CITY OF NORTH MIAMI BEACH

Exploratory Floridan Well Program
Summary Report

January 2004

HAI Project No. 00.0202.021

HARTMAN & ASSOCIATES, INC.
ORLANDO • FORT MYERS • DESTIN • FORT LAUDERDALE • JACKSONVILLE • ATLANTA
engineers, hydrogeologists, surveyors & management consultants
201 E. PINE ST. SUITE 1000 - ORLANDO, FL 32801
TELEPHONE (407) 839-3955 - FAX (407) 839-3790
A TETRA TECH Company

Norwood Water Treatment Plant
EXPANSION PROGRAM
CITY OF NORTH MIAMI BEACH

April 6, 2004

Ms. Emily Richardson
Water Supply Planning
South Florida Water Management District
P.O. Box 24680
West Palm Beach, FL 33416-4680

NMB -1F
NMB-2F

RE: Exploratory Floridan Aquifer Wells
Alternative Water Supply Grant (C-13982)

Dear Ms. Richardson:

Enclosed please find two CDs containing electronic copy of the geophysical logs for the Floridan Aquifer Wells 1F and 2F, City of North Miami Beach, as you requested through telephone.

If you have any questions, please contact me at (305) 651-8520.

Sincerely,

CITY OF NORTH MIAMI BEACH

Jeff An
Project Manager

Enclosure

cc: Kelvin Baker, Director
Albert Perez, Assistant Director
Hiep Huynh, City Engineer
Shawn Gabriel, Assistant Director
Martin King, Assistant Director
File: 2001-001A-CMS-3.1.4

PUBLIC SERVICES DEPARTMENT
17050 NE 19 Avenue / North Miami Beach, FL 33162 / 305.948.2967 / Fax 305.957.3502

Norwood Water Treatment Plant
EXPANSION PROGRAM
CITY OF NORTH MIAMI BEACH
PUBLIC SERVICES DEPARTMENT

17050 NE 19 Avenue
North Miami Beach, FL 33162
(305) 948-2967 - Phone
(305) 957-3502 - Fax

LETTER OF TRANSMITTAL

To: Ms. Liz Abbott
South Florida Water Management District
172-A West Flagler Street
Miami, FL 33130

Date: January 21, 2004

Subject: City of North Miami Beach,
Floridan Aquifer Well Report
(Contract No. C-13982)

WE ARE SENDING:	SUBMITTED FOR:
❑ Shop Drawings	❑ Approval
❑ Letter	❑ Your Use
❑ Prints	☒ As Requested
❑ Change Order(s)	❑ Review and Comment
❑ Plans	❑ Information
❑ Samples	SENT VIA: Hand Deliver
❑ Specifications	❑ Attached
❑ Other:	❑ Separate Cover Via:

# Copies	DESCRIPTION
1	City of North Miami Beach Floridan Aquifer Well Summary Report

Remarks: **As you requested, the Floridan Aquifer Well report is submitted. We thank the South Florida Water Management District for support of the project**

Signed: 654-7133 or 654-7132

Jeff An, Project Manager

cc: Albert Perez, Assistant Director of Public Services
File: **2001-001A-3.1.4**

Requested electronic logs - 3/24/04
Jeff An

CITY OF NORTH MIAMI BEACH
EXPLORATORY FLORIDAN WELL PROGRAM
SUMMARY REPORT

Prepared for:

City of North Miami Beach
Public Services Department
17050 N.E. 19th Avenue
North Miami Beach, Florida 33162

Prepared by:

Hartman & Associates, Inc.
201 East Pine Street, Suite 1000
Orlando, Florida 32801

January 2004

HAI #00.0202.021

CITY OF NORTH MIAMI BEACH
EXPLORATORY FLORIDAN WELL PROGRAM
SUMMARY REPORT

1.0 INTRODUCTION

This report summarizes the drilling and testing of the two (2) Floridan aquifer production wells for the City of North Miami Beach under the construction contract entitled "Exploratory Floridan Well Program". This report includes the record drawings, lithologic logs, well completion reports, step drawdown test results, aquifer performance test results, water quality analytical results, and the geophysical logs performed. Copies of video logs performed for the wells have been forwarded to the City under separate cover.

2.0 WELL CONSTRUCTION

The wells constructed under the subject contract include Floridan aquifer production wells 1F and 2F. These wells were constructed with 32-inch black steel pit casing, 26-inch black steel surface casing, and 17.4-inch, SDR 17 PVC final well casing. The cement grout used was Type II, and the final well casing had a minimum grout thickness of greater than three inches (3"). The open borehole below the final well casing has a nominal 15-inch diameter. Record drawings for the completed wells 1F and 2F are provided in Figures 1 and 2, respectively.

Well 1F was constructed first, and the initial borehole extended to 1900 ft below land surface (bls). Lithologic logs for both wells are provided in Attachment A. The log for Well 1F shows that sand and some limestone comprise the upper 350 ft of this boring, which represents the Biscayne aquifer in the area. Below the Biscayne aquifer from 350 to 1020 ft bls, lie the confining layers that consist of predominantly clay with some silt and limestone, which make up the intermediate confining unit. The top of Floridan aquifer is encountered at 1020 ft bls at this location. Very fine to medium grained, tight to very porous, limestone is encountered from 1020 ft bls to bottom of the boring at 1900 ft bls. Some dolomite is noted throughout the aquifer penetrated.

The lithologic log for well 2F shows that sand and limestone comprise the upper 370 ft of this boring, which represents the Biscayne aquifer in the area. Below the Biscayne aquifer from 370 to 950 ft bls, lie the confining layers that consist of predominantly clay with some silt and limestone, which make up the intermediate confining unit. The top of Floridan aquifer is encountered at 950 ft bls at this location. Very fine to medium grained, tight to very porous, limestone is encountered from 950 ft bls to bottom of the boring at 1500 ft bls.

The boring for Well 1F was completed to 1900 ft bls to determine the extent of suitable water available for the reverse osmosis process and to determine the productivity of the aquifer penetrated. Straddle packer testing was used to better define water quality

changes with depth and to help select the final well depth. The water quality results from the straddle packer testing are provided in Table 1. Analytical results are listed from Severn Trent laboratories for water samples collected from the 20-foot packered intervals and from the open annulus (open from the bottom of the well casing to the top of the packered interval). Figures 3 and 4 show the chloride and total dissolved solids concentrations along with the conductivity readings versus depth for the packered interval samples and the annulus samples, respectively. The packered interval water samples indicate that the base of the underground source of drinking water (USDW, where TDS > 10,000 mg/L) at the water treatment plant(WTP) site appears to be between 1380 and 1470 ft bls or approximately 1405 feet bls, which is higher than the USGS reports indicated. At the test rate of 700 to 800 gpm, the annulus water samples appeared to receive no more than approximately 5 to 7 percent of the water production from 1250 to 1470 feet bls when open to those zones. The water quality results remained within a reasonable RO treatment range for all annulus zones tested with chloride concentration from 1480 to 1690 mg/L and total dissolved solids concentration from 3330 to 3750 mg/L. Because the majority of the water appears to be coming from the upper 200 feet of open hole, the water quality degrades with depth, the base of the USDW is approximately 1405 ft bls, Wells 1F and 2F were back plugged to 1235 ft bls and 1231 ft bls, respectively. This provides for an open hole interval for the completed Wells 1F and 2F of about 215 feet and 231 feet, respectively, and a buffer zone between the bottom of the production zone and the base of the USDW of approximately 175 feet.

Well completion reports for Wells 1F and 2F are provided in Attachment B. Completion drawings for each well prepared by the drilling contractor are also provided in Attachment B.

3.0 STEP DRAWDOWN TESTING

A step drawdown test was performed in Well 1F on April 23, 2003. Prior to the test, the static water level was 29.0 ft above land surface (als). The well was pumped for one hour at four successive increasing pump rates of 1250 gpm, 1833 gpm, 2400 gpm, and 2967 gpm. Turbidity of the water was measured during the test and ranged from 0.08 to 0.40 NTU. The well efficiency ranged from 86% at 1250 gpm to 75% at 2967 gpm. Results from the test are provided in Attachment C.

The step drawdown test from Well 2F was performed on June 4, 2003. Results from the test are provided in Attachment C. Prior to the test, the static water level was 28.8 ft als. The well was pumped for one hour at four successive increasing pump rates of 1233 gpm, 1767 gpm, 2350 gpm, and 3283 gpm. The well efficiency ranged from 84% at 1233 gpm to 67% at 3283 gpm.

4.0 AQUIFER PERFORMANCE TESTING

The aquifer performance testing included monitoring during some of the development and the 72-hour constant rate discharge test. During a portion of the development of Well 1F, the potentiometric surface head in Well 2F was being monitored (April 7,

2003). Drawdown of about 12 feet was monitored in Well 2F after 3.5 hours while Well 1F was being developed at 3300 gpm. Aquifer parameters were calculated using both the drawdown and recovery data from this test. The resulting average transmissivity and storage values from this test were 22,815 ft^2/day (170,656 gpd/ft) and 0.0002, respectively. Results from this test along with graphs and summary tables are provided in Attachment D.

The constant rate discharge test was first attempted on June 5, 2003, but was stopped due to problems with the pumping equipment. The test was restarted on June 12, 2003 and the average pump rate during the test was 2458 gpm. Hand measurement values for the second test are provided in Attachment D. Drawdown of about 15 feet was recorded in Well 1F after 72 hours while Well 2F was pumped at 2458 gpm. Aquifer parameters were calculated using both the drawdown and recovery data from this test. The resulting average transmissivity and storage values from this test were 21,859 ft^2/day (163,505 gpd/ft) and 0.00014, respectively. Results from this test along with graphs and summary tables are also provided in Attachment D.

5.0 WATER QUALITY ANALYSES

Water samples collected during the straddle packer testing, described above for Well 1F, are provided in Attachment E. Samples collected on April 23, 2003 for Well 1F and on June 17, 2003 for Well 2F were analyzed for the primary and secondary drinking water standards as per Chapter 62-550 F.A.C. and for additional contaminants. Table 2 presents the results for both wells along with the maximum contaminant level if one exists. The total dissolved solids (TDS) concentrations were 4100 mg/L for Well 1F and 3353 mg/L for Well 2F. Split samples show the TDS concentrations at 3200 mg/L for Well 1F and 3900 mg/L for Well 2F. Chloride concentrations were 1665 mg/L for Well 1F and 1126 mg/L for Well 2F. Split samples show the chloride concentrations at 1400 mg/L for Well 1F and 1500 mg/L for Well 2F. Turbidity was 0.3 NTU for Well 1F and 0.4 NTU for Well 2F.

The wells were tested for bacteriological contamination over a series of five days with a total of ten samples per well. The samples were analyzed for the presence of fecal coliform and total coliform. All the samples came back below detection limit and absent. The two wells were cleared, and the disinfection of the wells was shown to be sufficient. Results from the bacteriological analyses are also provided in Attachment E.

6.0 PLUMBNESS AND ALIGNMENT TESTS

The plumbness and alignment tests for Wells 1F and 2F were completed on October 17, 2002 and January 14, 2003, respectively, to a depth of 980 to 990 feet. For plumbness, the maximum allowable drift is equal to 2/3 of the inside diameter of the casing per 100 ft of depth. Based on the inside casing diameter of 15.25 inches (1.2708 ft), the allowable drift for each well is 10.17 inches (0.8475 ft) per 100 ft. Wells 1F and 2F passes both the plumbness and alignment tests. The results from the plumbness test are provided in Attachment F.

7.0 GEOPHYSICAL LOGS

Two sets of geophysical logs were performed in Well 1F on November 7, 2002, December 9, 2002, and May 13, 2002. The first set, done in November and December of 2002, was performed in the pilot hole to a depth of approximately 1900 ft bls. The second set of logs was completed after the casing was installed and the pilot hole was backfilled to the desired well depth of 1235 ft. The geophysical logging for Well 2F was performed on March 4, 2003. The logging included static water quality, Gamma ray, resistivity, caliper, full wave borehole compensated acoustic, and flow logs. The logs are provided in Attachment G.

TABLES

TABLE 1
CITY OF NORTH MIAMI BEACH
WATER QUALITY FOR WELL 1F
STRADDLE PACKER AND ANNULUS TEST RESULTS

	Sample Number	Depth Interval (feet)		Date	Conductivity (µmhos/cm)	Total Hardness (mg/L)	pH (S.U.)	Total Dissolved Solids (mg/L)	Chlorides (mg/L)	Total Sulfide (mg/L)	Iron (mg/L)
Straddle Packer	4	1210	1230	02/10/03	6,840	980	7.95	4120	1850	0.80	0.86
	5	1250	1270	02/11/03	13,180	1860	7.38	8150	4440	0.80	0.97
	3	1290	1310	02/07/03	13,100	1700	7.66	8750	4400	0.40	1.1
	1	1360	1380	02/04/03	14,280	1850	7.68	8750	4490	0.40	1.78
	2	1470	1490	02/06/03	18,330	2400	7.72	11,880	6150	0.40	1.83

	Sample Number	Depth Interval (feet)		Date	Conductivity (µmhos/cm)	Total Hardness (mg/L)	pH (S.U.)	Total Dissolved Solids (mg/L)	Chlorides (mg/L)	Total Sulfide (mg/L)	Iron (mg/L)
Annulus	4	1020	1210	02/10/03	5,470	790	7.72	3330	1480	2.00	0.06
	5	1020	1250	02/11/03	5,440	760	7.96	3460	1580	2.80	BDL
	3	1020	1290	02/07/03	5,480	740	7.62	3360	1490	2.80	BDL
	1	1020	1360	02/04/03	5,590	805	7.9	3440	1520	2.00	0.47
	2	1020	1470	02/06/03	5,950	860	7.92	3750	1690	2.40	BDL

BDL – Below Detectable Limit

2F 100-1231-3353 6/17/03

TABLE 2
CITY OF NORTH MIAMI BEACH
WATER QUALITY RESULTS

PRIMARY DRINKING WATER STANDARDS
MAXIMUM CONTAMINANT LEVELS FOR INORGANIC COMPOUNDS
TABLE 1 (Reference: 62-550.310(1)(a))

FEDERAL CONTAMINANT ID NUMBER	CONTAMINANT	CAS NUMBER	MAXIMUM CONTAMINANT LEVEL	UNITS	WELL 1F 4/23/03	WELL 2F 6/17/03
1074	Antimony	---	0.006	mg/L	< 0.005	< 0.005
1005	Arsenic	---	0.05	mg/L	< 0.005	< 0.005
1010	Barium	---	2	mg/L	< 0.05	< 0.5
1075	Beryllium	---	0.004	mg/L	< 0.002	< 0.002
1015	Cadmium	---	0.005	mg/L	< 0.005	< 0.005
1020	Chromium	---	0.1	mg/L	< 0.005	< 0.005
1024	Cyanide	---	0.2	mg/L	< 0.004	< 0.005
1025	Fluoride	---	4	mg/L	2.05	1.15
1030	Lead	---	0.015	mg/L	< 0.001	< 0.001
1035	Mercury	---	0.002	mg/L	< 0.001	< 0.001
1036	Nickel	---	0.1	mg/L	0.004	< 0.002
1040	Nitrate	---	10	mg/L as N	< 0.05	< 0.5
1041	Nitrite	---	1	mg/L as N	< 0.05	< 0.5
	Total Nitrate and Nitrite	---	10	mg/L as N	< 0.05	< 0.5
1045	Selenium	---	0.05	mg/L	< 0.01	< 0.005
1052	Sodium	---	160	mg/L	**820**	**770**
1085	Thallium	---	0.002	mg/L	< 0.002	< 0.002

MAXIMUM RESIDUAL DISINFECTANT LEVELS
TABLE 2 (Reference: 62-550.310(2)(a))

FEDERAL CONTAMINANT ID NUMBER	CONTAMINANT	CAS NUMBER	MAXIMUM RESIDUAL DISINFECTANT LEVEL	UNITS	WELL 1F 4/23/03	WELL 2F 6/17/03
1012	Chlorine	---	4.0 (as Cl_2)	mg/L	< 0.05	< 0.1
1006	Chloramines	---	4.0 (as Cl_2)	mg/L	NA	NA
1008	Chlorine Dioxide	---	0.8 (as ClO_2)	mg/L	NA	NA

MAXIMUM CONTAMINANT LEVELS FOR DISINFECTION BYPRODUCTS
TABLE 3 (Reference: 62-550.310(3)(b))

FEDERAL CONTAMINANT ID NUMBER	CONTAMINANT	CAS NUMBER	MAXIMUM CONTAMINANT LEVEL	UNITS	WELL 1F 4/23/03	WELL 2F 6/17/03
2950	Total Trihalomethanes (TTHM)	---	0.08	mg/L	< 0.0005	< 0.0005
2456	Haloacetic Acids (Five) (HAA5)	---	0.06	mg/L	NA	NA
1011	Bromate	---	0.01	mg/L	NA	NA
1009	Chlorite	---	1	mg/L	NA	NA

MAXIMUM CONTAMINANT LIMITS FOR VOLATILE ORGANIC CONTAMINANTS
TABLE 4 (Reference: 62-550.310(4)(a))

FEDERAL CONTAMINANT ID NUMBER	CONTAMINANT	CAS NUMBER	MAXIMUM CONTAMINANT LEVEL	UNITS	WELL 1F 04/23/03	WELL 2F 6/17/03
2977	1,1-Dichloroethylene	75-35-4	7	µg/L	< 0.5	< 0.5
2981	1,1,1-Trichloroethane	71-55-6	200	µg/L	< 0.5	< 0.5
2985	1,1,2- Tricholoroethane	79-00-5	5	µg/L	< 0.5	< 0.5
2980	1,2-Dichloroethane	107-06-2	3	µg/L	< 0.5	< 0.5
2983	1,2-Dichloropropane	78-87-5	5	µg/L	< 0.5	< 0.5
2378	1,2,4-Tricholorobenzene	120-82-1	70	µg/L	< 0.5	< 0.5

TABLE 2
CITY OF NORTH MIAMI BEACH
WATER QUALITY RESULTS

FEDERAL CONTAMINANT ID NUMBER	CONTAMINANT	CAS NUMBER	MAXIMUM CONTAMINANT LEVEL	UNITS	WELL 1F 4/23/03	WELL 2F 6/17/03
2990	Benzene	71-43-2	1	µg/L	< 0.5	< 0.5
2982	Carbon tetrachloride	56-23-5	3	µg/L	< 0.5	< 0.5
2380	cis-1,2-Dichloroethylene	156-59-2	70	µg/L	< 0.5	< 0.5
2964	Dichloromethane	75-09-2	5	µg/L	< 0.5	< 0.5
2992	Ethylbenzene	100-41-4	700	µg/L	< 0.5	< 0.5
2989	Monochlorobenzene	108-90-7	100	µg/L	< 0.5	< 0.5
2968	o-Dichlorobenzene	95-50-1	600	µg/L	< 0.5	< 0.5
2969	para-Dichlorobenzene	106-46-7	75	µg/L	< 0.5	< 0.5
2996	Styrene	100-42-5	100	µg/L	< 0.5	< 0.5
2987	Tetrachloroethylene	127-18-4	3	µg/L	< 0.5	< 0.5
2991	Toluene	108-88-3	1000	µg/L	< 0.5	< 0.5
2979	trans-1,2-Dichloroethylene	156-60-5	100	µg/L	< 0.5	< 0.5
2984	Trichloroethylene	79-01-6	3	µg/L	< 0.5	< 0.5
2976	Vinyl chloride	75-01-4	1	µg/L	< 0.5	< 0.5
2955	Xylenes (total)	1330-20-7	10000	µg/L	< 1	< 1

MAXIMUM CONTAMINANT LEVELS FOR SYNTHETIC ORGANIC CONTAMINANTS
TABLE 5 (Reference: 62-550.310(4)(b))

FEDERAL CONTAMINANT ID NUMBER	CONTAMINANT	CAS NUMBER	MAXIMUM CONTAMINANT LEVEL	UNITS	WELL 1F 4/23/03	WELL 2F 6/17/03
2063	2,3,7,8-TCDD (Dioxin)	1746-01-6	3.00E-05	µg/L	NA	NA
2105	2,4-D	94-75-7	70	µg/L	< 0.2	< 0.2
2110	2,4,5-TP (Silvex)	93-72-1	50	µg/L	< 0.2	< 0.2
2051	Alachlor	15972-60-8	2	µg/L	< 0.01	< 0.01
2050	Atrazine	1912-24-9	3	µg/L	< 0.2	< 0.2
2306	Benzo(a)pyrene	50-32-8	0.2	µg/L	< 0.2	< 0.2
2046	Carbofuran	1563-66-2	40	µg/L	< 2.5	< 2.5
2959	Chlordane	57-74-9	2	µg/L	< 0.01	< 0.01
2031	Dalapon	75-99-0	200	µg/L	< 1.3	< 1.3
2035	Di(2-ethylhexyl)adipate	103-23-1	400	µg/L	< 5.00	< 5
2039	Di(2-ethylhexyl)phthalate	117-81-7	6	µg/L	< 5	< 5
2931	Dibromochloropropane (DBCP)	96-12-8	0.2	µg/L	< 0.02	< 0.02
2041	Dinoseb	88-85-7	7	µg/L	< 0.2	< 0.2
2032	Diquat	85-00-7	20	µg/L	< 5	< 5
2033	Endothall	145-73-3	100	µg/L	< 10	< 10
2005	Endrin	72-20-8	2	µg/L	< 0.01	< 0.01
2946	Ethylene dibromide (EDB)	106-93-4	0.02	µg/L	< 0.02	< 0.01
2034	Glyphosate	1071-83-6	700	µg/L	< 25	< 25
2065	Heptachlor	76-44-8	0.4	µg/L	< 0.01	< 0.01
2067	Heptachlor epoxide	1024-57-3	0.2	µg/L	< 0.01	< 0.01
2274	Hexachlorobenzene	118-74-1	1	µg/L	< 0.01	< 0.01
2042	Hexachlorocyclopentadiene	77-47-4	50	µg/L	< 0.01	< 0.01
2010	Lindane	58-89-9	0.2	µg/L	< 0.01	< 0.01
2015	Methoxychlor	72-43-5	40	µg/L	< 0.01	< 0.01
2036	Oxamyl (vydate)	23135-22-0	200	µg/L	< 2.5	< 2.5
2326	Pentachlorophenol	87-86-5	1	µg/L	< 1	< 0.2
2040	Picloram	2/1/1918	500	µg/L	< 0.20	< 0.20
2383	Polychlorinated biphenyl (PCB)	1336-36-3	0.5	µg/L	< 0.07	< 0.07
2037	Simazine	122-34-9	4	µg/L	< 0.5	< 0.5
2020	Toxaphene	8001-35-2	3	µg/L	< 0.01	< 0.01

TABLE 2
CITY OF NORTH MIAMI BEACH
WATER QUALITY RESULTS

OTHER PRIMARY DRINKING WATER STANDARDS

FEDERAL CONTAMINANT ID NUMBER	CONTAMINANT	CAS NUMBER	MAXIMUM CONTAMINANT LEVEL	UNITS	WELL 1F 4/23/03	WELL 2F 6/17/03
Microbiological	Total Coliforms >40 Samples/Mo	---	<5% Samples	Positive	NA	NA
Microbiological	Total Coliforms <40 Samples/Mo	---	<2.5% Samples	Positive	NA	NA
Microbiological	Fecal Coliform or E.coli positive repeat	---	1	Positive	NA	NA
Radionuclides	Combined Ra-226 and Ra-228	---	5	pCi/L	3.66	NA
Radionuclides	Gross Alpha including Ra-226 but excluding Rn and U	---	15	pCi/L	21	3
Radionuclides	Man-made radionuclides	---	4	millirem/yr	NA	NA

SECONDARY DRINKING WATER STANDARDS
TABLE 6 (Reference: 62-550.320(1))

FEDERAL CONTAMINANT ID NUMBER	CONTAMINANT	CAS NUMBER	MAXIMUM CONTAMINANT LEVEL	UNITS	WELL 1F 4/23/03	WELL 2F 6/17/03
1002	Aluminum	---	0.2	mg/L	< 0.1	< 0.1
1017	Chloride	---	250	mg/L	**1665**	**1126**
1022	Copper	---	1	mg/L	< 0.01	< 0.5
1025	Fluoride	---	2	mg/L	**2.05**	1.15
1028	Iron	---	0.3	mg/L	0.13	< 0.1
1032	Manganese	---	0.05	mg/L	< 0.05	< 0.05
1050	Silver	---	0.1	mg/L	< 0.001	< 0.005
1055	Sulfate	---	250	mg/L	**510**	**488**
1095	Zinc	---	5	mg/L	0.06	< 0.01
1905	Color	---	15	APHA	7.5	2.5
1920	Odor**	---	3	Threshold Odor Number	**10**	**80**
1925	pH	---	6.5 - 8.5	pH Units	7.53	7.82
1930	Total Dissolved Solids	---	500	mg/L	**4100**	**3353**
2905	Foaming agents	---	0.5	mg/L	< 0.01	< 0.1

TABLE 2
CITY OF NORTH MIAMI BEACH
WATER QUALITY RESULTS

ADDITIONAL CONTAMINANTS ANALYZED

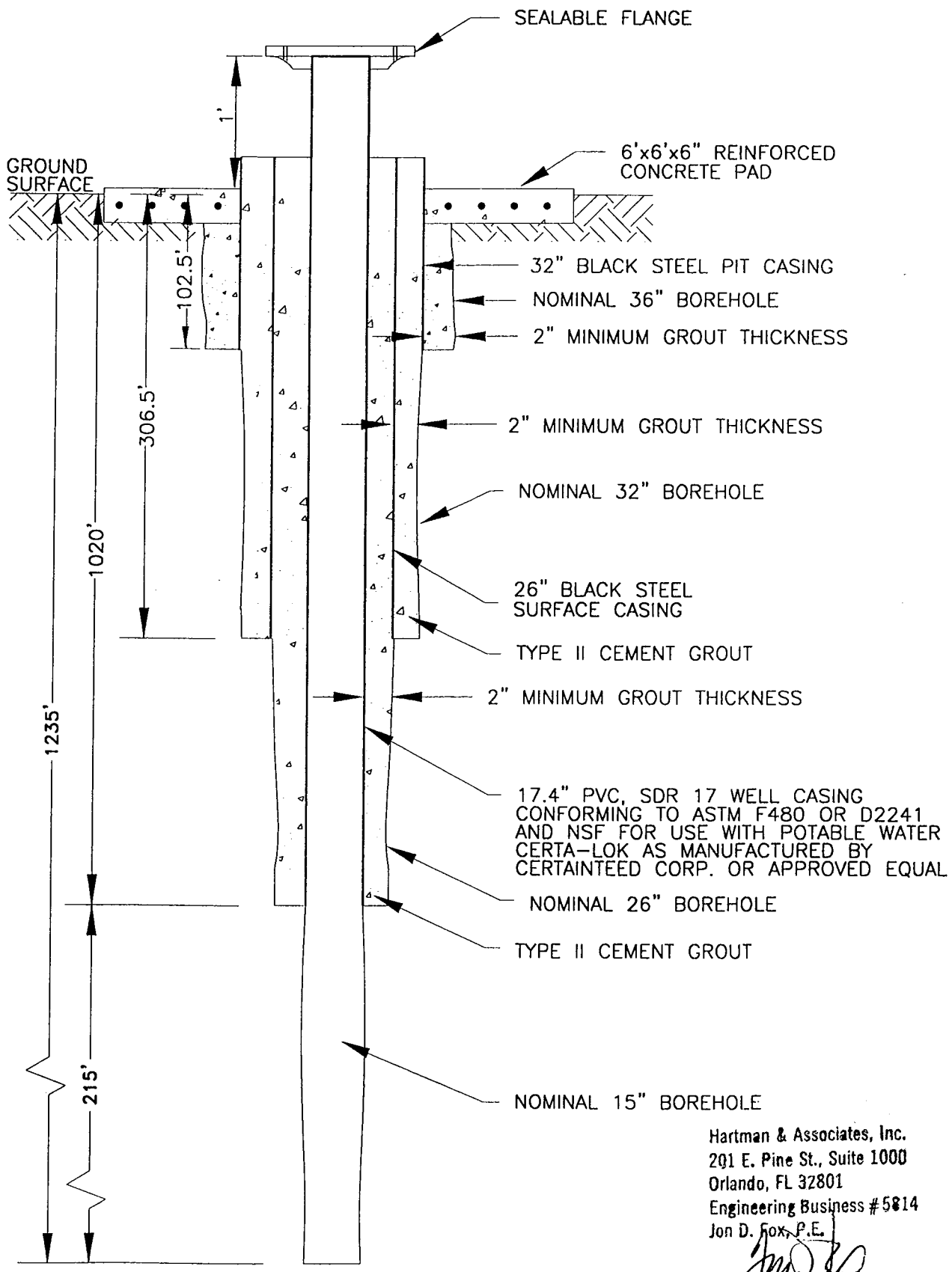
FEDERAL CONTAMINANT ID NUMBER	CONTAMINANT	CAS NUMBER	MAXIMUM CONTAMINANT LEVEL	UNITS	WELL 1F 4/23/03	WELL 2F 6/17/03
	Bicarbonate Alkalinity	---	---	mg/L $CaCO_3$	104	119
	Carbonate Alkalinity	---	---	mg/L $CaCO_3$	< 2	< 5
	Calcium Hardness	---	---	mg/L $CaCO_3$	670	310
	Total Hardness	---	---	mg/L $CaCO_3$	668	700
	Barium	---	2	mg/L	< 0.05	< 0.05
	Bromide	---	---	mg/L	7.85	7.6
	Calcium - ICP Method	---	---	mg/L	110	110
	Magnesium - ICP Method	---	---	mg/L	120	120
	Phosphorus, Total as "P"	---	---	mg/L	< 0.02	< 0.1
	Phosphate, Total as "P"	---	---	mg/L	< 0.025	< 0.1
	Potassium - ICP Method	---	---	mg/L	28	18
	Silica - ICP Method	---	---	mg/L	12.8	15.1
	Sulfide	---	---	mg/L	3.2	2.8
	Strontium - ICP Method	---	---	mg/L	10.1	9.3
	Alpha, Total	---	15	pCi/L	21	3
	Alpha-counting error	---	---	2σ+/-	15	12
	Beta, Total	---	---	pCi/L	44	26
	Beta-counting error	---	---	2σ+/-	15	12
	Radium 226	---	5	pCi/L	3.34	NA
	Radium 226-counting error	---	---	2σ+/-	0.59	NA
	Radium 228	---	5	pCi/L	0.32	NA
	Radium 228-counting error	---	---	2σ+/-	0.48	NA
	Conductivity (Specific Conductance)	---	---	µmhos/cm	5010	5300
	Turbidity	---	---	NTU	0.285	0.389
	Ammonia Nitrogen	---	---	mg/L	0.293	0.364
	Total Kjeldahl Nitrogen	---	---	mg/L	1.02	0.807
	Total Carbon Dioxide	---	---	mg/L CO_2	94	108
	Total Organic Carbon	---	---	mg/L	< 0.1	< 1
	BOD5	---	---	mg/L	< 2	< 2
	COD	---	---	mg/L	24.8	48.4
	Heterotrophic Plate Count	---	---	CFU/ml	< 1	< 1
	HAA Formation Potential (7-day)	---	---	µg/L	NA	1
	Monochloroacetic Acid (7-day)	---	---	µg/L	NA	< 3
	Dichloroacetic Acid (7-day)	---	---	µg/L	NA	< 3
	Trichloroacetic Acid (7-day)	---	---	µg/L	NA	< 1
	Monobromoacetic Acid (7-day)	---	---	µg/L	NA	< 2
	Dibromoacetic Acid (7-day)	---	---	µg/L	NA	< 1
	Chlorine (residual)	---	---	mg/L	< 1	< 1
	THM Formation Potential (7 Day)	---	---	µg/L	< 0.5	1
2943	Bromodichloromethane (7 Day)	75-27-4	---	µg/L	< 0.5	< 0.5
2942	Bromoform (7 Day)	75-25-2	---	µg/L	< 0.5	< 0.5
2941	Chloroform (7 Day)	67-66-3	---	µg/L	< 0.5	< 0.5
2944	Dibromochloromethane (7 Day)	124-48-1	---	µg/L	< 0.5	< 0.5

TABLE 2
CITY OF NORTH MIAMI BEACH
WATER QUALITY RESULTS

ADDITIONAL CONTAMINANTS ANALYZED - SPLIT SAMPLES TO 2ND LAB

FEDERAL CONTAMINANT ID NUMBER	CONTAMINANT	CAS NUMBER	MAXIMUM CONTAMINANT LEVEL	UNITS	WELL 1F 4/23/03	WELL 2F 6/17/03
	Barium	---	2	mg/L	< 0.01	0.012
	Bromide	---	---	mg/L	8.1	10
1017	Chloride	---	250	mg/L	**1400**	**1500**
	Hydrogen Sulfide	---	---	mg/L	< 1	< 1
1930	Total Dissolved Solids	---	500	mg/L	**3200**	**3900**
	Total Organic Carbon	---	---	mg/L	2	< 1
	HAA Formation Potential (7-day)	---	---	µg/L	20	< 1
	Monochloroacetic Acid (7-day)	---	---	µg/L	< 1	< 1
	Dichloroacetic Acid (7-day)	---	---	µg/L	1.1	< 1
	Trichloroacetic Acid (7-day)	---	---	µg/L	< 1	< 1
	Monobromoacetic Acid (7-day)	---	---	µg/L	3	< 1
	Dibromoacetic Acid (7-day)	---	---	µg/L	16	< 1
	Chlorine (residual)	---	4*	mg/L	< 0.1	NA
	THM Formation Potential (7 Day)	---	---	µg/L	120	140
	Bromodichloromethane (7 Day)	75-27-4	---	µg/L	2.6	NA
	Bromoform (7 Day)	75-25-2	---	µg/L	100	NA
	Chloroform (7 Day)	67-66-3	---	µg/L	0.33	NA
	Dibromochloromethane (7 Day)	124-48-1	---	µg/L	18	NA

FIGURES



Hartman & Associates, Inc.
201 E. Pine St., Suite 1000
Orlando, FL 32801
Engineering Business #5814
Jon D. Fox, P.E.
Florida Registration #49487
7-31-03

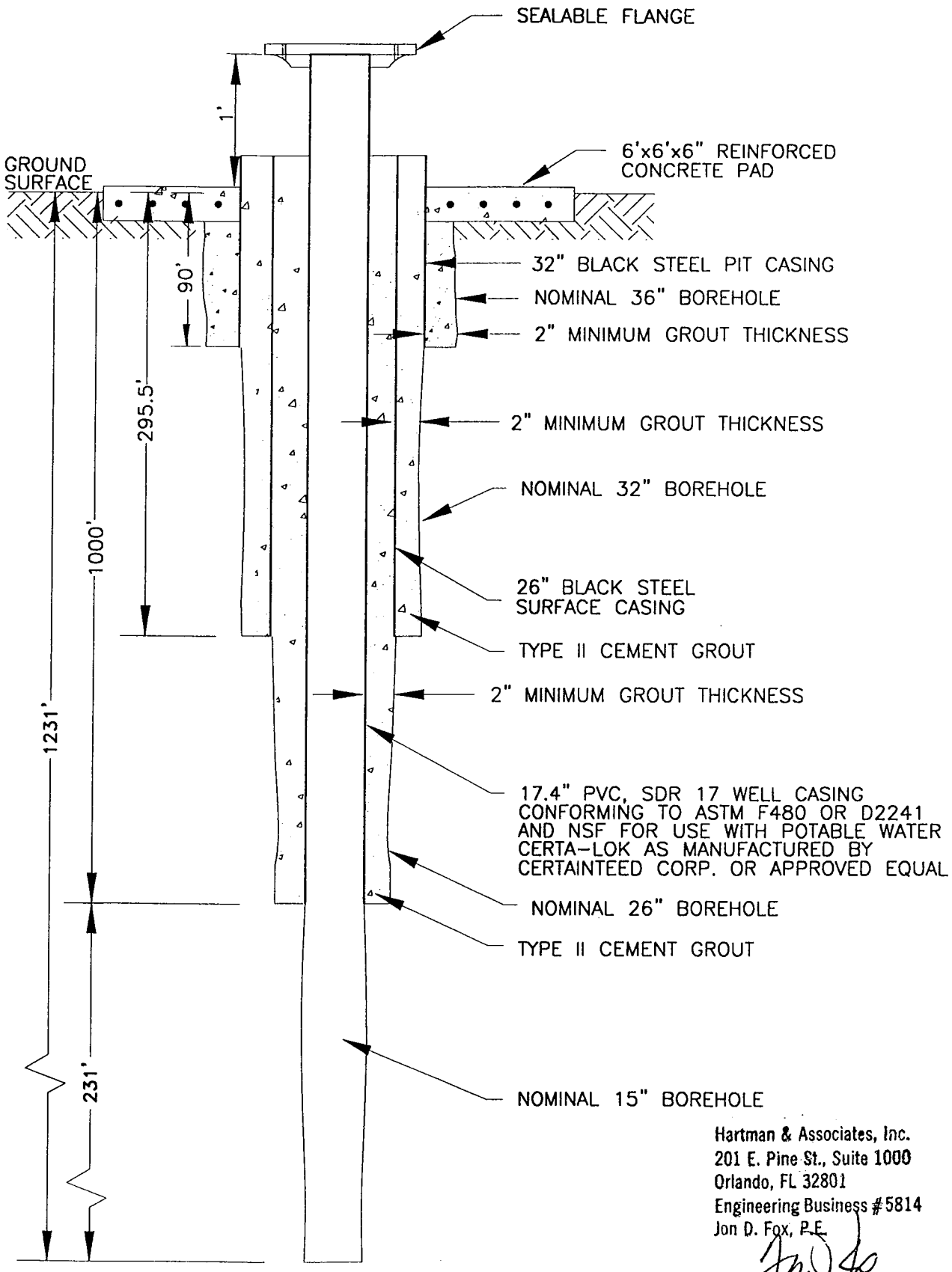
NOT TO SCALE

R:\...\DWG\2000\00-202.21\20221V06

HARTMAN & ASSOCIATES, INC.
engineers, hydrogeologists, surveyors & management consultants
201 EAST PINE STREET - SUITE 1000 - ORLANDO, FL 32801
TELEPHONE (407) 839-3955 - FAX (407) 839-3790

RECORD DRAWING
WELL CONSTRUCTION DETAIL
PRODUCTION WELL 1F
EXPLORATORY FLORIDAN WELL PROGRAM

FIGURE 1



Hartman & Associates, Inc.
201 E. Pine St., Suite 1000
Orlando, FL 32801
Engineering Business #5814
Jon D. Fox, P.E.
Florida Registration #49487
7-31-03

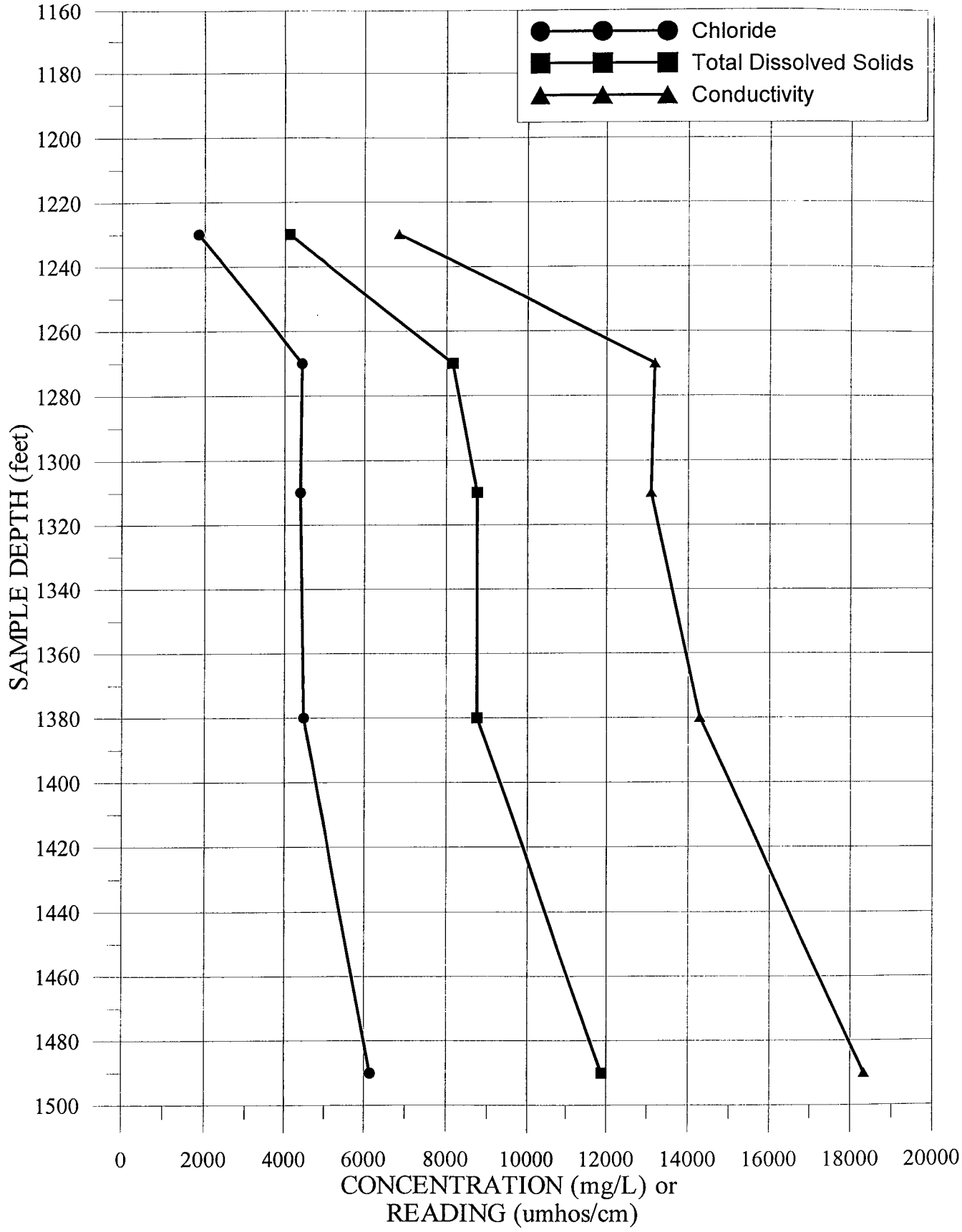
NOT TO SCALE

\DWG\2000\00-202.21\20221V05

HARTMAN & ASSOCIATES, INC.
engineers, hydrogeologists, surveyors & management consultants
201 EAST PINE STREET - SUITE 1000 - ORLANDO, FL 32801
TELEPHONE (407) 839-3955 - FAX (407) 839-3790

RECORD DRAWING
WELL CONSTRUCTION DETAIL
PRODUCTION WELL 2F
EXPLORATORY FLORIDAN WELL PROGRAM

FIGURE 2

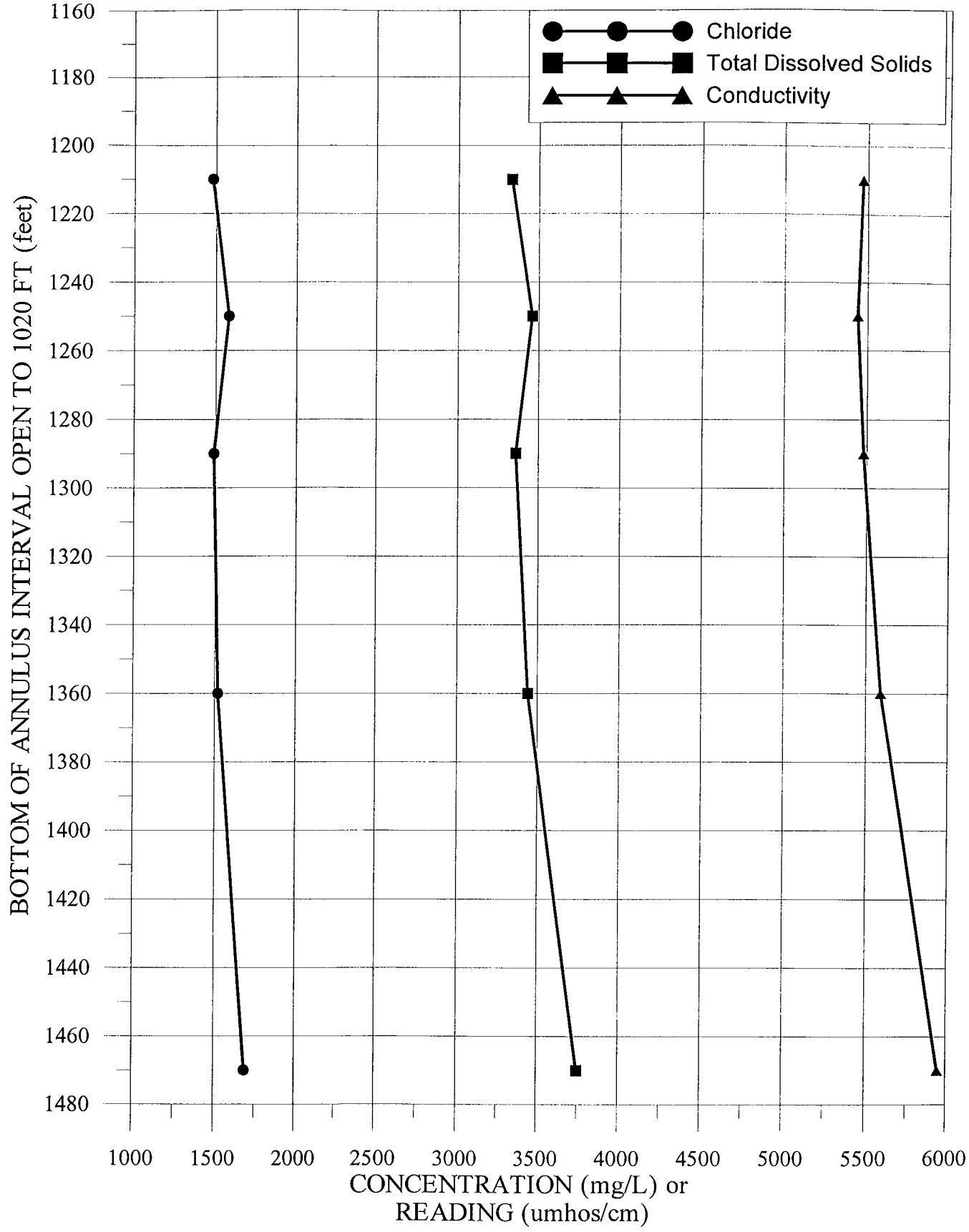


.021/C&P

HARTMAN & ASSOCIATES, INC.
engineers, hydrogeologists, surveyors & management consultants
201 EAST PINE STREET - SUITE 1000 - ORLANDO, FL 32801
TELEPHONE (407) 839-3955 - FAX (407) 839-3790

WATER QUALITY FOR WELL 1F
STRADDLE PACKER TEST RESULTS
CITY OF NORTH MIAMI BEACH

FIGURE 3



2.021/C&P

HARTMAN & ASSOCIATES, INC.
engineers, hydrogeologists, surveyors & management consultants
201 EAST PINE STREET - SUITE 1000 - ORLANDO, FL 32801
TELEPHONE (407) 839-3955 - FAX (407) 839-3790

WATER QUALITY FOR WELL 1F
ANNULUS TEST RESULTS
CITY OF NORTH MIAMI BEACH

FIGURE 4

ATTACHMENT A
LITHOLOGIC LOGS

LITHOLOGIC LOG

Job Name: City of North Miami Beach
Job Number: 00.0202.A21
Well No: Production Well # 1F
Completion Date: 9/9/2002
Drill Method: Rotary/Reverse Air
Contractor: Jaffer Associates, Ltd
Engineer: Hartman & Associates, Inc.

FROM (ft)	TO (ft)	DESCRIPTION
0	10	SAND, Fine-Very Fine, Silt, Slightly, Fossil Fragments, Greenish-Tan.
10	20	SAND, Fine-Very Fine, Silt, Slightly, Fossil Fragments, Greenish-Tan.
20	30	SAND, Fine-Very Fine, Silt, Slightly, Fossil Fragments, Greenish-Tan.
30	40	SAND, Fine-Very Fine, Silt, Slightly, Fossil Fragments, Greenish-Tan.
40	45	SAND, Fine-Very Fine, Silt, Slightly, Fossil Fragments, Greenish-Tan.
45	40	SAND, Fine-Very Fine, Silt, Slightly, Fossil Fragments, Greenish-Tan.
40	50	SAND, Medium to Fine, Silt, Slightly, Quartz, Rock Fragments, Greenish-Tan.
50	60	SAND, Fine-Very Fine, Rock Fragments, Fossil Fragments, Tan.
60	65	SAND, Fine-Very Fine, Rock Fragments, Fossil Fragments, Tan.
100	105	SAND, Fine-Very Fine, Traced Limestone, Tan-Yellow.
105	110	Rock Fragments, Gray.
110	115	Limestone, Recrystallised, Minor, Sand, Slightly, Fossil Fragments, Light Gray.
115	120	Limestone, Recrystallised, Minor, Sand, Slightly, Fossil, Fragments Light Gray .
120	125	SAND, Fine-Very Fine, Recrystallised limestone fragments, Minor, Fossil Fragments, Gray.
125	130	No Sample.
130	135	SAND, Fine-Very Fine, Recrystallised limestone, Minor, Fossil Fragments, Gray.
135	140	No Sample.
140	145	SAND, Fine-Very Fine, Clay, Trace, Shell, Fossil Fragments ,Gray .
145	150	SAND, Medium - Fine Grained, Shell Fragments, Slightly, Gray.
150	155	SAND, Medium - Fine Grained, Shell Fragments, Slightly, Gray.
155	160	SAND, Medium - Fine Grained, Silt, Traced, Shell Fragments, Gray.
160	165	SAND, Medium - Fine, Recrystallised Limestone Fragments, Shell, Fossil Fragments, Gray.
165	170	SAND, Medium-Fine Grained, Rock Fragments, Shell Fragments ,Gray.
170	175	SAND, Medium-Fine Grained, Rock Fragments,Slightly Silty, Shell Fragments ,Gray.
175	180	SAND, Medium-Fine Grained, Rock Fragments,Slightly Silty, Shell Fragments ,Gray.
180	185	SAND, Medium-Fine Grained, Rock Fragments,Slightly Silty, Shell Fragments ,Gray.
185	190	SAND, Medium-Fine, Slightly Silty, Fossil fragments, Trace, Gray.
190	195	SAND, Medium-Fine, Slightly silty, Shell, Gray.
195	200	SAND, Medium to Fine Grained,Trace Silt. Shell Fragments, Gray
200	205	SAND, Medium to Fine Grained, Silt, Trace, Shell, Shell Fragments, Gray .
205	210	SAND, Medium to Fine Grained, Recrystallised limestone, Traced, Gray.
210	215	SAND, Medium to Fine Grained, Recrystallised limestone, Traced, Echinoderm, Fossil Fragments, Gray.
215	220	SAND, Medium to Fine Grained, Fossil Fragments ,Gray.
220	225	SAND, Medium to Fine Grained, Fossil Fragments ,Gray.
225	230	SAND, Medium to Fine Grained, Fossil Fragments ,Gray.
230	235	SAND, Medium to Fine Grained, Slightly Silty, Fossil Fragments, Gray-Greenish.
235	240	SAND, Medium to Fine Grained, Slightly Silty, Fossil Fragments, Gray-Greenish.
240	245	No Sample.
245	250	SAND, Medium to Fine Grained, Silt, Trace, Shell, Gray-Greenish.
250	255	SAND, Medium to Fine Grained, Silt, Trace, Shell, Gray-Greenish.
255	260	SAND, Medium to Very Fine Grained, Fossil Fragments, Gray-Greenish.
260	265	SAND, Medium to Very Fine Grained, Fossil Fragments, Gray-Greenish.
265	270	SAND, Medium to Fine Grained, Silt, Trace, Fossil Fragments, Gray-Greenish.
270	275	No Sample.
275	280	SAND, Medium to Fine Grained, Slightly Silty, Shell, Shell Fragments, Gray-Greenish.
280	285	SAND, Medium to Fine Grained, Slightly Silty, Shell, Shell Fragments, Gray-Greenish.
285	290	SAND, Medium to Fine Grained, Slightly Silty, Shell, Shell Fragments, Gray-Greenish.
290	300	SAND, Medium to Fine Grained, Slightly Silty, Shell, Shell Fragments, Gray-Greenish.

LITHOLOGIC LOG

Job Name: City of North Miami Beach
Job Number: 00.0202.A21
Well No: Production Well # 1F
Completion Date: 9/9/2002
Drill Method: Rotary/Reverse Air
Contractor: Jaffer Associates, Ltd
Engineer: Hartman & Associates, Inc.

FROM (ft)	TO (ft)	DESCRIPTION
305	310	SAND, Medium to Fine Grained, Slightly Silty, Shell, Shell Fragments, Gray-Greenish.
310	315	LIMESTONE, Recrystallized, Minor to Slightly Sand, Fossil Fragments, Cream, Brown-Light Gray.
315	320	SAND, Coarse to Fine Grained, Limestone recrystallized, Slightly, Fossil Fragments, Gray.
320	325	SAND, Coarse to Fine Grained, Slightly Silty, Fossil Fragments, Gray.
325	330	SAND, Coarse to Fine Grained, Limestone recrystallized, Slightly, Fossil Fragments, Cream-Gray.
330	335	SAND, Coarse to Fine Grained, Limestone recrystallized, Slightly, Fossil Fragments, Cream-Gray.
335	340	Cement Grout, Trace Sand, Dark-Gray.
340	345	Cement Grout, Trace Sand, Dark-Gray.
345	350	Cement Grout, Trace Sand, Dark-Gray.
350	355	SILT, Clay, Slightly, Trace Sand, Fossil Fragments, Gray-Green
355	360	SILT, Clay, Minor, Fossil Fragments, Greenish-Dark Gray.
360	365	No Sample.
365	370	No Sample.
370	375	SILT, Clay, Minor, Fossil Fragments, Dark Gray-Green.
375	380	SILT, Clay, Slightly, Fossil Fragments, Gray-Green..
380	385	CLAY, Limestone, Slightly, Gray-Green
385	390	CLAY, Rock Fragments, Dark Gray-Green
390	395	CLAY, Fossil Fragments, Gray-Green.
395	400	CLAY, Gray-Green.
400	405	CLAY, Fossil Fragments, Gray-Green.
405	410	CLAY, Fossil Fragments, Gray-Green.
410	415	CLAY, Fossil Fragments, Gray-Green.
415	420	CLAY, Green.
420	425	CLAY, Limestone Fragments, Green-Dark Gray.
425	430	CLAY, Green.
430	435	CLAY, Limestone Fragments, Green.
435	440	CLAY, Limestone Fragments, Green.
440	445	CLAY, Limestone Fragments, Green.
445	450	No Sample.
450	455	CLAY, Green.
455	460	CLAY, Green.
460	465	CLAY, Limestone Fragments, Green.
465	470	CLAY, Limestone Fragments, Trace, Green.
470	475	CLAY, Gray-Green.
475	480	CLAY, Limestone, Trace, Gray-Green.
480	485	CLAY, Gray-Green.
485	490	CLAY, Gray-Green.
490	495	CLAY, Limestone. Trace, Gray-Green.
495	500	CLAY, Green.
500	505	CLAY, Rock Fragments Green.
505	510	CLAY, Gray-Green.
510	515	CLAY, Gray-Green.
515	520	CLAY, Gray-Green.
520	525	CLAY, Gray-Green.
525	530	CLAY, Gray-Green.
530	535	CLAY, Gray-Green.
535	540	CLAY, Limestone Fragments, Gray to Gray-Greenish.
540	545	CLAY, Limestone Fragments, Gray-Green.

LITHOLOGIC LOG

Job Name: City of North Miami Beach
Job Number: 00.0202.A21
Well No: Production Well # 1F
Completion Date: 9/9/2002
Drill Method: Rotary/Reverse Air
Contractor: Jaffer Associates, Ltd
Engineer: Hartman & Associates, Inc.

FROM (ft)	TO (ft)	DESCRIPTION
545	550	CLAY, Gray to Gray-Greenish.
550	555	CLAY, Limestone Fragments, Gray to Gray-Greenish.
555	560	CLAY, Limestone Fragments, Gray to Gray-Greenish.
560	565	CLAY, Gray-Greenish.
565	570	CLAY, Gray to Gray-Greenish.
570	575	CLAY, Limestone Fragments, Gray to Gray-Greenish.
575	580	CLAY, Gray to Gray-Greenish.
580	585	CLAY, Gray to Gray-Greenish.
585	590	CLAY, Gray to Gray-Greenish.
590	595	CLAY, Limestone Fragments, Gray to Gray-Greenish.
595	600	CLAY, Limestone Fragments, Trace, Gray to Gray-Greenish.
600	605	CLAY, Gray-Greenish.
605	610	CLAY, Limestone Fragments, Gray to Gray-Greenish.
610	615	CLAY, Gray-Greenish.
615	620	CLAY, Limestone Fragments, Slightly, Gray to Gray-Greenish.
620	625	CLAY,Limestone, Trace, Gray to Gray-Greenish.
625	630	CLAY, Limestone, Trace, Gray to Gray-Greenish.
630	635	CLAY, Limestone, Trace, Gray to Gray-Greenish.
635	640	CLAY, Limestone, Slightly, Gray to Gray-Greenish.
640	645	CLAY, Limestone, Slightly, Gray to Gray-Greenish.
645	650	CLAY, Limestone, Minor, Gray to Gray-Greenish.
650	655	CLAY, Limestone, Minor, Gray to Gray-Greenish.
655	660	CLAY, Limestone, Minor, Gray to Gray-Greenish.
660	665	LIMESTONE, Clay Minor, Gray to Gray-Greenish.
665	670	CLAY, Limestone, Minor, Gray to Gray-Greenish.
670	675	CLAY, Limestone, Slightly, Greenish.
675	680	No Sample.
680	685	CLAY, Limestone, Slightly, Gray to Gray-Greenish.
685	690	CLAY, Limestone, Slightly, Gray to Gray-Greenish.
690	695	No Sample.
695	700	No Sample.
700	705	CLAY, Limestone, Slightly, Gray to Gray-Greenish.
705	710	CLAY, Limestone, Slightly, Gray to Gray-Greenish.
710	715	CLAY, Limestone, Slightly, Gray to Gray-Greenish.
715	720	CLAY, Limestone, Slightly, Gray to Gray-Greenish.
720	725	CLAY, Limestone, Slightly,Greenish.
725	730	CLAY, Limestone, Slightly, Gray to Gray-Greenish.
730	735	No Sample.
735	740	CLAY, Limestone, Slightly, Greenish.
740	745	CLAY, Limestone, Slightly, Greenish.
745	750	CLAY, Limestone, Slightly, Gray to Gray-Greenish.
750	755	CLAY, Limestone, Slightly, Gray to Gray-Greenish.
755	760	CLAY, Limestone, Minor, Gray to Gray-Greenish.
760	765	CLAY, Limestone, Slightly, Greenish.
765	770	CLAY, Limestone, Slightly, Greenish.
770	775	CLAY, Limestone, Trace, Greenish.
775	780	CLAY, Limestone, Slightly, Greenish.
780	785	CLAY, Limestone, Trace, Greenish.

LITHOLOGIC LOG

Job Name: City of North Miami Beach
Job Number: 00.0202.A21
Well No: Production Well # 1F
Completion Date: 9/9/2002
Drill Method: Rotary/Reverse Air
Contractor: Jaffer Associates, Ltd
Engineer: Hartman & Associates, Inc.

FROM (ft)	TO (ft)	DESCRIPTION
785	790	CLAY, Limestone, Trace, Greenish.
790	795	CLAY, Limestone, Trace, Greenish.
795	800	CLAY, Greenish.
800	805	CLAY, Limestone, Slightly, Greenish.
805	810	CLAY, Limestone, Slightly, Gray to Gray-Greenish.
810	815	CLAY, Limestone, Slightly, Gray to Gray-Greenish.
815	820	CLAY, Limestone, Trace, Greenish.
820	825	CLAY, Limestone, Trace, Gray to Gray-Greenish.
825	830	CLAY, Limestone, Slightly, Greenish.
830	835	CLAY, Greenish.
835	840	CLAY, Greenish.
840	845	CLAY, Limestone, Trace, Greenish.
845	850	CLAY, Limestone, Trace, Gray to Gray-Greenish.
850	855	CLAY, Limestone, Trace, Greenish.
855	860	CLAY, Gray to Gray-Greenish.
860	865	CLAY, Gray to Gray-Greenish.
865	870	CLAY, Gray to Gray-Greenish.
870	875	CLAY, Gray to Gray-Greenish.
875	880	CLAY, Gray to Gray-Greenish.
880	885	CLAY, Gray to Gray-Greenish.
885	890	CLAY, Gray to Gray-Greenish.
890	895	CLAY, Gray to Gray-Greenish.
895	900	CLAY, Gray to Gray-Greenish.
900	905	CLAY, Gray to Gray-Greenish.
905	910	CLAY, Gray to Gray-Greenish.
910	915	CLAY, Gray to Gray-Greenish.
915	920	CLAY, Gray to Gray-Greenish.
920	925	CLAY, Gray to Gray-Greenish.
925	930	CLAY, Greenish.
930	935	CLAY, Gray to Gray-Greenish.
935	940	CLAY, Limestone, Slightly, Gray to Gray-Greenish.
940	945	CLAY, Limestone, Slightly, Gray to Gray-Greenish.
945	950	CLAY, Gray to Gray-Greenish.
950	955	CLAY, Limestone, Slightly,Fossil Fragments, Gray to Gray-Greenish.
955	960	CLAY, Gray to Gray-Greenish.
960	965	CLAY, Limestone, Trace, Gray to Gray-Greenish.
965	970	CLAY, Limestone, Trace, Gray to Gray-Greenish.
970	975	CLAY, Limestone, Trace, Gray to Gray-Greenish.
975	980	No Sample.
980	985	No Sample.
985	990	CLAY, Limestone, Slightly, Gray to Gray-Greenish.
990	995	CLAY, Limestone, Minor, Gray to Gray-Greenish.
995	1000	CLAY, Limestone, Minor, Gray to Gray-Greenish.
1000	1005	CLAY, Limestone, Slightly, Gray to Gray-Greenish.
1005	1010	CLAY, Limestone, Slightly, Gray to Gray-Greenish.
1010	1015	CLAY, Limestone, Minor, Gray to Gray-Greenish.
1015	1020	CLAY, Limestone, Minor, Gray to Gray-Greenish.
1020	1025	LIMESTONE, Clay Minor, Gray.

LITHOLOGIC LOG

Job Name: City of North Miami Beach
Job Number: 00.0202.A21
Well No: Production Well # 1F
Completion Date: 9/9/2002
Drill Method: Rotary/Reverse Air
Contractor: Jaffer Associates, Ltd
Engineer: Hartman & Associates, Inc.

FROM (ft)	TO (ft)	DESCRIPTION
1025	1030	LIMESTONE, Medium to Fine Grained, Gray.
1030	1035	LIMESTONE, Fine to Very Fine Grained, Gray.
1035	1040	LIMESTONE, Medium to Very Fine Grained, Gray.
1040	1045	LIMESTONE, Medium to Very Fine Grained, Gray.
1045	1055	LIMESTONE, Medium to Very Fine Grained, Gray.
1055	1065	LIMESTONE, Medium to Very Fine Grained, Gray.
1065	1075	LIMESTONE, Fine Grained, Trace Dolomite Fragments, Gray.
1075	1085	LIMESTONE, Medium to Fine Grained, Crystallized, Dolomite Fragments, Echinoids, Gray
1085	1095	LIMESTONE, Medium to Fine Grained, Gray.
1095	1105	LIMESTONE, Medium to Fine Grained, Dolomite Fragments, Gray.
1105	1115	LIMESTONE, Fine Grained, Gray.
1115	1125	LIMESTONE, Medium to Fine Grained, Dolomite Fragments, Gray.
1125	1135	LIMESTONE, Medium to Fine Grained, Dolomite Fragments, Gray.
1135	1145	LIMESTONE, Medium to Very Fine Grained, Gray-Tan.
1145	1155	LIMESTONE, Medium to Very Fine Grained, Gray-Tan.
1155	1165	LIMESTONE, Fine Grained, Gray-Tan.
1165	1175	LIMESTONE, Medium to Fine Grained, Gray.
1175	1185	LIMESTONE, Medium to Fine Grained, Dolomite Fragments, Gray.
1185	1195	LIMESTONE, Medium to Fine Grained, Dolomite Fragments, Gray.
1195	1205	LIMESTONE, Medium to Fine Grained, Tan.
1205	1215	LIMESTONE, Medium to Fine Grained, Tan.
1215	1225	LIMESTONE, Fine Grained, Tan.
1225	1235	LIMESTONE, Medium to Fine Grained, Dolomite Fragments, Gray.
1235	1245	LIMESTONE, Medium to Fine Grained, Foraminifera, Porous, Tan.
1245	1255	LIMESTONE, Medium to Fine Grained, Porous, Echinoids, Tan.
1255	1265	LIMESTONE, Medium to Fine Grained, Porous, Trace Dolomite Fragments, Tan.
1265	1275	LIMESTONE, Medium to Fine Grained, Porous, Trace Dolomite Fragments, Echinoids, Tan.
1275	1285	LIMESTONE, Medium to Fine Grained, Porous, Trace Dolomite Fragments, Echinoids, Tan.
1285	1295	LIMESTONE, Medium to Fine Grained, Porous, Trace Dolomite Fragments, Tan.
1295	1305	LIMESTONE, Medium to Fine Grained, Porous, Tan.
1305	1315	LIMESTONE, Medium to Fine Grained, Porous, Tan.
1315	1325	LIMESTONE, Fine Grained, Tan.
1325	1335	No Sample.
1335	1345	No Sample.
1345	1355	LIMESTONE, Medium to Fine Grained, Porous, Tan.
1355	1365	LIMESTONE, Medium to Fine Grained, Highly Porous, Tan.
1365	1375	LIMESTONE, Medium to Fine Grained, Porous, Echinoids, Tan.
1375	1385	LIMESTONE, Medium to Fine Grained, Porous, Trace Dolomite Fragments, Tan.
1385	1395	LIMESTONE, Medium to Fine Grained, Porous, Trace Dolomite Fragments,Echinoids, Tan.
1395	1405	LIMESTONE, Medium to Fine Grained, Highly Porous, Tan.
1405	1415	LIMESTONE, Medium to Fine Grained, Tan.
1415	1425	LIMESTONE, Medium to Fine Grained, Highly Porous, Gray.
1425	1435	LIMESTONE, Medium to Fine Grained, Highly Porous,Echinoids, Tan.
1435	1445	LIMESTONE, Fine Grained, Gray-Tan.
1445	1455	LIMESTONE, Fine Grained, Gray-Tan.
1455	1465	LIMESTONE, Medium to Fine Grained, Echinoids Fragments, Tan.
1465	1475	No Sample.
1475	1485	LIMESTONE, Medium to Fine Grained, Highly Porous, Gray.

LITHOLOGIC LOG

Job Name: City of North Miami Beach
Job Number: 00.0202.A21
Well No: Production Well # 1F
Completion Date: 9/9/2002
Drill Method: Rotary/Reverse Air
Contractor: Jaffer Associates, Ltd
Engineer: Hartman & Associates, Inc.

FROM (ft)	TO (ft)	DESCRIPTION
1485	1495	LIMESTONE, Medium to Fine Grained, Highly Porous, Gray-Tan.
1495	1505	LIMESTONE, Fine Grained, Tan.
1505	1515	LIMESTONE, Fine Grained, Gray.
1515	1525	LIMESTONE, Fine Grained, Gray.
1525	1535	LIMESTONE, Fine Grained, Dolomite Fragments, Tan.
1535	1545	LIMESTONE, Fine Grained, Dolomite Fragments ,Gray.
1545	1555	LIMESTONE, Medium to Fine Grained, Porous, Tan.
1555	1565	LIMESTONE, Medium to Fine Grained, Gray-Tan.
1565	1575	LIMESTONE, Medium to Fine Grained, Highly Porous, Echinoids Fragments, Tan.
1575	1585	LIMESTONE, Medium to Fine Grained, Dolomite, Slightly, Orange.
1585	1595	LIMESTONE, Medium to Fine Grained, Dolomite Fragments, Gray.
1595	1605	LIMESTONE, Medium to Fine Grained, High Porosity, Orange.
1605	1615	LIMESTONE, Medium to Fine Grained, Dolomite Fragments, Light Brown-Orange.
1615	1625	LIMESTONE, Medium to Fine Grained, Dolomite Fragments, Orange.
1625	1635	LIMESTONE, Medium to Fine Grained, Dolomite Fragments, Orange.
1635	1645	LIMESTONE, Medium to Fine Grained, High Porosity, Orange .
1645	1655	LIMESTONE, Medium to Fine Grained, Orange.
1655	1665	No Sample.
1665	1675	No Sample.
1675	1685	LIMESTONE, Medium to Fine Grained, High Porosity, Forminifera, Echonoid, Orange.
1685	1695	LIMESTONE, Medium to Fine Grained, High Porosity, Forminifera, Echonoid, Orange.
1695	1700	LIMESTONE, Medium to Fine Grained, Dolmite, Trace,High Porosity, Echonoid, LightGray-Orange.
1700	1710	LIMESTONE, Medium to Fine Grained, Orange.
1710	1720	LIMESTONE, Medium to Fine Grained, High Porosity, Brown.
1720	1730	LIMESTONE, Medium to Fine Grained, High Porosity, Gray.
1730	1740	LIMESTONE, Medium to Fine Grained, High Porosity, Tan-Orange.
1740	1750	LIMESTONE, Medium to Fine Grained, High Porosity, Dolomite Fragments, Gray.
1750	1760	LIMESTONE, Medium to Fine Grained, High Porosity, Dolomite Fragments, Orange.
1760	1770	LIMESTONE, Medium to Fine Grained, Orange-Gray.
1770	1780	LIMESTONE, Medium to Fine Grained, Orange.
1780	1790	LIMESTONE, Medium to Fine Grained, Orange.
1790	1800	LIMESTONE, Medium to Fine Grained, Dolomite Fragments, Tan-Orange.
1800	1810	LIMESTONE, Medium to Fine Grained, Dolomite Fragments, Tan-Orange.
1810	1820	LIMESTONE, Medium to Fine Grained, Gray.
1820	1830	LIMESTONE, Medium to Fine Grained, Gray to Tan.
1830	1840	LIMESTONE, Medium to Fine Grained, Ligth yellow - Gray.
1840	1850	LIMESTONE, Medium to Fine Grained, Highly porous, Dolomite Fragments, Orange.
1850	1860	LIMESTONE, Medium to Fine Grained, Highly porous, Dolomite Fragments,Brown-Orange.
1860	1870	LIMESTONE, Medium to Fine Grained, Porous, Light Orange-Gray.
1870	1880	LIMESTONE, Medium to Fine Grained, Foraminifera, Dolomite Fragments, Light Orange-Gray.
1880	1890	LIMESTONE, Medium to Fine Grained, Dolomite Fragments, Gray.
1890	1900	LIMESTONE, Medium to Fine Grained, Foraminifera, Dolomite Fragments, Gray.

LITHOLOGIC LOG

Job Name: City of North Miami Beach
Job Number: 00.0202.A21
Well No: Production Well # 2F
Completion Date: 1/10/2003
Drill Method: Rotary/Reverse Air
Contractor: Jaffer Associates, Ltd
Engineer: Hartman & Associates, Inc.

FROM (ft)	TO (ft)	DESCRIPTION
0	10	No Sample.
10	15	SAND, Fine-Very Fine, Silt, Slightly, Greenish-Tan.
15	20	SAND, Fine-Very Fine, Silt, Slightly, Greenish-Tan.
20	25	SAND, Medium to FineGrained, Silt, Slightly, Limestone, Slightly,Greenish-Tan.
25	30	SAND, Medium to FineGrained, Silt, Slightly, Limestone, Slightly,Greenish-Tan.
30	35	SAND, Coarse to Fine Grained, Limestone, Minor, Greenish-Tan.
35	40	LIMESTONE, Medium Grained, Gray, Sand, Minor, Tan.
40	45	SAND, Medium to FineGrained, Silt, Slightly, Limestone, Slightly,Greenish-Tan.
45	50	LIMESTONE, Medium to Fine Grained, Sand, Slightly, Greenish, Gray-Tan.
50	55	SAND, Fine-Very Fine, Traced Limestone,Tan-Yellow.
55	60	LIMESTONE, Medium to Fine Grained, Sand, Slightly, Greenish, Tan-Yellow.
60	65	LIMESTONE, Medium to Fine Grained, Sand, Slightly, Greenish, Tan-Yellow.
65	70	LIMESTONE, Medium to Fine Grained, Sand, Slightly, Greenish, Tan-Yellow.
70	75	LIMESTONE, Medium to Fine Grained, Sand, Slightly, Greenish, Tan-Yellow.
75	80	LIMESTONE, Medium to Fine Grained, Sand, Slightly,Trace Silt, Greenish, Gray-Yellow.
80	85	LIMESTONE, Medium to Fine Grained, Sand, Slightly,Trace Silt, Greenish, Gray-Yellow.
85	90	LIMESTONE, Medium to Fine Grained, Sand, Slightly,Trace Silt, Greenish, Gray-Yellow.
90	95	LIMESTONE, Medium to Fine Grained,Trace Sand, Greenish, Tan-Yellow.
95	100	LIMESTONE, Medium to Fine Grained,Dolomite Fragments, Gray.
100	110	LIMESTONE, Medium to Fine Grained,Dolomite Fragments, Gray.
110	115	LIMESTONE, Medium to Fine Grained,Dolomite Fragments, Gray.
115	120	LIMESTONE, Medium to Fine Grained,Dolomite Fragments, Gray.
120	125	LIMESTONE, Medium to Fine Grained,Dolomite Fragments, Gray.
125	130	LIMESTONE, Medium to Fine Grained,Dolomite Fragments, Gray.
130	135	LIMESTONE, Medium to Very Fine Grained, Dolomite Slightly, Gray.
135	140	LIMESTONE, Medium to Very Fine Grained, Fossil Fragments, Tan-Yellow.
140	145	LIMESTONE, Medium to Very Fine Grained, Dolomite Fragments, Tan-Yellow.
145	150	LIMESTONE, Medium to Very Fine Grained, Fossil Fragments, Tan-Yellow.
150	155	LIMESTONE, Medium to Very Fine Grained, Fossil Fragments, Tan-Yellow.
155	160	LIMESTONE, Medium to Very Fine Grained, Fossil Fragments, Tan-Yellow.
160	165	LIMESTONE, Medium to Very Fine Grained, Fossil Fragments, Tan-Yellow.
165	170	LIMESTONE, Medium to Very Fine Grained, Fossil Fragments, Tan-Yellow.
170	175	LIMESTONE, Medium to Very Fine Grained, Fossil Fragments, Tan-Yellow.
175	180	LIMESTONE, Medium to Very Fine Grained, Fossil Fragments, Gray-Yellow.
180	185	LIMESTONE, Medium to Very Fine Grained, Fossil Fragments, Gray-Yellow.
185	190	LIMESTONE, Medium to Very Fine Grained, Fossil Fragments, Gray-Yellow.
190	195	LIMESTONE, Medium to Very Fine Grained, Fossil Fragments, Gray-Yellow.
195	200	LIMESTONE, Medium to Very Fine Grained, Fossil Fragments, Gray-Yellow.
200	205	LIMESTONE, Medium to Fine Grained, Gray.
205	210	LIMESTONE, Medium to Very Fine Grained, Dolomite Fragments, Gray.
210	215	LIMESTONE, Medium to Very Fine Grained, Dolomite Fragments, Shell Molds, Gray.
215	220	LIMESTONE, Medium to Very Fine Grained, Dolomite Fragments, Shell Molds, Gray.
220	225	LIMESTONE, Medium to Very Fine Grained, Dolomite Fragments, Shell Molds, Gray.
225	230	LIMESTONE, Medium to Very Fine Grained, Dolomite Fragments, Gray.
230	235	LIMESTONE, Medium to Very Fine Grained, Dolomite Fragments, Gray.
235	240	LIMESTONE, Medium to Very Fine Grained, Dolomite Fragments, Gray.
240	245	LIMESTONE, Fine Grained, Dolomite Fragments, Fossil Fragments, Gray-Yellow

LITHOLOGIC LOG

Job Name: City of North Miami Beach
Job Number: 00.0202.A21
Well No: Production Well # 2F
Completion Date: 1/10/2003
Drill Method: Rotary/Reverse Air
Contractor: Jaffer Associates, Ltd
Engineer: Hartman & Associates, Inc.

FROM (ft)	TO (ft)	DESCRIPTION
245	250	LIMESTONE, Fine Grained, Dolomite Fragments, Fossil Fragments, Gray-Yellow
250	255	LIMESTONE, Fine Grained, Dolomite Fragments, Fossil Fragments, Gray-Yellow
255	260	LIMESTONE, Fine Grained, Dolomite Fragments, Fossil Fragments, Gray-Yellow
260	265	LIMESTONE, Fine Grained, Dolomite Fragments, Fossil Fragments, Gray-Yellow
265	270	No Sample.
270	275	LIMESTONE, Medium to Very Fine Grained, Dolomite Fragments, Fossil Fragments, Gray-Yellow.
275	280	LIMESTONE, Medium to Very Fine Grained, Dolomite Fragments, Fossil Fragments, Gray-Yellow.
280	285	LIMESTONE, Medium to Very Fine Grained, Dolomite Fragments, Fossil Fragments, Gray-Yellow.
285	290	LIMESTONE, Medium to Very Fine Grained, Dolomite Fragments, Fossil Fragments, Gray-Yellow.
290	295	LIMESTONE, Medium to Very Fine Grained, Dolomite Fragments, Fossil Fragments, Gray-Yellow.
295	300	LIMESTONE, Medium to Very Fine Grained, Dolomite Fragments, Fossil Fragments, Gray-Yellow.
300	305	DOLOMITE, Limestone, Slightly, Gray-Yellow, Fossil Fragments.
305	310	DOLOMITE, Limestone, Slightly, Gray-Yellow, Fossil Fragments.
310	315	DOLOMITE, Limestone, Slightly, Gray-Yellow, Fossil Fragments.
315	320	DOLOMITE, Limestone, Slightly, Gray-Yellow, Fossil Fragments.
320	325	DOLOMITE, Limestone, Slightly, Gray-Yellow, Fossil Fragments.
325	330	DOLOMITE, DarkGray, Limestone, Slightly, Gray-Yellow, Clay, Slightly, Fossil Fragments.
330	335	DOLOMITE, DarkGray, Limestone, Slightly, Gray-Yellow, Clay, Slightly, Fossil Fragments.
335	340	DOLOMITE, DarkGray, Limestone, Slightly, Gray-Yellow, Clay, Slightly, Fossil Fragments.
340	345	DOLOMITE, DarkGray, Limestone, Slightly, Gray-Yellow, Clay, Slightly, Fossil Fragments.
345	350	DOLOMITE, DarkGray, Limestone, Slightly, Gray-Yellow, Clay, Slightly, Fossil Fragments.
350	355	DOLOMITE, DarkGray, Limestone, Slightly, Gray-Yellow, Clay, Slightly, Fossil Fragments.
355	360	DOLOMITE, DarkGray, Limestone, Slightly, Gray-Yellow, Clay, Slightly, Fossil Fragments.
360	365	DOLOMITE, DarkGray, Limestone, Slightly, Gray-Yellow, Clay, Slightly, Fossil Fragments.
365	370	LIMESTONE, Medium to Fine Grained, Dolomite Fragments, Fossil Fragments, Gray-Yellow.
370	375	CLAY, Limestone Fragments, Fossil Fragments, Greenish.
375	380	CLAY, Limestone Fragments, Fossil Fragments, Green.
380	385	CLAY, Trace Limestone Fragments,Fossil Fragments, Green.
385	390	CLAY, Trace Limestone Fragments,Fossil Fragments, Green.
390	395	CLAY, Limestone, Slightly, Fossil Fragments, Green.
395	400	CLAY, Limestone, Slightly, Fossil Fragments, DarkGray-Greenish.
400	405	CLAY, Limestone Fragments, Green.
405	410	CLAY, Limestone Fragments, Green.
410	415	CLAY, Limestone Fragments, Green.
415	420	CLAY, Limestone, Slightly, Green.
420	425	CLAY, Limestone, Slightly, Green.
425	430	CLAY, Limestone, Slightly, Green-Yellow.
430	435	CLAY, Limestone, Slightly, Green-Yellow.
435	440	CLAY, Limestone, Slightly, Green-Yellow.
440	445	CLAY, Limestone, Slightly, Green-Yellow.
445	450	CLAY, Limestone, Slightly, Green-Yellow.
450	455	CLAY, Limestone, Slightly, Green-Yellow.
455	460	No Sample.
460	465	CLAY, Limestone, Slightly, Green-Yellow.
465	470	CLAY, Limestone, Slightly, Green-Yellow.
470	475	CLAY, Limestone, Slightly, Green-Yellow.
475	480	CLAY, Limestone, Minor, Green-Yellow.

LITHOLOGIC LOG

Job Name: City of North Miami Beach
Job Number: 00.0202.A21
Well No: Production Well # 2F
Completion Date: 1/10/2003
Drill Method: Rotary/Reverse Air
Contractor: Jaffer Associates, Ltd
Engineer: Hartman & Associates, Inc.

FROM (ft)	TO (ft)	DESCRIPTION
480	485	CLAY, Limestone, Slightly, Green-Yellow.
485	490	CLAY, Limestone, Slightly, Green-Yellow.
490	495	No Sample.
495	500	CLAY, Limestone, Slightly, Phosphate, Green-Yellow.
500	505	CLAY, Limestone, Slightly, Phosphate, Gray-Yellow.
505	510	CLAY, Limestone, Slightly, Phosphate, Grout, Gray-Yellow.
510	515	CLAY, Limestone, Slightly, Phosphate, Grout, Gray-Yellow.
515	520	CLAY, Limestone, Minor, Phosphate, Grout, Gray-Yellow.
520	525	Grout
525	530	CLAY, Limestone, Slightly, Trace Phosphate, Green-Yellow.
530	535	CLAY, Limestone, Slightly, Phosphate, Green-Yellow.
535	540	CLAY, Limestone, Slightly, Molds, Phosphate, Green-Yellow.
540	545	CLAY, Limestone, Slightly, Molds, Phosphate, Green-Yellow.
545	550	CLAY, Limestone, Slightly, Molds, Green-Yellow.
550	555	CLAY, Limestone, Slightly, Greenish-Yellow.
555	560	CLAY, Limestone, Slightly, Greenish-Yellow.
560	565	CLAY, Limestone, Minor, Greenish-Yellow.
565	570	CLAY, Limestone, Minor, Greenish-Yellow.
570	575	CLAY, Limestone, Minor, Greenish-Yellow.
575	580	CLAY, Limestone, Minor, Greenish-Yellow.
580	585	CLAY, Limestone, Minor, Greenish-Yellow.
585	590	CLAY, Limestone, Minor, Greenish-Yellow.
590	595	CLAY, Limestone, Minor, Greenish-Yellow.
595	600	CLAY, Limestone, Slightly, Greenish-Yellow.
600	605	CLAY, Limestone, Slightly, Greenish-Yellow.
605	610	CLAY, Limestone, Trace, Greenish-Yellow.
610	615	No Sample.
615	620	CLAY, Limestone, Trace, Greenish-Yellow.
620	625	CLAY, Greenish-Yellow.
625	630	No Sample.
630	635	CLAY, Greenish-Yellow.
635	640	CLAY, Greenish-Yellow.
640	645	CLAY, Greenish-Yellow.
645	650	CLAY, Limestone, Minor, Molds, Fossil Fragments,Greenish-Yellow.
650	655	CLAY, Limestone, Minor, Molds, Fossil Fragments,Greenish-Yellow.
655	660	CLAY, Limestone, Minor, Molds, Fossil Fragments,Greenish-Yellow.
660	665	CLAY, Limestone, Minor, Molds, Fossil Fragments,Greenish-Yellow.
665	670	CLAY, Limestone, Minor, Molds, Fossil Fragments,Greenish-Yellow.
670	675	LIMESTONE, Clay, Slightly, Fossil Fragments, Greenish-Yellow.
675	680	LIMESTONE, Medium to Fine Grained, Clay, Slightly, Fossil Fragments, Gray-Greenish.
680	685	LIMESTONE, Medium to Fine Grained, Silt, Slightly,Trace Clay, Gray-Greenish.
685	690	LIMESTONE, Medium to Fine Grained, Silt, Slightly,Trace Clay, Gray-Greenish.
690	695	LIMESTONE, Medium to Fine Grained, Silt, Slightly,Trace Clay, Gray-Greenish.
695	700	LIMESTONE, Medium to Fine Grained, Silt, Slightly,Trace Clay, Gray-Greenish.
700	705	LIMESTONE, Medium to Fine Grained, Silt, Slightly,Trace Clay, Gray-Greenish.
705	710	LIMESTONE, Medium to Fine Grained, Clay, Minor to Slightly, Greenish-Yellow.
710	715	LIMESTONE, Clay, Minor, Fossil Fragments, Greenish-Yellow.

LITHOLOGIC LOG

Job Name: City of North Miami Beach
Job Number: 00.0202.A21
Well No: Production Well # 2F
Completion Date: 1/10/2003
Drill Method: Rotary/Reverse Air
Contractor: Jaffer Associates, Ltd
Engineer: Hartman & Associates, Inc.

FROM (ft)	TO (ft)	DESCRIPTION
715	720	No Sample.
720	725	CLAY, Limestone, Trace, Greenish-Yellow.
725	730	CLAY, Limestone, Trace,Fossil Fragments, Greenish-Yellow.
730	735	CLAY, Limestone, Trace,Fossil Fragments, Greenish-Yellow.
735	740	CLAY, Limestone, Trace, Greenish-Yellow.
740	745	CLAY, Limestone, Trace, Fossil Fragments, Greenish-Yellow.
745	750	CLAY, Limestone, Trace, Fossil Fragments, Greenish-Yellow.
750	755	CLAY, Limestone, Trace, Greenish-Yellow.
755	760	CLAY, Trace Limestone, Greenish-Yellow.
760	765	CLAY, Trace Limestone, Greenish-Yellow.
765	770	CLAY, Limestone, Slightly, Greenish-Yellow.
770	775	CLAY, Limestone, Trace, Greenish-Yellow.
775	780	CLAY, Limestone, Slightly, Greenish-Yellow.
780	785	CLAY, Limestone, Slightly, Trace Dolomite, Gray-Yellow.
785	790	LIMESTONE, Silt, Slightly, Clay, Trace, Dolomite Fragments, Fossil Fragments, Gray-Yellow.
790	795	LIMESTONE, Clay, Minor, Dolomite Fragments, Slightly, Fossil Fragments, Gray-Yellow.
795	800	LIMESTONE, Clay, Minor, Dolomite Fragments, Slightly, Fossil Fragments, Gray-Yellow.
800	805	CLAY, Trace Limestone, Gray-Yellow.
805	810	CLAY, Trace Limestone, Gray-Yellow.
810	815	CLAY, Trace Limestone, Gray-Yellow.
815	820	CLAY, Trace Limestone, Gray-Yellow.
820	825	CLAY, Trace Limestone, Gray-Yellow.
825	830	CLAY, Trace Limestone, Gray-Yellow.
830	835	CLAY, Trace Limestone, Gray-Yellow.
835	840	CLAY, Trace Limestone, Greenish-Yellow.
840	845	CLAY, Trace Limestone, Greenish-Yellow.
845	850	CLAY, Trace Limestone, Greenish-Yellow.
850	855	CLAY, Trace Limestone, Greenish-Yellow.
855	860	CLAY, Trace Limestone, Greenish-Yellow.
860	865	CLAY, Trace Limestone, Greenish-Yellow.
865	870	CLAY, Trace Limestone, Greenish-Yellow.
870	875	CLAY, Trace Limestone, Greenish-Yellow.
875	880	CLAY, Trace Limestone, Greenish-Yellow.
880	885	CLAY, Trace Limestone, Greenish-Yellow.
885	890	CLAY, Trace Limestone, Greenish-Yellow.
890	895	CLAY, Trace Limestone, Greenish-Yellow.
895	900	CLAY, Trace Limestone, Greenish-Yellow.
900	905	CLAY, Greenish.
905	910	CLAY, Greenish-Yellow.
910	915	CLAY, Greenish-Yellow.
915	920	CLAY, Greenish-Yellow.
920	925	CLAY, Green.
925	930	CLAY, Green.
930	935	CLAY, Green.
935	940	CLAY, Green.
940	945	CLAY, Green.
945	950	CLAY, Trace Limestone, Green.

LITHOLOGIC LOG

Job Name: City of North Miami Beach
Job Number: 00.0202.A21
Well No: Production Well # 2F
Completion Date: 1/10/2003
Drill Method: Rotary/Reverse Air
Contractor: Jaffer Associates, Ltd
Engineer: Hartman & Associates, Inc.

FROM (ft)	TO (ft)	DESCRIPTION
955	960	LIMESTONE, Medium to Fine, Slightly Silt, Trace Clay, Dark-Gray.
960	965	LIMESTONE, Medium to Fine, Slightly Silt, Dark-Gray.
965	970	LIMESTONE, Medium to Fine, Slightly Silt, Fossil Fragments, Dark-Gray.
970	975	LIMESTONE, Medium to Fine, Trace Silt, Fossil Fragments, Dark-Gray.
975	980	LIMESTONE, Medium to Fine, Trace Silt, Fossil Fragments, Dark-Gray.
980	985	LIMESTONE, Medium to Fine, Trace Silt, Fossil Fragments, Dark-Gray.
985	990	LIMESTONE, Medium to Fine, Fossil Fragments, Gray to Dark-Gray.
990	995	LIMESTONE, Medium to Fine, Fossil Fragments, Gray to Dark-Gray.
995	1000	LIMESTONE, Medium to Fine, Fossil Fragments, Gray to Dark-Gray.
1000	1005	LIMESTONE, Medium to Fine, Fossil Fragments, Gray to Dark-Gray.
1005	1010	LIMESTONE, Medium to Fine Grained, Trace Clay, Orange,Greenish-Gray.
1010	1015	LIMESTONE, Coarse to Fine Grained, Crystallized, Slightly, Aboundant Shell, Fossil Fragments, Trace
		Clay, Molds, Gray to DarkGray.
1015	1020	LIMESTONE, Coarse to Fine Grained, Crystallized, Slightly, Aboundant Shell, Fossil Fragments, Molds,
		Orange-DarkGray.
1020	1025	LIMESTONE, Medium to Very Fine Grained, Crystalized Trace, Orange.
1025	1030	LIMESTONE, Medium to Very Fine Grained, Crystalized Slightly, Orange.
1030	1035	LIMESTONE, Medium to Very Fine Grained, Crystalized Slightly, DarkGray-Orange.
1035	1040	LIMESTONE, Medium to Fine Grained, Crystallized, Slightly, Gray.
1040	1045	LIMESTONE, Fine to Very Fine Grained, Crystallized, Trace, DarkGray-Orange.
1045	1050	LIMESTONE, Fine to Very Fine Grained, Crystallized, Trace, Light-Orange to Gray.
1050	1055	LIMESTONE, Fine to Very Fine Grained, Crystallized, Trace, Gray to Light-Orange.
1055	1060	LIMESTONE, Fine to Very Fine Grained, Crystallized, Trace, Gray to Light-Orange.
1060	1065	LIMESTONE, Fine to Very Fine Grained, Crystallized, Trace, Gray to Light-Orange.
1065	1070	LIMESTONE, Fine to Very Fine Grained, Crystallized, Trace, Gray to Light-Orange.
1070	1075	LIMESTONE, Fine to Very Fine Grained, Crystallized, Trace, Gray to Light-Orange.
1075	1080	LIMESTONE, Medium to Very Fine Grained,Gray to Light-Orange.
1080	1085	LIMESTONE, Medium to Very Fine Grained,Gray to Light-Orange.
1085	1090	LIMESTONE, Medium to Very Fine Grained, Light-Orange.
1090	1095	LIMESTONE, Medium to Very Fine Grained, Light-Orange.
1095	1100	LIMESTONE, Medium toVery Fine Grained, Gastropod, Molds, Light-Orange to Gray.
1100	1105	LIMESTONE, Medium to Very Fine Grained, Crystallized, Slightly, Light-Orange.
1105	1110	LIMESTONE, Medium to Very Fine Grained, Crystallized, Fragments, Pyrite, Light Orange-Gray.
1110	1115	LIMESTONE, Medium to Very Fine Grained, Crystallized, Fragments, Light Orange-Gray.
1115	1120	LIMESTONE, Medium to Very Fine Grained, Crystallized, Fragments, Light Orange-Gray.
1120	1125	LIMESTONE, Medium to Very Fine Grained, Crystallized, Fragments, Gray to Light-Orange.
1125	1130	LIMESTONE, Medium to Very Fine Grained, Crystallized, Fragments, Gray to light-Orange.
1130	1135	LIMESTONE, Medium to Very Fine Grained, Crystallized, Fragments, Orange.
1135	1140	LIMESTONE, Medium to Very Fine Grained, Crystallized, Fragments, Orange.
1140	1145	LIMESTONE, Medium to Very Fine Grained, Crystallized, Fragments, Orange.
1145	1150	LIMESTONE, Medium to Very Fine Grained, Crystallized, Fragments, Orange.
1150	1155	LIMESTONE, Medium to Very Fine Grained, Crystallized, Fragments, Orange.
1155	1160	LIMESTONE, Medium to Very Fine Grained, Slightly Crystallized, Porous, Light-Orange.
1160	1165	LIMESTONE, Medium to Very Fine Grained, Slightly Crystallized, Porous, Light-Orange.
1165	1170	LIMESTONE, Medium to Very Fine Grained, Slightly Crystallized, Porous, Light-Orange.
1170	1175	LIMESTONE, Medium to Very Fine Grained, Slightly Crystallized, Porous, Light-Orange.

LITHOLOGIC LOG

Job Name: City of North Miami Beach
Job Number: 00.0202.A21
Well No: Production Well # 2F
Completion Date: 1/10/2003
Drill Method: Rotary/Reverse Air
Contractor: Jaffer Associates, Ltd
Engineer: Hartman & Associates, Inc.

FROM (ft)	TO (ft)	DESCRIPTION
1175	1180	LIMESTONE, Medium to Very Fine Grained, Slightly Crystallized, Porous,Molds, Cast, Foreminifera,
		Light-Orange.
1180	1185	LIMESTONE, Medium to Very Fine Grained, Slightly Crystallized, Porous,Molds, Cast, Foreminifera,
		Light-Orange.
1185	1190	LIMESTONE, Medium to Very Fine Grained, Slightly Crystallized, Porous,Molds, Cast, Light-Orange
1190	1195	LIMESTONE, Medium to Very Fine Grained, Slightly Crystallized, Porous,Molds, Cast, Light-Orange
1195	1200	LIMESTONE, Medium to Very Fine Grained, Slightly Crystallized, Porous,Molds, Cast, Light-Orange
1200	1205	LIMESTONE, Medium to Very Fine Grained, Slightly Crystallized, Porous,Molds, Cast, Light-Orange
1205	1210	LIMESTONE, Medium to Very Fine Grained, Slightly Crystallized, Porous,Molds, Cast, Light-Orange
1210	1215	LIMESTONE, Medium to Very Fine Grained, Slightly Crystallized, Porous,Molds, Cast, Light-Orange
1215	1220	LIMESTONE, Medium to Very Fine Grained, Slightly Crystallized, Porous,Molds, Cast, Light-Orange
1220	1225	LIMESTONE, Medium to Very Fine Grained, Slightly Crystallized, Porous,Molds, Echinoids, Orange
1225	1230	LIMESTONE, Medium to Fine Grained, Crystallized, Porous, Cast, Molds, Orange.
1230	1235	LIMESTONE, Medium to Fine Grained, Crystallized, Porous, Cast, Molds, Orange.
1235	1240	LIMESTONE, Medium to Fine Grained, Crystallized, Porous, Cast, Molds, Orange.
1240	1245	LIMESTONE, Medium to Fine Grained, Crystallized, Porous, Cast, Molds, Orange.
1245	1250	LIMESTONE, Medium to Fine Grained, Crystallized, Porous, Cast, Molds, Orange.
1250	1255	LIMESTONE, Medium to Fine Grained, Crystallized, Porous, Cast, Molds, Orange.
1255	1260	LIMESTONE, Medium to Fine Grained, Crystallized, Porous, Cast, Molds, Orange.
1260	1265	LIMESTONE, Medium to Fine Grained, Crystallized, Porous, Cast, Molds, Orange.
1265	1270	LIMESTONE, Medium to Fine Grained, Crystallized, Porous, Cast, Molds, Orange.
1270	1275	No Sample
1275	1280	LIMESTONE, Medium to Fine Grained, Crystallized, Porous, Cast, Molds, Orange.
1280	1285	LIMESTONE, Medium to Fine Grained, Crystallized, Porous, Cast, Molds, Orange.
1285	1290	LIMESTONE, Medium to Fine Grained, Crystallized, Porous, Cast, Molds, Orange.
1290	1295	LIMESTONE, Medium to Fine Grained, Crystallized, Molds, Cast, Shell, Orange.
1295	1300	LIMESTONE, Medium to Fine Grained, Crystallized, Molds, Cast, Shell, Orange.
1300	1305	LIMESTONE, Medium to Fine Grained,Crystallized,Slightly,Molds,Cast,Fossil Fragments, Shell, Orange.
1305	1310	LIMESTONE, Medium to Fine Grained,Crystallized,Slightly,Porous,Cast, Orange.
1310	1315	LIMESTONE, Medium to Fine Grained, Trace Crystallized,Cast, Orange.
1315	1320	LIMESTONE, Medium to Fine Grained, Trace Crystallized,Cast, Orange.
1320	1325	LIMESTONE, Medium to Fine Grained, Trace Crystallized,Cast, Orange.
1325	1330	LIMESTONE, Medium to Fine Grained, Trace Crystallized,Cast, Orange.
1330	1335	LIMESTONE, Medium to Fine Grained, Trace Crystallized,Cast, Orange.
1335	1340	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Cast, Orange.
1340	1345	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Cast, Orange.
1345	1350	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Cast, Orange.
1350	1355	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Cast, Orange.
1355	1360	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Cast, Orange.
1360	1365	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Cast, Orange.
1365	1370	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Cast, Very light Gray-Orange.
1375	1380	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Cast, Very light Gray-Orange.
1380	1385	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Cast, Very light Gray-Orange.
1385	1390	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Porous,Cast, Very light Gray-Orange.
1390	1395	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Porous,Cast, Very light Gray-Orange.
1395	1400	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Porous,Cast, Very light Gray-Orange.
1400	1405	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Porous,Cast, Very light Gray-Orange.

LITHOLOGIC LOG

Job Name: City of North Miami Beach
Job Number: 00.0202.A21
Well No: Production Well # 2F
Completion Date: 1/10/2003
Drill Method: Rotary/Reverse Air
Contractor: Jaffer Associates, Ltd
Engineer: Hartman & Associates, Inc.

FROM (ft)	TO (ft)	DESCRIPTION
1405	1410	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Porous,Cast, Very light Gray-Orange.
1410	1415	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Porous,Cast, Very light Gray-Orange.
1415	1420	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Porous,Cast, Very light Gray-Orange.
1420	1425	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Cast, Very light Gray-Orange.
1425	1430	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Cast, Very light Gray-Orange.
1435	1440	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Cast, Very light Gray-Orange.
1440	1445	LIMESTONE, Medium to Fine Grained, Slightly Crystallized, Cast, Very light Gray-Orange.

ATTACHMENT B
WELL COMPLETION REPORTS

WELL COMPLETION REPORT

FORM 0124
Rev. 11/90

WELL PERMIT NO. DA-08-19-2002-2
SFWMD WATER USE PERMIT NO. —

City of North Miami Beach | 17050 Northeast 19th Avenue | North Miami Beach | FL | 33162
Owner | Address | City | State | Zip

Contractor's Signature | SWD 011033 License No. | 7-17-03 Completion Date | 1000 Casing Depth | 1231.5 Total Depth | 2-F Well #

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 29.4 Ft. above below top of casing
PUMPING WATER LEVEL -2 Ft. after 2 Hrs. at 1250 GPM
PUMP SIZE N/A H.P. CAPACITY N/A GPM
PUMP TYPE N/A INTAKE DEPTH N/A From top of ground

LOCATION
Located Near —
County MIAMI / DADE
¼ ¼ 2 Section 52S Township 41E Range
80° 12' 53.33"N - 25° 56' 53.85"N Latitude-Longitude

Cuttings sent to District? ( ) Yes ( ) No

LOCATE IN SECTION

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

Grout C.Y. Thickness & Depth	Casing & Screen Diameter & Depth inch	Feet	Depth (ft) From	To	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.
0	42	39	0	39	TAN SAND
15	32	90	0	90	TAN Fine shell (COQUINA)
14.5	26	295	0	295	TAN/Gray Fine Shell (COQUINA)
57	17.4	1000	0	1000	Gray Clay, Yellowish Gray L.S.
0	15	1231	1000	1231	OPEN HOLE (No CASING)
					Light gray/Yellowish Gray L.S.
24	15	1500	1231	1500	
Number of bags					
2528					

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

WELL COMPLETION REPORT

FORM 0124
Rev. 11/90

WELL PERMIT NO. DA-08-19-2002-1
SFWMD WATER USE PERMIT NO. —

City of North Miami Beach | 17050 Northeast 19th Ave | NMB | FL | 33162
Owner | Address | City | State | Zip

Contractor's Signature | SWD 011033 License No. | 7/17/2003 Completion Date | 1020 Casing Depth | 1235.3 Total Depth | 1-F Well #

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 29.4 Ft. above below top of casing
PUMPING WATER LEVEL -2 Ft. after 2 Hrs. at 1250 GPM
PUMP SIZE N/A H.P. CAPACITY N/A GPM
PUMP TYPE N/A INTAKE DEPTH N/A From top of ground

LOCATION
Located Near —
County MIAMI / DADE
¼ ¼ 2 Section 52S Township 41E Range
80° 12" 59.36"N - 25° 56' 58.21"W Latitude-Longitude

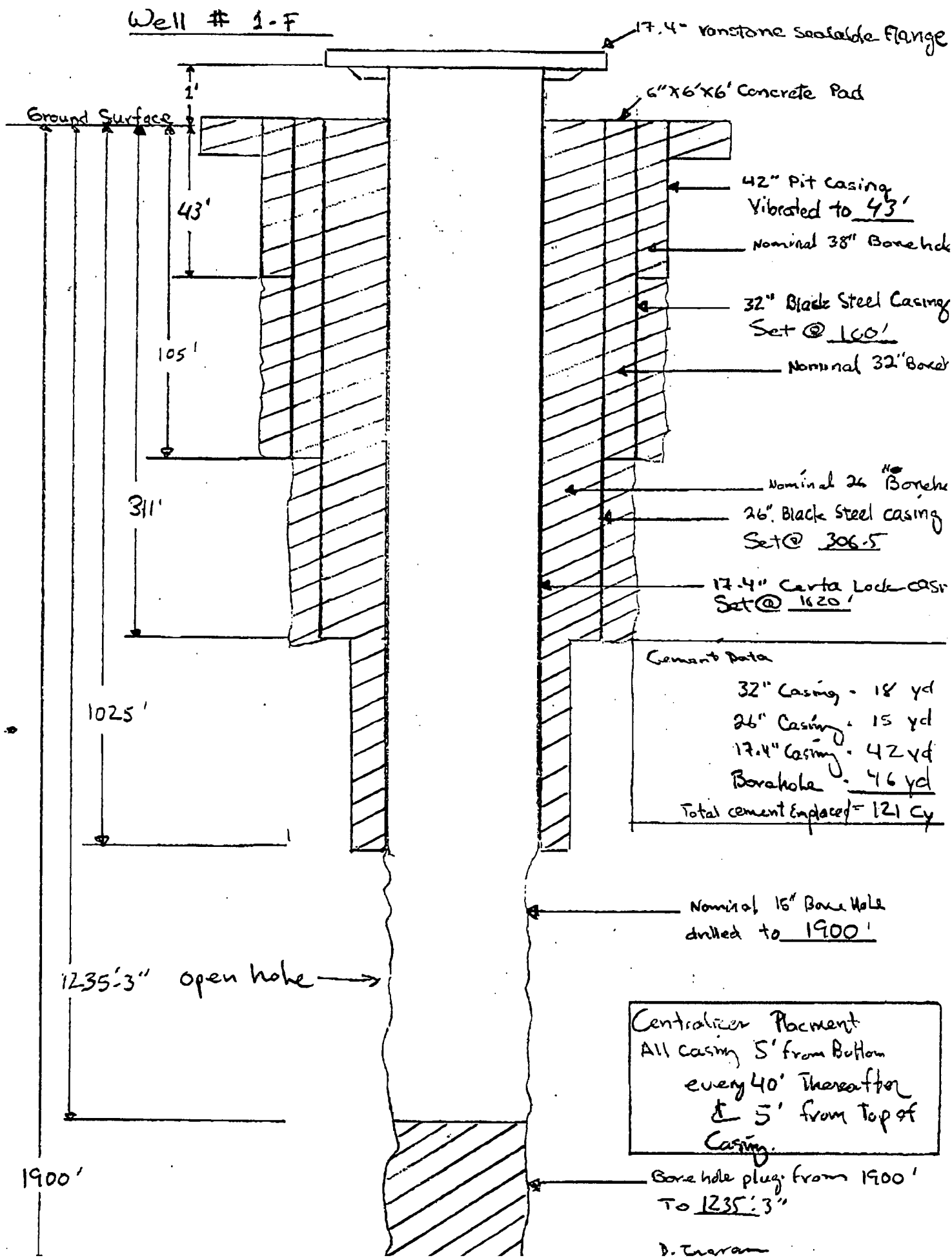
Cuttings sent to District? ( ) Yes ( ) No

LOCATE IN SECTION

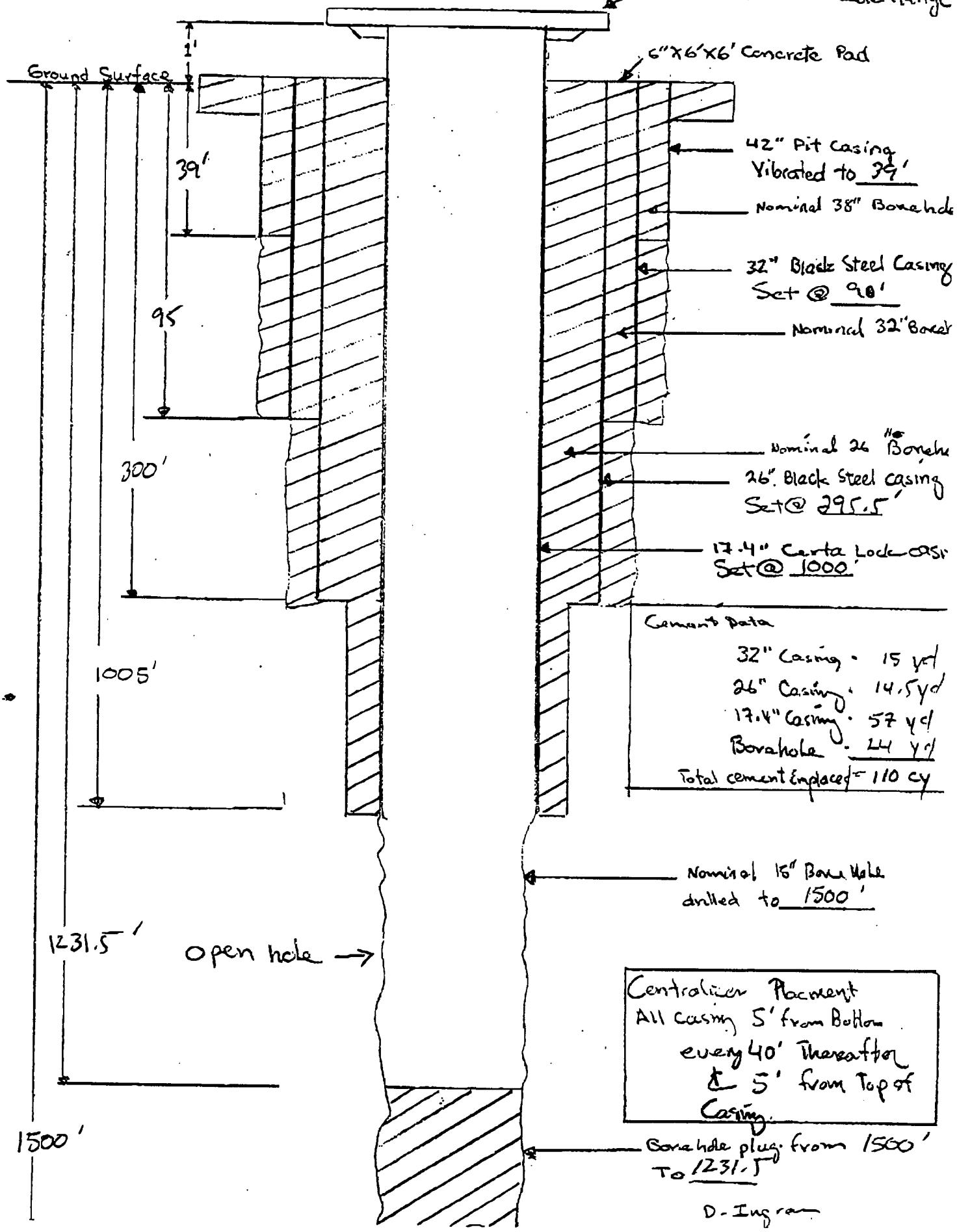
Note: PWS Wells attach a site map if well location is different from site location on permit application.

Grout Thickness & Depth	Casing & Screen Diameter & Depth inch	Feet	Depth (ft) From	To	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.
0	42	43	0	43	TAN SAND
18	32	100	0	100	TAN Fineshell (COQUINA)
15	26	306	0	306	TAN/Gray Fineshell (COQUINA)
42	17.4	1020	0	1020	Gray Clay, Yellowish Gray L.S.
0	15	1235	1020	1235	OPEN HOLE (No CASING)
					Light Gray/Yellowish Gray L.S.
46	15	1900	1235	1900	"Back Plugged Hole
					Light Gray Yellowish Gray
					LIMESTONE
Number of bags					
2769					

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


Well # 1-F
17.4" Vanstone Seaside Flange
6"X6'X6' Concrete Pad
1'
Ground Surface
43'
105'
311'
1025'
1235'-3" open hole
1900'
42" Pit Casing Vibrated to 43'
Nominal 38" Borehole
32" Black Steel Casing Set @ 160'
Nominal 32" Borehole
Nominal 26" Borehole
26" Black Steel casing Set @ 306.5
17.4" Certa Lock Casing Set @ 1620'
Cement Data
32" Casing - 18 yd
26" Casing - 15 yd
17.4" Casing - 42 yd
Borehole - 46 yd
Total cement Emplaced = 121 Cy
Nominal 15" Bore Hole drilled to 1900'
Centralizer Placement
All casing 5' from Bottom
every 40' Thereafter
& 5' from Top of Casing.
Bore hole plug from 1900' To 1235'-3"
D. Ingram

Well # 2-F


17.4" Vanstone Seatable Flange
6"X6'X6' Concrete Pad
1'
Ground Surface
39'
95'
300'
1005'
1231.5'
1500'
42" Pit Casing
Vibrated to 39'
Nominal 38" Borehole
32" Black Steel Casing
Set @ 98'
Nominal 32" Borehole
Nominal 26" Borehole
26" Black Steel casing
Set @ 295.5'
17.4" Certa Lock Casing
Set @ 1000'
Cement Data
32" Casing - 15 yd
26" Casing - 14.5 yd
17.4" Casing - 57 yd
Borehole - 24 yd
Total cement Emplaced = 110 cy
Nominal 15" Borehole
drilled to 1500'
open hole →
Centralizer Placement
All casing 5' from Bottom
every 40' Thereafter
& 5' from Top of
Casing.
Borehole plug from 1500'
To 1231.5'
D-Ingram

ATTACHMENT C
STEP DRAWDOWN TESTS

HARTMAN & ASSOCIATES, INC.

engineers, hydrogeologists, surveyors & management consultants

Step Test (Pump Data Sheet)

Date: 04/23/2003 Job Name: City of N.M.B.

Well No.: 1F Job No.: 00-0202.021 Page No.: 1

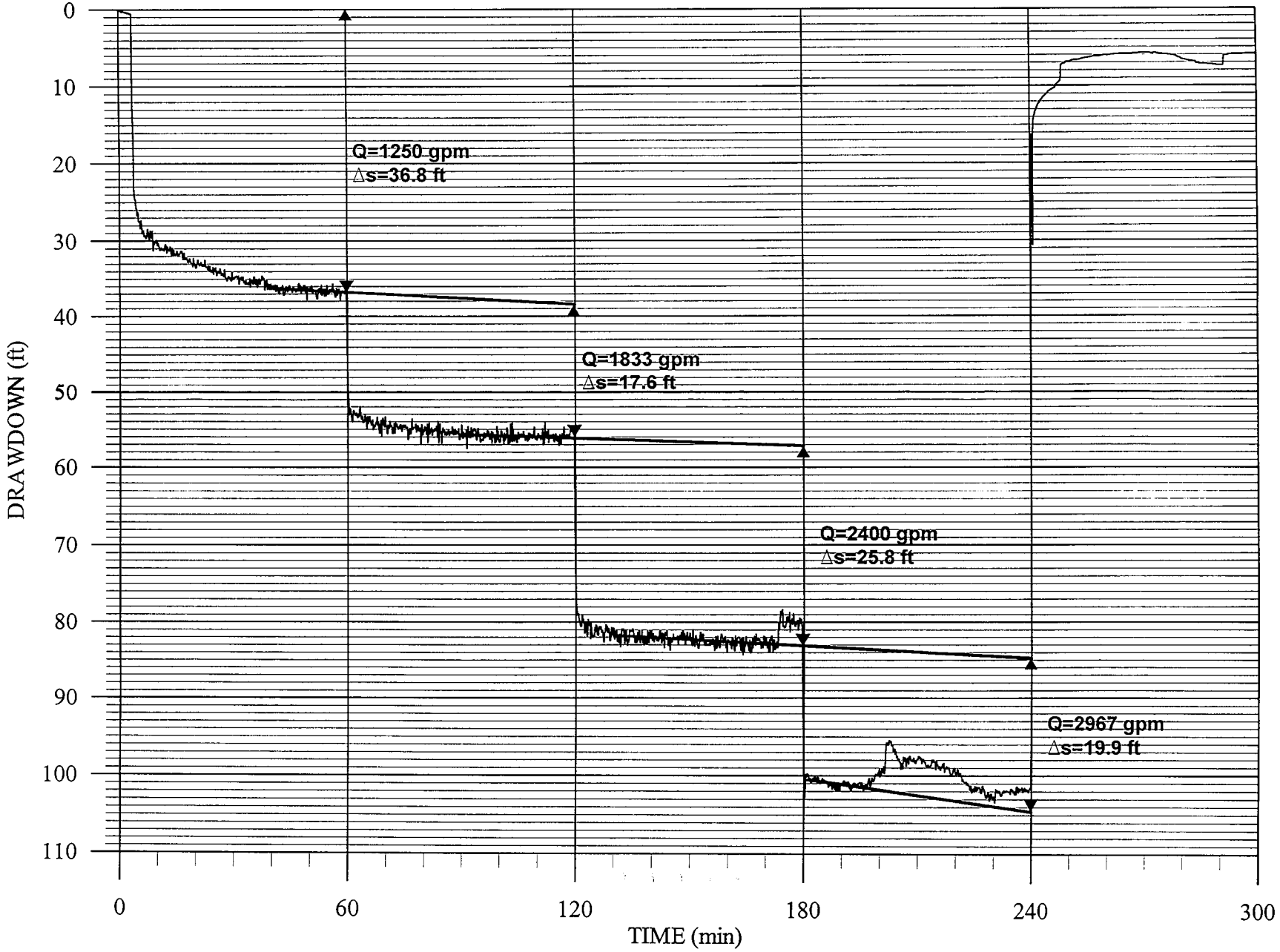
Time	Elapsed Time	GPM	W.L.	Flow Meter	Comment
08:45	0	-0-	+29.00'	27191	Start pump.
08:55	10	1250	-2.00'	27200	0.31 NTU
09:05	20		-2.20'	27213	0.15 NTU
09:15	30		-2.55'	27226	0.27 NTU
09:25	40		-2.97	27239	0.19 NTU
09:35	50		-2.85	27252	0.24 NTU
09:45	60	1250	-2.84	27266	End step 1. 0.08 NTU
09:55	70	1833	-20.87	27283	0.26 NTU
10:05	80		-21.10	27302	0.21 NTU
10:15	90		-21.40	27323	0.26 NTU
10:25	100		-21.72	27339	0.16 NTU
10:35	110		-21.61	27357	0.09 NTU
10:45	120	1833	-21.66	27376	End step 2. 0.18 NTU
10:55	130	2400	-	27399	0.27 NTU
11:05	140		-	27423	0.26 NTU
11:15	150		-	27448	0.18 NTU
11:25	160		-	27473	0.16 NTU
11:35	170		-	27496	0.12 NTU
11:45	180	2400	-	27520	End step 3. 0.13 NTU
11:55	190	2967	-	27549	0.32 NTU
12:05	200		-	27580	0.40 NTU
12:15	210		-	27610	0.13 NTU
12:25	220		-	27638	0.31 NTU
12:35	230		-	27668	0.35 NTU
12:45	240	2967	-	27698	End test. Begin recovery.
12:46	1	-0-	-	-	
12:47	2	-0-	-	-	
12:48	3	-0-	-	-	
12:49	4	-0-	-	-	
12:50	5	-0-	-	-	
12:51	6	-0-	-	-	
12:52	7	-0-	-	-	
12:53	8	-0-	-	-	

Date: 04/23/2003 Job Name: City of N.M.B.

Well No.: 1F Job No.: 00-0202.021 Page No.: 2

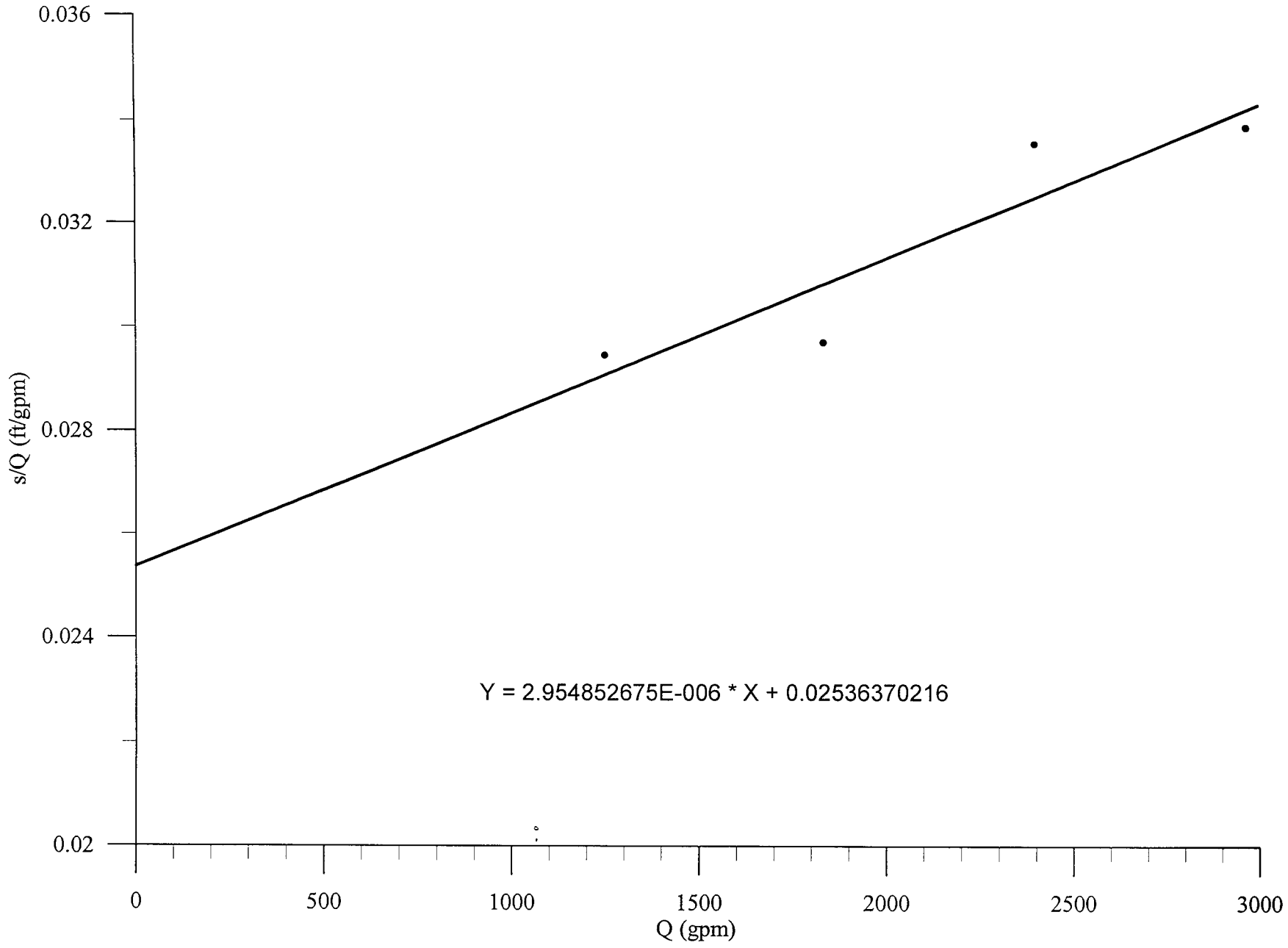
Time	Elapsed Time	GPM	W.L.	Flow Meter	Comment
12:54	9	-0-	-	-	
12:55	10	-0-	+23.30	-	
13:00	15	-0-	+23.30	-	
13:05	20	-0-	+23.55	-	
13:10	25	-0-	+24.00	-	
13:15	30	-0-	+24.50	-	
13:20	35	-0-	+24.88	-	
13:25	40	-0-	+25.18	-	
13:30	45	-0-	+25.46	-	
13:35	50	-0-	+25.69	-	
13:40	55	-0-	+25.88	-	
13:45	60	-0-	+26.07	-	
13:55	70	-0-	+26.22	-	
14:00	75	-0-	+26.39	-	
14:05	80	-0-	+26.54	-	
14:10	85	-0-	+26.63	-	
14:15	90	-0-	+26.75	-	
14:20	95	-0-	+26.84	-	
14:25	100	-0-	+26.94	-	
14:35	110	-0-	+27.07	-	
14:45	120	-0-	+27.22	-	
14:55	125	-0-	+27.37	-	
15:05	140	-0-	+27.57	-	
15:15	150	-0-	+28.22	-	
15:25	160	-0-	+27.77	-	
15:35	170	-0-	+27.85	-	
15:45	180	-0-	+28.02	-	End of manual readings today.
07:15		-0-	+29.54	-	04/24/03 - End of recovery.

CITY OF NORT. .MIAMI BEACH
STEP DRAWDOWN TEST
WELL 1F



n:\hydro\nmiami\flwellconstruction\testing\steptest\step1f.grf

CITY OF NORTH MIAMI BEACH
STEP DRAWDOWN TEST - WELL 1F
WELL EFFICIENCY



n:\hydro\nm flwellconstruction\testing\eff1f.grf

CITY OF NORTH MIAMI BEACH
STEP DRAWDOWN TEST
WELL 1F

STEP	Q (gpm)	INCREMENTAL OBSERVED DRAWDOWN (ft)	TOTAL OBSERVED DRAWDOWN (ft)	SPECIFIC CAPACITY (gpm/ft)	s/Q (ft/gpm)	AQUIFER AND LINEAR WELL LOSSES (ft)	WELL EFFICIENCY (%)	ESTIMATED AQUIFER DRAWDOWN (ft)
1	1250	36.800	36.80	34.0	0.0294400	31.70	86.15	36.32
2	1833	17.600	54.40	33.7	0.0296781	46.49	85.46	56.42
3	2400	26.000	80.40	29.9	0.0335000	60.87	75.71	77.89
4	2967	19.900	100.30	29.6	0.0338052	75.25	75.03	101.27
						B*Q		$BQ + CQ^2$

$s = BQ + CQ^2$

B = 0.025363702

C = 2.95480E-06

Static WL= 29.00 ft above land surface

HARTMAN & ASSOCIATES, INC.

engineers, hydrogeologists, surveyors & management consultants

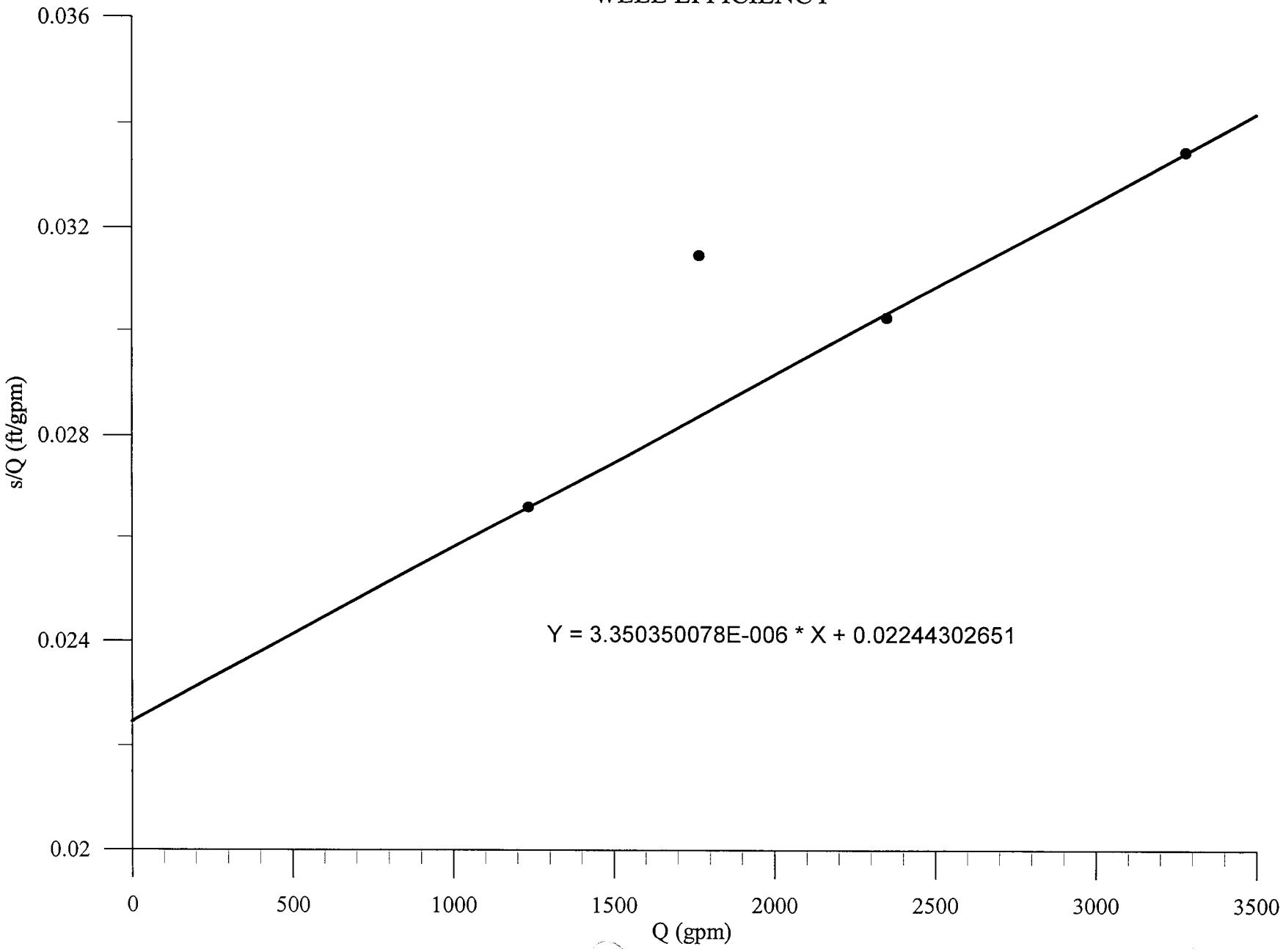
Step Test (Pump Data Sheet)

Date: 06/03-04/2003 Job Name: City of N.M.B.

Well No.: 2F Job No.: 00-0202.021 Page No.: 1

Time	Elapsed Time	GPM	W.L.	Flow Meter	Comment
10:00	0	-0-	+28.80'	034255	Start pump.
10:10	10	1233	+1.50'	034266	0.00 NTU
10:20	20		-3.60'	034279	0.00 NTU
10:30	30		-4.84'	034291	0.00 NTU
10:40	40		-4.80'	034304	0.00 NTU
10:50	50		-4.81'	034316	0.00 NTU
11:00	60	1233	-4.82'	034329	End step 1. 0.00 NTU
11:10	70	1767	-27.80'	034346	0.00 NTU
11:20	80		-28.20'	034364	0.00 NTU
11:30	90		-27.60'	034382	0.00 NTU
11:40	100		-28.10'	034399	0.00 NTU
11:50	110		-28.60'	034417	0.00 NTU
12:00	120	1767	-28.30'	034435	End step 2. 0.00 NTU
12:10	130	2350	-42.00'	034459	0.00 NTU
12:20	140		-43.40'	034484	0.00 NTU
12:30	150		-42.90'	034509	0.00 NTU
12:40	160		-43.70'	034531	0.00 NTU
12:50	170		-43.50'	034552	0.00 NTU
13:00	180	2350	-43.30'	034576	End step 3. 0.00 NTU
13:10	190	3283	-	034609	0.00 NTU
13:20	200		-	034643	0.00 NTU
13:30	210		-	034673	0.00 NTU
13:40	220		-	034705	0.00 NTU
13:50	230		-	034738	0.00 NTU
14:00	240	3283	-	034773	End pumping. Begin recovery.
14:01	1	-0-	-	-	
14:02	2	-0-	-	-	
14:03	3	-0-	+19.80	-	
14:04	4	-0-	+20.50	-	
14:05	5	-0-	+20.93	-	
14:06	6	-0-	+21.29	-	
14:07	7	-0-	+21.60	-	
14:08	8	-0-	+21.85	-	

CITY OF NORTH MIAMI BEACH
STEP DRAWDOWN TEST - WELL 2F
WELL EFFICIENCY



n:\hydro\nm[illegible]\wellconstruction\testing\eff2f.grf

CITY OF NORTH MIAMI BEACH
STEP DRAWDOWN TEST
WELL 2F

STEP	Q (gpm)	INCREMENTAL OBSERVED DRAWDOWN (ft)	TOTAL OBSERVED DRAWDOWN (ft)	SPECIFIC CAPACITY (gpm/ft)	s/Q (ft/gpm)	AQUIFER AND LINEAR WELL LOSSES (ft)	WELL EFFICIENCY (%)	ESTIMATED AQUIFER DRAWDOWN (ft)
1	1233	32.800	32.80	37.6	0.0266018	27.67	84.37	32.77
2	1767	22.800	55.60	31.8	0.0314658	39.66	71.33	50.12
3	2350	15.500	71.10	33.1	0.0302553	52.74	74.18	71.24
4	3283	38.800	109.90	29.9	0.0334755	73.68	67.04	109.79
						B*Q		$BQ + CQ^2$

$s = BQ + CQ^2$

B = 0.022443027

C = 3.35035E-06

Static WL= 28.80 ft above land surface

ATTACHMENT D
AQUIFER PERFORMANCE TEST

Hartman & Associates, Inc.
201 East Pine Street, Suite 1000
Orlando, Florida 32801
Ph: 407.839.3955 FAX: 407.839.2066

Analysis Summary

Project: Exploratory Floridan Well Program

Number: 00.0202.021 | Page 1

Client: City of North Miami Beach

Location: WTP Site | Pumping Test: 1F development dd | Pumping Well: Well 1F

Recorded by:

Date: 04/07/2003

Discharge Rate: 3300 [U.S. gal/min]

Aquifer Thickness: 1000 [ft]

	Name of Analysis	Analysis Method	Date	Evaluated by	Well	T ft²/d	K ft/d	S
1	Walton 2F	Walton	10/30/03	WHB	Well 2F	20708.5283	20.7085283	0.0001850
2	Cooper-Jacob Time-Drawdown 2F	Cooper-Jacob Time-Drawdown	10/29/03	WHB		20379.1863	20.3791863	
3	Hantush (1955) Leaky Aquitard - Forward	Hantush (1955) Leaky Aquitard - Forward Solution	10/30/03	WHB	Well 2F	20600.00	20.60	0.0002012
					Average Value	**20562.5715**	**20.562572**	**0.000193**

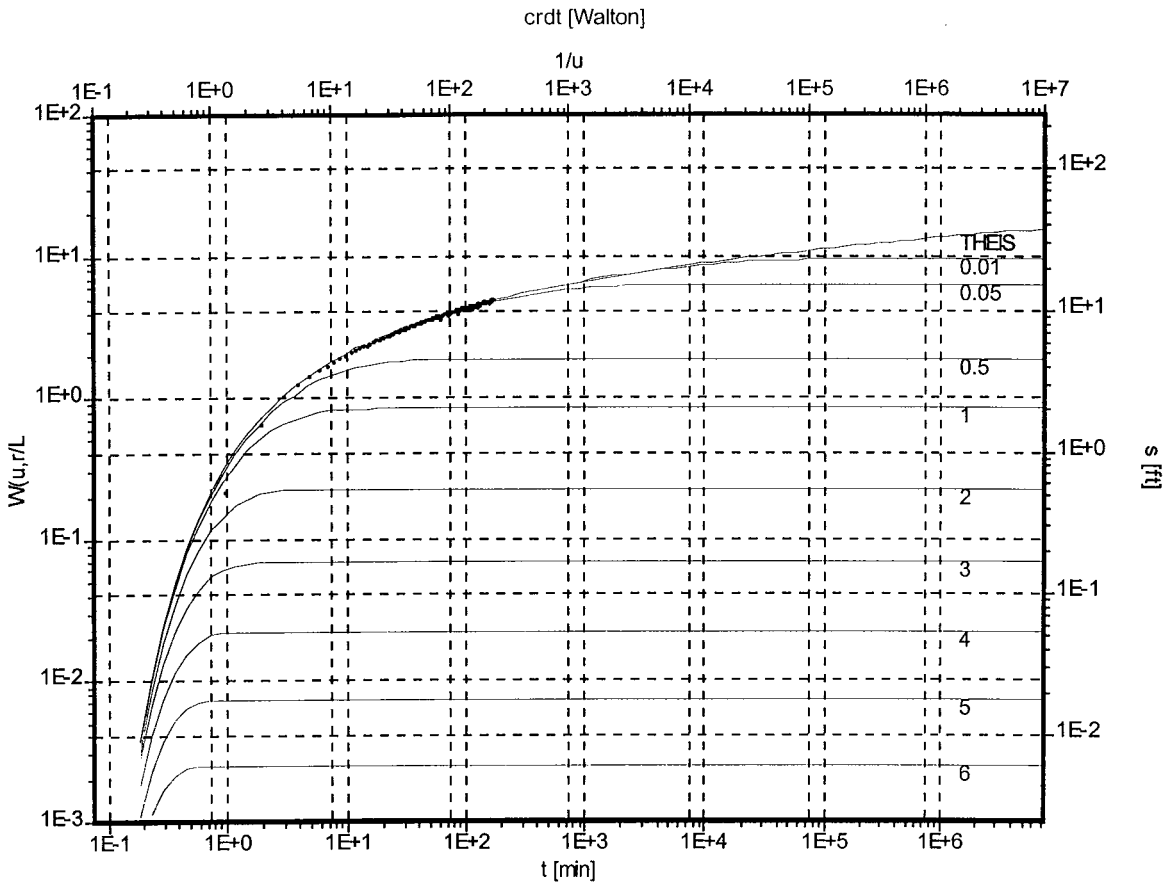
Hartman & Associates, Inc.
201 East Pine Street, Suite 1000
Orlando, Florida 32801
Ph: 407.839.3955 / FAX: 407.839.2066

Pumping Test Analysis Report

Project: Exploratory Floridan Well Program

Number: 00.0202.021

Client: City of North Miami Beach



Pumping Test: **1F development dd**

Analysis Method: **Walton**

Analysis Results:	Transmissivity:	2.07E+4 [ft²/d]	Conductivity:	2.07E+1 [ft/d]
	Storativity:	1.85E-4	c:	1.60E+8 [min]
Test parameters:	Pumping Well:	Well 1F	Aquifer Thickness:	1000 [ft]
	Casing radius:	1 [ft]	r/L:	0.01
	Screen length:	235 [ft]		
	Boring radius:	1 [ft]		
	Discharge Rate:	3300 [U.S. gal/min]		

Comments:

Evaluated by: WHB

Evaluation Date: 10/30/2003

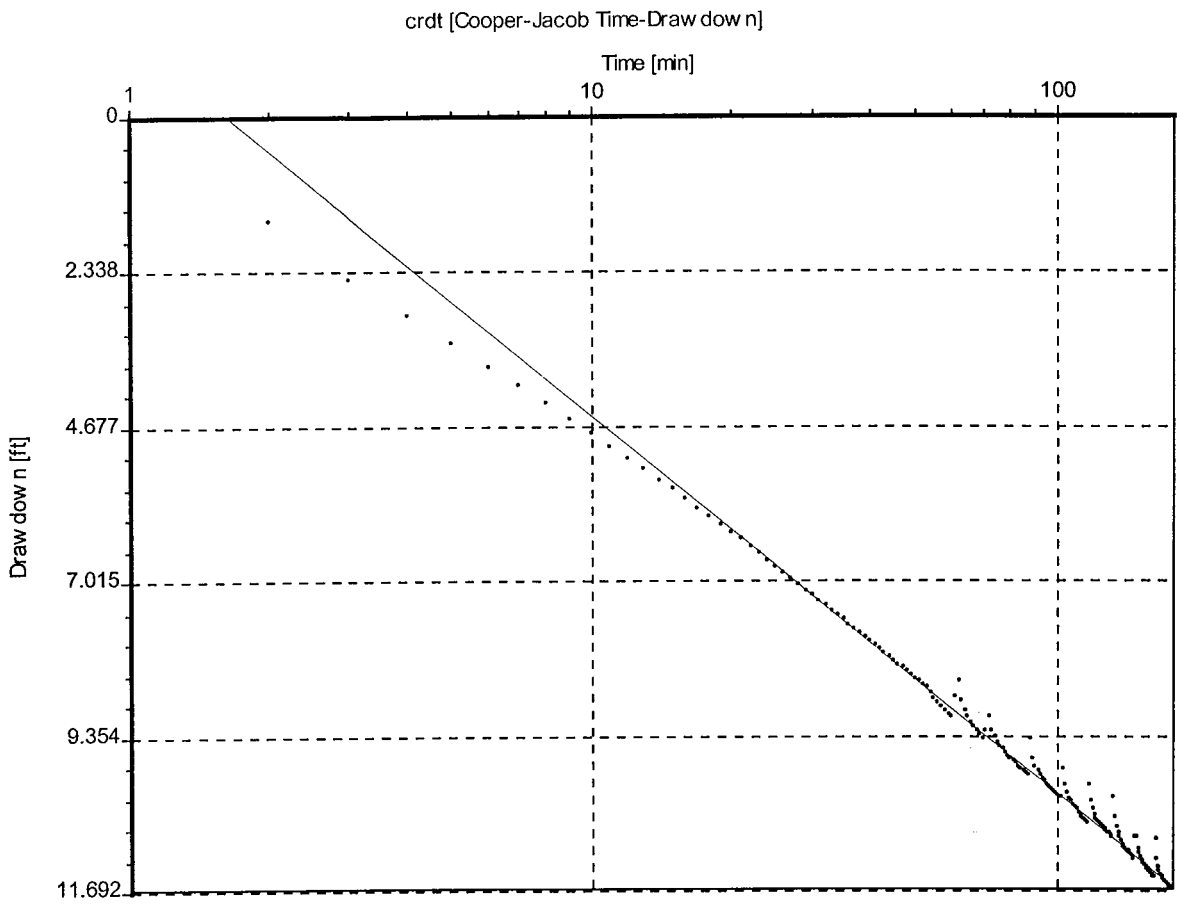
Hartman & Associates, Inc.
201 East Pine Street, Suite 1000
Orlando, Florida 32801
Ph: 407.839.3955 / FAX: 407.839.2066

Pumping Test Analysis Report

Project: Exploratory Floridan Well Program

Number: 00.0202.021

Client: City of North Miami Beach



Pumping Test: **1F development dd**

Analysis Method: **Cooper-Jacob Time-Drawdown**

Analysis Results:	Transmissivity:	2.04E+4 [ft²/d]	Conductivity:	2.04E+1 [ft/d]

Test parameters:	Pumping Well:	Well 1F	Aquifer Thickness:	1000 [ft]
	Casing radius:	1 [ft]	Confined Aquifer	
	Screen length:	235 [ft]		
	Boring radius:	1 [ft]		
	Discharge Rate:	3300 [U.S. gal/min]		

Comments:

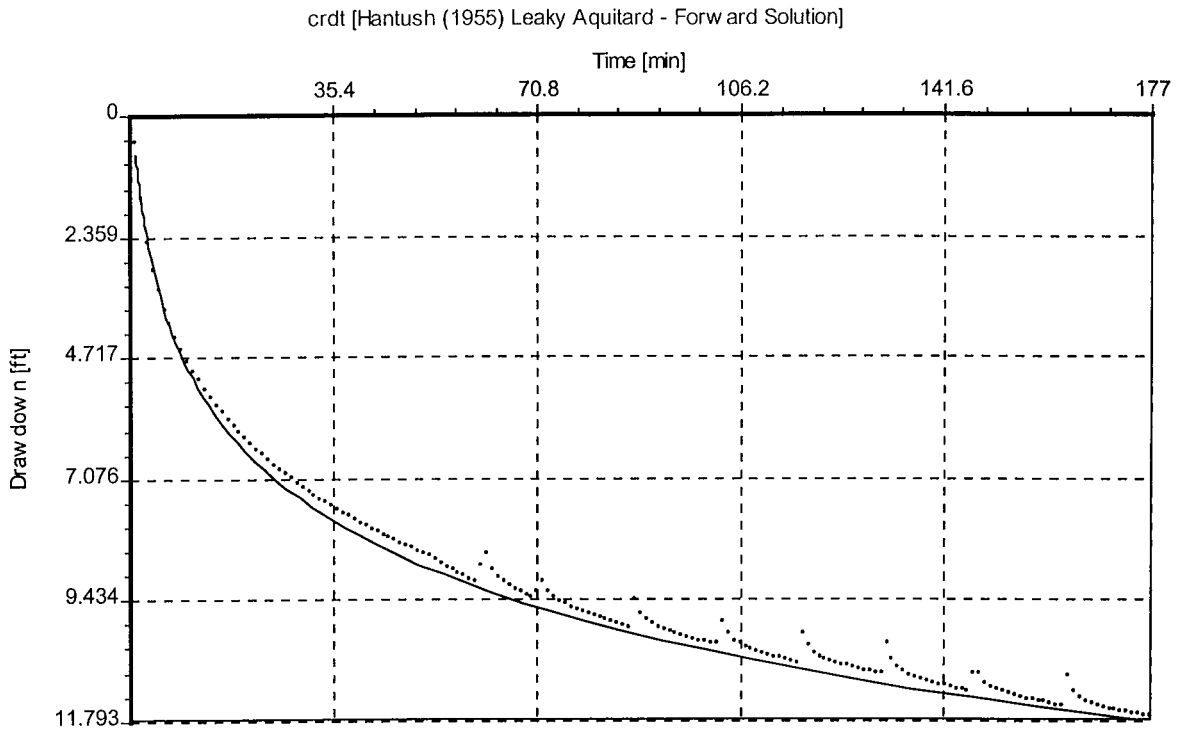
Evaluated by: WHB

Evaluation Date: 10/29/2003

Hartman & Associates, Inc.
201 East Pine Street, Suite 1000
Orlando, Florida 32801
Ph: 407.839.3955 FAX: 407.839.2066

Pumping Test Analysis Report

Project: Exploratory Floridan Well Program
Number: 00.0202.021
Client: City of North Miami Beach



Pumping Test: 1F development dd

Analysis Method: Hantush (1955) Leaky Aquitard - Forward Solution

Analysis Results:

Transmissivity:	2.06E+4 [ft²/d]	Mean Error (ME):	-2.39E-1
Storativity:	2.01E-4	Sum of Squares Error (SSE):	2.95E+0
Conductivity:	2.06E+1 [ft/d]	Variance (VAR):	1.67E-2
Leakage Factor	3.89E+4 [ft]	Standard Deviation (SDEV):	1.29E-1

Test Details: Saturated Aquifer Thickness: 1000 ft

Pumping Well:	X ft	Y ft	TOC Elev. ft	L ft	R ft	r ft	Q U.S. gal/min	Well Screen
Well 1F			15		1	1	3300	Partially Penetrating

Comments:

Evaluated by: WHB

Evaluation Date: 10/30/2003

Hartman & Associates, Inc.
201 East Pine Street, Suite 1000
Orlando, Florida 32801
Ph: 407.839.3955 FAX: 407.839.2066

Analysis Summary

Project: Exploratory Floridan Well Program

Number: 00.0202.021 | Page 1

Client: City of North Miami Beach

Location: WTP Site | Pumping Test: 1F development rec | Pumping Well: Well 1F

Recorded by:
Date: 04/07/2003

Discharge Rate: 3300 [U.S. gal/min]
Aquifer Thickness: 1000 [ft]

	Name of Analysis	Analysis Method	Date	Evaluated by	Well	T ft²/d	K ft/d	S
1	Cooper-Jacob Time-Drawdown 2F	Walton	10/29/03	WHB	Well 2F	23967.6804	23.9676804	0.0001896
2	Cooper-Jacob Time-Drawdown 2F	Cooper-Jacob Time-Drawdown	10/29/03	WHB	Well 2F	24973.6695	24.9736695	0.0001809
3	Hantush (1955) Leaky Aquitard - Forward	Hantush (1955) Leaky Aquitard - Forward Solution	10/30/03	WHB	Well 2F	22336.3964	22.3363964	0.0002
4	Walton 2F	Walton	10/30/03	WHB	Well 2F	26740.2058	26.7402058	0.0001708
					Average Value	**24504.4881**	**24.504488**	**0.000185**

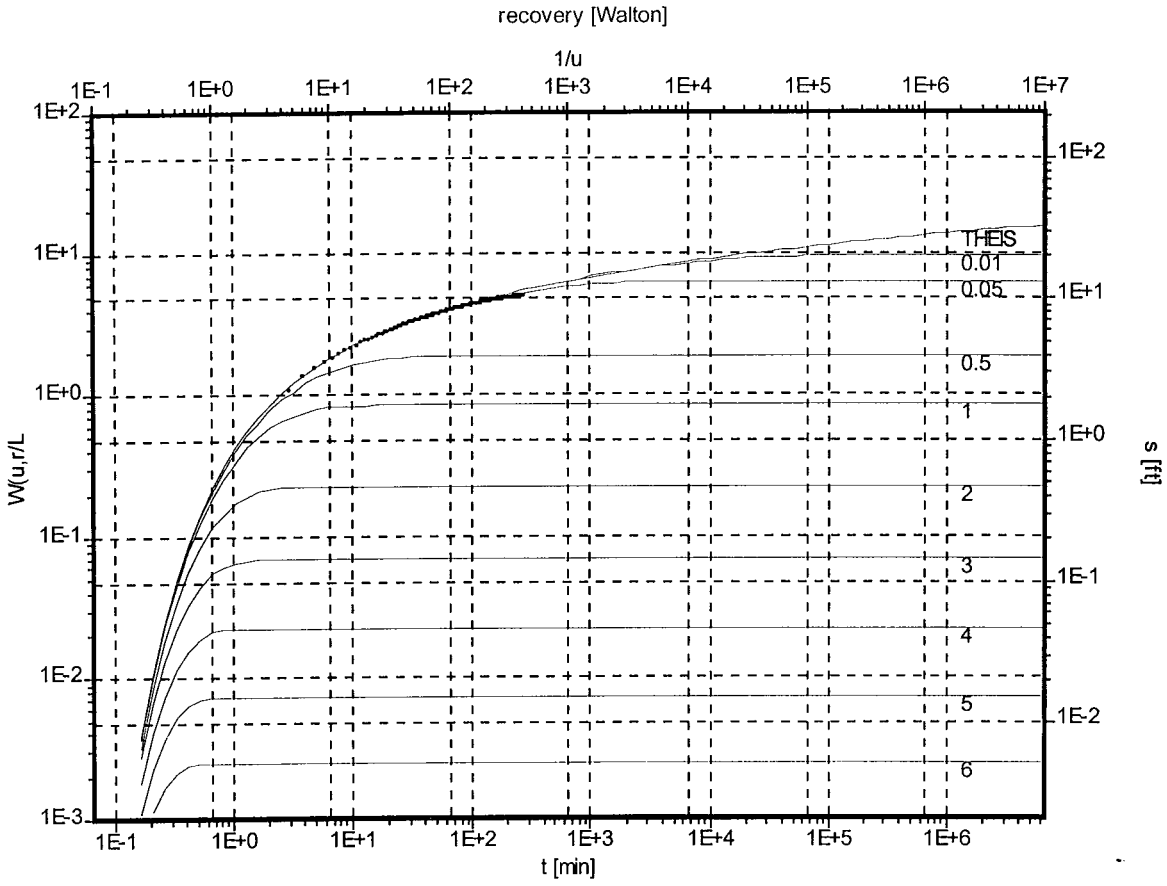
Hartman & Associates, Inc.
201 East Pine Street, Suite 1000
Orlando, Florida 32801
Ph: 407.839.3955 / FAX: 407.839.2066

Pumping Test Analysis Report

Project: Exploratory Floridan Well Program

Number: 00.0202.021

Client: City of North Miami Beach



Pumping Test: **1F development rec**

Analysis Method: **Walton**

Analysis Results:	Transmissivity:	2.40E+4 [ft²/d]	Conductivity:	2.40E+1 [ft/d]
	Storativity:	1.90E-4	c:	1.38E+8 [min]
Test parameters:	Pumping Well:	Well 1F	Aquifer Thickness:	1000 [ft]
	Casing radius:	1 [ft]	r/L:	0.01
	Screen length:	235 [ft]		
	Boring radius:	1 [ft]		
	Discharge Rate:	3300 [U.S. gal/min]		

Comments:

Evaluated by: WHB

Evaluation Date: 10/29/2003

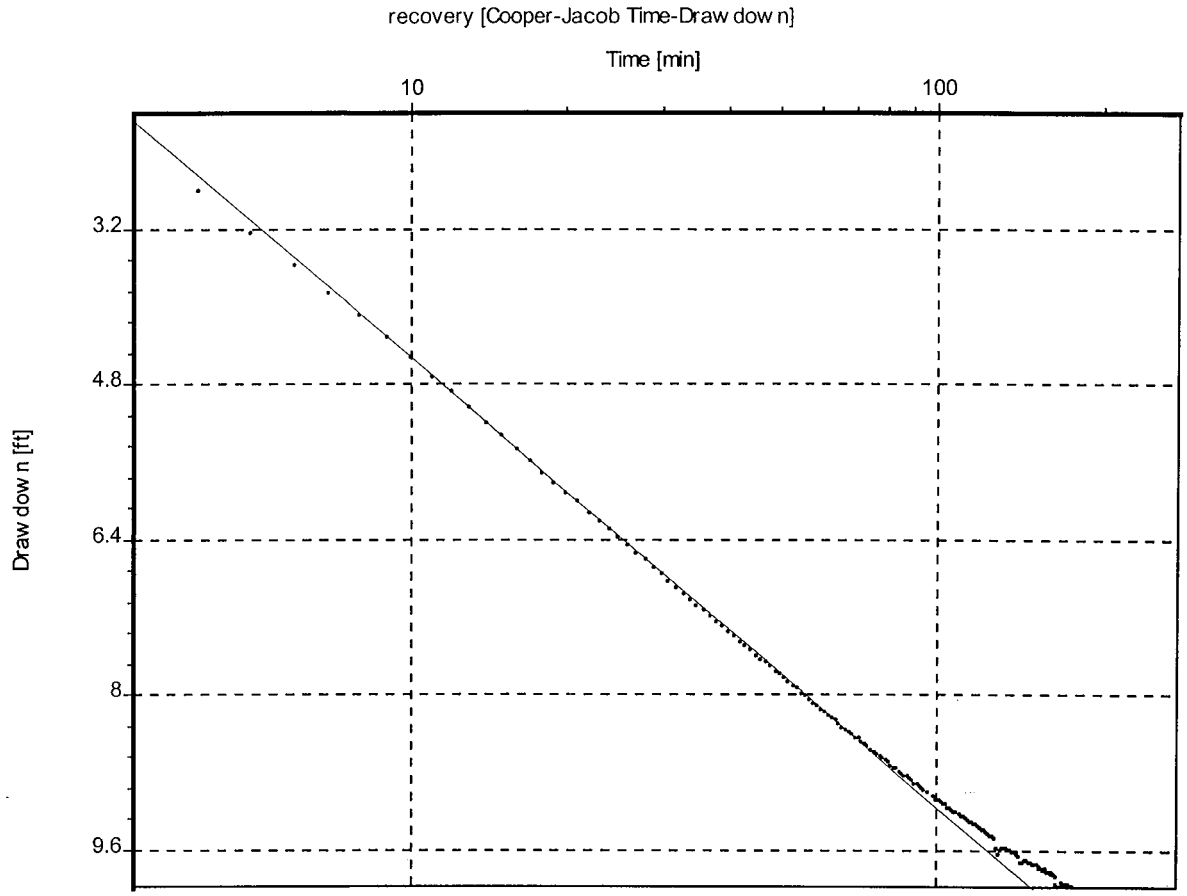
Hartman & Associates, Inc.
201 East Pine Street, Suite 1000
Orlando, Florida 32801
Ph: 407.839.3955 / FAX: 407.839.2066

Pumping Test Analysis Report

Project: Exploratory Floridan Well Program

Number: 00.0202.021

Client: City of North Miami Beach



Pumping Test: **1F development rec**

Analysis Method: **Cooper-Jacob Time-Drawdown**

Analysis Results:	Transmissivity:	2.50E+4 [ft²/d]	Conductivity:	2.50E+1 [ft/d]
	Storativity:	1.81E-4		
Test parameters:	Pumping Well:	Well 1F	Aquifer Thickness:	1000 [ft]
	Casing radius:	1 [ft]	Confined Aquifer	
	Screen length:	235 [ft]		
	Boring radius:	1 [ft]		
	Discharge Rate:	3300 [U.S. gal/min]		

Comments:

Evaluated by: WHB

Evaluation Date: 10/29/2003

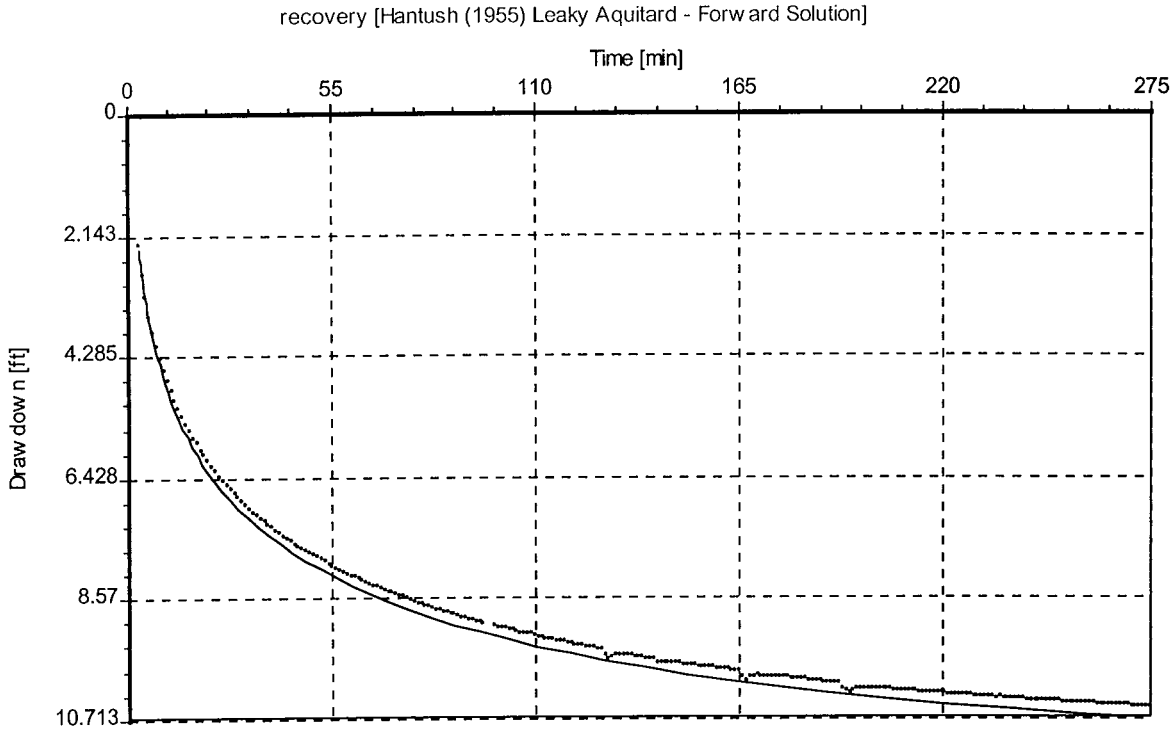
Hartman & Associates, Inc.
201 East Pine Street, Suite 1000
Orlando, Florida 32801
Ph: 407.839.3955 FAX: 407.839.2066

Pumping Test Analysis Report

Project: Exploratory Floridan Well Program

Number: 00.0202.021

Client: City of North Miami Beach



Pumping Test: 1F development rec

Analysis Method: Hantush (1955) Leaky Aquitard - Forward Solution

Analysis Results:

Transmissivity:	2.23E+4 [ft²/d]	Mean Error (ME):	-1.81E-1
Storativity:	2.00E-4	Sum of Squares Error (SSE):	2.09E-1
Conductivity:	2.23E+1 [ft/d]	Variance (VAR):	7.70E-4
Leakage Factor	5.39E+3 [ft]	Standard Deviation (SDEV):	2.77E-2

Test Details: Saturated Aquifer Thickness: 1000 ft

Pumping Well:	X ft	Y ft	TOC Elev. ft	L ft	R ft	r ft	Q U.S. gal/min	Well Screen
Well 1F			15		1	1	3300	Partially Penetrating

Comments:

Evaluated by: WHB

Evaluation Date: 10/30/2003

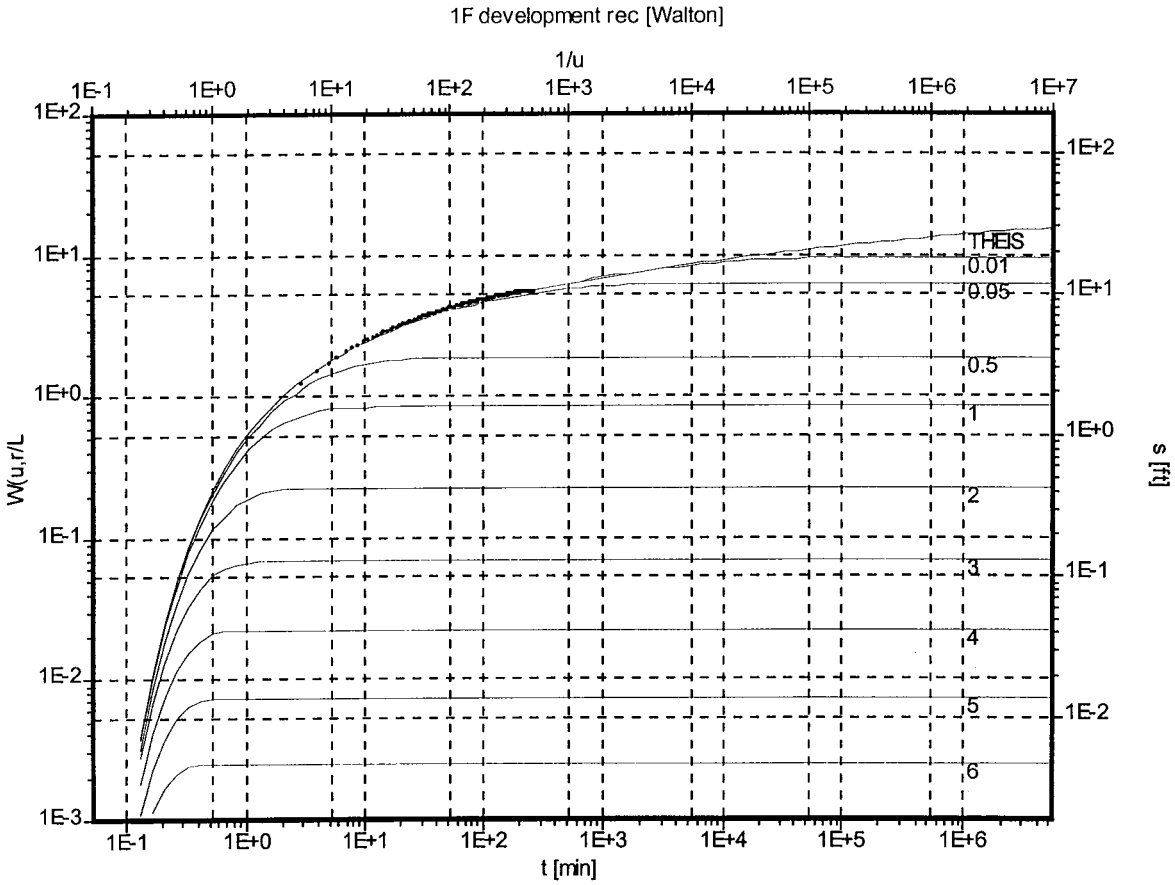
Hartman & Associates, Inc.
201 East Pine Street, Suite 1000
Orlando, Florida 32801
Ph: 407.839.3955 / FAX: 407.839.2066

Pumping Test Analysis Report

Project: Exploratory Floridan Well Program

Number: 00.0202.021

Client: City of North Miami Beach



Pumping Test: **1F development rec**

Analysis Method: **Walton**

Analysis Results:	Transmissivity:	2.67E+4 [ft²/d]	Conductivity:	2.67E+1 [ft/d]
	Storativity:	1.71E-4	c:	1.24E+8 [min]
Test parameters:	Pumping Well:	Well 1F	Aquifer Thickness:	1000 [ft]
	Casing radius:	1 [ft]	r/L:	0.01
	Screen length:	235 [ft]		
	Boring radius:	1 [ft]		
	Discharge Rate:	3300 [U.S. gal/min]		

Comments:

Evaluated by: WHB

Evaluation Date: 10/30/2003

HARTMAN & ASSOCIATES, INC.

engineers, hydrogeologists, surveyors & management consultants

72 Hour Aquifer Performance Test (Pump Data Sheet)

Date: 06/12/2003 Job Name: City of N.M.B.

Well No.: 2F Job No.: 00-0202.021 Page No.: 1

Time	Elapsed Time	2F W.L.	GPM	Flow Meter	1F W.L.	Comments
10:00	0	+29.03	-0-	043349	+29.19	Begin 72 hour APT @ +-2500 gpm.
10:30	30	-57.51	2367	043420	+23.45	
11:00	60	-58.01	2467	043494	+21.90	
11:30	90	-59.40	2433	043567	+21.05	
12:00	120	-60.12	2433	043640	+20.25	
12:30	150	-60.30	2433	043713	+19.98	
13:00	180	-60.25	2467	043787	+19.47	
13:30	210	-60.15	2433	043860	+19.08	
14:00	240	-60.55	2367	043931	+19.05	
15:00	300	-60.28	2417	044076	+18.60	
16:00	360	-60.70	2433	044222	+18.23	
17:00	420	-61.10	2383	044365	+17.98	
18:00	480	-61.18	2400	044509	+17.83	
19:00	540	-61.80	2433	044655	+17.60	
20:00	600	-62.38	2383	044798	+17.54	
21:00	660	-62.53	2400	044942	+17.10	
22:00	720	-62.98	2417	045087	+16.88	
23:00	780	-63.08	2433	045233	+16.52	
00:00	840	-64.10	2417	045378	+16.50	06/13/03
01:00	900	-64.18	2483	045527	+16.43	
02:00	960	-64.30	2467	045675	+16.37	
03:00	1020	-64.38	2400	045819	+16.28	
04:00	1080	-64.50	2417	045964	+16.22	
05:00	1140	-64.83	2417	046109	+16.15	
06:00	1200	-65.13	2450	046256	+16.08	
07:00	1260	-65.15	2417	046401	+15.86	
08:00	1320	-69.08	2533	046553	+15.60	
09:00	1380	-69.10	2500	046703	+15.49	
10:00	1440	-68.34	2500	046853	+15.43	
11:00	1500	-68.25	2500	047003	+15.38	
12:00	1560	-67.06	2467	047151	+15.38	
13:00	1620	-67.22	2467	047299	+15.35	
14:00	1680	-67.06	2450	047446	+15.35	
15:00	1740	-66.85	2483	047595	+15.35	

Time	Elapsed Time	2F W.L.	GPM	Flow Meter	1F W.L.	Comments
16:00	1800	-67.01	2450	047742	+15.33	
17:00	1860	-66.81	2450	047889	+15.32	
18:00	1920	-66.86	2433	048035	+15.30	
19:00	1980	-67.45	2517	048186	+15.23	
20:00	2040	-67.70	2483	048335	+15.14	
21:00	2100	-67.73	2433	048481	+15.03	
22:00	2160	-68.30	2433	048627	+14.97	
23:00	2220	-68.45	2500	048777	+14.91	
00:00	2280	-68.60	2450	048924	+14.87	06/14/03
01:00	2340	-68.98	2450	049071	+14.83	
02:00	2400	-69.72	2467	049219	+14.80	
03:00	2460	-70.36	2483	049368	+14.77	
04:00	2520	-68.60	2483	049517	+14.76	
05:00	2580	-69.40	2467	049665	+14.76	
06:00	2640	-69.12	2483	049814	+14.70	
07:00	2700	-68.20	2450	049961	+14.65	
08:00	2760	-71.00	2483	050110	+14.61	
09:00	2820	-69.51	2500	050260	+14.50	
10:00	2880	-69.09	2500	050410	+14.49	
11:00	2940	-69.17	2450	050557	+14.49	
12:00	3000	-69.15	2483	050706	+14.41	
13:00	3060	-68.78	2467	050854	+14.41	
14:00	3120	-69.09	2467	051002	+14.41	
15:00	3180	-68.40	2467	051150	+14.44	
16:00	3240	-68.70	2467	051298	+14.45	
17:00	3300	-66.10	2500	051448	+14.52	
18:00	3360	-68.63	2450	051595	+14.53	
19:00	3420	-68.45	2467	051743	+14.43	
20:00	3480	-68.80	2467	051891	+14.40	
21:00	3540	-68.70	2450	052038	+14.37	
22:00	3600	-68.95	2467	052186	+14.34	
23:00	3660	-69.45	2483	052335	+14.32	
00:00	3720	-69.80	2467	052483	+14.30	06/15/03
01:00	3780	-68.76	2467	052631	+14.27	
02:00	3840	-69.00	2483	052780	+14.20	
03:00	3900	-69.07	2467	052928	+14.12	
04:00	3960	-69.18	2483	053077	+14.16	
05:00	4020	-68.37	2467	053225	+14.22	Began raining @ 05:25
06:00	4080	-69.40	2467	053373	+14.18	
07:00	4140	-69.00	2433	053519	+14.17	Stop raining @ 07:00; 1.00" Total Rainfall.
08:00	4200	-70.39	2483	053668	+14.11	
09:00	4260	-70.91	2483	053817	+14.09	
10:00	4320	-70.82	2517	053968	+14.03	End 72 hour CRT.

HARTMAN & ASSOCIATES, INC.

engineers, hydrogeologists, surveyors & management consultants

24 Hour APT Recovery (Pump Data Sheet)

Date: 06/15/2003 Job Name: City of N.M.B.

Well No.: 2F Job No.: 00-0202.021 Page No.: 1

Time	Elapsed Time	2F W.L.	GPM	Flow Meter	1F W.L.	Comments
10:00	0	-	-0-	NA	+14.03	Begin Recovery.
10:01	1	-			+15.03	
10:02	2	+18.50			+16.05	
10:03	3	+15.50			+16.40	
10:04	4	+15.72			+16.73	
10:05	5	+16.10			+17.00	
10:06	6	+16.58			+17.32	
10:07	7	+16.75			+17.48	
10:08	8	+17.05			+17.69	
10:09	9	+17.23			+17.86	
10:10	10	+17.52			+18.17	
10:15	15	+18.39			+18.78	
10:20	20	+18.98			+19.28	
10:25	25	+19.40			+19.71	
10:30	30	+19.80			+20.08	
10:35	35	+20.10			+20.40	
10:40	40	+20.44			+20.61	
10:45	45	+20.75			+20.81	
10:50	50	+20.96			+21.07	
10:55	55	+21.10			+21.26	
11:00	60	+21.25			+21.55	
11:05	65	+21.42			+21.85	
11:10	70	+21.62			+21.95	
11:15	75	+21.75			+22.03	
11:20	80	+21.86			+22.05	
11:25	85	+21.97			+22.16	
11:30	90	+22.20			+22.35	
11:35	95	+22.38			+22.53	
11:40	100	+22.45			+22.38	
11:45	105	+22.52			+22.63	
11:50	110	+22.58			+22.70	
11:55	115	+22.70			+22.78	
12:00	120	+22.80			+23.00	
12:10	130	+23.00	-0-	NA	+23.05	

Time	Elapsed Time	2F W.L.	GPM	Flow Meter	1F W.L.	Comments
12:20	140	+23.10	-0-	NA	+23.15	
12:30	150	+23.18			+23.50	
13:00	180	+23.65			+23.75	
13:30	210	+23.91			+24.10	
14:00	240	+24.22			+24.40	
	270	+24.46			+24.75	
	300	+24.66			+25.00	
	330	+24.91			+25.10	
	360	+25.10			+25.40	
	390	+25.31			+25.45	
	420	+25.46			+25.55	
	450	+25.58			+25.66	
	480	+25.70			+25.80	
	510	+25.81			+25.90	
	540	+25.92			+26.00	
	570	+26.02			+26.11	
	600	+26.15			+26.16	
	630	+26.21			+26.24	
	660	+26.27			+26.33	
	690	+26.36			+26.29	
	720	+26.41			+26.44	
	750	+26.47			+26.49	
	780	+26.51			+26.55	
	810	+26.58			+26.59	
	840	+26.65			+26.68	
	870	+26.73			+26.76	
	900	+26.80			+26.83	
	930	+26.84			+26.87	
	960	+26.88			+26.89	
	990	+26.94			+26.93	
	1020	+27.00			+26.99	
	1050	+27.01			+27.03	
	1080	+27.02			+27.07	
	1110	+27.06			+27.12	
	1140	+27.10			+27.15	
	1170	+27.15			+27.18	
	1200	+27.19			+27.22	
	1230	+27.23			+27.26	
	1260	+27.25			+27.29	
	1290	+27.28			+27.35	
	1320	+27.40			+27.39	
	1350	+27.48			+27.42	
	1380	+27.51			+27.48	
	1410	+27.51			+27.49	
	1440	+27.52	-0-	NA	+27.50	End of manual data collection.

Hartman & Associates, Inc.
201 East Pine Street, Suite 1000
Orlando, Florida 32801
Ph: 407.839.3955 FAX: 407.839.2066

Analysis Summary

Project: Exploratory Floridan Well Program

Number: 00.0202.021 | Page 1

Client: City of North Miami Beach

Location: WTP Site | Pumping Test: 72-hr APT | Pumping Well: Well 2F

Recorded by: DPD
Date: 10/21/2003

Discharge Rate: 2458 [U.S. gal/min]
Aquifer Thickness: 235 [ft]

	Name of Analysis	Analysis Method	Date	Evaluated by	Well	T ft^2/d	K ft/d	S
1	Cooper-Jacob Time-Drawdown 1F	Cooper-Jacob Time-Drawdown	10/30/03	WHB	Well 1F	22389.5419	95.2746466	0.0001150
2	Walton 1F	Walton	10/30/03	WHB	Well 1F	23216.8209	98.7949827	0.0001686
					Average Value	**22803.1814**	**97.034815**	**0.000142**

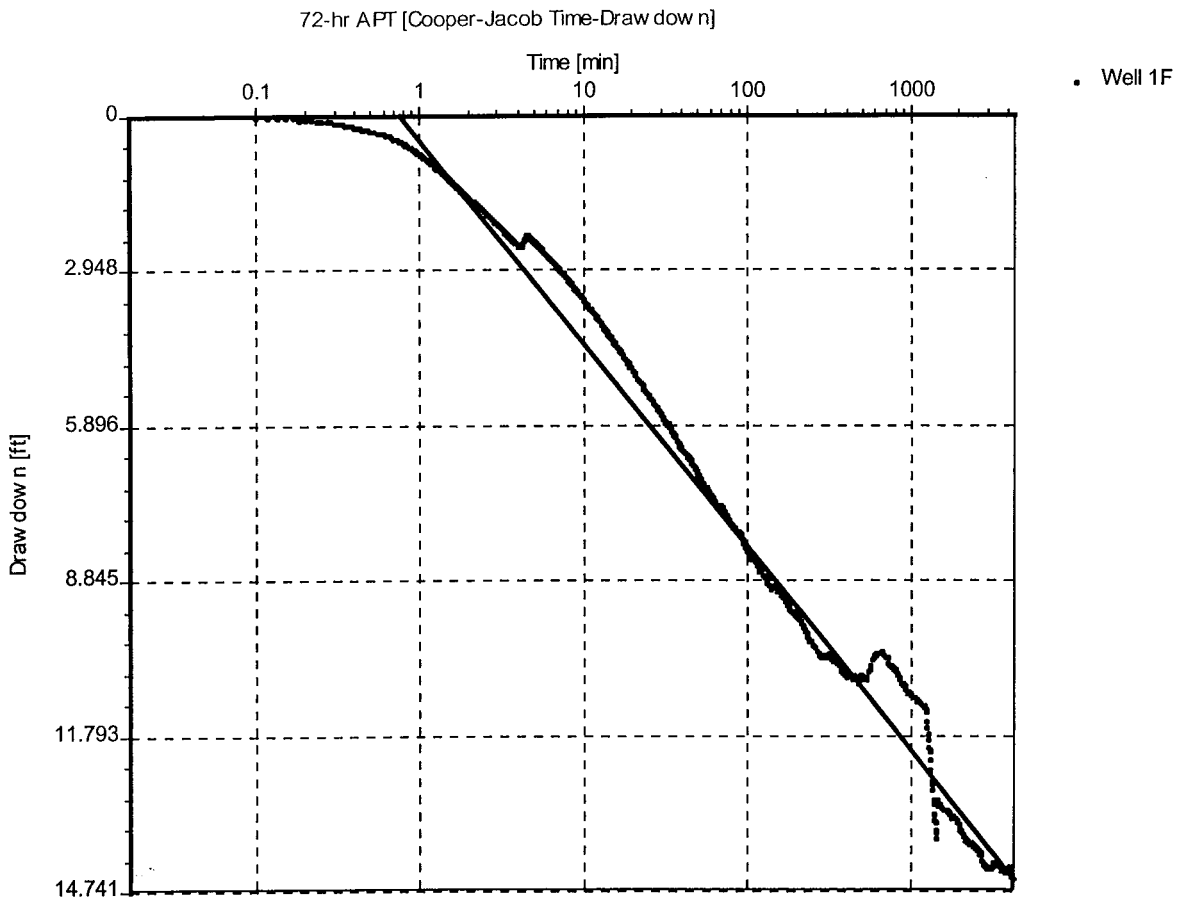
Hartman & Associates, Inc.
201 East Pine Street, Suite 1000
Orlando, Florida 32801
Ph: 407.839.3955 / FAX: 407.839.2066

Pumping Test Analysis Report

Project: Exploratory Floridan Well Program

Number: 00.0202.021

Client: City of North Miami Beach



Pumping Test: **72-hr APT**

Analysis Method: **Cooper-Jacob Time-Drawdown**

Analysis Results:	Transmissivity:	2.24E+4 [ft²/d]	Conductivity:	9.53E+1 [ft/d]
	Storativity:	1.15E-4		
Test parameters:	Pumping Well:	Well 2F	Aquifer Thickness:	235 [ft]
	Casing radius:	1 [ft]	Confined Aquifer	
	Screen length:	235 [ft]		
	Boring radius:	1 [ft]		
	Discharge Rate:	2458 [U.S. gal/min]		

Comments: Pumping Well 2F
Observation Well 1F

Evaluated by: WHB

Evaluation Date: 10/30/2003

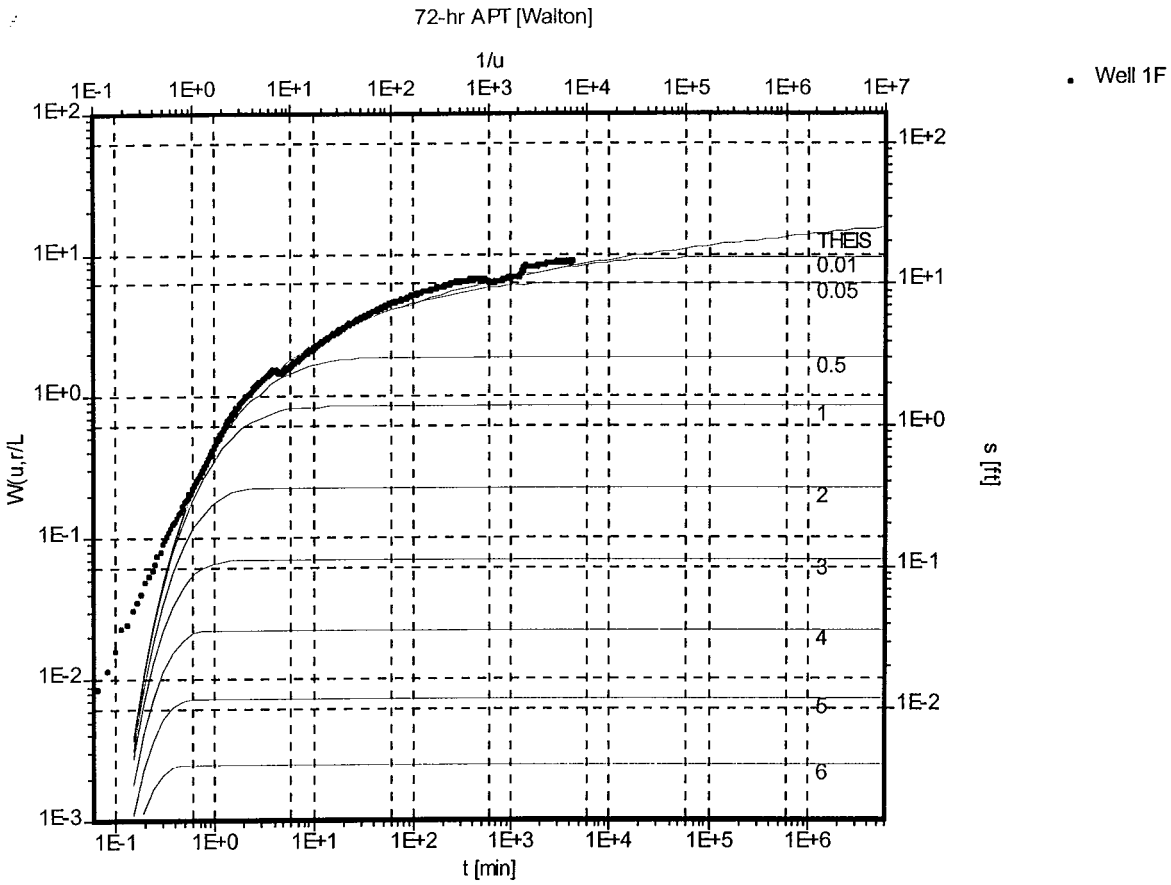
Hartman & Associates, Inc.
201 East Pine Street, Suite 1000
Orlando, Florida 32801
Ph: 407.839.3955 / FAX: 407.839.2066

Pumping Test Analysis Report

Project: Exploratory Floridan Well Program

Number: 00.0202.021

Client: City of North Miami Beach



Pumping Test: **72-hr APT**

Analysis Method: **Walton**

Analysis Results:	Transmissivity:	2.32E+4 [ft²/d]	Conductivity:	9.88E+1 [ft/d]
	Storativity:	1.69E-4	c:	1.43E+8 [min]
Test parameters:	Pumping Well:	Well 2F	Aquifer Thickness:	235 [ft]
	Casing radius:	1 [ft]	r/L:	0.01
	Screen length:	235 [ft]		
	Boring radius:	1 [ft]		
	Discharge Rate:	2458 [U.S. gal/min]		

Comments: Pumping Well 2F
Observation Well 1F

Evaluated by: WHB

Evaluation Date: 10/30/2003

Hartman & Associates, Inc.
201 East Pine Street, Suite 1000
Orlando, Florida 32801
Ph: 407.839.3955 FAX: 407.839.2066

Analysis Summary

Project: Exploratory Floridan Well Program

Number: 00.0202.021 | Page 1

Client: City of North Miami Beach

Location: WTP Site | Pumping Test: 72-hr recovery | Pumping Well: Well 2F

Recorded by:
Date: 04/07/2003

Discharge Rate: 2458 [U.S. gal/min]
Aquifer Thickness: 1000 [ft]

	Name of Analysis	Analysis Method	Date	Evaluated by	Well	T ft²/d	K ft/d	S
1	Cooper-Jacob Time-Drawdown 2F	Cooper-Jacob Time-Drawdown	10/30/03	WHB	Well 2F	18595.9568	18.5959568	
2	Walton 1F	Walton	10/30/03	WHB	Well 1F	24877.2718	24.8772718	0.0001016
3	Cooper-Jacob Time-Drawdown 1F	Cooper-Jacob Time-Drawdown	10/30/03	WHB	Well 1F	20213.7934	20.2137934	0.0001692
					Average Value	**21229.0073**	**21.229007**	**0.000135**

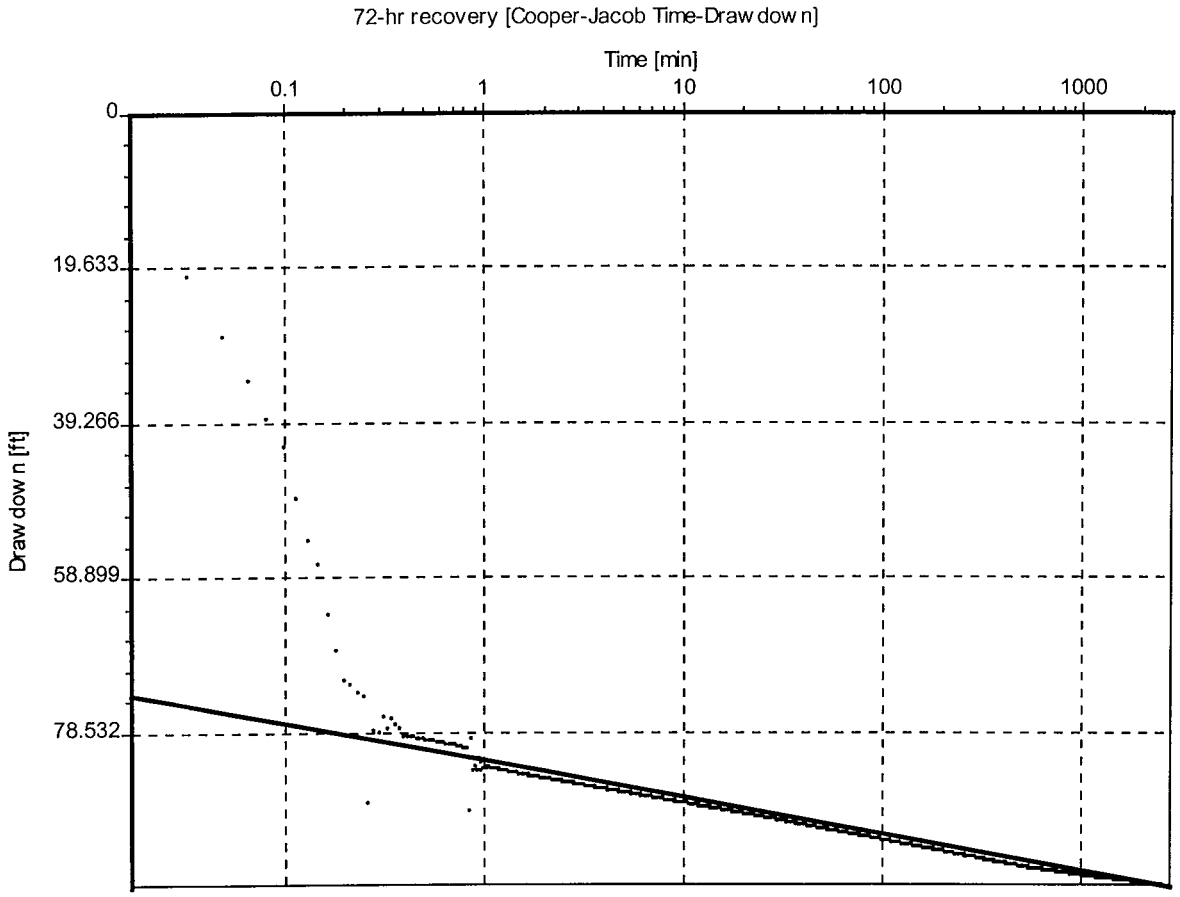
Hartman & Associates, Inc.
201 East Pine Street, Suite 1000
Orlando, Florida 32801
Ph: 407.839.3955 / FAX: 407.839.2066

Pumping Test Analysis Report

Project: Exploratory Floridan Well Program

Number: 00.0202.021

Client: City of North Miami Beach



Pumping Test: **72-hr recovery**

Analysis Method: **Cooper-Jacob Time-Drawdown**

Analysis Results:				
	Transmissivity:	1.86E+4 [ft²/d]	Conductivity:	1.86E+1 [ft/d]

Test parameters:				
	Pumping Well:	Well 2F	Aquifer Thickness:	1000 [ft]
	Casing radius:	1 [ft]	Confined Aquifer	
	Screen length:	235 [ft]		
	Boring radius:	1 [ft]		
	Discharge Rate:	2458 [U.S. gal/min]		

Comments: Pumping Well 2F
Observation Well 1F

Evaluated by: WHB

Evaluation Date: 10/30/2003

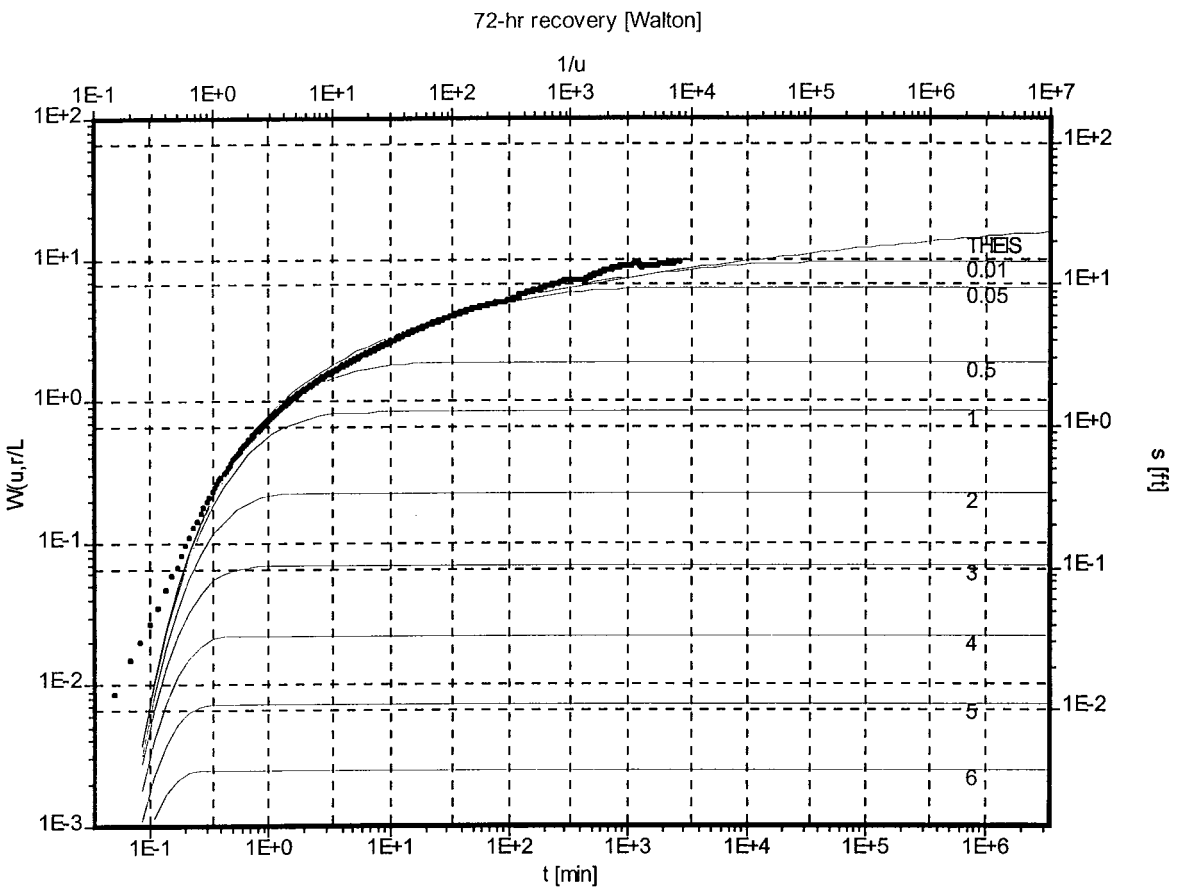
Hartman & Associates, Inc.
201 East Pine Street, Suite 1000
Orlando, Florida 32801
Ph: 407.839.3955 / FAX: 407.839.2066

Pumping Test Analysis Report

Project: Exploratory Floridan Well Program

Number: 00.0202.021

Client: City of North Miami Beach



Pumping Test: **72-hr recovery**

Analysis Method: **Walton**

Analysis Results:	Transmissivity:	2.49E+4 [ft²/d]	Conductivity:	2.49E+1 [ft/d]
	Storativity:	1.02E-4	c:	1.33E+8 [min]
Test parameters:	Pumping Well:	Well 2F	Aquifer Thickness:	1000 [ft]
	Casing radius:	1 [ft]	r/L:	0.01
	Screen length:	235 [ft]		
	Boring radius:	1 [ft]		
	Discharge Rate:	2458 [U.S. gal/min]		

Comments: Pumping Well 2F
Observation Well 1F

Evaluated by: WHB

Evaluation Date: 10/30/2003

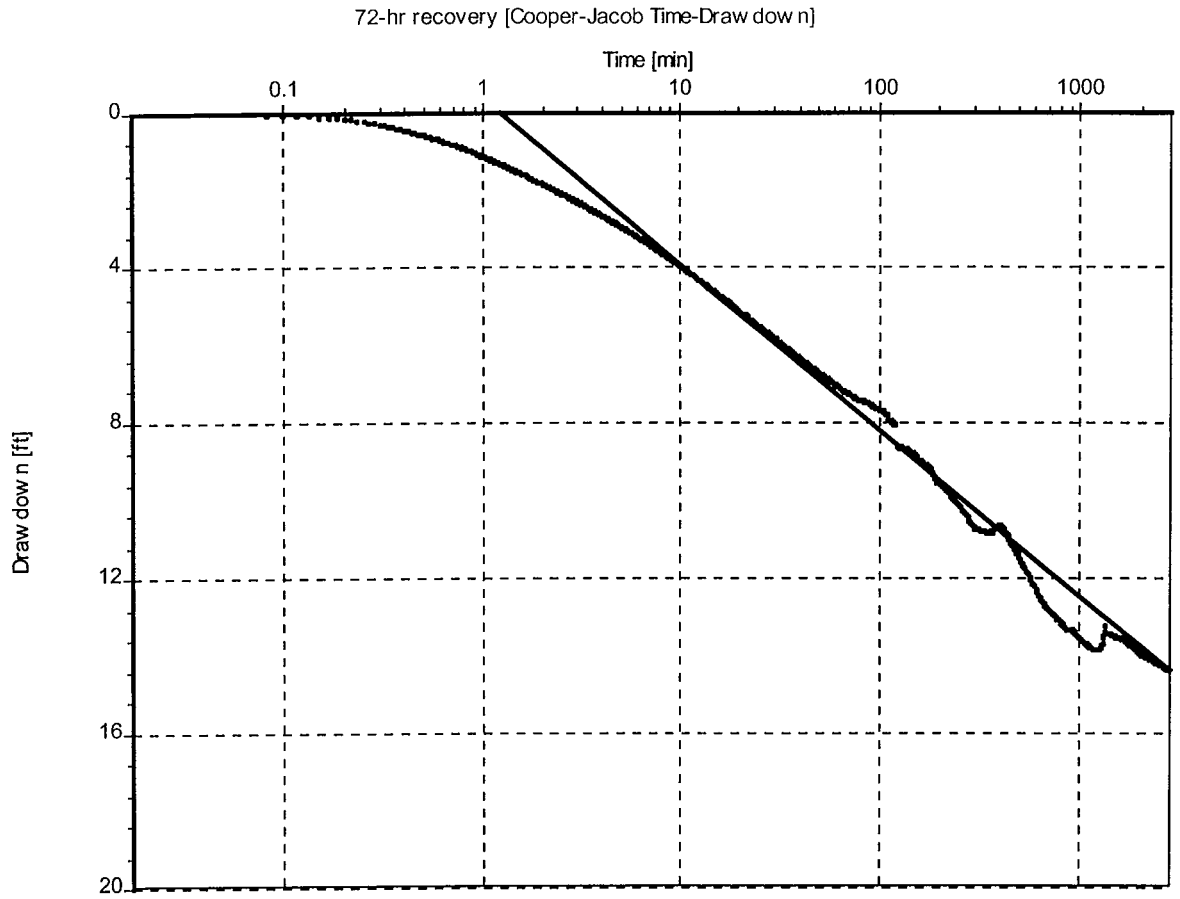
Hartman & Associates, Inc.
201 East Pine Street, Suite 1000
Orlando, Florida 32801
Ph: 407.839.3955 / FAX: 407.839.2066

Pumping Test Analysis Report

Project: Exploratory Floridan Well Program

Number: 00.0202.021

Client: City of North Miami Beach



Pumping Test: **72-hr recovery**

Analysis Method: **Cooper-Jacob Time-Drawdown**

Analysis Results:	Transmissivity:	2.02E+4 [ft²/d]	Conductivity:	2.02E+1 [ft/d]
	Storativity:	1.69E-4		
Test parameters:	Pumping Well:	Well 2F	Aquifer Thickness:	1000 [ft]
	Casing radius:	1 [ft]	Confined Aquifer	
	Screen length:	235 [ft]		
	Boring radius:	1 [ft]		
	Discharge Rate:	2458 [U.S. gal/min]		

Comments: Pumping Well 2F
Observation Well 1F

Evaluated by: WHB

Evaluation Date: 10/30/2003

ATTACHMENT E
WATER QUALITY ANALYSES

WELL 1F

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

February 11, 2003
Submission # 302000530
Order # 11526
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NMB 1F
NWB 1F

Sample I.D.: 1210 to 1230' Packer
Collected: 02/10/03 15:08
Received: 02/10/03 17:00
Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Specific Conductance {grab}	6840	umhos	120.1	1.0	02/11/2003	02/11/2003	SMF
Hardness, Total	980	mg/L	130.2	2.0	02/11/2003	02/11/2003	RDB
pH	7.95	units	150.1	1.0	02/11/2003	02/11/2003	PR
Residue, Total Filterable (TDS)	PENDING	mg/L	SM2540C (160.1)	1.0			
Chloride	1850	mg/L	300.0	1.0	02/11/2003	02/11/2003	SMF
le	0.80	mg/L	376.1	0.2	02/11/2003	02/11/2003	RDB
Dissolved Sulfide	0.80	mg/L	376.1	0.2	02/11/2003	02/11/2003	RDB
Iron	0.86	mg/L	SM3111B (236.1)	0.05	02/10/2003	02/11/2003	MAH

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Maria E. Castellano
Laboratory Manager

SEVERN TRENT LABORATORIES, INC.

CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

Original – Return w/Report Yellow – Lab Copy Pink – Sampler Copy

Submission Code:
Orders:
Entered to lims:

FDEP Facility No.
Page: of
Sampling CompQAP No.)
Approval Date:

Report To: Jacobs Assoc LLC
Bill To: Jacobs Assoc LLC
Report To Address:
Billing Address:
Project Number/Name: NMB 1E
Site Location: NMB 1E
Project Contact: Dan Jarman Phone: 786-423-0601 FAX:
Alternate Contact: ~~Dan~~ John C Peters Phone: 786-423-3468 FAX:
Sampled By (print):
Sampler's Signature:

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX (DW SW GW SED S EFF HW BIO SA)	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	ANALYSIS REQUIRED: Specific Conduct	Total Hardness	PH TDS	Total Iron Chlorids	Sulfide	Hydrogen sulfide	Sample Condition as Received: Temp C, Sealed Yes No — Lot number of Sampling Containers Used
1	1200 to 1230	020103	1506				W			—	—	—	—	—	—	
2	Jordan															
3																
4																
5																
6																
7																
8																
9																
10																

Special Comments:
Total # of Containers:

QA/QC Report Needed? Yes No (See price guide for applicable fees)
Report Format: Standard Other (specify)

(1) Relinquished by Signature:	Date: 020103	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED / Confirmation #
Company: Jacobs Assoc LLC	Time:	Company:	Time:	Coating Code: Q / L / D
(1) Received by Signature:	Date: 2/3/03	(2) Received by Signature:	Date:	Misc. Charges
Company:	Time: 1500	Company:	Time:	SHADED AREAS ARE FOR LAB USE

STI-8242 (3/01)

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

February 12, 2003
Submission # 302000601
Order # 11915
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NMB 1F
NMB 1F

Sample I.D.: 1250' to 1270' Packer
Collected: 02/11/03 00:00
Received: 02/11/03 17:45
Collected by: J. Petrous

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Specific Conductance {grab}	13180	umhos	120.1	1.0	02/12/2003	02/12/2003	RDB
Hardness, Total	1860	mg/L	130.2	2.0	02/12/2003	02/12/2003	RDB
pH	7.83	units	150.1	1.0	02/12/2003	02/12/2003	RDB
Residue, Total Filterable (TDS)	8150	mg/L	SM2540C (160.1)	1.0	02/12/2003	02/12/2003	YD
Chloride	4440	mg/L	300.0	1.0	02/12/2003	02/12/2003	SMF
Sulfide	.80	mg/L	376.1	0.2	02/12/2003	02/12/2003	SN
Dissolved Sulfide	.80	mg/L	376.1	0.2	02/12/2003	02/12/2003	SN
Iron	0.97	mg/L	SM3111B (236.1)	0.05	02/11/2003	02/12/2003	ERA

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Maria E. Castellano
Laboratory Manager

H0772

Submission Code:
Orders:
Entered to lims:

SEVERN TRENT LABORATORIES, INC.
CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

FDEP Facility No.
Page: ____ of ____
Sampling CompQAP No.)
Approval Date:

Original – Return w/Report | Yellow – Lab Copy | Pink – Sampler Copy

Report To: [illegible] LLP | Report To Address:
Bill To: [illegible] LLP | Billing Address:
Project Number/Name: NMB [illegible] | Site Location: NMB [illegible]
Project Contact: Dave [illegible] | Phone: 786 423 0601 | FAX:
Alternate Contact: John [illegible] | Phone: 786 4233468 | FAX:
Sampled By (print): John [illegible] | Sampler's Signature:

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX DW SW GW SED S EFF HW BIO SA	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	Specific Conductance	Total Hardness	PH TDS	Total Iron	Chloride Sulfate	Hydrogen Sulfide	Lot number of Sampling Containers Used
1	1250 to 1270'	021103					✓			—	—	—	—	—	—	
2	Packer															
3																
4																Rush!!
5																BH
6																
7																due 2/1[illegible]
8																
9																
10																

ANALYSIS REQUIRED: PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW (✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED

Sample Condition as Received: Temp ____ C; Sealed Yes No

Special Comments:

Total # of Containers:

QA/QC Report Needed? Yes No (See price guide for applicable fees)

Report Format: Standard Other (specify)

(1) Relinquished by Signature: [signature]	Date: 021103	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED Confirmation #
Company: [illegible] LLP	Time: 1510	Company:	Time:	Coating Code: ____ Q / L / D
(1) Received by Signature: [signature]	Date: 2/11/03	(2) Received by Signature:	Date:	Misc. Charges
Company: [illegible]	Time: 1745	Company:	Time:	SHADED AREAS ARE FOR LAB USE ONLY

SF-8242 (2/01)

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

Page 1
February 10, 2003
Submission # 302000395
Order # 10918
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NMB 1F
NMB 1F

Sample I.D.: 1290 to 1310 Packer
Collected: 02/07/03 12:40
Received: 02/07/03 14:20
Collected by: J.Petrous

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Specific Conductance {grab}	13100	umhos	120.1	1.0	02/09/2003	02/09/2003	RZ
Hardness, Total	1700	mg/L	130.2	2.0	02/07/2003	02/07/2003	RDB
pH	7.66	units	150.1	1.0	02/08/2003	02/08/2003	PR
Residue, Total Filterable (TDS)	8750	mg/L	SM2540C (160.1)	1.0	02/09/2003	02/10/2003	YD/SN
Chloride	4400	mg/L	300.0	1.0	02/07/2003	02/07/2003	SMF
Sulfide	.40	mg/L	376.1	0.2	02/07/2003	02/07/2003	SN
Dissolved Sulfide	.40	mg/L	376.1	0.2	02/07/2003	02/07/2003	SN
Iron	1.10	mg/L	SM3111B (236.1)	0.05	02/07/2003	02/08/2003	ERA

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Maria E. Castellano
Laboratory Manager

SEVERN TRENT LABORATORIES, INC.

CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

Submission Code:
Orders:
Entered to lims:

FDEP Facility No.
Page: of
Sampling CompQAP No.)
Approval Date:

Original – Return w/Report Yellow – Lab Copy Pink – Sampler Copy

Report To:		Report To Address:	
Bill To:		Billing Address:	
Project Number/Name:		Site Location:	
Project Contact:	Phone:	FAX:	
Alternate Contact:	Phone:	FAX:	
Sampled By (print):		Sampler's Signature:	

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX (DW SW GW SED S EFF HW BIO SA)	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	ANALYSIS REQUIRED (PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW; (✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED): Chloride	Total Hardness	pH TDS	Total Iron Chloride	Sulfide	Nitrate Sulfate	Lot number of Sampling Containers Used
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																

Sample Condition as Received: Temp C; Sealed Yes No

Special Comments:

Total # of Containers:

QA/QC Report Needed? Yes No (See price guide for applicable fees)

Report Format: Standard Other (specify)

(1) Relinquished by Signature:	Date:	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED; Confirmation #
Company:	Time:	Company:	Time:	Coating Code: Q / L / D
(1) Received by Signature:	Date:	(2) Received by Signature:	Date:	Misc. Charges
Company:	Time:	Company:	Time:	SHADED AREAS ARE FOR LAB USE ONLY

STL-8242 (3-01)

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD.
2801 N.W. 6th Avenue
Miami, FL 33127

February 5, 2003
Submission # 302000116
Order # 9487
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NMB IF
NMB IF

Sample I.D.: 1360 to 1380' Packer
Collected: 02/04/03 13:00
Received: 02/04/03 13:35
Collected by: J.Petrous

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Specific Conductance {grab}	14280	umhos	120.1	1.0	02/04/2003	02/04/2003	RDB
Hardness, Toml	1850	mg/L	130.2	2.0	02/05/2003	02/05/2003	RDB
pH	7.68	units	150.1	1.0	02/04/2003	02/04/2003	RDB
Residue, Total Filterable (TDS)	8750	mg/L	SM2540C (160.1)	1.0	02/04/2003	02/05/2003	YD
Chloride	4490	mg/L	300.0	1.0	02/04/2003	02/04/2003	SMF
Sulfide	.40	mg/L	376.1	0.2	02/05/2003	02/05/2003	SN
Dissolved Sulfide	.40	mg/L	376.1	0.2	02/05/2003	02/05/2003	SN
Iron	1.78	mg/L	SM3111B (236.1)	0.05	02/04/2003	02/05/2003	ERA

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department..

Maria E. Castellano
Laboratory Manager

SEVERN TRENT LABORATORIES, INC.

CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

Submission Code: _____
Orders: _____
Entered to lims: _____

FDEP Facility No. _____
Page: _____ of _____
Sampling CompQAP No.) _____
Approval Date: _____

Original – Return w/Report Yellow – Lab Copy Pink – Sampler Copy

Report To:		Report To Address:	
Bill To:		Billing Address:	
Project Number/Name:			Site Location:
Project Contact:	Phone:	FAX:	
Alternate Contact:	Phone:	FAX:	
Sampled By (print):		Sampler's Signature:	

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX DW SW GW SED S EFF HW BIO SA	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	ANALYSIS REQUIRED (✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED	Sample Condition as Received Temp ____C Sealed Yes No / Lot number of Sampling Containers Used
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

Special Comments: Total # of Containers:

QA/QC Report Needed? Yes No (See price guide for applicable fees)

Report Format: Standard Other (specify)

(1) Relinquished by Signature:	Date:	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED / Confirmation #
Company:	Time:	Company:	Time:	Coating Code: _____ Q / L / D
(1) Received by Signature:	Date:	(2) Received by Signature:	Date:	Misc. Charges
Company:	Time:	Company:	Time:	SHADED AREAS ARE FOR LAB USE

STL-8242 (1011)

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

February 7, 2003
Submission # 302000305
Order # 10477
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NMB IF
NMB IF

Sample I.D.: 1470-1490 Packer
Collected: 02/06/03 12:55
Received: 02/06/03 15:38
Collected by: John E. Petrous

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Specific Conductance {grab}	18330	umhos	120.1	1.0	02/06/2003	02/06/2003	SN
Hardness, Total	2400	mg/L	130.2	2.0	02/07/2003	02/07/2003	RDB
pH	7.72	units	150.1	1.0	02/06/2003	02/06/2003	SN
Residue, Total Filterable (TDS)	11880	mg/L	SM2540C (160.1)	1.0	02/06/2003	02/07/2003	YD/SN
Chloride	6150	mg/L	300.0	1.0	02/06/2003	02/06/2003	SMF
[illegible]	.40	mg/L	376.1	0.2	02/07/2003	02/07/2003	SN
Dissolved Sulfide	.40	mg/L	376.1	0.2	02/07/2003	02/07/2003	SN
Iron	1.83	mg/L	SM3111B (236.1)	0.05	02/06/2003	02/07/2003	ERA

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Maria E. Castellano
Laboratory Manager

PO# 37453

Submission Code:
Orders:
Entered to lims:

SEVERN TRENT LABORATORIES, INC.
CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

Original – Return w/Report   Yellow – Lab Copy   Pink – Sampler Copy

FDEP Facility No. ______
Page: ______ of ______
Sampling CompQAP No.) ______
Approval Date: ______

Report To: Jaeger Assoc. Ltd.   Report To Address:
Bill To: Jaeger Assoc. LLC   Billing Address:
Project Number/Name: NMB 11   Site Location: NMB 11
Project Contact: Dave Longren   Phone: 786 473 0801   FAX:
Alternate Contact: John C. Pereira   Phone: 786 473 3468   FAX:
Sampled By (print): John C. Pereira   Sampler's Signature:

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX DW SW GW SED S EFF HW BIO SA	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	Specific Gravity	Total Hardness	pH TDS	Total Iron Chlorides	Sulfate	Hydrogen Sulfide	Lot number of Sampling Containers Used
1	1120 to 1130	020803					W	NMB 11			–	–		–	–	
2	Packer															
3																
4																
5																
6																
7																
8																
9																
10																

ANALYSIS REQUIRED: PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW (✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED

Sample Condition as Received: Temp: ____ C Sealed Yes No

Special Comments: Total # of Containers:

QA/QC Report Needed? Yes No (See price guide for applicable fees)
Report Format: Standard Other (specify)

(1) Relinquished by Signature: [signature]	Date: 020803	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED Confirmation #
Company: Jaeger Assoc. Ltd.	Time:	Company:	Time:	Coating Code: ______ Q / L / D
(1) Received by Signature:	Date: 2/6/03	(2) Received by Signature:	Date:	Misc. Charges
Company: SL	Time: 13:36	Company:	Time:	SHADED AREAS ARE FOR LAB USE ONLY

STL-8242 (3-01)

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 21, 2003
Submission # 305001014
Order # 43047
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NW 191 ST & NW 9 AVE
City N.Miami Beach

Sample I.D.: 1 Of 10
Collected: 05/19/03 15:20
Received: 05/19/03 16:15
Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform, Fecal	BDL	CFU100ml	9222D	1.0	05/19/2003	05/20/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	05/19/2003	05/20/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, e PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 21, 2003
Submission # 305001014
Order # 43048
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NW 191 ST & NW 9 AVE
City N.Miami Beach

Sample I.D.: 2 Of 10
Collected: 05/19/03 15:50
Received: 05/19/03 16:15
Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform, Fecal	BDL	CFU100ml	9222D	1.0	05/19/2003	05/20/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	05/19/2003	05/20/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

Ref # 5/14-003

Submission Code: 5/5-1014
Orders: 43047 / 43048
Entered to lims: S

SEVERN TRENT LABORATORIES, INC.

CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

Original – Return w/Report Yellow – Lab Copy Pink – Sampler Copy

FDEP Facility No. _____
Page: _____ of _____
Sampling CompQAP No.) _____
Approval Date: _____

Report To: Dave Ingram
Report To Address: 2801 NW 6th ave Miami
Bill To: Jaffer Assoc. Ltd.
Billing Address: Fl. 33127
Project Number/Name: City N. Miami Beach
Site Location: NW 191 St & NW 9th ave
Project Contact: Dave Ingram Phone: 7864230601 FAX:
Alternate Contact: Jaffer Assoc Phone: 3055767363 FAX: 3055738711
Sampled By (print):
Sampler's Signature:

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX (DW SW GW SED S EFF HW BIO SA)	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	ANALYSIS REQUIRED: PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW (✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED: TOTAL + FECAL COLIFORM	Lot number of Sampling Containers Used
1	1 of 10	5/19/03	320PM				DW	43047	1	✓	
2	2 of 10	5/19/03	350PM				DW	43048	1	✓	
3											
4											
5											
6											
7											
8											
9											
10											

Sample Condition as Received: Temp 3 °C Sealed Yes No

Special Comments:
Total # of Containers: 2
QA/QC Report Needed? Yes No (See price guide for applicable fees)
Report Format: Standard Other (specify)

(1) Relinquished by Signature:	Date: 5/19/03	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED Confirmation #
Company:	Time:	Company:	Time:	Coating Code: Q / L / D
(1) Received by Signature:	Date: 5/19/03	(2) Received by Signature:	Date: 5/19/03	Misc. Charges
Company: STL	Time: 16:15	Company: STL-M2	Time: 16:15	SHADED AREAS ARE FOR LAB USE ONLY

Submission Code:
Orders:
Entered to lims:

SEVERN TRENT LABORATORIES, INC.

CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

Original – Return w/Report Yellow – Lab Copy Pink – Sampler Copy

FDEP Facility No. _____
Page: _____ of _____
Sampling CompQAP No.) _____
Approval Date: _____

Report To:	Report To Address:
Bill To:	Billing Address:
Project Number/Name:	Site Location:
Project Contact: / Phone:	FAX:
Alternate Contact: / Phone:	FAX:
Sampled By (print):	Sampler's Signature:

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH ..... FLD	TEMP °C ..... FLD	COND ..... FLD	MATRIX DW SW GW SED S EFF HW BIO SA	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	ANALYSIS REQUIRED PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW (✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED						Sample Condition as Received Temp _____ C Sealed Yes No / Lot number of Sampling Containers Used
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																

Special Comments: Total # of Containers:

QA/QC Report Needed? Yes No (See price guide for applicable fees)

Report Format: Standard Other (specify)

(1) Relinquished by Signature:	Date: 5/13/02	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED Confirmation #
Company:	Time:	Company:	Time:	Coating Code: _____ O / L / D
(1) Received by Signature:	Date:	(2) Received by Signature:	Date:	Misc. Charges
Company:	Time:	Company:	Time:	SHADED AREAS ARE FOR LAB USE ONLY

STL 8242 (3-01)

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

Page 1
May 23, 2003
Submission # 305001029
Order # 43171
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NW 191St & NW 9th Ave.
City N. Miami Beach

Sample I.D.: 3 of 10
Collected: 05/20/03 10:15
Received: 05/20/03 11:15
Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform, Fecal	BDL	CFU100ml	9222D	1.0	05/20/2003	05/21/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	05/20/2003	05/21/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, e PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 305001029
Order # 43172
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NW 191St. & NW 9th Ave.
City N. Miami Beach

Sample I.D.: 4 of 10
Collected: 05/20/03 10:45
Received: 05/20/03 11:15
Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform, Fecal	BDL	CFU100ml	9222D	1.0	05/20/2003	05/21/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	05/20/2003	05/21/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

Kat # JM - 5/14 - 003

Submission Code: 03/05-1029
Orders: 43171 - 43172
Entered to lims:

SEVERN TRENT LABORATORIES, INC.
CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

Original – Return w/Report Yellow – Lab Copy Pink – Sampler Copy

FDEP Facility No.
Page: of
Sampling CompQAP No.)
Approval Date:

Report To:	Dave Ingram	Report To Address:	2801 NW 6th ave Miami FL 33127
Bill To:	Jaffer Assoc	Billing Address:	" " " "
Project Number/Name:	City N. Miami Beach	Site Location:	NW 191 St & NW 9th ave
Project Contact:	Dave Ingram	Phone: 7866230601	FAX:
Alternate Contact:	Jaffer Assoc	Phone: 3055767363	FAX: 3055738711
Sampled By (print):		Sampler's Signature:	

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX DW SW GW SED S EFF HW BIO SA	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	ANALYSIS REQUIRED – PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW (✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED: Total & Fecal Coliform	Sample Condition as Received: Temp 4.1 °C; Sealed Yes No	Lot number of Sampling Containers Used
1	3 of 10	5/20/03	10:45AM				DW	43171	1	✓		
2	4 of 10	5/20/03	10:45AM				DW	43172	1	2		
3												
4												
5												
6												
7												
8												
9												
10												

Special Comments: Total # of Containers:

QA/QC Report Needed? Yes No (See price guide for applicable fees)

Report Format: Standard Other (specify)

(1) Relinquished by Signature:	Date: 5/20/03	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED
Company:	Time:	Company:	Time:	Confirmation #
(1) Received by Signature:	Date: 5/20/03	(2) Received by Signature:	Date: 5/20/03	Coating Code: Q / L / D
Company: STL	Time: 11:15	Company:	Time: 1120	Misc. Charges
				SHADED AREAS ARE FOR LAB USE ONLY

SEVERN TRENT LABORATORIES, INC.

CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

Submission Code:
Orders:
Entered to lims:

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

FDEP Facility No.
Page: of
Sampling CompQAP No.)
Approval Date:

Original – Return w/Report | Yellow – Lab Copy | Pink – Sampler Copy

Report To:	Report To Address:
Bill To:	Billing Address:
Project Number/Name:	Site Location:
Project Contact: Phone:	FAX:
Alternate Contact: Phone:	FAX:
Sampled By (print):	Sampler's Signature:

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH ..... FLD	TEMP °C ..... FLD	COND ..... FLD	MATRIX DW SW GW SED S EFF HW BIO SA	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	ANALYSIS REQUIRED PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW (✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED						Sample Condition as Received Temp ____ C Sealed Yes No / Lot number of Sampling Containers Used
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																

Special Comments: | Total # of Containers:

QA/QC Report Needed? Yes No (See price guide for applicable fees)

Report Format: Standard Other (specify)

(1) Relinquished by Signature:	Date: 5/20/03	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED Confirmation #
Company:	Time:	Company:	Time:	Coating Code: Q / L / D
(1) Received by Signature:	Date: 5/20/03	(2) Received by Signature:	Date:	Misc. Charges
Company:	Time: 11:15	Company:	Time:	SHADED AREAS ARE FOR LAB USE

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 305001117
Order # 43699
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NE 191st St. & NW 9th Ave.
City of North Miami Beach.

Sample I.D.: 5 of 10
Collected: 05/21/03 13:40
Received: 05/21/03 14:45
Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform, Fecal	BDL	CFU100ml	9222D	1.0	05/21/2003	05/22/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	05/21/2003	05/22/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, ıe PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 305001117
Order # 43700
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NE 191st St. & NW 9th Ave.
City of North Miami Beach.

Sample I.D.: 6 of 10
Collected: 05/21/03 14:10
Received: 05/21/03 14:45
Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform, Fecal	BDL	CFU100ml	9222D	1.0	05/21/2003	05/22/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	05/21/2003	05/22/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

NEW JM - 5/14-003

SEVERN TRENT LABORATORIES, INC.

CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

Original – Return w/Report Yellow – Lab Copy Pink – Sampler Copy

Submission Code: 03/05-1117
Orders: 43699
Entered to Jims: SD

FDEP Facility No
Page: of
Sampling CompQAP No.)
Approval Date:

Report To: Dave Ingram
Report To Address: 2801 NW 6th ave Miami Fl 33127
Bill To: Jaffer Assoc
Billing Address:
Project Number/Name: City North Miami Beach
Site Location: NW 191 St & NW 9th ave
Project Contact: Dave Ingram
Phone: 7864230601
FAX:
Alternate Contact: Jaffer Assoc
Phone: 305-5767363
FAX: 305-5738711
Sampled By (print):
Sampler's Signature:

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX (DW SW GW SED S EFF HW BIO SA)	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	ANALYSIS REQUIRED: PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW (✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED	Sample Condition as Received: Temp C, Sealed Yes No	Lot number of Sampling Containers Used
										Total & Fecal coliform		
1	5 of 10	5/21/03	1:40PM				DW	43699	✓	✓		
2	6 of 10	5/21/03	2:10PM				DW	43700	✓	✓		
3												
4												
5												
6												
7												
8												
9												
10												

Special Comments:
Total # of Containers: 2
QA/QC Report Needed? Yes No (See price guide for applicable fees)
Report Format: Standard Other (specify)

(1) Relinquished by Signature:	Date: 5/21/03	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED
Company:	Time: 14:45	Company:	Time:	Confirmation #
(1) Received by Signature:	Date: 5/21/03	(2) Received by Signature: SM MM	Date: 5/21/03	Coating Code: Q / L / D
Company: SDL	Time: 14:45	Company: STL-MIA	Time: 15:00	Misc. Charges
				SHADED AREAS ARE FOR LAB USE ONLY

Submission Code:
Orders:
Entered to lims:

SEVERN TRENT LABORATORIES, INC.

CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

Original – Return w/Report Yellow – Lab Copy Pink – Sampler Copy

FDEP Facility No.
Page: of
Sampling CompQAP No.)
Approval Date:

Report To: Report To Address:
Bill To: Billing Address:
Project Number/Name: Site Location:
Project Contact: Phone: FAX:
Alternate Contact: Phone: FAX:
Sampled By (print): Sampler's Signature:

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH ..... FLD	TEMP °C ..... FLD	COND ..... FLD	MATRIX DW SW GW SED S EFF HW BIO SA	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	ANALYSIS REQUIRED PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW (✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED						Sample Condition as Received Temp C Sealed Yes No / Lot number of Sampling Containers Used
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																

Special Comments: Total # of Containers:

QA/QC Report Needed? Yes No (See price guide for applicable fees)
Report Format: Standard Other (specify)

(1) Relinquished by Signature:	Date: 12/1/03	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED Confirmation #
Company:	Time:	Company:	Time:	Coating Code: O / L / D
(1) Received by Signature:	Date:	(2) Received by Signature:	Date:	Misc. Charges
Company:	Time:	Company:	Time:	SHADED AREAS ARE FOR LAB USE

STL 8242 (3 01)

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 28, 2003
Submission # 305001208
Order # 44114
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NW 191 St. & NW 9th. Ave.
City of North Miami Beach

Sample I.D.: 7 of 10
Collected: 05/22/03 11:00
Received: ~~05/22/03~~ 12:18
Collected by: D.Ingram

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform, Fecal	BDL	CFU100ml	9222D	1.0	05/22/2003	05/23/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	05/22/2003	05/23/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion,
.e PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 28, 2003
Submission # 305001208
Order # 44115
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NW 191 St. & NW 9th. Ave.
City of North Miami Beach

Sample I.D.: 8 of 10
Collected: 05/22/03 11:30
Received: 05/22/03 12:18
Collected by: D.Ingram

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform, Fecal	BDL	CFU100ml	9222D	1.0	05/22/2003	05/23/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	05/22/2003	05/23/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

ref # UM-5/14-03 & 2 chain of custody

SEVERN TRENT LABORATORIES, INC.

CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

Original – Return w/Report Yellow – Lab Copy Pink – Sampler Copy

Submission Code: 03/05-1208
Orders: 44114-44115
Entered to lims: RA

FDEP Facility No. _____
Page: _____ of _____
Sampling CompQAP No.) _____
Approval Date: _____

Report To:	Dave Ingram	Report To Address:	2801 NW 6th ave Miami FL 33127
Bill To:	Jaffer Associates	Billing Address:	
Project Number/Name:	City North Miami Beach	Site Location:	NW 19 St & NW 9th ave
Project Contact:	Dave Ingram	Phone: 786 4230601	FAX:
Alternate Contact:	Jaffer Assoc	Phone: 3055767363	FAX: 3055738711
Sampled By (print):	Dave Ingram	Sampler's Signature:	

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX (DW SW GW SED S EFF HW BIO SA)	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	ANALYSIS REQUIRED – PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW (✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED: Total fecal Coliform	Sample Condition as Received: Temp: ____C, Sealed Yes No; Lot number of Sampling Containers Used
1	7 of 10	5/22/03	11AM				DW	44114	1	(✓)	
2	7 of 10	5/22/03	11AM				DW		1		
3	3 of 10	5/22/03	1150AM				DW	44115	1	✓	
4	3 of 10	5/22/03	1150AM				DW		1		
5											
6											
7											
8											
9											
10											

Special Comments:

Total # of Containers: 4

QA/QC Report Needed? Yes No (See price guide for applicable fees)

Report Format: Standard Other (specify)

(1) Relinquished by Signature:	Date: 5/22/03	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED
Company:	Time:	Company:	Time:	Confirmation #
(1) Received by Signature:	Date: 5/22/03	(2) Received by Signature: NMESNYZ	Date: 5/22/03	Coating Code: Q / L / D
Company: SGS	Time: 19:18	Company:	Time: 1230	Misc. Charges
				SHADED AREAS ARE FOR LAB USE ONLY

STL 8042 (3-01)

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 28, 2003
Submission # 305001286
Order # 44574
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NW 191 St. & NW 9th. Ave.
City of N.Miami Beach

Sample I.D.: 9 of 10
Collected: 05/23/03 09:30
Received: 05/23/03 10:45
Collected by: D.Ingram

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform, Fecal	BDL	CFU100ml	9222D	1.0	05/23/2003	05/24/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	05/23/2003	05/24/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 28, 2003
Submission # 305001286
Order # 44576
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NW 191 St. & NW 9th. Ave.
City of N.Miami Beach

Sample I.D.: 10 of 10
Collected: 05/23/03 10:00
Received: 05/23/03 10:45
Collected by: D.Ingram

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform, Fecal	BDL	CFU100ml	9222D	1.0	05/23/2003	05/24/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	05/23/2003	05/24/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
'Qualifier following result conforms to FAC 62-160 Table 7******Unless otherwise noted, mg/Kg denotes wet weight***
62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

Ref # JM-5/14-003

SEVERN TRENT LABORATORIES, INC.

CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

Original – Return w/Report Yellow – Lab Copy Pink – Sampler Copy

Submission Code: 03/05 = 128C
Orders: 44574-44576
Entered to lims: RA

FDEP Facility No. _____
Page: _____ of _____
Sampling CompQAP No.) _____
Approval Date: _____

Report To: Dave Ingram
Report To Address: 2801 NW 6th ave Miami FL 33127
Bill To: Jaffer Assoc
Billing Address:
Project Number/Name: City N. Miami Beach
Site Location: NW 191st & NW 9th ave
Project Contact: Dave Ingram Phone: 786-423-0601 FAX:
Alternate Contact: Jaffer Assoc Phone: 305-5767563 FAX: 3055738711
Sampled By (print): Dave Ingram
Sampler's Signature:

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH ..... FLD	TEMP °C ..... FLD	COND ..... FLD	MATRIX (DW) SW GW SED S EFF HW BIO SA	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	ANALYSIS REQUIRED – PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW (✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED	Sample Condition as Received: Temp____C Sealed Yes No / Lot number of Sampling Containers Used
1	9 of 10	5/23/03	9:30				DW	44574	1	Total Fecal Coliform	
2	9 of 10	5/23/03	9:30				DW		1		
3	10 of 10	5/23/03	10:00				DW	44576	1		
4	10 of 10	5/23/03	10:06				DW		1		
5											
6											
7											
8											
9											
10											

Special Comments:
Total # of Containers: 4
QA/QC Report Needed? Yes No (See price guide for applicable fees)
Report Format: Standard Other (specify)

(1) Relinquished by Signature:	Date: 5/23/03	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED / Confirmation #	
Company:	Time: 10:45 AM	Company:	Time:	Coating Code: ____ Q / L / D	
(1) Received by Signature:	Date: 5/23/03	(2) Received by Signature:	Date: 5/23/03	Misc. Charges	
Company: SR	Time: 10:45	Company:	Time: 1105	SHADED AREAS ARE FOR LAB USE ONLY	

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD.
2801 N.W. 6th Avenue
Miami, FL 33127

February 5, 2003
Submission # 302000115
Order # 9486
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NMB IF
NMB IF

Sample I.D.: 1045 #1 Annuals
Collected: 02/04/03 13:00
Received: 02/04/03 13:35
Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Specific Conductance {grab}	5590	umhos	120.1	1.0	02/04/2003	02/04/2003	RDB
Hardness, Total	805	mg/L	130.2	2.0	02/05/2003	02/05/2003	RDB
pH	7.90	units	150.1	1.0	02/04/2003	02/04/2003	RDB
Residue, Total Filterable (TDS)	3440	mg/L	SM2540C (160.1)	1.0	02/04/2003	02/05/2003	YD
Chloride	1520	mg/L	300.0	1.0	02/04/2003	02/04/2003	SMF
Sulfide	2.00	mg/L	376.1	0.2	02/05/2003	02/05/2003	SN
Dissolved Sulfide	2.00	mg/L	376.1	0.2	02/05/2003	02/05/2003	SN
Iron	0.47	mg/L	SM3111B (236.1)	0.05	02/04/2003	02/05/2003	ERA

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Maria E. Castellano
Laboratory Manager

WO# 37425

Submission Code: 03/2-115
Order: 9486
Entered to lims: CA

SEVERN TRENT LABORATORIES, INC.

CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

Original – Return w/Report | Yellow – Lab Copy | Pink – Sampler Copy

FDEP Facility No. ______
Page: ____ of ____
Sampling CompQAP No.) ______
Approval Date: ______

Report To: ~~JAE~~ JAFFER Assoc Ltd | Report To Address:
Bill To: JAFFER Assoc Ltd | Billing Address:
Project Number/Name: NMB IF | Site Location: NMB IF
Project Contact: Dave Ingram | Phone: 786-423 0601 | FAX:
Alternate Contact: John E. Petrous | Phone: 786-423 3468 | FAX:
Sampled By (print): | Sampler's Signature:

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX DW SW GW SED S EFF HW BIO SA	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	Specific Conduct	Total Hardness	PH TDS	Total Iron	Chloride Sulfide	Hydrogen Sulfide	Lot number of Sampling Containers Used
1	1045' #1	02-04-03	1300				W			✓	✓	✓	✓	✓	✓	
2	Analysis															
3																
4																
5																
6																
7																
8																
9																
10																

ANALYSIS REQUIRED: PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW (✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED

Sample Condition as Received: Temp: ____ °C

Special Comments: | Total # of Containers:

QA/QC Report Needed? Yes No (See price guide for applicable fees)
Report Format: Standard Other (specify)

(1) Relinquished by Signature: [signature]	Date: 020403	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED 2/18/03 Confirmation #
Company: Jaffer Assoc Ltd	Time: 13:35	Company:	Time:	Quoting Code: Q/L/D
(1) Received by Signature: [signature]	Date: 2/4/03	(2) Received by Signature:	Date:	Misc. Charges:
Company: STL	Time: 13:35	Company:	Time:	SHADED AREAS ARE FOR LAB USE ONLY

SEVERN TRENT **STL**

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

February 7, 2003
Submission # 302000306
Order # 10481
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NMB IF
NMB IF

Sample I.D.: Annuals #2
Collected: 02/06/03 12:50
Received: 02/06/03 15:38
Collected by: John E. Petrous

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Specific Conductance (grab)	5950	umhos	120.1	1.0	02/06/2003	02/06/2003	SN
Hardness, Total	860	mg/L	130.2	2.0	02/07/2003	02/07/2003	RDB
pH	7.92	units	150.1	1.0	02/06/2003	02/06/2003	SN
Residue, Total Filterable (TDS)	3750	mg/L	SM2540C (160.1)	1.0	02/06/2003	02/07/2003	YD/SN
Chloride	1690	mg/L	300.0	1.0	02/06/2003	02/06/2003	SMF
ide	2.40	mg/L	376.1	0.2	02/07/2003	02/07/2003	SN
Dissolved Sulfide	2.40	mg/L	376.1	0.2	02/07/2003	02/07/2003	SN
Iron	BDL	mg/L	SM3111B (236.1)	0.05	02/06/2003	02/07/2003	ERA

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535
**These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Laboratory Manager

PO# 37433

SEVERN TRENT LABORATORIES, INC.

CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

Original – Return w/Report Yellow – Lab Copy Pink – Sampler Copy

Submission Code: 07/02 306
Order#: 1048
Entered by:

FDEP Facility No.
Page: of
Sampling CompQAP No.)
Approval Date:

Report To: JAFFER ASSOC LTD
Report To Address:
Bill To: JAFFER ASSOC LTD
Billing Address:
Project Number/Name: NMB 1F
Site Location: NMB 1F
Project Contact: DAVE INGRAM Phone: 786 423 0601 FAX:
Alternate Contact: JOHN E. PETROUS Phone: 786 423 3468 FAX:
Sampled By (print): JOHN E. PETROUS
Sampler's Signature:

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX (DW SW GW SED S EFF HW BIO SA)	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	ANALYSIS REQUIRED: PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW (X) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED: Specific Conduct	Total Hardness	TDS	Total Iron	Chloride	Sulfide	Hydrogen Sulfide	Lot number of Sampling Containers Used
1	RAW WATER #2	020603	1250				W	NMB 1F		—	—	—	—	—	—	—
2																
3																
4																
5																
6																
7																
8																
9																
10																

Sample Condition: Received Temp Sealed Yes No

Due 2/7/03

Special Comments:
Total # of Containers:
QA/QC Report Needed? Yes No (See price guide for applicable fees)
Report Format: Standard Other (specify)

(1) Relinquished by Signature:	Date: 020603	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED Confirmation #
Company: JAFFER ASSOC LTD	Time:	Company:	Time:	Quoting Code: Q1 / D
(1) Received by Signature:	Date: 2/6/03	(2) Received by Signature:	Date:	Misc. Charges:
Company: SDL	Time: 15:38	Company:	Time:	SHADED AREAS ARE FOR LAB USE

STL 9242 (7.01)

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

February 10, 2003
Submission # 302000394
Order # 10917
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NMB 1F
NMB 1F

Sample I.D.: Annualas #3
Collected: 02/07/03 10:55
Received: 02/07/03 14:20
Collected by: J.Petrous

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Specific Conductance {grab}	5480	umhos	120.1	1.0	02/10/2003	02/10/2003	SN
Hardness, Total	740	mg/L	130.2	2.0	02/07/2003	02/07/2003	RDB
pH	7.62	units	150.1	1.0	02/08/2003	02/08/2003	PR
Residue, Total Filterable (TDS)	3360	mg/L	SM2540C (160.1)	1.0	02/09/2003	02/10/2003	YD/SN
Chloride	1490	mg/L	300.0	1.0	02/07/2003	02/07/2003	SMF
S[illegible]	2.80	mg/L	376.1	0.2	02/07/2003	02/07/2003	SN
Dissolved Sulfide	2.80	mg/L	376.1	0.2	02/07/2003	02/07/2003	SN
Iron	BDL	mg/L	SM3111B (236.1)	0.05	02/07/2003	02/08/2003	ERA

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Maria E. Castellano
Laboratory Manager

PO# 11453

Submission Code: 32-394
Orders: 10917
Entered to lims: AH

SEVERN TRENT LABORATORIES, INC.
CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

Original – Return w/Report Yellow – Lab Copy Pink – Sampler Copy

FDEP Facility No. _____
Page: _____ of _____
Sampling CompQAP No.) _____
Approval Date: _____

Report To: JAFFER Assoc Ltd
Report To Address:
Bill To: JAFFER Assoc Ltd.
Billing Address:
Project Number/Name: NMB 1F
Site Location: NMB 1F
Project Contact: Dave Ingram Phone: 786 423 0601 FAX:
Alternate Contact: John E. Petkous Phone: 786 423 3468 FAX:
Sampled By (print): John E Petkous
Sampler's Signature:

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX (DW SW GW SED S EFF HW BIO SA)	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	ANALYSIS REQUIRED: Specific Conduct	Total Hardness	PH TDS	Total Iron Chloride	Sulfide	Hydrogen Sulfide	Sample Condition as Received / Lot number of Sampling Containers Used
1	Annulus #3	020703	1055				W	NMB 1F 10917		—	—	—	—	—	—	Temp 4.0 C; Sealed Yes No
2																
3																
4																
5																
6																
7																
8																
9																
10																

Special Comments:
Total # of Containers:

PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW
(✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED

QA/QC Report Needed? Yes No (See price guide for applicable fees)
Report Format: Standard Other (specify)

(1) Relinquished by Signature:	Date: 020703	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED
Company: Jaffer Assoc Ltd	Time:	Company:	Time:	Confirmation #
(1) Received by Signature:	Date: 2/2/03	(2) Received by Signature:	Date: 2/2/03	Coating Code: _____ Q / L / D
Company:	Time: 1345	Company: SM Miami	Time: 14:20	Misc. Charges
				SHADED AREAS ARE FOR LAB USE ONLY

SEVERN TRENT STL

DRAFT

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

February 11, 2003
Submission # 302000529
Order # 11525
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NMB 1F
NWB 1F

Sample I.D.: Annualas #4
Collected: 02/10/03 15:08
Received: 02/10/03 17:00
Collected by: John E. Petrous

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Specific Conductance {grab}	5470	umhos	120.1	1.0	02/11/2003	02/11/2003	SMF
Hardness, Total	790	mg/L	130.2	2.0	02/11/2003	02/11/2003	RDB
pH	7.72	units	150.1	1.0	02/11/2003	02/11/2003	PR
Residue, Total Filterable (TDS)	PENDING	mg/L	SM2540C (160.1)	1.0			
Chloride	1480	mg/L	300.0	1.0	02/11/2003	02/11/2003	SMF
S 'e	2.00	mg/L	376.1	0.2	02/11/2003	02/11/2003	RDB
Dissolved Sulfide	2.00	mg/L	376.1	0.2	02/11/2003	02/11/2003	RDB
Iron	0.06	mg/L	SM3111B (236.1)	0.05	02/10/2003	02/11/2003	MAH

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Maria E. Castellanos
Laboratory Manager

P21H [illegible]

Submission Code: / Orders: / Entered to lims:	**SEVERN TRENT LABORATORIES, INC.** **CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)** 10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025 (954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875 Original – Return w/Report Yellow – Lab Copy Pink – Sampler Copy	FDEP Facility No. Page: ___ of ___ Sampling CompQAP No.) Approval Date:

Report To: [illegible] — Report To Address:

Bill To: [illegible] — Billing Address:

Project Number/Name: [illegible] — Site Location: [illegible]

Project Contact: [illegible] — Phone: 786 423 [illegible] — FAX:

Alternate Contact: [illegible] — Phone: 7864233465 — FAX:

Sampled By (print): [illegible] — Sampler's Signature:

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX DW SW GW SED S EFF HW BIO SA	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	Specific Conductivity	Total Hardness	pH TDS	Total [illegible] Chlorides	Sulfate	Hydrogen Sulfide	Sample Condition as Received: Temp ___ C Sealed Yes No / Lot number of Sampling Containers Used
1	[illegible]	021003	1508				[illegible]			—	—	—	—	—	—	
2	[illegible]															
3																
4																
5																
6																
7																
8																
9																
10																

Special Comments: — Total # of Containers: — QA/QC Report Needed? Yes No (See price guide for applicable fees)

Report Format: Standard Other (specify)

(1) Relinquished by Signature: [signature]	Date: 021003	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED Confirmation # BH0[illegible]
Company: Jaffer Assoc. [illegible]	Time:	Company:	Time:	Coating Code: ___ Q / L / D
(1) Received by Signature: [signature]	Date: 2/10/03	(2) Received by Signature:	Date:	Misc. Charges
Company: S[illegible]	Time: 17:50	Company:	Time:	SHADED AREAS ARE FOR LAB USE ONLY

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

February 12, 2003
Submission # 302000600
Order # 11914
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NMB 1F
NMB 1F

Sample I.D.: Annualas#5
Collected: 02/11/03 00:00
Received: 02/11/03 17:45
Collected by: J. Petrous

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Specific Conductance (grab)	5440	umhos	120.1	1.0	02/12/2003	02/12/2003	RDB
Hardness, Total	760	mg/L	130.2	2.0	02/12/2003	02/12/2003	RDB
pH	7.96	units	150.1	1.0	02/12/2003	02/12/2003	RDB
Residue, Total Filterable (TDS)	3460	mg/L	SM2540C (160.1)	1.0	02/12/2003	02/12/2003	YD
Chloride	1580	mg/L	300.0	1.0	02/12/2003	02/12/2003	SMF
Sulfide	2.80	mg/L	376.1	0.2	02/12/2003	02/12/2003	SN
Dissolved Sulfide	2.80	mg/L	376.1	0.2	02/12/2003	02/12/2003	SN
Iron	BDL	mg/L	SM3111B (236.1)	0.05	02/11/2003	02/12/2003	ERA

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.

Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Maria E. Castellano
Laboratory Manager

Post

SEVERN TRENT LABORATORIES, INC.

CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025

(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

FDEP Facility No. _____

Page: _____ of _____

Sampling CompQAP No.) _____

Approval Date: _____

Original – Return w/Report Yellow – Lab Copy Pink – Sampler Copy

Report To: JAFFER Assoc Ltd

Report To Address:

Bill To: JAFFER Assoc. Ltd

Billing Address:

Project Number/Name: NMBIF

Site Location: NMBIF

Project Contact: Dave Ingram Phone: 786 423 0601 FAX:

Alternate Contact: John E. Petrous Phone: 786 423 3468 FAX:

Sampled By (print): John E. Petrous

Sampler's Signature:

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX (DW SW GW SED S EFF HW BIO SA)	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	ANALYSIS REQUIRED: Specific Conduct	Total Hardness	PH TDS	Total Iron	Chloride	Sulfide	Hydrogen Sulfide	Lot number of Sampling Containers Used
1	Ammonia #5	021103					W	11914		–	–	–	–	–	–		
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10								Total # of Containers:									

ANALYSIS REQUIRED

PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW

(✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED

Rush #BH098 due 2/12/03

Special Comments:

QA/QC Report Needed? Yes No (See price guide for applicable fees)

Report Format: Standard Other (specify)

(1) Relinquished by Signature:	Date: 021108	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED
Company: JAFFER Assoc Ltd	Time: 1415	Company:	Time:	Confirmation #
(1) Received by Signature:	Date: 2/11/03	(2) Received by Signature:	Date: 2/11/03	Coding Code: O / L / D
Company: STL-Miami	Time: 17:45	Company: STL-Miami	Time: 17:45	Misc. Charges

SHADED AREAS ARE FOR LAB USE

STL-8242 (3-01)

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Heterotrophic Plate Count	BDL	CFU/ml	SM 9215	1.0	04/23/2003	04/25/2003	E86616
Color (APHA)	7.5	Pt-Co	SM2120B (110.2)	1.0	04/23/2003	04/23/2003	RZ
Specific Conductance {grab}	5010	umhos	120.1	1.0	04/26/2003	04/26/2003	PR
Hardness, Calcium	670	mg/L	130.2	2.0	04/30/2003	04/30/2003	PR
Hardness, Total	668	mg/L	130.2	2.0	04/30/2003	04/30/2003	PR
Odo	10	TON	SM2150B (140.1)	1.0	04/23/2003	04/23/2003	RZ
pH	7.53	units	150.1	1.0	04/23/2003	04/23/2003	RZ
Residue, Total Filterable (TDS)	4100	mg/L	SM2540C (160.1)	1.0	04/28/2003	04/29/2003	YD
Turbidity	0.285	NTU	180.1	0.1	04/23/2003	04/23/2003	RZ
Bromide	7.85	mg/L	300.0	0.10	04/30/2003	04/29/2003	RDB/RZ
Chloride	1665	mg/L	300.0	1.0	04/29/2003	04/29/2003	RDB
Fluoride	2.05	mg/L	300.0	0.04	04/24/2003	04/24/2003	RDB
Nitrate (as N)	BDL	mg/L	300.0	0.05	04/29/2003	04/29/2003	RDB/RZ
Nitrite (as N)	BDL	mg/L	300.0	0.05	04/29/2003	04/29/2003	RDB
Nitrate/Nitrite (as N)	BDL	mg/L	300.0	0.05	04/29/2003	04/29/2003	RDB
Sulfate	510	mg/L	300.0	1.0	04/30/2003	04/29/2003	RDB/RZ
Carbonate Alkalinity (CO3^2-)	BDL	mg/L	310.1	2.0	04/26/2003	04/30/2003	SN/RDB
Bicarbonate	104	mg/L	310.1	2.0	04/26/2003	04/26/2003	RDB

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Carbon Dioxide	94.0	mg/L	310.1	0.5	04/26/2003	04/26/2003	RDB
Chlorine, Residual	BDL	mg/L	330.4	0.05	04/23/2003	04/23/2003	RZ
Cyanide, Total	BDL	mg/L	335.3	0.004	04/28/2003	04/28/2003	DSR
Nitrogen (Ammonia) as N	0.293	mg/L	350.1	0.04	04/29/2003	04/29/2003	DSR
Nitrogen (Kjeldahl) as "N"	1.02	mg/L	351.2	0.1	04/27/2003	04/27/2003	DSR
Phosphorus, Total as "P"	BDL	mg/L	365.4	0.020	04/27/2003	04/27/2003	DSR
Phosphate, Total as "P"	BDL	mg/L	365.4	0.025	04/27/2003	04/27/2003	DSR
Silica, Reactive	12.8	mg/L	370.1	0.1	04/25/2003	04/25/2003	SN
Sulfide	3.20	mg/L	376.1	0.4	04/30/2003	04/30/2003	SN
Dissolved Sulfide	3.20	mg/L	376.1	0.2	04/30/2003	04/30/2003	SN
Biochemical Oxygen Demand	BDL	mg/L	405.1	2.0	04/23/2003	04/28/2003	YD
Chemical Oxygen Demand	24.8	mg/L	410.4	5.0	04/30/2003	04/30/2003	PR
Organic Carbon, Total	BDL	mg/L	415.1	0.10	04/24/2003	04/24/2003	SN
MBAS Surfactants as "LAS"	BDL	mg/L	SM5540C (425.1)	0.01	04/23/2003	04/23/2003	PR
Aluminum	BDL	mg/L	SM3111D(202.1)	0.1	04/23/2003	04/24/2003	MG
Antimony	BDL	mg/L	SM3113B (204.2)	0.005	04/23/2003	04/24/2003	ERA
Barium	BDL	mg/L	SM3111D (208.1)	0.05	04/23/2003	04/24/2003	MG
Beryllium	BDL	mg/L	SM3113B (210.2)	0.002	04/23/2003	04/25/2003	ERA

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Cadmium	BDL	mg/L	SM3113B (213.2)	0.005	04/23/2003	04/24/2003	MAH/RP
Chromium	BDL	mg/L	SM3113B (218.2)	0.005	04/23/2003	04/24/2003	MAH/RP
Copper	BDL	mg/L	SM3111B (220.1)	0.01	04/23/2003	04/24/2003	MAH
Iron	0.13	mg/L	SM3111B (236.1)	0.05	04/23/2003	04/24/2003	MAH
Lead	BDL	mg/L	SM3113B (239.2)	0.001	04/23/2003	04/23/2003	RP
Ma nese	BDL	mg/L	SM3111B (243.1)	0.05	04/23/2003	04/24/2003	MAH
Mercury	BDL	mg/L	SM3112B (245.1)	0.001	04/23/2003	04/24/2003	NMO
Nickel	0.004	mg/L	SM3113B (249.2)	0.002	04/23/2003	04/24/2003	RP
Potassium	28.0	mg/L	258.1	.5	04/23/2003	04/24/2003	RP
Silver	BDL	mg/L	SM3113B (272.2)	0.001	04/23/2003	04/24/2003	ERA
Sodium	820	mg/L	SM3111B (273.1)	1.0	04/23/2003	04/24/2003	RP
Zinc	0.06	mg/L	SM 3111B (289.1	.01	04/23/2003	04/24/2003	RP
Strontium	10.1	mg/L	SM 303A	0.01	04/23/2003	04/24/2003	MG
SM3113B Selenium in Drinking Waters	BDL	mg/L	SM3113B (270.2)	0.010	04/23/2003	04/26/2003	ERA
505 PCBs: 62-550.310(2)(c)			MEDF	1			
Hexachlorocyclopentdiene	BDL	ug/L	505	0.010	04/25/2003	05/01/2003	JT
Hexachlorobenzene	BDL	ug/L	505	0.010	04/25/2003	05/01/2003	JT
v-BHC (Lindane)	BDL	ug/L	505	0.010	04/25/2003	05/01/2003	JT

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Heptachlor	BDL	ug/L	505	0.010	04/25/2003	05/01/2003	JT
Heptachlor Epoxide	BDL	ug/L	505	0.010	04/25/2003	05/01/2003	JT
Endrin	BDL	ug/L	505	0.010	04/25/2003	05/01/2003	JT
Methoxychlor	BDL	ug/L	505	0.010	04/25/2003	05/01/2003	JT
Arochlor 1016	BDL	ug/L	505	0.010	04/25/2003	05/01/2003	JT
Arochlor 1221	BDL	ug/L	505	0.010	04/25/2003	05/01/2003	JT
Arochlor 1232	BDL	ug/L	505	0.010	04/25/2003	05/01/2003	JT
Arochlor 1242	BDL	ug/L	505	0.010	04/25/2003	05/01/2003	JT
Arochlor 1248	BDL	ug/L	505	0.010	04/25/2003	05/01/2003	JT
Arochlor 1254	BDL	ug/L	505	0.010	04/25/2003	05/01/2003	JT
Arochlor 1260	BDL	ug/L	505	0.010	04/25/2003	05/01/2003	JT
Toxaphene	BDL	ug/L	505	0.010	04/25/2003	05/01/2003	JT
Chordane	BDL	ug/L	505	0.010	04/25/2003	05/01/2003	JT
507 Triazine Pesticides: 62-550.310(2)(c)			MEDF	1			
Simazine	BDL	ug/L	507	0.500	04/25/2003	04/29/2003	JT
Atrazine	BDL	ug/L	507	0.200	04/25/2003	04/29/2003	JT
Alachlor	BDL	ug/L	507	0.010	04/25/2003	04/29/2003	JT
Surrogate: Stirophos	105.00	%					

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
515.1 Chlorophenoxy Herbicides: 62-550.310(2c)			MEDF	1			
Dalapon	BDL	ug/L	EPA 515.1	1.300	04/25/2003	04/28/2003	JT
2,4-D	BDL	ug/L	EPA 515.1	0.200	04/25/2003	04/28/2003	JT
Pentachlorophenol	BDL	ug/L	EPA 515.1	0.200	04/25/2003	04/28/2003	JT
2,4,5-TP (silvex)	BDL	ug/L	EPA 515.1	0.200	04/25/2003	04/28/2003	JT
[illegible]eb	BDL	ug/L	EPA 515.1	0.200	04/25/2003	04/28/2003	JT
Picloram	BDL	ug/l	EPA 515.1	0.200	04/25/2003	04/28/2003	JT
Surrogate: Acifluorfen	19.40	%					
524.2 Trihalomethanes: 62-550.310(2)(a)			MEDF	1			
Bromodichloromethane	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
Dibromochloromethane	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
Tribromomethane (Bromoform)	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
Trichloromethane (Chloroform)	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
TOTAL Trihalomethanes	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
SURROGATE: Dibromofluorobenzene	93.00	%					
SURROGATE: Toluene-d8	97.25	%					
SURROGATE: p-Bromofluorobenzene	99.20	%					
524.2 Volatile Organics: 62-550.310(2)(b)			MEDF	1			

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Vinyl Chloride	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
1,1-Dichloroethene	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
Methylene Chloride	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
Trans-1,2-Dichloroethene	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
Cis-1,2-Dichloroethene	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
1,1,1-Trichloroethane	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
Carbon Tetrachloride	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
Benzene	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
1,2-Dichloroethane	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
Trichloroethene	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
1,2-Dichloropropane	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
Toluene	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
1,1,2-Trichloroethane	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
Tetrachloroethene	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
Chlorobenzene	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
Ethylbenzene	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
m & p-Xylene	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
o-Xylene	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NW 191 ST. & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Styrene	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
1,4-Dichlorobenzene (para)	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
1,2-Dichlorobenzene (ortho)	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
1,2,4-Trichlorobenzene	BDL	ug/L	524.2	0.500	05/01/2003	05/01/2003	AR
SURROGATE: Dibromofluoromethane	97.25	%					
SURROGATE: Toluene-D8	97.25	%					
SURROGATE: p-Bromofluorobenzene	99.20	%					
524.2 (SM 5710B) THM 7 Day TFP {3< Cl-Residual <5}			MEDF	1			
Bromodichloromethane (7 Day TFP)	BDL	ug/L	524.2 (SM 5710B	0.500	05/01/2003	05/01/2003	AR
Dibromochloromethane (7 Day TFP)	BDL	ug/L	524.2 (SM 5710B	0.500	05/01/2003	05/01/2003	AR
Tribromomethane (Bromoform) (7 Day	BDL	ug/L	524.2 (SM 5710B	0.500	05/01/2003	05/01/2003	AR
Trichloromethane (Chloroform) (7 D	BDL	ug/L	524.2 (SM 5710B	0.500	05/01/2003	05/01/2003	AR
TOTAL THM (7 Day Formation Potenti	BDL	ug/L	524.2 (SM 5710B	0.500	05/01/2003	05/01/2003	AR
Res. Cl2 @ End of 7 Days	BDL	mg/L	524.2 (SM 5710B	1.000	05/01/2003	05/01/2003	AR
525.2 Semivolatile Organics: 62-550.310(2)(c)			MEDF	1			
Di(2-Ethylhexyl)phthalate	BDL	ug/L	EPA 525.2	5.000	04/25/2003	05/01/2003	MD
Di(2-Ethylhexyl)adipate	BDL	ug/L	EPA 525.2	5.000	04/25/2003	05/01/2003	MD
Benzo(a)pyrene	BDL	ug/L	EPA 525.2	0.200	04/25/2003	05/01/2003	MD

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Pentachlorophenol	BDL	ug/L	EPA 525.2	1.000	04/25/2003	05/01/2003	MD
SURROGATE: 2-Fluorophenol	44.20	%					
SURROGATE: Phenol D-6	47.40	%					
SURROGATE: 2,4,6 Tribromophenol	50.80	%					
SURROGATE: Nitrobenzene D-5	79.80	%					
SURROGATE: 2-Fluorobiphenol	2.76	%					
SURROGATE: 4-Terphenyl D-14	4.18	%					
Thallium	<0.0020	mg/L	200.9	0.002	04/25/2003	04/25/2003	E81010
504.1 EDB, DBCP in Drinking Water			MEDF	1			
1,2-Dibromo-3-Chloropropane (DBCP)	<0.020	ug/L	EPA 504.1 ECD	0.020	05/01/2003	05/01/2003	E87052
Ethylene Dibromide (EDB)	<0.020	ug/L	EPA 504.1 ECD	0.020	05/01/2003	05/01/2003	E87052
EPA Radium 226 & 228			MEDF	1			
EPA 903.1 Radium 226	3.34	pCi/L	EPA 903.1	0.270	04/25/2003	05/12/2003	E87689
EPA RA-05 Radium 228	U-0.32	pCi/L	EPA 903.1	0.790	04/25/2003	05/12/2003	E87689
Arsenic in Drinking Waters	<0.0050	mg/L	200.7	0.005	04/28/2003	04/28/2003	E81010
SUB 552 (HAA) Haloacetic Acid	SEE ATTCH	ug/L	552.2	1	04/28/2003	05/02/2003	E87089
SUB 215.1 Calcium In Drinking Waters	110	mg/L	215.1	.5	04/28/2003	04/28/2003	E81010
SUB 242.1 Magnesium In Drinking Waters	120	mg/L	242.1	.5	04/28/2003	04/28/2003	E81010

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
SUB 531.1 Carbamate Pesticides: 62-550.310(2)			MEDF	1			
Carbofuran	<2.5	ug/L	531.1	2.500	04/25/2003	04/26/2003	E87052
Oxamyl (vydate)	<2.5	ug/L	531.1	2.500	04/25/2003	04/26/2003	E87052
SUB 547.1 Glyphosate	<25	ug/L	547.1	25.0	04/29/2003	04/29/2003	E87052
SUB 548.1 Endothall	<10	ug/L	548.1	10.0	04/29/2003	05/01/2003	E87052
S 49.2 Diquat/Paraquat: 62-550.310(2)(c)			MEDF	1			
Diquat	<5.0	ug/L	549.2	5.000	04/30/2003	05/01/2003	E87052
SUB EPA 900 Gross Alpha	21	pCi/L	EPA 900	20.0	05/15/2003	05/18/2003	E87689
EPA 900 Gross Beta	44	pCi/L	EPA 900	21.0	05/15/2003	05/18/2003	E87689

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

* SAMPLE WAS FIRST ANALYZED ON 4/24/03 FOR NO3/NO2

Maria E. Castellano
Laboratory Manager

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

QUICK REFERENCE SUMMARY REPORT
ALL BDL'S FOR ANALYTES HAVE BEEN REMOVED

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach
Order # 34636

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Heterotrophic Plate Count	BDL	CFU/ml	SM 9215	1.0	04/23/2003	04/25/2003	E86616
Color (APHA)	7.5	Pt-Co	SM2120B (110.2)	1.0	04/23/2003	04/23/2003	RZ
Specific Conductance {grab}	5010	umhos	120.1	1.0	04/26/2003	04/26/2003	PR
Hardness, Calcium	670	mg/L	130.2	2.0	04/30/2003	04/30/2003	PR
Hardness, Total	668	mg/L	130.2	2.0	04/30/2003	04/30/2003	PR
Odor	10	TON	SM2150B (140.1)	1.0	04/23/2003	04/23/2003	RZ
pH	7.53	units	150.1	1.0	04/23/2003	04/23/2003	RZ
Residue, Total Filterable (TDS)	4100	mg/L	SM2540C (160.1)	1.0	04/28/2003	04/29/2003	YD
Turbidity	0.285	NTU	180.1	0.1	04/23/2003	04/23/2003	RZ
Bromide	7.85	mg/L	300.0	0.10	04/30/2003	04/29/2003	RDB/RZ
Chloride	1665	mg/L	300.0	1.0	04/29/2003	04/29/2003	RDB
Fluoride	2.05	mg/L	300.0	0.04	04/24/2003	04/24/2003	RDB
Nitrate (as N)	BDL	mg/L	300.0	0.05	04/29/2003	04/29/2003	RDB/RZ
Nitrite (as N)	BDL	mg/L	300.0	0.05	04/29/2003	04/29/2003	RDB
Nitrate/Nitrite (as N)	BDL	mg/L	300.0	0.05	04/29/2003	04/29/2003	RDB
Sulfate	510	mg/L	300.0	1.0	04/30/2003	04/29/2003	RDB/RZ
Carbonate Alkalinity (CO3^2-)	BDL	mg/L	310.1	2.0	04/26/2003	04/30/2003	SN/RDB
Bicarbonate	104	mg/L	310.1	2.0	04/26/2003	04/26/2003	RDB
Carbon Dioxide	94.0	mg/L	310.1	0.5	04/26/2003	04/26/2003	RDB
Chlorine, Residual	BDL	mg/L	330.4	0.05	04/23/2003	04/23/2003	RZ
Cyanide, Total	BDL	mg/L	335.3	0.004	04/28/2003	04/28/2003	DSR
Nitrogen (Ammonia) as N	0.293	mg/L	350.1	0.04	04/29/2003	04/29/2003	DSR

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

QUICK REFERENCE SUMMARY REPORT
ALL BDL'S FOR ANALYTES HAVE BEEN REMOVED

Nitrogen (Kjeldahl) as "N"	1.02	mg/L	351.2	0.1	04/27/2003	04/27/2003	DSR
Phosphorus, Total as "P"	BDL	mg/L	365.4	0.020	04/27/2003	04/27/2003	DSR
Phosphate, Total as "P"	BDL	mg/L	365.4	0.025	04/27/2003	04/27/2003	DSR
Silica, Reactive	12.8	mg/L	370.1	0.1	04/25/2003	04/25/2003	SN
Sulfide	3.20	mg/L	376.1	0.4	04/30/2003	04/30/2003	SN
Dissolved Sulfide	3.20	mg/L	376.1	0.2	04/30/2003	04/30/2003	SN
Biochemical Oxygen Demand	BDL	mg/L	405.1	2.0	04/23/2003	04/28/2003	YD
Chemical Oxygen Demand	24.8	mg/L	410.4	5.0	04/30/2003	04/30/2003	PR
Organic Carbon, Total	BDL	mg/L	415.1	0.10	04/24/2003	04/24/2003	SN
MBAS Surfactants as "LAS"	BDL	mg/L	SM5540C (425.1)	0.01	04/23/2003	04/23/2003	PR
Aluminum	BDL	mg/L	SM3111D(202.1)	0.1	04/23/2003	04/24/2003	MG
Antimony	BDL	mg/L	SM3113B (204.2)	0.005	04/23/2003	04/24/2003	ERA
Barium	BDL	mg/L	SM3111D (208.1)	0.05	04/23/2003	04/24/2003	MG
Beryllium	BDL	mg/L	SM3113B (210.2)	0.002	04/23/2003	04/25/2003	ERA
Cadmium	BDL	mg/L	SM3113B (213.2)	0.005	04/23/2003	04/24/2003	MAH/RP
Chromium	BDL	mg/L	SM3113B (218.2)	0.005	04/23/2003	04/24/2003	MAH/RP
Co	BDL	mg/L	SM3111B (220.1)	0.01	04/23/2003	04/24/2003	MAH
Iron	0.13	mg/L	SM3111B (236.1)	0.05	04/23/2003	04/24/2003	MAH
Lead	BDL	mg/L	SM3113B (239.2)	0.001	04/23/2003	04/23/2003	RP
Manganese	BDL	mg/L	SM3111B (243.1)	0.05	04/23/2003	04/24/2003	MAH
Mercury	BDL	mg/L	SM3112B (245.1)	0.001	04/23/2003	04/24/2003	NMO
Nickel	0.004	mg/L	SM3113B (249.2)	0.002	04/23/2003	04/24/2003	RP
Potassium	28.0	mg/L	258.1	.5	04/23/2003	04/24/2003	RP
Silver	BDL	mg/L	SM3113B (272.2)	0.001	04/23/2003	04/24/2003	ERA
Sodium	820	mg/L	SM3111B (273.1)	1.0	04/23/2003	04/24/2003	RP
Zinc	0.06	mg/L	SM 3111B (289.1)	.01	04/23/2003	04/24/2003	RP
Strontium	10.1	mg/L	SM 303A	0.01	04/23/2003	04/24/2003	MG
SM3113B Selenium in Drinking Water	BDL	mg/L	SM3113B (270.2)	0.010	04/23/2003	04/26/2003	ERA
505 PCBs: 62-550.310(2)(c)		DONE	MEDF	1	04/25/2003	05/01/2003	JT
507 Triazine Pesticides: 62-550.310(2)(c)		DONE	MEDF	1	04/25/2003	04/29/2003	JT
515.1 Chlorophenoxy Herbicides: 62-550.310(2c)		DONE	MEDF	1	04/25/2003	04/28/2003	JT
524.2 Trihalomethanes: 62-550.310(2)(a)		DONE	MEDF	1	05/01/2003	05/01/2003	AR

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

QUICK REFERENCE SUMMARY REPORT
ALL BDL'S FOR ANALYTES HAVE BEEN REMOVED

524.2 Volatile Organics: 62-550.310(2)(b)		DONE	MEDF	1	05/01/2003	05/01/2003	AR
524.2 (SM 5710B) THM 7 Day TFP {3< Cl-Residual <5}		DONE	MEDF	1	05/01/2003	05/01/2003	AR
525.2 Semivolatile Organics: 62-550.310(2)(c)		DONE	MEDF	1	04/25/2003	05/01/2003	MD
Thallium	<0.0020	mg/L	200.9	0.002	04/25/2003	04/25/2003	E81010
504.1 EDB, DBCP in Drinking Water		DONE	MEDF	1	05/01/2003	05/01/2003	E87052
1,2-Dibromo-3-Chloropropane (DBCP)	<0.020	ug/L	EPA 504.1 ECD	0.020	05/01/2003	05/01/2003	E87052
Ethylene Dibromide (EDB)	<0.020	ug/L	EPA 504.1 ECD	0.020	05/01/2003	05/01/2003	E87052
EPA Radium 226 & 228		DONE	MEDF	1	04/25/2003	05/12/2003	E87689
EPA 903.1 Radium 226	3.34	pCi/L	EPA 903.1	0.270	04/25/2003	05/12/2003	E87689
EPA RA-05 Radium 228	U-0.32	pCi/L	EPA 903.1	0.790	04/25/2003	05/12/2003	E87689
Arsenic in Drinking Waters	<0.0050	mg/L	200.7	0.005	04/28/2003	04/28/2003	E81010
SUB 552 (HAA) Haloacetic Acid	SEE ATTCH	ug/L	552.2	1	04/28/2003	05/02/2003	E870[illegible]
SUB 215.1 Calcium In Drinking Wate	110	mg/L	215.1	.5	04/28/2003	04/28/2003	E81010
SUB 242.1 Magnesium In Drinking Wa	120	mg/L	242.1	.5	04/28/2003	04/28/2003	E81010
SUB 531.1 Carbamate Pesticides: 62-550.310(2)		DONE	MEDF	1	04/25/2003	04/26/2003	E87052
Carbofuran	<2.5	ug/L	531.1	2.500	04/25/2003	04/26/2003	E87052
Oxamyl (vydate)	<2.5	ug/L	531.1	2.500	04/25/2003	04/26/2003	E87052
SUB 547.1 Glyphosate	<25	ug/L	547.1	25.0	04/29/2003	04/29/2003	E87052
SUB 548.1 Endothall	<10	ug/L	548.1	10.0	04/29/2003	05/01/2003	E87052
SUB 549.2 Diquat/Paraquat: 62-550.310(2)(c)		DONE	MEDF	1	04/30/2003	05/01/2003	E87052
Diquat	<5.0	ug/L	549.2	5.000	04/30/2003	05/01/2003	E87052
SUB EPA 900 Gross Alpha	21	pCi/L	EPA 900	20.0	05/15/2003	05/18/2003	E87689

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

QUICK REFERENCE SUMMARY REPORT
ALL BDL'S FOR ANALYTES HAVE BEEN REMOVED

EPA 900 Gross Beta	44	pCi/L	EPA 900	21.0	05/15/2003	05/18/2003	E87689

***FINAL NELAC COMPLIANT REPORT WILL FOLLOW.
BDL: Indicates Analyte is Below Detection Limit
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7
Unless otherwise noted, mg/Kg denotes wet weight
MEDF: Matrix Effect Dilution Factor

* SAMPLE WAS FIRST ANALYZED ON 4/24/03 FOR NO3/NO2

Maria E. Castellano
Laboratory Manager
Authorized Laboratory Management

Submission Code: 3/4-1211
Orders: 34636
Entered to lims: D

SEVERN TRENT LABORATORIES, INC.

CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8675

Original – Return w/Report Yellow – Lab Copy Pink – Sampler Copy

FDEP Facility No. _____
Page: _____ of _____
Sampling CompQAP No.) _____
Approval Date: _____

Report To: Dave Ingram
Report To Address:
Bill To: Jaffer Assoc. Ltd
Billing Address:
Project Number/Name: City of Miami Beach
Site Location: NW 19th Street & NW 9th Avenue.
Project Contact: Dave Ingram Phone: 786-423-0601 FAX:
Alternate Contact: John Petras Phone: 786-423-3468 FAX:
Sampled By (print): Dave Ingram
Sampler's Signature:

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX (DW) SW GW SED S EFF HW BIO SA	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	ANALYSIS REQUIRED (PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW; (✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED)	Lot number of Sampling Containers Used
										See Attached list for Analysis.	
1	WELL #1-F	4/22/03					DW			✓	500ml H2SO4 HDPE lot#3
2											1000ml UNP Amber lot#3
3											500ml HDPE lot#1
4											500ml HNO3 HDPE lot#3
5											500ml NaOH HDPE lot#1
6											500ml H2SO4 HDPE lot#1
7	Informed Client (Dave Ingram), not enough Sample volume received for analysis.										40ml HCl Vials lot#4
8	We sent bottles according to price quotation but client submitted his list of										40ml NaOH Vials lot#2
9	analysis that included extra testing (Rad 226 + 228, radon etc) 4/25/03 (W)										40ml UNP Vials lot#4
10	Dave advised to do what can be done. Cannot Collect more Samples.										Bacteria Bags

Special Comments: PO# 38023
Total # of Containers:
QA/QC Report Needed? Yes No (See price guide for applicable fees)
Report Format: Standard Other (specify)

(1) Relinquished by Signature:	Date: 4/24/03	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED Confirmation #
Company: STL-Miami	Time: 15:00	Company:	Time:	Coating Code: _____ Q / L / D
(1) Received by Signature: Noe Vargas	Date: 4/24/03	(2) Received by Signature:	Date:	Misc. Charges
Company: STL	Time: 7:00	Company:	Time:	SHADED AREAS ARE FOR LAB USE ONLY

Sample Condition as Received
Temp 3-1-6
Sealed Yes (No)

SEVERN TRENT STL

FFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
Heterotrophic Plate Count	34636	< 1.0	SM 9215	1.0	04/25/2003	E86616
Hardness, Calcium	34636	670	130.2	2.0	04/30/2003	PR
Hardness, Total	34636	668	130.2	2.0	04/30/2003	PR
Bromide	34636	7.85	300.0	0.10	04/29/2003	RDB/RZ
Carbonate Alkalinity (CO3^2-)	34636	< 2.0	310.1	2.0	04/30/2003	SN/RDB
Bicarbonate	34636	104	310.1	2.0	04/26/2003	RDB
Carbon Dioxide	34636	94.0	310.1	0.5	04/26/2003	RDB
Chlorine, Residual	34636	< 0.05	330.4	0.05	04/23/2003	RZ
Nitrogen (Ammonia) as N	34636	0.293	350.1	0.04	04/29/2003	DSR
Nitrogen (Kjeldahl) as "N"	34636	1.02	351.2	0.1	04/27/2003	DSR
Phosphorus, Total as "P"	34636	< 0.020	365.4	0.020	04/27/2003	DSR
Phosphate, Total as "P"	34636	< 0.025	365.4	0.025	04/27/2003	DSR
Silica, Reactive	34636	12.8	370.1	0.1	04/25/2003	SN
Sulfide	34636	3.20	376.1	0.4	04/30/2003	SN
Dissolved Sulfide	34636	3.20	376.1	0.2	04/30/2003	SN
Biochemical Oxygen Demand	34636	< 2.0	405.1	2.0	04/28/2003	YD

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
Strontium	34636	10.1	SM 303A	0.01	04/24/2003	MG
Surrogate: Stirophos	34636	1050	507	0.01	04/29/2003	JT
SURROGATE: Dibromofluorobenzene	34636	37.2	524.2	0.5	05/01/2003	AR
SURROGATE: Toluene-d8	34636	38.9	524.2	0.5	05/01/2003	AR
SURROGATE: p-Bromofluorobenzene	34636	24.8	524.2	0.5	05/01/2003	AR
SURROGATE: Dibromofluoromethane	34636	38.9	524.2		05/01/2003	AR
SURROGATE: Toluene-D8	34636	38.9	524.2		05/01/2003	AR
SURROGATE: p-Bromofluorobenzene	34636	24.8	524.2		05/01/2003	AR
THM-7 Day TFP: {3< Cl-Res. <5}	34636	1	524.2 (SM 5710B)		05/01/2003	AR
Bromodichloromethane (7 Day TFP)	34636	< 0.5	524.2 (SM 5710B)	0.5	05/01/2003	AR
Dibromochloromethane (7 Day TFP)	34636	< 0.5	524.2 (SM 5710B)	0.5	05/01/2003	AR
Tribromomethane (Bromoform) (7 Day	34636	< 0.5	524.2 (SM 5710B)	0.5	05/01/2003	AR
Trichloromethane (Chloroform) (7 D	34636	< 0.5	524.2 (SM 5710B)	0.5	05/01/2003	AR
TOTAL THM (7 Day Formation Potenti	34636	< 0.5	524.2 (SM 5710B)	0.5	05/01/2003	AR
Res. Cl2 @ End of 7 Days	34636	< 1.0	524.2 (SM 5710B)	1.0	05/01/2003	AR
Thallium	34636	<0.0020	200.9	0.002	04/25/2003	E81010

FFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
Arsenic in Drinking Waters	34636	<0.0050	200.7	0.005	04/28/2003	E81010
SUB 552 (HAA) Haloacetic Acid	34636	SEE ATTCH	552.2	1	05/02/2003	E87089
SUB 215.1 Calcium In Drinking Wate	34636	110	215.1	.5	04/28/2003	E81010
SUB 242.1 Magnesium In Drinking Wa	34636	120	242.1	.5	04/28/2003	E81010
EPA 900 Gross Beta	34636	44	EPA 900	21.0	05/18/2003	E87689

Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field

Qualifier following result conforms to FAC 17-160 Table 7
* SAMPLE WAS FIRST ANALYZED ON 4/24/03 FOR NO3/NO2

Maria E. Castellano
Laboratory Manager
Authorized Laboratory Management

JAFFER000188
Dave Ingram
Jaffer Associates, LTD.
2801 N.W. 6th Avenue
Miami, FL 33127

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

INORGANICS ANALYSIS
62-550.310(1)
PWS030
Units are mg/L; except Asbestos = MFL

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
1010 Barium	34636	< 0.05	SM3111D (208.1)	0.05	04/24/2003	MG
1015 Cadmium	34636	< 0.005	SM3113B (213.2)	0.005	04/24/2003	MAH/RP
1020 Chromium	34636	< 0.005	SM3113B (218.2)	0.005	04/24/2003	MAH/RP
1024 Cyanide, Total	34636	< 0.004	335.3	0.004	04/28/2003	DSR
1025 Fluoride	34636	2.05	300.0	0.04	04/24/2003	RDB
1035 Mercury	34636	< 0.001	SM3112B (245.1)	0.001	04/24/2003	NMO
1036 Nickel	34636	0.004	SM3113B (249.2)	0.002	04/24/2003	RP
1038 Nitrate/Nitrite (as N)	34636	< 0.05	300.0	0.05	04/29/2003	RDB
1040 Nitrate (as N)	34636	< 0.05	300.0	0.05	04/29/2003	RDB/RZ
1041 Nitrite (as N)	34636	< 0.05	300.0	0.05	04/29/2003	RDB
1045 SM3113B Selenium in Drinking Water	34636	< 0.010	SM3113B (270.2)	0.010	04/26/2003	ERA
1052 Sodium	34636	820	SM3111B (273.1)	1.0	04/24/2003	RP
1074 Antimony	34636	< 0.005	SM3113B (204.2)	0.005	04/24/2003	ERA
1075 Beryllium	34636	< 0.002	SM3113B (210.2)	0.002	04/25/2003	ERA

FFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

INORGANICS ANALYSIS
62-550.310(1)
PWS030
Units are mg/L; except Asbestos = MFL

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
9999 Lead	34636	< 0.001	SM3113B (239.2)	0.001	04/23/2003	RP

Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field

Qualifier following result conforms to FAC 17-160 Table 7
* SAMPLE WAS FIRST ANALYZED ON 4/24/03 FOR NO3/NO2

Maria E. Castellanos
Laboratory Manager
Authorized Laboratory Management

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

TRIHALOMETHANE ANALYSIS
62-550.310(2)(a)
PWS027
Units are ug/L

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
2950 Bromodichloromethane	34636	< 0.5	524.2	0.5	05/01/2003	AR
2950 Dibromochloromethane	34636	< 0.5	524.2	0.5	05/01/2003	AR
2950 Tribromomethane (Bromoform)	34636	< 0.5	524.2	0.5	05/01/2003	AR
2950 Trichloromethane (Chloroform)	34636	< 0.5	524.2	0.5	05/01/2003	AR
2950 TOTAL Trihalomethanes	34636	< 0.5	524.2	0.5	05/01/2003	AR

Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field

Qualifier following result conforms to FAC 17-160 Table 7
* SAMPLE WAS FIRST ANALYZED ON 4/24/03 FOR NO3/NO2

Maria E. Castellanos
Laboratory Manager

Authorized Laboratory Management

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

VOLATILE ORGANICS ANALYSIS
62-550.310(2)(b)
PWS028
Units are ug/L

Parameter ID	NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
2378	1,2,4-Trichlorobenzene	34636	< 0.5	524.2	0.5	05/01/2003	AR
2380	Cis-1,2-Dichloroethene	34636	< 0.5	524.2	0.5	05/01/2003	AR
2955	m & p-Xylene	34636	< 0.5	524.2	0.5	05/01/2003	AR
2955	o-Xylene	34636	< 0.5	524.2	0.5	05/01/2003	AR
2964	Methylene Chloride	34636	< 0.5	524.2	0.5	05/01/2003	AR
2968	1,2-Dichlorobenzene (ortho)	34636	< 0.5	524.2	0.5	05/01/2003	AR
2969	1,4-Dichlorobenzene (para)	34636	< 0.5	524.2	0.5	05/01/2003	AR
2976	Vinyl Chloride	34636	< 0.5	524.2	0.5	05/01/2003	AR
2977	1,1-Dichloroethene	34636	< 0.5	524.2	0.5	05/01/2003	AR
2979	Trans-1,2-Dichloroethene	34636	< 0.5	524.2	0.5	05/01/2003	AR
2980	1,2-Dichloroethane	34636	< 0.5	524.2	0.5	05/01/2003	AR
2981	1,1,1-Trichloroethane	34636	< 0.5	524.2	0.5	05/01/2003	AR
2982	Carbon Tetrachloride	34636	< 0.5	524.2	0.5	05/01/2003	AR
2983	1,2-Dichloropropane	34636	< 0.5	524.2	0.5	05/01/2003	AR
2984	Trichloroethene	34636	< 0.5	524.2	0.5	05/01/2003	AR
2985	1,1,2-Trichloroethane	34636	< 0.5	524.2	0.5	05/01/2003	AR

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

VOLATILE ORGANICS ANALYSIS
62-550.310(2)(b)
PWS028
Units are ug/L

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
2987 Tetrachloroethene	34636	< 0.5	524.2	0.5	05/01/2003	AR
2989 Chlorobenzene	34636	< 0.5	524.2	0.5	05/01/2003	AR
2990 Benzene	34636	< 0.5	524.2	0.5	05/01/2003	AR
2991 Toluene	34636	< 0.5	524.2	0.5	05/01/2003	AR
2992 Ethylbenzene	34636	< 0.5	524.2	0.5	05/01/2003	AR
2996 Styrene	34636	< 0.5	524.2	0.5	05/01/2003	AR

Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field

Qualifier following result conforms to FAC 17-160 Table 7
* SAMPLE WAS FIRST ANALYZED ON 4/24/03 FOR NO3/NO2

Maria E. Castellano
Laboratory Manager
Authorized Laboratory Management

FFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

PESTICIDE & PCB CHEMICAL ANALYSIS
62-550.310(2)(c)
PWS029
Units are ug/L; except Surrogate = %

Parameter ID	NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
2005	Endrin	34636	< 0.01	505	0.01	05/01/2003	JT
2010	v-BHC (Lindane)	34636	< 0.01	505	0.01	05/01/2003	JT
2015	Methoxychlor	34636	< 0.01	505	0.01	05/01/2003	JT
2020	Toxaphene	34636	< 0.01	505	0.01	05/01/2003	JT
31	Dalapon	34636	< 1.30	EPA 515.1	1.30	04/28/2003	JT
2032	Diquat	34636	<5.0	549.2	5.0	05/01/2003	E87052
2033	SUB 548.1 Endothall	34636	<10	548.1	10.0	05/01/2003	E87052
2034	SUB 547.1 Glyphosate	34636	<25	547.1	25.0	04/29/2003	E87052
2035	Di(2-Ethylhexyl)adipate	34636	< 5.0	EPA 525.2	5.0	05/01/2003	MD
2036	Oxamyl (vydate)	34636	<2.5	531.1	2.5	04/26/2003	E87052
2037	Simazine	34636	< 0.50	507	0.50	04/29/2003	JT
2039	Di(2-Ethylhexyl)phthalate	34636	< 5.0	EPA 525.2	5.0	05/01/2003	MD
2040	Picloram	34636	< 0.20	EPA 515.1	0.20	04/28/2003	JT
2041	Dinoseb	34636	< 0.20	EPA 515.1	0.20	04/28/2003	JT
2042	Hexachlorocyclopentdiene	34636	< 0.01	505	0.01	05/01/2003	JT
2046	Carbofuran	34636	<2.5	531.1	2.5	04/26/2003	E87052

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

PESTICIDE & PCB CHEMICAL ANALYSIS
62-550.310(2)(c)
PWS029
Units are ug/L; except Surrogate = %

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
2050 Atrazine	34636	< 0.20	507	0.20	04/29/2003	JT
2051 Alachlor	34636	< 0.01	507	0.01	04/29/2003	JT
2065 Heptachlor	34636	< 0.01	505	0.01	05/01/2003	JT
2067 Heptachlor Epoxide	34636	< 0.01	505	0.01	05/01/2003	JT
2105 2,4-D	34636	< 0.20	EPA 515.1	0.20	04/28/2003	JT
2110 2,4,5-TP (silvex)	34636	< 0.20	EPA 515.1	0.20	04/28/2003	JT
2274 Hexachlorobenzene	34636	< 0.01	505	0.01	05/01/2003	JT
2306 Benzo(a)pyrene	34636	< 0.2	EPA 525.2	0.2	05/01/2003	MD
2326 Pentachlorophenol	34636	< 0.20	EPA 515.1	0.20	04/28/2003	JT
2383 Arochlor 1016	34636	< 0.01	505	0.01	05/01/2003	JT
2383 Arochlor 1221	34636	< 0.01	505	0.01	05/01/2003	JT
2383 Arochlor 1232	34636	< 0.01	505	0.01	05/01/2003	JT
2383 Arochlor 1242	34636	< 0.01	505	0.01	05/01/2003	JT
2383 Arochlor 1248	34636	< 0.01	505	0.01	05/01/2003	JT
2383 Arochlor 1254	34636	< 0.01	505	0.01	05/01/2003	JT
2383 Arochlor 1260	34636	< 0.01	505	0.01	05/01/2003	JT

.FFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

PESTICIDE & PCB CHEMICAL ANALYSIS
62-550.310(2)(c)
PWS029
Units are ug/L; except Surrogate = %

Parameter ID	NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
2931	1,2-Dibromo-3-Chloropropane (DBCP)	34636	<0.020	EPA 504.1 ECD	0.020	05/01/2003	E87052
2946	Ethylene Dibromide (EDB)	34636	<0.020	EPA 504.1 ECD	0.020	05/01/2003	E87052
2959	Chordane	34636	< 0.01	505	0.01	05/01/2003	JT
9999	Surrogate: Acifluorfen	34636	38.8	EPA 515.1		04/28/2003	JT
9999	SURROGATE: 2-Fluorophenol	34636	2.21	EPA 525.2		05/01/2003	MD
9999	SURROGATE: Phenol D-6	34636	2.37	EPA 525.2		05/01/2003	MD
9999	SURROGATE: 2,4,6 Tribromophenol	34636	2.54	EPA 525.2		05/01/2003	MD
9999	SURROGATE: Nitrobenzene D-5	34636	3.99	EPA 525.2		05/01/2003	MD
9999	SURROGATE: 2-Fluorobiphenol	34636	2.76	EPA 525.2		05/01/2003	MD
9999	SURROGATE: 4-Terphenyl D-14	34636	4.18	EPA 525.2		05/01/2003	MD

Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field

Qualifier following result conforms to FAC 17-160 Table 7
* SAMPLE WAS FIRST ANALYZED ON 4/24/03 FOR NO3/NO2

Maria E. Castellanos
Laboratory Manager
Authorized Laboratory Management

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

TURBIDITY ANALYSIS- For Surface Water Systems
62-550.310(3)
PWS026
Units are NTU

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
100 Turbidity	34636	0.285	180.1	0.1	04/23/2003	RZ

Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field

Qualifier following result conforms to FAC 17-160 Table 7
* SAMPLE WAS FIRST ANALYZED ON 4/24/03 FOR NO3/NO2

Maria E. Castellanos
Laboratory Manager
Authorized Laboratory Management

FFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

RADIOCHEMICAL ANALYSIS
62-550.310(5)
PWS033
Units are pCi/L

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
4000 SUB EPA 900 Gross Alpha	34636	21	EPA 900	20.0	05/18/2003	E87689
4020 EPA 903.1 Radium 226	34636	3.34	EPA 903.1	0.27	05/12/2003	E87689
4030 EPA RA-05 Radium 228	34636	U-0.32	EPA 903.1	0.79	05/12/2003	E87689

Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field

Qualifier following result conforms to FAC 17-160 Table 7
* SAMPLE WAS FIRST ANALYZED ON 4/24/03 FOR NO3/NO2

Maria E. Castellanos
Laboratory Manager
Authorized Laboratory Management

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

SECONDARY CHEMICAL ANALYSIS
62-550.320
PWS031
Units are mg/L; except Odor=TON / Color=APHA units

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
1002 Aluminum	34636	< 0.1	SM3111D(202.1)	0.1	04/24/2003	MG
1017 Chloride	34636	1665	300.0	1.0	04/29/2003	RDB
1022 Copper	34636	< 0.01	SM3111B (220.1)	0.01	04/24/2003	MAH
1025 Fluoride	34636	2.05	300.0	0.04	04/24/2003	RDB
1028 Iron	34636	0.13	SM3111B (236.1)	0.05	04/24/2003	MAH
1032 Manganese	34636	< 0.05	SM3111B (243.1)	0.05	04/24/2003	MAH
1050 Silver	34636	< 0.001	SM3113B (272.2)	0.001	04/24/2003	ERA
1055 Sulfate	34636	510	300.0	1.0	04/29/2003	RDB/RZ
1095 Zinc	34636	0.06	SM 3111B (289.1)	.01	04/24/2003	RP
1905 Color (APHA)	34636	7.5	SM2120B (110.2)	1.0	04/23/2003	RZ
1920 Odor	34636	10	SM2150B (140.1)	1.0	04/23/2003	RZ
1925 pH	34636	7.53	150.1	1.0	04/23/2003	RZ
1930 Residue, Total Filterable (TDS)	34636	4100	SM2540C (160.1)	1.0	04/29/2003	YD

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

SECONDARY CHEMICAL ANALYSIS
62-550.320
PWS031
Units are mg/L; except Odor=TON / Color=APHA units

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
2905 MBAS Surfactants as "LAS"	34636	< 0.01	SM5540C (425.1)	0.01	04/23/2003	PR

Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field

Qualifier following result conforms to FAC 17-160 Table 7
* SAMPLE WAS FIRST ANALYZED ON 4/24/03 FOR NO3/NO2

Maria E. Castellanos
Laboratory Manager
Authorized Laboratory Management

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

May 23, 2003
Submission # 304001211
Order # 34636
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Site Location/Project
NW 191 ST & NW 9 AVE
City of N.Miami Beach

Sample I.D.: Well# 1-F
Collected: 04/23/03 00:00
Received: 04/23/03 12:00
Collected by: Dave Ingram

MISCELLANEOUS EXTRA WATER QUALITY TESTS REQUESTED
NON 62-550 Tests
mg/L *
* except Cond=umhos/ BactT=CFU/100ml/ Temp=°C

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
9999 Specific Conductance (grab)	34636	5010	120.1	1.0	04/26/2003	PR
9999 Chemical Oxygen Demand	34636	24.8	410.4	5.0	04/30/2003	PR
9999 Organic Carbon, Total	34636	< 0.10	415.1	0.10	04/24/2003	SN
9999 Potassium	34636	28.0	258.1	.5	04/24/2003	RP

Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field

Qualifier following result conforms to FAC 17-160 Table 7
* SAMPLE WAS FIRST ANALYZED ON 4/24/03 FOR NO3/NO2

Maria E. Castellanos
Laboratory Manager
Authorized Laboratory Management

SEVERN TRENT STL

03/-4-1211

ANALYTICAL REPORT

PROJECT NO. 34636

Radiological Testing

Lot #: F3D240215

Nellie Montanez

STL Miami
10200 USA Today Way
Miramar, FL 33025

SEVERN TRENT LABORATORIES, INC.

Billy Tierney
Project Manager

May 21, 2003

Case Narrative
LOT NUMBER: **F3D240215**

This report contains the analytical results for the sample received under chain of custody by STL St. Louis on April 24, 2003. This sample is associated with your Radiological Testing project.

All applicable quality control procedures met method-specified acceptance criteria except as noted on the following page.

This report is incomplete without the case narrative. All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Gross Alpha by EPA 900.0

The alpha matrix spike associated with this batch has a recovery outside of acceptance limits. Method performance is demonstrated by acceptable beta matrix spike recovery and acceptable alpha and beta LCS recoveries. The matrix spike was not performed on the sample associated with this report. Analytical results are reported with this narrative.
Affected Samples:
F3D240215 (1): 34636

SAMPLE SUMMARY

F3D240215

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
FMHHN	001	34636	04/23/03	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

STL MIAMI

Client Sample ID: 34636

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3D240215-001
Work Order: FMHHN
Matrix: WATER

Date Collected: 04/23/03 0000
Date Received: 04/24/03 0900

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
RA-226 BY EPA-903.0 MOD				pCi/L	903.0 MOD			
Radium (226)	3.34		0.59	0.27	04/25/03	05/12/03	3115339	100
RA-228 BY GFPC EPA 904 MOD				pCi/L	904 MOD			
Radium 228	0.32	U	0.48	0.79	04/25/03	05/12/03	3115342	97
GROSS A/B BY GFPC EPA 900.0 MOD				pCi/L	900.0 MOD			
Gross Alpha	21		15	20	05/15/03	05/18/03	3135124	
Gross Beta	44		15	21	05/15/03	05/18/03	3135124	

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.
Bold results are greater than the MDC

U Result is less than the sample detection limit.

METHOD BLANK REPORT

Severn Trent Laboratories - Radiochemistry

Client Lot ID: F3D240215
Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	MDC	Prep Date	Analysis Date	Lab Sample ID Batch #	Yld %
RA-226 BY EPA-903.0 MOD			**pCi/L**	**903.0 MOD**			**F3D250000-339B**	
Radium (226)	0.005	U	0.13	0.24	04/25/03	05/12/03	3115339	100
RA-228 BY GFPC EPA 904 MOD			**pCi/L**	**904 MOD**			**F3D250000-342B**	
Radium 228	-0.12	U	0.37	0.64	04/25/03	05/12/03	3115342	96
GROSS A/B BY GFPC EPA 900.0 MOD			**pCi/L**	**900.0 MOD**			**F3E150000-124B**	
Gross Alpha	-0.12	U	0.47	0.94	05/15/03	05/18/03	3135124	
Gross Beta	-0.8	U	1.1	2.0	05/15/03	05/18/03	3135124	

NOTE(S)

Dat- are incomplete without the case narrative.

M s determined using instrument performance only
Bold results are greater than the MDC

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Severn Trent Laboratories - Radiochemistry

Client Lot ID: F3D240215
Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ+/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
GROSS A/B BY GFPC EPA 900.0 MOD		**pCi/L**	**900.0 MOD**				**F3E150000-124C**
Gross Alpha	60.2	52.1	6.1	0.7	87		(63 - 130)
	Batch #:	3135124		**Analysis Date:**	05/18/03		
GROSS A/B BY GFPC EPA 900.0 MOD		**pCi/L**	**900.0 MOD**				**F3E150000-124C**
Gross Beta	104	85.4	9.1	1.8	82		(80 - 120)
	Batch #:	3135124		**Analysis Date:**	05/18/03		

NOTE(S)

MDC is determined by instrument performance only
Calculations are performed before rounding to avoid round-off error in calculated results

Laboratory Control Sample/LCS Duplicate Report

Severn Trent Laboratories - Radiochemistry

Client Lot ID: F3D240215
Matrix: WATER

Parameter		Spike Amount	Result	Total Uncert. (2 σ+/-)	% Yld	% Rec	QC Control Limits	Precision	
							Lab Sample ID		
RA-226 BY EPA-903.0 MOD			**pCi/L**	**903.0 MOD**			**F3D250000-339C**		
Radium (226)		11.3	9.0	1.1	100	79	(62 - 130)		
	Spk 2	11.3	10.9	1.3	96	96	(62 - 130)	19	%RPD
		Batch #:	3115339		**Analysis Date:**		05/12/03		
RA-228 BY GFPC EPA 904 MOD			**pCi/L**	**904 MOD**			**F3D250000-342C**		
Radium 228		7.01	6.35	0.86	100	91	(60 - 140)		
	Spk 2	7.01	7.32	0.96	91	104	(60 - 140)	14	%RPD
		Batch #:	3115342		**Analysis Date:**		05/12/03		

NOTE(S)

Calculations are performed before rounding to avoid round-off error in calculated results

03/04-1211

STL

STL Savannah • 5102 LaRoche Avenue • Savannah, GA 31404 • Tel 912 354 7858 • Fax 912 351 3673 • www.stl-inc.com

LOG NO: S3-82910
Received: 24 APR 03
Reported: 05 MAY 03

Ms. Nellie Montanez
STL Miami
10200 USA Today Way
Miramar, FL 33025

Client PO. No.: 03/04-1211
Cl Project No: 03/04-1211

Project: FKAAS
Sampled By: Client
Code: 10333055

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
82910-1	34636	04-23-03

PARAMETER	82910-1
Glyphosate (547), ug/l	<25
Dilution Factor	1
Prep Date	04.29.03
Analysis Date	04.29.03
Batch ID	1J0429
Analyst	KH
Endothall (548.1), ug/l	<10
Dilution Factor	1
Prep Date	04.29.03
Analysis Date	05.01.03
Batch ID	0429A
Analyst	RB
Diquat (549.2), ug/l	<5.0
Dilution Factor	1
Prep Date	04.30.03
Analysis Date	05.01.03
Batch ID	0430A
Analyst	KH

STL

STL Savannah • 5102 LaRoche Avenue • Savannah, GA 31404 • Tel 912 354 7858 • Fax 912 351 3673 • www.stl-inc.com

LOG NO: S3-82910
Received: 24 APR 03
Reported: 05 MAY 03

Ms. Nellie Montanez
STL Miami
10200 USA Today Way
Miramar, FL 33025

Client PO. No.: 03/04-1211
Cl Project No: 03/04-1211

Project: FKAAS
Sampled By: Client
Code: 10333055

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
82910-1	34636	04-23-03

PARAMETER	82910-1
DW-504.1 (Primary) (504.1)	
1,2-Dibromoethane (EDB), ug/l	<0.020
1,2-Dibromo-3-chloropropane, ug/l	<0.020
Dilution Factor	1
Prep Date	05.01.03
Analysis Date	05.01.03
Batch ID	0501A
Analyst	CJM
DW-531.1 (531.1)	
Aldicarb, ug/l	<2.5
Aldicarb Sulfone, ug/l	<2.5
Aldicarb sulfoxide, ug/l	<2.5
Baygon/Propoxur, ug/l	<2.5
Carbaryl, ug/l	<2.5
Carbofuran, ug/l	<2.5
3-Hydroxycarbofuran, ug/l	<2.5
Methiocarb, ug/l	<2.5
Methomyl, ug/l	<2.5
Oxamyl, ug/l	<2.5
Dilution Factor	1
Prep Date	04.25.03
Analysis Date	04.26.03
Batch ID	2J0425
Analyst	KH

STL

STL Savannah • 5102 LaRoche Avenue • Savannah, GA 31404 • Tel 912 354 7858 • Fax 912 351 3673 • www.stl-inc.com

LOG NO: S3-82910
Received: 24 APR 03
Reported: 05 MAY 03

Ms. Nellie Montanez
STL Miami
10200 USA Today Way
Miramar, FL 33025

Client PO. No.: 03/04-1211
Cl Project No: 03/04-1211

Project: FKAAS
Sampled By: Client
Code: 10333055

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
82910-2	Method Blank	
82910-3	Lab Control Standard % Recovery	
82910-4	LCS Accuracy Control Limit (%R)	
82910-5	Reporting Limit (RL)	
82910-6	Method Detection Limit (MDL)	

PARAMETER	82910-2	82910-3	82910-4	82910-5	82910-6
Glyphosate (547), ug/l	<25	105 %	70-130 %	25	10
Dilution Factor	1	1	---	---	---
Prep Date	04.29.03	04.29.03	---	---	---
Analysis Date	04.29.03	04.29.03	---	---	---
Batch ID	1J0429	1J0429	---	---	---
Analyst	KH	KH	---	---	---
Endothall (548.1), ug/l	<10	92 %	70-130 %	10	2.5
Dilution Factor	1	1	---	---	---
Prep Date	04.29.03	04.29.03	---	---	---
Analysis Date	05.01.03	05.01.03	---	---	---
Batch ID	0429A	0429A	---	---	---
Analyst	RB	RB	---	---	---
Diquat (549.2), ug/l	<5.0	95 %	70-130 %	5.0	1.6
Dilution Factor	1	1	---	---	---
Prep Date	04.30.03	04.30.03	---	---	---
Analysis Date	05.01.03	05.01.03	---	---	---
Batch ID	0430A	0430A	---	---	---
Analyst	KH	KH	---	---	---

STL

STL Savannah • 5102 LaRoche Avenue • Savannah, GA 31404 • Tel 912 354 7858 • Fax 912 351 3673 • www.stl-inc.com

LOG NO: S3-82910
Received: 24 APR 03
Reported: 05 MAY 03

Ms. Nellie Montanez
STL Miami
10200 USA Today Way
Miramar, FL 33025

Client PO. No.: 03/04-1211
Cl Project No: 03/04-1211

Project: FKAAS
Sampled By: Client
Code: 10333055

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
82910-2	Method Blank	
82910-3	Lab Control Standard % Recovery	
82910-4	LCS Accuracy Control Limit (%R)	
82910-5	Reporting Limit (RL)	
82910-6	Method Detection Limit (MDL)	

PARAMETER	82910-2	82910-3	82910-4	82910-5	82910-6
DW-504.1 (Primary) (504.1)					
1,2-Dibromoethane (EDB), ug/l	<0.020	85 %	70-130 %	0.020	0.0082
1,2-Dibromo-3-chloropropane , ug/l	<0.020	100 %	70-130 %	0.020	0.0055
Dilution Factor	1	1	---	---	---
Prep Date	05.01.03	05.01.03	---	---	---
Analysis Date	05.01.03	05.01.03	---	---	---
Batch ID	0501A	0501A	---	---	---
Analyst	CJM	CJM	---	---	---

SEVERN TRENT STL

STL Savannah • 5102 LaRoche Avenue • Savannah, GA 31404 • Tel 912 354 7858 • Fax 912 351 3673 • www.stl-inc.com

LOG NO: S3-82910
Received: 24 APR 03
Reported: 05 MAY 03

Ms. Nellie Montanez
STL Miami
10200 USA Today Way
Miramar, FL 33025

Client PO. No.: 03/04-1211
Cl Project No: 03/04-1211

Project: FKAAS
Sampled By: Client
Code: 10333055

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
82910-2	Method Blank	
82910-3	Lab Control Standard % Recovery	
82910-4	LCS Accuracy Control Limit (%R)	
82910-5	Reporting Limit (RL)	
82910-6	Method Detection Limit (MDL)	

PARAMETER	82910-2	82910-3	82910-4	82910-5	82910-6
DW-531.1 (531.1)					
Aldicarb, ug/l	<2.5	92 %	80-120 %	2.5	1.0
Aldicarb Sulfone, ug/l	<2.5	100 %	80-120 %	2.5	1.0
Aldicarb sulfoxide, ug/l	<2.5	95 %	80-120 %	2.5	1.0
Baygon/Propoxur, ug/l	<2.5	99 %	80-120 %	2.5	1.0
Carbaryl, ug/l	<2.5	94 %	80-120 %	2.5	1.0
Carbofuran, ug/l	<2.5	96 %	80-120 %	2.5	1.0
3-Hydroxycarbofuran, ug/l	<2.5	110 %	80-120 %	2.5	1.0
Methiocarb, ug/l	<2.5	110 %	80-120 %	2.5	1.0
Methomyl, ug/l	<2.5	110 %	80-120 %	2.5	1.0
Oxamyl, ug/l	<2.5	100 %	80-120 %	2.5	1.0
Dilution Factor	1	1	---	---	---
Prep Date	04.25.03	04.25.03	---	---	---
Analysis Date	04.26.03	04.26.03	---	---	---
Batch ID	2J0425	2J0425	---	---	---
Analyst	KH	KH	---	---	---

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

Gloria D. Fulwood, Project Manager

Final Page Of Report

SUB of
03/04-1211

SEVERN TRENT STL

LOG NO: C3-04523
Received: 24 APR 03
Reported: 29 APR 03

Ms. Nellie Montanez
STL Miami
10200 USA Today Way
Miramar, FL 33025

Client PO. No.: 3/4-1211

Project: 3/4-1211
Sampled By: Client
Code: 164430429

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
04523-1	34636	04-23-03

PARAMETER	04523-1
Thallium (200.9), mg/l	<0.0020
Dilution Factor	1
Analysis Date	04.25.03
Batch ID	FW092
Analyst	JDE
Metals (200.7)	
Arsenic, mg/l	<0.0050
Calcium, mg/l	110
Magnesium, mg/l	120
Dilution Factor	1
Analysis Date	04.28.03
Batch ID	PW147
Analyst	GSP

SEVERN TRENT STL

LOG NO: C3-04523
Received: 24 APR 03
Reported: 29 APR 03

Ms. Nellie Montanez
STL Miami
10200 USA Today Way
Miramar, FL 33025

Client PO. No.: 3/4-1211

Project: 3/4-1211
Sampled By: Client
Code: 164430429

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
04523-2	Method Blank	
04523-3	Lab Control Standard % Recovery	

PARAMETER	04523-2	04523-3	
Thallium (200.9), mg/l	<0.0020	103 %	
Dilution Factor	1	---	
Analysis Date	04.25.03	---	
Batch ID	FW092	FW092	
Analyst	JDE	---	
Metals (200.7)			
Arsenic, mg/l	<0.0050	98 %	
Calcium, mg/l	<0.50	101 %	
Magnesium, mg/l	<0.50	101 %	
Dilution Factor	1	---	
Analysis Date	04.28.03	---	
Batch ID	PW147	PW147	
Analyst	GSP	---	

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.
See the Project Sample Inspection Form (PSIF) to determine if a sample was received that did not meet EPA requirements for sample collection, preservation, or holding time.

Lance Larson, Project Manager

Final Page Of Report

SEVERN TRENT STL

STL Mobile • 900 Lakeside Drive • Mobile, AL 36693 • Tel 251 666 6633 • Fax 251 666 6696 • www.stl-inc.com

LOG NO: M3-63095
Received: 24 APR 03
Reported: 07 MAY 03

Ms. Nellie Montanez
STL Miami
10200 USA Today Way
Miramar, FL 33025

Client PO. No.: 3/4-1211

Sampled By: Client
Code: 09533057

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES
63095-2	Method Blank
63095-3	Lab Control Standard % Recovery
63095-4	Precision (%RPD) of LCS/LCSD

PARAMETER	63095-2	63095-3	63095-4
Haloacetic Acids (552.2)			
Dibromoacetic Acid, ug/l	<1.0	112 %	6 %
Dichloroacetic Acid, ug/l	<3.0	100 %	7 %
Monobromoacetic Acid, ug/l	<2.0	84 %	17 %
Monochloroacetic Acid, ug/l	<3.0	127 %	99 %
Trichloroacetic Acid, ug/l	<1.0	112 %	17 %
Prep Date	04.28.03	04.28.03	---
Analysis Date	05.01.03	05.01.03	---
Analysis Time	01:10	01:25	---
Analyst	SS	SS	SS

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

Jesse L. Smith 05.09.03
Jesse L. Smith, Project Manager

Final Page Of Report

USBIOSYSTEMS

Client #: FTL-12-010101
Address: Jaffer Associates
2801 N.W 6th AVe.
Miami, FL 33127
Attn: Dave Ingram

Page: Page 1 of 1
Date: 05/14/2003
Log #: L75722-1

Sample Description:

City North Miami Beach

Analytical Report: Well #1F
Date Sampled: 04/23/2003
Time Sampled: 00:00
Date Received: 04/23/2003
Collected By: Client

Parameter	Results	Units	Method	Reportable Limit	Extr. Date	Anly. Date	Analyst
Subcontracted Services							
Subcontract Lab 1	E84129		552.1				SUB
Metals							
Barium	BDL	mg/l	3010/6010	0.010	04/24	04/26	ZL
General Chemistry							
Bromide	8.1	mg/l	300.0	0.50	04/26	04/26	MA
Chloride	1400	mg/l	300.0	25	04/30	04/30	MG
Hydrogen Sulfide	BDL Y	mg/l	376.1	1.0	04/29	04/29	IG
Total Dissolved Solids	3200	mg/l	160.1	100	04/28	04/28	VP
Total Organic Carbon	2.0	mg/l	415.1	1.0	04/29	04/29	MA

All analyses were performed using EPA, ASTM, NIOSH, USGS, or Standard Methods and certified to meet NELAC requirements.
Flags: BDL or U-below reporting limit; DL-diluted out; IL-meets internal lab limits; MI-matrix interference; NA-not appl.
Flags: CFR-Pb/Cu rule; ND-non detect(RL estimated); NFL-no free liquids; dw-dry wt; ww-wet wt; C(#)-see attached USB code
FLDEP Flags: J(#)-estimated 1:surr. fail 2:no known QC req. 3:QC fail %R or %RPD; 4:matrix int. 5:improper fld. protocol
FLDEP Flags: L-exceeds calibration; Q-holding time exceeded; T-value < MDL; V-present in blank
FLDEP Flags: Y-improper preservation; B-colonies exceed range; I-result between MDL and PQL

QAP# 980126
SUB DOH# 86122,86109,E86048
SC CERT# 96031001
USACE
VA CERT# 00395
DOH# E86240
ADEM ID# 40850
TN CERT# 02985
GA CERT# 917
USDA Soil Permit# S-35240
NC CERT# 444
IL CERT# 200020

Respectfully submitted,

Steve Walton
Client Technical Svcs. Manager

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL. 34677 813-855-1344 fax 813-855-2219

US Biosystems Inc.
3231 NW 7th Avenue
Boca Raton, FL 33431

May 8, 2003
Project No: 34945

Laboratory Report

Project Name	**L75722**
Sample Description	**L75722-1**
Matrix	**Groundwater**
SAL Sample Number	**34945.01**
Date/Time Collected	**04/23/03**
Date/Time Received	**04/24/03 09:30**

Parameters	Units	Results	Method	Detection Limit	Date/Time Analyzed	Date/Time Prep	Analyst
Disinfection By-Product Formation Potential							
Date Extracted		05/05/03	EPA 552.2			05/05/03 08:30	BML
Bromoacetic Acid	ug/l	3.0	EPA 552.2	1	05/05/03 20:26	05/05/03 08:30	BTJ
Chloroacetic Acid	ug/l	1 U	EPA 552.2	1	05/05/03 20:26	05/05/03 08:30	BTJ
Dibromoacetic Acid	ug/l	16	EPA 552.2	1	05/05/03 20:26	05/05/03 08:30	BTJ
Dichloroacetic Acid	ug/l	1.1	EPA 552.2	1	05/05/03 20:26	05/05/03 08:30	BTJ
Trichloroacetic Acid	ug/l	1 U	EPA 552.2	1	05/05/03 20:26	05/05/03 08:30	BTJ
HAA Formation Potential (7 Day)	ug/l	20	EPA 552.2	1	05/05/03 20:26	05/05/03 08:30	BTJ
Disinfection By-Product Formation Potential							
Bromodichloromethane	ug/l	2.6	EPA 502.2	0.3	05/05/03 20:40		FID
Bromoform	ug/l	100	EPA 502.2	0.5	05/05/03 21:39		FID
Chloroform	ug/l	0.33	EPA 502.2	0.2	05/05/03 20:40		FID
Dibromochloromethane	ug/l	18	EPA 502.2	0.5	05/05/03 21:39		FID
THM Formation Potential (7 Day)	ug/l	120	EPA 502.2	0.2	05/05/03 21:39		FID
Formation Potential - Chlorination Parameters							
Initial Total Chlorine Residual	mg/l	0.1 U	Hach	0.1	04/24/03 16:00		DB
Initial Free Chlorine Residual	mg/l	0.1 U	Hach	0.1	04/24/03 16:00		DB
Chlorine Demand Determination (16hr)	mg/l	24	SM 5710 B		04/25/03 08:40	04/24/03 16:40	DB
Chlorine Dose Applied	mg/l	31	SM 5710 B			04/25/03 12:40	DB
7 Day Free Chlorine Residual	mg/l	4.0	Hach	0.1	05/02/03 12:40	04/25/03 12:40	DB

CHAIN OF CUSTODY RECORD

USBIOSYSTEMS

Log # 75722 / TN   Quote:

Company Name	Jaffer Assoc — PO# 38024
Address	2801 NW 6th ave
City	Miami, Fl — State — Zip 33127
Attn:	Dave Ingram — Fax# 305-573-8711
Project Name	City North Miami Park — Proj#
Sampler Name/Signature	Dave Ingram — Phone# 7864230601

LAB ANALYSIS

Sample	1	1	1		1	1
pH	7	2	2		7	7
Pres Codes	A	B	E		A	A
Parameters	CLTDS Br	BA	TOC	H2S	THM4	THAA6

#	Sample Label (Client ID)	Collect Date	Collect Time	Matrix Code*	Sample Container No.	Size	Field Filtered (Y/N)	Integrity OK (Y/N)	REMARKS
1	0300358345	4/23		GW		(2)AG (1)33P (3)4P			
2	0300358362	4/23							
3	0300290789	4/23							WELL #1F TA 4/23/03
4	C203530812	4/23							
5	C203577534	4/23							
6	C203580844	4/23							
7									
8									
9									
0									

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	✓		
Received ON WET ICE? Temp 3°C	✓		
PROPER PRESERVATIVES indicated?	✓		
Received WITHIN HOLDING TIME?	✓		
CUSTODY SEALS INTACT?	✓		
VOLATILES rec'd W/OUT HEADSPACE?			✓
PROPER CONTAINERS used?	✓		

Matrix Codes*

SD	Solid Waste	OL	Oil
GW	Ground Water	SL	Sludge
EFF	Effluent	SO	Soil Sediment
AFW	Analyte Free H_2O	AQ	Aqueous
WW	Waste Water	NA	Nonaqueous
DW	Drinking Water	PE	Petroleum
SU	Surface Water	O	Other (Please Specify)

Pres/Codes

A. None
B. HNO_3
C. H_2SO_4
D. NaOH
E. HCL
F. MeOH
G. $Na_2S_2O_3$
H. $NaHSO_4$
I. Ice
J. MCAA
O. Other
(10)

T.A.T. REQUEST: STANDARD (Y) N — RUSH 5/8 Date required

Short Hold Y ___ N ✓

QA/QC Report Level: None ✓ 1 ___ 2 ___ 3 ___ Other ___

COC OK: (Y) N — Initials: CP

Specific State Certification Required

Coolers #'s	Item	Relinquished by	Date	Time	Received by	Date	Time
102		[signature]	4/24/03	1457	[signature]	4/22/03	3PM
		[signature]	4/23/03	1320	C. Pasero	4/23/03	1320

Bailers #___

3231 N.W. 7th Avenue
Boca Raton, FL 33431
888-862-LABS
561-447-7373
888-456-4846 Fax
561-447-6136 Fax

C.O.C. # 01112

CHAIN OF CUSTODY RECORD

US BIOSYSTEMS

Log # ________ Quote: ________

LAB USE ONLY	YES	NO	N/A
Samples INTACT upon arr.			
Received ON WET ICE? Temp____			
PROPER PRESERVATIVES indicated?			
Received WITHIN HOLDING TIME?			
CUSTODY SEALS INTACT?			
VOLATILES rec'd W/OUT HEADSPACE?			
PROPER CONTAINERS used?			

Company Name: Titan America PO# 58024
Address: 2801 NW 64 ave 33122
City: Miami State: Fl Zip: 33122
Attn: [illegible] Fax# 305 [illegible] 8711
Project Name: [illegible] Proj#
Sampler Name/Signature: [illegible] Phone# 786 230601

LAB ANALYSIS — Sample / pH / Pres Codes

Parameters: Cl TDS SO4, DO, TOC, H2S, THM4, THHG

Field Filtered (Y/N) | Integrity OK (Y/N)

#	Sample Label (Client ID)	Collect Date	Collect Time	Matrix Code*	No.	Size	REMARKS
1	0300397[illegible]	4/23		GW			
2	03003[illegible]	4/23					
3	0300071[illegible]	4/23					
4	C20035[illegible]	4/23					
5	C20359[illegible]	4/23					
6	C2035[illegible]	4/23					
7							
8							
9							
0							

Matrix Codes*

SD Solid Waste, GW Ground Water, EFF Effluent, AFW Analyte Free H_2O, WW Waste Water, DW Drinking Water, SU Surface Water, OL Oil, SL Sludge, SO Soil Sediment, AQ Aqueous, NA Nonaqueous, PE Petroleum, O Other ____ (Please Specify)

Pres/Codes

A. None, B. HNO_3, C. H_2SO_4, D. NaOH, E. HCL, F. MeOH, G. $Na_2S_2O_3$, H. $NaHSO_4$, I. Ice, J. MCAA, O. Other

T.A.T. REQUEST: STANDARD Y/N | RUSH Date required
Short Hold Y____ N____
QA/QC Report Level: None____ 1____ 2____ 3____ Other____
COC OK Y N | Initials | Specific State Certification Required

Coolers #'s	Item	Relinquished by	Date	Time	Received by	Date	Time
02		[signature]	4/23/03	1157	[signature]	4/23/03	3PM
		[signature]	4/23/03	1320	[signature]	4/23/03	1320
Bailers # ____							

3231 N.W. 7th Avenue
Boca Raton, FL 33431
888-862-LABS
561-447-7373
888-456-4846 Fax
561-447-6136 Fax

C.O.C. # 61112

WELL 2F

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

Site Location/Project

City of North Miami Beach

July 8, 2003
Submission # 306000887
Order # 51332
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Well 2F
Sample I.D.: Drinking Water
Collected: 06/17/03 10:27
Received: 06/17/03 12:00
Collected by: Phil D'Amo

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
Heterotrophic Plate Count	51332	< 1.0	SM 9215	1.0	06/19/2003	E86616
Hardness, Calcium	51332	310	130.2	25.0	06/24/2003	PR
Hardness, Total	51332	700	130.2	25.0	06/24/2003	PR
Bromide	51332	7.60	300.0	0.20	06/21/2003	RDB
Bicarbonate Alkalinity (HCO3-)	51332	119	310.1	5.0	06/18/2003	EP
Carbonate Alkalinity (CO3^2-)	51332	< 5.0	310.1	5.0	06/18/2003	EP
Carbon Dioxide	51332	108	310.1	5.0	06/18/2003	EP
Chlorine, Residual	51332	< 0.10	330.4	0.10	06/18/2003	PR
Nitrogen (Ammonia) as N	51332	0.364	350.1	0.10	06/19/2003	DSR
Nitrogen (Kjeldahl) as "N"	51332	0.807	351.2	0.10	06/20/2003	DSR
Phosphorus, Total as "P"	51332	< 0.10	365.4	0.10	06/20/2003	DSR
Phosphate, Total as "P"	51332	< 0.10	365.4	0.10	06/20/2003	DSR
Silica, Dissolved	51332	15.1	370.1/SM4500 SI D	0.25	06/23/2003	SN
Sulfide	51332	2.80	376.1	0.4	06/25/2003	SN
Dissolved Sulfide	51332	2.80	376.1	0.2	06/25/2003	SN
Biochemical Oxygen Demand	51332	< 2.0	405.1	2.0	06/23/2003	RZ/RDB

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

Site Location/Project

City of North Miami Beach

July 8, 2003
Submission # 306000887
Order # 51332
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Well 2F
Sample I.D.: Drinking Water
Collected: 06/17/03 10:27
Received: 06/17/03 12:00
Collected by: Phil D'Amo

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
Calcium By ICP	51332	110	200.7	0.50	06/20/2003	E81010
Magnesium By ICP	51332	120	200.7	0.50	06/20/2003	E81010
Strontium	51332	9.3	SM 303A	0.01	06/19/2003	RP
Surrogate: Stirophos	51332	1370	507	0.01	06/26/2003	JT
SURROGATE: Dibromofluorobenzene	51332	39.4	524.2	0.5	06/18/2003	SKL
SURROGATE: Toluene-d8	51332	40.3	524.2	0.5	06/18/2003	SKL
SURROGATE: p-Bromofluorobenzene	51332	25.2	524.2	0.5	06/18/2003	SKL
SURROGATE: Dibromofluoromethane	51332	39.4	524.2		06/18/2003	SKL
SURROGATE: Toluene-D8	51332	25.2	524.2		06/18/2003	SKL
SURROGATE: p-Bromofluorobenzene	51332	39.4	524.2		06/18/2003	SKL
THM-7 Day TFP: {3< Cl-Res. <5}	51332	1	524.2 (SM 5710B)		06/28/2003	PMD
Bromodichloromethane (7 Day TFP)	51332	< 0.5	524.2 (SM 5710B)	0.5	06/28/2003	PMD
Dibromochloromethane (7 Day TFP)	51332	< 0.5	524.2 (SM 5710B)	0.5	06/28/2003	PMD
Tribromomethane (Bromoform) (7 Day	51332	< 0.5	524.2 (SM 5710B)	0.5	06/28/2003	PMD
Trichloromethane (Chloroform) (7 D	51332	< 0.5	524.2 (SM 5710B)	0.5	06/28/2003	PMD
TOTAL THM (7 Day Formation Potenti	51332	< 0.5	524.2 (SM 5710B)	0.5	06/28/2003	PMD

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

Site Location/Project

City of North Miami Beach

July 8, 2003
Submission # 306000887
Order # 51332
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Well 2F
Sample I.D.: Drinking Water
Collected: 06/17/03 10:27
Received: 06/17/03 12:00
Collected by: Phil D'Amo

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
Res. Cl2 @ End of 7 Days	51332	< 1.0	524.2 (SM 5710B)	1.0	06/28/2003	PMD
Thallium	51332	W-<0.0020	200.9	0.002	06/23/2003	E81010
Arsenic in Drinking Waters	51332	<0.0050	200.7	0.005	06/20/2003	E81010
SUB 552 (HAA) Haloacetic Acid	51332	1	552.2	1	06/28/2003	E87089
Dibromoacetic Acid	51332	<1.0	552.2	1.0	06/28/2003	E87089
Dichloroacetic Acid	51332	<3.0	552.2	3.0	06/28/2003	E87089
Monobromoacetic Acid	51332	<2.0	552.2	2.0	06/28/2003	E87089
Monochloracetic Acid	51332	<3.0	552.2	3.0	06/28/2003	E87089
Trichloroacetic Acid	51332	<1.0	552.2	1.0	06/28/2003	E87089
200.9 SUB Selenium for Drinking Wa	51332	<0.0050W	200.9	0.005	06/23/2003	E81010
EPA 900 Gross Beta	51332	26	EPA 900		06/28/2003	E87689

Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field

Qualifier following result conforms to FAC 17-160 Table 7

Wayne Khan
Authorized Laboratory Management
Project Manager.

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

Site Location/Project

City of North Miami Beach

July 8, 2003
Submission # 306000887
Order # 51332
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

well 2F
Sample I.D.: Drinking Water
Collected: 06/17/03 10:27
Received: 06/17/03 12:00
Collected by: Phil D'Amo

INORGANICS ANALYSIS
62-550.310(1)
PWS030
Units are mg/L; except Asbestos = MFL

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
1010 Barium	51332	< 0.50	SM3111D (208.1)	0.50	06/19/2003	RP
1015 Cadmium	51332	< 0.005	SM3113B (213.2)	0.005	06/18/2003	NM
1020 Chromium	51332	< 0.005	SM3113B (218.2)	0.005	06/18/2003	MG
1024 Cyanide, Total	51332	< 0.005	335.3	0.005	06/18/2003	DSR
1025 Fluoride	51332	1.15	300.0	0.20	06/21/2003	RDB
1035 Mercury	51332	< 0.001	SM3112B (245.1)	0.001	06/18/2003	RP
1036 Nickel	51332	< 0.002	SM3113B (249.2)	0.002	06/18/2003	RP
1038 Nitrate/Nitrite (as N)	51332	< 0.50	300.0	0.50	06/18/2003	RDB
1040 Nitrate (as N)	51332	< 0.50	300.0	0.50	06/18/2003	RDB
1041 Nitrite (as N)	51332	< 0.50	300.0	0.50	06/18/2003	RDB
1052 Sodium	51332	770	SM3111B (273.1)	1.0	06/20/2003	RP
1074 Antimony	51332	< 0.005	SM3113B (204.2)	0.005	06/18/2003	NMO
1075 Beryllium	51332	< 0.002	SM3113B (210.2)	0.002	06/20/2003	NMO

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

July 8, 2003
Submission # 306000887
Order # 51332
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Site Location/Project

City of North Miami Beach

Well 2F
Sample I.D.: Drinking Water
Collected: 06/17/03 10:27
Received: 06/17/03 12:00
Collected by: Phil D'Amo

INORGANICS ANALYSIS
62-550.310(1)
PWS030
Units are mg/L; except Asbestos = MFL

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
9999 Lead	51332	< 0.001	SM3113B (239.2)	0.001	06/18/2003	MAH/RP

Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field

Qualifier following result conforms to FAC 17-160 Table 7*

Wayne Khan
Authorized Laboratory Management
Project Manager.

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

July 8, 2003
Submission # 306000887
Order # 51332
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Site Location/Project

City of North Miami Beach

Well 2F
Sample I.D.: Drinking Water
Collected: 06/17/03 10:27
Received: 06/17/03 12:00
Collected by: Phil D'Amo

TRIHALOMETHANE ANALYSIS
62-550.310(2)(a)
PWS027
Units are ug/L

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
2950 Bromodichloromethane	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2950 Dibromochloromethane	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2950 Tribromomethane (Bromoform)	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2950 Trichloromethane (Chloroform)	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2950 TOTAL Trihalomethanes	51332	< 0.5	524.2	0.5	06/18/2003	SKL

Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field

Qualifier following result conforms to FAC 17-160 Table 7

Wayne Khan
Authorized Laboratory Management
Project Manager.

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

Site Location/Project

City of North Miami Beach

July 8, 2003
Submission # 306000887
Order # 51332
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Well 2F
Sample I.D.: Drinking Water
Collected: 06/17/03 10:27
Received: 06/17/03 12:00
Collected by: Phil D'Amo

VOLATILE ORGANICS ANALYSIS
62-550.310(2)(b)
PWS028
Units are ug/L

Parameter ID	NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
2378	1,2,4-Trichlorobenzene	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2380	Cis-1,2-Dichloroethene	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2955	m & p-Xylene	51332	< 0.5	524.2	0.5	06/18/2003	SKL
955	o-Xylene	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2964	Methylene Chloride	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2968	1,2-Dichlorobenzene (ortho)	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2969	1,4-Dichlorobenzene (para)	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2976	Vinyl Chloride	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2977	1,1-Dichloroethene	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2979	Trans-1,2-Dichloroethene	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2980	1,2-Dichloroethane	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2981	1,1,1-Trichloroethane	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2982	Carbon Tetrachloride	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2983	1,2-Dichloropropane	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2984	Trichloroethene	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2985	1,1,2-Trichloroethane	51332	< 0.5	524.2	0.5	06/18/2003	SKL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

Site Location/Project

City of North Miami Beach

July 8, 2003
Submission # 306000887
Order # 51332
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Well 2F
Sample I.D.: Drinking Water
Collected: 06/17/03 10:27
Received: 06/17/03 12:00
Collected by: Phil D'Amo

VOLATILE ORGANICS ANALYSIS
62-550.310(2)(b)
PWS028
Units are ug/L

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
2987 Tetrachloroethene	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2989 Chlorobenzene	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2990 Benzene	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2991 Toluene	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2992 Ethylbenzene	51332	< 0.5	524.2	0.5	06/18/2003	SKL
2996 Styrene	51332	< 0.5	524.2	0.5	06/18/2003	SKL

Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field

Qualifier following result conforms to FAC 17-160 Table 7

Wayne Khan
Authorized Laboratory Management

Project Manager.

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

July 8, 2003
Submission # 306000887
Order # 51332
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Site Location/Project

City of North Miami Beach

Well 2F
Sample I.D.: Drinking Water
Collected: 06/17/03 10:27
Received: 06/17/03 12:00
Collected by: Phil D'Amo

PESTICIDE & PCB CHEMICAL ANALYSIS
62-550.310(2)(c)
PWS029
Units are ug/L; except Surrogate = %

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
2005 Endrin	51332	< 0.01	505	0.01	06/23/2003	JT
2010 v-BHC (Lindane)	51332	< 0.01	505	0.01	06/23/2003	JT
2015 Methoxychlor	51332	< 0.01	505	0.01	06/23/2003	JT
20 Toxaphene	51332	< 0.01	505	0.01	06/23/2003	JT
2031 Dalapon	51332	< 1.30	EPA 515.1	1.30	06/20/2003	JT
2032 Diquat	51332	<5.0	549.2	5.0	06/23/2003	E87052
2033 SUB 548.1 Endothall	51332	<10	548.1	10.0	06/25/2003	E87052
2034 SUB 547.1 Glyphosate	51332	<25	547.1	25.0	06/24/2003	E87052
2035 Di(2-Ethylhexyl)adipate	51332	< 5.0	EPA 525.2	5.0	06/24/2003	YA
2036 Oxamyl (vydate)	51332	<2.5	531.1	2.5	06/21/2003	E87052
2037 Simazine	51332	< 0.50	507	0.50	06/26/2003	JT
2039 Di(2-Ethylhexyl)phthalate	51332	< 5.0	EPA 525.2	5.0	06/24/2003	YA
2040 Picloram	51332	< 0.20	EPA 515.1	0.20	06/20/2003	JT
2041 Dinoseb	51332	< 0.20	EPA 515.1	0.20	06/20/2003	JT
2042 Hexachlorocyclopentdiene	51332	< 0.01	505	0.01	06/23/2003	JT
2046 Carbofuran	51332	<2.5	531.1	2.5	06/21/2003	E87052

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

Site Location/Project
.
City of North Miami Beach

July 8, 2003
Submission # 306000887
Order # 51332
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Well 2F
Sample I.D.: Drinking Water
Collected: 06/17/03 10:27
Received: 06/17/03 12:00
Collected by: Phil D'Amo

PESTICIDE & PCB CHEMICAL ANALYSIS
62-550.310(2)(c)
PWS029
Units are ug/L; except Surrogate = %

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
2050 Atrazine	51332	< 0.20	507	0.20	06/26/2003	JT
2051 Alachlor	51332	< 0.01	507	0.01	06/26/2003	JT
2065 Heptachlor	51332	< 0.01	505	0.01	06/23/2003	JT
2067 Heptachlor Epoxide	51332	< 0.01	505	0.01	06/23/2003	JT
2105 2,4-D	51332	< 0.20	EPA 515.1	0.20	06/20/2003	JT
2110 2,4,5-TP (silvex)	51332	< 0.20	EPA 515.1	0.20	06/20/2003	JT
2274 Hexachlorobenzene	51332	< 0.01	505	0.01	06/23/2003	JT
2306 Benzo(a)pyrene	51332	< 0.2	EPA 525.2	0.2	06/24/2003	YA
2326 Pentachlorophenol	51332	< 0.20	EPA 515.1	0.20	06/20/2003	JT
2383 Arochlor 1016	51332	< 0.01	505	0.01	06/23/2003	JT
2383 Arochlor 1221	51332	< 0.01	505	0.01	06/23/2003	JT
2383 Arochlor 1232	51332	< 0.01	505	0.01	06/23/2003	JT
2383 Arochlor 1242	51332	< 0.01	505	0.01	06/23/2003	JT
2383 Arochlor 1248	51332	< 0.01	505	0.01	06/23/2003	JT
2383 Arochlor 1254	51332	< 0.01	505	0.01	06/23/2003	JT
2383 Arochlor 1260	51332	< 0.01	505	0.01	06/23/2003	JT

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

July 8, 2003
Submission # 306000887
Order # 51332
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Site Location/Project

City of North Miami Beach

well 2F
Sample I.D.: Drinking Water
Collected: 06/17/03 10:27
Received: 06/17/03 12:00
Collected by: Phil D'Amo

PESTICIDE & PCB CHEMICAL ANALYSIS
62-550.310(2)(c)
PWS029
Units are ug/L; except Surrogate = %

Parameter ID	NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
2931	1,2-Dibromo-3-Chloropropane (DBCP)	51332	<0.020	EPA 504.1 ECD	0.02	06/26/2003	E87052
2946	Ethylene Dibromide (EDB)	51332	<0.010	EPA 504.1 ECD	0.01	06/26/2003	E87052
2959	Chordane	51332	< 0.01	505	0.01	06/23/2003	JT
99	Surrogate: Acifluorfen	51332	85.3	EPA 515.1		06/20/2003	JT
9999	SURROGATE: 2-Fluorophenol	51332	4.54	EPA 525.2		06/24/2003	YA
9999	SURROGATE: Phenol D-6	51332	2.90	EPA 525.2		06/24/2003	YA
9999	SURROGATE: 2,4,6 Tribromophenol	51332	3.74	EPA 525.2		06/24/2003	YA
9999	SURROGATE: Nitrobenzene D-5	51332	4.82	EPA 525.2		06/24/2003	YA
9999	SURROGATE: 2-Fluorobiphenol	51332	4.67	EPA 525.2		06/24/2003	YA
9999	SURROGATE: 4-Terphenyl D-14	51332	5.03	EPA 525.2		06/24/2003	YA

Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field

Qualifier following result conforms to FAC 17-160 Table 7

Wayne Khan
Authorized Laboratory Management

Project Manager.

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

July 8, 2003
Submission # 306000887
Order # 51332
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Site Location/Project

City of North Miami Beach

Well 2F
Sample I.D.: Drinking Water
Collected: 06/17/03 10:27
Received: 06/17/03 12:00
Collected by: Phil D'Amo

TURBIDITY ANALYSIS- For Surface Water Systems
62-550.310(3)
PWS026
Units are NTU

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
100 Turbidity	51332	.389	180.1	0.1	06/19/2003	SN

Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field

Qualifier following result conforms to FAC 17-160 Table 7

Wayne Khan
Authorized Laboratory Management

Project Manager.

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

July 8, 2003
Submission # 306000887
Order # 51332
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Site Location/Project

City of North Miami Beach

Well 2F
Sample I.D.: Drinking Water
Collected: 06/17/03 10:27
Received: 06/17/03 12:00
Collected by: Phil D'Amo

RADIOCHEMICAL ANALYSIS
62-550.310(5)
PWS033
Units are pCi/L

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
4000 SUB EPA 900 Gross Alpha	51332	U-3	EPA 900		06/28/2003	E87689

Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field

Qualifier following result conforms to FAC 17-160 Table 7

Wayne Klotz
Authorized Laboratory Management

Project Manager.

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

July 8, 2003
Submission # 306000887
Order # 51332
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Well 2F

Site Location/Project

City of North Miami Beach

Sample I.D.: Drinking Water
Collected: 06/17/03 10:27
Received: 06/17/03 12:00
Collected by: Phil D'Amo

SECONDARY CHEMICAL ANALYSIS
62-550.320
PWS031
Units are mg/L; except Odor=TON / Color=APHA units

Parameter ID	NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
1002	Aluminum	51332	< 0.1	SM3111D(202.1)	0.1	06/19/2003	RP
1017	Chloride	51332	1126	300.0	1.0	06/18/2003	RDB
1022	Copper	51332	< 0.50	SM3111B (220.1)	0.50	06/20/2003	ERA
1025	Fluoride	51332	1.15	300.0	0.20	06/21/2003	RDB
1028	Iron	51332	< 0.10	SM3111B (236.1)	0.10	06/19/2003	RP
1032	Manganese	51332	< 0.05	SM3111B (243.1)	0.05	06/21/2003	NMO
1050	Silver	51332	< 0.005	SM3113B (272.2)	0.005	06/18/2003	NMO
1055	Sulfate	51332	488	300.0	1.0	06/18/2003	RDB
1095	Zinc	51332	< 0.01	SM 3111B (289.1)	0.01	06/18/2003	MAH
1905	Color (APHA)	51332	2.5	SM2120B (110.2)	2.5	06/18/2003	EP
1920	Odor	51332	80	SM2150B (140.1)	1.0	06/18/2003	EP
1925	pH	51332	7.82	150.1	1.0	06/17/2003	EP
1930	Residue, Total Filterable (TDS)	51332	3353	SM2540C (160.1)	5.0	06/20/2003	YD

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

Site Location/Project

City of North Miami Beach

July 8, 2003
Submission # 306000887
Order # 51332
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Well 2F

Sample I.D.: Drinking Water
Collected: 06/17/03 10:27
Received: 06/17/03 12:00
Collected by: Phil D'Amo

SECONDARY CHEMICAL ANALYSIS
62-550.320
PWS031
Units are mg/L; except Odor=TON / Color=APHA units

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
2905 MBAS Surfactants as "LAS", MW=340	51332	< 0.10	SM5540C (425.1)	0.10	06/19/2003	EP

Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field

Qualifier following result conforms to FAC 17-160 Table 7

Authorized Laboratory Management

Project Manager.

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

Site Location/Project

City of North Miami Beach

July 8, 2003
Submission # 306000887
Order # 51332
FDEP CompQAP# 920323G
FL-DOH Certification# E86349, 86413, 8

Well 2F

Sample I.D.: Drinking Water
Collected: 06/17/03 10:27
Received: 06/17/03 12:00
Collected by: Phil D'Amo

MISCELLANEOUS EXTRA WATER QUALITY TESTS REQUESTED
NON 62-550 Tests
mg/L *
* except Cond=umhos/ BactT=CFU/100ml/ Temp=°C

Parameter ID NAME	Sample Number	Analysis Result	Analytical Method	Det. Limit	Analysis Date	Analyst ID
9999 Specific Conductance {grab}	51332	5300	120.1	1.0	06/19/2003	YD
9999 Chemical Oxygen Demand	51332	48.4	410.4	5.0	06/20/2003	PR
9999 Organic Carbon, Total	51332	< 1.00	415.1	1.00	06/18/2003	SN
9999 Potassium	51332	18	258.1	1.0	06/21/2003	NMO

Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field

Qualifier following result conforms to FAC 17-160 Table 7

Wayne Khan
Authorized Laboratory Management

Project Manager.

Sub #
03/06-887

SEVERN TRENT STL

ANALYTICAL REPORT

Well 2F

PROJECT NO. 51322

Radiological Testing

Lot #: F3F180322

Nellie Montanez

STL Miami
10200 USA Today Way
Miramar, FL 33025

SEVERN TRENT LABORATORIES, INC.

Billy Tierney
Project Manager

June 30, 2003

Severn Trent Laboratories, Inc.
STL St. Louis • 13715 Rider Trail North, Earth City, MO 63045
Tel 314 298 8566 Fax 314 298 8757 • *www.stlinc.com*

Case Narrative
LOT NUMBER: **F3F180322**

This report contains the analytical results for the sample received under chain of custody by STL St. Louis on June 18, 2003. This sample is associated with your Radiological Testing project.

All applicable quality control procedures met method-specified acceptance criteria except as noted on the following page.

This report is incomplete without the case narrative. All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Gross Alpha/Beta by EPA 900

The CRDL for gross alpha and gross beta was not met due to a reduction of sample size attributed to the sample's high residual mass. The analytical results are reported with the MDA achieved.
Affected Samples:
F3F180322 (1): 51332

METHODS SUMMARY

F3F180322

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Gross Alpha/Beta by GFPC	EPA 900.0 MOD	

References:

EPA "EASTERN ENVIRONMENTAL RADIATION FACILITY RADIOCHEMISTRY PROCEDURES MANUAL" US EPA EPA 520/5-84-006 AUGUST 1984

SAMPLE SUMMARY

F3F180322

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
FQRJW	001	51332	06/17/03	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

STL MIAMI

Client Sample ID: 51332

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3F180322-001
Work Order: FQRJW
Matrix: WATER

Date Collected: 06/17/03 0000
Date Received: 06/18/03 0915

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
GROSS A/B BY GFPC EPA 900.0 MOD				**pCi/L**	**900.0 MOD**			
Gross Alpha	3	U	12	21	06/25/03	06/28/03	3176164	
Gross Beta	**26**		**12**	**18**	**06/25/03**	**06/28/03**	**3176164**	

NOTE(S)

Data are incomplete without the case narrative.

[illegible] is determined by instrument performance only.

B[illegible] results are greater than the MDC

U Result is less than the sample detection limit.

METHOD BLANK REPORT

Severn Trent Laboratories - Radiochemistry

Client Lot ID: F3F180322
Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	MDC	Prep Date	Analysis Date	Lab Sample ID Batch #	Yld %
GROSS A/B BY GFPC EPA 900.0 MOD			**pCi/L**	**900.0 MOD**			**F3F250000-164B**	
Gross Alpha	-0.05	U	0.38	0.76	06/25/03	06/29/03	3176164	
Gross Beta	0.05	U	1.0	1.7	06/25/03	06/29/03	3176164	

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only
Bold results are greater than the MDC

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Severn Trent Laboratories - Radiochemistry

Client Lot ID: F3F180322
Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
GROSS A/B BY GFPC EPA 900.0 MOD		**pCi/L**		**900.0 MOD**			**F3F250000-164C**
Gross Alpha	60.2	53.9	6.3	0.7		90	(63 - 130)
	Batch #:	3176164		**Analysis Date:**	06/28/03		
GROSS A/B BY GFPC EPA 900.0 MOD		**pCi/L**		**900.0 MOD**			**F3F250000-164C**
Gross Beta	104	91.1	9.7	1.6		88	(80 - 120)
	Batch #:	3176164		**Analysis Date:**	06/28/03		

NOTE(S)

MDC is determined by instrument performance only
Calculations are performed before rounding to avoid round-off error in calculated results

Sub#
03/06-887

SEVERN TRENT STL

STL Savannah 5102 LaRoche Avenue - Savannah GA 31404 Telephone:(912) 354-7858 Fax:(912) 351-3673

Analytical Report

For: Ms. Nellie Montanez
STL Miami
10200 USA Today Way
Miramar, FL 33025
CC:

Order Number:S384600
SDG Number:
Client Project ID:03/06-887
Project:FKAAS
Report Date:06/26/2003
Sampled By:Client
Sample Received Date:06/18/2003

Gloria D. Fulwood, Project Manager
gfulwood@stl-inc.com

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
84600-1	51332	Liquid	06/18/03	06/17/03	

Parameter	Units	Lab Sample IDs 84600-1
Glyphosate (547)		
Glyphosate	ug/l	<25
Dilution Factor		1
Prep Date		06/23/03
Analysis Date		06/24/03
Batch ID		3J0623
Analyst		KH
Endothall (548.1)		
Endothall	ug/l	<10
Dilution Factor		1
Prep Date		06/23/03
Analysis Date		06/25/03
Batch ID		0623C
Analyst		CJM
Diquat (549.2)		
Diquat	ug/l	<5.0
Dilution Factor		1
Prep Date		06/20/03
Analysis Date		06/23/03
Batch ID		0620C
Analyst		KH
DW-504.1 (Primary) (504.1)		
1,2-Dibromoethane (EDB)	ug/l	<0.010
1,2-Dibromo-3-chloropropane	ug/l	<0.020
Dilution Factor		1
Prep Date		06/25/03
Analysis Date		06/26/03
Batch ID		0625C
Analyst		CJM

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
84600-1	51332	Liquid	06/18/03	06/17/03	

Parameter	Units	Lab Sample IDs: 84600-1
DW-531.1 (531.1)		
Aldicarb	ug/l	<2.5
Aldicarb Sulfone	ug/l	<2.5
Aldicarb sulfoxide	ug/l	<2.5
Baygon/Propoxur	ug/l	<2.5
Carbaryl	ug/l	<2.5
Carbofuran	ug/l	<2.5
3-Hydroxycarbofuran	ug/l	<2.5
Methiocarb	ug/l	<2.5
Methomyl	ug/l	<2.5
Oxamyl	ug/l	<2.5
Dilution Factor		1
Prep Date		06/21/03
Analysis Date		06/21/03
Batch ID		1J0621
Analyst		KH

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
84600-2	Method Blank	Liquid	06/18/03		
84600-3	Lab Control Standard % Recovery	Liquid	06/18/03		
84600-4	LCS Accuracy Control Limit (%R)	Liquid	06/18/03		
84600-5	Reporting Limit (RL)	Liquid	06/18/03		
84600-6	Method Detection Limit (MDL)	Liquid	06/18/03		

Parameter	Units	Lab Sample IDs 84600-2	84600-3	84600-4	84600-5	84600-6
DW-531.1 (531.1)						
Aldicarb	ug/l	<2.5	100 %	80-120 %	2.5	1.0
Aldicarb Sulfone	ug/l	<2.5	120 %	80-120 %	2.5	1.0
Aldicarb sulfoxide	ug/l	<2.5	120 %	80-120 %	2.5	1.0
Baygon/Propoxur	ug/l	<2.5	120 %	80-120 %	2.5	1.0
Carbaryl	ug/l	<2.5	110 %	80-120 %	2.5	1.0
Carbofuran	ug/l	<2.5	110 %	80-120 %	2.5	1.0
3-Hydroxycarbofuran	ug/l	<2.5	97 %	80-120 %	2.5	1.0
Methiocarb	ug/l	<2.5	110 %	80-120 %	2.5	1.0
Methomyl	ug/l	<2.5	100 %	80-120 %	2.5	1.0
Oxamyl	ug/l	<2.5	97 %	80-120 %	2.5	1.0
Dilution Factor		1	1			
Prep Date		06/21/03	06/21/03			
Analysis Date		06/21/03	06/21/03			
Batch ID		1J0621	1J0621			
Analyst		KH	KH			

SUB # 03/06-887

SEVERN TRENT STL

STL Mobile 900 Lakeside Drive - Mobile AL 36693 Telephone:(251) 666-6633 Fax:(251) 666-6696

Analytical Report

For: Ms. Nellie Montanez
STL Miami
10200 USA Today Way
Miramar, FL 33025
CC:

Order Number:M364673
SDG Number:
Client Project ID:
Project:
Report Date:07/01/2003
Sampled By:Client
Sample Received Date:06/18/2003

Jesse L. Smith 07.01.03

Jesse L. Smith, Project Manager
jsmith@stl-inc.com

STL Mobile 900 Lakeside Drive - Mobile AL 36693 Telephone:(251) 666-6633 Fax:(251) 666-6696

Analytical Data Report

Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
64673-1	51332	Liquid	06/18/03	06/17/03 00:00	

Lab Sample IDs

Parameter	Units	64673-1
Haloacetic Acids (552.2)		
Dibromoacetic Acid	ug/l	<1.0
Dichloroacetic Acid	ug/l	<3.0
Monobromoacetic Acid	ug/l	<2.0
Monochloroacetic Acid	ug/l	<3.0
Trichloroacetic Acid	ug/l	<1.0
Prep Date		06/26/03
Analysis Date		06/28/03
Analysis Time		09:55
Analyst		CLN

Sub #
03/06-887

SEVERN TRENT STL

STL Pensacola 3355 McLemore Drive - Pensacola FL 32514 Telephone:(850) 474-1001 Fax:(850) 478-2671

Analytical Report

For: Ms. Nellie Montanez
STL Miami
10200 USA Today Way
Miramar, FL 33025
CC:

Order Number:C306441
SDG Number:
Client Project ID:
Project:3/06-887
Report Date:06/24/2003
Sampled By:Client
Sample Received Date:06/18/2003

LAkers for LLarson

Lance Larson, Project Manager
llarson@stl-inc.com

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
06441-1	51332	Liquid	06/18/03	06/17/03	

Parameter	Units	Lab Sample IDs 06441-1
Thallium (200.9)		
Thallium	mg/l	<0.0020W
Dilution Factor		1
Prep Date		06/19/03
Analysis Date		06/23/03
Batch ID		FW122
Analyst		JDE
Selenium (200.9)		
Selenium	mg/l	<0.0050W
Dilution Factor		1
Prep Date		06/19/03
Analysis Date		06/23/03
Batch ID		FW122
Analyst		JDE
Metals (200.7)		
Arsenic	mg/l	<0.0050
Calcium	mg/l	110
Magnesium	mg/l	120
Dilution Factor		1
Analysis Date		06/20/03
Batch ID		PW226
Analyst		GSP
Quantitation Factor		1.000

STL Pensacola
PROJECT SAMPLE INSPECTION FORM

SEVERN TRENT STL

Lab Order #: C306441 Date Received: 18-Jun-03

1.	Was there a Chain of Custody?	(Yes)	No*		8.	Were samples checked for preservative? *(Check pH of all H_2O requiring preservative (STL-PN SOP 917) except VOA vials that require zero headspace)+*	(Yes)	No*	N/A
2.	Was Chain of Custody properly filled out and relinquished?	(Yes)	No*		9.	Is there sufficient volume for analysis requested?	(Yes)	No*	N/A *(Can)*
3.	Were all samples properly labeled and identified?	(Yes)	No*		10.	Were samples received within Holding Time? (REFER TO STL-SOP 1040)	(Yes)	No*	
4.	Were samples received cold? (Criteria: 2° - 6°C: STL-SOP 1055)	(Yes)	No*	N/A	11.	Is Headspace visible > ¼" in diameter in VOA vials?*	Yes*	No	(N/A)
5.	Did samples require splitting or compositing♦?	Yes*	(No)		12.	Were Trip Blanks Received?	Yes	No	(N/A)
6.	Were samples received in proper containers for analysis requested?	(Yes)	No*		13.	If sent, were matrix spike bottles returned?	Yes	No*	(N/A)
7.	Were all sample containers received intact?	(Yes)	No*		14.	If sent, were T-Handles returned?	Yes	No*	(N/A)
					15.	If any issues, how was PM notified?	PSIF ☐	Verbal ☐	

Airbill Number(s): 6032 6442 [illegible] **Shipped By:** UPS (FedX) HD BUS ABX

(HD – Hand Delivery)

Cooler Numbers & Temp(s) (°C): Client 5°, cool

(IE. 340L-4°C-CCK8 -- LIST THERMOMETER NUMBER FOR VERIFICATION)

Out of Control Events and Inspection Comments (list sample IDs/Tests where appropriate):

1-3. COC/Sample ID/COC discrepancy: _____

4. Insufficient Ice ☐ Delay in delivery ☐ Other ☐ _____

5. Samples were Split ☐ Composited ☐ Requested by: Client ☐ PM ☐ Other: _____

6. Improper Containers (ID/Size/desc): _____

7. Broken bottles/Test: _____

8. Incorrect pH: _____

9. Test/Matrix/Volume: _____

10. Out of Holding Time/Test: _____

11. VOA headspace >1/4" (list size) _____

List additional comments by above number: _____

(USE BACK OF PSIF FOR ADDITIONAL NOTES AND COMMENTS)

Inspected By: MW **Date:** 6/18/03 **Logged By:** [illegible] **Date:** 18-Jun-03

♣ *Note all Out-of-Control and/or questionable events on Comment Section of this form. For holding times, the analytical department will flag immediate hold time samples(pH, Dissolved O2, Residual Cl) as out of hold time, therefore, these samples will not be documented on this PSIF.*

♦ *All volatile samples requested to be split or composited must be done in the Volatile Lab. Document: "Volatile sample values may be compromised due to sample splitting (compositing)"*

+ *All pH results for North Carolina, New York, and other requested samples are to be recorded on the pH log provided (STL-SOP 938).*

• *According to EPA, ¼" of headspace is acceptable in 40 ml vials requiring volatile analysis.*

C306441

Submission Code:
Orders:
Entered to lims: C306441

SEVERN TRENT LABORATORIES, INC.
CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

Original – Return w/Report | Yellow – Lab Copy | Pink – Sampler Copy

FDEP Facility No.:
Page: of
Sampling CompQAP No.):
Approval Date:

Report To: STL - MIAMI | Report To Address: 10200 USA TODAY WAY, MIRAMAR, FL 33025
Bill To: STL- MIAMI | Billing Address: " " "
Project Number/Name: SUBCONTRACTED ANALYSIS (STL - PENSACOLA) | Site Location:
Project Contact: NELLIE MONTANEZ | Phone: (954) 431-4550 | FAX: (954) 431-1959
Alternate Contact: | Phone: | FAX:
Sampled By (print): | Sampler's Signature:

ANALYSIS REQUIRED: PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW (✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED

Sample Condition as Received: Temp. °C; Sealed Yes No

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX DW SW GW SED S EFF HW BIO SA	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	As	Ca	Mg	TL	Se		Lot number of Sampling Containers Used
1	51332	6/17					DW		1	✓	✓	✓	✓	✓		
2																
3																
4																
5																
6																
7																
8																
9																
10																

Special Comments: PO# 03/06-887 | Total # of Containers: 1 | QA/QC Report Needed? Yes No (See price guide for applicable fees)

Please Fax Results to Nellie @ 954-431-1959 | Report Format: Standard Other (specify)

(1) Relinquished by Signature: [signature]	Date: 6/17/03	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED Confirmation #
Company: STL/FEDX	Time: 18:00	Company:	Time:	Custody Code
(1) Received by Signature: [signature] L. Kitt	Date: 6/18/03	(2) Received by Signature:	Date:	
Company: STL-FL	Time: 0915	Company:	Time:	SHADED AREAS ARE FOR LAB USE ONLY

SEVERN TRENT STL

STL PENSACOLA
Certifications, Memberships & Affiliations

Alabama *Department of Environmental Management, Laboratory ID No. 40150 (Drinking Water by Reciprocity with FL), expires 06/30/03*

Arizona *Department of Health Services, Lab ID No. AZ0589 (Hazardous Waste & Wastewater), expires 01/11/04*

Arkansas *Department of Pollution Control and Ecology, (88-0689) (Environmental), expires 05/19/03*

California *Department of Health Services,* ***ELAP*** *Laboratory ID No. I-2510 (Hazardous Waste and Wastewater), expires 03/31/04*

Connecticut *Department of Health Services, Connecticut Lab Approval No. PH-0697 (D W, H W and Wastewater), expires 09/30/03*

Florida *DOH,* ***NELAP*** *Laboratory ID No. E81010 (Drinking Water, Hazardous Waste and Wastewater), expires 06/30/04*

Florida *DEP/DOH CompQAP # 980156*

Iowa *Department of Natural Resources, Laboratory ID No. 367 (UST), expires 08/01/04*

Kansas *Department of Health & Environment,* ***NELAP*** *Laboratory ID No. E10253 (Wastewater and Hazardous Waste), expires 10/31/03*

Kentucky *NR&EPC, Laboratory ID No. 90043 (Drinking Water), expires 12/31/03.*

Louisiana *DEQ, LELAP,* ***NELAP*** *Laboratory ID No. 02075, Agency Interest ID 30748 (Environmental, expires 6/30/03)*

Maryland *DH&MH Laboratory ID No. 233 (Drinking Water by Reciprocity with Florida), expires 09/30/03*

Massachusetts *DEP, Laboratory ID No. M-FL094 (Wastewater), expires 06/30/03*

Michigan *Bureau of E&OccH, Laboratory ID No.9912 (Drinking Water by Reciprocity with Florida), expires 06/30/03*

New Hampshire *DES ELAP,* ***NELAP*** *Laboratory ID No. 250502 (Drinking Water & Wastewater), expires 08/16/03*

New Jersey *DEP&E,* ***NELAP*** *Laboratory ID No. FL006 (Wastewater and Hazardous Waster), expires 06/30/03.*

New York State *Department of Health,* ***NELAP*** *Laboratory ID No. 11503 (WW and Solids/Hazardous Waste), expires 06/16/2003*

North Carolina *DENR, Laboratory ID No. 314 (Hazardous Waste and Wastewater), expires 12/31/03.*

North Dakota *DH&Consol Labs, Laboratory ID No. R-108 Wastewater and Hazardous Waste by Reciprocity with Florida), expires 06/30/03*

Oklahoma *Department of Environmental Quality, Laboratory ID No. 9810 (Hazardous Waste and Wastewater), expires 08/31/03*

Pennsylvania *Department of Environmental Resources,* ***NELAP*** *Laboratory ID No. 68-467 (Drinking Water & Wastewater), expires 12/01/03*

South Carolina *DH&EC, Laboratory ID No. 96026 (Wastewater & Solids/Hazardous Waste by Reciprocity with FL), expires 06/30/03*

Tennessee *Department of Health & Environment, Laboratory ID No. 02907 (Drinking Water), expires 08/03/04*

Virginia *Department of General Services, Laboratory ID No. 00008 (Drinking Water by Reciprocity with FL), expires 06/30/03.*

Washington *Department of Ecology, Laboratory ID No. C282 (Hazardous Waste and Wastewater), expires 09/14/03.*

West Virginia *DOE, Office of Water Resources, Laboratory ID No. 136 (Haz Waste and Wastewater), expires 04/30/04.*

AIHA *(American Industrial Hygiene Association) Accredited Laboratory, Laboratory ID No. 100704, expires April 1, 2004. Participant in AIHA sponsored Laboratory PAT Rounds*

EPA ICR *(Information Collection Rule) Approved Laboratory, Laboratory ID No. ICRFL031*

NFESC *(Naval Facilities Engineering Services Center), expires April 18, 2004*

USACE *(United States Army Corps. of Engineers), MRD, expires June 30, 2003.*

STL Pensacola also has a foreign soil permit to accept soils from locations other than the continental United States. Permit No. S-37599

certlist\condcert.lst revised 6/20/03

Total Pages of Report 9

USBIOSYSTEMS

Client #: FTL-12-010101
Address: Jaffer Associates
2801 N.W 6th AVe.
Miami, FL 33127
Attn: Dave Ingram

Page: Page 1 of 2
Date: 07/08/2003
Log #: L77869-1

Sample Description:

2nd Well Split
Proj.#: CNMB

Analytical Report: CNMB
Date Sampled: 06/17/2003
Time Sampled: 10:49
Date Received: 06/17/2003
Collected By: Client

Parameter	Results	Units	Method	Reportable Limit	Extr. Date	Anly. Date	Analyst
Total THM Potential							
Total THM Potential	140	ug/l	502.2	0.20	06/27	06/27	SUB
Dilution Factor	1.0		502.2		06/27	06/27	SUB
Subcontracted Services							
Subcontract Lab 1	E84129		552/502				SUB
Haloacetic Acids							
Monochloroacetic Acid	BDL	ug/l	552.2	1.0	06/20	06/24	SUB
Monobromoacetic Acid	BDL	ug/l	552.2	1.0	06/20	06/24	SUB
Dichloroacetic Acid	BDL	ug/l	552.2	1.0	06/20	06/24	SUB
Trichloroacetic Acid	BDL	ug/l	552.2	1.0	06/20	06/24	SUB
Dibromoacetic Acid	BDL	ug/l	552.2	1.0	06/20	06/24	SUB
Total HAA'S	BDL	mg/l	552.2	0.0010	06/20	06/24	SUB
Dilution Factor	1.0		552.2		06/20	06/24	SUB
Metals							
Barium	0.012	mg/l	3010/6010	0.010	06/23	06/30	SB
General Chemistry							
Bromide	10	mg/l	300.0	2.5	06/24	06/24	MG
Chloride	1500	mg/l	325.2	10	06/24	06/24	MG
Hydrogen Sulfide	BDL	mg/l	376.1	1.0	06/24	06/24	IG
Total Dissolved Solids	3900	mg/l	160.1	100	06/24	06/24	BG
Total Organic Carbon	BDL	mg/l	415.1	1.0	07/01	07/01	MG

Client #: FTL-12-010101
Address: Jaffer Associates
2801 N.W 6th AVe.
Miami, FL 33127
Attn: Dave Ingram

Date: 07/08/2003
Log #: L77869-1

Sample Description:

2nd Well Split
Proj.#: CNMB

Analytical Report: CNMB
Date Sampled: 06/17/2003
Time Sampled: 10:49
Date Received: 06/17/2003
Collected By: Client

Parameter	Results	Units	Method	Reportable Limit	Extr. Date	Anly. Date	Analyst

General Chemistry (continued)

All analyses were performed using EPA, ASTM, NIOSH, USGS, or Standard Methods and certified to meet NELAC requirements.
Flags: BDL or U-below reporting limit; DL-diluted out; IL-meets internal lab limits; MI-matrix interference; NA-not appl.
Flags: CFR-Pb/Cu rule; ND-non detect(RL estimated); NFL-no free liquids; dw-dry wt; ww-wet wt; C(#)-see attached USB code
FLDEP Flags: J(#)-estimated 1:surr. fail 2:no known QC req. 3:QC fail %R or %RPD; 4:matrix int. 5:improper fld. protocol
FLDEP Flags: L-exceeds calibration; Q-holding time exceeded; T-value < MDL; V-present in blank
FLDEP Flags: Y-improper preservation; B-colonies exceed range; I-result between MDL and PQL

QAP# 980126 | DOH# E86240 | NC CERT# 444
SUB DOH# 86122,86109,E86048 | ADEM ID# 40850 | IL CERT# 200020
SC CERT# 96031001 | TN CERT# 02985
USACE | GA CERT# 917
VA CERT# 00395 | USDA Soil Permit# S-35240

Respectfully submitted,

Steve Walton
Client Technical Svcs. Manager

USBIOSYSTEMS

CHAIN OF CUSTODY RECORD

Log # 77869 / TN'L   Quote:

LAB USE ONLY	YES	NO	N/A
Samples INTACT upon arr.	✓		
Received ON WET ICE? Temp____	✓		
PROPER PRESERVATIVES indicated?	✓		
Received WITHIN HOLDING TIME?	✓		
CUSTODY SEALS INTACT?	✓		
VOLATILES rec'd W/OUT HEADSPACE?			✓
PROPER CONTAINERS used?	✓		

Company Name: JAffer Associates   PO# 38402
Address: 2801 NW 6th AVE
City: MIAMI   State: FL   Zip: 33127
Attn: DAVE INGRAM   Fax# 3055738711
Project Name: 2nd Well Split   Proj# CNMB
Sampler Name/Signature: Phone#:

LAB ANALYSIS

Parameters	CL TDS Bromide	TOC	H_2S	BA	THM Potential	552-1
Sample	1	1	1	1		
pH	7	2	2	2		
Pres Codes	A	E	C	B		

#	Sample Label (Client ID)	Collect Date	Collect Time	Matrix Code	No.	Size	CL TDS Bromide	TOC	H_2S	BA	THM Potential	552-1	Field Filtered (Y/N)	Integrity OK (Y/N)	Remarks
1	CL, TDS, Bromide	6/17/03	1049	H2O	1	500 mL.	✓								S/O ②AL
2	TOC	6/17/03	1050	↓	1			✓							
3	H2S	6/17/03	1054	↓	1				✓		②AL ③4P ①32P				
4	BA	6/17/03	1050	↓	1					✓					
5	THM POTENTIAL	6/17/03	1053	↓	1	1000 mL					✓				
6	552-1	6/17/03	1052	↓	1	1000 mL						✓			
7	~~Hcl~~														
8															
9															
0															

1-6 6/17/03

Matrix Codes
SD Solid Waste; GW Ground Water; EFF Effluent; AFW Analyte Free H_2O; WW Waste Water; DW Drinking Water; SU Surface Water; OL Oil; SL Sludge; SO Soil Sediment; AQ Aqueous; NA Nonaqueous; PE Petroleum; O Other (Please Specify)

Pres/Codes
A. None; B. HNO_3; C. H_2SO_4; D. NaOH; E. HCL; F. MeOH; G. $Na_2S_2O_3$; H. $NaHSO_4$; I. Ice; J. MCAA; O. Other

(41)

REMARKS

T.A.T. REQUEST Standard	Rush	Short Hold	QA/QC Report Level	COC OK	Initials	Specific State Certification Required
(Y) N	Date required	Y___ N ✓	None ✓ 1___ 2___ 3___ Other___	(Y) N	[initials]	

Coolers #'s	Item	Relinquished by	Date	Time	Received by	Date	Time
93		[signature]	5/20/03				
		[signature]	5/17/03	1:55pm	[signature]	6/17/03	1355

Bailers
#______

3231 N.W. 7th Avenue
Boca Raton, FL 33431
888-862-LABS
561-447-7373
888-456-4846 Fax
561-447-6136 Fax

C.O.C. # 61398

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

June 30, 2003
Submission # 306001209
Order # 53248
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
191th NW 8th Ave.
City of North Miami Beach, FL

Sample I.D.: 2 of 20
Collected: 06/23/03 11:15
Received: 06/23/03 12:30
Collected by: Alonso Soules

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform, Fecal	BDL	CFU100ml	9222D	1.0	06/23/2003	06/24/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	06/23/2003	06/24/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

June 30, 2003
Submission # 306001209
Order # 53249
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
191th NW 8th Ave.
City of North Miami Beach, FL

Sample I.D.: 4 of 20
Collected: 06/23/03 11:45
Received: 06/23/03 12:30
Collected by: Alonso Soules

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform, Fecal	BDL	CFU100ml	9222D	1.0	06/23/2003	06/24/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	06/23/2003	06/24/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

Ref # JM - 5/14 -003 P.O. # 38408

Submission Code: 03/06 - 1209
Orders: 53248 - 53249
Entered to lims: AN

SEVERN TRENT LABORATORIES, INC.
CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

Original – Return w/Report Yellow – Lab Copy Pink – Sampler Copy

FDEP Facility No. _____
Page: _____ of _____
Sampling CompQAP No.) _____
Approval Date: _____

Report To: Dave Ingram
Report To Address: 2801 NW 6TH Ave. Miami Fl. 33127
Bill To: Jaffer Associates
Billing Address: 2801 NW 6TH Ave. Miami Fl. 33127
Project Number/Name: City of North Miami Beach Fl.
Site Location: 191 TH SW 8th Ave
Project Contact: Dave Ingram Phone: 786-423-0601 FAX:
Alternate Contact: Jaffer Associates Phone: 305-576-7363 FAX:
Sampled By (print): Alonso Soulés
Sampler's Signature: A. Soulés

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX (DW) SW GW SED S EFF HW BIO SA	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	ANALYSIS REQUIRED: Total Californ + Fecal	Lot number of Sampling Containers Used
1	2 of 20	6/23/03	11:15 hrs				DW	53248	2	✓	
2	4 of 20	6/23/03	11:45 hrs				DW	53249	2	✓	
3											
4											
5											
6											
7											
8											
9											
10											

Sample Condition as Received: Temp 4.1 c Sealed Yes (No)

PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW
(✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED

Special Comments:
Total # of Containers: 4
QA/QC Report Needed? Yes No (See price guide for applicable fees)
Report Format: Standard Other (specify)

(1) Relinquished by Signature: A. Soulés	Date: 6/23/03	(2) Relinquished by Signature:	Date:
Company: Jaffer Assoc.	Time: 12:30 hrs	Company:	Time:
(1) Received by Signature:	Date: 6/23/03	(2) Received by Signature: SM/RM	Date: 6/23/03
Company: ST	Time: 12:30	Company: STL-M2	Time: 12:45

DUE DATE REQUESTED
Confirmation #
Coating Code: _____ Q / L / D
Misc. Charges
SHADED AREAS ARE FOR LAB USE ONLY

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

June 30, 2003
Submission # 306001278
Order # 53671
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
191st. NW 8th. Ave.
City of North Miami Beach, FL

Sample I.D.: 6 of 20
Collected: 06/24/03 12:20
Received: 06/24/03 13:35
Collected by: A.Sovles

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform, Fecal	BDL	CFU100ml	9222D	1.0	06/24/2003	06/25/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	06/24/2003	06/25/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

June 30, 2003
Submission # 306001278
Order # 53705
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
191st. NW 8th. Ave.
City of North Miami Beach, FL

Sample I.D.: 8 of 20
Collected: 06/24/03 12:50
Received: 06/24/03 13:35
Collected by: A.Soules

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform, Fecal	BDL	CFU100ml	9222D	1.0	06/24/2003	06/25/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	06/24/2003	06/25/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

Ref. #JM - 3/14 - 003

Submission Code: 03/26 12:38
Order: 53671 53705
Entered to Bino: EA

SEVERN TRENT LABORATORIES, INC.

CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

Original – Return w/Report   Yellow – Lab Copy   Pink – Sampler Copy

FDEP Facility No.:
Page: of
Sampling CompQAP No.:
Approval Date:

Report To: Dave Ingram
Report To Address: 2801 NW 6TH Ave Miami Fl. 33127
Bill To: Jaffer Associates
Billing Address: 2801 NW 6TH Ave Miami Fl. 33127
Project Number/Name: City of North Miami Beach Fl.
Site Location: 191TH SW 8TH Ave.
Project Contact: Dave Ingram **Phone:** 786-423-0601 **FAX:**
Alternate Contact: Jaffer Associates **Phone:** 786-576-7363 **FAX:**
Sampled By (print): Alonso Soules
Sampler's Signature: [signature]

ANALYSIS REQUIRED: PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW (✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX (DW SW GW SED S EFF HW BIO SA)	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location) Ord #	# CONTAINERS	Total Coliform + Fecal						Lot number of Sampling Containers Used
1	6 of 20	6/24/03	12:20				DW	53671	2	✓						
2	8 of 20	6/24/03	12:50				DW	53705	2	✓						
3																
4																
5																
6																
7																
8																
9																
10																

Special Comments: **Total # of Containers:** 4
QA/QC Report Needed? Yes No (See price guide for applicable fees)
Report Format: Standard Other (specify)

(1) Relinquished by Signature: [signature]	Date: 6/24/03	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED Confirmation #
Company: Jaffer Assoc.	Time: 13:35	Company:	Time:	Custody Seal:
(1) Received by Signature: [signature]	Date: 6/24/03	(2) Received by Signature: [signature] STL	Date: 6/24/03	
Company: STL	Time: 13:35	Company:	Time: 1400	SHADED AREAS ARE FOR LAB USE ONLY

STL-8242 (3/01)

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

June 30, 2003
Submission # 306001365
Order # 54269
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
191st. NW 8th. Ave.
City of North Miami Beach, FL

Sample I.D.: 10 of 20
Collected: 06/25/03 10:40
Received: 06/25/03 12:00
Collected by: Alonso Soules

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform, Fecal	BDL	CFU100ml	9222D	1.0	06/25/2003	06/26/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	06/25/2003	06/26/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
*62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

June 30, 2003
Submission # 306001365
Order # 54270
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
191st. NW 8th. Ave.
City of North Miami Beach, FL

Sample I.D.: 12 of 20
Collected: 06/25/03 11:10
Received: 06/25/03 12:00
Collected by: Alonso Soules

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform, Fecal	BDL	CFU100ml	9222D	1.0	06/25/2003	06/26/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	06/25/2003	06/26/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

...#0... -74 005 P.O. #50900

Submission Code: 306-1365
Orders: 54269 - 54270
Entered to Lims: EC

SEVERN TRENT LABORATORIES, INC.

CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

FDEP Facility No. ______
Page: ______ of ______
Sampling CompQAP No.) ______
Approval Date: ______

Original – Return w/Report | Yellow – Lab Copy | Pink – Sampler Copy

Report To: Dave Ingram
Report To Address: 2801 NW 6TH Av. Miami Fl. 33127
Bill To: Jaffer Associates
Billing Address: 2801 NW 6TH Av. Miami Fl. 33127
Project Number/Name: City of North Miami Beach Fl.
Site Location: 191TH SW 8TH Ave
Project Contact: Dave Ingram Phone: 786-423-0601 FAX:
Alternate Contact: Jaffer Associates Phone: 305-576-7363 FAX:
Sampled By (print): Alonso Soule's
Sampler's Signature: [signature]

ANALYSIS REQUIRED: PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW (✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED

Matrix: DW (circled) SW GW SED S EFF HW BIO SA

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	Total Caliform + Fecal						Lot number of Sampling Containers Used
1	10 of 20	6/25/03	10:40 hrs.				DW	54269	2	✓						
2	12 of 20	6/25/03	11:10 hrs.				DW	54270	2	✓						
3																
4																
5																
6																
7																
8																
9																
10																

Special Comments:
Total # of Containers: 4
QA/QC Report Needed? Yes No (See price guide for applicable fees)
Report Format: Standard Other (specify)

(1) Relinquished by Signature: [signature]	Date: 6/25/03	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED Confirmation #
Company: Jaffer Assoc.	Time: 12:00	Company:	Time:	Cooling Code: ______ Q/L/D
(1) Received by Signature: [signature]	Date: 6/25/03	(2) Received by Signature: [signature]	Date: 6/25/03	Misc. Charges
Company: STL	Time: 12:00	Company:	Time: 1215	SHADED AREAS ARE FOR LAB USE ONLY

Sample Condition Upon Receipt: Temp: ... Seals: ...

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

June 30, 2003
Submission # 306001434
Order # 54773
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
191th. NW 8th. Ave.
City Of N.Miami Beach FL.

Sample I.D.: 14 of 20
Collected: 06/26/03 12:30
Received: 06/26/03 13:30
Collected by: A.Soules

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform, Fecal	BDL	CFU100ml	9222D	1.0	06/26/2003	06/27/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	06/26/2003	06/27/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

SEVERN TRENT STL

JAFFER000188
Dave Ingram
Jaffer Associates, LTD.
2801 N.W. 6th Avenue
Miami, FL 33127

June 30, 2003
Submission # 306001434
Order # 54775
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
191th. NW 8th. Ave.
City Of N.Miami Beach FL.

Sample I.D.: 16 of 20
Collected: 06/26/03 13:00
Received: 06/26/03 13:30
Collected by: A.Soules

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform, Fecal	BDL	CFU100ml	9222D	1.0	06/26/2003	06/27/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	06/26/2003	06/27/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

Ref # JM - 0714 - 003   P.O. # 30400

Submission Code: 03/06 - 1434
Order: 54773, 54775
Entered In: 8R

SEVERN TRENT LABORATORIES, INC.

CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

Original – Return w/Report   Yellow – Lab Copy   Pink – Sampler Copy

FDEP Facility No. ______
Page: ______ of ______
Sampling CompQAP No.) ______
Approval Date: ______

Report To: Dave Ingram
Report To Address: 2801 NW 6TH Ave. Miami Fl. 33127
Bill To: Jaffer Associates
Billing Address: 2801 NW 6TH Ave. Miami Fl. 33127
Project Number/Name: City of North Miami Beach Fl.
Site Location: 191TH NW 8TH Av.
Project Contact: Dave Ingram   Phone: 786-423-0601   FAX:
Alternate Contact: Jaffer Associates   Phone: 305-576-7363   FAX:
Sampled By (print): Alonso Soules
Sampler's Signature: [signature]

ANALYSIS REQUIRED

PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW
(✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED

Sample Condition As Received

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX (DW SW GW SED S EFF HW BIO SA)	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	Total Coliform + Fecal						Lot number of Sampling Containers Used
1	14 of 20	6/26/03	12:30				DW		2	✓		54773				
2	16 of 20	6/26/03	13:00				DW		2	✓		54775				
3																
4																
5																
6																
7																
8																
9																
10																

Special Comments: Total # of Containers: 4

QA/QC Report Needed? Yes No (See price guide for applicable fees)
Report Format: Standard Other (specify)

(1) Relinquished by Signature: [signature]	Date: 6/26/03	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED Confirmation #
Company: Jaffer Associates	Time: 13	Company:	Time:	Routing Code:
(1) Received by Signature: [signature]	Date: 6-26-03	(2) Received by Signature: [signature] SRM2	Date: 6/26/03	Misc. Charges
Company: STL	Time: 13:30	Company:	Time: 1335	SHADED AREAS ARE FOR LAB USE ONLY

STL-8242 (3-01)

SEVERN TRENT **STL**

JAFFER000188
Dave Ingram
Jaffer Associates, LTD.
2801 N.W. 6th Avenue
Miami, FL 33127

June 30, 2003
Submission # 306001505
Order # 55110
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
191th NW 8th. Ave.
City of North Miami Beach FL.

Sample I.D.: 18 of 20
Collected: 06/27/03 11:30
Received: 06/27/03 13:00
Collected by: Alonso Soules

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform. Fecal	BDL	CFU100ml	9222D	1.0	06/27/2003	06/28/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	06/27/2003	06/28/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

SEVERN TRENT **STL**

JAFFER000188
Dave Ingram
Jaffer Associates, LTD. Φ
2801 N.W. 6th Avenue
Miami, FL 33127

June 30, 2003
Submission # 306001505
Order # 55111
FDEP CompQAP# 990102
FL-DOH Certification# E86349,E86616

Site Location/Project
191th NW 8th. Ave.
City of North Miami Beach FL.

Sample I.D.: 20 of 20
Collected: 06/27/03 12:00
Received: 06/27/03 13:00
Collected by: Alonso Soules

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT-RQL	DATE EXT.	DATE ANALY.	ANALYST
Coliform, Fecal	BDL	CFU100ml	9222D	1.0	06/27/2003	06/28/2003	E86616
Coliform, Total	Absent	CFU100ml	9223B	P/A	06/27/2003	06/28/2003	E86616

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effect Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
**These test results meet all the requirements of NELAC.All questions regarding this test report should be directed to the STL representative who signed this report or the QC department.

Wayne Khan
Project Manager.

Ref. #JM-5/14-005

Submission #: 0306-1505
Order #: 55110-55111
Logged in by: (initials)

SEVERN TRENT LABORATORIES, INC.

CHAIN OF CUSTODY RECORD (DEP 62-770.900 – modified form)

10200 USA TODAY WAY, MIRAMAR, FLORIDA 33025
(954) 431-4550 • NAT'L WATS (800) LAB-8550 • FAX (954) 431-1959 • SAMPLE CUSTODY FAX (954) 432-8875

Original – Return w/Report　Yellow – Lab Copy　Pink – Sampler Copy

FDEP Facility No. ______
Page: ____ of ____
Sampling CompQAP No.) ______
Approval Date: ______

Report To: Dave Ingram
Report To Address: 2801 NW 6TH Ave. Miami Fl. 33127
Bill To: Jaffer Associates
Billing Address: 2801 NW 6TH Ave. Miami Fl. 33127
Project Number/Name: City of North Miami Beach Fl.
Site Location: 191TH NW 8TH Av.
Project Contact: Dave Ingram　Phone: 786-423-0601　FAX:
Alternate Contact: Jaffer Associates　Phone: 305-576-7363　FAX:
Sampled By (print): Alonso Soule's
Sampler's Signature: A. Loulez N.

Sample Condition as Received: Temp 4°C; Sealed: Yes / No

ANALYSIS REQUIRED: PLACE NAME OR METHOD NUMBER OF TESTS NEEDED IN LARGE BOXES BELOW (✓) CHECK OFF WHICH SAMPLE ITEMS NEED EACH TEST PERFORMED

ITEM	SAMPLE ID	DATE COLLECTED	TIME COLLECTED	pH FLD	TEMP °C FLD	COND FLD	MATRIX (DW SW GW SED S EFF HW BIO SA)	SAMPLE LOCATION JOB DESCRIPTION (optional if needed when samples are from different site location)	# CONTAINERS	Total Californ + Fecal						Lot number of Sampling Containers Used
1	18 of 20	6/27/03	11:30				DW		2	✓ 55110						
2	20 of 20	6/27/03	12:00				DW		2	✓ 55111						
3																
4																
5																
6																
7																
8																
9																
10																

Total # of Containers: 4

QA/QC Report Needed? Yes No (See price guide for applicable fees)
Report Format: Standard Other (specify)

Special Comments:

(1) Relinquished by Signature: A. Loulez N.	Date: 6/27/03	(2) Relinquished by Signature:	Date:	DUE DATE REQUESTED Confirmation #
Company: Jaffer Assoc.	Time:	Company:	Time:	Coating Code: Q/L/D
(1) Received by Signature: E mel	Date: 6/27/03	(2) Received by Signature: E	Date: 6/27/03	Misc. Charges
Company: STL	Time: 13:00	Company: STL	Time: 13:00	SHADED AREAS ARE FOR LAB USE ONLY

[signature] 6/27/03 1315

STL-8242 (3-01)

ATTACHMENT F
PLUMBNESS TESTS

HARTMAN & ASSOCIATES, INC.

engineers, hydrogeologists, surveyors & management consultants

Plumbness Test

Job Name: City of N.M.B. **Job Number:** 00-0202.021
Well No. 1F **Date:** 10/17/2002
Witness: Thomas Salter **Page** 1 of 1

Casing OD 17.40", Casing ID 15.25", Open Hole ID 15.00", Plummet OD 14.75"
Height of Apex Above Top of Well 10.00'

Depth of Plummet Below Top of Well - ft	Horizontal Deflection of Plumb Line – ft				Calculated Drift of Well – ft			
	North	South	East	West	North	South	East	West
0	0	0	0	0	0	0	0	0
10	.01			.03	.02			.06
20	.01			.04	.03			.12
30	.01			.04	.04			.16
40	.01			.04	.05			.20
50	.01			.04	.06			.24
60	0	0		.04	0	0		.28
70	0	0		.04	0	0		.32
80	0	0		.04	0	0		.36
90	.01			.03	.10			.30
100	.01			.03	.11			.33
110	.01			.03	.12			.36
120	.01			.04	.13			.52
130	0	0		.04	0	0		.56
140	.01			.04	.15			.60
150	0	0		.04	0	0		.64
160	0	0		.03	0	0		.51
170	0	0		.03	0	0		.54
180	.01			.03	.19			.57
190	.01			.04	.20			.80
200	0	0		.04	0	0		.84
210	0	0		.04	0	0		.88
220	.01			.04	.23			.92
230	0	0		.03	0	0		.72
240	0	0		.03	0	0		.75
250	.01			.03	.26			.78
260	.01			.03	.27			.81
270	0	0		.03	0	0		.84
280	0	0		.03	0	0		.87
290	0	0		.03	0	0		.90

Depth of Plummet Below Top of Well - ft	Horizontal Deflection of Plumb Line – ft				Calculated Drift of Well – ft			
	North	South	East	West	North	South	East	West
300	0	0		.03	0	0		.93
310	0	0		.03	0	0		.96
320	.01			.03	.33			.99
330	0	0		.03	0	0		1.02
340	0	0		.04	0	0		1.40
350	0	0		.04	0	0		1.44
360	.01			.04	.37			1.48
370	0	0		.03	0	0		1.14
380	0	0		.03	0	0		1.17
390	.01			.03	.40			1.20
400	.01			.03	.41			1.23
410	0	0		.03	0	0		1.26
420	.01			.03	.43			1.29
430	.01			.04	.44			1.76
440	0	0		.04	0	0		1.80
450	.01			.04	.46			1.84
460	0	0		.03	0	0		1.41
470	0	0		.03	0	0		1.44
480	.01			.03	.49			1.47
490	.01			.03	.50			1.50
500	0	0		.03	0	0		1.53
510	0	0		.03	0	0		1.56
520	.01			.03	.53			1.59
530	.01			.03	.54			1.62
540	.01			.03	.55			1.65
550	.01			.03	.56			1.68
560	0	0		.04	0	0		2.28
570	.01			.03	.58			1.74
580	.01			.04	.59			2.36
590	.01			.04	.60			2.40
600	0	0		.03	0	0		1.83
610	0	0		.04	0	0		2.48
620	0	0		.04	0	0		2.52
630	0	0		.03	0	0		1.92
640	.01			.03	.65			1.95
650	.01			.03	.66			1.98
660	.01			.03	.67			2.01
670	0	0		.03	0	0		2.04
680	.01			.03	.69			2.07
690	.01			.03	.70			2.10
700	0	0		.02	0	0		1.42
710	.01			.03	.72			2.16
720	0	0		.04	0	0		2.92
730	0	0		.04	0	0		2.96
740	.01			.03	.75			2.25
750	0	0		.03	0	0		2.28
760	.01			.03	.77			2.31
770	0	0		.04	0	0		3.12

Depth of Plummet Below Top of Well - ft	Horizontal Deflection of Plumb Line - ft				Calculated Drift of Well – ft			
Depth	North	South	East	West	North	South	East	West
780	0	0		.03	0	0		2.37
790	.01			.03	.80			2.40
800	0	0		.03	0			2.43
810	.01			.02	.82			1.64
820	0	0		.02	0			1.66
830	.01			.03	.84			2.52
840	0	0		.03	0			2.55
850	.01			.03	.86			2.58
860	0	0		.02	0			1.74
870	.01			.02	.88			1.76
880	.01			.03	.89			2.67
890	0	0		.03	0			2.70
900	0	0		.03	0			2.73
910	0	0		.03	0			2.76
920	.01			.02	.93			1.86
930	0	0		.01	0			.94
940	0	0		.01	0			.95
950	0	0		.01	0			.96
960	.01			.01	.97			.97
970	.01			.01	.98			.98
980	.01			.01	.99			.99
990	.01			.01	1.00			1.00
1000								

NOTE: Maximum Allowable Drift = 2/3 Casing ID Per 100' of Depth = 10.17"(0.8475')/100'

HARTMAN & ASSOCIATES, INC.

engineers, hydrogeologists, surveyors & management consultants

Plumbness Test

Job Name: City of N.M.B. **Job Number:** 00-0202.021
Well No. 2F **Date:** 01/14/2003
Witness: Thomas Salter **Page** 1 of 1

Casing OD 17.40", Casing ID 15.25", Open Hole ID 15.00", Plummet OD 14.75"
Height of Apex Above Top of Well 10.00'

Depth of Plummet Below Top of Well - ft	Horizontal Deflection of Plumb Line - ft				Calculated Drift of Well – ft			
	North	South	East	West	North	South	East	West
0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
20	0	0	.02		0	0	0.06	
30	.02		.02		0.08		0.08	
40	.02		.02		0.10		0.10	
50	.02		.01		0.12		0.06	
60	.02		.01		0.14		0.07	
70	.02		0	0	0.16		0	0
80	.02		0	0	0.18		0	0
90	.03		.01		0.30		0.10	
100	.03		0	0	0.33		0	0
110	.02		.01		0.24		0.12	
120	.02		0	0	0.26		0	0
130	.02		.01		0.28		0.14	
140	.02		.01		0.30		0.15	
150	.02		0	0	0.32		0	0
160	.02		0	0	0.34		0	0
170	.03		0	0	0.54		0	0
180	.02		0	0	0.38		0	0
190	.02		0	0	0.40		0	0
200	.03		0	0	0.63		0	0
210	.04		.01		0.88		0.22	
220	.03		0	0	0.69		0	0
230	.03		0	0	0.72		0	0
240	.02		0	0	0.50		0	0
250	.03		.01		0.78		0.26	
260	.03		0	0	0.81		0	0
270	.03		0	0	0.84		0	0
280	.03		0	0	0.87		0	0
290	.03		0	0	0.90		0	0

Depth of Plummet Below Top of Well - ft	Horizontal Deflection of Plumb Line - ft				Calculated Drift of Well -- ft			
	North	South	East	West	North	South	East	West
300	.02		0	0	0.62		0	0
310	.02		0	0	0.64		0	0
320	.03		0	0	0.99		0	0
330	.02		0	0	0.68		0	0
340	.03		0	0	1.05		0	0
350	.04		0	0	1.44		0	0
360	.02		0	0	0.74		0	0
370	.03		0	0	1.14		0	0
380	.03		.01		1.17		0.39	
390	.03		.01		1.20		0.40	
400	.03		0	0	1.23		0	0
410	.03		0	0	1.26		0	0
420	.03		0	0	1.29		0	0
430	.02		0	0	0.88		0	0
440	.03		0	0	1.35		0	0
450	.03		0	0	1.38		0	0
460	.02		.01		0.94		0.47	
470	.03		0	0	1.44		0	0
480	.03		0	0	1.47		0	0
490	.03		0	0	1.50		0	0
500	.03		0	0	1.53		0	0
510	.03		0	0	1.56		0	0
520	.03		0	0	1.59		0	0
530	.03		0	0	1.62		0	0
540	.04		.01		2.20		0.55	
550	.03		0	0	1.68		0	0
560	.02		0	0	1.14		0	0
570	.02		0	0	1.16		0	0
580	.03		0	0	1.77		0	0
590	.02		0	0	1.20		0	0
600	.02		0	0	1.22		0	0
610	.03		0	0	1.86		0	0
620	.02		0	0	1.26		0	0
630	.02		0	0	1.28		0	0
640	.02		0	0	1.30		0	0
650	.02		0	0	1.32		0	0
660	.02		0	0	1.34		0	0
670	.02		0	0	1.36		0	0
680	.02		0	0	1.38		0	0
690	.02		0	0	1.40		0	0
700	.02		0	0	1.42		0	0
710	.02		0	0	1.44		0	0
720	.02		0	0	1.46		0	0
730	.02		0	0	1.48		0	0
740	.03		.01		2.25		0.75	
750	.02		0	0	1.52		0	0
760	.02		0	0	1.54		0	0
770	.02		0	0	1.56		0	0

Depth of Plummet Below Top of Well - ft	Horizontal Deflection of Plumb Line - ft				Calculated Drift of Well – ft			
Depth	North	South	East	West	North	South	East	West
780	.02		0	0	1.58		0	0
790	.02		0	0	1.60		0	0
800	.02		0	0	1.62		0	0
810	.02		0	0	1.64		0	0
820	.02		0	0	1.66		0	0
830	.02		0	0	1.68		0	0
840	.02		0	0	1.70		0	0
850	.02		0	0	1.72		0	0
860	.01		0	0	0.87		0	0
870	.02		0	0	1.76		0	0
880	.02		0	0	1.78		0	0
890	.02		0	0	1.80		0	0
900	.02		0	0	1.82		0	0
910	.02		0	0	1.84		0	0
920	.02		0	0	1.86		0	0
930	.02		0	0	1.88		0	0
940	.02		0	0	1.90		0	0
950	.02		0	0	1.92		0	0
960	.01		0	0	0.97		0	0
970	.02		0	0	1.96		0	0
980	.02		0	0	1.98		0	0
990	-	-	-	-	-	-	-	-
1000	-	-	-	-	-	-	-	-

NOTE: Maximum Allowable Drift = 2/3 Casing ID Per 100' of Depth = 10.17"(0.8475')/100'

ATTACHMENT G
GEOPHYSICAL LOGS