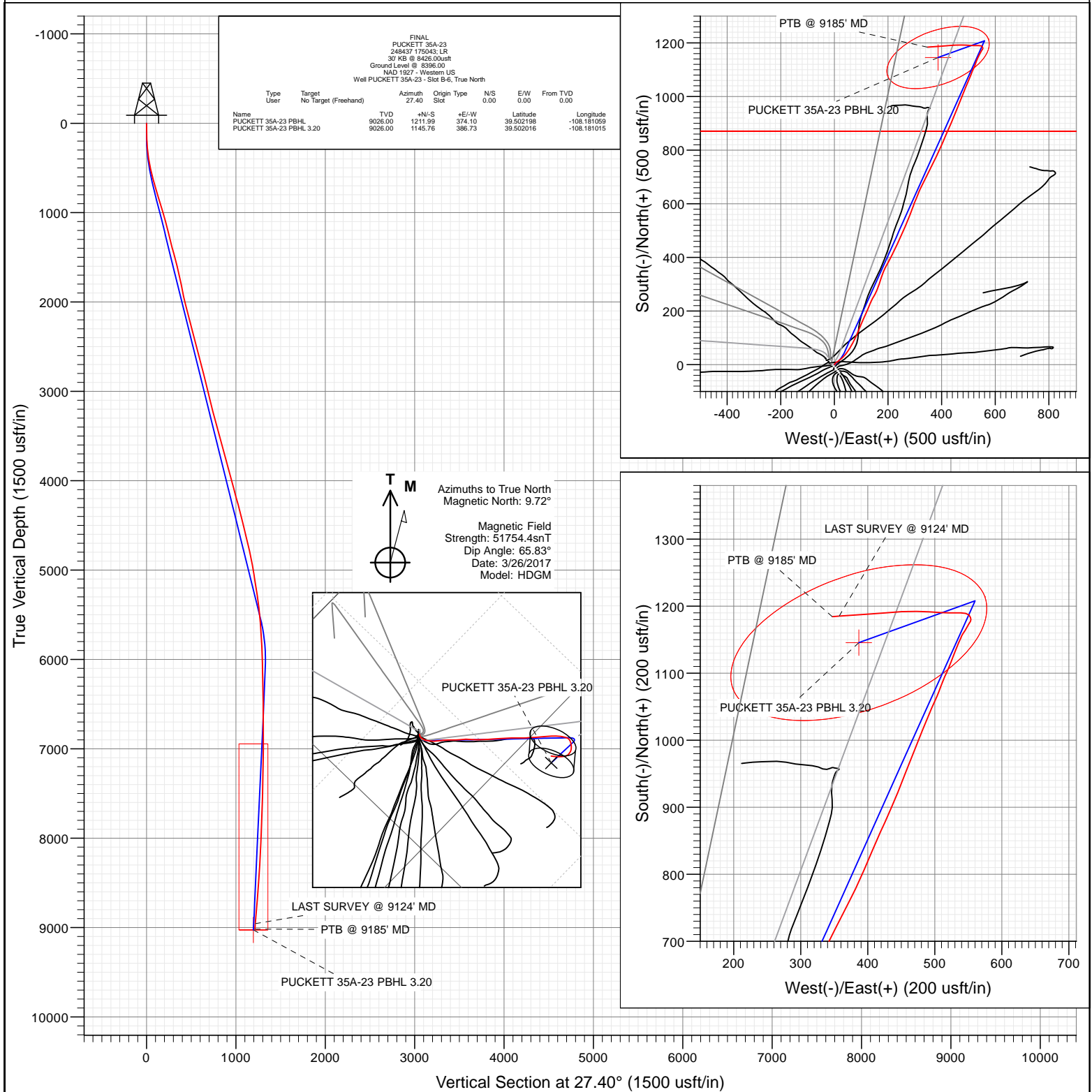




Project: Garfield County, CO (UTM 12N)  
Site: S26-T6S-R97W (697 26A)  
Well: PUCKETT 35A-23  
Wellbore: OH  
Design: FINAL



WELL DETAILS: PUCKETT 35A-23

+N/-S	+E/-W	Northing	Ground Level:	8396.00	Latitude	Longitude
0.00	0.00	14356011.90	Easting	2435312.81	39.498871	-108.182385

B-6



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Caerus Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 35A-23 - Slot B-6
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>TVD Reference:</b>	30' KB @ 8426.00usft
<b>Site:</b>	S26-T6S-R97W (697 26A)	<b>MD Reference:</b>	30' KB @ 8426.00usft
<b>Well:</b>	PUCKETT 35A-23	<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)		

<b>Site</b>	S26-T6S-R97W (697 26A)		
<b>Site Position:</b>		<b>Northing:</b>	14,356,905.20 usft
<b>From:</b>	Map	<b>Easting:</b>	2,433,730.50 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16"
		<b>Latitude:</b>	39.501458
		<b>Longitude:</b>	-108.187888
		<b>Grid Convergence:</b>	1.79 °

Well	PUCKETT 35A-23 - Slot B-6					
Well Position	+N/-S	0.00 usft	Northing:	14,356,011.90 usft	Latitude:	39.498871
	+E/-W	0.00 usft	Easting:	2,435,312.81 usft	Longitude:	-108.182385
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	8,396.00 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	3/26/2017	9.72	65.83	51,754

<b>Design</b>	FINAL				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>	
	(usft)	(usft)	(usft)	(°)	
	0.00	0.00	0.00	27.40	

<b>Survey Program</b>	<b>Date</b>	3/31/2017			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
179.00	9,185.00	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>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
179.00	1.98	36.70	178.96	2.48	1.85	3.05	1.11	1.11		
210.00	2.81	28.00	209.94	3.58	2.53	4.34	2.92	2.68		
240.00	4.04	43.65	239.88	4.99	3.60	6.09	5.11	4.10		
271.00	5.36	48.83	270.78	6.74	5.44	8.49	4.47	4.26		
301.00	6.59	54.90	300.62	8.65	7.91	11.32	4.60	4.10		
393.00	9.32	53.40	391.72	16.13	18.21	22.70	2.98	2.97		
485.00	11.95	45.67	482.14	27.23	31.01	38.44	3.25	2.86		
576.00	14.46	37.23	570.73	42.86	44.62	58.59	3.47	2.76		
670.00	15.65	31.96	661.51	62.96	58.43	82.79	1.93	1.27		
765.00	16.30	27.21	752.84	85.69	71.31	108.90	1.54	0.68		
859.00	16.96	23.96	842.91	109.95	82.91	135.78	1.21	0.70		
954.00	16.48	21.23	933.90	135.18	93.42	163.00	0.97	-0.51		

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Caerus Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 35A-23 - Slot B-6
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>TVD Reference:</b>	30' KB @ 8426.00usft
<b>Site:</b>	S26-T6S-R97W (697 26A)	<b>MD Reference:</b>	30' KB @ 8426.00usft
<b>Well:</b>	PUCKETT 35A-23	<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
1,048.00	16.57	24.13	1,024.02	159.84	103.73	189.64	0.88	0.10	
1,143.00	15.60	25.45	1,115.30	183.74	114.76	215.93	1.09	-1.02	
1,237.00	14.28	21.76	1,206.12	205.92	124.49	240.10	1.73	-1.40	
1,332.00	13.45	22.82	1,298.35	226.98	133.11	262.78	0.91	-0.87	
1,426.00	14.37	28.44	1,389.60	247.32	142.91	285.34	1.74	0.98	
1,521.00	15.34	26.95	1,481.42	268.89	154.22	309.69	1.10	1.02	
1,616.00	15.07	20.09	1,573.10	291.69	164.16	334.51	1.91	-0.28	
1,710.00	13.18	16.22	1,664.26	313.46	171.35	357.15	2.25	-2.01	
1,805.00	11.51	19.65	1,757.06	332.78	177.56	377.16	1.92	-1.76	
1,899.00	11.38	24.57	1,849.19	350.05	184.57	395.72	1.05	-0.14	
1,994.00	12.66	28.35	1,942.11	367.74	193.41	415.49	1.58	1.35	
2,089.00	13.89	27.47	2,034.57	387.02	203.62	437.30	1.31	1.29	
2,183.00	14.94	27.12	2,125.61	407.81	214.35	460.70	1.12	1.12	
2,278.00	14.90	26.77	2,217.41	429.62	225.43	485.16	0.10	-0.04	
2,373.00	14.15	23.61	2,309.37	451.16	235.58	508.96	1.15	-0.79	
2,467.00	14.19	23.61	2,400.51	472.25	244.80	531.92	0.04	0.04	
2,604.00	15.51	25.10	2,532.93	504.22	259.29	566.98	1.00	0.96	
2,698.00	14.33	22.11	2,623.76	526.38	269.00	591.13	1.50	-1.26	
2,793.00	14.68	21.67	2,715.74	548.46	277.87	614.81	0.39	0.37	
2,887.00	14.46	21.59	2,806.71	570.44	286.59	638.34	0.24	-0.23	
2,982.00	13.32	19.56	2,898.93	591.78	294.62	660.98	1.30	-1.20	
3,076.00	14.15	22.64	2,990.25	612.59	302.67	683.16	1.18	0.88	
3,171.00	13.54	21.15	3,082.49	633.68	311.15	705.78	0.74	-0.64	
3,265.00	14.02	25.01	3,173.78	654.26	319.93	728.10	1.10	0.51	
3,359.00	15.12	26.33	3,264.76	675.57	330.19	751.73	1.22	1.17	
3,454.00	15.29	26.16	3,356.43	697.92	341.20	776.64	0.18	0.18	
3,548.00	15.34	26.77	3,447.10	720.14	352.27	801.47	0.18	0.05	
3,643.00	15.47	27.03	3,538.68	742.65	363.69	826.70	0.15	0.14	
3,737.00	15.43	27.56	3,629.29	764.90	375.17	851.74	0.16	-0.04	
3,831.00	15.07	23.70	3,719.98	787.18	385.87	876.44	1.15	-0.38	
3,926.00	14.85	23.61	3,811.76	809.64	395.71	900.91	0.23	-0.23	
4,020.00	15.03	23.43	3,902.58	831.86	405.38	925.09	0.20	0.19	
4,115.00	15.16	23.96	3,994.30	854.51	415.32	949.78	0.20	0.14	
4,209.00	15.47	24.40	4,084.96	877.16	425.49	974.57	0.35	0.33	
4,304.00	14.94	22.82	4,176.64	899.99	435.47	999.43	0.71	-0.56	
4,398.00	14.99	22.55	4,267.45	922.39	444.84	1,023.62	0.09	0.05	
4,493.00	14.63	21.85	4,359.29	944.87	454.01	1,047.80	0.42	-0.38	
4,587.00	14.33	20.18	4,450.31	966.80	462.44	1,071.16	0.55	-0.32	
4,682.00	13.36	22.73	4,542.55	987.96	470.74	1,093.76	1.21	-1.02	
4,776.00	13.40	22.46	4,634.00	1,008.05	479.10	1,115.44	0.08	0.04	
4,871.00	13.45	21.59	4,726.40	1,028.49	487.37	1,137.40	0.22	0.05	
4,965.00	12.61	23.61	4,817.98	1,048.06	495.50	1,158.51	1.02	-0.89	
5,060.00	10.68	24.31	4,911.02	1,065.59	503.28	1,177.65	2.04	-2.03	
5,154.00	9.45	18.86	5,003.57	1,080.83	509.36	1,193.98	1.65	-1.31	
5,249.00	9.14	24.13	5,097.33	1,095.09	514.96	1,209.23	0.95	-0.33	
5,344.00	9.27	23.70	5,191.10	1,108.99	521.12	1,224.40	0.15	0.14	
5,438.00	8.17	19.39	5,284.02	1,122.22	526.39	1,238.57	1.36	-1.17	
5,533.00	7.12	22.73	5,378.17	1,134.02	530.90	1,251.12	1.20	-1.11	
5,627.00	5.93	23.17	5,471.56	1,143.85	535.06	1,261.77	1.27	-1.27	
5,722.00	5.14	23.43	5,566.12	1,152.27	538.69	1,270.91	0.83	-0.83	
5,816.00	4.31	30.55	5,659.80	1,159.18	542.16	1,278.63	1.08	-0.88	
5,911.00	2.59	36.88	5,754.62	1,163.97	545.26	1,284.32	1.85	-1.81	
6,005.00	2.46	31.61	5,848.53	1,167.39	547.59	1,288.42	0.28	-0.14	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Caerus Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 35A-23 - Slot B-6
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>TVD Reference:</b>	30' KB @ 8426.00usft
<b>Site:</b>	S26-T6S-R97W (697 26A)	<b>MD Reference:</b>	30' KB @ 8426.00usft
<b>Well:</b>	PUCKETT 35A-23	<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
6,100.00	2.20	22.82	5,943.45	1,170.80	549.37	1,292.27	0.46	-0.27	
6,194.00	1.54	28.18	6,037.40	1,173.58	550.66	1,295.34	0.73	-0.70	
6,289.00	1.58	38.37	6,132.37	1,175.73	552.08	1,297.90	0.29	0.04	
6,383.00	1.01	27.56	6,226.34	1,177.48	553.27	1,300.00	0.66	-0.61	
6,572.00	0.75	356.89	6,415.32	1,180.19	553.97	1,302.73	0.28	-0.14	
6,761.00	1.23	341.77	6,604.29	1,183.35	553.27	1,305.21	0.29	0.25	
6,950.00	1.36	314.88	6,793.25	1,186.86	551.04	1,307.31	0.33	0.07	
7,139.00	2.07	282.80	6,982.17	1,189.20	546.13	1,307.12	0.62	0.38	
7,328.00	2.42	273.30	7,171.02	1,190.19	538.81	1,304.63	0.27	0.19	
7,517.00	2.64	266.36	7,359.84	1,190.14	530.49	1,300.76	0.20	0.12	
7,706.00	3.52	271.81	7,548.56	1,190.05	520.34	1,296.01	0.49	0.47	
7,895.00	4.26	274.45	7,737.13	1,190.78	507.55	1,290.76	0.40	0.39	
8,084.00	5.23	272.51	7,925.48	1,191.70	491.94	1,284.40	0.52	0.51	
8,273.00	6.20	271.63	8,113.53	1,192.37	473.13	1,276.34	0.52	0.51	
8,463.00	7.25	266.80	8,302.23	1,191.99	450.91	1,265.77	0.63	0.55	
8,652.00	7.38	264.52	8,489.69	1,190.16	426.92	1,253.11	0.17	0.07	
8,841.00	8.00	266.89	8,676.99	1,188.29	401.70	1,239.84	0.37	0.33	
9,124.00	9.98	265.48	8,956.50	1,185.29	357.59	1,216.88	0.70	0.70	LAST SURVEY @ 9124' MD
9,185.00	9.98	265.48	9,016.58	1,184.46	347.05	1,211.29	0.00	0.00	PTB @ 9185' 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 35A-23 PBHL	0.00	0.00	9,026.00	1,211.99	374.10	14,357,235.00	2,435,648.80	39.502198	-108.181059
- actual wellpath misses target center by 39.73usft at 9185.00usft MD (9016.58 TVD, 1184.46 N, 347.05 E)									
- Circle (radius 100.00)									
PUCKETT 35A-23 PBHL	0.00	0.00	9,026.00	1,145.76	386.73	14,357,169.20	2,435,663.50	39.502016	-108.181015
- actual wellpath misses target center by 56.22usft at 9185.00usft MD (9016.58 TVD, 1184.46 N, 347.05 E)									
- Ellipse (radii L200.00 W100.00 on 250.00 azi)									

### Design Annotations

	Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
			+N/-S (usft)	+E/-W (usft)	
	9,124.00	8,956.50	1,185.29	357.59	LAST SURVEY @ 9124' MD
	9,185.00	9,016.58	1,184.46	347.05	PTB @ 9185' MD

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