

Job Number:   
 Company:   
 Lease/Well:   
 Location:   
 Rig Name:   
 RKB:   
 G.L. or M.S.L.:

State/Country:   
 Declination:   
 Grid:   
 File name: C:\WINSERVE\07134420.SVY  
 Date/Time: 08-Aug-13 / 13:14  
 Curve Name: T-103-8

**JAVINS CORPORATION**

WINSERVE SURVEY CALCULATIONS  
 Minimum Curvature Method  
 Vertical Section Plane .00  
 Vertical Section Referenced to Wellhead  
 Rectangular Coordinates Referenced to Wellhead

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Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Subsea TVD FT	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
								Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.17	190.40	100.00	-100.00	-.15	-.03	-.15	.15	190.40	.17
200.00	1.61	105.28	199.99	-199.99	-.66	1.30	-.66	1.46	116.96	1.60
300.00	2.85	168.31	299.92	-299.92	-3.47	3.16	-3.47	4.69	137.65	2.56
400.00	1.97	171.10	399.83	-399.83	-7.60	3.93	-7.60	8.56	152.65	.89
500.00	1.29	182.32	499.79	-499.79	-10.42	4.15	-10.42	11.22	158.29	.75
600.00	1.17	260.91	599.77	-599.77	-11.71	3.10	-11.71	12.11	165.18	1.56
700.00	.78	258.11	699.76	-699.76	-12.01	1.42	-12.01	12.09	173.24	.39
800.00	.49	268.93	799.75	-799.75	-12.16	.33	-12.16	12.16	178.45	.31
900.00	.27	280.34	899.75	-899.75	-12.12	-.33	-12.12	12.13	181.56	.23
1000.00	.82	328.17	999.75	-999.75	-11.47	-.94	-11.47	11.51	184.68	.67
1100.00	.94	308.09	1099.74	-1099.74	-10.36	-1.96	-10.36	10.54	190.72	.33
1200.00	.21	223.86	1199.73	-1199.73	-9.99	-2.73	-9.99	10.35	195.31	.94
1300.00	.34	43.55	1299.73	-1299.73	-9.90	-2.66	-9.90	10.25	195.02	.55
1400.00	.88	297.48	1399.73	-1399.73	-9.33	-3.13	-9.33	9.85	198.56	1.03
1500.00	.53	27.23	1499.72	-1499.72	-8.57	-3.60	-8.57	9.30	202.81	1.03
1600.00	.70	40.97	1599.71	-1599.71	-7.70	-2.99	-7.70	8.26	201.24	.22
1700.00	.04	19.90	1699.71	-1699.71	-7.20	-2.58	-7.20	7.65	199.70	.66
1800.00	.51	79.65	1799.71	-1799.71	-7.09	-2.13	-7.09	7.40	196.72	.49
1900.00	.79	7.20	1899.71	-1899.71	-6.33	-1.61	-6.33	6.53	194.24	.80
2000.00	.65	245.45	1999.70	-1999.70	-5.88	-2.03	-5.88	6.22	199.10	1.26
2100.00	.64	33.50	2099.70	-2099.70	-5.65	-2.24	-5.65	6.08	201.66	1.24
2200.00	.65	334.87	2199.69	-2199.69	-4.67	-2.18	-4.67	5.15	204.99	.63
2300.00	.19	214.57	2299.69	-2299.69	-4.29	-2.51	-4.29	4.97	210.33	.76
2400.00	.67	353.58	2399.69	-2399.69	-3.85	-2.67	-3.85	4.68	214.77	.82

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Subsea TVD FT	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
								Distance FT	Direction Deg	
2500.00	.67	278.44	2499.68	-2499.68	-3.18	-3.31	-3.18	4.59	226.18	.82
2600.00	.36	254.09	2599.68	-2599.68	-3.18	-4.19	-3.18	5.26	232.83	.37
2700.00	.03	131.31	2699.68	-2699.68	-3.28	-4.48	-3.28	5.55	233.74	.38
2800.00	.19	42.46	2799.68	-2799.68	-3.18	-4.34	-3.18	5.38	233.82	.19
2900.00	.54	343.83	2899.68	-2899.68	-2.60	-4.36	-2.60	5.08	239.19	.47
3000.00	.52	251.78	2999.68	-2999.68	-2.29	-4.93	-2.29	5.43	245.05	.76
3100.00	.26	125.33	3099.67	-3099.67	-2.57	-5.17	-2.57	5.77	243.62	.71
3200.00	.39	60.97	3199.67	-3199.67	-2.53	-4.69	-2.53	5.33	241.64	.36
3300.00	.69	316.95	3299.67	-3299.67	-1.93	-4.80	-1.93	5.17	248.15	.87
3400.00	.69	293.60	3399.66	-3399.66	-1.25	-5.77	-1.25	5.90	257.81	.28
3500.00	.19	208.97	3499.66	-3499.66	-1.15	-6.40	-1.15	6.50	259.82	.70
3600.00	.46	14.33	3599.66	-3599.66	-.91	-6.38	-.91	6.44	261.92	.65
3700.00	.49	295.20	3699.66	-3699.66	-.33	-6.67	-.33	6.67	267.13	.61
3800.00	.81	46.58	3799.65	-3799.65	.33	-6.54	.33	6.55	272.92	1.09
3900.00	.52	3.10	3899.65	-3899.65	1.27	-6.00	1.27	6.14	281.97	.56
4000.00	.22	142.09	3999.65	-3999.65	1.57	-5.86	1.57	6.07	285.04	.70
4100.00	.22	71.00	4099.64	-4099.64	1.49	-5.56	1.49	5.75	284.96	.26
4200.00	.82	11.83	4199.64	-4199.64	2.25	-5.23	2.25	5.69	293.25	.73
4300.00	.30	339.42	4299.64	-4299.64	3.19	-5.18	3.19	6.08	301.67	.59
4400.00	1.02	53.66	4399.63	-4399.63	3.97	-4.55	3.97	6.04	311.07	.98
4500.00	1.13	22.02	4499.61	-4499.61	5.41	-3.47	5.41	6.42	327.35	.60
4600.00	.86	60.64	4599.60	-4599.60	6.69	-2.44	6.69	7.12	339.95	.71
4700.00	.66	70.63	4699.59	-4699.59	7.25	-1.24	7.25	7.35	350.26	.24
4800.00	.59	87.20	4799.58	-4799.58	7.46	-.19	7.46	7.47	358.57	.19
4900.00	.79	50.23	4899.58	-4899.58	7.93	.86	7.93	7.98	6.17	.48
5000.00	.33	324.80	4999.57	-4999.57	8.61	1.22	8.61	8.69	8.08	.83
5100.00	.63	27.43	5099.57	-5099.57	9.33	1.31	9.33	9.42	7.98	.56
5200.00	.58	43.61	5199.56	-5199.56	10.19	1.91	10.19	10.36	10.63	.18

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