



Crestone Peak Resources

DJ BASIN

Kugel Pad Sec.18-T2N-R67W

Kugel 1J-18H-H267

Kugel 1J-18H-H267 Wellbore #1

Survey: Survey #1

Standard Survey Report

23 July, 2019



CRESTONE PEAK
RESOURCES

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well Kugel 1J-18H-H267
Project:	DJ BASIN	TVD Reference:	WELL @ 4976.0ft (Ensign 153 RKB - 23')
Site:	Kugel Pad Sec.18-T2N-R67W	MD Reference:	WELL @ 4976.0ft (Ensign 153 RKB - 23')
Well:	Kugel 1J-18H-H267	North Reference:	True
Wellbore:	Kugel 1J-18H-H267 Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	US_EDM

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	Kugel Pad Sec.18-T2N-R67W				
Site Position:		Northing:	1,294,300.39 usft	Latitude:	40.139825
From:	Lat/Long	Easting:	3,160,349.57 usft	Longitude:	-104.926457
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.37 °

Well	Kugel 1J-18H-H267					
Well Position	+N/-S	0.0 ft	Northing:	1,294,210.39 usft	Latitude:	40.139578
	+E/-W	0.0 ft	Easting:	3,160,350.15 usft	Longitude:	-104.926457
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,953.0 ft

Wellbore	Kugel 1J-18H-H267 Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	7/10/2019	8.30	66.52	52,036

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	1.15	

Survey Program		Date	7/23/2019		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
144.0	15,252.0	Survey #1 (Kugel 1J-18H-H267 Wellbore #	MWD+HDGM	OWSG MWD + HDGM	

Survey										
	Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
	0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
	1.0	0.00	297.33	1.0	0.0	0.0	0.0	0.18	0.18	0.00
	SHL 2208'FNL & 682'FEL, Sec.18									
	144.0	0.26	297.33	144.0	0.2	-0.3	0.1	0.18	0.18	0.00
	235.0	1.58	225.09	235.0	-0.6	-1.4	-0.7	1.67	1.45	-79.38
	326.0	4.31	221.57	325.9	-4.1	-4.5	-4.2	3.01	3.00	-3.87
	428.0	5.98	216.30	427.4	-11.2	-10.2	-11.4	1.70	1.64	-5.17
	510.0	7.39	206.19	508.9	-19.4	-15.1	-19.7	2.23	1.72	-12.33
	573.0	7.74	197.63	571.3	-27.1	-18.1	-27.4	1.87	0.56	-13.59
	655.0	6.90	190.15	652.7	-37.2	-20.7	-37.6	1.55	-1.02	-9.12
	738.0	5.30	188.33	735.2	-45.9	-22.1	-46.3	1.94	-1.93	-2.19

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well Kugel 1J-18H-H267
Project:	DJ BASIN	TVD Reference:	WELL @ 4976.0ft (Ensign 153 RKB - 23')
Site:	Kugel Pad Sec.18-T2N-R67W	MD Reference:	WELL @ 4976.0ft (Ensign 153 RKB - 23')
Well:	Kugel 1J-18H-H267	North Reference:	True
Wellbore:	Kugel 1J-18H-H267 Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	US_EDM

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
824.0	5.22	174.24	820.8	-53.7	-22.3	-54.2	1.50	-0.09	-16.38
907.0	5.85	169.85	903.5	-61.6	-21.2	-62.1	0.91	0.76	-5.29
991.0	6.50	170.55	987.0	-70.5	-19.6	-70.9	0.78	0.77	0.83
1,080.0	7.03	174.81	1,075.3	-80.9	-18.3	-81.3	0.82	0.60	4.79
1,170.0	7.00	174.58	1,164.7	-91.9	-17.3	-92.2	0.05	-0.03	-0.26
1,260.0	7.63	164.51	1,253.9	-103.1	-15.2	-103.4	1.58	0.70	-11.19
1,350.0	8.29	159.42	1,343.1	-114.9	-11.3	-115.1	1.07	0.73	-5.66
1,441.0	7.38	162.77	1,433.2	-126.7	-7.3	-126.8	1.12	-1.00	3.68
1,530.0	7.20	167.46	1,521.5	-137.6	-4.4	-137.6	0.70	-0.20	5.27
1,620.0	7.29	171.72	1,610.8	-148.7	-2.3	-148.7	0.61	0.10	4.73
1,710.0	5.53	170.27	1,700.2	-158.6	-0.8	-158.6	1.96	-1.96	-1.61
1,800.0	5.43	171.30	1,789.8	-167.1	0.6	-167.1	0.16	-0.11	1.14
1,889.0	5.79	176.69	1,878.4	-175.8	1.5	-175.7	0.72	0.40	6.06
1,979.0	5.28	187.57	1,968.0	-184.4	1.2	-184.4	1.29	-0.57	12.09
2,069.0	5.17	169.48	2,057.6	-192.5	1.4	-192.4	1.83	-0.12	-20.10
2,159.0	5.49	173.36	2,147.2	-200.8	2.7	-200.7	0.54	0.36	4.31
2,249.0	5.62	181.91	2,236.8	-209.4	3.0	-209.3	0.93	0.14	9.50
2,339.0	5.91	173.12	2,326.3	-218.5	3.4	-218.3	1.03	0.32	-9.77
2,366.0	5.89	176.41	2,353.2	-221.2	3.7	-221.1	1.25	-0.07	12.19
2,465.0	5.63	171.07	2,451.7	-231.1	4.7	-230.9	0.60	-0.26	-5.39
2,554.0	4.84	165.98	2,540.3	-239.0	6.3	-238.9	1.03	-0.89	-5.72
2,643.0	4.92	172.48	2,629.0	-246.5	7.7	-246.3	0.63	0.09	7.30
2,732.0	5.98	177.23	2,717.6	-254.9	8.5	-254.7	1.29	1.19	5.34
2,821.0	7.21	175.64	2,806.0	-265.1	9.1	-264.8	1.40	1.38	-1.79
2,910.0	6.51	172.83	2,894.4	-275.7	10.2	-275.4	0.87	-0.79	-3.16
2,999.0	5.80	172.66	2,982.9	-285.1	11.4	-284.8	0.80	-0.80	-0.19
3,088.0	5.45	176.17	3,071.4	-293.8	12.2	-293.5	0.55	-0.39	3.94
3,177.0	4.66	177.23	3,160.1	-301.6	12.7	-301.3	0.89	-0.89	1.19
3,266.0	5.36	176.35	3,248.7	-309.4	13.1	-309.1	0.79	0.79	-0.99
3,356.0	5.98	168.61	3,338.3	-318.2	14.3	-317.8	1.09	0.69	-8.60
3,445.0	6.95	172.66	3,426.7	-328.1	15.9	-327.7	1.20	1.09	4.55
3,534.0	6.33	173.53	3,515.1	-338.3	17.2	-337.9	0.71	-0.70	0.98
3,623.0	5.63	175.64	3,603.7	-347.5	18.0	-347.1	0.82	-0.79	2.37
3,712.0	6.24	174.59	3,692.2	-356.7	18.8	-356.2	0.70	0.69	-1.18
3,823.0	5.28	174.41	3,802.6	-367.8	19.9	-367.3	0.87	-0.86	-0.16
3,913.0	6.33	172.83	3,892.2	-376.8	20.9	-376.3	1.18	1.17	-1.76
4,002.0	5.36	173.18	3,980.7	-385.8	22.0	-385.3	1.09	-1.09	0.39
4,091.0	7.30	168.09	4,069.1	-395.5	23.7	-394.9	2.27	2.18	-5.72
4,180.0	6.60	171.95	4,157.5	-406.1	25.6	-405.5	0.95	-0.79	4.34
4,269.0	5.28	174.76	4,246.0	-415.2	26.7	-414.6	1.52	-1.48	3.16
4,358.0	6.95	175.29	4,334.5	-424.7	27.5	-424.0	1.88	1.88	0.60
4,447.0	6.16	180.92	4,422.9	-434.8	27.8	-434.1	1.14	-0.89	6.33
4,536.0	7.21	168.09	4,511.3	-445.0	28.9	-444.4	2.04	1.18	-14.42

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well Kugel 1J-18H-H267
Project:	DJ BASIN	TVD Reference:	WELL @ 4976.0ft (Ensign 153 RKB - 23')
Site:	Kugel Pad Sec.18-T2N-R67W	MD Reference:	WELL @ 4976.0ft (Ensign 153 RKB - 23')
Well:	Kugel 1J-18H-H267	North Reference:	True
Wellbore:	Kugel 1J-18H-H267 Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	US_EDM

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,625.0	6.77	168.09	4,599.7	-455.6	31.2	-454.9	0.49	-0.49	0.00
4,714.0	5.63	169.14	4,688.1	-465.1	33.1	-464.3	1.29	-1.28	1.18
4,803.0	5.80	162.99	4,776.7	-473.6	35.2	-472.8	0.71	0.19	-6.91
4,892.0	4.92	168.44	4,865.3	-481.7	37.3	-480.8	1.14	-0.99	6.12
4,981.0	6.68	166.50	4,953.8	-490.5	39.3	-489.6	1.99	1.98	-2.18
5,070.0	6.07	162.46	5,042.3	-500.0	41.9	-499.0	0.85	-0.69	-4.54
5,159.0	7.39	172.30	5,130.7	-510.1	44.1	-509.1	1.96	1.48	11.06
5,248.0	6.33	169.49	5,219.0	-520.6	45.7	-519.6	1.25	-1.19	-3.16
5,337.0	5.01	164.22	5,307.6	-529.2	47.7	-528.1	1.59	-1.48	-5.92
5,426.0	5.98	179.16	5,396.2	-537.6	48.8	-536.5	1.93	1.09	16.79
5,515.0	4.84	177.05	5,484.8	-546.0	49.1	-544.9	1.30	-1.28	-2.37
5,604.0	6.24	174.59	5,573.4	-554.5	49.7	-553.4	1.60	1.57	-2.76
5,693.0	5.28	170.02	5,661.9	-563.4	50.9	-562.2	1.19	-1.08	-5.13
5,782.0	6.42	171.43	5,750.5	-572.3	52.3	-571.2	1.29	1.28	1.58
5,871.0	4.57	167.91	5,839.1	-580.7	53.8	-579.5	2.11	-2.08	-3.96
5,961.0	7.39	177.40	5,928.6	-590.0	54.8	-588.8	3.31	3.13	10.54
6,050.0	6.07	174.76	6,016.9	-600.4	55.5	-599.2	1.52	-1.48	-2.97
6,139.0	6.60	176.87	6,105.4	-610.2	56.2	-608.9	0.65	0.60	2.37
6,228.0	6.24	175.29	6,193.8	-620.1	56.9	-618.9	0.45	-0.40	-1.78
6,317.0	6.77	177.05	6,282.3	-630.2	57.6	-628.9	0.64	0.60	1.98
6,406.0	7.39	173.18	6,370.6	-641.1	58.5	-639.8	0.88	0.70	-4.35
6,495.0	3.87	160.53	6,459.2	-649.6	60.2	-648.3	4.17	-3.96	-14.21
6,584.0	1.49	346.33	6,548.1	-651.3	60.9	-650.0	6.02	-2.67	-195.73
6,673.0	7.65	7.07	6,636.8	-644.3	61.4	-643.0	7.05	6.92	23.30
6,763.0	11.96	6.89	6,725.4	-629.1	63.2	-627.7	4.79	4.79	-0.20
6,852.0	15.48	6.54	6,811.9	-608.1	65.7	-606.7	3.96	3.96	-0.39
6,941.0	22.51	357.05	6,896.0	-579.3	66.2	-577.8	8.60	7.90	-10.66
7,030.0	31.74	355.64	6,975.1	-538.8	63.5	-537.5	10.40	10.37	-1.58
7,119.0	37.81	358.46	7,048.2	-488.2	61.0	-486.9	7.05	6.82	3.17
7,208.0	43.62	358.28	7,115.6	-430.2	59.3	-428.9	6.53	6.53	-0.20
7,297.0	52.32	359.16	7,175.2	-364.2	57.9	-362.9	9.80	9.78	0.99
7,387.0	63.93	0.57	7,222.6	-287.9	57.8	-286.6	12.97	12.90	1.57
7,476.0	69.91	359.34	7,257.5	-206.0	57.7	-204.8	6.84	6.72	-1.38
7,565.0	74.30	0.21	7,284.8	-121.3	57.4	-120.2	5.02	4.93	0.98
7,654.0	78.61	0.74	7,305.7	-34.8	58.1	-33.7	4.88	4.84	0.60
7,718.5	81.48	1.63	7,316.8	28.7	59.4	29.9	4.65	4.45	1.39
TPZ - 2179°FNL, 622°FEL, Sec.18									
7,743.0	82.57	1.97	7,320.2	52.9	60.2	54.1	4.65	4.45	1.37
7,754.4	83.19	1.83	7,321.6	64.2	60.6	65.4	5.56	5.44	-1.19
TPZ 2145°FNL & 610°FEL, Sec.18									
7,832.0	87.41	0.92	7,328.0	141.5	62.4	142.7	5.56	5.44	-1.18
7,922.0	89.78	358.63	7,330.2	231.5	62.1	232.7	3.66	2.63	-2.54
8,011.0	89.43	0.04	7,330.8	320.5	61.0	321.6	1.63	-0.39	1.58
8,100.0	89.96	359.51	7,331.3	409.5	60.7	410.6	0.84	0.60	-0.60

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well Kugel 1J-18H-H267
Project:	DJ BASIN	TVD Reference:	WELL @ 4976.0ft (Ensign 153 RKB - 23')
Site:	Kugel Pad Sec.18-T2N-R67W	MD Reference:	WELL @ 4976.0ft (Ensign 153 RKB - 23')
Well:	Kugel 1J-18H-H267	North Reference:	True
Wellbore:	Kugel 1J-18H-H267 Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	US_EDM

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,189.0	90.13	0.57	7,331.2	498.5	60.7	499.6	1.21	0.19	1.19
8,278.0	90.84	0.39	7,330.5	587.5	61.5	588.6	0.82	0.80	-0.20
8,367.0	90.57	359.51	7,329.4	676.4	61.4	677.5	1.03	-0.30	-0.99
8,456.0	90.31	1.09	7,328.7	765.4	61.9	766.5	1.80	-0.29	1.78
8,546.0	90.22	0.92	7,328.3	855.4	63.4	856.5	0.21	-0.10	-0.19
8,635.0	89.96	0.92	7,328.1	944.4	64.9	945.5	0.29	-0.29	0.00
8,724.0	89.69	0.92	7,328.4	1,033.4	66.3	1,034.5	0.30	-0.30	0.00
8,813.0	89.34	0.39	7,329.2	1,122.4	67.3	1,123.5	0.71	-0.39	-0.60
8,902.0	90.22	0.92	7,329.5	1,211.4	68.3	1,212.5	1.15	0.99	0.60
8,991.0	89.78	1.27	7,329.5	1,300.4	70.0	1,301.5	0.63	-0.49	0.39
9,080.0	91.10	1.27	7,328.8	1,389.3	72.0	1,390.5	1.48	1.48	0.00
9,169.0	90.75	2.68	7,327.4	1,478.3	75.1	1,479.5	1.63	-0.39	1.58
9,258.0	90.40	0.92	7,326.5	1,567.2	77.9	1,568.5	2.02	-0.39	-1.98
9,347.0	90.57	358.81	7,325.7	1,656.2	77.7	1,657.4	2.38	0.19	-2.37
9,436.0	91.19	358.46	7,324.4	1,745.2	75.5	1,746.3	0.80	0.70	-0.39
9,480.0	90.97	359.07	7,323.5	1,789.1	74.6	1,790.3	1.47	-0.49	1.38
Kugel 1J WP1									
9,525.0	90.75	359.69	7,322.9	1,834.2	74.1	1,835.3	1.47	-0.49	1.38
9,614.0	90.31	0.39	7,322.0	1,923.1	74.2	1,924.3	0.93	-0.49	0.79
9,703.0	90.66	0.21	7,321.3	2,012.1	74.6	2,013.2	0.44	0.39	-0.20
9,793.0	90.66	0.92	7,320.2	2,102.1	75.5	2,103.2	0.79	0.00	0.79
9,882.0	91.10	1.44	7,318.9	2,191.1	77.4	2,192.2	0.77	0.49	0.58
9,971.0	90.92	0.92	7,317.3	2,280.1	79.2	2,281.2	0.62	-0.20	-0.58
10,060.0	90.57	1.27	7,316.2	2,369.0	80.9	2,370.2	0.56	-0.39	0.39
10,149.0	90.57	1.27	7,315.3	2,458.0	82.9	2,459.2	0.00	0.00	0.00
10,238.0	90.57	0.74	7,314.4	2,547.0	84.4	2,548.2	0.60	0.00	-0.60
10,327.0	90.57	0.74	7,313.5	2,636.0	85.6	2,637.2	0.00	0.00	0.00
10,347.1	90.45	0.86	7,313.3	2,656.1	85.9	2,657.3	0.83	-0.59	0.59
Kugel 1J 2656 TGT									
10,417.0	90.04	1.27	7,313.0	2,726.0	87.2	2,727.2	0.83	-0.59	0.59
10,506.0	90.22	1.62	7,312.8	2,814.9	89.4	2,816.2	0.44	0.20	0.39
10,595.0	90.75	1.62	7,312.1	2,903.9	91.9	2,905.2	0.60	0.60	0.00
10,684.0	90.92	1.97	7,310.8	2,992.9	94.7	2,994.2	0.44	0.19	0.39
10,773.0	88.55	1.44	7,311.2	3,081.8	97.3	3,083.1	2.73	-2.66	-0.60
10,862.0	89.52	1.27	7,312.7	3,170.8	99.5	3,172.1	1.11	1.09	-0.19
10,951.0	90.22	0.74	7,312.9	3,259.8	101.0	3,261.1	0.99	0.79	-0.60
11,040.0	89.87	1.44	7,312.8	3,348.7	102.7	3,350.1	0.88	-0.39	0.79
11,129.0	90.40	1.97	7,312.6	3,437.7	105.4	3,439.1	0.84	0.60	0.60
11,219.0	90.75	1.27	7,311.7	3,527.7	107.9	3,529.1	0.87	0.39	-0.78
11,308.0	89.34	3.03	7,311.6	3,616.6	111.2	3,618.1	2.53	-1.58	1.98
11,397.0	89.87	2.68	7,312.2	3,705.5	115.7	3,707.0	0.71	0.60	-0.39
11,486.0	89.87	2.32	7,312.4	3,794.4	119.6	3,796.0	0.40	0.00	-0.40
11,575.0	89.60	2.68	7,312.8	3,883.3	123.4	3,885.0	0.51	-0.30	0.40

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well Kugel 1J-18H-H267
Project:	DJ BASIN	TVD Reference:	WELL @ 4976.0ft (Ensign 153 RKB - 23')
Site:	Kugel Pad Sec.18-T2N-R67W	MD Reference:	WELL @ 4976.0ft (Ensign 153 RKB - 23')
Well:	Kugel 1J-18H-H267	North Reference:	True
Wellbore:	Kugel 1J-18H-H267 Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	US_EDM

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,664.0	89.96	0.92	7,313.2	3,972.3	126.2	3,974.0	2.02	0.40	-1.98
11,744.1	89.64	0.92	7,313.5	4,052.3	127.5	4,054.1	0.40	-0.40	0.00
Kugel 1J WP2									
11,753.0	89.60	0.92	7,313.5	4,061.2	127.7	4,063.0	0.40	-0.40	0.00
11,842.0	89.69	359.86	7,314.1	4,150.2	128.3	4,152.0	1.20	0.10	-1.19
11,932.0	90.04	358.46	7,314.3	4,240.2	126.9	4,241.9	1.60	0.39	-1.56
12,021.0	89.96	355.64	7,314.3	4,329.1	122.4	4,330.7	3.17	-0.09	-3.17
12,110.0	89.96	356.35	7,314.4	4,417.9	116.1	4,419.3	0.80	0.00	0.80
12,199.0	90.48	356.52	7,314.0	4,506.7	110.6	4,508.0	0.61	0.58	0.19
12,288.0	90.84	355.12	7,313.0	4,595.5	104.1	4,596.6	1.62	0.40	-1.57
12,377.0	91.28	357.40	7,311.3	4,684.2	98.3	4,685.3	2.61	0.49	2.56
12,466.0	91.36	357.40	7,309.3	4,773.1	94.3	4,774.1	0.09	0.09	0.00
12,556.0	90.04	358.28	7,308.2	4,863.1	90.9	4,863.9	1.76	-1.47	0.98
12,645.0	90.40	358.81	7,307.9	4,952.0	88.6	4,952.8	0.72	0.40	0.60
12,734.0	89.78	358.10	7,307.7	5,041.0	86.2	5,041.7	1.06	-0.70	-0.80
12,823.0	91.10	0.39	7,307.0	5,130.0	85.1	5,130.7	2.97	1.48	2.57
12,912.0	89.60	358.10	7,306.5	5,219.0	83.9	5,219.6	3.08	-1.69	-2.57
12,988.3	89.30	357.20	7,307.2	5,295.2	80.8	5,295.8	1.24	-0.39	-1.18
Kugel 1J 5295 TGT									
13,001.0	89.25	357.05	7,307.4	5,307.9	80.1	5,308.4	1.24	-0.39	-1.18
13,090.0	89.25	356.87	7,308.5	5,396.7	75.4	5,397.2	0.20	0.00	-0.20
13,179.0	88.99	356.70	7,309.9	5,485.6	70.4	5,485.9	0.35	-0.29	-0.19
13,204.0	88.89	356.65	7,310.4	5,510.5	69.0	5,510.8	0.44	-0.39	-0.20
Kugel 1J WP3									
13,268.0	88.64	356.52	7,311.8	5,574.4	65.2	5,574.6	0.44	-0.39	-0.20
13,357.0	89.25	358.98	7,313.4	5,663.3	61.7	5,663.4	2.85	0.69	2.76
13,447.0	89.87	0.39	7,314.1	5,753.3	61.2	5,753.4	1.71	0.69	1.57
13,536.0	90.40	1.62	7,313.9	5,842.3	62.7	5,842.4	1.50	0.60	1.38
13,625.0	90.48	359.69	7,313.2	5,931.3	63.7	5,931.4	2.17	0.09	-2.17
13,714.0	90.57	1.27	7,312.4	6,020.3	64.5	6,020.4	1.78	0.10	1.78
13,803.0	90.40	3.38	7,311.6	6,109.2	68.1	6,109.3	2.38	-0.19	2.37
13,892.0	90.66	2.85	7,310.8	6,198.1	72.9	6,198.3	0.66	0.29	-0.60
13,981.0	91.01	3.03	7,309.5	6,286.9	77.5	6,287.2	0.44	0.39	0.20
14,070.0	91.10	2.50	7,307.9	6,375.8	81.8	6,376.2	0.60	0.10	-0.60
14,159.0	91.98	2.50	7,305.5	6,464.7	85.7	6,465.1	0.99	0.99	0.00
14,248.0	90.04	2.32	7,303.9	6,553.6	89.4	6,554.1	2.19	-2.18	-0.20
14,338.0	91.01	3.03	7,303.1	6,643.5	93.6	6,644.0	1.34	1.08	0.79
14,427.0	91.28	2.85	7,301.3	6,732.4	98.2	6,733.0	0.36	0.30	-0.20
14,516.0	91.71	2.32	7,299.0	6,821.2	102.2	6,821.9	0.77	0.48	-0.60
14,605.0	90.40	3.38	7,297.3	6,910.1	106.6	6,910.9	1.89	-1.47	1.19
14,694.0	88.29	3.73	7,298.4	6,998.9	112.1	6,999.8	2.40	-2.37	0.39
14,712.9	88.27	3.54	7,298.9	7,017.8	113.3	7,018.7	0.99	-0.10	-0.99
Kugel 1J WP4									
14,783.0	88.20	2.85	7,301.1	7,087.7	117.2	7,088.7	0.99	-0.10	-0.99

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well Kugel 1J-18H-H267
Project:	DJ BASIN	TVD Reference:	WELL @ 4976.0ft (Ensign 153 RKB - 23')
Site:	Kugel Pad Sec.18-T2N-R67W	MD Reference:	WELL @ 4976.0ft (Ensign 153 RKB - 23')
Well:	Kugel 1J-18H-H267	North Reference:	True
Wellbore:	Kugel 1J-18H-H267 Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	US_EDM

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
14,873.0	88.29	3.20	7,303.8	7,177.6	122.0	7,178.6	0.40	0.10	0.39	
14,962.0	89.52	4.08	7,305.5	7,266.4	127.6	7,267.5	1.70	1.38	0.99	
15,051.0	90.04	5.14	7,305.9	7,355.1	134.8	7,356.3	1.33	0.58	1.19	
15,140.0	90.31	4.43	7,305.6	7,443.8	142.2	7,445.1	0.85	0.30	-0.80	
15,187.0	90.13	4.78	7,305.4	7,490.6	146.0	7,492.0	0.84	-0.38	0.74	
Last Survey - 15,187' MD										
15,252.0	90.13	4.78	7,305.3	7,555.4	151.4	7,556.9	0.00	0.00	0.00	
PTB - 16'FNL, 611'FEL, Sec.7 - BHL 10'FNL & 610'FEL, Sec.7										

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
7,718.5	7,316.8	28.7	59.4	TPZ - 2179'FNL, 622'FEL, Sec.18	
15,187.0	7,305.4	7,490.6	146.0	Last Survey - 15,187' MD	
15,252.0	7,305.3	7,555.4	151.4	PTB - 16'FNL, 611'FEL, Sec.7	

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------