

sperry-sun
DRILLING SERVICES

End of Well Report

30-039-29527

Rosa Unit # 363A

Surface 2640/s 600/E

BH L 1661/s 661/E

Williams Production Co.

7/21/2005



HALLIBURTON

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

July 21, 2005

Re: Williams Production Co.
Rosa Unit #363-A
Sec. 17-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.

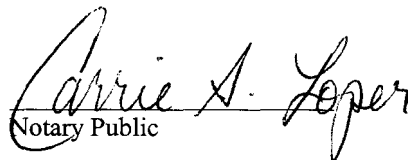
<u>Name & Title of Supervisor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Dennis Cook Field Supervisor	Original	353' – 3,166'	07/17/05 – 07/21/05	MWD
Dennis Cook Field Supervisor	Projection to TD	3,166' – 3,237'		MWD

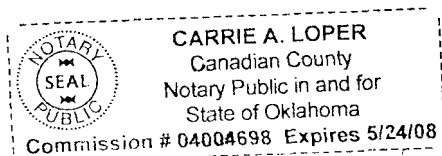
If any other information is required, please contact the undersigned at the letterhead address and phone number.


Dennis Cook
Field Supervisor

My Commission Expires:

5/24/08


Notary Public





Williams Production Company
New Mexico
Rio Arriba County
Sec. 17-T31N-R05W
Rosa Unit #363A - MWD survey

Halliburton Sperry-Drilling Survey Report

21 July, 2005

Surface Coordinates: 2146979.27 N, 633123.30 E (36° 53' 58.0000" N, 107° 22' 41.0000" W)
Grid Coordinate System: NAD27 New Mexico State Planes, Western Zone

Surface Coordinates relative to Global Coordinates: 641988.14 N, 335442.54 E (Grid)
Surface Coordinates relative to SE Corner of Sec. 17: 2640.00 N, 600.00 W (True)
Kelly Bushing Elevation: 6330.00ft above Mean Sea Level
Kelly Bushing Elevation: 15.00ft above Ground Level

Survey Ref: svy9085

HALLIBURTON

Sperry Drilling Services

HALLIBURTON**Sperry Drilling Services**

Williams Production Company
New Mexico
Rio Arriba County

Survey Report for Sec. 17-T31N-R05W - Rosa Unit #363A - MWD survey

Measure Depth (ft)	Incl. Angle (Deg)	Drift Direction (Deg)	True Vertical Depth	Vertical Section (ft)	Local Coordinates		Dogleg Severit (°/100ft)	Lease Calls		Global Coordinates	
					N-S (ft)	E-W (ft)		FNL-FSL (ft)	FEL-FWL (ft)	Grid Y (ft)	Grid X (ft)
0.00	0.000	0.000	0.00	0.00	0.00 N	0.00 E		2640.00 FSL	600.00 FEL	2146979.27 N	633123.30 E
353.00	0.310	310.310	353.00	-0.57	0.62 N	0.73 W	0.09	2640.62 FSL	600.73 FEL	2146979.88 N	633122.57 E
384.00	0.260	249.960	384.00	-0.59	0.65 N	0.86 W	0.93	2640.65 FSL	600.86 FEL	2146979.91 N	633122.44 E
414.00	0.500	225.530	414.00	-0.47	0.53 N	1.02 W	0.95	2640.53 FSL	601.02 FEL	2146979.79 N	633122.28 E
445.00	1.010	194.110	444.99	-0.10	0.17 N	1.18 W	2.06	2640.17 FSL	601.18 FEL	2146979.43 N	633122.12 E
475.00	2.290	178.400	474.98	0.76	0.68 S	1.23 W	4.49	2639.32 FSL	601.23 FEL	2146978.58 N	633122.08 E
506.00	3.200	180.180	505.95	2.24	2.17 S	1.21 W	2.95	2637.83 FSL	601.22 FEL	2146977.09 N	633122.10 E
537.00	4.010	180.170	536.88	4.18	4.12 S	1.22 W	2.61	2635.89 FSL	601.22 FEL	2146975.14 N	633122.10 E
568.00	4.970	181.760	567.79	6.61	6.54 S	1.26 W	3.12	2633.46 FSL	601.27 FEL	2146972.72 N	633122.07 E
598.00	5.600	184.220	597.66	9.37	9.30 S	1.41 W	2.23	2630.70 FSL	601.42 FEL	2146969.96 N	633121.94 E
629.00	6.380	183.000	628.49	12.60	12.53 S	1.61 W	2.55	2627.47 FSL	601.62 FEL	2146966.73 N	633121.75 E
660.00	7.150	183.630	659.28	16.26	16.17 S	1.82 W	2.50	2623.83 FSL	601.83 FEL	2146963.08 N	633121.56 E
690.00	8.050	182.440	689.01	20.22	20.14 S	2.03 W	3.05	2619.86 FSL	602.04 FEL	2146959.12 N	633121.37 E
720.00	8.890	183.460	718.68	24.64	24.55 S	2.26 W	2.84	2615.45 FSL	602.27 FEL	2146954.71 N	633121.16 E
751.00	10.230	184.280	749.25	29.79	29.69 S	2.61 W	4.34	2610.32 FSL	602.62 FEL	2146949.57 N	633120.83 E
781.00	10.930	184.060	778.74	35.30	35.18 S	3.01 W	2.34	2604.82 FSL	603.02 FEL	2146944.07 N	633120.46 E
812.00	11.810	180.420	809.13	41.40	41.28 S	3.24 W	3.66	2598.72 FSL	603.25 FEL	2146937.97 N	633120.26 E
844.00	12.490	182.490	840.42	48.13	48.02 S	3.42 W	2.52	2591.99 FSL	603.42 FEL	2146931.24 N	633120.11 E
873.00	13.450	182.300	868.68	54.64	54.52 S	3.69 W	3.31	2585.48 FSL	603.69 FEL	2146924.73 N	633119.87 E
905.00	14.500	181.690	899.73	62.37	62.24 S	3.96 W	3.31	2577.76 FSL	603.96 FEL	2146917.01 N	633119.64 E
936.00	15.840	180.120	929.65	70.47	70.35 S	4.08 W	4.52	2569.65 FSL	604.09 FEL	2146908.90 N	633119.56 E
968.00	15.880	181.350	960.43	79.20	79.10 S	4.19 W	1.06	2560.91 FSL	604.20 FEL	2146900.15 N	633119.49 E
999.00	17.170	181.570	990.15	88.02	87.91 S	4.42 W	4.17	2552.09 FSL	604.42 FEL	2146891.34 N	633119.30 E
1030.00	18.090	182.000	1019.69	97.40	97.29 S	4.71 W	3.00	2542.71 FSL	604.72 FEL	2146881.95 N	633119.06 E
1062.00	19.020	181.410	1050.03	107.58	107.47 S	5.01 W	2.96	2532.53 FSL	605.02 FEL	2146871.77 N	633118.80 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	20.220	182.420	1079.23	117.98	117.87 S	5.36 W	4.02	2522.13 FSL	605.37 FEL	2146861.37 N	633118.50 E
1126.00	21.290	182.370	1110.09	129.68	129.56 S	5.85 W	3.24	2510.44 FSL	605.86 FEL	2146849.68 N	633118.07 E
1157.00	22.320	181.720	1138.87	141.19	141.07 S	6.26 W	3.41	2498.94 FSL	606.27 FEL	2146838.17 N	633117.71 E
1189.00	23.200	182.420	1168.38	153.56	153.44 S	6.71 W	2.88	2486.56 FSL	606.72 FEL	2146825.80 N	633117.33 E
1220.00	24.350	182.600	1196.75	166.06	165.92 S	7.26 W	3.72	2474.08 FSL	607.26 FEL	2146813.31 N	633116.84 E
1251.00	25.400	183.300	1224.87	179.10	178.94 S	7.93 W	3.52	2461.06 FSL	607.94 FEL	2146800.29 N	633116.23 E
1283.00	26.370	183.650	1253.66	193.07	192.89 S	8.78 W	3.07	2447.11 FSL	608.79 FEL	2146786.34 N	633115.45 E
1314.00	26.980	183.300	1281.36	206.98	206.78 S	9.62 W	2.03	2433.22 FSL	609.63 FEL	2146772.44 N	633114.67 E
1345.00	27.600	182.600	1308.91	221.20	220.97 S	10.35 W	2.25	2419.03 FSL	610.36 FEL	2146758.24 N	633114.01 E
1376.00	28.740	184.000	1336.24	235.83	235.58 S	11.20 W	4.25	2404.42 FSL	611.21 FEL	2146743.63 N	633113.23 E
1408.00	29.880	183.300	1364.14	251.49	251.22 S	12.20 W	3.72	2388.79 FSL	612.20 FEL	2146727.99 N	633112.31 E
1439.00	30.670	184.880	1390.91	267.12	266.80 S	13.31 W	3.62	2373.20 FSL	613.32 FEL	2146712.40 N	633111.27 E
1503.00	32.430	186.470	1445.45	300.58	300.12 S	16.64 W	3.04	2339.88 FSL	616.64 FEL	2146679.07 N	633108.10 E
1566.00	33.490	187.870	1498.31	334.78	334.13 S	20.92 W	2.07	2305.88 FSL	620.93 FEL	2146645.04 N	633103.98 E
1597.00	33.930	187.870	1524.10	351.93	351.17 S	23.28 W	1.42	2288.83 FSL	623.28 FEL	2146627.99 N	633101.71 E
1629.00	33.750	186.290	1550.68	369.72	368.85 S	25.47 W	2.81	2271.15 FSL	625.48 FEL	2146610.30 N	633099.59 E
1659.00	33.400	184.880	1575.67	386.30	385.36 S	27.09 W	2.85	2254.64 FSL	627.10 FEL	2146593.78 N	633098.06 E
1722.00	31.640	183.830	1628.79	420.16	419.13 S	29.67 W	2.93	2220.87 FSL	629.68 FEL	2146560.00 N	633095.64 E
1784.00	31.030	183.830	1681.75	452.40	451.30 S	31.82 W	0.98	2188.70 FSL	631.83 FEL	2146527.82 N	633093.64 E
1845.00	31.550	184.530	1733.88	484.08	482.90 S	34.14 W	1.04	2157.11 FSL	634.14 FEL	2146496.21 N	633091.48 E
1876.00	31.820	183.480	1760.26	500.36	499.14 S	35.27 W	1.98	2140.86 FSL	635.28 FEL	2146479.96 N	633090.42 E
1907.00	31.820	182.600	1786.60	516.70	515.46 S	36.14 W	1.50	2124.54 FSL	636.15 FEL	2146463.64 N	633089.63 E
1939.00	31.820	180.660	1813.79	533.56	532.32 S	36.62 W	3.20	2107.68 FSL	636.63 FEL	2146446.77 N	633089.23 E
1970.00	31.380	179.610	1840.19	549.78	548.57 S	36.66 W	2.27	2091.44 FSL	636.67 FEL	2146430.53 N	633089.27 E
2001.00	31.200	179.610	1866.68	565.84	564.67 S	36.55 W	0.58	2075.34 FSL	636.56 FEL	2146414.43 N	633089.46 E
2033.00	31.550	179.790	1894.01	582.47	581.33 S	36.46 W	1.13	2058.67 FSL	636.47 FEL	2146397.77 N	633089.62 E
2096.00	31.730	182.070	1947.64	615.48	614.37 S	37.00 W	1.92	2025.64 FSL	637.01 FEL	2146364.73 N	633089.24 E
2128.00	31.730	182.770	1974.86	632.31	631.18 S	37.71 W	1.15	2008.82 FSL	637.72 FEL	2146347.91 N	633088.61 E
2160.00	31.030	183.300	2002.18	648.97	647.82 S	38.60 W	2.35	1992.18 FSL	638.60 FEL	2146331.27 N	633087.81 E
2191.00	30.320	182.770	2028.84	664.78	663.61 S	39.43 W	2.45	1976.39 FSL	639.44 FEL	2146315.47 N	633087.05 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)
2222.00	30.060	182.070	2055.64	680.37	679.19 S	40.09 W	1.41	1960.82 FSL	640.10 FEL	2146299.90 N	633086.46 E
2254.00	29.180	182.030	2083.46	696.18	694.99 S	40.66 W	2.75	1945.01 FSL	640.66 FEL	2146284.09 N	633085.97 E
2284.00	28.020	183.960	2109.79	710.54	709.33 S	41.41 W	4.94	1930.67 FSL	641.41 FEL	2146269.74 N	633085.30 E
2316.00	27.020	183.970	2138.17	725.32	724.08 S	42.43 W	3.13	1915.92 FSL	642.43 FEL	2146254.99 N	633084.34 E
2348.00	26.630	185.760	2166.73	739.76	738.47 S	43.65 W	2.80	1901.53 FSL	643.66 FEL	2146240.60 N	633083.19 E
2379.00	26.100	185.410	2194.51	753.51	752.17 S	44.99 W	1.78	1887.83 FSL	645.00 FEL	2146226.89 N	633081.92 E
2411.00	25.490	185.060	2223.32	767.43	766.04 S	46.26 W	1.96	1873.97 FSL	646.27 FEL	2146213.02 N	633080.71 E
2442.00	24.610	183.650	2251.40	780.56	779.12 S	47.26 W	3.43	1860.88 FSL	647.27 FEL	2146199.93 N	633079.77 E
2474.00	23.820	184.000	2280.59	793.68	792.22 S	48.14 W	2.51	1847.78 FSL	648.14 FEL	2146186.83 N	633078.96 E
2506.00	22.680	186.290	2309.99	806.30	804.80 S	49.26 W	4.55	1835.20 FSL	649.27 FEL	2146174.24 N	633077.89 E
2538.00	22.590	186.470	2339.52	818.60	817.04 S	50.63 W	0.35	1822.96 FSL	650.64 FEL	2146162.00 N	633076.58 E
2570.00	21.530	186.640	2369.18	830.60	828.98 S	52.01 W	3.32	1811.03 FSL	652.01 FEL	2146150.05 N	633075.27 E
2601.00	20.650	186.990	2398.10	841.74	840.05 S	53.33 W	2.87	1799.95 FSL	653.33 FEL	2146138.97 N	633074.00 E
2632.00	19.860	185.760	2427.19	852.46	850.72 S	54.52 W	2.89	1789.28 FSL	654.53 FEL	2146128.30 N	633072.86 E
2665.00	18.980	184.710	2458.31	863.42	861.64 S	55.53 W	2.87	1778.36 FSL	655.53 FEL	2146117.37 N	633071.91 E
2696.00	18.980	182.950	2487.62	873.51	871.70 S	56.20 W	1.85	1768.30 FSL	656.20 FEL	2146107.31 N	633071.28 E
2726.00	18.370	180.660	2516.04	883.11	881.30 S	56.51 W	3.18	1758.70 FSL	656.51 FEL	2146097.70 N	633071.02 E
2758.00	17.230	177.680	2546.51	892.86	891.08 S	56.37 W	4.56	1748.92 FSL	656.38 FEL	2146087.93 N	633071.20 E
2789.00	16.700	177.150	2576.16	901.85	900.12 S	55.96 W	1.78	1739.89 FSL	655.97 FEL	2146078.89 N	633071.65 E
2820.00	15.820	177.150	2605.92	910.48	908.78 S	55.53 W	2.84	1731.22 FSL	655.54 FEL	2146070.23 N	633072.12 E
2852.00	15.470	179.260	2636.74	919.07	917.41 S	55.26 W	2.09	1722.59 FSL	655.27 FEL	2146061.60 N	633072.44 E
2883.00	14.500	181.190	2666.68	927.07	925.42 S	55.29 W	3.52	1714.58 FSL	655.29 FEL	2146053.59 N	633072.45 E
2914.00	13.100	182.420	2696.79	934.46	932.81 S	55.52 W	4.61	1707.19 FSL	655.52 FEL	2146046.20 N	633072.25 E
2946.00	12.040	181.190	2728.02	941.42	939.77 S	55.74 W	3.42	1700.23 FSL	655.75 FEL	2146039.24 N	633072.07 E
2977.00	11.430	180.840	2758.37	947.72	946.08 S	55.85 W	1.98	1693.92 FSL	655.86 FEL	2146032.93 N	633071.98 E
3009.00	10.550	181.370	2789.78	953.82	952.18 S	55.97 W	2.77	1687.83 FSL	655.97 FEL	2146026.83 N	633071.90 E
3040.00	9.400	185.410	2820.32	959.18	957.53 S	56.28 W	4.34	1682.47 FSL	656.28 FEL	2146021.47 N	633071.61 E
3072.00	8.350	189.100	2851.93	964.11	962.43 S	56.89 W	3.73	1677.57 FSL	656.89 FEL	2146016.57 N	633071.02 E
3104.00	7.210	192.270	2883.64	968.41	966.69 S	57.68 W	3.81	1673.31 FSL	657.69 FEL	2146012.31 N	633070.25 E
3135.00	6.770	194.200	2914.41	972.12	970.36 S	58.55 W	1.61	1669.64 FSL	658.55 FEL	2146008.64 N	633069.41 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)
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last MWD survey

3166.00	5.710	194.900	2945.22	975.43	973.62 S	59.39 W	3.43	1666.38 FSL	659.40 FEL	2146005.37 N	633068.58 E
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projection to TD

3237.00	3.290	198.200	3016.00	980.86	978.97 S	60.94 W	3.43	1661.03 FSL	660.94 FEL	2146000.02 N	633067.06 E
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All data is in Feet (US) unless otherwise stated. Directions and coordinates are relative to True North. Vertical depths are relative to RKB(6322' +8' KB). Northings and Eastings are relative to Wellhead.

Based upon Minimum Curvature type calculations, at a Measured Depth of 3237.00ft., The Bottom Hole Displacement is 980.86ft., in the Direction of 183.561° (True).

Survey Report for Sec. 17-T31N-R05W - Rosa Unit #363A - MWD survey

Comments

Measured Depth (ft)	Station Coordinates		Comment
	TVD (ft)	Northings (ft)	
3166.00	2945.22	973.62 S	last MWD survey projection to TD
3237.00	3016.00	978.97 S	

North Reference Sheet for Sec. 17-T31N-R05W - Rosa Unit #363A

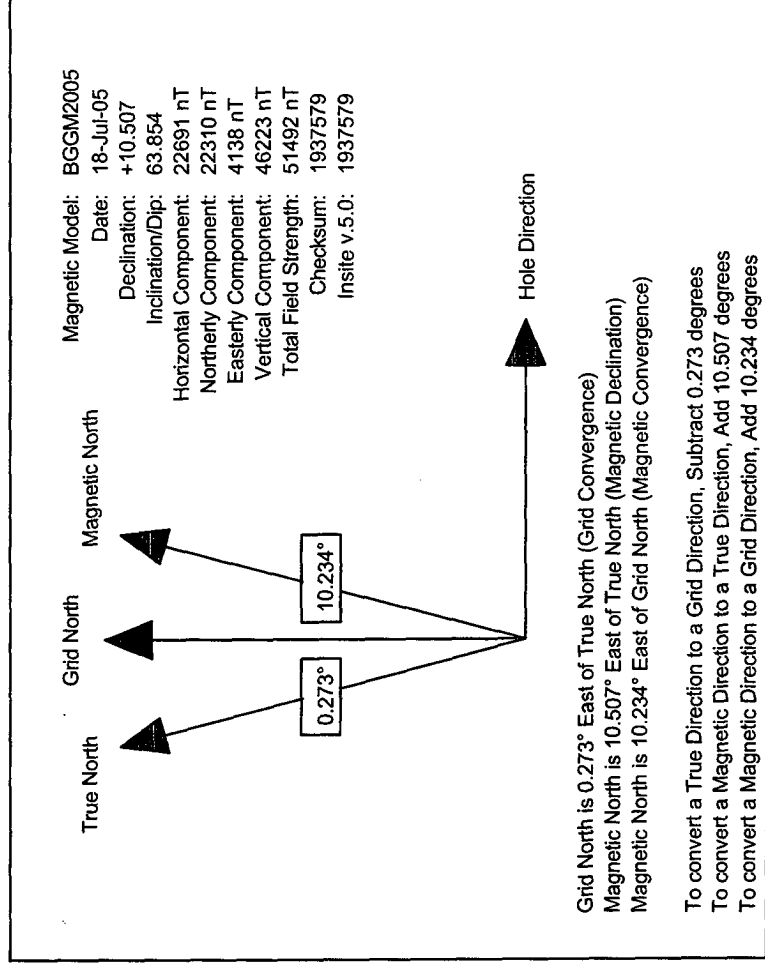
Coordinate System is NAD27 New Mexico State Planes, Western Zone, US Foot
Source: Snyder, J.P., 1987, Map Projections - A Working Manual

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

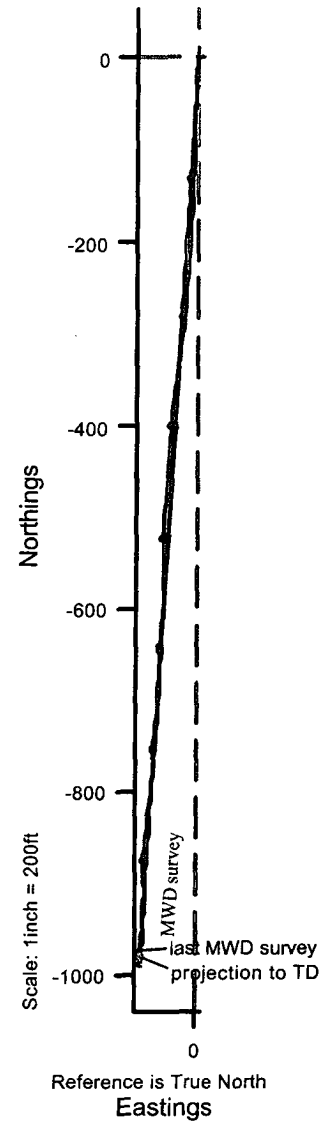
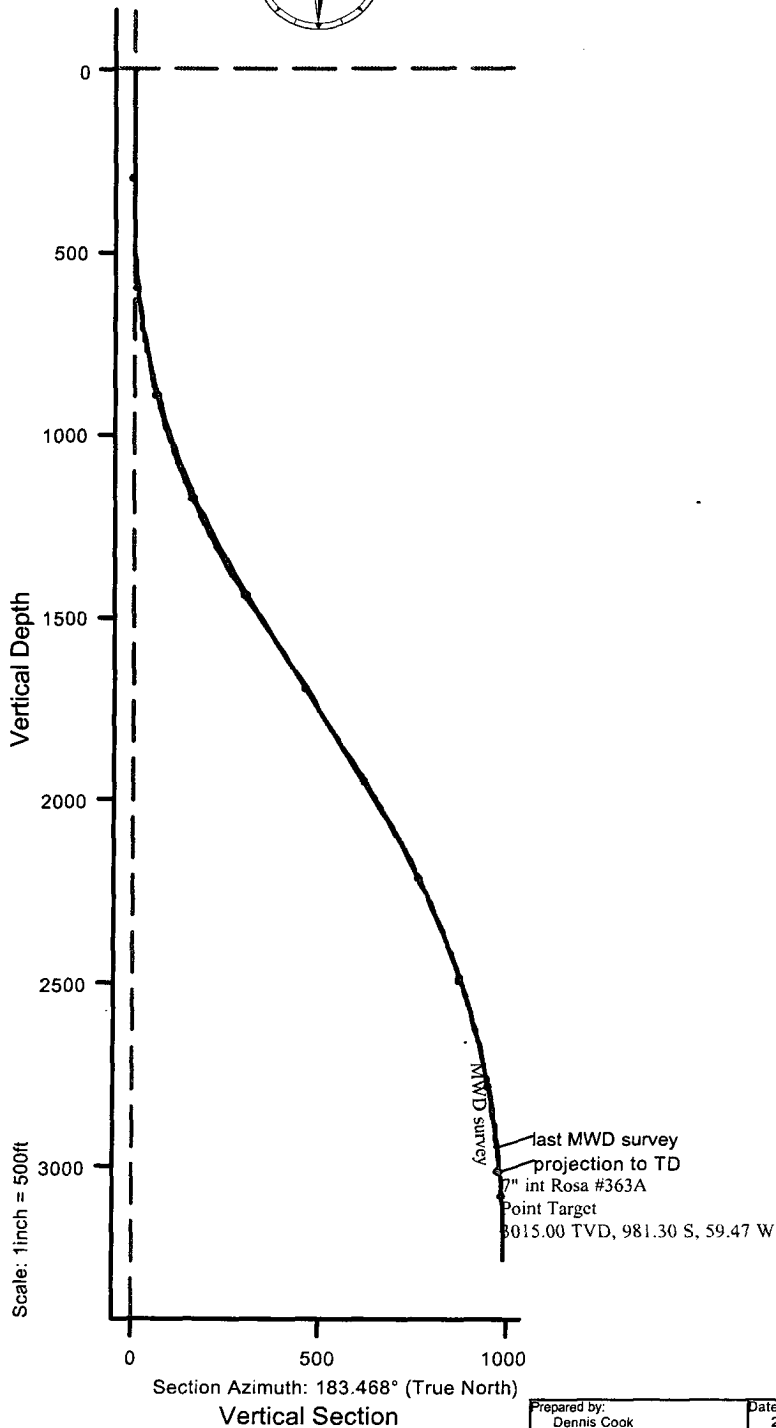
Spheroid is Clarke - 1866
Equatorial Radius: 6378206.400m.
Polar Radius: 6356583.800m.
Inverse Flattening: 294.978698213901

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: 2146979.27 N, 633123.30 E
Geographical Coordinates of Well: 36° 53' 58.0000" N, 107° 22' 41.0000" W
Surface Elevation of Well: 6330.00ft
Grid Convergence at Surface is +0.273°
Magnetic Declination at Surface is +10.507° (18 July, 2005)



New Mexico
Rio Arriba County
Sec. 17-T31N-R05W
Rosa Unit #363A



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

District II
PO Drawer DD, 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 363A
*GRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6322'

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
I	17	31N	5W		2640	SOUTH	600	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

¹² Dedicated Acres 320.0 Acres - (E/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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: NOVEMBER 18, 2004 Signature and Seal of Professional Surveyor
	JASON C. EDWARDS Certificate Number 15269