



CRESTONE PEAK  
RESOURCES

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	
3	767.46	12.35	138.50	762.69	-49.65	43.92	2.00	138.50	-49.19	
4	6419.47	12.35	138.50	6283.92	-955.01	844.86	0.00	0.00	-946.26	
5	7658.24	89.97	0.59	7105.00	-249.55	972.60	8.00	-137.25	-239.52	RUEGGE 3L-4H-N165 TPZ
6	9549.76	89.97	0.59	7106.00	1641.87	992.17	0.00	0.00	1652.00	RUEGGE 3L 1652' VS
7	9575.24	90.48	0.59	7105.90	1667.35	992.43	2.00	0.00	1677.48	
8	10749.07	90.48	0.59	7096.08	2841.07	1004.58	0.00	0.00	2851.27	
9	10761.80	90.22	0.59	7096.00	2853.80	1004.71	2.00	180.00	2864.00	RUEGGE 3L 2864' VS
10	12036.40	90.22	0.59	7091.00	4128.32	1017.90	0.00	0.00	4138.58	RUEGGE 3L-4H-N165 BHL

FINAL  
RUEGGE 3L-4H-N165  
360637 185108 362137 185191  
23' KB @ 4936.00usft  
Ground Level @ 4915.00  
North American Datum 1983  
Well RUEGGE 3L-4H-N165 - Slot RUEGGE 3L-4H-N165 SHL, True North

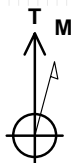
Type	Target	No Target (Freehand)	Azimuth	Origin	Type	N/S	E/W	From	TVD
Name			0.59	Slot		0.00	0.00	0.00	
RUEGGE 3L-4H-N165 BHL			7091.00	4128.32	1017.90	40.086594	-104.667100		
RUEGGE 3L 2864' VS			7096.00	2853.80	1004.71	40.083095	-104.667148		
RUEGGE 3L-4H-N165 TPZ			7105.00	-249.55	972.60	40.074576	-104.667263		
RUEGGE 3L 1652' VS			7106.00	1641.87	992.17	40.079768	-104.667193		
RUEGGE 3L 1.0 SF			7107.00	4039.59	1016.98	40.086351	-104.667104		

Project: DJ BASIN  
Site: S4-T1N-R65W (RUEGGE)  
Well: RUEGGE 3L-4H-N165  
Wellbore: OH  
Design: FINAL

True Vertical Depth (200 usft/in)

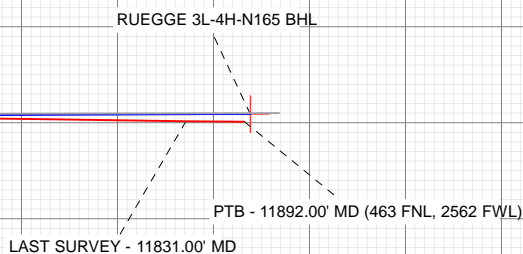
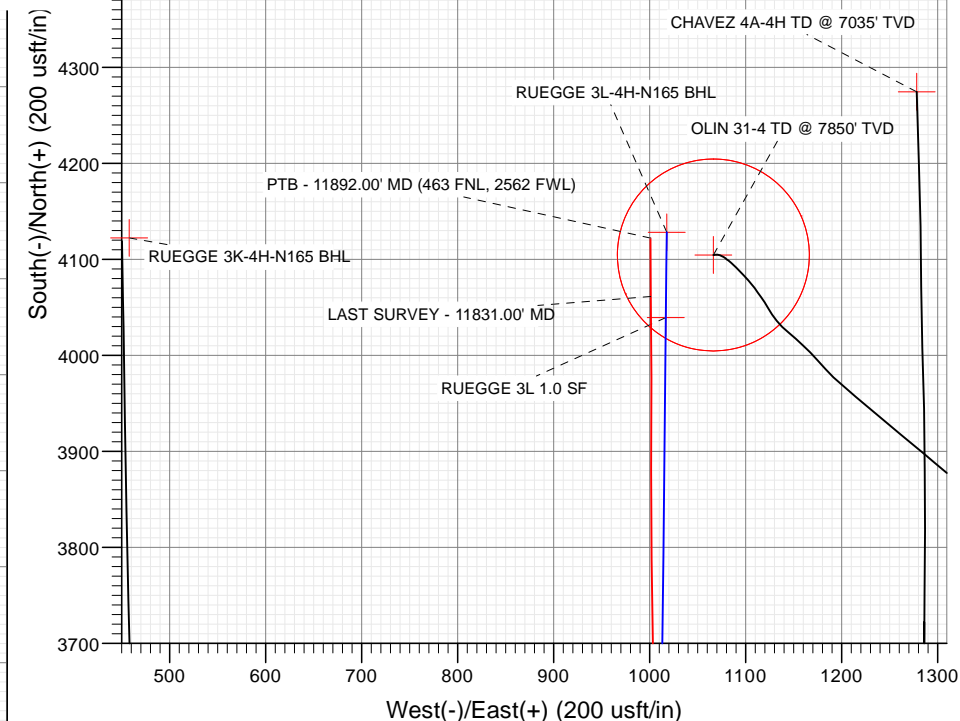
South(-)/North(+) (200 usft/in)

West(-)/East(+) (200 usft/in)



Azimuths to True North  
Magnetic North: 8.17°

Magnetic Field  
Strength: 52108.0nT  
Dip Angle: 66.47°  
Date: 7/2/2018  
Model: HDGM\_FILE



Vertical Section at 0.59° (200 usft/in)

WELL DETAILS: RUEGGE 3L-4H-N165

+N/-S	+E/-W	Northing	Easting	4915.00	Latitude	Longitude	Slot
0.00	0.00	1271347.74	3232060.86		40.075261	-104.670738	

CATHEDRAL



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well RUEGGE 3L-4H-N165 - Slot RUEGGE 3L-4H
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4938.00usft
<b>Site:</b>	S4-T1N-R65W (RUEGGE)	<b>MD Reference:</b>	23' KB @ 4938.00usft
<b>Well:</b>	RUEGGE 3L-4H-N165	<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>	DJ BASIN		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site		S4-T1N-R65W (RUEGGE)			
Site Position:		Northing:	1,271,333.68 usft	Latitude:	40.075225
From:	Map	Easting:	3,231,971.96 usft	Longitude:	-104.671056
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.54 °

Well		RUEGGE 3L-4H-N165 - Slot RUEGGE 3L-4H-N165 SHL				
Well Position	+N/-S	0.00 usft	Northing:	1,271,347.74 usft	Latitude:	40.075261
	+E/-W	0.00 usft	Easting:	3,232,060.86 usft	Longitude:	-104.670738
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,915.00 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_FILE	7/2/2018	8.17	66.47	52,108.00000000

<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) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	0.59	

<b>Survey Program</b>	<b>Date</b>	7/16/2018			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
109.00	2,408.00	Survey #1 (OH)	VESSI_GYROFLEX	VESSI Gyroflex Gyro	
2,556.00	11,892.00	Survey #2 (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>
10.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	
109.00	0.35	185.54	109.00	-0.30	-0.03	-0.30	0.35	0.35	
170.00	1.72	147.11	169.99	-1.26	0.45	-1.25	2.40	2.25	
232.00	2.74	128.21	231.94	-2.95	2.12	-2.93	2.01	1.65	
292.00	4.08	121.61	291.83	-4.96	5.06	-4.91	2.32	2.23	
353.00	5.96	125.92	352.60	-7.95	9.48	-7.86	3.14	3.08	
414.00	7.52	133.48	413.18	-12.56	14.94	-12.41	2.94	2.56	
476.00	8.54	137.26	474.57	-18.73	21.01	-18.52	1.85	1.65	
534.00	9.21	137.61	531.87	-25.32	27.06	-25.04	1.16	1.16	
619.00	11.09	136.81	615.54	-36.31	37.24	-35.92	2.22	2.21	
701.00	11.51	138.32	695.95	-48.17	48.08	-47.67	0.63	0.51	
785.00	12.56	139.35	778.10	-61.36	59.60	-60.74	1.28	1.25	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well RUEGGE 3L-4H-N165 - Slot RUEGGE 3L-4H
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4938.00usft
<b>Site:</b>	S4-T1N-R65W (RUEGGE)	<b>MD Reference:</b>	23' KB @ 4938.00usft
<b>Well:</b>	RUEGGE 3L-4H-N165	<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
868.00	12.80	140.53	859.08	-75.30	71.33	-74.56	0.43	0.29	
950.00	13.10	141.23	938.99	-89.56	82.92	-88.70	0.41	0.37	
1,032.00	11.55	145.68	1,019.10	-103.59	93.37	-102.62	2.22	-1.89	
1,115.00	10.05	145.91	1,100.63	-116.45	102.11	-115.39	1.81	-1.81	
1,198.00	10.26	139.90	1,182.33	-128.10	110.93	-126.95	1.30	0.25	
1,281.00	12.61	135.31	1,263.68	-140.20	122.07	-138.93	3.03	2.83	
1,363.00	13.13	133.73	1,343.62	-153.00	135.09	-151.60	0.77	0.63	
1,446.00	12.79	132.21	1,424.50	-165.69	148.71	-164.15	0.58	-0.41	
1,529.00	12.74	130.36	1,505.45	-177.79	162.49	-176.10	0.50	-0.06	
1,612.00	13.05	138.09	1,586.37	-190.69	175.72	-188.87	2.11	0.37	
1,696.00	12.58	146.18	1,668.28	-205.35	187.15	-203.41	2.21	-0.56	
1,781.00	12.47	149.27	1,751.26	-220.93	196.99	-218.89	0.80	-0.13	
1,862.00	11.47	147.18	1,830.50	-235.21	205.82	-233.08	1.35	-1.23	
1,943.00	10.62	146.41	1,910.00	-248.20	214.32	-245.98	1.07	-1.05	
2,024.00	10.11	143.24	1,989.67	-260.11	222.70	-257.80	0.94	-0.63	
2,114.00	10.32	131.34	2,078.26	-271.76	233.48	-269.35	2.35	0.23	
2,203.00	12.07	125.92	2,165.56	-282.49	247.01	-279.93	2.29	1.97	
2,293.00	13.35	128.21	2,253.36	-294.44	262.79	-291.72	1.53	1.42	
2,383.00	12.43	129.82	2,341.09	-307.07	278.40	-304.19	1.10	-1.02	
2,408.00	12.00	129.57	2,365.52	-310.45	282.47	-307.52	1.73	-1.72	
2,556.00	10.90	138.94	2,510.59	-330.80	303.52	-327.66	1.46	-0.74	
2,651.00	12.22	139.12	2,603.66	-345.18	316.00	-341.90	1.39	1.39	
2,745.00	12.57	137.80	2,695.47	-360.28	329.38	-356.86	0.48	0.37	
2,840.00	12.88	142.19	2,788.14	-376.30	342.82	-372.75	1.07	0.33	
2,934.00	13.54	144.04	2,879.65	-393.48	355.70	-389.80	0.83	0.70	
3,029.00	14.50	144.48	2,971.82	-412.17	369.14	-408.34	1.02	1.01	
3,123.00	13.14	142.90	3,063.09	-430.27	382.43	-426.31	1.50	-1.45	
3,229.00	13.58	140.44	3,166.23	-449.47	397.62	-445.35	0.68	0.42	
3,324.00	11.65	136.66	3,258.93	-465.05	411.31	-460.79	2.21	-2.03	
3,418.00	11.25	137.36	3,351.06	-478.69	424.03	-474.30	0.45	-0.43	
3,513.00	11.07	137.97	3,444.26	-492.29	436.42	-487.77	0.23	-0.19	
3,607.00	11.25	138.33	3,536.49	-505.84	448.55	-501.19	0.21	0.19	
3,702.00	11.43	134.02	3,629.63	-519.30	461.48	-514.52	0.91	0.19	
3,797.00	12.26	140.00	3,722.61	-533.57	474.74	-528.65	1.56	0.87	
3,891.00	13.45	137.62	3,814.26	-549.29	488.52	-544.23	1.39	1.27	
3,986.00	13.45	135.34	3,906.65	-565.31	503.74	-560.10	0.56	0.00	
4,080.00	13.58	139.73	3,998.05	-581.51	518.55	-576.14	1.10	0.14	
4,175.00	11.60	139.12	4,090.76	-597.24	532.01	-591.73	2.09	-2.08	
4,270.00	14.19	136.39	4,183.36	-612.90	546.30	-607.24	2.80	2.73	
4,364.00	12.66	134.55	4,274.79	-628.47	561.59	-622.65	1.69	-1.63	
4,459.00	11.51	142.72	4,367.69	-643.31	574.75	-637.36	2.17	-1.21	
4,554.00	12.52	142.19	4,460.60	-658.99	586.80	-652.91	1.07	1.06	
4,649.00	13.32	144.74	4,553.20	-676.06	599.43	-669.85	1.03	0.84	
4,743.00	11.82	142.37	4,644.94	-692.53	611.56	-686.20	1.69	-1.60	
4,838.00	12.79	139.21	4,737.76	-708.20	624.37	-701.73	1.24	1.02	
4,933.00	14.33	136.04	4,830.11	-724.62	639.41	-718.00	1.80	1.62	
5,027.00	12.00	131.91	4,921.64	-739.53	654.76	-732.74	2.67	-2.48	
5,122.00	11.65	134.55	5,014.62	-752.85	668.94	-745.92	0.68	-0.37	
5,217.00	11.21	139.82	5,107.74	-766.64	681.73	-759.58	1.19	-0.46	
5,311.00	11.03	140.61	5,199.98	-780.57	693.34	-773.39	0.25	-0.19	
5,406.00	12.61	140.26	5,292.96	-795.56	705.73	-788.26	1.66	1.66	
5,500.00	12.13	137.89	5,384.78	-810.78	718.92	-803.34	0.74	-0.51	
5,594.00	11.47	143.78	5,476.79	-825.65	731.06	-818.08	1.46	-0.70	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well RUEGGE 3L-4H-N165 - Slot RUEGGE 3L-4H
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4938.00usft
<b>Site:</b>	S4-T1N-R65W (RUEGGE)	<b>MD Reference:</b>	23' KB @ 4938.00usft
<b>Well:</b>	RUEGGE 3L-4H-N165	<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
5,689.00	10.42	137.27	5,570.07	-839.58	742.47	-831.89	1.71	-1.11	
5,784.00	9.76	133.67	5,663.60	-851.45	754.13	-843.64	0.96	-0.69	
5,878.00	10.33	131.30	5,756.16	-862.52	766.22	-854.58	0.75	0.61	
5,973.00	11.95	134.02	5,849.36	-874.97	779.69	-866.90	1.79	1.71	
6,068.00	13.10	134.20	5,942.10	-889.31	794.49	-881.09	1.21	1.21	
6,162.00	10.28	129.36	6,034.15	-902.06	808.61	-893.69	3.17	-3.00	
6,257.00	10.02	128.04	6,127.66	-912.53	821.67	-904.02	0.37	-0.27	
6,351.00	7.91	119.61	6,220.51	-920.77	833.74	-912.13	2.64	-2.24	
6,446.00	12.04	63.97	6,314.25	-919.65	848.36	-910.86	10.49	4.35	
6,540.00	17.36	43.14	6,405.20	-905.09	866.79	-896.12	7.89	5.66	
6,635.00	21.45	29.08	6,494.83	-879.54	884.94	-870.38	6.51	4.31	
6,730.00	26.81	18.09	6,581.55	-843.95	900.05	-834.64	7.34	5.64	
6,825.00	30.67	13.79	6,664.84	-800.04	912.49	-790.60	4.61	4.06	
6,919.00	40.83	12.99	6,741.02	-746.67	925.14	-737.10	10.82	10.81	
7,014.00	51.46	12.91	6,806.75	-680.00	940.47	-670.28	11.19	11.19	
7,109.00	54.98	10.53	6,863.63	-605.51	955.88	-595.64	4.21	3.71	
7,203.00	56.82	7.37	6,916.33	-528.64	967.97	-518.64	3.40	1.96	
7,298.00	59.94	2.62	6,966.16	-448.09	974.95	-438.03	5.38	3.28	
7,393.00	66.84	1.13	7,008.68	-363.25	977.69	-353.17	7.40	7.26	
7,487.00	73.17	359.46	7,040.81	-274.97	978.12	-264.88	6.94	6.73	
7,513.50	73.97	359.36	7,048.31	-249.55	977.86	-239.47	3.03	3.01	TPZ - 7513.50 (460 FSL, 2613 FWL)
7,582.00	76.03	359.11	7,066.04	-183.40	976.98	-173.33	3.03	3.01	
7,677.00	81.43	359.46	7,084.60	-90.27	975.82	-80.22	5.70	5.68	
7,771.00	86.75	359.99	7,094.27	3.20	975.37	13.24	5.69	5.66	
7,866.00	86.62	359.90	7,099.76	98.04	975.28	108.07	0.17	-0.14	
7,961.00	89.34	359.36	7,103.11	192.97	974.67	202.99	2.92	2.86	
8,055.00	90.62	0.78	7,103.15	286.96	974.78	296.98	2.03	1.36	
8,150.00	89.78	358.84	7,102.81	381.96	974.47	391.97	2.23	-0.88	
8,244.00	89.87	359.20	7,103.10	475.94	972.86	485.93	0.39	0.10	
8,340.00	91.45	1.22	7,102.00	571.93	973.21	581.92	2.67	1.65	
8,434.00	92.11	1.22	7,099.08	665.86	975.21	675.87	0.70	0.70	
8,529.00	90.70	0.43	7,096.75	760.82	976.58	770.83	1.70	-1.48	
8,624.00	91.06	0.07	7,095.29	855.80	976.99	865.82	0.54	0.38	
8,719.00	89.25	2.45	7,095.03	950.77	979.08	960.80	3.15	-1.91	
8,813.00	87.80	2.10	7,097.45	1,044.66	982.81	1,054.73	1.59	-1.54	
8,907.00	86.35	1.92	7,102.25	1,138.48	986.10	1,148.57	1.55	-1.54	
9,002.00	88.68	1.04	7,106.37	1,233.35	988.56	1,243.47	2.62	2.45	
9,096.00	88.29	0.69	7,108.85	1,327.31	989.97	1,337.43	0.56	-0.41	
9,191.00	91.63	359.11	7,108.92	1,422.29	989.81	1,432.41	3.89	3.52	
9,286.00	92.24	358.93	7,105.71	1,517.22	988.18	1,527.32	0.67	0.64	
9,380.00	90.26	359.99	7,103.66	1,611.19	987.30	1,621.27	2.39	-2.11	
9,475.00	91.01	359.46	7,102.61	1,706.18	986.84	1,716.25	0.97	0.79	
9,570.00	89.65	0.60	7,102.06	1,801.18	986.89	1,811.24	1.87	-1.43	
9,665.00	89.69	358.76	7,102.61	1,896.17	986.36	1,906.23	1.94	0.04	
9,759.00	90.92	0.25	7,102.11	1,990.16	985.55	2,000.20	2.06	1.31	
9,854.00	90.18	359.99	7,101.19	2,085.15	985.75	2,095.19	0.83	-0.78	
9,949.00	91.19	1.04	7,100.06	2,180.14	986.60	2,190.19	1.53	1.06	
10,043.00	91.49	1.04	7,097.86	2,274.10	988.31	2,284.16	0.32	0.32	
10,138.00	92.20	0.60	7,094.80	2,369.04	989.67	2,379.11	0.88	0.75	
10,233.00	91.85	1.83	7,091.44	2,463.96	991.68	2,474.04	1.35	-0.37	
10,327.00	89.56	2.18	7,090.29	2,557.89	994.97	2,568.00	2.46	-2.44	
10,422.00	89.74	2.36	7,090.87	2,652.81	998.73	2,662.95	0.27	0.19	
10,517.00	91.19	2.62	7,090.10	2,747.71	1,002.86	2,757.90	1.55	1.53	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well RUEGGE 3L-4H-N165 - Slot RUEGGE 3L-4H
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	23' KB @ 4938.00usft
<b>Site:</b>	S4-T1N-R65W (RUEGGE)	<b>MD Reference:</b>	23' KB @ 4938.00usft
<b>Well:</b>	RUEGGE 3L-4H-N165	<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
10,611.00	90.40	1.39	7,088.79	2,841.65	1,006.15	2,851.86	1.56	-0.84	
10,706.00	89.47	359.99	7,088.90	2,936.64	1,007.29	2,946.85	1.77	-0.98	
10,801.00	89.52	0.16	7,089.74	3,031.63	1,007.42	3,041.84	0.19	0.05	
10,896.00	89.74	359.72	7,090.35	3,126.63	1,007.32	3,136.84	0.52	0.23	
10,990.00	89.12	359.02	7,091.29	3,220.62	1,006.28	3,230.81	0.99	-0.66	
11,084.00	88.37	356.91	7,093.34	3,314.53	1,002.95	3,324.68	2.38	-0.80	
11,179.00	90.40	0.87	7,094.36	3,409.48	1,001.11	3,419.61	4.68	2.14	
11,273.00	90.44	1.04	7,093.68	3,503.47	1,002.67	3,513.61	0.19	0.04	
11,368.00	90.09	0.25	7,093.24	3,598.46	1,003.74	3,608.60	0.91	-0.37	
11,462.00	89.52	359.46	7,093.56	3,692.46	1,003.50	3,702.60	1.04	-0.61	
11,557.00	88.81	358.84	7,094.94	3,787.44	1,002.10	3,797.55	0.99	-0.75	
11,651.00	89.74	0.78	7,096.13	3,881.42	1,001.78	3,891.53	2.29	0.99	
11,746.00	88.99	359.46	7,097.18	3,976.41	1,001.98	3,986.52	1.60	-0.79	
11,831.00	89.34	359.64	7,098.42	4,061.40	1,001.32	4,071.50	0.46	0.41	LAST SURVEY - 11831.00' MD
11,892.00	89.34	359.64	7,099.12	4,122.40	1,000.93	4,132.48	0.00	0.00	PTB - 11892.00' MD (463 FNL, 2562 FWL)

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
RUEGGE 3L 2864' VS - hit/miss target - Shape	0.00	0.00	7,096.00	2,853.80	1,004.71	1,274,210.82	3,233,038.84	40.083095	-104.667148
- actual wellpath misses target center by 7.48usft at 10623.15usft MD (7088.72 TVD, 2853.79 N, 1006.42 E)									
- Point									
RUEGGE 3L 1.0 SF - hit/miss target - Shape	0.00	0.00	7,107.00	4,039.59	1,016.98	1,275,396.67	3,233,040.02	40.086351	-104.667104
- actual wellpath misses target center by 17.87usft at 11809.20usft MD (7098.15 TVD, 4039.60 N, 1001.46 E)									
- Point									
RUEGGE 3L 1652' VS - hit/miss target - Shape	0.00	0.00	7,106.00	1,641.87	992.17	1,272,998.82	3,233,037.63	40.079768	-104.667193
- actual wellpath misses target center by 5.54usft at 9410.62usft MD (7103.45 TVD, 1641.81 N, 987.25 E)									
- Point									
RUEGGE 3L-4H-N165 E - hit/miss target - Shape	0.00	0.00	7,091.00	4,128.32	1,017.90	1,275,485.40	3,233,040.11	40.086594	-104.667100
- actual wellpath misses target center by 19.72usft at 11892.00usft MD (7099.12 TVD, 4122.40 N, 1000.93 E)									
- Point									
RUEGGE 3L-4H-N165 T - hit/miss target - Shape	0.00	0.00	7,105.00	-249.55	972.60	1,271,107.30	3,233,035.74	40.074576	-104.667263
- actual wellpath misses target center by 54.79usft at 7528.25usft MD (7052.32 TVD, -235.36 N, 977.70 E)									
- Point									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,513.50	7,048.31	-249.55	977.86	TPZ - 7513.50 (460 FSL, 2613 FWL)
11,831.00	7,098.42	4,061.40	1,001.32	LAST SURVEY - 11831.00' MD
11,892.00	7,099.12	4,122.40	1,000.93	PTB - 11892.00' MD (463 FNL, 2562 FWL)

Checked By: _____	Approved By: _____	Date: _____
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