



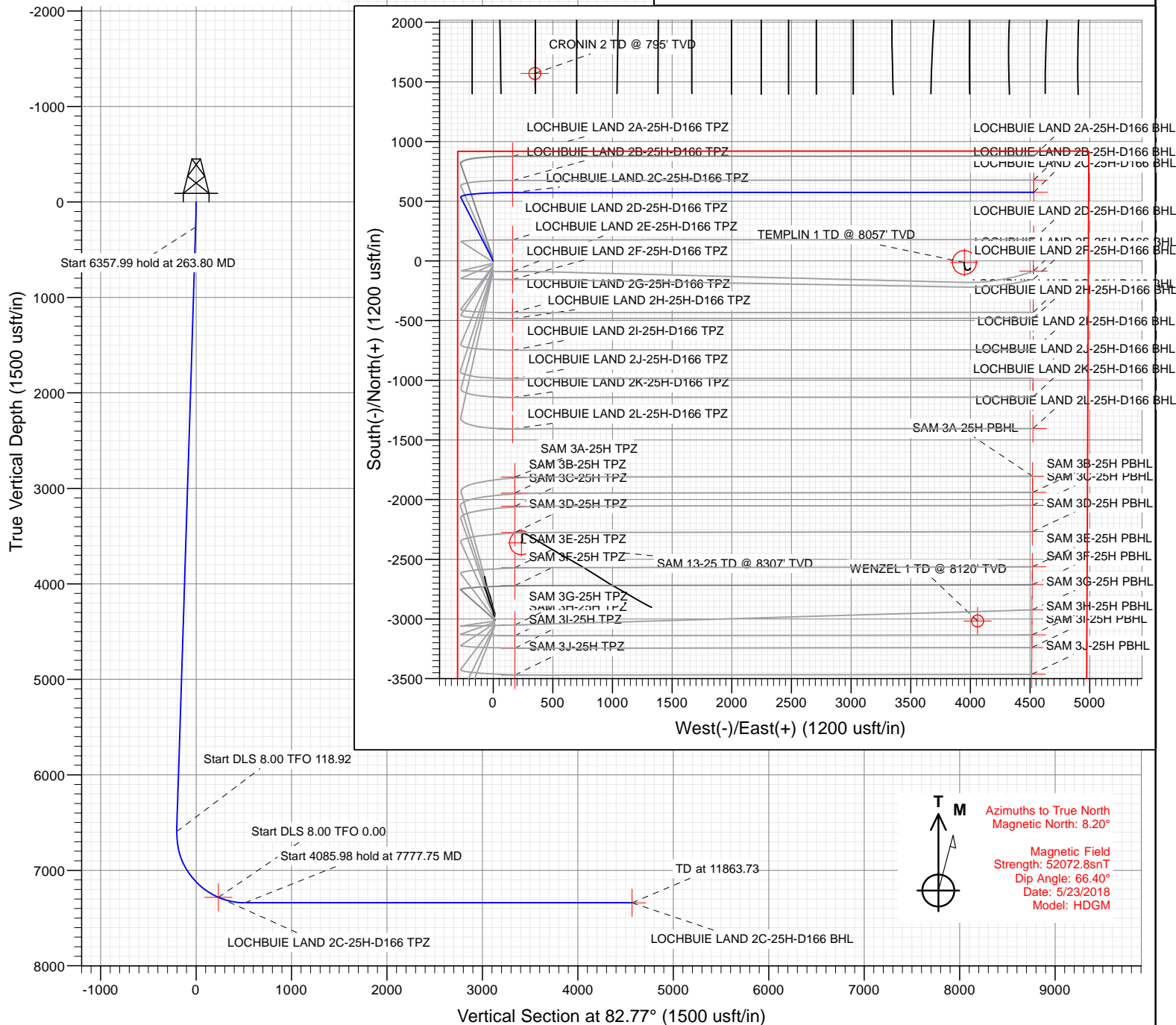
CRESTONE PEAK
RESOURCES

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	263.80	5.28	332.93	263.43	10.81	-5.52	2.00	332.93	-4.12	
3	6621.79	5.28	332.93	6594.48	531.42	-271.57	0.00	0.00	-202.57	
4	7487.88	66.81	89.97	7282.13	572.17	162.61	8.00	118.92	233.29	LOCHBUIE LAND 2C-25H-D166 TPZ
5	7777.75	90.00	89.97	7340.00	572.32	444.64	8.00	0.00	513.09	
6	11863.73	90.00	89.97	7340.00	574.41	4530.61	0.00	0.00	4566.88	LOCHBUIE LAND 2C-25H-D166 BHL

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

PLAN #1 LOCHBUIE LAND 2C-25H-D166 KB @ 5101.00usft Ground Level @ 5078.00 North American Datum 1983 Well LOCHBUIE LAND 2C-25H-D166 - Slot LOCHBUIE LAND 2C-25H-D166 SHL, True North									
Type	TD	Target	No Target (Freehand)	Azimuth	Origin	Type	N/S	E/W	From TVD
Name	TVD	+N/-S	+E/-W	Latitude	Longitude				
LOCHBUIE LAND 2C-25H-D166 TPZ	7282.13	572.17	162.61	40.028565	-104.733318				
LOCHBUIE LAND 2C-25H-D166 BHL	7340.00	574.41	4530.61	40.028590	-104.717720				



WELL DETAILS: LOCHBUIE LAND 2C-25H-D166

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1253614.19	3214538.35	40.027014	-104.733899



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well LOCHBUIE LAND 2C-25H-D166 - Slot LOC
Company:	Crestone Peak Resources	TVD Reference:	KB @ 5101.00usft
Project:	DJ BASIN	MD Reference:	KB @ 5101.00usft
Site:	S25-T1N-R66W (LOCHBUIE LAND)	North Reference:	True
Well:	LOCHBUIE LAND 2C-25H-D166	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

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		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 2C-25H-D166 - Slot LOCHBUIE LAND 2C-25H-D166 SHL					
Well Position	+N/-S	0.00 usft	Northing:	1,253,614.19 usft	Latitude:	40.027014
	+E/-W	0.00 usft	Easting:	3,214,538.35 usft	Longitude:	-104.733899
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,078.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	HDGM	5/23/2018	8.20	66.40	52,072.80000000

Design	PLAN #1				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.00	0.00	0.00	82.77	

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)	(°)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
263.80	5.28	332.93	263.43	10.81	-5.52	2.00	2.00	0.00	332.93	
6,621.79	5.28	332.93	6,594.48	531.42	-271.57	0.00	0.00	0.00	0.00	
7,487.88	66.81	89.97	7,282.13	572.17	162.61	8.00	7.10	13.51	118.92	LOCHBUIE LAND 2C
7,777.75	90.00	89.97	7,340.00	572.32	444.64	8.00	8.00	0.00	0.00	
11,863.73	90.00	89.97	7,340.00	574.41	4,530.61	0.00	0.00	0.00	0.00	LOCHBUIE LAND 2C

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well LOCHBUIE LAND 2C-25H-D166 - Slot LOC
Company:	Crestone Peak Resources	TVD Reference:	KB @ 5101.00usft
Project:	DJ BASIN	MD Reference:	KB @ 5101.00usft
Site:	S25-T1N-R66W (LOCHBUIE LAND)	North Reference:	True
Well:	LOCHBUIE LAND 2C-25H-D166	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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	2.00	332.93	99.98	1.55	-0.79	-0.59	2.00	2.00	
200.00	4.00	332.93	199.84	6.21	-3.18	-2.37	2.00	2.00	
263.80	5.28	332.93	263.43	10.81	-5.52	-4.12	2.00	2.00	
300.00	5.28	332.93	299.47	13.77	-7.04	-5.25	0.00	0.00	
400.00	5.28	332.93	399.05	21.96	-11.22	-8.37	0.00	0.00	
500.00	5.28	332.93	498.63	30.15	-15.41	-11.49	0.00	0.00	
600.00	5.28	332.93	598.20	38.34	-19.59	-14.61	0.00	0.00	
700.00	5.28	332.93	697.78	46.52	-23.78	-17.74	0.00	0.00	
800.00	5.28	332.93	797.36	54.71	-27.96	-20.86	0.00	0.00	
900.00	5.28	332.93	896.93	62.90	-32.14	-23.98	0.00	0.00	
1,000.00	5.28	332.93	996.51	71.09	-36.33	-27.10	0.00	0.00	
1,100.00	5.28	332.93	1,096.08	79.28	-40.51	-30.22	0.00	0.00	
1,200.00	5.28	332.93	1,195.66	87.47	-44.70	-33.34	0.00	0.00	
1,300.00	5.28	332.93	1,295.24	95.65	-48.88	-36.46	0.00	0.00	
1,400.00	5.28	332.93	1,394.81	103.84	-53.07	-39.58	0.00	0.00	
1,500.00	5.28	332.93	1,494.39	112.03	-57.25	-42.71	0.00	0.00	
1,600.00	5.28	332.93	1,593.97	120.22	-61.44	-45.83	0.00	0.00	
1,700.00	5.28	332.93	1,693.54	128.41	-65.62	-48.95	0.00	0.00	
1,800.00	5.28	332.93	1,793.12	136.60	-69.80	-52.07	0.00	0.00	
1,900.00	5.28	332.93	1,892.70	144.78	-73.99	-55.19	0.00	0.00	
2,000.00	5.28	332.93	1,992.27	152.97	-78.17	-58.31	0.00	0.00	
2,100.00	5.28	332.93	2,091.85	161.16	-82.36	-61.43	0.00	0.00	
2,200.00	5.28	332.93	2,191.42	169.35	-86.54	-64.56	0.00	0.00	
2,300.00	5.28	332.93	2,291.00	177.54	-90.73	-67.68	0.00	0.00	
2,400.00	5.28	332.93	2,390.58	185.72	-94.91	-70.80	0.00	0.00	
2,500.00	5.28	332.93	2,490.15	193.91	-99.10	-73.92	0.00	0.00	
2,600.00	5.28	332.93	2,589.73	202.10	-103.28	-77.04	0.00	0.00	
2,700.00	5.28	332.93	2,689.31	210.29	-107.46	-80.16	0.00	0.00	
2,800.00	5.28	332.93	2,788.88	218.48	-111.65	-83.28	0.00	0.00	
2,900.00	5.28	332.93	2,888.46	226.67	-115.83	-86.40	0.00	0.00	
3,000.00	5.28	332.93	2,988.03	234.85	-120.02	-89.53	0.00	0.00	
3,100.00	5.28	332.93	3,087.61	243.04	-124.20	-92.65	0.00	0.00	
3,200.00	5.28	332.93	3,187.19	251.23	-128.39	-95.77	0.00	0.00	
3,300.00	5.28	332.93	3,286.76	259.42	-132.57	-98.89	0.00	0.00	
3,400.00	5.28	332.93	3,386.34	267.61	-136.76	-102.01	0.00	0.00	
3,500.00	5.28	332.93	3,485.92	275.80	-140.94	-105.13	0.00	0.00	
3,600.00	5.28	332.93	3,585.49	283.98	-145.12	-108.25	0.00	0.00	
3,700.00	5.28	332.93	3,685.07	292.17	-149.31	-111.38	0.00	0.00	
3,800.00	5.28	332.93	3,784.65	300.36	-153.49	-114.50	0.00	0.00	
3,900.00	5.28	332.93	3,884.22	308.55	-157.68	-117.62	0.00	0.00	
4,000.00	5.28	332.93	3,983.80	316.74	-161.86	-120.74	0.00	0.00	
4,100.00	5.28	332.93	4,083.37	324.92	-166.05	-123.86	0.00	0.00	
4,200.00	5.28	332.93	4,182.95	333.11	-170.23	-126.98	0.00	0.00	
4,300.00	5.28	332.93	4,282.53	341.30	-174.42	-130.10	0.00	0.00	
4,400.00	5.28	332.93	4,382.10	349.49	-178.60	-133.22	0.00	0.00	
4,500.00	5.28	332.93	4,481.68	357.68	-182.79	-136.35	0.00	0.00	
4,600.00	5.28	332.93	4,581.26	365.87	-186.97	-139.47	0.00	0.00	
4,700.00	5.28	332.93	4,680.83	374.05	-191.15	-142.59	0.00	0.00	
4,800.00	5.28	332.93	4,780.41	382.24	-195.34	-145.71	0.00	0.00	
4,900.00	5.28	332.93	4,879.98	390.43	-199.52	-148.83	0.00	0.00	
5,000.00	5.28	332.93	4,979.56	398.62	-203.71	-151.95	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well LOCHBUIE LAND 2C-25H-D166 - Slot LOC
Company:	Crestone Peak Resources	TVD Reference:	KB @ 5101.00usft
Project:	DJ BASIN	MD Reference:	KB @ 5101.00usft
Site:	S25-T1N-R66W (LOCHBUIE LAND)	North Reference:	True
Well:	LOCHBUIE LAND 2C-25H-D166	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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	5.28	332.93	5,079.14	406.81	-207.89	-155.07	0.00	0.00	
5,200.00	5.28	332.93	5,178.71	415.00	-212.08	-158.20	0.00	0.00	
5,300.00	5.28	332.93	5,278.29	423.18	-216.26	-161.32	0.00	0.00	
5,400.00	5.28	332.93	5,377.87	431.37	-220.45	-164.44	0.00	0.00	
5,500.00	5.28	332.93	5,477.44	439.56	-224.63	-167.56	0.00	0.00	
5,600.00	5.28	332.93	5,577.02	447.75	-228.81	-170.68	0.00	0.00	
5,700.00	5.28	332.93	5,676.60	455.94	-233.00	-173.80	0.00	0.00	
5,800.00	5.28	332.93	5,776.17	464.12	-237.18	-176.92	0.00	0.00	
5,900.00	5.28	332.93	5,875.75	472.31	-241.37	-180.04	0.00	0.00	
6,000.00	5.28	332.93	5,975.32	480.50	-245.55	-183.17	0.00	0.00	
6,100.00	5.28	332.93	6,074.90	488.69	-249.74	-186.29	0.00	0.00	
6,200.00	5.28	332.93	6,174.48	496.88	-253.92	-189.41	0.00	0.00	
6,300.00	5.28	332.93	6,274.05	505.07	-258.11	-192.53	0.00	0.00	
6,400.00	5.28	332.93	6,373.63	513.25	-262.29	-195.65	0.00	0.00	
6,500.00	5.28	332.93	6,473.21	521.44	-266.47	-198.77	0.00	0.00	
6,600.00	5.28	332.93	6,572.78	529.63	-270.66	-201.89	0.00	0.00	
6,621.79	5.28	332.93	6,594.48	531.42	-271.57	-202.57	0.00	0.00	
6,700.00	5.91	40.73	6,672.39	537.68	-270.58	-200.80	8.00	0.82	
6,800.00	12.57	70.71	6,771.09	545.19	-256.93	-186.31	8.00	6.65	
6,900.00	20.21	79.28	6,866.97	552.00	-229.64	-158.39	8.00	7.65	
7,000.00	28.05	83.24	6,958.16	557.99	-189.25	-117.56	8.00	7.84	
7,100.00	35.96	85.56	7,042.90	563.04	-136.54	-64.64	8.00	7.91	
7,200.00	43.89	87.14	7,119.53	567.05	-72.54	-0.65	8.00	7.94	
7,300.00	51.85	88.32	7,186.56	569.94	1.50	73.17	8.00	7.95	
7,400.00	59.81	89.26	7,242.68	571.66	84.15	155.38	8.00	7.96	
7,487.88	66.81	89.97	7,282.13	572.17	162.61	233.29	8.00	7.97	LOCHBUIE LAND 2C-25H-D166 TPZ
7,500.00	67.78	89.97	7,286.81	572.18	173.79	244.38	8.00	8.00	
7,600.00	75.78	89.97	7,318.05	572.23	268.70	338.54	8.00	8.00	
7,700.00	83.78	89.97	7,335.78	572.28	367.04	436.10	8.00	8.00	
7,777.75	90.00	89.97	7,340.00	572.32	444.64	513.09	8.00	8.00	
7,800.00	90.00	89.97	7,340.00	572.33	466.88	535.16	0.00	0.00	
7,900.00	90.00	89.97	7,340.00	572.38	566.88	634.37	0.00	0.00	
8,000.00	90.00	89.97	7,340.00	572.43	666.88	733.59	0.00	0.00	
8,100.00	90.00	89.97	7,340.00	572.49	766.88	832.80	0.00	0.00	
8,200.00	90.00	89.97	7,340.00	572.54	866.88	932.01	0.00	0.00	
8,300.00	90.00	89.97	7,340.00	572.59	966.88	1,031.22	0.00	0.00	
8,400.00	90.00	89.97	7,340.00	572.64	1,066.88	1,130.44	0.00	0.00	
8,500.00	90.00	89.97	7,340.00	572.69	1,166.88	1,229.65	0.00	0.00	
8,600.00	90.00	89.97	7,340.00	572.74	1,266.88	1,328.86	0.00	0.00	
8,700.00	90.00	89.97	7,340.00	572.79	1,366.88	1,428.07	0.00	0.00	
8,800.00	90.00	89.97	7,340.00	572.84	1,466.88	1,527.28	0.00	0.00	
8,900.00	90.00	89.97	7,340.00	572.89	1,566.88	1,626.50	0.00	0.00	
9,000.00	90.00	89.97	7,340.00	572.95	1,666.88	1,725.71	0.00	0.00	
9,100.00	90.00	89.97	7,340.00	573.00	1,766.88	1,824.92	0.00	0.00	
9,200.00	90.00	89.97	7,340.00	573.05	1,866.88	1,924.13	0.00	0.00	
9,300.00	90.00	89.97	7,340.00	573.10	1,966.88	2,023.35	0.00	0.00	
9,400.00	90.00	89.97	7,340.00	573.15	2,066.88	2,122.56	0.00	0.00	
9,500.00	90.00	89.97	7,340.00	573.20	2,166.88	2,221.77	0.00	0.00	
9,600.00	90.00	89.97	7,340.00	573.25	2,266.88	2,320.98	0.00	0.00	
9,700.00	90.00	89.97	7,340.00	573.30	2,366.88	2,420.20	0.00	0.00	
9,800.00	90.00	89.97	7,340.00	573.35	2,466.88	2,519.41	0.00	0.00	
9,900.00	90.00	89.97	7,340.00	573.41	2,566.88	2,618.62	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well LOCHBUIE LAND 2C-25H-D166 - Slot LOC
Company:	Crestone Peak Resources	TVD Reference:	KB @ 5101.00usft
Project:	DJ BASIN	MD Reference:	KB @ 5101.00usft
Site:	S25-T1N-R66W (LOCHBUIE LAND)	North Reference:	True
Well:	LOCHBUIE LAND 2C-25H-D166	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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	7,340.00	573.46	2,666.88	2,717.83	0.00	0.00	
10,100.00	90.00	89.97	7,340.00	573.51	2,766.88	2,817.04	0.00	0.00	
10,200.00	90.00	89.97	7,340.00	573.56	2,866.88	2,916.26	0.00	0.00	
10,300.00	90.00	89.97	7,340.00	573.61	2,966.88	3,015.47	0.00	0.00	
10,400.00	90.00	89.97	7,340.00	573.66	3,066.88	3,114.68	0.00	0.00	
10,500.00	90.00	89.97	7,340.00	573.71	3,166.88	3,213.89	0.00	0.00	
10,600.00	90.00	89.97	7,340.00	573.76	3,266.88	3,313.11	0.00	0.00	
10,700.00	90.00	89.97	7,340.00	573.81	3,366.88	3,412.32	0.00	0.00	
10,800.00	90.00	89.97	7,340.00	573.87	3,466.88	3,511.53	0.00	0.00	
10,900.00	90.00	89.97	7,340.00	573.92	3,566.88	3,610.74	0.00	0.00	
11,000.00	90.00	89.97	7,340.00	573.97	3,666.88	3,709.95	0.00	0.00	
11,100.00	90.00	89.97	7,340.00	574.02	3,766.88	3,809.17	0.00	0.00	
11,200.00	90.00	89.97	7,340.00	574.07	3,866.88	3,908.38	0.00	0.00	
11,300.00	90.00	89.97	7,340.00	574.12	3,966.88	4,007.59	0.00	0.00	
11,400.00	90.00	89.97	7,340.00	574.17	4,066.88	4,106.80	0.00	0.00	
11,500.00	90.00	89.97	7,340.00	574.22	4,166.88	4,206.02	0.00	0.00	
11,600.00	90.00	89.97	7,340.00	574.27	4,266.88	4,305.23	0.00	0.00	
11,700.00	90.00	89.97	7,340.00	574.33	4,366.88	4,404.44	0.00	0.00	
11,800.00	90.00	89.97	7,340.00	574.38	4,466.88	4,503.65	0.00	0.00	
11,863.73	90.00	89.97	7,340.00	574.41	4,530.61	4,566.88	0.00	0.00	LOCHBUIE LAND 2C-25H-D166 BHL

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
LOCHBUIE LAND 2C-25H-D166 - plan hits target center - Point	0.00	0.00	7,340.00	574.41	4,530.61	1,254,227.72	3,219,063.83	40.028590	-104.717720
LOCHBUIE LAND 2C-25H-D166 - plan hits target center - Point	0.00	0.00	7,282.13	572.17	162.61	1,254,187.75	3,214,696.01	40.028585	-104.733318