



SUMMIT
SLICKLINE INC.

Company: PDC ENERGY
Lease / Well: STEPHENS FOE 10-3 RUN 2 API 05-123-12150
County/Parish: WELD 123
State: COLORADO
Date: 1/10/2017
Rig: NA
Surveyor: SHON LANE
Job Number: 3344-05-123-12150
Instrument Number: 3123 **Type:** MEMORY
Proposed Direction: 0 **GL Elev:** 4953
Magnetic Declination 9.78 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	0.53	165.93	100.00	-0.45	-0.45	0.11	0.53	0.46	165.93°
200	0.19	191.85	200.00	-1.06	-1.06	0.19	0.37	1.08	169.79°
300	0.04	233.50	300.00	-1.24	-1.24	0.13	0.16	1.25	174.09°
400	0.18	53.02	400.00	-1.17	-1.17	0.23	0.22	1.19	169.05°
500	0.17	165.65	500.00	-1.22	-1.22	0.39	0.29	1.28	162.31°
600	0.20	102.18	600.00	-1.40	-1.40	0.60	0.20	1.52	156.93°
700	0.19	224.05	700.00	-1.55	-1.55	0.65	0.34	1.69	157.28°
800	0.38	274.75	799.99	-1.65	-1.65	0.21	0.30	1.66	172.89°
900	0.46	283.46	899.99	-1.53	-1.53	-0.52	0.10	1.61	198.67°
1000	0.35	297.36	999.99	-1.29	-1.29	-1.18	0.15	1.75	222.35°
1100	0.42	270.05	1099.99	-1.15	-1.15	-1.81	0.19	2.15	237.62°
1200	0.27	286.82	1199.98	-1.08	-1.08	-2.41	0.18	2.64	245.79°
1300	0.50	296.20	1299.98	-0.82	-0.82	-3.02	0.24	3.13	254.80°
1400	0.57	280.77	1399.98	-0.54	-0.54	-3.90	0.16	3.94	262.18°
1500	0.60	261.41	1499.97	-0.52	-0.52	-4.91	0.20	4.94	263.94°
1600	0.67	264.49	1599.97	-0.66	-0.66	-6.01	0.08	6.05	263.77°
1700	0.61	265.25	1699.96	-0.76	-0.76	-7.12	0.06	7.16	263.94°
1800	0.59	270.62	1799.96	-0.79	-0.79	-8.17	0.06	8.21	264.45°
1900	0.47	292.42	1899.95	-0.63	-0.63	-9.06	0.23	9.08	266.01°
2000	0.50	287.03	1999.95	-0.35	-0.35	-9.86	0.05	9.86	267.98°
2100	0.53	290.32	2099.94	-0.06	-0.06	-10.71	0.04	10.71	269.68°
2200	0.68	293.43	2199.94	0.34	0.34	-11.69	0.15	11.69	271.65°
2300	0.92	301.52	2299.93	0.99	0.99	-12.92	0.26	12.95	274.39°
2400	0.98	309.34	2399.91	1.95	1.95	-14.26	0.14	14.40	277.80°
2500	0.94	311.02	2499.90	3.03	3.03	-15.54	0.05	15.84	281.05°
2600	0.92	313.82	2599.89	4.13	4.13	-16.74	0.05	17.24	283.86°
2700	0.93	319.32	2699.87	5.30	5.30	-17.85	0.09	18.62	286.54°
2800	0.92	314.12	2799.86	6.47	6.47	-18.95	0.08	20.03	288.86°
2900	0.82	320.08	2899.85	7.58	7.58	-19.99	0.13	21.38	290.77°
3000	0.79	322.00	2999.84	8.67	8.67	-20.87	0.04	22.60	292.57°
3100	0.75	320.70	3099.83	9.72	9.72	-21.71	0.04	23.79	294.13°
3200	0.47	332.28	3199.82	10.59	10.59	-22.32	0.30	24.70	295.39°
3300	0.14	300.64	3299.82	11.02	11.02	-22.61	0.36	25.16	295.98°
3400	0.13	245.44	3399.82	11.03	11.03	-22.82	0.13	25.35	295.80°
3500	0.23	254.05	3499.82	10.93	10.93	-23.12	0.10	25.57	295.31°
3600	0.40	262.65	3599.82	10.83	10.83	-23.66	0.18	26.02	294.60°
3700	0.42	267.21	3699.82	10.77	10.77	-24.37	0.04	26.64	293.84°
3800	0.28	261.68	3799.82	10.72	10.72	-24.98	0.14	27.18	293.22°
3900	0.25	266.39	3899.82	10.67	10.67	-25.44	0.04	27.58	292.75°
4000	0.40	279.44	3999.81	10.71	10.71	-26.00	0.17	28.12	292.39°
4100	0.60	267.87	4099.81	10.75	10.75	-26.87	0.22	28.94	291.81°
4200	0.70	271.97	4199.80	10.75	10.75	-28.00	0.11	29.99	291.00°
4300	0.69	281.68	4299.80	10.89	10.89	-29.20	0.12	31.17	290.46°
4400	0.49	287.22	4399.79	11.14	11.14	-30.20	0.21	32.19	290.25°
4500	0.13	293.03	4499.79	11.31	11.31	-30.71	0.36	32.73	290.22°
4600	0.40	356.18	4599.79	11.71	11.71	-30.84	0.36	32.99	290.78°
4700	0.13	21.45	4699.79	12.16	12.16	-30.82	0.29	33.13	291.53°
4800	0.22	47.78	4799.79	12.39	12.39	-30.64	0.12	33.05	292.02°

Directional Survey Report									
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4900	0.15	9.18	4899.79	12.65	12.65	-30.47	0.14	33.00	292.55°
5000	0.03	275.48	4999.79	12.78	12.78	-30.48	0.15	33.05	292.75°
5100	0.06	42.23	5099.79	12.82	12.82	-30.47	0.08	33.06	292.83°
5200	0.07	96.33	5199.79	12.86	12.86	-30.37	0.06	32.98	292.94°
5300	0.08	151.40	5299.79	12.79	12.79	-30.28	0.07	32.87	292.90°
5400	0.14	193.74	5399.79	12.61	12.61	-30.28	0.10	32.80	292.61°
5500	0.28	223.59	5499.79	12.31	12.31	-30.47	0.17	32.87	292.00°
5600	0.27	227.18	5599.78	11.98	11.98	-30.81	0.02	33.06	291.24°
5700	0.34	237.22	5699.78	11.66	11.66	-31.24	0.09	33.34	290.46°
5800	0.39	230.82	5799.78	11.28	11.28	-31.75	0.06	33.69	289.56°
5900	0.36	215.60	5899.78	10.81	10.81	-32.20	0.10	33.96	288.56°
6000	0.25	238.27	5999.78	10.44	10.44	-32.56	0.16	34.20	287.77°
6100	0.18	234.20	6099.78	10.23	10.23	-32.88	0.07	34.43	287.29°
6200	0.21	262.43	6199.78	10.12	10.12	-33.19	0.10	34.69	286.95°
6300	0.08	162.07	6299.78	10.03	10.03	-33.35	0.24	34.82	286.73°
6400	0.27	79.20	6399.78	10.00	10.00	-33.09	0.27	34.57	286.82°
6500	0.24	23.61	6499.77	10.24	10.24	-32.78	0.24	34.34	287.35°
6600	0.14	40.15	6599.77	10.52	10.52	-32.62	0.11	34.27	287.88°
6700	0.34	355.16	6699.77	10.91	10.91	-32.56	0.26	34.34	288.53°
6800	0.49	0.03	6799.77	11.64	11.64	-32.59	0.15	34.60	289.65°
6900	0.51	17.25	6899.77	12.49	12.49	-32.45	0.15	34.78	291.05°
7000	0.47	46.08	6999.76	13.20	13.20	-32.03	0.25	34.64	292.40°
7100	0.22	55.19	7099.76	13.59	13.59	-31.57	0.26	34.38	293.29°
7150	0.35	67.10	7149.76	13.71	13.71	-31.35	0.28	34.22	293.61°

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