



Job Number: SVGJ-140217

Company: PDC

Lease/Well: Webster 41-11

Location: Weld County, CO

Rig Name: MS Slickline

RKB: 0'

G.L. or M.S.L.: GL

State/Country: Colorado/USA

Declination: 8.43°

Grid: East To Truth North

File name: S:\2014SU~1\PDC\GJ\WEBSTER\4111.SVY

Date/Time: 27-Feb-14 / 16:49

Curve Name: Surface - 7118' M.D. (Rate Gyro)

MS SURVEY

WINSERVE SURVEY CALCULATIONS

Minimum Curvature Method

Vertical Section Plane .00

Vertical Section Referenced to Wellhead

Rectangular Coordinates Referenced to Wellhead

<i>Measured Depth FT</i>	<i>Incl Angle Deg</i>	<i>Drift Direction Deg</i>	<i>True Vertical Depth</i>	<i>N-S FT</i>	<i>E-W FT</i>	<i>Vertical Section FT</i>	<i>C L O S U R E</i>		<i>Dogleg Severity Deg/100</i>
							<i>Distance FT</i>	<i>Direction Deg</i>	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.47	297.02	100.00	.19	-.37	.19	.41	297.02	.47
200.00	.44	210.78	200.00	.04	-.93	.04	.93	272.64	.62
300.00	.39	207.84	299.99	-.59	-1.28	-.59	1.41	245.37	.05
400.00	.71	230.42	399.99	-1.28	-1.92	-1.28	2.31	236.22	.38
500.00	.43	224.35	499.98	-1.95	-2.66	-1.95	3.30	233.79	.29
600.00	1.07	272.86	599.98	-2.17	-3.85	-2.17	4.42	240.63	.85
700.00	1.25	274.99	699.96	-2.03	-5.87	-2.03	6.21	250.96	.19
800.00	.70	281.40	799.94	-1.81	-7.56	-1.81	7.77	256.52	.56
900.00	.86	278.48	899.93	-1.58	-8.90	-1.58	9.04	259.93	.16

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
1000.00	1.69	285.54	999.91	-1.07	-11.06	-1.07	11.11	264.45	.84
1100.00	1.28	276.95	1099.87	-.54	-13.59	-.54	13.60	267.71	.47
1200.00	1.36	290.72	1199.85	.01	-15.81	.01	15.81	270.04	.33
1300.00	1.67	306.73	1299.81	1.30	-18.09	1.30	18.14	274.12	.52
1400.00	1.84	290.21	1399.76	2.73	-20.76	2.73	20.94	277.49	.53
1500.00	1.94	311.58	1499.71	4.41	-23.54	4.41	23.94	280.60	.71
1600.00	2.07	292.33	1599.65	6.22	-26.47	6.22	27.19	283.21	.68
1700.00	2.06	294.70	1699.59	7.65	-29.78	7.65	30.74	284.41	.09
1800.00	1.23	300.06	1799.54	8.94	-32.34	8.94	33.55	285.46	.84
1900.00	1.79	306.54	1899.51	10.41	-34.52	10.41	36.06	286.78	.58
2000.00	1.70	310.65	1999.46	12.31	-36.90	12.31	38.90	288.44	.15
2100.00	1.30	305.09	2099.43	13.92	-38.96	13.92	41.37	289.67	.43
2200.00	1.84	298.01	2199.39	15.33	-41.30	15.33	44.05	290.36	.57
2300.00	1.82	282.96	2299.34	16.44	-44.27	16.44	47.22	290.37	.48
2400.00	1.13	290.85	2399.31	17.15	-46.73	17.15	49.78	290.15	.72
2500.00	1.04	313.97	2499.29	18.13	-48.31	18.13	51.60	290.57	.44
2600.00	.80	312.70	2599.28	19.23	-49.48	19.23	53.08	291.24	.24
2700.00	.42	283.30	2699.27	19.79	-50.35	19.79	54.10	291.46	.48
2800.00	.83	300.43	2799.26	20.24	-51.33	20.24	55.17	291.52	.45
2900.00	1.42	263.18	2899.25	20.46	-53.18	20.46	56.98	291.04	.91
3000.00	1.04	273.47	2999.22	20.37	-55.32	20.37	58.95	290.21	.44
3100.00	1.33	261.99	3099.20	20.26	-57.37	20.26	60.85	289.45	.37
3200.00	1.61	258.14	3199.17	19.81	-59.90	19.81	63.09	288.30	.30
3300.00	1.92	252.47	3299.12	19.02	-62.87	19.02	65.68	286.83	.36
3400.00	.99	189.78	3399.09	17.66	-64.61	17.66	66.98	285.29	1.71
3500.00	.84	117.59	3499.08	16.47	-64.11	16.47	66.19	284.41	1.08
3600.00	.85	124.10	3599.07	15.72	-62.85	15.72	64.78	284.04	.10
3700.00	2.19	102.59	3699.04	14.88	-60.37	14.88	62.17	283.85	1.43
3800.00	2.10	101.03	3798.97	14.12	-56.70	14.12	58.43	283.98	.11

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
3900.00	2.38	103.82	3898.89	13.27	-52.89	13.27	54.53	284.08	.30
4000.00	2.37	112.09	3998.80	12.00	-48.96	12.00	50.41	283.77	.34
4100.00	1.45	118.21	4098.75	10.62	-45.93	10.62	47.14	283.02	.94
4200.00	1.07	102.70	4198.72	9.82	-43.90	9.82	44.99	282.60	.51
4300.00	1.43	108.51	4298.70	9.22	-41.81	9.22	42.81	282.43	.38
4400.00	.81	132.78	4398.68	8.34	-40.10	8.34	40.96	281.75	.77
4500.00	.32	119.91	4498.67	7.72	-39.34	7.72	40.09	281.10	.50
4600.00	.72	89.16	4598.67	7.59	-38.47	7.59	39.22	281.16	.47
4700.00	.07	160.52	4698.67	7.54	-37.83	7.54	38.57	281.28	.70
4800.00	1.46	312.72	4798.66	8.35	-38.74	8.35	39.63	282.16	1.52
4900.00	1.58	286.90	4898.62	9.61	-41.00	9.61	42.11	283.20	.69
5000.00	1.64	275.04	4998.58	10.14	-43.74	10.14	44.90	283.05	.34
5100.00	1.21	278.68	5098.55	10.42	-46.21	10.42	47.37	282.71	.44
5200.00	1.64	264.79	5198.52	10.45	-48.68	10.45	49.79	282.12	.55
5300.00	1.20	222.37	5298.49	9.55	-50.81	9.55	51.70	280.65	1.11
5400.00	1.20	216.24	5398.47	7.93	-52.13	7.93	52.73	278.65	.13
5500.00	1.85	196.44	5498.44	5.54	-53.21	5.54	53.50	275.94	.83
5600.00	.75	235.53	5598.41	3.62	-54.21	3.62	54.33	273.82	1.35
5700.00	1.01	267.67	5698.40	3.21	-55.63	3.21	55.72	273.31	.55
5800.00	1.00	291.34	5798.38	3.50	-57.32	3.50	57.43	273.49	.41
5900.00	.49	293.32	5898.38	3.98	-58.53	3.98	58.66	273.89	.51
6000.00	.86	250.72	5998.37	3.90	-59.63	3.90	59.75	273.75	.60
6100.00	.99	292.57	6098.36	3.99	-61.13	3.99	61.26	273.73	.67
6200.00	1.31	281.86	6198.34	4.55	-63.05	4.55	63.21	274.13	.38
6300.00	1.82	258.89	6298.30	4.48	-65.73	4.48	65.88	273.90	.80
6400.00	1.33	259.08	6398.26	3.96	-68.42	3.96	68.54	273.31	.49
6500.00	1.22	265.28	6498.24	3.65	-70.62	3.65	70.72	272.96	.18
6600.00	1.70	250.96	6598.21	3.08	-73.09	3.08	73.15	272.41	.60
6700.00	1.29	251.81	6698.17	2.24	-75.56	2.24	75.59	271.70	.41

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
6800.00	1.95	242.77	6798.13	1.11	-78.14	1.11	78.15	270.82	.71
6900.00	2.60	219.65	6898.05	-1.41	-81.10	-1.41	81.11	269.00	1.11
7000.00	4.05	197.95	6997.89	-6.52	-83.64	-6.52	83.89	265.54	1.90
7100.00	3.61	183.57	7097.67	-13.02	-84.92	-13.02	85.91	261.28	1.05
Last Survey Depth Recorded									
7118.00	3.00	179.44	7115.64	-14.06	-84.95	-14.06	86.11	260.61	3.64