

30-45-33794



Job Number: ☐
 Company: Williams Exploration
 Lease/Well: Rosa Unit # 35-B
 Location: San Juan County
 Rig Name: ☐
 RKB: ☐
 G.L. or M.S.L.: 6348

State/Country: NM
 Declination: ☐
 Grid: ☐
 File name: C:\DATA\CUST06\SURVEYS\WILLIAMS\06236.SVY
 Date/Time: 05-Oct-06 / 14:32
 Curve Name: As Drilled

Inwell Inc.

Surface 1175/S 1490/W
 BHL 971/S 976/W

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 249.70
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

MD 6108
 TVD 6048

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
390.00	1.00	81.00	390.00	.12	.78	-.77	.79	81.00	1.11
421.00	1.10	104.00	420.99	.09	1.33	-1.28	1.33	86.00	1.39
451.00	.90	94.50	450.99	.01	1.85	-1.73	1.85	89.84	.86
482.00	.70	106.00	481.98	-.07	2.27	-2.11	2.27	91.67	.82
511.00	.50	110.00	510.98	-.16	2.56	-2.35	2.56	93.54	.70
542.00	.30	128.30	541.98	-.25	2.75	-2.49	2.76	95.29	.76
573.00	.20	235.60	572.98	-.34	2.77	-2.48	2.79	96.91	1.31
603.00	.60	253.90	602.98	-.41	2.58	-2.27	2.61	99.02	1.38
634.00	1.00	257.60	633.98	-.51	2.16	-1.84	2.22	103.36	1.30
664.00	1.60	256.90	663.97	-.66	1.49	-1.17	1.63	113.97	2.00
695.00	2.00	258.20	694.95	-.87	.54	-.20	1.03	148.19	1.30
725.00	2.80	259.80	724.93	-1.11	-.69	1.03	1.31	212.00	2.68
755.00	3.60	260.60	754.88	-1.39	-2.34	2.68	2.73	239.28	2.67
786.00	4.70	256.60	785.80	-1.85	-4.54	4.90	4.90	247.87	3.67
817.00	5.50	259.60	816.67	-2.41	-7.24	7.62	7.63	251.59	2.72
847.00	6.40	260.90	846.51	-2.93	-10.30	10.68	10.71	254.11	3.03
877.00	7.50	259.60	876.29	-3.55	-13.88	14.25	14.32	255.65	3.70
908.00	8.40	261.40	906.99	-4.25	-18.11	18.46	18.60	256.78	3.01
938.00	8.90	261.60	936.65	-4.92	-22.57	22.87	23.10	257.70	1.67
969.00	9.50	258.60	967.25	-5.78	-27.45	27.75	28.05	258.12	2.48
999.00	9.70	253.60	996.83	-6.98	-32.30	32.72	33.05	257.81	2.86
1030.00	10.20	253.10	1027.37	-8.51	-37.43	38.06	38.39	257.18	1.64
1060.00	10.80	252.80	1056.87	-10.12	-42.66	43.52	43.84	256.66	2.01

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	
1091.00	10.80	249.60	1087.32	-11.99	-48.16	49.32	49.63	256.02	1.93
1121.00	11.70	250.20	1116.74	-14.00	-53.65	55.18	55.45	255.38	3.03
1151.00	12.10	249.90	1146.10	-16.11	-59.47	61.36	61.61	254.84	1.35
1182.00	12.50	248.60	1176.38	-18.45	-65.64	67.97	68.19	254.30	1.57
1215.00	12.50	248.60	1208.60	-21.06	-72.29	75.11	75.30	253.76	.00
1247.00	12.90	243.80	1239.82	-23.90	-78.72	82.12	82.27	253.11	3.53
1278.00	13.70	244.60	1269.99	-27.00	-85.14	89.22	89.32	252.41	2.65
1309.00	14.40	245.40	1300.06	-30.18	-91.96	96.72	96.79	251.83	2.34
1341.00	15.70	246.80	1330.96	-33.54	-99.56	105.01	105.06	251.38	4.22
1372.00	16.70	247.80	1360.73	-36.88	-107.54	113.65	113.69	251.07	3.35
1404.00	17.80	249.00	1391.29	-40.37	-116.36	123.14	123.17	250.87	3.61
1435.00	19.00	251.40	1420.71	-43.68	-125.57	132.92	132.95	250.82	4.58
1464.00	20.40	250.30	1448.01	-46.88	-134.80	142.70	142.72	250.82	4.99
1496.00	20.90	249.60	1477.95	-50.75	-145.40	153.98	154.01	250.76	1.74
1528.00	20.90	247.80	1507.85	-54.90	-156.04	165.39	165.42	250.62	2.01
1559.00	20.90	247.20	1536.81	-59.13	-166.26	176.44	176.46	250.42	.69
1591.00	21.40	247.20	1566.65	-63.61	-176.90	187.98	187.99	250.22	1.56
1622.00	20.20	247.30	1595.63	-67.86	-187.05	198.98	198.98	250.06	3.87
1654.00	20.00	247.80	1625.68	-72.06	-197.21	209.97	209.97	249.93	.82
1685.00	20.10	247.80	1654.80	-76.08	-207.05	220.59	220.59	249.82	.32
1716.00	19.30	247.00	1683.99	-80.09	-216.70	231.03	231.03	249.72	2.72
1748.00	18.60	247.60	1714.25	-84.11	-226.29	241.41	241.41	249.61	2.27
1779.00	18.40	248.30	1743.65	-87.80	-235.41	251.24	251.25	249.55	.96
1811.00	18.40	248.10	1774.02	-91.55	-244.78	261.34	261.34	249.49	.20
1842.00	17.40	248.30	1803.51	-95.09	-253.63	270.87	270.87	249.45	3.23
1873.00	17.40	246.80	1833.10	-98.63	-262.20	280.13	280.13	249.39	1.45
1920.00	17.10	247.90	1877.98	-104.00	-275.06	294.05	294.06	249.29	.94
1936.00	16.80	248.30	1893.29	-105.74	-279.39	298.72	298.73	249.27	2.01
1968.00	16.50	247.60	1923.95	-109.18	-287.89	307.88	307.89	249.23	1.13
1999.00	15.80	248.80	1953.72	-112.38	-295.89	316.50	316.51	249.20	2.50
2031.00	15.20	247.80	1984.56	-115.54	-303.84	325.05	325.06	249.18	2.05
2061.00	15.20	247.50	2013.51	-118.53	-311.11	332.91	332.93	249.14	.26
2093.00	15.30	246.80	2044.38	-121.80	-318.87	341.32	341.34	249.09	.65
2124.00	14.90	246.60	2074.31	-125.00	-326.28	349.38	349.41	249.04	1.30
2156.00	14.20	245.30	2105.29	-128.27	-333.63	357.40	357.43	248.97	2.41
2187.00	13.90	248.30	2135.36	-131.24	-340.54	364.92	364.95	248.92	2.54
2219.00	13.60	248.90	2166.44	-134.01	-347.62	372.52	372.56	248.92	1.04
2250.00	13.60	251.60	2196.57	-136.47	-354.48	379.81	379.84	248.94	2.05
2282.00	13.40	252.80	2227.69	-138.76	-361.59	387.27	387.30	249.01	1.08
2313.00	13.00	252.60	2257.87	-140.86	-368.35	394.34	394.37	249.07	1.30
2345.00	12.90	252.30	2289.06	-143.02	-375.19	401.50	401.52	249.13	.38
2376.00	12.10	252.30	2319.32	-145.06	-381.58	408.21	408.22	249.18	2.58
2408.00	11.50	251.60	2350.64	-147.09	-387.80	414.75	414.76	249.23	1.93
2439.00	11.20	250.10	2381.04	-149.09	-393.57	420.85	420.86	249.25	1.36
2471.00	10.60	251.50	2412.46	-151.08	-399.28	426.89	426.91	249.27	2.05

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	
2502.00	10.50	249.40	2442.94	-152.98	-404.63	432.57	432.58	249.29	1.28
2534.00	10.40	251.40	2474.41	-154.93	-410.09	438.37	438.38	249.30	1.18
2565.00	9.50	251.60	2504.94	-156.63	-415.17	443.73	443.74	249.33	2.91
2597.00	9.40	251.20	2536.50	-158.30	-420.15	448.98	448.99	249.35	.37
2628.00	9.40	247.60	2567.09	-160.08	-424.89	454.04	454.05	249.36	1.90
2659.00	9.50	249.60	2597.67	-161.94	-429.63	459.13	459.13	249.35	1.11
2690.00	9.20	249.90	2628.26	-163.68	-434.35	464.16	464.17	249.35	.98
2722.00	8.40	252.80	2659.88	-165.26	-438.99	469.05	469.06	249.37	2.86
2753.00	7.70	253.30	2690.57	-166.52	-443.14	473.39	473.39	249.40	2.27
2785.00	7.30	253.50	2722.30	-167.71	-447.14	477.56	477.56	249.44	1.25
2816.00	7.20	255.00	2753.05	-168.78	-450.91	481.46	481.46	249.48	.69
2848.00	6.80	259.10	2784.81	-169.65	-454.70	485.32	485.32	249.54	2.00
2879.00	6.50	257.40	2815.61	-170.38	-458.22	488.87	488.87	249.60	1.16
2911.00	6.60	257.60	2847.40	-171.17	-461.78	492.49	492.49	249.66	.32
2943.00	6.50	256.10	2879.19	-172.00	-465.34	496.11	496.11	249.71	.62
2974.00	6.00	252.30	2910.00	-172.92	-468.58	499.47	499.47	249.74	2.09
3006.00	5.80	254.10	2941.83	-173.87	-471.73	502.75	502.75	249.77	.85
3037.00	5.60	254.10	2972.68	-174.71	-474.69	505.82	505.82	249.79	.65
3069.00	5.30	251.80	3004.54	-175.60	-477.60	508.86	508.86	249.81	1.16
3100.00	4.70	253.40	3035.42	-176.41	-480.18	511.56	511.56	249.83	1.99
3132.00	3.90	252.60	3067.33	-177.11	-482.47	513.95	513.95	249.84	2.51
3163.00	3.70	255.20	3098.26	-177.68	-484.44	516.00	516.00	249.86	.85
3195.00	3.60	253.80	3130.19	-178.23	-486.41	518.03	518.03	249.88	.42
3226.00	3.40	254.30	3161.14	-178.75	-488.23	519.92	519.92	249.89	.65
3258.00	3.40	252.60	3193.08	-179.29	-490.05	521.81	521.81	249.90	.32
3289.00	3.40	254.40	3224.03	-179.81	-491.81	523.64	523.65	249.92	.34
3321.00	3.50	254.40	3255.97	-180.33	-493.66	525.56	525.57	249.93	.31
3352.00	3.50	250.10	3286.91	-180.90	-495.46	527.45	527.46	249.94	.85
3384.00	3.10	245.10	3318.86	-181.60	-497.17	529.29	529.30	249.93	1.54
3416.00	2.80	247.80	3350.81	-182.26	-498.68	530.94	530.94	249.92	1.03
3447.00	2.50	240.80	3381.78	-182.88	-499.97	532.36	532.36	249.91	1.42
3479.00	2.20	232.20	3413.75	-183.59	-501.06	533.64	533.64	249.88	1.44
3511.00	1.80	235.80	3445.73	-184.25	-501.96	534.71	534.71	249.84	1.31
3542.00	1.10	226.60	3476.72	-184.73	-502.58	535.46	535.46	249.82	2.37
3573.00	1.10	209.00	3507.72	-185.20	-502.94	535.96	535.96	249.79	1.09
3605.00	1.30	211.50	3539.71	-185.77	-503.28	536.47	536.47	249.74	.65
3660.00	1.30	211.50	3594.70	-186.84	-503.93	537.45	537.45	249.66	.00
4532.00	.50	211.00	4466.58	-198.53	-511.06	548.20	548.27	248.77	.09
5140.00	.25	211.00	5074.57	-201.94	-513.11	551.30	551.42	248.52	.04
6100.00	.00	211.00	6034.57	-203.74	-514.19	552.94	553.08	248.38	.03
Projected to TD									
6108.00	.00	211.00	6042.57	-203.74	-514.19	552.94	553.08	248.38	.00

Company: Williams Exploration
 Lease/Well: Rosa Unit # 35-B
 Location: San Juan County
 State/Country: NM

