



Job Number: SVGJ-140707  
 Company: PDC  
 Lease/Well: Schlagel 5-26  
 Location: Weld County, CO  
 Rig Name: MS Energy Wireline  
 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\SCHLAGEL\526.SVY  
 Date/Time: 13-Jun-14 / 11:59  
 Curve Name: Surface - 6668' 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	1.64	283.63	99.99	.34	-1.39	.34	1.43	283.63	1.64
200.00	1.46	274.31	199.95	.77	-4.05	.77	4.12	280.76	.31
300.00	.99	286.22	299.93	1.11	-6.15	1.11	6.25	280.20	.53
400.00	.94	248.39	399.91	1.05	-7.74	1.05	7.81	277.70	.63
500.00	1.01	276.83	499.90	.85	-9.38	.85	9.42	275.17	.48
600.00	.71	251.97	599.89	.76	-10.85	.76	10.87	274.02	.47
700.00	1.21	266.78	699.87	.51	-12.49	.51	12.50	272.34	.55
800.00	.75	273.86	799.86	.50	-14.20	.50	14.20	272.00	.47
900.00	1.14	256.78	899.85	.31	-15.82	.31	15.82	271.13	.48

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	1.14	261.30	999.83	-.07	-17.77	-.07	17.77	269.79	.09
1100.00	1.10	281.28	1099.81	-.03	-19.69	-.03	19.69	269.92	.39
1200.00	.59	280.69	1199.80	.26	-21.14	.26	21.14	270.69	.51
1300.00	.89	305.28	1299.79	.80	-22.28	.80	22.30	272.05	.43
1400.00	.87	271.37	1399.78	1.27	-23.67	1.27	23.71	273.06	.51
1500.00	1.05	266.89	1499.76	1.23	-25.35	1.23	25.38	272.79	.19
1600.00	1.12	253.94	1599.75	.91	-27.20	.91	27.22	271.92	.25
1700.00	.79	241.54	1699.73	.32	-28.75	.32	28.75	270.63	.39
1800.00	1.70	252.25	1799.71	-.47	-30.77	-.47	30.77	269.13	.94
1900.00	1.43	252.31	1899.67	-1.30	-33.37	-1.30	33.39	267.77	.27
2000.00	2.00	240.87	1999.62	-2.53	-36.08	-2.53	36.17	266.00	.66
2100.00	2.08	244.64	2099.56	-4.15	-39.25	-4.15	39.46	263.96	.16
2200.00	1.64	240.39	2199.51	-5.64	-42.13	-5.64	42.50	262.38	.46
2300.00	2.05	233.63	2299.46	-7.40	-44.81	-7.40	45.42	260.62	.46
2400.00	1.95	226.33	2399.40	-9.64	-47.48	-9.64	48.45	258.52	.27
2500.00	1.81	219.91	2499.34	-12.03	-49.73	-12.03	51.16	256.41	.25
2600.00	1.88	225.05	2599.29	-14.40	-51.90	-14.40	53.86	254.50	.18
2700.00	1.59	236.04	2699.24	-16.33	-54.21	-16.33	56.62	253.24	.44
2800.00	1.06	220.34	2799.22	-17.81	-55.96	-17.81	58.73	252.35	.64
2900.00	.80	248.02	2899.20	-18.78	-57.21	-18.78	60.21	251.83	.51
3000.00	1.02	229.79	2999.19	-19.61	-58.54	-19.61	61.73	251.48	.36
3100.00	.55	250.98	3099.18	-20.34	-59.67	-20.34	63.04	251.17	.54
3200.00	.70	228.45	3199.18	-20.90	-60.58	-20.90	64.09	250.96	.29
3300.00	1.24	264.87	3299.16	-21.41	-62.12	-21.41	65.70	250.98	.79
3400.00	1.29	273.36	3399.14	-21.44	-64.32	-21.44	67.80	251.57	.19
3500.00	1.03	266.60	3499.12	-21.42	-66.34	-21.42	69.71	252.10	.29
3600.00	1.55	269.52	3599.09	-21.49	-68.59	-21.49	71.88	252.60	.52
3700.00	1.18	261.57	3699.06	-21.65	-70.96	-21.65	74.19	253.03	.41
3800.00	1.46	278.03	3799.04	-21.62	-73.24	-21.62	76.36	253.55	.47

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	1.66	269.89	3899.00	-21.45	-75.95	-21.45	78.92	254.23	.30
4000.00	1.37	262.20	3998.97	-21.61	-78.58	-21.61	81.50	254.62	.35
4100.00	1.47	278.90	4098.94	-21.58	-81.03	-21.58	83.86	255.09	.42
4200.00	1.14	272.67	4198.91	-21.33	-83.29	-21.33	85.98	255.63	.36
4300.00	.65	253.40	4298.90	-21.45	-84.83	-21.45	87.50	255.81	.57
4400.00	.77	290.09	4398.89	-21.38	-86.01	-21.38	88.62	256.04	.46
4500.00	.55	302.34	4498.88	-20.89	-87.04	-20.89	89.51	256.50	.26
4600.00	.08	113.66	4598.88	-20.66	-87.38	-20.66	89.79	256.70	.63
4700.00	.57	85.93	4698.88	-20.66	-86.82	-20.66	89.25	256.62	.50
4800.00	.44	144.05	4798.88	-20.93	-86.10	-20.93	88.61	256.34	.50
4900.00	.66	115.16	4898.87	-21.49	-85.36	-21.49	88.02	255.87	.35
5000.00	.46	85.14	4998.87	-21.70	-84.43	-21.70	87.18	255.59	.35
5100.00	.48	141.84	5098.87	-21.99	-83.78	-21.99	86.61	255.29	.45
5200.00	.16	48.50	5198.86	-22.23	-83.41	-22.23	86.32	255.08	.51
5300.00	.27	166.68	5298.86	-22.37	-83.25	-22.37	86.21	254.96	.37
5400.00	.70	233.73	5398.86	-22.96	-83.69	-22.96	86.78	254.66	.64
5500.00	.88	206.83	5498.85	-24.01	-84.53	-24.01	87.87	254.15	.41
5600.00	.43	190.31	5598.84	-25.06	-84.94	-25.06	88.56	253.56	.48
5700.00	.98	188.84	5698.84	-26.27	-85.14	-26.27	89.10	252.85	.55
5800.00	.77	210.88	5798.82	-27.70	-85.62	-27.70	89.99	252.07	.39
5900.00	.57	165.82	5898.82	-28.75	-85.84	-28.75	90.53	251.48	.55
6000.00	.28	213.94	5998.82	-29.44	-85.86	-29.44	90.76	251.07	.44
6100.00	.68	203.59	6098.81	-30.19	-86.23	-30.19	91.36	250.71	.41
6200.00	.07	70.20	6198.81	-30.71	-86.41	-30.71	91.71	250.44	.73
6300.00	.34	198.21	6298.81	-30.97	-86.45	-30.97	91.83	250.29	.39
6400.00	.33	99.37	6398.81	-31.30	-86.25	-31.30	91.76	250.06	.51
6500.00	.24	308.81	6498.81	-31.21	-86.13	-31.21	91.62	250.08	.55
6600.00	.62	158.11	6598.81	-31.59	-86.10	-31.59	91.71	249.85	.84

**Last Survey Depth Recorded**

6668.00	.62	122.40	6666.80	-32.12	-85.65	-32.12	91.47	249.44	.56
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