



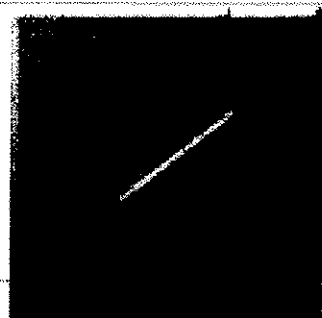
Job Number: I  
 Company: BG Intreat  
 Lease/Well: Volk 12-83-21 #1  
 Location: I  
 Rig Name: I  
 RKB: I  
 G.L. or M.S.L.: I

State/Country: I  
 Declination: I  
 Grid: I  
 File name: C:\WINSERVE\EXAMPLE1.SVY  
 Date/Time: 30-Nov-10 10:54  
 Curve Name: Volk work

WINSERVE SURVEY CALCULATIONS  
 Minimum Curvature Method  
 Vertical Section Plane 181.16  
 Vertical Section Referenced to Wellhead  
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
825.00	8.90	180.40	823.79	-23.47	-3.26	23.63	23.70	187.91	2.83
920.00	10.70	177.70	917.40	-39.63	-2.96	39.68	39.74	184.27	1.96
1012.00	11.20	181.30	1007.73	-57.10	-2.82	57.14	57.17	182.83	.92
1109.00	11.80	179.60	1102.78	-76.44	-2.96	76.48	76.49	182.22	.71
1205.00	14.30	182.30	1196.30	-98.10	-3.37	98.15	98.16	181.97	2.68
1300.00	15.80	183.70	1288.04	-122.73	-4.68	122.80	122.82	182.18	1.62
1396.00	18.10	184.30	1379.86	-150.66	-6.64	150.75	150.79	182.52	2.40
1491.00	18.00	183.90	1470.18	-180.01	-8.74	180.15	180.22	182.78	.17
1586.00	17.60	184.10	1560.64	-208.98	-10.77	209.15	209.26	182.95	.43
1682.00	17.20	182.50	1652.24	-237.64	-12.42	237.84	237.96	182.99	.65
1778.00	17.70	181.60	1743.83	-266.40	-13.45	266.62	266.74	182.89	.59
1873.00	18.00	180.20	1834.25	-295.52	-13.91	295.74	295.85	182.69	.55
1968.00	17.60	179.90	1924.70	-324.56	-13.93	324.78	324.86	182.46	.43
2064.00	17.60	179.70	2016.21	-353.59	-13.83	353.79	353.86	182.24	.06
2159.00	18.40	181.00	2106.56	-382.94	-14.02	383.15	383.20	182.10	.94
2255.00	18.20	181.40	2197.71	-413.08	-14.65	413.29	413.34	182.03	.25
2350.00	18.60	181.40	2287.86	-443.06	-15.38	443.28	443.32	181.99	.42
projection to bit									
2403.00	18.60	181.40	2338.08	-459.96	-15.79	460.18	460.23	181.97	.00

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	
2637.00	16.90	183.50	2560.97	-531.13	-18.76	531.40	531.48	182.02	.88
2732.00	16.80	183.50	2651.89	-558.61	-20.44	558.91	558.99	182.10	.11
2828.00	15.40	184.20	2744.13	-585.17	-22.22	585.50	585.59	182.17	1.47
2923.00	15.20	184.00	2835.76	-610.18	-24.01	610.54	610.65	182.25	.22
3019.00	13.20	184.70	2928.82	-633.66	-25.79	634.05	634.18	182.33	2.09
3114.00	12.30	186.70	3021.48	-654.52	-27.86	654.95	655.11	182.44	1.06
3210.00	10.70	187.70	3115.55	-673.51	-30.25	673.98	674.19	182.57	1.88
3242.00	10.50	188.10	3147.00	-679.34	-31.06	679.83	680.05	182.62	.67
Projection To Bit									
3300.00	10.50	188.10	3204.03	-689.80	-32.54	690.32	690.57	182.70	.00



Job Number: I  
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State/Country: I  
 Declination: I  
 Grid: I  
 File name: C:\WINSERVE\EXAMPLE1.SVY  
 Date/Time: 29-Nov-10 10:42  
 Curve Name: I

WINSERVE SURVEY CALCULATIONS  
 Minimum Curvature Method  
 Vertical Section Plane: 181.16  
 Vertical Section Referenced to Wellhead  
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
548.00	.60	251.00	547.99	-.93	-2.71	.99	2.87	251.00	.11
641.00	3.20	181.40	640.94	-3.69	-3.24	3.75	4.91	221.27	3.37
733.00	6.30	179.50	732.61	-11.30	-3.26	11.37	11.76	196.07	3.37
825.00	8.90	180.40	823.79	-23.47	-3.28	23.53	23.70	187.91	2.63
920.00	10.70	177.70	917.40	-39.63	-2.96	39.68	39.74	164.27	1.96
1012.00	11.20	181.30	1007.73	-57.10	-2.82	57.14	57.17	182.83	.92
1109.00	11.60	179.60	1102.78	-76.44	-2.96	76.48	76.49	182.22	.71
1205.00	14.30	182.30	1198.30	-98.10	-3.37	98.15	98.16	181.97	2.68
1300.00	15.80	183.70	1289.04	-122.73	-4.68	122.80	122.82	182.18	1.62
1396.00	18.10	184.30	1379.86	-150.65	-6.64	150.75	150.79	182.52	2.40
1491.00	18.00	183.90	1470.18	-180.01	-6.74	180.15	180.22	182.78	.17
1586.00	17.00	184.10	1560.64	-208.98	-10.77	209.15	209.26	182.95	.43
1682.00	17.20	182.50	1652.24	-237.84	-12.42	237.84	237.96	182.99	.66
1778.00	17.70	181.60	1743.83	-266.40	-13.45	266.62	266.74	182.89	.59
projection to bit									
1831.00	18.00	181.10	1794.27	-282.65	-13.83	282.87	282.98	182.80	.64