



CRESTONE PEAK
RESOURCES

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	-10.00	0.00	0.00	-10.00	0.00	0.00	0.00	0.00	0.00	
2	1190.00	0.00	0.00	1190.00	0.00	0.00	0.00	0.00	0.00	
3	1795.18	12.10	207.71	1790.69	-56.38	-29.62	2.00	207.71	-56.62	
4	6534.16	12.10	207.71	6424.32	-936.05	-491.74	0.00	0.00	-940.05	
5	7789.87	89.71	0.47	7270.00	-235.34	-568.54	8.00	152.26	-240.00	RUEGGE 3H (-240') VS
6	9178.88	89.71	0.47	7277.00	1153.61	-557.06	0.00	0.00	1149.00	RUEGGE 3H 1149' VS
7	9179.19	89.71	0.47	7277.00	1153.92	-557.06	2.00	180.00	1149.31	
8	10925.15	89.71	0.47	7285.99	2899.79	-542.63	0.00	0.00	2895.24	
9	10926.91	89.67	0.47	7286.00	2901.55	-542.62	2.00	-180.00	2897.00	RUEGGE 3H 2897' VS
10	12141.65	89.67	0.47	7293.00	4116.23	-532.58	0.00	0.00	4111.72	RUEGGE 3H-4H-N165 BHL

FINAL
RUEGGE 3H-4H-N165
360237 185096 361837 185176
13' KB @ 4929.00usft
Ground Level @ 4916.00
North American Datum 1983
Well RUEGGE 3H-4H-N165 - Slot RUEGGE 3H-4H-N165 SHL, True North

Type	Target	No Target (Freehand)	Azimuth	Origin	Type	N/S	E/W	From	TVD
Name									
RUEGGE 3H (-240') VS			2720.00	-235.34	-568.54	40.074599	-104.672911		
RUEGGE 3H-4H-N165 TPZ			7272.00	-240.87	-568.59	40.074584	-104.672912		
RUEGGE 3H 1149' VS			7277.00	1153.61	-557.06	40.078412	-104.672870		
RUEGGE 3H 2897' VS			7286.00	2901.55	-542.62	40.083210	-104.672819		
RUEGGE 3H-4H-N165 BHL			7293.00	4116.23	-532.58	40.086545	-104.672783		

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

True Vertical Depth (200 usft/in)



Azimuths to True North
Magnetic North: 8.17°

Magnetic Field
Strength: 52114.0nT
Dip Angle: 66.47°
Date: 6/14/2018
Model: HDGM_FILE

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

STELLING 3A-4H TD @ 7043' TVD

PTB - 12135.00' MD (463 FNL, 1526 FWL)

RUEGGE 3H-4H-N165 BHL

RUEGGE 3I-4H-N165 BHL

LAST SURVEY - 12073.00' MD

GITTLEIN 21-4J TD @ 8019' TVD

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

RUEGGE 3H-4H-N165 BHL

LAST SURVEY - 12073.00' MD

PTB - 12135.00' MD (463 FNL, 1526 FWL)

Vertical Section at 0.47° (200 usft/in)

WELL DETAILS: RUEGGE 3H-4H-N165

+N/-S 0.00 +E/-W 0.00 Northing 1271341.49 Easting 3232021.35 4916.00 Latitude 40.075245 Longitude -104.672819 Slot RUEGGE 3H-4H-N165 SHL

CATHEDRAL



Cathedral Energy Services

Survey Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well RUEGGE 3H-4H-N165 - Slot RUEGGE 3H-4
Project:	DJ BASIN	TVD Reference:	13' KB @ 4929.00usft
Site:	S4-T1N-R65W (RUEGGE)	MD Reference:	13' KB @ 4929.00usft
Well:	RUEGGE 3H-4H-N165	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Project	DJ BASIN		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	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 3H-4H-N165 - Slot RUEGGE 3H-4H-N165 SHL					
Well Position	+N/-S	0.00 usft	Northing:	1,271,341.49 usft	Latitude:	40.075245
	+E/-W	0.00 usft	Easting:	3,232,021.35 usft	Longitude:	-104.670880
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,916.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	6/14/2018	8.17	66.47	52,114.00000000

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	0.47	

Survey Program	Date	6/21/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
109.00	2,403.00	Survey #1 (OH)	VESSI_GYROFLEX	VESSI Gyroflex Gyro	
2,563.00	12,135.00	Survey #2 (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
10.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	
109.00	0.56	305.75	109.00	0.28	-0.39	0.28	0.57	0.57	
140.00	0.67	287.72	140.00	0.43	-0.69	0.42	0.71	0.35	
170.00	0.19	247.62	170.00	0.46	-0.90	0.45	1.80	-1.60	
262.00	0.32	260.11	261.99	0.36	-1.30	0.35	0.15	0.14	
353.00	0.40	116.34	352.99	0.17	-1.26	0.16	0.75	0.09	
445.00	0.54	123.99	444.99	-0.21	-0.61	-0.22	0.17	0.15	
506.00	0.59	139.37	505.99	-0.61	-0.17	-0.61	0.26	0.08	
588.00	0.40	147.73	587.98	-1.17	0.26	-1.17	0.25	-0.23	
674.00	0.73	150.98	673.98	-1.91	0.68	-1.90	0.39	0.38	
755.00	0.89	91.19	754.97	-2.37	1.56	-2.36	1.01	0.20	
839.00	0.40	342.94	838.97	-2.10	2.13	-2.09	1.29	-0.58	

Cathedral Energy Services

Survey Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well RUEGGE 3H-4H-N165 - Slot RUEGGE 3H-4
Project:	DJ BASIN	TVD Reference:	13' KB @ 4929.00usft
Site:	S4-T1N-R65W (RUEGGE)	MD Reference:	13' KB @ 4929.00usft
Well:	RUEGGE 3H-4H-N165	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
922.00	0.59	341.53	921.97	-1.42	1.91	-1.40	0.23	0.23	
1,005.00	0.43	333.18	1,004.96	-0.74	1.63	-0.72	0.21	-0.19	
1,087.00	0.35	333.53	1,086.96	-0.24	1.38	-0.23	0.10	-0.10	
1,169.00	0.30	307.86	1,168.96	0.12	1.10	0.13	0.19	-0.06	
1,253.00	1.77	246.39	1,252.95	-0.27	-0.26	-0.27	1.96	1.75	
1,335.00	3.41	222.03	1,334.86	-2.59	-3.06	-2.61	2.37	2.00	
1,393.00	4.77	217.15	1,392.71	-5.79	-5.67	-5.84	2.42	2.34	
1,476.00	6.97	213.11	1,475.27	-12.76	-10.50	-12.85	2.70	2.65	
1,560.00	9.33	212.35	1,558.42	-22.78	-16.93	-22.92	2.81	2.81	
1,642.00	10.05	214.80	1,639.25	-34.27	-24.57	-34.47	1.01	0.88	
1,725.00	11.25	209.79	1,720.82	-47.25	-32.73	-47.51	1.82	1.45	
1,810.00	11.95	208.10	1,804.08	-62.21	-40.99	-62.54	0.92	0.82	
1,893.00	12.31	205.91	1,885.23	-77.74	-48.90	-78.14	0.70	0.43	
1,974.00	12.41	208.15	1,964.35	-93.18	-56.78	-93.65	0.60	0.12	
2,056.00	12.43	208.62	2,044.43	-108.70	-65.17	-109.23	0.13	0.02	
2,138.00	12.06	204.10	2,124.57	-124.27	-72.89	-124.86	1.25	-0.45	
2,223.00	11.82	200.03	2,207.73	-140.55	-79.50	-141.20	1.03	-0.28	
2,307.00	10.96	198.17	2,290.08	-156.22	-84.94	-156.91	1.11	-1.02	
2,403.00	10.16	203.66	2,384.45	-172.65	-91.18	-173.39	1.34	-0.83	
2,563.00	11.38	199.77	2,541.63	-200.43	-102.19	-201.26	0.89	0.76	
2,657.00	13.45	202.94	2,633.43	-219.23	-109.58	-220.12	2.32	2.20	
2,751.00	12.00	204.08	2,725.12	-238.22	-117.83	-239.18	1.57	-1.54	
2,846.00	12.48	213.92	2,817.97	-255.75	-127.59	-256.79	2.25	0.51	
2,941.00	14.90	209.53	2,910.27	-274.90	-139.34	-276.04	2.77	2.55	
3,035.00	14.46	209.00	3,001.20	-295.68	-150.99	-296.91	0.49	-0.47	
3,130.00	12.88	208.91	3,093.51	-315.33	-161.86	-316.64	1.66	-1.66	
3,225.00	11.56	207.42	3,186.35	-333.05	-171.36	-334.44	1.43	-1.39	
3,319.00	9.93	206.19	3,278.70	-348.68	-179.27	-350.14	1.75	-1.73	
3,414.00	11.87	202.85	3,371.98	-365.04	-186.68	-366.55	2.15	2.04	
3,509.00	12.44	215.68	3,464.87	-382.35	-196.45	-383.95	2.90	0.60	
3,603.00	10.33	214.63	3,557.01	-397.51	-207.14	-399.20	2.26	-2.24	
3,698.00	9.58	205.75	3,650.59	-411.64	-215.42	-413.40	1.80	-0.79	
3,792.00	11.73	196.61	3,742.97	-427.85	-221.55	-429.65	2.90	2.29	
3,887.00	13.67	206.63	3,835.65	-447.14	-229.34	-449.01	3.08	2.04	
3,982.00	11.34	207.24	3,928.39	-465.48	-238.65	-467.43	2.46	-2.45	
4,076.00	13.32	199.33	4,020.23	-483.92	-246.47	-485.93	2.76	2.11	
4,171.00	15.82	202.32	4,112.17	-506.23	-255.01	-508.31	2.75	2.63	
4,265.00	15.82	203.02	4,202.60	-529.88	-264.89	-532.03	0.20	0.00	
4,371.00	13.14	199.68	4,305.23	-554.52	-274.60	-556.76	2.65	-2.53	
4,465.00	11.69	209.35	4,397.04	-572.89	-282.86	-575.19	2.69	-1.54	
4,561.00	11.03	212.78	4,491.16	-589.09	-292.60	-591.47	0.98	-0.69	
4,655.00	10.15	212.96	4,583.56	-603.60	-301.98	-606.05	0.94	-0.94	
4,750.00	8.61	210.93	4,677.28	-616.72	-310.19	-619.24	1.66	-1.62	
4,844.00	11.34	212.69	4,769.86	-630.54	-318.80	-633.13	2.92	2.90	
4,939.00	10.77	213.57	4,863.09	-645.79	-328.75	-648.47	0.63	-0.60	
5,034.00	13.45	212.96	4,955.97	-662.46	-339.67	-665.23	2.82	2.82	
5,129.00	12.44	208.82	5,048.56	-680.70	-350.61	-683.55	1.44	-1.06	
5,223.00	13.40	210.93	5,140.18	-698.91	-361.09	-701.85	1.14	1.02	
5,318.00	12.17	213.04	5,232.82	-716.75	-372.21	-719.78	1.38	-1.29	
5,413.00	10.85	209.97	5,325.91	-732.89	-382.14	-736.00	1.53	-1.39	
5,507.00	11.16	206.89	5,418.18	-748.67	-390.67	-751.85	0.71	0.33	
5,601.00	12.70	206.63	5,510.15	-766.02	-399.42	-769.27	1.64	1.64	
5,695.00	13.05	211.20	5,601.79	-784.34	-409.55	-787.67	1.15	0.37	

Cathedral Energy Services

Survey Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well RUEGGE 3H-4H-N165 - Slot RUEGGE 3H-4
Project:	DJ BASIN	TVD Reference:	13' KB @ 4929.00usft
Site:	S4-T1N-R65W (RUEGGE)	MD Reference:	13' KB @ 4929.00usft
Well:	RUEGGE 3H-4H-N165	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
5,790.00	13.32	213.83	5,694.28	-802.60	-421.20	-806.03	0.69	0.28	
5,885.00	13.40	209.09	5,786.71	-821.31	-432.64	-824.83	1.16	0.08	
5,979.00	12.48	215.86	5,878.33	-839.06	-443.89	-842.68	1.88	-0.98	
6,074.00	13.67	214.10	5,970.87	-856.68	-456.20	-860.39	1.32	1.25	
6,169.00	11.69	208.03	6,063.55	-874.47	-467.01	-878.27	2.51	-2.08	
6,263.00	10.50	210.23	6,155.79	-890.28	-475.80	-894.15	1.34	-1.27	
6,358.00	11.87	203.20	6,248.99	-906.74	-484.01	-910.68	2.03	1.44	
6,452.00	11.65	216.65	6,341.03	-923.24	-493.48	-927.26	2.92	-0.23	
6,547.00	13.14	241.08	6,433.88	-936.17	-508.67	-940.31	5.69	1.57	
6,642.00	18.11	279.14	6,525.57	-939.05	-532.78	-943.39	11.71	5.23	
6,736.00	21.45	308.40	6,614.23	-926.02	-560.75	-930.59	10.99	3.55	
6,831.00	20.17	341.72	6,703.34	-899.59	-579.56	-904.31	12.38	-1.35	
6,926.00	23.60	2.37	6,791.61	-864.97	-583.92	-869.74	8.81	3.61	
7,021.00	27.77	358.94	6,877.21	-823.83	-583.55	-828.59	4.66	4.39	
7,115.00	33.75	353.84	6,957.96	-775.92	-586.76	-780.71	6.94	6.36	
7,209.00	36.91	358.06	7,034.65	-721.73	-590.51	-726.55	4.25	3.36	
7,304.00	47.02	2.11	7,105.21	-658.31	-590.20	-663.13	11.01	10.64	
7,399.00	58.67	2.28	7,162.49	-582.78	-587.30	-587.58	12.26	12.26	
7,494.00	66.71	353.84	7,206.10	-498.61	-590.37	-503.43	11.56	8.46	
7,589.00	70.49	352.53	7,240.76	-410.80	-600.88	-415.72	4.18	3.98	
7,683.00	78.53	348.48	7,265.85	-321.56	-615.87	-326.60	9.51	8.55	
7,766.60	88.74	344.69	7,275.12	-240.87	-635.14	-246.07	13.01	12.21	TPZ - 7766.60 (460 FSL, 1473 FWL)
7,778.00	90.13	344.18	7,275.23	-229.89	-638.20	-235.12	13.01	12.22	
7,872.00	102.00	347.43	7,265.31	-139.45	-661.11	-144.87	13.09	12.63	
7,967.00	98.61	358.06	7,248.27	-46.88	-672.85	-52.40	11.57	-3.57	
8,061.00	94.09	358.85	7,237.88	46.48	-675.36	40.94	4.88	-4.81	
8,156.00	91.89	0.96	7,232.92	141.34	-675.52	135.80	3.21	-2.32	
8,250.00	89.39	3.16	7,231.87	235.26	-672.14	229.74	3.54	-2.66	
8,346.00	84.46	3.86	7,237.02	330.91	-666.27	325.44	5.19	-5.14	
8,440.00	83.54	3.25	7,246.85	424.22	-660.47	418.79	1.17	-0.98	
8,535.00	85.08	3.69	7,256.27	518.57	-654.75	513.18	1.69	1.62	
8,630.00	87.19	5.89	7,262.67	613.01	-646.84	607.69	3.20	2.22	
8,725.00	87.50	5.62	7,267.07	707.43	-637.32	702.18	0.43	0.33	
8,819.00	87.63	5.36	7,271.06	800.92	-628.34	795.74	0.31	0.14	
8,914.00	87.36	4.22	7,275.22	895.49	-620.41	890.38	1.23	-0.28	
9,008.00	86.22	3.69	7,280.48	989.12	-613.94	984.05	1.34	-1.21	
9,103.00	85.91	4.04	7,287.00	1,083.68	-607.55	1,078.66	0.49	-0.33	
9,197.00	87.23	5.45	7,292.62	1,177.19	-599.79	1,172.23	2.05	1.40	
9,292.00	88.95	5.36	7,295.79	1,271.71	-590.84	1,266.82	1.81	1.81	
9,386.00	90.48	3.86	7,296.26	1,365.40	-583.29	1,360.57	2.28	1.63	
9,481.00	90.18	3.51	7,295.71	1,460.20	-577.18	1,455.42	0.49	-0.32	
9,576.00	89.74	3.51	7,295.78	1,555.02	-571.37	1,550.28	0.46	-0.46	
9,671.00	89.87	2.28	7,296.10	1,649.90	-566.57	1,645.19	1.30	0.14	
9,766.00	89.82	1.75	7,296.36	1,744.84	-563.23	1,740.16	0.56	-0.05	
9,860.00	90.53	1.49	7,296.07	1,838.80	-560.57	1,834.14	0.80	0.76	
9,955.00	90.40	1.40	7,295.30	1,933.77	-558.18	1,929.12	0.17	-0.14	
10,049.00	90.44	0.70	7,294.61	2,027.75	-556.45	2,023.11	0.75	0.04	
10,144.00	90.66	0.00	7,293.70	2,122.74	-555.87	2,118.11	0.77	0.23	
10,239.00	90.84	359.29	7,292.45	2,217.73	-556.46	2,213.09	0.77	0.19	
10,333.00	90.79	358.68	7,291.12	2,311.71	-558.13	2,307.05	0.65	-0.05	
10,428.00	88.99	1.32	7,291.30	2,406.69	-558.13	2,402.03	3.36	-1.89	
10,523.00	89.12	1.75	7,292.87	2,501.65	-555.58	2,497.00	0.47	0.14	
10,617.00	88.81	0.96	7,294.56	2,595.60	-553.36	2,590.98	0.90	-0.33	

Cathedral Energy Services

Survey Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well RUEGGE 3H-4H-N165 - Slot RUEGGE 3H-4
Project:	DJ BASIN	TVD Reference:	13' KB @ 4929.00usft
Site:	S4-T1N-R65W (RUEGGE)	MD Reference:	13' KB @ 4929.00usft
Well:	RUEGGE 3H-4H-N165	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
10,712.00	88.68	0.79	7,296.64	2,690.57	-551.91	2,685.95	0.23	-0.14	
10,807.00	88.42	0.35	7,299.05	2,785.53	-550.96	2,780.92	0.54	-0.27	
10,902.00	88.77	359.47	7,301.38	2,880.50	-551.11	2,875.89	1.00	0.37	
10,996.00	88.73	358.33	7,303.43	2,974.46	-552.92	2,969.83	1.21	-0.04	
11,090.00	90.26	358.24	7,304.26	3,068.41	-555.73	3,063.75	1.63	1.63	
11,185.00	91.58	359.56	7,302.73	3,163.38	-557.55	3,158.70	1.96	1.39	
11,279.00	91.32	0.17	7,300.35	3,257.35	-557.78	3,252.66	0.71	-0.28	
11,374.00	91.49	2.02	7,298.02	3,352.30	-555.96	3,347.63	1.95	0.18	
11,468.00	91.27	1.05	7,295.76	3,446.24	-553.44	3,441.58	1.06	-0.23	
11,563.00	91.67	1.23	7,293.32	3,541.19	-551.55	3,536.54	0.46	0.42	
11,657.00	91.54	0.88	7,290.69	3,635.13	-549.82	3,630.50	0.40	-0.14	
11,752.00	88.64	1.23	7,290.54	3,730.11	-548.08	3,725.49	3.07	-3.05	
11,847.00	88.33	0.70	7,293.05	3,825.06	-546.48	3,820.45	0.65	-0.33	
11,942.00	88.68	0.70	7,295.53	3,920.02	-545.32	3,915.42	0.37	0.37	
12,037.00	88.37	0.00	7,297.98	4,014.99	-544.74	4,010.38	0.81	-0.33	
12,073.00	88.37	359.03	7,299.00	4,050.97	-545.04	4,046.36	2.69	0.00	LAST SURVEY - 12073.00' MD
12,135.00	88.37	359.03	7,300.76	4,112.94	-546.09	4,108.32	0.00	0.00	PTB - 12135.00' MD (463 FNL, 1526 FWL)

Targets									
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	
RUEGGE 3H 1149' VS	- actual wellpath misses target center by 47.04usft at 9176.14usft MD (7291.56 TVD, 1156.44 N, -601.71 E)	0.00	0.00	7,277.00	1,153.61	-557.06	1,272,489.84	3,231,453.52	40.078412 -104.672870
RUEGGE 3H-4H-N165 1	- actual wellpath misses target center by 64.36usft at 7750.86usft MD (7274.50 TVD, -256.07 N, -631.08 E)	0.00	0.00	7,272.00	-240.87	-568.59	1,271,095.31	3,231,455.04	40.074584 -104.672912
RUEGGE 3H 2897' VS	- actual wellpath misses target center by 18.08usft at 10922.54usft MD (7301.82 TVD, 2901.04 N, -551.35 E)	0.00	0.00	7,286.00	2,901.55	-542.62	1,274,237.84	3,231,451.62	40.083210 -104.672819
RUEGGE 3H-4H-N165 1	- actual wellpath misses target center by 15.92usft at 12135.00usft MD (7300.76 TVD, 4112.94 N, -546.09 E)	0.00	0.00	7,293.00	4,116.23	-532.58	1,275,452.56	3,231,450.30	40.086545 -104.672783
RUEGGE 3H (-240') VS	- actual wellpath misses target center by 65.93usft at 7755.98usft MD (7274.76 TVD, -251.12 N, -632.38 E)	0.00	0.00	7,270.00	-235.34	-568.54	1,271,100.85	3,231,455.03	40.074599 -104.672911

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
7,766.60	7,275.12	-240.87	-635.14	TPZ - 7766.60 (460 FSL, 1473 FWL)	
12,073.00	7,299.00	4,050.97	-545.04	LAST SURVEY - 12073.00' MD	
12,135.00	7,300.76	4,112.94	-546.09	PTB - 12135.00' MD (463 FNL, 1526 FWL)	

Checked By: _____ Approved By: _____ Date: _____