



**Company:** PDC Energy  
**Lease / Well:** Cervi 41-26  
**County/Parish:** WELD 123  
**State:** COLORADO  
**Date:** 5/28/2015  
**Rig:** NA  
**Surveyor:** SHON LANE  
**Job Number:** 1496-0512323101  
**Instrument Number:** 3123 **Type:** MEMORY  
**Proposed Direction:** 0 **GL Elev:** 4695  
**Magnetic Declination** 9.57 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	0.15	266.09	100.00	-0.01	-0.01	-0.13	0.15	0.13	266.09°
200	0.29	218.02	200.00	-0.22	-0.22	-0.42	0.22	0.47	242.49°
300	0.28	111.25	300.00	-0.51	-0.51	-0.35	0.46	0.61	214.35°
400	0.40	148.72	400.00	-0.89	-0.89	0.06	0.25	0.89	175.91°
500	0.30	113.94	500.00	-1.30	-1.30	0.48	0.23	1.38	159.52°
600	0.33	162.77	599.99	-1.68	-1.68	0.81	0.26	1.86	154.26°
700	0.36	153.72	699.99	-2.23	-2.23	1.03	0.06	2.46	155.18°
800	0.28	105.41	799.99	-2.58	-2.58	1.41	0.27	2.94	151.39°
900	0.22	133.87	899.99	-2.78	-2.78	1.78	0.14	3.30	147.33°
1000	0.70	103.92	999.99	-3.06	-3.06	2.51	0.52	3.96	140.60°
1100	0.66	103.11	1099.98	-3.34	-3.34	3.67	0.04	4.96	132.30°
1200	0.72	107.19	1199.97	-3.65	-3.65	4.83	0.08	6.05	127.11°
1300	0.94	101.96	1299.96	-4.01	-4.01	6.23	0.23	7.41	122.76°
1400	0.69	95.63	1399.95	-4.24	-4.24	7.63	0.27	8.73	119.04°
1500	0.77	91.17	1499.94	-4.31	-4.31	8.90	0.10	9.89	115.83°
1600	0.65	130.17	1599.94	-4.69	-4.69	10.01	0.49	11.05	115.11°
1700	0.68	127.68	1699.93	-5.42	-5.42	10.91	0.04	12.18	116.41°
1800	0.71	129.71	1799.92	-6.18	-6.18	11.86	0.04	13.37	117.52°
1900	0.50	144.17	1899.92	-6.93	-6.93	12.59	0.26	14.37	118.82°
2000	0.32	119.68	1999.91	-7.42	-7.42	13.09	0.25	15.04	119.55°
2100	0.49	140.58	2099.91	-7.89	-7.89	13.60	0.22	15.72	120.11°
2200	0.55	114.00	2199.91	-8.41	-8.41	14.31	0.25	16.60	120.45°
2300	0.55	129.96	2299.90	-8.92	-8.92	15.12	0.15	17.55	120.53°
2400	0.82	122.26	2399.90	-9.61	-9.61	16.09	0.28	18.74	120.84°
2500	0.63	116.60	2499.89	-10.23	-10.23	17.19	0.20	20.00	120.77°
2600	0.64	136.38	2599.88	-10.89	-10.89	18.07	0.22	21.09	121.07°
2700	0.87	130.31	2699.87	-11.78	-11.78	19.03	0.24	22.38	121.76°
2800	0.83	137.48	2799.86	-12.81	-12.81	20.10	0.11	23.83	122.50°
2900	0.94	140.38	2899.85	-13.97	-13.97	21.11	0.12	25.32	123.50°
3000	0.70	157.79	2999.84	-15.17	-15.17	21.86	0.34	26.61	124.75°
3100	0.90	152.08	3099.83	-16.43	-16.43	22.46	0.22	27.83	126.18°
3200	1.02	147.19	3199.82	-17.87	-17.87	23.31	0.15	29.37	127.47°
3300	2.02	144.04	3299.78	-20.05	-20.05	24.83	1.00	31.91	128.91°
3400	2.75	142.29	3399.69	-23.37	-23.37	27.33	0.73	35.96	130.53°
3500	2.85	141.06	3499.57	-27.20	-27.20	30.36	0.12	40.76	131.86°
3600	2.74	137.04	3599.45	-30.88	-30.88	33.55	0.22	45.60	132.63°
3700	2.66	133.66	3699.34	-34.24	-34.24	36.86	0.18	50.31	132.88°
3800	2.64	134.56	3799.24	-37.45	-37.45	40.18	0.05	54.93	132.99°
3900	2.47	132.59	3899.14	-40.53	-40.53	43.41	0.19	59.39	133.03°
4000	2.39	134.16	3999.05	-43.44	-43.44	46.49	0.10	63.63	133.06°
4100	2.09	130.23	4098.97	-46.07	-46.07	49.38	0.34	67.53	133.01°
4200	1.74	134.51	4198.91	-48.31	-48.31	51.85	0.38	70.87	132.97°
4300	1.75	133.53	4298.87	-50.43	-50.43	54.04	0.03	73.92	133.02°
4400	1.89	132.42	4398.82	-52.59	-52.59	56.37	0.14	77.09	133.01°
4500	1.97	138.60	4498.76	-54.99	-54.99	58.72	0.22	80.45	133.12°
4600	2.15	131.27	4598.70	-57.52	-57.52	61.27	0.32	84.04	133.19°
4700	1.76	129.55	4698.64	-59.73	-59.73	63.86	0.39	87.44	133.09°
4800	1.50	123.09	4798.60	-61.43	-61.43	66.14	0.32	90.27	132.88°

Directional Survey Report									
Measured Depth (ft.)	Inclination	Azimuth Bearing	Vertical Depth	Vertical Section	Coordinates (+N/-S) (+E/-W)		Dog-Leg / 100 ft.	Closure Distance	Closure Direction
4900	1.46	124.72	4898.56	-62.87	-62.87	68.29	0.06	92.82	132.63°
5000	1.49	121.85	4998.53	-64.28	-64.28	70.44	0.08	95.36	132.38°
5100	1.42	116.37	5098.50	-65.51	-65.51	72.65	0.16	97.83	132.04°
5200	1.39	112.53	5198.47	-66.53	-66.53	74.88	0.10	100.17	131.62°
5300	2.08	121.24	5298.42	-67.94	-67.94	77.55	0.74	103.10	131.22°
5400	2.32	116.07	5398.35	-69.77	-69.77	80.92	0.31	106.85	130.77°
5500	2.12	106.56	5498.27	-71.18	-71.18	84.52	0.42	110.50	130.11°
5600	1.50	99.08	5598.22	-71.92	-71.92	87.58	0.66	113.32	129.39°
5700	1.41	94.20	5698.19	-72.21	-72.21	90.10	0.15	115.47	128.71°
5800	1.20	89.27	5798.17	-72.29	-72.29	92.37	0.24	117.30	128.05°
5900	1.14	89.61	5898.14	-72.27	-72.27	94.42	0.06	118.90	127.43°
6000	1.03	78.68	5998.13	-72.09	-72.09	96.29	0.23	120.29	126.82°
6100	0.90	85.73	6098.11	-71.85	-71.85	97.96	0.18	121.48	126.26°
6200	0.72	89.57	6198.10	-71.79	-71.79	99.37	0.19	122.59	125.85°
6300	0.45	74.76	6298.10	-71.68	-71.68	100.38	0.31	123.34	125.53°
6400	0.40	80.75	6398.09	-71.52	-71.52	101.10	0.07	123.84	125.28°
6500	0.15	35.51	6498.09	-71.36	-71.36	101.52	0.31	124.09	125.10°
6600	0.28	231.80	6598.09	-71.40	-71.40	101.40	0.43	124.02	125.15°

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