

WELL COMPLETION REPORT

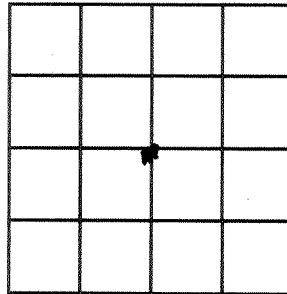
FORM 0124
Rev. 4/85

WELL PERMIT NO.

Owner SFWWD 3301 GUN CLUB ROAD Address WPB City FI State 30 Zip 33409
 Contractor's Signature Global Drilling Co. License No. _____ Completion Date 1974 Casing Depth _____ Total Depth _____ Well # STL172
 Driller's Name _____ Registration No. _____

TYPE OF WORK: Construct Repair () Abandon ()
 WELL USE: Domestic Well () Public () Monitor Test ()
 Irrigation () Fire Well () Other _____
 METHOD: Rotary with MUD () or Air (), Cable Tool (), Jet
 Casing Driven (), Other _____
 STATIC WATER LEVEL _____ Ft. below top of casing
 PUMPING WATER LEVEL _____ Ft. after _____ Hrs. at _____ GPM
 PUMP SIZE _____ H.P. CAPACITY _____ GPM
 PUMP TYPE _____ INTAKE DEPTH _____
From top of ground

LOCATION
 Located Near Boat Ramp
in Savannah Recreation Area
 County St. Lucie
 NE SW 35 35 40
1/4 1/4 Section Township Range
27 23 16 80 18 34
Latitude-Longitude



LOCATE IN SECTION

Cuttings sent to District? () Yes
 () No

Note: PWS Wells attach a site map if well location is different from site location on permit application.

Grout	Casing & Screen	Depth (ft)		DRILL CUTTINGS LOG Examine cuttings every 20 ft. or at formation changes Give color, grain size, and type of material Note cavities, depth to producing zones.
		From	To	
		4	26	CASING
		4	30	SCREEN
Number of bags				

Casing: Black Steel () Galv. () PVC () Fiberglass ()
 Screen: Type _____ Slot size _____
 Screened from 26 (ft.) to 30 (ft.)
 Type of grout with % additives _____
 Water: Clear () Colored () Sulphur () Salty () Iron ()
 Conductivity _____ Chlorides _____ mg/l

WELL COMPLETION REPORT

FORM 0124
Rev. 4/85

WELL PERMIT NO. _____

Owner SFWMD 3301 GUN CLUB ROAD Address WFB City FI State 33409 Zip
 Contractor's Signature Tony Lubrano License No. _____ Completion Date 7-6-89 Casing Depth 100 Total Depth 130 Well # SLMW14D
 Driller's Name _____ Registration No. _____

TYPE OF WORK: Construct () Repair () Abandon ()
 WELL USE: Domestic Well () Public () Monitor () Test ()
 Irrigation () Fire Well () Other _____
 METHOD: Rotary with MUD () or Air (), Cable Tool (), Jet ()
 Casing Driven (), Other _____
 STATIC WATER LEVEL _____ Ft. below top of casing
 PUMPING WATER LEVEL _____ Ft. after _____ Hrs. at _____ GPM
 PUMP SIZE _____ H.P. CAPACITY _____ GPM
 PUMP TYPE _____ INTAKE DEPTH _____
From top of ground

LOCATION
 Located Near Boat Ramp
in Savannah Recreative Area
 County ST LUCIE
NE SW 35 35 40
1/4 Section Township Range
2723 16 80 1834
Latitude-Longitude

		X	

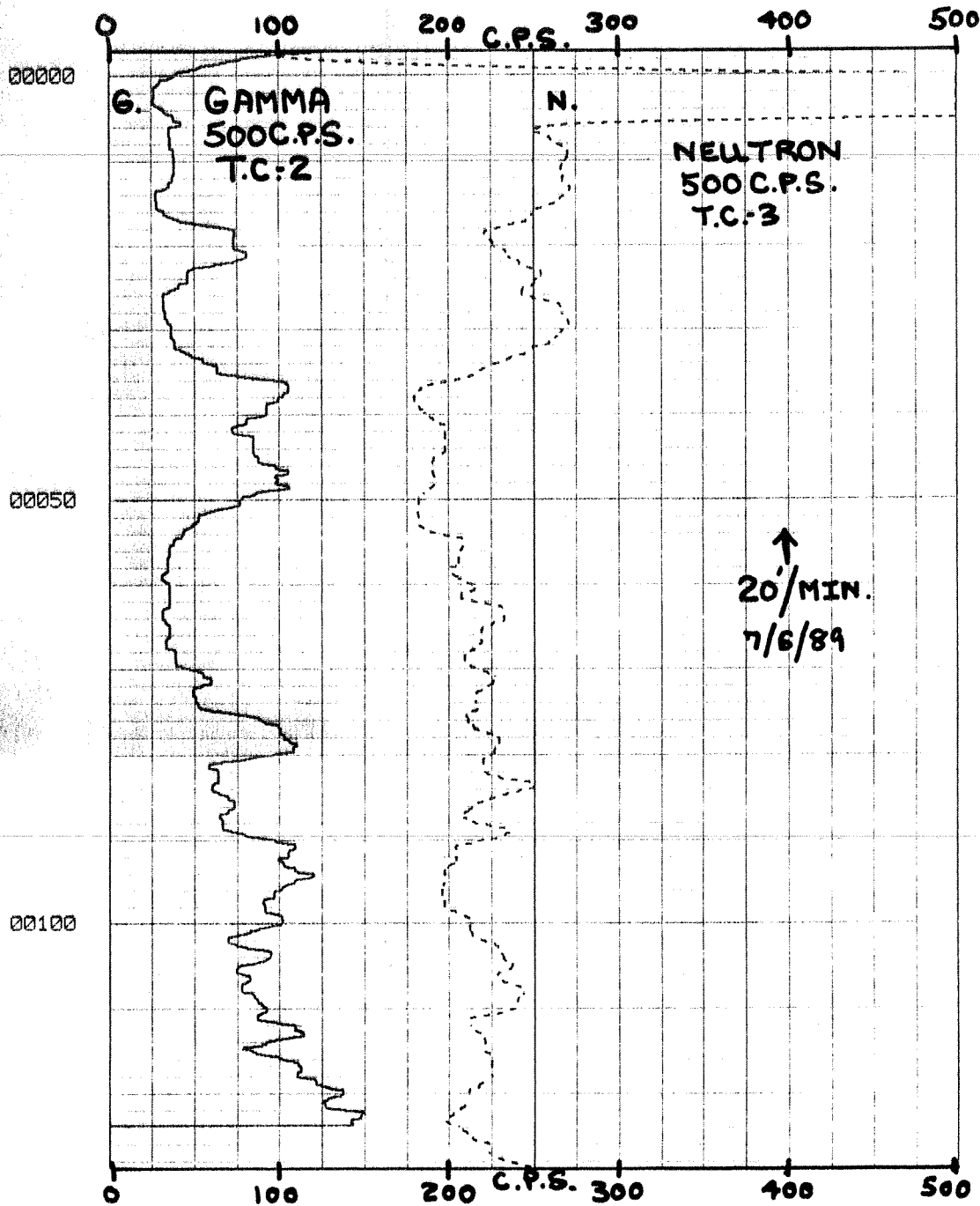
Cuttings sent to District? () Yes
 () No

Note: PWS Wells attach a site map if well location is different from site location on permit application.

Grout	Casing & Screen Diameter & Depth	Depth (ft)		DRILL CUTTINGS LOG Examine cuttings every 20 ft. or at formation changes Give color, grain size, and type of material. Note cavities, depth to producing zones.
		From	To	
	2 80	0	80	CASING
	2 100	80	100	SCREEN
	2 130	100	130	CASING
Number of bags				

Casing: Black Steel () Galv. () PVC () Fiberglass ()
 Screen: Type PVC Slot size 0.02
 Screened from 80 (ft.) to 100 (ft.)
 Type of grout with % additives _____
 Water: Clear () Colored () Sulphur () Salty () Iron ()
 Conductivity _____ Chlorides _____ mg/l

LMW14D



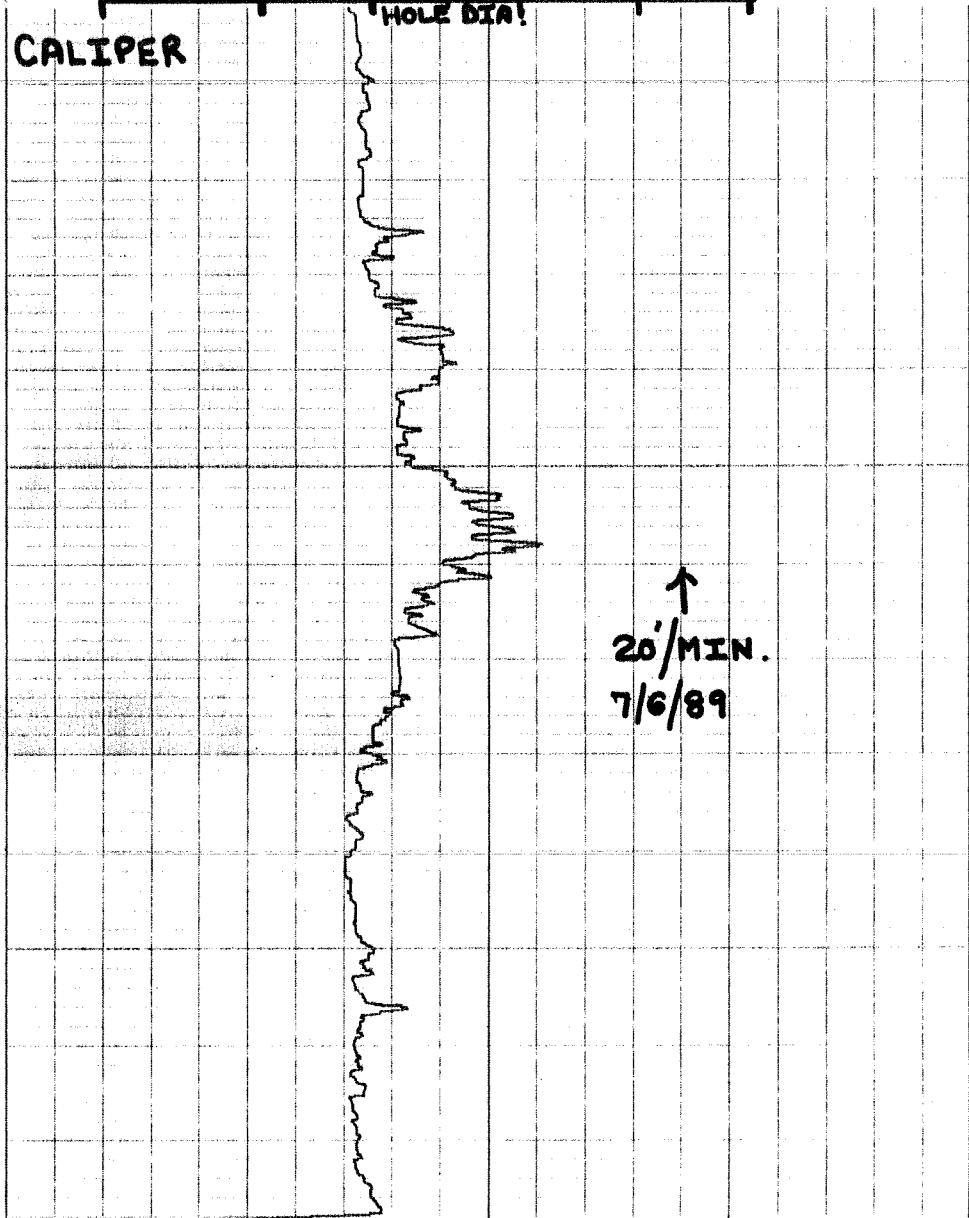
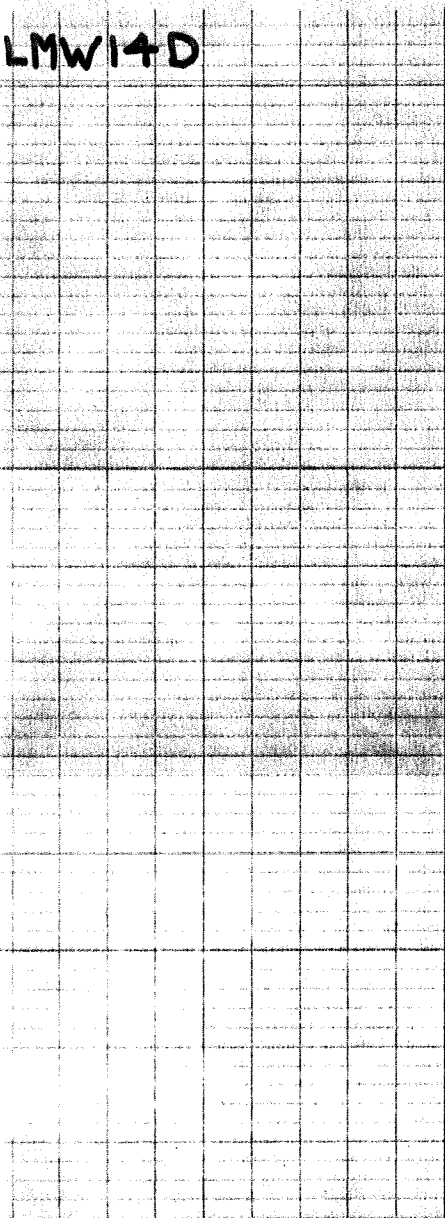
LMW14D

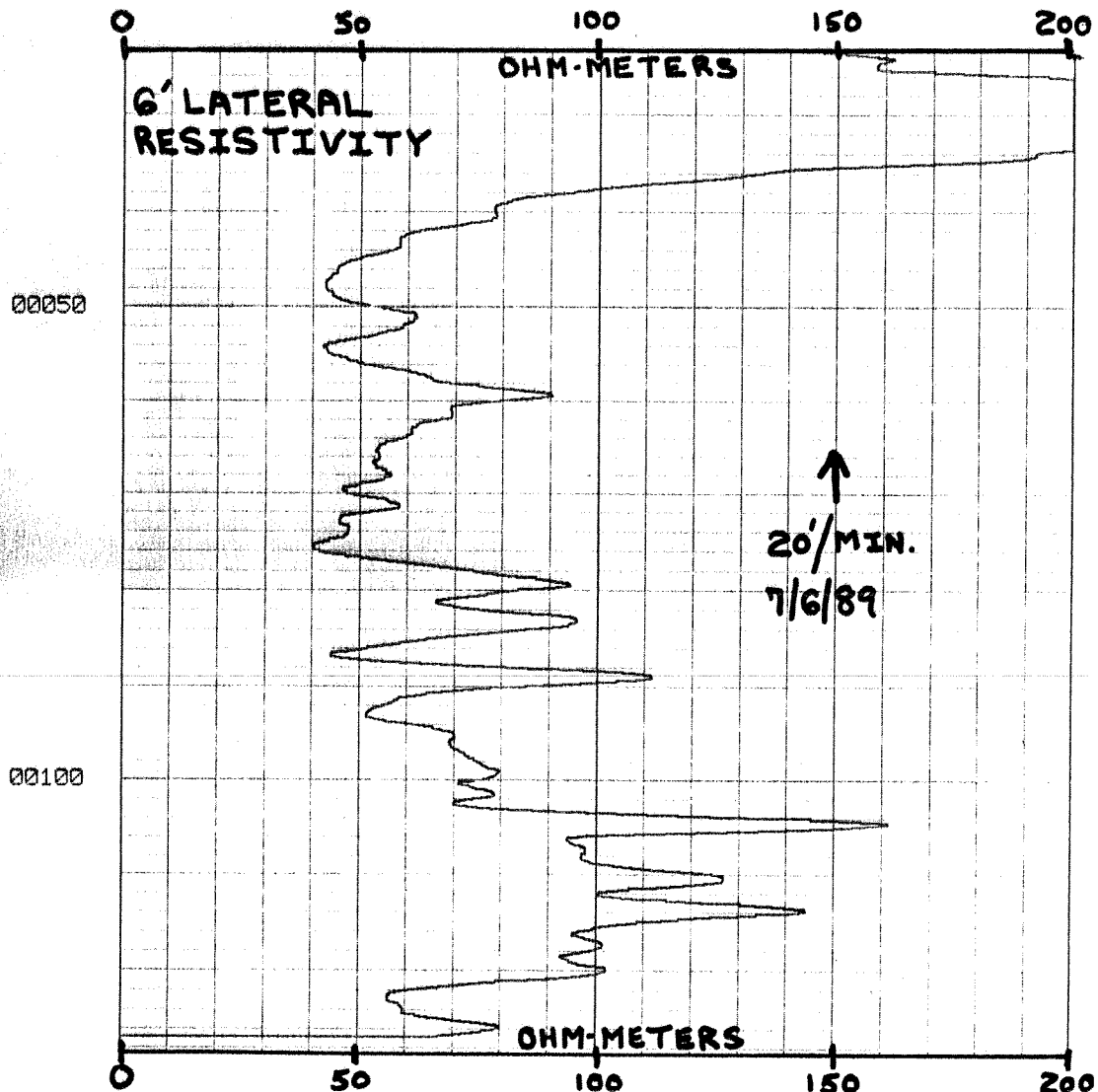
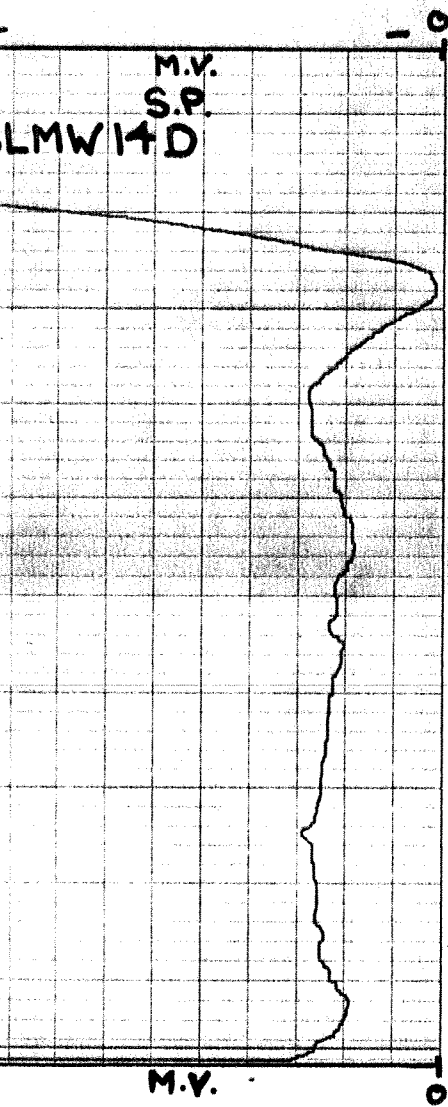
2" 4" 6" 8" 10" 12"
CALIPER HOLE DIA!

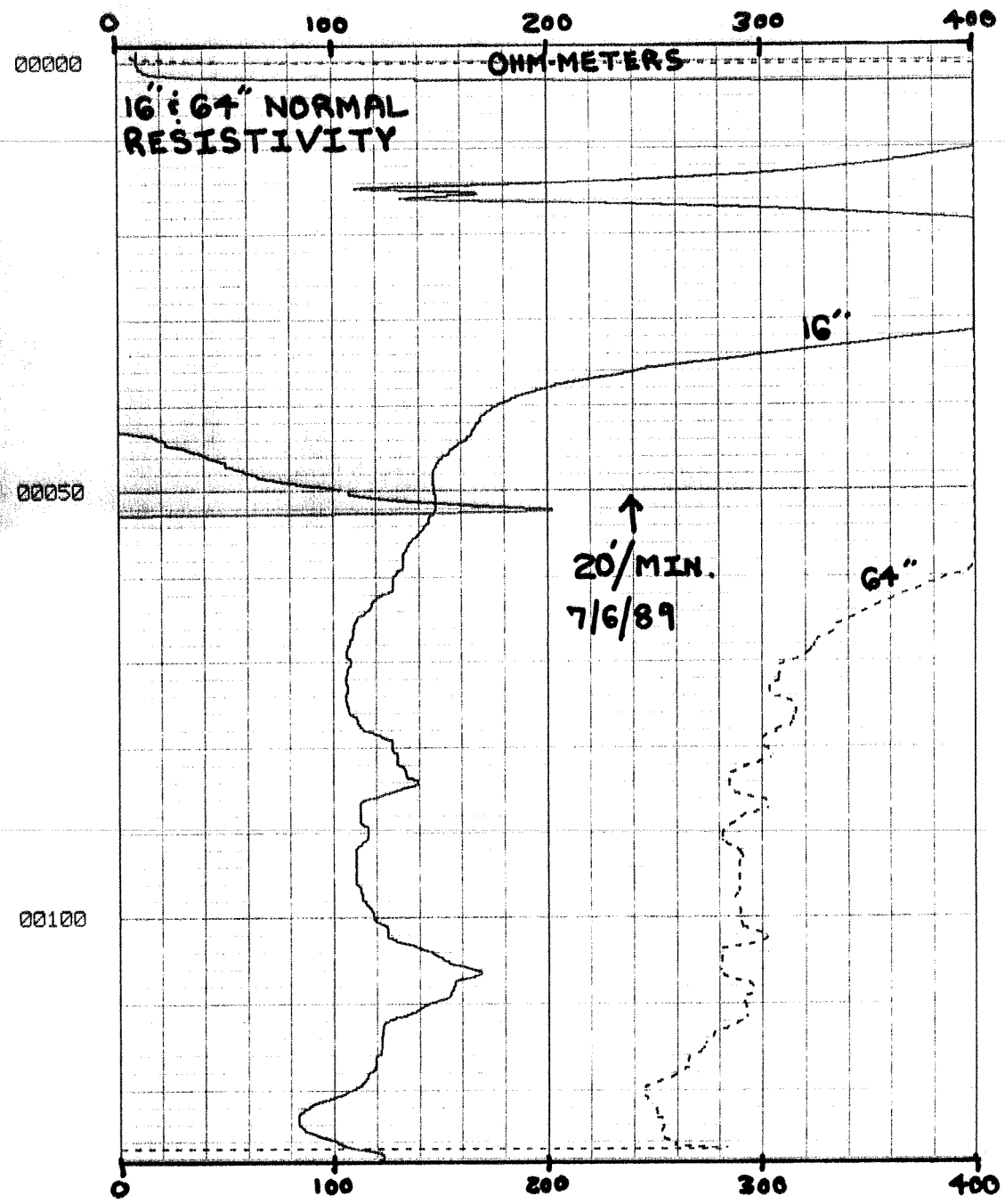
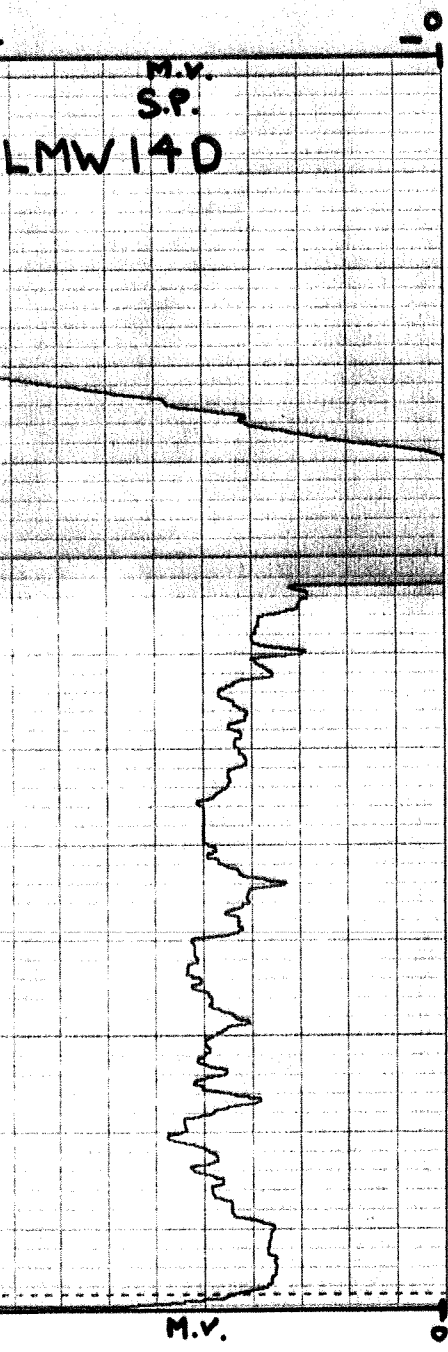
00050

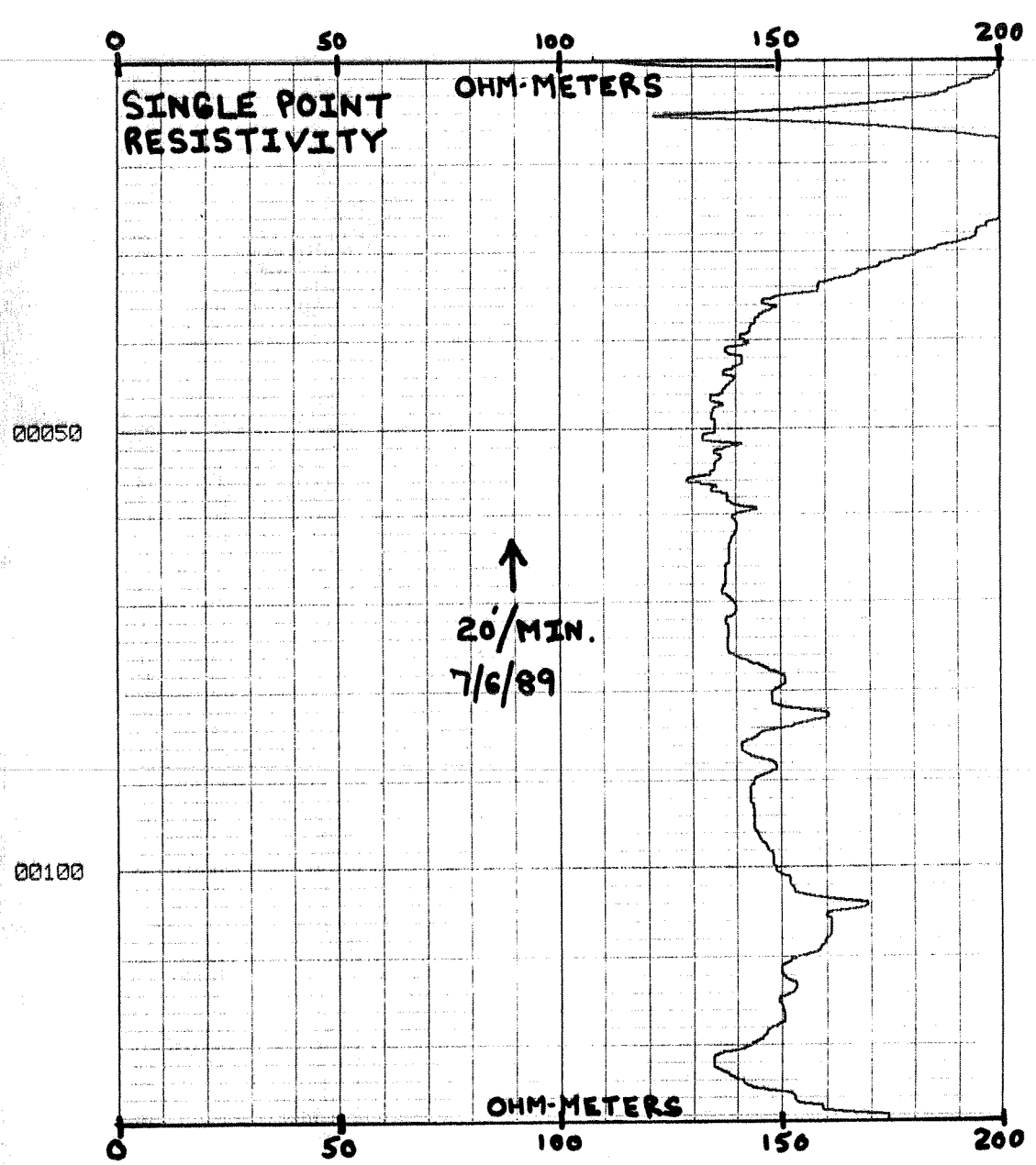
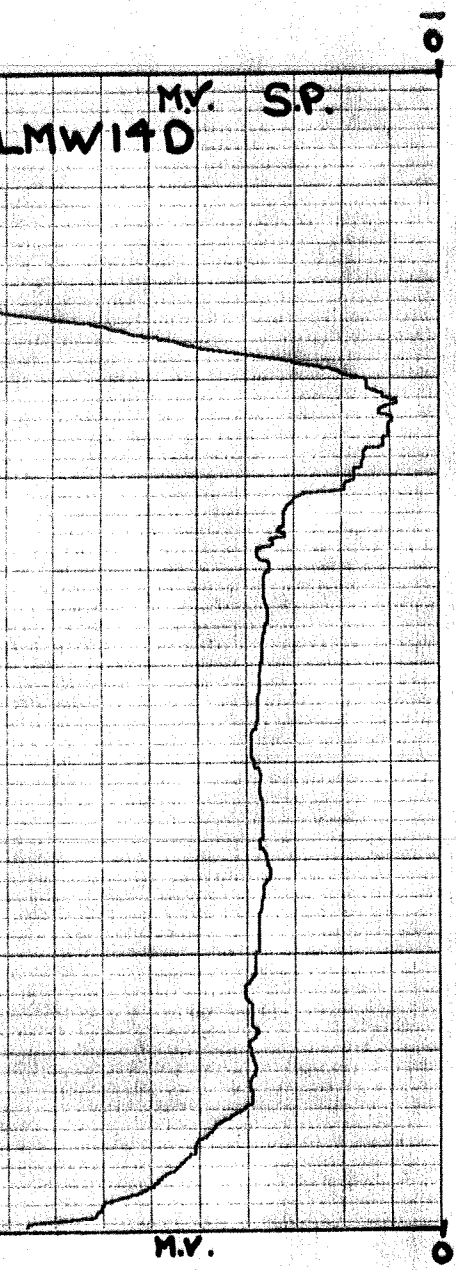
00100

↑
20'/MIN.
7/6/89

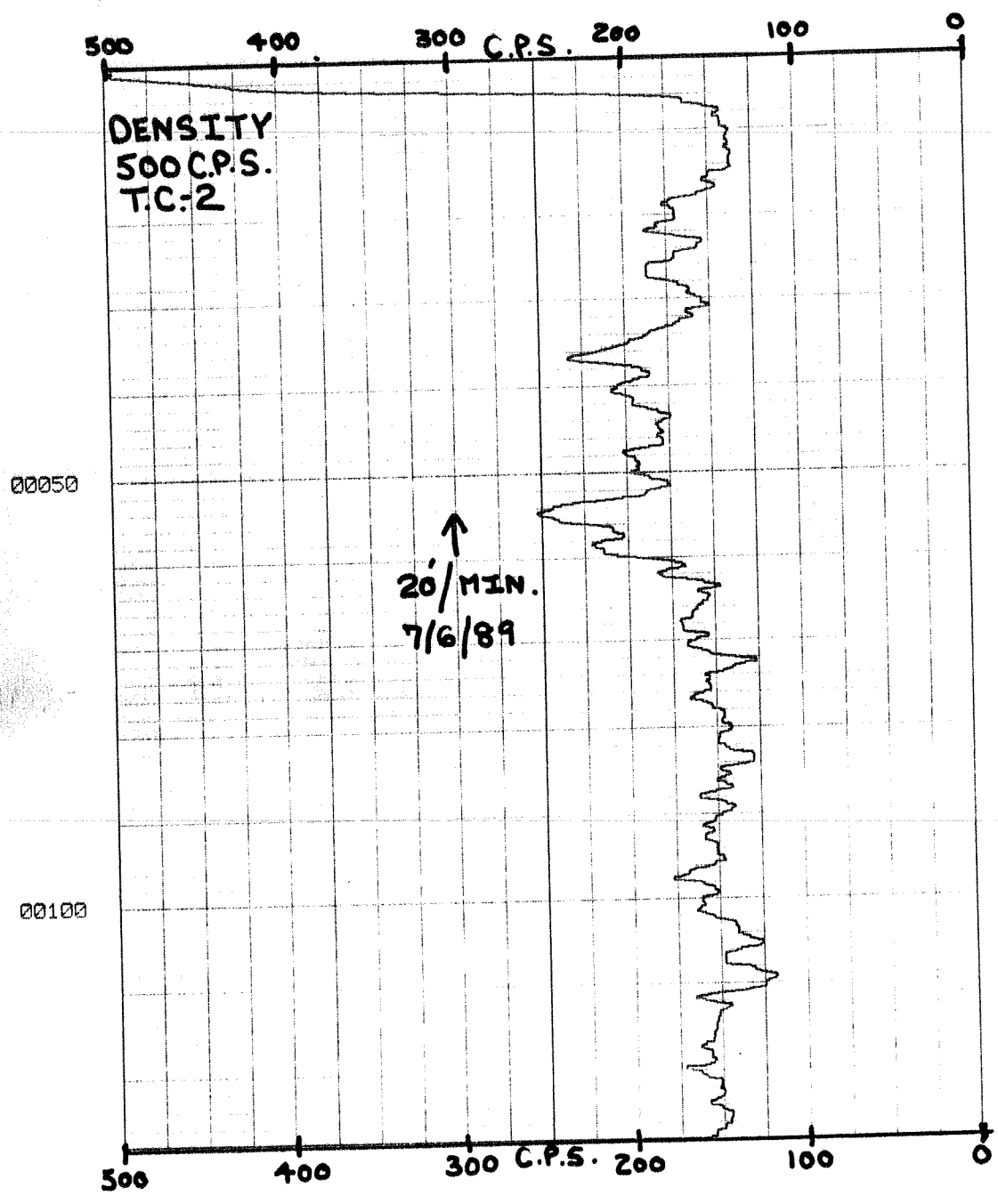








MW14D



BOARD OF COUNTY
COMMISSIONERS



COUNTY
ATTORNEY

Daniel S. McIntyre

Krista A. Storey

ASSISTANT COUNTY ATTORNEY

Heather Young

ASSISTANT COUNTY ATTORNEY

Doris G. Ferguson

ASSISTANT COUNTY ATTORNEY

June 19, 1989

Mr. Don G. J. Padgett
Staff Hydrogeologist
Hydrogeology Division
Resource Planning Department
South Florida Water Management District
Post Office Box 24680
West Palm Beach, Florida 33416-4689

Re: Right of Entry Agreement - Savannas Recreation Area

Dear Mr. Padgett:

Enclosed please find the above referenced Agreement which has been executed by the City of Fort Pierce as Owner of the property. Please obtain the necessary signatures for South Florida Water Management District and return a fully executed original to this office for further processing.

Thank you for your assistance in this matter.

Sincerely,

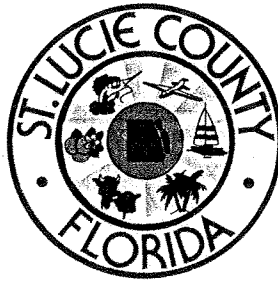
Doris G. Ferguson
Assistant County Attorney

DGF/sls

Enclosure

Copies To: Assistant County Administrator-Operations
Assistant County Administrator-Budget
Public Works Director
County Engineer
Recreation & Parks Director
Finance Director
Cassandra Steele, Fort Pierce City Clerk

BOARD OF COUNTY
COMMISSIONERS



COUNTY
ADMINISTRATOR

WELDON B. LEWIS
ASSISTANT COUNTY
ADMINISTRATORS
THOMAS R. L. KINDRED
DANIEL J. KUREK

May 16, 1989

Mr. James A. "Bo" Powell
City Manager
City of Fort Pierce
Post Office Box 1480
Fort Pierce, Florida 34954

RE: Right of Entry Agreement for South Florida Water
Management District to install well

Dear Mr. Powell:

The South Florida Water Management District has asked permission to install a monitoring well at the Savanna Recreation Area. To that end they have submitted a proposed Right of Entry Agreement for review and approval. Since Fort Pierce owns the property, an authorized city representative must execute the proposed agreement.

The well is to be located near the existing U.S. Geological Survey monitor well (see attached letter). Carl Warnock, Director of Recreation and Parks, and I inspected the proposed site and found it satisfactory. Further, I reviewed the proposed agreement and, with one additional clause, found it satisfactory. I added the requirement that the water district relocate or abandon the well within thirty (30) days at their sole expense if it is decided that the land is needed for other purposes.

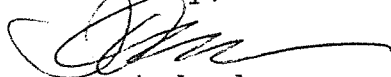
Please review the agreement and, if satisfactory, sign and return the agreement to this office for further processing. Please note

Page Two
May 16, 1989
Mr. James Powell

that Attachment A also requires a signature.

If you have any questions, please call. Thank you for your consideration in this matter.

Sincerely,



Tom Kindred
Asst. Co. Adm.

DGF/lm
Attachment

cc: County Administrator
Recreation and Parks Director
Assistant County Attorney/Ferguson
Don G. J. Padgett



South Florida Water Management District

P.O. Box 24680 • 3301 Gun Club Road • West Palm Beach, FL 33416-4680 • (407) 686-8800 • FL WATS 1-800-432-2045

March 27, 1989

Mr. Carl Warnock
Director, Parks and Recreation
St. Lucie County
2300 Virginia Avenue
Fort Pierce, FL 34982

Dear Mr. Warnock:

Please consider this letter to be a formal request to allow the South Florida Water Management District (SFWMD) to install a water table monitor well near the boat ramp at the Savannas Recreation Area. A more detailed well location site map is attached. The information we will gather during the construction and subsequent monitoring of this well will greatly assist us in our study of the Surficial Aquifer System in St. Lucie County.

I am including a Right of Entry/ Well Construction Agreement and a form giving us permission to run a special type of geophysical well log. The Right of Entry/Well Construction Agreement: 1) allows the SFWMD to construct and monitor the well at the location described; 2) insures the property and well site will be restored to the condition it was in immediately prior to the construction of the well; and 3) includes a "save and hold harmless" clause to protect the property owner from claims for damages or injuries. The Radioactive Materials Use form allows us to run a specialty well logging tool which uses a totally contained, low-level radioactive source to measure the porosity of the aquifer sediments. At no time does the source come into contact with any sediment or water. Our geophysical logging team is licensed by the Florida Department of Health and Rehabilitative Services and has logged over 500 wells in the past 15 years without incident.

If you allow us to drill this monitor well the attached forms must be signed by an authorized representative from your office and returned to me. The forms will be countersigned by the appropriate SFWMD authority and I will then provide you with a copy for your records.

I thank you, in advance, for your assistance in our study. Your support will be especially helpful in providing information necessary to effectively protect and manage the groundwater resources in St. Lucie County. Please contact me if you have any questions or concerns.

Sincerely,

A handwritten signature in black ink that reads "Don G. J. Padgett".

Don G. J. Padgett
Staff Hydrogeologist
Hydrogeology Division

DGJP/hm

Enclosures

Governing Board:

James F. Garner, Chairman - Fort Myers
Doran A. Jason, Vice Chairman - Key Biscayne
J.D. York - Palm City

Arsenio Milian - Miami
Fritz Stein - Belle Glade
Mike Stout - Windermere

Ken Adams - West Palm Beach
Valerie Boyd - Naples
James E. Nall - Fort Lauderdale

John R. Wodraska, Executive Director
Tilford C. Creel, Deputy Executive Director



South Florida Water Management District

P.O. Box 24680 • 3301 Gun Club Road • West Palm Beach, FL 33416-4680 • (407) 686-8800 • FL WATS 1-800-432-2045

April 14, 1989

Ms. Doris Ferguson
St. Lucie County Attorney's Office
2300 Virginia Avenue Annex
Ft. Pierce, FL 34982-5652

Dear Ms. Ferguson:

I am enclosing a map of the proposed monitor well location at the Savannahs Recreation Area in response to our telephone conversation on Thursday, April 13. As we discussed the South Florida Water Management District would like to install this well as close as possible to the existing U. S. Geological Survey monitor well (see enclosed site and detail maps) which has been used to record water levels in the shallower part of the Surficial Aquifer System. The well we propose to install would be used to monitor water levels in the deeper part of the Surficial Aquifer System at that site. Having a shallow and a deep monitor well close together will allow us to better evaluate the possible effects of water level changes in the aquifer system on the Savannahs. Any information we obtain during the construction and subsequent monitoring of this well will be available upon request.

It will take our drillers no longer than two days to install the well and restore the site to it's original condition. The well will be constructed of 2" diameter PVC cemented to land surface and will be completed with a removable cap for monitoring accessibility. The well will be cut off flush with the land surface so its presence should not interfere with any grounds maintenance operations.

I greatly appreciate your suggestion to expedite the Right-of-Entry signoff process by copying you on any additional requests for drilling on County property. I did not realize that individual requests were ultimately routed through your office for review before being presented to your County Commission for approval. We will definitely follow this course of correspondence with any future monitor well installation requests.

Thank you for your assistance in handling our Right-of-Entry approvals. Your support will be especially helpful in acquiring the information necessary to effectively protect and manage the ground water resource in St. Lucie County. Please contact me if you have any further questions or concerns.

Sincerely,

A handwritten signature in cursive script that reads "Don G. J. Padgett".

Don G. J. Padgett
Staff Hydrogeologist
Hydrogeology Division

DP/hm

Enclosures: site maps

c: Carl Warnock, Director, Parks and Recreation, St. Lucie County

Governing Board:

James F. Garner, Chairman - Fort Myers
Doran A. Jason, Vice Chairman - Key Biscayne
J.D. York - Palm City

Arsenio Milian - Miami
Fritz Stein - Belle Glade
Mike Stout - Windermere

Ken Adams - West Palm Beach
Valerie Boyd - Naples
James E. Nall - Fort Lauderdale

John R. Wodraska, Executive Director
Tilford C. Creel, Deputy Executive Director

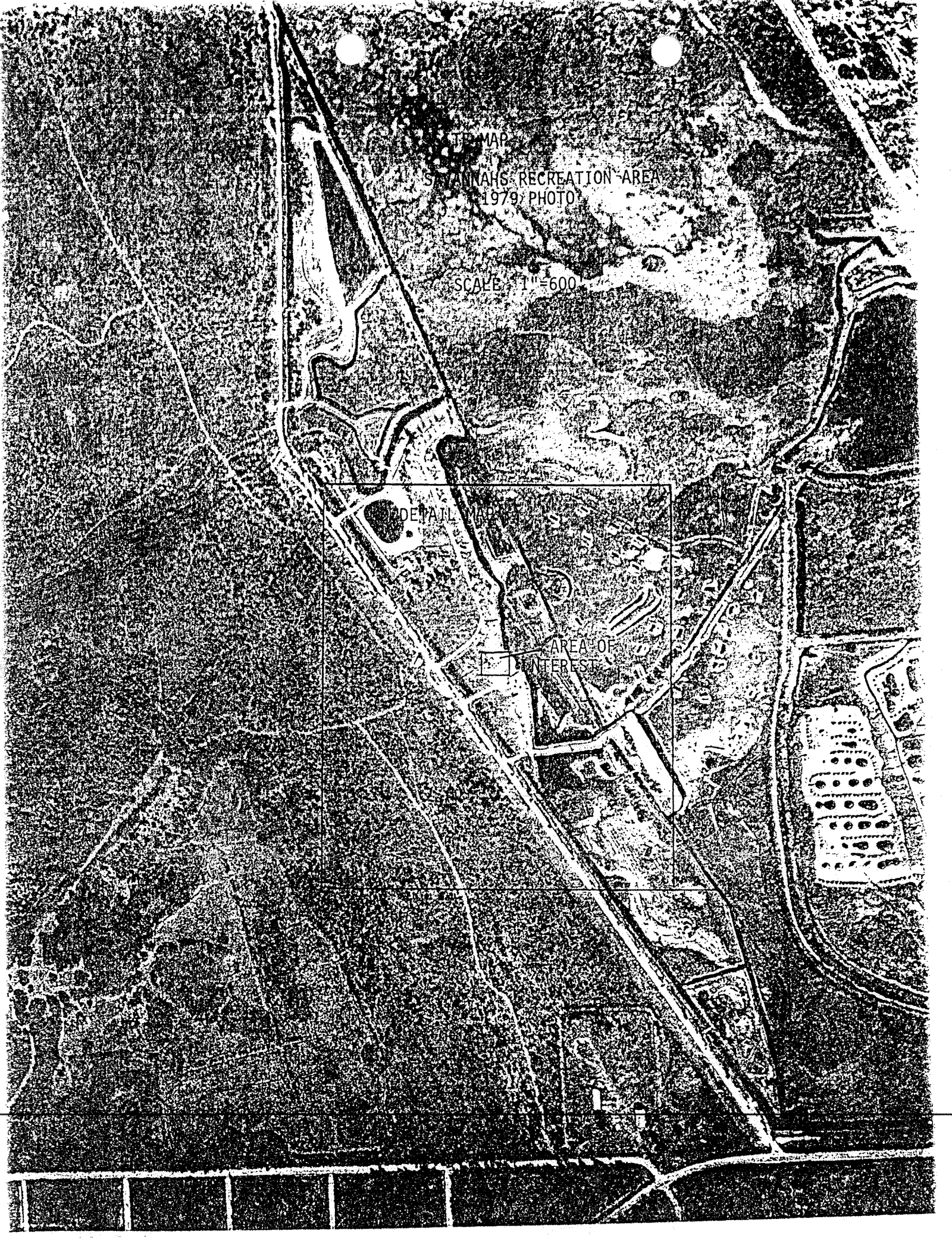
MAP

STANNAHS RECREATION AREA
1979 PHOTO

SCALE: 1"=600'

DETAIL MAP

AREA OF
INTEREST



EX-104
9688 8070

PROPOSED SFWMD
MONITOR WELL

EXISTING DISG
MONITOR WELL

ENTRANCE
OFFICE

BOAT RAMP PARKING

ENTRANCE ROAD

RIGHT OF ENTRY AGREEMENT/WELL CONSTRUCTION

X The SOUTH FLORIDA WATER MANAGEMENT DISTRICT and/or U.S. Geological Survey and the agents, employees or assigns of each, (Permittees) are hereby granted the right to enter upon property owned by _____ (owner), and described herein, for the following purposes:

1. To construct water well(s) for the purpose of gathering lithologic data.
2. To conduct aquifer performance and step drawdown test(s) to determine water availability.
3. To collect geophysical logs on selected well(s). *SEE ATTACHMENT "A".
4. To periodically be allowed access to the well(s) for the purpose of monitoring water levels and/or water quality sampling.

Such equipment as may be needed to accomplish the above purposes may be brought upon, over and across the property, which is described as follows: Section 35, Township 35 south, Range 40 east, at the boat ramp area of the Savannas Recreation Area, Ft Pierce, Florida

The permittees, and each of them, warrant to the undersigned that upon completion of the above purposes, the property will be left in, or restored to, the same condition as it was when the permittees or their contractor(s) first entered upon the land to begin their work. Further, permittees agree to relocate/abandon well within thirty (30) days at no expense to the owner if the owner decides, in its sole discretion, that the site is needed for other purposes. The permittees, and each of them, separately and severally, to the extent permitted by law, shall save and hold harmless the undersigned owner from claims for damages or injury caused by the permittees, their agents, servants, employees, or contractors, during the time this permit for access and use is in effect.

X _____
OWNER

Date: _____

Executed by owner in presence of:

X _____

COUNTERSIGNED BY PERMITTEE(s)

_____ for SFWMD

Date: _____

_____ for

Date: _____

ATTACHMENT A
USE OF RADIOACTIVE MATERIALS IN TEST WELL

1. Property owner authorizes use of sealed nuclear source for geophysical logging purposes in test well construction.
2. In the event the sealed source is lodged downhole, every effort at recovery of said source will be utilized.
3. If a decision is made to abandon the sealed source downhole, it will be done so in compliance with Florida Administrative Code Section 10D-91.1200, Control of Radiation Hazard Regulations.
4. In the event the said source is lost downhole, South Florida Water Management District will be responsible for the protection from any contamination of the well and surrounding formation water from said source.
5. The Radiation Safety Officer of this agency is responsible for compliance with the above-mentioned Department of Health and Rehabilitative Services regulations.

OWNER

DATE

SFWMD RADIATION SAFETY OFFICER

DATE



South Florida Water Management District

P.O. Box 24680 • 3301 Gun Club Road • West Palm Beach, FL 33416-4680 • (407) 686-8800 • FL WATS 1-800-432-2045

June 29, 1989

Doris G. Ferguson
Assistant County Attorney
St. Lucie County
2300 Virginia Avenue
Fort Pierce, FL 34982-5652

Dear Ms. Ferguson:

Enclosed are the fully executed Right-of-Entry and Use-of-Radioactive-Materials forms for the monitor well site at the Savannahs Recreation Area. I have deleted the word "relocate" on both the original and all copies of the Right-of-Entry Agreement as we discussed in our telephone conversation on June 26, 1989. I have retained two copies of each of these forms for the SFWMD files.

Thank you very much for your help in securing the proper signatures for the above agreements. Your communications with the involved offices of both the County and the City of Fort Pierce were instrumental in our being able to install this monitor well in a timely manner.

Sincerely,

A handwritten signature in cursive script that reads "Don G. J. Padgett".

Don G. J. Padgett
Staff Hydrogeologist
Hydrogeology Division
Resource Planning Department

DP/hm
Enclosures

bc: D. Butler
L. Wedderburn

Governing Board:

James F. Garner, Chairman - Fort Myers
Doran A. Jason, Vice Chairman - Key Biscayne
J.D. York - Palm City

Arsenio Milian - Miami
Fritz Stein - Belle Glade
Mike Stout - Windermere

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Valerie Boyd - Naples
James E. Nall - Fort Lauderdale

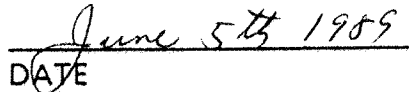
John R. Wodraska, Executive Director
Tilford C. Creel, Deputy Executive Director

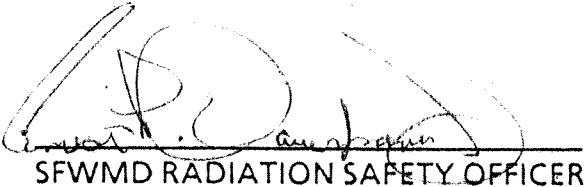
**ATTACHMENT A
USE OF RADIOACTIVE MATERIALS IN TEST WELL**

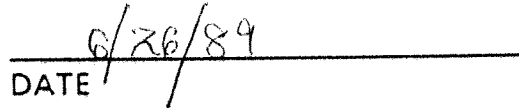
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4. In the event the said source is lost downhole, South Florida Water Management District will be responsible for the protection from any contamination of the well and surrounding formation water from said source.
5. The Radiation Safety Officer of this agency is responsible for compliance with the above-mentioned Department of Health and Rehabilitative Services regulations.

CITY OF FORT PIERCE


OWNER (City Manager)


DATE


SFWMD RADIATION SAFETY OFFICER


DATE

RIGHT OF ENTRY AGREEMENT/WELL CONSTRUCTION

The SOUTH FLORIDA WATER MANAGEMENT DISTRICT and/or U.S. Geological Survey and the agents, employees or assigns of each, (Permittees) are hereby granted the right to enter upon property owned by City of Fort Pierce (owner), and described herein, for the following purposes:

1. To construct water well(s) for the purpose of gathering lithologic data.
2. To conduct aquifer performance and step drawdown test(s) to determine water availability.
3. To collect geophysical logs on selected well(s). *SEE ATTACHMENT "A".
4. To periodically be allowed access to the well(s) for the purpose of monitoring water levels and/or water quality sampling.

Such equipment as may be needed to accomplish the above purposes may be brought upon, over and across the property, which is described as follows: Section 35, Township 35 south, Range 40 east, at the boat ramp area of the Savannas Recreation Area, Ft Pierce, Florida

The permittees, and each of them, warrant to the undersigned that upon completion of the above purposes, the property will be left in, or restored to, the same condition as it was when the permittees or their contractor(s) first entered upon the land to begin their work. Further, permittees agree to abandon well within thirty (30) days at no expense to the owner if the owner decides, in its sole discretion, that the site is needed for other purposes. The permittees, and each of them, separately and severally, to the extent permitted by law, shall save and hold harmless the undersigned owner from claims for damages or injury caused by the permittees, their agents, servants, employees, or contractors, during the time this permit for access and use is in effect.

D.P.
SFWMD

CITY OF FORT PIERCE

Janice Bowell City Manager Date: June 5th 1989
OWNER

Executed by owner in presence of:

Cassandra Steub
Lanza Cole

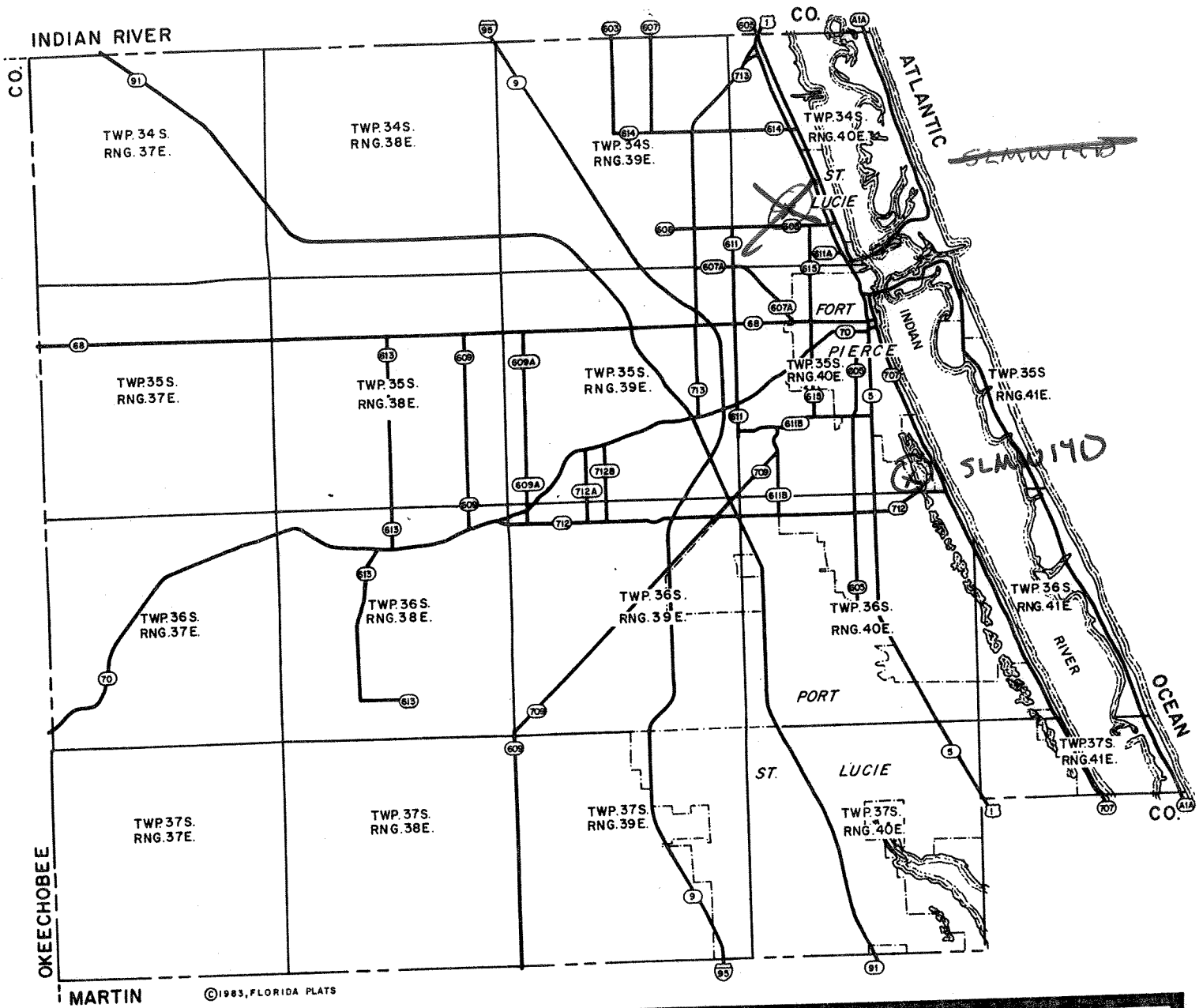
COUNTERSIGNED BY PERMITTEE(s)

[Signature]
for SFWMD

Date: June 26, 1989

for _____ Date: _____

1988 ST. LUCIE CO. FLORIDA



This directory has been published as a county ownership reference guide. The data contained herein has been compiled from the official city, state, and county public records. Constant property sales and transfers make it impossible for us to guarantee 100% accuracy; errors and omissions are inevitable. If you should notice an error in the Index of Owners or on a map, we would appreciate it if you would mail the correction to us on the coupon provided.

Florida Plats

1213 Bowman Street
Clermont, Florida 32711

(904) 394-6363

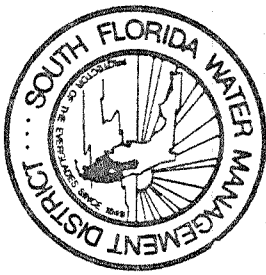
NAME _____			
ADDRESS _____			
CITY _____	STATE _____	ZIP _____	
COUNTY _____	TWP. & RNG. _____		
SECTION _____	AMOUNT OF ACREAGE _____		

We convey sincere thanks to your county officials for their participation. Your county plat directory has been made possible with their cooperation and support.

WELL DRILLER'S
 UNCORRECTED DRILLER'S LOG
 SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT Savannah Recreation Area WELL NO. SLAW 1410 DATE 7-6-89

DEPTH	DESCRIPTION - ROCK TYPE, COLOR, HARDNESS, OTHER
0-5	Grey AND BROWN SAND; SAND PASSED STRAINER
5-10	Grey AND BROWN SAND WITH CLAY
10-20	AS ABOVE; SAND CONTENT INCREASES 17-20 FT
20-22	SAND, CLAY, some shell
	KD; change bit
22-35	Mostly sand with some mud
35-37	grey mud
37-42	Fine grey sand with lots of shell
	KD MIX MUD
42-48	Mostly sand + shell some clay
48-62	AS ABOVE WITH MORE MUD
	KD MIX MUD
	Lost circulation 42-62 FT
62-66	SAND + shell, some mud
66-67	AS ABOVE; DRILLING MUD THICK
67-74	L.S., Larger shells, and sand; slow drilling bit chatter 67-72 FT
74-76	Lime mud; shell; sand
76-82	L.S., shell; some sand
	KD, Lost circulation 62-82 FT
82-83	L.S. + shell; more L.S. than shell
83-84	More shell than L.S.
84-95	EQUAL shell + L.S., some sand; bit chatter 85-86 FT
95-101	Shells; sand; Lime mud. Most of the shell + fine sand passed strainer
101-102	L.S.; some shell
	KD Some Lost circulation 82-102 FT
102-122	light green + phosphatic lime mud; L.S., shell, and sand Bit chatter 105, 110, AND 113 FT.
	KD
122-125	Green phosphatic clay with shell + L.S.
125-130	Green phosphatic AND grey clays; some shell
	TD = 130 FT SCREEN 80-130



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

FORM 60
Oct. 1977

WELL LOCATION

County Volusia

Section I. D. W-00039

Date 12/15/79 Well No. SIF-26

Latitude 029° 23' 23.6" Longitude 080° 18' 38.55"

SE 1/4 1/4 Section 35 Township 35S Range 40E

Owner Swann's Rd Phone _____

Driller _____ Date Drilled _____

WELL CONSTRUCTION

Drilling Method: Rot. Air CT Auger Other

T. Depth - Driller _____ T. Depth - Logger 252.0'

Casing Depth Driller _____ Casing Depth Logger 302.0'

Bit Size _____ Casing Dia. I.D. 3.916"

Hole Dia. _____ From _____ To _____ Dia. _____ From _____ To _____

Type of Casing steel Casing Thickness _____

Type of Screen open hole Screen Int. From _____ To _____

Type of Packing _____ Well Use _____

Static Water Level _____ Date _____

Yield Flow Pump _____

WELL LOG

DATUM

K.B. _____ L.S. _____ T.O.C. 18.20 ins

FLUID QUALITY

Date 12/15/79 Time 1000 Source of Sample wellhead

Cl _____ mg/l Type of Fluid water

Temp. 79.0 °F 26.1 °C Field Density _____ @ _____ °C

T.D.S. _____ mg/l Spec. Cond. _____ umhos/cm

Logged By: H. P. Brown Witnessed By: S. Anderson

Comments:

TYPE OF SURVEYS RUN

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

GAI-1MA

NEUTRO

0'

GAMMA 100 SCALE -200- -300-

CCL:

API Gamma Ray

NEUTRON SCALE

0 100 200

50'

100'

150'

200'

250'

