DOWN
Construction
Preliminary Data
Seminole Ranch

Aquifer System Monitor Wells:
Surficial BR-1595
Intermediate BR-1744
Floridan BR-1526

Abandoned:
Floridan BR-1489

SJRWMD Program No. 31-58200

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

May 1, 2001

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

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General Information

Site: Seminole Ranch

Service Request: Brian McGurk Division of Ground Water Programs←
Bill Osburn Division of Ground Water Programs↑

Purpose: ←Ground water model data for Division of Needs and Sources
↑District Observation Well Network

Work:

Monitor Well Construction:
Florida Geological Survey: Surficial
Huss Drilling Inc.: Intermediate
SJRWMD: Floridan

Well Abandonment:
SJRWMD (BR-1489)

Video Survey:
Florida Department of Transportation

Geophysical Logging:
SJRWMD

Report: Robert Brooks

Notes:

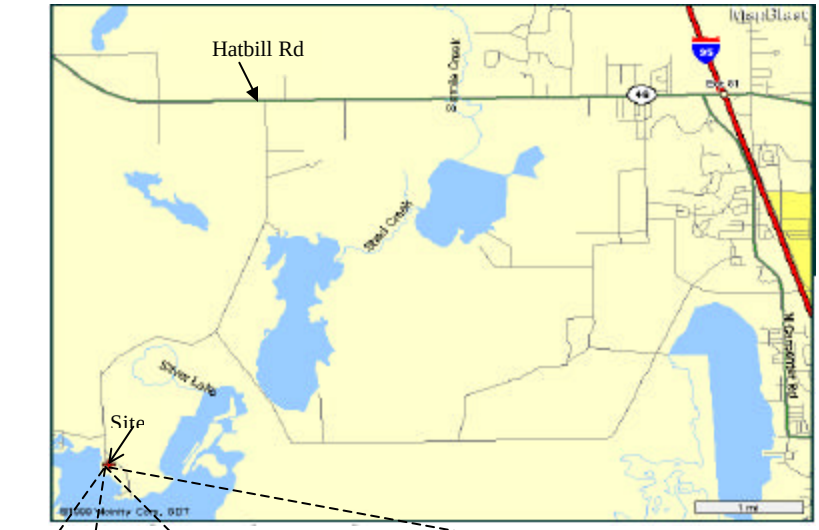
BR-1595 (Surficial**)**
4/11/97, Well completed (4-inch dia. PVC screened 17-ft to 22-ft); constructed using hollow stem augers. Well diagram and data not include in report.

BR-1744 (Intermediate)
8/15/00, Well completed; constructed using mud rotary drilling method.

BR-1489 (Floridan)
9/19/95, Casing (6-inch dia.) grouted to surface. Trip in rods with bit. Rods encounter resistance in two intervals; 320 to 340-ft and 430 to 460-ft. Water begins to flow from casing, drill (reverse air) out cement plug 550 to 560-ft. Gravel (used in grouting process) enters well and falls on top of bit, trip out.
9/21/95, Video survey: Start recording at 311-ft bls. Casing breech at joint connection (311-ft bls). Longitudinal cracks (324-336 ft bls). Backplug gravel enters casing (330-ft bls).
10/09/95, Well abandoned bottom to top with grout.

BR-1526 (Floridan)
10/10/00, Well completed; constructed using both mud rotary and reverse air drilling

methods.



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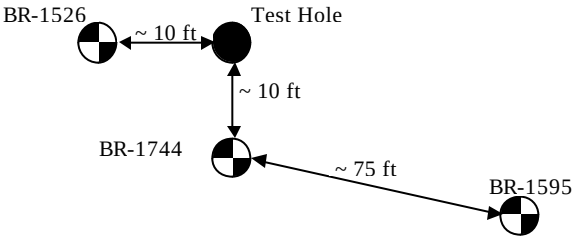


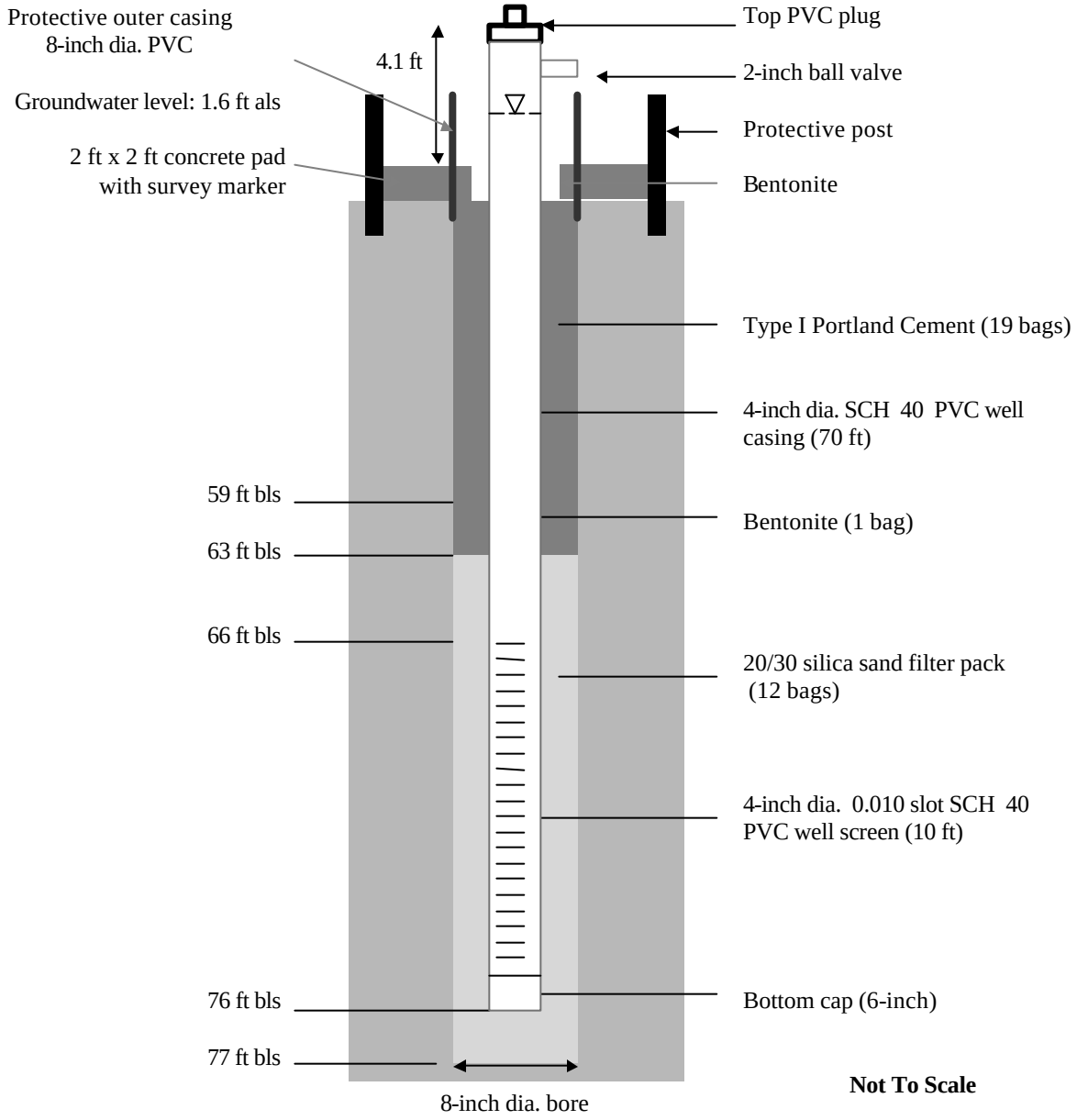
Location of Monitor Wells BR-1489 (Abandoned) and BR-0660 (Abandoned) not recorded.

Not To Scale

Site:	Seminole Ranch
GPS Lat/Long:	283644/805749
TRS:	223406
Topo:	Titiusville SW
Site Elevation:	~5 ft NGVD
Project No:	31-58200

SJRWMD

Figure 1. Site Map



Site:	Seminole Ranch
Driller:	Huss Drilling Inc.
Well Completed:	August 15, 2000

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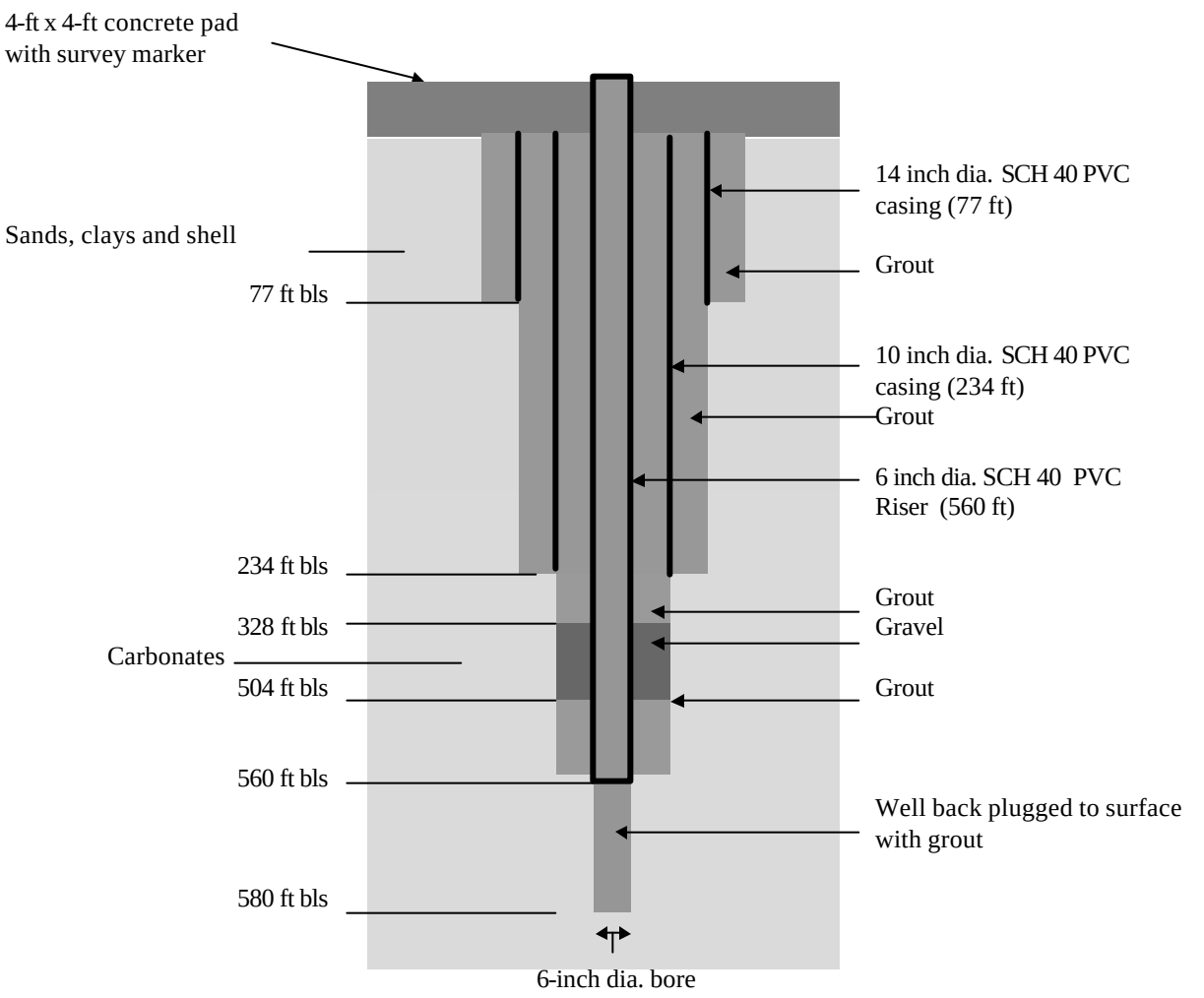
Figure 2.

Intermediate Monitor Well BR-1744



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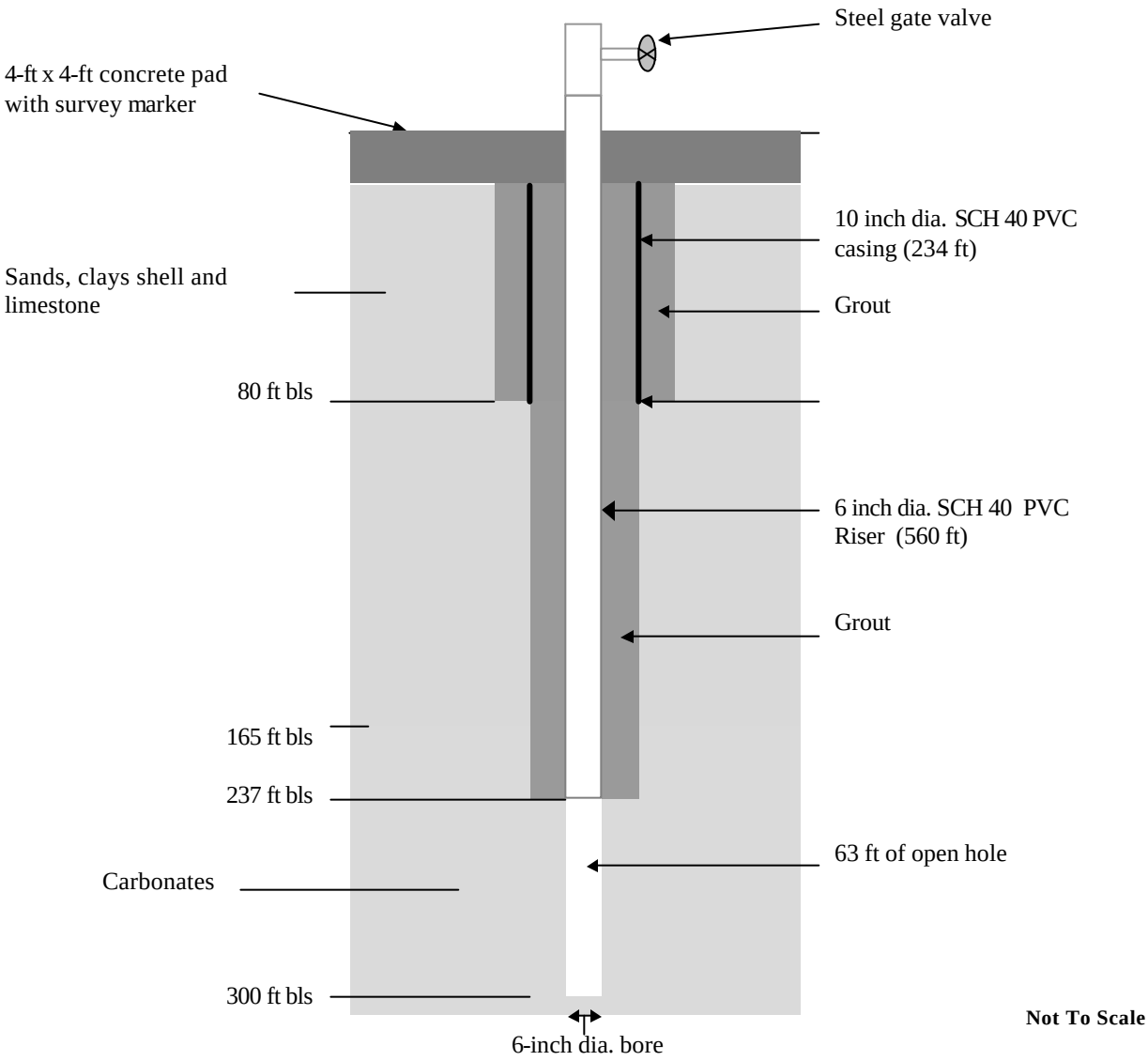
Site: Seminole Ranch	**SJRWMD**
Driller: SJRWMD	**Figure 3. Floridan Monitor Well BR-1489**
Well Abandoned: October 9, 1995	



Site:	Seminole Ranch
Driller:	SJRWMD
Well Completed:	February 21, 1996

SJRWMD

Figure 4. Floridan Monitor Well BR-1526

Table 1. **Ground Water Levels**

Site: Seminole Ranch **Well Number**: BR-1489

Hydrologist: J. Sego, A. Story **Casing Depth**: 234 ft

Water Levels			Well Borehole Characteristics	
Date/Time (yymmdd/hhmm)	**¬ Casing (ft als)**	**- Rod**	**Total Depth (ft bls)**	**Open Hole (ft)**
950726/1140	flowing	-3.9	300	66
950726/1300	flowing	-4.1	320	86
950726/1357	flowing	-3.9	340	106
950726/1456	flowing	-3.3	360	126
950727/0803	flowing	-3.6	380	146
950727/0902	flowing	-3.9	400	166
950727/0952	flowing	-3.3	420	186
950801/1025	flowing	-5.6	440	206
950801/1224	flowing	-4.8	460	226
950801/1403	flowing	-12	480	246
950801/1525	flowing	-	500	266
950803/1245	+0.5	+0.3	520	286
950807/1130	+0.5	+0.5	520	286
950807/1545	+0.6	+0.1	540	306
950808/0805	+0.7	+1.3	540	306
950808/1430	+0.8	+2.8	560	326
950809/0755	+0.8	+2.8	570	336
950809/1600	+0.9	+3.5	580	346
950810/0800	+0.9	3+.5	580	346

← Top of 10-inch dia. casing 1.9 ft above land surface
↑ Top of Rod 5.1 ft above land surface
+ above top of casing/ above top of rod
- below top of rod

Table 2. **Ground Water Levels**

Site: Seminole Ranch **Well Number**: BR-1526

Hydrologist: A. Story **Casing Depth**: 237 ft

Water Levels			Well Borehole Characteristics	
Date/Time (yymmdd/hhmm)	**Casing (ft bls)**	**Rod (ft bls)**	**Total Depth (ft bls)**	**Open Hole (ft)**
960221/1000	3.6	3.6	260	23
960221/1100	3.3	3.3	280	43
960221/1240	3	3	300	63

Table 3. **Drilling Data**

Site: Seminole Ranch **Well Number**: BR-1526

From (ft, bls)	To (ft, bls)	Bit Size (inch)	Time (min)	Rate (ft/hr)
240	260	5.5	15	80
260	280	5.5	16	75
280	300	5.5	10	120

Table 4. **Groundwater Quality and Development**

Site: Seminole Ranch **Well Number:** BR-1744

Hydrologist: R. Brooks

LAB	Date/Time (yymmdd/hhmm)	Rate (gpm)	∑ Vol (gal)	GWL static (ft als)	GWL pumping (ft bls)	Screen Interval (ft)	Temp (^{o}C)	pH	Cl (mg/l)	Specific conductivity (us/cm)
✓	000816/1200	12	2160	3.1	8.5	66-76	23.5	5.0	1290	5770

Comments:

1. Well installed with mud rotary.

Table 5. **Groundwater Quality Reverse Air Discharge**

Site: Seminole Ranch **Well Number**: BR-1489

Hydrologist: J. Sego, R. Brooks, A. Story

LAB ✓	Date/Time (yy:mm:dd/hh:mm)	Sample Depth (ft, bls)	Open Hole (ft)	Temp (Deg C)	Chlorides (mg/L)	Conductivity (us/cm)
	950725/0920	280	46	25.0	1610	6060
	950726/1115	300	66	25.5	1590	6099
	950726/1243	320	86	26.0	1650	6315
	950726/1341	340	106	26.0	1550	6038
	950726/1443	360	126	26.0	1525	5800
	950727/0848	380	146	25.0	1575	5858
	950727/0940	400	166	25.5	1600	5699
	950727/1033	420	186	25.5	1550	5699
	950801/1000	440	206	26.0	1485	5642
	950801/1200	460	226	26.5	1370	5192
	950801/1345	480	246	26.0	1280	5147
	950801/1505	500	266	26.5	1340	5045
	950803/1220	520	286	26.0	1290	5048
	950808/1025	560	326	26.0	1320	5388
	950809/1140	580	346	26.5	1250	5295

Table 6. Groundwater Quality Flowing from Casing

Site: Seminole Ranch **Well Number**: BR-1489

Hydrologist: J. Sego, R. Brooks, A. Story

Date/Time (yy:mm:dd/hh:mm)	Sample Depth (ft, bls)	Open Hole (ft)	Temp (Deg C)	Chlorides (mg/L)	Conductivity (us/cm)
950726/1205	300	66	25.5	1600	6999
950726/1302	320	86	26.0	1575	6434
950726/1359	340	106	26.0	1575	5939
950726/1458	360	126	25.5	1575	5999
950727/0902	380	146	25.5	1825	5899
950727/0956	400	166	25.5	1650	5500
950727/1046	420	186	25.5	1600	5999
950801/1027	440	206	26.0	1645	6137
950801/1225	460	226	26.0	1530	5741
950801/1405	480	246	26.0	1250	5147
950801/1514	500	266	26.0	1390	5642
950803/1234	520	286	26.0	1380	5345
950808/1045	560	326	26.0	1425	5388
950809/1210	580	346	26.5	1375	5295

Table 7. Groundwater Quality Reverse Air Discharge

Site: Seminole Ranch **Well Number**: BR-1526

Hydrologist: A. Story

LAB ✓	Date/Time (yy:mm:dd/hh:mm)	Sample Depth (ft, bls)	Open Hole (ft)	Temp (Deg C)	Chlorides (mg/L)	Conductivity (us/cm)
	960221/0945	260	23	24.0	NR	6181
	960221/1046	280	42	24.0	NR	6176
	960221/1127	300	63	24.0	NR	6232

Table 7. **Grout Data**

Site: Seminole Ranch **Well Number**: BR-1489

DATE	TAG DEPTH (ft)	ANNULUS/ BORE (inch)	VOLUME (yds/bgs)	MATERIAL	COMMENTS
6/29/95	80	A-18	Grout	32 bgs	Set 77-ft of 14-inch dia. PVC casing
7/05/95	0	A-18	-	-	14-inch dia. PVC casing grouted to surface
7/05/95	50	B-14	-	-	Tag on grout inside14-inch dia. PVC casing
7/12/95	270	B-14	Grout	35 bgs	Backplug
7/13/95	190	B-14	-	-	Drill out plug to 235 ft bls
7/18/95	235	B-14	Grout	3 yds	Pressure grout 234-ft of 10-inch dia. PVC casing
7/19/95	-	A-14	Grout	19 bgs	No tag possible; tight annulus ¾-inch tremie pipe to 90 ft
7/19/95	70	B-10	-	-	Tag on grout inside10-inch dia. PVC casing; pressure seal failed
8/22/95	560	A-10	31 bgs	Grout	Set 560-ft of 6-inch dia. PVC casing
8/23/95	520	A-10	3 yds	Grout	Grout through tremie pipe
8/28/95	504	A-10	3 yds	Grout	Grout through tremie pipe
9/07/95	504	A-10	6.5 yds	Pea-gravel	Add gravel to fill voids
9/07/95	455	A-10	3.5 yds	Pea-gravel	Add gravel to fill voids
9/11/95	-	A-10	1 yds	Pea-gravel	Add gravel to fill voids
9/12/95	428	A-10	2 yds	Pea-gravel	Add gravel to fill voids
9/12/95	407	A-10	2 yds	Pea-gravel	Add gravel to fill voids
9/13/95	328	A-10	3 yds	Grout	Grout through tremie pipe
9/14/95	258	A-10	3 yds	Grout	Grout through tremie pipe
9/18/95	80	A-10	16 bgs	Grout	Grout through tremie pipe
9/19/95	10	A-10	-	-	No grout added
9/20/95	400	B-6	-	-	6-inch dia. casing failed during drilling
9/25/95	400	B-6	4 yds	Grout	Backplug
9/26/95	280	B-6	17 bgs	Grout	Backplug
10/02/95	208	B-6	15 bgs	Grout	Backplug
10/03/95	102	B-6	8 bgs	Grout	Backplug
10/09/95	23	B-6	4 bgs	Grout	Backplug
10/09/95	0	B-6	-	-	Backplug complete; well abandoned

Table 8. Video Logs Available

Date	Logger	Casing/Bore dia. (inch)	Survey Depth (ft bls)	Drilled Depth (ft bls)	Comments
9/21/95	FDOT	6/6	336	560	Video starts at 311-ft bls; Casing breech at joint connection (311-ft bls); Longitudinal cracks (324-336ft bls); Backplug gravel enters casing (330-ft bls)

Lithologic Description

Site: Seminole Ranch **Test Hole:** BR-1744

Samples Described By: R. Brooks

From (ft)	To (ft)	Hammer Blow Counts	Lithology
0	15	cuttings	Sand, brown, fine
15	18	cuttings	Clay, brown to gray
18	50	cuttings	Shell and sand
50	65	cuttings	Shell and clay, light gray
65	80	cuttings	Limestone, gray, sandy, phosphatic
80	90	cuttings	Clay, light green, very sandy
92	96	cuttings	Dolostone, dark green
96	98	cuttings	Clay, yellowish gray, calcareous, phosphatic
98	109	cuttings	Clay, dark green, sandy
109	-	shelby tube	No return; tube bends
110	115	cuttings	Clay, olive green, small layers of limestone and shell
115	117	25/23/20/18	Clay, olive green, phosphatic, shell inclusions
120	137	cuttings	Dolostone and clay, gray
137	139	20/29/50	Limestone, crème, micritic, phosphatic
145	146	35/50-4 inches	Limestone, crème, phosphatic pebbles, dry

Lithologic Description (Field)

Site: Seminole Ranch **Well Number**: BR-1489

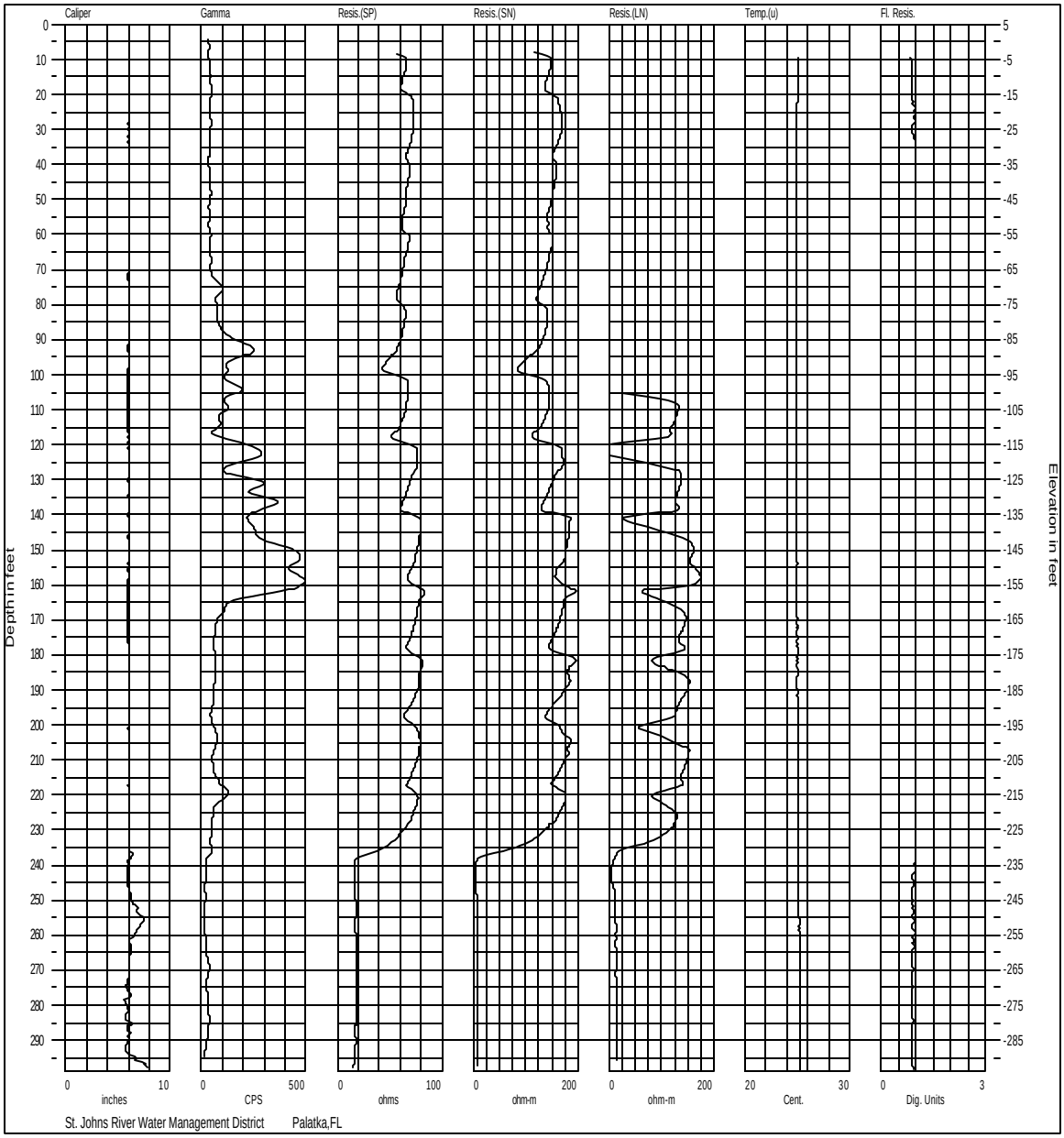
Samples Described By: R Brooks

From (ft)	To (ft)	Lithology
0	10	Sand, light olive gray 5Y 5/2, fine
10	60	Sand and shells, olive gray 5Y 3/2, fine to medium
60	80	Shells, with sand, olive gray, fine to medium, minor chert
80	100	Mudstone, grayish black N2, with sand
100	115	Clay, green olive gray5GY 3/2, phosphate specs
115	125	Clay, green olive gray5GY 3/2, phosphate specs, minor sandstone
125	175	Sandstone, pale olive 10Y 6/2 and phosphatic sands, (sandstone has high coarse quartz content), minor clay, light olive gray 5Y 5/2, dolomite, yellowish gray 5Y 7/2, mudstone grayish black N2
175	190	Limestone, yellowish gray 5Y 7/2, wackestone, friable, some phosphate content, fossil molds
190	210	Limestone yellowish gray 5Y 7/2, wackestone, friable, possible lepid at 205 ft
210	230	Same as Above (SAB), with clay
230	240	Limestone, yellowish gray 5Y 7/2, wackestone, hard, lepids
240	250	Same as Above (SAB), with clay and sandstone
250	270	Limestone, yellowish gray 5Y 7/2, mostly shells, minor clay
270	300	Limestone, yellowish gray 5Y 7/2, lepids abundant
300	460	Limestone, yellowish gray 5Y 7/2, pelletal micritic wackestone, soft, lepids and echinoids
460	470	Limestone, yellowish gray 5Y 7/2, pelletal micritic mudstone, soft to hard
470	473	Limestone, yellowish gray 5Y 7/2, dolomitic, porous, friable
473	480	Dolomite, yellowish gray 5Y 7/2, pin point porosity, hard, alternating with minor layers of pelletal limestone
480	490	Dolomite, brown, granular, pin point porosity
490	510	Dolomite, brown, granular to platey, porous
510	520	Dolomite, brown, granular to platey, porous to pin point
520	530	Dolomite, brown, soft, porous, sandy
530	540	Dolomite, brown, granular to platey, porous to pin point
540	550	Dolomite, brown, soft to medium, granular, porous
550	560	Dolomite, hard, granular, pin point porosity, brown
560	580	Dolomite, hard, granular, no visible porosity, brown

Geophysical Logs

Site: Seminole Ranch **Well ID:** BR-1526

Logger: SJRWMD **Date:** 10/11/00



Geophysical Logs

Site: Seminole Ranch **Well ID:** BR-1660

Logger: SJRWMD **Date:** 6/21/95