



**Company:** PDC ENERGY  
**Lease / Well:** BIHAIN 26-3  
**County/Parish:** WELD 123  
**State:** COLORADO  
**Date:** 3/18/2016  
**Rig:** NA  
**Surveyor:** SHON LANE  
**Job Number:** 2332-05123-16210  
**Instrument Number:** 3123      **Type:** MEMORY  
**Proposed Direction:** 0      **GL Elev:** 4601  
**Magnetic Declination** 9.61 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)	Coordinates (+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	0.30	265.21	100.00	-0.02	-0.02	-0.26	0.30	0.26	265.21°
200	0.22	329.26	200.00	0.12	0.12	-0.62	0.28	0.63	281.07°
300	0.17	217.32	300.00	0.17	0.17	-0.81	0.32	0.83	281.77°
400	0.37	325.38	400.00	0.32	0.32	-1.08	0.45	1.13	286.29°
500	0.36	269.74	500.00	0.58	0.58	-1.58	0.34	1.68	290.18°
600	0.18	305.28	599.99	0.67	0.67	-2.02	0.24	2.13	288.33°
700	0.60	299.89	699.99	1.02	1.02	-2.60	0.42	2.80	291.42°
800	0.54	262.14	799.99	1.22	1.22	-3.52	0.37	3.73	289.06°
900	0.49	297.85	899.98	1.35	1.35	-4.37	0.32	4.57	287.21°
1000	0.77	276.56	999.98	1.63	1.63	-5.41	0.36	5.65	286.75°
1100	0.48	280.32	1099.97	1.78	1.78	-6.49	0.29	6.73	285.34°
1200	1.04	284.08	1199.96	2.08	2.08	-7.79	0.56	8.06	284.94°
1300	1.11	301.47	1299.95	2.80	2.80	-9.49	0.33	9.90	286.45°
1400	1.45	294.01	1399.92	3.82	3.82	-11.48	0.38	12.10	288.43°
1500	2.04	305.59	1499.87	5.37	5.37	-14.08	0.68	15.07	290.90°
1600	2.09	313.40	1599.81	7.66	7.66	-16.85	0.29	18.51	294.46°
1700	2.07	314.12	1699.74	10.17	10.17	-19.47	0.03	21.97	297.59°
1800	2.09	314.42	1799.68	12.71	12.71	-22.07	0.02	25.47	299.93°
1900	1.59	316.39	1899.63	14.99	14.99	-24.33	0.50	28.58	301.63°
2000	1.10	321.10	1999.60	16.74	16.74	-25.89	0.50	30.83	302.89°
2100	0.80	336.77	2099.58	18.13	18.13	-26.77	0.39	32.33	304.11°
2200	0.72	41.59	2199.58	19.24	19.24	-26.63	0.82	32.85	305.85°
2300	0.79	73.93	2299.57	19.90	19.90	-25.55	0.43	32.38	307.92°
2400	0.62	107.14	2399.56	19.93	19.93	-24.37	0.43	31.48	309.28°
2500	0.44	106.50	2499.56	19.66	19.66	-23.48	0.18	30.63	309.94°
2600	0.68	79.89	2599.55	19.66	19.66	-22.53	0.35	29.90	311.11°
2700	0.71	84.87	2699.54	19.82	19.82	-21.33	0.07	29.11	312.90°
2800	0.61	99.93	2799.54	19.78	19.78	-20.19	0.20	28.26	314.42°
2900	0.60	106.55	2899.53	19.54	19.54	-19.16	0.07	27.37	315.56°
3000	0.57	110.72	2999.53	19.22	19.22	-18.19	0.05	26.46	316.56°
3100	0.41	131.40	3099.52	18.80	18.80	-17.46	0.24	25.66	317.12°
3200	0.39	138.78	3199.52	18.31	18.31	-16.97	0.06	24.96	317.18°
3300	0.59	233.68	3299.52	17.75	17.75	-17.16	0.73	24.69	315.97°
3400	1.32	348.42	3399.51	18.57	18.57	-17.80	1.66	25.73	316.21°
3500	0.77	308.49	3499.49	20.12	20.12	-18.56	0.88	27.37	317.31°
3600	0.45	325.31	3599.49	20.86	20.86	-19.31	0.36	28.43	317.21°
3700	0.67	331.29	3699.48	21.70	21.70	-19.81	0.23	29.38	317.59°
3800	0.88	276.86	3799.48	22.30	22.30	-20.86	0.73	30.53	316.91°
3900	1.46	226.95	3899.46	21.52	21.52	-22.55	1.12	31.17	313.66°
4000	1.42	222.83	3999.43	19.74	19.74	-24.32	0.11	31.33	309.07°
4100	1.32	230.95	4099.40	18.11	18.11	-26.06	0.22	31.74	304.79°
4200	1.72	226.49	4199.36	16.35	16.35	-28.04	0.42	32.46	300.24°
4300	1.83	219.82	4299.31	14.09	14.09	-30.16	0.23	33.29	295.05°
4400	2.70	211.00	4399.23	10.85	10.85	-32.39	0.93	34.16	288.51°
4500	3.89	212.81	4499.07	5.98	5.98	-35.44	1.19	35.94	279.57°
4600	4.68	213.60	4598.79	-0.27	-0.27	-39.54	0.79	39.54	269.60°
4700	3.54	220.44	4698.53	-6.02	-6.02	-43.80	1.24	44.21	262.17°
4800	3.06	222.97	4798.36	-10.32	-10.32	-47.62	0.50	48.73	257.77°

**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	2.68	226.60	4898.24	-13.88	-13.88	-51.14	0.42	52.99	254.81°
5000	1.85	243.53	4998.16	-16.21	-16.21	-54.28	1.06	56.65	253.37°
5100	1.16	269.91	5098.13	-16.93	-16.93	-56.74	0.96	59.21	253.39°
5200	0.68	278.68	5198.11	-16.84	-16.84	-58.34	0.50	60.72	253.90°
5300	0.83	279.47	5298.10	-16.63	-16.63	-59.64	0.15	61.91	254.42°
5400	1.20	287.70	5398.09	-16.20	-16.20	-61.35	0.40	63.45	255.21°
5500	1.37	292.93	5498.06	-15.41	-15.41	-63.45	0.21	65.29	256.35°
5600	1.57	296.37	5598.03	-14.34	-14.34	-65.78	0.22	67.32	257.70°
5700	1.85	297.43	5697.99	-12.99	-12.99	-68.44	0.28	69.66	259.26°
5800	2.17	306.71	5797.92	-11.11	-11.11	-71.39	0.46	72.25	261.15°
5900	1.34	309.08	5897.88	-9.24	-9.24	-73.81	0.83	74.39	262.86°
6000	0.22	328.96	5997.87	-8.34	-8.34	-74.82	1.14	75.28	263.64°
6100	0.41	171.00	6097.86	-8.53	-8.53	-74.86	0.62	75.35	263.50°
6200	0.24	167.60	6197.86	-9.09	-9.09	-74.76	0.17	75.31	263.07°
6300	0.28	164.13	6297.86	-9.53	-9.53	-74.65	0.04	75.26	262.73°
6400	0.14	231.97	6397.86	-9.84	-9.84	-74.68	0.26	75.33	262.50°
6500	0.28	170.91	6497.86	-10.15	-10.15	-74.74	0.25	75.42	262.26°
6600	0.47	150.63	6597.86	-10.75	-10.75	-74.50	0.23	75.27	261.79°
6700	0.44	168.78	6697.86	-11.49	-11.49	-74.22	0.15	75.11	261.20°
6750	0.42	160.02	6747.85	-11.85	-11.85	-74.12	0.14	75.06	260.92°

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**Directional Survey Report**

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