



CRESTONE PEAK
RESOURCES

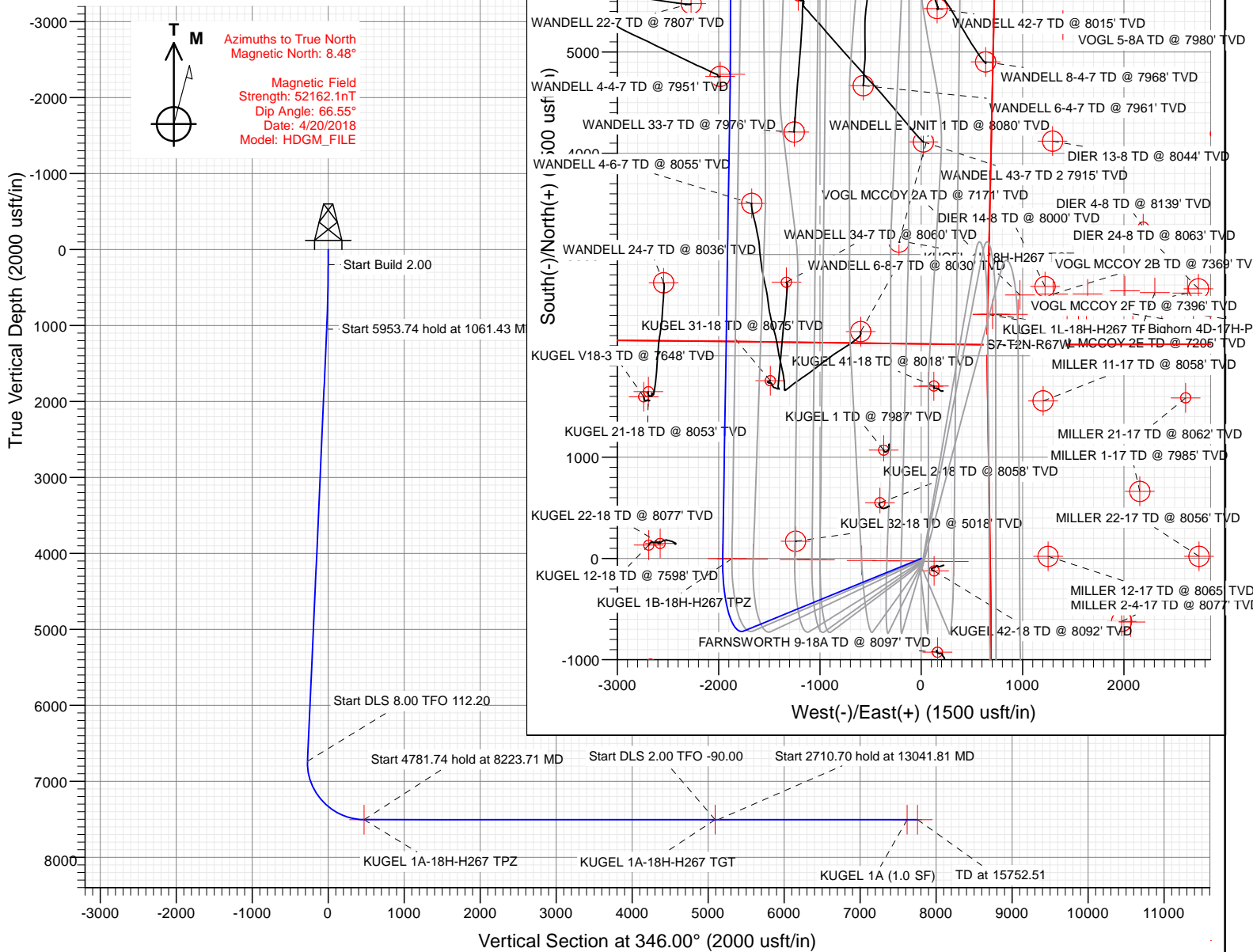
SECTION DETAILS

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	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	1061.43	17.23	247.76	1048.51	-48.65	-118.98	2.00	247.76	-18.43	
4	7015.17	17.23	247.76	6735.11	-716.13	-1751.17	0.00	0.00	-271.23	
5	8223.71	90.00	0.89	7504.00	-1.47	-1959.31	8.00	112.20	472.55	KUGEL 1A-18H-H267 TPZ
6	13005.45	90.00	0.89	7504.00	4779.69	-1884.75	0.00	0.00	5093.67	KUGEL 1A-18H-H267 TGT
7	13041.81	90.00	0.17	7504.00	4816.05	-1884.41	2.00	-90.00	5128.87	
8	15752.51	90.00	0.17	7504.00	7526.74	-1876.55	0.00	0.00	7757.14	KUGEL 1A-18H-H267 BHL

PLAN #3 (6.11)
KUGEL 1A-18H-H267
23 KB @ 4977.00usft
Ground Level @ 4954.00
North American Datum 1983
Well KUGEL 1A-18H-H267 - Slot KUGEL 1A, True North

Type	Target	No Target (Freehand)	Azimuth	Origin Type	Slot	N/S	E/W	From TVD
Name	TVD							
KUGEL 1A (1.0 SF)	7504.00		7384.23			-1876.98	40.160096	-104.933172
KUGEL 1A-18H-H267 BHL	7504.00		7526.74			-1876.55	40.160487	-104.933171
KUGEL 1A-18H-H267 TGT	7504.00		4779.69			-1884.75	40.152946	-104.933200
KUGEL 1A-18H-H267 TPZ	7504.00		7504.00			-1959.31	40.139821	-104.933465

Project: DJ BASIN
Site: S18-T2N-R67W (KUGEL)
Well: KUGEL 1A-18H-H267
Wellbore: OH
Design: PLAN #3 (6.11)



WELL DETAILS: KUGEL 1A-18H-H267

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	1294300.48	3160349.59	40.139825	-104.926457	KUGEL 1A

CATHEDRAL



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well KUGEL 1A-18H-H267 - Slot KUGEL 1A
Company:	Crestone Peak Resources	TVD Reference:	23' KB @ 4977.00usft
Project:	DJ BASIN	MD Reference:	23' KB @ 4977.00usft
Site:	S18-T2N-R67W (KUGEL)	North Reference:	True
Well:	KUGEL 1A-18H-H267	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #3 (6.11)		

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		S18-T2N-R67W (KUGEL)			
Site Position:		Northing:	1,294,180.28 usft	Latitude:	40.139495
From:	Lat/Long	Easting:	3,160,365.72 usft	Longitude:	-104.926402
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.37 °

Well	KUGEL 1A-18H-H267 - Slot KUGEL 1A					
Well Position	+N/-S	0.00 usft	Northing:	1,294,300.48 usft	Latitude:	40.139825
	+E/-W	0.00 usft	Easting:	3,160,349.59 usft	Longitude:	-104.926457
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,954.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	HDGM_FILE	4/20/2018	8.48	66.55	52,162.10000000

Design	PLAN #3 (6.11)			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	346.00

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,061.43	17.23	247.76	1,048.51	-48.65	-118.98	2.00	2.00	0.00	247.76	
7,015.17	17.23	247.76	6,735.11	-716.13	-1,751.17	0.00	0.00	0.00	0.00	
8,223.71	90.00	0.89	7,504.00	-1.47	-1,959.31	8.00	6.02	9.36	112.20	KUGEL 1A-18H-H267
13,005.45	90.00	0.89	7,504.00	4,779.69	-1,884.75	0.00	0.00	0.00	0.00	KUGEL 1A-18H-H267
13,041.81	90.00	0.17	7,504.00	4,816.05	-1,884.41	2.00	0.00	-2.00	-90.00	
15,752.51	90.00	0.17	7,504.00	7,526.74	-1,876.55	0.00	0.00	0.00	0.00	KUGEL 1A-18H-H267

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well KUGEL 1A-18H-H267 - Slot KUGEL 1A
Company:	Crestone Peak Resources	TVD Reference:	23' KB @ 4977.00usft
Project:	DJ BASIN	MD Reference:	23' KB @ 4977.00usft
Site:	S18-T2N-R67W (KUGEL)	North Reference:	True
Well:	KUGEL 1A-18H-H267	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #3 (6.11)		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
300.00	2.00	247.76	299.98	-0.66	-1.62	-0.25	2.00	2.00	
400.00	4.00	247.76	399.84	-2.64	-6.46	-1.00	2.00	2.00	
500.00	6.00	247.76	499.45	-5.94	-14.53	-2.25	2.00	2.00	
600.00	8.00	247.76	598.70	-10.55	-25.81	-4.00	2.00	2.00	
700.00	10.00	247.76	697.47	-16.47	-40.28	-6.24	2.00	2.00	
800.00	12.00	247.76	795.62	-23.70	-57.94	-8.97	2.00	2.00	
900.00	14.00	247.76	893.06	-32.21	-78.76	-12.20	2.00	2.00	
1,000.00	16.00	247.76	989.64	-42.01	-102.72	-15.91	2.00	2.00	
1,061.43	17.23	247.76	1,048.51	-48.65	-118.98	-18.43	2.00	2.00	
1,100.00	17.23	247.76	1,085.35	-52.98	-129.55	-20.07	0.00	0.00	
1,200.00	17.23	247.76	1,180.86	-64.19	-156.97	-24.31	0.00	0.00	
1,300.00	17.23	247.76	1,276.37	-75.40	-184.38	-28.56	0.00	0.00	
1,400.00	17.23	247.76	1,371.89	-86.61	-211.79	-32.80	0.00	0.00	
1,500.00	17.23	247.76	1,467.40	-97.82	-239.21	-37.05	0.00	0.00	
1,600.00	17.23	247.76	1,562.91	-109.03	-266.62	-41.30	0.00	0.00	
1,700.00	17.23	247.76	1,658.42	-120.25	-294.04	-45.54	0.00	0.00	
1,800.00	17.23	247.76	1,753.94	-131.46	-321.45	-49.79	0.00	0.00	
1,900.00	17.23	247.76	1,849.45	-142.67	-348.87	-54.04	0.00	0.00	
2,000.00	17.23	247.76	1,944.96	-153.88	-376.28	-58.28	0.00	0.00	
2,100.00	17.23	247.76	2,040.48	-165.09	-403.70	-62.53	0.00	0.00	
2,200.00	17.23	247.76	2,135.99	-176.30	-431.11	-66.77	0.00	0.00	
2,300.00	17.23	247.76	2,231.50	-187.51	-458.53	-71.02	0.00	0.00	
2,400.00	17.23	247.76	2,327.02	-198.72	-485.94	-75.27	0.00	0.00	
2,500.00	17.23	247.76	2,422.53	-209.93	-513.36	-79.51	0.00	0.00	
2,600.00	17.23	247.76	2,518.04	-221.15	-540.77	-83.76	0.00	0.00	
2,700.00	17.23	247.76	2,613.56	-232.36	-568.19	-88.00	0.00	0.00	
2,800.00	17.23	247.76	2,709.07	-243.57	-595.60	-92.25	0.00	0.00	
2,900.00	17.23	247.76	2,804.58	-254.78	-623.01	-96.50	0.00	0.00	
3,000.00	17.23	247.76	2,900.09	-265.99	-650.43	-100.74	0.00	0.00	
3,100.00	17.23	247.76	2,995.61	-277.20	-677.84	-104.99	0.00	0.00	
3,200.00	17.23	247.76	3,091.12	-288.41	-705.26	-109.24	0.00	0.00	
3,300.00	17.23	247.76	3,186.63	-299.62	-732.67	-113.48	0.00	0.00	
3,400.00	17.23	247.76	3,282.15	-310.83	-760.09	-117.73	0.00	0.00	
3,500.00	17.23	247.76	3,377.66	-322.05	-787.50	-121.97	0.00	0.00	
3,600.00	17.23	247.76	3,473.17	-333.26	-814.92	-126.22	0.00	0.00	
3,700.00	17.23	247.76	3,568.69	-344.47	-842.33	-130.47	0.00	0.00	
3,800.00	17.23	247.76	3,664.20	-355.68	-869.75	-134.71	0.00	0.00	
3,900.00	17.23	247.76	3,759.71	-366.89	-897.16	-138.96	0.00	0.00	
4,000.00	17.23	247.76	3,855.23	-378.10	-924.58	-143.20	0.00	0.00	
4,100.00	17.23	247.76	3,950.74	-389.31	-951.99	-147.45	0.00	0.00	
4,200.00	17.23	247.76	4,046.25	-400.52	-979.41	-151.70	0.00	0.00	
4,300.00	17.23	247.76	4,141.77	-411.73	-1,006.82	-155.94	0.00	0.00	
4,400.00	17.23	247.76	4,237.28	-422.95	-1,034.23	-160.19	0.00	0.00	
4,500.00	17.23	247.76	4,332.79	-434.16	-1,061.65	-164.44	0.00	0.00	
4,600.00	17.23	247.76	4,428.30	-445.37	-1,089.06	-168.68	0.00	0.00	
4,700.00	17.23	247.76	4,523.82	-456.58	-1,116.48	-172.93	0.00	0.00	
4,800.00	17.23	247.76	4,619.33	-467.79	-1,143.89	-177.17	0.00	0.00	
4,900.00	17.23	247.76	4,714.84	-479.00	-1,171.31	-181.42	0.00	0.00	
5,000.00	17.23	247.76	4,810.36	-490.21	-1,198.72	-185.67	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well KUGEL 1A-18H-H267 - Slot KUGEL 1A
Company:	Crestone Peak Resources	TVD Reference:	23' KB @ 4977.00usft
Project:	DJ BASIN	MD Reference:	23' KB @ 4977.00usft
Site:	S18-T2N-R67W (KUGEL)	North Reference:	True
Well:	KUGEL 1A-18H-H267	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #3 (6.11)		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
5,100.00	17.23	247.76	4,905.87	-501.42	-1,226.14	-189.91	0.00	0.00	
5,200.00	17.23	247.76	5,001.38	-512.63	-1,253.55	-194.16	0.00	0.00	
5,300.00	17.23	247.76	5,096.90	-523.85	-1,280.97	-198.41	0.00	0.00	
5,400.00	17.23	247.76	5,192.41	-535.06	-1,308.38	-202.65	0.00	0.00	
5,500.00	17.23	247.76	5,287.92	-546.27	-1,335.80	-206.90	0.00	0.00	
5,600.00	17.23	247.76	5,383.44	-557.48	-1,363.21	-211.14	0.00	0.00	
5,700.00	17.23	247.76	5,478.95	-568.69	-1,390.62	-215.39	0.00	0.00	
5,800.00	17.23	247.76	5,574.46	-579.90	-1,418.04	-219.64	0.00	0.00	
5,900.00	17.23	247.76	5,669.97	-591.11	-1,445.45	-223.88	0.00	0.00	
6,000.00	17.23	247.76	5,765.49	-602.32	-1,472.87	-228.13	0.00	0.00	
6,100.00	17.23	247.76	5,861.00	-613.53	-1,500.28	-232.37	0.00	0.00	
6,200.00	17.23	247.76	5,956.51	-624.75	-1,527.70	-236.62	0.00	0.00	
6,300.00	17.23	247.76	6,052.03	-635.96	-1,555.11	-240.87	0.00	0.00	
6,400.00	17.23	247.76	6,147.54	-647.17	-1,582.53	-245.11	0.00	0.00	
6,500.00	17.23	247.76	6,243.05	-658.38	-1,609.94	-249.36	0.00	0.00	
6,600.00	17.23	247.76	6,338.57	-669.59	-1,637.36	-253.61	0.00	0.00	
6,700.00	17.23	247.76	6,434.08	-680.80	-1,664.77	-257.85	0.00	0.00	
6,800.00	17.23	247.76	6,529.59	-692.01	-1,692.19	-262.10	0.00	0.00	
6,900.00	17.23	247.76	6,625.11	-703.22	-1,719.60	-266.34	0.00	0.00	
7,000.00	17.23	247.76	6,720.62	-714.43	-1,747.02	-270.59	0.00	0.00	
7,015.17	17.23	247.76	6,735.11	-716.13	-1,751.17	-271.23	0.00	0.00	
7,100.00	15.92	271.27	6,816.50	-720.64	-1,774.46	-269.97	8.00	-1.55	
7,200.00	17.81	298.33	6,912.35	-713.06	-1,801.67	-256.04	8.00	1.90	
7,300.00	22.49	317.37	7,006.30	-691.70	-1,828.13	-228.90	8.00	4.68	
7,400.00	28.62	329.39	7,096.53	-656.95	-1,853.33	-189.10	8.00	6.13	
7,500.00	35.45	337.28	7,181.29	-609.51	-1,876.76	-137.40	8.00	6.83	
7,600.00	42.65	342.86	7,258.93	-550.30	-1,897.98	-74.81	8.00	7.19	
7,700.00	50.04	347.07	7,327.93	-480.46	-1,916.57	-2.55	8.00	7.40	
7,800.00	57.57	350.45	7,386.95	-401.36	-1,932.17	77.97	8.00	7.52	
7,900.00	65.17	353.31	7,434.84	-314.54	-1,944.47	165.20	8.00	7.60	
8,000.00	72.81	355.83	7,470.67	-221.68	-1,953.24	257.42	8.00	7.65	
8,100.00	80.49	358.15	7,493.75	-124.59	-1,958.31	352.85	8.00	7.68	
8,200.00	88.18	0.37	7,503.62	-25.17	-1,959.57	449.62	8.00	7.69	
8,223.71	90.00	0.89	7,504.00	-1.47	-1,959.31	472.55	8.00	7.69	KUGEL 1A-18H-H267 TPZ
8,300.00	90.00	0.89	7,504.00	74.81	-1,958.12	546.29	0.00	0.00	
8,400.00	90.00	0.89	7,504.00	174.80	-1,956.56	642.93	0.00	0.00	
8,500.00	90.00	0.89	7,504.00	274.79	-1,955.00	739.57	0.00	0.00	
8,600.00	90.00	0.89	7,504.00	374.78	-1,953.44	836.21	0.00	0.00	
8,700.00	90.00	0.89	7,504.00	474.77	-1,951.89	932.85	0.00	0.00	
8,800.00	90.00	0.89	7,504.00	574.75	-1,950.33	1,029.49	0.00	0.00	
8,900.00	90.00	0.89	7,504.00	674.74	-1,948.77	1,126.13	0.00	0.00	
9,000.00	90.00	0.89	7,504.00	774.73	-1,947.21	1,222.77	0.00	0.00	
9,100.00	90.00	0.89	7,504.00	874.72	-1,945.65	1,319.41	0.00	0.00	
9,200.00	90.00	0.89	7,504.00	974.70	-1,944.09	1,416.05	0.00	0.00	
9,300.00	90.00	0.89	7,504.00	1,074.69	-1,942.53	1,512.69	0.00	0.00	
9,400.00	90.00	0.89	7,504.00	1,174.68	-1,940.97	1,609.33	0.00	0.00	
9,500.00	90.00	0.89	7,504.00	1,274.67	-1,939.41	1,705.98	0.00	0.00	
9,600.00	90.00	0.89	7,504.00	1,374.66	-1,937.85	1,802.62	0.00	0.00	
9,700.00	90.00	0.89	7,504.00	1,474.64	-1,936.29	1,899.26	0.00	0.00	
9,800.00	90.00	0.89	7,504.00	1,574.63	-1,934.73	1,995.90	0.00	0.00	
9,900.00	90.00	0.89	7,504.00	1,674.62	-1,933.17	2,092.54	0.00	0.00	
10,000.00	90.00	0.89	7,504.00	1,774.61	-1,931.61	2,189.18	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well KUGEL 1A-18H-H267 - Slot KUGEL 1A
Company:	Crestone Peak Resources	TVD Reference:	23' KB @ 4977.00usft
Project:	DJ BASIN	MD Reference:	23' KB @ 4977.00usft
Site:	S18-T2N-R67W (KUGEL)	North Reference:	True
Well:	KUGEL 1A-18H-H267	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #3 (6.11)		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
10,100.00	90.00	0.89	7,504.00	1,874.60	-1,930.05	2,285.82	0.00	0.00	
10,200.00	90.00	0.89	7,504.00	1,974.58	-1,928.49	2,382.46	0.00	0.00	
10,300.00	90.00	0.89	7,504.00	2,074.57	-1,926.94	2,479.10	0.00	0.00	
10,400.00	90.00	0.89	7,504.00	2,174.56	-1,925.38	2,575.74	0.00	0.00	
10,500.00	90.00	0.89	7,504.00	2,274.55	-1,923.82	2,672.38	0.00	0.00	
10,600.00	90.00	0.89	7,504.00	2,374.53	-1,922.26	2,769.02	0.00	0.00	
10,700.00	90.00	0.89	7,504.00	2,474.52	-1,920.70	2,865.66	0.00	0.00	
10,800.00	90.00	0.89	7,504.00	2,574.51	-1,919.14	2,962.31	0.00	0.00	
10,900.00	90.00	0.89	7,504.00	2,674.50	-1,917.58	3,058.95	0.00	0.00	
11,000.00	90.00	0.89	7,504.00	2,774.49	-1,916.02	3,155.59	0.00	0.00	
11,100.00	90.00	0.89	7,504.00	2,874.47	-1,914.46	3,252.23	0.00	0.00	
11,200.00	90.00	0.89	7,504.00	2,974.46	-1,912.90	3,348.87	0.00	0.00	
11,300.00	90.00	0.89	7,504.00	3,074.45	-1,911.34	3,445.51	0.00	0.00	
11,400.00	90.00	0.89	7,504.00	3,174.44	-1,909.78	3,542.15	0.00	0.00	
11,500.00	90.00	0.89	7,504.00	3,274.43	-1,908.22	3,638.79	0.00	0.00	
11,600.00	90.00	0.89	7,504.00	3,374.41	-1,906.66	3,735.43	0.00	0.00	
11,700.00	90.00	0.89	7,504.00	3,474.40	-1,905.10	3,832.07	0.00	0.00	
11,800.00	90.00	0.89	7,504.00	3,574.39	-1,903.54	3,928.71	0.00	0.00	
11,900.00	90.00	0.89	7,504.00	3,674.38	-1,901.99	4,025.35	0.00	0.00	
12,000.00	90.00	0.89	7,504.00	3,774.36	-1,900.43	4,121.99	0.00	0.00	
12,100.00	90.00	0.89	7,504.00	3,874.35	-1,898.87	4,218.64	0.00	0.00	
12,200.00	90.00	0.89	7,504.00	3,974.34	-1,897.31	4,315.28	0.00	0.00	
12,300.00	90.00	0.89	7,504.00	4,074.33	-1,895.75	4,411.92	0.00	0.00	
12,400.00	90.00	0.89	7,504.00	4,174.32	-1,894.19	4,508.56	0.00	0.00	
12,500.00	90.00	0.89	7,504.00	4,274.30	-1,892.63	4,605.20	0.00	0.00	
12,600.00	90.00	0.89	7,504.00	4,374.29	-1,891.07	4,701.84	0.00	0.00	
12,700.00	90.00	0.89	7,504.00	4,474.28	-1,889.51	4,798.48	0.00	0.00	
12,800.00	90.00	0.89	7,504.00	4,574.27	-1,887.95	4,895.12	0.00	0.00	
12,900.00	90.00	0.89	7,504.00	4,674.25	-1,886.39	4,991.76	0.00	0.00	
13,000.00	90.00	0.89	7,504.00	4,774.24	-1,884.83	5,088.40	0.00	0.00	
13,005.45	90.00	0.89	7,504.00	4,779.69	-1,884.75	5,093.67	0.00	0.00	KUGEL 1A-18H-H267 TGT
13,041.81	90.00	0.17	7,504.00	4,816.05	-1,884.41	5,128.87	2.00	0.00	
13,100.00	90.00	0.17	7,504.00	4,874.24	-1,884.24	5,185.29	0.00	0.00	
13,200.00	90.00	0.17	7,504.00	4,974.24	-1,883.95	5,282.25	0.00	0.00	
13,300.00	90.00	0.17	7,504.00	5,074.24	-1,883.66	5,379.21	0.00	0.00	
13,400.00	90.00	0.17	7,504.00	5,174.24	-1,883.37	5,476.16	0.00	0.00	
13,500.00	90.00	0.17	7,504.00	5,274.24	-1,883.08	5,573.12	0.00	0.00	
13,600.00	90.00	0.17	7,504.00	5,374.24	-1,882.79	5,670.08	0.00	0.00	
13,700.00	90.00	0.17	7,504.00	5,474.24	-1,882.50	5,767.04	0.00	0.00	
13,800.00	90.00	0.17	7,504.00	5,574.24	-1,882.21	5,864.00	0.00	0.00	
13,900.00	90.00	0.17	7,504.00	5,674.24	-1,881.92	5,960.96	0.00	0.00	
14,000.00	90.00	0.17	7,504.00	5,774.24	-1,881.63	6,057.92	0.00	0.00	
14,100.00	90.00	0.17	7,504.00	5,874.24	-1,881.34	6,154.88	0.00	0.00	
14,200.00	90.00	0.17	7,504.00	5,974.24	-1,881.05	6,251.84	0.00	0.00	
14,300.00	90.00	0.17	7,504.00	6,074.24	-1,880.76	6,348.80	0.00	0.00	
14,400.00	90.00	0.17	7,504.00	6,174.23	-1,880.47	6,445.76	0.00	0.00	
14,500.00	90.00	0.17	7,504.00	6,274.23	-1,880.18	6,542.72	0.00	0.00	
14,600.00	90.00	0.17	7,504.00	6,374.23	-1,879.89	6,639.68	0.00	0.00	
14,700.00	90.00	0.17	7,504.00	6,474.23	-1,879.60	6,736.63	0.00	0.00	
14,800.00	90.00	0.17	7,504.00	6,574.23	-1,879.31	6,833.59	0.00	0.00	
14,900.00	90.00	0.17	7,504.00	6,674.23	-1,879.02	6,930.55	0.00	0.00	
15,000.00	90.00	0.17	7,504.00	6,774.23	-1,878.73	7,027.51	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well KUGEL 1A-18H-H267 - Slot KUGEL 1A
Company:	Crestone Peak Resources	TVD Reference:	23' KB @ 4977.00usft
Project:	DJ BASIN	MD Reference:	23' KB @ 4977.00usft
Site:	S18-T2N-R67W (KUGEL)	North Reference:	True
Well:	KUGEL 1A-18H-H267	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #3 (6.11)		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
15,100.00	90.00	0.17	7,504.00	6,874.23	-1,878.44	7,124.47	0.00	0.00	
15,200.00	90.00	0.17	7,504.00	6,974.23	-1,878.15	7,221.43	0.00	0.00	
15,300.00	90.00	0.17	7,504.00	7,074.23	-1,877.86	7,318.39	0.00	0.00	
15,400.00	90.00	0.17	7,504.00	7,174.23	-1,877.57	7,415.35	0.00	0.00	
15,500.00	90.00	0.17	7,504.00	7,274.23	-1,877.28	7,512.31	0.00	0.00	
15,600.00	90.00	0.17	7,504.00	7,374.23	-1,876.99	7,609.27	0.00	0.00	
15,610.00	90.00	0.17	7,504.00	7,384.23	-1,876.96	7,618.96	0.00	0.00	KUGEL 1A (1.0 SF)
15,700.00	90.00	0.17	7,504.00	7,474.23	-1,876.70	7,706.23	0.00	0.00	
15,752.51	90.00	0.17	7,504.00	7,526.74	-1,876.55	7,757.14	0.00	0.00	KUGEL 1A-18H-H267 BHL

Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude Longitude		
KUGEL 1A-18H-H267 T1 - plan hits target center - Point	0.00	0.00	7,504.00	4,779.69	-1,884.75	1,299,067.88	3,158,433.97	40.152946	-104.933200	
KUGEL 1A-18H-H267 T1 - plan hits target center - Point	0.00	0.00	7,504.00	-1.47	-1,959.31	1,294,286.34	3,158,390.33	40.139821	-104.933465	
KUGEL 1A (1.0 SF) - plan hits target center - Point	0.00	0.00	7,504.00	7,384.23	-1,876.96	1,301,672.42	3,158,424.91	40.160096	-104.933172	
KUGEL 1A-18H-H267 B1 - plan hits target center - Point	0.00	0.00	7,504.00	7,526.74	-1,876.55	1,301,814.93	3,158,424.40	40.160487	-104.933171	