



Company: PDC Energy
Lease / Well: State 6524 11-28
County/Parish: WELD 123
State: COLORADO
Date: 4/7/2015
Rig: NA
Surveyor: SHON LANE
Job Number: 1241-0512320876
Instrument Number: 3087 **Type:** MEMORY
Proposed Direction: 0 **GL Elev:** 4712
Magnetic Declination 9.62 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	0.36	66.73	100.00	0.12	0.12	0.29	0.36	0.31	66.73°
200	0.19	329.21	200.00	0.39	0.39	0.49	0.43	0.63	51.57°
300	0.37	238.93	300.00	0.37	0.37	0.13	0.42	0.39	19.66°
400	0.31	238.07	400.00	0.06	0.06	-0.38	0.06	0.38	278.60°
500	0.39	214.88	499.99	-0.37	-0.37	-0.80	0.16	0.88	245.43°
600	0.48	217.92	599.99	-0.98	-0.98	-1.25	0.09	1.59	232.08°
700	0.73	237.04	699.99	-1.65	-1.65	-2.04	0.32	2.63	231.04°
800	0.74	237.49	799.98	-2.35	-2.35	-3.12	0.01	3.91	233.08°
900	0.55	232.71	899.97	-2.98	-2.98	-4.05	0.20	5.03	233.61°
1000	0.50	232.93	999.97	-3.54	-3.54	-4.78	0.05	5.95	233.49°
1100	0.59	224.74	1099.96	-4.17	-4.17	-5.49	0.12	6.89	232.80°
1200	0.82	232.62	1199.95	-4.97	-4.97	-6.42	0.25	8.12	232.28°
1300	0.75	258.14	1299.95	-5.54	-5.54	-7.63	0.35	9.43	234.04°
1400	0.46	258.46	1399.94	-5.75	-5.75	-8.66	0.29	10.40	236.43°
1500	0.58	235.52	1499.94	-6.12	-6.12	-9.47	0.24	11.28	237.15°
1600	0.61	245.33	1599.93	-6.63	-6.63	-10.37	0.11	12.31	237.44°
1700	0.69	260.03	1699.92	-6.95	-6.95	-11.45	0.18	13.40	238.74°
1800	0.40	304.84	1799.92	-6.86	-6.86	-12.33	0.49	14.11	240.92°
1900	0.42	5.43	1899.92	-6.29	-6.29	-12.58	0.41	14.07	243.43°
2000	0.68	36.90	1999.91	-5.45	-5.45	-12.19	0.39	13.36	245.90°
2100	1.35	52.75	2099.90	-4.27	-4.27	-10.90	0.72	11.70	248.62°
2200	1.47	42.84	2199.87	-2.61	-2.61	-9.09	0.27	9.46	253.96°
2300	1.59	35.54	2299.83	-0.54	-0.54	-7.41	0.23	7.43	265.81°
2400	1.69	34.18	2399.79	1.81	1.81	-5.77	0.11	6.05	287.37°
2500	1.90	33.82	2499.74	4.40	4.40	-4.02	0.21	5.96	317.58°
2600	2.29	31.30	2599.67	7.49	7.49	-2.06	0.40	7.77	344.60°
2700	2.60	27.04	2699.58	11.22	11.22	0.01	0.36	11.22	0.03°
2800	2.45	16.50	2799.49	15.28	15.28	1.64	0.49	15.37	6.14°
2900	2.49	19.71	2899.39	19.38	19.38	2.98	0.14	19.61	8.75°
3000	2.17	16.07	2999.31	23.24	23.24	4.24	0.35	23.63	10.34°
3100	2.14	10.99	3099.24	26.90	26.90	5.12	0.19	27.38	10.78°
3200	1.61	352.78	3199.19	30.12	30.12	5.30	0.79	30.58	9.98°
3300	0.89	357.59	3299.16	32.29	32.29	5.09	0.73	32.69	8.96°
3400	1.04	41.48	3399.15	33.75	33.75	5.66	0.73	34.22	9.52°
3500	1.44	39.57	3499.13	35.40	35.40	7.06	0.40	36.09	11.28°
3600	1.65	23.41	3599.09	37.69	37.69	8.43	0.48	38.62	12.61°
3700	1.78	26.11	3699.05	40.40	40.40	9.69	0.15	41.55	13.49°
3800	1.92	18.91	3798.99	43.38	43.38	10.92	0.27	44.73	14.12°
3900	2.21	22.21	3898.93	46.75	46.75	12.19	0.31	48.31	14.61°
4000	1.89	37.03	3998.87	49.85	49.85	13.91	0.62	51.76	15.59°
4100	1.67	58.20	4098.82	51.94	51.94	16.14	0.69	54.39	17.26°
4200	1.72	72.31	4198.77	53.16	53.16	18.81	0.42	56.39	19.48°
4300	1.87	92.82	4298.73	53.54	53.54	21.87	0.66	57.83	22.22°
4400	1.99	107.93	4398.67	52.92	52.92	25.15	0.52	58.59	25.42°
4500	2.17	126.78	4498.61	51.25	51.25	28.32	0.70	58.56	28.92°
4600	2.54	143.00	4598.52	48.35	48.35	31.17	0.76	57.53	32.81°
4700	2.62	141.47	4698.42	44.79	44.79	33.93	0.11	56.19	37.14°
4800	2.38	145.71	4798.33	41.29	41.29	36.52	0.30	55.12	41.49°

Directional Survey Report									
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4900	2.68	145.97	4898.23	37.64	37.64	39.00	0.30	54.20	46.02°
5000	2.90	141.49	4998.11	33.72	33.72	41.88	0.31	53.77	51.16°
5100	2.09	139.41	5098.01	30.35	30.35	44.64	0.81	53.98	55.79°
5200	1.61	145.51	5197.96	27.81	27.81	46.62	0.52	54.29	59.18°
5300	1.50	137.67	5297.93	25.69	25.69	48.30	0.24	54.71	62.00°
5400	1.21	115.27	5397.90	24.27	24.27	50.14	0.60	55.70	64.17°
5500	1.09	118.32	5497.88	23.37	23.37	51.93	0.13	56.94	65.77°
5600	1.38	128.12	5597.85	22.17	22.17	53.71	0.36	58.11	67.57°
5700	1.03	118.55	5697.83	21.00	21.00	55.45	0.40	59.29	69.26°
5800	0.88	126.91	5797.82	20.11	20.11	56.85	0.20	60.31	70.52°
5900	1.06	106.06	5897.80	19.39	19.39	58.36	0.39	61.49	71.62°
6000	0.78	97.78	5997.79	19.04	19.04	59.92	0.31	62.87	72.37°
6100	1.12	99.67	6097.78	18.79	18.79	61.56	0.34	64.36	73.03°
6200	1.02	85.81	6197.76	18.69	18.69	63.41	0.28	66.11	73.58°
6300	0.96	78.85	6297.75	18.91	18.91	65.12	0.13	67.81	73.80°
6400	1.42	65.38	6397.72	19.59	19.59	67.07	0.54	69.87	73.71°

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