

Job Number: SVGJ-130142      State/Country: Colorado/USA  
 Company: PDC      Declination: 8.60°  
 Lease/Well: Durnell 1      Grid: East To True North  
 Location: Weld County, CO      File name: F:\SURVEY\2013SU~1\PDC\GJ\DURNELL\1.SVY  
 Rig Name: MS Wireline      Date/Time: 21-Feb-13 / 09:05  
 RKB: 0'      Curve Name: Surface - 7100' M.D. (Rate Gyro)  
 G.L. or M.S.L.: GL

WINSERVE SURVEY CALCULATIONS

Minimum Curvature Method

Vertical Section Plane .00

Vertical Section Referenced to offset from Wellhead: EW =.00 Ft , NS=.00 Ft

Rectangular Coordinates Referenced to Wellhead

Measured	Incl	Drift	TRUE	N-S	E-W	Vertical	CLOSURE	CLOSURE	Dogleg
Depth	Angle	Direction	Vertical	FT	FT	Section	Distance	Direction	Severity
FT	Deg	Deg	Depth			FT	FT	Deg	Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.42	343.42	100.00	0.35	-0.10	0.35	0.37	343.42	0.42
200.00	0.47	342.69	200.00	1.09	-0.33	1.09	1.14	343.16	0.05
300.00	0.41	295.47	299.99	1.64	-0.78	1.64	1.81	334.66	0.36
400.00	0.26	214.87	399.99	1.61	-1.23	1.61	2.02	322.60	0.45
500.00	0.41	238.36	499.99	1.23	-1.66	1.23	2.07	306.56	0.20
600.00	0.53	228.02	599.99	0.74	-2.31	0.74	2.43	287.67	0.15
700.00	0.17	184.57	699.99	0.28	-2.67	0.28	2.68	275.97	0.42
800.00	0.61	226.72	799.98	-0.23	-3.07	-0.23	3.08	265.64	0.50
900.00	0.45	281.22	899.98	-0.52	-3.84	-0.52	3.87	262.25	0.51
1000.00	0.44	220.77	999.98	-0.74	-4.48	-0.74	4.54	260.65	0.45
1100.00	0.61	233.46	1099.97	-1.34	-5.15	-1.34	5.33	255.38	0.20
1200.00	0.32	234.58	1199.97	-1.82	-5.81	-1.82	6.09	252.58	0.29
1300.00	0.79	275.00	1299.96	-1.92	-6.72	-1.92	6.99	254.02	0.58
1400.00	0.80	296.76	1399.95	-1.55	-8.03	-1.55	8.18	259.08	0.30

1500.00	0.89	285.83	1499.94	-1.02	-9.40	-1.02	9.46	263.78	0.18
1600.00	0.96	307.06	1599.93	-0.31	-10.82	-0.31	10.82	268.37	0.35
1700.00	1.17	300.45	1699.91	0.71	-12.37	0.71	12.39	273.31	0.24
1800.00	1.14	323.11	1799.89	2.03	-13.85	2.03	13.99	278.33	0.45
1900.00	1.11	328.54	1899.87	3.65	-14.95	3.65	15.39	283.72	0.11
2000.00	0.97	306.55	1999.86	4.98	-16.13	4.98	16.88	287.15	0.42
2100.00	0.92	299.95	2099.85	5.88	-17.51	5.88	18.47	288.58	0.12
2200.00	0.62	287.89	2199.84	6.45	-18.72	6.45	19.80	289.02	0.34
2300.00	0.82	338.57	2299.83	7.28	-19.50	7.28	20.81	290.49	0.64
2400.00	0.92	333.17	2399.82	8.67	-20.12	8.67	21.91	293.30	0.13
2500.00	0.72	341.88	2499.81	9.98	-20.68	9.98	22.96	295.76	0.24
2600.00	0.90	333.44	2599.80	11.28	-21.22	11.28	24.04	297.99	0.22
2700.00	0.81	348.70	2699.79	12.68	-21.71	12.68	25.14	300.27	0.24
2800.00	0.74	357.86	2799.78	14.01	-21.88	14.01	25.98	302.64	0.14
2900.00	0.59	4.55	2899.77	15.17	-21.86	15.17	26.61	304.76	0.17
3000.00	0.74	7.63	2999.76	16.33	-21.73	16.33	27.18	306.91	0.15
3100.00	0.56	346.24	3099.76	17.44	-21.76	17.44	27.89	308.71	0.30
3200.00	0.78	341.67	3199.75	18.56	-22.09	18.56	28.86	310.03	0.23
3300.00	0.90	341.43	3299.74	19.95	-22.56	19.95	30.12	311.49	0.12
3400.00	0.88	326.96	3399.73	21.34	-23.23	21.34	31.54	312.58	0.23
3500.00	0.43	256.02	3499.72	21.89	-24.01	21.89	32.49	312.36	0.84
3600.00	0.69	274.77	3599.72	21.85	-24.97	21.85	33.18	311.19	0.31
3700.00	0.75	249.57	3699.71	21.67	-26.19	21.67	33.99	309.61	0.32
3800.00	0.89	248.03	3799.70	21.15	-27.52	21.15	34.71	307.55	0.14
3900.00	0.78	257.71	3899.69	20.72	-28.91	20.72	35.57	305.63	0.18
4000.00	0.81	289.62	3999.68	20.81	-30.24	20.81	36.71	304.54	0.44
4100.00	0.64	289.69	4099.67	21.24	-31.43	21.24	37.93	304.05	0.17
4200.00	0.27	273.96	4199.67	21.44	-32.19	21.44	38.68	303.67	0.39
4300.00	0.40	325.77	4299.67	21.75	-32.62	21.75	39.21	303.69	0.32
4400.00	0.43	329.38	4399.66	22.36	-33.01	22.36	39.87	304.11	0.04
4500.00	0.44	260.77	4499.66	22.62	-33.58	22.62	40.49	303.97	0.49
4600.00	0.91	42.29	4599.66	23.15	-33.42	23.15	40.66	304.70	1.28
4700.00	1.42	274.02	4699.65	23.82	-34.13	23.82	41.62	304.92	2.11
4800.00	0.52	280.28	4799.63	23.99	-35.81	23.99	43.10	303.82	0.90

4900.00	1.01	322.09	4899.62	24.76	-36.80	24.76	44.35	303.94	0.71
5000.00	0.54	70.08	4999.62	25.62	-36.89	25.62	44.92	304.78	1.28
5100.00	0.73	14.06	5099.61	26.40	-36.30	26.40	44.88	306.03	0.62
5200.00	0.89	42.98	5199.60	27.58	-35.61	27.58	45.05	307.76	0.43
5300.00	0.14	12.41	5299.60	28.27	-35.06	28.27	45.04	308.89	0.77
5400.00	0.64	217.85	5399.60	27.95	-35.37	27.95	45.08	308.31	0.77
5500.00	0.49	286.43	5499.59	27.63	-36.13	27.63	45.48	307.41	0.65
5600.00	0.76	271.73	5599.59	27.77	-37.20	27.77	46.42	306.74	0.31
5700.00	1.24	239.84	5699.57	27.25	-38.80	27.25	47.41	305.08	0.72
5800.00	0.50	341.73	5799.56	27.12	-39.87	27.12	48.22	304.22	1.43
5900.00	0.65	344.38	5899.56	28.08	-40.16	28.08	49.00	304.96	0.15
6000.00	0.15	159.87	5999.56	28.50	-40.27	28.50	49.33	305.29	0.80
6100.00	0.49	217.12	6099.56	28.04	-40.48	28.04	49.24	304.71	0.43
6200.00	0.14	218.27	6199.55	27.60	-40.81	27.60	49.27	304.07	0.35
6300.00	0.46	184.38	6299.55	27.11	-40.92	27.11	49.08	303.52	0.35
6400.00	0.22	266.00	6399.55	26.69	-41.14	26.69	49.04	302.97	0.48
6500.00	0.14	17.74	6499.55	26.79	-41.30	26.79	49.23	302.98	0.30
6600.00	0.37	14.12	6599.55	27.22	-41.18	27.22	49.37	303.47	0.23
6700.00	0.47	308.20	6699.55	27.79	-41.42	27.79	49.88	303.86	0.46
6800.00	0.46	329.92	6799.54	28.39	-41.95	28.39	50.65	304.09	0.18
6900.00	0.86	300.25	6899.54	29.12	-42.80	29.12	51.76	304.23	0.51
7000.00	0.17	253.02	6999.53	29.45	-43.59	29.45	52.60	304.05	0.75
7100.00	0.14	152.89	7099.53	29.30	-43.67	29.30	52.59	303.86	0.24