



**DOWN
Construction
Preliminary Data
Indian River Utilities at Orchid Island**

Aquifer System Monitor Well:

**Floridan IR-0999
(fka IR-0406)**

**Floridan IR-1000
(fka IR-0342)**

SJRWMD Program No. 31-58200

**Division of Ground Water Programs,
Department of Resource Management
St. Johns River Water Management District
Palatka, Florida**

March 4, 2002

*This report was generated for the Division of Ground Water Program's use.
All data, figures, tables and information are provisional.*

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General Information

Site: Orchid Island

Property Ownership/Control: Indian River Utilities

Service Request: Bill Osburn Division of Ground Water Programs

Purpose: District Observation Well Network (Potentiometric Map Upper Floridan)

Work:

Monitor Well Reconstruction

Southern Well Services Inc.

Geophysical Logs:

SFWMD

SJRWMD

Video Survey:

Florida Department of Transportation (FDOT)

Report: Robert Brooks

Notes:

IR-0999 (Floridan; fka IR-0406)

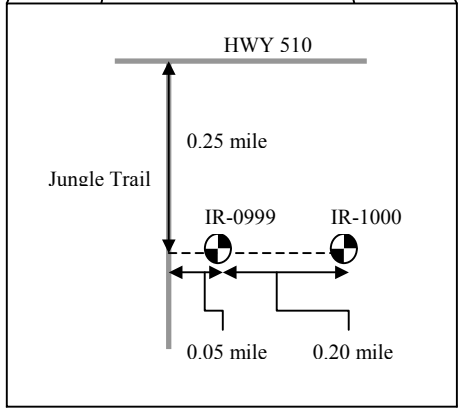
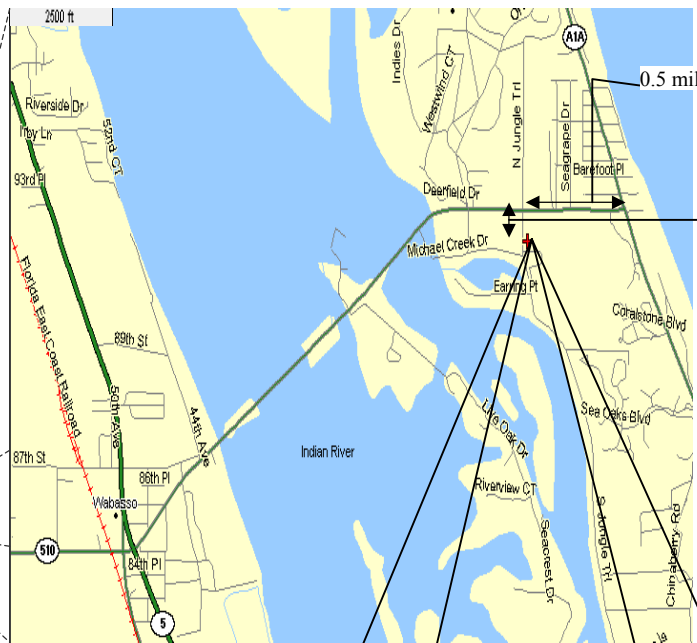
4/09/99, Well reconstruction completed.

IR-1000 (Floridan; fka IR-0342)

4/14/99, Work order called for setting 6-inch PVC with 10-ft of 8-inch stinger at bottom of string at 800-ft. and then back plugging hole to 850-ft. Casing hangs up and is set at 547-ft. Hole back plugged to 869-ft.

4/23/99, Well reconstruction completed.

DRAFT



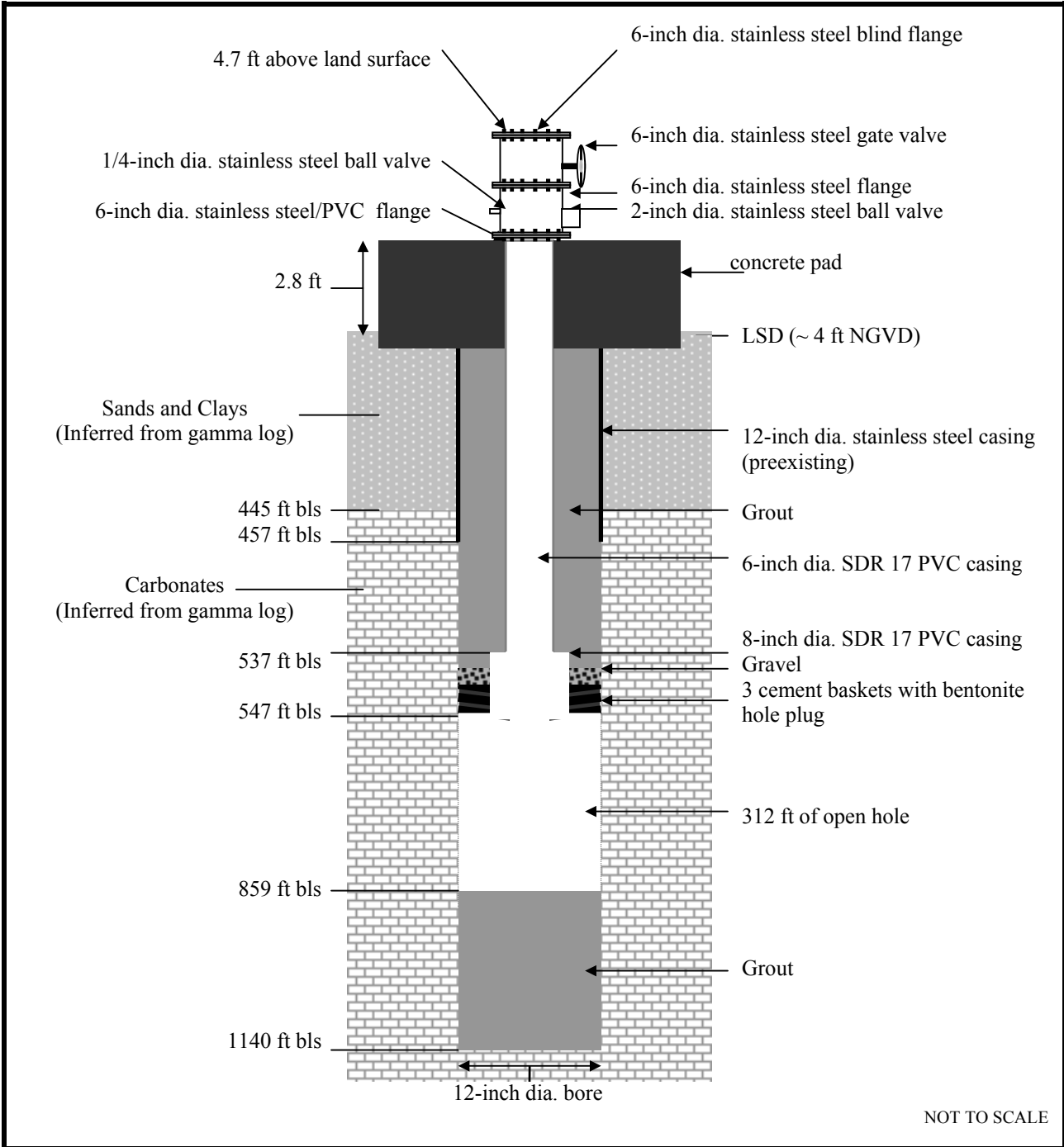
Not To Scale

Site:	Orchid Island	
Well ID:	IR-0999	IR-1000
GPS Lat/Long:	274534/802415	274535/802408
TRS:	31s 39e 26	31s 39e 26
Topo:	Sebastian	Sebastian
Elevation:	~ 4 ft NGVD	~ 3 ft NGVD

SJRWMD

Project No: 31- 52800

Figure 1. Site Map



Site: Orchid Island

Reconstruction: Southern Well Services Inc.

Well Completed: April 23, 1999

SJRWMD

Figure 3. Floridan Monitor Well IR-1000

Table 1.**Groundwater Quality**Site: Orchid IslandWell Number: IR-0999Samples: A. Story

L A B ✓	Date/Time (yyymmdd/hhmm)	Sample Depth (ft, bls)	Open Hole (ft)	Temp (Deg C)	Cl (mg/L)	Specific Conductivity (us/cm)	Comments
	990330/0840	999	599	25.0	910	2,929	Artesian flow ~250 gpm, pressure 10-psi; Pump salt down well to stop artesian flow
	990408/----	-	-	-	-	-	Pump well 2-gpm draws down past pump at 30-ft in 10-mins. Artesian flow ~3/4-gpm.
	990409/1448	-	-	-	-	-	Let well flow
	990412/1600	448	46	25.6	1,325	5,060	Reconstruction complete (4/9/99). Est. total discharge 4,300 gals. Let well flow
	990414/0740	448	46	23.6	-	3,790	Est. total discharge 7,100 gals, resample well, let well flow
	990415/0925	448	46	24.8	860	3,570	Resample well, let well flow
✓	990419/1325	448	46	25.5	890	3,780	Est. total discharge 18,600 gals, Artesian flow 1.9-gpm, head pressure not measured

Table 2. Groundwater Quality

Site: Orchid Island

Well Number: IR-1000

Samples: A. Story

L A B ✓	Date/Time (yyymmdd/hhmm)	Sample Depth (ft, bls)	Open Hole (ft)	Temp (Deg C)	Cl (mg/L)	Specific Conductivity (us/cm)	Comments
	990412/0815	1140	683	22.1	1250	3940	Artesian flow ~80 gpm, pump salt down well to control flow
	990421/1745	859	322	-	95	284	Casing set and grouted; pump fresh water (~5,000 gals) in well to return artesian flow
	990422/0720	859	322	24.2	127	404	Well flows over night gpm decreases to est.<1-gpm
	990423/1700	859	322	NR	1640	NR	Pump well at 32 and 65-gpm, total discharge 19,440 gals
	990424/0800	859	322	NR	850	NR	Pump well at 72-gpm
	990424/1700	859	322	NR	850	NR	Pump well at 72-gpm, total discharge 17,280 gals
✓	990503/1215	859	322	27.1	750	3370	Sample well, gpm not measured

Table 3. Grout Data

Site: Orchid Island

Well ID: IR-0999

DATE	TAG DEPTH (ft)	ANNULUS/ BORE (inch)	QUANTITY (yds/bags)	MATERIAL	COMMENTS
3/30/99	999	B-10	200 bags	Grout	Backplug bore, grout through tremie pipe
3/31/99 am	749	B-10	130 bags	Grout	Backplug bore, grout through tremie pipe
3/31/99 pm	557	B-10	65 bags	Grout	Backplug bore, grout through tremie pipe
4/01/99	448	B-10	30 bags	Grout	Backplug bore, grout through tremie pipe

Table 4.**Grout Data**Site: Orchid IslandWell ID: IR-1000

DATE	TAG DEPTH (ft)	ANNULUS/BORE (inch)	QUANTITY (yds/bags)	MATERIAL	COMMENTS
4/14/99	1140	B-12	-	-	Set 537-ft of 6-inch dia. PVC casing with 10-ft of 8-inch dia. PVC (537-547 ft); 3-cement baskets
4/14/99	No tag	A-12	12 bags (50 lb bags)	Gravel	Gravel poured to baskets
4/14/99	535	A-12	10 bags	Grout	Grout through tremie pipe
4/14/99 pm	528	A-12	50 bags	Grout	Grout through tremie pipe
4/15/99 am	534	A-12	1 yard	Gravel	Tag lower than previous tag, add gravel
4/15/99 am	519	A-12	25 bags	Grout	Grout through tremie pipe
4/15/99 pm	512	A-12	100 bags	Grout	Grout through tremie pipe
4/16/99	368	A-12	100 bags	Grout	Grout through tremie pipe
4/19/99	94	A-12	47 bags	Grout	Grout through tremie pipe
4/19/99	1040	B-12	50 bags	Grout	Video log measured depth 1140-ft, tag with tremie pipe 1040, Grout through tremie pipe
4/20/99	909	B-12	20 bags	Grout	Grout through tremie pipe
	859	B-12	-	-	Tag only
4/21/99	0.3	A-12	2 bags	Grout	Grouting of PVC completed

Table 5.**Video Logs Available**Site: Orchid Island

Date	Survey	Well ID	Casing/Bore dia. (inch)	Survey Depth Casing/Bore (ft bls)	Comments
1/19/99	FDOT	IR-0342	12/12	457/1140	Cavities at 525, 544 and 550-ft bls; boulder at 786-ft
1/19/99	FDOT	IR-0406	10/10	402/999	Cavities at 488, 506, 523 and 529-ft bls

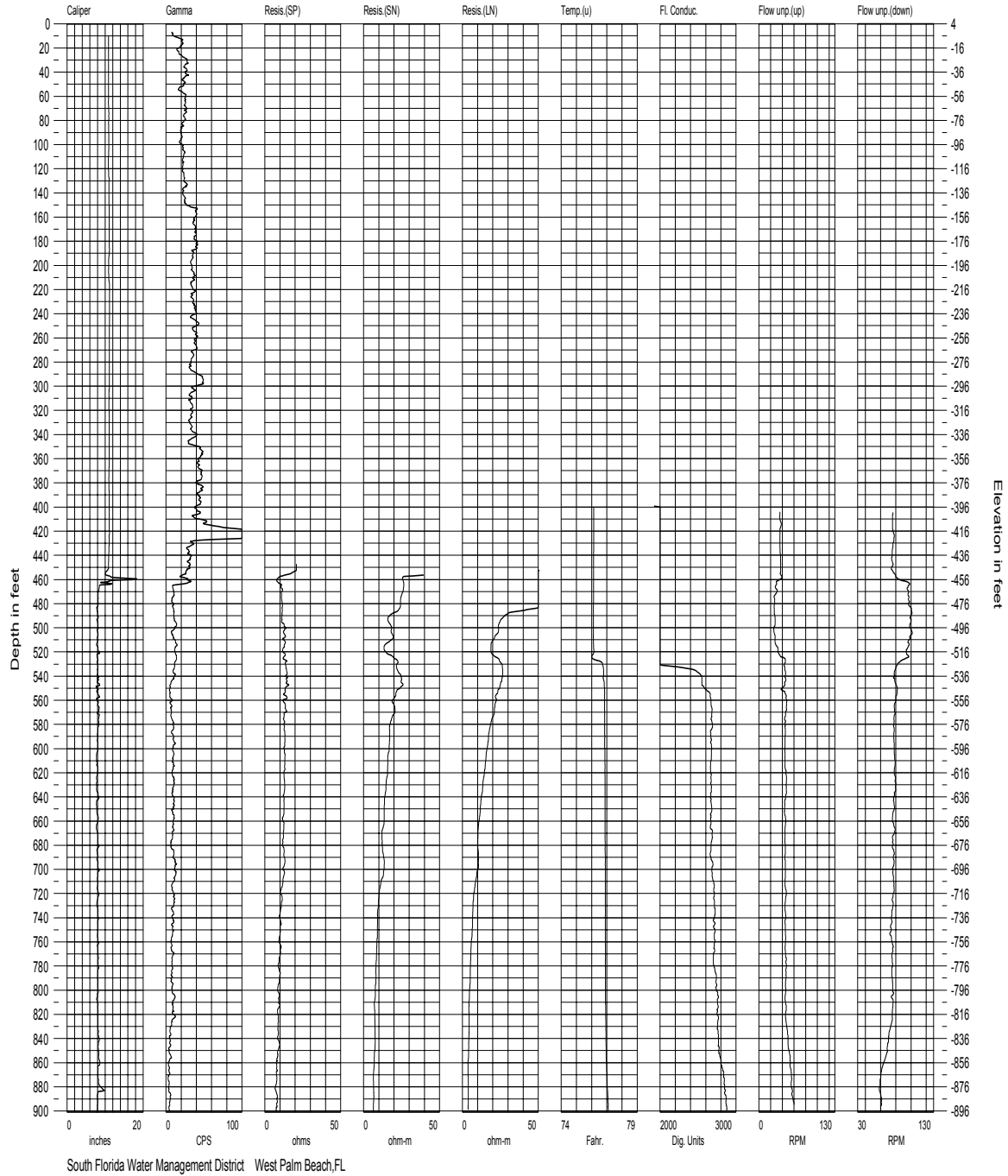
Geophysical Logs

Site: Orchid Island

Well ID: IR-0342

Logger: SFWMD

Date: 2/22/91



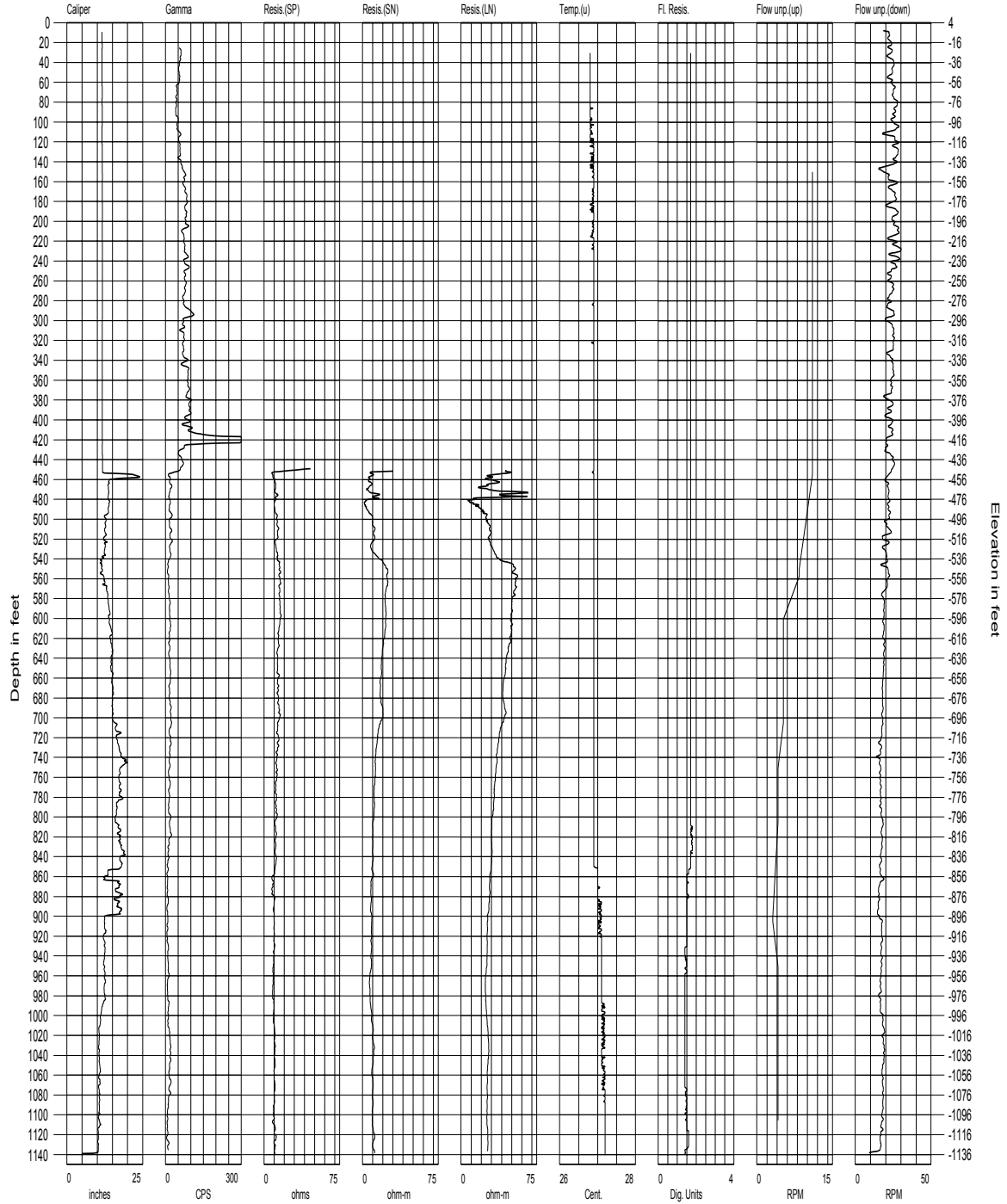
Geophysical Logs

Site: Orchid Island

Well ID: IR-0342

Logger: SJRWMD

Date: 5/19/98



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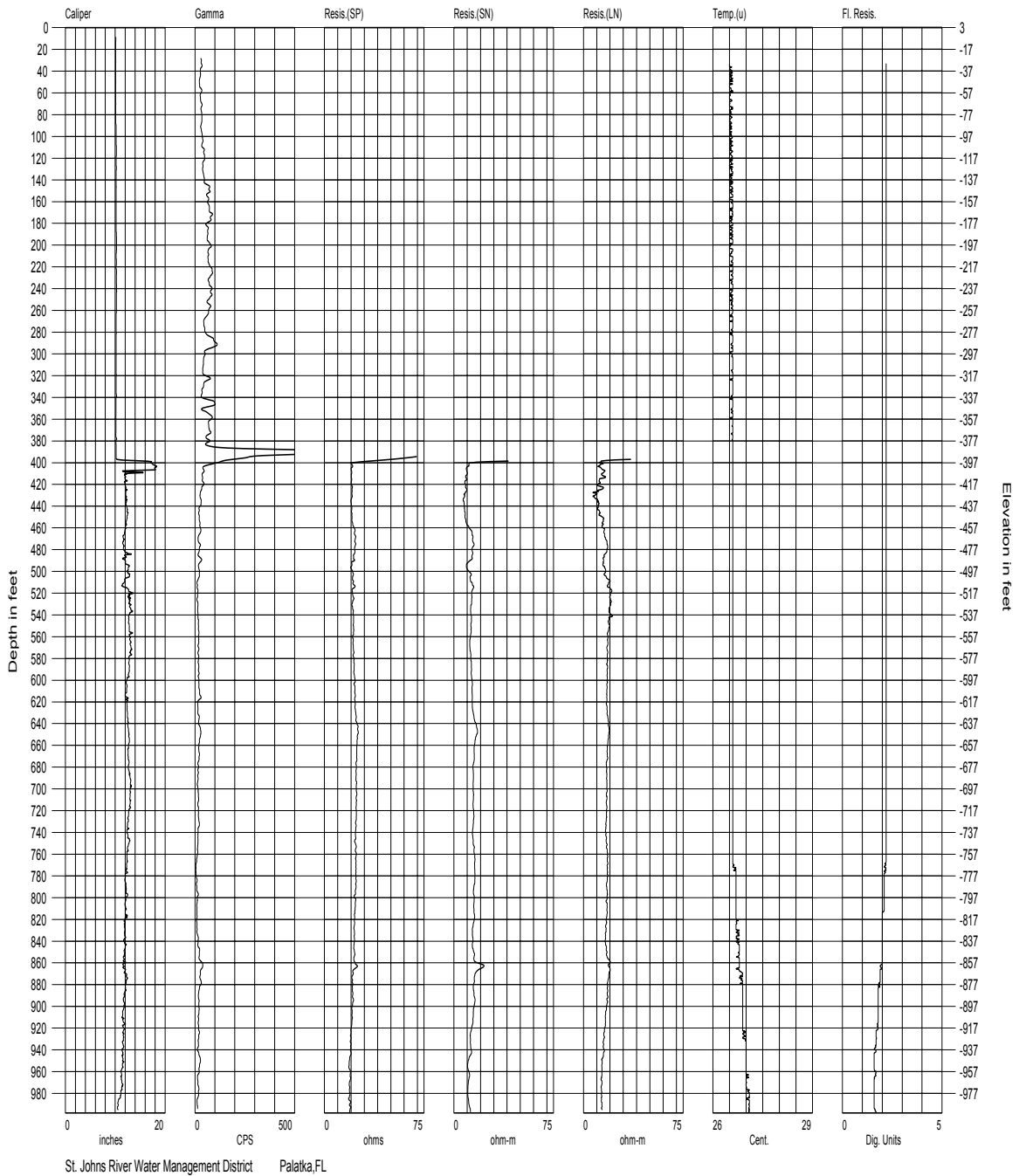
Geophysical Logs

Site: Orchid Island

Well ID: IR-0406

Logger: SJRWMD

Date: 5/5/98



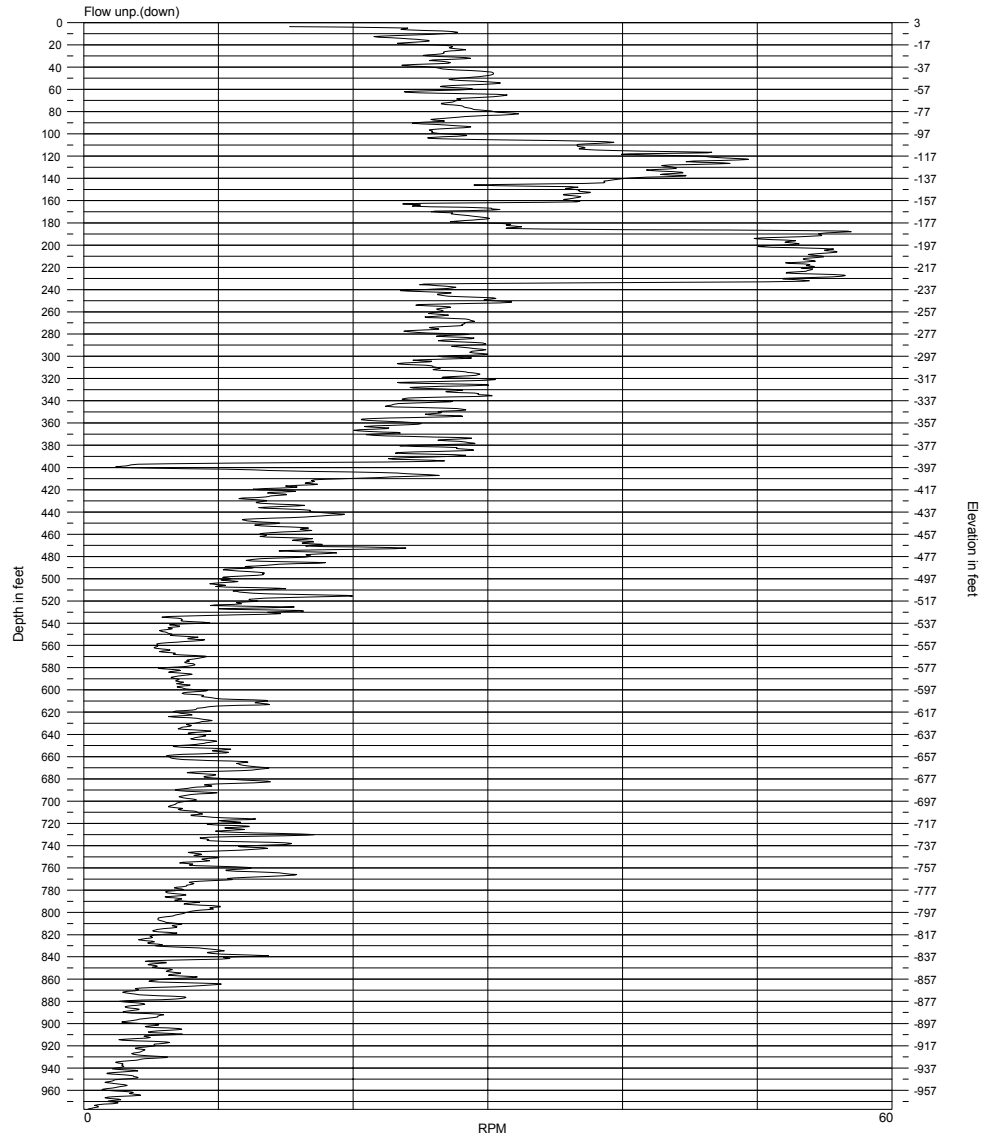
Geophysical Logs

Site: Orchid Island

Well ID: IR-0406

Logger: SFWMD

Date: 5/20/98



South Florida Water Management District West Palm Beach, FL