



Job Number: SVGJ-131116
 Company: PDC
 Lease/Well: Wiedeman 6
 Location: Weld County, CO
 Rig Name: MS Energy Wireline
 RKB: 0'
 G.L. or M.S.L.: GL

State/Country: Colorado/USA
 Declination: 8.55°
 Grid: East To True North
 File name: S:\2013SU~1\PDC\GJ\WIEDEMAN\6.SVY
 Date/Time: 28-Oct-13 / 09:56
 Curve Name: Surface - 6940' M.D. (Rate Gyro)

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	1.70	261.27	99.99	-.23	-1.47	-.23	1.48	261.27	1.70
200.00	.98	285.18	199.96	-.23	-3.76	-.23	3.76	266.55	.90
300.00	.64	314.70	299.95	.39	-4.98	.39	5.00	274.48	.53
400.00	.88	320.12	399.94	1.37	-5.87	1.37	6.03	283.16	.25
500.00	.52	314.02	499.93	2.28	-6.69	2.28	7.07	288.80	.37
600.00	.87	323.17	599.92	3.20	-7.47	3.20	8.13	293.19	.37
700.00	.86	284.91	699.91	4.00	-8.65	4.00	9.53	294.82	.57
800.00	1.00	279.73	799.90	4.34	-10.24	4.34	11.12	292.99	.16
900.00	.79	309.40	899.89	4.93	-11.63	4.93	12.63	292.96	.50

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	.70	290.90	999.88	5.58	-12.73	5.58	13.90	293.68	.26
1100.00	.70	307.87	1099.87	6.17	-13.78	6.17	15.10	294.13	.21
1200.00	1.10	314.10	1199.86	7.22	-14.96	7.22	16.61	295.76	.41
1300.00	.89	318.01	1299.85	8.46	-16.16	8.46	18.25	297.64	.22
1400.00	.77	307.09	1399.84	9.45	-17.22	9.45	19.64	298.75	.20
1500.00	1.23	302.76	1499.82	10.43	-18.66	10.43	21.38	299.21	.47
1600.00	.70	310.31	1599.81	11.41	-20.03	11.41	23.05	299.67	.54
1700.00	.70	290.32	1699.80	12.01	-21.07	12.01	24.25	299.70	.24
1800.00	.94	304.65	1799.79	12.69	-22.31	12.69	25.67	299.63	.31
1900.00	.64	331.89	1899.78	13.65	-23.25	13.65	26.96	300.42	.47
2000.00	.40	338.71	1999.77	14.47	-23.64	14.47	27.72	301.47	.25
2100.00	.38	349.38	2099.77	15.12	-23.83	15.12	28.22	302.40	.08
2200.00	.52	338.84	2199.77	15.87	-24.05	15.87	28.82	303.42	.16
2300.00	.95	310.48	2299.76	16.83	-24.85	16.83	30.01	304.11	.55
2400.00	.78	316.42	2399.75	17.86	-25.95	17.86	31.50	304.54	.19
2500.00	.77	274.31	2499.74	18.41	-27.09	18.41	32.75	304.20	.56
2600.00	.91	271.64	2599.73	18.48	-28.55	18.48	34.01	302.91	.15
2700.00	.96	274.13	2699.72	18.56	-30.18	18.56	35.43	301.59	.06
2800.00	1.28	269.41	2799.70	18.61	-32.13	18.61	37.13	300.08	.33
2900.00	1.54	245.20	2899.67	18.04	-34.47	18.04	38.90	297.62	.64
3000.00	1.24	237.54	2999.64	16.89	-36.60	16.89	40.31	294.77	.35
3100.00	1.36	239.82	3099.61	15.72	-38.54	15.72	41.62	292.18	.13
3200.00	1.73	249.52	3199.58	14.59	-40.98	14.59	43.50	289.60	.45
3300.00	1.78	251.73	3299.53	13.58	-43.87	13.58	45.92	287.19	.08
3400.00	1.31	240.06	3399.49	12.52	-46.34	12.52	48.00	285.12	.56
3500.00	.96	227.12	3499.47	11.38	-47.94	11.38	49.27	283.35	.43
3600.00	.96	236.56	3599.46	10.35	-49.25	10.35	50.33	281.86	.16
3700.00	1.57	274.53	3699.44	9.99	-51.32	9.99	52.28	281.02	1.01
3800.00	1.57	255.56	3799.40	9.76	-54.01	9.76	54.88	280.24	.52

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	1.84	273.58	3899.36	9.52	-56.94	9.52	57.73	279.49	.60
4000.00	1.37	277.66	3999.32	9.78	-59.73	9.78	60.52	279.30	.48
4100.00	1.42	300.93	4099.29	10.57	-61.97	10.57	62.87	279.68	.56
4200.00	1.37	310.27	4199.26	11.98	-63.95	11.98	65.06	280.61	.23
4300.00	1.13	304.69	4299.23	13.32	-65.67	13.32	67.01	281.46	.27
4400.00	1.82	307.09	4399.20	14.84	-67.75	14.84	69.35	282.35	.69
4500.00	1.31	310.66	4499.16	16.54	-69.88	16.54	71.81	283.31	.52
4600.00	1.19	264.33	4599.14	17.18	-71.78	17.18	73.81	283.46	.99
4700.00	1.42	243.53	4699.12	16.53	-73.93	16.53	75.75	282.60	.52
4800.00	.68	240.25	4799.10	15.68	-75.55	15.68	77.16	281.72	.74
4900.00	.96	249.40	4899.09	15.09	-76.85	15.09	78.32	281.11	.31
5000.00	.70	234.98	4999.08	14.44	-78.13	14.44	79.46	280.47	.33
5100.00	.84	273.99	5099.07	14.14	-79.37	14.14	80.62	280.11	.53
5200.00	.74	321.00	5199.06	14.70	-80.50	14.70	81.83	280.35	.64
5300.00	.14	289.05	5299.06	15.24	-81.02	15.24	82.45	280.65	.63
5400.00	.59	299.41	5399.06	15.53	-81.59	15.53	83.05	280.78	.45
5500.00	.32	41.27	5499.05	15.99	-81.85	15.99	83.40	281.06	.73
5600.00	.98	15.98	5599.05	17.03	-81.43	17.03	83.19	281.81	.70
5700.00	1.93	31.27	5699.01	19.29	-80.32	19.29	82.61	283.50	1.02
5800.00	1.84	22.28	5798.96	22.21	-78.84	22.21	81.91	285.73	.31
5900.00	1.31	9.26	5898.92	24.83	-78.05	24.83	81.90	287.65	.64
6000.00	1.63	3.04	5998.89	27.38	-77.79	27.38	82.47	289.39	.36
6100.00	1.56	353.46	6098.85	30.15	-77.87	30.15	83.50	291.16	.28
6200.00	1.57	341.15	6198.81	32.80	-78.47	32.80	85.04	292.68	.34
6300.00	1.71	340.22	6298.77	35.50	-79.41	35.50	86.99	294.08	.14
6400.00	1.51	356.12	6398.73	38.22	-80.01	38.22	88.67	295.53	.49
6500.00	2.10	338.19	6498.68	41.23	-80.78	41.23	90.69	297.04	.81
6600.00	2.32	336.96	6598.61	44.79	-82.25	44.79	93.66	298.57	.23
6700.00	2.53	334.56	6698.52	48.65	-83.99	48.65	97.06	300.08	.23

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	2.56	343.23	6798.42	52.78	-85.58	52.78	100.55	301.66	.39
6900.00	3.33	342.33	6898.29	57.69	-87.11	57.69	104.48	303.51	.77
Last Survey Depth Recorded									
6940.00	3.46	345.83	6938.22	59.96	-87.76	59.96	106.29	304.34	.61