



Job Number: DDOK-120310
 Company: Great Western
 Lease/Well: JBL 34-43
 Location: Weld County
 Rig Name: Cade 22
 RKB: 16
 G.L. or M.S.L.: MSL

State/Country: Colorado
 Declination: 8.41
 Grid: Grid
 File name: C:\DOCUME~1\MS\DESKTOP\JBL34-~1\JBL34-43.SVY
 Date/Time: 22-Apr-12 / 17:51
 Curve Name: As Drilled Plan #2 JBL 34-43

As Drilled Plan #2 JBL 34-43

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 62.41
 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
81.00	.20	318.50	81.00	.11	-.09	-.03	.14	318.51	.25
171.00	.10	98.60	171.00	.21	-.12	-.01	.24	330.45	.32
262.00	1.10	107.60	261.99	-.06	.79	.67	.79	94.64	1.10
352.00	2.00	71.70	351.96	.17	3.11	2.83	3.11	86.91	1.43
444.00	3.50	58.90	443.85	2.12	7.03	7.22	7.35	73.21	1.75
535.00	4.90	60.70	534.61	5.46	12.80	13.88	13.92	66.91	1.55
626.00	6.00	72.80	625.20	8.77	20.74	22.44	22.51	67.08	1.74
721.00	7.30	68.20	719.56	12.48	31.08	33.33	33.49	68.13	1.48
910.00	8.00	64.10	906.88	22.68	54.06	58.42	58.63	67.24	.47
1099.00	8.80	65.60	1093.85	34.40	79.06	86.00	86.22	66.49	.44
1264.00	8.50	62.70	1256.97	45.21	101.39	110.80	111.01	65.97	.32
1395.00	7.70	60.80	1386.66	53.93	117.66	129.25	129.43	65.38	.64
1490.00	8.30	60.60	1480.74	60.40	129.18	142.47	142.61	64.94	.63
1617.00	9.60	65.40	1606.19	69.31	146.80	162.21	162.34	64.73	1.18
1744.00	10.50	57.70	1731.25	79.90	166.21	184.32	184.42	64.33	1.27
1871.00	11.30	61.70	1855.96	91.98	186.95	208.29	208.35	63.80	.87
1998.00	12.30	56.20	1980.27	105.41	209.15	234.18	234.21	63.25	1.18
2124.00	12.50	60.20	2103.34	119.65	232.13	261.15	261.15	62.73	.70
2252.00	12.80	58.80	2228.23	133.88	256.28	289.14	289.14	62.42	.34
2379.00	13.40	62.00	2351.93	148.08	281.31	317.90	317.90	62.24	.74
2506.00	13.20	60.90	2475.52	162.04	306.97	347.11	347.11	62.17	.25
2633.00	14.20	68.40	2598.91	174.83	334.13	377.10	377.10	62.38	1.60
2823.00	12.60	61.20	2783.75	193.39	373.96	421.00	421.01	62.65	1.22
2949.00	12.00	60.90	2906.86	206.38	397.45	447.84	447.84	62.56	.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	
3076.00	10.60	67.70	3031.40	217.24	419.80	472.67	472.67	62.64	1.52
3171.00	11.80	64.90	3124.59	224.67	436.68	491.07	491.08	62.77	1.39
3297.00	11.80	65.40	3247.92	235.50	460.06	516.81	516.83	62.89	.08
3424.00	10.70	56.00	3372.49	247.50	481.64	541.50	541.51	62.80	1.68
3550.00	10.40	64.10	3496.37	259.01	501.57	564.49	564.50	62.69	1.20
3677.00	13.50	63.50	3620.60	270.63	525.15	590.78	590.79	62.74	2.44
3805.00	13.40	65.30	3745.09	283.50	552.00	620.53	620.54	62.82	.34
3930.00	15.40	65.90	3866.16	296.33	580.31	651.56	651.59	62.95	1.60
4057.00	12.50	63.70	3989.40	309.31	608.03	682.14	682.18	63.04	2.32
4151.00	9.90	59.40	4081.60	317.93	624.11	700.39	700.42	63.01	2.90
4248.00	9.40	58.80	4177.23	326.28	638.06	716.62	716.65	62.92	.53
4343.00	9.10	69.70	4271.00	332.90	651.75	731.81	731.84	62.94	1.87
4439.00	11.00	72.80	4365.53	338.25	667.62	748.35	748.41	63.13	2.06
4534.00	11.60	73.50	4458.68	343.64	685.43	766.64	766.75	63.37	.65
4630.00	11.80	71.00	4552.69	349.58	703.97	785.82	785.99	63.59	.57
4725.00	11.60	67.20	4645.72	356.44	721.96	804.94	805.15	63.72	.84
4853.00	12.50	67.10	4770.90	366.82	746.58	831.57	831.83	63.83	.70
4980.00	11.10	65.40	4895.21	377.25	770.36	857.48	857.77	63.91	1.14
5105.00	10.00	60.10	5018.10	387.67	790.71	880.34	880.63	63.88	1.17
5231.00	7.60	59.00	5142.61	397.42	807.34	899.59	899.85	63.79	1.91
5356.00	6.50	61.20	5266.66	405.09	820.62	914.92	915.16	63.73	.91
5484.00	5.70	61.00	5393.93	411.66	832.53	928.52	928.75	63.69	.63
5610.00	3.60	66.00	5519.51	416.30	841.62	938.72	938.95	63.68	1.70
5768.00	2.10	70.00	5677.31	419.31	848.87	946.54	946.79	63.71	.96
6054.00	.50	357.30	5963.24	422.35	853.74	952.26	952.49	63.68	.70
6339.00	1.30	229.70	6248.22	421.50	851.21	949.63	949.86	63.66	.58
6624.00	3.30	304.10	6533.02	424.01	841.95	942.59	942.69	63.27	1.12
6910.00	2.90	284.60	6818.61	430.45	828.13	933.32	933.32	62.54	.39
7195.00	2.40	283.00	7103.30	433.61	815.34	923.45	923.47	62.00	.18
7418.00	2.00	295.10	7326.14	436.31	807.27	917.54	917.63	61.61	.27
Projection To Bit									
7469.00	2.00	295.10	7377.11	437.06	805.66	916.46	916.57	61.52	.00