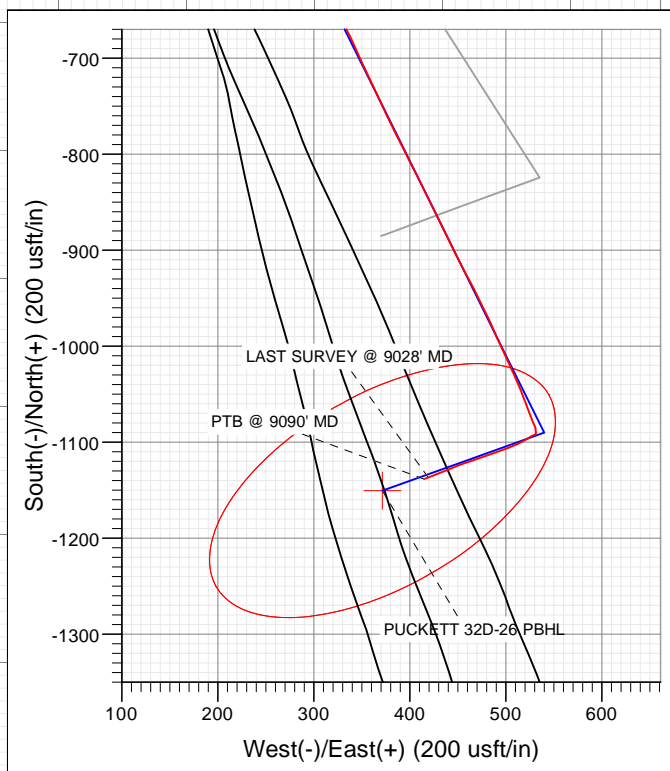
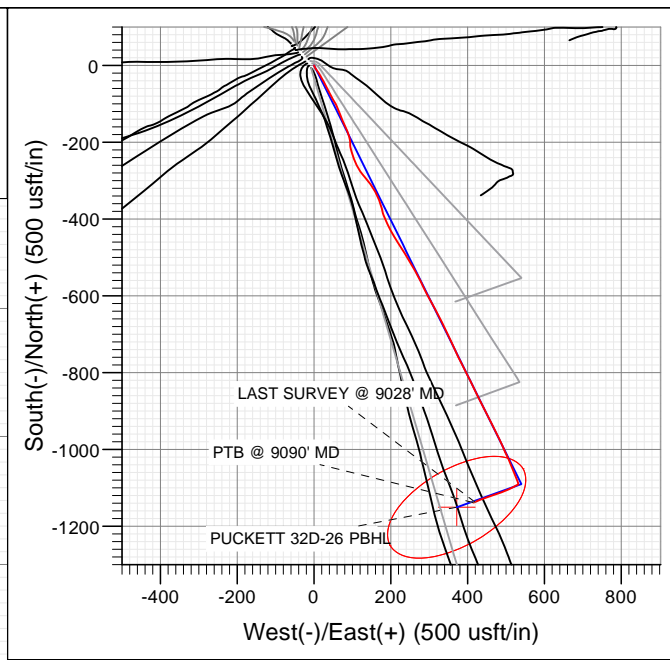
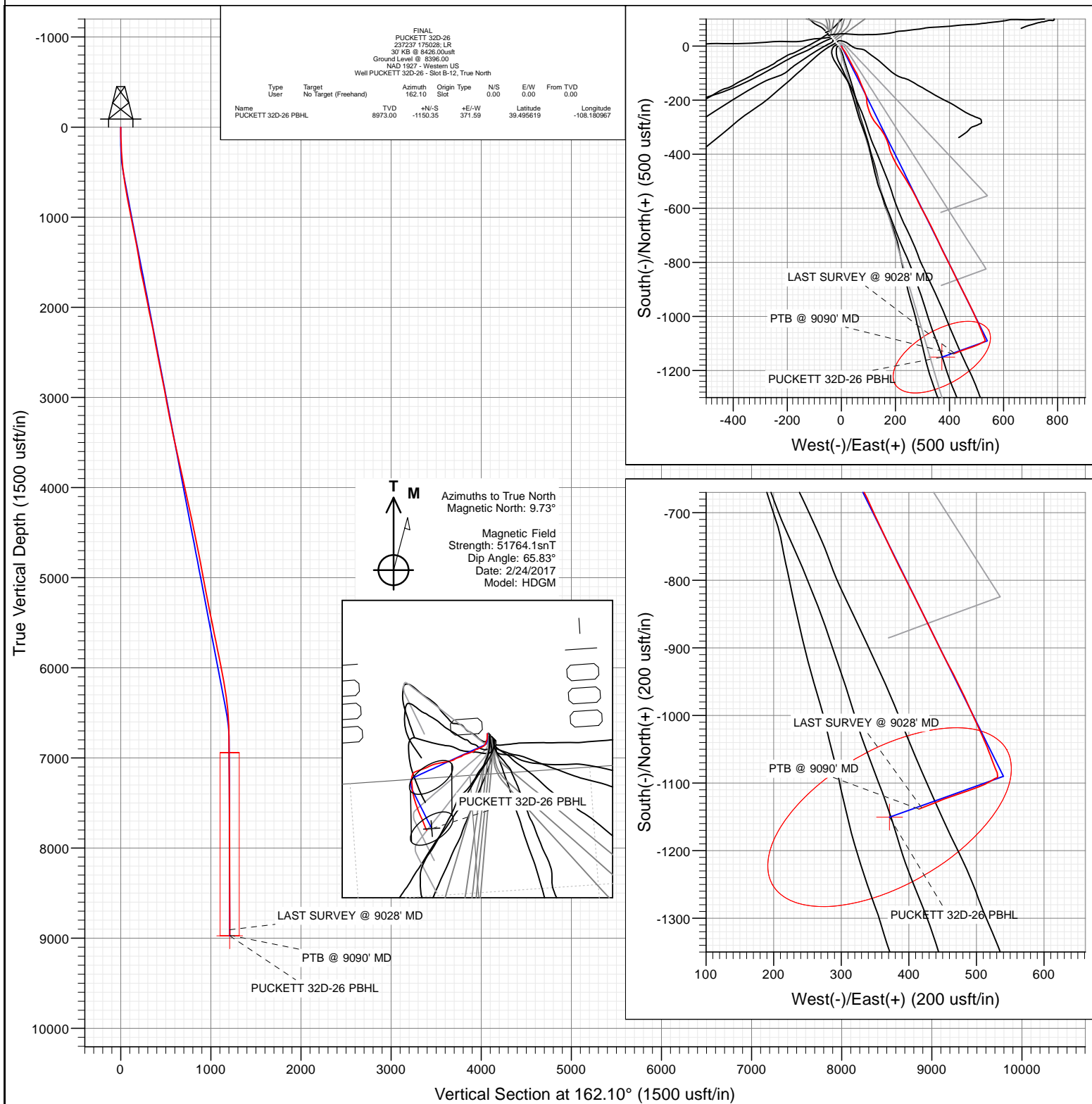




Project: Garfield County, CO (UTM 12N)  
 Site: S26-T6S-R97W (697 26A)  
 Well: PUCKETT 32D-26  
 Wellbore: OH  
 Design: FINAL



WELL DETAILS: PUCKETT 32D-26

+N/-S 0.00 +E/-W 0.00 Northing 14355978.16 Ground Level: 8396.00 Easting 2435342.59 Latitude 39.498776 Longitude -108.182283

B-12



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Caerus Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 32D-26 - Slot B-12
<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 32D-26	<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 32D-26 - Slot B-12					
Well Position	+N/-S	0.00 usft	Northing:	14,355,978.16 usft	Latitude:	39.498776
	+E/-W	0.00 usft	Easting:	2,435,342.59 usft	Longitude:	-108.182283
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	2/24/2017	9.73	65.83	51,764

<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	162.10	

<b>Survey Program</b>	<b>Date</b>	3/10/2017			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
179.00	9,090.00	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	2.37	149.74	178.95	-3.20	1.87	3.62	1.32	1.32		
210.00	2.86	159.85	209.92	-4.48	2.45	5.01	2.17	1.58		
240.00	3.12	149.65	239.88	-5.88	3.13	6.56	1.97	0.87		
301.00	3.96	143.94	300.76	-9.02	5.20	10.18	1.49	1.38		
392.00	4.44	147.19	391.51	-14.52	8.96	16.57	0.59	0.53		
482.00	6.46	148.16	481.10	-21.75	13.52	24.85	2.25	2.24		
575.00	8.83	149.04	573.27	-32.32	19.95	36.89	2.55	2.55		
669.00	10.50	155.10	665.94	-46.27	27.27	52.42	2.08	1.78		
764.00	10.90	152.38	759.28	-62.08	35.08	69.86	0.68	0.42		
858.00	11.12	148.77	851.55	-77.71	43.90	87.44	0.77	0.23		
953.00	10.46	150.71	944.87	-93.06	52.87	104.81	0.79	-0.69		
1,047.00	10.42	156.95	1,037.32	-108.33	60.37	121.64	1.20	-0.04		

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Caerus Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 32D-26 - Slot B-12
<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 32D-26	<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
1,142.00	11.56	157.91	1,130.58	-125.05	67.32	139.69	1.22	1.20	
1,236.00	11.87	158.18	1,222.62	-142.76	74.45	158.73	0.33	0.33	
1,331.00	10.37	154.84	1,315.83	-159.57	81.72	176.96	1.72	-1.58	
1,425.00	8.75	159.06	1,408.53	-173.90	87.87	192.49	1.88	-1.72	
1,520.00	9.01	164.15	1,502.39	-187.81	92.49	207.14	0.87	0.27	
1,615.00	11.38	180.68	1,595.90	-204.34	94.41	223.47	3.94	2.49	
1,709.00	12.88	161.69	1,687.84	-223.57	97.59	242.74	4.51	1.60	
1,804.00	11.87	160.99	1,780.63	-242.86	104.10	263.10	1.07	-1.06	
1,898.00	10.72	154.05	1,872.81	-259.86	111.07	281.42	1.89	-1.22	
1,993.00	11.91	144.73	1,965.97	-275.81	120.60	299.53	2.29	1.25	
2,087.00	12.26	139.63	2,057.89	-291.34	132.67	318.01	1.19	0.37	
2,182.00	12.52	144.55	2,150.68	-307.41	145.17	337.15	1.14	0.27	
2,277.00	11.87	147.19	2,243.54	-324.01	156.44	356.41	0.90	-0.68	
2,350.00	10.55	153.08	2,315.15	-336.28	163.53	370.27	2.39	-1.81	
2,508.00	9.40	165.47	2,470.77	-361.67	173.32	397.44	1.54	-0.73	
2,603.00	11.47	166.44	2,564.20	-378.36	177.48	414.60	2.19	2.18	
2,697.00	11.69	155.37	2,656.29	-396.11	183.64	433.38	2.37	0.23	
2,791.00	11.34	155.28	2,748.40	-413.16	191.48	452.01	0.37	-0.37	
2,886.00	11.25	152.03	2,841.56	-429.83	199.73	470.41	0.68	-0.09	
2,980.00	11.29	148.33	2,933.75	-445.76	208.86	488.38	0.77	0.04	
3,075.00	10.55	147.02	3,027.03	-460.97	218.48	505.81	0.82	-0.78	
3,169.00	10.46	146.49	3,119.46	-475.30	227.87	522.33	0.14	-0.10	
3,264.00	11.21	150.53	3,212.76	-490.53	237.18	539.69	1.12	0.79	
3,358.00	12.48	149.13	3,304.76	-507.21	246.88	558.54	1.39	1.35	
3,452.00	12.04	148.07	3,396.62	-524.24	257.28	577.95	0.53	-0.47	
3,547.00	12.04	151.15	3,489.53	-541.33	267.30	597.29	0.68	0.00	
3,641.00	12.39	154.40	3,581.40	-559.01	276.39	616.91	0.82	0.37	
3,736.00	12.96	155.10	3,674.08	-577.87	285.28	637.58	0.62	0.60	
3,830.00	13.18	151.67	3,765.65	-596.86	294.80	658.58	0.86	0.23	
3,925.00	12.88	151.15	3,858.20	-615.67	305.05	679.63	0.34	-0.32	
4,019.00	12.88	152.46	3,949.84	-634.14	314.95	700.24	0.31	0.00	
4,113.00	12.31	151.94	4,041.58	-652.27	324.51	720.43	0.62	-0.61	
4,208.00	11.38	151.41	4,134.55	-669.44	333.76	739.61	0.99	-0.98	
4,302.00	12.26	156.77	4,226.56	-686.75	342.13	758.66	1.50	0.94	
4,397.00	12.22	153.78	4,319.40	-705.04	350.55	778.66	0.67	-0.04	
4,491.00	12.57	155.19	4,411.21	-723.25	359.24	798.65	0.49	0.37	
4,586.00	11.51	155.89	4,504.12	-741.28	367.45	818.34	1.13	-1.12	
4,680.00	11.65	154.05	4,596.21	-758.38	375.43	837.06	0.42	0.15	
4,775.00	11.34	152.90	4,689.30	-775.32	383.89	855.78	0.41	-0.33	
4,869.00	11.07	153.61	4,781.51	-791.63	392.11	873.83	0.32	-0.29	
4,964.00	10.94	153.43	4,874.76	-807.86	400.19	891.76	0.14	-0.14	
5,058.00	10.37	152.99	4,967.14	-823.38	408.03	908.93	0.61	-0.61	
5,153.00	10.33	153.96	5,060.60	-838.65	415.65	925.80	0.19	-0.04	
5,248.00	12.00	153.52	5,153.80	-855.14	423.79	944.00	1.76	1.76	
5,342.00	11.12	154.13	5,245.89	-872.04	432.10	962.64	0.95	-0.94	
5,437.00	11.21	153.87	5,339.09	-888.58	440.17	980.85	0.11	0.09	
5,531.00	11.78	153.43	5,431.20	-905.36	448.48	999.38	0.61	0.61	
5,626.00	11.65	151.85	5,524.23	-922.49	457.35	1,018.41	0.36	-0.14	
5,720.00	11.16	152.55	5,616.37	-938.93	466.02	1,036.72	0.54	-0.52	
5,815.00	11.87	154.31	5,709.46	-955.90	474.49	1,055.46	0.83	0.75	
5,909.00	11.12	154.22	5,801.57	-972.77	482.62	1,074.02	0.80	-0.80	
6,004.00	11.82	155.98	5,894.67	-989.91	490.57	1,092.77	0.82	0.74	
6,098.00	11.25	155.63	5,986.77	-1,007.05	498.27	1,111.45	0.61	-0.61	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Caerus Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 32D-26 - Slot B-12
<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 32D-26	<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
6,193.00	10.68	155.54	6,080.04	-1,023.51	505.74	1,129.41	0.60	-0.60	
6,287.00	10.24	156.33	6,172.48	-1,039.09	512.70	1,146.37	0.49	-0.47	
6,382.00	8.39	159.32	6,266.22	-1,053.31	518.54	1,161.70	2.01	-1.95	
6,476.00	6.68	160.38	6,359.41	-1,064.88	522.80	1,174.01	1.83	-1.82	
6,571.00	5.71	157.21	6,453.85	-1,074.44	526.48	1,184.25	1.08	-1.02	
6,665.00	3.87	155.80	6,547.52	-1,081.64	529.60	1,192.06	1.96	-1.96	
6,760.00	2.81	173.12	6,642.36	-1,086.88	531.19	1,197.53	1.53	-1.12	
6,854.00	1.49	173.82	6,736.29	-1,090.38	531.60	1,200.99	1.40	-1.40	
6,949.00	0.75	269.45	6,831.28	-1,091.62	531.11	1,202.01	1.82	-0.78	
7,232.00	1.10	234.47	7,114.24	-1,093.21	527.04	1,202.28	0.23	0.12	
7,421.00	3.12	237.89	7,303.10	-1,097.00	521.21	1,204.10	1.07	1.07	
7,610.00	2.99	245.01	7,491.84	-1,101.82	512.39	1,205.97	0.21	-0.07	
7,799.00	3.21	249.94	7,680.56	-1,105.71	502.95	1,206.78	0.18	0.12	
7,988.00	3.78	250.29	7,869.21	-1,109.63	492.11	1,207.17	0.30	0.30	
8,177.00	4.22	250.29	8,057.75	-1,114.08	479.70	1,207.59	0.23	0.23	
8,367.00	4.40	252.31	8,247.21	-1,118.65	466.18	1,207.78	0.12	0.09	
8,556.00	4.70	249.76	8,435.61	-1,123.53	452.00	1,208.07	0.19	0.16	
8,745.00	4.09	244.57	8,624.06	-1,129.10	438.65	1,209.27	0.38	-0.32	
8,934.00	4.26	251.87	8,812.56	-1,134.18	425.89	1,210.18	0.29	0.09	
9,028.00	4.35	247.91	8,906.29	-1,136.61	419.27	1,210.46	0.33	0.10	LAST SURVEY @ 9028' MD
9,090.00	4.35	247.91	8,968.11	-1,138.38	414.91	1,210.80	0.00	0.00	PTB @ 9090' 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 32D-26 PBHI	0.00	0.00	8,973.00	-1,150.35	371.59	14,354,840.00	2,435,750.00	39.495619	-108.180967
- actual wellpath misses target center by 45.21usft at 9090.00usft MD (8968.11 TVD, -1138.38 N, 414.91 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)	
	9,028.00	8,906.29	-1,136.61	419.27	LAST SURVEY @ 9028' MD
	9,090.00	8,968.11	-1,138.38	414.91	PTB @ 9090' MD

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