

Survey Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well COSSLETT 1D-22H-B168
Project:	DJ BASIN	TVD Reference:	23' KB @ 5197.00usft
Site:	S22-T1N-R68W (COSSLETT)	MD Reference:	23' KB @ 5197.00usft
Well:	COSSLETT 1D-22H-B168	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		S22-T1N-R68W (COSSLETT)			
Site Position:		Northing:	1,258,338.24 usft	Latitude:	40.041391
From:	Lat/Long	Easting:	3,143,327.55 usft	Longitude:	-104.988083
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.33 °

Well		COSSLETT 1D-22H-B168				
Well Position	+N/-S	0.00 usft	Northing:	1,258,338.35 usft	Latitude:	40.041391
	+E/-W	0.00 usft	Easting:	3,143,357.51 usft	Longitude:	-104.987976
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,174.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	12/31/2018	8.33	66.37	52,001.70000000

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	178.48	

Survey Program	Date	2/5/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
318.00	2,437.00	Survey #1 (OH)	VESSI_GYROFLEX	VESSI Gyroflex Gyro	
2,563.00	17,524.00	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 (°/100usft)	Build Rate (°/100us)	Formations / Comments
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
318.00	0.18	336.62	318.00	0.46	-0.20	-0.46	0.06	0.06	
586.00	0.97	342.69	585.98	3.01	-1.04	-3.04	0.30	0.29	
675.00	0.88	351.04	674.97	4.40	-1.37	-4.44	0.18	-0.10	
764.00	1.14	324.14	763.96	5.80	-2.00	-5.85	0.60	0.29	
853.00	1.41	344.00	852.94	7.57	-2.82	-7.64	0.58	0.30	
942.00	0.79	337.32	941.92	9.19	-3.35	-9.27	0.71	-0.70	
1,011.00	2.26	15.33	1,010.90	10.94	-3.18	-11.02	2.48	2.13	
1,100.00	2.75	18.76	1,099.81	14.65	-2.03	-14.70	0.58	0.55	
1,189.00	2.96	31.20	1,188.70	18.64	-0.15	-18.64	0.73	0.24	
1,278.00	3.15	34.03	1,277.57	22.63	2.41	-22.56	0.27	0.21	
1,367.00	4.61	28.36	1,366.37	27.81	5.48	-27.65	1.69	1.64	

Survey Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well COSSLETT 1D-22H-B168
Project:	DJ BASIN	TVD Reference:	23' KB @ 5197.00usft
Site:	S22-T1N-R68W (COSSLETT)	MD Reference:	23' KB @ 5197.00usft
Well:	COSSLETT 1D-22H-B168	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 (°/100usft)	Build Rate (°/100us)	Formations / Comments
1,457.00	6.53	27.80	1,455.94	35.52	9.58	-35.25	2.13	2.13	
1,546.00	8.12	28.15	1,544.21	45.53	14.91	-45.12	1.79	1.79	
1,635.00	9.63	27.84	1,632.14	57.66	21.35	-57.07	1.70	1.70	
1,724.00	9.80	21.56	1,719.87	71.29	27.61	-70.53	1.21	0.19	
1,813.00	9.73	16.17	1,807.58	85.56	32.49	-84.66	1.03	-0.08	
1,902.00	9.69	10.33	1,895.31	100.15	35.92	-99.16	1.11	-0.04	
1,991.00	9.61	2.95	1,983.05	114.94	37.65	-113.89	1.39	-0.09	
2,080.00	9.48	5.30	2,070.82	129.65	38.71	-128.58	0.46	-0.15	
2,169.00	10.34	16.26	2,158.50	144.62	41.62	-143.46	2.32	0.97	
2,259.00	10.55	14.96	2,247.01	160.33	46.01	-159.05	0.35	0.23	
2,348.00	10.42	14.81	2,334.52	175.99	50.17	-174.59	0.15	-0.15	
2,437.00	9.92	13.38	2,422.12	191.23	54.00	-189.72	0.63	-0.56	
2,563.00	9.71	12.56	2,546.28	212.16	58.83	-210.52	0.20	-0.17	
2,652.00	9.42	19.85	2,634.04	226.33	62.93	-224.58	1.40	-0.33	
2,741.00	11.38	29.08	2,721.58	240.86	69.67	-238.92	2.88	2.20	
2,830.00	10.64	19.77	2,808.95	256.27	76.72	-254.13	2.16	-0.83	
2,919.00	9.41	16.16	2,896.59	270.99	81.52	-268.72	1.55	-1.38	
3,008.00	8.40	14.14	2,984.52	284.28	85.14	-281.91	1.19	-1.13	
3,097.00	7.52	24.25	3,072.66	295.89	89.12	-293.42	1.85	-0.99	
3,187.00	9.14	32.51	3,161.72	307.29	95.38	-304.65	2.23	1.80	
3,276.00	9.85	26.09	3,249.50	320.09	102.53	-317.25	1.43	0.80	
3,365.00	8.48	24.42	3,337.36	332.90	108.59	-329.90	1.57	-1.54	
3,454.00	10.02	24.07	3,425.20	345.95	114.46	-342.78	1.73	1.73	
3,543.00	8.97	21.96	3,512.98	359.45	120.21	-356.13	1.24	-1.18	
3,632.00	7.74	19.94	3,601.03	371.52	124.85	-368.07	1.42	-1.38	
3,721.00	7.87	28.29	3,689.21	382.52	129.78	-378.93	1.28	0.15	
3,810.00	9.45	19.50	3,777.20	394.78	135.11	-391.04	2.31	1.78	
3,899.00	10.46	14.93	3,864.86	409.47	139.63	-405.61	1.44	1.13	
3,988.00	8.40	7.99	3,952.65	423.72	142.62	-419.77	2.64	-2.31	
4,077.00	8.44	11.86	4,040.70	436.55	144.86	-432.54	0.64	0.04	
4,166.00	10.20	13.09	4,128.52	450.62	147.99	-446.52	1.99	1.98	
4,255.00	10.33	18.18	4,216.09	465.87	152.26	-461.66	1.03	0.15	
4,344.00	10.37	13.17	4,303.65	481.25	156.58	-476.92	1.01	0.04	
4,467.00	10.55	15.20	4,424.60	502.90	162.05	-498.41	0.33	0.15	
4,556.00	9.27	10.45	4,512.28	517.81	165.49	-513.22	1.71	-1.44	
4,645.00	9.41	16.25	4,600.10	531.85	168.83	-527.17	1.07	0.16	
4,734.00	8.84	23.46	4,687.97	545.11	173.58	-540.29	1.43	-0.64	
4,823.00	10.77	22.84	4,775.67	559.04	179.53	-554.07	2.17	2.17	
4,912.00	12.09	28.55	4,862.91	574.90	187.22	-569.71	1.95	1.48	
5,001.00	11.91	27.76	4,949.96	591.21	195.95	-585.79	0.27	-0.20	
5,090.00	10.86	26.71	5,037.21	606.83	204.00	-601.18	1.20	-1.18	
5,179.00	9.14	24.86	5,124.85	620.73	210.74	-614.90	1.97	-1.93	
5,268.00	10.07	32.95	5,212.61	633.67	217.94	-627.65	1.84	1.04	
5,357.00	9.23	30.58	5,300.35	646.35	225.80	-640.11	1.04	-0.94	
5,447.00	10.55	25.92	5,389.01	659.97	233.08	-653.54	1.71	1.47	
5,536.00	9.98	23.19	5,476.59	674.39	239.68	-667.77	0.84	-0.64	
5,625.00	8.48	22.93	5,564.43	687.52	245.27	-680.75	1.69	-1.69	
5,714.00	10.07	15.99	5,652.27	701.05	249.97	-694.15	2.18	1.79	
5,803.00	8.84	10.36	5,740.06	715.26	253.34	-708.26	1.73	-1.38	
5,892.00	10.51	9.57	5,827.79	729.99	255.92	-722.92	1.88	1.88	
5,981.00	9.19	6.49	5,915.48	745.06	258.08	-737.92	1.60	-1.48	
6,070.00	8.53	23.55	6,003.43	758.17	261.52	-750.94	3.03	-0.74	
6,159.00	8.53	19.59	6,091.45	770.44	266.37	-763.08	0.66	0.00	

Survey Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well COSSLETT 1D-22H-B168
Project:	DJ BASIN	TVD Reference:	23' KB @ 5197.00usft
Site:	S22-T1N-R68W (COSSLETT)	MD Reference:	23' KB @ 5197.00usft
Well:	COSSLETT 1D-22H-B168	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 (°/100usft)	Build Rate (°/100us)	Formations / Comments
6,248.00	7.25	15.11	6,179.60	782.08	270.05	-774.62	1.59	-1.44	
6,337.00	7.56	15.55	6,267.86	793.14	273.08	-785.60	0.35	0.35	
6,426.00	8.84	11.42	6,355.95	805.49	276.00	-797.86	1.58	1.44	
6,516.00	9.85	14.76	6,444.76	819.71	279.33	-811.99	1.27	1.12	
6,605.00	10.59	17.57	6,532.34	834.87	283.74	-827.02	1.00	0.83	
6,694.00	9.32	12.56	6,620.00	849.70	287.78	-841.74	1.73	-1.43	
6,783.00	7.34	17.48	6,708.06	862.16	291.05	-854.11	2.36	-2.22	
6,872.00	6.42	11.59	6,796.42	872.46	293.76	-864.33	1.30	-1.03	
6,961.00	6.90	48.77	6,884.86	880.86	298.78	-872.60	4.79	0.54	
7,051.00	13.80	97.72	6,973.49	882.99	313.53	-874.33	11.78	7.67	
7,140.00	11.25	129.19	7,060.46	876.06	330.80	-866.95	8.06	-2.87	
7,229.00	15.87	174.01	7,147.18	858.42	338.82	-849.10	12.49	5.19	
7,318.00	22.55	185.09	7,231.21	829.28	338.58	-819.97	8.52	7.51	
7,408.00	28.04	186.67	7,312.55	791.05	334.59	-781.86	6.15	6.10	
7,497.00	35.16	183.77	7,388.31	744.64	330.47	-735.58	8.18	8.00	
7,586.00	45.36	179.90	7,456.15	687.24	328.83	-678.25	11.80	11.46	
7,675.00	54.68	184.47	7,513.28	619.21	326.05	-610.32	11.18	10.47	
7,764.00	60.75	182.63	7,560.80	544.15	321.43	-535.41	7.04	6.82	
7,853.00	65.05	181.22	7,601.34	464.99	318.79	-456.34	5.03	4.83	
7,874.35	65.89	180.64	7,610.20	445.57	318.48	-436.94	4.65	3.94	TPZ - 7874.35' MD (480 FNL, 1902 FEL)
7,942.00	68.57	178.85	7,636.38	383.20	318.76	-374.58	4.65	3.96	
8,031.00	74.51	178.41	7,664.55	298.84	320.79	-290.20	6.69	6.67	
8,120.00	79.65	177.71	7,684.45	212.17	323.73	-203.48	5.83	5.78	
8,209.00	83.12	178.14	7,697.78	124.25	326.91	-115.51	3.93	3.90	
8,298.00	90.86	178.23	7,702.45	35.49	329.72	-26.70	8.70	8.70	
8,387.00	91.91	177.18	7,700.29	-53.42	333.29	62.27	1.67	1.18	
8,476.00	90.29	176.47	7,698.59	-142.26	338.22	151.21	1.99	-1.82	
8,566.00	90.07	177.44	7,698.30	-232.13	343.00	241.18	1.11	-0.24	
8,655.00	88.88	179.11	7,699.12	-321.08	345.68	330.17	2.30	-1.34	
8,744.00	88.22	178.76	7,701.37	-410.04	347.33	419.13	0.84	-0.74	
8,833.00	87.65	180.61	7,704.58	-498.97	347.82	508.05	2.17	-0.64	
8,922.00	88.70	182.10	7,707.41	-587.90	345.71	596.89	2.05	1.18	
9,011.00	88.26	182.10	7,709.77	-676.81	342.45	685.68	0.49	-0.49	
9,100.00	89.63	181.22	7,711.41	-765.75	339.88	774.53	1.83	1.54	
9,189.00	89.36	180.69	7,712.20	-854.74	338.39	863.44	0.67	-0.30	
9,278.00	89.19	180.25	7,713.32	-943.73	337.66	952.38	0.53	-0.19	
9,367.00	90.81	180.25	7,713.32	-1,032.72	337.27	1,041.33	1.82	1.82	
9,456.00	91.30	179.81	7,711.68	-1,121.71	337.23	1,130.28	0.74	0.55	
9,545.00	91.43	179.02	7,709.56	-1,210.68	338.14	1,219.25	0.90	0.15	
9,634.00	91.08	180.78	7,707.61	-1,299.65	338.29	1,308.19	2.02	-0.39	
9,723.00	90.95	180.17	7,706.04	-1,388.63	337.55	1,397.12	0.70	-0.15	
9,812.00	90.68	179.81	7,704.77	-1,477.62	337.57	1,486.08	0.51	-0.30	
9,901.00	90.42	179.29	7,703.92	-1,566.62	338.27	1,575.06	0.65	-0.29	
9,990.00	90.42	181.92	7,703.26	-1,655.60	337.33	1,663.99	2.95	0.00	
10,080.00	90.77	181.66	7,702.33	-1,745.55	334.52	1,753.84	0.48	0.39	
10,169.00	88.48	180.96	7,702.91	-1,834.52	332.48	1,842.72	2.69	-2.57	
10,258.00	88.09	180.25	7,705.58	-1,923.48	331.54	1,931.62	0.91	-0.44	
10,347.00	88.18	179.38	7,708.47	-2,012.43	331.83	2,020.54	0.98	0.10	
10,436.00	88.00	178.67	7,711.44	-2,101.36	333.34	2,109.49	0.82	-0.20	
10,525.00	89.71	179.38	7,713.22	-2,190.33	334.86	2,198.46	2.08	1.92	
10,614.00	90.07	178.85	7,713.39	-2,279.32	336.23	2,287.46	0.72	0.40	
10,704.00	89.80	180.17	7,713.49	-2,369.31	337.00	2,377.44	1.50	-0.30	
10,793.00	89.58	179.99	7,713.97	-2,458.31	336.88	2,466.41	0.32	-0.25	

Survey Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well COSSLETT 1D-22H-B168
Project:	DJ BASIN	TVD Reference:	23' KB @ 5197.00usft
Site:	S22-T1N-R68W (COSSLETT)	MD Reference:	23' KB @ 5197.00usft
Well:	COSSLETT 1D-22H-B168	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 (°/100usft)	Build Rate (°/100us)	Formations / Comments
10,882.00	88.97	179.20	7,715.10	-2,547.30	337.51	2,555.38	1.12	-0.69	
10,971.00	89.58	180.52	7,716.22	-2,636.29	337.73	2,644.34	1.63	0.69	
11,060.00	89.41	180.08	7,717.01	-2,725.29	337.26	2,733.30	0.53	-0.19	
11,149.00	90.95	181.22	7,716.73	-2,814.28	336.25	2,822.23	2.15	1.73	
11,238.00	90.73	180.43	7,715.42	-2,903.26	334.97	2,911.14	0.92	-0.25	
11,327.00	90.29	181.66	7,714.63	-2,992.24	333.35	3,000.05	1.47	-0.49	
11,416.00	90.02	181.05	7,714.39	-3,081.21	331.24	3,088.93	0.75	-0.30	
11,506.00	89.54	180.43	7,714.74	-3,171.20	330.08	3,178.86	0.87	-0.53	
11,595.00	89.45	182.01	7,715.52	-3,260.18	328.18	3,267.75	1.78	-0.10	
11,684.00	88.62	181.75	7,717.02	-3,349.11	325.26	3,356.58	0.98	-0.93	
11,773.00	90.11	181.31	7,718.01	-3,438.07	322.89	3,445.45	1.75	1.67	
11,862.00	90.15	180.52	7,717.80	-3,527.06	321.47	3,534.37	0.89	0.04	
11,951.00	90.33	179.55	7,717.43	-3,616.06	321.41	3,623.33	1.11	0.20	
12,040.00	91.52	180.08	7,715.99	-3,705.05	321.70	3,712.29	1.46	1.34	
12,129.00	90.95	180.43	7,714.08	-3,794.02	321.30	3,801.23	0.75	-0.64	
12,218.00	88.57	180.08	7,714.45	-3,883.02	320.91	3,890.18	2.70	-2.67	
12,307.00	88.62	179.29	7,716.63	-3,971.99	321.40	3,979.13	0.89	0.06	
12,396.00	88.57	178.14	7,718.81	-4,060.94	323.39	4,068.10	1.29	-0.06	
12,486.00	88.40	179.29	7,721.19	-4,150.88	325.41	4,158.07	1.29	-0.19	
12,575.00	88.66	179.73	7,723.48	-4,239.85	326.17	4,247.03	0.57	0.29	
12,664.00	89.76	180.87	7,724.70	-4,328.84	325.70	4,335.97	1.78	1.24	
12,753.00	89.85	180.25	7,725.01	-4,417.83	324.83	4,424.91	0.70	0.10	
12,842.00	89.41	178.06	7,725.58	-4,506.81	326.15	4,513.90	2.51	-0.49	
12,931.00	88.62	180.34	7,727.11	-4,595.78	327.39	4,602.87	2.71	-0.89	
13,020.00	88.88	181.57	7,729.05	-4,684.75	325.91	4,691.76	1.41	0.29	
13,109.00	89.45	181.84	7,730.35	-4,773.70	323.26	4,780.61	0.71	0.64	
13,199.00	89.67	181.75	7,731.04	-4,863.65	320.44	4,870.46	0.26	0.24	
13,288.00	89.76	180.87	7,731.48	-4,952.63	318.41	4,959.35	0.99	0.10	
13,377.00	89.85	179.99	7,731.79	-5,041.62	317.74	5,048.29	0.99	0.10	
13,466.00	88.18	181.48	7,733.32	-5,130.60	316.60	5,137.21	2.51	-1.88	
13,555.00	90.81	181.31	7,734.10	-5,219.56	314.43	5,226.08	2.96	2.96	
13,644.00	91.21	180.78	7,732.53	-5,308.53	312.81	5,314.97	0.75	0.45	
13,733.00	91.21	180.08	7,730.65	-5,397.51	312.14	5,403.90	0.79	0.00	
13,822.00	90.99	178.76	7,728.94	-5,486.48	313.04	5,492.87	1.50	-0.25	
13,911.00	90.95	180.43	7,727.44	-5,575.47	313.67	5,581.84	1.88	-0.04	
14,000.00	91.12	181.92	7,725.83	-5,664.43	311.84	5,670.72	1.68	0.19	
14,089.00	90.90	181.40	7,724.26	-5,753.38	309.27	5,759.57	0.63	-0.25	
14,178.00	91.12	180.78	7,722.69	-5,842.35	307.57	5,848.46	0.74	0.25	
14,268.00	90.02	180.43	7,721.80	-5,932.34	306.62	5,938.40	1.28	-1.22	
14,357.00	90.77	179.73	7,721.18	-6,021.33	306.50	6,027.36	1.15	0.84	
14,446.00	90.15	179.38	7,720.47	-6,110.33	307.19	6,116.34	0.80	-0.70	
14,535.00	89.05	180.96	7,721.09	-6,199.32	306.93	6,205.29	2.16	-1.24	
14,624.00	89.23	180.69	7,722.43	-6,288.30	305.64	6,294.21	0.36	0.20	
14,713.00	87.91	181.05	7,724.65	-6,377.26	304.29	6,383.10	1.54	-1.48	
14,802.00	87.78	180.69	7,727.99	-6,466.19	302.94	6,471.96	0.43	-0.15	
14,892.00	87.30	182.19	7,731.86	-6,556.07	300.68	6,561.75	1.75	-0.53	
14,981.00	87.16	181.66	7,736.16	-6,644.92	297.70	6,650.49	0.62	-0.16	
15,070.00	87.21	181.05	7,740.53	-6,733.79	295.60	6,739.27	0.69	0.06	
15,159.00	87.34	180.96	7,744.76	-6,822.67	294.04	6,828.08	0.18	0.15	
15,248.00	88.13	182.36	7,748.28	-6,911.56	291.46	6,916.87	1.81	0.89	
15,337.00	87.96	181.66	7,751.31	-7,000.46	288.34	7,005.65	0.81	-0.19	
15,426.00	88.84	182.45	7,753.80	-7,089.36	285.15	7,094.44	1.33	0.99	
15,515.00	89.19	182.71	7,755.33	-7,178.26	281.14	7,183.20	0.49	0.39	

Survey Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well COSSLETT 1D-22H-B168
Project:	DJ BASIN	TVD Reference:	23' KB @ 5197.00usft
Site:	S22-T1N-R68W (COSSLETT)	MD Reference:	23' KB @ 5197.00usft
Well:	COSSLETT 1D-22H-B168	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 (°/100usft)	Build Rate (°/100us)	Formations / Comments
15,604.00	89.32	182.10	7,756.49	-7,267.17	277.41	7,271.98	0.70	0.15	
15,693.00	89.58	181.40	7,757.34	-7,356.13	274.69	7,360.83	0.84	0.29	
15,782.00	89.63	180.69	7,757.95	-7,445.11	273.07	7,449.74	0.80	0.06	
15,871.00	89.19	180.17	7,758.87	-7,534.10	272.40	7,538.68	0.77	-0.49	
15,960.00	91.30	180.08	7,758.49	-7,623.10	272.21	7,627.64	2.37	2.37	
16,050.00	91.74	179.29	7,756.10	-7,713.06	272.70	7,717.59	1.00	0.49	
16,133.00	92.44	178.32	7,753.08	-7,795.99	274.43	7,800.53	1.44	0.84	
16,222.00	91.03	177.18	7,750.38	-7,884.87	277.92	7,889.48	2.04	-1.58	
16,312.00	89.63	179.46	7,749.86	-7,974.83	280.56	7,979.47	2.97	-1.56	
16,401.00	88.88	182.01	7,751.02	-8,063.80	279.42	8,068.38	2.99	-0.84	
16,490.00	88.66	181.75	7,752.93	-8,152.73	276.50	8,157.20	0.38	-0.25	
16,579.00	88.04	181.31	7,755.49	-8,241.66	274.13	8,246.04	0.85	-0.70	
16,668.00	87.69	180.87	7,758.81	-8,330.59	272.43	8,334.89	0.63	-0.39	
16,757.00	87.82	182.28	7,762.30	-8,419.48	269.99	8,423.69	1.59	0.15	
16,846.00	87.96	182.28	7,765.57	-8,508.35	266.45	8,512.43	0.16	0.16	
16,935.00	86.86	182.01	7,769.59	-8,597.20	263.12	8,601.15	1.27	-1.24	
17,025.00	88.66	182.19	7,773.11	-8,687.06	259.83	8,690.90	2.01	2.00	
17,114.00	89.23	182.36	7,774.75	-8,775.98	256.30	8,779.69	0.67	0.64	
17,203.00	89.41	182.10	7,775.81	-8,864.90	252.83	8,868.49	0.36	0.20	
17,292.00	88.97	181.66	7,777.06	-8,953.85	249.91	8,957.33	0.70	-0.49	
17,381.00	88.66	181.40	7,778.91	-9,042.80	247.54	9,046.18	0.45	-0.35	
17,464.00	88.44	181.13	7,781.01	-9,125.75	245.71	9,129.06	0.42	-0.27	LAST SURVEY - 17464.00' MD
17,524.00	88.44	181.13	7,782.64	-9,185.72	244.52	9,188.97	0.00	0.00	PTB - 17524.00' MD (466 FSL, 1944 FEL)

Survey Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well COSSLETT 1D-22H-B168
Project:	DJ BASIN	TVD Reference:	23' KB @ 5197.00usft
Site:	S22-T1N-R68W (COSSLETT)	MD Reference:	23' KB @ 5197.00usft
Well:	COSSLETT 1D-22H-B168	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									
COSSLETT 1D 3018' VS	0.00	0.00	7,716.00	-3,010.54	326.09	1,255,329.74	3,143,700.97	40.033126	-104.986811
- actual wellpath misses target center by 6.90usft at 11345.47usft MD (7714.55 TVD, -3010.70 N, 332.83 E)									
- Point									
COSSLETT 1D 3098' TC	0.00	0.00	7,685.00	-3,098.00	325.85	1,255,242.28	3,143,701.24	40.032886	-104.986812
- actual wellpath misses target center by 29.84usft at 11432.74usft MD (7714.40 TVD, -3097.95 N, 330.95 E)									
- Point									
COSSLETT 1D TPZ	0.00	0.00	7,680.00	445.57	335.31	1,258,785.85	3,143,690.24	40.042614	-104.986778
- actual wellpath misses target center by 66.19usft at 7901.44usft MD (7621.04 TVD, 420.74 N, 318.36 E)									
- Point									
COSSLETT 1D -190 VS	0.00	0.00	7,704.00	186.99	334.62	1,258,527.26	3,143,691.04	40.041904	-104.986781
- actual wellpath misses target center by 17.91usft at 8148.21usft MD (7689.25 TVD, 184.40 N, 324.81 E)									
- Point									
COSSLETT 1D 6097' TC	0.00	0.00	7,728.00	-6,097.00	297.34	1,252,243.17	3,143,690.05	40.024653	-104.986914
- actual wellpath misses target center by 12.26usft at 14432.54usft MD (7720.52 TVD, -6096.86 N, 307.05 E)									
- Point									
COSSLETT 1D PBHL	0.00	0.00	7,764.00	-9,191.33	239.19	1,249,148.56	3,143,649.77	40.016159	-104.987122
- actual wellpath misses target center by 20.18usft at 17524.00usft MD (7782.64 TVD, -9185.72 N, 244.52 E)									
- Point									

Design Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S	+E/-W	Comment	
(usft)	(usft)	(usft)	(usft)		
7,874.35	7,610.20	445.57	318.48	TPZ - 7874.35' MD (480 FNL, 1902 FEL)	
17,464.00	7,781.01	-9,125.75	245.71	LAST SURVEY - 17464.00' MD	
17,524.00	7,782.64	-9,185.72	244.52	PTB - 17524.00' MD (466 FSL, 1944 FEL)	

Checked By: _____ Approved By: _____ Date: _____