



**SUMMIT**  
SLICKLINE INC.

Company: CRESTONE PEAK  
Lease/Well: GRANDE 4-65 20-19 4AH  
State/County: ARAPAHOE, CO  
API#: 05-005-07488

Survey Type: DROP METHOD GYRO  
North Reference: TRUE NORTH  
Rig Name: ENSIGN 122  
RKB: 13

Date: 09-12-21  
Job Number: 10763  
Survey Engineer: J BENSON J  
HOOPES  
Instrument Number: 1021

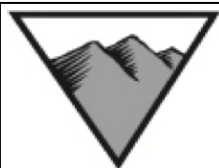
## SUMMIT OILFIELD SERVICES

GRANDE 4-65 20-19 4AH

*Minimum Curvature Method*  
*Vertical Section Plane: 268.82*  
*Vertical Section Reference: WELLHEAD*  
*Rectangular Coordinates Reference: WELLHEAD*

Measured Depth	Inclin	Azimuth	True Vertical Depth	Vertical Section	N[+]/S[-]	E[+]/W[-]	Dogleg Severity	Closure Distance	Closure Direction	Comment
0.00 ft	0.00	0.00	0.00 ft	0.00 ft	0.00 ft	0.00 ft	0.00/100 ft	0.00 ft	0.00	Tie In Station
18.38 ft	0.25	235.27	18.38 ft	0.03 ft	-0.02 ft	-0.03 ft	1.34/100 ft	0.04 ft	235.27	
48.94 ft	0.20	257.24	48.94 ft	0.14 ft	-0.07 ft	-0.14 ft	0.32/100 ft	0.16 ft	242.63	
79.50 ft	0.46	225.92	79.50 ft	0.28 ft	-0.17 ft	-0.28 ft	1.02/100 ft	0.33 ft	238.77	
110.06 ft	0.75	223.11	110.06 ft	0.51 ft	-0.40 ft	-0.51 ft	0.95/100 ft	0.65 ft	231.51	
140.62 ft	0.73	257.41	140.62 ft	0.84 ft	-0.59 ft	-0.83 ft	1.43/100 ft	1.02 ft	234.62	
201.74 ft	0.68	237.09	201.73 ft	1.53 ft	-0.87 ft	-1.52 ft	0.41/100 ft	1.75 ft	240.06	
262.86 ft	1.03	253.44	262.84 ft	2.37 ft	-1.23 ft	-2.35 ft	0.69/100 ft	2.65 ft	242.40	
305.51 ft	1.34	250.08	305.48 ft	3.21 ft	-1.51 ft	-3.18 ft	0.75/100 ft	3.52 ft	244.68	
348.16 ft	1.89	245.80	348.12 ft	4.34 ft	-1.97 ft	-4.30 ft	1.32/100 ft	4.72 ft	245.42	
390.81 ft	2.49	242.35	390.74 ft	5.81 ft	-2.68 ft	-5.76 ft	1.44/100 ft	6.35 ft	245.01	
433.46 ft	2.98	246.43	433.34 ft	7.67 ft	-3.56 ft	-7.60 ft	1.24/100 ft	8.39 ft	244.91	
476.11 ft	3.42	246.46	475.92 ft	9.88 ft	-4.51 ft	-9.78 ft	1.03/100 ft	10.77 ft	245.25	

Icefield Tools Inc. makes no warranty of any kind with respect to the subject matter included herein or the completeness or accuracy of this document. Icefield Tools Inc. are not responsible for any actions (or lack thereof) taken as a result of relying on or in any way using information contained in this document and in no event shall be liable for any damages resulting from reliance on or use of this information.



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State/County: ARAPAHOE, CO  
API#: 05-005-07488

Survey Type: DROP METHOD GYRO  
North Reference: TRUE NORTH  
Rig Name: ENSIGN 122  
RKB: 13

Date: 09-12-21  
Job Number: 10763  
Survey Engineer: J BENSON J  
HOOPES  
Instrument Number: 1021

Measured Depth	Inclin	Azimuth	True Vertical Depth	Vertical Section	N[+]/S[-]	E[+]/W[-]	Dogleg Severity	Closure Distance	Closure Direction	Comment
518.76 ft	3.80	247.88	518.49 ft	12.37 ft	-5.55 ft	-12.26 ft	0.91/100 ft	13.46 ft	245.64	
561.41 ft	3.83	247.21	561.04 ft	15.02 ft	-6.64 ft	-14.89 ft	0.12/100 ft	16.30 ft	245.97	
604.06 ft	4.00	250.23	603.59 ft	17.75 ft	-7.69 ft	-17.60 ft	0.64/100 ft	19.21 ft	246.39	
646.71 ft	4.29	250.59	646.13 ft	20.68 ft	-8.73 ft	-20.50 ft	0.68/100 ft	22.28 ft	246.95	
689.36 ft	3.76	247.20	688.67 ft	23.49 ft	-9.80 ft	-23.30 ft	1.37/100 ft	25.27 ft	247.19	
732.01 ft	3.75	246.25	731.23 ft	26.08 ft	-10.90 ft	-25.86 ft	0.15/100 ft	28.07 ft	247.15	
774.66 ft	4.25	241.81	773.78 ft	28.78 ft	-12.21 ft	-28.53 ft	1.37/100 ft	31.03 ft	246.83	
817.31 ft	4.25	240.67	816.31 ft	31.58 ft	-13.73 ft	-31.30 ft	0.20/100 ft	34.18 ft	246.32	
859.96 ft	2.92	240.41	858.88 ft	33.93 ft	-15.04 ft	-33.63 ft	3.10/100 ft	36.84 ft	245.90	
902.61 ft	2.48	233.81	901.48 ft	35.64 ft	-16.12 ft	-35.32 ft	1.27/100 ft	38.82 ft	245.46	
945.26 ft	2.70	231.43	944.09 ft	37.20 ft	-17.29 ft	-36.85 ft	0.58/100 ft	40.71 ft	244.86	
987.91 ft	2.64	231.15	986.69 ft	38.78 ft	-18.54 ft	-38.40 ft	0.14/100 ft	42.64 ft	244.23	
1030.56 ft	1.99	230.96	1029.30 ft	40.14 ft	-19.62 ft	-39.74 ft	1.53/100 ft	44.32 ft	243.72	
1073.21 ft	1.61	227.80	1071.93 ft	41.18 ft	-20.49 ft	-40.76 ft	0.92/100 ft	45.62 ft	243.31	
1115.86 ft	1.83	231.75	1114.56 ft	42.17 ft	-21.32 ft	-41.74 ft	0.58/100 ft	46.87 ft	242.95	
1158.51 ft	1.94	227.54	1157.19 ft	43.26 ft	-22.22 ft	-42.81 ft	0.42/100 ft	48.23 ft	242.56	
1201.16 ft	1.76	219.63	1199.82 ft	44.23 ft	-23.22 ft	-43.76 ft	0.73/100 ft	49.54 ft	242.05	
1243.81 ft	1.56	207.54	1242.45 ft	44.94 ft	-24.24 ft	-44.45 ft	0.95/100 ft	50.63 ft	241.39	
1286.46 ft	1.39	208.84	1285.09 ft	45.47 ft	-25.21 ft	-44.96 ft	0.41/100 ft	51.55 ft	240.73	
1329.11 ft	1.56	204.40	1327.72 ft	45.98 ft	-26.19 ft	-45.45 ft	0.47/100 ft	52.46 ft	240.05	
1371.76 ft	1.71	216.67	1370.36 ft	46.62 ft	-27.23 ft	-46.07 ft	0.90/100 ft	53.52 ft	239.42	

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Rig Name: ENSIGN 122  
RKB: 13

Date: 09-12-21  
Job Number: 10763  
Survey Engineer: J BENSON J  
HOOPES  
Instrument Number: 1021

Measured Depth	Inclin	Azimuth	True Vertical Depth	Vertical Section	N[+]/S[-]	E[+]/W[-]	Dogleg Severity	Closure Distance	Closure Direction	Comment
1414.41 ft	1.62	231.75	1412.99 ft	47.49 ft	-28.11 ft	-46.93 ft	1.05/100 ft	54.70 ft	239.08	
1457.06 ft	1.97	237.01	1455.62 ft	48.60 ft	-28.88 ft	-48.01 ft	0.92/100 ft	56.03 ft	238.97	
1499.71 ft	1.92	233.33	1498.24 ft	49.80 ft	-29.71 ft	-49.20 ft	0.31/100 ft	57.48 ft	238.88	
1542.36 ft	1.10	214.14	1540.88 ft	50.62 ft	-30.47 ft	-50.01 ft	2.24/100 ft	58.56 ft	238.64	
1585.01 ft	1.16	217.96	1583.52 ft	51.13 ft	-31.15 ft	-50.50 ft	0.23/100 ft	59.34 ft	238.33	
1627.66 ft	0.78	225.01	1626.16 ft	51.61 ft	-31.70 ft	-50.97 ft	0.94/100 ft	60.02 ft	238.12	
1670.31 ft	0.78	208.50	1668.81 ft	51.96 ft	-32.15 ft	-51.31 ft	0.52/100 ft	60.56 ft	237.93	
1712.96 ft	1.12	219.46	1711.45 ft	52.38 ft	-32.73 ft	-51.72 ft	0.89/100 ft	61.20 ft	237.67	
1755.61 ft	0.89	215.09	1754.10 ft	52.84 ft	-33.32 ft	-52.17 ft	0.57/100 ft	61.90 ft	237.43	
1798.26 ft	0.87	217.30	1796.74 ft	53.24 ft	-33.85 ft	-52.55 ft	0.09/100 ft	62.51 ft	237.22	
1840.91 ft	1.22	228.82	1839.38 ft	53.79 ft	-34.40 ft	-53.09 ft	0.97/100 ft	63.26 ft	237.06	
1883.56 ft	0.99	231.38	1882.03 ft	54.43 ft	-34.93 ft	-53.72 ft	0.56/100 ft	64.08 ft	236.97	
1926.21 ft	0.90	232.51	1924.67 ft	54.99 ft	-35.37 ft	-54.27 ft	0.23/100 ft	64.78 ft	236.91	
1968.86 ft	0.82	233.34	1967.32 ft	55.51 ft	-35.75 ft	-54.78 ft	0.18/100 ft	65.42 ft	236.87	
2011.51 ft	0.96	221.87	2009.96 ft	56.00 ft	-36.20 ft	-55.27 ft	0.53/100 ft	66.06 ft	236.78	
2054.16 ft	0.94	223.86	2052.61 ft	56.49 ft	-36.72 ft	-55.75 ft	0.08/100 ft	66.75 ft	236.63	
2096.81 ft	0.97	203.77	2095.25 ft	56.89 ft	-37.30 ft	-56.13 ft	0.78/100 ft	67.40 ft	236.40	
2139.46 ft	1.01	203.89	2137.89 ft	57.20 ft	-37.97 ft	-56.43 ft	0.10/100 ft	68.02 ft	236.06	

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