



**SUMMIT**  
SLICKLINE INC.

**Company:** PDC ENERGY  
**Lease / Well:** MELLON 28-2 05123-11509  
**County/Parish:** WELD 123  
**State:** COLORADO  
**Date:** 2/3/2017  
**Rig:** NA  
**Surveyor:** JOHNNY RIDDLE  
**Job Number:** 3581-05-123-11509  
**Instrument Number:** 3123 **Type:** MEMORY  
**Proposed Direction:** 0 **GL Elev:** 4814  
**Magnetic Declination** 9.80 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	0.52	225.88	100.00	-0.32	-0.32	-0.33	0.52	0.45	225.88°
200	0.49	234.21	199.99	-0.88	-0.88	-1.00	0.08	1.33	228.55°
300	0.48	231.98	299.99	-1.39	-1.39	-1.68	0.02	2.18	230.32°
400	0.80	220.55	399.98	-2.18	-2.18	-2.46	0.34	3.29	228.46°
500	0.83	222.85	499.97	-3.24	-3.24	-3.41	0.04	4.70	226.43°
600	0.68	222.43	599.97	-4.21	-4.21	-4.30	0.15	6.02	225.60°
700	0.62	226.76	699.96	-5.02	-5.02	-5.09	0.08	7.15	225.43°
800	0.92	245.02	799.95	-5.73	-5.73	-6.21	0.38	8.45	227.34°
900	0.73	247.98	899.94	-6.31	-6.31	-7.53	0.19	9.82	230.07°
1000	0.70	244.99	999.93	-6.80	-6.80	-8.68	0.05	11.03	231.91°
1100	0.69	245.06	1099.93	-7.31	-7.31	-9.78	0.01	12.21	233.20°
1200	0.67	242.92	1199.92	-7.83	-7.83	-10.84	0.03	13.38	234.15°
1300	0.69	220.36	1299.91	-8.56	-8.56	-11.75	0.27	14.54	233.94°
1400	0.88	233.53	1399.90	-9.47	-9.47	-12.76	0.26	15.89	233.41°
1500	1.08	224.49	1499.89	-10.60	-10.60	-14.04	0.25	17.59	232.94°
1600	1.25	220.20	1599.87	-12.11	-12.11	-15.40	0.19	19.59	231.83°
1700	1.25	219.44	1699.84	-13.78	-13.78	-16.80	0.02	21.73	230.63°
1800	1.31	215.41	1799.82	-15.56	-15.56	-18.16	0.11	23.91	229.41°
1900	1.14	217.79	1899.79	-17.28	-17.28	-19.43	0.18	26.00	228.36°
2000	1.07	216.61	1999.78	-18.81	-18.81	-20.59	0.07	27.89	227.59°
2100	0.92	218.57	2099.76	-20.19	-20.19	-21.65	0.15	29.60	227.00°
2200	0.92	211.50	2199.75	-21.50	-21.50	-22.57	0.11	31.17	226.39°
2300	1.18	223.52	2299.73	-22.93	-22.93	-23.70	0.34	32.98	225.94°
2400	0.97	229.89	2399.71	-24.22	-24.22	-25.06	0.24	34.85	225.97°
2500	1.11	213.07	2499.70	-25.58	-25.58	-26.23	0.33	36.64	225.72°
2600	1.30	225.43	2599.68	-27.19	-27.19	-27.57	0.32	38.72	225.40°
2700	1.11	212.19	2699.65	-28.80	-28.80	-28.89	0.34	40.80	225.09°
2800	1.27	235.17	2799.63	-30.26	-30.26	-30.32	0.50	42.83	225.06°
2900	0.99	251.87	2899.61	-31.16	-31.16	-32.05	0.43	44.70	225.81°
3000	1.35	255.49	2999.59	-31.72	-31.72	-34.01	0.37	46.51	226.99°
3100	1.12	255.63	3099.57	-32.26	-32.26	-36.10	0.23	48.41	228.21°
3200	1.56	259.99	3199.54	-32.74	-32.74	-38.39	0.45	50.45	229.54°
3300	1.40	253.04	3299.51	-33.33	-33.33	-40.89	0.24	52.76	230.82°
3400	1.63	258.32	3399.47	-33.98	-33.98	-43.46	0.27	55.16	231.98°
3500	1.88	251.60	3499.43	-34.78	-34.78	-46.40	0.32	57.99	233.15°
3600	1.48	243.97	3599.38	-35.87	-35.87	-49.12	0.46	60.82	233.86°
3700	1.12	247.15	3699.36	-36.81	-36.81	-51.18	0.37	63.05	234.27°
3800	0.57	218.44	3799.35	-37.58	-37.58	-52.39	0.68	64.48	234.35°
3900	0.96	173.37	3899.34	-38.80	-38.80	-52.61	0.69	65.37	233.59°
4000	0.95	175.76	3999.32	-40.46	-40.46	-52.45	0.04	66.24	232.35°
4100	0.80	179.43	4099.31	-41.99	-41.99	-52.38	0.16	67.13	231.28°
4200	0.45	213.72	4199.31	-43.01	-43.01	-52.59	0.50	67.94	230.72°
4300	0.28	340.45	4299.31	-43.11	-43.11	-52.89	0.66	68.23	230.82°
4400	0.26	334.39	4399.30	-42.67	-42.67	-53.07	0.03	68.10	231.20°
4500	0.22	35.28	4499.30	-42.31	-42.31	-53.06	0.25	67.86	231.43°
4600	0.50	21.87	4599.30	-41.75	-41.75	-52.78	0.29	67.30	231.66°
4700	0.48	14.14	4699.30	-40.94	-40.94	-52.52	0.07	66.59	232.06°
4800	0.34	3.54	4799.30	-40.24	-40.24	-52.40	0.16	66.07	232.48°

Directional Survey Report									
Measured Depth (ft.)	Inclination	Azimuth Bearing	Vertical Depth	Vertical Section	Coordinates		Dog-Leg / 100 ft.	Closure Distance	Closure Direction
(+N/-S)					(+E/-W)				
4900	0.32	3.66	4899.29	-39.66	-39.66	-52.36	0.02	65.69	232.86°
5000	0.24	65.17	4999.29	-39.30	-39.30	-52.15	0.29	65.30	233.00°
5100	0.31	61.21	5099.29	-39.08	-39.08	-51.73	0.07	64.83	232.93°
5200	0.49	33.24	5199.29	-38.59	-38.59	-51.26	0.26	64.16	233.02°
5300	0.46	61.80	5299.29	-38.04	-38.04	-50.67	0.24	63.36	233.10°
5400	0.56	114.43	5399.28	-38.06	-38.06	-49.87	0.46	62.73	232.65°
5500	0.61	99.89	5499.28	-38.35	-38.35	-48.90	0.16	62.14	231.89°
5600	0.71	118.23	5599.27	-38.73	-38.73	-47.83	0.23	61.55	231.00°
5700	0.68	94.04	5699.26	-39.07	-39.07	-46.69	0.29	60.88	230.08°
5800	0.89	71.57	5799.25	-38.86	-38.86	-45.36	0.37	59.73	229.41°
5900	0.94	72.76	5899.24	-38.38	-38.38	-43.84	0.05	58.27	228.80°
6000	0.90	69.72	5999.23	-37.86	-37.86	-42.32	0.06	56.79	228.18°
6100	1.06	86.59	6099.21	-37.53	-37.53	-40.66	0.33	55.34	227.29°
6200	0.79	98.46	6199.20	-37.58	-37.58	-39.06	0.33	54.20	226.10°
6300	0.67	121.52	6299.19	-37.99	-37.99	-37.88	0.31	53.64	224.92°
6400	0.58	110.92	6399.19	-38.47	-38.47	-36.91	0.15	53.31	223.81°
6500	1.05	106.11	6499.18	-38.91	-38.91	-35.55	0.47	52.70	222.42°
6600	0.89	108.67	6599.16	-39.41	-39.41	-33.94	0.17	52.01	220.73°
6700	1.22	117.89	6699.15	-40.16	-40.16	-32.26	0.37	51.51	218.78°
6800	0.77	101.38	6799.13	-40.79	-40.79	-30.66	0.53	51.03	216.93°
6900	0.62	96.59	6899.12	-40.98	-40.98	-29.46	0.16	50.47	215.71°
6950	0.63	87.26	6949.12	-41.00	-41.00	-28.92	0.20	50.17	215.20°

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