

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFOR APPROVED
OMB NO. 1004-0137
Expires: December 31, 1991

5. IMAGE DESIGNATION AND SERIAL NO.

NMLC065347

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

SW94

8. FARM OR LEASE NAME, WELL NO.

White City Penn 28 GCU 3 #4

9. API WELL NO.

30-015-33862

10. FIELD AND POOL, OR WILDCAT

White City; Penn (Gas)

11. SEC. T. R. M., OR BLOCK AND SURVEY OR AREA

Sec 28 T-24S- R-26E

12. COUNTY OR PARISH
Eddy13. STATE
NM

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____

b. TYPE OF COMPLETION:

NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. REVR. ☐ Other _____

2. NAME OF OPERATOR

Gruy Petroleum Management Co.

3. ADDRESS AND TELEPHONE NO.

P O Box 140907 Irving Tx. 75014-0907

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)

At surface 1980' FSL & 1500' FWL

At top prod. interval reported below 1652' FSL & 1496' FWL

At total depth 690' FSL & 1306' FWL

14. PERMIT NO.

DATE ISSUED

RECEIVED

AUG 24 2005

BUREAU OF LAND MANAGEMENT

15. DATE SPUDDED 03-15-05 16. DATE T.D. REACHED 04-11-05 17. DATE COMPL. (Ready to prod.) 06-07-05 18. ELEVATIONS (DF, RKB, RT, OR, ETC.)* 3387' GR 19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD MD 11900' TVD 11722' 21. PLUG, BACK T.D., MD & TVD MD 11866' TVD 11675' 22. IF MULTIPLE COMPL., HOW MANY* 23. INTERVALS DRILLED BY 24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 25. WAS DIRECTIONAL SURVEY MADE

White City; Penn (Gas) MD 10996' - 11541' TVD 10860' - 11379'

Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN

DSN, DLL, CBL

27. WAS WELL CORED

No

28. CASING RECORD (Report all strings set in well)

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
13 - 3/8" J-55	54.5 #	355'	17-1/2"	350sx Prem circ 82sx to pit	
9-5/8" NS-110HC	40 #	1607'	12 1/4"	700sx IntC/Prem circ 180sx to pit	
5-1/2" P-110/N-80	17#	11900'	8-3/4"	2725sx IntH/SupH/IntC/Prem TOC 1400'	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2 7/8"	10897'	

31. PERFORATION RECORD (Interval, size and number)

11522' - 11541' 6 SPF 66 Holes

11166' - 11344' 6 SPF 216 Holes

10996' - 11005' 6 SPF 54 Holes

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
11522' - 11541'	68000gal foam CO2 40000# 18/40 VProp
11166' - 11344'	120000gal foam CO2 83000# 18/40 VProp
10996' - 11005'	64000gal foam CO2 46000# 18/40 VProp

33.* PRODUCTION

DATE FIRST PRODUCTION 07-01-05 PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flowing WELL STATUS (Producing or shut-in) Producing

DATE OF TEST	HOURS TESTED	CHOKER SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
07-15-05	24	open	→	0	1574	0	
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
670	850	→	0	574	0		

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

Sold

35. LIST OF ATTACHMENTS

NM C-122, Electric logs and Inclination Summary

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

TITLE Regulatory Analyst

DATE August 10, 2005

*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

38. GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
				Wolfcamp	8352'	
				Cisco	9370'	
				Canyon	9754'	
				Strawn	9895'	
				Atoka	10431'	
				Morrow	10724'	

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

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

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised JUNE 10, 2003
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-33862	Pool Code	Pool Name White City; Penn (Gas)
Property Code	Property Name WHITE CITY PENN 28 GAS UNIT COM 3	Well Number 4
OGRID No. 162683	Operator Name GRUY PETROLEUM MANAGEMENT COMPANY	Elevation 3387'

Surface Location

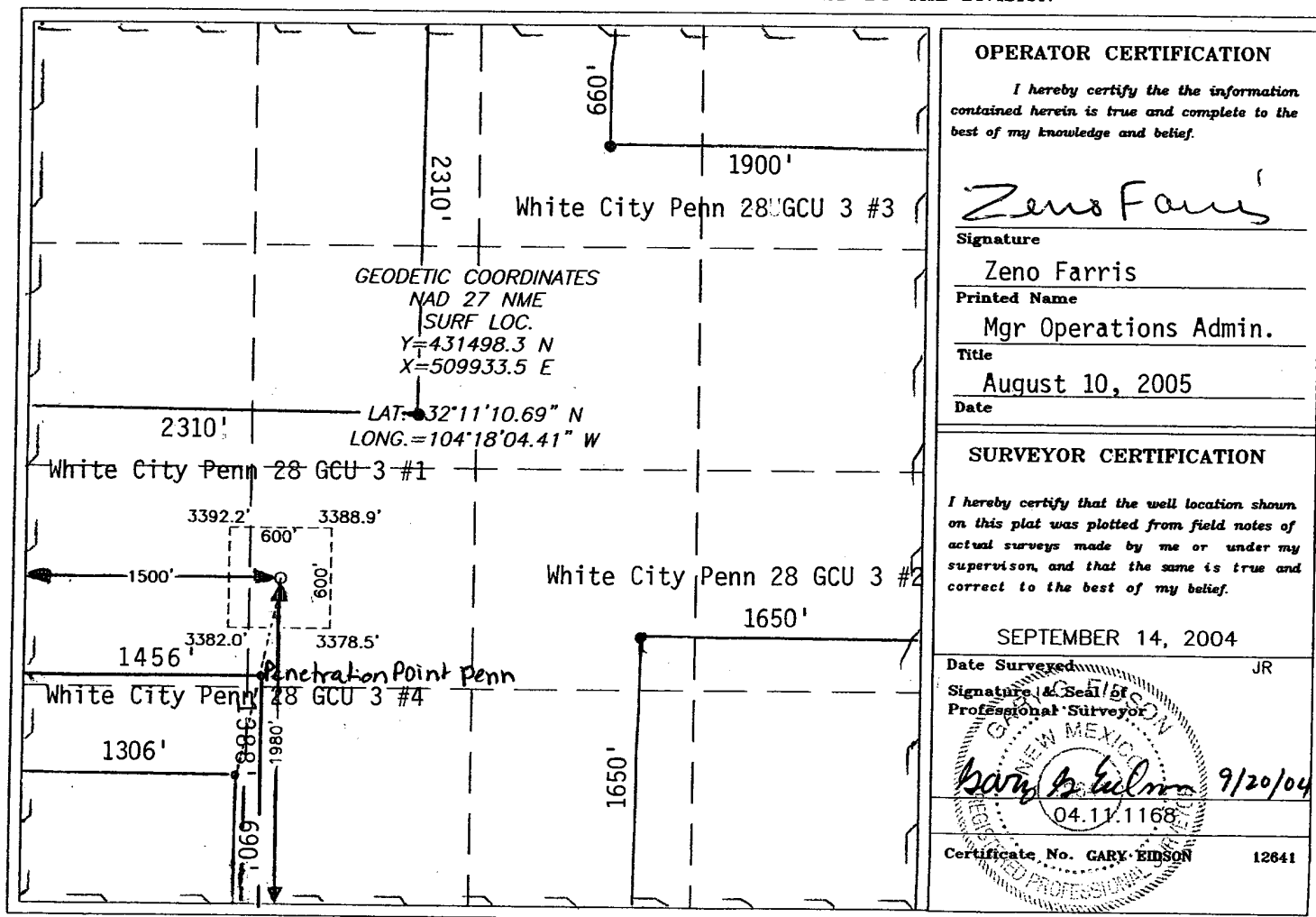
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	28	24-S	26-E		1980	SOUTH	1500	WEST	EDDY

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
M	28	24-S	26-E		690'	SOUTH	1306	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
640	Y	C	

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

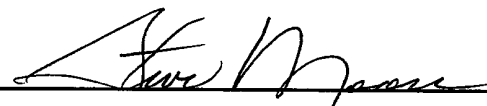


OPERATOR MAGNUM HUNTER dba GRUY
WELL/LEASE WHITE CITY PENN 28 GSU 3 #4
COUNTY EDDY, NM

075-0035

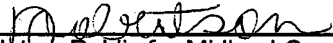
STATE OF NEW MEXICO
DEVIATION REPORT

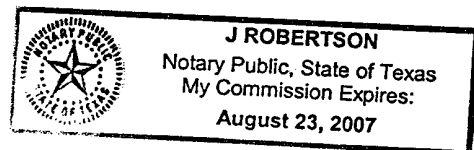
162	1
296	1 1/4
538	3/4
1,012	3/4
1,600	2 3/4
2,091	1
2,610	1
2,622	1 1/2
3,143	2
3,402	1
3,649	2
3,727	3/4
4,215	1
4,689	1
5,195	1
5,680	2
6,213	1

BY: 

STATE OF TEXAS
COUNTY OF MIDLAND

The foregoing instrument was acknowledged before me April 20, 2005, by Steve Moore on behalf of Patterson - UTI Drilling Company, LP, LLLP.


Notary Public for Midland County, Texas
My Commission Expires: 8/23/07





End of Well Report

White Cty Penn 28 Gas Unit Com 3 #4

Gruy Petroleum Management

4/12/2005

Customer : Gruy Petroleum Management

Well : White Cty Penn 28 Gas Unit Com 3 #4

Discussion:

BHA #	Bit #	Motor Run #	Hole Size (in)	MD In (ft)	MD Out (ft)	TVD In (ft)	TVD Out (ft)	Inc In (deg)	Inc Out (deg)	Azi In (deg)	Azi Out (deg)	Drig hrs	Circ hrs
1	6	1		6723	8891	6722	8836	1.6	13.8	199	195	79	1
2	2	2	8.750	8891	10219	8836	10112	13.8	18.6	195	182	57	1
3	8	3	8.750	10219	11104	10112	10954	18.6	17.6	182	192	50	1
4	9	4	8.750	11104	11900	10954	11722	17.6	10.1	192	233	69	10

Table 1 - BHA Summary

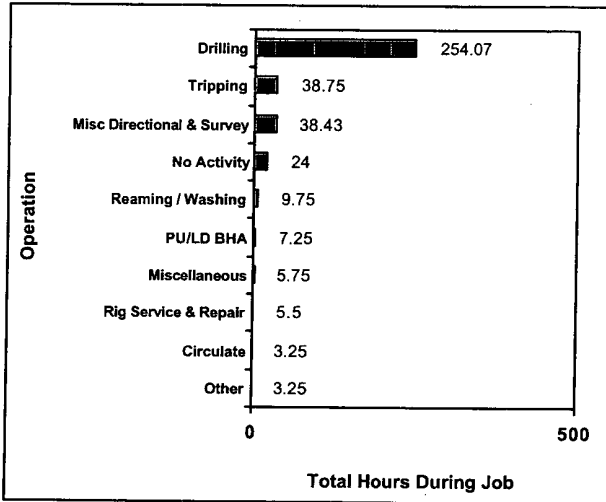
Motor Run #	Manufacturer	Type	Lobe	OD (in)	Gauge (in)	Bend (deg)	Adj	DLS (Ori) ('/100')	ROP (Ori) (ft/hr)	ROP (Rot) (ft/hr)
1	SSDS	SperryDrill	8/9	6.750	8.625	1.50	Y		16	30
2	SSDS	SperryDrill	8/9	6.750		1.50	Y		12	25
3	SSDS	SperryDrill	8/9	6.750	8.625	1.50	Y		13	18
4	SSDS	SperryDrill	8/9	6.750	8.625		Y		10	12

Table 2 - Motor Run Summary

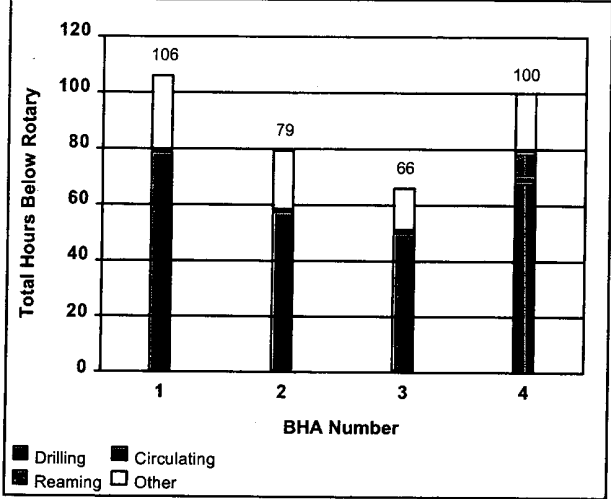
Bit #	Manufacturer	Style	OD (in)	Gge Len (in)	Nozzles (/32's)	TFA (in")	Dull Grades I O D L B G O R	Ftge (ft)	Drig hrs	ROP (ft/hr)
6	STC	F37HY			3x15	0.518	3-4-ER-A -E-I-FC-PR	2168	78.57	28
2	HTC	HRS38C	8.750		3x16	0.589	5-6-BT-CR-E-I-LC-TQ	1328	57.00	23
8	STC	F47HYPS	8.750		3x15	0.518	3-8-BT-GA-E-9-WT-TQ	885	49.75	18
9	STC	F47HYPS	8.750		3x15	0.518	4-6-WT-A -E-3-CT-TD	796	68.75	12

Table 3 - Bit Run Summary

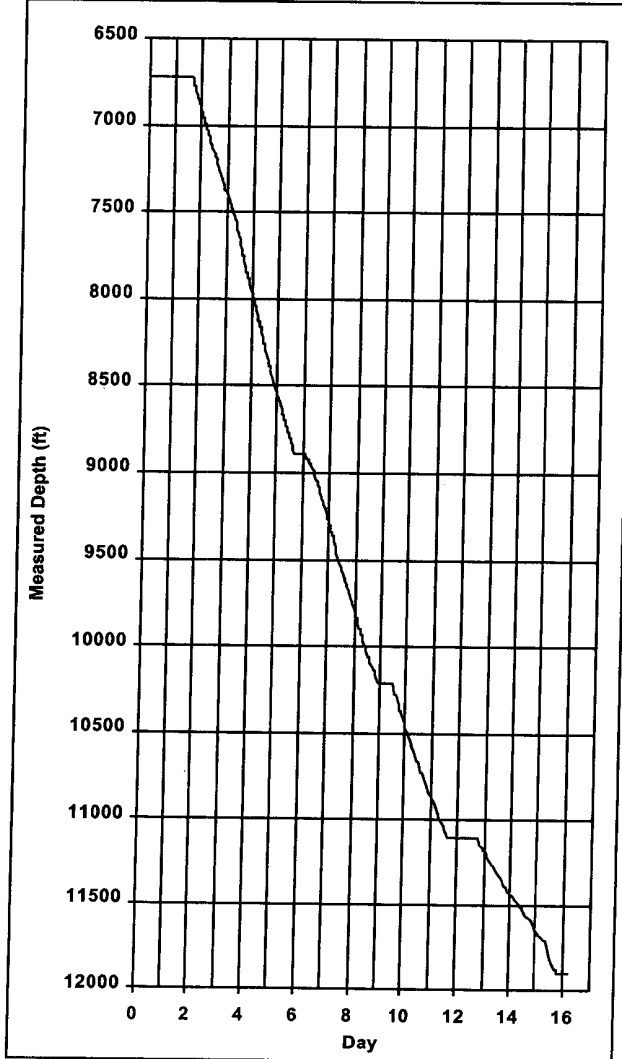
Hours by Operation Summary



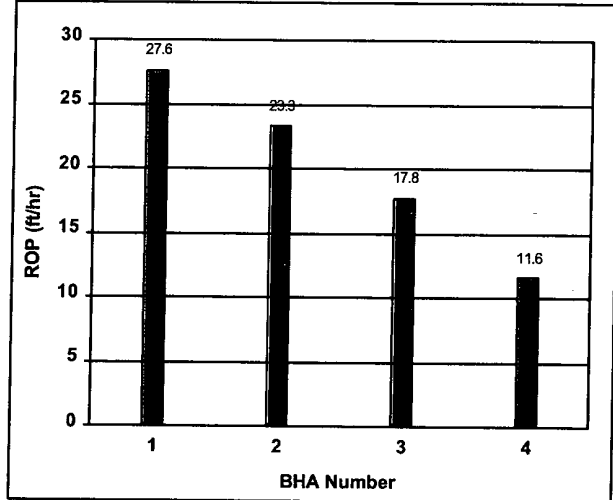
Hours per BHA Breakdown



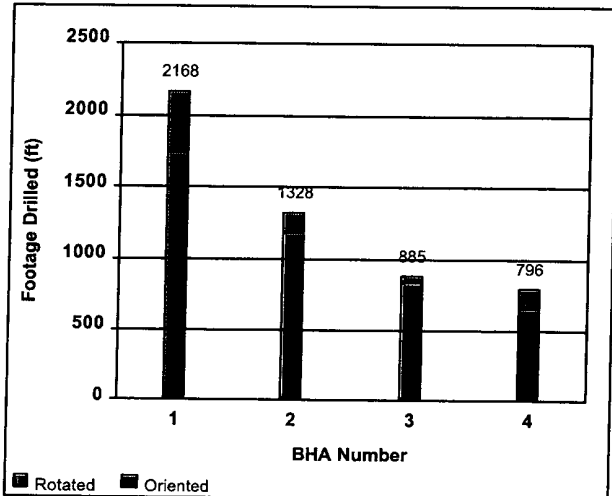
Days vs. Depth



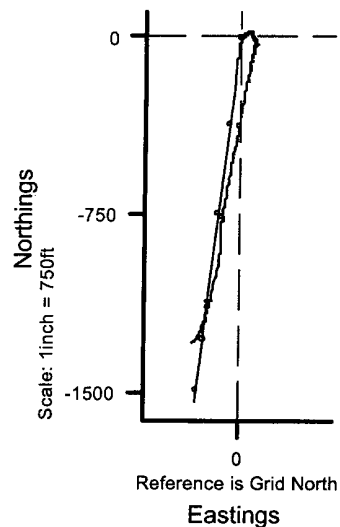
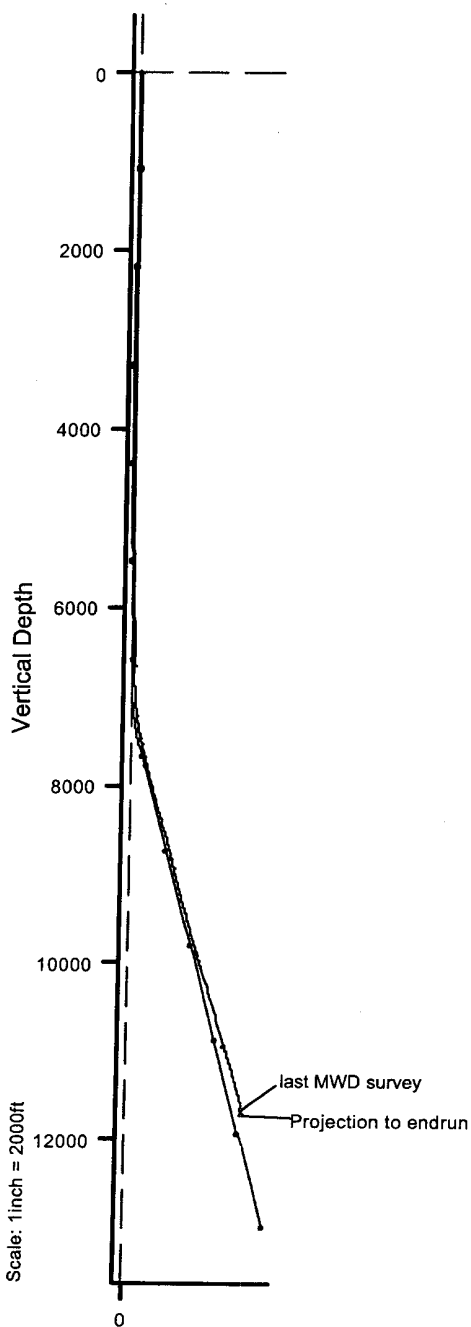
Average Rate of Penetration per BHA



Footage per BHA



New Mexico
Eddy County
Sec 28-T24S-R26E
White City Penn 28 Gas Unit Com 3 #4



Section Azimuth: 186.696° (Grid North)

Vertical Section

Prepared by:
Dennis Cook

Date/Time:
12 April, 2005 - 7:09

Checked:

Approved:



**Gruy Petroleum Management
New Mexico
Eddy County
Sec 28-T24S-R26E
White City Penn 28 Gas Unit Com 3 #4 -
MWD survey**

Sperry Drilling Services Survey Report

12 April, 2005

Survey Ref: svy8263

Prepared by: Dennis Cook
Checked by:
Approved by:

HALLIBURTON
Sperry Drilling Services

**Survey Report for Sec 28-T24S-R26E - White City Penn 28 Gas Unit
Com 3 #4**

Measured Depth (ft)	Incl.	Grid Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
Gyro Survey							
0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00	
200.00	0.310	147.470	200.00	0.46 S	0.29 E	0.42	0.16
400.00	0.330	243.900	400.00	1.17 S	0.06 E	1.15	0.24
600.00	0.710	252.970	599.99	1.78 S	1.64 W	1.96	0.19
800.00	0.880	264.580	799.97	2.29 S	4.35 W	2.78	0.12
1000.00	1.150	135.950	999.95	3.88 S	4.48 W	4.37	0.92
1200.00	1.200	120.350	1199.91	6.38 S	1.28 W	6.48	0.16
1400.00	2.730	63.620	1399.80	5.32 S	4.79 E	4.72	1.15
1600.00	1.680	47.810	1599.66	1.23 S	11.23 E	-0.08	0.60
1800.00	1.580	55.250	1799.57	2.31 N	15.67 E	-4.12	0.12
2000.00	1.370	55.100	1999.51	5.25 N	19.90 E	-7.53	0.11
2200.00	1.310	46.210	2199.45	8.20 N	23.51 E	-10.88	0.11
2400.00	1.150	52.230	2399.41	11.01 N	26.74 E	-14.05	0.10
2600.00	1.010	63.160	2599.37	13.03 N	29.90 E	-16.43	0.12
2800.00	0.960	58.380	2799.34	14.71 N	32.90 E	-18.44	0.05
3000.00	0.810	64.220	2999.32	16.20 N	35.60 E	-20.24	0.09
3200.00	0.720	67.630	3199.30	17.29 N	38.04 E	-21.61	0.05
3400.00	0.580	77.210	3399.29	17.99 N	40.19 E	-22.56	0.09
3600.00	0.620	82.010	3599.28	18.37 N	42.25 E	-23.17	0.03
3800.00	0.490	81.750	3799.27	18.64 N	44.16 E	-23.66	0.07
4000.00	0.270	107.930	3999.26	18.62 N	45.46 E	-23.79	0.14
4200.00	0.340	109.950	4199.26	18.27 N	46.46 E	-23.57	0.04
4400.00	0.310	157.220	4399.26	17.57 N	47.23 E	-22.96	0.13
4600.00	0.390	181.950	4599.25	16.39 N	47.42 E	-21.81	0.08
4800.00	0.620	168.280	4799.25	14.65 N	47.61 E	-20.10	0.13
5000.00	1.030	182.110	4999.23	11.80 N	47.77 E	-17.29	0.23
5200.00	1.390	185.410	5199.18	7.58 N	47.47 E	-13.07	0.18
5400.00	1.580	159.980	5399.12	2.58 N	48.19 E	-8.18	0.34
5600.00	1.870	154.780	5599.02	2.96 S	50.52 E	-2.95	0.16
5700.00	1.840	145.020	5698.97	5.75 S	52.14 E	-0.36	0.32
5800.00	2.380	146.440	5798.90	8.80 S	54.21 E	2.42	0.54
5900.00	2.420	148.370	5898.82	12.33 S	56.46 E	5.66	0.09
6000.00	2.010	143.820	5998.74	15.54 S	58.60 E	8.60	0.45
6100.00	1.520	142.670	6098.69	18.01 S	60.44 E	10.84	0.49
6200.00	1.090	145.400	6198.67	19.85 S	61.79 E	12.51	0.43

Survey Report for Sec 28-T24S-R26E - White City Penn 28 Gas Unit Com 3 #4

Measured Depth (ft)	Incl.	Grid Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
6300.00	0.940	157.280	6298.65	21.39 S	62.65 E	13.94	0.26
6400.00	1.030	163.900	6398.64	23.01 S	63.21 E	15.48	0.14
6500.00	1.310	187.390	6498.62	25.01 S	63.31 E	17.45	0.55
6600.00	1.680	190.450	6598.58	27.58 S	62.90 E	20.06	0.38
6647.00	1.690	194.760	6645.56	28.93 S	62.60 E	21.43	0.27

MWD survey

6684.00	1.660	203.080	6682.55	29.95 S	62.25 E	22.49	0.66
6717.00	1.540	200.530	6715.53	30.80 S	61.91 E	23.38	0.42
6749.00	1.970	193.980	6747.52	31.74 S	61.62 E	24.34	1.48
6780.00	2.370	197.150	6778.50	32.87 S	61.31 E	25.50	1.35
6812.00	2.650	195.000	6810.47	34.22 S	60.92 E	26.88	0.92
6844.00	3.130	196.350	6842.42	35.77 S	60.48 E	28.47	1.51
6875.00	3.890	193.310	6873.37	37.61 S	60.00 E	30.35	2.52
6907.00	4.270	187.860	6905.29	39.84 S	59.59 E	32.62	1.70
6939.00	4.480	191.820	6937.19	42.25 S	59.17 E	35.06	1.15
6971.00	4.580	190.830	6969.09	44.72 S	58.67 E	37.58	0.40
7002.00	4.730	190.490	6999.99	47.20 S	58.21 E	40.09	0.49
7034.00	5.090	189.650	7031.87	49.89 S	57.73 E	42.82	1.15
7066.00	5.400	194.040	7063.74	52.75 S	57.13 E	45.73	1.58
7097.00	5.360	196.030	7094.60	55.56 S	56.37 E	48.61	0.62
7129.00	5.540	197.790	7126.46	58.47 S	55.49 E	51.60	0.77
7161.00	5.980	194.630	7158.30	61.55 S	54.60 E	54.76	1.69
7192.00	6.860	192.170	7189.10	64.92 S	53.80 E	58.21	2.97
7224.00	7.470	193.400	7220.85	68.81 S	52.91 E	62.18	1.97
7256.00	8.350	192.690	7252.55	73.11 S	51.92 E	66.55	2.77
7287.00	8.960	192.170	7283.19	77.66 S	50.92 E	71.19	1.98
7319.00	9.490	192.690	7314.78	82.67 S	49.81 E	76.30	1.68
7350.00	9.930	193.570	7345.34	87.76 S	48.62 E	81.49	1.50
7382.00	10.020	193.750	7376.85	93.15 S	47.31 E	87.00	0.30
7414.00	10.460	193.050	7408.34	98.68 S	46.00 E	92.65	1.43
7447.00	11.160	191.460	7440.76	104.73 S	44.69 E	98.81	2.31
7477.00	12.220	191.460	7470.13	110.69 S	43.48 E	104.86	3.53
7509.00	12.830	189.880	7501.37	117.51 S	42.20 E	111.79	2.19
7540.00	13.360	188.830	7531.57	124.44 S	41.06 E	118.80	1.87
7572.00	13.970	189.000	7562.66	131.91 S	39.88 E	126.35	1.91
7603.00	14.500	189.530	7592.71	139.43 S	38.66 E	133.97	1.76

Survey Report for Sec 28-T24S-R26E - White City Penn 28 Gas Unit Com 3 #4

Measured Depth (ft)	Incl.	Grid Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
7635.00	14.770	190.060	7623.67	147.40 S	37.28 E	142.04	0.94
7667.00	14.330	190.580	7654.64	155.30 S	35.84 E	150.07	1.43
7698.00	13.360	190.580	7684.74	162.60 S	34.48 E	157.47	3.13
7730.00	13.100	191.990	7715.89	169.78 S	33.05 E	164.77	1.29
7761.00	13.360	191.990	7746.07	176.72 S	31.57 E	171.83	0.84
7793.00	13.750	193.750	7777.18	184.03 S	29.90 E	179.29	1.77
7824.00	13.800	192.520	7807.29	191.22 S	28.22 E	186.62	0.96
7856.00	14.150	193.220	7838.34	198.75 S	26.50 E	194.30	1.21
7888.00	14.150	191.110	7869.37	206.40 S	24.85 E	202.09	1.61
7919.00	14.410	190.230	7899.41	213.91 S	23.44 E	209.72	1.09
7951.00	14.770	188.830	7930.38	221.86 S	22.10 E	217.77	1.57
7983.00	14.770	189.180	7961.32	229.92 S	20.83 E	225.92	0.28
8014.00	15.290	189.000	7991.26	237.85 S	19.56 E	233.95	1.68
8046.00	15.470	188.650	8022.12	246.24 S	18.26 E	242.43	0.63
8077.00	15.030	188.830	8052.02	254.30 S	17.02 E	250.58	1.43
8109.00	15.290	188.650	8082.91	262.57 S	15.75 E	258.94	0.83
8141.00	15.560	189.350	8113.76	270.98 S	14.41 E	267.45	1.02
8172.00	15.290	189.880	8143.64	279.11 S	13.04 E	275.68	0.98
8204.00	15.730	190.760	8174.48	287.53 S	11.50 E	284.22	1.56
8235.00	15.910	190.230	8204.30	295.84 S	9.96 E	292.66	0.74
8267.00	16.000	190.230	8235.07	304.49 S	8.40 E	301.44	0.28
8299.00	16.520	190.060	8265.79	313.31 S	6.82 E	310.38	1.63
8330.00	16.790	189.710	8295.49	322.06 S	5.30 E	319.25	0.93
8362.00	16.440	191.110	8326.15	331.06 S	3.65 E	328.38	1.66
8393.00	15.910	190.230	8355.93	339.55 S	2.05 E	336.99	1.88
8425.00	16.080	189.530	8386.69	348.24 S	0.53 E	345.80	0.80
8457.00	16.000	188.650	8417.44	356.97 S	0.86 W	354.63	0.80
8488.00	16.080	187.950	8447.23	365.44 S	2.10 W	363.19	0.68
8520.00	16.520	188.120	8477.95	374.34 S	3.36 W	372.17	1.38
8552.00	16.520	188.120	8508.63	383.34 S	4.64 W	381.27	0.00
8583.00	16.700	188.120	8538.33	392.12 S	5.89 W	390.13	0.58
8615.00	16.610	189.000	8568.99	401.19 S	7.26 W	399.30	0.84
8647.00	16.790	189.530	8599.64	410.26 S	8.74 W	408.48	0.74
8678.00	16.080	190.060	8629.37	418.90 S	10.23 W	417.24	2.34
8710.00	15.470	191.110	8660.17	427.46 S	11.83 W	425.92	2.10
8741.00	15.030	192.520	8690.08	435.44 S	13.49 W	434.04	1.86
8773.00	14.410	192.340	8721.03	443.38 S	15.24 W	442.13	1.94
8805.00	14.060	193.050	8752.04	451.05 S	16.97 W	449.96	1.22
8836.00	13.710	194.280	8782.14	458.28 S	18.73 W	457.34	1.48
8868.00	13.620	195.150	8813.23	465.59 S	20.65 W	464.82	0.70

Survey Report for Sec 28-T24S-R26E - White City Penn 28 Gas Unit Com 3 #4

Measured Depth (ft)	Incl.	Grid Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
8899.00	13.890	194.280	8843.34	472.72 S	22.52 W	472.12	1.10
8931.00	14.060	193.050	8874.40	480.23 S	24.35 W	479.79	1.07
8963.00	13.970	192.170	8905.44	487.79 S	26.04 W	487.50	0.72
8994.00	13.270	191.820	8935.57	494.93 S	27.56 W	494.77	2.27
9026.00	13.010	191.210	8966.73	502.06 S	29.01 W	502.02	0.92
9057.00	14.070	192.380	8996.87	509.17 S	30.49 W	509.25	3.53
9089.00	14.350	191.220	9027.89	516.85 S	32.10 W	517.07	1.25
9120.00	14.390	190.350	9057.92	524.41 S	33.54 W	524.75	0.71
9152.00	15.030	188.380	9088.87	532.43 S	34.86 W	532.86	2.54
9184.00	15.310	187.630	9119.76	540.72 S	36.02 W	541.23	1.07
9216.00	15.560	187.970	9150.61	549.16 S	37.18 W	549.75	0.83
9247.00	15.520	189.370	9180.47	557.37 S	38.43 W	558.05	1.22
9279.00	15.830	189.050	9211.28	565.90 S	39.82 W	566.69	1.01
9310.00	16.150	188.380	9241.08	574.34 S	41.11 W	575.22	1.19
9342.00	16.290	188.370	9271.81	583.19 S	42.41 W	584.15	0.44
9374.00	16.670	188.400	9302.49	592.17 S	43.73 W	593.23	1.19
9405.00	16.670	188.740	9332.19	600.96 S	45.06 W	602.12	0.31
9437.00	16.430	188.640	9362.87	609.97 S	46.44 W	611.23	0.76
9469.00	16.210	189.460	9393.58	618.85 S	47.85 W	620.21	1.00
9500.00	16.150	189.270	9423.35	627.37 S	49.26 W	628.84	0.26
9532.00	16.260	188.830	9454.08	636.19 S	50.66 W	637.76	0.52
9564.00	16.230	189.100	9484.80	645.04 S	52.06 W	646.71	0.25
9595.00	15.870	189.520	9514.59	653.49 S	53.44 W	655.27	1.22
9627.00	15.980	189.740	9545.36	662.15 S	54.91 W	664.04	0.39
9659.00	15.700	189.780	9576.15	670.76 S	56.39 W	672.76	0.88
9690.00	16.040	191.180	9605.97	679.09 S	57.93 W	681.22	1.65
9723.00	16.190	189.570	9637.67	688.10 S	59.58 W	690.36	1.43
9754.00	15.870	190.750	9667.46	696.53 S	61.09 W	698.90	1.47
9786.00	16.060	189.420	9698.23	705.19 S	62.63 W	707.69	1.29
9818.00	16.230	189.920	9728.97	713.97 S	64.13 W	716.57	0.69
9850.00	16.270	189.270	9759.69	722.79 S	65.62 W	725.52	0.58
9881.00	15.810	189.270	9789.48	731.25 S	67.00 W	734.07	1.48
9913.00	15.820	189.710	9820.27	739.85 S	68.44 W	742.78	0.38
9944.00	16.170	188.650	9850.07	748.28 S	69.80 W	751.32	1.47
9976.00	16.610	185.840	9880.77	757.24 S	70.94 W	760.34	2.83
10008.00	16.960	187.950	9911.41	766.41 S	72.05 W	769.58	2.20
10039.00	17.400	185.660	9941.03	775.50 S	73.13 W	778.74	2.60
10071.00	17.670	183.900	9971.54	785.11 S	73.93 W	788.37	1.86
10102.00	17.930	183.900	10001.05	794.56 S	74.58 W	797.84	0.84
10134.00	17.840	183.550	10031.51	804.37 S	75.21 W	807.65	0.44

Survey Report for Sec 28-T24S-R26E - White City Penn 28 Gas Unit Com 3 #4

Measured Depth (ft)	Incl.	Grid Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
10166.00	18.190	183.200	10061.94	814.25 S	75.80 W	817.53	1.14
10229.00	18.720	182.150	10121.70	834.17 S	76.72 W	837.42	0.99
10292.00	18.460	182.500	10181.41	854.24 S	77.54 W	857.45	0.45
10324.00	18.460	182.320	10211.77	864.36 S	77.97 W	867.55	0.18
10387.00	18.190	183.730	10271.57	884.14 S	79.01 W	887.32	0.82
10450.00	17.670	184.960	10331.51	903.48 S	80.48 W	906.70	1.02
10482.00	17.670	185.310	10362.00	913.15 S	81.34 W	916.41	0.33
10513.00	17.670	185.490	10391.54	922.52 S	82.23 W	925.81	0.18
10545.00	17.700	187.020	10422.03	932.18 S	83.29 W	935.53	1.46
10608.00	17.340	189.110	10482.10	950.96 S	85.95 W	954.49	1.15
10672.00	17.260	190.010	10543.21	969.72 S	89.11 W	973.50	0.44
10735.00	17.490	191.010	10603.34	988.22 S	92.54 W	992.27	0.60
10798.00	17.670	193.050	10663.39	1006.83 S	96.51 W	1011.21	1.02
10862.00	18.020	193.570	10724.31	1025.91 S	101.02 W	1030.69	0.60
10925.00	18.190	194.280	10784.20	1044.91 S	105.73 W	1050.12	0.44
10988.00	18.280	192.170	10844.03	1064.10 S	110.24 W	1069.70	1.06
11052.00	18.280	191.990	10904.80	1083.73 S	114.44 W	1089.68	0.09
11083.00	17.930	191.290	10934.27	1093.17 S	116.39 W	1099.28	1.33
11114.00	17.490	191.640	10963.80	1102.41 S	118.26 W	1108.68	1.46
11146.00	16.870	193.920	10994.37	1111.63 S	120.35 W	1118.08	2.86
11177.00	16.610	194.450	11024.06	1120.28 S	122.54 W	1126.93	0.97
11209.00	16.440	194.100	11054.74	1129.10 S	124.78 W	1135.95	0.62
11241.00	16.440	194.630	11085.43	1137.88 S	127.03 W	1144.93	0.47
11272.00	16.520	195.510	11115.15	1146.37 S	129.31 W	1153.63	0.85
11304.00	16.350	195.680	11145.85	1155.09 S	131.75 W	1162.57	0.55
11335.00	16.520	194.980	11175.58	1163.55 S	134.07 W	1171.24	0.84
11367.00	16.170	195.150	11206.29	1172.24 S	136.41 W	1180.15	1.10
11399.00	16.080	197.440	11237.03	1180.77 S	138.90 W	1188.91	2.01
11430.00	15.540	196.560	11266.85	1188.85 S	141.37 W	1197.22	1.91
11462.00	16.080	197.620	11297.64	1197.18 S	143.93 W	1205.80	1.91
11493.00	16.440	198.320	11327.40	1205.44 S	146.61 W	1214.31	1.32
11525.00	17.050	198.670	11358.05	1214.18 S	149.54 W	1223.33	1.93
11556.00	17.490	197.970	11387.65	1222.92 S	152.43 W	1232.35	1.57
11619.00	17.140	198.670	11447.79	1240.72 S	158.32 W	1250.71	0.65
11683.00	15.030	205.000	11509.29	1257.18 S	164.85 W	1267.82	4.28
11777.00	12.300	222.290	11600.66	1275.64 S	176.74 W	1287.55	5.20
11840.00	10.110	232.600	11662.46	1283.96 S	185.65 W	1296.85	4.70
11900.00	10.110	232.600	11721.53	1290.36 S	194.02 W	1304.18	0.00

All data is in Feet (US) unless otherwise stated. Directions and coordinates are relative to Grid North.
Vertical depths are relative to RKB=3387+25est=3412. Northings and Eastings are relative to Well.

The Dogleg Severity is in Degrees per 100 feet.

Survey Report for Sec 28-T24S-R26E - White City Penn 28 Gas Unit Com 3 #4

Vertical Section is from Well and calculated along an Azimuth of 186.696° (Grid).

Based upon Minimum Curvature type calculations, at a Measured Depth of 11900.00ft.,
The Bottom Hole Displacement is 1304.87ft., in the Direction of 188.551° (Grid).

Comments

Measured Depth (ft)	Station Coordinates			Comment
	TVD (ft)	Northings (ft)	Eastings (ft)	
6647.00	6645.56	28.93 S	62.60 E	tie from gyro
11840.00	11662.46	1283.96 S	185.65 W	last MWD survey
11900.00	11721.53	1290.36 S	194.02 W	Projection to endrun

North Reference Sheet for Sec 28-T24S-R26E - White City Penn 28 Gas Unit Com 3 #4

Coordinate System is NAD27 New Mexico State Planes, Eastern 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 -104.333°, Longitude Origin: 0.000°, Latitude Origin: 31.000°

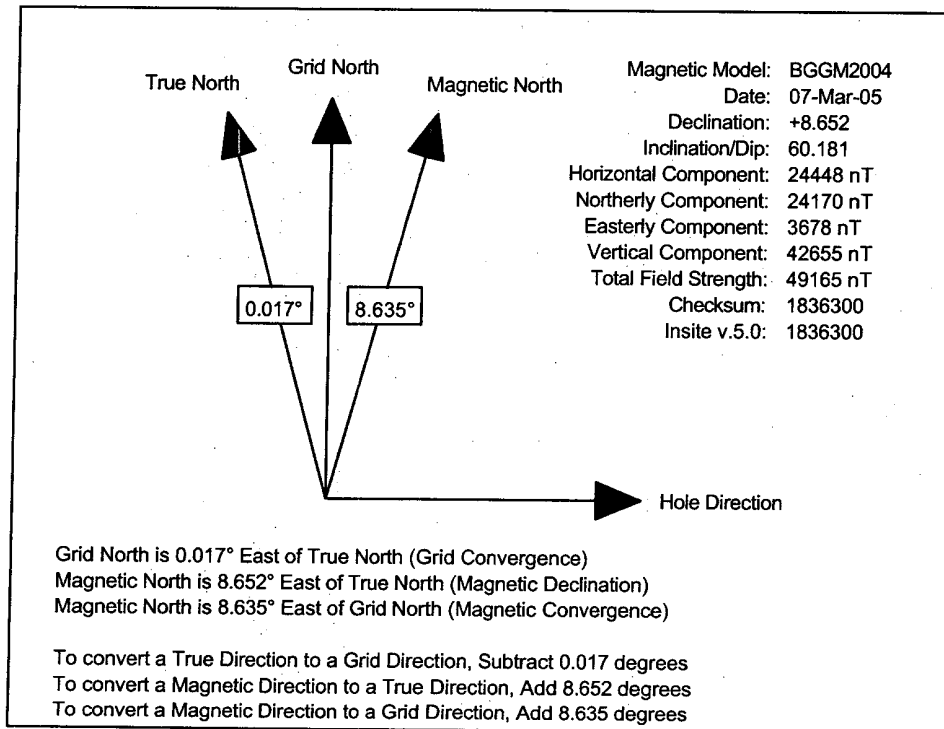
False Easting: 152400.00m, False Northing: 0.00m, Scale Reduction: 0.99990909

Grid Coordinates of Well: 431498.30 N, 509933.50 E

Geographical Coordinates of Well: 32° 11' 10.6864" N, 104° 18' 04.4069" W

Surface Elevation of Well: 3412.00ft

Grid Convergence at Surface is +0.017°, Magnetic Convergence at Surface is -8.635° (7 March, 2005)





End of Well Report

White Cty Penn 28 Gas Unit Com 3 #4

Gruy Petroleum Management

4/12/2005

Customer : Gruy Petroleum Management

Well : White Cty Penn 28 Gas Unit Com 3 #4

Discussion:

BHA #	Bit #	Motor Run #	Hole Size (in)	MD In (ft)	MD Out (ft)	TVD In (ft)	TVD Out (ft)	Inc In (deg)	Inc Out (deg)	Azi In (deg)	Azi Out (deg)	Drig hrs	Circ hrs
1	6	1		6723	8891	6722	8836	1.6	13.8	199	195	79	1
2	2	2	8.750	8891	10219	8836	10112	13.8	18.6	195	182	57	1
3	8	3	8.750	10219	11104	10112	10954	18.6	17.6	182	192	50	1
4	9	4	8.750	11104	11900	10954	11722	17.6	10.1	192	233	69	10

Table 1 - BHA Summary

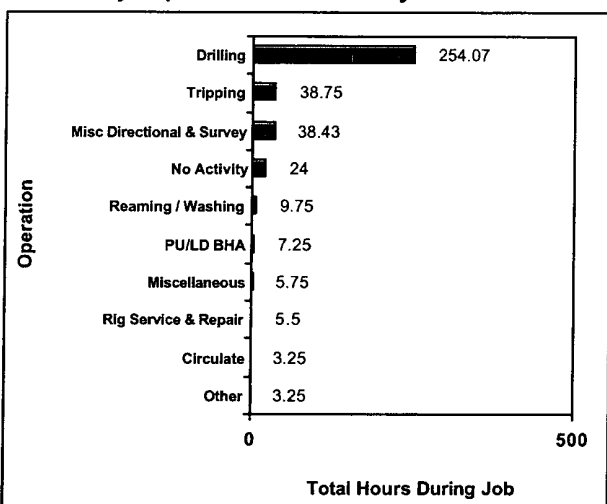
Motor Run #	Manufacturer	Type	Lobe	OD (in)	Gauge (in)	Bend (deg)	Adj	DLS (Ori) (* /100')	ROP (Ori) (ft/hr)	ROP (Rot) (ft/hr)
1	SSDS	SperryDrill	8/9	6.750	8.625	1.50	Y		16	30
2	SSDS	SperryDrill	8/9	6.750		1.50	Y		12	25
3	SSDS	SperryDrill	8/9	6.750	8.625	1.50	Y		13	18
4	SSDS	SperryDrill	8/9	6.750	8.625		Y		10	12

Table 2 - Motor Run Summary

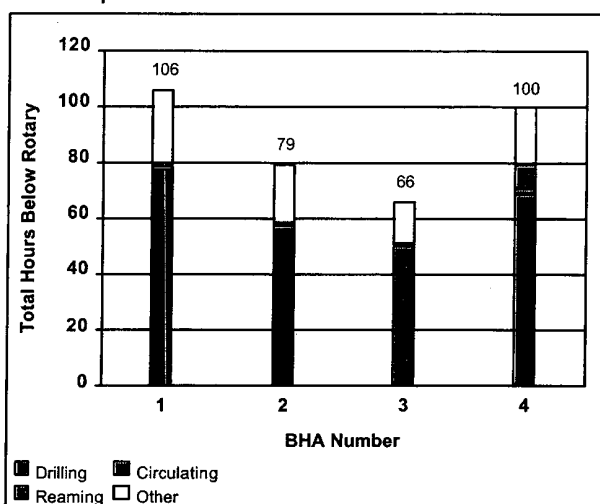
Bit #	Manufacturer	Style	OD (in)	Gge Len (in)	Nozzles (/32's)	TFA (in³)	Dull Grades I O D L B G O R	Ftge (ft)	Drig hrs	ROP (ft/hr)
6	STC	F37HY			3x15	0.518	3-4-ER-A -E-I-FC-PR	2168	78.57	28
2	HTC	HRS38C	8.750		3x16	0.589	5-6-BT-CR-E-I-LC-TQ	1328	57.00	23
8	STC	F47HYPS	8.750		3x15	0.518	3-8-BT-GA-E-9-WT-TQ	885	49.75	18
9	STC	F47HYPS	8.750		3x15	0.518	4-6-WT-A -E-3-CT-TD	796	68.75	12

Table 3 - Bit Run Summary

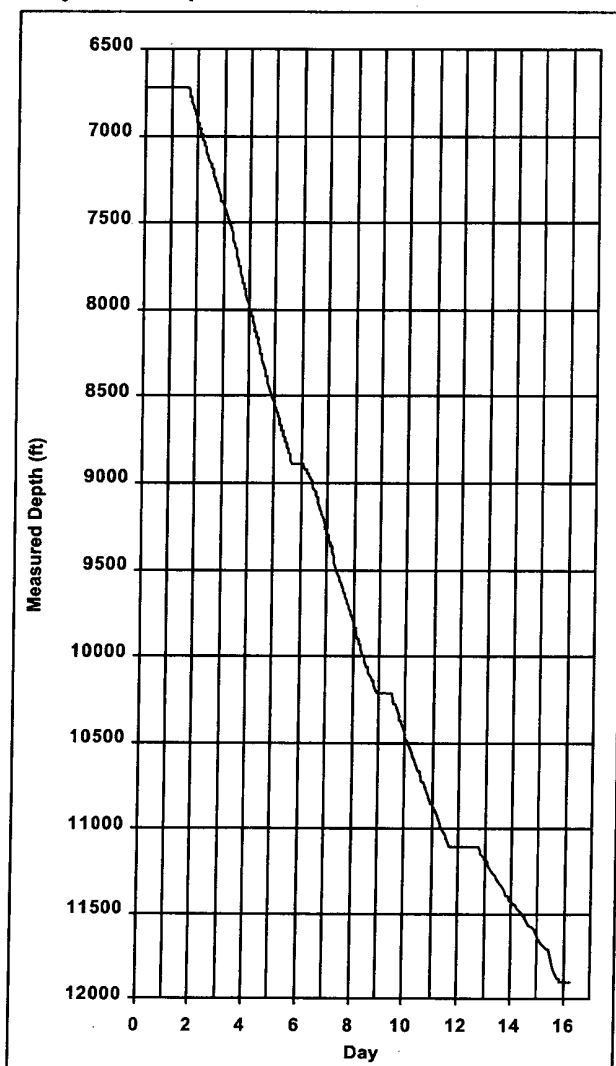
Hours by Operation Summary



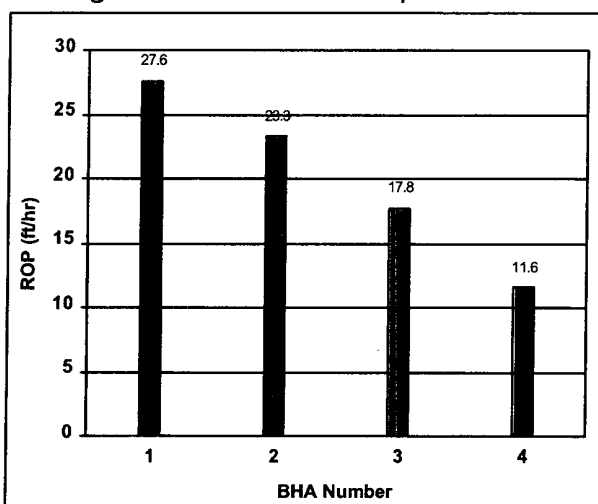
Hours per BHA Breakdown



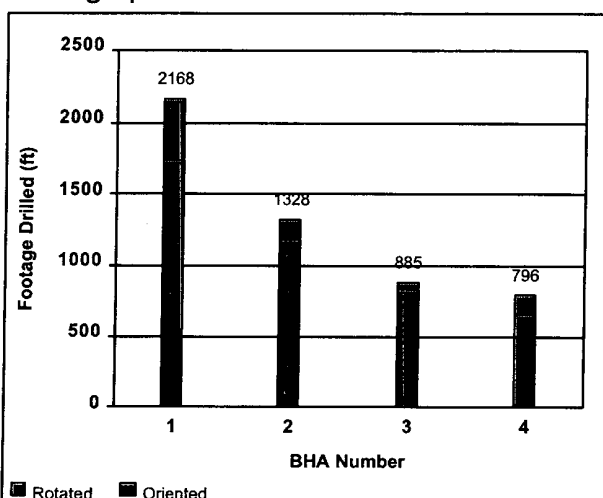
Days vs. Depth



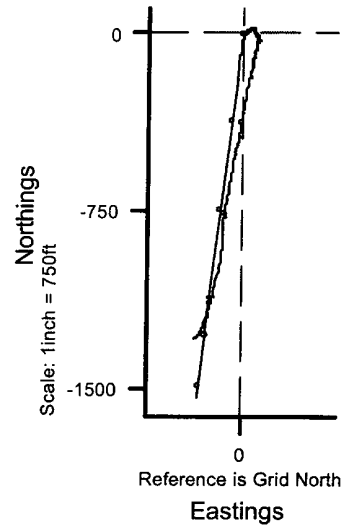
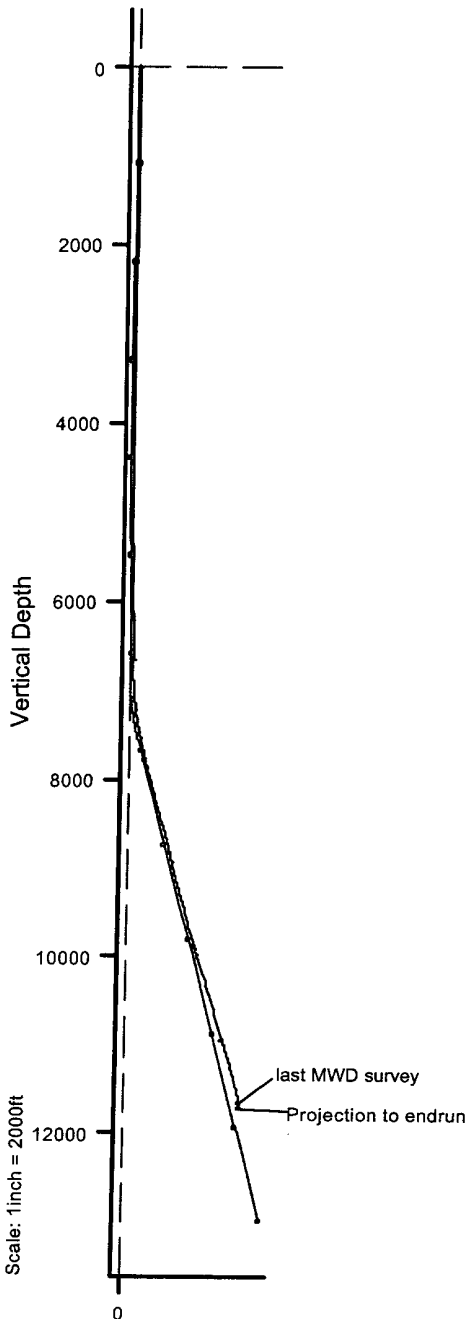
Average Rate of Penetration per BHA



Footage per BHA



New Mexico
Eddy County
Sec 28-T24S-R26E
White City Penn 28 Gas Unit Com 3 #4



Section Azimuth: 186.696° (Grid North)

Vertical Section

Prepared by:
Dennis Cook

Date/Time:
12 April, 2005 - 7:09

Checked:

Approved:



**Gruy Petroleum Management
New Mexico
Eddy County
Sec 28-T24S-R26E
White City Penn 28 Gas Unit Com 3 #4 -
MWD survey**

Sperry Drilling Services Survey Report

12 April, 2005

Survey Ref: svy8263

Prepared by: Dennis Cook
Checked by:
Approved by:

HALLIBURTON
Sperry Drilling Services

**Survey Report for Sec 28-T24S-R26E - White City Penn 28 Gas Unit
Com 3 #4**

Measured Depth (ft)	Incl.	Grid Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
Gyro Survey							
0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00	
200.00	0.310	147.470	200.00	0.46 S	0.29 E	0.42	0.16
400.00	0.330	243.900	400.00	1.17 S	0.06 E	1.15	0.24
600.00	0.710	252.970	599.99	1.78 S	1.64 W	1.96	0.19
800.00	0.880	264.580	799.97	2.29 S	4.35 W	2.78	0.12
1000.00	1.150	135.950	999.95	3.88 S	4.48 W	4.37	0.92
1200.00	1.200	120.350	1199.91	6.38 S	1.28 W	6.48	0.16
1400.00	2.730	63.620	1399.80	5.32 S	4.79 E	4.72	1.15
1600.00	1.680	47.810	1599.66	1.23 S	11.23 E	-0.08	0.60
1800.00	1.580	55.250	1799.57	2.31 N	15.67 E	-4.12	0.12
2000.00	1.370	55.100	1999.51	5.25 N	19.90 E	-7.53	0.11
2200.00	1.310	46.210	2199.45	8.20 N	23.51 E	-10.88	0.11
2400.00	1.150	52.230	2399.41	11.01 N	26.74 E	-14.05	0.10
2600.00	1.010	63.160	2599.37	13.03 N	29.90 E	-16.43	0.12
2800.00	0.960	58.380	2799.34	14.71 N	32.90 E	-18.44	0.05
3000.00	0.810	64.220	2999.32	16.20 N	35.60 E	-20.24	0.09
3200.00	0.720	67.630	3199.30	17.29 N	38.04 E	-21.61	0.05
3400.00	0.580	77.210	3399.29	17.99 N	40.19 E	-22.56	0.09
3600.00	0.620	82.010	3599.28	18.37 N	42.25 E	-23.17	0.03
3800.00	0.490	81.750	3799.27	18.64 N	44.16 E	-23.66	0.07
4000.00	0.270	107.930	3999.26	18.62 N	45.46 E	-23.79	0.14
4200.00	0.340	109.950	4199.26	18.27 N	46.46 E	-23.57	0.04
4400.00	0.310	157.220	4399.26	17.57 N	47.23 E	-22.96	0.13
4600.00	0.390	181.950	4599.25	16.39 N	47.42 E	-21.81	0.08
4800.00	0.620	168.280	4799.25	14.65 N	47.61 E	-20.10	0.13
5000.00	1.030	182.110	4999.23	11.80 N	47.77 E	-17.29	0.23
5200.00	1.390	185.410	5199.18	7.58 N	47.47 E	-13.07	0.18
5400.00	1.580	159.980	5399.12	2.58 N	48.19 E	-8.18	0.34
5600.00	1.870	154.780	5599.02	2.96 S	50.52 E	-2.95	0.16
5700.00	1.840	145.020	5698.97	5.75 S	52.14 E	-0.36	0.32
5800.00	2.380	146.440	5798.90	8.80 S	54.21 E	2.42	0.54
5900.00	2.420	148.370	5898.82	12.33 S	56.46 E	5.66	0.09
6000.00	2.010	143.820	5998.74	15.54 S	58.60 E	8.60	0.45
6100.00	1.520	142.670	6098.69	18.01 S	60.44 E	10.84	0.49
6200.00	1.090	145.400	6198.67	19.85 S	61.79 E	12.51	0.43

Survey Report for Sec 28-T24S-R26E - White City Penn 28 Gas Unit Com 3 #4

Measured Depth (ft)	Incl.	Grid Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
6300.00	0.940	157.280	6298.65	21.39 S	62.65 E	13.94	0.26
6400.00	1.030	163.900	6398.64	23.01 S	63.21 E	15.48	0.14
6500.00	1.310	187.390	6498.62	25.01 S	63.31 E	17.45	0.55
6600.00	1.680	190.450	6598.58	27.58 S	62.90 E	20.06	0.38
6647.00	1.690	194.760	6645.56	28.93 S	62.60 E	21.43	0.27

MWD survey

6684.00	1.660	203.080	6682.55	29.95 S	62.25 E	22.49	0.66
6717.00	1.540	200.530	6715.53	30.80 S	61.91 E	23.38	0.42
6749.00	1.970	193.980	6747.52	31.74 S	61.62 E	24.34	1.48
6780.00	2.370	197.150	6778.50	32.87 S	61.31 E	25.50	1.35
6812.00	2.650	195.000	6810.47	34.22 S	60.92 E	26.88	0.92
6844.00	3.130	196.350	6842.42	35.77 S	60.48 E	28.47	1.51
6875.00	3.890	193.310	6873.37	37.61 S	60.00 E	30.35	2.52
6907.00	4.270	187.860	6905.29	39.84 S	59.59 E	32.62	1.70
6939.00	4.480	191.820	6937.19	42.25 S	59.17 E	35.06	1.15
6971.00	4.580	190.830	6969.09	44.72 S	58.67 E	37.58	0.40
7002.00	4.730	190.490	6999.99	47.20 S	58.21 E	40.09	0.49
7034.00	5.090	189.650	7031.87	49.89 S	57.73 E	42.82	1.15
7066.00	5.400	194.040	7063.74	52.75 S	57.13 E	45.73	1.58
7097.00	5.360	196.030	7094.60	55.56 S	56.37 E	48.61	0.62
7129.00	5.540	197.790	7126.46	58.47 S	55.49 E	51.60	0.77
7161.00	5.980	194.630	7158.30	61.55 S	54.60 E	54.76	1.69
7192.00	6.860	192.170	7189.10	64.92 S	53.80 E	58.21	2.97
7224.00	7.470	193.400	7220.85	68.81 S	52.91 E	62.18	1.97
7256.00	8.350	192.690	7252.55	73.11 S	51.92 E	66.55	2.77
7287.00	8.960	192.170	7283.19	77.66 S	50.92 E	71.19	1.98
7319.00	9.490	192.690	7314.78	82.67 S	49.81 E	76.30	1.68
7350.00	9.930	193.570	7345.34	87.76 S	48.62 E	81.49	1.50
7382.00	10.020	193.750	7376.85	93.15 S	47.31 E	87.00	0.30
7414.00	10.460	193.050	7408.34	98.68 S	46.00 E	92.65	1.43
7447.00	11.160	191.460	7440.76	104.73 S	44.69 E	98.81	2.31
7477.00	12.220	191.460	7470.13	110.69 S	43.48 E	104.86	3.53
7509.00	12.830	189.880	7501.37	117.51 S	42.20 E	111.79	2.19
7540.00	13.360	188.830	7531.57	124.44 S	41.06 E	118.80	1.87
7572.00	13.970	189.000	7562.66	131.91 S	39.88 E	126.35	1.91
7603.00	14.500	189.530	7592.71	139.43 S	38.66 E	133.97	1.76

Survey Report for Sec 28-T24S-R26E - White City Penn 28 Gas Unit Com 3 #4

Measured Depth (ft)	Incl.	Grid Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
7635.00	14.770	190.060	7623.67	147.40 S	37.28 E	142.04	0.94
7667.00	14.330	190.580	7654.64	155.30 S	35.84 E	150.07	1.43
7698.00	13.360	190.580	7684.74	162.60 S	34.48 E	157.47	3.13
7730.00	13.100	191.990	7715.89	169.78 S	33.05 E	164.77	1.29
7761.00	13.360	191.990	7746.07	176.72 S	31.57 E	171.83	0.84
7793.00	13.750	193.750	7777.18	184.03 S	29.90 E	179.29	1.77
7824.00	13.800	192.520	7807.29	191.22 S	28.22 E	186.62	0.96
7856.00	14.150	193.220	7838.34	198.75 S	26.50 E	194.30	1.21
7888.00	14.150	191.110	7869.37	206.40 S	24.85 E	202.09	1.61
7919.00	14.410	190.230	7899.41	213.91 S	23.44 E	209.72	1.09
7951.00	14.770	188.830	7930.38	221.86 S	22.10 E	217.77	1.57
7983.00	14.770	189.180	7961.32	229.92 S	20.83 E	225.92	0.28
8014.00	15.290	189.000	7991.26	237.85 S	19.56 E	233.95	1.68
8046.00	15.470	188.650	8022.12	246.24 S	18.26 E	242.43	0.63
8077.00	15.030	188.830	8052.02	254.30 S	17.02 E	250.58	1.43
8109.00	15.290	188.650	8082.91	262.57 S	15.75 E	258.94	0.83
8141.00	15.560	189.350	8113.76	270.98 S	14.41 E	267.45	1.02
8172.00	15.290	189.880	8143.64	279.11 S	13.04 E	275.68	0.98
8204.00	15.730	190.760	8174.48	287.53 S	11.50 E	284.22	1.56
8235.00	15.910	190.230	8204.30	295.84 S	9.96 E	292.66	0.74
8267.00	16.000	190.230	8235.07	304.49 S	8.40 E	301.44	0.28
8299.00	16.520	190.060	8265.79	313.31 S	6.82 E	310.38	1.63
8330.00	16.790	189.710	8295.49	322.06 S	5.30 E	319.25	0.93
8362.00	16.440	191.110	8326.15	331.06 S	3.65 E	328.38	1.66
8393.00	15.910	190.230	8355.93	339.55 S	2.05 E	336.99	1.88
8425.00	16.080	189.530	8386.69	348.24 S	0.53 E	345.80	0.80
8457.00	16.000	188.650	8417.44	356.97 S	0.86 W	354.63	0.80
8488.00	16.080	187.950	8447.23	365.44 S	2.10 W	363.19	0.68
8520.00	16.520	188.120	8477.95	374.34 S	3.36 W	372.17	1.38
8552.00	16.520	188.120	8508.63	383.34 S	4.64 W	381.27	0.00
8583.00	16.700	188.120	8538.33	392.12 S	5.89 W	390.13	0.58
8615.00	16.610	189.000	8568.99	401.19 S	7.26 W	399.30	0.84
8647.00	16.790	189.530	8599.64	410.26 S	8.74 W	408.48	0.74
8678.00	16.080	190.060	8629.37	418.90 S	10.23 W	417.24	2.34
8710.00	15.470	191.110	8660.17	427.46 S	11.83 W	425.92	2.10
8741.00	15.030	192.520	8690.08	435.44 S	13.49 W	434.04	1.86
8773.00	14.410	192.340	8721.03	443.38 S	15.24 W	442.13	1.94
8805.00	14.060	193.050	8752.04	451.05 S	16.97 W	449.96	1.22
8836.00	13.710	194.280	8782.14	458.28 S	18.73 W	457.34	1.48
8868.00	13.620	195.150	8813.23	465.59 S	20.65 W	464.82	0.70

Survey Report for Sec 28-T24S-R26E - White City Penn 28 Gas Unit Com 3 #4

Measured Depth (ft)	Incl.	Grid Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
8899.00	13.890	194.280	8843.34	472.72 S	22.52 W	472.12	1.10
8931.00	14.060	193.050	8874.40	480.23 S	24.35 W	479.79	1.07
8963.00	13.970	192.170	8905.44	487.79 S	26.04 W	487.50	0.72
8994.00	13.270	191.820	8935.57	494.93 S	27.56 W	494.77	2.27
9026.00	13.010	191.210	8966.73	502.06 S	29.01 W	502.02	0.92
9057.00	14.070	192.380	8996.87	509.17 S	30.49 W	509.25	3.53
9089.00	14.350	191.220	9027.89	516.85 S	32.10 W	517.07	1.25
9120.00	14.390	190.350	9057.92	524.41 S	33.54 W	524.75	0.71
9152.00	15.030	188.380	9088.87	532.43 S	34.86 W	532.86	2.54
9184.00	15.310	187.630	9119.76	540.72 S	36.02 W	541.23	1.07
9216.00	15.560	187.970	9150.61	549.16 S	37.18 W	549.75	0.83
9247.00	15.520	189.370	9180.47	557.37 S	38.43 W	558.05	1.22
9279.00	15.830	189.050	9211.28	565.90 S	39.82 W	566.69	1.01
9310.00	16.150	188.380	9241.08	574.34 S	41.11 W	575.22	1.19
9342.00	16.290	188.370	9271.81	583.19 S	42.41 W	584.15	0.44
9374.00	16.670	188.400	9302.49	592.17 S	43.73 W	593.23	1.19
9405.00	16.670	188.740	9332.19	600.96 S	45.06 W	602.12	0.31
9437.00	16.430	188.640	9362.87	609.97 S	46.44 W	611.23	0.76
9469.00	16.210	189.460	9393.58	618.85 S	47.85 W	620.21	1.00
9500.00	16.150	189.270	9423.35	627.37 S	49.26 W	628.84	0.26
9532.00	16.260	188.830	9454.08	636.19 S	50.66 W	637.76	0.52
9564.00	16.230	189.100	9484.80	645.04 S	52.06 W	646.71	0.25
9595.00	15.870	189.520	9514.59	653.49 S	53.44 W	655.27	1.22
9627.00	15.980	189.740	9545.36	662.15 S	54.91 W	664.04	0.39
9659.00	15.700	189.780	9576.15	670.76 S	56.39 W	672.76	0.88
9690.00	16.040	191.180	9605.97	679.09 S	57.93 W	681.22	1.65
9723.00	16.190	189.570	9637.67	688.10 S	59.58 W	690.36	1.43
9754.00	15.870	190.750	9667.46	696.53 S	61.09 W	698.90	1.47
9786.00	16.060	189.420	9698.23	705.19 S	62.63 W	707.69	1.29
9818.00	16.230	189.920	9728.97	713.97 S	64.13 W	716.57	0.69
9850.00	16.270	189.270	9759.69	722.79 S	65.62 W	725.52	0.58
9881.00	15.810	189.270	9789.48	731.25 S	67.00 W	734.07	1.48
9913.00	15.820	189.710	9820.27	739.85 S	68.44 W	742.78	0.38
9944.00	16.170	188.650	9850.07	748.28 S	69.80 W	751.32	1.47
9976.00	16.610	185.840	9880.77	757.24 S	70.94 W	760.34	2.83
10008.00	16.960	187.950	9911.41	766.41 S	72.05 W	769.58	2.20
10039.00	17.400	185.660	9941.03	775.50 S	73.13 W	778.74	2.60
10071.00	17.670	183.900	9971.54	785.11 S	73.93 W	788.37	1.86
10102.00	17.930	183.900	10001.05	794.56 S	74.58 W	797.84	0.84
10134.00	17.840	183.550	10031.51	804.37 S	75.21 W	807.65	0.44

Survey Report for Sec 28-T24S-R26E - White City Penn 28 Gas Unit Com 3 #4

Measured Depth (ft)	Incl.	Grid Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
10166.00	18.190	183.200	10061.94	814.25 S	75.80 W	817.53	1.14
10229.00	18.720	182.150	10121.70	834.17 S	76.72 W	837.42	0.99
10292.00	18.460	182.500	10181.41	854.24 S	77.54 W	857.45	0.45
10324.00	18.460	182.320	10211.77	864.36 S	77.97 W	867.55	0.18
10387.00	18.190	183.730	10271.57	884.14 S	79.01 W	887.32	0.82
10450.00	17.670	184.960	10331.51	903.48 S	80.48 W	906.70	1.02
10482.00	17.670	185.310	10362.00	913.15 S	81.34 W	916.41	0.33
10513.00	17.670	185.490	10391.54	922.52 S	82.23 W	925.81	0.18
10545.00	17.700	187.020	10422.03	932.18 S	83.29 W	935.53	1.46
10608.00	17.340	189.110	10482.10	950.96 S	85.95 W	954.49	1.15
10672.00	17.260	190.010	10543.21	969.72 S	89.11 W	973.50	0.44
10735.00	17.490	191.010	10603.34	988.22 S	92.54 W	992.27	0.60
10798.00	17.670	193.050	10663.39	1006.83 S	96.51 W	1011.21	1.02
10862.00	18.020	193.570	10724.31	1025.91 S	101.02 W	1030.69	0.60
10925.00	18.190	194.280	10784.20	1044.91 S	105.73 W	1050.12	0.44
10988.00	18.280	192.170	10844.03	1064.10 S	110.24 W	1069.70	1.06
11052.00	18.280	191.990	10904.80	1083.73 S	114.44 W	1089.68	0.09
11083.00	17.930	191.290	10934.27	1093.17 S	116.39 W	1099.28	1.33
11114.00	17.490	191.640	10963.80	1102.41 S	118.26 W	1108.68	1.46
11146.00	16.870	193.920	10994.37	1111.63 S	120.35 W	1118.08	2.86
11177.00	16.610	194.450	11024.06	1120.28 S	122.54 W	1126.93	0.97
11209.00	16.440	194.100	11054.74	1129.10 S	124.78 W	1135.95	0.62
11241.00	16.440	194.630	11085.43	1137.88 S	127.03 W	1144.93	0.47
11272.00	16.520	195.510	11115.15	1146.37 S	129.31 W	1153.63	0.85
11304.00	16.350	195.680	11145.85	1155.09 S	131.75 W	1162.57	0.55
11335.00	16.520	194.980	11175.58	1163.55 S	134.07 W	1171.24	0.84
11367.00	16.170	195.150	11206.29	1172.24 S	136.41 W	1180.15	1.10
11399.00	16.080	197.440	11237.03	1180.77 S	138.90 W	1188.91	2.01
11430.00	15.540	196.560	11266.85	1188.85 S	141.37 W	1197.22	1.91
11462.00	16.080	197.620	11297.64	1197.18 S	143.93 W	1205.80	1.91
11493.00	16.440	198.320	11327.40	1205.44 S	146.61 W	1214.31	1.32
11525.00	17.050	198.670	11358.05	1214.18 S	149.54 W	1223.33	1.93
11556.00	17.490	197.970	11387.65	1222.92 S	152.43 W	1232.35	1.57
11619.00	17.140	198.670	11447.79	1240.72 S	158.32 W	1250.71	0.65
11683.00	15.030	205.000	11509.29	1257.18 S	164.85 W	1267.82	4.28
11777.00	12.300	222.290	11600.66	1275.64 S	176.74 W	1287.55	5.20
11840.00	10.110	232.600	11662.46	1283.96 S	185.65 W	1296.85	4.70
11900.00	10.110	232.600	11721.53	1290.36 S	194.02 W	1304.18	0.00

All data is in Feet (US) unless otherwise stated. Directions and coordinates are relative to Grid North.
Vertical depths are relative to RKB=3387+25est=3412. Northings and Eastings are relative to Well.

The Dogleg Severity is in Degrees per 100 feet.

Survey Report for Sec 28-T24S-R26E - White City Penn 28 Gas Unit Com 3 #4

Vertical Section is from Well and calculated along an Azimuth of 186.696° (Grid).

Based upon Minimum Curvature type calculations, at a Measured Depth of 11900.00ft.,
The Bottom Hole Displacement is 1304.87ft., in the Direction of 188.551° (Grid).

Comments

Measured Depth (ft)	Station Coordinates			Comment
	TVD (ft)	Northings (ft)	Eastings (ft)	
6647.00	6645.56	28.93 S	62.60 E	tie from gyro
11840.00	11662.46	1283.96 S	185.65 W	last MWD survey
11900.00	11721.53	1290.36 S	194.02 W	Projection to endrun

North Reference Sheet for Sec 28-T24S-R26E - White City Penn 28 Gas Unit Com 3 #4

Coordinate System is NAD27 New Mexico State Planes, Eastern 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 -104.333°, Longitude Origin: 0.000°, Latitude Origin: 31.000°

False Easting: 152400.00m, False Northing: 0.00m, Scale Reduction: 0.99990909

Grid Coordinates of Well: 431498.30 N, 509933.50 E

Geographical Coordinates of Well: 32° 11' 10.6864" N, 104° 18' 04.4069" W

Surface Elevation of Well: 3412.00ft

Grid Convergence at Surface is +0.017°, Magnetic Convergence at Surface is -8.635° (7 March, 2005)

