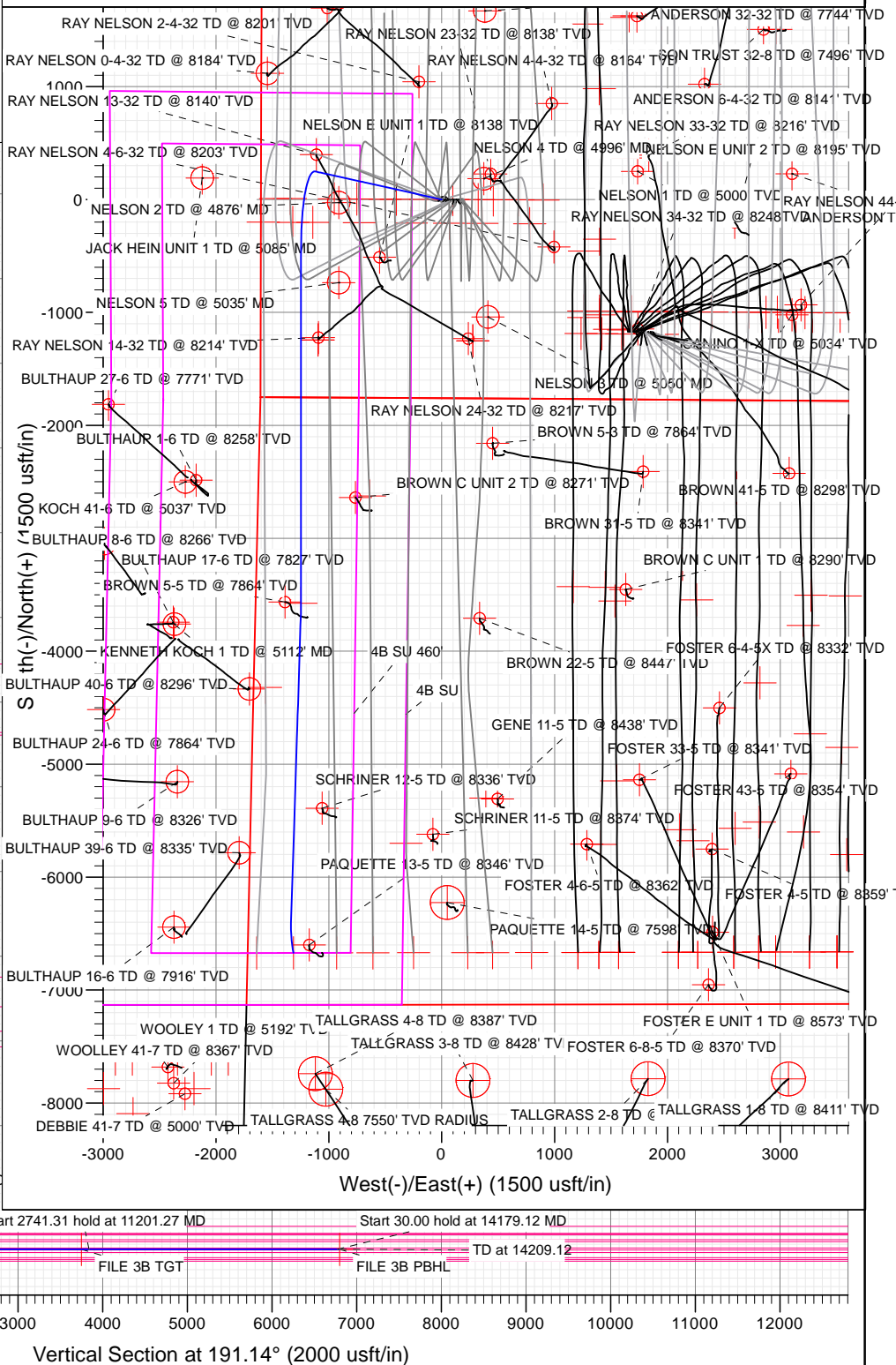
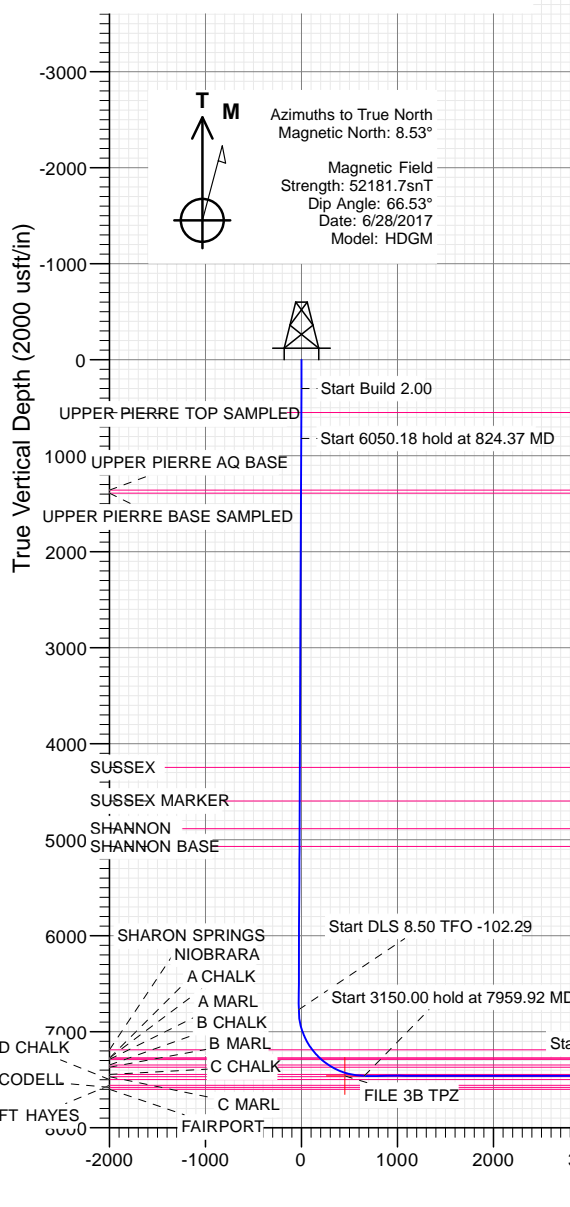




Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
3	824.37	10.49	282.49	821.45	10.35	-46.72	2.00	282.49	-1.13	
4	6874.56	10.49	282.49	6770.56	248.55	-1121.91	0.00	0.00	-27.16	
5	7959.92	90.00	180.00	7460.00	-425.00	-1246.51	8.50	-102.29	657.77	
6	11109.92	90.00	180.00	7460.00	-357.50	-1246.51	0.00	0.00	3748.45	FILE 3B TGT
7	11201.27	90.00	181.83	7460.00	-3666.34	-1247.97	2.00	90.00	3838.34	
8	13942.58	90.00	181.83	7460.00	-6406.25	-1335.37	0.00	0.00	6543.54	
9	14179.12	90.00	170.00	7460.00	-6641.77	-1318.54	5.00	-90.00	6771.37	
10	14209.12	90.00	170.00	7460.00	-6671.31	-1313.33	0.00	0.00	6799.36	FILE 3B PBHL

PLAN 1							
FILE 3B-32H-K268							
23 KB @ 4953.0000							
Ground Level @ 4970.00							
North American Datum 1983							
Well FILE 3B-32H-K268, True North							
Type TD	Target No Target (Freehand)	Azimuth 191.14	Original Type	N/S	E/W	From TWD	
Name	TWD				Latitude		Longitude
FILE 3B PBHL	7460.00	-6671.31	-1313.33	40.074262		-105.035676	
FILE 3B TGT	7460.00	-3575.00	-1246.51	40.082762		-105.035637	
	7460.00	-202.11	-18.98	40.092021		-105.036000	

Project: DJ BASIN  
Site: S32-T2N-R68W  
Well: FILE 3B-32H-K268  
Wellbore: OH  
Design: PLAN #1



			4970.00		
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1276916.71	3131162.14	40.092576	-105.031182



# CATHEDRAL



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well FILE 3B-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 3B-32H-K268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

<b>Project</b>	DJ BASIN		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	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 3B-32H-K268					
Well Position	+N/-S	0.00 usft	Northing:	1,276,916.71 usft	Latitude:	40.092576
	+E/-W	0.00 usft	Easting:	3,131,162.14 usft	Longitude:	-105.031182
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,970.00 usft

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

<b>Design</b>	PLAN #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	191.14

<b>Plan Sections</b>										
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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
824.37	10.49	282.49	821.45	10.35	-46.72	2.00	2.00	0.00	282.49	
6,874.56	10.49	282.49	6,770.56	248.55	-1,121.91	0.00	0.00	0.00	0.00	
7,959.92	90.00	180.00	7,460.00	-425.00	-1,246.51	8.50	7.33	-9.44	-102.29	
11,109.92	90.00	180.00	7,460.00	-3,575.00	-1,246.51	0.00	0.00	0.00	0.00	FILE 3B TGT
11,201.27	90.00	181.83	7,460.00	-3,666.34	-1,247.97	2.00	0.00	2.00	90.00	
13,942.58	90.00	181.83	7,460.00	-6,406.25	-1,335.37	0.00	0.00	0.00	0.00	
14,179.12	90.00	170.00	7,460.00	-6,641.77	-1,318.54	5.00	0.00	-5.00	-90.00	
14,209.12	90.00	170.00	7,460.00	-6,671.31	-1,313.33	0.00	0.00	0.00	0.00	FILE 3B PBHL

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well FILE 3B-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 3B-32H-K268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

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	2.00	282.49	399.98	0.38	-1.70	-0.04	2.00	2.00	
500.00	4.00	282.49	499.84	1.51	-6.81	-0.16	2.00	2.00	
550.32	5.01	282.49	550.00	2.36	-10.67	-0.26	2.00	2.00	UPPER PIERRE TOP SAMPLED
600.00	6.00	282.49	599.45	3.39	-15.32	-0.37	2.00	2.00	
700.00	8.00	282.49	698.70	6.03	-27.22	-0.66	2.00	2.00	
800.00	10.00	282.49	797.47	9.41	-42.49	-1.03	2.00	2.00	
824.37	10.49	282.49	821.45	10.35	-46.72	-1.13	2.00	2.00	
900.00	10.49	282.49	895.81	13.33	-60.16	-1.46	0.00	0.00	
1,000.00	10.49	282.49	994.14	17.27	-77.93	-1.89	0.00	0.00	
1,100.00	10.49	282.49	1,092.47	21.20	-95.71	-2.32	0.00	0.00	
1,200.00	10.49	282.49	1,190.80	25.14	-113.48	-2.75	0.00	0.00	
1,300.00	10.49	282.49	1,289.13	29.08	-131.25	-3.18	0.00	0.00	
1,371.06	10.49	282.49	1,359.00	31.87	-143.88	-3.48	0.00	0.00	UPPER PIERRE AQ BASE
1,400.00	10.49	282.49	1,387.46	33.01	-149.02	-3.61	0.00	0.00	
1,402.58	10.49	282.49	1,390.00	33.12	-149.48	-3.62	0.00	0.00	UPPER PIERRE BASE SAMPLED
1,500.00	10.49	282.49	1,485.79	36.95	-166.79	-4.04	0.00	0.00	
1,600.00	10.49	282.49	1,584.12	40.89	-184.56	-4.47	0.00	0.00	
1,700.00	10.49	282.49	1,682.45	44.82	-202.33	-4.90	0.00	0.00	
1,800.00	10.49	282.49	1,780.78	48.76	-220.10	-5.33	0.00	0.00	
1,900.00	10.49	282.49	1,879.11	52.70	-237.87	-5.76	0.00	0.00	
2,000.00	10.49	282.49	1,977.44	56.64	-255.65	-6.19	0.00	0.00	
2,100.00	10.49	282.49	2,075.77	60.57	-273.42	-6.62	0.00	0.00	
2,200.00	10.49	282.49	2,174.10	64.51	-291.19	-7.05	0.00	0.00	
2,300.00	10.49	282.49	2,272.43	68.45	-308.96	-7.48	0.00	0.00	
2,400.00	10.49	282.49	2,370.76	72.38	-326.73	-7.91	0.00	0.00	
2,500.00	10.49	282.49	2,469.09	76.32	-344.50	-8.34	0.00	0.00	
2,600.00	10.49	282.49	2,567.41	80.26	-362.27	-8.77	0.00	0.00	
2,700.00	10.49	282.49	2,665.74	84.19	-380.04	-9.20	0.00	0.00	
2,800.00	10.49	282.49	2,764.07	88.13	-397.81	-9.63	0.00	0.00	
2,900.00	10.49	282.49	2,862.40	92.07	-415.59	-10.06	0.00	0.00	
3,000.00	10.49	282.49	2,960.73	96.01	-433.36	-10.49	0.00	0.00	
3,100.00	10.49	282.49	3,059.06	99.94	-451.13	-10.92	0.00	0.00	
3,200.00	10.49	282.49	3,157.39	103.88	-468.90	-11.35	0.00	0.00	
3,300.00	10.49	282.49	3,255.72	107.82	-486.67	-11.78	0.00	0.00	
3,400.00	10.49	282.49	3,354.05	111.75	-504.44	-12.21	0.00	0.00	
3,500.00	10.49	282.49	3,452.38	115.69	-522.21	-12.64	0.00	0.00	
3,600.00	10.49	282.49	3,550.71	119.63	-539.98	-13.07	0.00	0.00	
3,700.00	10.49	282.49	3,649.04	123.56	-557.75	-13.50	0.00	0.00	
3,800.00	10.49	282.49	3,747.37	127.50	-575.53	-13.93	0.00	0.00	
3,900.00	10.49	282.49	3,845.70	131.44	-593.30	-14.36	0.00	0.00	
4,000.00	10.49	282.49	3,944.03	135.37	-611.07	-14.79	0.00	0.00	
4,100.00	10.49	282.49	4,042.36	139.31	-628.84	-15.22	0.00	0.00	
4,200.00	10.49	282.49	4,140.69	143.25	-646.61	-15.66	0.00	0.00	
4,300.00	10.49	282.49	4,239.02	147.19	-664.38	-16.09	0.00	0.00	
4,308.12	10.49	282.49	4,247.00	147.51	-665.82	-16.12	0.00	0.00	SUSSEX
4,400.00	10.49	282.49	4,337.35	151.12	-682.15	-16.52	0.00	0.00	
4,500.00	10.49	282.49	4,435.68	155.06	-699.92	-16.95	0.00	0.00	
4,600.00	10.49	282.49	4,534.00	159.00	-717.69	-17.38	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 3B-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 3B-32H-K268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

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
4,664.07	10.49	282.49	4,597.00	161.52	-729.08	-17.65	0.00	0.00	SUSSEX MARKER
4,700.00	10.49	282.49	4,632.33	162.93	-735.47	-17.81	0.00	0.00	
4,800.00	10.49	282.49	4,730.66	166.87	-753.24	-18.24	0.00	0.00	
4,900.00	10.49	282.49	4,828.99	170.81	-771.01	-18.67	0.00	0.00	
4,955.94	10.49	282.49	4,884.00	173.01	-780.95	-18.91	0.00	0.00	SHANNON
5,000.00	10.49	282.49	4,927.32	174.74	-788.78	-19.10	0.00	0.00	
5,100.00	10.49	282.49	5,025.65	178.68	-806.55	-19.53	0.00	0.00	
5,145.10	10.49	282.49	5,070.00	180.46	-814.57	-19.72	0.00	0.00	SHANNON BASE
5,200.00	10.49	282.49	5,123.98	182.62	-824.32	-19.96	0.00	0.00	
5,300.00	10.49	282.49	5,222.31	186.56	-842.09	-20.39	0.00	0.00	
5,400.00	10.49	282.49	5,320.64	190.49	-859.86	-20.82	0.00	0.00	
5,500.00	10.49	282.49	5,418.97	194.43	-877.63	-21.25	0.00	0.00	
5,600.00	10.49	282.49	5,517.30	198.37	-895.41	-21.68	0.00	0.00	
5,700.00	10.49	282.49	5,615.63	202.30	-913.18	-22.11	0.00	0.00	
5,800.00	10.49	282.49	5,713.96	206.24	-930.95	-22.54	0.00	0.00	
5,900.00	10.49	282.49	5,812.29	210.18	-948.72	-22.97	0.00	0.00	
6,000.00	10.49	282.49	5,910.62	214.11	-966.49	-23.40	0.00	0.00	
6,100.00	10.49	282.49	6,008.95	218.05	-984.26	-23.83	0.00	0.00	
6,200.00	10.49	282.49	6,107.28	221.99	-1,002.03	-24.26	0.00	0.00	
6,300.00	10.49	282.49	6,205.61	225.93	-1,019.80	-24.69	0.00	0.00	
6,400.00	10.49	282.49	6,303.94	229.86	-1,037.57	-25.12	0.00	0.00	
6,500.00	10.49	282.49	6,402.26	233.80	-1,055.35	-25.55	0.00	0.00	
6,600.00	10.49	282.49	6,500.59	237.74	-1,073.12	-25.98	0.00	0.00	
6,700.00	10.49	282.49	6,598.92	241.67	-1,090.89	-26.41	0.00	0.00	
6,800.00	10.49	282.49	6,697.25	245.61	-1,108.66	-26.84	0.00	0.00	
6,874.56	10.49	282.49	6,770.56	248.55	-1,121.91	-27.16	0.00	0.00	
6,900.00	10.24	270.53	6,795.60	249.07	-1,126.43	-26.80	8.50	-0.95	
7,000.00	13.22	230.28	6,893.65	241.83	-1,144.15	-16.27	8.50	2.98	
7,100.00	19.69	210.33	6,989.58	219.94	-1,161.49	8.55	8.50	6.47	
7,200.00	27.27	200.53	7,081.27	183.88	-1,178.06	47.13	8.50	7.58	
7,300.00	35.24	194.82	7,166.70	134.44	-1,193.50	98.62	8.50	7.98	
7,327.69	37.49	193.63	7,189.00	118.53	-1,197.53	115.01	8.50	8.11	SHARON SPRINGS
7,400.00	43.40	191.02	7,244.01	72.72	-1,207.47	161.88	8.50	8.17	
7,441.06	46.78	189.78	7,273.00	44.12	-1,212.71	190.95	8.50	8.23	A CHALK
7,443.99	47.02	189.70	7,275.00	42.01	-1,213.07	193.09	8.50	8.24	NIOBRARA
7,464.86	48.74	189.12	7,289.00	26.74	-1,215.61	208.56	8.50	8.25	A MARL
7,500.00	51.64	188.22	7,311.49	0.06	-1,219.67	235.53	8.50	8.27	
7,560.66	56.67	186.82	7,347.00	-48.67	-1,226.09	284.58	8.50	8.29	B CHALK
7,600.00	59.95	186.00	7,367.67	-81.94	-1,229.82	317.94	8.50	8.31	
7,606.72	60.50	185.87	7,371.00	-87.73	-1,230.43	323.74	8.50	8.32	B MARL
7,700.00	68.28	184.13	7,411.29	-171.47	-1,237.71	407.31	8.50	8.33	
7,800.00	76.63	182.46	7,441.42	-266.57	-1,243.15	501.67	8.50	8.35	
7,816.30	77.99	182.20	7,445.00	-282.46	-1,243.80	517.39	8.50	8.36	C CHALK
7,900.00	84.99	180.91	7,457.38	-365.16	-1,246.04	598.96	8.50	8.36	
7,959.92	90.00	180.00	7,460.00	-425.00	-1,246.51	657.77	8.50	8.36	
8,000.00	90.00	180.00	7,460.00	-465.08	-1,246.51	697.09	0.00	0.00	
8,100.00	90.00	180.00	7,460.00	-565.08	-1,246.51	795.20	0.00	0.00	
8,200.00	90.00	180.00	7,460.00	-665.08	-1,246.51	893.32	0.00	0.00	
8,300.00	90.00	180.00	7,460.00	-765.08	-1,246.51	991.44	0.00	0.00	
8,400.00	90.00	180.00	7,460.00	-865.08	-1,246.51	1,089.55	0.00	0.00	
8,500.00	90.00	180.00	7,460.00	-965.08	-1,246.51	1,187.67	0.00	0.00	
8,600.00	90.00	180.00	7,460.00	-1,065.08	-1,246.51	1,285.79	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 3B-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 3B-32H-K268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

### 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	180.00	7,460.00	-1,165.08	-1,246.51	1,383.91	0.00	0.00	
8,800.00	90.00	180.00	7,460.00	-1,265.08	-1,246.51	1,482.02	0.00	0.00	
8,900.00	90.00	180.00	7,460.00	-1,365.08	-1,246.51	1,580.14	0.00	0.00	
9,000.00	90.00	180.00	7,460.00	-1,465.08	-1,246.51	1,678.26	0.00	0.00	
9,100.00	90.00	180.00	7,460.00	-1,565.08	-1,246.51	1,776.37	0.00	0.00	
9,200.00	90.00	180.00	7,460.00	-1,665.08	-1,246.51	1,874.49	0.00	0.00	
9,300.00	90.00	180.00	7,460.00	-1,765.08	-1,246.51	1,972.61	0.00	0.00	
9,400.00	90.00	180.00	7,460.00	-1,865.08	-1,246.51	2,070.72	0.00	0.00	
9,500.00	90.00	180.00	7,460.00	-1,965.08	-1,246.51	2,168.84	0.00	0.00	
9,600.00	90.00	180.00	7,460.00	-2,065.08	-1,246.51	2,266.96	0.00	0.00	
9,700.00	90.00	180.00	7,460.00	-2,165.08	-1,246.51	2,365.07	0.00	0.00	
9,800.00	90.00	180.00	7,460.00	-2,265.08	-1,246.51	2,463.19	0.00	0.00	
9,900.00	90.00	180.00	7,460.00	-2,365.08	-1,246.51	2,561.31	0.00	0.00	
10,000.00	90.00	180.00	7,460.00	-2,465.08	-1,246.51	2,659.42	0.00	0.00	
10,100.00	90.00	180.00	7,460.00	-2,565.08	-1,246.51	2,757.54	0.00	0.00	
10,200.00	90.00	180.00	7,460.00	-2,665.08	-1,246.51	2,855.66	0.00	0.00	
10,300.00	90.00	180.00	7,460.00	-2,765.08	-1,246.51	2,953.77	0.00	0.00	
10,400.00	90.00	180.00	7,460.00	-2,865.08	-1,246.51	3,051.89	0.00	0.00	
10,500.00	90.00	180.00	7,460.00	-2,965.08	-1,246.51	3,150.01	0.00	0.00	
10,600.00	90.00	180.00	7,460.00	-3,065.08	-1,246.51	3,248.13	0.00	0.00	
10,700.00	90.00	180.00	7,460.00	-3,165.08	-1,246.51	3,346.24	0.00	0.00	
10,800.00	90.00	180.00	7,460.00	-3,265.08	-1,246.51	3,444.36	0.00	0.00	
10,900.00	90.00	180.00	7,460.00	-3,365.08	-1,246.51	3,542.48	0.00	0.00	
11,000.00	90.00	180.00	7,460.00	-3,465.08	-1,246.51	3,640.59	0.00	0.00	
11,100.00	90.00	180.00	7,460.00	-3,565.08	-1,246.51	3,738.71	0.00	0.00	
11,109.92	90.00	180.00	7,460.00	-3,575.00	-1,246.51	3,748.45	0.00	0.00	
11,200.00	90.00	181.80	7,460.00	-3,665.06	-1,247.93	3,837.08	2.00	0.00	
11,201.27	90.00	181.83	7,460.00	-3,666.34	-1,247.97	3,838.34	2.00	0.00	
11,300.00	90.00	181.83	7,460.00	-3,765.01	-1,251.11	3,935.77	0.00	0.00	
11,400.00	90.00	181.83	7,460.00	-3,864.96	-1,254.30	4,034.45	0.00	0.00	
11,500.00	90.00	181.83	7,460.00	-3,964.91	-1,257.49	4,133.13	0.00	0.00	
11,600.00	90.00	181.83	7,460.00	-4,064.86	-1,260.68	4,231.82	0.00	0.00	
11,700.00	90.00	181.83	7,460.00	-4,164.81	-1,263.87	4,330.50	0.00	0.00	
11,800.00	90.00	181.83	7,460.00	-4,264.76	-1,267.05	4,429.18	0.00	0.00	
11,900.00	90.00	181.83	7,460.00	-4,364.71	-1,270.24	4,527.86	0.00	0.00	
12,000.00	90.00	181.83	7,460.00	-4,464.65	-1,273.43	4,626.55	0.00	0.00	
12,100.00	90.00	181.83	7,460.00	-4,564.60	-1,276.62	4,725.23	0.00	0.00	
12,200.00	90.00	181.83	7,460.00	-4,664.55	-1,279.81	4,823.91	0.00	0.00	
12,300.00	90.00	181.83	7,460.00	-4,764.50	-1,283.00	4,922.60	0.00	0.00	
12,400.00	90.00	181.83	7,460.00	-4,864.45	-1,286.18	5,021.28	0.00	0.00	
12,500.00	90.00	181.83	7,460.00	-4,964.40	-1,289.37	5,119.96	0.00	0.00	
12,600.00	90.00	181.83	7,460.00	-5,064.35	-1,292.56	5,218.64	0.00	0.00	
12,700.00	90.00	181.83	7,460.00	-5,164.30	-1,295.75	5,317.33	0.00	0.00	
12,800.00	90.00	181.83	7,460.00	-5,264.25	-1,298.94	5,416.01	0.00	0.00	
12,900.00	90.00	181.83	7,460.00	-5,364.20	-1,302.13	5,514.69	0.00	0.00	
13,000.00	90.00	181.83	7,460.00	-5,464.15	-1,305.31	5,613.37	0.00	0.00	
13,100.00	90.00	181.83	7,460.00	-5,564.10	-1,308.50	5,712.06	0.00	0.00	
13,200.00	90.00	181.83	7,460.00	-5,664.04	-1,311.69	5,810.74	0.00	0.00	
13,300.00	90.00	181.83	7,460.00	-5,763.99	-1,314.88	5,909.42	0.00	0.00	
13,400.00	90.00	181.83	7,460.00	-5,863.94	-1,318.07	6,008.11	0.00	0.00	
13,500.00	90.00	181.83	7,460.00	-5,963.89	-1,321.25	6,106.79	0.00	0.00	
13,600.00	90.00	181.83	7,460.00	-6,063.84	-1,324.44	6,205.47	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 3B-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 3B-32H-K268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

### 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	181.83	7,460.00	-6,163.79	-1,327.63	6,304.15	0.00	0.00	
13,800.00	90.00	181.83	7,460.00	-6,263.74	-1,330.82	6,402.84	0.00	0.00	
13,900.00	90.00	181.83	7,460.00	-6,363.69	-1,334.01	6,501.52	0.00	0.00	
13,942.58	90.00	181.83	7,460.00	-6,406.25	-1,335.37	6,543.54	0.00	0.00	
14,000.00	90.00	178.96	7,460.00	-6,463.66	-1,335.76	6,599.95	5.00	0.00	
14,100.00	90.00	173.96	7,460.00	-6,563.44	-1,329.58	6,696.65	5.00	0.00	
14,179.12	90.00	170.00	7,460.00	-6,641.77	-1,318.54	6,771.37	5.00	0.00	
14,200.00	90.00	170.00	7,460.00	-6,662.33	-1,314.91	6,790.85	0.00	0.00	
14,209.12	90.00	170.00	7,460.00	-6,671.31	-1,313.33	6,799.36	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 3B TGT - plan hits target center - Point	0.00	0.00	7,460.00	-3,575.00	-1,246.51	1,273,335.17	3,129,934.55	40.082762	-105.035637
FILE 3B PBHL - plan hits target center - Point	0.00	0.00	7,460.00	-6,671.31	-1,313.33	1,270,238.55	3,129,884.10	40.074262	-105.035875
FILE 3B TPZ - plan misses target center by 86.96usft at 7748.38usft MD (7427.60 TVD, -216.92 N, -1240.65 E) - Point	0.00	0.00	7,460.00	-202.11	-1,319.98	1,276,707.62	3,129,843.25	40.092021	-105.035900

### Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
550.32	550.00	UPPER PIERRE TOP SAMPLED			
1,371.06	1,359.00	UPPER PIERRE AQ BASE			
1,402.58	1,390.00	UPPER PIERRE BASE SAMPLED			
4,308.12	4,247.00	SUSSEX			
4,664.07	4,597.00	SUSSEX MARKER			
4,955.94	4,884.00	SHANNON			
5,145.10	5,070.00	SHANNON BASE			
7,327.69	7,189.00	SHARON SPRINGS			
7,441.06	7,273.00	A CHALK			
7,443.99	7,275.00	NIOBRARA			
7,464.86	7,289.00	A MARL			
7,560.66	7,347.00	B CHALK			
7,606.72	7,371.00	B MARL			
7,816.30	7,445.00	C CHALK			