



Job Number: SVGJ-141087  
 Company: PDC  
 Lease/Well: Schneider 43-18  
 Location: Weld County, CO  
 Rig Name: MS Slickline #6000  
 RKB: 0'  
 G.L. or M.S.L.: GL

State/Country: Colorado/USA  
 Declination: 8.32°  
 Grid: East To True North  
 File name: S:\2014SU-1\PDC\GJ\SCHNEI-1\4318.SVY  
 Date/Time: 05-Sep-14 / 16:18  
 Curve Name: Surface - 7000' 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	.39	313.12	100.00	.23	-.25	.23	.34	313.12	.39
200.00	.35	280.90	200.00	.52	-.80	.52	.95	303.28	.21
300.00	.09	186.27	300.00	.50	-1.11	.50	1.21	294.46	.37
400.00	.47	11.10	400.00	.83	-1.03	.83	1.32	308.63	.56
500.00	.45	323.35	499.99	1.54	-1.19	1.54	1.95	322.38	.37
600.00	.09	103.61	599.99	1.84	-1.35	1.84	2.28	323.78	.52
700.00	.47	355.76	699.99	2.23	-1.30	2.23	2.58	329.73	.50
800.00	.12	260.31	799.99	2.62	-1.44	2.62	2.99	331.30	.50
900.00	.30	101.54	899.99	2.55	-1.28	2.55	2.86	333.33	.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	
1000.00	.42	13.49	999.99	2.86	-.94	2.86	3.01	341.78	.51
1100.00	.22	114.47	1099.99	3.13	-.68	3.13	3.21	347.75	.51
1200.00	.50	43.35	1199.99	3.37	-.21	3.37	3.38	356.50	.48
1300.00	.14	285.64	1299.98	3.72	-.02	3.72	3.72	359.63	.58
1400.00	.44	85.72	1399.98	3.78	.24	3.78	3.79	3.64	.57
1500.00	.39	11.91	1499.98	4.15	.69	4.15	4.20	9.51	.50
1600.00	.18	257.94	1599.98	4.45	.61	4.45	4.49	7.82	.49
1700.00	.35	176.24	1699.98	4.11	.48	4.11	4.14	6.63	.37
1800.00	.26	148.71	1799.98	3.61	.62	3.61	3.66	9.67	.17
1900.00	.49	287.82	1899.98	3.55	.33	3.55	3.56	5.25	.71
2000.00	.47	232.52	1999.97	3.43	-.41	3.43	3.45	353.23	.45
2100.00	.60	314.40	2099.97	3.54	-1.11	3.54	3.71	342.66	.71
2200.00	.63	259.81	2199.97	3.81	-2.02	3.81	4.32	332.07	.56
2300.00	.83	312.58	2299.96	4.21	-3.10	4.21	5.22	323.64	.67
2400.00	.35	305.35	2399.95	4.87	-3.88	4.87	6.23	321.48	.48
2500.00	.65	31.73	2499.95	5.53	-3.83	5.53	6.73	325.31	.72
2600.00	.72	5.34	2599.94	6.64	-3.47	6.64	7.49	332.39	.32
2700.00	.60	352.66	2699.94	7.79	-3.48	7.79	8.53	335.91	.19
2800.00	.15	45.00	2799.93	8.40	-3.46	8.40	9.08	337.63	.52
2900.00	.67	40.35	2899.93	8.94	-2.98	8.94	9.42	341.53	.52
3000.00	.67	47.15	2999.92	9.78	-2.18	9.78	10.02	347.45	.08
3100.00	.11	83.80	3099.92	10.19	-1.65	10.19	10.32	350.78	.59
3200.00	.49	330.72	3199.92	10.57	-1.77	10.57	10.72	350.51	.54
3300.00	1.60	347.78	3299.90	12.31	-2.27	12.31	12.51	349.54	1.14
3400.00	1.46	342.22	3399.87	14.88	-2.96	14.88	15.18	348.77	.20
3500.00	1.07	352.80	3499.84	17.02	-3.46	17.02	17.37	348.51	.45
3600.00	.73	29.73	3599.83	18.50	-3.26	18.50	18.79	350.00	.65
3700.00	.69	11.20	3699.82	19.65	-2.83	19.65	19.85	351.80	.23
3800.00	.49	345.85	3799.82	20.65	-2.82	20.65	20.84	352.23	.32

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	.15	343.17	3899.82	21.19	-2.96	21.19	21.40	352.05	.34
4000.00	.62	357.06	3999.81	21.86	-3.03	21.86	22.07	352.12	.48
4100.00	.52	311.64	4099.81	22.70	-3.39	22.70	22.95	351.50	.45
4200.00	.28	344.86	4199.81	23.24	-3.80	23.24	23.55	350.72	.32
4300.00	.52	359.77	4299.81	23.93	-3.86	23.93	24.24	350.83	.26
4400.00	1.21	335.05	4399.79	25.34	-4.31	25.34	25.70	350.35	.77
4500.00	.97	310.65	4499.78	26.85	-5.40	26.85	27.38	348.64	.52
4600.00	.56	334.14	4599.77	27.84	-6.25	27.84	28.53	347.34	.51
4700.00	1.05	323.66	4699.76	29.02	-7.01	29.02	29.85	346.42	.51
4800.00	1.38	292.18	4799.74	30.21	-8.67	30.21	31.43	343.99	.73
4900.00	1.49	263.16	4899.71	30.51	-11.07	30.51	32.46	340.05	.73
5000.00	1.40	288.82	4999.67	30.75	-13.52	30.75	33.59	336.27	.65
5100.00	1.48	280.31	5099.64	31.37	-15.95	31.37	35.19	333.06	.23
5200.00	1.27	271.86	5199.61	31.64	-18.32	31.64	36.56	329.92	.29
5300.00	.69	329.52	5299.60	32.19	-19.74	32.19	37.76	328.49	1.07
5400.00	.49	272.91	5399.60	32.74	-20.47	32.74	38.61	327.98	.59
5500.00	.32	82.78	5499.60	32.79	-20.62	32.79	38.74	327.84	.81
5600.00	.92	328.13	5599.59	33.51	-20.77	33.51	39.42	328.21	1.09
5700.00	.69	350.43	5699.58	34.78	-21.29	34.78	40.78	328.53	.38
5800.00	.21	19.13	5799.58	35.55	-21.33	35.55	41.46	329.04	.52
5900.00	1.54	4.10	5899.56	37.07	-21.17	37.07	42.69	330.26	1.34
6000.00	1.22	356.03	5999.54	39.47	-21.15	39.47	44.78	331.81	.37
6100.00	1.04	22.42	6099.52	41.37	-20.88	41.37	46.34	333.22	.54
6200.00	1.03	2.43	6199.50	43.11	-20.49	43.11	47.73	334.57	.36
6300.00	1.22	340.18	6299.48	45.00	-20.82	45.00	49.59	335.18	.47
6400.00	.74	340.98	6399.47	46.62	-21.39	46.62	51.29	335.35	.48
6500.00	.52	9.77	6499.46	47.67	-21.52	47.67	52.31	335.70	.38
6600.00	.91	359.16	6599.45	48.92	-21.46	48.92	53.41	336.32	.41
6700.00	.75	326.90	6699.44	50.26	-21.83	50.26	54.79	336.53	.49

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	.47	304.11	6799.44	51.04	-22.52	51.04	55.79	336.19	.37
6900.00	.44	14.36	6899.44	51.64	-22.77	51.64	56.43	336.21	.52
Last Survey Depth Recorded									
7000.00	.89	334.73	6999.43	52.71	-23.00	52.71	57.51	336.42	.62