



CRESTONE PEAK  
RESOURCES

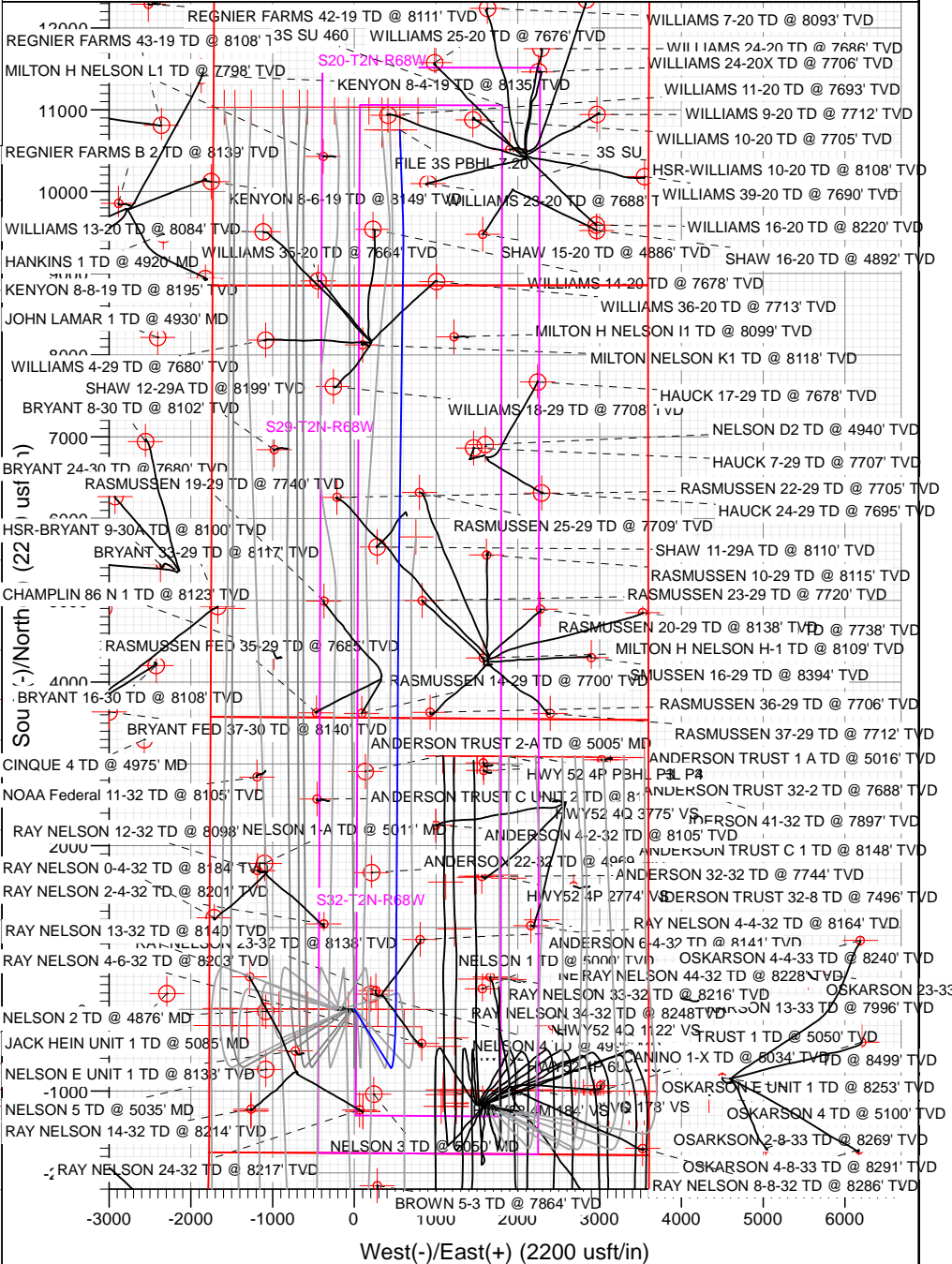
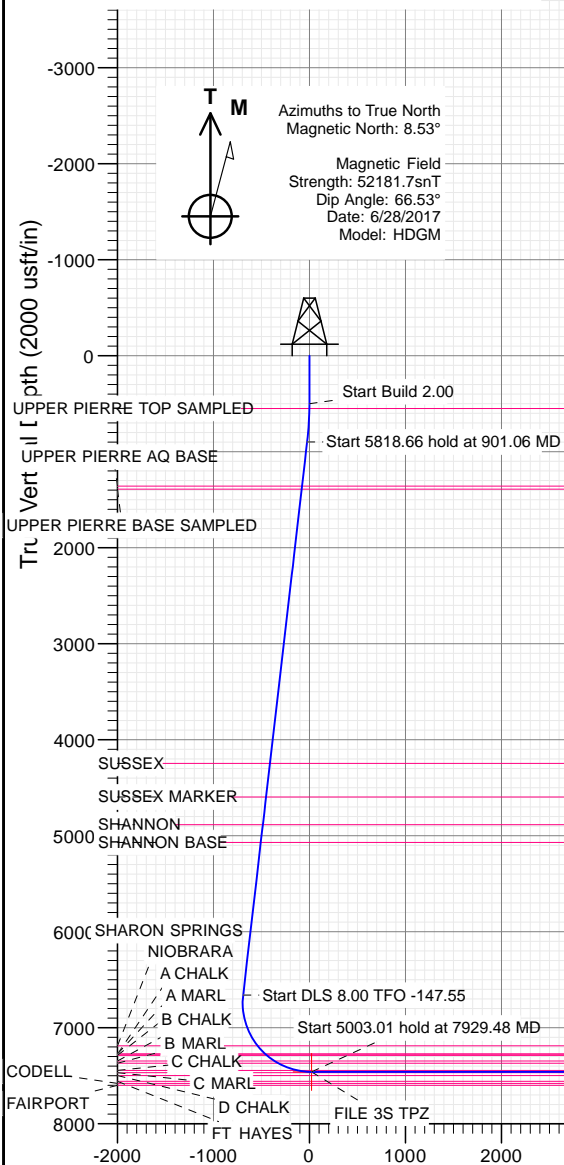
SECTION DETAILS

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	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	
3	901.06	8.02	148.17	899.75	-23.81	14.78	2.00	148.17	-23.02	
4	6719.72	8.02	148.17	6661.48	-713.68	442.93	0.00	0.00	-689.82	
5	7929.48	90.00	0.37	7460.00	-2.90	507.51	8.00	-147.55	23.35	FILE 3S TPZ
6	12932.49	90.00	0.37	7460.00	5000.00	540.00	0.00	0.00	5021.23	
7	12952.94	90.00	0.78	7460.00	5020.45	540.21	2.00	90.00	5041.67	
8	17346.80	90.00	0.78	7460.00	9413.90	600.11	0.00	0.00	9432.34	
9	17485.86	90.00	358.00	7460.00	9552.94	598.63	2.00	-90.00	9571.11	
10	18685.86	90.00	358.00	7460.00	10752.21	556.75	0.00	0.00	10766.61	FILE 3S PBHL 7.20

PLAN #3  
FILE 3S-32H-K268  
23 KB @ 4993.00usft  
Ground Level @ 4970.00  
North American Datum 1983  
Well FILE 3S-32H-K268, True North

Type	Target	No Target (Freehand)	Azimuth	Origin Type	N/S	E/W	From TVD
Name	TVD	+N/-S	+E/-W	Latitude	Longitude		
FILE 3S PBHL	7460.00	11032.18	558.46	40.122858	-105.028577		
FILE 3S PBHL 7.20	7460.00	10752.21	556.75	40.122089	-105.028563		
FILE 3S TPZ	7460.00	2.90	507.51	40.092565	-105.028760		

Project: DJ BASIN  
Site: S32-T2N-R68W  
Well: FILE 3S-32H-K268  
Wellbore: OH  
Design: PLAN #3



WELL DETAILS: FILE 3S-32H-K268			
+N/-S	+E/-W	Northing	Easting
0.00	0.00	1276916.54	3131332.25
		Latitude	Longitude
		40.092573	-105.030574



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well FILE 3S-32H-K268
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 4993.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 4993.00usft
<b>Site:</b>	S32-T2N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	FILE 3S-32H-K268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #3		

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	S32-T2N-R68W				
Site Position:		Northing:	1,275,752.56 usft	Latitude:	40.089356
From:	Lat/Long	Easting:	3,132,818.22 usft	Longitude:	-105.025285
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.31 °

Well	FILE 3S-32H-K268					
Well Position	+N/-S	0.00 usft	Northing:	1,276,916.54 usft	Latitude:	40.092573
	+E/-W	0.00 usft	Easting:	3,131,332.25 usft	Longitude:	-105.030574
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,970.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/28/2017	8.53	66.53	52,181.70000000

Design		PLAN #3		
Audit Notes:				
Version:		Phase:	PLAN	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	2.96

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	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
901.06	8.02	148.17	899.75	-23.81	14.78	2.00	2.00	0.00	148.17	
6,719.72	8.02	148.17	6,661.48	-713.68	442.93	0.00	0.00	0.00	0.00	
7,929.48	90.00	0.37	7,460.00	-2.90	507.51	8.00	6.78	-12.22	-147.55	FILE 3S TPZ
12,932.49	90.00	0.37	7,460.00	5,000.00	540.00	0.00	0.00	0.00	0.00	
12,952.94	90.00	0.78	7,460.00	5,020.45	540.21	2.00	0.00	2.00	90.00	
17,346.80	90.00	0.78	7,460.00	9,413.90	600.11	0.00	0.00	0.00	0.00	
17,485.86	90.00	358.00	7,460.00	9,552.94	598.63	2.00	0.00	-2.00	-90.00	
18,685.86	90.00	358.00	7,460.00	10,752.21	556.75	0.00	0.00	0.00	0.00	FILE 3S PBHL 7.20

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well FILE 3S-32H-K268
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 4993.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 4993.00usft
<b>Site:</b>	S32-T2N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	FILE 3S-32H-K268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #3		

### 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	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	
550.00	1.00	148.17	550.00	-0.37	0.23	-0.36	2.00	2.00	UPPER PIERRE TOP SAMPLED
600.00	2.00	148.17	599.98	-1.48	0.92	-1.43	2.00	2.00	
700.00	4.00	148.17	699.84	-5.93	3.68	-5.73	2.00	2.00	
800.00	6.00	148.17	799.45	-13.33	8.28	-12.89	2.00	2.00	
900.00	8.00	148.17	898.70	-23.69	14.70	-22.90	2.00	2.00	
901.06	8.02	148.17	899.75	-23.81	14.78	-23.02	2.00	2.00	
1,000.00	8.02	148.17	997.72	-35.54	22.06	-34.36	0.00	0.00	
1,100.00	8.02	148.17	1,096.74	-47.40	29.42	-45.82	0.00	0.00	
1,200.00	8.02	148.17	1,195.77	-59.26	36.78	-57.28	0.00	0.00	
1,300.00	8.02	148.17	1,294.79	-71.11	44.13	-68.74	0.00	0.00	
1,364.85	8.02	148.17	1,359.00	-78.80	48.91	-76.17	0.00	0.00	UPPER PIERRE AQ BASE
1,396.15	8.02	148.17	1,390.00	-82.51	51.21	-79.75	0.00	0.00	UPPER PIERRE BASE SAMPLED
1,400.00	8.02	148.17	1,393.81	-82.97	51.49	-80.20	0.00	0.00	
1,500.00	8.02	148.17	1,492.83	-94.83	58.85	-91.66	0.00	0.00	
1,600.00	8.02	148.17	1,591.85	-106.68	66.21	-103.11	0.00	0.00	
1,700.00	8.02	148.17	1,690.87	-118.54	73.57	-114.57	0.00	0.00	
1,800.00	8.02	148.17	1,789.90	-130.39	80.93	-126.03	0.00	0.00	
1,900.00	8.02	148.17	1,888.92	-142.25	88.28	-137.49	0.00	0.00	
2,000.00	8.02	148.17	1,987.94	-154.11	95.64	-148.95	0.00	0.00	
2,100.00	8.02	148.17	2,086.96	-165.96	103.00	-160.41	0.00	0.00	
2,200.00	8.02	148.17	2,185.98	-177.82	110.36	-171.87	0.00	0.00	
2,300.00	8.02	148.17	2,285.00	-189.67	117.72	-183.33	0.00	0.00	
2,400.00	8.02	148.17	2,384.03	-201.53	125.08	-194.79	0.00	0.00	
2,500.00	8.02	148.17	2,483.05	-213.39	132.43	-206.25	0.00	0.00	
2,600.00	8.02	148.17	2,582.07	-225.24	139.79	-217.71	0.00	0.00	
2,700.00	8.02	148.17	2,681.09	-237.10	147.15	-229.17	0.00	0.00	
2,800.00	8.02	148.17	2,780.11	-248.96	154.51	-240.63	0.00	0.00	
2,900.00	8.02	148.17	2,879.13	-260.81	161.87	-252.09	0.00	0.00	
3,000.00	8.02	148.17	2,978.16	-272.67	169.23	-263.55	0.00	0.00	
3,100.00	8.02	148.17	3,077.18	-284.52	176.58	-275.01	0.00	0.00	
3,200.00	8.02	148.17	3,176.20	-296.38	183.94	-286.47	0.00	0.00	
3,300.00	8.02	148.17	3,275.22	-308.24	191.30	-297.93	0.00	0.00	
3,400.00	8.02	148.17	3,374.24	-320.09	198.66	-309.39	0.00	0.00	
3,500.00	8.02	148.17	3,473.26	-331.95	206.02	-320.85	0.00	0.00	
3,600.00	8.02	148.17	3,572.29	-343.80	213.38	-332.31	0.00	0.00	
3,700.00	8.02	148.17	3,671.31	-355.66	220.73	-343.77	0.00	0.00	
3,800.00	8.02	148.17	3,770.33	-367.52	228.09	-355.23	0.00	0.00	
3,900.00	8.02	148.17	3,869.35	-379.37	235.45	-366.69	0.00	0.00	
4,000.00	8.02	148.17	3,968.37	-391.23	242.81	-378.15	0.00	0.00	
4,100.00	8.02	148.17	4,067.39	-403.09	250.17	-389.61	0.00	0.00	
4,200.00	8.02	148.17	4,166.42	-414.94	257.53	-401.07	0.00	0.00	
4,281.38	8.02	148.17	4,247.00	-424.59	263.51	-410.40	0.00	0.00	SUSSEX
4,300.00	8.02	148.17	4,265.44	-426.80	264.88	-412.53	0.00	0.00	
4,400.00	8.02	148.17	4,364.46	-438.65	272.24	-423.99	0.00	0.00	
4,500.00	8.02	148.17	4,463.48	-450.51	279.60	-435.45	0.00	0.00	
4,600.00	8.02	148.17	4,562.50	-462.37	286.96	-446.91	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well FILE 3S-32H-K268
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 4993.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 4993.00usft
<b>Site:</b>	S32-T2N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	FILE 3S-32H-K268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #3		

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
4,634.84	8.02	148.17	4,597.00	-466.50	289.52	-450.90	0.00	0.00	SUSSEX MARKER
4,700.00	8.02	148.17	4,661.52	-474.22	294.32	-458.37	0.00	0.00	
4,800.00	8.02	148.17	4,760.55	-486.08	301.68	-469.83	0.00	0.00	
4,900.00	8.02	148.17	4,859.57	-497.93	309.03	-481.29	0.00	0.00	
4,924.67	8.02	148.17	4,884.00	-500.86	310.85	-484.12	0.00	0.00	SHANNON
5,000.00	8.02	148.17	4,958.59	-509.79	316.39	-492.75	0.00	0.00	
5,100.00	8.02	148.17	5,057.61	-521.65	323.75	-504.21	0.00	0.00	
5,112.51	8.02	148.17	5,070.00	-523.13	324.67	-505.64	0.00	0.00	SHANNON BASE
5,200.00	8.02	148.17	5,156.63	-533.50	331.11	-515.67	0.00	0.00	
5,300.00	8.02	148.17	5,255.65	-545.36	338.47	-527.13	0.00	0.00	
5,400.00	8.02	148.17	5,354.68	-557.22	345.83	-538.59	0.00	0.00	
5,500.00	8.02	148.17	5,453.70	-569.07	353.18	-550.05	0.00	0.00	
5,600.00	8.02	148.17	5,552.72	-580.93	360.54	-561.51	0.00	0.00	
5,700.00	8.02	148.17	5,651.74	-592.78	367.90	-572.97	0.00	0.00	
5,800.00	8.02	148.17	5,750.76	-604.64	375.26	-584.43	0.00	0.00	
5,900.00	8.02	148.17	5,849.78	-616.50	382.62	-595.89	0.00	0.00	
6,000.00	8.02	148.17	5,948.81	-628.35	389.97	-607.35	0.00	0.00	
6,100.00	8.02	148.17	6,047.83	-640.21	397.33	-618.81	0.00	0.00	
6,200.00	8.02	148.17	6,146.85	-652.06	404.69	-630.27	0.00	0.00	
6,300.00	8.02	148.17	6,245.87	-663.92	412.05	-641.73	0.00	0.00	
6,400.00	8.02	148.17	6,344.89	-675.78	419.41	-653.18	0.00	0.00	
6,500.00	8.02	148.17	6,443.91	-687.63	426.77	-664.64	0.00	0.00	
6,600.00	8.02	148.17	6,542.94	-699.49	434.12	-676.10	0.00	0.00	
6,700.00	8.02	148.17	6,641.96	-711.35	441.48	-687.56	0.00	0.00	
6,719.72	8.02	148.17	6,661.48	-713.68	442.93	-689.82	0.00	0.00	
6,800.00	4.31	95.15	6,741.34	-718.72	448.90	-694.54	8.00	-4.62	
6,900.00	8.76	29.54	6,840.78	-712.42	456.41	-687.87	8.00	4.45	
7,000.00	16.21	15.34	6,938.37	-692.31	463.86	-667.39	8.00	7.45	
7,100.00	24.01	10.08	7,032.21	-658.77	471.13	-633.52	8.00	7.80	
7,200.00	31.90	7.30	7,120.48	-612.46	478.06	-586.92	8.00	7.90	
7,283.94	38.56	5.78	7,189.00	-564.38	483.51	-538.62	8.00	7.93	SHARON SPRINGS
7,300.00	39.84	5.54	7,201.45	-554.27	484.51	-528.48	8.00	7.94	
7,399.17	47.72	4.29	7,273.00	-485.96	490.33	-459.96	8.00	7.95	A CHALK
7,400.00	47.79	4.28	7,273.56	-485.35	490.38	-459.34	8.00	7.96	
7,402.15	47.96	4.25	7,275.00	-483.76	490.49	-457.75	8.00	7.96	NIOBRARA
7,423.41	49.65	4.03	7,289.00	-467.81	491.65	-441.76	8.00	7.96	A MARL
7,500.00	55.75	3.30	7,335.39	-407.03	495.53	-380.86	8.00	7.96	
7,521.09	57.43	3.12	7,347.00	-389.46	496.51	-363.26	8.00	7.97	B CHALK
7,568.11	61.18	2.74	7,371.00	-349.08	498.58	-322.83	8.00	7.97	B MARL
7,600.00	63.72	2.50	7,385.75	-320.84	499.87	-294.56	8.00	7.97	
7,700.00	71.69	1.80	7,423.65	-228.46	503.31	-202.12	8.00	7.97	
7,782.44	78.27	1.27	7,445.00	-148.90	505.43	-122.57	8.00	7.98	C CHALK
7,800.00	79.67	1.16	7,448.36	-131.67	505.80	-105.34	8.00	7.98	
7,900.00	87.65	0.55	7,459.39	-32.38	507.27	-6.10	8.00	7.98	
7,929.48	90.00	0.37	7,460.00	-2.90	507.51	23.35	8.00	7.98	
8,000.00	90.00	0.37	7,460.00	67.61	507.97	93.79	0.00	0.00	
8,100.00	90.00	0.37	7,460.00	167.61	508.62	193.69	0.00	0.00	
8,200.00	90.00	0.37	7,460.00	267.61	509.27	293.59	0.00	0.00	
8,300.00	90.00	0.37	7,460.00	367.61	509.92	393.48	0.00	0.00	
8,400.00	90.00	0.37	7,460.00	467.61	510.56	493.38	0.00	0.00	
8,500.00	90.00	0.37	7,460.00	567.60	511.21	593.28	0.00	0.00	
8,600.00	90.00	0.37	7,460.00	667.60	511.86	693.18	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well FILE 3S-32H-K268
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 4993.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 4993.00usft
<b>Site:</b>	S32-T2N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	FILE 3S-32H-K268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #3		

### 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
8,700.00	90.00	0.37	7,460.00	767.60	512.51	793.07	0.00	0.00	
8,800.00	90.00	0.37	7,460.00	867.60	513.16	892.97	0.00	0.00	
8,900.00	90.00	0.37	7,460.00	967.59	513.81	992.87	0.00	0.00	
9,000.00	90.00	0.37	7,460.00	1,067.59	514.46	1,092.77	0.00	0.00	
9,100.00	90.00	0.37	7,460.00	1,167.59	515.11	1,192.67	0.00	0.00	
9,200.00	90.00	0.37	7,460.00	1,267.59	515.76	1,292.56	0.00	0.00	
9,300.00	90.00	0.37	7,460.00	1,367.59	516.41	1,392.46	0.00	0.00	
9,400.00	90.00	0.37	7,460.00	1,467.58	517.06	1,492.36	0.00	0.00	
9,500.00	90.00	0.37	7,460.00	1,567.58	517.71	1,592.26	0.00	0.00	
9,600.00	90.00	0.37	7,460.00	1,667.58	518.36	1,692.15	0.00	0.00	
9,700.00	90.00	0.37	7,460.00	1,767.58	519.01	1,792.05	0.00	0.00	
9,800.00	90.00	0.37	7,460.00	1,867.58	519.66	1,891.95	0.00	0.00	
9,900.00	90.00	0.37	7,460.00	1,967.57	520.31	1,991.85	0.00	0.00	
10,000.00	90.00	0.37	7,460.00	2,067.57	520.96	2,091.74	0.00	0.00	
10,100.00	90.00	0.37	7,460.00	2,167.57	521.60	2,191.64	0.00	0.00	
10,200.00	90.00	0.37	7,460.00	2,267.57	522.25	2,291.54	0.00	0.00	
10,300.00	90.00	0.37	7,460.00	2,367.57	522.90	2,391.44	0.00	0.00	
10,400.00	90.00	0.37	7,460.00	2,467.56	523.55	2,491.34	0.00	0.00	
10,500.00	90.00	0.37	7,460.00	2,567.56	524.20	2,591.23	0.00	0.00	
10,600.00	90.00	0.37	7,460.00	2,667.56	524.85	2,691.13	0.00	0.00	
10,700.00	90.00	0.37	7,460.00	2,767.56	525.50	2,791.03	0.00	0.00	
10,800.00	90.00	0.37	7,460.00	2,867.55	526.15	2,890.93	0.00	0.00	
10,900.00	90.00	0.37	7,460.00	2,967.55	526.80	2,990.82	0.00	0.00	
11,000.00	90.00	0.37	7,460.00	3,067.55	527.45	3,090.72	0.00	0.00	
11,100.00	90.00	0.37	7,460.00	3,167.55	528.10	3,190.62	0.00	0.00	
11,200.00	90.00	0.37	7,460.00	3,267.55	528.75	3,290.52	0.00	0.00	
11,300.00	90.00	0.37	7,460.00	3,367.54	529.40	3,390.41	0.00	0.00	
11,400.00	90.00	0.37	7,460.00	3,467.54	530.05	3,490.31	0.00	0.00	
11,500.00	90.00	0.37	7,460.00	3,567.54	530.70	3,590.21	0.00	0.00	
11,600.00	90.00	0.37	7,460.00	3,667.54	531.35	3,690.11	0.00	0.00	
11,700.00	90.00	0.37	7,460.00	3,767.54	532.00	3,790.01	0.00	0.00	
11,800.00	90.00	0.37	7,460.00	3,867.53	532.65	3,889.90	0.00	0.00	
11,900.00	90.00	0.37	7,460.00	3,967.53	533.29	3,989.80	0.00	0.00	
12,000.00	90.00	0.37	7,460.00	4,067.53	533.94	4,089.70	0.00	0.00	
12,100.00	90.00	0.37	7,460.00	4,167.53	534.59	4,189.60	0.00	0.00	
12,200.00	90.00	0.37	7,460.00	4,267.53	535.24	4,289.49	0.00	0.00	
12,300.00	90.00	0.37	7,460.00	4,367.52	535.89	4,389.39	0.00	0.00	
12,400.00	90.00	0.37	7,460.00	4,467.52	536.54	4,489.29	0.00	0.00	
12,500.00	90.00	0.37	7,460.00	4,567.52	537.19	4,589.19	0.00	0.00	
12,600.00	90.00	0.37	7,460.00	4,667.52	537.84	4,689.08	0.00	0.00	
12,700.00	90.00	0.37	7,460.00	4,767.51	538.49	4,788.98	0.00	0.00	
12,800.00	90.00	0.37	7,460.00	4,867.51	539.14	4,888.88	0.00	0.00	
12,900.00	90.00	0.37	7,460.00	4,967.51	539.79	4,988.78	0.00	0.00	
12,932.49	90.00	0.37	7,460.00	5,000.00	540.00	5,021.23	0.00	0.00	
12,952.94	90.00	0.78	7,460.00	5,020.45	540.21	5,041.67	2.00	0.00	
13,000.00	90.00	0.78	7,460.00	5,067.50	540.85	5,088.69	0.00	0.00	
13,100.00	90.00	0.78	7,460.00	5,167.50	542.21	5,188.62	0.00	0.00	
13,200.00	90.00	0.78	7,460.00	5,267.49	543.57	5,288.55	0.00	0.00	
13,300.00	90.00	0.78	7,460.00	5,367.48	544.94	5,388.47	0.00	0.00	
13,400.00	90.00	0.78	7,460.00	5,467.47	546.30	5,488.40	0.00	0.00	
13,500.00	90.00	0.78	7,460.00	5,567.46	547.66	5,588.33	0.00	0.00	
13,600.00	90.00	0.78	7,460.00	5,667.45	549.03	5,688.26	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well FILE 3S-32H-K268
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 4993.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 4993.00usft
<b>Site:</b>	S32-T2N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	FILE 3S-32H-K268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #3		

### 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
13,700.00	90.00	0.78	7,460.00	5,767.44	550.39	5,788.18	0.00	0.00	
13,800.00	90.00	0.78	7,460.00	5,867.43	551.75	5,888.11	0.00	0.00	
13,900.00	90.00	0.78	7,460.00	5,967.42	553.12	5,988.04	0.00	0.00	
14,000.00	90.00	0.78	7,460.00	6,067.41	554.48	6,087.97	0.00	0.00	
14,100.00	90.00	0.78	7,460.00	6,167.40	555.84	6,187.89	0.00	0.00	
14,200.00	90.00	0.78	7,460.00	6,267.39	557.21	6,287.82	0.00	0.00	
14,300.00	90.00	0.78	7,460.00	6,367.38	558.57	6,387.75	0.00	0.00	
14,400.00	90.00	0.78	7,460.00	6,467.37	559.93	6,487.68	0.00	0.00	
14,500.00	90.00	0.78	7,460.00	6,567.36	561.30	6,587.60	0.00	0.00	
14,600.00	90.00	0.78	7,460.00	6,667.36	562.66	6,687.53	0.00	0.00	
14,700.00	90.00	0.78	7,460.00	6,767.35	564.02	6,787.46	0.00	0.00	
14,800.00	90.00	0.78	7,460.00	6,867.34	565.39	6,887.39	0.00	0.00	
14,900.00	90.00	0.78	7,460.00	6,967.33	566.75	6,987.31	0.00	0.00	
15,000.00	90.00	0.78	7,460.00	7,067.32	568.11	7,087.24	0.00	0.00	
15,100.00	90.00	0.78	7,460.00	7,167.31	569.48	7,187.17	0.00	0.00	
15,200.00	90.00	0.78	7,460.00	7,267.30	570.84	7,287.10	0.00	0.00	
15,300.00	90.00	0.78	7,460.00	7,367.29	572.20	7,387.02	0.00	0.00	
15,400.00	90.00	0.78	7,460.00	7,467.28	573.57	7,486.95	0.00	0.00	
15,500.00	90.00	0.78	7,460.00	7,567.27	574.93	7,586.88	0.00	0.00	
15,600.00	90.00	0.78	7,460.00	7,667.26	576.29	7,686.81	0.00	0.00	
15,700.00	90.00	0.78	7,460.00	7,767.25	577.66	7,786.73	0.00	0.00	
15,800.00	90.00	0.78	7,460.00	7,867.24	579.02	7,886.66	0.00	0.00	
15,900.00	90.00	0.78	7,460.00	7,967.23	580.38	7,986.59	0.00	0.00	
16,000.00	90.00	0.78	7,460.00	8,067.23	581.74	8,086.51	0.00	0.00	
16,100.00	90.00	0.78	7,460.00	8,167.22	583.11	8,186.44	0.00	0.00	
16,200.00	90.00	0.78	7,460.00	8,267.21	584.47	8,286.37	0.00	0.00	
16,300.00	90.00	0.78	7,460.00	8,367.20	585.83	8,386.30	0.00	0.00	
16,400.00	90.00	0.78	7,460.00	8,467.19	587.20	8,486.22	0.00	0.00	
16,500.00	90.00	0.78	7,460.00	8,567.18	588.56	8,586.15	0.00	0.00	
16,600.00	90.00	0.78	7,460.00	8,667.17	589.92	8,686.08	0.00	0.00	
16,700.00	90.00	0.78	7,460.00	8,767.16	591.29	8,786.01	0.00	0.00	
16,800.00	90.00	0.78	7,460.00	8,867.15	592.65	8,885.93	0.00	0.00	
16,900.00	90.00	0.78	7,460.00	8,967.14	594.01	8,985.86	0.00	0.00	
17,000.00	90.00	0.78	7,460.00	9,067.13	595.38	9,085.79	0.00	0.00	
17,100.00	90.00	0.78	7,460.00	9,167.12	596.74	9,185.72	0.00	0.00	
17,200.00	90.00	0.78	7,460.00	9,267.11	598.10	9,285.64	0.00	0.00	
17,300.00	90.00	0.78	7,460.00	9,367.10	599.47	9,385.57	0.00	0.00	
17,346.80	90.00	0.78	7,460.00	9,413.90	600.11	9,432.34	0.00	0.00	
17,400.00	90.00	359.72	7,460.00	9,467.10	600.34	9,485.48	2.00	0.00	
17,485.86	90.00	358.00	7,460.00	9,552.94	598.63	9,571.11	2.00	0.00	
17,500.00	90.00	358.00	7,460.00	9,567.07	598.13	9,585.20	0.00	0.00	
17,600.00	90.00	358.00	7,460.00	9,667.01	594.64	9,684.83	0.00	0.00	
17,700.00	90.00	358.00	7,460.00	9,766.95	591.15	9,784.45	0.00	0.00	
17,800.00	90.00	358.00	7,460.00	9,866.89	587.66	9,884.08	0.00	0.00	
17,900.00	90.00	358.00	7,460.00	9,966.83	584.17	9,983.70	0.00	0.00	
18,000.00	90.00	358.00	7,460.00	10,066.77	580.68	10,083.32	0.00	0.00	
18,100.00	90.00	358.00	7,460.00	10,166.70	577.19	10,182.95	0.00	0.00	
18,200.00	90.00	358.00	7,460.00	10,266.64	573.70	10,282.57	0.00	0.00	
18,300.00	90.00	358.00	7,460.00	10,366.58	570.21	10,382.20	0.00	0.00	
18,400.00	90.00	358.00	7,460.00	10,466.52	566.72	10,481.82	0.00	0.00	
18,500.00	90.00	358.00	7,460.00	10,566.46	563.23	10,581.45	0.00	0.00	
18,600.00	90.00	358.00	7,460.00	10,666.40	559.74	10,681.07	0.00	0.00	



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well FILE 3S-32H-K268
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 4993.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 4993.00usft
<b>Site:</b>	S32-T2N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	FILE 3S-32H-K268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #3		

### 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
18,685.86	90.00	358.00	7,460.00	10,752.21	556.75	10,766.61	0.00	0.00	

### 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
FILE 3S TPZ - plan hits target center - Point	0.00	0.00	7,460.00	-2.90	507.51	1,276,916.32	3,131,839.77	40.092565	-105.028760
FILE 3S PBHL 7.20 - plan hits target center - Point	0.00	0.00	7,460.00	10,752.21	556.75	1,287,671.54	3,131,832.07	40.122089	-105.028583
FILE 3S PBHL - plan misses target center by 279.98usft at 18685.86usft MD (7460.00 TVD, 10752.21 N, 556.75 E) - Point	0.00	0.00	7,460.00	11,032.18	558.46	1,287,951.52	3,131,832.30	40.122858	-105.028577

### Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
550.00	550.00	UPPER PIERRE TOP SAMPLED			
1,364.85	1,359.00	UPPER PIERRE AQ BASE			
1,396.15	1,390.00	UPPER PIERRE BASE SAMPLED			
4,281.38	4,247.00	SUSSEX			
4,634.84	4,597.00	SUSSEX MARKER			
4,924.67	4,884.00	SHANNON			
5,112.51	5,070.00	SHANNON BASE			
7,283.94	7,189.00	SHARON SPRINGS			
7,399.17	7,273.00	A CHALK			
7,402.15	7,275.00	NIOBRARA			
7,423.41	7,289.00	A MARL			
7,521.09	7,347.00	B CHALK			
7,568.11	7,371.00	B MARL			
7,782.44	7,445.00	C CHALK			