



Scientific Drilling

Gyroscopic Survey Report
for
Williams

39-30236

Well Location	Sec. 10-T31N-R6W, Rio Arriba County, NM
Well Name	Rosa Unit #381A
Rig Name	AWS 520
Survey Date	7/13/2008
Latitude	36.91 deg
North Reference	True North
Grid Correction	0.00 deg
Depth Reference	RKB (14')
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 0.00Azim (deg)
Definitive Survey	Computed from 3W.BIN's HighSpeed: InRun
Operator	Brett Lanier

Comments

Surveyed from RKB to 3583'
Surveyed RKB (14')
Surveyed in 2 7/8" drillpipe

RCVD SEP 4 '08
OIL CONS. DIV.
DIST. 3



Survey Report

Well Name: Rosa Unit #381A
Survey: Computed from 3W.BIN's HighSpeed: InRun
Survey Date: 7/13/2008

MD ft	Inc deg	Azim deg	TVD ft	VS ft	Northing ft	Easting ft	DLS deg/100ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid
100.00	0.20	296.03	100.00	0.08	0.08	-0.16	0.20
200.00	0.08	95.45	200.00	0.15	0.15	-0.24	0.28
300.00	0.28	134.61	300.00	-0.03	-0.03	0.01	0.22
400.00	0.26	175.95	400.00	-0.43	-0.43	0.20	0.19
500.00	0.94	286.98	499.99	-0.42	-0.42	-0.57	1.06
600.00	4.29	290.03	599.88	1.10	1.10	-4.87	3.36
700.00	7.95	285.83	699.29	4.27	4.27	-15.05	3.68
800.00	10.37	283.23	798.01	8.22	8.22	-30.47	2.46
900.00	13.19	280.87	895.89	12.43	12.43	-50.44	2.85
1000.00	15.17	279.70	992.84	16.79	16.79	-74.54	2.00
1100.00	17.50	279.38	1088.80	21.44	21.44	-102.27	2.33
1200.00	19.71	278.94	1183.57	26.51	26.51	-133.76	2.21
1300.00	22.21	280.19	1276.95	32.48	32.48	-169.02	2.54
1400.00	25.02	281.18	1368.56	39.92	39.92	-208.38	2.84
1500.00	27.53	281.56	1458.22	48.66	48.66	-251.78	2.51
1600.00	29.25	280.57	1546.19	57.77	57.77	-298.44	1.78
1700.00	30.65	281.30	1632.83	67.25	67.25	-347.46	1.45
1800.00	30.56	277.46	1718.91	75.55	75.55	-397.66	1.96
1900.00	30.45	278.46	1805.07	82.58	82.58	-447.93	0.52
2000.00	29.77	279.50	1891.58	90.40	90.40	-497.48	0.86
2100.00	30.23	280.86	1978.18	99.24	99.24	-546.69	0.82
2200.00	29.51	279.86	2064.90	108.20	108.20	-595.68	0.87
2300.00	30.27	280.42	2151.59	116.98	116.98	-644.74	0.81
2400.00	30.08	279.56	2238.04	125.70	125.70	-694.24	0.48
2500.00	29.37	280.25	2324.88	134.23	134.23	-743.09	0.78
2600.00	29.30	281.51	2412.06	143.47	143.47	-791.20	0.62
2700.00	29.83	281.36	2499.04	153.26	153.26	-839.56	0.53
2800.00	30.28	280.49	2585.60	162.74	162.74	-888.73	0.63
2900.00	29.79	280.99	2672.17	172.07	172.07	-937.90	0.55
3000.00	30.13	281.19	2758.81	181.67	181.67	-986.91	0.35
3100.00	29.83	280.94	2845.43	191.27	191.27	-1035.95	0.32
3200.00	29.49	280.15	2932.32	200.33	200.33	-1084.60	0.52
3300.00	29.08	281.07	3019.54	209.33	209.33	-1132.67	0.60
3400.00	26.17	284.31	3108.14	219.45	219.45	-1177.90	3.28
3500.00	23.58	286.95	3198.86	230.73	230.73	-1218.41	2.81
3583.00	22.09	287.22	3275.35	240.19	240.19	-1249.20	1.80