DOWN
Construction
Preliminary Data
United Water

Aquifer System Monitor Well: Floridan V-0499 (Abandoned)

SJRWMD Program No. 31-58200

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

April 7, 1999

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

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Site:	United Water
GPS Lat/Long:	285502/811302
TRS:	18s 31e 21
Topo:	Lake Helen
Site Elevation:	~ 45 ft NGVD
Project No:	31-58200

SJRWMD

Figure 1. Site Map

Table 1. **Groundwater Levels and Drilling Data**

Site: United Water **Well ID:** V-0499

Water Levels				Borehole		Drilling Data				
Static ✓	Date/Time (yymmdd/hhmm)	Casing (ft, bls)	Rod (ft, bls)	Total Depth (ft, bls)	Open Hole (ft)	Bit Size (in)	From (ft, bls)	To (ft, bls)	Time (min)	Rate (ft/hr)
✓	990224/0713	38.9	39.0	214	36	6	-	-	-	-
	990224/1551	38.9	39.0	220	42	6	-	-	-	-
	990224/1615	-	-	227	49	6	220	227	22	19
✓	990225/0712	38.9	39.0	227	49	6	-	227	-	-
	990225/1135	-	-	227	49	6	224	227	204	0.9
	990225/1205	-	-	240	62	6	227	240	30	26
✓	990301/1020	38.9	39.0	240	62	6	-	240	-	-
	990301/1345	38.9	39.1	260	82	6	240	260	105	11
	990301/1525	-	-	280	102	6	260	280	67	18.0
✓	990302/0726	39.0	38.9	280	102	6	-	280	-	-
	990302/0928	38.9	39.1	300	122	6	280	300	67	18.0
	990302/1208	38.9	38.9	320	142	6	300	320	86	14.0
	990302/1342	38.9	38.9	340	162	6	320	340	40	30
	990302/1520	38.9	38.9	360	182	6	340	360	54	22
	990302/1610	-	-	368	190	6	360	368	45	11
✓	990303/0715	38.9	38.6	368	190	6	-	368	-	-
	990303/0838	38.9	39.1	380	202	6	368	380	39	18
	990303/0957	38.9	39.0	400	222	6	380	400	26	46
	990303/1122	38.9	38.8	420	242	6	400	420	30	40
	990303/1247	38.6	39.1	440	262	6	420	440	38	32
	990303/1423	38.7	39.1	460	282	6	440	460	29	41
	990303/1540	38.5	38.8	480	302	6	460	480	34	35
	990303/1601	-	-	500	322	6	480	500	16	75
✓	990304/0720	38.9	39.0	500	322	6	-	500	-	-
	990304/0855	38.9	39.2	520	342	6	500	520	30	40
	990304/1000	38.9	39.4	540	362	6	520	540	20	60
	990304/1105	38.9	39.1	560	382	6	540	560	20	60
	990304/1200	38.9	39.2	580	402	6	560	580	17	71
	990304/1227	-	-	600	422	6	580	590	20	60
	990308/1207	39.1	39.5	600	422	6	-	600	-	-
	990308/1324	39.1	39.2	620	442	6	600	620	28	43
	990308/1430	39.0	39.3	640	462	6	620	640	22	55
	990308/1530	39.0	39.2	660	482	6	640	660	20	60
	990308/1601	-	-	680	502	6	660	680	26	46
	990309/0703	39.0	39.3	680	502	6	-	680	-	-
	990309/0905	39.0	39.3	700	522	6	680	700	65	18

Table 2. **Groundwater Quality**

Site: United Water **Well ID:** V-0499

Hydrologist: A Story **Casing Depth**: 178 ft bls

LAB ✓	Date/Time (yy:mm:dd/hh:mm)	Sample Depth (ft, bls)	Open Hole (ft)	Temp (Deg C)	Chlorides (mg/L)	Conductivity (us/cm)
	990224/1545	220	42	26.5	286	1019
	990225/1220	240	62	22.5	450	1506
	990301/1400	260	82	24.5	364	1010
	990301/1540	280	102	23.5	412	1477
	990302/0907	300	122	22.5	674	2333
✓	990302/1119	320	142	25.0	1350	4242
	990302/1315	340	162	25.0	1964	5959
	990302/1506	360	182	23.5	1670	5514
	990303/0825	380	202	22.0	1960	6424
	990303/0936	400	222	22.5	2030	6363
	990303/1055	420	242	22.5	1770	6363
	990303/1226	440	262	23.5	1750	6138
	990303/1340	460	282	23.0	1650	6092
	990303/1521	480	302	23.5	1370	4473
	990303/1621	500	322	23.0	1380	5252
	990304/0825	520	342	21.0	1710	5672
	990304/0940	540	362	22.0	1780	6102
	990304/1025	560	382	23.0	1890	5987
	990304/1145	580	402	23.5	1940	6246
	990304/1247	600	422	24.0	1960	6181
	990308/1308	620	442	23.0	1500	5462
	990308/1417	640	462	23.5	1810	6034
	990308/1515	660	482	23.0	1700	5987
	990308/1621	680	502	23.0	1770	6034
	990309/0855	700	522	23.0	1460	5357

Table 3. **Groundwater Quality**
Down Hole Sampler

Site: United Water **Well ID:** V-0499

Hydrologist: R Brooks **Casing Depth**: 178 ft bls

LAB ✓	Date/Time (yy:mm:dd/hh:mm)	Sample Depth (ft, bls)	Open Hole (ft)	Temp (Deg C)	Chlorides (mg/L)	Conductivity (us/cm)
	990315/1102	250	72	21.8	750	2920
	990315/1120	350	172	21.9	350	1595
	990315/1148	453	275	22.1	450	1840
	990315/1155	480	302	23.6	825	2800
	990315/1210	690	512	23.9	1000	3410

Table 4. **Grout Data**

Site: United Water **Well ID:** V-0499

DATE	TAG DEPTH (ft)	ANNULUS/ BORE (in.)	QUANITY (yds/bgs)	MATERIAL	COMMENTS
3/17/99 am	700	B-6	150 bgs	grout	Start abandonment, backplug through tremie pipe
3/17/99 pm	440	B-6	100 bgs	grout	Backplug
3/18/99 am	230	B-6	3 yds	gravel	Gravel used to fill voids
3/18/99 am	190	B-10	25 bgs	grout	Backplug
3/18/99 pm	180	B-10	110 bgs	grout	Backplug
3/19/99	1	B-10	-	-	Cut 10 in. dia. steel casing to 1 ft below surface; well abandoned

Table 5. Drawdown: Groundwater Quality

Site: United Water **Well ID:** V-0499

Hydrologist: R Brooks **Casing Depth**: 178 ft bls

Date/Time Lab ✓	DTW	Standing H2O	Temp	Chlorides (mg/L)	Cond	GPM	Comments
	TOC (ft)	P2 (ft)	Deg C		us/cm		
990316/1220	40.89	38.676	-	-	-	0	-
990316/1228	-	-	-	-	-	920	Start pumping
990316/1236	NR	NR	24.2	1465	4990	920	-
990316/1246	NR	NR	24.1	1350	4700	920	-
990316/1252	NR	NR	24.0	-	4700	920	-
990316/1312	NR	NR	-	-	-	659	Reduce gpm
990316/1318	NR	NR	-	-	-	0	Stop pumping

TOC: Stick up is 2.0 ft als
P2: Pressure transducer 2 (30 PSI) set @ ~81.5 ft below TOC

Transducer measurements recorded with Data Logger 3000
Transducer setting – DTW- TOC = Standing head of H2O above transducer (ft)

Turbine pump set to 105 ft below TOC.
Size: 6 inch dia. column pipe with 8 inch dia. bowls
Discharge pipe: 6 inch dia., 40 ft, 4 ¾ inch orifice

Drawdown recorded while running the flowmeter log.

Table 6. **APT Drawdown March 16, 1999**

Site: United Water **Well Number**: V-0499

Hydrologist: R Brooks and J Sego

Time (min)	ΔGWL 30 psi (ft)		Time (min)	ΔGWL 30 psi (ft)		Time (min)	ΔGWL 30 psi (ft)		Time (min)	ΔGWL 30 psi (ft)
0	0		0.4447	4.532		2.8383	6.947		18.8003	5.528
0.0112	-0.048		0.4695	4.467		3.0052	7.145		19.8003	6.132
0.0223	0		0.4958	4.687		3.182	6.486		20.8003	6.072
0.0335	-0.056		0.5238	5.407		3.3693	7.063		21.8003	5.157
0.0447	-0.099		0.5535	5.213		3.5677	7.059		22.8003	6.218
0.0558	0.678		0.5848	5.244		3.7778	6.774		23.8003	6.222
0.067	1.559		0.618	5.287		4.0005	7.249		24.8003	5.347
0.0782	1.464		0.6532	5.468		4.2363	7.037		25.8003	5.123
0.0893	2.301		0.6905	5.377		4.4862	6.705		26.8003	5.671
0.1005	2.189		0.73	6.149		4.7508	7.335		27.8003	5.571
0.1117	3.156		0.7718	5.99		5.0312	6.8		28.8003	5.61
0.1228	2.707		0.8162	6.054		5.328	7.106		29.8003	5.727
0.134	2.642		0.8632	5.878		5.6425	6.028		30.8003	5.636
0.1452	2.62		0.913	6.339		5.9757	6.641		31.8003	5.002
0.1563	3.505		0.9657	5.821		6.3285	6.546		32.8003	5.071
0.1675	2.711		1.0215	6.08		6.7023	6.304		33.8003	4.627
0.1787	2.56		1.0807	6.68		7.0983	6.473		34.8003	5.61
0.1898	3.475		1.1433	6.921		7.5177	6.365		35.8003	5.36
0.201	2.275		1.2097	6.309		7.962	6.33		36.8003	5.809
0.2122	1.787		1.28	6.313		8.4327	6.02		37.8003	6.227
0.2233	0.561		1.3545	5.964		8.9312	5.718		38.8003	4.976
0.235	2.305		1.4335	6.24		9.4592	6.106		39.8003	5.968
0.2475	2.966		1.5172	5.998		10.0185	5.554		40.8003	5.947
0.2607	3.393		1.6057	6.99		10.611	5.938		41.8003	5.295
0.2747	4.066		1.6995	6.563		11.2385	6.369		42.8003	5.942
0.2895	4.144		1.7988	6.442		11.9033	5.727		43.8003	5.481
0.3052	4.769		1.9042	6.809		12.6075	6.11		*44.8003	3.686
0.3218	4.924		2.0157	6.356		13.3533	6.378		45.8003	2.983
0.3395	5.235		2.1338	6.546		14.1433	5.99		46.8003	2.314
0.3582	4.532		2.259	5.934		14.9802	5.994		47.8003	4.834
0.378	4.139		2.3915	6.253		15.8667	7.154		48.8003	3.721
0.399	4.092		2.532	6.326		16.8057	6.425		49.8003	4.381
0.4212	4.609		2.6808	6.442		17.8003	5.218			

Comments: *Discharged reduced from 920 gpm to 659 gpm at 44.8003 minutes.

Table 7. **APT Recovery March 16, 1999**

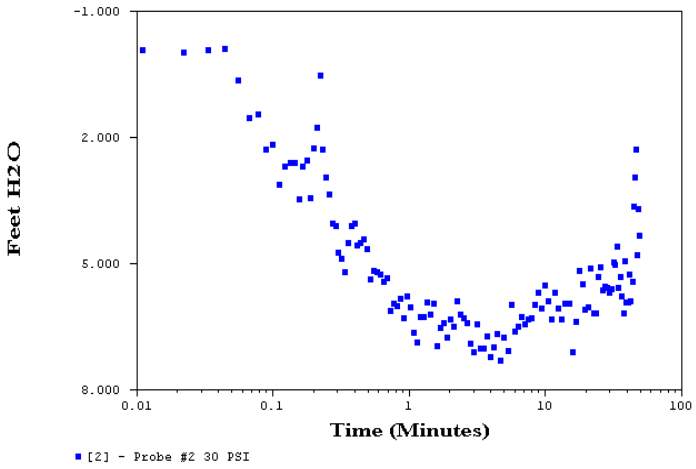
Site: United Water **Well Number**: V-0499

Hydrologist: R Brooks and J Sego

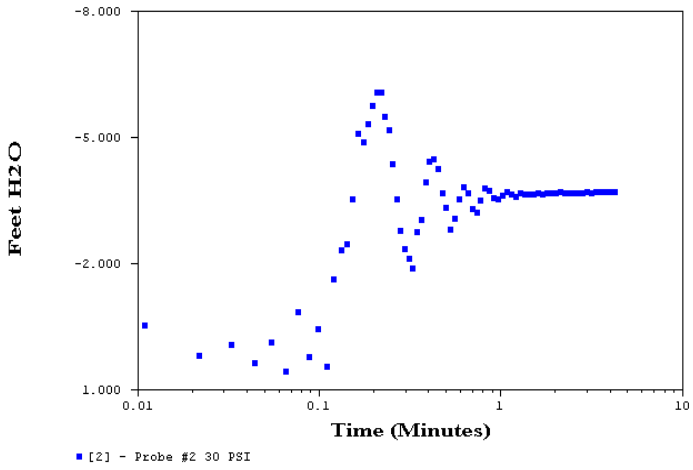
Time (min)	ΔGWL 30 psi (ft)		Time (min)	ΔGWL 30 psi (ft)		Time (min)	ΔGWL 30 psi (ft)		Time (min)	ΔGWL 30 psi (ft)
0	0		0.4288	-4.45		2.6885	-3.656			
0.011	-0.488		0.4523	-4.235		2.846	-3.656			
0.022	0.242		0.4772	-3.639		3.0128	-3.66			
0.033	-0.022		0.5035	-3.302		3.1897	-3.656			
0.044	0.393		0.5315	-2.784		3.377	-3.66			
0.055	-0.082		0.5612	-3.038		3.5753	-3.66			
0.066	0.604		0.5925	-3.509		3.7855	-3.66			
0.077	-0.807		0.6257	-3.798		4.0082	-3.66			
0.088	0.259		0.6608	-3.647		4.244	-3.664			
0.099	-0.406		0.6982	-3.276						
0.11	0.492		0.7377	-3.177						
0.121	-1.592		0.7795	-3.479						
0.132	-2.292		0.8238	-3.764						
0.143	-2.425		0.8708	-3.708						
0.154	-3.496		0.9207	-3.518						
0.165	-5.059		0.9733	-3.487						
0.176	-4.861		1.0292	-3.591						
0.187	-5.284		1.0883	-3.664						
0.198	-5.742		1.151	-3.604						
0.209	-6.049		1.2173	-3.565						
0.22	-6.053		1.2877	-3.634						
0.231	-5.478		1.3622	-3.63						
0.2427	-5.163		1.4412	-3.608						
0.2552	-4.325		1.5248	-3.63						
0.2683	-3.505		1.6133	-3.643						
0.2823	-2.736		1.7072	-3.63						
0.2972	-2.3		1.8065	-3.634						
0.3128	-2.071		1.9118	-3.643						
0.3295	-1.847		2.0233	-3.647						
0.3472	-2.728		2.1415	-3.664						
0.3658	-3.013		2.2667	-3.647						
0.3857	-3.906		2.3992	-3.652						
0.4067	-4.407		2.5397	-3.656						

Comments: Discharge water remaining in the turbine column pipe fell back down the well immediately after pump shut off.

Drawdown



Recovery



Site:	United Water APT	**SJRWMD**
Project No:	31-58200	**Figure 2.** Monitor Well V-0499

Lithologic Description (page 1 of 2)

Site: United Water **Well ID:** V-0499

Samples Described By: A Story

From (ft)	To (ft)	Lithology
220	221	Limestone, gray, porous, poorly indurated
221	223	Limestone, tan, porous, poorly indurated
223	227	Limestone, tan, very fine, silty (dredging zone)
227	247	Limestone, light tan, semi porous, poorly indurated
247	256	Limestone, off white, semi porous, poorly indurated
256	260	Limestone, light brown, dolomitic, well indurated
260	266	Limestone, off white, semi porous, poorly indurated
266	270	Limestone, off white, semi porous, poorly indurated; minor clay off white
270	272	Limestone, beige, semi porous, poorly indurated
272	276	Limestone, dark tan, moderately indurated
276	277	Cavity
277	278	Limestone, dark beige, moderately indurated
278	279	Cavity
279	285	Limestone, dark beige, moderately indurated
285	293	Limestone, off white, semi porous, poorly indurated
293	297	Limestone, off white, semi porous, poorly indurated; minor clay off white
297	298	Limestone, dark tan, dolomitic, well indurated
298	300	Limestone, beige, dolomitic, well indurated
300	307	Limestone, light tan to beige, semi porous, poorly indurated
307	312	Limestone, off white, semi porous, poorly indurated
312	317	Limestone, tan to dark tan, dolomitic, well indurated
317	322	Limestone, gray, moderately indurated
322	323	Clay, gray
323	325	Limestone, gray, moderately indurated
325	330	Limestone, gray, semi porous, moderately indurated
330	340	Limestone, tan, porous, poorly indurated
340	345	Limestone, dark tan, semi porous, moderately indurated
345	353	Limestone, off white, porous, poorly indurated
353	365	Limestone, dark tan, dolomitic, well indurated
365	372	Limestone, off white, semi porous, poorly indurated
372	375	Limestone, gray, dolomitic, well indurated
375	386	Limestone, tan, semi porous, poorly indurated
386	390	Limestone, off white, semi porous, soft
390	398	Limestone, tan, semi porous, poorly indurated

Site: United Water **Well ID:** V-0499

Samples Described By: A Story

From (ft)	To (ft)	Lithology
398	401	Limestone, off white, semi porous, soft; minor clay, white
401	434	Limestone, tan, semi porous, moderately indurated
434	435	Limestone, beige, dolomitic, well indurated
435	443	Limestone, tan, porous, moderately indurated
443	444	Limestone, beige, dolomitic, well indurated
444	464	Limestone, tan, semi porous, poorly indurated
464	469	Limestone, beige, moderately indurated; minor clay, white
469	507	Limestone, tan to beige, semi porous, poorly indurated
507	555	Limestone, off white, semi porous, poorly indurated
555	556	Limestone, tan to brown, semi porous, moderately indurated
556	602	Limestone, light tan, semi porous, poorly indurated
602	608	Limestone, light tan, semi porous, moderately indurated
608	616	Limestone, light tan, semi porous, poorly indurated
616	623	Limestone, tan, semi porous, moderately indurated
623	631	Limestone, light tan, fine, soft
631	636	Limestone, tan, semi porous, moderately indurated
636	655	Limestone, light tan, semi porous, poorly indurated
655	656	Limestone, dark tan, dolomitic, moderately indurated
656	658	Limestone, light tan, semi porous, poorly indurated
658	663	Limestone, dark tan, semi porous, moderately indurated
663	664	Limestone, light tan, semi porous, poorly indurated
664	667	Limestone, dark tan, semi porous, moderately indurated
667	676	Limestone, light tan, semi porous, poorly indurated
676	684	Limestone, light brown, dolomitic, semi porous, well indurated
684	700	Limestone, light brown, dolomitic, semi porous, well to moderately indurated

Geophysical Logs

Log Source: St. Johns River Water Management District

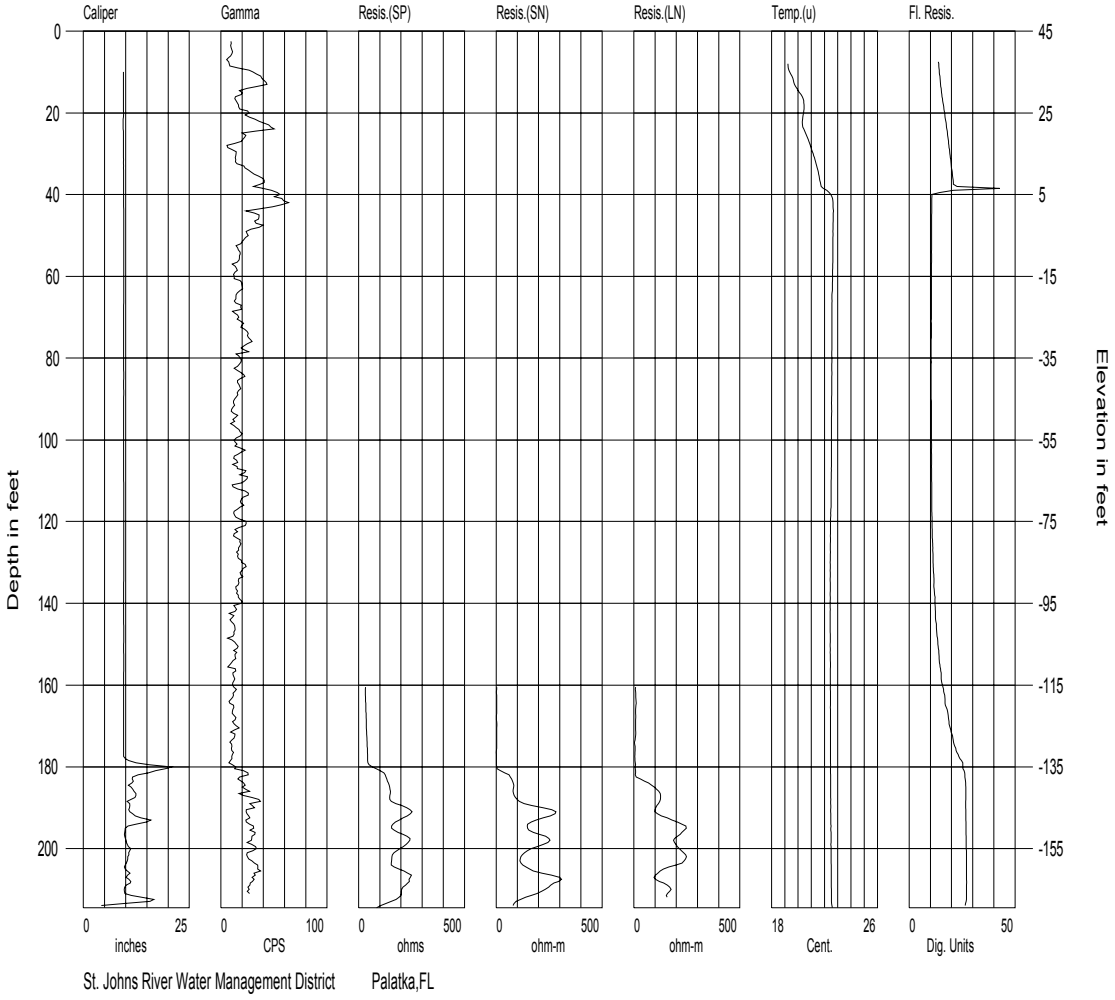
Site: United Water **Monitor Well:** V-0499

Station Name:

Logger: Shane Dossat Latitude: 28D 55M 02S **Abandoned:** March 19, 1999

Well ID: V-0499 Depth Logged: 214.5 ft.

M 0



Geophysical Logs

GE
Log Source: St. Johns River Water Management District

Site: United Water **Monitor Well:** V-0499

Station Name:
WMD: V-0499A

Logger: Jeff Davis Latitude: 28D 55M 02S **Abandoned:** March 19, 1999

Depth Logged: 703 ft.

D 1