



SUMMIT
SLICKLINE INC.

Company: PDC ENERGY
Lease / Well: TOTEMS 34-24
County/Parish: WELD 123
State: COLORADO
Date: 8/1/2016
Rig: NA
Surveyor: JOHNNY RIDDLE
Job Number: 2630-05123-21354
Instrument Number: 3123 **Type:** MEMORY
Proposed Direction: 0 **GL Elev:** 5133
Magnetic Declination 9.82 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	1.16	144.81	99.99	-0.83	-0.83	0.58	1.16	1.01	144.81°
200	1.23	135.41	199.97	-2.42	-2.42	1.92	0.21	3.09	141.56°
300	1.94	123.98	299.93	-4.13	-4.13	4.08	0.77	5.80	135.36°
400	2.02	126.68	399.87	-6.13	-6.13	6.89	0.12	9.22	131.63°
500	2.51	113.52	499.80	-8.05	-8.05	10.32	0.71	13.09	127.98°
600	2.29	121.32	599.71	-9.97	-9.97	14.03	0.39	17.21	125.39°
700	1.40	122.82	699.66	-11.67	-11.67	16.76	0.89	20.42	124.84°
800	1.02	101.06	799.63	-12.50	-12.50	18.66	0.59	22.46	123.81°
900	1.02	110.88	899.62	-12.99	-12.99	20.37	0.17	24.16	122.52°
1000	0.84	68.09	999.61	-13.03	-13.03	21.88	0.70	25.47	120.78°
1100	1.25	56.37	1099.59	-12.15	-12.15	23.47	0.46	26.43	117.38°
1200	1.15	60.67	1199.57	-11.06	-11.06	25.25	0.13	27.57	113.65°
1300	0.78	42.51	1299.55	-10.07	-10.07	26.59	0.48	28.43	110.74°
1400	0.79	25.03	1399.54	-8.94	-8.94	27.34	0.24	28.76	108.11°
1500	0.76	35.31	1499.53	-7.77	-7.77	28.01	0.14	29.07	105.51°
1600	0.60	46.67	1599.53	-6.87	-6.87	28.78	0.21	29.59	103.43°
1700	0.31	67.78	1699.52	-6.41	-6.41	29.41	0.33	30.10	102.30°
1800	0.16	190.79	1799.52	-6.45	-6.45	29.63	0.42	30.33	102.27°
1900	0.43	226.01	1899.52	-6.84	-6.84	29.34	0.31	30.12	103.13°
2000	0.57	217.29	1999.52	-7.50	-7.50	28.77	0.16	29.73	104.61°
2100	0.52	202.79	2099.51	-8.31	-8.31	28.29	0.15	29.49	106.38°
2200	0.69	172.63	2199.51	-9.33	-9.33	28.19	0.36	29.69	108.31°
2300	1.10	169.26	2299.50	-10.87	-10.87	28.45	0.41	30.45	110.91°
2400	1.24	174.39	2399.48	-12.89	-12.89	28.73	0.17	31.49	114.16°
2500	1.25	170.80	2499.45	-15.04	-15.04	29.01	0.08	32.68	117.41°
2600	1.20	165.80	2599.43	-17.14	-17.14	29.44	0.12	34.07	120.20°
2700	0.96	174.99	2699.41	-18.99	-18.99	29.77	0.30	35.31	122.52°
2800	1.18	203.04	2799.39	-20.77	-20.77	29.44	0.56	36.03	125.20°
2900	1.32	197.70	2899.37	-22.81	-22.81	28.69	0.18	36.65	128.49°
3000	1.47	216.12	2999.34	-24.95	-24.95	27.58	0.47	37.19	132.13°
3100	1.82	214.09	3099.30	-27.30	-27.30	25.94	0.35	37.65	136.46°
3200	1.51	234.51	3199.26	-29.38	-29.38	23.97	0.66	37.92	140.78°
3300	1.95	236.69	3299.21	-31.08	-31.08	21.48	0.44	37.78	145.35°
3400	1.68	241.50	3399.16	-32.71	-32.71	18.77	0.31	37.71	150.15°
3500	1.90	234.29	3499.11	-34.38	-34.38	16.13	0.31	37.97	154.86°
3600	0.57	252.55	3599.09	-35.49	-35.49	14.31	1.37	38.27	158.04°
3700	0.59	78.65	3699.09	-35.54	-35.54	14.34	1.16	38.33	158.02°
3800	0.43	74.20	3799.08	-35.34	-35.34	15.21	0.16	38.47	156.71°
3900	0.87	40.73	3899.08	-34.66	-34.66	16.07	0.56	38.20	155.13°
4000	0.88	55.95	3999.06	-33.66	-33.66	17.20	0.23	37.79	152.93°
4100	0.90	55.34	4099.05	-32.78	-32.78	18.48	0.02	37.63	150.59°
4200	1.28	53.96	4199.03	-31.67	-31.67	20.03	0.38	37.48	147.69°
4300	1.01	34.28	4299.01	-30.29	-30.29	21.43	0.47	37.10	144.72°
4400	0.71	50.00	4399.00	-29.16	-29.16	22.40	0.38	36.77	142.47°
4500	0.69	73.23	4499.00	-28.59	-28.59	23.45	0.28	36.98	140.64°
4600	0.76	75.75	4598.99	-28.25	-28.25	24.67	0.08	37.51	138.87°
4700	1.02	69.79	4698.98	-27.78	-27.78	26.15	0.28	38.15	136.74°
4800	1.22	72.16	4798.96	-27.15	-27.15	28.00	0.21	39.00	134.12°

Directional Survey Report									
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4900	1.24	72.95	4898.93	-26.51	-26.51	30.05	0.03	40.07	131.42°
5000	1.05	77.60	4998.91	-25.99	-25.99	31.97	0.21	41.21	129.11°
5100	1.10	75.67	5098.90	-25.56	-25.56	33.80	0.06	42.37	127.10°
5200	1.22	64.04	5198.88	-24.85	-24.85	35.69	0.26	43.49	124.86°
5300	0.97	15.75	5298.86	-23.57	-23.57	36.87	0.92	43.77	122.59°
5400	1.12	359.54	5398.84	-21.78	-21.78	37.10	0.33	43.02	120.42°
5500	0.79	7.71	5498.83	-20.12	-20.12	37.18	0.36	42.28	118.42°
5600	0.42	5.50	5598.82	-19.07	-19.07	37.31	0.37	41.90	117.08°
5700	0.61	310.53	5698.82	-18.36	-18.36	36.94	0.50	41.25	116.43°
5800	0.60	268.32	5798.81	-18.03	-18.03	36.01	0.44	40.27	116.60°
5900	0.76	266.59	5898.81	-18.09	-18.09	34.82	0.16	39.24	117.45°
6000	0.93	261.60	5998.80	-18.24	-18.24	33.36	0.19	38.02	118.67°
6100	1.07	257.33	6098.78	-18.57	-18.57	31.65	0.16	36.69	120.40°
6200	0.61	245.21	6198.77	-19.00	-19.00	30.25	0.49	35.72	122.13°
6300	0.39	206.51	6298.77	-19.52	-19.52	29.62	0.39	35.47	123.39°
6400	0.35	197.11	6398.77	-20.12	-20.12	29.38	0.07	35.61	124.41°
6500	0.71	138.34	6498.76	-20.88	-20.88	29.70	0.61	36.30	125.10°
6600	0.45	159.81	6598.76	-21.71	-21.71	30.24	0.33	37.23	125.67°
6700	0.30	180.09	6698.75	-22.34	-22.34	30.38	0.20	37.71	126.33°
6800	0.28	284.23	6798.75	-22.54	-22.54	30.14	0.46	37.64	126.79°
6900	0.13	301.87	6898.75	-22.42	-22.42	29.81	0.16	37.30	126.95°
7000	0.24	12.37	6998.75	-22.15	-22.15	29.76	0.23	37.10	126.67°
7100	0.37	41.61	7098.75	-21.71	-21.71	30.02	0.20	37.04	125.87°
7200	1.18	33.64	7198.74	-20.61	-20.61	30.80	0.82	37.06	123.79°
7300	1.66	39.87	7298.71	-18.64	-18.64	32.30	0.50	37.29	119.99°
7400	2.68	46.43	7398.64	-15.92	-15.92	34.92	1.05	38.38	114.50°
7500	2.78	34.42	7498.52	-12.31	-12.31	37.99	0.58	39.93	107.95°

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