



SUMMIT
SLICKLINE INC.

Company: PDC ENERGY
Lease / Well: STATE 5519 33-8
County/Parish: WELD 123
State: COLORADO
Date: 9/20/2016
Rig: NA
Surveyor: SHON LANE
Job Number: 3000-05123-19434
Instrument Number: 3123 **Type:** MEMORY
Proposed Direction: 0 **GL Elev:** 4749
Magnetic Declination 9.55 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	75.95	100.00	0.06	0.06	0.25	0.30	0.26	75.95°
200	0.30	171.67	200.00	-0.13	-0.13	0.55	0.44	0.56	103.59°
300	0.51	203.02	300.00	-0.80	-0.80	0.41	0.30	0.90	152.90°
400	1.11	237.06	399.99	-1.74	-1.74	-0.58	0.74	1.83	198.38°
500	0.87	234.55	499.97	-2.70	-2.70	-2.01	0.24	3.37	216.61°
600	1.06	247.60	599.96	-3.50	-3.50	-3.48	0.29	4.93	224.88°
700	0.87	242.78	699.94	-4.20	-4.20	-5.01	0.21	6.54	230.06°
800	0.85	247.40	799.93	-4.83	-4.83	-6.37	0.07	8.00	232.85°
900	0.95	250.80	899.92	-5.39	-5.39	-7.84	0.11	9.51	235.51°
1000	0.97	277.25	999.91	-5.55	-5.55	-9.46	0.44	10.97	239.60°
1100	0.70	273.74	1099.90	-5.41	-5.41	-10.91	0.27	12.18	243.65°
1200	0.94	272.03	1199.88	-5.34	-5.34	-12.34	0.24	13.45	246.61°
1300	0.54	263.41	1299.88	-5.36	-5.36	-13.63	0.41	14.65	248.53°
1400	0.69	273.81	1399.87	-5.38	-5.38	-14.70	0.19	15.65	249.91°
1500	0.78	255.40	1499.86	-5.51	-5.51	-15.96	0.25	16.88	250.96°
1600	0.67	230.81	1599.85	-6.05	-6.05	-17.07	0.33	18.11	250.49°
1700	0.64	224.30	1699.85	-6.82	-6.82	-17.91	0.08	19.17	249.16°
1800	0.51	226.36	1799.84	-7.52	-7.52	-18.62	0.13	20.09	248.00°
1900	0.29	226.36	1899.84	-8.01	-8.01	-19.13	0.22	20.74	247.29°
2000	0.37	275.22	1999.84	-8.15	-8.15	-19.63	0.28	21.26	247.45°
2100	0.48	315.39	2099.84	-7.82	-7.82	-20.25	0.31	21.71	248.88°
2200	0.35	321.39	2199.83	-7.29	-7.29	-20.73	0.14	21.98	250.64°
2300	0.14	336.35	2299.83	-6.94	-6.94	-20.97	0.22	22.09	251.70°
2400	0.17	314.63	2399.83	-6.72	-6.72	-21.13	0.07	22.17	252.36°
2500	0.02	216.45	2499.83	-6.63	-6.63	-21.25	0.17	22.26	252.67°
2600	0.11	170.91	2599.83	-6.74	-6.74	-21.24	0.10	22.28	252.40°
2700	0.13	154.41	2699.83	-6.94	-6.94	-21.18	0.04	22.28	251.86°
2800	0.17	151.50	2799.83	-7.17	-7.17	-21.06	0.04	22.24	251.20°
2900	0.14	165.42	2899.83	-7.42	-7.42	-20.95	0.05	22.23	250.51°
3000	0.11	200.16	2999.83	-7.63	-7.63	-20.96	0.08	22.30	250.01°
3100	0.09	184.45	3099.83	-7.79	-7.79	-21.00	0.03	22.40	249.63°
3200	0.25	172.34	3199.83	-8.09	-8.09	-20.97	0.16	22.48	248.91°
3300	0.85	169.77	3299.83	-9.03	-9.03	-20.81	0.60	22.69	246.53°
3400	1.57	177.55	3399.80	-11.13	-11.13	-20.62	0.74	23.44	241.64°
3500	1.29	169.86	3499.77	-13.61	-13.61	-20.37	0.34	24.49	236.25°
3600	1.20	171.35	3599.75	-15.75	-15.75	-20.01	0.10	25.47	231.79°
3700	1.27	169.97	3699.72	-17.88	-17.88	-19.66	0.08	26.57	227.71°
3800	1.26	166.71	3799.70	-20.04	-20.04	-19.21	0.07	27.76	223.79°
3900	1.09	167.09	3899.68	-22.04	-22.04	-18.75	0.17	28.93	220.39°
4000	1.33	160.44	3999.66	-24.06	-24.06	-18.15	0.28	30.14	217.03°
4100	1.22	159.17	4099.63	-26.15	-26.15	-17.38	0.11	31.40	213.61°
4200	1.10	156.70	4199.61	-28.02	-28.02	-16.62	0.13	32.58	210.67°
4300	0.93	144.05	4299.60	-29.56	-29.56	-15.77	0.28	33.50	208.07°
4400	1.05	134.11	4399.58	-30.86	-30.86	-14.63	0.21	34.15	205.37°
4500	0.76	134.77	4499.57	-31.96	-31.96	-13.50	0.29	34.70	202.90°
4600	0.61	154.68	4599.56	-32.91	-32.91	-12.80	0.28	35.31	201.26°
4700	0.42	118.80	4699.56	-33.57	-33.57	-12.26	0.37	35.74	200.06°
4800	1.35	201.88	4799.55	-34.84	-34.84	-12.37	1.36	36.97	199.55°

Directional Survey Report									
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4900	1.67	205.06	4899.51	-37.25	-37.25	-13.43	0.33	39.60	199.82°
5000	1.20	190.46	4999.48	-39.60	-39.60	-14.24	0.59	42.08	199.77°
5100	0.58	149.37	5099.47	-41.07	-41.07	-14.17	0.85	43.44	199.04°
5200	0.57	152.08	5199.46	-41.94	-41.94	-13.68	0.03	44.12	198.06°
5300	0.73	238.99	5299.46	-42.71	-42.71	-13.99	0.90	44.94	198.14°
5400	0.41	236.74	5399.45	-43.23	-43.23	-14.84	0.32	45.71	198.94°
5500	0.56	113.06	5499.45	-43.62	-43.62	-14.69	0.86	46.03	198.61°
5600	0.38	107.24	5599.45	-43.91	-43.91	-13.92	0.19	46.06	197.59°
5700	1.82	352.11	5699.43	-42.44	-42.44	-13.82	2.01	44.63	198.04°
5800	1.62	320.14	5799.39	-39.78	-39.78	-14.94	0.97	42.49	200.59°
5900	1.21	258.46	5899.37	-38.90	-38.90	-16.89	1.49	42.41	203.46°
6000	1.69	209.61	5999.34	-40.40	-40.40	-18.65	1.28	44.49	204.78°
6100	1.41	181.49	6099.30	-42.91	-42.91	-19.41	0.80	47.09	204.34°
6200	1.30	177.21	6199.27	-45.27	-45.27	-19.39	0.15	49.25	203.18°
6300	1.20	168.56	6299.25	-47.43	-47.43	-19.12	0.21	51.14	201.96°
6400	0.87	163.41	6399.23	-49.19	-49.19	-18.70	0.34	52.62	200.82°
6500	1.06	168.37	6499.22	-50.82	-50.82	-18.30	0.21	54.01	199.80°
6600	1.12	162.84	6599.20	-52.66	-52.66	-17.82	0.12	55.59	198.70°
6700	1.21	161.57	6699.18	-54.59	-54.59	-17.20	0.09	57.24	197.49°
6800	1.19	153.79	6799.16	-56.53	-56.53	-16.41	0.16	58.86	196.18°

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