



CRESTONE PEAK
RESOURCES

SECTION DETAILS

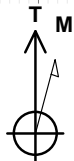
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	
3	1600.00	12.00	210.00	1595.62	-54.22	-31.30	2.00	210.00	-54.47	
4	1759.88	13.97	221.26	1751.44	-83.12	-52.34	2.00	57.69	-83.55	
5	6500.82	13.97	221.26	6352.16	-943.42	-807.12	0.00	0.00	-950.01	
6	7765.33	90.64	0.47	7188.00	-230.30	-938.64	8.00	138.25	-238.00	RUEGGE 3G (-238') VS
7	9022.41	90.64	0.47	7174.00	1026.65	-928.25	0.00	0.00	1019.00	RUEGGE 3G 1019' VS
8	9040.16	90.99	0.47	7173.75	1044.40	-928.10	2.00	0.00	1036.75	
9	10723.49	90.99	0.47	7144.57	2727.42	-914.19	0.00	0.00	2719.83	
10	10749.67	91.52	0.47	7144.00	2753.59	-913.98	2.00	0.00	2746.00	RUEGGE 3G 2749' VS
11	12109.82	91.52	0.47	7108.00	4113.21	-902.74	0.00	0.00	4105.67	RUEGGE 3G-4H-N165 BHL

FINAL
RUEGGE 3G-4H-N165
358937 185094 361737 185176
23' KB @ 4939.00usft
Ground Level @ 4916.00
North American Datum 1983
Well RUEGGE 3G-4H-N165 - Slot RUEGGE 3G-4H-N165 SHL, True North

Type	Target	No Target (Freehand)	Azimuth	Origin	Type	N/S	E/W	From	TVD
Name			0.47		Slot	0.00	0.00	0.00	
RUEGGE 3G-4H-N165 BHL			7108.00	4113.21	-902.74	40.086532	-104.674141		
RUEGGE 3G-4H-N165 TPZ			7117.00	-238.72	-938.71	40.074586	-104.674269		
RUEGGE 3G 2749' VS			7144.00	2753.59	-913.98	40.082800	-104.674181		
RUEGGE 3G 1019' VS			7174.00	1026.65	-928.25	40.078959	-104.674232		
RUEGGE 3G (-238') VS			7188.00	-230.30	-938.64	40.074609	-104.674269		

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

True Vertical Depth (200 usft/in)

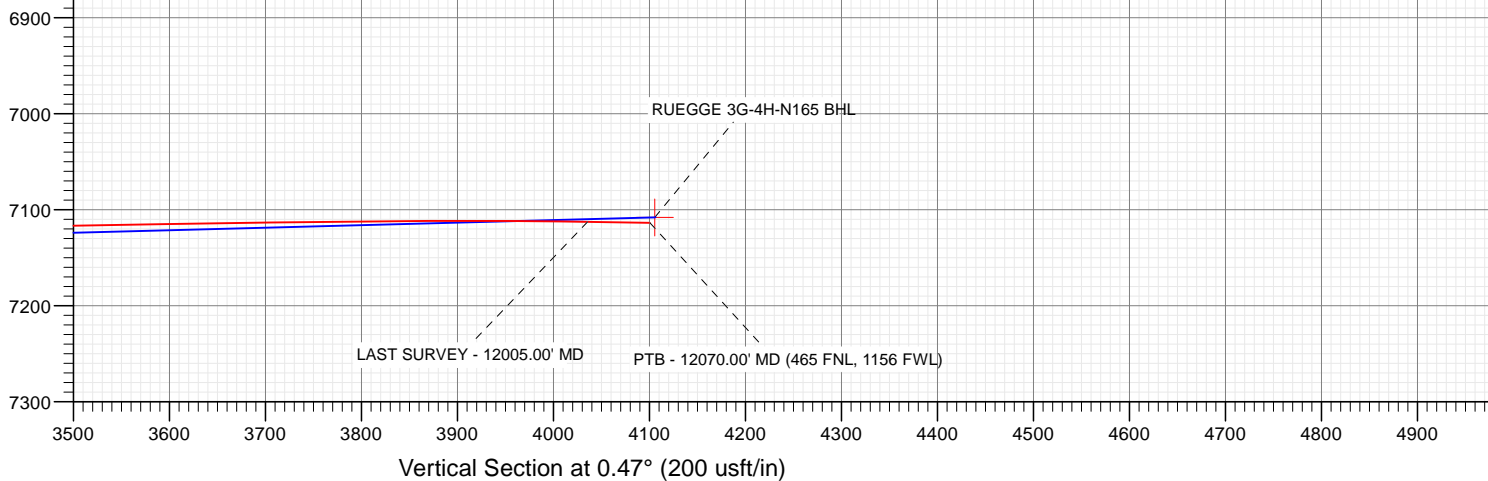
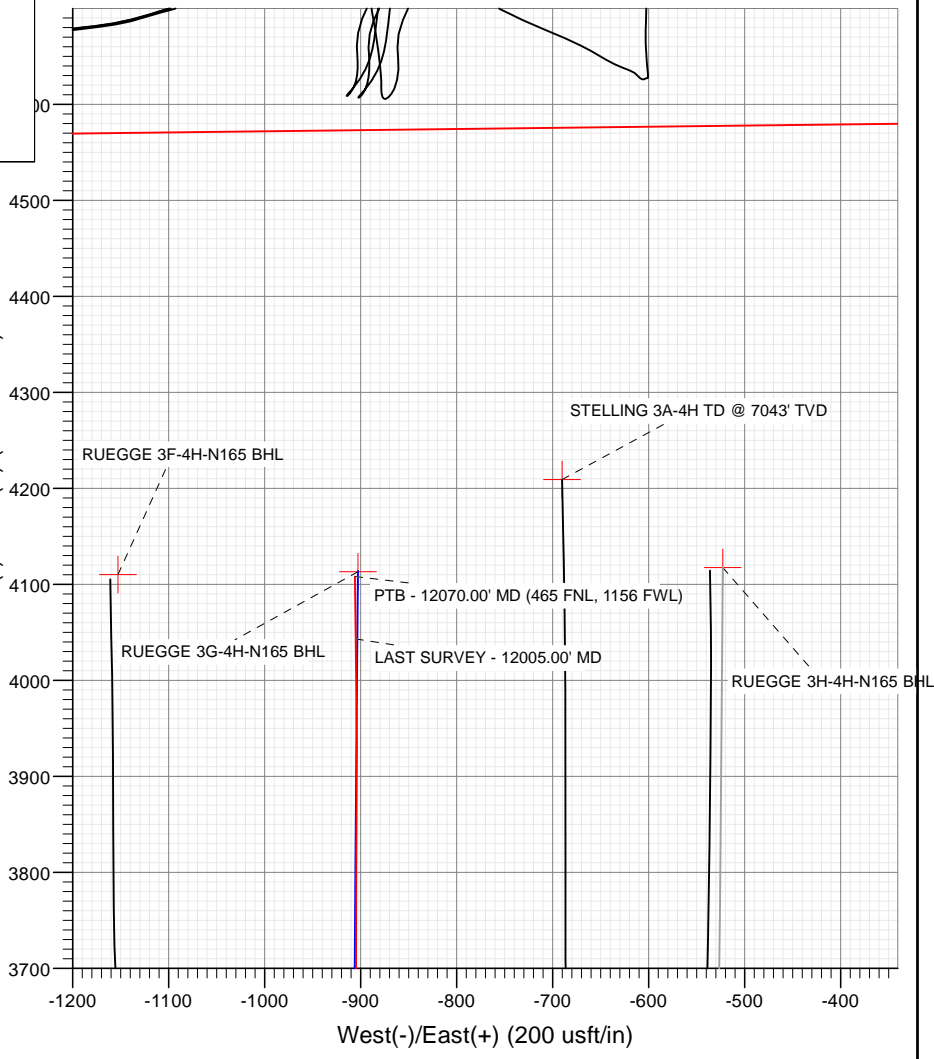


Azimuths to True North
Magnetic North: 8.17°

Magnetic Field
Strength: 52116.0nT
Dip Angle: 66.47°
Date: 6/8/2018
Model: HDGM_FILE

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

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



WELL DETAILS: RUEGGE 3G-4H-N165

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1271339.93	3232011.47	40.075241	-104.670915

4916.00

CATHEDRAL



Cathedral Energy Services

Survey Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well RUEGGE 3G-4H-N165 - Slot RUEGGE 3G-4
Project:	DJ BASIN	TVD Reference:	23' KB @ 4939.00usft
Site:	S4-T1N-R65W (RUEGGE)	MD Reference:	23' KB @ 4939.00usft
Well:	RUEGGE 3G-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 3G-4H-N165 - Slot RUEGGE 3G-4H-N165 SHL					
Well Position	+N/-S	0.00 usft	Northing:	1,271,339.93 usft	Latitude:	40.075241
	+E/-W	0.00 usft	Easting:	3,232,011.47 usft	Longitude:	-104.670915
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	6/8/2018	8.17	66.47	52,116.00000000

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	2,405.00	Survey #1 (OH)	VESSI_GYROFLEX	VESSI Gyroflex Gyro	
2,563.00	12,070.00	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	0.99	61.38	109.00	0.41	0.75	0.42	1.00	1.00	
139.00	0.51	50.91	138.99	0.62	1.08	0.63	1.66	-1.60	
170.00	0.48	60.94	169.99	0.77	1.30	0.78	0.30	-0.10	
200.00	0.38	54.96	199.99	0.89	1.49	0.90	0.36	-0.33	
261.00	0.48	58.74	260.99	1.13	1.88	1.15	0.17	0.16	
352.00	0.30	253.25	351.99	1.26	1.98	1.28	0.85	-0.20	
464.00	0.08	114.14	463.99	1.15	1.77	1.16	0.33	-0.20	
548.00	0.08	33.50	547.99	1.17	1.85	1.19	0.12	0.00	
631.00	0.21	47.04	630.99	1.32	2.00	1.34	0.16	0.16	
713.00	0.38	35.53	712.99	1.65	2.26	1.67	0.22	0.21	
795.00	0.83	277.17	794.98	1.94	1.83	1.96	1.30	0.55	

Cathedral Energy Services

Survey Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well RUEGGE 3G-4H-N165 - Slot RUEGGE 3G-4
Project:	DJ BASIN	TVD Reference:	23' KB @ 4939.00usft
Site:	S4-T1N-R65W (RUEGGE)	MD Reference:	23' KB @ 4939.00usft
Well:	RUEGGE 3G-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
878.00	1.13	276.55	877.97	2.11	0.42	2.12	0.36	0.36	
961.00	0.86	292.99	960.96	2.45	-0.96	2.44	0.47	-0.33	
1,044.00	2.15	255.45	1,043.93	2.30	-3.04	2.28	1.88	1.55	
1,127.00	2.90	244.98	1,126.85	1.02	-6.45	0.97	1.06	0.90	
1,210.00	4.54	225.29	1,209.67	-2.18	-10.69	-2.27	2.48	1.98	
1,268.00	6.10	218.19	1,267.42	-6.21	-14.23	-6.33	2.91	2.69	
1,352.00	8.66	208.44	1,350.72	-15.29	-20.00	-15.45	3.38	3.05	
1,435.00	9.72	206.18	1,432.66	-27.07	-26.07	-27.28	1.35	1.28	
1,517.00	9.88	210.09	1,513.46	-39.37	-32.65	-39.63	0.83	0.20	
1,600.00	11.73	214.48	1,594.99	-52.48	-41.00	-52.82	2.44	2.23	
1,684.00	12.38	212.62	1,677.14	-67.11	-50.68	-67.52	0.90	0.77	
1,770.00	12.87	210.98	1,761.06	-83.08	-60.58	-83.58	0.71	0.57	
1,852.00	12.40	215.35	1,841.07	-98.10	-70.38	-98.67	1.30	-0.57	
1,933.00	12.83	216.99	1,920.12	-112.37	-80.82	-113.03	0.69	0.53	
2,018.00	12.71	215.05	2,003.01	-127.57	-91.87	-128.31	0.52	-0.14	
2,099.00	12.77	218.79	2,082.02	-141.84	-102.60	-142.67	1.02	0.07	
2,183.00	12.19	220.48	2,164.04	-155.82	-114.17	-156.75	0.82	-0.69	
2,269.00	12.97	220.15	2,247.97	-170.10	-126.29	-171.13	0.91	0.91	
2,352.00	13.18	221.15	2,328.82	-184.35	-138.52	-185.48	0.37	0.25	
2,395.00	12.79	220.43	2,370.72	-191.66	-144.83	-192.84	0.98	-0.91	LAST SURVEY - 2395.00' MD
2,405.00	12.70	220.26	2,380.47	-193.34	-146.26	-194.54	0.98	-0.90	
2,563.00	13.71	222.80	2,534.30	-220.34	-170.21	-221.72	0.74	0.64	
2,657.00	11.34	222.27	2,626.05	-235.35	-183.99	-236.85	2.52	-2.52	
2,751.00	12.70	223.33	2,717.99	-249.71	-197.30	-251.32	1.47	1.45	
2,846.00	13.62	220.16	2,810.49	-265.85	-211.68	-267.58	1.23	0.97	
2,941.00	13.58	222.10	2,902.83	-282.67	-226.37	-284.52	0.48	-0.04	
3,035.00	17.84	219.72	2,993.30	-301.95	-242.98	-303.93	4.58	4.53	
3,130.00	19.51	217.35	3,083.30	-325.75	-261.90	-327.89	1.93	1.76	
3,225.00	17.45	216.03	3,173.39	-349.89	-279.91	-352.17	2.21	-2.17	
3,319.00	14.72	214.89	3,263.71	-371.08	-295.03	-373.49	2.92	-2.90	
3,414.00	15.91	219.28	3,355.33	-391.06	-310.18	-393.60	1.75	1.25	
3,509.00	13.58	219.02	3,447.20	-409.81	-325.45	-412.47	2.45	-2.45	
3,603.00	13.27	227.46	3,538.64	-425.68	-340.35	-428.46	2.11	-0.33	
3,698.00	14.68	227.11	3,630.82	-441.25	-357.20	-444.16	1.49	1.48	
3,792.00	13.45	230.97	3,722.01	-456.24	-374.42	-459.29	1.64	-1.31	
3,887.00	14.24	227.37	3,814.25	-471.11	-391.60	-474.30	1.23	0.83	
3,982.00	13.84	224.21	3,906.41	-487.17	-408.12	-490.50	0.91	-0.42	
4,076.00	15.25	220.87	3,997.40	-504.58	-424.05	-508.04	1.74	1.50	
4,171.00	16.52	219.81	4,088.77	-524.40	-440.88	-528.00	1.37	1.34	
4,265.00	15.51	219.28	4,179.12	-544.39	-457.39	-548.13	1.09	-1.07	
4,371.00	12.09	218.76	4,282.04	-564.03	-473.32	-567.89	3.23	-3.23	
4,465.00	13.14	218.40	4,373.77	-580.08	-486.12	-584.04	1.12	1.12	
4,561.00	16.13	224.29	4,466.65	-598.18	-502.21	-602.28	3.48	3.11	
4,655.00	14.02	223.50	4,557.41	-615.79	-519.17	-620.03	2.26	-2.24	
4,750.00	14.59	227.02	4,649.47	-632.29	-535.84	-636.67	1.09	0.60	
4,845.00	15.91	220.95	4,741.13	-650.29	-553.13	-654.80	2.18	1.39	
4,939.00	13.80	220.87	4,831.98	-668.50	-568.92	-673.14	2.24	-2.24	
5,034.00	13.71	215.24	4,924.26	-686.26	-582.83	-691.02	1.41	-0.09	
5,129.00	13.67	216.91	5,016.56	-704.43	-596.06	-709.30	0.42	-0.04	
5,223.00	13.36	220.69	5,107.96	-721.55	-609.81	-726.53	1.00	-0.33	
5,318.00	13.32	218.40	5,200.40	-738.45	-623.77	-743.54	0.56	-0.04	
5,412.00	14.28	218.32	5,291.68	-756.03	-637.68	-761.23	1.02	1.02	
5,507.00	14.41	217.88	5,383.72	-774.55	-652.21	-779.87	0.18	0.14	

Cathedral Energy Services

Survey Report

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Project:	DJ BASIN	TVD Reference:	23' KB @ 4939.00usft
Site:	S4-T1N-R65W (RUEGGE)	MD Reference:	23' KB @ 4939.00usft
Well:	RUEGGE 3G-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
5,601.00	13.32	224.03	5,474.99	-791.57	-666.91	-797.01	1.95	-1.16	
5,696.00	13.98	219.37	5,567.31	-808.31	-681.80	-813.87	1.35	0.69	
5,790.00	13.14	218.05	5,658.68	-825.50	-695.59	-831.18	0.95	-0.89	
5,885.00	12.22	220.25	5,751.37	-841.68	-708.74	-847.46	1.09	-0.97	
5,980.00	14.11	220.34	5,843.87	-858.18	-722.73	-864.08	1.99	1.99	
6,074.00	16.08	225.44	5,934.62	-876.05	-739.43	-882.09	2.53	2.10	
6,169.00	15.78	229.74	6,025.98	-893.63	-758.66	-899.82	1.28	-0.32	
6,263.00	12.70	224.65	6,117.08	-909.24	-775.68	-915.58	3.53	-3.28	
6,358.00	13.18	229.04	6,209.67	-923.77	-791.20	-930.23	1.15	0.51	
6,452.00	13.62	242.57	6,301.13	-935.90	-809.12	-942.51	3.36	0.47	
6,547.00	14.28	259.80	6,393.37	-943.13	-830.59	-949.91	4.41	0.69	
6,642.00	19.03	298.82	6,484.64	-937.72	-855.78	-944.71	12.49	5.00	
6,737.00	17.93	338.11	6,575.08	-916.60	-874.87	-923.75	12.92	-1.16	
6,831.00	19.25	355.16	6,664.24	-887.72	-881.58	-894.92	5.93	1.40	
6,926.00	21.27	357.36	6,753.36	-854.89	-883.70	-862.11	2.27	2.13	
7,021.00	26.90	357.54	6,840.05	-816.18	-885.41	-823.42	5.93	5.93	
7,115.00	37.00	357.27	6,919.71	-766.55	-887.68	-773.81	10.75	10.74	
7,210.00	46.49	357.01	6,990.51	-703.45	-890.85	-710.74	9.99	9.99	
7,304.00	55.37	354.46	7,049.70	-630.77	-896.37	-638.10	9.68	9.45	
7,399.00	66.01	356.31	7,096.14	-548.31	-902.95	-555.70	11.33	11.20	
7,494.00	71.41	357.54	7,130.62	-459.96	-907.68	-467.39	5.81	5.68	
7,589.00	78.14	0.35	7,155.56	-368.37	-909.33	-375.82	7.64	7.08	
7,683.00	84.42	3.51	7,169.81	-275.57	-906.19	-282.99	7.46	6.68	
7,720.06	84.97	2.38	7,173.24	-238.72	-904.29	-246.13	3.38	1.48	TPZ - 7720.06 (460 FSL, 1194 FWL)
7,778.00	85.83	0.61	7,177.89	-180.99	-902.79	-188.39	3.38	1.49	
7,873.00	87.41	359.12	7,183.49	-86.16	-903.01	-93.56	2.28	1.66	
7,967.00	89.17	356.74	7,186.29	7.73	-906.40	0.29	3.15	1.87	
8,062.00	91.85	357.80	7,185.45	102.61	-910.93	95.13	3.03	2.82	
8,157.00	92.73	357.80	7,181.65	197.46	-914.57	189.95	0.93	0.93	
8,251.00	92.55	357.45	7,177.32	291.28	-918.46	283.73	0.42	-0.19	
8,346.00	91.76	357.54	7,173.75	386.12	-922.61	378.54	0.84	-0.83	
8,441.00	92.64	357.45	7,170.10	480.96	-926.76	473.34	0.93	0.93	
8,536.00	93.16	359.47	7,165.29	575.80	-929.31	568.15	2.19	0.55	
8,631.00	92.90	359.29	7,160.27	670.66	-930.34	663.00	0.33	-0.27	
8,725.00	91.80	359.12	7,156.42	764.57	-931.64	756.90	1.18	-1.17	
8,820.00	91.63	359.38	7,153.58	859.52	-932.89	851.84	0.33	-0.18	
8,914.00	90.44	359.29	7,151.88	953.49	-933.98	945.80	1.27	-1.27	
9,009.00	89.91	359.29	7,151.59	1,048.49	-935.15	1,040.78	0.56	-0.56	
9,103.00	92.51	1.49	7,149.60	1,142.45	-934.51	1,134.75	3.62	2.77	
9,198.00	92.07	1.58	7,145.81	1,237.34	-931.97	1,229.65	0.47	-0.46	
9,292.00	92.86	2.55	7,141.76	1,331.19	-928.59	1,323.53	1.33	0.84	
9,387.00	92.15	2.46	7,137.61	1,426.01	-924.44	1,418.38	0.75	-0.75	
9,482.00	91.32	1.58	7,134.74	1,520.90	-921.09	1,513.30	1.27	-0.87	
9,577.00	91.32	1.49	7,132.55	1,615.84	-918.55	1,608.25	0.09	0.00	
9,671.00	89.74	0.35	7,131.68	1,709.82	-917.04	1,702.24	2.07	-1.68	
9,766.00	90.13	0.17	7,131.78	1,804.82	-916.61	1,797.24	0.45	0.41	
9,861.00	89.47	0.35	7,132.12	1,899.82	-916.18	1,892.24	0.72	-0.69	
9,955.00	88.77	0.26	7,133.56	1,993.81	-915.68	1,986.23	0.75	-0.74	
10,050.00	88.77	359.65	7,135.60	2,088.78	-915.75	2,081.20	0.64	0.00	
10,144.00	89.56	359.29	7,136.97	2,182.77	-916.62	2,175.18	0.92	0.84	
10,239.00	90.13	0.35	7,137.23	2,277.77	-916.92	2,270.17	1.27	0.60	
10,334.00	89.69	0.26	7,137.38	2,372.77	-916.41	2,365.17	0.47	-0.46	
10,428.00	89.56	0.08	7,137.99	2,466.76	-916.14	2,459.16	0.24	-0.14	

Cathedral Energy Services

Survey Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well RUEGGE 3G-4H-N165 - Slot RUEGGE 3G-4
Project:	DJ BASIN	TVD Reference:	23' KB @ 4939.00usft
Site:	S4-T1N-R65W (RUEGGE)	MD Reference:	23' KB @ 4939.00usft
Well:	RUEGGE 3G-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
10,524.00	88.95	0.00	7,139.24	2,562.75	-916.07	2,555.15	0.64	-0.64	
10,618.00	91.41	1.67	7,138.94	2,656.73	-914.70	2,649.14	3.16	2.62	
10,712.00	91.19	1.84	7,136.81	2,750.67	-911.82	2,743.09	0.30	-0.23	
10,808.00	91.45	2.19	7,134.60	2,846.58	-908.45	2,839.03	0.45	0.27	
10,902.00	91.76	0.00	7,131.97	2,940.52	-906.65	2,932.98	2.35	0.33	
10,996.00	92.02	359.82	7,128.87	3,034.47	-906.80	3,026.93	0.34	0.28	
11,091.00	91.98	0.35	7,125.55	3,129.41	-906.66	3,121.87	0.56	-0.04	
11,185.00	91.71	0.44	7,122.52	3,223.36	-906.01	3,215.82	0.30	-0.29	
11,279.00	91.23	0.00	7,120.11	3,317.33	-905.65	3,309.79	0.69	-0.51	
11,374.00	91.10	0.26	7,118.18	3,412.31	-905.43	3,404.77	0.31	-0.14	
11,469.00	90.75	359.82	7,116.65	3,507.29	-905.37	3,499.75	0.59	-0.37	
11,564.00	91.10	0.44	7,115.11	3,602.28	-905.15	3,594.74	0.75	0.37	
11,658.00	90.79	0.08	7,113.56	3,696.27	-904.72	3,688.72	0.51	-0.33	
11,753.00	90.53	0.17	7,112.47	3,791.26	-904.52	3,783.71	0.29	-0.27	
11,848.00	90.44	0.44	7,111.67	3,886.26	-904.01	3,878.71	0.30	-0.09	
11,943.00	89.39	359.21	7,111.81	3,981.25	-904.30	3,973.70	1.70	-1.11	
12,005.00	89.08	359.29	7,112.63	4,043.24	-905.11	4,035.68	0.52	-0.50	LAST SURVEY - 12005.00' MD
12,070.00	89.08	359.29	7,113.68	4,108.23	-905.92	4,100.66	0.00	0.00	PTB - 12070.00' MD (465 FNL, 1156 FWL)

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Site:	S4-T1N-R65W (RUEGGE)	MD Reference:	23' KB @ 4939.00usft
Well:	RUEGGE 3G-4H-N165	North Reference:	True
Wellbore:	OH	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									
RUEGGE 3G (-238') VS	0.00	0.00	7,188.00	-230.30	-938.64	1,271,100.86	3,231,075.03	40.074609	-104.674269
- actual wellpath misses target center by 37.41usft at 7728.74usft MD (7173.99 TVD, -230.08 N, -903.95 E)									
- Point									
RUEGGE 3G-4H-N165 I	0.00	0.00	7,108.00	4,113.21	-902.74	1,275,444.52	3,231,070.31	40.086532	-104.674141
- actual wellpath misses target center by 8.20usft at 12070.00usft MD (7113.68 TVD, 4108.23 N, -905.92 E)									
- Point									
RUEGGE 3G 1019' VS	0.00	0.00	7,174.00	1,026.65	-928.25	1,272,357.86	3,231,073.66	40.078059	-104.674232
- actual wellpath misses target center by 23.38usft at 8987.01usft MD (7151.58 TVD, 1026.50 N, -934.88 E)									
- Point									
RUEGGE 3G 2749' VS	0.00	0.00	7,144.00	2,753.59	-913.98	1,274,084.85	3,231,071.79	40.082800	-104.674181
- actual wellpath misses target center by 7.59usft at 10714.68usft MD (7136.76 TVD, 2753.34 N, -911.73 E)									
- Point									
RUEGGE 3G-4H-N165	0.00	0.00	7,117.00	-238.72	-938.71	1,271,092.45	3,231,075.04	40.074586	-104.674269
- actual wellpath misses target center by 65.62usft at 7713.10usft MD (7172.62 TVD, -245.64 N, -904.59 E)									
- Point									

Design Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	Comment	
2,395.00	2,370.72	-191.66	-144.83	LAST SURVEY - 2395.00' MD	
7,720.06	7,173.24	-238.72	-904.29	TPZ - 7720.06 (460 FSL, 1194 FWL)	
12,005.00	7,112.63	4,043.24	-905.11	LAST SURVEY - 12005.00' MD	
12,070.00	7,113.68	4,108.23	-905.92	PTB - 12070.00' MD (465 FNL, 1156 FWL)	

Checked By: _____ Approved By: _____ Date: _____