



Job Number: 06246

Company: Williams Production

Lease/Well: Rosa Unit # 139-C MV

Location: San Juan County

Rig Name: □

RKB: □

G.L. or M.S.L.: 6414'

State/Country: NM

Declination: □

Grid: □

File name: C:\DATA\CUST06\SURVEYS\TEMP\06246.SVY

Date/Time: 04-Oct-06 / 10:02

Curve Name: As Drilled

Inwell Inc.

WINSERVE SURVEY CALCULATIONS

Minimum Curvature Method

Vertical Section Plane 148.91

Vertical Section Referenced to Wellhead

Rectangular Coordinates Referenced to Wellhead

30-045-33914

Surface 1025/N 1535/W

BHC 2356/N 2314/W

M 26518

TVL 6111

in P14

2-2-07

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
300.00	.00	.00	300.00	.00	.00	.00	.00	.00	.00
368.00	.00	.00	368.00	.00	.00	.00	.00	.00	.00
390.00	.80	71.80	390.00	.05	.15	.03	.15	71.80	3.64
421.00	.80	88.50	421.00	.12	.57	.19	.58	77.95	.75
451.00	1.80	122.40	450.99	-.13	1.18	.71	1.18	96.11	4.07
482.00	3.10	136.70	481.96	-1.00	2.16	1.97	2.38	114.76	4.60
511.00	4.50	140.00	510.90	-2.44	3.43	3.86	4.21	125.41	4.88
542.00	5.40	145.50	541.78	-4.57	5.04	6.52	6.80	132.23	3.28
573.00	6.50	146.00	572.61	-7.23	6.85	9.73	9.96	136.56	3.55
603.00	6.80	146.50	602.41	-10.12	8.78	13.20	13.39	139.07	1.02
634.00	7.20	146.90	633.18	-13.28	10.85	16.97	17.15	140.74	1.30
664.00	8.20	147.90	662.91	-16.66	13.01	20.99	21.14	142.01	3.36
695.00	9.70	148.80	693.53	-20.77	15.54	25.81	25.94	143.20	4.86
725.00	10.50	149.20	723.06	-25.28	18.25	31.07	31.18	144.17	2.68
755.00	10.90	150.40	752.54	-30.09	21.05	36.64	36.73	145.03	1.53
786.00	10.60	150.40	783.00	-35.12	23.91	42.42	42.49	145.76	.97
817.00	11.40	149.80	813.43	-40.25	26.86	48.34	48.39	146.29	2.61
847.00	12.70	148.60	842.77	-45.63	30.07	54.60	54.64	146.62	4.41
877.00	13.70	147.80	871.97	-51.45	33.68	61.45	61.49	146.79	3.39
908.00	14.80	147.90	902.02	-57.91	37.74	69.08	69.12	146.91	3.55
938.00	15.70	148.40	930.96	-64.61	41.90	76.97	77.01	147.04	3.03
969.00	16.80	149.20	960.72	-72.03	46.39	85.64	85.68	147.22	3.62
999.00	18.00	149.20	989.35	-79.74	50.99	94.61	94.65	147.40	4.00
1030.00	19.20	149.00	1018.73	-88.22	56.06	104.50	104.53	147.56	3.88

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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 Distance FT	Direction Deg	Dogleg Severity Deg/100
1060.00	20.30	149.10	1046.97	-96.92	61.28	114.64	114.66	147.70	3.67
1091.00	21.40	149.30	1075.94	-106.39	66.93	125.67	125.69	147.83	3.56
1121.00	22.60	149.80	1103.75	-116.08	72.62	136.91	136.93	147.97	4.05
1151.00	23.90	149.50	1131.31	-126.30	78.60	148.75	148.76	148.10	4.35
1182.00	25.30	149.10	1159.50	-137.40	85.19	161.65	161.67	148.20	4.55
1215.00	26.60	149.10	1189.17	-149.79	92.61	176.09	176.10	148.27	3.94
1246.00	27.90	148.90	1216.73	-161.95	99.92	190.29	190.30	148.33	4.20
1278.00	28.80	148.80	1244.89	-174.96	107.78	205.48	205.49	148.37	2.82
1309.00	29.70	149.30	1271.94	-187.95	115.57	220.63	220.64	148.41	3.01
1341.00	30.50	149.90	1299.62	-201.79	123.69	236.68	236.68	148.49	2.67
1372.00	31.90	150.00	1326.14	-215.69	131.73	252.73	252.74	148.59	4.52
1404.00	33.30	149.80	1353.10	-230.61	140.38	269.97	269.97	148.67	4.39
1436.00	34.60	149.60	1379.64	-246.03	149.39	287.84	287.84	148.73	4.08
1467.00	34.80	149.80	1405.13	-261.27	158.30	305.48	305.48	148.79	.74
1499.00	34.60	149.80	1431.44	-277.02	167.46	323.70	323.70	148.85	.62
1530.00	34.70	150.40	1456.94	-292.30	176.25	341.32	341.32	148.91	1.15
1562.00	34.60	150.30	1483.26	-308.11	185.25	359.51	359.51	148.98	.36
1593.00	35.70	149.30	1508.61	-323.53	194.23	377.35	377.35	149.02	4.00
1624.00	36.50	148.40	1533.66	-339.16	203.68	395.62	395.62	149.01	3.10
1656.00	36.20	147.90	1559.43	-355.27	213.68	414.58	414.58	148.97	1.32
1688.00	35.90	147.50	1585.30	-371.19	223.75	433.41	433.41	148.92	1.19
1719.00	36.90	148.40	1610.26	-386.78	233.51	451.80	451.80	148.88	3.66
1751.00	37.80	150.10	1635.69	-403.47	243.43	471.21	471.21	148.90	4.28
1782.00	38.10	151.30	1660.14	-420.09	252.76	490.27	490.27	148.97	2.57
1813.00	37.90	151.40	1684.57	-436.84	261.91	509.34	509.34	149.06	.68
1845.00	38.00	150.60	1709.80	-454.05	271.45	529.00	529.01	149.13	1.57
1877.00	39.20	150.10	1734.81	-471.40	281.33	548.96	548.97	149.17	3.87
1908.00	39.70	149.90	1758.75	-488.46	291.18	568.65	568.66	149.20	1.66
1940.00	39.80	149.20	1783.35	-506.10	301.55	589.11	589.12	149.21	1.43
1971.00	39.90	148.90	1807.15	-523.13	311.76	608.98	608.99	149.21	.70
2003.00	39.80	148.90	1831.72	-540.69	322.35	629.48	629.49	149.20	.31
2034.00	39.80	148.90	1855.53	-557.68	332.60	649.33	649.33	149.19	.00
2066.00	40.20	149.10	1880.05	-575.31	343.20	669.90	669.90	149.18	1.31
2097.00	40.00	149.90	1903.76	-592.52	353.33	689.86	689.87	149.19	1.78
2128.00	39.90	149.50	1927.52	-609.70	363.37	709.77	709.78	149.21	.89
2160.00	40.10	149.40	1952.04	-627.42	373.83	730.33	730.34	149.21	.66
2192.00	40.40	149.80	1976.46	-645.25	384.29	751.01	751.02	149.22	1.24
2223.00	40.70	149.80	2000.02	-662.67	394.43	771.16	771.17	149.24	.97
2255.00	39.80	149.80	2024.44	-680.54	404.83	791.83	791.85	149.25	2.81
2286.00	39.70	149.80	2048.27	-697.67	414.80	811.65	811.67	149.27	.32
2317.00	38.30	149.50	2072.36	-714.51	424.66	831.16	831.18	149.28	4.56
2349.00	36.80	148.90	2097.73	-731.26	434.64	850.66	850.68	149.27	4.82
2380.00	36.70	148.30	2122.57	-747.09	444.30	869.21	869.22	149.26	1.20
2412.00	37.10	149.50	2148.16	-763.54	454.23	888.42	888.44	149.25	2.58
2443.00	36.80	149.90	2172.94	-779.63	463.63	907.05	907.07	149.26	1.24

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 Distance FT	Direction Deg	Dogleg Severity Deg/100
2475.00	35.70	149.30	2198.74	-795.95	473.20	925.97	925.99	149.27	3.61
2506.00	34.20	149.30	2224.15	-811.22	482.27	943.73	943.75	149.27	4.84
2538.00	33.10	150.10	2250.79	-826.53	491.22	961.46	961.48	149.28	3.71
2570.00	32.90	150.50	2277.63	-841.67	499.85	978.88	978.91	149.29	.92
2601.00	33.40	151.00	2303.58	-856.46	508.13	995.83	995.85	149.32	1.84
2633.00	33.30	151.60	2330.31	-871.89	516.58	1013.40	1013.43	149.35	1.08
2664.00	33.30	150.60	2356.22	-886.79	524.81	1030.41	1030.45	149.38	1.77
2696.00	33.30	149.30	2382.97	-902.00	533.61	1047.98	1048.01	149.39	2.23
2727.00	33.50	147.00	2408.85	-916.49	542.61	1065.04	1065.07	149.37	4.13
2759.00	33.60	146.00	2435.52	-931.24	552.37	1082.71	1082.73	149.33	1.76
2790.00	34.00	146.00	2461.28	-945.53	562.01	1099.93	1099.95	149.27	1.29
2822.00	34.00	146.00	2487.81	-960.37	572.02	1117.80	1117.82	149.22	.00
2853.00	32.80	145.60	2513.69	-974.48	581.61	1134.84	1134.85	149.17	3.94
2885.00	32.10	146.00	2540.69	-988.68	591.26	1151.98	1151.99	149.12	2.29
2917.00	31.80	145.10	2567.84	-1002.65	600.84	1168.89	1168.89	149.07	1.76
2948.00	31.20	144.10	2594.28	-1015.85	610.22	1185.04	1185.04	149.01	2.57
2980.00	29.80	143.80	2621.85	-1028.98	619.78	1201.22	1201.22	148.94	4.40
3012.00	27.90	144.50	2649.87	-1041.49	628.82	1216.60	1216.60	148.88	6.03
3044.00	26.70	145.50	2678.31	-1053.51	637.24	1231.25	1231.25	148.83	4.01
3076.00	26.10	146.20	2706.97	-1065.29	645.23	1245.45	1245.46	148.80	2.11
3107.00	25.60	147.90	2734.87	-1076.63	652.58	1258.96	1258.97	148.78	2.88
3139.00	24.60	149.40	2763.85	-1088.22	659.65	1272.54	1272.54	148.78	3.70
3170.00	24.10	150.00	2792.09	-1099.25	666.10	1285.32	1285.32	148.79	1.80
3202.00	23.10	151.00	2821.42	-1110.40	672.41	1298.12	1298.12	148.80	3.37
3233.00	22.50	151.20	2849.99	-1120.92	678.21	1310.13	1310.13	148.82	1.95
3265.00	21.40	151.50	2879.67	-1131.41	683.95	1322.08	1322.08	148.85	3.46
3296.00	19.70	152.30	2908.70	-1141.01	689.08	1332.94	1332.94	148.87	5.56
3328.00	18.30	152.80	2938.95	-1150.26	693.88	1343.34	1343.34	148.90	4.40
3359.00	17.60	153.50	2968.45	-1158.78	698.20	1352.87	1352.87	148.93	2.36
3391.00	16.70	153.80	2999.02	-1167.23	702.39	1362.27	1362.27	148.96	2.83
3421.00	16.10	154.20	3027.80	-1174.85	706.10	1370.71	1370.71	148.99	2.04
3452.00	15.90	155.10	3057.60	-1182.57	709.76	1379.21	1379.21	149.03	1.03
3484.00	15.30	154.80	3088.42	-1190.36	713.40	1387.77	1387.77	149.07	1.89
3515.00	15.10	154.40	3118.34	-1197.71	716.89	1395.85	1395.86	149.10	.73
3547.00	14.90	154.40	3149.25	-1205.18	720.47	1404.10	1404.11	149.13	.62
3578.00	14.30	154.10	3179.25	-1212.21	723.86	1411.88	1411.89	149.16	1.95
3610.00	13.60	152.30	3210.30	-1219.10	727.34	1419.57	1419.59	149.18	2.57
3641.00	13.10	150.90	3240.46	-1225.40	730.74	1426.72	1426.74	149.19	1.92
3674.00	12.10	150.50	3272.67	-1231.68	734.26	1433.91	1433.93	149.20	3.04
3706.00	11.50	150.00	3303.99	-1237.36	737.51	1440.46	1440.48	149.20	1.90
3737.00	11.00	149.10	3334.40	-1242.57	740.57	1446.50	1446.52	149.21	1.71
3768.00	10.30	148.60	3364.86	-1247.47	743.53	1452.23	1452.25	149.20	2.28
3800.00	9.50	148.10	3396.39	-1252.16	746.42	1457.73	1457.75	149.20	2.51
3831.00	8.80	147.00	3426.99	-1256.32	749.06	1462.66	1462.68	149.20	2.33
3863.00	8.60	145.60	3458.62	-1260.35	751.75	1467.50	1467.51	149.19	.91

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	
3894.00	8.30	143.60	3489.29	-1264.06	754.39	1472.04	1472.05	149.17	1.35
3926.00	7.50	141.40	3520.98	-1267.55	757.06	1476.41	1476.42	149.15	2.67
3957.00	6.70	140.00	3551.75	-1270.52	759.48	1480.20	1480.21	149.13	2.64
3989.00	5.60	142.30	3583.56	-1273.18	761.64	1483.60	1483.61	149.11	3.52
4020.00	4.60	144.80	3614.44	-1275.40	763.28	1486.34	1486.35	149.10	3.30
4051.00	3.90	145.50	3645.35	-1277.28	764.59	1488.63	1488.64	149.09	2.26
4083.00	3.10	146.40	3677.29	-1278.90	765.69	1490.58	1490.59	149.09	2.51
4403.00	.38	159.09	3997.12	-1287.10	770.86	1500.27	1500.28	149.08	.85
4880.00	3.77	169.05	4473.73	-1303.98	774.40	1516.56	1516.59	149.29	.71
5135.00	3.01	174.24	4728.29	-1318.87	776.67	1530.48	1530.56	149.51	.32
5515.00	1.57	185.56	5107.97	-1333.98	777.16	1543.67	1543.85	149.78	.40
5989.00	1.59	26.06	5581.91	-1334.53	779.42	1545.32	1545.47	149.71	.66
6465.00	.87	237.95	6057.86	-1330.52	779.26	1541.80	1541.92	149.64	.50
Projected to TD									
6518.00	.87	237.95	6110.85	-1330.94	778.58	1541.81	1541.95	149.67	.00