

HYDROGEOLOGIC INVESTIGATION

MOBIL PROPERTY

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INTRODUCTION

The hydrogeologic investigation conducted at this site is part of a larger study to define the ground water resources available in Martin County. Testing at this site included drilling a pilot hole, collection geophysical information, installing wells which were later used for an aquifer performance test (APT), collecting water quality data, and also obtaining a continuous core. This data packet contains the results of the data collection along with an analysis of the APT results.

SITE DESCRIPTION

General

The site is located 2 miles south of Cove Road and 1 mile east of the South Fork of the St. Lucie River on Mobil Property. Specifically, the site is in Sec 10, Township 39 South, Range 41 East, Latitude 27° 05' 35", Longitude 80° 13' 43", State Plane Coordinates 750900 East and 1003700 North, Martin County, Florida. See figure 1 for a map. Current land use is cattle grazing on unimproved pasture dominated by pine and palmetto.

Hydrogeology

There are two major aquifer systems in Martin County: the Surficial and the Floridan. The Floridan Aquifer System is highly mineralized in Martin County and is not suitable for potable supply without extensive treatment. It is used by some agricultural operations after mixing with surface water to dilute the mineral content. The Surficial Aquifer System contains two zones; the water table, in which water levels respond to atmospheric pressure, and a semi-unconfined producing zone, separated by a discontinuous layer of fine sand, silt and clay of varying thickness. The water table, consisting of loose sand and some shell, is generally too thin to produce significant quantities of water. The deeper producing zone, made up of sand, shell and thin layers of limestone/sandstone is the most used portion of the aquifer system. Figure 2 is a lithologic column of the pilot hole. The well cuttings descriptions, both the field drillers log and the microscope office description, can be found in the appendix.

METHOD OF STUDY

Well Descriptions

The pilot hole was drilled to a total of 182 feet below land surface. Drilling terminated upon encountering a dark green, dense, phosphatic clay which signifies the top of the Hawthorn Formation.

Geophysical surveys; density, gamma neutron, neutron porosity, single point resistivity, 16" and 64" normal resistivity, 6' lateral resistivity, caliper and spontaneous potential, were run. The logs can be found in the appendix. The logs were then used to determine the extent of the producing zone. For accuracy and ease of pump test analysis, the entire producing zone was screened.

All wells were drilled using the mud rotary method to the specifications on the table on figure 3. PVC casing and 20 slot screen were installed. If necessary, water and mud thinner were pumped down the well to flush out the drilling mud. Gravel

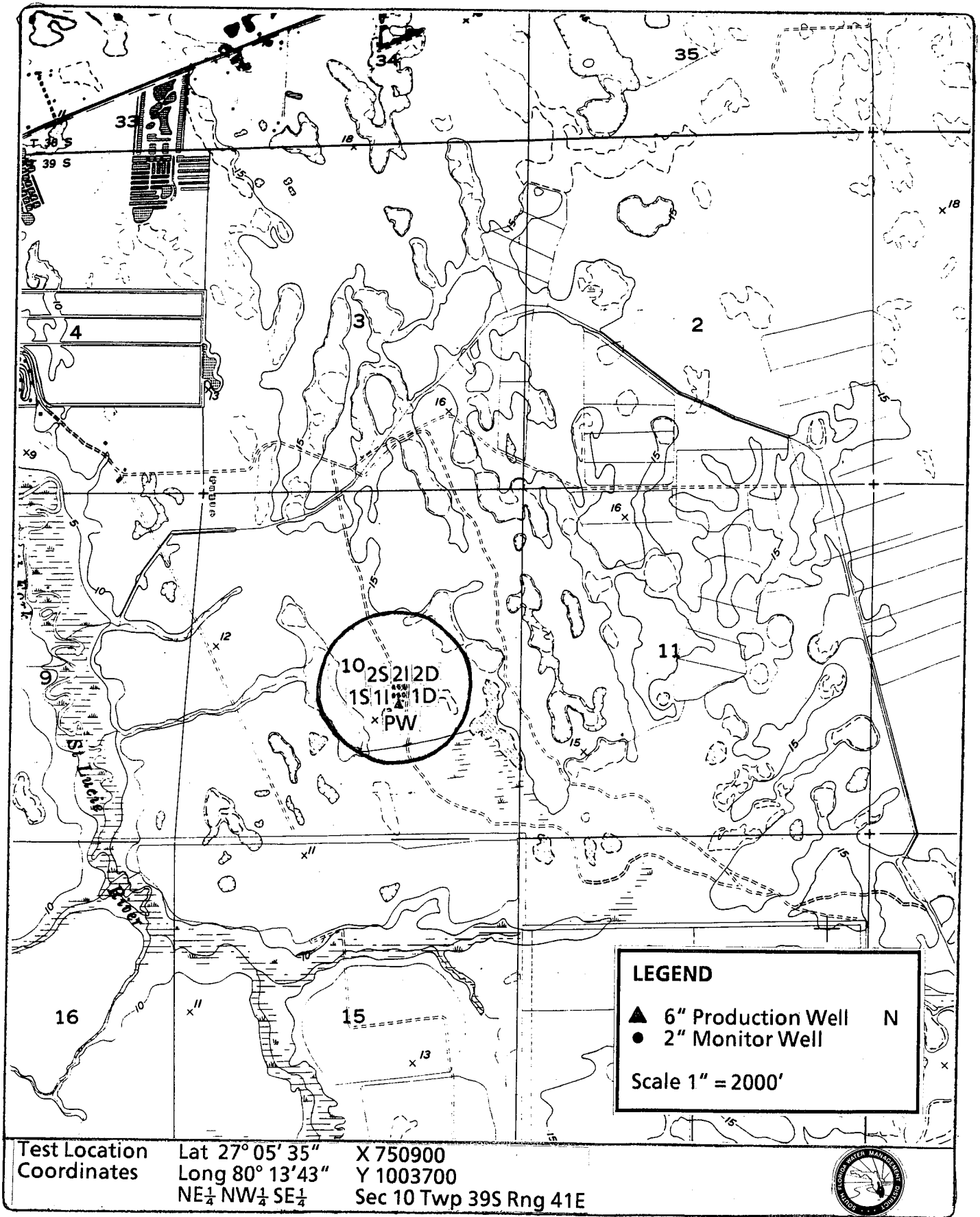
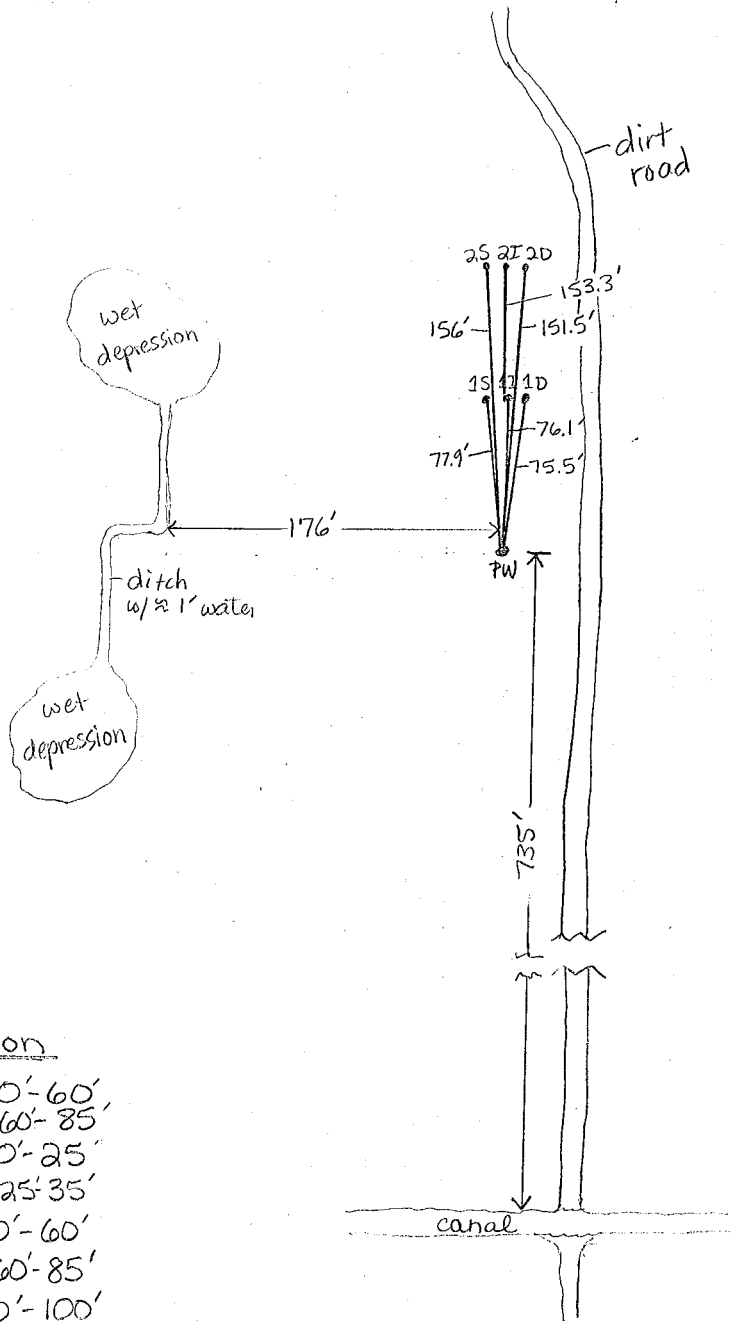


FIGURE 1 SITE LOCATION

Mobil APT Site



Well Construction

- 6" PW cased 0'-60'
screened 60'-85'
- 2" 1S, 2S cased 0'-25'
screened 25'-35'
- 2" 1I, 2I cased 0'-60'
screened 60'-85'
- 2" 1D, 2D cased 0'-100'
screened 100'-105'

42-381 50 SHEETS 5 SQUARE
42-382 100 SHEETS 5 SQUARE
42-389 200 SHEETS 5 SQUARE
NATIONAL



was then poured around the screen and each well was developed with air. The remaining borehole outside the casing was then cement grouted.

Step Drawdown Test

A step drawdown test was performed on September 9, 1989. The production well was pumped at 2 rates: 70 gpm and 95 gpm. This test is run to get an idea of the pump capacity of the well, the drawdown expected in the monitor wells during a pump test, and to check that the wells are adequately developed. A minimum of 3 steps is necessary to calculate transmissivity and well loss values. The production well was pumped using a 3-inch portable pump starting at a low pump rate. Pump rates were measured by a 3-inch flow meter. Discharge was routed 250 feet away from the wells through a hose which discharged onto the ground and did not flow back toward the site. Water levels in the pumped well and the monitor wells were collected using steel tapes. As the well drawdown stabilized at one pump rate, the rate was increased without stopping the pump in-between steps, until the final step at the maximum rate of the pump. Unfortunately, the pump apparently was at full capacity on the second step, so a third step was not possible. The results of the step drawdown test can be found in the appendix.

Constant Rate Test Setup

The location of the production and monitor wells and their relation to surface water bodies is depicted in Figure 3. A 3-inch submersible pump was used to pump the 6-inch production well. Discharge was monitored by a 3-inch impeller flow meter located at the well head and by a 6-inch PVC manometer tube with a 3-inch orifice plate installed. The water was discharged into a canal located 700 feet from the production well. A staff gauge was placed in the canal near the point of discharge. Water level data were collected by an In-Situ, Inc. SE200 Hydrologic Analysis System. The SE200 is a portable computerized water level data acquisition system. Water levels were measured using Truck Ltd 160D transducers, which were corrected for temperature and barometric pressure fluctuations. Steel tape measurements were also taken as a check of the computer values. Water levels in the production well were taken with an electric well sounder. Meteorological conditions were recorded by a meteorograph which collects data on temperature, barometric pressure and humidity. The graph can be found in the appendix.

Aquifer Performance Test

Setup and pre-test pump checkout were completed, whereupon it began to rain for approximately 40 minutes, accumulating 1.25 inches of rain in the gauge. Water levels were observed for the next 1.5 hours until the change in water levels became approximately .02 feet per 15 minutes. At that point, the APT was started at 2:05 PM on October 9, 1989 and continued for 43 hours at a pumping rate of 136 gpm. The only significant rainfall event during the test occurred 1.5 hours into the test, measuring .32 inches in the rain gauge. The test was stopped short of the planned 72 hours, under threatening skies, in order to collect recovery data before the next rainfall. The wells fully recovered to pre-test levels in 2 hours and continued to rise. Twenty-four hours later water levels had risen in the water table to .34', in the intermediate zone to .39' and in the deeper zone to .38' above pre-test levels. All drawdown and recovery data, both the In-Situ and hand taped values, are included in the appendix.

Water Quality

Water samples were collected from the production well at the beginning and end of the APT. The results can be found in Table 1. A table of water quality standards can be found in the appendix.

SUMMARY

A hydrogeologic study was performed on Mobil property designated the TP&J tract, located in east central Martin County, to gather data for a reconnaissance report on Martin County ground water resources. Geophysical, lithologic and water quality data were collected and an aquifer performance test was completed.

The lithologic and geophysical data describe the aquifer as a 53 feet thick sequence of shell, sand and limestone/sandstone layers beginning at 52 feet below land surface. Hawthorn Formation sediments were encountered 170 feet below ground. The water quality meets drinking water standards.

Water Quality

Water samples were collected from the production well at the beginning and end of the APT. The results can be found in Table 1. A table of water quality standards can be found in the appendix.

RESULTS

Step Drawdown Test

The step drawdown test data was analyzed and a specific capacity for each discharge rate was calculated. The results are as follows:

<u>Step</u>	<u>Rate</u>	<u>Drawdown</u>	<u>Specific Capacity</u>
1	70 gpm	12.3'	5.7 gpm/ft
2	95 gpm	17.38'	5.5 gpm/ft

Aquifer Performance Test

Two hydraulic coefficients, transmissivity and storage, were determined by analyzing the drawdown data collected from the APT. The following non-equilibrium equations were used (Neuman, 1975):

$$T = \frac{114.6Q W(Uay,\beta)}{s} \quad S = \frac{Tt}{2693r^2(1/Ua)}$$

Where

T = Transmissivity in gpd/ft
Q = Pumpage rate in gpm
s = Drawdown in feet
t = Time since pumping started in minutes
r = Radial distance from pumping well in feet
W(Uay,β) = well function

The above equation assumes the aquifer to be unconfined, homogeneous, anisotropic, infinite in areal extent, of constant thickness, the production and observation wells having no storage capacity and the wells fully penetrating the aquifer.

When pumping is stopped, well and aquifer water levels rise toward their pre-pumping levels. The rate of recovery provides a means of calculating a transmissivity value for each monitor well. These values serve to check the calculations based on the drawdown data. The following equation was used:

$$T = \frac{264 Q}{\Delta s'}$$

Where:

T = Transmissivity in gpd/ft
Q = pumpage rate in gpm
s' = residual drawdown in feet

When the recovery data is plotted, if the t/t' value at 0 drawdown is 2 or more, it can be concluded that some recharge water reached the aquifer during the pumping period.

The drawdown data for each observation well was plotted on log-log graph paper. These curves were then matched to type curves, the necessary values were determined and then entered in the equations. The recovery data was plotted on semi-log graph paper. A straight line was drawn through the points and a slope was determined which was entered in the equation. The t/t' value at 0 drawdown was approximately 30, confirming that the rainfall recharged the aquifer during the APT. Therefore, it is important to analyze the early data, when recharge effects do not significantly distort the data. The plotted test data are presented in figures 4 through 11, with the calculation for transmissivity shown on each graph. Table 2 lists a summary of the calculated values. Average values of transmissivity and storage are: 15,100 gpd/ft and 2.4×10^{-4} respectively.

TABLE 2
SUMMARY OF AQUIFER CHARACTERISTICS

WELL NO.	METHOD	TRANSMISSIVITY (gpd/ft)	STORAGE COEFFICIENT
1I	Neuman Recovery	12,604 19,513	1.54E-4
1D	Neuman Recovery	16,852 23,164	3.46E-4
2I	Neuman Recovery	14,356 27,200	1.84E-4
2D	Neuman Recovery	6,493 29,648	2.0E-4

Water Quality

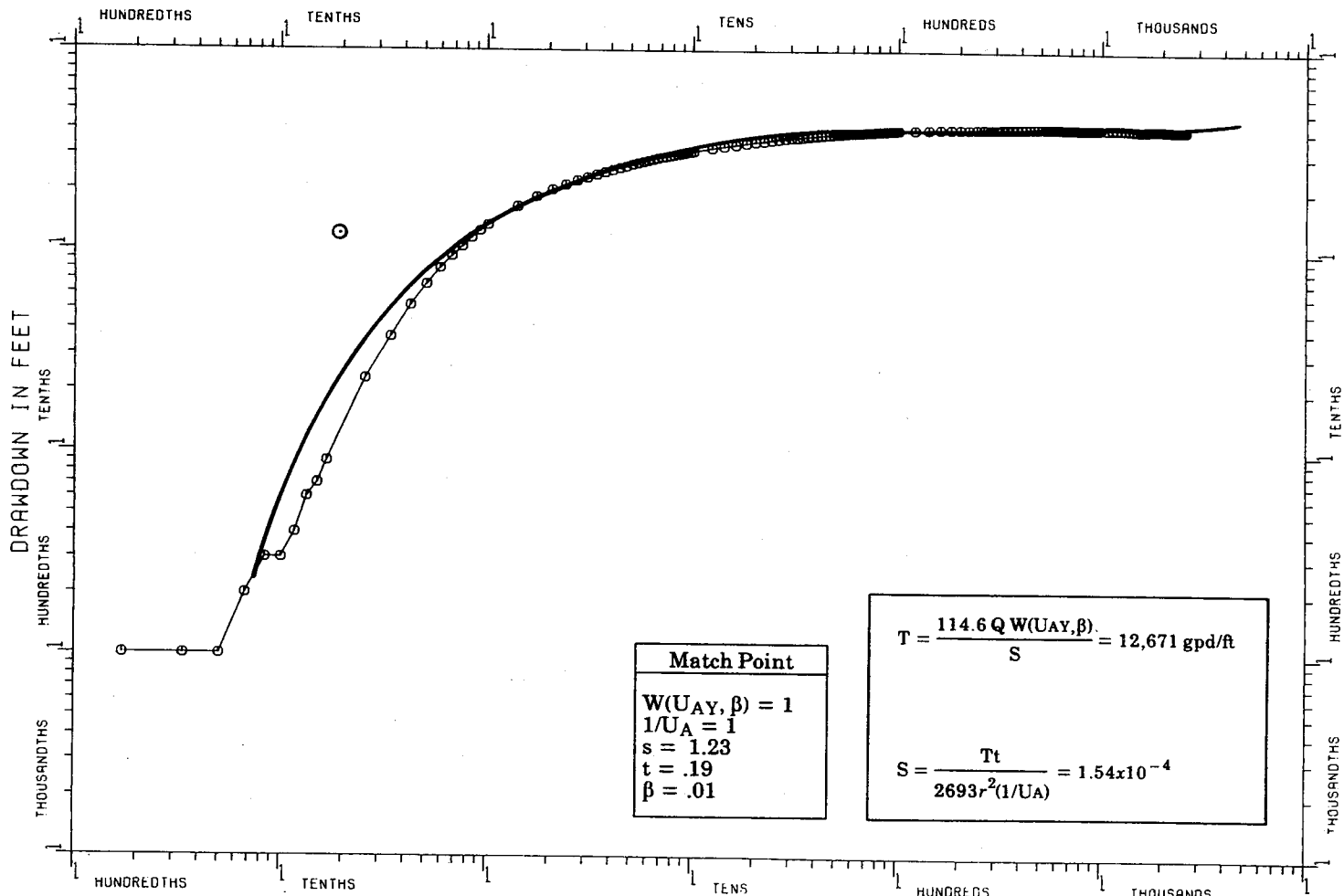
Referring to Table 1, none of the water quality parameters tested increased significantly from the beginning to the end of the test.

SUMMARY

A hydrogeologic study was performed on Mobil property designated the TP&J tract, located in east central Martin County, to gather data for a reconnaissance report on Martin County ground water resources. Geophysical, lithologic and water quality data were collected and an aquifer performance test was completed.

OBSERVATION WELL: 11

R = 76.1 Q = 136.0



Match Point
$W(U_{AY}, \beta) = 1$
$1/U_A = 1$
$s = 1.23$
$t = .19$
$\beta = .01$

$T = \frac{114.6 Q W(U_{AY}, \beta)}{S} = 12,671 \text{ gpd/ft}$
$S = \frac{Tt}{2693r^2(1/U_A)} = 1.54 \times 10^{-4}$

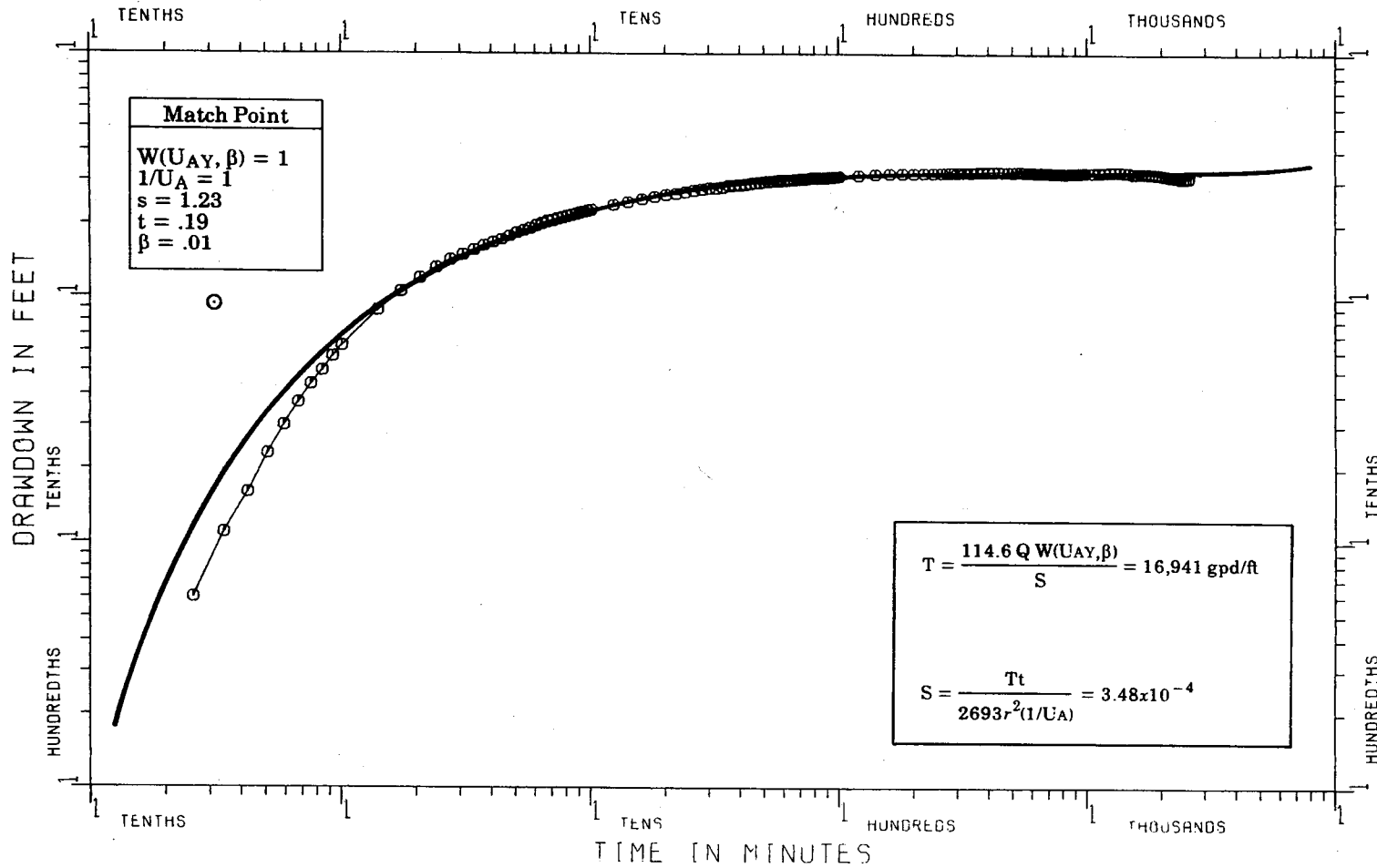
MOBIL (TP & J) DRAWDOWN

FIGURE 4

9

OBSERVATION WELL: 1D

R= 75.5 Q=136.0



MOBIL (TP & J) DRAWDOWN

FIGURES

01

OBSERVATION WELL: 21

R=153.3 Q=136.0

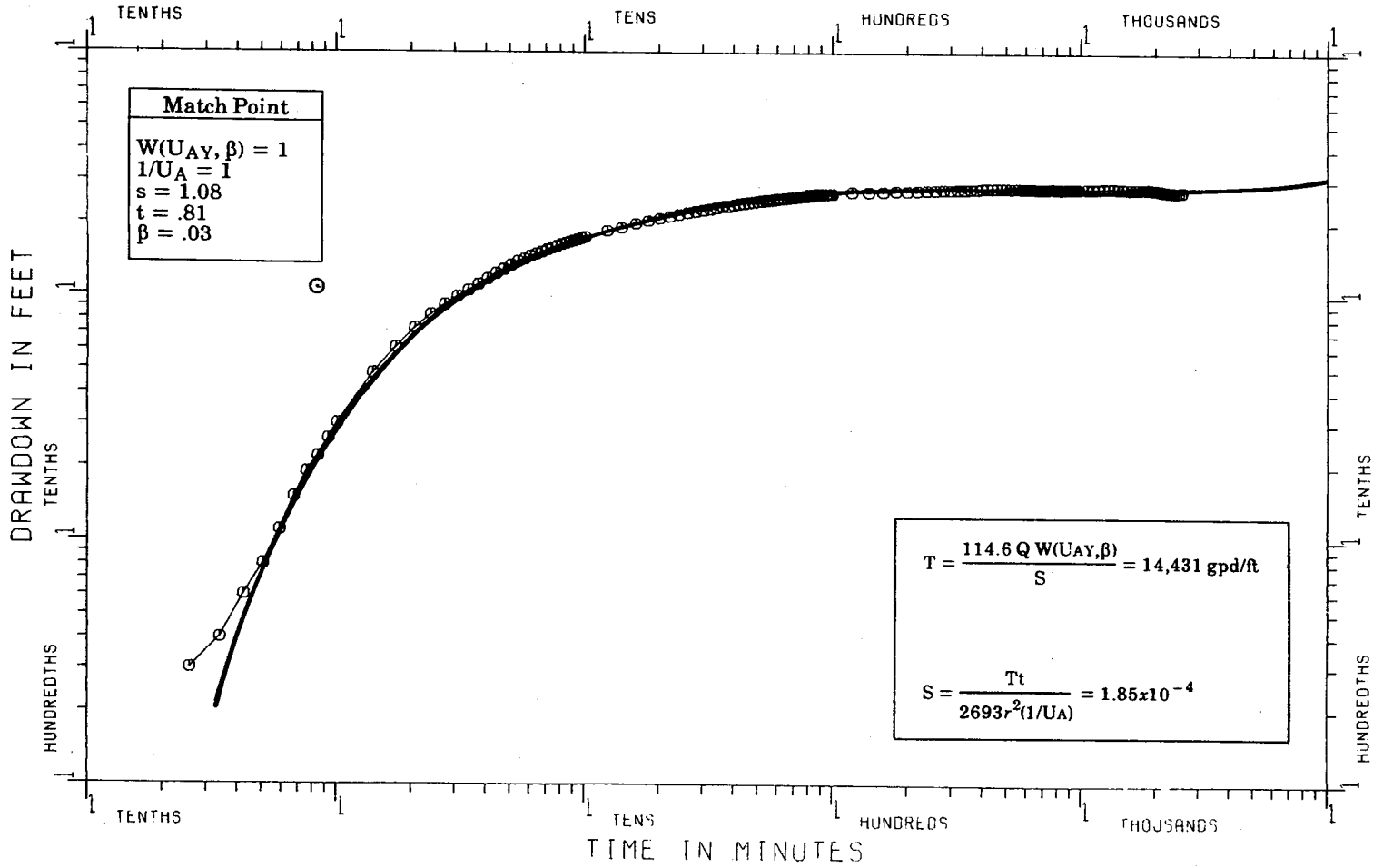
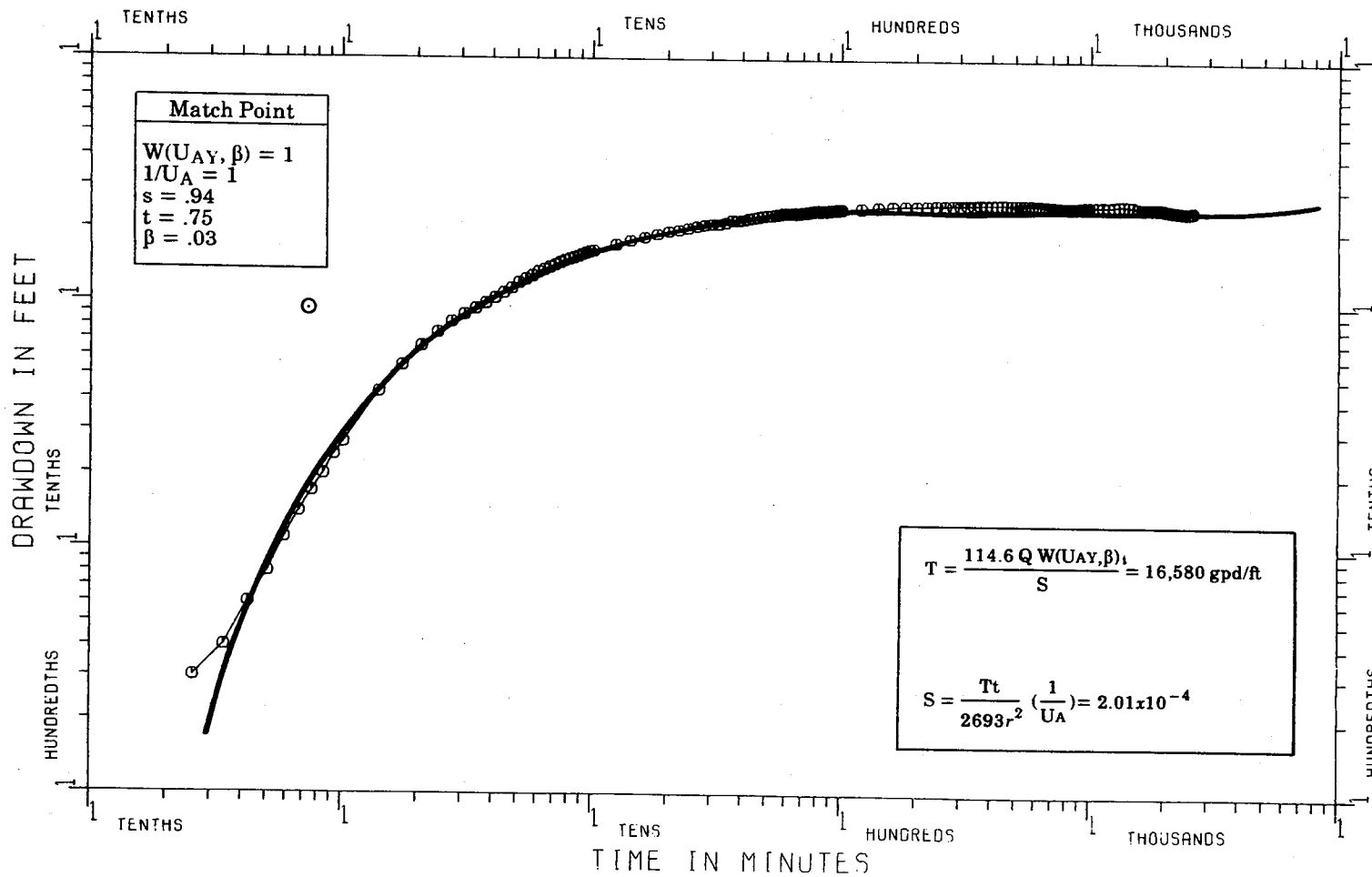


FIGURE 6

MOBIL (TP & J) DRAWDOWN

OBSERVATION WELL: 2D

R=151.5 Q=136.0



MOBIL (TP & J) DRAWDOWN

FIGURE 7

MOBIL (TP & J) RECOVERY
OBSERVATION WELL: 11

R= 76.1 Q=136.0

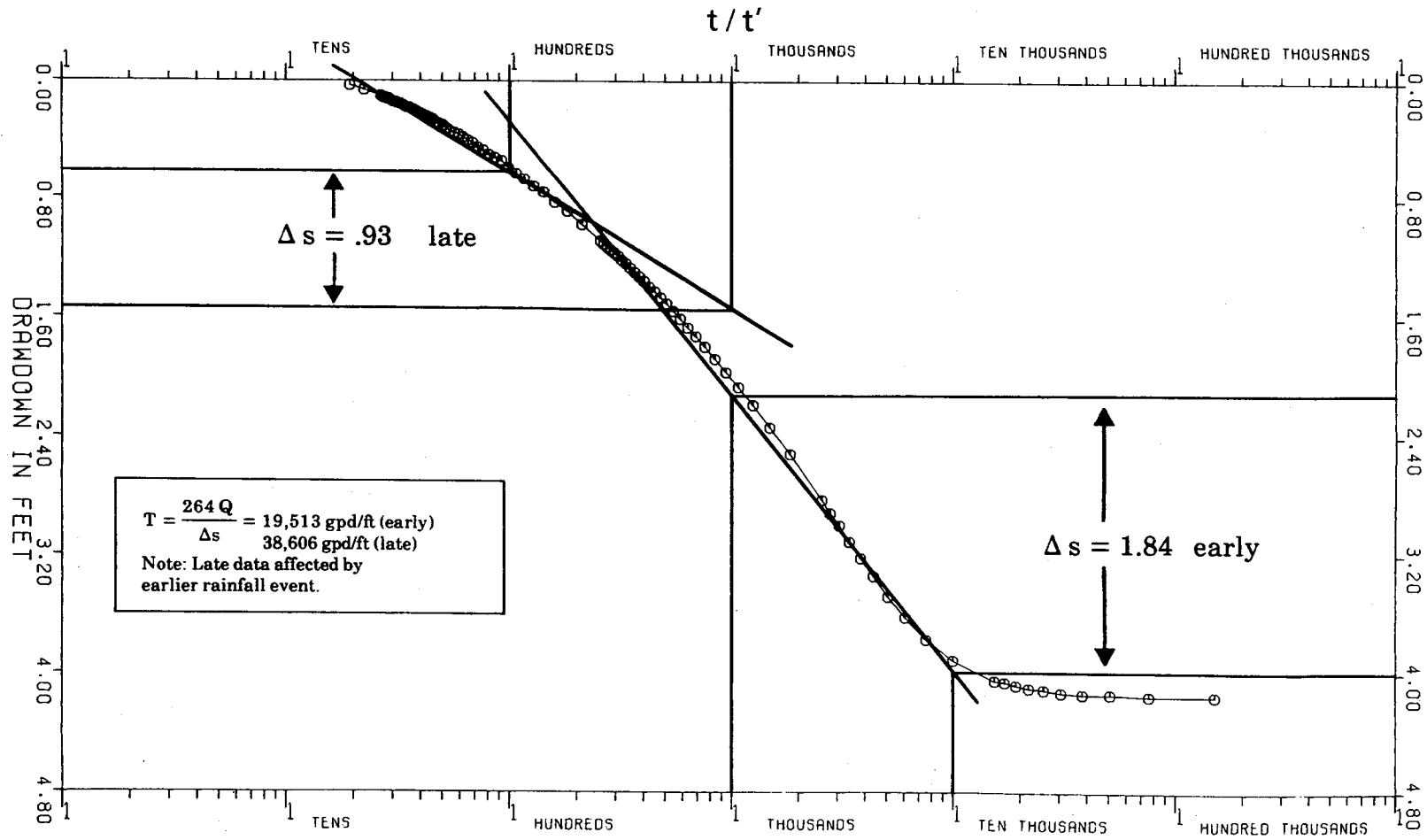


FIGURE 8

MOBIL (TP & J) RECOVERY

OBSERVATION WELL: 1D

R= 75.5 Q=136.0

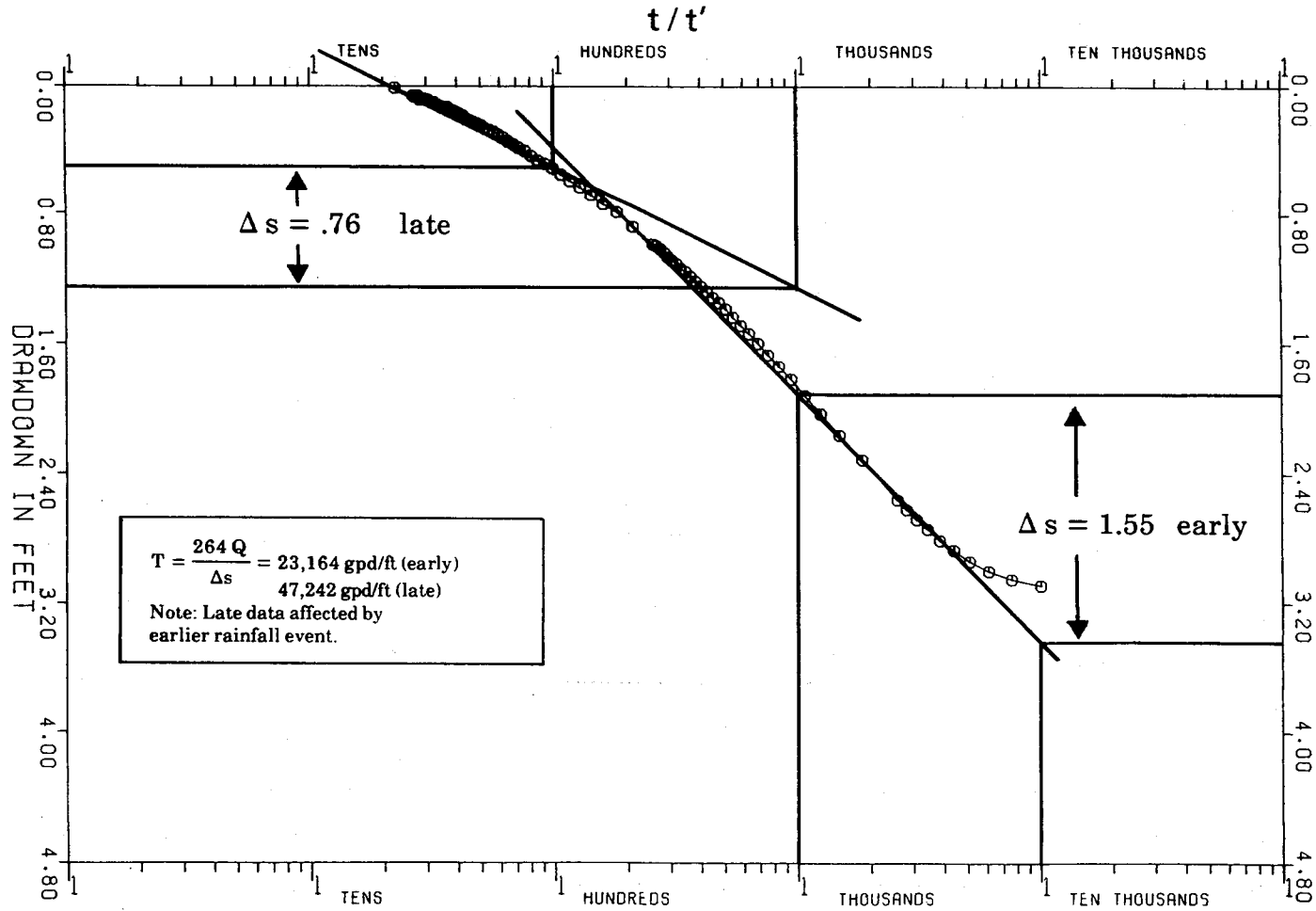


FIGURE 9

MOBIL (TP & J) RECOVERY

OBSERVATION WELL: 21

R=153.3 Q=136.0

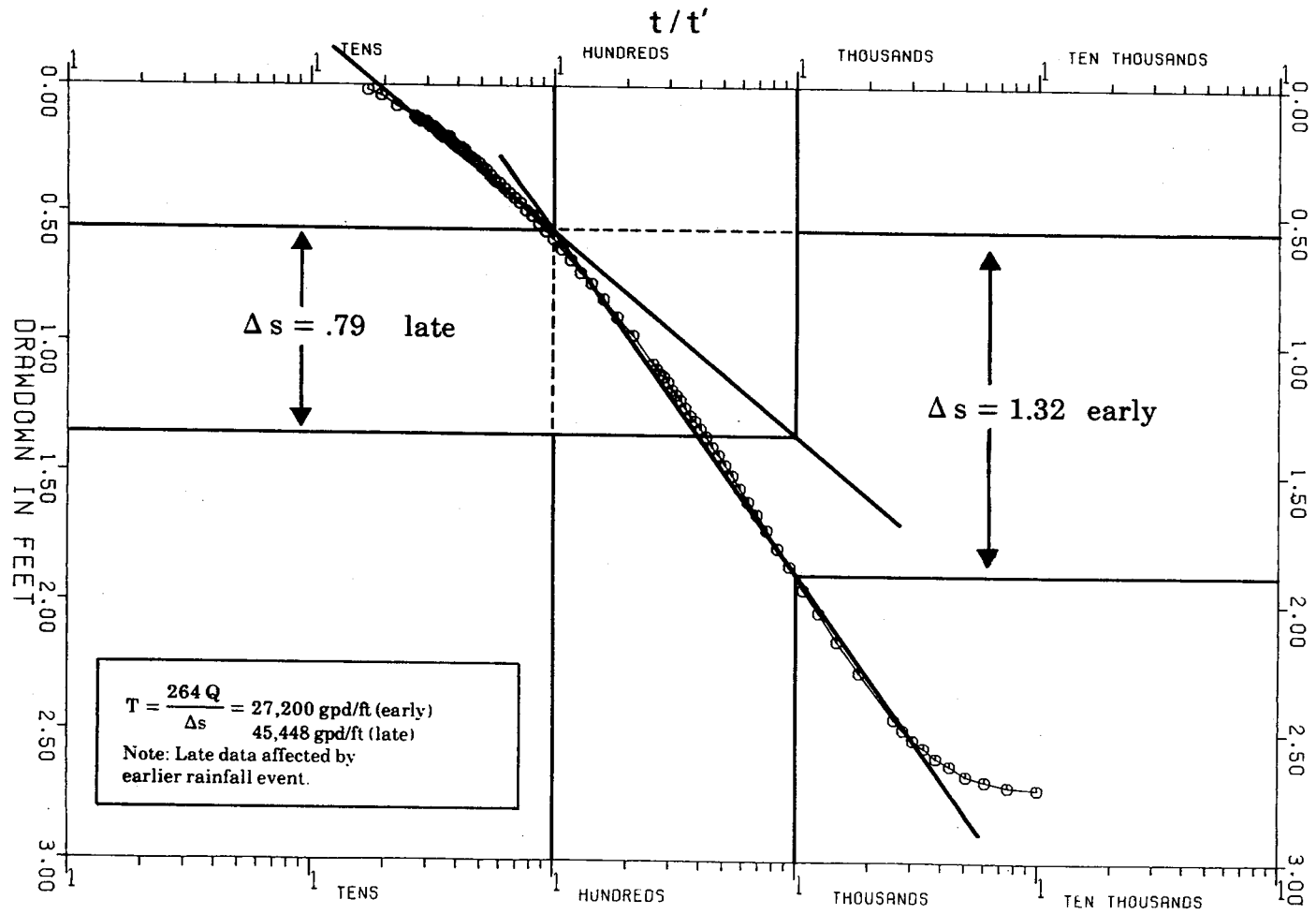


FIGURE 10

MOBIL (TP & J) RECOVERY

OBSERVATION WELL: 2D

R=151.5 Q=136.0

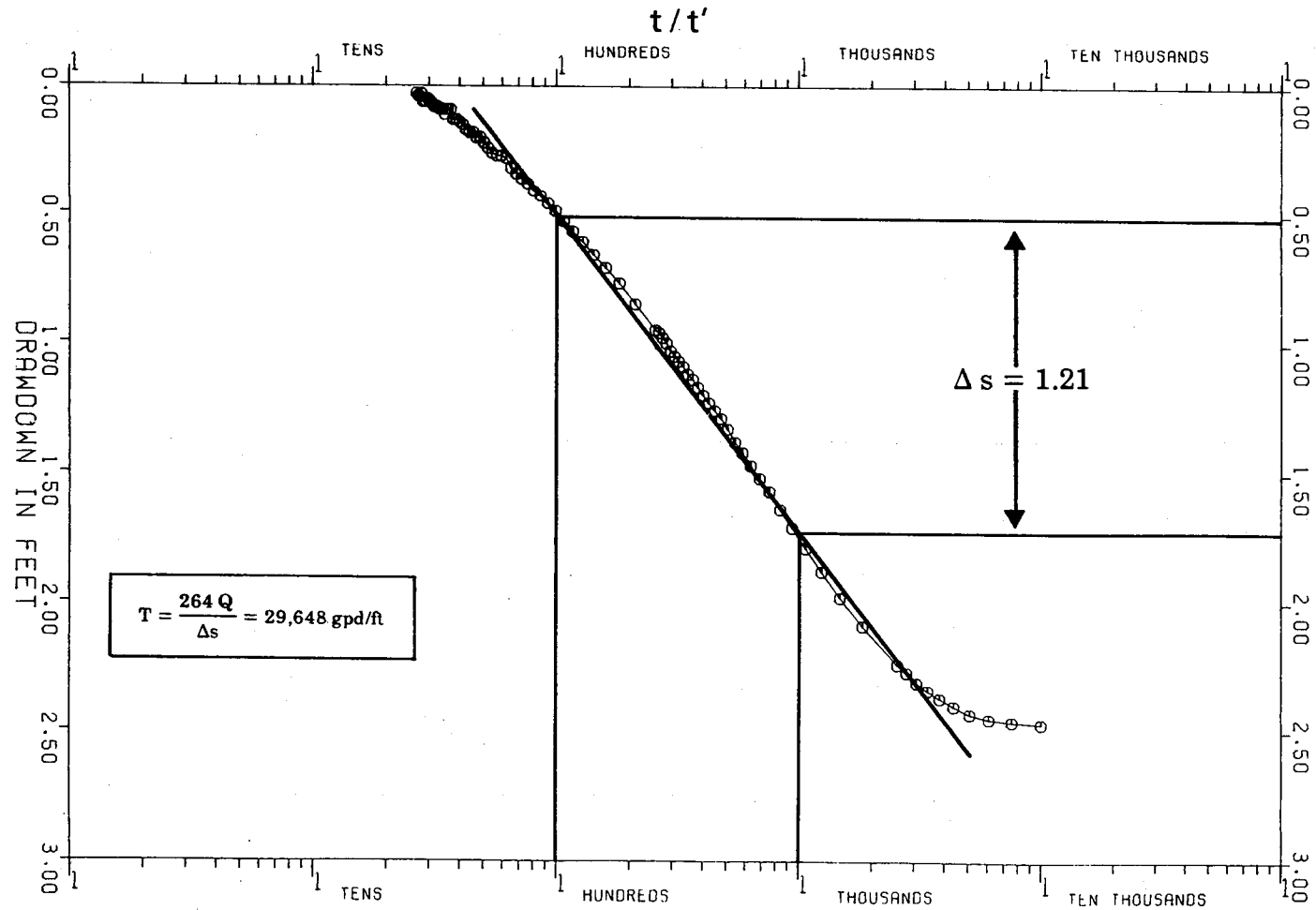


FIGURE 11

The lithologic and geophysical data describe the aquifer as a 53 feet thick sequence of shell, sand and limestone/sandstone layers beginning at 52 feet below land surface. Hawthorn Formation sediments were encountered 170 feet below ground. The water quality meets drinking water standards.

Analysis of the pump test data yielded the following aquifer characteristics:

Transmissivity	15,100 gpd/ft
Storage Coefficient	2.4E-4

BIBLIOGRAPHY

Driscoll, F.G., 1986. Groundwater and Wells. Johnson Division. pp. 252-260.

Neuman, S.P., 1975. Analysis of Pumping Test Data from Anisotropic Unconfined Aquifers Considering Delayed Gravity Response. Water Resources Research Vol. II, No. 2, p. 329-342.

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SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT Martin Co. WELL NO. Mobil DATE 8/29/89

DEPTH	DESCRIPTION - ROCK TYPE, COLOR, HARDNESS, OTHER	
0-2	white sand	
2-4	orange to brown clay	
4-5	lt gray sandy silt	
5-7	gray sand	
7-10	dk brown partially cemented sand	
10-20	dk red brown sand, partially cemented	
20-30	tan olive sand	
30-33	" " "	
33-36	dk gray sandstone, gray silt	
36-40	as above with lt orange to gray shell fragments	
40-42	shell	
42-50	very fine sand, gray	
50-52	fine sand, lt tan silt	
52-60	gray shell, tan shell, dk gray silt, sandstone ^{added water} mixed mud ^(silt)	
2' 2'	60-62	tan to gray sandstone, limestone, hard slow drilling, shell ^{silt} frag
	62-65	orange tan to gray sandstone mod cemented
	65-80	fine sand, shell fragm., interbedded limestone
	80-82	orange & tan whole shell, limestone, gray
	82-85	broken shell
1' 1'	85-92	broken & whole shell, green clay
2' 2'	92-98	lt orange tan shell
	98-105	shell & lt gray limestone
5' 5'	105-110	limestone, green clay
3' 3'	110-120	lt gray to tan shell fragments, minor limestone ^{water} for
	120-130	lt gray shell fragm. & green silty clay
	130-135	lt tan shell, gray sandstone, green clay balls
	135-143	shell fragm., lt green clay (minor) ^{added water} mixed mud
	143-145	lt tan shell, gray clay balls
8' 8'	145-151	dk gray shell fragments
	151-155	lt tan to lt orange shell, poorly consol. sandstone, ^{minor} phosph.
	155-160	^{mod to.} poorly consol. sandstone, phosphatic, minor shell fragm.
	160-170	lt tan poorly consol. s. stone, shiny flat oyster shell fragm, sand, phos
	170-180	dk green clay, limestone pieces (well consol.)

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - SFWMD

WELL NUMBER: W- 34
TOTAL DEPTH: 00182 FT.
45 SAMPLES FROM 0 TO 182 FT.

COUNTY - MARTIN
LOCATION: T.39S R.41E S.10 A
LAT = N 27D 05M 36
LON = W 80D 13M 43

COMPLETION DATE - 29/08/89

ELEVATION - 013 FT

OTHER TYPES OF LOGS AVAILABLE - ELECTRIC, GAMMA, NEUTRON, CALIPER

OWNER/DRILLER: MOBIL APT SITE; DRILLER; T. LUBRANO

WORKED BY: K. ADAMS & E. HOPKINS; SAMPLE QUALITY: GOOD

- 0 - 2 SAND; LIGHT GRAY; 30% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY;
GRAIN SIZE: MEDIUM; RANGE: MEDIUM TO COARSE;
ROUNDNESS: SUB-ANGULAR TO ROUNDED; MEDIUM SPHERICITY; UNCONSOLIDATED;
- 2 - 3 SAND; DARK YELLOWISH BROWN TO DARK YELLOWISH ORANGE; 20% POROSITY, INTERGRANULAR,
POSSIBLY HIGH PERMEABILITY;
GRAIN SIZE: MEDIUM; RANGE: FINE TO MEDIUM;
ROUNDNESS: SUB-ANGULAR; LOW SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: IRON STAIN- %;
- 3 - 5 SAND; LIGHT OLIVE; 20% POROSITY, INTERGRANULAR;
GRAIN SIZE: FINE; RANGE: FINE TO MEDIUM;
ROUNDNESS: ANGULAR TO SUB-ANGULAR; MEDIUM SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: SILT-03%, IRON STAIN- %, PLANT REMAINS-02%;
- 5 - 7 SAND; OLIVE GRAY; 25% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY;
GRAIN SIZE: MEDIUM; RANGE: MEDIUM TO COARSE;
ROUNDNESS: ANGULAR TO SUB-ROUNDED; MEDIUM SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: ORGANICS-01%, HEAVY MINERALS-01%;
- 7 - 10 SAND; PINKISH GRAY; 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY;
GRAIN SIZE: FINE; RANGE: FINE TO MEDIUM;
ROUNDNESS: SUB-ROUNDED; MEDIUM SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: ORGANICS-35%;
- 10 - 15 SAND; GRAYISH BROWN TO MODERATE YELLOWISH BROWN; 30% POROSITY, INTERGRANULAR;
GRAIN SIZE: COARSE; RANGE: MEDIUM TO COARSE;
ROUNDNESS: SUB-ROUNDED TO ROUNDED; MEDIUM SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: ORGANICS-05%, IRON STAIN- %;
OTHER FEATURES: FROSTED;
- 15 - 20 SAND; DARK YELLOWISH BROWN TO MODERATE YELLOWISH BROWN; 20% POROSITY, INTERGRANULAR;
GRAIN SIZE: MEDIUM; RANGE: FINE TO COARSE;
ROUNDNESS: SUB-ROUNDED TO ROUNDED; MEDIUM SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: SILT-05%, IRON STAIN- %;

- 20 - 22 SAND; DARK YELLOWISH BROWN; 20% POROSITY, INTERGRANULAR, LOW PERMEABILITY;
GRAIN SIZE: FINE; RANGE: FINE TO COARSE;
ROUNDNESS: SUB-ANGULAR TO ROUNDED; LOW SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: SILT-15%, ORGANICS-05%, IRON STAIN- %;
- 22 - 25 SAND; LIGHT OLIVE GRAY; 30% POROSITY, INTERGRANULAR;
GRAIN SIZE: MEDIUM; RANGE: MEDIUM TO MEDIUM;
ROUNDNESS: SUB-ROUNDED; MEDIUM SPHERICITY; UNCONSOLIDATED;
- 25 - 30 SAND; LIGHT OLIVE GRAY; 30% POROSITY, INTERGRANULAR;
GRAIN SIZE: MEDIUM; RANGE: MEDIUM TO MEDIUM;
ROUNDNESS: SUB-ANGULAR TO SUB-ROUNDED; MEDIUM SPHERICITY; UNCONSOLIDATED;
- 30 - 33 SAND; OLIVE GRAY; 30% POROSITY, INTERGRANULAR;
GRAIN SIZE: MEDIUM; RANGE: FINE TO MEDIUM;
ROUNDNESS: SUB-ANGULAR TO SUB-ROUNDED; HIGH SPHERICITY; UNCONSOLIDATED;
- 33 - 36 SAND; DARK YELLOWISH BROWN TO OLIVE GRAY; 20% POROSITY, INTERGRANULAR, LOW PERMEABILITY;
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE;
ROUNDNESS: SUB-ANGULAR; MEDIUM SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: CALCILUTITE-20%, SILT-05%, ORGANICS-05%;
- 36 - 40 AS ABOVE
5% POORLY INDURATED MICRITE LS & 5% SHELL FRAG.
- 40 - 50 SAND; OLIVE GRAY; 20% POROSITY, INTERGRANULAR;
GRAIN SIZE: FINE; RANGE: VERY FINE TO FINE;
ROUNDNESS: ANGULAR TO SUB-ANGULAR; MEDIUM SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: PHOSPHATIC SAND-01%, SHELL-02%, ORGANICS-01%, IRON STAIN- %;
FOSSILS: FOSSIL FRAGMENTS;
DESANDER SAMPLE
- 50 - 52 AS ABOVE
10% MICRITE, 2% CLAY
- 52 - 55 SHELL BED; OLIVE GRAY TO VERY LIGHT ORANGE; 30% POROSITY, INTERGRANULAR; UNCONSOLIDATED;
ACCESSORY MINERALS: LIMESTONE-30%, SILT-05%, QUARTZ SAND-03%;
FOSSILS: FOSSIL FRAGMENTS, BRYOZOA, MOLLUSKS, BARNACLES;
LIMESTONE PIECES ARE SMALL & SHELL ROUNDED
- 55 - 60 SHELL BED; VERY LIGHT ORANGE TO OLIVE GRAY; 35% POROSITY, INTERGRANULAR,
POSSIBLY HIGH PERMEABILITY; UNCONSOLIDATED;
ACCESSORY MINERALS: LIMESTONE-50%;
FOSSILS: BRYOZOA, SPICULES, FOSSIL FRAGMENTS;
VUGULAR, ROUNDED, PEBBLE SIZED LIMESTONE PIECES

- 60 - 62 SANDSTONE; OLIVE GRAY TO VERY LIGHT ORANGE; 20% POROSITY, INTERGRANULAR;
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE;
ROUNDNESS: ANGULAR TO SUB-ANGULAR; MEDIUM SPHERICITY; POOR INDURATION;
CEMENT TYPE(S): CALCILUTITE MATRIX;
ACCESSORY MINERALS: LIMESTONE-15%, CALCILUTITE-10%, CLAY-02%;
- 62 - 65 SANDSTONE; LIGHT OLIVE GRAY; 15% POROSITY, INTERGRANULAR, MOLDIC;
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE;
ROUNDNESS: SUB-ANGULAR; MEDIUM SPHERICITY; POOR INDURATION;
CEMENT TYPE(S): CALCILUTITE MATRIX;
ACCESSORY MINERALS: CALCILUTITE-25%, SHELL-10%, LIMESTONE-02%, PHOSPHATIC SAND-01%;
- 65 - 70 SHELL BED; VERY LIGHT ORANGE TO LIGHT OLIVE GRAY; 25% POROSITY, INTERGRANULAR;
UNCONSOLIDATED;
ACCESSORY MINERALS: LIMESTONE-10%;
FOSSILS: BARNACLES, FOSSIL FRAGMENTS, BRYOZOA, MOLLUSKS;
5% MICRITIC SANDSTONE AS ABOVE, POOR RETURNS PROBABLY FINE SAND
- 70 - 75 AS ABOVE
- 75 - 80 SHELL BED; YELLOWISH GRAY TO VERY LIGHT ORANGE; 30% POROSITY, INTERGRANULAR;
UNCONSOLIDATED;
ACCESSORY MINERALS: LIMESTONE-05%;
FOSSILS: BRYOZOA, WORM TRACES, MOLLUSKS, FOSSIL FRAGMENTS;
5% SLIGHTLY MICRITIC POORLY CONSOLIDATED SANDSTONE
- 80 - 82 AS ABOVE
- 82 - 85 SHELL BED; LIGHT OLIVE GRAY TO LIGHT OLIVE; 20% POROSITY, INTERGRANULAR; UNCONSOLIDATED;
ACCESSORY MINERALS: LIMESTONE-05%, SILT-02%, QUARTZ SAND-02%;
FOSSILS: FOSSIL FRAGMENTS, WORM TRACES, BRYOZOA, BARNACLES;
- 85 - 88 SHELL BED; LIGHT OLIVE GRAY; 20% POROSITY, INTERGRANULAR, LOW PERMEABILITY; UNCONSOLIDATED;
ACCESSORY MINERALS: SILT-10%, QUARTZ SAND-10%, CLAY-05%, CALCILUTITE-05%;
FOSSILS: FOSSIL FRAGMENTS, BRYOZOA, BARNACLES, MOLLUSKS, SPICULES;
- 88 - 92 SHELL BED; LIGHT OLIVE GRAY; 20% POROSITY, INTERGRANULAR, LOW PERMEABILITY; UNCONSOLIDATED;
ACCESSORY MINERALS: CALCILUTITE-15%, SILT-10%, LIMESTONE-10%, QUARTZ SAND-10%;
- 92 - 97 SHELL BED; LIGHT OLIVE TO VERY LIGHT ORANGE; 30% POROSITY, INTERGRANULAR,
POSSIBLY HIGH PERMEABILITY; UNCONSOLIDATED;
ACCESSORY MINERALS: LIMESTONE-10%;
FOSSILS: MOLLUSKS, FOSSIL FRAGMENTS, BRYOZOA;
- 97 - 100 SHELL BED; YELLOWISH GRAY TO MODERATE DARK GRAY; 25% POROSITY, INTERGRANULAR;
UNCONSOLIDATED;
ACCESSORY MINERALS: LIMESTONE-25%, SILT-02%, CLAY-01%;
FOSSILS: FOSSIL FRAGMENTS, BARNACLES, MOLLUSKS;

- 100 - 105 SHELL BED; YELLOWISH GRAY TO MODERATE DARK GRAY; 25% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY; UNCONSOLIDATED;
ACCESSORY MINERALS: LIMESTONE-30%;
FOSSILS: FOSSIL FRAGMENTS, WORM TRACES;
- 105 - 110 LIMESTONE; MODERATE GRAY TO LIGHT OLIVE; 12% POROSITY, INTERGRANULAR;
GRAIN TYPE: INTRACLASTS; 50% ALLOCHEMICAL CONSTITUENTS;
GRAIN SIZE: FINE; RANGE: FINE TO FINE; MODERATE INDURATION;
CEMENT TYPE(S): CALCILUTITE MATRIX;
ACCESSORY MINERALS: QUARTZ SAND-50%, CALCILUTITE-40%, SHELL-15%, CLAY-05%;
FOSSILS: FOSSIL FRAGMENTS, BARNACLES, SPICULES;
STRINGERS
- 110 - 115 SHELL BED; YELLOWISH GRAY; 25% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY;
UNCONSOLIDATED;
ACCESSORY MINERALS: LIMESTONE-05%;
FOSSILS: SPICULES, FOSSIL FRAGMENTS, BARNACLES, BRYOZOA;
- 115 - 120 AS ABOVE
- 120 - 125 SHELL BED; LIGHT OLIVE; 20% POROSITY, INTERGRANULAR, LOW PERMEABILITY; UNCONSOLIDATED;
ACCESSORY MINERALS: QUARTZ SAND-15%, SILT-10%, CALCILUTITE-10%;
FOSSILS: FOSSIL FRAGMENTS, SPICULES, MOLLUSKS, BARNACLES, BRYOZOA;
- 125 - 130 AS ABOVE
3% CLAY
- 130 - 135 SHELL BED; LIGHT OLIVE GRAY TO LIGHT OLIVE; 20% POROSITY, INTERGRANULAR, LOW PERMEABILITY;
UNCONSOLIDATED;
ACCESSORY MINERALS: CALCILUTITE-15%, LIMESTONE-15%, SILT-10%, CALCITE-05%;
FOSSILS: FOSSIL FRAGMENTS, BRYOZOA, BARNACLES, BENTHIC FORAMINIFERA;
- 135 - 140 SHELL BED; VERY LIGHT ORANGE TO LIGHT OLIVE; 20% POROSITY, INTERGRANULAR; UNCONSOLIDATED;
ACCESSORY MINERALS: LIMESTONE-05%, CALCILUTITE-05%, QUARTZ SAND-02%;
FOSSILS: FOSSIL FRAGMENTS, BRYOZOA, BARNACLES, SPICULES;
- 140 - 143 AS ABOVE
3% SILT
- 143 - 145 SHELL BED; LIGHT OLIVE GRAY; 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY; UNCONSOLIDATED;
ACCESSORY MINERALS: CALCILUTITE-10%, SILT-10%, QUARTZ SAND-10%, CLAY-05%;
FOSSILS: FOSSIL FRAGMENTS, BRYOZOA, BARNACLES;
- 145 - 151 SHELL BED; MODERATE LIGHT GRAY TO VERY LIGHT ORANGE; 20% POROSITY, INTERGRANULAR;
UNCONSOLIDATED;
ACCESSORY MINERALS: CALCILUTITE-04%, QUARTZ SAND-05%, PHOSPHATIC SAND-01%;
FOSSILS: BARNACLES, BRYOZOA, SPICULES;
LIGHT GREY CALCITE REPLACED SHELL FRAG.

- 151 - 155 SHELL BED; VERY LIGHT ORANGE TO YELLOWISH GRAY; 20% POROSITY, INTERGRANULAR;
UNCONSOLIDATED;
ACCESSORY MINERALS: LIMESTONE-15%, CALCITE-15%, CALCILUTITE-10%, QUARTZ SAND-03%;
- 155 - 160 SAND; YELLOWISH GRAY TO VERY LIGHT ORANGE; 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY;
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE;
ROUNDNESS: ANGULAR TO SUB-ANGULAR; MEDIUM SPHERICITY; POOR INDURATION;
CEMENT TYPE(S): CALCILUTITE MATRIX;
ACCESSORY MINERALS: CALCILUTITE-10%, SHELL-10%, PHOSPHATIC SAND-01%;
FOSSILS: FOSSIL FRAGMENTS, BARNACLES, MOLLUSKS;
- 160 - 165 AS ABOVE
20% MICRITE
- 165 - 170 CALCILUTITE; YELLOWISH GRAY TO VERY LIGHT ORANGE; 12% POROSITY, INTERGRANULAR,
LOW PERMEABILITY;
GRAIN TYPE: INTRACLASTS, BIOGENIC; 50% ALLOCHEMICAL CONSTITUENTS;
GRAIN SIZE: FINE; RANGE: FINE TO FINE; POOR INDURATION;
CEMENT TYPE(S): CALCILUTITE MATRIX;
ACCESSORY MINERALS: QUARTZ SAND-45%, SHELL-10%, SILT-05%, PHOSPHATIC SAND-02%;
FOSSILS: FOSSIL FRAGMENTS, BRYOZOA, BARNACLES;
- 170 - 175 SAND; OLIVE GRAY; 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY;
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE;
ROUNDNESS: SUB-ANGULAR; MEDIUM SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: CALCILUTITE-10%, LIMESTONE-10%, SILT-05%, PHOSPHATIC SAND-02%;
- 175 - 182 SAND; OLIVE GRAY; 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY;
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE;
ROUNDNESS: SUB-ROUNDED; MEDIUM SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: SILT-15%, CLAY-05%, PHOSPHATIC SAND-02%, LIMESTONE-02%;
- 182 TOTAL DEPTH



FORM 0395
Rev. 10/87

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

WELL LOG

WELL LOCATION

County MARTIN

Station I. D. 0850000082

Date 8/29/89 Well No. MOBILE A.P.T.

Latitude 27° 05' 36" Longitude 80° 13' 43"

NE 1/4 NW 1/4 SE 1/4 Section 10 Township 39S Range 41E

Owner S.F.W.M.D. Phone _____

^{A7} Driller T. LUBRANO Date Drilled 8/29/89

WELL CONSTRUCTION

Drilling Method: Rot. Air CT Auger Other _____

T. Depth - Driller 182' T. Depth - Logger 182'

Casing Depth Driller _____ Casing Depth Logger _____

Bit Size 5 7/8" Casing Dia. I.D. _____

Hole Dia. 6" From 0' To 182' Dia. _____ From _____ To _____

Type of Casing _____ Casing Thickness _____

Type of Screen _____ Screen Int. From _____ To _____

Type of Packing _____ Well Use A.P. TEST

Static Water Level _____ Date _____

Yield Flow _____ Pump _____

DATUM

K.B. _____ L.S. 13.0' T.O.C. 0.0

FLUID QUALITY

Date _____ Time _____ Source of Sample _____

Cl _____ mg/l Type of Fluid _____

Temp. _____ °C Field Density _____ @ _____ °C

T.D.S. _____ mg/l Spec. Cond. _____ umho

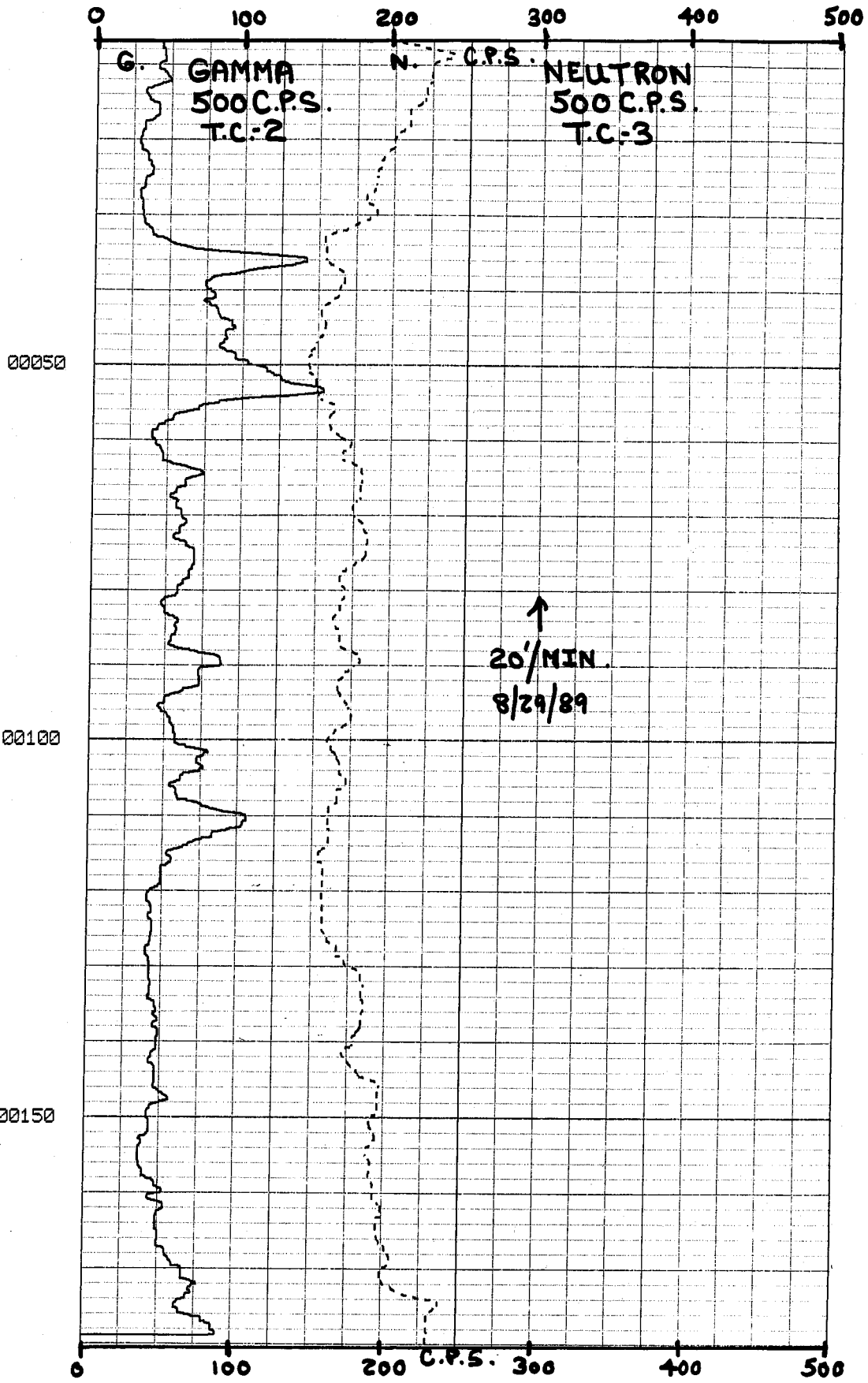
Logged By: E.P. DAUENHAUER Witnessed By: A. TASSINARI

Comments: WELL WAS CASED AND SCREENED AFTER

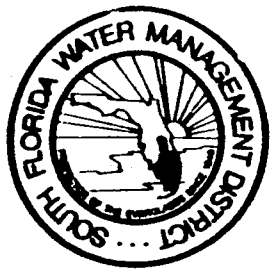
TYPE OF SURVEYS RUN

Lateral 6'	(x)	Density	(x)
Caliper	(x)	ccl	()
Flow meter	()	Fluid Sampler	()
16", 64" normals	(x)	Temperature	()
Neutron	(x)	Delta Temp.	()
Natural Gamma	(x)	SP	(x)
Fluid Resistivity	()	Single Point	(x)

MOBILE A.P.T.



A8



FORM 0395
Rev. 10/87

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

WELL LOG

WELL LOCATION

County MARTIN
 Station I. D. 0850000082
 Date 8/29/89 Well No. MOBILE A.P.T.
 Latitude 27° 05' 36" Longitude 80° 13' 43"
NE 1/4 NW 1/4 SE 1/4 Section 10 Township 39S Range 41E
 Owner S.F.W.M.D. Phone _____
 Driller T. LUBRANO Date Drilled 8/29/89

WELL CONSTRUCTION

Drilling Method: Rot. Air CT Auger Other _____
 T. Depth - Driller 182' T. Depth - Logger 182'
 Casing Depth Driller _____ Casing Depth Logger _____
 Bit Size 5 7/8" Casing Dia. I.D. _____
 Hole Dia. 6" From 0' To 182' Dia. _____ From _____ To _____
 Type of Casing _____ Casing Thickness _____
 Type of Screen _____ Screen Int. From _____ To _____
 Type of Packing _____ Well Use A.P. TEST
 Static Water Level _____ Date _____
 Yield Flow _____ Pump _____

DATUM

K.B. _____ L.S. 13.0' T.O.C. 0.0

FLUID QUALITY

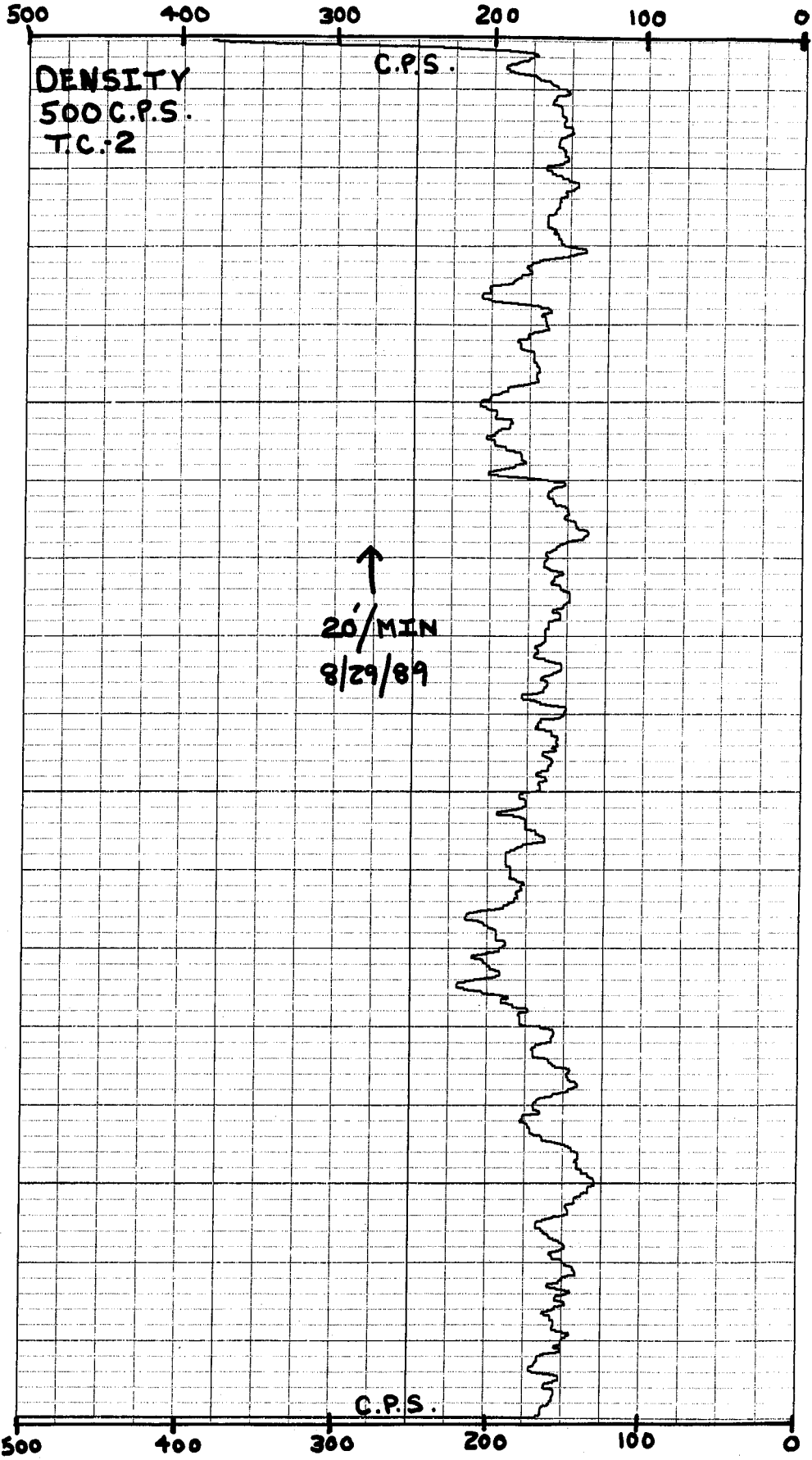
Date _____ Time _____ Source of Sample _____
 Cl _____ mg/l Type of Fluid _____
 Temp. _____ °C Field Density _____ @ _____ °C
 T.D.S. _____ mg/l Spec. Cond. _____ umho
 Logged By: E.P. DAUENHAUER Witnessed By: A. TASSINARI

Comments: WELL WAS CASED AND SCREENED AFTER 1

TYPE OF SURVEYS RUN

Lateral 6'	(x)	Density	(x)
Caliper	(x)	ocl	()
Flow meter	()	Fluid Sampler	()
16", 64" normals	(x)	Temperature	()
Neutron	(x)	Delta Temp.	()
Natural Gamma	(x)	SP	(x)
Fluid Resistivity	()	Single Point	(x)

MOBILE A.P.T.





FORM 0395
Rev. 10/87

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

WELL LOG

WELL LOCATION

County MARTIN

Station I. D. 0850000082

Date 8/29/89 Well No. MOBILE A.P.T.

Latitude 27° 05' 36" Longitude 80° 13' 43"

NE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 10 Township 39S Range 41E

Owner S.F.W.M.D. Phone _____

Driller T. LUBRANO Date Drilled 8/29/89

WELL CONSTRUCTION

Drilling Method: Rot. Air CT Auger Other _____

T. Depth - Driller 182' T. Depth - Logger 182'

Casing Depth Driller _____ Casing Depth Logger _____

Bit Size 5 7/8" Casing Dia. I.D. _____

Hole Dia. 6" From 0' To 182' Dia. _____ From _____ To _____

Type of Casing _____ Casing Thickness _____

Type of Screen _____ Screen Int. From _____ To _____

Type of Packing _____ Well Use A.P. TEST

Static Water Level _____ Date _____

Yield Flow _____ Pump _____

DATUM

K.B. _____ L.S. 13.0' T.O.C. 0.0

FLUID QUALITY

Date _____ Time _____ Source of Sample _____

Cl _____ mg/l Type of Fluid _____

Temp. _____ °C Field Density _____ @ _____ °C

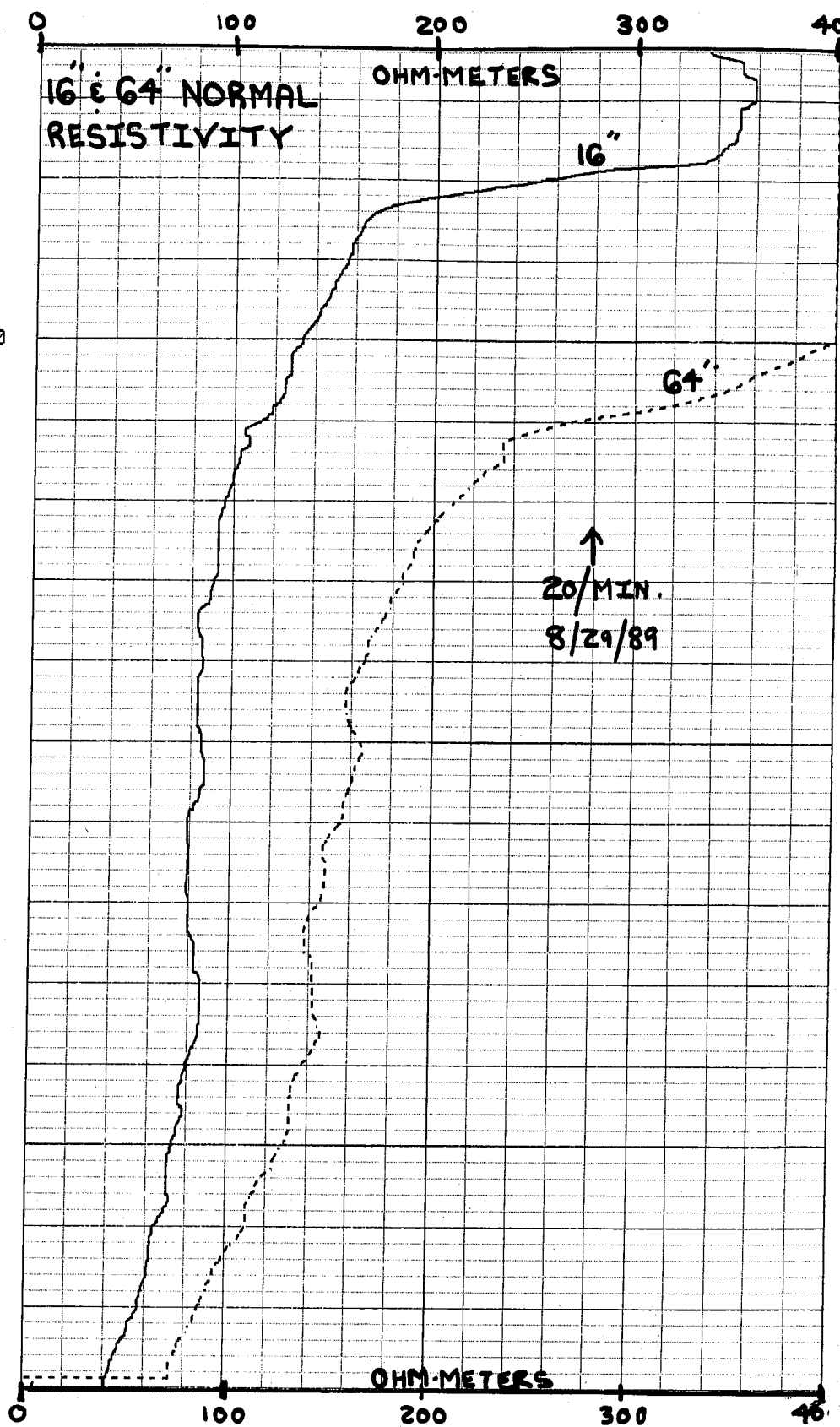
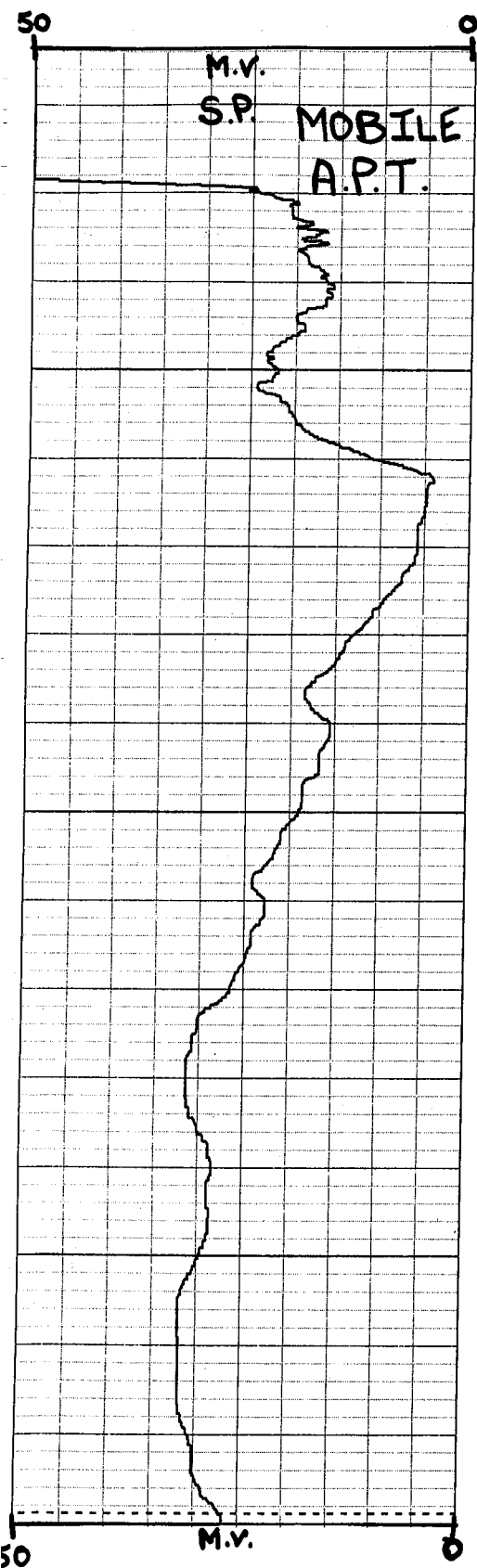
T.D.S. _____ mg/l Spec. Cond. _____ µmhos

Logged By: E.P. DAUENHAUER Witnessed By: A. TASSINARI

Comments: WELL WAS CASED AND SCREENED AFTER L

TYPE OF SURVEYS RUN

Lateral 6'	(X)	Density	(X)
Caliper	(X)	ccl	()
Flow meter	()	Fluid Sampler	()
16", 64" normals	()	Temperature	()
Neutron	(X)	Delta Temp.	()
Natural Gamma	(X)	SP	()
Fluid Resistivity	()	Single Point	(X)





FORM 0395
Rev. 10/87

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

WELL LOG

WELL LOCATION

County MARTIN
Station I. D. 0850000082
Date 8/29/89 Well No. MOBILE A.P.T.
Latitude 27° 05' 36" Longitude 80° 13' 43"
NE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 10 Township 39S Range 41E
Owner S.F.W.M.D. Phone _____
Driller J. LUBRANO Date Drilled 8/29/89

WELL CONSTRUCTION

Drilling Method: Rot. Air CT Auger Other _____
T. Depth - Driller 182' T. Depth - Logger 182'
Casing Depth Driller _____ Casing Depth Logger _____
Bit Size 57/8" Casing Dia. I.D. _____
Hole Dia. 6" From 0' To 182' Dia. _____ From _____ To _____
Type of Casing _____ Casing Thickness _____
Type of Screen _____ Screen Int. From _____ To _____
Type of Packing _____ Well Use A.P. TEST
Static Water Level _____ Date _____
Yield Flow _____ Pump _____

DATUM

K.B. _____ L.S. 13.0' T.O.C. 0.0

FLUID QUALITY

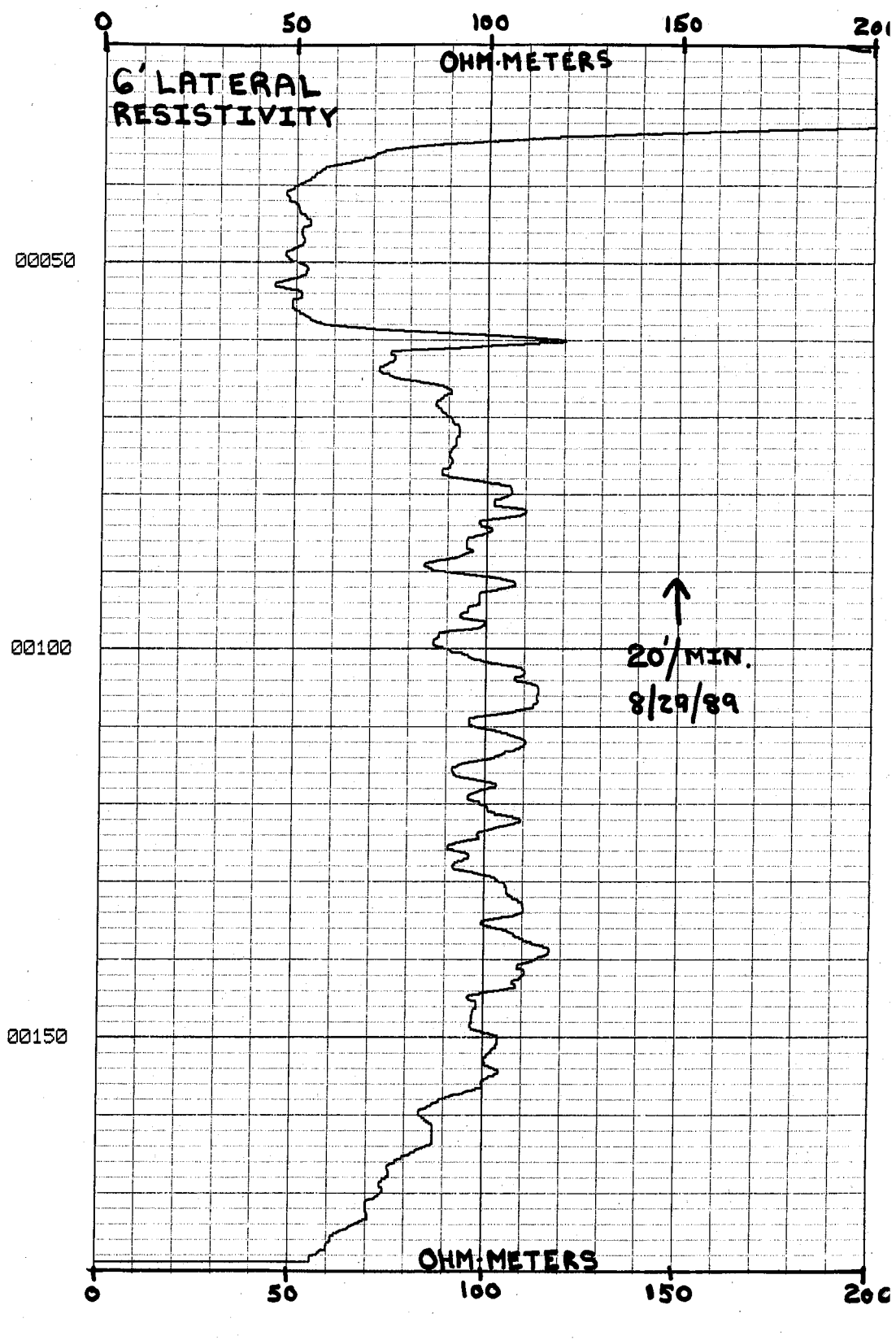
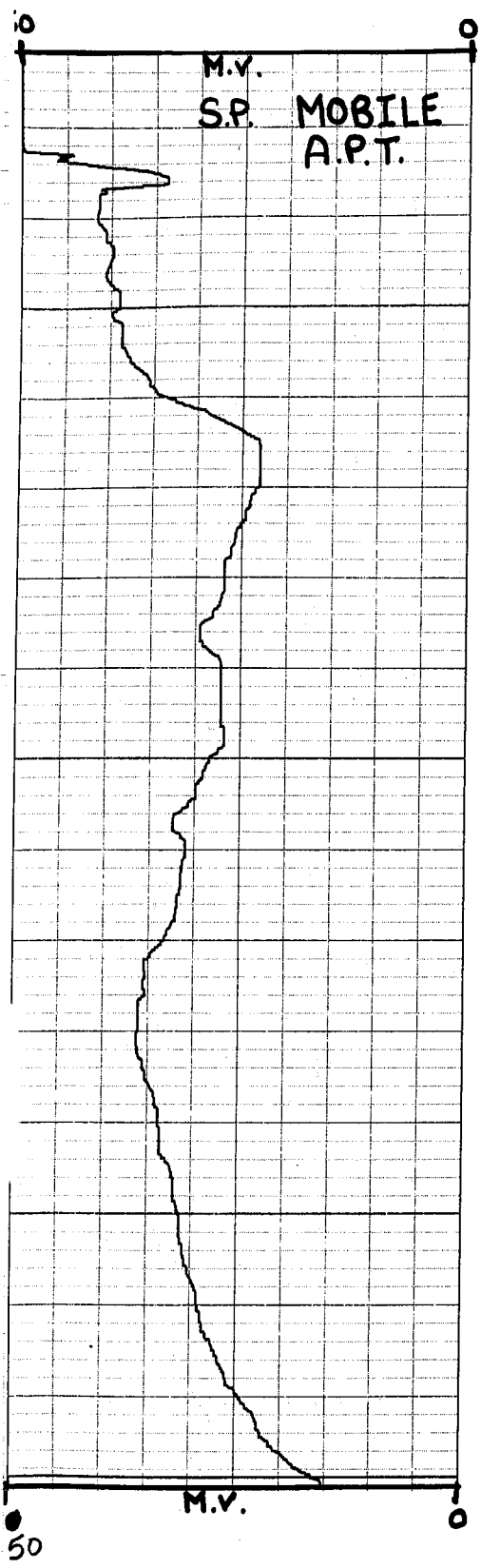
Date _____ Time _____ Source of Sample _____
Cl _____ mg/l Type of Fluid _____
Temp. _____ °C Field Density _____ @ _____ °C
T.D.S. _____ mg/l Spec. Cond. _____ umhos

Logged By: E.P. DAUENHAUER Witnessed By: A. TASSINARI

Comments: WELL WAS CASED AND SCREENED AFTER L

TYPE OF SURVEYS RUN

Lateral 6'	<input checked="" type="checkbox"/>	Density	<input checked="" type="checkbox"/>
Caliper	<input checked="" type="checkbox"/>	ccl	<input type="checkbox"/>
Flow meter	<input type="checkbox"/>	Fluid Sampler	<input type="checkbox"/>
16", 64" normals	<input checked="" type="checkbox"/>	Temperature	<input type="checkbox"/>
Neutron	<input checked="" type="checkbox"/>	Delta Temp.	<input type="checkbox"/>
Natural Gamma	<input checked="" type="checkbox"/>	SP	<input checked="" type="checkbox"/>
Fluid Resistivity	<input type="checkbox"/>	Single Point	<input checked="" type="checkbox"/>





FORM 0395
Rev. 10/87

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

WELL LOG

WELL LOCATION

County MARTIN

Station I. D. 0850000082

Date 8/29/89 Well No. MOBILE A.P.T.

Latitude 27° 05' 36" Longitude 80° 13' 43"

NE 1/4 NW 1/4 SE 1/4 Section 10 Township 39S Range 41E

Owner S.F.W.M.D. Phone _____

Driller T. LUBRANO Date Drilled 8/29/89

WELL CONSTRUCTION

Drilling Method: Rot. Air CT Auger Other _____

T. Depth - Driller 182' T. Depth - Logger 182'

Casing Depth Driller _____ Casing Depth Logger _____

Bit Size 5 7/8" Casing Dia. I.D. _____

Hole Dia. 6" From 0' To 182' Dia. _____ From _____ To _____

Type of Casing _____ Casing Thickness _____

Type of Screen _____ Screen Int. From _____ To _____

Type of Packing _____ Well Use A.P. TEST

Static Water Level _____ Date _____

Yield Flow _____ Pump _____

DATUM

K.B. _____ L.S. 13.0' T.O.C. 0.0

FLUID QUALITY

Date _____ Time _____ Source of Sample _____

Cl _____ mg/l Type of Fluid _____

Temp. _____ °C Field Density _____ @ _____ °C

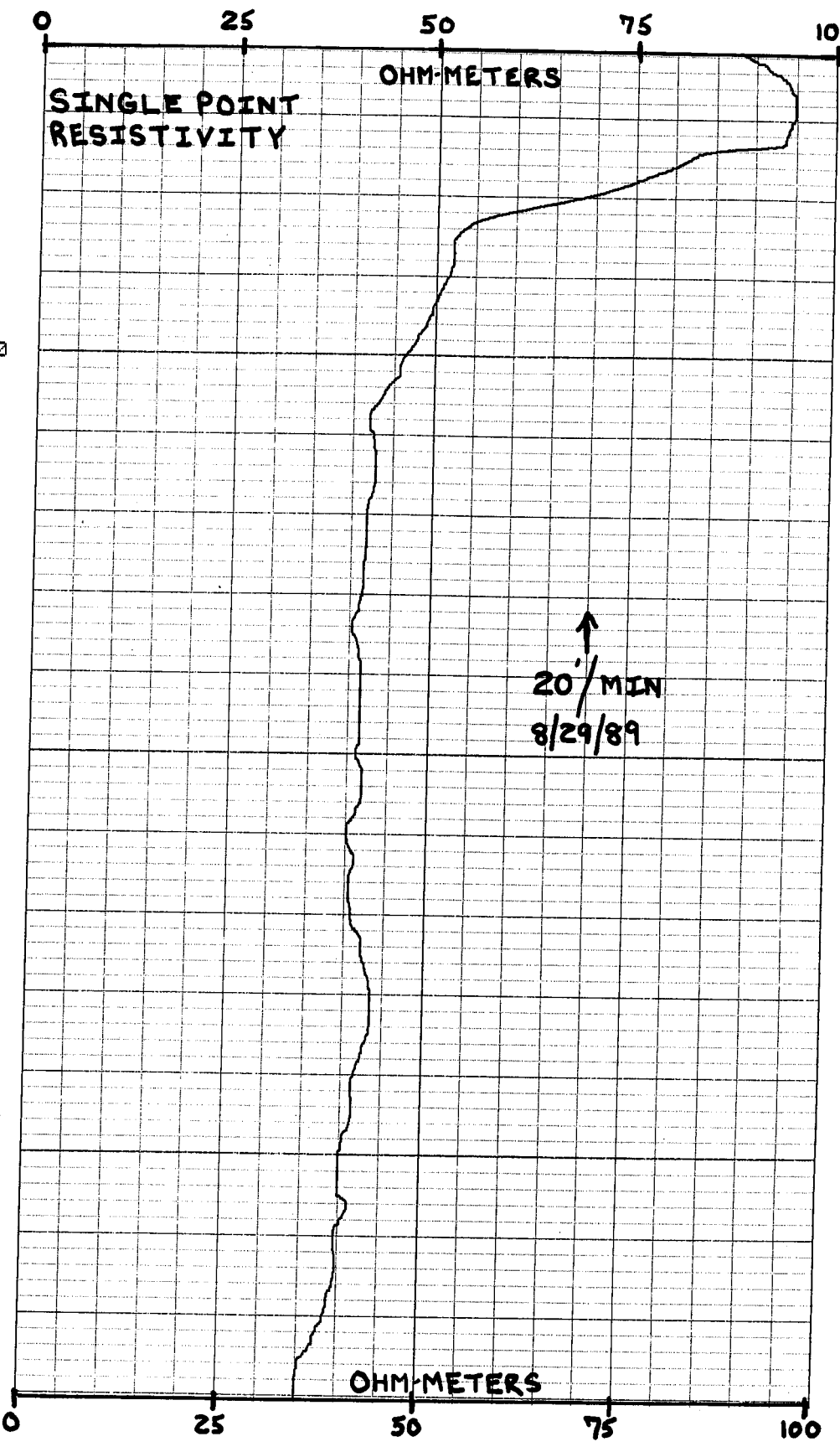
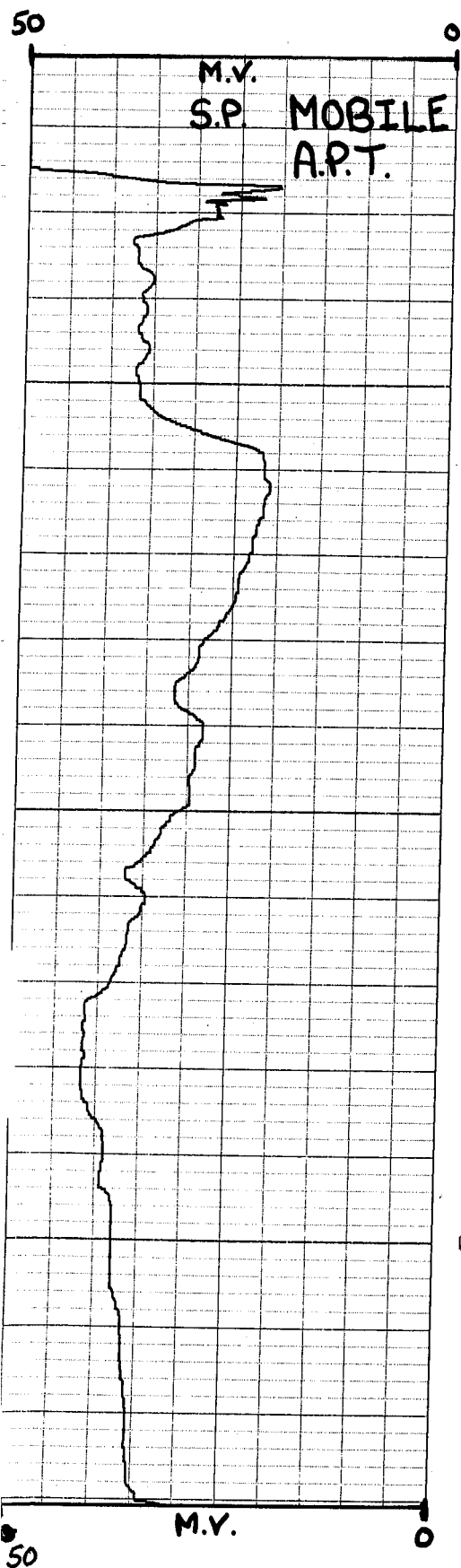
T.D.S. _____ mg/l Spec. Cond. _____ µmhos

Logged By: E.P. DAUENHAUER Witnessed By: A. TASSINARI

Comments: WELL WAS CASED AND SCREENED AFTER LOG

TYPE OF SURVEYS RUN

Lateral 6'	(X)	Density	(X)
Caliper	(X)	ccl	()
Flow meter	()	Fluid Sampler	()
16", 64" normals	(X)	Temperature	()
Neutron	(X)	Delta Temp.	()
Natural Gamma	(X)	SP	()
Fluid Resistivity	()	Single Point	()





FORM 0395
Rev. 10/87

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

WELL LOG

WELL LOCATION

County MARTIN

Station I. D. 0850000082

Date 8/29/89 Well No. MOBILE A.P.T.

Latitude 27° 05' 36" Longitude 80° 13' 43"

NE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 10 Township 39S Range 41E

Owner S.F.W.M.D. Phone _____

Driller T. LUBRANO Date Drilled 8/29/89

WELL CONSTRUCTION

Drilling Method: Rot. Air CT Auger Other _____

T. Depth - Driller 182' T. Depth - Logger 182'

Casing Depth Driller _____ Casing Depth Logger _____

Bit Size 5 7/8" Casing Dia. I.D. _____

Hole Dia. 6" From 0' To 182' Dia. _____ From _____ To _____

Type of Casing _____ Casing Thickness _____

Type of Screen _____ Screen Int. From _____ To _____

Type of Packing _____ Well Use A.P. TEST

Static Water Level _____ Date _____

Yield Flow _____ Pump _____

DATUM

K.B. _____ L.S. 13.0' T.O.C. 0.0'

FLUID QUALITY

Date _____ Time _____ Source of Sample _____

Cl _____ mg/l Type of Fluid _____

Temp. _____ °C Field Density _____ @ _____ °C

T.D.S. _____ mg/l Spec. Cond. _____ µmhos

Logged By: E.P. DAUENHAUER Witnessed By: A. TASSINARI

Comments: WELL WAS CASED AND SCREENED AFTER 1

TYPE OF SURVEYS RUN

Lateral 6'	(X)	Density	(X)
Caliper	(X)	ccl	()
Flow meter	()	Fluid Sampler	()
16", 64" normals	(X)	Temperature	()
Neutron	(X)	Delta Temp.	()
Natural Gamma	(X)	SP	(X)
Fluid Resistivity	()	Single Point	(X)

MOBILE A.P.T.

CALIPER

2" 4" 6" 8" 10" 12" 14"
HOLE DIA.

00050

00100

00150

↑
20' / MIN.
8/29/89

MOBIL (TP & J PROP.) STEP DRAWDOWN TEST

TEST DATE: Sep. 9, 1989 6" PRODUCTION WELL

WEATHER: Clear, sunny

PUMP HP: 9.2 DISCHARGE DIAMETER: 3 inches

FLOW METER TYPE: 3" propellor type

STATIC WATER LEVEL: 6.11 FT. from Top of Casing

MEASURING EQUIPMENT: Steel tape

DISCHARGE RATE (GPM)	ELAPS. TIME (MIN)	DEPTH TO WATER FROM TOC	DRAWDOWN	
70	5.00	18.08	11.97	
	7.00	17.98	11.87	
	8.00	18.05	11.94	
	10.00	18.17	12.06	
	11.00	18.28	12.17	
	13.00	18.31	12.20	
	15.00	18.24	12.13	
	18.00	18.28	12.17	
	25.00	18.34	12.23	
	29.00	18.41	12.30	
	95	35.00	22.98	16.87
		37.00	23.08	16.97
		39.00	23.19	17.08
		40.00	23.17	17.06
45.00		23.26	17.15	
50.00		23.35	17.24	
	55.00	23.49	17.38	

Pump increased to full throttle, valve fully open.

No increase in pumpage possible for 3rd step.

Maximum drawdown reached with 2nd step.

MOBIL (TP & J PROP.) STEP DRAWDOWN TEST

TEST DATE: Sep. 9, 1989 MONITOR WELL: 1D
 WEATHER: Clear, sunny DISTANCE FROM PW: 75'
 PUMP HP: 9.2 DISCHARGE DIAMETER: 3 inches
 FLOW METER TYPE: 3" propellor type
 STATIC WATER LEVEL: 5.93 FT. from Top of Casing
 MEASURING EQUIPMENT: Insitu Hermit Recorder

DISCHARGE RATE (GPM)	ELAPS. TIME (MIN)	DRAWDOWN
70	0.003	0.08
	0.007	0.08
	0.010	0.08
	0.013	0.08
	0.017	0.08
	0.020	0.08
	0.023	0.08
	0.027	0.08
	0.030	0.08
	0.033	0.08
	0.050	0.08
	0.067	0.09
	0.083	0.09
	0.100	0.09
	0.117	0.10
	0.133	0.10
	0.150	0.11
	0.167	0.11
	0.183	0.11
	0.200	0.12
	0.217	0.13
	0.233	0.14
	0.250	0.15
	0.267	0.16
	0.283	0.17
	0.300	0.18
	0.317	0.20
	0.333	0.21
	0.417	0.29
	0.500	0.37
	0.583	0.45
	0.667	0.52
	0.750	0.59
	0.833	0.65
	0.917	0.70
	1.00	0.75
	1.08	0.79
	1.17	0.83
	1.25	0.86
	1.33	0.90
	1.42	0.93
	1.50	0.95

DISCHARGE RATE (GPM)	ELAPS. TIME (MIN)	DRAWDOWN
70	1.58	0.98
	1.67	1.01
	1.75	1.03
	1.83	1.06
	1.92	1.08
	2.00	1.10
	2.50	1.19
	3.00	1.29
	3.50	1.35
	4.00	1.41
	4.50	1.46
	5.00	1.50
	5.50	1.54
	6.00	1.57
	6.50	1.60
	7.00	1.63
	7.50	1.66
	8.00	1.68
	8.50	1.70
	9.00	1.72
	9.50	1.74
	10.00	1.76
	12.00	1.83
	14.00	1.88
	16.00	1.91
	18.00	1.94
	20.00	1.97
	22.00	1.99
	24.00	2.00
	26.00	2.03
28.00	2.04	
30.00	2.07	
95	32.00	2.42
	34.00	2.53
	36.00	2.59
	38.00	2.63
	40.00	2.66
	42.00	2.69
	44.00	2.71
	46.00	2.73
	48.00	2.75
	50.00	2.76
52.00	2.77	
54.00	2.79	
56.00	2.80	
58.00	2.84	
60.00	2.79	

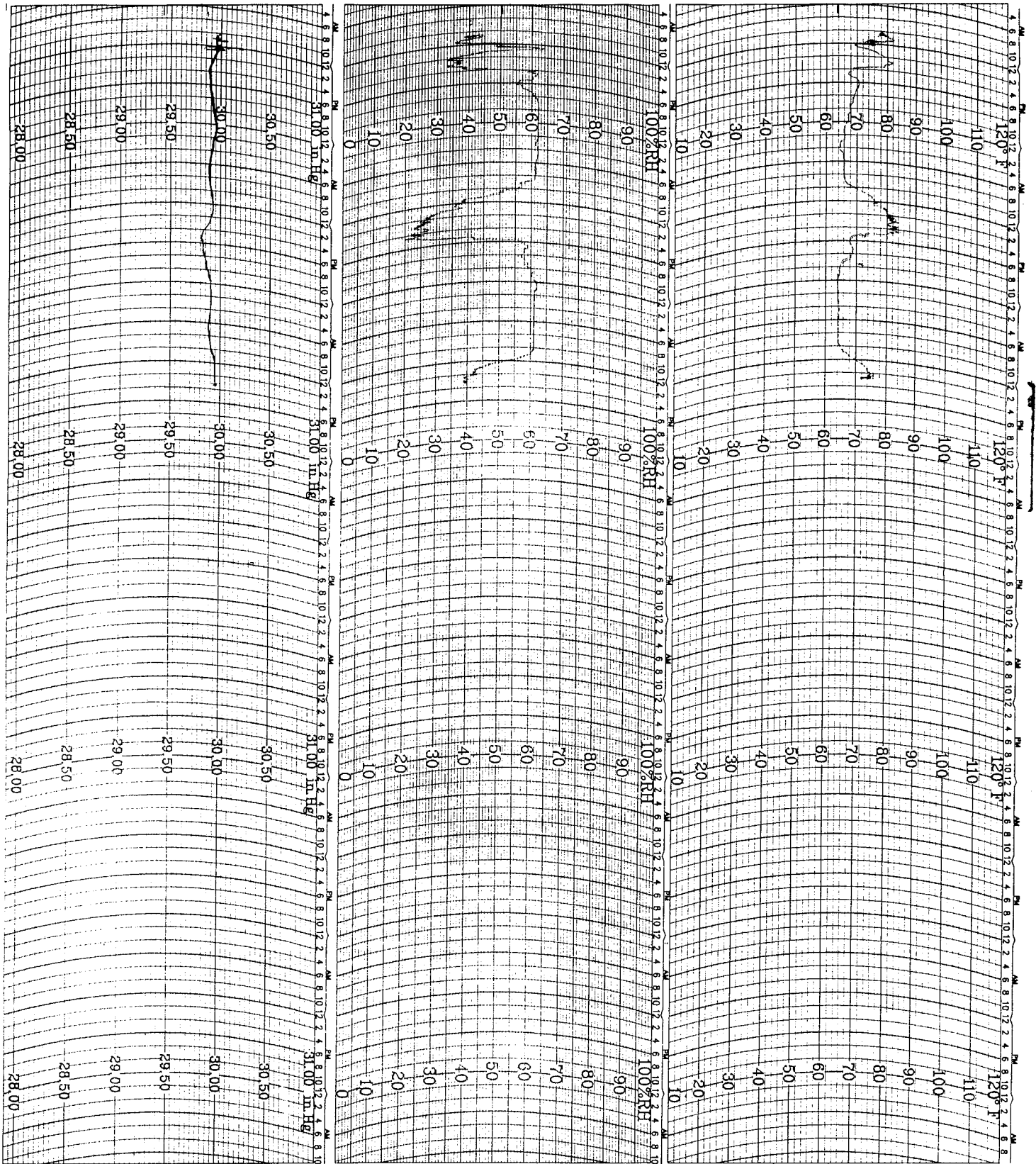
Pump increased to full throttle, valve fully open.
No increase in pumpage possible for 3rd step.
Maximum drawdown reached with 2nd step.


MOBIL (TP & J PROP.) STEP DRAWDOWN TEST

TEST DATE: Sep. 9, 1989 MONITOR WELL: 2D
 WEATHER: Clear, sunny DISTANCE FROM PW: 150'
 PUMP HP: 9.2 DISCHARGE DIAMETER: 3 inches
 FLOW METER TYPE: 3" propellor type
 STATIC WATER LEVEL: 3.74 FT. from Top of Casing
 MEASURING EQUIPMENT: Steel tape

DISCHARGE RATE (GPM)	ELAPS. TIME (MIN)	DEPTH TO WATER FROM TOC	DRAWDOWN
70	8.00	6.42	2.68
	9.00	6.45	2.71
	10.00	6.47	2.73
	11.00	6.50	2.76
	12.00	6.51	2.77
	13.00	6.54	2.80
	13.50	6.56	2.82
	14.00	6.58	2.84
	15.00	6.61	2.87
	16.00	6.62	2.88
	17.00	6.64	2.90
	18.00	6.65	2.91
	19.00	6.67	2.93
	20.00	6.68	2.94
	25.00	6.74	3.00
	29.00	6.79	3.05
	95	33.00	7.00
34.00		7.02	3.28
35.00		7.05	3.31
36.00		7.08	3.34
37.00		7.11	3.37
38.00		7.13	3.39
39.00		7.14	3.40
40.00	7.16	3.42	
45.00	7.22	3.48	
50.00	7.24	3.53	
54.00	7.29	3.55	

Pump increased to full throttle, valve fully open.
 No increase in pumpage possible for 3rd step.
 Maximum drawdown reached with 2nd step.




Weather Measure
WEATHERtronic
 Division of **QUALLMETRICS, Inc.**

P.O. BOX 41039
 SACRAMENTO, CA 95841
 PHONE: (916) 923-0055

METEOROGRAPH
 7 DAY

CHART NO. 50104
 ECN 2563
 10/6/86

STATION Mobil APT DATE ON 10/9/89 DATE OFF _____

MOBIL (TP&J PROPERTY) AQUIFER PERFORMANCE TEST

DATE OF TEST: Oct. 9-11, 1989
 PUMPING RATE: 136 gpm
 WEATHER: Scattered rain

LOCATION: S10 T39S R41E
 DURATION: 43 hours drawdown

WELL ID:	1S	1I	1D	2S	2I-1	2I-2	2D
RADIUS :	77.9	76.1	75.5	156	153.3	153.3	151.5

ELAPSED TIME (MIN)	DRAWDOWN IN FEET (INSITU RECORDER VALUES)						
0.017	-999.99	0.01	-999.99	-999.99	-999.99	-999.99	-999.99
0.034	-999.99	0.01	-999.99	-999.99	-999.99	-999.99	-999.99
0.050	-999.99	0.01	-999.99	-999.99	-999.99	-999.99	-999.99
0.067	-999.99	0.02	-999.99	-999.99	-999.99	-999.99	-999.99
0.084	-999.99	0.03	-999.99	-999.99	-999.99	-999.99	-999.99
0.100	-999.99	0.03	-999.99	-999.99	-999.99	-999.99	-999.99
0.117	-999.99	0.04	-999.99	-999.99	-999.99	-999.99	-999.99
0.134	-999.99	0.06	-999.99	-999.99	-999.99	-999.99	-999.99
0.150	-999.99	0.07	-999.99	-999.99	-999.99	-999.99	-999.99
0.167	-999.99	0.09	-999.99	-999.99	-999.99	-999.99	-999.99
0.257	-0.01	0.23	0.06	0	0.03	0.03	0.03
0.340	-0.02	0.37	0.11	0	0.04	0.04	0.04
0.424	-0.03	0.53	0.16	0	0.06	0.06	0.06
0.507	-0.04	0.67	0.23	0	0.08	0.09	0.08
0.590	-0.04	0.81	0.3	0	0.11	0.12	0.11
0.674	-0.05	0.94	0.37	0	0.15	0.15	0.14
0.757	-0.06	1.05	0.44	0	0.19	0.19	0.17
0.840	-0.06	1.16	0.5	0	0.22	0.23	0.2
0.924	-0.07	1.26	0.57	-0.01	0.26	0.27	0.24
1.007	-0.07	1.35	0.63	-0.01	0.3	0.31	0.27
1.401	-0.08	1.67	0.88	-0.02	0.48	0.48	0.43
1.735	-0.09	1.87	1.05	-0.03	0.61	0.61	0.55
2.068	-0.09	2.03	1.19	-0.03	0.73	0.73	0.66
2.401	-0.09	2.15	1.31	-0.04	0.83	0.83	0.75
2.734	-0.09	2.26	1.41	-0.04	0.91	0.92	0.83
3.068	-0.09	2.34	1.48	-0.05	0.98	0.98	0.89
3.401	-0.09	2.42	1.55	-0.05	1.04	1.04	0.94
3.735	-0.08	2.49	1.62	-0.05	1.1	1.1	0.99
4.068	-0.08	2.55	1.67	-0.05	1.16	1.15	1.04
4.401	-0.08	2.61	1.72	-0.04	1.22	1.21	1.09
4.735	-0.07	2.66	1.78	-0.04	1.27	1.26	1.14
5.068	-0.06	2.72	1.84	-0.03	1.32	1.32	1.2
5.401	-0.05	2.77	1.88	-0.02	1.37	1.37	1.24
5.735	-0.05	2.81	1.92	-0.02	1.4	1.41	1.28
6.068	-0.04	2.85	1.97	-0.01	1.44	1.45	1.33
6.401	-0.03	2.89	2.01	-0.01	1.47	1.49	1.36
6.734	-0.03	2.93	2.05	0	1.5	1.52	1.39
7.068	-0.03	2.96	2.07	0	1.53	1.55	1.42
7.401	-0.02	2.98	2.1	0.01	1.56	1.58	1.45
7.734	-0.02	3.01	2.12	0.01	1.58	1.6	1.48
8.068	-0.02	3.04	2.15	0.01	1.61	1.62	1.5
8.401	-0.01	3.07	2.17	0.02	1.63	1.65	1.52
8.734	-0.01	3.09	2.19	0.03	1.65	1.67	1.54

WELL ID:	1S	1I	1D	2S	2I-1	2I-2	2D
ELAPSED TIME (MIN)	DRAWDOWN IN FEET (INSITU RECORDER VALUES)						
9.068	0	3.11	2.22	0.03	1.67	1.69	1.57
9.401	0.01	3.14	2.24	0.04	1.69	1.71	1.59
9.734	0.01	3.15	2.26	0.04	1.71	1.73	1.61
10.068	0.01	3.17	2.28	0.05	1.73	1.75	1.62
12.390	0.04	3.29	2.39	0.08	1.84	1.85	1.72
14.160	0.07	3.36	2.45	0.11	1.9	1.92	1.79
16.160	0.1	3.42	2.52	0.14	1.98	1.99	1.85
18.160	0.13	3.48	2.58	0.18	2.04	2.05	1.91
20.160	0.15	3.54	2.63	0.2	2.09	2.1	1.96
22.160	0.18	3.57	2.66	0.23	2.13	2.13	1.99
24.160	0.2	3.62	2.7	0.26	2.17	2.18	2.03
26.160	0.23	3.66	2.74	0.29	2.21	2.22	2.07
28.160	0.24	3.69	2.77	0.31	2.24	2.25	2.1
30.160	0.26	3.72	2.8	0.33	2.27	2.27	2.12
32.160	0.28	3.73	2.8	0.35	2.29	2.29	2.12
34.160	0.31	3.75	2.83	0.37	2.32	2.32	2.15
36.160	0.32	3.79	2.87	0.4	2.35	2.36	2.2
38.160	0.33	3.8	2.88	0.41	2.35	2.36	2.2
40.160	0.35	3.82	2.89	0.43	2.38	2.38	2.21
42.160	0.37	3.84	2.91	0.45	2.41	2.4	2.24
44.160	0.38	3.86	2.93	0.46	2.42	2.42	2.26
46.160	0.39	3.87	2.95	0.47	2.44	2.44	2.28
48.160	0.41	3.89	2.96	0.49	2.45	2.46	2.3
50.160	0.42	3.91	2.98	0.5	2.47	2.47	2.31
52.160	0.43	3.91	2.99	0.52	2.48	2.48	2.32
54.160	0.44	3.93	3	0.53	2.49	2.49	2.33
56.160	0.45	3.94	3.01	0.54	2.5	2.51	2.34
58.160	0.46	3.95	3.03	0.55	2.51	2.52	2.36
60.160	0.47	3.95	3.01	0.56	2.53	2.52	2.36
62.160	0.47	3.96	3.03	0.57	2.53	2.53	2.36
64.160	0.49	3.97	3.04	0.58	2.54	2.54	2.37
66.160	0.48	3.97	3.04	0.58	2.55	2.54	2.36
68.160	0.5	3.98	3.05	0.59	2.56	2.55	2.37
70.160	0.51	3.99	3.06	0.6	2.57	2.56	2.39
72.160	0.51	3.99	3.06	0.61	2.57	2.56	2.39
74.160	0.51	4	3.07	0.62	2.59	2.57	2.4
76.160	0.52	4.01	3.08	0.62	2.59	2.58	2.41
78.160	0.53	4.02	3.1	0.63	2.6	2.6	2.42
80.160	0.55	4.04	3.11	0.64	2.63	2.6	2.43
82.160	0.54	4.02	3.09	0.64	2.61	2.59	2.42
84.160	0.55	4.04	3.09	0.64	2.63	2.59	2.42
86.160	0.56	4.04	3.1	0.64	2.65	2.6	2.43
88.160	0.55	4.04	3.09	0.64	2.64	2.6	2.42
90.160	0.55	4.05	3.11	0.64	2.64	2.61	2.44
92.160	0.56	4.06	3.12	0.64	2.65	2.62	2.44
94.160	0.56	4.06	3.12	0.64	2.64	2.62	2.45
96.160	0.56	4.06	3.12	0.65	2.65	2.62	2.45
98.160	0.56	4.07	3.13	0.65	2.65	2.63	2.45
100.160	0.57	4.08	3.14	0.66	2.65	2.63	2.46
120.250	0.59	4.1	3.17	0.68	2.7	2.66	2.48

WELL ID:	1S	1I	1D	2S	2I-1	2I-2	2D
ELAPSED TIME (MIN)	DRAWDOWN IN FEET (INSITU RECORDER VALUES)						
140.250	0.61	4.12	3.2	0.69	2.7	2.69	2.51
160.250	0.62	4.14	3.22	0.71	2.71	2.71	2.53
180.250	0.64	4.15	3.23	0.71	2.73	2.72	2.54
200.250	0.65	4.15	3.23	0.72	2.73	2.73	2.54
220.230	0.66	4.15	3.24	0.73	2.74	2.74	2.55
240.230	0.67	4.16	3.24	0.74	2.75	2.75	2.56
260.230	0.68	4.17	3.25	0.75	2.76	2.76	2.56
280.230	0.69	4.17	3.26	0.76	2.77	2.76	2.57
300.230	0.7	4.17	3.26	0.77	2.77	2.76	2.57
320.230	0.7	4.19	3.27	0.77	2.78	2.77	2.58
340.230	0.71	4.19	3.27	0.77	2.78	2.77	2.58
360.230	0.71	4.2	3.28	0.77	2.79	2.78	2.59
380.230	0.72	4.2	3.28	0.78	2.79	2.78	2.59
400.230	0.73	4.21	3.29	0.79	2.81	2.78	2.59
420.230	0.74	4.21	3.29	0.8	2.82	2.79	2.59
440.230	0.74	4.22	3.3	0.8	2.81	2.79	2.6
460.230	0.75	4.22	3.28	0.8	2.82	2.79	2.59
480.230	0.75	4.22	3.28	0.81	2.82	2.79	2.59
500.230	0.75	4.23	3.28	0.81	2.82	2.79	2.59
520.230	0.76	4.23	3.28	0.81	2.81	2.79	2.59
540.230	0.76	4.23	3.29	0.81	2.82	2.79	2.59
560.230	0.76	4.23	3.28	0.81	2.82	2.78	2.59
580.230	0.76	4.23	3.28	0.81	2.81	2.78	2.59
600.230	0.76	4.23	3.28	0.81	2.81	2.78	2.58
620.230	0.76	4.22	3.27	0.81	2.81	2.78	2.58
640.230	0.76	4.21	3.27	0.8	2.81	2.77	2.57
660.230	0.75	4.21	3.27	0.8	2.8	2.77	2.57
680.230	0.75	4.21	3.26	0.8	2.8	2.76	2.56
700.230	0.75	4.21	3.26	0.79	2.8	2.76	2.56
720.230	0.75	4.21	3.25	0.8	2.8	2.76	2.55
740.230	0.75	4.21	3.25	0.8	2.81	2.75	2.55
760.230	0.75	4.2	3.25	0.8	2.81	2.75	2.54
780.230	0.75	4.2	3.25	0.8	2.81	2.74	2.54
800.230	0.74	4.2	3.24	0.8	2.8	2.74	2.54
820.230	0.74	4.19	3.24	0.79	2.8	2.74	2.54
840.230	0.74	4.19	3.24	0.79	2.79	2.73	2.53
860.230	0.75	4.21	3.25	0.83	2.8	2.74	2.54
880.230	0.75	4.21	3.25	0.84	2.8	2.75	2.54
900.230	0.75	4.21	3.25	0.83	2.8	2.74	2.55
920.230	0.75	4.21	3.26	0.83	2.81	2.74	2.56
940.230	0.75	4.21	3.26	0.82	2.8	2.74	2.56
960.230	0.75	4.21	3.26	0.81	2.8	2.74	2.57
980.230	0.75	4.21	3.27	0.81	2.8	2.74	2.57
1060.200	0.76	4.21	3.27	0.8	2.81	2.73	2.57
1120.100	0.77	4.22	3.28	0.81	2.81	2.74	2.58
1180.100	0.79	4.22	3.29	0.83	2.82	2.73	2.57
1240.100	0.79	4.22	3.3	0.86	2.83	2.74	2.59
1300.100	0.78	4.21	3.31	0.85	2.83	2.73	2.6
1360.100	0.78	4.21	3.3	0.83	2.83	2.73	2.61
1420.100	0.76	4.19	3.29	0.81	2.82	2.7	2.59

WELL ID:	1S	1I	1D	2S	2I-1	2I-2	2D
ELAPSED TIME (MIN)	DRAWDOWN IN FEET (INSITU RECORDER VALUES)						
1480.100	0.75	4.18	3.28	0.79	2.82	2.69	2.59
1540.100	0.74	4.15	3.24	0.78	2.81	2.66	2.55
1600.100	0.75	4.17	3.25	0.75	2.8	2.66	2.54
1660.200	0.76	4.17	3.25	0.76	2.81	2.66	2.54
1720.200	0.79	4.19	3.25	0.78	2.81	2.66	2.55
1780.200	0.79	4.19	3.24	0.81	2.81	2.66	2.55
1840.100	0.81	4.2	3.24	0.81	2.82	2.66	2.55
1900.100	0.81	4.19	3.23	0.81	2.81	2.66	2.54
1960.100	0.79	4.19	3.22	0.78	2.8	2.64	2.53
2020.100	0.78	4.18	3.2	0.77	2.79	2.63	2.51
2080.100	0.77	4.18	3.19	0.77	2.78	2.62	2.5
2140.100	0.76	4.17	3.17	0.77	2.76	2.61	2.49
2200.100	0.75	4.16	3.16	0.76	2.75	2.59	2.48
2260.100	0.74	4.15	3.15	0.75	2.74	2.58	2.47
2320.100	0.74	4.14	3.14	0.74	2.73	2.57	2.47
2380.100	0.75	4.15	3.11	0.75	2.73	2.57	2.46
2440.100	0.75	4.15	3.11	0.75	2.72	2.57	2.45
2500.100	0.76	4.15	3.11	0.76	2.73	2.57	2.46
2560.200	0.78	4.16	3.12	0.77	2.73	2.58	2.47
2576.800	0.78	4.16	3.13	0.79	2.74	2.58	2.48

MOBIL (TP&J PROPERTY) AQUIFER PERFORMANCE TEST

DATE OF TEST: Oct. 11, 1989
 PUMPING RATE: 0 gpm
 WEATHER: Scattered rain

LOCATION: S10 T39S R41E
 DURATION: 3 hours recovery

WELL ID:	1S	1I	1D	2S	2I-1	2I-2	2D
RADIUS :	77.9	76.1	75.5	156	153.3	153.3	151.5

ELAPSED TIME (MIN)	RESIDUAL DRAWDOWN IN FEET (INSITU RECORDER VALUES)						
0.017	-999.99	4.15	-999.99	-999.99	-999.99	-999.99	-999.99
0.034	-999.99	4.15	-999.99	-999.99	-999.99	-999.99	-999.99
0.050	-999.99	4.14	-999.99	-999.99	-999.99	-999.99	-999.99
0.067	-999.99	4.14	-999.99	-999.99	-999.99	-999.99	-999.99
0.084	-999.99	4.13	-999.99	-999.99	-999.99	-999.99	-999.99
0.100	-999.99	4.11	-999.99	-999.99	-999.99	-999.99	-999.99
0.117	-999.99	4.1	-999.99	-999.99	-999.99	-999.99	-999.99
0.134	-999.99	4.08	-999.99	-999.99	-999.99	-999.99	-999.99
0.150	-999.99	4.06	-999.99	-999.99	-999.99	-999.99	-999.99
0.167	-999.99	4.05	-999.99	-999.99	-999.99	-999.99	-999.99
0.257	0.8	3.91	3.09	0.79	2.72	2.57	2.47
0.340	0.81	3.77	3.05	0.79	2.71	2.55	2.46
0.424	0.81	3.62	3	0.79	2.69	2.53	2.45
0.507	0.82	3.48	2.94	0.79	2.67	2.51	2.43
0.590	0.83	3.34	2.87	0.79	2.63	2.47	2.4
0.674	0.84	3.22	2.81	0.79	2.6	2.44	2.37
0.757	0.84	3.11	2.74	0.79	2.56	2.4	2.34
0.840	0.85	3	2.68	0.79	2.53	2.36	2.31
0.924	0.85	2.92	2.62	0.8	2.49	2.33	2.27
1.007	0.86	2.83	2.56	0.8	2.45	2.29	2.24
1.406	0.86	2.52	2.31	0.81	2.27	2.11	2.09
1.740	0.86	2.34	2.16	0.81	2.15	1.99	1.98
2.073	0.86	2.19	2.03	0.82	2.04	1.88	1.88
2.406	0.86	2.07	1.92	0.82	1.95	1.78	1.79
2.740	0.86	1.97	1.82	0.82	1.86	1.7	1.71
3.073	0.86	1.88	1.74	0.82	1.79	1.62	1.64
3.406	0.86	1.8	1.67	0.82	1.72	1.56	1.57
3.740	0.85	1.73	1.6	0.82	1.66	1.5	1.52
4.073	0.85	1.67	1.54	0.82	1.61	1.44	1.47
4.406	0.84	1.61	1.49	0.82	1.56	1.4	1.42
4.740	0.84	1.56	1.44	0.81	1.51	1.35	1.38
5.073	0.83	1.51	1.39	0.81	1.47	1.3	1.33
5.406	0.83	1.47	1.35	0.8	1.43	1.26	1.29
5.740	0.82	1.43	1.32	0.8	1.4	1.23	1.26
6.073	0.82	1.4	1.28	0.8	1.36	1.2	1.23
6.406	0.81	1.36	1.25	0.79	1.33	1.16	1.2
6.740	0.81	1.33	1.22	0.79	1.3	1.13	1.17
7.073	0.81	1.3	1.19	0.78	1.28	1.11	1.14
7.406	0.8	1.27	1.16	0.78	1.25	1.08	1.12
7.740	0.79	1.24	1.14	0.77	1.22	1.06	1.09
8.073	0.79	1.22	1.11	0.77	1.2	1.03	1.07
8.406	0.79	1.19	1.09	0.76	1.18	1.01	1.05
8.740	0.78	1.17	1.07	0.75	1.15	0.98	1.03
9.073	0.77	1.15	1.04	0.75	1.13	0.96	1
9.406	0.77	1.13	1.02	0.74	1.12	0.94	0.98
9.740	0.76	1.11	1	0.74	1.1	0.92	0.96

WELL ID:	1S	1I	1D	2S	2I-1	2I-2	2D
ELAPSED TIME (MIN)	RESIDUAL DRAWDOWN IN FEET (INSITU RECORDER VALUES)						
10.073	0.76	1.09	0.99	0.73	1.08	0.91	0.95
12.215	0.72	0.98	0.88	0.69	0.97	0.8	0.85
14.215	0.69	0.89	0.79	0.66	0.9	0.72	0.77
16.215	0.66	0.83	0.74	0.63	0.83	0.66	0.71
18.215	0.64	0.76	0.68	0.6	0.77	0.6	0.66
20.215	0.61	0.72	0.63	0.57	0.73	0.55	0.61
22.215	0.59	0.67	0.59	0.54	0.68	0.51	0.57
24.215	0.56	0.63	0.55	0.51	0.64	0.46	0.53
26.215	0.54	0.59	0.51	0.48	0.6	0.43	0.49
28.215	0.51	0.54	0.48	0.46	0.57	0.39	0.46
30.215	0.49	0.52	0.46	0.43	0.54	0.37	0.43
32.215	0.47	0.5	0.43	0.41	0.51	0.34	0.41
34.215	0.45	0.47	0.4	0.39	0.49	0.31	0.38
36.215	0.44	0.45	0.38	0.37	0.46	0.28	0.36
38.105	0.42	0.42	0.36	0.35	0.44	0.26	0.34
40.105	0.4	0.4	0.34	0.34	0.42	0.24	0.32
42.105	0.39	0.38	0.32	0.32	0.4	0.21	0.28
44.105	0.37	0.36	0.3	0.3	0.38	0.2	0.27
46.105	0.36	0.35	0.28	0.29	0.37	0.19	0.27
48.105	0.35	0.34	0.27	0.27	0.35	0.17	0.26
50.105	0.34	0.32	0.26	0.26	0.33	0.16	0.24
52.105	0.32	0.3	0.24	0.25	0.32	0.14	0.22
54.105	0.31	0.29	0.23	0.23	0.3	0.12	0.2
56.105	0.3	0.28	0.22	0.22	0.29	0.12	0.2
58.105	0.29	0.26	0.21	0.21	0.28	0.1	0.18
60.105	0.28	0.25	0.2	0.2	0.27	0.1	0.18
62.105	0.27	0.24	0.18	0.19	0.25	0.08	0.17
64.105	0.26	0.23	0.17	0.18	0.24	0.06	0.15
66.105	0.25	0.22	0.16	0.17	0.24	0.05	0.14
68.105	0.24	0.21	0.15	0.16	0.23	0.05	0.13
70.105	0.24	0.2	0.15	0.16	0.22	0.04	0.13
72.105	0.23	0.19	0.13	0.14	0.2	0.01	0.09
74.105	0.22	0.18	0.13	0.14	0.2	0.01	0.09
76.105	0.21	0.18	0.13	0.14	0.2	0.02	0.11
78.105	0.21	0.17	0.12	0.12	0.19	0	0.09
80.105	0.2	0.16	0.11	0.12	0.18	0	0.09
82.105	0.19	0.15	0.1	0.11	0.17	-0.01	0.08
84.105	0.19	0.15	0.1	0.11	0.16	-0.02	0.08
86.105	0.18	0.14	0.09	0.1	0.16	-0.03	0.07
88.105	0.18	0.14	0.08	0.09	0.15	-0.03	0.06
90.105	0.17	0.13	0.08	0.08	0.14	-0.04	0.05
92.105	0.17	0.12	0.08	0.09	0.14	-0.03	0.06
94.105	0.16	0.12	0.08	0.08	0.14	-0.04	0.06
96.105	0.15	0.11	0.06	0.07	0.13	-0.06	0.03
98.105	0.16	0.11	0.06	0.07	0.13	-0.05	0.04
100.110	0.15	0.1	0.06	0.06	0.12	-0.06	0.03
120.270	0.11	0.06	0.01	0.03	0.08	-0.1	-0.01
140.270	0.08	0.03	-0.02	-0.01	0.04	-0.14	-0.04
160.270	0.06	-0.01	-0.05	-0.03	0.02	-0.17	-0.06
180.270	0.03	-0.03	-0.07	-0.05	-0.01	-0.2	-0.09
181.000	0.03	-0.03	-0.07	-0.06	-0.01	-0.2	-0.1

AQUIFER TEST DATA

Owner Mobil Address _____ County Martin State FL
 Date 10/9/89 Company performing test SFWMD Measured by Adams & Hopkins
 Well No. 19 Distance from pumping well 77.9 Type of test Constant Rate Test No. 1

Measuring equipment _____

Time Data Pump on: Date <u>10/9/89</u> Time <u>1405</u> (?:) Pump off: Date <u>10/10/89</u> Time <u>0900</u> (?:) Duration of aquifer test: _____ Pumping <u>42.9</u> Recovery _____		Water Level Data Static water level <u>6.45</u> Measuring point <u>TOC</u> Elevation of measuring point _____		Comments on factors affecting test data
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Date	Clock time	Time since pump started	Time since pump stopped	1/R	TOC HEAD	WEL	Water level measurement	Correction or Conversion	Water level	ΔS Water level change s or s'	ΔS Insitu #1	Difference	# 209 SCALE 10.2 RANGE 6m	PORT 1
10/9	7:45	0			7	1.44	6.56							
	12:00	0			8	1.41	6.59							
	13:55	0			8	1.55	(6.45)							
	14:20	15			8	1.46	6.54		.09	1.12	+0.03			
	14:33				8	1.28	6.72		.27	1.28	+0.01			
	15:02				8	1.09	6.91		.46	1.47	+0.01			
	16:07				8	.95	7.05		.60	1.60	0			
	17:00				8	.92	7.08		.63	1.64	+0.01			
	17:58				8	.89	7.11		.66	1.66	0			
	19:05				8	.86	7.14		.69	1.69	0			
	20:11				8	.84	7.16		.71	1.71	0			
	20:13				8	.84	7.16		.71	1.74	+0.03			
	21:59				8	.81	7.19		.74	1.75	+0.01			
	23:00				8	.81	7.19		.74	1.76	+0.02			
10/10	24:00				8	.81	7.19		.74	1.76	+0.02			
	1:01				8	.82	7.18		.73	1.76	+0.03			
	2:01				8	.83	7.17		.72	1.75	+0.03			
	3:08				8	.84	7.16		.71	1.75	+0.04			
	4:08				8	.85	7.15		.70	1.74	+0.04			
	5:08				8	.85	7.15		.70	1.75	+0.05			
	6:08				8	.85	7.15		.70	1.75	+0.05			
	7:01				Y	.84	7.16		.71	1.75	+0.04			
	7:58				8	.83	7.17		.72	1.76	+0.04			
	9:58				8	.81	7.19		.74	1.79	+0.05			
	11:57				8	.81	7.19		.74	1.79	+0.05			
	13:56				8	.84	7.16		.71	1.76	+0.05			
	15:34				8	.86	7.14		.69	1.73	+0.04			
	17:57				8	.83				1.77				

AQUIFER TEST DATA

Owner mobil Address _____ County _____ State _____

Date _____ Company performing test SFWMD Measured by _____

Well No. 1S Distance from pumping well 77.9 Type of test _____ Test No. 1

Measuring equipment _____

<p>Time Data Pump on: Date <u>10/9/07</u> Time <u>1405</u> (t) Pump off: Date <u>10/16/07</u> Time <u>0900</u> (t) Duration of aquifer test: Pumping <u>42.9</u> hrs Recovery _____</p>	<p>Water Level Data Static water level <u>6.45</u> Measuring point <u>TOC</u> Elevation of measuring point _____</p>	<p>Comments on factors affecting test data</p>
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Date	Clock time	Time since pump started (t)	Time since pump stopped (t)	1/r	Held	Wet	Water level measurement	Correction or Conversion	Water level	Δs Water level change s or s'	Δs Instn #1	Diff.	1940-RAIN- STADY DRIELE
10/10	2003				8	.81	7.19			.74	1.80		.28"
	2157				8	.81	7.14			.74	1.81		
	2358				9	1.83	7.17			.72	1.78		
	205				8	.86	7.14			.69	1.76		
	402				8	.86	7.14			.69	1.74		
	602				8	.87	7.13			.68	1.75		
	752				2	.88	7.12			.67	1.77		
	854				8	.87	7.13			.68	1.78		
Recovery	913	17			8	.91	7.09			.64	1.69		
	928				8	1.10	6.10			.35	1.50		
	958				8	1.34	6.66			.21	1.29		
	1059				8	1.52	6.47			.03	1.11		
	1156				8	1.59							

AQUIFER TEST DATA

Owner Mobil Address _____ County Martin State FL
 Date 10/9/89 Company performing test SFWMD Measured by Adams & Hopkins
 Well No. 1 I Distance from pumping well 76.1 Type of test Constant Rate Test No. 1

Measuring equipment In Situ

Time Data Pump on: Date <u>10/9/89</u> Time <u>1405</u> (t) Pump off: Date <u>10/9/89</u> Time <u>0900</u> (t) Duration of aquifer test: _____ Pumping <u>42.9</u> Recovery _____		Water Level Data Static water level <u>5.27</u> Measuring point <u>TDC</u> Elevation of measuring point _____		Comments on factors affecting test data
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Date	Clock time	Time since pump started t	Time since pump stopped t'	t/t'	Well TX	Well	Water level measurement	Correction or Conversion	Water level	DS Water level change s or s'	AS INSITU #2	Diff #2	F599 #2 Scale = 100 R = 6m Port #2	# 710 Scale 10/14 R = 6m Port #3
10/9					2		5.29						In situ	Difference
10/9	1240	0			7	1.64	5.36						ΔS #3	#3
	1356				7	1.73	5.27							
	1420	15			9	.28	8.72		3.45	4.45	0		4.47	+0.02
	1434				10	.98	9.02		3.75	4.70	-0.05		4.72	-0.03
	1503				10	.74	9.26		3.99	4.94	-0.05		4.96	-0.03
	1619				10	? 1.09	8.91			5.07			5.11	
	1700				10	.55	9.45		4.18	5.13	-0.05		5.15	-0.03
	1759				10	.53	9.47		4.20	5.14	-0.06		5.15	-0.05
	1905				10	.49	9.51		4.24	5.16	-0.08		5.17	-0.07
	2003				10	.47	9.53		4.26	5.18	-0.08		5.19	-0.07
	2104				10	.46	9.54		4.27	5.20	-0.07		5.22	-0.05
	2200				10	.45	9.55		4.28	5.21	-0.07		5.22	-0.06
	2304				10	.42	9.58		4.31	5.21	-0.10		5.23	-0.08
10/10	2406				10	.45	9.55		4.28	5.21	-0.07		5.23	-0.05
	103				10	.48	9.52		4.25	5.19	-0.06		5.22	-0.03
	203				10	.47	9.53		4.26	5.18	-0.08		5.21	-0.05
	309				10	.49	9.51		4.24	5.16	-0.08		5.20	-0.04
	400				10	.48	9.52		4.25	5.15	-0.10		5.19	-0.06
	506				10	.47	9.51		4.24	5.14	-0.08		5.21	-0.03
	611				10	.49	9.51		4.24	5.16	-0.08		5.21	-0.03
	703				10	.47	9.53		4.26	4.41 (?)			5.21	-0.05
	759				10	.50	9.50		4.23	5.01	-0.22		5.21	-0.02
	1000				10	.49	9.51		4.24	5.02	-0.22		5.22	-0.02
	1158				10	.51	9.49		4.22	4.88	-0.34		5.21	-0.01
	1357				10	.53	9.47		4.20	4.32	-0.88		5.18	-0.02
	1534				10	.53	9.47		4.20	0.03	BAD		5.15	-0.05
	1758				10	.52							5.17	

AQUIFER TEST DATA

Owner mobil Address _____ County _____ State _____

Date _____ Company performing test SFWMD Measured by _____

Well No 1I Distance from pumping well 76.1 Type of test Constant Rate Test No. 1

Measuring equipment _____

<p>Time Data Pump on: Date <u>10/9/87</u> Time <u>1408</u> (t) Pump off: Date <u>10/11/87</u> Time <u>0900</u> (t) Duration of aquifer test: Pumping <u>42.9 hrs</u> Recovery _____</p>	<p>Water Level Data Static water level <u>5.27</u> Measuring point <u>TOC</u> Elevation of measuring point _____</p>	<p>Comments on factors affecting test data</p>
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Date	Clock time	Time since pump started	Time since pump stopped	1/2"	Held	Wet	Water level measurement	Correction or Conversion	Water level	Δs Water level change s or s'	Δs Insitu #2	Diff	Δs Insitu #3	Diff
	2004				10	.51	9.49			4.22	NONE FOUND		5.19	
	22				10	.49	9.51			4.24			5.19	
	2404				10	.53	9.47			4.25			5.18	
	205				10	.54	9.46			4.19			5.17	
	405				10	.56	9.44			4.17			5.15	
	605				10	.56	9.44			4.17			5.15	
	759				10	.58	9.42			4.15			5.15	
	855				10	.56	9.44			4.17			5.16	
Recovery	914				9	2.83	6.17			.90			1.87	
	929				7	1.20	5.80			.53			1.54	
	959				7	1.50	5.50			.23			1.26	
	1059				7	1.70	5.30			.03			1.06	
	1156				7	1.79								

AQUIFER TEST DATA

Owner Mobil Address _____ County Martin State FL
 Date 10/9/89 Company performing test SFWMP Measured by Adams & Hopkins
 Well No. 1D Distance from pumping well 75.5 Type of test Constant Rate Test No. 1

Measuring equipment In Situ

Time Data Pump on: Date <u>10/9/89</u> Time <u>1405</u> (t) Pump off: Date <u>10/10/89</u> Time <u>0900</u> (t) Duration of aquifer test: Pumping <u>42.9</u> Recovery _____		Water Level Data Static water level <u>6.82</u> Measuring point <u>TOL</u> Elevation of measuring point _____		Comments on factors affecting test data
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Date	Clock time	Time Data		t/r	DC H/d	Net H+t	Water level measurement	Correction or Conversion	Water level	ΔS Water level change s or s'	ΔS In situ #4	Diff	# 2248 Scale = 0.12 RANGE = 10 PSI PORT 4
		t	t'										
	0	0			8	1.14	6.72						
10/9	1240	0			8	1.08	6.92						
	1356	0			8	1.18	6.82						
	1421	16			10	.64	9.36			2.54	3.58	+04	
	1435				11	1.36	9.64			2.82	3.80	-02	
	1504				11	1.14	9.86			3.04	4.03	-01	
	1610				11	.99	10.01			3.19	4.18	-01	
	1701				11	.95	10.05			3.23	4.23	0	
	1759				11	.93	10.07			3.25	4.24	-01	
	1902				11	.89	10.11			3.29	4.25	-04	
	2008				11	.89	10.11			3.29	4.24	-01	
	2106				11	.86	10.14			3.32	4.29	-03	
	2211				11	.87	10.13			3.31	4.29	-03	
	2305				11	.86	10.14			3.32	4.29	-04	
10/10	2409				11	.84	10.16			3.34	4.24	-06	
	104				11	.88	10.12			3.30	4.27	-03	
	208				11	.89	10.11			3.29	4.26	-03	
	309				11	.90	10.10			3.28	4.24	-04	
	409				11	.91	10.09			3.27	4.24	-03	
	508				11	.91	10.09			3.27	4.29	-02	
	614				11	.90	10.10			3.28	4.26	-02	
	704				11	.90	10.10			3.28	4.27	-01	
	800				11	.91	10.09			3.27	4.27	0	
	1000				11	.91	10.09			3.27	4.29	+02	
	1158				11	.92	10.08			3.26	4.31	+05	
	1357				11	.94	10.06			3.24	4.27	+03	
	1534				11	.95	10.05			3.23	4.24	+01	
	1758				11	.94		A34			4.25		

AQUIFER TEST DATA

Owner Mobil Address _____ County _____ State _____

Date _____ Company performing test SFWMO Measured by _____

Well No. 1D Distance from pumping well 75.5 Type of test Constant Rate Test No. 1

Measuring equipment _____

Time Data		Water Level Data		Comments on factors affecting test data
Pump on: Date <u>10/1/87</u> Time <u>1405</u> (t)	Static water level <u>6.82</u>	Pump off: Date <u>10/1/87</u> Time <u>0900</u> (t')	Measuring point <u>TOC</u>	
Duration of aquifer test: Pumping <u>42.9</u> Recovery _____	Elevation of measuring point _____			

Date	Clock time	Time since pump started t	Time since pump stopped t'	t/t'	Held	Wet	Water level measurement	Correction or Conversion	Water level	Δs		Diff.
										Water level changes or s'	Δs Inside #4	
2004					11	.92	10.08		3.26	4.24		
2158					11	.93	10.07		3.25	4.23		
2407					11	.95	10.05		3.23	4.20		
2607					11	.97	10.03		3.21	4.17		
4107					11	.97	10.03		3.21	4.14		
606					11	1.00	10.0		3.18	4.12		
800					11	1.03	9.97		3.15	4.11		
856					11	1.02	9.98		3.16	4.13		
915					8	.35	7.65		.83	1.78		
936					8	.68	7.32		.50	1.46		
959					8	.96	7.04		.22	1.20		
1100					8	1.16	6.84		.02	1.01		
1157					8	1.24						

Recovery

AQUIFER TEST DATA

Owner Mobil Address _____ County Martin State FL
 Date 10/9/89 Company performing test SFWMD Measured by Adams & Hopkins
 Well No. 2S Distance from pumping well 156.0' Type of test Constant Rate Test No. 1

Measuring equipment In Situ

Time Data
 Pump on: Date 10/9/89 Time 1405 (t.)
 Pump off: Date 10/10/89 Time 0700 (t.)
 Duration of aquifer test: _____
 Pumping 42.9 Recovery _____

Water Level Data 5.81
 Static water level 7.90
 Measuring point TOC
 Elevation of measuring point 2' above ground

4492 see 7.90
R = 10 psi/g
 Part 5

Comments on factors affecting test data

Date	Clock time	Time since pump started t	Time since pump stopped t'	t/t'	Held	Wet	Water level measurement	Correction or Conversion	Water level	Δs Water level change s or s'	With Δs Difference	
					7	1.08	5.72					
	1244	0			7	1.06	5.94					
	1357				7	1.19	5.81					
	1423				9	3.0	6.0		.19	1.18	- .01	
	1437				8	1.81	6.19		.38	1.35	- .03	
	1507				7	.61	6.39		.58	1.56	- .02	
	1613				7	.49	6.51		.70	1.69	- .01	
	1702				7	.45	6.55		.74	1.72	- .02	
	1801				7	.42	6.58		.77	1.74	- .03	
	1904				8	1.39	6.61		.80	1.77	- .03	
	1958				7	.37	6.63		.82	1.77	- .05	
	2058				8	1.37	6.63		.82	1.80	- .02	
	2155				8	1.35	6.65		.84	1.81	- .03	
	2252				8	1.33	6.67		.86	1.81	- .05	
10/10	2400				8	1.34	6.66		.85	1.81	- .04	
	0558				8	1.35	6.65		.84	1.80	- .03	
	1558				9	1.36	6.64		.83	1.80	- .03	
	303				8	1.36	6.64		.83	1.80	- .03	
	859				8	1.36	6.64		.83	1.79	- .04	
	457				8	1.37	6.63		.82	1.83	+ .01	
606	606				8	1.37	6.63		.82	1.81	- .01	
	658				8	1.37	6.63		.82	1.80	- .02	
	803				8	1.36	6.64		.83	1.80	- .03	
	1003				8	1.34	6.66		.85	1.84	- .01	
	1200				8	1.34	6.66		.85	1.85	0	
	1359				8	1.37	6.63		.82	1.80	- .02	
	1535				8	1.39	6.61		.80	1.78	- .02	
	1800				8	1.36		A36		1.75		

AQUIFER TEST DATA

Owner Mobil Address _____ County _____ State _____

Date _____ Company performing test SFWMD Measured by _____

Well No 25 Distance from pumping well 156 Type of test Constant Rate Test No. 1

Measuring equipment _____

<p>Time Data Pump on: Date <u>10/9/81</u> Time <u>1405</u> (t) Pump off: Date <u>10/11/81</u> Time <u>0900</u> (t') Duration of aquifer test: Pumping <u>42.9</u> Recovery _____</p>	<p>Water Level Data Static water level <u>5.81</u> Measuring point <u>TOC</u> Elevation of measuring point _____</p>	<p>Comments on factors affecting test data</p>
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Date	Clock time	Time since pump started t	Time since pump stopped t'	t/t'	Held	Wet	Water level measurement	Correction or Conversion	Water level	Δs	Δs	Diff
										Water level change s or s'	inches #5	
39					8'	1.33	6.67		.86	1.81		
22	2200				8	1.32	6.68		.87	1.81		
2	24				8	1.34	6.64		.83	1.77		
	0159				8	1.39	6.61		.80	1.77		
	358				8	1.39	6.61		.80	1.75		
	558				8	1.40	6.60		.79	1.75		
	801				8	1.40	6.60		.79	1.77		
	857				8	1.40	6.60		.79	1.78		
	916				8	1.55	6.45		.64	1.65		
	951				8	1.76	6.24		.43	1.44		
	1000				8	1.98	6.02		.21	1.21		
	1102				8	2.17	5.83		.02	1.03		
	1158				8	2.24						

Recovery

AQUIFER TEST DATA

Owner Mobil Address _____ County Martin State FL
 Date 10/9/89 Company performing test SFWMD Measured by Adams & Hopkins
 Well No. ZI Distance from pumping well 77.2 Type of test Constant Rate Test No. 1

Measuring equipment _____ r = 153

Time Data
 Pump on: Date 10/9/89 Time 1405 (h:m)
 Pump off: Date 10/11/89 Time 0900 (h:m)
 Duration of aquifer test: _____
 Pumping 42.9 Recovery _____

Water Level Data
 Static water level 6.24
 Measuring point TOC
 Elevation of measuring point _____

2157 10.06 10 psig Part 7
 # 4609 9.92 10 psig Part 6

Comments on factors affecting test data

Date	Clock time	Time since pump started t	Time since pump stopped t'	t/t'	Held	Wet	Water level measurement	Correction or conversion	Water level	ΔS Water level change s or s'	Difference		Difference
											Insitu ΔS #6	Insitu ΔS #7	
		0			7	.71	6.29						
	12:44	0			7	.67	6.33						
	13:58				7	.76	6.24						
	14:24				10	1.64	8.36		2.12	3.05	-0.07	3.06	-0.06
	14:38				10	1.41	8.59		2.35	3.30	-0.05	3.30	-0.05
	15:08				10	1.19	8.81		2.57	3.53	-0.04	3.53	-0.04
	16:13				10	1.04	8.96		2.72	3.70	-0.02	3.67	-0.05
	17:03				10	.60	9.0		2.76	3.73	-0.03	3.72	-0.04
	18:02				10	.99	9.01		2.77	3.75	-0.02	3.75	-0.02
	19:07				10	.97	9.03		2.79	3.77	-0.02	3.76	-0.03
	19:57				10	.94	9.06		2.82	3.79	-0.03	3.78	-0.04
	20:59				10	.93	9.07		2.83	3.83	0	3.79	-0.04
	21:52				10	.92	9.08		2.84	3.82	-0.02	3.79	-0.05
	22:58				10	.93	9.07		2.83	3.82	-0.01	3.79	-0.04
10/10	24:01				10	.92	9.08		2.84	3.81	-0.03	3.78	-0.06
	00:59				10	.93	9.07		2.83	3.81	-0.02	3.77	-0.06
	1:59				10	.94	9.06		2.82	3.81	-0.01	3.76	-0.06
	3:04				10	.95	9.05		2.81	3.80	-0.01	3.74	-0.07
	4:00				10	.95	9.05		2.81	3.79	-0.02	3.73	-0.08
	5:00				10	.96	9.04		2.80	3.80	0	3.74	-0.06
	6:07				10	.96	9.04		2.80	3.80	0	3.74	-0.06
	6:59				10	.95	9.05		2.81	3.80	-0.01	3.73	-0.08
	8:04				10	.96	9.04		2.80	3.80	+0.01	3.73	-0.07
	10:03				10	.96	9.04		2.80	3.83	+0.03	3.74	-0.06
	12:01				10	.97	9.03		2.79	3.85	+0.04	3.73	-0.06
	14:00				10	.99	9.01		2.77	3.81	+0.04	3.69	-0.08
	15:36				10	1.00	9.00		2.76	3.80	+0.04	3.66	-0.10
	18:01				10	.99				3.80		3.66	

AQUIFER TEST DATA

Owner Mobil Address _____ County _____ State _____
 Date 10/9/89 Company performing test SFWMD Measured by _____
 Well No. 2E Distance from pumping well 1I 77.2 Type of test Constant Rate Test No. 1
r = 153

Measuring equipment _____

Time Data Pump on: Date <u>10/9/89</u> Time <u>1405</u> (t) Pump off: Date <u>10/10/89</u> Time <u>0900</u> (t') Duration of aquifer test: Pumping <u>92.9</u> Recovery _____	Water Level Data Static water level <u>6.24</u> Measuring point <u>TOC</u> Elevation of measuring point _____	Comments on factors affecting test data
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Date	Clock time	Time since pump started t	Time since pump stopped t'	t/t'	Held	Wet	Water level measurement	Correction or Conversion	Water level	Δs	Δs	Diff	Δs	Diff.
										Water level change s or s'	Insitu #6		Insitu #7	
	820				10	.95	7.02			2.72	3.81		3.66	
	22				10	.99	7.01			2.71	3.81		3.65	
	2401				11	1.98	7.02			2.72	3.78		3.63	
	0700				10	1.01	7.79			2.75	3.76		3.60	
	359				10	1.03	8.97			2.73	3.73		3.58	
	559				10	1.03	8.97			2.73	3.73		3.57	
	801				10	1.04	8.96			2.72	3.73		3.57	
	858				10	1.04	8.96			2.72	3.74		3.58	
Recovery	917				8	.98	7.02			.78	1.67		1.69	
	991				8	1.27	6.73			.49	1.55		1.37	
	1001				8	1.55	6.45			.21	1.27		1.10	
	1102				8	1.74	6.26			.02	1.08		.90	
	1158				8	1.82								

AQUIFER TEST DATA

Owner Mobil Address _____ County Martin State FL
 Date 10/9/89 Company performing test SFWMD Measured by Adams & Hopkins
 Well No. 2D Distance from pumping well 151.5 Type of test Constant Rate Test No. 1
 Measuring equipment In Situ

Pump on: Date <u>10/9/89</u> Time <u>1405</u> (t.) Pump off: Date <u>10/10/89</u> Time <u>0900</u> (t.) Duration of aquifer test: _____ Pumping <u>42.9</u> Recovery _____	# <u>1993</u> Scale = <u>15.11</u> Range <u>10 pps</u>	Port <u>8</u>	Comments on factors affecting test data
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Date	Clock time	Time since pump started t	Time since pump stopped t'	t/t'	Held	Wet	Water level measurement	Correction or Conversion	Water level	AS Water level change s or s'	Insitu AS	Difference
	1245				7	.53	6.47					
	1359				7	.61	<u>6.39</u>					
	1425				10	1.63	8.37		1.98	2.93	-.05	
	1439				10	1.41	8.59		2.20	3.14	-.06	
	1508				10	1.21	8.79		2.40	3.36	-.04	
	1614				10	1.08	8.92		2.53	3.50	-.03	
	1703				10	1.02	8.98		2.59	3.54	-.05	
	1823				10	1.01	8.99		2.60	3.56	-.04	
	1908				10	.98	9.12		2.73	3.57	-.16	
	2000				10	.97	9.13		2.74	3.59	-.15	
	2100				10	.95	9.17		2.78	3.59	-.19	
	2257				10	.94	9.16		2.77	3.59	-.18	
	2259				10	.94	9.16		2.77	3.59	-.18	
<u>10/10</u>	2409				10	.94	9.16		2.77	3.58	-.19	
	1:00				10	.95	9.15		2.76	3.57	-.19	
	2:00				10	.94	9.16		2.77	3.55	-.22	
	3:05				10	.95	9.15		2.76	3.54	-.20	
	4:01				10	.97	9.13		2.74	3.57	-.21	
	5:02				10	.95	9.15		2.76	3.55	-.21	
	6:08				10	.96	9.14		2.75	3.57	-.18	
	7:00				10	.97	9.13		2.74	3.57	-.17	
	8:05				10	.98	9.12		2.73	3.57	-.16	
	10:04				10	.97	9.13		2.74	3.59	-.15	
	12:02				10	.99	9.11		2.72	3.61	-.11	
	14:01				10	1.01	8.99		2.60	3.58	-.02	
	15:36				10	1.03	8.97		2.58	3.55	-.03	
	18:02				10	1.01				3.54		

AQUIFER TEST DATA

Owner Mobil Address _____ County _____ State _____

Date _____ Company performing test SFWMD Measured by _____

Well No. 2D Distance from pumping well 151.5 Type of test Constant Rate Test No. 1

Measuring equipment _____

<p>Time Data</p> <p>Pump on: Date <u>10/1/89</u> Time <u>1405</u> (t.)</p> <p>Pump off: Date <u>10/1/89</u> Time <u>0900</u> (t.)</p> <p>Duration of aquifer test: Pumping <u>42.9</u> Recovery _____</p>	<p>Water Level Data</p> <p>Static water level <u>6.39</u></p> <p>Measuring point _____</p> <p>Elevation of measuring point _____</p>	<p>Comments on factors affecting test data</p>
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Date	Clock time	Time since pump started t	Time since pump stopped t'	t/t'	Water level measurement	Correction or Conversion	Water level	Δs	Δs	Diff.
								Water level change s or s'	Initial #8	
	2303				10 .99		9.01	2.12	3.55	
	22				10 .99		9.01	2.62	3.54	
	2401				10 1.01		8.99	2.00	3.57	
	0202				10 1.02		8.98	2.59	3.49	
	401				10 1.02		8.98	2.59	3.47	
	605				10 1.03		8.97	2.52	3.46	
	802				10 1.08		8.92	2.53	3.46	
	859				10 1.06		8.94	2.55	3.48	
Recovery	917				8 .86		7.14	.75	1.74	
	932				8 1.09		6.96	.57	1.46	
	1001				8 1.39		6.61	.22	1.17	
	1103				8 1.59		6.41	.02	.99	
	1158				8 1.67					

AQUIFER TEST DATA

Owner Mobil Address _____ County Martin State FL
 Date 10/9/89 Company performing test SFWMD Measured by Adams & Hopkins
 Well No Pumping Well Distance from pumping well _____ Type of test Constant Rate Test No. 1
 Measuring equipment Well Sounder

<p>Time Data Pump on: Date <u>10/9/89</u> Time <u>1405</u> (t) Pump off: Date <u>10/11/89</u> Time <u>0700</u> (t) Duration of aquifer test: _____ Pumping <u>42.9</u> Recovery _____</p>	<p>Water Level Data Static water level <u>5.05</u> Measuring point <u>T of pump plant</u> Elevation of measuring point _____</p>	<p>Comments on factors affecting test data</p>
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Date	Clock time	Time since pump started	Time since pump stopped	1/2"	Water level measurement	Correction or conversion	Water level	Δs Water level change s or s'
10/9	1315	0					5.05	
	1402	0					(5.01)	
	1428	23					34.27	29.22
	1440				35.47		34.53	29.43
	15.10				35.24		34.76	29.75
	16.16				35.0			
	17.05				35.0			
	18.04				34.9			
	19.12				34.95			
	20.0				34.94			
	21.09				35			
	22.02				35.32			
	23.06				35.26			
10/10	23.11				35.29			
	1.07				35.29			
	2.10				35.29			
	3.10				35.30			
	4.10				35.33			
	5.10				35.34			
	6.15				35.36			
	7.07				35.39			
	8.06				35.46			
	10.05				35.33			
	12.03				35.29			
	14.03				35.30			
	15.57				35.33			
	18.04				35.42			

AQUIFER TEST DATA

Owner Mobil Address _____ County _____ State _____

Date _____ Company performing test SFWMD Measured by _____

Well No Prod. Well Distance from pumping well 0 Type of test Constant Rate Test No. 1

Measuring equipment Well Sounder

Time Data Pump on: Date <u>10/18/87</u> Time <u>1405</u> (t.) Pump off: Date <u>10/18/87</u> Time <u>0400</u> (t.) Duration of aquifer test: Pumping <u>429</u> Recovery _____	Water Level Data Static water level <u>5.01</u> Measuring point _____ Elevation of measuring point _____	Comments on factors affecting test data
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Date	Clock time	Time since pump started (t)	Time since pump stopped (t')	t/t'	★ Water level measurement	Correction or Conversion	Water level	Δs		
								Water level change s or s'		
	<u>20.16</u>				<u>35.51</u>			<u>30.5</u>		
	<u>22</u>				<u>35.54</u>			<u>30.53</u>		
	<u>24:09</u>				<u>35.44</u>			<u>30.43</u>		
	<u>2:10</u>				<u>35.42</u>			<u>30.41</u>		
	<u>4:10</u>				<u>35.41</u>			<u>30.4</u>		
	<u>6:10</u>				<u>35.73</u>			<u>30.72</u>		
	<u>8:15</u>				<u>35.79</u>			<u>30.72</u>		
	<u>08:57</u>				<u>35.78</u>			<u>30.77</u>		
RECOVERY	<u>9:19</u>				<u>5.72</u>			<u>.71</u>		
	<u>74</u>				<u>5.48</u>			<u>.47</u>		
	<u>1004</u>				<u>5.23</u>			<u>.22</u>		
	<u>1107</u>				<u>5.05</u>			<u>.04</u>		
	<u>12:00</u>				<u>4.95</u>					

AQUIFER TEST DATA

Owner Mobil Address _____ County Martin State FL
 Date 10/9/89 Company performing test SFWMD Measured by Adams & Hopkins
~~Well No.~~ Manometer Distance from pumping well 737' Type of test Constant Rate Test No. 1
Staff Gauge
 Measuring equipment EO

Time Data Pump on: Date <u>10/9/89</u> Time <u>1405</u> (t) Pump off: Date <u>10/10/89</u> Time <u>0700</u> (t) Duration of aquifer test: Pumping <u>42.9</u> Recovery _____		Water Level Data Static water level <u>.68</u> Measuring point _____ Elevation of measuring point _____		Comments on factors affecting test data
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Date	Clock time	Time Data		Inches	GPM	Flow Meter Water level measurement	Correction or Conversion	Water level	Water level change s or s'	Staff Gauge	
		Time since pump started	Time since pump stopped								
10/9	1115	0								.53	11:50-12:30 Rain
	1130	5m		21" ¹² / ₁₉	152	(Pretest)					1.25 inches
	1410			17"	136					.68	
	1430	25				132					
	1445			17"	136					.69	
	1515			17"	136					.70	1525-1542 .32 inches
	1619			17"	136					.80	1552-1607 .03 inches
	1710			17"	136					.79	-1700 .04 inches
	1807			17"						.79	
	1915			17"						.79	
	2017			16 ³⁴ / ₁₉						.79	
	2112			16 ³¹ / ₁₉						.79	
	2210			"						"	
	2311			"						"	
10/10	2414			"						"	
	0115			"						"	
	0215			"						"	
	0315			"						"	
	0415			"						"	
	0515			"						"	
	0615			"						"	
	0712			"						"	
	0810			17						.79	
	1015			17						.79	
	1207			16 ³⁸ / ₁₉						.79	
	1405			17						.79	
	1805			17"						.79	1550-1610 1.01 inches 1630-1700 .005"

A44

AQUIFER TEST DATA

Owner Mobil Address _____ County _____ State _____

Date _____ Company performing test SFWMD Measured by _____

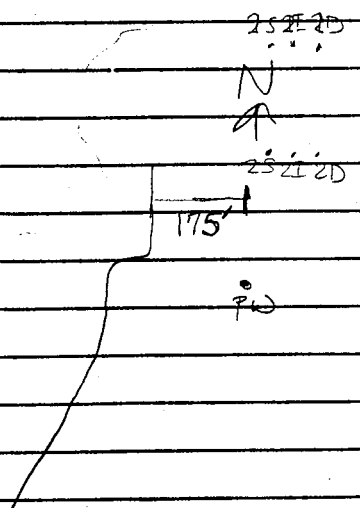
Well No Manometer Staff Gauge Distance from pumping well 737' Type of test Constant Rate Test No. 1

Measuring equipment _____

<p>Time Data</p> <p>Pump on: Date <u>10/11/97</u> Time <u>1405</u> (t₁)</p> <p>Pump off: Date <u>10/11/97</u> Time <u>0900</u> (t₂)</p> <p>Duration of aquifer test: _____</p> <p>Pumping <u>42.9</u> Recovery _____</p>	<p>Water Level Data</p> <p>Static water level <u>.53</u></p> <p>Measuring point _____</p> <p>Elevation of measuring point _____</p>	<p>Comments on factors affecting test data</p>
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Date	Clock time	Time since pump started t	Time since pump stopped t'	t/t'	<u>Manometer</u>		Water level measurement	Correction or conversion	Water level	Water level change s or s'	<u>Staff Gauge</u>
					Inches	G Pm					
	2:12				17	1.57					8.0
	2:14				17						8.1
10/11	2:14				17						8.2
	2:15				17						8.3
	4:15				"						"
	6:14				"						"
	07:30				"						"
	08:20				"						.83

Recovery



RECOMMENDED LEVELS FOR TESTED WATER QUALITY PARAMETERS

PARAMETER	RECOMMENDED LEVEL	COMMENTS
Sodium (Na)	160 mg/l max.	High levels associated with sea water.
Potassium (K)	--	Together with sodium, associated with connate or ancient sea water.
Calcium (Ca)	75-200 mg/l	Recommended standard; main cause of hardness.
Magnesium (Mg)	125 mg/l max.	EPA & U. S. Public Health Service recommended limit.
Chloride (Cl ⁻)	250 mg/l max. <750 mg/l	Fla. Secondary Drinking Water Standards Can be detrimental to plants and livestock above this level.
Sulfate (SO ₄)	250 mg/l max.	Fla. Secondary Drinking Water Standards
Total Alkalinity (AlCO ₃)	220 mg/l max.	Recommended standard, EPA & U. S. Public Health Service
Flouride (F)	1.4 to 2.4 mg/l	Fla. Primary Drinking Water Standards
Silicon Dioxide (SiO ₂)	--	Indicator of aquifer material (ie: dissolved silica).
Total Diss. Strontium (SR)	--	No drinking water standard.
Total Iron	--	
Total Diss. Iron	.30 mg/l max.	Fla. Primary Drinking Water Standards
Total Diss. Solids	500 mg/l max. 1000 mg/l max. 3000 mg/l max.	Fla. Secondary Drinking Water Standards For domestic and industrial purposes For agricultural purposes
Color	15 units	
Conductivity	< 1200 umhos/cm	Suitable for most <u>irrigation</u> purposes, no drinking water standard
pH	min 6.5-no max.	Fla. Secondary Drinking Water Standards
Hardness	--	0-60 soft, 61-120 mod. hard, 121-180 hard, > 180 very hard Sum of (calcium X 2.447) + (magnesium X 4.118) = Hardness

**MOBIL (TP & J) APT
WATER QUALITY TEST RESULTS
PRODUCTION WELL**

Parameter Tested	Start of Test 10/9/89	End of Test 10/11/89
Sodium	19.21	18.10
Potassium	.49	.43
Calcium	100.8	100.8
Magnesium	2.91	2.77
Chloride	31.2	33.3
Sulfate	<2.0	<2.0
Total Alkalinity	242.7	253.4
Flouride	.284	.268
Silicon Dioxide	14.6	14.8
Total Dissolved Strontium	.50	.50
Total Iron	.42	.37
Total Dissolved Iron	.07	.05
Total Dissolved Solids	349	334
Color (Units)	26	31
Lab Conduct. (umhos/cm)	405	456
Lab pH (Units)	6.45	6.62

Note: All results are given in mg/l unless otherwise specified.