



**SUMMIT**  
SLICKLINE INC.

**Company:** BONANZA CREEK  
**Lease / Well:** PARK 32-4  
**County/Parish:** WELD 123  
**State:** COLORADO  
**Date:** 12/14/2018  
**Rig:** NA  
**Surveyor:** NATHAN PROFFITT  
**Job Number:** 6920-0512320572  
**Instrument Number:** 3087 **Type:** MEMORY  
**Proposed Direction:** 0 **GL Elev:** 4566  
**Magnetic Declination** 9.41 EAST TO TRUE NORTH  
**Calulation Method:** MINIMUM OF CURVATURE  
**Log Measured From:** GL

**TIE-IN Coordinates**

Measured Depth (ft.)	Inclination	Azimuth Bearing	Vertical Depth	Coordinates	
				(+N/-S)	(+E/-W)
0	0.00	0.00	0.00	0.00	0.00

**Directional Survey Report**

Measured Depth (ft.)	Inclination	Azimuth Bearing	Vertical Depth	Vertical Section	Coordinates (+N/-S)	Coordinates (+E/-W)	Dog-Leg / 100 ft.	Closure Distance	Closure Direction
100	0.30	131.32	100.00	-0.17	-0.17	0.20	0.30	0.26	131.32°
200	0.26	209.01	200.00	-0.54	-0.54	0.28	0.35	0.61	152.50°
300	0.57	103.26	300.00	-0.86	-0.86	0.66	0.69	1.08	142.50°
400	0.13	82.46	399.99	-0.96	-0.96	1.25	0.45	1.58	127.32°
500	0.16	60.61	499.99	-0.87	-0.87	1.49	0.06	1.72	120.38°
600	0.23	40.10	599.99	-0.65	-0.65	1.74	0.10	1.86	110.51°
700	0.12	197.29	699.99	-0.60	-0.60	1.84	0.34	1.93	108.00°
800	0.30	186.03	799.99	-0.96	-0.96	1.78	0.18	2.02	118.29°
900	0.28	177.22	899.99	-1.46	-1.46	1.76	0.05	2.29	129.66°
1000	0.29	160.10	999.99	-1.94	-1.94	1.86	0.09	2.69	136.25°
1100	0.29	237.96	1099.99	-2.32	-2.32	1.73	0.36	2.89	143.20°
1200	0.04	161.74	1199.99	-2.48	-2.48	1.53	0.28	2.92	148.38°
1300	0.41	233.88	1299.99	-2.73	-2.73	1.25	0.40	3.00	155.36°
1400	0.27	185.69	1399.99	-3.17	-3.17	0.94	0.31	3.31	163.52°
1500	0.45	248.88	1499.98	-3.55	-3.55	0.55	0.41	3.59	171.21°
1600	0.51	205.86	1599.98	-4.09	-4.09	-0.01	0.36	4.09	180.16°
1700	0.68	225.22	1699.98	-4.91	-4.91	-0.63	0.26	4.95	187.28°
1800	0.55	235.60	1799.97	-5.60	-5.60	-1.44	0.17	5.78	194.47°
1900	0.42	233.10	1899.97	-6.09	-6.09	-2.13	0.13	6.45	199.31°
2000	0.75	204.86	1999.96	-6.90	-6.90	-2.70	0.43	7.41	201.37°
2100	0.66	228.23	2099.95	-7.88	-7.88	-3.41	0.30	8.59	203.38°
2200	0.75	221.91	2199.95	-8.75	-8.75	-4.27	0.12	9.74	206.02°
2300	0.62	233.71	2299.94	-9.56	-9.56	-5.15	0.19	10.86	208.30°
2400	0.56	225.75	2399.93	-10.22	-10.22	-5.93	0.10	11.82	210.13°
2500	0.23	245.59	2499.93	-10.64	-10.64	-6.47	0.35	12.45	211.27°
2600	0.47	187.40	2599.93	-11.13	-11.13	-6.70	0.40	12.99	211.04°
2700	0.12	220.70	2699.93	-11.62	-11.62	-6.82	0.38	13.47	210.42°
2800	0.25	223.17	2799.93	-11.86	-11.86	-7.04	0.13	13.79	210.69°
2900	0.41	116.31	2899.93	-12.18	-12.18	-6.87	0.54	13.98	209.43°
3000	0.58	109.92	2999.92	-12.51	-12.51	-6.07	0.18	13.90	205.89°
3100	0.62	66.98	3099.92	-12.47	-12.47	-5.10	0.44	13.47	202.24°
3200	0.79	54.03	3199.91	-11.85	-11.85	-4.04	0.23	12.52	198.83°
3300	1.26	54.02	3299.89	-10.80	-10.80	-2.59	0.47	11.11	193.51°
3400	1.28	54.44	3399.87	-9.51	-9.51	-0.80	0.02	9.54	184.79°
3500	1.25	38.86	3499.85	-8.01	-8.01	0.80	0.34	8.05	174.31°
3600	1.37	56.06	3599.82	-6.49	-6.49	2.47	0.41	6.94	159.14°
3700	1.11	53.08	3699.80	-5.24	-5.24	4.24	0.27	6.74	141.03°
3800	1.56	40.23	3799.77	-3.62	-3.62	5.89	0.54	6.92	121.56°
3900	1.88	50.19	3899.72	-1.53	-1.53	8.03	0.44	8.18	100.78°
4000	1.87	43.05	3999.67	0.71	0.71	10.41	0.23	10.43	86.08°
4100	2.08	51.77	4099.61	3.03	3.03	12.95	0.37	13.29	76.83°
4200	1.95	45.21	4199.55	5.35	5.35	15.58	0.26	16.47	71.05°
4300	2.22	45.90	4299.48	7.90	7.90	18.18	0.27	19.82	66.52°
4400	2.40	47.63	4399.40	10.66	10.66	21.11	0.19	23.65	63.22°
4500	2.39	47.84	4499.32	13.47	13.47	24.21	0.01	27.70	60.91°
4600	1.94	55.59	4599.24	15.82	15.82	27.15	0.54	31.42	59.77°
4700	1.98	50.12	4699.19	17.89	17.89	29.87	0.19	34.82	59.09°
4800	1.63	60.44	4799.14	19.70	19.70	32.43	0.48	37.95	58.73°

Directional Survey Report									
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4900	1.64	52.02	4899.10	21.28	21.28	34.80	0.24	40.79	58.56°
5000	1.51	59.87	4999.06	22.82	22.82	37.07	0.25	43.53	58.38°
5100	1.26	53.63	5099.03	24.13	24.13	39.09	0.29	45.94	58.31°
5200	1.25	60.99	5199.00	25.31	25.31	40.93	0.16	48.13	58.27°
5300	0.82	56.99	5298.99	26.23	26.23	42.48	0.44	49.93	58.31°
5400	1.05	65.24	5398.97	27.01	27.01	43.92	0.27	51.56	58.41°
5500	0.94	79.90	5498.96	27.53	27.53	45.56	0.28	53.23	58.85°
5600	0.54	84.89	5598.95	27.72	27.72	46.83	0.40	54.42	59.38°
5700	0.84	78.98	5698.94	27.90	27.90	48.02	0.31	55.54	59.84°
5800	0.50	92.03	5798.94	28.03	28.03	49.18	0.37	56.60	60.32°
5900	0.57	100.58	5898.93	27.92	27.92	50.10	0.11	57.36	60.87°
6000	0.65	90.01	5998.93	27.83	27.83	51.16	0.14	58.24	61.46°
6100	0.65	101.38	6098.92	27.72	27.72	52.28	0.13	59.17	62.07°
6200	0.79	93.41	6198.91	27.56	27.56	53.53	0.17	60.21	62.75°
6300	0.89	92.33	6298.90	27.49	27.49	54.99	0.10	61.48	63.44°
6400	0.50	91.44	6398.89	27.45	27.45	56.20	0.39	62.55	63.97°

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