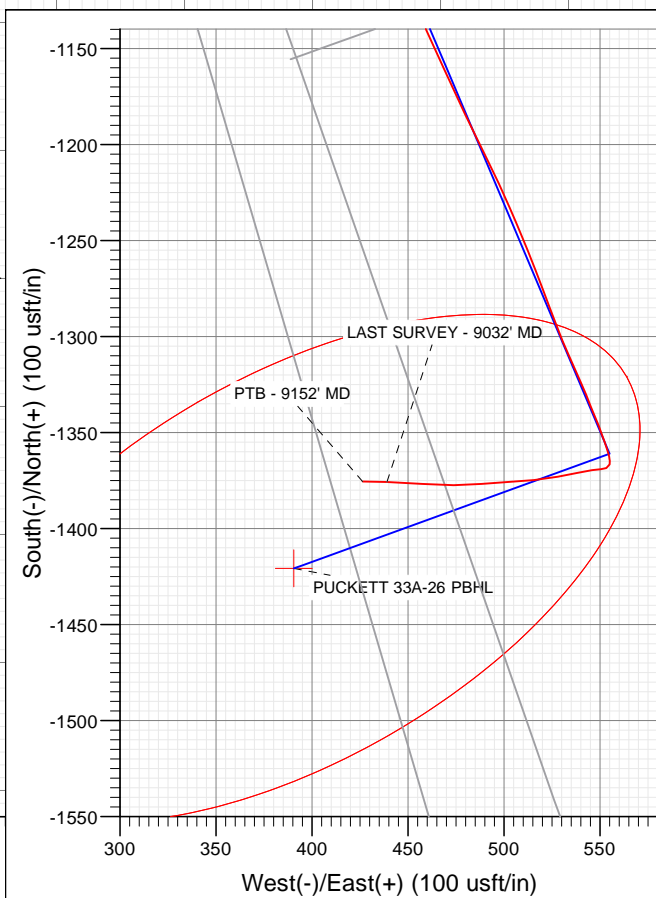
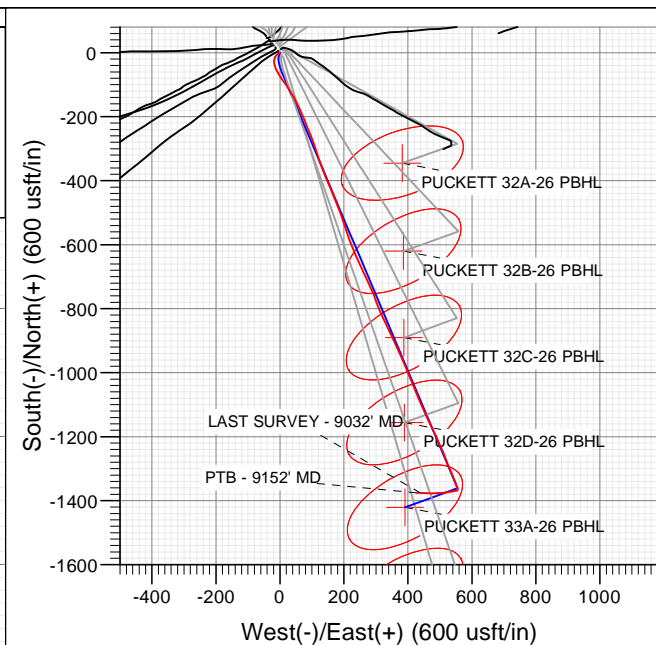
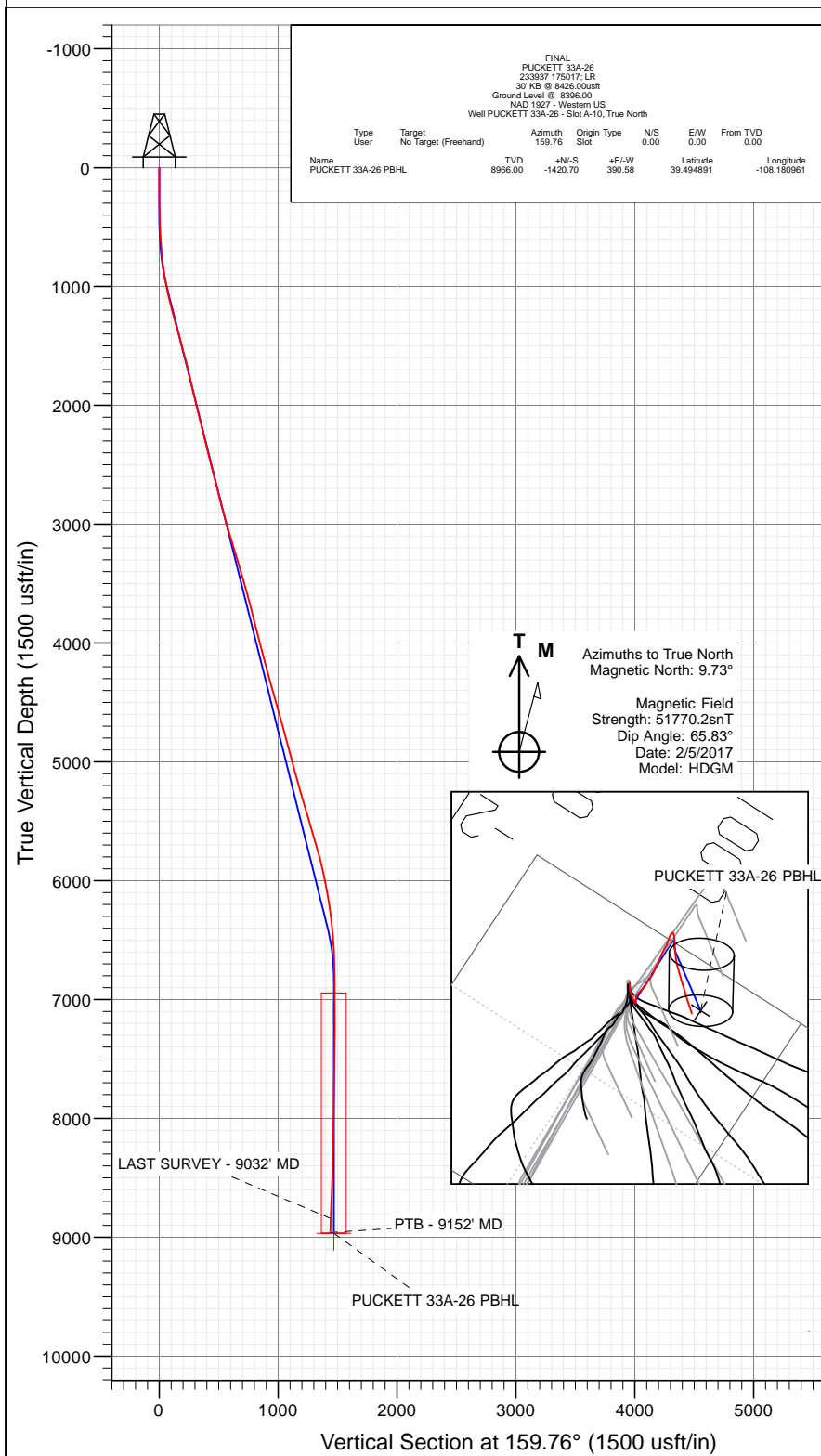




Project: Garfield County, CO (UTM 12N)
 Site: S26-T6S-R97W (697 26A)
 Well: PUCKETT 33A-26
 Wellbore: OH
 Design: FINAL



WELL DETAILS: PUCKETT 33A-26

+N/-S 0.00 +E/-W 0.00 Northing 14355982.78 Easting 2435325.16 Ground Level: 8396.00 Latitude 39.498790 Longitude -108.182344

A-10



Cathedral Energy Services

Survey Report

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well PUCKETT 33A-26 - Slot A-10
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	30' KB @ 8426.00usft
Site:	S26-T6S-R97W (697 26A)	MD Reference:	30' KB @ 8426.00usft
Well:	PUCKETT 33A-26	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		S26-T6S-R97W (697 26A)			
Site Position:		Northing:	14,356,905.20 usft	Latitude:	39.501458
From:	Map	Easting:	2,433,730.50 usft	Longitude:	-108.187888
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.79 °

Well		PUCKETT 33A-26 - Slot A-10				
Well Position	+N/-S	0.00 usft	Northing:	14,355,982.78 usft	Latitude:	39.498790
	+E/-W	0.00 usft	Easting:	2,435,325.16 usft	Longitude:	-108.182344
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	8,396.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	2/5/2017	9.73	65.83	51,770

Design	FINAL				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	159.76	

Survey Program	Date	2/16/2017			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
177.00	9,152.00	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	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
177.00	2.02	252.04	176.96	-0.96	-2.97	-0.12	1.14	1.14		
208.00	2.20	231.48	207.94	-1.50	-3.95	0.04	2.50	0.58		
238.00	2.11	249.32	237.92	-2.05	-4.92	0.23	2.25	-0.30		
299.00	2.11	221.99	298.88	-3.29	-6.72	0.76	1.63	0.00		
390.00	2.94	227.26	389.79	-6.11	-9.56	2.43	0.95	0.91		
481.00	3.60	216.54	480.65	-9.99	-12.97	4.89	0.99	0.73		
573.00	4.18	202.39	572.43	-15.42	-15.97	8.94	1.21	0.63		
667.00	5.58	187.71	666.10	-23.11	-17.89	15.50	1.98	1.49		
762.00	6.28	175.05	760.59	-32.87	-18.06	24.59	1.56	0.74		
856.00	7.69	160.81	853.90	-43.93	-15.55	35.84	2.36	1.50		
951.00	9.71	152.03	947.80	-57.01	-9.70	50.13	2.54	2.13		
1,045.00	12.35	146.84	1,040.06	-72.43	-0.48	67.79	3.00	2.81		

Cathedral Energy Services

Survey Report

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well PUCKETT 33A-26 - Slot A-10
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	30' KB @ 8426.00usft
Site:	S26-T6S-R97W (697 26A)	MD Reference:	30' KB @ 8426.00usft
Well:	PUCKETT 33A-26	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
1,140.00	14.72	145.43	1,132.42	-90.88	11.93	89.39	2.52	2.49	
1,234.00	15.60	146.75	1,223.14	-111.28	25.63	113.28	1.01	0.94	
1,329.00	15.82	148.77	1,314.60	-133.04	39.35	138.43	0.62	0.23	
1,423.00	15.21	151.15	1,405.17	-154.79	51.94	163.20	0.94	-0.65	
1,518.00	15.51	157.30	1,496.78	-177.43	62.86	188.22	1.74	0.32	
1,613.00	15.34	159.32	1,588.36	-200.90	72.20	213.47	0.59	-0.18	
1,707.00	14.06	157.74	1,679.28	-223.10	80.92	237.32	1.43	-1.36	
1,802.00	12.88	155.37	1,771.67	-243.41	89.70	259.41	1.37	-1.24	
1,896.00	12.92	158.44	1,863.30	-262.70	97.93	280.36	0.73	0.04	
1,991.00	13.01	160.73	1,955.88	-282.68	105.36	301.67	0.55	0.09	
2,086.00	13.45	162.92	2,048.36	-303.33	112.13	323.39	0.70	0.46	
2,180.00	14.15	163.01	2,139.64	-324.77	118.70	345.78	0.75	0.74	
2,275.00	14.15	159.76	2,231.76	-346.77	126.11	368.99	0.84	0.00	
2,370.00	14.02	157.30	2,323.91	-368.28	134.57	392.10	0.64	-0.14	
2,464.00	13.80	156.42	2,415.15	-389.06	143.45	414.66	0.32	-0.23	
2,606.00	13.98	158.27	2,553.00	-420.52	156.57	448.72	0.34	0.13	
2,701.00	14.24	158.18	2,645.13	-442.02	165.17	471.87	0.27	0.27	
2,795.00	15.38	158.62	2,736.01	-464.36	174.01	495.89	1.22	1.21	
2,890.00	14.72	157.04	2,827.75	-487.21	183.31	520.54	0.82	-0.69	
2,984.00	14.68	160.90	2,918.68	-509.46	191.86	544.38	1.04	-0.04	
3,079.00	15.91	162.13	3,010.31	-533.23	199.80	569.43	1.34	1.29	
3,173.00	16.44	161.34	3,100.59	-558.10	208.01	595.59	0.61	0.56	
3,267.00	16.79	160.90	3,190.66	-583.53	216.71	622.47	0.40	0.37	
3,362.00	17.27	156.77	3,281.50	-609.45	226.76	650.27	1.37	0.51	
3,456.00	16.35	157.91	3,371.48	-634.53	237.24	677.43	1.04	-0.98	
3,551.00	16.61	154.66	3,462.58	-659.20	248.08	704.32	1.01	0.27	
3,645.00	15.82	154.22	3,552.84	-682.88	259.40	730.45	0.85	-0.84	
3,739.00	14.33	155.37	3,643.60	-704.99	269.82	754.80	1.62	-1.59	
3,834.00	14.33	155.89	3,735.65	-726.41	279.52	778.26	0.14	0.00	
3,928.00	13.89	156.16	3,826.81	-747.35	288.84	801.12	0.47	-0.47	
4,023.00	14.37	160.64	3,918.94	-768.90	297.35	824.29	1.26	0.51	
4,117.00	14.99	158.88	4,009.87	-791.24	305.60	848.11	0.81	0.66	
4,212.00	14.37	155.37	4,101.77	-813.42	314.94	872.15	1.14	-0.65	
4,306.00	15.43	154.13	4,192.61	-835.28	325.26	896.22	1.18	1.13	
4,400.00	15.34	154.75	4,283.24	-857.77	336.02	921.06	0.20	-0.10	
4,495.00	15.43	155.10	4,374.84	-880.60	346.70	946.17	0.14	0.09	
4,589.00	15.60	154.49	4,465.41	-903.35	357.41	971.22	0.25	0.18	
4,684.00	15.60	155.98	4,556.91	-926.55	368.11	996.68	0.42	0.00	
4,778.00	16.48	155.89	4,647.25	-950.26	378.70	1,022.60	0.94	0.94	
4,873.00	15.73	155.63	4,738.52	-974.29	389.52	1,048.89	0.79	-0.79	
4,967.00	15.21	159.58	4,829.12	-997.46	399.08	1,073.93	1.25	-0.55	
5,062.00	14.33	157.12	4,920.98	-1,019.97	408.00	1,098.13	1.14	-0.93	
5,157.00	14.33	157.74	5,013.03	-1,041.68	417.02	1,121.63	0.16	0.00	
5,251.00	15.38	157.30	5,103.88	-1,063.95	426.24	1,145.71	1.12	1.12	
5,346.00	16.22	156.16	5,195.29	-1,087.70	436.47	1,171.54	0.94	0.88	
5,440.00	16.57	157.04	5,285.47	-1,112.05	447.00	1,198.03	0.46	0.37	
5,535.00	15.78	155.19	5,376.71	-1,136.25	457.71	1,224.44	0.99	-0.83	
5,629.00	16.52	155.89	5,467.00	-1,160.05	468.53	1,250.51	0.81	0.79	
5,724.00	16.17	154.22	5,558.16	-1,184.29	479.80	1,277.15	0.62	-0.37	
5,818.00	16.79	153.61	5,648.30	-1,208.24	491.53	1,303.68	0.68	0.66	
5,913.00	16.22	156.51	5,739.39	-1,232.70	502.91	1,330.57	1.05	-0.60	
6,008.00	14.06	157.74	5,831.08	-1,255.55	512.57	1,355.35	2.30	-2.27	
6,102.00	12.48	160.20	5,922.57	-1,275.68	520.34	1,376.92	1.78	-1.68	

Cathedral Energy Services

Survey Report

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well PUCKETT 33A-26 - Slot A-10
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	30' KB @ 8426.00usft
Site:	S26-T6S-R97W (697 26A)	MD Reference:	30' KB @ 8426.00usft
Well:	PUCKETT 33A-26	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
6,197.00	11.25	158.35	6,015.54	-1,293.95	527.24	1,396.45	1.36	-1.29	
6,291.00	9.98	156.51	6,107.93	-1,309.94	533.87	1,413.75	1.40	-1.35	
6,385.00	8.66	155.89	6,200.69	-1,323.87	540.00	1,428.94	1.41	-1.40	
6,480.00	7.43	158.27	6,294.75	-1,336.11	545.20	1,442.22	1.34	-1.29	
6,575.00	6.06	158.53	6,389.09	-1,346.48	549.31	1,453.37	1.44	-1.44	
6,669.00	4.53	160.81	6,482.69	-1,354.61	552.35	1,462.05	1.64	-1.63	
6,764.00	3.38	164.95	6,577.46	-1,360.85	554.31	1,468.59	1.25	-1.21	
6,858.00	1.41	174.17	6,671.37	-1,364.68	555.14	1,472.47	2.13	-2.10	
6,953.00	0.88	199.57	6,766.35	-1,366.53	555.02	1,474.16	0.76	-0.56	
7,142.00	0.84	244.66	6,955.34	-1,368.49	553.28	1,475.40	0.35	-0.02	
7,330.00	0.97	270.68	7,143.31	-1,369.06	550.44	1,474.95	0.23	0.07	
7,519.00	1.85	261.27	7,332.25	-1,369.51	545.83	1,473.77	0.48	0.47	
7,708.00	2.86	257.85	7,521.09	-1,370.96	538.20	1,472.50	0.54	0.53	
7,897.00	3.43	259.69	7,709.81	-1,372.97	528.03	1,470.86	0.31	0.30	
8,086.00	4.13	264.61	7,898.39	-1,374.62	515.69	1,468.14	0.41	0.37	
8,275.00	4.26	266.46	8,086.89	-1,375.69	501.91	1,464.38	0.10	0.07	
8,465.00	3.96	265.32	8,276.40	-1,376.66	488.33	1,460.59	0.16	-0.16	
8,654.00	4.88	268.92	8,464.84	-1,377.34	473.79	1,456.20	0.51	0.49	
8,843.00	5.10	275.86	8,653.12	-1,376.64	457.39	1,449.87	0.34	0.12	
9,032.00	6.06	270.94	8,841.22	-1,375.62	439.06	1,442.57	0.57	0.51	LAST SURVEY - 9032' MD
9,152.00	6.06	270.94	8,960.55	-1,375.41	426.39	1,437.99	0.00	0.00	PTB - 9152' MD

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PUCKETT 33A-26 PBHL	0.00	0.00	8,966.00	-1,420.70	390.58	14,354,575.00	2,435,760.00	39.494891	-108.180961
- hit/miss target									
- Shape									
- actual wellpath misses target center by 58.00usft at 9152.00usft MD (8960.55 TVD, -1375.41 N, 426.39 E)									
- Ellipse (radii L200.00 W100.00 on 240.00 azi)									

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
9,032.00	8,841.22	-1,375.62	439.06	LAST SURVEY - 9032' MD	
9,152.00	8,960.55	-1,375.41	426.39	PTB - 9152' MD	

Checked By: _____ Approved By: _____ Date: _____