



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	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
3	1197.21	15.94	57.95	1186.96	58.48	93.42	2.00	57.95	-41.60	
4	6979.53	15.94	57.95	6746.83	901.29	1439.78	0.00	0.00	-641.22	
5	8209.85	90.00	180.19	7545.00	192.18	1630.30	8.00	121.23	90.04	
6	17594.85	90.00	180.19	7545.00	-9192.77	1599.02	0.00	0.00	9330.80	COSSLETT 1J PBH

Type TD	Target No Target (Freehand)	Azimuth 170.13	Origin Type Slot	N/S 0.00	E/W 0.00	From TVD 0.00
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
COSSLETT 1J TPBZ	7498.50	449.59	1620.21	40.042624	-104.981975	
COSSLETT 1J PBHL	7545.00	-9192.77	1599.02	40.016154	-104.982053	

Azimuths to True North  
Magnetic North: 8.45°

Magnetic Field  
Strength: 52137.5snT  
Dip Angle: 66.43°  
Date: 10/26/2017  
Model: HDGM

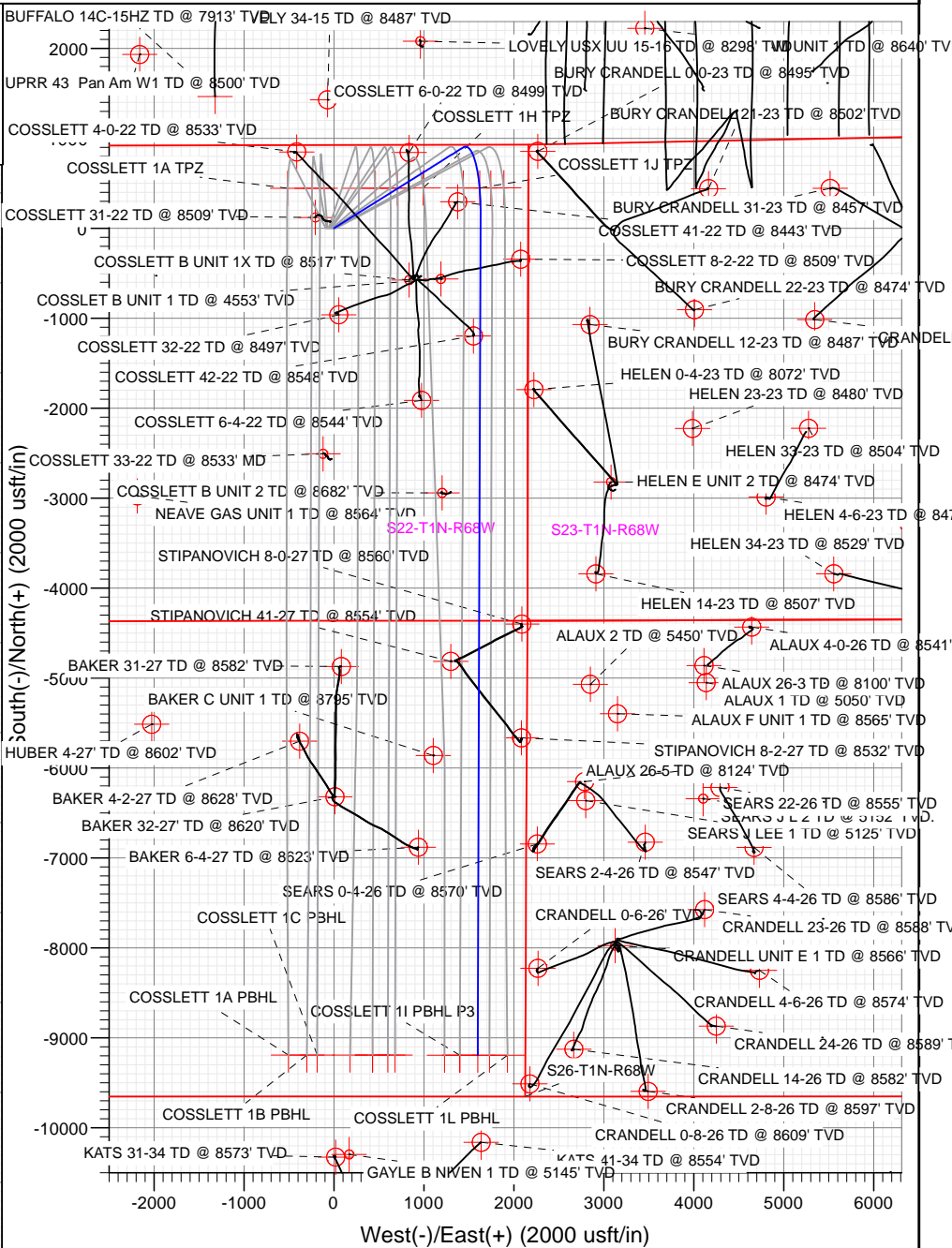
Start Build 2.00

Start 5782.32 hold at 1197.21 MD

Start DLS 8.00 TFO 121.23

COSSLETT 1J TPZ

Start 9385.00 hold at 8209.85 MD



5173.00					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1258338.37	3143417.42	40.041390	-104.987762



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well COSSLETT 1J-22H-B168
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 5196.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 5196.00usft
<b>Site:</b>	S22-T1N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	COSSLETT 1J-22H-B168	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #4		

<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		S22-T1N-R68W			
Site Position:		Northing:	1,258,338.24 usft	Latitude:	40.041391
From:	Lat/Long	Easting:	3,143,327.55 usft	Longitude:	-104.988083
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.33 °

Well	COSSLETT 1J-22H-B168					
Well Position	+N/-S	0.00 usft	Northing:	1,258,338.37 usft	Latitude:	40.041390
	+E/-W	0.00 usft	Easting:	3,143,417.42 usft	Longitude:	-104.987762
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,173.00 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	10/26/2017	8.45	66.43	52,137.50000000

<b>Design</b>	PLAN #4			
<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	170.13

<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	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,197.21	15.94	57.95	1,186.96	58.48	93.42	2.00	2.00	0.00	57.95	
6,979.53	15.94	57.95	6,746.83	901.29	1,439.78	0.00	0.00	0.00	0.00	
8,209.85	90.00	180.19	7,545.00	192.18	1,630.30	8.00	6.02	9.94	121.23	
17,594.85	90.00	180.19	7,545.00	-9,192.77	1,599.02	0.00	0.00	0.00	0.00	COSSLETT 1J PBHL

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well COSSLETT 1J-22H-B168
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 5196.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 5196.00usft
<b>Site:</b>	S22-T1N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	COSSLETT 1J-22H-B168	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #4		

### 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	2.00	57.95	499.98	0.93	1.48	-0.66	2.00	2.00	
600.00	4.00	57.95	599.84	3.70	5.92	-2.63	2.00	2.00	
700.00	6.00	57.95	699.45	8.33	13.30	-5.92	2.00	2.00	
800.00	8.00	57.95	798.70	14.79	23.63	-10.52	2.00	2.00	
900.00	10.00	57.95	897.47	23.09	36.89	-16.43	2.00	2.00	
1,000.00	12.00	57.95	995.62	33.22	53.06	-23.63	2.00	2.00	
1,100.00	14.00	57.95	1,093.06	45.15	72.13	-32.12	2.00	2.00	
1,197.21	15.94	57.95	1,186.96	58.48	93.42	-41.60	2.00	2.00	
1,200.00	15.94	57.95	1,189.64	58.88	94.07	-41.89	0.00	0.00	
1,300.00	15.94	57.95	1,285.80	73.46	117.35	-52.26	0.00	0.00	
1,400.00	15.94	57.95	1,381.95	88.04	140.63	-62.63	0.00	0.00	
1,500.00	15.94	57.95	1,478.10	102.61	163.92	-73.00	0.00	0.00	
1,600.00	15.94	57.95	1,574.26	117.19	187.20	-83.37	0.00	0.00	
1,700.00	15.94	57.95	1,670.41	131.76	210.49	-93.74	0.00	0.00	
1,800.00	15.94	57.95	1,766.56	146.34	233.77	-104.11	0.00	0.00	
1,900.00	15.94	57.95	1,862.71	160.91	257.05	-114.48	0.00	0.00	
2,000.00	15.94	57.95	1,958.87	175.49	280.34	-124.85	0.00	0.00	
2,100.00	15.94	57.95	2,055.02	190.06	303.62	-135.22	0.00	0.00	
2,200.00	15.94	57.95	2,151.17	204.64	326.91	-145.59	0.00	0.00	
2,300.00	15.94	57.95	2,247.33	219.22	350.19	-155.96	0.00	0.00	
2,400.00	15.94	57.95	2,343.48	233.79	373.48	-166.33	0.00	0.00	
2,500.00	15.94	57.95	2,439.63	248.37	396.76	-176.70	0.00	0.00	
2,600.00	15.94	57.95	2,535.79	262.94	420.04	-187.07	0.00	0.00	
2,700.00	15.94	57.95	2,631.94	277.52	443.33	-197.44	0.00	0.00	
2,800.00	15.94	57.95	2,728.09	292.09	466.61	-207.81	0.00	0.00	
2,900.00	15.94	57.95	2,824.24	306.67	489.90	-218.18	0.00	0.00	
3,000.00	15.94	57.95	2,920.40	321.25	513.18	-228.55	0.00	0.00	
3,100.00	15.94	57.95	3,016.55	335.82	536.46	-238.92	0.00	0.00	
3,200.00	15.94	57.95	3,112.70	350.40	559.75	-249.29	0.00	0.00	
3,300.00	15.94	57.95	3,208.86	364.97	583.03	-259.66	0.00	0.00	
3,400.00	15.94	57.95	3,305.01	379.55	606.32	-270.03	0.00	0.00	
3,500.00	15.94	57.95	3,401.16	394.12	629.60	-280.40	0.00	0.00	
3,600.00	15.94	57.95	3,497.31	408.70	652.89	-290.77	0.00	0.00	
3,700.00	15.94	57.95	3,593.47	423.28	676.17	-301.14	0.00	0.00	
3,800.00	15.94	57.95	3,689.62	437.85	699.45	-311.51	0.00	0.00	
3,900.00	15.94	57.95	3,785.77	452.43	722.74	-321.88	0.00	0.00	
4,000.00	15.94	57.95	3,881.93	467.00	746.02	-332.25	0.00	0.00	
4,100.00	15.94	57.95	3,978.08	481.58	769.31	-342.62	0.00	0.00	
4,200.00	15.94	57.95	4,074.23	496.15	792.59	-352.99	0.00	0.00	
4,300.00	15.94	57.95	4,170.39	510.73	815.87	-363.36	0.00	0.00	
4,400.00	15.94	57.95	4,266.54	525.30	839.16	-373.73	0.00	0.00	
4,500.00	15.94	57.95	4,362.69	539.88	862.44	-384.10	0.00	0.00	
4,600.00	15.94	57.95	4,458.84	554.46	885.73	-394.47	0.00	0.00	
4,700.00	15.94	57.95	4,555.00	569.03	909.01	-404.84	0.00	0.00	
4,800.00	15.94	57.95	4,651.15	583.61	932.30	-415.21	0.00	0.00	
4,900.00	15.94	57.95	4,747.30	598.18	955.58	-425.58	0.00	0.00	
5,000.00	15.94	57.95	4,843.46	612.76	978.86	-435.95	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 COSSLETT 1J-22H-B168
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 5196.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 5196.00usft
<b>Site:</b>	S22-T1N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	COSSLETT 1J-22H-B168	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #4		

### 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	15.94	57.95	4,939.61	627.33	1,002.15	-446.32	0.00	0.00	
5,200.00	15.94	57.95	5,035.76	641.91	1,025.43	-456.69	0.00	0.00	
5,300.00	15.94	57.95	5,131.92	656.49	1,048.72	-467.06	0.00	0.00	
5,400.00	15.94	57.95	5,228.07	671.06	1,072.00	-477.43	0.00	0.00	
5,500.00	15.94	57.95	5,324.22	685.64	1,095.29	-487.80	0.00	0.00	
5,600.00	15.94	57.95	5,420.37	700.21	1,118.57	-498.17	0.00	0.00	
5,700.00	15.94	57.95	5,516.53	714.79	1,141.85	-508.53	0.00	0.00	
5,800.00	15.94	57.95	5,612.68	729.36	1,165.14	-518.90	0.00	0.00	
5,900.00	15.94	57.95	5,708.83	743.94	1,188.42	-529.27	0.00	0.00	
6,000.00	15.94	57.95	5,804.99	758.52	1,211.71	-539.64	0.00	0.00	
6,100.00	15.94	57.95	5,901.14	773.09	1,234.99	-550.01	0.00	0.00	
6,200.00	15.94	57.95	5,997.29	787.67	1,258.27	-560.38	0.00	0.00	
6,300.00	15.94	57.95	6,093.45	802.24	1,281.56	-570.75	0.00	0.00	
6,400.00	15.94	57.95	6,189.60	816.82	1,304.84	-581.12	0.00	0.00	
6,500.00	15.94	57.95	6,285.75	831.39	1,328.13	-591.49	0.00	0.00	
6,600.00	15.94	57.95	6,381.90	845.97	1,351.41	-601.86	0.00	0.00	
6,700.00	15.94	57.95	6,478.06	860.54	1,374.70	-612.23	0.00	0.00	
6,800.00	15.94	57.95	6,574.21	875.12	1,397.98	-622.60	0.00	0.00	
6,900.00	15.94	57.95	6,670.36	889.70	1,421.26	-632.97	0.00	0.00	
6,979.53	15.94	57.95	6,746.83	901.29	1,439.78	-641.22	0.00	0.00	
7,000.00	15.16	63.32	6,766.56	903.98	1,444.56	-643.06	8.00	-3.84	
7,100.00	13.64	95.34	6,863.56	908.76	1,468.01	-643.75	8.00	-1.52	
7,200.00	16.37	124.81	6,960.29	899.61	1,491.36	-630.73	8.00	2.73	
7,300.00	21.80	143.02	7,054.84	876.70	1,514.13	-604.25	8.00	5.43	
7,400.00	28.43	153.68	7,145.38	840.47	1,535.89	-564.83	8.00	6.63	
7,500.00	35.59	160.45	7,230.15	791.64	1,556.21	-513.24	8.00	7.16	
7,600.00	43.01	165.18	7,307.50	731.15	1,574.70	-450.48	8.00	7.42	
7,700.00	50.58	168.73	7,375.92	660.18	1,591.00	-377.77	8.00	7.57	
7,800.00	58.24	171.59	7,434.09	580.11	1,604.79	-296.52	8.00	7.66	
7,900.00	65.95	174.00	7,480.86	492.51	1,615.80	-208.32	8.00	7.71	
8,000.00	73.69	176.14	7,515.33	399.07	1,623.82	-114.89	8.00	7.74	COSSLETT 1J TPZ
8,100.00	81.46	178.11	7,536.83	301.61	1,628.69	-18.04	8.00	7.76	
8,200.00	89.23	180.01	7,544.93	202.03	1,630.31	80.34	8.00	7.77	
8,209.85	90.00	180.19	7,545.00	192.18	1,630.30	90.04	8.00	7.78	
8,300.00	90.00	180.19	7,545.00	102.03	1,630.00	178.81	0.00	0.00	
8,400.00	90.00	180.19	7,545.00	2.04	1,629.66	277.27	0.00	0.00	
8,500.00	90.00	180.19	7,545.00	-97.96	1,629.33	375.73	0.00	0.00	
8,600.00	90.00	180.19	7,545.00	-197.96	1,629.00	474.20	0.00	0.00	
8,700.00	90.00	180.19	7,545.00	-297.96	1,628.66	572.66	0.00	0.00	
8,800.00	90.00	180.19	7,545.00	-397.96	1,628.33	671.12	0.00	0.00	
8,900.00	90.00	180.19	7,545.00	-497.96	1,628.00	769.59	0.00	0.00	
9,000.00	90.00	180.19	7,545.00	-597.96	1,627.66	868.05	0.00	0.00	
9,100.00	90.00	180.19	7,545.00	-697.96	1,627.33	966.51	0.00	0.00	
9,200.00	90.00	180.19	7,545.00	-797.96	1,627.00	1,064.97	0.00	0.00	
9,300.00	90.00	180.19	7,545.00	-897.96	1,626.66	1,163.44	0.00	0.00	
9,400.00	90.00	180.19	7,545.00	-997.96	1,626.33	1,261.90	0.00	0.00	
9,500.00	90.00	180.19	7,545.00	-1,097.96	1,626.00	1,360.36	0.00	0.00	
9,600.00	90.00	180.19	7,545.00	-1,197.96	1,625.66	1,458.83	0.00	0.00	
9,700.00	90.00	180.19	7,545.00	-1,297.96	1,625.33	1,557.29	0.00	0.00	
9,800.00	90.00	180.19	7,545.00	-1,397.96	1,625.00	1,655.75	0.00	0.00	
9,900.00	90.00	180.19	7,545.00	-1,497.96	1,624.66	1,754.22	0.00	0.00	
10,000.00	90.00	180.19	7,545.00	-1,597.96	1,624.33	1,852.68	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 COSSLETT 1J-22H-B168
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 5196.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 5196.00usft
<b>Site:</b>	S22-T1N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	COSSLETT 1J-22H-B168	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #4		

### 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	180.19	7,545.00	-1,697.96	1,624.00	1,951.14	0.00	0.00	
10,200.00	90.00	180.19	7,545.00	-1,797.95	1,623.66	2,049.60	0.00	0.00	
10,300.00	90.00	180.19	7,545.00	-1,897.95	1,623.33	2,148.07	0.00	0.00	
10,400.00	90.00	180.19	7,545.00	-1,997.95	1,623.00	2,246.53	0.00	0.00	
10,500.00	90.00	180.19	7,545.00	-2,097.95	1,622.66	2,344.99	0.00	0.00	
10,600.00	90.00	180.19	7,545.00	-2,197.95	1,622.33	2,443.46	0.00	0.00	
10,700.00	90.00	180.19	7,545.00	-2,297.95	1,622.00	2,541.92	0.00	0.00	
10,800.00	90.00	180.19	7,545.00	-2,397.95	1,621.66	2,640.38	0.00	0.00	
10,900.00	90.00	180.19	7,545.00	-2,497.95	1,621.33	2,738.85	0.00	0.00	
11,000.00	90.00	180.19	7,545.00	-2,597.95	1,621.00	2,837.31	0.00	0.00	
11,100.00	90.00	180.19	7,545.00	-2,697.95	1,620.66	2,935.77	0.00	0.00	
11,200.00	90.00	180.19	7,545.00	-2,797.95	1,620.33	3,034.23	0.00	0.00	
11,300.00	90.00	180.19	7,545.00	-2,897.95	1,620.00	3,132.70	0.00	0.00	
11,400.00	90.00	180.19	7,545.00	-2,997.95	1,619.66	3,231.16	0.00	0.00	
11,500.00	90.00	180.19	7,545.00	-3,097.95	1,619.33	3,329.62	0.00	0.00	
11,600.00	90.00	180.19	7,545.00	-3,197.95	1,619.00	3,428.09	0.00	0.00	
11,700.00	90.00	180.19	7,545.00	-3,297.95	1,618.66	3,526.55	0.00	0.00	
11,800.00	90.00	180.19	7,545.00	-3,397.95	1,618.33	3,625.01	0.00	0.00	
11,900.00	90.00	180.19	7,545.00	-3,497.95	1,618.00	3,723.48	0.00	0.00	
12,000.00	90.00	180.19	7,545.00	-3,597.94	1,617.66	3,821.94	0.00	0.00	
12,100.00	90.00	180.19	7,545.00	-3,697.94	1,617.33	3,920.40	0.00	0.00	
12,200.00	90.00	180.19	7,545.00	-3,797.94	1,617.00	4,018.86	0.00	0.00	
12,300.00	90.00	180.19	7,545.00	-3,897.94	1,616.66	4,117.33	0.00	0.00	
12,400.00	90.00	180.19	7,545.00	-3,997.94	1,616.33	4,215.79	0.00	0.00	
12,500.00	90.00	180.19	7,545.00	-4,097.94	1,616.00	4,314.25	0.00	0.00	
12,600.00	90.00	180.19	7,545.00	-4,197.94	1,615.67	4,412.72	0.00	0.00	
12,700.00	90.00	180.19	7,545.00	-4,297.94	1,615.33	4,511.18	0.00	0.00	
12,800.00	90.00	180.19	7,545.00	-4,397.94	1,615.00	4,609.64	0.00	0.00	
12,900.00	90.00	180.19	7,545.00	-4,497.94	1,614.67	4,708.11	0.00	0.00	
13,000.00	90.00	180.19	7,545.00	-4,597.94	1,614.33	4,806.57	0.00	0.00	
13,100.00	90.00	180.19	7,545.00	-4,697.94	1,614.00	4,905.03	0.00	0.00	
13,200.00	90.00	180.19	7,545.00	-4,797.94	1,613.67	5,003.49	0.00	0.00	
13,300.00	90.00	180.19	7,545.00	-4,897.94	1,613.33	5,101.96	0.00	0.00	
13,400.00	90.00	180.19	7,545.00	-4,997.94	1,613.00	5,200.42	0.00	0.00	
13,500.00	90.00	180.19	7,545.00	-5,097.94	1,612.67	5,298.88	0.00	0.00	
13,600.00	90.00	180.19	7,545.00	-5,197.94	1,612.33	5,397.35	0.00	0.00	
13,700.00	90.00	180.19	7,545.00	-5,297.94	1,612.00	5,495.81	0.00	0.00	
13,800.00	90.00	180.19	7,545.00	-5,397.93	1,611.67	5,594.27	0.00	0.00	
13,900.00	90.00	180.19	7,545.00	-5,497.93	1,611.33	5,692.74	0.00	0.00	
14,000.00	90.00	180.19	7,545.00	-5,597.93	1,611.00	5,791.20	0.00	0.00	
14,100.00	90.00	180.19	7,545.00	-5,697.93	1,610.67	5,889.66	0.00	0.00	
14,200.00	90.00	180.19	7,545.00	-5,797.93	1,610.33	5,988.12	0.00	0.00	
14,300.00	90.00	180.19	7,545.00	-5,897.93	1,610.00	6,086.59	0.00	0.00	
14,400.00	90.00	180.19	7,545.00	-5,997.93	1,609.67	6,185.05	0.00	0.00	
14,500.00	90.00	180.19	7,545.00	-6,097.93	1,609.33	6,283.51	0.00	0.00	
14,600.00	90.00	180.19	7,545.00	-6,197.93	1,609.00	6,381.98	0.00	0.00	
14,700.00	90.00	180.19	7,545.00	-6,297.93	1,608.67	6,480.44	0.00	0.00	
14,800.00	90.00	180.19	7,545.00	-6,397.93	1,608.33	6,578.90	0.00	0.00	
14,900.00	90.00	180.19	7,545.00	-6,497.93	1,608.00	6,677.37	0.00	0.00	
15,000.00	90.00	180.19	7,545.00	-6,597.93	1,607.67	6,775.83	0.00	0.00	
15,100.00	90.00	180.19	7,545.00	-6,697.93	1,607.33	6,874.29	0.00	0.00	
15,200.00	90.00	180.19	7,545.00	-6,797.93	1,607.00	6,972.76	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 COSSLETT 1J-22H-B168
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	23' KB @ 5196.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	23' KB @ 5196.00usft
<b>Site:</b>	S22-T1N-R68W	<b>North Reference:</b>	True
<b>Well:</b>	COSSLETT 1J-22H-B168	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #4		

### 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
15,300.00	90.00	180.19	7,545.00	-6,897.93	1,606.67	7,071.22	0.00	0.00	
15,400.00	90.00	180.19	7,545.00	-6,997.93	1,606.33	7,169.68	0.00	0.00	
15,500.00	90.00	180.19	7,545.00	-7,097.93	1,606.00	7,268.14	0.00	0.00	
15,600.00	90.00	180.19	7,545.00	-7,197.92	1,605.67	7,366.61	0.00	0.00	
15,700.00	90.00	180.19	7,545.00	-7,297.92	1,605.33	7,465.07	0.00	0.00	
15,800.00	90.00	180.19	7,545.00	-7,397.92	1,605.00	7,563.53	0.00	0.00	
15,900.00	90.00	180.19	7,545.00	-7,497.92	1,604.67	7,662.00	0.00	0.00	
16,000.00	90.00	180.19	7,545.00	-7,597.92	1,604.33	7,760.46	0.00	0.00	
16,100.00	90.00	180.19	7,545.00	-7,697.92	1,604.00	7,858.92	0.00	0.00	
16,200.00	90.00	180.19	7,545.00	-7,797.92	1,603.67	7,957.39	0.00	0.00	
16,300.00	90.00	180.19	7,545.00	-7,897.92	1,603.33	8,055.85	0.00	0.00	
16,400.00	90.00	180.19	7,545.00	-7,997.92	1,603.00	8,154.31	0.00	0.00	
16,500.00	90.00	180.19	7,545.00	-8,097.92	1,602.67	8,252.77	0.00	0.00	
16,600.00	90.00	180.19	7,545.00	-8,197.92	1,602.33	8,351.24	0.00	0.00	
16,700.00	90.00	180.19	7,545.00	-8,297.92	1,602.00	8,449.70	0.00	0.00	
16,800.00	90.00	180.19	7,545.00	-8,397.92	1,601.67	8,548.16	0.00	0.00	
16,900.00	90.00	180.19	7,545.00	-8,497.92	1,601.33	8,646.63	0.00	0.00	
17,000.00	90.00	180.19	7,545.00	-8,597.92	1,601.00	8,745.09	0.00	0.00	
17,100.00	90.00	180.19	7,545.00	-8,697.92	1,600.67	8,843.55	0.00	0.00	
17,200.00	90.00	180.19	7,545.00	-8,797.92	1,600.33	8,942.02	0.00	0.00	
17,300.00	90.00	180.19	7,545.00	-8,897.92	1,600.00	9,040.48	0.00	0.00	
17,400.00	90.00	180.19	7,545.00	-8,997.91	1,599.67	9,138.94	0.00	0.00	
17,500.00	90.00	180.19	7,545.00	-9,097.91	1,599.33	9,237.40	0.00	0.00	
17,594.85	90.00	180.19	7,545.00	-9,192.77	1,599.02	9,330.80	0.00	0.00	COSSLETT 1J PBHL

### 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
COSSLETT 1J TPZ - plan misses target center by 170.78usft at 8000.00usft MD (7515.33 TVD, 399.07 N, 1623.82 E) - Point	0.00	0.00	7,678.43	449.59	1,620.21	1,258,797.31	3,145,035.01	40.042624	-104.981975
COSSLETT 1J PBHL - plan hits target center - Point	0.00	0.00	7,545.00	-9,192.77	1,599.02	1,249,154.99	3,145,069.52	40.016154	-104.982053