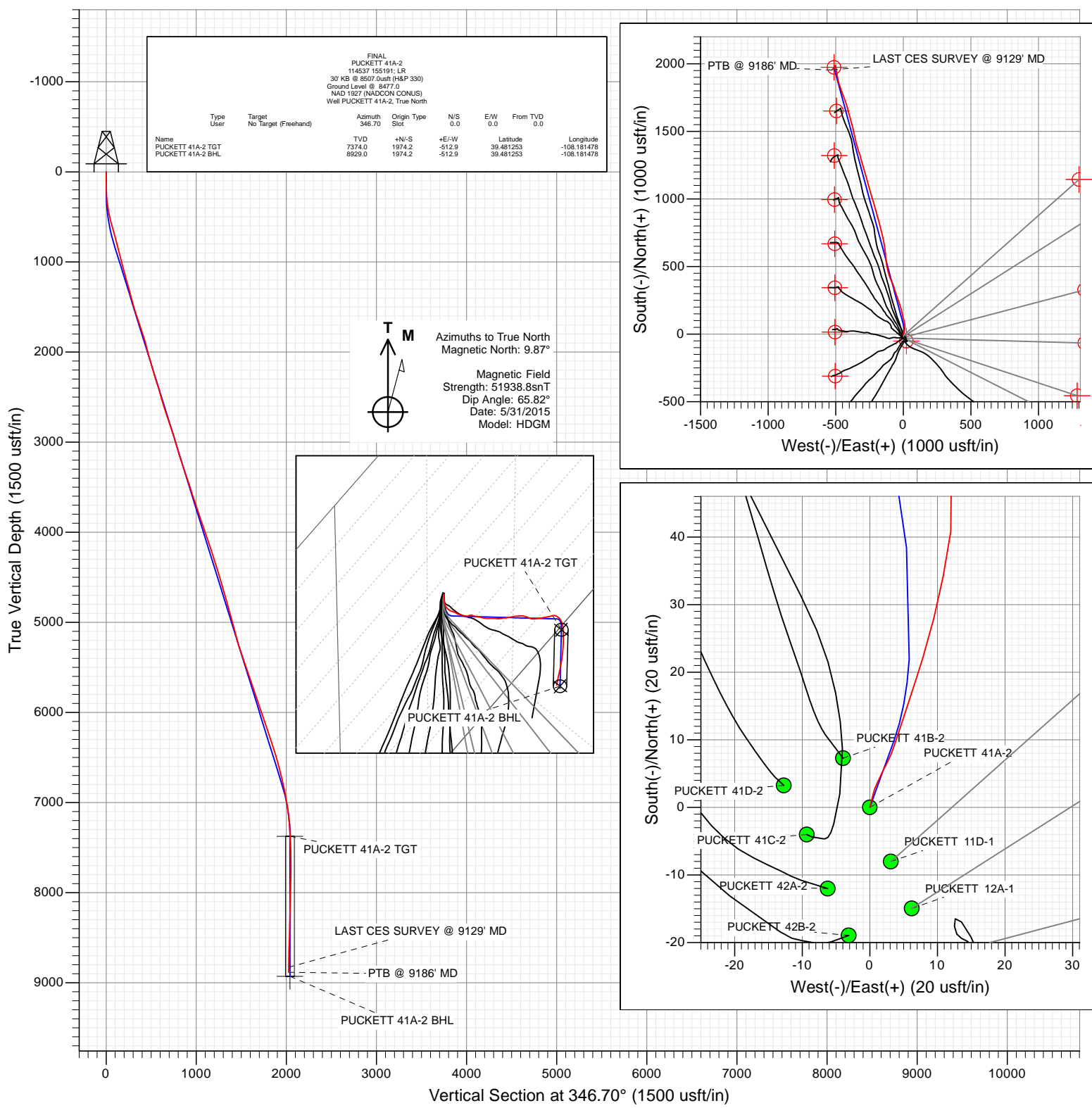




Project: Garfield County, CO
 Site: S2-T7S-R97W (Mesa H2)
 Well: PUCKETT 41A-2
 Wellbore: DD
 Design: FINAL



WELL DETAILS: PUCKETT 41A-2

Ground Level: 8477.0
 Northing: 609344.46
 Easting: 1243671.80
 Latitude: 39.475833
 Longitude: -108.179661



Survey Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 41A-2
Project:	Garfield County, CO	TVD Reference:	30' KB @ 8507.0usft (H&P 330)
Site:	S2-T7S-R97W (Mesa H2)	MD Reference:	30' KB @ 8507.0usft (H&P 330)
Well:	PUCKETT 41A-2	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Project	Garfield County, CO		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Colorado Central 502		

Site		S2-T7S-R97W (Mesa H2)			
Site Position:		Northing:	609,295.74 usft	Latitude:	39.475700
From:	Lat/Long	Easting:	1,243,680.53 usft	Longitude:	-108.179625
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.69 °

Well	PUCKETT 41A-2					
Well Position	+N/-S	0.0 usft	Northing:	609,344.46 usft	Latitude:	39.475833
	+E/-W	0.0 usft	Easting:	1,243,671.80 usft	Longitude:	-108.179661
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,477.0 usft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/31/2015	9.87	65.82	51,939

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	346.70	

Survey Program	Date	6/5/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
183.0	9,186.0	Survey #1 (DD)	ISCWSA MWD	MWD - Standard	

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		
183.0	1.40	14.10	183.0	2.2	0.5	2.0	0.77	0.77		
275.0	4.90	27.30	274.8	6.8	2.6	6.0	3.86	3.80		
306.0	6.10	18.00	305.7	9.5	3.7	8.4	4.81	3.87		
337.0	7.40	18.60	336.5	13.0	4.9	11.5	4.20	4.19		
398.0	10.90	17.40	396.7	22.2	7.9	19.8	5.75	5.74		
490.0	13.10	8.40	486.7	40.8	12.0	36.9	3.13	2.39		
581.0	15.10	353.40	575.0	62.8	12.1	58.3	4.56	2.20		
676.0	16.20	346.00	666.4	87.9	7.5	83.9	2.40	1.16		
771.0	14.90	344.60	758.0	112.6	1.1	109.3	1.42	-1.37		
865.0	13.20	349.50	849.2	134.8	-4.1	132.1	2.21	-1.81		
959.0	14.60	349.50	940.4	157.0	-8.2	154.7	1.49	1.49		
1,054.0	15.10	344.60	1,032.2	180.7	-13.7	179.0	1.42	0.53		

Survey Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 41A-2
Project:	Garfield County, CO	TVD Reference:	30' KB @ 8507.0usft (H&P 330)
Site:	S2-T7S-R97W (Mesa H2)	MD Reference:	30' KB @ 8507.0usft (H&P 330)
Well:	PUCKETT 41A-2	North Reference:	True
Wellbore:	DD	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
1,148.0	15.50	338.70	1,122.9	204.2	-21.5	203.7	1.71	0.43	
1,243.0	16.10	340.10	1,214.3	228.4	-30.6	229.3	0.75	0.63	
1,337.0	14.90	342.60	1,304.9	252.2	-38.7	254.3	1.46	-1.28	
1,431.0	15.30	343.30	1,395.7	275.6	-45.8	278.8	0.47	0.43	
1,526.0	15.60	342.10	1,487.2	299.8	-53.4	304.0	0.46	0.32	
1,620.0	17.60	342.30	1,577.3	325.3	-61.6	330.8	2.13	2.13	
1,715.0	18.80	339.50	1,667.5	353.4	-71.3	360.3	1.56	1.26	
1,809.0	19.30	336.00	1,756.4	381.7	-82.9	390.6	1.33	0.53	
1,904.0	17.60	337.00	1,846.5	409.3	-94.9	420.2	1.82	-1.79	
1,998.0	14.60	341.20	1,936.8	433.6	-104.3	446.0	3.42	-3.19	
2,093.0	15.10	346.40	2,028.6	457.0	-111.1	470.3	1.50	0.53	
2,188.0	16.00	346.80	2,120.2	481.7	-117.0	495.7	0.95	0.95	
2,282.0	16.60	349.50	2,210.4	507.6	-122.4	522.1	1.03	0.64	
2,377.0	17.40	353.20	2,301.2	535.0	-126.5	549.8	1.42	0.84	
2,471.0	17.50	355.40	2,390.9	563.1	-129.3	577.7	0.71	0.11	
2,596.0	15.90	354.60	2,510.6	598.8	-132.4	613.2	1.29	-1.28	
2,690.0	17.40	352.90	2,600.7	625.6	-135.4	640.0	1.68	1.60	
2,785.0	18.30	350.90	2,691.1	654.4	-139.5	669.0	1.15	0.95	
2,880.0	19.10	349.30	2,781.1	684.4	-144.7	699.4	1.00	0.84	
2,974.0	18.60	347.90	2,870.1	714.2	-150.7	729.7	0.72	-0.53	
3,069.0	16.50	345.60	2,960.6	742.1	-157.3	758.4	2.33	-2.21	
3,163.0	16.80	345.00	3,050.7	768.1	-164.1	785.3	0.37	0.32	
3,258.0	16.70	346.20	3,141.7	794.7	-170.9	812.7	0.38	-0.11	
3,352.0	17.50	346.20	3,231.5	821.5	-177.5	840.3	0.85	0.85	
3,447.0	19.20	344.40	3,321.7	850.4	-185.1	870.2	1.89	1.79	
3,541.0	18.90	344.20	3,410.5	879.9	-193.4	900.8	0.33	-0.32	
3,636.0	17.70	344.70	3,500.7	908.7	-201.4	930.6	1.27	-1.26	
3,731.0	18.20	344.00	3,591.1	936.9	-209.3	959.9	0.57	0.53	
3,825.0	18.40	344.00	3,680.4	965.2	-217.5	989.4	0.21	0.21	
3,920.0	18.60	342.60	3,770.4	994.1	-226.1	1,019.5	0.51	0.21	
4,014.0	18.70	342.40	3,859.5	1,022.8	-235.2	1,049.5	0.13	0.11	
4,109.0	19.00	344.00	3,949.4	1,052.2	-244.0	1,080.1	0.63	0.32	
4,203.0	18.70	344.60	4,038.4	1,081.4	-252.2	1,110.4	0.38	-0.32	
4,298.0	18.50	344.80	4,128.4	1,110.6	-260.2	1,140.7	0.22	-0.21	
4,403.0	18.20	344.60	4,228.1	1,142.5	-269.0	1,173.7	0.29	-0.29	
4,498.0	17.50	343.80	4,318.5	1,170.5	-276.9	1,202.8	0.78	-0.74	
4,592.0	18.00	344.70	4,408.0	1,198.1	-284.7	1,231.5	0.61	0.53	
4,687.0	17.70	343.40	4,498.4	1,226.1	-292.7	1,260.6	0.53	-0.32	
4,782.0	16.30	342.60	4,589.3	1,252.7	-300.8	1,288.3	1.49	-1.47	
4,876.0	15.40	343.60	4,679.7	1,277.2	-308.2	1,313.9	1.00	-0.96	
4,971.0	15.60	347.60	4,771.3	1,301.8	-314.6	1,339.3	1.14	0.21	
5,065.0	15.30	343.30	4,861.9	1,326.0	-320.8	1,364.3	1.26	-0.32	
5,160.0	14.60	339.20	4,953.7	1,349.2	-328.7	1,388.7	1.33	-0.74	
5,254.0	14.40	342.10	5,044.7	1,371.4	-336.5	1,412.1	0.80	-0.21	
5,349.0	15.10	343.90	5,136.5	1,394.6	-343.5	1,436.2	0.88	0.74	
5,443.0	16.70	347.60	5,226.9	1,419.5	-349.8	1,461.9	2.01	1.70	
5,538.0	18.70	348.10	5,317.4	1,447.8	-355.9	1,490.8	2.11	2.11	
5,633.0	19.60	347.20	5,407.2	1,478.2	-362.6	1,522.0	1.00	0.95	
5,727.0	18.20	346.10	5,496.1	1,507.8	-369.6	1,552.4	1.54	-1.49	
5,822.0	19.30	346.90	5,586.1	1,537.5	-376.7	1,582.9	1.19	1.16	
5,916.0	19.40	345.50	5,674.8	1,567.8	-384.2	1,614.1	0.50	0.11	
6,011.0	17.90	344.30	5,764.8	1,597.1	-392.1	1,644.5	1.63	-1.58	
6,105.0	17.60	343.50	5,854.3	1,624.6	-400.0	1,673.1	0.41	-0.32	

Survey Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 41A-2
Project:	Garfield County, CO	TVD Reference:	30' KB @ 8507.0usft (H&P 330)
Site:	S2-T7S-R97W (Mesa H2)	MD Reference:	30' KB @ 8507.0usft (H&P 330)
Well:	PUCKETT 41A-2	North Reference:	True
Wellbore:	DD	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
6,200.0	19.40	345.50	5,944.4	1,653.7	-408.0	1,703.2	2.01	1.89	
6,294.0	19.50	344.00	6,033.0	1,683.9	-416.3	1,734.5	0.54	0.11	
6,389.0	19.40	341.80	6,122.6	1,714.1	-425.6	1,766.0	0.78	-0.11	
6,483.0	18.30	340.60	6,211.6	1,742.9	-435.3	1,796.3	1.24	-1.17	
6,578.0	18.00	339.00	6,301.8	1,770.6	-445.6	1,825.6	0.61	-0.32	
6,672.0	18.20	337.70	6,391.2	1,797.8	-456.3	1,854.5	0.48	0.21	
6,766.0	16.80	341.00	6,480.8	1,824.2	-466.3	1,882.6	1.83	-1.49	
6,861.0	15.40	343.50	6,572.1	1,849.3	-474.4	1,908.8	1.64	-1.47	
6,956.0	14.40	347.30	6,663.9	1,872.9	-480.6	1,933.2	1.47	-1.05	
7,050.0	13.20	348.70	6,755.2	1,894.8	-485.2	1,955.6	1.33	-1.28	
7,145.0	11.70	350.00	6,848.0	1,914.9	-489.0	1,976.1	1.61	-1.58	
7,240.0	10.00	350.50	6,941.3	1,932.6	-492.1	1,993.9	1.79	-1.79	
7,334.0	8.60	351.00	7,034.0	1,947.6	-494.5	2,009.1	1.49	-1.49	
7,428.0	7.20	349.10	7,127.1	1,960.3	-496.7	2,022.0	1.51	-1.49	
7,523.0	5.50	348.40	7,221.5	1,970.6	-498.8	2,032.5	1.79	-1.79	
7,617.0	4.00	343.40	7,315.2	1,978.1	-500.6	2,040.3	1.65	-1.60	
7,712.0	2.10	341.80	7,410.1	1,983.0	-502.1	2,045.3	2.00	-2.00	
7,807.0	0.70	342.60	7,505.0	1,985.2	-502.8	2,047.6	1.47	-1.47	
7,901.0	0.70	28.20	7,599.0	1,986.2	-502.7	2,048.6	0.58	0.00	
7,995.0	0.80	28.20	7,693.0	1,987.3	-502.1	2,049.5	0.11	0.11	
8,090.0	0.70	216.90	7,788.0	1,987.4	-502.2	2,049.7	1.57	-0.11	
8,184.0	1.10	204.00	7,882.0	1,986.2	-502.9	2,048.6	0.47	0.43	
8,279.0	1.80	198.60	7,977.0	1,983.9	-503.7	2,046.6	0.75	0.74	
8,373.0	1.20	205.70	8,070.9	1,981.6	-504.6	2,044.6	0.67	-0.64	
8,469.0	1.90	215.20	8,166.9	1,979.4	-506.0	2,042.7	0.77	0.73	
8,562.0	2.30	217.50	8,259.8	1,976.7	-508.0	2,040.5	0.44	0.43	
8,657.0	2.90	217.40	8,354.8	1,973.3	-510.6	2,037.8	0.63	0.63	
8,751.0	2.90	224.80	8,448.6	1,969.7	-513.7	2,035.0	0.40	0.00	
8,845.0	3.30	223.10	8,542.5	1,966.0	-517.3	2,032.3	0.44	0.43	
8,940.0	3.10	226.20	8,637.3	1,962.2	-521.0	2,029.5	0.28	-0.21	
9,034.0	2.80	228.80	8,731.2	1,959.0	-524.6	2,027.1	0.35	-0.32	
9,129.0	2.60	231.40	8,826.1	1,956.1	-528.0	2,025.1	0.25	-0.21	LAST CES SURVEY @ 9129' MD
9,186.0	2.60	231.40	8,883.1	1,954.5	-530.0	2,024.0	0.00	0.00	PTB @ 9186' MD

Survey Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well PUCKETT 41A-2
Project:	Garfield County, CO	TVD Reference:	30' KB @ 8507.0usft (H&P 330)
Site:	S2-T7S-R97W (Mesa H2)	MD Reference:	30' KB @ 8507.0usft (H&P 330)
Well:	PUCKETT 41A-2	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
PUCKETT 41A-2 TGT	0.00	0.00	7,374.0	1,974.2	-512.9	611,332.88	1,243,217.37	39.481253	-108.181478
- actual wellpath misses target center by 13.4usft at 7675.7usft MD (7373.8 TVD, 1981.5 N, -501.6 E)									
- Point									
PUCKETT 41A-2 BHL	0.00	0.00	8,929.0	1,974.2	-512.9	611,332.88	1,243,217.37	39.481253	-108.181478
- actual wellpath misses target center by 52.8usft at 9186.0usft MD (8883.1 TVD, 1954.5 N, -530.0 E)									
- Circle (radius 50.0)									

Design Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S	+E/-W		
		(usft)	(usft)	Comment	
9,129.0	8,826.1	1,956.1	-528.0	LAST CES SURVEY @ 9129' MD	
9,186.0	8,883.1	1,954.5	-530.0	PTB @ 9186' MD	

Checked By: _____ Approved By: _____ Date: _____