

**ROSA UNIT #276A
BASIN FRUITLAND COAL**

Surface Location:

2165' FSL and 380' FEL
NE/4 SE/4 Sec 17(I), T31N, R6W
San Juan, NM

Bottom Hole Location:

1020' FSL and 969' FEL
SE/4 SE/4 Sec 17(P), 31N, 6W
San Juan, NM

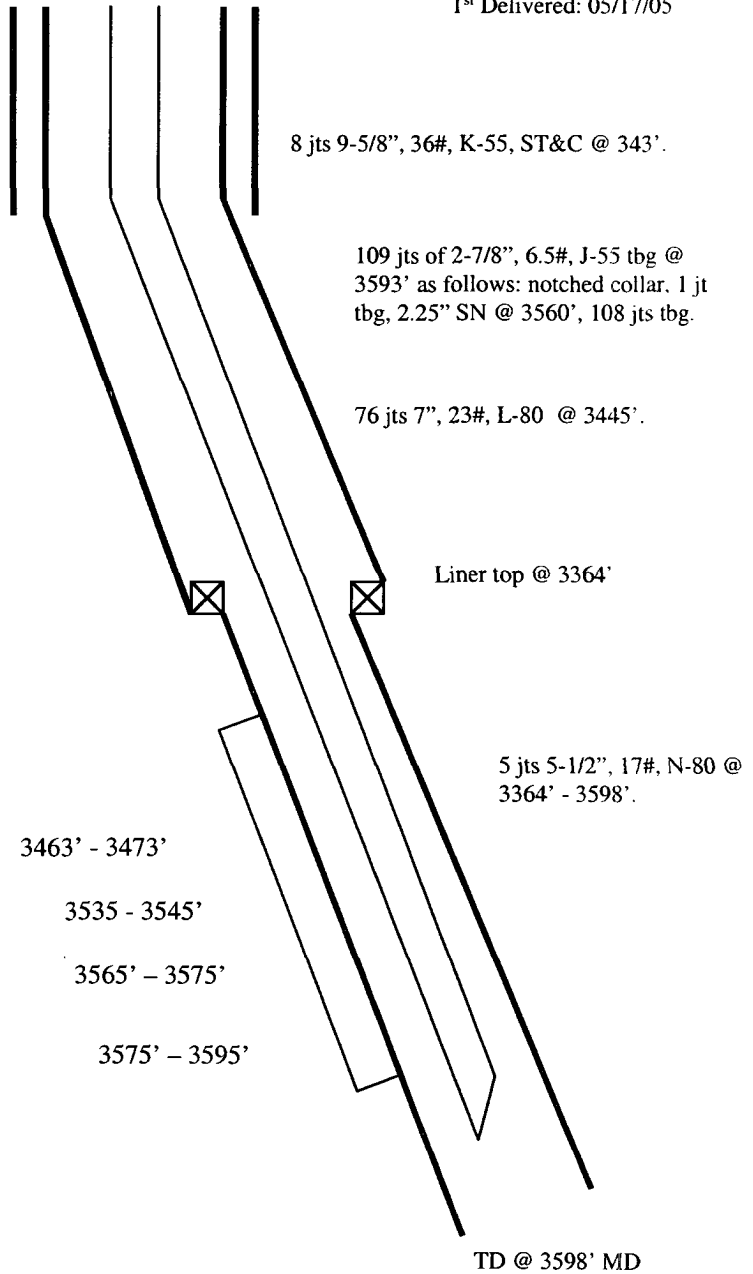
Elevation: 6411' GR
API # 30-045-32192

Spud: 01/24/05

Completed: 04/22/05

1st Delivered: 05/17/05

Top	MD Depth	TVD Depth
Ojo Alamo	2721'	2381'
Kirtland	2854'	2501'
Fruitland	3360'	2986'
Base of Coal	3611'	3236'
Pictured Cliffs	3620'	3241'



200 holes total

Open hole from 6-1/4" to 9-1/2"
from 3460' to 3598'



Hole Size	Casing	Cement	Volume	Top of Cmt
12-1/4"	9-5/8", 36#	190 sx	268 cu. ft.	Surface
8-3/4"	7", 23#	550 sx	1125 cu. ft.	Surface
6-1/4"	5-1/2", 17#	Did Not Cmt		

Williams Production Company
Rosa Unit #276A

slot #1
Rosa Unit
San Juan County, New Mexico

S U R V E Y L I S T I N G

by
Baker Hughes INTEQ

Your ref : MWD
Our ref : svy2739
License :

Date printed : 19-Oct-2005
Date created : 27-Jan-2005
Last revised : 19-Oct-2005

Field is centred on n36 30 0.000,w108 30 0
Structure is centred on 603773.000,2146450.000,999.00000,N

Slot location is n36 53 53.998,w107 28 42.375
Slot Grid coordinates are N 2146450.000, E 603773.000
Slot local coordinates are 0.00 N 0.00 E

Projection type: mercator - New Mexico West (3003), Spheroid: Clarke - 1866

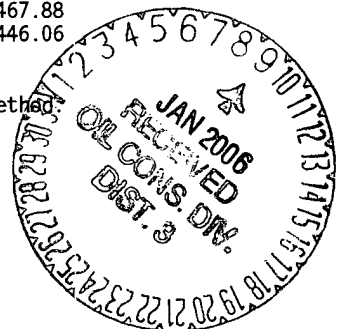
Reference North is Grid North

Williams Production Company
Rosa Unit #276A, slot #1
Rosa Unit, San Juan County, New Mexico

SURVEY LISTING Page 1
Your ref : MWD
Last revised : 19-Oct-2005

Measured Depth	Inclin Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/100ft	Vert Sect	G R I D Easting	C O O R D S Northing
0.00	0.00	0.00	0.00	0.00N	0.00E	0.00	0.00	603773.00	2146450.00
113.00	1.25	325.00	112.99	1.01N	0.71W	1.11	-0.57	603772.29	2146451.01
275.00	1.25	330.00	274.95	3.99N	2.60W	0.07	-2.34	603770.40	2146453.99
347.00	0.70	304.60	346.94	4.92N	3.36W	0.95	-2.82	603769.64	2146454.92
377.00	0.60	310.80	376.94	5.12N	3.63W	0.41	-2.87	603769.37	2146455.12
406.00	1.40	245.80	405.94	5.08N	4.07W	4.38	-2.63	603768.93	2146455.08
436.00	3.20	227.00	435.91	4.36N	5.01W	6.43	-1.56	603767.99	2146454.36
466.00	5.20	222.30	465.83	2.78N	6.54W	6.76	0.55	603766.46	2146452.78
495.00	6.70	217.70	494.67	0.47N	8.46W	5.42	3.48	603764.54	2146450.47
525.00	8.20	212.40	524.42	2.72S	10.68W	5.49	7.34	603762.32	2146447.28
556.00	9.60	203.50	555.05	6.96S	12.89W	6.32	12.12	603760.11	2146443.04
586.00	11.10	200.60	584.56	11.96S	14.91W	5.29	17.48	603758.09	2146438.04
616.00	12.40	201.50	613.93	17.66S	17.10W	4.38	23.55	603755.90	2146432.34
645.00	13.50	203.10	642.19	23.67S	19.57W	3.99	30.03	603753.43	2146426.33
705.00	16.30	208.40	700.17	37.52S	26.33W	5.19	45.43	603746.67	2146412.48
764.00	18.20	206.90	756.51	53.02S	34.43W	3.31	62.93	603738.57	2146396.98
823.00	19.90	206.70	812.28	70.21S	43.11W	2.88	82.18	603729.89	2146379.79
884.00	21.70	208.00	869.30	89.44S	53.07W	3.05	103.84	603719.93	2146360.56
934.00	23.20	208.00	915.51	106.30S	62.04W	3.00	122.93	603710.96	2146343.70
945.00	23.50	209.80	925.61	110.12S	64.15W	7.04	127.29	603708.85	2146339.88
1007.00	25.50	210.00	982.03	132.41S	76.96W	3.23	152.98	603696.04	2146317.59
1066.00	27.60	208.20	1034.80	155.45S	89.77W	3.81	179.33	603683.23	2146294.55
1127.00	29.10	204.90	1088.49	181.36S	102.70W	3.56	208.28	603670.30	2146268.64
1189.00	30.80	202.90	1142.21	209.66S	115.22W	3.18	239.17	603657.78	2146240.34
1251.00	32.80	203.00	1194.90	239.75S	127.96W	3.23	271.74	603645.04	2146210.25
1313.00	34.90	203.40	1246.39	271.49S	141.57W	3.41	306.18	603631.43	2146178.51
1375.00	36.70	205.10	1296.67	304.54S	156.47W	3.32	342.39	603616.53	2146145.46
1437.00	38.70	207.20	1345.73	338.56S	173.19W	3.83	380.29	603599.81	2146111.44
1500.00	38.90	206.60	1394.83	373.77S	191.05W	0.68	419.76	603581.95	2146076.23
1563.00	39.00	206.20	1443.82	409.24S	208.66W	0.43	459.36	603564.34	2146040.76
1613.00	39.00	207.00	1482.68	437.38S	222.75W	1.01	490.82	603550.25	2146012.62
1628.00	38.80	208.80	1494.35	445.70S	227.16W	7.65	500.24	603545.84	2146004.30
1688.00	39.30	209.10	1540.95	478.78S	245.46W	0.89	538.02	603527.54	2145971.22
1750.00	39.30	209.50	1588.93	513.02S	264.67W	0.41	577.27	603508.33	2145936.98
1810.00	39.40	209.60	1635.32	546.12S	283.44W	0.20	615.29	603489.56	2145903.88
1874.00	39.80	209.00	1684.64	581.69S	303.40W	0.86	656.06	603469.60	2145868.31
1937.00	39.70	207.30	1733.07	617.21S	322.41W	1.73	696.34	603450.59	2145832.79
1998.00	39.70	206.30	1780.01	651.99S	339.97W	1.05	735.30	603433.03	2145798.01
2061.00	39.90	207.00	1828.41	688.03S	358.06W	0.78	775.63	603414.94	2145761.97
2124.00	38.90	206.80	1877.09	723.69S	376.15W	1.60	815.61	603396.85	2145726.31
2186.00	36.10	205.70	1926.28	757.53S	392.86W	4.64	853.34	603380.14	2145692.47
2250.00	34.00	205.30	1978.67	790.70S	408.68W	3.30	890.07	603364.32	2145659.30
2313.00	32.40	206.00	2031.38	821.80S	423.61W	2.61	924.55	603349.39	2145628.20
2376.00	30.60	206.40	2085.10	851.34S	438.14W	2.88	957.46	603334.86	2145598.66
2438.00	30.30	205.90	2138.54	879.54S	451.99W	0.63	988.87	603321.01	2145570.46
2501.00	28.60	205.50	2193.40	907.45S	465.42W	2.72	1019.83	603307.58	2145542.55
2564.00	26.90	205.90	2249.15	933.88S	478.14W	2.71	1049.15	603294.86	2145516.12
2627.00	25.50	208.50	2305.68	958.62S	490.84W	2.87	1076.96	603282.16	2145491.38
2691.00	24.10	209.30	2363.78	982.12S	503.80W	2.25	1103.79	603269.20	2145467.88
2754.00	22.50	208.50	2421.64	1003.94S	515.85W	2.59	1128.70	603257.15	2145446.06

All data in feet unless otherwise stated. Calculation uses minimum curvature method.
Coordinates from slot #1 and TVD from rotary table.
Bottom hole distance is 1287.65 on azimuth 207.22 degrees from wellhead.
Vertical section is from N 0.00 E 0.00 on azimuth 207.45 degrees.
Grid is mercator - New Mexico West (3003).
Grid coordinates in FEET and computed using the Clarke - 1866 spheroid
Presented by Baker Hughes INTEQ



Williams Production Company
 Rosa Unit #276A, slot #1
 Rosa Unit, San Juan County, New Mexico

SURVEY LISTING Page 2
 Your ref : MWD
 Last revised : 19-Oct-2005

Measured Depth	Inclin Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/100ft	Vert Sect	G R I D Easting	C O O R D S Northing
2817.00	22.10	208.90	2479.93	1024.91S	527.33W	0.68	1152.60	603245.67	2145425.09
2880.00	19.50	207.90	2538.82	1044.58S	537.98W	4.17	1174.97	603235.02	2145405.42
2943.00	17.50	208.40	2598.56	1062.20S	547.41W	3.18	1194.95	603225.59	2145387.80
3005.00	15.50	209.20	2658.00	1077.64S	555.88W	3.25	1212.56	603217.12	2145372.36
3068.00	14.00	207.70	2718.92	1091.73S	563.53W	2.46	1228.59	603209.47	2145358.27
3130.00	12.60	204.10	2779.26	1104.55S	569.78W	2.62	1242.84	603203.22	2145345.45
3192.00	10.70	201.70	2839.98	1116.07S	574.67W	3.16	1255.32	603198.33	2145333.93
3255.00	9.40	203.50	2902.01	1126.22S	578.88W	2.12	1266.28	603194.12	2145323.78
3315.00	7.50	208.10	2961.36	1134.17S	582.68W	3.36	1275.08	603190.32	2145315.83
3408.00	4.00	212.20	3053.88	1142.27S	587.27W	3.79	1284.38	603185.73	2145307.73
3458.00	3.50	212.20	3103.77	1145.04S	589.01W	1.00	1287.64	603183.99	2145304.96

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 Coordinates from slot #1 and TVD from rotary table.
 Bottom hole distance is 1287.65 on azimuth 207.22 degrees from wellhead.
 Vertical section is from N 0.00 E 0.00 on azimuth 207.45 degrees.
 Grid is mercator - New Mexico West (3003).
 Grid coordinates in FEET and computed using the Clarke - 1866 spheroid
 Presented by Baker Hughes INTEQ

Williams Production Company

Structure : Rosa Unit #276A

Slot : slot #1

Field : Rosa Unit

Location : San Juan County, New Mexico

Created by tray
Date plotted : 19-Oct-2005
Plot Reference is Plan 1.
Coordinates are in feet reference slot #1.
True Vertical Depths are reference rotary table.

--- Baker Hughes INTEQ ---



INTEQ

WELL PROFILE DATA								
Point	MD	Inc	Dir	TVD	North	East	V. Sect	Deg/100
Tie on	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Target	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00
End of Build/Turn	1426.77	39.44	207.45	1339.88	-330.74	-171.83	372.71	3.50
End of Hold	2100.41	39.44	207.45	1860.15	-710.47	-369.12	800.63	0.00
T.D. & Target TD	3597.90	2.00	207.45	3236.01	-1172.26	-609.04	1321.03	2.50

