



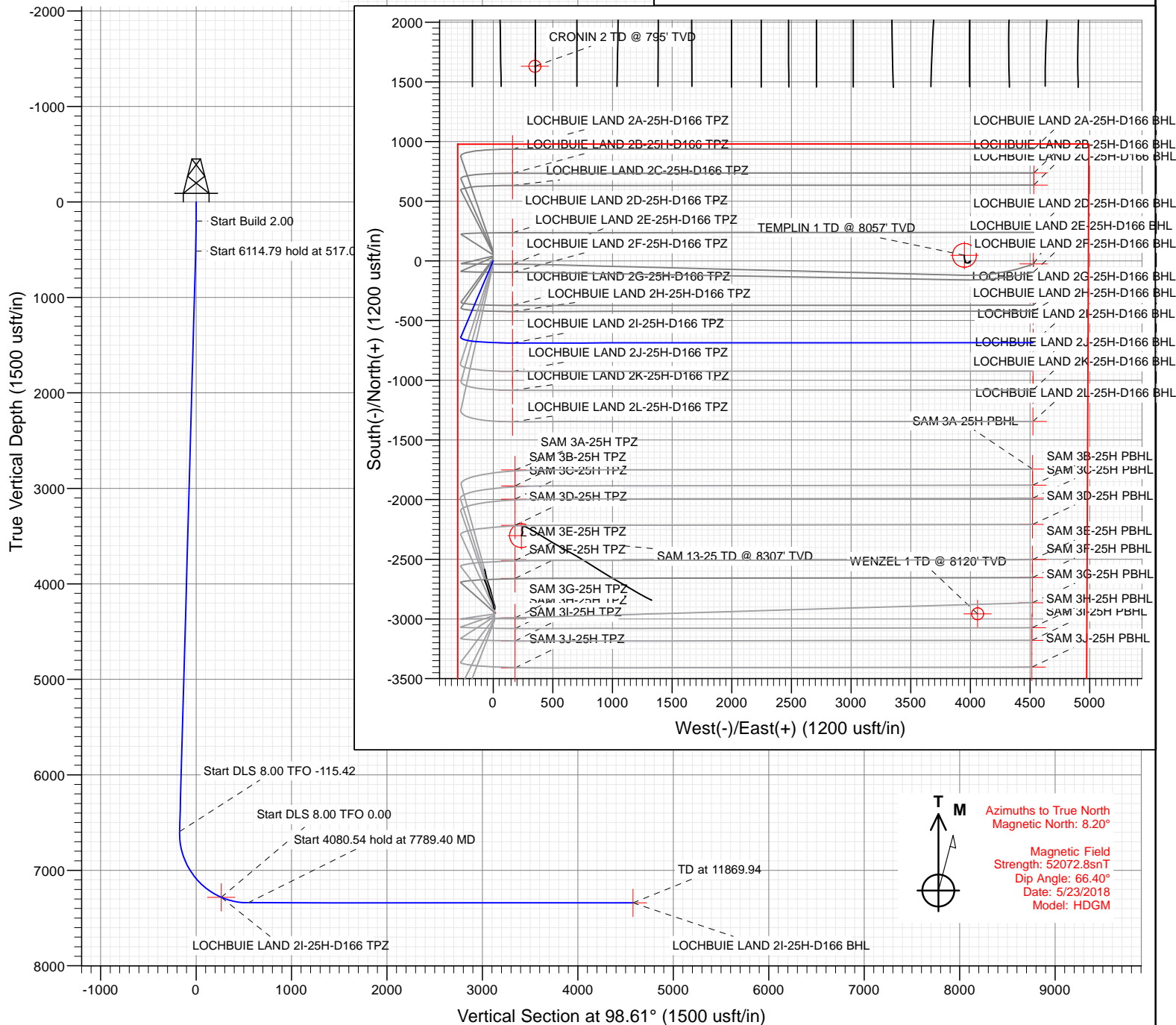
**CRESTONE PEAK**  
RESOURCES

# 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	517.02	6.34	203.06	516.37	-16.12	-6.86	2.00	203.06	-4.37	
4	6631.81	6.34	203.06	6593.76	-637.46	-271.34	0.00	0.00	-172.83	
5	7499.14	66.78	89.97	7282.00	-687.60	162.86	8.00	-115.42	263.97	LOCHBUIE LAND 2I-25H-D166 TPZ
6	7789.40	90.00	89.97	7340.01	-687.45	445.23	8.00	0.00	543.14	
7	11869.94	90.00	89.97	7340.00	-685.36	4525.77	0.00	0.00	4577.37	LOCHBUIE LAND 2I-25H-D166 BHL

Project: DJ BASIN  
Site: S25-T1N-R66W (LOCHBUIE LAND)  
Well: LOCHBUIE LAND 2I-25H-D166  
Wellbore: OH  
Design: PLAN #1

PLAN #1 LOCHBUIE LAND 2I-25H-D166 KB @ 5099.00usft Ground Level @ 5076.00 North American Datum 1983 Well LOCHBUIE LAND 2I-25H-D166 - Slot LOCHBUIE LAND 2I-25H-D166 SHL, True North									
Type	Target	No Target (Freehand)	Azimuth	Origin	Type	N/S	E/W	From TVD	
Name	TVD	+N/-S	+E/-W	Latitude	Longitude				
LOCHBUIE LAND 2I-25H-D166 TPZ	7282.00	-687.60	162.86	40.024962	-104.733319				
LOCHBUIE LAND 2I-25H-D166 BHL	7340.00	-685.36	4525.77	40.024967	-104.717740				



**CATHEDRAL**



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well LOCHBUIE LAND 2I-25H-D166 - Slot LOCH
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	KB @ 5099.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	KB @ 5099.00usft
<b>Site:</b>	S25-T1N-R66W (LOCHBUIE LAND)	<b>North Reference:</b>	True
<b>Well:</b>	LOCHBUIE LAND 2I-25H-D166	<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		S25-T1N-R66W (LOCHBUIE LAND)			
Site Position:		Northing:	1,253,634.19 usft	Latitude:	40.027069
From:	Map	Easting:	3,214,538.35 usft	Longitude:	-104.733898
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.50 °

Well	LOCHBUIE LAND 2I-25H-D166 - Slot LOCHBUIE LAND 2I-25H-D166 SHL					
Well Position	+N/-S	0.00 usft	Northing:	1,253,554.19 usft	Latitude:	40.026850
	+E/-W	0.00 usft	Easting:	3,214,538.35 usft	Longitude:	-104.733901
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,076.00 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	5/23/2018	8.20	66.40	52,072.80000000

<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	98.61

<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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
517.02	6.34	203.06	516.37	-16.12	-6.86	2.00	2.00	0.00	203.06	
6,631.81	6.34	203.06	6,593.76	-637.46	-271.34	0.00	0.00	0.00	0.00	
7,499.14	66.78	89.97	7,282.00	-687.60	162.86	8.00	6.97	-13.04	-115.42	LOCHBUIE LAND 2I-
7,789.40	90.00	89.97	7,340.01	-687.45	445.23	8.00	8.00	0.00	0.00	
11,869.94	90.00	89.97	7,340.00	-685.36	4,525.77	0.00	0.00	0.00	0.00	LOCHBUIE LAND 2I-

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well LOCHBUIE LAND 2I-25H-D166 - Slot LOCH
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	KB @ 5099.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	KB @ 5099.00usft
<b>Site:</b>	S25-T1N-R66W (LOCHBUIE LAND)	<b>North Reference:</b>	True
<b>Well:</b>	LOCHBUIE LAND 2I-25H-D166	<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	2.00	203.06	299.98	-1.61	-0.68	-0.44	2.00	2.00	
400.00	4.00	203.06	399.84	-6.42	-2.73	-1.74	2.00	2.00	
500.00	6.00	203.06	499.45	-14.44	-6.15	-3.92	2.00	2.00	
517.02	6.34	203.06	516.37	-16.12	-6.86	-4.37	2.00	2.00	
600.00	6.34	203.06	598.85	-24.55	-10.45	-6.66	0.00	0.00	
700.00	6.34	203.06	698.23	-34.72	-14.78	-9.41	0.00	0.00	
800.00	6.34	203.06	797.62	-44.88	-19.10	-12.17	0.00	0.00	
900.00	6.34	203.06	897.01	-55.04	-23.43	-14.92	0.00	0.00	
1,000.00	6.34	203.06	996.40	-65.20	-27.75	-17.68	0.00	0.00	
1,100.00	6.34	203.06	1,095.79	-75.36	-32.08	-20.43	0.00	0.00	
1,200.00	6.34	203.06	1,195.18	-85.52	-36.40	-23.19	0.00	0.00	
1,300.00	6.34	203.06	1,294.56	-95.68	-40.73	-25.94	0.00	0.00	
1,400.00	6.34	203.06	1,393.95	-105.84	-45.05	-28.70	0.00	0.00	
1,500.00	6.34	203.06	1,493.34	-116.01	-49.38	-31.45	0.00	0.00	
1,600.00	6.34	203.06	1,592.73	-126.17	-53.70	-34.21	0.00	0.00	
1,700.00	6.34	203.06	1,692.12	-136.33	-58.03	-36.96	0.00	0.00	
1,800.00	6.34	203.06	1,791.51	-146.49	-62.35	-39.72	0.00	0.00	
1,900.00	6.34	203.06	1,890.89	-156.65	-66.68	-42.47	0.00	0.00	
2,000.00	6.34	203.06	1,990.28	-166.81	-71.00	-45.23	0.00	0.00	
2,100.00	6.34	203.06	2,089.67	-176.97	-75.33	-47.98	0.00	0.00	
2,200.00	6.34	203.06	2,189.06	-187.13	-79.65	-50.74	0.00	0.00	
2,300.00	6.34	203.06	2,288.45	-197.29	-83.98	-53.49	0.00	0.00	
2,400.00	6.34	203.06	2,387.84	-207.46	-88.30	-56.25	0.00	0.00	
2,500.00	6.34	203.06	2,487.22	-217.62	-92.63	-59.00	0.00	0.00	
2,600.00	6.34	203.06	2,586.61	-227.78	-96.95	-61.76	0.00	0.00	
2,700.00	6.34	203.06	2,686.00	-237.94	-101.28	-64.51	0.00	0.00	
2,800.00	6.34	203.06	2,785.39	-248.10	-105.60	-67.27	0.00	0.00	
2,900.00	6.34	203.06	2,884.78	-258.26	-109.93	-70.02	0.00	0.00	
3,000.00	6.34	203.06	2,984.17	-268.42	-114.25	-72.78	0.00	0.00	
3,100.00	6.34	203.06	3,083.55	-278.58	-118.58	-75.53	0.00	0.00	
3,200.00	6.34	203.06	3,182.94	-288.74	-122.91	-78.29	0.00	0.00	
3,300.00	6.34	203.06	3,282.33	-298.91	-127.23	-81.04	0.00	0.00	
3,400.00	6.34	203.06	3,381.72	-309.07	-131.56	-83.80	0.00	0.00	
3,500.00	6.34	203.06	3,481.11	-319.23	-135.88	-86.55	0.00	0.00	
3,600.00	6.34	203.06	3,580.50	-329.39	-140.21	-89.31	0.00	0.00	
3,700.00	6.34	203.06	3,679.88	-339.55	-144.53	-92.06	0.00	0.00	
3,800.00	6.34	203.06	3,779.27	-349.71	-148.86	-94.82	0.00	0.00	
3,900.00	6.34	203.06	3,878.66	-359.87	-153.18	-97.57	0.00	0.00	
4,000.00	6.34	203.06	3,978.05	-370.03	-157.51	-100.33	0.00	0.00	
4,100.00	6.34	203.06	4,077.44	-380.19	-161.83	-103.08	0.00	0.00	
4,200.00	6.34	203.06	4,176.83	-390.36	-166.16	-105.84	0.00	0.00	
4,300.00	6.34	203.06	4,276.21	-400.52	-170.48	-108.59	0.00	0.00	
4,400.00	6.34	203.06	4,375.60	-410.68	-174.81	-111.35	0.00	0.00	
4,500.00	6.34	203.06	4,474.99	-420.84	-179.13	-114.10	0.00	0.00	
4,600.00	6.34	203.06	4,574.38	-431.00	-183.46	-116.86	0.00	0.00	
4,700.00	6.34	203.06	4,673.77	-441.16	-187.78	-119.61	0.00	0.00	
4,800.00	6.34	203.06	4,773.16	-451.32	-192.11	-122.37	0.00	0.00	
4,900.00	6.34	203.06	4,872.54	-461.48	-196.43	-125.12	0.00	0.00	
5,000.00	6.34	203.06	4,971.93	-471.64	-200.76	-127.88	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 LOCHBUIE LAND 2I-25H-D166 - Slot LOCH
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	KB @ 5099.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	KB @ 5099.00usft
<b>Site:</b>	S25-T1N-R66W (LOCHBUIE LAND)	<b>North Reference:</b>	True
<b>Well:</b>	LOCHBUIE LAND 2I-25H-D166	<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
5,100.00	6.34	203.06	5,071.32	-481.81	-205.08	-130.63	0.00	0.00	
5,200.00	6.34	203.06	5,170.71	-491.97	-209.41	-133.39	0.00	0.00	
5,300.00	6.34	203.06	5,270.10	-502.13	-213.73	-136.14	0.00	0.00	
5,400.00	6.34	203.06	5,369.49	-512.29	-218.06	-138.90	0.00	0.00	
5,500.00	6.34	203.06	5,468.88	-522.45	-222.38	-141.65	0.00	0.00	
5,600.00	6.34	203.06	5,568.26	-532.61	-226.71	-144.41	0.00	0.00	
5,700.00	6.34	203.06	5,667.65	-542.77	-231.03	-147.16	0.00	0.00	
5,800.00	6.34	203.06	5,767.04	-552.93	-235.36	-149.92	0.00	0.00	
5,900.00	6.34	203.06	5,866.43	-563.10	-239.68	-152.67	0.00	0.00	
6,000.00	6.34	203.06	5,965.82	-573.26	-244.01	-155.43	0.00	0.00	
6,100.00	6.34	203.06	6,065.21	-583.42	-248.33	-158.18	0.00	0.00	
6,200.00	6.34	203.06	6,164.59	-593.58	-252.66	-160.94	0.00	0.00	
6,300.00	6.34	203.06	6,263.98	-603.74	-256.98	-163.69	0.00	0.00	
6,400.00	6.34	203.06	6,363.37	-613.90	-261.31	-166.45	0.00	0.00	
6,500.00	6.34	203.06	6,462.76	-624.06	-265.63	-169.20	0.00	0.00	
6,600.00	6.34	203.06	6,562.15	-634.22	-269.96	-171.96	0.00	0.00	
6,631.81	6.34	203.06	6,593.76	-637.46	-271.34	-172.83	0.00	0.00	
6,700.00	6.34	151.99	6,661.59	-644.25	-271.04	-171.52	8.00	0.00	
6,800.00	12.14	115.28	6,760.32	-653.63	-258.92	-158.14	8.00	5.80	
6,900.00	19.55	103.90	6,856.48	-662.15	-233.13	-131.36	8.00	7.41	
7,000.00	27.29	98.71	6,948.18	-669.66	-194.16	-91.71	8.00	7.74	
7,100.00	35.14	95.69	7,033.65	-675.99	-142.79	-39.96	8.00	7.85	
7,200.00	43.03	93.67	7,111.21	-681.04	-80.00	22.87	8.00	7.90	
7,300.00	50.96	92.17	7,179.36	-684.70	-7.03	95.57	8.00	7.92	
7,400.00	58.90	90.97	7,236.78	-686.90	74.72	176.73	8.00	7.94	
7,499.14	66.78	89.97	7,282.00	-687.60	162.86	263.97	8.00	7.95	LOCHBUIE LAND 2I-25H-D166 TPZ
7,500.00	66.85	89.97	7,282.34	-687.59	163.64	264.75	8.00	8.00	
7,600.00	74.85	89.97	7,315.12	-687.55	258.03	358.07	8.00	8.00	
7,700.00	82.85	89.97	7,334.44	-687.49	356.07	454.99	8.00	8.00	
7,789.40	90.00	89.97	7,340.01	-687.45	445.23	543.14	8.00	8.00	
7,800.00	90.00	89.97	7,340.01	-687.44	455.83	553.62	0.00	0.00	
7,900.00	90.00	89.97	7,340.01	-687.39	555.83	652.49	0.00	0.00	
8,000.00	90.00	89.97	7,340.01	-687.34	655.83	751.35	0.00	0.00	
8,100.00	90.00	89.97	7,340.01	-687.29	755.83	850.22	0.00	0.00	
8,200.00	90.00	89.97	7,340.01	-687.24	855.83	949.08	0.00	0.00	
8,300.00	90.00	89.97	7,340.01	-687.19	955.83	1,047.95	0.00	0.00	
8,400.00	90.00	89.97	7,340.01	-687.14	1,055.83	1,146.81	0.00	0.00	
8,500.00	90.00	89.97	7,340.01	-687.09	1,155.83	1,245.68	0.00	0.00	
8,600.00	90.00	89.97	7,340.01	-687.03	1,255.83	1,344.55	0.00	0.00	
8,700.00	90.00	89.97	7,340.01	-686.98	1,355.83	1,443.41	0.00	0.00	
8,800.00	90.00	89.97	7,340.01	-686.93	1,455.83	1,542.28	0.00	0.00	
8,900.00	90.00	89.97	7,340.01	-686.88	1,555.83	1,641.14	0.00	0.00	
9,000.00	90.00	89.97	7,340.01	-686.83	1,655.83	1,740.01	0.00	0.00	
9,100.00	90.00	89.97	7,340.01	-686.78	1,755.83	1,838.87	0.00	0.00	
9,200.00	90.00	89.97	7,340.01	-686.73	1,855.83	1,937.74	0.00	0.00	
9,300.00	90.00	89.97	7,340.01	-686.68	1,955.83	2,036.60	0.00	0.00	
9,400.00	90.00	89.97	7,340.01	-686.63	2,055.83	2,135.47	0.00	0.00	
9,500.00	90.00	89.97	7,340.01	-686.57	2,155.83	2,234.33	0.00	0.00	
9,600.00	90.00	89.97	7,340.01	-686.52	2,255.83	2,333.20	0.00	0.00	
9,700.00	90.00	89.97	7,340.01	-686.47	2,355.83	2,432.06	0.00	0.00	
9,800.00	90.00	89.97	7,340.01	-686.42	2,455.83	2,530.93	0.00	0.00	
9,900.00	90.00	89.97	7,340.01	-686.37	2,555.83	2,629.79	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 LOCHBUIE LAND 2I-25H-D166 - Slot LOCH
<b>Company:</b>	Crestone Peak Resources	<b>TVD Reference:</b>	KB @ 5099.00usft
<b>Project:</b>	DJ BASIN	<b>MD Reference:</b>	KB @ 5099.00usft
<b>Site:</b>	S25-T1N-R66W (LOCHBUIE LAND)	<b>North Reference:</b>	True
<b>Well:</b>	LOCHBUIE LAND 2I-25H-D166	<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
10,000.00	90.00	89.97	7,340.01	-686.32	2,655.83	2,728.66	0.00	0.00	
10,100.00	90.00	89.97	7,340.01	-686.27	2,755.83	2,827.52	0.00	0.00	
10,200.00	90.00	89.97	7,340.01	-686.22	2,855.83	2,926.39	0.00	0.00	
10,300.00	90.00	89.97	7,340.01	-686.17	2,955.83	3,025.25	0.00	0.00	
10,400.00	90.00	89.97	7,340.00	-686.11	3,055.83	3,124.12	0.00	0.00	
10,500.00	90.00	89.97	7,340.00	-686.06	3,155.83	3,222.98	0.00	0.00	
10,600.00	90.00	89.97	7,340.00	-686.01	3,255.83	3,321.85	0.00	0.00	
10,700.00	90.00	89.97	7,340.00	-685.96	3,355.83	3,420.71	0.00	0.00	
10,800.00	90.00	89.97	7,340.00	-685.91	3,455.83	3,519.58	0.00	0.00	
10,900.00	90.00	89.97	7,340.00	-685.86	3,555.83	3,618.44	0.00	0.00	
11,000.00	90.00	89.97	7,340.00	-685.81	3,655.83	3,717.31	0.00	0.00	
11,100.00	90.00	89.97	7,340.00	-685.76	3,755.83	3,816.17	0.00	0.00	
11,200.00	90.00	89.97	7,340.00	-685.70	3,855.83	3,915.04	0.00	0.00	
11,300.00	90.00	89.97	7,340.00	-685.65	3,955.83	4,013.90	0.00	0.00	
11,400.00	90.00	89.97	7,340.00	-685.60	4,055.83	4,112.77	0.00	0.00	
11,500.00	90.00	89.97	7,340.00	-685.55	4,155.83	4,211.63	0.00	0.00	
11,600.00	90.00	89.97	7,340.00	-685.50	4,255.83	4,310.50	0.00	0.00	
11,700.00	90.00	89.97	7,340.00	-685.45	4,355.83	4,409.36	0.00	0.00	
11,800.00	90.00	89.97	7,340.00	-685.40	4,455.83	4,508.23	0.00	0.00	
11,869.94	90.00	89.97	7,340.00	-685.36	4,525.77	4,577.37	0.00	0.00	LOCHBUIE LAND 2I-25H-D166 BHL

### Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
LOCHBUIE LAND 2I-25I - plan hits target center - Point	0.00	0.00	7,282.00	-687.60	162.86	1,252,868.03	3,214,707.14	40.024962	-104.733319
LOCHBUIE LAND 2I-25I - plan hits target center - Point	0.00	0.00	7,340.00	-685.36	4,525.77	1,252,907.96	3,219,069.88	40.024967	-104.717740