



SUMMIT
SLICKLINE INC.

Company: PDC Energy
Lease / Well: Glens #4
County/Parish: WELD 123
State: COLORADO
Date: 4/13/2015
Rig: NA
Surveyor: SHON LANE
Job Number: 1300-0512309859
Instrument Number: 3123 **Type:** MEMORY
Proposed Direction: 0 **GL Elev:** 5065
Magnetic Declination 9.88 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	0.41	6.83	100.00	0.36	0.36	0.04	0.41	0.36	6.83°
200	0.47	0.42	200.00	1.12	1.12	0.09	0.08	1.12	4.50°
300	0.31	0.59	299.99	1.80	1.80	0.09	0.16	1.80	2.98°
400	0.38	359.44	399.99	2.40	2.40	0.09	0.07	2.41	2.23°
500	0.44	341.01	499.99	3.10	3.10	-0.03	0.14	3.10	359.36°
600	0.11	12.64	599.99	3.55	3.55	-0.14	0.35	3.56	357.77°
700	0.72	331.10	699.99	4.20	4.20	-0.42	0.64	4.22	354.27°
800	0.95	327.93	799.97	5.45	5.45	-1.17	0.23	5.57	347.93°
900	1.16	320.20	899.96	6.93	6.93	-2.25	0.25	7.29	341.99°
1000	1.06	315.44	999.94	8.37	8.37	-3.55	0.14	9.09	337.01°
1100	1.25	299.98	1099.92	9.57	9.57	-5.14	0.36	10.87	331.75°
1200	4.61	304.45	1199.77	12.39	12.39	-9.40	3.37	15.56	322.80°
1300	8.63	302.23	1299.09	18.67	18.67	-19.07	4.03	26.69	314.39°
1400	12.38	308.46	1397.40	29.34	29.34	-33.81	3.91	44.77	310.95°
1500	13.71	304.41	1494.82	42.71	42.71	-51.99	1.61	67.28	309.40°
1600	15.12	313.29	1591.68	58.35	58.35	-71.26	2.62	92.10	309.31°
1700	16.77	315.06	1687.83	77.50	77.50	-90.95	1.72	119.49	310.44°
1800	17.87	317.43	1783.29	99.02	99.02	-111.52	1.31	149.13	311.60°
1900	18.68	322.23	1878.25	122.98	122.98	-131.71	1.71	180.19	313.04°
2000	18.74	325.55	1972.97	148.88	148.88	-150.60	1.07	211.77	314.67°
2100	18.07	326.23	2067.86	175.02	175.02	-168.31	0.70	242.82	316.12°
2200	17.19	326.24	2163.16	200.20	200.20	-185.14	0.88	272.69	317.24°
2300	15.92	311.15	2259.06	221.52	221.52	-203.69	4.47	300.93	317.40°
2400	17.48	300.05	2354.86	238.07	238.07	-227.02	3.54	328.97	316.36°
2500	18.33	299.07	2450.02	253.23	253.23	-253.77	0.90	358.50	314.94°
2600	17.92	299.68	2545.05	268.49	268.49	-280.88	0.45	388.56	313.71°
2700	17.29	302.36	2640.37	284.06	284.06	-306.80	1.03	418.11	312.80°
2800	16.92	303.83	2735.95	300.12	300.12	-331.44	0.57	447.13	312.16°
2900	16.53	305.68	2831.72	316.52	316.52	-355.08	0.66	475.67	311.71°
3000	16.34	306.18	2927.63	333.12	333.12	-377.99	0.24	503.83	311.39°
3100	17.46	301.56	3023.32	349.27	349.27	-402.13	1.75	532.64	310.98°
3200	19.06	302.06	3118.28	365.79	365.79	-428.75	1.61	563.59	310.47°
3300	20.63	299.36	3212.34	383.10	383.10	-457.95	1.82	597.06	309.91°
3400	19.97	298.94	3306.13	400.00	400.00	-488.25	0.68	631.18	309.33°
3500	19.40	299.85	3400.28	416.53	416.53	-517.60	0.65	664.38	308.83°
3600	18.56	301.51	3494.85	433.12	433.12	-545.57	1.00	696.59	308.45°
3700	17.85	302.90	3589.84	449.76	449.76	-572.01	0.83	727.65	308.18°
3800	16.95	304.72	3685.26	466.39	466.39	-596.86	1.05	757.47	308.00°
3900	16.31	304.00	3781.08	482.54	482.54	-620.48	0.67	786.03	307.87°
4000	15.29	307.91	3877.30	498.50	498.50	-642.52	1.47	813.23	307.81°
4100	15.74	313.43	3973.66	515.92	515.92	-662.78	1.54	839.91	307.90°
4200	19.21	319.05	4069.04	537.68	537.68	-683.42	3.85	869.58	308.19°
4300	21.19	328.55	4162.91	565.53	565.53	-703.64	3.83	902.74	308.79°
4400	21.28	333.57	4256.13	597.20	597.20	-721.15	1.82	936.33	309.63°
4500	20.60	333.64	4349.53	629.22	629.22	-737.04	0.68	969.09	310.49°
4600	19.81	331.34	4443.37	659.85	659.85	-752.97	1.12	1001.19	311.23°
4700	19.01	331.02	4537.69	688.97	688.97	-768.99	0.81	1032.48	311.86°
4800	18.26	333.74	4632.45	717.27	717.27	-783.82	1.15	1062.47	312.46°

Directional Survey Report									
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(+N/-S)					(+E/-W)				
4900	17.53	333.47	4727.61	744.79	744.79	-797.47	0.73	1091.18	313.04°
5000	18.37	340.82	4822.75	773.15	773.15	-809.38	2.41	1119.31	313.69°
5100	18.81	351.93	4917.56	804.01	804.01	-816.82	3.56	1146.13	314.55°
5200	19.92	355.67	5011.91	836.96	836.96	-820.37	1.66	1171.97	315.57°
5300	19.23	354.76	5106.13	870.34	870.34	-823.16	0.75	1197.95	316.60°

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