



**CRESTONE PEAK**  
RESOURCES

## **Crestone Peak Resources**

**DJ BASIN**

**S25-T1N-R66W (LOCHBUIE LAND)**

**LOCHBUIE LAND 2E-25H-D166 - Slot LOCHBUIE LAND  
2E-25H-D166 SHL**

**OH**

**Design: OH**

## **Standard Survey Report**

**26 December, 2018**



**Scientific Drilling**

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<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well LOCHBUIE LAND 2E-25H-D166 - Slot LOCHBUIE LAND 2E-25H-D166 SHL
<b>Project:</b>	DJ BASIN	<b>TVD Reference:</b>	GL 5077' & RKB 13' @ 5090.000usft (Ensign 122)
<b>Site:</b>	S25-T1N-R66W (LOCHBUIE LAND)	<b>MD Reference:</b>	GL 5077' & RKB 13' @ 5090.000usft (Ensign 122)
<b>Well:</b>	LOCHBUIE LAND 2E-25H-D166	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Grand Junction District

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:			40.0270692					
From:			Map			Easting:			3,214,538.35 usft			Longitude:			-104.7338980		
Position Uncertainty:			0.000 usft			Slot Radius:			13-3/16 "			Grid Convergence:			0.50 °		

Well	LOCHBUIE LAND 2E-25H-D166 - Slot LOCHBUIE LAND 2E-25H-D166 SHL					
Well Position	+N/-S	0.000 usft	Northing:	1,253,594.19 usft	Latitude:	40.0269594
	+E/-W	0.000 usft	Easting:	3,214,538.35 usft	Longitude:	-104.7338993
Position Uncertainty		0.000 usft	Wellhead Elevation:	0.000 usft	Ground Level:	5,077.000 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/22/2018	8.13	66.37	52,010

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.000
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.000	0.000	0.000	90.83	

Survey Program		Date	12/26/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
162.000	2,382.000	Survey #1 - Surface MWD Survey (OH)	MWD+HDGM	OWSG MWD + HDGM	

Survey										
	Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
	0.000	0.00	0.00	0.000	0.000	0.000	0.000	0.00	0.00	0.00
	162.000	0.44	317.55	161.998	0.459	-0.420	-0.426	0.27	0.27	0.00
	251.000	1.67	66.45	250.986	1.229	0.538	0.521	2.09	1.38	122.36
	342.000	1.67	70.75	341.947	2.196	3.006	2.974	0.14	0.00	4.73
	462.000	1.76	66.01	461.894	3.522	6.340	6.289	0.14	0.08	-3.95
	552.000	1.76	66.53	551.851	4.634	8.871	8.803	0.02	0.00	0.58
	642.000	2.02	74.44	641.802	5.610	11.666	11.584	0.41	0.29	8.79
	732.000	1.76	9.40	731.763	7.400	13.420	13.312	2.27	-0.29	-72.27

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<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Grand Junction District

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
821.000	1.50	304.63	820.733	9.410	12.685	12.547	1.98	-0.29	-72.78
893.000	2.44	250.54	892.696	9.435	10.464	10.327	2.75	1.31	-75.13
983.000	3.32	245.94	982.581	7.734	6.278	6.166	1.01	0.98	-5.11
1,114.000	2.92	250.76	1,113.387	5.088	-0.336	-0.409	0.36	-0.31	3.68
1,156.000	2.18	251.34	1,155.345	4.480	-2.103	-2.167	1.76	-1.76	1.38
1,238.000	0.81	285.16	1,237.316	4.133	-4.140	-4.199	1.92	-1.67	41.24
1,321.000	1.45	274.25	1,320.300	4.364	-5.753	-5.816	0.81	0.77	-13.14
1,405.000	2.11	275.66	1,404.259	4.595	-8.352	-8.418	0.79	0.79	1.68
1,486.000	2.31	274.38	1,485.199	4.867	-11.464	-11.533	0.25	0.25	-1.58
1,569.000	3.30	261.09	1,568.099	4.625	-15.492	-15.557	1.42	1.19	-16.01
1,651.000	3.55	255.44	1,649.953	3.621	-20.280	-20.331	0.51	0.30	-6.89
1,734.000	3.88	258.23	1,732.778	2.402	-25.517	-25.549	0.45	0.40	3.36
1,818.000	4.25	257.69	1,816.567	1.159	-31.340	-31.353	0.44	0.44	-0.64
1,900.000	4.83	252.06	1,898.310	-0.552	-37.593	-37.581	0.89	0.71	-6.87
1,984.000	4.77	234.84	1,982.019	-3.653	-43.813	-43.756	1.71	-0.07	-20.50
2,071.000	3.71	237.61	2,068.780	-7.244	-49.147	-49.037	1.24	-1.22	3.18
2,161.000	3.20	249.19	2,158.617	-9.696	-53.954	-53.808	0.96	-0.57	12.87
2,250.000	2.38	270.24	2,247.513	-10.571	-58.124	-57.965	1.46	-0.92	23.65
2,310.000	2.64	269.26	2,307.456	-10.584	-60.752	-60.592	0.44	0.43	-1.63
2,382.000	2.64	269.26	2,379.379	-10.627	-64.068	-63.907	0.00	0.00	0.00

Checked By: _____	Approved By: _____	Date: _____
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