



Crestone Peak Resources

DJ BASIN

Kugel Pad Sec.18-T2N-R67W

Kugel 11-18H-H267

Kugel 11-18H-H267 Wellbore #1

Survey: Survey #1

Standard Survey Report

29 July, 2019



CRESTONE PEAK
RESOURCES

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well Kugel 1I-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 1I-18H-H267	North Reference:	True
Wellbore:	Kugel 1I-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 1I-18H-H267					
Well Position	+N/-S	0.0 ft	Northing:	1,294,220.59 usft	Latitude:	40.139606
	+E/-W	0.0 ft	Easting:	3,160,350.09 usft	Longitude:	-104.926457
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,953.0 ft

Wellbore	Kugel 1I-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	359.11	

Survey Program		Date	7/29/2019		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
115.0	15,412.0	Survey #1 (Kugel 1I-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	336.36	1.0	0.0	0.0	0.0	0.30	0.30	0.00
SHL 2198'FNL & 681'FEL, Sec.18										
	115.0	0.35	336.36	115.0	0.3	-0.1	0.3	0.30	0.30	0.00
	206.0	0.53	330.64	206.0	0.9	-0.5	1.0	0.20	0.20	-6.29
	298.0	0.53	327.04	298.0	1.7	-0.9	1.7	0.04	0.00	-3.91
	388.0	0.97	353.94	388.0	2.8	-1.2	2.8	0.61	0.49	29.89
	471.0	1.06	18.63	471.0	4.2	-1.0	4.2	0.53	0.11	29.75
	553.0	0.26	38.32	553.0	5.1	-0.7	5.1	1.00	-0.98	24.01
	636.0	0.62	79.89	636.0	5.3	-0.1	5.3	0.55	0.43	50.08
	719.0	0.62	202.06	719.0	5.0	0.2	5.0	1.31	0.00	147.19

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Wellbore:	Kugel 11-18H-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)
801.0	1.06	201.62	801.0	3.8	-0.3	3.8	0.54	0.54	-0.54
929.0	1.94	200.30	928.9	0.7	-1.5	0.7	0.69	0.69	-1.03
951.0	1.79	194.30	950.9	0.0	-1.7	0.1	1.12	-0.68	-27.27
1,037.0	2.41	202.53	1,036.8	-2.9	-2.7	-2.9	0.80	0.72	9.57
1,127.0	2.72	199.42	1,126.7	-6.7	-4.2	-6.6	0.38	0.34	-3.46
1,217.0	3.20	204.49	1,216.6	-11.0	-5.9	-10.9	0.61	0.53	5.63
1,307.0	4.73	190.35	1,306.4	-16.9	-7.6	-16.8	2.01	1.70	-15.71
1,397.0	5.68	190.96	1,396.0	-25.0	-9.1	-24.8	1.06	1.06	0.68
1,487.0	6.46	188.22	1,485.5	-34.4	-10.7	-34.2	0.92	0.87	-3.04
1,577.0	6.86	187.66	1,574.9	-44.7	-12.1	-44.5	0.45	0.44	-0.62
1,667.0	7.54	189.94	1,664.2	-55.8	-13.9	-55.6	0.82	0.76	2.53
1,757.0	7.93	189.09	1,753.4	-67.8	-15.9	-67.5	0.45	0.43	-0.94
1,847.0	8.78	191.55	1,842.4	-80.6	-18.2	-80.3	1.02	0.94	2.73
1,936.0	8.97	193.11	1,930.4	-94.1	-21.2	-93.7	0.34	0.21	1.75
2,026.0	6.97	192.43	2,019.5	-106.2	-23.9	-105.8	2.22	-2.22	-0.76
2,116.0	6.32	192.74	2,108.9	-116.4	-26.2	-116.0	0.72	-0.72	0.34
2,206.0	6.78	199.75	2,198.3	-126.2	-29.1	-125.7	1.02	0.51	7.79
2,296.0	6.89	203.35	2,287.7	-136.2	-33.0	-135.6	0.49	0.12	4.00
2,341.0	7.35	204.79	2,332.3	-141.3	-35.3	-140.7	1.10	1.02	3.20
2,464.0	6.60	206.41	2,454.4	-154.7	-41.7	-154.1	0.63	-0.61	1.32
2,553.0	6.16	198.32	2,542.9	-163.9	-45.5	-163.1	1.12	-0.49	-9.09
2,642.0	7.03	200.43	2,631.3	-173.5	-48.9	-172.7	1.01	0.98	2.37
2,731.0	6.60	199.20	2,719.6	-183.4	-52.5	-182.6	0.51	-0.48	-1.38
2,820.0	5.72	197.44	2,808.1	-192.5	-55.5	-191.6	1.01	-0.99	-1.98
2,909.0	6.33	195.51	2,896.6	-201.4	-58.2	-200.5	0.72	0.69	-2.17
2,999.0	7.12	196.03	2,986.0	-211.6	-61.0	-210.6	0.88	0.88	0.58
3,088.0	6.42	194.98	3,074.4	-221.7	-63.8	-220.7	0.80	-0.79	-1.18
3,177.0	7.74	196.56	3,162.7	-232.2	-66.8	-231.2	1.50	1.48	1.78
3,266.0	6.51	197.79	3,251.0	-242.8	-70.1	-241.7	1.39	-1.38	1.38
3,355.0	7.21	191.82	3,339.4	-253.1	-72.8	-251.9	1.12	0.79	-6.71
3,444.0	8.62	196.39	3,427.5	-264.9	-75.8	-263.7	1.73	1.58	5.13
3,534.0	8.27	196.56	3,516.6	-277.6	-79.5	-276.3	0.39	-0.39	0.19
3,623.0	6.95	194.80	3,604.8	-288.9	-82.7	-287.6	1.51	-1.48	-1.98
3,712.0	8.00	193.57	3,693.0	-300.2	-85.6	-298.8	1.19	1.18	-1.38
3,823.0	7.03	194.63	3,803.1	-314.3	-89.1	-312.8	0.88	-0.87	0.95
3,912.0	7.65	198.50	3,891.3	-325.1	-92.3	-323.7	0.89	0.70	4.35
4,001.0	6.68	201.13	3,979.6	-335.6	-96.1	-334.1	1.15	-1.09	2.96
4,090.0	8.27	195.16	4,067.9	-346.6	-99.6	-345.0	1.99	1.79	-6.71
4,179.0	8.18	195.51	4,156.0	-358.9	-103.0	-357.2	0.12	-0.10	0.39
4,268.0	7.30	193.75	4,244.2	-370.5	-106.0	-368.8	1.02	-0.99	-1.98
4,357.0	6.24	195.51	4,332.5	-380.6	-108.7	-378.9	1.21	-1.19	1.98
4,446.0	7.91	192.69	4,420.9	-391.3	-111.3	-389.5	1.92	1.88	-3.17
4,535.0	8.71	192.34	4,508.9	-403.8	-114.1	-402.0	0.90	0.90	-0.39

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Wellbore:	Kugel 11-18H-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)
4,624.0	8.44	191.11	4,596.9	-416.8	-116.8	-414.9	0.37	-0.30	-1.38
4,713.0	7.47	190.59	4,685.1	-428.9	-119.1	-427.0	1.09	-1.09	-0.58
4,802.0	7.47	203.77	4,773.3	-439.9	-122.5	-437.9	1.92	0.00	14.81
4,891.0	6.86	208.69	4,861.6	-449.8	-127.4	-447.8	0.97	-0.69	5.53
4,980.0	7.12	193.93	4,950.0	-459.9	-131.3	-457.8	2.03	0.29	-16.58
5,069.0	6.07	193.57	5,038.4	-469.8	-133.7	-467.7	1.18	-1.18	-0.40
5,159.0	7.03	186.19	5,127.8	-479.9	-135.4	-477.7	1.42	1.07	-8.20
5,248.0	5.63	185.31	5,216.2	-489.7	-136.4	-487.5	1.58	-1.57	-0.99
5,337.0	6.68	191.29	5,304.7	-499.1	-137.8	-496.9	1.38	1.18	6.72
5,425.0	8.44	191.82	5,392.0	-510.4	-140.2	-508.2	2.00	2.00	0.60
5,515.0	6.68	190.06	5,481.2	-522.0	-142.4	-519.8	1.97	-1.96	-1.96
5,604.0	7.47	191.46	5,569.5	-532.8	-144.5	-530.5	0.91	0.89	1.57
5,693.0	8.18	195.51	5,657.7	-544.6	-147.3	-542.2	1.01	0.80	4.55
5,782.0	5.80	195.16	5,746.0	-555.0	-150.2	-552.6	2.67	-2.67	-0.39
5,871.0	6.60	198.14	5,834.5	-564.2	-153.0	-561.8	0.97	0.90	3.35
5,960.0	7.30	190.59	5,922.8	-574.6	-155.6	-572.1	1.29	0.79	-8.48
6,049.0	8.62	193.22	6,011.0	-586.7	-158.2	-584.2	1.54	1.48	2.96
6,138.0	8.35	193.40	6,099.0	-599.5	-161.2	-596.9	0.30	-0.30	0.20
6,227.0	6.24	191.99	6,187.3	-610.5	-163.7	-607.9	2.38	-2.37	-1.58
6,316.0	6.77	198.14	6,275.7	-620.2	-166.3	-617.5	0.98	0.60	6.91
6,406.0	7.74	193.57	6,365.0	-631.1	-169.4	-628.4	1.25	1.08	-5.08
6,495.0	7.47	188.48	6,453.2	-642.7	-171.6	-639.9	0.82	-0.30	-5.72
6,584.0	7.47	193.05	6,541.4	-654.0	-173.8	-651.3	0.67	0.00	5.13
6,673.0	3.69	193.93	6,630.0	-662.5	-175.8	-659.6	4.25	-4.25	0.99
6,762.0	3.78	24.47	6,718.9	-662.6	-175.3	-659.8	8.36	0.10	-190.40
6,851.0	8.88	25.00	6,807.4	-653.7	-171.2	-650.9	5.73	5.73	0.60
6,940.0	12.93	13.05	6,894.8	-637.7	-166.0	-635.1	5.19	4.55	-13.43
7,029.0	19.96	355.64	6,980.1	-612.8	-164.9	-610.2	9.56	7.90	-19.56
7,119.0	28.05	352.13	7,062.3	-576.5	-169.0	-573.8	9.12	8.99	-3.90
7,208.0	34.47	353.36	7,138.3	-530.7	-174.8	-527.9	7.25	7.21	1.38
7,297.0	39.57	356.17	7,209.3	-477.4	-179.6	-474.5	6.04	5.73	3.16
7,386.0	45.46	355.29	7,274.9	-417.4	-184.1	-414.5	6.65	6.62	-0.99
7,475.0	53.73	357.58	7,332.6	-349.8	-188.2	-346.9	9.50	9.29	2.57
7,564.0	61.38	0.39	7,380.3	-274.8	-189.5	-271.8	9.00	8.60	3.16
7,654.0	67.62	358.28	7,419.0	-193.6	-190.4	-190.6	7.25	6.93	-2.34
7,743.0	75.18	0.39	7,447.4	-109.4	-191.4	-106.4	8.79	8.49	2.37
7,832.0	79.32	359.16	7,467.0	-22.6	-191.7	-19.6	4.84	4.65	-1.38
7,879.0	82.80	357.94	7,474.3	23.8	-192.9	26.8	7.83	7.40	-2.59
TPZ - 2177'FNL, 874'FEL, Sec.18									
7,911.8	85.23	357.10	7,477.7	56.4	-194.3	59.4	7.83	7.41	-2.56
TPZ 2145'FNL & 880'FEL, Sec.18									
7,921.0	85.91	356.87	7,478.5	65.6	-194.8	68.6	7.83	7.41	-2.54
8,010.0	90.40	358.28	7,481.3	154.4	-198.6	157.5	5.29	5.04	1.58
8,099.0	91.19	0.21	7,480.1	243.4	-199.7	246.5	2.34	0.89	2.17

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8,188.0	91.98	359.86	7,477.6	332.4	-199.7	335.4	0.97	0.89	-0.39
8,278.0	91.10	1.27	7,475.2	422.3	-198.8	425.4	1.85	-0.98	1.57
8,367.0	91.45	1.09	7,473.2	511.3	-197.0	514.3	0.44	0.39	-0.20
8,456.0	89.25	0.92	7,472.7	600.3	-195.4	603.2	2.48	-2.47	-0.19
8,545.0	88.46	359.51	7,474.5	689.3	-195.1	692.2	1.82	-0.89	-1.58
8,634.0	90.48	0.21	7,475.3	778.2	-195.3	781.2	2.40	2.27	0.79
8,723.0	90.66	0.21	7,474.4	867.2	-194.9	870.2	0.20	0.20	0.00
8,812.0	92.33	359.16	7,472.1	956.2	-195.4	959.1	2.22	1.88	-1.18
8,901.0	93.03	359.86	7,467.9	1,045.1	-196.2	1,048.0	1.11	0.79	0.79
8,990.0	92.77	1.44	7,463.4	1,134.0	-195.2	1,136.9	1.80	-0.29	1.78
9,080.0	91.63	1.09	7,460.0	1,223.9	-193.2	1,226.8	1.32	-1.27	-0.39
9,169.0	92.24	1.80	7,457.0	1,312.8	-191.0	1,315.6	1.05	0.69	0.80
9,258.0	90.31	1.80	7,455.0	1,401.7	-188.2	1,404.5	2.17	-2.17	0.00
9,347.0	90.31	1.62	7,454.5	1,490.7	-185.5	1,493.4	0.20	0.00	-0.20
9,436.0	89.96	1.09	7,454.3	1,579.7	-183.4	1,582.3	0.71	-0.39	-0.60
9,525.0	90.84	3.55	7,453.7	1,668.6	-179.8	1,671.2	2.94	0.99	2.76
9,614.0	90.31	359.34	7,452.8	1,757.5	-177.6	1,760.1	4.77	-0.60	-4.73
9,703.0	91.01	7.25	7,451.7	1,846.3	-172.5	1,848.8	8.92	0.79	8.89
9,792.0	90.22	358.10	7,450.8	1,935.1	-168.3	1,937.5	10.32	-0.89	-10.28
9,881.0	91.36	2.32	7,449.6	2,024.1	-168.0	2,026.5	4.91	1.28	4.74
9,970.0	88.55	2.32	7,449.6	2,113.0	-164.4	2,115.3	3.16	-3.16	0.00
10,059.0	89.60	1.09	7,451.1	2,202.0	-161.7	2,204.2	1.82	1.18	-1.38
10,061.8	89.63	1.09	7,451.1	2,204.8	-161.7	2,207.0	1.18	1.18	0.00
Kugel 11 2205 TGT									
10,149.0	90.66	1.09	7,450.9	2,291.9	-160.0	2,294.1	1.18	1.18	0.00
10,238.0	88.99	359.51	7,451.1	2,380.9	-159.5	2,383.1	2.58	-1.88	-1.78
10,327.0	88.20	358.63	7,453.3	2,469.9	-161.0	2,472.1	1.33	-0.89	-0.99
10,416.0	88.20	358.28	7,456.1	2,558.8	-163.4	2,561.0	0.39	0.00	-0.39
10,505.0	88.37	357.93	7,458.8	2,647.7	-166.3	2,650.0	0.44	0.19	-0.39
10,594.0	88.90	359.51	7,460.9	2,736.7	-168.3	2,739.0	1.87	0.60	1.78
10,683.0	89.69	359.69	7,462.0	2,825.7	-168.9	2,827.9	0.91	0.89	0.20
10,773.0	88.99	0.21	7,463.0	2,915.7	-169.0	2,917.9	0.97	-0.78	0.58
10,862.0	87.76	0.74	7,465.5	3,004.6	-168.3	3,006.9	1.50	-1.38	0.60
10,951.0	88.37	0.39	7,468.5	3,093.6	-167.4	3,095.8	0.79	0.69	-0.39
11,040.0	88.64	0.21	7,470.9	3,182.5	-166.9	3,184.7	0.36	0.30	-0.20
11,129.0	88.29	0.04	7,473.3	3,271.5	-166.7	3,273.7	0.44	-0.39	-0.19
11,218.0	88.02	358.63	7,476.1	3,360.4	-167.8	3,362.6	1.61	-0.30	-1.58
11,307.0	89.16	359.86	7,478.3	3,449.4	-169.0	3,451.6	1.88	1.28	1.38
11,396.0	89.78	1.97	7,479.1	3,538.4	-167.5	3,540.6	2.47	0.70	2.37
11,485.0	90.40	2.15	7,479.0	3,627.3	-164.3	3,629.4	0.73	0.70	0.20
11,575.0	90.48	0.39	7,478.3	3,717.3	-162.3	3,719.4	1.96	0.09	-1.96
11,664.0	88.90	1.80	7,478.8	3,806.3	-160.6	3,808.3	2.38	-1.78	1.58
11,753.0	89.08	1.62	7,480.4	3,895.2	-158.0	3,897.2	0.29	0.20	-0.20

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well Kugel 1I-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 1I-18H-H267	North Reference:	True
Wellbore:	Kugel 1I-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)
11,842.0	88.55	1.27	7,482.2	3,984.2	-155.7	3,986.1	0.71	-0.60	-0.39
11,931.0	90.04	2.68	7,483.3	4,073.1	-152.7	4,075.0	2.30	1.67	1.58
12,020.0	89.87	1.80	7,483.4	4,162.0	-149.2	4,163.9	1.01	-0.19	-0.99
12,109.0	89.16	0.92	7,484.1	4,251.0	-147.1	4,252.8	1.27	-0.80	-0.99
12,198.0	90.66	1.44	7,484.3	4,340.0	-145.2	4,341.7	1.78	1.69	0.58
12,288.0	90.92	1.62	7,483.0	4,429.9	-142.8	4,431.6	0.35	0.29	0.20
12,358.1	90.30	1.34	7,482.3	4,500.0	-141.0	4,501.7	0.97	-0.89	-0.39
Kugel 1I 4500 TGT									
12,377.0	90.13	1.27	7,482.2	4,518.9	-140.6	4,520.6	0.97	-0.89	-0.39
12,466.0	90.57	0.57	7,481.7	4,607.9	-139.2	4,609.5	0.93	0.49	-0.79
12,555.0	91.89	1.09	7,479.7	4,696.9	-137.9	4,698.4	1.59	1.48	0.58
12,644.0	91.01	359.51	7,477.5	4,785.8	-137.4	4,787.4	2.03	-0.99	-1.78
12,733.0	89.96	359.16	7,476.7	4,874.8	-138.4	4,876.4	1.24	-1.18	-0.39
12,822.0	90.04	358.98	7,476.7	4,963.8	-139.9	4,965.4	0.22	0.09	-0.20
12,911.0	90.40	358.63	7,476.4	5,052.8	-141.7	5,054.4	0.56	0.40	-0.39
13,001.0	90.04	359.69	7,476.0	5,142.8	-143.1	5,144.4	1.24	-0.40	1.18
13,090.0	90.31	359.51	7,475.8	5,231.8	-143.7	5,233.4	0.36	0.30	-0.20
13,179.0	90.40	359.16	7,475.2	5,320.8	-144.7	5,322.4	0.41	0.10	-0.39
13,268.0	90.04	0.04	7,474.9	5,409.8	-145.3	5,411.4	1.07	-0.40	0.99
13,357.0	89.96	359.34	7,474.9	5,498.8	-145.8	5,500.4	0.79	-0.09	-0.79
13,446.0	90.04	0.57	7,474.9	5,587.8	-145.9	5,589.4	1.38	0.09	1.38
13,535.0	90.04	0.39	7,474.8	5,676.8	-145.1	5,678.3	0.20	0.00	-0.20
13,624.0	90.57	0.04	7,474.3	5,765.8	-144.8	5,767.3	0.71	0.60	-0.39
13,713.0	89.87	1.80	7,474.0	5,854.7	-143.4	5,856.3	2.13	-0.79	1.98
13,802.0	89.78	0.92	7,474.3	5,943.7	-141.3	5,945.2	0.99	-0.10	-0.99
13,891.0	90.04	0.04	7,474.4	6,032.7	-140.5	6,034.2	1.03	0.29	-0.99
13,981.0	90.48	359.51	7,474.0	6,122.7	-140.9	6,124.2	0.77	0.49	-0.59
14,070.0	90.22	0.21	7,473.5	6,211.7	-141.1	6,213.1	0.84	-0.29	0.79
14,159.0	90.75	1.62	7,472.7	6,300.7	-139.7	6,302.1	1.69	0.60	1.58
14,248.0	88.81	0.57	7,473.1	6,389.7	-138.0	6,391.0	2.48	-2.18	-1.18
14,337.0	89.08	1.09	7,474.7	6,478.6	-136.7	6,480.0	0.66	0.30	0.58
14,427.0	89.08	0.92	7,476.1	6,568.6	-135.1	6,569.9	0.19	0.00	-0.19
14,516.0	89.25	359.86	7,477.4	6,657.6	-134.5	6,658.9	1.21	0.19	-1.19
14,605.0	89.69	0.74	7,478.3	6,746.6	-134.0	6,747.9	1.11	0.49	0.99
14,694.0	90.75	1.44	7,477.9	6,835.6	-132.3	6,836.8	1.43	1.19	0.79
14,783.0	91.45	1.62	7,476.2	6,924.5	-130.0	6,925.7	0.81	0.79	0.20
14,872.0	89.87	1.09	7,475.2	7,013.5	-127.9	7,014.6	1.87	-1.78	-0.60
14,961.0	89.87	0.04	7,475.4	7,102.5	-127.0	7,103.6	1.18	0.00	-1.18
15,050.0	90.13	359.69	7,475.4	7,191.5	-127.2	7,192.6	0.49	0.29	-0.39
15,139.0	89.78	0.74	7,475.5	7,280.5	-126.9	7,281.6	1.24	-0.39	1.18
15,228.0	89.87	0.39	7,475.7	7,369.5	-126.0	7,370.5	0.41	0.10	-0.39
15,318.0	89.96	0.57	7,475.9	7,459.5	-125.2	7,460.5	0.22	0.10	0.20
15,347.0	90.22	0.92	7,475.8	7,488.5	-124.9	7,489.5	1.50	0.90	1.21
Last Survey - 15,347' MD									

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well Kugel 1I-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 1I-18H-H267	North Reference:	True
Wellbore:	Kugel 1I-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)
15,412.0	90.22	0.92	7,475.6	7,553.5	-123.8	7,554.5	0.00	0.00	0.00
PTB - 15'FNL, 886'FEL,Sec.7 - BHL 10'FNL & 880'FEL, Sec.7									

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
7,879.0	7,474.3	23.8	-192.9	TPZ - 2177'FNL, 874'FEL, Sec.18
15,347.0	7,475.8	7,488.5	-124.9	Last Survey - 15,347' MD
15,412.0	7,475.6	7,553.5	-123.8	PTB - 15'FNL, 886'FEL,Sec.7

Checked By: _____ Approved By: _____ Date: _____