



CRESTONE PEAK  
RESOURCES

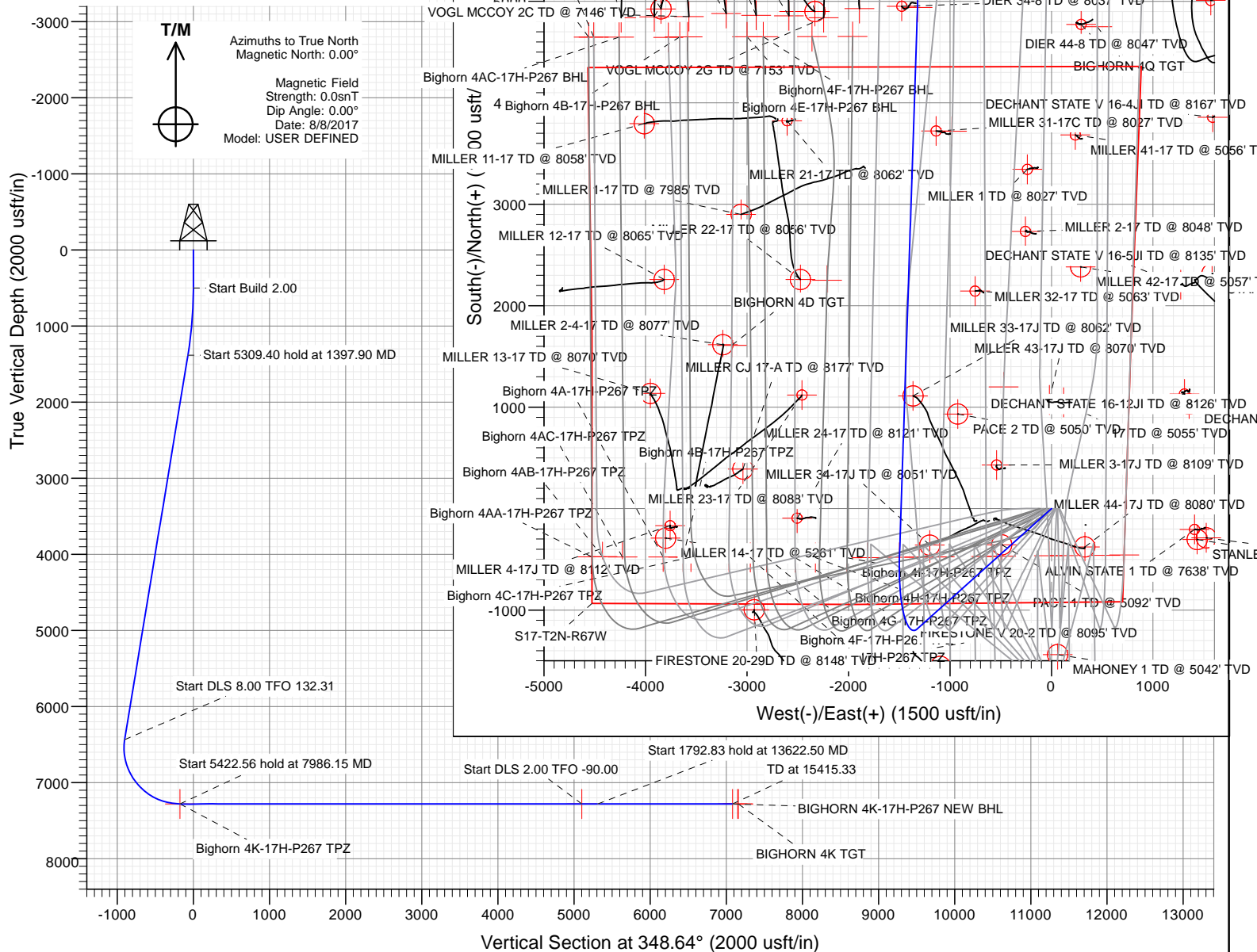
#### SECTION DETAILS

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	1397.90	17.96	228.14	1383.27	-93.13	-103.95	2.00	228.14	-70.82	
4	6707.30	17.96	228.14	6434.01	-1185.50	-1323.15	0.00	0.00	-901.54	
5	7986.15	90.00	1.88	7280.00	-479.63	-1498.15	8.00	132.31	-175.03	Bighorn 4K-17H-P267 TPZ
6	13408.71	90.00	1.88	7280.00	4940.00	-1320.00	0.00	0.00	5103.25	Interp @ 7280.00 (BIGHORN 4K-17H-P267 OH PLAN #2)
7	13622.50	90.00	357.61	7280.00	5153.74	-1320.95	2.00	-90.00	5312.98	
8	15415.33	90.00	357.61	7280.00	6945.00	-1395.81	0.00	0.00	7083.88	BIGHORN 4K-17H-P267 NEW BHL

PLAN #2  
BIGHORN 4K-17H-P267  
23 KB @ 4952.00usft  
Ground Level @ 4959.00  
North American Datum 1983  
Well BIGHORN 4K-17H-P267, True North

Type	Target	No Target (Freehand)	Azimuth	Origin Type	N/S	E/W	From TVD
Name	TD		348.64	SLD	0.00	0.00	0.00
BIGHORN 4K TGT	7280.00						
Bighorn 4K-17H-P267 BHL	7280.00						
BIGHORN 4K-17H-P267 NEW BHL	7280.00						
Bighorn 4K-17H-P267 TPZ	7280.00						
Interp @ 7280.00 (BIGHORN 4K-17H-P267 OH PLAN #2)	7280.00						

Project: DJ BASIN  
Site: BIGHORN  
Well: BIGHORN 4K-17H-P267  
Wellbore: OH  
Design: PLAN #2



#### WELL DETAILS: BIGHORN 4K-17H-P267

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1292097.23	3165579.39	40.133683	-104.907804

CATHEDRAL



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well BIGHORN 4K-17H-P267
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 4982.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 4982.00usft
<b>Site:</b>	BIGHORN	<b>North Reference:</b>	True
<b>Well:</b>	BIGHORN 4K-17H-P267	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #2		

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		BIGHORN			
Site Position:		Northing:	1,292,097.01 usft	Latitude:	40.133684
From:	Lat/Long	Easting:	3,165,479.29 usft	Longitude:	-104.908162
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.38 °

Well	BIGHORN 4K-17H-P267					
Well Position	+N/-S	0.00 usft	Northing:	1,292,097.23 usft	Latitude:	40.133683
	+E/-W	0.00 usft	Easting:	3,165,579.39 usft	Longitude:	-104.907804
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,959.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	User Defined	8/8/2017	0.00	0.00	0.00000000

Design		PLAN #2		
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	348.64

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	
1,397.90	17.96	228.14	1,383.27	-93.13	-103.95	2.00	2.00	0.00	228.14	
6,707.30	17.96	228.14	6,434.01	-1,185.50	-1,323.15	0.00	0.00	0.00	0.00	
7,986.15	90.00	1.88	7,280.00	-479.63	-1,498.15	8.00	5.63	10.46	132.31	Bighorn 4K-17H-P267
13,408.71	90.00	1.88	7,280.00	4,940.00	-1,320.00	0.00	0.00	0.00	0.00	Interp @ 7280.00 (BK
13,622.50	90.00	357.61	7,280.00	5,153.74	-1,320.95	2.00	0.00	-2.00	-90.00	
15,415.33	90.00	357.61	7,280.00	6,945.00	-1,395.81	0.00	0.00	0.00	0.00	BIGHORN 4K-17H-P2

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well BIGHORN 4K-17H-P267
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 4982.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 4982.00usft
<b>Site:</b>	BIGHORN	<b>North Reference:</b>	True
<b>Well:</b>	BIGHORN 4K-17H-P267	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #2		

### 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	
600.00	2.00	228.14	599.98	-1.16	-1.30	-0.89	2.00	2.00	
700.00	4.00	228.14	699.84	-4.66	-5.20	-3.54	2.00	2.00	
800.00	6.00	228.14	799.45	-10.47	-11.69	-7.96	2.00	2.00	
900.00	8.00	228.14	898.70	-18.60	-20.76	-14.15	2.00	2.00	
1,000.00	10.00	228.14	997.47	-29.04	-32.42	-22.09	2.00	2.00	
1,100.00	12.00	228.14	1,095.62	-41.77	-46.63	-31.77	2.00	2.00	
1,200.00	14.00	228.14	1,193.06	-56.79	-63.38	-43.18	2.00	2.00	
1,300.00	16.00	228.14	1,289.64	-74.06	-82.65	-56.32	2.00	2.00	
1,397.90	17.96	228.14	1,383.27	-93.13	-103.95	-70.82	2.00	2.00	
1,400.00	17.96	228.14	1,385.27	-93.56	-104.43	-71.15	0.00	0.00	
1,500.00	17.96	228.14	1,480.40	-114.14	-127.39	-86.80	0.00	0.00	
1,600.00	17.96	228.14	1,575.53	-134.71	-150.35	-102.45	0.00	0.00	
1,700.00	17.96	228.14	1,670.65	-155.29	-173.32	-118.09	0.00	0.00	
1,800.00	17.96	228.14	1,765.78	-175.86	-196.28	-133.74	0.00	0.00	
1,900.00	17.96	228.14	1,860.91	-196.43	-219.24	-149.38	0.00	0.00	
2,000.00	17.96	228.14	1,956.04	-217.01	-242.21	-165.03	0.00	0.00	
2,100.00	17.96	228.14	2,051.17	-237.58	-265.17	-180.68	0.00	0.00	
2,200.00	17.96	228.14	2,146.30	-258.16	-288.13	-196.32	0.00	0.00	
2,300.00	17.96	228.14	2,241.42	-278.73	-311.10	-211.97	0.00	0.00	
2,400.00	17.96	228.14	2,336.55	-299.31	-334.06	-227.61	0.00	0.00	
2,500.00	17.96	228.14	2,431.68	-319.88	-357.02	-243.26	0.00	0.00	
2,600.00	17.96	228.14	2,526.81	-340.45	-379.99	-258.91	0.00	0.00	
2,700.00	17.96	228.14	2,621.94	-361.03	-402.95	-274.55	0.00	0.00	
2,800.00	17.96	228.14	2,717.07	-381.60	-425.91	-290.20	0.00	0.00	
2,900.00	17.96	228.14	2,812.19	-402.18	-448.88	-305.85	0.00	0.00	
3,000.00	17.96	228.14	2,907.32	-422.75	-471.84	-321.49	0.00	0.00	
3,100.00	17.96	228.14	3,002.45	-443.32	-494.80	-337.14	0.00	0.00	
3,200.00	17.96	228.14	3,097.58	-463.90	-517.77	-352.78	0.00	0.00	
3,300.00	17.96	228.14	3,192.71	-484.47	-540.73	-368.43	0.00	0.00	
3,400.00	17.96	228.14	3,287.83	-505.05	-563.69	-384.08	0.00	0.00	
3,500.00	17.96	228.14	3,382.96	-525.62	-586.65	-399.72	0.00	0.00	
3,600.00	17.96	228.14	3,478.09	-546.20	-609.62	-415.37	0.00	0.00	
3,700.00	17.96	228.14	3,573.22	-566.77	-632.58	-431.01	0.00	0.00	
3,800.00	17.96	228.14	3,668.35	-587.34	-655.54	-446.66	0.00	0.00	
3,900.00	17.96	228.14	3,763.48	-607.92	-678.51	-462.31	0.00	0.00	
4,000.00	17.96	228.14	3,858.60	-628.49	-701.47	-477.95	0.00	0.00	
4,100.00	17.96	228.14	3,953.73	-649.07	-724.43	-493.60	0.00	0.00	
4,200.00	17.96	228.14	4,048.86	-669.64	-747.40	-509.25	0.00	0.00	
4,300.00	17.96	228.14	4,143.99	-690.22	-770.36	-524.89	0.00	0.00	
4,400.00	17.96	228.14	4,239.12	-710.79	-793.32	-540.54	0.00	0.00	
4,500.00	17.96	228.14	4,334.25	-731.36	-816.29	-556.18	0.00	0.00	
4,600.00	17.96	228.14	4,429.37	-751.94	-839.25	-571.83	0.00	0.00	
4,700.00	17.96	228.14	4,524.50	-772.51	-862.21	-587.48	0.00	0.00	
4,800.00	17.96	228.14	4,619.63	-793.09	-885.18	-603.12	0.00	0.00	
4,900.00	17.96	228.14	4,714.76	-813.66	-908.14	-618.77	0.00	0.00	
5,000.00	17.96	228.14	4,809.89	-834.23	-931.10	-634.41	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 BIGHORN 4K-17H-P267
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 4982.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 4982.00usft
<b>Site:</b>	BIGHORN	<b>North Reference:</b>	True
<b>Well:</b>	BIGHORN 4K-17H-P267	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #2		

### 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	17.96	228.14	4,905.02	-854.81	-954.07	-650.06	0.00	0.00	
5,200.00	17.96	228.14	5,000.14	-875.38	-977.03	-665.71	0.00	0.00	
5,300.00	17.96	228.14	5,095.27	-895.96	-999.99	-681.35	0.00	0.00	
5,400.00	17.96	228.14	5,190.40	-916.53	-1,022.95	-697.00	0.00	0.00	
5,500.00	17.96	228.14	5,285.53	-937.11	-1,045.92	-712.65	0.00	0.00	
5,600.00	17.96	228.14	5,380.66	-957.68	-1,068.88	-728.29	0.00	0.00	
5,700.00	17.96	228.14	5,475.79	-978.25	-1,091.84	-743.94	0.00	0.00	
5,800.00	17.96	228.14	5,570.91	-998.83	-1,114.81	-759.58	0.00	0.00	
5,900.00	17.96	228.14	5,666.04	-1,019.40	-1,137.77	-775.23	0.00	0.00	
6,000.00	17.96	228.14	5,761.17	-1,039.98	-1,160.73	-790.88	0.00	0.00	
6,100.00	17.96	228.14	5,856.30	-1,060.55	-1,183.70	-806.52	0.00	0.00	
6,200.00	17.96	228.14	5,951.43	-1,081.12	-1,206.66	-822.17	0.00	0.00	
6,300.00	17.96	228.14	6,046.56	-1,101.70	-1,229.62	-837.81	0.00	0.00	
6,400.00	17.96	228.14	6,141.68	-1,122.27	-1,252.59	-853.46	0.00	0.00	
6,500.00	17.96	228.14	6,236.81	-1,142.85	-1,275.55	-869.11	0.00	0.00	
6,600.00	17.96	228.14	6,331.94	-1,163.42	-1,298.51	-884.75	0.00	0.00	
6,700.00	17.96	228.14	6,427.07	-1,184.00	-1,321.48	-900.40	0.00	0.00	
6,707.30	17.96	228.14	6,434.01	-1,185.50	-1,323.15	-901.54	0.00	0.00	
6,800.00	14.04	251.31	6,523.20	-1,198.66	-1,344.48	-910.24	8.00	-4.22	
6,900.00	13.53	285.28	6,620.47	-1,199.46	-1,367.30	-906.54	8.00	-0.51	
7,000.00	17.17	312.62	6,717.01	-1,186.36	-1,389.48	-889.32	8.00	3.64	
7,100.00	23.07	328.53	6,810.93	-1,159.61	-1,410.61	-858.93	8.00	5.90	
7,200.00	29.92	337.88	6,900.42	-1,119.73	-1,430.26	-815.96	8.00	6.85	
7,300.00	37.20	343.91	6,983.71	-1,067.50	-1,448.06	-761.24	8.00	7.28	
7,400.00	44.70	348.19	7,059.20	-1,003.92	-1,463.66	-695.84	8.00	7.50	
7,500.00	52.31	351.46	7,125.42	-930.25	-1,476.75	-621.03	8.00	7.62	
7,600.00	60.01	354.12	7,181.07	-847.91	-1,487.08	-538.27	8.00	7.69	
7,700.00	67.74	356.38	7,225.08	-758.50	-1,494.45	-449.17	8.00	7.74	
7,800.00	75.51	358.41	7,256.58	-663.78	-1,498.71	-355.46	8.00	7.77	
7,900.00	83.29	0.30	7,274.96	-565.57	-1,499.79	-258.96	8.00	7.78	
7,986.15	90.00	1.88	7,280.00	-479.63	-1,498.15	-175.03	8.00	7.79	Bighorn 4K-17H-P267 TPZ
8,000.00	90.00	1.88	7,280.00	-465.79	-1,497.69	-161.55	0.00	0.00	
8,100.00	90.00	1.88	7,280.00	-365.85	-1,494.41	-64.21	0.00	0.00	
8,200.00	90.00	1.88	7,280.00	-265.90	-1,491.12	33.12	0.00	0.00	
8,300.00	90.00	1.88	7,280.00	-165.95	-1,487.84	130.46	0.00	0.00	
8,400.00	90.00	1.88	7,280.00	-66.01	-1,484.55	227.80	0.00	0.00	
8,500.00	90.00	1.88	7,280.00	33.94	-1,481.27	325.14	0.00	0.00	
8,600.00	90.00	1.88	7,280.00	133.88	-1,477.98	422.48	0.00	0.00	
8,700.00	90.00	1.88	7,280.00	233.83	-1,474.70	519.82	0.00	0.00	
8,800.00	90.00	1.88	7,280.00	333.78	-1,471.41	617.16	0.00	0.00	
8,900.00	90.00	1.88	7,280.00	433.72	-1,468.13	714.50	0.00	0.00	
9,000.00	90.00	1.88	7,280.00	533.67	-1,464.84	811.84	0.00	0.00	
9,100.00	90.00	1.88	7,280.00	633.61	-1,461.56	909.18	0.00	0.00	
9,200.00	90.00	1.88	7,280.00	733.56	-1,458.27	1,006.52	0.00	0.00	
9,300.00	90.00	1.88	7,280.00	833.51	-1,454.99	1,103.86	0.00	0.00	
9,400.00	90.00	1.88	7,280.00	933.45	-1,451.70	1,201.20	0.00	0.00	
9,500.00	90.00	1.88	7,280.00	1,033.40	-1,448.41	1,298.54	0.00	0.00	
9,600.00	90.00	1.88	7,280.00	1,133.34	-1,445.13	1,395.87	0.00	0.00	
9,700.00	90.00	1.88	7,280.00	1,233.29	-1,441.84	1,493.21	0.00	0.00	
9,800.00	90.00	1.88	7,280.00	1,333.24	-1,438.56	1,590.55	0.00	0.00	
9,900.00	90.00	1.88	7,280.00	1,433.18	-1,435.27	1,687.89	0.00	0.00	
10,000.00	90.00	1.88	7,280.00	1,533.13	-1,431.99	1,785.23	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 BIGHORN 4K-17H-P267
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 4982.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 4982.00usft
<b>Site:</b>	BIGHORN	<b>North Reference:</b>	True
<b>Well:</b>	BIGHORN 4K-17H-P267	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #2		

### 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	1.88	7,280.00	1,633.07	-1,428.70	1,882.57	0.00	0.00	
10,200.00	90.00	1.88	7,280.00	1,733.02	-1,425.42	1,979.91	0.00	0.00	
10,300.00	90.00	1.88	7,280.00	1,832.97	-1,422.13	2,077.25	0.00	0.00	
10,400.00	90.00	1.88	7,280.00	1,932.91	-1,418.85	2,174.59	0.00	0.00	
10,500.00	90.00	1.88	7,280.00	2,032.86	-1,415.56	2,271.93	0.00	0.00	
10,600.00	90.00	1.88	7,280.00	2,132.80	-1,412.28	2,369.27	0.00	0.00	
10,700.00	90.00	1.88	7,280.00	2,232.75	-1,408.99	2,466.61	0.00	0.00	
10,800.00	90.00	1.88	7,280.00	2,332.70	-1,405.71	2,563.95	0.00	0.00	
10,900.00	90.00	1.88	7,280.00	2,432.64	-1,402.42	2,661.29	0.00	0.00	
11,000.00	90.00	1.88	7,280.00	2,532.59	-1,399.13	2,758.62	0.00	0.00	
11,100.00	90.00	1.88	7,280.00	2,632.53	-1,395.85	2,855.96	0.00	0.00	
11,200.00	90.00	1.88	7,280.00	2,732.48	-1,392.56	2,953.30	0.00	0.00	
11,300.00	90.00	1.88	7,280.00	2,832.43	-1,389.28	3,050.64	0.00	0.00	
11,400.00	90.00	1.88	7,280.00	2,932.37	-1,385.99	3,147.98	0.00	0.00	
11,500.00	90.00	1.88	7,280.00	3,032.32	-1,382.71	3,245.32	0.00	0.00	
11,600.00	90.00	1.88	7,280.00	3,132.27	-1,379.42	3,342.66	0.00	0.00	
11,700.00	90.00	1.88	7,280.00	3,232.21	-1,376.14	3,440.00	0.00	0.00	
11,800.00	90.00	1.88	7,280.00	3,332.16	-1,372.85	3,537.34	0.00	0.00	
11,900.00	90.00	1.88	7,280.00	3,432.10	-1,369.57	3,634.68	0.00	0.00	
12,000.00	90.00	1.88	7,280.00	3,532.05	-1,366.28	3,732.02	0.00	0.00	
12,100.00	90.00	1.88	7,280.00	3,632.00	-1,363.00	3,829.36	0.00	0.00	
12,200.00	90.00	1.88	7,280.00	3,731.94	-1,359.71	3,926.70	0.00	0.00	
12,300.00	90.00	1.88	7,280.00	3,831.89	-1,356.42	4,024.03	0.00	0.00	
12,400.00	90.00	1.88	7,280.00	3,931.83	-1,353.14	4,121.37	0.00	0.00	
12,500.00	90.00	1.88	7,280.00	4,031.78	-1,349.85	4,218.71	0.00	0.00	
12,600.00	90.00	1.88	7,280.00	4,131.73	-1,346.57	4,316.05	0.00	0.00	
12,700.00	90.00	1.88	7,280.00	4,231.67	-1,343.28	4,413.39	0.00	0.00	
12,800.00	90.00	1.88	7,280.00	4,331.62	-1,340.00	4,510.73	0.00	0.00	
12,900.00	90.00	1.88	7,280.00	4,431.56	-1,336.71	4,608.07	0.00	0.00	
13,000.00	90.00	1.88	7,280.00	4,531.51	-1,333.43	4,705.41	0.00	0.00	
13,100.00	90.00	1.88	7,280.00	4,631.46	-1,330.14	4,802.75	0.00	0.00	
13,200.00	90.00	1.88	7,280.00	4,731.40	-1,326.86	4,900.09	0.00	0.00	
13,300.00	90.00	1.88	7,280.00	4,831.35	-1,323.57	4,997.43	0.00	0.00	
13,400.00	90.00	1.88	7,280.00	4,931.29	-1,320.29	5,094.77	0.00	0.00	
13,408.71	90.00	1.88	7,280.00	4,940.00	-1,320.00	5,103.25	0.00	0.00	Interp @ 7280.00 (BIGHORN 4K-17H-P267 OH)
13,500.00	90.00	0.06	7,280.00	5,031.27	-1,318.45	5,192.42	2.00	0.00	
13,600.00	90.00	358.06	7,280.00	5,131.25	-1,320.10	5,290.77	2.00	0.00	
13,622.50	90.00	357.61	7,280.00	5,153.74	-1,320.95	5,312.98	2.00	0.00	
13,700.00	90.00	357.61	7,280.00	5,231.17	-1,324.19	5,389.53	0.00	0.00	
13,800.00	90.00	357.61	7,280.00	5,331.08	-1,328.36	5,488.31	0.00	0.00	
13,900.00	90.00	357.61	7,280.00	5,430.99	-1,332.54	5,587.09	0.00	0.00	
14,000.00	90.00	357.61	7,280.00	5,530.91	-1,336.71	5,685.86	0.00	0.00	
14,100.00	90.00	357.61	7,280.00	5,630.82	-1,340.89	5,784.64	0.00	0.00	
14,200.00	90.00	357.61	7,280.00	5,730.73	-1,345.07	5,883.42	0.00	0.00	
14,300.00	90.00	357.61	7,280.00	5,830.65	-1,349.24	5,982.19	0.00	0.00	
14,400.00	90.00	357.61	7,280.00	5,930.56	-1,353.42	6,080.97	0.00	0.00	
14,500.00	90.00	357.61	7,280.00	6,030.47	-1,357.59	6,179.75	0.00	0.00	
14,600.00	90.00	357.61	7,280.00	6,130.38	-1,361.77	6,278.52	0.00	0.00	
14,700.00	90.00	357.61	7,280.00	6,230.30	-1,365.94	6,377.30	0.00	0.00	
14,800.00	90.00	357.61	7,280.00	6,330.21	-1,370.12	6,476.08	0.00	0.00	
14,900.00	90.00	357.61	7,280.00	6,430.12	-1,374.29	6,574.85	0.00	0.00	
15,000.00	90.00	357.61	7,280.00	6,530.04	-1,378.47	6,673.63	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 BIGHORN 4K-17H-P267
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 4982.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 4982.00usft
<b>Site:</b>	BIGHORN	<b>North Reference:</b>	True
<b>Well:</b>	BIGHORN 4K-17H-P267	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #2		

### 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	357.61	7,280.00	6,629.95	-1,382.64	6,772.41	0.00	0.00	
15,200.00	90.00	357.61	7,280.00	6,729.86	-1,386.82	6,871.18	0.00	0.00	
15,300.00	90.00	357.61	7,280.00	6,829.77	-1,390.99	6,969.96	0.00	0.00	
15,400.00	90.00	357.61	7,280.00	6,929.69	-1,395.17	7,068.74	0.00	0.00	
15,415.33	90.00	357.61	7,280.00	6,945.00	-1,395.81	7,083.88	0.00	0.00	BIGHORN 4K-17H-P267 NEW BHL - BIGHORN

### 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
BIGHORN 4K-17H-P267 - plan hits target center - Point	0.00	0.00	7,280.00	6,945.00	-1,395.81	1,299,032.75	3,164,137.23	40.152748	-104.912797
Bighorn 4K-17H-P267 T - plan hits target center - Point	0.00	0.00	7,280.00	-479.63	-1,498.15	1,291,607.61	3,164,084.48	40.132366	-104.913162
BIGHORN 4K TGT - plan misses target center by 354.22usft at 15415.33usft MD (7280.00 TVD, 6945.00 N, -1395.81 E) - Point	0.00	0.00	7,280.00	6,950.00	-1,750.00	1,299,035.39	3,163,783.01	40.152761	-104.914065
Interp @ 7280.00 (BIGH - plan hits target center - Point	0.00	0.00	7,280.00	4,940.00	-1,320.00	1,297,028.31	3,164,226.43	40.147244	-104.912526
Bighorn 4K-17H-P267 B - plan misses target center by 67.15usft at 15415.33usft MD (7280.00 TVD, 6945.00 N, -1395.81 E) - Point	0.00	0.00	7,280.00	7,012.15	-1,395.11	1,299,099.90	3,164,137.48	40.152932	-104.912795