

sperry-sun
DRILLING SERVICES

End of Well Report

Rosa Unit # 228A

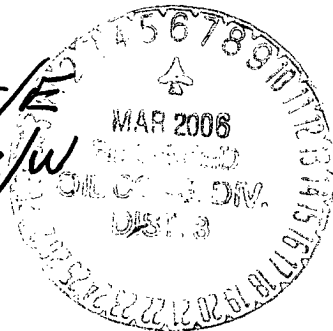
Williams Production Co.

30-039-29528

7/15/2005

TVD 2925
MD 3253

Surface 2165/N 1815/E
BHL 1308/N 1183/W



HALLIBURTON

9800 W RENO • OKLA CITY, OK 73127
PHONE 405.324.2222 • FAX 405.324.1009

July 18, 2005

Re: Williams Production Co.
Rosa Unit #228-A
Sec. 07-T31N-R05W
Rio Arriba County, New Mexico

Enclosed please find the original and one copy of the surveys performed on the referenced well by Halliburton/Sperry Drilling Services.

<u>Name & Title of Supervisor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Dennis Cook Field Supervisor	Original	352' – 3,189'	07/08/05 – 07/14/05	MWD
Dennis Cook Field Supervisor	Projection to TD	3,189' – 3,253'		MWD

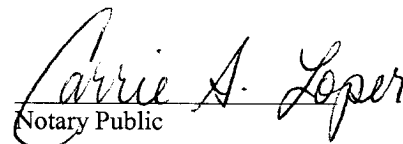
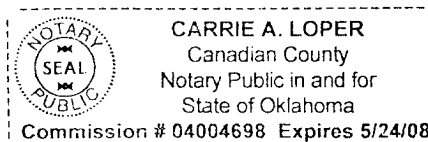
If any other information is required, please contact the undersigned at the letterhead address and phone number.



Dennis Cook
Field Supervisor

My Commission Expires:

5/24/08


Notary Public



**Williams Production Company
New Mexico
Rio Arriba County
Sec. 07-T31N-R05W
Rosa Unit #228A - MWD Survey**

Halliburton Sperry-Drilling Survey Report

15 July, 2005

Surface Coordinates: 2152713.26 N, 626599.32 E (36° 54' 55.0000" N, 107° 24' 01.0000" W)
Grid Coordinate System: NAD27 New Mexico State Planes, Western Zone

Surface Coordinates relative to Global Coordinates: 647722.14 N, 328918.55 E (Grid)
Surface Coordinates relative to NE corner sec 7: 2165.00 S, 1815.00 W (True)
Kelly Bushing Elevation: 6271.00ft above Mean Sea Level
Kelly Bushing Elevation: 8.00ft above structure

Survey Ref: svy9083

HALLIBURTON

Sperry Drilling Services

Survey Report for Sec. 07-T31N-R05W - Rosa Unit #228A - MWD Survey

Measure Depth (ft)	Incl. Angle (Deg)	Drift Direction (Deg)	True Vertical Depth	Vertical Section (ft)	Local Coordinates N-S (ft)	E-W (ft)	Dogleg Severit (°/100ft)	Lease Calls FNL-FSL (ft)	FEL-FWL (ft)	Global Coordinates Grid Y (ft)	Grid X (ft)
0.00	0.000	0.000	0.00	0.00	0.00 N	0.00 E		2165.00 FNL	1815.00 FEL	2152713.26 N	626599.32 E
352.00	0.590	137.890	351.99	-1.81	1.34 S	1.22 E	0.17	2166.34 FNL	1813.78 FEL	2152711.93 N	626600.54 E
383.00	0.290	162.860	382.99	-2.04	1.54 S	1.35 E	1.13	2166.54 FNL	1813.65 FEL	2152711.73 N	626600.67 E
413.00	0.390	295.800	412.99	-2.01	1.57 S	1.28 E	2.08	2166.57 FNL	1813.72 FEL	2152711.70 N	626600.60 E
444.00	1.150	309.490	443.99	-1.60	1.32 S	0.94 E	2.51	2166.32 FNL	1814.06 FEL	2152711.95 N	626600.27 E
474.00	2.220	316.980	473.98	-0.72	0.71 S	0.31 E	3.63	2165.71 FNL	1814.69 FEL	2152712.56 N	626599.64 E
505.00	3.530	310.560	504.94	0.83	0.35 N	0.82 W	4.35	2164.65 FNL	1815.82 FEL	2152713.61 N	626598.50 E
536.00	4.280	314.350	535.86	2.93	1.78 N	2.37 W	2.56	2163.22 FNL	1817.37 FEL	2152715.04 N	626596.94 E
567.00	5.930	313.420	566.74	5.69	3.69 N	4.37 W	5.33	2161.31 FNL	1819.36 FEL	2152716.94 N	626594.94 E
597.00	6.980	313.260	596.55	9.06	6.01 N	6.82 W	3.50	2158.99 FNL	1821.82 FEL	2152719.24 N	626592.47 E
627.00	8.160	313.720	626.29	13.01	8.73 N	9.68 W	3.94	2156.27 FNL	1824.68 FEL	2152721.95 N	626589.60 E
657.00	9.250	314.840	655.94	17.55	11.90 N	12.93 W	3.68	2153.10 FNL	1827.93 FEL	2152725.10 N	626586.33 E
688.00	10.260	314.980	686.49	22.80	15.61 N	16.65 W	3.26	2149.39 FNL	1831.65 FEL	2152728.80 N	626582.60 E
719.00	11.660	315.130	716.93	28.69	19.78 N	20.81 W	4.52	2145.22 FNL	1835.81 FEL	2152732.95 N	626578.41 E
750.00	12.650	314.960	747.23	35.22	24.40 N	25.43 W	3.20	2140.60 FNL	1840.43 FEL	2152737.55 N	626573.78 E
780.00	13.850	315.430	776.43	42.09	29.28 N	30.27 W	4.02	2135.72 FNL	1845.27 FEL	2152742.40 N	626568.92 E
811.00	15.190	315.640	806.44	49.87	34.83 N	35.71 W	4.33	2130.17 FNL	1850.71 FEL	2152747.93 N	626563.45 E
842.00	16.420	315.960	836.27	58.31	40.88 N	41.60 W	3.98	2124.12 FNL	1856.60 FEL	2152753.95 N	626557.53 E
874.00	17.710	315.900	866.86	67.70	47.63 N	48.13 W	4.03	2117.37 FNL	1863.13 FEL	2152760.67 N	626550.97 E
905.00	18.900	315.590	896.29	77.44	54.60 N	54.92 W	3.85	2110.40 FNL	1869.92 FEL	2152767.61 N	626544.14 E
936.00	19.960	315.620	925.52	87.75	61.97 N	62.14 W	3.42	2103.03 FNL	1877.14 FEL	2152774.95 N	626536.90 E
968.00	20.510	314.890	955.55	98.81	69.83 N	69.93 W	1.89	2095.17 FNL	1884.93 FEL	2152782.77 N	626529.07 E
999.00	21.900	316.000	984.45	110.03	77.82 N	77.79 W	4.67	2087.18 FNL	1892.79 FEL	2152790.73 N	626521.17 E
1031.00	22.860	316.360	1014.04	122.21	86.62 N	86.23 W	3.03	2078.38 FNL	1901.23 FEL	2152799.48 N	626512.69 E
1061.00	23.620	315.750	1041.61	134.05	95.14 N	94.44 W	2.66	2069.86 FNL	1909.44 FEL	2152807.97 N	626504.44 E

Measure Depth (ft)	Incl. Angle (Deg)	Drift Direction (Deg)	True Vertical Depth	Vertical Section (ft)	Local Coordinates N-S (ft)	E-W (ft)	Dogleg Severit ("100ft)	Lease Calls FNL-FSL (ft)	FEL-FWL (ft)	Global Coordinates Grid Y (ft)	Grid X (ft)
1093.00	25.470	316.820	1070.71	147.34	104.75 N	103.62 W	5.95	2060.25 FNL	1918.62 FEL	2152817.54 N	626495.21 E
1124.00	26.080	315.620	1098.63	160.82	114.48 N	112.95 W	2.59	2050.52 FNL	1927.95 FEL	2152827.22 N	626485.84 E
1155.00	27.530	316.480	1126.30	174.80	124.55 N	122.65 W	4.84	2040.45 FNL	1937.65 FEL	2152837.25 N	626476.10 E
1217.00	29.640	317.600	1180.74	204.45	146.26 N	142.86 W	3.51	2018.74 FNL	1957.86 FEL	2152858.87 N	626455.79 E
1248.00	30.170	318.050	1207.61	219.90	157.72 N	153.23 W	1.86	2007.28 FNL	1968.23 FEL	2152870.27 N	626445.36 E
1279.00	31.100	318.170	1234.28	235.68	169.48 N	163.78 W	3.01	1995.52 FNL	1978.78 FEL	2152881.99 N	626434.76 E
1311.00	32.210	318.320	1261.52	252.46	182.01 N	174.96 W	3.48	1982.99 FNL	1989.96 FEL	2152894.46 N	626423.52 E
1374.00	33.700	316.980	1314.38	286.71	207.33 N	198.05 W	2.63	1957.67 FNL	2013.05 FEL	2152919.68 N	626400.32 E
1405.00	34.180	317.190	1340.10	304.01	220.00 N	209.83 W	1.59	1944.99 FNL	2024.83 FEL	2152932.30 N	626388.48 E
1436.00	35.150	316.810	1365.60	321.64	232.90 N	221.86 W	3.21	1932.10 FNL	2036.86 FEL	2152945.14 N	626376.39 E
1498.00	35.820	314.250	1416.09	357.63	258.58 N	247.07 W	2.63	1906.42 FNL	2062.07 FEL	2152970.70 N	626351.06 E
1529.00	36.280	313.680	1441.15	375.86	271.24 N	260.20 W	1.84	1893.76 FNL	2075.20 FEL	2152983.30 N	626337.87 E
1561.00	36.490	313.490	1466.91	394.83	284.33 N	273.95 W	0.74	1880.67 FNL	2088.95 FEL	2152996.33 N	626324.07 E
1592.00	37.030	313.640	1491.75	413.36	297.12 N	287.39 W	1.77	1867.88 FNL	2102.39 FEL	2153009.05 N	626310.56 E
1655.00	37.970	314.270	1541.73	451.70	323.74 N	315.00 W	1.61	1841.26 FNL	2130.00 FEL	2153035.55 N	626282.84 E
1686.00	38.430	314.860	1566.09	470.86	337.19 N	328.65 W	1.89	1827.81 FNL	2143.65 FEL	2153048.94 N	626269.12 E
1716.00	38.480	314.410	1589.58	489.51	350.30 N	341.93 W	0.95	1814.70 FNL	2156.93 FEL	2153061.99 N	626255.78 E
1747.00	38.470	314.660	1613.85	508.80	363.83 N	355.68 W	0.50	1801.17 FNL	2170.67 FEL	2153075.45 N	626241.97 E
1779.00	39.210	314.730	1638.78	528.86	377.94 N	369.94 W	2.32	1787.06 FNL	2184.94 FEL	2153089.50 N	626227.64 E
1811.00	39.440	314.700	1663.53	549.14	392.21 N	384.35 W	0.72	1772.79 FNL	2199.35 FEL	2153103.70 N	626213.17 E
1842.00	39.320	314.950	1687.49	568.80	406.08 N	398.30 W	0.64	1758.92 FNL	2213.30 FEL	2153117.50 N	626199.16 E
1874.00	39.000	315.740	1712.30	589.01	420.45 N	412.50 W	1.85	1744.55 FNL	2227.50 FEL	2153131.81 N	626184.89 E
1905.00	39.120	316.100	1736.37	608.54	434.49 N	426.09 W	0.83	1730.51 FNL	2241.09 FEL	2153145.79 N	626171.24 E
1936.00	38.680	316.510	1760.50	628.00	448.56 N	439.53 W	1.70	1716.44 FNL	2254.53 FEL	2153159.80 N	626157.73 E
1967.00	37.800	316.850	1784.85	647.18	462.52 N	452.69 W	2.86	1702.48 FNL	2267.69 FEL	2153173.69 N	626144.50 E
1999.00	38.040	316.320	1810.10	666.85	476.80 N	466.21 W	1.26	1688.20 FNL	2281.21 FEL	2153187.92 N	626130.92 E
2061.00	36.460	315.150	1859.45	704.37	503.68 N	492.39 W	2.79	1661.32 FNL	2307.39 FEL	2153214.67 N	626104.61 E
2092.00	36.780	315.100	1884.33	722.86	516.79 N	505.44 W	1.04	1648.21 FNL	2320.44 FEL	2153227.72 N	626091.51 E
2124.00	36.160	315.460	1910.06	741.88	530.30 N	518.82 W	2.05	1634.70 FNL	2333.82 FEL	2153241.17 N	626078.06 E
2155.00	35.540	316.770	1935.19	760.04	543.39 N	531.41 W	3.18	1621.61 FNL	2346.41 FEL	2153254.20 N	626065.41 E

Measure Depth (ft)	Incl. Angle (Deg)	Drift Direction (Deg)	True Vertical Depth	Vertical Section (ft)	Local Coordinates N-S (ft)	E-W (ft)	Dogleg Severit (°/100ft)	Lease Calls FNL-FSL (ft)	FEL-FWL (ft)	Global Coordinates Grid Y (ft)	Grid X (ft)
2187.00	35.010	317.520	1961.32	778.51	556.93 N	543.98 W	2.14	1608.06 FNL	2358.98 FEL	2153267.69 N	626052.78 E
2218.00	35.270	318.110	1986.67	796.35	570.16 N	555.96 W	1.38	1594.84 FNL	2370.96 FEL	2153280.85 N	626040.74 E
2250.00	35.880	318.570	2012.69	814.94	584.07 N	568.33 W	2.08	1580.93 FNL	2383.33 FEL	2153294.71 N	626028.31 E
2281.00	35.380	318.610	2037.89	832.98	597.61 N	580.28 W	1.61	1567.39 FNL	2395.27 FEL	2153308.20 N	626016.30 E
2313.00	34.360	317.960	2064.14	851.26	611.27 N	592.45 W	3.39	1553.73 FNL	2407.45 FEL	2153321.80 N	626004.06 E
2344.00	33.490	316.450	2089.87	868.55	623.97 N	604.20 W	3.91	1541.03 FNL	2419.20 FEL	2153334.44 N	625992.26 E
2376.00	33.800	316.360	2116.51	886.28	636.81 N	616.42 W	0.98	1528.19 FNL	2431.42 FEL	2153347.23 N	625979.97 E
2406.00	34.320	316.230	2141.36	903.08	648.95 N	628.03 W	1.75	1516.05 FNL	2443.03 FEL	2153359.32 N	625968.31 E
2438.00	33.660	315.790	2167.89	920.97	661.83 N	640.45 W	2.20	1503.17 FNL	2455.45 FEL	2153372.13 N	625955.83 E
2470.00	33.470	315.810	2194.56	938.67	674.51 N	652.79 W	0.59	1490.49 FNL	2467.79 FEL	2153384.76 N	625943.43 E
2501.00	32.490	316.750	2220.56	955.54	686.71 N	664.45 W	3.57	1478.29 FNL	2479.45 FEL	2153396.90 N	625931.71 E
2533.00	31.040	316.900	2247.77	972.38	698.99 N	675.98 W	4.54	1466.01 FNL	2490.98 FEL	2153409.13 N	625920.13 E
2564.00	29.700	316.940	2274.51	988.05	710.44 N	686.68 W	4.32	1454.56 FNL	2501.68 FEL	2153420.53 N	625909.38 E
2596.00	28.450	314.990	2302.48	1003.60	721.62 N	697.48 W	4.90	1443.38 FNL	2512.48 FEL	2153431.67 N	625898.52 E
2628.00	27.980	314.280	2330.68	1018.73	732.25 N	708.25 W	1.80	1432.75 FNL	2523.25 FEL	2153442.25 N	625887.71 E
2659.00	27.570	313.770	2358.11	1033.16	742.29 N	718.63 W	1.53	1422.71 FNL	2533.63 FEL	2153452.24 N	625877.28 E
2690.00	26.280	314.230	2385.75	1047.19	752.04 N	728.73 W	4.22	1412.96 FNL	2543.73 FEL	2153461.94 N	625867.13 E
2722.00	25.030	314.960	2414.59	1061.04	761.77 N	738.60 W	4.03	1403.23 FNL	2553.60 FEL	2153471.62 N	625857.22 E
2753.00	24.400	316.020	2442.75	1074.01	771.01 N	747.68 W	2.48	1393.99 FNL	2562.68 FEL	2153480.82 N	625848.09 E
2784.00	23.460	316.330	2471.09	1086.58	780.08 N	756.39 W	3.06	1384.92 FNL	2571.39 FEL	2153489.86 N	625839.35 E
2816.00	22.140	316.960	2500.58	1098.98	789.10 N	764.90 W	4.19	1375.90 FNL	2579.90 FEL	2153498.83 N	625830.79 E
2847.00	21.150	318.290	2529.40	1110.41	797.54 N	772.61 W	3.56	1367.46 FNL	2587.61 FEL	2153507.24 N	625823.04 E
2879.00	19.700	317.850	2559.39	1121.56	805.85 N	780.07 W	4.56	1359.15 FNL	2595.07 FEL	2153515.52 N	625815.55 E
2909.00	18.130	317.200	2587.77	1131.28	813.03 N	786.64 W	5.28	1351.97 FNL	2601.64 FEL	2153522.66 N	625808.95 E
2940.00	17.110	316.380	2617.31	1140.67	819.87 N	793.06 W	3.39	1345.13 FNL	2608.06 FEL	2153529.47 N	625802.49 E
2972.00	15.600	315.510	2648.01	1149.68	826.35 N	799.32 W	4.78	1338.65 FNL	2614.32 FEL	2153535.92 N	625796.20 E
3003.00	13.720	315.460	2678.00	1157.52	831.94 N	804.82 W	6.06	1333.06 FNL	2619.82 FEL	2153541.49 N	625790.68 E
3035.00	12.060	315.730	2709.20	1164.66	837.04 N	809.82 W	5.19	1327.96 FNL	2624.82 FEL	2153546.57 N	625785.66 E
3064.00	10.460	318.110	2737.64	1170.32	841.17 N	813.69 W	5.74	1323.83 FNL	2628.69 FEL	2153550.68 N	625781.77 E
3095.00	8.870	320.630	2768.20	1175.51	845.11 N	817.08 W	5.31	1319.89 FNL	2632.08 FEL	2153554.60 N	625778.35 E

Measure Depth (ft)	Incl. Angle (Deg)	Drift Direction (Deg)	True Vertical Depth (ft)	Vertical Section (ft)	Local Coordinates N-S (ft)	E-W (ft)	Dogleg Severit (°/100ft)	Lease Calls FNL-FSL (ft)	FEL-FWL (ft)	Global Coordinates Grid Y (ft)	Grid X (ft)
3128.00	7.550	323.070	2800.86	1180.20	848.81 N	820.00 W	4.14	1316.19 FNL	2635.00 FEL	2153558.29 N	625775.42 E
3159.00	6.430	323.460	2831.63	1183.94	851.84 N	822.26 W	3.62	1313.16 FNL	2637.26 FEL	2153561.30 N	625773.15 E
last MWD survey											
3189.00	5.220	319.940	2861.47	1186.97	854.23 N	824.14 W	4.20	1310.77 FNL	2639.14 FEL	2153563.69 N	625771.26 E
projection to TD											
3253.00	2.790	302.430	2925.31	1191.39	857.29 N	827.33 W	4.21	1307.71 FNL	2642.32 FEL	2153566.74 N	625768.06 E

All data is in Feet (US) unless otherwise stated. Directions and coordinates are relative to True North.
Vertical depths are relative to RKB (6263' +8' KB). Northings and Eastings are relative to Wellhead.

Based upon Minimum Curvature type calculations, at a Measured Depth of 3253.00ft.,
The Bottom Hole Displacement is 1191.39ft., in the Direction of 316.015° (True).

HALLIBURTON

Sperry Drilling Services

Williams Production Company
New Mexico
Rio Arriba County

Survey Report for Sec. 07-T31N-R05W - Rosa Unit #228A - MWD Survey

Comments

Measured Depth (ft)	Station Coordinates		Comment
	TVD (ft)	Northings (ft)	
3189.00	2861.47	854.23 N	last MWD survey projection to TD
3253.00	2925.31	857.29 N	
		824.14 W	
		827.33 W	

North Reference Sheet for Sec. 07-T31N-R05W - Rosa Unit #228A

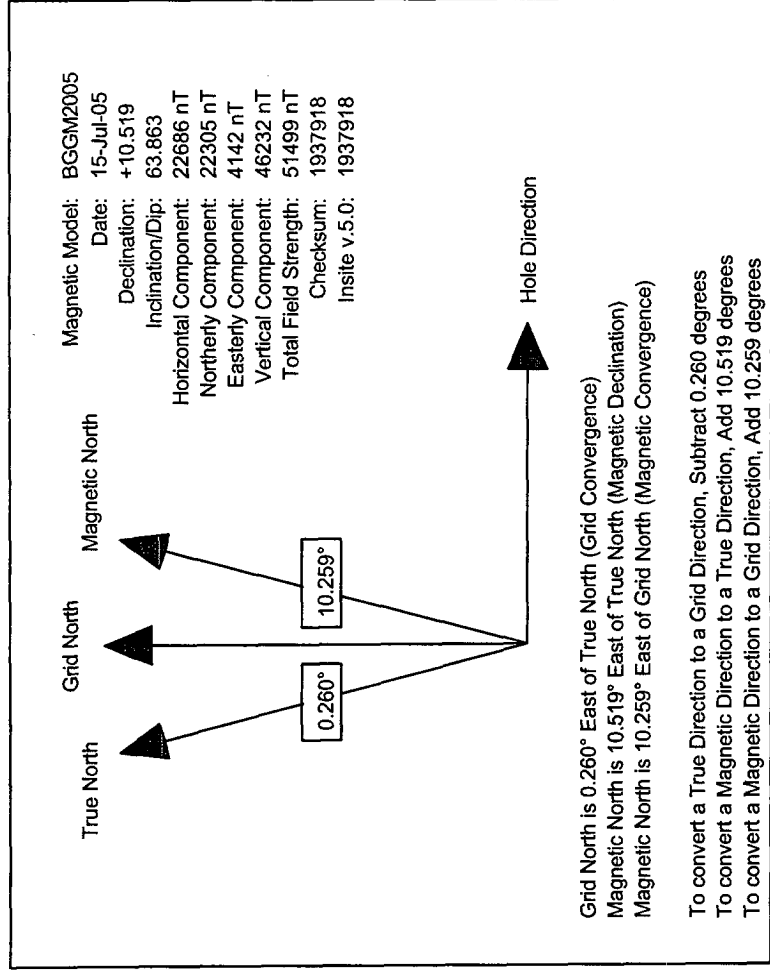
Coordinate System is NAD27 New Mexico State Planes, Western Zone, US Foot
Source: Snyder, J.P., 1987, Map Projections - A Working Manual

Datum is North American Datum of 1927 (US48, AK, HI, and Canada)

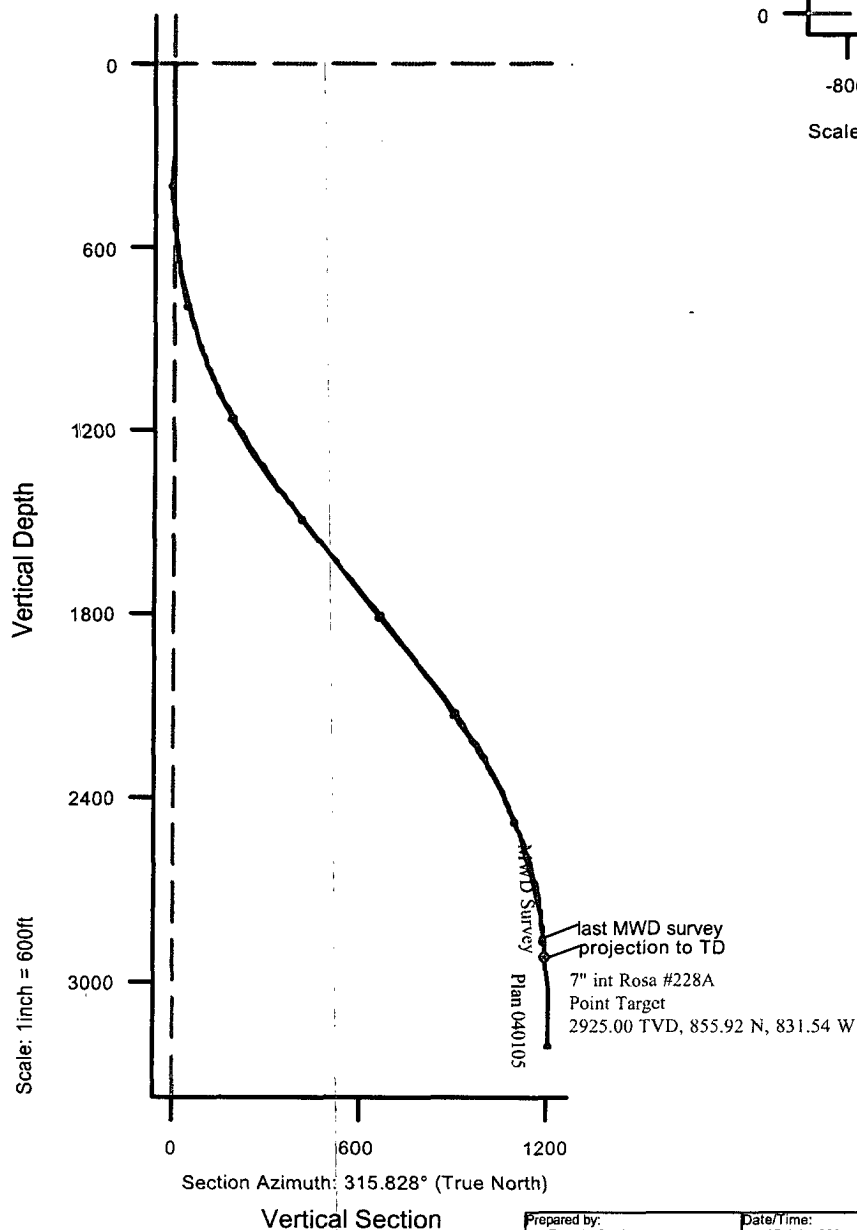
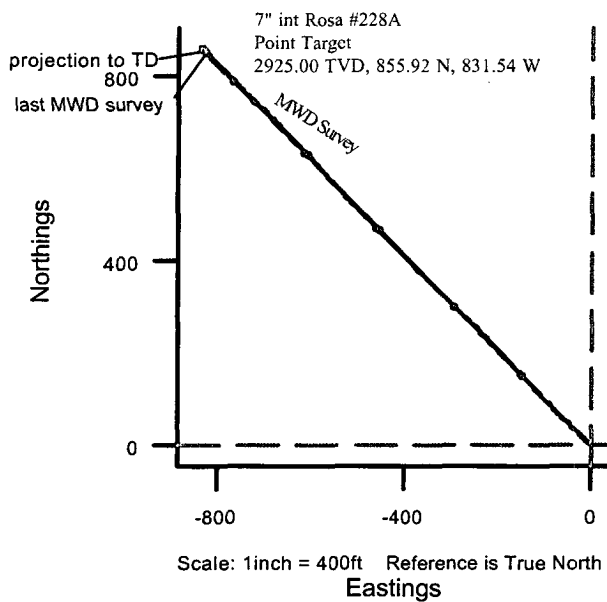
Spheroid is Clarke - 1866
Equatorial Radius: 6378206.400m.
Polar Radius: 6356583.800m.
Inverse Flattening: 294.978698213901

Projection method is Transverse Mercator or Gauss Kruger Projection
Central Meridian is -107.833°
Longitude Origin: 0.000°
Latitude Origin: 31.000°
False Easting: 152400.00m
False Northing: 0.00m
Scale Reduction: 0.99991667

Grid Coordinates of Well: 2152713.26 N, 626599.32 E
Geographical Coordinates of Well: 36° 54' 55.0000" N, 107° 24' 01.0000" W
Surface Elevation of Well: 6271.00ft
Grid Convergence at Surface is +0.260°
Magnetic Declination at Surface is +10.519° (15 July, 2005)



New Mexico
Rio Arriba County
Sec. 07-T31N-R05W
Rosa Unit #228A



Prepared by:
Dennis Cook

Date/Time:
15 July, 2005 - 14:12

Checked:

Approved:

District I
PO Box 1980, Hobbs, NM 88241-1980

District II
PO Drawer 00, Artesia, NM 88211-0719

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102

Revised February 21, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

2006

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code 71629	Pool Name BASIN FRUITLAND COAL
Property Code 17033	Property Name ROSA UNIT		Well Number 228A
OGAID No. 120782	Operator Name WILLIAMS PRODUCTION COMPANY		Elevation 6263'

10 Surface Location

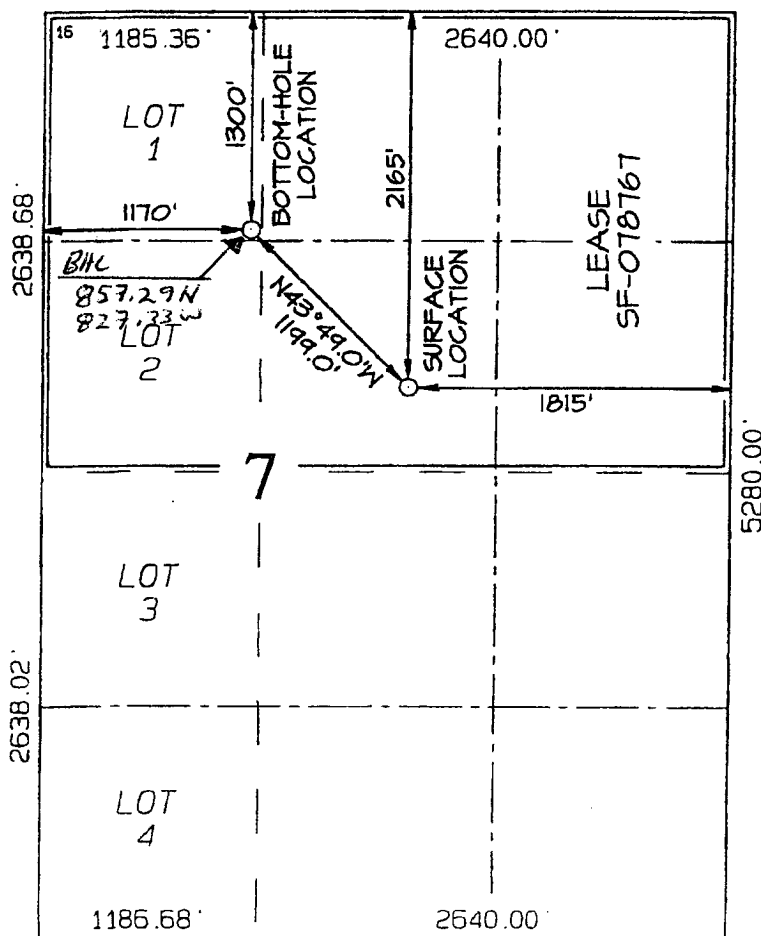
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	7	31N	5W		2165	NORTH	1815	EAST	RIO ARriba

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	7	31N	5W		1300	NORTH	1170	WEST	RIO ARriba

12 Dedicated Acres 231.86 Acres - (N/2)	13 Joint or Infill	14 Consolidation Code	15 Order No.
--	--------------------	-----------------------	--------------

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



17 OPERATOR CERTIFICATION

I hereby certify that the information
contained herein is true and complete
to the best of my knowledge and belief

Signature

Printed Name

Title

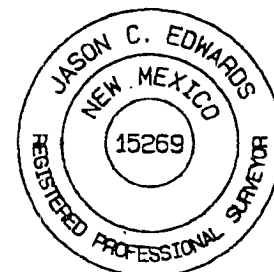
Date

18 SURVEYOR CERTIFICATION

I hereby certify that the well location
shown on this plat was plotted from field
notes of actual surveys made by me or under
my supervision, and that the same is true
and correct to the best of my belief.

Survey Date: OCTOBER 21, 2004

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

-8397
9.95