Appendix A

Well Drilling and Installation Report

Technical Memorandum

Exploratory and Shallow Well Drilling Rio Grande Watershed Study–Phase I San Acacia Surface Water/Groundwater Investigation

Prepared For:

U.S. Army Corps of Engineers – Albuquerque District
Contract No. DACW47-99-C-0012, Modification No. P00007

Prepared By:

S.S. PAPADOPULOS & ASSOCIATES, INC.
Boulder, Colorado

December 5, 2003

1877 Broadway, Suite 703, Boulder, Colorado 80302-5245 · (303) 939-8880

S. S. PAPADOPULOS & ASSOCIATES, INC.
Environmental & Water-Resource Consultants

Technical Memorandum

Date: December 1, 2003

From: S. S. Papadopulos & Associates, Inc.

To: Ron Kneebone – U. S. Army Corps of Engineers
Page Pegram – New Mexico Interstate Stream Commission

Subject: Exploratory and Shallow Well Drilling, Rio Grande Watershed Study - Phase I, San Acacia Surface Water/Groundwater Investigation

This memorandum transmits data collected from the drilling of exploratory boreholes and the drilling and construction of monitoring wells conducted as part of the Rio Grande Watershed Study, Phase 1. Exploratory and monitoring well drilling was conducted by Geotest, Inc. Drive-point monitoring wells were installed at the San Acacia transect on the east side of the Rio Grande by Detech, Inc. Test extraction wells were drilled and constructed by WDC Exploration and Wells. All drilling and well construction activities were supervised by an S.S. Papadopulos and Associates, Inc. (SSP&A), geologist. Procedures followed during drilling, soil sampling, geologic logging, and well construction are presented in detail in the Work Plan for Exploratory and Shallow Well Drilling Activities, Rio Grande Watershed Study, Phase 1 (SSP&A, 2002). The primary purpose of this memorandum is to present data collected during this phase of the Rio Grande Water Supply Study.

DATA PACKAGE

The following data is transmitted as part of this memorandum:

- Drilling program base map and individual transect plan view maps (Figures 1 through 9)
- Tabulated well construction data (Table 1)
- Tabulated well and staff gage survey data (Tables 2 through 9)
- Geologic logs and well construction diagrams (Appendix A)
- Geophysical logs for SAC east-side boreholes (Appendix B)
- Geologic cross sections for each transect (Figures 10 through 16)
- Graphical presentation of the results of grain size distribution analyses (Figures 17 through 23)

1877 BROADWAY, SUITE 703, BOULDER, COLORADO 80302-5245 · TEL: (303) 939-8880 FAX: (303) 939-8877
www.sspa.com e-mail: boulder@sspa.com

- Laboratory data reports for grain size and hydrometer/Atterberg limits testing (Appendix C)
- Summary of unsaturated soil hydraulic properties (Table 10)
- Laboratory reports for unsaturated soil characteristics testing (Appendix D)
- Photocopies of field log books (Appendix E)

A CD containing Adobe Acrobat copies of the transect plan view maps, the geologic logs and well construction diagrams, and the geologic cross sections is included with this memorandum. The CD also includes Excel files of the well details table, survey data table, and the unsaturated soil characteristics table.

REFERENCES

S.S. Papadopulos and Associates, Inc., 2002. Work Plan for Exploratory and Shallow Well Drilling Activities, Rio Grande Watershed Study, Phase 1, SSP&A report to U.S. Army Corps of Engineers and the New Mexico Interstate Stream Commission.

van Genuchten, M. T., 1980. A closed-form equation for predicting the hydraulic conductivity of unsaturated soils, Soil Science Society of America Journal, vol. 44, p. 892.

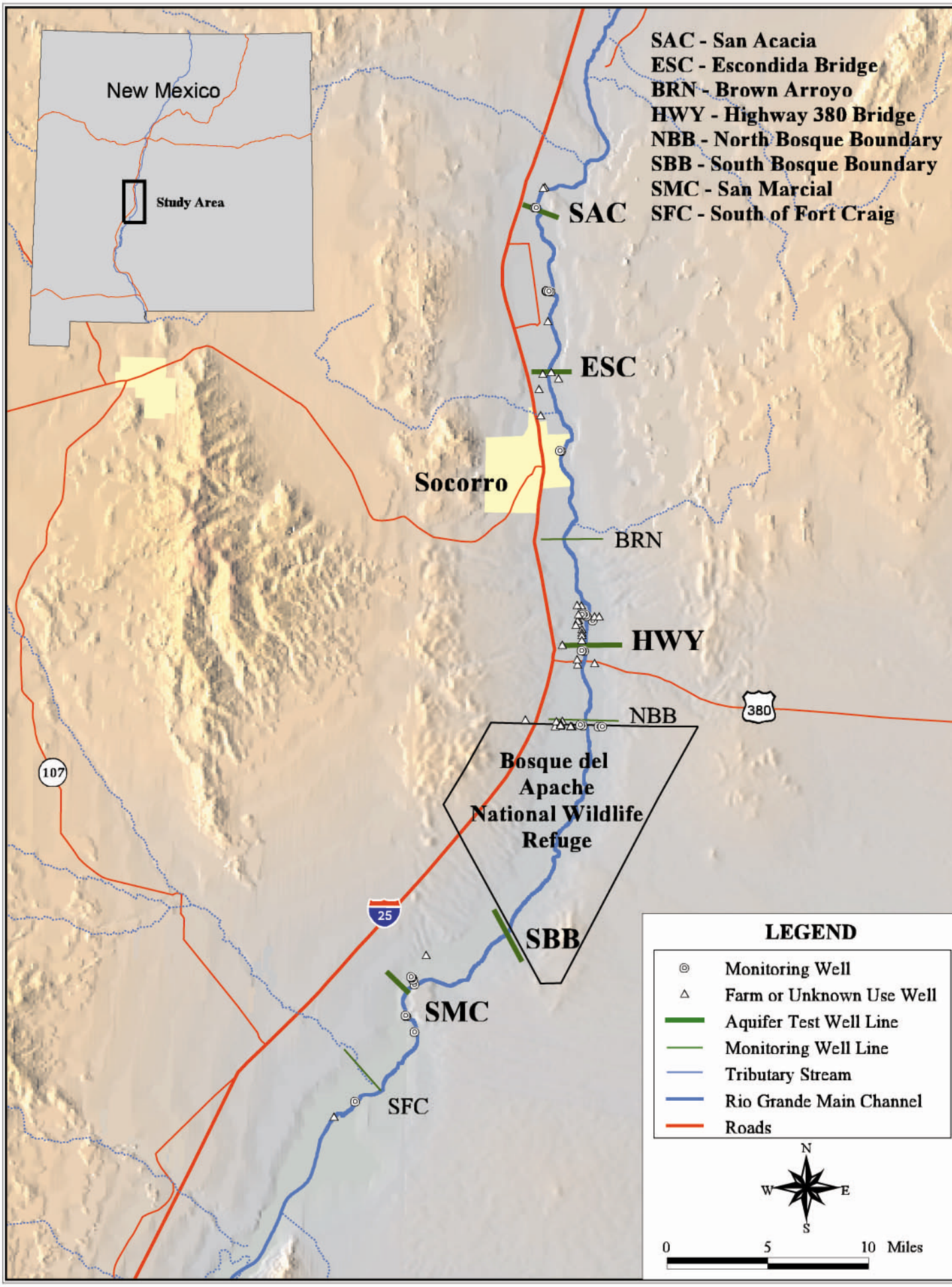


Figure 1. Well transects, Rio Grande Watershed Study, Phase 1

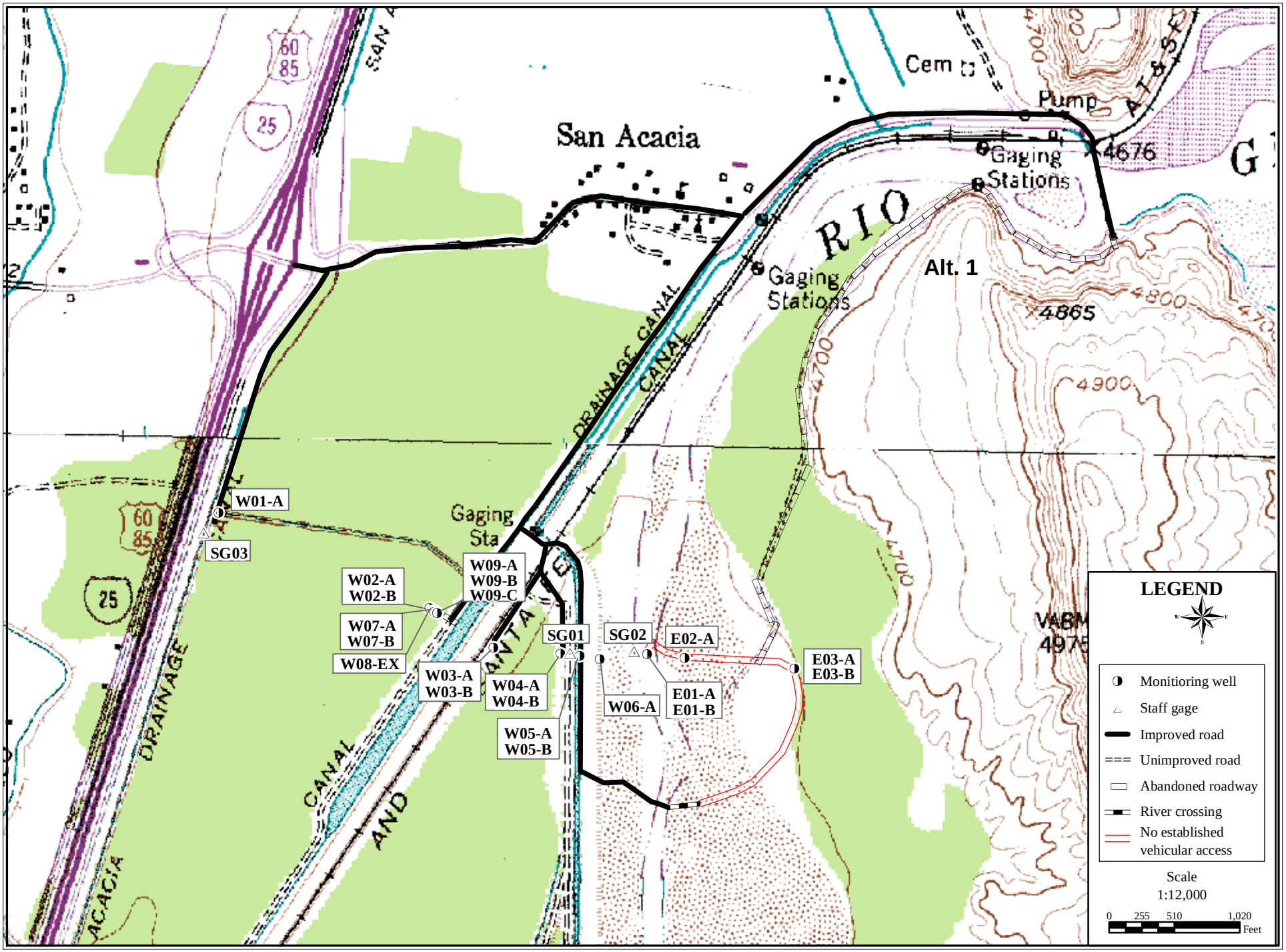


Figure 2. San Acacia (SAC) surveyed well locations and access roads

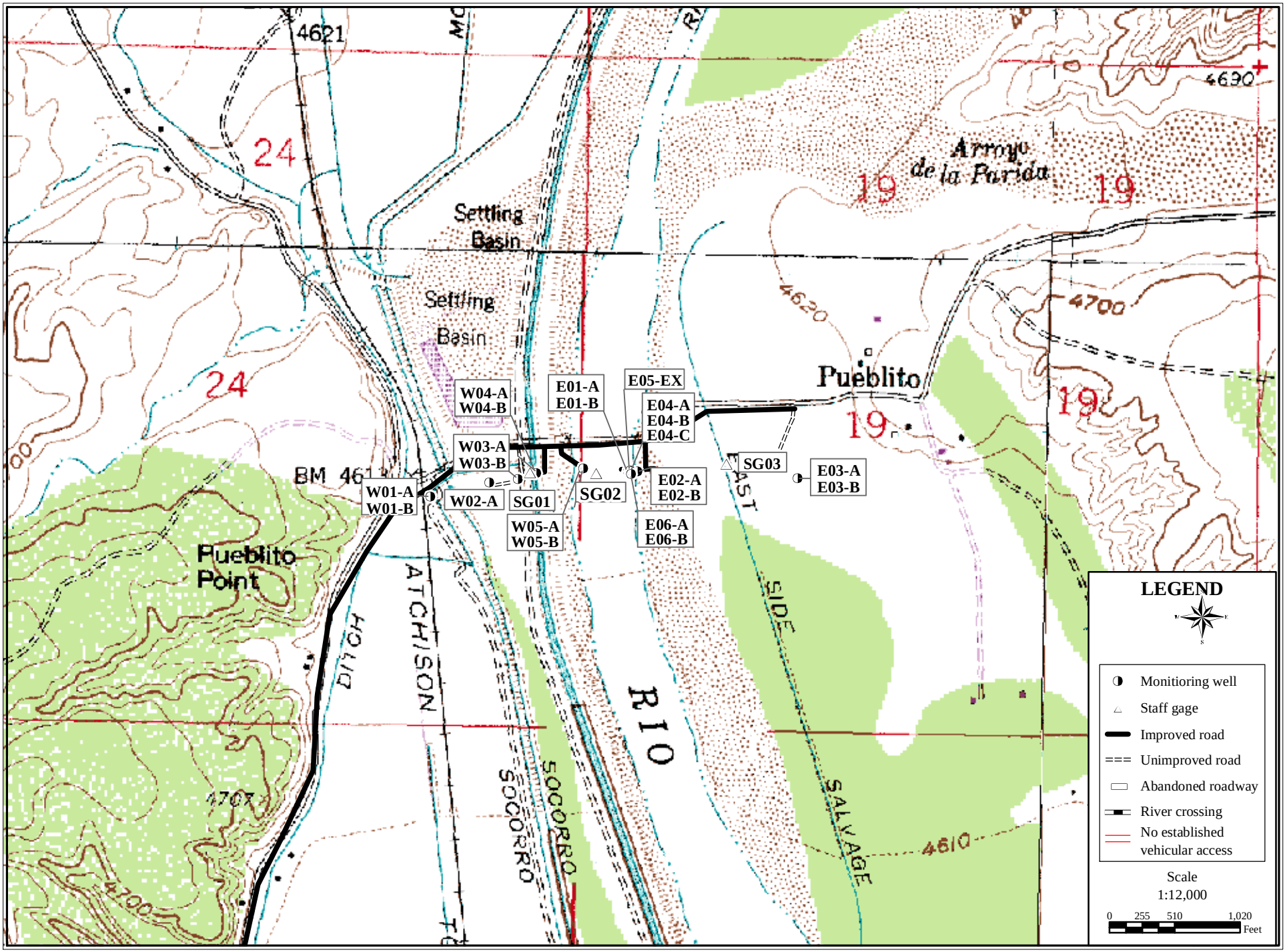


Figure 3. Escondida Bridge (ESC) surveyed well locations and access roads

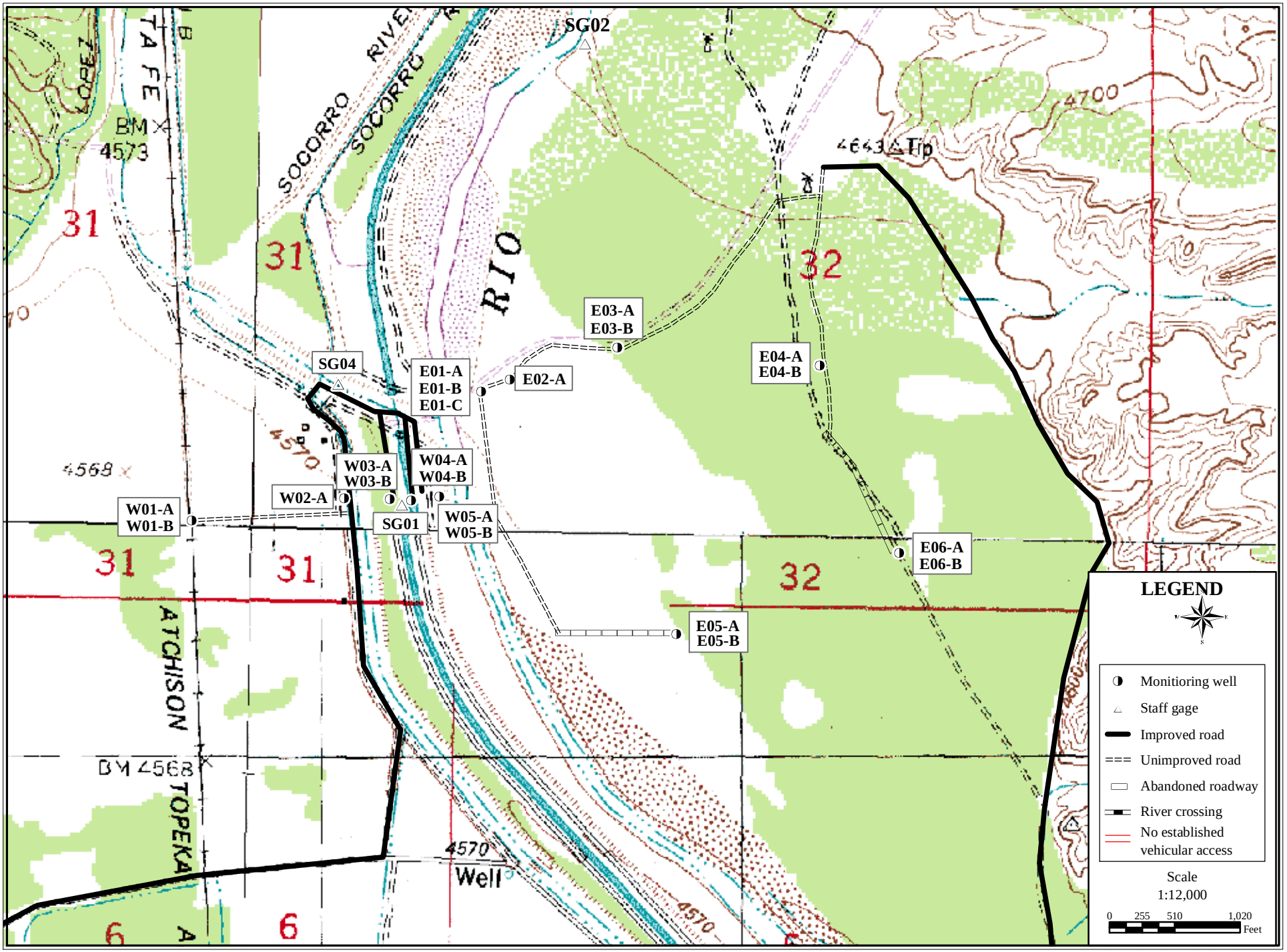


Figure 4. Brown Arroyo (BRN) surveyed well locations and access roads

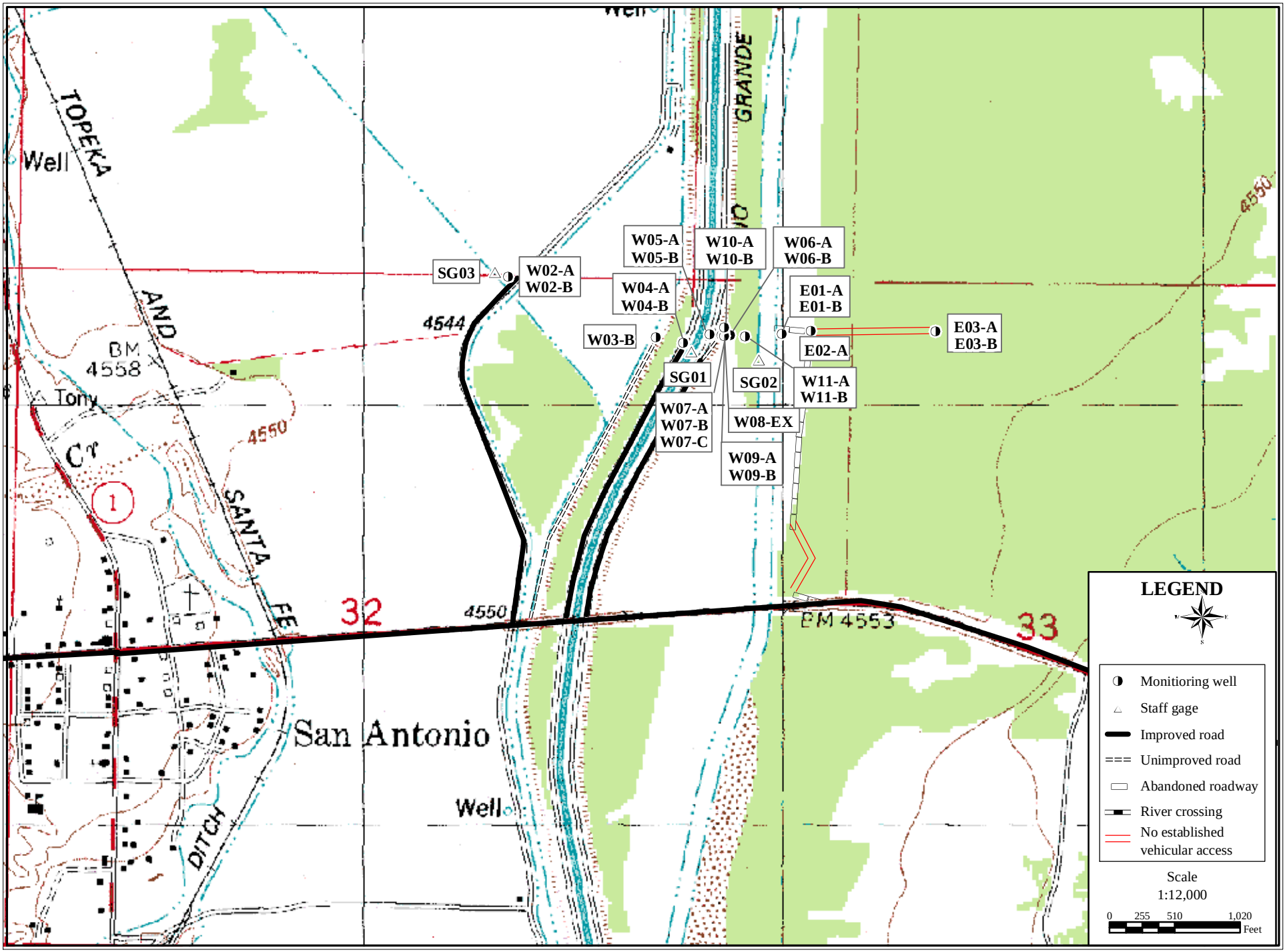


Figure 5. Highway 380 Bridge (HWY) surveyed well locations and access roads

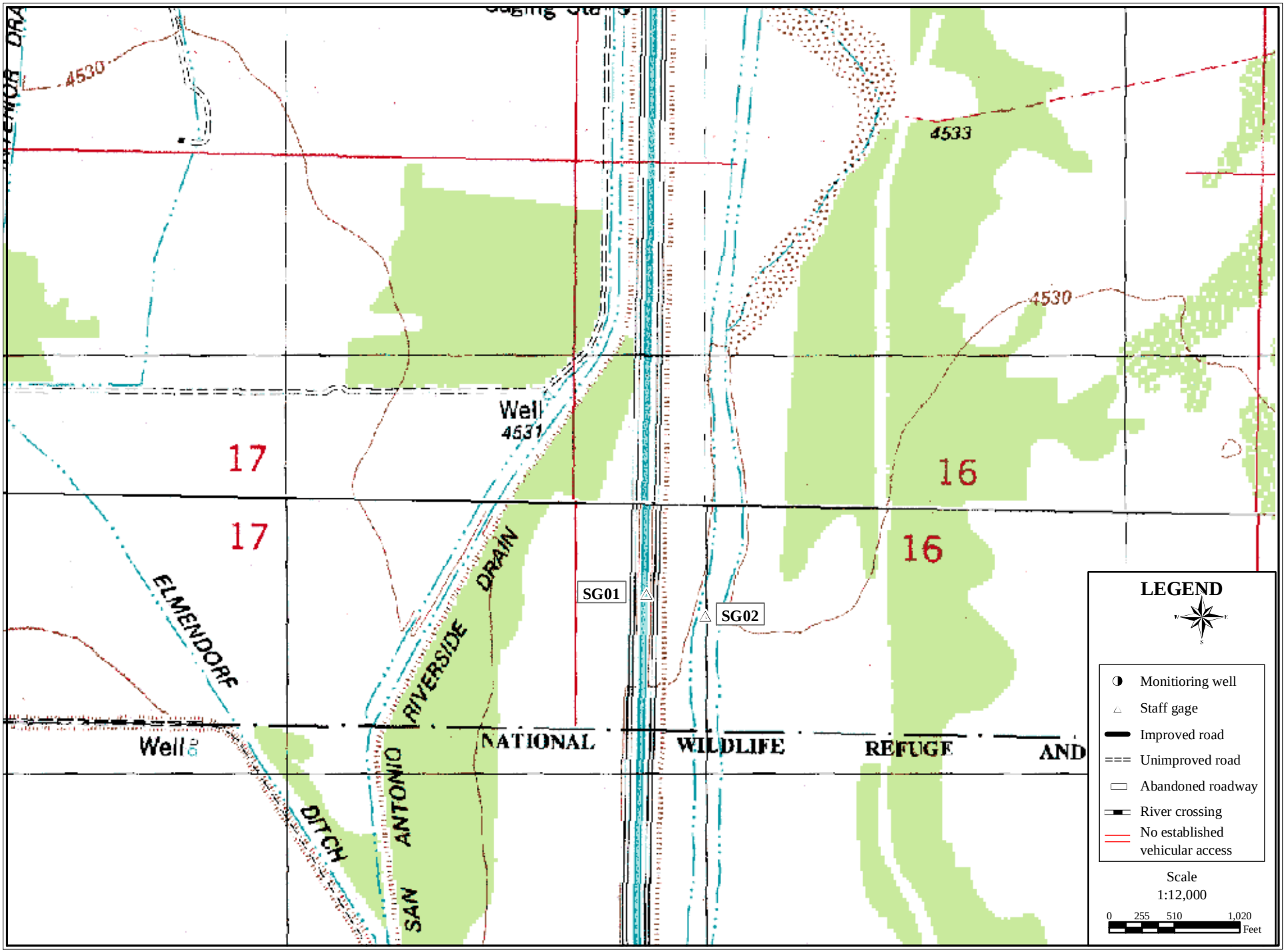


Figure 6. North Bosque Boundary (NBB) surveyed well locations and access roads

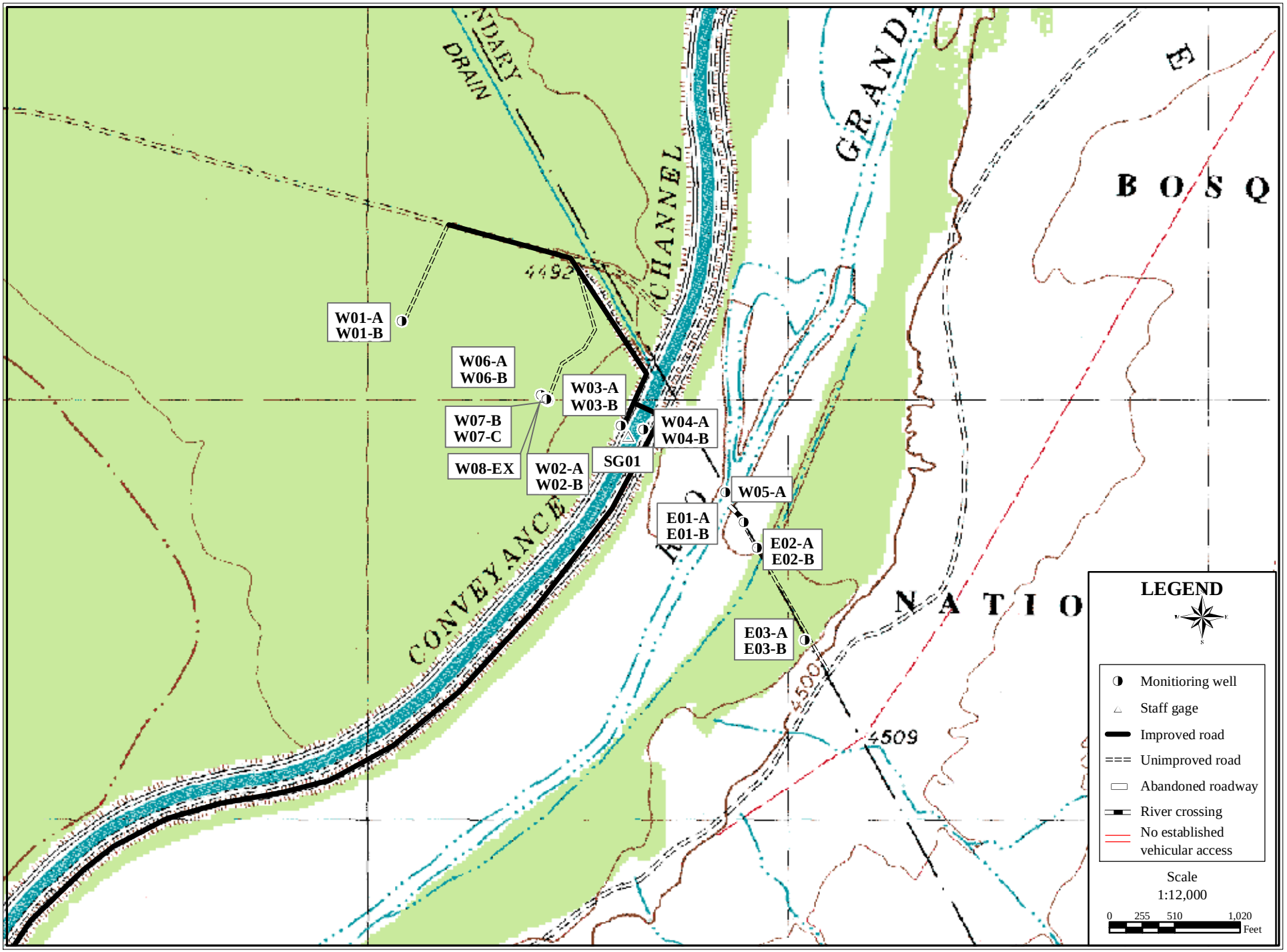


Figure 7. South Bosque Boundary (SBB) surveyed well locations and access roads

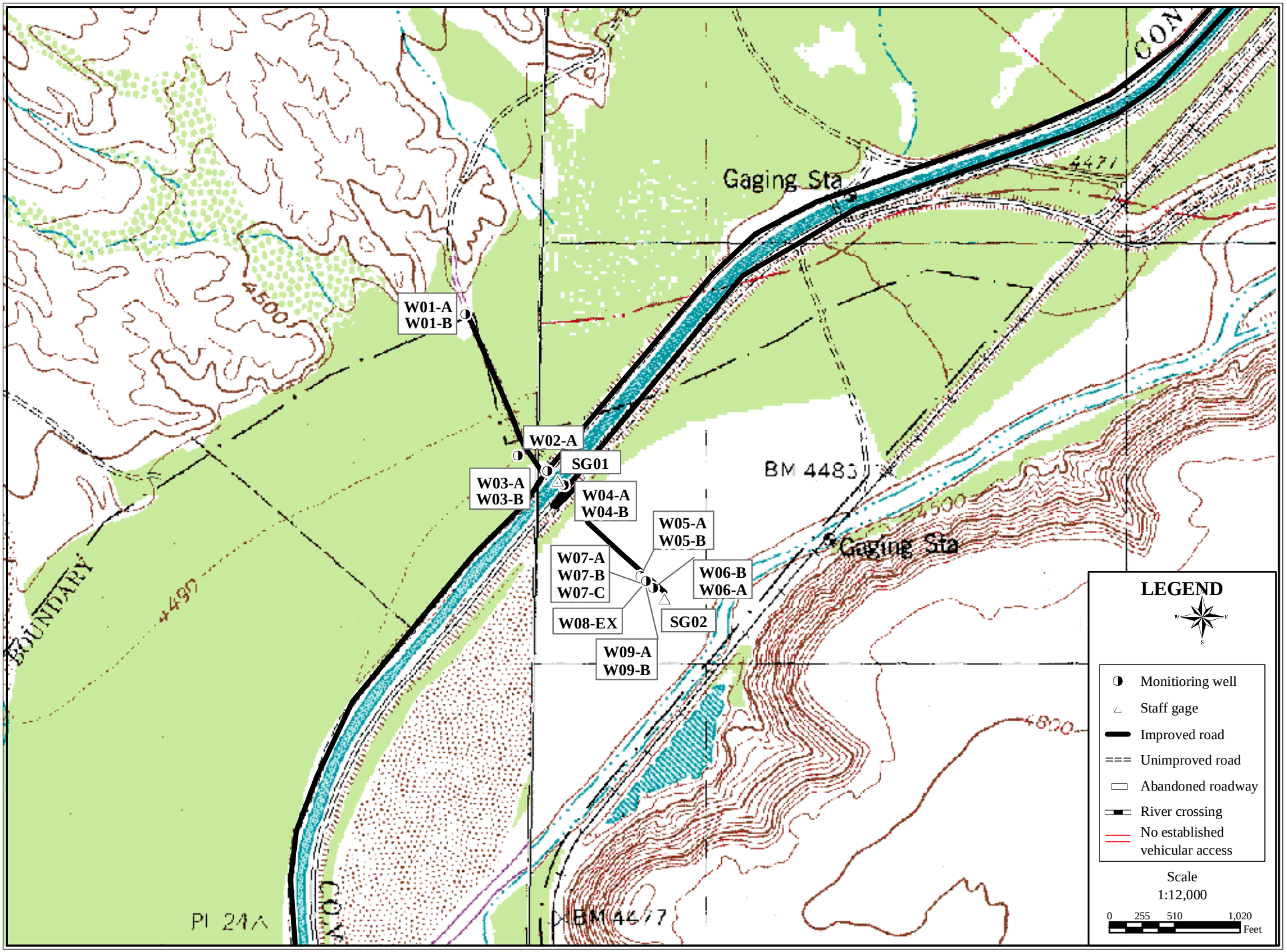


Figure 8. San Marcial (SMC) surveyed well locations and access roads

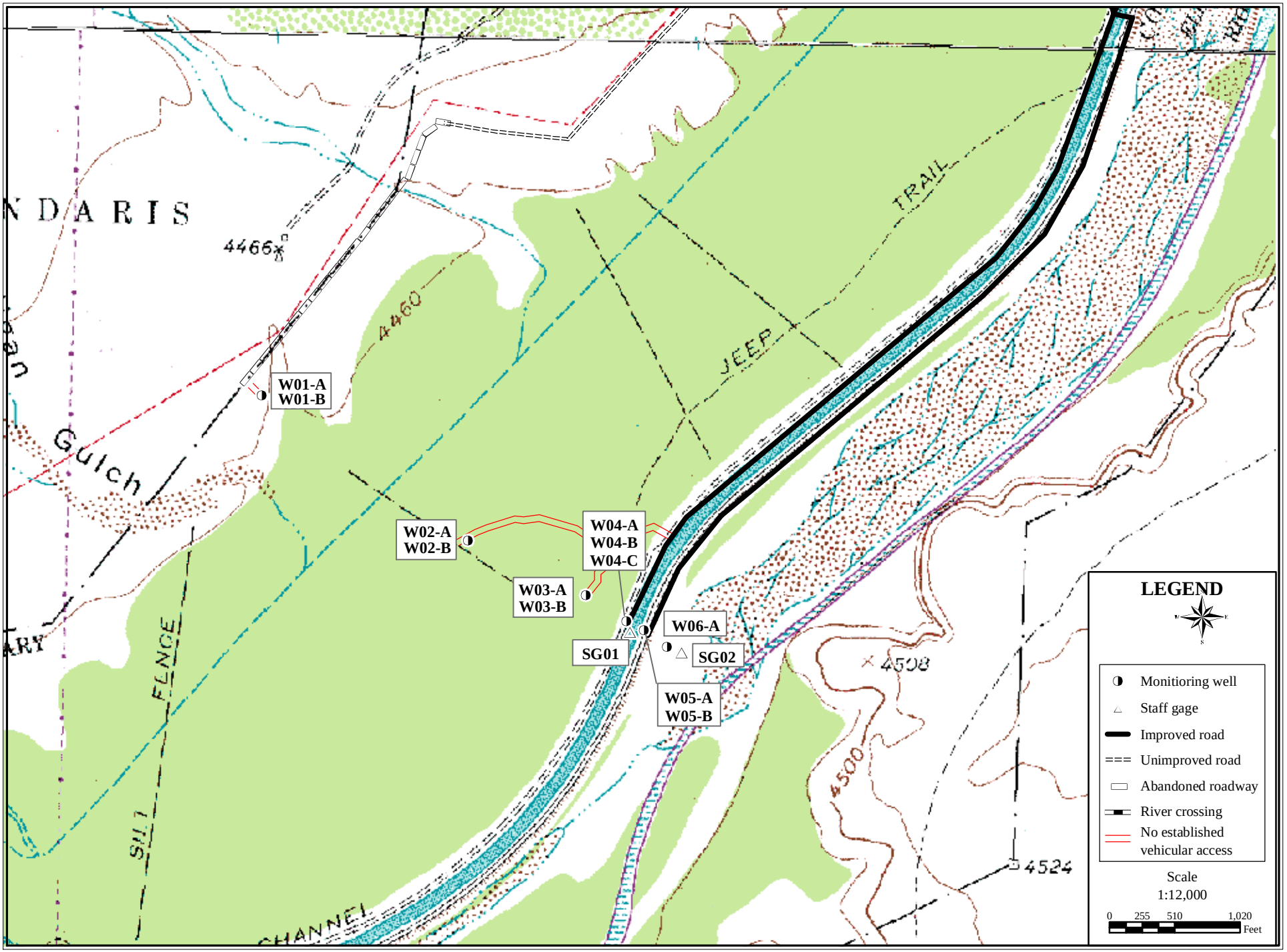


Figure 9. South of Ft. Craig (SFC) surveyed well locations and access roads

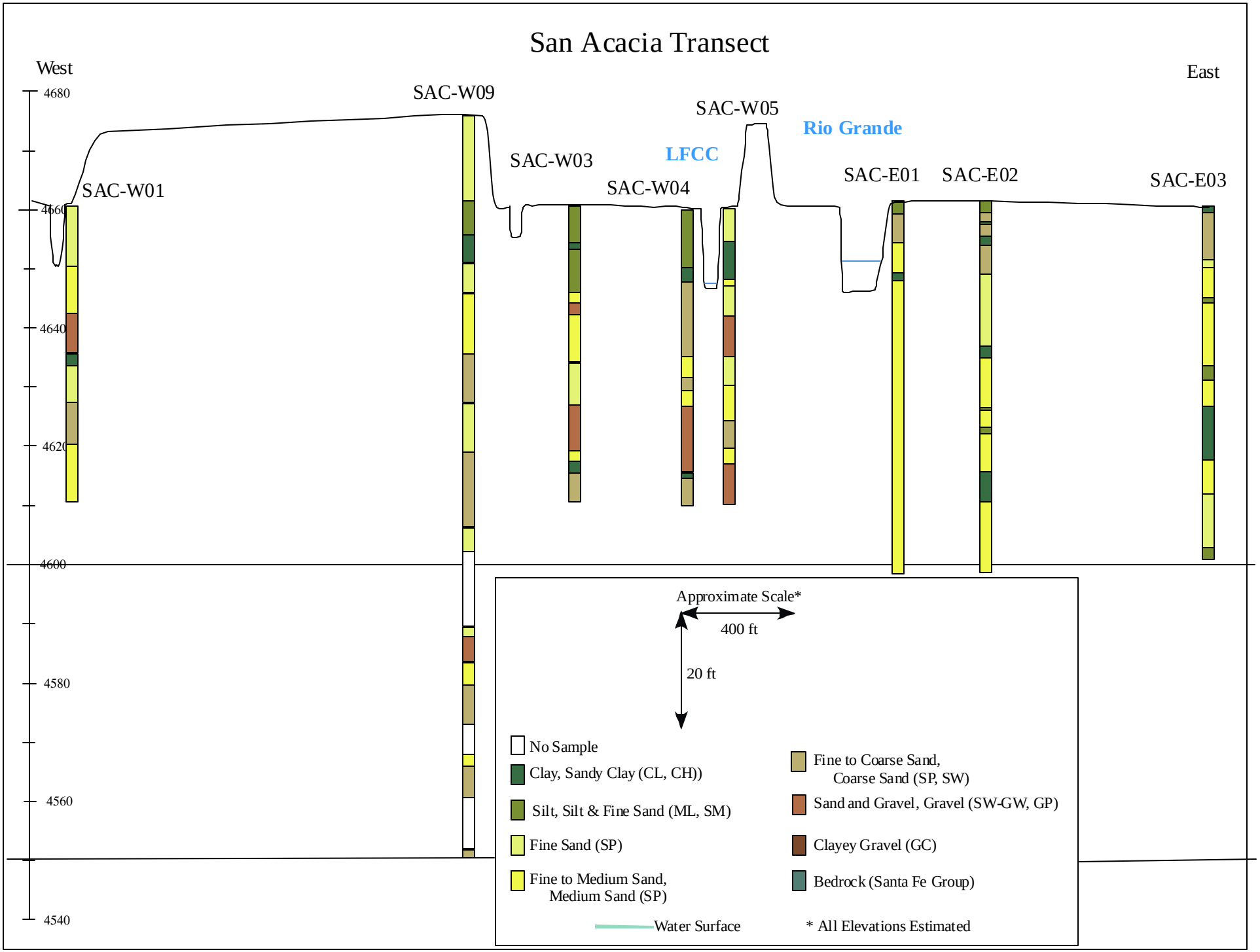


Figure 10. Geologic Cross Section, San Acacia Transect

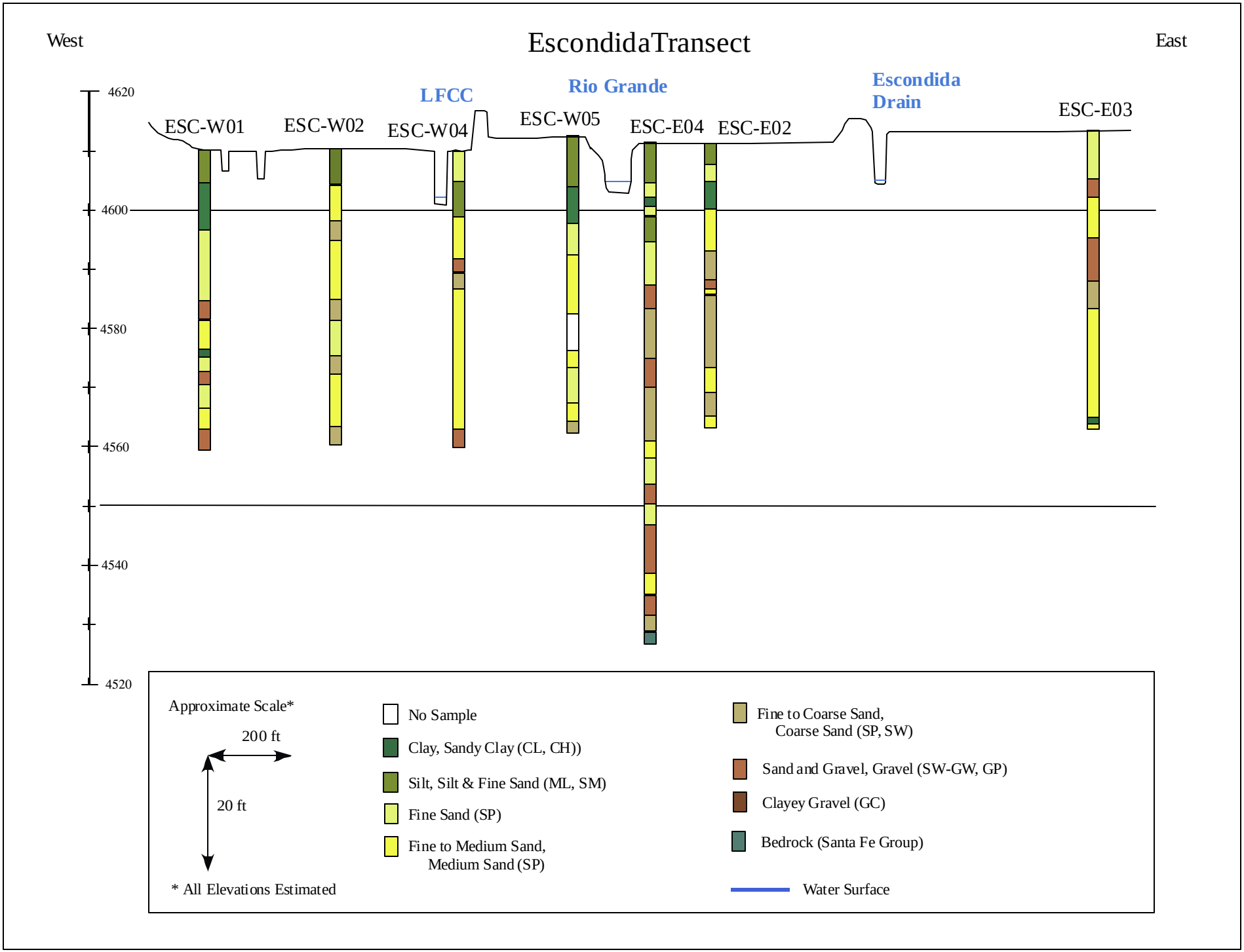


Figure 11. Geologic Cross Section, Escondida Transect

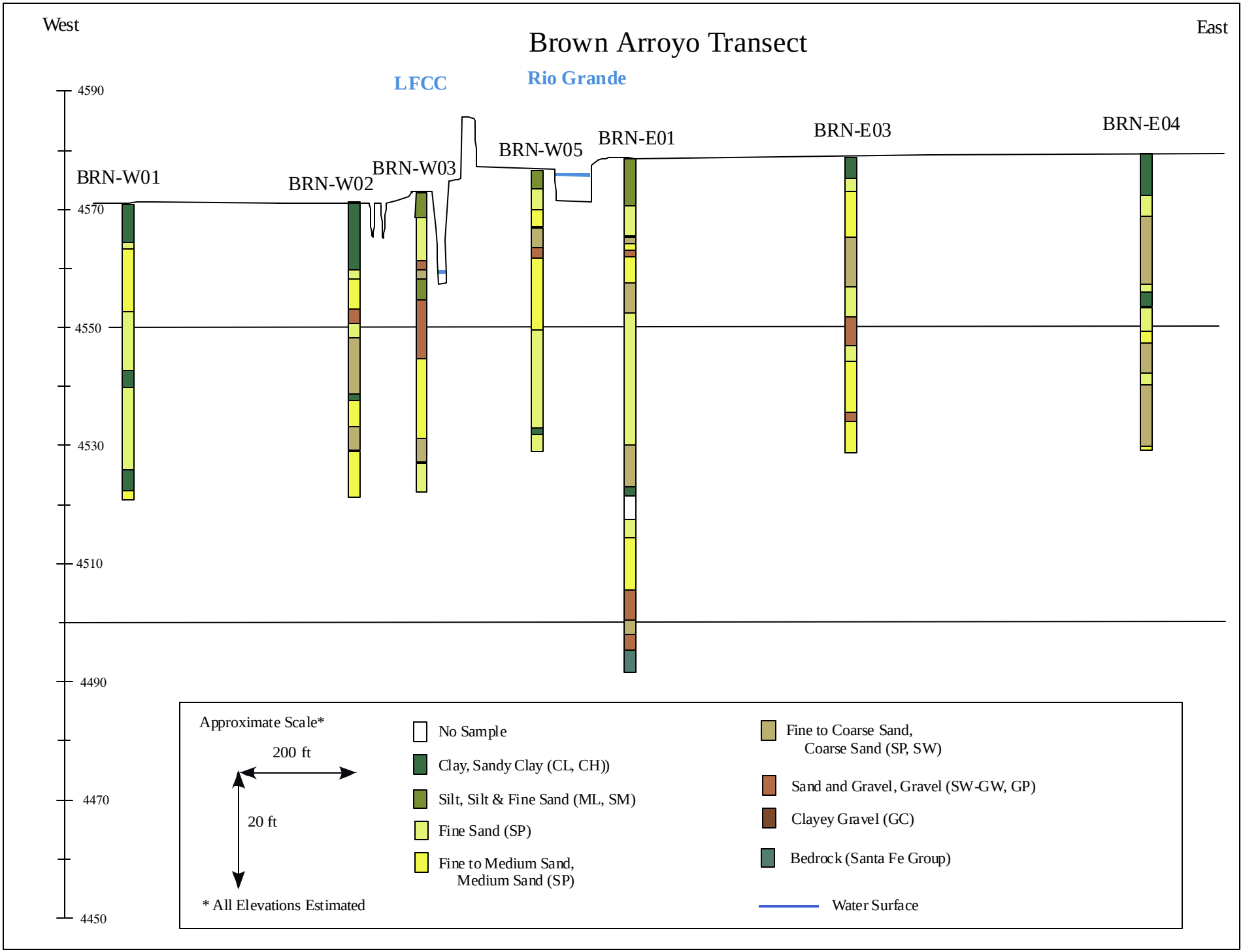


Figure 12. Geologic Cross Section, Brown Arroyo Transect

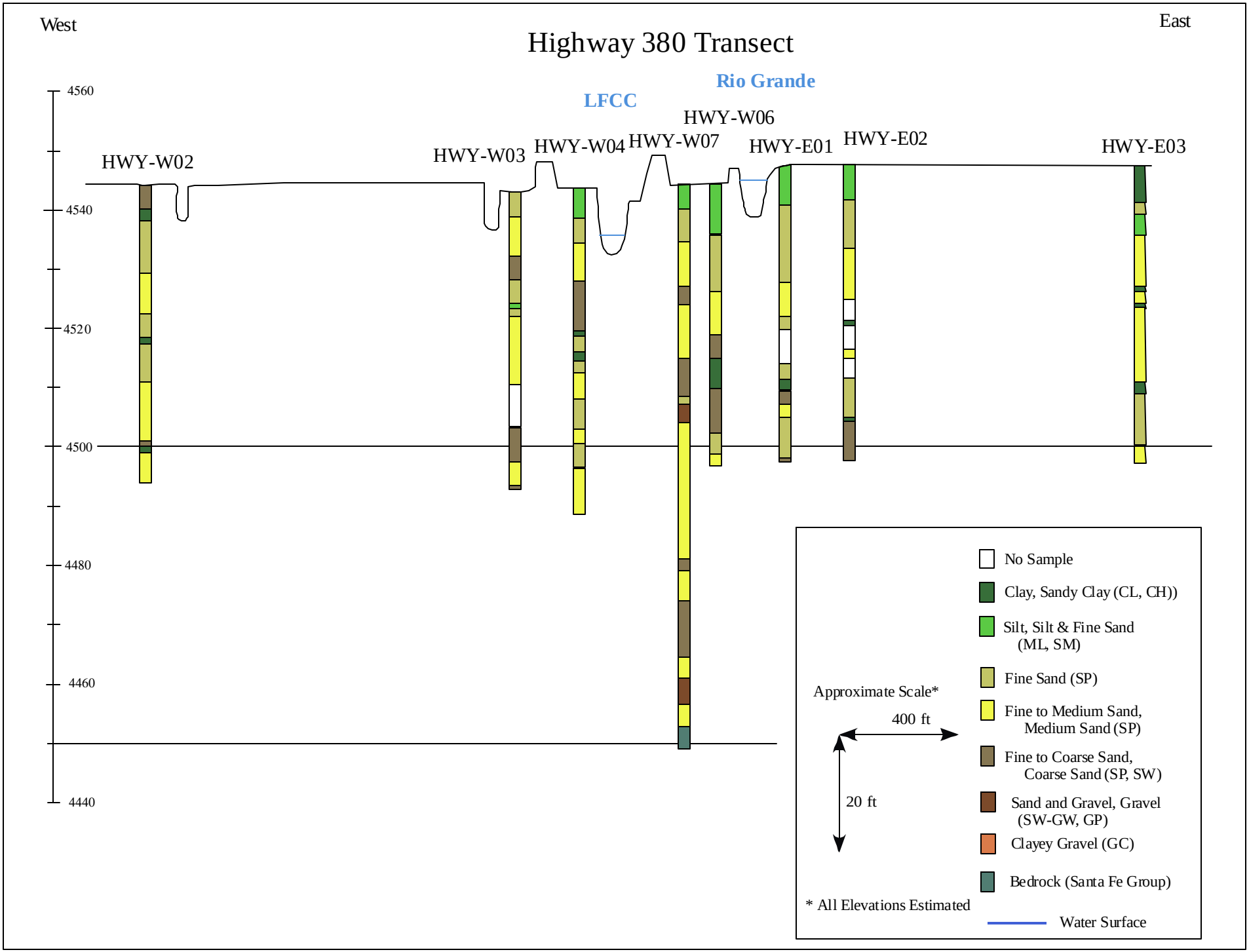


Figure 13. Geologic Cross Section, Highway 380 Transect

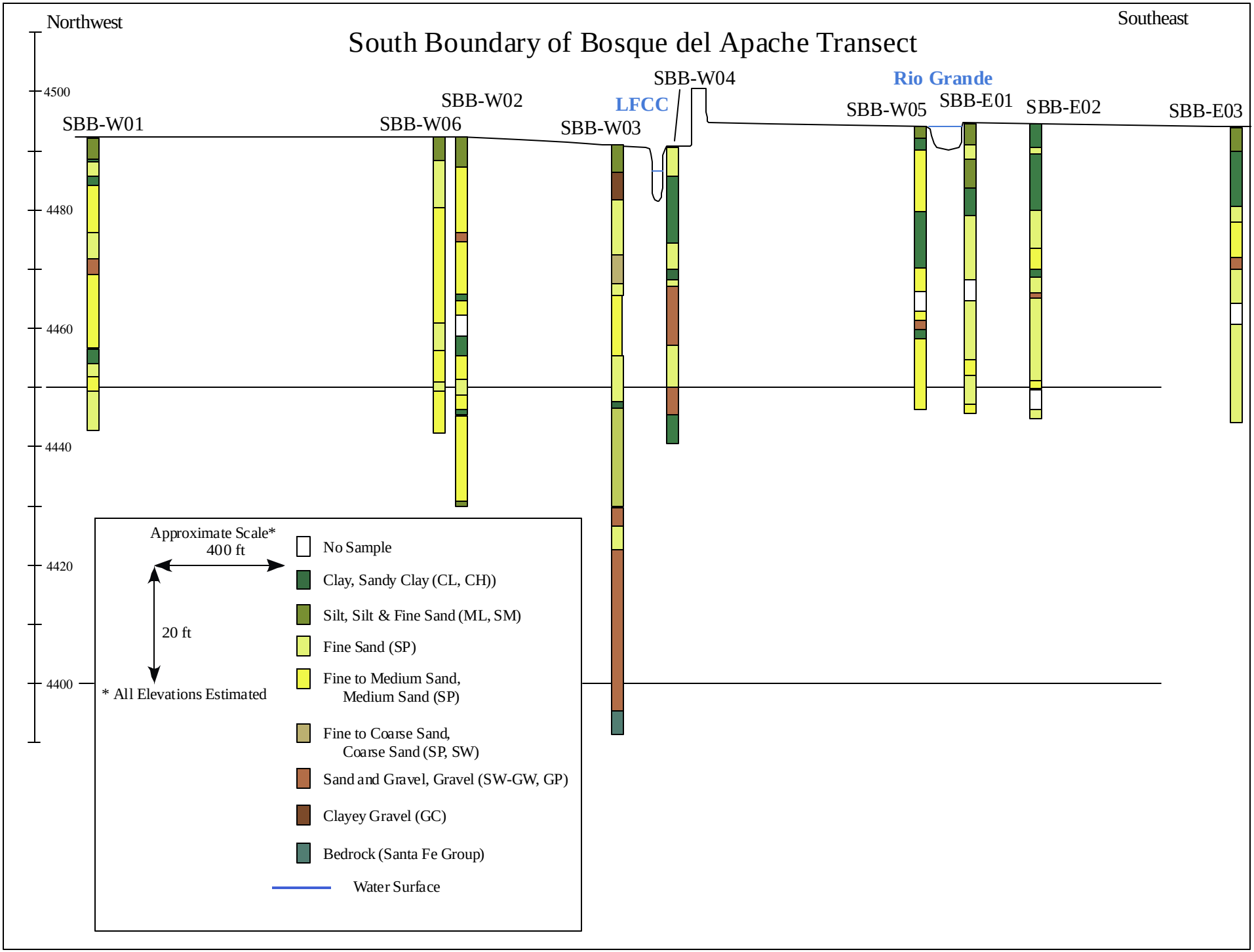


Figure 14. Geologic Cross Section, South Bosque Boundary Transect

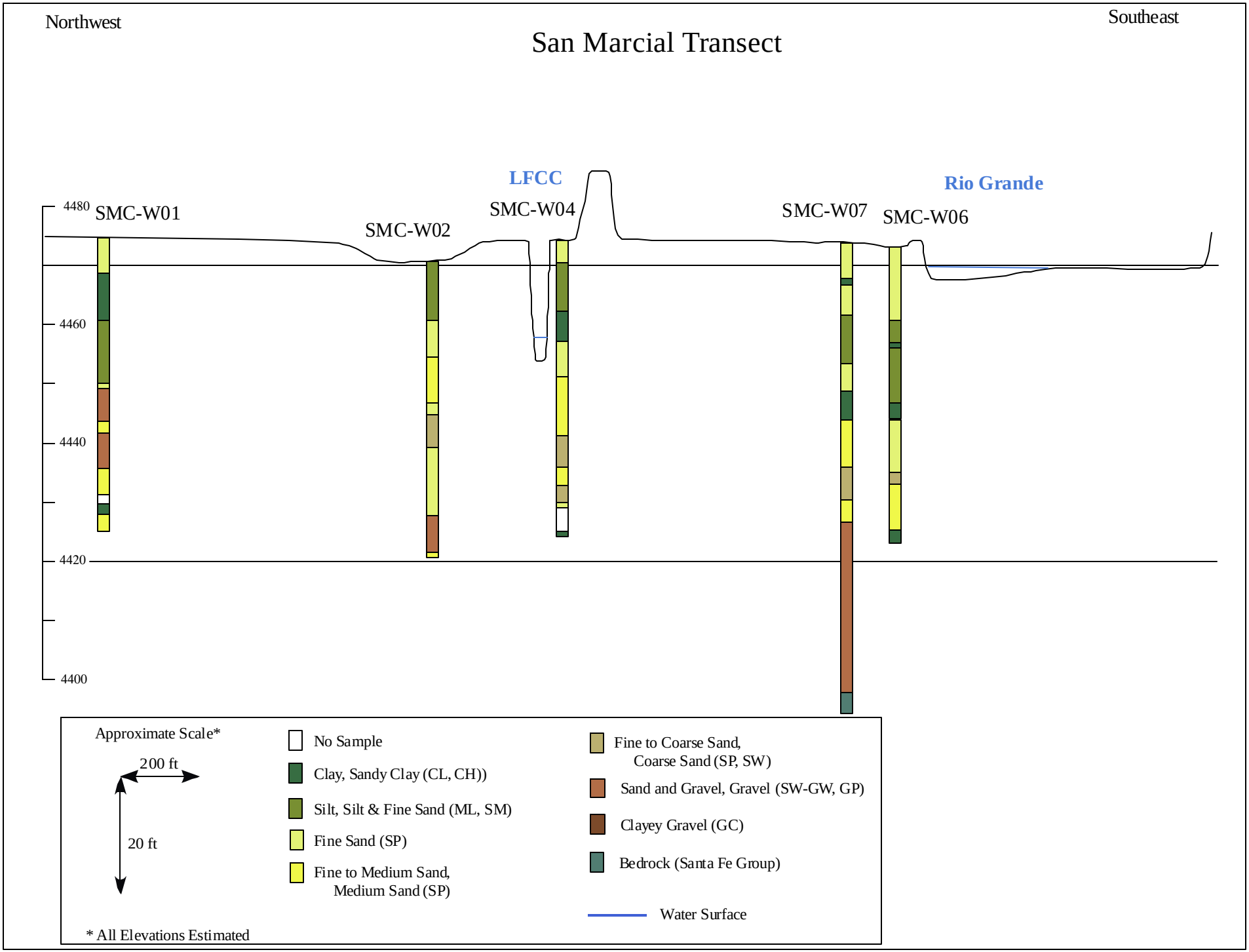


Figure 15. Geologic Cross Section, San Marcial Transect

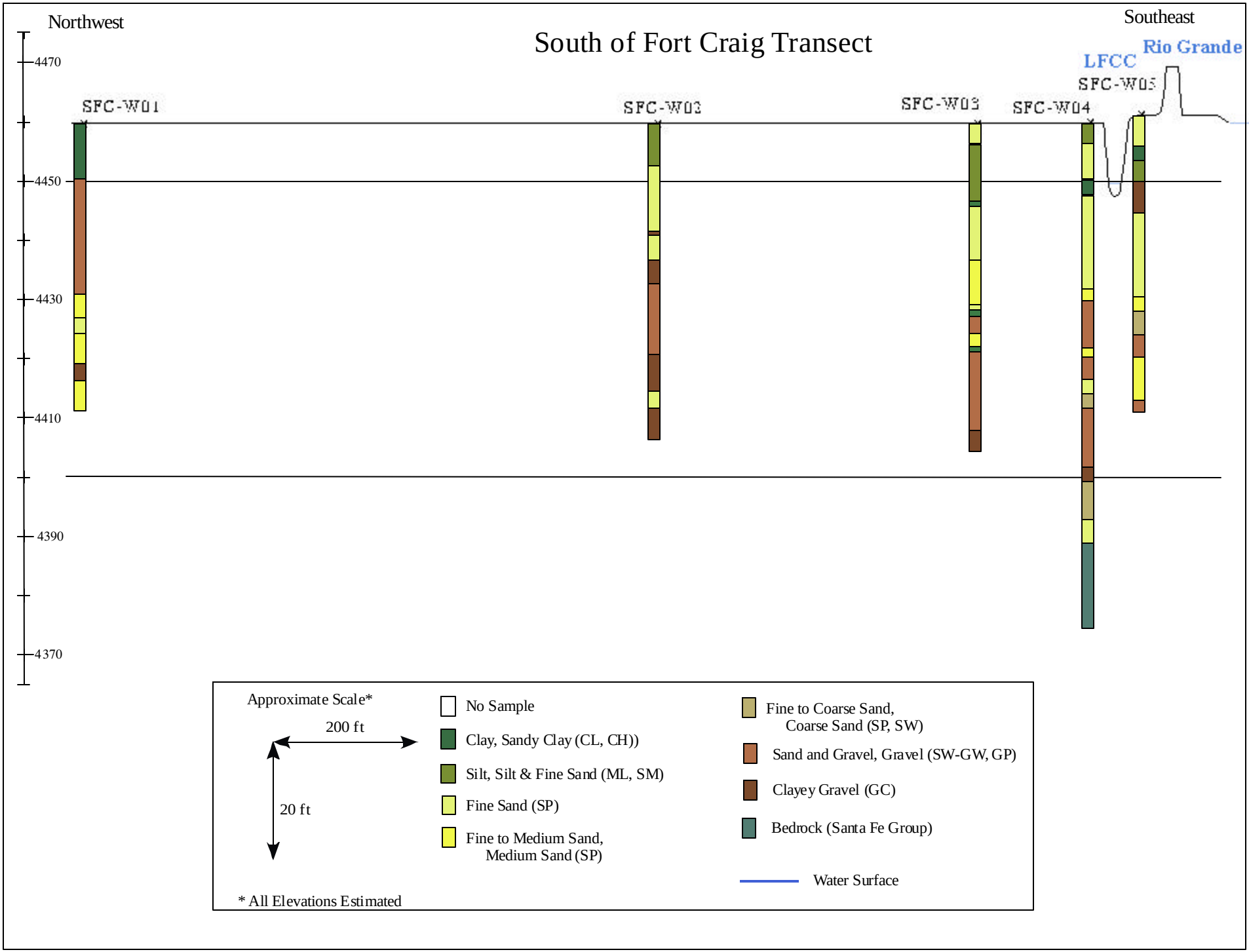


Figure 16. Geologic Cross Section, South of Fort Craig Transect

Figure 17. SAC-W09 Grain Size Distribution

(Rio Grande Watershed Study - Phase 1)

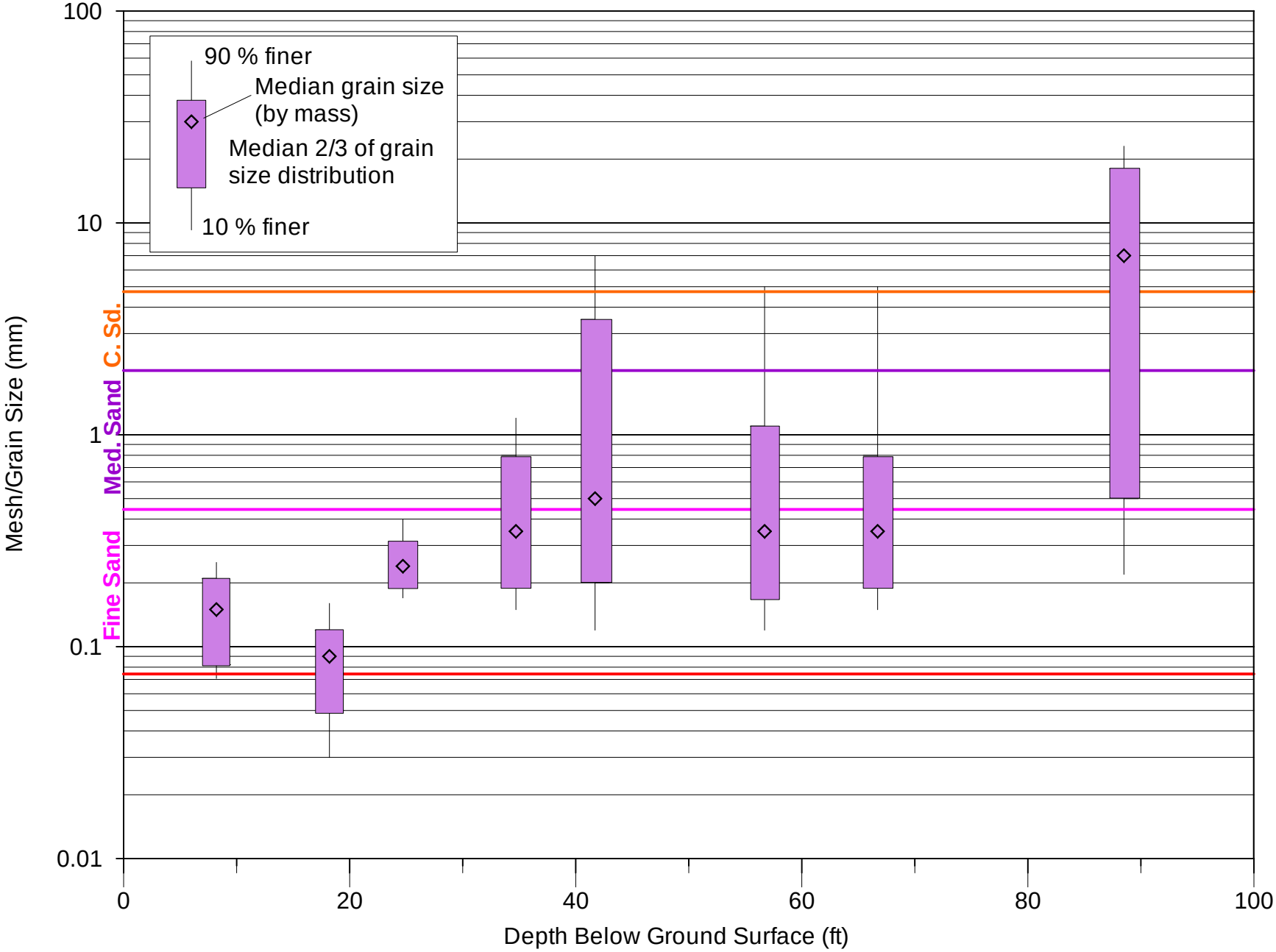


Figure 18. ESC-E04 Grain Size Distribution

(Rio Grande Watershed Study - Phase 1)

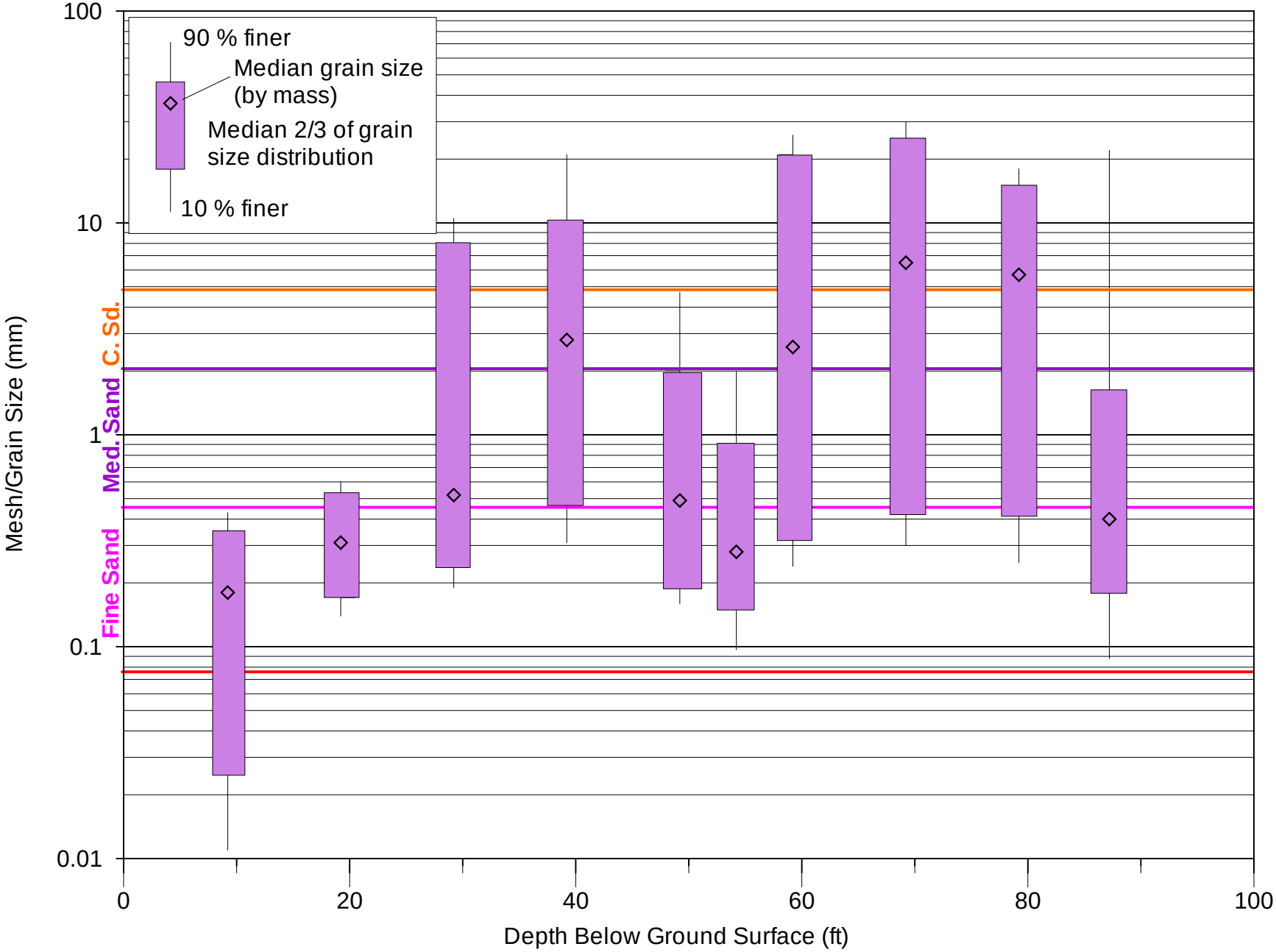


Figure 19. BRN-E01 Grain Size Distribution

(Rio Grande Watershed Study - Phase 1)

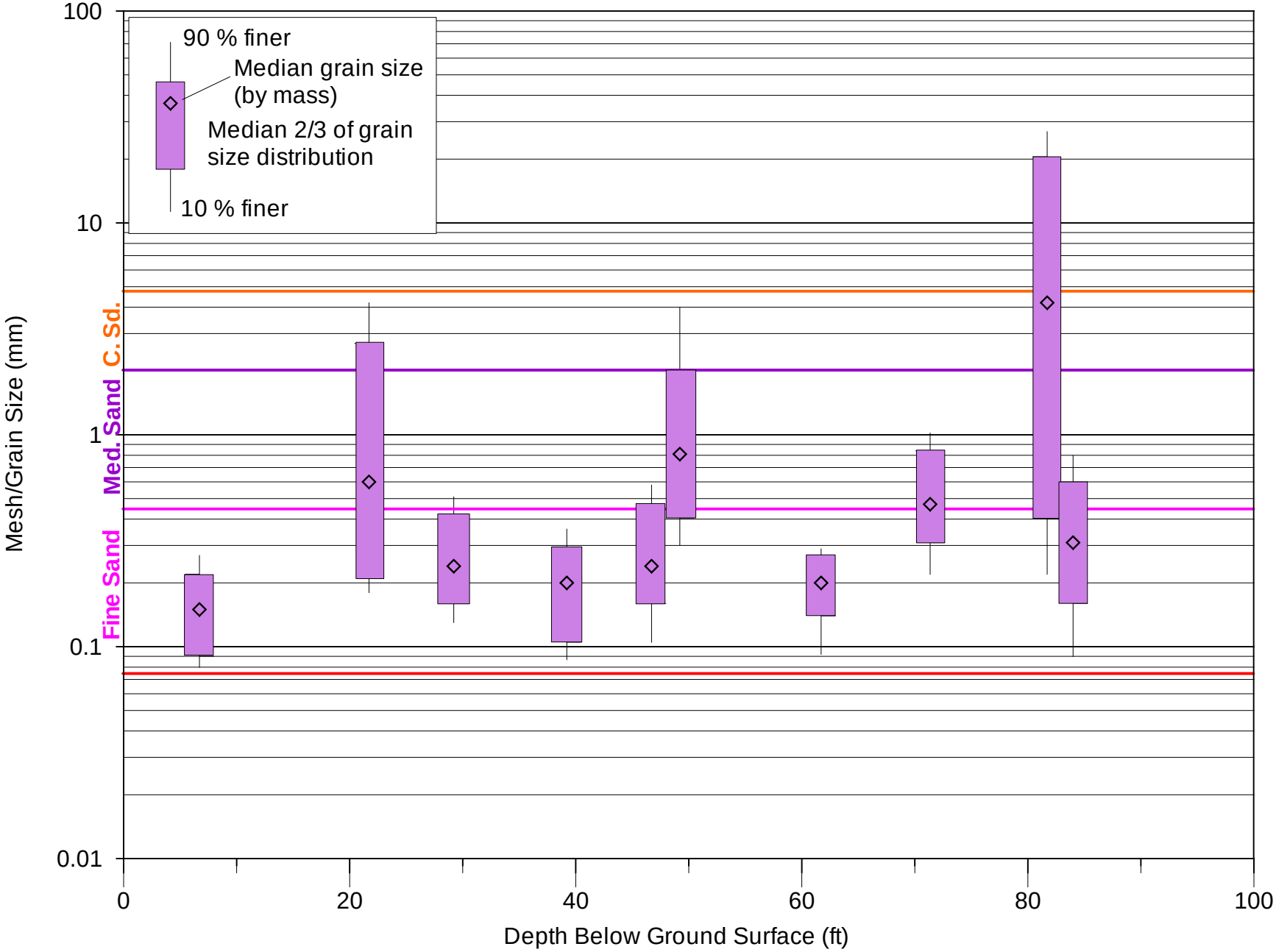


Figure 20. HWY-W07 Grain Size Distribution

(Rio Grande Watershed Study - Phase 1)

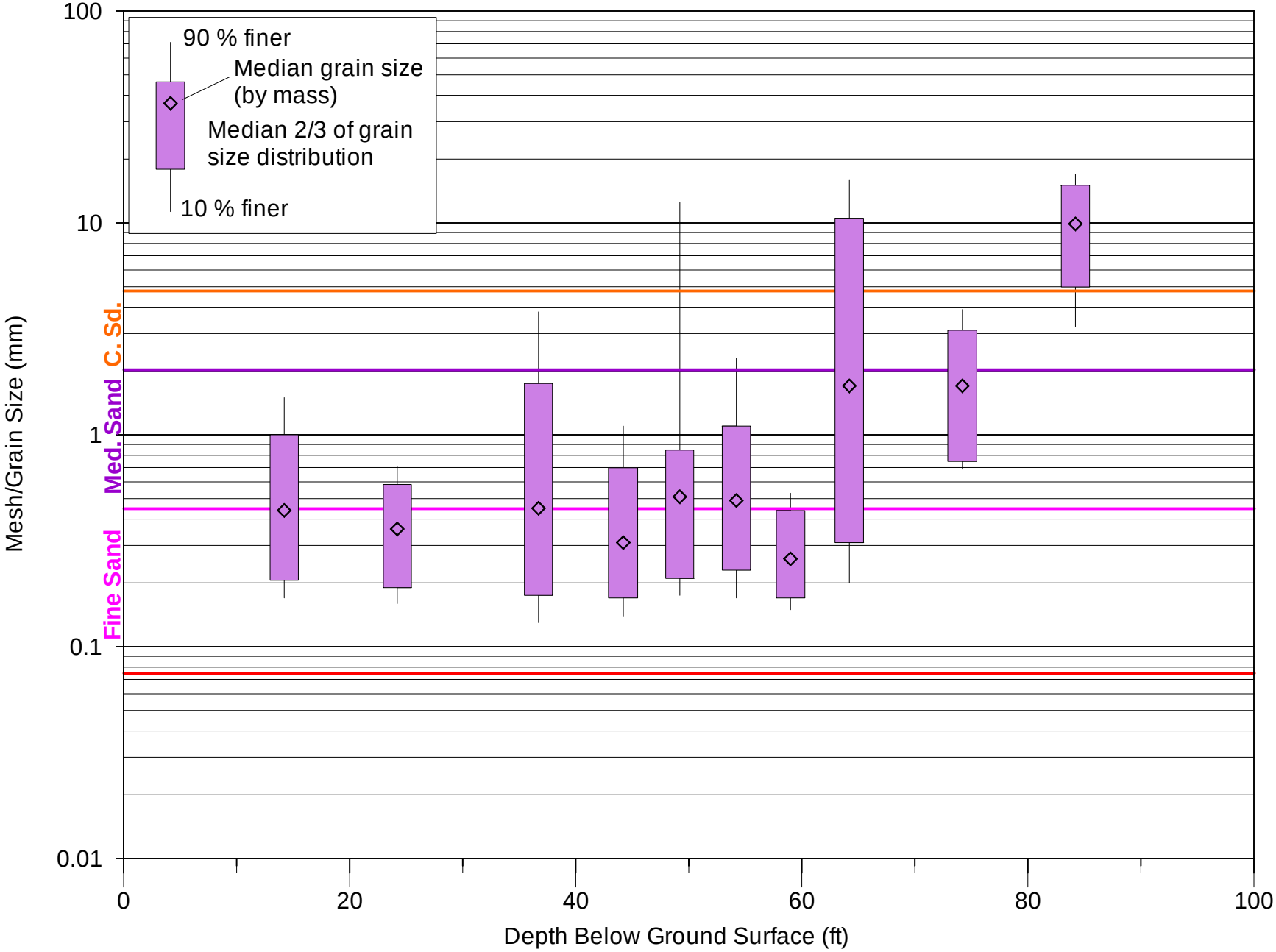


Figure 21. SBB-W03 Grain Size Distribution

(Rio Grande Watershed Study - Phase 1)

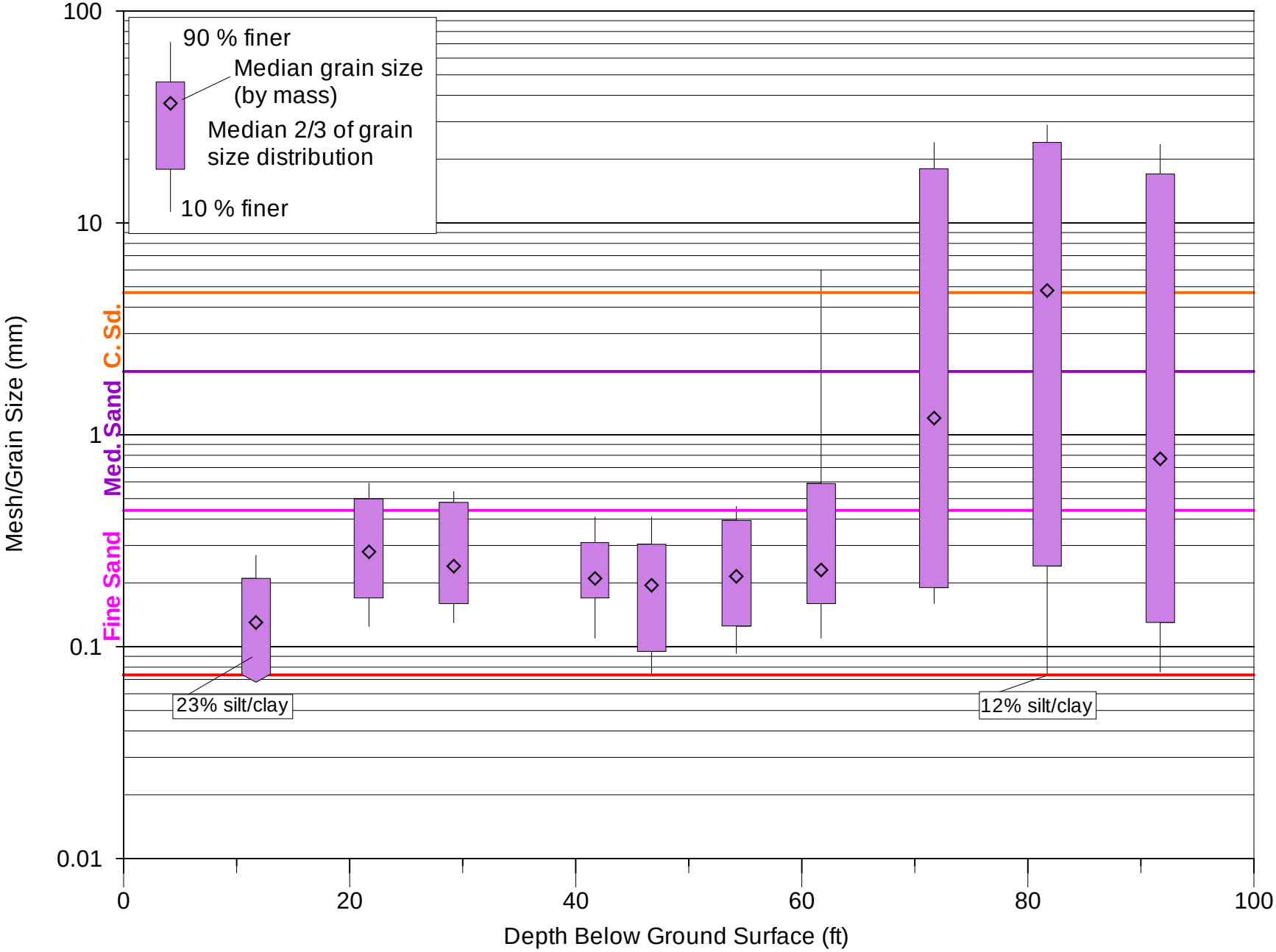


Figure 22. SMC-W07 Grain Size Distribution

(Rio Grande Watershed Study - Phase 1)

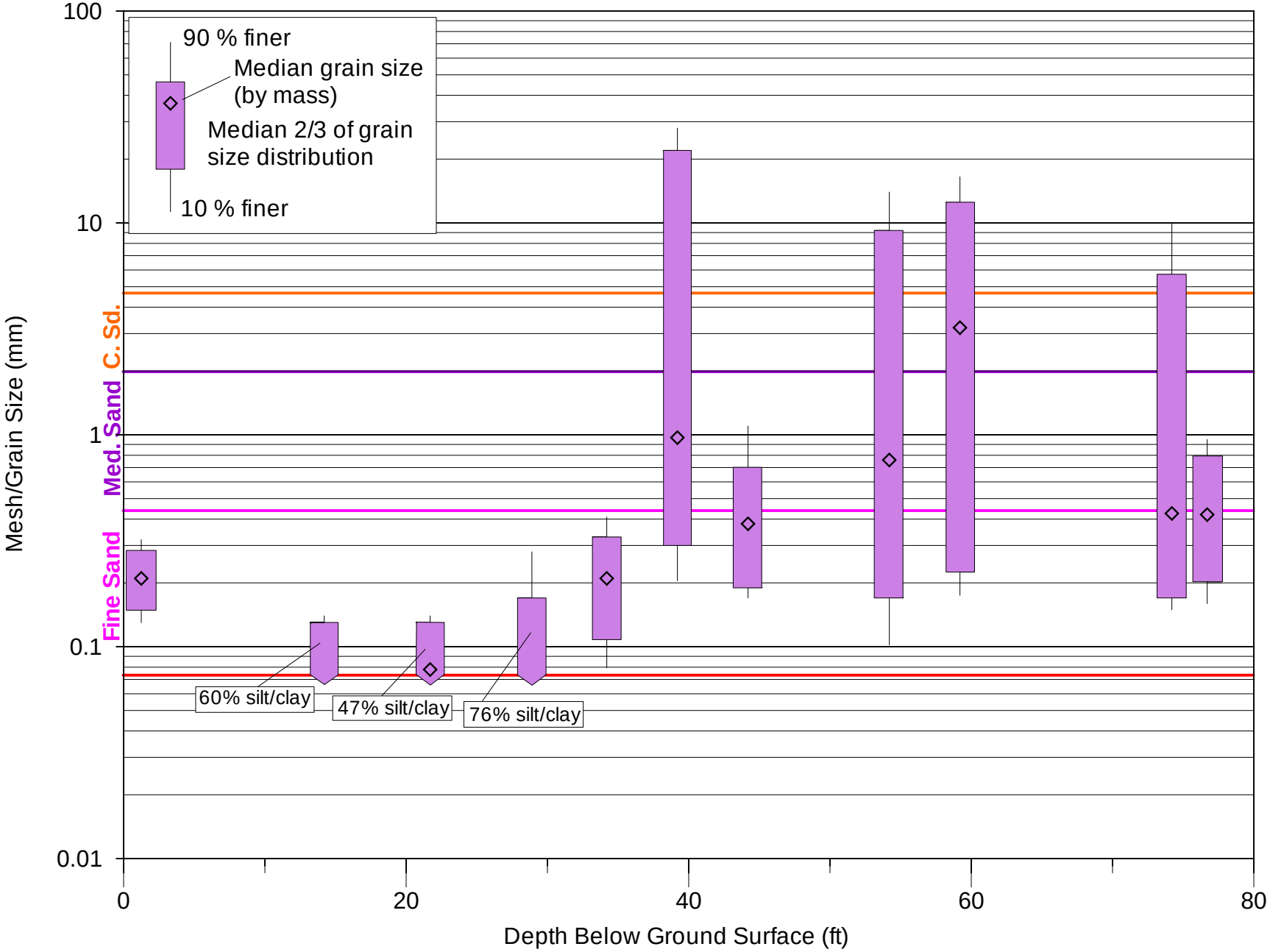


TABLE 1.
Middle Rio Grande Watershed Study
Well Construction Details

Transect	Well ID	Surface Elevation (ft amsl)	Total Depth (ft bgs)	Borehole Diameter (in)	Casing Diameter (in)	Screened Interval[1]	Filter Pack[2]	Lower Seal	Upper Seal
Brown Arroyo	BRN-E01A	4575.92	19.2	10	2	4.0-19.0	1.9-21.2	21.2-23.4	0.5-1.9
	BRN-E01B	4575.92	49.7	10	2	44.5-49.5	42.2-50	NA	38.7-42.2
	BRN-E01C	4575.91	81.2	8	2	75.9-80.9	71.3-83	NA	63-72.2
	BRN-E02A	4575.3	19.2	10	2	4.0-19.0	2.0-19.2	NA	0.6-2.0
	BRN-E03A	4573.47	18.8	10	2	4.3-18.6	2.0-20.9	20.9-23.5	0-2
	BRN-E03B	4573.47	49.5	10	2	43.7-8.7	42.2-50	NA	20.9-23.5
	BRN-E04A	4571.08	16.7	10	2	2.3-16.5	1.5-21.2	21.2-23.8	0-1.5
	BRN-E04B	4571.08	49.2	10	2	44.7-49.7	42-50	NA	38.5-42
	BRN-E05A	4572.1	19.2	10	2	4.0-19	1.7-20.5	20.5-24.4	0.4-1.7
	BRN-E05B	4572.1	49.2	10	2	44.5-49.5	41.9-49.5	NA	38.3-41.9
	BRN-E06A	4572.71	19.2	10	2	4.0-19.0	1.9-22.2	22.2-23.7	0.4-1.9
	BRN-E06B	4572.71	54.2	10	2	49.0-54.0	46.3-55.2	NA	43.4-46.3
	BRN-W01A	4570.9	19.8	10	2	4.8-19.8	2.2-21.2	21.2-23.5	1.0-2.2
	BRN-W01B	4570.9	46.7	10	2	41.7-16.7	39-47	NA	36-39
	BRN-W02A	4570.95	19.5	10	1	4.0-19.0	2.2-20.0	NA	1.1-2.2
	BRN-W03A	4574.31	19.4	10	2	4.4-19.4	3.0-20.0	20-23.5	0.9-2.5
	BRN-W03B	4574.31	51	10	2	45.5-50.5	43.5-52.5	NA	40.5-43.5
	BRN-W04A	4571.22	21.2	10	2	6.0-21.0	4.0-22.4	22.4-25	1.5-4.0
	BRN-W04B	4571.22	50.8	10	2	46.7-50.6	43.8-52.5	NA	41-43.8
	BRN-W05A	4575.89	20	10	2	5.0-20.0	3.5-21	21-24	1-3.5
	BRN-W05B	4575.89	51	10	2	46-51	43-52	NA	40.5-43
Escondida	ESC-E01A	4617.86	19.7	10	2	4.5-19.5	3.1-23	23-26.2	0.8-3.1
	ESC-E01B	4617.86	49.2	10	2	44-49	39.3-51	NA	34.6-39.3
	ESC-E02A	4618.3	20.2	10	2	4.75-19.75	3-23.2	23.2-26	0.5-3.0
	ESC-E02B	4618.3	49.8	10	2	44.3-49.3	39.2-51	NA	35.3-39.2
	ESC-E03A	4610.79	13.5	10	2	3.0-13.0	2.0-16.3	16.3-18.9	1.0-2.0
	ESC-E03B	4610.79	45	10	2	39.5-44.5	34.4-46	NA	32.3-34.4
	ESC-E04A	4618.21	20	10	2	5.0-20.0	2.7-22.9	22.9-26.1	0.6-2.7
	ESC-E04B	4618.21	50.7	10	2	45.5-50.5	41.6-52	NA	38.7-41.6
	ESC-E04C	4618.1	83.9	8	2	78.4-83.4	72.6-84	NA	62.5-72.6
	ESC-E05EX	4618.93	55.3	13.8	10	30.4-49.2	26.0-51	NA	22.6-26.0
	ESC-E06A	4618.53	20.5	10	2	5.0-20.0	3.1-23.5	23.5-25.8	0.8-3.1
	ESC-E06B	4618.53	50.5	10	2	45.0-50.0	38.9-52	NA	35.7-38.9
	ESC-W01A	4616.32	20.5	10	2	5.0-20.0	2.8-23.1	23.1-26.3	1.0-2.75
	ESC-W01B	4616.32	51	10	2	45.5-50.5	41-52	NA	32.5-41
	ESC-W02A	4616.89	19.5	8	2	4.0-19.0	2.5-21	NA	1.0-2.5
	ESC-W03A	4615.45	20.2	10	2	4.8-19.8	2.5-21.5	21.5-24.7	0.9-2.5
	ESC-W03B	4615.45	50	10	2	44.5-49.5	40.1-50	NA	35.8-40.1
	ESC-W04A	4615.58	16.5	10	2	6.5-16.5	2.2-16.5	18.3-20.8	0.5-2.2
	ESC-W04B	4615.58	50.2	10	2	44.4-49.7	39.7-51	NA	31-39.75
	ESC-W05A	4618.05	19.2	10	2	4.0-19.0	2.0-23.2	23.2-25.8	1.0-2.0
	ESC-W05B	4618.05	51	10	2	45.5-50.5	38.5-52	NA	32.7-38.5

TABLE 1.
Middle Rio Grande Watershed Study
Well Construction Details

Transect	Well ID	Surface Elevation (ft amsl)	Total Depth (ft bgs)	Borehole Diameter (in)	Casing Diameter (in)	Screened Interval[1]	Filter Pack[2]	Lower Seal	Upper Seal
Highway 380	HWY-E01A	4553.67	19.2	10	2	4.0-19.0	3.0-23.3	23.3-25.2	1.0-3.0
	HWY-E01B	4553.67	50.2	10	2	45-50	39.7-50.5	NA	35.5-39.7
	HWY-E02A	4552.06	19.5	10	2	4.0-19.0	2.5-20	NA	1.0-2.5
	HWY-E03A	4551.11	18.7	10	2	3.5-18.5	1.5-21.1	21.1-23.3	0-1.5
	HWY-E03B	4551.11	50.5	10	2	45-50	41.8-51.5	NA	36.7-41.8
	HWY-W02A	4548.06	19.5	10	2	4.0-19.0	1.0-23.1	23.1-26.1	0-1.0
	HWY-W02B	4548.06	49.5	10	2	44.0-49.0	42.1-50.5	NA	39.4-42.1
	HWY-W03B	4547.23	49.5	10	2	44.0-49.0	38.6-50.5	NA	37.8-38.6
	HWY-W04A	4549.29	19.5	10	2	4.0-19.0	3.0-21.3	21.3-25.4	0-3.0
	HWY-W04B	4549.29	49.5	10	2	44.0-49.0	41.2-50.5	NA	37.4-41.2
	HWY-W05A	4550.05	20	10	2	4.5-19.5	2.0-23.3	23.3-25.5	0.5-2.0
	HWY-W05B	4550.05	50	10	2	44.5-49.5	41.9-50.5	NA	37.9-41.9
	HWY-W06A	4550.05	19.2	10	2	4.0-19.0	1.7-22.7	22.7-23.9	0.4-1.7
	HWY-W06B	4550.05	49.2	10	2	44.0-49.0	41-50	NA	37.4-41
	HWY-W07A	4551.47	19.9	10	2	5.0-20.0	3.0-21.0	21.0-24.0	1.0-3.0
	HWY-W07B	4551.47	49.5	10	2	44.0-49.0	42.0-51.0	NA	38.2-41.8
	HWY-W07C	4551.49	91.5	8	2	86.0-91.0	52-92.5	NA	70.4-82
	HWY-W08EX	4550.53	64.6	13.8	10	35.1-58.9	32.0-61.0	NA	28.5-32.0
	HWY-W09A	4550.24	19.8	10	2	3.5-18.5	3.0-20.0	20.0-22.0	1.0-3.0
	HWY-W09B	4550.24	49.5	10	2	44.0-49.0	41.8-50	NA	38.2-41.8
	HWY-W10A	4551.43	19	10	2	4.0-19.0	2.3-23.2	23.2-26.6	0.8-2.3
	HWY-W10B	4551.43	49	10	2	44.0-49.0	40.4-50	NA	37.5-40.4
	HWY-W11A	4555.44	21.5	10	2	6.7-21.0	3.0-23.0	24.0-26.0	0-3.0
	HWY-W11B	4555.44	54.5	10	2	49.8-54.0	47.6-55	NA	42.5-47.6
San Acacia	SAC-E01A	4658.31	18.7	2.125	1	3.5-18.5	0.2-18.7	NA	None
	SAC-E01B	4658.28	50.2	2.125	1	45.0-50.0	0.2-50.8	NA	None
	SAC-E02A	4663.7	21.2	2.125	1	6.0-21.0	0.2-21.5	NA	None
	SAC-E03A	4664.57	21.7	2.125	1	6.5-21.5	0.3-21.7	NA	None
	SAC-E03B	4664.53	55.7	2.125	1	50.5-55.5	0.3-56	NA	None
	SAC-W01A	4662.37	18.5	10	2	3.0-18.0	2.0-19.1	19.1-26.8	1.0-2.0
	SAC-W01B		49.5	10	2	44.0-49.0	36.3-49	NA	33.8-36.3
	SAC-W02A	4677.1	35.5	10	2	20.0-35.0	16.8-36.0	36-42	13.6-16.8
	SAC-W02B	4677.1	59.2	10	2	53.7-58.7	51-59.2	NA	43.2-51
	SAC-W03A	4663.34	19	10	2	4.0-19.0	2.5-19.5	19.5-21	1-2.5
	SAC-W03B	4663.34	51	10	2	45.5-50.5	42.8-51.5	NA	36.0-42.8
	SAC-W04A	4662.36	18.2	10	2	3.2-18.2	2.2-20.8	20.8-23.1	1.0-2.2
	SAC-W04B	4662.36	49.4	10	2	44.0-49.0	38-49.5	NA	33.7-38.0
	SAC-W05A	4663.35	22	10	2	7.0-22.0	3.7-24.2	24.2-25.5	2.3-3.7
	SAC-W05B	4663.35	51	10	2	45.5-50.5	41.5-52	NA	40.3-41.5
	SAC-W06A	4655.16	9	Drive point	1	6.0-9.0	0.2-9	NA	None
	SAC-W07A	4677.46	34	10	2	18.5-33.5	16.6-35	NA	13.7-16.6
	SAC-W07B	4677.46	59	10	2	53.5-58.5	49-60	NA	45.5-49
	SAC-W08EX	4677.31	80.5	13.8	10	46.0-74.9	43.5-77.0	NA	41.0-43.5

TABLE 1.
Middle Rio Grande Watershed Study
Well Construction Details

Transect	Well ID	Surface Elevation (ft amsl)	Total Depth (ft bgs)	Borehole Diameter (in)	Casing Diameter (in)	Screened Interval[1]	Filter Pack[2]	Lower Seal	Upper Seal
San Acacia (cont.)	SAC-W09A	4677.87	34	10	2	18.5-33.5	14.5-38	38-40	10-14.5
	SAC-W09B	4677.87	59	10	2	53.5-58.5	51-60	NA	48.2-51.0
	SAC-W09C	4677.87	98.6	8	2	93.1-98.1	87.8-99	NA	77.0-87.8
South Boundary Bosque del Apache	SBB-E01A	4498.81	20.2	10	2	15.0-20.0	2.0-23.0	23-23.5	1.0-2.0
	SBB-E01B	4498.81	48.7	10	2	43.5-48.5	40-49.5	NA	38-40
	SBB-E02A	4498.26	20.2	10	2	5.0-20.0	2.8-23.2	23.2-26	1.0-2.8
	SBB-E02B	4498.26	48.7	10	2	43.5-48.5	38.9-49.5	NA	32.5-38.9
	SBB-E03A	4495.48	18.2	10	2	3.0-18.0	2.0-23.7	23.7-24.5	1.0-2.0
	SBB-E03B	4495.48	46.7	10	2	41.5-46.5	39.5-47	NA	39.0-39.5
	SBB-W01A	4484.47	20.2	10	2	5.0-20.0	2.8-22.5	22.5-25.8	0.8-2.8
	SBB-W01B	4484.47	49.7	10	2	44.5-49.5	39.7-50.5	NA	33-39.7
	SBB-W02A	4487.96	20.2	10	2	5.0-20.0	3-24.8	24.8-29.5	1.0-3.0
	SBB-W02B	4487.96	49.2	10	2	44.0-49.0	29.5-49.5	NA	None
	SBB-W03A	4488.81	20.2	10	2	5.0-20.0	2.8-24.5	24.5-26.3	0.9-2.8
	SBB-W03B	4488.81	45.2	10	2	42.0-47.0	39.7-47.5	NA	36.3-39.7
	SBB-W04A	4493.86	24.2	10	2	9.0-24.0	5.4-26.4	26.4-28.7	3.3-5.4
	SBB-W04B	4493.86	53.2	10	2	48.0-53.0	43.8-54	NA	41.5-43.8
	SBB-W05A	4498.66	19.7	8	2	4.5-19.5	2.0-27.0	22.3-27	0.5-2.0
	SBB-W06A	4488.1	20.2	10	2	5.0-20.0	3.0-22.0	22.0-24.0	1.0-3.0
	SBB-W06B	4488.1	49.2	10	2	44.0-49.0	42.5-50	NA	39.0-42.5
	SBB-W07B	4488.19	49.2	8	2	44.0-49.0	42.0-51.0	51-76.5	38.5-42.0
	SBB-W07C	4488.19	86.3	8	2	81.3-86.3	42.0-51.0	NA	51.0-76.5
	SBB-W08EX	4487.9	67.1	13.8	8	37.0-62.0	35.1-63.5	NA	32.1-35.1
South of Fort Craig	SFC-W01A		20.5	10	2	5.0-20.0	3.0-29.4	29.4-30	0.5-3.0
	SFC-W01B	4462.68	50.5	10	2	45.0-50.0	35-50.5	NA	30-35
	SFC-W02A	4457.58	19.1	10	2	3.9-18.9	2.0-20.0	20.0-23.9	0.5-2.0
	SFC-W02B	4457.58	49.2	10	2	44.0-49.0	39.3-51	NA	34.7-39.3
	SFC-W03A	4458.08	20.2	10	2	5.0-20.0	1.5-21.0	21.0-25.2	0.5-1.5
	SFC-W03B	4458.08	49.7	10	2	44.5-49.5	35-5.05	NA	32.0-35.0
	SFC-W04A	4456.64	18.2	10	2	3.0-18.0	2.0-23.2	23.2-25.3	1.0-2.0
	SFC-W04B	4456.64	50.2	10	2	45.0-50.0	38.7-51	NA	32.8-38.7
	SFC-W04C	4456.88	84.5	8	2	79.0-84.0	62.0-85.5	NA	40.0-62.0
	SFC-W05A	4457.17	19.5	10	2	4.0-19.0	3.0-20.0	20.0-25.5	0.5-3.0
	SFC-W05B	4457.17	49.5	10	2	44.0-49.0	38-50.5	NA	28.3-38.0
	SFC-W06A	4464.17	11.3	Drive point	1.5	8.0-11.0	1.0-11.8	NA	none

TABLE 1.
Middle Rio Grande Watershed Study
Well Construction Details

Transect	Well ID	Surface Elevation (ft amsl)	Total Depth (ft bgs)	Borehole Diameter (in)	Casing Diameter (in)	Screened Interval[1]	Filter Pack[2]	Lower Seal	Upper Seal
San Marcial	SMC-W01A		20.2	10	2	5.0-20.0	2.0-25.0	25.0-26.0	1.0-2.0
	SMC-W01B	4468.71	50.2	10	2	45.0-50.0	39.5-50.5	NA	35.0-39.5
	SMC-W02A	4471.29	19.5	10	2	4.3-19.3	2.0-20.0	NA	0.5-2.0
	SMC-W03A	4473.72	20.2	10	2	5.0-20.0	3.0-22.0	22.0-22.5	1.0-3.0
	SMC-W03B	4473.72	49.7	10	2	44.5-49.5	38.2-50.5	NA	32.4-38.2
	SMC-W04A	4470.91	20.2	10	2	5.0-20.0	3.0-23.0	23.0-25.2	1.0-3.0
	SMC-W04B	4470.91	50.2	10	2	45.0-50.0	37.9-50.5	NA	33.6-37.9
	SMC-W05A	4476.65	17.7	10	2	2.5-17.5	1.0-23.9	23.9-26.7	0.2-1.0
	SMC-W05B	4476.65	54.2	10	2	49.0-54.0	46.2-54	NA	44.7-46.2
	SMC-W06A	4477.05	18.2	10	2	3.0-18.0	1.2-22.0	22.0-29.3	0.4-1.2
	SMC-W06B	4477.05	54.7	10	2	49.5-54.5	46.8-55.5	NA	43.7-46.8
	SMC-W07A	4476.63	18.7	10	2	3.5-18.5	1.3-20.6	20.6-23.8	0.4-1.3
	SMC-W07B	4476.63	54.7	10	2	49.5-54.5	44.6-55.5	NA	42.3-44.6
	SMC-W07C	4476.8	76.7	8	2	71.5-76.5	66.8-77.5	NA	46.8-66.8
	SMC-W08EX	4476.79	74.5	14.75	10	44.6-69.6	42.5-72.1	NA	39.6-42.5
	SMC-W09A	4476.57	18.7	10	2	3.5-18.5	1.4-24.0	24.0-27.2	0.3-1.4
	SMC-W09B	4476.57	54.7	10	2	49.5-54.5	46.7-55.5	NA	38.3-46.7

[1]Note: All monitoring well screens are 0.010" slot. Extraction well screens range from 0.030" to 0.090" slots.

[2]Note: All monitoring well filter pack is natural pack or 20-40 silica sand Extraction well filter pack ranges from 4-8 to 10-20.

TABLE 2.
Middle Rio Grande Watershed Study,
San Acacia Survey Data

SAN ACACIA (SAC) - PVC PIPES

Well No.	Latitude	Longitude	PVC Pipe ELEV.	Concrete ELEV.	Casing ELEV.
W01-A	N 34º 14' 54.32277"	W 106º 54' 35.59211"	4663.20	4662.37	4664.41
W02-A	N 34º 14' 47.25096"	W 106º 54' 15.83149"	4677.58	4677.10	4679.18
W02-B	N 34º 14' 47.25109"	W 106º 54' 15.83512"	4677.74	4677.10	4679.18
W03-A	N 34º 14' 44.29280"	W 106º 54' 09.80978"	4664.18	4663.34	4665.29
W03-B	N 34º 14' 44.29521"	W 106º 54' 09.81158"	4664.15	4663.34	4665.29
W04-A	N 34º 14' 43.92241"	W 106º 54' 03.54852"	4662.69	4662.36	4664.38
W04-B	N 34º 14' 43.92169"	W 106º 54' 03.55215"	4662.36	4662.36	4664.38
W05-A	N 34º 14' 43.77692"	W 106º 54' 01.73609"	4664.37	4663.35	4665.29
W05-B	N 34º 14' 43.77531"	W 106º 54' 01.73477"	4664.15	4663.35	4665.29
W06-A	N 34º 14' 43.56394"	W 106º 53' 59.89611"	4658.30	4655.16	4658.83
W07-A	N 34º 14' 47.02365"	W 106º 54' 15.39558"	4678.01	4677.46	4679.48
W07-B	N 34º 14' 47.05097"	W 106º 54' 15.38880"	4678.16	4677.46	4679.37
W08-EX	N 34º 14' 46.96576"	W 106º 54' 15.35975"	4678.75	4677.31	4679.59
W09-A	N 34º 14' 46.88902"	W 106º 54' 15.07282"	4678.52	4677.87	4680.00
W09-B	N 34º 14' 46.89067"	W 106º 54' 15.07057"	4678.61	4677.87	4680.00
W09-C	N 34º 14' 46.87357"	W 106º 54' 15.09573"	4679.11	4677.87	4679.96
E01-A	N 34º 14' 44.02863"	W 106º 53' 55.47999"	4661.53	4658.31	4661.61
E01-B	N 34º 14' 44.02263"	W 106º 53' 55.48897"	4661.16	4658.28	4661.11
E02-A	N 34º 14' 43.77483"	W 106º 53' 51.96039"	4666.48	4663.70	4666.40
E03-A	N 34º 14' 43.10808"	W 106º 53' 41.77328"	4667.34	4664.57	4667.20
E03-B	N 34º 14' 43.10096"	W 106º 53' 41.76808"	4667.30	4664.53	4667.12

Geodetic Coordinates (Latitude and Longitude) are based on NAD 83 Horizontal Datum and Elevations are NGVD 88 Datum Values.

TABLE 3.
Middle Rio Grande Watershed Study,
Escondida Bridge Survey Data

ESCONDIDA BRIDGE (ESC) - MONITORING WELLS (PVC PIPES)

Well No.	Latitude	Longitude	PVC Pipe ELEV.	Concrete ELEV.	Casing ELEV.
W01-A	N 34º 07' 11.06826"	W 106º 53' 29.33244"	4617.30	4616.32	4618.37
W01-B	N 34º 07' 11.06980"	W 106º 53' 29.33540"	4617.20	4616.32	4618.37
W02-A	N 34º 07' 12.25187"	W 106º 53' 23.91738"	4617.96	4616.89	4618.97
W03-A	N 34º 07' 12.54634"	W 106º 53' 21.24507"	4616.62	4615.45	4617.43
W03-B	N 34º 07' 12.54772"	W 106º 53' 21.24778"	4616.58	4615.45	4617.43
W04-A	N 34º 07' 13.05085"	W 106º 53' 19.55172"	4616.72	4615.58	4618.00
W04-B	N 34º 07' 13.04916"	W 106º 53' 19.55014"	4616.28	4615.58	4618.00
W05-A	N 34º 07' 13.46197"	W 106º 53' 15.20643"	4619.97	4618.05	4620.05
W05-B	N 34º 07' 13.46188"	W 106º 53' 15.20280"	4619.71	4618.05	4620.05
E01-A	N 34º 07' 13.30051"	W 106º 53' 11.01091"	4618.44	4617.86	4619.81
E01-B	N 34º 07' 13.29912"	W 106º 53' 11.01254"	4618.42	4617.86	4619.81
E02-A	N 34º 07' 13.33380"	W 106º 53' 10.16802"	4619.17	4618.30	4620.25
E02-B	N 34º 07' 13.33191"	W 106º 53' 10.16981"	4619.15	4618.30	4620.25
E03-A	N 34º 07' 13.01238"	W 106º 52' 55.26056"	4611.58	4610.79	4612.91
E03-B	N 34º 07' 13.01175"	W 106º 52' 55.25685"	4611.47	4610.79	4612.91
E04-A	N 34º 07' 13.31378"	W 106º 53' 10.81751"	4619.06	4618.21	4620.18
E04-B	N 34º 07' 13.31308"	W 106º 53' 10.81642"	4618.99	4618.21	4620.18
E04-C	N 34º 07' 13.28895"	W 106º 53' 10.82674"	4618.91	4618.10	4620.01
E05-EX	N 34º 07' 13.36871"	W 106º 53' 10.84893"	4619.65	4618.93	4621.89
E06-A	N 34º 07' 13.13010"	W 106º 53 10.75735"	4619.48	4618.53	4620.52
E06-B	N 34º 07' 13.12791"	W 106º 53' 10.75816"	4619.55	4618.53	4620.52

Geodetic Coordinates (Latitude and Longitude) are based on NAD 83 Horizontal Datum and Elevations are NGVD 88 Datum Values.

TABLE 4.
Middle Rio Grande Watershed Study,
Brown Arroyo Survey Data

BROWN ARROYO (BRN) - MONITORING WELLS (PVC PIPES)

Well No.	Latitude	Longitude	PVC Pipe ELEV.	Concrete ELEV.	Casing ELEV.
W01-A	N 34º 00' 00.48520"	W 106º 52' 37.59919"	4571.99	4570.90	4573.12
W01-B	N 34º 00' 00.48827"	W 106º 52' 37.59482"	4572.06	4570.90	4573.12
W02-A	N 34º 00' 02.41229"	W 106º 52' 23.48245"	4571.78	4570.95	4573.17
W03-A	N 34º 00' 02.40549"	W 106º 52' 19.26465"	4575.09	4574.31	4576.61
W03-B	N 34º 00' 02.40773"	W 106º 52' 19.26372"	4575.48	4574.31	4576.61
W04-A	N 34º 00' 02.33190"	W 106º 52' 17.27183"	4572.36	4571.22	4573.42
W04-B	N 34º 00' 02.33485"	W 106º 52' 17.27423"	4572.51	4571.22	4573.42
W05-A	N 34º 00' 02.65798"	W 106º 52' 14.66424"	4576.62	4575.89	4578.16
W05-B	N 34º 00' 02.66051"	W 106º 52' 14.66875"	4576.24	4575.89	4578.16
E01-A	N 34º 00' 10.89319"	W 106º 52' 10.95924"	4577.41	4575.92	4578.13
E01-B	N 34º 00' 10.89344"	W 106º 52' 10.96392"	4576.48	4575.92	4578.13
E01-C	N 34º 00' 10.84829"	W 106º 52' 10.95043"	4577.37	4575.91	4578.18
E02-A	N 34º 00' 11.80577"	W 106º 52' 08.30281"	4576.58	4575.30	4577.45
E03-A	N 34º 00' 14.45214"	W 106º 51' 58.37058"	4574.41	4573.47	4575.54
E03-B	N 34º 00' 14.45273"	W 106º 51' 58.37567"	4574.34	4573.47	4575.54
E04-A	N 34º 00' 13.33824"	W 106º 51' 39.56927"	4572.39	4571.08	4573.36
E04-B	N 34º 00' 13.33495"	W 106º 51' 39.56781"	4571.74	4571.08	4573.36
E05-A	N 33º 59' 52.37607"	W 106º 51' 52.44922"	4573.05	4572.10	4574.29
E05-B	N 33º 59' 52.37802"	W 106º 51' 52.44507"	4572.98	4572.10	4574.29
E06-A	N 33º 59' 58.95910"	W 106º 51' 31.92397"	4573.75	4572.71	4574.82
E06-B	N 33º 59' 58.95987"	W 106º 51' 31.92079"	4573.79	4572.71	4574.82

Geodetic Coordinates (Latitude and Longitude) are based on NAD 83 Horizontal Datum and Elevations are NGVD 88 Datum Values.

TABLE 5.
Middle Rio Grande Watershed Study,
Highway 380 Survey Data

HIGHWAY 380 BRIDGE (HWY) - MONITORING WELLS (PVC PIPES)

Well No.	Latitude	Longitude	PVC Pipe ELEV.	Concrete ELEV.	Casing ELEV.
W02-A	N 33º 55' 33.51142"	W 106° 51' 27.37846"	4548.83	4548.06	4550.28
W02-B	N 33º 55' 33.51611"	W 106° 51' 27.37810"	4548.62	4548.06	4550.28
W03-B	N 33º 55' 29.03397"	W 106° 51' 13.55067"	4547.78	4547.23	4549.31
W04-A	N 33º 55' 28.65537"	W 106° 51' 11.02269"	4549.69	4549.29	4551.37
W04-B	N 33º 55' 28.65255"	W 106° 51' 11.02110"	4549.34	4549.29	4551.37
W05-A	N 33º 55' 29.34710"	W 106° 51' 08.60026"	4550.33	4550.05	4551.96
W05-B	N 33º 55' 29.34789"	W 106° 51' 08.59733"	4550.19	4550.05	4551.96
W06-A	N 33º 55' 29.28909"	W 106° 51' 06.66598"	4550.98	4550.05	4552.07
W06-B	N 33º 55' 29.29277"	W 106° 51' 06.66932"	4550.89	4550.05	4552.07
W07-A	N 33º 55' 29.27124"	W 106° 51' 07.44169"	4552.44	4551.47	4553.69
W07-B	N 33º 55' 29.26810"	W 106° 51' 07.44334"	4552.07	4551.47	4553.69
W07-C	N 33º 55' 29.30093"	W 106° 51' 07.45630"	4551.81	4551.49	4554.01
W08-EX	N 33º 55' 29.29155"	W 106° 51' 07.24961"	4552.45	4550.53	4553.13
W09-A	N 33º 55' 29.23421"	W 106° 51' 07.25576"	4550.65	4550.24	4552.16
W09-B	N 33º 55' 29.23789"	W 106° 51' 07.25513"	4550.99	4550.24	4552.16
W10-A	N 33° 55' 29.87586"	W 106° 51' 07.25392"	4552.10	4551.43	4553.79
W10-B	N 33º 55' 29.87141"	W 106° 51' 07.25464"	4552.24	4551.43	4553.79
W11-A	N 33º 55' 29.20272"	W 106° 51' 05.29976"	4556.93	4555.44	4557.77
W11-B	N 33º 55' 29.20410"	W 106° 51' 05.29424"	4556.12	4555.44	4557.77
E01-A	N 33º 55' 29.45916"	W 106° 51' 01.90768"	4554.19	4553.67	4555.58
E01-B	N 33º 55' 29.46170"	W 106° 51' 01.90869"	4554.03	4553.67	4555.58
E02-A	N 33º 55' 29.75145"	W 106° 50' 59.21588"	4552.70	4552.06	4554.14
E03-A	N 33º 55' 29.86520"	W 106° 50' 47.66863"	4551.44	4551.11	4553.20
E03-B	N 33º 55' 29.86803"	W 106° 50' 47.66827"	4552.04	4551.11	4553.20

Geodetic Coordinates (Latitude and Longitude) are based on NAD 83 Horizontal Datum and Elevations are NGVD 88 Datum Values.

TABLE 6.
Middle Rio Grande Watershed Study,
South Bosque Boundary Survey Data

SOUTH BOUNDARY OF BOSQUE DEL APACHE (SBB) - MONITORING WELLS (PVC PIPES)

Well No.	Latitude	Longitude	PVC Pipe ELEV.	Concrete ELEV.	Casing ELEV.
W01-A	N 33° 43' 31.95768"	W 106° 55' 14.95594"	4484.80	4484.47	4486.16
W01-B	N 33° 43' 31.96000"	W 106° 55' 14.95491"	4484.96	4484.47	4486.16
W02-A	N 33° 43' 26.05089"	W 106° 55' 01.29448"	4488.33	4487.96	4489.51
W02-B	N 33° 43' 26.05481"	W 106° 55' 01.29129"	4488.43	4487.96	4489.51
W03-A	N 33° 43' 24.19842"	W 106° 54' 54.53000"	4489.68	4488.81	4490.54
W03-B	N 33° 43' 24.20186"	W 106° 54' 54.52892"	4489.76	4488.81	4490.54
W04-A	N 33° 43' 23.94996"	W 106° 54' 52.44152"	4495.08	4493.86	4495.87
W04-B	N 33° 43' 23.94617"	W 106° 54' 52.43741"	4495.07	4493.86	4495.87
W05-A	N 33° 43' 19.20301"	W 106° 54' 44.74922"	4499.51	4498.66	4500.71
W06-A	N 33° 43' 26.44928"	W 106° 55' 01.96530"	4488.71	4488.10	4489.74
W06-B	N 33° 43' 26.44643"	W 106° 55' 01.96732"	4488.55	4488.10	4489.74
W07-B	N 33° 43' 26.18947"	W 106° 55' 01.51410"	4489.00	4488.19	4490.44
W07-C	N 33° 43' 26.18640"	W 106° 55' 01.51168"	4489.93	4488.19	4490.44
W08-EX	N 33° 43' 26.12750"	W 106° 55' 01.44261"	4489.82	4487.90	4490.83
E01-A	N 33° 43' 16.90771"	W 106° 54' 42.99820"	4499.56	4498.81	4500.68
E01-B	N 33° 43' 16.90432"	W 106° 54' 42.99812"	4499.84	4498.81	4500.68
E02-A	N 33° 43' 14.96478"	W 106° 54' 41.70178"	4499.44	4498.26	4500.28
E02-B	N 33° 43' 14.96136"	W 106° 54' 41.70077"	4499.67	4498.26	4500.28
E03-A	N 33° 43' 07.90537"	W 106° 54' 37.13864"	4497.09	4495.48	4497.32
E03-B	N 33° 43' 07.90945"	W 106° 54' 37.13944"	4496.79	4495.48	4497.32

Geodetic Coordinates (Latitude and Longitude) are based on NAD 83 Horizontal Datum and Elevations are NGVD 88 Datum Values.

TABLE 7.
Middle Rio Grande Watershed Study,
San Marcial Survey Data

SAN MARCIAL (SMC) - MONITORING WELLS (PVC PIPES)

Well No.	Latitude	Longitude	PVC Pipe ELEV.	Concrete ELEV.	Casing ELEV.
W01-A	N 33° 41' 06.09143"	W 107° 00' 08.91565"	4469.28	4468.71	4470.42
W01-B	N 33° 41' 06.09489"	W 107° 00' 08.91714"	4469.68	4468.71	4470.42
W02-A	N 33° 40' 55.25087"	W 107° 00' 03.83086"	4472.49	4471.29	4473.44
W03-A	N 33° 40' 54.12814"	W 107° 00' 01.08614"	4474.44	4473.72	4475.23
W03-B	N 33° 40' 54.12888"	W 107° 00' 01.08175"	4474.31	4473.72	4475.23
W04-A	N 33° 40' 53.03519"	W 106° 59' 59.51005"	4471.49	4470.91	4472.49
W04-B	N 33° 40' 53.03814"	W 106° 59' 59.51256"	4471.62	4470.91	4472.49
W05-A	N 33° 40' 46.13085"	W 106° 59' 52.26070"	4478.14	4476.65	4478.96
W05-B	N 33° 40' 46.13221"	W 106° 59' 52.25475"	4478.22	4476.65	4478.96
W06-A	N 33° 40' 45.24915"	W 106° 59' 51.07910"	4477.48	4477.05	4478.95
W06-B	N 33° 40' 45.24701"	W 106° 59' 51.08126"	4477.60	4477.05	4478.95
W07-A	N 33° 40' 45.87865"	W 106° 59' 51.88124"	4478.07	4476.63	4478.71
W07-B	N 33° 40' 45.87895"	W 106° 59' 51.88571"	4478.27	4476.63	4478.71
W07-C	N 33° 40' 45.85440"	W 106° 59' 51.92906"	4478.01	4476.80	4478.96
W08-EX	N 33° 40' 45.84017"	W 106° 59' 51.81962"	4478.42	4476.79	4479.25
W09-A	N 33° 40' 45.73792"	W 106° 59' 51.74478"	4478.11	4476.57	4478.75
W09-B	N 33° 40' 45.73968"	W 106° 59' 51.73996"	4478.12	4476.57	4478.75

Geodetic Coordinates (Latitude and Longitude) are based on NAD 83 Horizontal Datum and Elevations are NGVD 88 Datum Values.

TABLE 8.
Middle Rio Grande Watershed Study,
South of Fort Craig Survey Data

SOUTH OF FORT CRAIG (SFC) - MONITORING WELLS (PVC PIPES)

Well No.	Latitude	Longitude	PVC Pipe ELEV.	Concrete ELEV.	Casing ELEV.
W01-A	N 33° 37' 02.17090"	W 107° 01' 39.07426"	4464.06	4462.68	4464.53
W01-B	N 33° 37' 02.16955"	W 107° 01' 39.07284"	4463.07	4462.68	4464.53
W02-A	N 33° 36' 51.26606"	W 107° 01' 19.76862"	4458.48	4457.58	4459.44
W02-B	N 33° 36' 51.26364"	W 107° 01' 19.77151"	4458.42	4457.58	4459.44
W03-A	N 33° 36' 47.20817"	W 107° 01' 08.78307"	4458.72	4458.08	4459.92
W03-B	N 33° 36' 47.20516"	W 107° 01' 08.78304"	4458.44	4458.08	4459.92
W04-A	N 33° 36' 45.28145"	W 107° 01' 05.07666"	4457.82	4456.64	4458.89
W04-B	N 33° 36' 45.28196"	W 107° 01' 05.07819"	4457.92	4456.64	4458.89
W04-C	N 33° 36' 45.27439"	W 107° 01' 05.00126"	4458.05	4456.88	4458.95
W05-A	N 33° 36' 44.58968"	W 107° 01' 03.37437"	4458.03	4457.17	4459.23
W05-B	N 33° 36' 44.59170"	W 107° 01' 03.38040"	4458.37	4457.17	4459.23
W06-A	N 33° 36' 43.33635"	W 107° 01' 01.19555"	4467.78	(Ground) 4464.94	4468.59

Geodetic Coordinates (Latitude and Longitude) are based on NAD 83 Horizontal Datum and Elevations are NGVD 88 Datum Values.

TABLE 9.
Middle Rio Grande Watershed Study,
Staff Gage Survey Data

STAFF GAGES

Staff Gage No.	Latitude	Longitude	6 Ft. (3 Ft.) Mark Elevation	Flowline Elevation
SAC SG01	N 34º 14' 43.97556"	W 106º 54' 02.68179"	4653.72	4646.70
SAC SG02	N 34º 14' 44.20205"	W 106º 53' 56.69766"	4657.63	4649.69
SAC SG03	N 34º 14' 52.75769"	W 106º 54' 36.95378"	4659.79	4652.52
ESC SG01	N 34º 07' 13.08266"	W 106º 53' 20.16842"	4610.55	4603.74
ESC SG02	N 34º 07' 13.09886"	W 106º 53' 14.00248"	4614.81	4608.07
ESC SG03	N 34º 07' 14.02766"	W 106º 53' 01.92003"	4608.16 (3 Ft. Mark)	4604.43
BRN SG01	N 34º 00' 01.94406"	W 106º 52' 18.13989"	4564.47	4557.76
BRN SG02	N 34º 00' 37.85875"	W 106º 52' 01.90909"	4578.76	4573.29
BRN SG03	Not Found			
BRN SG04	N 34º 00' 11.21637"	W 106º 52' 24.22358"	4575.62 (3 Ft. Mark)	4572.74
HWY SG01	N 33º 55' 27.95113"	W 106º 51' 10.25045"	4543.98	4537.02
HWY SG02	N 33º 55' 27.41276"	W 106º 51' 03.97547"	4554.20	4546.30
HWY SG03	N 33º 55' 33.83092"	W 106º 51' 28.59657"	4547.53	4540.23
NBB SG01	N 33º 52' 23.04770"	W 106º 51' 03.10065"	4534.59	4527.98
NBB SG02	N 33º 52' 21.44480"	W 106º 50' 57.61193"	4540.17	4534.59
NBB SG03	Not Found			
SBB SG01	N 33º 43' 23.39672"	W 106º 54' 53.83789"	4483.17	4475.21
SBB SG02	Not Found			
SMC SG01	N 33º 40' 53.33618"	W 107º 00' 00.11143"	4468.51	4462.11
SMC SG02	N 33º 40' 44.41148"	W 106º 59' 50.00719"	4481.40	4473.74
SFC SG01	N 33º 36' 44.41995"	W 107º 01' 04.66636"	4459.53	4453.21
SFC SG02	N 33º 36' 42.91010"	W 107º 00' 59.86990"	4467.81	4461.32

Geodetic Coordinates (Latitude and Longitude) are based on NAD 83 Horizontal Datum and Elevations are NGVD 88 Datum Values.

TABLE 10
Middle Rio Grande Watershed Study
Summary of Unsaturated Soil Samples Hydraulic Properties

Well ID (Sample Depth)	**Soil Type**	**Porosity, n (% vol)**	**Saturation (% vol)**	**K_{sat} (cm/sec)**	**Unsaturated Hydraulic Properties**			
					a **(cm^{-1})**	**N**	q_r	q_s
SAC-W09C (23.5-24)	CL	42.6	90.1	1.3E-07	0.0009	1.7252	0.0477	0.4135
BRN-E04AB (4.5-5)	SM/CH	41.1	95.4	1.3E-07	0.0007	1.3076	0.0000	0.3901
HWY-W07C (29-29.5)	CL	47.5	58.3	1.9E-07	0.0008	1.6706	0.0689	0.4582
SBB-W04AB (14-14.5)	CL	52.1	92	2.4E-08	0.0007	1.2504	0.0000	0.4941
SMC-W07C (6-6.5)	CL/SM	44	97.2	1.1E-06	0.0114	1.2201	0.0000	0.4448

K_{sat} = saturated hydraulic conductivity (cm/sec)

α = fitting parameter for soil-water retention curve (cm^{-1}) [van Genuchten, 1980]

N = fitting parameter for soil-water retention curve [van Genuchten, 1980]

θ_r = residual water content

θ_s = saturated water content

SUMMARY OF LAI)RATORY TEST DATA

Test Hole	Depth (feet)	Unified Classification	Atterberg Limits		SIEVE ANALYSIS-% PASSING BY WEIGHT										Description
			LL	PI	1 1/2"	3/4"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	
ESC-E04BC	8.5-10	SM					100	98	98	97	95	75	39	30.9	
ESC-E04BC	18.5-20	SP					100	99	98	98	90	42	9	2.6	
ESC-E04BC	28.5-30	SP g			100	95	84	78	72	67	56	24	7	4.4	
ESC-E04BC	38.5-40	SP g			100	89	79	64	47	32	18	9	5	3.6	
ESC-E04BC	48.5-50	SP g				100	95	90	85	77	59	30	9	3.8	
ESC-E04BC	53.5-55	SP-SM				100	96	94	91	88	77	53	20	4.9	
ESC-E04BC	58.5-60	SP g			100	83	71	59	49	41	32	13	5	3.4	
ESC-E04BC	68.5-70	GP s			100	69	56	44	35	30	22	10	4	2.4	
ESC-E04BC	78.5-80	GP s			100	90	64	45	32	25	20	11	6	3.7	
ESC-E04BC	86-86.5	SP-SM			100	88	88	87	85	83	68	37	17	8.3	

Project Number : 02-2-586
Project : SSP 771-3

Table No. : 1

SUMMARY OF LAB ORATORY TEST DATA

Test Hole	Depth (feet)	Unified Classification	Natural Moisture Content (%)	Atterberg Limits		SIEVE ANALYSIS-% PASSING BY WEIGHT										Description
				LL	PI	1 1/2"	3/4"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	
SACW09BC	7.5-9	SP-SM	1.7	NV	NP							100	95	48	10.3	
SACW09BC	17.5-19	SM	5.3	NV	NP							100	99	86	37.7	
SACW09BC	24-25.5	SP	20.4	NV	NP		100	99	98	98	98	98	78	9	2.7	
SACW09BC	34-35.5	SP	16.4	NV	NP	100	97	97	96	93	89	76	42	13	5.6	
SACW09BC	41-42.5	SP	14.1	NV	NP		100	93	86	79	72	59	28	11	6.2	
SACW09BC	56-57.5	SP	17.6	NV	NP	100	97	94	90	87	84	76	40	11	5.5	
SACW09BC	66-67.5	SP	19.6	NV	NP	100	97	94	90	88	86	80	39	8	3.4	
SACW09BC	88-89	GP s	8.4	NV	NP	100	83	60	39	28	23	19	12	5	3.5	
SACW09BC	22.5-24	CH		61	34											

NV= not a valid value, NP= Non plastic.

Project Number : 02-2-586
SSP 771.3

Table No. : 1

SUMMARY OF LABORATORY TEST DATA

Test Hole	Depth (feet)	Unified Classification	Atterberg Limits		SIEVE ANALYSIS-% PASSING BY WEIGHT										Description
			LL	PI	1 1/2"	3/4"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	
SACW09BC	96-97.5	SW-SM				100	96	93	84	72	52	27	15	10.5	
SACW09BC	98-5.100	SW-SW g				100	88	72	60	46	32	21	13	9.7	
SACW09BC	108.5-110	SM				100	96	88	79	69	50	26	17	12.7	
SACW09BC	124-125.5	SM				100	96	90	81	68	52	33	17	12.0	
SFCW04	8.5-9.8	ML				100	100	100	100	99	99	99	98	78.2	
SFCW04	18.5-20	SM				100	100	100	100	100	100	95	38	11.9	
SFCW04	33.5-34.5	SP-SM			100	92	84	55	45	40	34	20	10	7.0	
SFCW04	43.5-45	SM				100	99	96	94	92	91	85	68	25	
SFCW04	48.5-52.5	GP-GM s			100	84	66	50	36	26	19	14	11	8.8	
SFCW04	58.5-60	GM s			100	71	58	49	40	33	28	21	16	14.3	
SFCW04	66-67.5	SM			100	97	96	92	90	83	58	25	16	13.0	
SFCW04	71-72.5	SM				100	97	95	94	89	68	32	17	12.8	
SFCW04	81-82	SW-SM				100	100	100	100	99	89	47	16	11.2	

NV= not a valid value, NP= Non plastic.

Project Number : 02-2-586
SSP 771.3

Table No. : 1

SUMMARY OF LAL)RATORY TEST DATA

Test Hole	Depth (feet)	Unified Classification	Atterberg Limits		SIEVE ANALYSIS-% PASSING BY WEIGHT										Description
			LL	PI	1 1/2"	3/4"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	
HWY-W07BC	13.5-15	SP				100	99	97	94	88	68	27	6	3.1	
HWY-W07BC	23.5-25	SP						100	99	98	87	37	8	3.6	
HWY-W07BC	36-37.5	SP				100	96	92	86	79	63	32	12	3.4	
HWY-W07BC	43.5-45	SP				100	97	96	94	91	80	49	11	3.9	
HWY-W07BC	48.5-50	SP g			100	96	85	76	69	66	58	24	7	4.3	
HWY-W07BC	53.5-55	SP				100	99	94	90	83	63	22	8	3.6	
HWY-W07BC	58.5-60	SP						100	99	98	96	64	11	4.3	
HWY-W07BC	63.5-65	SP g			100	94	80	63	54	47	35	15	6	3.3	
HWY-W07BC	73.5-75	SP					100	98	73	28	6	2	1	0.1	
HWY-W07BC	bottom of auger	GP			100	96	48	14	6	4	3	2	2	1.2	

Project Number : 02-2-586
Project : SSP 771-3

Table No. : 1

SUMMARY OF LAL)RATORY TEST DATA

Test Hole	Depth (feet)	Unified Classification	Atterberg Limits		SIEVE ANALYSIS-% PASSING BY WEIGHT										Description
			LL	PI	1 1/2"	3/4"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	
BRN-E01	6-7.5	SW-SM			100	100	100	100	100	100	100	97	46	7.7	
BRN-E01	21-22.5	SP			100	100	98	92	81	69	50	25	5	2.2	
BRN-E01	28.5-320	SP			100	100	99	98	98	98	95	68	11	2.1	
BRN-E01	38.5-40	SW-SM			100	100	100	100	100	100	99	88	25	5.8	
BRN-E01	46-47.5	SP-SM			100	100	100	99	99	98	94	63	15	5.6	
BRN-E01	48.5-50	SP-SM			100	100	94	91	87	77	26	9	5	4.5	
BRN-E01	56-57.5	CL	32	9	100	100	100	100	99	98	98	93	88	85.5	
BRN-E01	61-62.5	SP-SM			100	100	100	100	100	100	100	96	19	5.8	
BRN-E01	71-71.7	SP			100	100	100	100	99	94	71	14	3	2.4	
BRN-E01	81-82.5	GP s			100	80	66	51	41	33	23	12	7	4.4	
BRN-E01	83.5-84.5	SP			100	100	100	99	98	96	85	48	14	8.5	

Project Number : 02-2-586
Project : SSP 771-3

Table No. : 1

SUMMARY OF LABORATORY TEST DATA

Test Hole	Depth (feet)	Unified Classification	Atterberg Limits		SIEVE ANALYSIS-% PASSING BY WEIGHT										Description
			LL	PI	1 1/2"	3/4"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	
SMC-W07	0-2.5	SP								100	99	89	12	2.8	
SMC-W07	13.5-15	ML										100	92	59.8	
SMC-W07	21-22.5	SM										100	98	47.1	
SMC-W07	28.5-29.3	CL	41	21					100	99	98	91	82	76.0	
SMC-W07	33.5-35	SP-SM								100	99	82	23	8.8	
SMC-W07	38.5-40	SP g			100	76	71	64	57	53	44	16	5	2.8	
SMC-W07	43.5-45	SP				100	98	95	92	90	81	37	6	3.2	
SMC-W07	53.5-50	SP g			100	96	83	72	61	54	48	34	14	7.0	
SMC-W07	58.5-60	SW g			100	95	76	57	43	36	32	22	7	3.9	
SMC-W07	73.5-75	SP g				100	89	81	74	69	62	37	10	5.2	
SMC-W07	76-77.5	SP				100	99	99	99	97	75	26	10	6.7	

Project Number : 02-2-586
Project : SSP 771-3

Table No. : 1

SUMMARY OF LABORATORY TEST DATA

Test Hole	Depth (feet)	Unified Classification	Atterberg Limits		SIEVE ANALYSIS-% PASSING BY WEIGHT										Description
			LL	PI	1 1/2"	3/4"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	
SBB-W03	11-12.5	SM									100	99	61	23.1	
SBB-W03	21-22.5	SP					100	99	98	97	92	54	13	5.1	
SBB-W03	28.5-30	SW					100	98	97	97	94	63	11	4.4	
SBB-W03	41-42.5	SW									100	82	14	4.7	
SBB-W03	46-47.5	SP-SM								100	98	83	29	10.3	
SBB-W03	53.5-55	SP-SM								100	98	75	19	5.8	
SBB-W03	61-62.5	SP			100	93	92	89	88	87	84	70	15	4.3	
SBB-W03	71-72.5	SP g			100	84	70	60	53	50	45	31	9	4.6	
SBB-W03	81-82.5	GP s			100	72	62	50	40	34	28	19	13	11.9	
SBB-W03	91-92.5	SP-SM g			100	85	73	64	58	54	48	33	19	9.8	

Project Number : 02-2-586
Project : SSP 771-3

Table No. : 1

Project Number : 02-2-586

APPENDIX A

Geologic Logs and Well Construction Diagrams

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-E01A

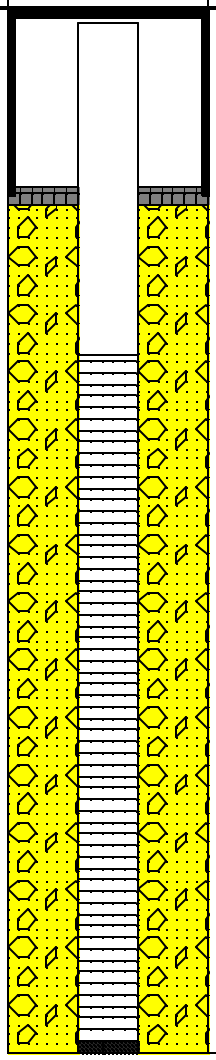
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** Detech
PROJECT NUMBER: 771-3	**CREW LEADER:** John MaClure
LOCATION: San Acacia Transect	**RIG TYPE:** Geoprobe 54DT
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** Geologic resistivity
START DATE: 4/16/2003	**WELL ELEVATION:** 4661.53 ft.
FINISH DATE: 4/16/2003	**GROUND ELEVATION:** 4658.31 ft.

NOTES: Borehole Diameter: 2.125 in.-direct push

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM A	WELL CONSTRUCTION
							Locking protective casing
							1 in. ID sch 40 PVC riser
0							Concrete collar
							Natural backfill/collapse
							1 in. ID sch 40 PVC screen, 0.010 in. slots
5							
10							
15							Borehole TD: 18.75 ft.
							End cap



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-E01B

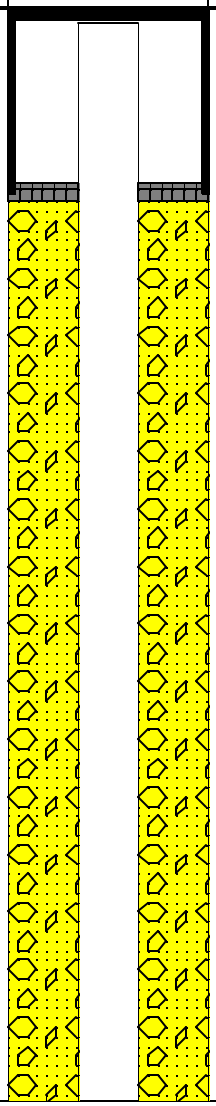
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** Detech
PROJECT NUMBER: 771-3	**CREW LEADER:** John MaClure
LOCATION: San Acacia Transect	**RIG TYPE:** Geoprobe 54DT
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** Geologic/Resistivity
START DATE: 4/16/03	**WELL ELEVATION:** 4661.16 ft.
FINISH DATE: 4/16/03	**GROUND ELEVATION:** 4658.28 ft.

NOTES: Borehole Diameter: 2.125 in.-direct push

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B	WELL CONSTRUCTION
							Locking protective casing
							1 in. ID sch 40 PVC riser
0							Concrete collar
							Natural backfill/collapse
5							
10							
15							



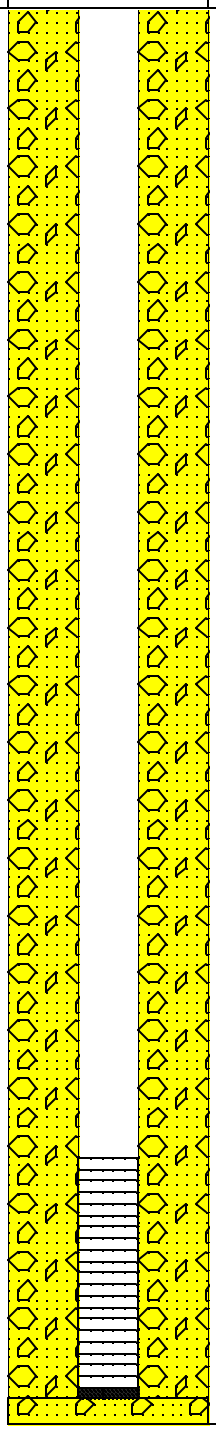
S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-E01B

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	SAMPLES BLOWS	SAMPLES REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B	WELL CONSTRUCTION
20							
25							
30							
35							
40							
45							1 in. ID sch 40 PVC screen, 0.010 in. slots Borehole TD: 50.8 ft.
50							End cap



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

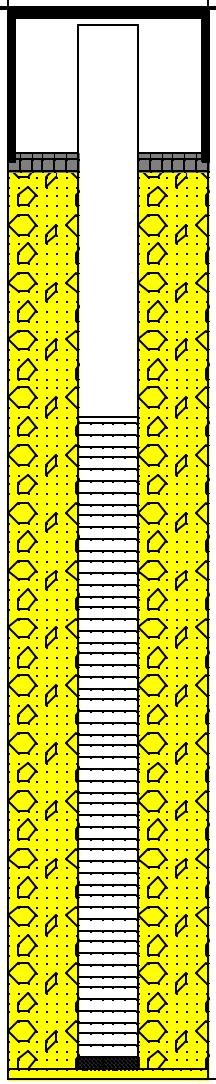
BORING NO. : SAC-E02A

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grand Watershed Study Phase 1	**DRILLING FIRM:** Detech
PROJECT NUMBER: 771-3	**CREW LEADER:** John MaClure
LOCATION: San Acacia Transect	**RIG TYPE:** Geoprobe 54DT
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** Geologic/Resistivity
START DATE: 4/16/2003	**WELL ELEVATION:** 4666.48 ft.
FINISH DATE: 4/16/2003	**GROUND ELEVATION:** 4663.70 ft.

NOTES: Borehole Diameter: 2.125 in.-direct push

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM A	WELL CONSTRUCTION
							Locking protective casing 1 in. ID sch 40 PVC riser Concrete collar Natural backfill/collapse 1 in. ID sch 40 PVC screen, 0.010 in. slots Borehole TD: 21.5 ft. End cap

0 5 10 15 20

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

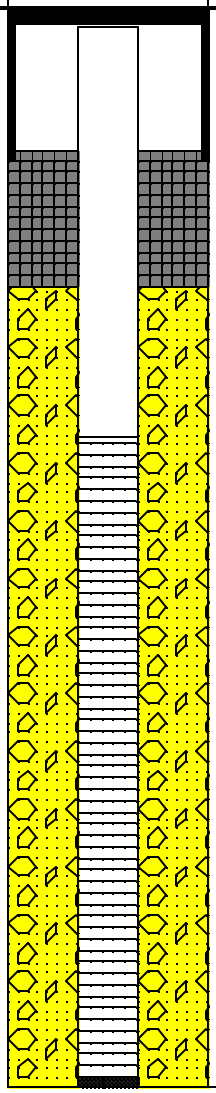
BORING NO. : SAC-E03A

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grand Watershed Study Phase 1	**DRILLING FIRM:** Detech
PROJECT NUMBER: 771-3	**CREW LEADER:** John MaClure
LOCATION: San Acacia Transect	**RIG TYPE:** Geoprobe 54DT
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** Geologic/Resistivity
START DATE: 4/16/2003	**WELL ELEVATION:** 4667.34 ft.
FINISH DATE: 4/16/2003	**GROUND ELEVATION:** 4664.57 ft.

NOTES: Borehole Diameter: 2.125 in.-direct push

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM A	WELL CONSTRUCTION
							Locking protective casing 1 in. ID sch 40 PVC riser Natual backfill/collapse 1 in. ID sch 40 PVC screen, 0.010 in. slots Borehole TD: 21.75 ft. End cap

0 5 10 15 20

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-E03B

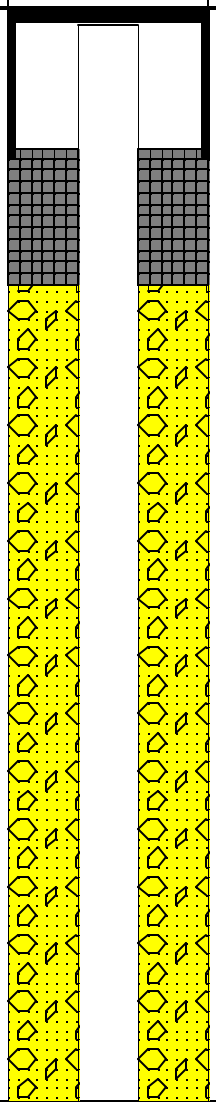
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** Detech
PROJECT NUMBER: 771-3	**CREW LEADER:** John MaClure
LOCATION: San Acacia Transect	**RIG TYPE:** Geoprobe 54DT
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** Geologic/Resistivity
START DATE: 4/16/2003	**WELL ELEVATION:** 4667.30 ft.
FINISH DATE: 4/16/2003	**GROUND ELEVATION:** 4664.53 ft.

NOTES: Borehole Diameter: 2.125 in.-direct push

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B	WELL CONSTRUCTION
							Locking protective casing
							1 in. ID sch 40 PVC riser
0							Concrete collar
							Natural backfill/collapse
5							
10							
15							
20							



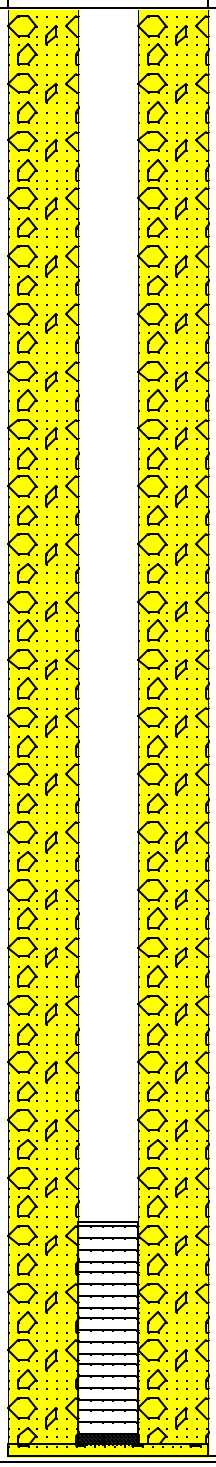
S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-E03B

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B	WELL CONSTRUCTION
25							
30							
35							
40							
45							
50							1 in. ID sch 40 PVC screen, 0.010 in. slots
							Borehole TD: 56 ft.
55							End cap



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

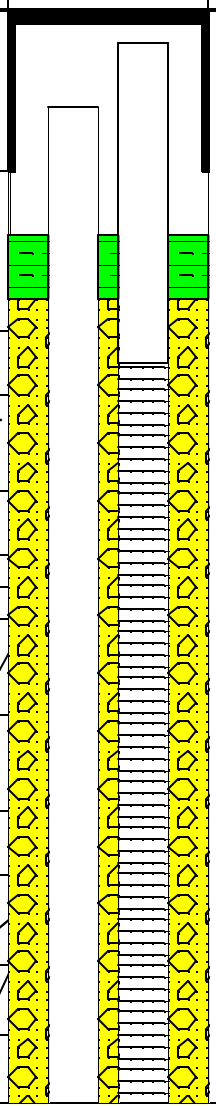
BORING NO. : SAC-W01AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: San Acacia Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** Split Spoon
START DATE: 11/11/2002	**WELL ELEVATION:**
FINISH DATE: 1/7/2003	**GROUND ELEVATION:**

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					SAND, f., brownish yellow (10YR6/6), rounded-subrounded, quartz and feldspar, dry (SP)
	1	4	1.5		As above, yellowish brown (10YR5/4), some silt in basal 0.1 ft., v. moist (SP)
5					CLAY, no sand, olive (5YR4/4), firm (CL)
▼	2	9	1.4		SAND, f., wet, (SP)
					SAND, m., some f. sand, rounded-subrounded, quartz and feldspar, 90/10 quartz/other (SP)
	3	11	1		SAND, f.-v.f., few m. sand, tr. c. sand, no fines, dk. yellowish brown (10YR4/4), firm (SP)
10					SAND, m., some f. sand, few c. sand and gravel, dk. grayish brown (10YR4/2), soft (SW)
	4	9	1.0		SAND, v.f., and SILT, brown (10YR4/3), firm (SP)
					SAND, f.-m., (SP)
	5	9	1		SAND, m., tr. f. sand, ltl. c. sand, tr. gravel, subangular-rounded, quartz, lithic and mafic, 60/40 quartz/other, c. fraction is



WELL CONSTRUCTION:
- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- Natural backfill/collapse

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W01AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
15	5	9	1		carbonates, quartz, quartzite, granite and some volcanics (SP)		
	6	16	0.9		SAND, f.-m., tr. c. sand, and no gravel, dk. grayish brown to v. dk. grayish brown (10YR4/2-3/2), lithology as above (SP)		End cap
	7	22	0.8		SAND, f.-c., f. gravel, tr. c. gravel, few fines, lithology as above (SW)		Bentonite pellets
20	8	22	0.2		GRAVEL, broken cobble pieces, quartzite, redish f. grain volcanics, weathering to clay (GP)		
	9	42	1		CLAYSTONE, pale olive to olive (5YR6/4-5/4) (CL) Top 0.8 ft suspected sluff of f.-m. sand.		
25					CLAY, hard, dry, pale olive to olive (5YR6/4-5/4) (CL)		
	10	34	1.5		SAND, f., some silt/clay, lt. yellowish brown to brownish yellow (10YR6/4-6/6), firm (SW)		
					SAND, c., GRAVEL, f., loose, (SP-GP)		Natural backfill/collapse
	11	55	1.3		SAND, f., ltl. m. sand, yellowish brown (10YR5/4), firm, few fines (SP)		
30					SAND, f.-m., ltl. c. sand, 1 piece of quartzite gravel, few fines, rounded-subrounded quarzt, feldspar, lithic and mafics, 90/10 quartz/other; c. fraction is carbonate, quartzite, granite and volcanics (SP)		
	12	62	1.1		SAND, f.-v.f., brown to yellowish brown (10YR5/3-5/4), few fines, firm (SP)		
					SAND, m., few f. and c. sand, brown to yellowish brown (10YR5/3-5/4), lithology as above, layer of c. sand and f. gravel 33.7-33.8 ft. (SP)		
	13	66	1.3		As above, (SP)		Bentonite pellets
35							
	14	52	1.4		As above, (SP)		20-40 Silica sand pack

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W01AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
					SAND, f., f., gravel at base, few m. sand at top (SP)		
	15	60	1.4		SAND, f.-m., few fines, f.-c. sand in upper 0.3 ft., brown (10YR5/3), quartz feldspar, lithic/mafic, 80/20 quartz/other, soft (SP)		
40							
	16	48	1.1		As above, few c. sand, tr. f. gravel (SP)		
	17	65	1.2		As above, pieces of red clay, olive brown (2.5YR4/9), v. firm, big piece of clay in bottom 0.3 ft of drive shoe (SP)		2 in. ID sch 40 PVC screen, 0.010 in. slots
45							
	18	48	1.3		As above, no clay (SP)		Borehole TD: 50 ft.
	19	85	0.3		As above, no clay (SP)		End cap
50							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W02AB

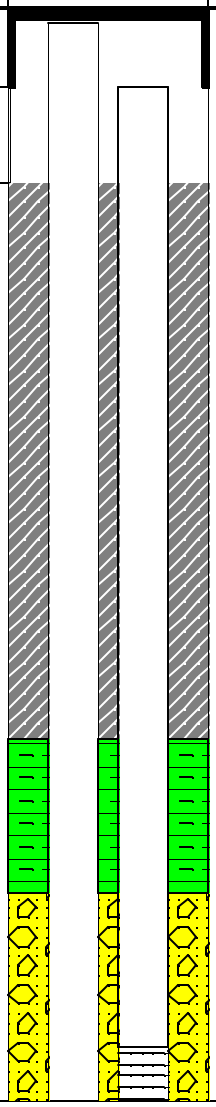
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: San Acacia Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** NA
START DATE: 1/10/2003	**WELL ELEVATION:** A: 4677.58 ft. B: 4677.74 ft.
FINISH DATE: 1/10/2003	**GROUND ELEVATION:** 4677.10 ft.

NOTES: Borehole Diameter: 10 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
0					Not sampled. See log of SAC-W09C for lithology.		Locking protective casing; 2 in. ID sch 40 PVC riser; Cement Bentonite grout
5							
10							
15							Bentonite slurry; Natural backfill/collapse
20							2 in. ID sch 40 PVC screen, 0.010 in. slots



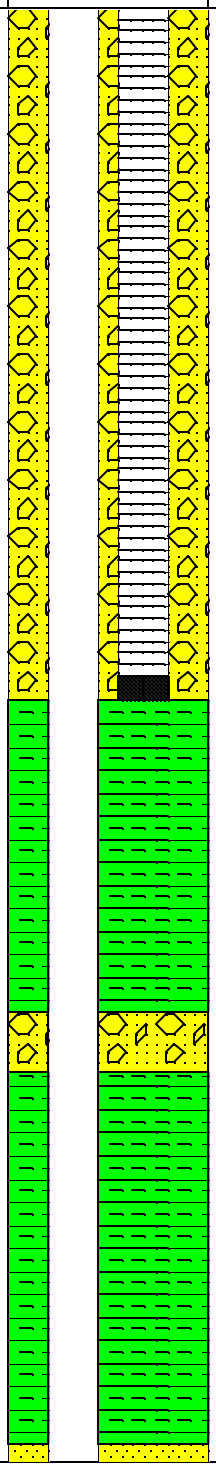
S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W02AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 | **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B	WELL DIAGRAM A	WELL CONSTRUCTION
25								
30								
35								End cap
								Bentonite slurry
40								
								Natural backfill/collapse
								Bentonite slurry and pellets
45								
50								

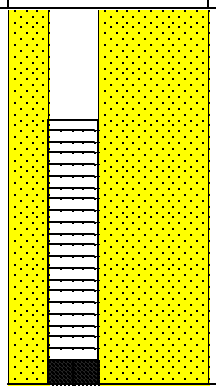


S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W02AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
55							20-40 Silica sand pack 2 in. ID sch 40 PVC screen, 0.010 in. slots Borehole TD: 59 ft. End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W03AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: San Acacia Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** Split Spoon
START DATE: 11/12/2002	**WELL ELEVATION:** A: 4664.18 ft. B: 4664.15 ft.
FINISH DATE: 1/7/2003	**GROUND ELEVATION:** 4663.34 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
							Locking protective casing
							2 in. ID sch 40 PVC riser
0					SAND/SILT, f.-v.f sand, balls of clay in cuttings, dk. yellowish brown (10YR4/4-4/6), loose, dry (SM)		Bentonite chips
							20-40 Silica sand pack
					SAND, f.-v.f., moist and soft (SP)		
	1	5	1.5		CLAY, no sand, v. hard, dk. yellowish brown (10YR4/4), high plasticity, high toughness, no dilatancy, high dry strength (CH)		2 in. ID sch 40 PVC screen, 0.010 in. slots
5					SAND, f., ltl.-some fines yellowish brown (10YR5/6), soft, moist (SP)		
					CLAY, ltl. f. sand, brown (10YR4/3), firm (CL)		
	2	8	1.5		SAND, f.-v.f., clay in basal 0.1 ft., yellowish brown (10YR5/4), soft, moist, (SP)		
					CLAY, ltl. f. sand, firm, v. dk. gray (10YR3/1) (CL)		
	3	6	1.5		SAND, f., some clay, soft (SP)		
10 ▼					CLAY, no sand, dk. yellowish brown (10YR4/4), firm-hard (CL)		
					SILT, dk. yellowish brown (10YR4/4), wet (ML)		
					SAND, f.-v.f., and silt, (some clay?), firm, yellowish brown (10YR5/4), moist (SM)		
	4	12	1.2		CLAY, firm, v. dk. grayish brown (10YR3/2), organic material, slight motteling (CL)		
					SAND, f.-v.f, ltl. fines, yellowish brown (10YR5/4), subrounded-rounded, quartz and feldspar, 80/20 quartz/other (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W03AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
15	5	10	1.8		CLAY, scraped off augers (CL)		
					SAND, m., ltl. f. sand, few c. sand, tr. f. gravel, dk. grayish brown (10YR4/2), f.-m. sand is rounded-subrounded, quartz, feldspar and lithic/mafic. c. sand is volcanics, calcite cemented sandstone, quartzite, and granite (SP)		
	6	11	1				
					SAND, f.-c., f. GRAVEL, tr. fines, dk grayish brown (10YR4/2), lithology as above (SW-GW)		
	7	18	0.9		SAND, f.-m., tr. c. sand, no gravel, tr. fines, dk. grayish brown to v. dk. grayish brown (10YR4/2-3/2), firm, lithology as above (SP)		End cap
20							Bentonite slurry and pellets
	8	16			As above, (SP)		Natural backfill/collapse
	9	18	1.0		SAND, m., few f. sand, ltl. c. sand and f. gravel, dk. grayish brown (10YR4/2), lithology as above, 70/30 quartz/other (SP)		
25	10	20	0.8		SAND, f., 6 f. gravel pieces in bottom 0.1 ft., faint layering with some m. sand in basal 0.4 ft., dk. grayish brown (10YR4/2) (SP)		
					As above, (SP)		
	11	13	1.1		SAND, m., ltl. f. sand, few c. sand and f. gravel, lithology as above (SP)		
30	2	14	1.1		SAND, f., ltl. c. sand in upper 0.3 ft., m. sand in basal 0.2 ft. (SP)		
	13	40	0.6		SAND, f.-c., GRAVEL, f.-c., 1 piece of clay along side of sampler, lithology as above (SW-GW)		
35							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W03AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	14	13	0.6		As above, (SW-GW)		Bentonite slurry
	15	11	0.5		As above, v. loose (SW-GW)		
40							
	16	18	1.0		SAND, f., few m. sand, tr. c. sand, tr. fines, dk. grayish brown (10YR4/2), firm, lithology as above, 70/30 quartz/other, (SP)		
							Natural backfill/collapse
	17	18	1.8		CLAY, no sand, soft, black (10YR2/1), organic matter, charcoal (CH)		
					SAND, f.-c., as above (SW)		
45							
							2 in. ID sch 40 PVC screen, 0.010 in. slots
	18	14	1.1		SAND, f.-m., few c. sand, tr. fines, lithology as above, 60/40 quartz other (SP)		
							Borehole TD: 51 ft.
	19	32			GRAVEL, f., minimal recovery (GP)		
50							
							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

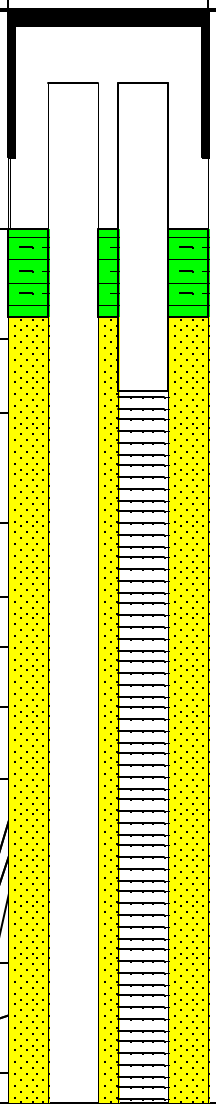
BORING NO. : SAC-W04AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: San Acacia Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** Split Spoon
START DATE: 11/12/2002	**WELL ELEVATION:** A: 4662.69 ft. B: 4662.36 ft.
FINISH DATE: 1/2/2003	**GROUND ELEVATION:** 4662.36 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					
					SAND, f., tr. m. sand, few fines, dk. yellowish brown (10YR4/4) (SP)
	1	4	1		SILT, some f. sand, dk. yellowish brown (10YR4/4), soft (SM)
5					
					SAND, f., clean, lt. yellowish brown (10YR6/4) (SP)
	2	4	1.4		SILT, as above, (SM)
					SAND, f.-v.f., some fines, lt. yellowish brown (10YR6/4), (SP) interbedded with clay, ltl. f. sand, iron oxide stains and charcoal layers (CL)
▼	3	5	1.5		As above (CL)
10					SILT, some f. sand, lt. yellowish brown (10YR6/4), rapid dilatancy, no plasticity, wet (ML)
					CLAY, organic matter, dk. brown (10YR3/3), iron oxide staining (CL)
	4	7	2.2		CLAY, few f. sand, dk. yellowish brown (10YR4/4), firm (CL)



WELL CONSTRUCTION:
- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch. 40 PVC screen, 0.010 in. slots

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W04AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	5	9	1.2		SAND, f.-m., tr. c. sand, no fines, yellowish brown (10YR5/4), soft, moist (SP)		
15							
	6	12	0.8		SAND, f.-m., few c. sand, tr. f. gravel, dk. gray to v. dk. grayish brown (10YR4/1-3/2), charcoal, black staining, rounded-subrounded, quartz, feldspar, lithic and mafic, 70/30 quartz/other, c. fraction is volcanic, carbonate, quartzite and granite (SP)		
					As above, (SP)		
					SAND, f.-c., ltl. fines, 2 pieces of c. gravel/cobble pieces, quartzite, and a dense pale green sandstone (SW)		End cap
	7	10	0.9				
20					SAND, f.-m., ltl.-some c. sand, few f. gravel, tr.-few fines, dk. grayish brown (10YR4/2), lithology as above, soft (SP)		
	8	15	0.7		As above, 1 c. gravel piece (SP)		Bentonite pellets
	9	16	1		As above, f. sand, at bottom, c. sand and gravel at top, loose (SP)		20-40 Silica sand pack
25							
	10	16	0.9		SAND, f., ltl.-some m. sand, tr. c. sand, no fines, dk. gray to v. dk. grayish brown (10YR4/1-3/2), rounded-subrounded grains, quartz/feldspar, gravel pieces are quartzite and granite (SP)		
							Natural backfill/collapse
	11	9	1.1		SAND, f.-c., few f. gravel, c. fraction is carbonate, granite, quartzite and volcanics (SW)		
30							
	12	17	1.0		SAND, f., ltl. m. sand, tr. c. sand, dk. grayish brown (10YR4/2), tr. fines, lithology as above, soft (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

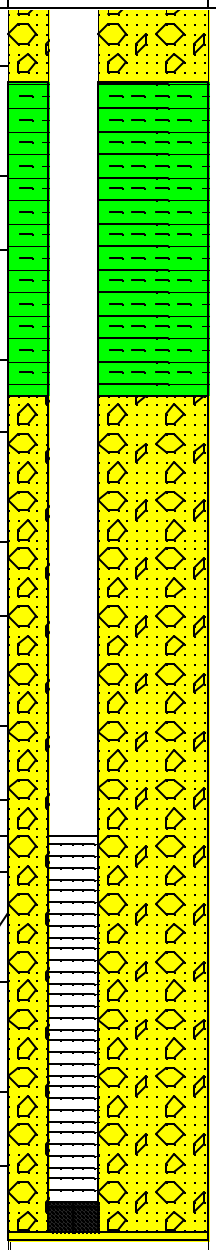
GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W04AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
	13	19	0.8		SAND, f.-c., f.-c. gravel, ltl. fines, soft, lithology as above (SW-GW)
35					
	14	15	0.2		As above, loose in sampler (SW-GW)
	15	17	1.1		As above, few f.-c. gravel (SW)
40					
	16	20	1.0		SAND, f.-m., ltl. c. sand, few f. gravel, dk. grayish brown (10YR4/2), soft, lithology as above, silt and sand are clacite cemented (SP)
					As above, (SP)
	17	21	1.1		CLAY, no sand, (10YR3/1), plastic, charcoal (CL)
45					SAND, f., with clay matrix, dk. gray (10YR4/1), several gravel size pieces also appear to be weathering, sandy limestone (SP)
	18	18			SAND, f., few m. sand, tr. c. sand, tr. f. gravel, dk. grayish brown (10YR4/2), soft (SP)
	19	9	0.8		SAND, f.-c., few f. gravel, lithology as above, 60/40 quartz/other (SW)
50					

WELL DIAGRAM



WELL CONSTRUCTION

- Bentonite slurry
- Natural backfill/collapse
- 2 in. ID sch. 40 PVC screen, 0.010 in. slots
- Borehole TD=49.5
- End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W05AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: San Acacia Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** Split Spoon
START DATE: 11/13/2002	**WELL ELEVATION:** A: 4664.37 ft. B: 4664.15 ft.
FINISH DATE: 1/21/2003	**GROUND ELEVATION:** 4663.35 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
0							2 in. ID sch 40 PVC riser
					SAND, f., few fines, dk. yellowish brown (10YR4/4) (SP)		
							Bentonite chips
					As above, loose (SP)		20-40 Silica sand pack
	1	12	0.5		As above, lt. yellowish brown (10YR6/4), loose, balls of clay (SP)		
5							
					CLAY, ltl. f. sand, dk. yellowish brown (10YR4/6), firm, dry (CL)		
	2	13	1.5		SAND, f., loose, dry, rounded-subrounded, quartz and feldspar 90/10 quartz/other (SP)		2 in. ID Sch 40 PVC screen, 0.010 in. slots
					CLAY, ltl. f. sand, iron oxide staining, lt. yellowish brown (10YR6/4), dry, hard (CL)		
					As above, some sand, soft-firm (CL)		
	3	6	1.8				
10					CLAY, no sand, dk. brown to dark yellowish brown (10YR3/3-3/4), iron oxide staining, charcoal, blocky texture, firm (CL)		
					As above, roots, moist (CL)		
	4	7	1.5		SAND, f., few m. sand, tr. c. sand, lt. yellowish brown to yellowish brown (10YR5/4-6/4), moist, soft (SP)		
▼							
	5	7	1.0		SAND, f.-v.f., tr. m. sand, tr. fines, wet, soft, lithology as above (SP)		
15							Natural backfill/collapse

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W05AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	6	15	1.3		As above, layer of clay, brown (10YR4/3), soft at 16.4-16.6 ft. (SP) SAND, f.-m., few c. sand, 1 cs. gravel piece of red calcite, cemented siltstone (SP)		
20	7	21	0.3		SAND/GRAVEL, f.-c., 1 piece of broken cobble size quartzite, c. fraction is red siltstone, quartzite, gray carbonate, fossil shells, dk. gray volcanics, angular-rounded (SW)		
	8	14	0.6		As above, f. material may have washed out (SW)		End cap
25	9	13	0.9		As above, interval of gray clay, dk. greenish gray (GLEY 1 4/N), charcoal, 0.4 ft. thick, has some structure, may be scraped off inside of augers (SW)		Bentonite pellets Natural backfill/collapse
	10	25	1.1		SAND, f., dk. grayish brown (10YR4/2), rounded-subrounded, quartz, 80/20 quartz/other, 1 piece of angular c. gravel size black carbonate with crinoid stem and shell fragments (SP)		
30	11	13	0.9		As above, few c. sand in bottom 0.1 ft, 1 broken-up cobble size piece of grayish carbonate, no fossils (SP)		
	12	6	1.3		SAND, f.-m., few c., sand, ltl.-some clay, abundant wood and charcoal, black to v. dk. gray (10YR2/1-3/1) (SP) SAND, f., and silt, v. dk. grayish brown (10YR3/2), soft (SP)		
35	13	9	1.2		SAND, tr. m.-c., tr. fines, dk. grayish brown (10YR4/2), firm (SP) As above, some m. sand, few c. sand, 2 f. gravel pieces (SP)		
	14	17	1.0		SAND, f.-c., few f.-c. gravel, f.-m. sand in the basal 0.6 ft., c. fraction volcanic, quartzite, red siltstone, granite, no carbonate fragments (SW)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W05AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL CONSTRUCTION
	15	23			As above, (SW)	
40						Bentonite pellets and slurry
	16	19	0.9		SAND, m., some f. sand, some c. sand at bottom, dk. grayish brown (10YR4/2), (SW)	Natural backfill/collapse
	17	11			SAND, c., minimal recovery (SP)	
45						2 in. ID sch 40 PVC screen, 0.010 in. slots
	18	18	0.2		SAND, f.-c., f. gravel, tr. fines, dk. grayish brown (10YR4/2), loose, lithology as above but with carbonates (SW)	Borehole TD: 52 ft.
	19	19	0		No Recovery	
50						End cap

WELL DIAGRAM: B A

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

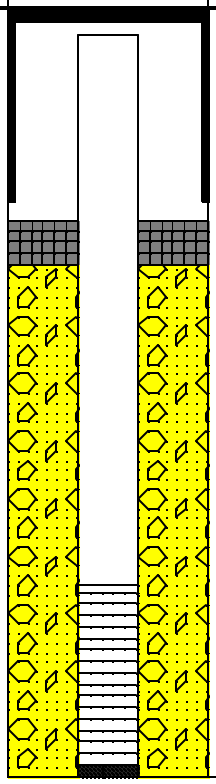
BORING NO. : SAC-W06A

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: San Acacia Transect	**RIG TYPE:** Manual Drive Point
ONSITE GEOLOGIST:	**SAMPLE TYPE:** NA
START DATE: 5/7/2003	**WELL ELEVATION:** 4658.30 ft.
FINISH DATE: 5/7/2003	**GROUND ELEVATION:** 4655.1 ft.

NOTES: Borehole Diameter: 2 inches

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM A	WELL CONSTRUCTION
0							Locking protective casing 1.5 in. Galvanized steel pipe riser Concrete collar Natural backfill/collapse
5							Wire wrap, stainless steel drive point well Borehole TD: 9.0 ft. End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W07A

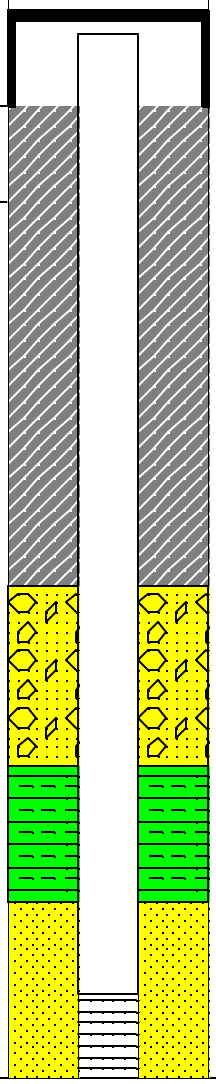
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: San Acacia Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:**
START DATE: 1/14/2003	**WELL ELEVATION:** 4678.01 ft.
FINISH DATE: 1/14/2003	**GROUND ELEVATION:** 4677.46 ft.

NOTES: Borehole Diameter: 10 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM A	WELL CONSTRUCTION
0					Not sampled. See log of SAC-W09C for lithology.		Locking protective casing 2 in. ID sch 40 PVC riser Cement Bentonite grout
5							
10							Natural backfill/collapse
15							Bentonite chips 20-40 Silica sand pack
20							2 in. ID sch 40 PVC screen, 0.010 in. slots

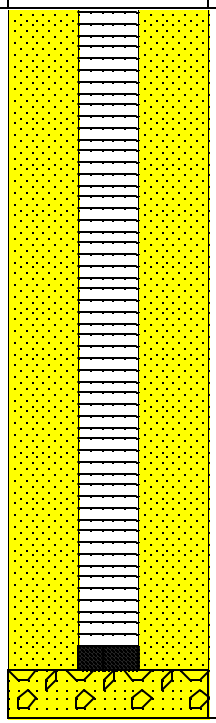


S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W07A

PROJECT NAME: Rio Grande Watershed Study Phase 1 | **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM A	WELL CONSTRUCTION
25							
30							Borehole TD: 35 ft.
35							End cap Natural backfill/collapse

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W07B

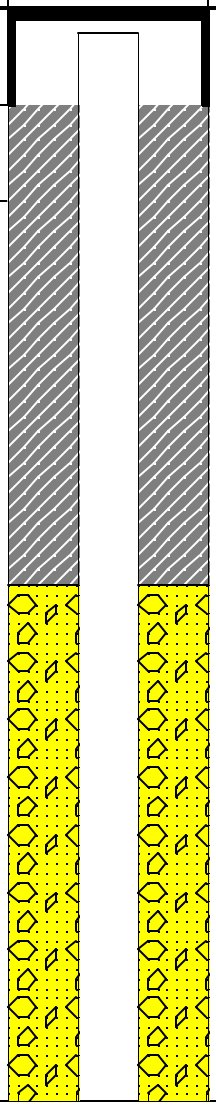
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: San Acacia Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** NA
START DATE: 1/14/2003	**WELL ELEVATION:** 4678.16 ft.
FINISH DATE: 1/14/2003	**GROUND ELEVATION:** 4677.46 ft.

NOTES: Borehole Diameter: 10 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B	WELL CONSTRUCTION
							Locking protective casing
0					Not sampled. See log of SAC-W09C for lithology.		2 in. ID sch 40 PVC riser
							Cement bentonite grout
5							
10							Natural backfill/collapse
15							
20							



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W07B

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

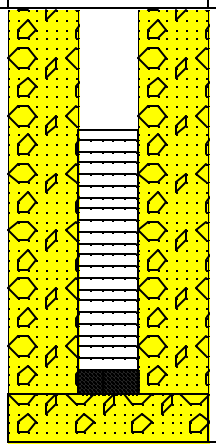
DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B	WELL CONSTRUCTION
25							
30							
35							
40							
45							Slurry and Bentonite pellets
							Natural backfill/collapse
50							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W07B

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B	WELL CONSTRUCTION
55							2 in. ID sch 40 PVC screen, 0.010 in. slots Borehole TD: 60 ft. End cap
60							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

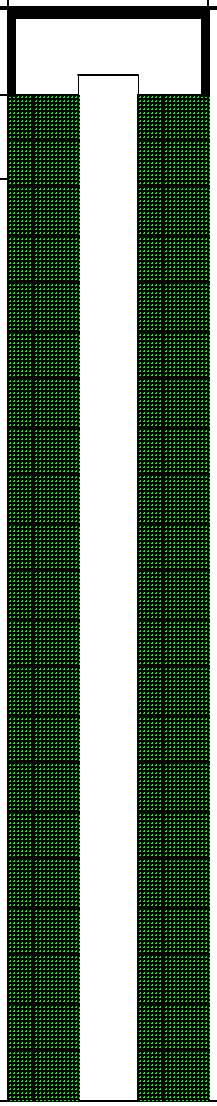
BORING NO. : SAC-W08EX

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** WDC Exploration
PROJECT NUMBER: 771-3	**CREW LEADER:** Mike Thomas
LOCATION: San Acacia Transect	**RIG TYPE:** Speedstar 30K
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** NA
START DATE: 4/18/2003	**WELL ELEVATION:** 4678.75 ft.
FINISH DATE: 4/18/2003	**GROUND ELEVATION:** 4677.31 ft.

NOTES: Borehole Diameter: 13.875 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM EX	WELL CONSTRUCTION
0					Not sampled. See log of SAC-W09C for lithology.		10 in. ID sch 40 PVC riser Cement Bentonite grout
5							
10							
15							
20							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W08EX

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM EX	WELL CONSTRUCTION
25							
30							
35							
40							Bentonite pellets
							10-20 Silica sand pack
45							10 in. ID sch 40 PVC screen, 0.030 in. slots
50							
55							8-14 Silica sand pack
							10 in. ID sch 40 PVC screen, 0.050 in. slots

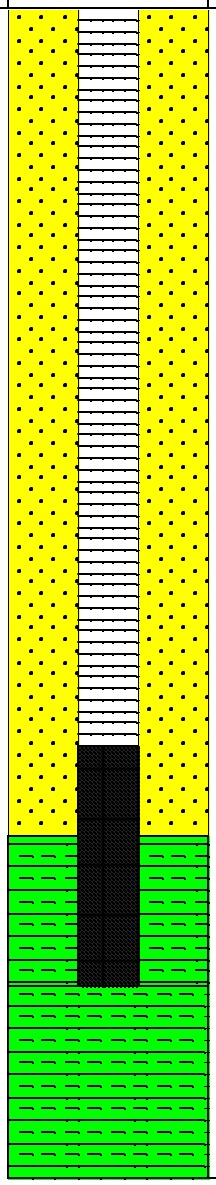
S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W08EX

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM EX	WELL CONSTRUCTION
60							
65							
70							
75							End cap
							Bentonite chips
80							Borehole TD: 85 ft.
85							



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W09AB

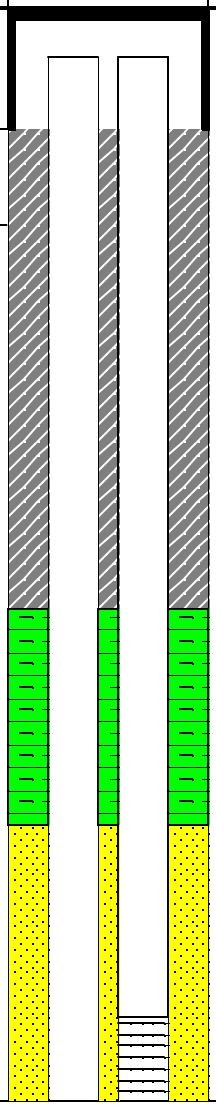
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: San Acacial Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** NA
START DATE: 1/15/2003	**WELL ELEVATION:** A: 4678.52 ft. B: 4678.61 ft.
FINISH DATE: 1/15/2003	**GROUND ELEVATION:** 4677.87 ft.

NOTES: Borehole Diameter: 10 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
							Locking protective casing
0					Not sampled. See log of SAC-W09C for lithology.		2 in. ID sch 40 PVC riser
							Cement Bentonite grout
5							
10							Bentonite chips
15							20-40 Silica sand pack
							2 in ID sch 40 PVC screen, 0.010 in. slots
20							



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W09AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 | **PROJECT NUMBER:** 771-3

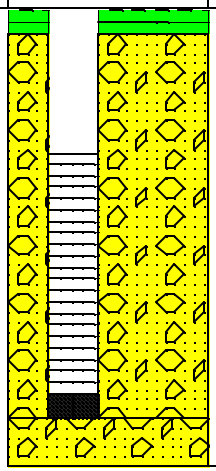
DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B	WELL DIAGRAM A	WELL CONSTRUCTION
25								
30								
								End cap
35								
								Bentonite chips
40								
								Natural backfill/collapse
45								
								Slurry and Bentonite pellets
50								

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W09AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
55							Natural backfill/collapse 2 in. ID sch 40 PVC screen, 0.010 in. slots Borehole TD: 60 ft. End cap
60							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W09C

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: San Acacial Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** Split Spoon
START DATE: 10/1/2002	**WELL ELEVATION:** 4679.11 ft.
FINISH DATE: 1/16/2003	**GROUND ELEVATION:** 4677.87 ft.

NOTES: Borehole Diameter: 6 in. geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
0							Locking protective casing; 2 in. ID sch 40 PVC riser; Cement Bentonite grout
	1	11	1.4		SAND, f., v. pale brown (10YR8/2), tr.-no mafic grains, rounded quartz and feldspar grains, moist upper 0.4 ft, dry and v. soft below (SP)		
5	2	7	1.3		As above, increasing fines and roots in basal 1 ft. Fines, same color, no dry strength, rapid dilatancy, low toughness, low plasticity, f. zone contains some f. sand, tr. m. sand (SP-SM)		
	3	14	1.5		SAND, f.-v. f. sand, rounded quartz and feldspar, trace mafic and no lithic grains, v. soft, dry (SP)		
10	4	7	1.5		As above, becoming yellower, lt. yellowish brown (10YR6/4), color returns to (10YR5/2) when dry, moist (SP)		Natural backfill/collapse
	5	9	1.5		As above, layers that grade into layers of f.-v.f. sand with tr. m. sand, m. sand zones concentrated in 13.5-13.9 ft. (SP)		
					SAND, f.-v. f., v. pale brown (10YR8/2) when dry, loose, moist (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W09C

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
15	6	7	1.5		SAND, f.-v.f., yellower than above lt. yellowish brown (10YR6/4), quartz and feldspar, tr. mafic grains, rounded-subrounded, v. soft, thin lens of silty sand at 14.5-14.6, moist (SP)		
					As above, (SP)		
	7	7	1.5		SAND, f.-v.f., interbedded with v. thin layers of clay and silt (CL/MH) and iron oxide staining, no to slow dilatancy, low to medium dry strength (SP)		
					As above, increased fines, color change to dk. yellowish brown (10YR4/4-4/6), soft, moist (SW)		
20	8	10	1.5		CLAY, v. dk. grayish brown (10YR3/2), high dry strength, no dilatancy, high toughness, med.-high plasticity (CH/CL)		
	9	8	1.3		As above, color change to dk. gray to gray (10YR4/1-5/1), root structures and organics, basal 0.4 ft firm, v. dk. grayish brown (10YR3/2), still root structures, high dry strength, no dilatancy, high toughness, high plasticity (CL)		
25	10	11	nr		SAND, f., tr. m. sand, dk. grayish brown (10YR4/2), lithology as above, a few epidote grains, clay lens at 25.2-25.4, attributes as above, no roots (SP)		
	11	22	nr		As above, tr. fines in upper 0.5 ft, a couple of volcanic and carbonate pebbles, tr. f. gravel, subrounded, (SP)		
30	12	17	nr		SAND, f.-c. sand, and f. gravel, rounded-subrounded quartz and feldspar, some lithic and mafic grains, c. fraction includes carbonates (SW)		
35	13	0	1		As above, some c. sand and fn. gravel, including red subrounded Permian siltstone, rounded dark sandstone, angular granite (SW)		
	14	26	1		As above, (SW)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W09C

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
	15	17	0.91		As above, one c. red volcanic gravel piece with carbonate inclusion (SW)		Bentonite seal
40							
	16	33	1		SAND, f.-c., few f. gravel, ltl. c. gravel, quartz and feldspar, some mafic and lithic grains (SW)		
	17	12	0.5		As above, (SW)		
45							
	18	13	0.6		As above dk. grayish brown (10YR4/2), slight odor indicative of reducing environment (SW)		
	19	16	1		CLAY, black (2.5Y3/1 - 2.5Y2/1), no dilatancy, medium toughness, organic material (OL)		Natural backfill/collapse
50					SAND, f., no c. or m. sand, quartz and feldspar, rounded to well-rounded, charcoal fragments (SP)		
	20	20	1.1		As above, tr. f. gravel pieces, charcoal fragments (SP)		
	21	30	0		As above, v. loose and fluid, suspected sluff (SP)		
55							
	22	16	1		SAND, f., no m.-c. sand, no gravel, dk. gray (2.5YR4/1) soft (SW)		
					SAND, f.-c., few f. gravel, predominantly quartz and feldspar, some mafic and lithic sandstone, quartzite (SP)		
	23	26	1.2		As above, (SP)		
					SAND, f. sand, no c. material, no gravel, dk. gray (2.5YR4/1) soft		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W09C

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
60					SAND, f. sand, no c. material, no gravel, dk. gray (2.5YR4/1) soft (SP)		
	24	21	1.5		SAND, f.-m., tr.-few c. sand, tr.-few f. gravel, v. dk. grayish brown (2.5Y3/2 -10YR3/2), one 2.5'x1.5' piece of rounded c. gravel (SP-SW)		
	25	18	0.9		As above, ltl.-some f.-c. gravel, well rounded quartzite, quartz biotite schist, a subangular dolomite piece, some broken quartzite pieces indicate larger pieces in situ (SW)		
65	26	25	1.2		SAND, f.-m., tr. c. sand, t. f. gravel, v. dk.-dk. grayish brown (2.5YR4/2-3/2), broken fragments c. gravel top 0.1 ft., 0.01 ft. magnetite grains @ 67.35 ft., soft/firm (SP)		
	27	28	1.3		As above, thin magnetite layer at 68.6 ft, f. magnetite grains throughout in tr. quantities, (SP) SAND, f., no c. fraction except 1 f. gravel pieces at bottom (SP)		
70	28	12	1.1		As above, unable to tell if this is in situ or sluff (SP)		
75							Bentonite seal
80							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SAC-W09C

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
					Rig Chatter		
85							
	29	12	1.1		SAND, f., tr. m. sand, well rounded-rounded quartz, little feldspar, little mafic, few lithic, trace fine gravel, no structure. Sample could be "blow-up" into augers. Driller off by 10 ft. in depth, thus, no samples from 72-86 ft. Rig Chatter (SP)		
	30	68	0		GRAVEL, f.-c., rounded, angular, piece appears to be broken off of larger rounder pieces of cobble, few c. sand, subangular, ltl. f. sand, rounded, f. fraction quartz and feldspar, c. sand and gravel, lithic quartzite, igneous, f. grain quartz and feldspar with tr. pyroxene and biotite (GP)		Natural backfill/collapse
90							
	31	46	0.9		SAND, m., few f. sand, tr. few fines, v. dk. gray (10YR3/1), rounded-subrounded quarz, feldspar, mafics/lithics, 70/30 quartz/other, drilled like sand (SP)		
					SAND, f.-c., tr. fines, soft (SP)		2 in. ID sch 40 PVC screen, 0.010 in. slots
	32	77	1.0		CLAY, no sand, grayish brown (2.5YR5/2), hard (CL)		
95					SAND, f., tr. m. sand, very dk. gray to v. dk. grayish brown (10YR3/1-3/2), rounded-subrounded, quartz, feldspar, mafic/lithics, 70/30 quartz/other, soft (SP)		
	33	130	1.3		SAND, f.-c., few f. gravel, few-ltl. clay, lithology as above, 6-10 chunks of weathered material that is green-lt. green pebbles, small pieces soft clay and larger pieces have hard inner section (SW)		Borehole TD: 99 ft.
							End cap
					SAND, f.-c., f. GRAVEL, ltl. clay, green-white weathered material as above, c. fraction is angular-rounded, quartzite, granite and volcanics (SW)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-E01AB

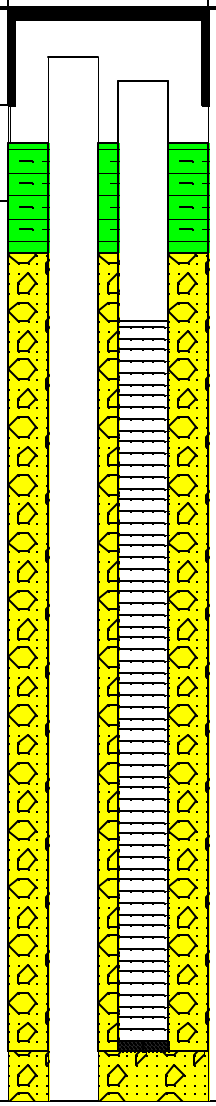
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Escondida Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** NA
START DATE: 1/31/2003	**WELL ELEVATION:** A: 4618.44 ft. B: 4618.42 ft.
FINISH DATE: 1/31/2003	**GROUND ELEVATION:** 4617.86 ft.

NOTES: Borehole Diameter: 10 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
0					Not sampled. See log of ESC-E04C for lithology.		Locking protective casing; 2 in. ID sch 40 PVC riser; Bentonite chips
5							Natural backfill/collapse; 2 in. ID sch 40 PVC screen, 0.010 in. slots
10							
15							
20							End cap



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-E01AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 | **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
25							Bentonite pellets
							Natural backfill/collapse
30							
35							Slurry and Bentonite pellets
40							Natural backfill/collapse
45							2 in. ID sch 40 PVC screen , 0.010 in. slots
							Borehole TD=51 ft.
50							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

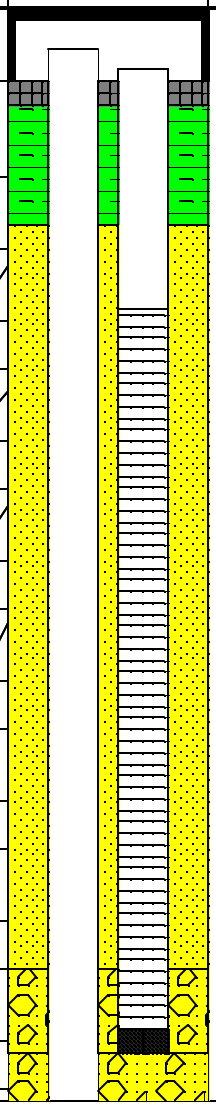
BORING NO. : ESC-E02AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study, Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Escodida Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** Split Spoon
START DATE: 11/18/2002	**WELL ELEVATION:** A: 4619.17 ft. B: 4619.15 ft.
FINISH DATE: 1/29/2003	**GROUND ELEVATION:** 4618.30 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					SAND, v.f., silt, brown (SP-ML)
					SAND, v.f., brown, slightly moist (SP)
	1	6	1.5		SAND, f., poorly graded, lt. brown, quartz, tr. mafic, dry (SP)
5					
					As above, (SP)
	2	12	1.5		CLAY, brown, (Pp=1.2), oxidized layer (CL)
▼					CLAY, some f. sand, brown, (Pp=1.0), (CL)
	3	3	1.5		CLAY, with f. sand, brown, plastic, (Pp=0), v. moist (CL-SC)
10					
					CLAY, with some m. sand (CL-SC)
	4	3	1.1		SAND, v.f.-m., sand, lt. brown, quartz, (SP)
	5	9	0.9		SAND, m., tr. v.f. sand, well graded, lt. brown, subrounded-subangular, may be sluff (SP)
15					
	6	11	0.85		SAND, m., tr. mafic f. sand, tr. lithic f. gravel, lt. brown, subrounded (SP)
	7	11	NR		SAND, few f. gravel, well graded, fragmented volcanics (SW)
20					



WELL CONSTRUCTION:
- Locking protective casing
- 2 in. ID 40 sch PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID 40 sch PVC screen, 0.010 in. slots
- Natural backfill/collapse
- End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-E02AB

PROJECT NAME: Rio Grande Watershed Study, Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	8	13	0.6		As above, (SW)		
	9	12	1.0		SAND, m., graded to f. sand, gray, (SP) GRAVEL, f., c. sand, some m. sand, (SW)		Bentonite pellets
25							
	10	18	0.7		SAND, m.-f., gray, no visible structure (SP)		Natural backfill/collapse
	11	14	1.2		CLAY, dk. gray, soft, (Pp=0), very moist (CL) SAND, m., poorly graded, olive gray (SP)		
30							
	12	4	0.8		SAND, m., poorly graded, lt. brown (SP) CLAY, dk. brown, (Pp=0.1), (CL)		
	13	15	1.0		GRAVEL, f., (suspected sluff) (GW) SAND, m., poorly graded, no visible structure (SP)		
35							
	14	13	0.8		As above, tr. m. gravel, rounded (SP)		Slurry and Bentonite pellets
	15	12	0.9		SAND, c., some f. gravel and m. sand, no visible structure, (SP)		Natural backfill/collapse
40							
	16	13	0		No Recovery		
	17	13	0.5		SAND, m., tr. c. sand and f. gravel., poorly graded, (SP)		2 in. ID 40 sch PVC screen, 0.010 in. slots
45							
	18	13	0.7		SAND, m.-c., tr. f. sand, ltl. f. gravel, poorly graded, no visible structure (SP-SW)		Borehole TD= 51 ft.
	19	19	0.1		SAND, m.-f., tr. c. sand, tr. v.f. mafic grains, poorly graded (SP)		End cap
50							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

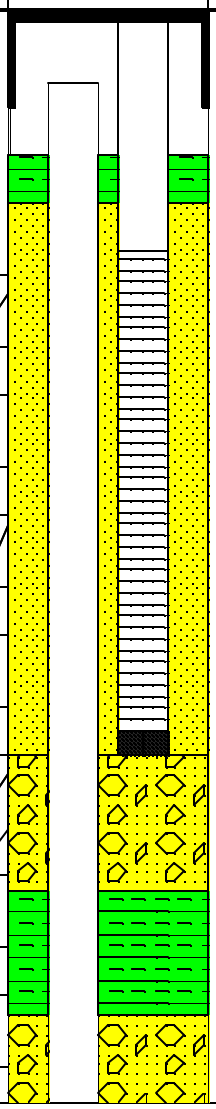
BORING NO. : ESC-E03AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Escondida Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** Split Spoon
START DATE: 11/19/2002	**WELL ELEVATION:** A: 4611.58 ft. B: 4611.47 ft.
FINISH DATE: 1/27/2003	**GROUND ELEVATION:** 4610.79 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					
▼					
					CLAY, some f. sand, brown, (Pp=0.1), soft (CL)
5	1	4	1.3		SAND, f., poorly graded, subrounded, quartz, moist (SP)
	2	9	0.8		As above, tr. f. grain mafics, no visible structure (SP)
					GRAVEL, m., angular, lithic fragments, volcanics (GW)
10	3	10	0.7		SAND/GRAVEL, c., well graded, subangular grains (SW-GW)
	4	7	0.7		SAND, f.-m., tr. f. gravel, tr. f. mafic sands, poorly graded, subrounded grains (SP)
					GRAVEL, rounded-subrounded grains (GP)
15	5	20	1.0		SAND, f., tr. m. sand, increasing gravel, poorly graded, no structure (SP)
	6	17	0.3		SAND, f.-m., tr. f. gravel, poorly graded, subrounded sand and subrounded-rounded gravel, tr. f. green sands (SP)
20	7	8	0.3		GRAVEL, f., rounded to subangular, clean, predominately sandstone and siltstone (GP)



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- End cap
- Natural backfill/collapse
- Bentonite pellets
- Natural backfill/collapse

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-E03AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
	8	11	0.8		CLAY, m, some angular gravel and f. sand, (Pp=0.1) (CL)		
					SAND, some f. gravel, well graded, subrounded, no fines, quartz, gravel is predominately sandstone (SW)		
	9	13	0.5		GRAVEL, f., SAND, c., some to ltl. m.-f. sand, moderately well graded, angular to subrounded grains (SW-SP)		
25							
	10	11	0.6		SAND, m.-c., some f. gravel, predominately rounded to subrounded, becoming finer downward to f.-m. sand, some clay at base (SP)		
	11	10	0.8		SAND, m.-c., some f. gravel, some f.-m. sand, (SP)		
30					SAND, f., tr. m. sand, tr. f. mafic sands, poorly graded (SP)		
	12	20	1.0		SAND, f., poorly graded, olive gray, subangular to subrounded, no visible structure (SP)		
	13	6	1.0		CLAY/SAND, alternating layers 0.2 ft. thick, (Pp=0.25-0.75), clay is olive gray brown, with significant f.-m. sand (CL-SC)		Bentonite slurry and pellets
35							
	14	19	1.0		SAND, f.-m., tr. f. gravel, moderately poorly graded, gray, subrounded, tr.-ltl. mafics, no visible structure (SP-SW)		Natural backfill/collapse
	15	17	0.9		As above (SP-SW)		
40							
	16		1.0		As above, no gravel (SP-SW)		2 in. ID sch 40 PVC screen, 0.010 in. slots
	17		0.8		As above, no gravel (SP-SW)		
45							End cap
	18	28	0.5		As above, no gravel (SP-SW)		Borehole TD: 46.5 ft.
	19	21	0.9		CLAY, some v.f. sand/silt, olive brown, (Pp=0.2), soft, moist (CL)		
50					SAND, f., tr. f. gravel, moderately poorly graded (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-EO4AB

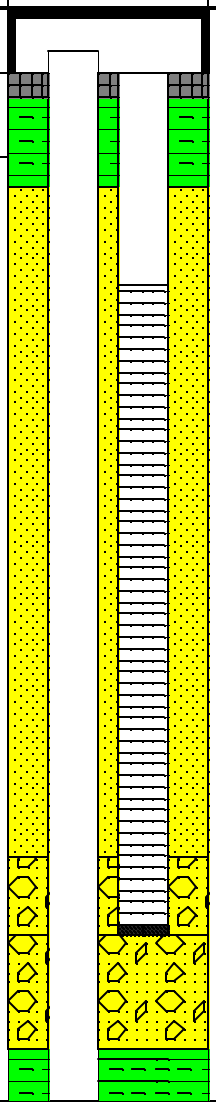
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grand Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Escondida Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** Split spoon
START DATE: 1/30/2003	**WELL ELEVATION:** A: 4619.06 ft. B: 4618.99 ft.
FINISH DATE: 1/30/2003	**GROUND ELEVATION:** 4618.21 ft.

NOTES: Borehole Diameter: 10 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
0					Not sampled. See log of ESC-E04C for lithology.		Locking protective casing; Concrete; 2 in. ID sch 40 PVC riser; Bentonite chips; 20-40 Silica sand pack; 2 in. ID sch 40 PVC screen, 0.010 in. slots; Natural backfill/collapse; End cap
5							
10							
15							
20							



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-EO4AB

PROJECT NAME: Rio Grand Watershed Study Phase 1 | **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
25							Bentonite pellets
30							Natural backfill/collapse
35							
40							Slurry and Bentonite pellets
							Natural backfill/collapse
45							2 in. ID sch 40 PVC screen, 0.010 in. slots
							Borehole TD= 52 ft.
50							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-EO4C

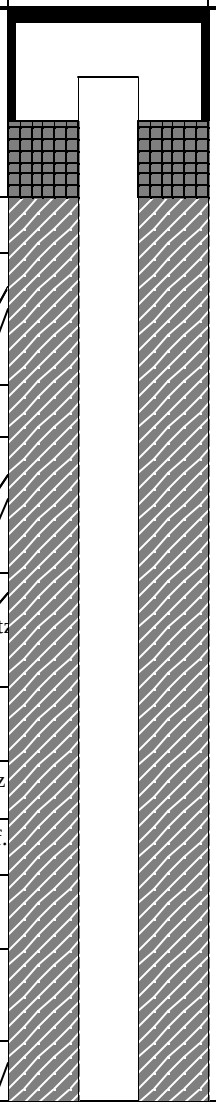
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grand Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Greg Sena
LOCATION: Escondida Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** Split Spoon
START DATE: 10/4/2002	**WELL ELEVATION:** 4618.91 ft.
FINISH DATE: 1/28/2003	**GROUND ELEVATION:** 4618.10 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
8 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					
	1	11	1.3		SAND, v.f.-f., lt. yellow brown (2.5Y6/4), quartz and feldspar grains, subangular (SP)
					CLAY, high dry strength, no dilatancy, high plasticity, high toughness (CL-CH)
					SAND, v.f-f., as above (SP)
					SAND, v.f-f., as above (SP)
	2	11	1.5		CLAY, high dry strength, no dilatancy, high plasticity, high toughness, roots and iron oxide staining (CH)
5					SAND, v.f-f., as above (SP)
					CLAY, as above (CH)
	3	8	1.5		SAND, f., thin (2mm) clay layer at 7.25 ft., subround-round quartz and feldspar, tr. few mafic and lithic grains (SP)
▼					SAND, f., tr. m. sand, lt. brownish gray (10YR6/2), rounded quartz and feldspar, few lithic and mafic grains, v.soft, wet (SP)
	4	5	1.5		CLAY, d. brown (10YR3/3), roots, gray zones (CL-CH) 0.1 ft. v.f. sand at 9.6 ft.
10					
	5	7	1.5		SAND, f., charcoal fragments and color change to black (10YR2/1) at 11.4ft (SP)
					SILT, slow dilatancy, low plasticity, low dry strength, low toughness (ML-MH)

WELL DIAGRAM C



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Concrete
- 2 in. ID sch. 40 PVC screen, 0.010 in. slots
- Cement Bentonite grout

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-EO4C

PROJECT NAME: Rio Grand Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
	6	6	1.5		CLAY, lt. yellowish brown (2.5YR4/6), soft (CL) SAND, v.f. sand, tr. clay, v. soft (SP)		Natural backfill/collapse
15							
	7	9	1.1		As above, (SP) SAND, f.-m., tr. c. sand, tr.subangular to subround carbonate pieces (SP)		
	8	12	1.5		SAND, f. m. sand, dk. grayish brown overall (10YR5/2), loose rounded quartz grains, ltl.-some mafic and lithic grains (SP)		
20							
	9	18	.8		As above, gravel size piece of rhyolite tuff at 21.8 ft. (SP)		
	10	8	1.3		As above, (SP) SAND f.-c., ltl. f. gravel, c. fraction rounded volcanics, subrounded carbonates and subangular quartzite, f. fraction primarily quartz and feldspar with little mafic or lithics (SW)		
25							
	11	27	.5		SAND, f.-c. and f. GRAVEL, rounded to angular quartz and feldspar, quartzite, conglomerate, bottom of sampler pluggued with rhyolite gravel piece. (SW-GW) rig chatter		
	12	24	1		SAND, f.-m., ltl. c. sand, tr. f. gravel, brown (10YR5/3), red calcite cemented sandstone, red siltstone, f. fraction rounded quartz and feldspar with little mafic and lithic grains, c. fraction rounded to angular carbonate, loose (SP-SW)		
30							
	13	17	1		As above, tr. f. gravel (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-EO4C

PROJECT NAME: Rio Grand Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
	14	23	1		As above. No layering or sedimentary structures are apparent. (SP)		
35							
	15	28	1.1		As above, (SP) SAND, c. and f.-c. gravel, angular well-rounded quartzite, siltstone, carbonate, fines entrained in drilling mud, loose. (SW-GW)		
	16	12	1.5		SAND, m.-c.,and f. GRAVEL, tr. c. gravel, few-ltl. f. sand, sand is well rounded quartz and feldspar, angular lithics, gravel is carbonate, red siltstone, banded orange-clear metamorphic (quartzite?) (SW-GW)		
40							
	17	32	1.5		As above, few f. gravel (SW-GW) SAND, f.-m., tr. c. sand and f. gravel, gray to d. grayish brown (10YR5/1-4/2), rounded quartz and feldspar, few angular lithic c. sand (SP)		
	18	22	1.3		SAND, m.-c., few f. sand (SP) SAND, f.-m., tr. c. sand, tr. f. gravel, (SP), layer of c. sand-f. gravel, 44.2-44.4 (SP)		
45							
	19	16	.7		SAND, f-m sand, tr. c. sand, and f. gravel, composition and color as above, gravel size piece of rhyolite appears to be a part of larger in situ cobble (SP) 0.2 ft of clay in bottom of sampler		
	20	12	.8		SAND, f.-c. and f. GRAVEL, gravel is lithic with no carbonate (SW-GW) SAND, f., some m. sand, few c. sand, dk. gray to v. dk. grayish brown (10YR4/1-3/2) (SP-SW)		
50							
					SAND, f., ltl. m. sand, (10YR4/1-3/2), rounded quartz grains, less		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-EO4C

PROJECT NAME: Rio Grand Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
	21	0	.9		feldspar, ltl. mafic and lithic grains, tr. c. sand in drive shoe (SP)		
	22	13	1.4		SAND, f.-v.f. and f.-c., interbedded, 0.01-0.02 ft layers in basal 0.6 ft of sample, thicker (0.05-0.15 ft) in upper 0.8 ft, (SP, SW		
55	23	14	1.1		SAND, f., tr. m.-c. sand, tr. f. gravel, dark gray (10YR4/1), well rounded quartz grains, ltl. few mafic/lithic, flecks of biotite (SP)		
	24	27	1		SAND, f.-c. and f.-c. GRAVEL (largest pieces appear to be broken off of cobble size), thin lens of (0.02') of gray sandy clay, very d. grayish brown (10YR3/2) at 59 ft., c. fraction is igneous and metamorphic, trace of c. sand is rounded carbonates (SW-GW)		
60					SAND, m.-c., loose (SP) rig chatter		
	25	32	1.2		SAND, f., v. d. grayish brown (10YR3/2), rounded- well rounded quartz grains, few-ltl. feldspar, mafic and lithic, faint bands with magnetite or mafics (SP)		Bentonite slurry
	26	33	1.5		As above (SP)		
65					SAND, f.-c., and f. GRAVEL, with clay, v.d. grayish brown, (10YR3/2) (SP)		
	27	12	.7		SAND, f.-c., and f. GRAVEL, clay clast, v. d. grayish brown (10YR3/2) with red staining and charcoal in middle of sample, broken cobble of red calcite cemented quartz sandstone (SW-GW)		
	28	25	.7		SAND, f.-c., and f.-c. GRAVEL, gravel quartzite and basalt, several pieces v. angular quartz (SW-GW)		
70							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-EO4C

PROJECT NAME: Rio Grand Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
	29	50	1.2		SAND, f., tr. m. sand, v.d. gray (10YR3/1), rounded quartz, ltl. to some mafic/lithic grains (SP)		
					GRAVEL, f.-c., f.-m. sand matrix, ltl. c. sand, gravel is rounded granite, basalt and calcite cemented siltstone olive (5Y5/6), calcite cemented sandstone and broken pieces of cobbles (SW-GW)		Natural backfill/collapse
	30	95	1.6		SAND, f., tr. m. sand, v.d. gray (10YR3/1), rounded quartz, ltl.-some lithic/mafic grains (SP) bottom 0.2 ft has some c. sand and f. gravel in firm clay matrix		
75							
	31	46	1.8		As above, (SP)		
					GRAVEL, f.-c., some f.-c. sand, black f. volcanics with white crystalline inclusions, olive gray f. sandstone, calcite cemented siltstone, silicate with abundant pyroxene, rounded-subrounded or broken off pieces of cobbles (GW)		
	32	64	1.2		GRAVEL, f.-c., some f.-c. sand, gravel is subrounded-rounded quartzite, siltstone, charcoal, with fragments of larger pieces, (GW)		2 in. ID sch 40 PVC screen, 0.010 in. slots
80							Borehole TD= 84 ft.
	33	50	1		SAND, f., tr. c. sand and f. gravel, rounded quartz grains, ltl. lithic or mafic grains, firm, dk. grayish brown (10YR4/2) (SP)		
	34	60	1		SAND, f., tr.-no m. or c. sand, quartz, well-rounded, few lithic or mafic grains, firm (SP) top 0.5 ft may be slough, grades from f.-c. sand at top to f. gravel		End cap
85							
	35	70	0.5		SAND, f.-m., tr. c. sand, one gravel piece at top of sample, d. grayish brown (10YR4/2), rounded quartz and feldspar, ltl lithic or mafic grains (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-E05EX

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** WDC Exploration
PROJECT NUMBER: 771-3	**CREW LEADER:** Mike Thomas
LOCATION: Escondida Transect	**RIG TYPE:** Speedstar 30K
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** NA
START DATE: 4/16/2003	**WELL ELEVATION:** 4619.65 ft.
FINISH DATE: 4/16/2003	**GROUND ELEVATION:** 4618.93 ft.

NOTES: Borehole Diameter: 13.875 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM EX	WELL CONSTRUCTION
							Locking protective casing
							10 in. ID sch 40 PVC riser
0					Not Sampled. See log of ESC-E04C for lithology.		Cement Bentonite grout
5							
10							
15							
20							

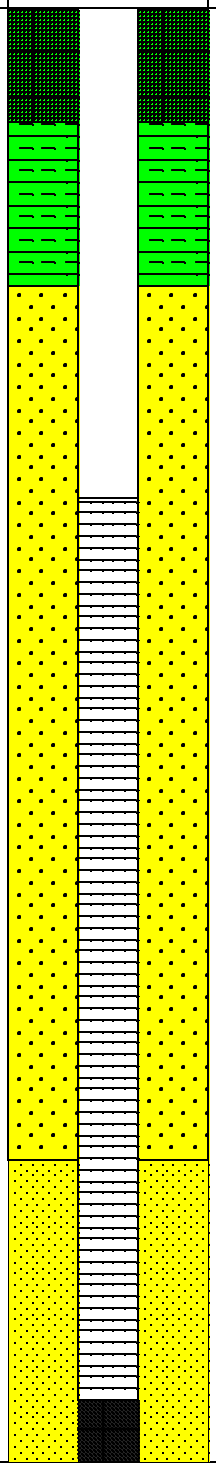
S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-E05EX

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM EX	WELL CONSTRUCTION



Bentonite pellets

8-14 Silica sand pack

10 in. ID sch 40 PVC screen, 0.050 in. slots

10 in. ID sch 40 PVC screen, 0.030 in. slots
10-20 Silica sand pack

End cap

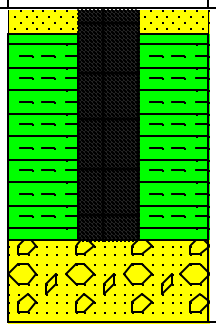
25 30 35 40 45 50

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-E05EX

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM EX	WELL CONSTRUCTION
55							Bentonite pellets Borehole TD: 57 ft.

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-E06AB

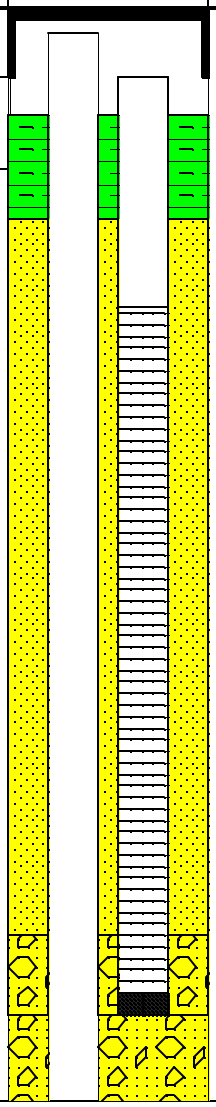
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Escondida Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** NA
START DATE: 1/30/2003	**WELL ELEVATION:** A: 4619.48 ft. B: 4619.55 ft.
FINISH DATE: 1/30/2003	**GROUND ELEVATION:** 4618.53 ft.

NOTES: Borehole Diameter: 10 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
0					Not sampled. See log of ESC-E04BC for lithology.		Locking protective casing; 2 in. ID sch 40 PVC riser; Bentonite chips; 20-40 Silica sand pack; 2 in. ID sch 40 PVC screen, 0.010 in. slots; Natural backfill/collapse; End cap
5							
10							
15							
20							



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-E06AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 | **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
25							Bentonite pellets
							Natural backfill/collapse
30							
35							Slurry and Bentonite pellets
							Natural backfill/collapse
40							
45							2 in. ID sch 40 PVC screen, 0.010 in. slots
							Borehole TD= 52 ft.
50							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

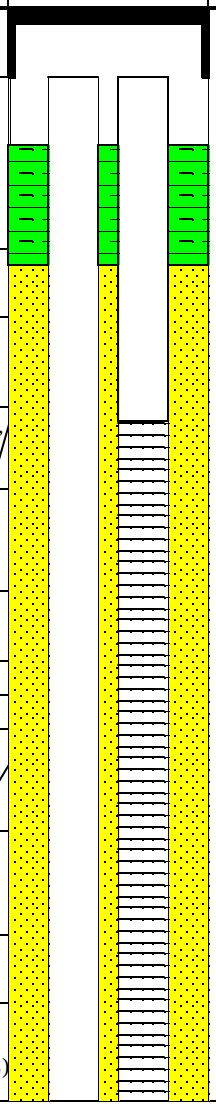
BORING NO. : ESC-W01AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Escondida Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** Split Spoon
START DATE: 11/13/02	**WELL ELEVATION:** A: 4617.30 ft. B: 4617.20 ft.
FINISH DATE: 1/23/2003	**GROUND ELEVATION:** 4616.32 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					Fill
	1	3	0.8		SAND, v.f., silt, dk. yellowish brown (10YR4/6), soft (SP)
5					CLAY, high plasticity, no dilatancy, high toughness, med. density, hard, moist, (CL)
	2	5	1.5		CLAY, ltl. f. sand, iron oxide stained, layers of some f. sand 6.6.-6.9 ft and 7.3-7.5 ft.,calcite deposits (CL)
					As above (CL)
▼	3	4	1.5		SAND, f., some clay, wet (SP)
10					As above, v. dk. gray (10YR3/1), abundant charcoal and wood, (SP)
	4	3	1.5		CLAY, some sand, v. dk. gray (10YR4/2), grades to clay, ltl.-few sand, gray (10YR5/1), abundant organic matter (CL)
	5	2			SILT, and v. f. sand, dk. grayish brown to v. dk. grayish brown (10YR4/2-3/2), rapid dilatancy, low plasticity, low toughness, layers of high organic matter, ltl. f. sand at 14 ft and 15.2 ft. (ML)



WELL CONSTRUCTION:
- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in slots

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-W01AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
15							
	6	7	1.2		SAND, f.-v.f., few m. sand, tr. c. sand, dk. grayish brown to v. dk. grayish brown (10YR4/2-3/2), soft, no layering or structure, rounded-subrounded quartz and feldspar, 90/10 quartz-other (SP)		
	7	10	0.8		As above, (SP)		Natural backfill/collapse
20							End cap
	8	14	0.9		As above, (SP)		
	9	11	1.1		As above, some m.-c. sand, several 3-5 mm. size bands of m. sand throughout (SP)		Bentonite pellets
25							
	10	37	1.2		SAND, f.-c., gravel, few fines in matrix, c. pieces are broken chunks of cobbles of quartzite, clacite cemented sandstone, f. grain volcanics with hornblende crystals. Gravel and cobbles dominate basal 0.7 ft, (SW)		Natural backfill/collapse
	11	31	0.5		SAND, f., few m. sand, scattered c. sand on top of sample, 1 piece broken from cobble of red siltstone, in drive shoe, dk. grayish brown (10YR4/2), firm (SP)		
30							
	12	10	0.9		SAND, m., ltl.-some f. sand, dk. grayish brown to v. dk. grayish brown (10YR4/2-3/2), 60/40 quartz/other (SP)		
					SAND, f.-c., f. gravel, (SW)		
					CLAY, no sand, gray-green, plastic in drive shoe (CL-CH)		
	13	6	1.5		CLAY, no sand, gray (10YR5/1), firm (Pp=0.5), abundant wood in basal 0.2 ft. (CL)		
					SAND, f.-m., some clay, v. dk. gray (10YR3/1), charcoal, thin layer of brown clay near bottom (SP)		
35					SILT, some v.f. sand, tr. m. sand, wood and charcoal fragments, high dilatancy, no dry strength, no plasticity, no toughness (ML)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-W01AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	14	23	1.2		SAND, f., no fines or c. fraction, lithology as above, less mafic and lithic grains, 70/30 quartz/other (SP)		Bentonite slurry and pellets
					SAND, f.-c., f. gravel, tr. fines, lithology as above, few dolomite pieces (SW)		
					As above, some broken cobble size pieces, 2 pieces of weathered vesicular basalt (SW)		
	15	31	1.3		SAND, f., tr. m. sand, few fines, dk. grayish brown (10YR4/2), 80/20 quartz/other (SP)		
40							
	16	27	0.9		As above, tr.-m. sand, a dozen loose c. sand and fine gravel size pieces on top that may not be in place (SP)		Natural backfill/collapse
	17	24	0.9		SAND, f.-m., few c. sand, tr. fines, dk. grayish brown to v. dk. grayish brown (10YR4/2-3/2), slightly more mafic/lithic grains, loose c. sand and f. gravel on top of sample (SP)		
45							
					As above, ltl. c. sand and f. gravel (SP)		
	18	47	1.2		GRAVEL, ltl. c. sand, few m.-f. sand, few fines, shattered cobble size pieces of rhyolite tuff, red siltstone and quartzite. Smaller pieces are rounded-subangular (GP)		2 in. ID sch 40 PVC screen, 0.010 in. slots
					As above, some c. sand, (GP)		
	19	29	0.5				
50							
							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-W02A

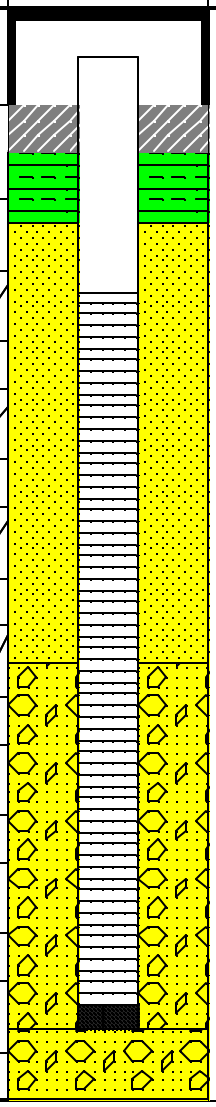
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Escodida Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** Split Spoon
START DATE: 11/18/2002	**WELL ELEVATION:** 4617.96 ft.
FINISH DATE: 1/23/2003	**GROUND ELEVATION:** 4616.89 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
8 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					SAND, v.f., silt, brown (SP-ML)
	1	6	1.5		SAND, v.f., brown, slightly moist (SP) SAND, f., poorly graded, lt. brown, quartz, tr. mafic, dry (SP)
5	2	12	1.5		As above, (SP) CLAY, brown, (Pp=1.2), oxidized layer (CL)
▼ 10	3	3	1.5		CLAY, some f. sand, brown, (Pp=1.0), (CL) CLAY, with f. sand, brown, plastic, (Pp=0), v. moist (CL-SC)
	4	3	1.1		CLAY, with some m. sand (CL-SC) SAND, v.f.-m., sand, lt. brown, quartz, (SP)
15	5	9	0.9		SAND, m., tr. v.f. sand, well graded, lt. brown, subrounded-subangular, may be sluff (SP)
	6	11	0.85		SAND, m., tr. mafic f. sand, tr. lithic f. gravel, lt. brown, subrounded (SP)
20	7	11	NR		SAND, few f. gravel, well graded, fragmented volcanics (SW)

WELL DIAGRAM A



WELL CONSTRUCTION

- Locking protective casing
- Concrete
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- Natural backfill/collapse
- Borehole TD= 21 ft.
- End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-W02A

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM A	WELL CONSTRUCTION
	8	13	0.6		As above, (SW)		
					SAND, m., graded to f. sand, gray, (SP)		
25	9	12	1.0		GRAVEL, f., c. sand, some m. sand, (SW)		
	10	18	0.7		SAND, m.-f., gray, no visible structure (SP)		
					CLAY, dk. gray, soft, (Pp=0), very moist (CL)		
30	11	14	1.2		SAND, m., poorly graded, olive gray (SP)		
					SAND, m., poorly graded, lt. brown (SP)		
	12	4	0.8		CLAY, dk. brown, (Pp=0.1), (CL)		
					GRAVEL, f., (suspected sluff) (GW)		
35	13	15	1.0		SAND, m., poorly graded, no visible structure (SP)		
	14	13	0.8		As above, tr. m. gravel, rounded (SP)		
40	15	12	0.9		SAND, c., some f. gravel and m. sand, no visible structure, (SP)		
	16	13	0		No Recovery		
45	17	13	0.5		SAND, m., tr. c. sand and f. gravel., poorly graded, (SP)		
	18	13	0.7		SAND, m.-c., tr. f. sand, ltl. f. gravel, poorly graded, no visible structure (SP-SW)		
50	19	19	0.1		SAND, m.-f., tr. c. sand, tr. v.f. mafic grains, poorly graded (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-W03AB

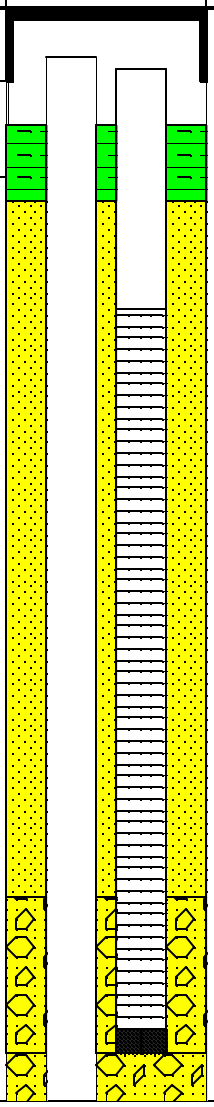
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Escondida Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** NA
START DATE: 1/24/2003	**WELL ELEVATION:** A: 4616.62 ft. B: 4616.58 ft.
FINISH DATE: 1/24/2003	**GROUND ELEVATION:** 4615.45 ft.

NOTES: Borehole Diameter: 10 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
0					Not sampled. See log of ESC-W02AB for lithology.		Locking protective casing; 2 in. ID sch 40 PVC riser; Bentonite chips; 20-40 Silica sand pack
5							2 in. ID sch 40 PVC, 0.010 in. slots
10							
15							Natural backfill/collapse
20							End cap



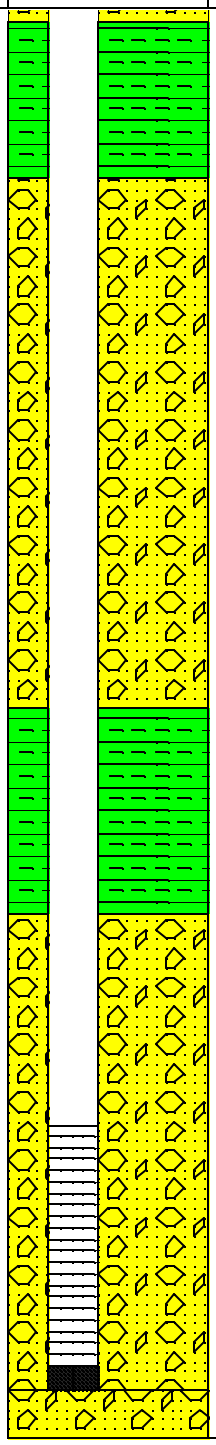
S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-W03AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
							Bentonite pellets
25							Natural backfill/collapse
30							
35							Slurry and Bentonite pellets
40							Natural backfill/collapse
45							2 in. ID sch 40 PVC, 0.010 in. slots
50							End cap



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-WO4AB

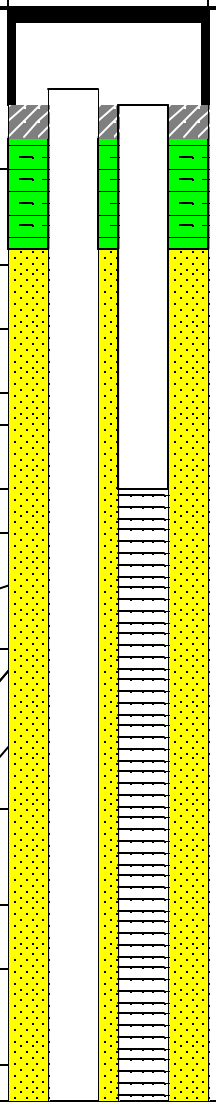
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Escondida Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** Split Spoon
START DATE: 11/15/2002	**WELL ELEVATION:** A: 4616.72 ft. B: 4616.28 ft.
FINISH DATE: 1/22/2003	**GROUND ELEVATION:** 4615.58 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					
					SAND, f., few fines, yellowish brown (10YR5/4), dry (SP)
					As above, iron oxide staining, soft (SP)
	1	6	1.1		
5					CLAY, no sand, firm, iron oxide staining, roots, moist (CL)
					SILT, tr.-no v. f. sand (ML)
	2	11	1.3		SAND, v. f., few fines, yellowish brown (10YR5/4-5/6), firm, moist-wet (SP)
▼					CLAY, (may be scraping of inside augers), (CL)
	3	6	1.5		SAND, v.f., few fines, yellowish brown (10YR5/4-5/6), firm, moist-wet, rounded-subrounded quartz and feldspar, few lithic/mafic grains 90/10 quartz/other (SP)
10					
	4	6	0.8		SAND, f., ltl. m. sand, tr. c. sand, tr.-no fines, f. sand lithology as above, c. sand: angular-rounded quartzite and quartz, lithic and mafic (SP)
	5	5	0.9		SAND, m., some f. sand, ltl. c. sand, lithology as above, f. and c. sand seperated by v. faint 2-3 mm. thick layers (SP)
15					

WELL DIAGRAM (B A)



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Concrete
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-WO4AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B	WELL DIAGRAM A	WELL CONSTRUCTION
					SAND, c., f. gravel, ltl. f.-m. sand, (SP)			End cap
	6	10	0.8		SAND, m., some f. sand, ltl. c. sand (SP)			Natural backfill/collapse
	7	10	0.7		SAND, f.-c., ltl. f. gravel, tr. c. gravel, tr. fines, dk. grayish brown (10YR4/2), c. material, carbonates, red siltstone, quartzite, volcanics and basalt, f. sand primarily quartz (SW)			Bentonite pellets
20								
	8	13	0.7		SAND, m.-c., ltl. f. sand, no fines, tr. f. gravel, 2 c. gravel quartzite pieces, lithology as above (SP)			Natural backfill/collapse
	9	17	0.7		SAND, m., ltl. f. sand, few c. sand, tr. gravel, no fines, dk. grayish brown to brown (10YR4/2-4/3), lithology as above (SP)			
25								
	10	20	1.0		As above, 1-2 cm. thick layers dominated by f. and c. sand, tr.-no fines (SP)			
	11	18	0.8		SAND, f., tr. m. sand, no fines, several c. sand, f. gravel pieces loose on top of sample, 3 magnetite layers in top 0.4 ft. of sample (SP)			
30								
	12	30	0		No Recovery			Slurry and Bentonite pellets
	13	18	1.1		SAND, f., few m. sand, layers of m. sand throughout, dk. grayish brown to brown (10YR4/2-4/3), 3 cm. c. sand layer at 34.3 ft. lithology as above, silt and ltl. f. sand, v.dk. grayish brown (10YR3/2) in drive shoe (SP)			
35								
	14	19	0.7		SAND, v.f., some silt, v. dk. grayish brown (10YR3/2), organic matter (SP)			
					SAND, m., ltl. c. sand, ltl. f sand and tr. f. gravel, dk. grayish brown (10YR4/2) (SP)			

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-WO4AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	15	17	0.1		SAND, f.-m., ltl. c. sand, tlt. f. gravel, loose (SP)		
40							Natural backfill/collapse
	16	12	1.0		SAND, f., ltl. m. sand, tr. c. sand, several chunks of red and gray clay in upper 0.4 ft., 2 c. gravel limestone pieces (SP)		
	17	23	0.9		SAND, f., few m. sand, dk. grayish brown to v. dk. grayish brown (10YR4/2-3/2), soft rounded-subrounded, quartz and feldspar, 80/20 quartz and others, bottom of sample is wash-out (SP)		
45							2 in. ID sch 40 PVC screen, 0.010 in. slots
	18	15	0.9		SAND, f.-c., ltl. f. gravel, dk. grayish brown to v. dk. grayish brown (10YR4/2-3/2), lithology as above, few-ltl. fines (SW)		Borehole TD= 51 ft.
	19	22	0.7		SAND, f.-m., ltl. c. sand and few f. gravel, 1-2 c. gravel pieces, rounded quartz, some fines in basal 0.3 ft. (SP)		End cap
50							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-W05AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Escondida Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** Split Spoon
START DATE: 11/18/02	**WELL ELEVATION:** A: 4619.97 ft. B: 4619.71 ft.
FINISH DATE: 1/22/2003	**GROUND ELEVATION:** 4618.05 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL CONSTRUCTION
0					SAND, v. f., red (SP)	Locking protective casing; 2 in. ID sch 40 PVC riser; Concrete
					As above, lt. brown (SP)	Bentonite chips; 20-40 Silica sand pack
					SILT, tr. clay, clumps slightly, slightly moist (ML)	
	1	15	1.5		SILT, tan, slightly compacted, f. varve-like layering, dry (ML)	2 in. ID sch 40 PVC screen, 0.010 in. slots
5					SAND, f.-v.f., poorly graded, lt. tan (SP)	
	2	8	1.5		CLAY, brown, (Pp=1.5), (CL)	
					SAND, f.-v.f., lt. tan (SP)	
▼					SILT, ltl. clay, brown (ML)	
	3	4	1.4		CLAY, soft, brown, (Pp=0.25) (CL)	
10						
	4	2	1.5		CLAY, some f. sand, brown changing to gray, some organic matter, layer of increasing sand content between 11.5-12 ft., moist (CL)	
					CLAY, ltl. f. sand, brown/gray, v. moist and soft (CL)	
	5	9	1.5		SAND, f., poorly graded, clean (SP)	
15						
	6	8	0.9		SAND, f., poorly graded, lt. brown, clean (SP)	Natural backfill/collapse
	7	23	0.6		As above, slightly compacted (SP)	End cap
20						
					GRAVEL, c., f.-m. sand at bottom, well graded (SW)	

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : ESC-W05AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	8	5	0.5				
	9	14	0.7		SAND, f., some m. sand, lt. brown, quartz, subrounded (SP)		Bentonite pellets
25							
	10	14	0		No Recovery		Natural backfill/collapse
	11	13	1.2		SAND, m.-f., subrounded-subangular grains, fining upward, sample may not be in place (SP)		
30							
	12	10	0		SILT/CLAY, brown to lt. brown, (Pp=0.1) (ML-CL)		
	13	14	0.5		SAND, f., ltl. f. gravel, lt. brown, rounded-subrounded. Majority of sample has washed away (SP)		Bentonite slurry
35							
	14	23	1.1		SAND, f.-m., poorly graded, tan-lt. brown, no visible structure (SP)		
	15	20	0		SAND, and f. gravel, subrounded-subangular. Majority of sample has washed away. (SP-GW)		Natural backfill/collapse
40							
	16	27	0.8		SAND, f.-v.f., poorly graded, brown, tr. mafic grains, no visible sturcture (SP)		
	17	12	0.9		SAND, f., poorly graded, brown to lt. brown (SP)		
45							
	18	12	1.1		SAND, f.-m., lt. brown, no visible structure (SP)		2 in. ID sch 40 PVC screen, 0.010 in. slots Borehole TD= 52 ft.
	19	24	0.6		SAND, m.-c., tr. f. sand, well graded (SW) SAND, m.-f., tr. mafic grains, subrounded (SP)		
50							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-E01AB

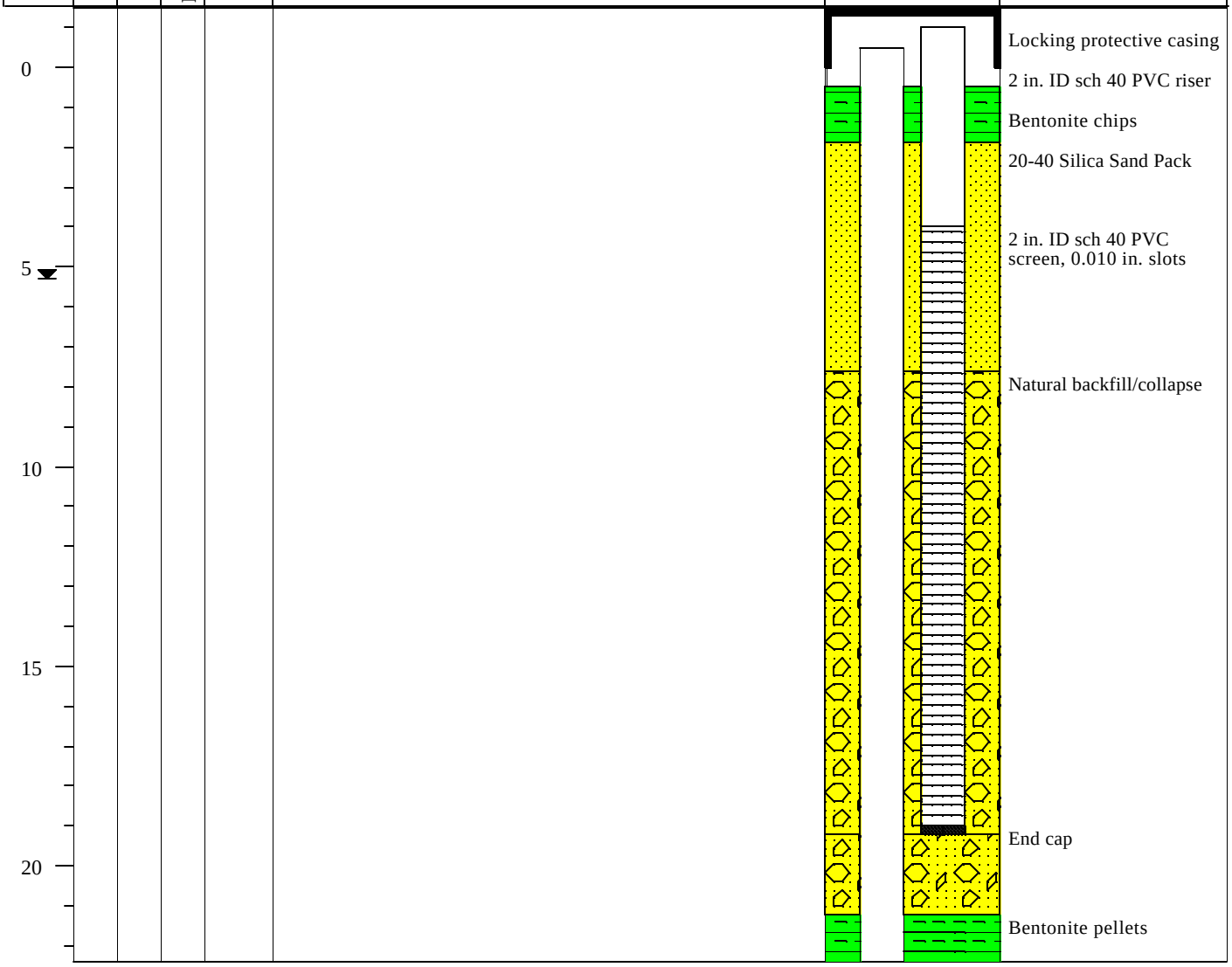
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Brown Arroyo Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: P. Lang	**SAMPLE TYPE:** Split Spoon
START DATE: 4/30/03	**WELL ELEVATION:** A: 4577.41 ft. B: 4576.48 ft.
FINISH DATE: 4/30/03	**GROUND ELEVATION:** 4575.92 ft.

NOTES: Borehole Diameter: 10 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-E01AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
25							Natural backfill/collapse
30							
35							
40							Bentonite pellets Natural backfill/collapse
45							2 in ID sch 40 PVC screen, 0.010 in. slots Borehole TD= 50 ft.
50							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-E01C

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study, Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Brown Arroyo Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: S. Lindblom, B. Grigsby	**SAMPLE TYPE:** Split Spoon
START DATE: 10/14/2002	**WELL ELEVATION:** 4577.37 ft.
FINISH DATE: 5/7/03	**GROUND ELEVATION:** 4575.91 ft.

NOTES: Borehole Diameter: 6 in.- geologic sampling
8 in.- well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
							Locking protective casing
0							2 in. ID sch 40 PVC riser
	1	9	1.2		SILT, and CLAY, tr. f. sand, (2.5YR5/4), roots, quartz and feldspar, low dry strength, no dilatancy, medium plasticity, medium toughness (ML-CL)		Concrete
					SAND, f.-v.f. sand, brown (10YR6/4), quartz and feldspar, loose and dry (SP)		
							Cement bentonite grout
	2	4	0.4		SILT and CLAY, as above, thin bands of charcoal and organic matter, v. moist and wet (ML-CL)		
5 ▼							
					As above, (ML)		
	3	8	1.2		SAND, tr. clay/silt, rounded quartz, ltl. feldspar, mafic and lithic grains, ratio: 90/10 quartz and other (SP)		
	4	12	2		SAND, f., few m. sand, tr. c. sand and gravel, tr. clay and silt, f. fraction as above, c. fraction contains basalt, orange f. grain clacite cemented sandstone, carbonate and red siltstone (SP)		Natural backfill/collapse
10							
	5	9	1		As above, 1 piece large gravel, pink with v. f. cross bedding (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-E01C

PROJECT NAME: Rio Grande Watershed Study, Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
					SAND, m., some c. sand, ltl. fn. sand, tr. gravel, soft (SP-SW)		
	6	14	1.5		SAND, f., tr. m. sand, tr. silt, m. dense, rounded quartz and feldspar, few lithic and mafic grains (SP)		
15							
					SAND, f.-m. sand, ltl. c. sand and f.-c. gravel (SP)		
	7	11	1.2		As above, tr. c. sand, no gravel (10YR4/2) (SP)		
	8	n/a	0		As above, (SP)		
20							
	9	17	1.1		SAND, f.-m., some c. sand, tr. silt/clay, f. fraction rounded quartz, ltl. lithic and mafic, c. fraction angular-rounded siltstone, black f. grain volcanics, quartzite, no structure, m. dense (SP)		
	10	9	0.25		As above, loose (SP)		
25							
	11	11	0.6		SAND, f. no m.-c. sand tr.-no clay/silt, brown gray (10YR5/2-4/2) rounded quartz, few-ltl. lithic and mafic grains (SP)		
	12	6	0.8		As above, no structure, 6 f. gravel pieces, loose (SP)		
30							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-E01C

PROJECT NAME: Rio Grande Watershed Study, Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
	13	11	0.6		As above, (SP)		
	14	n/a	0		No Recovery		
35	15	33	1.0		SAND, f., tr. m. sand, tr. clay/silt, brown-gray (10YR5/2-4/2), rounded quartz, f. gravel and c. sand in top few layers, magnatite at 36.5 ft. dense (SP)		
40	16	48	1.2		SAND, f., no m.-c. sand, ltl. clay/silt, (10YR5/1-5/2), 3 thin layers of tr. m. sand at 39 ft. (SP)		
	17	24	1.3		As above, tr.-few m. sand, tr.-few silt/clay, no apparent structure or layering (SP)		
45	18	42	1.5		SAND, f., tr.-few m. sand, tr. few clay/silt, thin faint layer of m. sand in basal 0.8 ft of sample (SP)		
	19	29	0.9		As above, 2 thin faint magnetite layers on top 0.3 ft of sample (SP		
	20	27	1.2		As above, (SP		
50							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-E01C

PROJECT NAME: Rio Grande Watershed Study, Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
50					SAND, m., some f. sand, ltl. c. sand, tr. f. gravel, (10YR4/1), f.-m. fraction rounded quartz and angular-rounded lithics and mafics, 60/40 quartz/other, c. sand and gravel is red siltstone and yellow brown sandstone, gray carbonate, dk. gray volcanics, granite (SW)		
					SAND, f.-m. sand, tr. c. sand, lithology as above (SW)		
	21	42	1.7		SAND, c., some f. gravel, ltl. m.-f. sand, angular-subrounded volcanics and carbonate, quartz and quartzite, granite (SW)		
					SAND, f.-m., ltl. c. sand, no gravel, few clay/silt (10YR4/2) (SP)		
					SAND, c., f. gravel, angular-rounded grains, lithology as above (SP)		
	22	46	1.5		SAND, f.-m., few c. sand (SP)		
55							
	23	67	0.5		CLAY, slow dilatancy, high plasticity, high toughness, medium dry strength, appears to be organic matter, charcoal and roots, 1 piece of gravel in sampler (CL-CH)		
					SAND, f., (SP)		
					No Recovery		
	24	81	0				
60							
	25	85	1.25		SAND, f., no m.-c., tr.-few clay/silt, gray to brown gray, (10YR4/1-4/2), rounded quartz grains, 75-80% quartz, 20-25% pink orange quartz, rounded grains, firm, faint magnetite rich layer at 61.6 ft. (SP)		Bentonite pellets and slurry
					As above, (SP)		
	26	47	1.2		SAND, f., ltl., m. sand, tr.-few c. sand, tr. fine gravel, c. sand is volcanic, quartz and quartzite, rhyolite gravel is subrounded, fine grain volcanic and metamorphic and well rounded quartzite (SP-SW)		
65							
					SAND, f., some m. sand, few c. sand, tr.-few f. gravel pieces, lithology as above, 1 c. gravel piece of dolomite (SP)		
	27	105	1.5		SAND, c., fine gravel, few lithic and mafic f. sand, angular and rounded dk. gray volcanics, gray carbonate, quartz and quartzite grains (SP-GP)		
					SAND, f.-m., several layers with f.-c. gravel (SP-SW)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

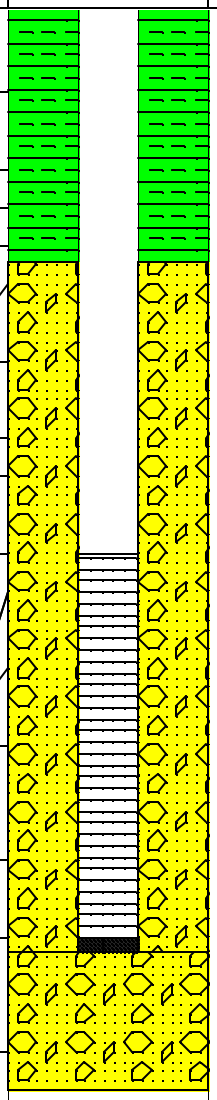
GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-E01C

PROJECT NAME: Rio Grande Watershed Study, Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
	28	56	1.2		SAND, f.-m., several layers with f.-c. gravel (SP-SW)
70					
					SAND, f.-m. grades to f.-c. sand (SP)
	29	80	1.4		SAND, grades back to f. sand with tr. f. gravel (SP)
					SAND, f. with increasing silt and clay towards the bottom, dk. gray brown (10YR4/2) (SP-SM)
					GRAVEL, f.-c., some f.-c. sand, gravel predominately subrounded, volcanics, quartz and sandstone, metamorphic sandstone (GW)
	30	61	1.1		GRAVEL, increasing silt/clay matrix (GP)
75					
					CLAY, dk. green gray (5GY4/1), firm, (Pp=1.04), with 2 gravel clasts, no dilatancy, plastic, moist, bottom contact is sharp c. gravel (CL)
	31	>10	1.1		GRAVEL, f.-c., and f.-c SAND, one clast greater than 2 inches in diameter (SW-GW)
	32	68/6	0.5		SAND, f.-m., ltl.-some f. gravel and c. sand, tr.-few silt/clay, brown (10YR4/3) (SP-SW)
80					
	33	45	0.9		As above, fewer fines, few c. gravel, same large clasts, subrounded-rounded (SP-SW)
	34	67	1.1		SAND, f., few-ltl. m. sand, tr. silt/clay, v. dk. brown (10YR2/2), poorly graded, v. dense, (SP) Probable Santa Fe Group.
85					
	35	50/4	n/a		As above, tr. m. sand, only in fine zones, no apparent bedding (SP)

WELL DIAGRAM C



WELL CONSTRUCTION

Natural backfill/collapse

Borehole TD= 83 ft.

2 in. ID sch 40 PVC screen, 0.010 in. slots

End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

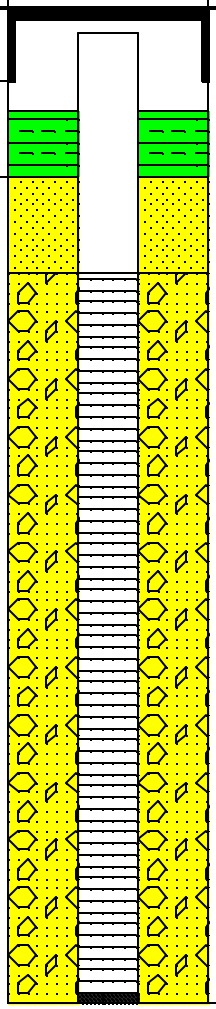
BORING NO. : BRN-E02A

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study, Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Brown Arroyo Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** NA
START DATE: 4/30/03	**WELL ELEVATION:** 4576.58 ft.
FINISH DATE: 4/30/03	**GROUND ELEVATION:** 4575.3 ft.

NOTES: Borehole Diameter: 10 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM A	WELL CONSTRUCTION
0					Not sampled. See log of BRN-E01C for lithology.		Locking protective casing 2 in. ID sch 40 PVC riser Bentonite chips 20-40 Silica sand pack 2 in. ID sch 40 PVC screen, 0.010 in. slots Natural backfill/collapse Borehole TD= 19.2 ft. End cap
5							
10							
15							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

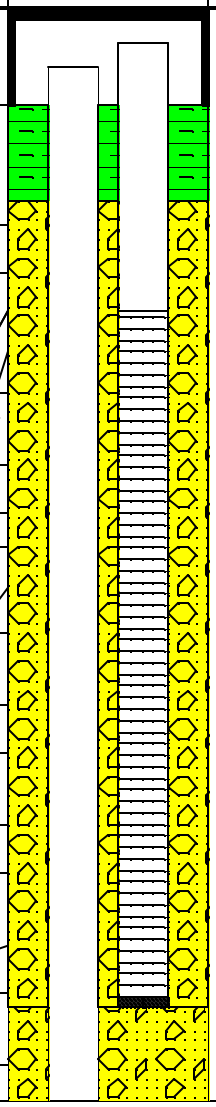
BORING NO. : BRN-E03AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed, Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Greg Sena
LOCATION: Brown Arroyo Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Bryan Grigsby	**SAMPLE TYPE:** Split Spoon
START DATE: 10/18/02	**WELL ELEVATION:** A: 4574.41 ft. B: 4574.34 ft.
FINISH DATE: 5/5/2003	**GROUND ELEVATION:** 4573.47 ft.

NOTES: Borehole Diameter: 6 in.- geologic sampling
10 in.- well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0		n/a	0		Cuttings: CLAY, tr. silt and f. sand, dk. yellow brown (10YR3/4), plastic, wet (CL)
▼	1	7	1.5		SAND, f.-m., grades to silty f. sand, to silt, dk. yellow brown (10YR4/4), moist-wet (SP, ML)
5					SAND, f., tr.-few m. sand, tr. silt/clay, color as above, wetter in bottom (SP)
	2	3	1.5		SAND, f., tr. m.-c. sand, grades to f.-m. sand, tr.-few c. sand and f. gravel, brown (10YR4/3), wet (SP)
	3	7	1.3		SAND, f.-m., as above, only tr. c. sand, 1 piece of f. gravel (SP)
10					SAND, f. with faint thin dk. orgainc layers, yellow brown (10YR5/4) (SP)
	4	5	0.9		As above, f.-m. sand, and f. sand, 1 piece of c. gravel, subangular (SP)
	5	5	0.2		SAND, f.-m., and f. GRAVEL, ltl. c. sand, (SW-GW)
15	6	7	0.9		SAND, f.-m., tr.-few sand and f. gravel, dk. gray brown (10YR4/2), gravel is predominately sandstone and limestone, subangular, sand is subangular to subrounded (SP-SW)
	7	13	0.7		As above, but less c. sand and gravel (SP-SW)
20					



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- Natural backfill/collapse
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-E03AB

PROJECT NAME: Rio Grande Watershed, Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	8	15	1.5		Sluff, Shows gradation from f.-m. sand to f. gravel, lots of green grass in upper 0.5 ft.		Bentonite pellets
	9	11	1.0		SAND, f., tr. m. sand, few mica flakes, dk. gray brown (10YR4/2) (SP)		Natural backfill/collapse
25	10	0	0.5		SAND, f., tr.-few c. sand and f. gravel, grades to f.-c. sand and f. gravel in base of sample (SW-GW)		
	11	9	0.9		As above, increasing gravel, piece of wood in bottom (SW-GW)		
30	12	21	1.7		As above, more young looking wood, no m.-c. sand (SW-GW) SAND, f., no m.-c. sand or gravel (SP)		
	13	23	1.1		SAND, f., v. dk. gray brown (10YR3/2) (SP) SAND, m., few c. sand, tr. f. gravel, dk. gray brown (10YR4/2) (SP)		
35	14	24	0.6		SAND, f.-m., tr. c. sand, color as above, few clay 0.1 ft. from the bottom (SP)		
	15	17	1.0		SAND, f.-m., tr.-few c. sand, and f. gravel, angular c. gravel, grades to f. sand, with thin organic rich lens, piece of old wood .5 ft. from bottom (SP)		Bentonite pellets
40	16	26	0.7		SAND, f.-m., tr. c. sand, dk. gray brown (10YR4/2), predominately quartz, angular to rounded, predominately subrounded (SP)		Natural backfill/collapse
	17	21	0.9		SAND, f.-c., ltl.-some f.-c. gravel (SW-GW) SAND, f, some m. sand (SP)		2 in. ID sch 40 PVC screen, 0.010 in. slots
45	18	22	1.2		As above (SP) SAND, f., few m. sand and f. gravel (SP) SAND, f.-c. and f. GRAVEL, dk. gray (10YR4.5/1), clay lens less than 0.05 ft. from bottom (SW-GW)		
	19	36	1.0		Sluff, sand and gravel (SW-GW)		End cap
50							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-E04AB

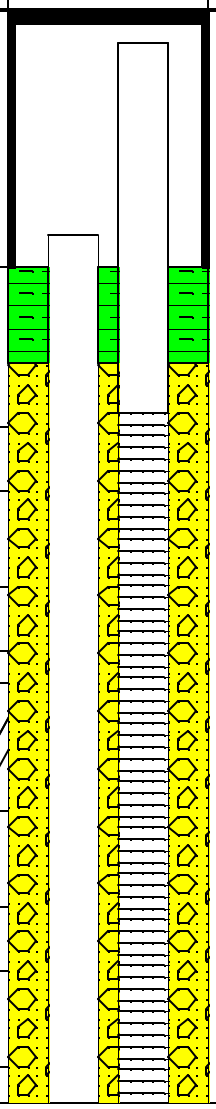
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Greg Sena
LOCATION: Brown Arroyo Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Bryan Grigsby	**SAMPLE TYPE:** Split Spoon
START DATE: 10/21/2002	**WELL ELEVATION:** A: 4572.39 ft. B: 4571.74 ft.
FINISH DATE: 5/6/2003	**GROUND ELEVATION:** 4571.08 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0		n/a	n/a		CLAY, silty, tr.-ltl. f. sand, reddish brown (5YR4/3), roots, m. plasticity, v. soft, strong reaction to acid, moist (CL)
▼	1	3	1.5		Alternating layers of SAND, f., and SILT/CLAY, brown (10YR4/3) and CLAY, v. dk. gray (10YR3/2), very soft, roots throughout, wet (SM, CH)
5					SILT/CLAY, med. plasticity (CL-ML)
	2	5	1.5		SILT and SAND, f., tr. clay, brown (10YR4/3), non-plastic (SM-ML)
					SAND, f., no-tr. fines, loose, strong reaction to acid, wet (SP)
	3	5	1.1		SAND, f., ltl. m. sand, dk. yellow brown (10YR4/4), poorly graded, subrounded-rounded, predominately quartz, loose, strong reaction to acid, wet (SP)
10	4	13	1.0		SAND, f.-m., tr. ltl. c. sand, f.-c. gravel, brown to dk. yellow (10YR4/3-4/4), m. density, mod. well graded, c. gravel is volcanic, moderate reaction to acid (SP-SW)

WELL DIAGRAM



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- Natural backfill/collapse

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-E04AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	5	7	0.5		As above, c. gravel in tip of sampler, (SP-SW)		
15							
	6	10	0.7		SAND, f.-c., few f.-c. gravel, 1 vesicular basalt clast, dk. yellow brown (10YR4/4), well graded, loose-medium density (SW)		End cap
	7	6	0.8		SAND, f.-m., tr. few c. sand and f. gravel, dk. gray brown (10YR4/2), loose, subangular-subrounded gravel clasts, volcanics, limestone, quartzite, weak-moderately weak reaction to acid (SP-SW)		
20							Bentonite pellets
	8	6	0.5		SAND, f.-m., coarsening to f.-c. sand, with gravel (SP-SW)		
					SAND, f., possibly tr. silt, dk. gray brown (10YR4/2), poorly graded, predominately quartz (SP)		
	9	7	2.2		CLAY, dk. gray brown (10YR4/2), v. soft, plastic (CH)		Natural backfill/collapse
					SILT, tr.-few f. sand and clay (ML)		
25					CLAY, plant material present (CH)		
					SAND, f. (SP)		
	10	21	1.1		CLAY, as above (CH)		
					SAND, f., dk. gray brown (10YR4/2), v. poorly graded, m. dense, thin horizontal bands of dk. material, plant matter below bands (SP)		
	11	21	1.0		SAND, f., ltl. m.-c. sand at 29-29.3 ft., finer towards the bottom (SP)		
30							
	12	25	1.0		SAND, f.-m., tr. c. sand and f. gravel, poorly graded (SP)		
					SAND, f., brown (10YR5/3), v. poorly graded, med. density (SP)		
	13	18	1.3		SAND, f.-c., ltl. f. gravel, well graded except for a 0.2 ft. interval of sand, f.-m. (SP-SW)		
35							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-E04AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	14	28	1.4		As above, (SP-SW)		
					SAND, f., few-ltl. m. sand (SP)		
	15	16	0.9		SAND, alternating layers f. sand, few m. sand, with f.-c. sand (SP-SW)		Bentonite pellets
40					SAND, few-ltl. f. gravel (SW-GW)		
	16	18	0.3		SAND, f.-m., tr. c. sand, ltl. f. gravel, 0.2 ft. of f. sand in bottom o sample (SP-SW)		Natural backfill/collapse
					SAND, f.-m., slight coarsening downward trend, (SP)		
	17	23	n/a		SAND, m., and CLAY (SC)		
45					SAND, f.-m., tr. c. sand and f. gravel (SP)		2 in. ID sch 40 PVC screen, 0.010 in. slots
	18	15	0.7		Sluff, sand, coarsening downward from f. sand to c. sand and f. gravel, more gravel than in previous samples (SW-GW)		
					CLAY and SAND, f.-c., and f. GRAVEL (SC-GC)		Borehole TD= 50 ft.
					SAND, f.-m., tr.-ltl. c. sand and f. gravel (SW)		
					SAND, m.-c., few f.-c. sand, tr. few-med. sand and f. gravel (SW)		
	19	33/2			SAND, f.-m, tr. c. sand, tr. clay, few f. gravel (SP-SW)		End cap
50							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

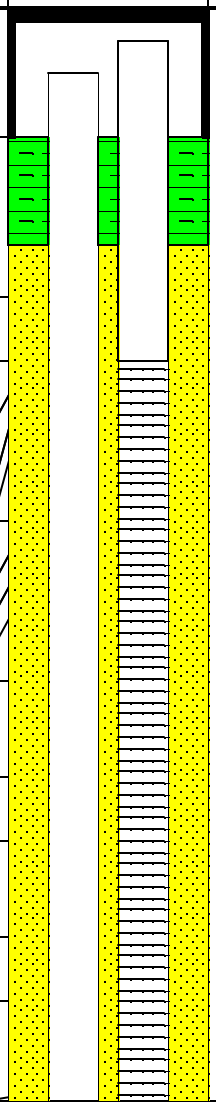
BORING NO. : BRN-E05AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Brown Arroyo Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Bryan Grigsby	**SAMPLE TYPE:** Split Spoon
START DATE: 10/17/2002	**WELL ELEVATION:** A: 4573.05 ft. B: 4572.98 ft.
FINISH DATE: 4/29/2003	**GROUND ELEVATION:** 4572.10 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					SAND, f., ltl.-some silt/clay, dk. yellow brown (10YR4/6), moist (SP)
					CLAY, dk. yellow brown (10YR3/4), v. hard, roots, thin organic layer (CL)
	1	7	1.4		SAND, f., yellow brown (10YR5/4), predominately quartz, poorly graded, moist (SP)
5 ▼					SAND, f.-m., poorly graded, color as above, subangular (SP)
					As above, but no m. sand, dk. gray brown (10YR4/2), wet, loose, iron oxide staining, slight color change, wood, (SP)
	2	6	1.5		SAND, v. f., (SP)
					As above, increase m. sand, tr. c. sand and f. gravel (SP)
	3	13	1.2		SAND, f., tr. m.-c. sand and f. gravel, brown (10YR4/3) poorly graded, predominately quartz, angular-subrounded, more dk. v. f. grains, loose, thin horizontal dk. gray streaks (SP)
10					
	4	15	1.4		As above, continued occasional dk. streaks (SP)
	5	9	1.0		SAND, grades from f.-c. sand, tr. f. gravel in upper 0.5 ft to f.-m. sand, tr. c. sand and f. gravel, in bottom; brown (10YR4/3), more diverse mineral content than above, subangular to subrounded, loose (SP-SW)
15					



WELL CONSTRUCTION:
- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite seal
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-E05AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	6	11	1		As above, coarser near top and bottom, frequent v. small angular black flecks (SP-SW)		
	7	7	1		SAND, f.-m., sand ltl. c. sand, ltl. f. gravel, loose (SP-SW)		End cap
20							Bentonite chips
	8	7	1.0		As above, slightly darker, dk. brown (10YR3/3), (SP-SW)		
					As above, coarser and darker, increased gravel, subangular limestone (SP-SW)		
					As above (SP-SW)		
	9	9	0.5		SILT and CLAY, dk. brown (10YR3/3), v. soft, sharp upper contact with sand, plastic (CL-ML)		Natural backfill/collapse
25							
					As above, soft in top of sample, firm in bottom (Pp=1.5) (CL-ML)		
	10	13	1.5		SAND, f.-m., tr. c. sand, dk. gray brown (10YR3/2), m. density, subangular-subrounded, predominately quartz (SP)		
	11	19	0.9		SAND, f.-m., grading to f.-c. sand, tr.-few f. gravel in bottom, brown (10YR3/2), clay lens 0.1 ft. thick in upper part of samples (SP)		
30							
	12	25	0		Sluff, coarsening down sequence from f. sand to c. sand, drilling mud in c. sand.		
	13	17	1.0		SAND, f.-m., tr. c. sand, v. dk. gray brown (10YR3/2), 0.1 ft. thick layer with vague dk. layering (SP)		
35							
	14	16	0.9		SAND, layers of f.-c. sand, f.-c. sand and f. gravel, and clay, v. dk. brown (10YR2/2 to 10YR3/2), clay is soft and plastic, some clay coatings on gravel, sands are subrounded and gravel is angular (SW-GW)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-E05AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
							Bentonite chips
	15	13	1.0		SAND, f.-m., tr. c. sand and f. gravel, not as dark as above, (10YR4/2), (SP)		
40					SAND, f.-c., ltl. f. gravel, (10YR5/2), small interval with silty clayey matrix, clay is also greater than above, volcanics and limestone gravel clasts (SW)		
					Sluff, did not get sampler to bottom of hole.		
	16	n/a	0				Natural backfill/collapse
	17	5	2.0		SAND, f.-m., tr. c. sand, and f. gravel, color as above, poorly graded, 0.05-ft. clay layer 0.1 ft. from bottom (SP)		2 in. ID sch 40 PVC screen, 0.010 in. slots
45							
	18	24	1.1		SAND, f.-m., and f.-c. gravel, ltl. c. sand, tr. clay, m. density, well graded small clay coating on 1 of 2 large gravel pieces (SW-GW)		Borehole TD= 49.5 ft.
	19	8	0.7		SAND, f.-m., tr. c. sand and f. gravel, some intervals are clayey (SP)		
50					CLAY, dk. brown (10YR3/3), blackish streaks, high plasticity (CL)		End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-E06AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Brown Arroyo Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Bryan Grigsby	**SAMPLE TYPE:** Split Spoon
START DATE: 10/22/02	**WELL ELEVATION:** A: 4573.75 ft. B: 4573.79 ft.
FINISH DATE: 4/29/2003	**GROUND ELEVATION:** 4572.71 ft.

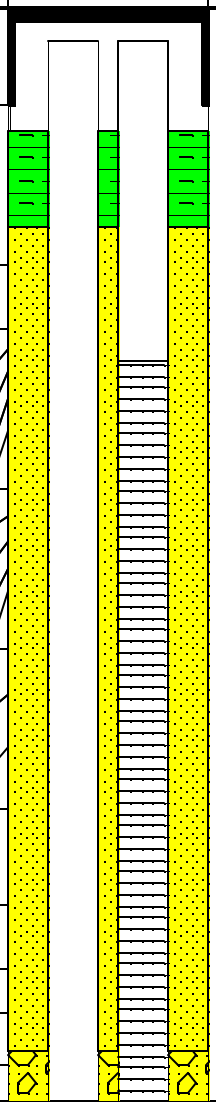
NOTES: Borehole Diameter: 6 in.- geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0		n/a	n/a		CLAY, tr.-few f. sand and silt, brown, moist (CL)
	1	7	1.4		CLAY, tr. silt (CL)
					SAND, v. f. with silt (SM-SP)
5 ▼					CLAY, (CL)
					SAND, v. f. (SP)
	2	6	1.4		SAND, f., loose, wet (SP)
					SAND, f.-m., brown (7.5YR4/4), fines downward (SP)
					SAND, f., with organic matter. (SP)
					SAND, f.-m. (SP)
	3	12	1.4		SAND, f., tr. m. sand, tr. f. gravel, at 8.9 ft. there is a dark gray stain and a root (SP)
10					SAND, f.-m., tr. c. sand, f. gravel, brown (10YR4/3), med. dense (SP)
	4	8	1.2		SAND, f.-m., tr. c. sand and f. gravel (SP)
	5	6	1.2		As above, (SP)
					As above, increased c. sand and f. gravel (SP)
15					

WELL DIAGRAM (B A)

WELL CONSTRUCTION



- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in ID sch 40 PVC screen, 0.010 in slots
- Natural backfill/collapse

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-E06AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	6	7	1.1		As above, clay lens at 17.3 ft. (SP)		
	7	4/3	0.8		CLAY, dk. gray (2.5YR4/1) (CH) SAND, m.-c. few f. sand, tr.-few f. gravel, well graded (SW) SAND, f.-m., (SP) SAND, m.-c., tr. f. sand, few f. gravel, well graded (SW)		End cap
20							
	8	11/2	0.5		SAND, f.-m., tr. c. sand, few f. gravel, (SP-SW)		Bentonite pellets
	9	14	1.5		SAND, f.-m., tr. f. gravel, poorly graded (SP) CLAY, dk. gray brown (2.5YR4/2) with dk. streaks and reddish streaks, firm, plastic, difficult to mold (CH)		Natural backfill/collapse
25							
	10	21	1.4		SAND, f.-m., tr. c. sand and f. gravel, (SP-SW) SILT, ltl.-some f. sand, non-plastic (ML) SILT and v. f. SAND, v. dk. gray brown (10YR3/2), non plastic (SM-ML)		
	11	22	1.2		SAND, f., dk. gray brown (10YR4/2), scattered dk. gray bands, v. poorly graded (SP)		
30							
	12	32	1.2		As above, 1 clast f. gravel at bottom of f. sand, dense (SP) SAND, f.-m., tr. f. gravel, dk. gray bands in upper 0.1 ft. (SP)		
	13	40	1.3		SAND, f.-m., poorly graded (SP) SAND, coarser, tr. f. gravel (SP) SAND, f.-m., poorly graded (SP)		
35							
	14	22	1.1		SAND, f.-m., faint dk. gray bands at 36.6 ft., tr. c. sand and f. gravel in bottom 0.5 ft. (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-E06AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
	15	16	1.4		As above, increased m. sand, c. sand in lenses, at 39.2 and 39.6 ft., tr. dk. gray brown (10YR4/2) v. weak reaction with acid (SP)		
40							
	16	23	1.6		SAND, m., tr.-few f. sand, poorly graded, subangular to subrounded (SP)		
					SAND, f., v. dk. gray brown (10YR3/2), v. poorly graded, subrounded-rounded, predominately quartz (SP)		
	17	23	0.9		As above, with tr. c. sand and f. gravel (SP)		Bentonite pellets
45							
	18	27	1.1		As above, (SP)		Natural backfill/collapse
					SAND, f.-c,. and f.-c. GRAVEL, well graded, gravel is subrounded, metamorphic, carbonate, volcanics (SW-GW)		
	19	28	1		SAND, m., few f.-c. sand and f. gravel, v. dk. gray brown (10YR3/2), medium density (SP)		2 in ID shc 40 PVC screen, 0.010 in slots
50							
	20	39	0.1		As above, 1 clast of c. gravel, quartz sandstone (SP)		Borehole TD= 55.25
	21	47	1.6		As above, (SP)		End cap
55					SAND, f., few-ltl. m. sand, tr. f. gravel, brown (10YR4/3), dense (SP)		
	22	45	0.2		As above, (SP)		
	23	37	1.3		SAND, f.-m., v. poorly graded, dense, brown (10YR4/3) (SP)		
60							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

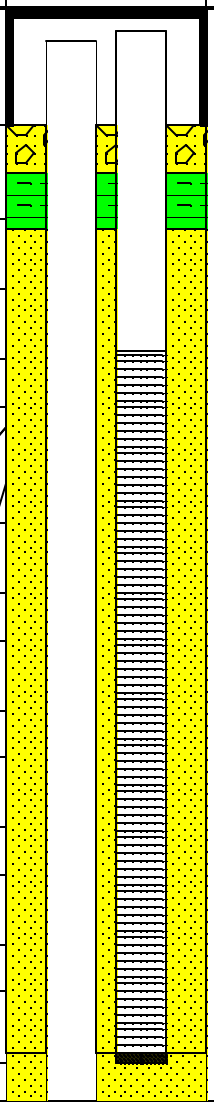
BORING NO. : BRN-W01AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study, Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** David Tanner
LOCATION: Brown Arroyo Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** Split Spoon
START DATE: 11/20/2002	**WELL ELEVATION:** A: 4571.99 ft. B: 4572.06 ft.
FINISH DATE: 4/22/2003	**GROUND ELEVATION:** 4570.90 ft.

NOTES: Borehole Diameter: 6 in.
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0	1		0		CLAY, ltl. to some silt, d. brown, soft (CL)
5	2	3	1.3		CLAY, some v.f. sand, lt. brown, firm, (Pp=1.5), slightly moist (CL)
▼	3	3	1.2		As above, (CL) SAND, f. quartz sand, lt brown to yellow/orange, some rust colored staining of grains in cross-section, probably due to water movement, poorly graded (SP)
10	4	6	.9		SAND, f.-m., tr. f. mafic sand, tr. f. silliceous gravels, subangular, moderately poorly graded, no visible structure in sampler (SP)
	5	12	1		As above, (SP)
15	6	8	.8		As above, (SP)
	7	9	.9		As above, piece of cobble in sampler 0.7' from bottom (SP)
20	8	9	.8		SAND, f. quartz sand, tr. v. f. mafic sands, gray, very poorly graded, subangular to subrounded grains, no visible structure (SP)



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Natural backfill/collapse
- Bentonite pellets
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-W01AB

PROJECT NAME: Rio Grande Watershed Study, Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	9	10	.7		SAND, f.-c., ltl. gravel, moderately graded, subrounded to subangular (SP-SW)		Natural backfill/collapse
					CLAY, some silt, olive gray clay, firm, (Pp=0.7) moist (CL)		
	10	21	1		SAND, f. quartz sand, tr. f. grain mafic sand, gray in color, poorly graded (SP)		
25							
	11	14	1.1		As above, increasing m. sand (SP)		
	12	12	1.0		CLAY, ltl. silt to v.f. sand, olive gray, med. firm (Pp=1.5-2.0), slightly moist (CL)		
30							
					As above, (CL)		
	13	15	.8		SAND, f. quartz sand, lt. gray to brown in color, poorly graded, subangular to subrounded grains (SP)		
	14	22	.2		As above. Increasing m. sand (SP)		
35							
	15	28	1.3		As above, some gravel 0.5'-0.6' from bottom of sample (SP)		Bentonite pellets
	16	13	.7		As above, some clay 0.4' from bottom, organic matter 0.1' from bottom (SP)		Natural backfill/collapse
40							
	17	14	1		As above, tr. clay at bottom of sampler, lt gray-gray in color, v. soft (SP)		2 in. ID sch 40 PVC screen, 0.010 in. slots
					As above, with some m. sand and ltl. f. gravel (SP)		
	18	14	1.1		CLAY, ltl. to no silt, gray, med. stiff, (Pp=1.0-1.6) (CL)		
45							Borehole TD=47.2 ft.
					CLAY, gray, soft, (Pp-0.2), moist (CL)		
	19	8	1.2		CLAY, brown to lt. brown, soft, (Pp=0.4) (CL)		End cap
					CLAY, dk. gray to black clay, firm, (Pp=1.2-1.4) (CL)		
					CLAY, olive gray, firm (CL)		
	20	26	1		SAND, f.-m. quartz sand, tr. mafic f. sand, tr. f. gravel, poorly graded, (SP)		
50							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-W02A

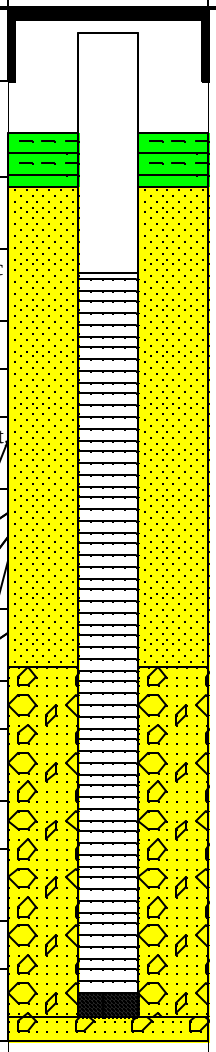
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study, Phase 1	**DRILLING FIRM:** Geotest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Brown Arroyo Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Peter Lang, Dagmar Llewellyn	**SAMPLE TYPE:** Split Spoon
START DATE: 11/20/2002	**WELL ELEVATION:** A: 4571.78 ft.
FINISH DATE: 4/21/2003	**GROUND ELEVATION:** 4570.95 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0	1				CLAY, ltl. silt, brown, soft (CL)
5	2	6	1.2		CLAY, ltl. silt, tr. mica, brown, firm (Pp=1), some surface organic material, soft (CL)
	3	3	1.4		As above, (CL)
					CLAY, increasing silt and some v. f. sand, brown/gray, soft-v. soft increasing moisture. (CL)
▼ 10	4	3	1.5		As above, (CL)
					SAND, f. quartz poorly graded (SP)
					CLAY, gray, very soft, moist, with significant organic matter (OL-CL)
					CLAY, significant f. sand, gray, v. soft (CL)
	5	9	1.4		SAND, f., d.gray, poorly graded, subangular to subrounded (SP)
15	6	11	0.8		SAND, lf.-m., poorly graded, quartz and mafic sands, subangular to subrounded (SP)
	7	14	1.2		As above, some f. gravel of siliceous lithologies over lower 0.4' of sample (SP)
20	8	8	.6		As above, some f. gravel (SP-SW)

WELL DIAGRAM A



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in slots
- Natural pack
- Borehole TD= 20 ft.
- End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-W02A

PROJECT NAME: Rio Grande Watershed Study, Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM A	WELL CONSTRUCTION
	9	14	1.4		SAND, f., ltl. v. f. sand, lt. brown, poorly graded, no structure apparent, wet, part of sample washed away (SP)		
25	10	13	0.9		SAND, f.-c., ltl. f. gravel, med. brown, poorly sorted, well graded, no structure apparent (SW)		
	11	15	1.4		As above, but with a 1" diameter pocket of d. brown clay, ltl. sand, soft (SW) SAND, m., some f. sand, lt. brown, clean, no fines, well sorted, poorly graded, no structure apparent (SP)		
30	12	12	0.7		SAND, v. f.-m., tr. c. sand, lt. brown, clean, no fines, well sorted, poorly graded, no visible structure, wet (SP-SW)		
	13	6	0.9		SAND, f.-c., with pockets of m. brown, soft clay. Bottom 0.1' of sampler is clean, well sorted, poorly graded, coarse sand. Tip of spoon is soft clay, some sand, m. clay (SM)		
35	14	10	1.0		CLAY, ltl. sand, med. brown gray, soft, gummy (CL) SAND, f., ltl. m. sand, med. brown, clean, no fines, poorly graded (SP)		
	15	12	1.0		SAND, f., ltl. m. sand, tr. f. gravel, med. brown to lt. gray, clean, no fines, well sorted, poorly graded, no visible structure, wet (SP)		
40	16	15	1.0		SAND, m.-c., ltl. fl-c. gravel, tr. silt to f. sand, well graded, gravel wash at top of sample, subrounded (SW)		
	17	28	0.8		SAND, m.-c., ltl. f.-c. gravel, lt. brown, clean, no fines, well graded, wet (SW)		
45	18	22	1.2		SAND, m., ltl. c. sand, tr. f. gravel, lt. brown, clean, no fines, well graded, wet (SP-SW)		
	19	24	1.3		As above, (SP-SW)		
50	20	25	0.4		As above, with subrounded gravel (SP-SW)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-W03AB

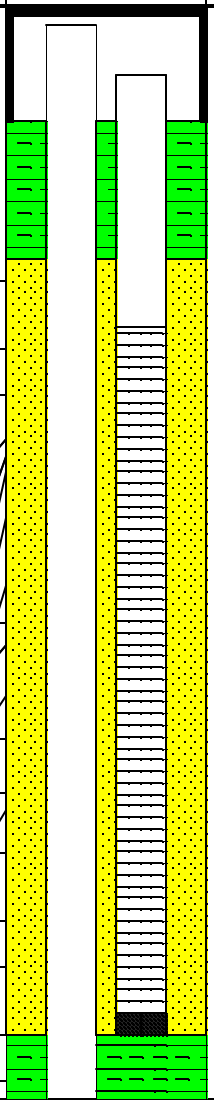
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study, Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Brown Arroyo Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** Split Spoon
START DATE: 11/20/02	**WELL ELEVATION:** A: 4575.09 ft. B: 4575.48 ft.
FINISH DATE: 4/22/2003	**GROUND ELEVATION:** 4574.31 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					
5	1	11	0.9		SAND, f.-v.f., some c. gravel, lt. brown, poorly graded (SP)
	2	6	1.5		SAND, f.-v.f., lt brown to yellowish orange, poorly graded, dry (SP)
					SAND, m. quartz, poorly graded (SP)
					SAND,v. f., lt brown to yellowish orange, poorly graded (SP)
10	3	15	1.2		As above, increasing f. gravel over lower .2' of sample, no visible structure, slightly moist (SP)
					As above, (SP)
	4	12	1.2		SAND, f.-c. sand, ltl. f. gravel, clean, moderately well graded, subrounded to subangular, moist (SW)
▼	5	7	1.5		As above, (SW)
15					SAND, f.-v.f., poorly graded, quartz (SP)
	6	3	1.5		SAND, f.-m. ltl. to some clay/silt, moderately poorly graded, subangular to subrounded (SM)
	7	15	0.8		SAND, m.-c., f. gravel, some f. sand, quartz, moderately well graded, subrounded to subangular (SP-SW)
20					

WELL DIAGRAM



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite pellets
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

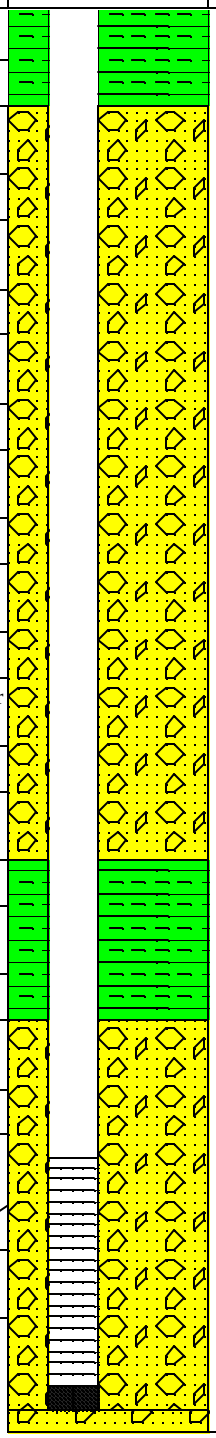
GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-W03AB

PROJECT NAME: Rio Grande Watershed Study, Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL CONSTRUCTION
	8	17	0.9		GRAVEL, sand at base, fining upward to moderately graded f.-m. sand, some siliceous f. gravel, subrounded to subangular (SW)	Bentonite chips
	9	18	0.9		SAND, f.-m., some f.-c. gravel, lt. brown, little to no fines, moderately well graded, subrounded to subangular (SW)	Natural backfill/collapse
25	10	15	0.9		SAND, f.-c., and f. GRAVEL, well graded, quartz, subangular to subrounded (SW-GW)	
	11	10	1		SAND, f.-m., olive gray-brown, poorly graded, subrounded to subangular (SP)	
30	12	17	1.1		As above, with some f. gravel (SP)	
	13	14	0.9		As above, with thin soft olive brown clay layer 0.5' from the bottom of sampler (SP)	
35	14	15	1.1		As above, horizontal bedding of what appears to be organic matter 0.1', 0.25' & 0.45' from bottom of sampler (SP)	
	15	28	1.0		As above, horizontal banding of f. mafic mineral approximately every 0.05' (SP)	
40						Bentonite chips
	16	11	.9		SAND, f.-m., some f. gravel, gray, increasing f. grain mafic sands, subrounded to subangular (SP-SW)	
	17	26	0.7		SAND, f.-c., some gravel, well graded, predominantly quartz (SW)	Natural backfill/collapse
45	18	29	1.0		SAND, f., tr. m. sand, gray, poorly graded, bedding visible in dark layers, 0.4' and 0.6' from the bottom of the sample (SP)	2 in. ID sch 40 PVC screen, 0.010 in. slots
	19	21	NR		As above, increasing to m. sand (SP)	
50						End cap

WELL DIAGRAM



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

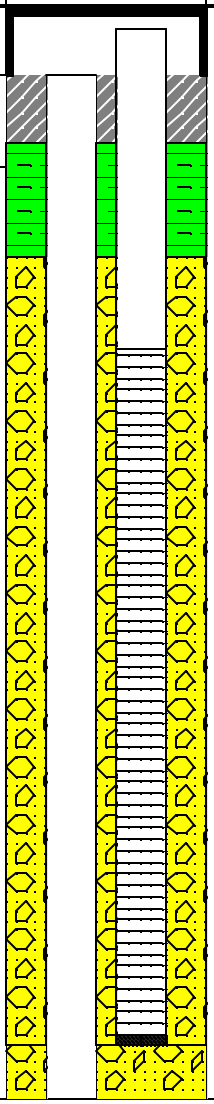
BORING NO. : BRN-W04AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Brown Arroyo Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:**
START DATE: 4/20/2003	**WELL ELEVATION:** A: 4572.36 ft. B: 4572.51 ft.
FINISH DATE: 4/20/2003	**GROUND ELEVATION:** 4571.22 ft.

NOTES: Borehole Diameter: NA
8 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
0					Not sampled. See log of BRN-W03 for lithology.		Locking protective casing; 2 in. ID sch 40 PVC riser; Cement; Bentonite chips
5							Natural backfill/collapse; 2 in. ID sch 40 PVC screen, 0.010 in. slots
10							
15							
20							End cap



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-W04AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 | **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
							Bentonite pellets
25							Natural backfill/collapse
30							
35							
40							Bentonite pellets
							Natural backfill/collapse
45							2 in. ID sch 40 PVC screen, 0.010 in. slots
							Borehole TD= 52.5 ft.
50							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

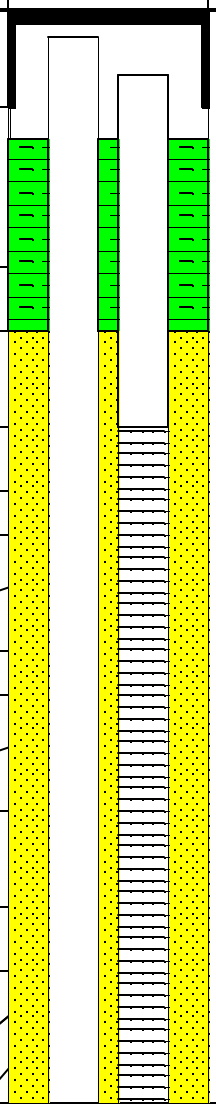
BORING NO. : BRN-W05AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Brown Arroyo Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Bryan Grigsby	**SAMPLE TYPE:** Split Spoon
START DATE: 12/5/2002	**WELL ELEVATION:** A: 4576.62 ft. B:4576.24 ft.
FINISH DATE: 4/25/2003	**GROUND ELEVATION:** 4575.89 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0	0				SILT, and v. f. sand, yellow brown (10YR5/8), v. poorly graded, dry (ML-SM)
5	1	9	1.2		SAND, f., few-ltl. silt, yellow brown (10YR5/6), v. poorly graded, dry-moist (SP)
					As above, (SP)
	2	5	1.4		SAND, f.-m., dk. yellow brown (10YR4/4), poorly graded, few thin dk. gray black bands, wet (SP)
					As above, with tr. c. sand and f. gravel (SP)
10	3	8	1.0		SAND, f.-c., tr. clay, some f. gravel, yellow brown, well graded, sands subrounded-subangular (SW-GW)
	4	32	0.5		SAND, f.-m., tr. c. sand and f. gravel, dk. yellow brown (10YR4/6), moderately well graded, med. density (SP-SW)
					SAND, f.-c., and f.-c. gravel, sand washed out, possibly sluff (SW-GW)
15	5	15	0.3		SAND, f., tr.-few m.-c. sand, dk. yellow brown (10YR4/4), poorly graded (SP)



WELL CONSTRUCTION:
- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- Natural pack and 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-W05AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B	WELL DIAGRAM A	WELL CONSTRUCTION
	6	15	1.4		SAND, layers of f. sand, tr. m.-cs. sand with f.-c. sand, tr.-some f. gravel dk. yellow brown, (SW)			
					SAND, f., tr. m. sand, poorly graded (SP)			
					GRAVEL, f.-c., f.-m. sand, sluff			
	7	18	1.1		SAND, f., tr.-ltl. m. sand, dk. yellow brown (10YR4/4), frequent thin dk. gray bands, poorly graded (SP)			
20								End cap
					GRAVEL, gravel comprised of volcanics, some sandstone predominately subangular, sluff			Bentonite pellets
	8	20	0.9		SAND, f.-m., tr.-ltl. c. sand, tr. f. gravel, brown (10YR4/3) poorly to m. graded (SP)			
	9	24	1.0		As above, (SP)			Natural backfill/collapse
25								
	10	20	1.0		As above, overall slightly finer grain size (SP)			
					SAND, f., tr. m. sand, brown (10YR4/3), v. poorly graded (SP)			
	11	10	0.9		As above, with thin layers of alternate f. sand, f.-m. sand with tr. c sand and f. gravel. (SP)			
30								
	12	27	1.0		As above, brown (10YR4/3) (SP)			
					SAND, f. (SP)			
	13	37	1.1		SAND, f., tr.-few m. sand, brown (10YR4/3), poorly graded, massive (SP)			
35								
	14	28	1.1		As above, sand is predominately quartz, some feldspar and tr. v. f. black flecks, subround (SP)			

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : BRN-W05AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	15	33	0.9		SAND, f.-m., ltl. c. sand, few f. gravel, moderately well graded (SW)		
					SAND, f., brown (10YR4/3), to dk. gray brown (10YR4/2) (SP)		
40							Bentonite pellets
	16	30	0.4		As above, (SP)		
							Natural backfill/collapse
					SAND, f.-c., and f. gravel, sluff		
	17	21	1.6		SILT and CLAY, v. dk. gray brown (10YR3/2), v. sloft, plastic, slow-rapid dilatancy, (ML-CL)		
45					SAND, f.-m., tr. few c. sand, tr. f. gravel, dk. gray brown (10YR4/2), moderately poorly sorted, (SP)		
	18	16	0.5		As above, (SP)		2 in. ID sch 40 PVC screen, 0.010 in. slots
							Borehole TD= 52 ft.
50							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

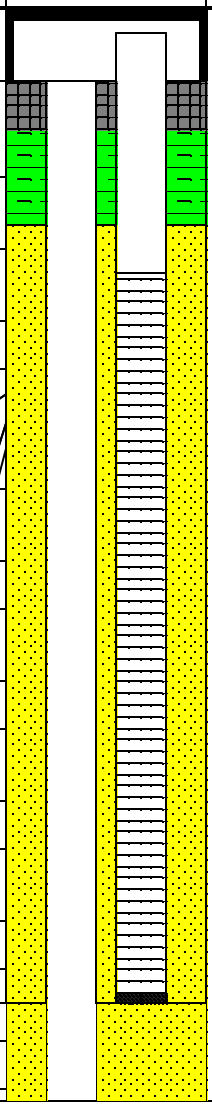
BORING NO. : HWY-E01AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Highway 380 Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Dagmar Llewellyn	**SAMPLE TYPE:** Split Spoon
START DATE: 11/22/2002	**WELL ELEVATION:** A: 4554.19 ft. B: 4554.03 ft.
FINISH DATE: 4/4/2003	**GROUND ELEVATION:** 4553.67 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0	1				SILT and SAND, v.f., light brown, some roots/surface organics, dry (SM)
5	2	5	1.2		SILT, and v.f. SAND, vertically compacted, 2, 1 inch clay and silt layers (SM)
▼	3	9	1.5		As above, (SM); CLAY, mottled brown and olive, (Pp=1.25-3.5), soft to hard (CL-CH); SAND, v.f., ltl. f. sand, light brown, (SP)
10	4	9	1.4		As above, (SP)
	5	4	1.5		SAND, f., ltl. v. f. sand, poorly graded, brown, clean, wet (SP)
15	6	24	0.7		As above, (SP)
	7	13	1.0		SAND, f., ltl. m. sand, m. brown, clean (SP)
20	8	13	0.8		SAND, f., ltl. v. f. sand, light brown, clean (SP); SAND, m., ltl. c. sand, med. brown, clean (SP)



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Concrete
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-E01AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	9	12	1.0		SAND, m., poorly graded, piece of red angular c. gravel in bottom of sampler, clean (SP)		
	10	5	1.0		SAND, m., ltl. c. sand, poorly graded, 0.1 ft. layer of firm olive clay at top, possibly sluff (SP)		Bentonite pellets
25							Natural backfill/collapse
	11	17	1.0		SAND, f., ltl. v.f. sand, poorly graded, clean, (SP)		
	12	21	0		No Recovery		
30							
	13	20	0		No Recovery		
	14	16	1.3		SAND, f.-m., ltl. c. sand, well graded (SP-SW) CLAY, med. brown, (Pp=1.5) (CL) SAND, f.-m., ltl. c. sand and tr. v.f. sand, poorly graded (SP)		
35							Bentonite pellets
	15	12	1.1		CLAY, medium brown, with mottled gray, soft (Pp=1.0), 0.1 ft. thick layer of clean subrounded fine gravel (CL)		
	16	17	1.2		SAND, v. f., tr. c. sand, tr. c. gravel, medium brown, well graded, gravel is subangular (SW)		
40							Natural backfill/collapse
	17	32	0.3		SAND,v. f. to m., tr. silt, well graded (SW)		
	18	27	1.1		SAND, f., ltl. v. f. sand, poorly graded, med. brown, 0.2 ft. thick layer of clean well sorted f.-m. sand 0.2 ft. from the bottom (SP)		
45							2 in. ID sch 40 PVC screen, 0.010 in. slots
	19	19	0.9		CLAY, soft-med., med. brown (CL) SAND, f., ltl. v. f. sand, poorly graded, med. brown to grayish (SP)		Borehole TD= 50.5 ft.
	20	16	1.1		CLAY, soft-med., brown-gray mottles (CL) CLAY/SAND, soft clay and f.-c. sand (CL-SP) SAND, f.-c., ltl. f. gravel, well graded (SW)		
50							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-E02A

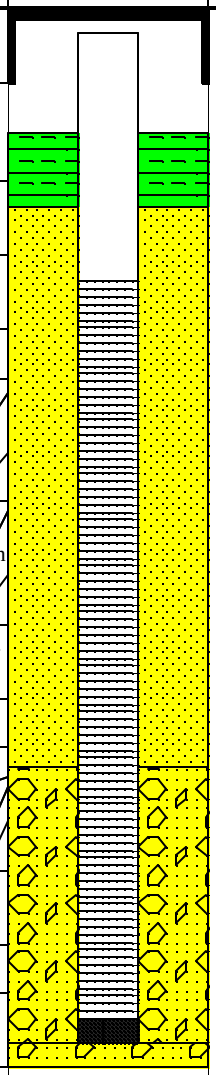
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Highway 380 Transect	**RIG TYPE:** CME75
ONSITE GEOLOGIST: Dagmar Llewellyn	**SAMPLE TYPE:** Split Spoon
START DATE: 11/22/2002	**WELL ELEVATION:** 4552.70 ft.
FINISH DATE: 4/7/2003	**GROUND ELEVATION:** 4552.06 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0	1	n/a	n/a		SILT, with balls of clay, ltl. v. f. sand, med. brown, roots and surface orgaincs (ML)
5	2	7	1.5		SILT, some clay in layers, buff colored, roots and surface organics present, compacted horizontally, breaks into plates, dry (ML)
▼	3	7	1.5		SILT/CLAY, med.-dk. brown clay, compacted (ML-CL) SAND, f., ltl. v. f. sand, poorly graded, light brown, clean, wet (SP)
10	4	3	1.5		CLAY, ltl. silt, med.-dk brown, (CL-ML) SAND, f., ltl. m. sand, tr. v. f. sand, poorly graded, lt. brown, clean (SP)
	5	8	1.4		SAND, f., tr. m. sand, tr. v. f. sand, poorly graded, m. brown to m. gray, clean (SP)
15	6	9	1.0		SAND, f., (SP) SAND, m., (SP) SAND, m.-c., tr. gravel (SP)
	7	9	0.9		SAND, m., tr. c. sand and subangular f. gravel, more mafics than in previous samples, poorly graded, med. gray, clean (SP)
20	8	8	1.2		As above (SP)

WELL DIAGRAM A



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- Natural backfill/collapse
- Borehole TD= 20 ft.
- End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-E02A

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM A	WELL CONSTRUCTION
	9	10	1.0		CLAY, soft, dk. gray, v. soft, (Pp=0.05), (CL) SAND, m., tr. c. sand and f. gravel, poorly graded med. gray, clean (SP)		
	10	7	0		No Recovery		
25							
	11	18	1.3		CLAY, soft, dk. gray to olive, gummy (CL) SAND, f., poorly graded, lt. gray, clean (SP)		
	12	19	0		No Recovery		
30							
	13	7	1.2		SAND, f.-m., m. gray, with mafics, 0.2 ft. thick layer of olive soft clay in the middle (Pp=0.5); (SP)		
	14	26	0		No Recovery		
35							
	15	17	0.9		SAND, f., tr. v. f. sand, clean, med. gray (SP)		
	16	17	1.3		SAND, f., ltl. m. sand, m., gray, 2.5 inch layer of clay, soft, m. brown (SP and CL)		
40							
	17	19	1.2		SAND, f., tr.-few v. f. sand, m. gray, well sorted, clean (SP) CLAY, gray, firm, (Pp=1.25), gummy (CL)		
	18	21	0.8		SAND, m.-c, tr. f. gravel, dk. gray, lots of mafics, occasional blobs of clay, gravel is subangular to subrounded (SP)		
45							
	19	33	0.6		SAND, m.-c., ltl. f. sand, tr. f. gravel, angular (SW)		
	20	39	0.4		As above, (SW)		
50							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

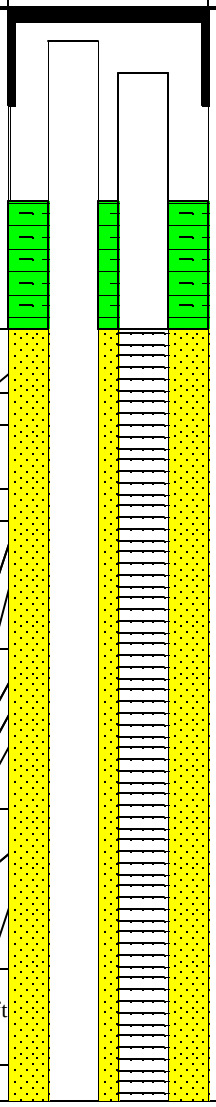
BORING NO. : HWY-E03AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Highway 380 Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Bryan Grigsby	**SAMPLE TYPE:** Split Spoon
START DATE: 12/2/2002	**WELL ELEVATION:** A: 4551.44 ft. B: 4552.04 ft.
FINISH DATE: 4/8/2003	**GROUND ELEVATION:** 4551.11 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
	1	7	1.5		CLAY, sandy at top, dk. yellow brown (10YR3/4), hard, (Pp=2.8) (CL)
					SILT, few clay, (10YR4/4-4/6), non-plastic, wet at bottom (ML)
					CLAY, hard, (Pp=2.2), (CL)
	2	4	1.4		SAND/CLAY, interbedded f. sand and clay layers 0.1 ft. thick, wet, roots (SP)
					SAND, f., tr.-few silt, poorly graded, yellow brown (10YR5/4), root traces, some oxidized intervals (SP)
					SILT, ltl.-some clay, brown (10YR4/3), with reddish/organic, zones sl. plastic, (ML-CL)
	3	8	1.7		SAND and SILT, (SM))
					SAND, f., poorly graded (SP)
					SILT/CLAY, brown (10YR4/3) with grayish layers, v. soft, slow dilatancy (ML-CL)
	4	7	2.0		SAND, f.-m., tr. f. gravel, slight coarsening downward, brown (10YR5/3), gravel is predominately quartz and feldspar grains, subangular to subrounded (SP)
	5	5	2.3		SAND, f., tr.-ltl. m. sand, v. poorly graded, dk gray brown to brown (10YR4/2-4/3), 1 piece of grayish wood near bottom, 0.1 ft layer of silt/clay at 14.2 ft. (SP)



WELL CONSTRUCTION:
- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in slots

0 5 10 15

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-E03AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	6	16	1.1		SAND, f.-m., few c. sand, tr. f. gravel, moderatley well graded (SP)		
					SAND, f.-m., no tr. c. sand, poorly graded, v. dk. gray brown (10YR3/2) (SP)		Upper backfill/natural collapse
	7	14	0.9		SAND, f., tr. c. sand, tr. f. gravel (SP)		End cap
20							
	8	11	1.4		CLAY, soft-firm, dk. brown (10YR3/3), greenish intervals in the middle, plastic (CH)		Bentonite pellets
					SAND, f.-m., tr.-ltl. c. sand, few thin clay intervals, v. dk. gray brown (10YR3/2), f. sand is subrounded, and angular, c. sand is subrounded with volcanic pieces, soft (SP)		
	9	15	1.2		CLAY, v. dk. gray (10YR3/1), soft, firm, plastic (CH)		Natural backfill/collapse
25					SAND, f., v. poorly graded, dk. brown (10YR3/3), piece of f. gravel in bottom (SP)		
	10	16	1.0		SAND, f.-m., tr. f. gravel (1 piece), poorly graded, v. dk. gray brown (10YR3/2), predominately quartz, subrounded-angular, med. density (SP)		
	11	19	1.2		As above, possible 0.1 ft. of clay at top (SP)		
30							
	12	32	0		No Recovery		
	13	14	0.9		SAND, f.-m., tr.-few c. sand and f. gravel, (10YR3/2), thin clay intervals in bottom 0.4 ft., hard sandstone clast in bottom of spoon (SP)		
35							
	14	6			SAND, f.-m., tr-few c. sand, tr. gravel, moderately well graded, some clay intervals (SP)		
					CLAY, firm, (Pp=0.7), thin gray-black organic looking intervals, plastic, few layers of sand and f. gravel (CH)		Bentonite pellets

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-E03AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	15	17	1.2		SAND, f., tr.-few m.-c. sand, tr. f. gravel, v. poorly graded, 0.2 ft. clay interval over thin gravel lens (not in place?) (SP)		
40							
	16	30	0.8		SAND, f., v. poorly graded, 1 piece of f. gravel (SP)		Natural backfill/collapse
					SAND, f.-m., v. poorly graded, 0.07 ft. clay lense, (SP)		
	17	52	1.6		SAND, f., v. poorly graded, tr.-few silt/clay, v. dense, few thin dk. gray bands (SP)		
45							2 in. ID sch 40 PVC screen, 0.010 in. slots
	18	34	0.5		As above, (SP)		Borehole TD= 51.5 ft.
					SAND, f.-m., poorly graded, dense (SP)		
	19	29	0.1		As above, (SP)		
50							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

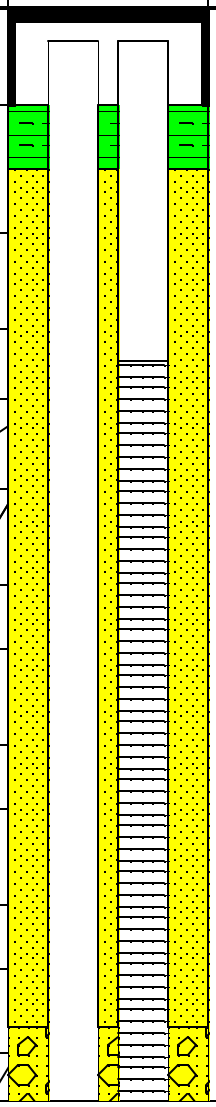
BORING NO. : HWY-W02AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Highway 380 Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Dagmar Llewellyn	**SAMPLE TYPE:** Split Spoon
START DATE: 11/21/2002	**WELL ELEVATION:** A: 4548.83 ft. B: 4548.62 ft.
FINISH DATE: 4/16/2003	**GROUND ELEVATION:** 4548.06 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0	1	n/a	n/a		SILT, some f.-c. sand, ltl. f.-c. gravel, med. brown, well graded, recent organics, roots, angular, dry (SW)
5	2	10	1.5		CLAY, ltl. silt, soft, brown, with mottles of rust and white flecks, (Pp=0.2) (CL)
					SAND, f.-v.f., lt. brown, moist (SP)
	3	9	1.2		CLAY, as above, (CL)
					SAND, v.f.-f. sand, thin horizontal black layers, moist (SP
10	4	9	1.5		SAND, f., ltl. v.f., light brown, clean, wet (SP)
	5	8	1.5		As above, (SP)
15	6	12	1.4		As above, with m. brown clay in upper 0.2 ft. (SP)
					SAND, m.-c., and m. brown clay, (SW-CL)



WELL CONSTRUCTION:
- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- Natural backfill/collapse

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W02AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	7	8	0.8		SAND, m., ltl. c. sand, tr. f. gravel, angular, clean (SP)		
	8	8	0.5		As above, (SP)		End cap
20							
	9	28	0.8		As above, (SP) SAND, f., lt. brown, clean (SP)		
	10	30	0.5		As above, (SP)		Bentonite pellets
25							
	11	18	1.3		CLAY, ltl. f.-c. sand, soft, (Pp=0.5), med. brown (CL) SAND, f., lt. brown, clean, (SP)		Natural backfill/collapse
	12	22	1.2		As above, (SP) SAND, f.-c., ltl. f. gravel, with m. gray clay layer at bottom of sample (Pp=1.0), gravel is angular (SW)		
30							
	13	12	1.1		SAND, f., ltl. v. f. sand, gray, occasional mud balls, clay blobs (Pp=0.1) (SP)		
	14	15	0.9		SAND, m.-c., (SP) SAND, f.-m., poorly graded, lt. gray, well sorted, clean, (SP)		
35							
	15	7	0.5		As above, (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W02AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
	16	17	1.2		As above, (SP)		Bentonite pellets
40							
	17	20	1.3		SAND, m., ltl. f. sand, ltl. c. sand, m.-c. sand in upper 0.1 ft., lt. gray, clean (SP)		Natural backfill/collapse
	18	6	1.5		SAND, f., ltl. f. gravel, occasional clay blobs, lt. gray, gravel is subangular (SP) CLAY, olive gray, v. soft, (Pp=0.1) (CL)		2 in. ID sch 40 PVC screen, 0.010 in. slots
45							
	19	15	0.6		SAND, f., ltl. m. sand, f. gravel in sluff, lt. gray (SP)		Borehole TD= 50.5 ft.
	20	29	1.3		SAND, f.-m., lt. gray, no apparent structure (SP)		End cap
50							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W03B

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Highway 380 Transect	**RIG TYPE:** CME 55
ONSITE GEOLOGIST: Bryan Grigsby	**SAMPLE TYPE:** Split Spoon
START DATE: 12/4/2002	**WELL ELEVATION:** 4547.78 ft.
FINISH DATE: 4/15/2003	**GROUND ELEVATION:** 4547.23 ft.

NOTES: Borehole Diameter: 6 in.-geological sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B	WELL CONSTRUCTION
							Locking protective casing
0					SAND, f., tr. m. sand, v. poorly graded, yellow brown (10YR5/6), dry (SP)		2 in. ID sch 40 PVC riser
							Bentonite grout
					CLAY, tr. few silt, brown (10YR5/3), reddish mottling, v. soft-soft, slightly plastic (CL)		
▼ 5	1	11	1.4		SAND, f., tr. m. sand, tr. f. gravel, with increasing m-c sand and f. gravel near the bottom, poorly graded, yellow brown (10YR5/6), moist-wet (SP)		
					SAND, m., few f. sand, poorly graded, yellow brown (10YR5/6), predominately quartz, subrounded, wet (SP)		
	2	6	1.2		CLAY, silty (CL)		
					SAND, f., ltl. m. sand, poorly graded, dk. gray brown (10YR4/2) (SP)		
	3	9	0.9		SAND, f.-m., tr. c. sand and f. gravel, poorly graded, dk. gray brown (10YR4/2), predominately quartz and feldspar, subangular to subrounded, gravel predominately volcanics (SP)		
10							
	4	8	0.7		SAND, m., few f. sand, tr.-few c. sand and few f. gravel, moderately poorly graded, dk. gray brown (10YR4/2) (SP)		
							Natural backfill/collapse
	5	7	0.7		As above, slightly coarser grain sand, v. diverse gravel: granite, basalt, sandstone, limestone, volcanics, f. sand in botton 0.03 ft of sample (SP-SW)		
15							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W03B

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B	WELL CONSTRUCTION
	6	20	1.0		SAND, f., tr. m. sand, v. poorly graded, dk. gray brown (10YR4/2) (SP)		
	7	29	1.2		SILT, f. sand and ltl. clay, v. soft, v. dk. gray brown (10YR3/2), non-plastic (ML-SM)		
					SAND, f., tr.-few m. sand (SP)		
20							
	8	34	1.1		SAND, f.-c., ltl.-some f. gravel (SW-GW)		
					SAND, f.-m., tr. c. sand, poorly graded, dk gray brown (10YR4/2) (SP)		
	9	21	0.9		SAND, f., tr.-few m. sand, poorly graded (SP)		
25							
	10	20	1.0		SAND, f., poorly graded, coarsening downward to m. sand tr. -few f. sand, and tr.-few c. sand (SP)		
	11	38	0.7		SAND, f.-c. sand and f. gravel (SP-GW)		
					SAND, f.-m., poorly graded, v. dark gray brown (10YR3/2) (SP)		
30							
	12	20	1		As above, (SP)		
	13	4			No Recovery		
35							
	14	14			No Recovery		
							Bentonite pellets

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W03B

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B	WELL CONSTRUCTION
	15	38	1.3		SAND, f., tr. m. sand, v. poorly graded, dk. gray brown as above except the upper 0.1 ft. which is yellow brown (SP)		Natural backfill/collapse
40							
	16	34	1		As above, dk. gray brown, (SP)		
	17	21	0.9		SAND, f., tr. m. sand, a 0.03 ft clay lens at 44.3 ft across 2/3 of sample (SP)		2 in. ID sch 40 PVC screen, 0.010 in. slots
45							
	18	30	0.8		SAND, f.-m., tr. c. sand and f. gravel, moderately poorly graded dk. gray (10YR4/1) (SP)		Borehole TD= 50.5 ft.
	19	22	1		SAND, f.-m., poorly graded, dk. gray brown (10YR4/2) (SP) SAND, f.-m., ltl. c. sand and f. gravel, well graded (SW)		End cap
50							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

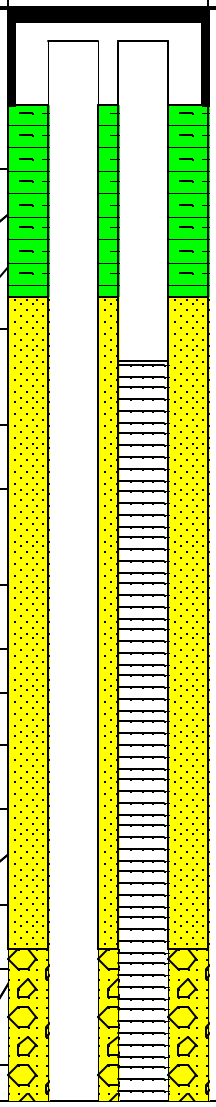
BORING NO. : HWY-W04AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Highway 380 Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Bryan Grigsby	**SAMPLE TYPE:** Split Spoon
START DATE: 12/2/2002	**WELL ELEVATION:** A: 4549.69 ft. B: 4549.34 ft.
FINISH DATE: 4/17/2003	**GROUND ELEVATION:** 4549.29 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					
					SAND, f.-m., tr.-few c. sand and f. gravel, dk. yellow brown (10YR4/4), roots (SP)
					SAND, v.f., silt, v. poorly graded, yellow brown (10YR5/6), dry (SP)
					CLAY/SILT, wet, cobble and dry sand in sampler tip (ML-CL)
	1	12	0.6		
5					
					SAND, f., tr. m. sand, v. poorly graded, yellow brown (10YR5/4), v. thin grayish bands, dry-slightly moist (SP)
	2	11	1.3		
					As above, (SP)
▼	3	4	1.2		SAND, v. f., tr. silt/clay, brown (10YR4/2), (SP)
10					
					SAND, f.-m., tr. c. sand and f. gravel, dk. gray brown (10YR4/2) (SP)
	4	12	1.4		SAND, v. f., tr. silt/clay, brown (10YR4/3) (SP)
					As above, (SP)
	5	7	1.2		SAND, f.-m., tr. c. sand, tr.-few f. gravel, moderately poorly graded, dk. gray brown (10YR4/2) (SP)
15					



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch. 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- Natural backfill/collapse

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W04AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	6	9	1.1		SAND, f.-c., tr. few f. gravel, grades down to f.-m. sand, v. dk. gray brown (10YR3/2), quartz and feldspar, ltl.-some dk. grains and volcanics, subrounded to angular, (SP)		
	7	11	1.3		SAND, f.-m., and f.-c. sand, tr. f. gravel in alternating layers, poor-med. graded, dk. gray brown (10YR4/2), more quartz and less dk. minerals than above (SP-SW)		End cap
20	8	18	0.9		SAND, f.-c., with intervals of f.-m. sand, few-ltl. f. gravel, well graded, dk. gray brown (10YR4/2), gravel predominately volcanic clasts (SP-SW)		Bentonite pellets
	9	8	1.4		CLAY, v. soft (CL) SAND, f.-m., tr. c. sand, (SP) CLAY, tr.-few silt, dk. brown (10YR3/3), plastic with thin layers of sand (CH)		
25	0	10	1.3		SAND, f. tr. few m. sand, poorly graded, few small clay lenses, v.dk. gray brown (10YR3/2) (SP) CLAY, gravelly clay in the tip of the spoon (CH)		Natural backfill/collapse
	10	18	1.2		SAND/GRAVEL, m.-c. sand, and f.-c. gravel (SW-GW) SAND, f., tr. m. sand, v. poorly graded, dk. gray brown (10YR4/2-3/2) (SP)		
30	11	22	0.9		SAND, f.-m., tr. c. sand and f. gravel, poorly graded, dk. gray brown (10YR4/2) (SP)		
	12	21	0.8		As above, with increasing f. gravel in bottom 0.1 ft (SP)		
35	13	22	1.1		SAND, f., tr. m. sand, v. poorly graded, dk. gray brown (10YR4/2), with thin dk. gray band containing abundant v. small black flecks (organics?) (SP)		Bentonite pellets

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W04AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	14	19	1.0		As above, gravel fragment in tip of spoon (SP)		
40							
	15	17	1.0		SAND, f.-m., tr.-few c. sand, tr. f. gravel, moderatley poorly graded, dk. gray brown (10YR4/2) (SP)		Natural backfill/collapse
	16	14	0.6		SAND, f., v. poorly graded, v. dk. gray brown (10YR4/2) (SP)		2 in. ID sch 40 PVC screen, 0.010 in. slots
45							
	17	11	0.9		SAND, f., tr. m. sand, tr. f. grave (1), poorly graded (SP)		Borehole TD= 50.5 ft.
					CLAY, tr.-few silt, v. dk. gray (10YR3/1), v. soft (SP)		
					SAND/GRAVEL, f.-c. sand and f. gravel (SW-GW)		
	18	35	0.3		SAND, f., tr. m.-c. sand, v. poorly graded, dk. gray brown (10YR4/2) (SP)		End cap
50							
	19	26	0.6		SAND, f.-m., tr. c. sand, and f. gravel, poorly graded with 0.1 ft. interval of well graded f.-c. sand, dk. gray brown (10YR4/2) (SP)		
	20	27	1.0		As above, (SP)		
55					SAND, f.-c., piece of f. gravel with a 0.5 inch diameter (SW)		
					SAND, f.-m. (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W05AB

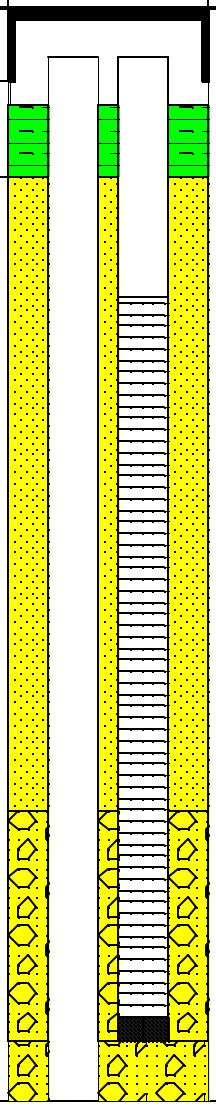
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Highway 380 Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Stephanie Kuhn	**SAMPLE TYPE:** Split Spoon
START DATE: 4/18/2003	**WELL ELEVATION:** A: 4550.33 ft. B: 4550.19 ft.
FINISH DATE: 4/18/2003	**GROUND ELEVATION:** 4550.05 ft.

NOTES: Borehole Diameter: 10 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
0					Not sampled. See log of HWY-W07C for lithology.		Locking protective casing; 2 in. ID sch 40 PVC riser; Bentonite chips; 20-40 Silica sand pack
5							2 in. ID sch 40 PVC screen, 0.010 in. slots
10							
15							Natural backfill/collapse
20							End cap



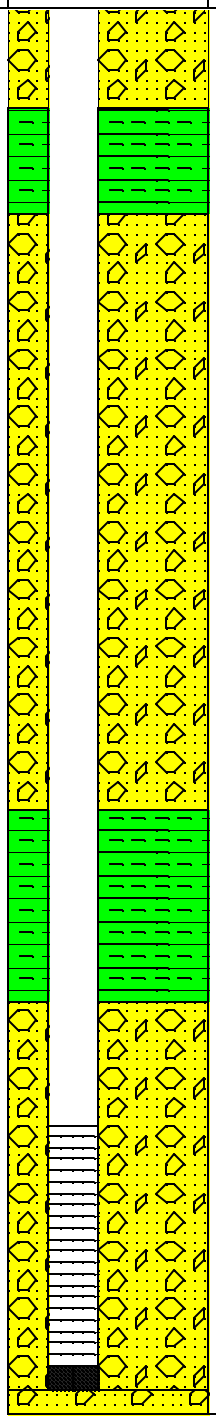
S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W05AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 | **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
25							Bentonite pellets
							Natural backfill/collapse
30							
35							
							Bentonite pellets
40							
							Natural backfill/collapse
45							2 in. ID sch 40 PVC screen, 0.010 in. slots
							Borehole TD: 50.5 ft.
50							End Cap



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

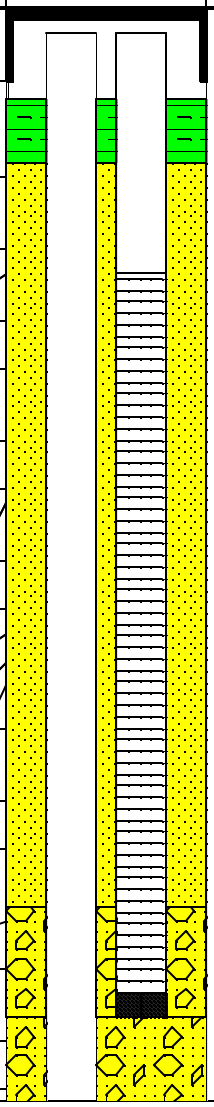
BORING NO. : HWY-W06AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Highway 380 Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Dagmar Llewellyn	**SAMPLE TYPE:** Split Spoon
START DATE: 11/26/2002	**WELL ELEVATION:** A: 4550.98 ft. B: 4550.89 ft.
FINISH DATE: 4/9/2003	**GROUND ELEVATION:** 4550.05 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0	1				SILT, some v. f. sand, tr. f.-c. sand, reddish brown, roots and organic debris (ML)
	2	5	1.5		As above, (ML) As above, buff color, (ML)
5	3	10	1.4		SAND, v. f., poorly graded, lt. brown, 0.2 ft. layer of med. brown silty clay, (Pp=0.5), (SP)
	4	5	1.5		SILT, some clay, med. reddish brown (ML) SAND, v. f., tr. silt, buff colored (SP)
10	5	7	1.5		SAND, f-v.f., med. brown, clean (SP) SAND, f.-c., gray to black, organics (SW) SAND, v.f., olive colored, poorly graded, clean (SP)
	6	8	0.9		SAND, f.-v.f., med.-dk. gray at top and grading to med. brown at bottom, poorly graded, clean (SP)
15	7	21	0.9		As above, top portion is organized and shows some horizontal structure , manganese layers, bottom of sample is med. brown, loose and wet (SP)
	8	9	0.9		SAND, f.-m., ltl. v. f sand, med. brown (SP)
20					



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- Natural backfill/collapse
- End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W06AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	9	16	0.8		SAND, m., ltl. f. sand, poorly graded, med. brown, clean (SP)		
							Bentonite pellets
	10	9	1.5		As above, (SP)		Natural backfill/collapse
25							
	11	18	0.2		SAND, f.-c., ltl. f. gravel, well graded, mulitcolored, clean (SW)		Bentonite pellets
	12	16	0		No Recovery		Natural backfill/collapse
30							
	13	5	1.5		CLAY, mottled olive and reddish, (Pp=1.25), some layers have ltl. sand, one piece of c. subangular sandstone gravel (CL)		
	14	17	1.4		As above, without the sand layers and somewhat gummier (CL) SAND, m., ltl. f. sand, tr. f. gravel. poorly graded, clean (SP)		
35							
	15	15	1.0		SAND, f.-c., ltl. f subrounded gravel, brown/multicolored, well graded (SW)		
							Bentonite pellets
	16	10	1.1		As above, med. brown at top grading to med. to dk. gray at bottom occasional med. brown mudballs/clay blobs, soft (SW)		
40							
	17	23	0		No Recovery		Natural backfill/collapse
	18	35	1.2		SAND, f., ltl. v.f. sand, poorly graded, clean, horizontal layering highlighted by manganese layers (SP)		2 in. ID sch 40 PVC screen, 0.010 in. slots
45							
	19	27	0.8		SAND, f.-m., med. brown, poorly graded, clean (SP)		Borehole TD= 50 ft.
	20	20	0		No Recovery		End cap
50							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W07AB

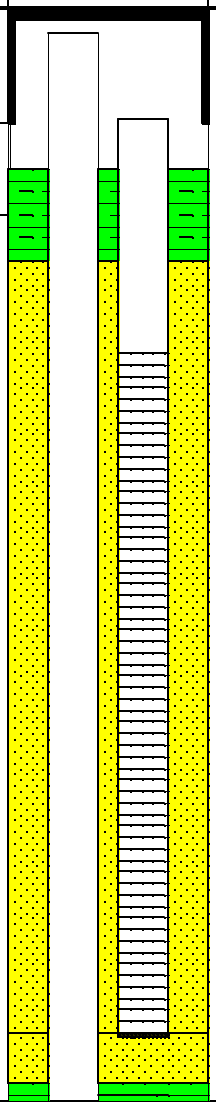
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Highway 380	**RIG TYPE:** CME75
ONSITE GEOLOGIST: Dagmar Llewellyn	**SAMPLE TYPE:** NA
START DATE: 4/24/2003	**WELL ELEVATION:** A: 4552.44 ft. B: 4552.07 ft.
FINISH DATE: 4/24/2003	**GROUND ELEVATION:** 4551.47 ft.

NOTES: Borehole Diameter: 10 inches

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
0					Not sampled. See log of HWY-W07C for lithology.		Locking protective casing; 2 in. ID sch 40 PVC riser; Bentonite pellets; Natural backfill/collapse and 20-40 Silica sand pack; 2 in. ID sch 40 PVC screen, 0.010 in. slots; End cap
5							
10							
15							
20							



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W07AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
							Bentonite pellets
							Natural backfill/collapse
25							
30							
35							
							Bentonite pellets
40							
							Natural backfill/collapse
							2 in. ID sch 40 PVC screen, 0.010 in. slots
45							
							Borehole TD=51 ft.
50							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W07C

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Highway 380 Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Dagmar Llewellyn	**SAMPLE TYPE:** Split Spoon
START DATE: 11/25/2002	**WELL ELEVATION:** 4551.81 ft.
FINISH DATE: 4/11/2003	**GROUND ELEVATION:** 4551.49 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
							Locking protective casing
							2 in. ID sch 40 PVC riser
0	1	n/a	n/a		SILT/CLAY, organic soil material and surface roots, red brown (OL)		Cement bentonite grout
	2	16	1.5		As above, (OL) SAND, v.f., buff colored, poorly graded (SP)		
5 ▼	3	4	1.4		SAND, v.f., coarsening downward towards to f.-m. sand, reddish near the top and getting more brown below, some black flecks, wet near bottom (SP)		
	4	6	1.5		SAND, f., ltl. v. f. sand, lt. brown with reddish tinge, poorly graded, clean (SP)		Natural backfill/collapse
10	5	13	1.5		SAND, f.-m., ltl. v. f. sand, m. reddish brown, occasional subrounded f. gravel and clay blob/mudball (SP)		
	6	4	0.8		SAND, v.f.-m, some clay at top of sample, mudballs are present 0.2 ft from the top, moderately well graded, (SP)		
15							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W07C

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
	7	7	1.0		SAND, v.f.-m., moderately well graded, med. brown, poorly sorted, (SW)		
	8	8	0.7		SAND, v.f.-c., tr. f. gravel, well graded, gravel is angular (SP)		
20	9	12	1.3		CLAY, organic, with root fragments, black (OL) SAND, v.f.-m., moderately well graded, soupy layer of silt and f. gravel about 0.2 ft. from the bottom (SP-SW)		
	10	37	1.2		SAND, f.-m., dk. gray near top and v.f. sand, lt. brown, clean near bottom (SP)		
25	11	10	1.4		CLAY, firm, brown olive (CL) SAND, f.-m., ltl. v. f. sand, med. gray, 1 piece of black organic debris (SP)		
	12	7	1.5		CLAY, and silt, soft, brown to olive (MH-CH) SAND, v.f.-c., tr. silt, occasional clay blobs, well graded, piece of woody organic material near top (SW)		
30	13	10	1.2		SAND, f., ltl. v.f. sand, lt. brown, poorly graded (SP) CLAY, med. brown (CL) SAND, v.f.-c., tr. silt, dk. gray (SW)		
	14	7	2		SAND, f.-c., well graded, no fines, medium gray, mafics, mica (SW)		
35	15	9	0.6		SAND, f., tr. v.f. sand, med. brown, poorly graded, clean (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W07C

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
					CLAY, olive, dk. gray, soft, (Pp=0), sticky, (CL)		
	16	10	1.4		SAND, v.f.-c., and f.-c. gravel, well graded, med. brown, subangular gravel (SW-GW)		
40							
	17	17	0.7		SAND, f.-m., tr. c. sand, gray, f. gravel and blobs of clay, at top of sample, poorly graded (SP)		
	18	9	0.8		As above, (SP)		
45					CLAY, soft, olive (CL)		
	19	30	0		No Recovery		
	20	26	0.8		SAND, f.-m., moderately well graded, med. brown (SP)		
50					SAND, m. (SP)		
					SAND, f.-m., med. brown, poorly graded (SP)		
	21	39	0.8		SAND, f.-m., med. brown, poorly graded, 1 piece of subrounded c. gravel, (SP)		
	22	55	1.1		As above, (SP)		
55							
					SAND, f.-c., ltl. f. gravel, moderately well graded (SW)		
	23	52	1.3		SAND, f., lt. brown, poorly graded (SP)		
					SAND, v.f., mottled red, brown and black (manganese) (SP)		
	24	46	1.2		SAND, f.-m., clean, poorly graded, 1 layer of 5-10 pieces of subrounded f. gravel (SP)		
60							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W07C

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
	25	34	0.9		As above, including the layer of gravel, now at the bottom of the sample (SP)		
	26	33	1.0		SAND, f.-c., tr. f.-c. gravel, well graded, med. gray, no fines, gravel is subangular (SW)		
65							
	27	33	1.1		SAND, m., tr. c. sand, tr. f. gravel, poorly graded, clean, subangular (SP)		
	28	59	1.0		As above, tip contains f.-c., gravel, subrounded in a wet silt matrix, clast supported (SP)		
70							Slurry and Bentonite pellets
	29	19	1.2		SAND, f.-c., and f.-c. GRAVEL, well graded, multi-colored (SW-GW))		
					SAND, v.f., ltl. silt, gray, clean, poorly graded, 1 cm. layer of brown silt and clay (SP)		
	30	51	0.9		SAND, f.-c., ltl. f.-c. gravel, well graded, multicolored (SW)		
75							
	31	27	0.9		As above, (SW)		
	32	65	0		No Recovery		
80							
	33	45	1.2		SAND, m., some f. sand, ltl. f. gravel in lowest 0.2 ft. of sample, poorly graded (SP)		Natural backfill/collapse

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W07C

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
	34	41	0.8		SAND, f.-c., and f.-c. gravel, well graded (SW-GW)		
					GRAVEL, f., tr. silt, subrounded (GP)		
85							
	35	31	0.3		GRAVEL, c., ltl. f. gravel, multicolored, washed (GP)		2 in. ID sch 40 PVC screen, 0.010 in. slots
							Borehole TD= 92.5 ft.
	36	95	1.3		SAND, m., ltl. f. sand, multi-colored gray, poorly graded, clean (SP)		
90							
					As above (SP)		End cap
	37	97	1.3		SAND, f., ltl. v.f. sand, tr. silt, olive, soft, but compacted in spoon (SP)		
					SAND, m., brown to slightly olive, poorly graded, clean (SP)		
	38	125	1.5		CLAY, some silt, bright green olive, densely compacted (Pp=2.0) (CL)		
95					SAND, f.-m., olive, clean (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W08EX

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** WDC Exploration
PROJECT NUMBER: 771-3	**CREW LEADER:** Mike Thomas
LOCATION: Highway 380 Transect	**RIG TYPE:** Speedstar 30K
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** NA
START DATE: 4/22/2003	**WELL ELEVATION:** 4552.45 ft.
FINISH DATE: 4/22/2003	**GROUND ELEVATION:** 4550.53 ft.

NOTES: Borehole Diameter: 13.875 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM EX	WELL CONSTRUCTION
							Locking protective casing
							10 in. ID sch 40 PVC riser
0					Not sampled. See log of HWY-W07C for lithology.		Cement bentonite grout
5							
10							
15							
20							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W08EX

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

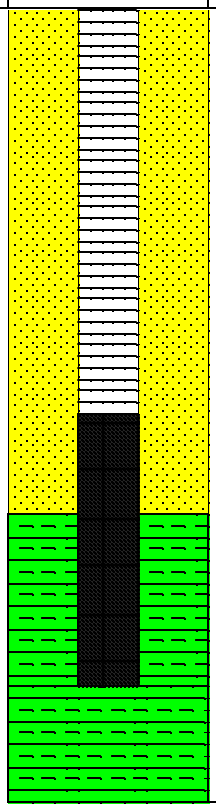
DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM EX	WELL CONSTRUCTION
25							
30							Bentonite chips 10-20 Silica sand pack
35							10 in. ID sch 40 PVC screen, 0.030 in. slots
40							
45							
50							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W08EX

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM EX	WELL CONSTRUCTION
55							End cap
60							Bentonite chips
							Borehole TD: 67 ft.
65							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W09AB

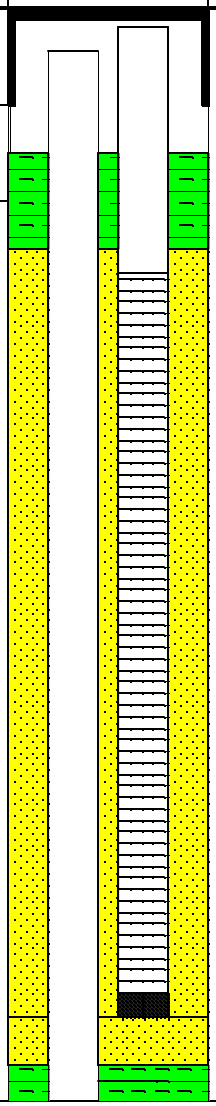
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Highway 380 Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** NA
START DATE: 4/24/2003	**WELL ELEVATION:** A: 4550.65 ft. B: 4550.99 ft.
FINISH DATE: 4/24/2003	**GROUND ELEVATION:** 4550.24 ft.

NOTES: Borehole Diameter: 10 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM	WELL CONSTRUCTION
0					Not sampled. See log of HWY-W07C for lithology.	B A	Locking protective casing 2 in. ID sch 40 PVC riser Bentonite pellets
5							2 in. ID sch 40 PVC screen, 0.010 in. slots 20-40 Silica sand pack
10							
15							End cap
20							Bentonite pellets



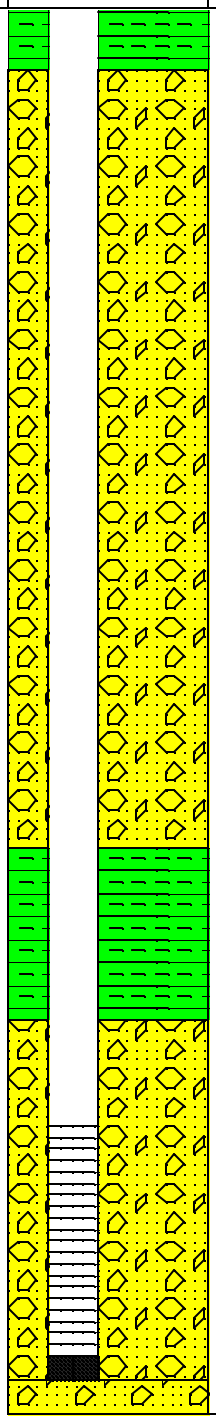
S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W09AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION



25
30
35
40
45
50

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W10AB

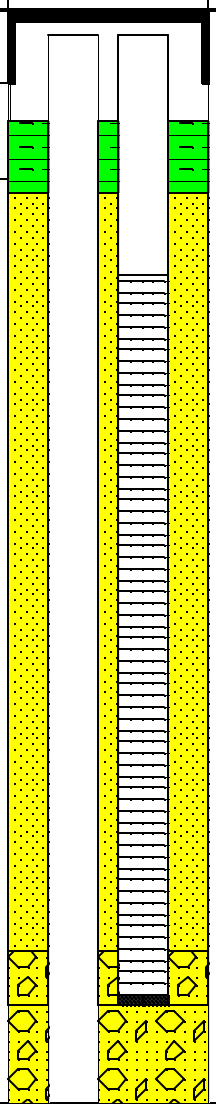
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Highway 380 Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** NA
START DATE: 4/10/2003	**WELL ELEVATION:** A: 4552.10 ft. B: 4552.24 ft.
FINISH DATE: 4/10/2003	**GROUND ELEVATION:** 4551.43 ft.

NOTES: Borehole Diameter: 10 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
0					Not sampled. See log of HWY-W07C for lithology.		Locking protective casing 2 in. ID sch 40 PVC riser Bentonite chips 20-40 Silica sand pack 2 in. ID sch 40 PVC screen, 0.010 in. slots
5							
10							
15							Natural backfill/collapse End cap
20							



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W10AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 | **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
							Bentonite pellets
							Natural backfill/collapse
25							
							Bentonite pellets
							Natural backfill/collapse
30							
35							
							Bentonite pellets
40							
							Natural backfill/collapse
							2 in. ID sch 40 PVC screen, 0.010 in. slots
45							
							Borehole TD: 50 ft.
							End cap
50							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W11AB

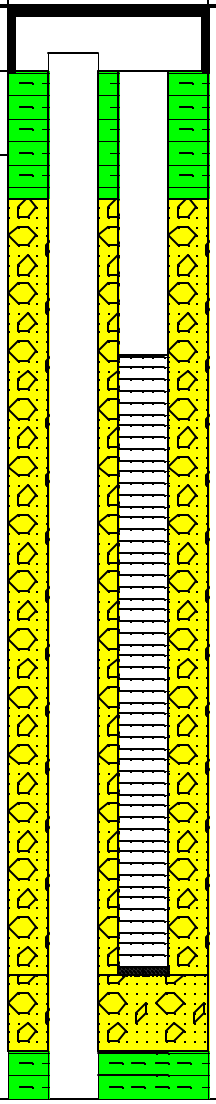
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: Highway 380 Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** NA
START DATE: 5/6/2003	**WELL ELEVATION:** A: 4556.93 ft. B: 4556.12 ft.
FINISH DATE: 5/6/2003	**GROUND ELEVATION:** 4555.44 ft.

NOTES: Borehole Diameter: 10 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
0					Not sampled. See log of HWY-W07C for lithology.		Locking protective casing; 2 in. ID sch 40 PVC riser; Bentonite chips
5							Natural backfill/collapse; 2 in. ID sch 40 PVC screen, 0.010 in. slots
10							
15							
20							End cap; Bentonite pellets



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : HWY-W11AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
25							Natural backfill/collapse
							Bentonite pellets
30							
							Natural backfill/collapse
35							
40							
							Bentonite pellets
45							
							Natural backfill/collapse
50							2 in. ID sch 40 PVC screen, 0.010 in. slots
							Borehole TD: 55 ft.
							End cap
55							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-E01AB

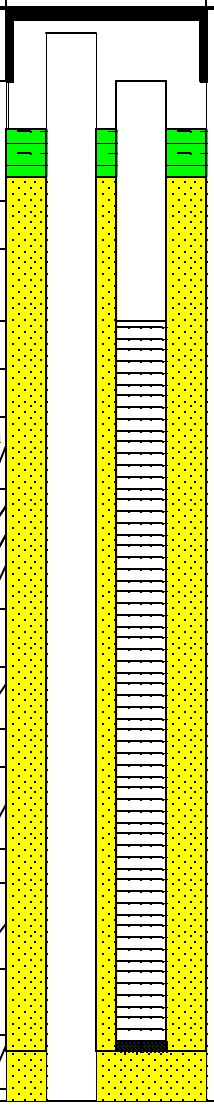
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: South Bosque Boundary Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Stephanie Kuhn	**SAMPLE TYPE:** Split Spoon
START DATE: 2/12/2003	**WELL ELEVATION:** A: 4499.56 ft. B. 4499.84 ft.
FINISH DATE: 2/13/2003	**GROUND ELEVATION:** 4498.81 ft.

NOTES: Borehole Diameter: 6 in.-geological sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					SILT, dk. yellowish brown, (10YR4/4), v. loose, dry (ML)
	1	7	1.7		SAND, f.-v.f., poorly graded, yellowish brown (10YR5/4), loose, dry (SP)
5					
	2	3	1		SILT, some sand, brown (7.5YR4/2), v. loose (ML-SM)
					SILT, increase clay content, dk. brown, (10YR3/3), pinches into a ribbon 1.5 inches long (ML-CL)
▼					SILT, dark yellowish brown (10YR4/4) (ML)
	3	2	1.4		SILT, increasing sand content and moisture, (ML)
10					SILT, v. dk. grayish brown (10YR5/2), moist (ML)
	4	4	1.75		CLAY, higher sand content in upper 0.7 ft., (10YR4/3), pinches into a ribbon 4 inches long (CL)
					SILT, (10YR4/4) (ML)
					SILT, increasing clay, (ML)
	5	9	1.6		SILTand SAND v.f., dark grayish brown (10YR4/2), v. loose, moist (ML-SP)
15					
					CLAY, dk. grayish brown (10YR4/2), (Pp=0.5), (CL)
	6	20	2.1		SAND, f.-v.f., grayish brown (10YR5/2), some bedding apparent in thin black layers of sand (SP)
	7	4	2.1		SAND, f.-v.f., ltl.-few fines, dk. grayish brown, (10YR4/2) (SP)
20					SAND, f.-m., ltl. fines, grayish brown (10YR5/2) (SP)

WELL DIAGRAM



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite pellets and mudgel
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-E01AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B	WELL DIAGRAM A	WELL CONSTRUCTION
	8	5	0.8		SAND, f.-v.f., ltl.-few fines, dk. grayish brown, (10YR4/2) (SP)			
								Bentonite pellets
	9	4	1.5		SAND, f.-v.f., some silt, poorly graded, dk. grayish brown (10YR4/2), upper 0.7 ft. suspected sluff (SP)			Natural fill/bentonite slurry
25								
	10	50/4	2.3		As above, some bedding apparent in darker sand layers (SP)			
	11	50/6	0		No Recovery, cobble plugging sampler bottom when retrieved (SP)			
30								
	12	50/5	1.3		SAND, f.-v.f., few fines, brown (10YR5/3), 0.05 ft. layer of light brownish gray (10YR6/2), sandstone (SP)			
	13	50/5	1.3		As above, 0.25-0.50 inch cobbles at top of sample (SP)			
35								
	14	13	0.65		As above, including cobbles (probabaly sluff), (SP)			
								Bentonite slurry
	15	50/5	1.4		As above, top 0.4 ft. suspected sluff (SP)			
40								Natural fill/collapse
	16	50/4	0.9		SAND, f.-m., ltl. fines, poorly graded, brown (7.5YR4/6), dense (SP)			
	17	50/6	0.6		SAND, f.-v.f., some fines, poorly graded, brown (10YR4/3), dense, chunck of light brownish gray sandstone 0.35 ft. from bottom of sampler (SP)			2 in. ID sch 40 PVC screen, 0.010 in. slots
45								
	18	50/5	0.7		SAND, f.-m., poorly graded, brown (7.5YR4/6), ltl. fines, dense (SP) SAND, f.-v.f., (SP)			Borehole TD: 49.5 ft.
	19	50/6	0.6		SAND, f.-m., (SP)			End cap
50								

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

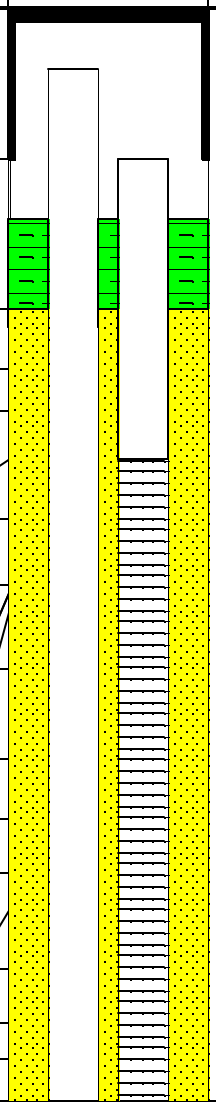
BORING NO. : SBB-E02AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: South Bosque Boundary Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** Split Spoon
START DATE: 2/4/2003	**WELL ELEVATION:** A: 4499.44 ft. B: 4499.67 ft.
FINISH DATE: 2/5/2003	**GROUND ELEVATION:** 4498.26 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					SILT/CLAY, (10YR4/3), (Pp=0.1), slightly moist (ML-CL)
					As above, (ML-CL)
	1	6	1.5		SAND, v.f., poorly graded, (10YR7/2), dry, no visible structure (SP)
5					
					CLAY, sandy, (10YR3/4), (Pp=0.3) (CL)
	2	6	1.3		SAND, f., (SP)
					CLAY, no sand, (Pp=1.4), dense (CL)
▼					
					CLAY, no-tr. sand, (Pp=1.5-1.7) (CL)
	3	6	1.4		
10					
					As above, (CL)
	4	9	1.5		SILT, dk. gray, grading to sandy clay, grading to clayey sand, organic matter present (ML-SP)
					CLAY, soft, (10YR4/3), dk. organic rich layers (CL)
	5	13	1.5		SAND, v.f., poorly graded, tr.-some fines (SP)
15					



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-E02AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	6	21	1.5		SAND, v.f., poorly graded, (10YR5/4), predominately quartz and carbonate sand, weak-moderate reaction to acid, 0.15 inch thick clay layer 0.3 ft. from bottom (SP)		
	7	9	0.8		As above, (SP)		
20							End cap
	8	11	1.0		SAND, f.-m., poorly graded, (10YR5/4), 80/20 quartz/other, subrounded-subangular, f. darker colored layer present (SP)		Natural backfill/collapse
	9	8	0.9		As above, (SP) CLAY, (10YR4/6), some iron staining, (Pp=1.0), firm (CL)		Bentonite pellets
25							
	10	60	1.4		GRAVEL/SAND, c., suspected sluff (GP-SP) SAND, f.-v.f., poorly graded, lt. brown to rust brown (10YR5/6), tr. fines, 80/20 quartz and other (SP)		Natural backfill/collapse
	11	50/5	2.0		GRAVEL/SAND, f., subrounded-subangular,silaceous (GP-SP) SAND, f.-v.f., v. poorly graded, rust brown(2.5YR6/4), no visible structures (SP)		
30							
	12	50/5	1.2		GRAVEL, f.-m., suspected sluff (GP) SAND, f.-v.f., dense, (SP)		
							Bentonite pellets and slurry
	13	50/5	1.2		SAND, f.-v.f., tr. f. gravel in upper 0.3 ft., carbonate present by acid test, dense (SP)		
35							
	14	50/5	0.2		As above, tr. f. gravel in upper 0.1 ft, may indicate sluff, no visble structure (SP)		
	15	51/5	1.9		GRAVEL/SAND, v.c., fining upward to f. gravel and c. sand, then m. sand to f. sand, suspected sluff (GP-SP) SAND, f., (SP)		Natural backfill/collapse

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-E02AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM	WELL CONSTRUCTION
40					SAND, f., (SP)	B A	
					SAND, f., some c. sand and f. gravel, upper 1.2 ft. suspected sluff (SP)		
	16	50/4	1.0		SAND, v.f.-f., (SP)		
	17	50/3	1.3		SAND, f.-m., color as above, f. gravel 0.4-0.6 ft. from top of sample (SP-GP)		2 in. ID sch 40 PVC screen, 0.010 in. slots
45							
	18	50/5	0		No Recovery, small plug of f. sand in drive shoe with few f. gravel pieces		Borehole TD: 49.5 ft.
	19	50/4	0.5		SAND/GRAVEL, sluff		End cap
50					SAND, f.-v.f., (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

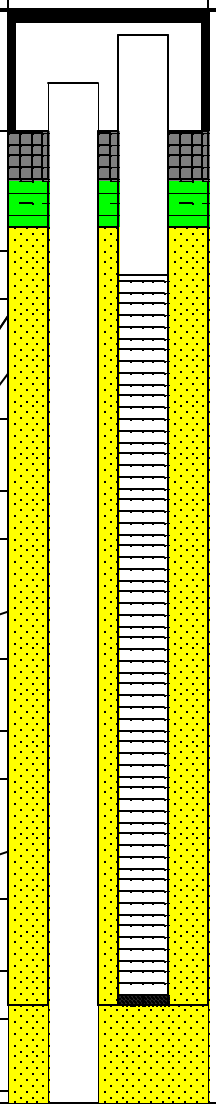
BORING NO. : SBB-E03AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: South Boundary Bosque Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: P. Lang, S. Kuhn	**SAMPLE TYPE:** Split Spoon
START DATE: 2/6/2003	**WELL ELEVATION:** A: 4497.09 ft. B: 4496.79 ft.
FINISH DATE: 2/11/2003	**GROUND ELEVATION:** 4495.48 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					SILT, SAND, v.f., lt. yellowish brown (10YR1/4), loose, dry (MH-SP)
					As above, (MH-SP)
5	1	6	0.6		CLAY, dk. yellow brown (10YR4/4), (Pp=2.0), forms ball when moist (CL)
	2	8	0.6		CLAY, as above, (Pp=1.5), med. stiffness (CL) Upper 0.5 ft. suspected sluff
10	3	6	1.3		CLAY, brown to gray black (10YR4/3), (Pp=1.6), med. stiffness, blocky structure, significant organic matter (CL) Upper 0.2 ft. suspected sluff
▼	4	3	1.5		As above, decreased organic matter, (Pp=1.0), forms ribbon to about 0.2 inches (CL)
15	5	2	1.3		SAND, f., some m. sand, poorly graded, gray brown (10YR5/2), predominately silica, carbonate grains present by acid reaction, loose (SP)
	6	7	0.8		SAND, f.-m., tr. c. sand, poorly graded, color as above, 80/20 quartz/other, loose (SP)
20	7	15	0.8		As above, no visible bedding, loose (SP)



WELL CONSTRUCTION:
- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in slots
- End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-E03AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	8	24	1.5		As above, increasing m.-c. sand (SP) SILT, loose, soft (ML) SAND, f.-c., with some f. gravel (SP-SW)		
	9	68	1.3		SAND, f.-c., increasing gravel, well graded, bedding visible (SW) SAND, f.-v.f., poorly graded, brown (7.5YR4/4), no visible bedding/structure, dense (SP)		Bentonite slurry Natural pack, sand, slurry
25	10	50/6	1.4		As above, some fines, few pieces of f.-m. gravel in upper 0.2 ft. (SP)		20-40 Silica Sand
	11	50/4	1.3		As above, m. gravel in upper 0.1 ft (SP)		Bentonite pellets
30	12	50/5	0		No Recovery		
	13	50/5	1.0		SAND, f.-v.f., as above (SP)		
35	14	50/5	0.9		As above, (SP)		Natural pack/collapse
	15	50/4	0.7		As above, sluff upper 0.5 ft. (SP)		Bentonite pellets
40	16	50/4	0.8		As above, gravel/cobble sized sandstone at 0.5 ft. from base (SP)		2 in. ID sch 40 PVC screen, 0.010 in. slots
	17	50/5	1		As above, (SP)		
45	18	50/5	1		As above, with few sandstone gravel pieces at 46.3, 46.5 and 46.7 ft. (SP)		End cap Borehole TD= 47 ft.
50	19	50/4	0.8		As above, upper 0.1 ft. sluff (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

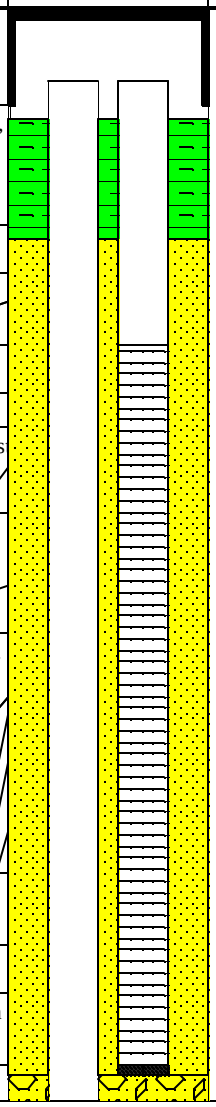
BORING NO. : SBB-W01AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: South Bosque Boundary Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** Split Spoon
START DATE: 2/25/2003	**WELL ELEVATION:** A: 4484.80 ft. B: 4484.96 ft.
FINISH DATE: 2/28/2003	**GROUND ELEVATION:** 4484.47 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					SAND/SILT, v.f. sand, poorly graded, lt. yellow brown (10YR6/6), dry (SP-ML)
					CLAY, ltl. silt/sand, brownish red, soft, (Pp=0.1), soft, dry (CL)
	1	10	1.3		SAND, v. f., poorly graded, lt. brown (SP)
5					
					As above, dry (SP)
▼	2	4	1.2		CLAY, ltl. sand, dk. gray brown (10YR4/1), (Pp=0.21), soft, mois significant organic material (CL)
	3	9	1.3		SAND, f.-m., tr. c. sand, poorly graded, yellowish brown (10YR5/4), darker layer representing bedding evident in sample, mica up to 1.5 mm present (SP)
10					
	4	7	1.0		As above, increasing to some c. sand, tr. f. gravel (SP) Top 1.2 ft. sluff made of f.-m. sand, c.-f. gravel (SP) Top 1.2 ft. suspected sluff.
					SAND, v.f., some f. sand, poorly graded, dk. gray (GLEY13/5) (SP)
	5	16	1.2		
15					SAND, f.-m., ltl. c. sand, ltl. f. gravel, poorly graded, brown/gray (10YR4/3), horizontal layering evident (SP)
	6	22	0.6		As above, no gravel, tr.-few c. sand (SP)
	7	29	1.2		SAND, f., poorly graded, lt. brown, (10YR5/4), layering present in thin bands (SP)
20					



WELL CONSTRUCTION:
- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite pellets
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W01AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	8	9	0.5		GRAVEL, f.-c., SAND, f.-c., well graded, gray brown, angular to rounded, silaceous lithologies. Large fragments of gravel stuck in shoe. (SW-GW)		Natural backfill/collapse
							Bentonite pellets
	9	11	0.1		SAND, f.-m., some f. gravel, tr. clay, dk. gray, may be sluff (SP) Very little recovery.		
25							
	10	18	0.7		SAND, f.-m., ltl.-some c. sand present in layers, poorly graded, gray brown (10YR5/1-5/2) (SP)		Natural backfill/collapse
	11	29	1.1		SAND, f.-m., v. poorly graded, brown-dk. brown (10YR3/3), layering visible in thin dk. bands (SP)		
30							
	12	38	1.1		As above, (SP)		
	13	12	1.0		SAND, as above, significant f. gravel over lower 0.2 ft. of sample, plug of soft clay in sample shoe overlain by gravel, clay contains gravel, (SP) Upper 0.2 ft contains suspected sluff of f. gravel with sand.		Bentonite slurry
35							
	14	61	1.1		CLAY, some gravel, no sand, matrix supported, brown (7.5YR5/5), (Pp=1.0-1.5), some organic layering (CL)		
	15	16	0.7		SAND, v.f., tr. gravel and c. sand near base, poorly graded, pale brown (10YR6/3), plug of dense clay in shoe, dk. brown (Pp=0.3), (SP)		
40							Natural backfill/collapse
	16	28	0.8		SAND, f.-m., poorly graded (SP)		
	17	32	1.2		SAND, v. f., poorly graded, brown (10YR4/3), horizontal layering present (SP)		
45							2 in. ID sch 40 PVC screen, 0.010 in. slots
	18	25	0.3		As above, (SP)		Borehole TD= 50.5 ft.
	19	24	0.8		As above, (SP)		
50							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W02AB

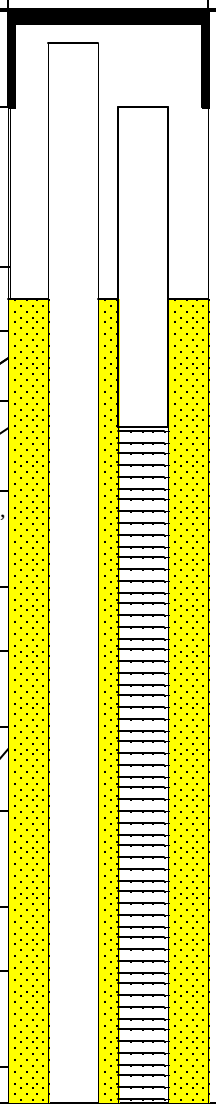
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: South Boundary Bosque Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Stephanie Kuhn	**SAMPLE TYPE:** Split Spoon
START DATE: 2/18/2003	**WELL ELEVATION:** A: 4488.33 ft. B: 4488.43 ft.
FINISH DATE: 2/19/2003	**GROUND ELEVATION:** 4487.96 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0	1				SILT, yellowish brown (10YR5/4), soft, dry (MH)
	2	10	1.3		As above, (MH)
					SILT, lt. yellowish brown (10YR6/4), loose, dry, tr. roots (MH)
5					CLAY, brown (10YR4/3), (Pp=3.75) (CL)
	3	4	1.3		SAND, f.-m., ltl. fines, poorly graded, yellowish brown (10YR5/4), v. loose, moist (SP)
▼	4	5	1.6		SAND, f.-m., ltl. fines, gravel in lower 0.6 ft., grayish brown (10YR5/2), wet (SP)
10					SILT, some f.-m. sand, (10YR5/4), (SP)
	5	11	2.1		SAND, f.-m., tr. fines, poorly graded, grayish brown, poorly graded, loose (SP)
	6	9	1.9		As above, (SP)
15					

WELL DIAGRAM



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W02AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B	WELL DIAGRAM A	WELL CONSTRUCTION
	7	3	0.5		GRAVEL, largest piece 3/4 in. long, angular, flowing sands (GP)			
	8	8	0.7		SAND, f.-m., (SP)			
20								End cap
					CLAY/SILT, gray (10YR5/1) (CL-MH)			
	9	13	1.4		SAND, f.-m., (SP)			Natural backfill/collapse
								Bentonite pellets
	10	10	1		As above, (SP)			
25								
					SAND, f.-m., some fines, yellowish brown (10YR5/8), increasing silt content near the top (SP)			Natural backfill/collapse
	11	7	0.9		CLAY, v. dk. grayish brown (10YR3/2) (Pp=0.25) (CL)			
	12	21	0.8		SAND, f.-m., tr. fines, poorly graded, dk grayish brown (10YR4/2), med. dense (SP)			
30								
	13	13	0		No Recovery, Sluff			
								Bentonite pellets and slurry
					SAND, f.-m., tr. c. gravel (SP)			
	14	3	1.1		CLAY/SILT, dk. grayish brown (10YR4/2), (Pp=0.75), rolls into a ball easily and can be pinched into a 2 in. ribbon (CL-MH)			
35								
	15	10	2.2		CLAY, mottled color grayish brown (10YR5/2) to gray (10YR5/1) to brown (7.5YR 5/2), (Pp=0), rolls easily into a ball and pinches into a ribbon (CL)			
					SAND, f.-m., with 0.2 ft layer of clay (SP)			

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W02AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
	16		1.5		SILT, few f. sand, dk grayish brown (10YR4/2) (ML) SAND, few cobbles with largest being 1.5 in. (SP) CLAY, (CL) SAND, (SP)		Natural backfill/collapse
40							
	17	27	1.1		SAND, v.f.-f., ltl.-some fines, dk. gray (10YR4/1), poorly sorted, med. dense (SP)		
	18	31	1.0		SAND, f.-m., few fines, poorly graded, dk. gray (10YR4/1), med. dense, orange grease shows up on sampler, lower 0.3 ft. may be sluff, contains several pieces of rock, largest is 1.25 in. (SP)		2 in. ID sch 40 PVC screen, 0.010 in. slots
45							
	19	32	1.4		CLAY, v. dk. gray (10YR3/1), (Pp=0.75), rolls into a ball easily and forms a 2 in. ribbon (CL) SAND, m-c., gravel, some fines, poorly graded, dk. grayish brown (10YR4/2), gravel is angular and largest piece is 1.5 in. (SW-GW) SAND, f.-m. (SP)		Borehole TD= 49.5 ft.
	20	18	1.0		SILT, some-ltl. f.-m. sand, tr. gravel, v. dk. grayish brown (10YR3/2), gravel are in angular pieces, largest pieces 1.5 in., large cobble stuck in shoe when sample pulled up size 2.25 in. (ML-SM)		End cap
50							
	21	50/5	0.5		SAND, f.-m., ltl. fines, f.-c. gravel in top of sampler, dk. yellowish brown (10YR4/4) (SP)		
	22	50/5	0.6		As above, tr. rounded gravel throughout sampler (SP)		
55							
	23	50/4	1.4		As above, no gravel (SP)		
	24	50/4	0.7		As above, (SP)		
60							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W02AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
					SAND, f.-m., rounded pieces of gravel, largest piece is 0.75 in (SP)		
	25	50/6	1.0		SILT, ltl. f. sand, dk. yellowish brown (10YR4/4), (Pp=1.25) (SP-ML)		
					SLUFF, No actual recovery		
	26	50/4	0				
65							

S. S. PAPADOPULOS & ASSOCIATES, INC.

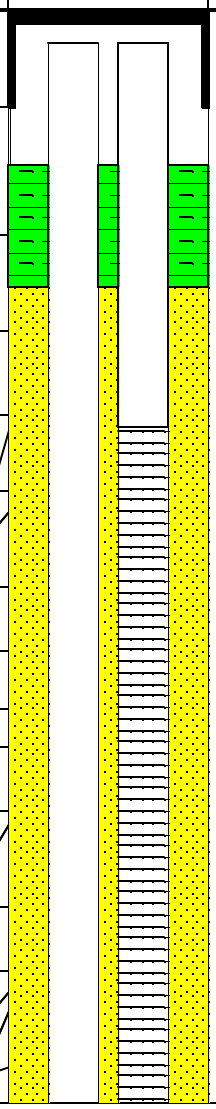
GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W03AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: South Bosque Boundary Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Dagmar Llewellyn	**SAMPLE TYPE:** Split Spoon
START DATE: 10/31/2002	**WELL ELEVATION:** A: 4489.68 ft. B: 4489.76 ft.
FINISH DATE: 3/5/2003	**GROUND ELEVATION:** 4488.81 ft.

NOTES: Borehole Diameter: 6 in.-geo. sampling, 10 in.-well construct. ▼ = visual observation of water during drilling
Located 38 ft. south of staked location Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0		n/a	n/a		SILT, loam, ltl. sand, lt. brown, dry (ML)
	1	7	1.2		As above, (ML)
5					CLAY, silty clay, transitioning to hard, moist dark brown clay, in tip, (Pp=2.0) (CH)
					CLAY, dk. brown, fat, (Pp=2.5), moist, (CH)
	2	12	1.3		SILT, some v. f. sand, lt. brown, dry (ML)
▼					
	3	12	1.3		CLAY, ltl. sand, dk. brown, mottled with med. orange clay, (Pp=3.25) (CH)
10					SAND, f., some v.f. sand, lt. gray (SP)
					CLAY, dk. brown and m. orange clay, mottled, (Pp=1.75) (CH)
	4	9	1.3		SAND, f., some v.f. sand, lt. gray (SP)
					SAND, f., lt. gray, few roots, 1 piece of f. white gravel (SP)
	5	9	1.3		SAND, f.-m., clean, (SP)
15					SAND, m., lt. gray, clean (SP)



WELL CONSTRUCTION:
- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W03AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	6	19	1.0		SAND, f.-v.f., poorly graded, med. brown, (SP)		
	7	19	1.0		SAND, f.-m. tr. c. gravel (SP)		
					SAND, m., ltl. c. gravel, ltl. f.-v.f. sand (SP)		
20							End cap
	8	16	1.0		SAND, m.-c. (SP)		
					SAND, m., some c. sand (SP)		Natural backfill/collapse
	9	15	0.9		SAND, f., some v. f. sand, lt. gray with some orange, clean (SP)		
25							Bentonite pellets
	10	30	1.5		SAND, m., some c. sand, tr. f. gravel, poorly graded, lt. gray, clean (SP)		Natural backfill/collapse
					SAND, f.-m., tr. c. sand, lt. gray, clean, no fines (SP)		
30							
	12	25	0.6		As above, (SP)		
	13	15	0		As above, ltl. f.-c. gravel. sample half full, suspected sluff (SP)		
35							
	14	20	0.9		SAND, f., ltl. v.f. sand, thin bands of m. sand, lt. gray (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

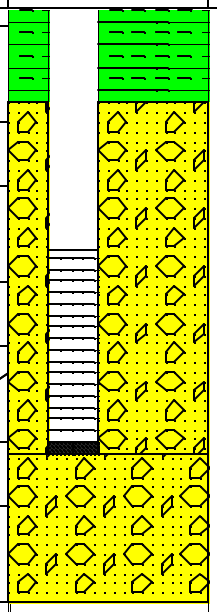
GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W03AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
	15	20	0.0		SAND, f.-m., lt. gray, clean (SP)
40					
	16	24	.9		As above, (SP)
					CLAY, ltl. f.-c. sand, dk. brown, (Pp=2.5) (CH)
	17	39	1.5		SAND, f.-m., clay peds, tr. c. sand (SP)
45					
	18	47	1.2		SAND, f.-m., 3-5mm layers of m. sand, lt. gray (SP)
	19	29	0.9		As above, (SP)
50					
	20	39	n/a		No Recovery
	21	39	1.2		SAND, f.-m., no fines, lt. gray, clean (SP)
55					
	22	39	1.2		SAND, f.-m., a couple of thick, 1 in. dark brown fat clay layers (SP)
	23	16	1.0		SAND., v.f.-f., med. brown (SP)
60					

WELL DIAGRAM



WELL CONSTRUCTION

- Bentonite slurry
- Natural backfill/colapse
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- End cap
- Borehole TD: 47.5

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W03AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	24	32	1.2		SAND, f.-m., lt. gray, clean, f.-c. gravel in tip of spoon (SP-GP)		
	25	26	0.3		SAND, m., some f. sand, tr. f. gravel, lt. gray, suspected sluff (SW)		
65							
	26	43	0.6		SAND, f.-m., lt. gray, some blobs of clay (SP)		
	27	41	0		No Recovery		
70							
	28	50	1.0		SAND, f.-c., some f.-c. gravel, well graded, fines may have been washed out (SW)		
	29	23	0.7		GRAVEL, f.-c., ltl. f.-c. sand, clean, fines may have been washed out (GW)		
75							
	30	38	1.1		GRAVEL, f.-c., some f.-c. sand, multi-colored (GW-SW)		
	31	32	0.7		As above, (GW-SW)		
80							
	32	21	0.9		SAND, f.-c., f.-c. gravel, with 2 one inch layers of dk. brown clay, some striations of sand and gravel evident but disturbed by sampling (SW-GW)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W03AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	33	21	0.8		GRAVEL, f.-c., little f.-c. sand, slightly more gravel than above (GW-SW)		
85							
	34	38	0.8		SAND, f.-c., f.-c. gravel, mixed up, brown (GW-SW)		
	35	43	0.8		As above, tr.-ltl. silt, (GW-SW)		
90							
	36	78	1.4		As above, tr. silt, (GW-SW)		
	37	75/6	0		No Recovery		
95							
	38	90	0.6		SAND, f.-m., sand, lt. brown, well sorted (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

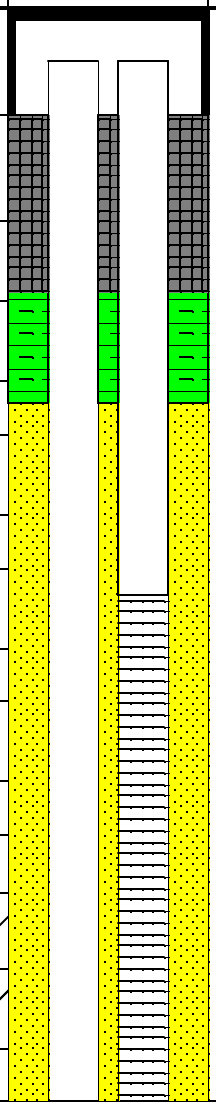
GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W04AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: South Bosque Boundary Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Dagmar Llewellyn	**SAMPLE TYPE:** Split Spoon
START DATE: 11/1/2002	**WELL ELEVATION:** A: 4495.08 ft. B: 4495.07 ft.
FINISH DATE: 3/6/2003	**GROUND ELEVATION:** 4493.86 ft.

NOTES: Borehole Diameter: 6 in.-geo. sampling, 10 in.-well construct. ▼ = visual observation of water during drilling
Located 23 ft. north of staked location Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					SAND, f.-m., lt. brown, clean (SP)
	1	5	1.5		SILT/SAND, v.f., lt. brown, moist (SM)
5					
	2	6	1.5		SILT, loam, clayey, med. brown (CL-ML)
	3	6	1.4		SILT/CLAY, med. brown, more silt at top and more clay near bottom of sample, moist (CL-ML)
10					
	4	7	1.5		CLAY, some silt, med. brown, (Pp=0.5-0.75), slightly organic at top with a mottled gray and olive color, moist, (CL)
	5	14	1.5		CLAY, with organics, greenish and black (CL)
15					SAND, f., lt. brown (SP)
	6	16	1.5		CLAY, med. brown, (Pp=1.5) (CL)
					SAND, f.-m., lt. brown, clean (SP)



WELL CONSTRUCTION:
- Locking protective casing
- 2 in. ID sch. 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W04AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	7	5	1.5		SAND, f.-m., lt. gray, clean (SP)		
20							
					CLAY, greenish, organic with organic debris (CL)		
	8	17	1.5		SAND, f.-m., lt. brown, clean (SP)		
	9	15	1.5		SAND, m.-c., some f. sand, ltl. clay/silt, tr. f. gravel, med.-dk. brown (SW)		End cap
25							Natural backfill/collapse
	10	23	0.7		SAND, f.-c., ltl. f. gravel, med. brown, clean (SW)		Bentonite pellets
	11	14	0		No Recovery		
30							Natural backfill/collapse
	12	11	0.7		SAND, m.-c., tr. f. gravel, lt. gray, clean (SP)		
	13	19	0.7		SAND, f.-m., some black layers, lt. brown, clean (SP)		
35							
	14	20	0.6		SAND, f.-m., lt. gray, clean (SP)		
	15	44	0.6		As above, (SP)		
40							
	16	22	0.8		SAND, f.-c., and GRAVEL, f., tr. c. gravel, gray, more sand in bottom of sample (SW-GW)		Slurry and Bentonite pellets
	17	21	0.5		SAND, m., some c. sand, ltl. f.-c. gravel, lt. gray (SP)		
45							Natural backfill/collapse

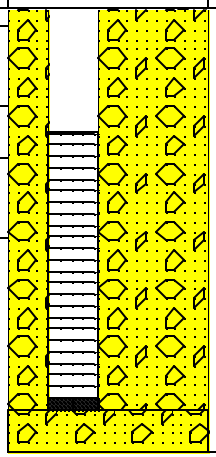
S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W04AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	18	33	0.7		SAND, f.-m., lt. gray, clean (SP)		
	19	11	0.9		As above, (SP)		2 in. ID sch 40 PVC screen, 0.010 in. slots
50							Borehole TD= 54 ft.
							End cap



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W05A

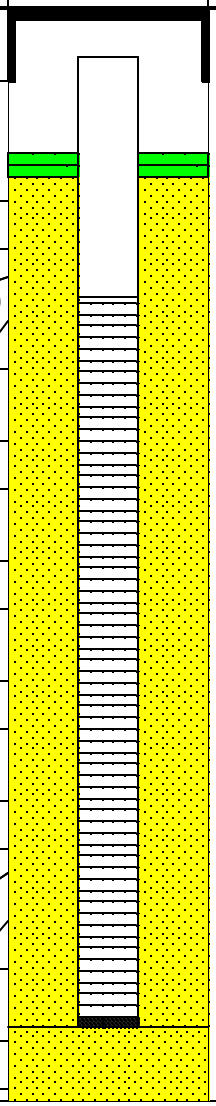
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: South Bosque Boundary Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** Split Spoon
START DATE: 3/7/2003	**WELL ELEVATION:** 4499.51 ft.
FINISH DATE: 3/7/2003	**GROUND ELEVATION:** 4498.66 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
8 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					SILT, some clay and v.f. sand, brown-brown gray in color, dry (ML)
					As above, (ML)
5	1	3	1.4		CLAY, dk. yellowish brown (10YR4/4), moderately stiff (Pp=1.1) (CL)
▼	2	5	1.4		SAND, v.f., some m. sand, some-ltl. fines, poorly graded, brownish yellow (10YR5/6) (SP)
10	3	5	1.0		SAND, f.-m., few-tr. c. sand, no fines, poorly graded, brown (7.5YR5/4), 70/30 quartz/other (SP)
	4	5	1.5		As above, (SP)
15	5	7	2.0		SAND, f.-m., tr. c. sand and v. f. sand, tr. fines, some clay present in ball structure, poorly graded, brown (10YR4/4) (SP)
					As above, (SP)
	6	3	1.2		CLAY, gray brown (10YR4/2), alternating with few thin sand/silt layers, moderately stiff (Pp=0.7-1.0) (CL)
20	7	3	1.4		As above, no alternating sand (SP)

WELL DIAGRAM A



WELL CONSTRUCTION

- Locking protective casing
- 2 in ID sch 40 PVC screen, 0.010 in. slots
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W05A

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM A	WELL CONSTRUCTION
	8	1/18	2.2		CLAY, some silt and v.f. sand, brown (10YR5/3), (Pp=0.3-0.5) (CL)		Bentonite pellets
	9	14	1.5		CLAY, v. f. sand, color as above, mod. stiff-stiff (Pp=0.5-1.0) (CL)		
25	10	14	2.1		SAND, f., some m. sand, poorly graded, yellowish brown (10YR5/4) (SP)		Borehole TD= 27 ft.
	11	22	2.1		SAND, f.-m., tr. c. sand, poorly graded, lt. yellowish brown (10YR5/4), bedding visible in lower 1.4 ft. (SP) Sampler stuck in auger, had to free by using bonnet and water.		
30	12	10	0		No Recovery, some f.-c. sand and f. gravel loose in sampler		
	13	17	0.8		SAND, f.-m., some c. sand, some f. gravel, moderately-well graded, (SP-SW)		
35					GRAVEL, c., lithic gravel, angular (GP)		
					SAND, as above (SP)		
	14	50/4	0.9		CLAY, reddish brown (2.5YR4/4), very stiff (Pp=4.0-4.5) (CL)		
	15	50/5	0.8		SAND, f., some m. sand, tr. c. sand, some fines, poorly graded, yellowish red (5YR4/6) (SP)		
40	16	50/5	1.2		As above, (SP)		
	17	50/5	1.1		As above, (SP)		
45	18	50/5	1.3		As above, (SP)		
	19	50/5	1.0		As above, (SP)		
50							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W06AB

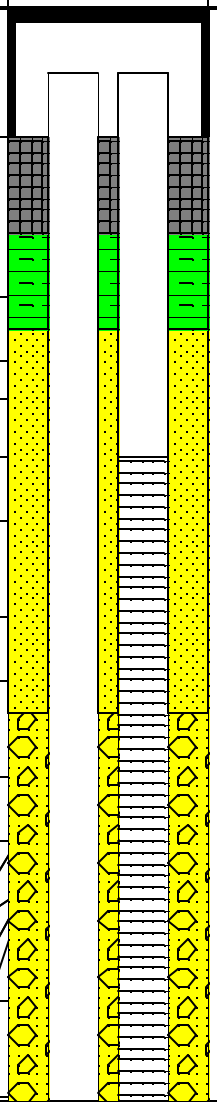
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: South Bosque Boundary Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Stephanie Kuhn	**SAMPLE TYPE:** Split Spoon
START DATE: 2/20/2003	**WELL ELEVATION:** A: 4488.71 ft. B: 4488.55 ft.
FINISH DATE: 2/21/2003	**GROUND ELEVATION:** 4488.10 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					SILT, yellowish brown (10YR5/6), v. loose, dry (ML)
					As above, piece of wood in sample (ML)
	1	11	1.6		SAND, v.f.-f., some-ltl. fines, poorly graded, brown (10YR6/3), loose, dry (SP)
5					
	2	9	1.6		SAND, v.f.-f., some fines, poorly graded, yellowish brown (10YR5/4), bedding clearly present by color and lithology, fines increasing towards the top (SP)
▼					
	3	2	1.6		SAND, v.f.-f., increasing silt towards the top of sample, ltl. fines, grayish brown to brown (10YR5/2-5/3), v. loose, wet, bedding clearly present (SP)
10					
	4	3	2.1		SAND, v.f.-f., some fines, grayish brown (10YR5/2) (SP) SILT, some f. sand, brown (10YR5/3) (ML) SAND. v.f.-f., some fines, grayish brown (10YR5/2) (SP) SAND, f.-m., ltl.-few fines, grayish brown (10YR5/2) (SP)
	5	7	1.0		SAND, m.-f., ltl. fines, grayish brown (10YR5/2), v. loose (SP)
15					

WELL DIAGRAM (B A)



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Concrete
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- Natural backfill/collapse

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W06AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
	6	11	1.0		SAND, m.-f., some fines, grayish brown (10YR5/2), more fines at top and bottom of sample; some gravel at the top of sampler, som bedding present in sand (SP)		
	7	26	0.9		As above, (SP)		
20							End cap
	8	13	1.1		SAND, m.-f., ltl. fines, dk. grayish brown (10YR4/2), loose (SP)		Bentonite pellets
	9	11	0.9		As above, coarsening upward (SP)		
25							Natural backfill/collapse
	10	11	1.1		SAND, v.f.-f., ltl. fines, grayish brown (10YR5/2), some bedding apparent (SP) SAND, m-c., few fines, dk. gray (10YR4/1), loose (SP)		
	11	16	0.3		SAND, f.-m., some fines, dk. gray (10YR4/1), 2 in. piece of rose quartz at top of sampler (SP)		
30							
	12	17	0.9		SAND, f.-m., f. gravel, poorly graded, dk. gray (10YR4/1), largest piece of gravel is 1 in. (SW-GW) SAND, v.f.-f., few-tr. fines, gray (10YR5/1) (SP)		
	13	5	1.1		As above, lots of fines in drive shoe, perhaps some clay color changes to gray (10YR5/1) at 34.5 ft. (SP)		
35							
	14	14	0.6		SAND, f.-m., few fines, well graded, dk. grayish brown (10YR4/2), loose (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W06AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
					As above, 0.5 in. piece of gravel in upper 0.4 ft. of sample (SP)		
	15	21	0.9		SILT, grayish brown (10YR5/2), rolls with some difficulty into a ball (ML)		Bentonite pellets
40					SAND, f.-m., dk. grayish brown (SP)		
					SAND, f.-m., ltl. f. gravel throughout sample, dk. gray (10YR4/1) (SP)		Bentonite slurry
	16	14	0.9		SAND, f.-v.f., few-ltl. fines, well graded, dk grayish brown (10YR4/2) (SP)		
							Natural backfill/collapse
					SAND, f.-m., ltl.-few fines (SP)		
	17	24	1.2		SAND. f.-v.f., some fines (SP)		2 in. ID sch 40 PVC screen, 0.010 in. slots
45					SAND, f.-m., ltl. fines (SP)		
					As above, (SP)		Borehole TD= 50 ft.
	18	50	1.3		SAND, f.-m., some fines, ltl. gravel and cobble pieces (largest piece 1.5 in) (SP)		
	19	50/5	0.4		SAND, f.-m., some fines, brown (10YR5/3), 1.75 in. piece of gravel at top of sample (SP)		End cap
50							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W07BC

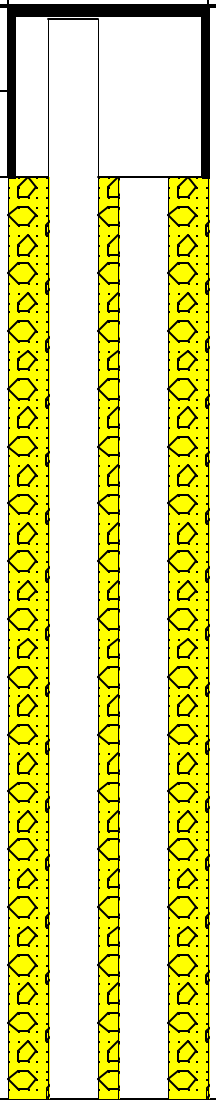
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** WDC Exploration
PROJECT NUMBER: 771-3	**CREW LEADER:** Mike Thomas
LOCATION: South Bosque Boundary Transect	**RIG TYPE:** Speedstar 30K
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** NA
START DATE: 4/14/2003	**WELL ELEVATION:** B: 4489.00 ft. C: 4489.93 ft.
FINISH DATE: 4/14/2003	**GROUND ELEVATION:** 4488.19 ft.

NOTES: Borehole Diameter: 8 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (C B)	WELL CONSTRUCTION
							Locking protective casing
					Not sampled. See log of SBB-W03AB for lithology.		2 in. ID sch 40 PVC riser
0							Natural backfill/collapse
5							
10							
15							
20							



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W07BC

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (C B)	WELL CONSTRUCTION
25							
30							
35							
40							Bentonite chips
							Natural backfill/collapse
45							2 in. ID sch 40 PVC screen, 0.020 in. slots
50							End cap
							Bentonite chips
55							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W07BC

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (C B)	WELL CONSTRUCTION
60							
65							
70							
75							Natural backfill/collapse
80							2 in. ID sch 40 PVC screen, 0.020 in. slots
85							Borehole TD: 86.3 ft.
							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

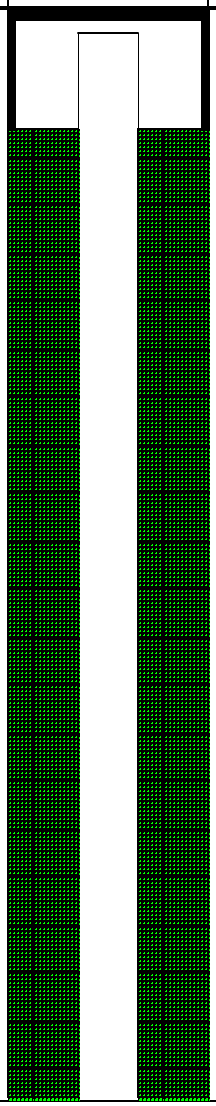
BORING NO. : SBB-W08EX

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** WDC Exploration
PROJECT NUMBER: 771-3	**CREW LEADER:** Mike Thomas
LOCATION: South Bosque Boundary Transect	**RIG TYPE:** Speedstar 30K
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** NA
START DATE: 4/13/2003	**WELL ELEVATION:** 4489.82 ft.
FINISH DATE: 4/14/2003	**GROUND ELEVATION:** 4487.90 ft.

NOTES: Borehole Diameter: 13.875 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM EX	WELL CONSTRUCTION
							Locking protective casing 8 in. ID sch 40 PVC riser Cement Bentonite grout
0							
5							
10							
15							
20							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W08EX

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM EX	WELL CONSTRUCTION
25							
30							Bentonite chips
35							10-20 Silica sand pack
							8 in. ID sch 40 PVC screen, 0.030 in. slots
40							
45							
50							

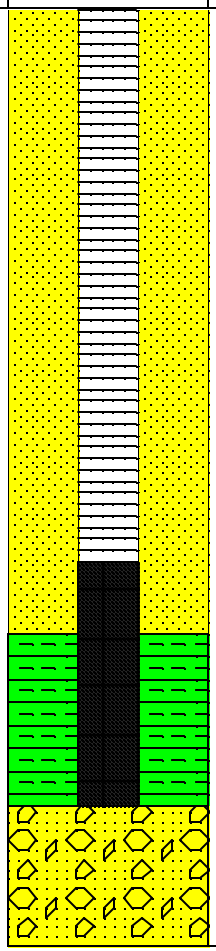
S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SBB-W08EX

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM EX	WELL CONSTRUCTION
55							
60							End cap
							Bentonite pellets
65							Borehole TD: 70 ft.
							Natural backfill/collapse
70							



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W01AB

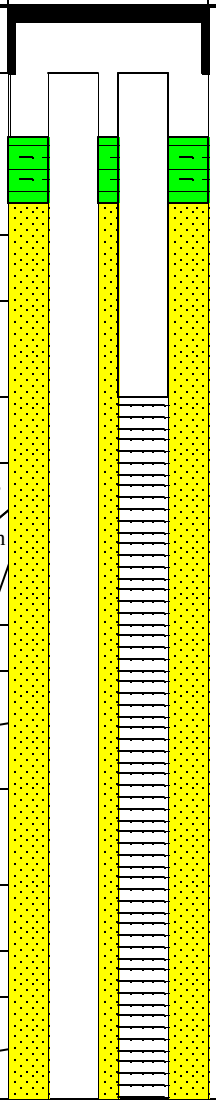
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: San Marcial Transect	**RIG TYPE:** ATV CME 55
ONSITE GEOLOGIST: Bryan Grigsby	**SAMPLE TYPE:** Split Spoon
START DATE: 12/10/2002	**WELL ELEVATION:** A: 4469.28 ft. B: 4469.68 ft.
FINISH DATE: 3/18/2003	**GROUND ELEVATION:** 4470.42 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					SAND, f., tr.-few. silt/clay, yellow brown (10YR5/6), v. poorly graded, slightly moist (SP)
	1	8	1.2		SAND, f., tr.-m. sand, with thin intervals of silt, dk. yellow brown (10YR4/6), silt browner, few thin dk. gray black bands, thick, moist to wet at the bottom of the sample (SP)
5					SILT, and sand, v.f., dk. yellow brown, with gray brown mottleing, wet, non-plastic (ML-SM)
	2	4	1.5		CLAY, ltl.-some silt, brown to dk. gray brown (10YR4/3-4/2) with yellow brown areas and frequent dk. gray-black bands, organic matter, plastic, slow dilatancy, v. soft (CL-ML)
					As above, (CL-ML)
	3	7	1.5		CLAY, dk. gray brown (10YR4/2), firm, no dilatancy, med. plasticity, high toughness, 0.03 ft. of sand at 9.8 feet (CL)
10					
	4	6	1.5		As above, plant material at 11.9 ft. (CL)
					CLAY, few-some silt, soft, plastic (CH-MH)
	5	6	2.0		SAND, f., silt/clay, poorly graded, non-plastic, less silt and clay in bottom 0.4 in. (SM)
15					

WELL DIAGRAM (B A)



WELL CONSTRUCTION

- Locking protective seal
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W01AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
					As above, top 1.2 ft., suspected sluff, not described (SM)		
	6	2	1.2		SAND, f., ltl.-some silt, brown to dk. gray brown (10YR4/3-4/2), poorly graded non-plastic (SM)		
	7	6	1.4		As above, (ML-SM) in alternating layers		
20					SILT, clay, plastic, slow dilatancy, (MH-CH)		End cap
	8	1/18	1.0		SAND, f.-v.f., tr.-few silt, tr. clay, brown to dk. gray-brown (10YR4/3-4/2), v. poorly graded, predominately quartz grains, subrounded and difficult to see because of f. grain size (SP) Top 1.4 ft. is suspected sluff. Sluff is f. sand with clay pieces.		Bentonite pellets
	9	7	1.1		SAND, f., slightly coarser than above, brown-dk. gray-brown (10YR4/3-4/2), less fines and color change to yeloow-brown to brown (10YR5/4-5/3), in bottom 0.6 ft. (SP) Top 1.3 ft. is sluff. Sluff is f. sand, v. poorly graded		
25							Natural backfill/collapse
	10	7	0.9		SAND, f.-m. ltl. c. sand, few-ltl. f. gravel, 1 piece of c. gravel, sized vesicular basalt, dk. gray to dk. gray brown (10YR4/1-4/2), well graded, predominately quartz, but more dk. mineral (volcanic grains), subangular to subrounded (SW)		
	11	11	0.6		As above, gravel in sluff, gravel is mostly volcanic and platonic/metamorphic, angular to subrounded (SW)		
30							
	12	11	1.0		SAND, f. tr. m. sand, with 0.1 ft. interval containing c. sand and f. gravel 0.2 ft., above bottom of sample, dk gray (10YR4/1), poorly graded (SP)		
	13	50/1	0.1		GRAVEL, pieces of broken rhyolite in core catcher, gravel includes limestone and well-indurated sandstone (GW)		
35							Bentonite pellets
	14	59	1.0		SAND, m., ltl. f. sand, few -ltl. c. sand, tr. f. gravel, tr. silt and clay, dk. green gray (GLEY 1 3/1), clays apparently give overall color (SW) Top 0.2 ft. suspected sluff.		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W01AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
					SAND, f.-c., gravel, f.-c., tr. few silt/clay, well graded (SW-GW)		
	15	52	1.1		SAND, f.-m. tr. c. sand, tr. silt/clay, still gray-green even though less silt and clay, med. poorly graded, (SP)		Natural backfill/collapse
40							
	16	50/3	1.0		SAND, m., tr. ltl. f. sand, tr. c. sand, tr. silt/clay, dk. green gray (GLEY1 4/1), predominately subangular quartz, much greenish feldspar and other minerals (SP)		
					No Recovery		
	17	60/4	0				
45							2 in. ID sch 40 PVC screen, 0.010 in. slots
	18	74	1.9		CLAY, few silt, tr. sand, thin intervals of f.-m. sand, lt. green gray (GLEY 1 7/1-6/1) changing to red brown (5YR5/3), v, hard (Pp=2-4), non-plastic at current moisture, (CL)		Borehole TD=50.5 ft.
					SAND, m., color gray green, as above (SP)		
					CLAY, lt. brn gray (GLEY 1 7/1), hard (CL)		
	19	50/5	0.9		SAND, f.-m., tr. silt/clay, green gray (GLEY1 4/1), poorly graded, predominately quartz, some feldspars, predominately subangular (SP) Top 0.4 ft. suspected sluff of f.-m. sand and gravel		
50							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W02A

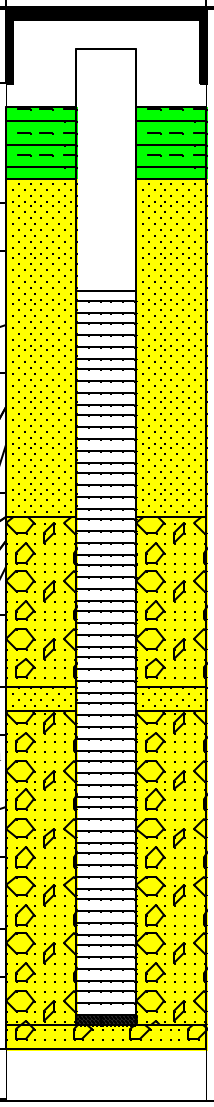
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: San Marcial Transect	**RIG TYPE:** ATV CME 55
ONSITE GEOLOGIST: Bryan Grigsby	**SAMPLE TYPE:** Split Spoon
START DATE: 12/9/2002	**WELL ELEVATION:** 4472.49 ft.
FINISH DATE: 3/17/2003	**GROUND ELEVATION:** 4471.29 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					SAND, v.f., few-ltl. silt/clay, dk. yellow brown (10YR4/6), dry to slightly moist, non-plastic (SP-SM)
5 ▼	1	6	1.3		SAND, f., interbedded with silt and clay, layers are 0.05 ft. to 0.3 ft. thick. dk. yellow brown (10YR4/6), with thin dk. gray black bands, moist, wet in bottom, roots (ML-SM)
	2	6	0.8		As above, then large piece of wood, sluff (ML-SM) Top 0.5 ft. suspected sluff, not described.
					SILT and v.f. sand, brown (10YR4/3), very poorly graded, wet, non-plastic, one piece of wood (ML-SM)
					As above (ML-SM)
	3	4	1.1		CLAY, ltl.-some silt (CL-ML)
10					SAND, f., ltl.-some silt/clay, non-plastic (SP-SM)
	4	17	0.3		SAND, f., few-ltl. silt/clay, brown (10YR4/3), poorly graded (SP) Top 0.3 ft. suspected sluff, not described.
	5	13	1.1		SAND, f., tr. m. sand, tr. silt, brown (10YR5/3), with frequent thin dk. gray to black bands, possible charcoal flecks, v. poorly graded (SP)
15					
	6	10	0.8		SAND, f.-m., tr. c. sand, color as above with dk. bands, fines near bottom, poorly graded (SP)
	7	8	1.0		As above, with tr. c. sand and f. gravel, brown to dk. gray brown (10YR4/3-4/2) poorly graded (SP)
20					

WELL DIAGRAM A



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- Natural backfill/collapse
- 20-40 Silica sand pack
- Natural backfill/collapse
- Borehole TD= 20 ft.
- End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W02A

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM A	WELL CONSTRUCTION
	8	11	1.1		As above, no gravel, grayer in bottom 4 inches, predominately quartz, tr. f. dk. minerals, subangular to subrounded (SP)		
					As above, with tr. f. gravel (SP)		
25	9	31	1.1		SAND, f, tr. m. sand, v. poorly graded (SP), brn (10YR4/3), fewer dk. minerals (SP)		
	10	14	1.2		SAND, f.-c., few-ltl. f.-c. gravel, dk. gray brown to brown (10YR4/2-4/3), well graded (SW)		
30	11	12	0.9		As above, slightly finer grain size overall, tr. gravel (SW)		
	12	34	0.5		SAND, f.-m., tr. c. sand, brown (10YR4/3) poorly graded, finer grained in bottom 0.2 ft. of sample (SP) Top 0.1 ft is sluff. Sluff is predominately c. sand, f. gravel		
35	13	33	0.8		SAND, f., tr. m.-c. sand, brown (10YR4/3) poorly graded (SP) Top 0.2 ft is sluff of c. sand and f. gravel.		
	14	32	0.9		As above, no c. sand (SP) Top 0.3 ft. suspected sluff.		
40	15	27	0.1		SAND, f., and f. gravel. Cannot tell if sampler is in place or sluff. (SP-GP)		
	16	17	0		SAND, f., tr.-ltl. m. sand, tr. c. sand, v. dk. gray brown (10YR3/2), poorly graded with ltl. c. sand on the bottom (SP)		
45	17	27	0.8		SAND, c., f.-c. gravel, few f.-m. sand, gray brown, well graded, sand and gravel predominately subangular to subrounded, v. diverse lithologies (SW-GW)		
	18	27	0.3		As above, with ltl.-some f.-m. sand, very well graded, sluff is f.-c. gravel (SW-GW)		
					SAND, f.-c., tr.-few f. gravel, poorly graded (SP-SW)		
50	19	16	0.8		SAND, f.-m. tr. c. sand, v.dk. gray brown (10YR3/2), poorly graded (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W03AB

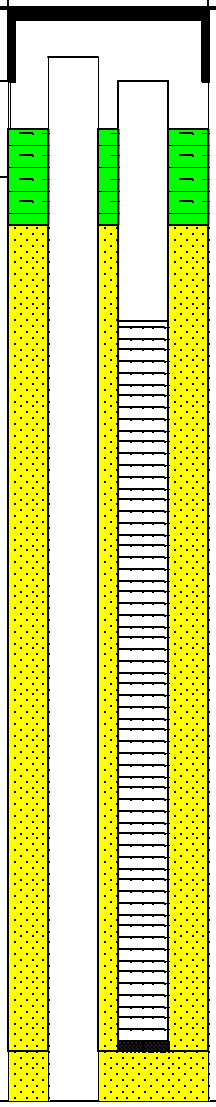
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: San Marcial Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Stephanie Kuhn	**SAMPLE TYPE:** NA
START DATE: 3/19/2003	**WELL ELEVATION:** A: 4474.44 ft. B: 4474.31 ft.
FINISH DATE: 3/19/2003	**GROUND ELEVATION:** 4473.72 ft.

NOTES: Borehole Diameter: 10 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
0					Not sampled. See log of SMC-W02A and SMC-W04AB for lithology.		Locking protective casing 2 in. ID sch 40 PVC riser Bentonite chips 20-40 Silica sand pack 2 in. ID sch 40 PVC screen, 0.010 in. slots End cap
5							
10							
15							
20							



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W03AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 | **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
							Bentonite pellets
							Natural backfill/collapse
25							
30							
							Bentonite pellets
35							
							Natural backfill/collapse
40							
45							2 in. ID sch 40 PVC screen, 0.010 in. slots
							Borehole TD= 50.5 ft.
50							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC W04AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: San Marcial Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** Split Spoon
START DATE: 11/04/2002	**WELL ELEVATION:** A: 4471.49 ft. B: 4471.62 ft.
FINISH DATE: 3/20/2003	**GROUND ELEVATION:** 4470.91 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL CONSTRUCTION
						Locking protective casing
0					SAND, f., ltl. clay, dk. yellowish brown (10YR4/4), moist (SP)	Natural backfill/collapse
						Bentonite chips
						2 in. ID sch 40 PVC riser
	1	6	1.6		SAND, f.-v.f., some silt, thin layers of clay throughout, yellowish brown (10YR5/8-5/6) (SP)	
					CLAY, and silt, some sand, yelowish brown (10YR5/5) (CL)	
5					SAND, f.-v.f., no clay layers, moist (SP)	20-40 Silica sand pack
▼	2	3	1.6		SILT, dk. yellowish brown (10YR4/6) rapid dilatancy, low plasticity, low toughness, low dry strength, moist, roots, wet at 6.8 ft. (ML)	
					CLAY, high plasticity, high dry strength, no dilatancy (CL)	2 in. ID sch 40 PVC screen, 0.010 in. slots
					SILT, as above, wet (ML)	
					SAND, f., some silt, brown to yellowish brown (10YR5/3-5/4) (SW)	
	3	3	1.2		CLAY, v. dk. yellowish brown (10YR3/2), firm, sand filled partings at 8.6 ft, 8.8 ft. and 8.9ft. (CL)	
10					SAND, f., some silt, brown to yellowish brown (10YR5/3-5/4) (SW)	

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC W04AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
					SILT, tr. f. sand, dk. yellowish brown (10YR4/4), soft (ML)		
					CLAY, no sand, grayish brown (10YR5/2), charcoal pieces (CL)		
	4	6	1.4		SILT, and clay, interbedded, dk. grayish brown (10YR4/2) (ML-CL)		
					CLAY and silt, tr. sand, interbedded, soft, woody material at 14.8 ft. (CL-ML)		Natural backfill/collapse
	5	3	1.5				
15							
					SILT, and clay, appears to be sluff (ML-CL)		
	6	8	2.2		CLAY, no sand, dk. grayish brown (10YR4/2), firm (CL)		
					SAND, f., tr. m. sand, rounded quartz and feldspar, 80/20 quartz/other (SP)		
					SAND, f., tr.-no m. sand, tr.-few fines, rounded-subrounded quartz and feldspar, firm, (SP)		
	7	17	2.2				
20							End cap
					No Recovery		
	8	14	0				
							Bentonite pellets
					SAND, f.-m., ltl. c. sand, fine fraction rounded-subrounded quartz and feldspar, coarse fraction rounded-angular quartz, quartzite, granite, basalt, and metamorphic (SW)		
	9	15	0.8				
25					GRAVEL (GP)		
							Natural backfill/collapse

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC W04AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
							Natural backfill/collapse
	10	12	0.8		As above, gray to grayish brown (10YR5/1-5/2), no structure apparent a few carbonate pieces in c. fraction (SW)		
	11	17	0.8		As above, tr. f. gravel, 1 c. gravel piece (SW)		
30							
	12	14	0.6		As above, 1 c. gravel piece appears to be broken off cobble (SW)		
	13	5	0.8		SAND, f.-c., f. gravel, few c. gravel, tr. fines, v. dk. grayish brown (10YR3/2), lithology as above, pink fine sand, sandstone noted in c. fraction, (SW)		Bentonite pellets
35							
	14	17	0.7		SAND, f.-m., ltl. c. sand, few f. gravel, sample appears to be mostly reworked by drilling fluid, c. fraction concentrated in basal 0.2ft. (SW)		
							Natural backfill/collapse
					SAND, f.-m. no c. sand, firm, grayish brown to dk. grayish brown (10YR5/2-4/2) no fines (SP)		
	15	16	1.3		SAND, c., and gravel, ltl. f.-m. sand, coarse zone is angular-rounded quartzite, granite, carbonate, volcanic (SW)		
40					SAND, f.-m. rounded-subrounded quartz and feldspar, mafic grains (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC W04AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	16	23	0.2		SAND, f.-c., f. gravel, loose (SW)		
	17	42	0.8		SAND, f.-v.f., no m. sand, v. dk. grayish brown (10YR3/2), appears to be washed by drilling fluid, firm, 2-3 gravel pieces (SW)		
45							2 in. ID sch 40 PVC screen, 0.010 in. slots
	18	36	0		No Recovery		Borehole TD= 50.5 ft.
					SAND, f.-c. sand, f. gravel, lithology as above (SP)		
	19	10	1.3		SAND, f., few m. sand, v. dk. gray to v. dk. grayish brown (10YR3/1-3/2) (SP)		
50					CLAY, no sand, dk. grayish brown to v. dk. grayish brown (10YR4/2-3/2), soft (CL)		End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W05AB

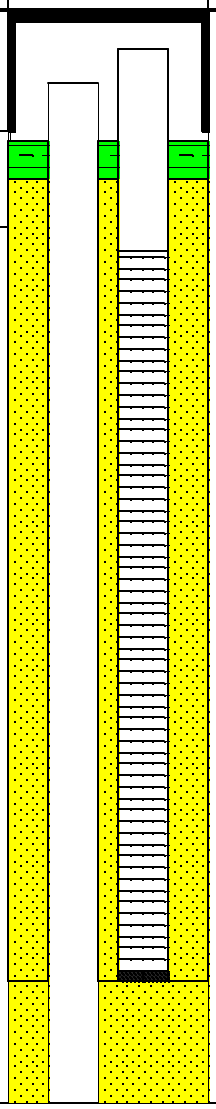
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: San Marcial Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** NA
START DATE: 3/13/2003	**WELL ELEVATION:** A: 4478.14 ft. B: 4478.22 ft.
FINISH DATE: 3/13/2003	**GROUND ELEVATION:** 4476.65 ft.

NOTES: Borehole Diameter: 10 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
0					Not sampled. See log for SMC-WO7C for lithology.		Locking protective casing; 2 in. ID sch 40 PVC riser; Bentonite chips; 20-40 Silica sand pack; 2 in. ID sch 40 PVC screen, 0.010 in. slots; End cap
5							
10							
15							
20							



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W05AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

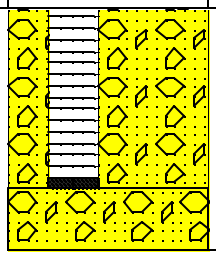
DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B	WELL DIAGRAM A	WELL CONSTRUCTION
25								Bentonite pellets
								Natural backfill/collapse
30								
35								Bentonite pellets
								Natural backfill/collapse
40								
45								Bentonite pellets
								Natural backfill/collapse
50								2 in. ID sch 40 PVC screen, 0.010 in. slots

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W05AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
55							Borehole TD= 55.5 ft. End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W06AB

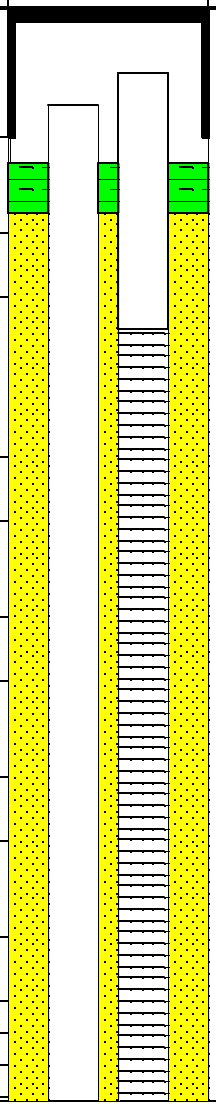
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: San Marcial Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** Split Spoon
START DATE: 11/04/2002	**WELL ELEVATION:** A: 4477.48 ft. B: 4477.60 ft.
FINISH DATE: 3/10/2003	**GROUND ELEVATION:** 4477.05 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					SAND, f., ltl. silty clay, dk. yellowish brown (10YR4/4), rounded-subrounded quartz and feldspar (SP-SM)
	1	3	0.9		SAND, f.-v.f., dk. yellowish brown (10YR4/4), rounded-subrounded quartz and feldspar, with a ratio of 90/10 quartz and other, ltl. fines (SP)
5	2	6	1.3		As above, lens of f. sand, some clay 6.7-6.9 feet (SP)
	3	5	1.0		SAND, f.-v.f., no fines, dk. yellowish brown (10YR4/4), rounded-subrounded quartz and feldspar, with a ratio of 90/10 quartz and other, soft, no apparent structure (SP)
10	4	11	1.1		As above, (SP)
	5	2	1.2		SILT, dk. yellowish brown (10YR3/6-4/6) (ML)
					CLAY, grayish brown (10YR5/2), high plasticity, (CL)
					SILT, no sand, dk. yellowish brown (10YR3/6-4/6) (ML)
15					

WELL DIAGRAM



WELL CONSTRUCTION

- Locking protective casing
- 2 in. sch 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in ID sch 40 PVC screen, 0.010 in. slots

S. S. PAPADOPULOS & ASSOCIATES, INC.

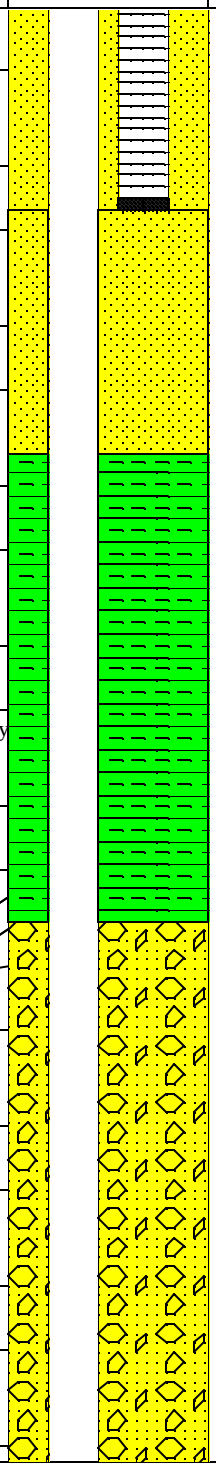
GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W06AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
	6	4	1.1		CLAY, no sand, grayish brown to dk. grayish brown (10YR5/2-4/2), soft, charcoal pieces, large wood piece at bottom, reducing odor, (CL)
	7	8	1.0		SILT, gray to dk. gray (10YR5/1-4/1), soft, piece of wood 0.8 ft. long and 0.5 inch thick by 1.5 inch wide, reducing odor (ML)
20	8	8	1.2		As above, wood chunks in top 0.3 ft (ML)
	9	7	1.8		SILT, and v.f. sand, gray to dk. gray (10YR5/1-4/1) v. soft, rapid dilatancy, low plasticity, low toughness and no dry strength (ML-SM)
25	10	6			CLAY, dk. gray (10YR4/1), soft, firm (Pp=0.25-1.5), no dilatancy high plasticity, high toughness, charcoal and organic matter throughout, (CL)
					As above, (CL)
	11	6	1.6		SAND, f., some fines, gray (10YR5/1) soft (SP)
30					CLAY, some f. sand, gray (10YR5/1), soft (CL)
	12	28	1.1		SAND, f., no m. sand, tr. fines, dk. grayish brown (10YR4/2), soft to firm (Pp=0.25-0.75), rounded-subrounded quartz, feldspar, and mafic, 80/20 quartz/other (SP)
	13	20	0		No Recovery
35	14	16	0.2		SAND, f., loose (SP)

WELL DIAGRAM B A



WELL CONSTRUCTION

End cap

Slurry and Bentonite pellets

Natural backfill/collapse

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W06AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	15	20	1.1		SAND, f.-c., ltl. f.-c. gravel, tr.-n. fines, soft, f.-m. sand is similar to lithology above, c. fraction angular-rounded quartzite, basalt, red siltstone, carbonate, and granite (SW)		
40							
	16	18	1.0		SAND, f.-m., tr-few c. sand, firm, layered with fine sand and f.-m. sand (SW) SAND, m., some f. sand, ltl. c. sand, few f. gravel (SP)		
	17	23	0.3		As above, dk. grayish brown (10YR4/2), 3 larger gravel pieces of olive f. grain quartz and sandstone, on top of recorded sample, (SP)		Slurry and Bentonite pellets
45							
	18	24	1.2		SAND, f., ltl. m. sand, tr. c. sand, f. gravel, few fines, dk. grayish brown (10YR4/2), faint layering throughout, soft, (SP)		Natural backfill/collapse
	19	16	0.7		CLAY, some f.-c. sand, few gravel, some fines, high plasticity, high dry strength, no dilatancy (CL-SC)		2 in ID sch 40 PVC screen, 0.010 in. slots
50							Borehole TD= 55.5 ft
55							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-WO7AB

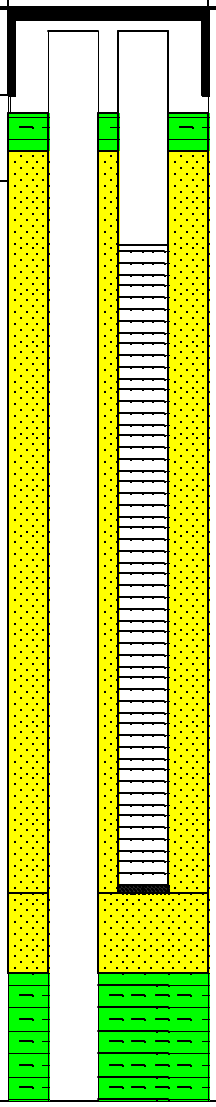
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: San Marcial Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** NA
START DATE: 3/14/2003	**WELL ELEVATION:** A: 4478.07 ft. B: 4478.27 ft.
FINISH DATE: 3/14/2003	**GROUND ELEVATION:** 4476.63 ft.

NOTES: Borehole Diameter: 10 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
0					Not sampled. See log of SMC-W07C for lithology.		Locking protective casing; 2 in. ID sch 40 PVC riser; Bentonite chips; 20-40 Silica sand pack
5							2 in. sch 40 PVC screen, 0.010 in. slots
10							
15							
20							End cap; Bentonite pellets



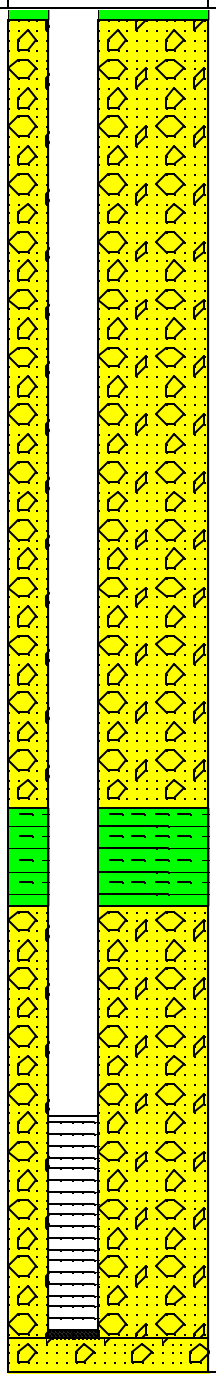
S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-WO7AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 | **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
25							Natural backfill/collapse
30							
35							
40							Bentonite pellets
45							Natural backfill/collapse
50							2 in. sch 40 PVC screen, 0.010 in. slots Borehole TD=55.5 ft.
55							End cap



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W07C

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: San Marcial Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Bryan Grigsby	**SAMPLE TYPE:** Split Spoon
START DATE: 10/23/2002	**WELL ELEVATION:** 4478.01 ft.
FINISH DATE: 5/12/2003	**GROUND ELEVATION:** 4476.80 ft.

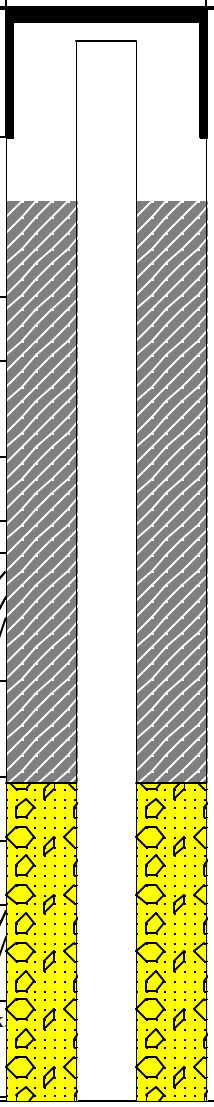
NOTES: Borehole Diameter: 8 in.-well construction

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					SAND, f., tr. m. sand, yellow brown (10YR5/6), v. poorly graded, slightly moist, roots (SP)
	1	4	0.5		SAND, f., tr. m. sand, dk. yellow brown (10YR4/4), v. poorly graded, roots, orangish oxidized intervals, silty interval at 4.8 feet. (SP)
5 ▼					CLAY, v. soft, plastic, roots, irregular sand pockets (CL)
	2	3	1.7		SAND, f., some silt, v. poorly graded, dk. gray bands, wet (SM)
					CLAY, silty, v. soft, slightly plastic (ML-CL)
					SAND, as above, loose (SM)
	3	4	1.1		As above (SM)
10					
	4	3	0.8		As above, dk. brown yellow (SM)
					SILT, some f. sand, dk. gray (ML)
					SAND, f., some silt, as above (SM)
	5	3/2	0.7		SAND, f., and SILT, tr. clay, v. loose, brown (10YR4/3), 1 thin dk gray band, 1 gravel clast, roots, predominately quartz (SM-ML)
15					

WELL DIAGRAM C



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch. 40 PVC riser
- Cement Bentonite grout
- Natural backfill/collapse

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W07C

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
					As above, with silt and clay layers (SM-ML)		
	6	5/2	1.8		SAND f., ltl.-some silt, with interbedded thin layers of clay, change in color to v. dk. gray brown (10YR3/2), thin dk. gray-black bands, large root, fresh reddish color (5R3/4) (SP-SM)		
					SAND f., tr.-some silt/clay, color as above, frequent dk. gray bands, plant matter (SP-SM)		
	7	5	2.3		CLAY (CL)		
20					SAND, as above (SP-SM)		
	8	4/2	1.2		SAND f., some silt, frequent dk. gray bands, strong reaction to acid (SM)		
					As above (SM)		
	9	3	1.7		CLAY, v. soft, with woody matter (CL-CH)		
25							
	10	4	1.1		CLAY, as above soft and firm (Pp=0.3-0.8), f. sand lens, difficult to mold, plastic, plant matter in bottom 0.3 ft. (CL-CH)		
					CLAY, as above, some thin intervals of f. sand, higher plasticity than above (CH)		
	11	10	1.6		SAND, f., tr. m. sand, still plant matter (SP)		
30							
	12	13	0.1		CLAY, ltl. f. sand, organic matter (CL-CH)		
	13	18	0.9		SAND, f.-m., dk. gray brown (10YR4/2), loose to m. dense, poorly graded, no plant matter, subangular-subrounded, tr. charcoal flecks (SP)		
35							
	14	55	1.1		SAND, f.-m., grades downward, few m. sand, brown (10YR4/3), poorly graded, v. dense, small charcoal flecks near top, rare dk. bands (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W07C

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
	15	15	0.5		SAND, m. tr. f. sand, few c. sand, few-ltl. f.-c. gravel with c. gravel fragments at top, moderately well graded, gravel predominately igneous and metamorphic (SW)		
40							
	16	26	1.0		As above (SW) As above, less gravel, possible dark pieces of charcoal (SP-SW) As above, with increasing gravel (SW)		
	17	8	0.6		SAND, m., tr.-few f.and c. sand, tr. f. gravel (SP)		
45							
	18	6	1.3		SAND, f.-m., poorly graded, young looking woody matter (SP) SILT/CLAY and f. SAND, older woody material SAND, f.-m., few c. sand and f. gravel (SP-SW)		Slurry and Bentonite pellets
	19	14	1.0		SAND, f.-c., and f.-c. GRAVEL, tr.-few clay, well graded, gravel subangular to subrounded (SW-GW) SAND, m., ltl. f.-c. sand, ltl. f. gravel (SW) SAND f.-c., and f.-c. GRAVEL, tr.-few clay, well graded, gravel subangular to subrounded (SW-GW)		
50							
	20	18	1.6		Sluff, grades downward from f.-m. sand to c. sand few f. gravel in bottom 0.3 ft. SAND, f.-m., irregular upper contact with c. sand and gravel (SP)		
	21	21	1.1		SAND, f.-m., ltl. c. sand and f. gravel, tr.-few silt/clay, v. dk. gray brown (10YR3/2) (SW)		
55							
	22	22	1.0		SAND, f.-m., tr-ltl. f. gravel, gravel in tip of sampler (SP-SW)		
	23	21	0.6		SAND, f.-c., and f. GRAVEL, tr. clay, gravel predominately volcanics with some igneous and one sandstone clast, well graded (SW-GW)		
60							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W07C

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
	24	13	0.5		As above, one clast of fossiliferous limestone (SW-SG)		
					As above, more gravel, probably sluff (SW-GW)		
	25	19	0.6		SAND, f.-m., brown (10YR4/3), poorly graded, subround-round (SP)		
65							
					As above, but drilled on cobbles above 66 ft. (SP)		
	26	49	0.9		GRAVEL, f.-c., fragment of quartzite clast stuck and in tip of sampler (GP-GW)		Natural backfill/collapse
	27	39	0.7		SAND, f.-c., and f. GRAVEL in alternating layers, gravel less sandstone and more well-indurated siliceous and metamorphics, subround (SW-GW)		
70							
	28	22	1.1		As above, gravel slightly more coarse (SW-GW)		2 in. ID sch 40 PVC screen, 0.010 in. slots
							Borehole TD= 77.5 ft.
	29	70	1.1		As above, less gravel and more f.-m. sand, cobble fragment stuck in tip of sampler (SW-GW)		
75							
					SAND and f.-c. GRAVEL, as above (SW-GW)		
	30	90	1.7		CLAY, silty, tr. sand, green gray (5GY5/1) (CL)		End cap
					SAND, f.-m., v. dk. gray brown (10YR3/2), v. dense, poorly graded, (SP) (Santa Fe Group)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-WO8EX

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** WDC Exploration
PROJECT NUMBER: 771-3	**CREW LEADER:** Mike Thomas
LOCATION: San Marcial Transect	**RIG TYPE:** Speedstar 30K
ONSITE GEOLOGIST: Steve Lindblom	**SAMPLE TYPE:** NA
START DATE: 4/11/2003	**WELL ELEVATION:** 4478.42 ft.
FINISH DATE: 4/11/2003	**GROUND ELEVATION:** 4476.79 ft.

NOTES: Borehole Diameter: 14.75 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
							Locking protective casing
0					Not sampled. See log of SMC-W07C for lithology.		10 in. ID sch 40 PVC riser
							Cement Bentonite grout
5							
10							
15							
20							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-WO8EX

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

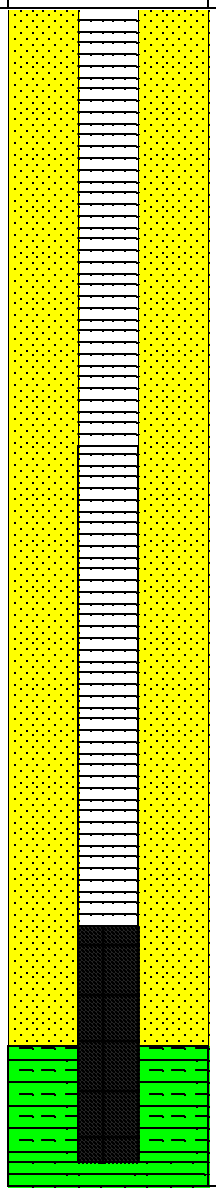
DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
25							
30							
35							
40							Bentonite pellets
							10-20 Silica sand pack
45							10 in. ID sch 40 PVC screen, 0.030 in. slots
50							10 in. ID sch 40 PVC screen, 0.050 in. slots

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-WO8EX

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
							screen, 0.050 in. slots
55							
60							10 in. ID sch 40 PVC screen, 0.080 in. slots
65							
70							Borehole TD: 75 ft.
							Bentonite pellets
							End cap
75							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W09AB

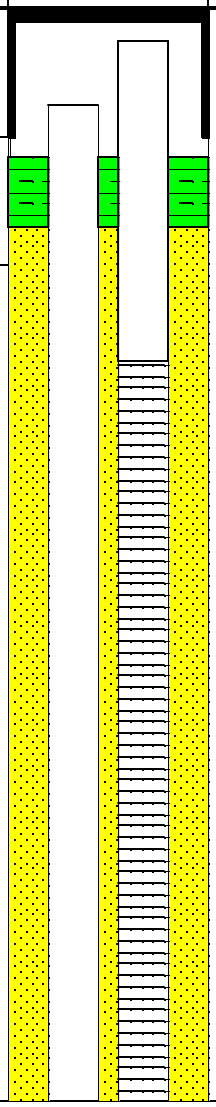
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: San Marcial Tansect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** Split Spoon
START DATE: 3/11/2003	**WELL ELEVATION:** A: 4478.11 ft. B: 4478.12 ft.
FINISH DATE: 3/11/2003	**GROUND ELEVATION:** 4476.57 ft.

NOTES: Borehole Diameter: 10 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
0					Not sampled. See log for SMC-W07C for lithology.		Locking protective casing 2 in ID sch 40 PVC riser Bentonite chips 20-40 Silica sand pack 2 in. ID sch 40 PVC screen, 0.010 in. slots
5							
10							
15							



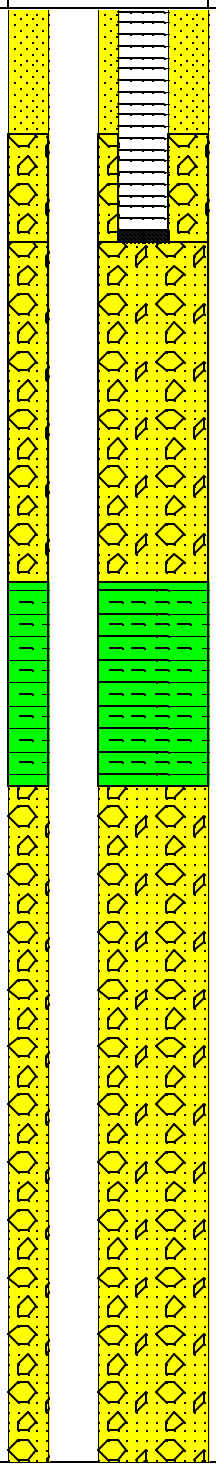
S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W09AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
15							
							Natural backfill/collapse
							End cap
20							
							Bentonite pellets
25							
							Natural backfill/collapse
30							
35							



S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SMC-W09AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
40							Slurry and Bentonite pellets
45							Natural backfill/collapse
50							2 in. ID sch 40 PVC screen, 0.010 in. slots
							Borehole TD= 55.5 ft.
55							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SFC-WO1AB

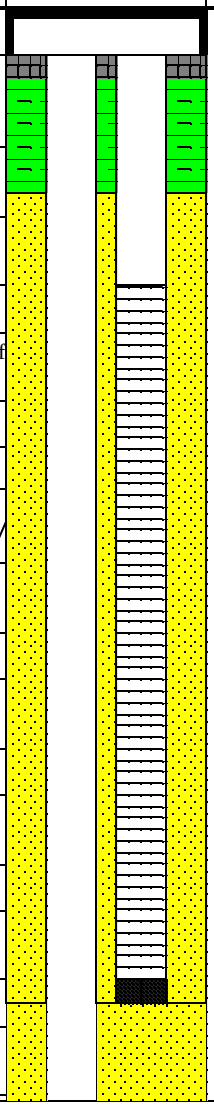
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: South of Fort Craig Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Dagmar Llewellyn	**SAMPLE TYPE:** Split Spoon
START DATE: 10/29/2002	**WELL ELEVATION:** A: 4464.06 ft. B: 4463.07 ft.
FINISH DATE: 4/2/2003	**GROUND ELEVATION:** 4462.68 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					SILT, ltl. f.-c. sand, med. brown, contains some recent organics and evidence of soil formation. Driller says he encountered gravel at about 3 feet bgs. (ML)
	1	3	0.9		CLAY, some silt, med.-dk. brown. soft, (Pp=0), rolls into a thin tube; moist (CL)
5 ▼	2	2/18	1.2		CLAY, sandy in lower 0.3', (Pp=0), piece of coarse gravel in tip of sampler, dk. brown, soft, wet, very gummy; no resistance (CL)
	3	25	1.5		As above, (CL)
10					SAND and GRAVEL, c. sand and f.-c. gravel, with clay coating, clast supported. (SP-GP)
	4	30	0.8		GRAVEL, f.-c., ltl. f.-c. sand, clay (mud) coating, clast supported, angular gravel (GW)
	5	22	0.8		SAND, v.f.-c., f.-c. tr. silt and clay, gravel, well graded, med. brown, wet, angular clasts (GW)
15	6	26	1		As above, (GW)
	7	28	1		GRAVEL, f.-c., some sand, clay/silt coating, med. brown, wet (GW)
20	8	50/6	1.1		Same as above, some clay, some pockets are clay-cemented (GW-GC)

WELL DIAGRAM



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SFC-WO1AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
	9	50/2	.2		GRAVEL, f., ltl. c. sand. Driller was likely pushing a cobble, which would explain the spoon refusal, wet, muddy, soupy (GP)		
25							
	10	50/1	0		No recovery. Driller says he is drilling through gravel and cobbles- he is probably pushing a cobble with his spoon. (GP?)		Natural backfill/collapse
	11	74	1.3		GRAVEL, f.-c., ltl. f.-c. sand, tr. silt, tr. clay, muddy (GW-GC)		
30					SAND, v. f.-m., no fines, lt. brown (SW)		Bentonite pellets
	12	67	0.9		SAND, v. f.-m sand, no fines, med. brown, well graded. Driller says that he is not drilling through gravel anymore past 30' bgs. (SW)		Natural backfill/collapse
	13	95	0.7		SAND, f., no fines, poorly graded, med. brown, wet, not muddy (SP)		
35							Bentonite Slurry
	14	86	1.2		SAND, some f. sand, tr. c. sand, med. brown, clean, well sorted (SP)		
	15	90	1.3		As above, (SP)		Natural backfill/collapse
40							
	16	90	1.2		GRAVEL, pockets of gravel, sand and clay, highly weathered material, decayed black rock or charcoal (GW-SW)		
	17	50/5	0.9		CLAY, lt brown (CL)		
					SAND, m., no fines, med. brown (SP)		
45							2 in. ID sch 40 PVC screen, 0.010 in. slots
	18	50/3	0		No recovery		Borehole TD= 50.5 ft.
	19	50/5	0.4		SAND, f.-m., no fines, med. brown (SP)		
50							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SFC-W02AB

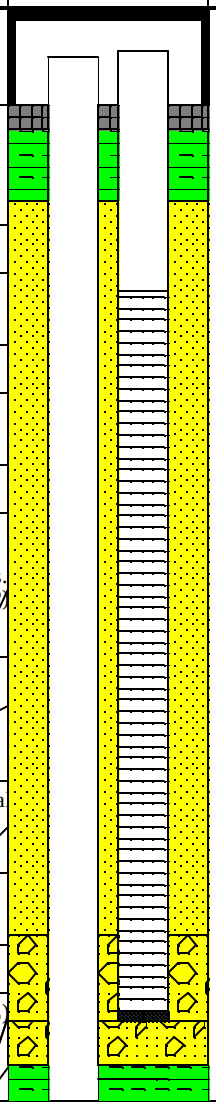
PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: South of Fort Craig Transect	**RIG TYPE:** ATV CME 55
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** Split Spoon
START DATE: 12/12/2002	**WELL ELEVATION:** A: 4458.48 ft. B: 4458.42 ft.
FINISH DATE: 3/27/2003	**GROUND ELEVATION:** 4457.58 ft.

NOTES: Borehole Diameter: 6 in.-geological sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					SAND, v. f. sand and silt, lt. brown to yellow orange (10YR5/4), loose, dry, holds shape when compacted but will not form tube or ball (SM)
5	1	26	1.3		As above, med. density, poorly graded, no visible structure, moist (SM)
	2	7	1.5		As above, decreasing silt (SM-SP)
10	3	10	1.5		SAND, f.-m. sand, lt. brown, predominately quartz, tr. mica up to 3mm, clay nodule 0.6 ft. and 1 ft. from the bottom, clay balls displaying spherical deposition patterns, organic matter 9.9 inches. Note: Sampler drove through approximately 8 inches of sluff. (SP)
	4	24	1.1		SAND, as above, poorly graded, dense to medium dense, no tr. mica (SP)
15	5	12	0.9		As above, tr. mica, Note: sampler may not reflect in place materia (SP)
	6	7	1.0		As above, (SP)
20	7	2	1.8		CLAY, ltl. sand and silt, dk. brown (10YR3/3), soft, (Pp=0.2) (CL) Top 0.3 ft. of sample suspected sluff, not described. SAND, fn.-m. (SM)

WELL DIAGRAM (B A)



WELL CONSTRUCTION

- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- Natural backfill/collapse
- End cap
- Bentonite pellets

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SFC-W02AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
	8	3	1.7		SAND, v.f., ltl. v.f.-f. gravel, and ltl. silt, lt. brown (10YR4/3), loose to v. loose, poorly graded-moderately poorly graded (SP)		
25	9	4	2.2		As above, no gravel, silt/clay increasing to ltl.-some, very loose, upper 0.9 ft fining upward (SP) Top 0.9 ft. suspected sluff.		Natural backfill/collapse
	10	2	0		No sample		
30	11	37	1.0		GRAVEL, f.-c., and cobbles, some f.-c. sand, tr.-no silt and clay, lt. brown (10YR3/4), moderately graded, rounded to angular, silaceous lithologies (sandstone and granite) (GW-GP)		
	12	50/5	0.6		GRAVEL, f.-c., cobbles, some f.-c. sand, rounded-angular (GW-GP)		
35	13	50/4	0.2		As above, increasing f.-c. sands (GW-GP)		Bentonite pellets
	14	50/4	0.4		SAND, f.-c. sand, some angular-subrounded f. gravel, moderately well graded, may be sluff (SW)		
40	15	66	0.9		GRAVEL, f.-c., m.-c. sand and ltl. f. sand in clay supported matrix, lt. brown clay (10YR7/6) is stiff-v. stiff, angular to subrounded gravel, gravel lithologies composed of silaceous sandstone, siltstone, rhyolite and basalt (GC)		Natural backfill/collapse
	16	50/5	0.5		GRAVEL, and sand, suspected to be washed sluff (GC) GRAVEL, f.-c., m.-c. sand and ltl. f. sand in clay supported matrix (GC)		
45	17	69	0.9		As above, clay supported m.-c. sand, and f.-c. gravel (GC)		2 in. ID sch 40 PVC screen, 0.010 in. slots
	18	50/5	1.2		SAND, f.-v.f., tr. m. sand, no-tr. fines, dk. brown (10YR5/4), poorly graded, dense (SP)		Borehole TD= 51 ft.
50	19	50/2	0.1		GRAVEL, washed gravel and sand, suspected sluff (GW)		End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SFC-W02AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	20	50/0	0.35		SAND, fining upward from f. gravel with m.-c. sand, to poorly graded f.-m. sand, no fines, brown-brown gray in color (SP-SW)		
55							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SFC-W03AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: South of Fort Craig Transect	**RIG TYPE:** ATV CME 55
ONSITE GEOLOGIST: Bryan Grigsby	**SAMPLE TYPE:** Split Spoon
START DATE: 12/11/2002	**WELL ELEVATION:** A: 4458.72 ft. B: 4458.44 ft.
FINISH DATE: 3/25/2003	**GROUND ELEVATION:** 4458.08 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
							Locking protective casing
							2 in. ID sch 40 PVC riser
0					SAND, f., tr. silt/clay, yellow brown, (10Y5/4-5/6), slightly moist, v. poorly graded (SP)		Natural backfill/collapse
							Bentonite chips
							20-40 Silica sand pack
▼							
					SAND, f., ltl. silt, wet (SM)		
	1	8	1.0		SILT/CLAY, v. soft (MH)		
5					SAND, f., tr. silt/clay, brown (10YR5/3), v. poorly graded, sand of uniform grain size, predominately quartz, subrounded (SP)		2 in. ID sch 40 PVC screen, 0.010 in. slots
	2	8	1.1		As above, some siltier intervals, f. dk. gray black bands (SP) Top 1.3 ft. is suspected sluff, not described.		
	3	10	1.0		SAND, v.f.-f. ltl. silt, brown (10YR4/3), poorly graded (SP-SM)		
10							
	4	6	0.9		As above, v. thin lens (0.05") silt/clay at top of in-place sample (SP-SM) Top of 0.3 ft. is suspected sluff, not described.		
	5	25	1.5		CLAY, brown to gray-brown, firm, (Pp=0.75-1.0), no dilatency, tough, plastic, (CH-CL)		
15					SAND, f., tr.-few silt/clay, brown to gray-brown, very poorly graded, roots and wood in several intervals (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SFC-W03AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	6	32	1.0		SAND, f., tr. m. sand, color changes from brown (10YR3/4) to dk. gray-brown (10YR3/2) with thin oxidized bands near transition, v. poorly graded (SP)		
	7	18			SAND, f.-m., v. dk. gray to dk. gray-brown (10YR3/1-3/2), 0.1" in dark organic clayey interval at about 19.2 ft., poorly graded (SP)		Natural backfill/collapse
20							End cap
	8	18	1.2		As above, no-few m. sand at bottom, tr. silt. Note: Sampler stuck in augers; had to pull 5 ft. auger to unstick. (SP)		Bentonite pellets
	9	15	0.7		SAND, f.-m., dk. gray brown to very dk. gray brown (10YR4/2-3/2), poorly graded, predominately quartz and feldspar, few-ltl. dk. grains, predominately subangular, ltl.-some subrounded grains (SP) Top 1.7 ft. suspected sluff of f.-m. sand, chunks of clay (SP)		
25					CLAY, sandy and sandy clay, (CL-SC)		Natural backfill/collapse
	10	16	1.2		SAND, f.-m., sluff is v. fine sand and some silt, (SP) Top 0.7 ft. suspected sluff of f.-v.f. sand, some silt.		
					SAND, f., silt, tr. clay, v.dk. gray brown (10YR3/2) (SM)		Bentonite pellets
	11	32	1.0		As above, (SM) Top 1.4 ft. suspected sluff of f.-v.f. sand, some silt		
30							
					SAND, f., tr.-ltl. silt, tr. m. sand (SP-SM)		
	12	8	0.9		CLAY, soft-v. soft, black band of organic matter at bottom (CH)		
					SAND, f., silty, as above (SM)		Natural backfill/collapse
	13	24	0.4		SAND, f.-c. and f. gravel, tr.-few silt/clay, well graded, limestone, quartz and volcanics, much of coarse sand is angular, gravel is subrounded (SW-GW)		
35							
					SAND, f.-m., poorly graded, wood (SP)		
	14	5	1.0		SAND, f.-m., few c. sand, tr. f. gravel, moderately well graded, frequent thin dk. gray-black bands (SW)		
					CLAY, silty (CH-MH)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SFC-W03AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	15	50/5	0.2		GRAVEL, f., fragments of c. gravel (GW)		
40							
	16	29	0.7		SAND, f.-c. and gravel, tr. silt/clay, well graded, several pieces of gray loose basalt in gravel (SW)		
	17	17	0.2		SAND, c., f.-c. gravel, large fragments of rhyolite (SW-GW)		2 in. ID sch 40 PVC screen, 0.010 in. slots
45							
	18	10	0.6		As above, no c. limestone, lots of f.-v.f. grained silaceous gravel (SW-GW)		Borehole TD= 50.5 ft.
	19	19	0.8		As above, (SW-GW)		End cap
50							
					Driling on gravel and cobble.		
	20	76	nr		As above, ltl. silt/clay, lt. reddish brn, (5YR6/4), (GW-GC)		
55							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SFC-WO4AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: South of Fort Craig Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Dagmar Llewellyn	**SAMPLE TYPE:** NA
START DATE: 10/25/2002	**WELL ELEVATION:** A: 4457.82 ft. B: 4457.92 ft.
FINISH DATE: 3/21/2003	**GROUND ELEVATION:** 4456.64 ft.

NOTES: Borehole Diameter: 10 in.

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
							Locking protective casing
							2 in. ID sch 40 PVC riser
0					Not sampled. See log of SFC-W04C for lithology.		Natural backfill/collapse
							Bentonite chips
							Natural backfill/collapse
5							2 in. ID sch 40 PVC screen, 0.010 in. slots
10							
15							20-40 Silica sand pack
							End cap
							Natural backfill/collapse
20							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SFC-WO4AB

PROJECT NAME: Rio Grande Watershed Study Phase 1 | **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM (B A)	WELL CONSTRUCTION
							Bentonite pellets
25							Natural backfill/collapse
30							Bentonite pellets
35							
40							Natural backfill/collapse
45							2 in. ID sch 40 PVC screen, 0.010 in. slots
							Borehole TD: 51 ft.
50							End cap

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SFC-WO4C

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: South of Fort Craig Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Dagmar Llewellyn	**SAMPLE TYPE:** Split Spoon
START DATE: 10/25/2002	**WELL ELEVATION:** 4458.05 ft.
FINISH DATE: 3/31/2003	**GROUND ELEVATION:** 4456.88 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
8 in. well construction

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
							Locking protective casing
							2 in. ID sch 40 PVC riser
0 ▼					SAND, f., with silt and clay, dk. yellow brown (10YR4/4), loose and poorly graded, wet (SP)		Cement Bentonite grout
	1	3/2	1.5		SAND, f., tr. clay, dk. yellow brown (10YR4/4), wet (SP)		
5					SILT, and f. sand, non-plastic, (SM)		
	2	2	1.7		SAND, f., with occasional thin d. gray bands, some intervals with silty clay, v. loose, non-plastic, some oxidized spots, (SP)		
	3	4	1.7		As above, alternate layers of d. yellow brown (10YR4/4), v. dark gray brown (10YR3/2) less fines than above, roots, poorly graded (SP)		
10					CLAY, brown (10YR3/4), v. soft, slight plasticity (CH)		
					SAND, f., as above (SP) Top 1.2 ft. suspected sluff. Not described.		
	4	5	1.0		CLAY, silty, slightly plastic, soft (CH)		
					SAND, f., tr. m. sand, dk. yellow brown (10YR3/4) (SP)		Natural backfill/collapse
	5	12	1.5		SAND, f., v. dk. yellow brown (10YR3/4), 2 thin (0.02") clayey lenses near bottom (SP) Top 0.5 ft. suspected sluff, not described.		
15							
	6	17	0		No sample recovered		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SFC-WO4C

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
	7	6	1.2		SAND, f., tr.-few m. sand, poorly graded, brown (10YR4/3), predominately quartz, feldspars, dark reddish black grains, subangular, subrounded (SP)		
20							
	8	16	0.2		As above, (SP)		
	9	6	1.0		SAND, f., tr. m. sand, tr. c. sand and f. gravel, dark gray brown (10YR4/2), thin dk. gray bands (SP) Top 0.3 ft. suspected sluff. Not described.		
25							
	10	18	0.6		As above, but no c. sand or c. gravel (SP)		
	11	18	1.1		SAND, m. tr. f. sand, poorly graded, med. density (SP)		
30							
	12	23	0.4		SAND. f.-c. sand and tr. silt/clay, tr. f. gravel, drilling on gravel, blow-up (SW-GW) Top 1.1 ft. suspected sluff of f.-c. sand, thin dk. gray bands, poorly graded (SP)		
	13	14	1.0		SAND, f.-c. sand, some c. gravel (GW) Top 0.5 ft. suspected sluff of f.-c. sand		
35					SAND, m., tr. f. sand, thin dk. gray bands, poorly graded (SP)		
					SAND, f.-c., tr. f. gravel (SW)		
	14	13	1.8		SAND and GRAVEL, m.-c. sand, f.-c. gravel, coarsening downward (SP-GW)		
					SAND, m., tr. f. and c. sand (SP)		
	15	13	0.9		SAND, m., and tr. f. sand, thin gray bands (0.2"); dark gray (10YR4/2) (SP) Top 0.2 ft. suspected sluff. Not described.		
40					SAND, f.-c. and f. gravel, tr. silt and clay (SW-GW)		Bentonite slurry
	16	32	0.2		As above, (SW-GW)		
					SAND, f. tr. m. sand, brown (10YR4/3), poorly graded med. density, two thin layers with gravel (SP)		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SFC-WO4C

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
45	17	16	1.1		density, two thin layers with gravel (SP)		
	18	38	1.0		SAND, v.f. to f. sand, ltl. angular f. gravel, some m.-c. sand, brown. Note: sluff above sample is well sorted f.-v.f. sand, light brown (SW)		
					Drilling through gravel (per driller)		
	19	70	0.6		SAND and GRAVEL, no fines, med. brown, poorly sorted, angular (GW)		
50	20	50/4	1.0		GRAVEL, some c. sand, no fines, med. brown, angular, max gravel size in sample is 1.5" elongated (GW)		
	21	52/6	0.8		GRAVEL, f.-c., some c. sand, med. brown, angular gravel (GW)		
55	22	50	0.8		GRAVEL, f.-c. some c. sand with some clay lenses, med. brown, gravel is angular with clay (GW)		
	23	37	0.8		GRAVEL, f.-c. gravel and f.-c. sand in gummy clay matrix, lt. brown to yellowish orange, clast supported (GC)		
60	24	50/4	1.0		SAND, m., some c. sand, f.-c. gravel in tip of spoon, no fines, poorly graded, reddish brown (SP)		Natural backfill/collapse
	25	80	1.5+		SAND, m.-c., ltl. f. sand, ltl. f. gravel (rounded), no fines, med. brown, (SP) Top 0.5 ft. suspected sluff. Same composition as sample.		
65	26	105	1.2		As above, bottom 0.2 ft f.-m. sand, no fines, med. brown (SP)		
	27	100/	0.2		SAND, f.-m., light brown, no fines, clean, driller believes that this is the Santa Fe Formation (SP)		
70							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SFC-WO4C

PROJECT NAME: Rio Grande Watershed Study Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM C	WELL CONSTRUCTION
	28	130	1.5		As above, (SP)		
	29	85	1.0		SAND, some v. f. sand, feels soft in spoon, no structures apparent (SP)		
75							
	30	52	0		No recovery		
	31	120	1.5		SAND, f., ltl. v. f. sand in tip and lower few inches of sample, clean, light brown, coarsening upward to c. sand at top of sample (SW)		2 in. ID sch 40 PVC screen, 0.010 in. slots
80							
	32	57	1.0		SAND, f., ltl. v. f. sand, l. med. sand, no fines, compacted in sampler, but no apparent signs of induration (SP)		Borehole TD= 85.5 ft.
	33	55	1.0		As above, (SP)		End cap
85							
	34	75/6	0		No recovery		

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

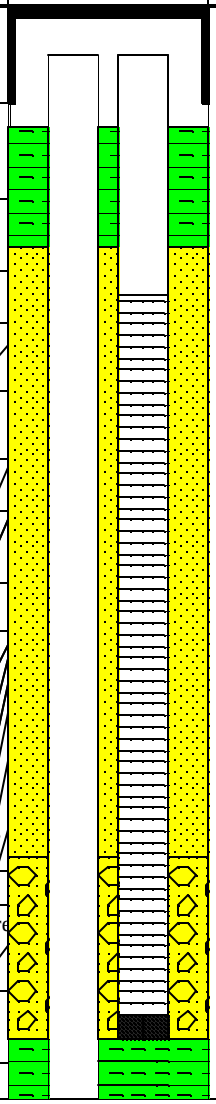
BORING NO. : SFC-WO5AB

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study, Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** David Tanner
LOCATION: South of Fort Craig Transect	**RIG TYPE:** CME 75
ONSITE GEOLOGIST: Dagmar Llewellyn	**SAMPLE TYPE:** Split Spoon
START DATE: 10/30/2002	**WELL ELEVATION:** A: 4458.03 ft. B: 4458.37 ft.
FINISH DATE: 4/3/2003	**GROUND ELEVATION:** 4457.17 ft.

NOTES: Borehole Diameter: 6 in.-geologic sampling
10 in.-well construction Water observation not noted.

▼ = visual observation of water during drilling
Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION
0					SAND, v.f. sand and silt, lt.-med. brown, clean, well sorted, poorly graded, wet (SP)
	1	4	1.2		As above, (SP)
5					CLAY, some silt, lt-med. brown, (CL)
	2	5	1.5		CLAY, ltl. silt, ltl. v.f. sand, lt.-med. brown, (Pp=0), no structure apparent (CL)
					SILT, and v.f. sand, med. brown (SM)
					CLAY, ltl. silt, gray (CL)
	3	2	1.2		SILT, v.f. sand, lt.-med. brown, no structure apparent (SM)
10					
					As above, (SP)
	4	2	1.2		CLAY, with c. sand clasts, gray, dense (CL)
					SILT, and v.f. sand, med. brown with orange striations (SM)
					CLAY, and silt, med. brown (CL)
	5	2	1.5		
15					CLAY/SILT, interbedded, clay, dense, gray, with orange striations, and brown silt and v. f. sand (CL-ML)
					CLAY, lt.-med. brown, soft, gummy (CL)
	6	11	1.3		SAND, f., ltl. v.f. sand, no fines, med. brown, no apparent structure (SP)
	7	12	1.2		SAND, f., ltl. v. f. sand, med. brown. no apparent structure (SP)
20					



WELL CONSTRUCTION:
- Locking protective casing
- 2 in. ID sch 40 PVC riser
- Bentonite chips
- 20-40 Silica sand pack
- 2 in. ID sch 40 PVC screen, 0.010 in. slots
- Natural backfill/collapse
- End cap
- Bentonite pellets

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

BORING NO. : SFC-WO5AB

PROJECT NAME: Rio Grande Watershed Study, Phase 1 **PROJECT NUMBER:** 771-3

DEPTH (ft)	SAMPLES SPL. NO.	BLOWS	REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM B A	WELL CONSTRUCTION
	8	8	.6		As above, (SP)		
	9	13	1.5		As above, (SP) Sample contains some sluff. Cannot distinguish between sluff and sample.		
25							Natural backfill/collapse
	10	30	?		As above, (SP) Sampler tip was empty and 1 ft. of sample was half washed out. Sample may be sluff.		
	11	28	1.5		As above, (SP)		Bentonite pellets
30							
	12	15	1.2		SAND, m., ltl. f. sand, ltl. c. sand, med. brown, clean (SW-SP)		
	13	12	.9		SAND, c., ltl. f. gravel, tr. c. gravel, a couple of 0.1' thick layers of m. sand, med. brown (SP)		
35							
	14	11	0		No recovery		
	15	28	nr		GRAVEL, four pieces of c. gravel, hard, pink crystalline rock, washed, no other recovery (GP)		Natural backfill/collapse
40							
	16	74	1.5		SAND, m., ltl. f. sand, tr. c. sand, some c. sand in the lowest 0.2' of sample. Sampler was lodged inside auger by rock and deeply scored the sampler. Driller had to trip out augers 30ft to get sample. (SW-SP)		
	17	44	1.3		As above, (SW-SP)		2 in. ID sch 40 PVC screen, 0.010 in. slots
45							
	18	50/3	1.4		As above, (SW-SP)		Borehole TD= 50.5 ft.
	19	62	1		GRAVEL, f.-c., some c. sand, ltl. silt and clay, lt. gray, angular stones, mud coating (GP-GW)		End cap
50							

S. S. PAPADOPULOS & ASSOCIATES, INC.

GEOLOGIC LOG OF TEST BORING

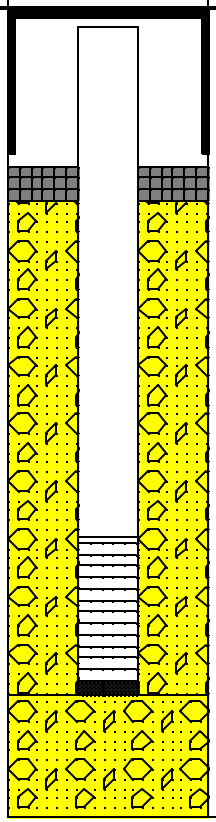
BORING NO. : SFC-W06A

PROJECT INFORMATION	DRILLING INFORMATION
PROJECT NAME: Rio Grande Watershed Study Phase 1	**DRILLING FIRM:** GeoTest
PROJECT NUMBER: 771-3	**CREW LEADER:** Dave Tanner
LOCATION: South of Fort Craig Transect	**RIG TYPE:** Manual Drive Point
ONSITE GEOLOGIST: Peter Lang	**SAMPLE TYPE:** NA
START DATE: 4/10/2003	**WELL ELEVATION:** 4467.78 ft.
FINISH DATE: 4/10/2003	**GROUND ELEVATION:** 4464.94 ft.

NOTES: Borehole Diameter: 2 inches

▼ = visual observation of water during drilling

Elevations based on NGVD 88 (ft. AMSL)

DEPTH (ft)	SAMPLES: SPL. NO.	SAMPLES: BLOWS	SAMPLES: REC'Y (ft)	LITHOLOGY	SOIL DESCRIPTION	WELL DIAGRAM A	WELL CONSTRUCTION
0							Locking protective casing 1.5 in. Galvanized steel pipe riser Concrete collar Natural backfill/collapse
5							
10							Wire wrap, stainless steel drive point well Borehole TD: 13.85 ft. End cap

APPENDIX B

Geophysical Logs for SAC East-Side Boreholes

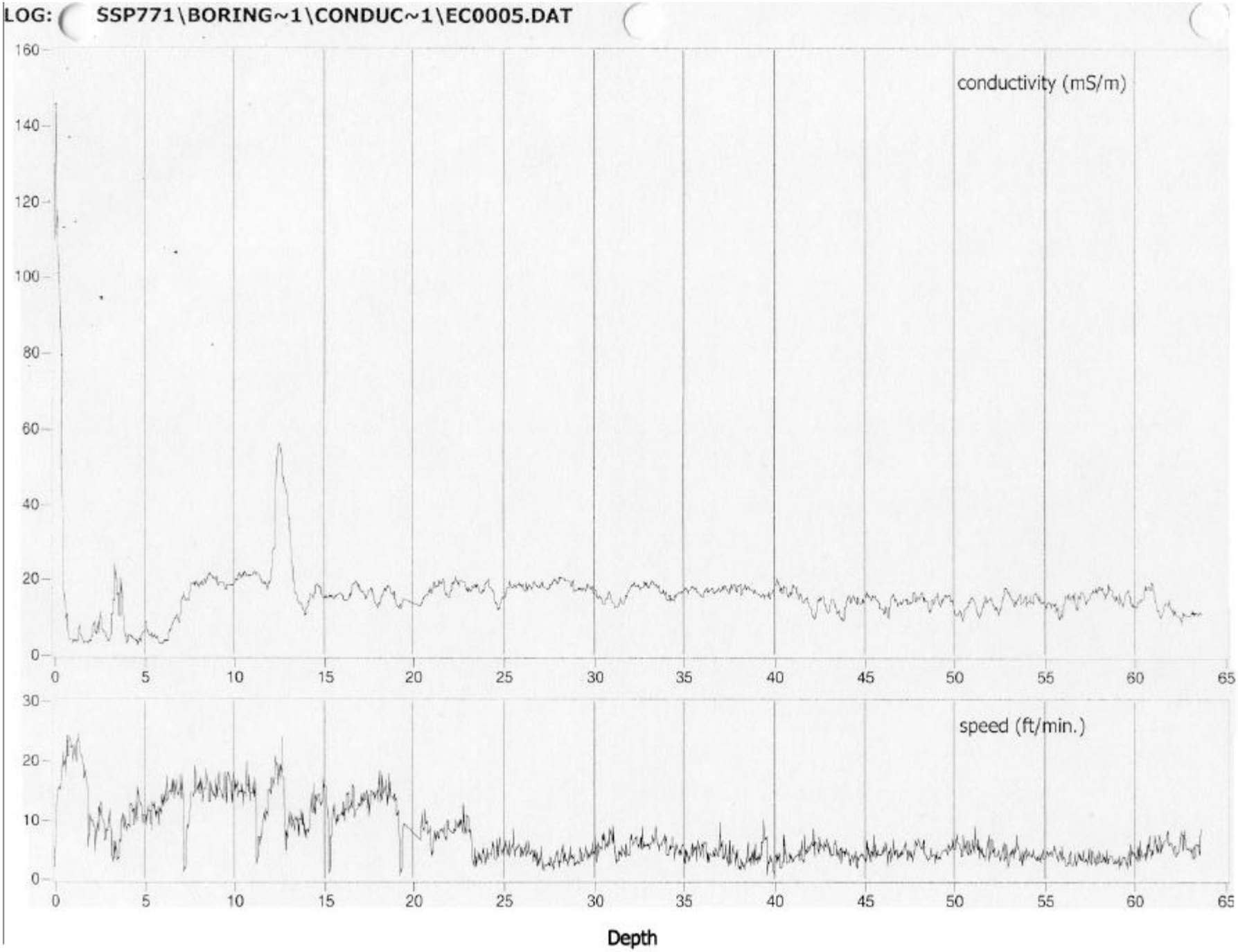


Figure B-1. SAC-E01 Borehole Conductivity Log

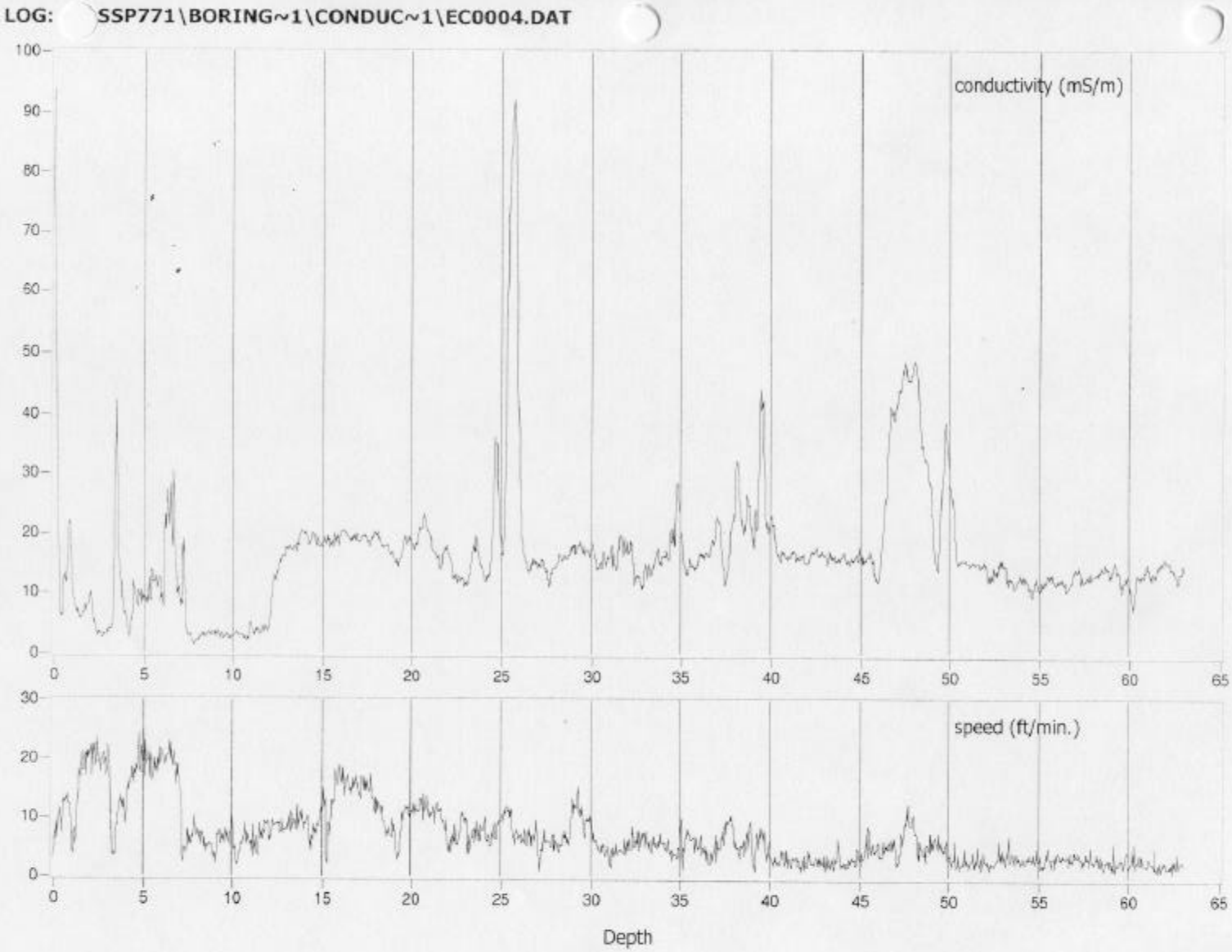


Figure B-2. SAC-E02 Borehole Conductivity Log

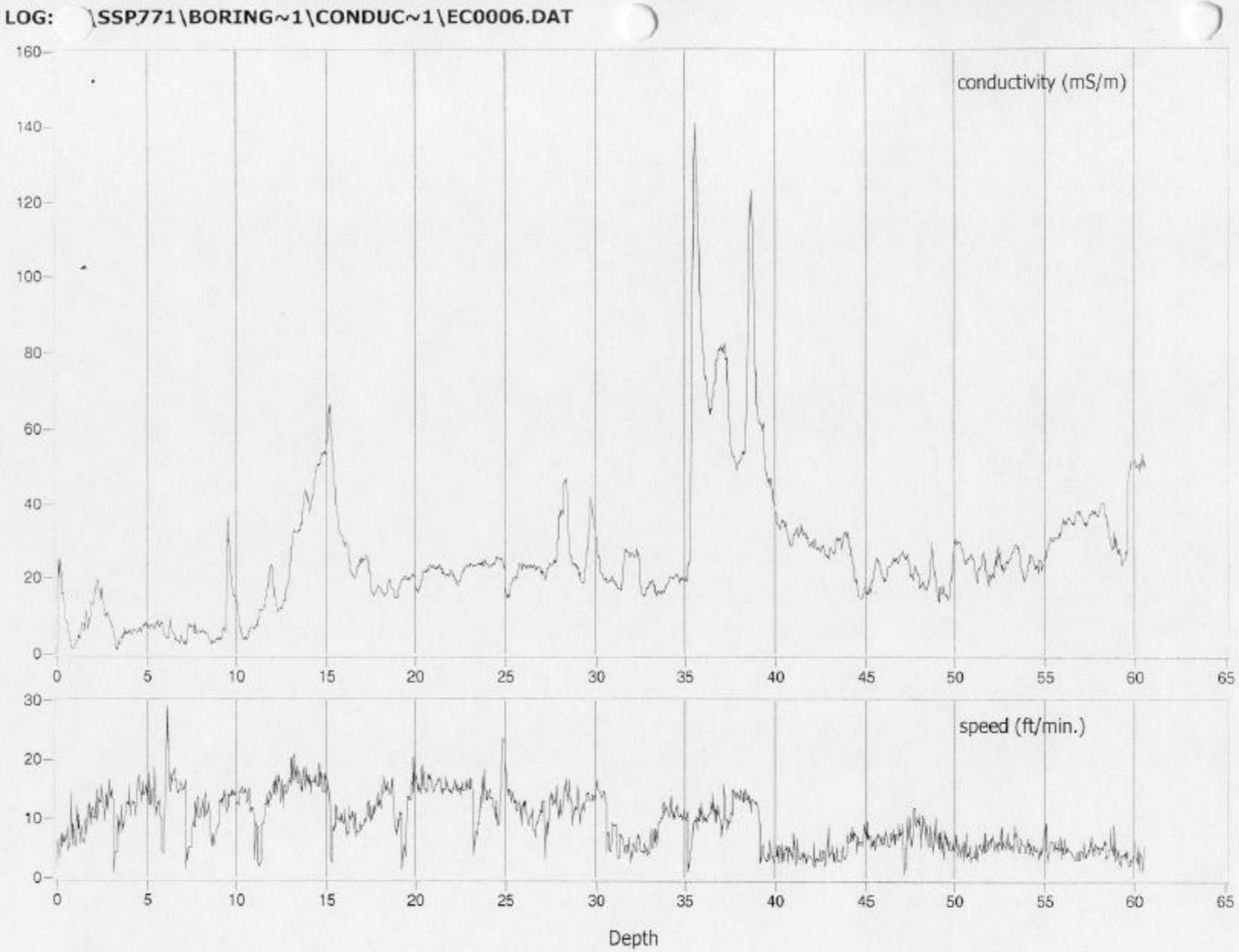


Figure B-3. SAC-E03 Borehole Conductivity Log

APPENDIX C

Laboratory Data Reports for Grain Size and Hydrometer/Atterberg Limit Testing

Summary Tables C1-C7 located in Tables Section of Report.

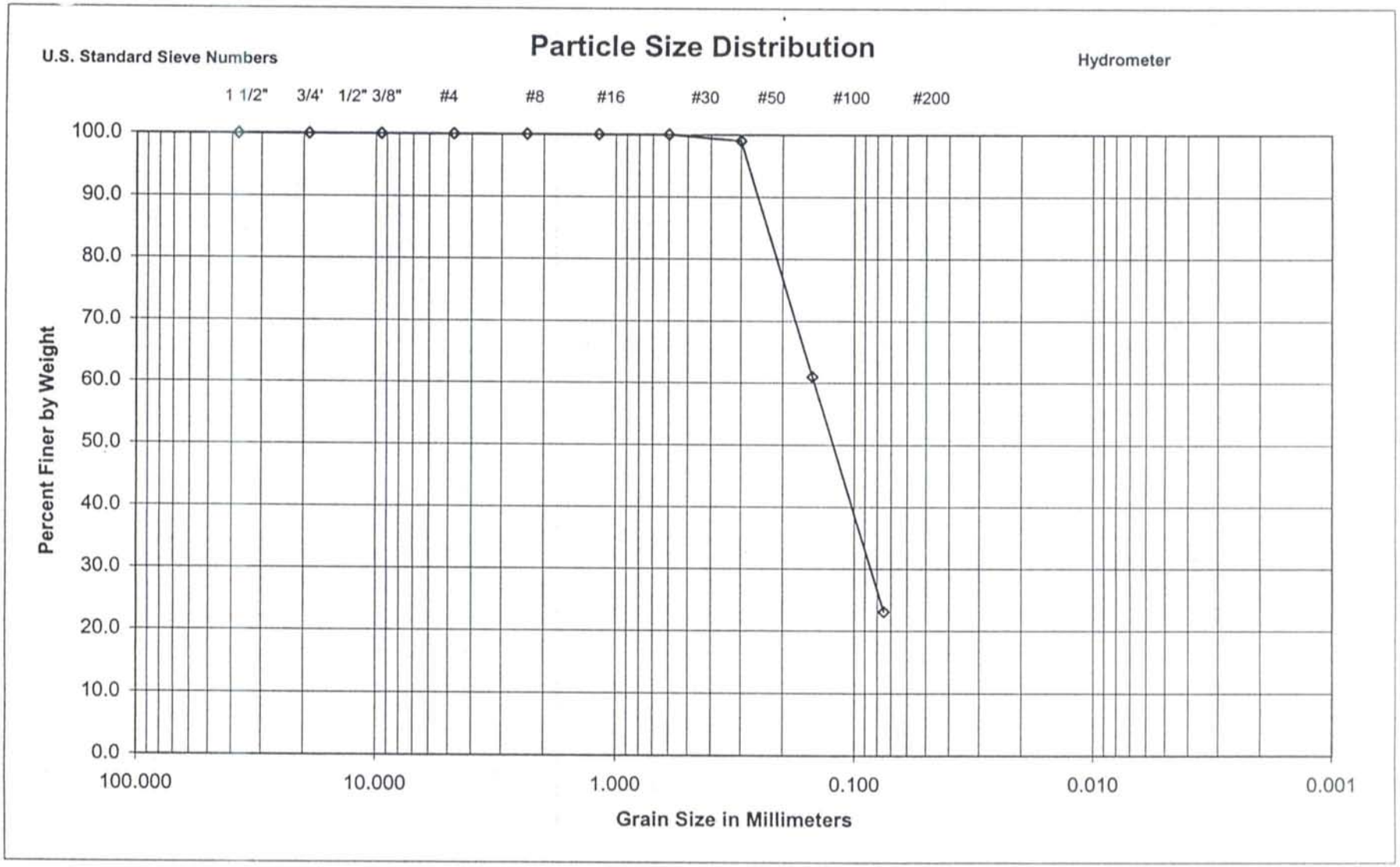
For hard copies of particle size graphs are available by request from Page Pegram, 505-764-3890

SUMMARY OF LAI ORATORY TEST DATA

Test Hole	Depth (feet)	Unified Classification	Atterberg Limits		SIEVE ANALYSIS-% PASSING BY WEIGHT										Description
			LL	PI	1 1/2"	3/4"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	
SBB-W03	11-12.5	SM									100	99	61	23.1	
SBB-W03	21-22.5	SP					100	99	98	97	92	54	13	5.1	
SBB-W03	28.5-30	SW					100	98	97	97	94	63	11	4.4	
SBB-W03	41-42.5	SW									100	82	14	4.7	
SBB-W03	46-47.5	SP-SM								100	98	83	29	10.3	
SBB-W03	53.5-55	SP-SM								100	98	75	19	5.8	
SBB-W03	61-62.5	SP			100	93	92	89	88	87	84	70	15	4.3	
SBB-W03	71-72.5	SP g			100	84	70	60	53	50	45	31	9	4.6	
SBB-W03	81-82.5	GP s			100	72	62	50	40	34	28	19	13	11.9	
SBB-W03	91-92.5	SP-SM g			100	85	73	64	58	54	48	33	19	9.8	

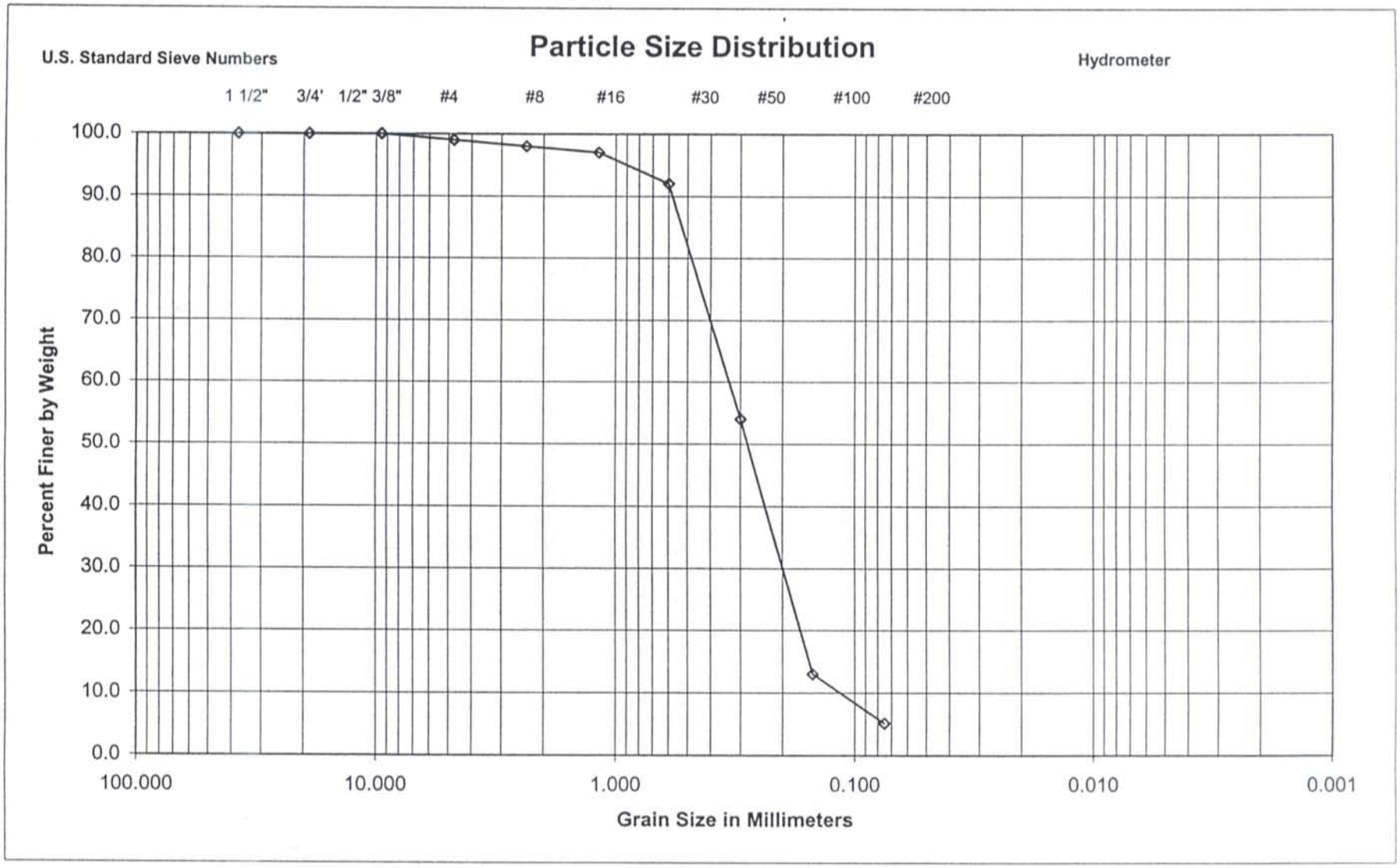
Project Number : 02-2-586
Project : SSP 771-3

Table No. : 1



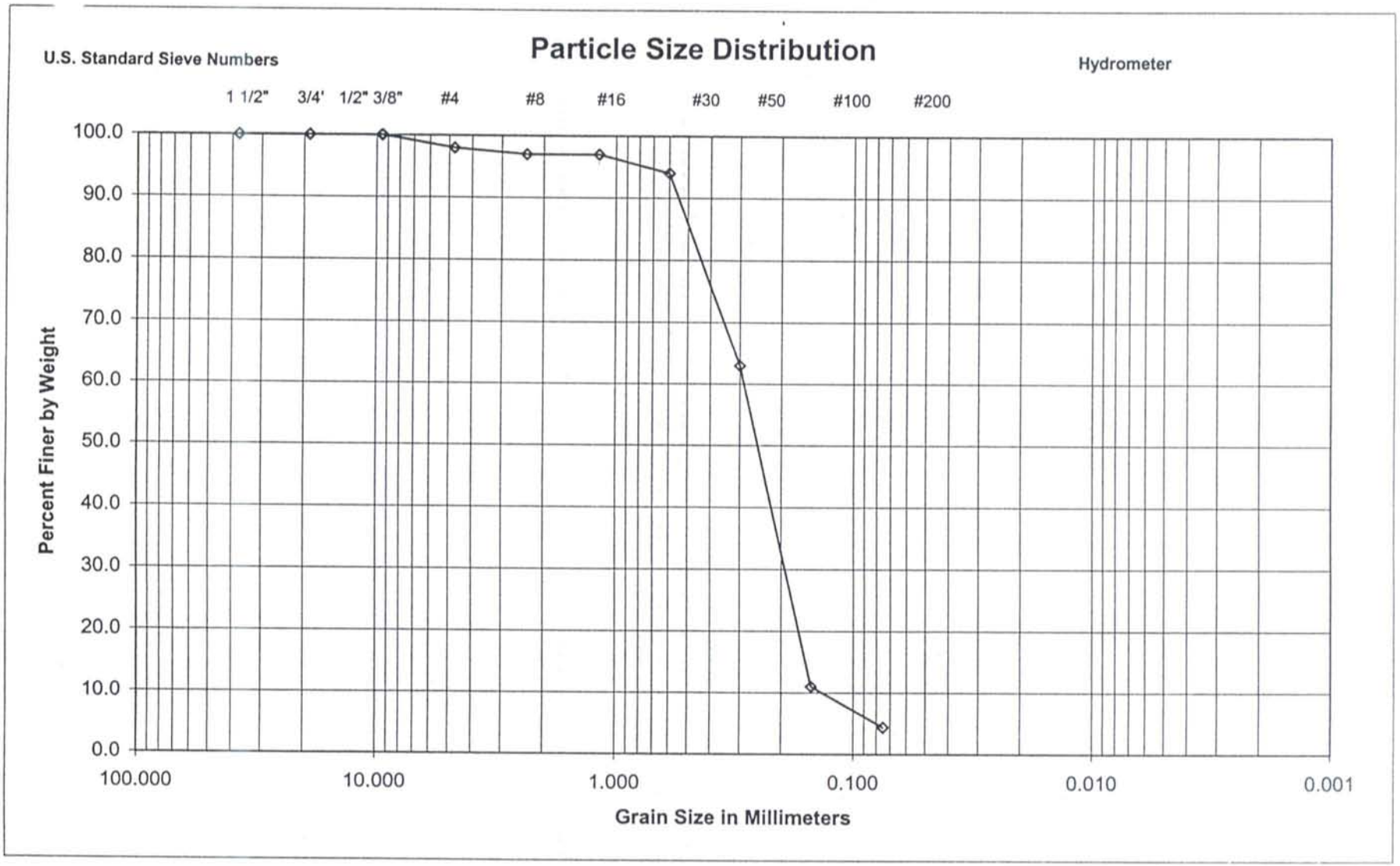
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SBB-W03 11-12.5



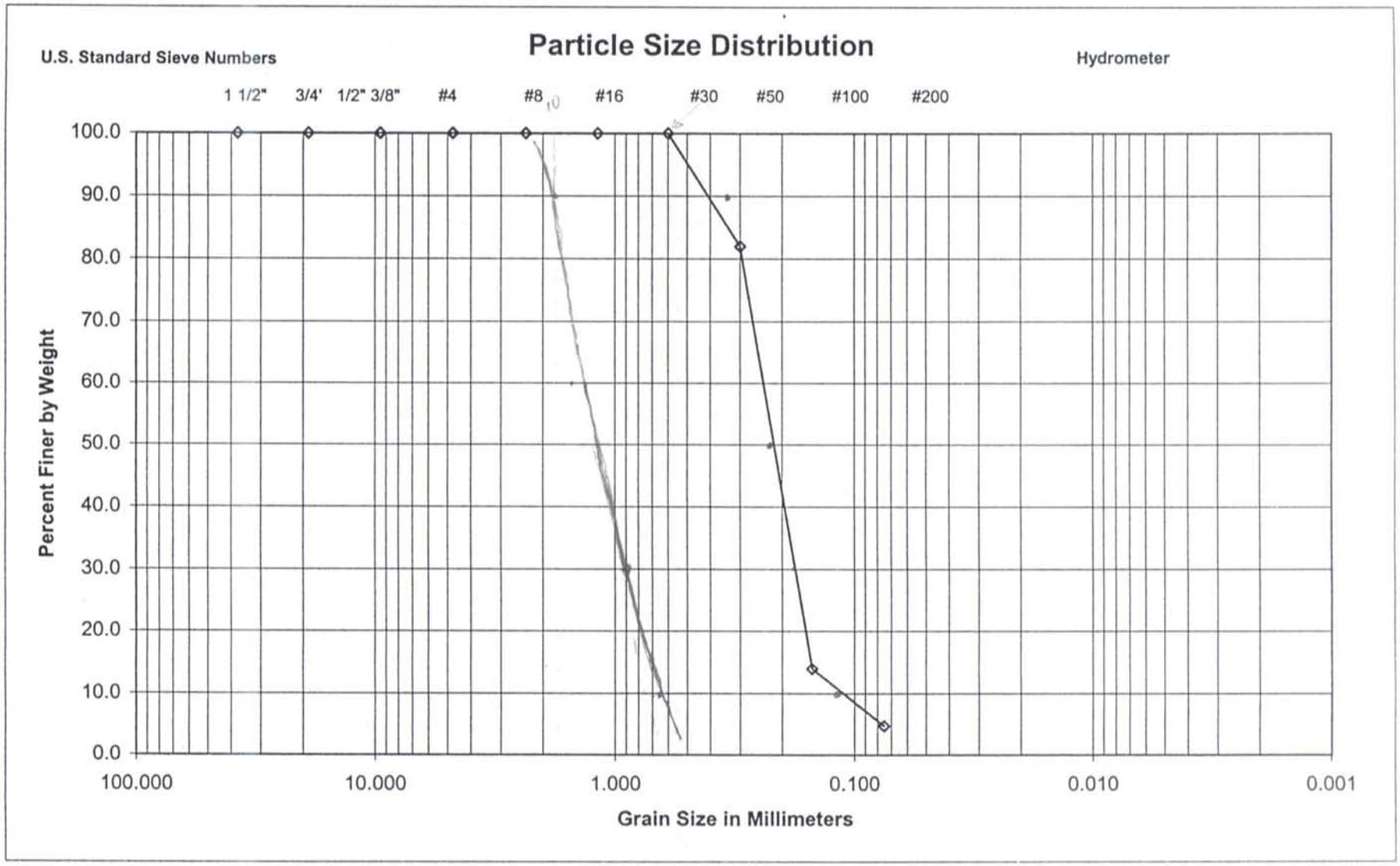
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SBB-W03 21-22.5



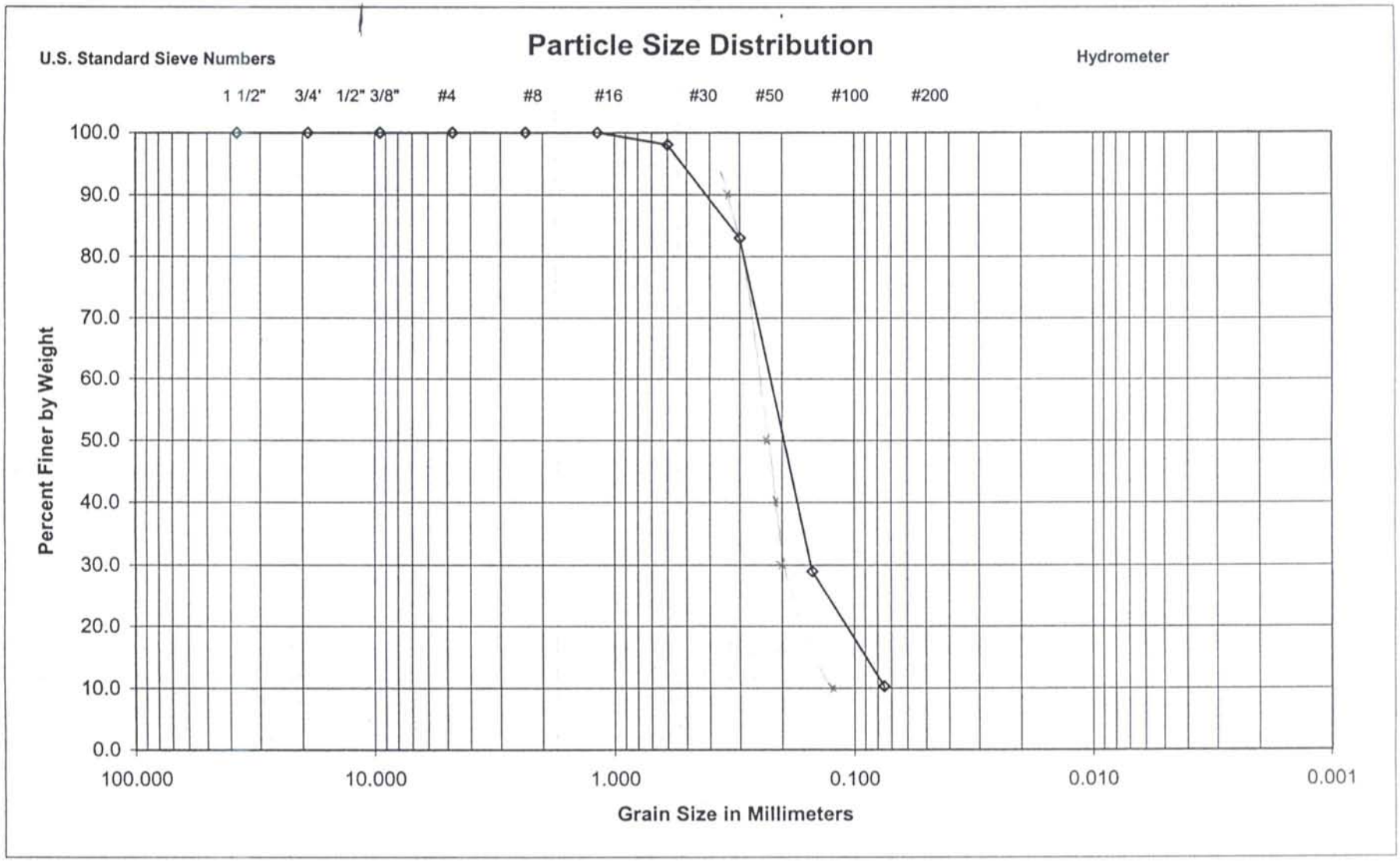
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SBB-W03 28.5-30



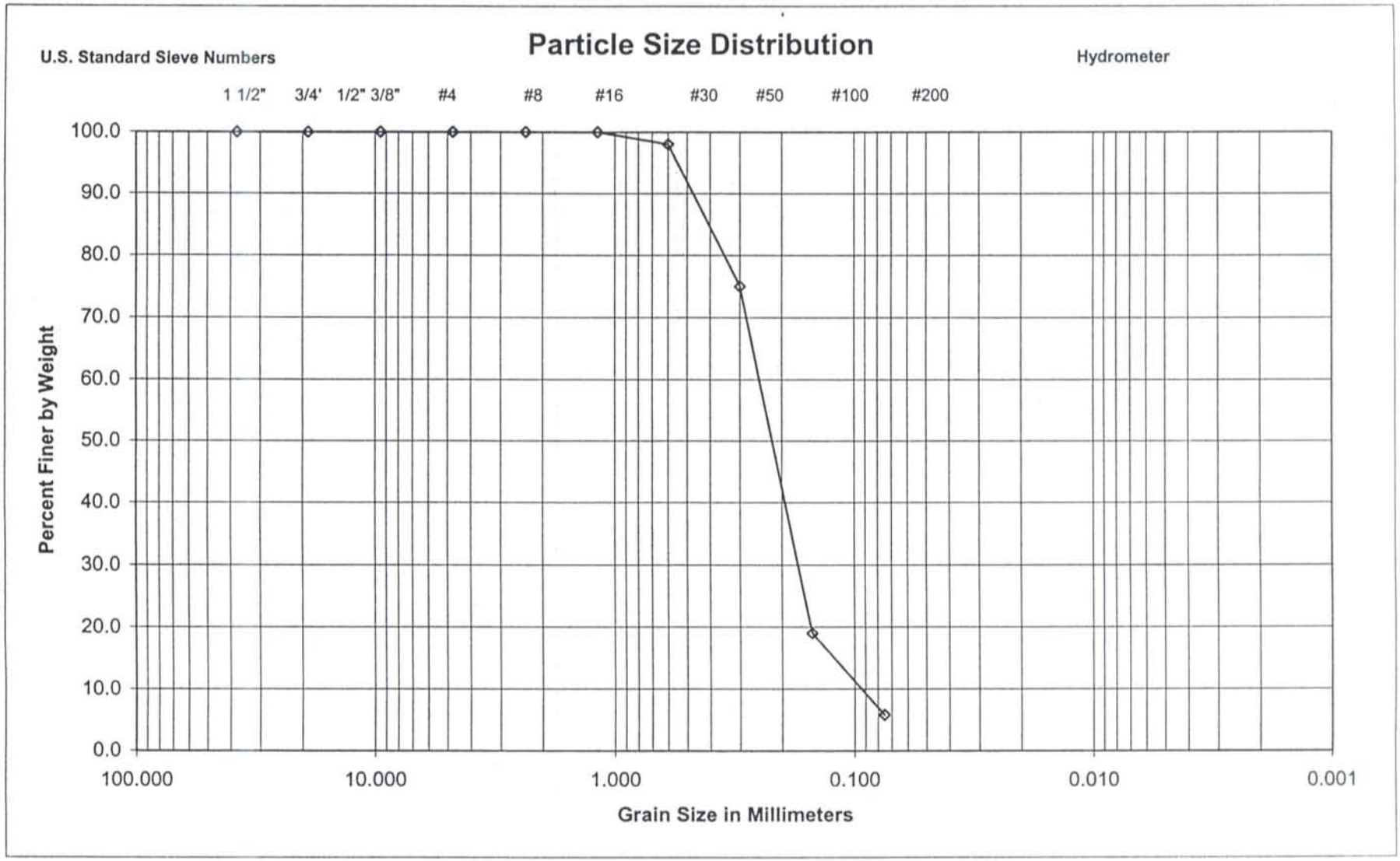
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SBB-W03 41-42.5



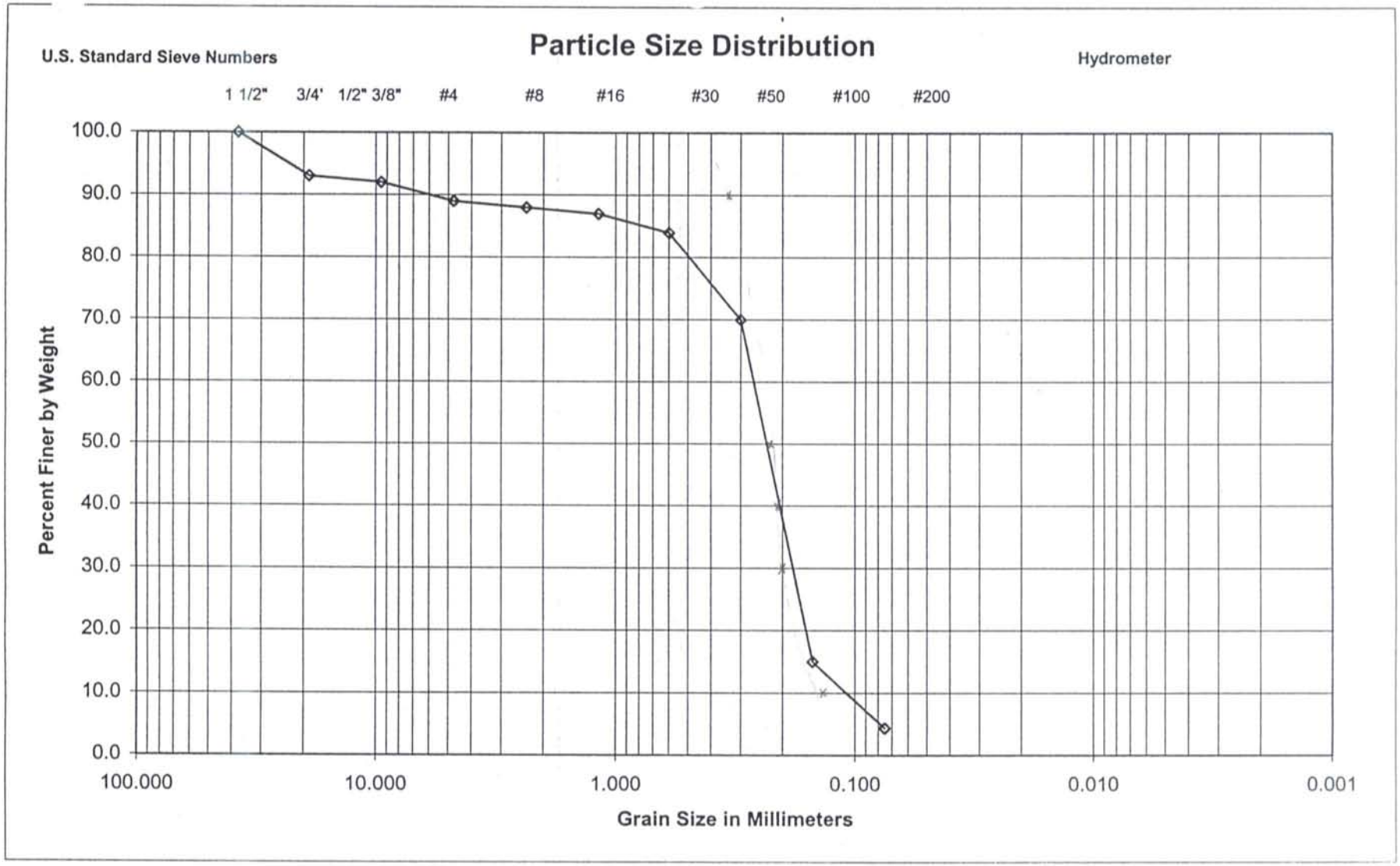
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SBB-W03 46-47.5



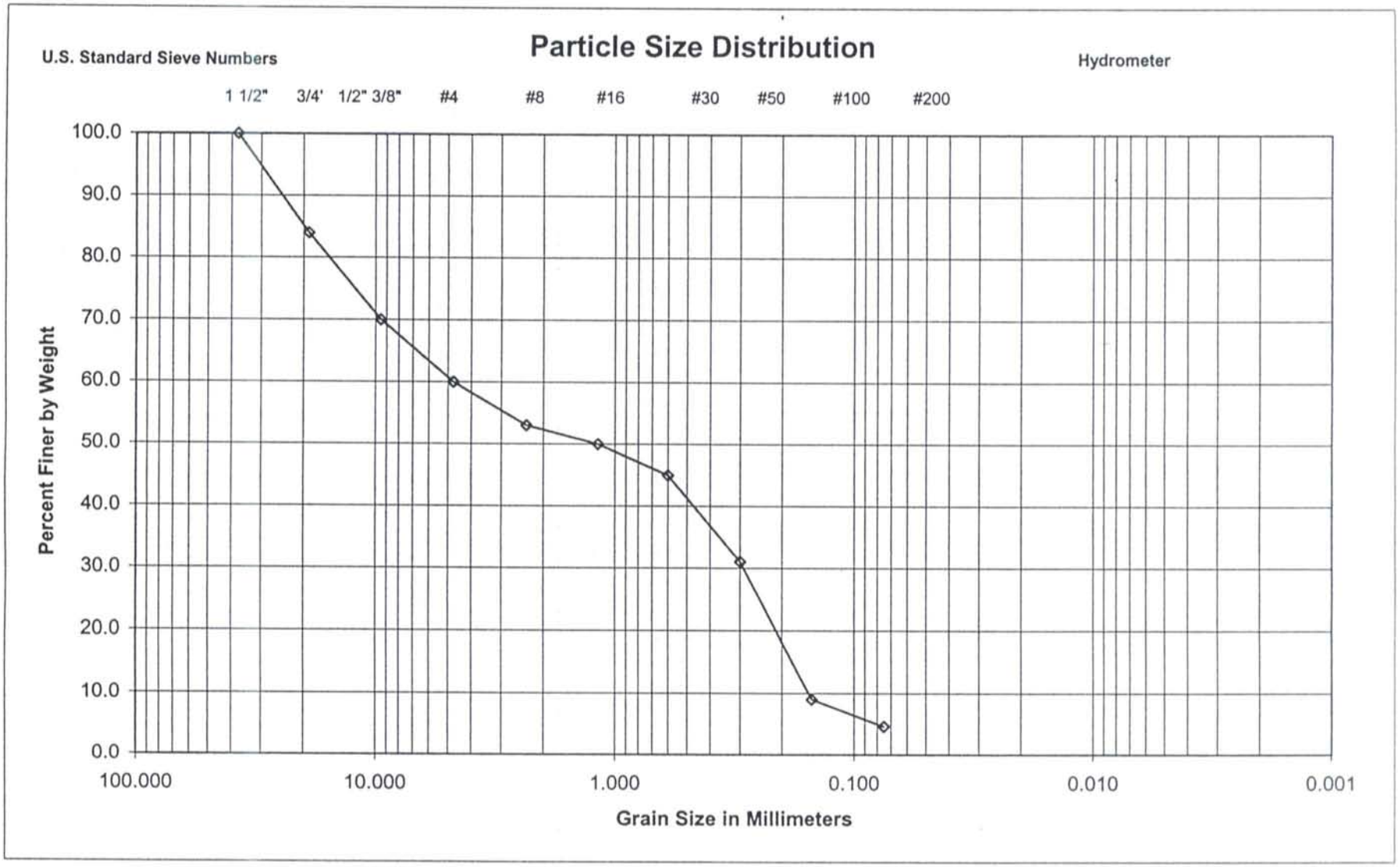
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SBB-W03 53.5-55



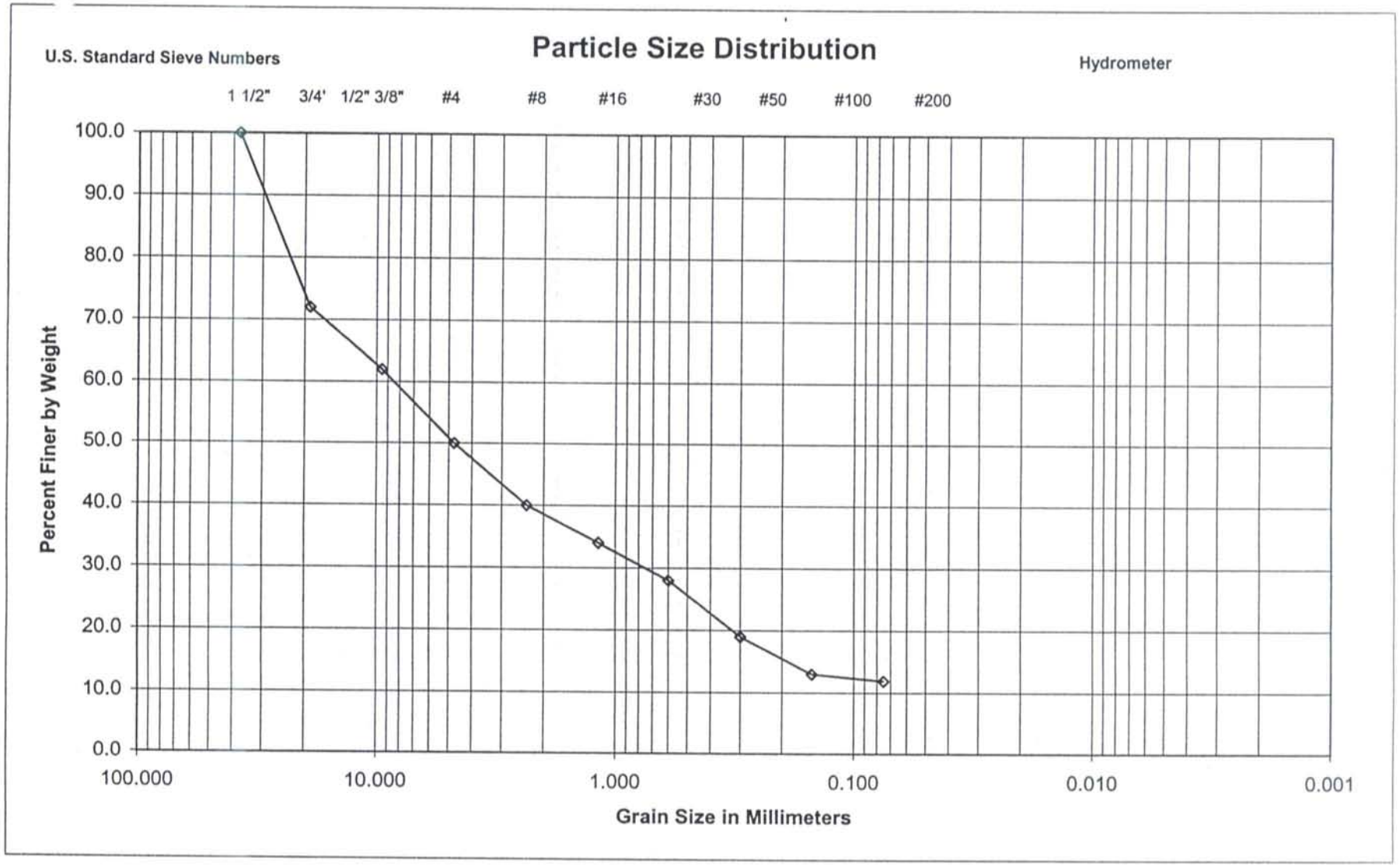
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SBB-W03 61-62.5



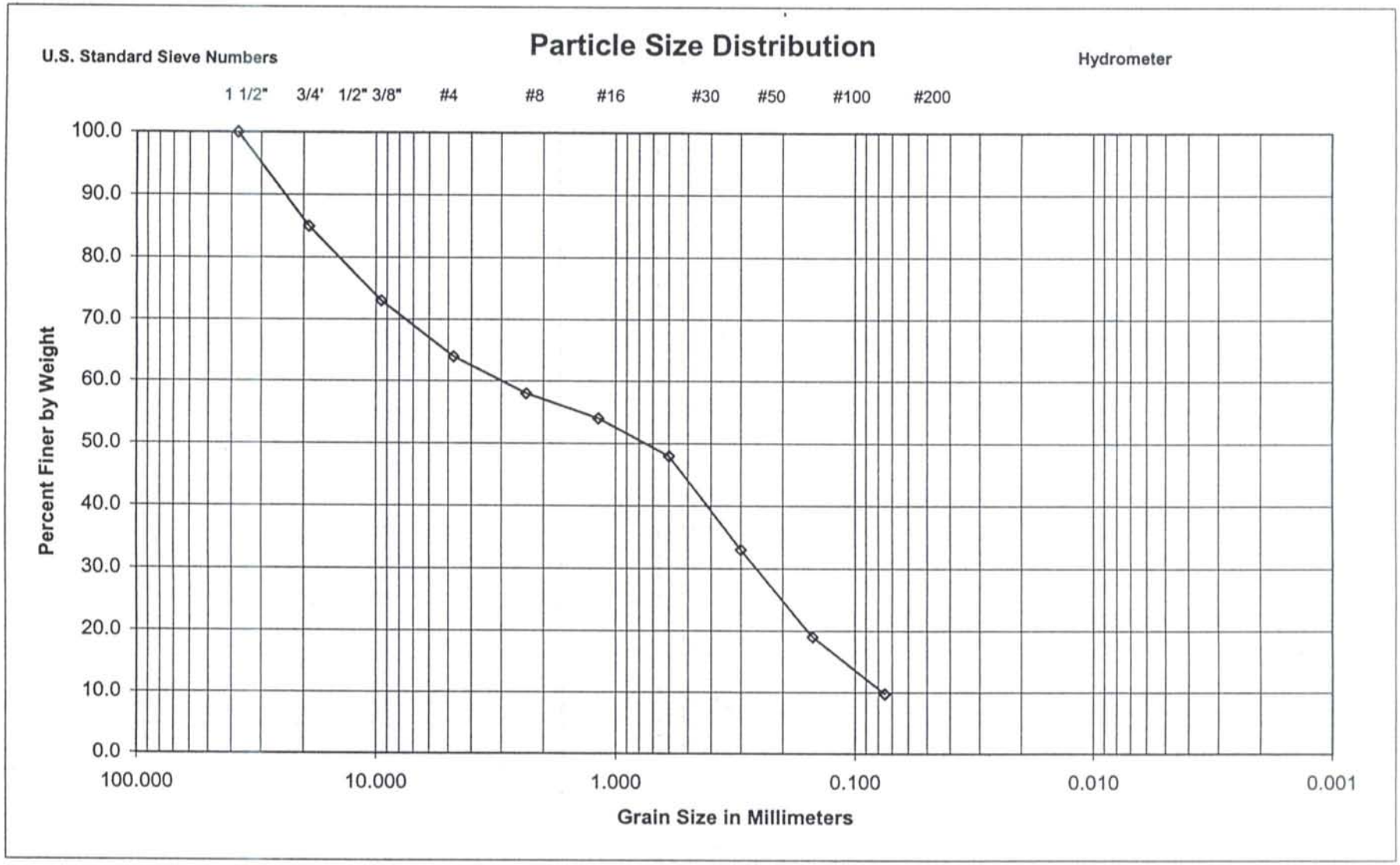
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SBB-W03 71-72.5



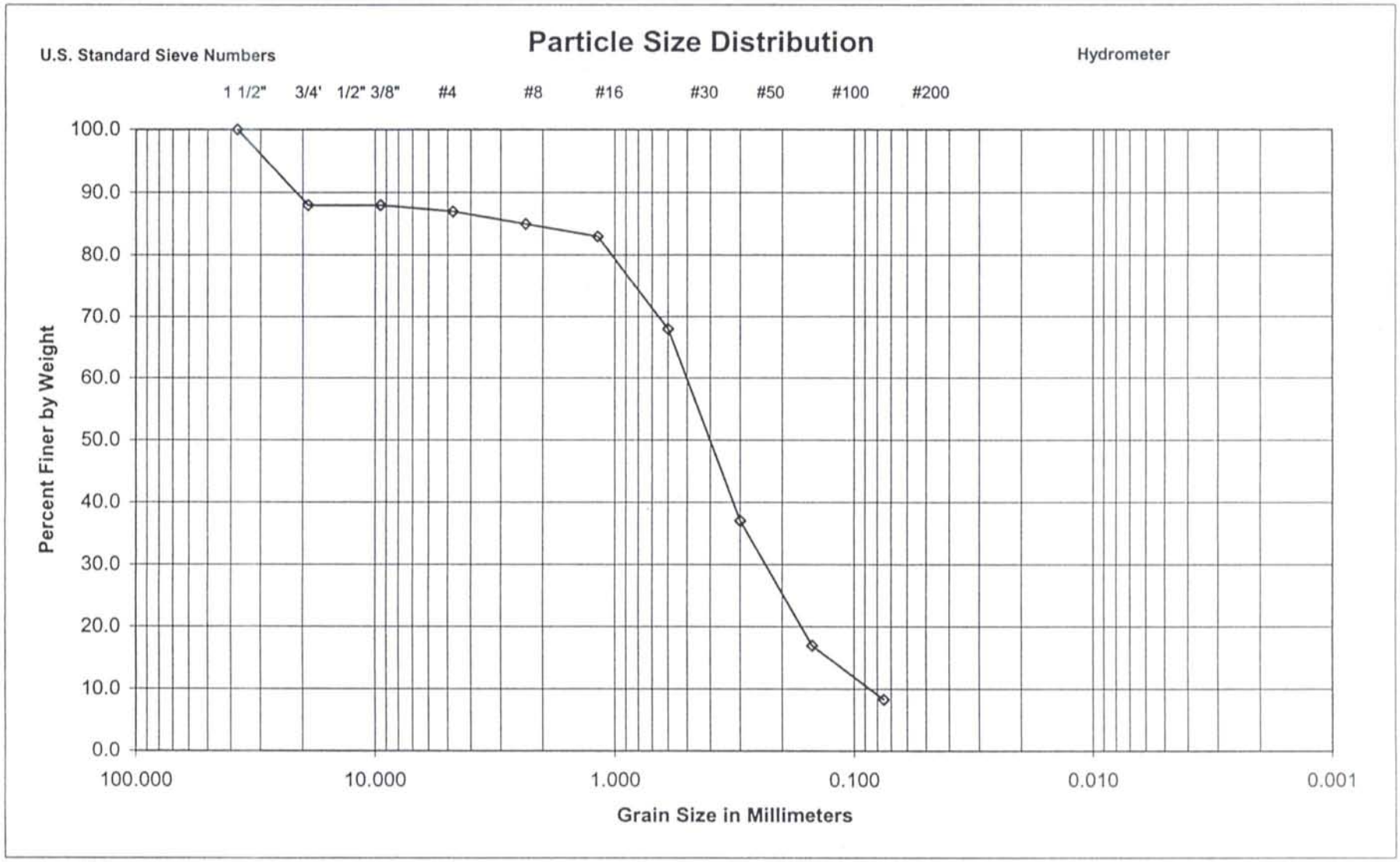
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SBB-W03 81-82.5



Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SBB-W03 91-92.5



Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

ESC-E04BC 86-86.5

771-3

V

Vinyard & Associates, Inc.

8916-A Adams Street NE
Albuquerque, New Mexico 87113
505/797-9743 505/797-9749 FAX

A

Geotechnical Engineering * Materials Testing * Environmental Engineering

October 14, 2002

S.S. Papadopulos & Associates, Inc.
7001 Prospect Place
Suite 100
Albuquerque, NM 87110

Mr. Bryan Grigsby

Project: SSP 771-3 Gradation Samples
V & A Project No. 02-2-586

Gentlemen:

Attached are copies of the Laboratory Test results for the subject project.

Should you have any questions regarding this data, please do not hesitate to call.

Sincerely,

Robert K. Abeyta, S.E.T.

Vinyard & Associates, Inc.

Martin D. Vinyard, P.E.

Attachment: Data Sheets: (9)

cc: Addressee: (1)

rka

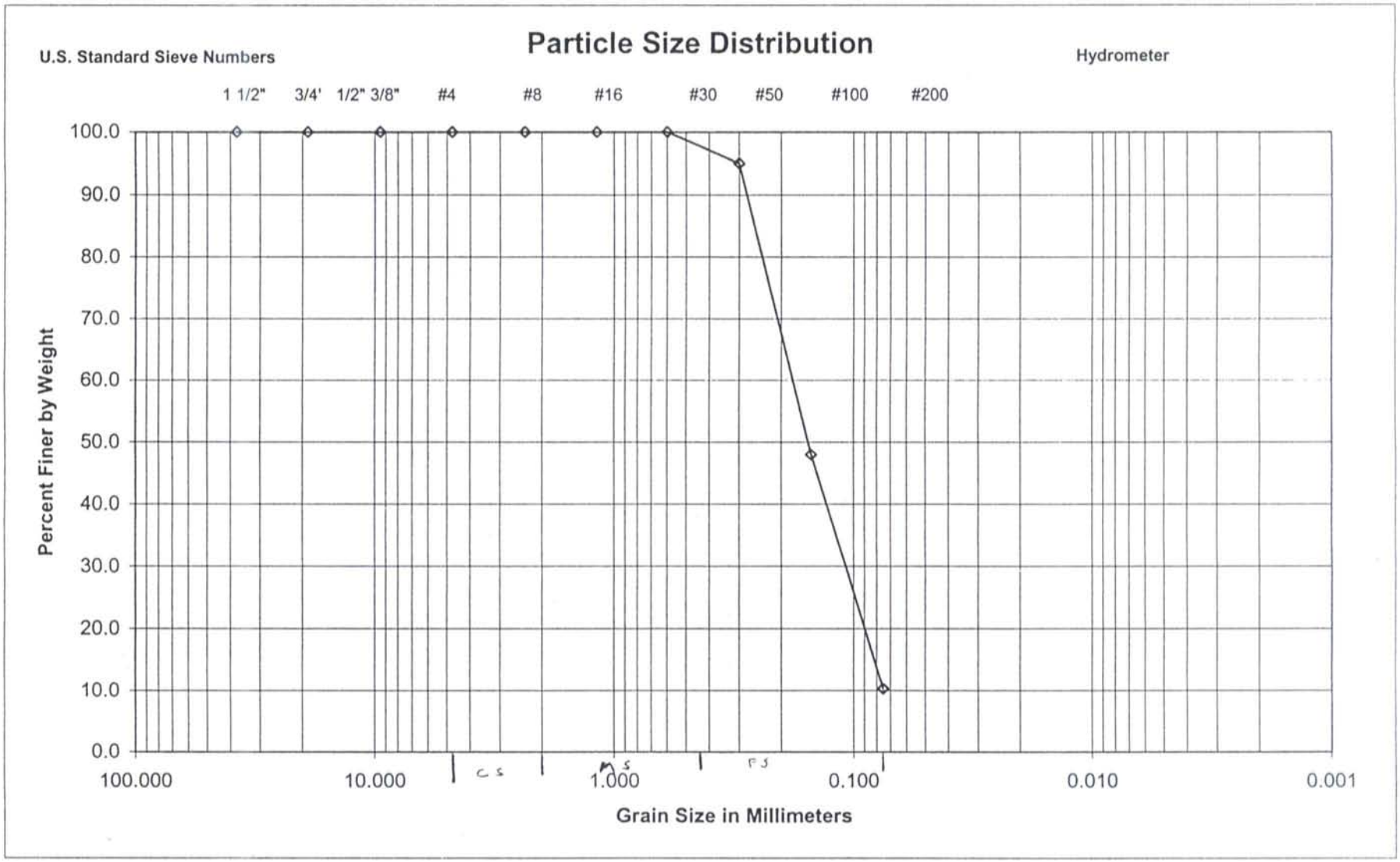
SUMMARY OF LAB ORATORY TEST DATA

Test Hole	Depth (feet)	Unified Classification	Natural Moisture Content (%)	Atterberg Limits		SIEVE ANALYSIS-% PASSING BY WEIGHT										Description
				LL	PI	1 1/2"	3/4"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	
SACW09BC	7.5-9	SP-SM	1.7	NV	NP							100	95	48	10.3	
SACW09BC	17.5-19	SM	5.3	NV	NP							100	99	86	37.7	
SACW09BC	24-25.5	SP	20.4	NV	NP		100	99	98	98	98	98	78	9	2.7	
SACW09BC	34-35.5	SP	16.4	NV	NP	100	97	97	96	93	89	76	42	13	5.6	
SACW09BC	41-42.5	SP	14.1	NV	NP		100	93	86	79	72	59	28	11	6.2	
SACW09BC	56-57.5	SP	17.6	NV	NP	100	97	94	90	87	84	76	40	11	5.5	
SACW09BC	66-67.5	SP	19.6	NV	NP	100	97	94	90	88	86	80	39	8	3.4	
SACW09BC	88-89	GP s	8.4	NV	NP	100	83	60	39	28	23	19	12	5	3.5	
SACW09BC	22.5-24	CH		61	34											

NV= not a valid value, NP= Non plastic.

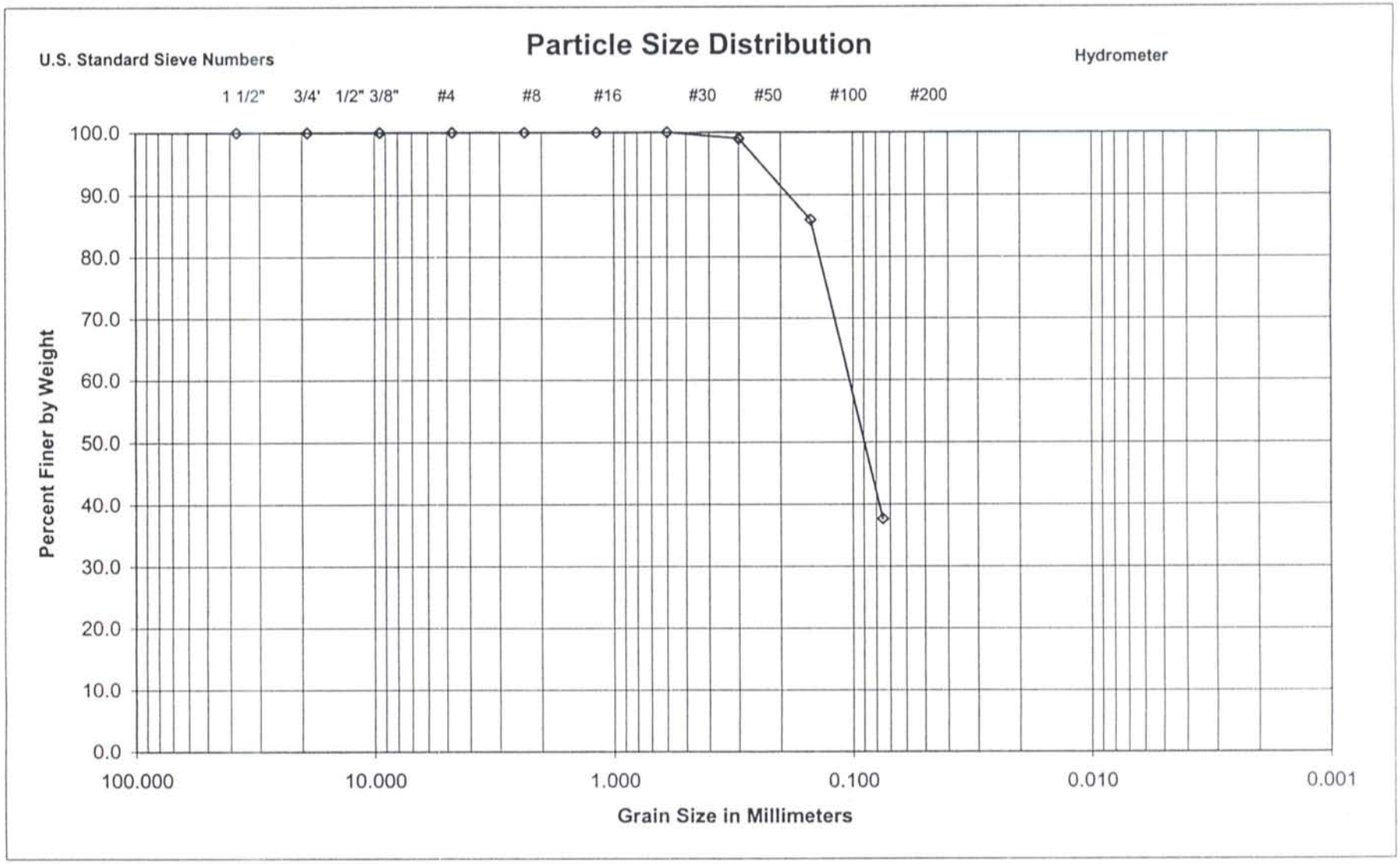
Project Number : 02-2-586
SSP 771.3

Table No. : 1



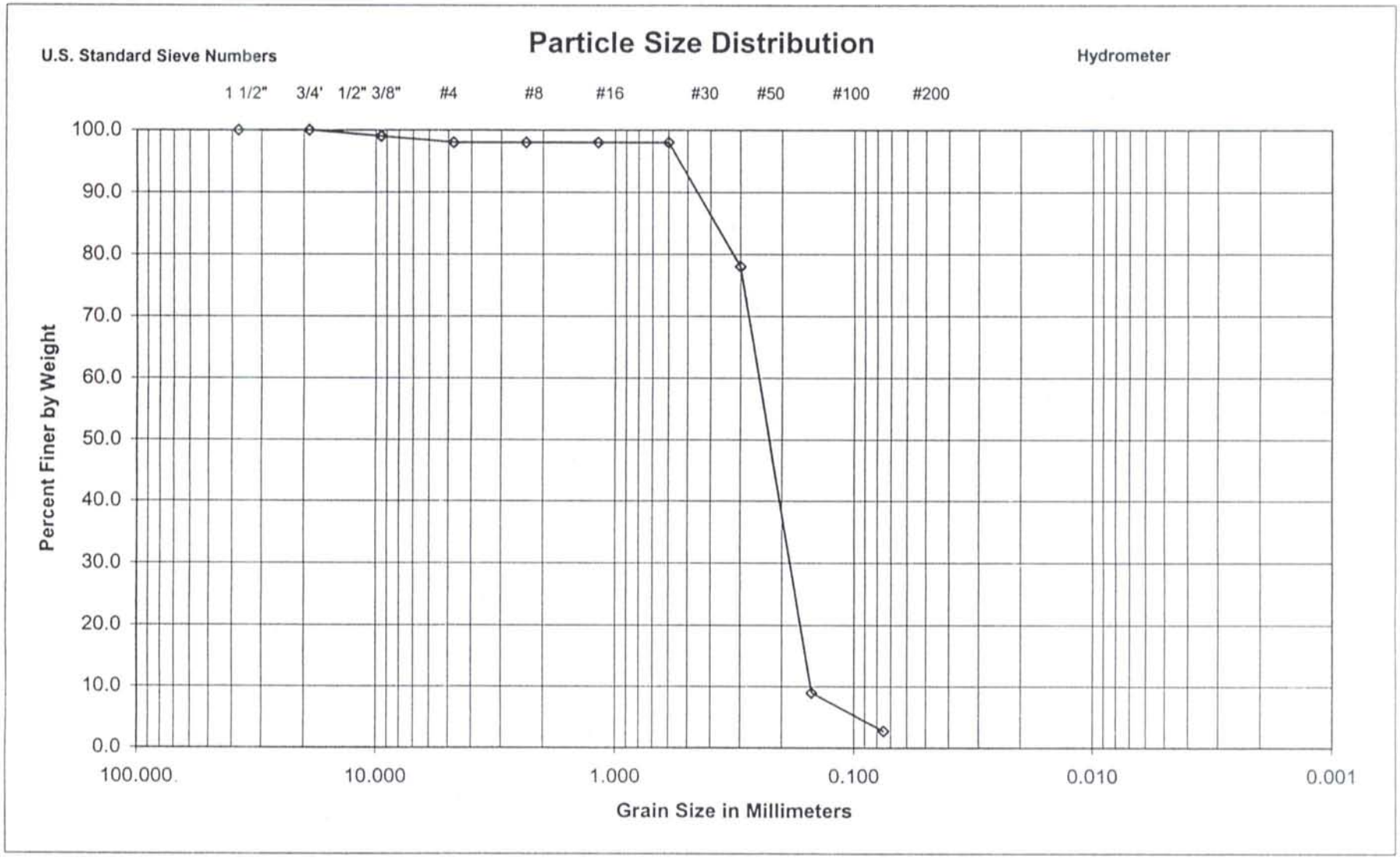
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SACW09BC 7.5-9'



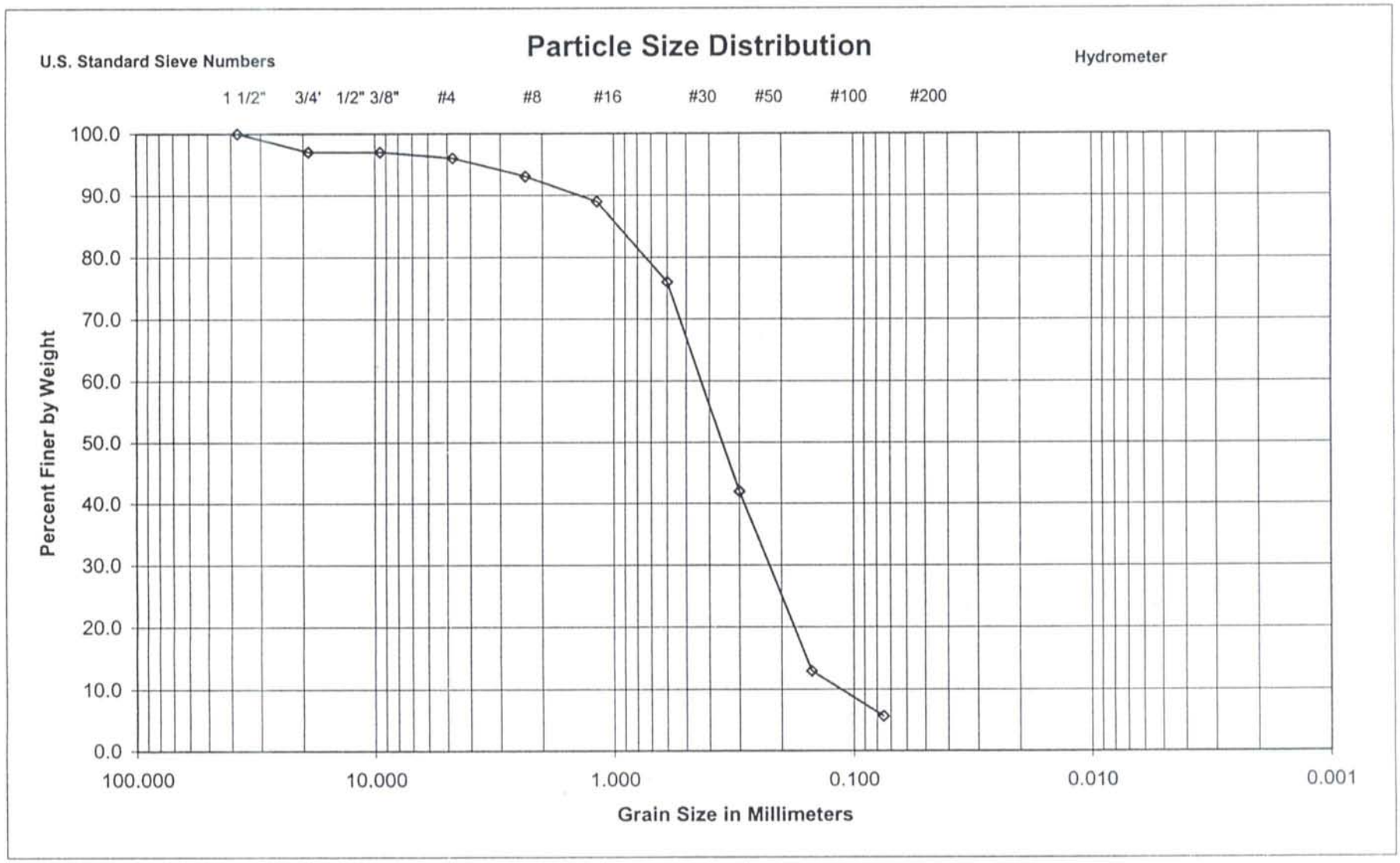
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SACW09BC 17.5-19



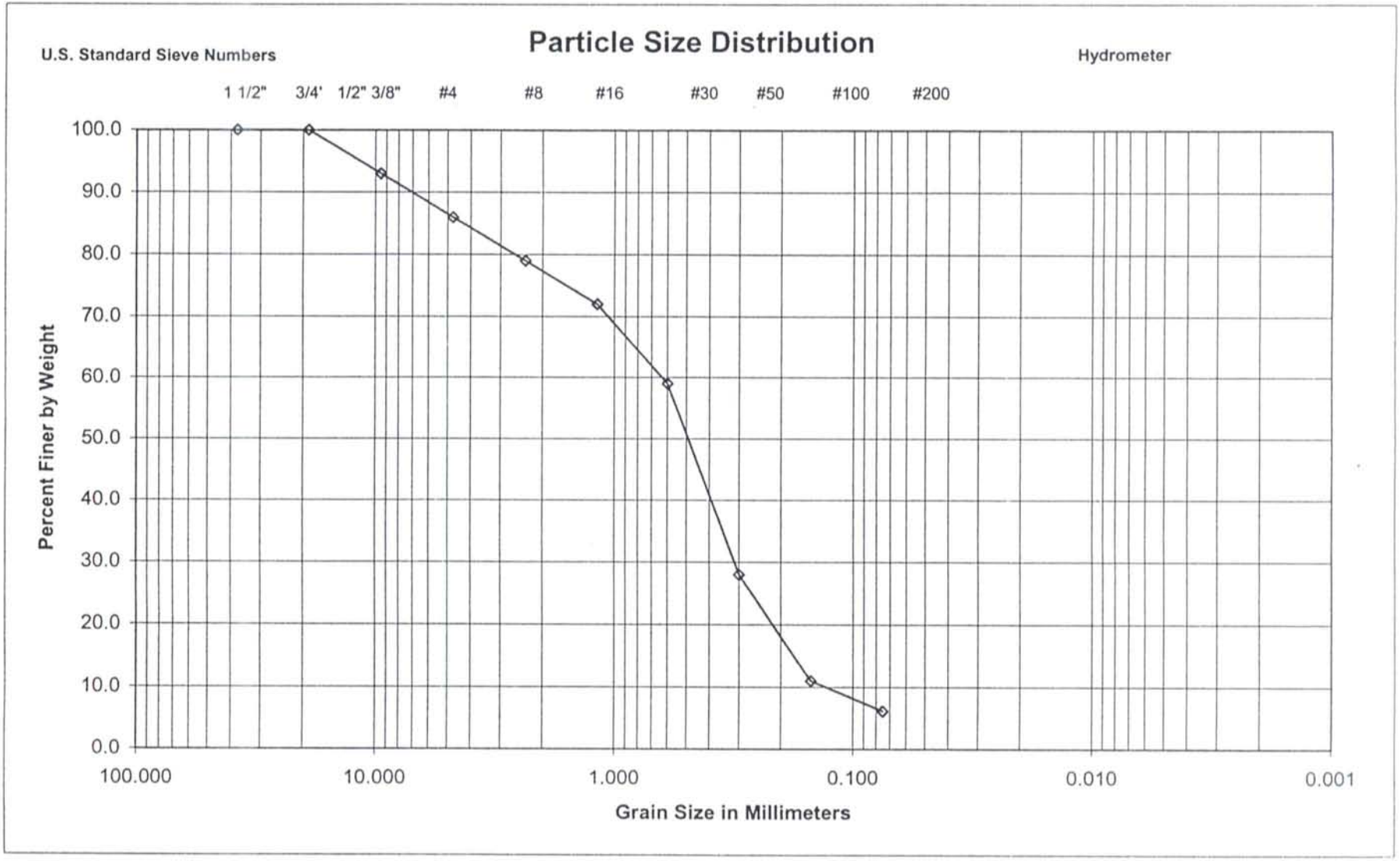
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SACW09BC 24-25.5'



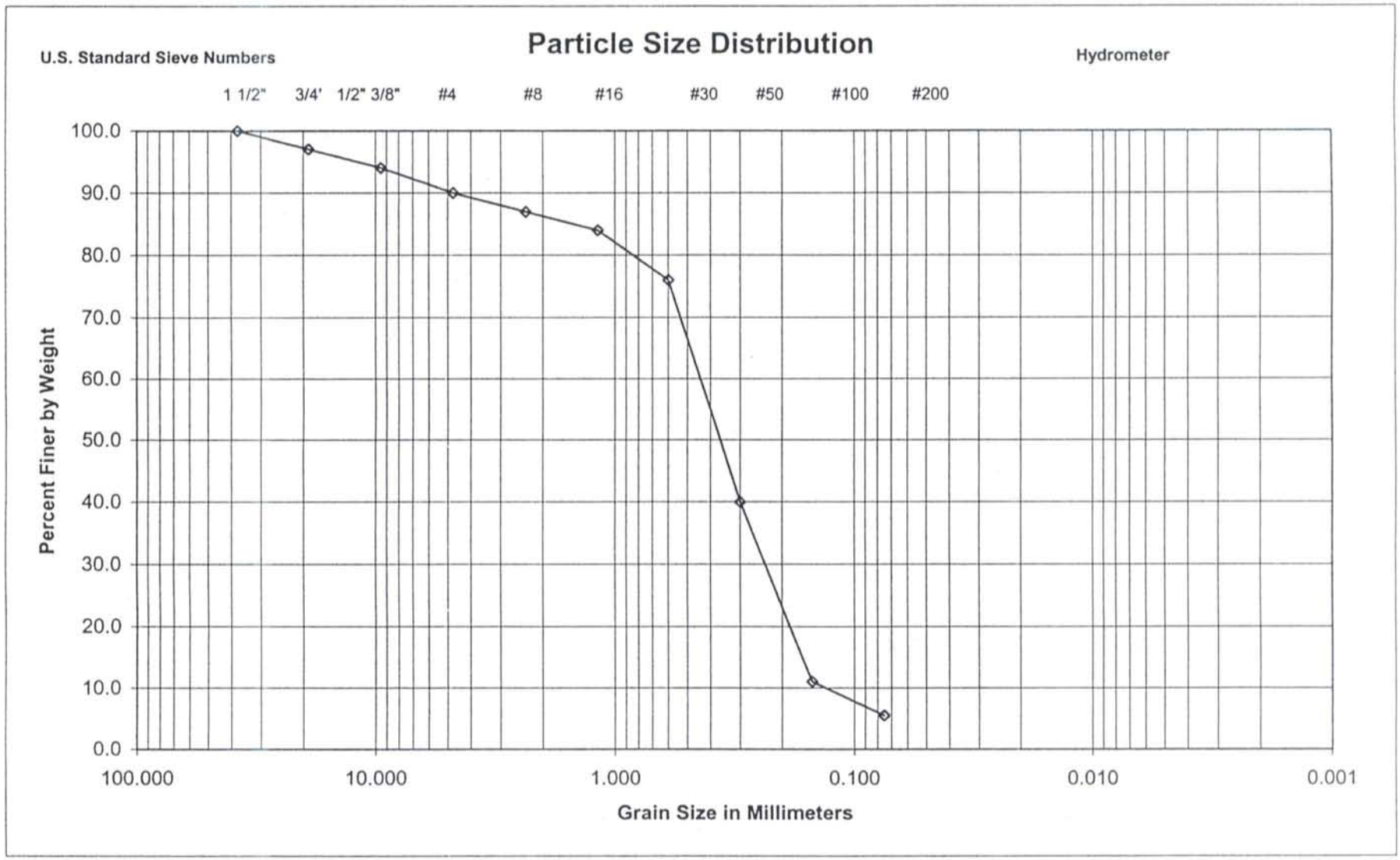
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SACW09BC 34-35.5'



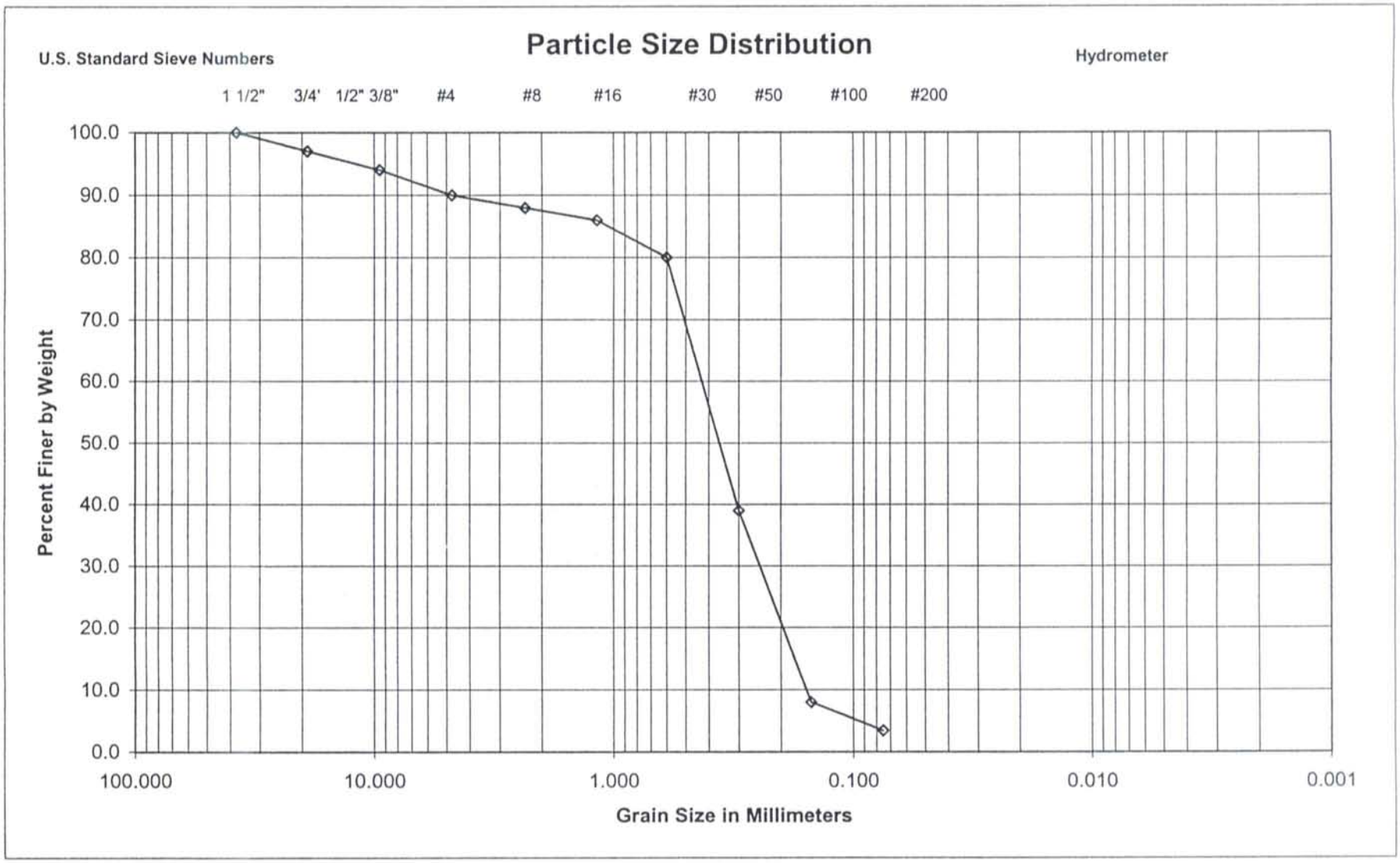
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SACW09BC 41-42.5'



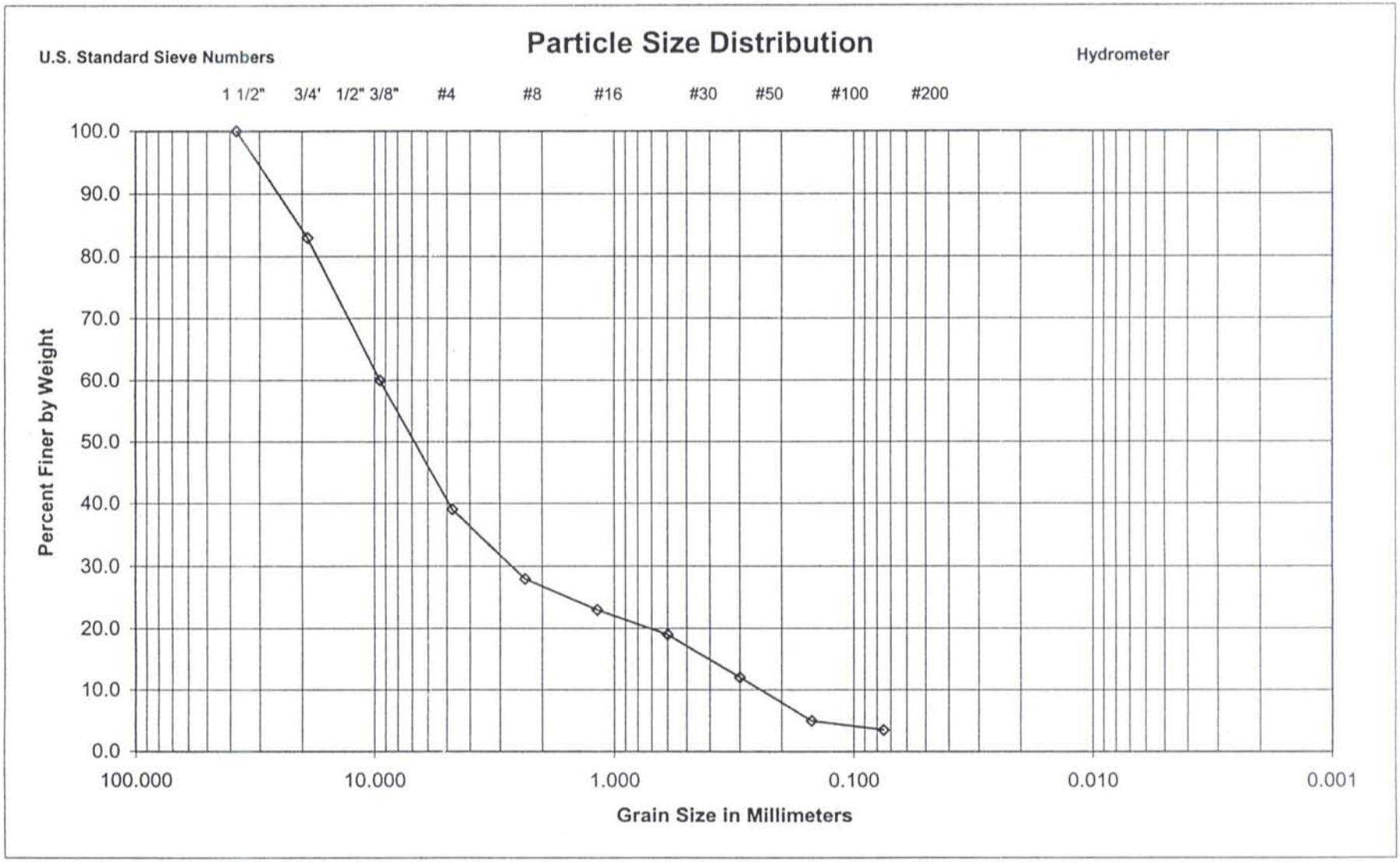
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SACW09BC 56-57.5'



Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SACW09BC 66-67.5'



Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SACW09BC 88-89'

771-3

V

Vinyard & Associates, Inc.

8916-A Adams Street NE
Albuquerque, New Mexico 87113
505/797-9743 505/797-9749 FAX

A

Geotechnical Engineering * Materials Testing * Environmental Engineering

February 20, 2003

S.S. Papadopulos & Associates, Inc.
1877 Broadway
Suite 703
Boulder, Co 80302

Mr. Bryan Grigsby

Project: SSP 771-3 Gradation Samples
V & A Project No. 02-2-586

Gentlemen:

Attached are copies of the Sieve Analysis Test Results for the subject project.

Should you have any questions regarding this data, please do not hesitate to call.

Sincerely,

Robert K. Abeyta, S.E.T.
Vinyard & Associates, Inc.

Attachment: Data Sheets: (15)

cc: Addressee: (1)

rka

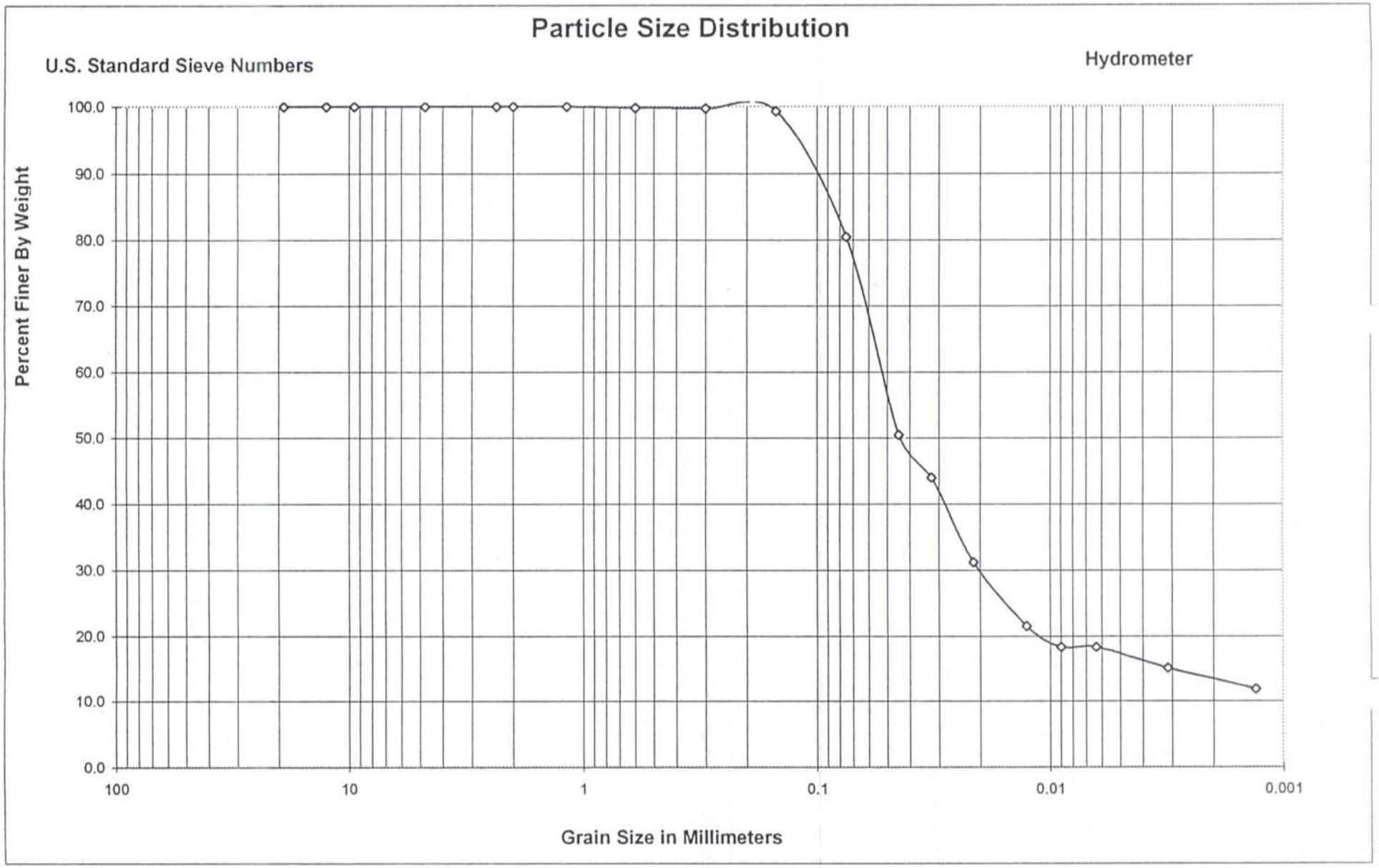
SUMMARY OF LABORATORY TEST DATA

Test Hole	Depth (feet)	Unified Classification	Atterberg Limits		SIEVE ANALYSIS-% PASSING BY WEIGHT										Description
			LL	PI	1 1/2"	3/4"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	
SACW09BC	96-97.5	SW-SM				100	96	93	84	72	52	27	15	10.5	
SACW09BC	98-5.100	SW-SW g				100	88	72	60	46	32	21	13	9.7	
SACW09BC	108.5-110	SM				100	96	88	79	69	50	26	17	12.7	
SACW09BC	124-125.5	SM				100	96	90	81	68	52	33	17	12.0	
SFCW04	8.5-9.8	ML				100	100	100	100	99	99	99	98	78.2	
SFCW04	18.5-20	SM				100	100	100	100	100	100	95	38	11.9	
SFCW04	33.5-34.5	SP-SM			100	92	84	55	45	40	34	20	10	7.0	
SFCW04	43.5-45	SM				100	99	96	94	92	91	85	68	25	
SFCW04	48.5-52.5	GP-GM s			100	84	66	50	36	26	19	14	11	8.8	
SFCW04	58.5-60	GM s			100	71	58	49	40	33	28	21	16	14.3	
SFCW04	66-67.5	SM			100	97	96	92	90	83	58	25	16	13.0	
SFCW04	71-72.5	SM				100	97	95	94	89	68	32	17	12.8	
SFCW04	81-82	SW-SM				100	100	100	100	99	89	47	16	11.2	

NV= not a valid value, NP= Non plastic.

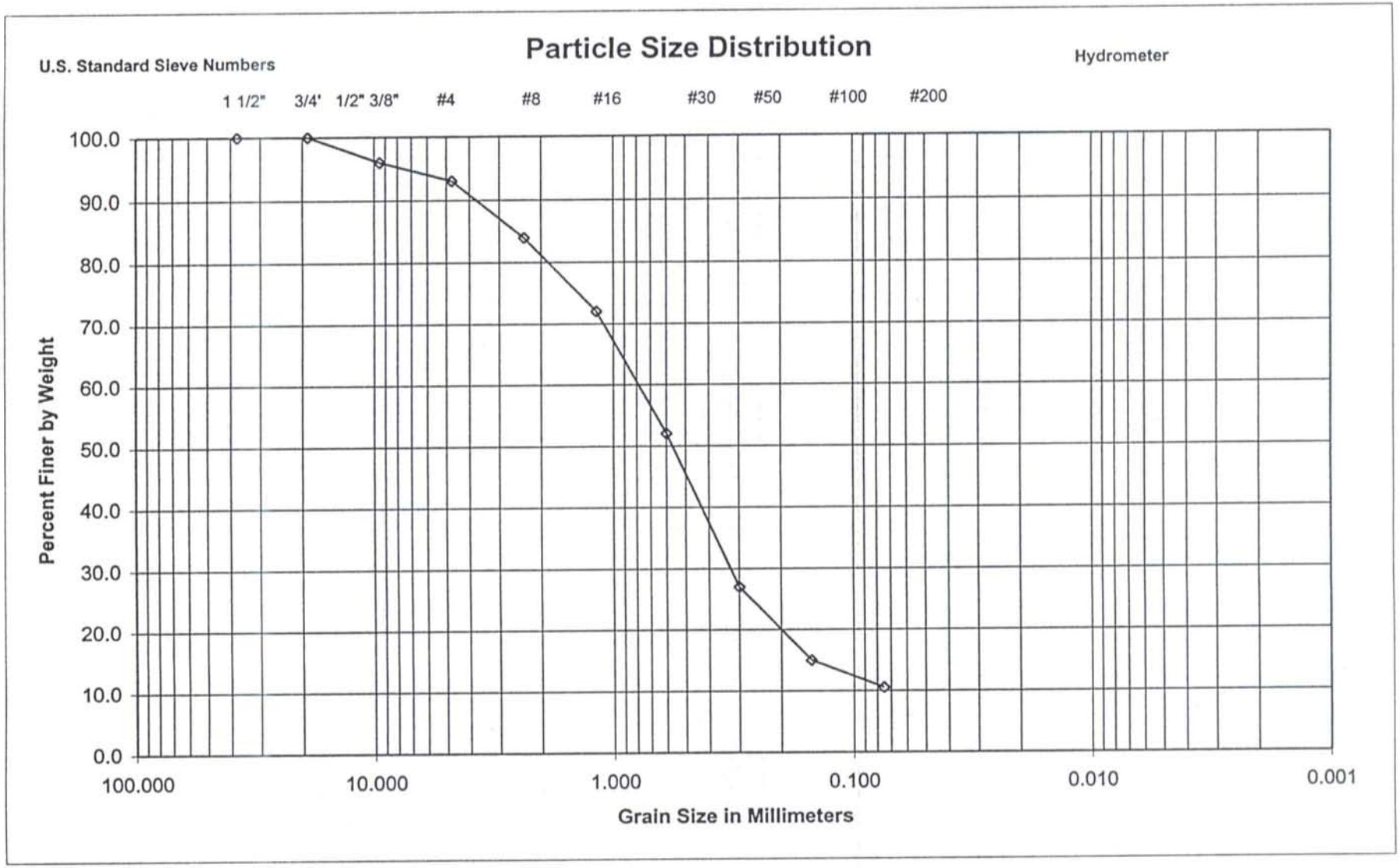
Project Number : 02-2-586
SSP 771.3

Table No. : 1



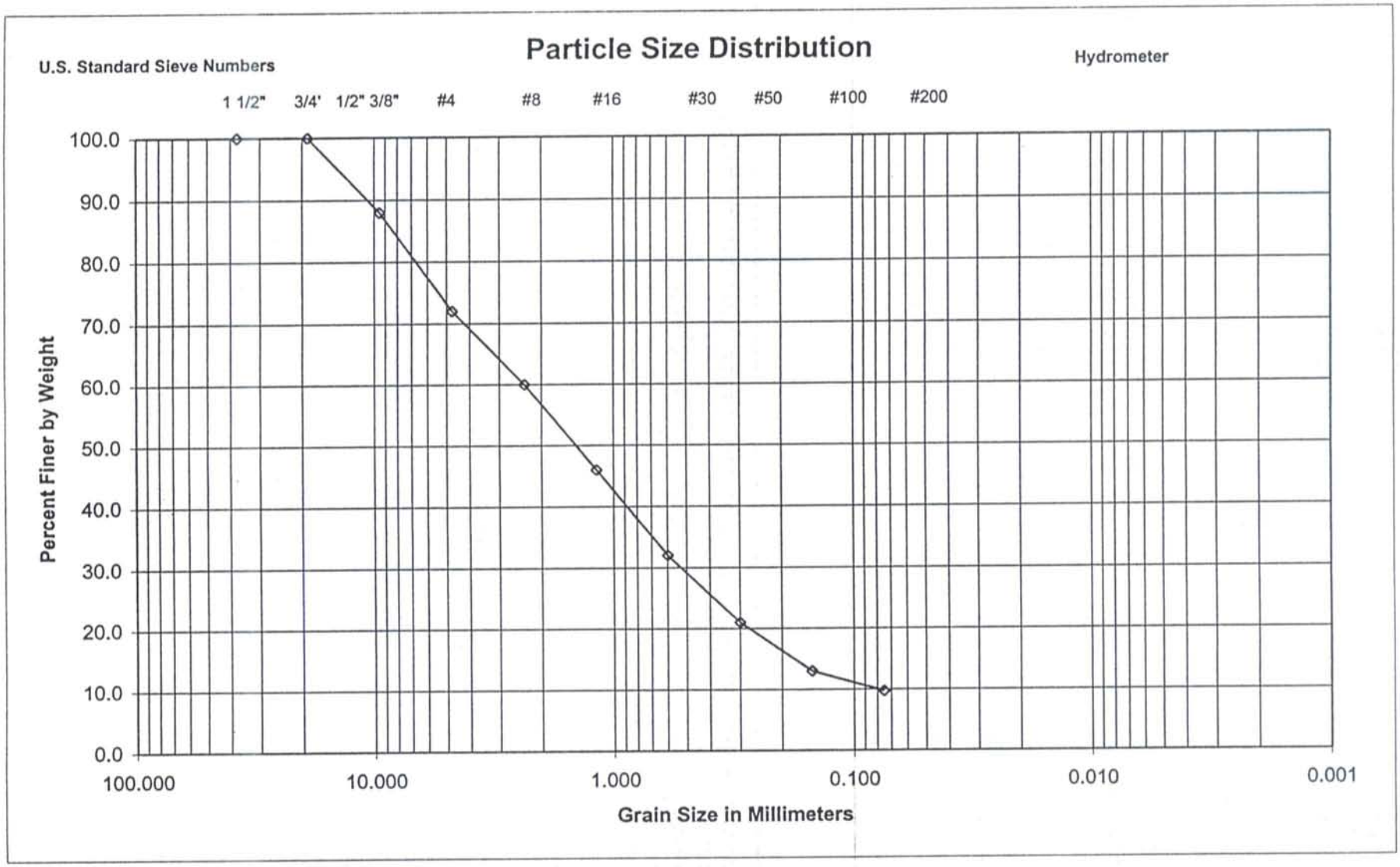
Project: SSP 771.3
Client: S.S. Papadopulas

Sample SFCWO4
8.5-9.8



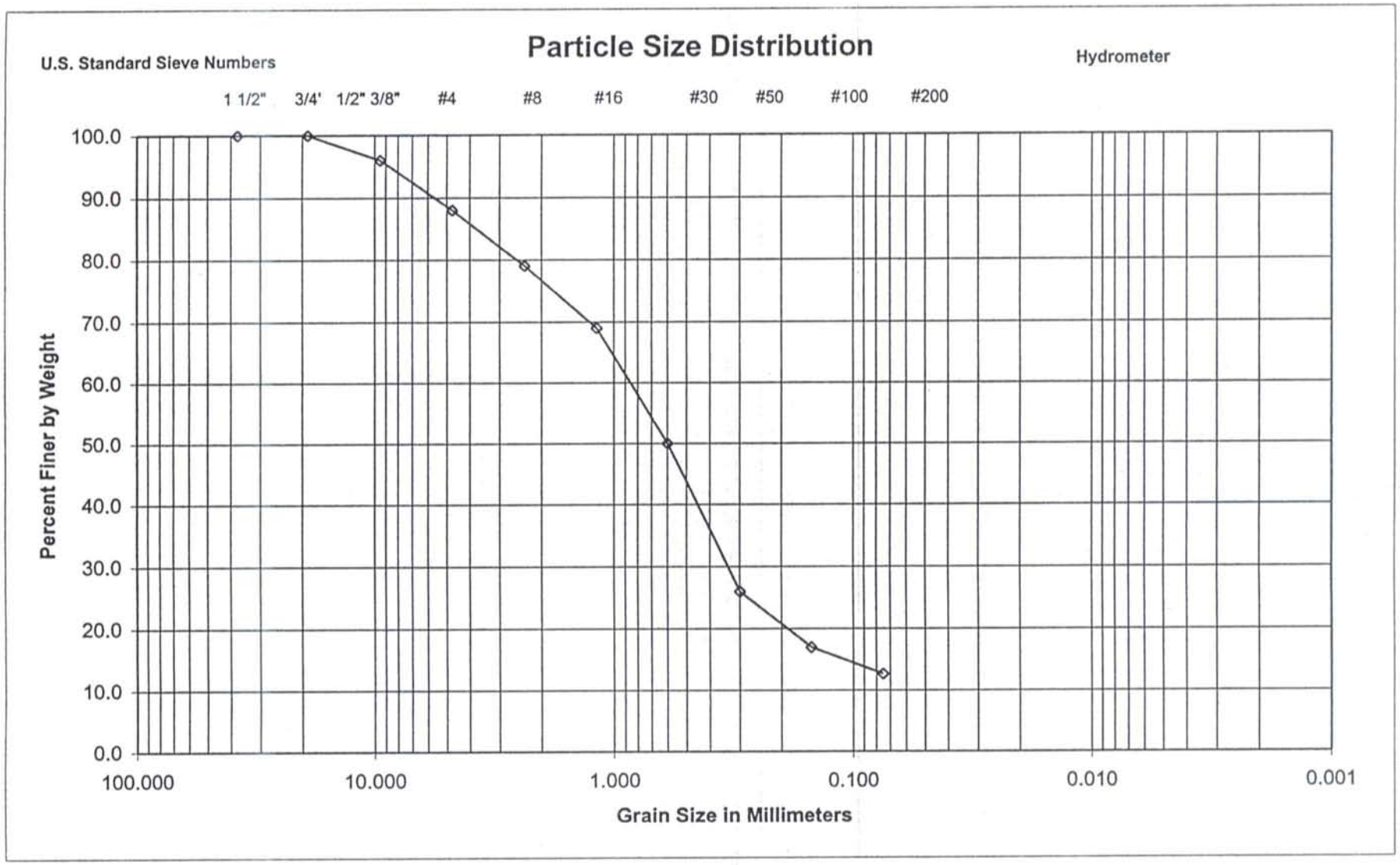
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SACW09BC 96-97.5



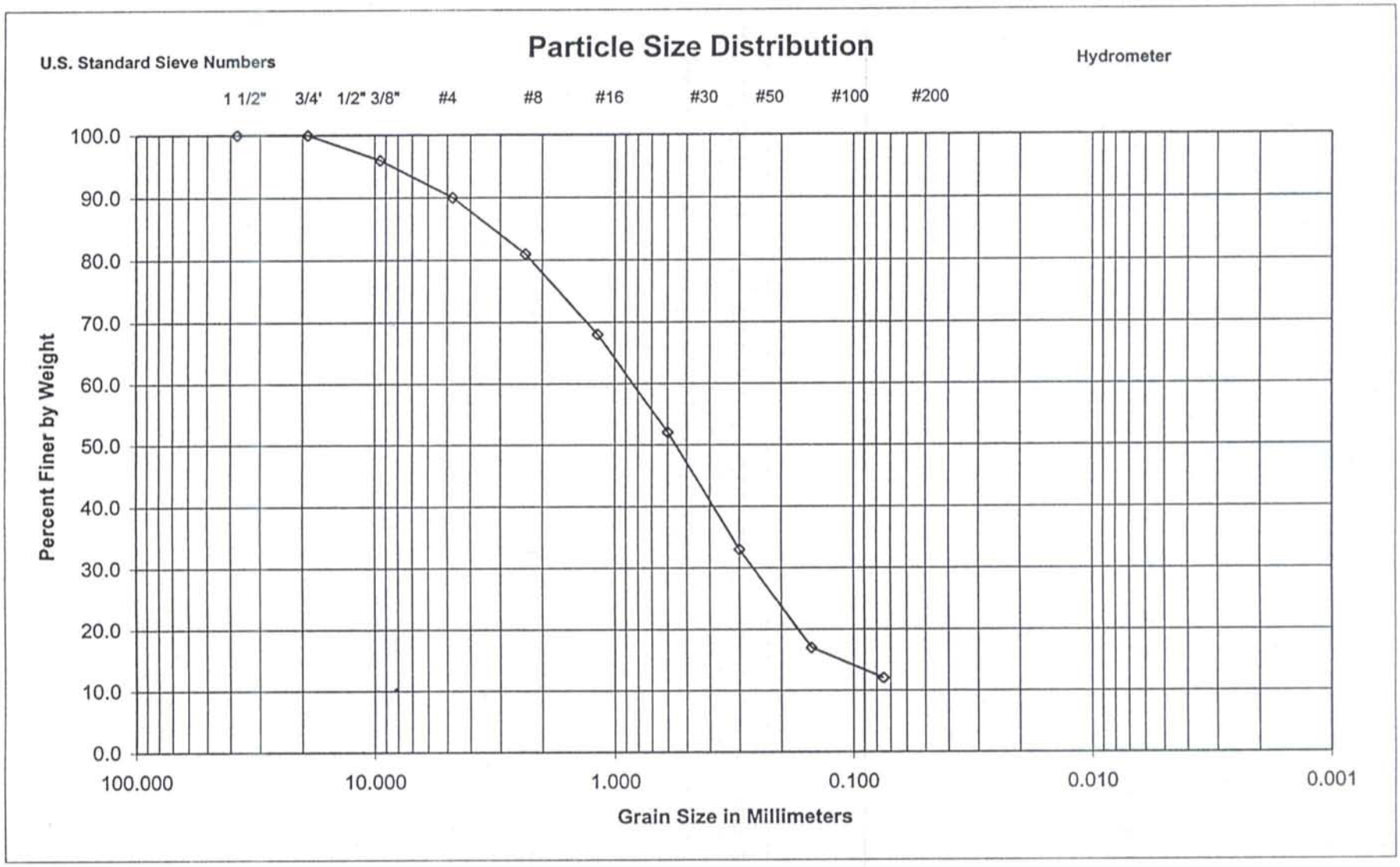
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SACW09BC 98.5-100



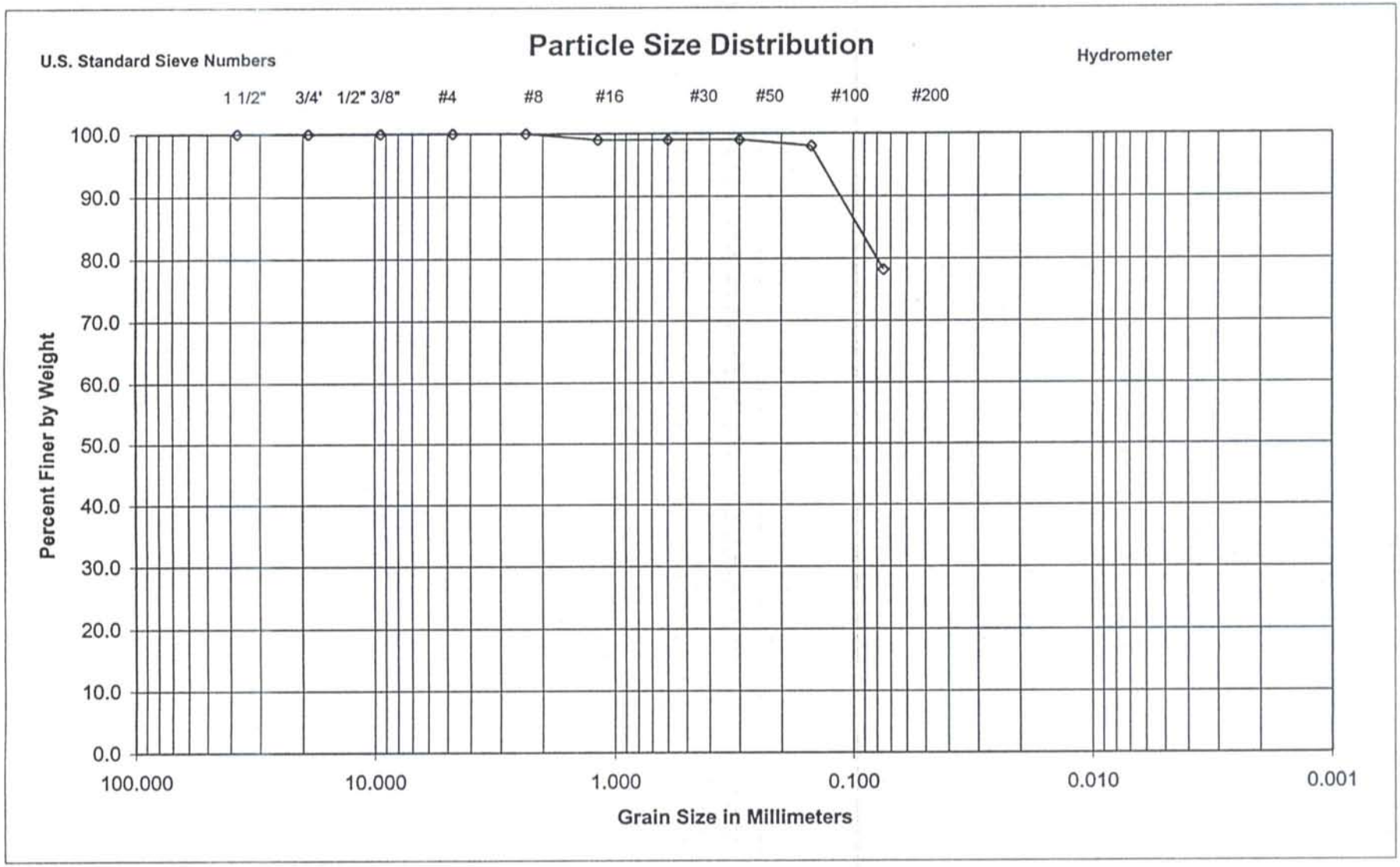
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SACW09BC 108.5-110



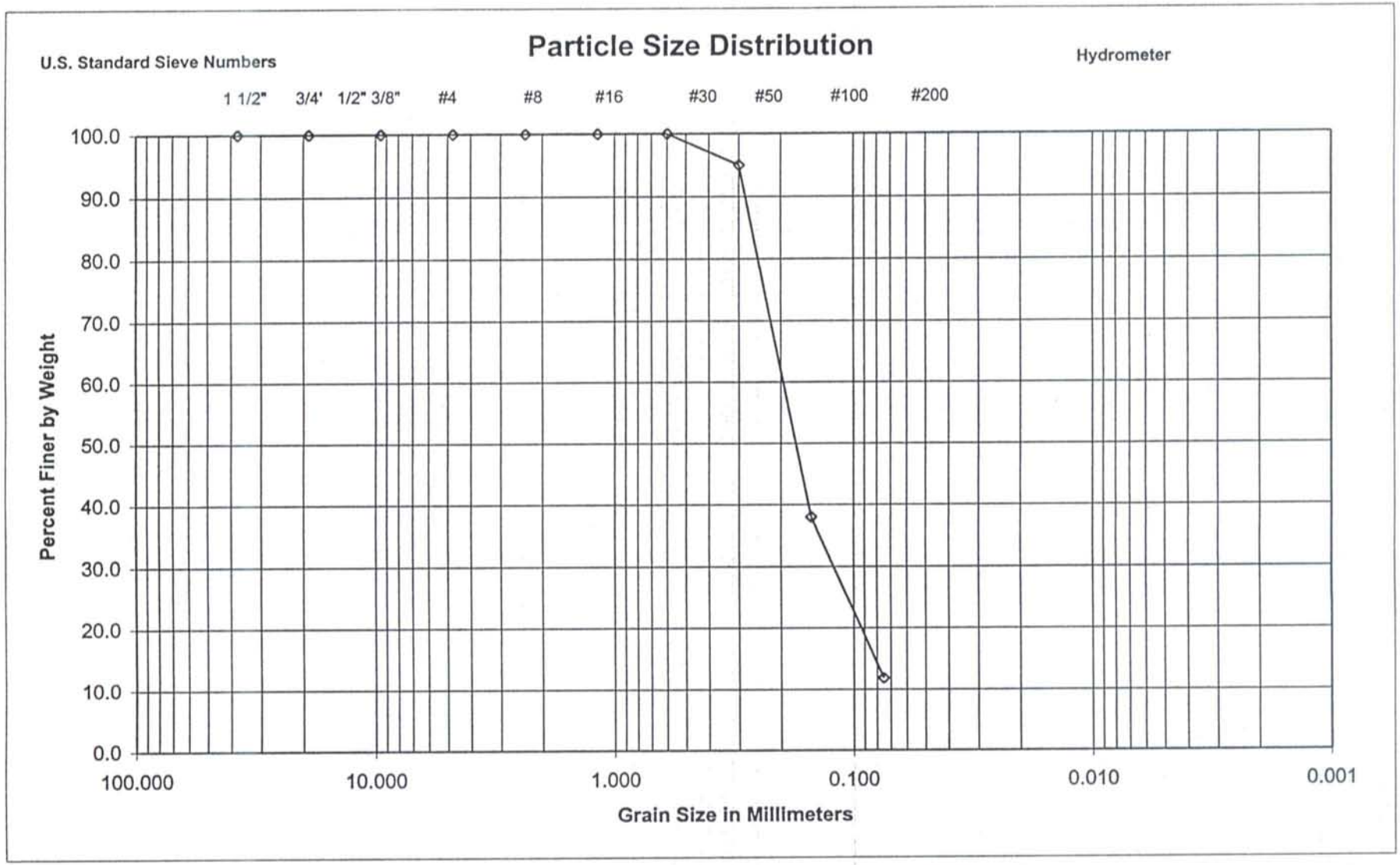
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SACW09BC 124-125.5



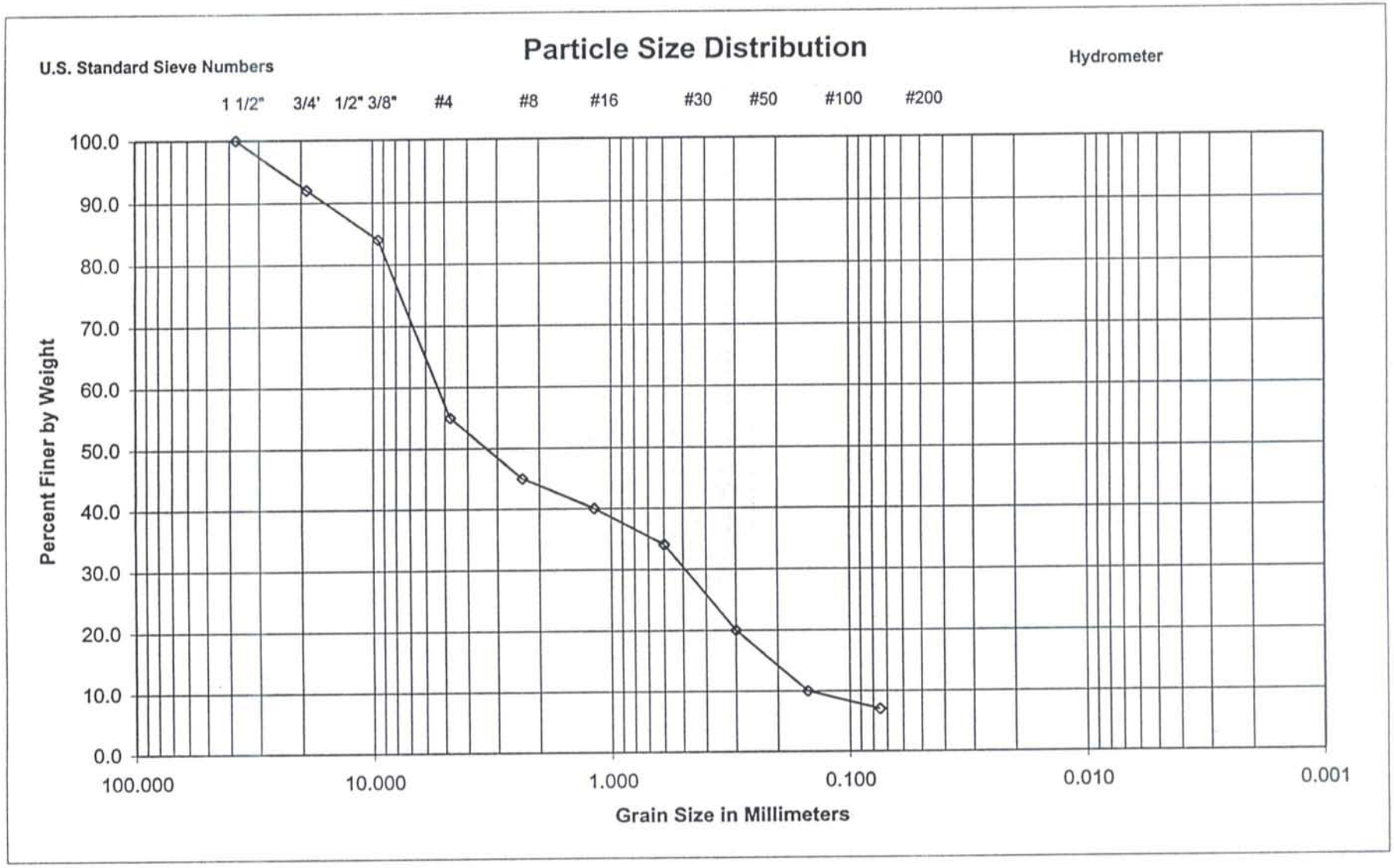
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SFCWO4 8.5-9.8



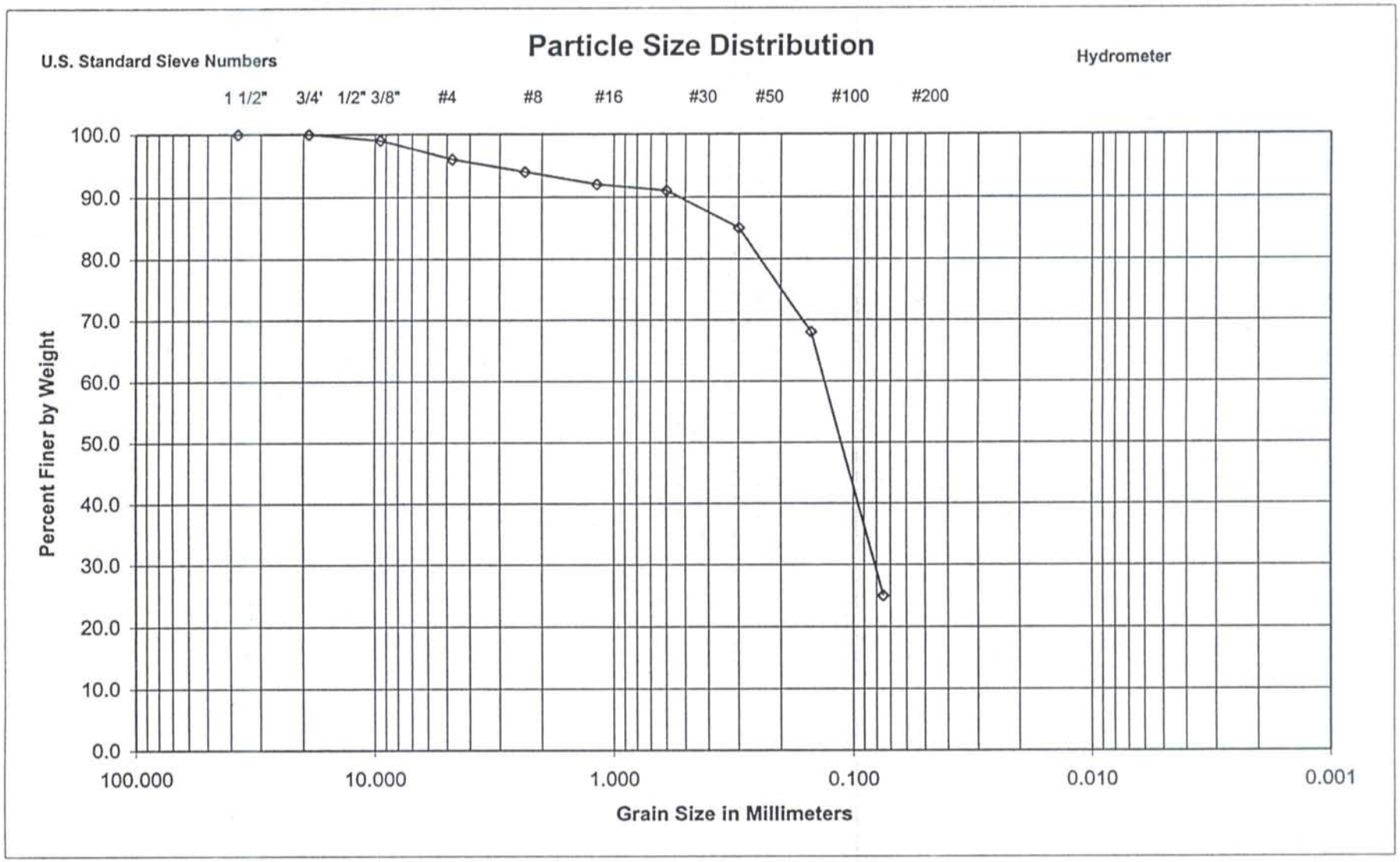
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SFCWO4 18.5-20



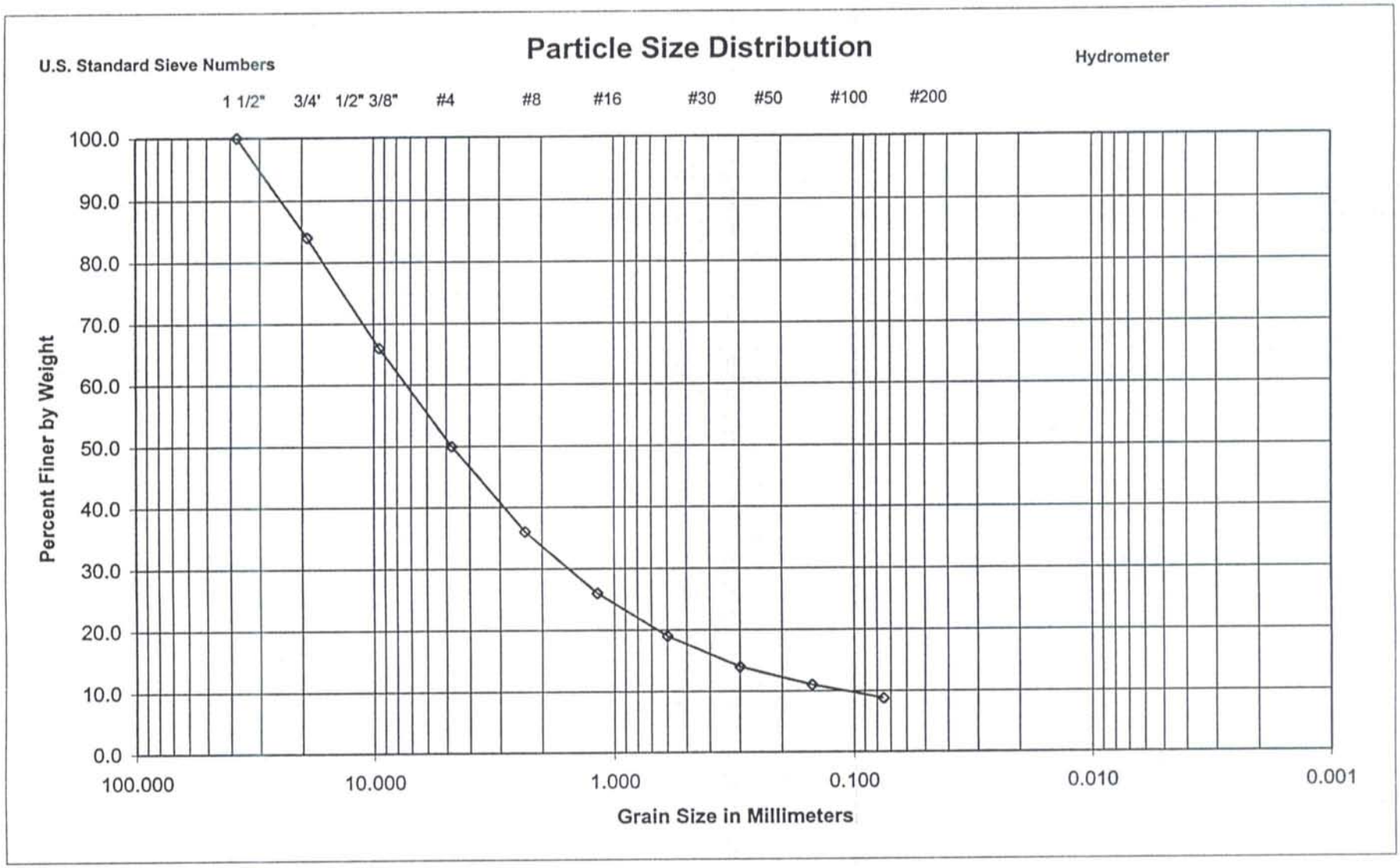
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SFCWO4 33.5-34.5



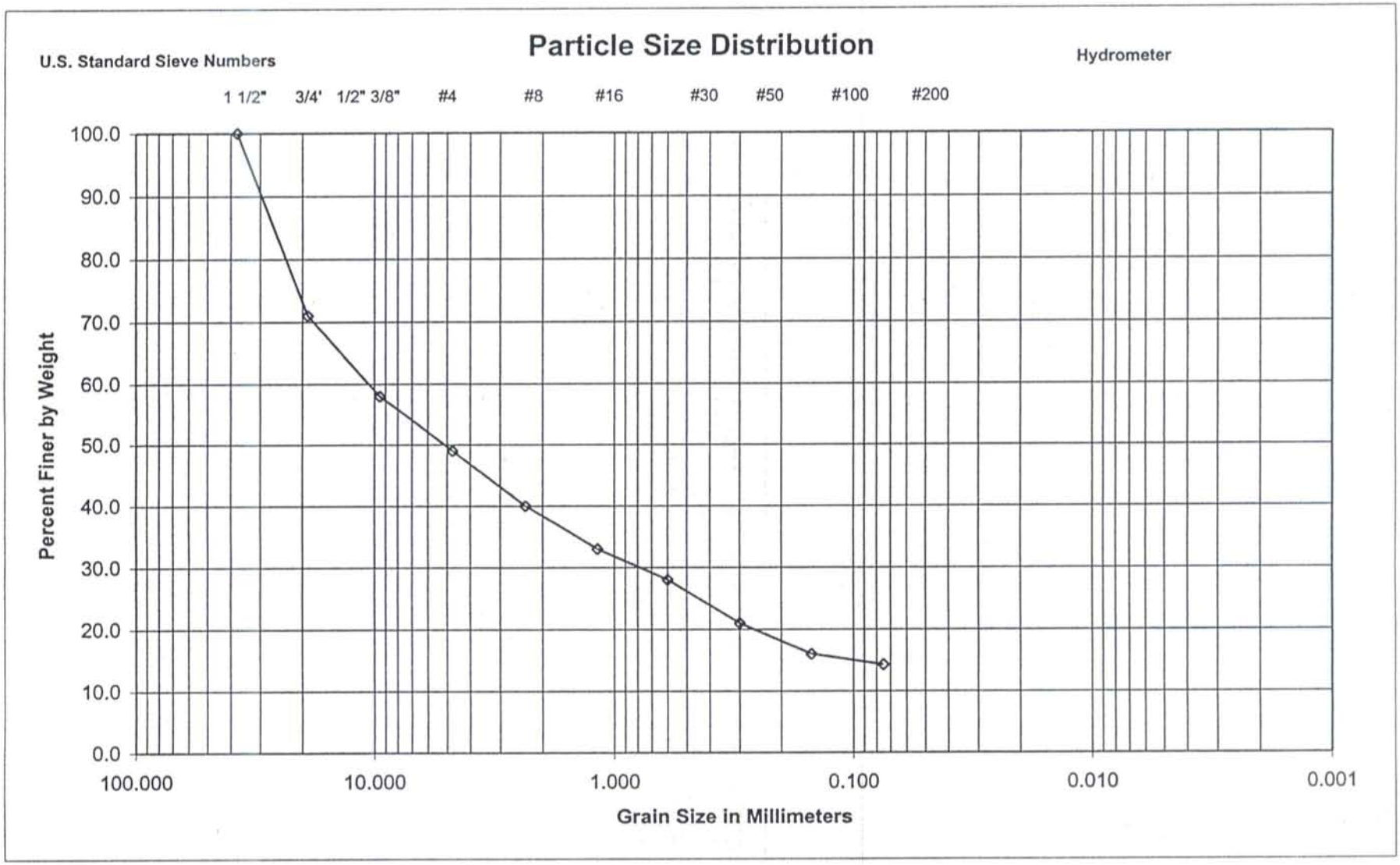
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SFCWO4 43.5-45



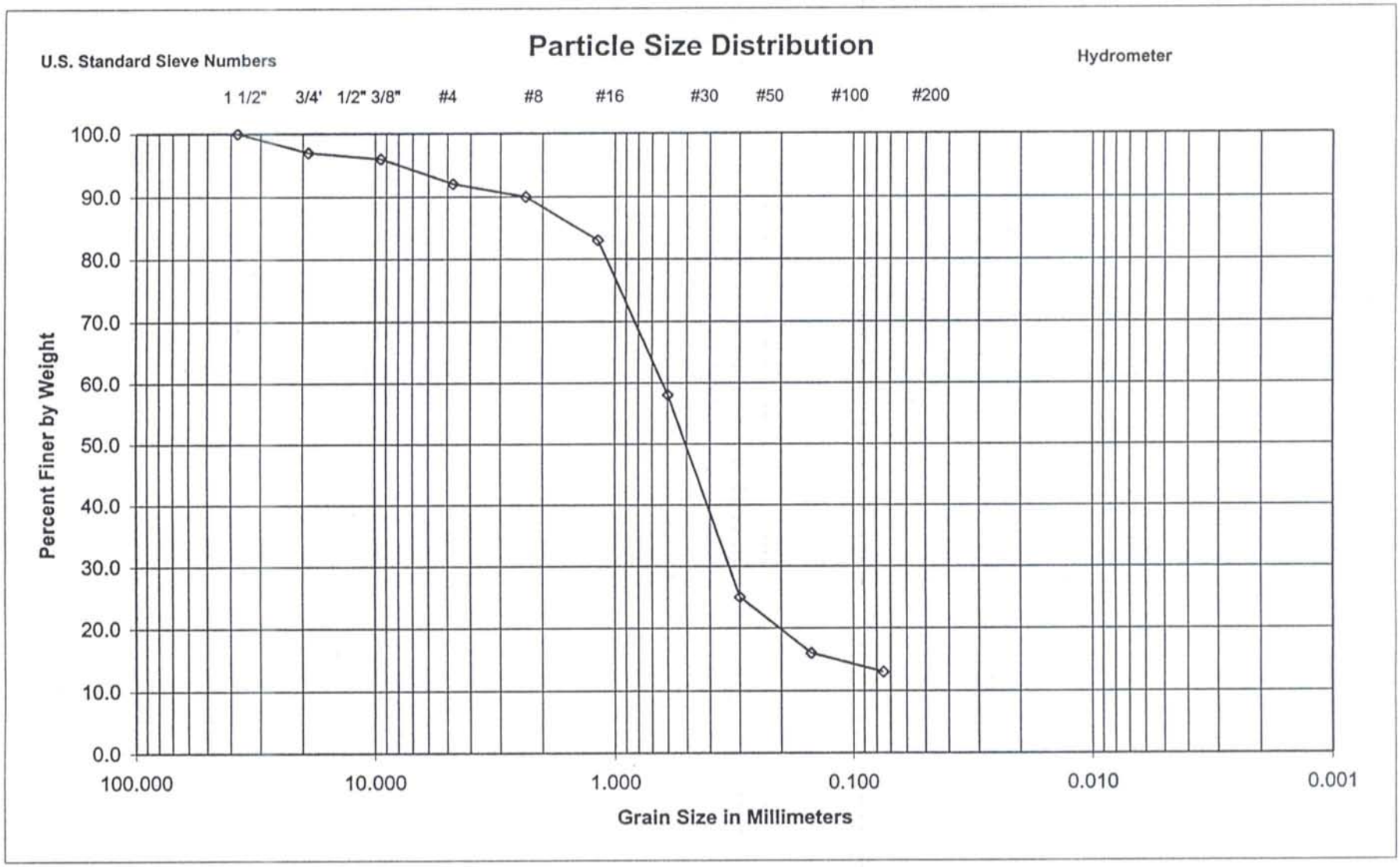
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SFCWO4 48.5-52.5



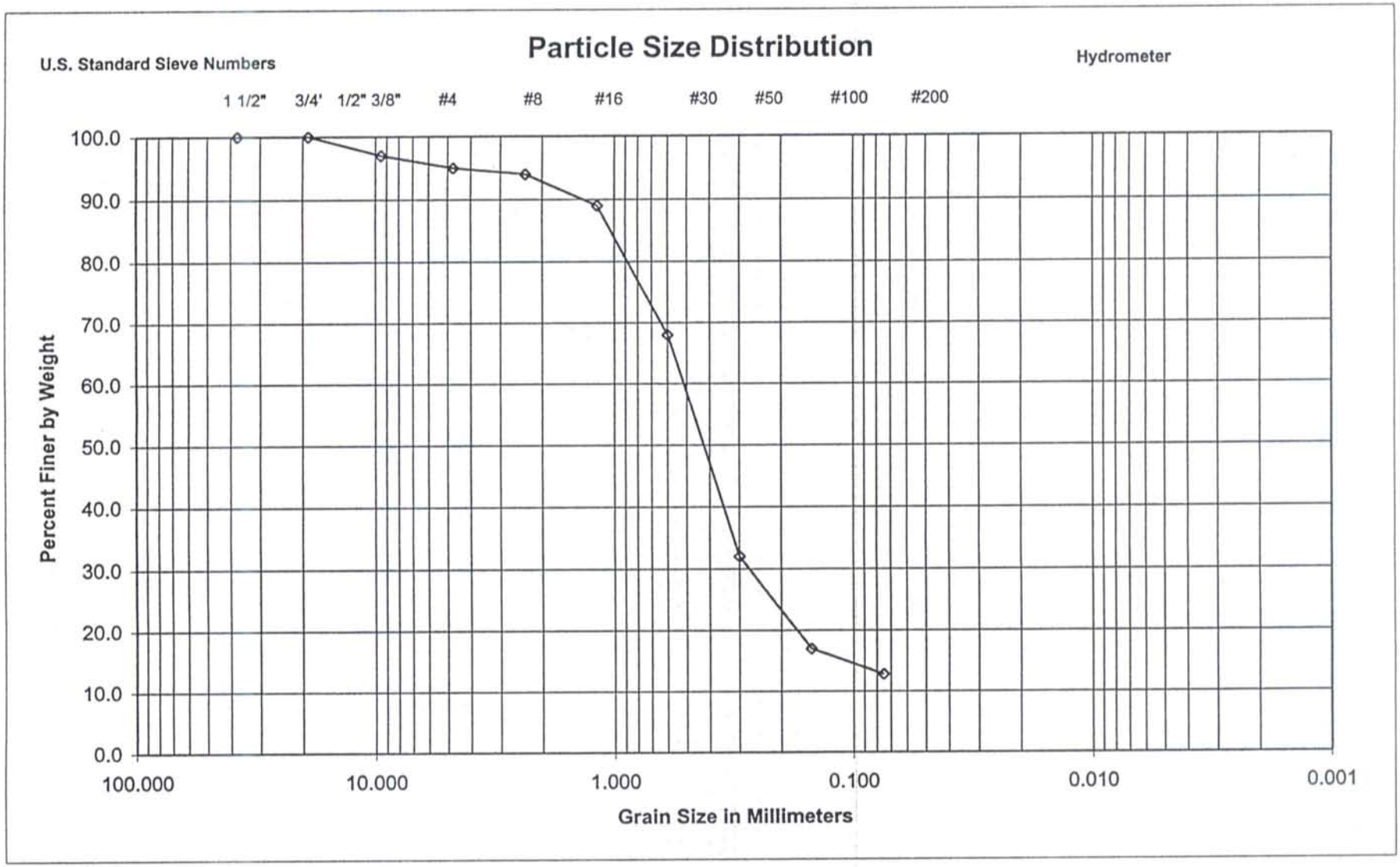
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SFCWO4 58.5-60



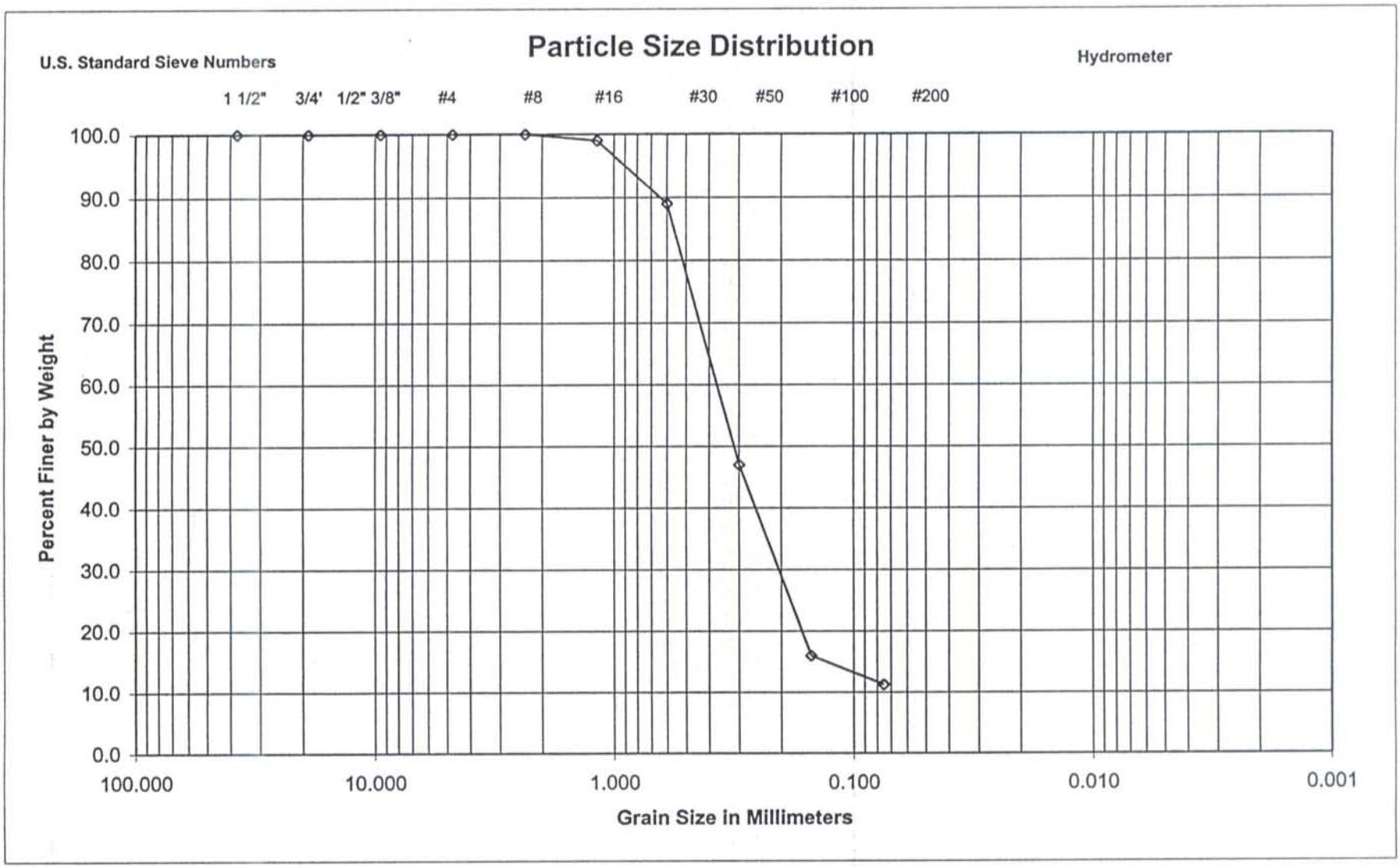
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SFCWO4 66-67.5



Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SFCWO4 71-72.5



Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SFCWO4 81-82

771-3

V

Vinyard & Associates, Inc.

8916-A Adams Street NE
Albuquerque, New Mexico 87113
505/797-9743 505/797-9749 FAX

A

Geotechnical Engineering * Materials Testing * Environmental Engineering

October 21, 2002

S.S. Papadopulos & Associates, Inc.
7001 Prospect Place
Suite 100
Albuquerque, NM 87110

Mr. Bryan Grigsby

Project: SSP 771-3 Gradation Samples
V & A Project No. 02-2-586

Gentlemen:

Attached are copies of the Laboratory Test results for the subject project.

Should you have any questions regarding this data, please do not hesitate to call.

Sincerely,

Robert K. Abeyta, S.E.T.

Vinyard & Associates, Inc.

Martin D. Vinyard, P.E.

Attachment: Data Sheets: (1)
Figures: (10)

cc: Addressee: (1)

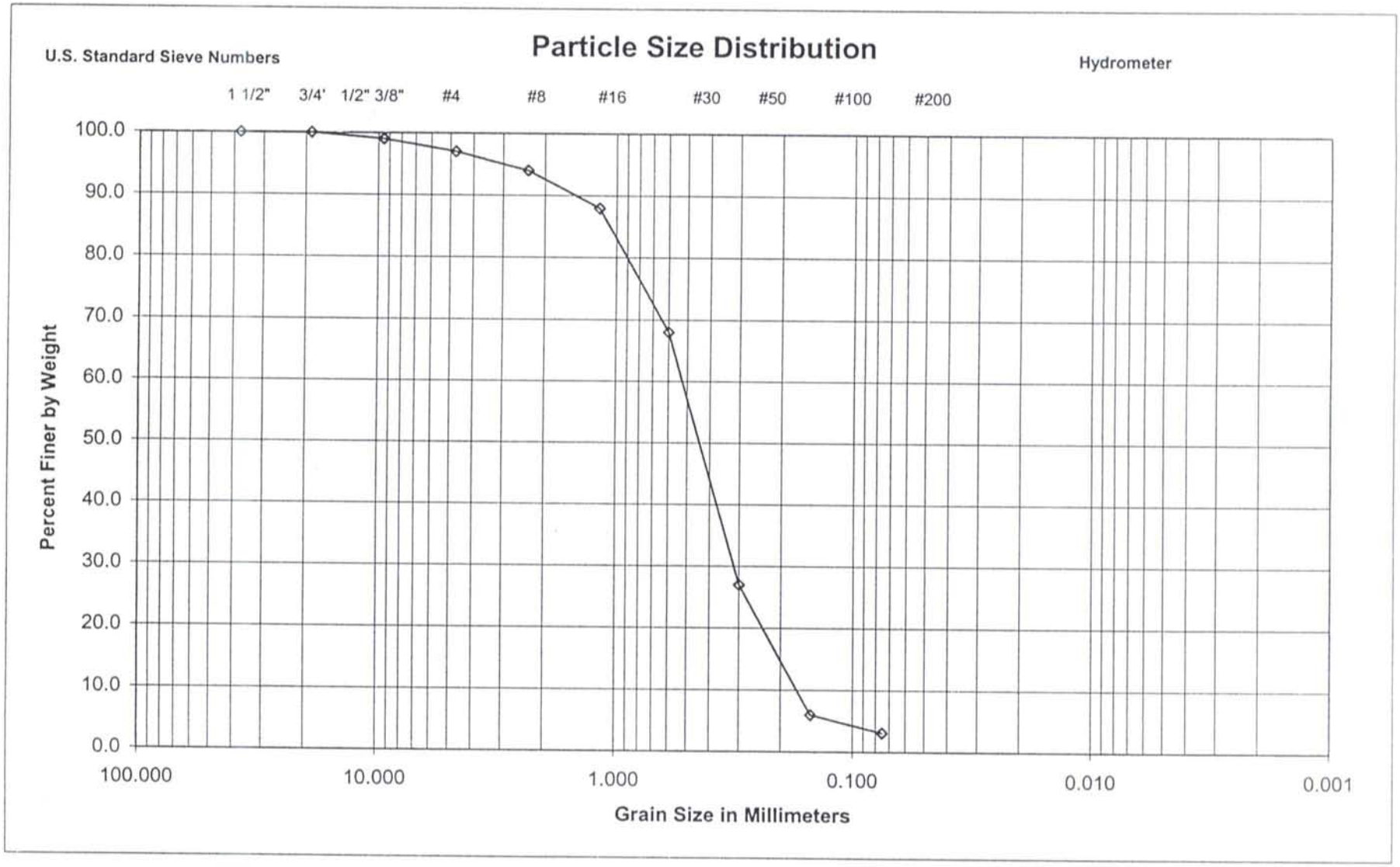
rka

SUMMARY OF LAL)RATORY TEST DATA

Test Hole	Depth (feet)	Unified Classification	Atterberg Limits		SIEVE ANALYSIS-% PASSING BY WEIGHT										Description
			LL	PI	1 1/2"	3/4"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	
HWY-W07BC	13.5-15	SP				100	99	97	94	88	68	27	6	3.1	
HWY-W07BC	23.5-25	SP						100	99	98	87	37	8	3.6	
HWY-W07BC	36-37.5	SP				100	96	92	86	79	63	32	12	3.4	
HWY-W07BC	43.5-45	SP				100	97	96	94	91	80	49	11	3.9	
HWY-W07BC	48.5-50	SP g			100	96	85	76	69	66	58	24	7	4.3	
HWY-W07BC	53.5-55	SP				100	99	94	90	83	63	22	8	3.6	
HWY-W07BC	58.5-60	SP						100	99	98	96	64	11	4.3	
HWY-W07BC	63.5-65	SP g			100	94	80	63	54	47	35	15	6	3.3	
HWY-W07BC	73.5-75	SP					100	98	73	28	6	2	1	0.1	
HWY-W07BC	bottom of auger	GP			100	96	48	14	6	4	3	2	2	1.2	

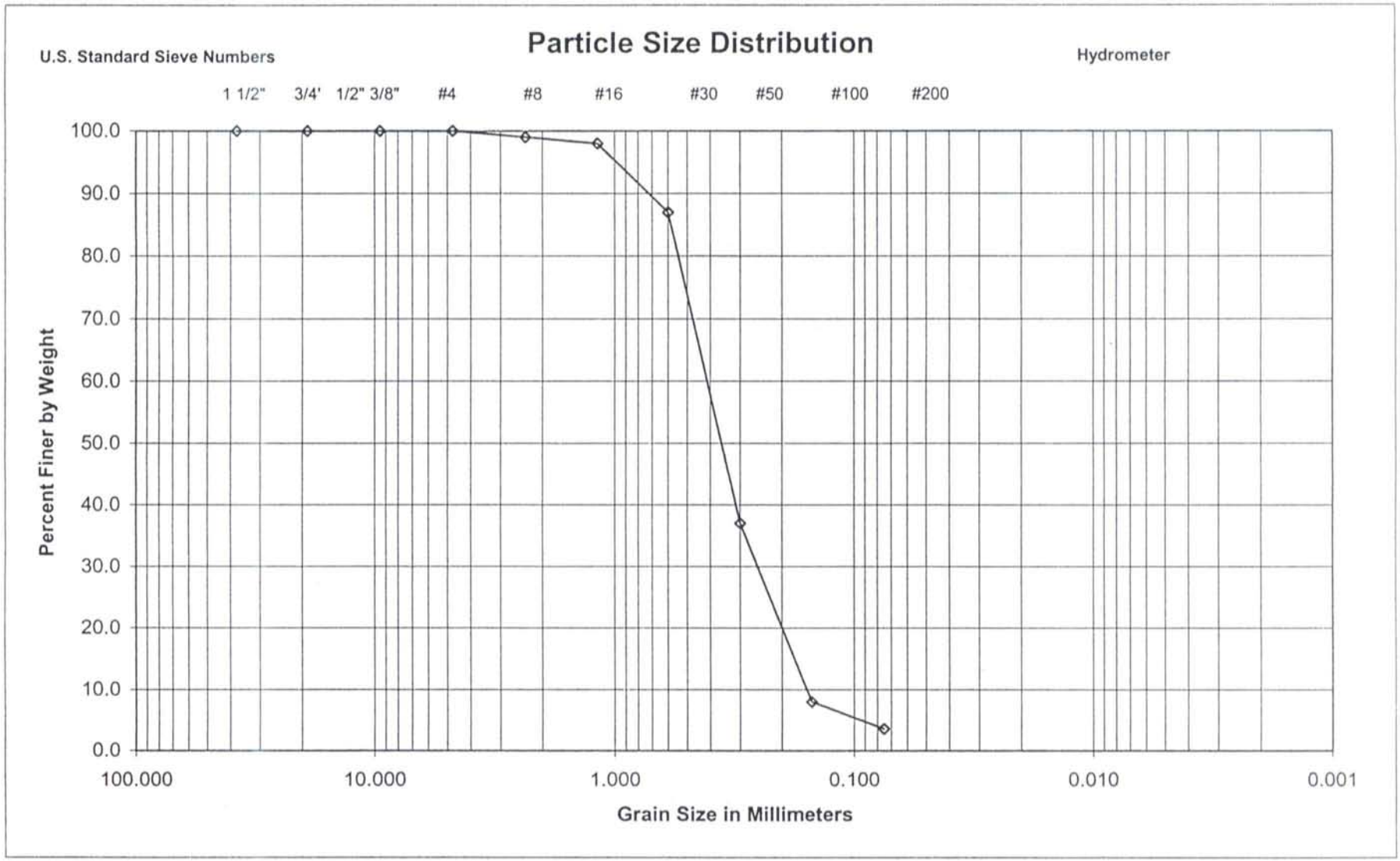
Project Number : 02-2-586
Project : SSP 771-3

Table No. : 1



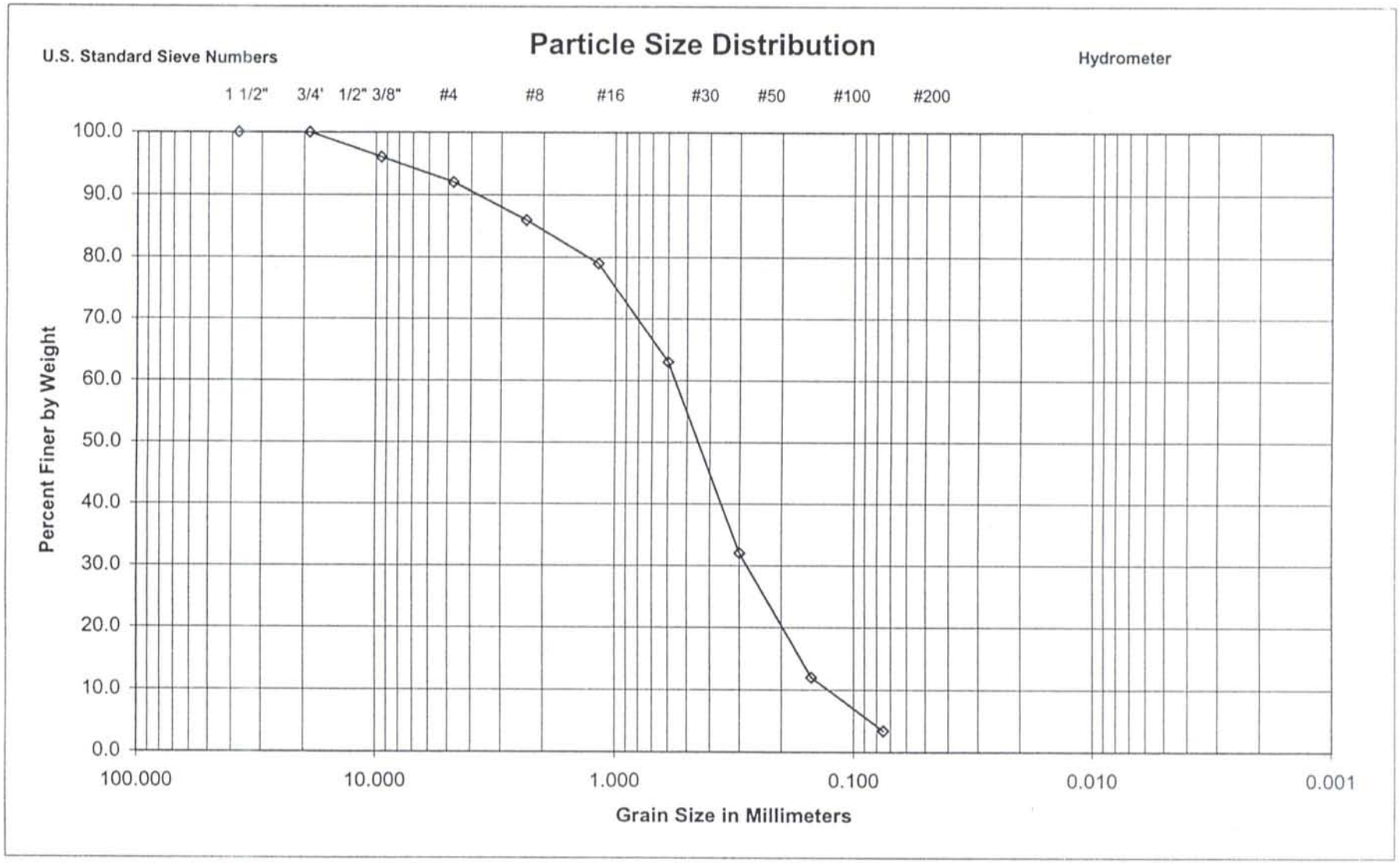
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

HWY-W07BC 13.5-15



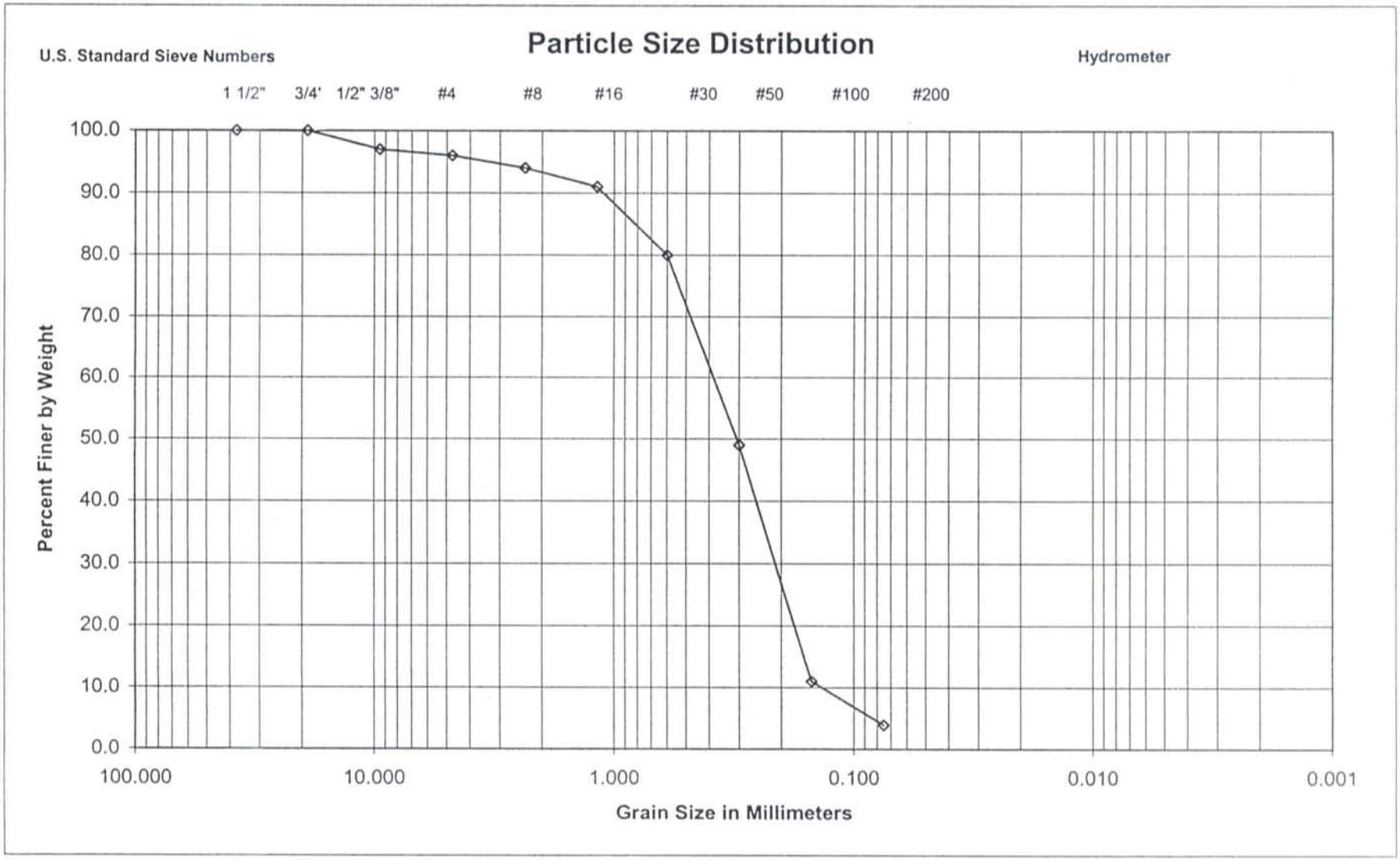
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

HWY-W07BC 23.5-25



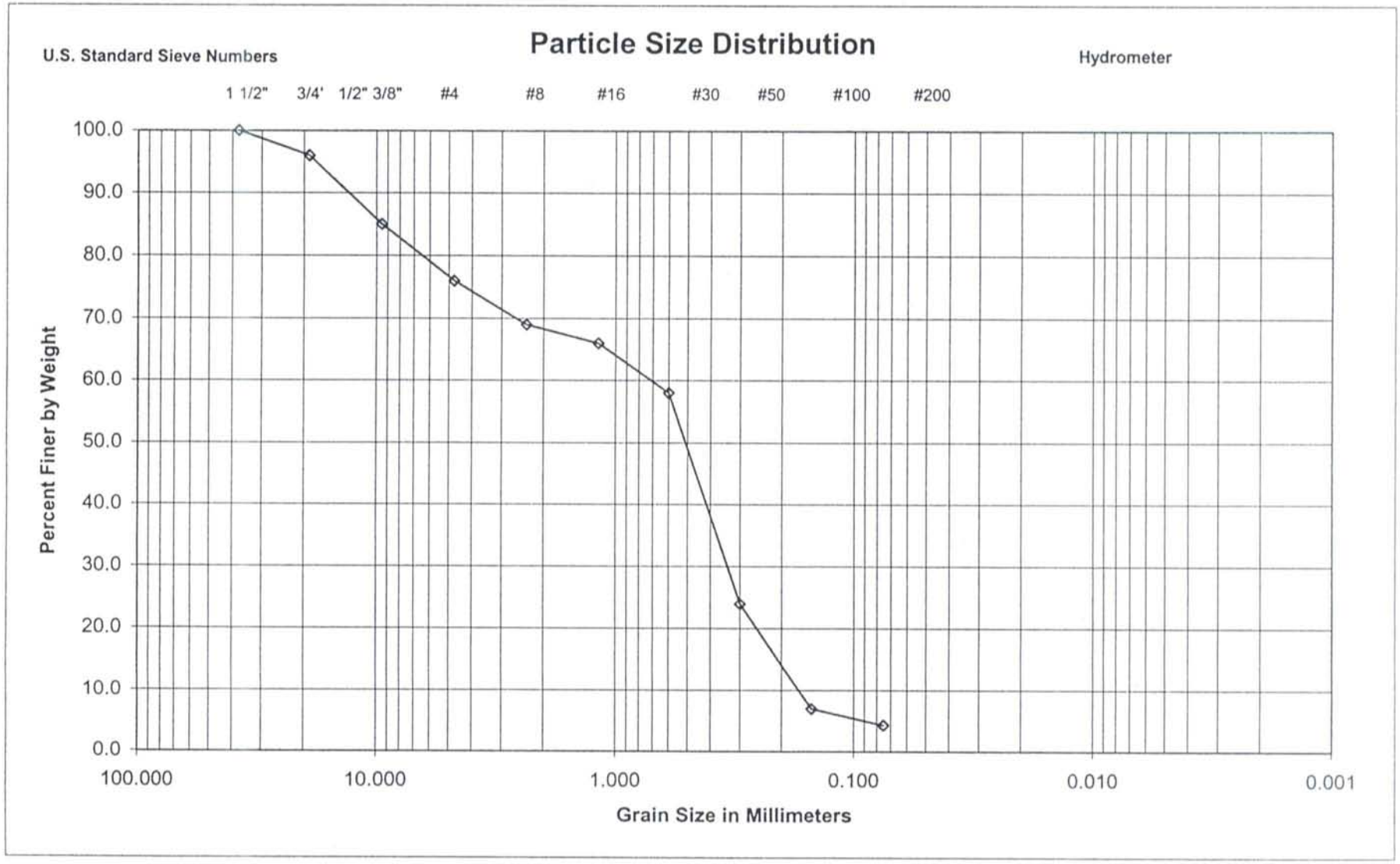
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

HWY-W07BC 36-37.5



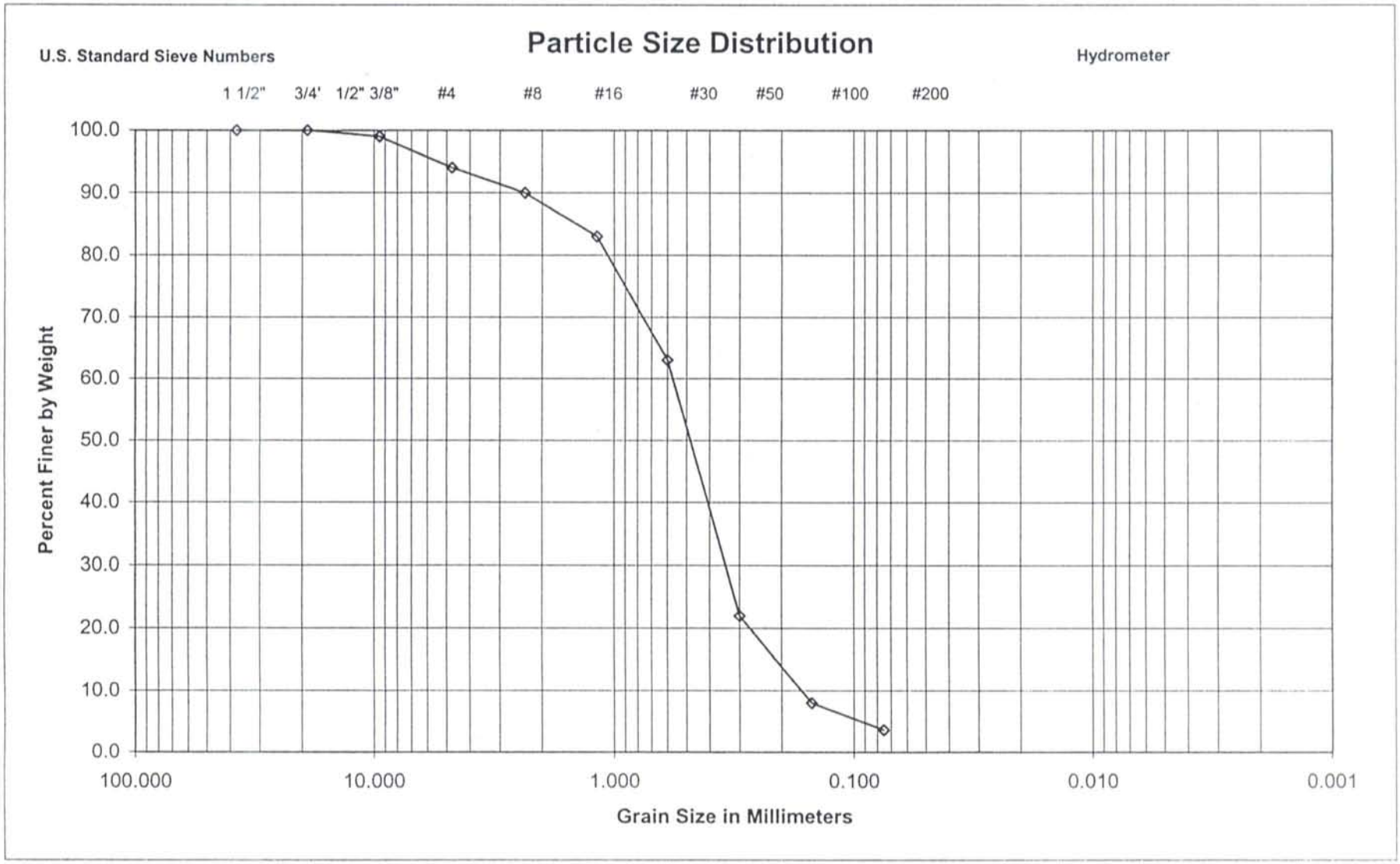
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

HWY-W07BC 43.5-45



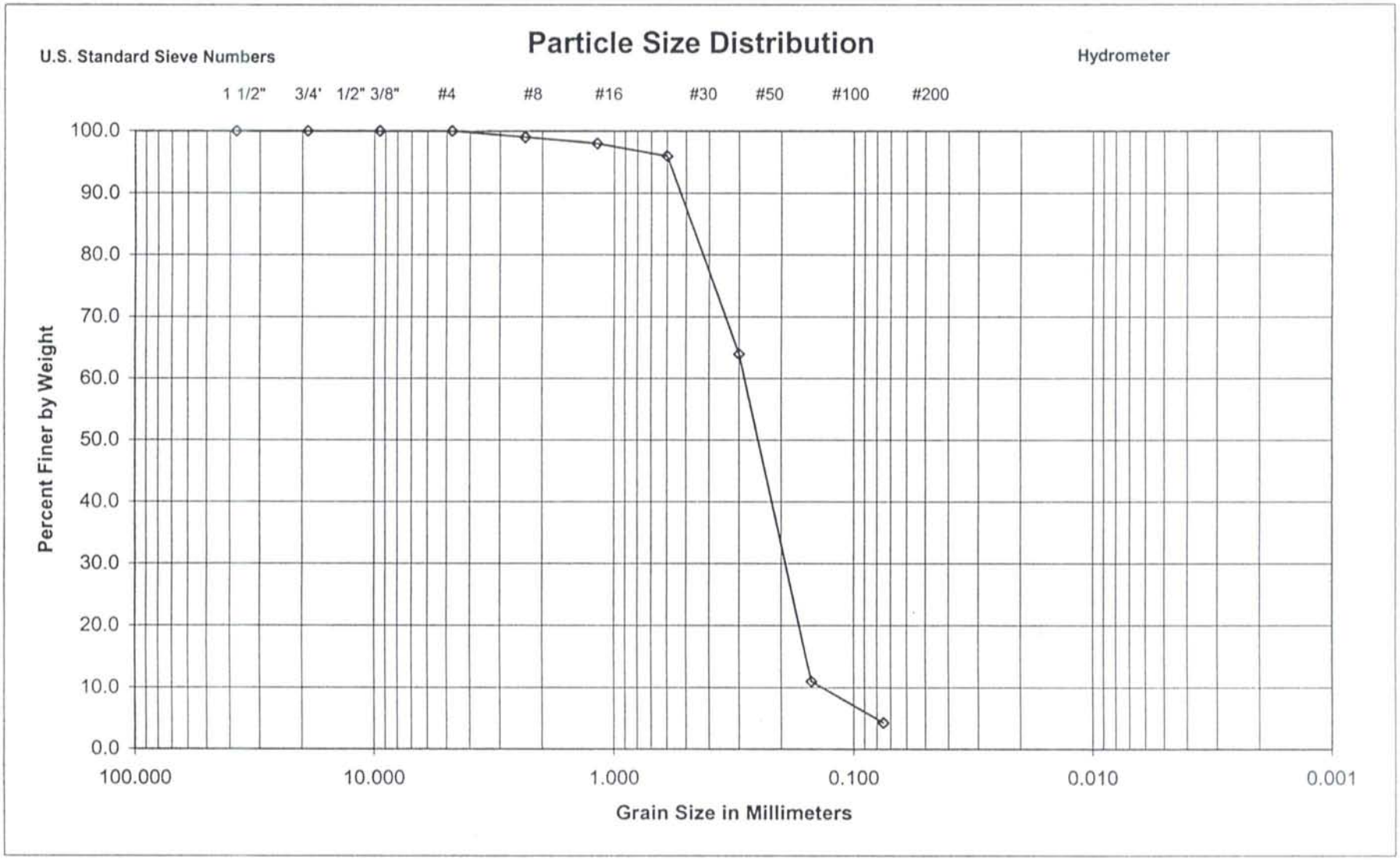
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

HWY-W07BC 48.5-50



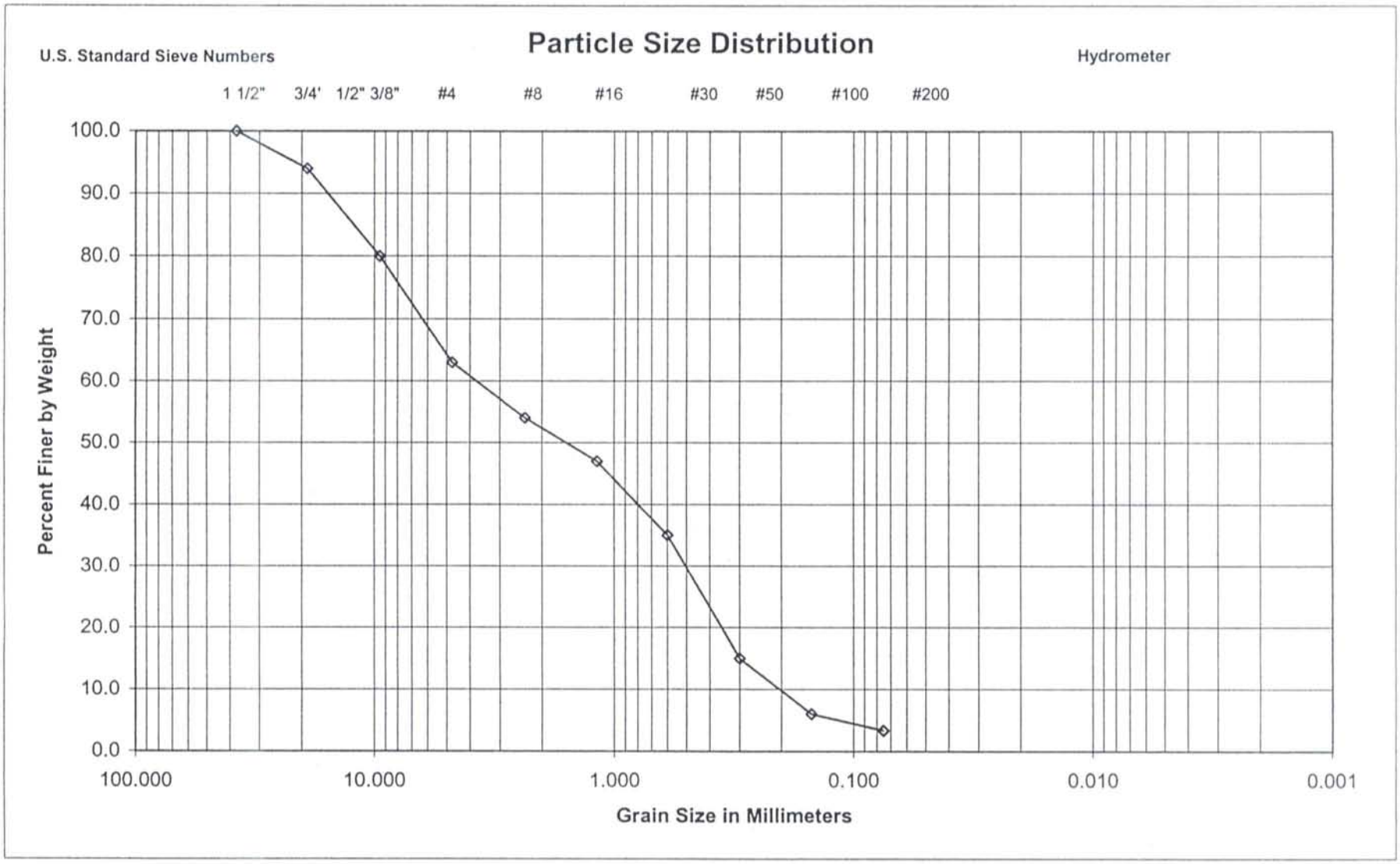
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

HWY-W07BC 53.5-55



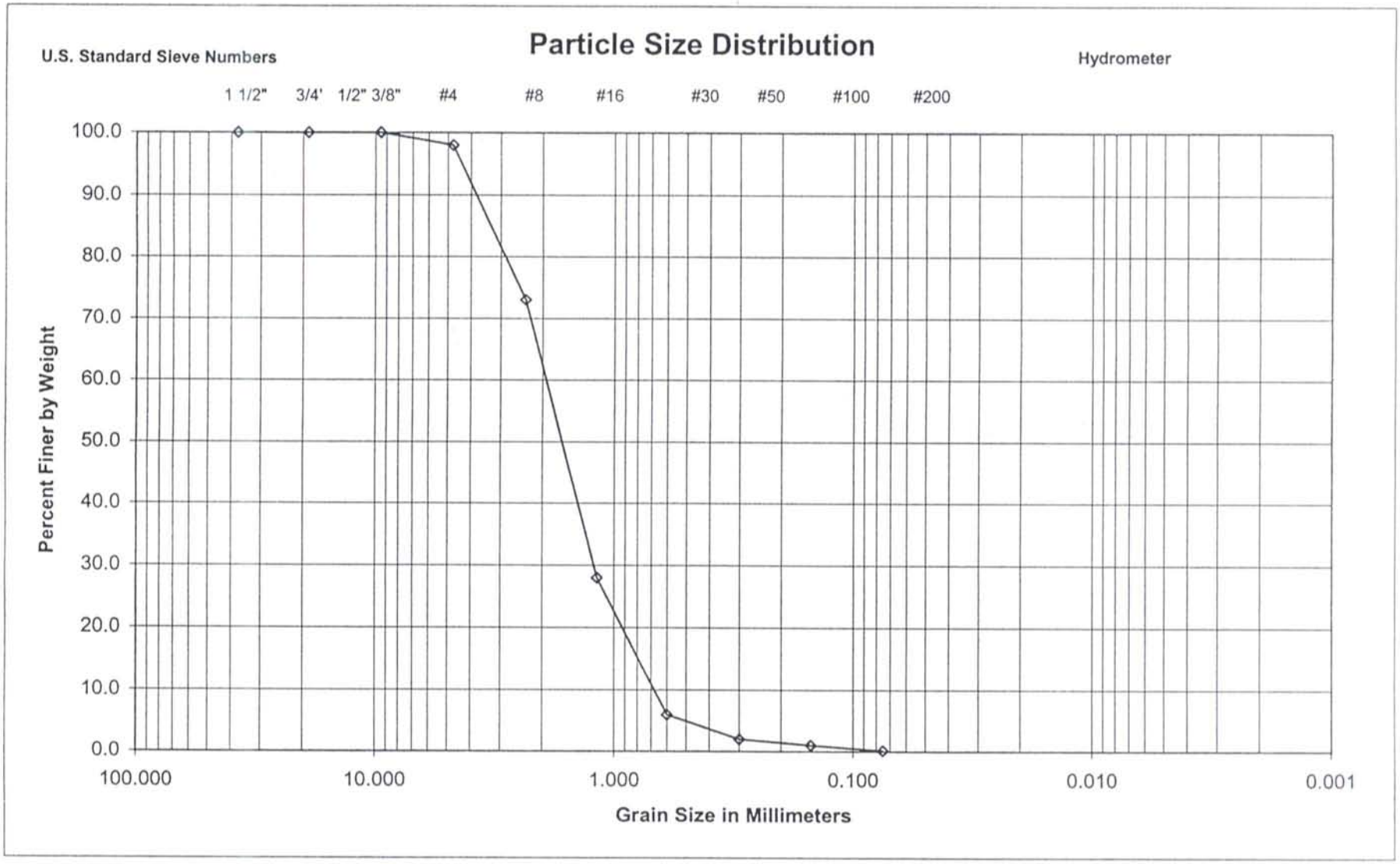
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

HWY-W07BC 58.5-60



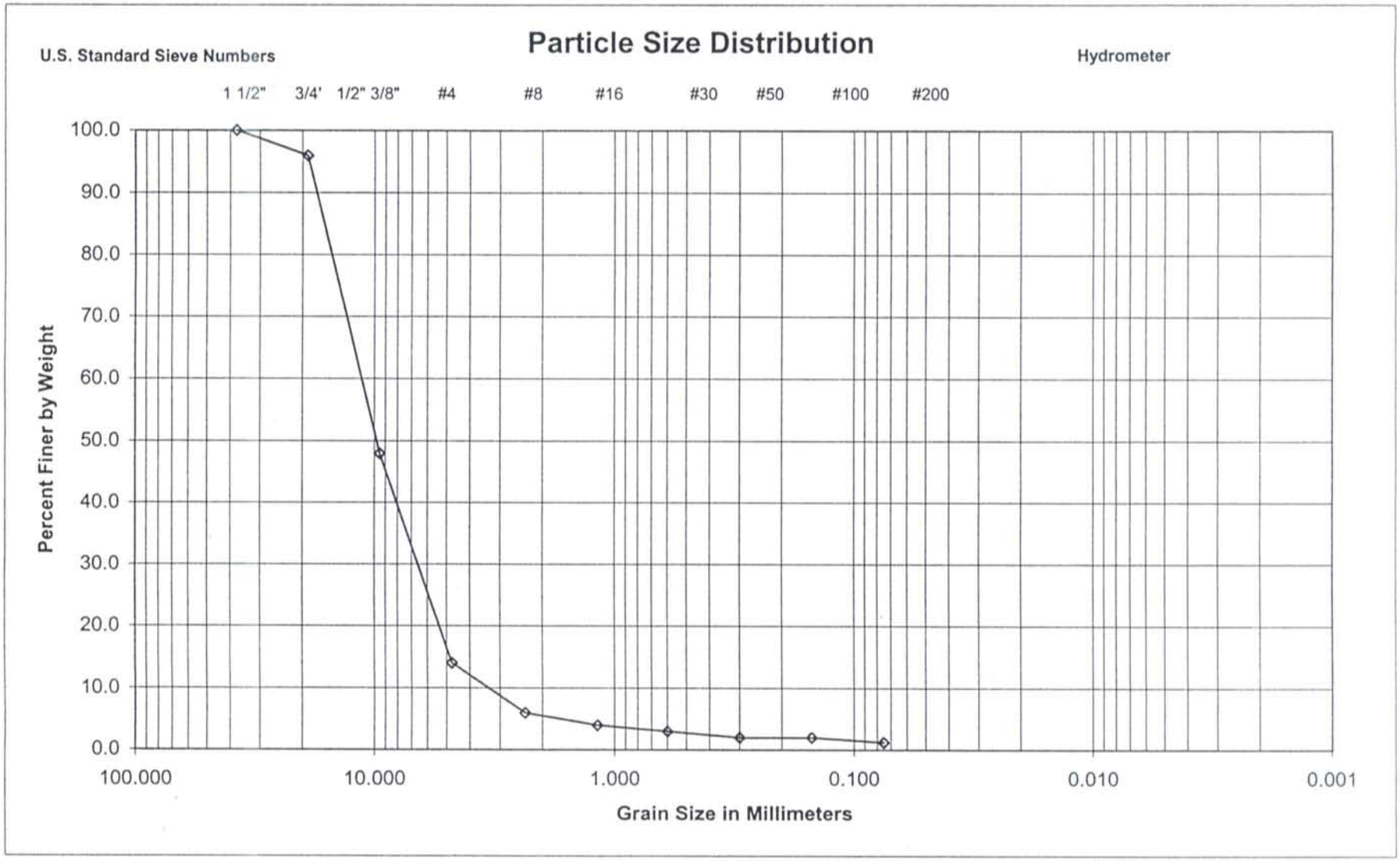
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

HWY-W07BC 63.5-65



Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

HWY-W07BC 73.5-75



Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

HWY-W07BC Bottom of Auger

APPENDIX C

Laboratory Data Reports for Grain Size and Hydrometer/Atterberg Limit Testing

771-3

V

Vinyard & Associates, Inc.

8916-A Adams Street NE
Albuquerque, New Mexico 87113
505/797-9743 505/797-9749 FAX

A

Geotechnical Engineering * Materials Testing * Environmental Engineering

October 21, 2002

S.S. Papadopulos & Associates, Inc.
7001 Prospect Place
Suite 100
Albuquerque, NM 87110

Mr. Bryan Grigsby

Project: SSP 771-3 Gradation Samples
V & A Project No. 02-2-586

Gentlemen:

Attached are copies of the Laboratory Test results for the subject project.

Should you have any questions regarding this data, please do not hesitate to call.

Sincerely,

Robert K. Abeyta, S.E.T.

Vinyard & Associates, Inc.

Martin D. Vinyard, P.E.

Attachment: Data Sheets: (1)
Figures: (10)

cc: Addressee: (1)

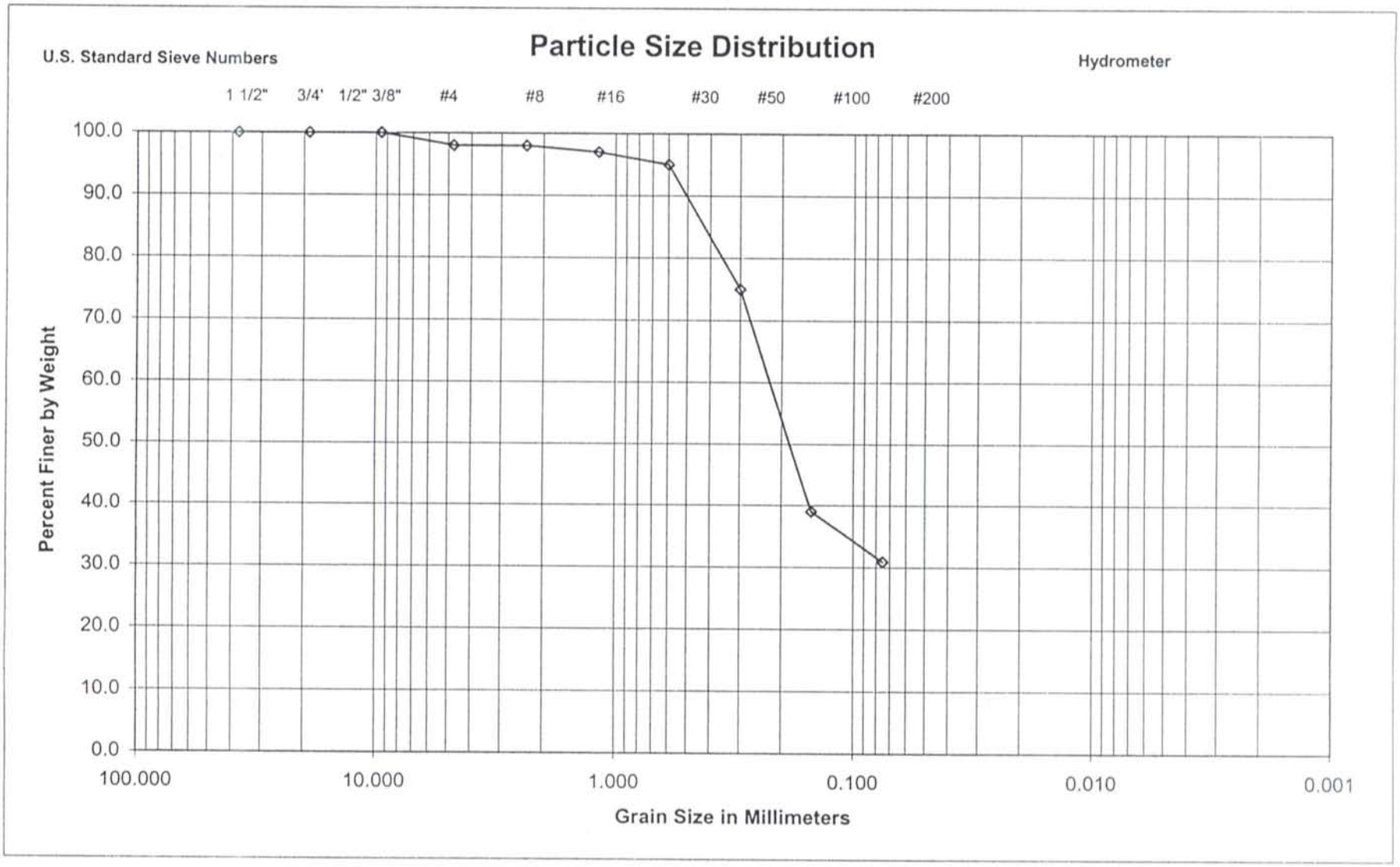
rka

SUMMARY OF LAI)RATORY TEST DATA

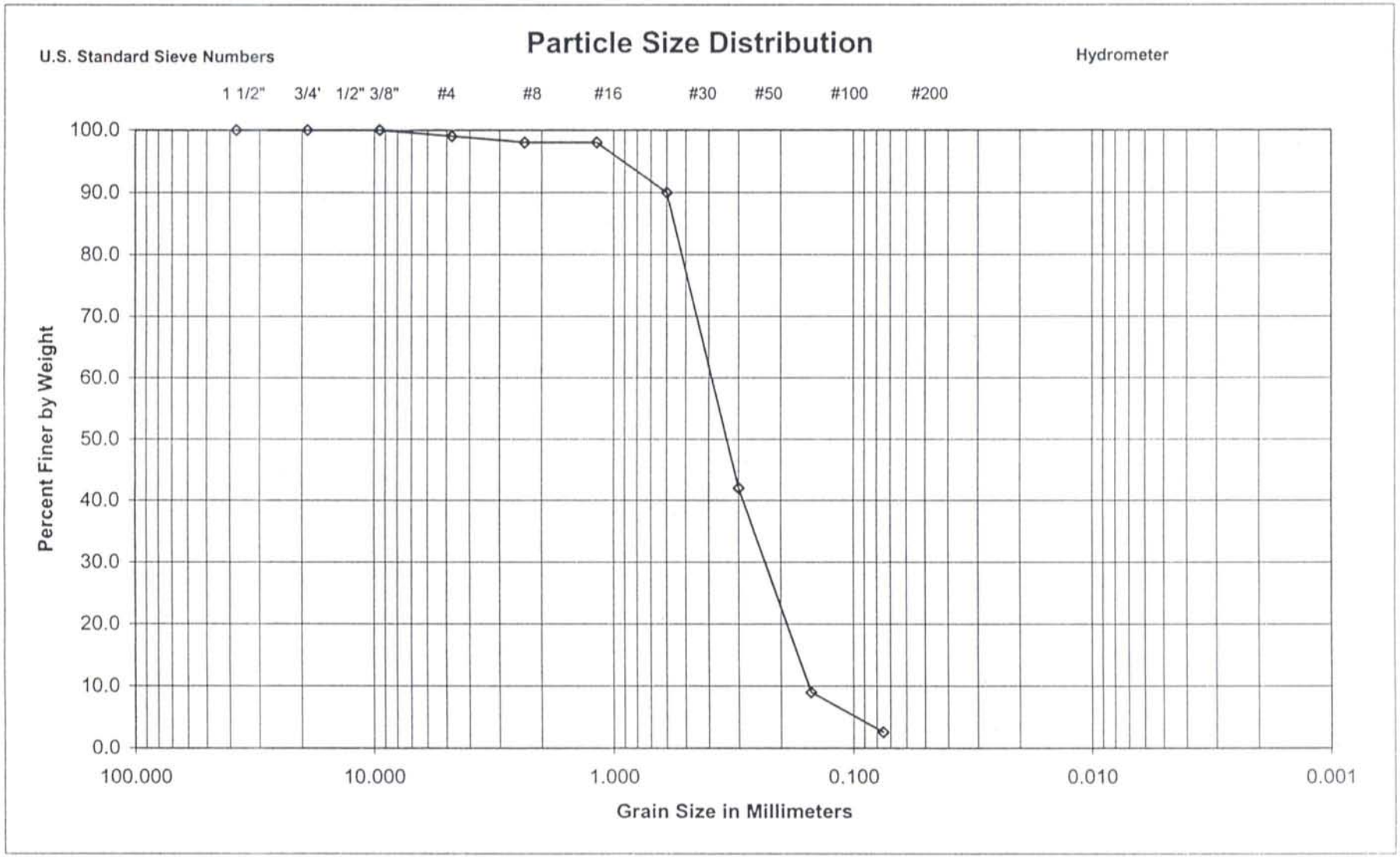
Test Hole	Depth (feet)	Unified Classification	Atterberg Limits		SIEVE ANALYSIS-% PASSING BY WEIGHT										Description
			LL	PI	1 1/2"	3/4"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	
ESC-E04BC	8.5-10	SM					100	98	98	97	95	75	39	30.9	
ESC-E04BC	18.5-20	SP					100	99	98	98	90	42	9	2.6	
ESC-E04BC	28.5-30	SP g			100	95	84	78	72	67	56	24	7	4.4	
ESC-E04BC	38.5-40	SP g			100	89	79	64	47	32	18	9	5	3.6	
ESC-E04BC	48.5-50	SP g				100	95	90	85	77	59	30	9	3.8	
ESC-E04BC	53.5-55	SP-SM				100	96	94	91	88	77	53	20	4.9	
ESC-E04BC	58.5-60	SP g			100	83	71	59	49	41	32	13	5	3.4	
ESC-E04BC	68.5-70	GP s			100	69	56	44	35	30	22	10	4	2.4	
ESC-E04BC	78.5-80	GP s			100	90	64	45	32	25	20	11	6	3.7	
ESC-E04BC	86-86.5	SP-SM			100	88	88	87	85	83	68	37	17	8.3	

Project Number : 02-2-586
Project : SSP 771-3

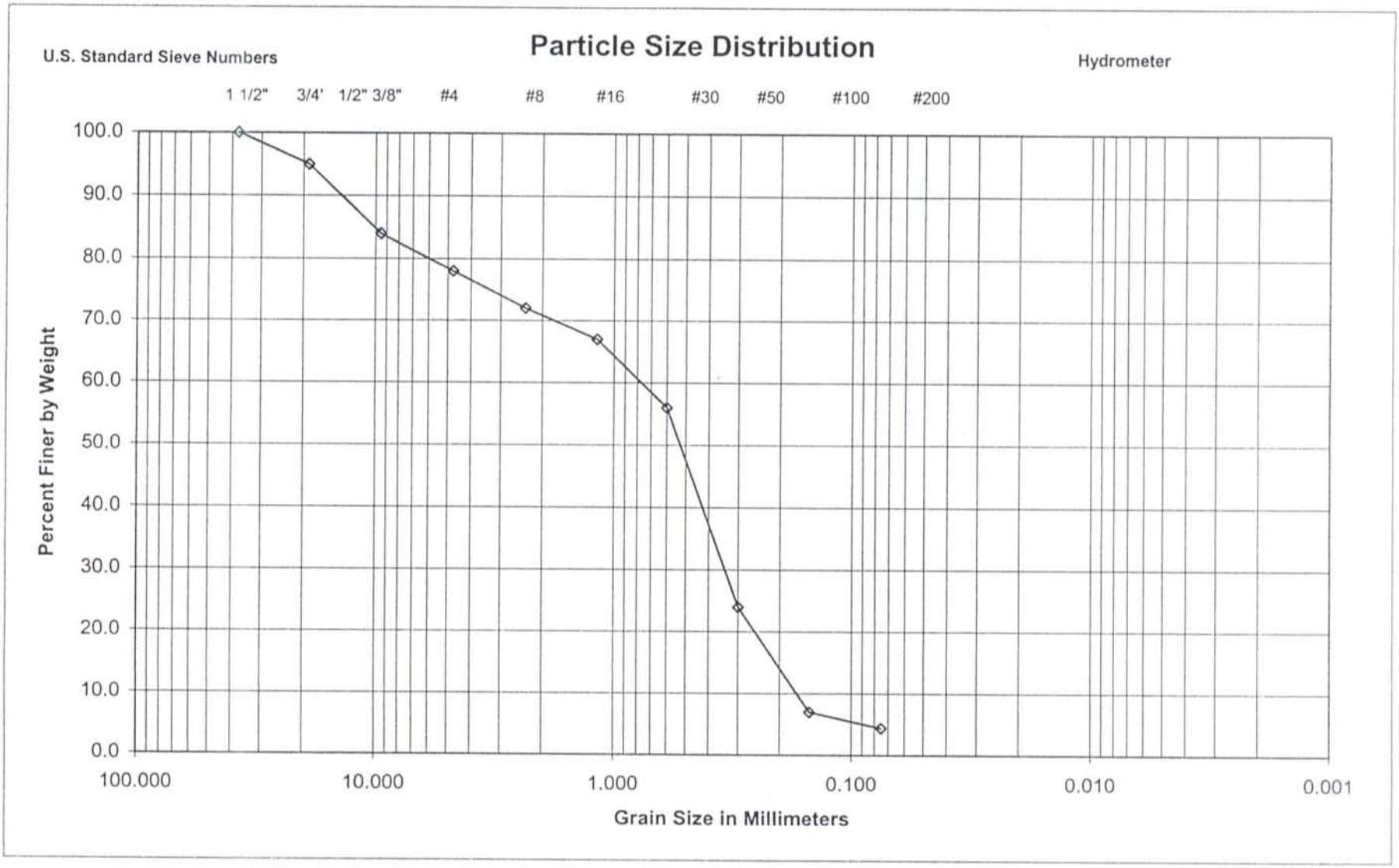
Table No. : 1



Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

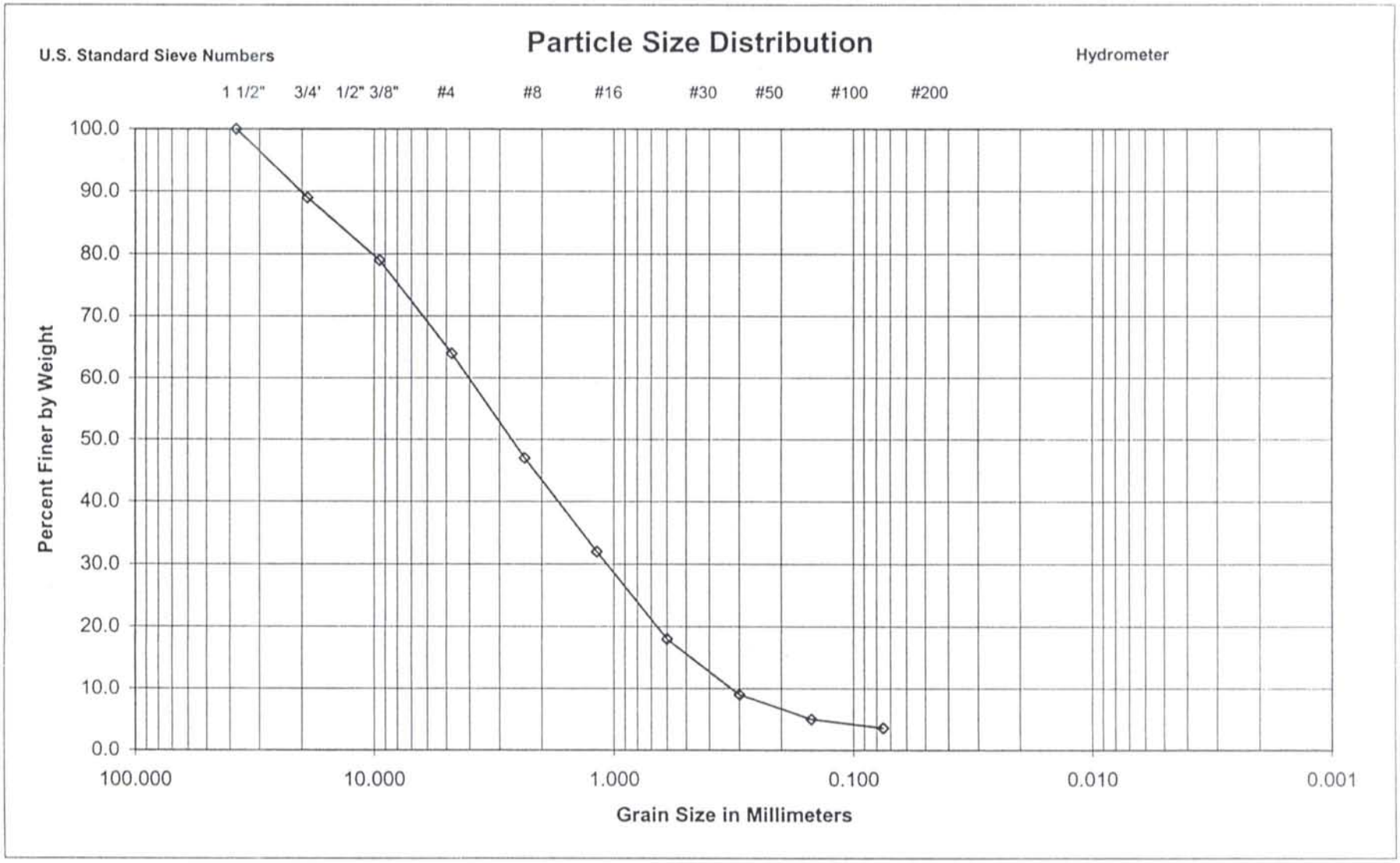


Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586



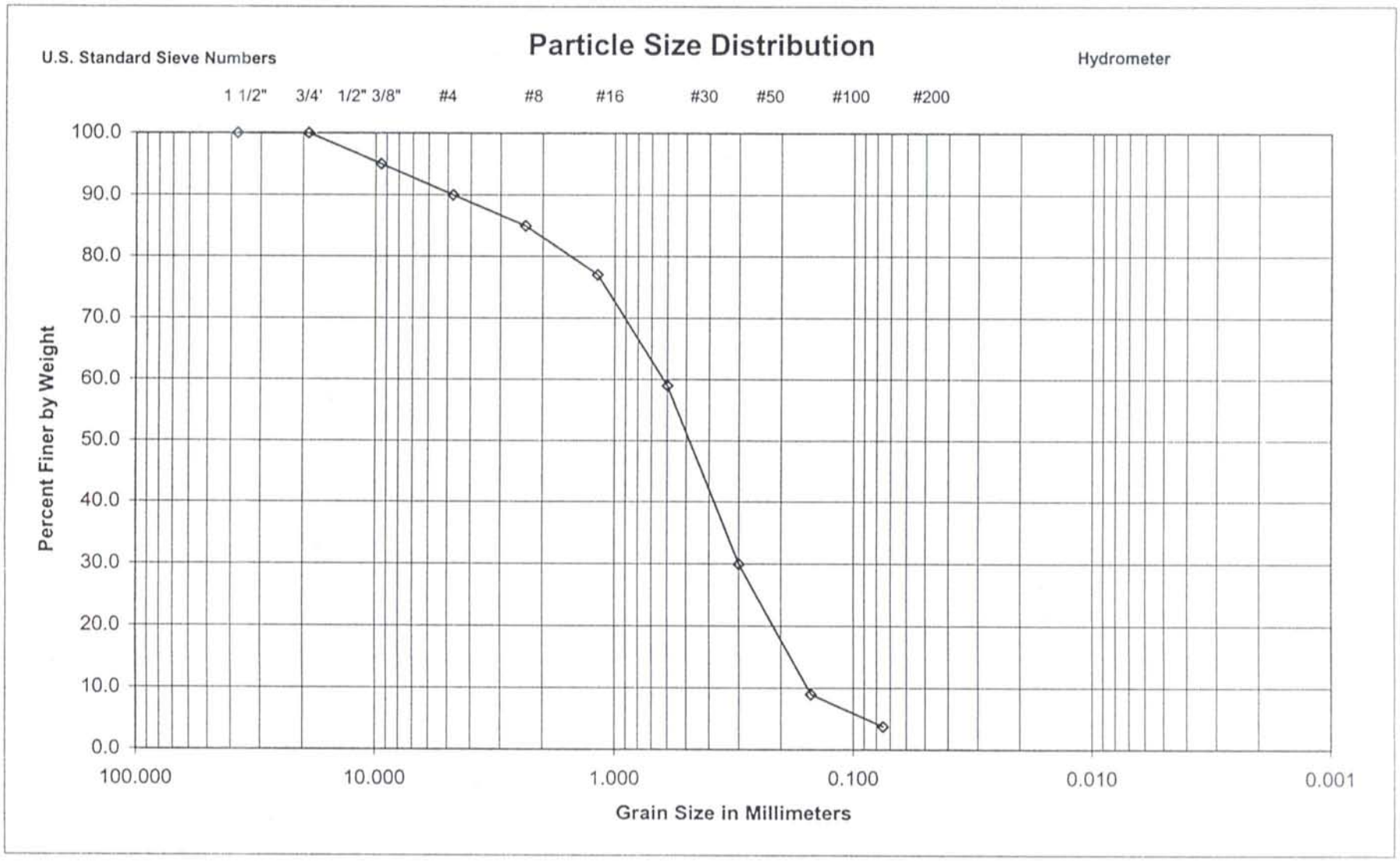
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

ESC-E04BC 28.5-30



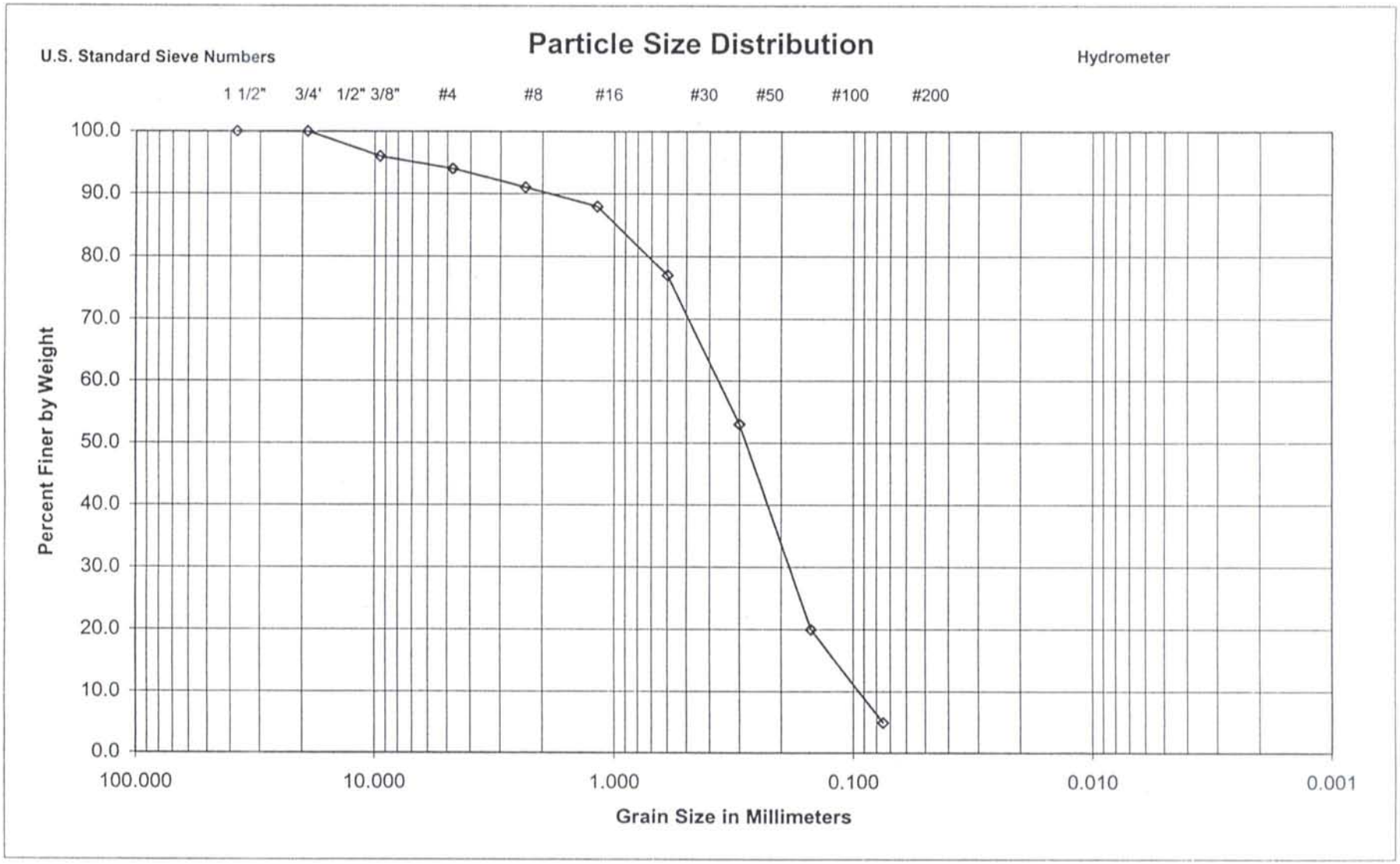
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

ESC-E04BC 38.5-40



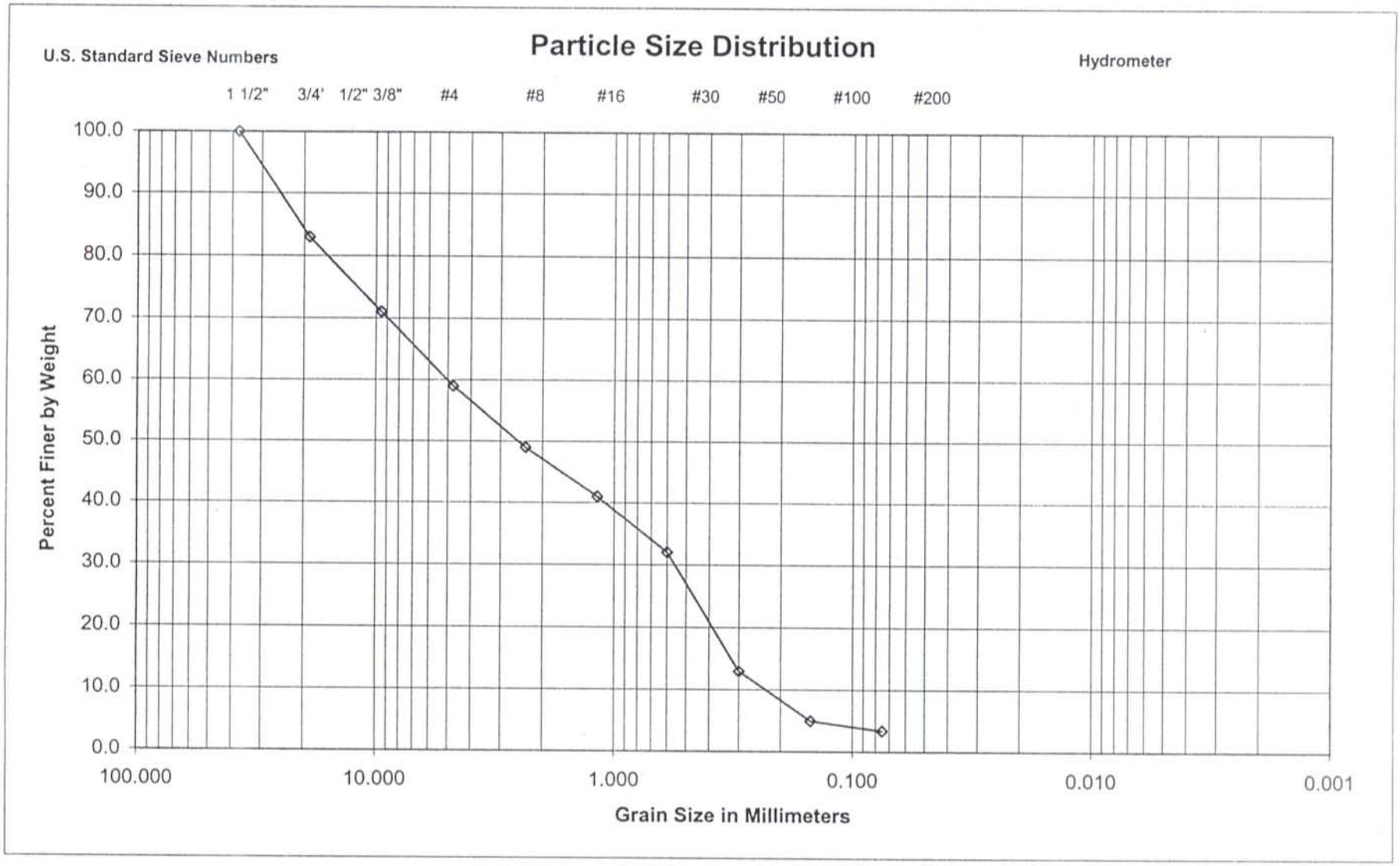
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

ESC-E04BC 48.5-50



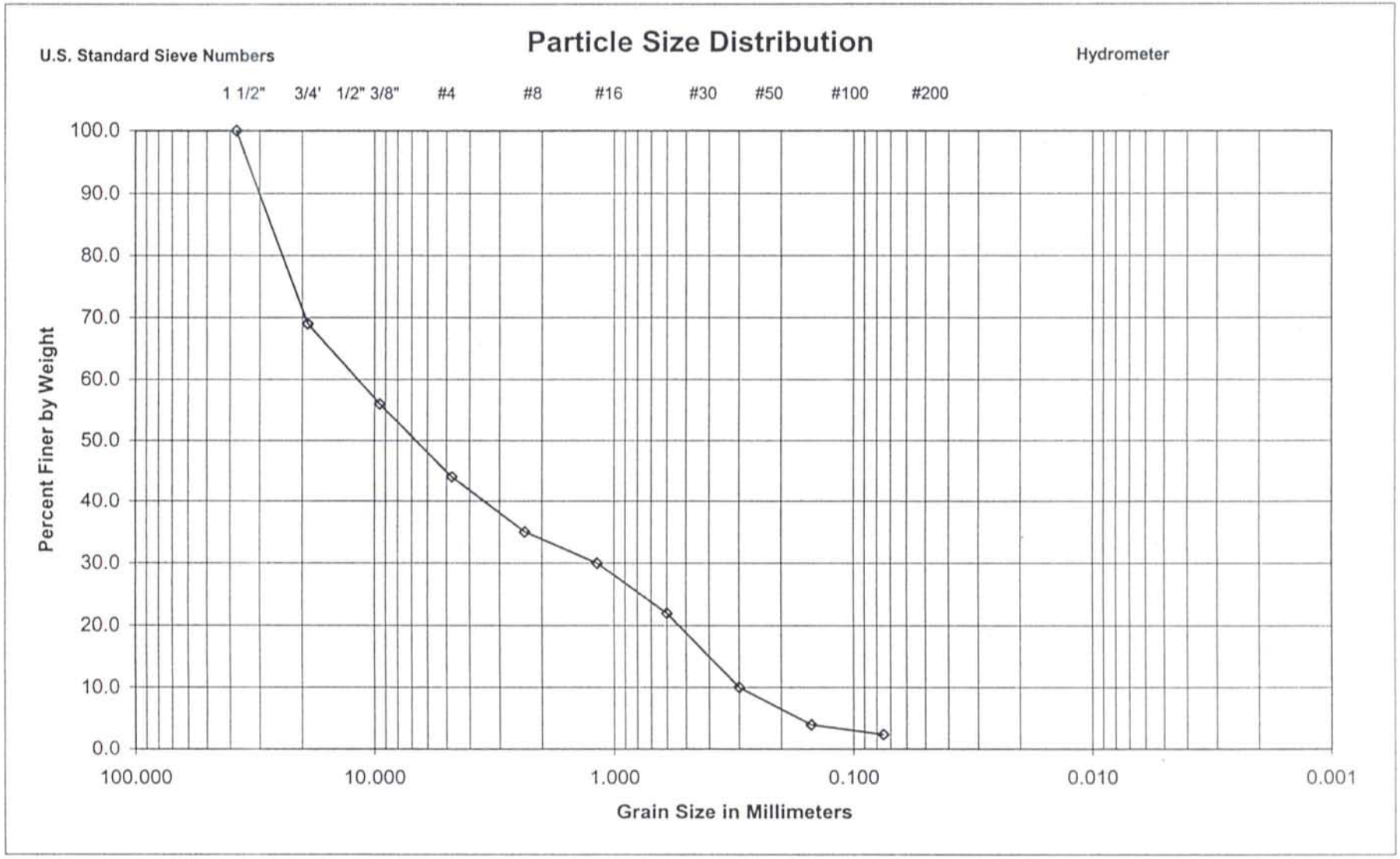
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

ESC-E04BC 53.5-55



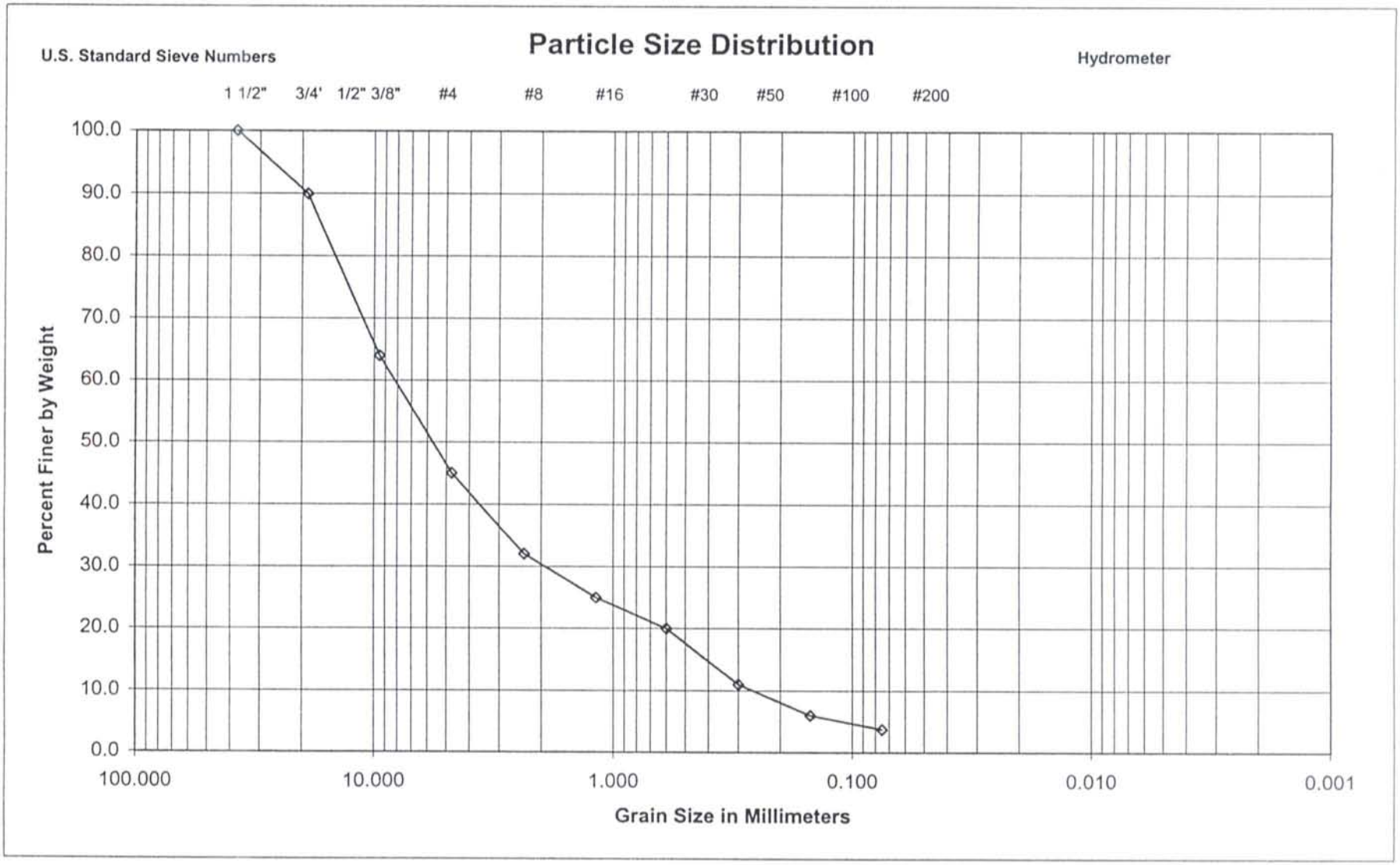
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

ESC-E04BC 58.5-60



Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

ESC-E04BC 68.5-70



Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

ESC-E04BC 78.5-80

V

Vinyard & Associates, Inc.

8916-A Adams Street NE
Albuquerque, New Mexico 87113
505/797-9743 505/797-9749 FAX

A

Geotechnical Engineering * Materials Testing * Environmental Engineering

771-3

October 25, 2002

S.S. Papadopulos & Associates, Inc.
1877 Broadway
Suite 703
Boulder, CO 80302

Attn: Mr. Bryan Grigsby

Project: SSP 771-3 Gradation Samples
V & A Project No. 02-2-586

Gentlemen:

Attached are copies of the Laboratory Test results for the subject project.

Should you have any questions regarding this data, please do not hesitate to call.

Sincerely,

Robert K. Abeyta, S.E.T.

Vinyard & Associates, Inc.

Martin D. Vinyard, P.E.

Attachment: Data Sheets: (1)
Figures: (11)

cc: Addressee: (1)

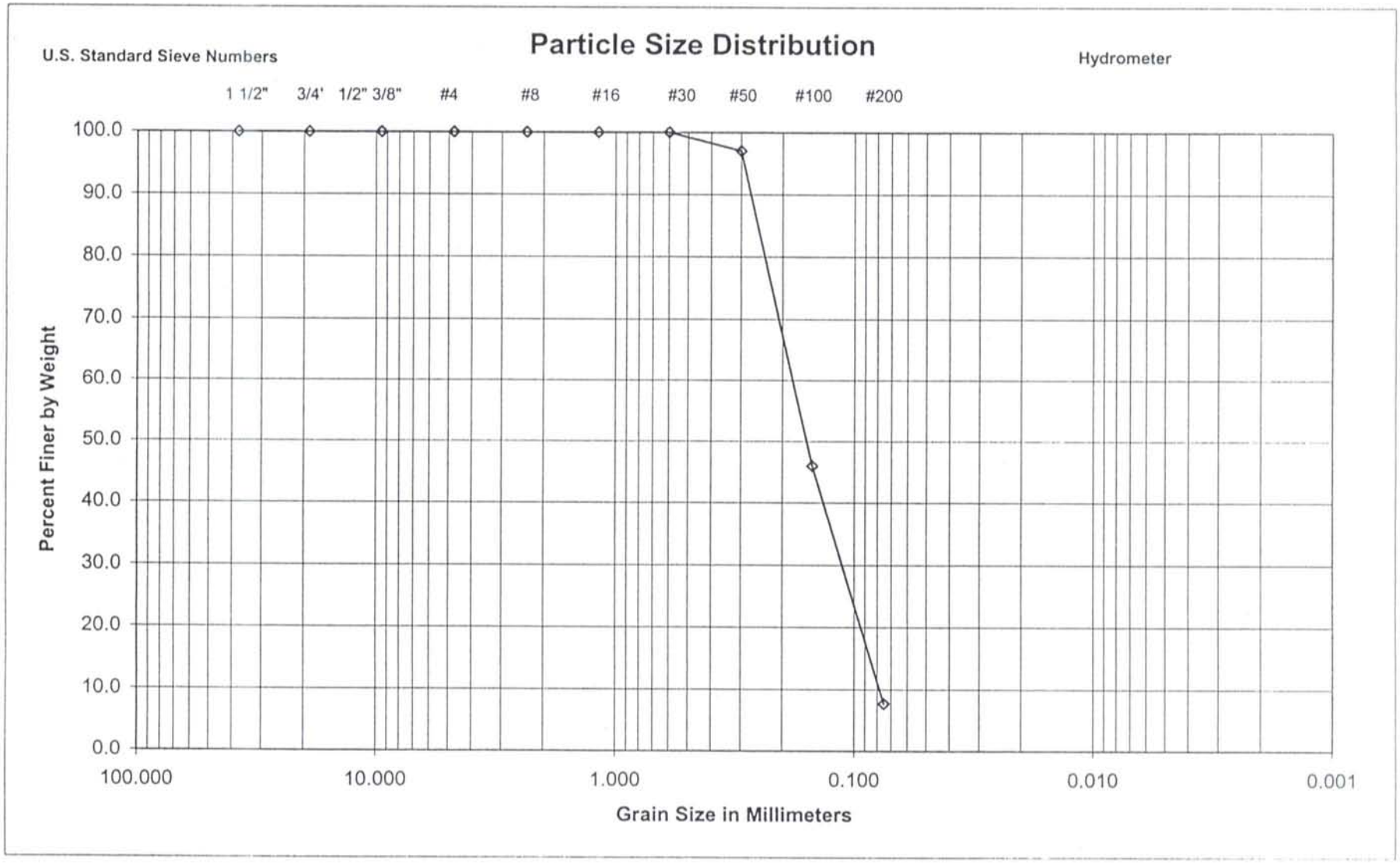
rka

SUMMARY OF LAL ɔRATORY TEST DATA

Test Hole	Depth (feet)	Unified Classificati on	Atterberg Limits		SIEVE ANALYSIS-% PASSING BY WEIGHT										Description
			LL	PI	1 1/2"	3/4"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	
BRN-E01	6-7.5	SW-SM			100	100	100	100	100	100	100	97	46	7.7	
BRN-E01	21-22.5	SP			100	100	98	92	81	69	50	25	5	2.2	
BRN-E01	28.5-320	SP			100	100	99	98	98	98	95	68	11	2.1	
BRN-E01	38.5-40	SW-SM			100	100	100	100	100	100	99	88	25	5.8	
BRN-E01	46-47.5	SP-SM			100	100	100	99	99	98	94	63	15	5.6	
BRN-E01	48.5-50	SP-SM			100	100	94	91	87	77	26	9	5	4.5	
BRN-E01	56-57.5	CL	32	9	100	100	100	100	99	98	98	93	88	85.5	
BRN-E01	61-62.5	SP-SM			100	100	100	100	100	100	100	96	19	5.8	
BRN-E01	71-71.7	SP			100	100	100	100	99	94	71	14	3	2.4	
BRN-E01	81-82.5	GP s			100	80	66	51	41	33	23	12	7	4.4	
BRN-E01	83.5-84.5	SP			100	100	100	99	98	96	85	48	14	8.5	

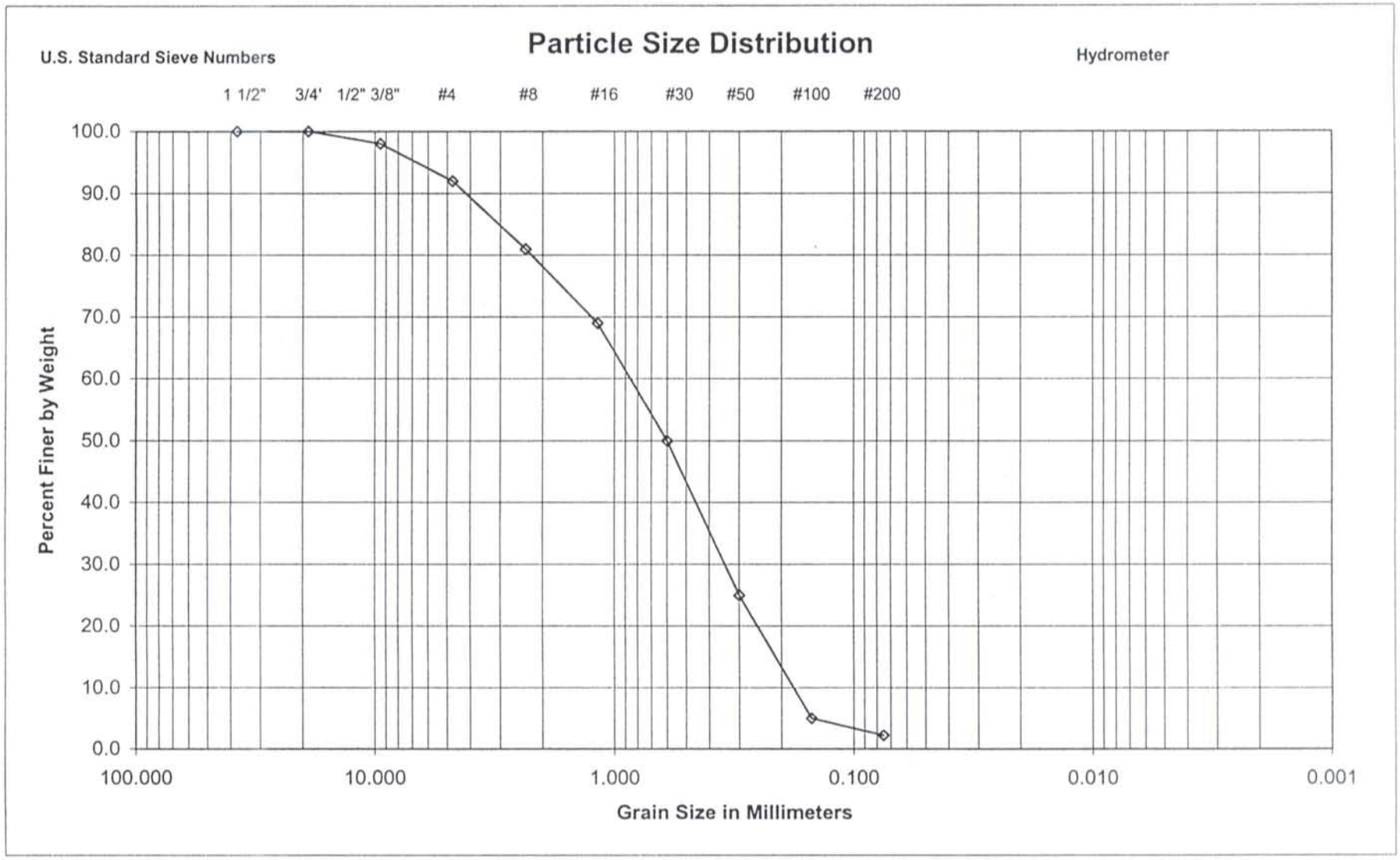
Project Number : 02-2-586
Project : SSP 771-3

Table No. : 1



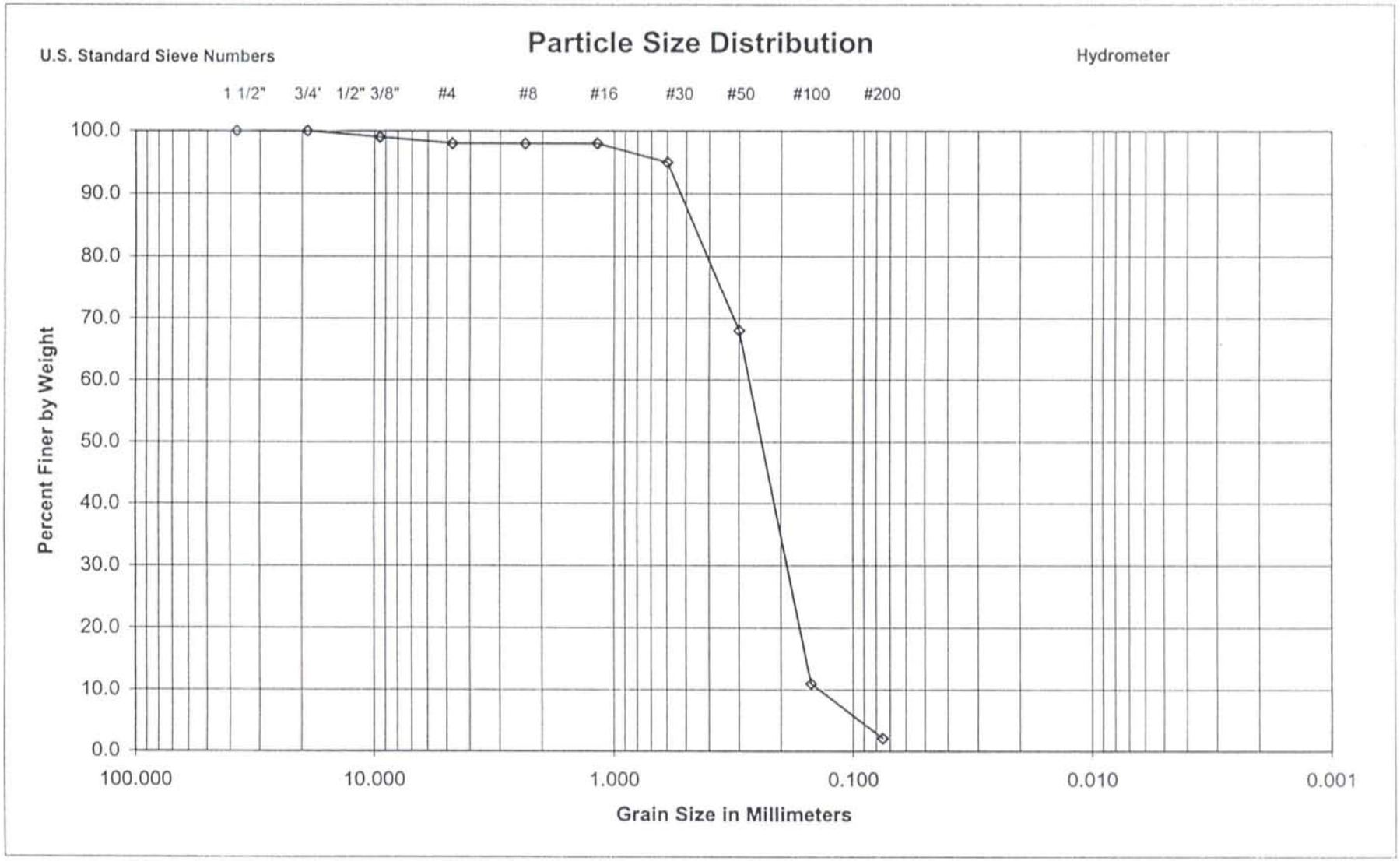
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

BRN-E01 6-7.5



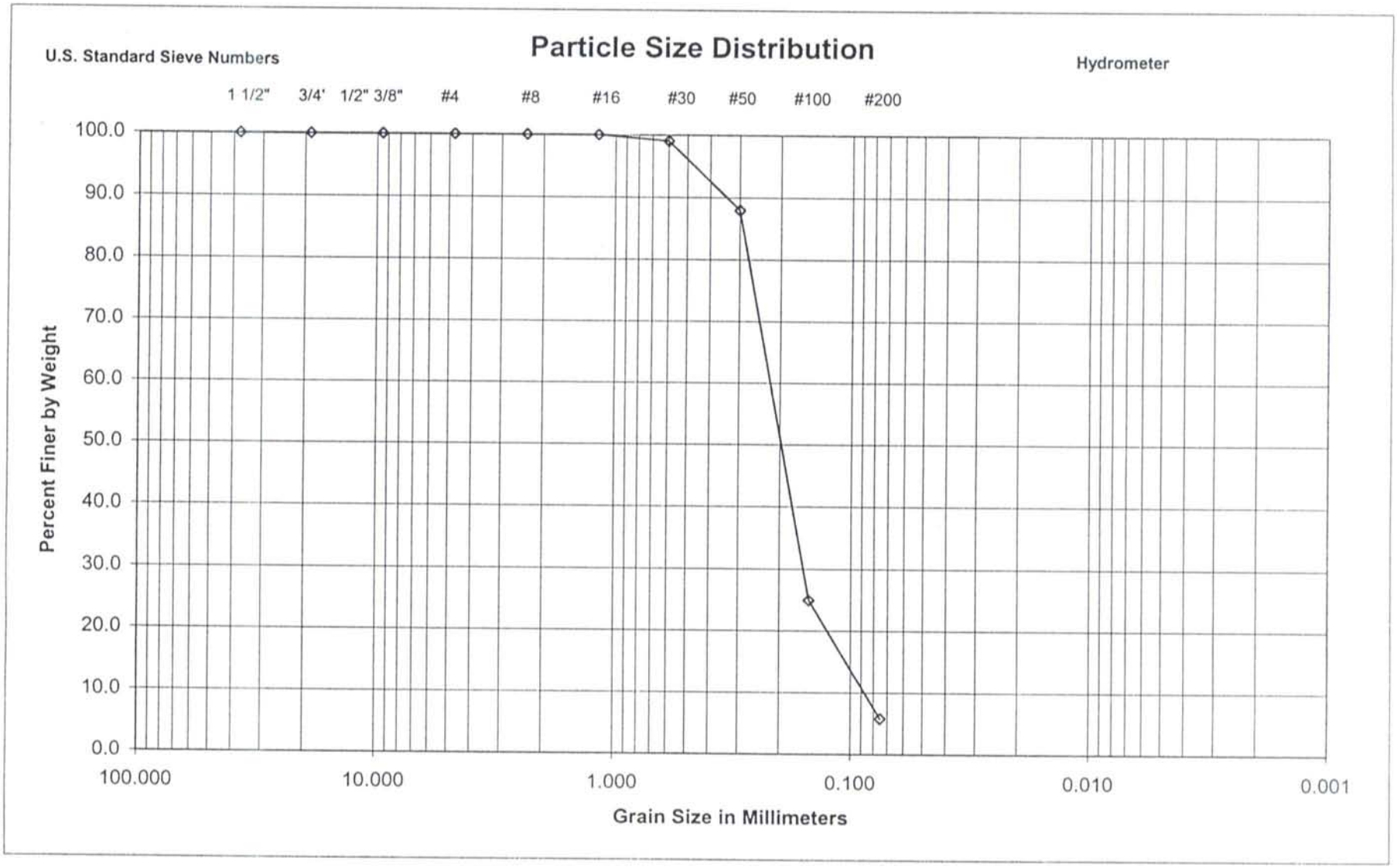
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

BRN-E01 21-22.5



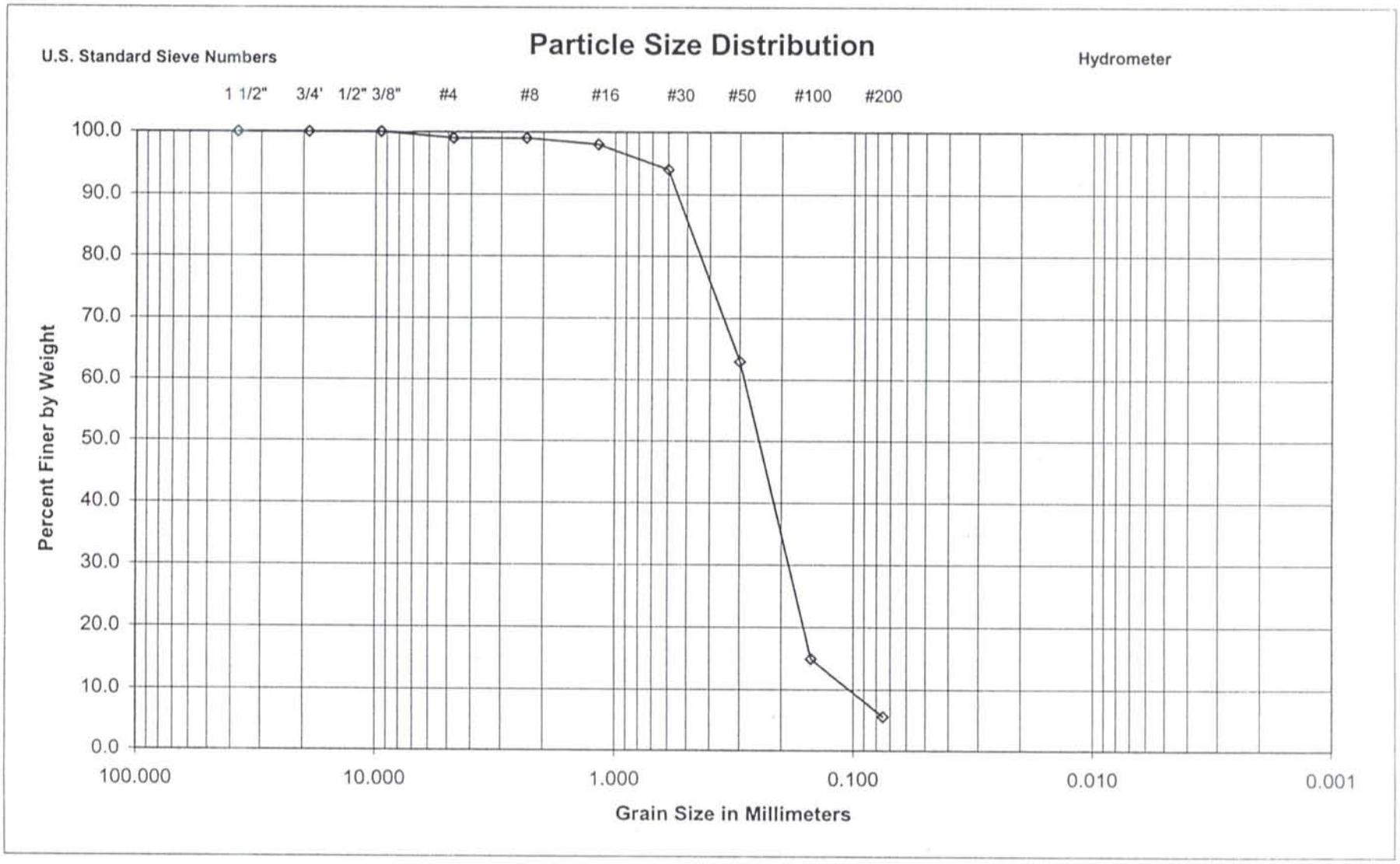
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

BRN-E01 28.5-30



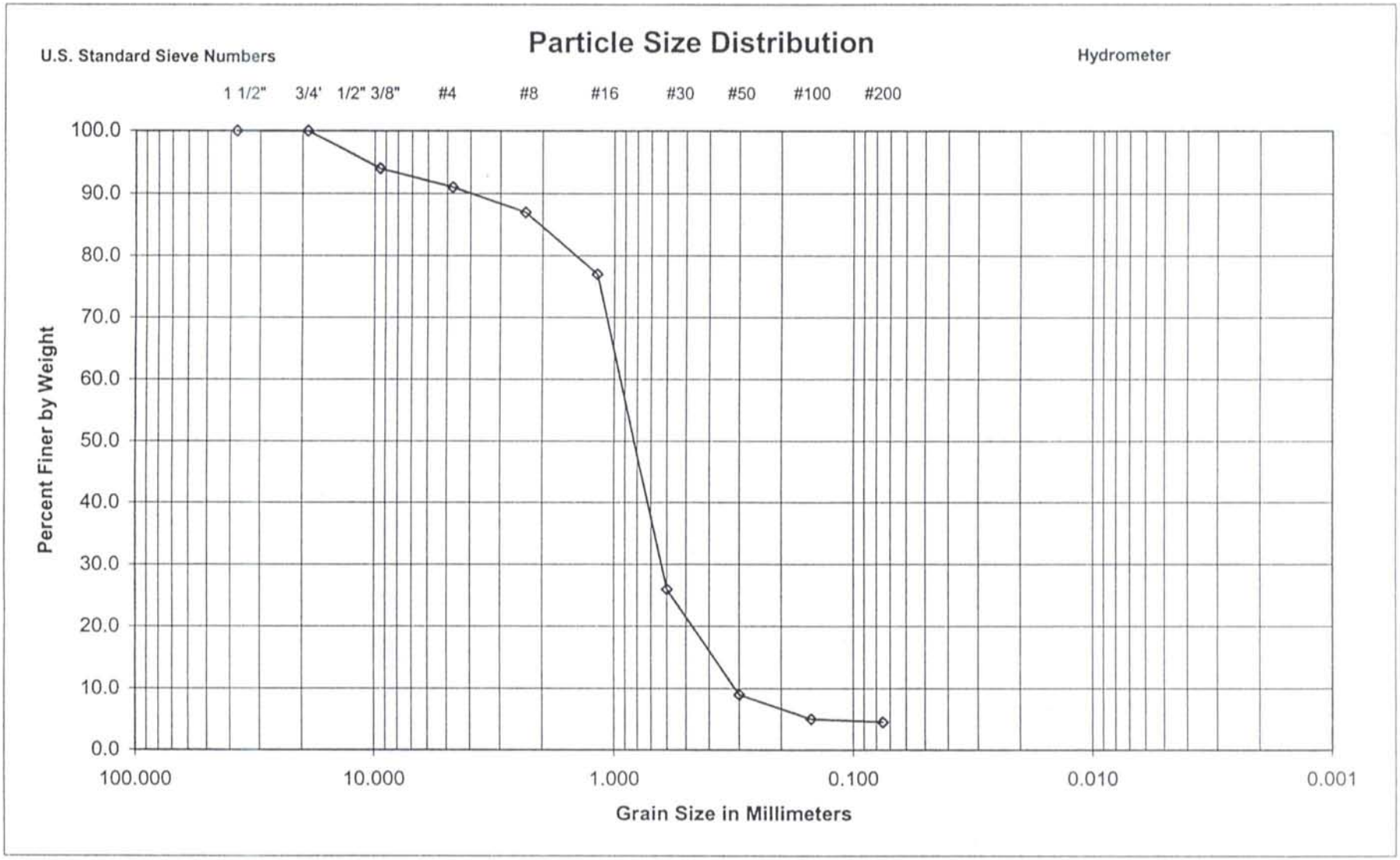
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

BRN-E01 38.5-40



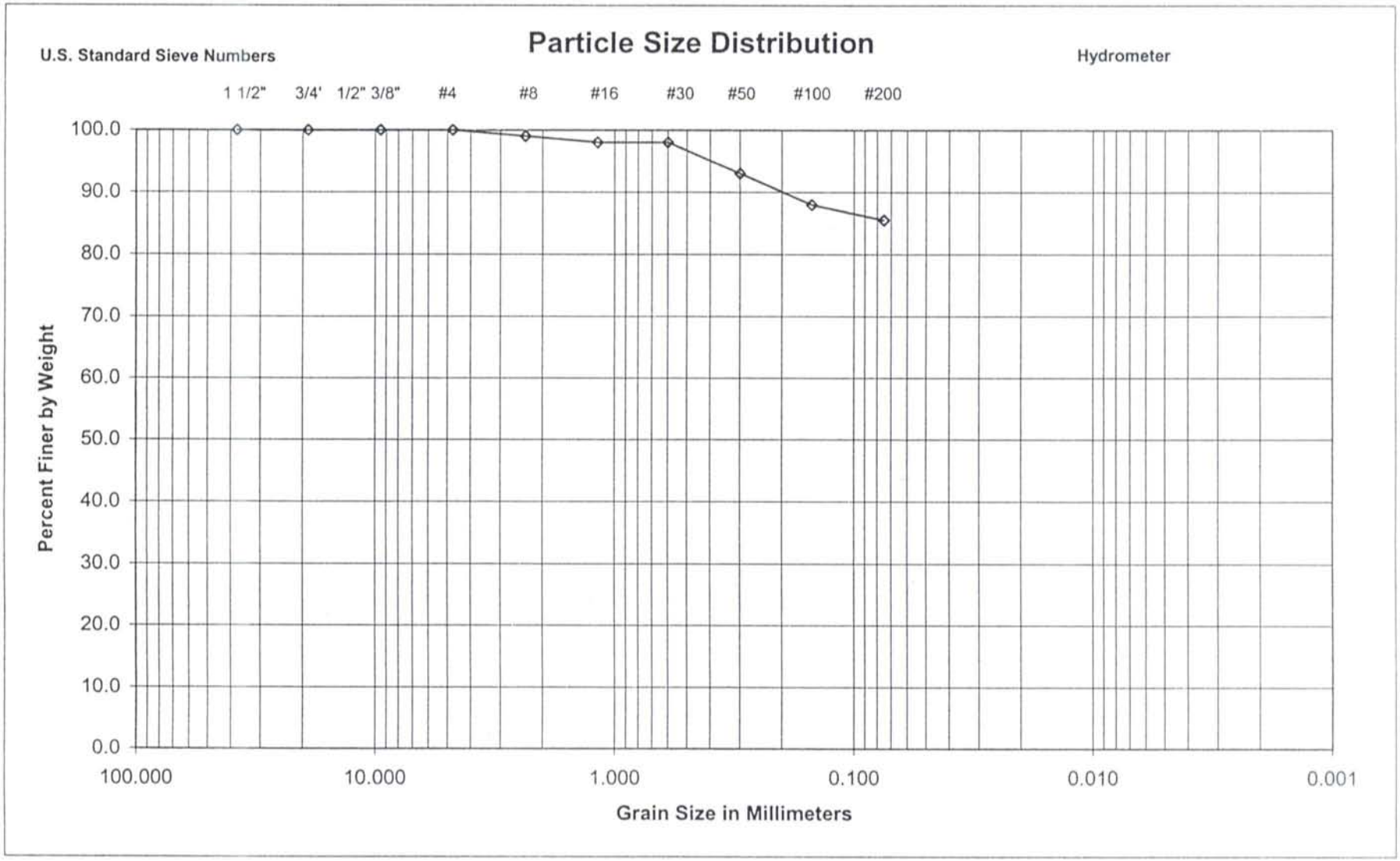
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

BRN-E01 46-47.5



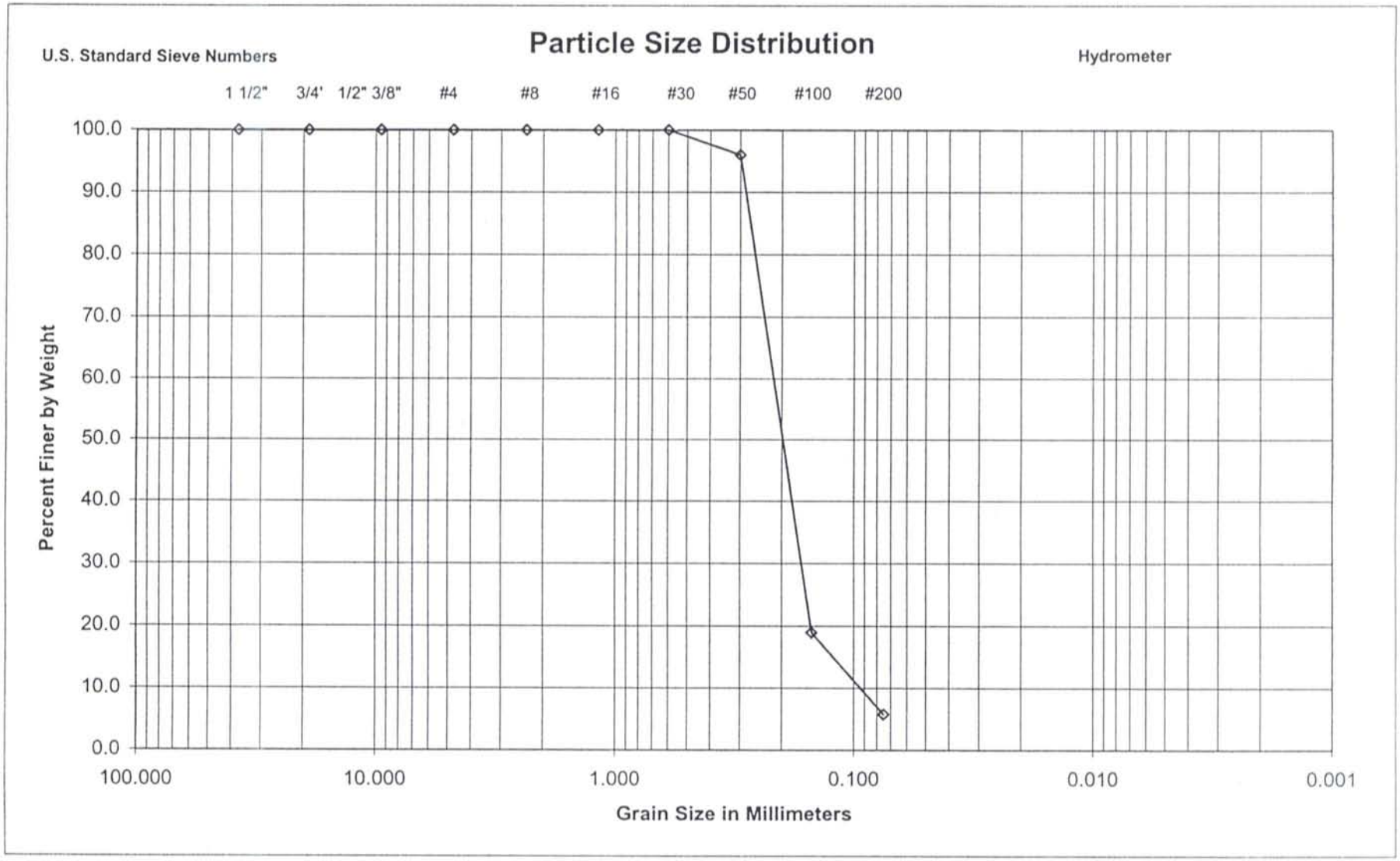
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

BRN-E01 48.5-50



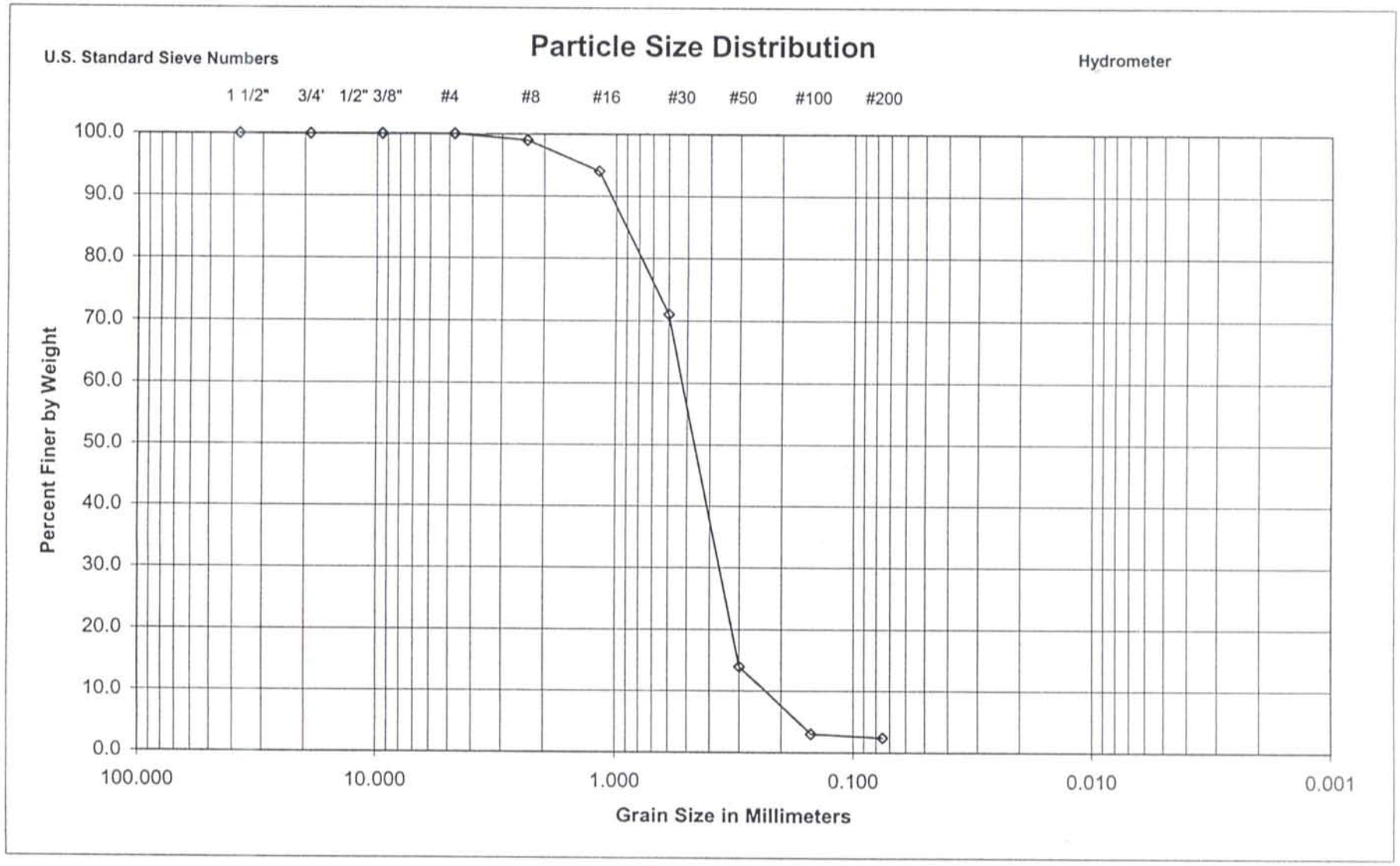
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

BRN-E01 56-57.5



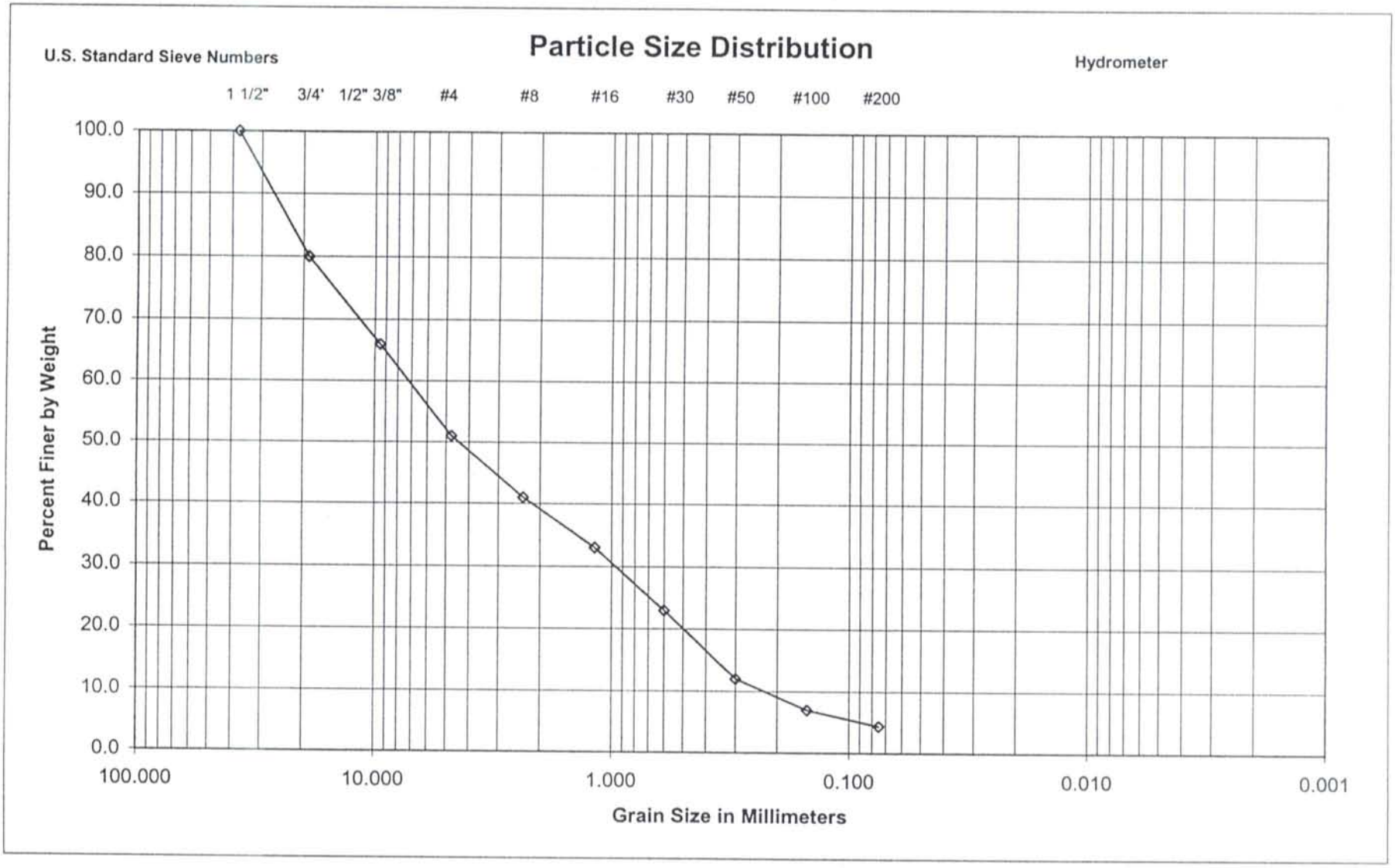
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

BRN-E01 61-62.5



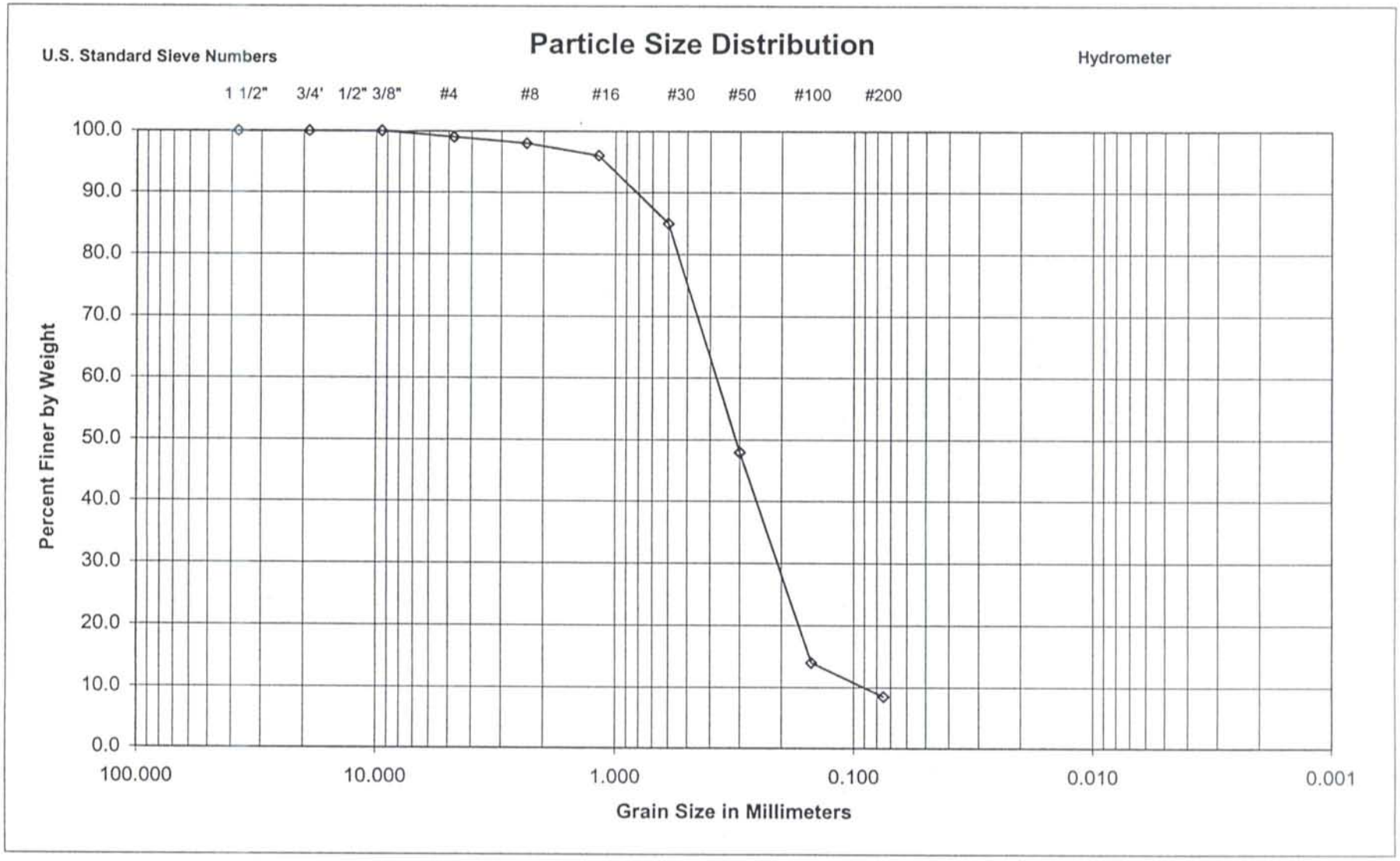
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

BRN-E01 71-71.7



Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

BRN-E01 81-82.5



Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

BRN-E01 83.5-84.5

771-3

V

Vinyard & Associates, Inc.

8916-A Adams Street NE
Albuquerque, New Mexico 87113
505/797-9743 505/797-9749 FAX

A

Geotechnical Engineering * Materials Testing * Environmental Engineering

SMC-W07

SBB-W03

November 19, 2002

S.S. Papadopulos & Associates, Inc.
1877 Broadway
Suite 703
Boulder, Co 80302

Mr. Bryan Grigsby

Project: SSP 771-3 Gradation Samples
V & A Project No. 02-2-586

Gentlemen:

Attached are copies of the Laboratory Test results for the subject project.

Should you have any questions regarding this data, please do not hesitate to call.

Sincerely,

Robert K. Abeyta, S.E.T.

Vinyard & Associates, Inc.

Martin D. Vinyard, P.E.

Attachment: Data Sheets: (23)

cc: Addressee: (1)

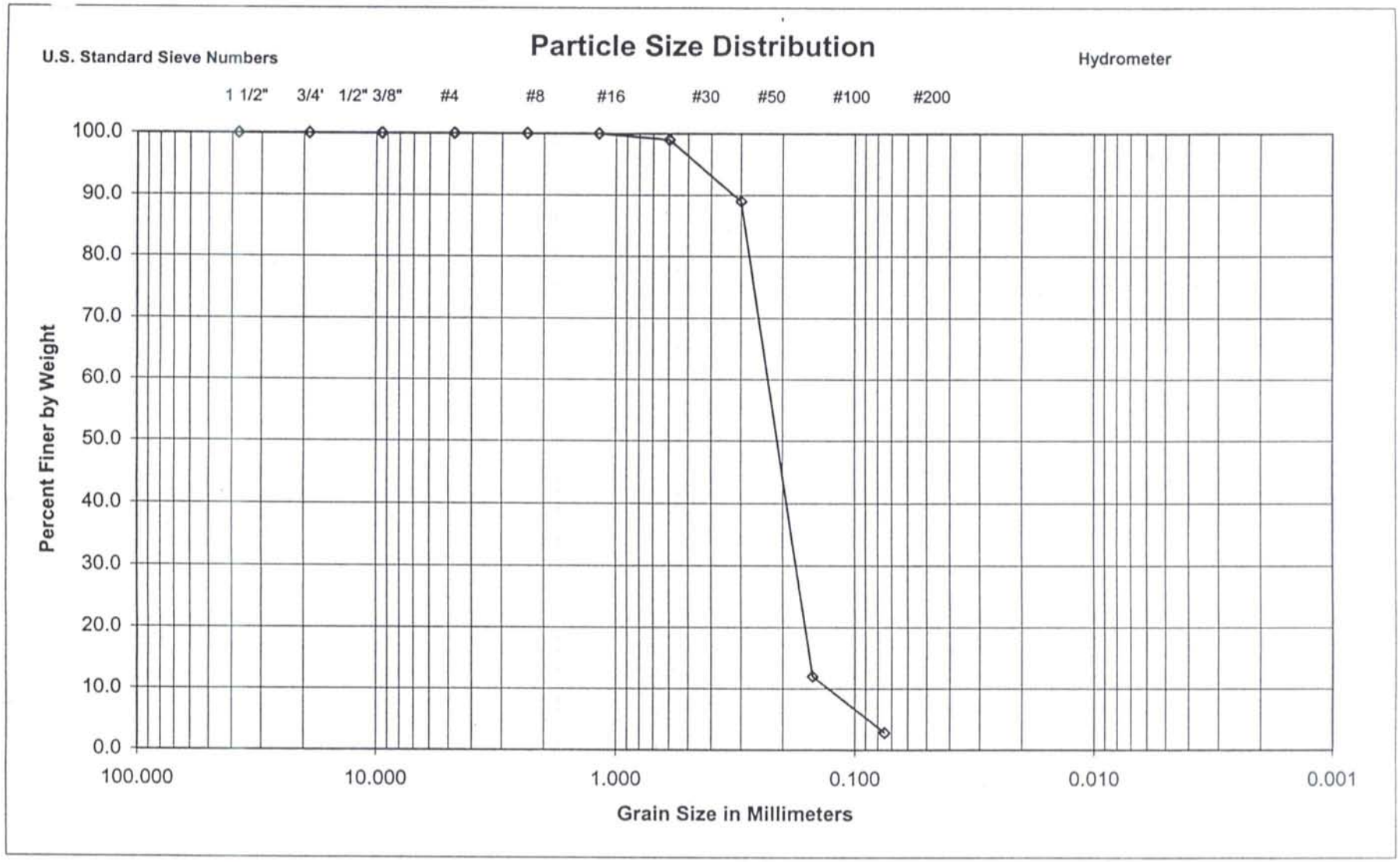
rka

SUMMARY OF LABORATORY TEST DATA

Test Hole	Depth (feet)	Unified Classification	Atterberg Limits		SIEVE ANALYSIS-% PASSING BY WEIGHT										Description
			LL	PI	1 1/2"	3/4"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	
SMC-W07	0-2.5	SP								100	99	89	12	2.8	
SMC-W07	13.5-15	ML										100	92	59.8	
SMC-W07	21-22.5	SM										100	98	47.1	
SMC-W07	28.5-29.3	CL	41	21					100	99	98	91	82	76.0	
SMC-W07	33.5-35	SP-SM								100	99	82	23	8.8	
SMC-W07	38.5-40	SP g			100	76	71	64	57	53	44	16	5	2.8	
SMC-W07	43.5-45	SP				100	98	95	92	90	81	37	6	3.2	
SMC-W07	53.5-50	SP g			100	96	83	72	61	54	48	34	14	7.0	
SMC-W07	58.5-60	SW g			100	95	76	57	43	36	32	22	7	3.9	
SMC-W07	73.5-75	SP g				100	89	81	74	69	62	37	10	5.2	
SMC-W07	76-77.5	SP				100	99	99	99	97	75	26	10	6.7	

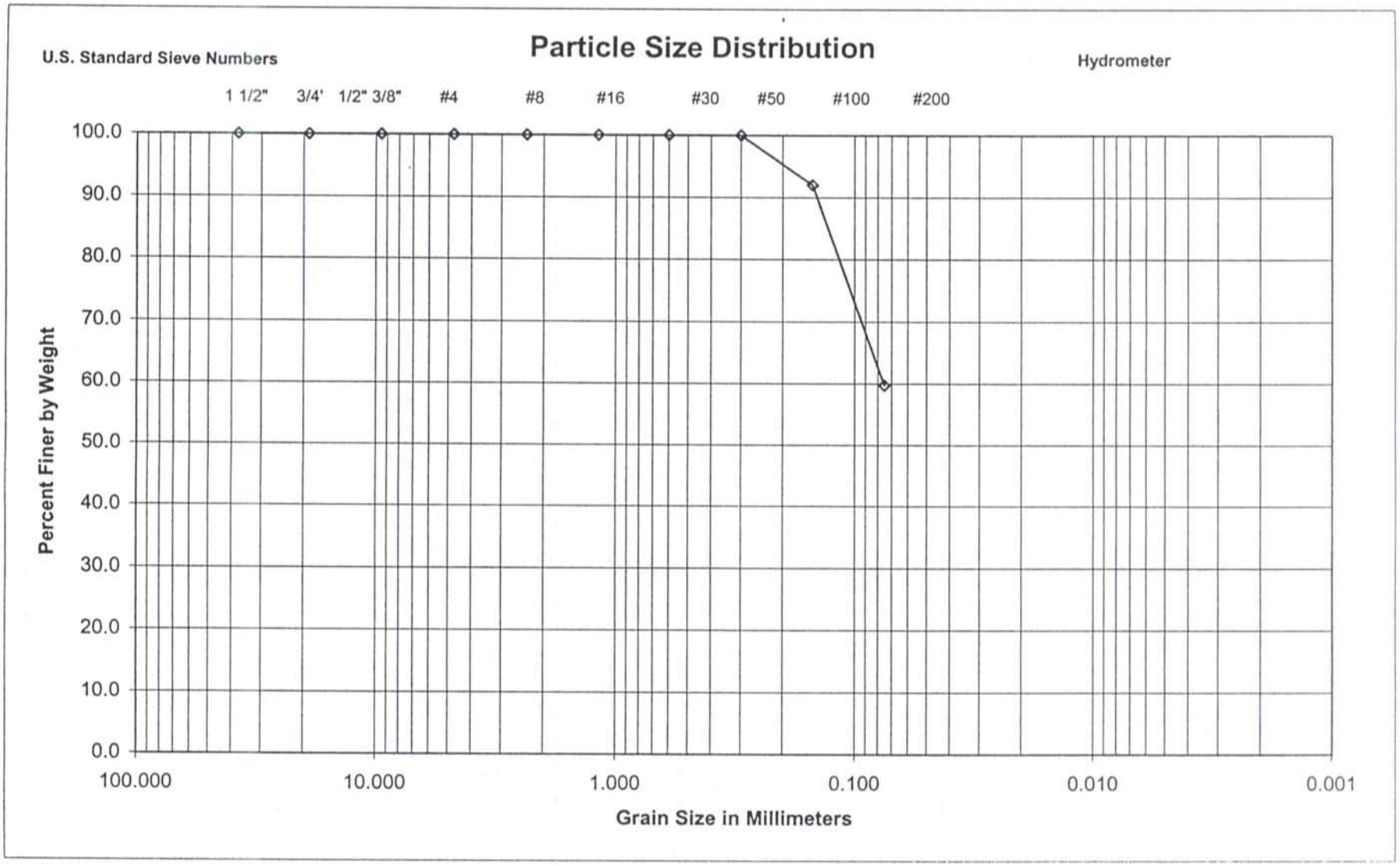
Project Number : 02-2-586
Project : SSP 771-3

Table No. : 1



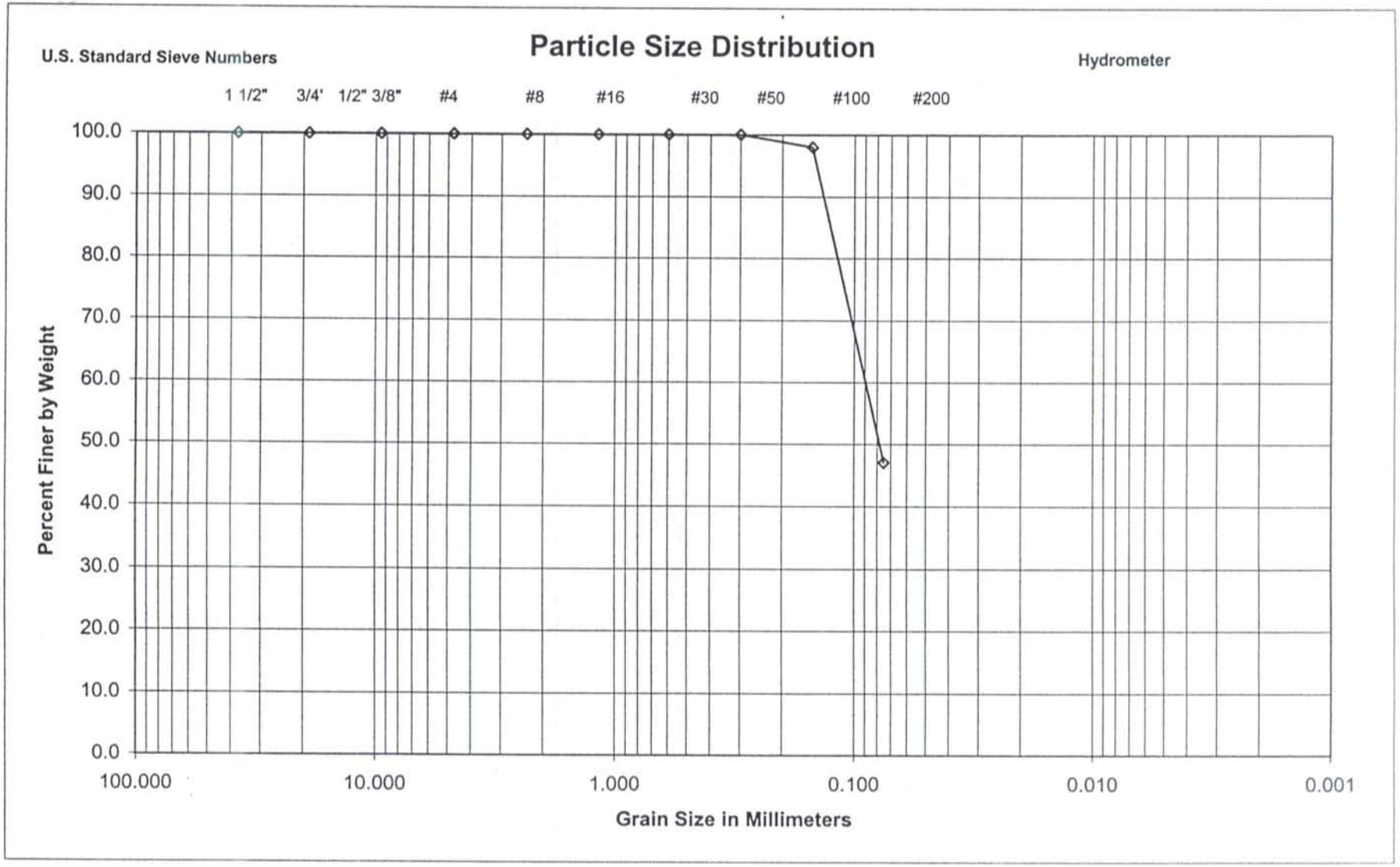
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SMC-W07 0-2.5



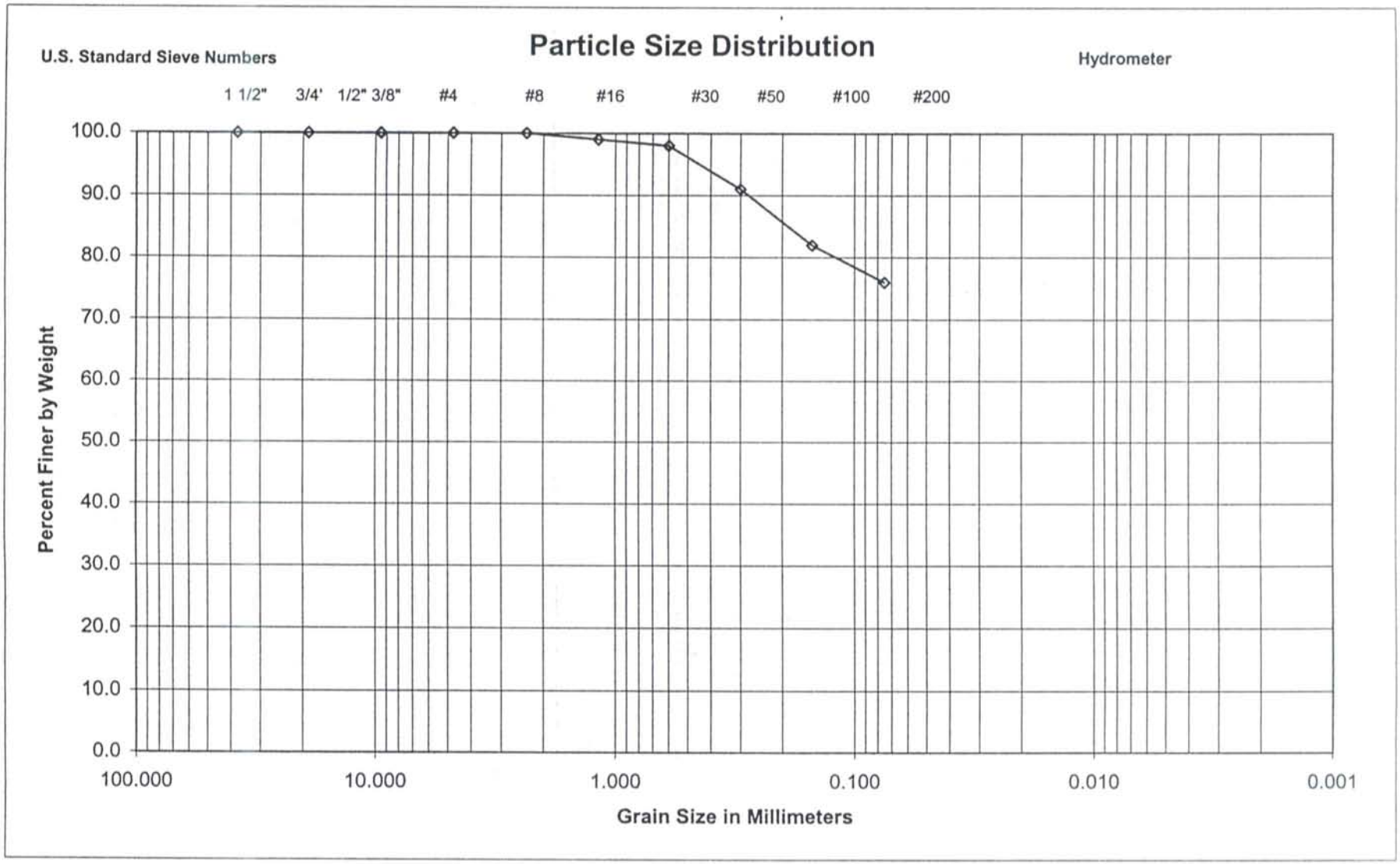
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SMC-W07 13.5-15



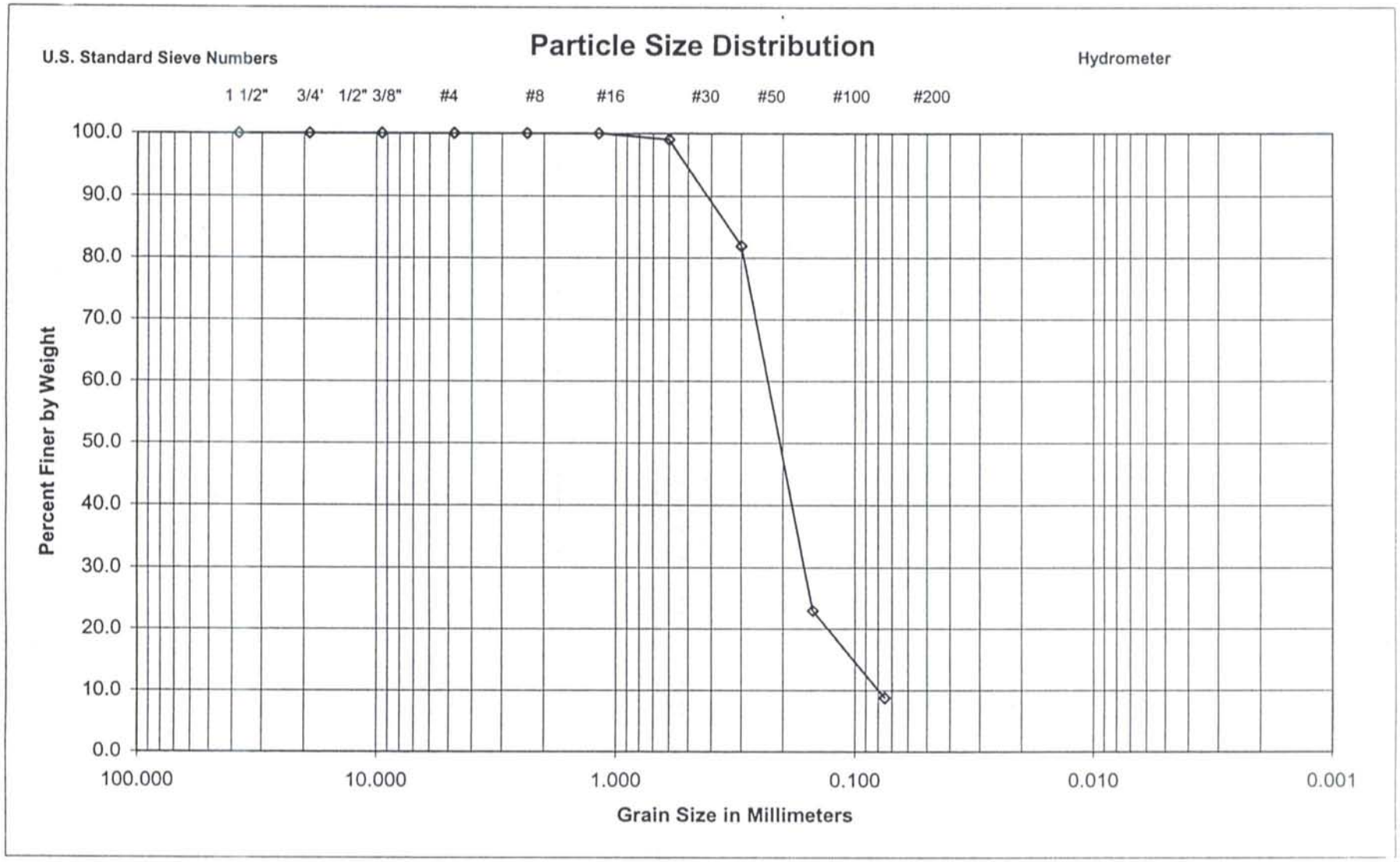
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SMC-W07 21-22.5



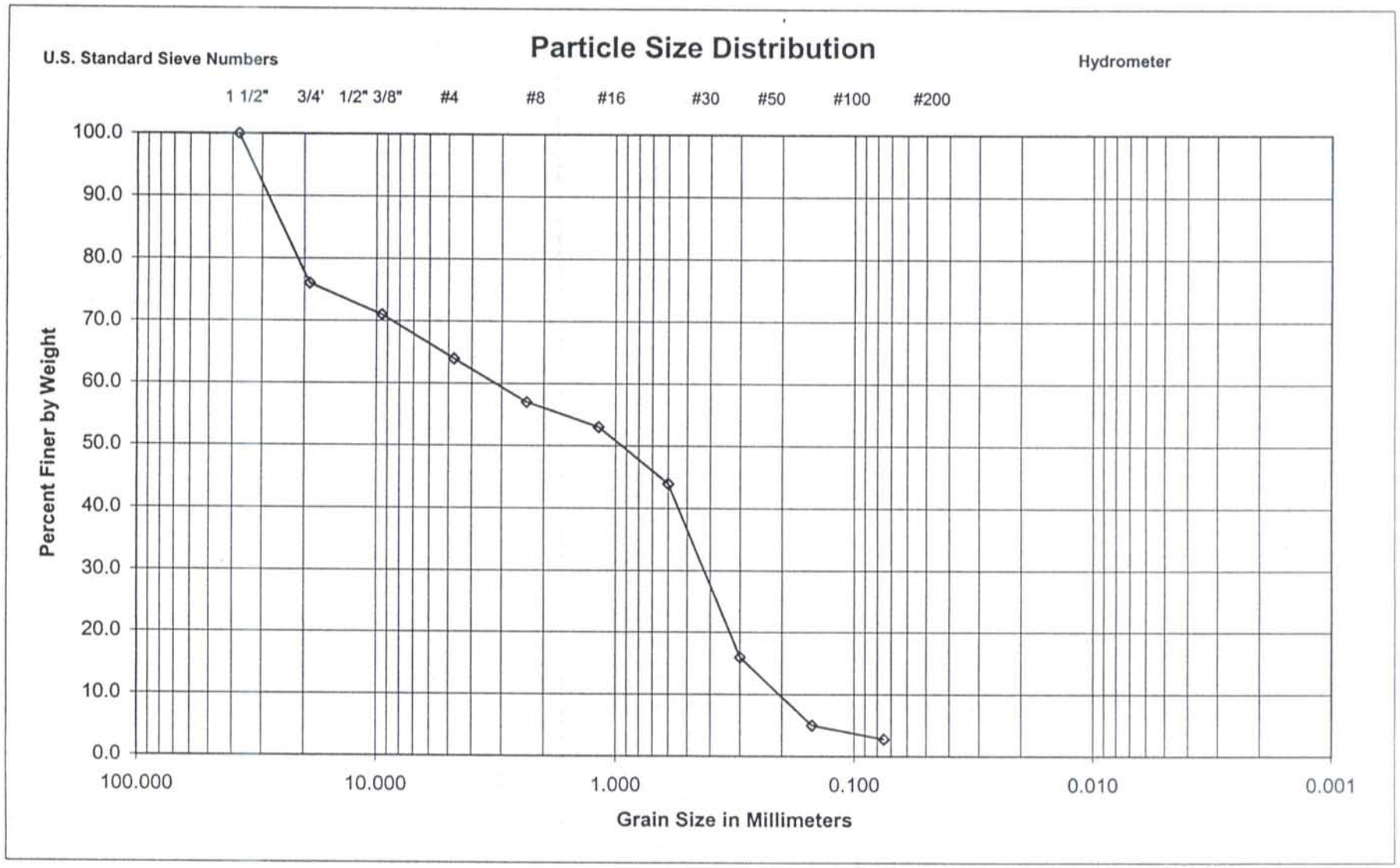
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SMC-W07 28.5-29.3



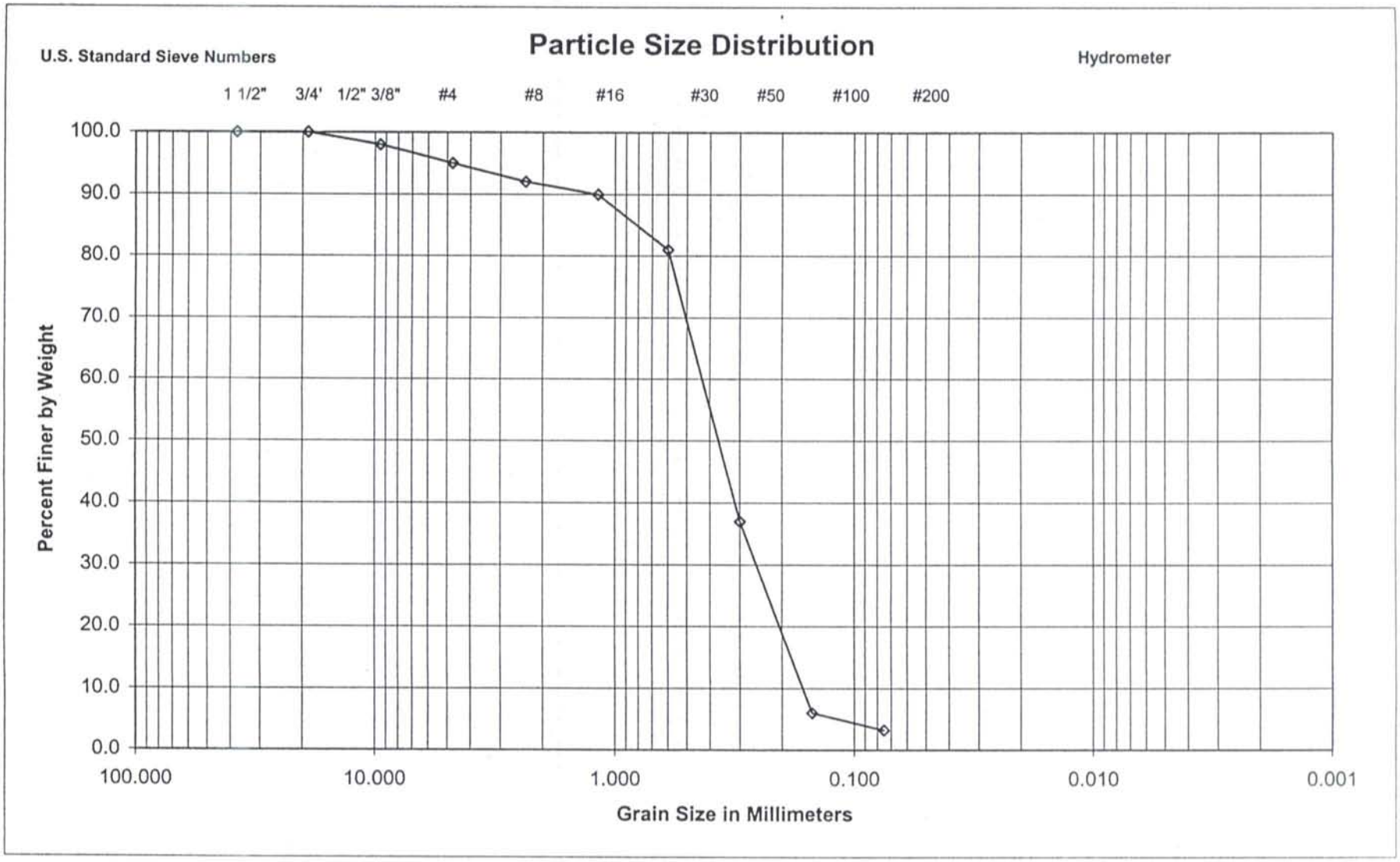
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SMC-W07 33.5-35



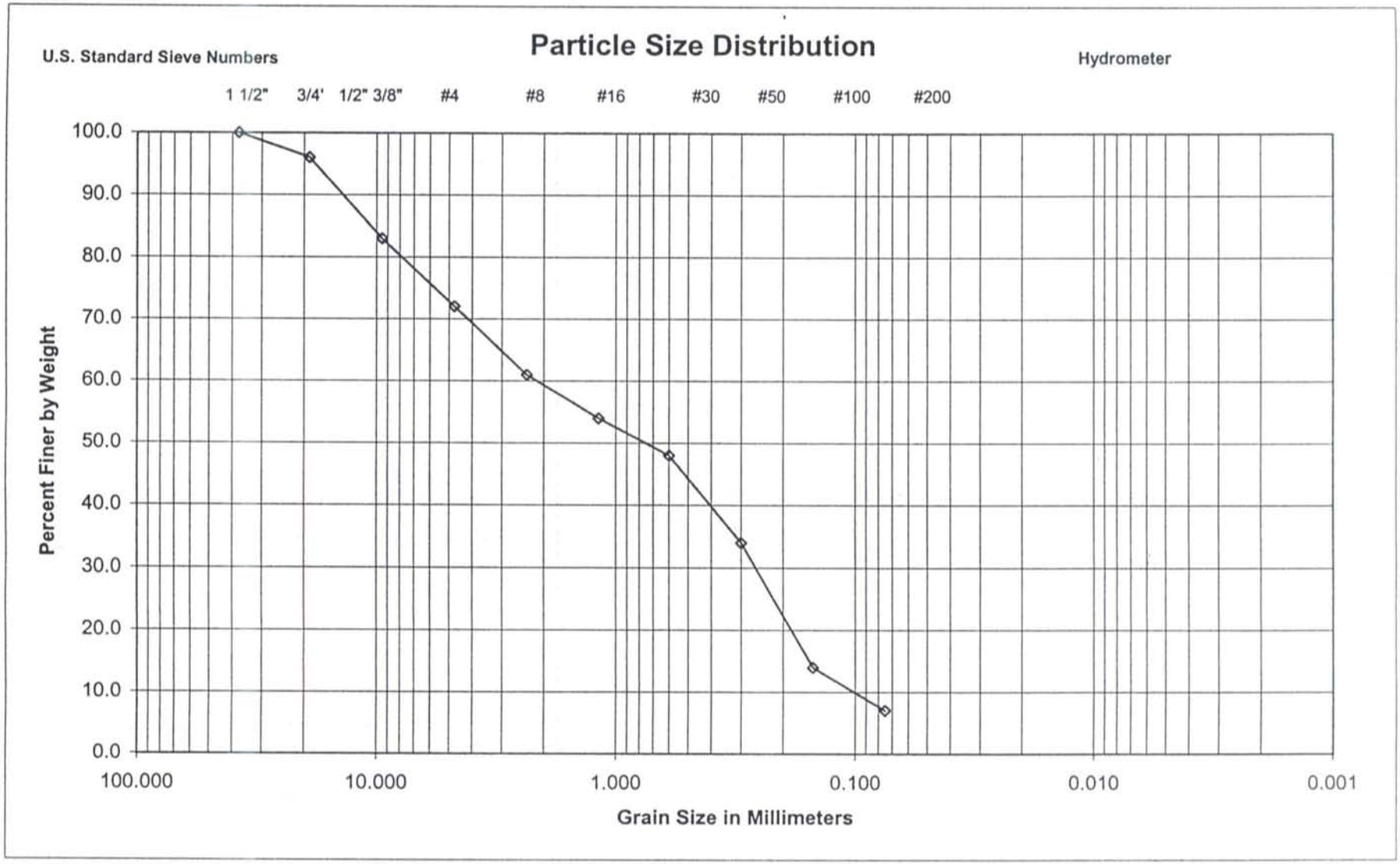
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SMC-W07 38.5-40.0



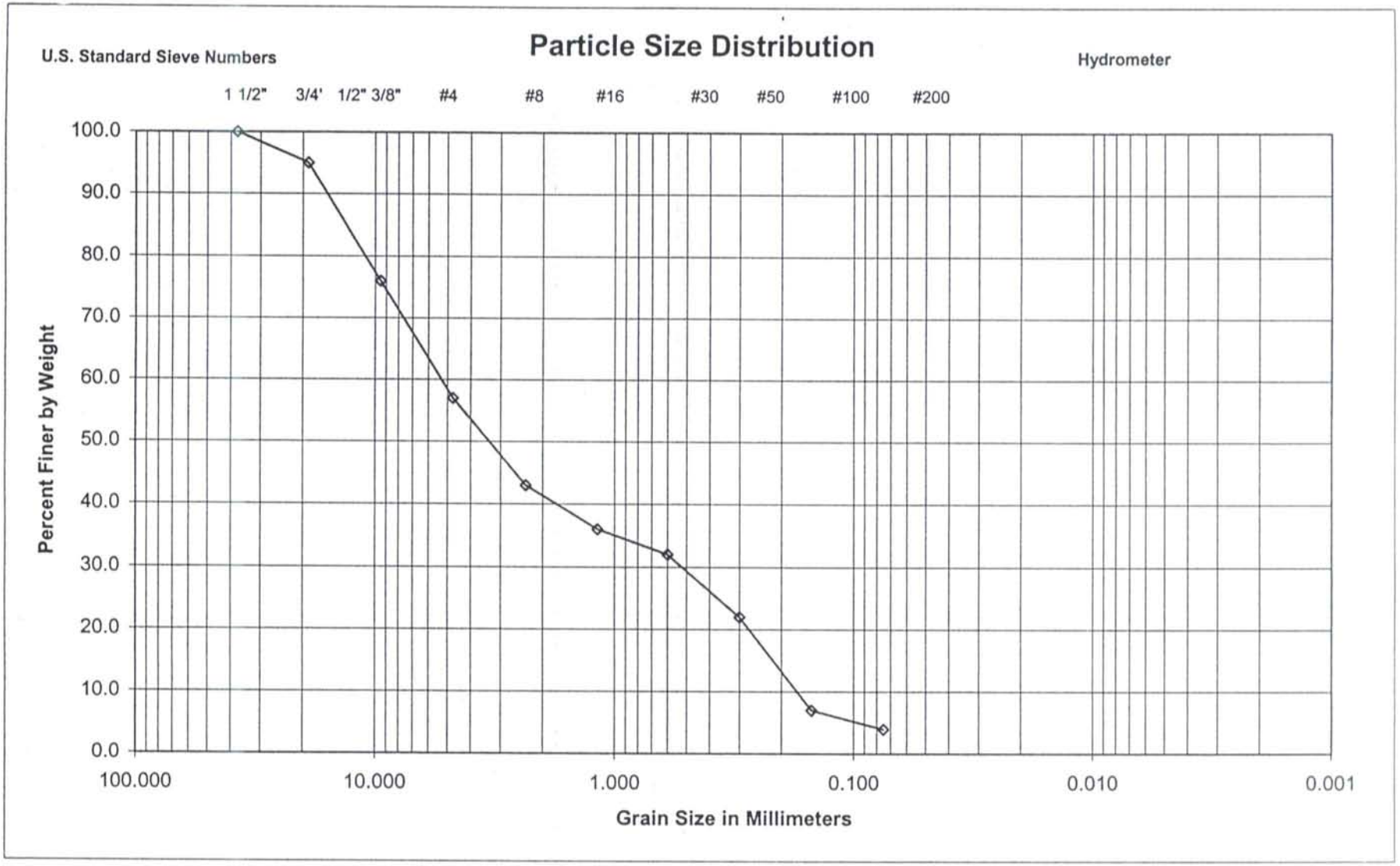
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SMC-W07 43.5-45



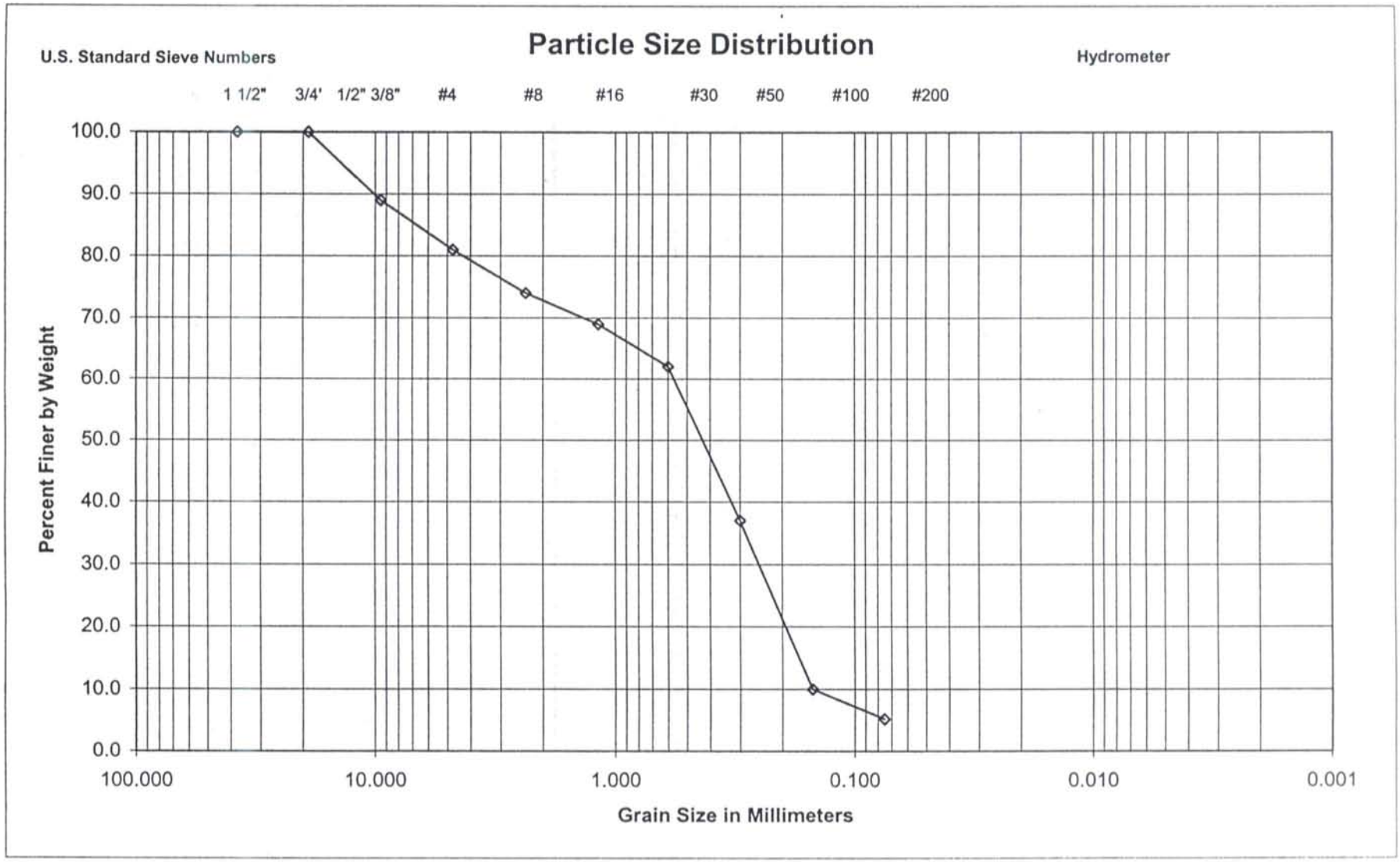
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SMC-W07 53.5-50



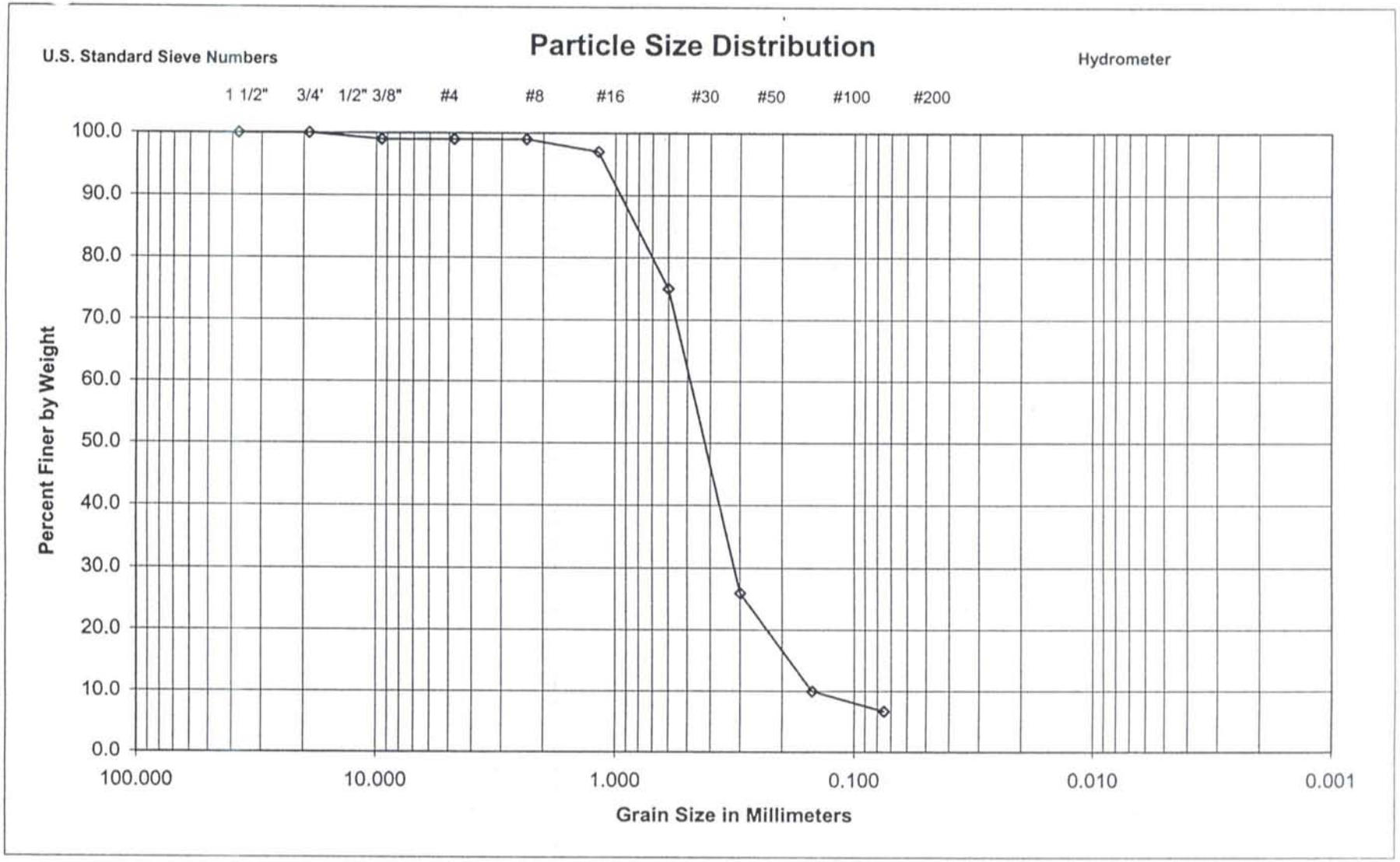
Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SMC-W07 58.5-60



Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SMC-W07 73.5-75



Project: SSP 771-3 Samples
Client: S.S. Papadopulas & Associates, Inc.
V A Project No.: 02-2-586

SMC-W07 76-77.5

APPENDIX D

Laboratory Data Reports for Unsaturated Soil Characteristics Testing

For hard copies of laboratory data reports are available by request from
Page Pegram, 505-764-3890

Appendix B

Aquifer Tests at HWY and ESC Transects

Technical Memorandum
Highway & Escondida Aquifer Testing
Middle Rio Grande Watershed Study-
Phase 1

S.S. PAPADOPULOS & ASSOCIATES, INC.
Boulder, Colorado

January 8, 2004

1877 Broadway, Suite 703, Boulder, Colorado 80302-5245 · (303) 939-8880

Technical Memorandum Highway & Escondida Aquifer Testing Middle Rio Grande Watershed Study – Phase 1

Prepared for:

U.S. Army Corps of Engineers – Albuquerque District Contract No. DACW47-99-C-0012, Modification No. P00007

Prepared by:

S.S. PAPADOPULOS & ASSOCIATES, INC.
Boulder, Colorado

January 8, 2004

1877 Broadway, Suite 703, Boulder, Colorado 80302-5245 • (303) 939-8880

TABLE OF CONTENTS

Page

List of Figures ii

List of Tables ii

List of Appendices ii

Executive Summary 1

1.0 INTRODUCTION 1

2.0 ANALYSIS OF HWY-W08EX AQUIFER TEST 3

- 2.1 Hydrogeologic Conceptual Model 3
- 2.2 Test Setup and Performance Details 5
- 2.3 Data Corrections 6
  - 2.3.1 Barometric Pressure 6
  - 2.3.2 Regional Water-Level Changes 7
- 2.4 Constant-Rate Test Responses in Observation Wells 7
- 2.5 Diagnostic Application of Analytical Methods 8
  - 2.5.1 Steady-State Analytical Methods 9
  - 2.5.2 Transient Analytical Methods 11
  - 2.5.3 Limitations of Analytical Methods 11
- 2.6 Analysis of Aquifer Characteristics: Numerical Methods 12
  - 2.6.1 RZ Model Analysis 13
  - 2.6.2 MODFLOW Analysis 14
- 2.7 Conclusions 16

3.0 RECOMMENDATIONS FOR ADDITIONAL WORK 17

4.0 REFERENCES 19

Figures

Tables

Appendices

List of Figures

Figure 1 Highway 380 Aquifer Test Well Layout

Figure 2 Highway 380 Bridge (HWY) Well Cross Section Detail

Figure 3 HWY-W07 Grain Size Distribution

Figure 4 HWY-W08EX Step Test Data

Figure 5 Baseline Water Level and Barometric Changes, Highway 380

Figure 6 Regional Water Level Decline – Water Table (A) Wells

Figure 7 Regional Water Level Decline – B Wells

Figure 8 Regional Water Level Decline – C Wells

Figure 9 Corrected Drawdown versus Time, HWY-W08EX 48 Hour Test

Figure 10 Corrected Distance Drawdown and Transmissivity Estimates

Figure 11 Composite Plot of Drawdown versus Time and Type Curves for HWY-W08EX Test

Figure 12 Derivatives versus Time for HWY-W08EX Test Observation Wells

Figure 13 RZ Model Simulated versus Observed Drawdown in Water Table (A) Wells

Figure 14 RZ Model Simulated versus Observed Drawdown in Intermediate (B) Wells

Figure 15 RZ Model Simulated versus Observed Drawdown in Deep (C) Well

Figure 16 MODFLOW Simulated versus Observed Drawdown in Water Table (A) Wells

Figure 17 MODLFOW Simulated versus Observed Drawdown in Intermediate Depth (B) Wells

Figure 18 MODFLOW Simulated versus Observed Drawdown in Deep (C) Well

Figure 19 Groundwater Elevations at Highway 380 Transect East of LFCC, Summer 2003

List of Tables

Table 1 Aquifer Parameters Derived from the MODFLOW Analysis

List of Appendices

Appendix A Uncorrected and Corrected Drawdown versus Time Graphs, HWY-W08EX 48-Hour Test

Appendix B Paper Data Package, Highway 380 and Escondida Aquifer Tests

Executive Summary

Two constant-rate aquifer tests were conducted by S. S. Papadopulos & Associates, Inc. (SSP&A) as part of the work performed under U.S. Army Corps of Engineers Contract No. DACW47-99-C-0012, the Middle Rio Grande Watershed Study – Phase 1. The contract specified in Section I.B.4-6 that SSP&A perform two aquifer tests, conduct stepped-rate tests on each test well prior to aquifer testing, and analyze test data for one aquifer test. Results of these tests and analyses were to be provided in a *Data Compilation Technical Memorandum* and an *Aquifer Testing and Analysis Technical Memorandum*. In accordance with the terms of this contract, SSP&A conducted stepped-rate and 48-hour constant rate tests at extraction wells at the Escondida transect (ESC) and the Highway 380 transect (HWY) and analyzed data from the HWY tests. Results from these analyses, in addition to data from both test locations, are included with this Technical Memorandum.

At the Highway 380 transect, groundwater was pumped from well HWY-W08EX. The well is 10 inches in diameter and screened from 35 to 59 feet below ground surface (bgs) in unconsolidated alluvium. At the time of the test the depth to groundwater was measured at seven feet bgs in the test extraction well. HWY-W08EX is located approximately 220 feet west of the Rio Grande and 190 feet east of the Low Flow Conveyance Channel. Thirteen monitoring points (six with screens across the water table, six with screens within the interval being tested, and one with a screen situated at the top of the underlying Santa Fe Group bedrock) are located within 165 feet of the extraction well. All of these wells were monitored during the test, which was started at 9:00 a.m. on June 23 and was completed 48 hours later at 9:00 a.m. on June 25. The pumping rate for the constant-rate test was 76 gallons per minute (gpm).

In reviewing the Highway 380 test results, analytical methods were used diagnostically to evaluate the aquifer's hydraulic response and to assess the applicability of various analytical solutions for estimating hydraulic properties. A correction for a declining regional groundwater trend, associated in part with declining Rio Grande flows, was applied prior to data analysis. The aquifer and test conditions were not well suited to analysis using analytical solutions primarily due to vertical anisotropy and heterogeneity arising from the depositional arrangement

of clay, silt, sand and gravel in the aquifer. Though also a potential impediment to the application of analytical solutions, the presence of nearby water channels proved not to be a significant factor in the test analysis. Test diagnostics, including the application of partial-penetration leaky-aquifer methods to obtain first-order approximations of transmissivity, suggested that numerical methods would be the preferable approach for analyzing the aquifer test.

Numerical methods applied in the evaluation of the aquifer test included simulation with two modeling approaches: a radial flow finite-difference model (RZ model) and a MODFLOW finite-difference model. Both modeling approaches were applied because they have complementary strengths. The radial flow model provides a superior ability to model conditions near the pumped well, whereas, the MODFLOW approach facilitates the accurate representation of boundaries. Both modeling approaches are well-suited to modeling the fluvial-based vertical anisotropy that causes "leaky aquifer" behavior, with water table conditions and water table storage at the top of the aquifer; and, these models were easily configured to account for vertical heterogeneity.

At the Highway 380 location, hydraulic conductivity is estimated in the range of 65 to 70 feet per day in the upper 50 feet of the unconsolidated aquifer; and, is estimated at 150 feet per day in the lower 30 feet of the aquifer (and above the Santa Fe Group). The overall transmissivity of the valley alluvium is estimated to be on the order of 8,000 feet squared per day. The specific yield was simulated as 0.20 at the water table; below the water table layer, the storage coefficient is based on a specific storage of 7.5×10^{-5}. Vertical-to-horizontal hydraulic conductivity ratios of 0.3 to 0.7 for the deeper 60 feet and 0.05 to 0.08 for the upper 30 feet of the aquifer were derived from these analyses.

1.0 INTRODUCTION

Two constant-rate aquifer tests were conducted by S. S. Papadopulos & Associates, Inc. (SSP&A) as part of the work performed under U.S. Army Corps of Engineers Contract No. DACW47-99-C-0012, the Middle Rio Grande Watershed Study – Phase 1. The contract specified in Section I.B.4-6 that SSP&A perform two aquifer tests, conduct stepped-rate tests on each test well prior to aquifer testing, and analyze test data for one aquifer test. Results of these tests and analyses were to be provided in a *Data Compilation Technical Memorandum* and an *Aquifer Testing and Analysis Technical Memorandum*. In accordance with the terms of this contract, SSP&A conducted stepped-rate and 48-hour constant rate tests at extraction wells at the Escondida transect (ESC) and the Highway 380 transect (HWY) and analyzed data from the HWY tests.

This report transmits paper and electronic data collected from the performance of the aquifer tests conducted at wells HWY-W08EX and ESC-E05EX. Methods and conclusions pertaining to the analysis the HWY test are also included. For each of the aquifer tests conducted the following data is transmitted:

Paper Data

- Pumping records for both stepped-rate and constant-rate tests.
- Water-level measurements for extraction wells and observation wells for both stepped-rate and constant rate tests, as appropriate. These records include hand measurements of water levels collected prior to testing and during the recovery phase of testing following the completion of pumping.
- Datalogger and transducer setup/configuration records.
- Diagrams showing relative well locations and distances between wells.

Electronic Data

- Binary files for all dataloggers and transducers used to automatically log water levels and barometric pressure. Included are files for pretest logging, stepped-rate and constant-rate pump test logging, and post-pumping logging. The binary files may be viewed and converted to text files or Excel spreadsheet files using data management software distributed by In-Situ, Inc., manufacturer of the dataloggers and transducers used on this project.
- Excel spreadsheet files generated by conversion of the binary files by the In-Situ data management software program.

- An Excel spreadsheet providing basic data for the test (e.g., test start and stop dates and times, pumping rates, distances to observation wells, and well construction details).

2.0 ANALYSIS OF HWY-W08EX AQUIFER TEST

Aquifer testing at extraction well HWY-W08EX was conducted between June 20 and 26, 2003. The test was directed by SSP&A personnel with field assistance provided by New Mexico Tech Department of Earth and Environmental Science graduate and undergraduate students.

Extraction well HWY-W08EX is located approximately 1/3 mile north of U. S. Highway 380. The well is 220 feet west of the west bank of the channel of the Rio Grande and 190 feet east of the Low Flow Conveyance Channel (LFCC; see Figure 1). At this location, the river channel bears slightly west of north while the LFCC bears north-northeast. During the recovery period of the constant-rate pumping test, the Rio Grande ceased to flow.

2.1 Hydrogeologic Conceptual Model

At the test location, unconsolidated alluvium is present to a depth of approximately 90 to 95 feet below the ground surface (bgs). As shown on the cross-section in Figure 2, the alluvium consists primarily of sand with scattered lenses of silty and clayey material and with occasional layers containing significant amounts of gravel. Geologic logs from borings in the vicinity of the extraction well indicate that except within a few feet of the ground surface, clay lenses and fine-grained materials are discontinuous and are generally limited to the upper 40 feet of the subsurface. Silt and very fine sand are dominant in the uppermost 5 to 10 feet bgs. Grain size analyses conducted on samples collected between 14 and 85 feet bgs from a boring located approximately 200 feet south of the extraction well indicate that most of the alluvium consists of fine sand to fine gravel with materials below 60 feet generally being coarser grained than those above (see Figure 3).

The shallow alluvium is fluvial in origin, deposited from the Rio Grande. As such, on a small scale it is characterized by vertically and laterally discontinuous layers that are truncated or pinch out quickly. Except for infrequent fine-grained overbank deposits, sandy deposits dominate. General trends in grain size occur as the river has gained and lost energy over time; however, based on the review of boring logs between wells, the continuity and correlation of specific units laterally is poor. The discontinuous multi-layered nature of the alluvium likely has resulted in anisotropy with respect to hydraulic conductivity. Horizontal hydraulic conductivity

is expected to exceed vertical hydraulic conductivity, especially in the shallower portions of the unconsolidated alluvial aquifer where finer-grained overbank sediments are present.

In well HWY-W07C, dense poorly-graded fine sand that was interpreted to be Santa Fe Group bedrock was encountered at 92 feet bgs. In outcrop, Santa Fe Group sandstones often are slightly indurated. In the sample containing Santa Fe Group sediments, there was no indication of induration, however, blow counts for the sample were very high and it is possible that any induration was destroyed during the collection of the sample. The nature of the bedrock material below 95 ft bgs, the depth at which the borehole for the well was terminated, is unknown.

The water table at and in the immediate vicinity of well HWY-W08EX is approximately 10 feet below the ground surface. Over a period of 6 days prior to and during the time of the test, regional water levels were declining at a rate of about 0.07 feet per day. Surface water and groundwater levels collected over the past two years indicate that groundwater flows from the Rio Grande towards the LFCC and in a southerly direction. The Rio Grande is a losing stream that recharges the shallow aquifer in the vicinity of the Highway Transect. The LFCC, on the other hand, collects groundwater and acts as a discharge feature (drain) for the shallow aquifer. Seepage losses for the Rio Grande in the reach from Escondida to Highway 380 were calculated within a range of seven to eleven cubic feet per second per mile (cfs/mile) from four separate seepage runs conducted in 2000. During these field events, flow in the Rio Grande at Highway 380 was in the range of 50-100 cfs (SSP&A, 2001). Because the flow in the river was well below 50 cfs during the aquifer test, recharge to the aquifer likely was below the rates measured in 2000. Whereas groundwater discharge to the LFCC (LFCC gain) is head dependent (i.e., a function of the head in the adjacent aquifer), the recharge from the Rio Grande to the aquifer (Rio Grande losses) is not expected to be head dependent under the low river flow and depressed groundwater elevation conditions present during the test.

Although the shallow aquifer is not confined by any widespread overlying aquitard, the scattered, fine-grained lenses impede vertical flow, causing the aquifer to react somewhat like a leaky-confined aquifer during the aquifer test. Borehole geologic samples and grain size analyses and the responses in the monitoring wells during the aquifer test suggest that the horizontal hydraulic conductivity in the alluvium below approximately 60 feet bgs is

significantly higher than in the shallower saturated sediments. Additionally, grain size changes between the lowest section of the unconsolidated alluvium and the underlying Santa Fe Group suggest that the hydraulic conductivity in the alluvium is higher than in the Santa Fe Group. For the analysis of the aquifer test, the following conditions were assumed:

- The tested interval of 35 to 59 feet bgs is overlain and underlain by saturated materials able to transmit water to the pumped interval, to varying degrees, dependent upon vertical and horizontal hydraulic conductivity.
- The Rio Grande, depending on whether or not it is flowing and the quantity of flow, provides a source of recharge to the aquifer that is largely independent of aquifer head under these test conditions.
- The LFCC functions (approximately) as a constant head boundary to the upper part of the alluvial aquifer.

2.2 Test Setup and Performance Details

Extraction well HWY-W08EX is 10 inches in diameter and is screened from 35 to 59 feet bgs. Observation wells used to monitor the test included six that had 5-foot screens within same interval as the pumped well ("B" wells), six that were screened across the water table ("A" wells), and one deep ("C") well that was screened from 86 to 91 feet bgs. The observation wells varied from 5 to 165.5 feet in distance from the pumped well as measured between well casings at the ground surface (Figure 1). Most of the wells are located along an east-west line between the LFCC and the Rio Grande, although HWY-W10AB and -W09AB are offset 58 feet north and 5 feet south of HWY-W08EX, respectively. There are staff gages equipped with data loggers in both the LFCC and Rio Grande in the vicinity of the extraction well. Records from the data loggers were collected over the duration of the test.

In order to determine an appropriate pumping rate for the 48-hour constant-rate test, a stepped-rate test was conducted on June 20. In the stepped-rate test, HWY-W08EX was pumped at three progressively higher rates for a period of two hours at each rate. Flow rates and drawdown in the well being pumped were recorded during the test. Pumping rates were 56, 64, and 82 gpm; drawdowns in the well are shown on Figure 4. On the basis of the results of the stepped-rate test, a target-pumping rate of 78 gpm was determined for the constant-rate test. This flow rate ensured sufficient drawdown in the pumped well without causing the water levels at the well to drop to the level of the well screen or sand filter pack.

The stepped-rate test was concluded at 3:30 p.m. on June 20. Background water-level and atmospheric pressure (barometric pressure) monitoring of all wells outfitted with dataloggers was initiated immediately thereafter. Monitoring was conducted to determine the relationships between atmospheric pressure changes and water-level changes in the observation wells, and to characterize water-level trends due to other factors. Assessing these relationships allows for the development and application of correction factors, if necessary, to isolate water-level changes due to pumping from changes that occur due to external factors (e.g., regional water-level trends, barometric effects or daily evapotranspiration peaks).

The HWY-W08EX constant-rate aquifer test was started at 9:00 AM on June 23, 2003, and pumping was terminated 48 hours later at 9:00 AM on June 25. The flow rate was measured using a totalizing flow meter and verified with a 30-gallon container and a stopwatch. A total of 219,494 gallons were removed during the test for an average pumping rate of 76.2 gpm. Extracted water was discharged to the Rio Grande. Water levels in the pumping well and 13 observation wells were measured using dataloggers and checked by manual measurements. Manual flow rate and water-level measurements were collected throughout the test in accordance with the schedules listed in the *Aquifer Test Work Plan* (SSP&A, 2002). Uncorrected datalogger and hand water-level measurements are presented for each well monitored in Appendix A, Figures A1-A14.

2.3 Data Corrections

Prior to analysis of the constant-rate aquifer test, correction factors were evaluated to account for potential transient conditions during the test. These potential transient conditions included barometric pressure and regional water level changes.

2.3.1 Barometric Pressure

Atmospheric pressure changes induce changes in water levels in wells screened below the water table. To account for this effect, water-level and barometric pressure data are typically plotted for each well over a period of time representing baseline conditions. From this data a well-specific barometric pressure correction factor can be calculated and applied to observed water-level data. In the case of the Highway 380 test, barometric changes prior to and during the test were largely limited to diurnal fluctuation (Figure 5). This fluctuation was only minimally,

if at all, correlated with observed pre-test water-level changes and did not warrant application of a correction factor. Of potentially more importance to the test analysis was a declining regional trend, as discussed below.

2.3.2 Regional Water-Level Changes

Baseline water-level monitoring prior to testing indicated a regional trend of declining water levels in all monitored intervals (Figure 5). This background trend continued through the constant-rate test and served to increase the observed drawdown in observation wells during the test. In order to isolate the pumping-induced drawdown that occurred during the aquifer test, the regional water-level decline was subtracted from the water-level changes observed during the test.

To determine the regional trend, water levels from wells both inside and outside the area influenced by pumping were inspected to determine if the pre-test trend appeared to extend through the test period. The continuation of the trend was confirmed, so for each monitored interval (shallow, intermediate, deep), a straight line was fit to water-level data plotted against time during the period from June 19 through 25, excluding the period of active testing for wells influenced by the aquifer test. The slopes of these trend lines represent the rates of regional water-level decline. The results of these analyses are shown on Figures 6 through 8. Drawdown versus time data after correction for regional water-level decline for the monitored wells are shown on the composite graph on Figure 9 and individually in Appendix A, Figures A15 through A28.

2.4 Constant-Rate Test Responses in Observation Wells

During the constant-rate test, drawdowns in the proximal B-zone monitoring wells (HWY-W06B, -W-7B, -W09B, and -W10B) stabilized within 5 to 15 minutes of the initiation of pumping. Distal B wells (HWY-W05B and -W11B) recorded 80-85% of their maximum drawdown in this time period. The drawdown observed in nearby monitoring wells ranged from 3.5 feet in HWY-W09B, located approximately 6 feet from the pumping well to 0.2 feet in HWY-W11B, located 165 feet away. A similar pattern of water-level decline and stabilization was observed in the lone deep well, HWY-W07C, which achieved a maximum drawdown of 0.5 feet. The rapid stabilization of water levels in the B and C observation wells is consistent with

the occurrence of leakage from over- and underlying sediments and/or recharge to the shallow aquifer from the LFCC.

In contrast to the deeper observation wells, water levels in the water-table wells (A wells) declined throughout the test, with drawdown curves that somewhat resembled delayed yield responses to pumping. The magnitude of the response in the shallow wells was much smaller than in corresponding B- and C-zone wells (maximum of 0.28 feet of drawdown in HWY-W07A). Drawdowns had not stabilized in any of the water-table wells at the end of the 48-hour test.

The drawdowns in the A-zone wells exhibited two characteristics suggesting heterogeneity. First, there is a larger drawdown in well HWY-W07A, 16 feet from the pumping well, than there is in well HWY-W09A, only 5 feet from the pumping well. This apparent anomaly may indicate enhanced communication between the tested interval and overlying or underlying materials due to natural variability in the subsurface. Second, the drawdown in HWY-W06A, located less than 50 feet east of the pumping well is delayed relative to the other A wells. Drawdown in HWY-W06A did not exceed 0.01 feet until 95 minutes into the test while the other shallow wells had reached this level of drawdown by 5 minutes into the test.

2.5 Diagnostic Application of Analytical Methods

Analysis of the HWY-W08EX constant-rate test with analytical solutions is complicated by a combination of factors, including:

- Anisotropy and heterogeneity within the shallow alluvial aquifer,
- A partially-penetrating pumping well and observation wells,
- Apparent leaky-confined aquifer conditions with leakage occurring from both above and below the shallow aquifer,
- Recharge boundaries, and
- Regionally changing surface water and groundwater levels at the time of the pumping test.

The relative complexity of the hydrogeologic and test setting precluded the definitive determination of aquifer properties using analytical techniques. However, application of methods accounting for some of these features was found useful as part of a diagnostic, initial

assessment. The diagnostic application of selected analytical methods is described below. Resulting parameter estimates were used as starting points in the subsequent analysis using numerical models. The solution with numerical models is better-suited for evaluation of this aquifer test, as will be described in later sections.

2.5.1 Steady-State Analytical Methods

Given the observed responses in observation wells and the conceptual model of the system described earlier, the analytical method used to obtain initial estimates for aquifer transmissivity was the steady-state solution to the radial flow equations for a leaky-confined aquifer derived by Hantush and Jacob (1955) as described in Kruseman and DeRidder (1990). Because the Hantush-Jacob solution assumes that the aquifer is homogeneous, isotropic, and of infinite aerial extent—conditions not strictly applicable at this location—this solution is only applied for the purpose of obtaining an initial estimate of aquifer properties.

Most analytical solutions applied to aquifer test analysis have as a key assumption that the pumping and observation wells fully penetrate the tested aquifer. For the Highway 380 test, however, both the pumping well and the observation wells only partially penetrate the pumped aquifer. Partial penetration induces vertical flow in the vicinity of the well. These vertical flow components result in higher head losses in the vicinity of the well, due in part to higher flow velocities. Under these conditions, observed drawdown in the vicinity of the pumped well would be greater than expected if the wells were fully penetrating. For the Highway 380 constant-rate test, data were corrected for partial penetration using the methods described by Huisman (in Anonymous, 1964) as presented in Kruseman and DeRidder (1990) for steady-state analysis and Hantush (1961a, 1961b) for transient analysis. These corrected data were plotted versus log distance, a straight line was fitted through the data, and transmissivity estimated using the procedures described in Kruseman and DeRidder (1990).

For this analysis, an aquifer thickness of 60 feet was assumed. This assumption reflects a hypothetical aquifer geometry whereby the upper 30 feet of alluvial material represents a leaky aquitard (based upon grain size observations) overlying the “aquifer” interval from about 30 to 90 feet. Below 90 feet, a hypothetical boundary is assumed, constituted by the contact between the alluvial material and the Santa Fe Group sediments. While this conceptualization is not

strictly representative of the site aquifer, the analysis was conducted to evaluate how well this simplified model could represent the test behavior and to obtain a ballpark transmissivity estimate.

Because the Huisman partial-penetration correction is dependent on transmissivity, the process of estimating transmissivity by this method is iterative. Therefore, the initial estimate of transmissivity used for the Huisman correction, assuming an aquifer thickness of 60 feet and a top of screen elevation 5 feet below the top elevation of the aquifer, was changed to reflect the initial estimate obtained by the Hantush-Jacob solution. Transmissivity was then recalculated using the new drawdown data and the process was repeated until the calculated transmissivity used to determine the Huisman correction factor resulted in a best-fit straight-line for the Hantush-Jacob solution. Figure 10 shows corrected distance–drawdown data over a range of transmissivity values and the corresponding straight-line fit through the data. The straight line fit neglects data from the closest well to the pumped well (HWY-W09B), where the correction is most sensitive to aquifer geometry assumptions, as the method for partial penetration correction is not fully capable of accounting for the aquifer-well geometry at the test site. As can be seen on the graph, using a transmissivity assumed for the Huisman correction of 4,000 ft^2/day, the resulting transmissivity from a straight-line fit through HWY-W07B, HWY-W06B, and HWY-W10B using Hantush-Jacob is estimated at 3,983 ft^2/day. Despite the application of the correction for partial penetration, this method does not account for the presence of zones of varying hydraulic conductivity throughout the identified aquifer thickness. Given that the lower half of the alluvial aquifer modeled in this analysis (i.e., from about 60 to 90 feet bgs) is characterized by coarser-grained material, this method will likely underestimate the full transmissivity of the "aquifer". The value obtained in this analysis is considered to be a lower bound on the transmissivity of the zone from 30 to 90 feet bgs.

While the Hantush-Jacob analysis allows an estimation of vertical hydraulic conductivity for a leaky-confining unit (assuming that it is at least two orders of magnitude less than the horizontal hydraulic conductivity of the aquifer), no attempt was made to determine any properties for the leaky-confining layer because the aquitard at this site consists of a scattered series of lenses of varying permeability rather than a discrete unit of defined thickness.

2.5.2 Transient Analytical Methods

Non-steady state analysis was conducted for several B-zone observation wells using the AQTESOLV Version 3.5 curve-matching software package (Duffield, 2003). While the data were corrected for the regional water-level decline, they were not corrected for partial penetration as this correction is applied within AQTESOLV based on geometry of the aquifer, the pumping well, and observation wells using the method derived by Hantush (1961a, b). As was the case with the steady-state analysis, the aquifer was assumed to be 60 feet thick and the top of the 25-foot screen of the extraction well placed 5 feet below the top of the hypothetical "aquifer" (as above, the zone from 30 to 90 feet bgs). The upper 30 feet of finer-grained materials were conceptualized in this analysis as an aquitard. Transmissivity values obtained using the Hantush-Jacob leaky aquifer analytical solution (Hantush and Jacob, 1955) were within the same order of magnitude as estimated using the steady-state analysis described above. As described above, due to the heterogeneity within this modeled "aquifer", the estimates obtained from this conceptualization likely represent a lower bound on transmissivity for the 30 to 90 foot bgs zone. Storage coefficients ranged from 0.05 to 0.001, values intermediate between normal confined and unconfined aquifer ranges. While the variability in these values may partly reflect changes in the character of the aquifer, they more likely reflect the complexity of the hydrogeologic system and the limitations of these analytical solutions.

2.5.3 Limitations of Analytical Methods

Because the hydrogeologic setting at the Highway 380 transect is more complex than the simplified model on which analytical solutions are based, the values of the hydraulic properties calculated using these analytical solutions are, at best, estimates of the possible range for hydraulic properties of the system. Both analytical solutions assume that a defined aquitard exists and that groundwater flow is vertical through the aquitard, usually assumed to occur when K/K'>100. The fact that the "aquitard" is more likely a scattered series of lenses of varying permeability rather than a discrete unit of defined thickness and that significant leakage comes from below the pumped interval calls this assumption into question. And, given the presence of coarser materials below the pumped interval, both of the methods described above are expected to underestimate the actual transmissivity.

There are other indications that the Hantush-Jacob conceptual model over-simplifies the hydrogeologic setting at this site. First, when the data are plotted on a composite plot with log-log axes, the data do not coincide with the family of Hantush-Jacob type curves (Figure 11). The composite plots also show that the drawdowns never seem to cluster along an early-time straight line before stabilizing. Finally, a plot of the derivative of the drawdown versus time curve shows that the derivatives rise and then descend to near zero within the first 10 minutes of the test (Figure 12) without ever settling on a plateau. This plateau would indicate the period of time where estimation of transmissivity would be justified prior to leakage dominating the response.

These observations suggest that although drawdowns do stabilize during the test as would be expected in a confined leaky aquifer system, analytical solutions using the Hantush-Jacob conceptual model may not adequately consider all site processes or explain test observations.

2.6 Analysis of Aquifer Characteristics: Numerical Methods

As indicated above, since the conceptual model of the shallow aquifer does not closely match the systems upon which the steady-state and non-steady state pump test analytical solutions are based, the transmissivities calculated using the Hantush-Jacob method are, at best, rough estimates of the lower end of the transmissivity range for this aquifer. The shortcomings associated with trying to match the site conceptual model and observations from the pump test to the restrictions imposed by the analytical solutions motivated the use of numerical simulations to better estimate transmissivity, vertical hydraulic conductivity, and storage coefficients for the unconsolidated alluvial aquifer. The simulations cannot uniquely solve for all hydrologic parameters, however they provide a combination of estimates for the various parameters that—when combined with appropriate physical hydrogeologic constraints—approximately match observed behavior in the observation wells monitored during the pump test.

SSP&A applied two techniques to evaluate aquifer characteristics using data from the HWY-W08EX pumping test. These included a finite difference radial flow model (RZ model), using a code developed by SSP&A and a 3-dimensional MODFLOW (McDonald and Harbaugh, 1988) analysis. The RZ model was particularly valuable for evaluation of response close to the pumped well whereas the MODFLOW model was better suited for examination of impacts further from the pumped well and closer to recharge boundaries.

2.6.1 RZ Model Analysis

The RZ model is a radial flow model applied in a three-dimensional space. The pumped well is placed at the origin of an outwardly expanding grid defined in polar coordinates, allowing for detailed representation of conditions near the pumped well. The model easily accommodates a large number of vertical layers for detailed representation of vertical heterogeneity, anisotropy and partial penetration. In this model, 40 layers, each of 2.5-foot thickness, were employed. Inputs to the model include pumping and observation well screen intervals, horizontal and vertical hydraulic conductivity, storage coefficient, and well bore storage factors. The model can simulate recharge and a variety of boundary conditions; however, the linear nature of the boundaries of the LFCC cannot explicitly be represented within the polar coordinate-based grid. For this reason, the RZ model is considered most useful in evaluating responses at wells near the pumped well and is less suited for analysis of upper layer water-level responses close to the LFCC.

Aquifer test analysis using the RZ model is accomplished by simulation of the test conditions, and modification of aquifer parameters until the model yields "type curves" that match the observed test data. Aquifer parameters evaluated in this process included the vertical distribution of hydraulic conductivity and the ratio of vertical to horizontal hydraulic conductivity (K_v/K_r). Drawdown predicted by the RZ model ("type curves") and observed drawdown are shown in Figures 13 through 15.

In general, the best matches between predicted and observed drawdown were obtained with the division of aquifer into three zones of similar hydraulic characteristics. The uppermost zone represents the 50-foot interval from the water table to approximately 60 feet bgs and is assigned a horizontal K of 65 ft/day (20 layers of 2.5-foot thickness). In order to represent the impedance to vertical flow imposed by the lenses of fine grain material in the upper 30 feet of this zone, the interval from the water table to 40 feet bgs has a smaller K_v/K_r ratio (0.08) than the lower part of the zone (0.3). The intermediate zone, from 60 to 90 feet bgs (12 layers of 2.5-foot thickness), corresponds to the lowermost part of the Rio Grande valley fill. Based upon grain size analysis and field observations, the material in this interval is coarser than the upper 60 feet and has fewer lenses of fine-grained material than the upper 30 feet of alluvial material. This

intermediate zone was assigned a K_r of 150 ft/day and a K_v/K_r ratio of 0.3. The lower zone of the model, from 90 to 110 feet bgs (8 layers, of 2.5 foot thickness), represents the top of the Santa Fe Group sediments and was modeled with proxy values to reflect the exchange of water between the alluvium and Santa Fe Group. This interval was assigned a much higher K_r and a very low K_v/K_r ratio. These proxy values were designed to compensate for the small thickness of Santa Fe Group represented by the model and are not meant to reflect the K of the material in the Santa Fe Group. With the exception of the interval representing the water table, the specific storage for all layers was designated as 7.5×10^{-5}. The uppermost layer was assigned a value of 0.2 to represent the specific yield at the water table. Although a 3-zone conceptual model provided adequate discretization to model the vertical heterogeneity for this test, the larger number of model layers facilitated the assignment of water-level responses at observation wells of varying depths, given the vertical anisotropy.

A qualitative evaluation of the influence of the Rio Grande and the LFCC on observed drawdown during the test was conducted by running the RZ model with these features represented by hypothetically placed constant head cells in the uppermost layers. Although the representation of these features in the radial flow model grid could not replicate the field geometry of the LFCC, these simulations showed that, over the two-day test period of time simulated by the model, the presence of a proxy constant-head boundary in the uppermost layer had little effect on calculated drawdown in the vicinity of the test monitoring wells.

2.6.2 MODFLOW Analysis

A MODFLOW finite-difference model was constructed to further evaluate hydrologic parameters using data from the Highway 380 constant-rate test. The model was run in a superposition fashion to simulate drawdown from the pumped well, given the presence of the LFCC simulated as a constant head source in the upper layer. The Rio Grande is not represented in this simulation because, given the very low river flow condition during the test, it is unlikely that saturation beneath the river is maintained at a sufficient level that seepage rates are dependent on aquifer head. Without a head-dependent condition, the river would have no effect on drawdown during the test. Furthermore, the amount of seepage during this test and the very

small aquifer water-level changes induced in shallow wells near the river would render this impact negligible, even if head-dependent conditions existed.

The model covers an area of 5,840 x 5,840 feet and is centered on the pumped well. The model has a uniform thickness of 300 feet over the entire area and is intended to represent not only the 80 feet of alluvial valley fill below the water table, but also the upper 220 feet of the Santa Fe Group sediments. The model grid employed 65 rows and 65 columns with cell width increasing from 2 feet around the model center to 800 feet at the model edges. The model is divided into 6 layers, each having uniform aquifer properties. Vertical discretization was based not only upon field observations and grain size analysis, but also upon the screened intervals of the test extraction and observation wells. Hydraulic properties of the model (horizontal hydraulic conductivity, K_v/K_r ratio and storage properties) were adjusted during calibration until "type curves" matching the observed data were obtained. In this process, model layers 1, 3 and 5 represented respectively, shallow, medium, and deep (A-, B-, and C-zone) monitoring wells. Calibration focused on the time-series drawdown data corrected for regional water level decline at observation wells HWY-W05A,B, -W06A,B, -W07A,B,C, -W09A,B, -W10A,B, and -W11A,B.

The results of calibration are shown in Figure 16 through 18. Generally, simulated drawdowns are in good agreement with the measurements in all A-, B-, and C-zone wells.[1] The groundwater parameters used in the model are listed in Table 1. This analysis supports an estimated transmissivity on the order of 8,000 feet squared per day for the alluvial aquifer, with the upper area characterized by somewhat lower hydraulic conductivity (about 70 feet per day) and the lower area with coarser-grained sediments exhibiting higher hydraulic conductivity (about 150 feet per day). The aquifer exhibits leaky behavior, with leakage available from water-table storage in the upper layer, as well as from the underlying Santa Fe Group. The presence of interfingered fine-grained lenses, particularly in the upper part of the aquifer, results

[1] MODFLOW simulated drawdown at W09B under predicts the actual drawdown at this well– this difference is in part due to the lack of grid resolution at a distance of 5 feet from the pumped well. The response at this well is better simulated with the radial flow model that provides for greater discretization in the vicinity of the pumped well.

in vertical resistance to flow, with the ratio of vertical to horizontal hydraulic conductivity estimated at 0.05 for the upper zone and 0.5 to 0.7 for the intermediate and lower zone.

The relative impact of the LFCC on drawdown during the test was explored with an alternate simulation run without representation of the LFCC. In this case, little difference was observed in the intermediate and deep zones of the aquifer, but a slight increase in simulated drawdown (0.03 ft) was observed in the shallow zone at the well nearest the LFCC. It is concluded from this comparison that the analysis of aquifer test results at this location is only slightly sensitive to the representation of recharge from the LFCC.

2.7 Conclusions

The hydrologic system at the Highway 380 test location is a seemingly complex system in which surface water features act as boundaries that both add water to and remove groundwater from the subsurface, regional water-level changes are superimposed on test data, and layers and lenses of varying permeability exhibit characteristics of both leaky-confined and unconfined aquifers. However, following correction of test data for background conditions, the data support analysis by methods accounting for leakage from overlying and underlying zones. The results of these analyses, as presented above, provide a reasonable quantitative estimate of the hydrologic properties of the system and can allow prediction of future behavior under similar conditions. In general, the results of the numerical simulations support the original conceptual model, based upon field observations and grain size analyses, that the system consists of three intervals of distinctly different hydrologic characteristics. The three intervals include an upper interval with lower hydraulic conductivity and a restricted ability to pass water vertically, an intermediate zone of higher hydraulic conductivity corresponding to the basal 30-40 feet of the alluvial valley fill, and a deeper interval of lower hydraulic conductivity material representing the upper part of the Santa Fe Group.

3.0 RECOMMENDATIONS FOR ADDITIONAL WORK

The analysis of the Highway 380 aquifer test and of water-level data collected after completion of the test has highlighted areas that may benefit from additional investigation. More detailed evaluations of variation of shallow aquifer hydraulic properties near the Rio Grande and of the relationship between shallow aquifer groundwater levels and Rio Grande flow conditions should be considered. Improved knowledge in these areas would have relevance to river conveyance efficiency and to habitat conditions under varying flow regimes.

Field observations during drilling and the varying response of wells to pumping, both spatially and temporally, indicate that the system is vertically and laterally heterogeneous. Further characterization of heterogeneity within the near-river zone would allow for refined evaluation of groundwater levels, and would support evaluation of transient river events and their impact on the shallow riparian groundwater environment. Field activities that would support a refined understanding of heterogeneity include continued water-level monitoring in both staff gages and monitoring wells to allow detailed evaluation of shallow aquifer hydraulic responses to transient river flows and shallow well slug testing to obtain specific estimates of hydraulic conductivity.

The evaluation of the HWY aquifer test suggested that the LFCC and Rio Grande only minimally impacted the estimation of hydraulic parameters during this test. Regardless, significant exchanges of water occur between the shallow groundwater zone and these surface water channels, particularly during periods of higher river flow and higher groundwater elevation. The ability to characterize these exchanges and their influence on conveyance efficiency or habitat conditions is important to active water management. Important questions in this area include:

- "What is the magnitude of seepage from the river under low flow conditions?"
- "To what degree do river stage changes affect groundwater levels?"
- "What do long-term data from staff gages and monitoring wells tell us about the magnitude and duration of surface water/groundwater exchanges and the persistence of saturation following overbank flooding?"

The answers to these questions are critical in representing the river and predicting the behavior of the system over periods of transient river flow and fluctuating regional groundwater conditions. Long term water-level data from staff gages and shallow monitoring wells collected at the Highway 380 transect have shown an interesting relationship between water-level change in the shallow aquifer and river stage (Grigsby et al, 2003). Water levels in the shallow aquifers tend to mimic changes in river stage when the river is flowing. However, at the point the river ceases to flow, there is a rapid decline in water levels in the shallow aquifer (Figure 19). The magnitude of the water level decline in some locations exceeds four feet. The pattern of water level change over time during this period before the system reaches equilibrium bears a strong resemblance to what one would expect from an observation well when a stress of constant magnitude is imposed on the system. Additional analysis of these data may allow further refinement of aquifer hydraulic parameters, riverbed conductance, and river seepage estimates.

To refine estimates of aquifer parameters and to better understand the stream-aquifer interaction, we recommend:

- That the existing program for long-term monitoring of water levels in staff gages and monitoring wells be continued;
- That data collected under this program be evaluated on a regular basis for seasonal and other trends;
- That analysis of transient conditions such as the cessation of river flow or flood events be conducted to refine parameter estimates in the upper zone and the conductance of channel beds; and
- That slug tests at shallow wells be considered to refine hydraulic conductivity variations for the uppermost layer.

4.0 REFERENCES

Anonymous, 1964, Steady flow of groundwater towards wells. Proceedings, Committee on Hydrologic Research TNO, No. 10.

Grigsby, F.B., S.R. Lindblom, L. Wilcox, R.S. Bowman, and P. Pegram. 2003. Responses of Shallow Groundwater to Changes in River Stage in the Middle Rio Grande Valley, New Mexico. In 2003 American Water Resources Association Annual Conference, November 3-6, 2003, San Diego, CA. November 5.

Hantush, M.S., 1961a, Drawdown around a partially penetrating well. Journal of the Hydraulics Division, Proceedings of the American Society of Civil Engineers, Vol. 87.

Hantush, M.S., 1961b, Aquifer tests on partially penetrating wells. Journal of the Hydraulics Division, Proceedings of the American Society of Civil Engineers, Vol. 87.

Hantush, M.S., and C.E. Jacob, 1955, Non-steady radial flow in an infinite leaky aquifer. Transactions, American Geophysical Union, Vol. 36, No.1.

Kruseman, G.P., and N.A. DeRidder, 1990, Analysis and Evaluation of Pumping Test Data (2nd Edition), Publication 47, International Institute for Land Reclamation and Improvement, Wageningen, The Netherlands.

SSPA, 2001, Field Assessment of Flow and Seepage Conditions along the Rio Grande and Low Flow Conveyance Channel, San Acacia to Elephant Butte. Prepared for the New Mexico Interstate Stream Commission. September 2001.

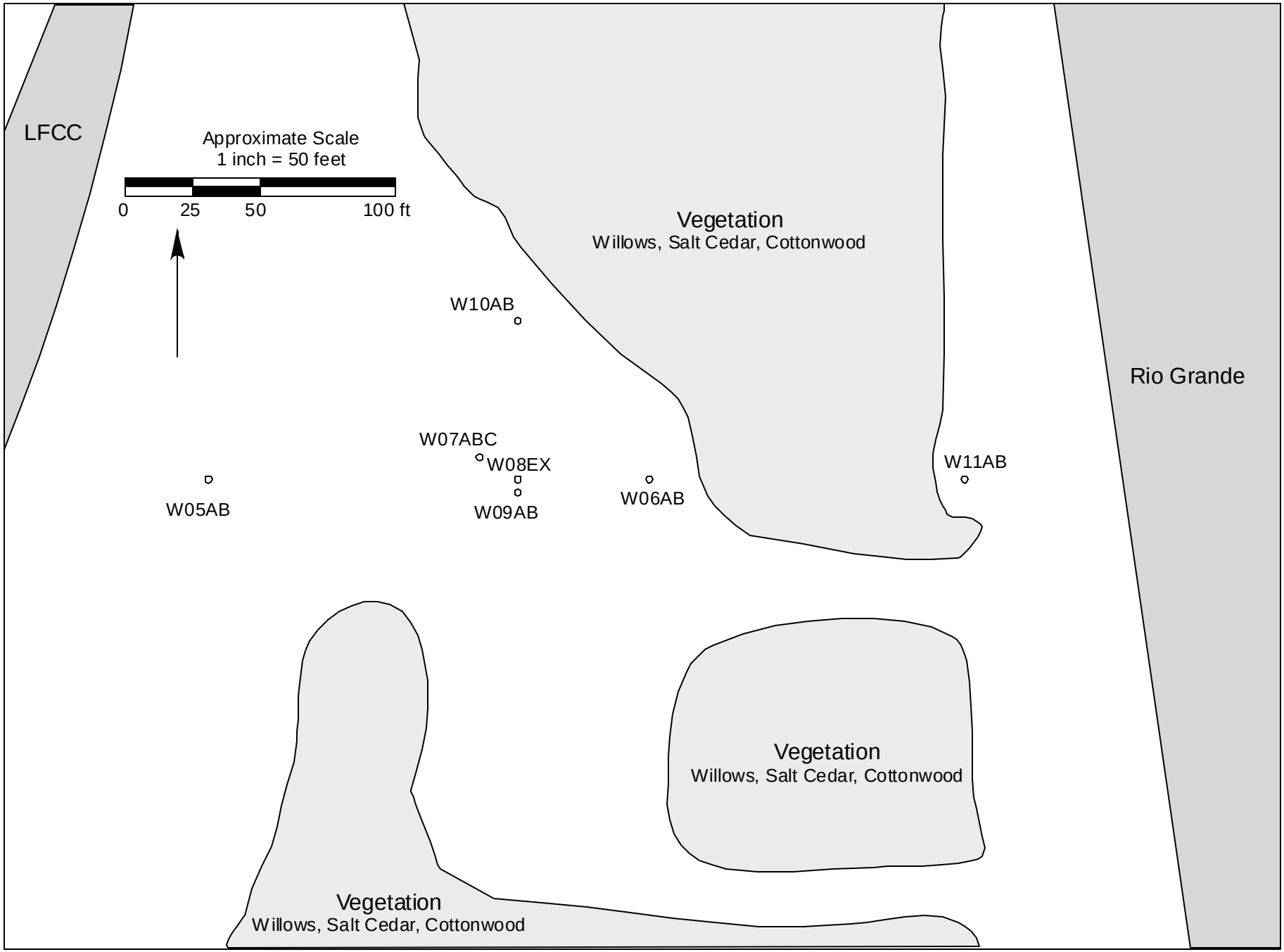


Figure 1. Highway 380 Aquifer Test Well Layout

HIGHWAY 380 BRIDGE (HWY)

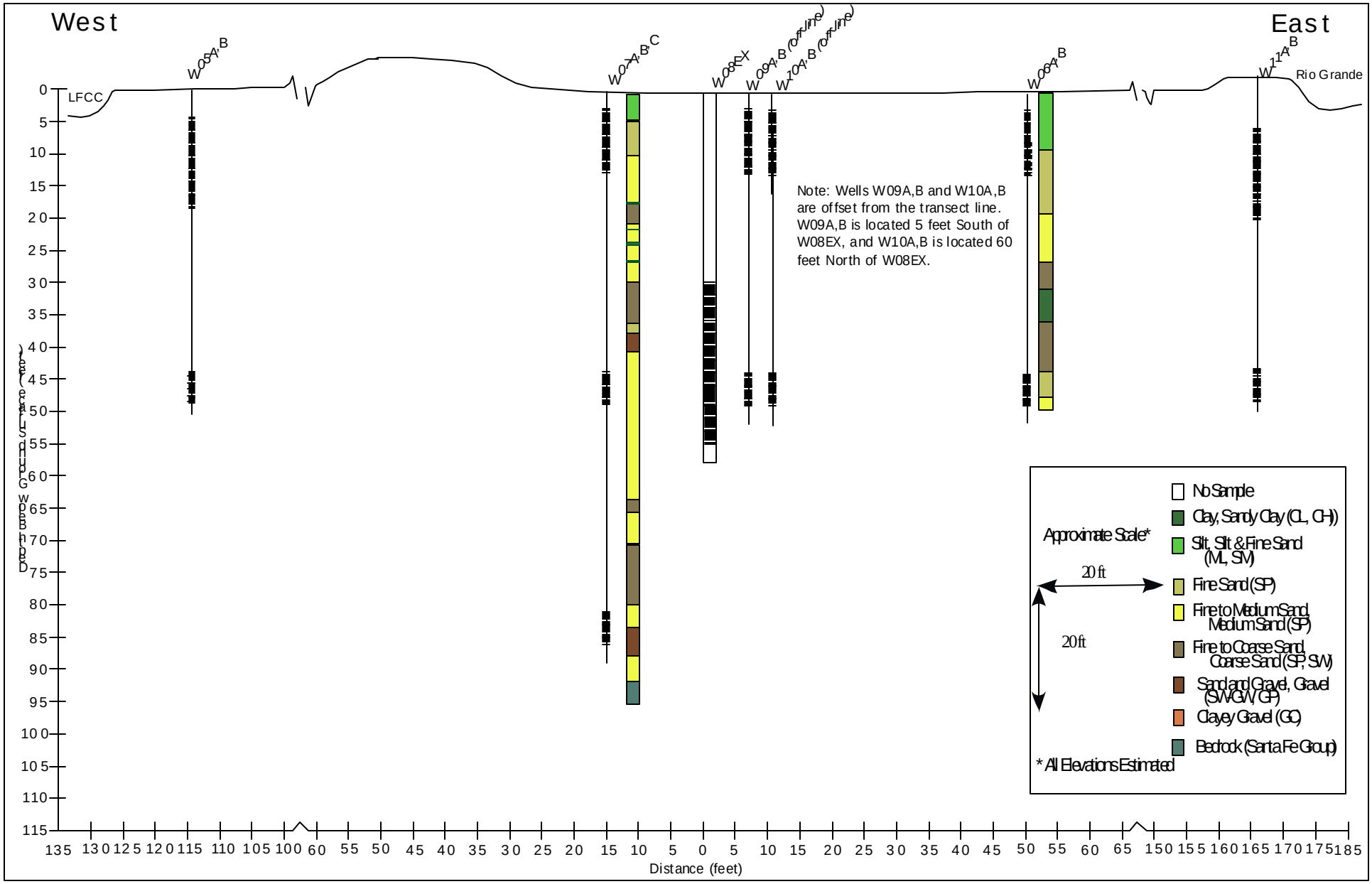


Figure 2. Highway 380 Bridge (HWY) Well Cross Section Detail

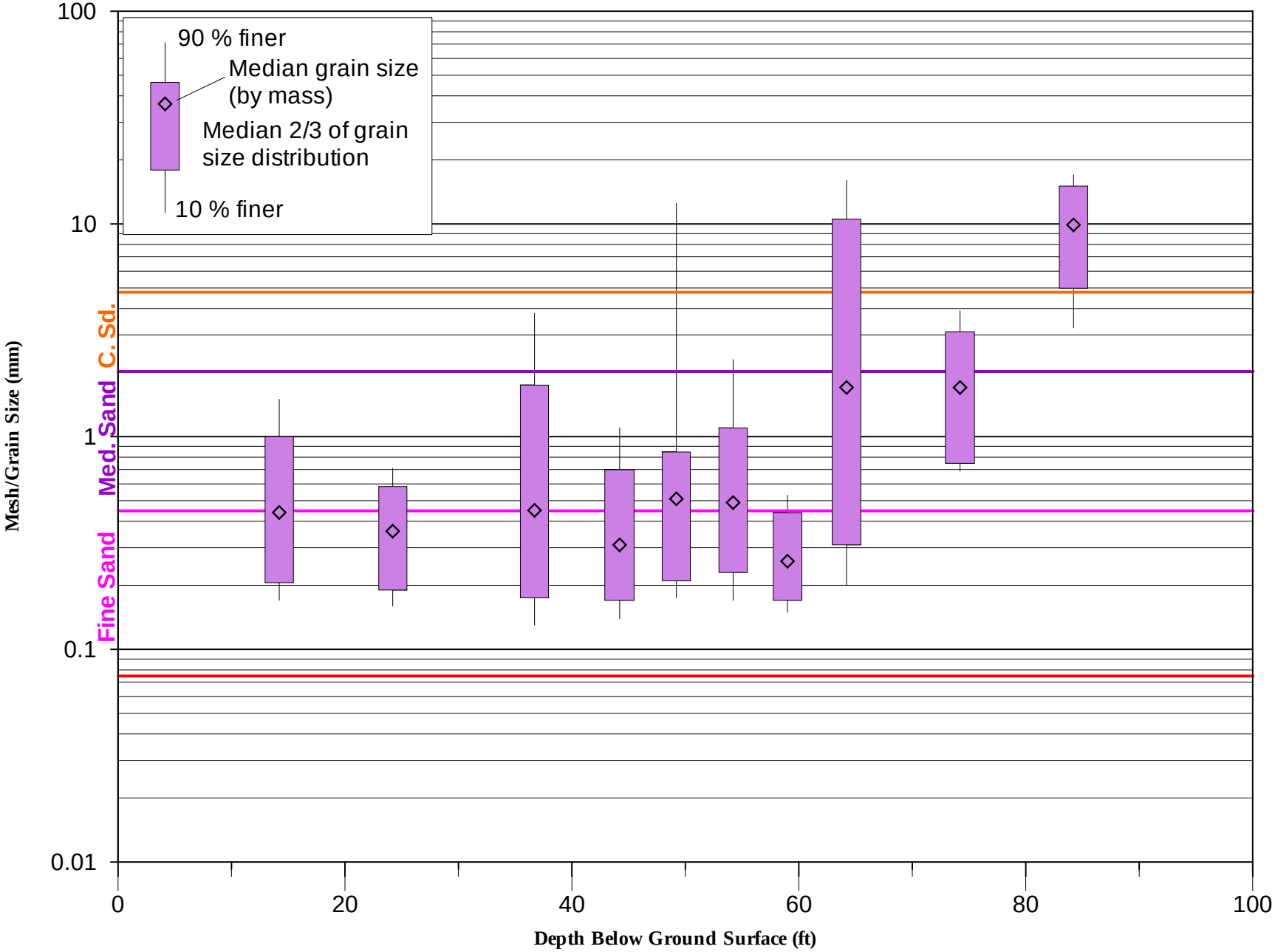


Figure 3. HWY-W07 Grain Size Distribution

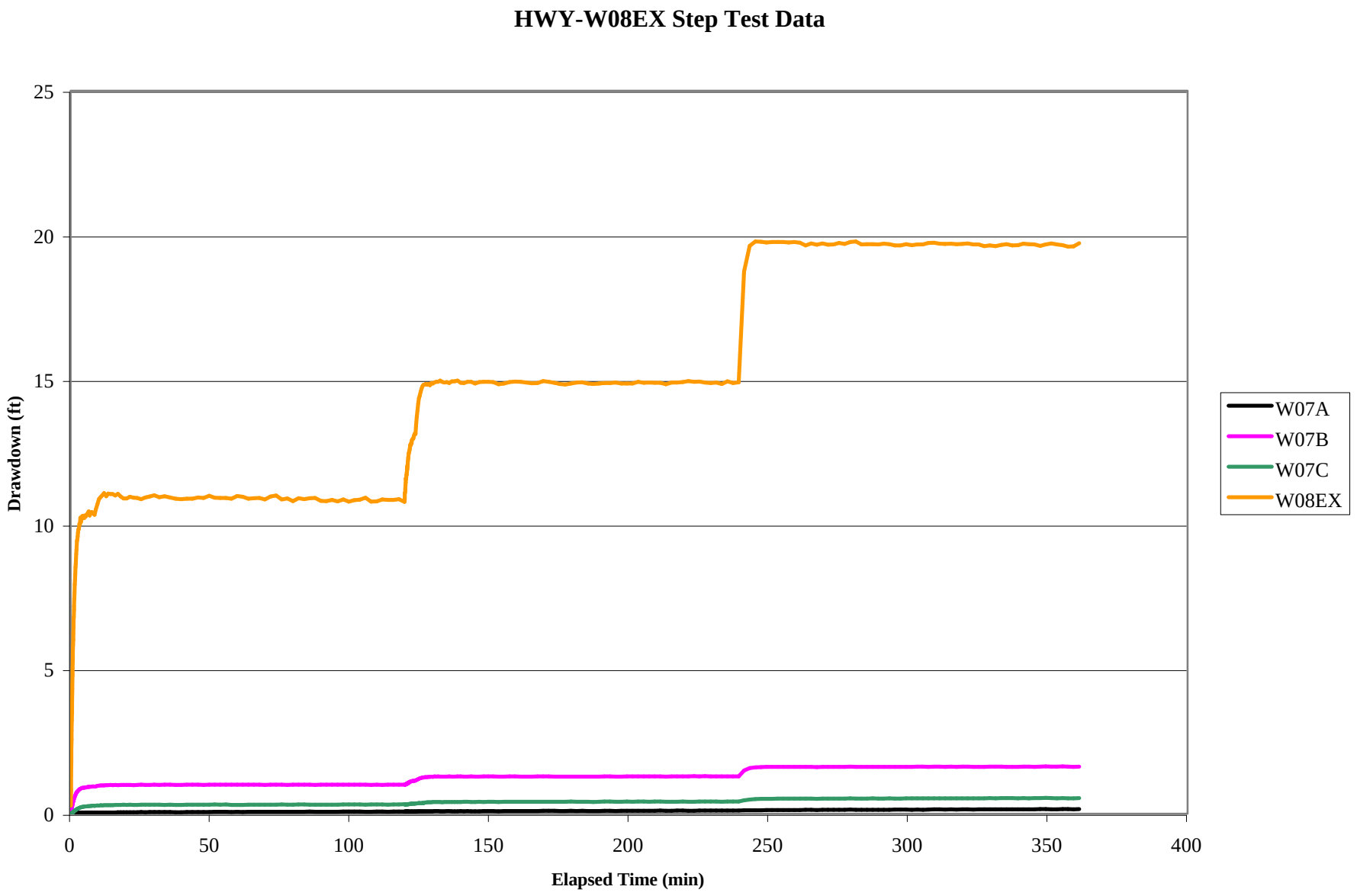


Figure 4. HWY-W08EX Step Test Data

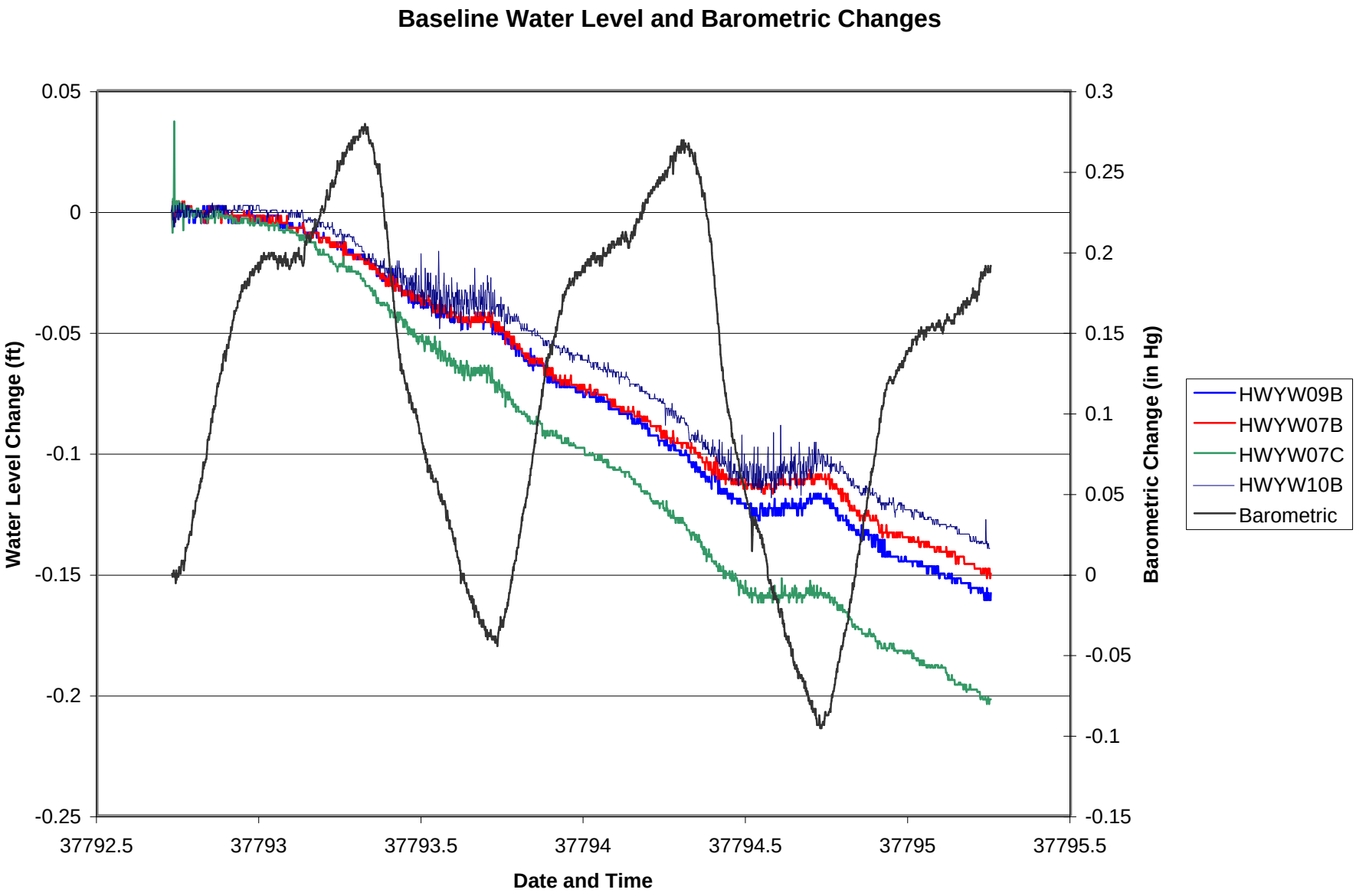


Figure 5. Baseline Water Level and Barometric Changes, Highway 380

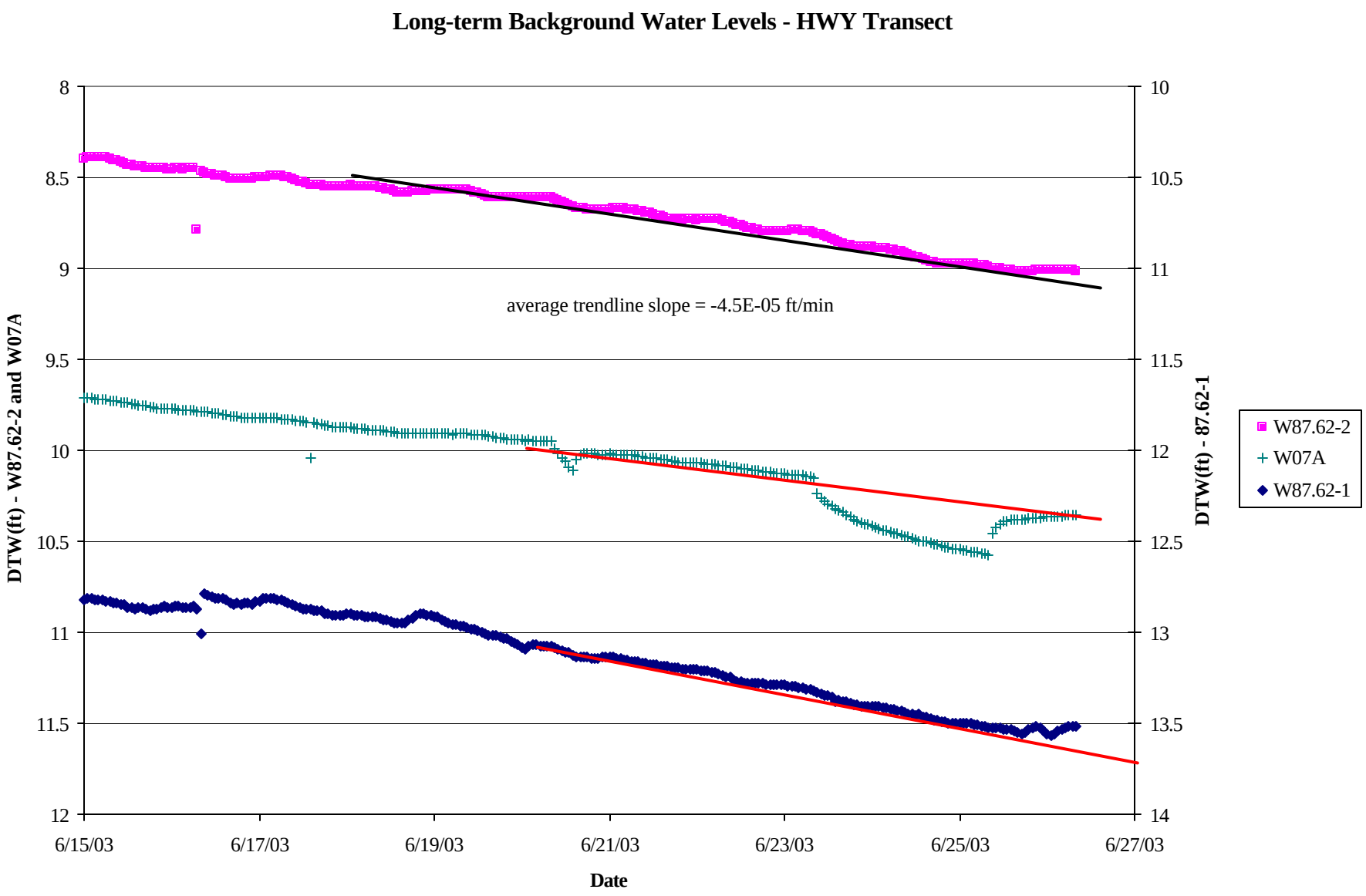


Figure 6. Regional Water Level Decline - Water Table (A) Wells

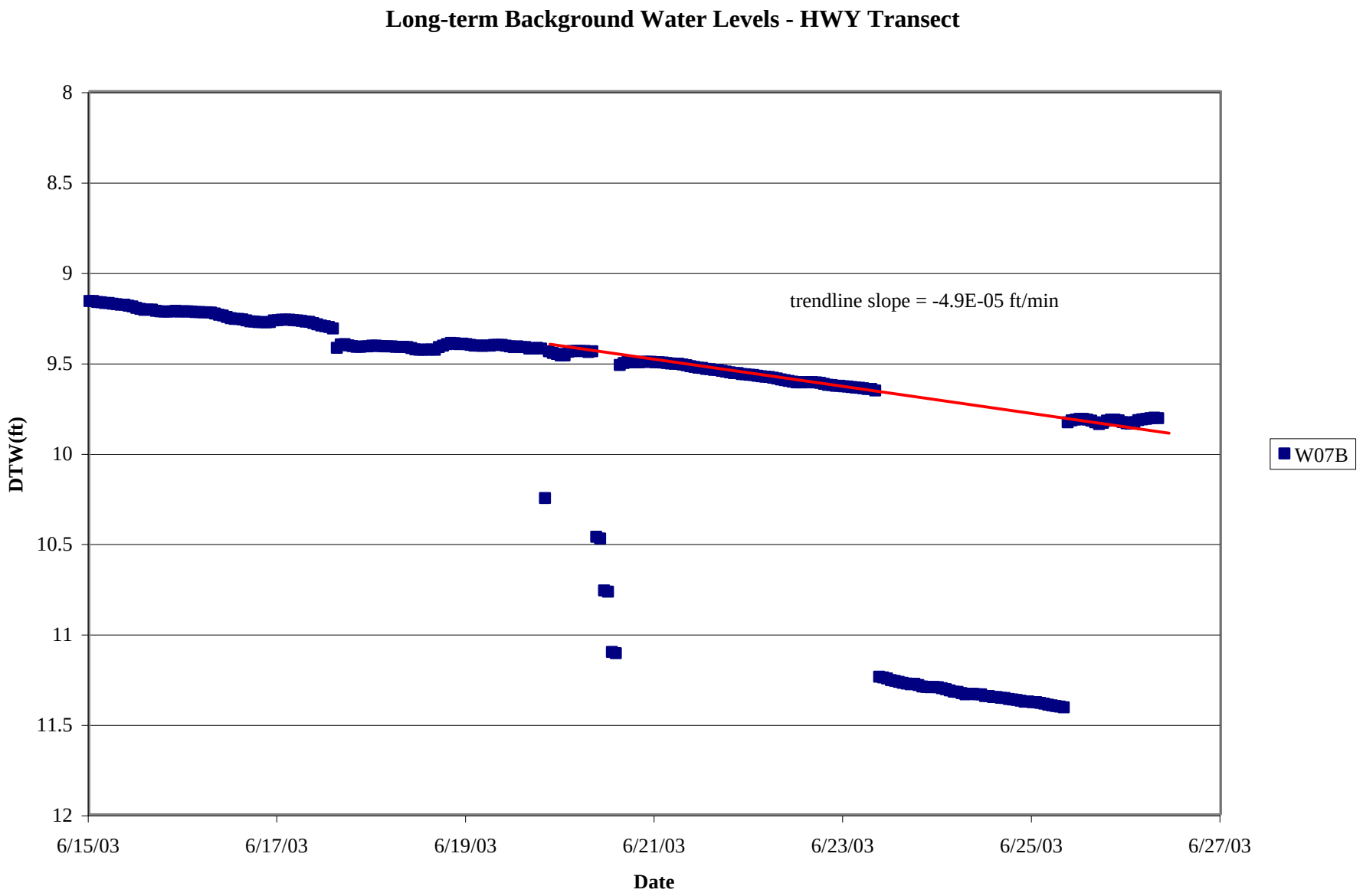


Figure 7. Regional Water Level Decline - B Wells

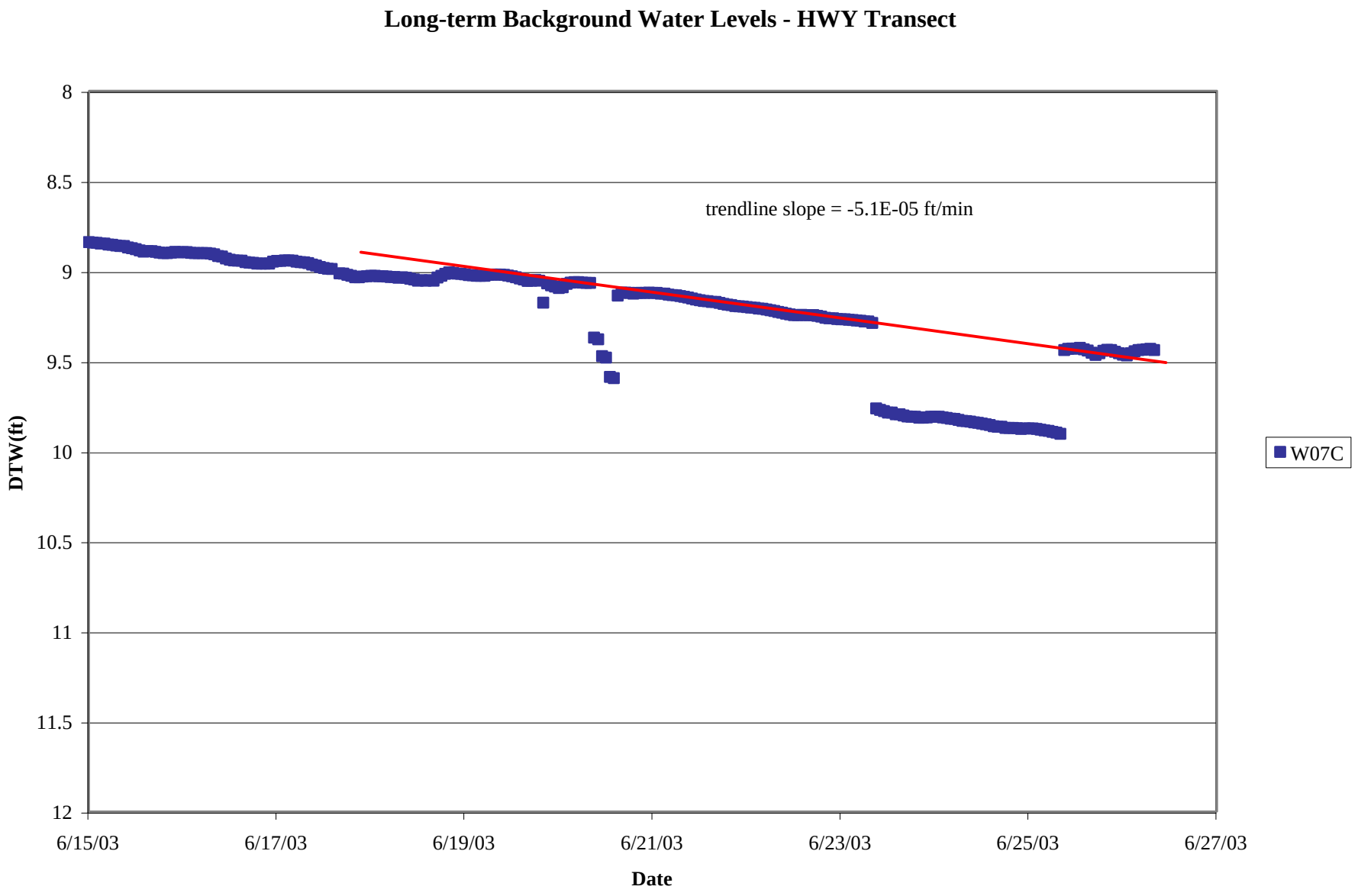


Figure 8. Regional Water Level Decline - C Wells

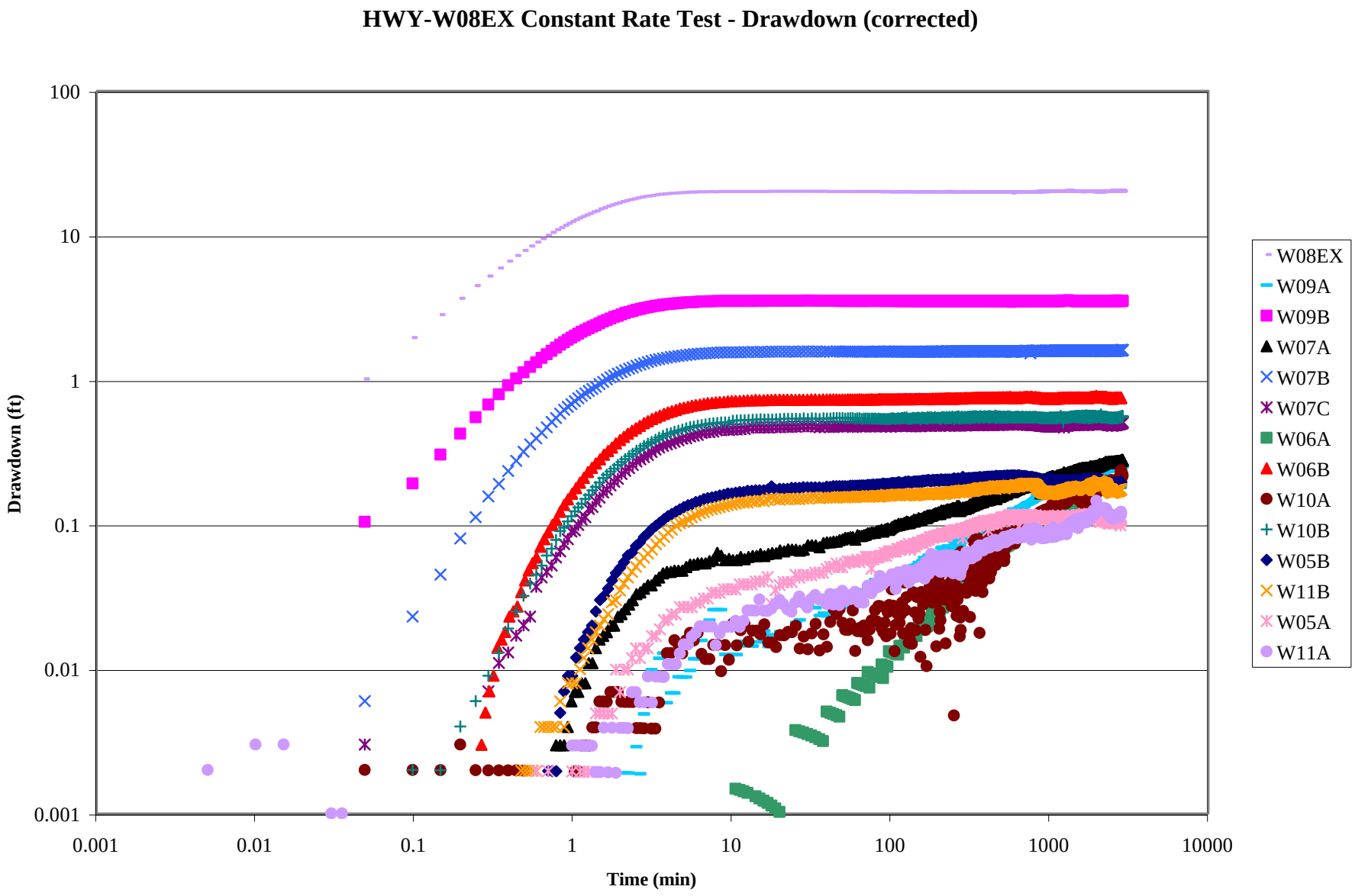


Figure 9. Corrected Drawdown versus Time, HWY-W08EX 48 Hour Test

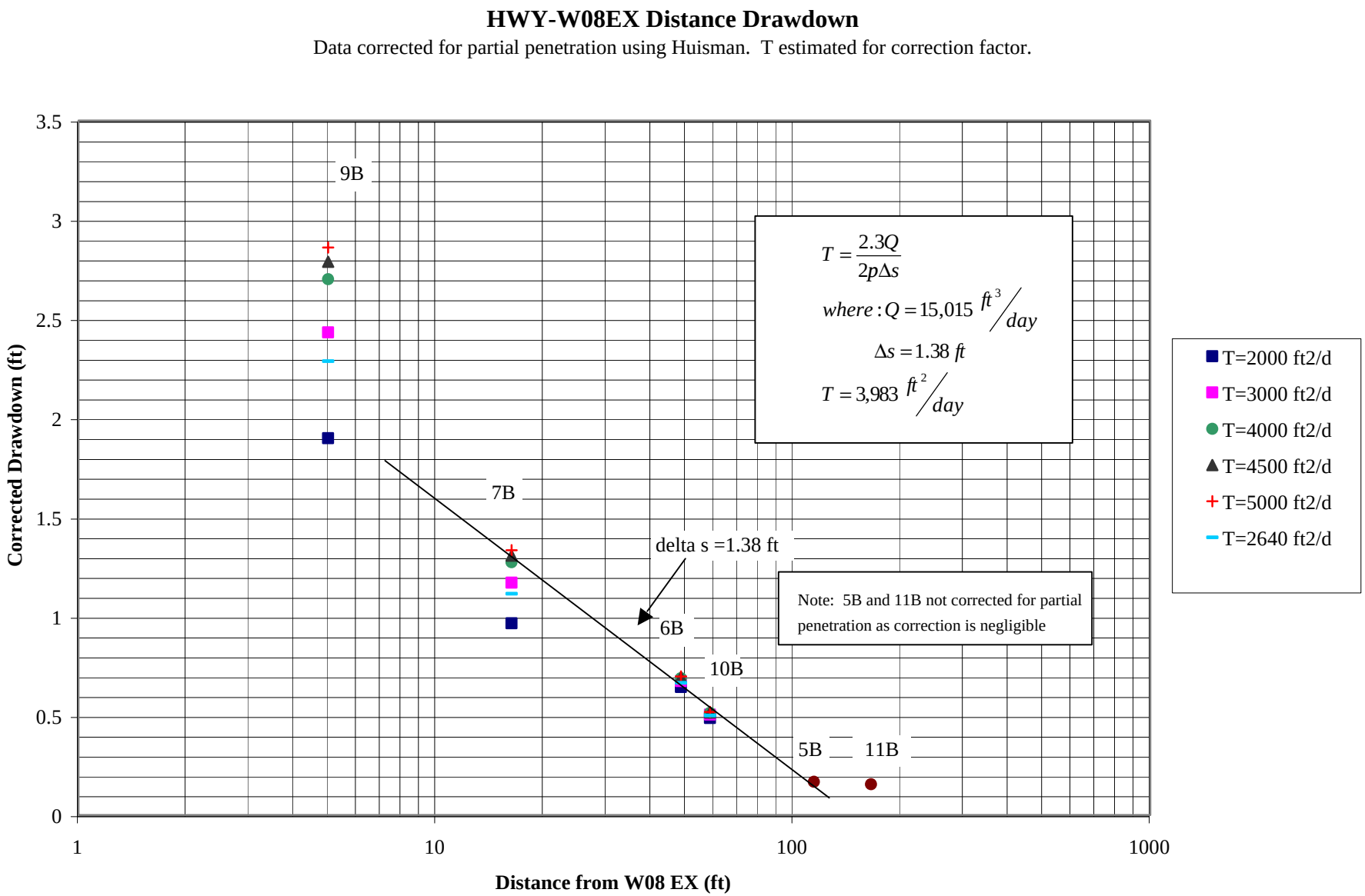


Figure 10. Corrected Distance Drawdown and Transmissivity Estimates

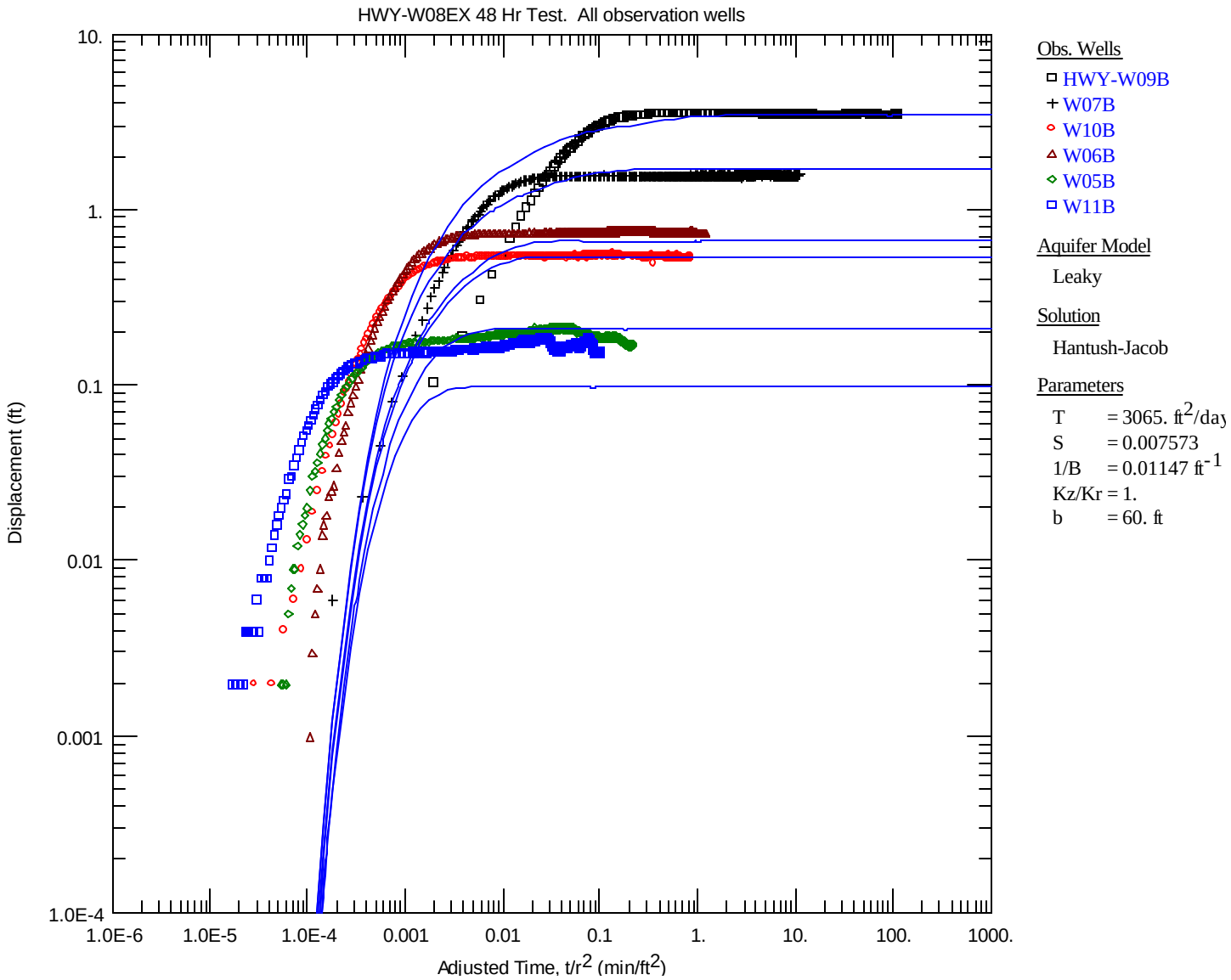


Figure 11. Composite Plot of Drawdown versus Time and Type Curves for HWY-W08EX Test

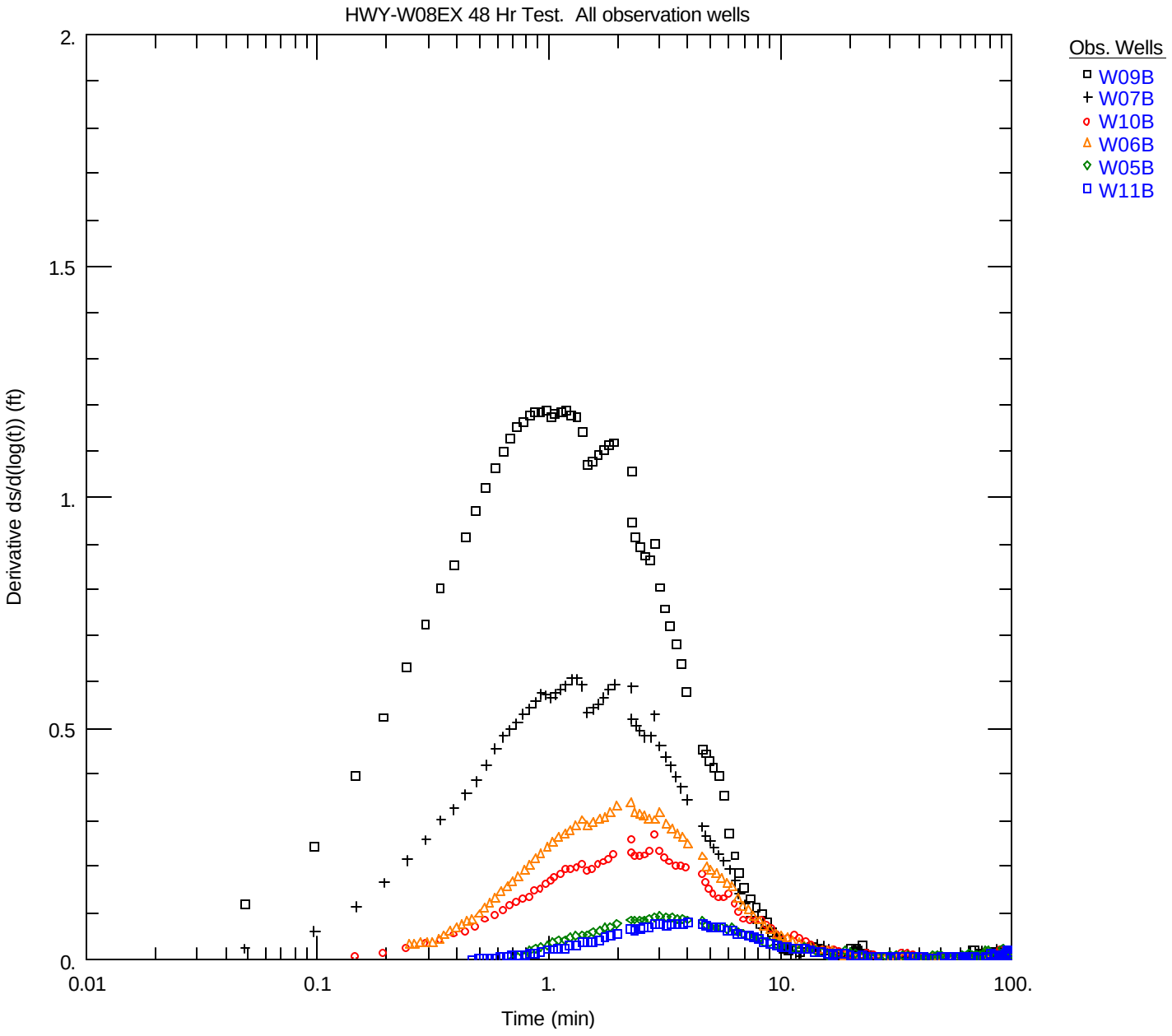


Figure 12. Derivatives versus Time for HWY-W08EX Test Observation Wells

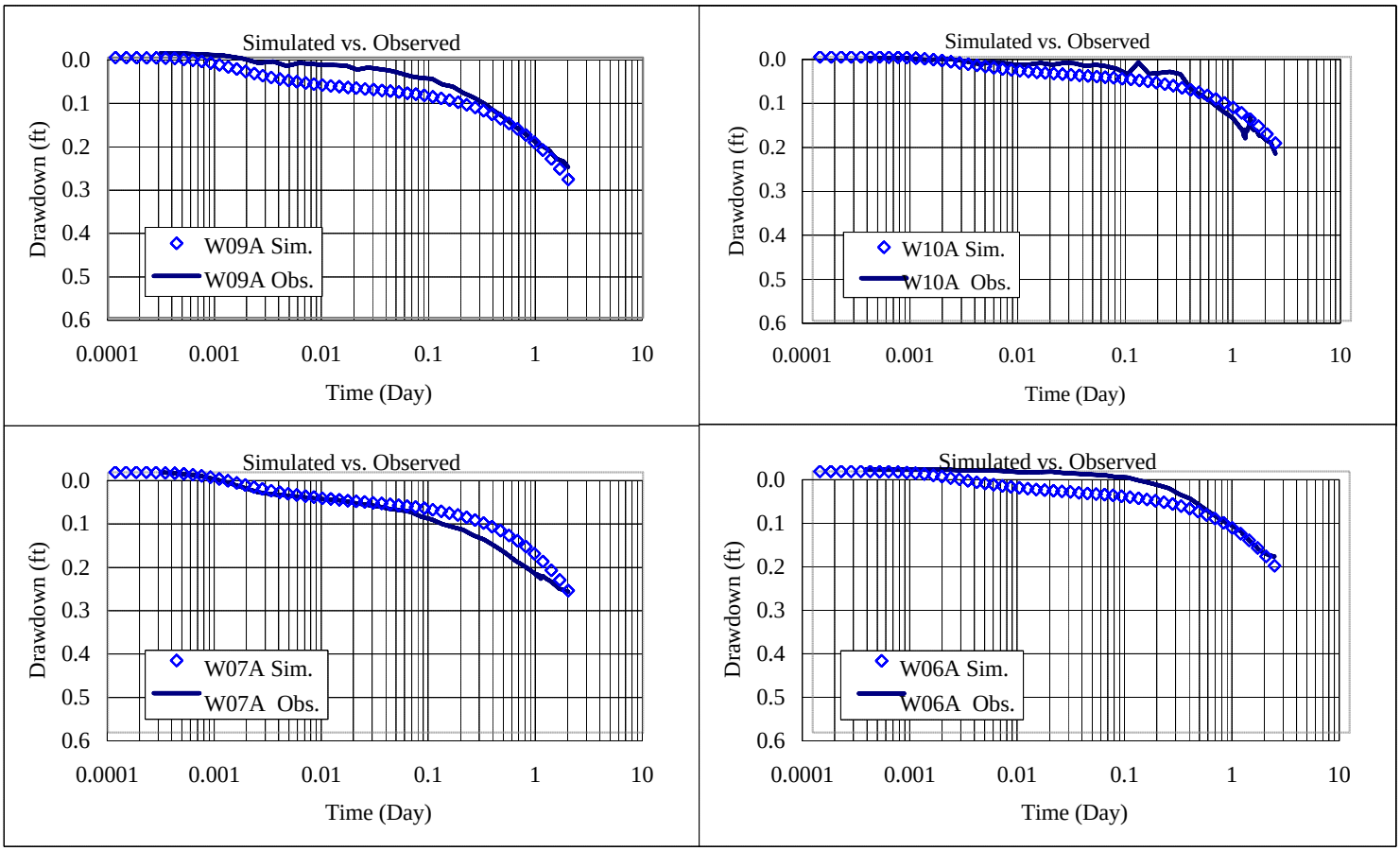


Figure 13. RZ Model Simulated versus Observed Drawdown in Water Table (A) Wells

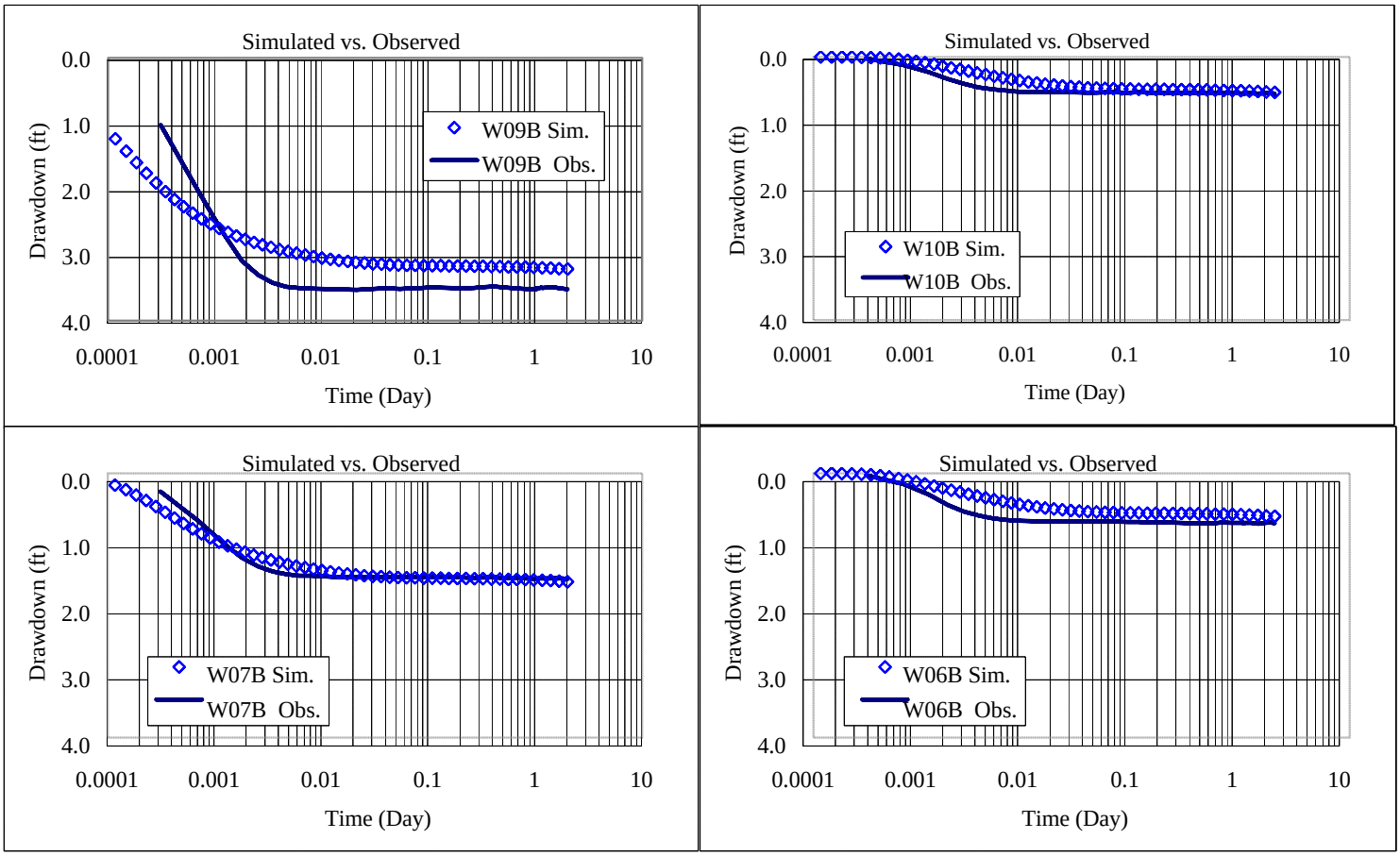


Figure 14. RZ Model Simulated versus Observed Drawdown in Intermediate (B) Wells

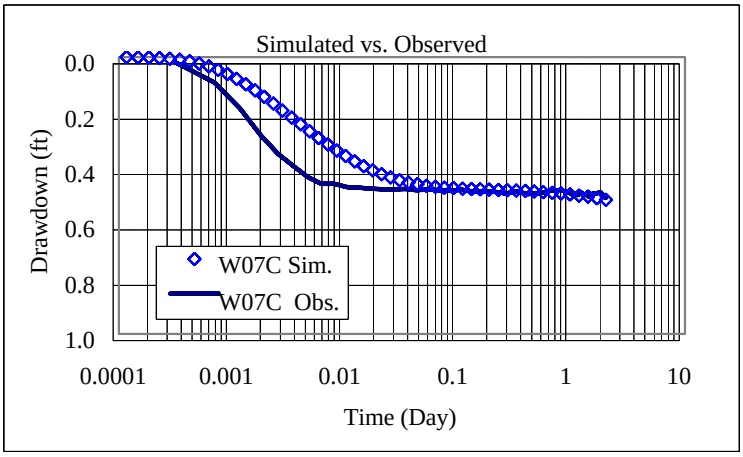


Figure 15. RZ Model Simulated versus Observed Drawdown in Deep (C) Well

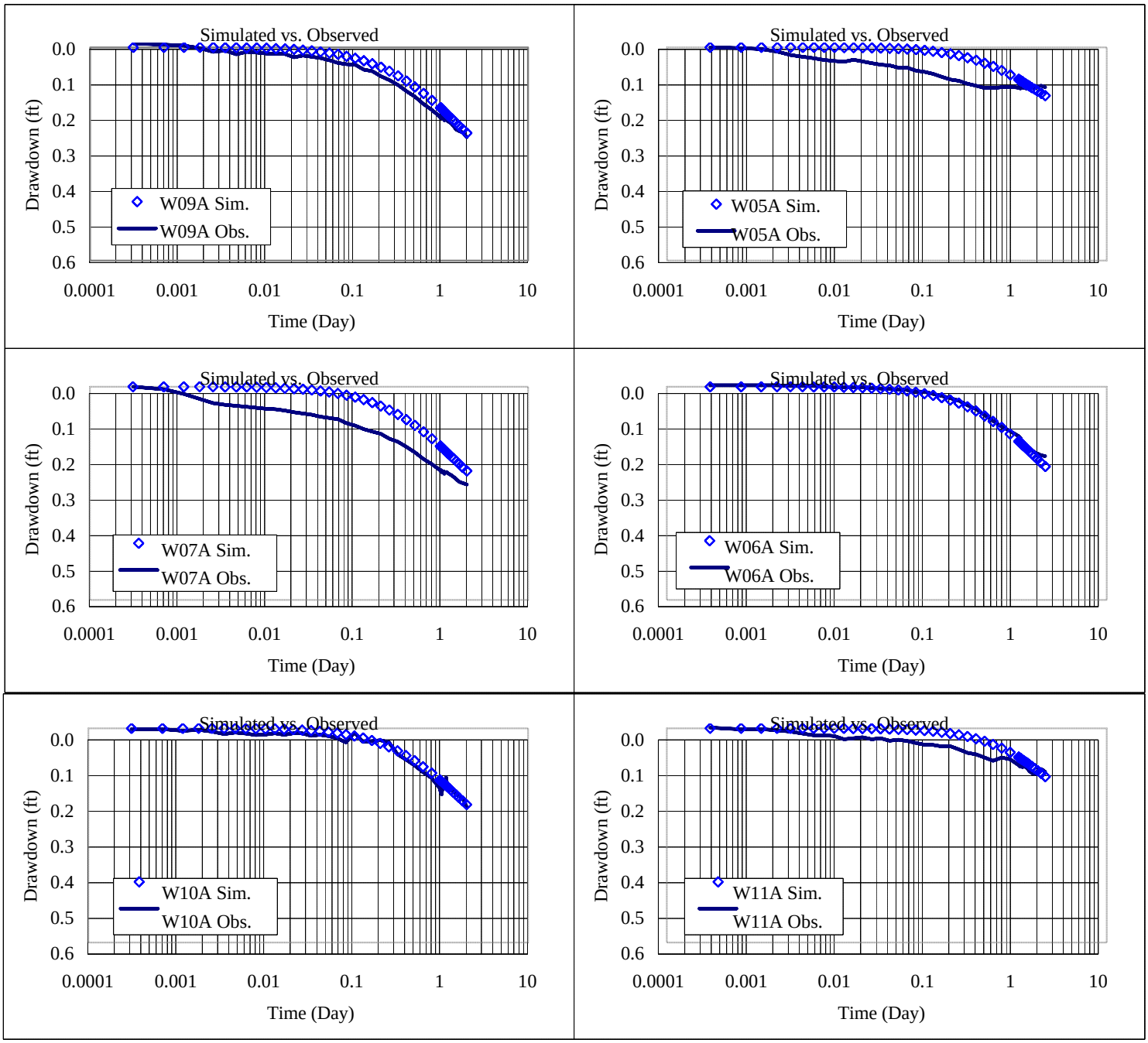
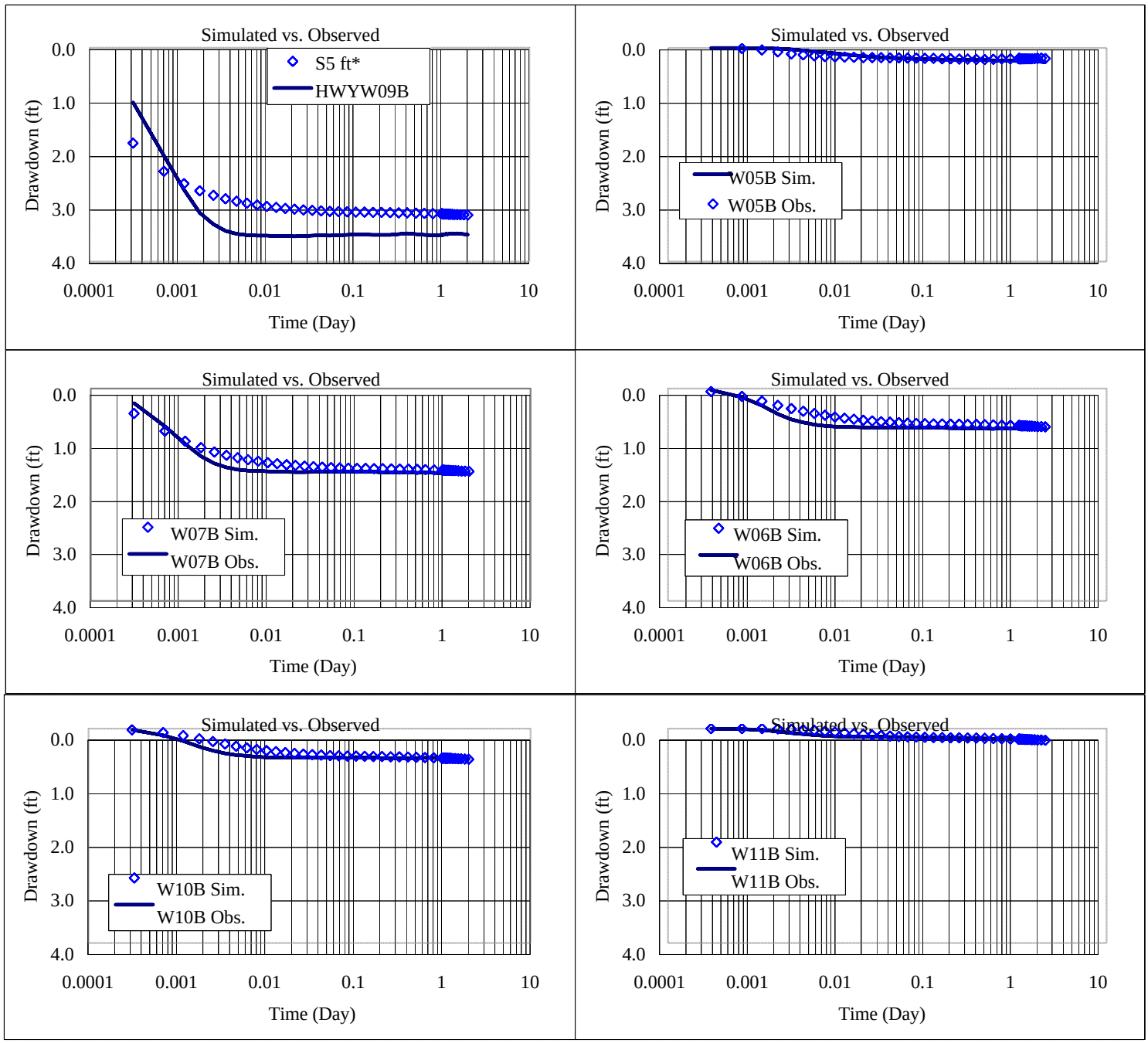


Figure 16. MODLFOW Simulated versus Observed Drawdown in Water Table (A) Wells



*: Due to the design of model grid system, simulated drawdown at monitoring well HWYW09B is the averaged drawdown of cells Row 35 Col 33 and Row 36 Col 33 in layer 3.

Figure 17. MODFLOW Simulated versus Observed Drawdown in Intermediate Depth (B) Wells

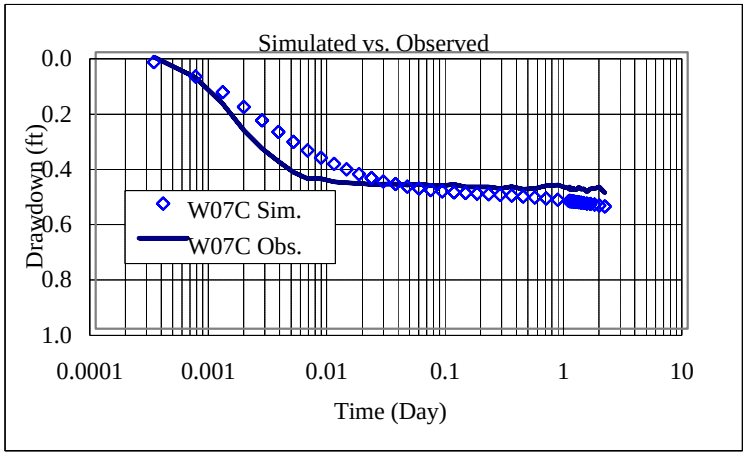


Figure 18. MODFLOW Simulated versus Observed Drawdown in Deep (C) Well

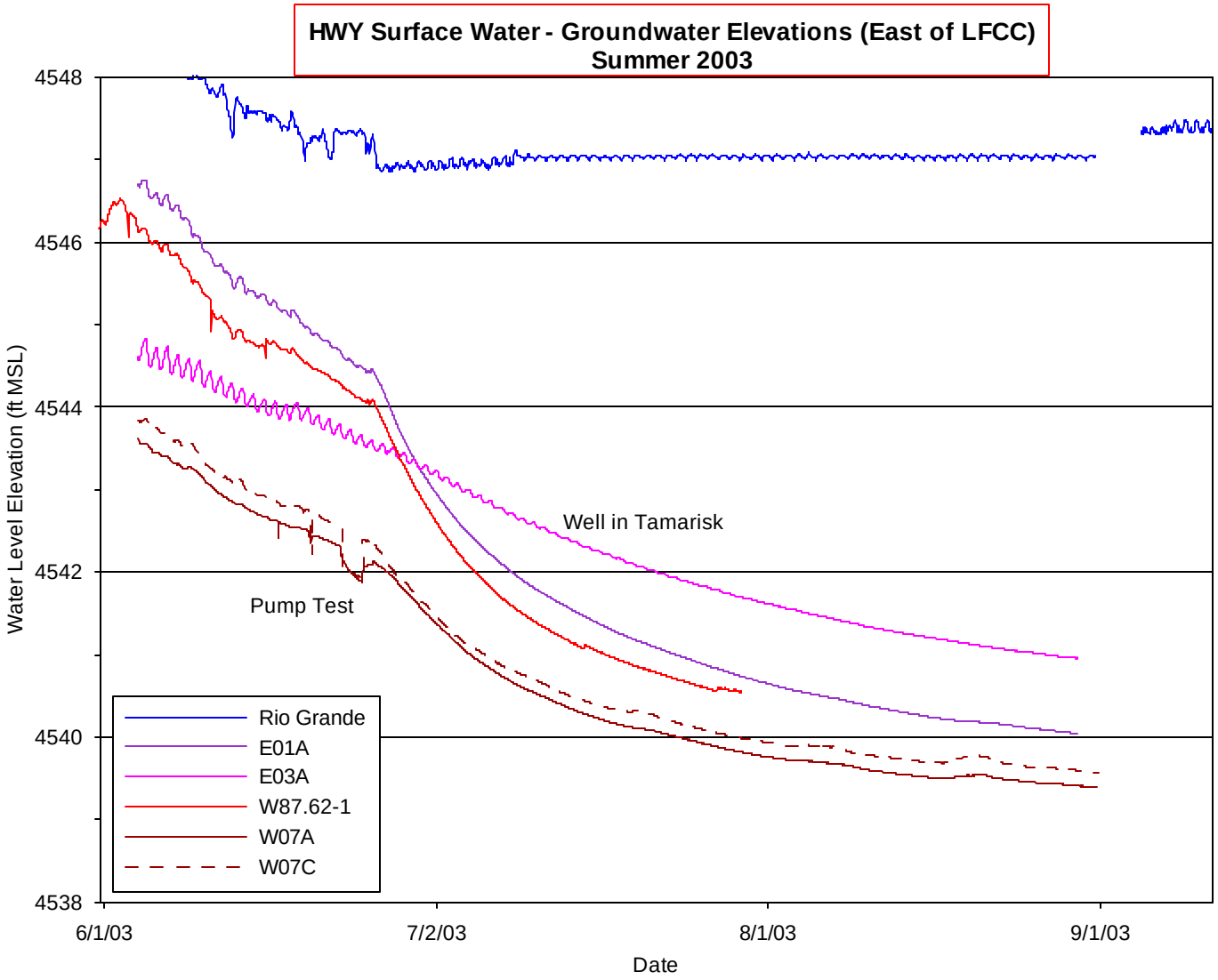


Figure 19. Groundwater Elevations at Highway 380 Transect East of LFCC, Summer 2003

Table 1. Aquifer parameters simulated in the MODFLOW analysis.

Model Layer	Kh (ft/day)	Kv/Kh	Storage	Thickness (ft)
1	70	0.05	0.2	10
2	70	0.05	0.0011	15
3	70	0.5	0.0018	24
4	150	0.5	0.002	27
5	150	0.7	0.00037	5
6	60		0.0016	219

Figure A-1
Drawdown Versus Time (uncorrected): HWY-W05A

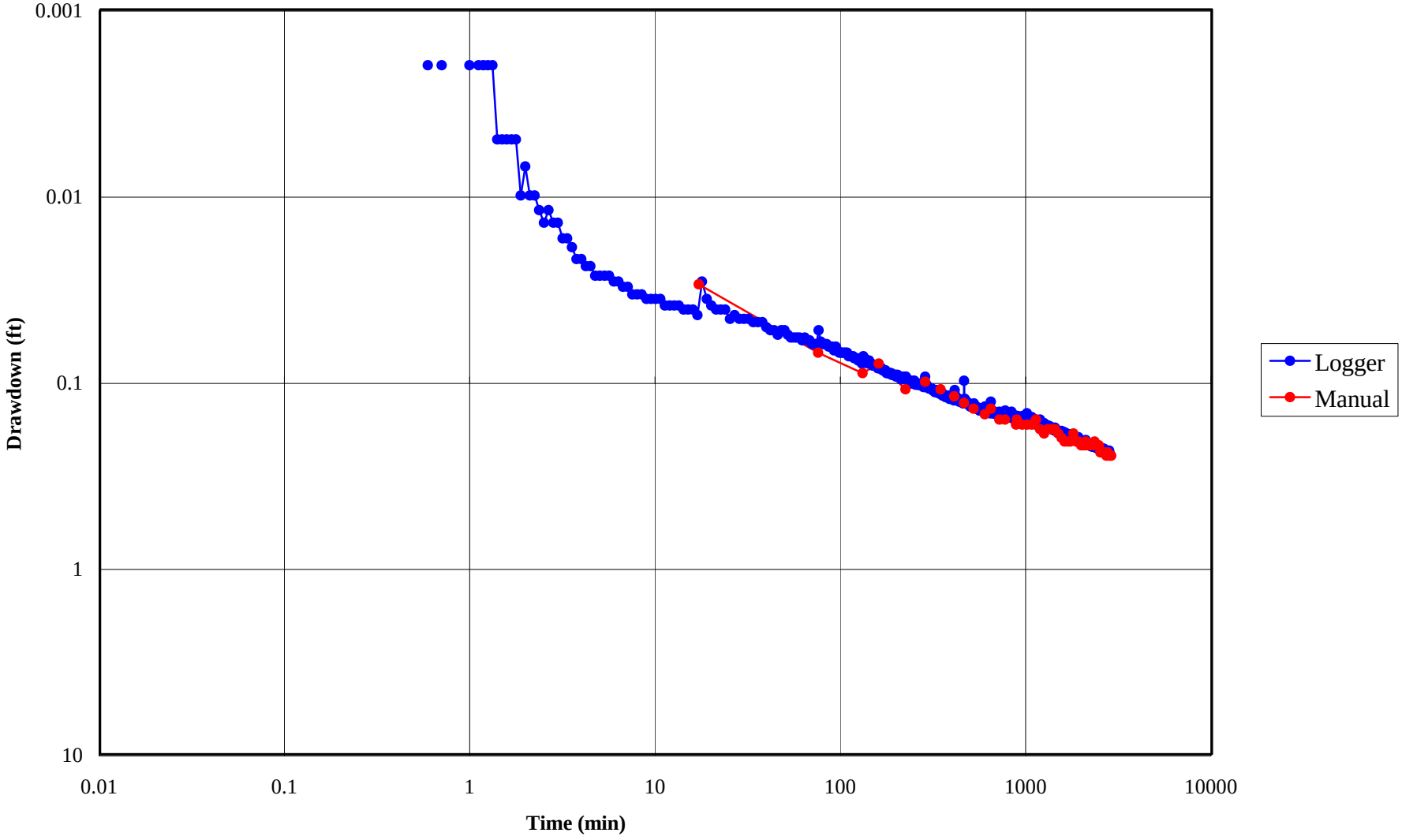


Figure A-2
Drawdown Versus Time (uncorrected): HWY-W05B

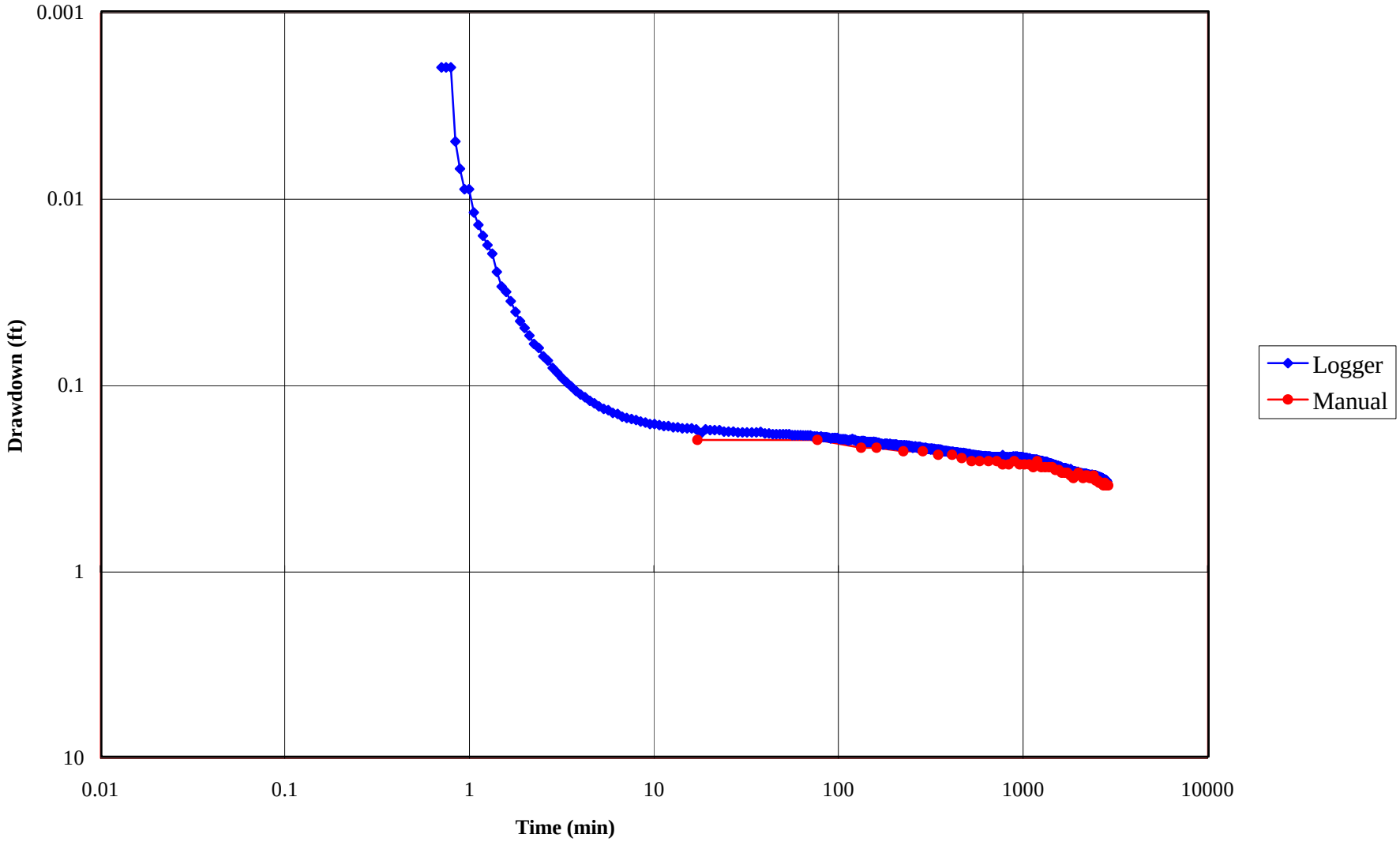


Figure A-3
Drawdown Versus Time (uncorrected): HWY-W06A

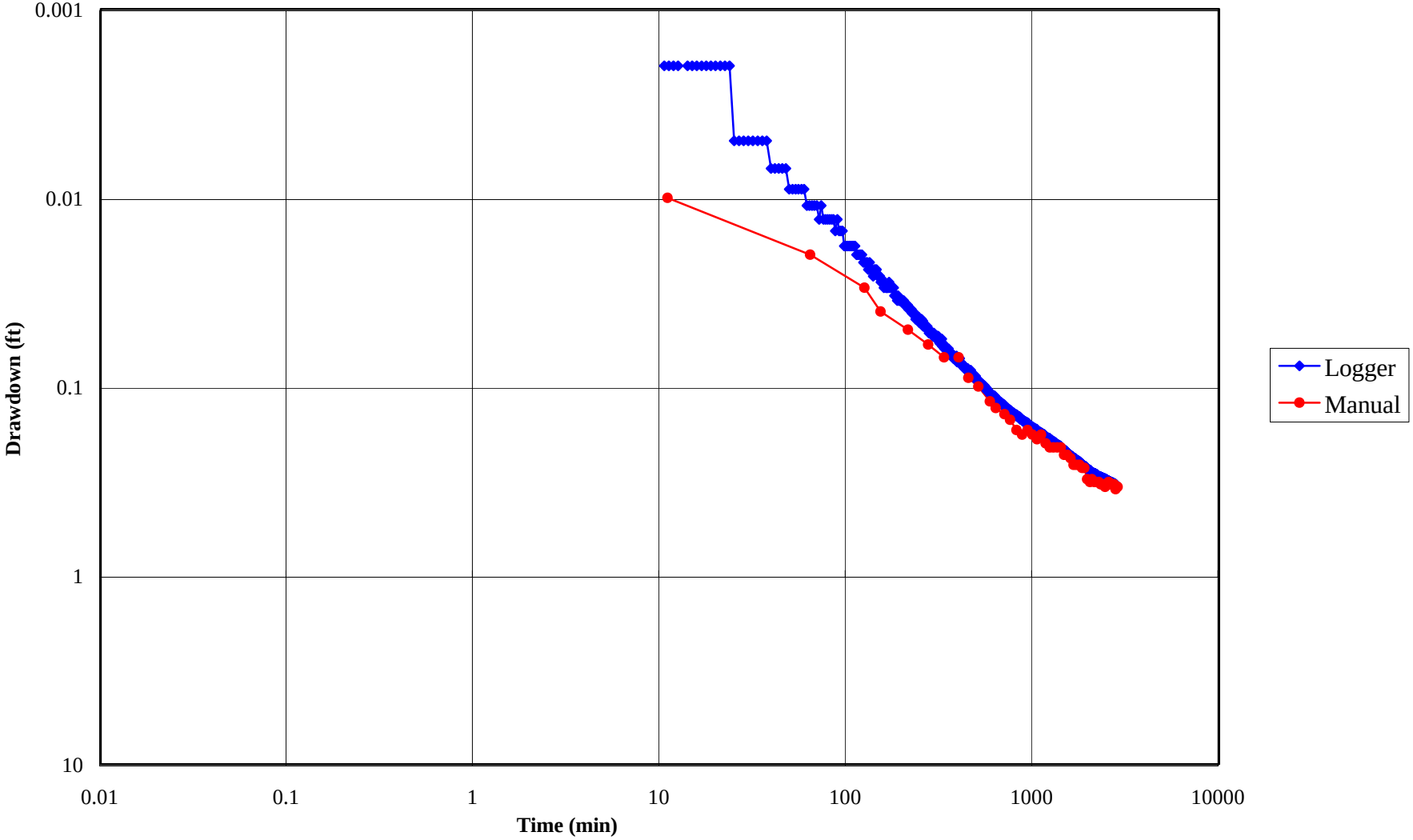


Figure A-4
Drawdown Versus Time (uncorrected): HWY-W06B

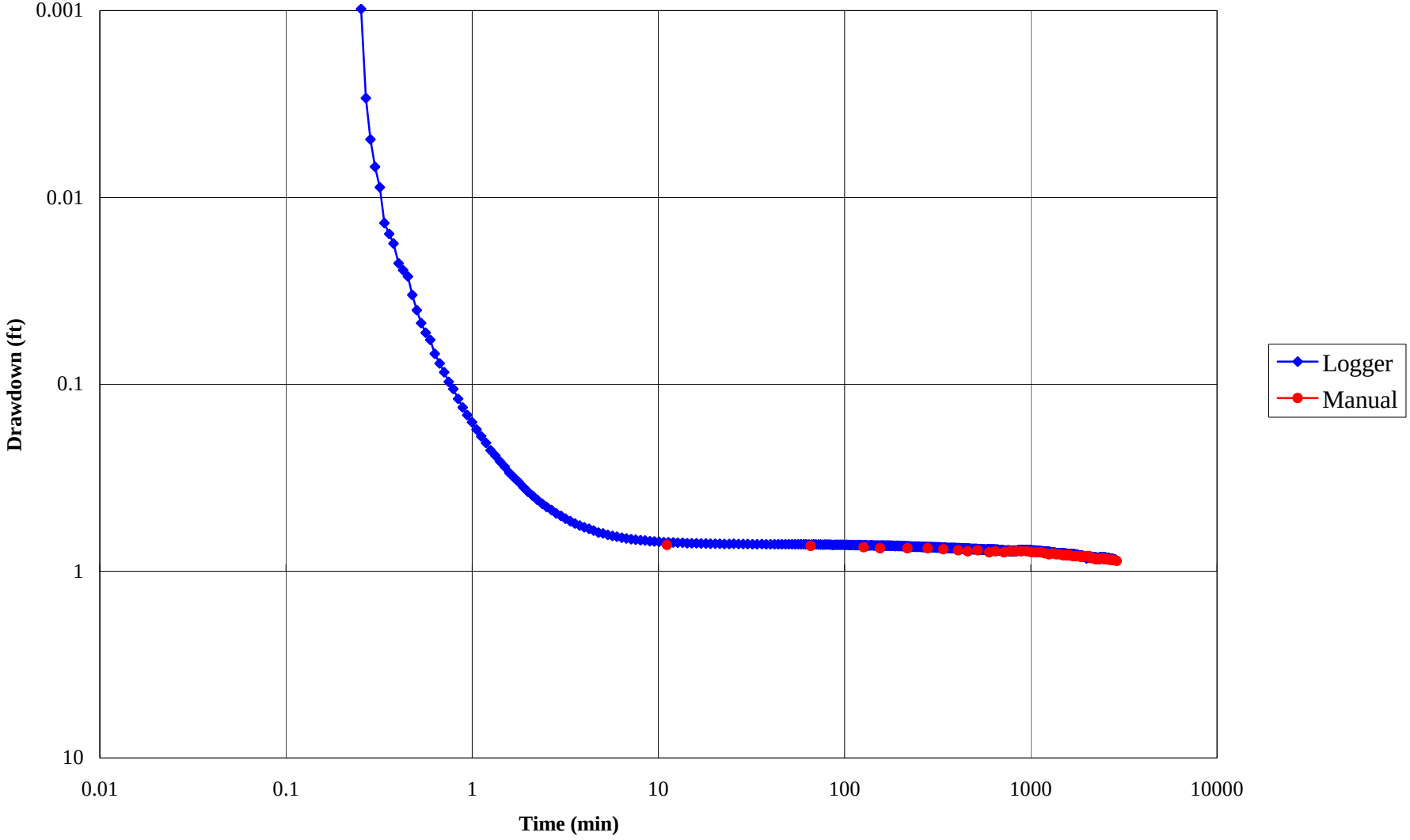


Figure A-5
Drawdown Versus Time (uncorrected): HWY-W07A

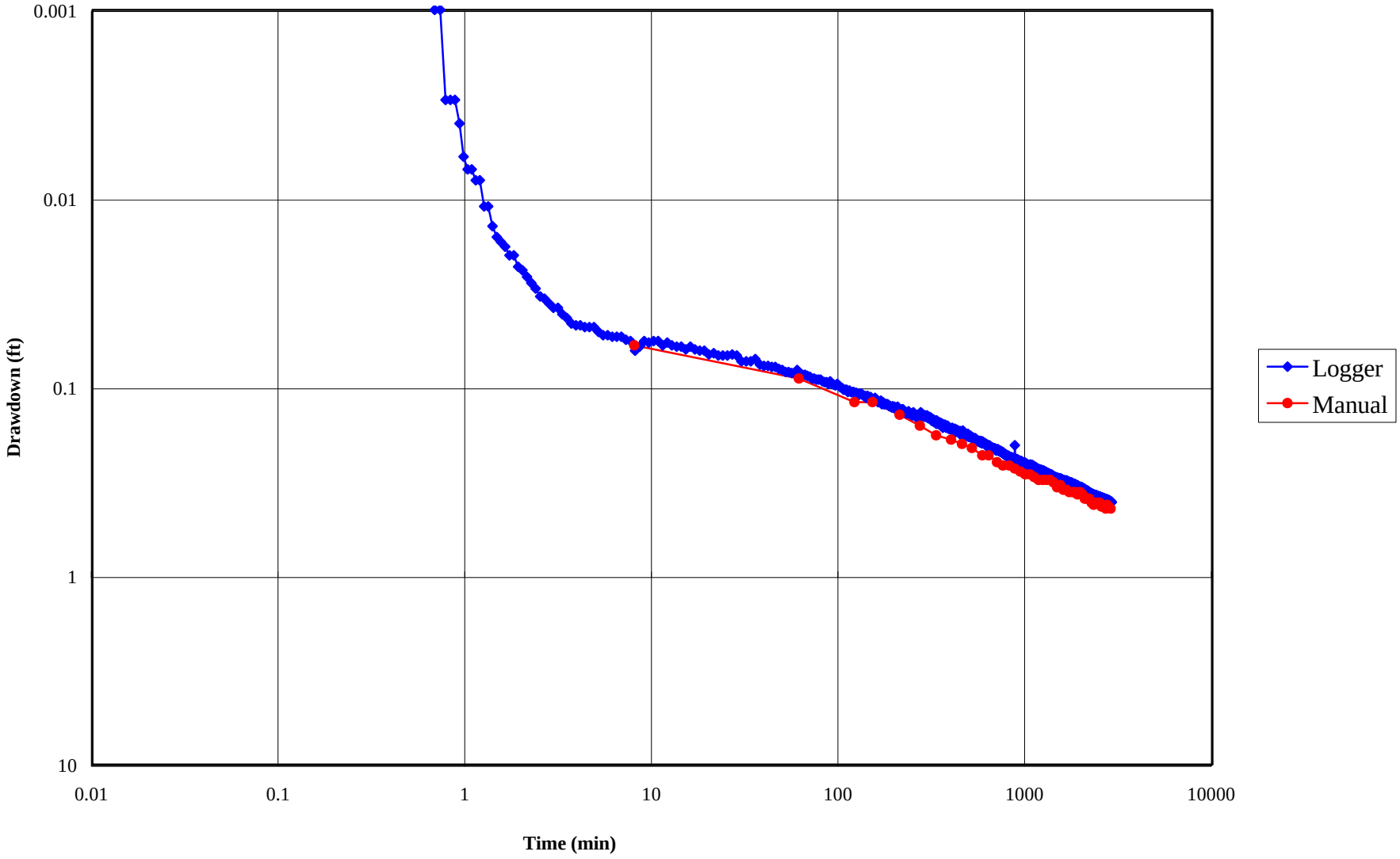


Figure A-6
Drawdown Versus Time (uncorrected): HWY-W07B

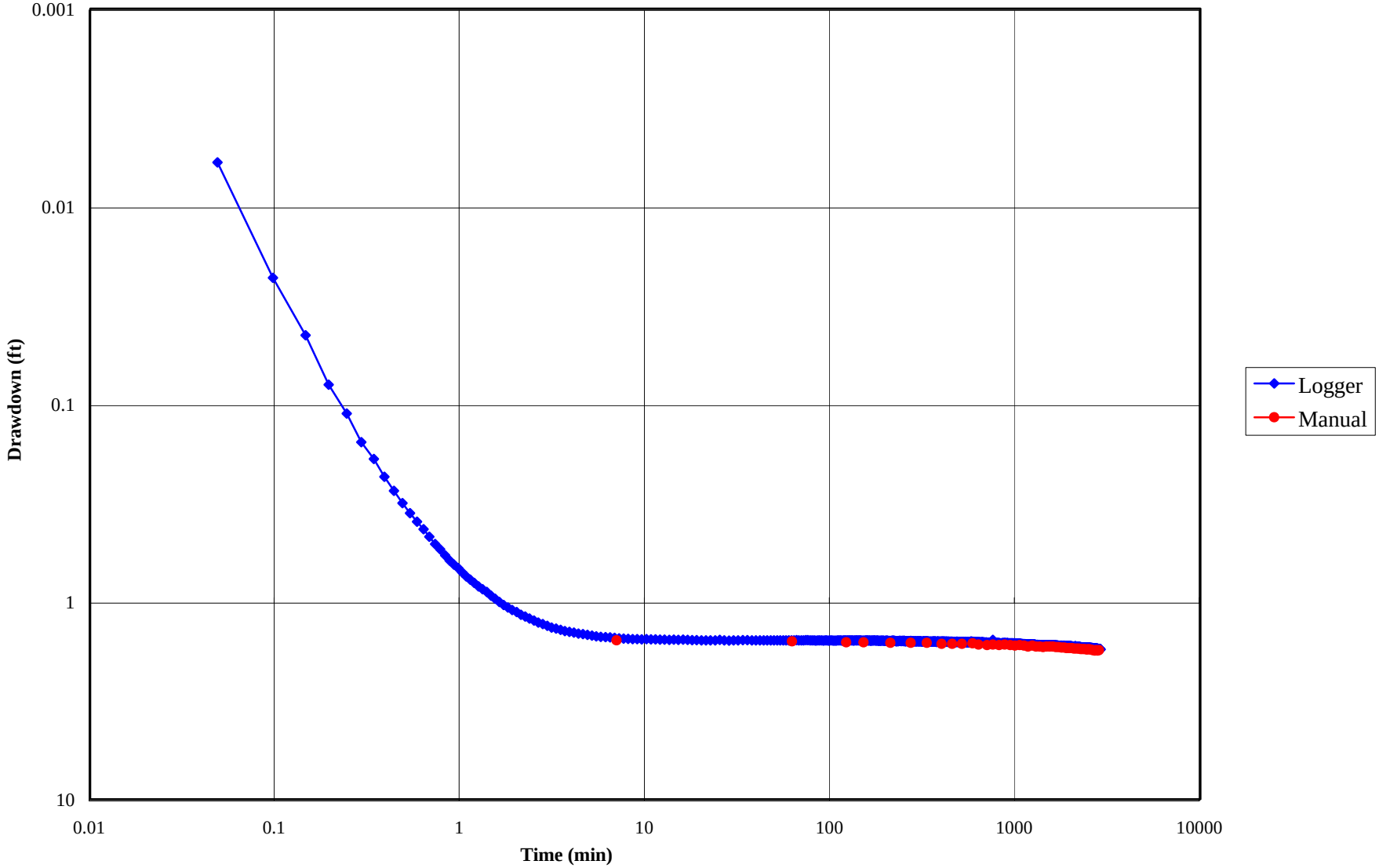


Figure A-7
Drawdown Versus Time (uncorrected): HWY-W07C

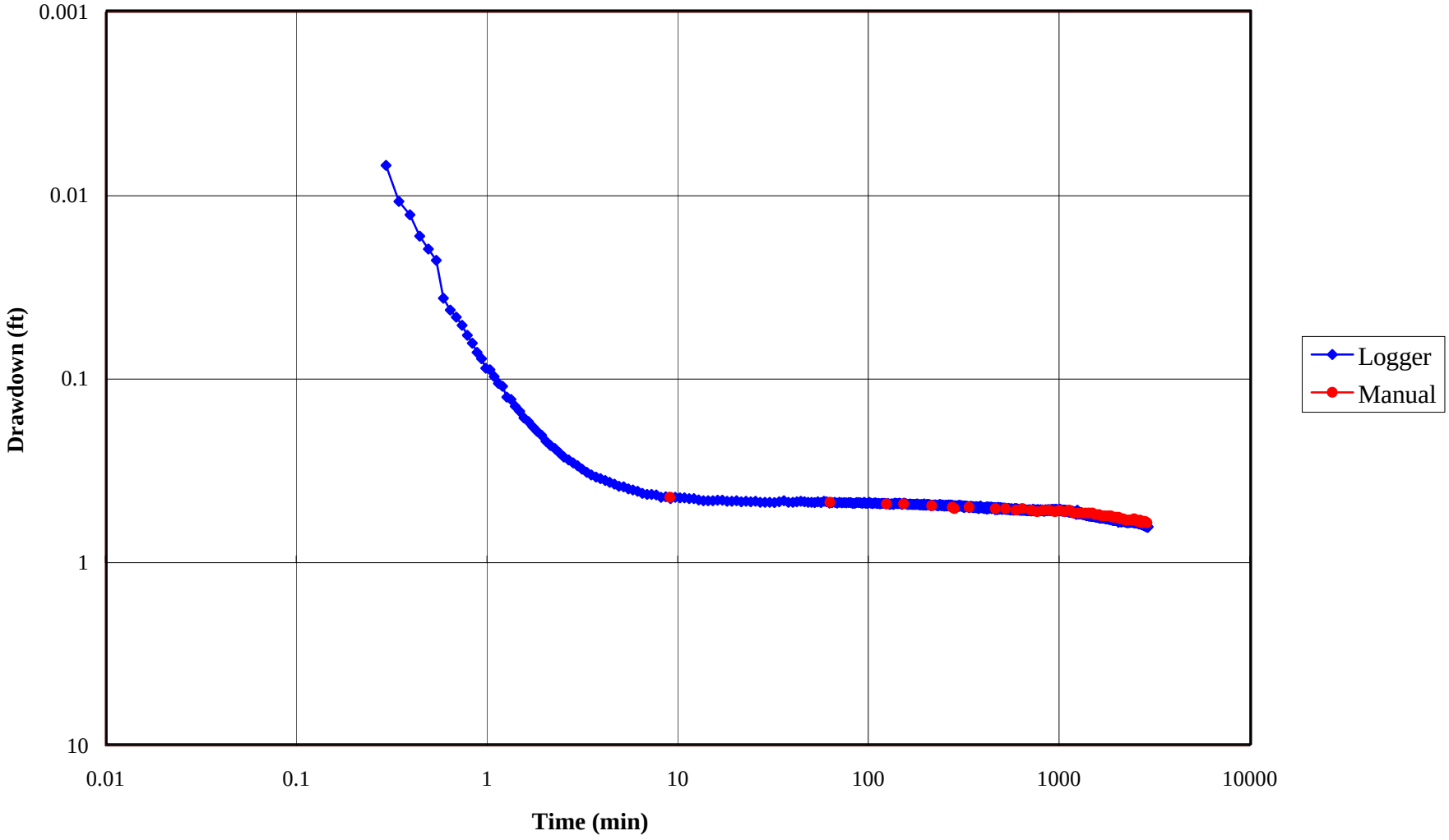


Figure A-8
Drawdown Versus Time (uncorrected): HWY-08EX

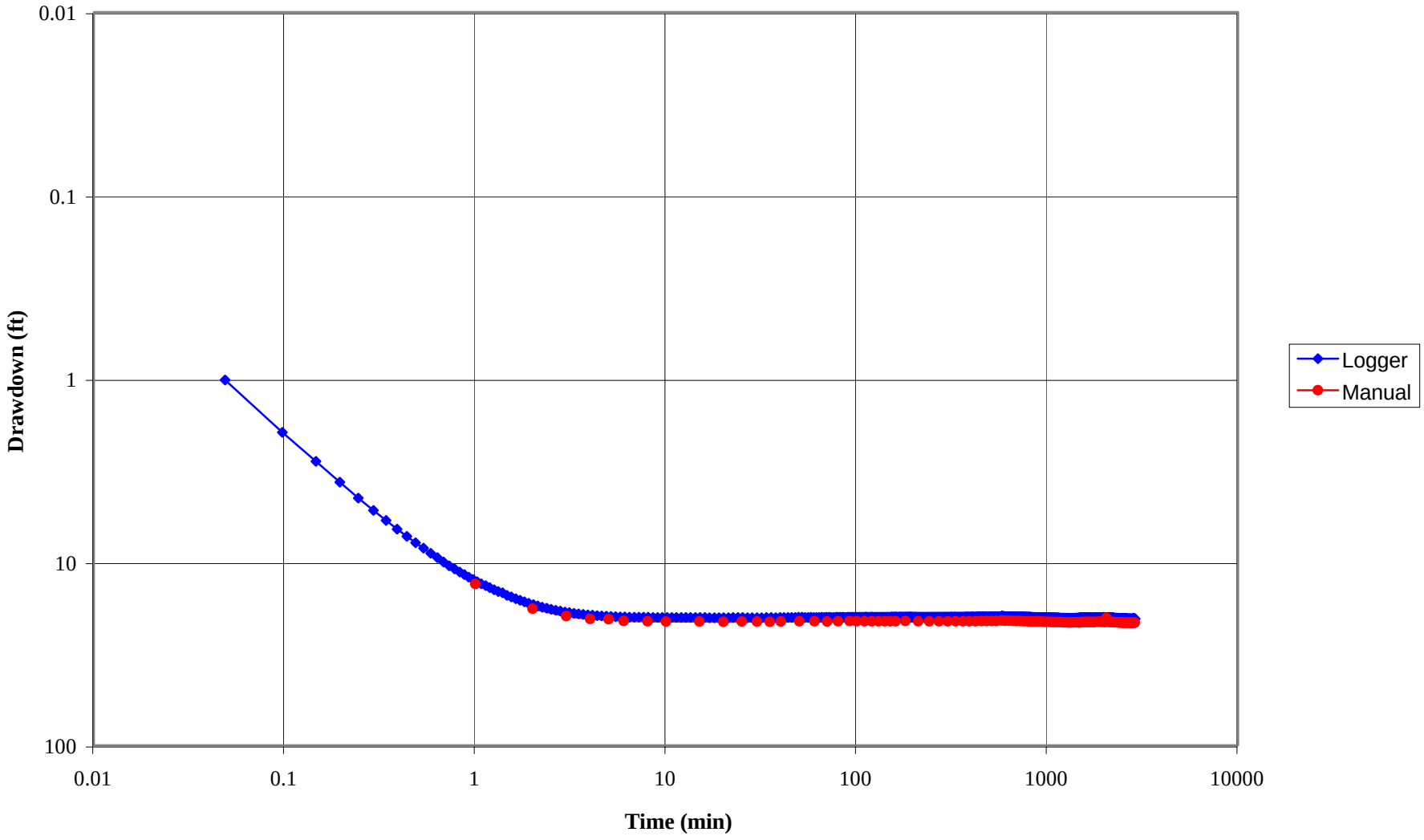


Figure A-9
Drawdown Versus Time (uncorrected): HWY-W09A

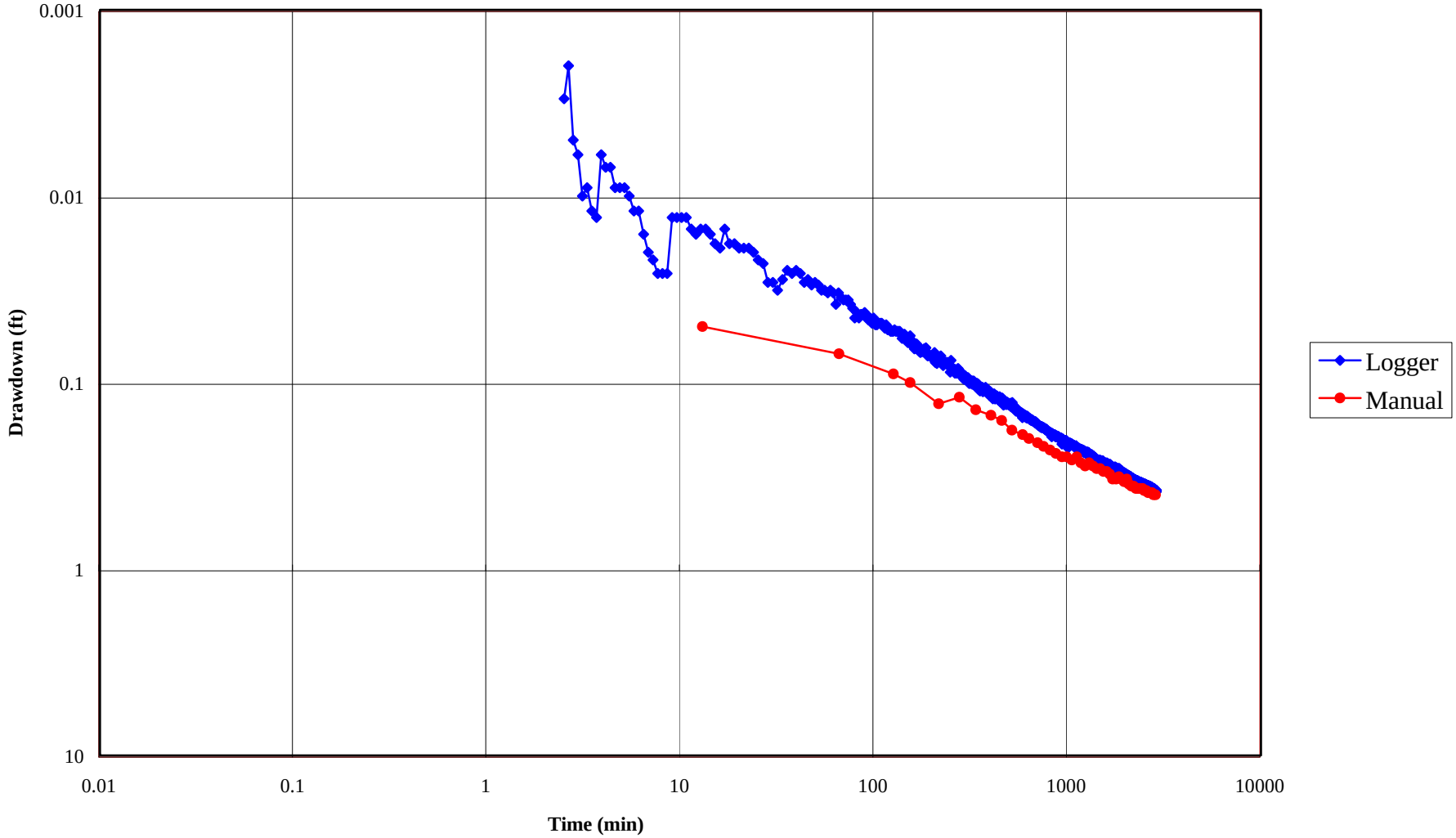


Figure A-10
Drawdown Versus Time (uncorrected): HWY-W09B

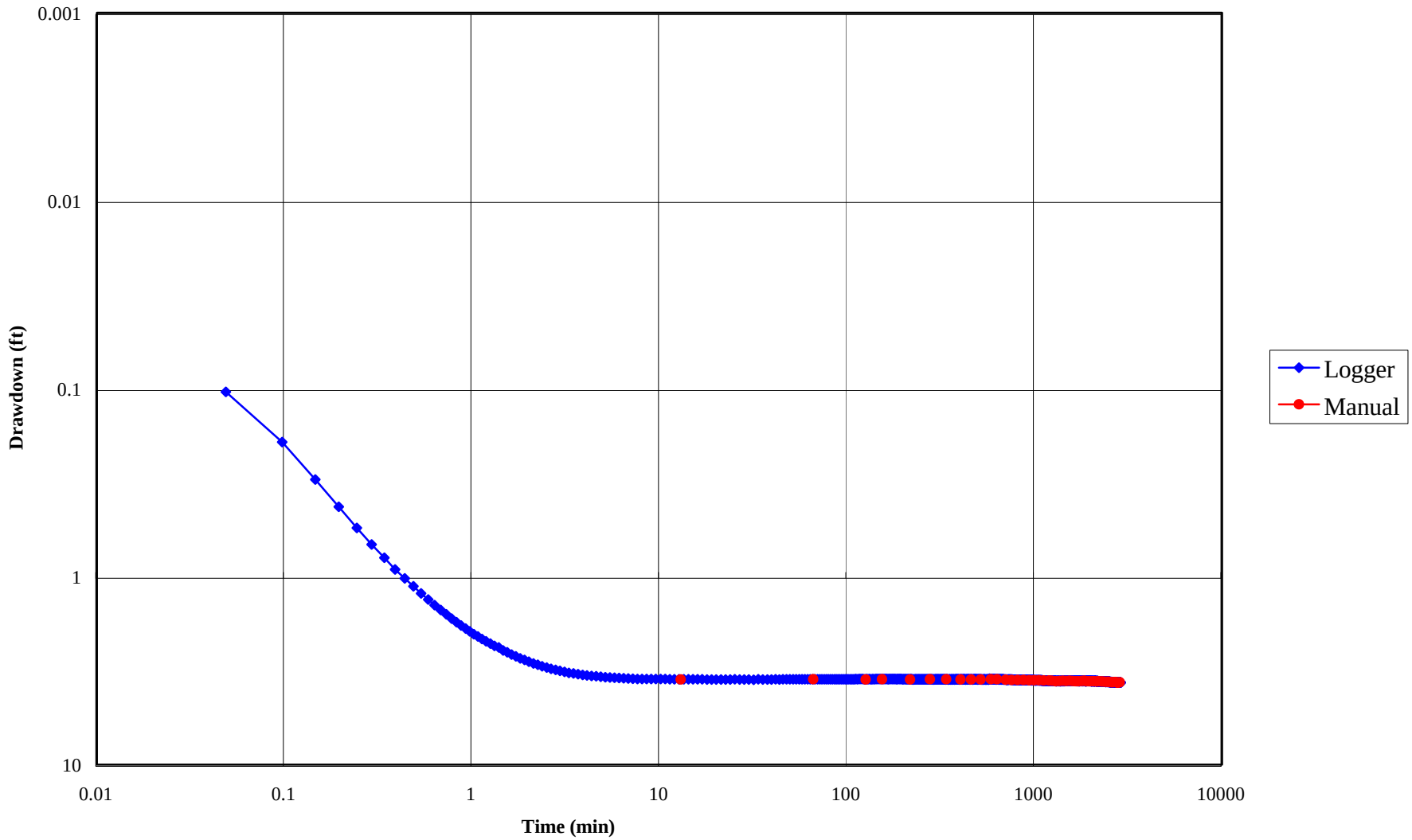


Figure A-11
Drawdown Versus Time (uncorrected): HWY-W10A

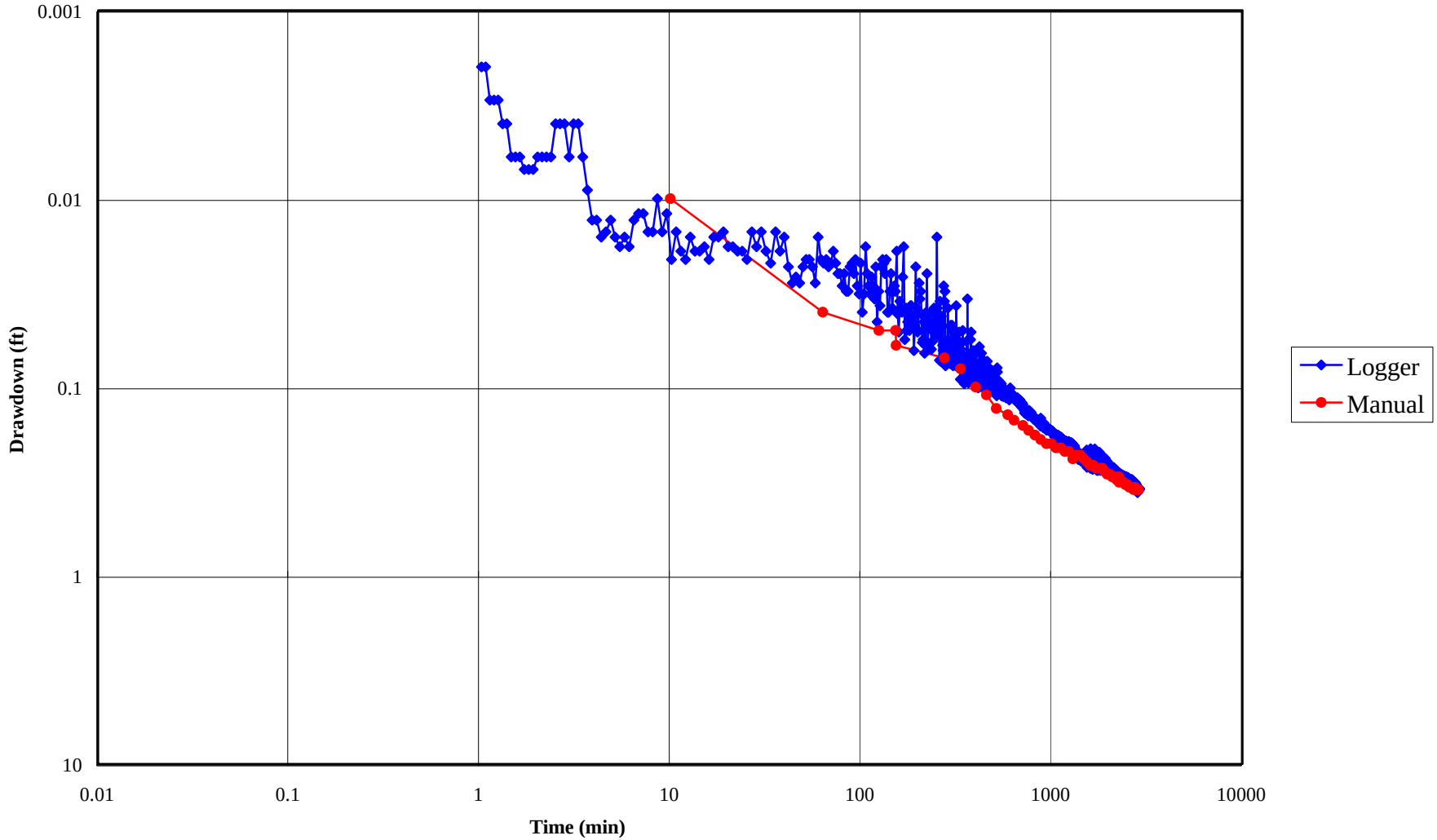


Figure A-12
Drawdown Versus Time (uncorrected): HWY-W10B

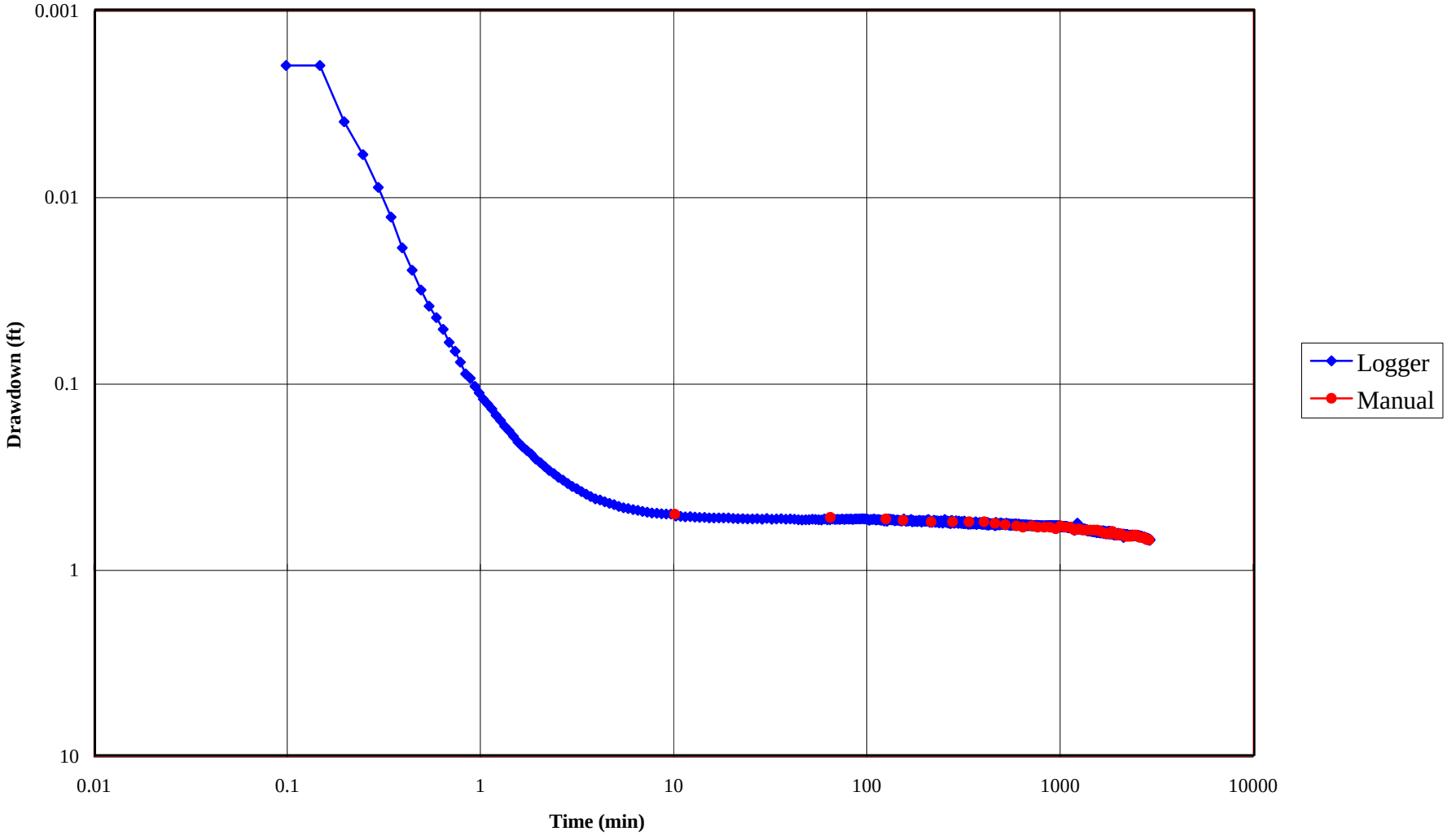


Figure A-13
Drawdown Verus Time (uncorrected): HWY-W11A

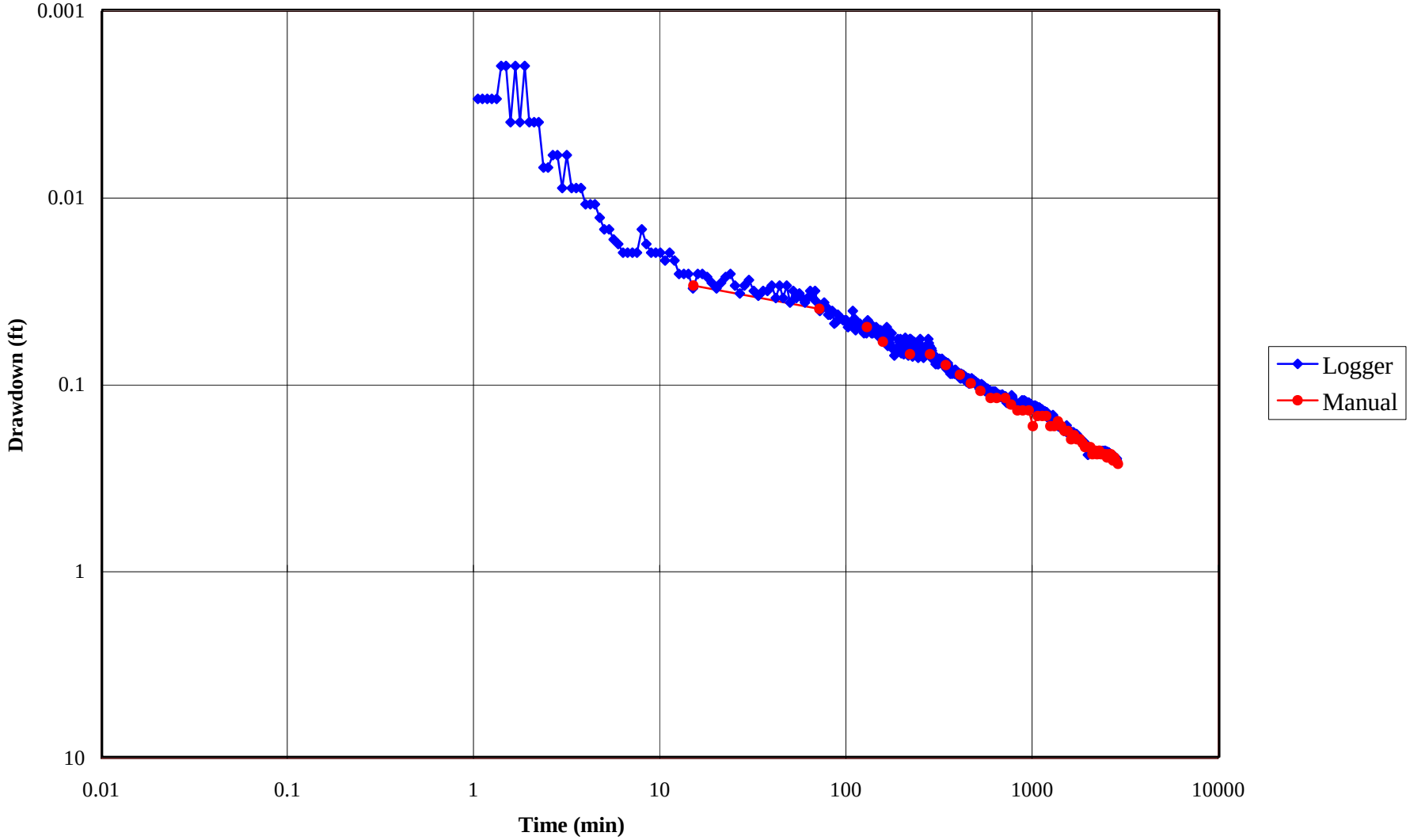


Figure A-14
Drawdown Versus Time (uncorrected): HWY-W11B

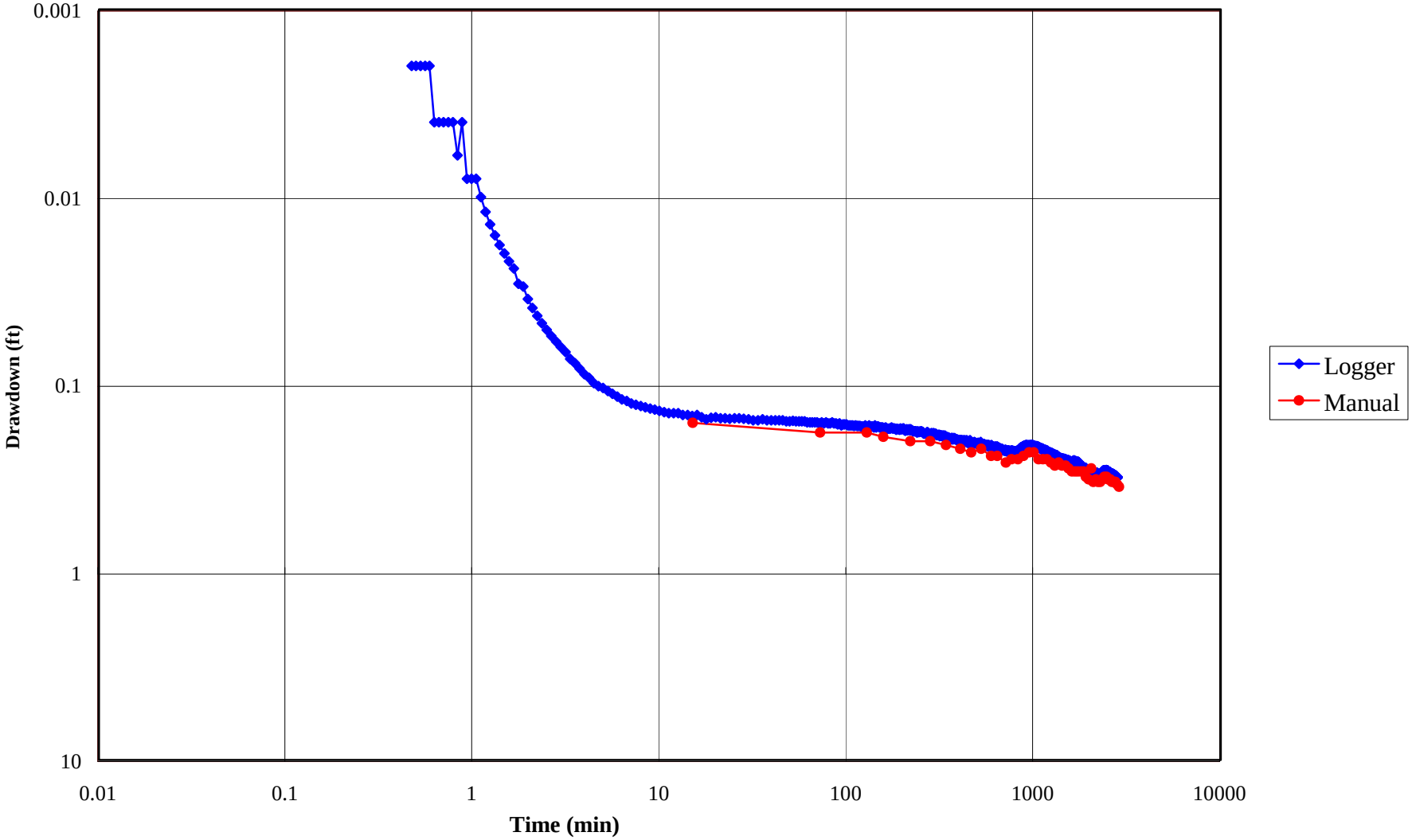


Figure A-15
Drawdown Versus Time (corrected): HWY-W05A

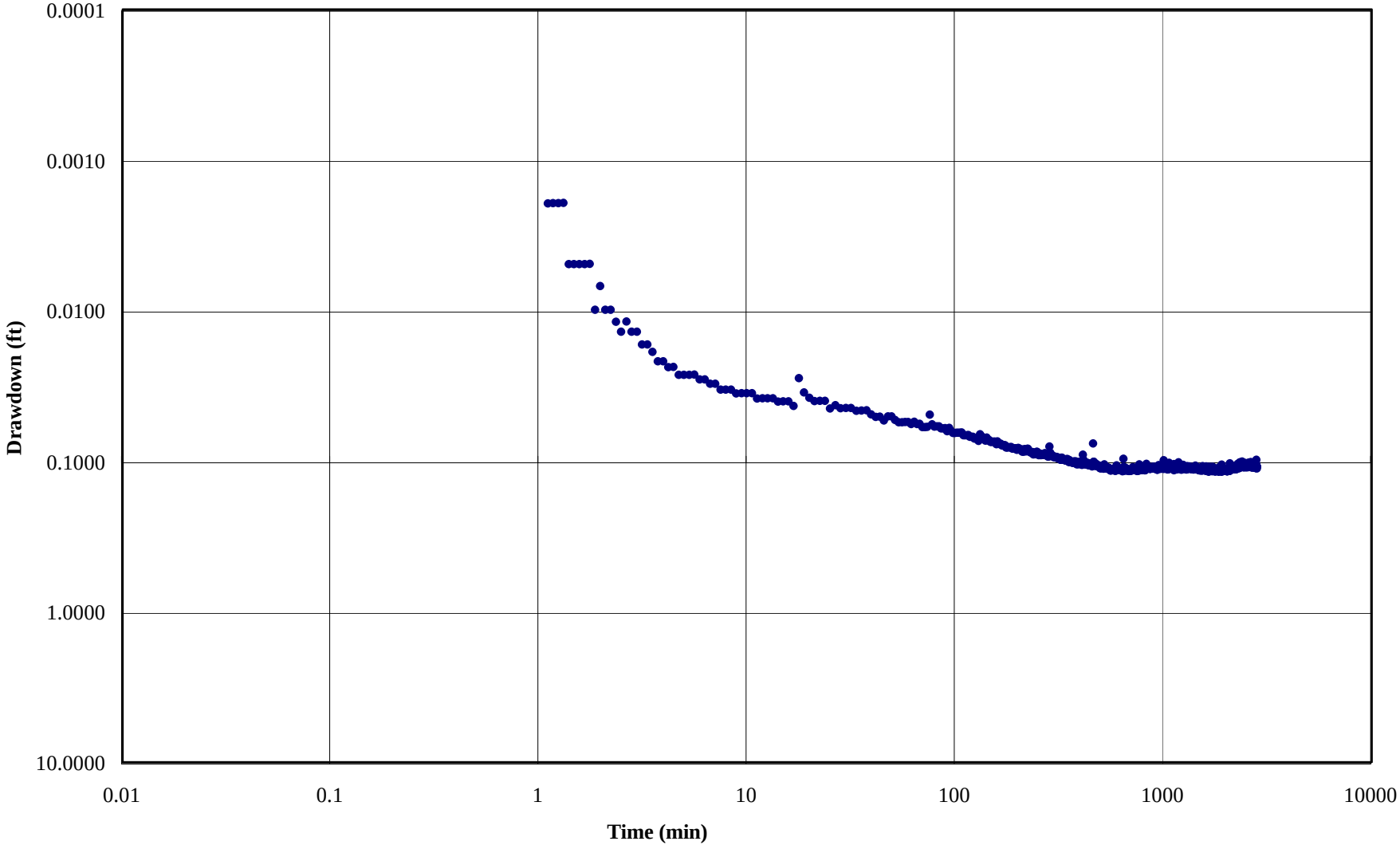


Figure A-16
Drawdown Versus Time (corrected): HWY-W05B

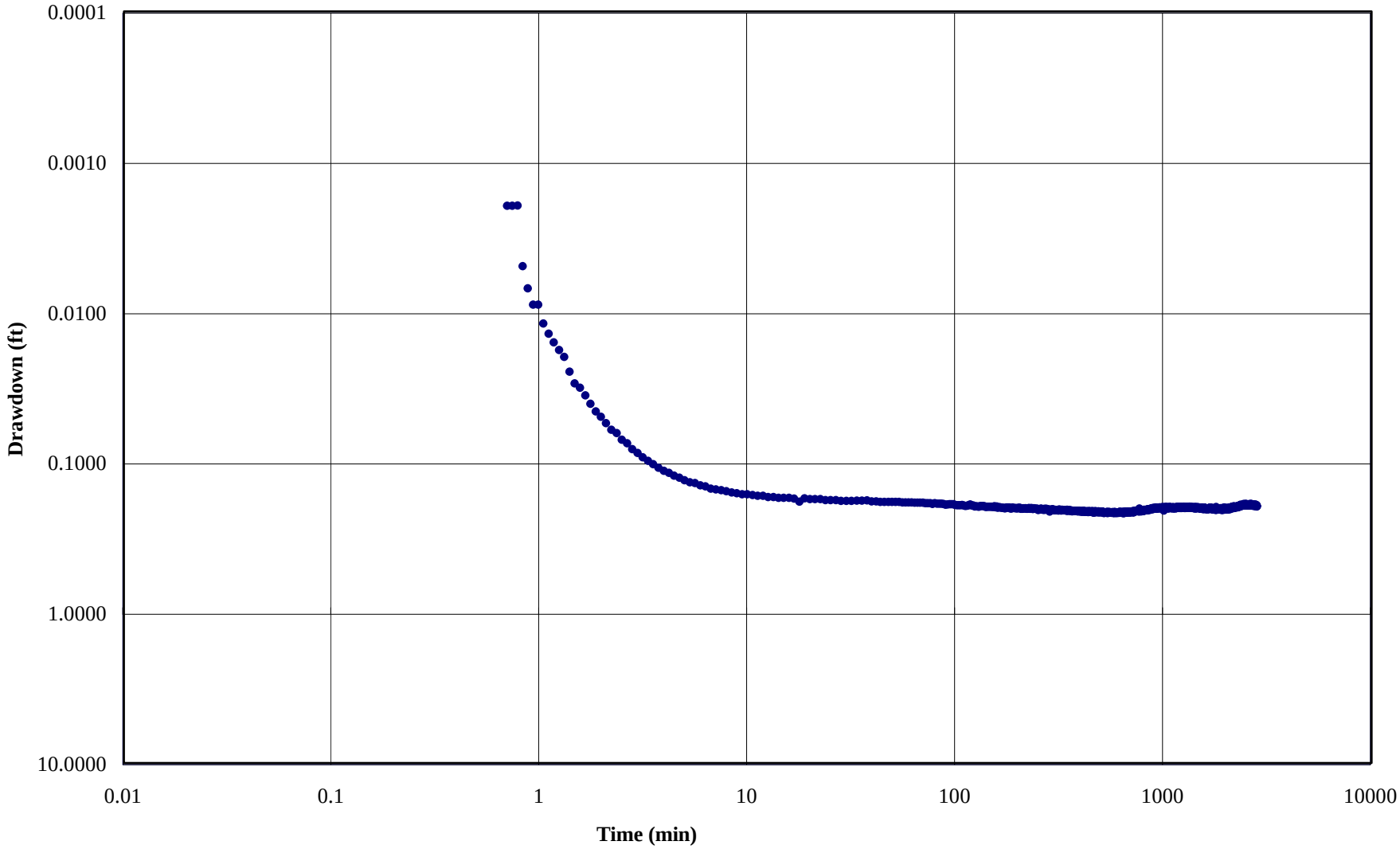


Figure A-17
Drawdown Versus Time (corrected): HWY-W06A

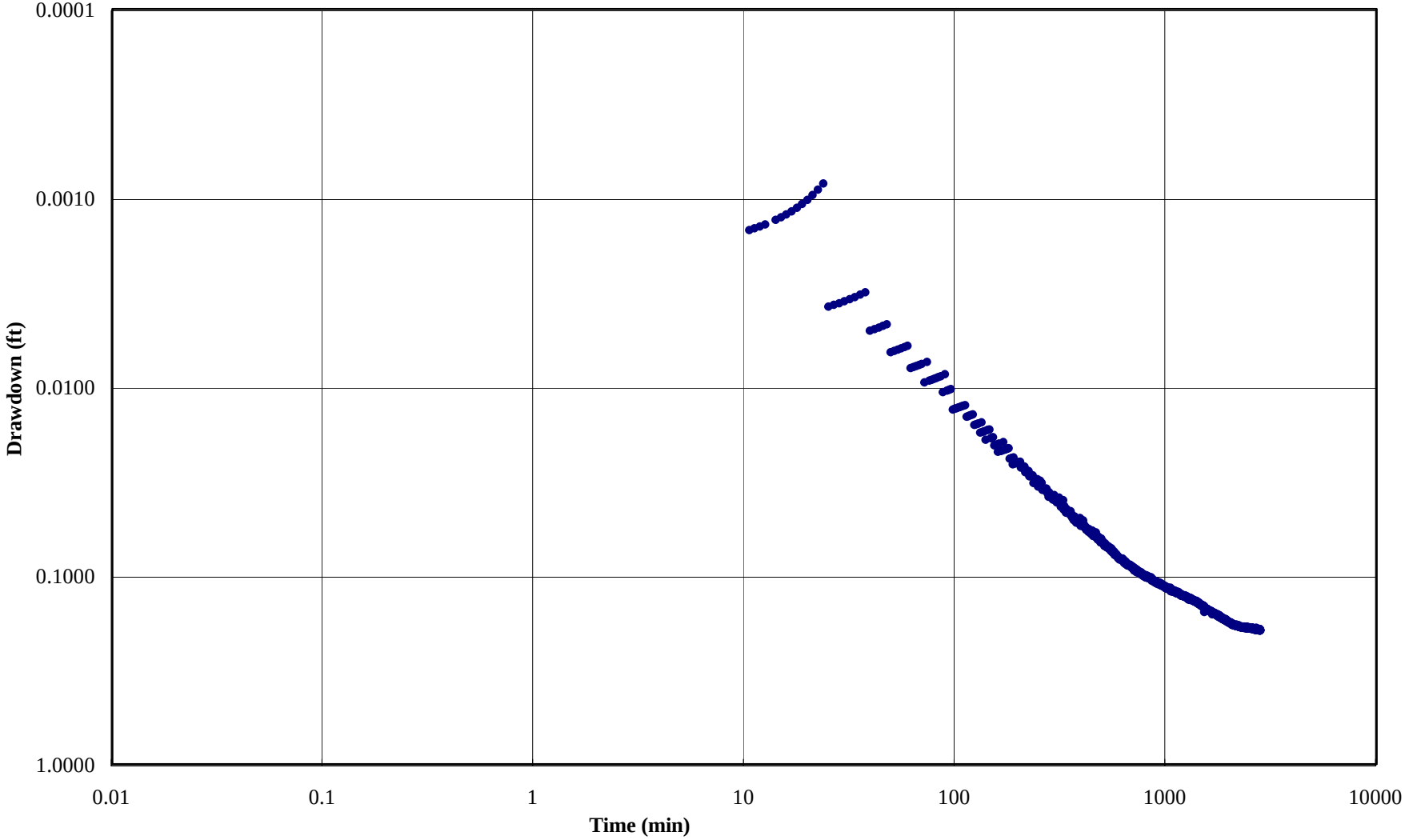


Figure A-18
Drawdown Versus Time (corrected): HWY-W06B

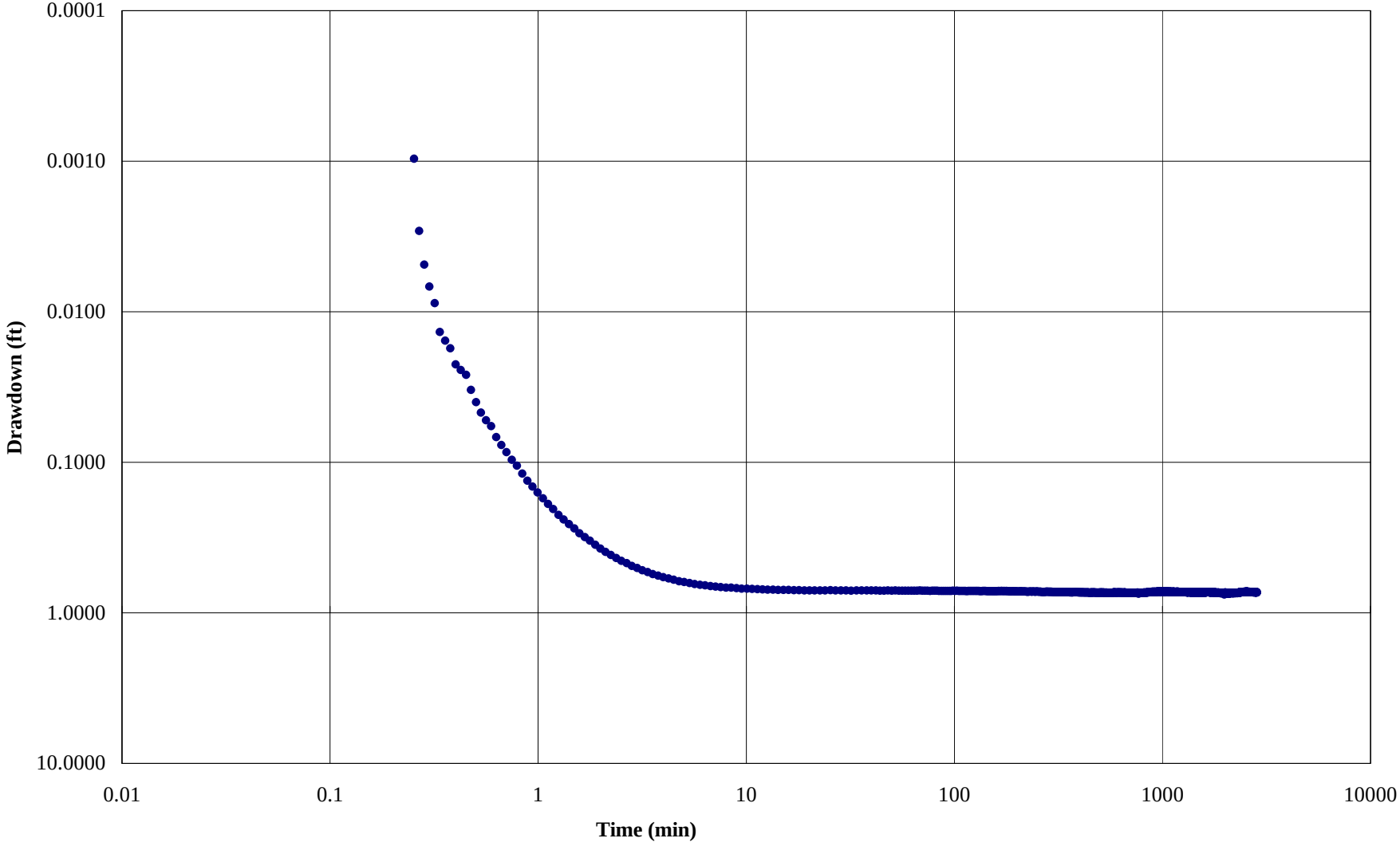


Figure A-19
Drawdown Versus Time (corrected): HWY-W07A

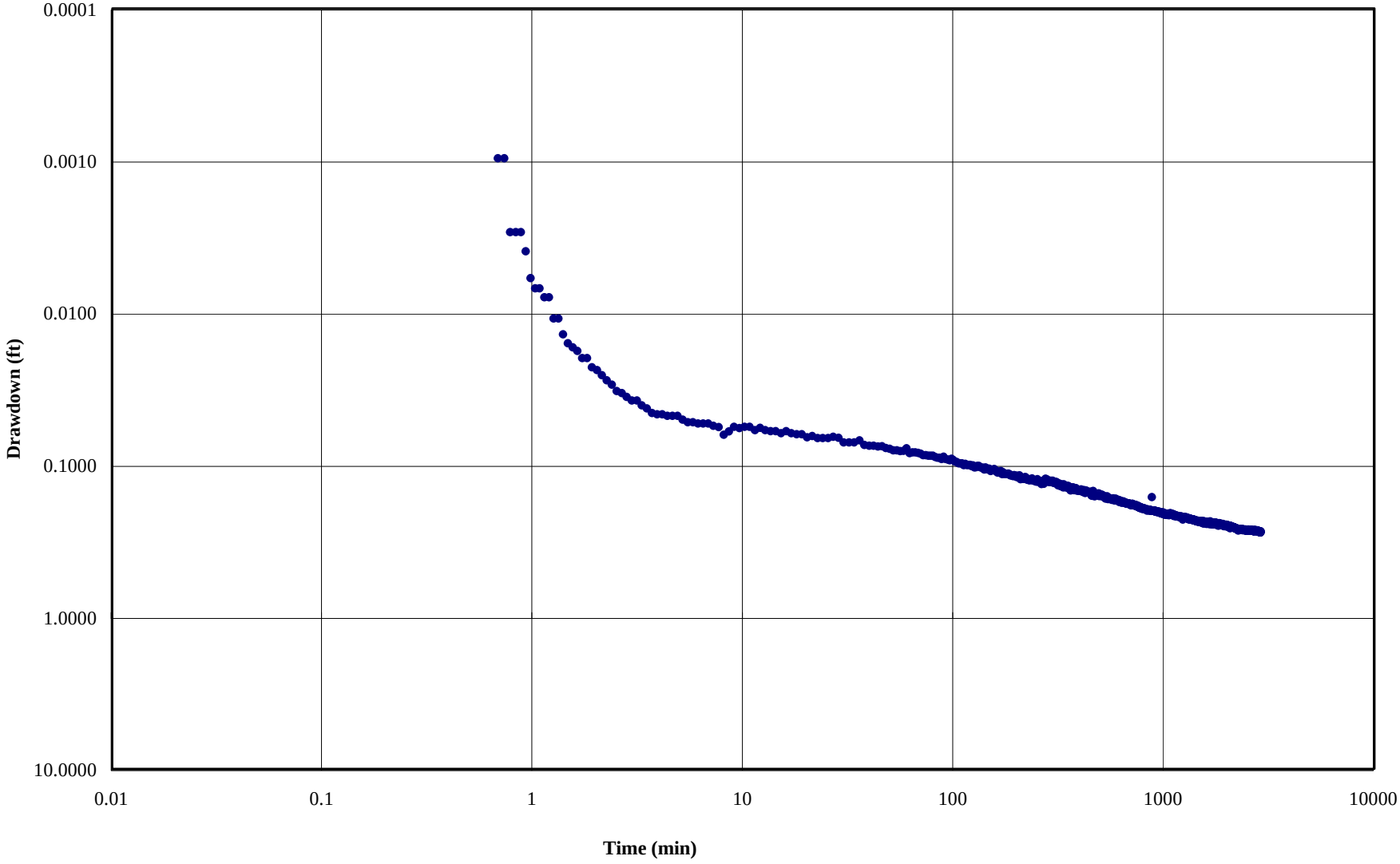


Figure A-20
Drawdown Versus Time (corrected): HWY-W07B

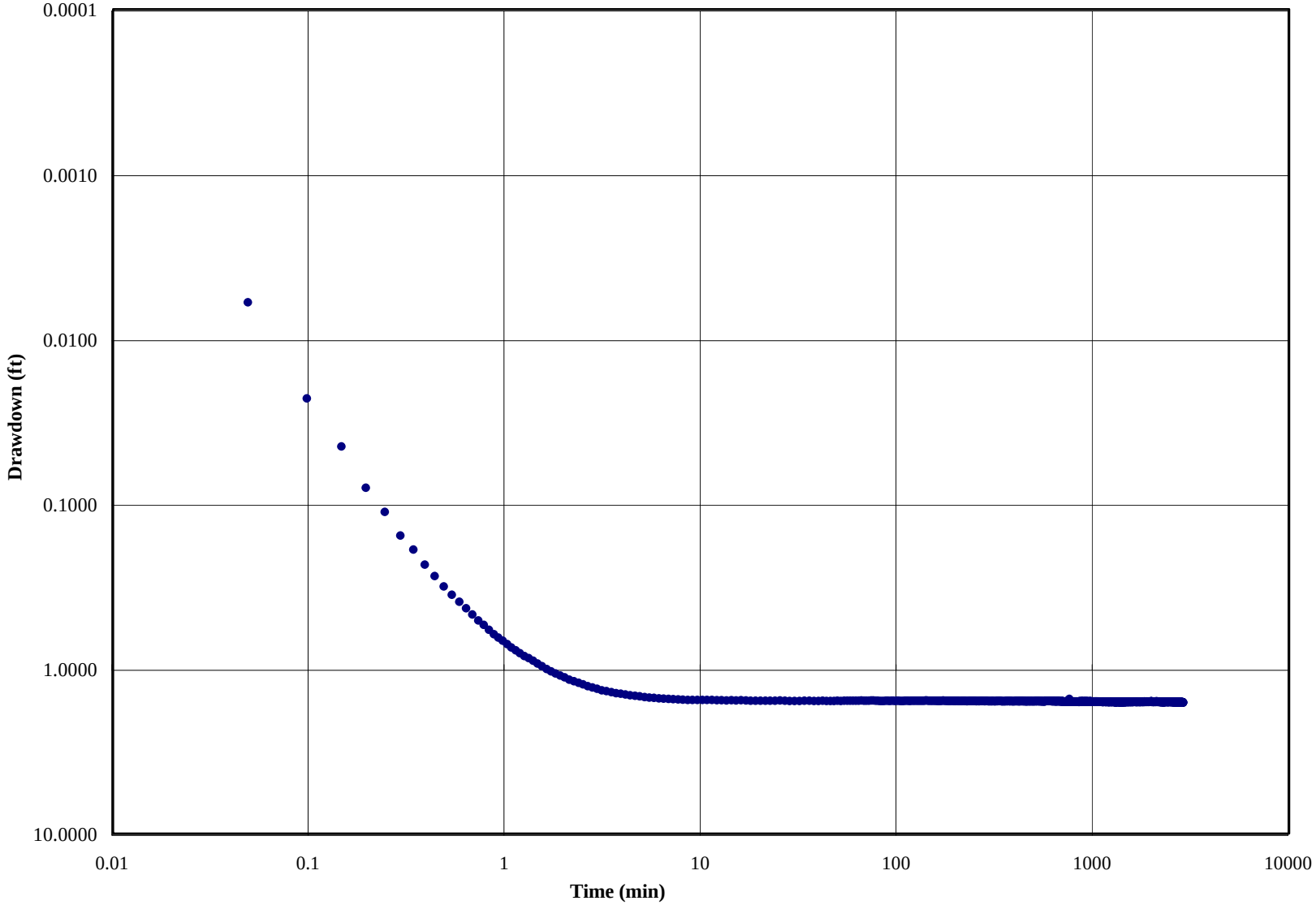


Figure A-21
Drawdown Versus Time (corrected): HWY-W07C

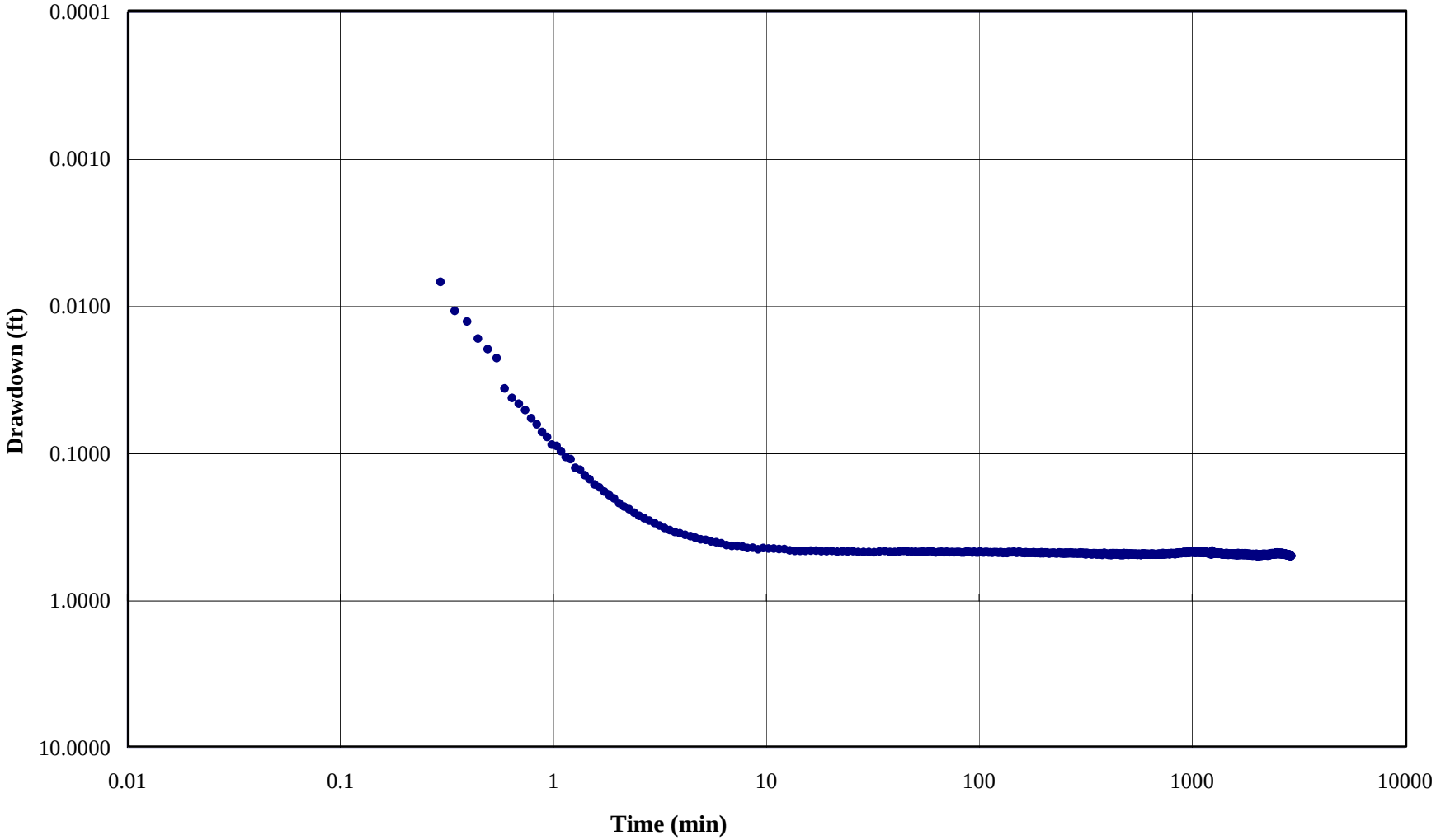


Figure A-22
Drawdown Versus Time (corrected): HWY-08EX

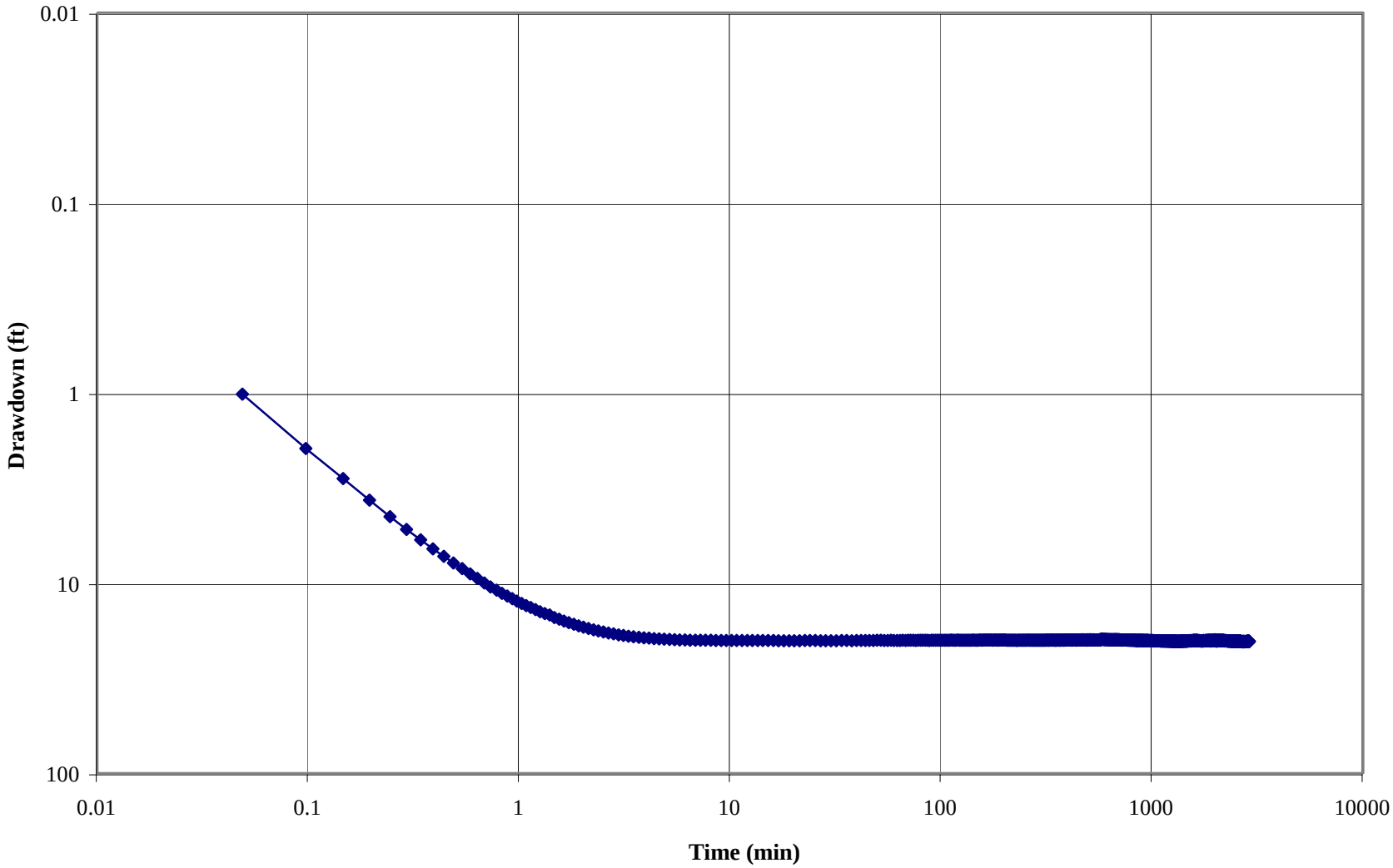


Figure A-23
Drawdown Versus Time (corrected): HWY-W09A

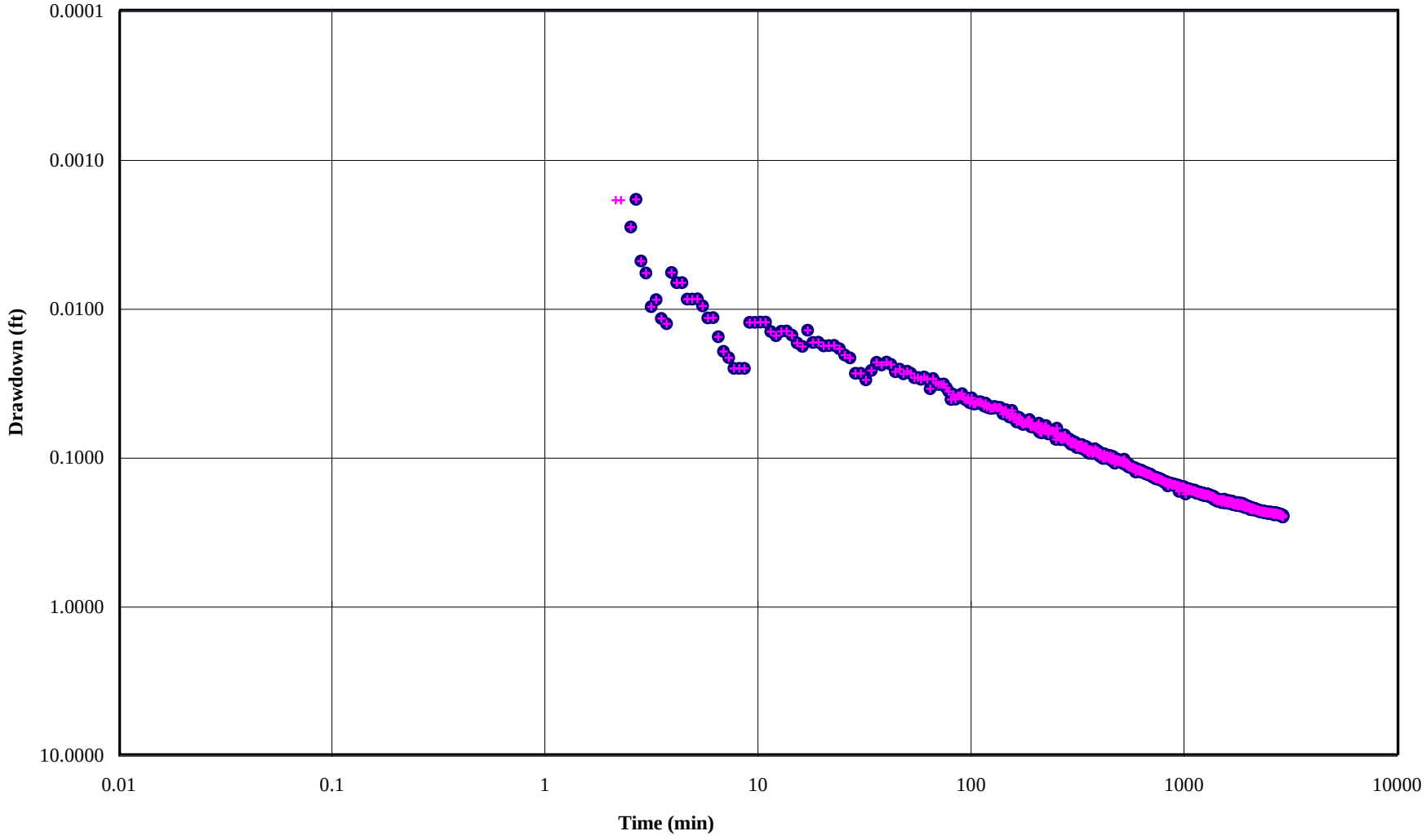


Figure A-24
Drawdown Versus Time (corrected): HWY-W09B

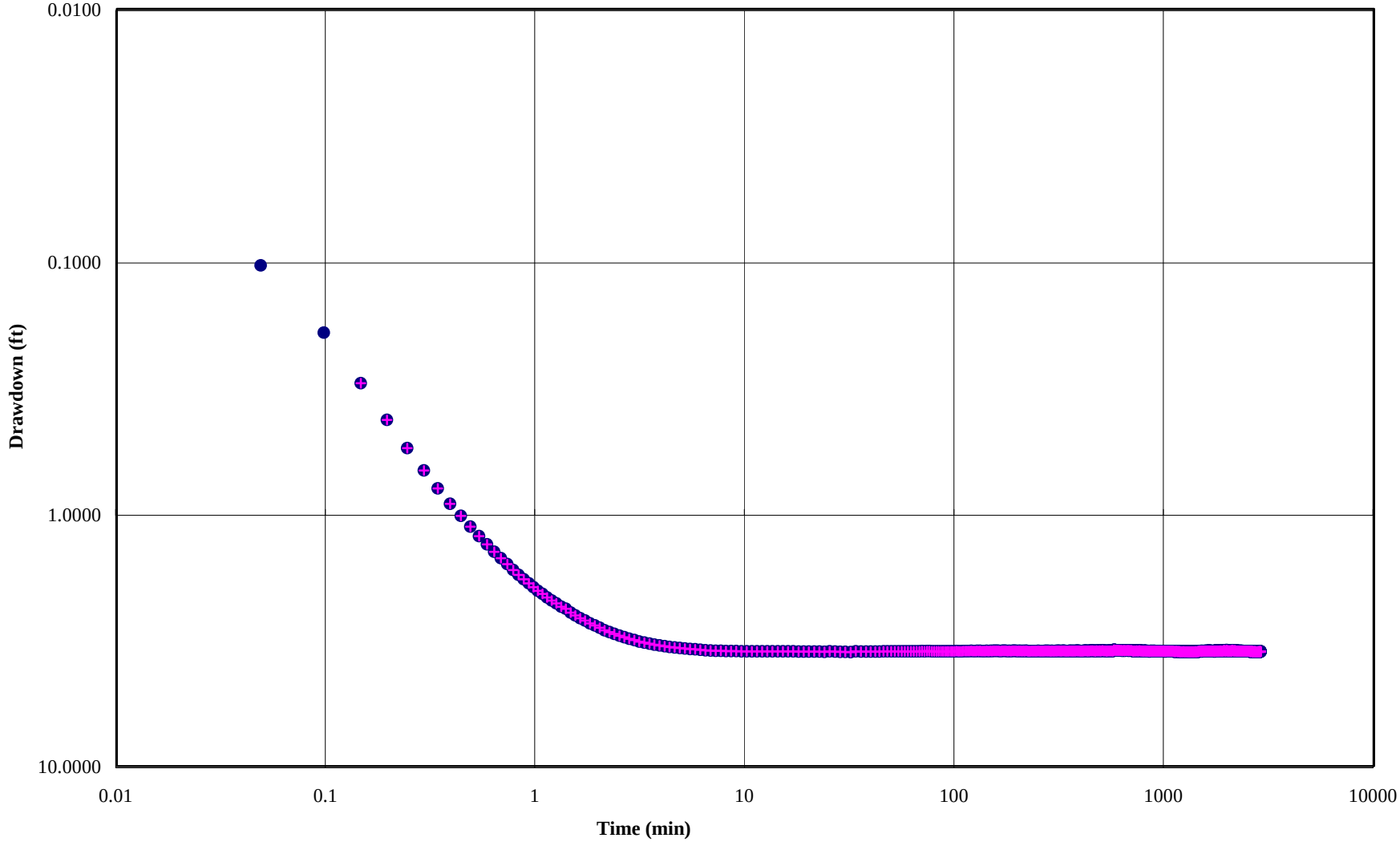


Figure A-25
Drawdown Versus Time (corrected): HWY-W10A

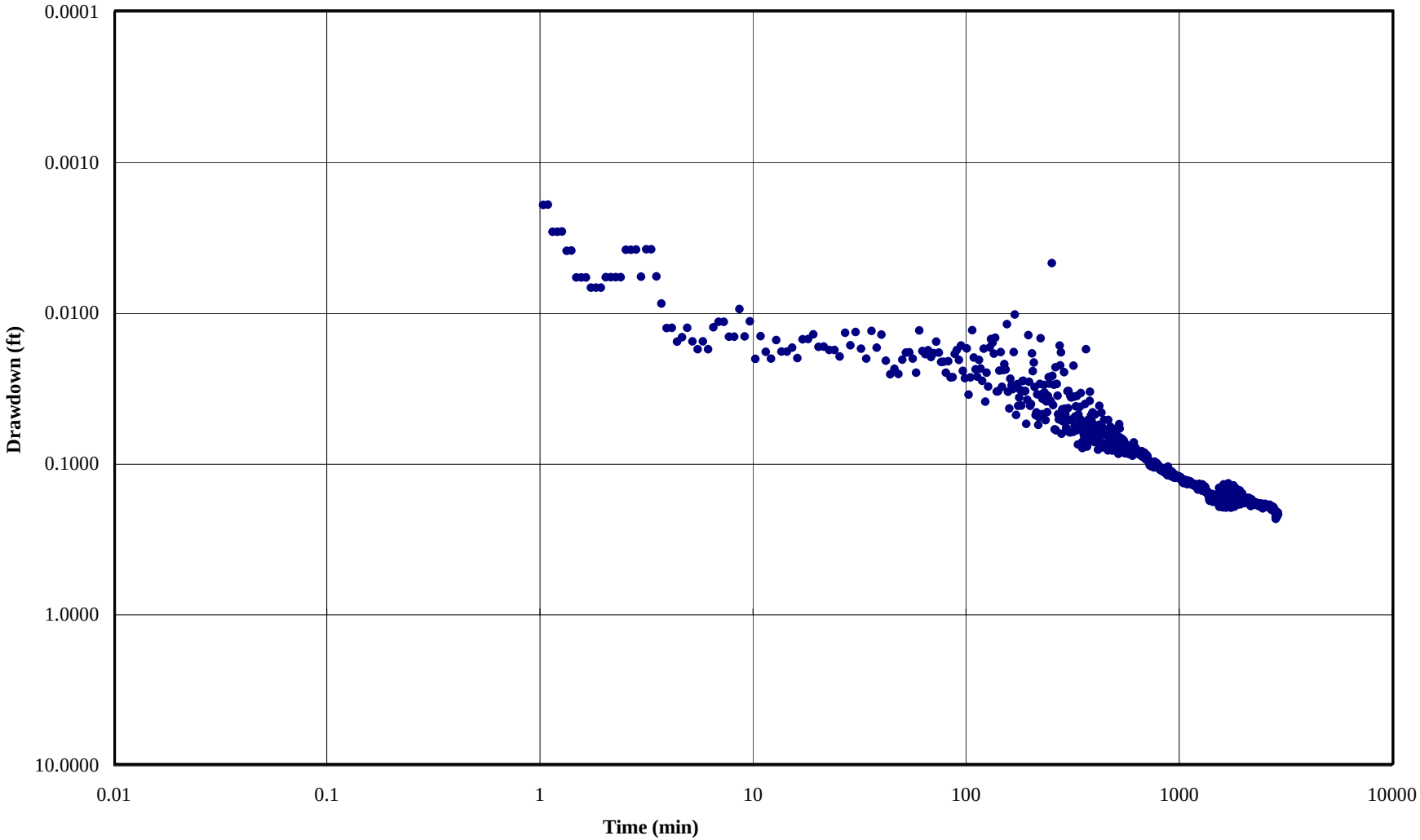


Figure A-26
Drawdown Versus Time (corrected): HWY-W10B

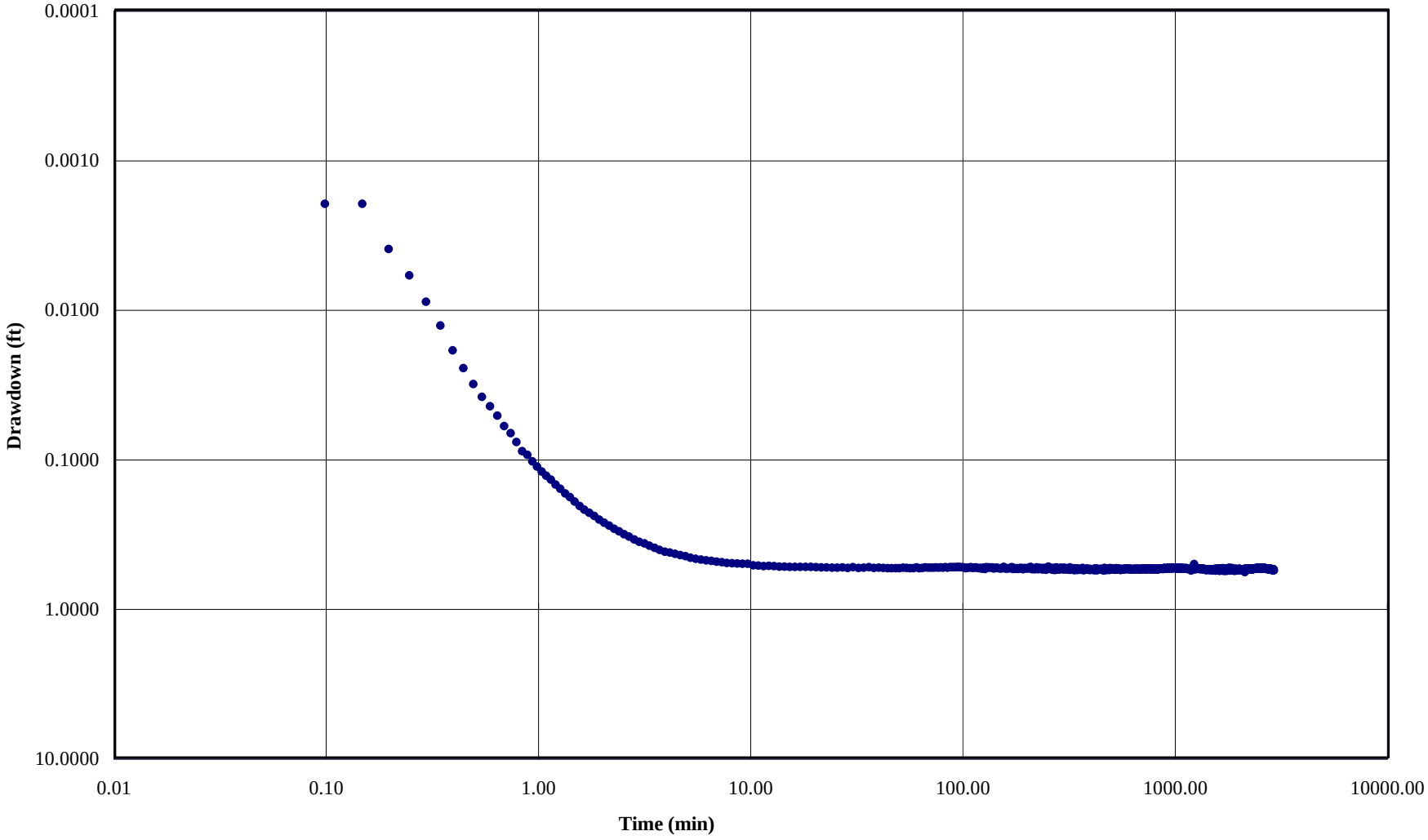


Figure A-27
Drawdown Verus Time (corrected): HWY-W11A

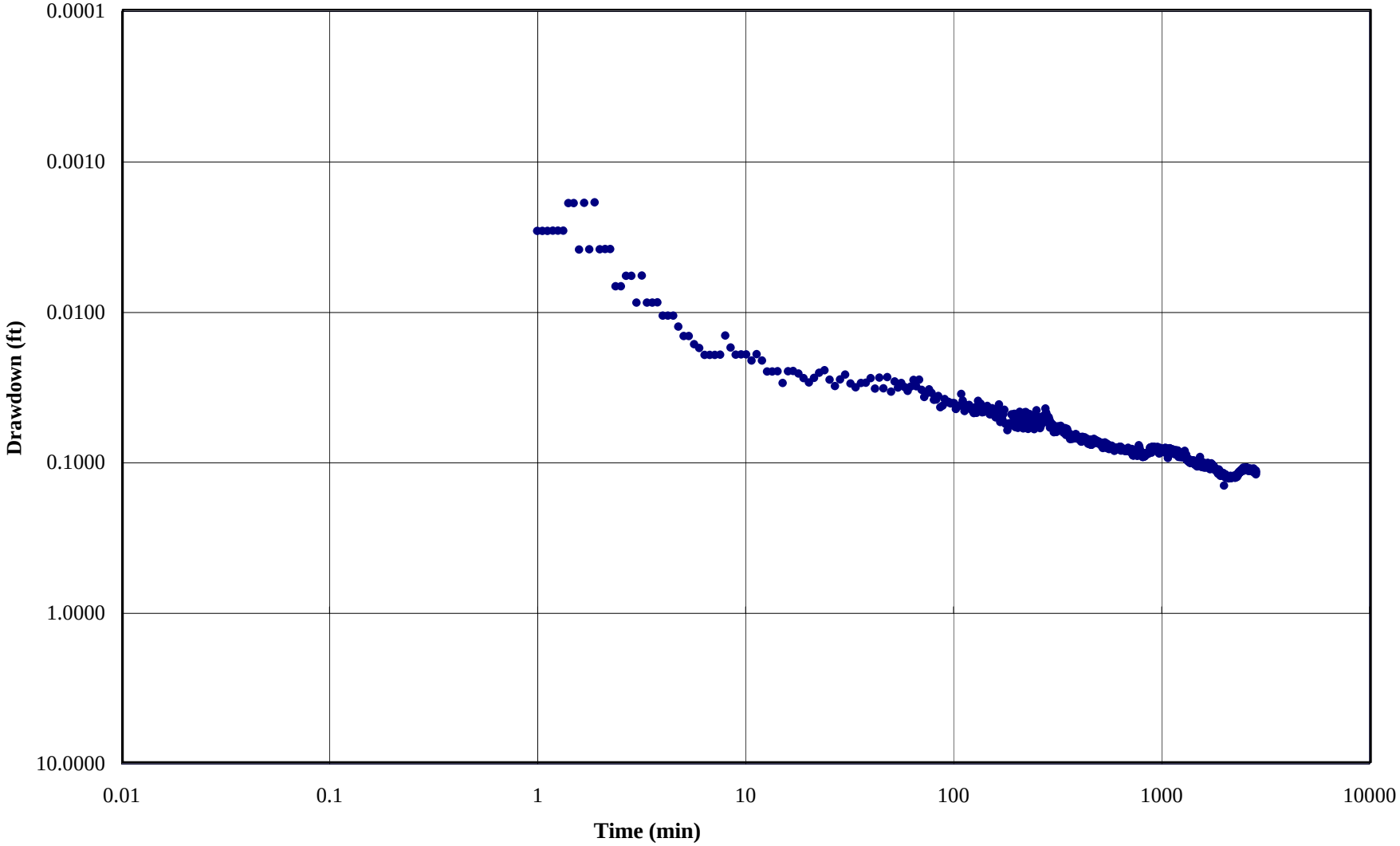
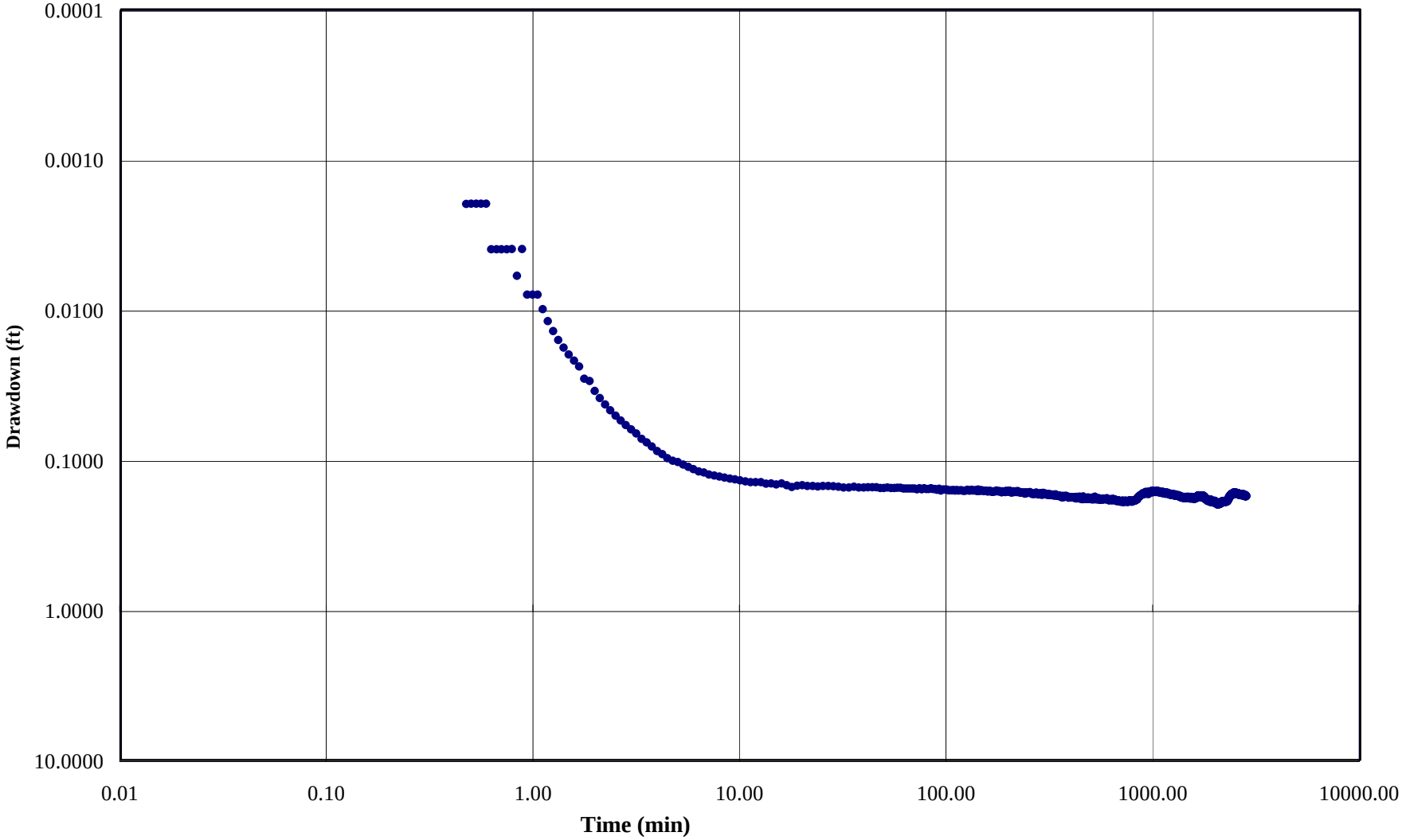


Figure A-28
Drawdown Versus Time (corrected): HWY-W11B



Σ²Π

AQUIFER TEST DATA LOGGING RECORD

TEST ID/TYPE: HWY W08EX / STEP

Project: RGW03 Date: 6/20/03

Project No. 771.4 Site Location: HIGHWAY TRANSECT

Data Logger Information:

Instrument Type: HERMIT 3000 Model: 3000 Serial No.: 45124

Number of Transducers Used for Test: 8

Delayed start (Y/N) N Starting Date/Time: 6/20/03 / 0930 Ending Date/Time: 6/20/03/1533

Logging Frequency: LOG Reference (TOC or Surface): DEPTH OF WATER

Test Number: 1 Steps: 3 + RECOVERY

Pumping/Injection Well Information:

Well ID: HWY W08EX No. Observation Wells: 7

Screened Interval (ft. BGS): 35.1 - 59.8 Stick up (ft.): 2.74

Initial Depth of Water (ft. TOC): 10.32 Date/Time: 6/20/03 0900

Ending Depth of Water (ft. TOC): 32.9 Date/Time: 6/20/03 1530 Kic Hoppell 6/23/03 0600

Data Logger Input Information:

Channel No.: 1
Station ID: W09A Transducer Serial No.: 7189 Pressure Range (psi): 10
Transducer-Linearity: 0.0222 Scale: 9.9339 Offset: 0.0645 Delay: N
Depth(ft. TOC): 18 Submergance (ft.): 9.6 Reference: N Date/Time: NA

Channel No.: 2
Station ID: W09B Transducer Serial No.: 6266 Pressure Range (psi): 15
Transducer-Linearity: 0.0640 Scale: ~~6266~~ 15.1363 Offset: -0.0319 Delay: N
Depth(ft. TOC): 41 Submergance (ft.): 32.7 Reference: N Date/Time: NA

Channel No.: 3
Station ID: W07A Transducer Serial No.: 5107 Pressure Range (psi): 10
Transducer-Linearity: 0.0293 Scale: 9.8834 Offset: -0.0073 Delay: N
Depth(ft. TOC): 18 Submergance (ft.): 8.12 Reference: N Date/Time: NA

Channel No.: 4
Station ID: W07B Transducer Serial No.: 6659 Pressure Range (psi): 15
Transducer-Linearity: 0.0673 Scale: 14.9199 Offset: 0.1074 Delay: N
Depth(ft. TOC): 42 Submergance (ft.): 32.64 Reference: N Date/Time: NA

Channel No.: 5
Station ID: W07C Transducer Serial No.: 1731 DC Pressure Range (psi): 10
Transducer-Linearity: 0.000 Scale: 10.005 Offset: -0.014 Delay: N
Depth(ft. TOC): 30 Submergance (ft.): 19.96 Reference: N Date/Time: NA

Channel No.: 6
Station ID: W10A Transducer Serial No.: 3103 EB Pressure Range (psi): 10
Transducer-Linearity: 0.011 Scale: 10.115 Offset: -0.045 Delay: NA
Depth(ft. TOC): 18 Submergance (ft.): 8.48 Reference: N Date/Time: NA

Channel No.: 7
Station ID: W10B Transducer Serial No.: 1012CH Pressure Range (psi): 10
Transducer-Linearity: 0.0144 Scale: 9.9869 Offset: 0.0282 Delay: N
Depth(ft. TOC): 30 Submergance (ft.): 20.58 Reference: N Date/Time: NA

Channel No.: 8
Station ID: W08EX Transducer Serial No.: 5791 Pressure Range (psi): 20
Transducer-Linearity: 0.0769 Scale: 19.6881 Offset: 0.041 Delay: N
Depth(ft. TOC): 38 Submergance (ft.): 27.68 Reference: N Date/Time: NA

Aquifer Test Data Logging Record

Record of Data Downloading			
Test/Step No.	Date	Time	Comments
W08EX			
STEP 1	6/20/03	1700	DATA DOWNLOADED ONTO DELL
			FIELD LAPTOP. H3000 NOT
			STEPPED BETWEEN STEPS 2+3
			THAN 1 FILE
STEP 2+3	6/23/03	1200	"
+RECOVERY			

Form 4. Data Logging Record (cont'd)

HIGHWAY 380 STEP TEST

S.S. PAPADOPULOS ASSOCIATES, INC.
Environmental and Water Resource Consultants

RECORD OF PUMPING

PVC STICKUP 4.1 FT

WELL NUMBER: HWY-W08EX

Project Name: RG WATERSHED STUDY Project Number: 771.4 Site Location: HWY

Pumping Well Parameters: BERKELEY 1720-450

Diameter: 10"

Screened Interval: 37.84 - 61.64 (PVC) Total Depth: 67.63 TOP OF STEEL

Measuring Point Description: VARIABLE · SEE NOTES DTW @ TOP OF DROP PIPE

Pump Type: 460V 3PHASE 20HP Capacity: 200 GPM Setting: 41.7 FT BGS (INTAKE)

Totalizing Flowmeter: INSTANTANEOUS

Brand name: McCROMETER ~~Scale (gal/rotation)~~: MAJ INC: 100 GPM MIN INC: 10 GPM Initial Reading: 117637

Contractor: RODGERS & CO Foreman: JEFF HITCHCOCK

SSP&A Personnel: LINDBLOM, HOBSON

Start of Pumping: Date: 6/20/03 Time: 0930 Pumping Rate Goal: STEP

Type of Test/ Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM) → by meter	Totalizer Reading (gal)	DTW ~~(ft. bgs)~~	Notes
SETUP	6/20/03	0804	—	—	11763700	10.28	TOP OF STEEL 11.60 DROP PIPE
STEP 1		0930	0	~30	11763700	11.60	ALL MSMT WILL BE TOP OF DROP PIPE
		0931	1	~30	NM	21.0	NOTE: METER BOUNCING 25-35 gpm
		0932	2	~30	NM	23.38	
		0933	3	~30	NM	24.32	
		0934	4	~30	11763800	24.72	1176
		0935	5	~30	NM	24.76	30 gal/42.5 sec = 42.3 gpm
		0936	6	~30	NM	24.87	
		0938	8	~30	NM	24.94	
		0940	10	~30	NM	25.32	30 gal/36 sec = 50 gpm (by 30 gal bands)
		0945	15	~30	NM	25.56	11764200 @ 0946 = 31 gpm
		0950	20	~30	NM	25.44	30 gal/36 sec = 50 gpm
		0955	25	~30	NM	25.42	
		1000	30	~30	NM	25.46	
		1005	35	~30	NM	25.44	30 gal 36 sec @ 1006 & 1007
		1010	40	20-30	11765000	25.44	32.5 gpm by ~~meter~~ totalizer
		1020	50	20-30	11765300	25.42	pump rate by meter has been consistent
		1030	60	20-30	11765600	25.44	10:26 XD=13.491 30 gpm by totalizer ~20-30 gpm
		1040	70	20-30	11765900	25.44	30 gal 36 sec @ 1037 30 gpm by totalizer
		1050	80	20-30	11766250	25.44	
		1100	90	20-30	NM	25.42	30 gal 36.3 sec @ 1103

Σ²Π

NM = NO MEASUREMENT

RECORD OF PUMPING

WELL NUMBER: HWY - W08EX

Start of Pumping: 6/20/03 0930

Date: 6/20/03 Time: 1110 Pumping Rate Goal: STEPS ← 50, 64

Type of Test/Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW ~~(ft. bgs)~~	Notes
STEP 1 CONT	6/20/03	1110	100	20-30	11766850	25.38	YD=13.483 @ 1108
↓	↓	1120	110	20-30	117672	25.34	30 GAL / 36.7 sec @ 1119
↓	↓	1130	120	NM	NM	25.33	
STEP 2	↓	1131	121	NM	NM	26.48	increase flow rate
↓	↓	1132	122	NM	NM	27.26	
↓	↓	1133	123	NM	NM	27.54	30 gal / 32 sec = 56 gpm
↓	↓	1134	124	NM	NM	27.96	increase flow rate
↓	↓	1135	125	NM	NM	28.86	30 gal / 27 sec = 66.7 gpm
↓	↓	1136	126	NM	NM	29.22	
↓	↓	1137	127	NM	NM	29.40	
↓	↓	1138	128	NM	NM	29.42	
↓	↓	1139	129	40-50	11767850	29.44	
↓	↓	1140	130	NM	NM	29.44	
↓	↓	1142	132	NM	NM	29.44	
↓	↓	1144	134	NM	NM	29.46	30 gal / 28 sec = 64.3 gpm
↓	↓	1146	136	NM	NM	29.46	
↓	↓	1148	138	NM	NM	29.48	
↓	↓	1150	140	NM	NM	29.49	
↓	↓	1155	145	NM	NM	29.49	30 GAL / 28 sec = 64.3 GPM
↓	↓	1200	150	NM	NM	29.49	
↓	↓	1205	155	NM	NM	29.48	WC @ 1209 T = 10.4 pH 7.9 COND 0.567 mS/sec
↓	↓	1210	160	NM	NM	29.49	
↓	↓	1220	170	40-60	11769900	29.49	30 GAL / 28 sec = 64.3 GPM @ 1222
↓	↓	1230	180	50-60	11770500	29.49	WC @ 1233 T = 10.0 pH 7.9 COND 0.475
↓	↓	1240	190	50-60	11771100	29.46	YD: 9.499 FT @ 1241
↓	↓	1250	200	50-60	11771600	29.43	

Form 2. Record of Pumping (cont'd)

Σ²Π

RECORD OF PUMPING

WELL NUMBER: HWY-W08EX

Start of Pumping:

Date: 6/20/03 Time: 1247 Pumping Rate Goal: STEPS 50/64/82 GPM

Type of Test/Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW (~~ft bgs~~)	Notes
STEP 2 cont	6/20/03	1300	210	50-60	11772200	29.44	
		1310	220	50-60	11772700	29.49	
		1320	230	50-60	11773300	29.48	30 GAL/28 SEC @ 1327
		1330	240	50-60	11773800	29.43	
STEP 3		1331	241	70-75	NM	32.43	81 GPM
		1332	242	70-75	NM	33.62	82 GPM
		1333	243	70-75	NM	34.11	
		1334	244	70-75	NM	34.28	
		1335	245	70-75	NM	34.38	YD = 4.6
		1336	246	70-75	11774300	34.41	YD = 4.6 @ 1337
		1338	248	70-75	11774500	34.39	
		1340	250	70-75	11774700	34.38	
		1345	255	70-75	11775000	34.36	~~22~~ 30 GAL/22 SEC @ 1348 = 82 gpm
		1350	260	70-75	11775400	34.35	YD = 4.657 @ 1353
		1355	265	70-75	11775800	34.26	
		1400	270	70-75	11776200	34.29	30 GAL/22 SEC @ 1402 = 82 gpm
		1405	275	70-75	11776600	34.34	
		1410	280	70-75	11776950	34.34	
		1420	290	70-75	11777800	34.28	
		1430	300	70-75	11778500	34.29	
		1440	310	70-75	11779250	34.30	~~22~~ 30 GAL/22 SEC @ 1448
		1450	320	70-75	11780100	34.32	
		1500	330	70-75	11780900	34.30	
		1510	340	70-75	11781650	34.28	WC @ 1512 T = 11.0 pH: 7.8 cond 0.557
		1520	350	70-75	11782450	34.28	
		1530	360	70-75	11783250	34.26	

Σ²Π

RECORD OF PUMPING

WELL NUMBER: HWY-W08EX

Start of Pumping:

Date: 6/20/03 Time: 1522 Pumping Rate Goal: 50/64/82 GPM

Type of Test/Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW ~~(ft. bgs)~~	Notes
Recovery	6/20/03	1531	361				
		1532	362				
		1533	363				
		1534	364				
		1535	365				
		1536	366				
		1538	368				
		1540	370				
		1545	375				
		1550	380				
		1555	385				
		1600	390				
		1605	400				
		1610	405				
		1533	Pump off				
Recovery	6/20/03	1534	1	0	1178360	18.58	
		1535	2			14.50	
		1536	3			13.84	
		1537	4			12.20	
		1538	5			11.90	
		1539	6			11.79	
		1541	8			11.70	
		1543	10			11.68	
		1556	22			11.60	

Form 2. Record of Pumping (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY W09A

Project Name: RGWSS Project Number: 771.4 Site Location: HIGHWAY 380 TRANSECT

Pumping Well: HWY W08EX

Pumping Rate: STEPS AT 50, 64, 82

Start of Pumping 6/20/03 0930 (Date Time)

End of Pumping 6/20/03 1533 (Date Time)

Monitoring Well:

Measuring Point Description: TOP OF STEEL

Measurement Frequency: 30 MIN

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/20/03	0953	Ø	10.05		XD: 9.354 FT
Step 1	~~6/20/03~~	~~1005~~		~~8.84~~		
"	6/20/03	1009	39	10.08	0.03	XD: 9.326 @1025
"	"	1031	61	10.09	0.04	
"	"	1056	86	10.10	0.05	XD: 9.311 @ 1108
"	"	1123	113	10.10	0.05	XD: 9.318 @ 1125
STEP 2	"	1203	153	10.11	0.06	XD: 9.301 @ 1207
		1234	184	10.12	0.07	XD = 9.285 @ 1241
"	"	1303	213	10.13	0.08	XD = 9.285 @ 1315
STEP 3		1348	258	10.14	0.09	XD: 9.272 @ 1352
"	"	1437	307	10.16	0.11	XD = 9.258 @ 1431
		1505	335	10.17	0.12	XD: 9.251 @ 1500
		1524	354	10.18	0.13	
REC		1543	377	10.14	0.09	

9A

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY W09B

Project Name: RGWSS Project Number: 771.4 Site Location: HIGHWAY 380 TRANSECT

Pumping Well: HWY W08EX

Pumping Rate: STEPS @ 50, 64, 82

Start of Pumping 6/20/03 0930 (Date / Time)

End of Pumping 6/20/03 1533 (Date / Time)

Monitoring Well:

Measuring Point Description: TOP OF STEEL

Measurement Frequency: 30 MIN

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/20/03	0754	Ø	9.96	0.0	XD: 32.265FT
Step 1	"	~~1005~~		~~9.33~~	~~2.28~~	XD: 30.022 @ 1025
"	"	1010	40	12.24	2.28	
"	"	1031	61	12.24	2.28	
"	"	1057	87	12.24	2.28	XD: 30.031 @ 1108
"	"	1123	113	12.23	2.27	XD: 30.043 @ 1125
STEP 2	"	1203	153	12.85	2.89	XD: 29.420 @ 1206
	"	1235	185	12.85	2.89	XD: 29.400 @ 1242
"	"	1303	213	12.85	2.89	XD=29.581 @ 1315
STEP 3	"	1348	258	13.55	3.59	XD: 28.691 @ 1352
		1436	306	13.55	3.59	XD: 28.685 @ 1432
		1506	336	13.54	3.58	XD: 28.643 @ 1459
		1524	354	13.56	3.60	
REC	"	1547	377	10.04	0.08	

22

22.1

22.9

4.675

9B

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY W07A

Project Name: ROWSS Project Number: 771.4 Site Location: HIGHWAY 380 TRANSECT

Pumping Well: HWY W08EX

Pumping Rate: STEPS @ 50, 64, 82

Start of Pumping 6/20/03 (Date) 0930 (Time)

End of Pumping 6/20/03 (Date) 1531 (Time)

Monitoring Well:

Measuring Point Description: TOP OF STEEL

Measurement Frequency: ~~VARIABLE~~ 30 MIN

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/20/03	0752	Ø	11.15		XD: 7.891'
Step 1	"	1005	35	11.20	0.05	XD: 7.834' @ 1025
"	"	1032	62	11.21	0.06	
"	"	1056	85	11.22	0.07	XD: 7.826 @ 1107
"	"	1124	114	11.22	0.07	XD: 7.828 @ 1125
STEP 2	"	1202	152	11.24	0.09	XD: 7.805 @ 1208
"	"	1231	181	11.25	0.10	XD 7.792 @ 1241
"	"	1302	212	11.27	0.12	XD = 7.791 @ 1314
STEP 3	"	1348	258	11.29	0.14	XD: 7.769 @ 1352
"	"	1435	305	11.31	0.16	XD: 7.752 @ 1431
		1504	334	11.31	0.16	XD: 7.744 @ 1500
		1522	352	11.32	0.17	
REC		1546	376	11.25	0.10	

7A

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY W 07B

Project Name: ROWSS Project Number: 771.4 Site Location: HIGHWAY 380 TRANSECT

Pumping Well: HWY W 08EX

Pumping Rate: STEP 1 50.64

Start of Pumping 6/20/03 0730 (Date Time)

End of Pumping 6/20/03 1537 (Date Time)

Monitoring Well:

Measuring Point Description: TOP OF STEEL

Measurement Frequency: 30 MIN

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/20/03	0751	Ø	11.04		XD: 32.270'
Step 1	6/20/03	1005	35	12.08	1.04	XD: 31.252 @ 1029
"	"	1032	62	12.08	1.04	
"	"	1056	86	12.08	1.04	XD: 31.253 @ 1107
"	"	1123	113	12.08	1.04	XD: 31.256 @ 1125
STEP 2	"	1202	152	12.32	1.28	XD: 30.977 @ 1207
"	"	1232	182	12.37	1.33	XD: 30.969 @ 1241
"	"	1302	212	12.38	1.34	XD = 30.948 @ 1314
STEP 3	"	1347	257	12.70	1.66	XD: 30.617 @ 1352
"	"	1435	305	12.71	1.67	XD: 30.613 1431
		1505	335	12.71	1.67	XD: 30.608 @ 1500
		1522	352	12.73	1.69	
REC		1546	376	11.13	0.09	

48

48

44

7B

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY W07C

Project Name: RGWSS Project Number: 771.4 Site Location: HIGHWAY 380 TRANSECT

Pumping Well: HWY W08C
Pumping Rate: STEPS @ 50, 64, 82
Start of Pumping 6/20/03 0930
End of Pumping 6/21/03 1537 (Date Time)

Monitoring Well:
Measuring Point Description: TOP OF STEEL
Measurement Frequency: 30 MIN

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/20/03	0750	Ø	10.87		XD: 20.781 FT
Step 1	6/20/03	1004	34	11.20	0.33	XD: 20.460 FT @1024
"	"	1033	63	11.19	0.32	
"	"	1055	85	11.19	0.32	XD: 20.460 @ 1106
"	"	1124	114	11.19	0.32	XD: 20.457 @ 1125
STEP 2		1202	152	11.29	0.42	XD: 20.365 @ 1208
"	"	1231	183	11.29	0.42	XD: 20.365 @ 1241
	"	1301	213	11.30	0.43	XD=20.360 @ 1313
STEP 3	"	1346	258	11.39	0.52	XD: 20.263 @ 1352
		1435	307	11.41	0.54	XD: 20.248 @ 1430
		1504	336	11.41	0.54	XD: 20.243 @ 1501
		1521	343	11.41	0.54	
REC		1545	367	10.95	0.08	

7C

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY W06A

Project Name: RGWSS Project Number: 771.4 Site Location: HIGHWAY 380 TRANSECT

Pumping Well: HWY W08EX

Pumping Rate: STEPS @ 30, 64, 82

Start of Pumping 6/20/03 0930 (Date Time)

End of Pumping 6/20/03 ~~1534~~ 1537 (Date Time)

Monitoring Well:

Measuring Point Description: TOP OF STEEL

Measurement Frequency: ~~HOURLY~~ 30 MIN

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/20/03	0755	0	8.83		
Step 1	"	1005	35	8.84	0.01	
"	"	1035	65	8.84	0.01	
"	"	1057	87	8.85	0.02	
"	"	1121	111	8.85	0.02	
STEP 2	"	1204	154	8.86	0.03	
"	"	1235	185	8.86	0.03	
"	"	1304	214	8.87	0.04	
STEP 3		1349	259	8.86	0.03	
"	"	1438	307	8.87	0.04	
		1506	335	8.88	0.04	
		1525	354	8.89	0.05	
REC.		1548	377	8.89	0.05	

6A

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY WØ6B

Project Name: RGWSS Project Number: 771.4 Site Location: HIGHWAY 380, TRANSECT

Pumping Well: HWY W08EX

Pumping Rate: STEPS @ 50, 64, 82

Start of Pumping 6/20/03 0930 (Date / Time)

End of Pumping 6/20/03 1532 (Date / Time)

Monitoring Well:

Measuring Point Description: TOP OF STEEL

Measurement Frequency: ~~[illegible]~~ 30 MIN

	Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
	PRE	6/20/03	0756	Ø	8.84		
106	Step 1	"	1005	35	9.33	0.46	
	"	"	1035	65	9.34	0.47	
	"	"	1057	87	9.32	0.45	
	"	"	1121	111	9.34	0.47	
	STEP 2	"	1205	155	9.47	0.63	
100	"	"	1235	185	9.48	0.64	
	"	"	1304	214	9.48	0.64	
	STEP 3	"	1349	259	9.62	0.78	
102.5	"	"	1438	308	9.64	0.80	
			1507	336	9.64	0.80	
			1525	354	9.65	0.81	
	REC.		1548	377	8.91	0.07	

6B

Form 5. Monitoring Well Water Levels

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY W10A

Project Name: ~~RGWW~~ RGWSS Project Number: 771.4 Site Location: HIGHWAY 380 TRANSECT

Pumping Well: HWY W08EX

Pumping Rate: STEPS @ 50, 64, 82

Start of Pumping 6/20/03 0930 (Date / Time)

End of Pumping 6/20/03 ~~1534~~ 1533 (Date / Time)

Monitoring Well:

Measuring Point Description: TOP OF STEEL

Measurement Frequency: VARIABLE 30 MIN

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/20/03	0747	Ø	11.11		XD = 8.148 FT
STEP 1	6/20/03	1003	33	11.13	0.02	XD = 8.061 FT @ 1023
"	"	1034	64	11.13	0.02	
"	"	1055	85	11.14	0.03	XD = ~~8.06~~ 8.136 @ 1105
"	"	1123	113	11.13	0.02	XD = 8.134 @ 1125
STEP 2	"	1201	151	11.15	0.04	XD: 8.117 @ 1209
"	"	1230	180	11.15	0.04	XD: 8.061 @ 1241
"	"	1300	210	11.15	0.04	XD = 8.087 @ 1312
STEP 3	"	1345	255	11.18	0.07	XD: 8.159 @ 1351
		1432	302	11.18	0.07	XD: 8.072 @ 1430
		1502	332	11.18	0.07	XD: 8.083 1502
		1320	350	1119	0.08	
REC		1544	374	11.18	0.07	

2.80

726

10A

4.657

Form 5. Monitoring Well Water Levels

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY CW10B

Project Name: RGWSS Project Number: 771.4 Site Location: HIGHWAY 380 TRANSECT

Pumping Well: HWY CW38EX

Pumping Rate: STEPS @ 54, 64, 82

Start of Pumping 6/20/03 ~~0430~~ 0930 (Date Time)

End of Pumping 6/20/03 ~~1530 1534~~ 1533 (Date Time)

Monitoring Well:

Measuring Point Description: TOP OF STEEL

Measurement Frequency: 30 min

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/20/03	0748	8	10.96		XD: 20.309 FT
Step 1	6/20/03	1004	34	11.31	~~0.05~~ 0.35	XD: 19.954 FT @1024
"	"	1034	64	11.32	0.36	
"	"	1055	85	11.32	0.36	XD: 19.970 @1106
"	"	1123	113	11.33	0.37	XD: 19.961 @ 1025
STEP 2	"	1201	151	11.42	0.46	XD: 19.855 @ 1208
"	"	1230	180	11.44	0.48	XD: 19.838 @ 1240
"	"	1300	210	11.44	0.48	XD = 19.844 @ 1312
STEP 3	"	1346	256	11.55	0.59	XD: 19.736 @ 1351
		~~1434~~ 1434	304	11.56	0.60	XD: 19.727 @ 1430
		1503	333	11.56	0.60	XD: 19.735 @ 1501
		1520	350	11.56	0.60	
REC.		1545	375	11.05	0.09	

10B

Form 5. Monitoring Well Water Levels

MONITORING WELL WATER LEVELS

WELL NUMBER: ~~MW05A~~ HWY W05A

5A

Project Name: RGW22 Project Number: 771.4 Site Location: HIGHWAY 380

Pumping Well: HWY W08EX

Pumping Rate: STEPS @ 50, 64, 82

Start of Pumping 6/20/03 0930 (Date Time)

End of Pumping 6/20/03 1553 (Date Time)

Monitoring Well:

Measuring Point Description: TOP OF STEEL

Measurement Frequency: ~~1 PER 2HRS FOR STEP~~ HOURY

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/20/03	0943	0	10.67		
Step 1	"	1040	70	10.71	0.04	
	"	1115	105	10.72	0.05	
STEP 2	"	1239	189	10.74	0.07	
"	"	1309	219	10.75	0.08	
STEP 3	"	1448	318	10.76	0.09	
		1518	348	10.78	0.11	
REC		1553	383	10.74	0.07	

5A

MONITORING WELL WATER LEVELS

WELL NUMBER: MW HWY W05B

5B

Project Name: RGWSS Project Number: 721.4 Site Location: HIGHWAY 380 TRANSECT

Pumping Well: HWY BW08CX

Pumping Rate: STEPS @ 30, 64, 82

Start of Pumping 6/20/03 0730 (Date Time)

End of Pumping 6/20/03 1534 (Date Time)

Monitoring Well:

Measuring Point Description: TOP OF STEEL

Measurement Frequency: HOURLY

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/20/03	0746	Ø	10.20		
Step 1	"	1040	70	10.34	0.14	
	"	1116	106	10.34	0.14	
STEP 2	"	1239	189	10.39	0.19	
"	"	1309	219	10.40	0.20	
STEP 3	"	1447	318	10.46	0.20	
"	"	1517	348	10.46	0.20	
RECOVERY		1554	385	10.28	0.08	

5B

Form 5. Monitoring Well Water Levels

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY W11A

Project Name: RGWJS Project Number: 771.4 Site Location: HIGHWAY 380 TRANSECT

Pumping Well: HWY W08EX

Pumping Rate: STEPS AT 50, 64, 82

Start of Pumping 6/20/03 0930 (Date Time)

End of Pumping 6/20/03 1553 (Date Time)

Monitoring Well:

Measuring Point Description: TOP OF STEEL

Measurement Frequency: HOURLY

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/20/03	0758	8	13.45		
Step 1	"	1037	67	13.48	0.03	
		1118	108	13.49	0.04	
STEP 2	"	1236	186	13.51	0.06	
"	"	1306	216	13.51	0.06	
STEP 3	"	1442	312	13.52	0.07	
		1528	358	13.52	0.07	
REC		1550	380	13.51	0.06	

11A

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY W11B

Project Name: R6WSS Project Number: 771.4 Site Location: HIGHWAY 380 TRANSECT

Pumping Well: HWY W08EX

Pumping Rate: STEPS @ 50, 64, 82

Start of Pumping 6/20/03 0930
Date Time

End of Pumping 6/20/03 1533
Date Time

Monitoring Well:

Measuring Point Description: TOP OF STEEL

Measurement Frequency: HOURLY

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/20/03	0800	Ø	13.61		
Step 1	"	1034	64	13.73	0.12	
"	"	1118	108	13.73	0.12	
STEP 2		~~108~~ 1236	~~216~~ 180	13.77	0.16	
"	"	13:06	216	13.76	0.15	
STEP 3	"	1442	312	13.80	0.19	
		1528	358	13.81	0.20	
REC.		1550	380	13.67		

11B

Form 5. Monitoring Well Water Levels Page 1 of____

AQUIFER TEST DATA LOGGING RECORD

TEST ID/TYPE: HWY W08EX – 48HR TEST + RECOVERY

Project: RGWSS
Date: 6/23/03
Project No. 771
Site Location: HIGHWAY 380 TRANSECT

Data Logger Information:

Instrument Type: HERMIT
Model: 3000
Serial No.: 45124
Number of Transducers Used for Test: 8
Delayed start (Y/N) N
Starting Date/Time: 6/23/03 /0900
Ending Date/Time: 6/25/03 /0900
Logging Frequency: LOG
Reference (TOC or Surface): DTW
Test Number: 3
Steps: 1

Pumping/Injection Well Information:

Well ID: W08EX
No. Observation Wells: 7
Screened Interval (ft. BGS): 35.1 - 59.8
Stick up (ft.): 2.74
Initial Depth of Water (ft. TOC): 10.97
Date/Time: 6/23/03 0830
Ending Depth of Water (ft. TOC): 32.4 (11.15 AFTER RECOV.)
Date/Time: 6/25/03 0856 6/26/03 0558 (END RECOV.)

Data Logger Input Information:

Channel No.: 1
Station ID: W09A Transducer Serial No.: 7189 Pressure Range (psi): 10
Transducer-Linearity: 0.0222 Scale: 9.9339 Offset: 0.0695 Delay: N
Depth(ft. TOC): 18 Submergance (ft.): 9.6 Reference: N Date/Time: NA

Channel No.: 2
Station ID: W09B Transducer Serial No.: 6266 Pressure Range (psi): 15
Transducer-Linearity: 0.0640 Scale: 15.1363 Offset: -0.0319 Delay: N
Depth(ft. TOC): 41 Submergance (ft.): 32.7 Reference: N Date/Time: NA

Channel No.: 3
Station ID: W07A Transducer Serial No.: 5107 Pressure Range (psi): 10
Transducer-Linearity: 0.0293 Scale: 9.8834 Offset: -0.0073 Delay: N
Depth(ft. TOC): 18 Submergance (ft.): 8.12 Reference: N Date/Time: NA

Channel No.: 4
Station ID: W07B Transducer Serial No.: 6659 Pressure Range (psi): 15
Transducer-Linearity: 0.0673 Scale: 14.9199 Offset: 0.1074 Delay: N
Depth(ft. TOC): 42 Submergance (ft.): 32.64 Reference: N Date/Time: NA

Channel No.: 5
Station ID: W07C Transducer Serial No.: 1731 DC Pressure Range (psi): 10
Transducer-Linearity: 0.000 Scale: 10.005 Offset: -0.014 Delay: N
Depth(ft. TOC): 30 Submergance (ft.): 19.96 Reference: N Date/Time: NA

Channel No.: 6
Station ID: W10A Transducer Serial No.: 3103EB Pressure Range (psi): 10
Transducer-Linearity: 0.011 Scale: 10.115 Offset: -0.045 Delay: NA
Depth(ft. TOC): 18 Submergance (ft.): 8.48 Reference: N Date/Time: NA

Channel No.: 7
Station ID: W10B Transducer Serial No.: 1012CH Pressure Range (psi): 10
Transducer-Linearity: 0.0144 Scale: 9.9869 Offset: 0.0282 Delay: N
Depth(ft. TOC): 30 Submergance (ft.): 20.58 Reference: N Date/Time: NA

Channel No.: 8
Station ID: W08EX Transducer Serial No.: 5791 Pressure Range (psi): 20
Transducer-Linearity: 0.0769 Scale: 19.6881 Offset: 0.042 Delay: N
Depth(ft. TOC): 38 Submergance (ft.): 27.68 Reference: N Date/Time: NA

Aquifer Test Data Logging Record

Record of Data Downloading			
Test/Step No.	Date	Time	Comments
W08EX			
48 HR TEST	6/25/03	1200	DATA LOADED TO DELL FIELD LAPTOP
RECOVERY	6/26/03	0900	"

Form 4. Data Logging Record (cont'd)

S.S. PAPADOPULOS ASSOCIATES, INC.
Environmental and Water Resource Consultants

RECORD OF PUMPING

WELL NUMBER: HWY W08EX

Project Name: R6WSS Project Number: 771.4 Site Location: HIGHWAY 380 TRANSECT

Pumping Well Parameters: BERKLEY 1720-450

Diameter: 10"
Screened Interval: 37.84 - 61.64' (B PVC) **Total Depth:**
Measuring Point Description:

Pump Type: 460V 3PH, 20HP Capacity: 300 GPM Setting: 41.7' BGS

Totalizing Flowmeter:
Brand name: HAYS 97 2" Scale (gal/rotation): 100 Initial Reading: ~~529068~~ 529952.5

Contractor: RODGERS Foreman: JEFF HITCHCOCK

SSP&A Personnel: LINDBLOM, HOBSON, ~~WILSON~~ WILCOX, NEWTON, DECKER - NMTECH, PEGRAM - PSC

Start of Pumping: Date: 6/23/03 Time: 0900 Pumping Rate Goal:

Type of Test/ Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW ~~(ft. bgs)~~	Notes
PRE	6/23/03		Ø	Ø	529952.5	10.97	ALL DTW MSMT TO TOP OF DROP PIPE
CONSTANT RATE	6/23/03	0900	Ø				
	6/23/03	0901	1	80	530029	24.16	
	6/23/03	0902	2	75	530104	28.94	
	6/23/03	0903	3	78	530182	30.69	
	6/23/03	0904	4	77.5	530258	31.42	23 sec. for 30 gal.
	6/23/03	0905	5	77.0	530335	31.47	
	6/23/03	0906	6	78	530413	31.97	
	6/23/03	0908	8	76.5	530566	32.04	
	6/23/03	0910	10	77	530720	32.07	
	6/23/03	0915	15	76.6	531103	32.11	
	6/23/03	0920	20	76.8	531487	32.15	23.35 sec for 30 gal = 77 gpm
	6/23/03	0925	25	76.6	531870	32.13	XD @ 6.123 ft H_2O
	6/23/03	0930	30	76.4	532252	32.12	slight sulfur odor of sample
	6/23/03	0935	35	76.8	532636	32.14	PH=6.86, Cond=0.579 mS/cm, Temp=10.8
	6/23/03	0940	40	76.0	533016	32.12	
	6/23/03	0950	50	76.7	533783	32.05	
	6/23/03	1000	60	76.2	534545	32.05	
	6/23/03	1010	70	76.3	535308	32.07	
	6/23/03	1020	80	75.9	536067	32.03	
	6/23/03	1032	90	75.25	536970	31.98	Measurement taken 2 min late

Form 1. Record of Pumping

042 - 15
3.62 m/d

7.48 GAL/ft³

Σ²Π

RECORD OF PUMPING

WELL NUMBER: HWY-W08EX

Start of Pumping:

Date: 6/23/03 Time: Pumping Rate Goal:

Type of Test/Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW (ft. bgs)	Notes
Constant rate	6/23/03	1040	100	77.5	537590	32.01	XD: 6.227 @ 1046
	6/23/03	1050	110	76.0	538350	32.04	
	6/23/03	~~1060~~ 1100	120	75.9	539109	32.00	
	6/23/03	1110	130	76.0	539869	32.00	30 gal @ 23.78 sec = 75.69
	6/23/03	1120	140	75.8	540627	32.03	
	6/23/03	1130	150	75.9	541386	32.01	
	6/23/03	~~1200~~ 1140	~~180~~ 160	76.0	542146	32.01	XD = 6.224 @ 1142
	6/23/03	~~1230~~ 1200	~~210~~ 180	75.4	543654	31.95	100 gal @ 79.62 sec. = 75.36
	6/23/03	1230	210	75.5	545918	32.04	XD = 6.222 @ 1247
	6/23/03	1300	240	75.6	548186	32.02	PH = 8.29, cond = 0.540 mS/cm, temp = 12.0 @1250
	6/23/03	1330	270	75.6	550455	32.01	XD = 6.237 @ 1346
	6/23/03	1400	300	75.4	552716	32.03	
	6/23/03	1430	330	75.9	554982	32.01	XD = 6.255 @ 1446 Sulfur odor
	6/23/03	1500	360	75.4	557243	32.01	pH = 8.29 COND = 0.540 mS/cm T = 11.0°C
	6/23/03	1530	390	75.5	559500	32.01	
	6/23/03	1600	420	75.3	561758	32.01	~~8.03 / 10 GAL~~ ~~24~~ 30 GAL / 24.03 sec = 74.8
	6/23/03	1630	450	75.2	564013	31.98	XD = 6.290
	6/23/03	1700	480	75.1	566267	31.98	23.35 / 30 GAL = 77.1
	6/23/03	1730	~~600~~ 510	75.1	568520	31.98	24.24 / 30 GAL = 74.3 XD = 6.274
	6/23/03	1800	540	75.0	570770	31.98	48.26 / 60 Gal = 74.6
	6/23/03	1834	574	75.0	573325	31.81	24.98 / 30 gal = 72.05
	6/23/03	1900	600	75.0	575260	31.91	24.36 / 30 gal
	6/23/03	1930	630	75.0	577503	31.91	23.38 / 30 gal
	—	—	—	—	~~5796~~	—	WC T: 11.5 pH = 8.51 COND = 0.541 mS/cm
	6/23/03	2000	660	74.88	579747	31.94	24.04 / 30 gal
	6/23	2030	690	~~73.1~~ 74.8	581990	31.98	23.88 / 30 GAL = 75.4

Form 2. Record of Pumping (cont'd) Page 2 of ___

Σ²Π

RECORD OF PUMPING

WELL NUMBER: HWY - W08GX

Start of Pumping:

Date: 6/23/03 Time: ~~2110~~ 0900 Pumping Rate Goal: 76 gpm

Type of Test/Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW (ft. bgs)	Notes
CONSTANT RATE PUMP	6/23/03	2100	~~710~~ 720	75.0	584240	31.98	
	6/23/03	2130	~~740~~ 750	75.0	586490	32.02	30/23.63 – 76.2
	6/23/03	2200	~~770~~ 780	75.0	588740	32.04	30/23.65 – 76.2
	6/23/03	2230	~~800~~ 810	75.0	590995	32.07	30/23.63 XD=6.186 @ 2250
	6/23/03	2300	840	75.3	593255	32.08	30/23.97 PH: 8.27 COND 0.560 T: 8.7
	6/23/03	—	—	—	~~591~~	—	—
	6/23/03	2330	870	75.3	~~595~~ 595774	32.11	24.69/30 = 74.7
	6/24/03	0000	900	75.4	597776	32.11	23.78/30 = 75.7
	6/24/03	0030	930	75.5	600040	32.12	23.82/30 = 75.4
	6/24/03	0100	960	75.5	602305	32.14	23.91/30 = 75.3
	6/24/03	0130	990	75.6	604572	32.20	23.82/30 = 75.6 XD=6.055 @ 0147
	6/24/03	0200	1020	75.7	606842	32.20	24.03/30 = 74.9
	6/24/03	0230	1050	75.6	609111	32.22	23.82/30 = 75.6
	6/24/03	0300	1080	75.8	611384	32.22	pH=8.34, cond=0.571 mS/cm T=8.0°F @ 0347
	6/24/03	0330	1110	75.6	613653	32.24	XD = 5.998 @ 0332
		0400	1140	75.8	615927	32.26	
		0430	1170	75.9	618204	32.27	XD = 5.951 @ 0446
		0500	1200	75.8	620478	32.28	
		0530	1230	76.0	622758	32.29	XD = 5.948
		0600	1260	75.9	625035	32.32	
		0630	1290	75.8	627310	32.35	XD = 5.872 @ 0649
		0700	1320	75.9	629589	32.39	
		0730	1350	76.1	631872	32.32	XD = 5.940 @ 0747
		0800	~~0810~~ 1380	75.9	634148	32.32	PH 8.21 COND 0.564 mS/cm T = 8.5°C
		0830	1410	75.7	636419	32.31	30 gal @ 24.31 sec = 74.04
		0900	1440	75.8	638694	32.30	XD = 5.946 @ 0831
		0930	1470	75.5	640959	32.35	XD = 6.012 @ 0943

Σ²Π

RECORD OF PUMPING

WELL NUMBER: HWY WD8EX

Start of Pumping:

Date: 6/23/03 Time: 0900 Pumping Rate Goal: 76 gpm

Type of Test/Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW (ft. bgs)	Notes
constant rate	6/24/03	1000	1500	75.6	643228	32.22	pH: 8.04 T: 8.8°C COND: 0.563 ms/cm
		1030	1530	75.4	645491	32.23	
		1100	1560	75.5	647755	32.21	
		1132	1592	75.7	650177	32.22	XD = 6.075 @ 1144
		1200	1620	75.2	652282	32.20	
		1230	1650	75.3	654540	32.21	XD = 6.033 @ 1247
		1300	1680	75.6	656807	32.23	
		1330	1710	75.5	659073	32.22	XD = 6.014 @ 1243
		1404	1744	75.5	661639	32.24	pH 8.32 COND 0.555 ms/cm T = 10.3°C — collect sample
		1430	1770	75.3	663596	32.23	30 gal @ 23.93 sec = 75.22
		1500	1800	75.4	665858	32.19	XD = 6.043 @ 1437
		1530	1830	75.4	668120	32.20	XD = 6.038 @ 1556
		1600	1860	75.2	670376	32.19	pH = 8.34, cond = .562, T = 10.5°C @ 1620
		1630	1890	75.2	672632	32.20	
		1700	1920	75.2	674888	32.18	
		1730	1950	75.3	677146	32.18	
		1800	1980	75.0	679396	32.17	
		1830	2010	75.1	681649	32.21	
		1900	2040	75.1	683902	32.17	
		1930	2070	75.2	686157	32.19	
		2000	2100	75.1	688409	32.17	
		2030	2130	75.0	690659	32.21	
		2100	2160	75.2	692915	32.25	
		2130	2190	75.2	695172	32.24	XD = 6.009 @ 2145
		2200	2220	75.2	697428	32.26	
		2230	2250	75.4	699690	32.28	
					TOTAL		

Form 2. Record of Pumping (cont'd)

92
62

835c 1500
204

Σ²Π

RECORD OF PUMPING

WELL NUMBER: HWY W08EX

Start of Pumping:

Date: 6/23/03 Time: 0900 Pumping Rate Goal: 76 GPM

Type of Test/Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW (ft. bgs)	Notes
CONSTANT RATE	6/24/03	2300	2280	75.7	701962	32.30	
	6/24/03	2330	2310	74.0	704182	32.31	YD=5.928 @ 2350
	6/25/03	0001	2340	~~73.8~~ 76.7	706560	32.33	30 gal @ 23.2 sec/100 gal 79.1
							Totalizer Flow @ 0014 =
							707541 => 75.5 GPM
		0030	2370	73.1	708752	32.37	
		0100	2400	75.6	711021	32.35	
		0130	2430	75.7	713293	32.35	YD: 5.870 @ 0156
		0200	2460	75.8	715566	32.40	
		0230	2490	75.8	717840	32.40	
		0300	2520	75.7	720112	32.42	
		0330	2550	75.9	722391	32.41	YD=5.818 Water quality meter not working
		0400	2580	75.9	724668	32.42	
		0430	2610	75.9	726945	32.42	XD=5.800 30 gal @ 24.43 sec = 75
		0500	2640	75.9	729222	32.43	
		0544	2684	76.0	732567	32.40	XD=5.800
		0600	2700	75.9	733782	32.42	
		0630	2730	76.0	736062	32.44	XD=5.800
		0700	2760	76.0	738342	32.44	
		0730	2790	75.9	740621	32.44	
		0800	2820	75.8	742894	32.44	
		0830	2850	76.0	745173	32.43	XD=5.785 @ 0841
Recovery	6/25/03	~~0900~~ 0856	2880 76	75.8	747447	32.40	Pump Stopped @ 0900
		0901	2881			18.42	
		0902	2882			13.91	
		0903	2883			12.20	
		0904	2884			11.60	

Σ²Π

RECORD OF PUMPING

WELL NUMBER: HWY-W08EY

Start of Pumping:

Date: 6/23/03 Time: 0900 Pumping Rate Goal: 76 GPM

Type of Test/Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW (ft. bgs)	Notes
Recovery	6/25/03	0905	2885/5			11.39	
		0906	2886/6			11.30	
		0908	2888/8			11.21	
		0910	2890/10			11.18	
		0915	2895/15			11.17	
		0920	2900/20			11.16	
		0925	2905/25			11.15	xD = 26.889 @ 0926
		0930	2910/30			11.15	
		0935	2915/35			11.15	
		0940	2920/40			11.14	
		0950	2930/50			11.15	xD = 26.897 @ 0952
		~~0960~~ 1000	2940/60			11.14	
		1030	2970/90			11.14	
		1130	3030/130			11.15	
		1230	3090/190			11.15	
		1330	3150/250			11.15	
		1430	3210/310			11.15	
		1530	3270/370			11.15	
		1630	3330/430			11.15	
		1730	3390/490			11.18	
	6/26/03	0558				11.15	

Form 2. Record of Pumping (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY W09A

Project Name: RG WSS Project Number: 771.4 Site Location: HIGHWAY 380 TRANSECT

Pumping Well: HWY W08EV
Pumping Rate: ~~6/23/03~~ 76 gpm
Start of Pumping 6/23/03 0900
Date Time
End of Pumping
Date Time

Monitoring Well:
Measuring Point Description: TOP OF STEEL
Measurement Frequency: HOURLY

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/23/03	0751	Ø	10.25	Ø	~~TD @ 9.147 0814~~ TD @ 9.167 0800
test	6/23/03	0913	13	10.30	0.05	test start 0900 XD = 9.124 @ 0928
	6/23/03	1006	66	10.32	0.07	XD = 9.100 @ 1045
	6/23/03	1106	126	10.34	0.09	XD = 9.090 @ 1113
	6/23/03	1134	154	10.35	0.10	XD = 9.085 @ 1143
	6/23/03	1236	216	10.38	0.13	XD = 9.068 @ 1246
	6/23/03	1336	276	10.37	0.12	XD = 9.055 @ 1346
	6/23/03	1436	336	10.39	0.14	XD = 9.042 @ 1446
	6/23/03	1542	402	10.40	0.15	
	6/23/03	1638	458	10.41	0.16	XD = 9.018 @ 1647
	6/23/03	1736	516	10.43	0.18	XD = 9.007 @ 1748
	6/23/03	1846	586	10.44	0.19	
	6/23/03	1933	633	10.45	0.20	
		2040	700	10.46	0.21	
		2132	752	10.47	0.22	
		2233	813	10.48	0.23	XD = 8.957 @ 2230
		2332	872	10.49	0.24	
	6/24/03	0035	935	10.50	0.25	
		0131	991	10.50	0.25	XD = 8.935 @ 0146
		0232	1052	10.51	0.26	
		0337	1117	10.50	0.25	XD = 8.924 @ 0330
		0435	1145	10.52	0.27	XD = 8.915 @ 0445
		0536	~~1176~~ 1206	10.53	0.28	XD = 8.908 @ 0544
		0635	1266	10.52	0.27	XD = 8.902 @ 0646
		0736	1356	10.53	0.28	XD = 8.890 @ 0747
		0835	1415	10.54	0.29	XD = 8.887 @ 0830

9A 9A

MONITORING WELL WATER LEVELS

WELL NUMBER: W09A

SW = 10.25

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
Constant rate	6/24/03	0835	1415	10.54	0.29	Repeat of last line of previous sheet
		0934	1474	10.55	0.30	XD = 8.884 @ 0942
		1034	1534	10.55	0.30	XD = 8.872 @ 1044
		1135	1595	10.56	0.31	XD = 8.874 @ 1143
		1236	1656	10.58	0.33	XD = 8.866 @ 1245
		1334	1714	10.58	0.33	XD = 8.862 @ 1342
		1443	1783	10.57	0.32	XD = 8.853 @ 1436
		1542	1842	10.58	0.33	XD = 8.847 @ 1555
		1635	1895	10.59	0.34	
		1744	1964	10.58	0.33	XD = 8.835 @ 1755
		1844	2029	10.60	0.35	
		1937	2077	10.61	0.36	XD = 8.828 @ 1947
		2041	2141	10.61	0.36	
		2135	2195	10.62	0.37	XD = 8.816 @ 2146
		2240	2260	10.62	0.37	XD = 8.810 @ 2254
		2336	2316	10.62	0.37	XD = 8.805 @ 2348
	6/25/03	0036	2376	10.62	0.37	
		0143	2443	10.63	0.38	XD = 8.796 @ 0154
		0235	2495	10.63	0.38	
		0335	2555	10.64	0.39	XD = 8.790 @ 0345
		0435	2615	10.64	0.39	XD = 8.787 @ 0444
		0548	~~28~~ 2688	10.64	0.39	XD = 8.782 @ 0557
		0634	2734	10.65	0.40	XD = 8.776 @ 0642
		0722	2782	10.66	0.41	XD = 8.773 @ 0729
		0833	2853	10.65	0.40	XD = 8.764 @ 0840
Recovery		0911	11	10.62	0.37	Pump off @ 0900 SWL = 10.25
		0943	43	10.58	0.33	XD = 8.846 @ 0952
		~~1045~~ 1035	~~105~~ 95	10.56	0.31	
		1142	162	10.53	0.28	
		1339	279	10.51	0.26	
		1547	407	10.50	0.25	

9A.

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY-W09 A

SWL = 10.25

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
REC	6/25/03	1807	547	10.51	0.26	
	6/26/03	0605	1265	10.48	0.23	

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER HWY W Ø9B

Project Name: RGWSS Project Number: 771.4 Site Location: HIGHWAY 380 TRANSECT

Pumping Well: HWY W06EX
Pumping Rate: 76gpm
Start of Pumping 6/23/03 0900
Date Time
End of Pumping
Date Time

Monitoring Well:
Measuring Point Description: TOP OF STEEL
Measurement Frequency: HOURLY

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/23/03	0752	Ø	10.16	Ø	~~TD @ 28.987, 0814~~ TD @ 32.055 @ 0800
test	6/23/03	0913	13	13.68	3.52	test start 0900 XD = 28.50 @ 0929
	6/23/03	1006	66	13.68	3.52	XD = 28.579 @ 1046
	6/23/03	1106	126	13.69	3.53	XD = 28.575 @ 1114
	6/23/03	1134	154	13.68	3.52	XD = 28.583 @ 1143
	6/23/03	1237	217	13.69	3.53	XD = 28.579 @ 1246
	6/23/03	1237	277	13.68	3.52	XD = 28.575 @ 1346
	6/23/03	1438	338	13.68	3.52	XD = 28.573 @ 1446
	6/23/03	1543	403	13.69	3.53	XD = 28.574 @ 1647
	6/23/03	1638	458	13.69	3.53	XD = 28.572 @ 1748
	6/23/03	1737	517	13.69	3.53	
	6/23/03	1846	586	13.68	3.52	
	6/23/03	1939	633	13.68	3.52	
		2042	702	13.70	3.54	
		2133	752	13.71	3.55	
		2234	814	13.71	3.55	XD = 28.567 @ 2250
		2333	873	13.71	3.55	
	6/24/03	0036	936	13.72	3.56	
	6/24/03	0132	992	13.72	3.56	XD = 28.555 @ 0146
	6/24/03	0233	1053	13.72	3.56	
		0337	1117	13.73	3.57	XD = 28.517 @ 0330
		0436	1146	13.73	3.57	XD = 28.507 @ 0445
		0537	1207 ~~1197~~	13.74	3.58	XD = 28.503 @ 0544
		0635	1265	13.76	3.60	XD = 28.492 @ 0645
		0737	1357	13.75	3.59	XD = 28.489 @ 0747
		0835	1415	13.74	3.58	XD = 28.490 @ 0830

6.201
6.18
6.055

9B

9B

Form 5. Monitoring Well Water Levels

MONITORING WELL WATER LEVELS

WELL NUMBER: W9B

SW = 10.16

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
Constant rate	6/24/03	0835	1415	13.74	3.58	Repeat of last line of previous sheet
		0934	1474	13.75	3.59	XD = 28.506 @ 0943
		1035	1535	13.74	3.58	XD = 28.509 @ 1044
		1135	1595	13.75	3.59	XD = 28.510 @ 1143
		1236	1656	13.76	3.60	XD = 28.508 @ 1246
		1334	1714	13.76	3.60	XD = 28.507 @ 1342
		1443	1783	13.75	3.59	XD = 28.508 @ 1436
		1542	1842	13.74	3.58	XD = 28.500 @ 1596
		1636	1896	13.76	3.60	
		1743	1963	13.76	3.60	XD = 28.527 @ 1756
		1846	2026	13.76	3.60	
		1938	2078	13.76	3.60	XD = 28.497 @ 1947
		2042	2142	13.77	3.61	
		2135	2195	13.76	3.60	XD = 28.483 @ 2148
		2242	2262	13.78	3.62	XD = 28.473 @ 2255
		2338	2318	13.77	3.61	XD = 28.469 @ 2348
	6/25/03	0037	2377	13.79	3.63	
		0144	2444	13.79	3.63	XD = 28.455 @ 0154
		0236	2496	13.79	3.63	
		0335	2555	13.81	3.65	XD = 28.434 @ 0345
		0435	2615	13.81	3.65	XD = 28.440 @ 0444
		0548	2688	13.80	3.64	XD = 28.433 @ 0557
		0634	2734	13.81	3.65	XD = 28.427 @ 0642
		0722	2782	13.83	3.67	XD = 28.435 @ 0729
		0833	2853	13.81	3.65	XD = 28.424 @ 0840
RECOVERY		0912	12	10.39	0.23	pump off @ 0900 SWL = 10.16
		0943	43	10.35	0.19	XD = 31.866 @ 0952
		~~1045~~ 1035	~~105~~ 95	10.36	0.20	
		1143	163	10.35	0.19	
		1340	280	10.34	0.18	
		1548	408	10.35	0.19	

Form 6. Monitoring Well Water Levels (cont'd)

9B

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY-W09B

SWL = 10.16

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
Rec	6/25/03	1807	547	10.38	0.22	
	6/26/03	0605	1265	10.35	0.19	

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY W07A

Project Name: RGW55 Project Number: 771.4 Site Location: HIGHWAY 380 TRANSECT

Pumping Well: HWY W08EX

Pumping Rate: 76 gpm

Start of Pumping 6/23/03 0900 (Date Time)

End of Pumping _____ (Date Time)

Monitoring Well:

Measuring Point Description: TOP OF STEEL

Measurement Frequency: HOURLY

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/23/03	0723	Ø	11.35	Ø	TOC 7.725, 0800
test	6/23/03	0908	8 min	11.41	0.06	test start 0900 XD=7.65 @ 0929
	6/23/03	1001	61	11.44	0.09	XD = 7.616 @ 1042
	6/23/03	~~1101~~	121	11.47	0.12	XD = 7.607 @ 1112
	6/23/03	1131	151	11.47	0.12	XD = 7.599 @ 1141
	6/23/03	1231	211	11.49	0.14	XD = 7.584 @ 1243
	6/23/03	1331	~~271~~ 272	11.~~54~~51	0.16	XD = 7.574 @ 1345
	6/23/03	1431	~~334~~ 331	11.53	0.18	XD = 7.559 @ 1444
	6/23/03	1528	398	11.54	0.19	X
	6/23/03	1636	456	11.55	0.20	XD = 7.538 @ 1646
	6/23/03	1735	515	11.56	0.21	XD = 7.529 @ 1745 PW-6.274 @ 1750
	6/23/03	1846	586	11.58	0.23	
		1932	632	11.58	0.23	
		2042	702	11.60	0.25	
		2135	755	11.61	0.26	
		2236	816	11.61	0.26	XD = 7.481 2248
		2333	873	11.62	0.27	
	6/24/03	0035	935	11.63	0.28	
	6/24/03	0133	993	11.64	0.29	XD = 7.460 @ 0145
	6/24/03	0233	1053	11.64	0.29	~~XD = 7.451~~
		0333	~~1173~~ 1113	11.65	0.30	XD = 7.451 @ 0320
		0431	1141	11.66	0.31	XD = 7.440 @ 0444
		0532	~~1172~~ 1202	11.66	0.31	XD = 7.437 @ 0543
		0631	1261	11.66	0.31	XD = 7.429 @ 0644
		0733	1353	11.66	0.31	XD = 7.423 @ 0746
		0831	1411	11.67	0.32	XD = 7.419 @ 0828

7A

7A

Form 5. Monitoring Well Water Levels

1234

MONITORING WELL WATER LEVELS

WELL NUMBER: W07A

SW = 11.35

Status of Pumping Test	Date	Time	(min) Elapsed Time	(ft) Depth to Water	(ft) Drawdown	Notes
Constant rate	6/24/03	0831	1411	11.67	0.32	Repeat of last line of previous sheet
		0931	1471	11.69	0.34	XD = 7.413 @ 0941
		1032	1532	11.68	0.33	XD = 7.406 @ 1042
		1133	1593	11.70	0.35	XD = 7.401 @ 1142
		1232	1653	11.70	0.35	XD = 7.402 @ 1244
		1331	1713	11.71	0.36	XD = 7.393 @ 1340
		1440	1780	11.71	0.36	XD = 7.392 @ 1434
		1539	1839	11.71	0.36	XD = 7.382 @ 1552
		1631	1891	11.72	0.37	
		1731	1951	11.71	0.36	XD = 7.374 @ 1756
		1836	2016	11.72	0.37	
		1932	2072	11.74	0.39	XD = 7.365 @ 1948
		2035	2135	11.74	0.39	
		2131	2191	11.74	0.39	XD = 7.351 @ 2146
		~~2232~~				
		2234	2254	11.76	0.41	XD = 7.345 @ 2256
		2331	2311	11.77	0.42	XD = 7.342 @ 2349
	6/25/03	0031	2371	11.76	0.41	
		0136	2436	11.76	0.41	XD = 7.334 @ 0155
		0231	2491	11.76	0.41	
		0331	2551	11.78	0.43	XD = 7.329 @ 0344
		0432	2612	11.78	0.43	XD = 7.326 @ 0433
		0544	2682	11.79	0.44	XD = 7.322 @ 0556
		0631	2731	11.77	0.42	XD = 7.319 @ 0641
		0718	2778	11.78	0.43	XD = 7.316 @ 0728
		0830	2850	11.79	0.44	XD = 7.309 @ 0839
Recovery		0908	8	11.72	0.37	pump off @ 0900 SWL = 11.35
		0940	40	11.67	0.32	XD = 7.431 @ 0951
		1032	92	11.64	0.29	
		1143	163	11.61	0.26	
		1332	272	11.59	0.24	
		1542	402	11.58	0.23	

Form 6. Monitoring Well Water Levels (cont'd)

Σ²Π

MONITORING WELL WATER LEVELS

SWL = 11.35

WELL NUMBER: HWY-W07A

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
Recover	6/25/03	1757	537	11.59	0.24	
	6/26/03	0600	1260	11.57	0.22	

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY W07B

Project Name: RGWSS Project Number: 771.4 Site Location: HIGHWAY 380 TRANSECT

Pumping Well: HWY W07EX
Pumping Rate: 76 gpm
Start of Pumping 6/23/03 09 00
Date Time
End of Pumping
Date Time

Monitoring Well:
Measuring Point Description: TOP OF STEEL
Measurement Frequency: HOURLY

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/23/03	0725	Ø	11.26	Ø	TD @ 32.074, 0800
test	6/23/03	0907	7	12.83	1.57	test start 0900 XD = 30.497 @ 0929
	6/23/03	1002	62	12.85	1.59	XD = 30.468 @ 1043
	6/23/03	1102	122	12.87	1.61	XD = 30.470 @ 1112
	6/23/03	1131	151	12.87	1.61	XD = 30.480 @ 1141
	6/23/03	1231	211	12.88	1.62	XD = 30.460 @ 1244
	6/23/03	1332	~~262~~ 272	12.88	1.62	XD = 30.456 @ 1345
	6/23/03	1432	332	12.88	1.62	XD = 3.448
	6/23/03	1539	399	12.90	1.64	
	6/23/03	1636	456	12.90	1.64	XD = 30.449 @ 1646
	6/23/03	1735	515	12.90	1.64	XD = 30.440 @ 1745
	6/23/03	1846	586	12.89	1.63	
	6/23/03	1932	632	12.91	1.65	
	6/23/03	2043	703	12.92	1.66	
	6/23/03	2135	755	12.91	1.65	
	6/23/03	2237	817	12.92	1.66	XD = 30.444 @ 2248
	6/23/03	2334	874	12.91	1.65	
	6/24/03	0037	937	12.92	1.66	
	6/24/03	0133	992	12.93	1.67	XD = 30.435 @ 0145
	6/24/03	0234	1054	12.92	1.66	XD = 30.441 @ 0330
		0334	1114	12.93	1.67	
		0431	1141	12.95	1.69	XD = 30.397 @ 0444
		0533	~~173~~ 1203	12.93	1.67	XD = 30.393 @ 0543
		0631	1261	12.95	1.69	XD = 30.389 @ 0644
		0733	1353	12.95	1.69	XD = 30.384 @ 0746
		0832	1412	12.96	1.70	XD = 30.387 @ 0828

7B

Form 5. Monitoring Well Water Levels

MONITORING WELL WATER LEVELS

WELL NUMBER: ~~MW~~ W07B

SWL = 11.26

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
constant rate	6/24/03	0832	1412	12.96	1.70	Repeat of last line of previous sheet
		0931	1471	12.95	1.69	xD = 30.381 @ 0941
		1032	1532	12.95	1.69	xD = 30.374 @ 1042
		1133	1593	12.95	1.69	xD = 30.374 @ 1142
		1234	1654	12.96	1.70	xD = 30.374 @ 1244
		1331	1711	12.96	1.70	xD = 30.378 @ 1341
		1440	1780	12.97	1.71	xD = 30.374 @ 1434
		1539	1839	12.97	1.71	xD = 30.370 @ 1554
		1632	1892	12.98	1.72	
		1732	1952	12.98	1.72	xD = 30.367 @ 1757
		1838	2018	12.98	1.72	
		1933	2073	12.99	1.73	xD = 30.356 @ 1948
		2036	2136	12.99	1.73	
		2132	2192	12.99	1.73	xD = 30.346 @ 2147
		2235	2255	13.00	1.74	xD = 30.339 @ 2256
		2332	2312	13.00	1.74	xD = 30.334 @ 2349
	12/25/03	0032	2372	13.00	1.74	
		0137	2437	13.01	1.75	xD = 30.334 @ 0154
		0231	2491	13.00	1.74	
		0332	2552	13.01	1.75	xD = 30.324 @ 0344
		0433	2613	13.02	1.76	xD = 30.326 @ 0433
		0545	2685	13.03	1.77	xD = 30.32 @ 0556
		0631	2731	13.02	1.76	xD = 30.304 @ 0641
		0718	2778	13.03	1.77	xD = 30.307 @ 0725
		0811	2851	13.02	1.76	xD = 30.306 @ 0839
Recovery		0908	8	11.49	0.23	PUMP OFF @ 0900 SWL = 11.26
		0940	40	11.45	0.19	xD = 31.876 @ 0951
		1032	92	11.44	0.18	
		1144	164	11.43	0.17	
		1333	273	11.42	0.16	
		1543	403	11.44	0.18	

7B

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY-W07B

SWL = 11.26

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
Recover	6/25/03	1758	538	11.46	0.20	
	6/26/03	0601	1261	11.43	0.17	

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY W07C

Project Name: RGWSS Project Number: 771.4 Site Location: HIGHWAY 350 TRANSECT

Pumping Well: HWY W08EV
Pumping Rate: 76 gpm
Start of Pumping 6/23/03 0900 (Date Time)
End of Pumping _____ (Date Time)

Monitoring Well:
Measuring Point Description: TOP OF STEEL
Measurement Frequency: HOURLY

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/23/03	0725	Ø	11.10	Ø	TD @ 20.507, 0800
test	6/23/03	0909	9	11.55	0.45	test start 0900 XD = 20.033 @ 0929
	6/23/03	1002	62	11.58	0.48	XD = 20.024 @ 1043
	6/23/03	1103	123	11.59	0.49	XD = 20.026 @ 1112
	6/23/03	1131	151	11.59	0.49	XD = 20.015 @ 1142
	6/23/03	1232	212	11.60	0.50	XD = 20.012 @ 1245
	6/23/03	1332	272	11.61	0.51	XD = 20.007 @ 1345
	6/23/03	1433	333	11.61	0.51	XD = 19.994 @ 1445
	6/23/03	1539	399	11.62	0.52	
	6/23/03	1637	457	11.62	0.52	XD = 19.982 @ 1646
	6/23/03	1736	516	11.62	0.52	XD = 19.983 @ 1746
	6/23/03	1847	587	11.63	0.53	
	6/23/03	1932	632	11.62	0.52	
		2044	704	11.63	0.53	
		2136	756	11.64	0.54	
		2237	817	11.63	0.53	XD = 19.974 @ 2248
		2334	874	11.63	0.53	
	6/24/03	0037	937	11.64	0.54	
	6/24/03	0134	994	11.63	0.53	XD = 19.973 @ 0145
	6/24/03	0234	1054	11.64	0.54	~~XD =~~
		0334	1114	11.63	0.53	XD = 19.968 @ 0330
		0432	1142	11.65	0.55	XD = 19.964 @ 0444
		0533	~~1173~~ 1293	11.65	0.55	XD = 19.958 @ 0544
		0631	1261	11.65	0.55	XD = 19.952 @ 0644
		0734	1354	11.65	0.55	XD = 19.949 @ 0746
		0832	1412	11.65	0.55	XD = 19.944 @ 0829

7C

7C

MONITORING WELL WATER LEVELS

WELL NUMBER: W07C

SW = 11.10

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
Constant rate	6/24/03	0832	1412	11.65	0.55	Repeat of last line of previous sheet
		0932	1472	11.65	0.55	XD = 19.940 @ 0941
		1033	1533	11.66	0.56	XD = 19.931 @ 1043
		1133	1593	11.66	0.56	XD = 19.924 @ 1143
		1234	1654	11.67	0.57	XD = 19.932 @ 1245
		1333	1713	11.67	0.57	XD = 19.928 @ 1341
		1440	1780	11.67	0.57	XD = 19.920 @ 1435
		1539	1839	11.67	0.57	XD = 19.913 @ 1554
		1632	1892	11.68	0.58	
		1735	1955	11.68	0.58	XD = 19.914 @ 1757
		1840	2020	11.68	0.58	
		1934	2074	11.69	0.59	XD = 19.902 @ 1949
		2037	2137	11.69	0.59	
		2132	2192	11.70	0.60	XD = 19.893 @ 2147
		2236	2256	11.70	0.60	XD = 19.895 @ 2257
		2333	2313	11.70	0.60	XD = 19.897 @ 2349
	6/25/03	0033	2373	11.70	0.60	
		0138	2438	11.69	0.59	XD = 19.891 @ 0155
		0232	2492	11.70	0.60	
		0333	2553	11.71	0.61	XD = 19.887 @ 0344
		0433	2613	11.70	0.60	XD = 19.852 @ 0443
		0545	2685	11.72	0.62	XD = 19.874 @ 0556
		0632	2732	11.71	0.61	XD = 19.872 @ 0641
		0718	2778	11.71	0.61	XD = 19.864 @ 0728
		0831	2851	11.72	0.62	XD = 19.857 @ 0839
Recovery		0908	8	11.30	0.20	PUMP OFF @ 0900
		0941	41	11.25	0.15	XD = 20.326 @ 0951 SWL 11.10
		1032	92	11.25	0.15	
		1145	165	11.25	0.15	
		1334	274	11.24	0.14	
		1544	404	11.25	0.15	

7C

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

SWL = 11.10

WELL NUMBER: HWY-W07C

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
REC	6/25/03	1758	538	11.28	0.18	
	6/26/03	0602	1262	11.25	0.15	

04A 10.75
04B 10.10

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY W Ø6A

Project Name: RGWJS Project Number: 771.4 Site Location: HIGHWAY TRANSECT

Pumping Well: HWY W Ø8EX
Pumping Rate: 76 gpm
Start of Pumping 6/23/03 0900
Date Time
End of Pumping
Date Time

Monitoring Well:
Measuring Point Description: TOP OF STEEL
Measurement Frequency: HOURLY

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/23/03	0719	Ø	9.04	Ø	
test	6/23/03	0911	11	9.05	0.01	Test start 0900
	6/23/03	1004	64	9.06	0.02	
	6/23/03	1105	125	9.07	0.03	
	6/23/03	1133	153	9.08	0.04	
	6/23/03	1234	214	9.09	0.05	
	6/23/03	1335	275	9.10	0.06	
	6/23/03	1435	335	9.11	0.07	
	6/23/03	1541	401	9.11	0.07	
	6/23/03	1632	452	9.13	0.09	
	6/23/03	1731	511	9.14	0.10	
	6/23/03	1849	589	9.16	0.12	
	6/23/03	1935	635	9.17	0.13	
		2047	707	9.18	0.14	
		2138	758	9.19	0.15	
		2240	820	9.21	0.17	
		2337	877	9.20	0.16	
	6/24/03	0040	940	9.21	0.17	
	6/24/03	0136	996	9.22	0.18	
	6/24/03	0236	1056	9.23	0.19	
		0336	1116	9.22	0.18	
		0434	1174	9.24	0.20	
		0535	1205	9.25	0.21	
		0634	1264	9.25	0.21	
		0735	1355	9.25	0.21	
		0834	1414	9.25	0.21	

6A

6A

MONITORING WELL WATER LEVELS

WELL NUMBER: W26A

SWL = 9.04

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
Constant rate	6/24/13	0834	1414	9.25	0.21	Repeat of last line of previous sheet
		0934	1474	9.27	0.23	
		1035	1535	9.27	0.23	
		1136	1596	9.28	0.24	
		1237	1657	9.30	0.26	
		1335	1715	9.30	0.26	
		1434	1784	9.30	0.26	
		1544	1844	9.31	0.27	
		1637	1897	9.31	0.27	
		1741	1961	9.35	0.31	
		1848	2028	9.36	0.32	
		1939	2079	9.35	0.31	
		2043	2143	9.36	0.32	
		2137	2197	9.36	0.32	
		2243	2263	9.36	0.32	
		2338	2318	9.37	0.33	
	6/25/03	0037	2377	9.37	0.33	
		0146	2446	9.38	0.34	
		0236	2496	9.37	0.33	
		0336	2556	9.36	0.32	
		0436	2616	9.37	0.33	
		0549	2689	9.37	0.33	
		0634	2734	9.37	0.33	
		0723	2783	9.39	0.35	
		0834	2854	9.38	0.34	
Recovery		0913	13	9.39	0.35	Pump off @ 0940 SWL = 9.04
		0943	43	9.37	0.33	
		1037	97	9.35	0.31	
		1149	169	9.35	0.31	
		1342	282	9.32	0.28	
		1549	409	9.32	0.28	

6A

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY-06A

SWL = 9.04

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
REC	6/25/03	1808	548	9.29	0.25	
	6/26/03	0606	1266	9.31	0.27	

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY W06B

Project Name: RGWJS Project Number: 771.4 Site Location: HIGHWAY TRANSECT

Pumping Well: HWY W88EX
Pumping Rate: 76gpm
Start of Pumping 6/23/03 0900
Date Time
End of Pumping
Date Time

Monitoring Well:
Measuring Point Description: TOP OF STEEL
Measurement Frequency: Hourly

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/23/03	0720	Ø	9.07	Ø	
test	6/23/03	0911	11	9.81	0.74	test start 0900
	6/23/03	1005	65	9.82	0.75	
	6/23/03	1105	125	9.83	0.76	
	6/23/03	1133	153	9.84	0.77	
	6/23/03	1235	215	9.84	0.77	
	6/23/03	1336	276	9.84	0.77	
	6/23/03	1435	335	9.85	0.78	
	6/23/03	1542	402	9.86	0.79	
	6/23/03	1633	453	9.87	0.80	
	6/23/03	1732	512	9.86	0.79	
	6/23/03	1850	590	9.88	0.81	
	6/23/03	1936	636	9.87	0.80	
		2049	709	9.88	0.81	
		2139	759	9.87	0.80	
		2241	821	9.87	0.80	
		2337	877	9.87	0.80	
	6/24/03	0041	941	9.87	0.80	
	6/24/03	0137	997	9.88	0.81	
	6/24/03	0237	1057	9.88	0.81	
		0336	1116	9.88	0.81	
		0435	1145	9.89	0.82	
		0536	~~1176~~ 1206	9.90	0.83	
		0635	1265	9.89	0.82	
		0735	1355	9.90	0.83	
		0834	1414	9.90	0.83	

6B 6B

Form 5. Monitoring Well Water Levels

Σ²Π

MONITORING WELL WATER LEVELS

WELL NUMBER: LW06B

SW = 9.07

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
Constant rate	6/24/03	0834	1414	9.90	0.83	Repeat of last line of previous sheet
		0934	1474	9.91	0.84	
		~~153~~1036	1536	9.91	0.84	
		1137	1597	9.91	0.84	
		1237	1657	9.92	0.85	
		1335	1715	9.92	0.85	
		1444	1784	9.92	0.85	
		1544	1844	9.93	0.86	
		1637	1897	9.92	0.85	
		1739	1959	9.92	0.85	
		1849	2029	9.92	0.85	
		1939	2079	9.94	0.87	
		2044	2144	9.94	0.87	
		2137	2197	9.95	0.88	
		2244	2264	9.95	0.88	
		2340	2320	9.95	0.88	
	6/25/03	0039	2379	9.94	0.87	
		0146	2446	9.95	0.88	
		0237	2497	9.95	0.88	
		0336	2556	9.95	0.88	
		0436	2616	9.96	0.89	
		0549	2689	9.96	0.89	
		0635	2735	9.96	0.89	
		0723	2783	9.96	0.89	
		0834	2854	9.97	0.90	
Recovery		0913	13	9.28	0.21	pump off @ 0900 SW 9.07
		0944	44	9.25	0.18	
		1037	97	9.26	0.19	
		1149	167	9.24	0.17	
		1342	282	9.23	0.16	
		1549	409	9.26	0.19	

6B

Form 6. Monitoring Well Water Levels (cont'd)

CASSIDY — 507-7481 cell

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY-W06B

SWL = 9.07

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
REC	6/25/03	1809	549	9.29	0.22	
	6/26/03	0607	1267	9.24	0.17	

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY W10A

Project Name: RGWSS Project Number: 771.4 Site Location: HIGHWAY 350 TRANSECT

Pumping Well: HWY W08EX
Pumping Rate: 76 gpm
Start of Pumping 6/23/03 0900
Date Time
End of Pumping
Date Time

Monitoring Well:
Measuring Point Description: TOP OF STEEL
Measurement Frequency: HOURLY

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/23/03	0722	Ø	11.32	Ø	TD @ 7.958, 0800
test	6/23/03	0910	10	11.33	0.01	test start 0900 XD = 7.945 @ 0929
	6/23/03	1003	63	11.36	0.04	XD = 7.935 @ 1044
	6/23/03	1104	124	11.37	0.05	XD = 7.941 @ 1112
	6/23/03	1132	152	11.37	0.05	XD = 7.920 @ 1143
	6/23/03	1133	213	11.38	0.06	XD = 7.902 @ 1245
	6/23/03	1334	274	11.39	0.07	XD = 7.924 @ 1346
	6/23/03	1433	333	11.40	0.08	XD = 7.850 @ 1445
	6/23/03	1540	400	11.42	0.10	
	6/23/03	1634	454	11.43	0.11	XD = 7.870 @ 1646
	6/23/03	1733	513	11.45	0.13	XD = 7.865 @ 1747
	6/23/03	1848	588	11.46	0.14	
	6/23/03	1934	634	11.47	0.15	
		2046	706	11.48	0.16	
		2137	757	11.49	0.17	
		2238	818	11.50	0.18	XD = 7.813 @ 2249
		2335	875	11.51	0.19	
	6/24/03	0039	939	11.52	0.20	
	6/24/03	0135	994	11.52	0.20	XD = 7.790 @ 0145
	6/24/03	0235	1055	11.53	0.21	
		0335	1115	11.53	0.21	XD = 7.777 @ 0330
		0433	1143	11.54	0.22	XD = 7.768 @ 0445
		0534	~~1174~~ 1204	11.54	0.22	XD = 7.763 @ 0544
		0632	1264	11.56	0.24	XD = 7.757 @ 0645
		0734	1354	11.55	0.23	XD = 7.738 @ 0746
		0833	1413	11.55	0.23	XD = 7.733 @ 0829

10A

10A

MONITORING WELL WATER LEVELS

WELL NUMBER: ~~MW~~ TW 10A

SWL = 11.32

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
Constant rate	6/24/03	0833	1413	11.55	0.23	Repeat of last line of previous sheet
		0933	1473	11.56	0.24	XD = 7.720 @ 0942
		1034	1534	11.57	0.25	XD = 7.717 @ 1043
		1134	1594	11.58	0.26	XD = 7.732 @ 1145
		1235	1655	11.58	0.26	XD = 7.730 @ 1245
		1333	1713	11.59	0.27	XD = 7.716 @ 1341
		1442	1782	11.59	0.27	XD = 7.706 @ 1436
		1541	1841	11.59	0.27	XD = 7.705 @ 1555
		1633	1893	11.60	0.28	
		1736	1956	11.61	0.29	XD = 7.707 @ 1758
		1841	2021	11.61	0.29	
		1935	2075	11.62	0.30	XD = 7.693 @ 1949
		2039	2139	11.62	0.30	
		2133	2193	11.63	0.31	XD = 7.677 @ 2147
		2237	2257	11.64	0.32	XD = 7.673 @ 2257
		2234	2314	11.62	0.30	XD = 7.670 @ 0349
	6/25/03	0034	2374	11.64	0.32	
		0140	2440	11.65	0.33	XD = 7.661 @ 0155
		0233	2493	11.65	0.33	
		0334	2554	11.66	0.34	XD = 7.655 @ 0345
		0434	2614	11.66	0.34	XD = 7.650 @ 0444
		0547	2687	11.67	0.35	XD = 7.643 @ 0556
		0632	2732	11.66	0.34	XD = 7.639 @ 0641
		0720	2780	11.67	0.35	XD = 7.626 @ 0729
		0832	2852	11.67	0.35	XD = 7.609 @ 0839
Recovery		0910	10	11.66	0.34	Pump off @ 0900 SWL = 11.32
		0942	42	11.63	0.31	XD = 7.670 @ 0951
		1033	93	11.61	0.29	
		1147	167	11.59	0.27	
		1337	277	11.57	0.25	
		1545	405	11.55	0.23	

10A

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY-W10A

SWL= 11.32

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
REC	6/25/03	1505	545	11.56	0.24	
	6/26/03	0603	1263	11.55	0.23	

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY W10B

Project Name: RGW 55 Project Number: 771.4 Site Location: HIGHWAY 380 TRANSECT

Pumping Well: HWY W08EX

Pumping Rate: 26 gpm

Start of Pumping 6/23/03 0900
Date Time

End of Pumping
Date Time

Monitoring Well:

Measuring Point Description: TOP OF STEEL

Measurement Frequency: HOURLY

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/23/03	0722	Ø	11.20	Ø	TD @ 20.122 , 0800
test	6/23/03	0910	10	11.71	0.51	test start 0900 XD = 19.579 @ 0929
	6/23/03	1004	64	11.73	0.53	XD = 19.573 @ 1045
	6/23/03	1104	124	11.74	0.54	XD = 19.569 @ 1112
	6/23/03	1132	152	11.75	0.55	XD = 19.564 @ 1143
	6/23/03	1233	213	11.76	0.56	XD = 19.565 @ 1245
	6/23/03	1334	274	11.76	0.56	XD = 19.558 @ 1346
	6/23/03	1434	334	11.76	0.56	XD = 19.547 @ 1445
	6/23/03	1540	400	11.76	0.56	
	6/23/03	1635	455	11.77	0.57	XD = 19.543 @ 1647
	6/23/03	1734	514	11.78	0.58	XD = 19.540 @ 1747
	6/23/03	1848	588	11.79	0.59	
	6/23/03	1935	635	11.80	0.60	
		2046	706	11.79	0.59	
		2137	757	11.80	0.60	
		2238	818	11.80	0.60	XD = 19.528 @ 2249
		2336	876	11.80	0.60	
	6/24/03	0039	939	11.81	0.61	
	6/24/03	0135	995	11.79	0.59	XD = 19.526 @ 0146
	6/24/03	0235	055	11.80	0.60	
		0335	1115	11.80	0.60	XD = 19.519 @ 0330
		0433	1143	11.82	0.62	XD = 19.511 @ 0445
		0534	1207 ~~1174~~	11.81	0.61	XD = 19.510 @ 0544
		0633	1264	11.82	0.62	XD = 19.506 @ 0645
		0735	1355	11.82	0.62	XD = 19.498 @ 0746
		0833	1413	11.82	0.62	XD = 19.495 @ 0829

10B

10 B

Form 5. Monitoring Well Water Levels

MONITORING WELL WATER LEVELS

WELL NUMBER: W10B

SW = 11.20

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
Constant rate	6/24/03	0833	1413	11.82	0.62	Repeat of last line of previous sheet
		0933	1473	11.82	0.62	xD = 19.492 @ 0942
		1034	1534	11.83	0.63	xD = 19.484 @ 1043
		1134	1594	11.84	0.64	xD = 19.485 @ 1143
		1235	1655	11.85	0.65	xD = 19.477 @ 1245
		1333	1713	11.85	0.65	xD = 19.480 @ 1342
		1442	1782	11.83	0.63	xD = 19.470 @ 1436
		1541	1841	11.85	0.65	xD = 19.481 @ 1555
		1634	1894	11.86	0.66	
		1737	1957	11.85	0.65	xD = 19.470 @ 1758
		1844	2024	11.86	0.66	
		1936	2076	11.87	0.67	xD = 19.463 @ 1950
		2040	2140	11.87	0.67	
		2134	2194	11.87	0.67	xD = 19.458 @ 2148
		2238	2258	11.87	0.67	xD = 19.458 @ 2258
		2335	2315	11.87	0.67	xD = 19.457 @ 2349
	6/25/03	0035	2375	11.86	0.66	
		0141	2441	11.86	0.66	xD = 19.454 @ 0155
		0233	2493	11.87	0.67	
		0334	2554	11.88	0.68	xD = 19.449 @ 0345
		0431	2614	11.88	0.68	xD = 19.442 @ 0444
		0547	2687	11.88	0.68	xD = 19.438 @ 0557
		0633	2733	11.89	0.69	xD = 19.436 @ 0642
		0721	2781	11.90	0.70	xD = 19.430 @ 0729
		0832	2852	11.90	0.70	xD = 19.421 @ 0840
RECOVERY		0911	11	11.40	0.20	PUMP OFF @ 0903 SW = 11.20
		0942	42	11.37	0.17	xD = 19.947 @ 095
		1033	93	11.37	0.17	
		1147	167	11.36	0.16	
		1338	278	11.35	0.15	
		1546	406	11.36	0.16	

10B

Form 6. Monitoring Well Water Levels (cont'd)

Σ²Π

MONITORING WELL WATER LEVELS

SWL = 11.20

WELL NUMBER: HWY-W10B

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
REC	6/25/03	1805	545	11.39	0.19	
	6/26/03	0604	1264	11.36	0.16	

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY W05A

Project Name: RGWSS Project Number: 771.4 Site Location: HIGHWAY 350 TRANSECT

Pumping Well: HWY W05EX

Pumping Rate: ~~6/23/03~~ 76 gpm

Start of Pumping 6/23/03 0800
Date Time

End of Pumping
Date Time

Monitoring Well:

Measuring Point Description: TOP OF STEEL

Measurement Frequency: HOURLY

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/23/03	0731	Ø	10.83	Ø	
test	6/23/03	0917	17	10.86	0.03	test start 0900
	6/23/03	1015	75	10.90	0.07	
	6/23/03	1110	130	10.92	0.09	
	6/23/03	1139	159	10.91	0.08	
	6/23/03	1242	222	10.94	0.11	
	6/23/03	1343	283	10.93	0.10	
	6/23/03	1443	343	10.94	0.11	
	6/23/03	1547	407	10.95	0.12	
	6/23/03	1639	459	10.96	0.13	
	6/23/03	1738	518	10.97	0.14	
	6/23/03	1854	594	10.98	0.15	
	6/23/03	1941	641	10.97	0.14	
		2052	712	10.99	0.16	
		2144	764	10.99	0.16	
		2246	826	11.00	0.17	
		2344	884	10.99	0.16	
	6/24/03	0046	946	11.00	0.17	
	6/24/03	0142	1002	11.00	0.17	
	6/24/03	0245	1065	11.00	0.17	
		0342	1122	10.99	0.16	
		0440	1150	11.01	0.18	
		0542	1242 ~~1282~~	11.02	0.19	
		0640	1270	11.01	0.18	
		0741	1361	11.01	0.18	
		0840	1420	11.01	0.18	

5A 5A

Form 5. Monitoring Well Water Levels

MONITORING WELL WATER LEVELS

WELL NUMBER: W 05A

SW = 10.83

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
Constant rate	6/24/03	0840	1420	11.01	0.18	Repeat of last line of previous sheet
		0939	1479	11.02	0.19	
		1040	1540	11.03	0.20	
		1141	1601	11.04	0.21	
		1241	1661	11.04	0.21	
		1339	1719	11.04	0.21	
		1449	1789	11.02	0.19	
		1550	1850	11.04	0.21	
		1643	1903	11.04	0.21	
		1752	1972	11.05	0.22	
		1856	2036	11.05	0.22	
		1945	2085	11.04	0.21	
		2050	2150	11.05	0.22	
		2143	2203	11.05	0.22	
		2251	2271	11.05	0.22	
		2345	2325	11.04	0.21	
	6/25/03	0044	2384	11.05	0.22	
		0152	2452	11.05	0.22	
		0243	2503	11.07	0.24	
		0341	2561	11.07	0.24	
		0441	2621	11.07	0.24	
		0554	2694	11.08	0.25	
		0639	2739	11.07	0.24	
		0733	2793	11.08	0.25	
		0837	2857	11.08	0.25	
Recovery		0920	20	11.04	0.21	Pump off @ 0900 SWL = 10.83
		0948	48	11.02	0.19	
		1041	101	11.02	0.19	
		1227	207	10.98	0.15	
		1349	289	10.98	0.15	
		1555	415	10.98	0.15	

5A

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY-W05A

SWL = ~~[illegible]~~ 10.83

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
REC	6/25/03	1813	553	10.99	0.16	
	6/26/03	0613	1273	10.97	0.14	

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: HWYW05B

Project Name: RGWSS Project Number: 771.4 Site Location: HIGHWAY 550 TRANSECT

Pumping Well: HWY W05EV

Pumping Rate: 76 gpm

Start of Pumping 6/23/03 0900 (Date / Time)

End of Pumping _____ (Date / Time)

Monitoring Well:

Measuring Point Description: TOP OF STEEL

Measurement Frequency: HOURLY

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/23/03	0731	Ø	10.40	Ø	
test	6/23/03	0917	17	10.60	0.20	test start 0900
	6/23/03	1016	76	10.60	0.20	
	6/23/03	1111	131	10.62	0.22	
	6/23/03	1139	159	10.62	0.22	
	6/23/03	1242	222	10.63	0.23	
	6/23/03	1343	283	10.63	0.23	
	6/23/03	1443	343	10.64	0.24	
	6/23/03	1548	408	10.64	0.24	
	6/23/03	1640	460	10.65	0.25	
	6/23/03	1739	519	10.66	0.26	
	6/23/03	1834	594	10.66	0.26	
	6/23/03	1941	641	10.66	0.26	
		2053	713	10.66	0.26	
		2146	766	10.67	0.27	
		2246	826	10.67	0.27	
		2345	885	10.66	0.26	
	6/24/03	0047	947	10.67	0.27	
	6/24/03	0143	1003	10.67	0.27	
	6/24/03	0245	1065	10.67	0.27	
		0343	~~1425~~ 1123	10.68	0.28	
		0441	1151	10.66	0.26	
		0542	~~1182~~ 1202	10.68	0.28	
		0641	1271	10.68	0.28	
		0742	1362	10.68	0.28	
		0840	1420	10.68	0.28	

5B 5B

Form 5. Monitoring Well Water Levels

MONITORING WELL WATER LEVELS

WELL NUMBER: W05B

SWL 10.40

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
Constant rate	6/24/03	0840	1420	10.68	0.28	Repeat of last line of previous sheet
		0940	1480	10.69	0.29	
		1040	1540	10.69	0.29	
		1141	1601	10.70	0.30	
		1241	1661	10.70	0.30	
		1339	1719	10.70	0.30	
		1449	1789	10.71	0.31	
		1550	1850	10.72	0.32	
		1643	1903	10.71	0.31	
		1751	1971	10.70	0.30	
		1857	2037	10.71	0.31	
		1945	2085	10.72	0.32	
		2051	2151	10.71	0.31	
		2143	2203	10.71	0.31	
		2253	2273	10.72	0.32	
		2345	2325	10.72	0.32	
	6/25/03	0045	2385	10.71	0.31	
		0152	2452	10.73	0.33	
		0244	2504	10.73	0.33	
		0341	2561	10.74	0.34	
		0441	2621	10.74	0.34	
		0554	2694	10.75	0.35	
		0639	2739	10.74	0.34	
		0733	2793	10.75	~~10~~ 0.35	
		0837	2857	10.75	0.35	
Recovery		0920	20	10.57	0.17	Pump off @ 0940 SWL = 10.40
		0948	48	10.56	0.16	
		1042	102	10.56	0.16	
		1227	207	10.55	0.15	
		1350	290	10.54	0.14	
		1556	416	10.55	0.15	

5B

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY-W05B SWL = 10.40

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
REC	6/25/03	1814	554	10.56	0.16	
	6/26/03	0614	1274	10.55	0.15	

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: W11A

Project Name: RGWSS Project Number: 771.4 Site Location: HIGHWAY TRANSECT

Pumping Well: HWY W OBEX

Pumping Rate: 76 gpm

Start of Pumping 6/23/03 0900 (Date / Time)

End of Pumping _____ (Date / Time)

Monitoring Well:

Measuring Point Description: TOP OF STEEL

Measurement Frequency: HOURLY

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/23/03	0728	Ø	13.70	Ø	
test	6/23/03	0915	15	13.73	0.03	test start 0900
	6/23/03	1011	71	13.74	0.04	
	6/23/03	1108	128	13.75	0.05	
	6/23/03	1136	156	13.76	0.06	
	6/23/03	1238	218	13.77	0.07	
	6/23/03	1339	279	13.77	0.07	
	6/23/03	1439	339	13.78	0.08	
	6/23/03	1544	404	13.79	0.09	
	6/23/03	1642	462	13.80	0.10	
	6/23/03	1741	521	13.81	0.11	
	6/23/03	1851	591	13.82	0.12	
	6/23/03	1937	637	13.82	0.12	
		2049	709	13.82	0.12	
		2141	761	13.83	0.13	
		2243	823	13.84	0.14	
		2339	879	13.84	0.14	
	6/24/03	0042	942	13.84	0.14	
	6/24/03	0138	998	13.87	0.17	
	6/24/03	0239	1059	13.85	0.15	
		0339	1119	13.85	0.15	
		0437	1147	13.85	0.15	
		0538	1298 ~~1178~~	13.87	0.17	
		0638	1268	13.87	0.17	
		0739	1359	13.86	0.16	
		0837	1417	13.87	0.17	

11A

11A

MONITORING WELL WATER LEVELS

WELL NUMBER: W11A

SWL = 13.70

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
Constant Rate	6/24/03	0837	1417	13.87	0.17	Repeat of last line of previous sheet
		0937	1477	13.88	0.18	
		1037	1537	13.88	0.18	
		1138	1598	13.90	0.20	
		1239	1659	13.89	0.19	
		1337	1717	13.90	0.20	
		1446	1786	13.90	0.20	
		1546	1846	13.91	0.21	
		1639	1899	13.92	0.22	
		1748	1968	13.92	0.22	
		1851	2031	13.92	0.22	
		1941	2081	13.94	0.24	
		2046	2146	13.93	0.23	
		2139	2199	13.94	0.24	
		2247	2267	13.93	0.23	
		2341	2321	13.94	0.24	
	6/25/03	0040	2380	13.94	0.24	
		0148	2448	13.94	0.24	
		0239	2499	13.95	0.25	
		0338	2558	13.94	0.24	
		0438	2618	13.94	0.24	
		0551	2691	13.96	0.26	
		0636	2736	13.95	0.25	
		0726	2786	13.96	0.26	
		0835	2855	13.97	0.27	
Recovery		0917	17	13.95	0.25	Pump off @ 0900 SWL 13.70
		0945	45	13.93	0.23	
		1039	99	13.94	0.24	
		1223	203	13.91	0.21	
		1345	285	13.91	0.21	
		1552	412	13.94	0.24	

11A

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY ~~[illegible]~~ W11A SWL = 13.70

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
REC	6/25/03	1810	550	13.97	0.27	RIVER STOPPED FLOWING
	6/26/03	0610	1270	13.90	0.20	

Form 6. Monitoring Well Water Levels (cont'd)

W11A

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY W 11 B

Project Name: RGWSS Project Number: 771.4 Site Location: HIGHWAY TRANSECT

Pumping Well: HWY W08EV
Pumping Rate: 16 gpm
Start of Pumping 6/23/03 0900
Date Time
End of Pumping
Date Time

Monitoring Well:
Measuring Point Description: TOP OF STEEL
Measurement Frequency: HOURLY

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/23/03	0729	Ø	13.85	Ø	
test	6/23/03	0915	15	14.01	0.16	test start 0900
	6/23/03	1012	72	14.03	0.18	
	6/23/03	1108	128	14.03	0.18	
	6/23/03	1137	157	14.04	0.19	
	6/23/03	1239	219	14.05	0.20	
	6/23/03	1339	279	14.05	0.20	
	6/23/03	1439	339	14.06	0.21	
	6/23/03	1545	405	14.07	0.22	
	6/23/03	1643	463	14.08	0.23	
	6/23/03	1743	523	14.07	0.22	
	6/23/03	1852	592	14.09	0.24	
	6/23/03	1958	658	14.09	0.24	
		2050	710	14.11	0.26	
		2141	761	14.10	0.25	
		2243	823	14.10	0.25	
		2340	880	14.09	0.24	
	6/24/03	0043	943	14.08	0.23	
	6/24/03	0139	999	14.08	0.23	
	6/24/03	0239	1059	14.10	0.25	
		0339	1119	14.10	0.25	
		0437	1147	14.10	0.25	
		0538	~~1178~~ 1208	14.11	0.26	
		0638	1268	14.12	0.27	
		0739	1359	14.11	0.26	
		0837	1417	14.12	0.27	

11B

MONITORING WELL WATER LEVELS

WELL NUMBER: W11B

SWL = 13.85

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
Constant rate	6/24/03	0837	1417	14.12	0.27	Repeat of last line of previous sheet
		0937	~~1444~~ 1477	14.12	0.27	
		1037	1537	14.13	0.28	
		1138	1598	14.14	0.29	
		1239	1659	14.14	0.29	
		1337	1717	14.14	0.29	
		1446	1786	14.14	0.29	
		1546	1846	14.14	0.29	
		1640	1900	14.16	0.31	
		1747	1967	14.17	0.32	
		1852	2032	14.13	0.28	
		1942	2082	14.18	0.33	
		2048	2148	14.17	0.32	
		2140	2200	14.18	0.33	
		2248	2268	14.18	0.33	
		2342	2322	14.17	0.32	
	6/25/03	0041	2381	14.16	0.31	
		0149	2449	14.16	0.31	
		0239	2499	14.17	0.32	
		0338	2558	14.17	0.32	
		0438	2618	14.18	0.33	
		0551	2691	14.18	0.33	
		0637	2737	14.18	0.33	
		0726	2786	14.19	0.34	
		0835	2855	14.20	0.35	
Recovery		0918	18	14.06	0.21	Pump off @ 0900 SWL = 13.85
		0945	45	14.05	0.20	
		1039	99	14.05	0.20	
		1224	204	14.04	0.20	
		1345	285	14.02	0.18	
		1553	413	14.06	0.21	

11B

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY- 11B SWL = 13.85

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
REC	6/25/03	1811	551	14.11	0.26	RIVER STOPPED FLOWING
	6/26/03	0611	1271	14.02	0.17	

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY-W04A

Project Name: RGWSS Project Number: 771.4 Site Location: HIGHWAY 380 TRANSECT

Pumping Well: HWY W08EX

Pumping Rate: 76 gpm

Start of Pumping 6/23/03 0900 (Date / Time)

End of Pumping 6/25/03 0900 (Date / Time)

Monitoring Well:

Measuring Point Description: TOP OF STEEL AT LETTER

Measurement Frequency:

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/23/03	0745	Ø	10.75	Ø	
CONSTANT RATE	6/23/03	1521	381	10.78	0.03	
	6/23/03	2115	735	10.75	Ø	
	6/24/03	0100	960	10.72	-0.03	
	"	0650	1310	10.73	-0.02	
		1621	1881	10.77	0.02	
	6/25/03	0129	2429	10.75	Ø	
	"	0622	2722	10.77	0.02	
RECOVERY	6/25/03	1200	180	10.80	0.05	PUMP OFF @ 0900

1521
900
21

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY-W04B

Project Name: R GWSS Project Number: 771.4 Site Location: Highway 380 Transect

Pumping Well: HWY W08 EX

Pumping Rate: 76 gpm

Start of Pumping 6/23/03 0900 (Date / Time)

End of Pumping 6/25/03 0900 (Date / Time)

Monitoring Well:

Measuring Point Description: Top of steel at latch

Measurement Frequency:

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	6/23/03	0746	Ø	10.10	Ø	
CONSTANT RATE	6/23/03	1521	361	10.15	0.05	
	6/23/03	2117	737	10.12	0.02	
	6/24/03	0101	961	10.13	0.03	
	"	0650	1310	10.11	0.01	
	"	1622	1882	10.16	0.06	
	6/25/03	0130	2430	10.15	0.05	
	"	0622	2722	10.16	0.06	
RECOVERY	6/25/03	1200	180	10.17	0.07	Pump off @ 0900

MONITORING WELL WATER LEVELS

WELL NUMBER: ~~HWY W03B~~ ~~HWY W0~~ HWY-E01A

Project Name: RLW 55 Project Number: 771.4 Site Location: HIGHWAY 380 TRANSECT

Pumping Well: HWY W08EX

Pumping Rate: 76 gpm

Start of Pumping 6/23/03 0900 (Date Time)

End of Pumping 6/25/03 0900 (Date Time)

Monitoring Well:

Measuring Point Description: TOP OF STEEL at letter "A"

Measurement Frequency:

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
~~PRE~~	~~6/23/03~~	~~0741~~	~~Ø~~	~~8.01~~	~~Ø~~	
PRE	6/23/03	0804	Ø	10.97	Ø	
Constant Rate	6/23/03	1527	387	11.05	0.08	
	6/23/03	2205	785	11.08	0.11	
	6/24/03	0112	972	11.07	0.10	
	"	0658	1318	11.09	0.12 ~~0.11~~	
		1651	1911	11.16	0.19	
	6/25/03	0120	2420	11.16	0.19	
	"	0615	2715	11.17	0.20	
Recovery	"	1205	185	11.20	0.23	Pump off @ 0900

Form 5. Monitoring Well Water Levels

MONITORING WELL WATER LEVELS

WELL NUMBER: HWY-E01 B

Project Name: R6WSS Project Number: 771.4 Site Location: highway 380 transect

Pumping Well: HWY-FW08EX

Pumping Rate: 76 gpm

Start of Pumping 6/23/03 (Date) 0900 (Time)

End of Pumping 6/25/03 (Date) 0900 (Time)

Monitoring Well:

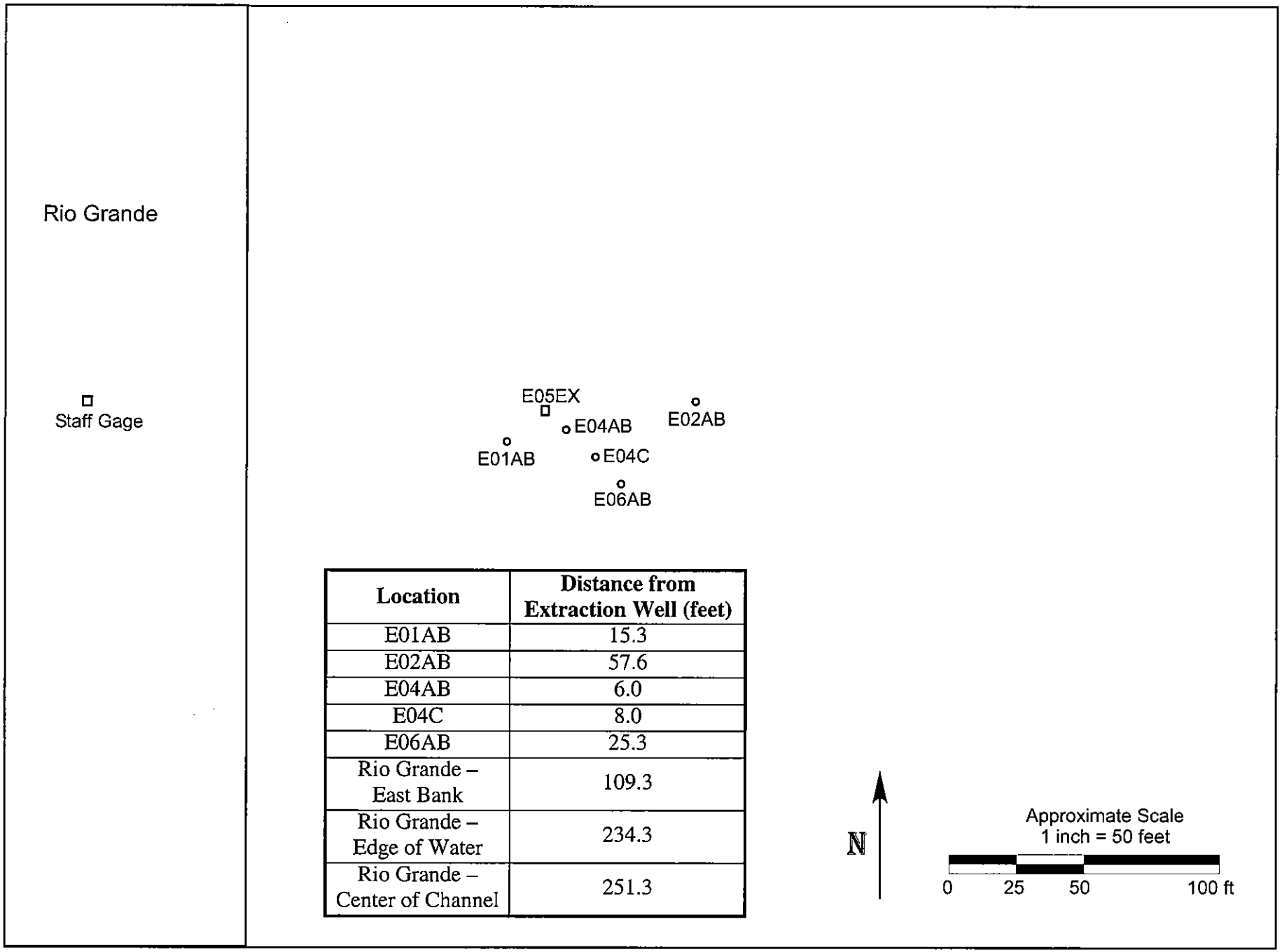
Measuring Point Description: TOP OF STEEL at letter "B"

Measurement Frequency:

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
PRE	06/23/03	0805	Ø	11.08	Ø	
CONSTANT RATE	6/23/03	1528	388	11.14	0.06	
	6/23/03	[illegible]	787	11.18	0.10	
	6/24/03	0113	973	11.17	0.09	
	"	0658	1318	11.18	0.10	
		1653	1913	11.24	0.16	
	6/25/03	0121	2421	11.24	0.16	
	"	0615	2715	11.26	0.18	
Recovery	6/25/03	1205	185	11.27	0.19	Pump off @ 0900

21
60
1260
50

Form 5. Monitoring Well Water Levels



Location	Distance from Extraction Well (feet)
E01AB	15.3
E02AB	57.6
E04AB	6.0
E04C	8.0
E06AB	25.3
Rio Grande – East Bank	109.3
Rio Grande – Edge of Water	234.3
Rio Grande – Center of Channel	251.3

Escondida 48 Hour Pumping Test Well Layout

Σ²Π

AQUIFER TEST DATA LOGGING RECORD

TEST ID/TYPE: ESC-E05EX Const. Rate

Project: 771-4 Date: 6/30/03

Project No. RGWS-PH 1 Site Location: Escondido, NM

Data Logger Information:

Instrument Type: In-situ Model: Hermit 3000 Serial No.: 45124

Number of Transducers Used for Test: 8

Delayed start (Y/N) N Starting Date/Time: 6/27/03/0852 - STEP 6/30/03/0840 - 48 HR Ending Date/Time: 6/27/03/1500 - STEP 7/2/03/1000 - 48 HR

Logging Frequency: Log - To 5 min max Reference (TOC or Surface): DTW

Test Number: Steps:

Pumping/Injection Well Information:

Well ID: 10" No. Observation Wells: 9 proximal

Screened Interval (ft. BGS): 30.4-49.2' Stick up (ft.): ~3.35

Initial Depth of Water (ft. TOC): Date/Time:

Ending Depth of Water (ft. TOC): Date/Time:

Data Logger Input Information:

Channel No.: 1
Station ID: ESC-E06B Transducer Serial No.: 1731 DC Pressure Range (psi): 10
Transducer-Linearity: 0.0 Scale: 10.005 Offset: -0.014 Delay: N
Depth(ft. TOC): 32 Submergance (ft.): 19.07 Reference: N Date/Time: NA

Channel No.: 2
Station ID: ESC-E02B Transducer Serial No.: 1012 Pressure Range (psi): 10
Transducer-Linearity: 0.0144 Scale: 9.9869 Offset: 0.0282 Delay: N
Depth(ft. TOC): 32 Submergance (ft.): 19.982 Reference: N Date/Time: NA

Channel No.: 3
Station ID: ESC-E04A Transducer Serial No.: 5107 Pressure Range (psi): 10
Transducer-Linearity: 0.0293 Scale: 9.8834 Offset: -0.0073 Delay: N
Depth(ft. TOC): 20 Submergance (ft.): 7.438 Reference: N Date/Time: NA

Channel No.: 4
Station ID: ESC-E04B Transducer Serial No.: 06659 Pressure Range (psi): 15
Transducer-Linearity: 0.0673 Scale: 14.9199 Offset: 0.1074 Delay: N
Depth(ft. TOC): 32 Submergance (ft.): 19.372 Reference: N Date/Time: NA

Channel No.: 5
Station ID: ESC-E04C Transducer Serial No.: 7189 Pressure Range (psi): 10
Transducer-Linearity: 0.0222 Scale: 9.9339 Offset: 0.0695 Delay: N
Depth(ft. TOC): 32 Submergance (ft.): 19.303 Reference: N Date/Time: NA

Channel No.: 6
Station ID: ESC-E01A Transducer Serial No.: 3103AB Pressure Range (psi): 10
Transducer-Linearity: 0.011 Scale: 10.115 Offset: -0.045 Delay: N
Depth(ft. TOC): 20 Submergance (ft.): 7.849 Reference: N Date/Time: NA

Channel No.: 7
Station ID: ESC-E01B Transducer Serial No.: 06266 Pressure Range (psi): 15
Transducer-Linearity: 0.0640 Scale: 15.1363 Offset: -0.0319 Delay: N
Depth(ft. TOC): 30 Submergance (ft.): 17.915 Reference: N Date/Time: NA

Channel No.: 8
Station ID: ESC-E05EX Transducer Serial No.: 5791 Pressure Range (psi): 20
Transducer-Linearity: 0.0769 Scale: 19.6881 Offset: 0.042 Delay: N
Depth(ft. TOC): 33 Submergance (ft.): 18.634 Reference: N Date/Time: NA

Σ²Π

Aquifer Test Data Logging Record

Record of Data Downloading			
Test/Step No.	Date	Time	Comments
ESC CNSEX			
STEPS			
1,2,3 & REC.	6/27/03	1700	DATA LOADED TO DELL FIELD LAPTOP
BACKGROUND	6/28	1739	"
48HR	7/2/03	1200	"
RECOVERY	7/2/03	18:57	"

Form 4. Data Logging Record (cont'd)

Pg. 1A

S.S. PAPADOPULOS ASSOCIATES, INC.
Environmental and Water Resource Consultants

RECORD OF PUMPING

WELL NUMBER: ESC-E05EX - Step Test

Project Name: RGWS-PH 1 Project Number: 771-4 Site Location: Escondida, NM

Pumping Well Parameters: See back for diagram

Diameter: 10"

Screened Interval: 30.4-49.2' bgs Total Depth: 55.3' bgs

Measuring Point Description: TOP OF 1" PVC DROP PIPE

Pump Type: Berkeley 1720 Capacity: 450 gpm Setting:

Motor - Franklin 20hp (460 V, 3 phase)

Totalizing Flowmeter:

Brand name: Hays 97-2" Scale (gal/rotation): 100 g/rot Initial Reading: 748237

Contractor: Rodgers Foreman: Jeff Hitchcock

SSP&A Personnel: Grigsby, Pearcy

Start of Pumping: Date: 6/27/03 Time: 0852 Pumping Rate Goal: Step 1: 40-45 gpm

Type of Test/ Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW (ft. bgs)	Notes

See Page 1B

Form 1. Record of Pumping

ESCE05 Step Test

Σ²Π

RECORD OF PUMPING

WELL NUMBER: ESCE05EX

Start of Pumping:

Date: 6/27/03 Time: 0852 Pumping Rate Goal: Step Test - Step 1 @ 40GPM

Type of Test/Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW (ft. bgs)	Notes
Step-Pre	6/27/03	0816	—	—	—	14.24'	Below T/PVC Drop Pipe
" "	"	0843	—	—	748237.	—	XD = 18.395
" "	"	0874	—	—			= 18.399
~~Step 1~~	~~6/27~~	~~[illegible]~~	~~ϕ~~	~~ϕ~~	~~748237~~	~~14.24~~	~~Start T=0~~
Step 1	6/27/03	0852	ϕ	ϕ	748237	14.24	Start T=0
		0852:30		34		17.46	
		0853	1			17.82	
		0853:30				18.12	
		0854	2	34		18.10	
		0855	3	32	748333	18.10	
		0856	4	31	64	18.10	
		0857	5	33	748397	18.10	
		0858	6	—	748425	18.10	Meter Stuck (3.86' DD)
		0900	8	31.5	438		
		0901	9		528	18.32	Up Pump Rate 0900:30 → Meter Stuck
		0901:30		50	53	20.34	Back Down Pump
		0902	10		577	20.40	
		0902:30		44	599	20.24	
		0903	11	46	622	20.22	
		0904	12	46	668	20.22	
		0905	13	46	714	20.22	
		0906	14	46	760	20.22	
		0908	16	46	852	20.22	
		0910	18	46	748944	20.22	
		0915	23	46.8	749178	20.44	XD = 12.314
		0920	28	47.4	749415	20.44	
		0925	32	47.4	749652	20.40	

Page 2 ESC-E05

Σ²Π

RECORD OF PUMPING

Con't

Steptest

WELL NUMBER: ESC-E05EX

STATIC 14.24

Start of Pumping:

Date: 6/27/03 Time: 0852 Pumping Rate Goal: Step Test - Test 1

Type of Test/Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW (ft. bgs)	Notes
Step 1	6/27/03	0930	37	46.6	749885	20.40	
		0935	42	45.0	750110	20.40	Start every 10 min
		0945	52	46.2	750572	20.40	
		0955	62	46.8	751040	20.32	
		1005	72	45.0	751490	20.32	
		1015	82	45.0	751940	20.32	
		1025	92	45.4	752394	20.32	
		1035	102	45.1	752845	20.40	x D = 13.375
		1045	112	46.0	753305	20.42	
		1055	122		753759	20.42	
		1100					Start Step 2
		1102	2		754109	22.74	
		1102:30	2:30	56	37		
		1103	3	60	754169		
		1104	4	64	233	23.00	
		1105	5	67	300	22.95	
		1106	6	62	362	23.04	
		1107	7	63	425	23.04	
		1108	8	66	491	23.02	
		1109	9	62	553	23.02	
		1110	10	66	619	23.02	
		1112	12	62.5	744	23.02	x D = 9.721
		1114	14	64	872	23.04	
		1116	16	65.5	755003	23.04	
		1120	20	63	755254	23.04	
		1125	25	63.6	755572	23.08	
		1130	30	64.6	755895	23.08	

Form 2. Record of Pumping (cont'd)

cont' page 3

ESC-E05EX

RECORD OF PUMPING

WELL NUMBER: ESC-E05EX

Start of Pumping:

Date: 6/27 Time: 0852 Pumping Rate Goal: STEP 2 64 gpm SWL=14.24.
STEP 3 87 gpm

Type of Test/Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW (ft. bgs)	Notes
STEP 2	6/27/03	11:40	40	63.4	756529	23.12	Step 2 cont.
		11:50	50	63.5	757164	23.12	
		noon	60	64.3	757807	23.12	
		1210	70	63.1	758438	23.25	
		1220	80	63.7	759075	23.40	
		1230	90	64.0	759715	23.40	
		1240	100	63.2	760347	23.14	XEX = 9.592
		1250	110	64.5	760992	23.14	
END STEP 2		1300	120				END STEP 2
START STEP 3		1300	0				
STEP 3	6/27/03	1306	6		762138	26.40	
		1307	7	87	762225	26.85	
		1308	8	87	762312	26.82	
		1309	9	86	2398	26.85	
		1310	10	86	762484	26.84	
		1311	11	81	762565	26.84	
		1312	12	86	762650	26.84	
		1313	13	86	735	26.84	
		1316	15	87	762909	26.60	
		1317	17	86.5	763082	26.60	
		1320	20	83	763332	26.70	XD = 5.881. DD = 12.46
		1325	25	85.2	763758	26.70	River still has water
		1330	30	86.0	764188	26.70	start 10min
		1340	40	84.6	765034	26.80	
		1350	50	85.1	765893	26.92	
		1400	60	84.9	766742	26.94	
		1410	70	85.6	767598	26.94	

Page 4

Σ²Π

RECORD OF PUMPING

WELL NUMBER: ESC - EOSEX

Start of Pumping:

Date: 6/27/03 Time: Pumping Rate Goal: STEP 3 87 gpm

Type of Test/Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW (ft. bgs)	Notes
STEP 3	6/27/03	1420	80	84.4	768442	26.94	
		1430	90	85.2	769294	26.94	
		1440	100	84.2	770136	26.94	
		1450	110	84.9	770985	26.94	
		~~1460~~					
		15:00	120	84.1	771826	26.94	

Form 2. Record of Pumping (cont'd)

S.S. PAPADOPULOS ASSOCIATES, INC.
Environmental and Water Resource Consultants

RECORD OF PUMPING

WELL NUMBER: BSC-EOSLEX SWL 14.37

Project Name: RGWS-PA 1 Project Number: 771-4 Site Location: Escondida, NM

Pumping Well Parameters: Diameter: 10"
Screened Interval: 30.4-49.2' bgs Total Depth: 55.3' bgs
Measuring Point Description: Top of 1" PVC drop pipe

Pump Type: Berkley 1720 Capacity: 450 gpm Setting: ~~90 gpm~~

Totalizing Flowmeter:
Brand name: Nagy 97-2" Scale (gal/rotation): 100 Initial Reading: 772872

Contractor: Rogers Foreman: Todd Hitchcock

SSP&A Personnel: Gr. gsby, Pearing

Start of Pumping: Date: 6/30/03 Time: 0840:18 Pumping Rate Goal: ~90 gpm

Type of Test/ Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW (ft. bgs)	Notes
Pre	06/30/03	0838	0		772872	14.37	XD@0805 = 18.634
Constant		0840	TEST		START	0	0840:18
		0840:18	← ACTUAL		START	Pump	Circuit Breaker was off.
		0842				26.16	
		0843			773123	26.70	
		0844		92	773214	26.85	
		0845	5	94	3308	26.91	
		0846		91	3399	26.93	
		0847		89	3488	26.96	
		0848		92	3580	26.97	
		0849		87	3667	26.99	
		0850	10	91	3758	27.00	DD = 12.63
		0852		91	3940	27.02	
		0854		90.5	774121	27.04	
		0856		92.5	4306	27.06	
		0858		91	4488	27.05	
		0900	20	90	4668	27.06	
		0905	25		775125	27.07	~~XD 0.098 = 0.010~~
		0910	30	88.6	775573	27.08	XD = 9:10 = 6.082
		0915	35	91.0	776028	27.10	

Form 1. Record of Pumping

840
1240

~~1788~~

Σ²Π

RECORD OF PUMPING

WELL NUMBER: ESC-E05EX

Start of Pumping: 6/30/03 0840:18 SWL=14.37

Date: 6/30/03 Time: 0840 Pumping Rate Goal: ~90 gpm

Type of Test/Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW (ft. bgs)	Notes
Constant rate	6/30/03	0920	40	90.6	776481	27.10	
		0930	50	90.3	777384	27.15	start at 10:min
		0940	60	90.7	778291	27.20	6.022=EX @ 9:26 am
		0950	70	90.3	779194	27.22	
		1000	80	90.3	780097	27.22	
		1010	90	90.1	780948	27.25	
		1020	100	90.1	781899	27.23	XD= 5.896 @1020 658 µS/cm
		1030	110	90.3	782802	27.25	T= 11.7°C, PH=7.83, cond ~~658~~ µS/cm
		1040	120	90.3	783705	27.26	~~T=11.9°C DO=3.0 cond 634~~ DO = 0.8 ppm
		1110	150	89.7	786398	27.28	start at 30 min
		1140	180	88.33	789089	27.31	XD = 5.800 @ 1148
		1210	210	89.93	791782	27.32	DD = 12.85
		1240	240	89.63	794471	27.33	XD = 5.810 @1252 DD = 12.82
		1310	270	89.40	797153	27.34	
		1340	300	89.30	799832	27.33	XD = 5.770 @ 1347
		1410	330	89.50	802517	27.35	
		1440	360	89.13	805191	27.35	T=13.2 PH8.71 Cond 652 mS/cm
		1510	392	88.75	808031	27.37	DO: 1.2 ppm @14:32
		1530	410	88.94	809632	27.32	
		1600	440	88.67	812292	27.31	
		1630	470	88.27	814940	27.31	
		1700	500	88.67	817600	27.30	XD @1713 = 5.846
		1745	~~545~~ 545	88.22	821570	27.28	
		1800	~~620~~ 560	88.07	822891	27.27	DD = ~~13.73~~ 12.90
		1830	~~650~~ 590	88.57	825548	27.26	XD @ 18.35 = 5.855 DD = 12.78
		1900	~~680~~ 620	88.33	828198	27.24	

Form 2. Record of Pumping (cont'd)

Σ²Π

RECORD OF PUMPING

WELL NUMBER: ESC-EOSEX

SWL=14.37

Start of Pumping: 6/30/03 0840:18

Date: 6/30/03 Time: 840 Pumping Rate Goal: 90 gpm

Type of Test/Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW (ft. bgs)	Notes
constant rate	6/30	1930	~~710~~ 650	89.7	830889	27.24	
		2000	~~740~~ 680	87.67	833519	27.23	x D@ 2014 = 5.920
		2030	~~770~~ 710	88.87	836185	27.23	
		2100	~~800~~ 740	89.27	838863	27.24	
		2130	~~830~~ 770	89.23	841540	~~27~~ 27.23	
		2200	~~860~~ 800	89.23	844217	27.25	
		2230	~~890~~ 830	89.53	846903	27.25	
		2300	~~920~~ 860	89.23	849580	27.25	
		2330	~~950~~ 890	89.43	852263	27.25	
	7/1	000	~~980~~ 920	89.36	854944	27.25	
		030	~~1010~~ 950	89.50	857629	27.24	
		100	~~1040~~ 980	89.53	860315	27.26	
		130	~~1070~~ 1010	89.67	863005	27.26	
		200	~~1100~~ 1040	89.50	865690	27.26	
		230	~~1130~~ 1070	87.63	868379	27.27	
		300	~~1160~~ 1100	89.9	871076	27.27	XD@3125.0856
		330	~~1190~~ 1130	90.2	873782	27.27	
		400	~~1220~~ 1160	90.0	876484	27.26	
		430	~~1250~~ 1190	90.2	879192	27.26	
		500	~~1280~~ 1220	89.7	881885	27.25	
		530	~~1310~~ 1250	89.9	884584	27.25	
		600	~~1340~~ 1280	89.7	887277	27.24	
		0630	~~1370~~ 1310	89.6	889966	27.26	
		0700	~~1400~~ 1340	89.9	892662	27.26	XD @ 0713 = 5.859
		0730	~~1430~~ 1370	89.8	895356	~~27.27~~	
		0800	~~1500~~ 1400	89.8	898051	27.26	
		0830	~~1530~~ 1430	89.7	900742	27.27	

Form 2. Record of Pumping (cont'd)

10-742

Σ²Π

RECORD OF PUMPING

0806: XD = 18.34
SWL = 14.37

WELL NUMBER: ESC - E05EX

Start of Pumping: 6/30/03 0840:18

Date: Time: Pumping Rate Goal: 90 gpm

Type of Test/Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW (ft. bgs)	Notes
Constant rate	7/1/03	0900	~~1560~~ 1460	89.7	903433	27.26	
		0930	~~1590~~ 1490	89.6	906122	27.28	@ 1035
		1000	~~1620~~ 1520	89.6	908810	27.27	pH = 9.38 T = 11.9 °C
		1030	1550	89.4	911492	27.30	cond = 605 µS/cm DO = 1.4 PPM
		1100	1580	89.1	914166	27.32	XD @ 1116 = 5.794
		1130	1610	89.2	916842	27.33	
		1200	1640	89.3	919520	27.36	27.32
		1230	1670	88.96	[illegible]	27.37	922189
		1300	1700	89.1	924863	27.37	XD @ 1257 = 5.713
		1330	1730	88.9	927530	27.37	
		1400	1760	88.9	930198	27.38	
		1430	1790	91.03	932860	27.35	DD = 12.88'
		1500	1820	88.8	935524	27.35	XD @ 1503 = 5.756' DD = 12.87
		1530	1850 (82.5)	[illegible]	938178	27.35	.732
		1600	1880	88.5	940832	27.34	
		1630	1910	88.4	943485	27.31	
		1700	1940	88.2	946132	27.31	XD @ 1709 = 5.848
		1730	~~1970~~	88.6	948789	27.28	
		1800	2000	88.3	951437	27.26	
		1830	2030	88.4	954090	27.26	
		1900	2060	88.2	956737	27.26	XD @ 1913 = 5.844
		1930	2090	88.1	959379	27.26	
		2000	~~2120~~ 2150	88.2	962025	27.26	
		2030	~~2150~~ 2180	88.2	964672	27.29	
		2100	2180	88.6	967330	27.29	
		2130	2210	88.3	969978	27.28	

6 2

Σ²Π

RECORD OF PUMPING

XD@0805 = 18.634

WELL NUMBER: ESC-E05EX

SWL = 14.37

Start of Pumping: 6/30/03 0840:18

Date: Time: Pumping Rate Goal: 90 gpm

Type of Test/Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW (ft. bgs)	Notes
Const.	7/1/03	2130	2210	88.3	969978	27.28	← Repeat from pvs. page
rate		2200	2240	88.4	972631	27.27	
		2230	2270	88.5	975285	27.28	
		2300	2300	88.3	977933	27.26	XD @ 2312 = 5.832
		2330	2330	88.5	980588	27.25	
	7/2/03	0000	2360	88.6	983245	27.25	
		0030	2390	89.0	985914	27.24	DD = 12.87
		0100	2420	88.6	988573	27.25	XD @ 0111 = 5.882 DD = 12.7
		0130	2450	88.9	991241	27.26	
		0200	2480	89.1	993913	27.25	
		0230	2510	88.7	996575	27.25	
		0300	2540	88.3	999240	27.25	
		0330	2570	89.1	1001913	27.25	
		0400	2600	89.3	1004592	27.26	
		0432	2630	90.8	1007498	27.26	(number a little late)
		0500	2660	89.6	1009925	27.26	
		0530	2690	89.16	1012600	27.30	
		0600	2720	89.03	1015271	27.33	
		0630	2750	89.63	1017960	27.32	
		0700	2780	89.03	1020631	27.32	DX 7:10 = 5.815
		0730	2810	89.57	1023318	27.33	
		0800	2840	89.46	1026002	27.32	
		0830	2870	89.33	1028682	27.33	Drain SG - 0.78
		0900	2900	89.4	1031364	27.33	
		0932	2932		1034223	27.33	Temp: 12.1 PH 8.43
							DOC: Con 6.56
							11.3 mS/cm

3

1034 23

Form 2. Record of Pumping (cont'd)

Σ²Π

RECORD OF PUMPING

WELL NUMBER: ESC-E05EX

SWL=14.37

Start of Pumping: 6/30/03 0840

Date: 7/2/03 Time: Pumping Rate Goal: 90 gpm

Type of Test/Status	Date	Time	Elapsed Time (min)	Pumping Rate (GPM)	Totalizer Reading (gal)	DTW (ft. bgs)	Notes
Const. Rate	7/2/03	10:00				25.20	15 sec
		10:00				19.91	15 sec
Recovery	7/4/03					~~19.75~~	~~17.38~~
		10:01	1			15.31	30 sec
		1001				14.95	
		1002	2				14.84
		1002				14.78	
		1003	3			14.75	
		1003				14.74	
		1004	4			14.71	60 sec.
		1005	5			14.69	
		1006	6			14.68	
		1007	7			14.68	
	1009	~~1008~~	9			14.66	120 sec.
		1011	11			14.65	
		1013	13			14.64	
		10:15	15			14.64	~~5 minutes~~
		1020	20			14.62	~~5 minutes~~
		1030	30			14.61	
		1040	40			14.60	XD @ 1046 = 8.397
		1050	50			14.59	
		~~1054~~					
		1100	60			14.59	DD = 0.22
		1130	90			14.61	
		noon	120			14.62	
		13:00	150			14.65	
		14:07	187			14.65	

Form 2. Record of Pumping (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-E04A

Project Name: RGWS Ph.1 Project Number: 771-4 Site Location: Escondida

Pumping Well: ESC E05 EX

Pumping Rate: 90 gpm

Start of Pumping 0840:18 6/30/03 (Date / Time)

End of Pumping 7/2/03 1000 (Date / Time)

Monitoring Well:

Measuring Point Description: top of steel casing

Measurement Frequency: 1 hour

June 30 - July 2, 2003

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	726	Ø	12.32	0	XD @ 0803 = 7.438
constant	6/30/03	0853	13	13.03	0.71	XD @ 0906 = 6.690
rate		0918	38	13.10	0.78	XD @ 0926 = 6.647
		0940	60	13.13	0.81	**
		~~0940~~ 1015	95	13.17	0.86	XD @ 1018 = 6.585
		1043	123	13.20	0.89	
		1043	183	13.23	0.92	XD @ 1147 = 6.537
		1242	242	13.25	0.95	XD @ 1250 = 6.507
		1342	302	13.28	0.96	XD @ 1346 = 6.488
		~~1346~~ 1441	361	13.29	0.97	XD @ 1448 = 6.475
		1609	~~389~~ 449	13.31	0.99	
		1704	~~445~~ 504	13.31	0.99	XD @ 1711 = 6.459 DD = 0.78'
		1908	~~548~~ 568	13.32	1.00	
		2005	685	13.31	0.99	XD @ 2012 = 6.470
		2108	748	13.29	0.97	
		2204	804	13.28	0.96	
		2302	862	13.27	0.96	XD @ 2315 = 6.512
	7/1/03	005	925	13.26	0.94	
		102	982	13.25	0.93	
		0204	1044	13.23	0.91	
		0304	1104	13.22	0.90	XD @ 0310 = 6.557
		401	1161	13.20	0.88	
		0502	1222	13.17	0.85	
		0602	1282	13.17	0.85	
		0703	1343	13.16	0.84	XD @ 0711 = 6.611
		0801	1401	13.18	0.86	

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-E04A

SWL = 12.32
XD 7.+38

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
Constant rate	7/1/03	0902	1459	13.20	0.88	
		1002	1522	13.23	0.91	
		1102	1582	13.27	0.95	XD @ 1109 = 6.502
		1202	1642	13.29	~~0.98~~ 0.97	
		1303	1703	13.32	1.00	XD @ 1254 = 6.460
		1402	1762	13.33	1.01	
		1457	1817	13.35	1.03	XD @ 1502 = 6.442
		1602	1882	13.34	1.02	
		1702	1942	13.35	1.03	XD @ 1707 = 6.435
		1802	2002	13.35	1.03	
		1903	2063	13.35	1.03	XD @ 1910 = 6.441
		2005	2125	13.34	1.02	
		2101	2181	13.31	0.99	
		2204	2244	13.30	0.98	
		2302	2302	13.29	0.97	XD @ 2309 = 6.511
	7/2/03	0003	2363	13.27	0.95	
		0102	2422	13.27	0.95	XD @ 0112 = 6.531 (DD=0.91)
		0202	2482	13.26	0.94	
		306	2546	13.25	0.93	
		0402	2602	13.25	0.93	
		0502	2662	13.25	0.93	XD @ 0510 = 6.544
		0601	2721	13.25	0.93	
		0700	2781	13.25	0.93	XD @ 0712 = 6.55
		0809	2850	13.26	0.94	
		0903	2904	13.26	0.94	
Recovery	7/2/03	10:01	1	13.17	0.85	
		10:05	5	12.82	0.50	
		10:15	15	12.67	0.35	
		11:02	62	12.56	0.24	XD @ 1040 = 7.197' DD = 0.24'
		1207		12.56		
		1406		12.56		
		1758		12.65		

XD @ 1845 = 7.150

0.93

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC- E04B

Project Name: RGWS Ph. I Project Number: 771-4 Site Location: Escondida

Pumping Well: ~~ESC 605EX~~
Pumping Rate: 90 gpm
Start of Pumping: 0840:18 (Date) 6/30/03 (Time)
End of Pumping: 7/2/03 (Date) 1200 (Time)

Monitoring Well:
Measuring Point Description: top of steel casing
Measurement Frequency: 1 hour

June 30 - July 2, 2003

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	727	Ø	12.32	0	XD @ 0804 = 19.372
constant rate	6/30/03	0854	14	13.82	1.50	XD @ 0907 = 17.823
		0918	38	13.87	1.55	XD @ 0927 = 17.788
		0940	60	13.91	1.59	
		1015	95	13.94	1.62	XD @ 1019 = 17.735
		1043	123	13.96	1.64	
		1143	183	13.99	1.67	XD @ 1147 = 17.687
		1242	242	14.01	1.69	XD @ 1250 = 17.665
		1342	302	14.04	1.72	XD @ 1346 = 17.656
		1441	362	14.04	1.72	XD @ 1448 = 17.638
		1609	~~38~~ 449	14.05	1.73	
		1704	~~48~~ 504	14.05	1.73	XD @ 1711 = 17.631 DD = 1.74
		1908	~~648~~ 568	14.05	1.73	
		2006	686	14.04	1.72	XD @ 2012 = 17.642
		2108	748	14.03	1.71	
		2204	804	14.02	1.70	
		2303	863	14.01	1.69	XD @ 2315 = 17.677
	7/1/03	005	925	14.00	1.68	
		102	988	13.99	1.67	
		0204	1044	13.97	1.65	
		0304	1104	13.96	1.64	XD @ 0310 = 17.733
		0402	1162	13.93	1.61	
		0502	1222	13.93	1.61	
		0603	1283	13.91	1.59	
		0704	1344	13.91	1.59	XD @ 0711 = 17.781
		0802	1402	13.92	1.60	

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-E04B

SWL = 12.32
XD 19.372

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes	
constant rate	7/1/03	0902	1462	13.94	1.62		
		1003	1523	13.98	1.66		
		1102	1582	14.02	1.70	XD @ 1109 = 17.677	
		1202	1642	14.03	1.71		1.67
		1303	1703	14.06	1.74	XD @ 1254 = 17.629	
		1403	1763	14.05	1.73		
		1458	1818	14.08	1.76	XD @ 1502 = 17.617	
		1602	1882	14.07	1.75		
		1702	1942	14.08	1.76	XD @ 1707 = 17.619	
		1802	2002	14.07	1.75		
		1903	2063	14.07	1.75	XD @ 1911 = 12.623	
		1906	2126	14.05	1.73		
		2101	2181	14.04	1.72		
		2205	2245	14.02	1.70		
		2303	2303	14.01	1.69	XD @ 2309 = 12.686	
	7/2/03	0003	2363	14.00	1.68		
		0102	2422	13.99	1.67	XD @ 0112 = 17.690 (DD =	1.68)
		0203	2483	13.98	1.66		
		0306	2546	13.98	1.66		
		0403	2603	13.98	1.66		
		0503	2663	13.99	1.67	XD @ 0510 = 17.713	
		0603	2723	13.98	1.66		
		0703	2783	13.98	1.66	XD @ 0712 = 17.716	
		0810	2850	13.98	1.66		
		0903	2903	13.98	1.66		
Recovery	7/2/03	10:01	1	12.86	0.54		
		10:05	5	12.63	0.31	12.63	
		10:16	16	12.56	0.24		
		11:02	62	12.57	0.25	XD @ 1041 = 19.152 DD =	0.22'
		12:07		12.57	0.25		
		14:08		12.60			
		17:58		12.62			

XD @ 1841 = 19.048

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC- E04C

Project Name: RGWS-Ph1 Project Number: 771-4 Site Location: Escondido

Pumping Well: ESC GOSEX
Pumping Rate: 90 gpm
Start of Pumping 0840:18 6/30/03 (Date Time)
End of Pumping 7/2/03 1000 (Date Time)

Monitoring Well:
Measuring Point Description: top of steel casing
Measurement Frequency: 1 hour

June 30 - July 2, 2003

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	727	Ø	12.49	0	XD @ 0804 = 19.303
constant rate	6/30/03	0855	15	12.63	0.14	XD @ 0907 = 19.075
		0918	38	12.67	0.18	XD @ 0928 = 19.047
		0940	60	12.69	0.20	
		1016	96	12.72	0.23	XD @ 1019 = 19.007
		1044	124	12.74	0.25	XD @ 1148 = 18.964
		1043	183	12.77	0.28	
		1242	242	12.80	0.31	XD @ 1251 = 18.938
		1342	302	12.82	0.33	XD @ 1346 = 18.924
		1442	362	12.83	0.34	XD @ 1449 18.911
		1610	~~390~~ 450	12.85	0.36	
		1705	~~455~~ 505	12.85	0.36	XD @ 1711 = 18.909 DD = 0.39
		1909	~~549~~ 549	12.86	0.37	
		2006	686	12.84	0.35	XD @ 2012 = 18.909
		2109	749	12.83	0.34	
		2206	806	12.81	0.32	
		2304	864	12.81	0.32	XD @ 2315 = 18.957
	7/1/03	006	926	12.79	0.30	
		103	983	12.78	0.29	
		0205	1045	12.76	0.27	
		0305	1105	12.75	0.26	XD @ 0311 = 18.993
		402	1162	12.72	0.23	
		0503	1223	12.71	0.22	
		0603	1283	12.72	0.23	
		0704	1344	12.72	0.23	XD @ 0712 = 19.057
		0802	1402	12.71	0.22	

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-E04C

SWL = 12.49
XD 19.303

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
Constant rate	7/1/03	903	1460	12.73	0.24	
		1003	1523	12.77	0.28	
		1103	1583	12.80	0.31	XD @ 1109 = 18.936
		1202	1642	12.82	0.33	0.29
		1304	1704	12.85	0.36	XD @ 1255 = 18.895
		1403	1763	12.88	0.39	
		1458	1818	12.87	0.38	XD = 1302 = 18.881
		1603	1883	12.87	0.38	
		1703	1943	12.88	0.39	XD @ 1708 = 18.878
		1803	2003	12.88	0.39	
		1904	2064	12.88	0.39	XD @ 1911 = 18.871
		2007	2127	12.87	0.38	
		2102	2182	12.84	0.35	
		2205	2245	12.83	0.34	
		2303	2303	12.81	0.32	XD @ 2310 = 18.930
	7/2/03	0003	2363	12.80	0.31	
		0103	2423	12.80	0.31	XD @ 0113 = 18.968 (DD = 0.33)
		0204	2484	12.79	0.30	
		0306	2546	12.78	0.29	
		0404	2604	12.76	0.29	
		0504	2664	12.78	0.29	XD @ 0511 = 18.969
		0603	2723	12.76	0.27	
		0703	2783	12.76	0.27	XD @ 0716 18.983
		0811	2851	12.78	0.29	
		0904	2904	12.79	0.30	
Recovery	7/2/03	10:02	2	12.79	0.30	
		10:06	6	12.72	0.23	
		10:16	16	12.67	0.18	
		11:03	63	12.65	0.16	XD @ 1042 = 19.112 DD = 0.19
		1209		12.66		
		1406		12.71		
		1759		12.75		

XD @ 1846 = 18.994

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-E01A

Project Name: RGWS Ph. 1 Project Number: 771-4 Site Location: Escondida

Pumping Well: ESC E05 0840

Pumping Rate: 90 gpm

Start of Pumping 0840:18 6/30/03 (Date / Time)

End of Pumping 7/2/03 1000 (Date / Time)

Monitoring Well:

Measuring Point Description: top of steel casing

Measurement Frequency: 1 hour

June 30-July 2, 2003

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	7:21	Ø	11.91	0	XD @ 0808 = 7.849
Constant rate	6/30/03	0850	10	12.57	0.66	XD @ 0905 = 7.110
		0916	26	12.62	0.71	XD @ 0926 = 7.080
		0939	59	12.64	0.73	
		1014	94	12.69	0.78	XD @ 1018 = 7.028
		1043	123	12.70	0.79	
		1142	182	12.73	0.82	XD @ 1147 = 6.972
		1241	241	12.76	0.85	XD @ 1249 = 6.964
		1340	300	12.78	0.88	XD @ 1345 = 6.950
		1440	360	12.80	0.89	XD @ 1447 = 6.931
		1607	~~388~~ 447	12.81	0.90	
		1702	~~473~~ 592	12.81	0.90	XD @ 1710 = 6.910 → DD = 0.94
627		1907	~~648~~	12.82	0.91	
		2004	684	12.81	0.90	XD @ 2013 = 6.920
		2105	745	12.80	0.89	
		2202	802	12.78	0.87	
		2301	861	12.78	0.87	XD @ 2313 = 6.950
	7/1/03	003	923	12.78	0.87	
		101	985	12.77	0.86	
		0202	1042	12.74	0.83	
		0302	1102	12.73	0.82	XD @ 0309 = 7.001
		0400	1160	12.70	0.79	
		0500	1220	12.72	0.81	
		0600	1280	12.67	0.76	
		0702	1342	12.68	0.77	XD @ 0710 = 7.045
		0800	1400	12.68	0.77	

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC - E01A

SWL = 11.91
SXD 7.849

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
Constant rate	7/1/03	901	1460	12.70	0.79	
		1000	1520	12.75	0.84	
		~~1031~~ 1101	1581	12.77	0.86	XD @ 1108 = 6.940
		1201	1641	12.79	0.88	0.82
		1301	1701	12.83	0.92	XD @ 1252 = 6.904
		1401	1761	12.82	0.91	
		~~15~~ 1456	1816	12.82	0.91	XD @ 1501 = 6.896
		1601	1881	12.84	0.95	
		1701	1941	12.85	0.94	XD @ 1706 = 6.884
		1800	2000	12.86	0.94	
		1901	2061	12.86	0.94	XD @ 1909 = 6.889
		2001	2121	12.83	0.92	
		2059	2179	12.81	0.90	
		2203	2243	12.80	0.89	
		2301	2301	12.79	0.88	XD @ 2308 = 6.935
	7/2/03	0000	2360	12.78	0.87	
		0100	~~2396~~ 2420	12.77	0.86	XD @ 0112 = 6.959 (DD = 0.89)
		0200	2480	12.76	0.85	
		0303	2543	12.76	0.85	
		0401	2601	12.75	0.84	
		0501	2661	12.75	0.84	XD @ 0509 = 6.976
		0601	2721	12.76	0.85	
		0701	2781	12.76	0.85	XD @ 0711 = 6.972
		0806	2846	12.76	0.85	
		0901	2901	12.77	0.86	
Recovery	7/2/03	10:00	0+	12.81	0.90	E01 A
		~~10:00~~		~~12.71~~		~~E01 B~~
				~~12.2~~		~~E04A~~
		10:04	4	12.27	0.36	
		10:14	14	12.17	0.26	
		11:01	61	12.09	0.18	XD @ 1038 = 7.019 DD = 0.24
		12:01		12.08	0.17	
		14:06		12.12	0.21	
		17:57		12.18	0.27	

Form 6. Monitoring Well Water Levels (cont'd)

XD @ 18:43 = 7.548

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-E01B

Project Name: RGWSPhI Project Number: 771-4 Site Location: Escondida

Pumping Well: ESC EOS ex

Pumping Rate: 90 gpm

Start of Pumping: 0840:18 6/30/03 (Date / Time)

End of Pumping: 7/2/03 1000 (Date / Time)

Monitoring Well:

Measuring Point Description: top of steel casing

Measurement Frequency: 1 hour

June 30 - July 2, 2003

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	7:20	Ø	11.87	0	XD @ 0805 = 17.915
constant rate	6/30/03	0851	11	12.76	0.89	XD @ 0906 = 16.978
		0917	37	12.82	0.95	XD @ 0926 = 16.947
		0939	59	12.84	0.97	~~XD @ 1018 = 16.898~~
		1015	95	12.88	1.01	XD @ 1018 = 16.898
		1043	123	12.90	1.03	
		1142	182	12.92	1.05	XD @ 1147 16.851
		1241	241	12.95	1.08	XD @ 1249 = 16.829
		1341	301	12.97	1.10	XD @ 1345 = 16.815
		1440	360	12.98	1.11	XD @ 1447 = 16.799
		1608	~~338~~ 448	13.00	1.13	
		1703	~~503~~ 503	13.00	1.13	XD @ 1711 = 16.787 DD = 1.13
		1907	~~547~~ 547	13.00	1.13	
		2004	684	12.99	1.12	XD @ 2013 = 16.794
		2107	~~643~~ 747	12.98	1.11	
		2203	803	12.96	1.09	
		2301	861	12.96	1.09	XD @ 2314 = 16.828
	7/1/03	004	924	12.95	1.08	
		101	981	12.94	1.07	
		0202	1042	12.92	1.05	
		0303	1103	12.91	1.04	XD @ 0309 = 16.881
		401	1161	12.88	1.01	
		0501	1221	12.86	0.99	
		0601	1281	12.85	0.98	
		0702	1342	12.85	0.98	XD @ 0710 = 16.933
		0800	1400	12.86	0.99	

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC- E01B

SWL = 11.87
XD 17.916

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
Constant rate	7/1/03	0902	1462	12.88	~~0.97~~ 1.01	
		1002	1522	12.92	1.05	
		1101	1581	12.95	1.08	XD @ 1108 = 16.832
		1201	1641	12.97	1.10	
		1302	1702	12.99	1.12	XD @ 1253 = 16.789
		1401	1761	13.00	1.13	
		1457	1817	13.02	1.15	XD @ 1502 = 16.771
		1601	1881	13.01	1.14	
		1701	1941	13.03	1.16	XD @ 1706 = 16.774
		1800	2000	13.03	1.16	
		1901	2061	13.02	1.15	XD @ 1910 = 16.769
		2004	2124	13.00	1.13	
		2059	2179	12.99	1.12	
		2203	2243	12.97	1.10	
		2301	2301	12.96	1.09	XD @ 2308 = 16.833
	7/2/03	0000	2360	12.95	1.08	
		0101	2421	12.95	1.08	XD @ 0112 = 16.841 (DD=1.08)
		0201	2481	12.94	1.07	
		0304	2544	12.93	1.06	
		0401	2601	12.93	1.06	
		0501	2661	12.92	1.05	XD @ 509 = 16.861
		0601	2721	12.94	1.07	
		701	2781	12.92	1.05	XD @ 0712 = 16.866
		806	2846	12.94	1.07	
		902	2902	12.93	1.06	
Recovery	7/2/03	10:00	0+	12.71	0.84	
		10:05	5	12.18	0.31	
		10:15	15	12.11	0.24	
		11:01	61	12.07	0.20	XD @ 1039 = 17.707 DD = 0.21
		12:06		12.08	0.21	
		14:07		12.11	0.24	
		17:57		12.16	0.29	

XD @ 1844 = 17.611

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-E06A

Project Name: RGWS-Ph1 Project Number: 771-4 Site Location: Escondida

Pumping Well: ESC 605EX
Pumping Rate: 90 gpm
Start of Pumping 6/30/03 0840:18
Date Time
End of Pumping 7/20/03 1000
Date Time

Monitoring Well:
Measuring Point Description: top of steel casing
Measurement Frequency: 1 hour

June 30 - July 2, 2003

SWL 12.63

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	728	Ø	12.63	0	
Constant rate	6/30/03	0856	16	13.22	0.59	
		0919	39	13.26	0.63	
		0941	61	13.30	0.67	
		1016	96	13.34	0.71	
		1044	124	13.36	0.73	
		1144	184	13.39	0.76	
		1243	243	13.42	0.79	
		1343	303	13.44	0.81	
		1442	362	13.45	0.82	
		1611	~~360~~ 451	13.47	0.84	
		1706	~~446~~ 506	13.48	0.85	
		1910	~~521~~ 520	13.48	0.85	
		2007	687	13.46	0.83	XD @ 2017 = 6.004
		2109	749	13.45	0.82	
		2207	807	13.43	0.80	
		2306	866	13.43	0.80	
	7/1/03	0006	926	13.41	0.78	
		104	984	13.40	0.77	
		0206	1046	13.38	0.75	
		0305	1105	13.37	0.74	
		0402	1162	13.35	0.72	
		0504	1224	13.33	0.70	
		0603	1283	13.33	0.70	
		0709	1345	13.33	0.70	
		0803	1403	13.33	0.70	

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-E06A SWL = 12.63

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
constant rate	7/1/03	903	1461	13.35	0.72	
		1004	1524	13.41	0.78	
		1103	1583	13.42	0.79	
		1203	1643	13.45	0.82	0.77
		1304	~~16~~ 1704	13.47	0.84	
		1404	1764	13.49	0.86	
		1458	1818	13.56	0.93	
		1603	1883	13.50	0.87	
		1703	1943	13.51	0.88	
		1803	2003	13.51	0.88	
		1904	2064	13.51	0.88	
		2008	2128	13.49	0.86	
		2103	2183	13.46	0.83	
		2206	2246	13.44	0.81	
		2304	2304	13.43	0.80	
	7/2/03	0004	2364	13.43	0.80	
		0104	2424	13.41	0.78	
		0205	2485	13.41	0.78	
		0306	2546	13.41	0.78	
		0406	2606	13.40	0.77	
		0505	2665	13.40	0.77	
		0603	2723	13.41	0.78	
		0603	2783	13.39	0.76	
		0811	2851	13.40	0.77	
		0904	2904	13.41	0.78	
Recovery	7/2/03	10:02	2	13.10	0.47	
		10:06	6	12.97	0.34	
		10:17	17	12.89	0.26	
		~~10:19~~		~~12.87~~		
		11:03	63	12.85	0.22	~~x @ 1043~~
		1209		12.85		
		209		12.91		
		1759		1244		

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-E06B

Project Name: RGWS-Ph1 Project Number: 771-4 Site Location: Escondida

Pumping Well: ESC EØSEX

Pumping Rate: 90 gpm

Start of Pumping 6/30/03 0840:18 (Date Time)

End of Pumping 7/2/03 1000 (Date Time)

Monitoring Well:

Measuring Point Description: top of steel casing

Measurement Frequency: 1 hour

June 30 - July 2, 2003

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	729	Ø	12.62	0	XD @ 0802 = 19.070
constant rate	6/30/03	0856	16	13.31	0.690	XD @ 0908 = 18.341
		0920	40	13.35	0.73	XD @ 0925 = 18.311
		0942	62	13.39	0.77	
		1016	96	13.43	0.81	XD @ 1019 = 18.252
		1045	125	13.44	0.82	
		1145	185	13.47	0.85	XD @ 1148 = 18.201
		1243	243	13.50	0.88	XD @ 1251 = 18.171
		1343	303	13.52	0.90	XD @ 1346 = 18.154
		1442	362	13.53	0.91	XD @ 1449 = 18.134
		1611	~~392~~ 451	13.55	0.93	
		1707	~~447~~ 507	13.55	0.93	XD @ 1712 = 18.123 DD = 0.95
		1910	~~578~~ 578	13.56	0.94	
		2008	688	13.58	0.93	XD @ 2011 = 18.126
		2110	750	13.52	0.90	
		2208	808	13.51	0.89	
		2306	866	13.50	0.88	XD @ 2316 = 18.172
	7/01/03	007	927	13.49	0.87	
		104	984	13.48	0.86	
		0207	1047	13.46	0.84	
		0306	1106	13.45	0.83	XD @ 0311 = 18.220
		0403	1163	13.43	0.81	
		0505	1225	13.41	0.79	
		0604	1284	13.40	0.78	
		0705	1345	13.41	0.79	XD @ 0713 = 18.276
		0804	1404	13.42	0.80	

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC - E06B

SWL = 12.62
XD = 19.07

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
constant rate	7/1/03	904	1464	13.43	0.81	
		1004	1524	13.46	0.84	
		1103	1583	13.50	0.88	XD @1109 = 18.157
		1203	1643	13.53	0.91	
		1304	1704	13.55	0.93	XD @ 1255 = 18.105
		1404	1764	13.56	0.94	
		1458	1818	13.57	0.95	XD @ 1503 = 18.090
		1604	1884	13.57	0.95	
		1604	1944	13.58	0.96	XD @ 1709 = 18.085
		1803	2003	13.58	0.96	
		1905	2065	13.58	0.96	XD @ 1912 = 18.085
		2009	2129	13.56	0.94	
		2103	2183	13.54	0.92	
		2207	2247	13.52	0.90	
		2304	2304	13.51	0.89	XD @ 2311 = 18.158
	7/2/03	0004	2364	13.50	0.88	
		0105	2425	13.49	0.87	XD @ 0114 = 18.176 (DD = 0.89)
		0205	2485	13.48	0.86	
		0307	2546	13.48	0.86	
		0406	2608	13.48	0.86	
		0506	2668	13.48	0.86	XD @ 0512 = 18.186
		0604	2726	13.46	0.84	
		0604	2786	13.46	0.84	XD @ 0717 18.196
		0811	2853	13.48	0.86	
		0905	2907	13.49	0.87	
Recovery	7/2/03	10:02	2	13.01	0.39	
		10:06	6	12.91	0.29	
		10:17	17	12.87	0.25	
		11:04	64	12.85	0.23	XD @ 1044 = 18.832 DD = 0.24
		12:10		12.85		
		14:10		12.91		
		1800		12.92		

XD @ 1847 = 18.718

0.86

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC - E02A

Project Name: RGWS-Ph1 Project Number: 771-4 Site Location: Escondida

Pumping Well: ESC EXSEX

Pumping Rate: 90 gpm

Start of Pumping: 6/30/03 (Date) 0840:18 (Time)

End of Pumping: 7/2/03 (Date) 1000 (Time)

Monitoring Well:

Measuring Point Description: top of steel casing

Measurement Frequency: 1 hr

June 30 - July 2 - 2003

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	7:22	Ø	12.56	0	
Constant rate	6/30/03	0857	17	12.92	0.36	
		0921	41	12.97	0.41	
		0942	62	13.01	0.45	
		1016	96	13.06	0.50	
		1045	125	13.08	0.52	
		1145	185	13.11	0.55	
		1244	244	13.15	0.59	
		1344	304	13.17	0.61	
		1443	363	13.18	0.62	
		1612	~~553~~ 452	13.20	0.64	
		1708	~~44~~ 508	13.23	0.67	
		1911	571	13.21	0.65	
		2008	688	13.20	0.64	xD @ 2023 = 6940
		2111	751	13.17	0.61	
		2209	809	13.16	0.60	
		2308	868	13.14	0.58	
	7/1/03	008	928	13.13	0.57	
		105	985	13.12	0.56	
		0208	1048	13.11	0.56	
		0307	1107	13.09	0.53	
		0403	1163	13.06	0.50	
		0505	1225	13.05	0.49	
		0604	1284	13.05	0.49	
		0706	1346	13.05	0.49	~~xD @ 0713 = t~~
		0804	1404	13.06	0.50	

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-E02A SWL = 12.56

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes
constant rate	7/1/03	904	1464	13.07	0.51	
		1005	1525	13.11	0.55	
		1105	1585	13.17	0.61	
		1203	1643	13.18	0.62	0.56
		1306	1706	13.21	0.65	
		1405	1765	13.22	0.66	
		1500	1820	13.23	0.67	
		1605	1885	13.23	0.67	
		1704	1944	13.24	0.68	
		1804	2004	13.24	0.68	
		1906	2066	13.24	0.68	
		2010	2130	13.22	0.66	
		2104	2184	13.19	0.63	
		2208	2248	13.17	0.61	
		2305	2305	13.15	0.59	
	7/2/03	0005	2365	13.15	0.59	
		0106	2426	13.14	0.58	
		0206	2486	13.12	0.56	
		0308	2548	13.11	0.55	
		0408	2608	13.12	0.56	
		0506	2666	13.11	0.57	
		0605	2725	13.12	0.58	
		0705	2785	13.11	0.57	
		0812	2852	13.11	0.57	
		0906	2906	13.13	0.59	
Recovery	7/2/03	10:03	3	12.92	0.46	
		10:07	7	12.86	0.30	
		10:19	19	12.81	0.25	
		1105	65	12.78	0.22	
		1210		12.77		
		1210		12.82		
		1301		12.87		

Form 6. Monitoring Well Water Levels (cont'd)

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC - E02B

Project Name: RGWS-Ph1 Project Number: 771-4 Site Location: Escondida

Pumping Well: COC EUSEX

Pumping Rate: 90 gpm

Start of Pumping 6/30/03 0840:18 (Date / Time)

End of Pumping 7/2/03 1000 (Date / Time)

Monitoring Well:

Measuring Point Description: top of steel casing

Measurement Frequency: 1 hour

June 30 - July 2, 2003

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	721	0	12.54	0	XD @ 0803 = 19.282
Constant rate	6/30/03	0858	18	12.97	0.43	XD @ 0908 = 18.832
		0921	41	13.00	0.46 ~~0.46~~	XD @ 0930 = 18.792
		0942	62	13.04	0.50 ~~0.70~~	
		1017	97	13.09	0.55	XD @ 1019 = 18.741
		1046	126	13.10	0.56	
		1146	186	13.15	0.61	XD @ 1148 = 18.683
		1244	244	13.16	0.62	XD @ 1252 = 18.648 ~~18.665~~
		1344	304	13.19	0.65	XD @ 1346 = 18.630
		1443	363	13.20	0.66	XD @ 1449 = 18.610
		1612	~~393~~ 452	13.22	0.68	
		1708	~~[illegible]~~ 508	13.25	0.71	XD @ 1712 = 18.592 DD = 0.69
		1912	572	13.23	0.69	
		2009	689	13.22	0.68	XD @ 2011 = 18.607
		2111	751	13.21	0.67	
		2210	810	13.18	0.64	
		2309	869	13.16	0.62	XD @ 2317 = 18.668
	7/1/03	008	930	13.15	0.61	
		105	985	13.13	0.59	
		0208	1048	13.12	0.58	
		0307	1107	13.11	0.57	XD @ 0311 = 18.722
		0403	1163	13.08	0.54	
		0506	1226	13.07	0.53	
		0605	1285	13.05	0.51	
		0706	1346	13.05	0.51	XD @ 0713 = 18.774
		0805	1405	13.11	0.57	

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-E02B

SWL = 12.54
XD 19.282

Status of Pumping Test	Date	Time	Elapsed Time	Depth to Water	Drawdown	Notes	
Constant rate	7/1/03	904	1464	13.09	0.55		
		1006	1526	13.15	0.61		
		1105	1585	13.18	0.64	XD @1109 = 18.652	
		1264	1644	13.20	0.66		0.61
		1306	1706	13.22	0.68	XD @ 1256 = 18.595	
		1406	1786	13.25	0.71		
		1500	1820	13.26	0.72	XD @ 1503 = 18.577	
		1805	1885	13.25	0.71		
		1705	1945	13.27	0.73	XD @ 1715 = 18.562	
		1804	2004	13.26	0.72		
		1906	2066	13.26	0.72	XD @ 1912 = 18.571	
		2011	2131	13.26	0.72		
		2105	2185	13.21	0.67		
		2208	2248	13.19	0.65		
		2305	2305	13.17	0.63	XD @ 2311 = 18.659	
	7/2/03	0005	2365	13.17	0.63		
		0106	2426	13.16	0.62	XD @ 0114 = 18.681	DD = 0.607
		0207	2487	13.15	0.61		
		0309	2549	13.14	0.60		
		0408	2608	13.14	0.60	XD @ 0512 = 18.710	
		0507	2667	13.13	0.59		
		0605	2725	13.14	0.60		
		0706	2784	13.12	0.58	XD @ 0717 = 18.710	
		0813	2851	13.14	0.60		
		0907	2905	13.15	0.61		
Recovery	7/2/03	10:03	3	12.91	0.37		
		10:08	8	12.86	0.32		
		10:20	20	12.81	0.27		
		1105		12.77		XD @ 1045 = 19.053	DD = 0.23
		1211		12.78			
		1411		12.81			
		1801		12.88			

XD @ 1848 = 18.957

.75 .77 ESC

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-E03A

Project Name: RGWS-Ph 1 Project Number: 771-4 Site Location: Escondida

Pumping Well: ESC-E05EX

Pumping Rate: ~90gpm

Start of Pumping 6/30/03 0840 (Date / Time)

End of Pumping 7/2/03 1000 (Date / Time)

Monitoring Well:

Measuring Point Description: top of Steel Casing

Measurement Frequency: distal (2 hrs)

June 30-July 2, 2003

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	738	0	6.77	0	
~~Constant rate~~	~~6/30/03~~	~~0850~~	~~10~~	~~12.57~~		
Constant rate	6/30/03	0950	70	6.77	0	
	6/30/03	1051	131	6.81	0.04	
		1252	252	6.88	0.11	
		1450	370	6.93	0.16	
		1724	524	6.95	0.18	SG - E side Drain 0.73' @ 1720
		1917	637	6.95	0.18	
		2120	760	6.92	0.15	
		2325	885	6.89	0.12	
	7/01/03	0113	993	6.85	0.08	
		0409	1109	6.81	0.04	
		716	1356	6.82	0.05	
		0911	1471	6.81	0.04	
		1111	1591	6.87	0.10	
		1309	1709	6.94	0.17	
		1512	1832	6.96	0.19	
		1711	~~1899~~	~~6.98~~		
		1711	1951	6.98	0.21	
		1922	2082	6.99	0.22	
		2113	2193	6.96	0.19	
		2317	2357	6.92	0.15	
	7/02/03	0115	2435	6.89	0.12	
		0315	2555	6.86	0.09	
		0718	2798	6.82	0.05	
		0913	2913	6.83	0.06	
Recovery		1028	28	6.87	.10	
		1708		7.01	0.24	Download NMTech Minitroll

Form 5. Monitoring Well Water Levels

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-E03B

Project Name: RGWS-Ph1 Project Number: 771-4 Site Location: Escondida

Pumping Well: ESC-E0588

Pumping Rate: ~90 gpm

Start of Pumping 06/30/03 0846
Date Time

End of Pumping 7/2/03 1000
Date Time

Monitoring Well:

Measuring Point Description: top of Steel casing

Measurement Frequency: distal (2hrs)

June 30 - July 2, 2003

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	738		6.75	0	
~~constant rate~~	~~6/30/03~~	~~0851~~	~~11~~	~~12.76~~		
Constant rate	6/30/03	0951	71	6.75	0	
	6/30/03	1051	131	6.79	0.04	
		1253	253	6.86	0.11	
		1453	373	6.91	0.16	
		1725	525	6.94	0.19	
		1918	638	6.94	0.19	
		2120	760	6.91	0.16	
		2325	885	6.87	0.12	
	07/01/03	0174	994	6.84	0.09	
		0409	1109	6.81	0.06	
		717	1357	6.78	0.03	
		0911	1471	6.79	0.04	
		1113	1593	6.87	0.12	
		1310	1710	6.93	0.18	
		1313	1833	6.95	0.20	
		1711	1951	6.96	0.21	
		1923	2083	6.97	0.22	SG - V. Side Drain = 0.72" ±
		2114	2194	6.94	0.19	
		2318	2318	6.89	0.14	
	07/02/03	0116	2436	6.87	0.12	
		0316	2556	6.84	0.09	
		0718	2798	6.81	0.06	
		0914	2914	6.81	0.06	
Recovery		10:28	28	6.86	0.11	
		1708		7.00	0.26	Download NMTech Mintroll

Form 5. Monitoring Well Water Levels

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC- WOSA

Project Name: RGWS-Ph1 Project Number: 771-4 Site Location: Escondida

Pumping Well: ESC-205ex

Pumping Rate: 90 gpm

Start of Pumping 6/30/03 0840 (Date / Time)

End of Pumping 7/2/03 1000 (Date / Time)

Monitoring Well:

Measuring Point Description: top of steel casing

Measurement Frequency: ~~Hourly~~ Distal (2hrs)

June 30 - July 2, 2003

SG 0.26

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	802	∅	12.16	0	
constant rate	6/30/03	0956	76	12.24	0.08	
	6/30/03	1056	136	12.27	0.11	
		1321	281	12.33	0.17	
		1456	376	12.32	0.16	
		1730	530	12.35	0.19	
		1923	643	12.33	0.17	
		2126	766	12.30	0.14	
		2333	893	12.29	0.13	
	7/01/03	0122	1002	12.28	0.12	
		0416	1116	12.22	0.06	
		0742	1382	12.21	0.05	
		0925	1485	12.26	0.10	
	11:35	[illegible]	~~1625~~ 1615	12.31	0.15	
		1318	1918	12.34	0.18	
		1533	1853	12.35	0.19	
		1716	1956	12.36	0.20	
		1934	2094	12.34	0.18	
		2120	2200	12.31	0.15	
		2327	2327	12.29	0.13	
	7/02/03	0123	2443	12.29	0.13	
		0418	2618	12.29	0.13	
		0747	2827	12.30	0.14	
		0920	2920	12.31	0.15	
Recovery		1045		12.33		

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-W05B

Project Name: RGWS-Ph1 Project Number: 771-4 Site Location: Escondida

Pumping Well:
Pumping Rate: 90gpm ESC-W05EX
Start of Pumping 6/30/03 0840 (Date / Time)
End of Pumping 7/2/03 1000 (Date / Time)

Monitoring Well:
Measuring Point Description: top of steel casing
Measurement Frequency: Distal (2 hrs)

June 30 - July 2 - 2003

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	803	Ø	12.15	0	
Constant rate	6/30/03	0956	76	12.22	0.07	
	6/30/03	1056	136	12.24	0.09	
		1322	282	12.29	0.14	
		1456	376	12.28	0.13	
		1731	531	12.31	0.16	
		1924	644	12.30	0.15	
		2127	767	12.28	0.13	
		2334	894	12.28	0.13	
	07/02/03	0123	1003	12.27	0.12	
		0417	1117	12.26	0.05	
		0743	1383	12.21	0.06	
		0925	1485	12.24	0.09	
		1158	1618	12.27	0.12	
		1318	1718	12.29	0.14	
		1534	1854	12.31	0.16	
		1716	1956	12.31	0.16	SG-RG 0.24'
		1934	2094	12.31	0.16	
		2121	2201	12.29	0.14	
		2328	2328	12.28	0.13	
	7/02/03	0124	2444	12.28	0.13	
		0418	2618	12.28	0.13	
		0748	2828	12.28	0.13	
		0922	2922	12.29	0.14	
Recovery		10:46		12.28		

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-W04A

Project Name: RGWS-Ph1 Project Number: 771-4 Site Location: Escondida

Pumping Well: ESC-E025E7

Pumping Rate: 90 gpm

Start of Pumping 6/30/03 0840 (Date / Time)

End of Pumping 7/2/03 1020 (Date / Time)

Monitoring Well:

Measuring Point Description: top of steel casing

Measurement Frequency: distal (2 hrs)

June 30-July 2-2003

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	757	∅	12.22	0	
constant rate	6/30/03	~~09~~ 1000	80	12.25	0.03	
	6/30/03	1058	138	12.26	0.04	
		1301	261	12.30	0.08	
		1458	378	12.29	0.07	
		1734	534	12.30	0.08	
		1927	647	12.29	0.07	
		2130	770	12.28	0.06	
		2338	898	12.27	0.05	
	7/01/03	0127	1007	12.26	0.04	
		0420	1120	12.24	0.02	
		737	1377	12.23	0.01	
		0927	1487	12.26	0.04	
		1133	1603	12.28	0.06	
		1321	1721	12.30	0.08	.08
		1529	1849	12.31	0.09	
		1722	1962	12.31	0.09	
		1940	2100	12.30	0.08	
		2125	2205	12.29	0.07	
		2331	2331	12.28	0.06	
	10/02/03	0128	2448	12.27	0.05	
		0413	2613	12.26	0.04	
		0740	2820	12.27	0.05	
		0925	2925	12.28	0.06	
Recovery		10:41		12.31		

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-W04B

Project Name: RGWS-Ph1 Project Number: 771-4 Site Location: Escondida

Pumping Well: ESC-[illegible]

Pumping Rate: 90 gpm

Start of Pumping 6/30/03 0840
Date Time

End of Pumping 7/2/03 1000
Date Time

Monitoring Well:

Measuring Point Description: top of steel casing

Measurement Frequency: distal (2 hrs)

June 30-July 2, 2003

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	758	∅	12.12	0	
constant	6/30/03	1000	80	12.15	0.03	
rate	6/30/03	1058	138	12.16	0.04	
		1303	263	12.22	0.10	
		1458	278	12.19	0.07	
		1734	534	12.20	0.08	
		1928	648	12.20	0.08	
		2131	771	12.18	0.06	
		2338	898	12.17	0.05	
	7/01/03	0128	1008	12.17	0.05	
		0420	~~110~~ 1120	12.15	0.03	
		0739	1379	12.13	0.01	
		0928	1488	12.16	0.04	
		1133	1613	12.21	0.09	
		1321	1721	12.20	0.08	
		1530	1850	12.21	0.09	
		1722	1962	12.21	0.09	
		1941	2101	12.21	0.09	
		2126	2206	12.19	0.07	
		2332	2332	12.18	0.06	
	7/02/03	0129	2449	12.18	0.06	
		0414	2614	12.17	0.05	
		0740	2820	12.17	0.05	
		0926	2926	12.19	0.07	
Recovery		10:41		12.22		

Form 5. Monitoring Well Water Levels

Page 1 of ____

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-W03A

Project Name: RGWS Rh 1 Project Number: 771-4 Site Location: Escondida

Pumping Well: ESC-E05[illegible]

Pumping Rate: 90 gpm

Start of Pumping 6/30/03 0840 (Date / Time)

End of Pumping 7/2/03 1000 (Date / Time)

Monitoring Well:

Measuring Point Description: top of steel casing

Measurement Frequency: distal (2 hrs)

June 30-July 2, 2003

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	753	Ø	11.89	0	
Constant rate	6/30/03	1003	83	11.90	0.01	
	6/30/03	1101	141	11.90	0.01	
		1316	276	11.91	0.02	
		1500	280	11.92	0.03	
		1737	537	11.92	0.03	
		1931	651	11.93	0.04	
	7/01/03	0132	1012	11.91	0.02	
		~~00~~733	1373	11.91	0.02	
		1128	1608	11.93	0.04	
		1525	1845	11.93	0.04	
		1945	2105	11.94	0.05	
	7/02/03	0134	2454	11.93	0.04	
		0739	2818	11.93	0.04	
Recovery		10:38	38	11.93	0.04	
		1727		11.96	0.07	Download NMTech Datalogger

340

Form 5. Monitoring Well Water Levels

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-W03B

Project Name: RGWS Ph. 1 Project Number: 771-4 Site Location: Escondida

Pumping Well: ESC-P05E

Pumping Rate: 90 gpm

Start of Pumping 6/30/03 0840 (Date / Time)

End of Pumping 7/2/03 1000 (Date / Time)

Monitoring Well:

Measuring Point Description: top of steel casing

Measurement Frequency: distal (2 hrs)

June 30 - July 2, 2003

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	753	0	11.82	0	
Constant rate	6/30/03	1004	84	11.84	0.02	
	6/30/03	1101	141	11.85	0.03	
		1318	278	11.87	0.05	
		1500	380	11.86	0.04	
		1737	537	11.87	0.05	
		1932	652	11.87	0.05	
	7/01/03	0133	1013	11.86	0.04	
		734	1374	11.85	0.03	
		1129	1609	11.86	0.04	
		1526	1846	11.88	0.06	
		1945	2105	11.89	0.07	
	7/02/03	0135	2455	11.87	0.05	
		0739	2819	11.88	0.06	
Recovery	7/2/03	10:39	39	11.90	0.08	
		1727		11.91	0.09	

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-W02A

Project Name: RGWS Ph.1 Project Number: 771-4 Site Location: Escondida

Pumping Well: ESC-W05C

Pumping Rate: 90 gpm

Start of Pumping 6/30/03 0840 (Date / Time)

End of Pumping 7/2/03 1000 (Date / Time)

Monitoring Well:

Measuring Point Description: top of steel casing

Measurement Frequency: distal (2 hrs)

June 30 - July 2, 2003

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	750	0	13.14	0	
Constant rate	6/30/03	1006	86	13.13	-0.01	
	6/30/03	1102	142	13.12	-0.02	
		1313	273	12.23	0.09	?
		1503	383	13.14	Ø	
		1739	539	13.14	Ø	
		1935	655	13.15	0.01	
		2138	775	~~13.16~~ ← P	→ 13.14	
	07/01/03	0136	1016	13.15	0.01	
		730	1370	13.15	0.01	
		1124	1604	13.15	0.01	
		1523	1843	13.15	0.01	
		1948	2108	13.17	0.03	
	10/02/03	0138	2458	13.17	0.03	
		0736	2816	13.18	0.04	
	Recovery	10:36	36	13.17	0.03	
		1742		13.18	0.04	

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-W01A

Project Name: RGWS-Ph1 Project Number: 771-4 Site Location: Escondido

Pumping Well: ESC-P05SR

Pumping Rate: 90 gpm

Start of Pumping 6/30/03 0840 (Date Time)

End of Pumping 7/2/03 1000 (Date Time)

Monitoring Well:

Measuring Point Description: top of steel casing

Measurement Frequency: distal 2hr

June 30-July 2, 2003

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	746	0	12.36	0	
constant rate	6/30/03	1009	89	12.35	-0.01	
	6/30/03	1104	144	12.36	0	
		1308	268	12.39	0.03	
		1504	384	12.37	0.01	
		1740	540	12.38	0.02	
		1938	658	12.38	0.02	
	07/01/03	0139	1019	12.35	-0.01	
		725	1365	12.35	-0.01	
		1120	1600	12.35	-0.01	
		1578	1838	12.37	0.01	
		1950	2110	12.38	0.02	
		0141	2461	12.38	0.02	
		0722	2802	12.38	0.02	
	Recovery	10:33	33	12.40	0.04	
	(1118)			12.41	0.05	

MONITORING WELL WATER LEVELS

WELL NUMBER: ESC-W01B

Project Name: RGWS-Ph1 Project Number: 771-4 Site Location: Escondida

Pumping Well: ESC-E05E

Pumping Rate: 90 gpm

Start of Pumping 6/30/03 (Date) 0840 (Time)

End of Pumping 7/2/03 (Date) 1000 (Time)

Monitoring Well:

Measuring Point Description: top of steel casing

Measurement Frequency: distal (2 hrs)

June 30 - July 2, 2003

Status of Pumping Test	Date	Time	Elapsed Time (min)	Depth to Water (ft)	Drawdown (ft)	Notes
Pre	6/30/03	746		12.36	0	
Constant rate	6/30/03	1009	89	12.36	0	
	6/30/03	1104	144	12.36	0	
		1309	269	12.39	0.03	
		1504	384	12.37	0.01	
		1741	541	12.38	0.02	
		1938	658	12.38	0.02	
	07/01/03	0140	1020	12.34	-0.02	
		726	1366	12.35	-0.01	
		1121	1601	12.35	-0.01	
		1519	1839	12.37	0.01	
		1951	2111	12.38	0.02	
	7/02/03	0142	2463	12.38	0.02	
		0723	2804	12.38	0.02	
	Recovery	10:33		12.40	.04	
		1738		12.41	.05	

Appendix C

Aquifer Tests at Irrigation Wells

Page Pegram

Final Report:

Phase I Irrigation Well Testing

Of Shallow Alluvial Aquifer

Along San Acacia to San Antonio Reach of the Rio Grande

Socorro County, New Mexico

Prepared for:
New Mexico Interstate Stream Commission
Albuquerque, New Mexico

May 30, 2002

HYDROSPHERE
Resource Consultants

1002 Walnut, Suite 200 • Boulder, Colorado 80302
(303) 443-7839 • TeleFax (303) 442-0616

P.O. Box 445 • Socorro, New Mexico 87801
(505) 835-2556 • TeleFax (505) 835-2609

HYDROSPHERE
Resource Consultants

Final Report:

Phase I Irrigation Well Testing

Of Shallow Alluvial Aquifer

Along San Acacia to San Antonio Reach of the Rio Grande

Socorro County, New Mexico

Prepared for:
New Mexico Interstate Stream Commission
Albuquerque, New Mexico

May 30, 2002

Executive Summary

On contract to the New Mexico Interstate Stream Commission (ISC), Hydrosphere Resource Consultants ("Hydrosphere") performed a series of pumping tests of irrigation wells completed in the Rio Grande shallow alluvial aquifer along the San Acacia to San Antonio reach (hereafter referred to as the "San Acacia reach" for brevity) of the Rio Grande.

The goals of the testing program included: (a) obtaining shallow aquifer hydrologic parameters (e.g., hydraulic conductivity and storage characteristics), (b) acquiring field data that could shed light on surface water – groundwater interactions, (c) determining aquifer response to large pumping stresses, and (d) assessing the quality of the water in the shallow alluvial aquifer.

In this report, we present:

- field procedures and conditions encountered,
- data obtained,
- data analysis and interpreted aquifer flow parameters, and
- caveats to consider when utilizing these results

The test results indicate the shallow alluvial aquifer is characterized by high hydraulic conductivities, on the order of 100 ft/day and larger, at the locations tested. The water quality samples exhibited rather high dissolved solids contents, on the order of 2,500 ppm and higher, which is suitable for irrigation of moderately salt-tolerant crops.

Table of Contents

Exexcutive Summary ii

1.0 Introduction 5

2.0 Field Testing Program and Data Collected 6

2.1 Duggins Well Test: 3/26/01 through 4/9/01 6

2.1.1 Duggins Well Field Reconnaissance 6

2.1.2 Duggins Well Site Set-up 7

2.1.3 Duggins Well Test Chronology 7

2.1.4 Duggins Well Drawdown Data 8

2.2 McCord Well Test: 4/9/01 through 4/11/01 10

2.2.1 McCord Well Field Reconnaissance 10

2.2.2 McCord Well Site Set-up 11

2.2.3 McCord Well Test Chronology 11

2.2.4 McCord Well Drawdown Data 12

2.3 Sichler Well Test: 1/21/02 through 2/11/02 12

2.3.1 Sichler Well Field Reconnaissance 12

2.3.2 Sichler Well Site Set-up 13

2.3.3 Sichler Well Test Chronology 13

2.3.4 Sichler Well Drawdown Data 14

2.4 Water Level Data Availability 15

2.5 Water Quality Data 15

3.0 Data Analysis and Results 16

3.1 Duggins Well Test Data Analysis 16

3.1.1 Hydrosphere Analysis of Duggins Well Test 16

3.1.2 NM ISC Analysis of Duggins Well Test 16

3.2 McCord Well Test Data Analysis 17

3.3 Sichler Well Test Data Analysis 17

3.4 Caveats 19

4.0 Summary and Conclusions 21

5.0 References 22

List of Figures

Figure 1. Site location map for aquifer tests described in this report. 23
Figure 2. Duggins well vicinity map, illustrates layout of well relative to fields. 24
Figure 3. DAS-recorded drawdown and recovery data for the 4/5 through 4/9/01 Duggins well test. 25
Figure 4. Manually recorded drawdown and recovery data for the 4/6 through 4/9/01 Duggins well test. 25
Figure 5. DAS drawdown data from Duggins test, showing raw data as well as data adjusted to account for early-time "slug" anomaly and long-term rising water table trend. 26
Figure 6. Log-log plot of the pressure derivative (*dh/dt*) drawdown data for the 4/6 through 4/9/01 Duggins well test. 26
Figure 7. McCord well vicinity map. 27
Figure 8. DAS-recorded drawdown and recovery data for the 4/9 through 4/11/01 McCord well test. 28
Figure 9. Manually recorded drawdown and recovery data for the 4/9 through 4/1/01 McCord well test. 29
Figure 10. Sichler well vicinity map. 30
Figure 11. Sichler well test drawdown and recovery data. 31
Figure 12. Log-log plots of Sichler well test drawdown data. 32

List of Tables

Table 1. Summary of interpreted results from Phase I testing of Rio Grande shallow alluvial aquifer. 18

List of Appendices

Appendix A. Water Quality Analysis Results 33

1.0 INTRODUCTION

This report describes the planning, implementation, data, and results obtained from the irrigation well aquifer tests completed near Socorro, New Mexico. The work was undertaken by Hydrosphere Resource Consultants ("Hydrosphere") for the New Mexico Interstate Stream Commission (NM ISC) to characterize the shallow alluvial aquifer along the San Acacia to San Antonio reach (hereafter referred to as the "San Acacia reach" for brevity) of the Rio Grande.

The goals of the testing program included: (a) obtaining shallow aquifer hydrologic parameters (e.g., hydraulic conductivity and storage characteristics), (b) acquiring field data that could shed light on surface water – groundwater interactions, (c) determining aquifer response to large pumping stresses, and (d) assessing the quality of the water in the shallow alluvial aquifer.

Testing existing irrigation wells provides a cost-effective approach to pursue the stated goals. This initial testing was prescribed in the Work Order Scope of Work as a Phase I test program, with two wells to be tested in Phase I. The results of the initial testing described here can be used to directly address some of the goals, as well as for helping refine plans for possible future Phase II testing.

In this report, we present:

- field procedures and conditions encountered,
- data obtained,
- data analysis and interpreted aquifer flow parameters, and
- caveats to consider when utilizing these results

2.0 FIELD TESTING PROGRAM AND DATA COLLECTED

Even though the initial Work Order called for only two wells to be tested in Phase I, we completed testing of 3 wells within the Work Order budget. Two wells were tested in April 2001, and another well was tested in February 2002. The 2001 testing involved wells owned by Mr. Glen Duggins of Lemitar, and by James and Cecilia McCord of Polvadera. The locations of both wells can be found in Figure 1. The 2002 testing was conducted on a 1,350 gpm capacity well owned by Mr. Chris Sichler of San Antonio (location also identified in Fig. 1). The results of the 2001 testing program were very helpful in designing the Winter 2002 test at the Sichler farm.

The general testing protocols undertaken in each well test are described in the Well Test Plan (Hydrosphere, 2001), and a summary of the field conditions encountered and test results are provided below.

2.1 Duggins Well Test: 3/26/01 through 4/9/01

Following discussions with the well owner, two field reconnaissance visits to the well were conducted during the week of 3/26/01 and testing occurred between 4/5 and 4/9/01.

2.1.1 Duggins Well Field Reconnaissance

The well is located in the SE 1/4 of the NW 1/4 of section 36 of T1S R1W, alongside a private lateral ditch owned by Mr. Duggins that he uses to irrigate his adjacent fields (Figure 2). This lateral is generally dry, conveying water only when Mr. Duggins uses it for irrigation (typically for a two-day period once every two to three weeks during the growing season)[1].

The Duggins well was installed less than 10 years prior to testing and the well pump is electrically powered, with the electric motor operable at only a single rate. This eliminated the possibility of conducting a step-drawdown test. Mr. Duggins has a copy of the driller's log, which indicates that the well was advanced to a total depth of 100

[1] *During the winter of 2001-2002, Mr. Duggins installed concrete lining in this ditch.*

feet, and that the intake screen is located in the bottom 30 feet of the borehole. An initial flow rate checkout conducted by Hydrosphere personnel on 4/4/01 indicated that the well pumps between 1,800 and 1,900 gpm as measured using the "Purdue" method for discharge from a horizontal pipe (USBR, 1997).

The field reconnaissance showed that the well had an obstruction in the annulus a couple feet below the static water level (static water level was about 8 feet below ground surface, bgs), which prohibited us from obtaining drawdown measurements at the pumping well. This dictated that we install an observation well.

2.1.2 Duggins Well Site Set-up

To cost-effectively address the observation well issue, we installed a 1-1/2 inch ID sandpoint. The sandpoint was comprised of a 3-foot length of steel well-screen (consisting of a 2.5-foot screen above a 6-inch drive point) at the bottom with a galvanized steel riser to the ground surface. It was driven in using a fence post driver to the desired depth (approximately 30 feet).

Due to the well owner's schedule, it was determined that we would need to test the well after Mr. Duggins' initial irrigation of his chile fields, but before irrigation of his oats field (both fields are adjacent to the well; Fig. 2). That gave us a window of time between 4/4 and 4/10 to perform the test.

2.1.3 Duggins Well Test Chronology

Based on those constraints, we prepped the well site and performed a well test according to the following schedule:

1. The sandpoint was installed at a distance of 53 feet from the pumping well on 4/4/01 and 4/5/01. The 2.5-foot screen of the sand point was located between 28.5 and 31 feet bgs. The static water level in the well was about 8 feet bgs.
2. Following well and pump checkout, and data acquisition system (DAS) instrumentation installation and checkout as described in the test plan, we initiated the constant rate pumping test at 5:49pm on 4/5/01. Automated data collection at the

well proceeded as described in the test plan. Personnel manned the test site until sunset on 4/5, and visits were made to the site at 9pm and midnight, and 8am on 4/6/01.

3. At approximately 11:30 am on 4/6/01, Hydrosphere personnel traveled to the site for another round of manual monitoring and found that the pumping had ceased[2]. Upon discovering the cessation of pumping, high frequency recovery monitoring was initiated using the DAS.
4. The maximum drawdown at the observation well (located 53 feet from the pumping well) was less than 10 feet.
5. Recovery proceeded with DAS monitoring for approximately 5 hours, and lower frequency manual monitoring for an additional two-and-a-half days.
6. Field data were downloaded from the DAS at the end of the test.

2.1.4 Duggins Well Drawdown Data

Both the DAS data and manually collected data have been entered into Excel spreadsheets, and time versus drawdown plots have been developed. Linear charts of DAS-recorded drawdown versus time and the manually-collected data are attached as Figures 3 and 4, respectively. Log-log plots of the drawdown data and the pressure derivative (*dh/dt)* are presented in Figures 5 and 6.

There are two notable features in the data considered below that deviate from the classic drawdown-recovery curve:

- a "blip" in the drawdown data that occurred approximately 3 minutes after pumping began is clearly evident in Figures 5 and 6, and
- a long-term rising water-table trend found by comparing the static water level before pumping to the water level after three days of recovery (Fig. 3).

[2] *We presume that the electrically powered pump quit pumping due to a brief power outage, which are quite common in areas served by Socorro Electric Coop. When power was restored, the well pump needed to be manually re-started using the "start" button. The downloaded DAS data indicated that we missed the start of recovery by less than 20 minutes.*

"Blip" in Early-time Drawdown Data. A little more than three minutes into pumping, a curious water level rise occurred in the observation well. We are unsure of the exact cause of this anomaly, since we noted nothing out of the ordinary during the test. No matter the cause, the data associated with this anomaly suggests an instantaneous slug of water was added to the well. Two approaches can be taken to address this data anomaly: (1) ignore the early-time data, or (2) attempt to remove the effects of the "slug" of water. An independent analysis undertaken by the ISC employs the first approach, and Hydrosphere undertook the second approach as described below.

To accommodate analysis of the early time data, we attempted to remove the impacts of this unknown "slug" using the following procedure. We first inspected the trend in the pressure-derivative (Fig. 6) and noted where it deviated from a monotonically decreasing path and clearly reversed itself. We then linearly interpolated (in log-log space) the pressure derivative between the last point in the initial smooth trend (at 3.27 minutes into pumping) and the first point that visually appears to represent a continuation in that trend (at 31.64 minutes into pumping); the adjusted pressure derivative is presented in Figure 6. The "slug-corrected" head was subsequently computed by incrementally adding the pressure derivative times the time increment to the last "correct" head value (again at t=3.27 minutes); the estimated corrected drawdown curve is shown in Figure 5.

Long-Term Rise in Static Water Level. After three days of recovery, the static water level in both the pumping and observation wells was approximately 1.6 feet higher than the static water level observed before pumping. The actual timing of the occurrence of this change in head can never be known, but we can make assumptions that will allow us to explicitly account for this observation before undertaking the data analysis. Assuming that this static head difference represented a long-term trend of a rising water table, we could correct for this trend by assuming a steady, linear rise in the water table of 1.6 feet over three days. In our analyses below, we analyzed both the raw data and data corrected assuming a time-linear water table rise (Fig. 5).

It is possible, if not likely, that this water table rise was due to the recently completed irrigating by Mr. Duggins. Referring to Figure 2, Fields A, B, and D had just finished irrigating when we commenced the test at the Duggins well. All the fields were flood irrigated. Following an initial rapid drainage from macropores in the soil profile, drainage likely continues at an exponentially decreasing rate as the agricultural soils drained to field capacity over a few week period (e.g., Selker, et al., 1999).

2.2 McCord Well Test: 4/9/01 through 4/11/01

The McCords acquired the well along with the farm that they purchased in 1995. According to the previous owners, the well was already in place when they acquired the farm in the mid-1970s. This suggests that the well was likely installed during the drought of the mid-1950s. No well construction documentation of the well is available, although irrigation wells in the valley are typically advanced to 100 feet, with the bottom 20 to 30 feet being screened.

2.2.1 McCord Well Field Reconnaissance

The well is located in the NW 1/4 of the SW 1/4 of section 23 of T1S R1W, approximately 50 feet east of the Lemitar Lateral ditch (of the MRGCD ditch network; see Fig. 7). The Lemitar Lateral ditch is generally full of water throughout the irrigation season. The water level in the Lemitar Lateral is typically two to five feet above the ground surface elevation at the well.

The well pump is powered by a 4-cylinder Waukesha motor. An initial flow rate checkout indicated the well pumps 350 gallons per minute (gpm) at full throttle as measured using the "barrel and stopwatch" method.

There is access to the well annulus sufficiently large for water level measurement using our manually operated water level indicator, but too small for the DAS pressure transducer. Due to the age of the well, we elected to not take measurements in the annulus during pumping, out of concern for damaging or losing our equipment. This

made it impossible

decision obviated the utility of performing a stepped drawdown test to assess well efficiency as described in the test plan.

2.2.2 McCord Well Site Set-up

Following discussions with Dr. Nabil Shafike of the NM ISC, we elected to install two sandpoints to serve as observation wells during pumping and recovery (Fig. 7). The sandpoints were installed at radial distances of approximately 24 and 43 feet from the pumping well. The two wells were installed to the southwest of the pumping well, along a transect roughly paralleling the Lemitar Lateral ditch. Only the observation well closest to the pumping well was instrumented with a transducer connected to the DAS.

2.2.3 McCord Well Test Chronology

Based on the described constraints, we prepped the well site and performed a well test according to the following schedule:

1. Two sandpoints were installed on 4/8/01 and 4/9/01. The 2.5-foot screens of the sand points were located between 18.5 and 21.5 feet bgs and between 13.5 and 16.5 feet bgs for the closer and more distant observation wells, respectively. The static water level in the pumping well and both observation wells was about 8 feet bgs.
2. Following well and pump checkout and data acquisition system (DAS) instrumentation installation and checkout as described in the test plan, we initiated the constant rate pumping test at 5:39pm on 4/9/01. Data collection at the well proceeded as described in the test plan. Personnel manned the test site until sunset on 4/9, and visits were made to the well site on an hourly basis thereafter.
3. At approximately 1:00 am on 4/10/01, the field technician noted that the pump motor was beginning to overheat. At that time pumping was stopped and recovery monitoring began.
4. Recovery proceeded with DAS monitoring for approximately 10 hours, and lower frequency manual monitoring for an additional two days.
5. Field data were downloaded from the DAS at the end of the test.

2.2.4 McCord Well Drawdown Data

Both the DAS data and manually collected data have been entered into Excel spreadsheets, and time versus drawdown plots have been developed. Linear charts of DAS drawdown versus time are attached as Figure 8, and the manually collected drawdown and recovery data is presented in Figure 9.

Notable in the manually collected data is the fact that the observation well closer to pumping well exhibited less drawdown than the more distant observation well. There are several possible causes on this behavior, including:

- Partial penetration effects (Fetter, 1988).
- The well may be extracting water from a permeable channel that the observation wells are not fully connected with.
- The nearer observation well had a low-K "skin" that was not removed by well development.

2.3 Sichler Well Test: 1/21/02 through 2/11/02

Following discussions with the well owner, two field reconnaissance visits to the well were conducted during the week of 1/21/02 and testing occurred between 2/7/02 and 2/11/02.

2.3.1 Sichler Well Field Reconnaissance

The well is located alongside a private concrete-lined lateral ditch owned by Mr. Sichler that he uses to irrigate his adjacent fields (Figure 10). This lateral is generally dry, conveying water only when Mr. Sichler uses it for irrigation (typically for a two-day period once every two to three weeks during the irrigation season).

There are no records available to indicate when the well was installed. Mr. Sichler stated that the well was already installed when he and Mrs. Sichler purchased their farm in 1988. When the pump for the well was serviced in 1994, it was found that the total depth

of the well was approximately 120 feet. The pump intake was set at approximately 100 feet below ground surface.

The field reconnaissance indicated that there was no access to the annulus between the pumping casing and surface casing, thus water levels at the pumping well needed to be taken from inside the pumping casing. The pumping casing could be accessed via a faucet located in the pump bell housing. The faucet could be removed using a wrench to gain access for water level measurements. Water levels, therefore, could be measured only when the pump was not on. The inability to take measurements during pumping dictated that that we install an observation well at a very small radial distance from the pumping well. As discussed in the next section, in addition to the "close-in" observation well, two additional observation wells were installed.

An initial flow rate checkout conducted by Hydrosphere personnel on 4/4/01 indicated that the well pumps (at full throttle) between 1,300 and 1,350 gpm as measured using the "Purdue" method for discharge from a horizontal pipe (USBR, 1997).

2.3.2 Sichler Well Site Set-up

To adequately characterize the cone-of-depression during pumping, three observation wells were installed at radial distances from the pumping well ranging between 4 and 55 feet. Again, to cost-effectively address the observation well issue, we installed three 1-1/2 inch ID sandpoints. The sandpoints were comprised of a 3-foot length of steel well-screen (2.5 foot screen with a 6 inch drive point) at the bottom with a galvanized steel riser to the ground surface. They were installed using a fence post driver to the desired depth (between approximately 20 and 35 feet, depending on radial distance from the pumping well). Figure 10 provides a schematic layout of the well test site; including the locations of the observation wells and several surface features.

2.3.3 Sichler Well Test Chronology

Based on those constraints, we prepped the well site and performed a well test according to the following schedule:

1. The sandpoint observation wells were installed at distances of 54.5, 18, and 4.5 feet from the pumping well between 1/31/02 and 2/6/02. The 2.5-foot screen of the sand point was located at approximately 20 feet bgs (SOB1), 30 feet bgs (SOB2), and 38 feet bgs (SOB3). The static water level in the wells was about 7 feet bgs.
2. The DAS system employed in the Sichler well test involved installation of transducers in observation wells SOB2 and SOB3, and the transducers were connected to an Instruments NW datalogger.
3. Following well and pump checkout, and data acquisition system (DAS) checkout as described in the test plan, we initiated the constant rate pumping test at 6:50pm on 2/7/02. Automated data collection at the well proceeded as described in the test plan. Personnel manned the test site throughout the 24-hr testing period.
4. At approximately 6:51 pm on 2/8/02, the pump was shutdown, and high frequency recovery monitoring was initiated using the DAS. In addition, recovery data was manually collected in well SOB1 and in the pumping well
5. The maximum drawdown at the "close-in" observation well (located 4 ft 7 in from the pumping well) was less than 6 feet, and the more distant observation wells exhibited far less drawdown.
6. Recovery proceeded with DAS monitoring for approximately 6 hours, and lower frequency manual monitoring for an additional three days.
7. Field data were downloaded from the DAS at the end of the test.

2.3.4 Sichler Well Drawdown Data

Both the DAS data and manually collected data have been entered into Excel spreadsheets, and time versus drawdown plots have been developed. Linear charts of DAS-recorded drawdown versus time and the manually-collected data are attached as Figure 11. Log-log plots of the drawdown data are presented in Figure 12.

Notable in the SOB3 log-log data (Fig. 12) is the break in slope of the early-time drawdown curves, which corresponds to an increase in the pumping rate from 965 gpm to 1329 gpm approximately 2min: 20sec (1.64×10^{-3} days) after pumping began. To accommodate analysis of the early time data from SOB3, we used the early-time

pumping rate (see Section 3.3). All other analyses employed only data collected after the increase in pumping; for these analyses we used the time-weight average pumping rate (1,326 gpm).

2.4 Water Level Data Availability

All data obtained from the pumping tests is available in electronic format upon request to Hydrosphere (jtm@hydrosphere.com).

2.5 Water Quality Data

Water quality samples were obtained from both the Duggins well and the Sichler well. For both wells, samples were taken from the discharge stream roughly 10 minutes after the start of pumping. From the Sichler well an additional sample was taken immediately before the cessation of pumping. The samples were taken to the New Mexico Bureau of Geology and Mineral Resource (NMBGMR) water chemistry lab for quantification of pH and major ion distribution. Both wells exhibited rather high total dissolved solids, 1,680ppm for the Duggins well and 2,800ppm for the Sichler well, which indicates the waters are suitable only for irrigation of moderately salt-tolerant crops. The raw data obtained from the NMBGMR is included at the end of the report in Appendix A.

3.0 DATA ANALYSIS AND RESULTS

Here we present the data analysis approaches and results in terms of interpreted aquifer flow parameters.

3.1 Duggins Well Test Data Analysis

Three separate analyses have been undertaken to date to determine aquifer flow parameters from the data. Two of the analyses were undertaken by Hydrosphere staff, and one was performed by Dr. Nabil Shafike of the NM ISC.

3.1.1 Hydrosphere Analysis of Duggins Well Test

Hydrosphere performed a Cooper-Jacob straight-line analysis (Freeze and Cherry, 1979; pp. 347-348) of the late-time drawdown data, and a Boulton Delayed-Yield type-curve analysis (Lomen, 1979) for unconfined aquifers. Before undertaking both analyses, the long-term rising water table trend (noted in item 6 of the well-test chronology) was removed as described above in Section 2.1.4. For the Boulton type-curve analysis, the "slug" anomaly was removed from the data as described above. The Boulton type-curve analysis was undertaken the "old-fashioned" way: manual curve matching on a light table by a Hydrosphere staff hydrologist following the procedure outlined by Lomen (1979). These results were checked by the company's senior groundwater hydrologist. Hydrosphere's interpretation results are presented in Table 1.

3.1.2 NM ISC Analysis of Duggins Well Test

NM ISC staff analyzed the Duggins pumping test data with the assumption that the early observation well recovery was caused by the unexpected shutting down of the pumping well. Therefore the first three minutes were not considered as part of the pumping test. The ISC staff investigated both the Neuman unconfined (Neuman, 1975) and the Boulton method with delayed yield index as described by Boulton (1963 and 1973) using a FORTRAN program developed by Dr. Shafike. The program was run with different aquifer properties until a best fit between observed and simulated drawdown was established. No combination of parameters for the Neuman analysis yielded a good

match between model and data. Using the Boulton method allowed the estimation of hydraulic conductivity, specific storage, specific yield, and delayed yield index.

3.2 McCord Well Test Data Analysis

For a variety of reasons as described below in the "Caveats" section, only a Cooper-Jacob straight-line analysis of the DAS-acquired data from the McCord well was undertaken. The results of that analysis are presented in Table 1. The unrealistic storage value obtained from the radial flow analysis is addressed below.

3.3 Sichler Well Test Data Analysis

Hydrosphere performed a Cooper-Jacob straight-line analysis (Freeze and Cherry, 1979; pp. 347-348) of the late-time drawdown data, as well as for the recovery data from all wells (including the pumping well). For the observation wells, we also employed a Boulton Delayed-Yield type-curve analysis (Lomen, 1979) for unconfined aquifers. Only the drawdown curves for observation wells SOB1 and SOB3 included sufficient high-quality, unambiguous data suitable for the Boulton type-curve analysis. Again, the Boulton type-curve analysis involved manual curve matching on a light table by a Hydrosphere staff hydrologist following the procedure outlined by Lomen (1979), and subsequent QA checking by the company's senior groundwater hydrologist. Hydrosphere's aquifer test interpretations for the Sichler well are presented in Table 1.

Table 1. Summary of interpreted results from Phase I testing of Rio Grande shallow alluvial aquifer.

Well ID	*Analysis Type*	*T (ft2/day)*	*K (ft/day)* [3]	S_y	S_s
Duggins	Drawdown, Straight Line (raw data) [1]	16,613	207.7	0.0554	---
	Drawdown, Straight Line (corrected) [2]	15,636	195.5	0.0783	---
	Drawdown, Boulton Type-Curve Early (corrected) [2]	13,759	172.0	---	5.13E-05
	Drawdown, Boulton Type-Curve Late (corrected) [2]	12,562	157.0	0.1031	---
	Drawdown, Boulton Unconfined (uncorrected) [1]	15,000	150.0 [4]	0.0350	4.50E-05
	Duggins Test Average Values	*14,714*	*183.0*	*0.068*	*4.81E-05*
Sichler	Drawdown, Straight Line, Obs. 1	25,957	259.6	0.100	---
	Drawdown, Straight Line, Obs. 2	25,957	259.6	0.001	---
	Drawdown, Straight Line, Obs. 3	25,255	252.6	0.002	---
	Drawdown, Boulton Type-Curve Early, Obs. 1	18,490	184.9	---	1.00E-02
	Drawdown, Boulton Type-Curve Early, Obs. 3	16,436	164.4	---	1.68E-02
	Drawdown, Boulton Type-Curve Late, Obs. 1	18,490	184.9	0.049	---
	Drawdown, Boulton Type-Curve Late, Obs. 3	13,512	135.1	---	---
	Recovery, Pumping Well	26,016	260.2	---	---
	Recovery, Obs. 1	17,344	173.4	---	---
	Recovery, Obs. 2	16,148	161.5	---	---
	Recovery, Obs. 3	15,609	156.1	---	---
	Sichler Test Average Values	*19,929*	*199.3*	*0.038*	*1.34E-02*
McCord	Drawdown, Straight Line [5]	6,577	82.2	1.284	---

1. Raw data, uncorrected for rising water table trend
2. Corrected, rising water table trend removed, early-time "slug" effects removed
3. Hydraulic conductivity computed assuming 80-foot thickness for Duggins test, except as noted, and assuming a 100-foot thickness for the Sichler and McCord tests
4. Hydraulic conductivity computed assuming a 100-foot aquifer thickness
5. Storage value clearly suggests problems in analysis, see "Caveats" section

where is Ksu?

3.4 Caveats

When viewing these results, it is important to keep caution in mind.

- It is broadly recognized (Freeze and Cherry, 1979; Bangoy, et al., 1992; Chakrabarty; 1994) that flow test interpretation is non-unique. That is, multiple conceptual models may be used to "model" observed drawdowns, and lacking independent data or information the analyst cannot always distinguish between competing conceptual models. For instance, in our analysis of the Duggins well, we assumed that the aquifer would behave according to an unconfined aquifer conceptual model and the log-log plot of drawdown versus time appeared to fit that model. However, a diagnostic pressure derivative plot (Roberts and Beauheim, 2001) suggests that the late-time part of the drawdown curve may be influenced by a low-permeability boundary; this is an alternative conceptual model to the late-time delayed yield concept underlying the Boulton analysis.
- The Duggins well test is subject to unknown effects related to flood irrigation of adjacent fields immediately before test. This may be reflected in the delayed yield index, and this may explain why the Neuman method will not fit the whole curve as the Boulton method did.
- As clearly stated by Freeze and Cherry (1979), "The fact that a theoretical curve can be matched by the pumping test data in no way proves that the aquifer fits the assumptions on which the curve is based."

Given these uncertainties, it is prudent to view the interpreted aquifer flow parameters as "apparent properties" commensurate with the underlying conceptual model used in the interpretation (Chakrabarty, 1994). In other words, the transmissivities and storativities as presented in Table 1 represent effective radial flow properties in the shallow alluvial aquifer.

If the flow geometry significantly deviates from radial (for instance, as the diagnostic plot for the McCord well indicates), then different properties would be obtained from analyses

honoring the true flow geometry. In fact, the nonsensical storage value obtained for the McCord well radial flow interpretation is consistent with the "garbage in – garbage out" maxim recognized by scientists and engineers.

The equivocal results from the McCord well test were very helpful in identifying potential pitfalls in performing such tests, and thus providing guidance in the planning, design, and execution of the Sichler test. Application of these "lessons learned" to the Sichler test ultimately yielded a far superior data set.

4.0 SUMMARY AND CONCLUSIONS

Three pumping tests were conducted on existing irrigation wells completed in the shallow alluvial aquifer along the San Acacia to San Antonio reach of the Rio Grande. Testing protocols are described. Data evaluation and interpretations are presented, along with caveats related to the interpretations (Table 1). The results indicate:

- The Duggins well exhibits radial flow behavior, and results obtained using three separate radial flow models consistently yield hydraulic conductivity values in the range between 130 and 150 feet/day. Elastic storativities are on the order of 4.5×10^{-5}/ft, and specific yield estimates range between 0.03 and 0.10.
- The McCord well test yielded generally lower quality data. Diagnostic pressure-derivative plots indicates that the well may be completed in a sandy channel embedded in a matrix of lower-conductivity deposits, although the drawdown behavior in the two observation wells may simply reflect poor development of the inner-most well (Section 2.2.4). Radial flow interpretation of the McCord drawdown data yields a non-realistic value of storativity, suggesting that alternative interpretative models that more adequately address the channel flow conceptual model should be employed.
- The Sichler well test yielded generally higher quality data, due to planning and test design that benefited from lessons-learned from the Duggins and McCord tests. The Sichler well exhibits radial flow behavior, and results obtained from the three observation wells, as well as pumping well recovery, consistently yielded hydraulic conductivity values greater than 150 feet/day. Elastic storativities are on the order of 10^{-3}/ft, and specific yield estimates range between 0.02 and 0.10.
- The testing results indicate the shallow alluvial aquifer materials at the Duggins and Sichler sites exhibit high hydraulic conductivities consistent with clean, coarse sandy deposits.
- In future testing, it is recommended that at least two observation wells be installed and instrumented with DAS transducers, and if possible that the pumping well also be equipped with transducers.

5.0 REFERENCES

Bangoy, L.M., P. Bidaux, C. Drogue, R. Plegat, and S. Pistre, 1992. A new method of characterizing fissured media by pumping tests with observation wells, *Journal of Hydrology*, 138(1-2), pp. 77-88.

Boulton N. S., 1963. Analysis of data from non-equilibrium pumping tests allowing for delayed yield from storage. Proc. Ins. Of Civil Enigineers, v.26, pp. 469-482.

Boulton N. S., 1973. The influence of delayed drainage on data from pumping tests in unconfined aquifers. J. of Hydrol. v.19, pp 157-169.

Chakrabarty, C., 1994. A note of fractional dimension analysis of constant rate interference tests, *Water Resources Research*, 30(7), pp. 2339-2341.

Fetter, C.W., 1988. *Applied Hydrogeology, 2nd Edition.*

Freeze and Cherry, 1979. *Groundwater.*

Hydrosphere, 2001. *Pump Test Plan for Irrigation Wells in the Shallow Alluvial Aquifer along the San Acacia to San Marcial Reach of the Rio Grande, Socorro County, New Mexico,* prepared for New Mexico Interstate Stream Commission.

Lomen, S.W., 1979. *Ground-Water Hydraulics*, USGS Professional Paper 708.

Neuman, S.P., 1975. Analysis of pumping test data from anisotropic unconfined aquifer s considering delayed gravity response, *Water Resources Research*, 11(2), pp. 329-342.

Roberts, R.M., and R.L. Beauheim, 2001.Hydraulic-test interpretation in systems with complex flow geometries, submitted to *Water Resources Research.*

Selker, J.S., C.K. Keller, and J.T. McCord, 1999. *Vadose Zone Processes.*

USBR, 1997. *Water Measurement Manual, 3rd Edition.*

Figure 1. Site location map for aquifer tests described in this report.

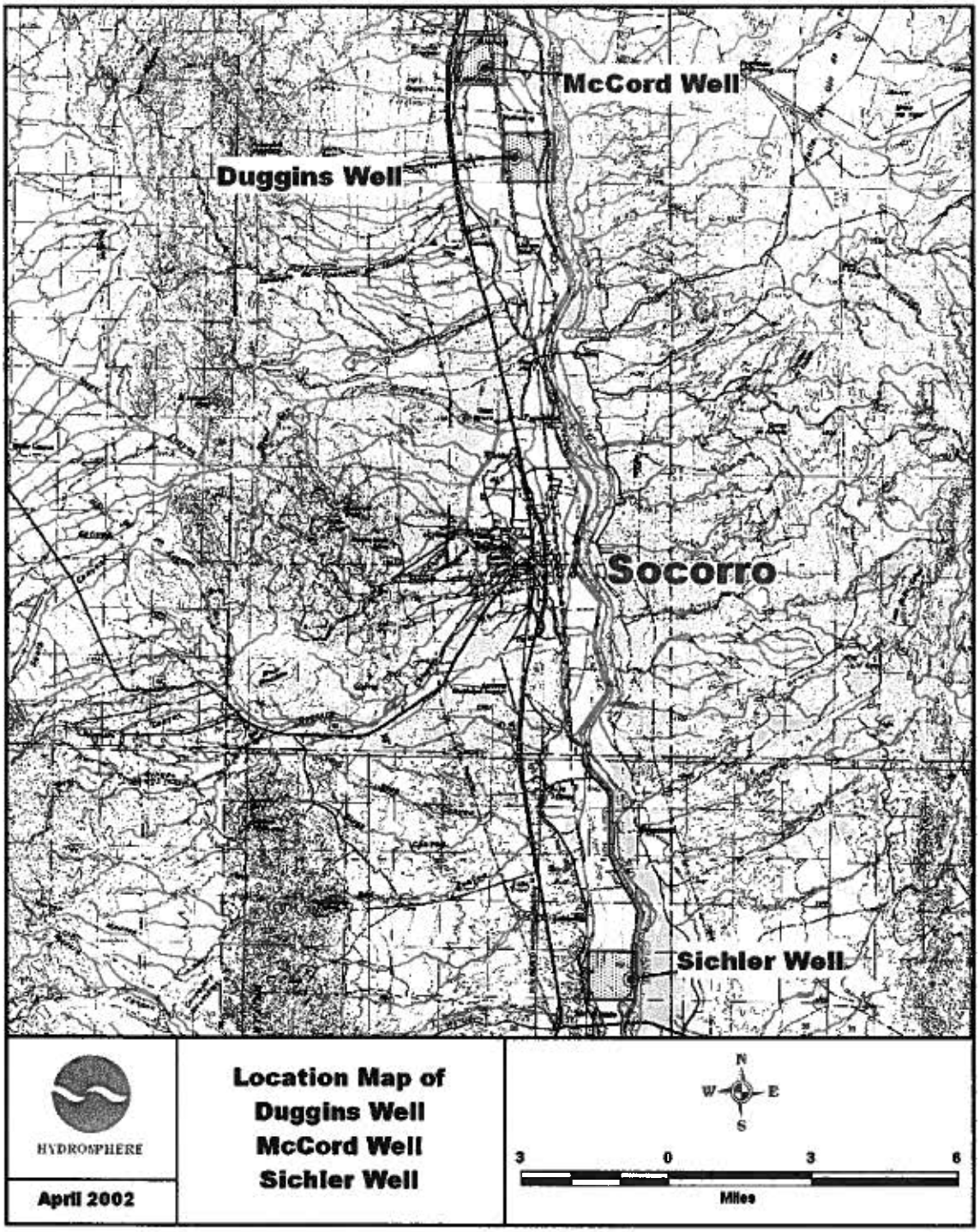
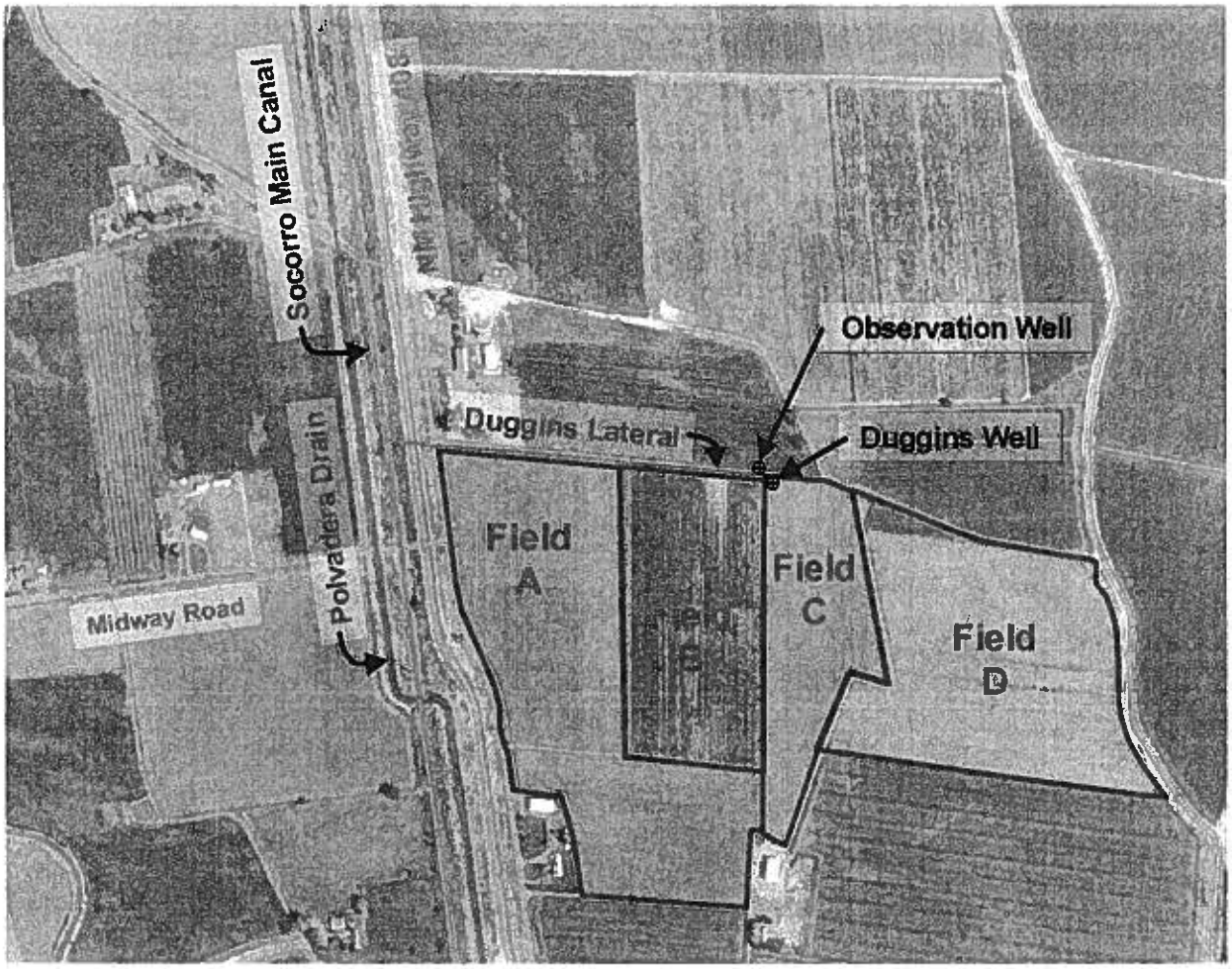


Figure 2. Duggins well vicinity map, illustrates layout of well relative to fields.



325,000.00
3,783,732.91

Figure 3. DAS-recorded drawdown and recovery data for the 4/5 through 4/9/01 Duggins well test.

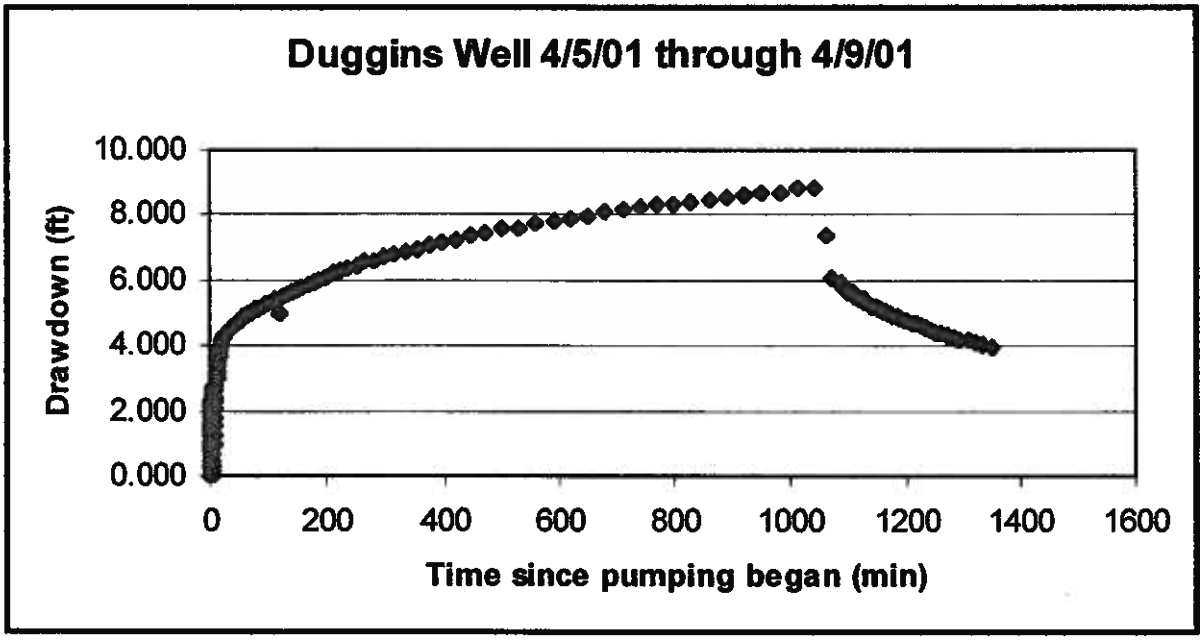


Figure 4. Manually recorded drawdown and recovery data for the 4/6 through 4/9/01 Duggins well test.

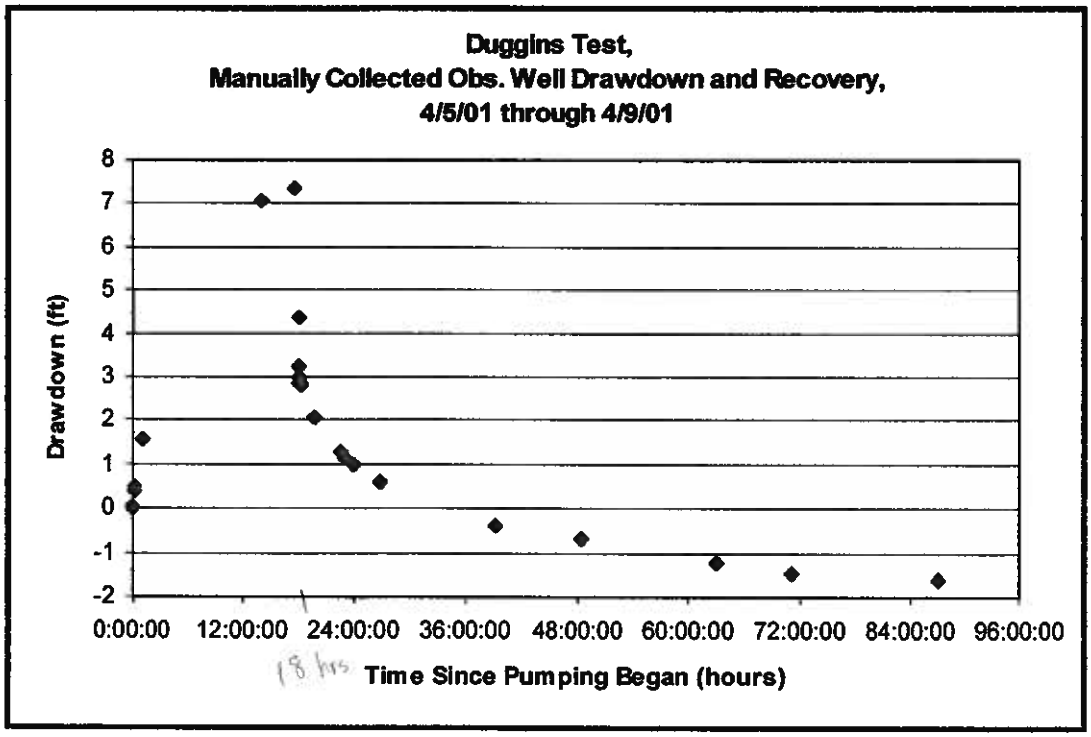


Figure 5. DAS drawdown data from Duggins test, showing raw data as well as data adjusted to account for early-time "slug" anomaly and long-term rising water table trend.

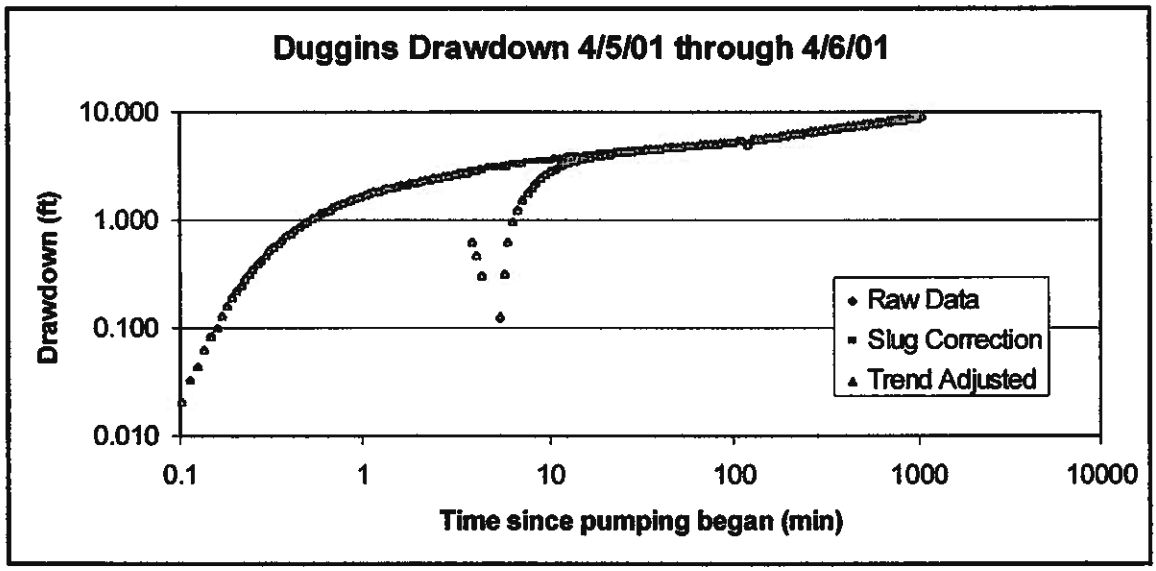


Figure 6. Log-log plot of the pressure derivative (*dh/dt*) drawdown data for the 4/6 through 4/9/01 Duggins well test.

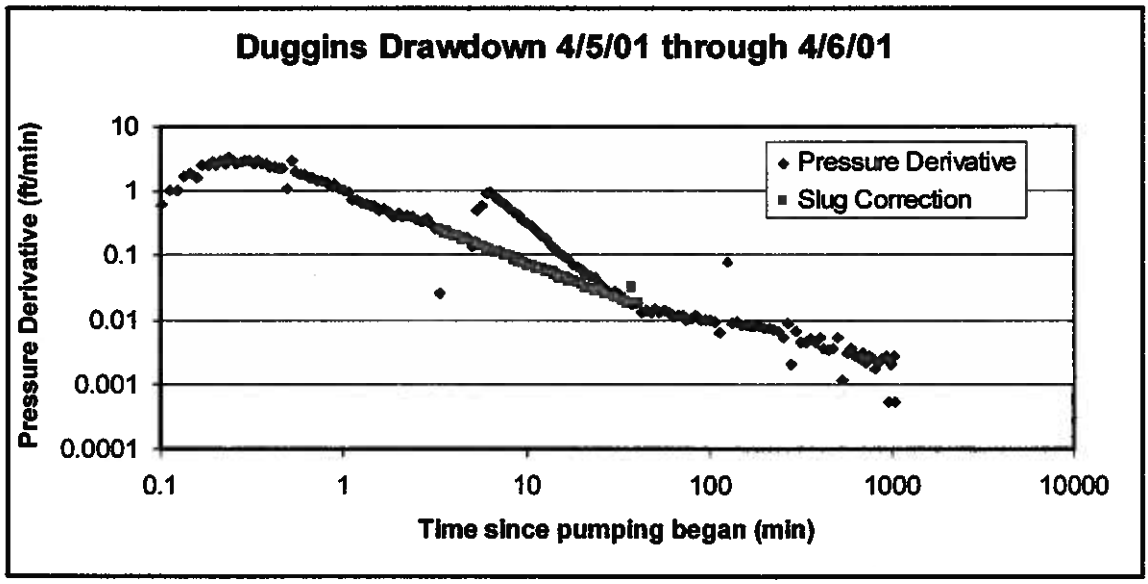


Figure 7. McCord well vicinity map.

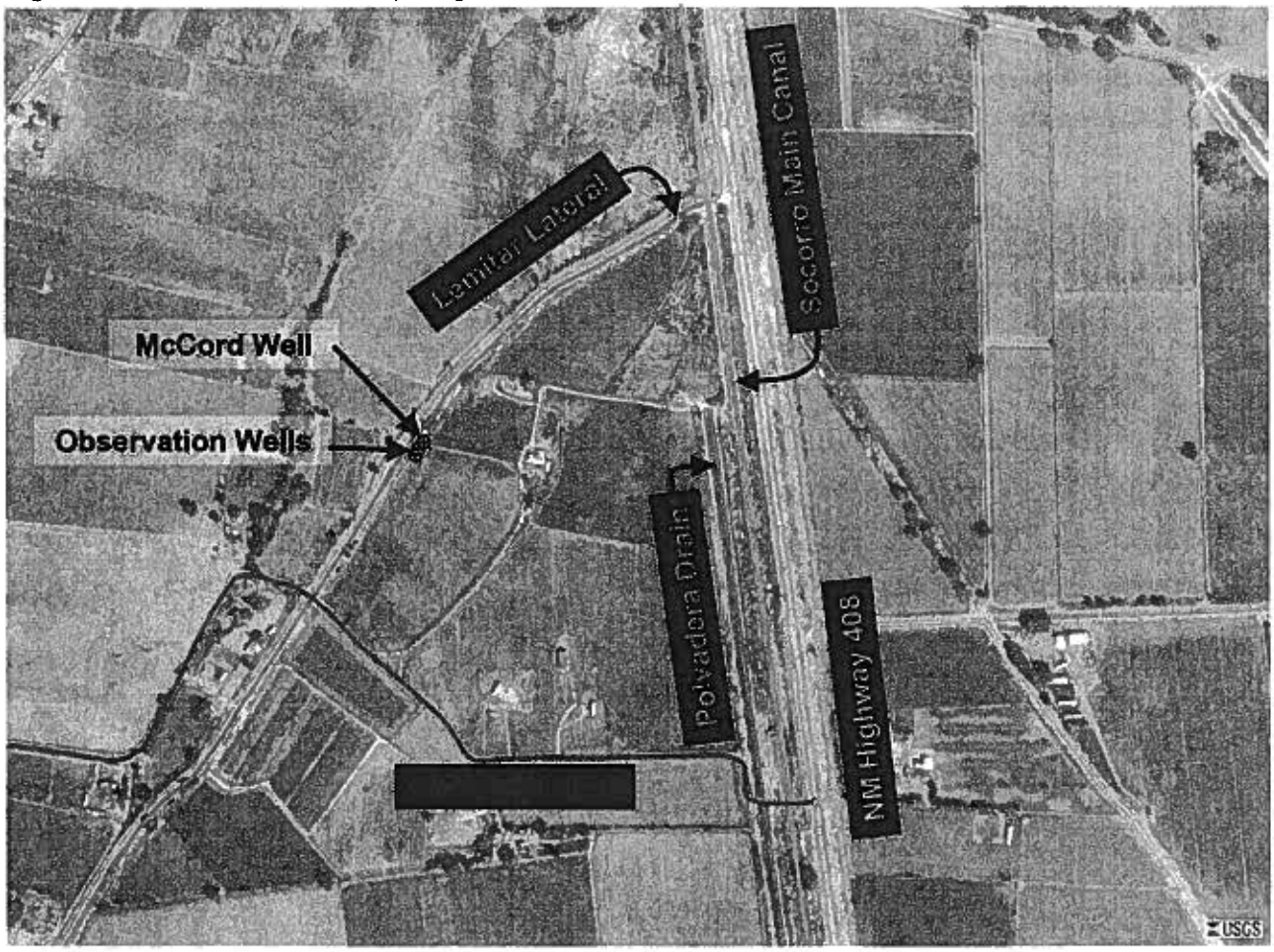


Figure 8. DAS-recorded drawdown and recovery data for the 4/9 through 4/11/01 McCord well test.

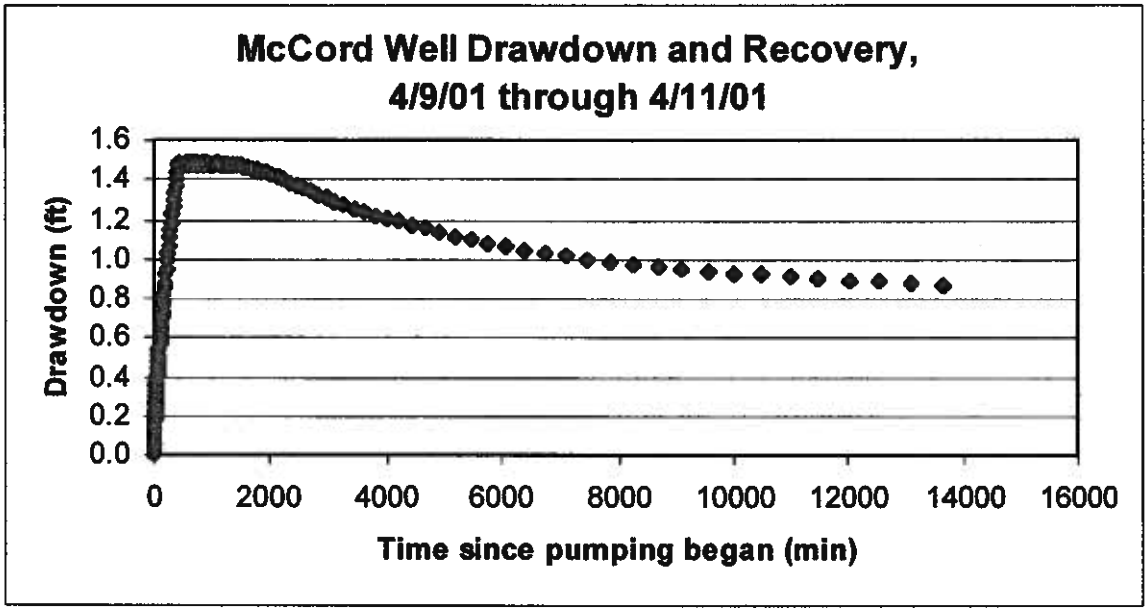


Figure 9. Manually recorded drawdown and recovery data for the 4/9 through 4/1/01 McCord well test.

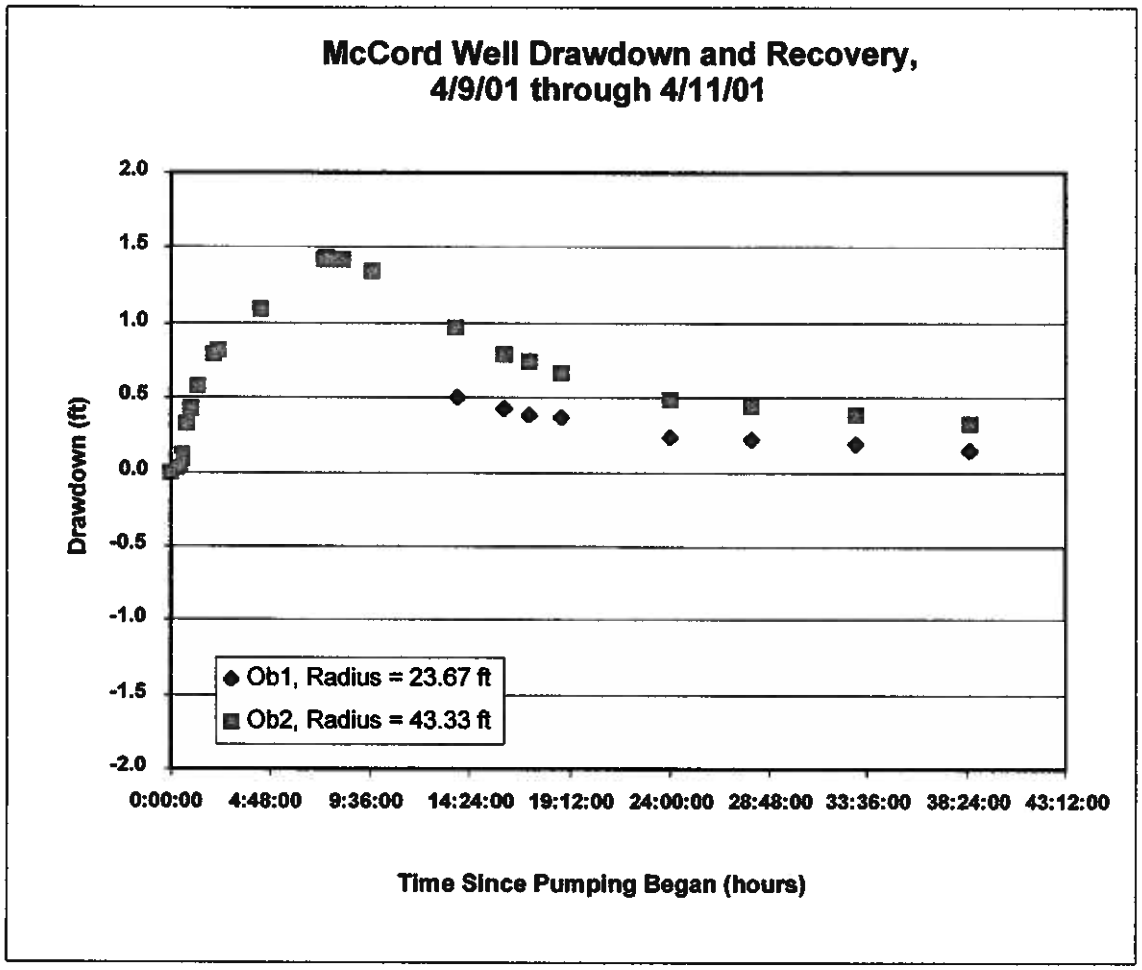


Figure 10. Sichler well vicinity map.

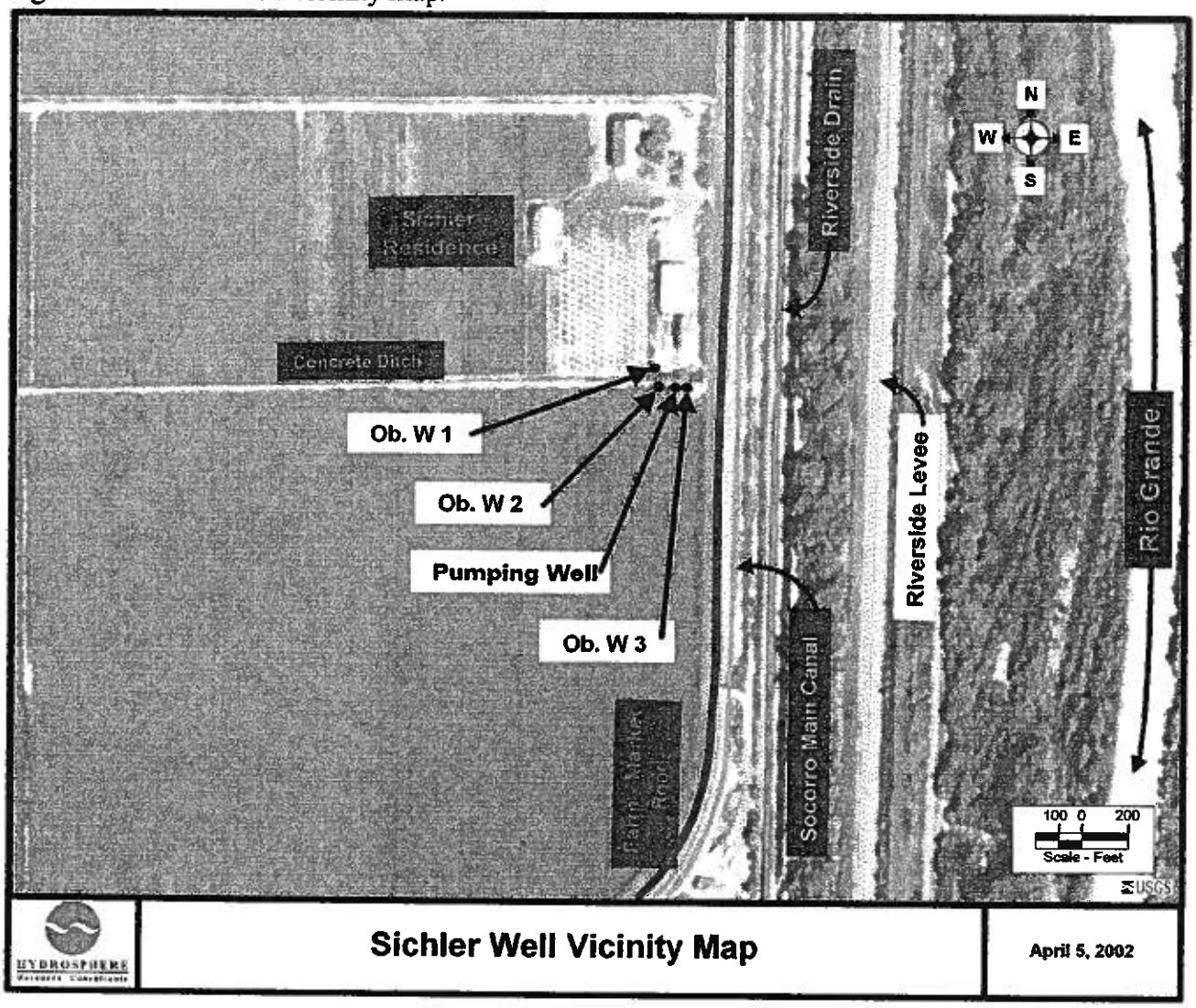


Figure 11. Sichler well test drawdown and recovery data.

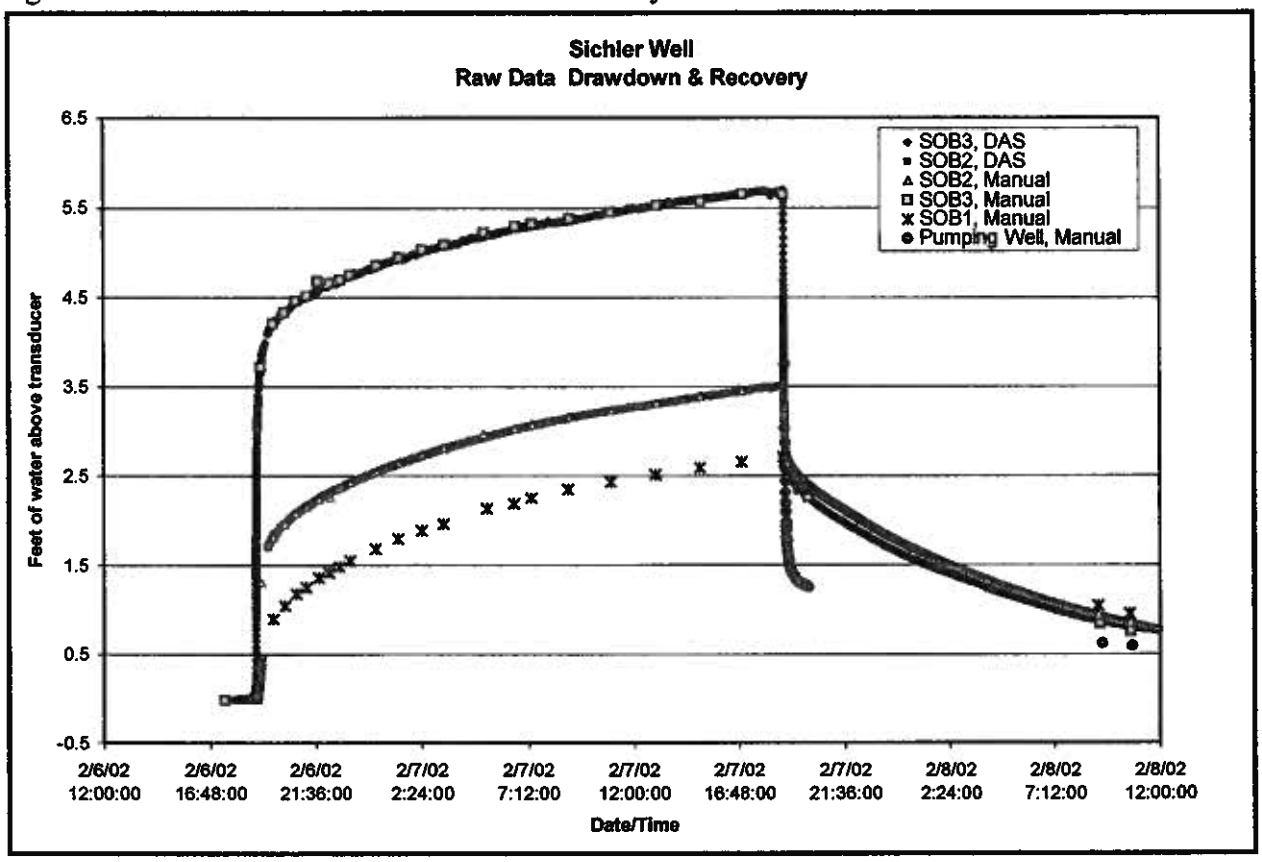
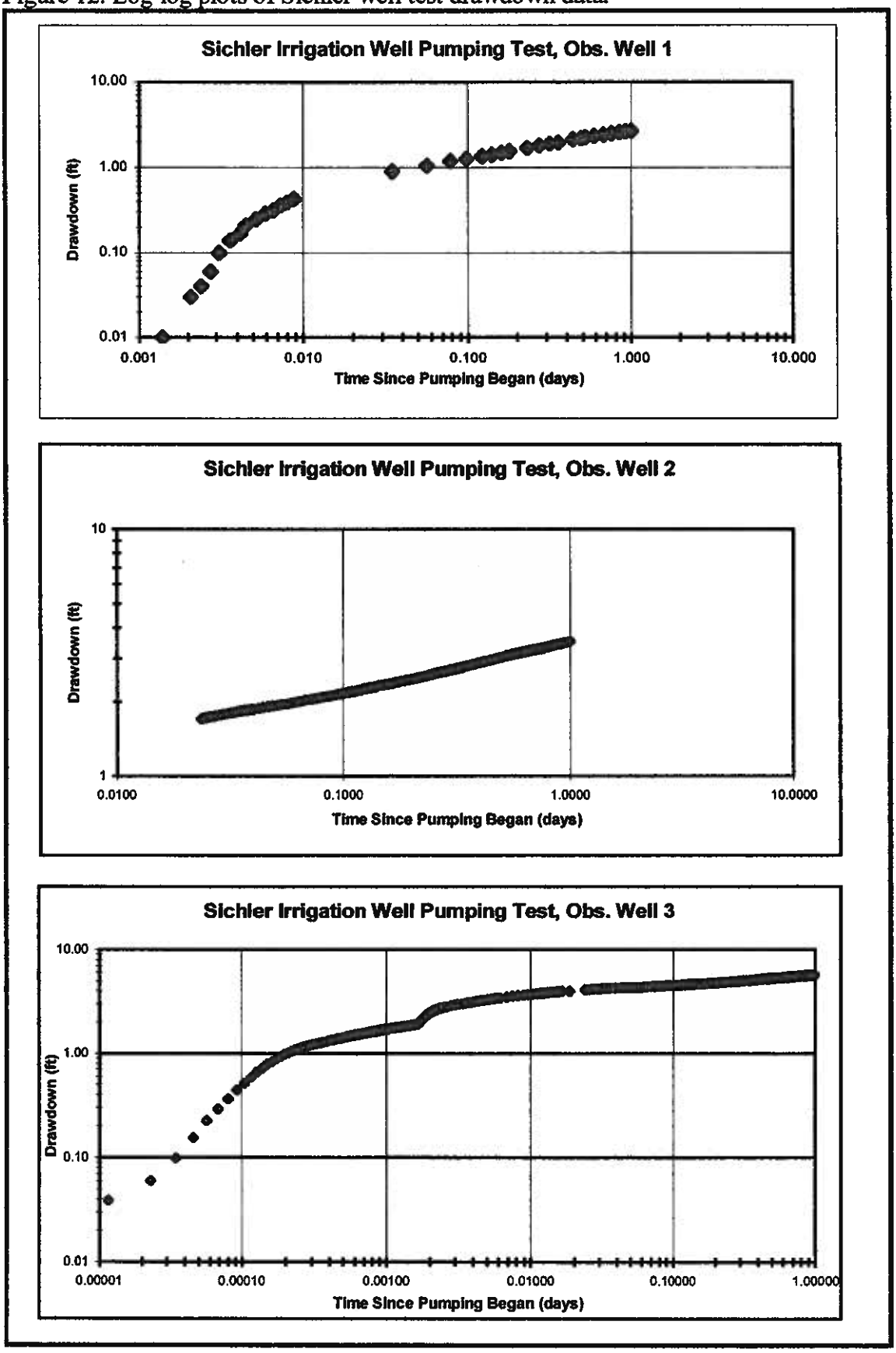


Figure 12. Log-log plots of Sichler well test drawdown data.



Appendix A. Water Quality Analysis Results

On the following pages are presented the analytical chemistry results for water samples obtained from the Duggins and Sichler wells.

NEW MEXICO BUREAU OF MINES AND MINERAL RESOURCES
NEW MEXICO TECH
801 Leroy Place, Socorro, NM 87801
REPORT OF WATER ANALYSES

Basin		County		Township, Range	
Collection Date		Collected By	Jodi Clark	Section	
Well Depth		Water Depth		Lab. number	01-0308
Sample Description	Water Sample, Duggins Well				
pH	7.24	TDS (ppm)	1680	Conductivity (uS/cm)	2400

ANALYSIS	ppm	epm	ANALYSIS	ppm	epm	ANALYSIS	ppm	epm
Hardness ($CaCO_3$)	793		Aluminum (Al)		0.00	Mercury (Hg)		
Carbonate (CO_3^{2-})			Arsenic (As)			Molybdenum (Mo)		
Bicarbonate (HCO_3^-)	800	13.11	Barium (Ba)			Nickel (Ni)		
Chloride (Cl^-)	135	3.81	Boron (B)			Selenium (Se)		
Sulfate (SO_4^{2-})	570	11.87	Cadmium (Cd)			Silica (SiO_2)		
Nitrate (NO_3^-)	<0.1	0.00	Chromium (Cr)			Silver (Ag)		
Phosphate (PO_4^{3-})	<0.5	0.00	Cobalt (Co)			Zinc (Zn)		
Fluoride (F^-)	0.17	0.01	Copper (Cu)			Strontium (Sr)		
Sodium (Na)	275	11.96	Iron (Fe)			Bromide (Br)	0.32	
Potassium (K)	8.3	0.21	Lead (Pb)			SAR	23	
Magnesium (Mg)	47	3.87	Lithium (Li)					
Calcium (Ca)	240	11.98	Manganese (Mn)					

If this data appears in a presentation, report or publication, please acknowledge the NMBMMR Chemistry Laboratory.

Name, Address and Phone:
Jodi Clark or Jim McCord
Hydrosphere Resource Consultants
835-2569
jac@hydrosphere.com

Total epm Cations	28.02
Total epm Anions	28.80
% Difference	-1.4
Charges:	$35.00

Approved by: Lynn Brandvold

Date received: 04/11/01
Date completed: 04/17/01

NEW MEXICO BUREAU OF GEOLOGY AND MINERAL RESOURCES
NEW MEXICO TECH
801 Leroy Place, Socorro, NM 87801
REPORT OF WATER ANALYSES

Basin		County		Township, Range	
Collection Date	02/11/02	Collected By	Hydrosphere	Section	
Well Depth		Water Depth		Lab. number	02-0255
Sample Description	Chris Sichler Sample #1				
pH	7.34	TDS (ppm)	2870	Conductivity (uS/cm)	4520

ANALYSIS	ppm	epm	ANALYSIS	ppm	epm	ANALYSIS	ppm	epm
Hardness ($CaCO_3$)	653		Aluminum (Al)		0.00	Mercury (Hg)		
Carbonate (CO_3^{2-})		0.00	Arsenic (As)	0.016		Molybdenum (Mo)		
Bicarbonate (HCO_3^-)	473	7.75	Barium (Ba)			Nickel (Ni)		
Chloride (Cl^-)	960	27.08	Boron (B)			Selenium (Se)		
Sulfate (SO_4^{2-})	625	13.01	Cadmium (Cd)			Silica (SiO_2)	35	
Nitrate (NO_3^-)	<0.1	0.00	Chromium (Cr)			Silver (Ag)		
Phosphate (PO_4^{3-})	<0.5	0.00	Cobalt (Co)			Zinc (Zn)	<0.05	0.00
Fluoride (F^-)	0.1	0.01	Copper (Cu)			Strontium (Sr)		
Sodium (Na)	750	32.63	Iron (Fe)		0.00	Bromide (Br)		
Potassium (K)	22	0.56	Lead (Pb)					
Magnesium (Mg)	39	3.21	Lithium (Li)					
Calcium (Ca)	197	9.83	Manganese (Mn)	0.55	0.04			

If this data appears in a presentation, report or publication, please acknowledge the NMBMMR Chemistry Laboratory.

Name, Address and Phone:
Hydrosphere
115 Abeyta Avenue West
Socorro, NM 87801

Total epm Cations	46.27
Total epm Anions	47.85
% Difference	-1.68
Charges:	$35.00

Approved by: Lynn Brandvold

Date received: 02/11/02
Date completed: 02/25/02

NEW MEXICO BUREAU OF GEOLOGY AND MINERAL RESOURCES
NEW MEXICO TECH
801 Leroy Place, Socorro, NM 87801
REPORT OF WATER ANALYSES

Basin		County		Township, Range	
Collection Date	02/11/02	Collected By	Hydrosphere	Section	
Well Depth		Water Depth		Lab. number	02-0256
Sample Description	Chris Sichler Sample #2				
pH	7.38	TDS (ppm)	2790	Conductivity (uS/cm)	4430

ANALYSIS	ppm	epm	ANALYSIS	ppm	epm	ANALYSIS	ppm	epm
Hardness ($CaCO_3$)	591		Aluminum (Al)		0.00	Mercury (Hg)		
Carbonate (CO_3^{2-})		0.00	Arsenic (As)	0.016		Molybdenum (Mo)		
Bicarbonate (HCO_3^-)	474	7.77	Barium (Ba)			Nickel (Ni)		
Chloride (Cl^-)	910	25.67	Boron (B)			Selenium (Se)		
Sulfate (SO_4^{2-})	620	12.91	Cadmium (Cd)			Silica (SiO_2)	35	
Nitrate (NO_3^-)	<0.1	0.00	Chromium (Cr)			Silver (Ag)		
Phosphate (PO_4^{3-})	<0.5	0.00	Cobalt (Co)			Zinc (Zn)	<0.05	0.00
Fluoride (F^-)	0.12	0.01	Copper (Cu)			Strontium (Sr)		
Sodium (Na)	755	32.84	Iron (Fe)		0.00	Bromide (Br)		
Potassium (K)	21	0.54	Lead (Pb)					
Magnesium (Mg)	35	2.88	Lithium (Li)					
Calcium (Ca)	179	8.93	Manganese (Mn)	0.54	0.04			

If this data appears in a presentation, report or publication, please acknowledge the NMBMMR Chemistry Laboratory.

Name, Address and Phone:
Hydrosphere
115 Abeyta Avenue West
Socorro, NM 87801

Total epm Cations	45.23
Total epm Anions	46.35
% Difference	-1.23
Charges:	$35.00

Approved by: Lynn Brandvold

Date received: 02/11/02
Date completed: 02/25/02

NEW MEXICO BUREAU OF GEOLOGY AND MINERAL RESOURCES
NEW MEXICO TECH
801 Leroy Place, Socorro, NM 87801

Water Quality Evaluation

Sample #

PARAMETER	SAMPLE(1)	Limits for Various Uses (mg/L) DOMESTIC (2)	DRINKING (3)	STOCK(4,5)	IRRIGATION(4,5)
ANIONS					
Chloride	_____	250(a)	250 (a)		
Sulfate	_____	600 (a)	250 (a) / 400 (p)	1000 (4, *)	
Nitrate	_____	45.0	45	45.0*	
Fluoride	_____	1.8(50.0-50.3 F.) 1.5(50.4-70.6 F.) 1.2(70.7-90.6 F.)	4.0 / 2.0 (a)	2.0	1.0
TOTAL SOLIDS	_____	1000(a)	500 (a)	3000* small animals 5000* poultry 7000* large animals	500* no effects 500-1000* affects sensitive crops 1000-2000* affects many crops 2000-3000* only for tolerant crops
HARDNESS	_____	0-75 = soft 75-150 = moderately hard 150-300 = hard >300 = extremely hard			
pH	_____	between 6 and 9 (a)	6.5-8.5 (a)		
TRACE METALS					
Aluminum	_____		0.05-0.26 (a)		5.0
Arsenic	_____	0.1	0.05	0.2	0.1
Barium	_____	1.0	2.0		
Berylium	_____		0.004		
Boron	_____			5.0	0.75
Cadmium	_____	0.01		0.05	0.01
Chromium	_____	0.05		1.0	0.1
Cobalt	_____				0.5
Copper	_____	1.0 (a)	1.3 (al)		
Cyanide	_____	0.1			
Iron	_____	1	0.3		
Lead	_____	0.05	0.015 (al)		
Manganese	_____	0.2 (a)	0.05 (a)		<10.0 long term
Mercury	_____	0.002	0.002	0.01	
Molybdenum	_____				1.0
Nickel	_____		0.1		0.2
Selenium	_____	0.05	0.05	0.05	0.02
Silica	_____				
Silver	_____	0.05	0.05		
Uranium	_____	5.0	0.02 (p)		
Zinc	_____	10.0	5.0		

1. Analysed only for parameters indicated; mg/L = milligrams per liter = parts per million.
2. New Mexico groundwater standards for domestic supply. Standards are enforceable including aesthetic.
3. Enforceable U.S.E.P.A. Drinking Water Standards. Aesthetic standards are only recommendations.
4. U.S. Environmental Protection Agency, 1973, Water Quality Criteria-1972; Government Printing Office, Washington, D.C.
5. New Mexico Water Quality Control Commission Regulations as amended through January, 1992; New Mexico Environment Department.

(a) = aesthetic
(al) EPA Action Level
(p) = proposed
* Recommendations only

Appendix D

Laboratory Analyses

Table D-1
Middle Rio Grande Watershed Study
Summary of Unsaturated Soil Samples Hydraulic Properties

Well ID (Sample Depth)	Soil Type	Porosity, n (% vol)	Saturation (% vol)	K_{sat} (cm/sec)	Unsaturated Hydraulic Properties			
					α (cm^{-1})	N	θ_r	θ_s
SAC-W09C (23.5-24)	CL	42.6	90.1	1.3E-07	0.0009	1.7252	0.0477	0.4135
BRN-E04AB (4.5-5)	SM/CH	41.1	95.4	1.3E-07	0.0007	1.3076	0.0000	0.3901
HWY-W07C (29-29.5)	CL	47.5	58.3	1.9E-07	0.0008	1.6706	0.0689	0.4582
SBB-W04AB (14-14.5)	CL	52.1	92	2.4E-08	0.0007	1.2504	0.0000	0.4941
SMC-W07C (6-6.5)	CL/SM	44	97.2	1.1E-06	0.0114	1.2201	0.0000	0.4448

K_{sat} = saturated hydraulic conductivity (cm/sec)

α = fitting parameter for soil-water retention curve (cm^{-1}) [van Genuchten, 1980]

N = fitting parameter for soil-water retention curve [van Genuchten, 1980]

θ_r = residual water content

θ_s = saturated water content

Daniel B. Stephens & Associates, Inc.

Summary of Tests Performed

Laboratory Sample Number	Initial Soil Properties[1] (θ, ρ_d, ϕ)	Saturated Hydraulic Conductivity[2]		Moisture Characteristics[3]					Unsaturated Hydraulic Conductivity	Particle Size[4]			Effective Porosity	Particle Density	Air Permeability	1/3, 15 Bar Points and Water Holding Capacity	Atterberg Limits	Proctor Compaction
		CH	FH	HC	PP	TH	WP	RH		DS	WS	H						
SAC W09BC (23.5-24)	X		X	X	X		X	X	X									

[1] θ = Initial moisture content, ρ_d = Dry bulk density, ϕ = Calculated porosity

[2] CH = Constant head, FH = falling head

[3] HC = Hanging column, PP = Pressure plate, TH = Thermocouple psychrometer, WP = Water activity meter, RH = Relative humidity box

[4] DS = Dry sieve, WS = Wet sieve, H = Hydrometer

SAC W09BC

Summary of Initial Moisture Content, Dry Bulk Density Wet Bulk Density and Calculated Porosity

Sample Number	Initial Moisture Content Gravimetric (%, g/g)	Initial Moisture Content Volumetric (%, cm^3/cm^3)	Dry Bulk Density (g/cm^3)	Wet Bulk Density (g/cm^3)	Calculated Porosity (%)
SAC W09BC (23.5-24)	25.2	38.4	1.52	1.91	42.6

Daniel B. Stephens & Associates, Inc.

Data for Initial Moisture Content, Bulk Density, Porosity, and Percent Saturation

Job Name: Papadopulos1
Job Number: WR02.0024.00, Task 1
Sample Number: SAC W09BC (23.5-24)
Ring Number: NA
Depth: NA

Test Date: 17-Oct-02

Field weight of sample* (g): 80.00
Tare weight, ring (g): 21.70
Tare weight, cap/plate/epoxy (g): 0.00

Dry weight of sample (g): 46.56
Sample volume (cm^3): 30.60
Assumed particle density: 2.65

Initial Volumetric Moisture Content (% vol): 38.4

Initial Gravimetric Moisture Content (% g/g): 25.2

Dry bulk density (g/cm^3): 1.52

Wet bulk density (g/cm^3): 1.91

Calculated Porosity (% vol): 42.6

Percent Saturation: 90.1

Comments:

* Weight including tares

Laboratory analysis by: M. Devine
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

Summary of Saturated Hydraulic Conductivity Tests

Sample Number	K_{sat} (cm/sec)	Method of Analysis	
		Constant Head	Falling Head
SAC W09BC (23.5-24)	1.3E-07		X

Saturated Hydraulic Conductivity
Falling Head Method

Job name: Papadopulos1
Job number: WR02.0024.00, Task 1
Sample number: SAC W09BC (23.5-24)
Ring number: NA
Depth: NA

Type of water used: TAP
Backpressure (psi): 2.5
Offset (cm): 0.8
Sample length (cm): 2.90
Sample x-sectional area (cm^2): 10.54
Reservoir x-sectional area (cm^2): 0.70

Date	Time	Temp (°C)	Reservoir head (cm)	Corrected head (cm)	Elapsed time (sec)	Ksat (cm/sec)	Ksat @ 20°C (cm/sec)
Test # 1:							
22-Oct-02	14:04:35	20.5	79.4	254.4	73745	1.4E-07	1.4E-07
23-Oct-02	10:33:40	20.0	66.3	241.3			
Test # 2:							
23-Oct-02	10:33:40	20.0	66.3	241.3	14865	1.2E-07	1.2E-07
23-Oct-02	14:41:25	20.0	64.0	239.0			
Test # 3:							
23-Oct-02	14:41:25	20.0	64.0	239.0	72865	1.2E-07	1.2E-07
24-Oct-02	10:55:50	20.0	53.7	228.6			

***Average Ksat* (cm/sec):** **1.3E-07**

Comments:

Laboratory analysis by: M. Devine
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

Summary of Moisture Characteristics of the Initial Drainage Curve

Sample Number	Pressure Head (-cm water)	Moisture Content (%, cm^3/cm^3)
SAC W09BC (23.5-24)	0	41.5
	23	41.5
	128	40.5
	510	37.8
	8974	12.5
	13665	10.4
	851293	5.1

Summary of Calculated Unsaturated Hydraulic Properties

Sample Number	α (cm^{-1})	**N** (dimensionless)	θ_r	θ_s
SAC W09BC (23.5-24)	0.0009	1.7252	0.0477	0.4135

Daniel B. Stephens & Associates, Inc.

Moisture Retention Data

Hanging Column/Pressure Plate/Thermocouple

(Main Drainage Curve)

Job Name:	Papadopulos1	*Dry wt. of sample* (g):	46.56
Job Number:	WR02.0024.00, Task 1	*Tare wt., screen & clamp* (g):	23.21
Sample Number:	SAC W09BC (23.5-24)	*Tare wt., ring* (g):	21.70
Ring Number:	NA	*Tare wt., epoxy* (g):	0.00
Depth:	NA	*Sample volume* (cm^3):	30.60

Saturated weight at 0 cm tension* (g): 104.18
Volume of water† in saturated sample (cm^3): 12.71
Saturated moisture content (% vol): 41.53
Sample bulk density (g/cm^3): 1.52

	Date/Time	Weight* (g)	Matric Potential (-cm water)	Moisture Content† (% vol)
Hanging column:	01-Nov-02 / 09:45	104.18	0.00	41.53
	04-Nov-02 / 14:30	104.18	23.00	41.53
	06-Nov-02 / 15:20	103.87	128.00	40.52
Pressure plate:	08-Jan-02 / 14:20	103.03	509.90	37.77

Comments:

* Weight including tares
† Assumed density of water is 1.0 g/cm^3

Laboratory analysis by: M. Devine
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

Daniel B. Stephens & Associates, Inc.

Moisture Retention Data

Water Activity Meter/Relative Humidity Box

(Main Drainage Curve)

Job Name: Papadopulos1
Job Number: WR02.0024.00, Task 1
Sample Number: SAC W09BC (23.5-24)
Ring Number: NA
Depth: NA

Dry weight of water activity meter sample* (g): 145.44
Tare weight, jar (g): 117.39
Sample bulk density (g/cm^3): 1.52

	Date/Time	Weight* (g)	Matric Potential (-cm water)	Moisture Content† (% vol)
Water Activity Meter:	25-Oct-02 / 13:25	147.74	8974.2	12.48
	23-Oct-02 / 14:15	147.36	13665.3	10.41

Dry weight of relative humidity box sample* (g): 74.84
Tare weight (g): 44.10
Sample bulk density (g/cm^3): 1.52

	Date/Time	Weight* (g)	Matric Potential (-cm water)	Moisture Content† (% vol)
Relative humidity box:	29-Oct-02 / 08:30	75.86	851293	5.07

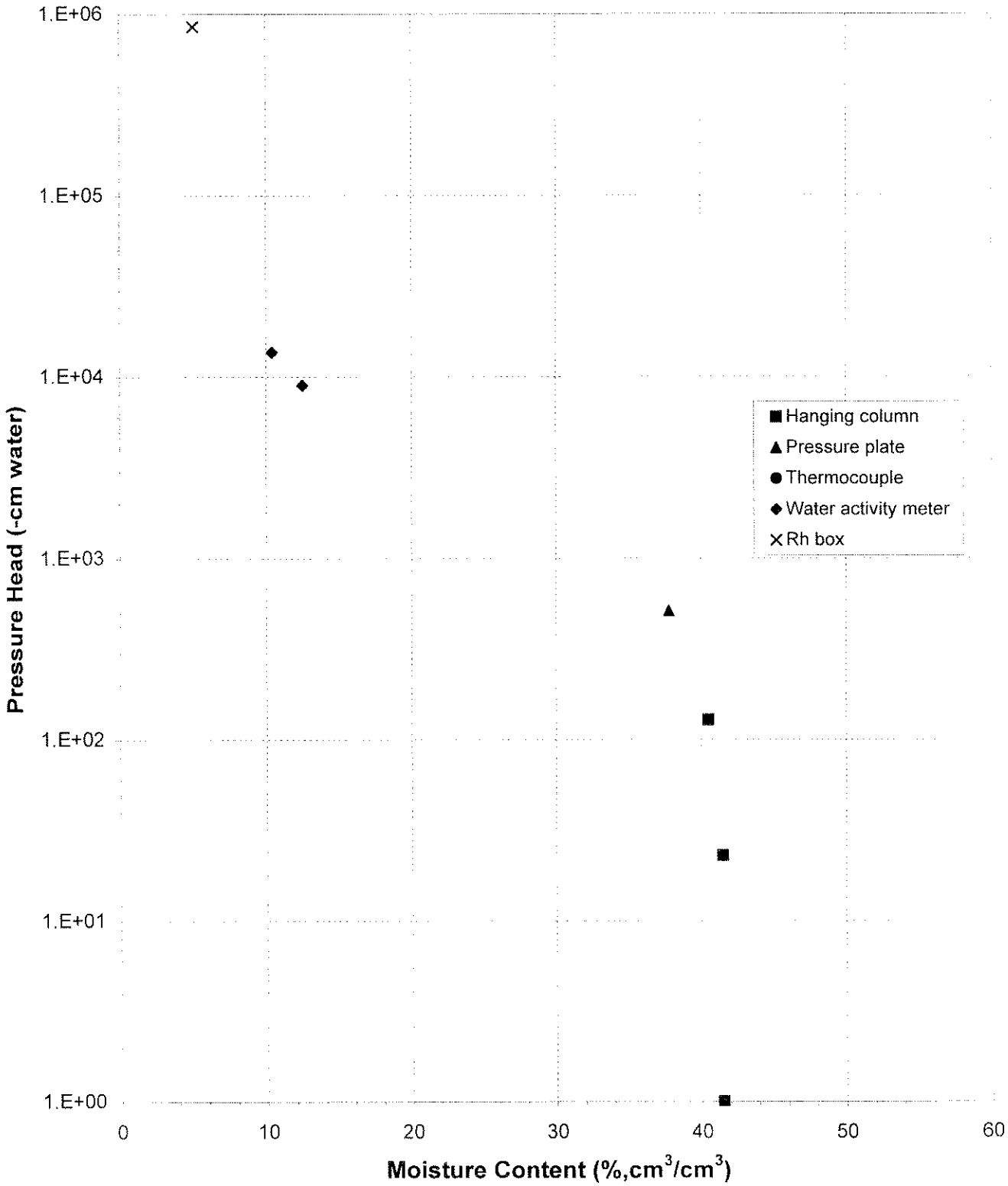
Comments:

* Weight including tares
† Assumed density of water is 1.0 g/cm^3

Laboratory analysis by: D. O'Dowd
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

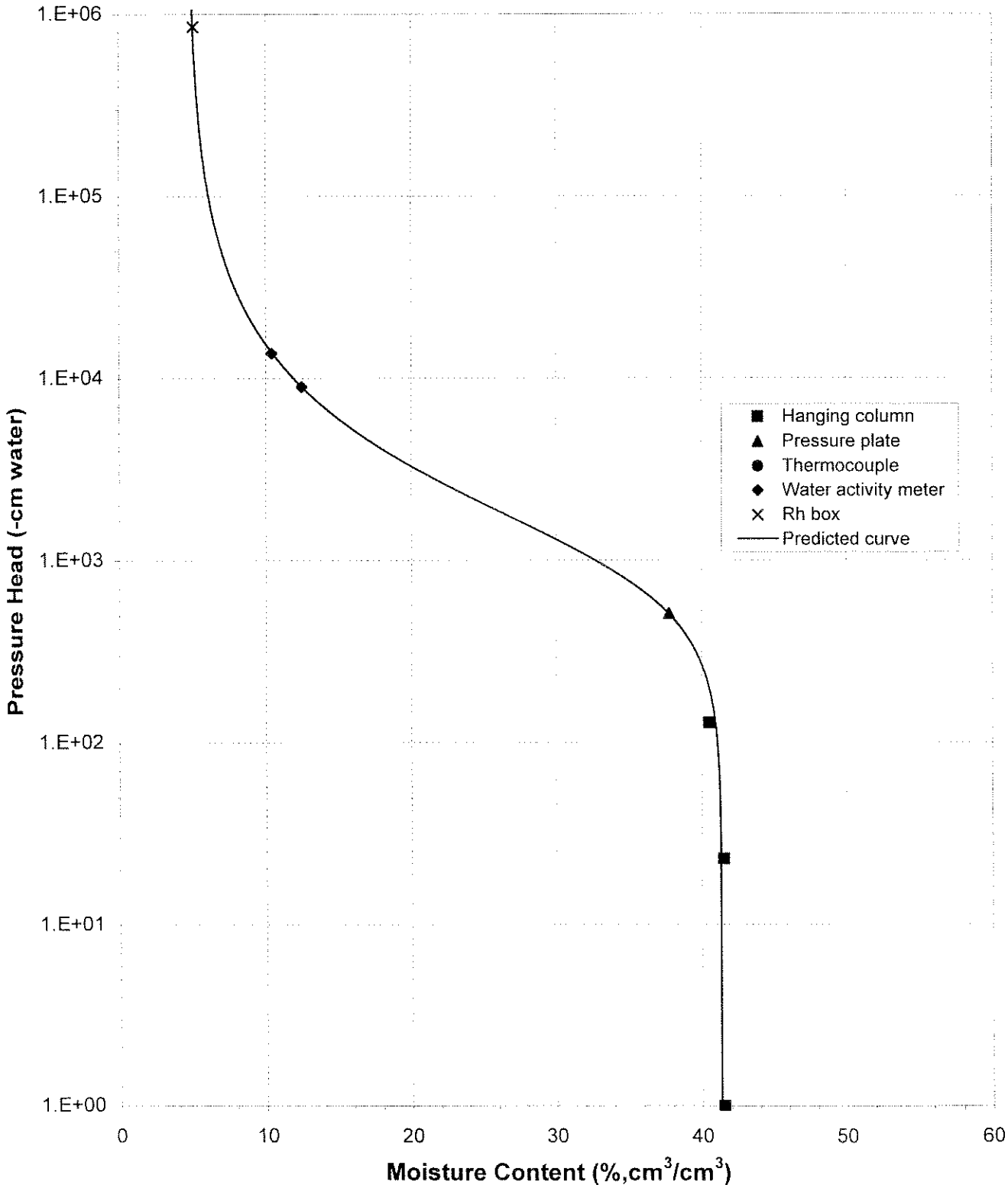
Water Retention Data Points

Sample Number: SAC W09BC (23.5-24)



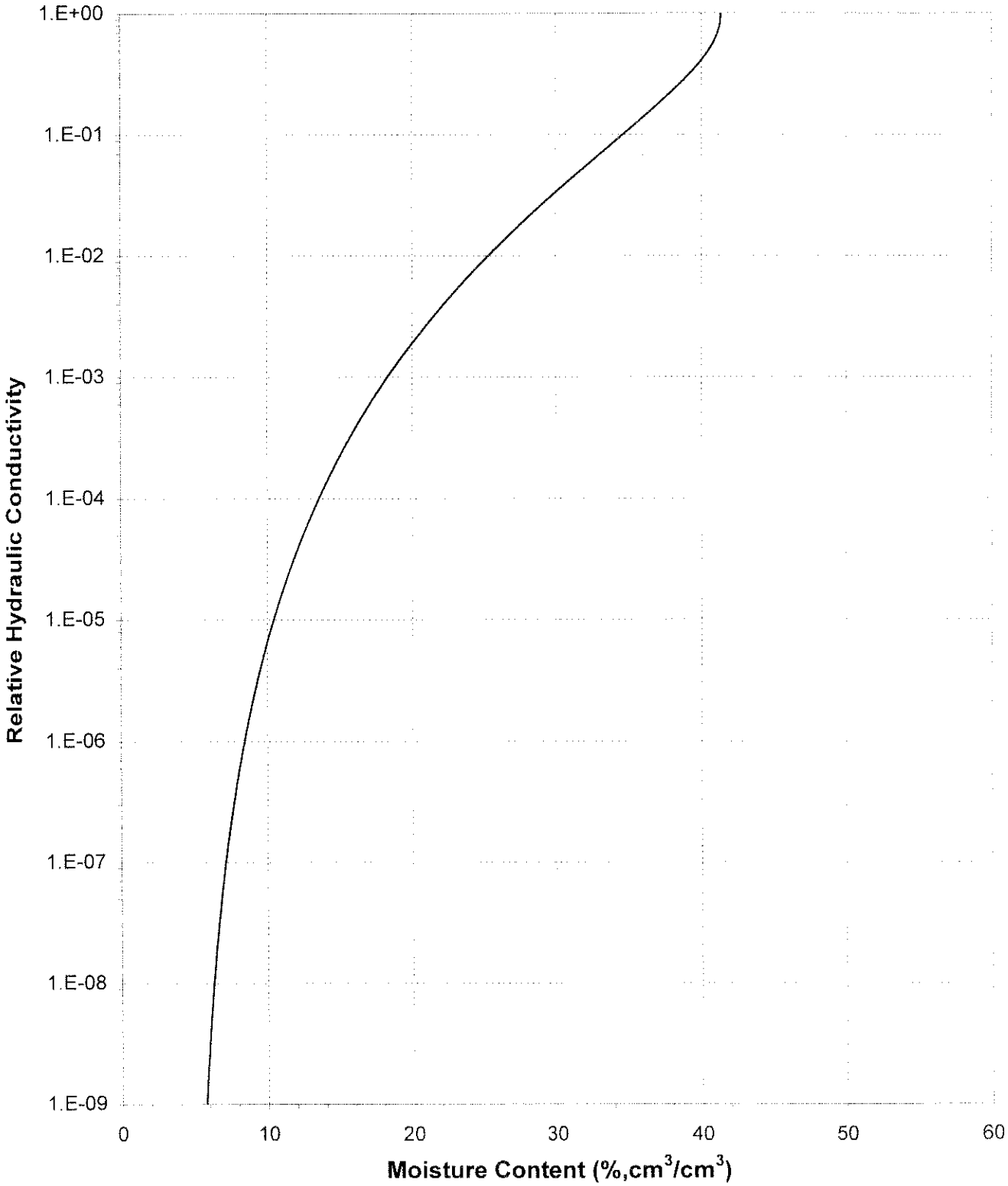
Predicted Water Retention Curve and Data Points

Sample Number: SAC W09BC (23.5-24)



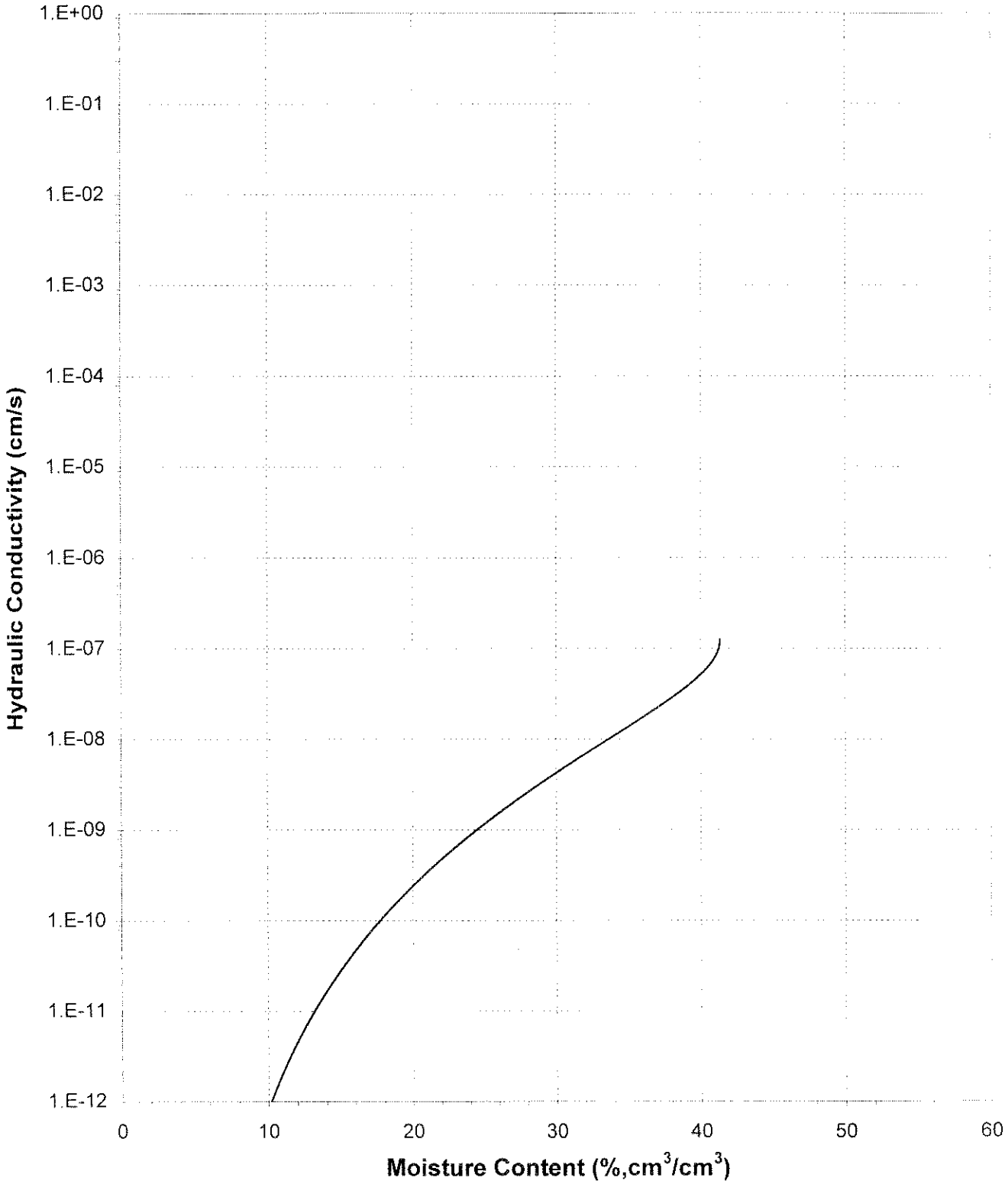
Plot of Relative Hydraulic Conductivity vs Moisture Content

Sample Number: SAC W09BC (23.5-24)



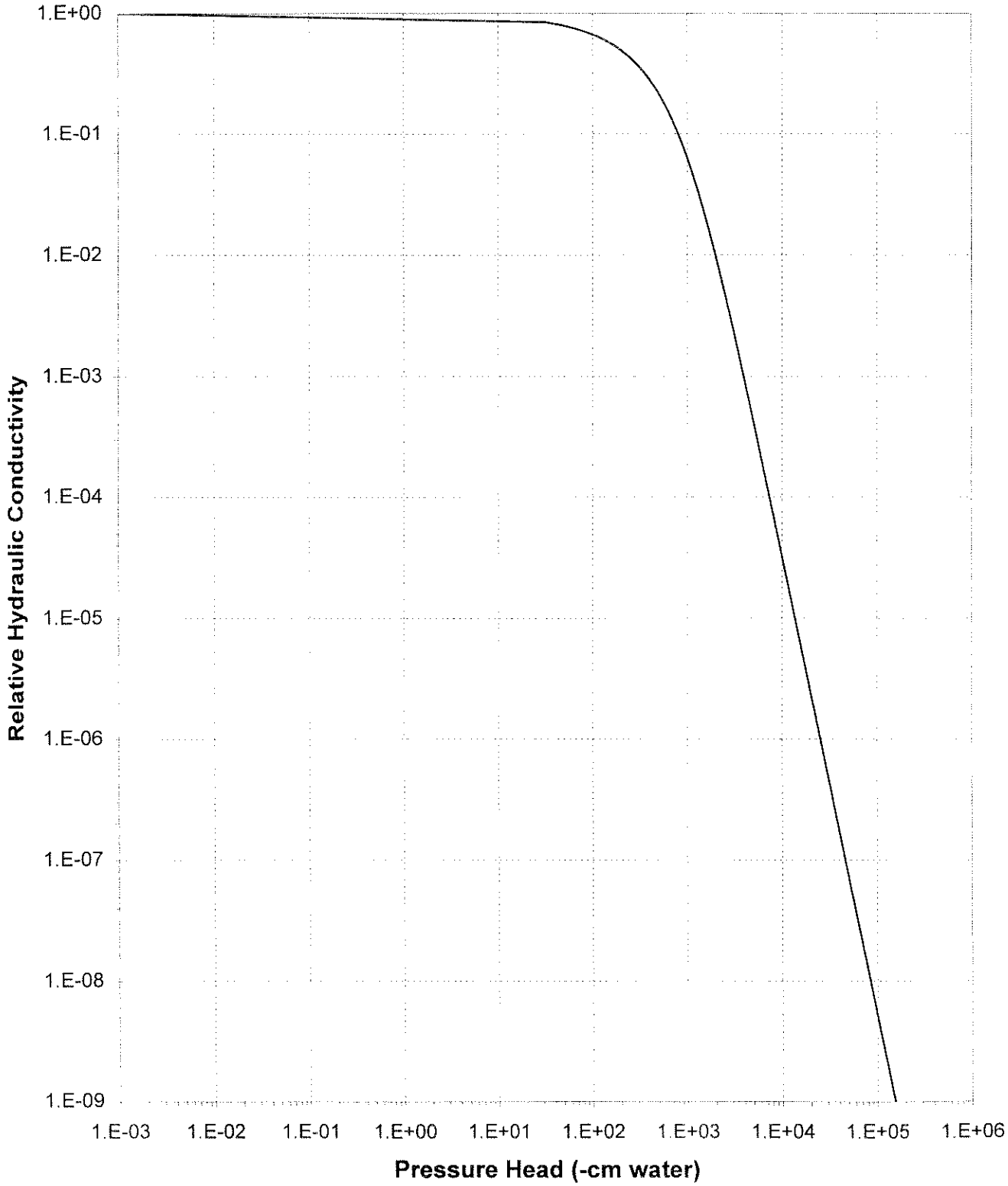
Plot of Hydraulic Conductivity vs Moisture Content

Sample Number: SAC W09BC (23.5-24)



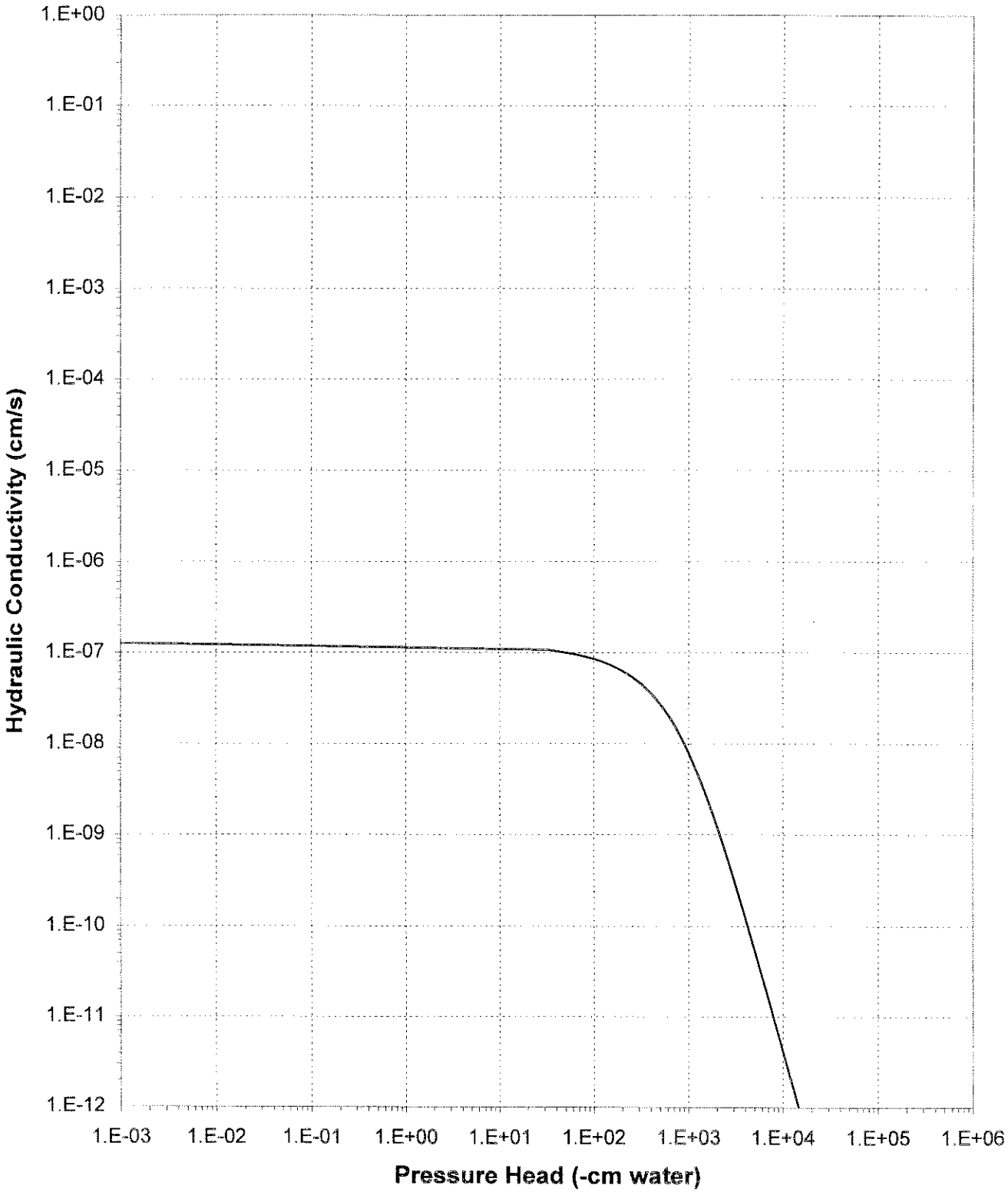
Plot of Relative Hydraulic Conductivity vs Pressure Head

Sample Number: SAC W09BC (23.5-24)



Plot of Hydraulic Conductivity vs Pressure Head

Sample Number: SAC W09BC (23.5-24)



7713

December 27, 2002

BLN - E04

Mr. Brian Grigsby
S.S. Papadopulos & Associates, Inc.
1877 Broadway, Suite 703
Boulder, CO 80302
303-939-8877

Dear Mr. Grigsby:

Enclosed is the final report for the S.S. Papadopulos & Associates, Inc. job. Please review this report and provide any comments as samples will be held for a maximum of 30 days. After 30 days samples will be returned or disposed of in an appropriate manner.

All testing results were evaluated subjectively for consistency and reasonableness, and the results appear to be reasonably representative of the material tested. However, DBS&A does not assume any responsibility for interpretations or analyses based on the data enclosed, nor can we guarantee that these data are fully representative of the undisturbed materials at the field site. We recommend that careful evaluation of these laboratory results be made for your particular application.

We are pleased to provide this service to S.S. Papadopulos and look forward to future laboratory testing on other projects. If you have any questions about the enclosed data, please do not hesitate to call.

Sincerely,

DANIEL B. STEPHENS & ASSOCIATES, INC.

Daniel O'Dowd
Enclosure

Daniel B. Stephens & Associates, Inc.

6020 Academy NE, Suite 100 505-822-9400
Albuquerque, NM 87109 FAX 505-822-8877

Summary of Tests Performed

Laboratory Sample Number	Initial Soil Properties[1] (θ, ρ_d, ϕ)	Saturated Hydraulic Conductivity[2]		Moisture Characteristics[3]					Unsaturated Hydraulic Conductivity	Particle Size[4]			Effective Porosity	Particle Density	Air Permeability	1/3, 15 Bar Points and Water Holding Capacity	Atterberg Limits	Proctor Compaction
		CH	FH	HC	PP	TH	WP	RH		DS	WS	H						
SBB-W04 (Bottom third f 13-14.5)	X		X	X	X			X	X									
BRN-E04 (4.5-5.0)	X		X	X	X			X	X									
SMC-W07 (6.0-6.5)	X		X	X	X			X	X									

[1] θ = Initial moisture content, ρ_d = Dry bulk density, ϕ = Calculated porosity
[2] CH = Constant head, FH = falling head
[3] HC = Hanging column, PP = Pressure plate, TH = Thermocouple psychrometer, WP = Water activity meter, RH = Relative humidity box
[4] DS = Dry sieve, WS = Wet sieve, H = Hydrometer

Summary of Initial Moisture Content, Dry Bulk Density Wet Bulk Density and Calculated Porosity

Sample Number	Initial Moisture Content Gravimetric (%, g/g)	Initial Moisture Content Volumetric (%, cm^3/cm^3)	Dry Bulk Density (g/cm^3)	Wet Bulk Density (g/cm^3)	Calculated Porosity (%)
SBB-W04 (Bottom third f 13-14.5)	37.8	48.0	1.27	1.75	52.1
BRN-E04 (4.5-5.0)	25.1	39.2	1.56	1.95	41.1
SMC-W07 (6.0-6.5)	28.8	42.8	1.48	1.91	44.0

Summary of Saturated Hydraulic Conductivity Tests

Sample Number	K_{sat} (cm/sec)	Method of Analysis	
		Constant Head	Falling Head
SBB-W04 (Bottom third f 13-14.5)	2.4E-08		X
BRN-E04 (4.5-5.0)	1.3E-07		X
SMC-W07 (6.0-6.5)	1.1E-06		X

Summary of Moisture Characteristics of the Initial Drainage Curve

Sample Number	Pressure Head (-cm water)	Moisture Content (%, cm^3/cm^3)
SBB-W04 (Bottom third f 13-14.5)	0	51.1
	50	48.5
	150	47.8
	510	47.1
	8158	31.8
	15297	26.8
	851293	10.0
BRN-E04 (4.5-5.0)	0	42.2
	50	38.0
	150	37.6
	510	35.1
	8158	23.3
	15297	19.0
	851293	4.4
SMC-W07 (6.0-6.5)	0	44.5
	50	40.8
	150	38.2
	510	28.0
	8158	17.4
	15297	14.2
	851293	5.5

Summary of Calculated Unsaturated Hydraulic Properties

Sample Number	α (cm^{-1})	N (dimensionless)	θ_r	θ_s
SBB-W04 (Bottom third f 13-14.5)	0.0007	1.2504	0.0000	0.4941
BRN-E04 (4.5-5.0)	0.0007	1.3076	0.0000	0.3901
SMC-W07 (6.0-6.5)	0.0114	1.2201	0.0000	0.4448

Raw Laboratory Data and Graphical Plots

Daniel B. Stephens & Associates, Inc.

Data for Initial Moisture Content, Bulk Density, Porosity, and Percent Saturation

Job Name: Papadopulos3
Job Number: WR02.0080.00
Sample Number: BRN-E04 (4.5-5.0)
Ring Number: NA
Depth: NA

Test Date: 27-Nov-02

Field weight of sample* (g): 102.01
Tare weight, ring (g): 26.69
Tare weight, cap/plate/epoxy (g): 0.00

Dry weight of sample (g): 60.20
Sample volume (cm^3): 38.57
Assumed particle density: 2.65

Initial Volumetric Moisture Content (% vol): 39.2

Initial Gravimetric Moisture Content (% g/g): 25.1

Dry bulk density (g/cm^3): 1.56

Wet bulk density (g/cm^3): 1.95

Calculated Porosity (% vol): 41.1

Percent Saturation: 95.4

Comments:

* Weight including tares

Laboratory analysis by: D. O'Dowd
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

Daniel B. Stephens & Associates, Inc.

Saturated Hydraulic Conductivity
Falling Head Method

Job name:	Papadopulos3	*Type of water used:*	TAP
Job number:	WR02.0080.00	*Backpressure* (psi):	2.5
Sample number:	BRN-E04 (4.5-5.0)	*Offset* (cm):	1.4
Ring number:	NA	*Sample length* (cm):	3.68
Depth:	NA	*Sample x-sectional area* (cm^2):	10.49
		Reservoir x-sectional area (cm^2):	0.70

Date	Time	Temp (°C)	Reservoir head (cm)	Corrected head (cm)	Elapsed time (sec)	Ksat (cm/sec)	Ksat @ 20°C (cm/sec)
Test # 1:							
09-Dec-02	09:48:10	20.0	107.5	281.9	17200	1.5E-07	1.5E-07
09-Dec-02	14:34:50	20.0	104.6	279.0			
Test # 2:							
09-Dec-02	14:34:50	20.0	104.6	279.0	66660	1.3E-07	1.3E-07
10-Dec-02	09:05:50	20.0	95.0	269.4			
Test # 3:							
10-Dec-02	09:05:50	20.0	95.0	269.4	24609	1.2E-07	1.2E-07
10-Dec-02	15:55:59	20.5	91.8	266.2			

***Average Ksat* (cm/sec):** **1.3E-07**

Comments:

Laboratory analysis by: M. Devine
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

Daniel B. Stephens & Associates, Inc.

Moisture Retention Data

Hanging Column/Pressure Plate/Thermocouple

(Main Drainage Curve)

Job Name:	Papadopulos3	*Dry wt. of sample* (g):	60.20
Job Number:	WR02.0080.00	*Tare wt., screen & clamp* (g):	23.31
Sample Number:	BRN-E04 (4.5-5.0)	*Tare wt., ring* (g):	26.69
Ring Number:	NA	*Tare wt., epoxy* (g):	0.00
Depth:	NA	*Sample volume* (cm^3):	38.57

Saturated weight at 0 cm tension* (g): 126.46
Volume of water† in saturated sample (cm^3): 16.26
Saturated moisture content (% vol): 42.16
Sample bulk density (g/cm^3): 1.56

	Date/Time	Weight* (g)	Matric Potential (-cm water)	Moisture Content† (% vol)	
Hanging column:	16-Dec-02 / 14:30	126.46	0.00	42.16	
	18-Dec-02 / 15:30	124.86	50.00	38.01	
	21-Dec-02 / 12:00	124.69	150.00	37.57	
Pressure plate:	23-Dec-02 / 08:45	123.75	509.90	35.13	
	25-Nov-02 / 12:00	223.70	8158.40	23.33	SS1
	27-Nov-02 / 12:00	223.36	15297.00	18.95	SS2

Comments:

* Weight including tares
† Assumed density of water is 1.0 g/cm^3

SS1 = Analysis using subsample #1: Dry wt* = 222.63 g, Tare wt = 215.47 g.
SS2 = Analysis using subsample #2: Dry wt* = 221.91 g, Tare wt = 209.97 g.

Laboratory analysis by: M. Devine
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

Daniel B. Stephens & Associates, Inc.

Moisture Retention Data

Water Activity Meter/Relative Humidity Box

(Main Drainage Curve)

Job Name: Papadopulos3
Job Number: WR02.0080.00
Sample Number: BRN-E04 (4.5-5.0)
Ring Number: NA
Depth: NA

Dry weight of relative humidity box sample* (g): 89.87
Tare weight (g): 43.54
Sample bulk density (g/cm^3): 1.56

	Date/Time	Weight* (g)	Matric Potential (-cm water)	Moisture Content† (% vol)
Relative humidity box:	17-Dec-02 / 10:00	91.16	851293	4.35

Comments:

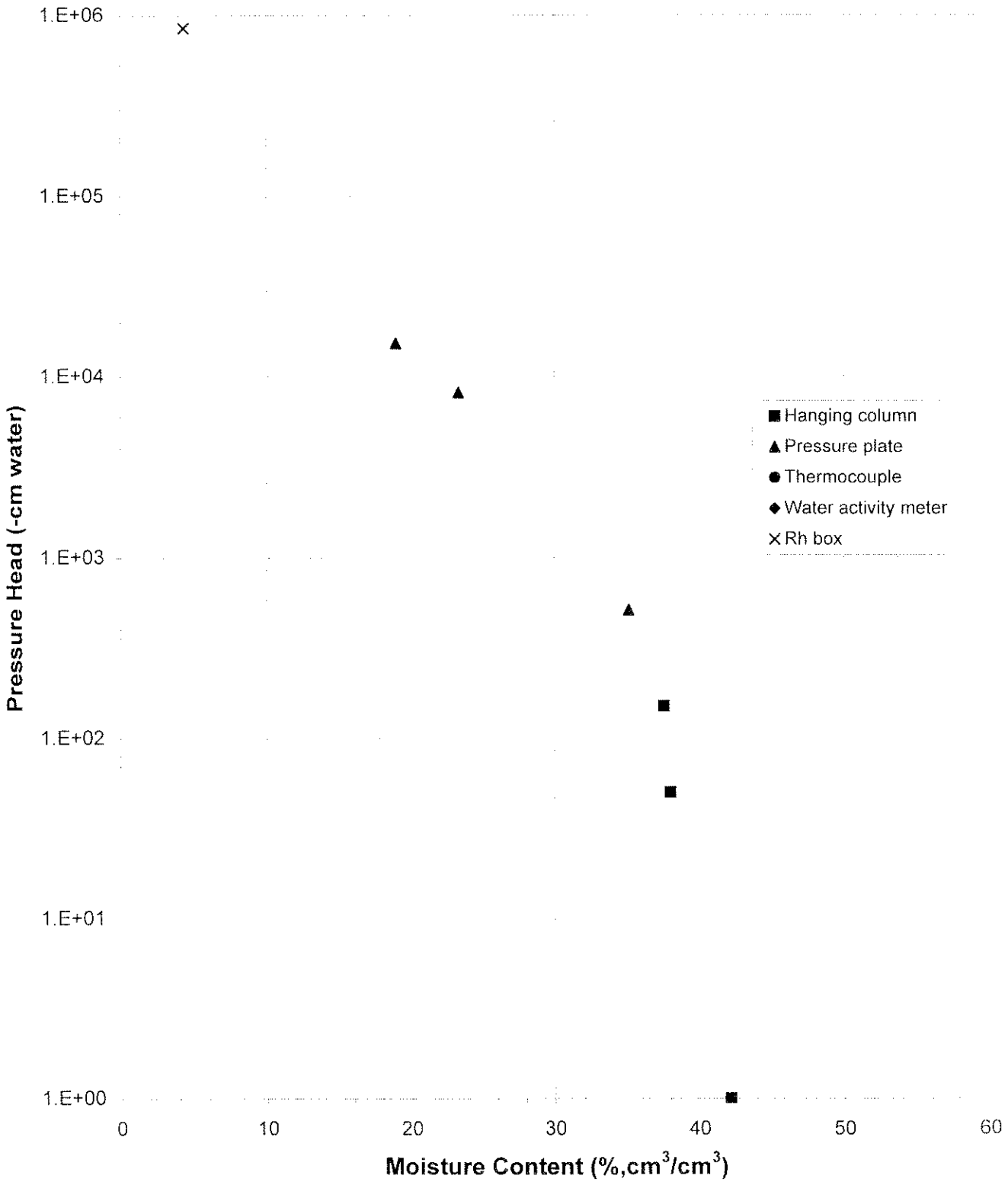
* Weight including tares

† Assumed density of water is 1.0 g/cm^3

Laboratory analysis by: M. Devine
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

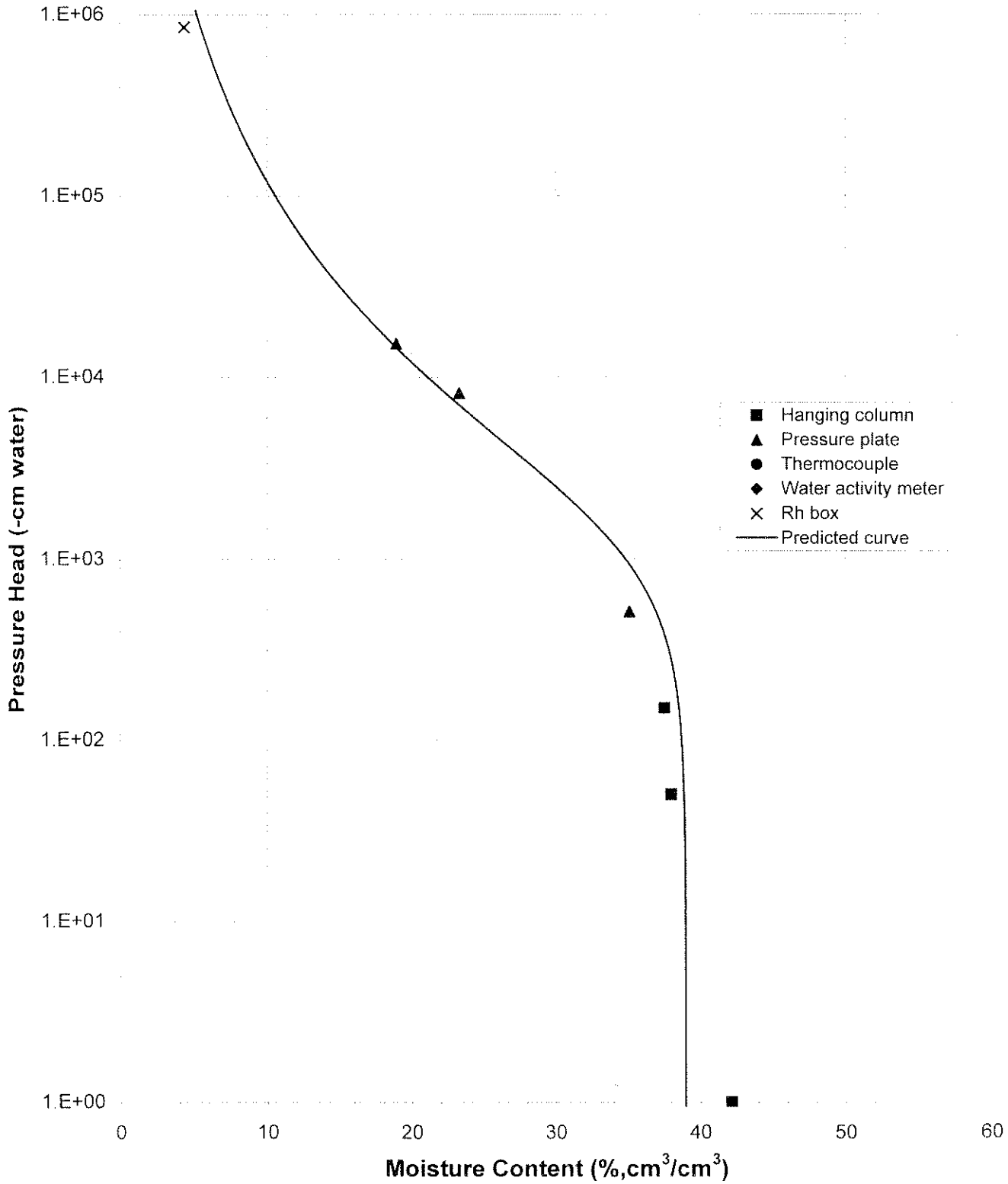
Water Retention Data Points

Sample Number: BRN-E04 (4.5-5.0)



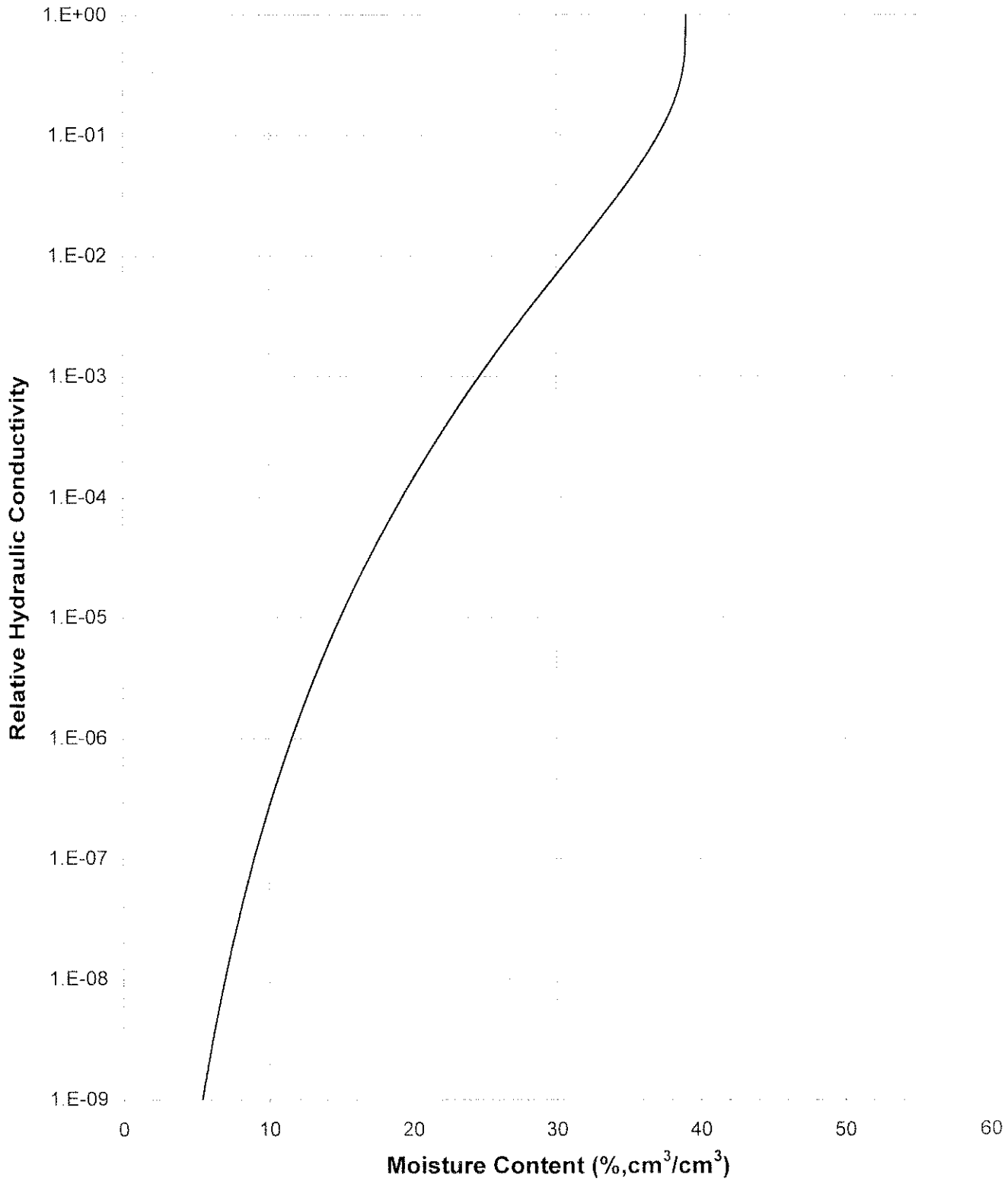
Predicted Water Retention Curve and Data Points

Sample Number: BRN-E04 (4.5-5.0)



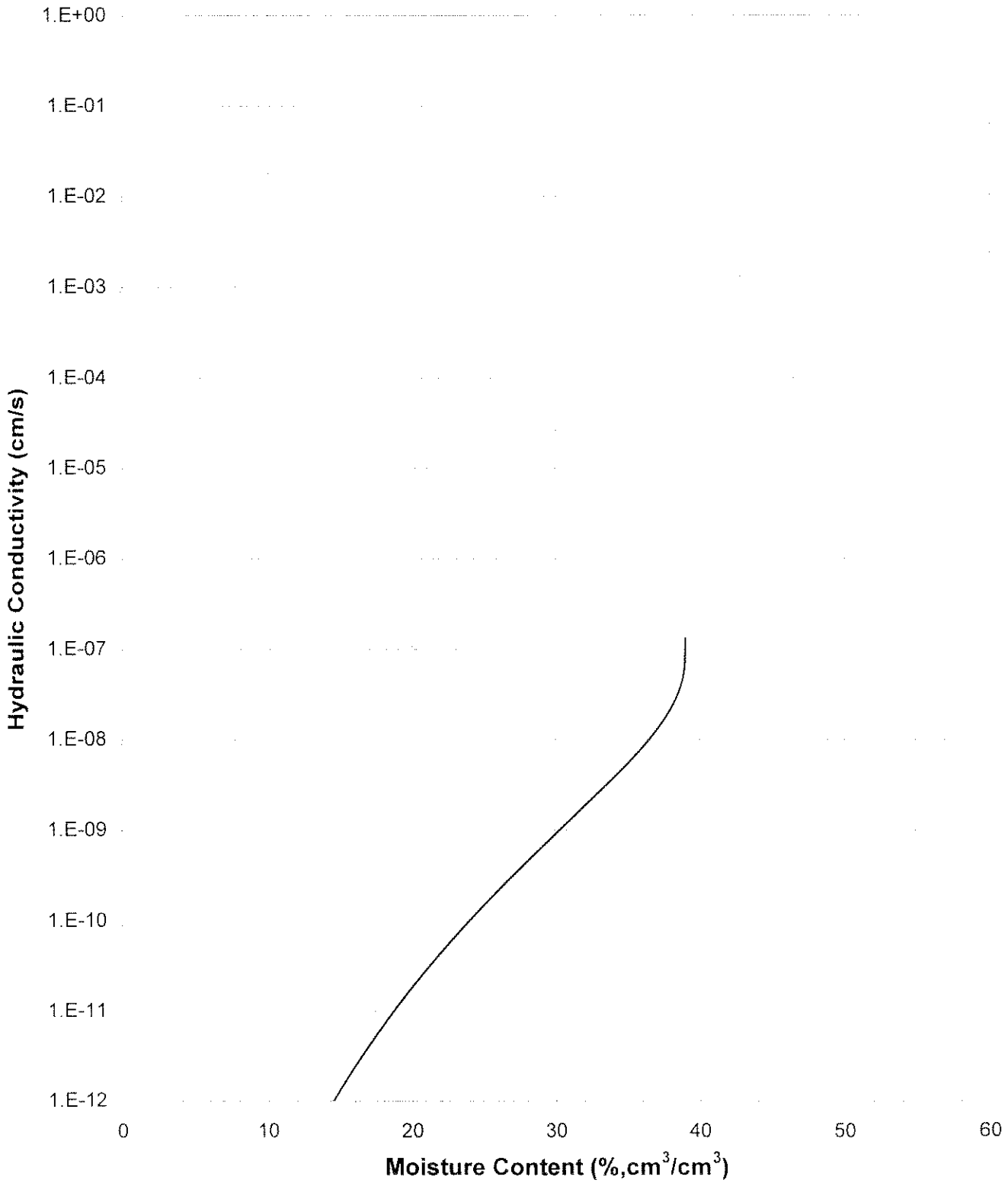
Plot of Relative Hydraulic Conductivity vs Moisture Content

Sample Number: BRN-E04 (4.5-5.0)



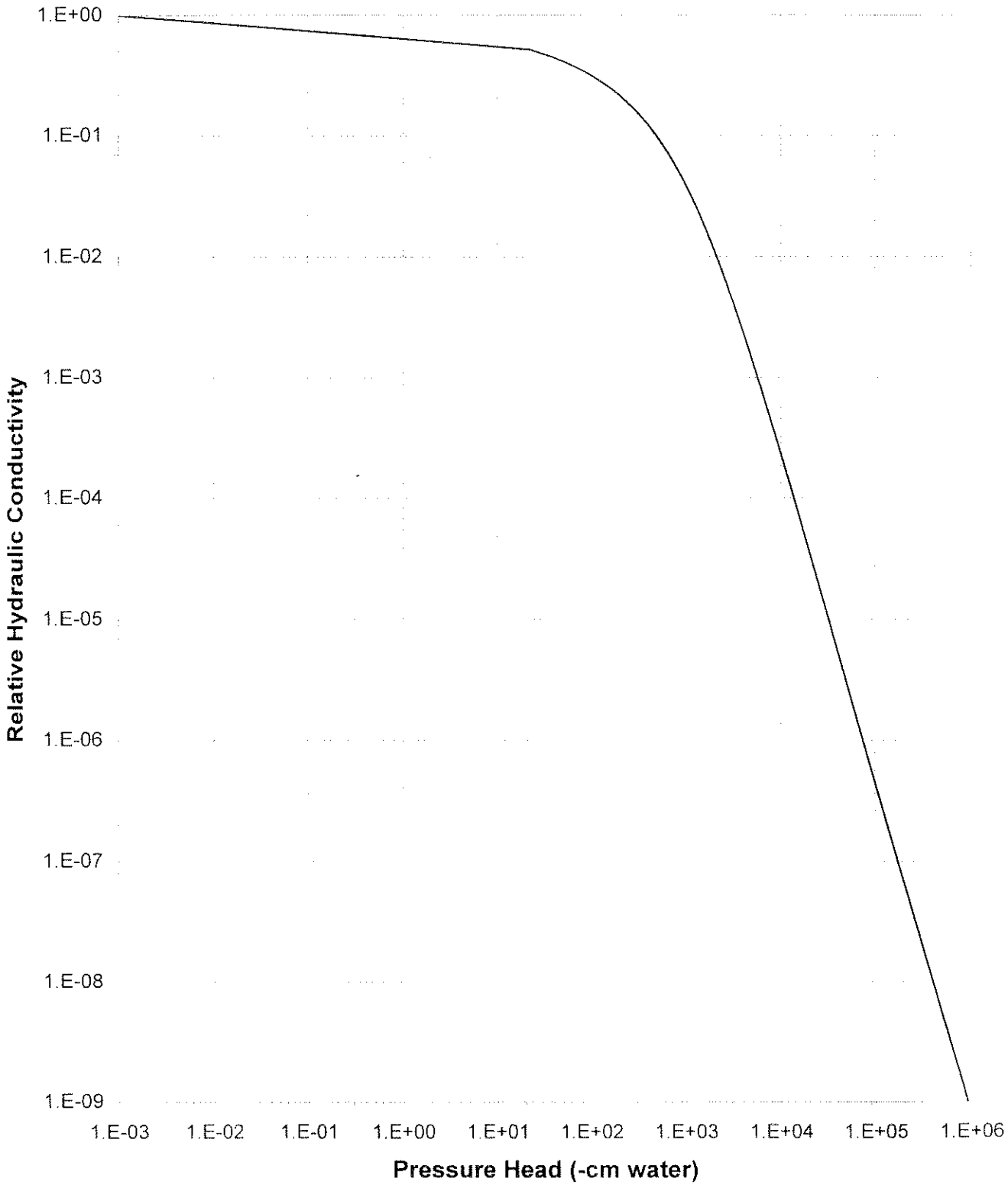
Plot of Hydraulic Conductivity vs Moisture Content

Sample Number: BRN-E04 (4.5-5.0)



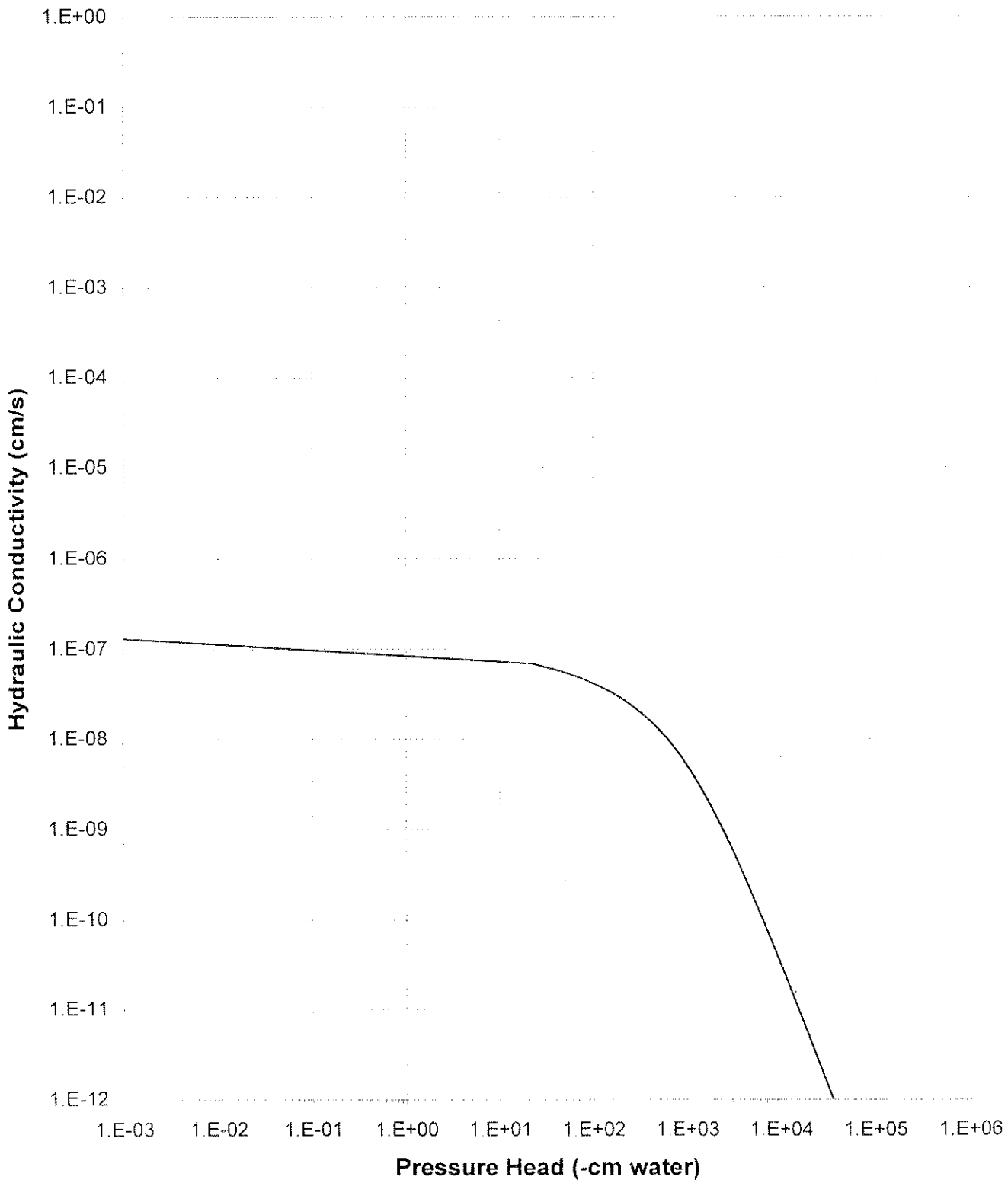
Plot of Relative Hydraulic Conductivity vs Pressure Head

Sample Number: BRN-E04 (4.5-5.0)



Plot of Hydraulic Conductivity vs Pressure Head

Sample Number: BRN-E04 (4.5-5.0)



7.1-3

Daniel B. Stephens & Associates, Inc.

Summary of Tests Performed

Laboratory Sample Number	Initial Soil Properties[1] (θ, ρ_d, ϕ)	Saturated Hydraulic Conductivity[2]		Moisture Characteristics[3]					Unsaturated Hydraulic Conductivity	Particle Size[4]			Effective Porosity	Particle Density	Air Permeability	1/3, 15 Bar Points and Water Holding Capacity	Atterberg Limits	Proctor Compaction
		CH	FH	HC	PP	TH	WP	RH		DS	WS	H						
HWY W07BC (29-29.5)	X		X	X	X			X	X			X						

[1] θ = Initial moisture content, ρ_d = Dry bulk density, ϕ = Calculated porosity

[2] CH = Constant head, FH = falling head

[3] HC = Hanging column, PP = Pressure plate, TH = Thermocouple psychrometer, WP = Water activity meter, RH = Relative humidity box

[4] DS = Dry sieve, WS = Wet sieve, H = Hydrometer

HWY W07BC

Summary of Initial Moisture Content, Dry Bulk Density Wet Bulk Density and Calculated Porosity

Sample Number	Initial Moisture Content Gravimetric (%, g/g)	Initial Moisture Content Volumetric (%, cm^3/cm^3)	Dry Bulk Density (g/cm^3)	Wet Bulk Density (g/cm^3)	Calculated Porosity (%)
HWY W07BC (29-29.5)	19.9	27.7	1.39	1.67	47.5

Daniel B. Stephens & Associates, Inc.

Data for Initial Moisture Content, Bulk Density, Porosity, and Percent Saturation

Job Name: Papadopulos2
Job Number: WR02.0024.00, Task2
Sample Number: HWY W07BC (29-29.5)
Ring Number: NA
Depth: NA

Test Date: 18-Oct-02

Field weight of sample* (g): 83.56
Tare weight, ring (g): 24.25
Tare weight, cap/plate/epoxy (g): 0.00

Dry weight of sample (g): 49.48
Sample volume (cm^3): 35.53
Assumed particle density: 2.65

Initial Volumetric Moisture Content (% vol): 27.7

Initial Gravimetric Moisture Content (% g/g): 19.9

Dry bulk density (g/cm^3): 1.39

Wet bulk density (g/cm^3): 1.67

Calculated Porosity (% vol): 47.5

Percent Saturation: 58.3

Comments:

* Weight including tares

Laboratory analysis by: M. Devine
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

Summary of Saturated Hydraulic Conductivity Tests

Sample Number	K_{sat} (cm/sec)	Method of Analysis	
		Constant Head	Falling Head
HWY W07BC (29-29.5)	1.9E-07		X

Daniel B. Stephens & Associates, Inc.

Saturated Hydraulic Conductivity
Falling Head Method

Job name: Papadopulos2
Job number: WR02.0024.00, Task2
Sample number: HWY W07BC (29-29.5)
Ring number: NA
Depth: NA

Type of water used: TAP
Backpressure (psi): 0.0
Offset (cm): 0.5
Sample length (cm): 3.38
Sample x-sectional area (cm^2): 10.50
Reservoir x-sectional area (cm^2): 0.70

Date	Time	Temp (°C)	Reservoir head (cm)	Corrected head (cm)	Elapsed time (sec)	Ksat (cm/sec)	Ksat @ 20°C (cm/sec)
Test # 1:							
22-Oct-02	09:58:30	20.5	83.1	82.6	14890	2.1E-07	2.1E-07
22-Oct-02	14:06:40	19.5	82.0	81.5			
Test # 2:							
22-Oct-02	14:06:40	19.5	82.0	81.5	73800	1.8E-07	1.8E-07
23-Oct-02	10:36:40	20.0	77.2	76.7			
Test # 3:							
23-Oct-02	10:36:10	20.0	77.2	76.7	6790	1.7E-07	1.7E-07
23-Oct-02	12:29:20	20.0	76.8	76.3			

***Average Ksat* (cm/sec):** **1.9E-07**

Comments:

Laboratory analysis by: M. Devine
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

Summary of Moisture Characteristics of the Initial Drainage Curve

Sample Number	Pressure Head (-cm water)	Moisture Content (%, cm^3/cm^3)
HWY W07BC (29-29.5)	0	44.8
	23	46.7
	128	45.6
	510	42.5
	8158	17.7
	15297	13.6
	851293	7.4

Summary of Calculated Unsaturated Hydraulic Properties

Sample Number	α (cm^{-1})	N (dimensionless)	θ_r	θ_s
HWY W07BC (29-29.5)	0.0008	1.6706	0.0689	0.4582

Daniel B. Stephens & Associates, Inc.

Moisture Retention Data

Hanging Column/Pressure Plate/Thermocouple

(Main Drainage Curve)

Job Name:	Papadopulos2	*Dry wt. of sample* (g):	49.48
Job Number:	WR02.0024.00, Task2	*Tare wt., screen & clamp* (g):	23.47
Sample Number:	HWY W07BC (29-29.5)	*Tare wt., ring* (g):	24.25
Ring Number:	NA	*Tare wt., epoxy* (g):	0.00
Depth:	NA	*Sample volume* (cm^3):	35.53

Saturated weight at 0 cm tension* (g): 113.13
Volume of water† in saturated sample (cm^3): 15.93
Saturated moisture content (% vol): 44.83
Sample bulk density (g/cm^3): 1.39

	Date/Time	Weight* (g)	Matric Potential (-cm water)	Moisture Content† (% vol)	
Hanging column:	01-Nov-02 / 09:25	113.13	0.00	44.83	
	04-Nov-02 / 14:30	113.80	23.00	46.72	
	06-Nov-02 / 15:20	113.41	128.00	45.62	
Pressure plate:	08-Nov-02 / 14:20	112.30	509.90	42.49	
	11-Nov-02 / 12:00	307.42	8158.40	17.71	SS1
	14-Nov-02 / 12:00	215.97	15297.00	13.64	SS2

Comments:

* Weight including tares
† Assumed density of water is 1.0 g/cm^3

SS1 = Analysis using subsample #1: Dry wt* = 306.62 g, Tare wt = 300.33 g.
SS2 = Analysis using subsample #2: Dry wt* = 215.44 g, Tare wt = 210.03 g.

Laboratory analysis by: M. Devine
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

Daniel B. Stephens & Associates, Inc.

Moisture Retention Data

Water Activity Meter/Relative Humidity Box

(Main Drainage Curve)

Job Name: Papadopulos2
Job Number: WR02.0024.00, Task2
Sample Number: HWY W07BC (29-29.5)
Ring Number: NA
Depth: NA

Dry weight of relative humidity box sample* (g): 88.36
Tare weight (g): 42.09
Sample bulk density (g/cm^3): 1.39

	Date/Time	Weight* (g)	Matric Potential (-cm water)	Moisture Content† (% vol)
Relative humidity box:	29-Oct-02 / 08:30	90.82	851293	7.42

Comments:

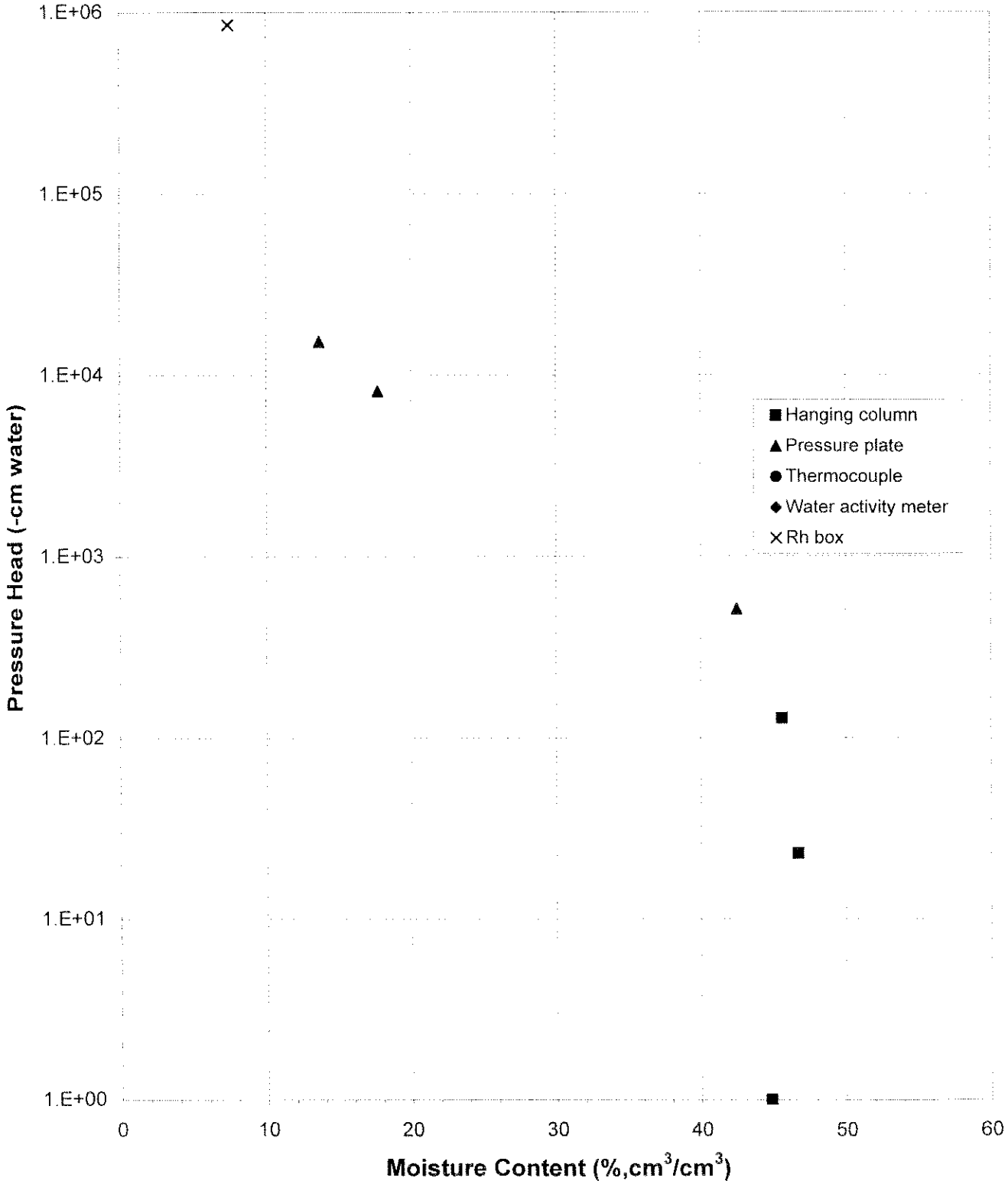
* Weight including tares

† Assumed density of water is 1.0 g/cm^3

Laboratory analysis by: D. O'Dowd
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

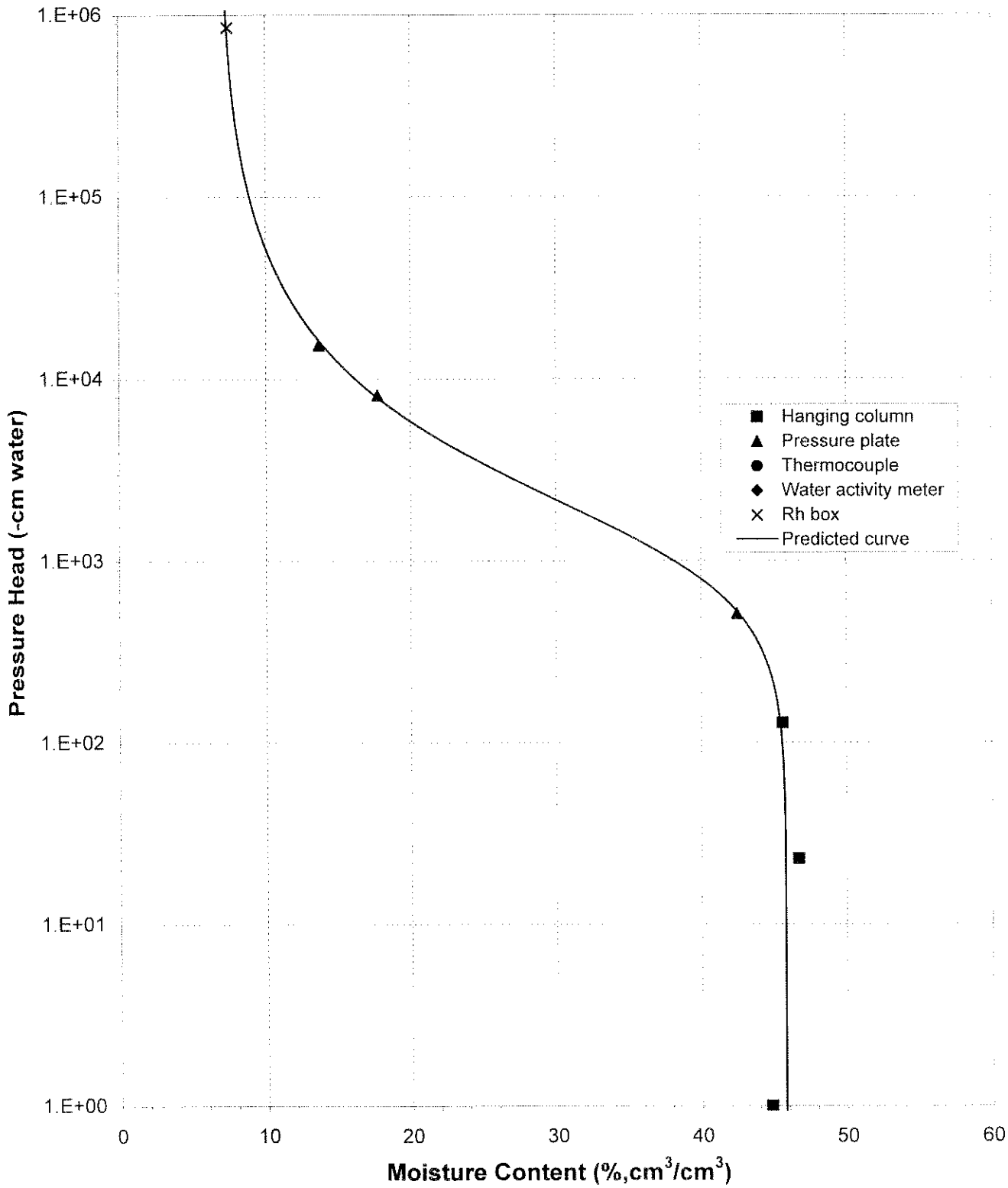
Water Retention Data Points

Sample Number: HWY W07BC (29-29.5)



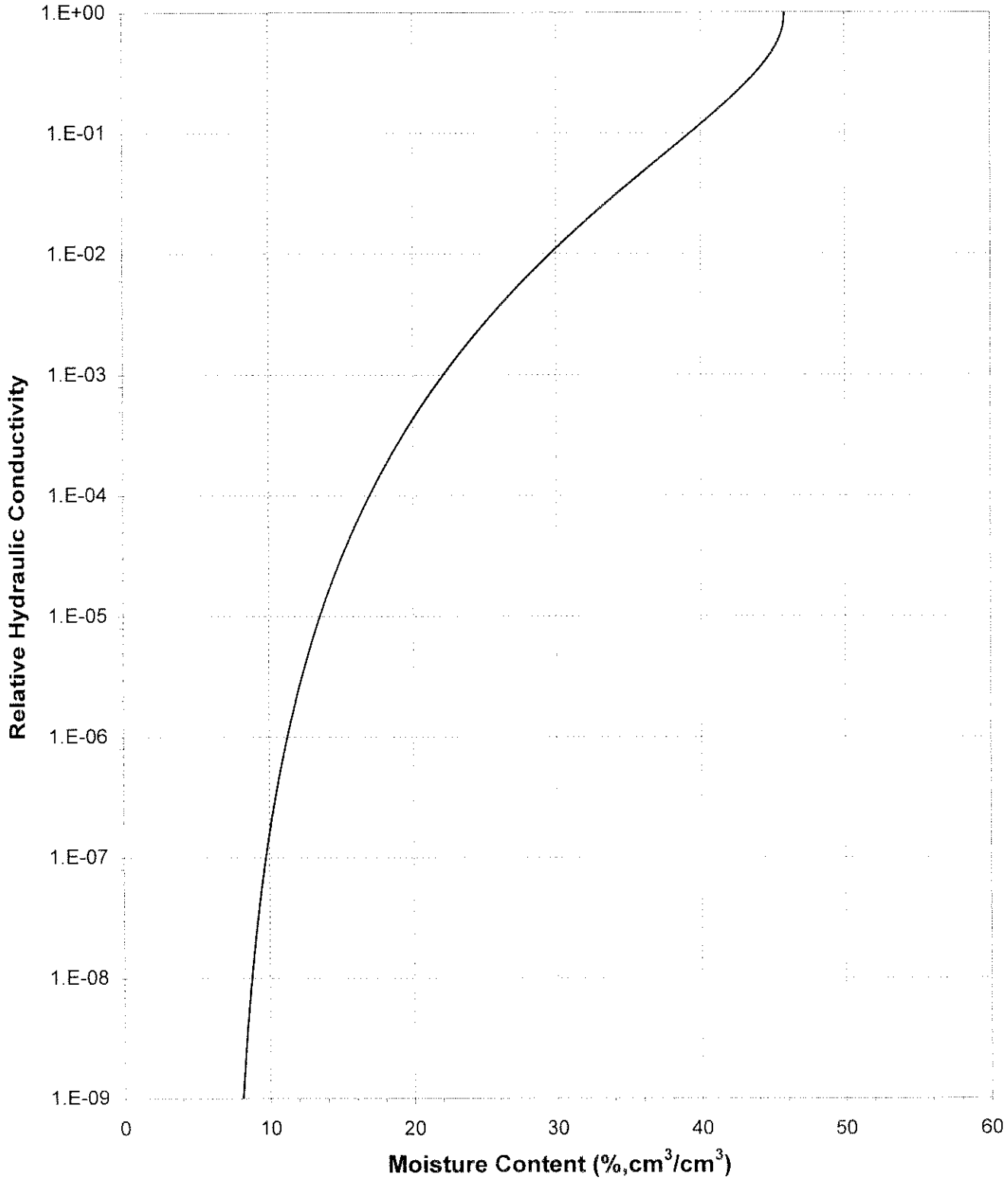
Predicted Water Retention Curve and Data Points

Sample Number: HWY W07BC (29-29.5)



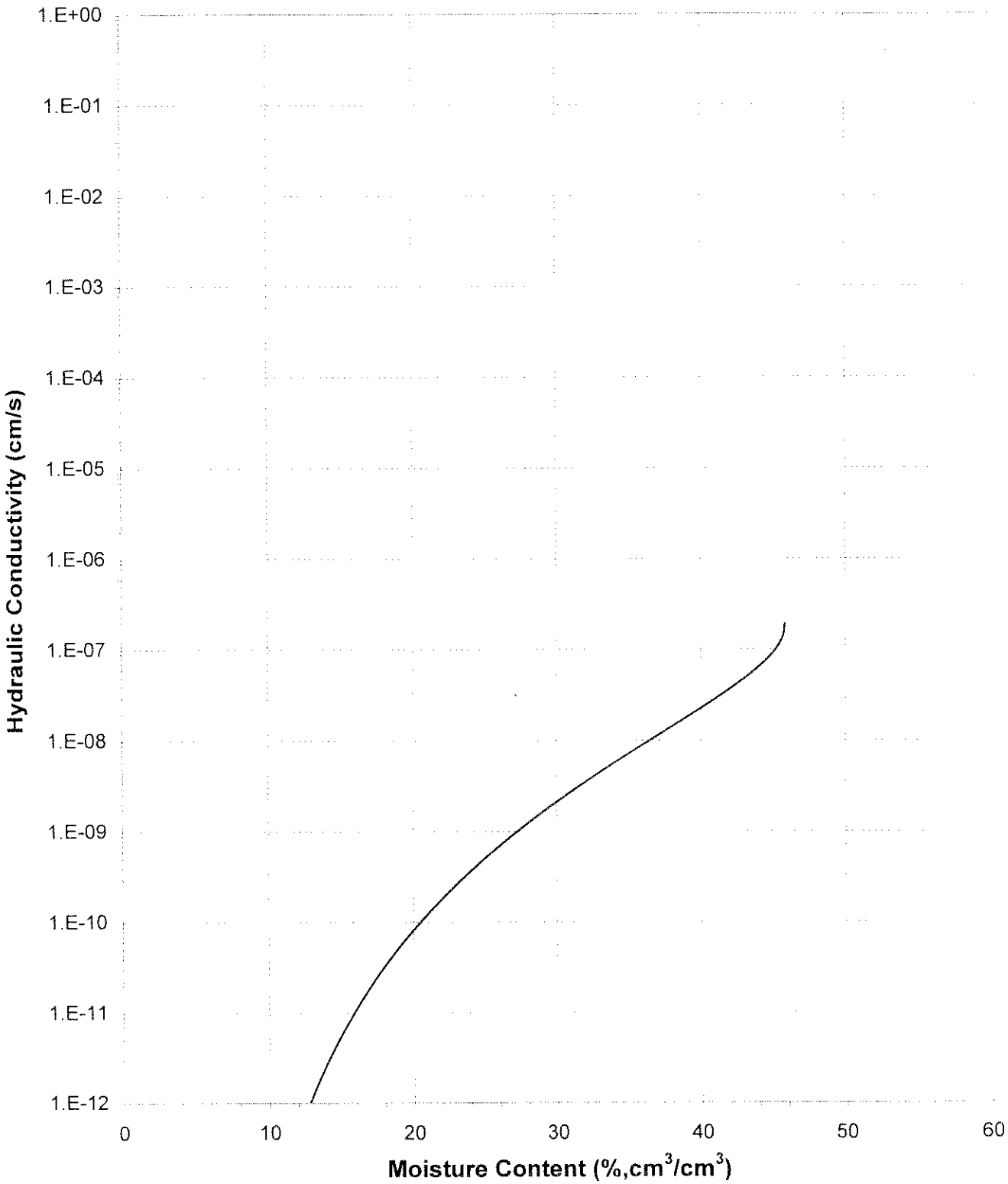
Plot of Relative Hydraulic Conductivity vs Moisture Content

Sample Number: HWY W07BC (29-29.5)



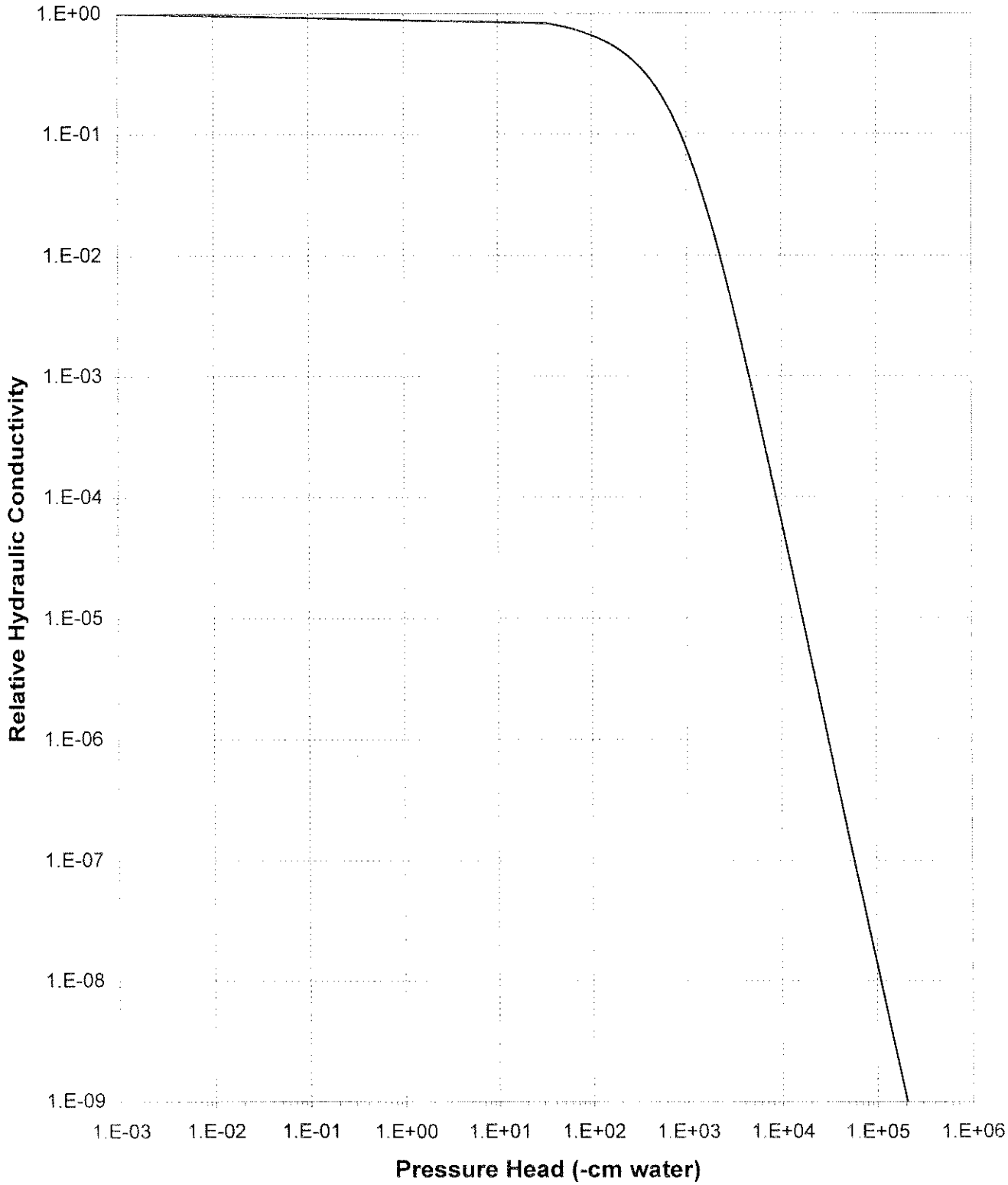
Plot of Hydraulic Conductivity vs Moisture Content

Sample Number: HWY W07BC (29-29.5)



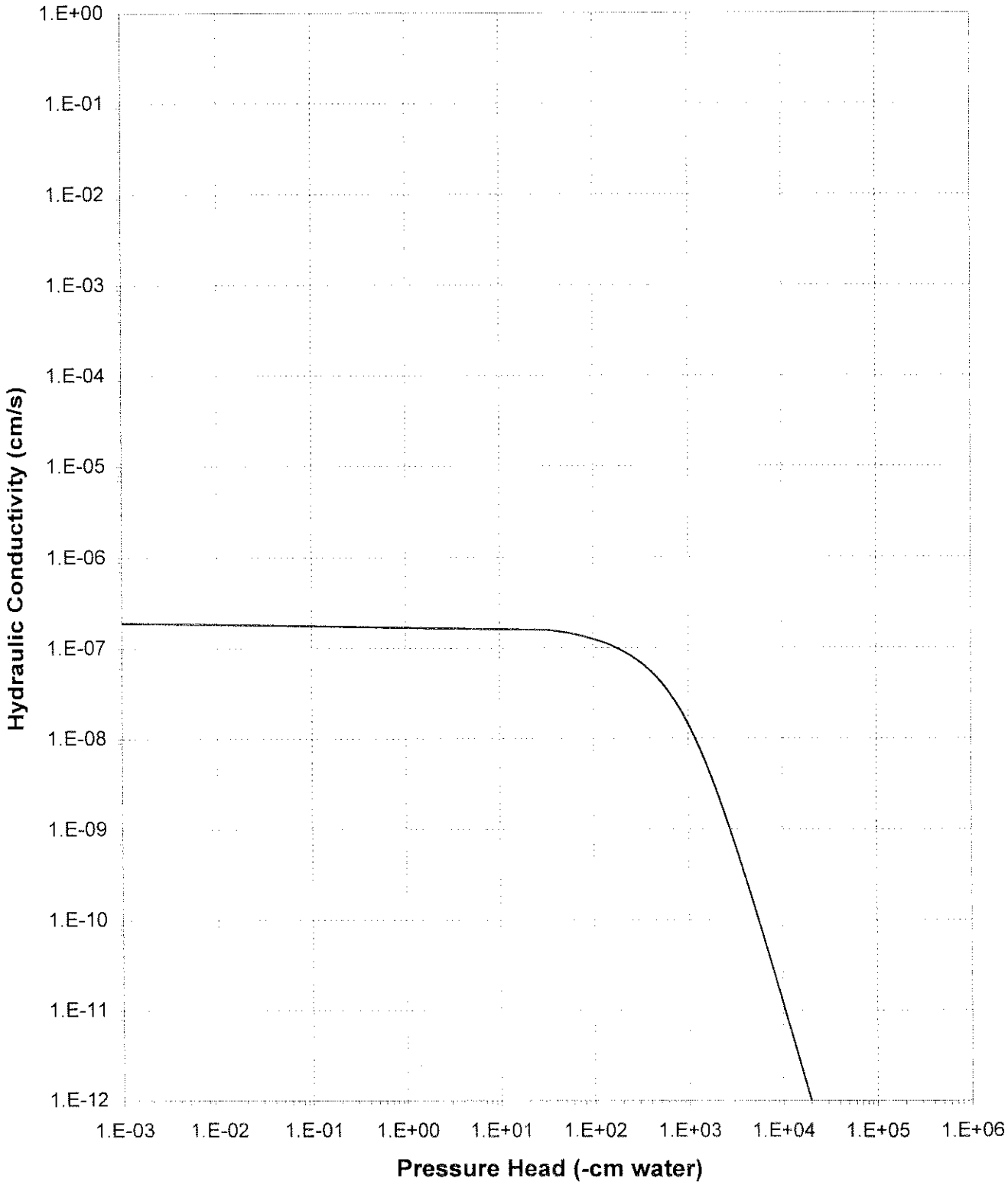
Plot of Relative Hydraulic Conductivity vs Pressure Head

Sample Number: HWY W07BC (29-29.5)



Plot of Hydraulic Conductivity vs Pressure Head

Sample Number: HWY W07BC (29-29.5)



Summary of Particle Size Characteristics

Sample Number	d_{10} (mm)	d_{50} (mm)	d_{60} (mm)	C_u	C_c	Method	ASTM Classification	USDA Classification
HWY W07BC (29-29.5)	0.00015	0.0012	0.0020	13	0.62	WS/H	Classification by ASTM 2487 requires Atterberg test	Clay (Est)

d_{50} = Median particle diameter

Est = Reported values for d_{10}, C_u, C_c, and soil classification are estimates, since extrapolation was required to obtain the d_{10} diameter

$$C_u = \frac{d_{60}}{d_{10}}$$

$$C_c = \frac{(d_{30})^2}{(d_{10})(d_{60})}$$

DS = Dry sieve

H = Hydrometer

WS = Wet sieve

Daniel B. Stephens & Associates, Inc.

Particle Size Analysis
Hydrometer Data

Job Name: Papadopulos2
Job Number: WR02.0024.00, Task2
Sample Number: HWY W07BC (29-29.5)
Ring Number: NA
Depth: NA

Test Date: 18-Oct-02
Start Time: 8:42

Type of Water Used: DISTILLED
Reaction with H_2O_2: Weak
Dispersant: $(NaPO_3)_6$
Assumed particle density: 2.65

Initial Wt. (g): 50.14
Total Sample Wt. (g): 181.69
Wt. Passing #10 (g): 181.69

Date	Time (min)	Temp (°C)	R (g/L)	R_L (g/L)	R_{corr} (g/L)	L (cm)	D (mm)	P (%)	% Finer
31-Oct-02	1	20.0	54.0	6.0	48.0	7.4	0.03721	95.7	95.7
	2	20.0	52.5	6.0	46.5	7.7	0.02674	92.7	92.7
	5	20.0	50.5	6.0	44.5	8.0	0.01727	88.8	88.8
	10	20.0	49.0	6.0	43.0	8.3	0.01240	85.8	85.8
	20	20.0	47.0	6.0	41.0	8.6	0.00894	81.8	81.8
	60	20.0	43.5	6.0	37.5	9.2	0.00533	74.8	74.8
	120	20.0	41.0	6.0	35.0	9.6	0.00385	69.8	69.8
	240	21.0	38.0	6.0	32.0	10.1	0.00276	63.8	63.8
	480	20.0	36.0	6.0	30.0	10.4	0.00201	59.8	59.8
1-Nov-02	1440	20.5	31.0	6.0	25.0	11.2	0.00119	49.9	49.9

Comments:

Laboratory analysis by: D. O'Dowd
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

771-3

December 27, 2002

SBB-W04

Mr. Brian Grigsby
S.S. Papadopulos & Associates, Inc.
1877 Broadway, Suite 703
Boulder, CO 80302
303-939-8877

Dear Mr. Grigsby:

Enclosed is the final report for the S.S. Papadopulos & Associates, Inc. job. Please review this report and provide any comments as samples will be held for a maximum of 30 days. After 30 days samples will be returned or disposed of in an appropriate manner.

All testing results were evaluated subjectively for consistency and reasonableness, and the results appear to be reasonably representative of the material tested. However, DBS&A does not assume any responsibility for interpretations or analyses based on the data enclosed, nor can we guarantee that these data are fully representative of the undisturbed materials at the field site. We recommend that careful evaluation of these laboratory results be made for your particular application.

We are pleased to provide this service to S.S. Papadopulos and look forward to future laboratory testing on other projects. If you have any questions about the enclosed data, please do not hesitate to call.

Sincerely,

DANIEL B. STEPHENS & ASSOCIATES, INC.

Daniel O'Dowd
Enclosure

Daniel B. Stephens & Associates, Inc.

6020 Academy NE, Suite 100 505-822-9400
Albuquerque, NM 87109 FAX 505-822-8877

Summary of Tests Performed

Laboratory Sample Number	Initial Soil Properties[1] (θ, ρ_d, ϕ)	Saturated Hydraulic Conductivity[2]		Moisture Characteristics[3]					Unsaturated Hydraulic Conductivity	Particle Size[4]			Effective Porosity	Particle Density	Air Permeability	1/3, 15 Bar Points and Water Holding Capacity	Atterberg Limits	Proctor Compaction
		CH	FH	HC	PP	TH	WP	RH		DS	WS	H						
SBB-W04 (Bottom third f 13-14.5)	X		X	X	X			X	X									
BRN-E04 (4.5-5.0)	X		X	X	X			X	X									
SMC-W07 (6.0-6.5)	X		X	X	X			X	X									

[1] θ = Initial moisture content, ρ_d = Dry bulk density, ϕ = Calculated porosity

[2] CH = Constant head, FH = falling head

[3] HC = Hanging column, PP = Pressure plate, TH = Thermocouple psychrometer, WP = Water activity meter, RH = Relative humidity box

[4] DS = Dry sieve, WS = Wet sieve, H = Hydrometer

Summary of Initial Moisture Content, Dry Bulk Density Wet Bulk Density and Calculated Porosity

Sample Number	Initial Moisture Content Gravimetric (%, g/g)	Initial Moisture Content Volumetric (%, cm^3/cm^3)	Dry Bulk Density (g/cm^3)	Wet Bulk Density (g/cm^3)	Calculated Porosity (%)
SBB-W04 (Bottom third f 13-14.5)	37.8	48.0	1.27	1.75	52.1
BRN-E04 (4.5-5.0)	25.1	39.2	1.56	1.95	41.1
SMC-W07 (6.0-6.5)	28.8	42.8	1.48	1.91	44.0

Summary of Saturated Hydraulic Conductivity Tests

Sample Number	K_{sat} (cm/sec)	Method of Analysis	
		Constant Head	Falling Head
SBB-W04 (Bottom third f 13-14.5)	2.4E-08		X
BRN-E04 (4.5-5.0)	1.3E-07		X
SMC-W07 (6.0-6.5)	1.1E-06		X

Summary of Moisture Characteristics of the Initial Drainage Curve

Sample Number	Pressure Head (-cm water)	Moisture Content (%, cm^3/cm^3)
SBB-W04 (Bottom third f 13-14.5)	0	51.1
	50	48.5
	150	47.8
	510	47.1
	8158	31.8
	15297	26.8
	851293	10.0
BRN-E04 (4.5-5.0)	0	42.2
	50	38.0
	150	37.6
	510	35.1
	8158	23.3
	15297	19.0
	851293	4.4
SMC-W07 (6.0-6.5)	0	44.5
	50	40.8
	150	38.2
	510	28.0
	8158	17.4
	15297	14.2
	851293	5.5

Summary of Calculated Unsaturated Hydraulic Properties

Sample Number	α (cm^{-1})	N (dimensionless)	θ_r	θ_s
SBB-W04 (Bottom third f 13-14.5)	0.0007	1.2504	0.0000	0.4941
BRN-E04 (4.5-5.0)	0.0007	1.3076	0.0000	0.3901
SMC-W07 (6.0-6.5)	0.0114	1.2201	0.0000	0.4448

Raw Laboratory Data and Graphical Plots

Daniel B. Stephens & Associates, Inc.

Data for Initial Moisture Content, Bulk Density, Porosity, and Percent Saturation

Job Name: Papadopulos3
Job Number: WR02.0080.00
Sample Number: SBB-W04 (Bottom third f 13-14.5)
Ring Number: NA
Depth: NA

Test Date: 27-Nov-02

Field weight of sample* (g): 98.12
Tare weight, ring (g): 31.08
Tare weight, cap/plate/epoxy (g): 0.00

Dry weight of sample (g): 48.65
Sample volume (cm^3): 38.34
Assumed particle density: 2.65

Initial Volumetric Moisture Content (% vol): 48.0

Initial Gravimetric Moisture Content (% g/g): 37.8

Dry bulk density (g/cm^3): 1.27

Wet bulk density (g/cm^3): 1.75

Calculated Porosity (% vol): 52.1

Percent Saturation: 92.0

Comments:

* Weight including tares

Laboratory analysis by: D. O'Dowd
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

Daniel B. Stephens & Associates, Inc.

Saturated Hydraulic Conductivity
Falling Head Method

Job name: Papadopulos3
Job number: WR02.0080.00
Sample number: SBB-W04 (Bottom third f 13-14.5)
Ring number: NA
Depth: NA

Type of water used: TAP
Backpressure (psi): 5.0
Offset (cm): 2.2
Sample length (cm): 3.68
Sample x-sectional area (cm^2): 10.42
Reservoir x-sectional area (cm^2): 0.70

Date	Time	Temp (°C)	Reservoir head (cm)	Corrected head (cm)	Elapsed time (sec)	Ksat (cm/sec)	Ksat @ 20°C (cm/sec)
Test # 1:							
09-Dec-02	14:33:59	20.0	87.3	436.6	66671	2.6E-08	2.6E-08
10-Dec-02	09:05:10	20.0	84.2	433.6			
Test # 2:							
10-Dec-02	09:05:10	20.0	84.2	433.6	24610	2.3E-08	2.3E-08
10-Dec-02	15:55:20	20.5	83.2	432.6			
Test # 3:							
10-Dec-02	15:55:20	20.5	83.2	432.6	68710	2.4E-08	2.4E-08
11-Dec-02	11:00:30	20.5	80.3	429.7			

***Average Ksat* (cm/sec):** **2.4E-08**

Comments:

Laboratory analysis by: M. Devine
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

Daniel B. Stephens & Associates, Inc.

Moisture Retention Data

Hanging Column/Pressure Plate/Thermocouple

(Main Drainage Curve)

Job Name:	Papadopulos3	*Dry wt. of sample* (g):	48.65
Job Number:	WR02.0080.00	*Tare wt., screen & clamp* (g):	23.27
Sample Number:	SBB-W04 (Bottom third f 13-14.5)	*Tare wt., ring* (g):	31.08
Ring Number:	NA	*Tare wt., epoxy* (g):	0.00
Depth:	NA	*Sample volume* (cm^3):	38.34

Saturated weight at 0 cm tension* (g): 122.59
Volume of water† in saturated sample (cm^3): 19.59
Saturated moisture content (% vol): 51.10
Sample bulk density (g/cm^3): 1.27

	Date/Time	Weight* (g)	Matric Potential (-cm water)	Moisture Content† (% vol)	
Hanging column:	13-Dec-02 / 09:20	122.59	0.00	51.10	
	16-Dec-02 / 13:55	121.61	50.00	48.54	
	18-Dec-02 / 15:30	121.32	150.00	47.79	
Pressure plate:	20-Dec-02 / 12:00	121.05	509.90	47.08	
	25-Nov-02 / 12:00	223.94	8158.40	31.78	SS1
	27-Nov-02 / 12:00	310.10	15297.00	26.80	SS2

Comments:

* Weight including tares
† Assumed density of water is 1.0 g/cm^3

SS1 = Analysis using subsample #1: Dry wt* = 221.16 g, Tare wt = 210.06 g.
SS2 = Analysis using subsample #2: Dry wt* = 308.59 g, Tare wt = 301.44 g.

Laboratory analysis by: M. Devine
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

Moisture Retention Data

Water Activity Meter/Relative Humidity Box

(Main Drainage Curve)

Job Name: Papadopulos3
Job Number: WR02.0080.00
Sample Number: SBB-W04 (Bottom third f 13-14.5)
Ring Number: NA
Depth: NA

Dry weight of relative humidity box sample* (g): 62.36
Tare weight (g): 36.22
Sample bulk density (g/cm^3): 1.27

	Date/Time	Weight* (g)	Matric Potential (-cm water)	Moisture Content† (% vol)
Relative humidity box:	17-Dec-02 / 10:00	64.41	851293	9.96

Comments:

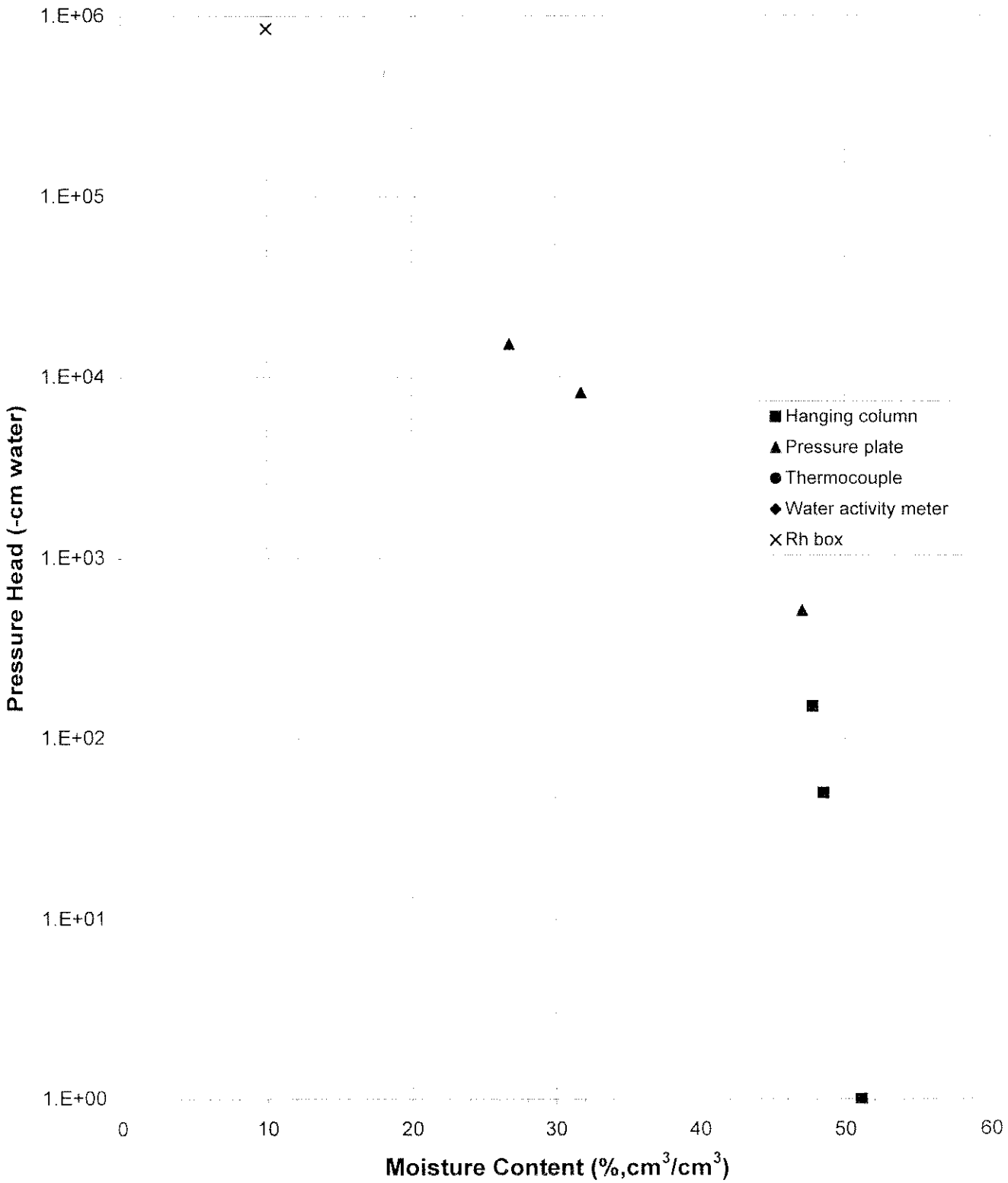
* Weight including tares

† Assumed density of water is 1.0 g/cm^3

Laboratory analysis by: M. Devine
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

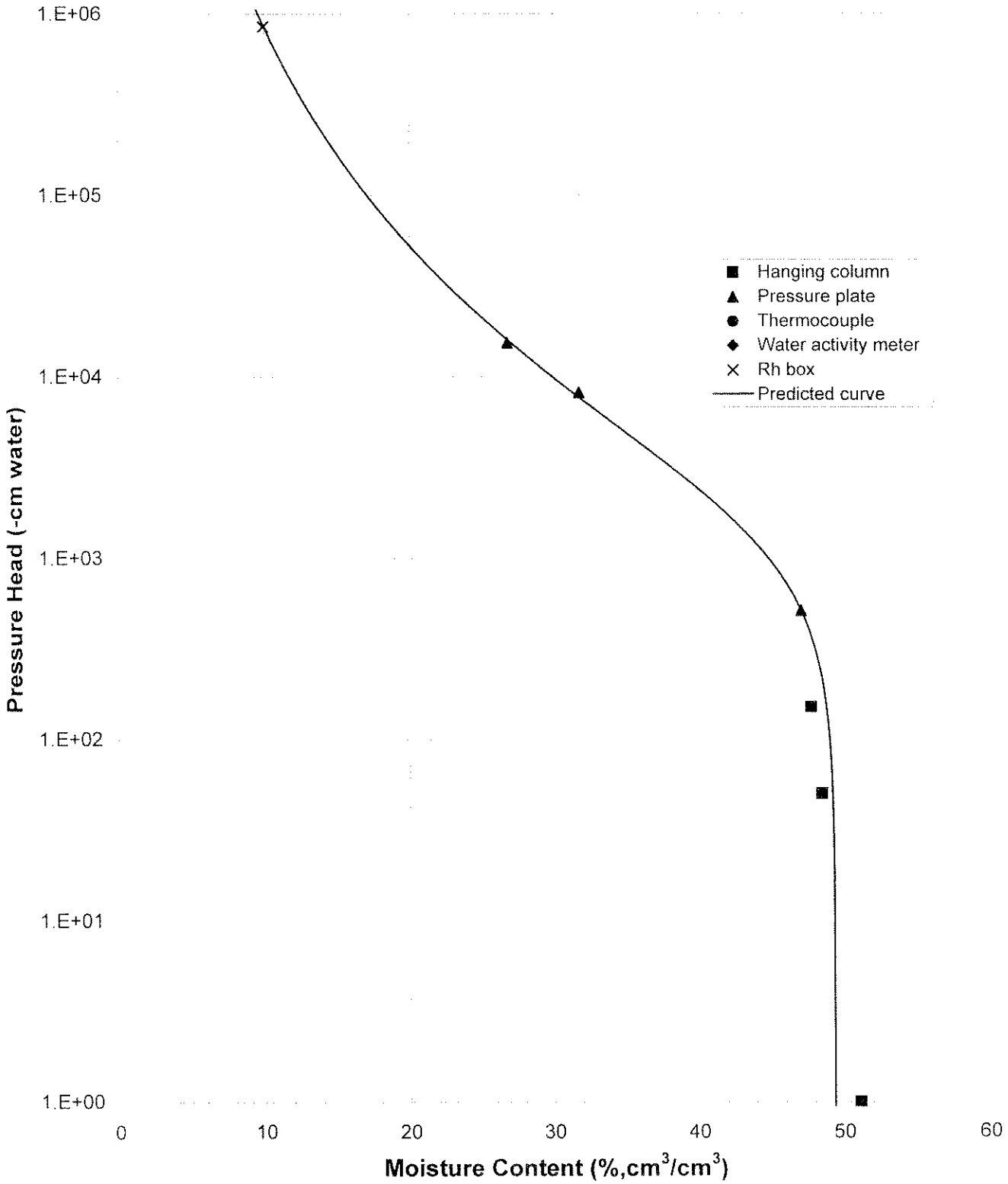
Water Retention Data Points

Sample Number: SBB-W04 (Bottom third f 13-14.5)



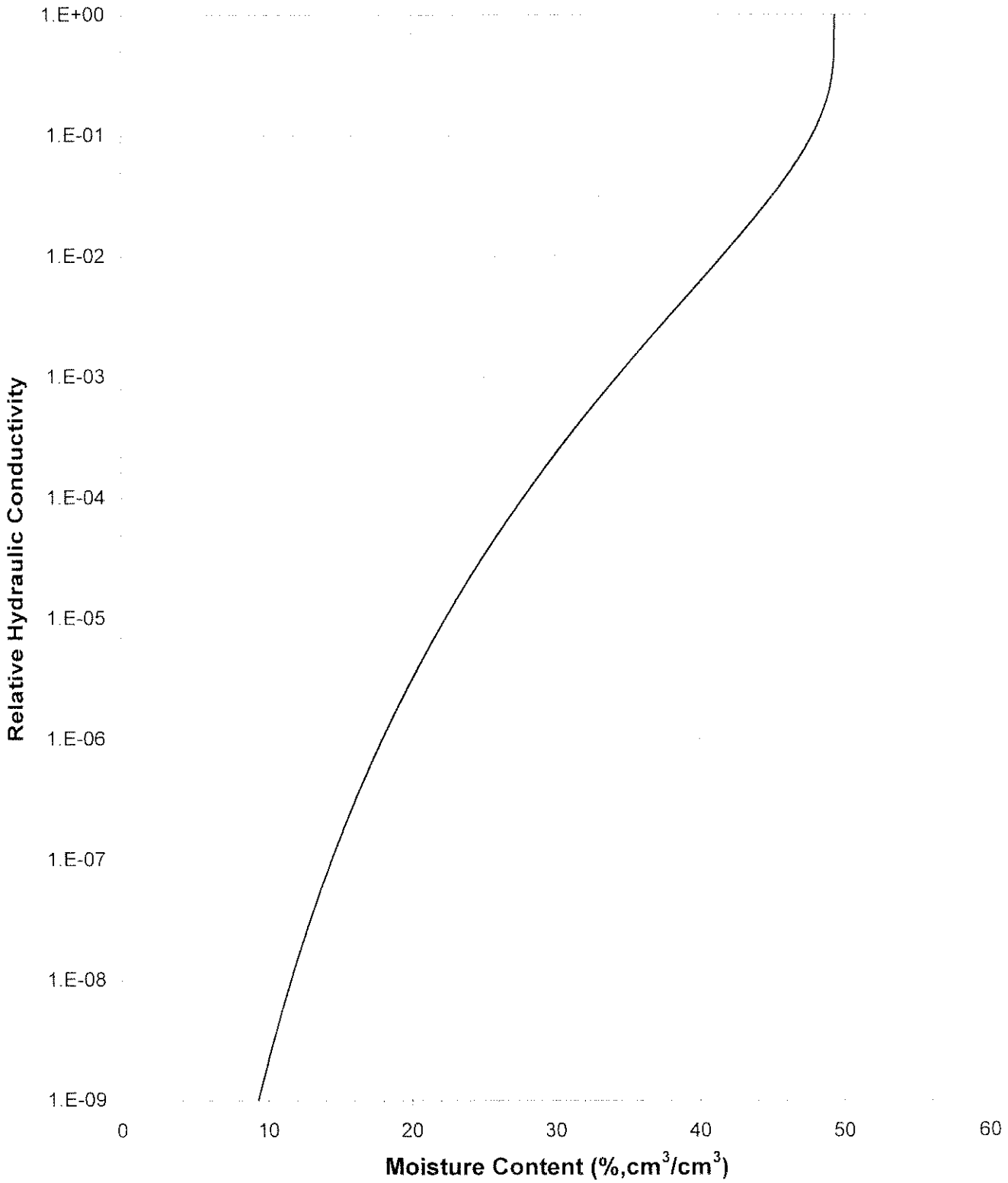
Predicted Water Retention Curve and Data Points

Sample Number: SBB-W04 (Bottom third f 13-14.5)



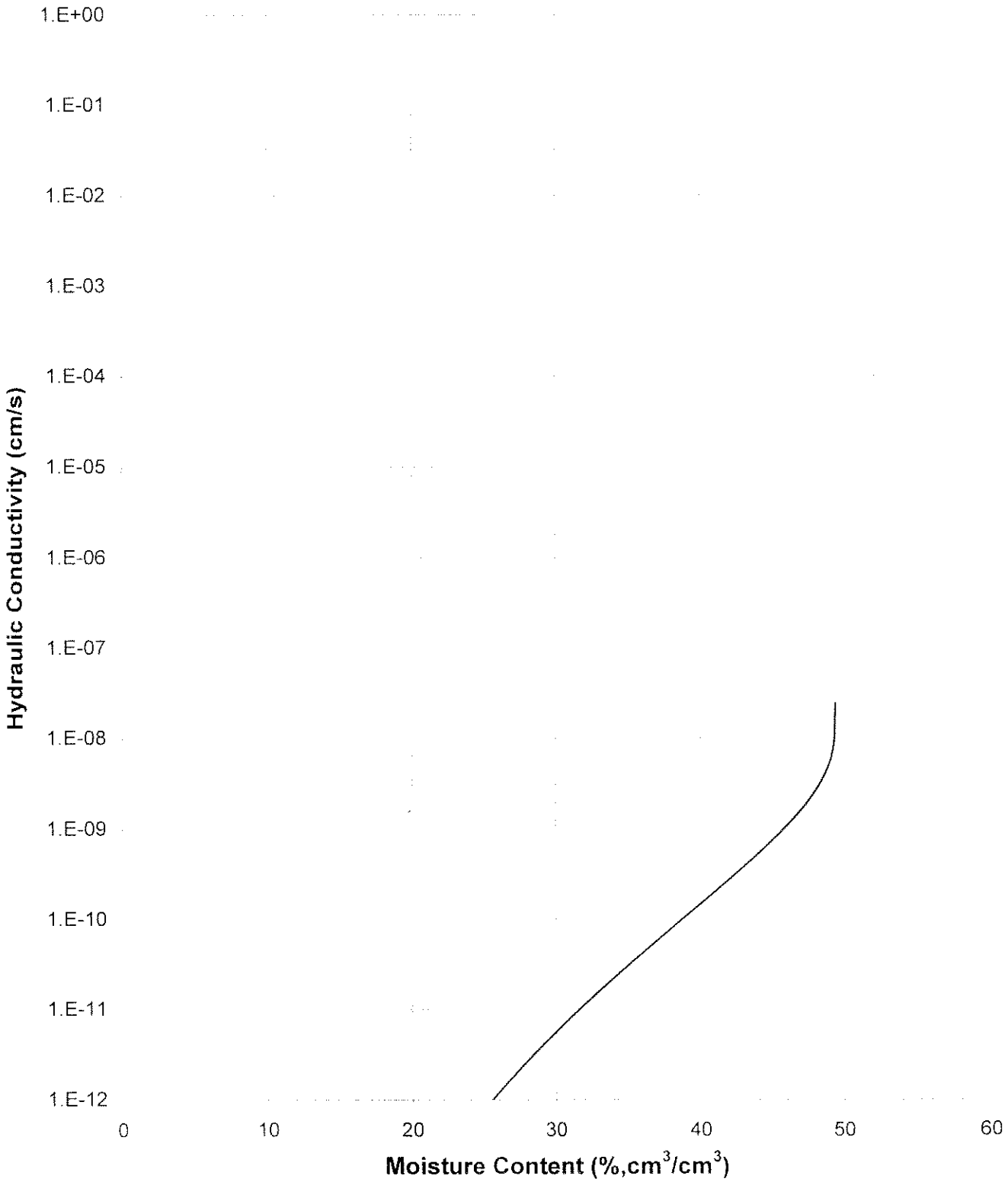
Plot of Relative Hydraulic Conductivity vs Moisture Content

Sample Number: SBB-W04 (Bottom third f 13-14.5)



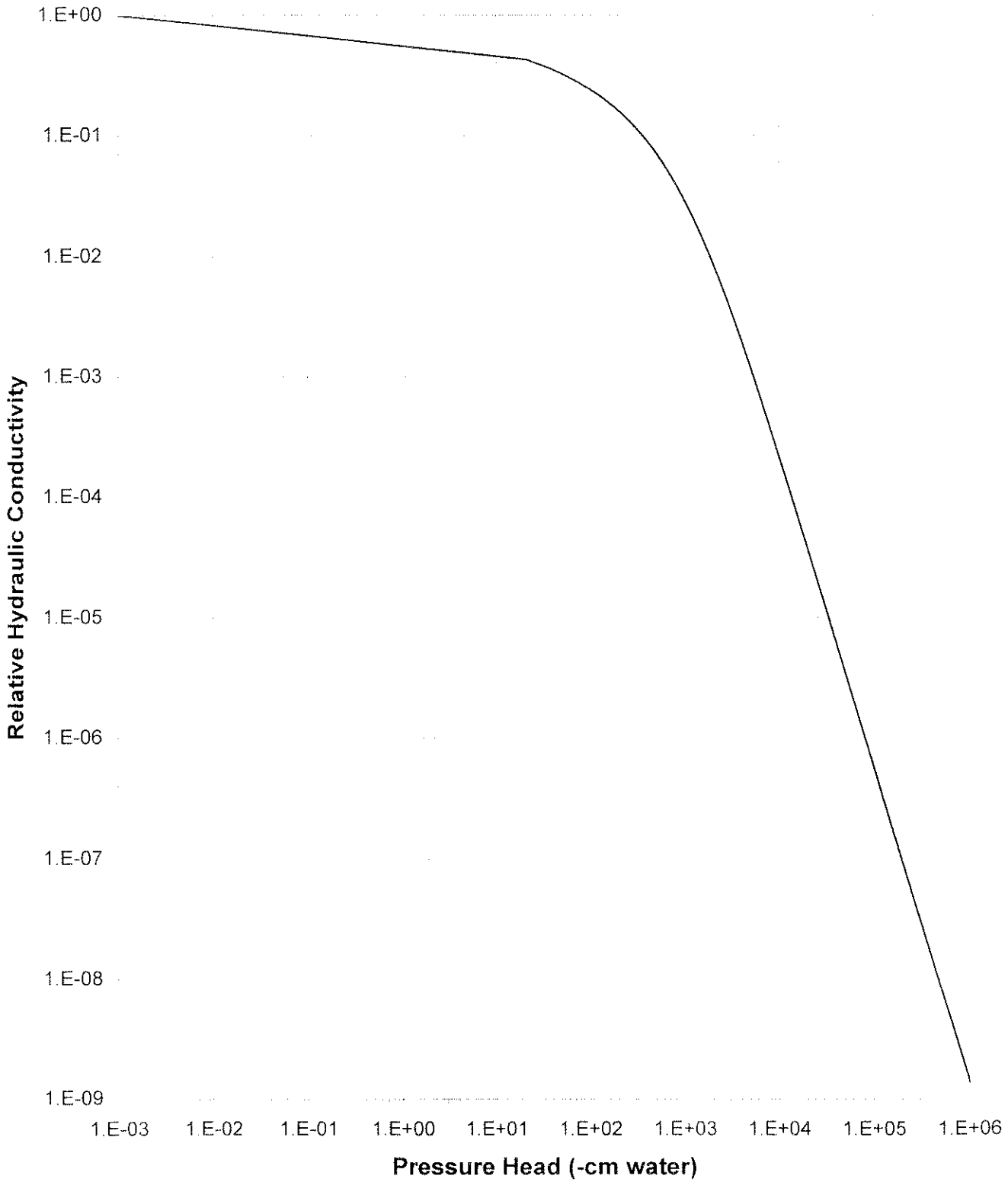
Plot of Hydraulic Conductivity vs Moisture Content

Sample Number: SBB-W04 (Bottom third f 13-14.5)



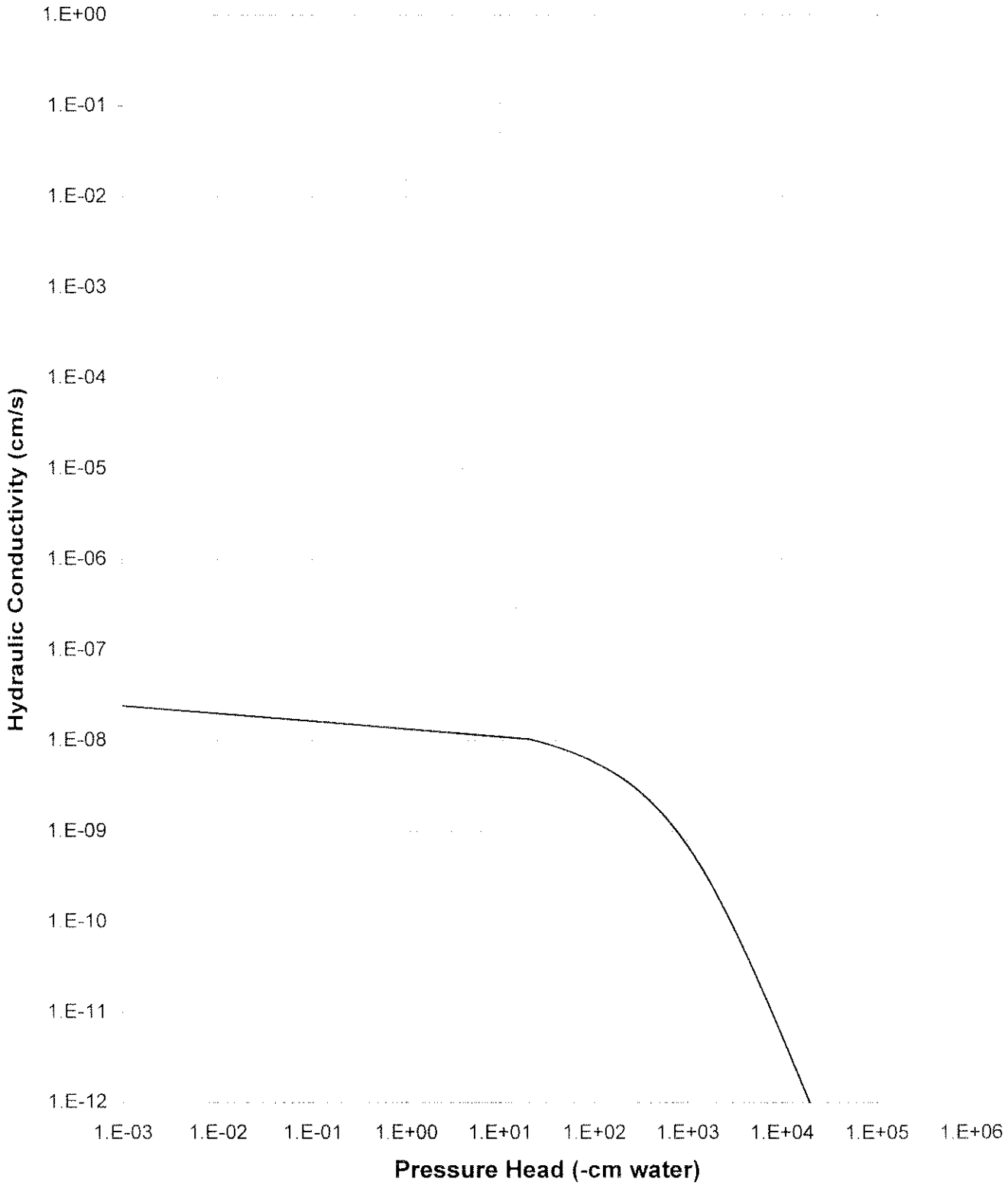
Plot of Relative Hydraulic Conductivity vs Pressure Head

Sample Number: SBB-W04 (Bottom third f 13-14.5)



Plot of Hydraulic Conductivity vs Pressure Head

Sample Number: SBB-W04 (Bottom third f 13-14.5)



771-3

December 27, 2002

SMC-W07

Mr. Brian Grigsby
S.S. Papadopulos & Associates, Inc.
1877 Broadway, Suite 703
Boulder, CO 80302
303-939-8877

Dear Mr. Grigsby:

Enclosed is the final report for the S.S. Papadopulos & Associates, Inc. job. Please review this report and provide any comments as samples will be held for a maximum of 30 days. After 30 days samples will be returned or disposed of in an appropriate manner.

All testing results were evaluated subjectively for consistency and reasonableness, and the results appear to be reasonably representative of the material tested. However, DBS&A does not assume any responsibility for interpretations or analyses based on the data enclosed, nor can we guarantee that these data are fully representative of the undisturbed materials at the field site. We recommend that careful evaluation of these laboratory results be made for your particular application.

We are pleased to provide this service to S.S. Papadopulos and look forward to future laboratory testing on other projects. If you have any questions about the enclosed data, please do not hesitate to call.

Sincerely,

DANIEL B. STEPHENS & ASSOCIATES, INC.

Daniel O'Dowd
Enclosure

Daniel B. Stephens & Associates, Inc.

6020 Academy NE, Suite 100 505-822-9400
Albuquerque, NM 87109 FAX 505-822-8877

Summary of Tests Performed

Laboratory Sample Number	Initial Soil Properties[1] (θ, ρ_d, ϕ)	Saturated Hydraulic Conductivity[2]		Moisture Characteristics[3]					Unsaturated Hydraulic Conductivity	Particle Size[4]			Effective Porosity	Particle Density	Air Permeability	1/3, 15 Bar Points and Water Holding Capacity	Atterberg Limits	Proctor Compaction
		CH	FH	HC	PP	TH	WP	RH		DS	WS	H						
SBB-W04 (Bottom third f 13-14.5)	X		X	X	X			X	X									
BRN-E04 (4.5-5.0)	X		X	X	X			X	X									
SMC-W07 (6.0-6.5)	X		X	X	X			X	X									

[1] θ = Initial moisture content, ρ_d = Dry bulk density, ϕ = Calculated porosity
[2] CH = Constant head, FH = falling head
[3] HC = Hanging column, PP = Pressure plate, TH = Thermocouple psychrometer, WP = Water activity meter, RH = Relative humidity box
[4] DS = Dry sieve, WS = Wet sieve, H = Hydrometer

Summary of Initial Moisture Content, Dry Bulk Density Wet Bulk Density and Calculated Porosity

Sample Number	Initial Moisture Content Gravimetric (%, g/g)	Initial Moisture Content Volumetric (%, cm^3/cm^3)	Dry Bulk Density (g/cm^3)	Wet Bulk Density (g/cm^3)	Calculated Porosity (%)
SBB-W04 (Bottom third f 13-14.5)	37.8	48.0	1.27	1.75	52.1
BRN-E04 (4.5-5.0)	25.1	39.2	1.56	1.95	41.1
SMC-W07 (6.0-6.5)	28.8	42.8	1.48	1.91	44.0

Summary of Saturated Hydraulic Conductivity Tests

Sample Number	K_{sat} (cm/sec)	Method of Analysis	
		Constant Head	Falling Head
SBB-W04 (Bottom third f 13-14.5)	2.4E-08		X
BRN-E04 (4.5-5.0)	1.3E-07		X
SMC-W07 (6.0-6.5)	1.1E-06		X

Summary of Moisture Characteristics of the Initial Drainage Curve

Sample Number	Pressure Head (-cm water)	Moisture Content (%, cm^3/cm^3)
SBB-W04 (Bottom third f 13-14.5)	0	51.1
	50	48.5
	150	47.8
	510	47.1
	8158	31.8
	15297	26.8
	851293	10.0
BRN-E04 (4.5-5.0)	0	42.2
	50	38.0
	150	37.6
	510	35.1
	8158	23.3
	15297	19.0
	851293	4.4
SMC-W07 (6.0-6.5)	0	44.5
	50	40.8
	150	38.2
	510	28.0
	8158	17.4
	15297	14.2
	851293	5.5

Summary of Calculated Unsaturated Hydraulic Properties

Sample Number	α (cm^{-1})	**N** (dimensionless)	θ_r	θ_s
SBB-W04 (Bottom third f 13-14.5)	0.0007	1.2504	0.0000	0.4941
BRN-E04 (4.5-5.0)	0.0007	1.3076	0.0000	0.3901
SMC-W07 (6.0-6.5)	0.0114	1.2201	0.0000	0.4448

Raw Laboratory Data and Graphical Plots

Daniel B. Stephens & Associates, Inc.

Data for Initial Moisture Content, Bulk Density, Porosity, and Percent Saturation

Job Name: Papadopulos3
Job Number: WR02.0080.00
Sample Number: SMC-W07 (6.0-6.5)
Ring Number: NA
Depth: NA

Test Date: 27-Nov-02

Field weight of sample* (g): 92.79
Tare weight, ring (g): 24.32
Tare weight, cap/plate/epoxy (g): 0.00

Dry weight of sample (g): 53.15
Sample volume (cm^3): 35.81
Assumed particle density: 2.65

Initial Volumetric Moisture Content (% vol): 42.8

Initial Gravimetric Moisture Content (% g/g): 28.8

Dry bulk density (g/cm^3): 1.48

Wet bulk density (g/cm^3): 1.91

Calculated Porosity (% vol): 44.0

Percent Saturation: 97.2

Comments:

* Weight including tares

Laboratory analysis by: D. O'Dowd
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

Daniel B. Stephens & Associates, Inc.

Saturated Hydraulic Conductivity
Falling Head Method

Job name: Papadopulos3
Job number: WR02.0080.00
Sample number: SMC-W07 (6.0-6.5)
Ring number: NA
Depth: NA

Type of water used: TAP
Backpressure (psi): 2.5
Offset (cm): 1.2
Sample length (cm): 3.38
Sample x-sectional area (cm^2): 10.61
Reservoir x-sectional area (cm^2): 0.70

Date	Time	Temp (°C)	Reservoir head (cm)	Corrected head (cm)	Elapsed time (sec)	Ksat (cm/sec)	Ksat @ 20°C (cm/sec)
Test # 1:							
09-Dec-02	09:48:10	20.0	108.5	283.1	9840	1.1E-06	1.1E-06
09-Dec-02	12:32:10	20.0	94.6	269.1			
Test # 2:							
09-Dec-02	12:32:10	20.0	94.6	269.1	73990	1.0E-06	1.0E-06
10-Dec-02	09:05:20	20.0	16.2	190.8			
Test # 3:							
10-Dec-02	09:07:15	20.0	54.4	229.0	24545	1.0E-06	1.0E-06
10-Dec-02	15:56:20	20.5	29.9	204.5			

***Average Ksat* (cm/sec):** **1.1E-06**

Comments:

Laboratory analysis by: M. Devine
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

Daniel B. Stephens & Associates, Inc.

Moisture Retention Data

Hanging Column/Pressure Plate/Thermocouple

(Main Drainage Curve)

Job Name:	Papadopulos3	*Dry wt. of sample* (g):	53.15
Job Number:	WR02.0080.00	*Tare wt., screen & clamp* (g):	23.29
Sample Number:	SMC-W07 (6.0-6.5)	*Tare wt., ring* (g):	24.32
Ring Number:	NA	*Tare wt., epoxy* (g):	0.00
Depth:	NA	*Sample volume* (cm^3):	35.81

Saturated weight at 0 cm tension* (g): 116.69
Volume of water† in saturated sample (cm^3): 15.93
Saturated moisture content (% vol): 44.48
Sample bulk density (g/cm^3): 1.48

	Date/Time	Weight* (g)	Matric Potential (-cm water)	Moisture Content† (% vol)	
Hanging column:	16-Dec-02 / 14:30	116.69	0.00	44.48	
	18-Dec-02 / 15:30	115.37	50.00	40.80	
	21-Dec-02 / 12:00	114.45	150.00	38.23	
Pressure plate:	23-Dec-02 / 08:45	110.79	509.90	28.01	
	25-Nov-02 / 12:00	223.43	8158.40	17.43	SS1
	27-Nov-02 / 12:00	300.89	15297.00	14.16	SS2

Comments:

* Weight including tares
† Assumed density of water is 1.0 g/cm^3

SS1 = Analysis using subsample #1: Dry wt* = 222.13 g, Tare wt = 211.06 g.
SS2 = Analysis using subsample #2: Dry wt* = 299.77 g, Tare wt = 288.03 g.

Laboratory analysis by: M. Devine
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

Daniel B. Stephens & Associates, Inc.

Moisture Retention Data

Water Activity Meter/Relative Humidity Box

(Main Drainage Curve)

Job Name: Papadopulos3
Job Number: WR02.0080.00
Sample Number: SMC-W07 (6.0-6.5)
Ring Number: NA
Depth: NA

Dry weight of relative humidity box sample* (g): 83.64
Tare weight (g): 34.63
Sample bulk density (g/cm^3): 1.48

	Date/Time	Weight* (g)	Matric Potential (-cm water)	Moisture Content† (% vol)
Relative humidity box:	17-Dec-02 / 10:00	85.47	851293	5.54

Comments:

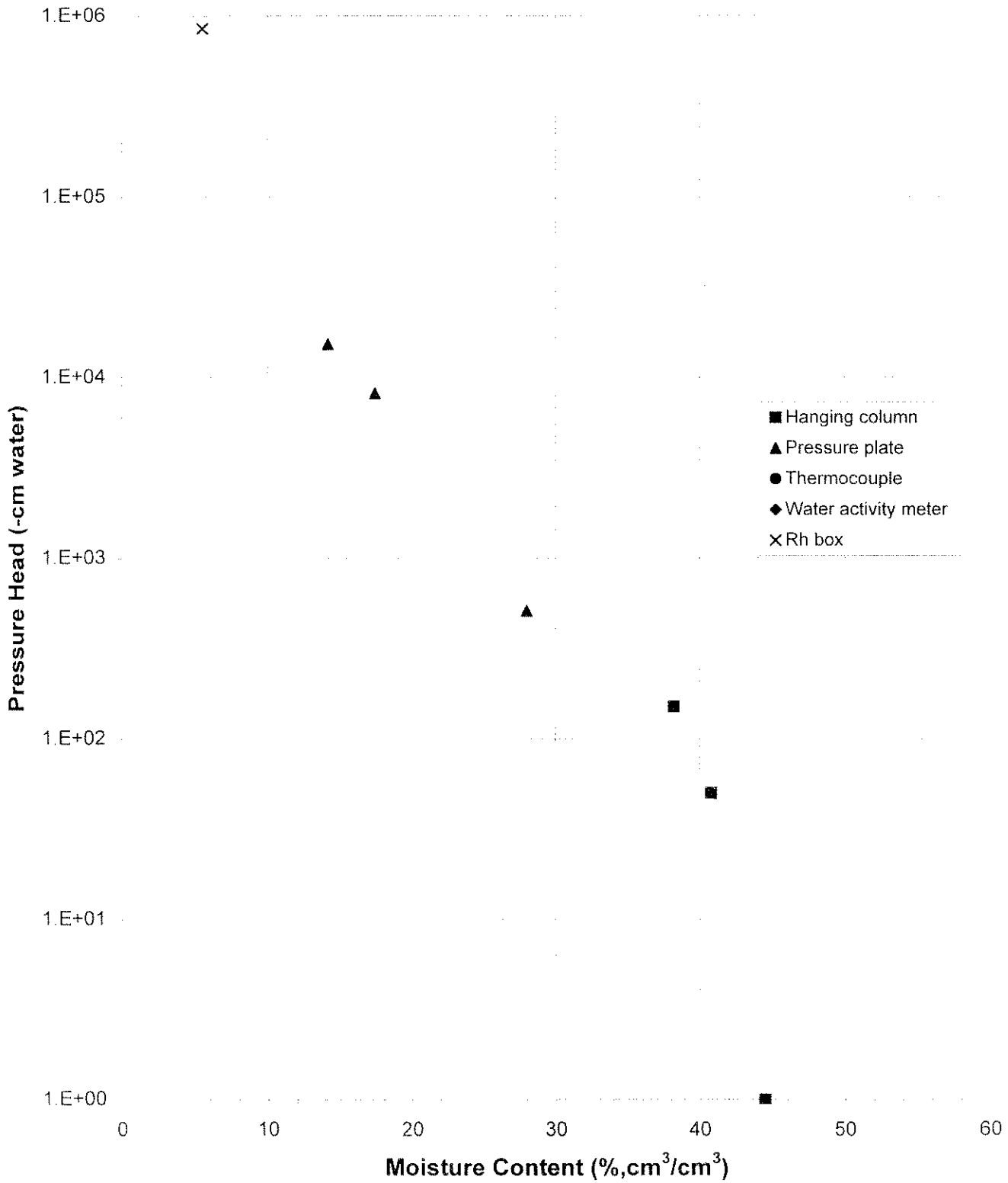
* Weight including tares

† Assumed density of water is 1.0 g/cm^3

Laboratory analysis by: M. Devine
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

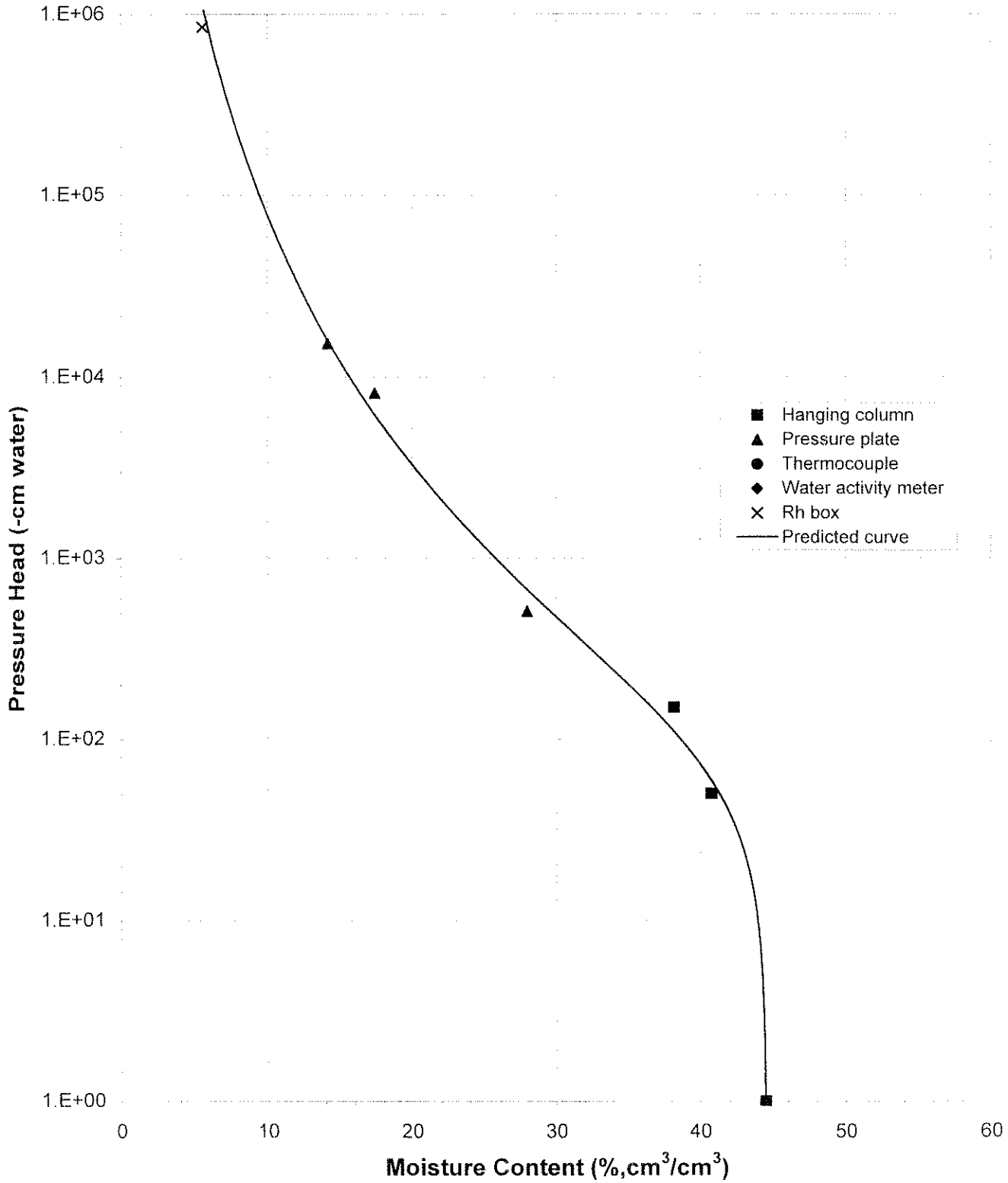
Water Retention Data Points

Sample Number: SMC-W07 (6.0-6.5)



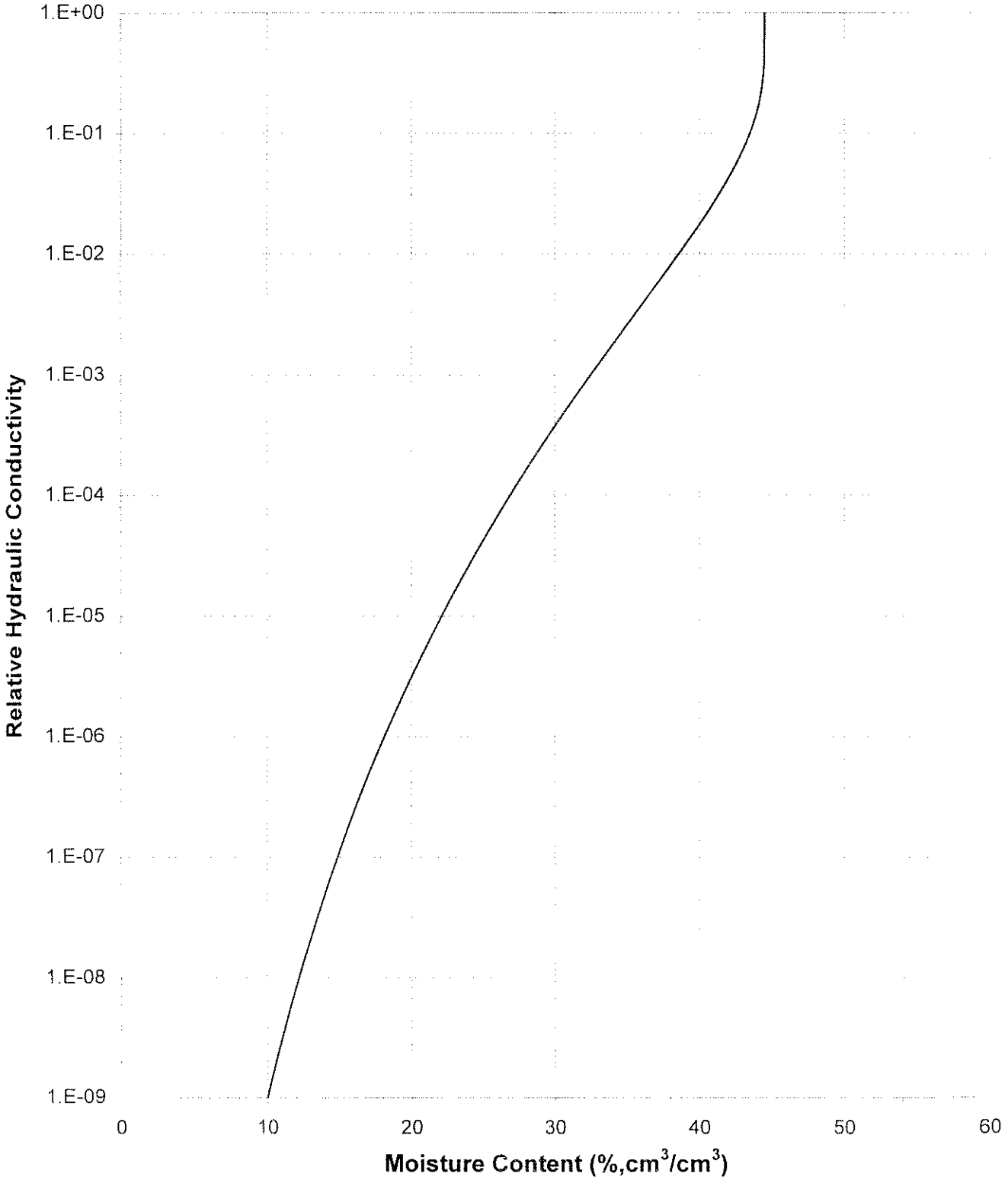
Predicted Water Retention Curve and Data Points

Sample Number: SMC-W07 (6.0-6.5)



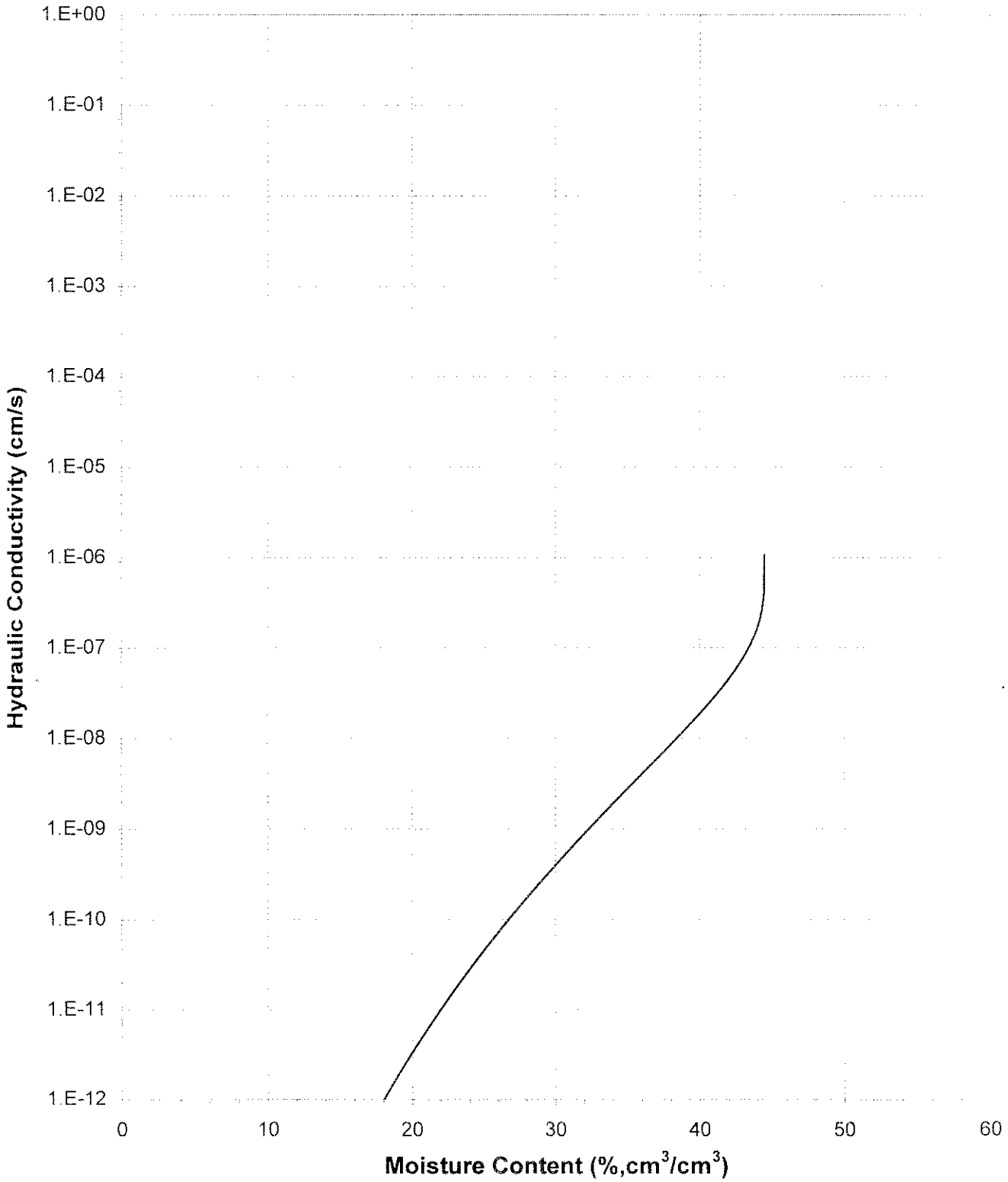
Plot of Relative Hydraulic Conductivity vs Moisture Content

Sample Number: SMC-W07 (6.0-6.5)



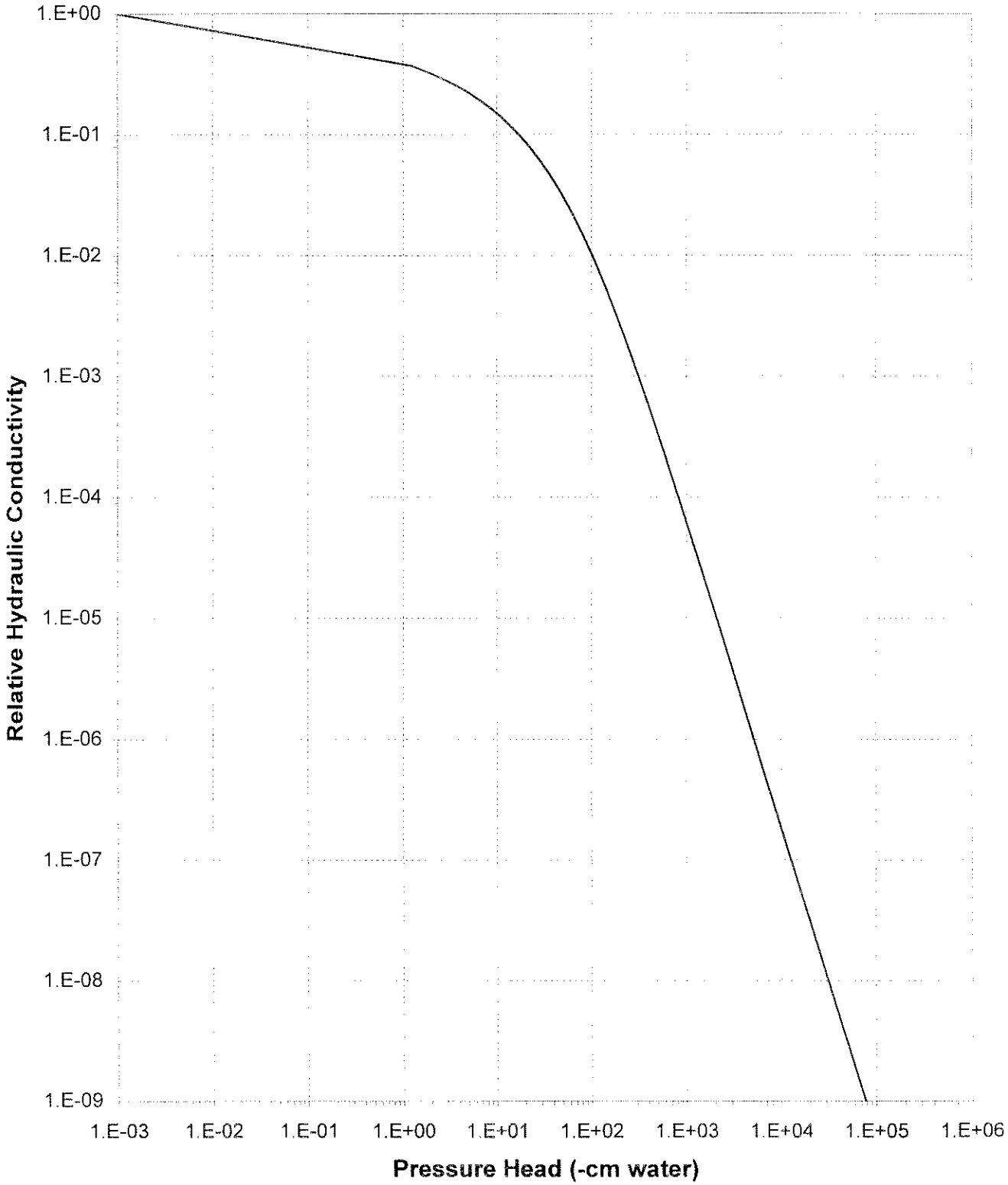
Plot of Hydraulic Conductivity vs Moisture Content

Sample Number: SMC-W07 (6.0-6.5)



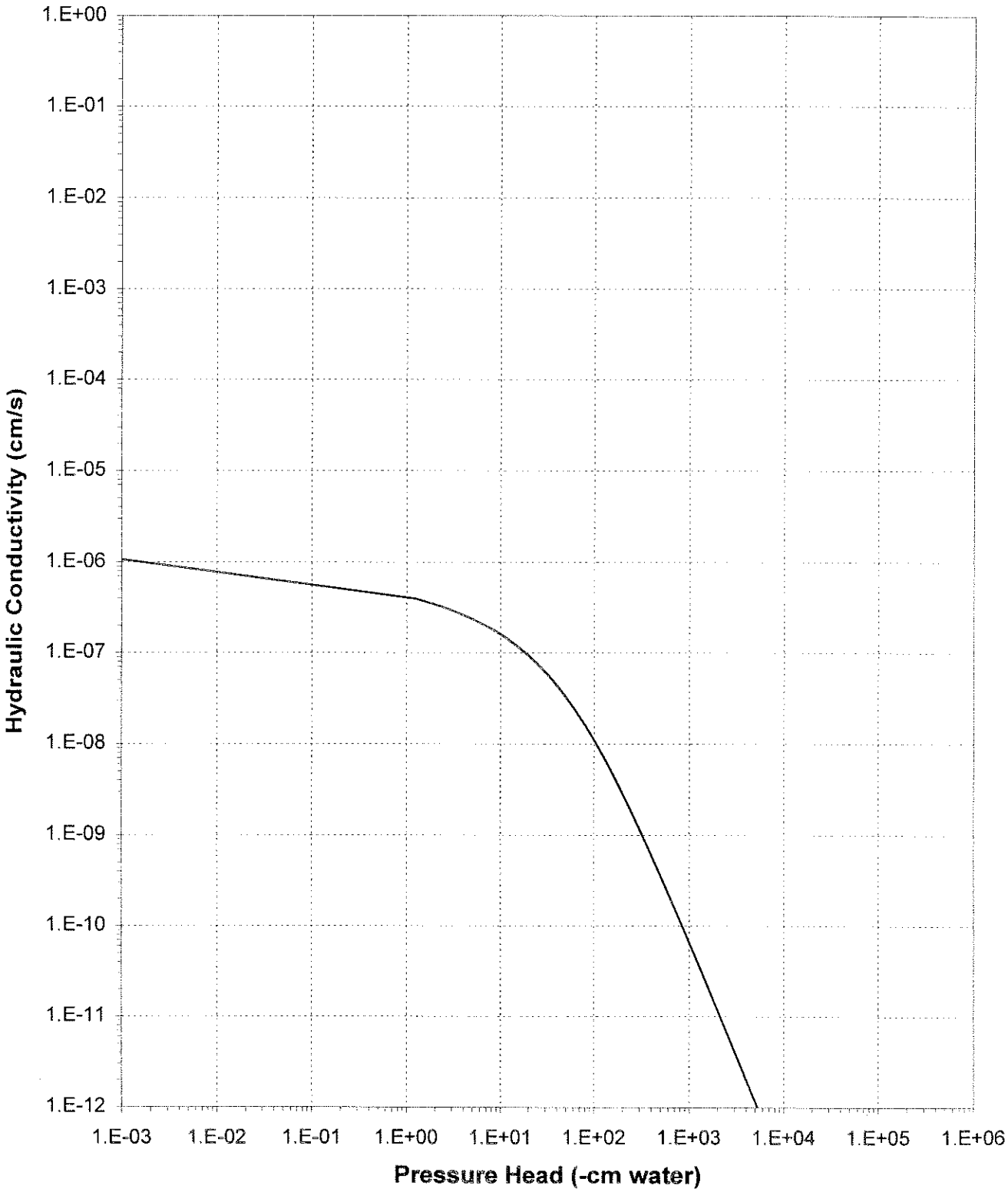
Plot of Relative Hydraulic Conductivity vs Pressure Head

Sample Number: SMC-W07 (6.0-6.5)



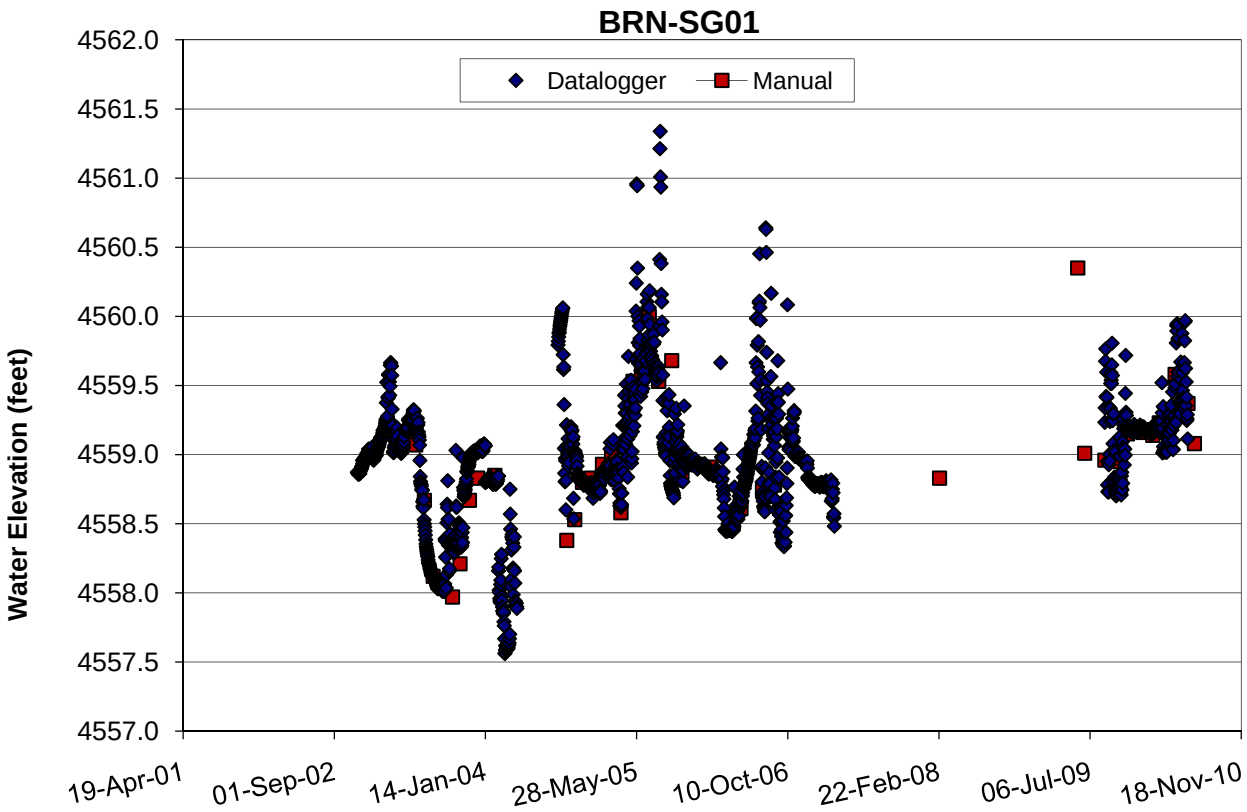
Plot of Hydraulic Conductivity vs Pressure Head

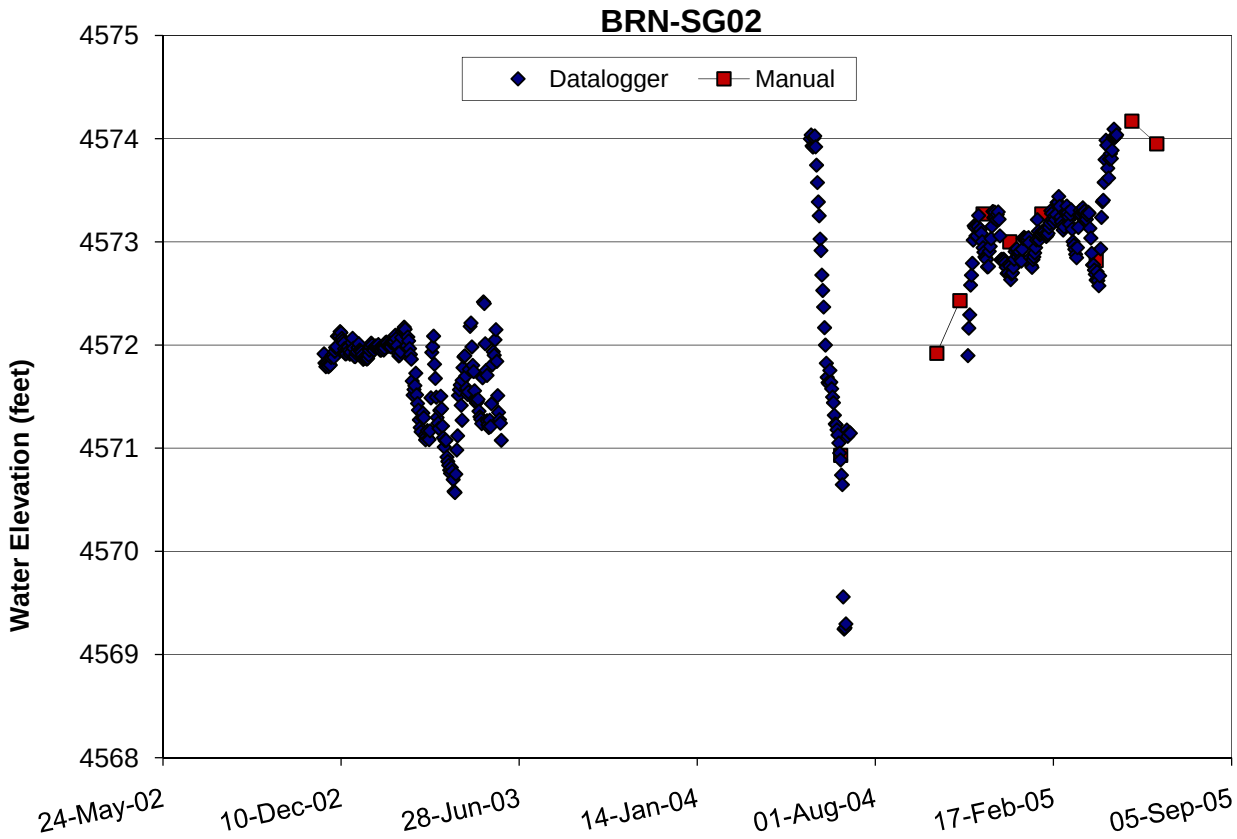
Sample Number: SMC-W07 (6.0-6.5)

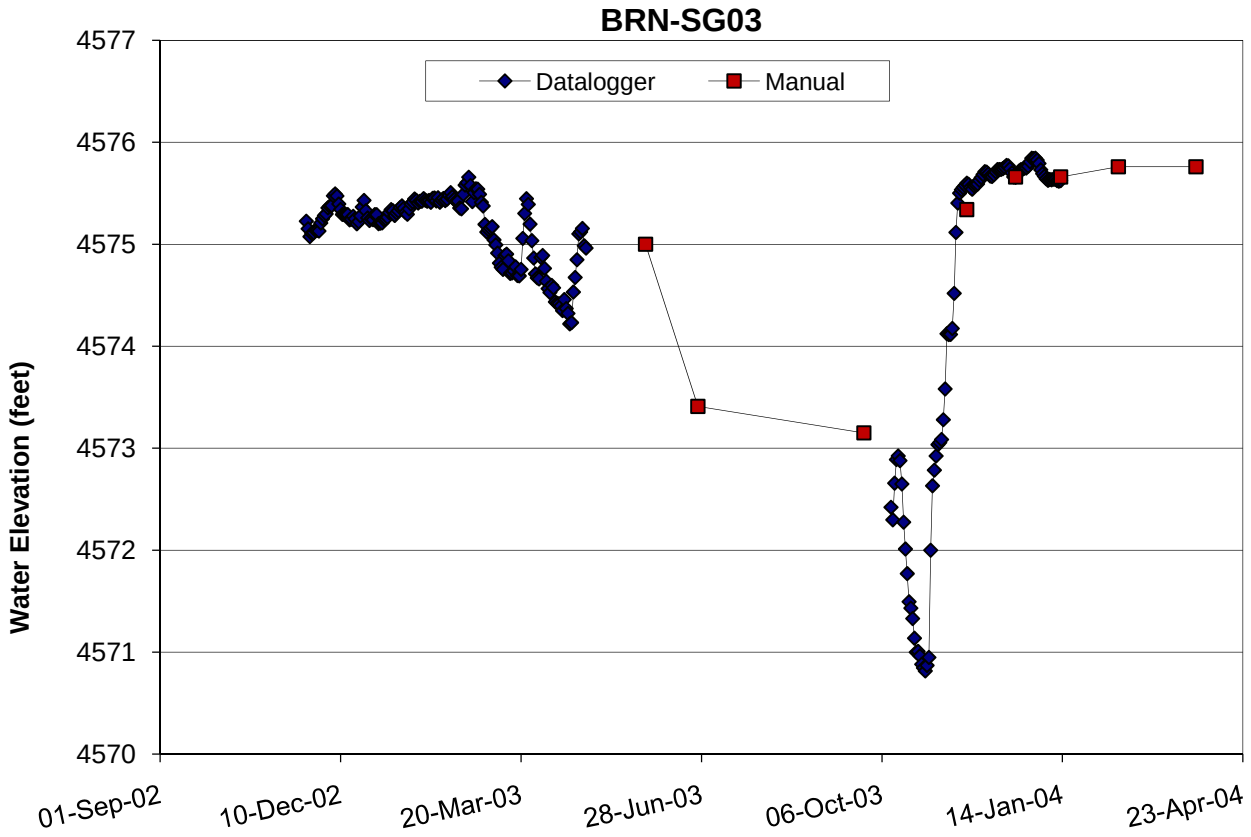


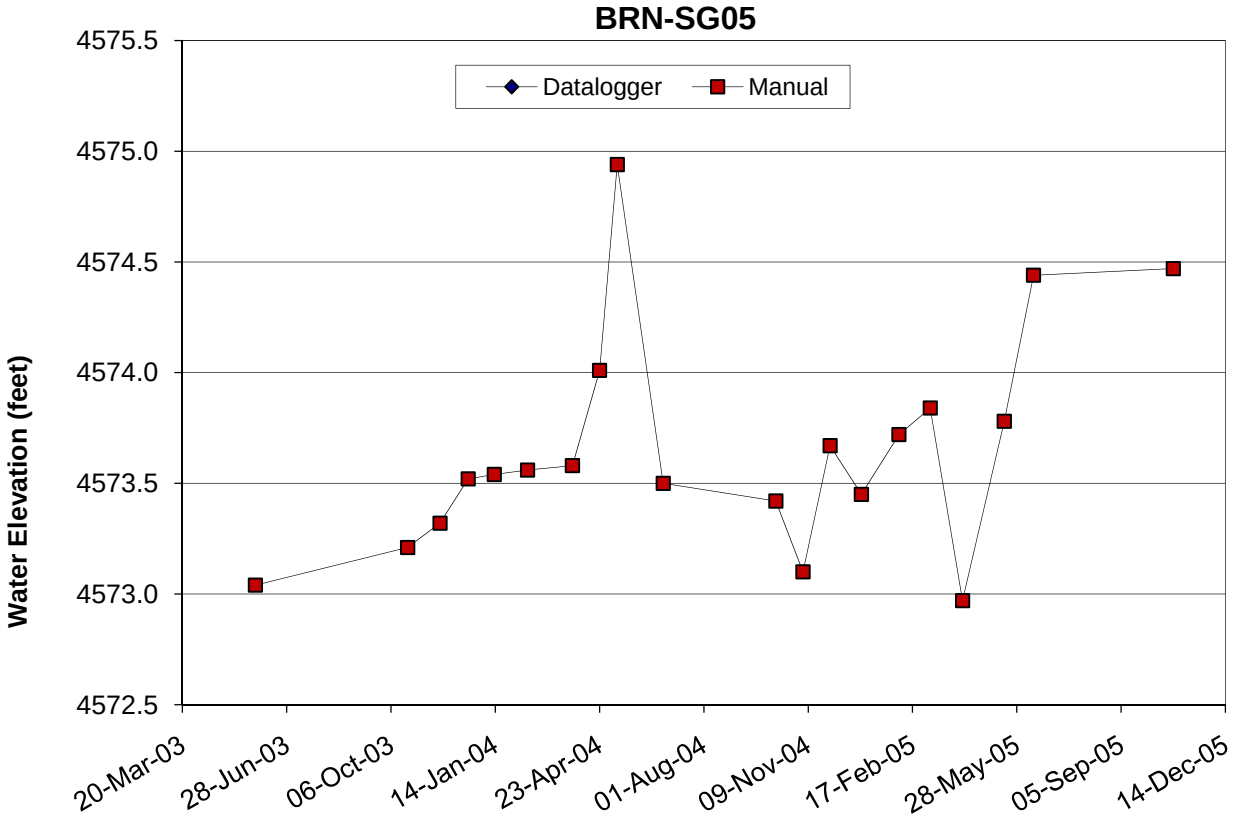
Appendix E

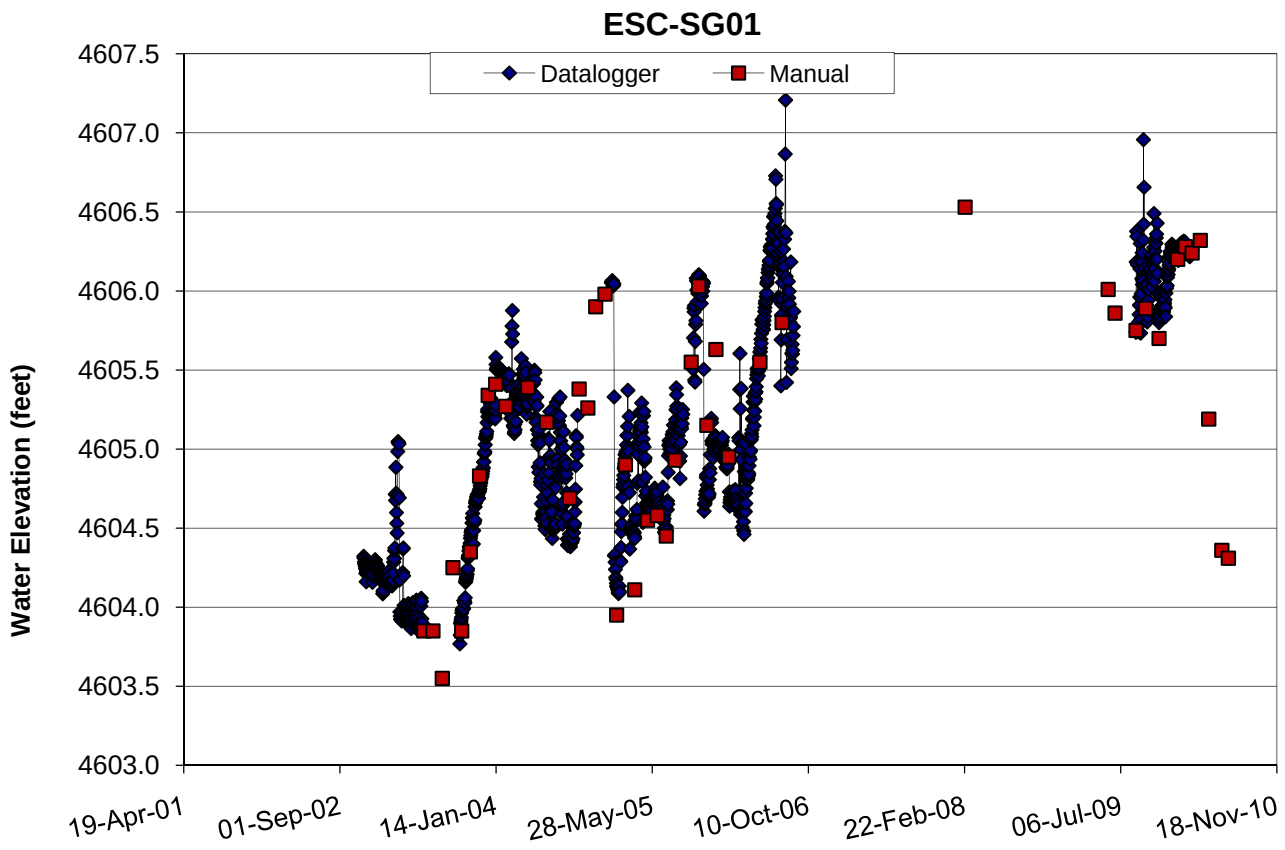
Surface Water Hydrographs
Project Staff Gages

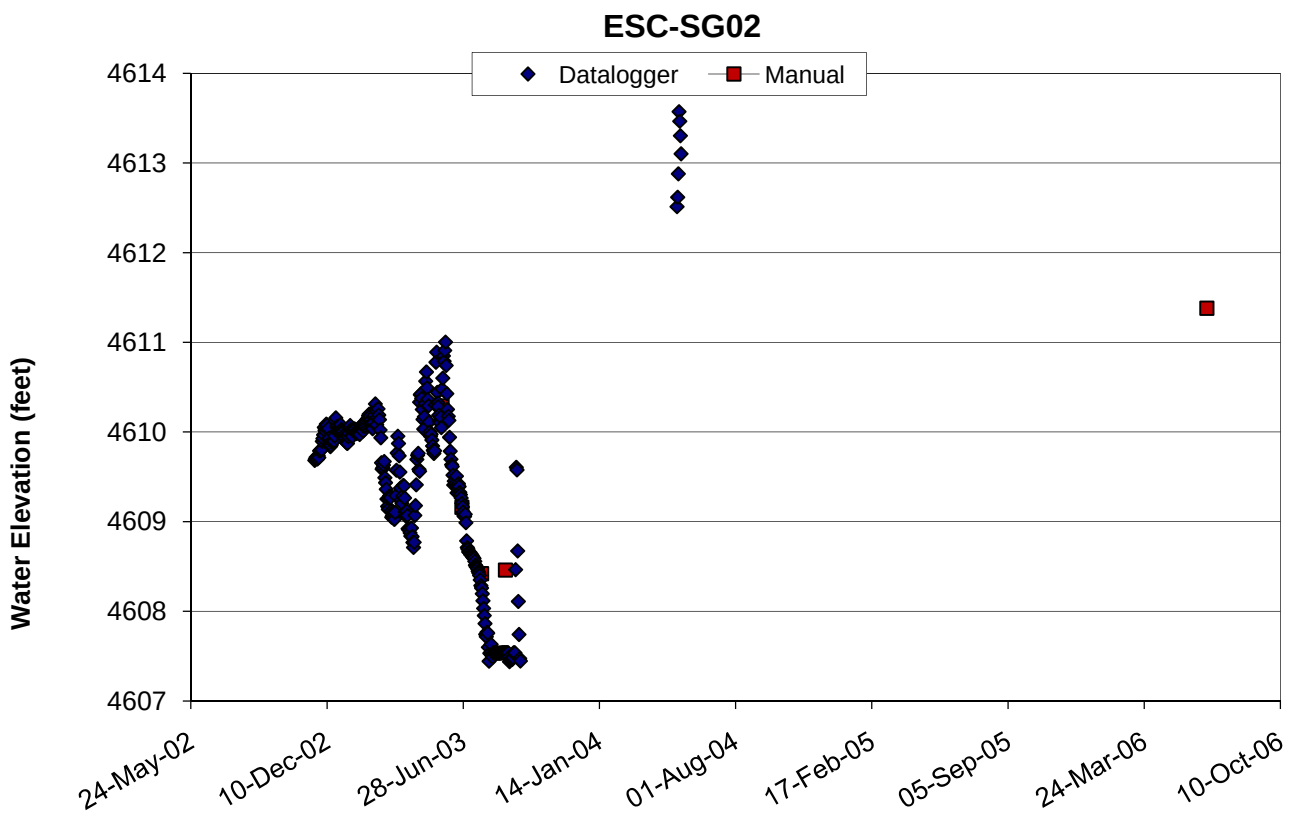

BRN-SG01
Datalogger
Manual
Water Elevation (feet)
4562.0
4561.5
4561.0
4560.5
4560.0
4559.5
4559.0
4558.5
4558.0
4557.5
4557.0
19-Apr-01
01-Sep-02
14-Jan-04
28-May-05
10-Oct-06
22-Feb-08
06-Jul-09
18-Nov-10

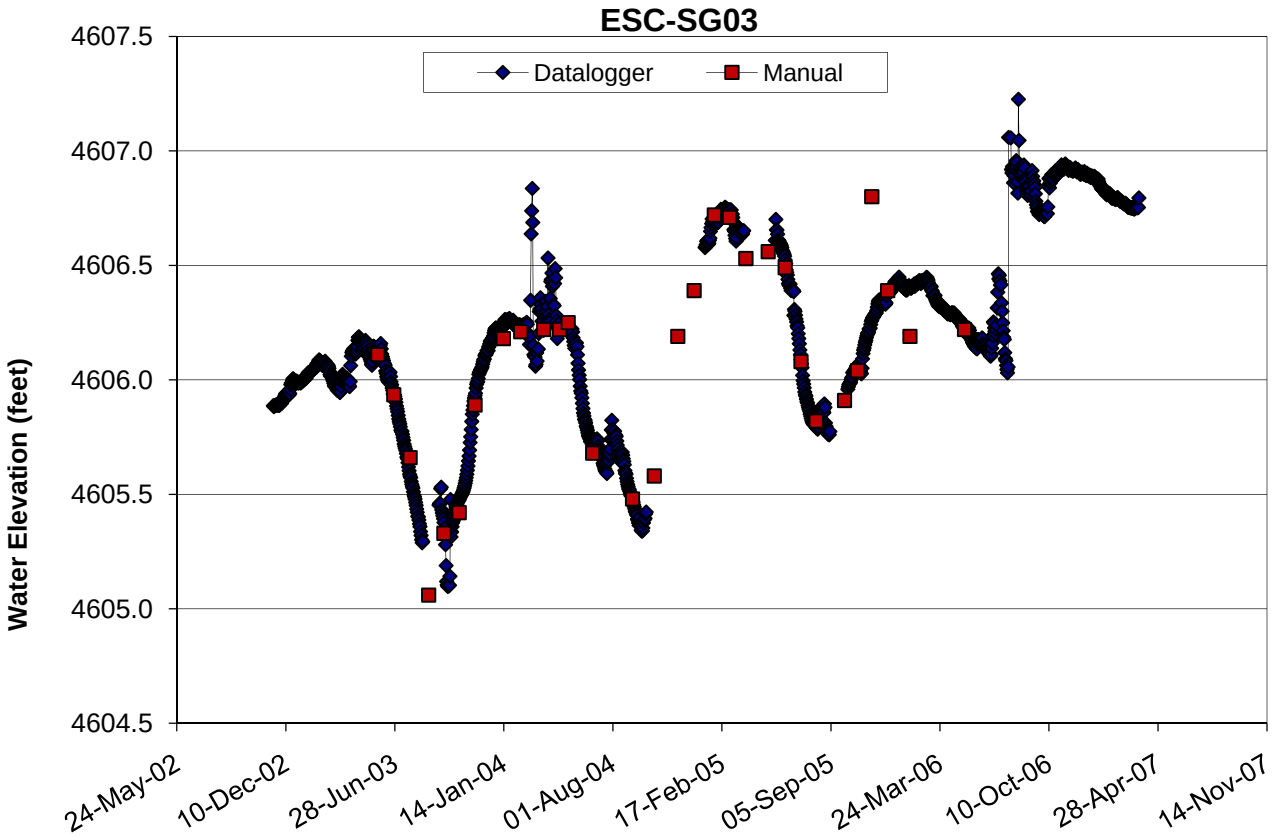

BRN-SG02
Datalogger
Manual
Water Elevation (feet)
4575
4574
4573
4572
4571
4570
4569
4568
24-May-02
10-Dec-02
28-Jun-03
14-Jan-04
01-Aug-04
17-Feb-05
05-Sep-05

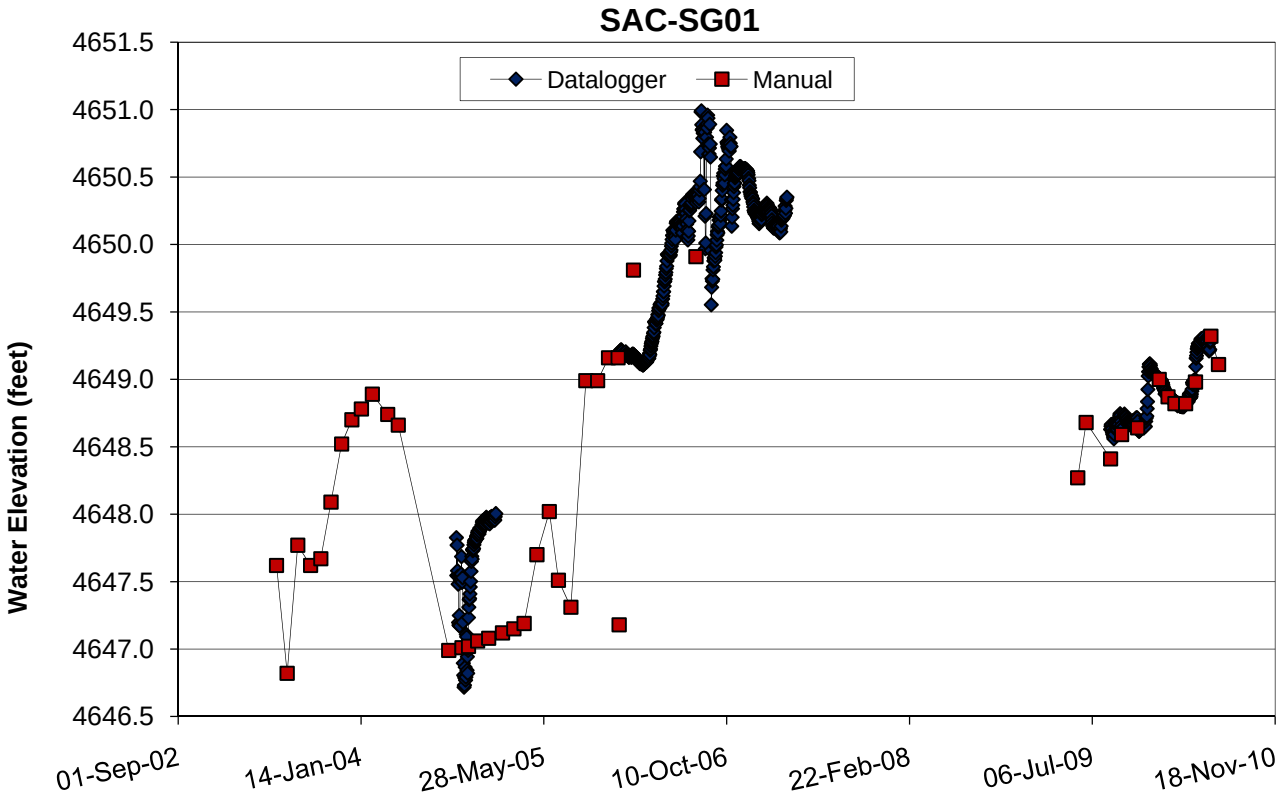

BRN-SG03
Datalogger
Manual
Water Elevation (feet)
4577
4576
4575
4574
4573
4572
4571
4570
01-Sep-02
10-Dec-02
20-Mar-03
28-Jun-03
06-Oct-03
14-Jan-04
23-Apr-04

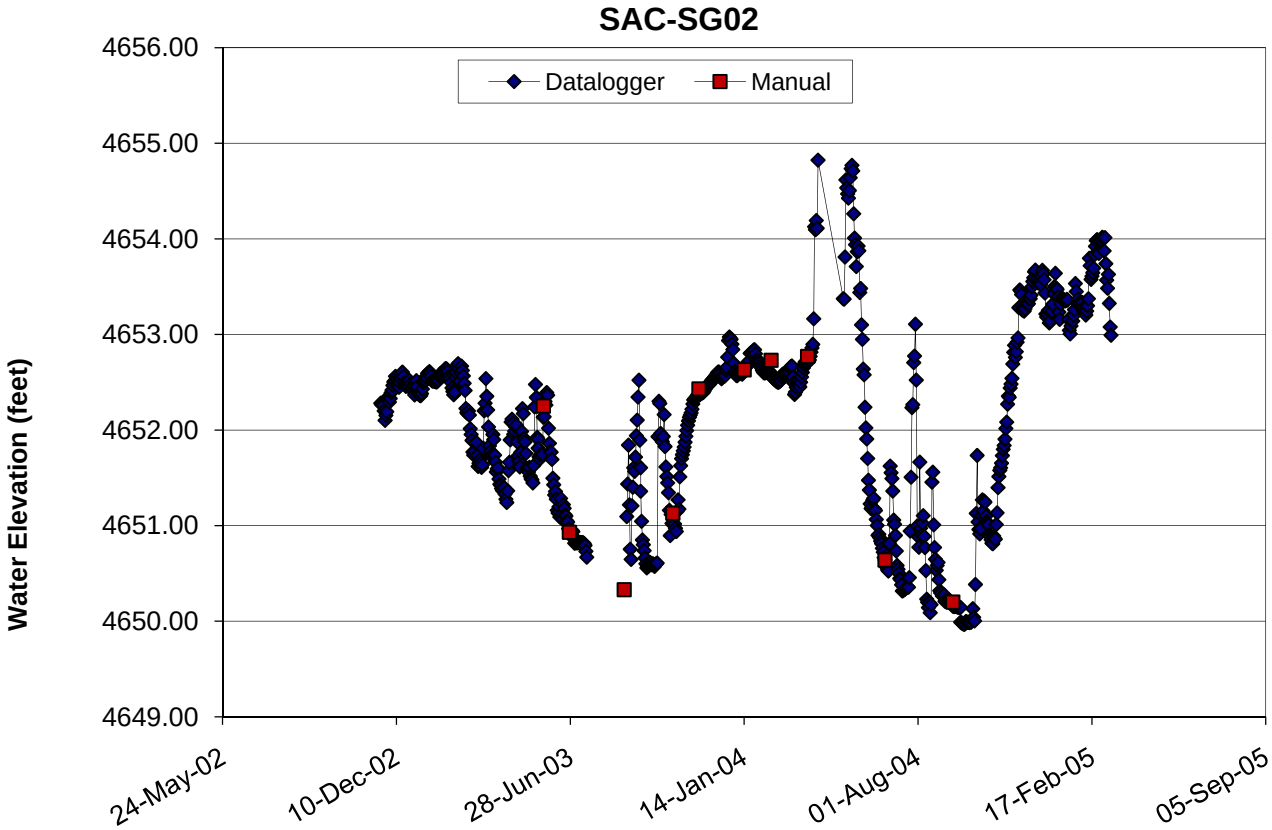

BRN-SG05
Datalogger
Manual
Water Elevation (feet)
4575.5
4575.0
4574.5
4574.0
4573.5
4573.0
4572.5
20-Mar-03
28-Jun-03
06-Oct-03
14-Jan-04
23-Apr-04
01-Aug-04
09-Nov-04
17-Feb-05
28-May-05
05-Sep-05
14-Dec-05

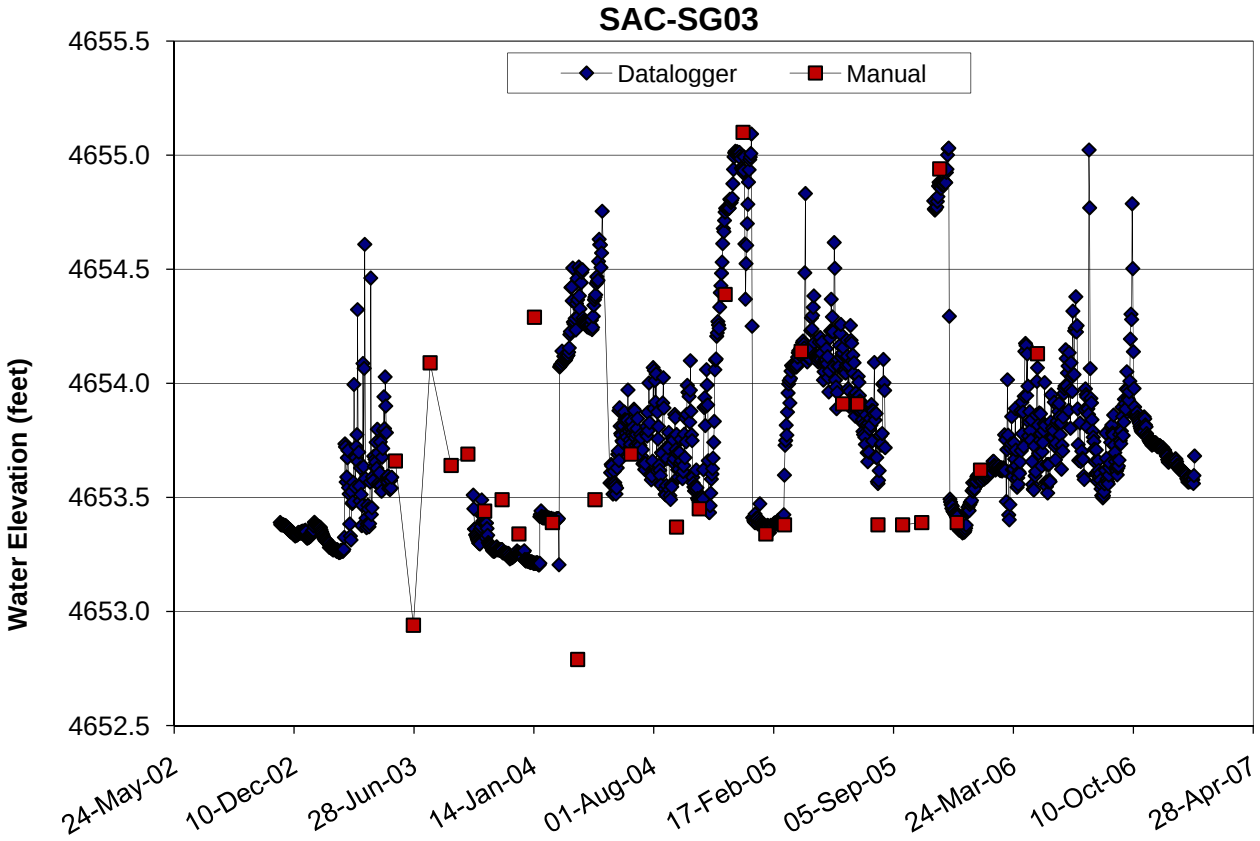

ESC-SG01
Datalogger
Manual
Water Elevation (feet)
4607.5
4607.0
4606.5
4606.0
4605.5
4605.0
4604.5
4604.0
4603.5
4603.0
19-Apr-01
01-Sep-02
14-Jan-04
28-May-05
10-Oct-06
22-Feb-08
06-Jul-09
18-Nov-10

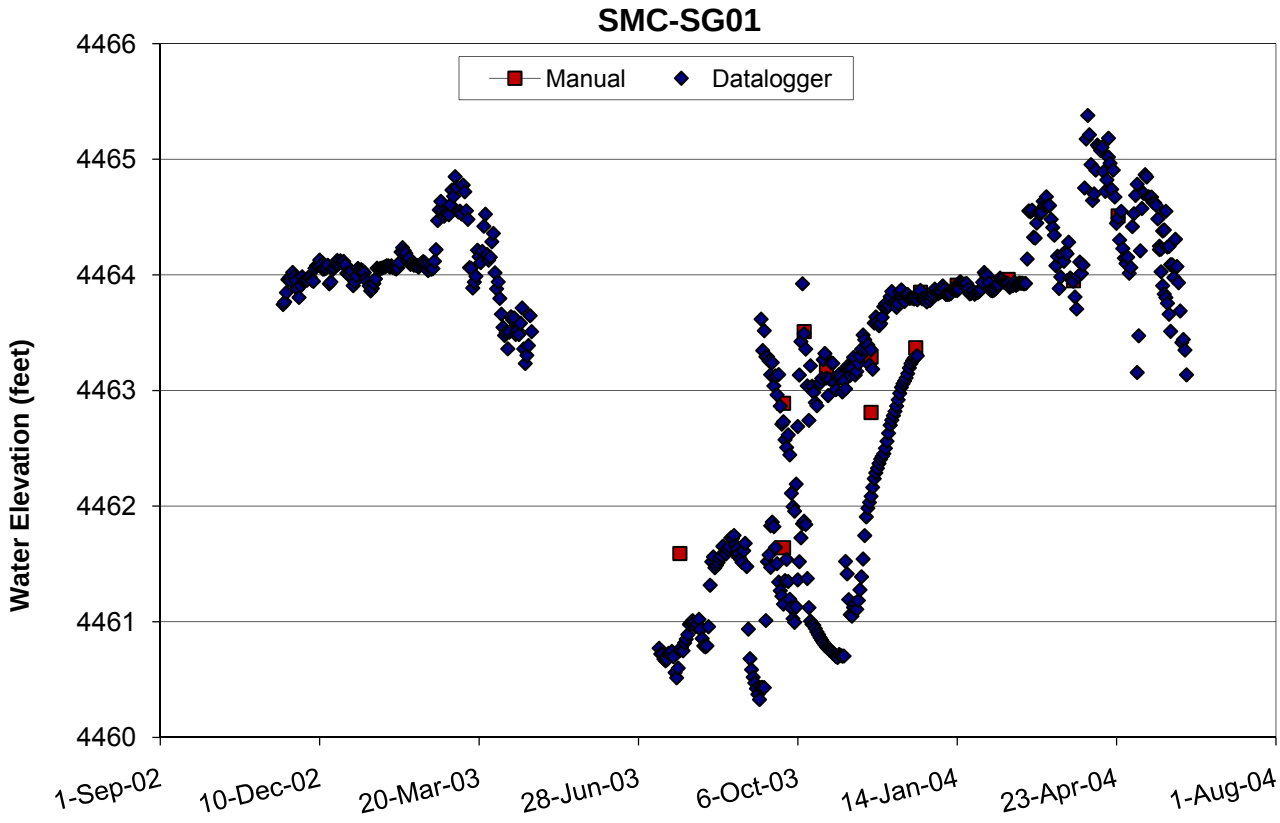

ESC-SG02
Datalogger
Manual
Water Elevation (feet)
4614
4613
4612
4611
4610
4609
4608
4607
24-May-02
10-Dec-02
28-Jun-03
14-Jan-04
01-Aug-04
17-Feb-05
05-Sep-05
24-Mar-06
10-Oct-06

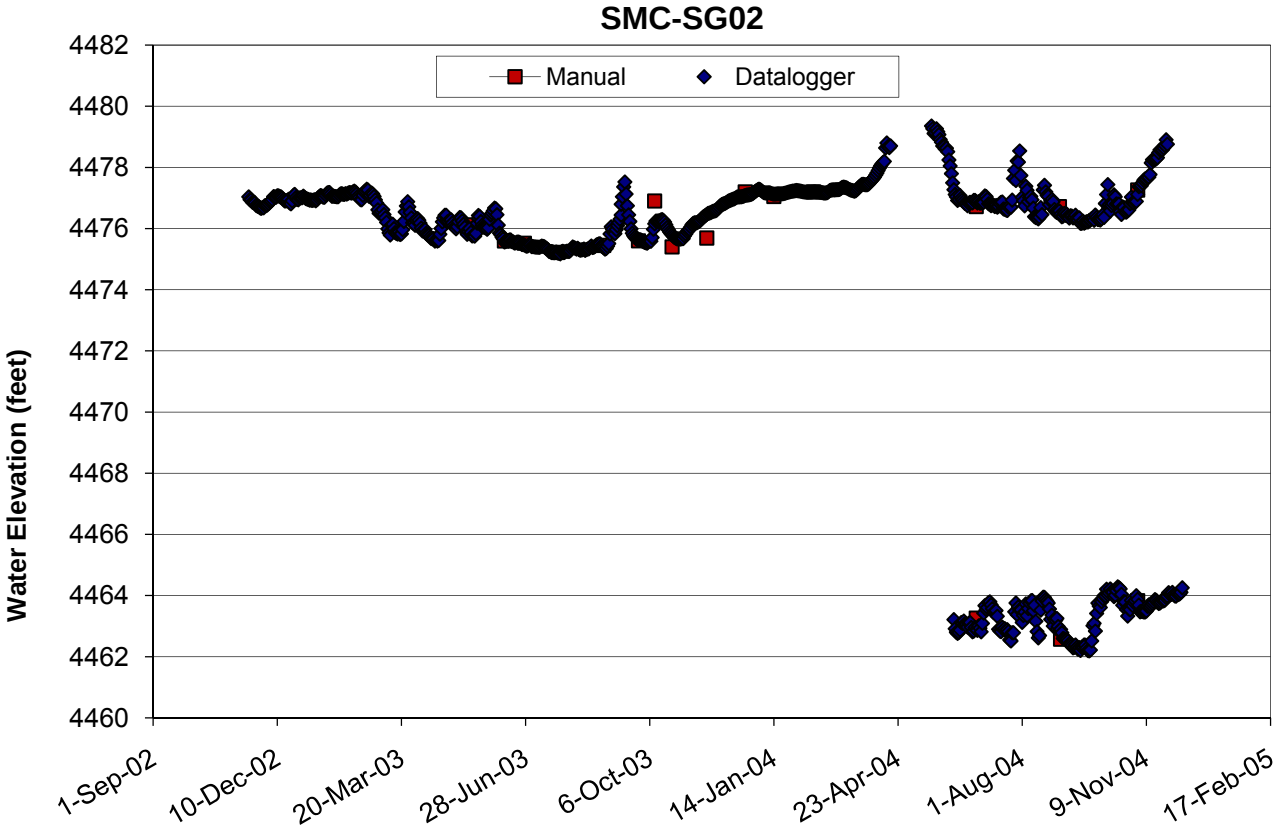

ESC-SG03
Datalogger
Manual
Water Elevation (feet)
4607.5
4607.0
4606.5
4606.0
4605.5
4605.0
4604.5
24-May-02
10-Dec-02
28-Jun-03
14-Jan-04
01-Aug-04
17-Feb-05
05-Sep-05
24-Mar-06
10-Oct-06
28-Apr-07
14-Nov-07

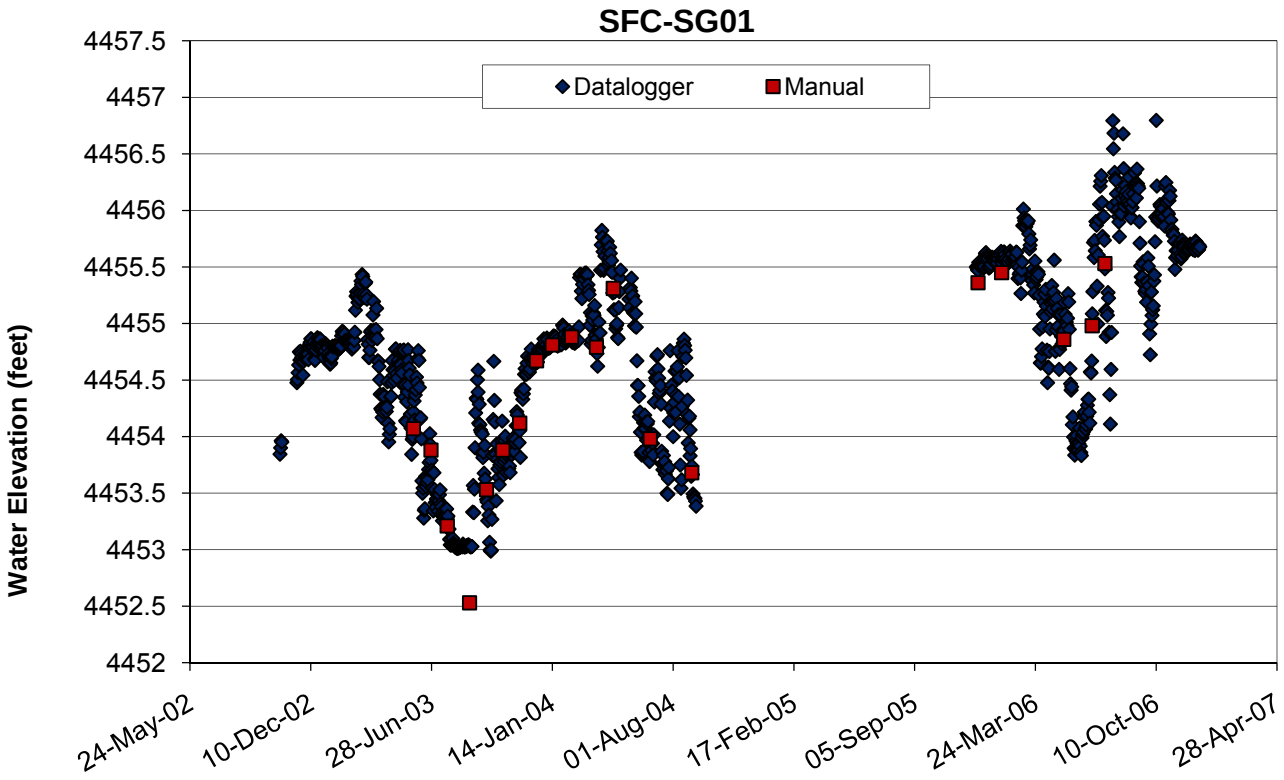

SAC-SG01
Datalogger
Manual
Water Elevation (feet)
4651.5
4651.0
4650.5
4650.0
4649.5
4649.0
4648.5
4648.0
4647.5
4647.0
4646.5
01-Sep-02
14-Jan-04
28-May-05
10-Oct-06
22-Feb-08
06-Jul-09
18-Nov-10

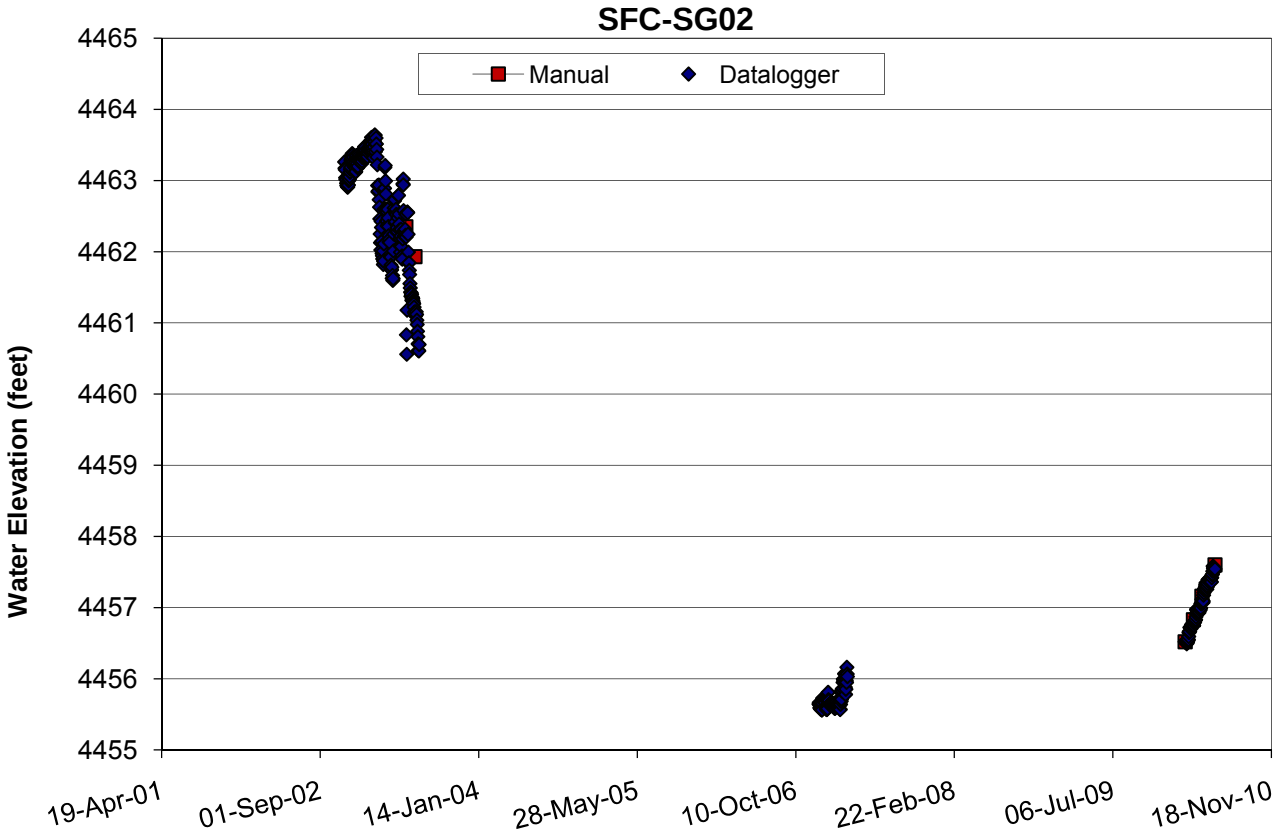

SAC-SG02
Datalogger
Manual
Water Elevation (feet)
4656.00
4655.00
4654.00
4653.00
4652.00
4651.00
4650.00
4649.00
24-May-02
10-Dec-02
28-Jun-03
14-Jan-04
01-Aug-04
17-Feb-05
05-Sep-05

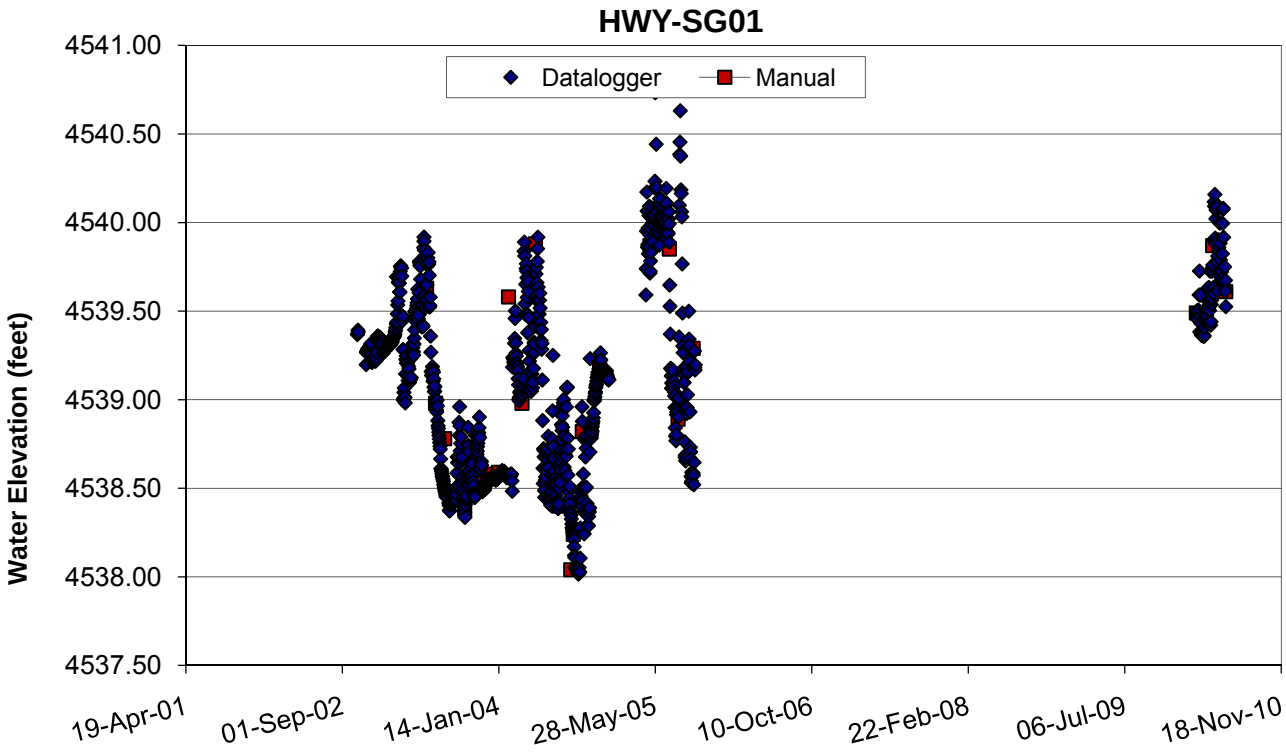

SAC-SG03
Datalogger
Manual
Water Elevation (feet)
4655.5
4655.0
4654.5
4654.0
4653.5
4653.0
4652.5
24-May-02
10-Dec-02
28-Jun-03
14-Jan-04
01-Aug-04
17-Feb-05
05-Sep-05
24-Mar-06
10-Oct-06
28-Apr-07

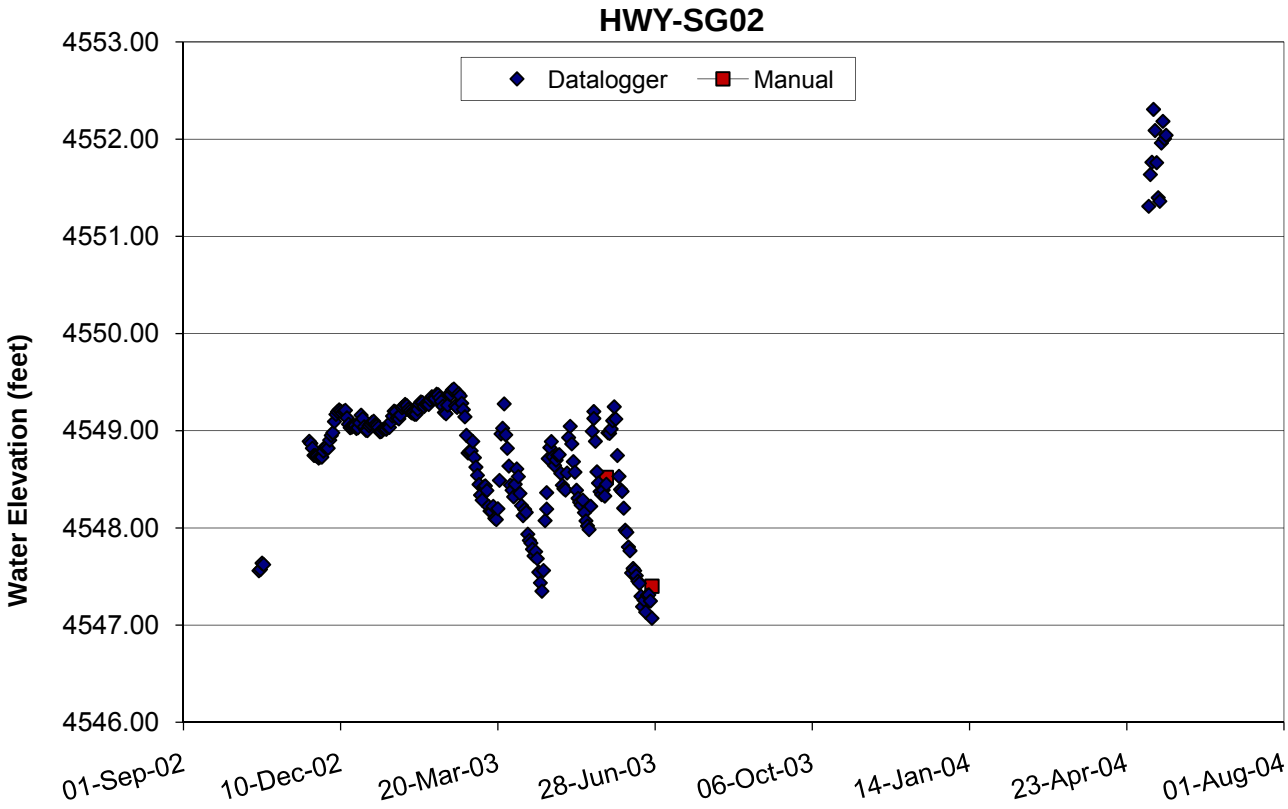

SMC-SG01
Manual
Datalogger
Water Elevation (feet)
4466
4465
4464
4463
4462
4461
4460
1-Sep-02
10-Dec-02
20-Mar-03
28-Jun-03
6-Oct-03
14-Jan-04
23-Apr-04
1-Aug-04

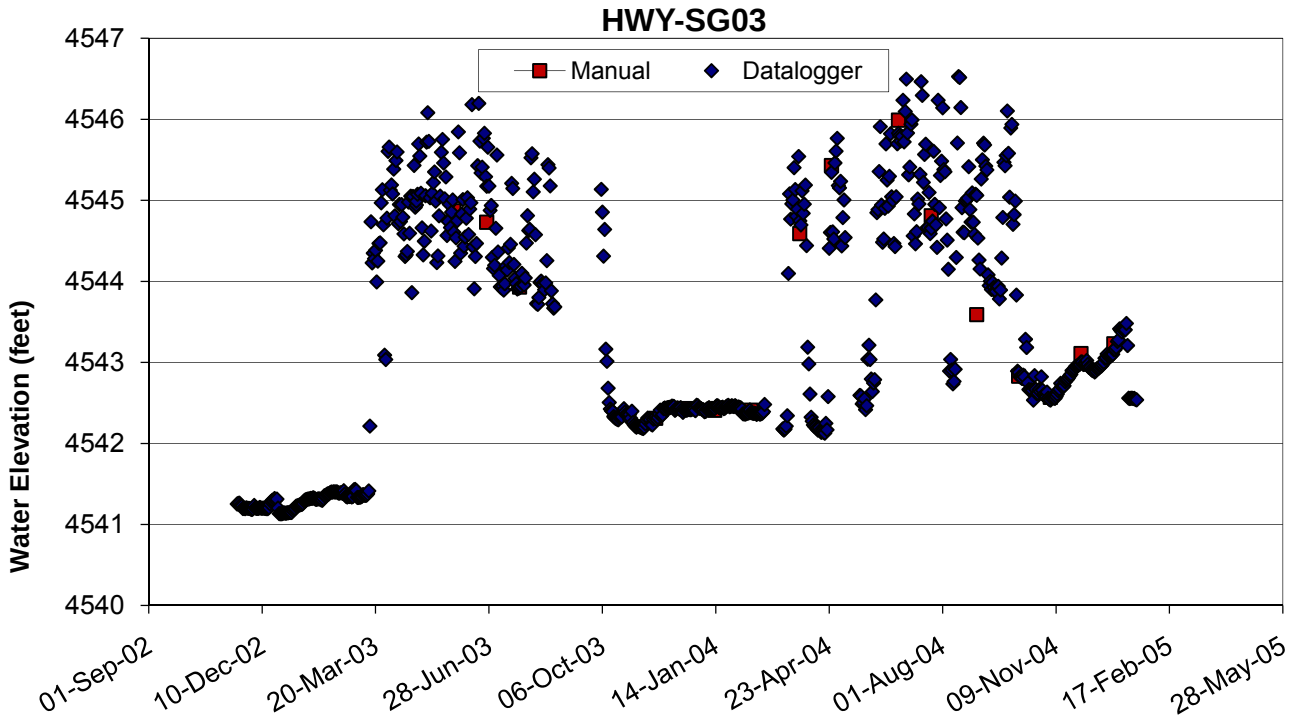

SMC-SG02
Manual
Datalogger
Water Elevation (feet)
4482
4480
4478
4476
4474
4472
4470
4468
4466
4464
4462
4460
1-Sep-02
10-Dec-02
20-Mar-03
28-Jun-03
6-Oct-03
14-Jan-04
23-Apr-04
1-Aug-04
9-Nov-04
17-Feb-05

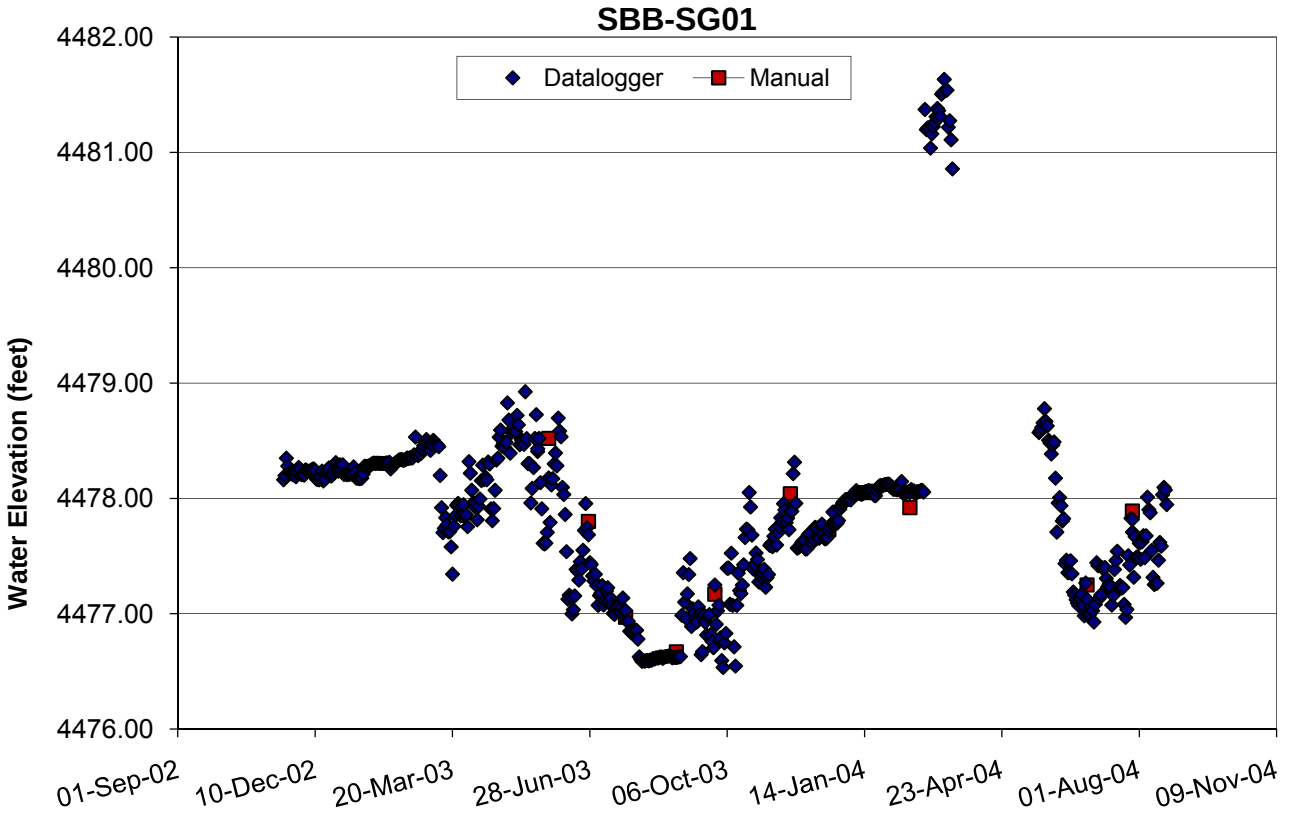

SFC-SG01
Datalogger
Manual
Water Elevation (feet)
4457.5
4457
4456.5
4456
4455.5
4455
4454.5
4454
4453.5
4453
4452.5
4452
24-May-02
10-Dec-02
28-Jun-03
14-Jan-04
01-Aug-04
17-Feb-05
05-Sep-05
24-Mar-06
10-Oct-06
28-Apr-07


SFC-SG02
Manual
Datalogger
Water Elevation (feet)
4465
4464
4463
4462
4461
4460
4459
4458
4457
4456
4455
19-Apr-01
01-Sep-02
14-Jan-04
28-May-05
10-Oct-06
22-Feb-08
06-Jul-09
18-Nov-10


HWY-SG01
Datalogger
Manual
Water Elevation (feet)
4541.00
4540.50
4540.00
4539.50
4539.00
4538.50
4538.00
4537.50
19-Apr-01
01-Sep-02
14-Jan-04
28-May-05
10-Oct-06
22-Feb-08
06-Jul-09
18-Nov-10

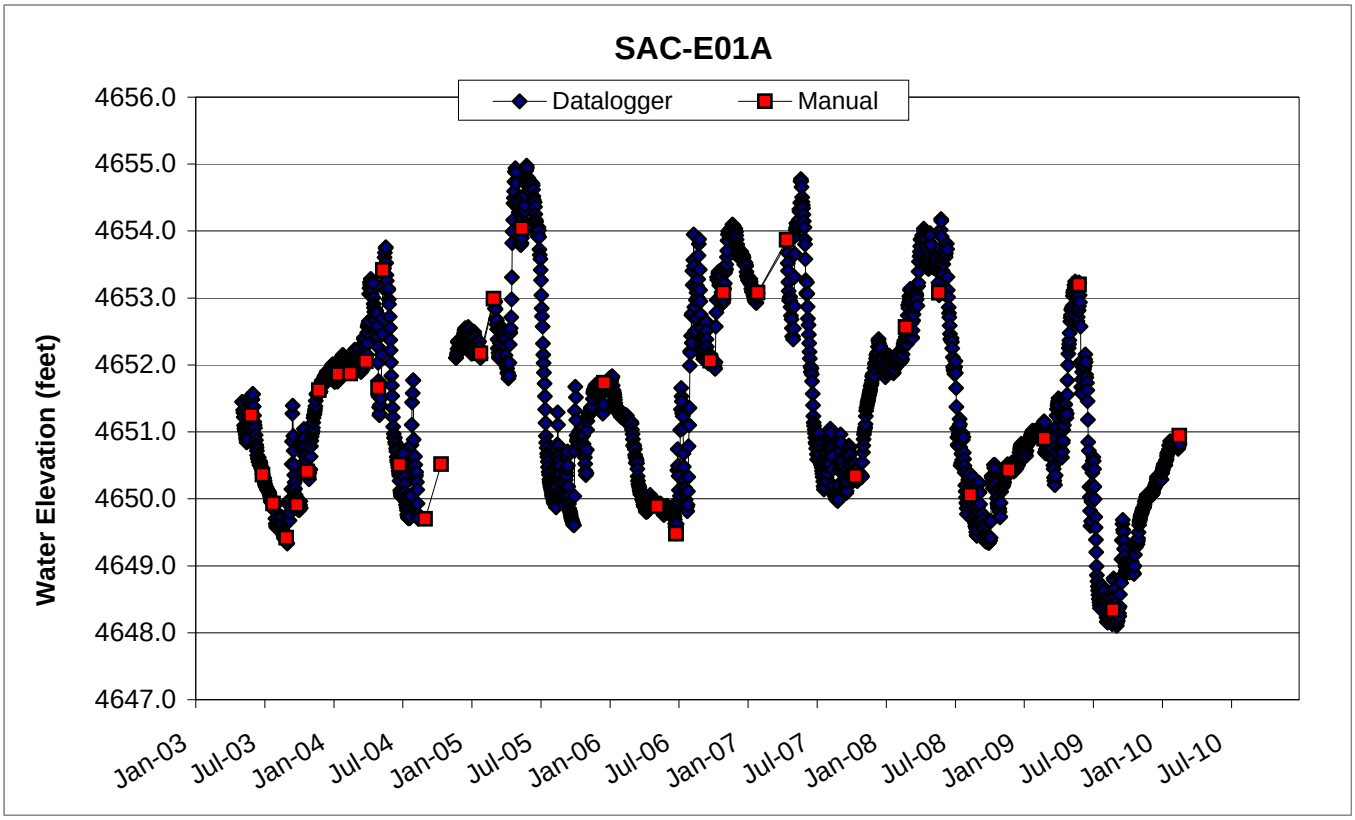

HWY-SG02
Datalogger
Manual
Water Elevation (feet)
4553.00
4552.00
4551.00
4550.00
4549.00
4548.00
4547.00
4546.00
01-Sep-02
10-Dec-02
20-Mar-03
28-Jun-03
06-Oct-03
14-Jan-04
23-Apr-04
01-Aug-04

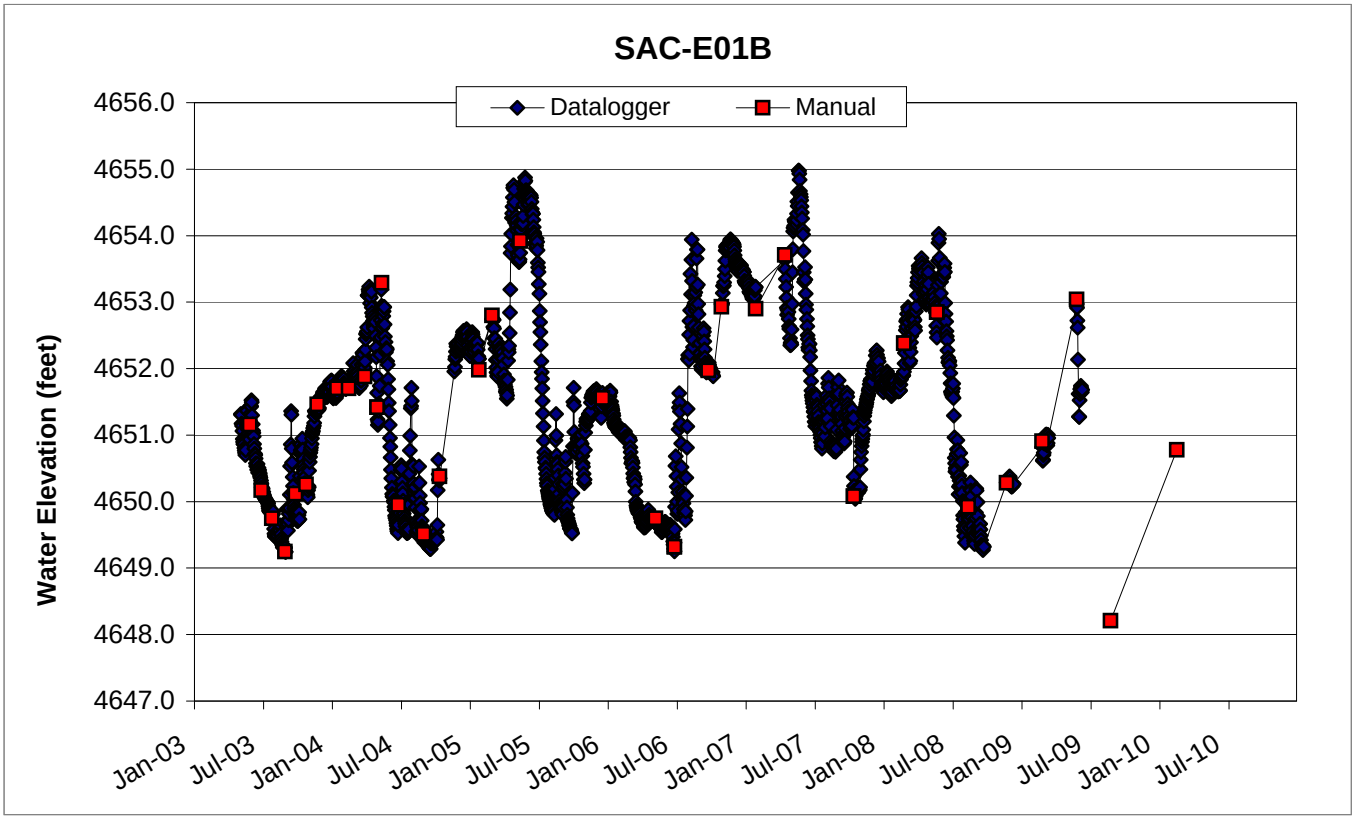

HWY-SG03
Manual
Datalogger
Water Elevation (feet)
4547
4546
4545
4544
4543
4542
4541
4540
01-Sep-02
10-Dec-02
20-Mar-03
28-Jun-03
06-Oct-03
14-Jan-04
23-Apr-04
01-Aug-04
09-Nov-04
17-Feb-05
28-May-05

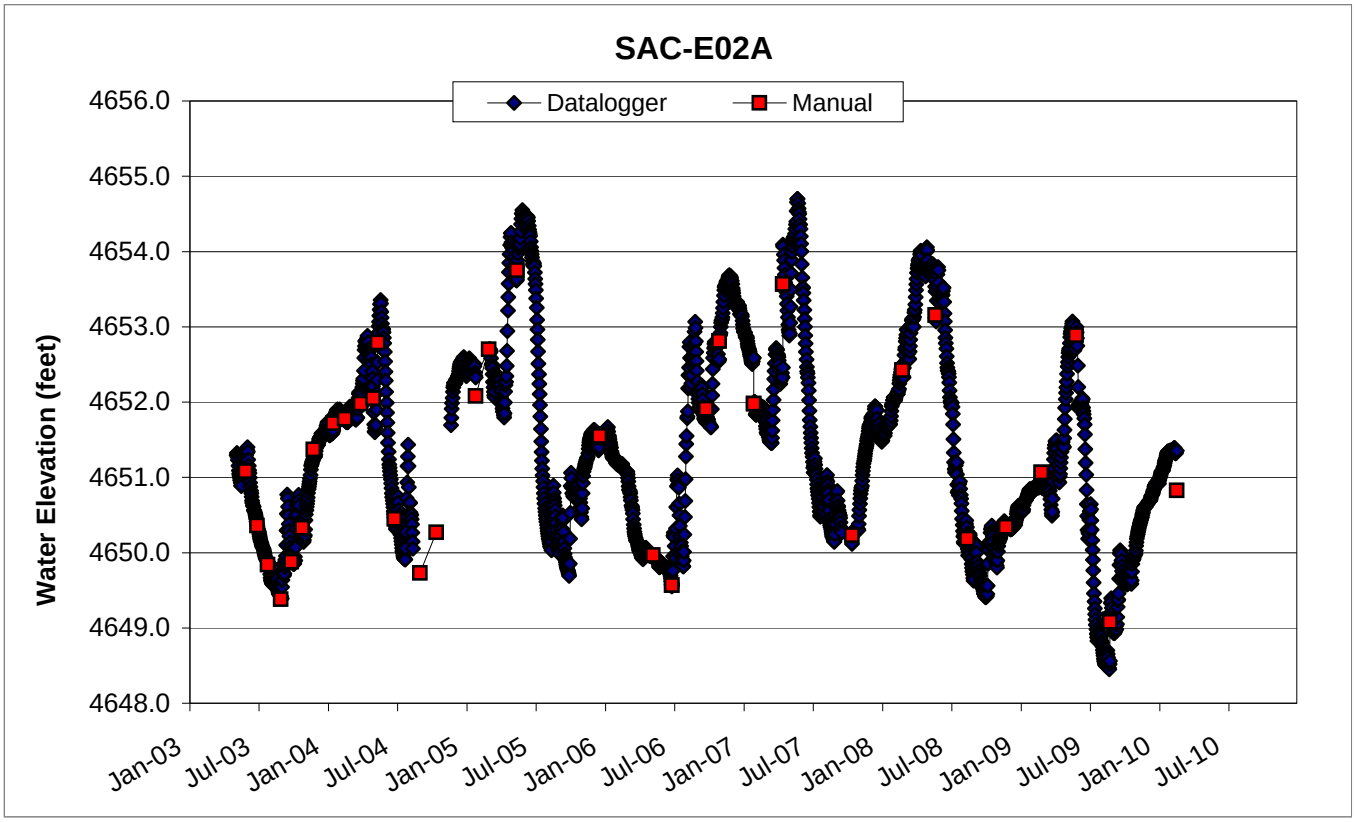

SBB-SG01
Datalogger
Manual
Water Elevation (feet)
4482.00
4481.00
4480.00
4479.00
4478.00
4477.00
4476.00
01-Sep-02
10-Dec-02
20-Mar-03
28-Jun-03
06-Oct-03
14-Jan-04
23-Apr-04
01-Aug-04
09-Nov-04

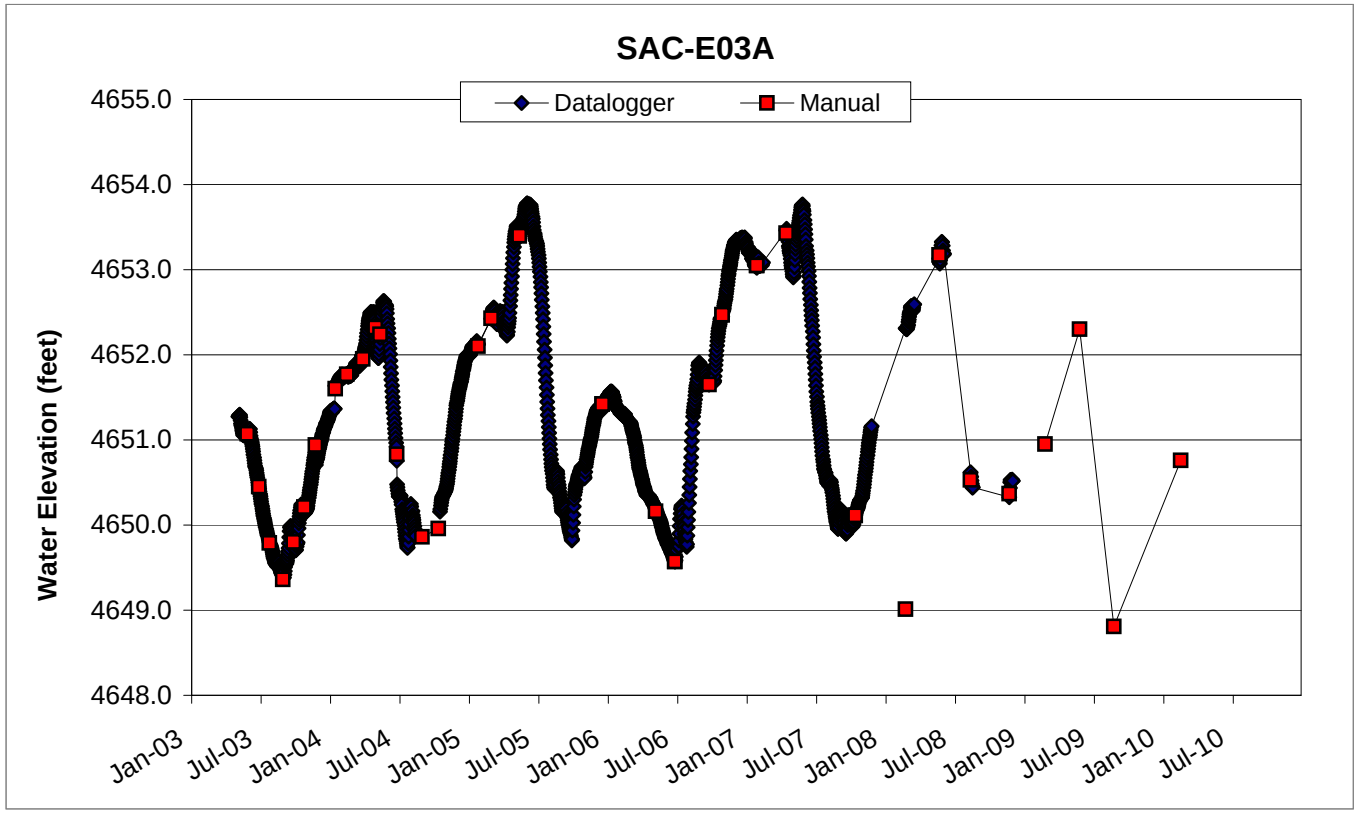
Appendix F

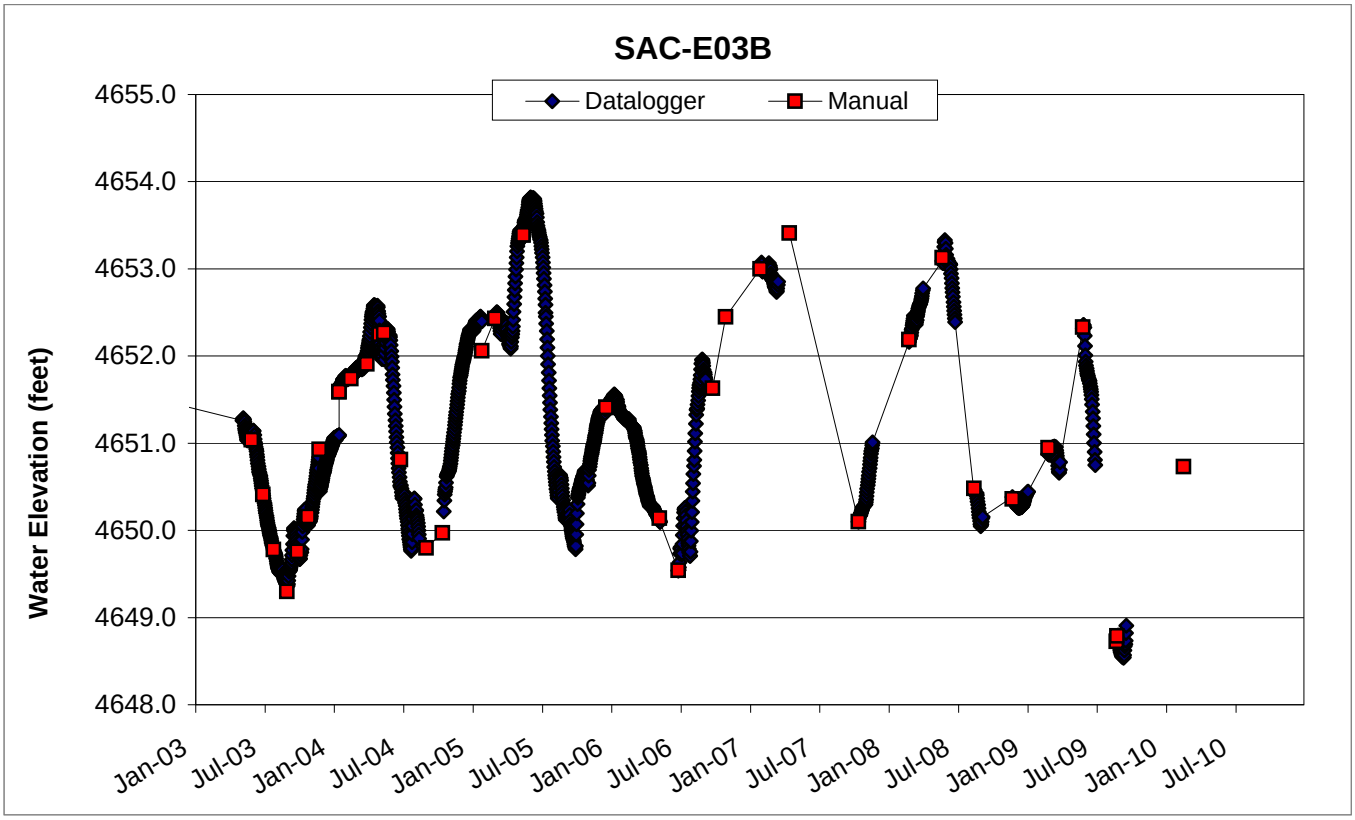
Groundwater Level Hydrographs

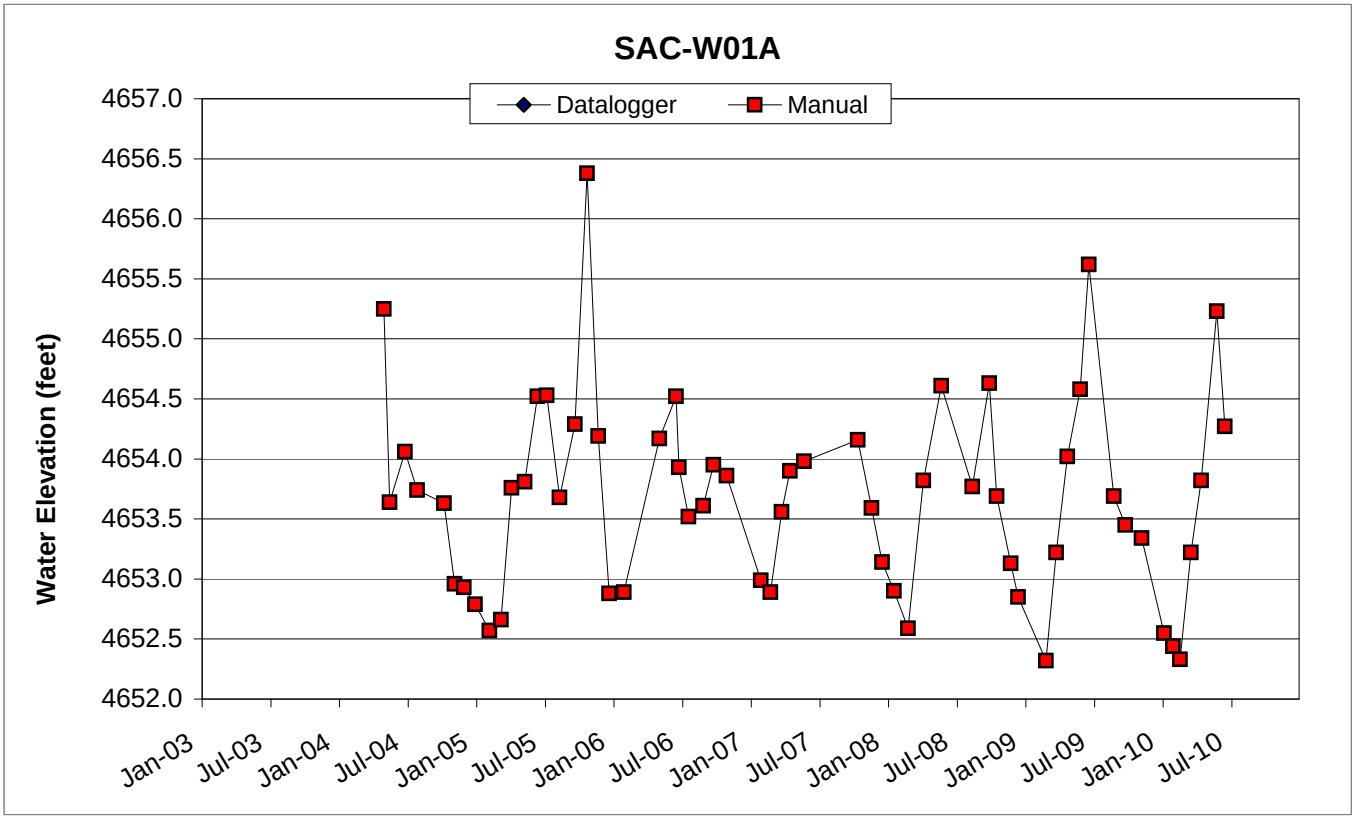

SAC-E01A
Datalogger
Manual
Water Elevation (feet)
4656.0
4655.0
4654.0
4653.0
4652.0
4651.0
4650.0
4649.0
4648.0
4647.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

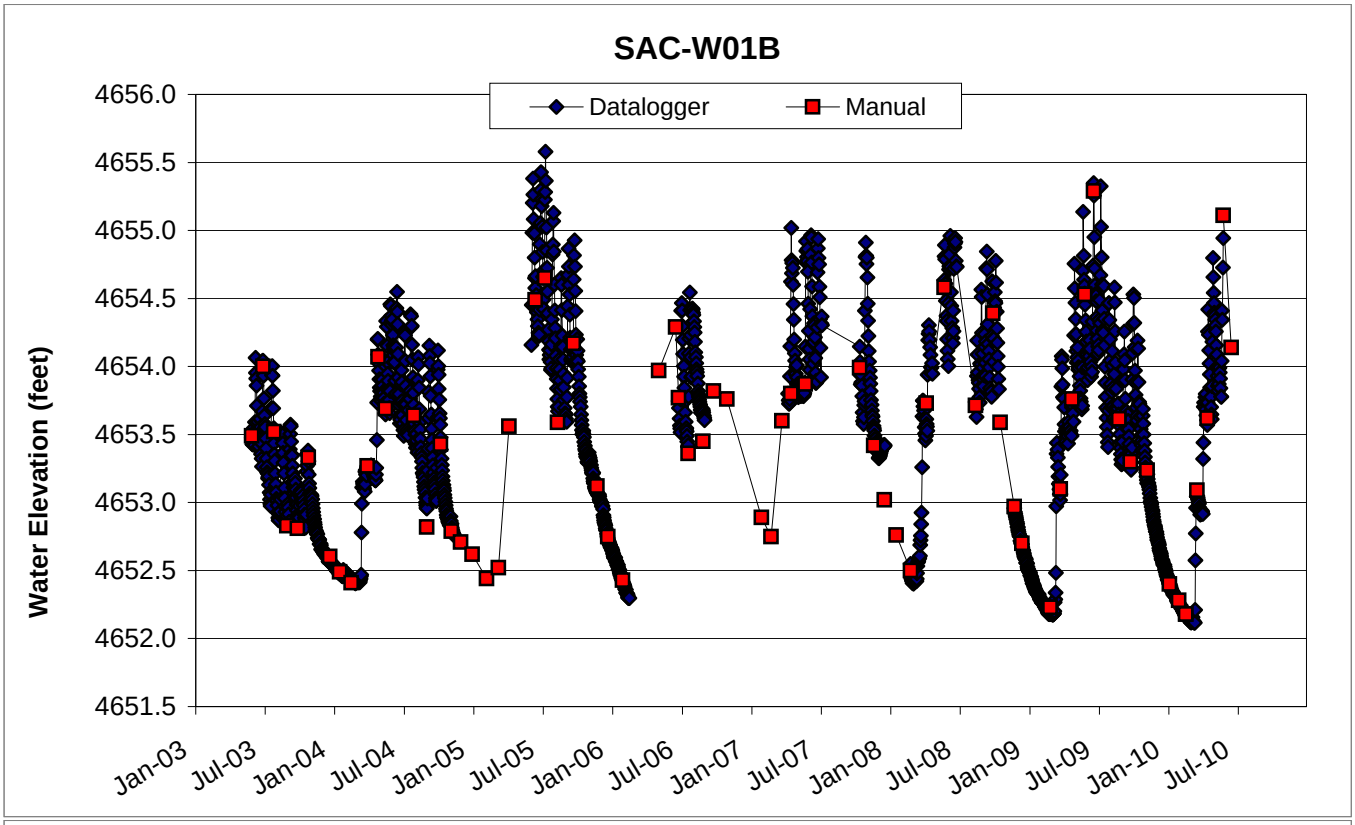

SAC-E01B
Datalogger
Manual
Water Elevation (feet)
4656.0
4655.0
4654.0
4653.0
4652.0
4651.0
4650.0
4649.0
4648.0
4647.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

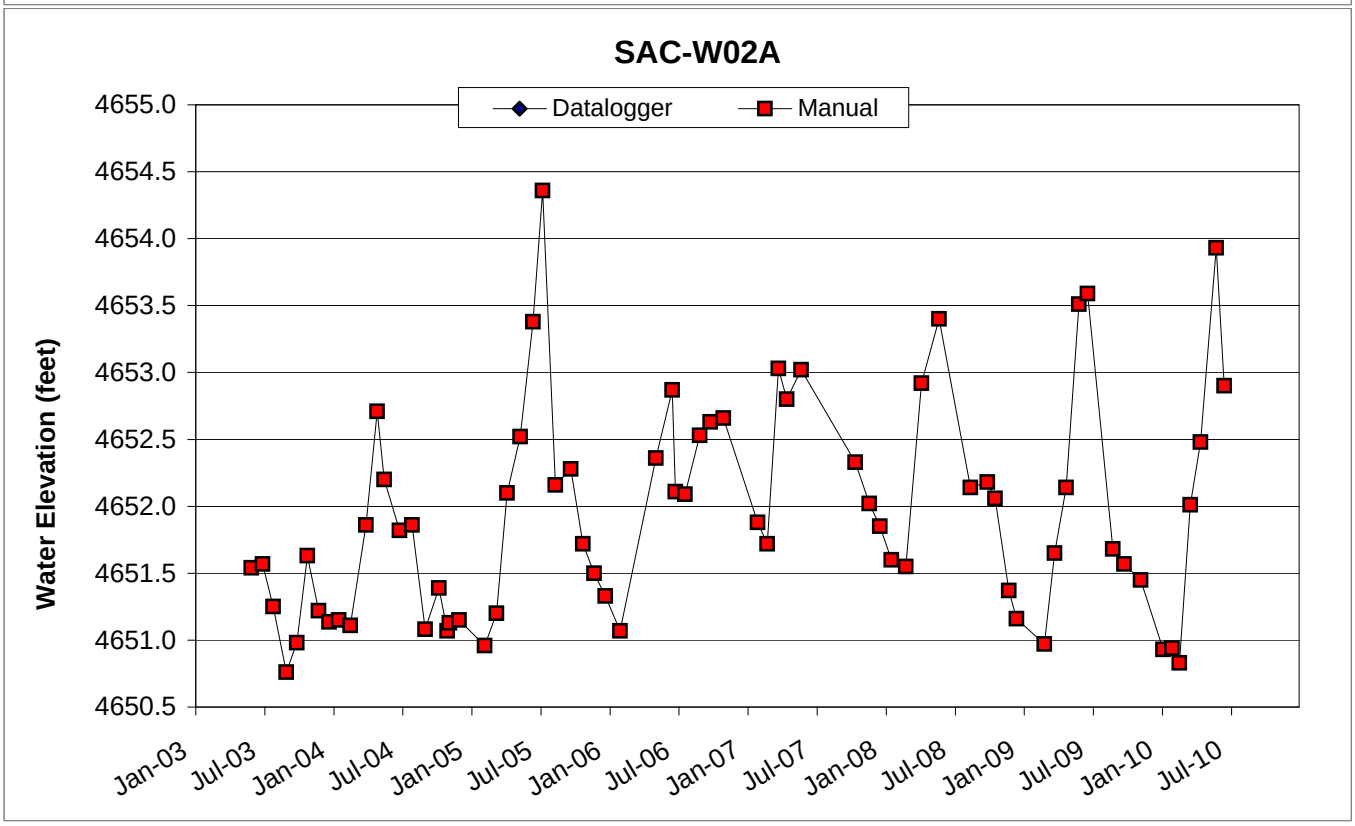

SAC-E02A
Datalogger
Manual
Water Elevation (feet)
4656.0
4655.0
4654.0
4653.0
4652.0
4651.0
4650.0
4649.0
4648.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

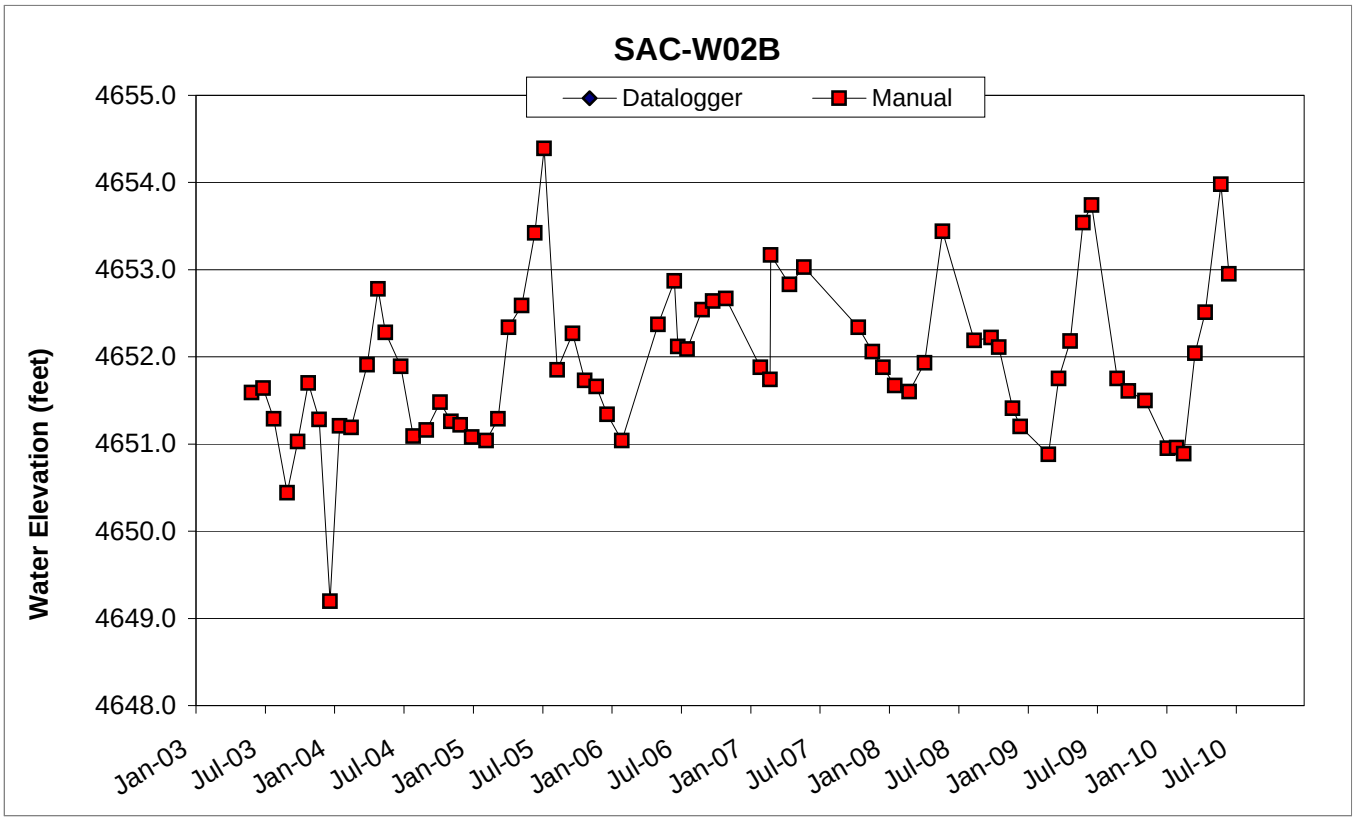

SAC-E03A
Datalogger
Manual
Water Elevation (feet)
4655.0
4654.0
4653.0
4652.0
4651.0
4650.0
4649.0
4648.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

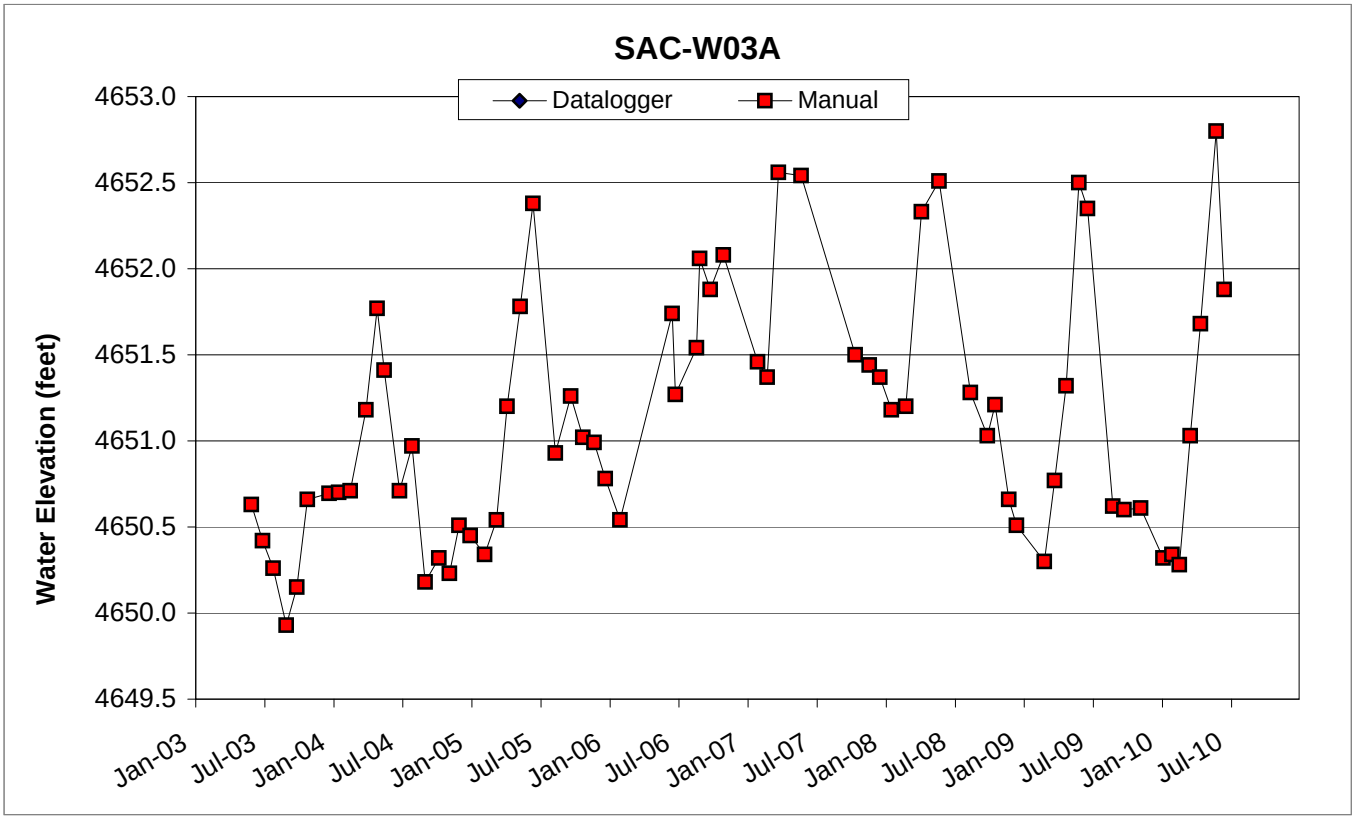

SAC-E03B
Datalogger
Manual
Water Elevation (feet)
4655.0
4654.0
4653.0
4652.0
4651.0
4650.0
4649.0
4648.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

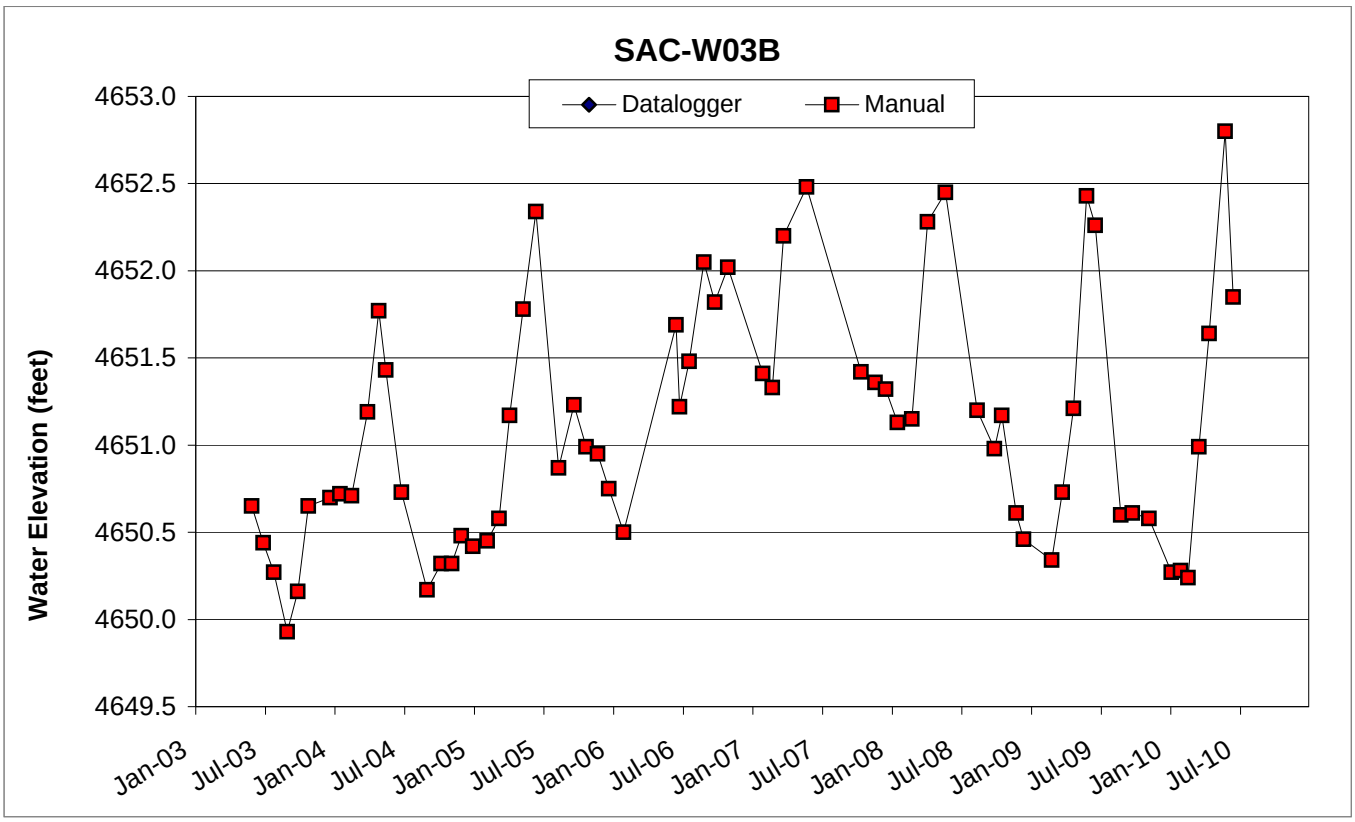

SAC-W01A
Datalogger
Manual
Water Elevation (feet)
4657.0
4656.5
4656.0
4655.5
4655.0
4654.5
4654.0
4653.5
4653.0
4652.5
4652.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

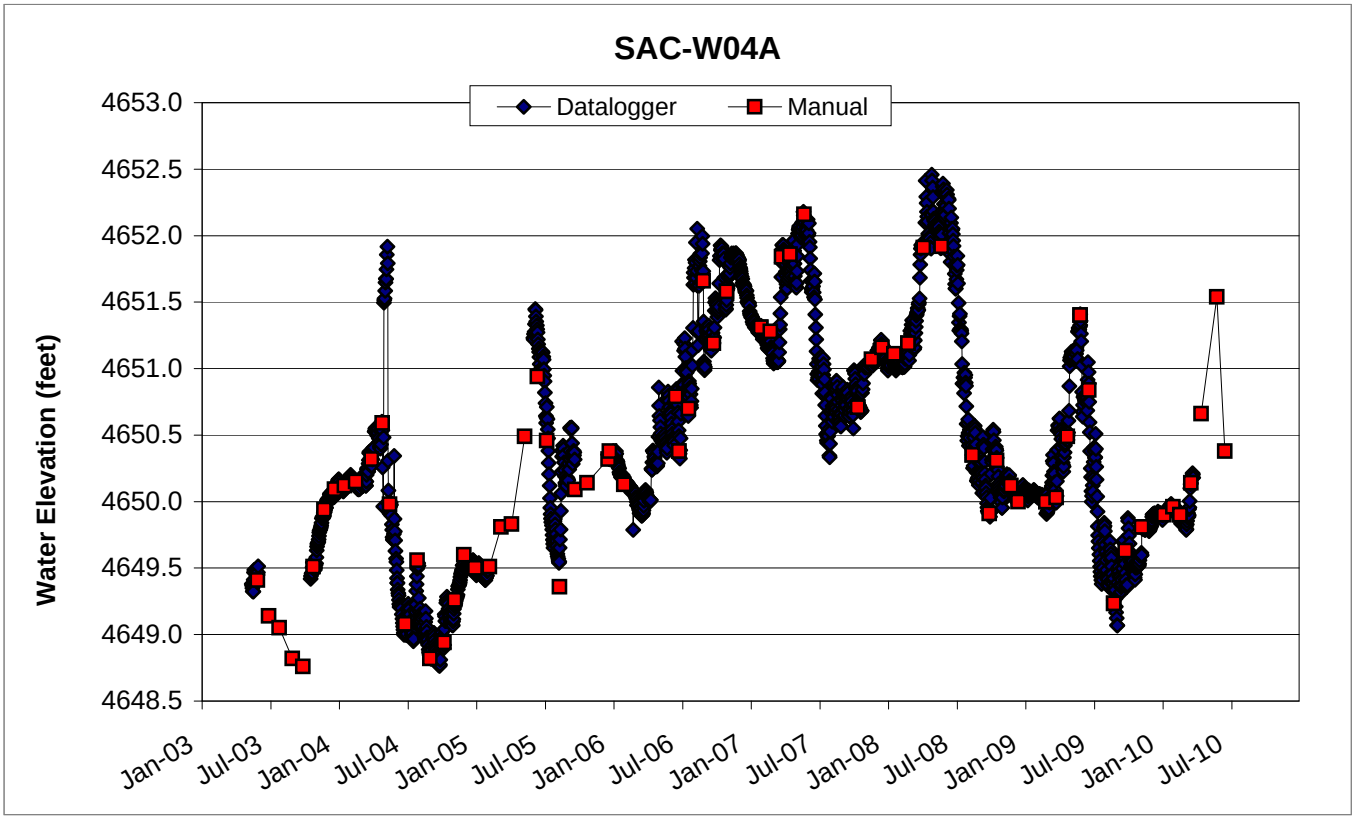

SAC-W01B
Datalogger
Manual
Water Elevation (feet)
4656.0
4655.5
4655.0
4654.5
4654.0
4653.5
4653.0
4652.5
4652.0
4651.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

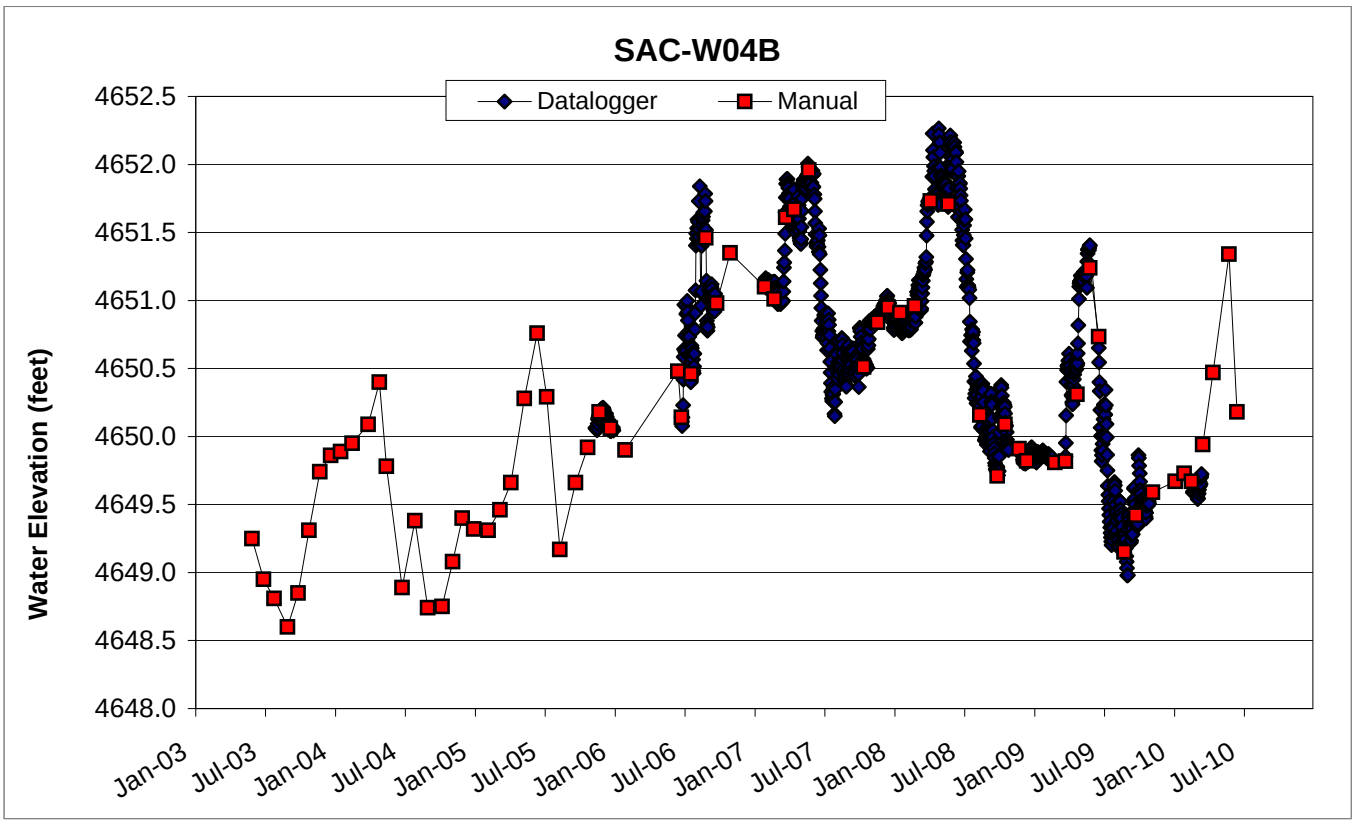

SAC-W02A
Datalogger
Manual
Water Elevation (feet)
4655.0
4654.5
4654.0
4653.5
4653.0
4652.5
4652.0
4651.5
4651.0
4650.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

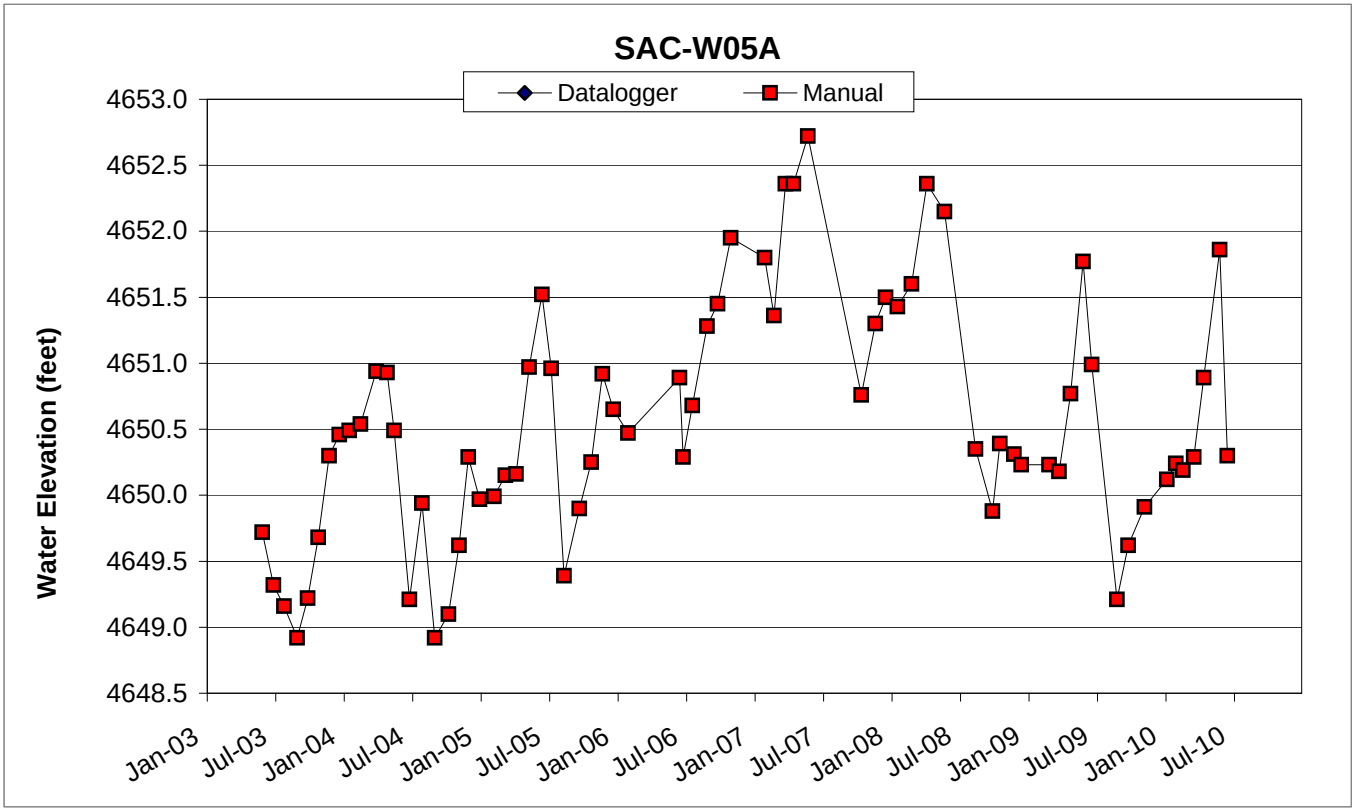

SAC-W02B
Datalogger
Manual
Water Elevation (feet)
4655.0
4654.0
4653.0
4652.0
4651.0
4650.0
4649.0
4648.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

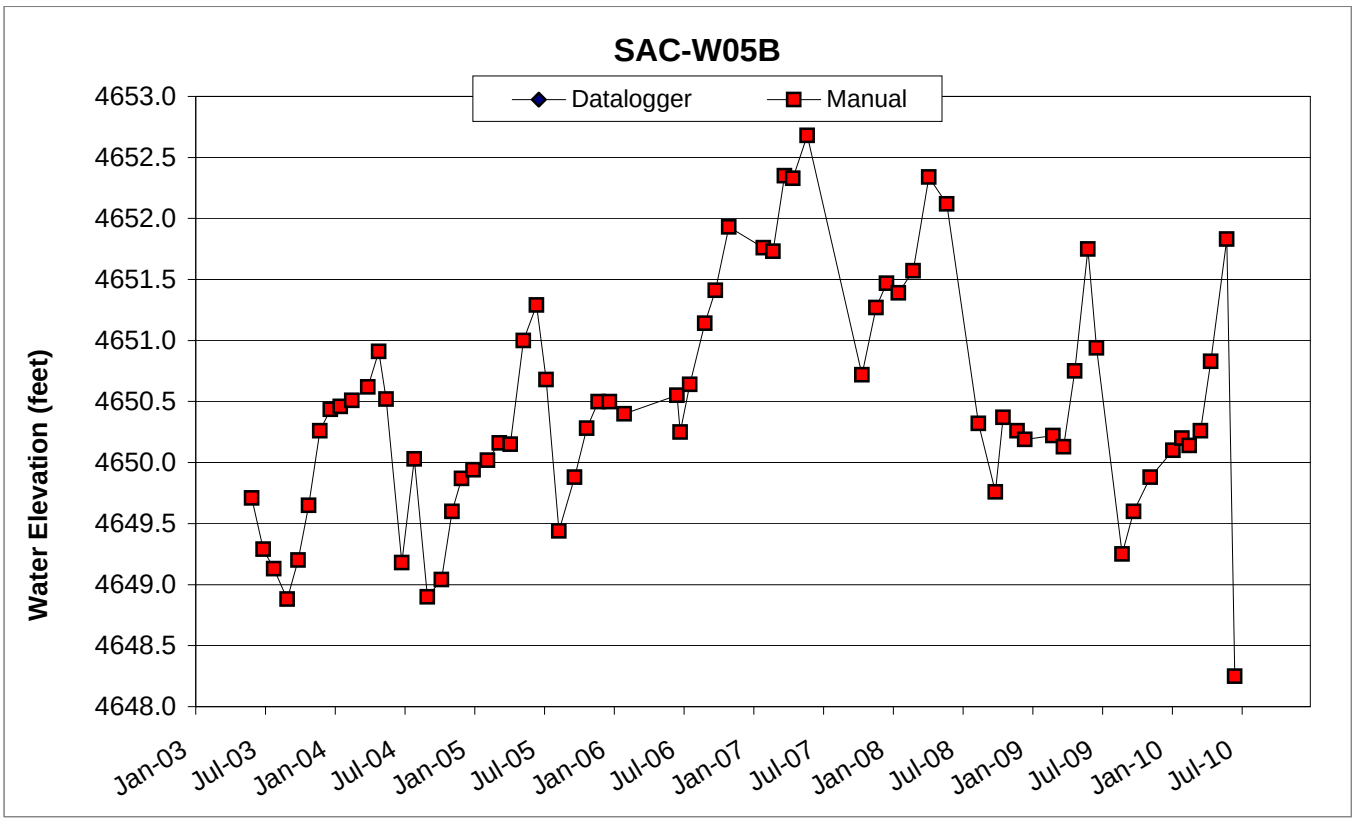

SAC-W03A
Datalogger
Manual
Water Elevation (feet)
4653.0
4652.5
4652.0
4651.5
4651.0
4650.5
4650.0
4649.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

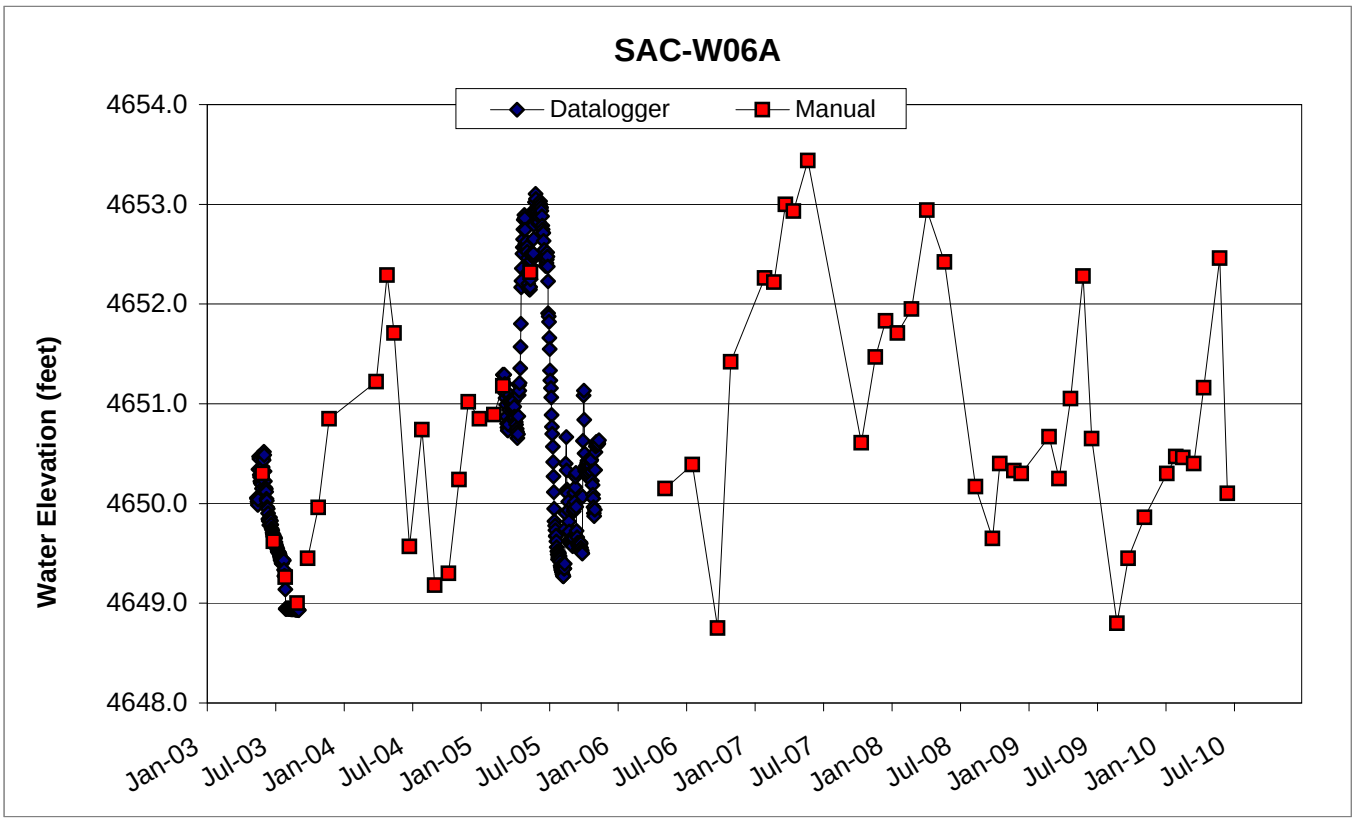

SAC-W03B
Datalogger
Manual
Water Elevation (feet)
4653.0
4652.5
4652.0
4651.5
4651.0
4650.5
4650.0
4649.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

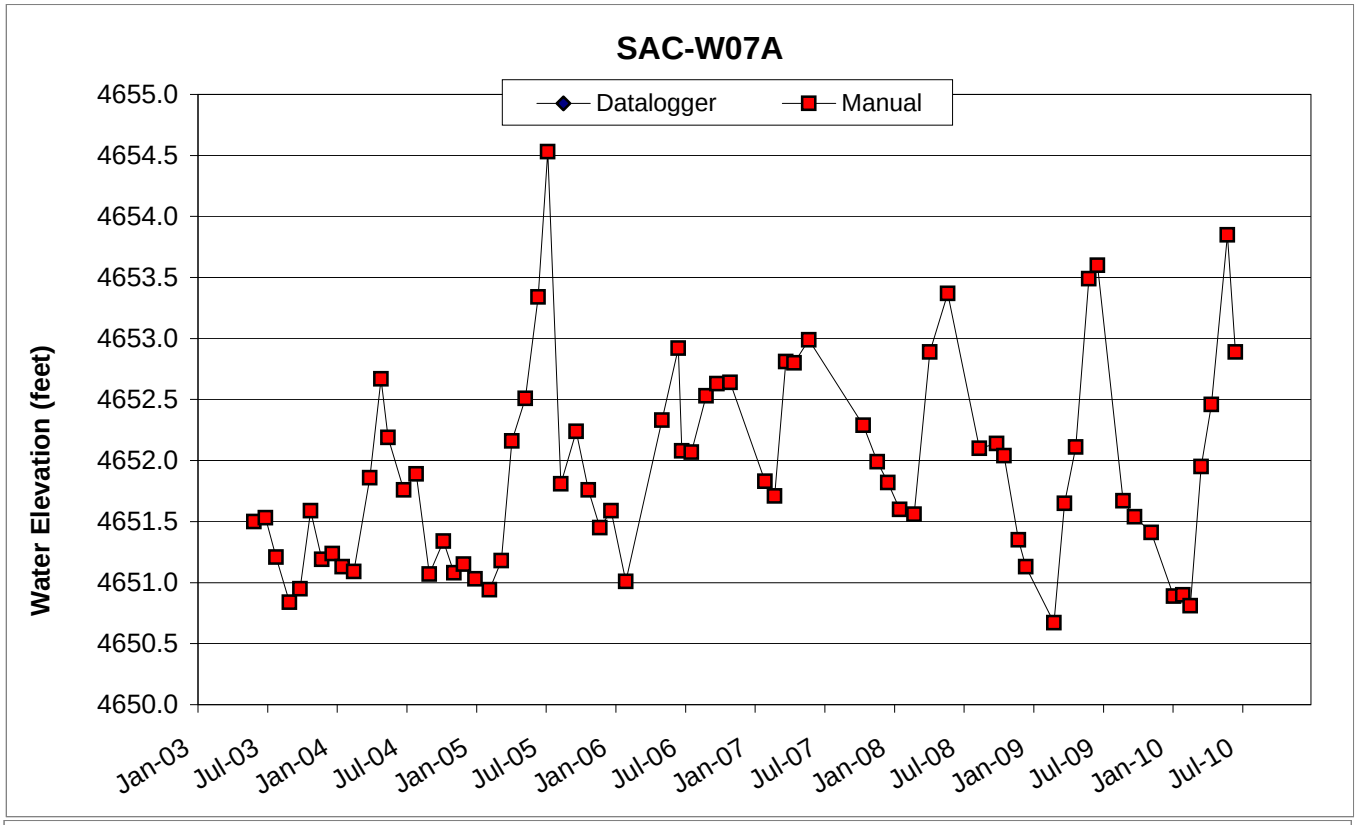

SAC-W04A
Datalogger
Manual
Water Elevation (feet)
4653.0
4652.5
4652.0
4651.5
4651.0
4650.5
4650.0
4649.5
4649.0
4648.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

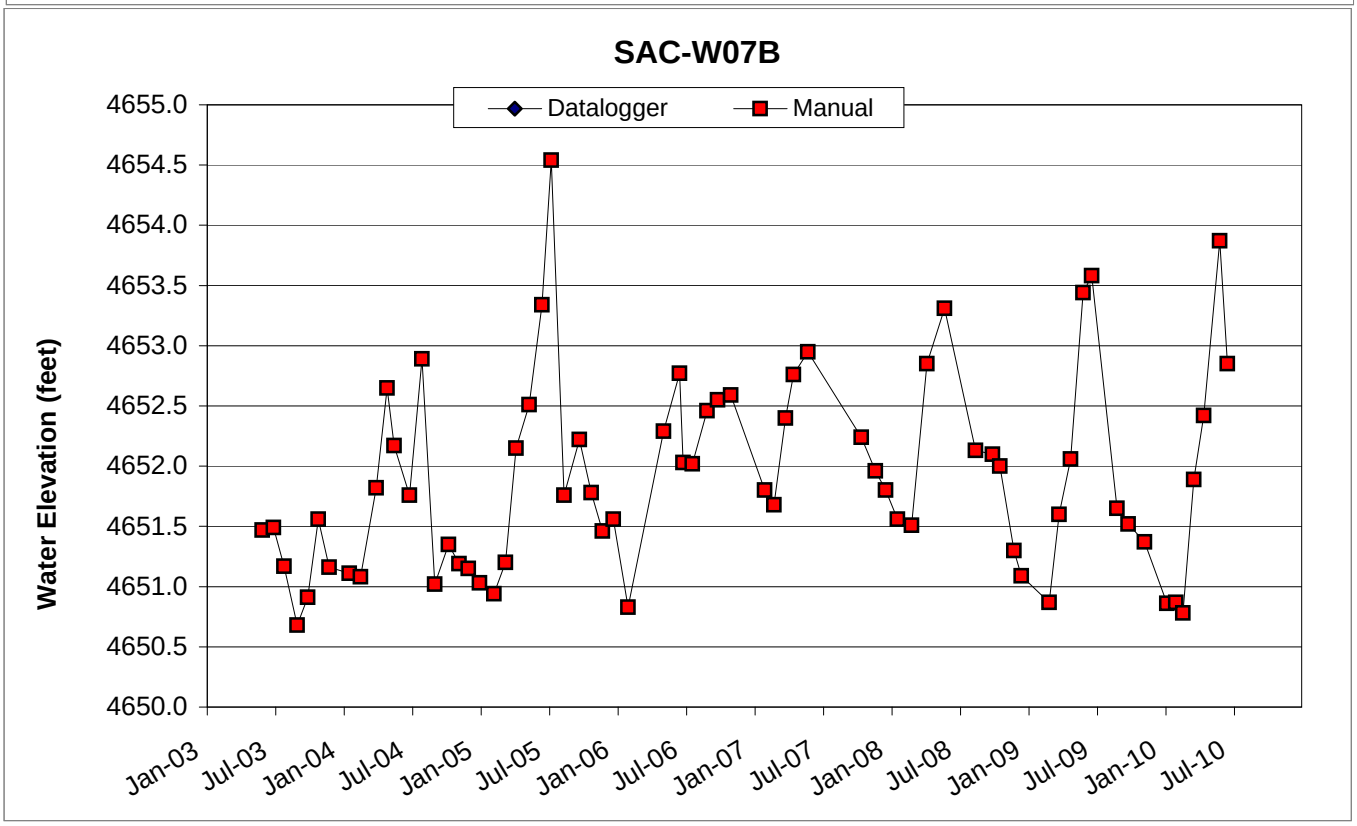

SAC-W04B
Datalogger
Manual
Water Elevation (feet)
4652.5
4652.0
4651.5
4651.0
4650.5
4650.0
4649.5
4649.0
4648.5
4648.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

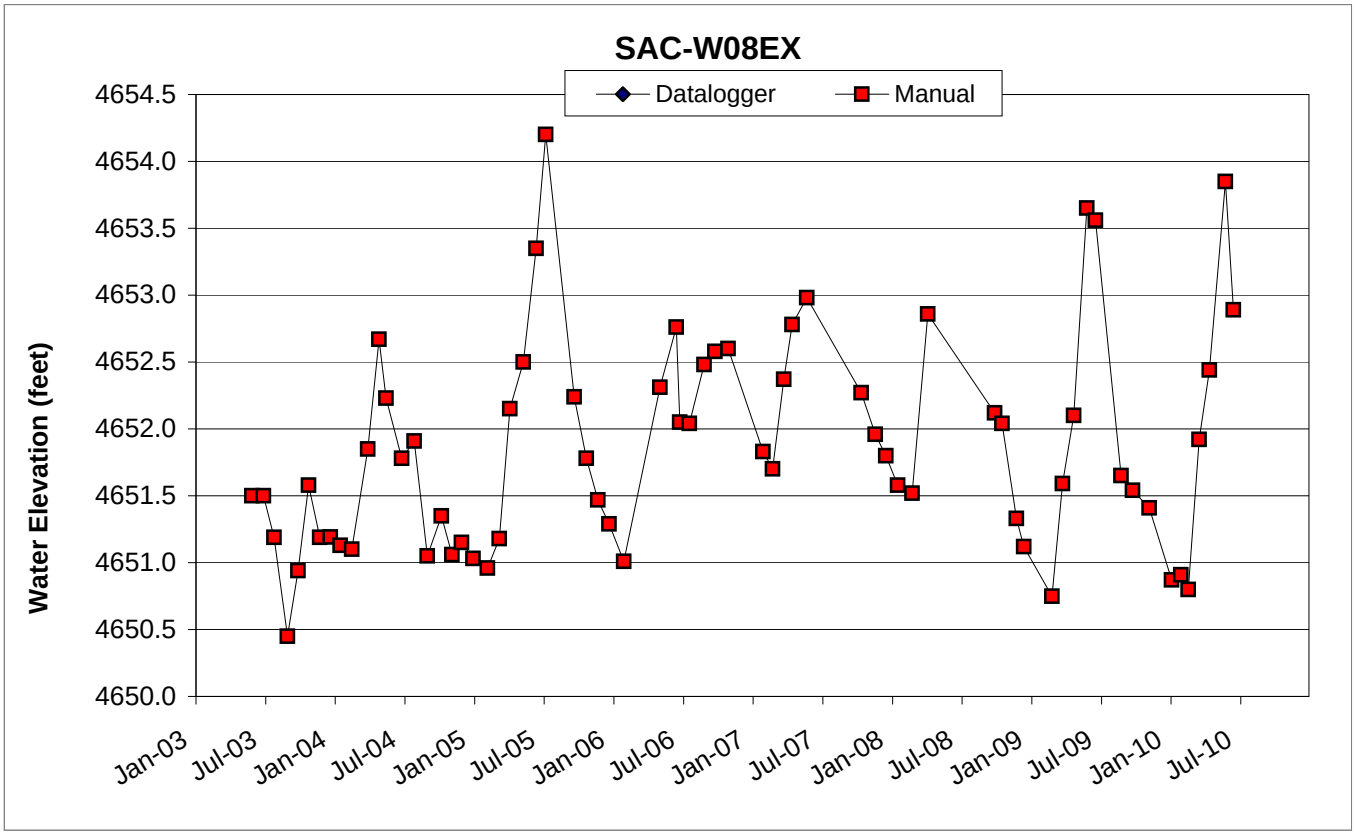

SAC-W05A
Datalogger
Manual
Water Elevation (feet)
4653.0
4652.5
4652.0
4651.5
4651.0
4650.5
4650.0
4649.5
4649.0
4648.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

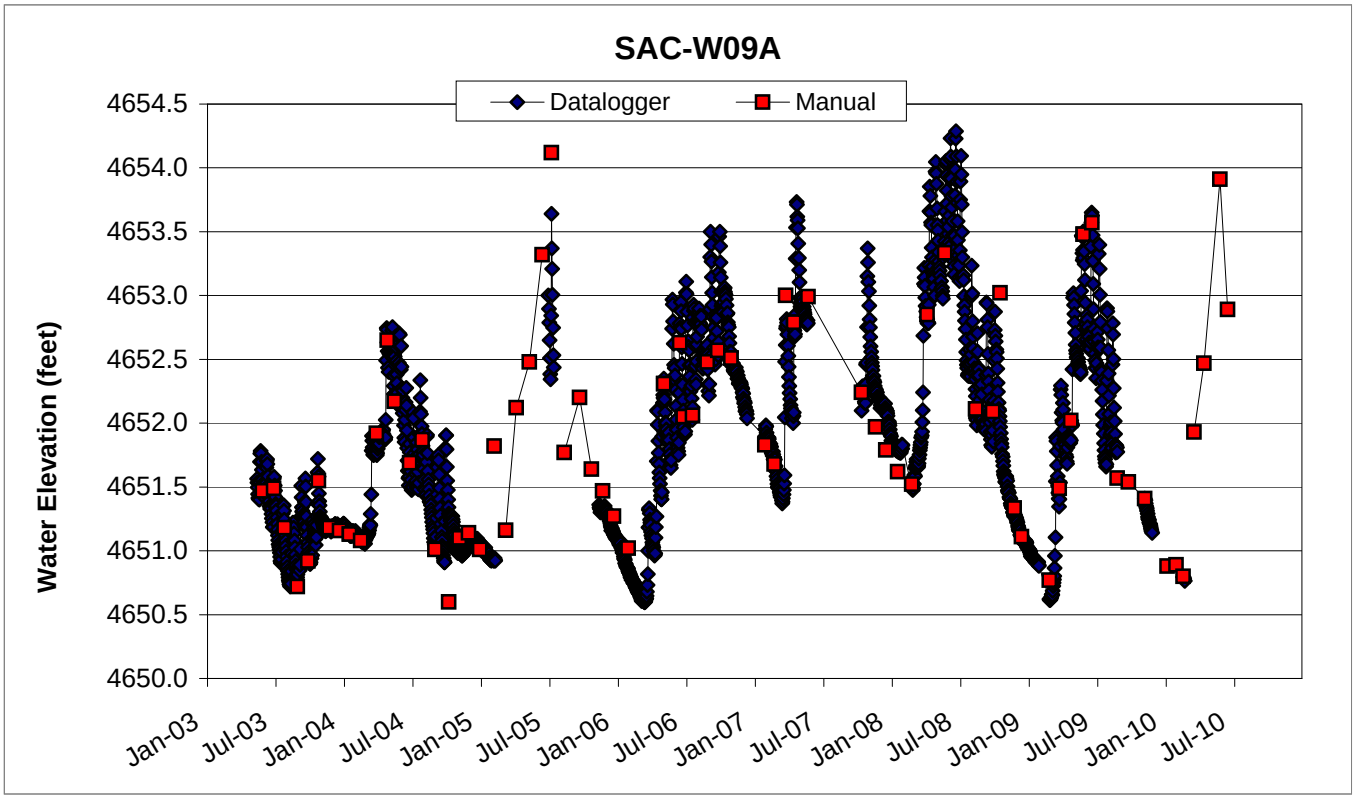

SAC-W05B
Datalogger
Manual
Water Elevation (feet)
4653.0
4652.5
4652.0
4651.5
4651.0
4650.5
4650.0
4649.5
4649.0
4648.5
4648.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

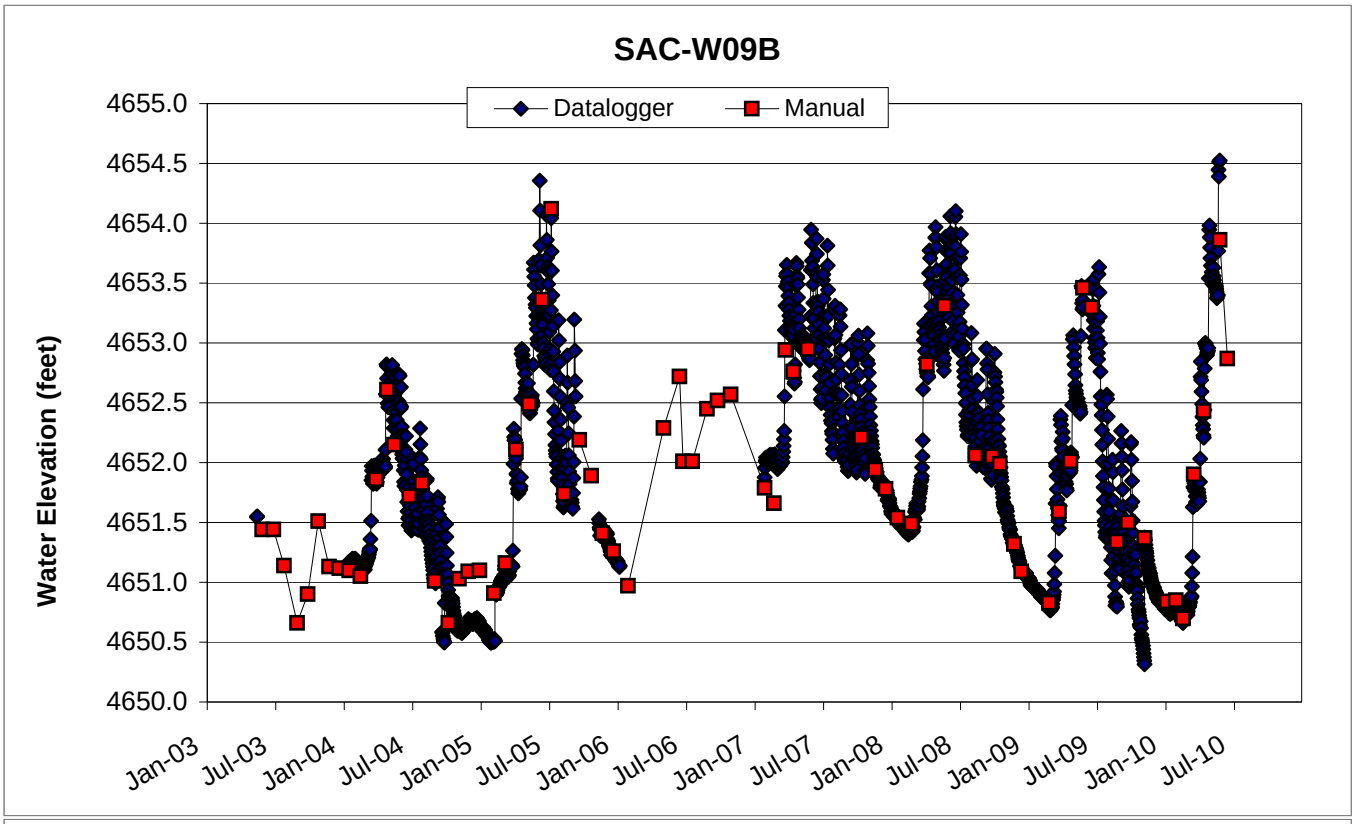

SAC-W06A
Datalogger
Manual
Water Elevation (feet)
4654.0
4653.0
4652.0
4651.0
4650.0
4649.0
4648.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

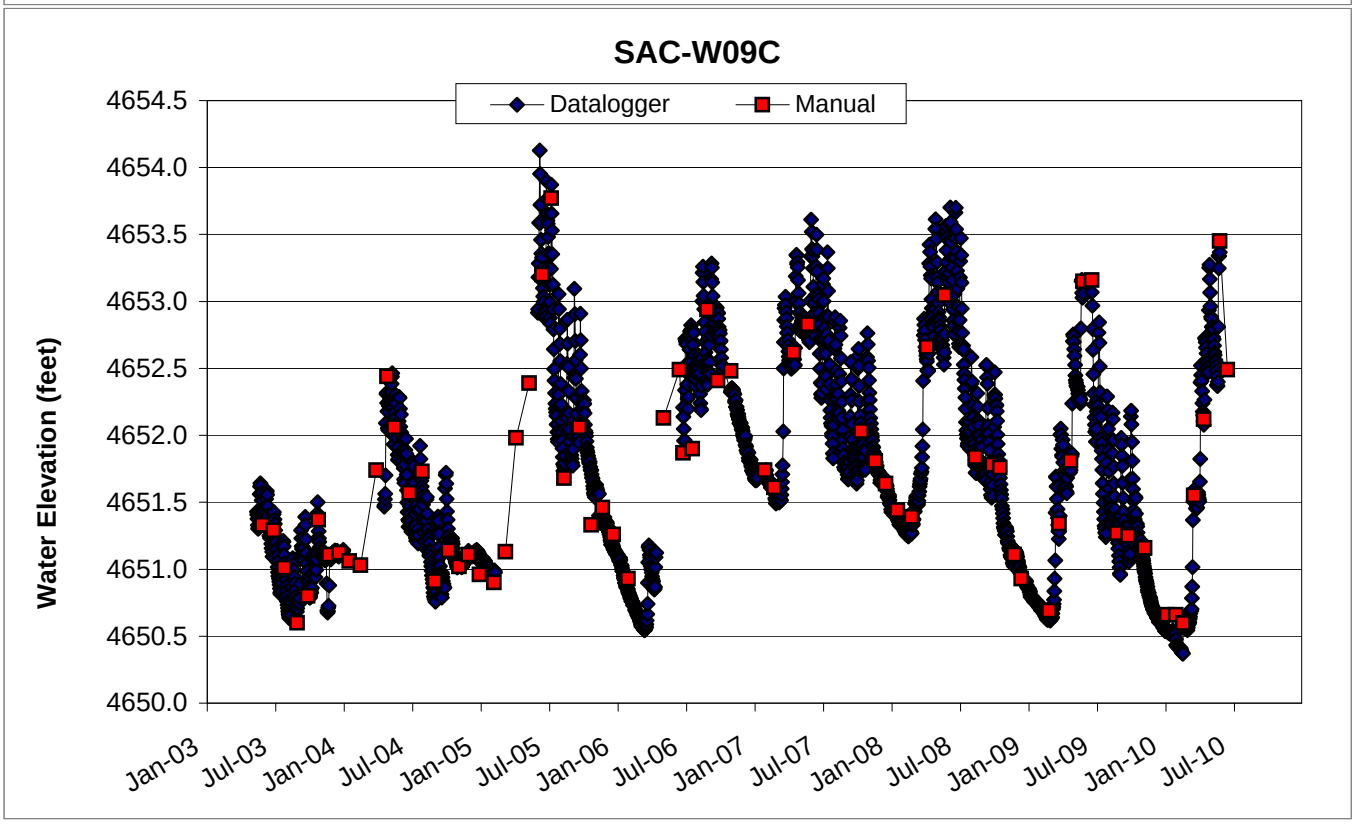

SAC-W07A
Datalogger
Manual
Water Elevation (feet)
4655.0
4654.5
4654.0
4653.5
4653.0
4652.5
4652.0
4651.5
4651.0
4650.5
4650.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

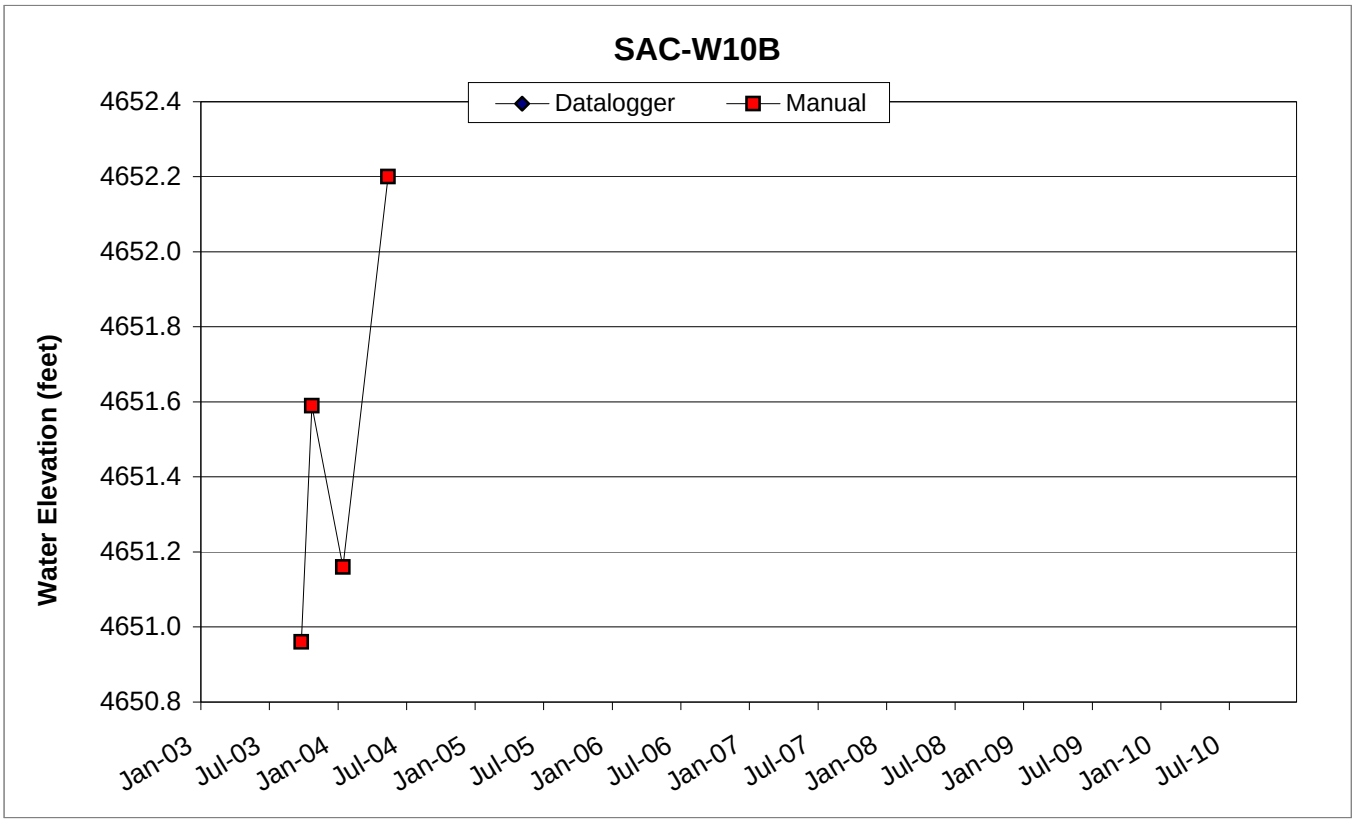

SAC-W07B
Datalogger
Manual
Water Elevation (feet)
4655.0
4654.5
4654.0
4653.5
4653.0
4652.5
4652.0
4651.5
4651.0
4650.5
4650.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

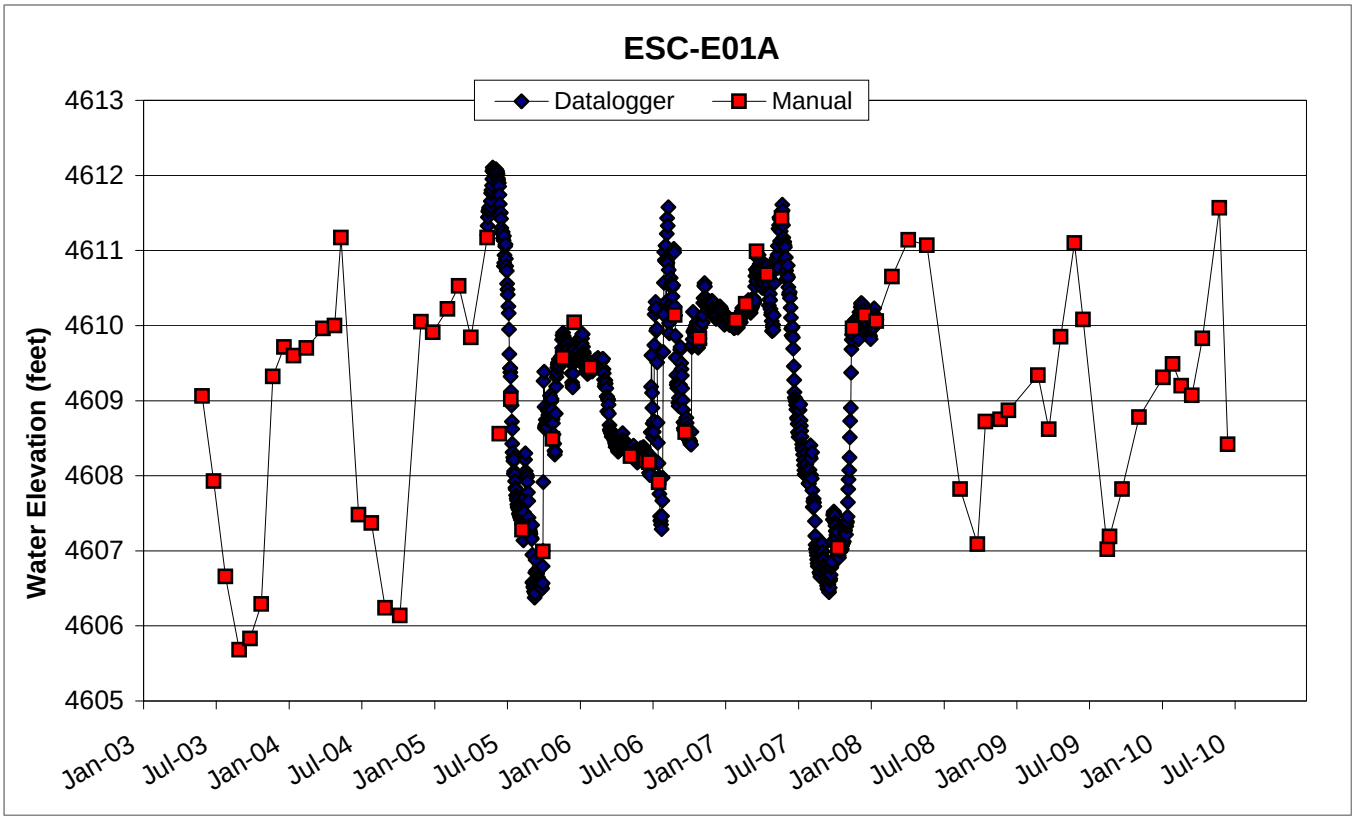

SAC-W08EX
Datalogger
Manual
Water Elevation (feet)
4654.5
4654.0
4653.5
4653.0
4652.5
4652.0
4651.5
4651.0
4650.5
4650.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

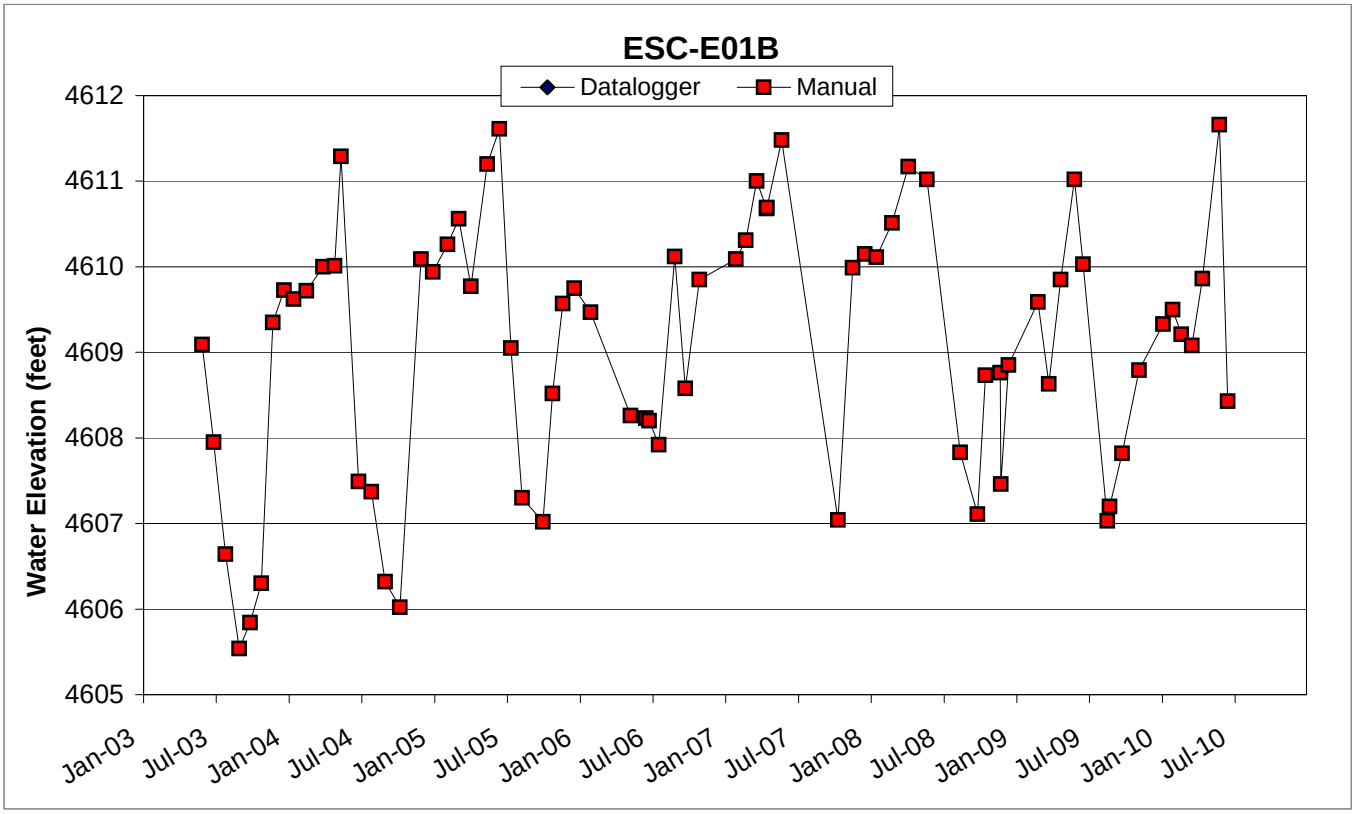

SAC-W09A
Datalogger
Manual
Water Elevation (feet)
4654.5
4654.0
4653.5
4653.0
4652.5
4652.0
4651.5
4651.0
4650.5
4650.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

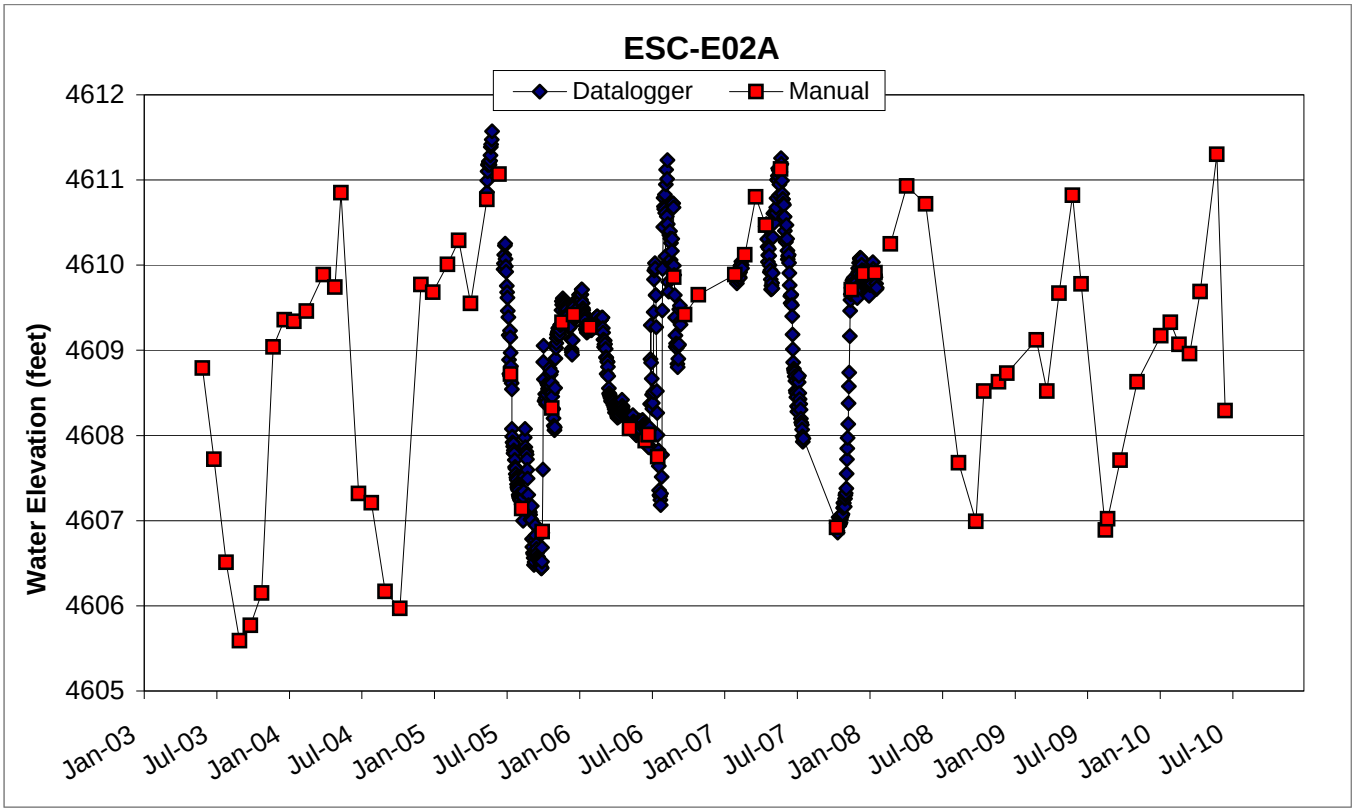

SAC-W09B
Datalogger
Manual
Water Elevation (feet)
4655.0
4654.5
4654.0
4653.5
4653.0
4652.5
4652.0
4651.5
4651.0
4650.5
4650.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

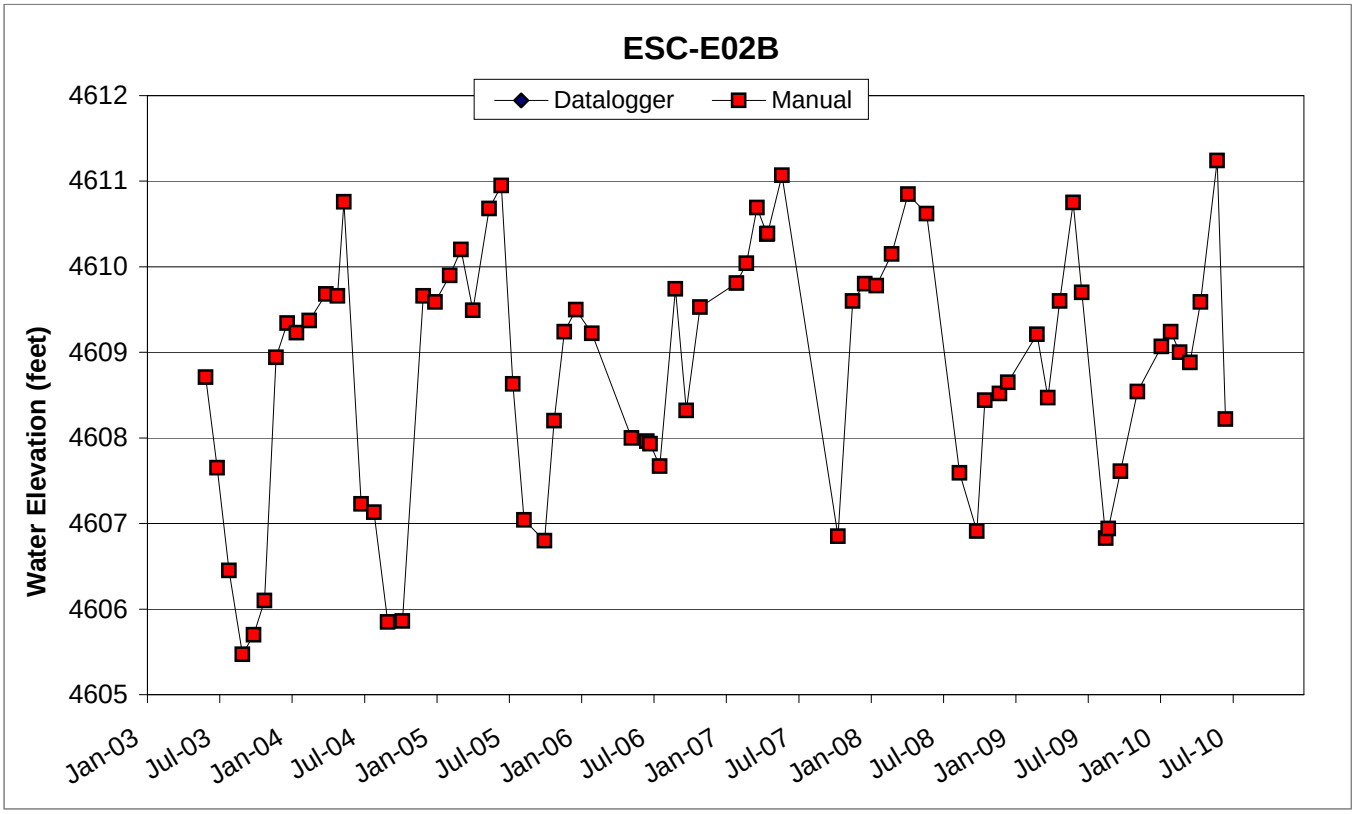

SAC-W09C
Datalogger
Manual
Water Elevation (feet)
4654.5
4654.0
4653.5
4653.0
4652.5
4652.0
4651.5
4651.0
4650.5
4650.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

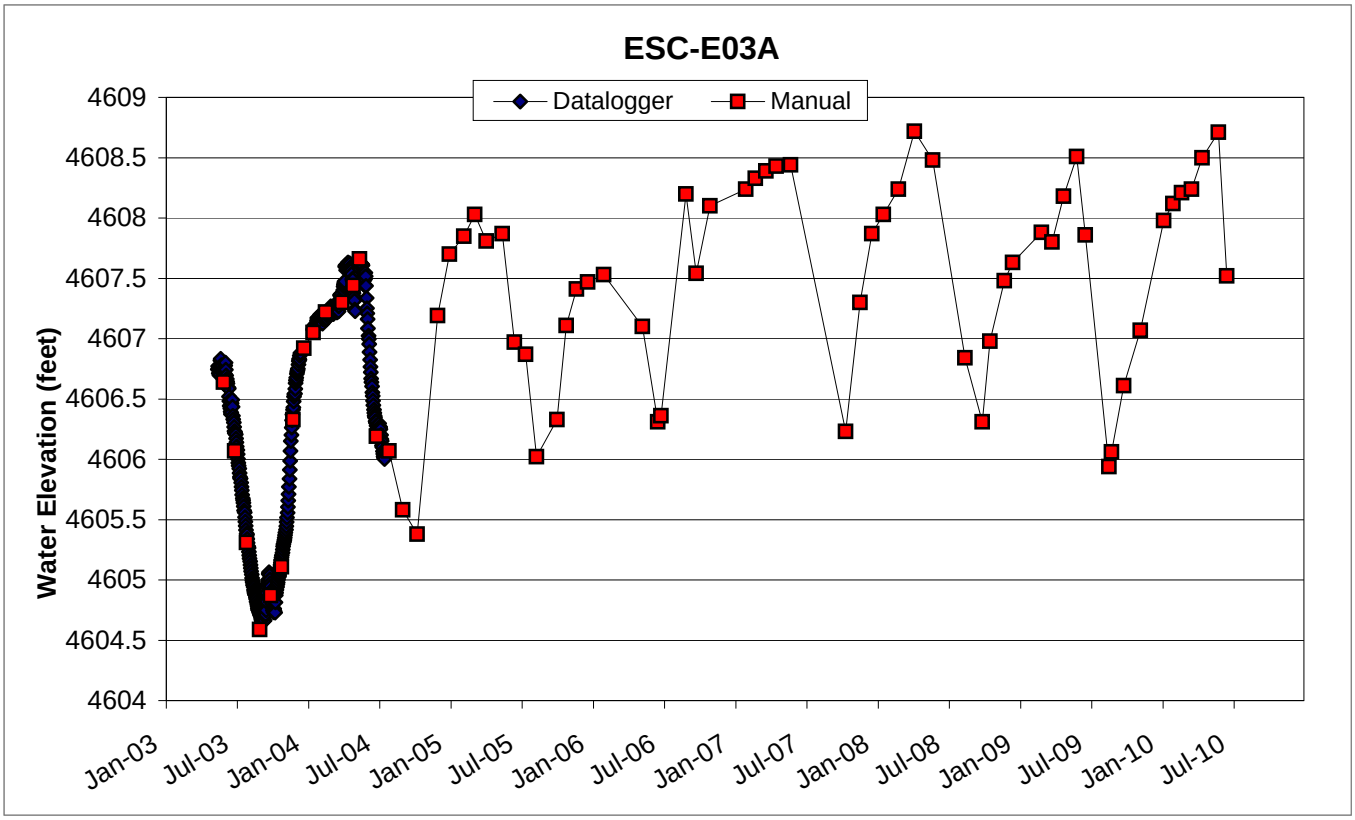

SAC-W10B
Datalogger
Manual
Water Elevation (feet)
4652.4
4652.2
4652.0
4651.8
4651.6
4651.4
4651.2
4651.0
4650.8
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

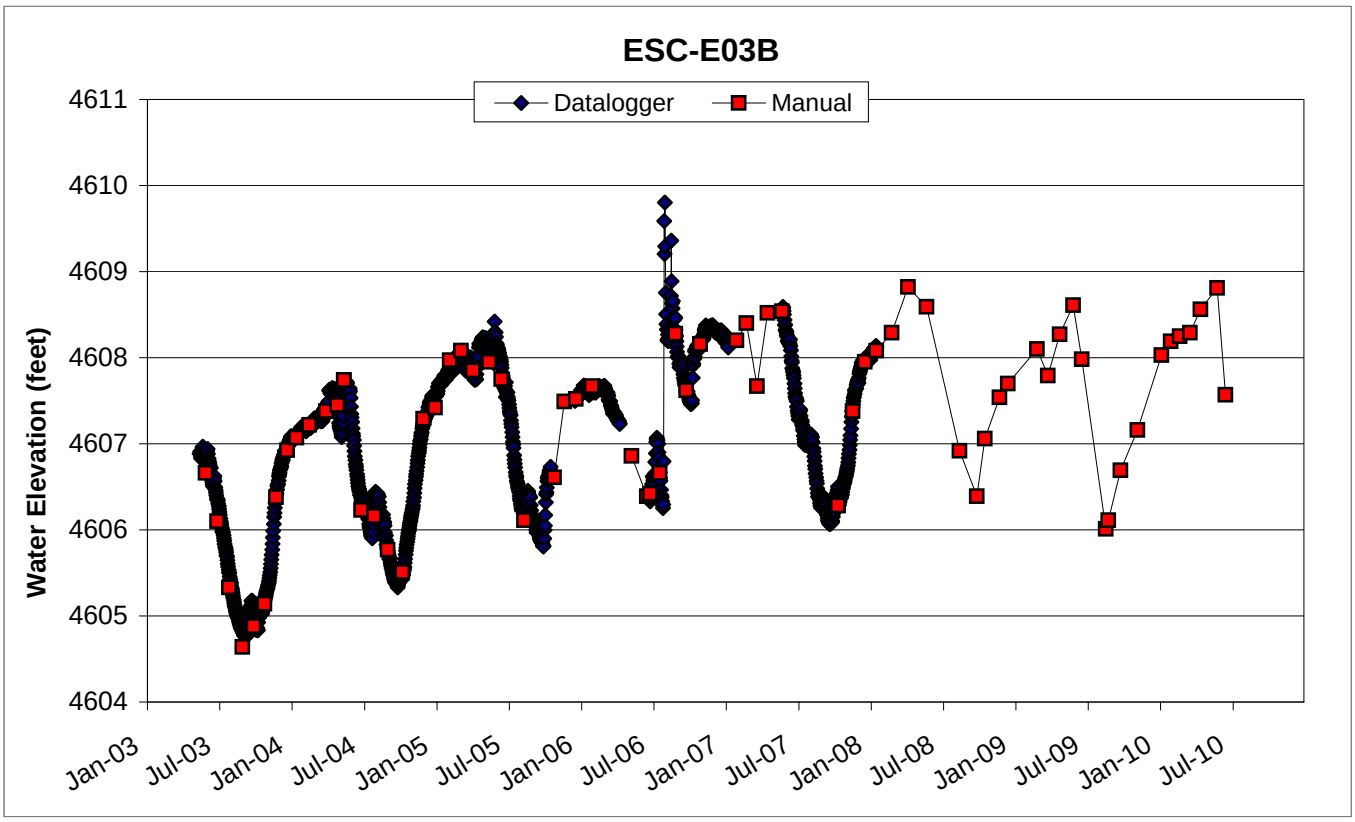

ESC-E01A
Datalogger
Manual
Water Elevation (feet)
4613
4612
4611
4610
4609
4608
4607
4606
4605
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

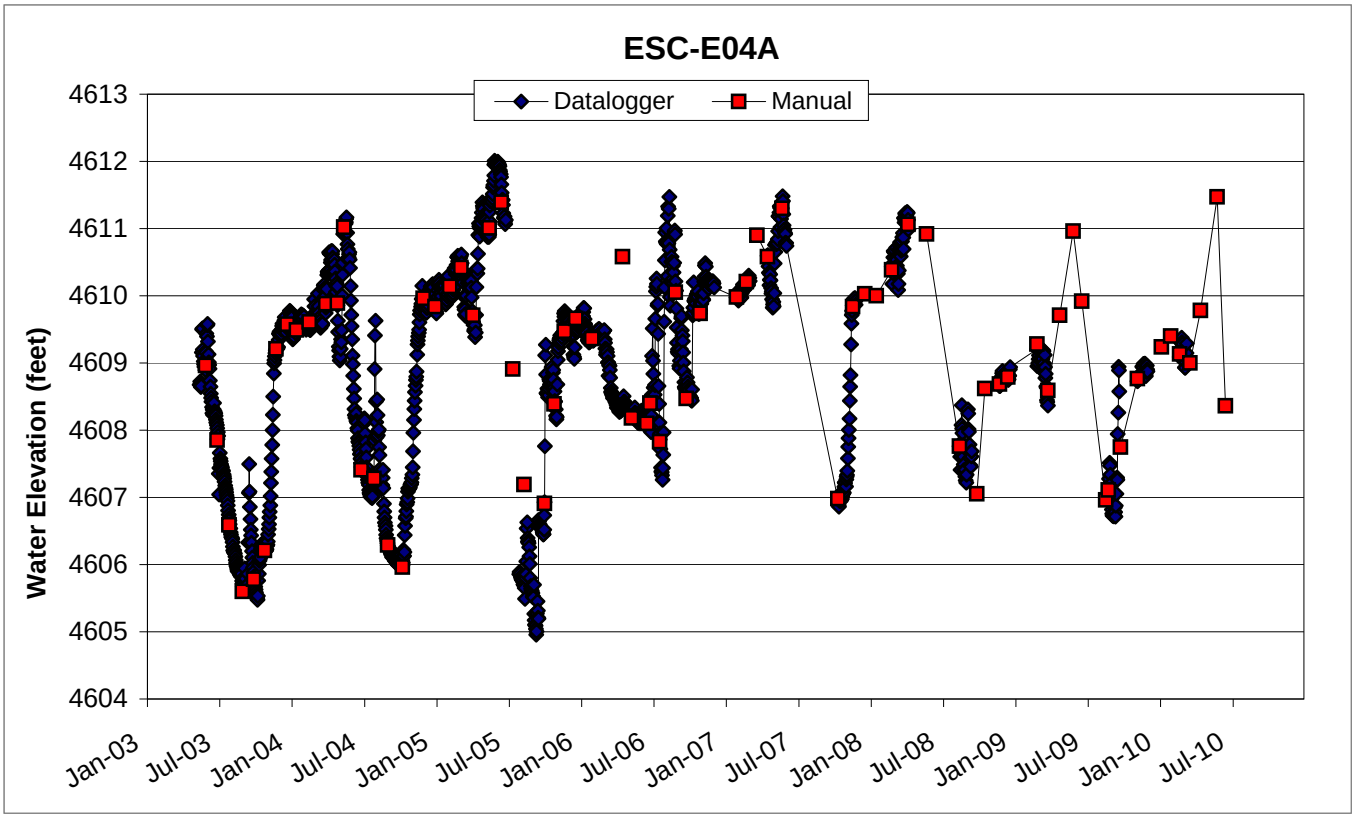

ESC-E01B
Datalogger
Manual
Water Elevation (feet)
4612
4611
4610
4609
4608
4607
4606
4605
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

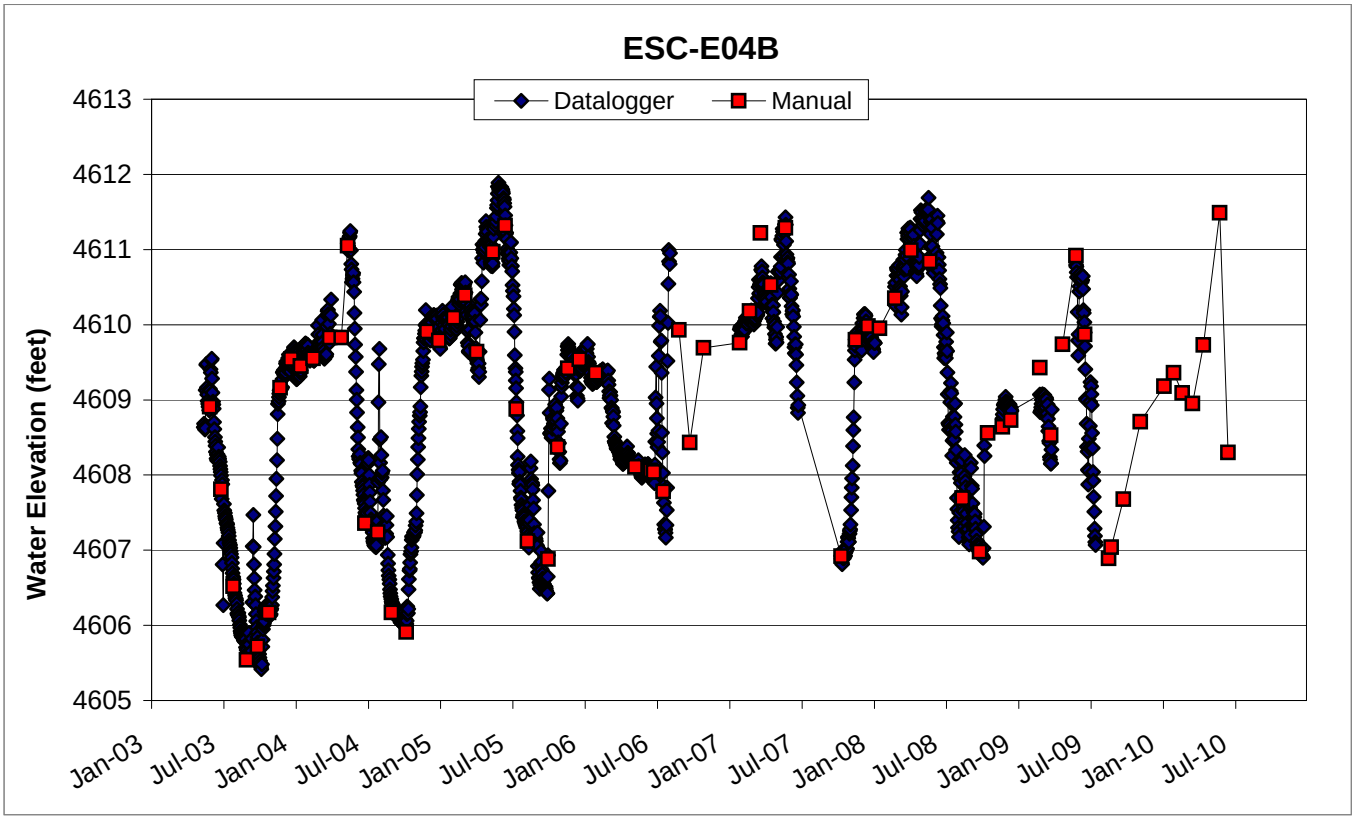

ESC-E02A
Datalogger
Manual
Water Elevation (feet)
4612
4611
4610
4609
4608
4607
4606
4605
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

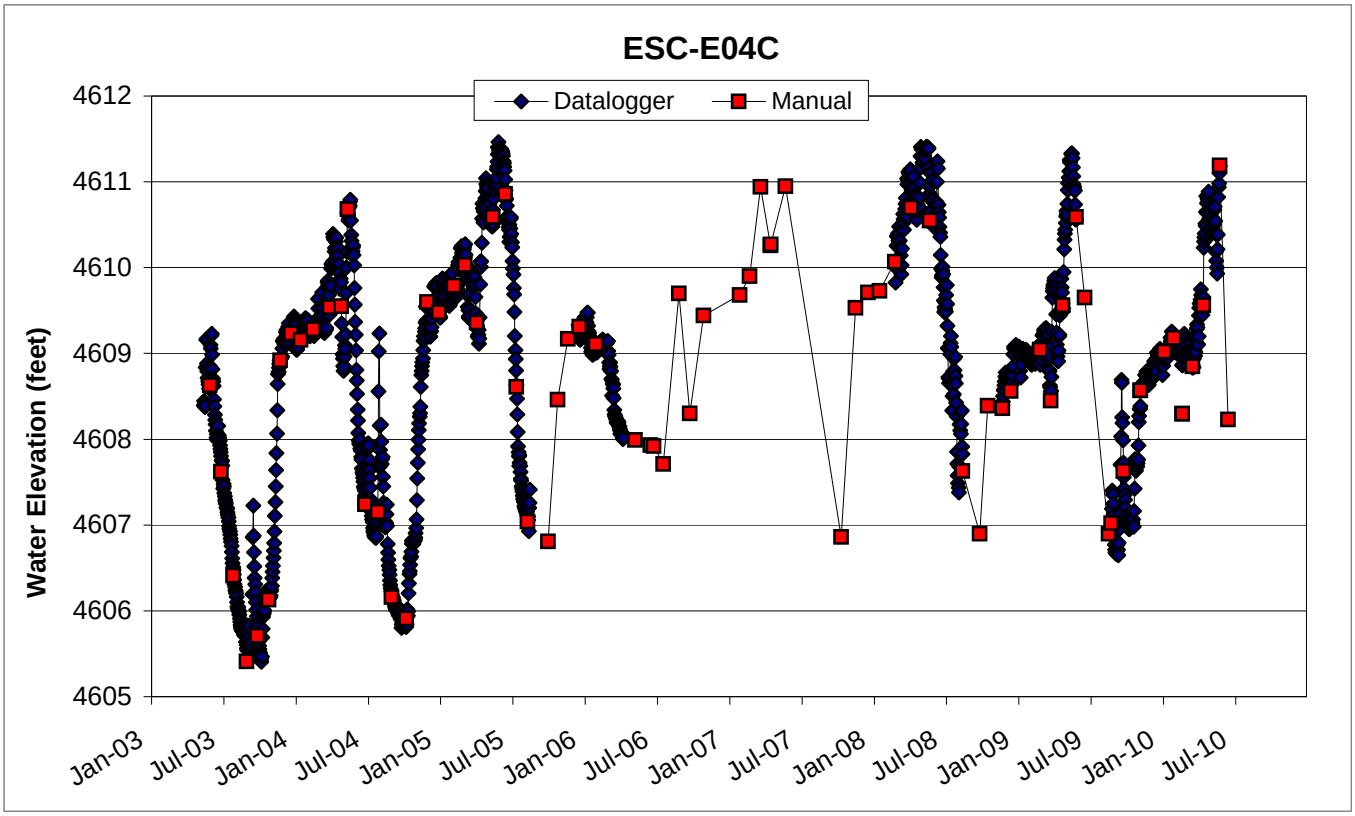

ESC-E02B
Datalogger
Manual
Water Elevation (feet)
4612
4611
4610
4609
4608
4607
4606
4605
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

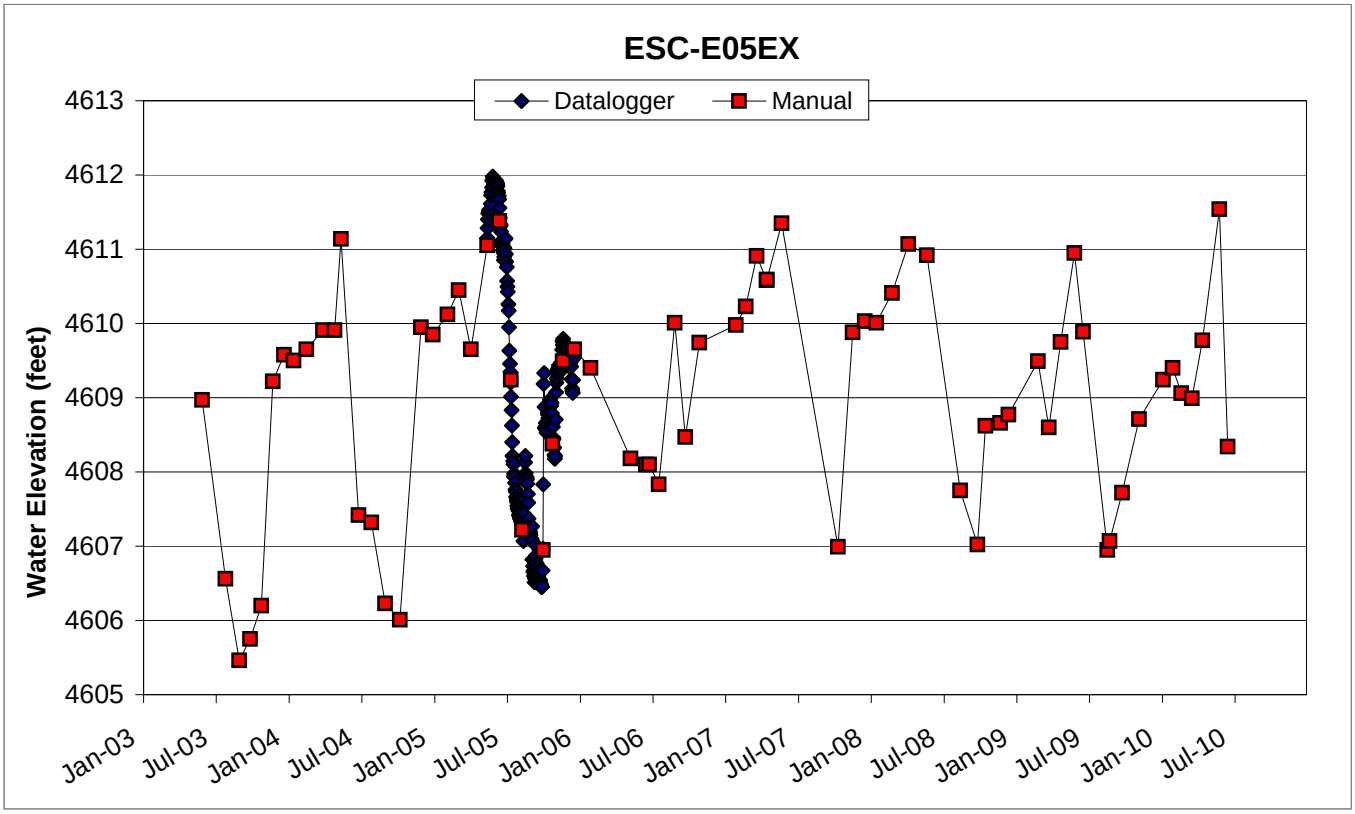

ESC-E03A
Datalogger
Manual
Water Elevation (feet)
4609
4608.5
4608
4607.5
4607
4606.5
4606
4605.5
4605
4604.5
4604
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

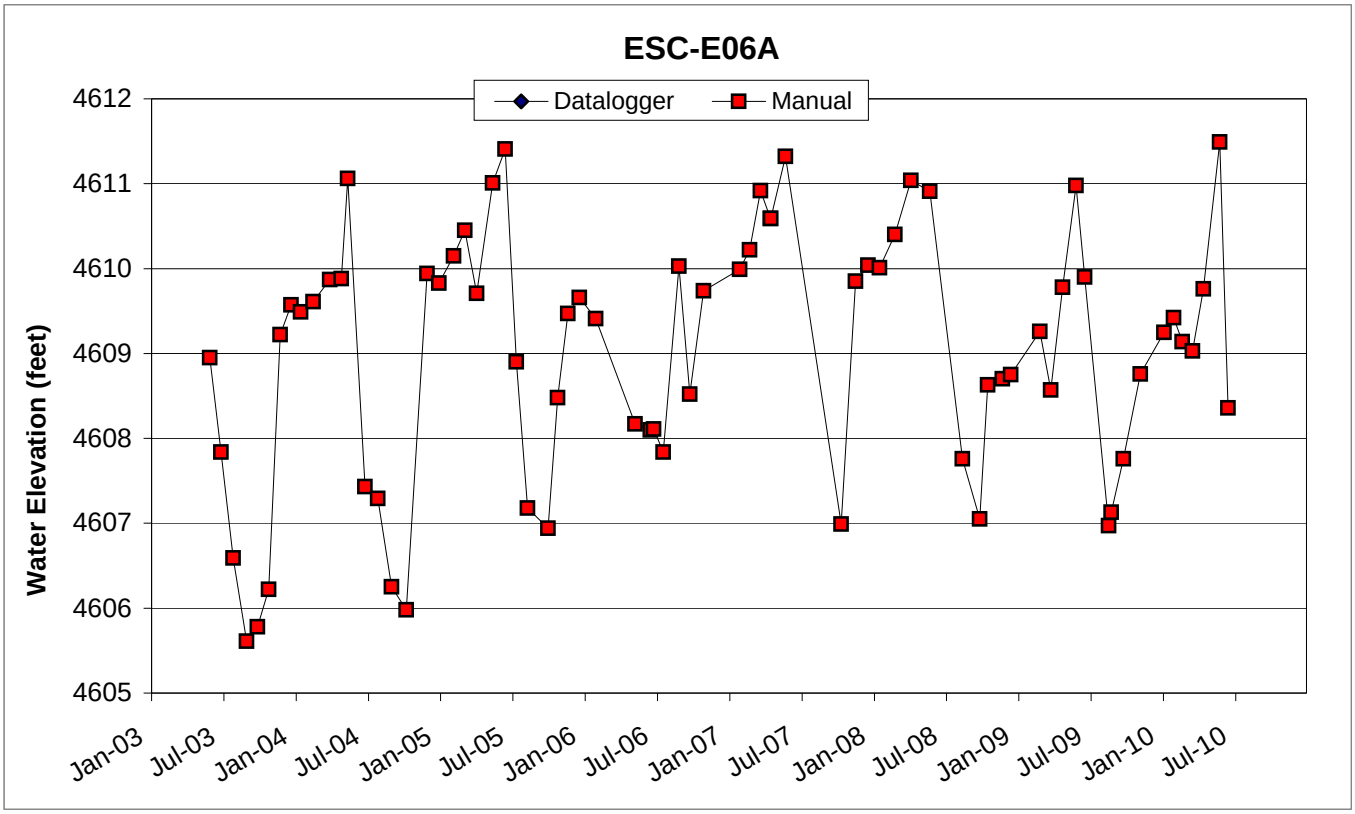

ESC-E03B
Datalogger
Manual
Water Elevation (feet)
4611
4610
4609
4608
4607
4606
4605
4604
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

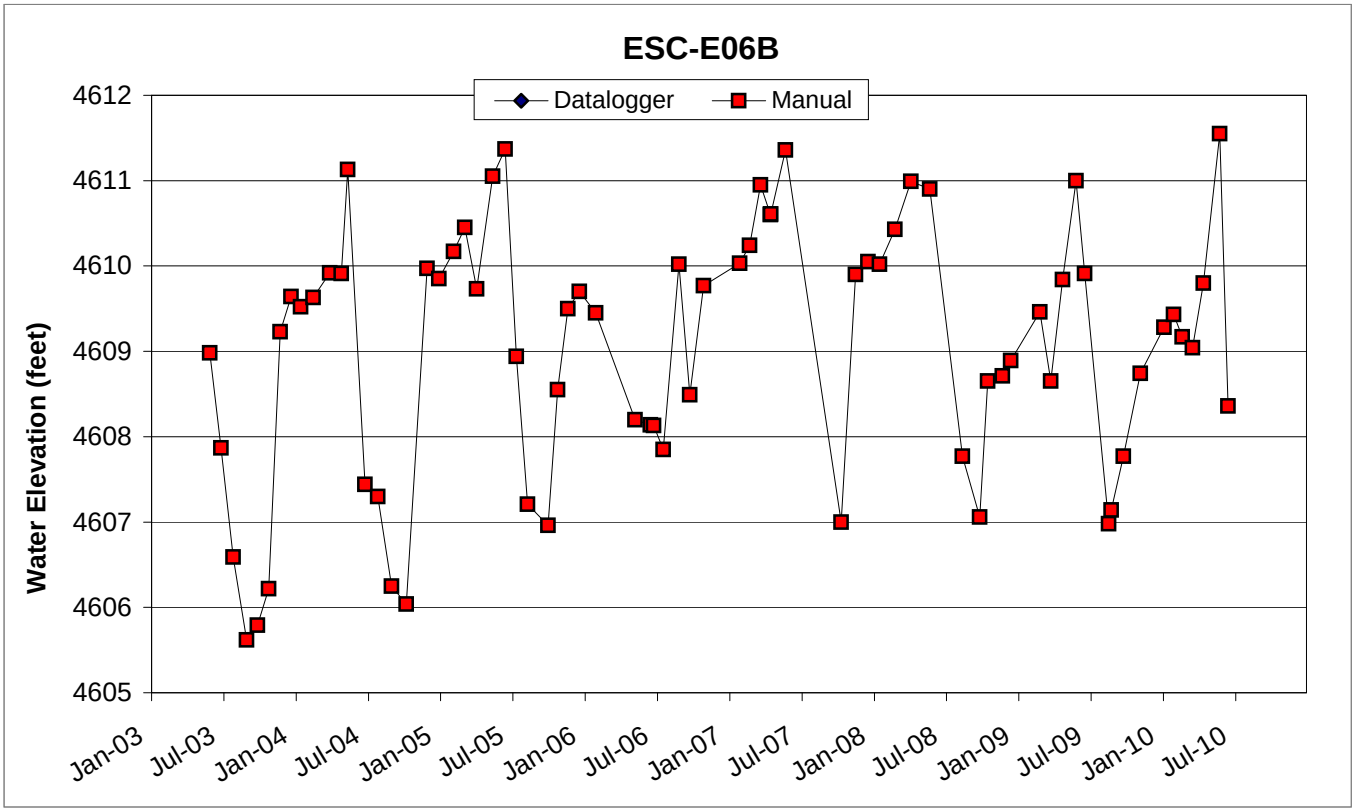

ESC-E04A
Datalogger
Manual
Water Elevation (feet)
4613
4612
4611
4610
4609
4608
4607
4606
4605
4604
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

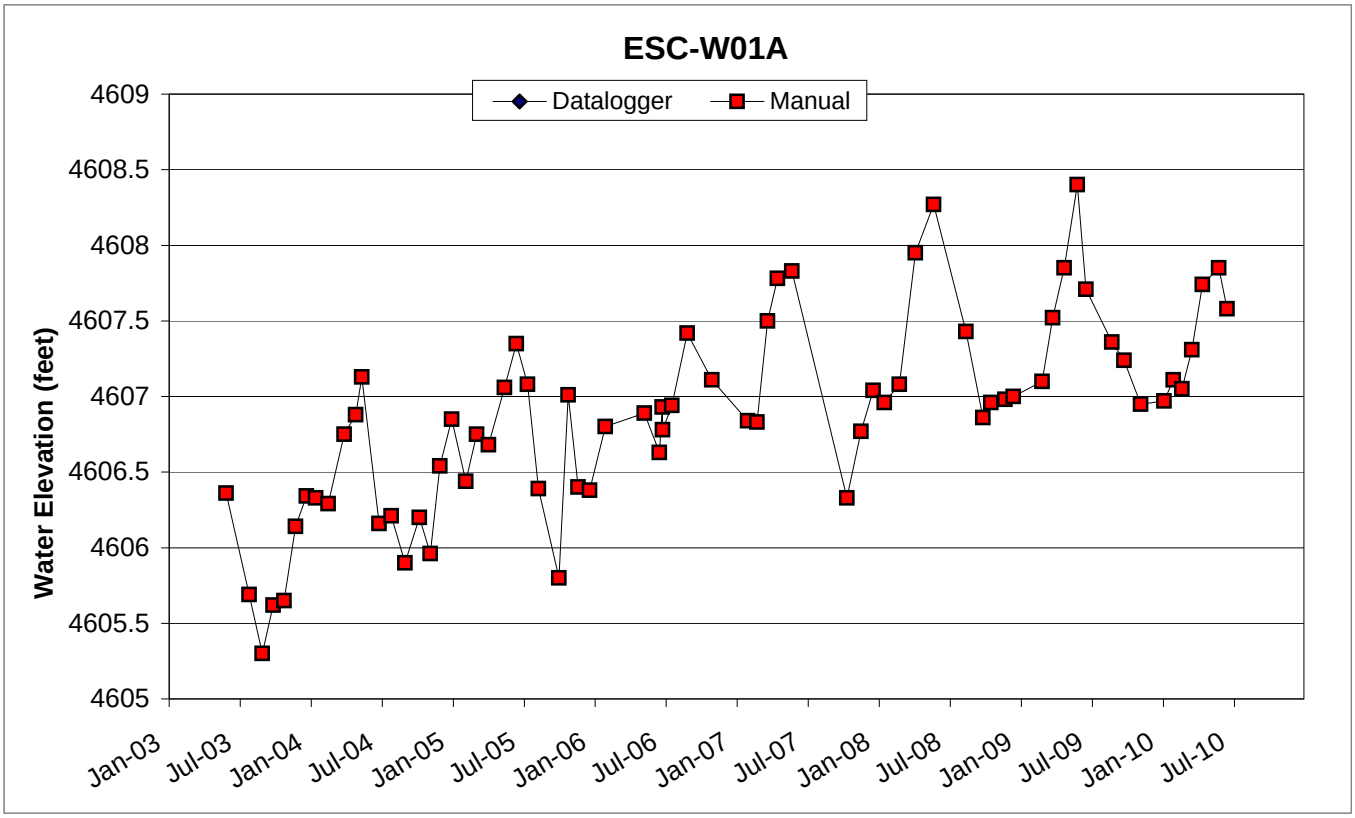

ESC-E04B
Datalogger
Manual
Water Elevation (feet)
4613
4612
4611
4610
4609
4608
4607
4606
4605
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

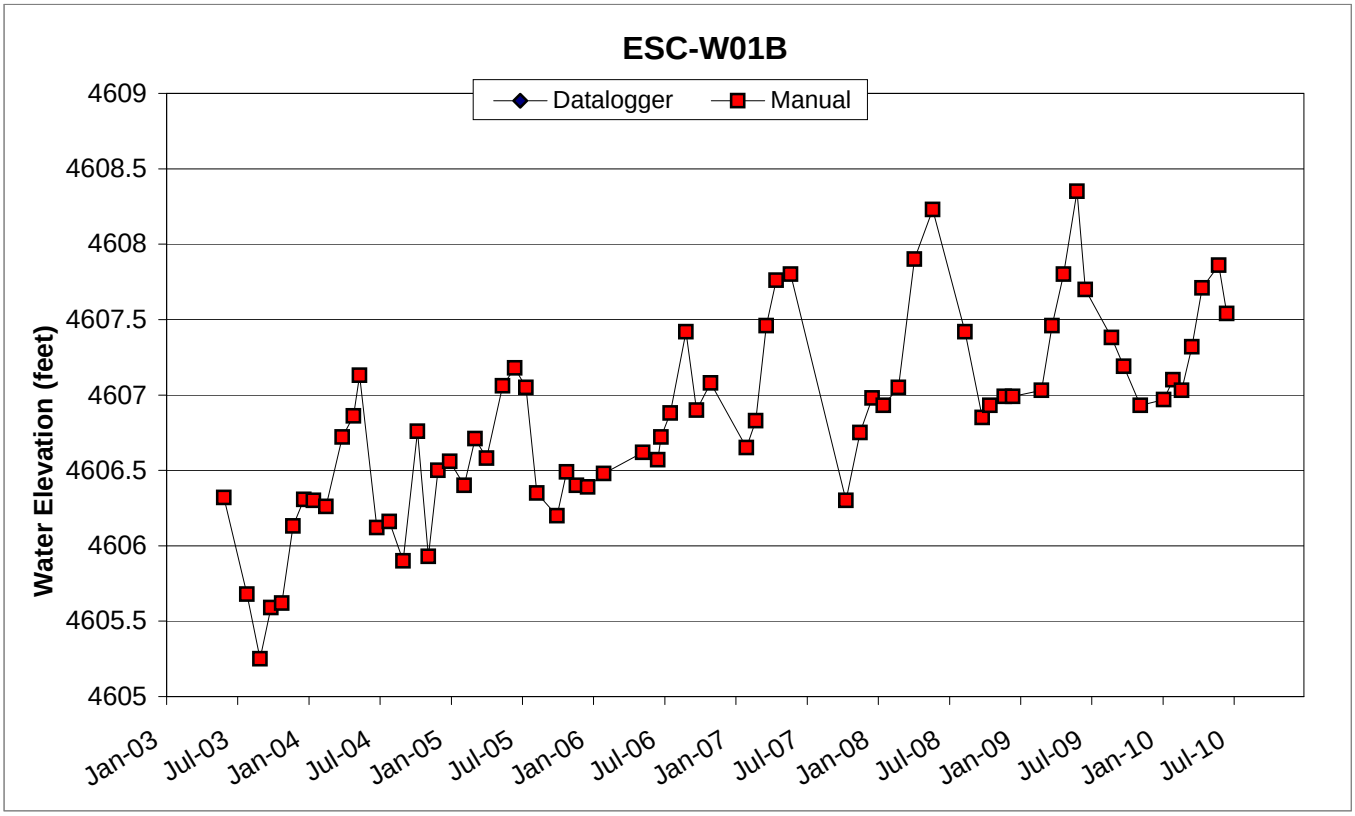

ESC-E04C
Datalogger
Manual
Water Elevation (feet)
4612
4611
4610
4609
4608
4607
4606
4605
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

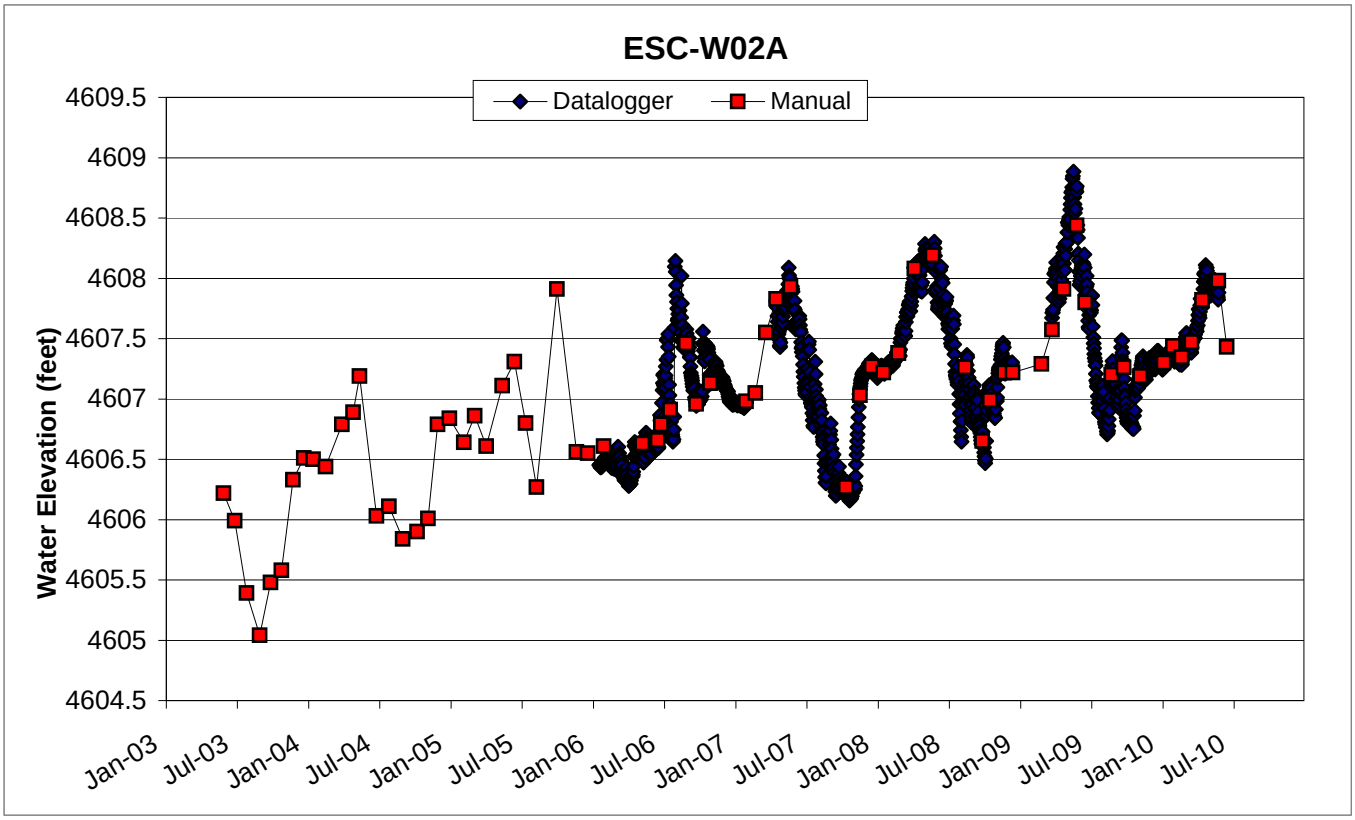

ESC-E05EX
Datalogger
Manual
Water Elevation (feet)
4613
4612
4611
4610
4609
4608
4607
4606
4605
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

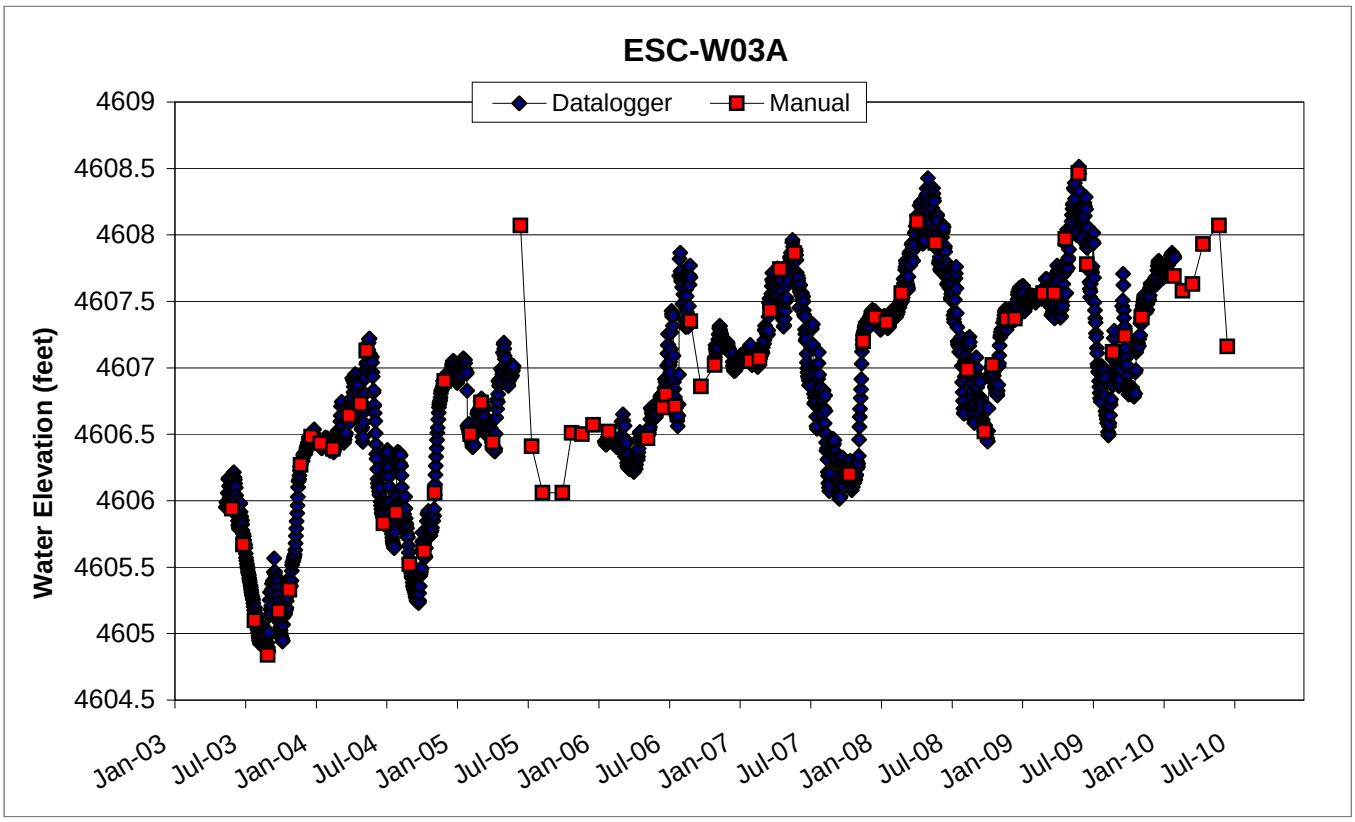

ESC-E06A
Datalogger
Manual
Water Elevation (feet)
4612
4611
4610
4609
4608
4607
4606
4605
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

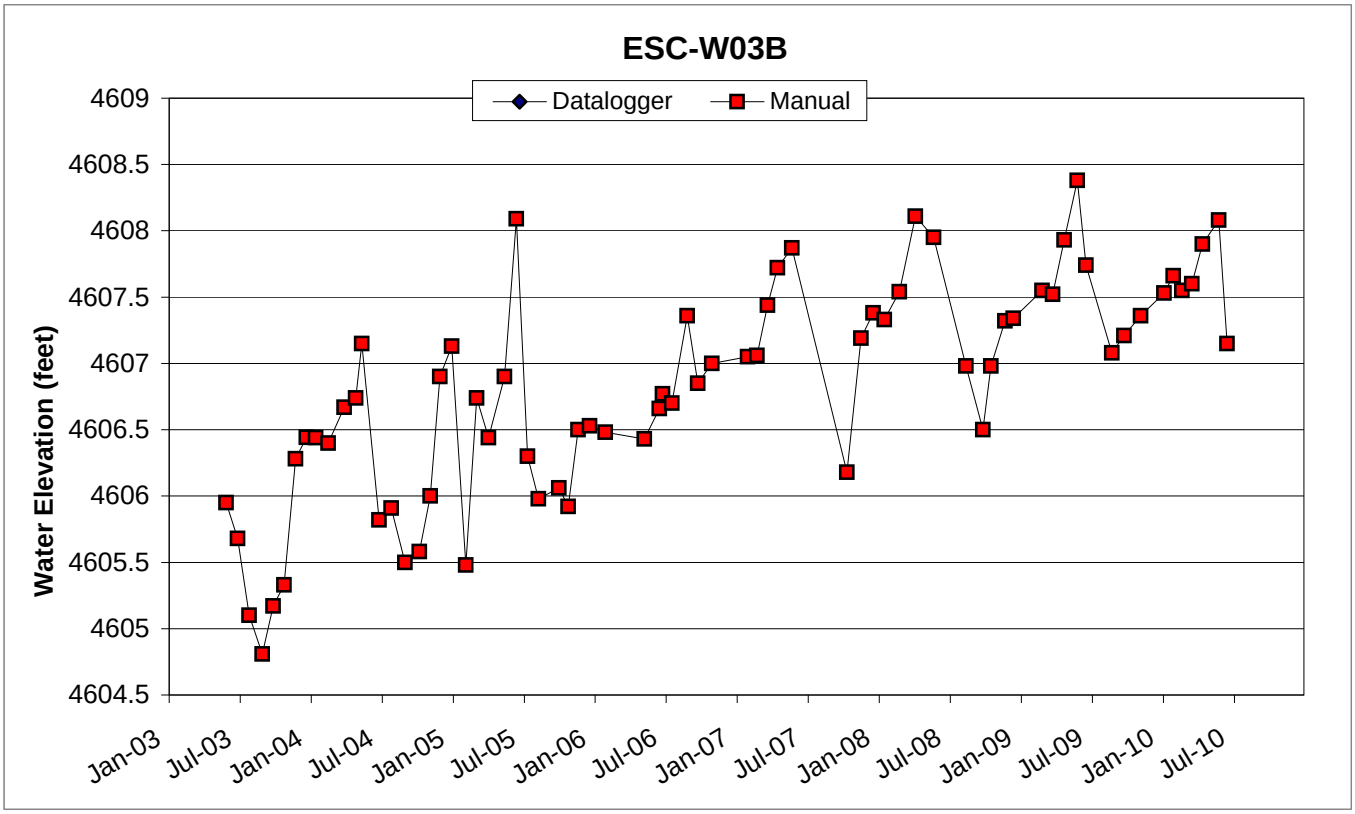

ESC-E06B
Datalogger
Manual
Water Elevation (feet)
4612
4611
4610
4609
4608
4607
4606
4605
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

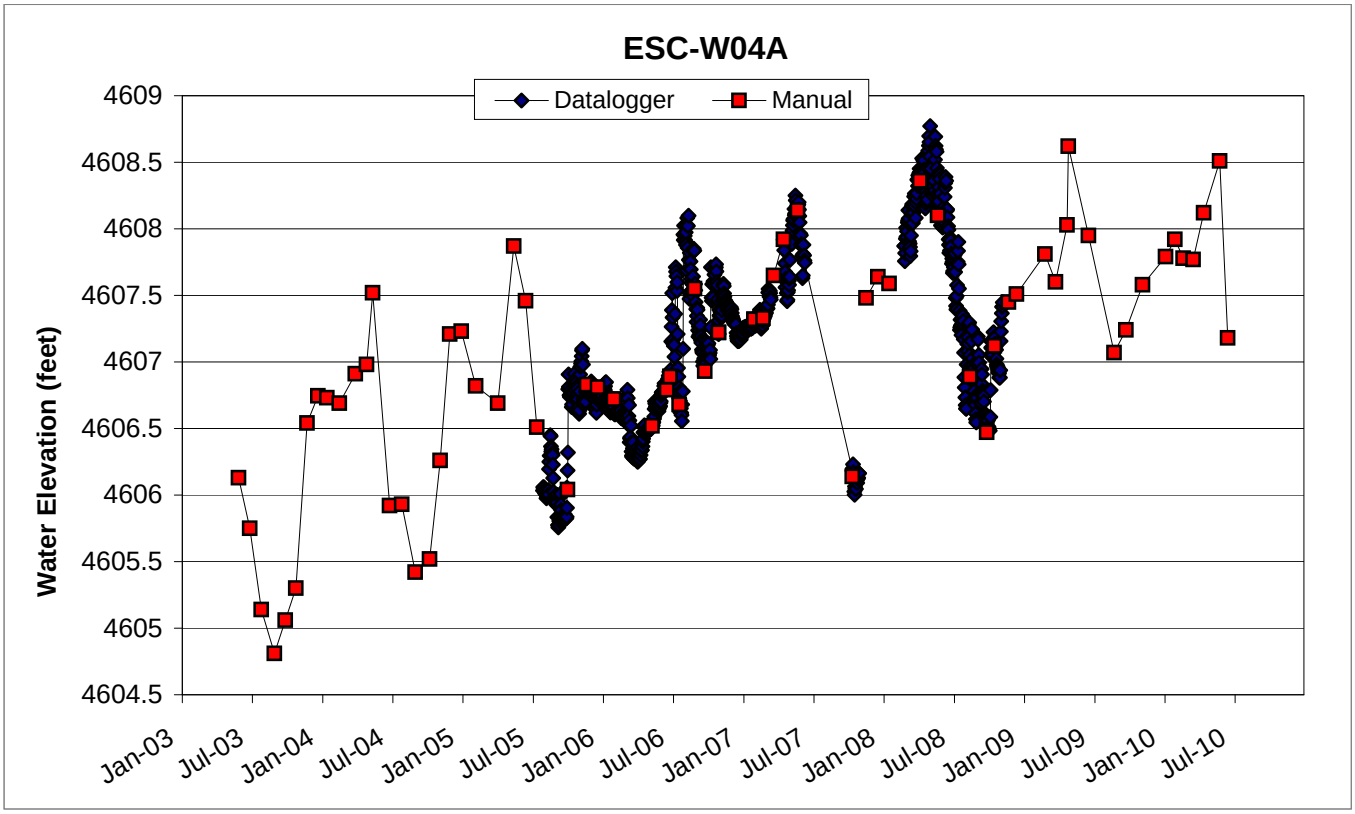

ESC-W01A
Datalogger
Manual
Water Elevation (feet)
4609
4608.5
4608
4607.5
4607
4606.5
4606
4605.5
4605
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

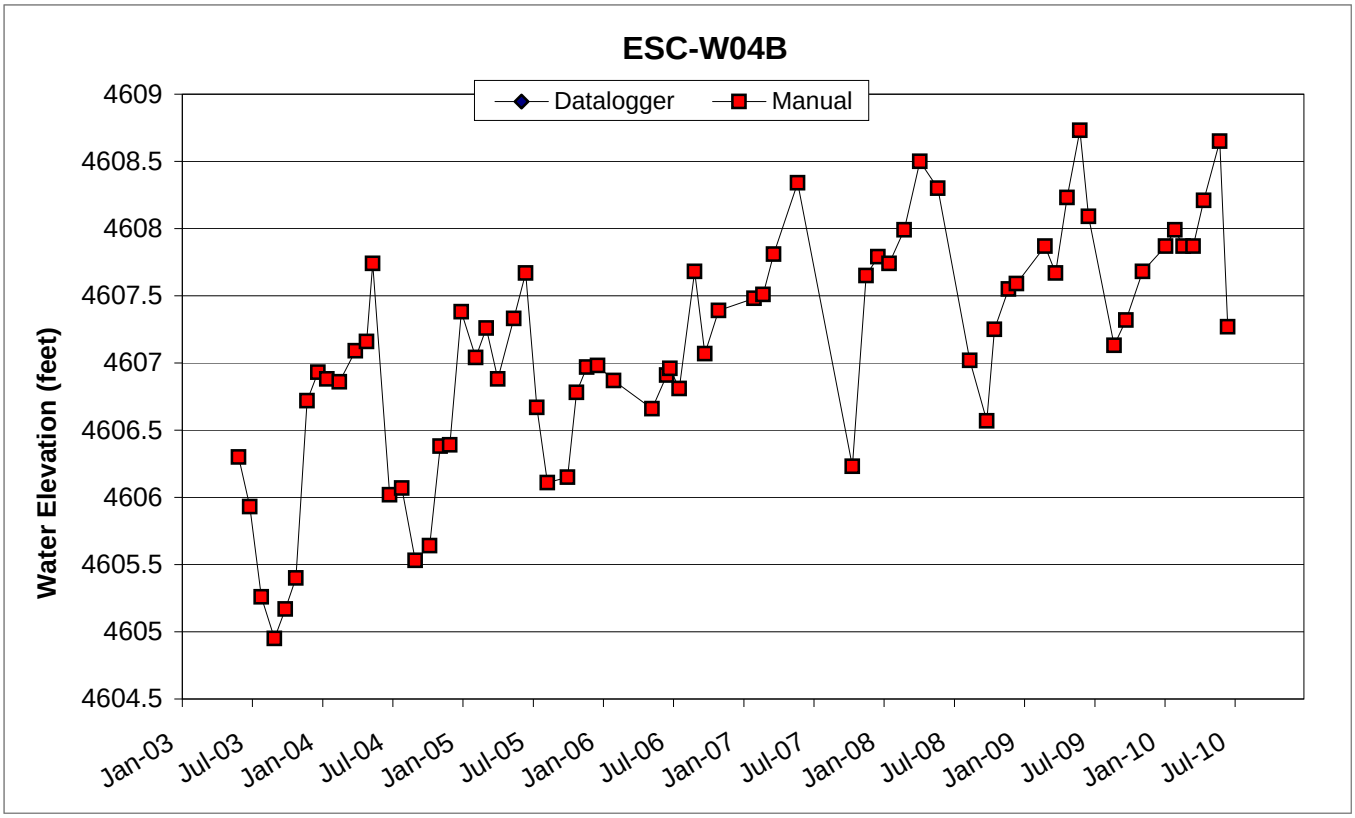

ESC-W01B
Datalogger
Manual
Water Elevation (feet)
4609
4608.5
4608
4607.5
4607
4606.5
4606
4605.5
4605
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

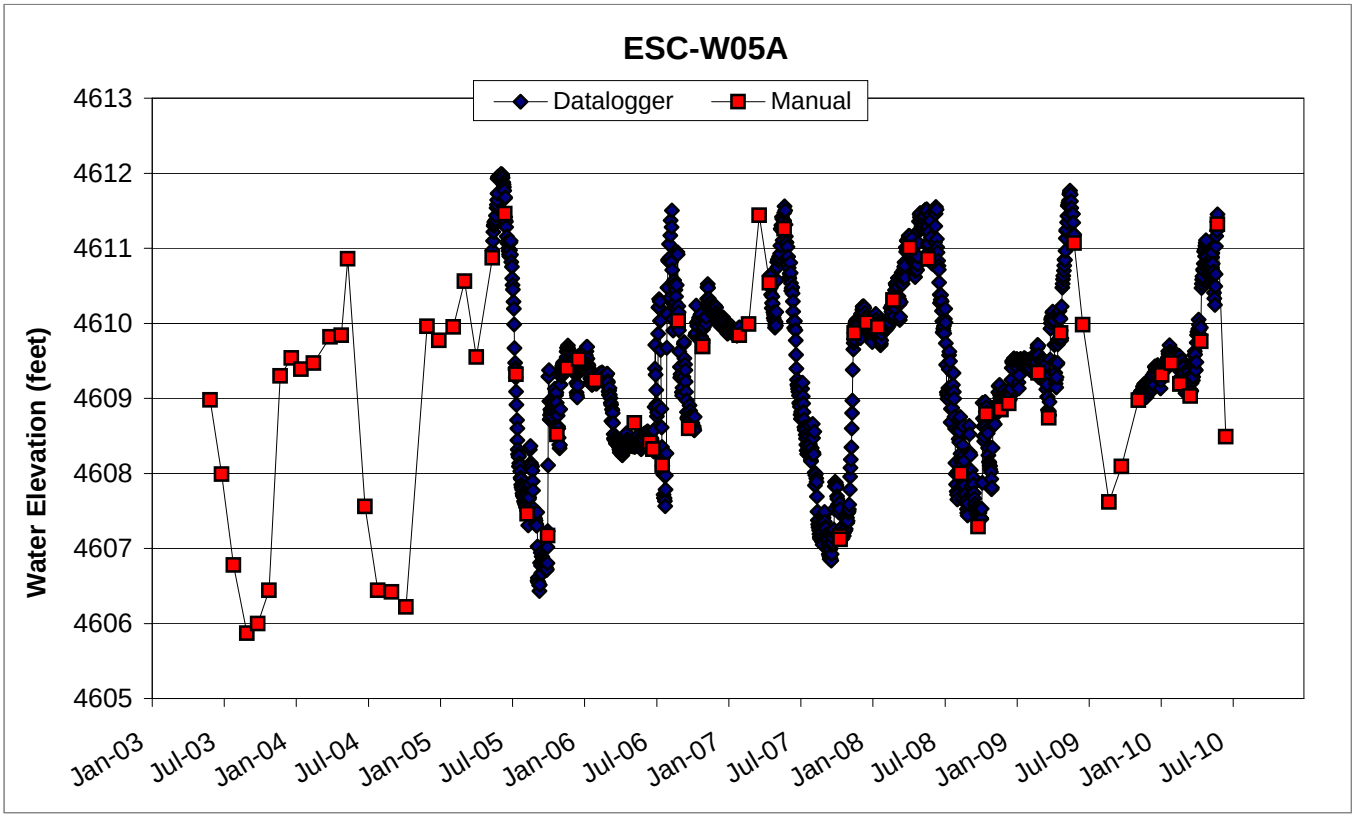

ESC-W02A
Datalogger
Manual
Water Elevation (feet)
4609.5
4609
4608.5
4608
4607.5
4607
4606.5
4606
4605.5
4605
4604.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

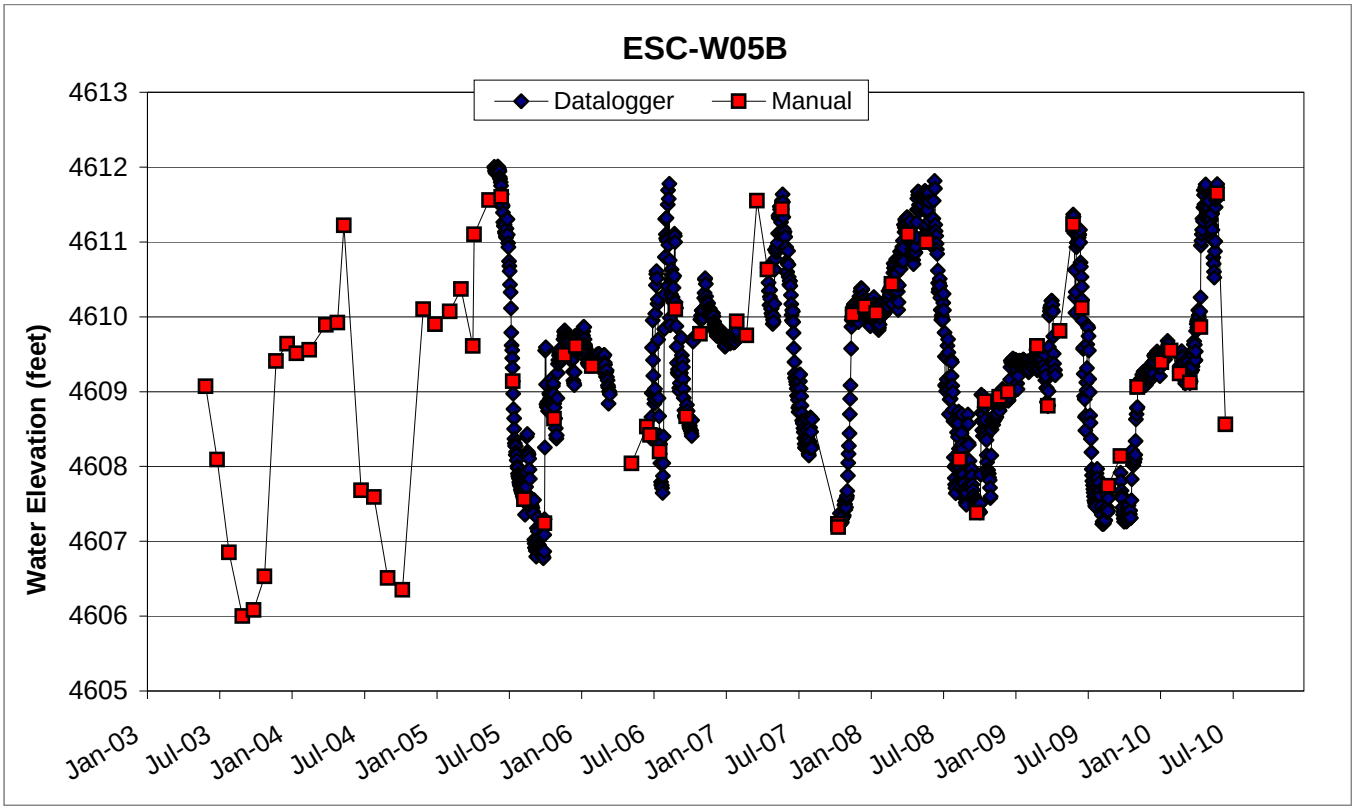

ESC-W03A
Datalogger
Manual
Water Elevation (feet)
4609
4608.5
4608
4607.5
4607
4606.5
4606
4605.5
4605
4604.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

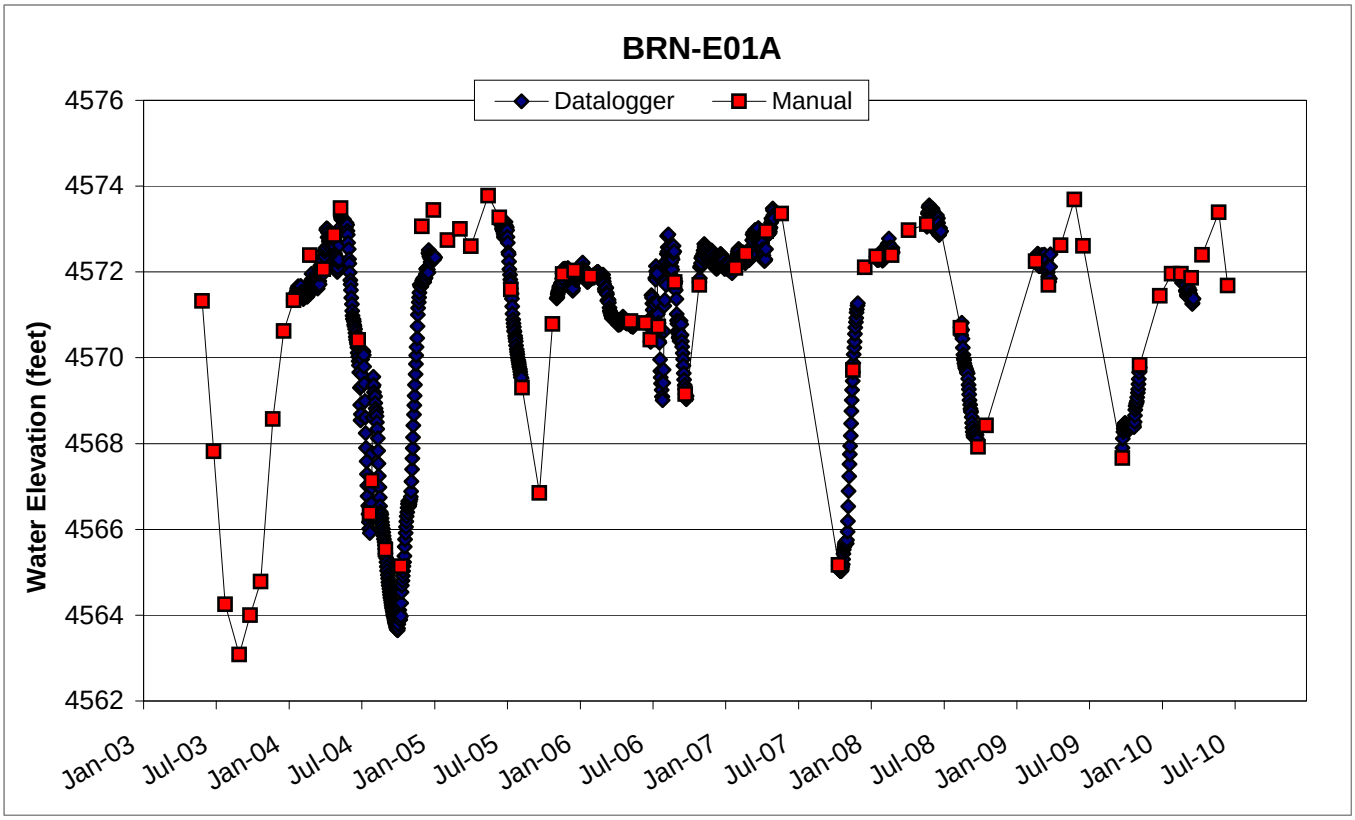

ESC-W03B
Datalogger
Manual
Water Elevation (feet)
4609
4608.5
4608
4607.5
4607
4606.5
4606
4605.5
4605
4604.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

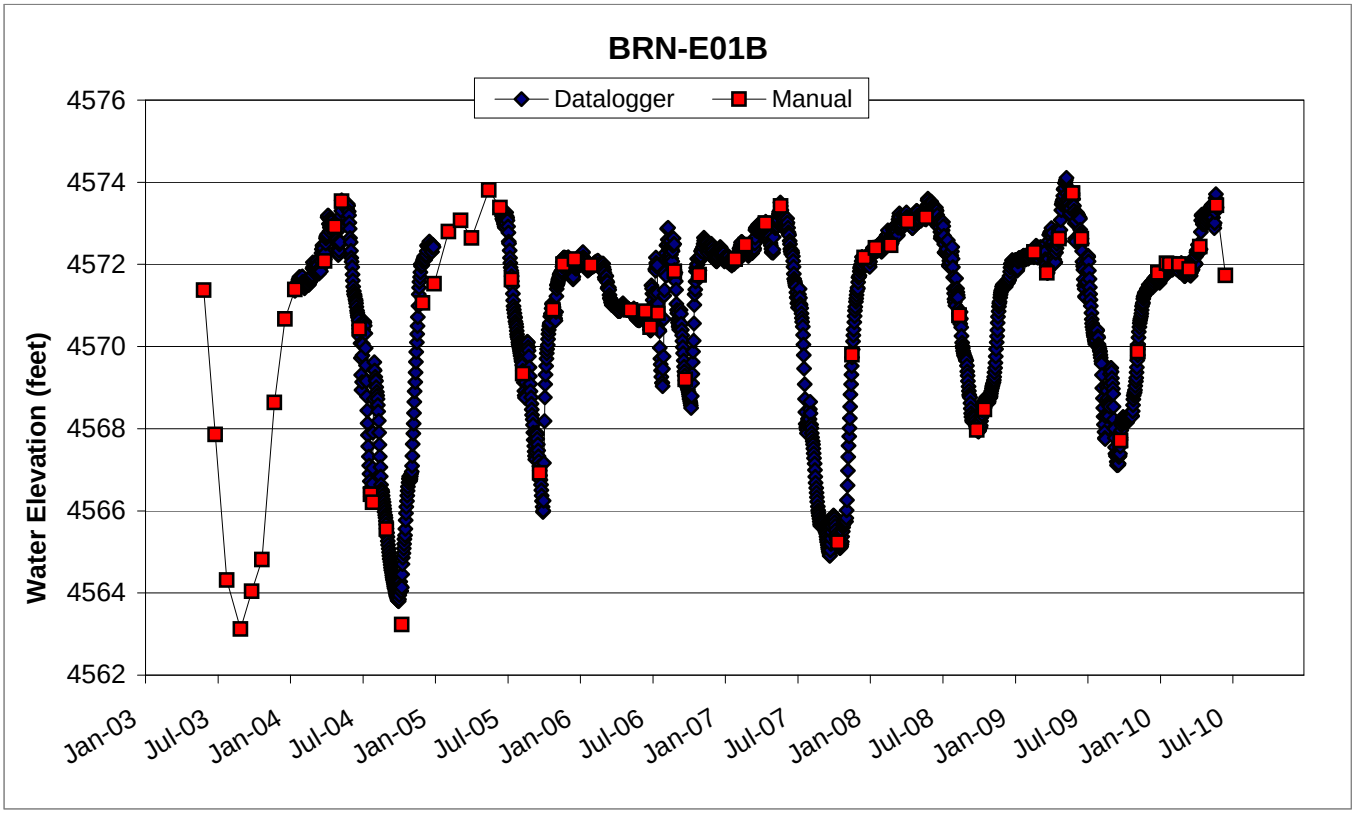

ESC-W04A
Datalogger
Manual
Water Elevation (feet)
4609
4608.5
4608
4607.5
4607
4606.5
4606
4605.5
4605
4604.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

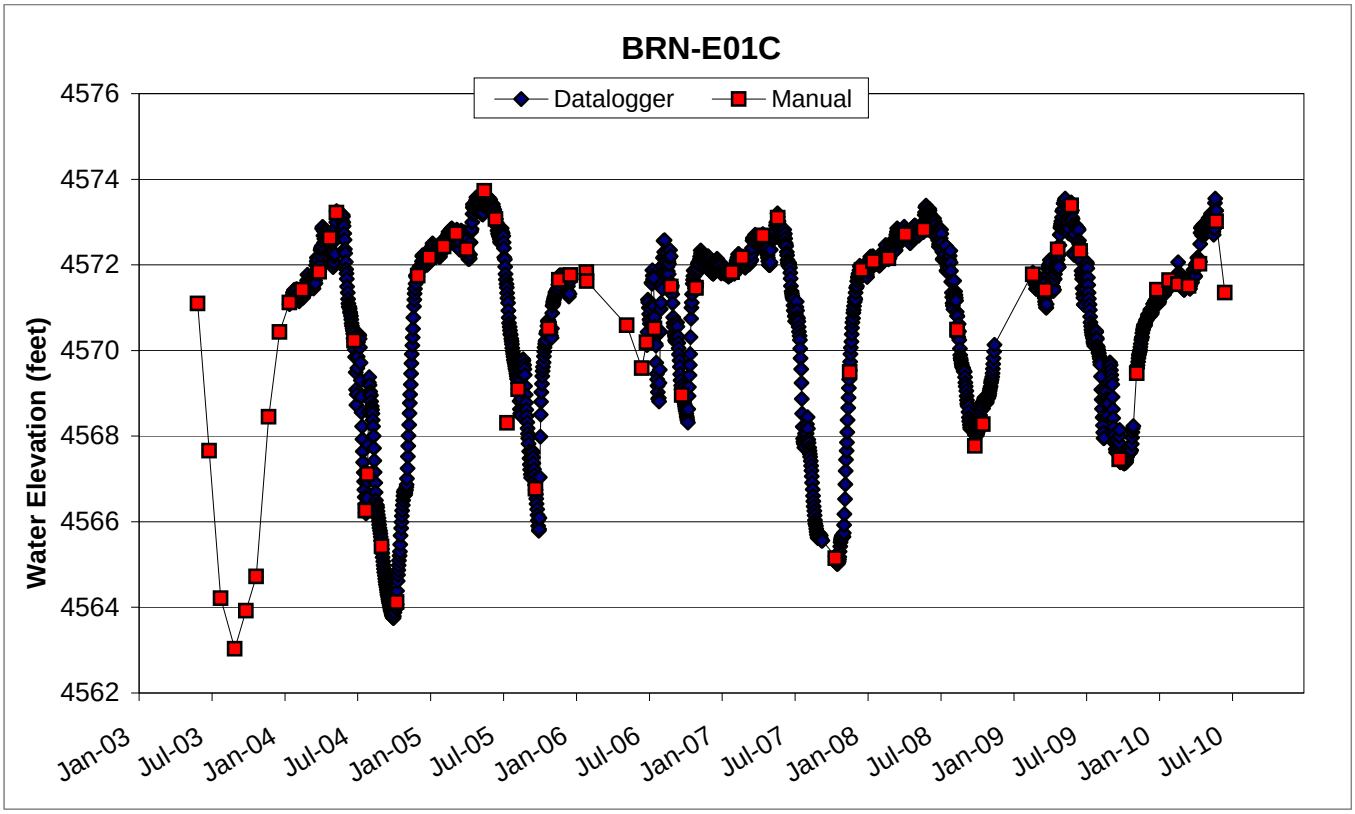

ESC-W04B
Datalogger
Manual
Water Elevation (feet)
4609
4608.5
4608
4607.5
4607
4606.5
4606
4605.5
4605
4604.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

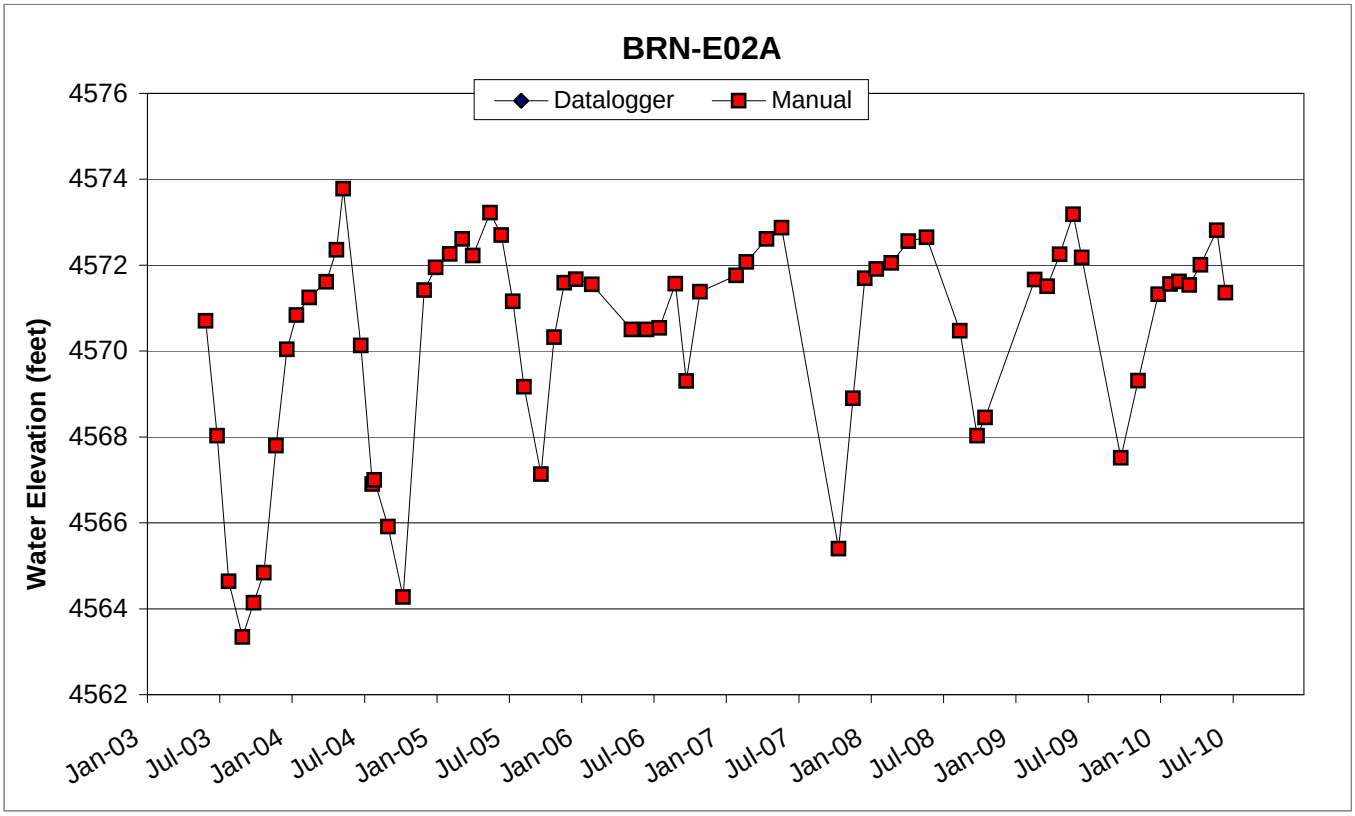

ESC-W05A
Datalogger
Manual
Water Elevation (feet)
4613
4612
4611
4610
4609
4608
4607
4606
4605
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

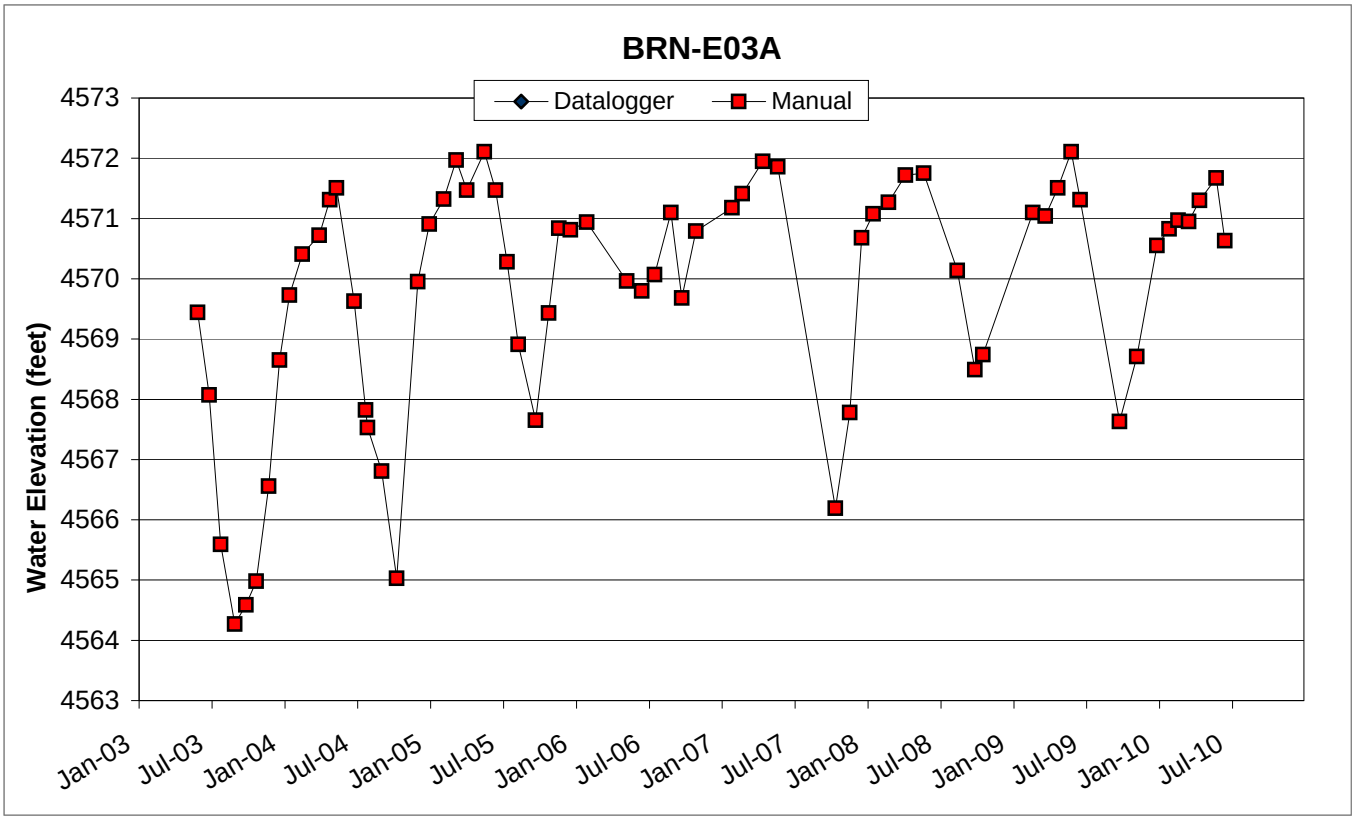

ESC-W05B
Datalogger
Manual
Water Elevation (feet)
4613
4612
4611
4610
4609
4608
4607
4606
4605
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

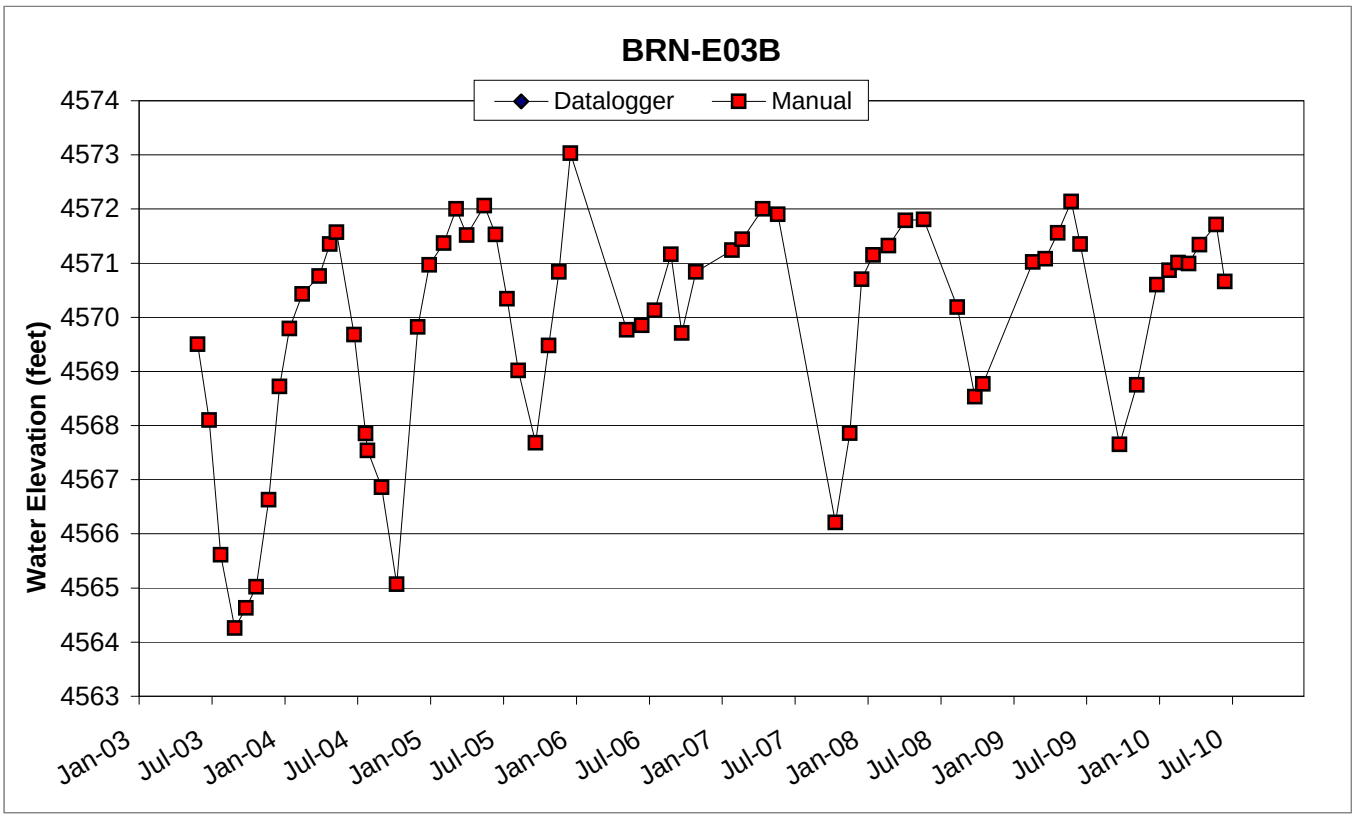

BRN-E01A
Datalogger
Manual
Water Elevation (feet)
4576
4574
4572
4570
4568
4566
4564
4562
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

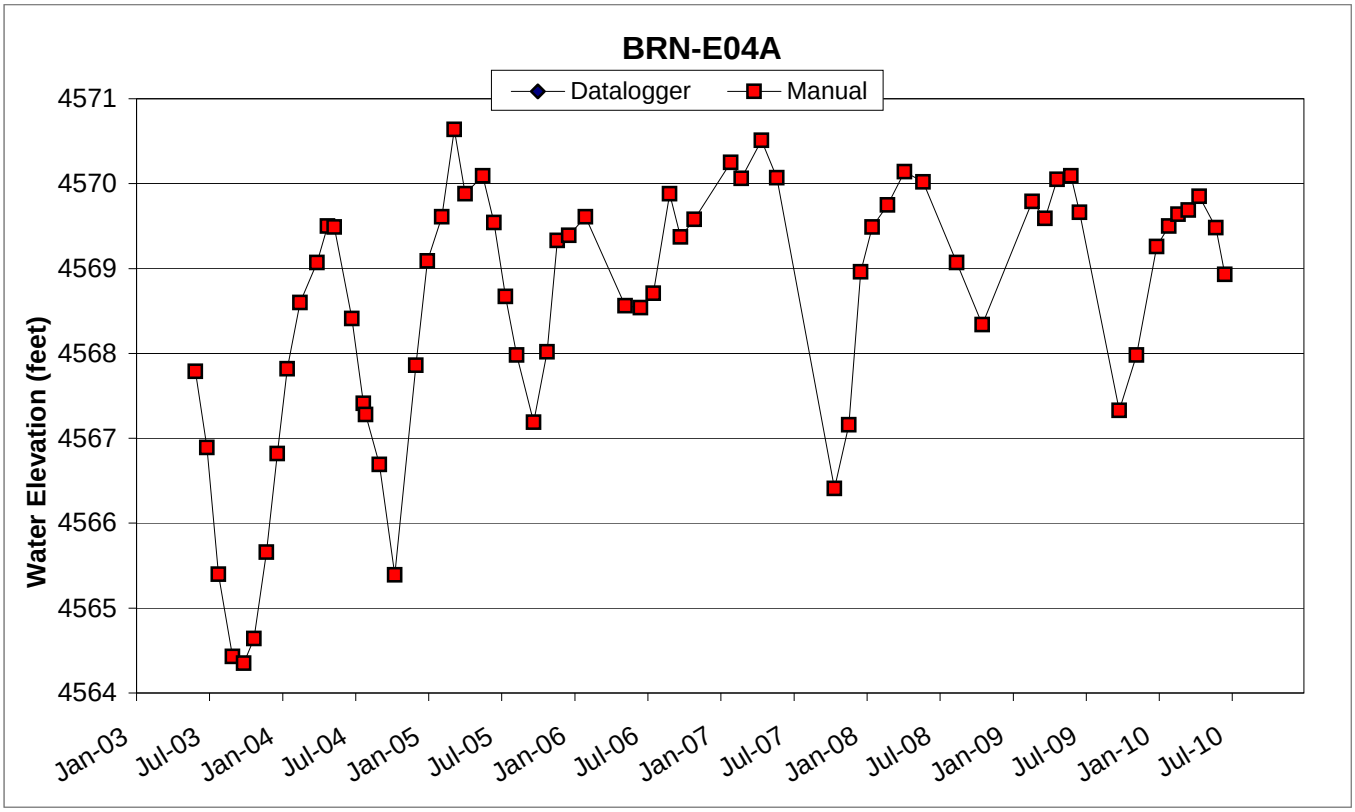

BRN-E01B
Datalogger
Manual
Water Elevation (feet)
4576
4574
4572
4570
4568
4566
4564
4562
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

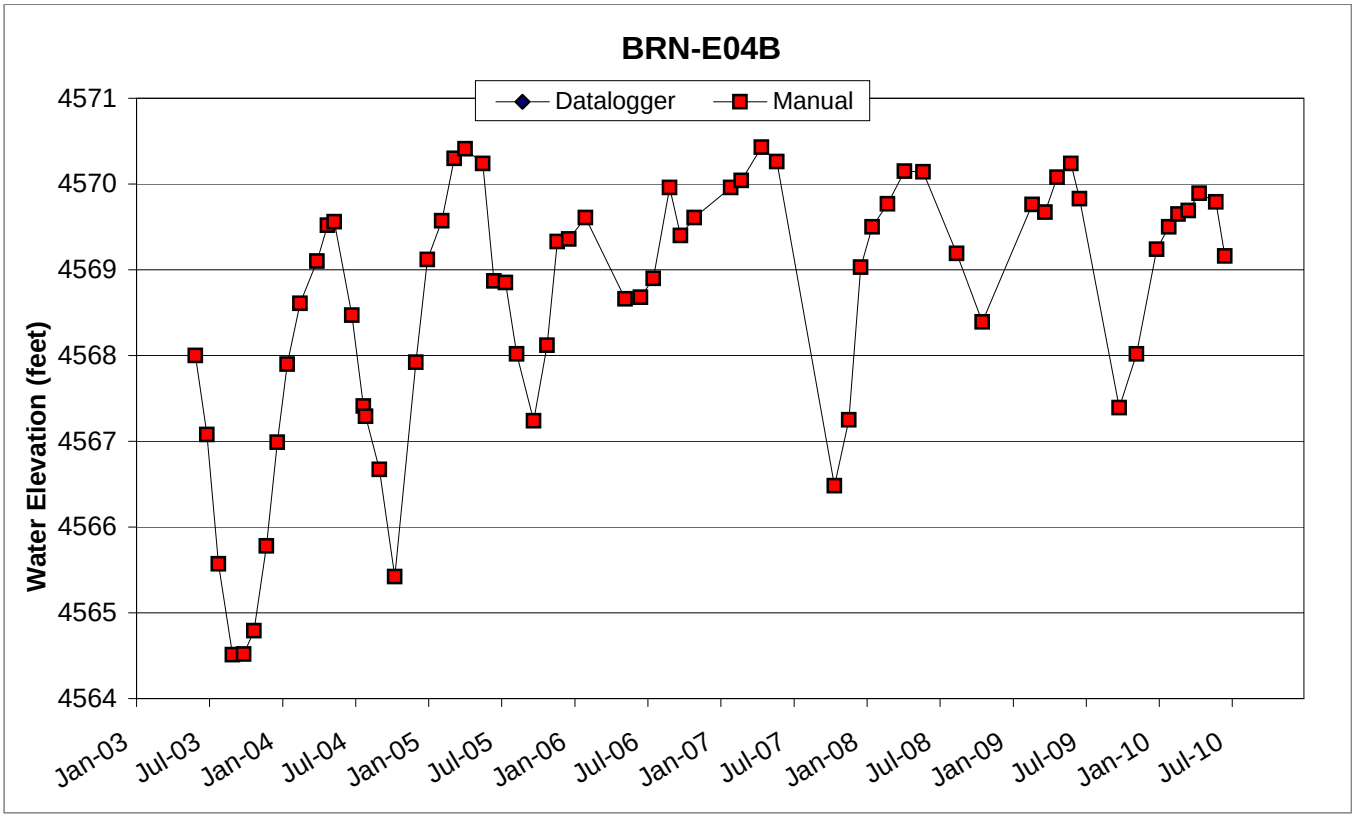

BRN-E01C
Datalogger
Manual
Water Elevation (feet)
4576
4574
4572
4570
4568
4566
4564
4562
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

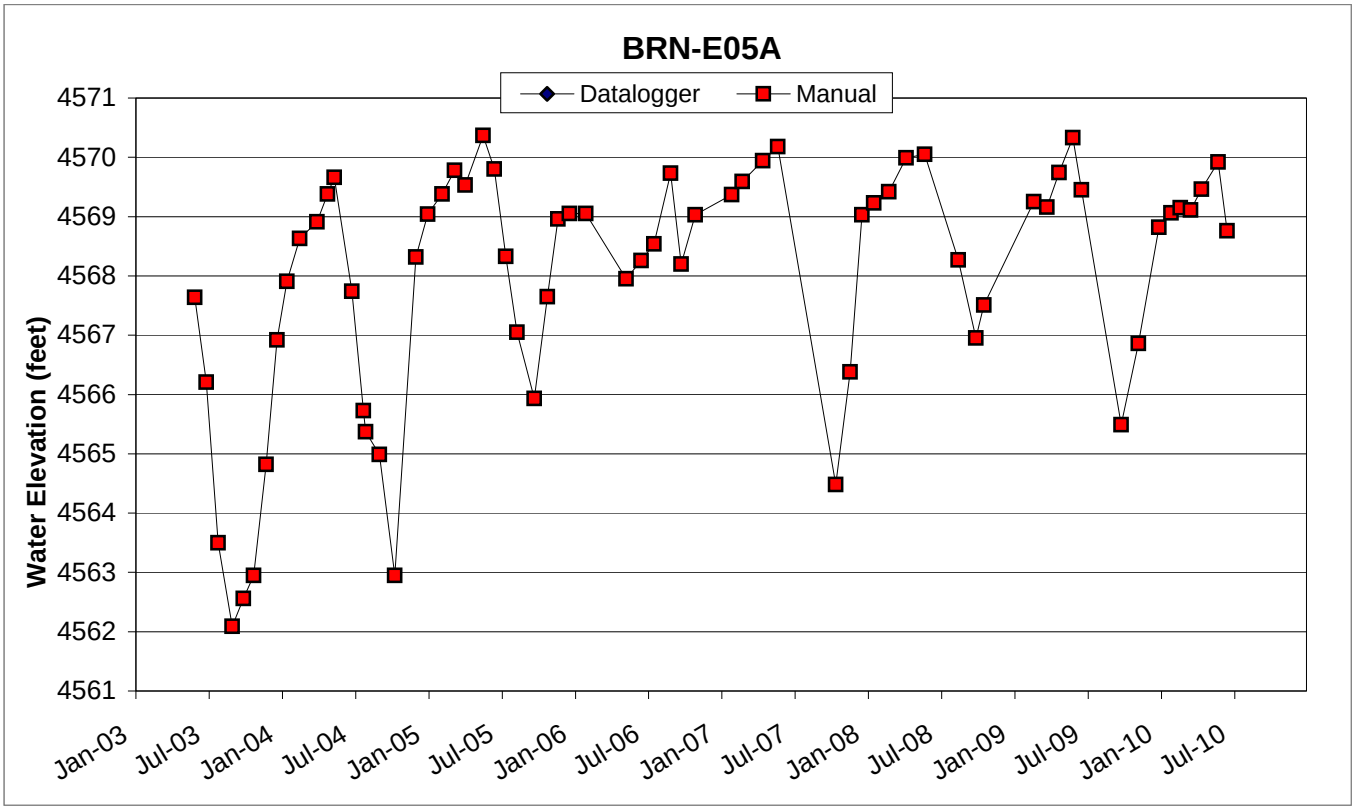

BRN-E02A
Datalogger
Manual
Water Elevation (feet)
4576
4574
4572
4570
4568
4566
4564
4562
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

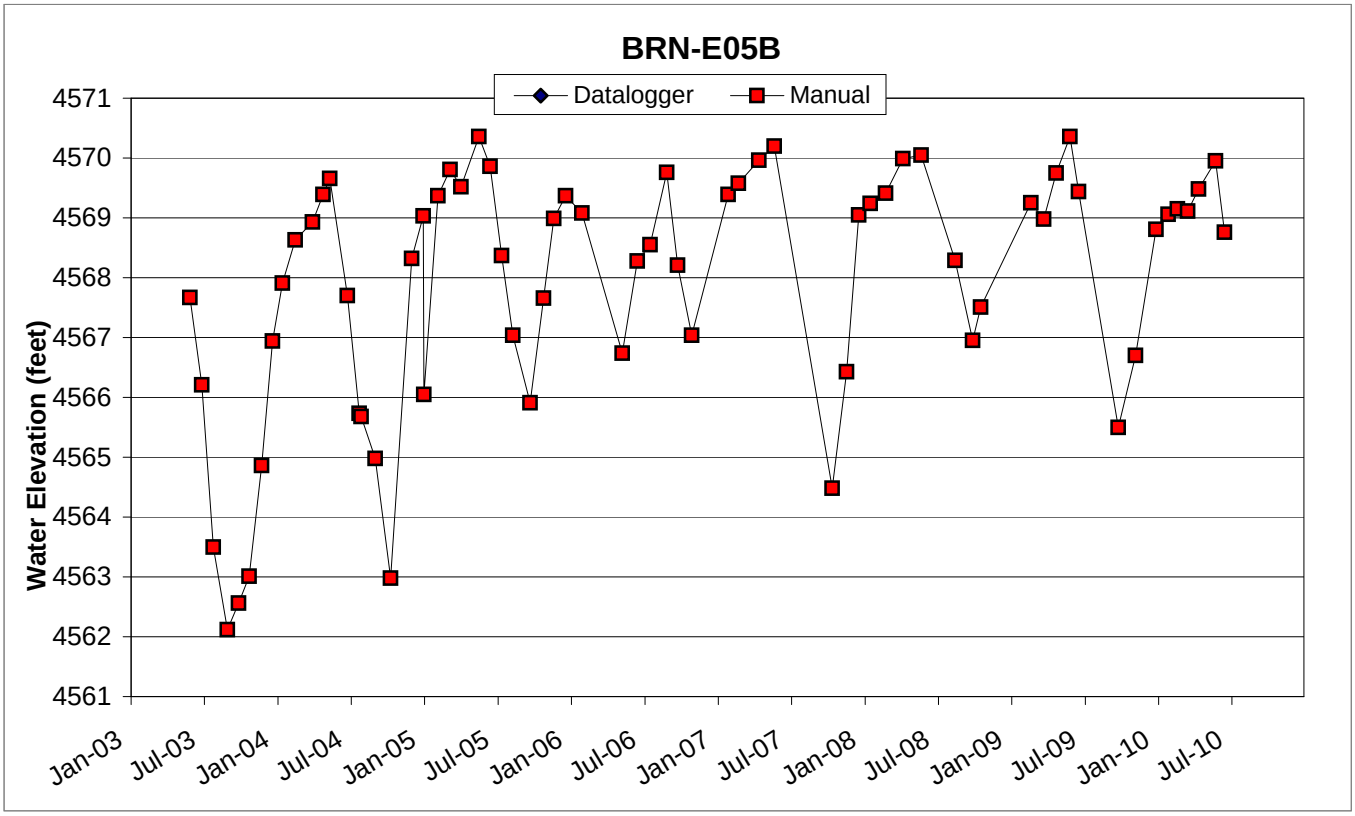

BRN-E03A
Datalogger
Manual
Water Elevation (feet)
4573
4572
4571
4570
4569
4568
4567
4566
4565
4564
4563
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

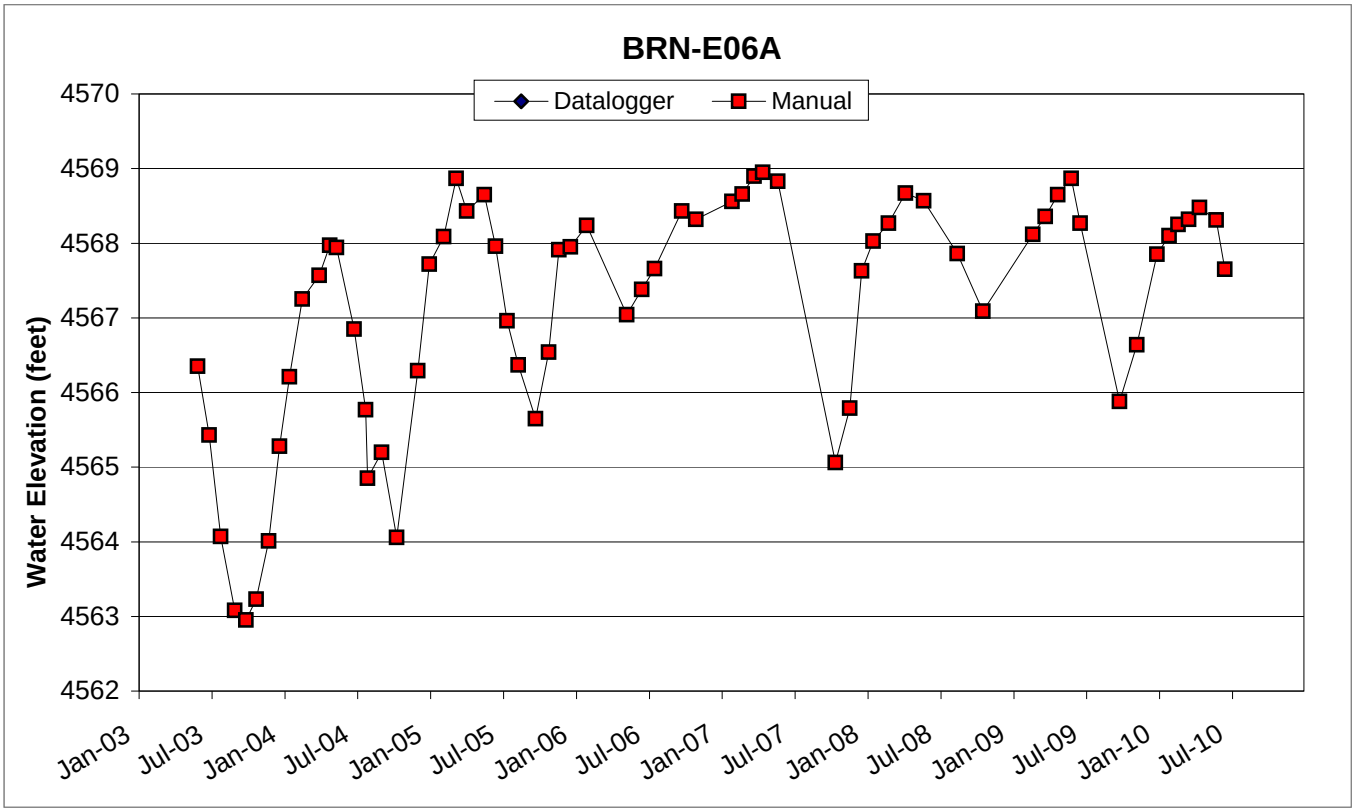

BRN-E03B
Datalogger
Manual
Water Elevation (feet)
4574
4573
4572
4571
4570
4569
4568
4567
4566
4565
4564
4563
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

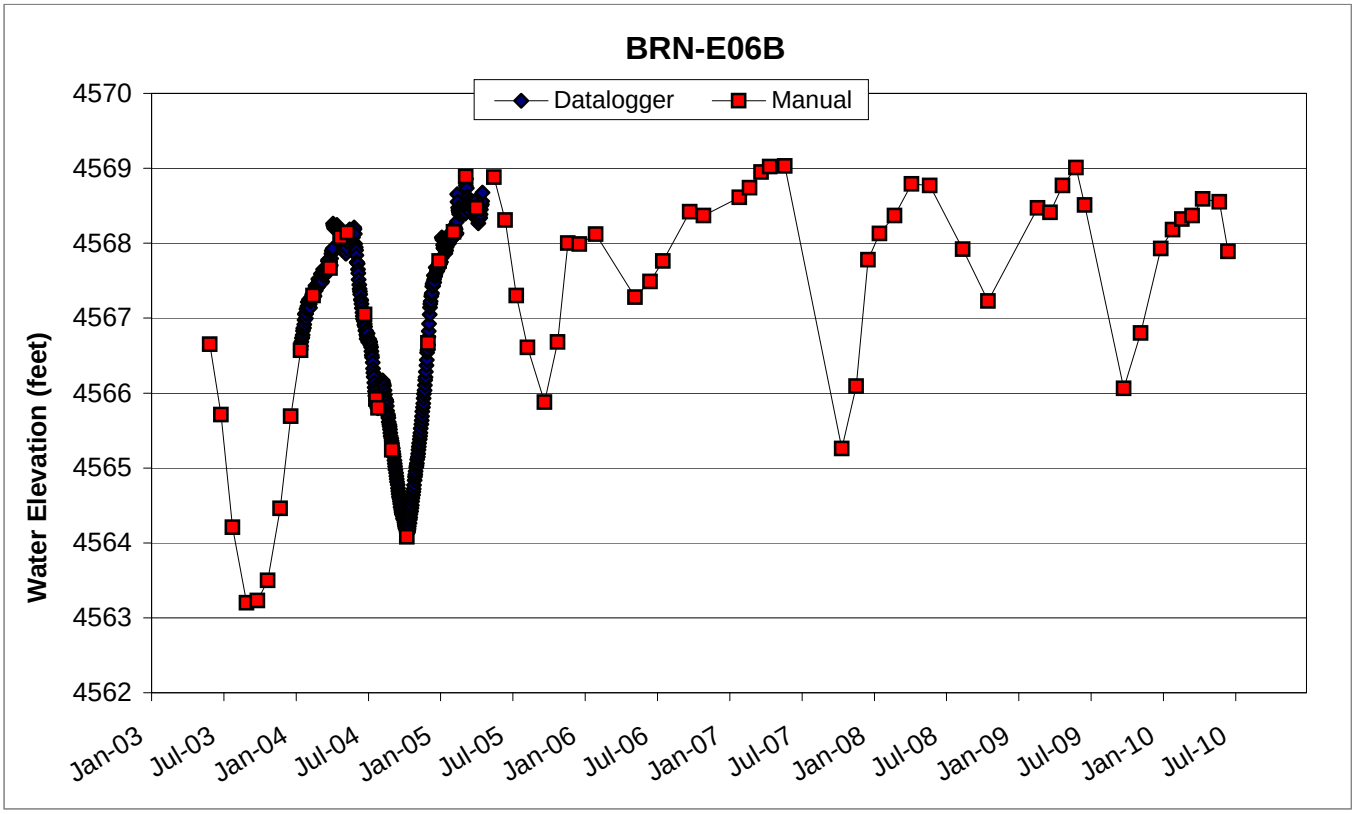

BRN-E04A
Datalogger
Manual
Water Elevation (feet)
4571
4570
4569
4568
4567
4566
4565
4564
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

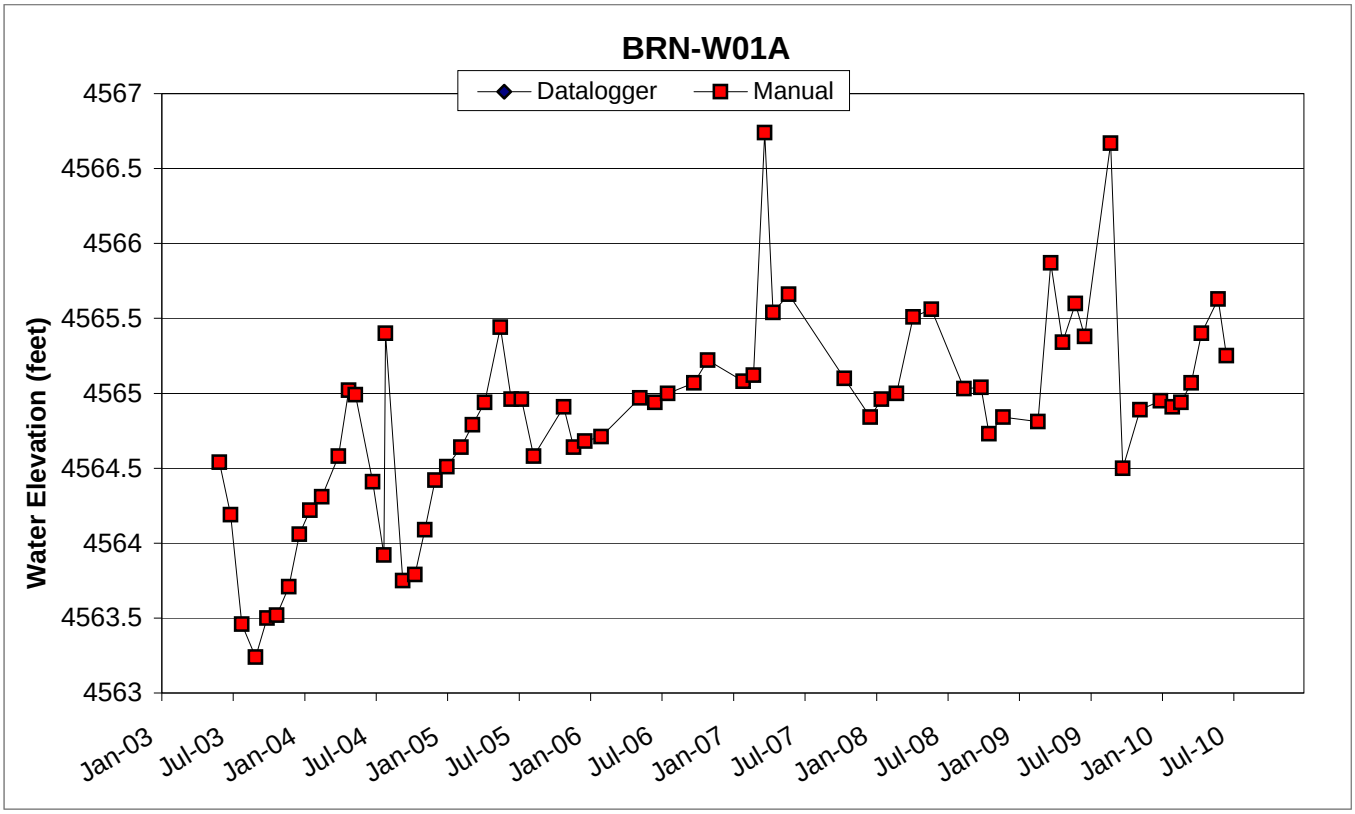

BRN-E04B
Datalogger
Manual
Water Elevation (feet)
4571
4570
4569
4568
4567
4566
4565
4564
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

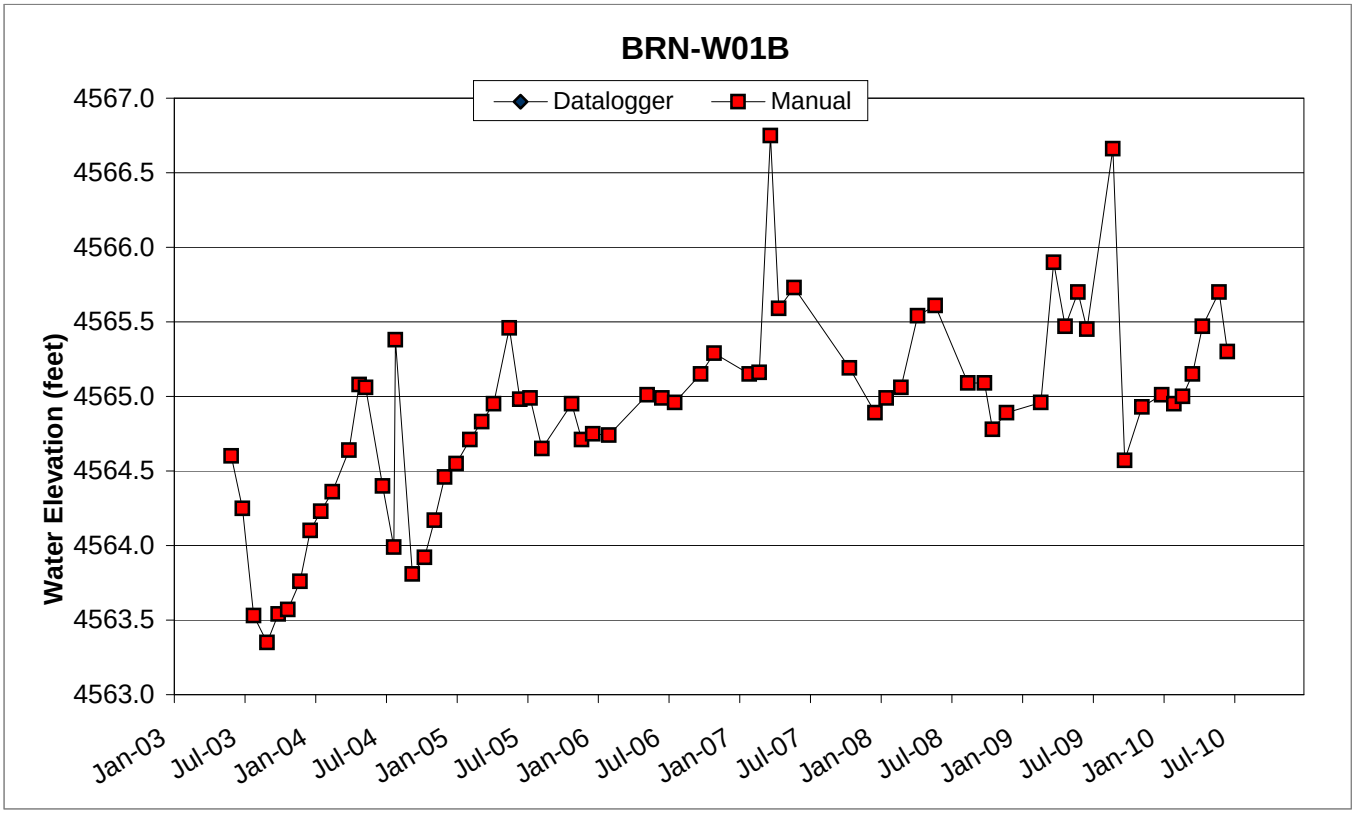

BRN-E05A
Datalogger
Manual
Water Elevation (feet)
4571
4570
4569
4568
4567
4566
4565
4564
4563
4562
4561
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

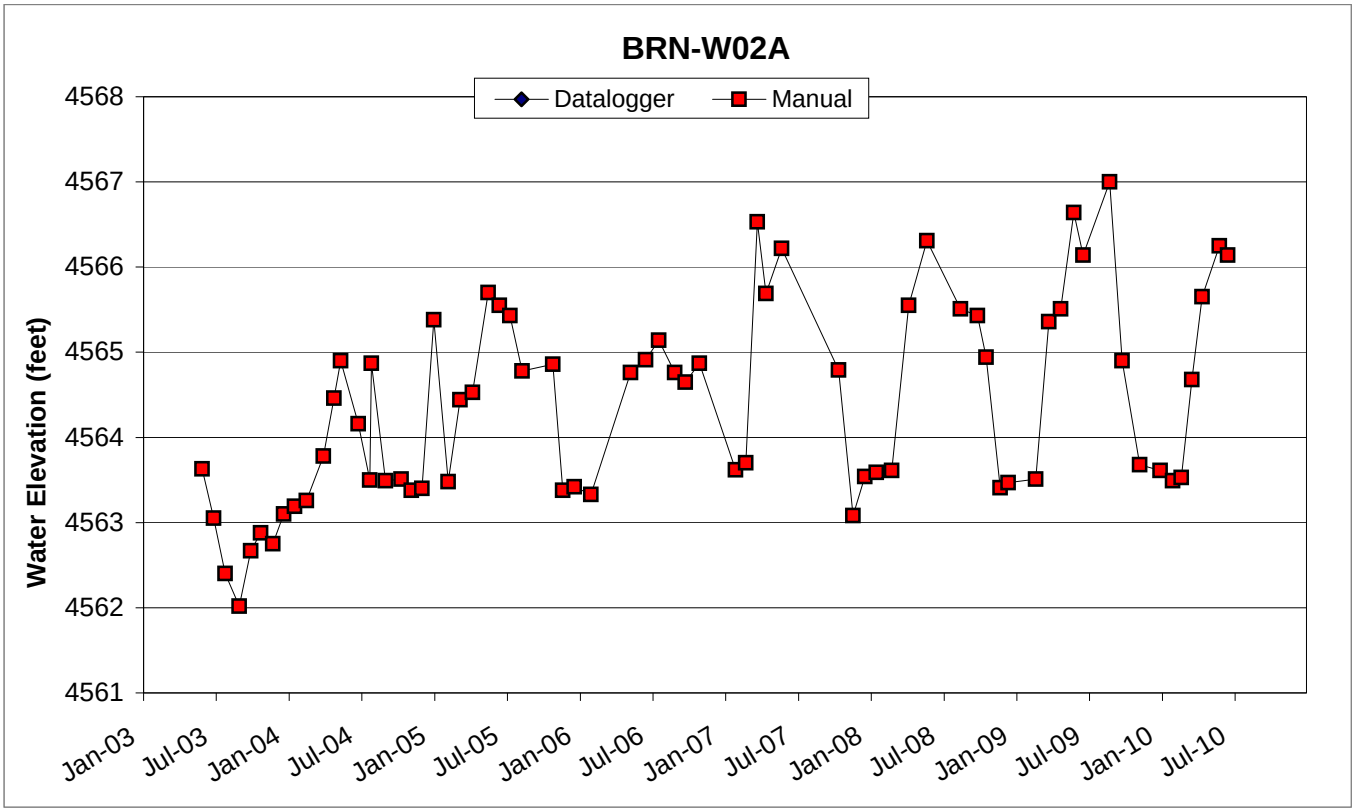

BRN-E05B
Datalogger
Manual
Water Elevation (feet)
4571
4570
4569
4568
4567
4566
4565
4564
4563
4562
4561
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

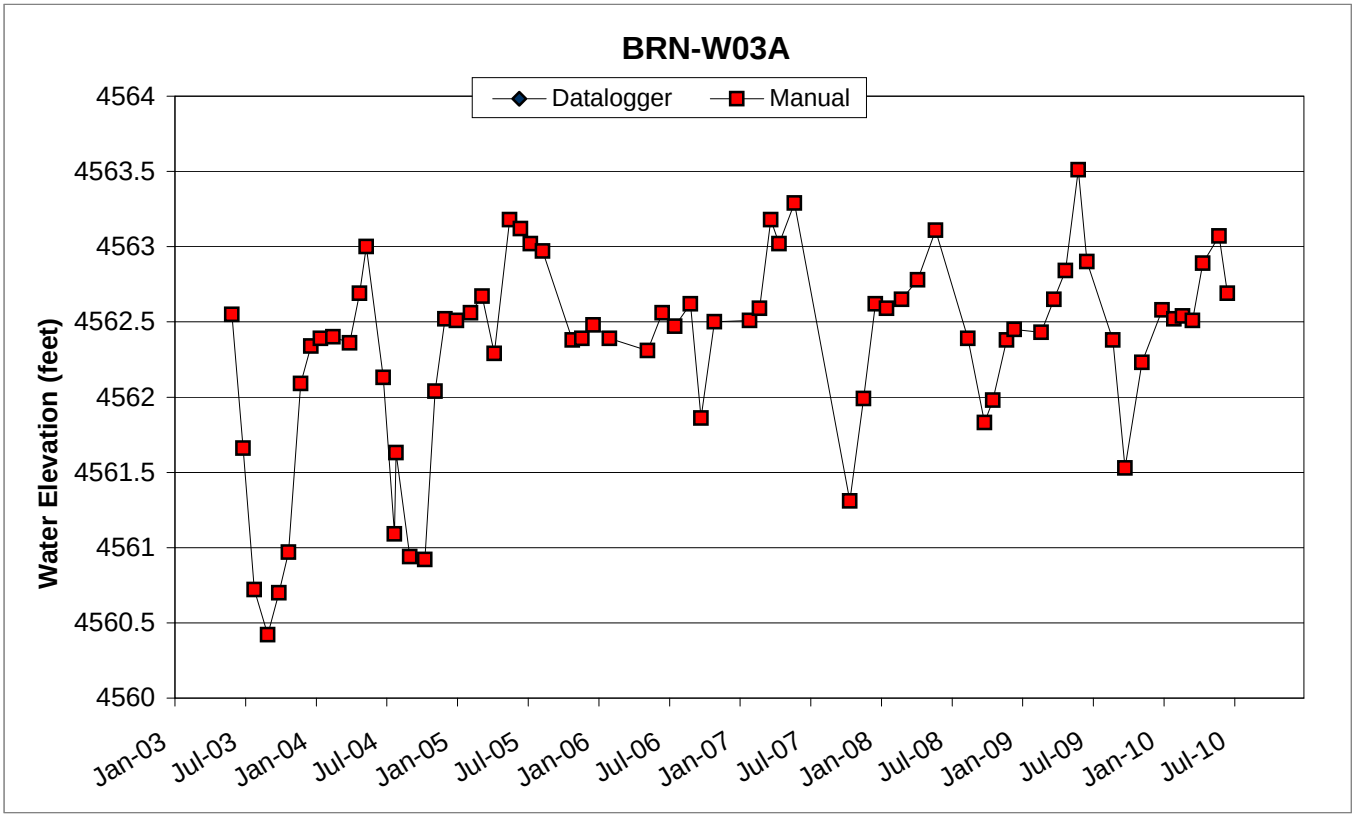

BRN-E06A
Datalogger
Manual
Water Elevation (feet)
4570
4569
4568
4567
4566
4565
4564
4563
4562
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

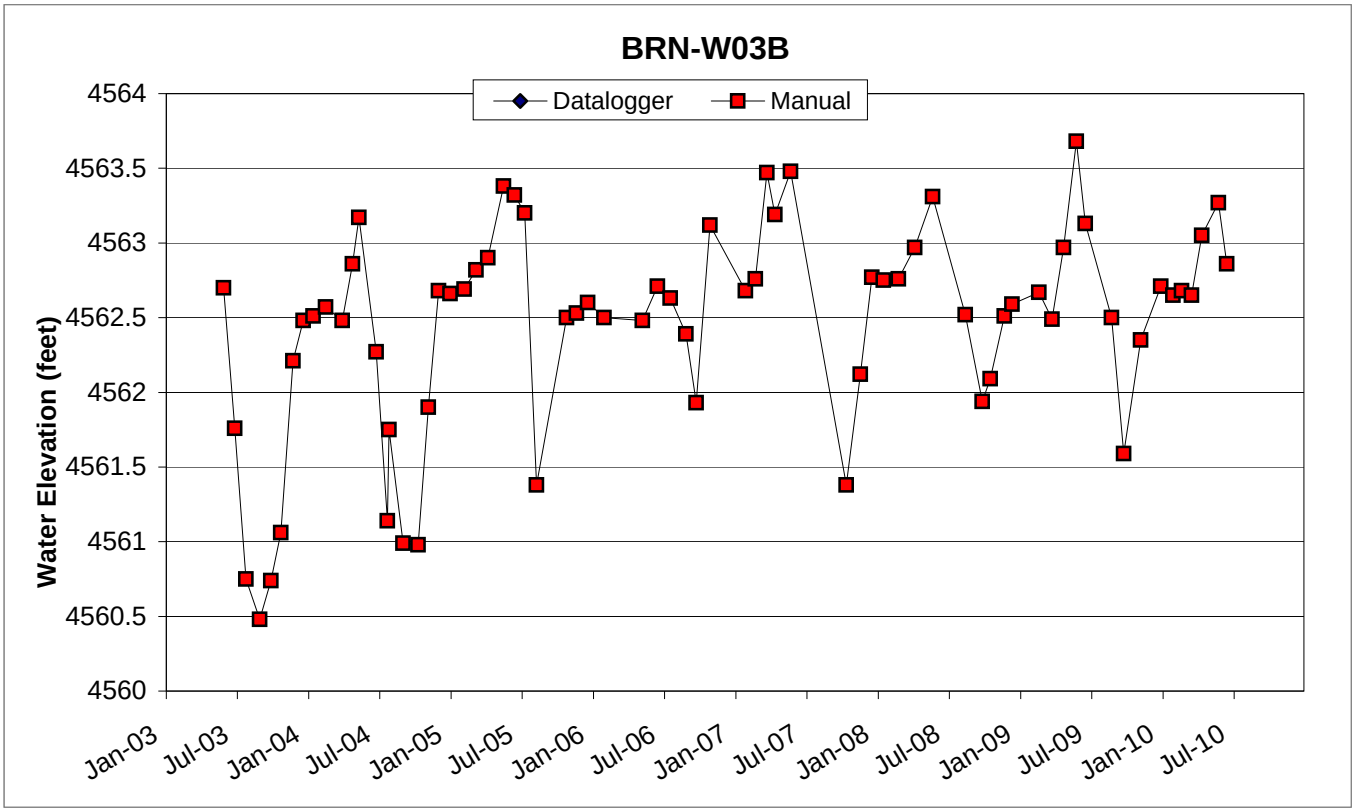

BRN-E06B
Datalogger
Manual
Water Elevation (feet)
4570
4569
4568
4567
4566
4565
4564
4563
4562
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

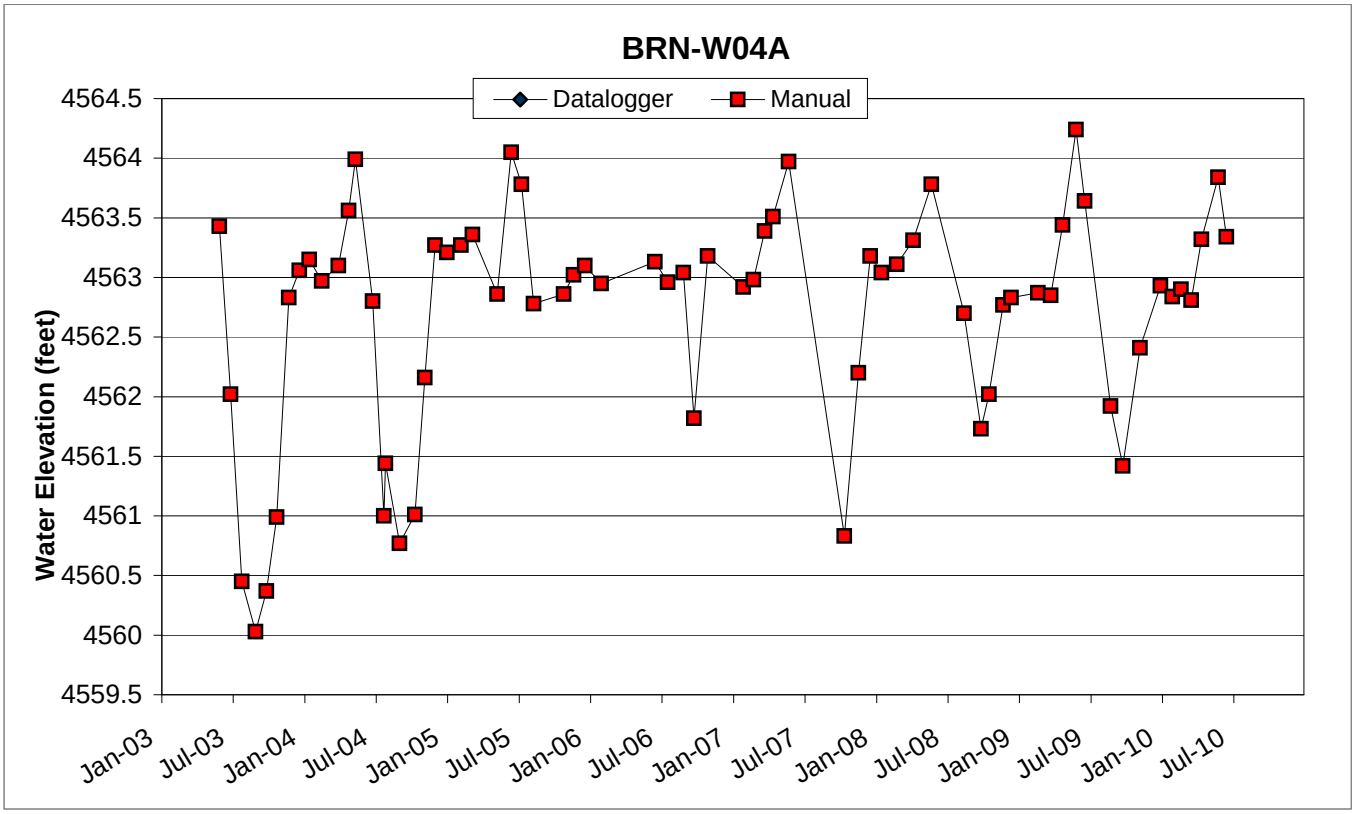

BRN-W01A
Datalogger
Manual
Water Elevation (feet)
4567
4566.5
4566
4565.5
4565
4564.5
4564
4563.5
4563
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

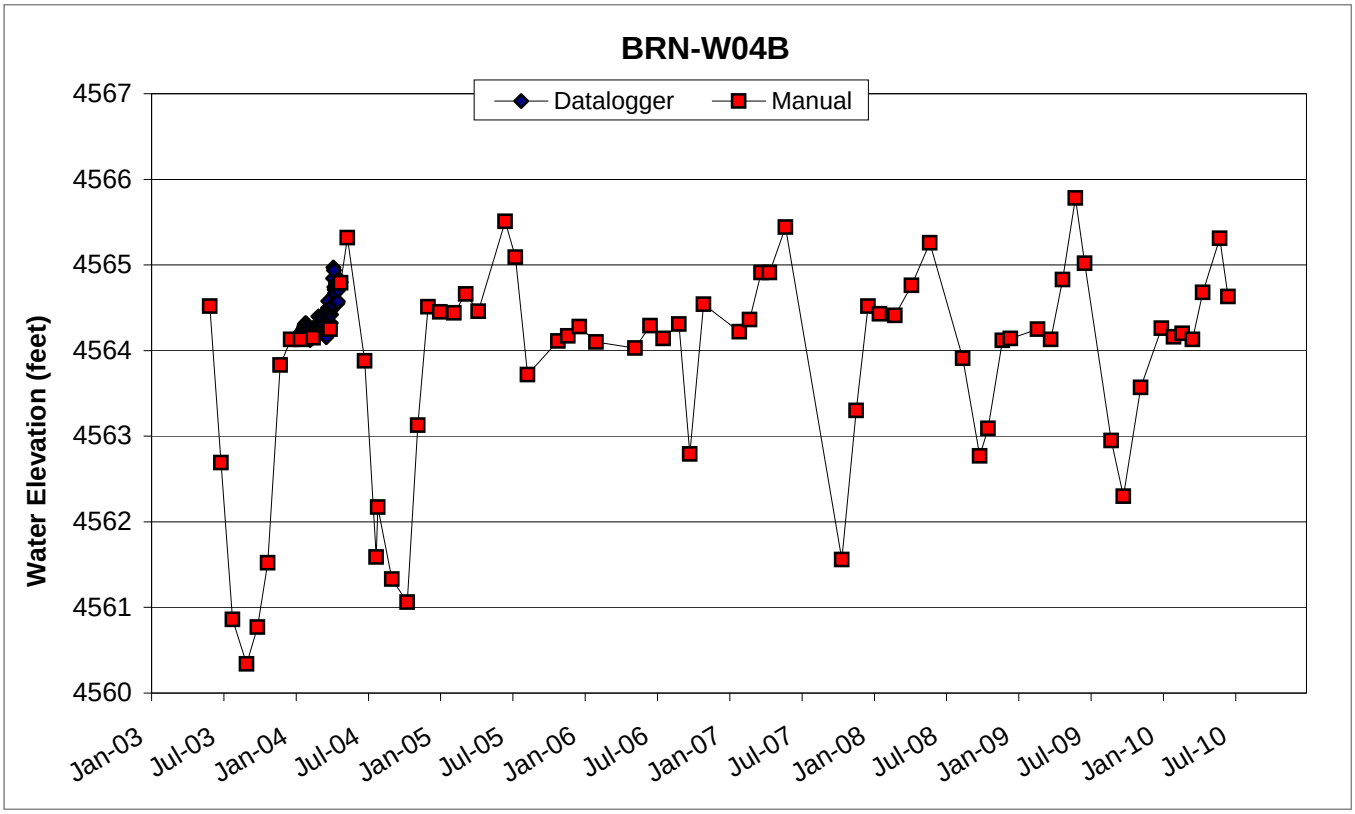

BRN-W01B
Datalogger
Manual
Water Elevation (feet)
4567.0
4566.5
4566.0
4565.5
4565.0
4564.5
4564.0
4563.5
4563.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

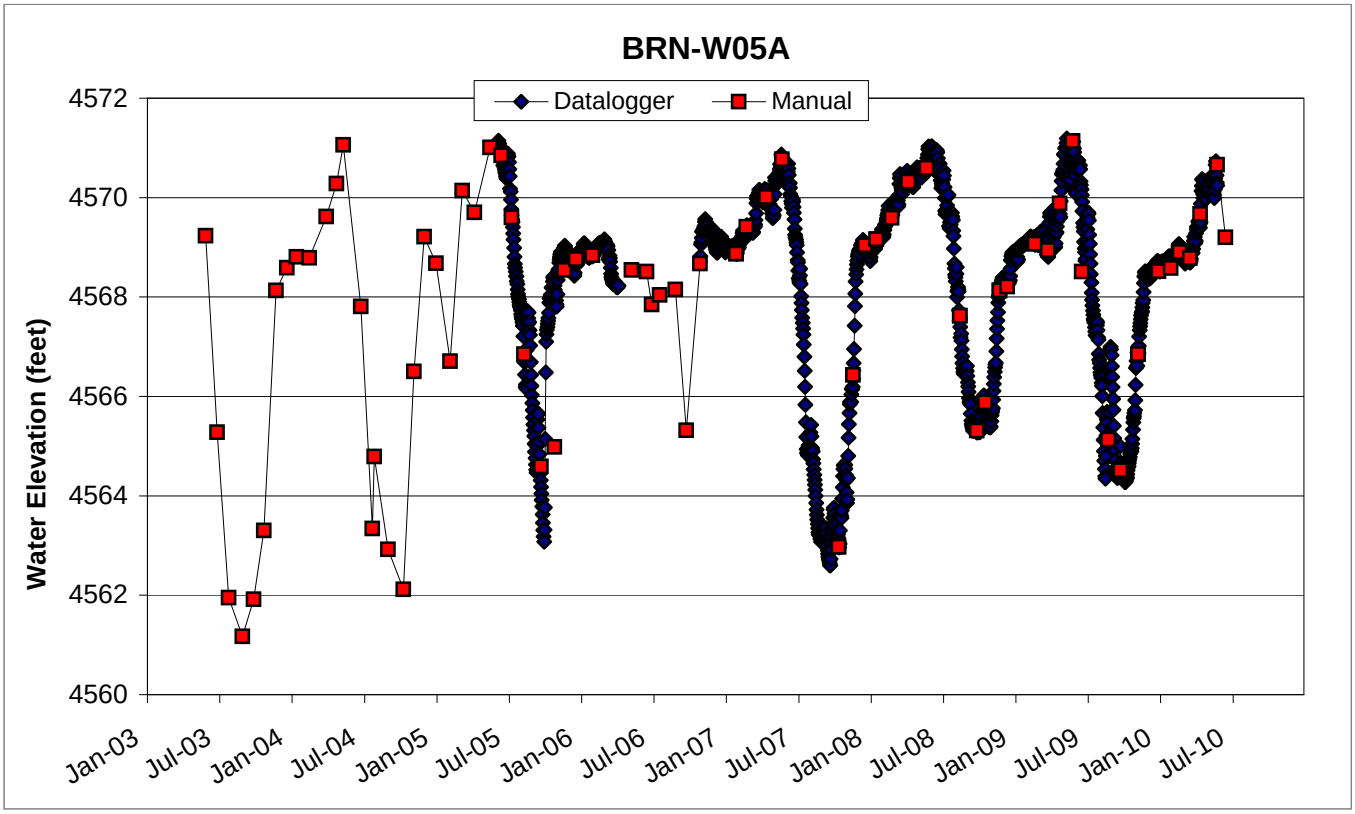

BRN-W02A
Datalogger
Manual
Water Elevation (feet)
4568
4567
4566
4565
4564
4563
4562
4561
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

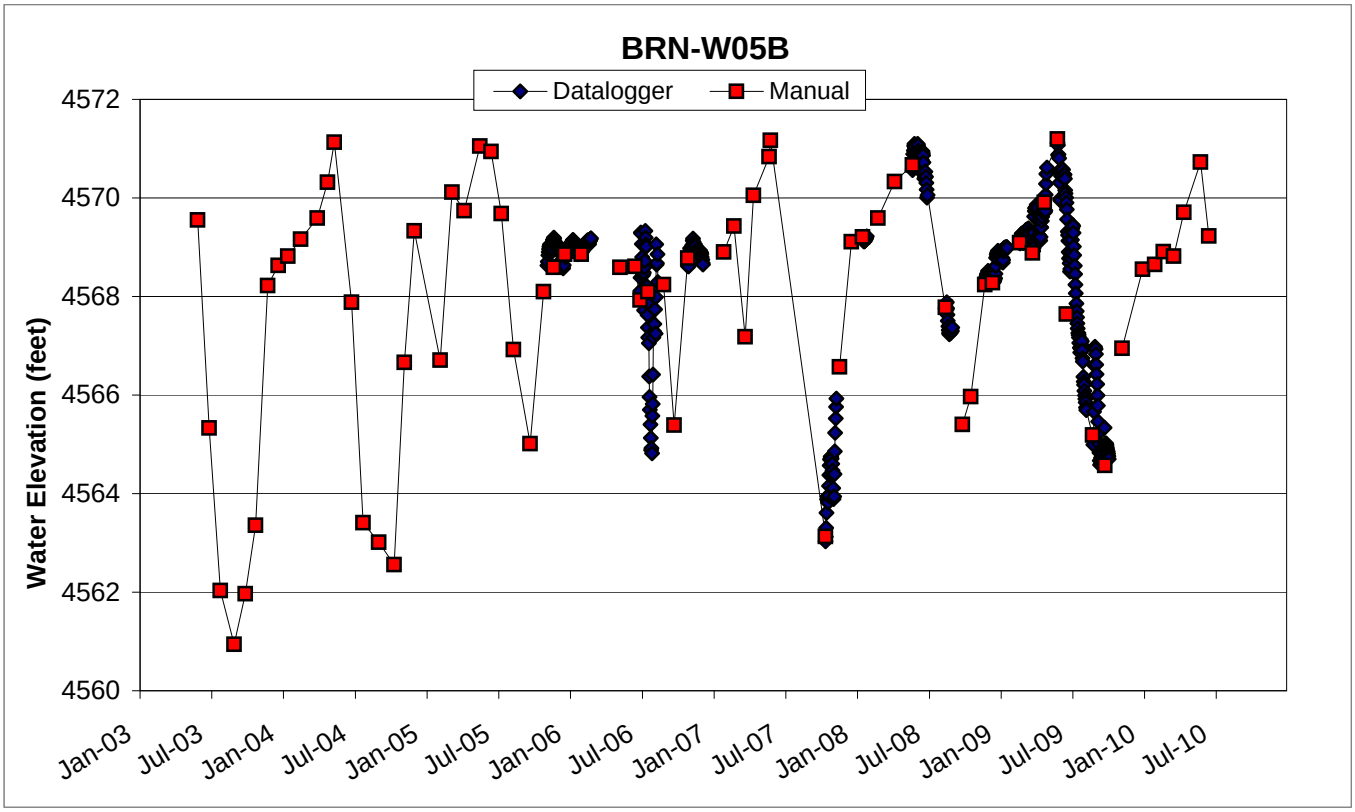

BRN-W03A
Datalogger
Manual
Water Elevation (feet)
4564
4563.5
4563
4562.5
4562
4561.5
4561
4560.5
4560
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

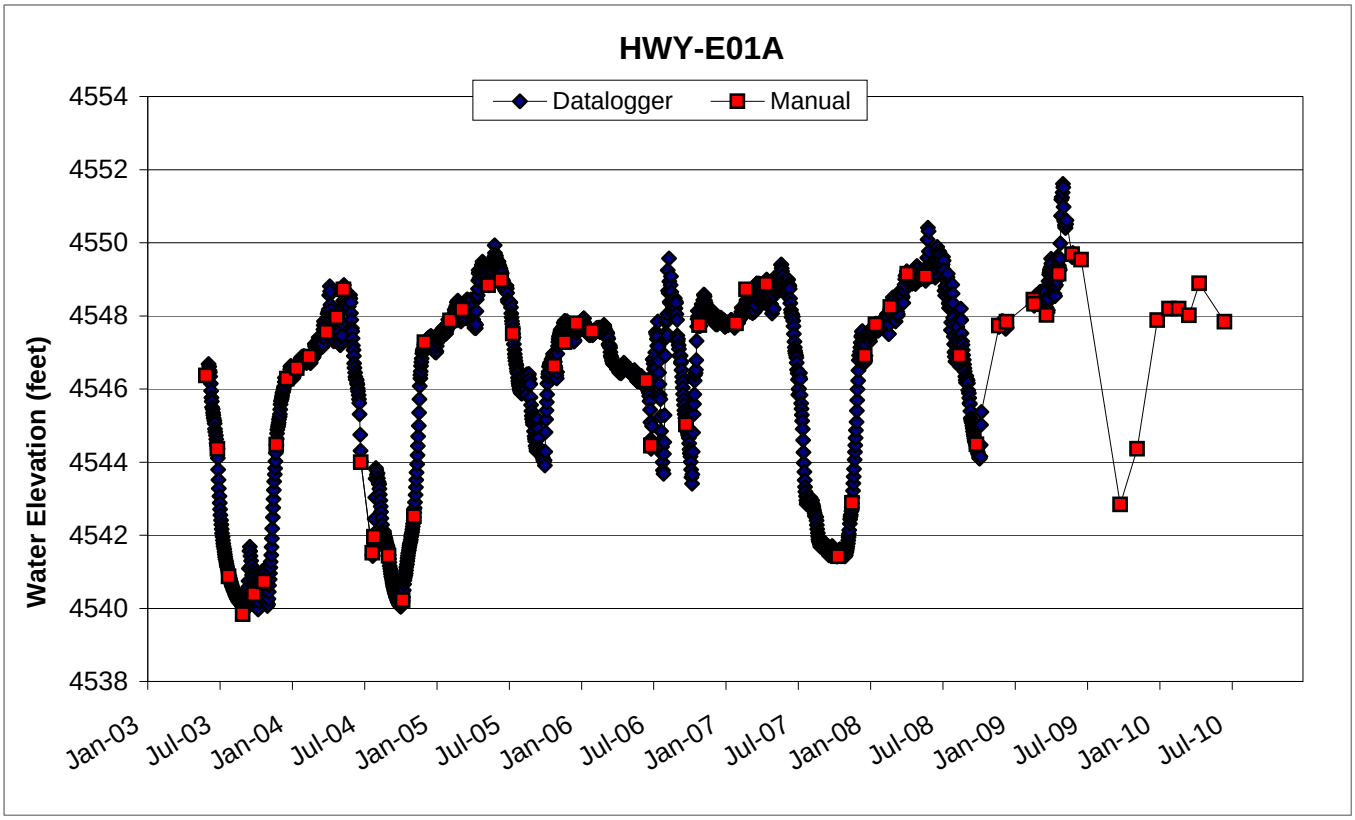

BRN-W03B
Datalogger
Manual
Water Elevation (feet)
4564
4563.5
4563
4562.5
4562
4561.5
4561
4560.5
4560
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

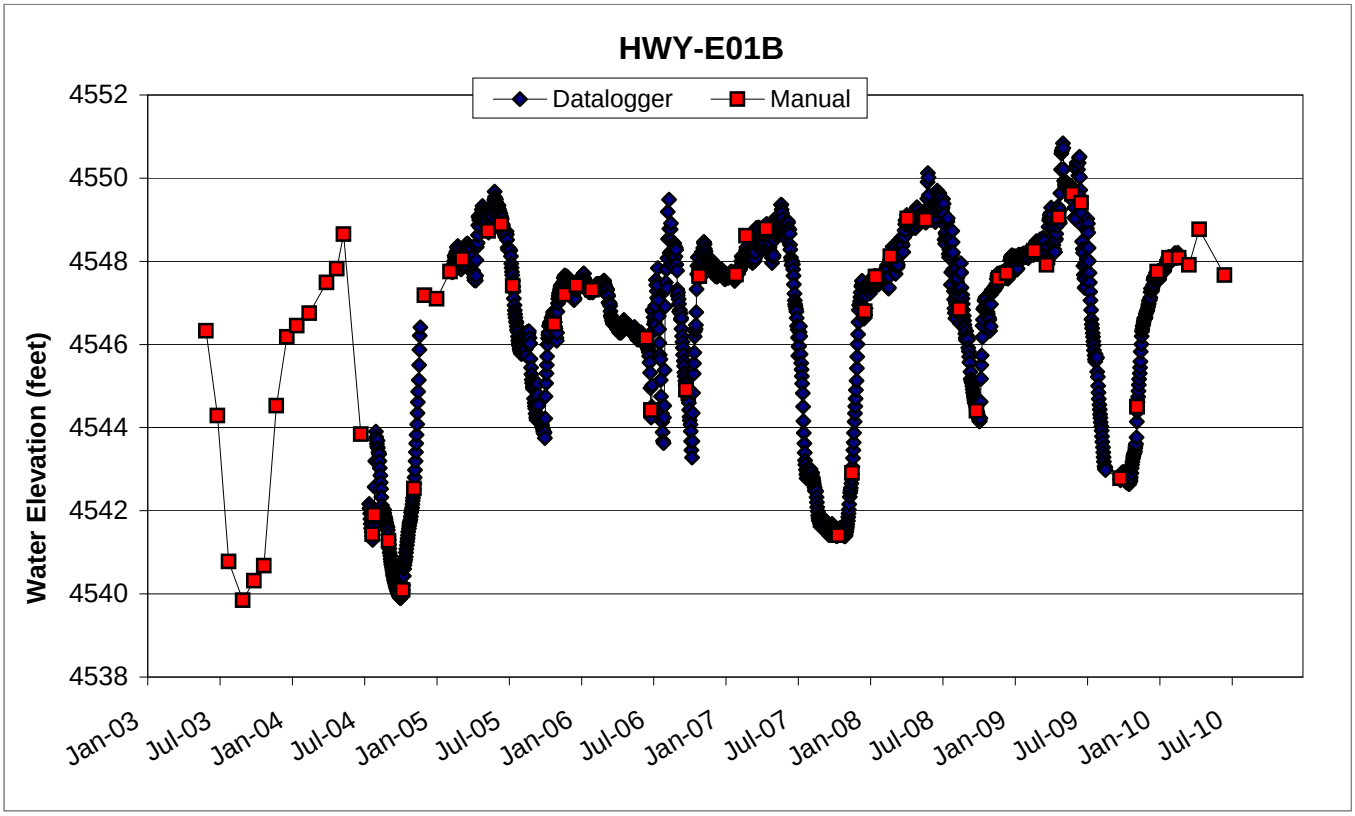

BRN-W04A
Datalogger
Manual
Water Elevation (feet)
4564.5
4564
4563.5
4563
4562.5
4562
4561.5
4561
4560.5
4560
4559.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

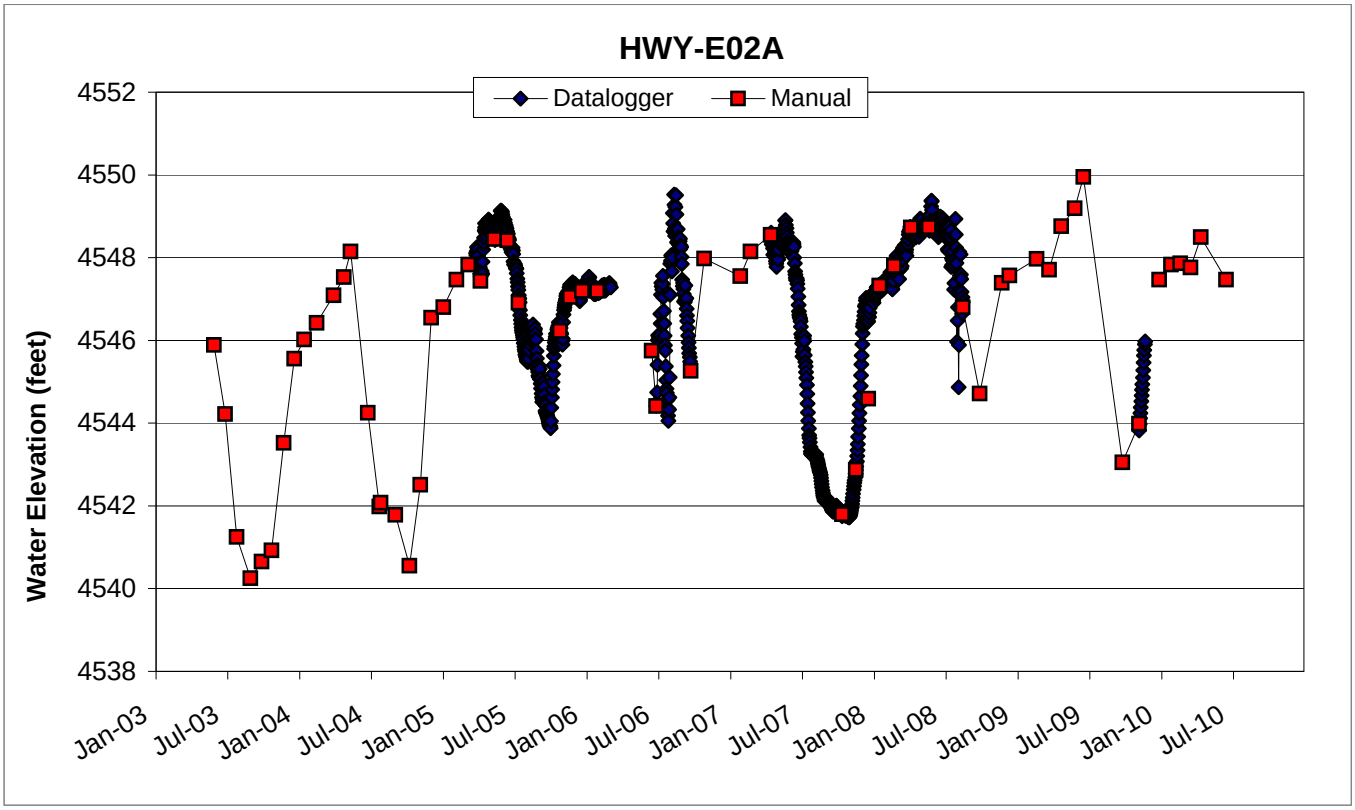

BRN-W04B
Datalogger
Manual
Water Elevation (feet)
4567
4566
4565
4564
4563
4562
4561
4560
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

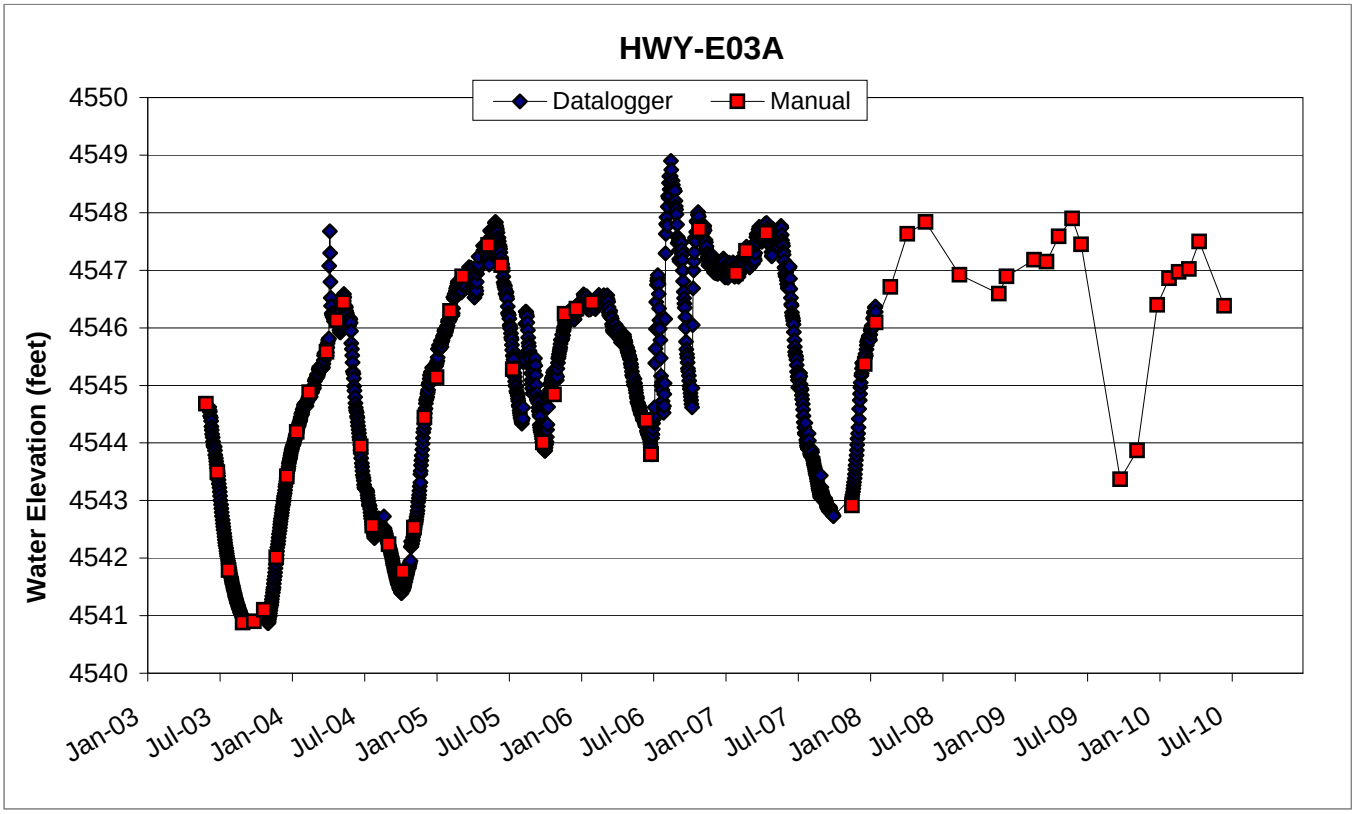

BRN-W05A
Datalogger
Manual
Water Elevation (feet)
4572
4570
4568
4566
4564
4562
4560
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

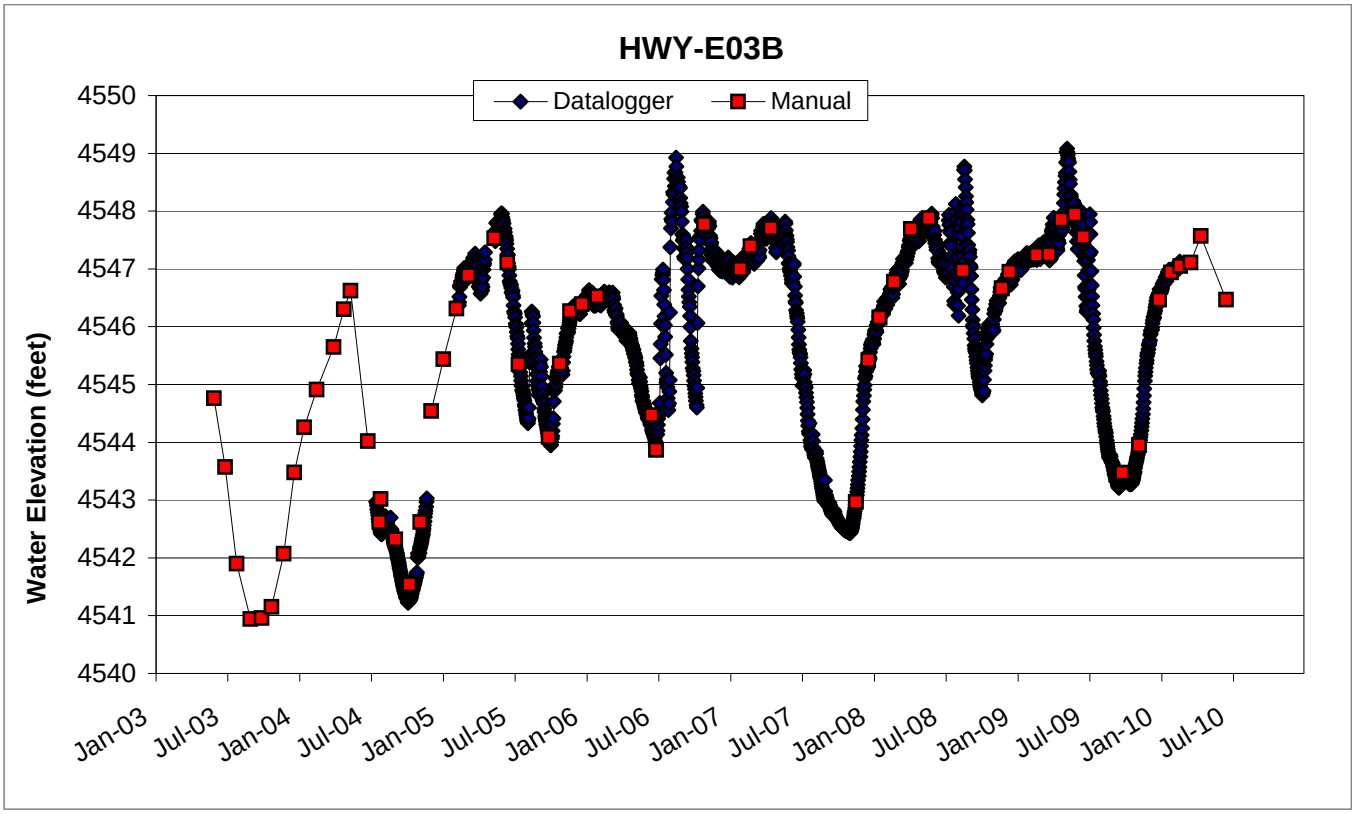

BRN-W05B
Datalogger
Manual
Water Elevation (feet)
4572
4570
4568
4566
4564
4562
4560
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

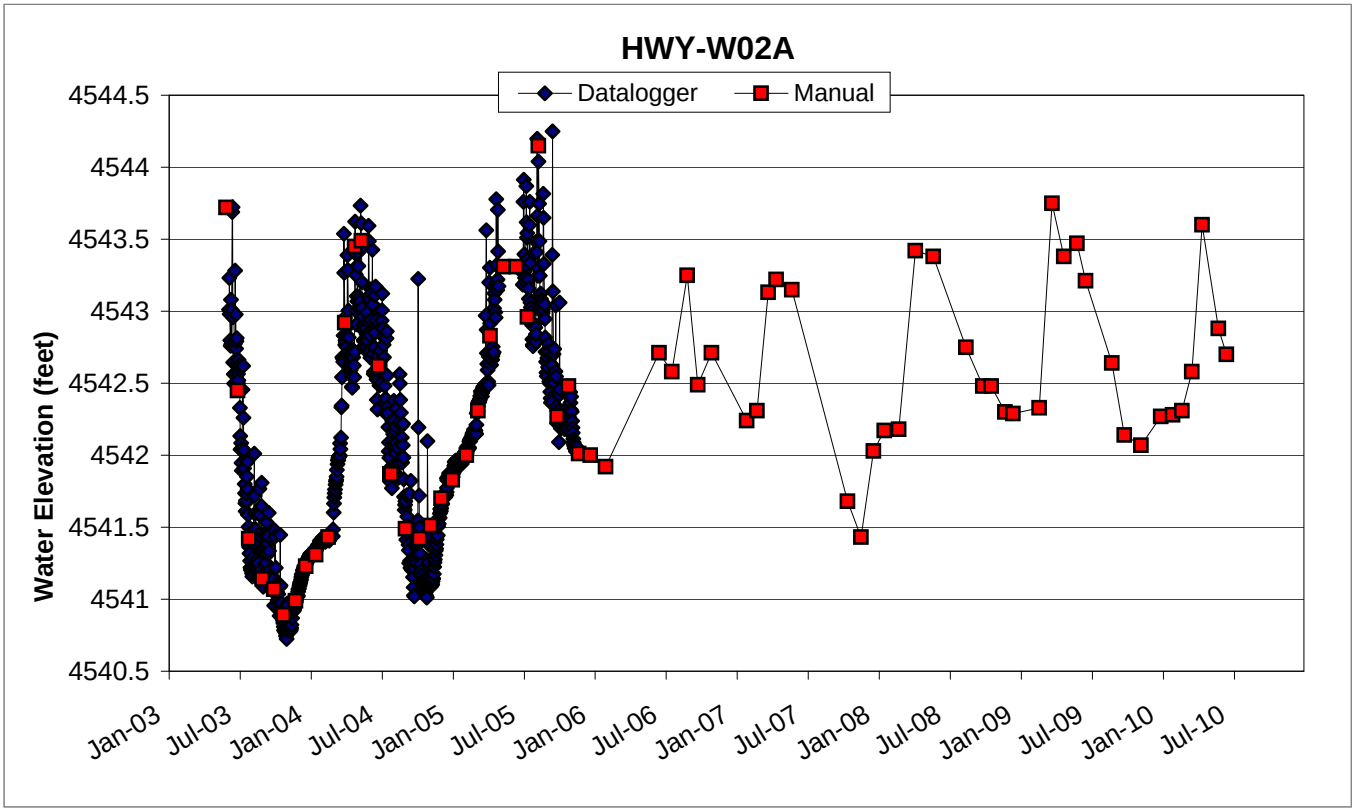

HWY-E01A
Datalogger
Manual
Water Elevation (feet)
4554
4552
4550
4548
4546
4544
4542
4540
4538
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

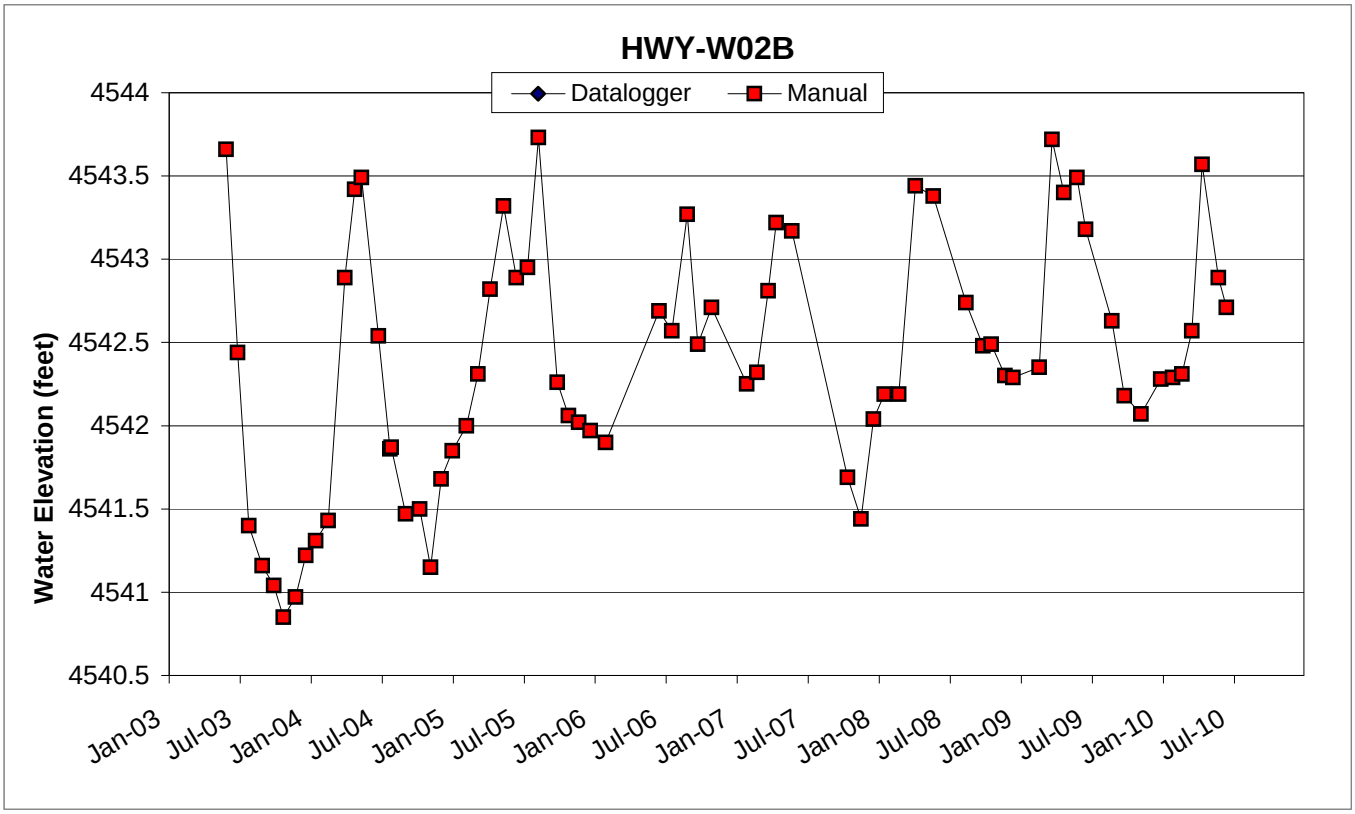

HWY-E01B
Datalogger
Manual
Water Elevation (feet)
4552
4550
4548
4546
4544
4542
4540
4538
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

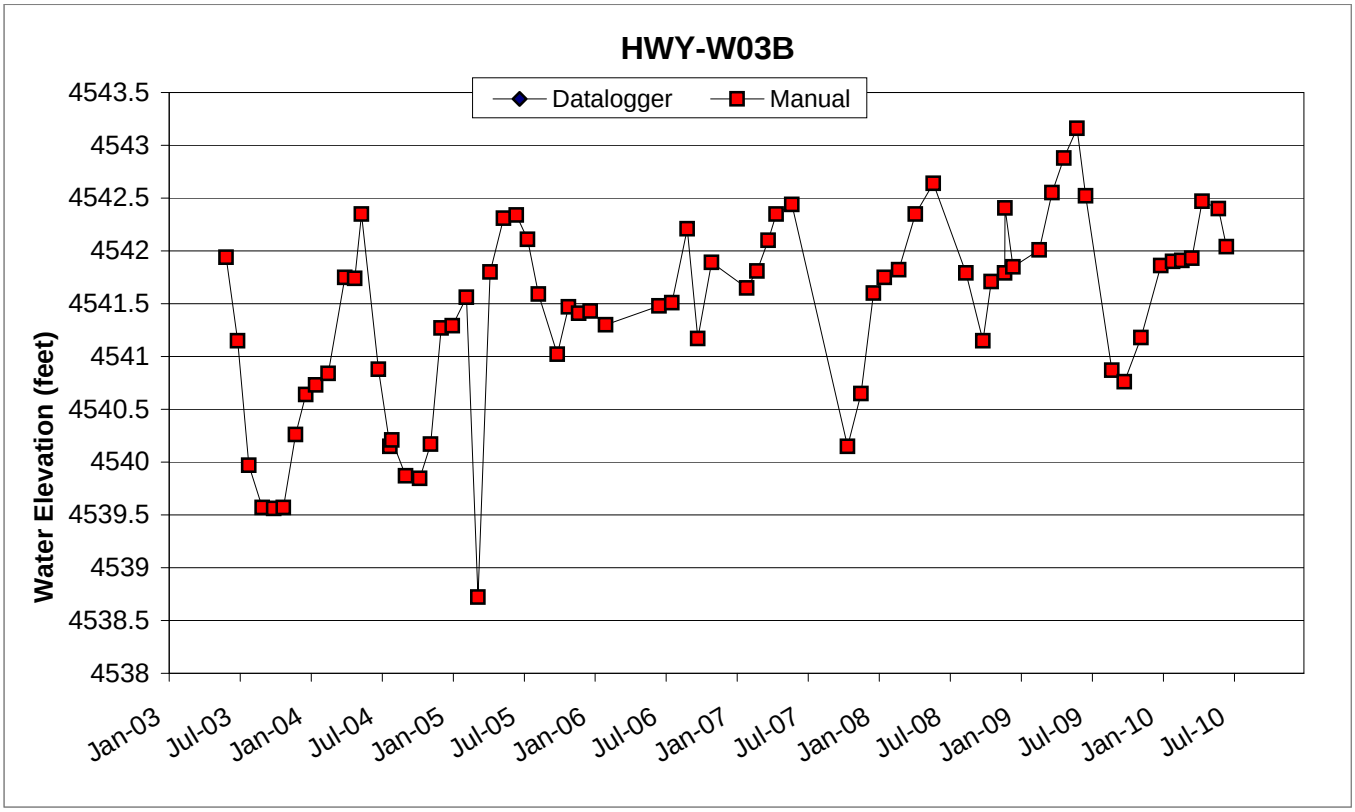

HWY-E02A
Datalogger
Manual
Water Elevation (feet)
4552
4550
4548
4546
4544
4542
4540
4538
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

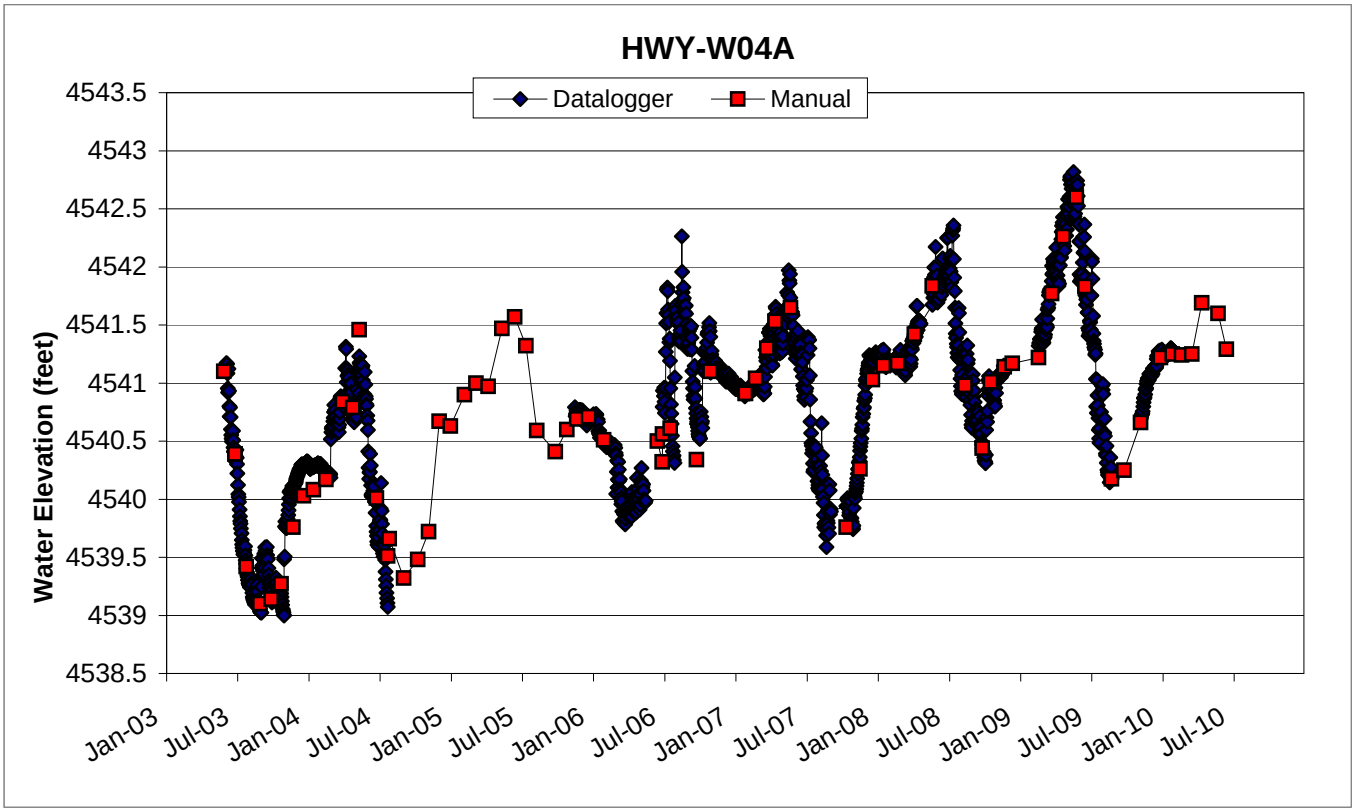

HWY-E03A
Datalogger
Manual
Water Elevation (feet)
4550
4549
4548
4547
4546
4545
4544
4543
4542
4541
4540
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

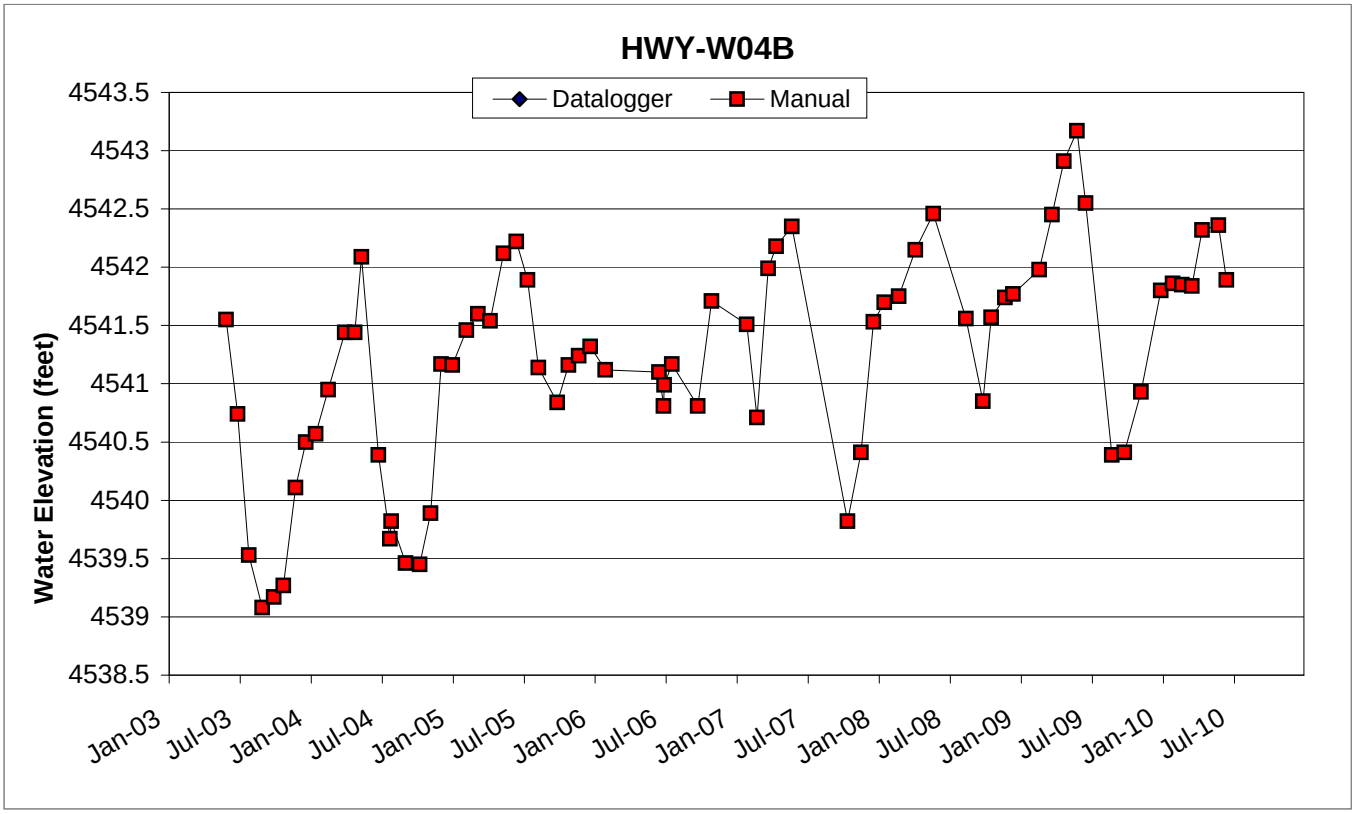

HWY-E03B
Datalogger
Manual
Water Elevation (feet)
4550
4549
4548
4547
4546
4545
4544
4543
4542
4541
4540
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

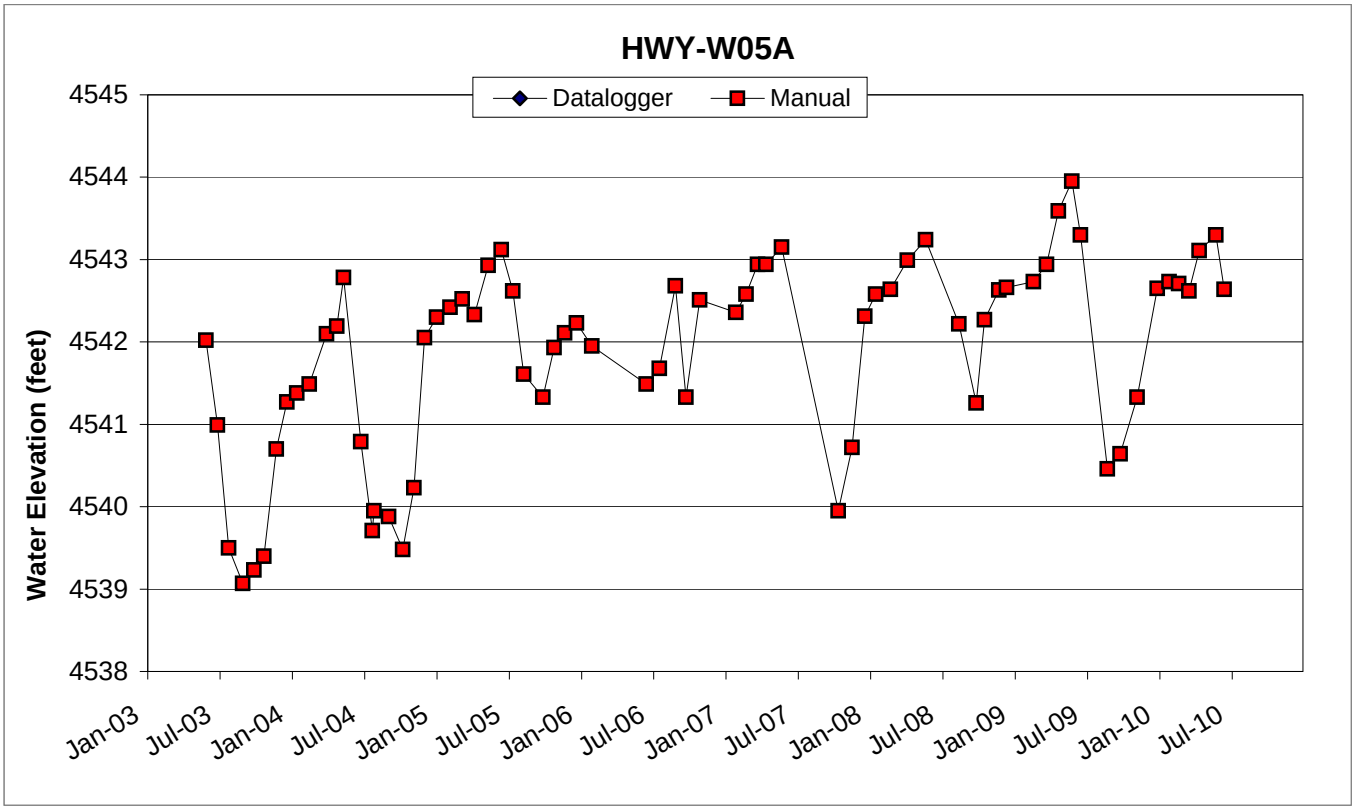

HWY-W02A
Datalogger
Manual
Water Elevation (feet)
4544.5
4544
4543.5
4543
4542.5
4542
4541.5
4541
4540.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

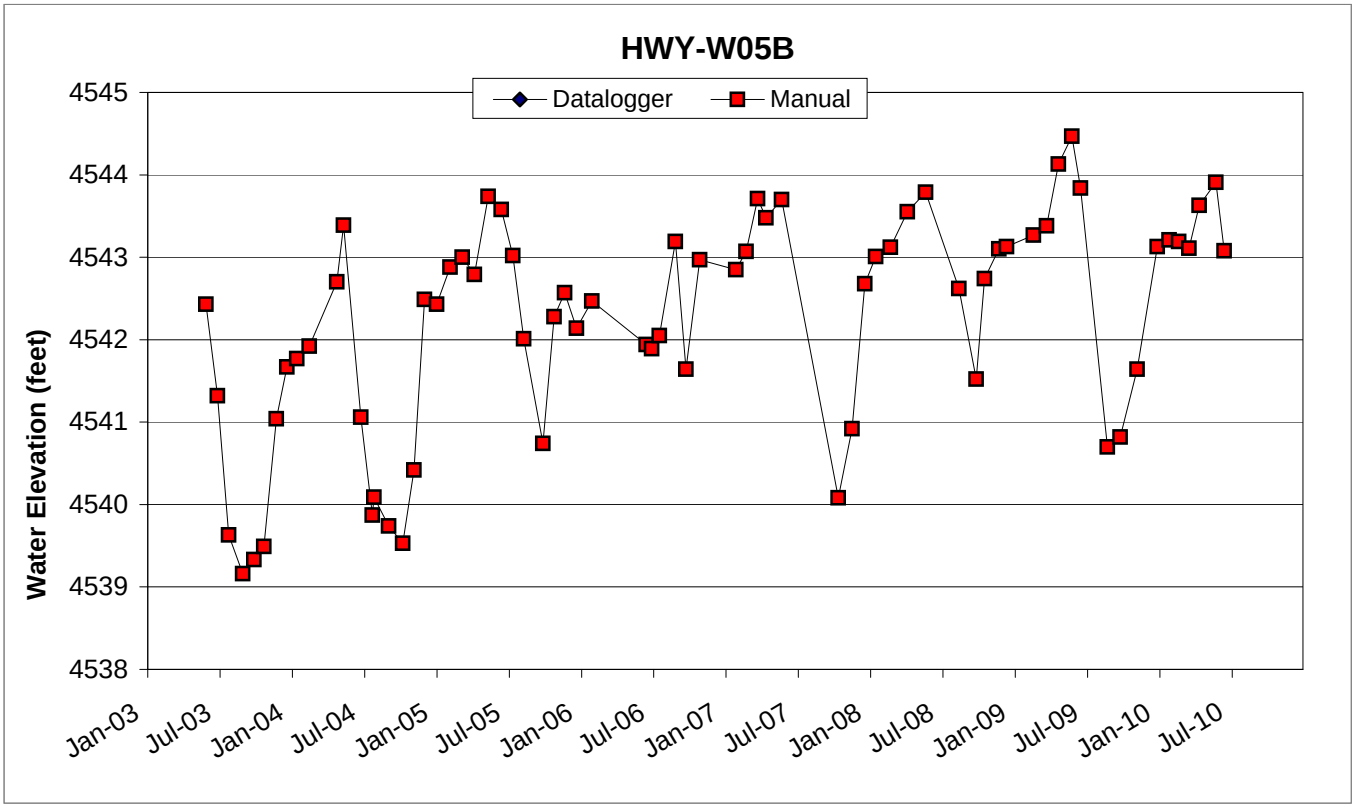

HWY-W02B
Datalogger
Manual
Water Elevation (feet)
4544
4543.5
4543
4542.5
4542
4541.5
4541
4540.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

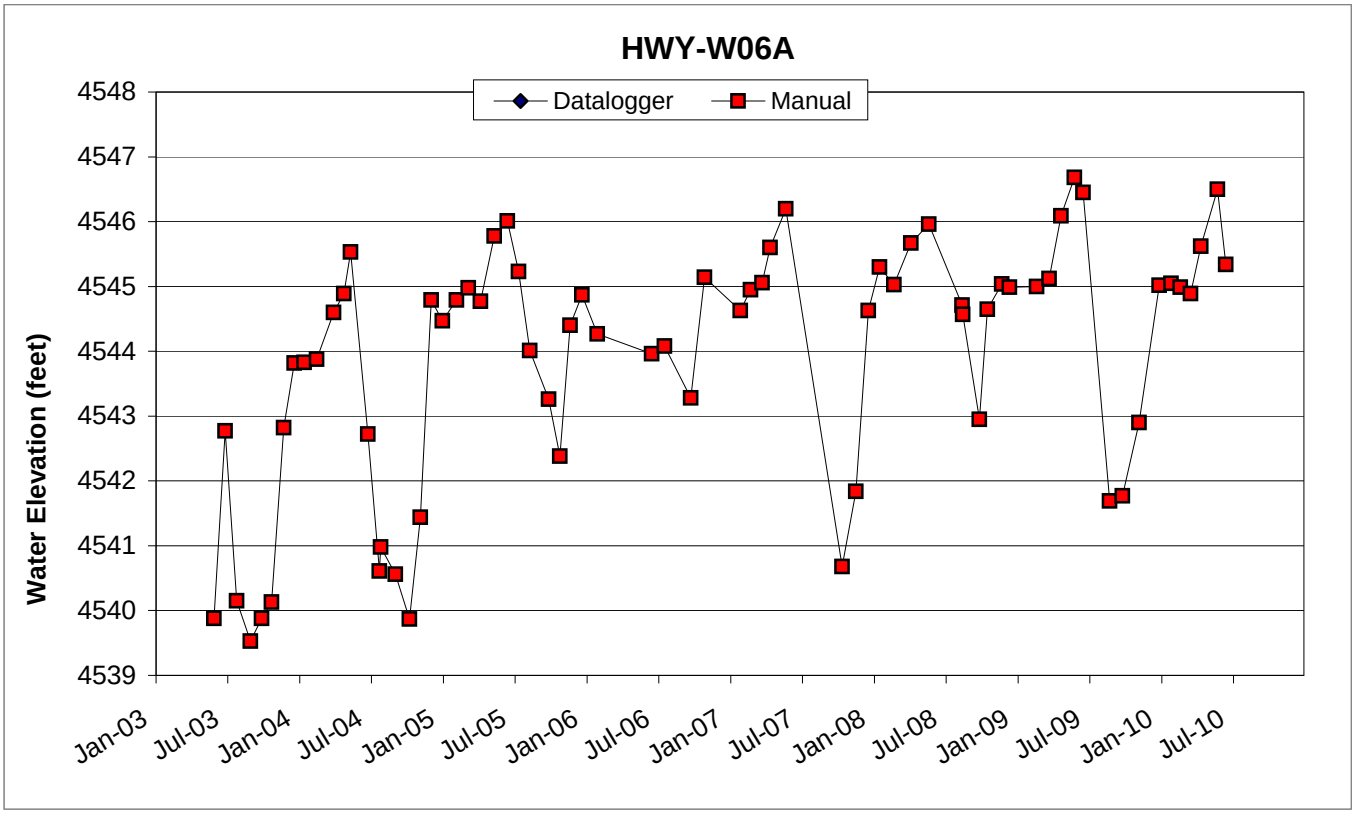

HWY-W03B
Datalogger
Manual
Water Elevation (feet)
4543.5
4543
4542.5
4542
4541.5
4541
4540.5
4540
4539.5
4539
4538.5
4538
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

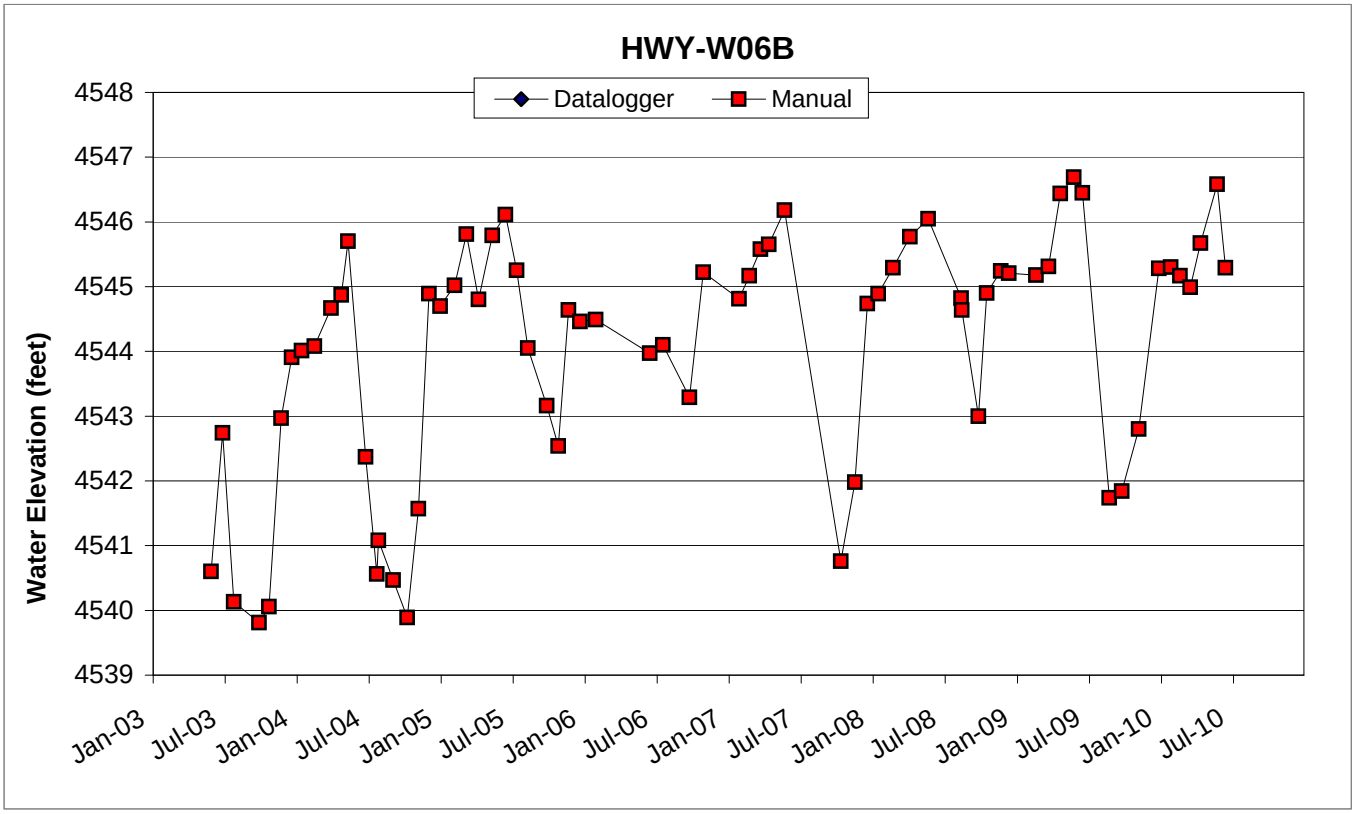

HWY-W04A
Datalogger
Manual
Water Elevation (feet)
4543.5
4543
4542.5
4542
4541.5
4541
4540.5
4540
4539.5
4539
4538.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

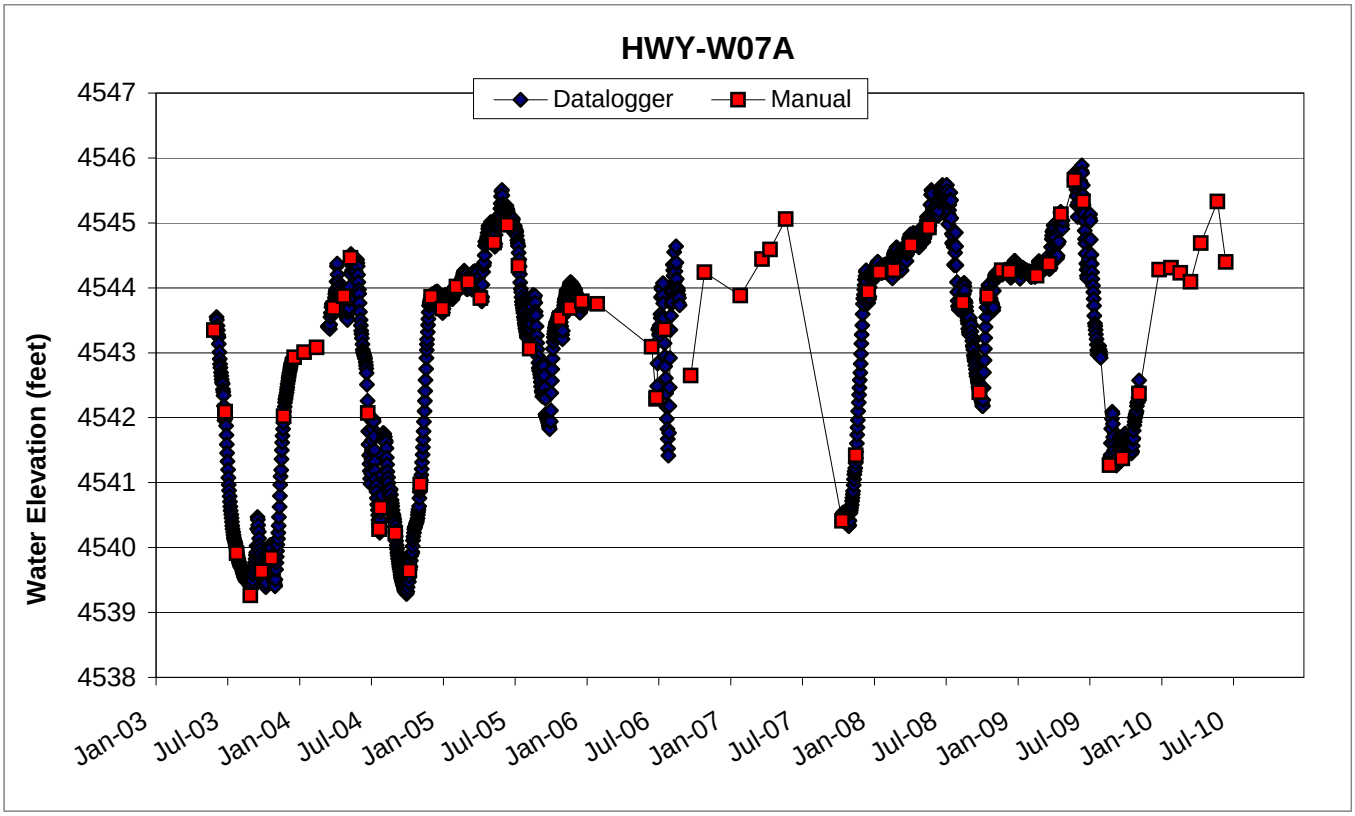

HWY-W04B
Datalogger
Manual
Water Elevation (feet)
4543.5
4543
4542.5
4542
4541.5
4541
4540.5
4540
4539.5
4539
4538.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

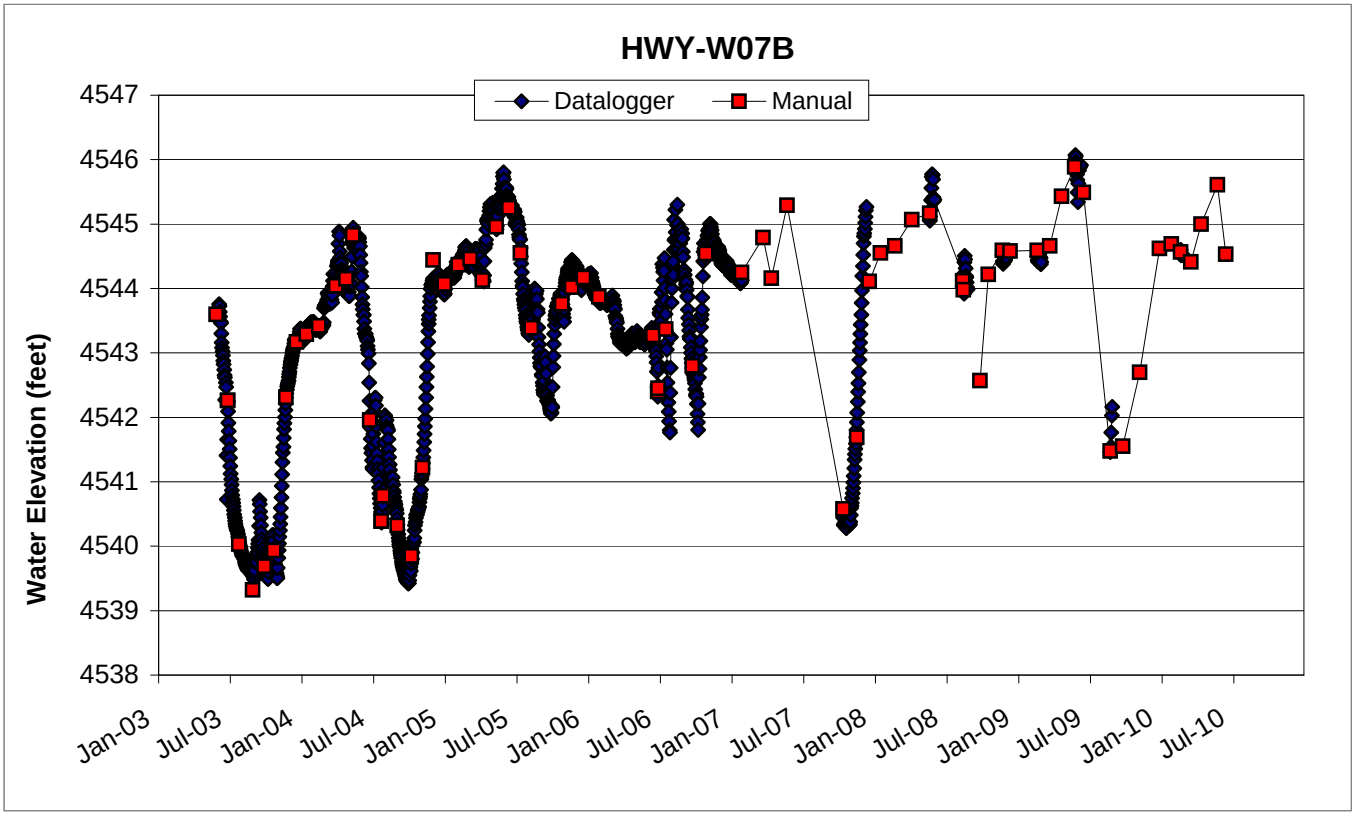

HWY-W05A
Datalogger
Manual
Water Elevation (feet)
4545
4544
4543
4542
4541
4540
4539
4538
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

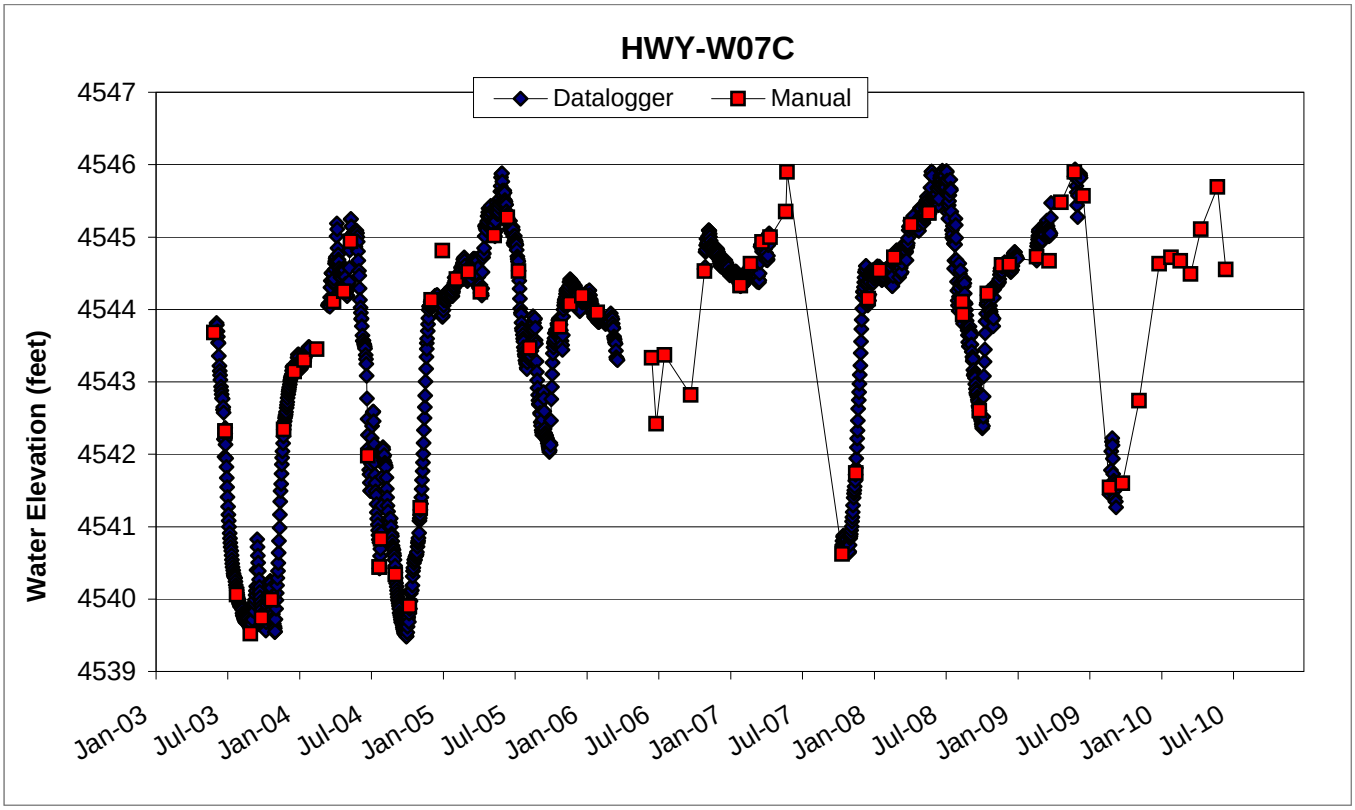

HWY-W05B
Datalogger
Manual
Water Elevation (feet)
4545
4544
4543
4542
4541
4540
4539
4538
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

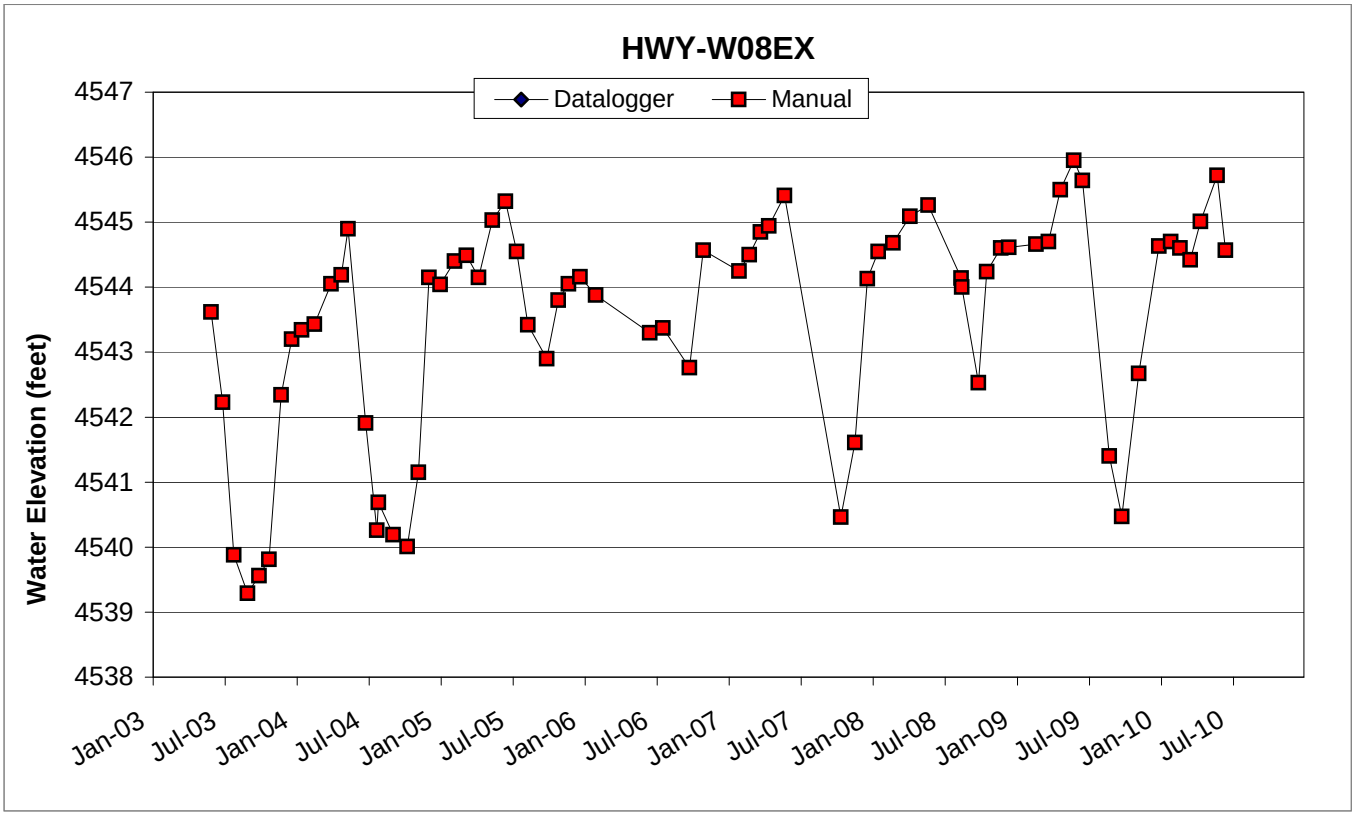

HWY-W06A
Datalogger
Manual
Water Elevation (feet)
4548
4547
4546
4545
4544
4543
4542
4541
4540
4539
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

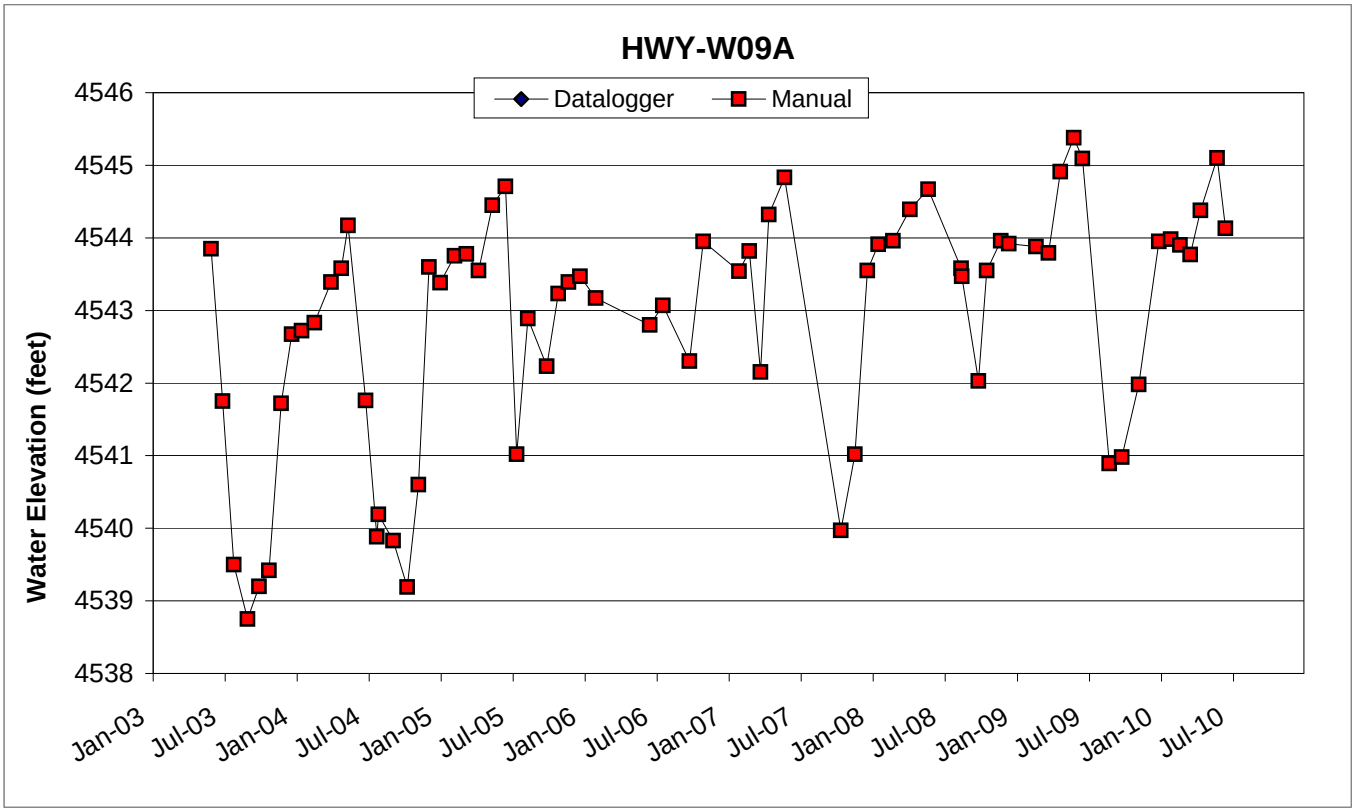

HWY-W06B
Datalogger
Manual
Water Elevation (feet)
4548
4547
4546
4545
4544
4543
4542
4541
4540
4539
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

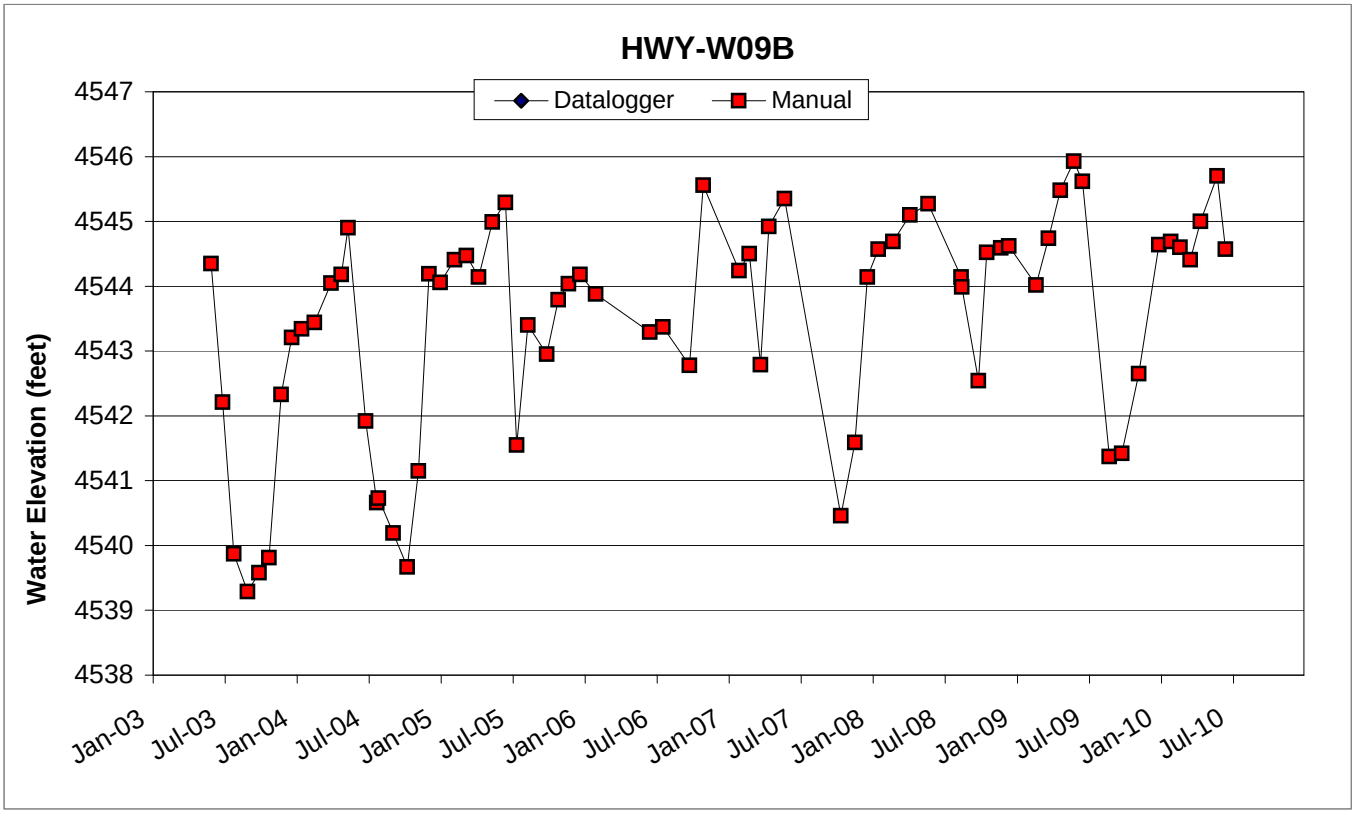

HWY-W07A
Datalogger
Manual
Water Elevation (feet)
4547
4546
4545
4544
4543
4542
4541
4540
4539
4538
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

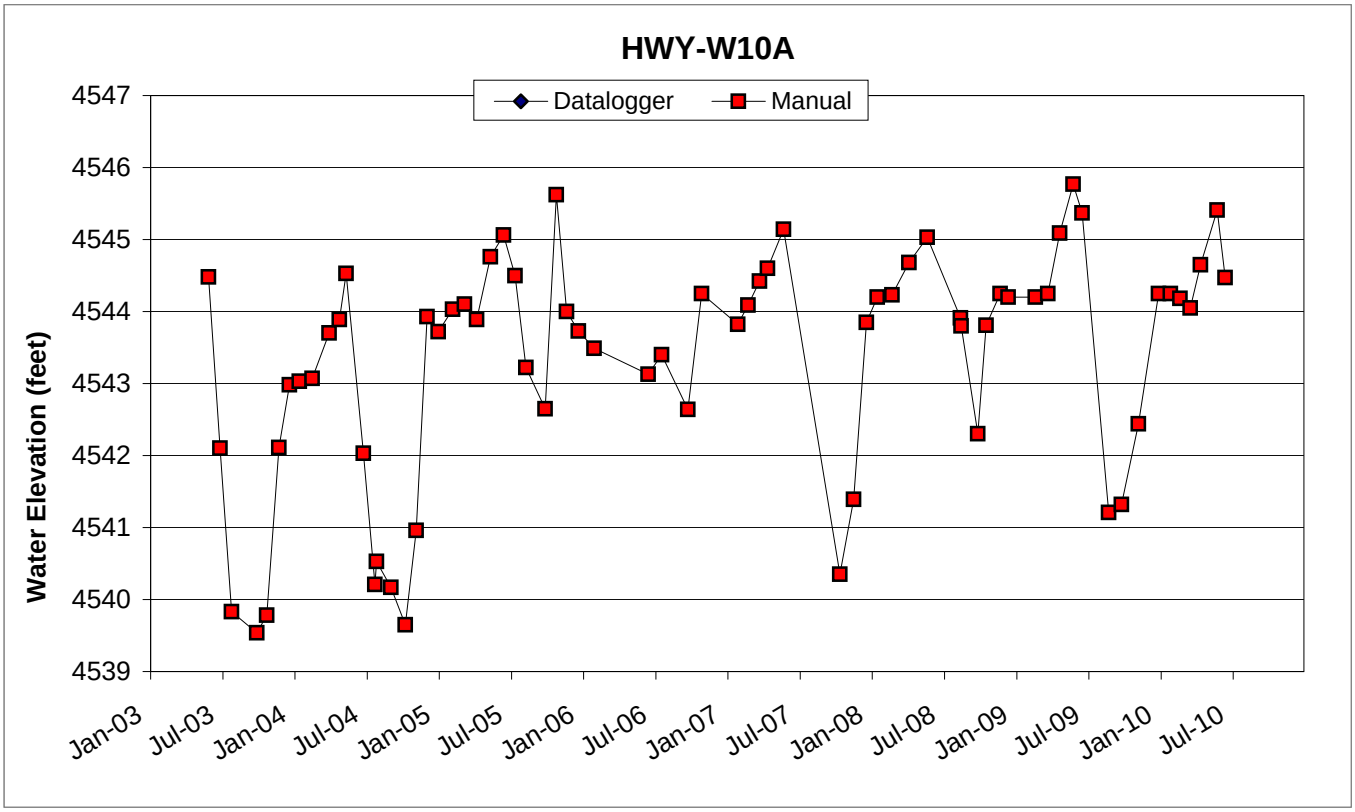

HWY-W07B
Datalogger
Manual
Water Elevation (feet)
4547
4546
4545
4544
4543
4542
4541
4540
4539
4538
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

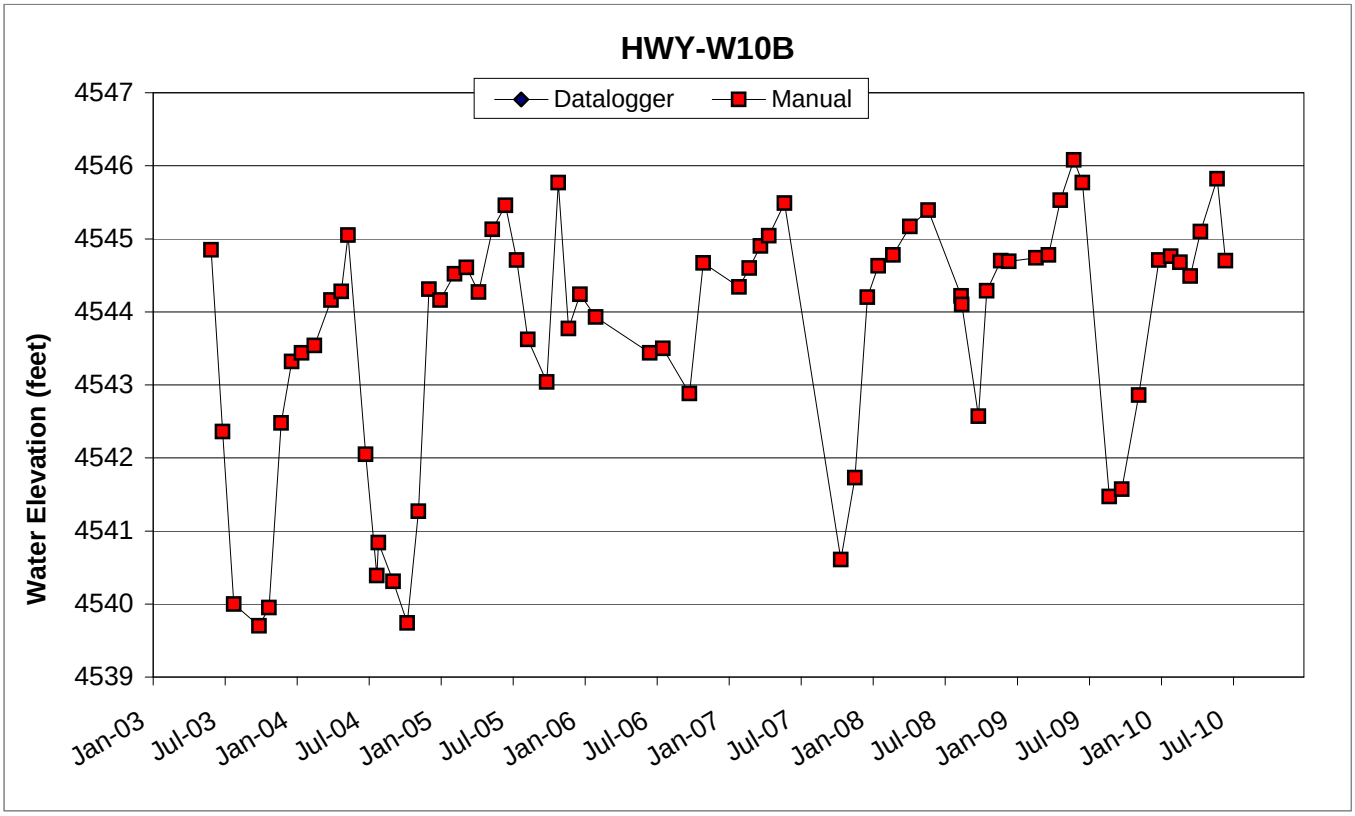

HWY-W07C
Datalogger
Manual
Water Elevation (feet)
4547
4546
4545
4544
4543
4542
4541
4540
4539
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

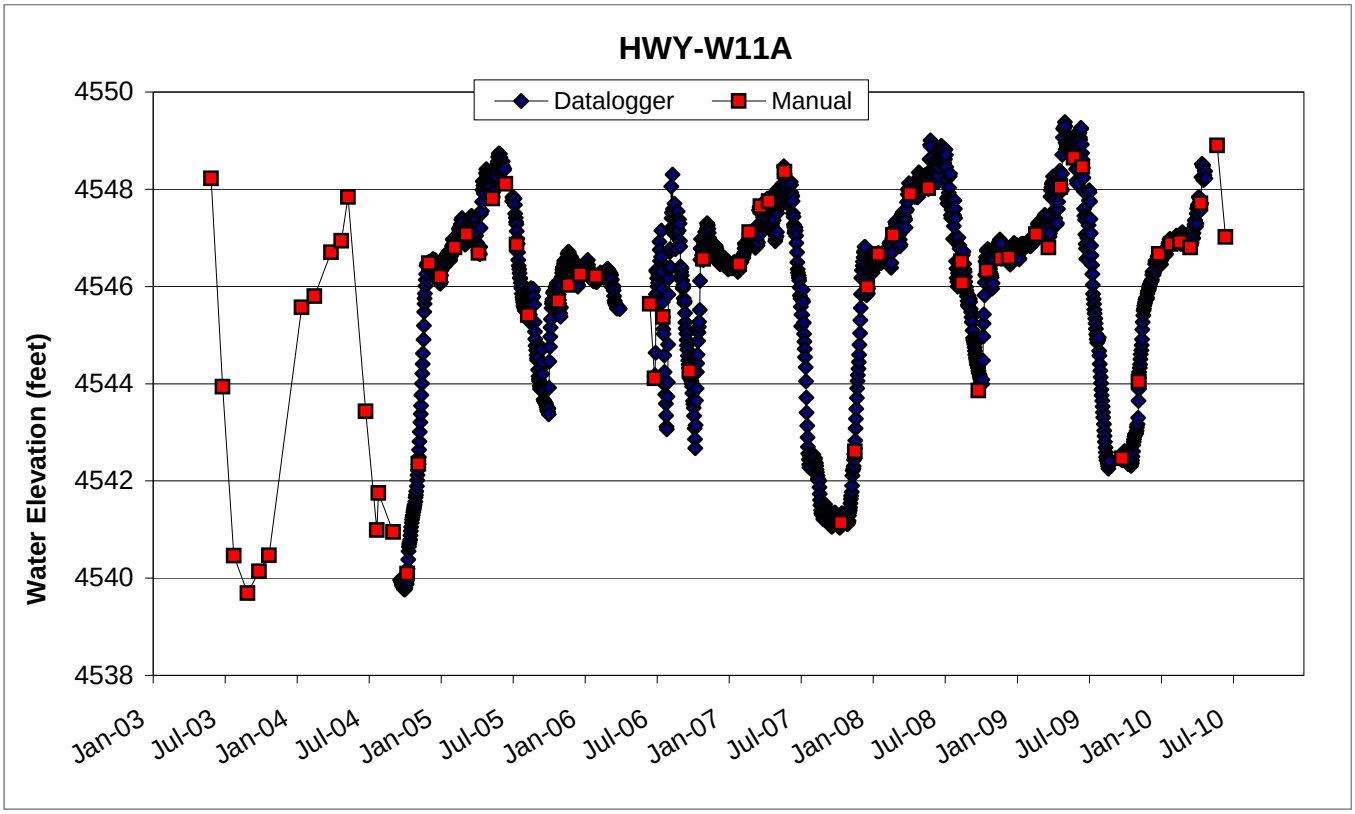

HWY-W08EX
Datalogger
Manual
Water Elevation (feet)
4547
4546
4545
4544
4543
4542
4541
4540
4539
4538
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

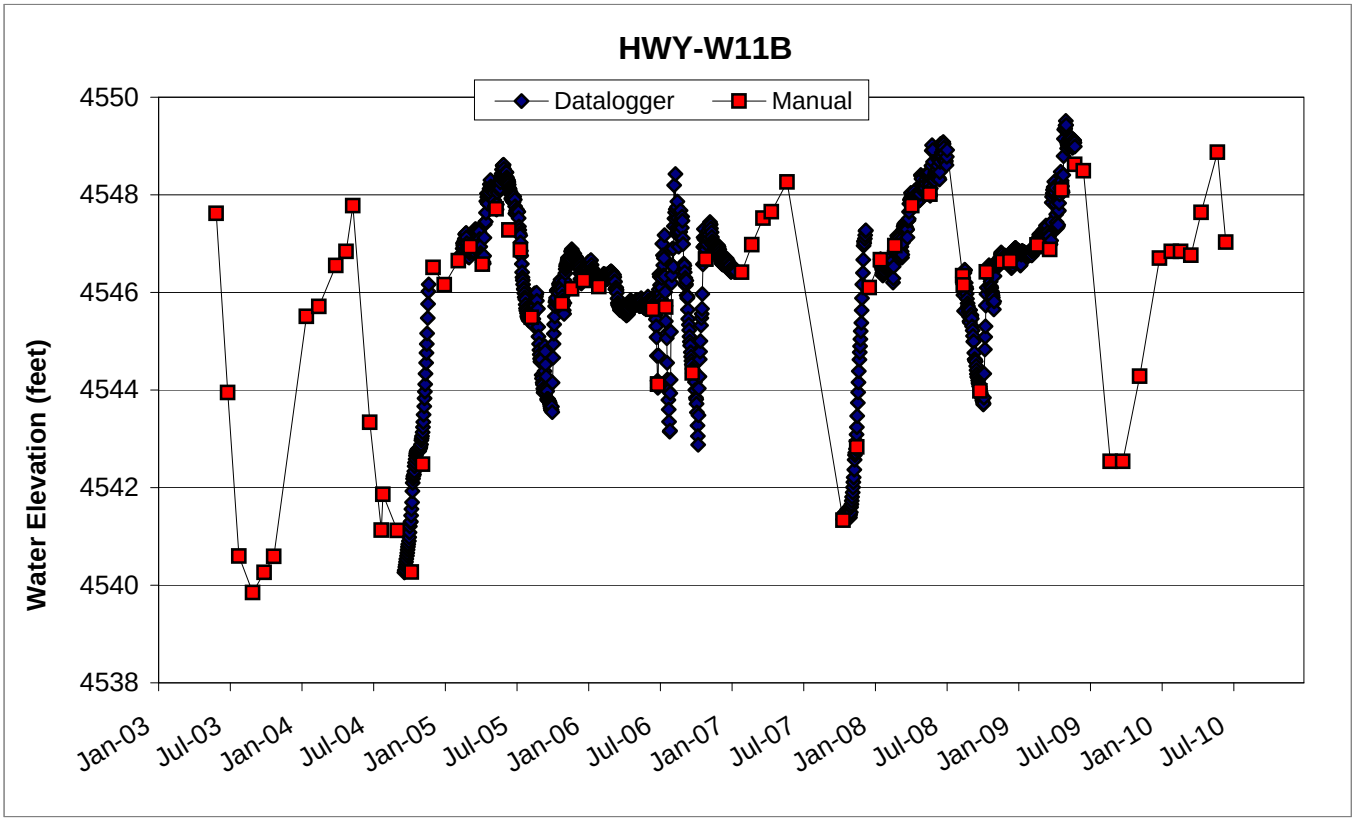

HWY-W09A
Datalogger
Manual
Water Elevation (feet)
4546
4545
4544
4543
4542
4541
4540
4539
4538
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

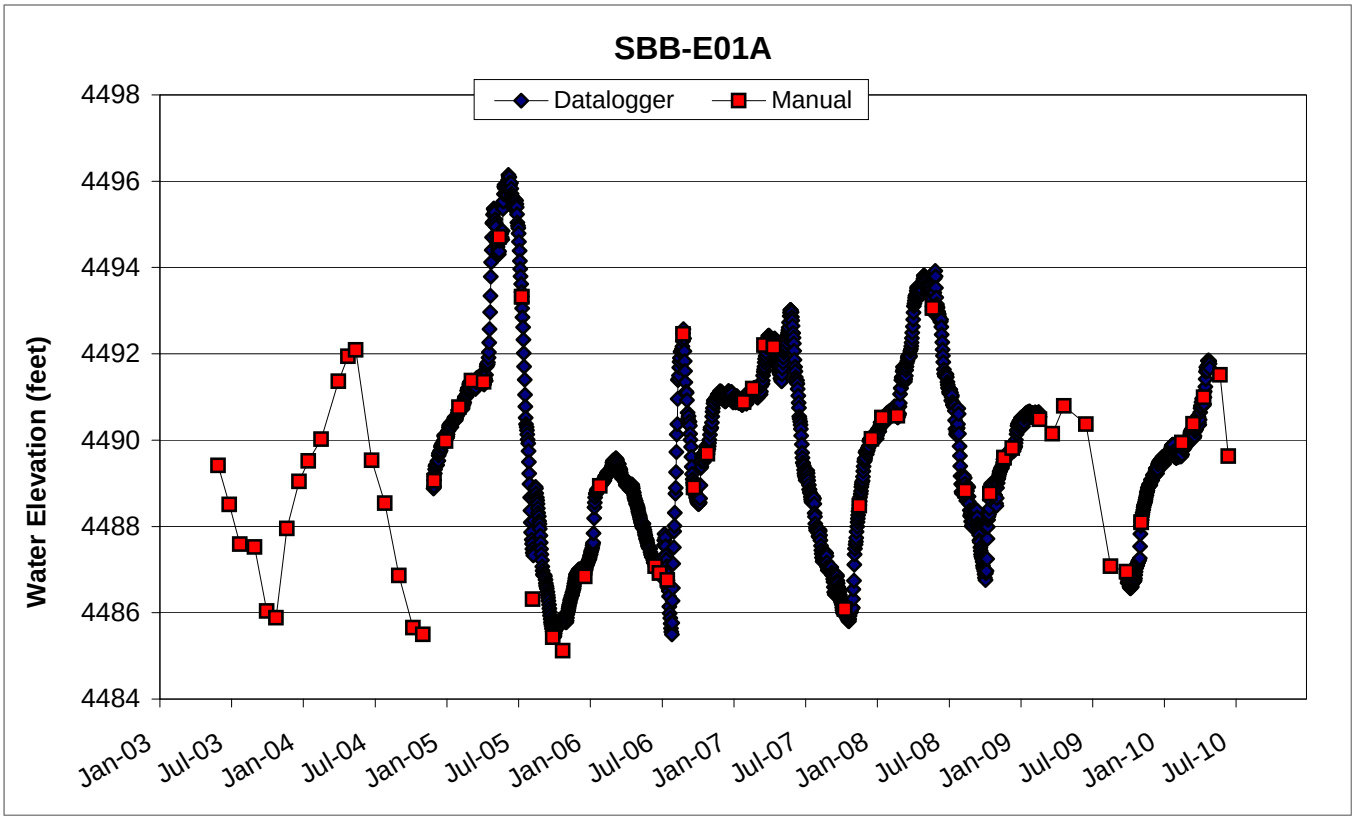

HWY-W09B
Datalogger
Manual
Water Elevation (feet)
4547
4546
4545
4544
4543
4542
4541
4540
4539
4538
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

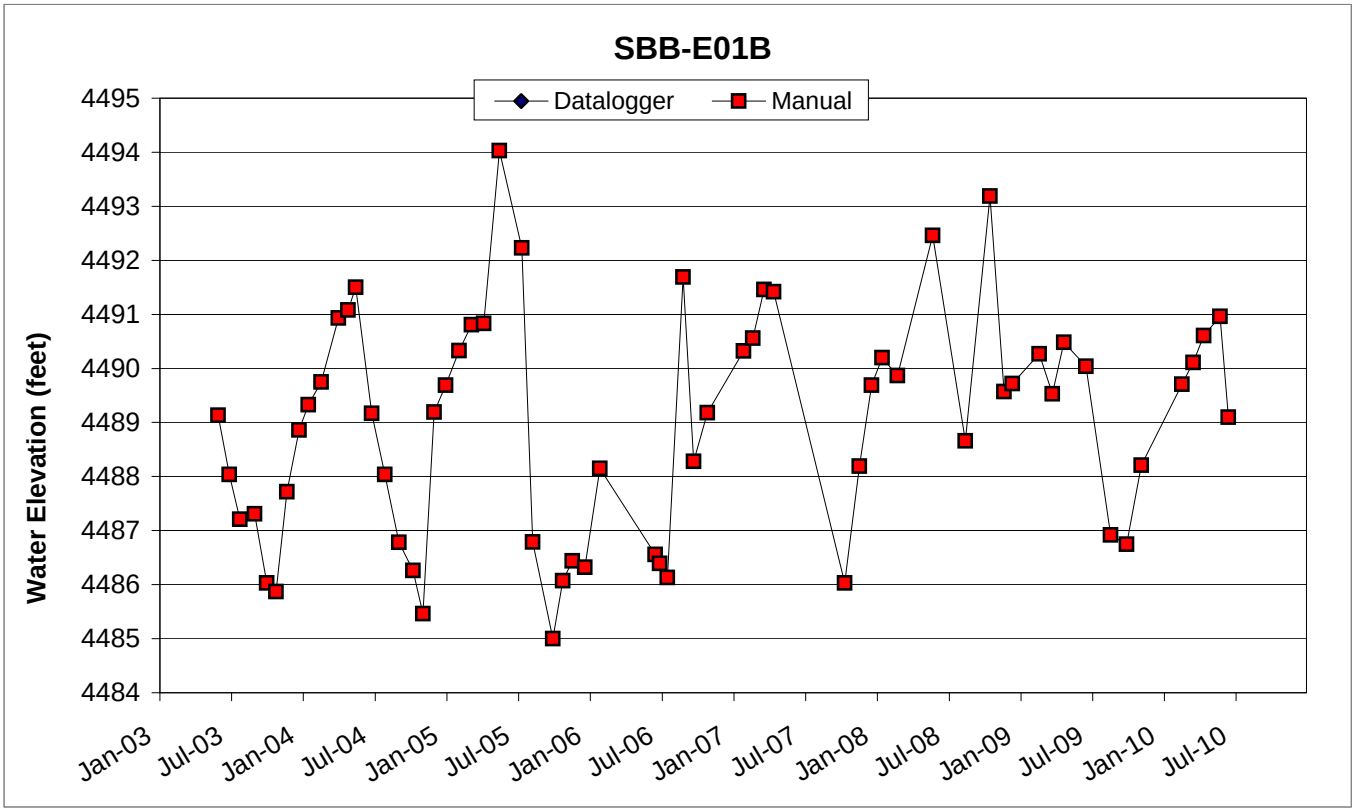

HWY-W10A
Datalogger
Manual
Water Elevation (feet)
4547
4546
4545
4544
4543
4542
4541
4540
4539
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

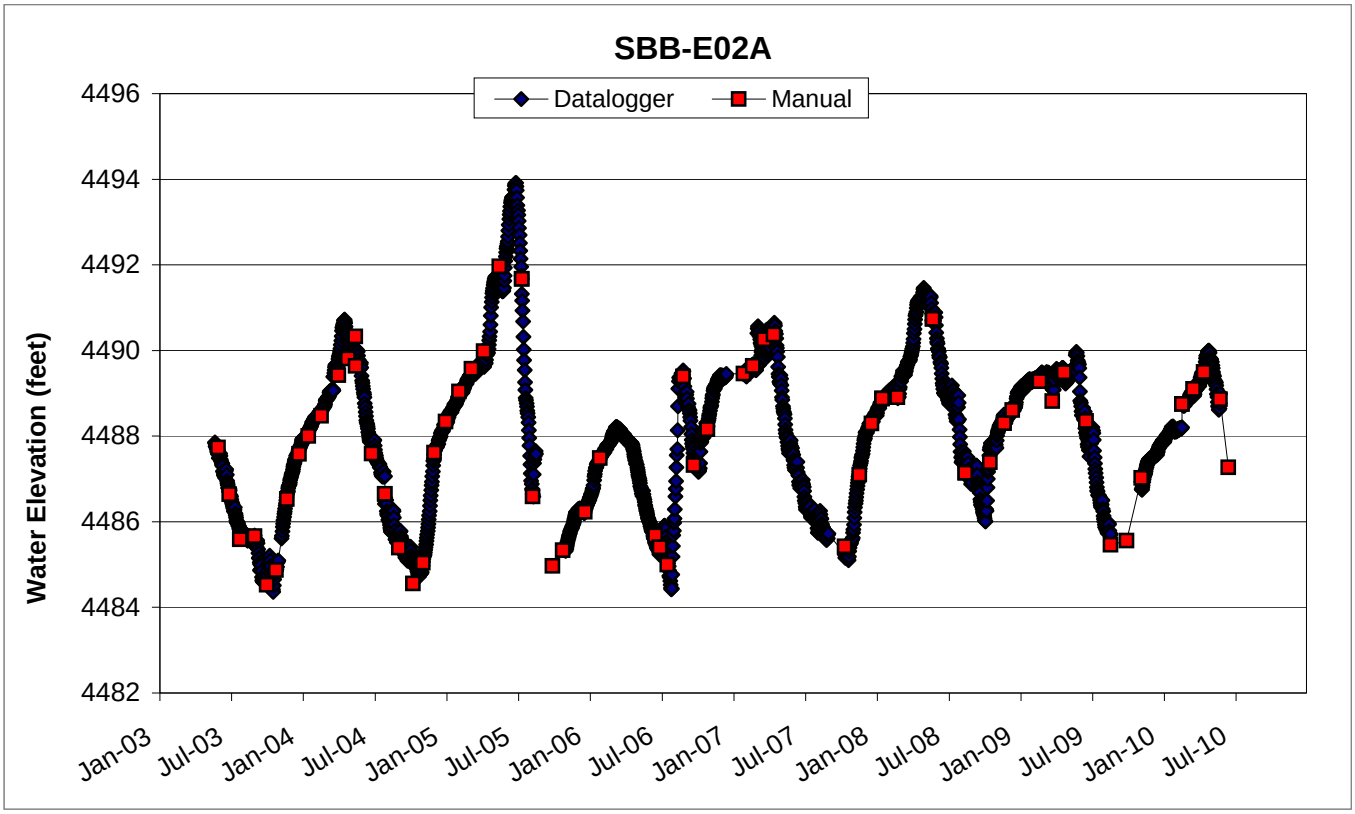

HWY-W10B
Datalogger
Manual
Water Elevation (feet)
4547
4546
4545
4544
4543
4542
4541
4540
4539
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

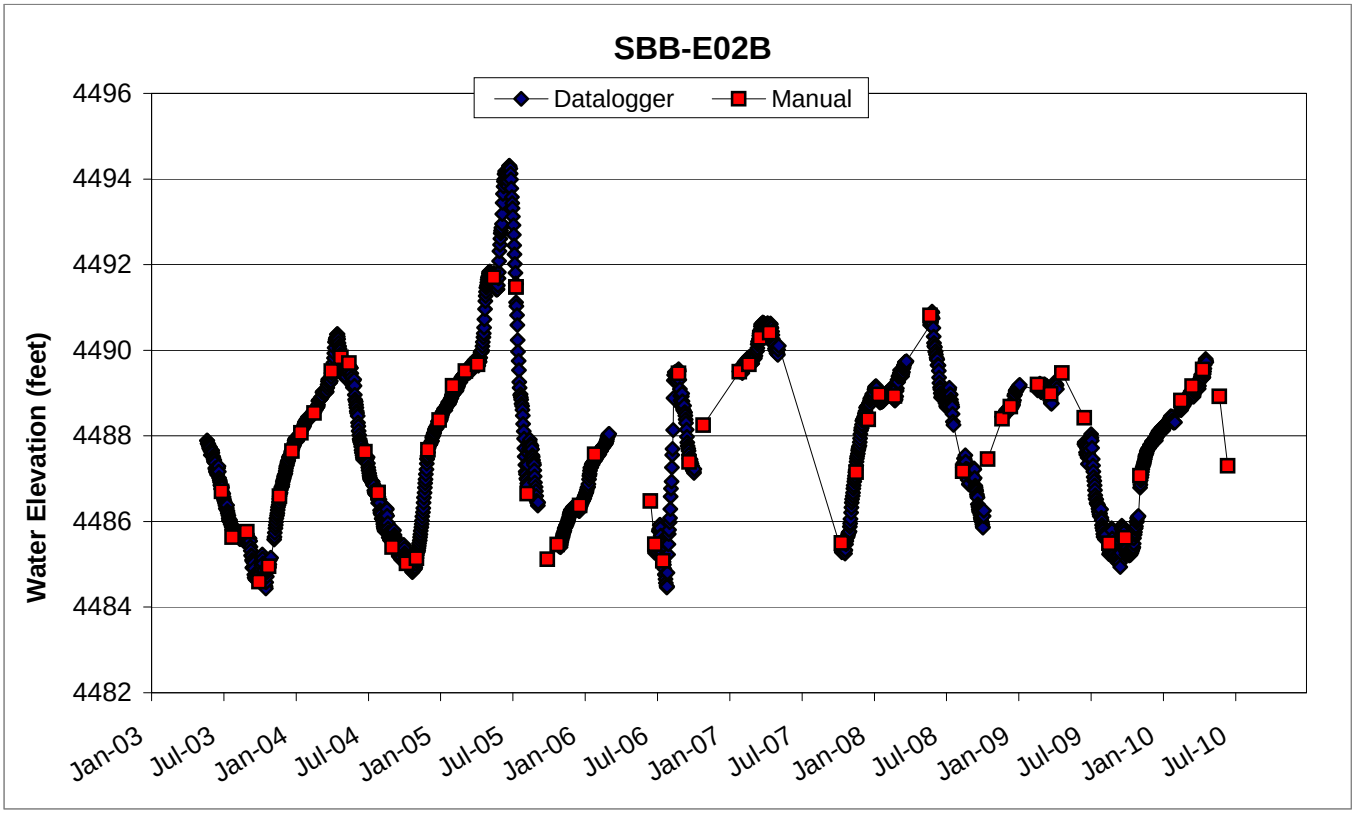

HWY-W11A
Datalogger
Manual
Water Elevation (feet)
4550
4548
4546
4544
4542
4540
4538
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

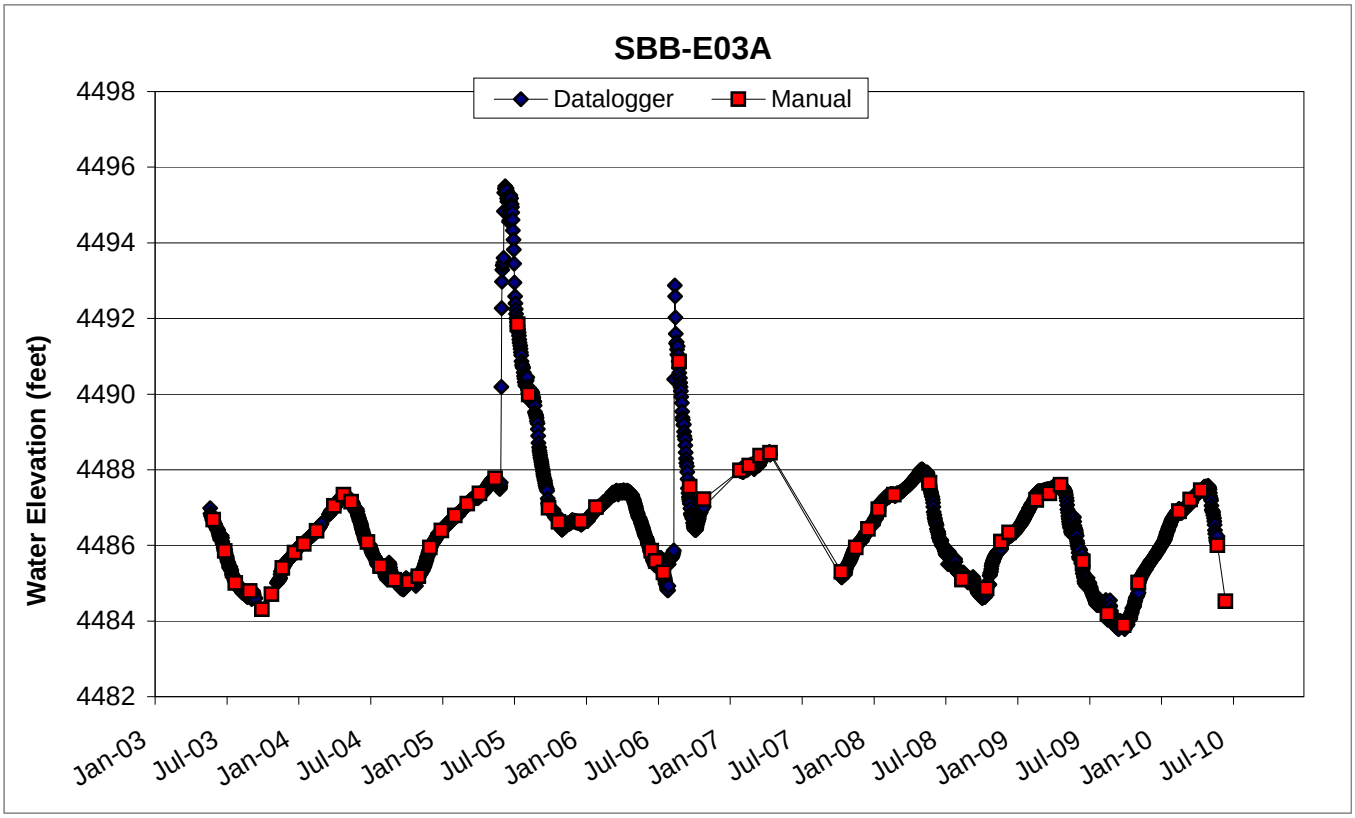

HWY-W11B
Datalogger
Manual
Water Elevation (feet)
4550
4548
4546
4544
4542
4540
4538
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

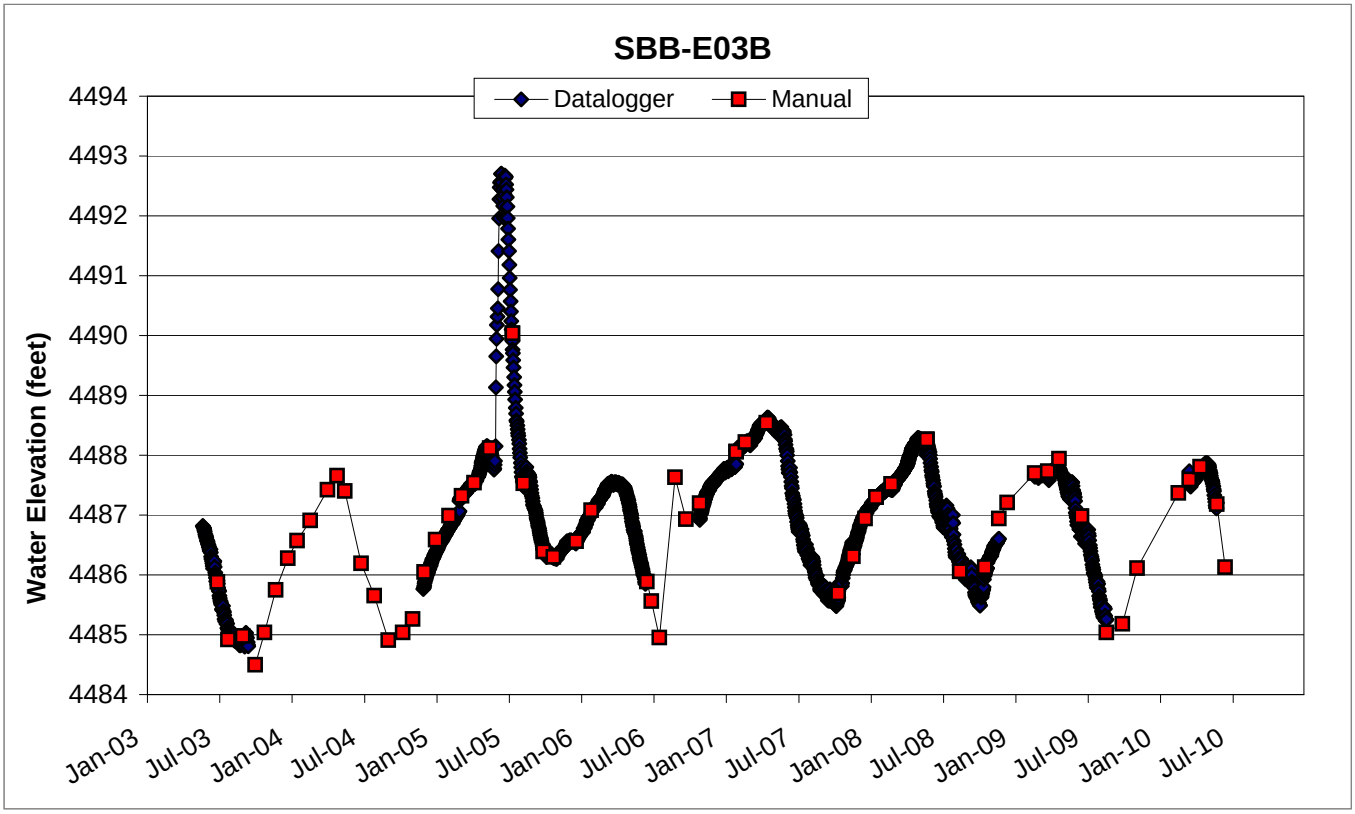

SBB-E01A
Datalogger
Manual
Water Elevation (feet)
4498
4496
4494
4492
4490
4488
4486
4484
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

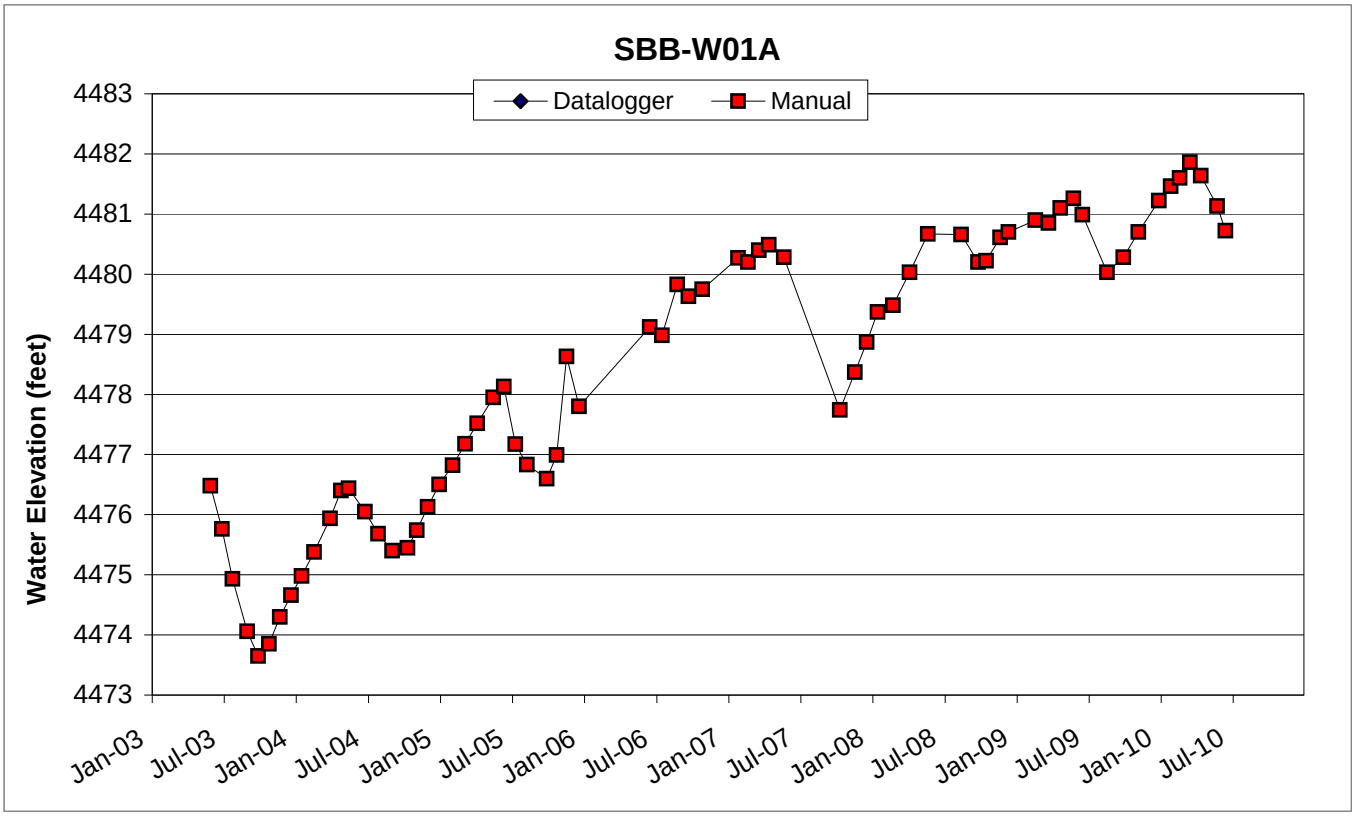

SBB-E01B
Datalogger
Manual
Water Elevation (feet)
4495
4494
4493
4492
4491
4490
4489
4488
4487
4486
4485
4484
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

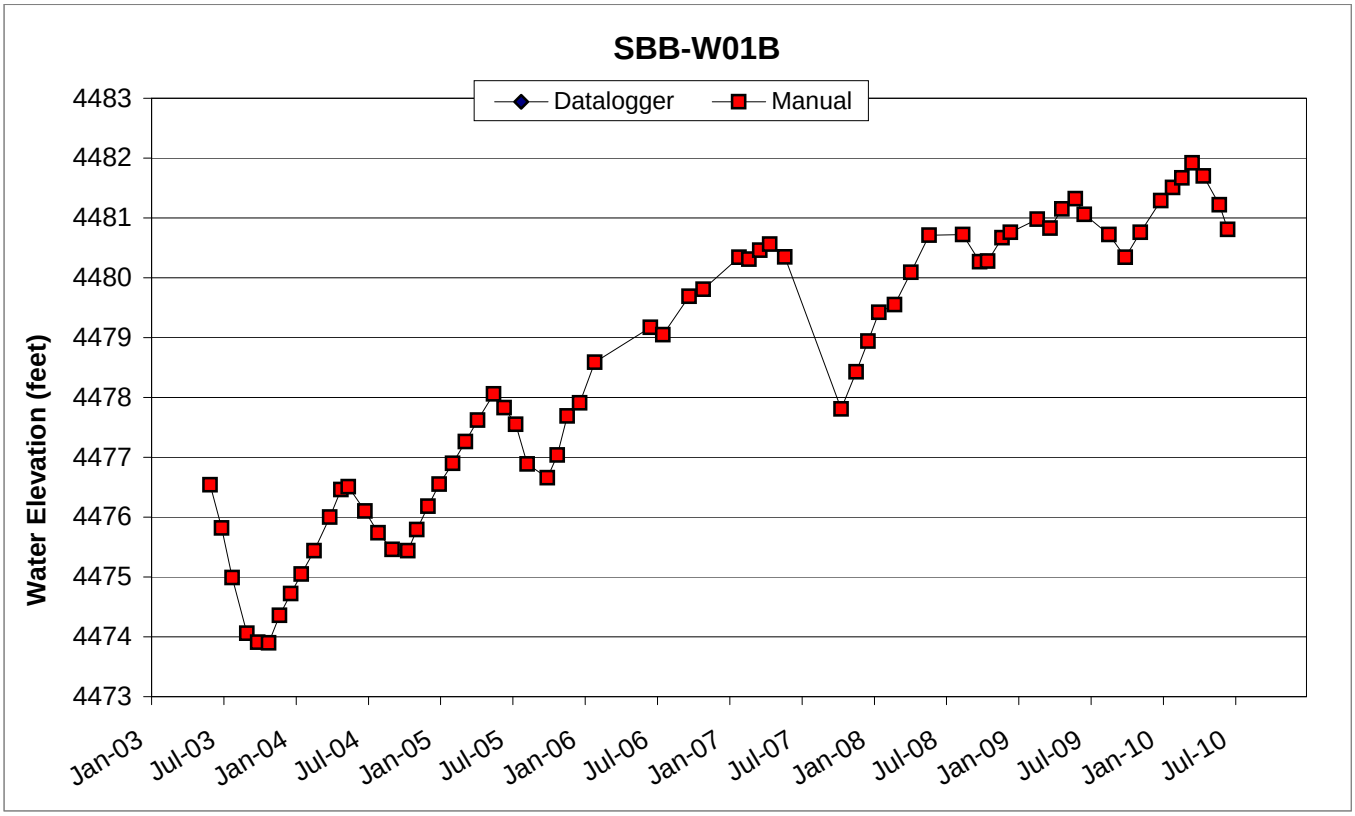

SBB-E02A
Datalogger
Manual
Water Elevation (feet)
4496
4494
4492
4490
4488
4486
4484
4482
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

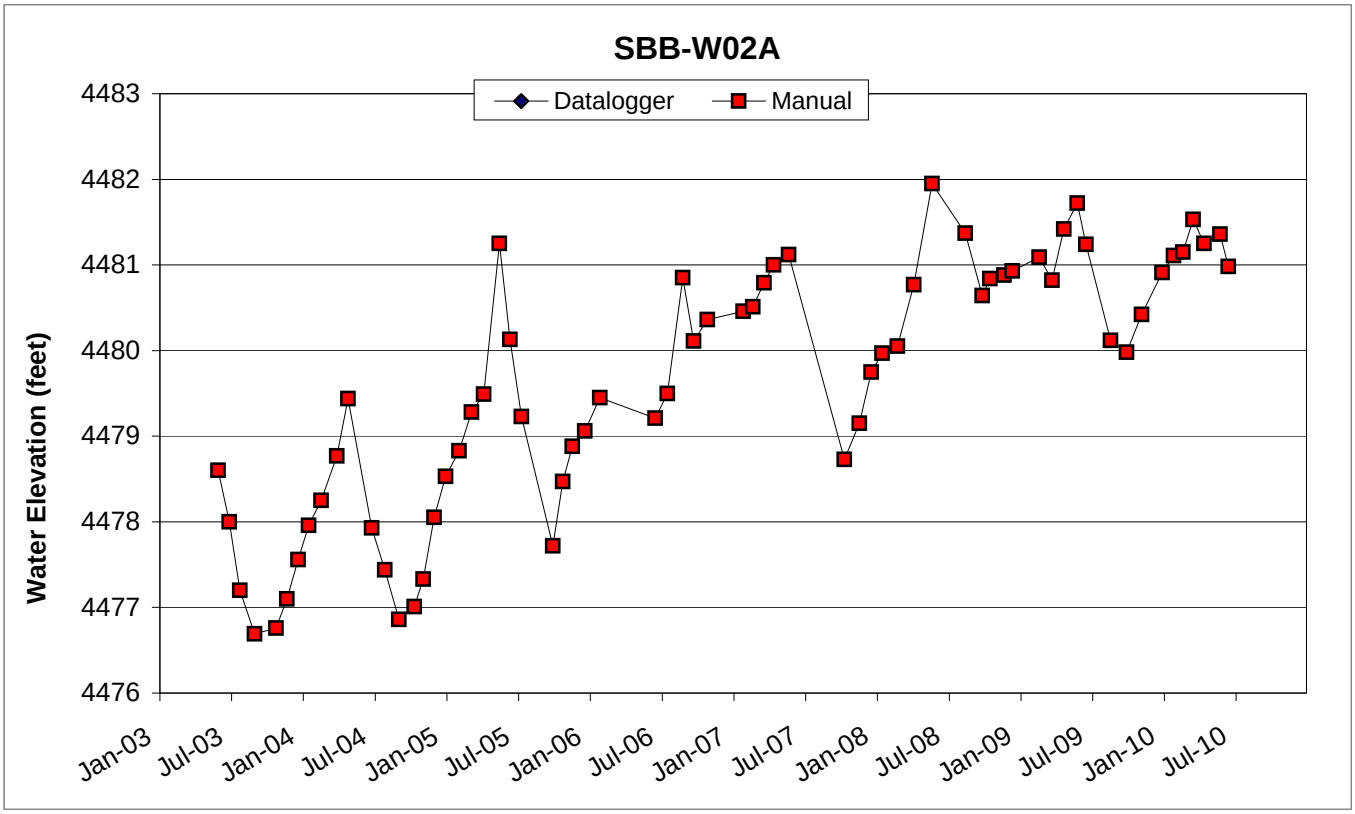

SBB-E02B
Datalogger
Manual
Water Elevation (feet)
4496
4494
4492
4490
4488
4486
4484
4482
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

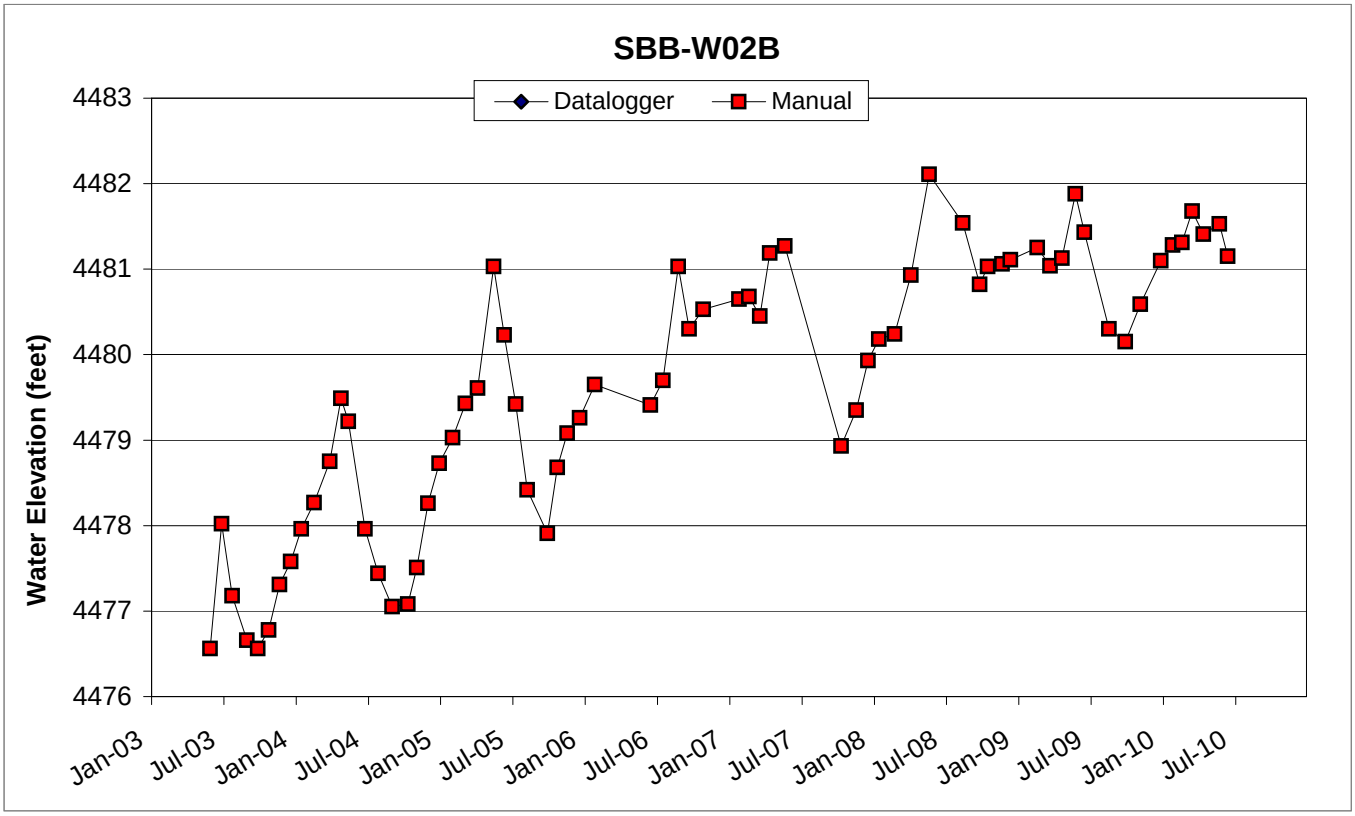

SBB-E03A
Datalogger
Manual
Water Elevation (feet)
4498
4496
4494
4492
4490
4488
4486
4484
4482
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

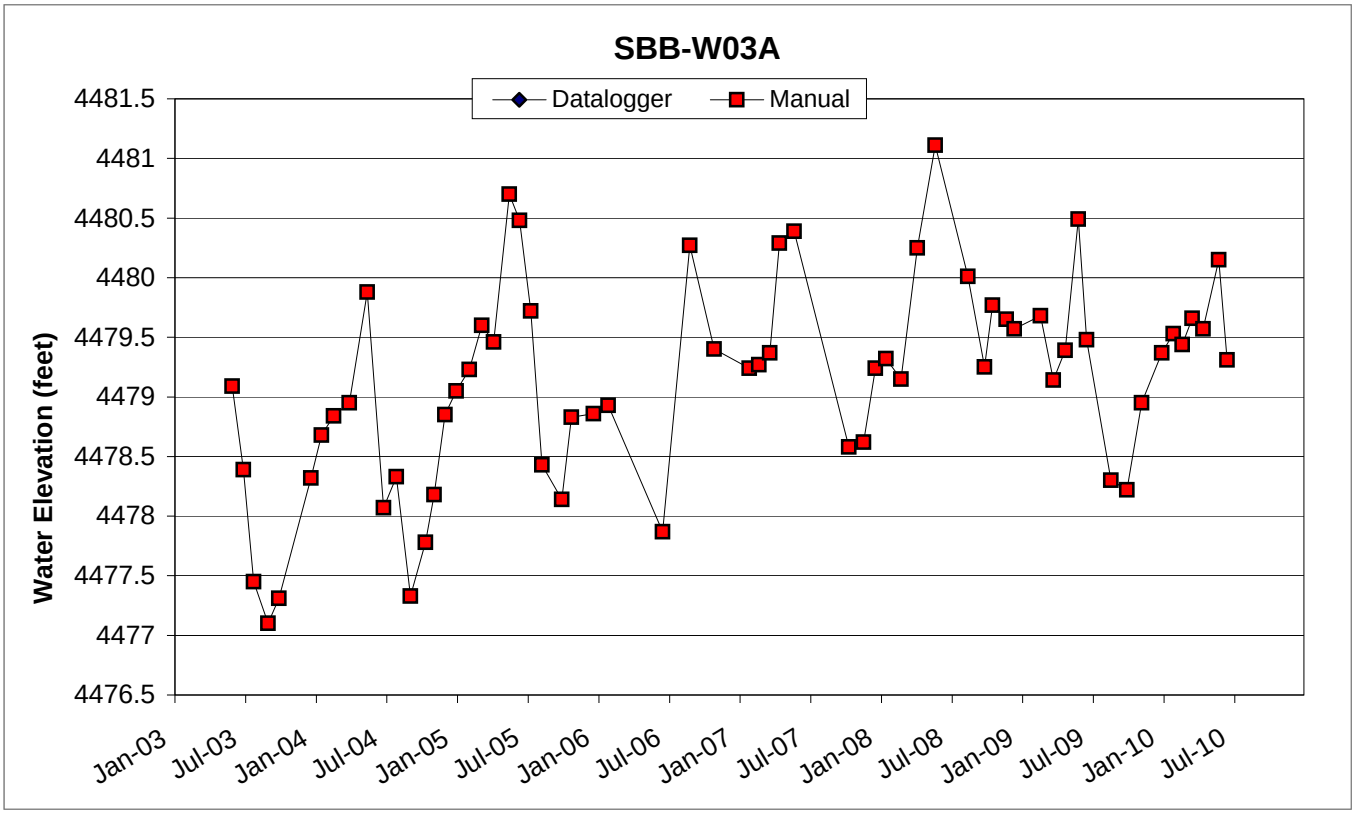

SBB-E03B
Datalogger
Manual
Water Elevation (feet)
4494
4493
4492
4491
4490
4489
4488
4487
4486
4485
4484
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

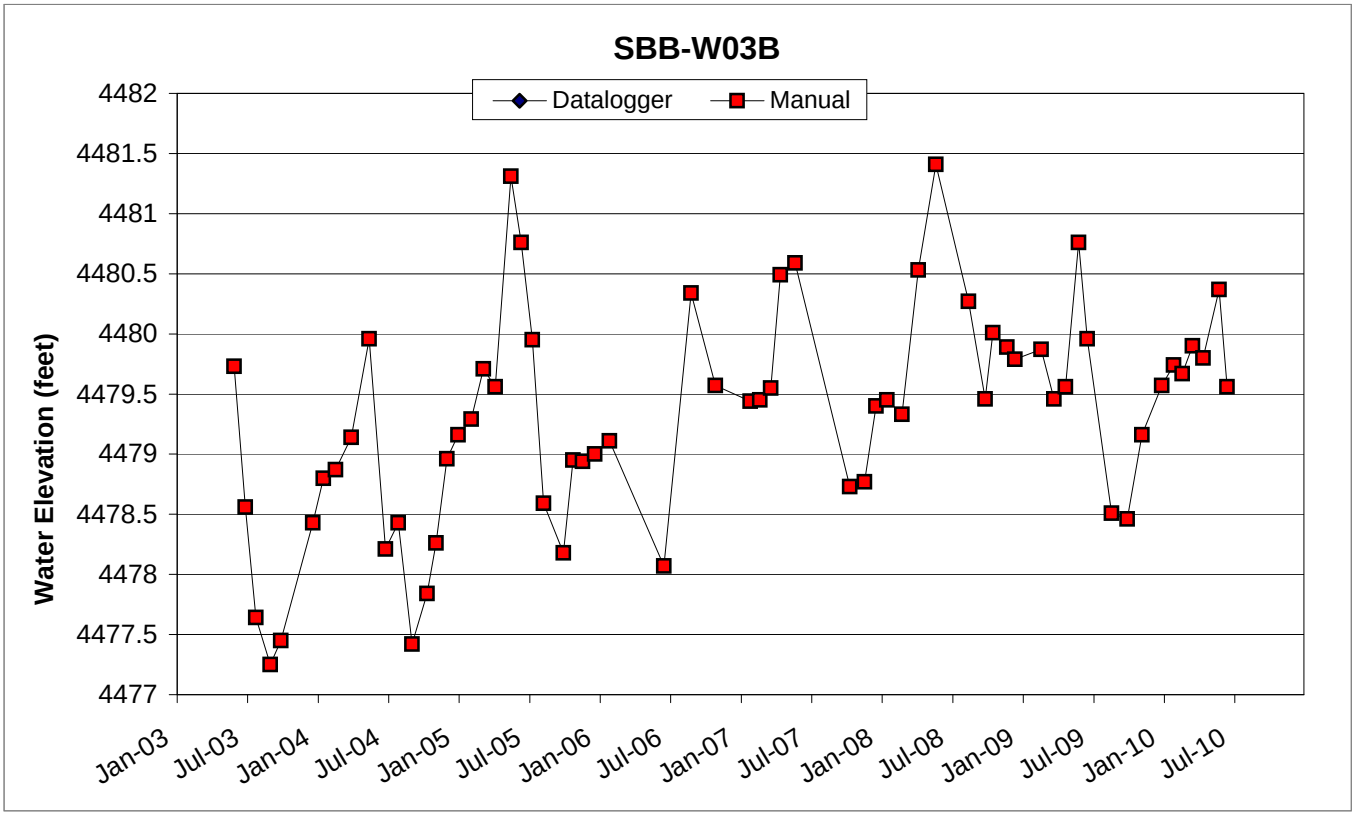

SBB-W01A
Datalogger
Manual
Water Elevation (feet)
4483
4482
4481
4480
4479
4478
4477
4476
4475
4474
4473
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

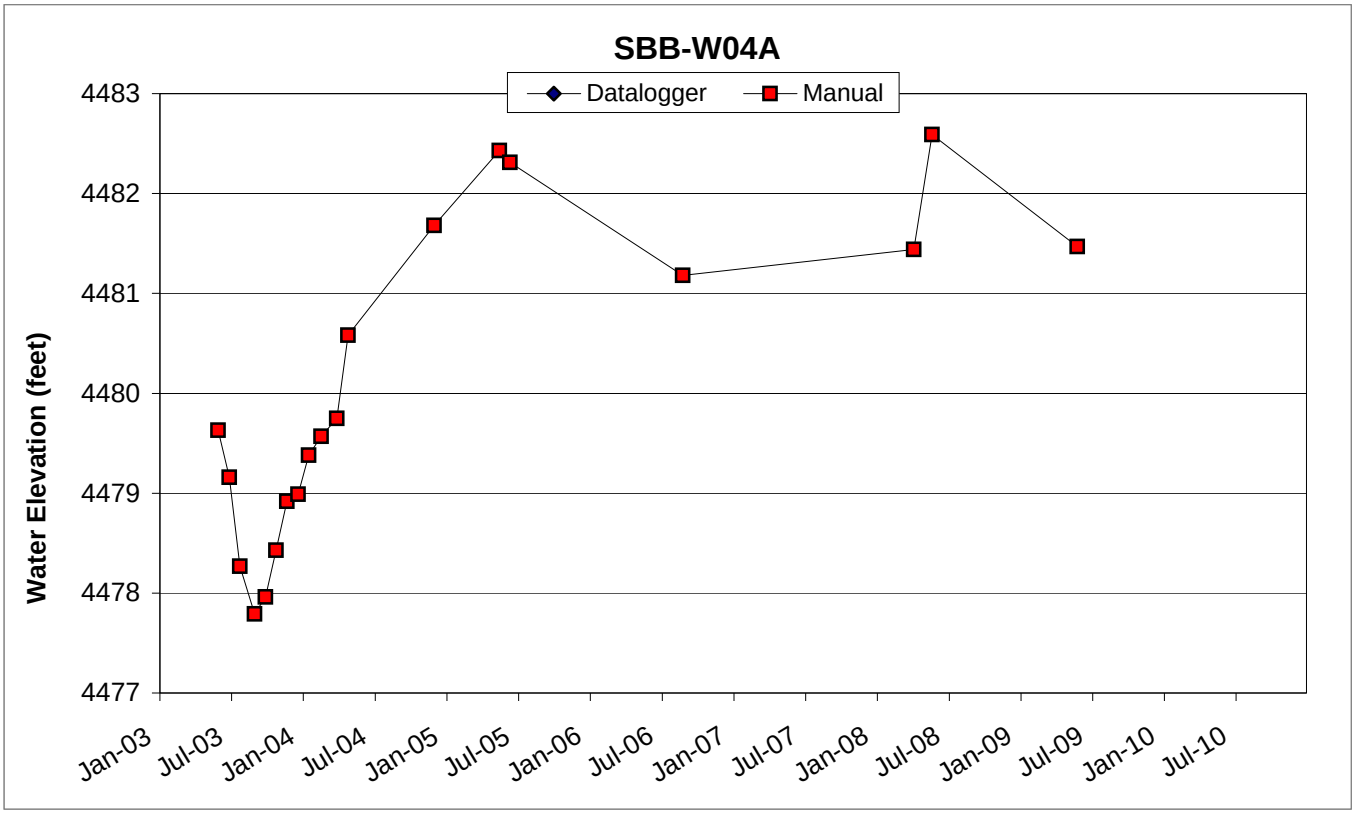

SBB-W01B
Datalogger
Manual
Water Elevation (feet)
4483
4482
4481
4480
4479
4478
4477
4476
4475
4474
4473
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

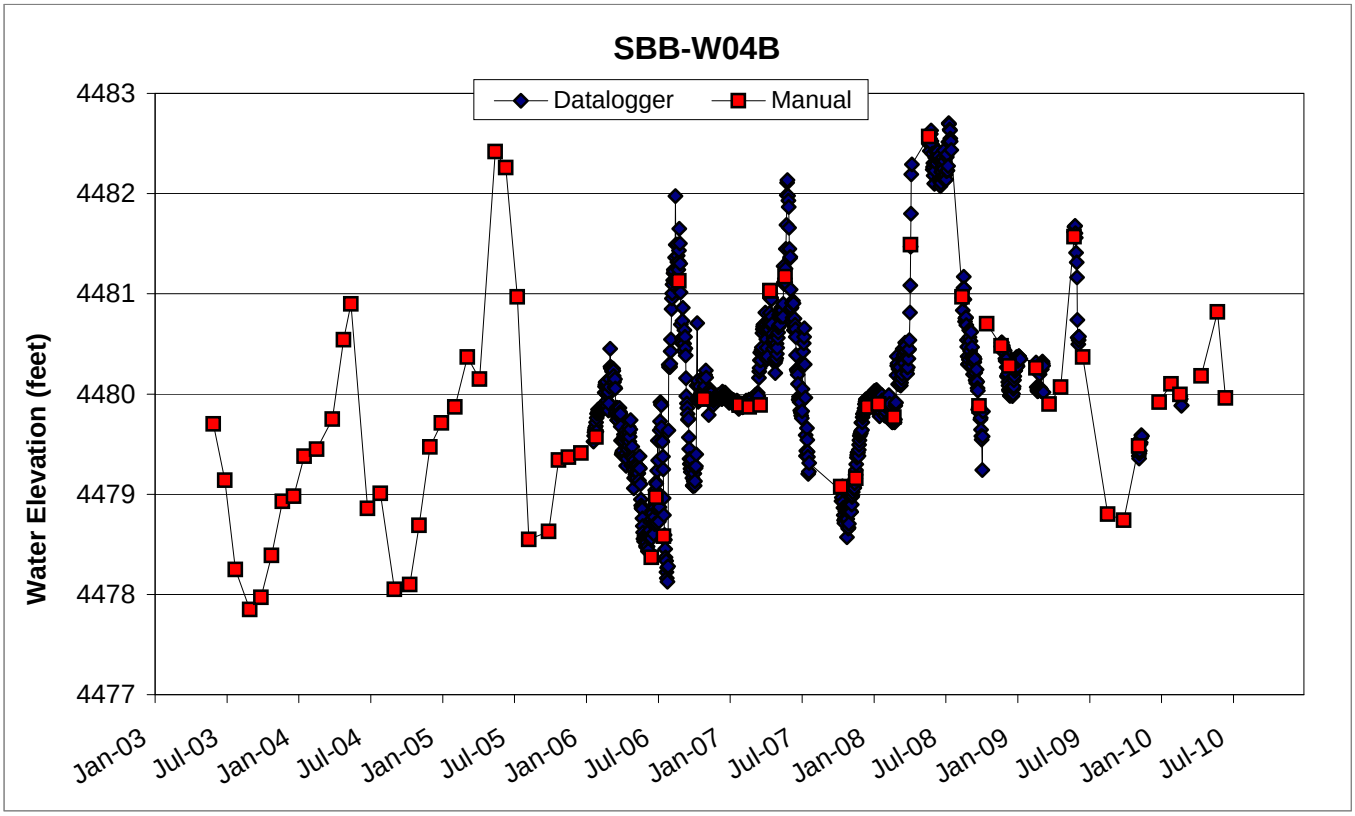

SBB-W02A
Datalogger
Manual
Water Elevation (feet)
4483
4482
4481
4480
4479
4478
4477
4476
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

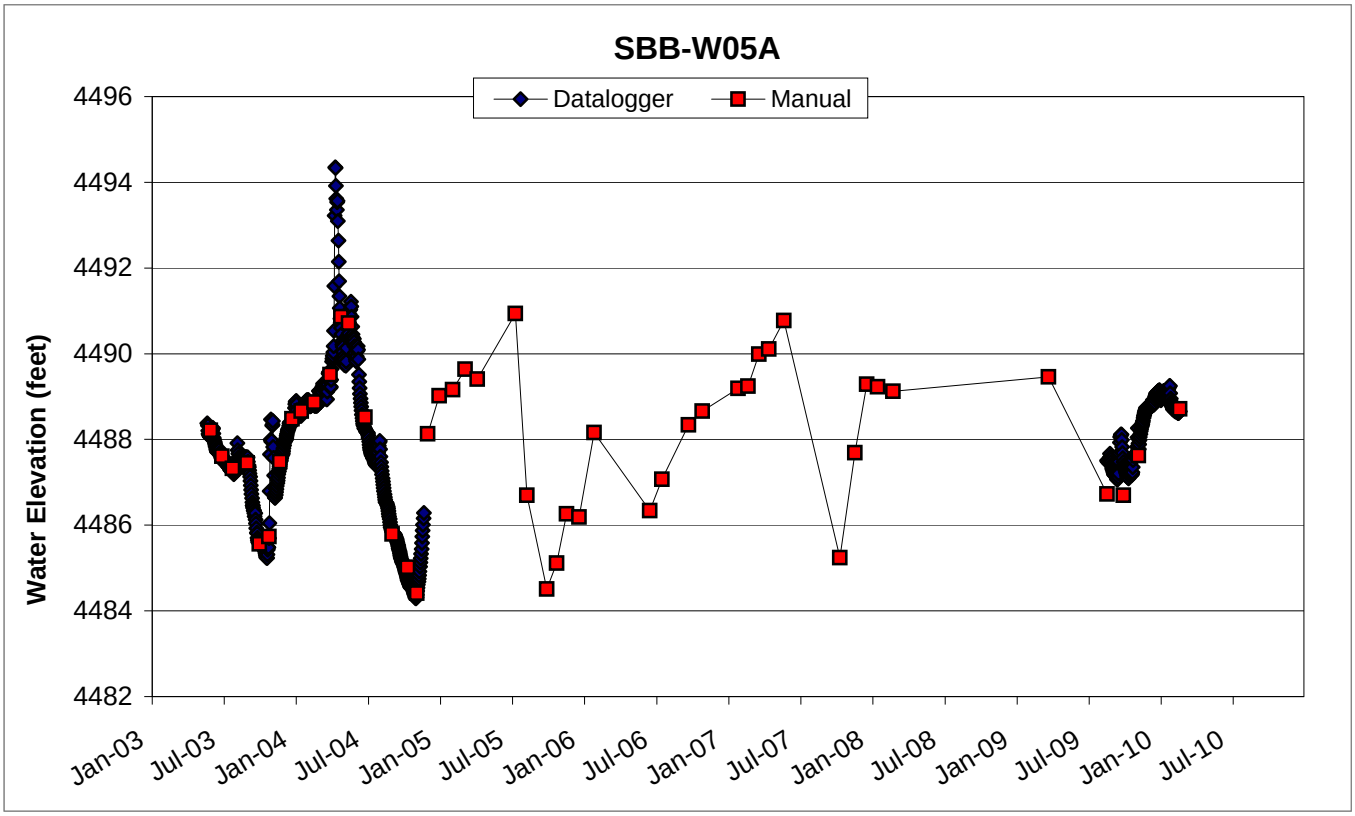

SBB-W02B
Datalogger
Manual
Water Elevation (feet)
4483
4482
4481
4480
4479
4478
4477
4476
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

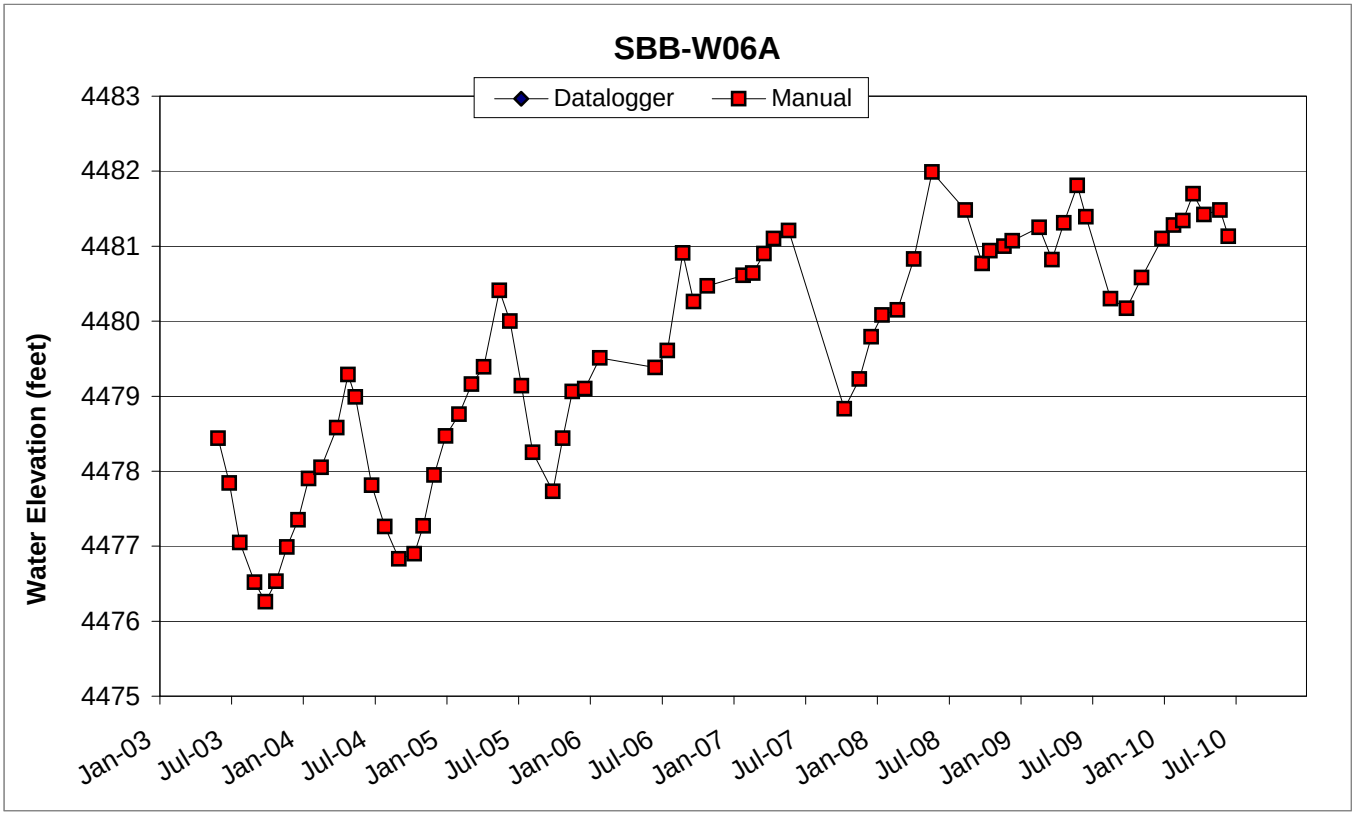

SBB-W03A
Datalogger
Manual
Water Elevation (feet)
4481.5
4481
4480.5
4480
4479.5
4479
4478.5
4478
4477.5
4477
4476.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

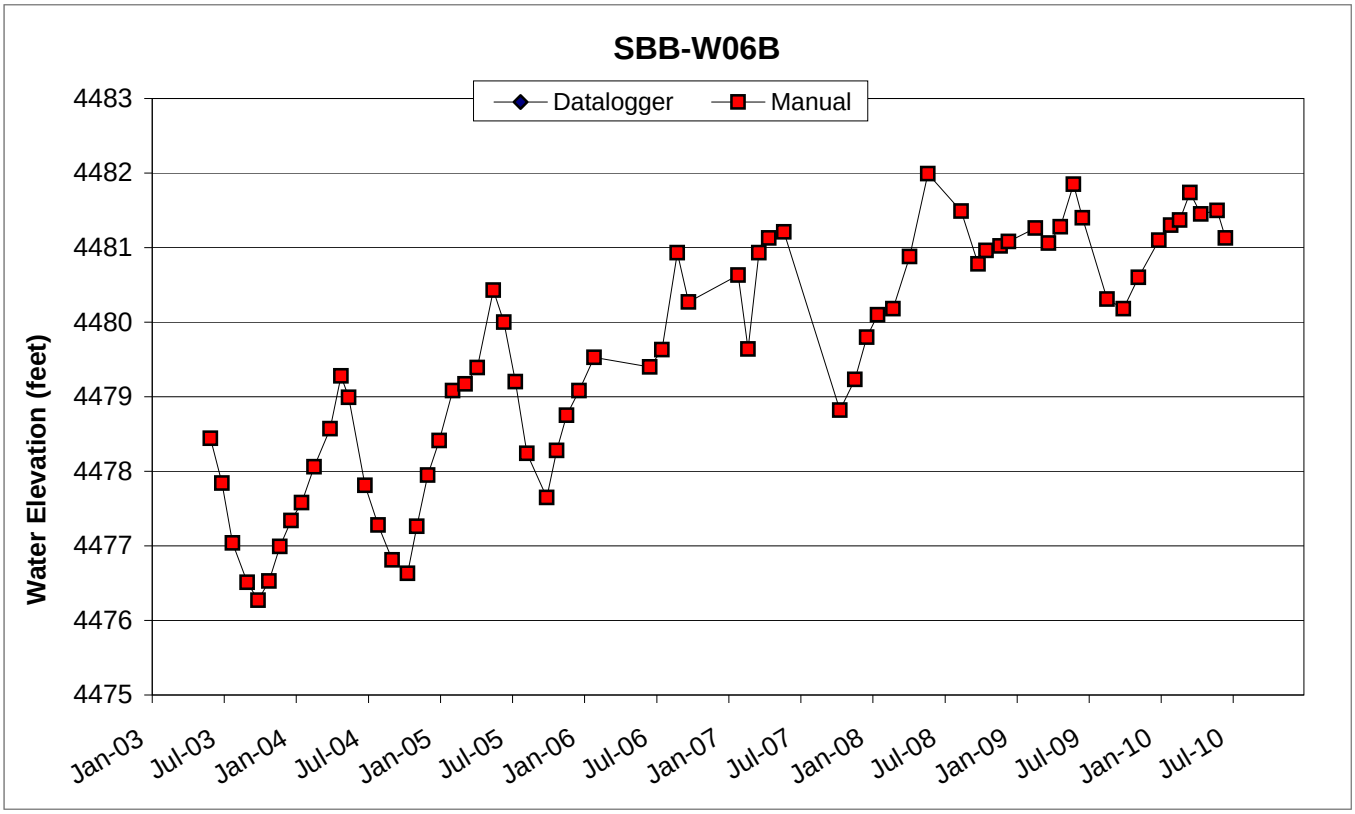

SBB-W03B
Datalogger
Manual
Water Elevation (feet)
4482
4481.5
4481
4480.5
4480
4479.5
4479
4478.5
4478
4477.5
4477
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

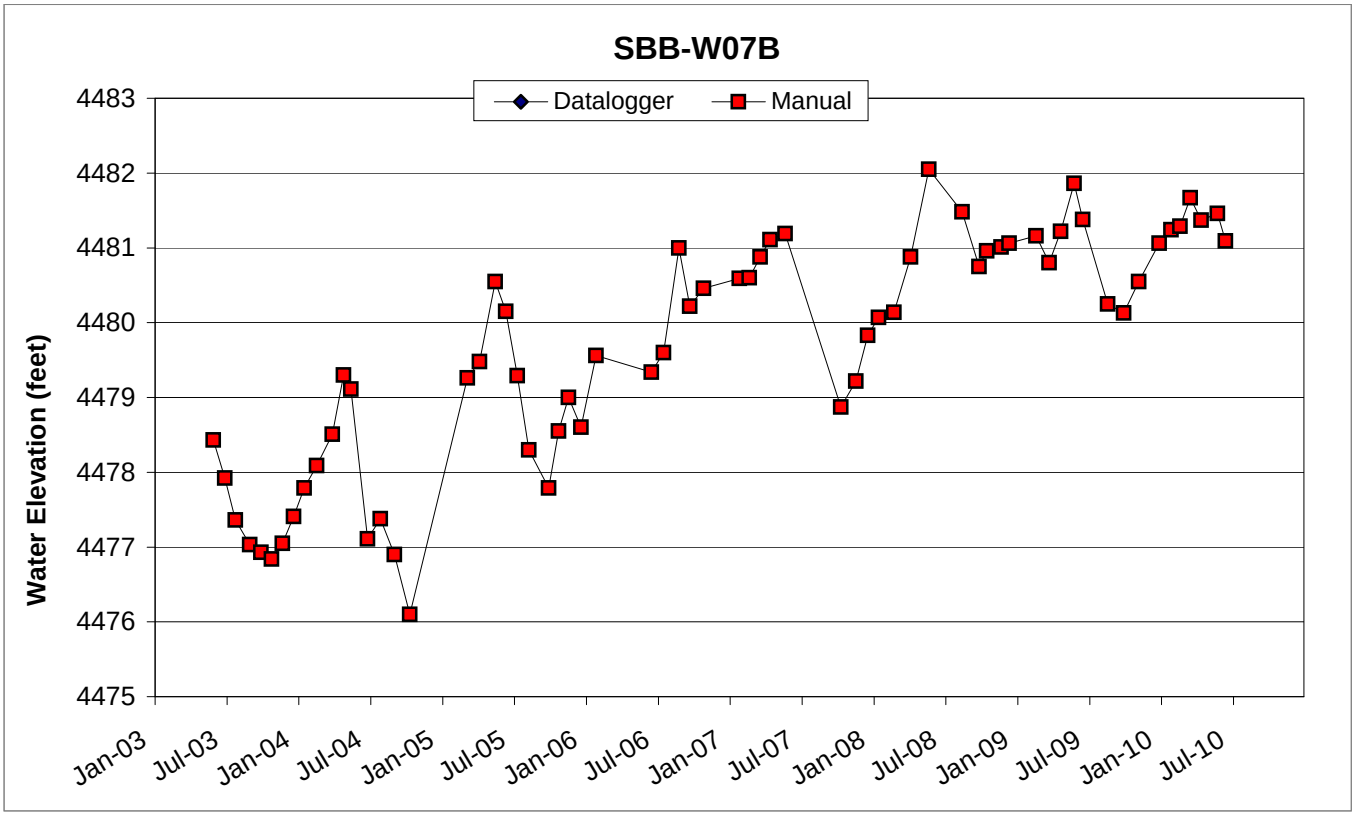

SBB-W04A
Datalogger
Manual
Water Elevation (feet)
4483
4482
4481
4480
4479
4478
4477
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

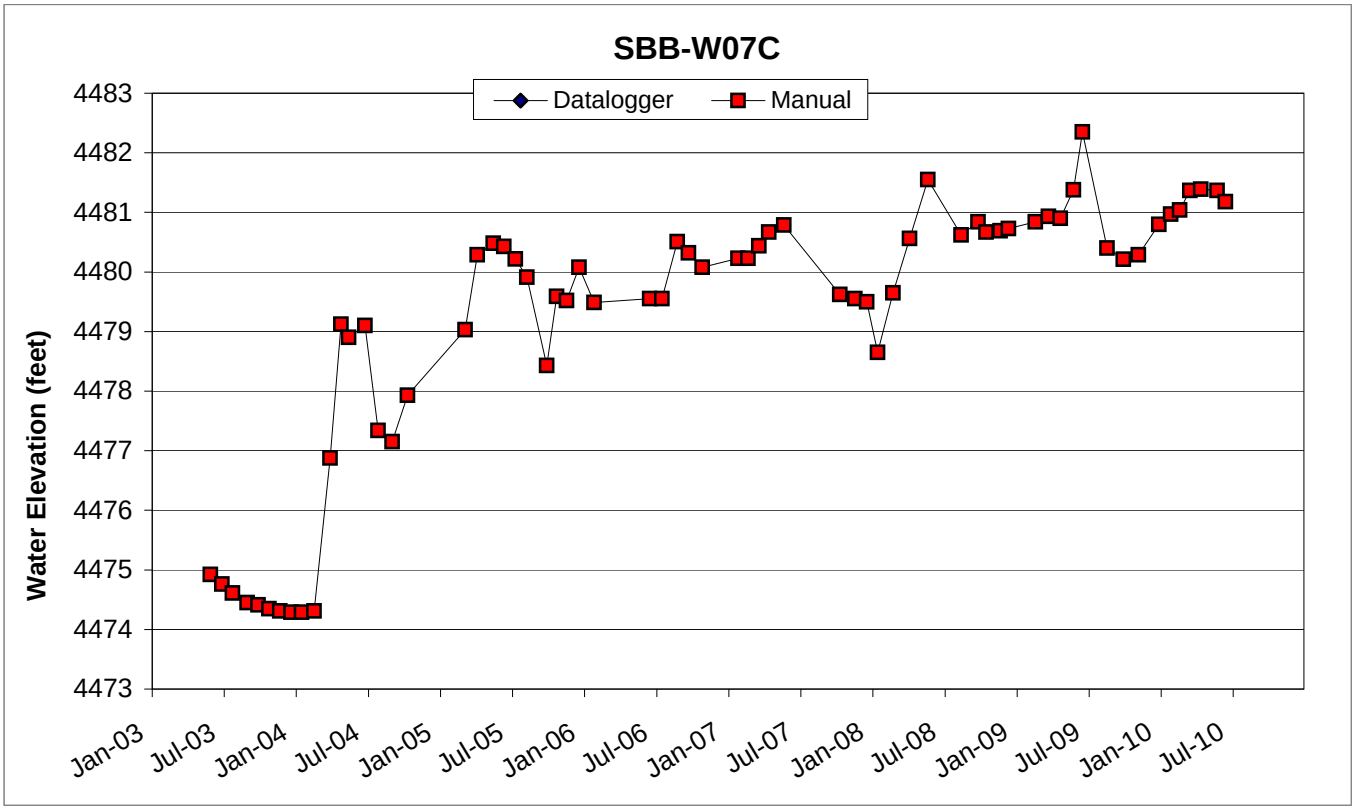

SBB-W04B
Datalogger
Manual
Water Elevation (feet)
4483
4482
4481
4480
4479
4478
4477
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

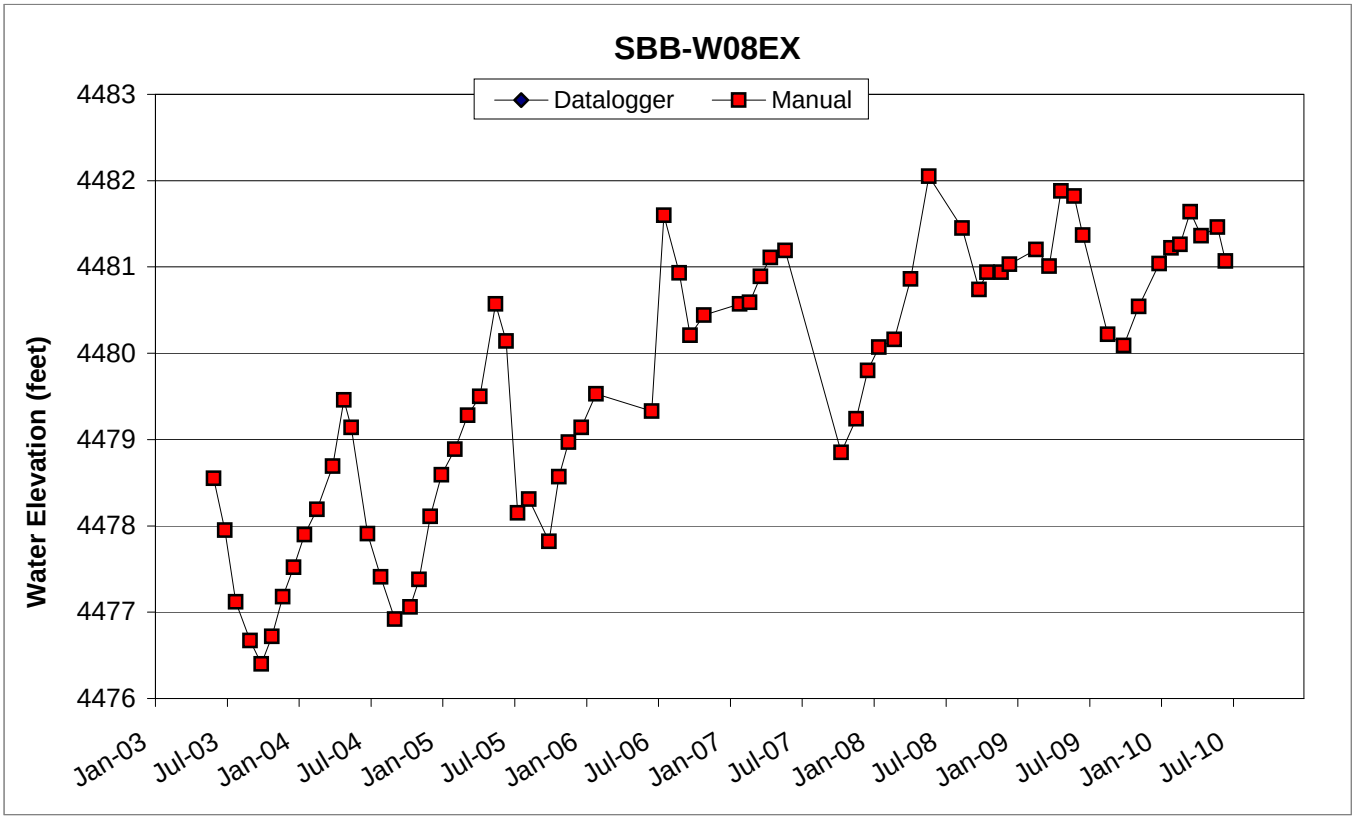

SBB-W05A
Datalogger
Manual
Water Elevation (feet)
4496
4494
4492
4490
4488
4486
4484
4482
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

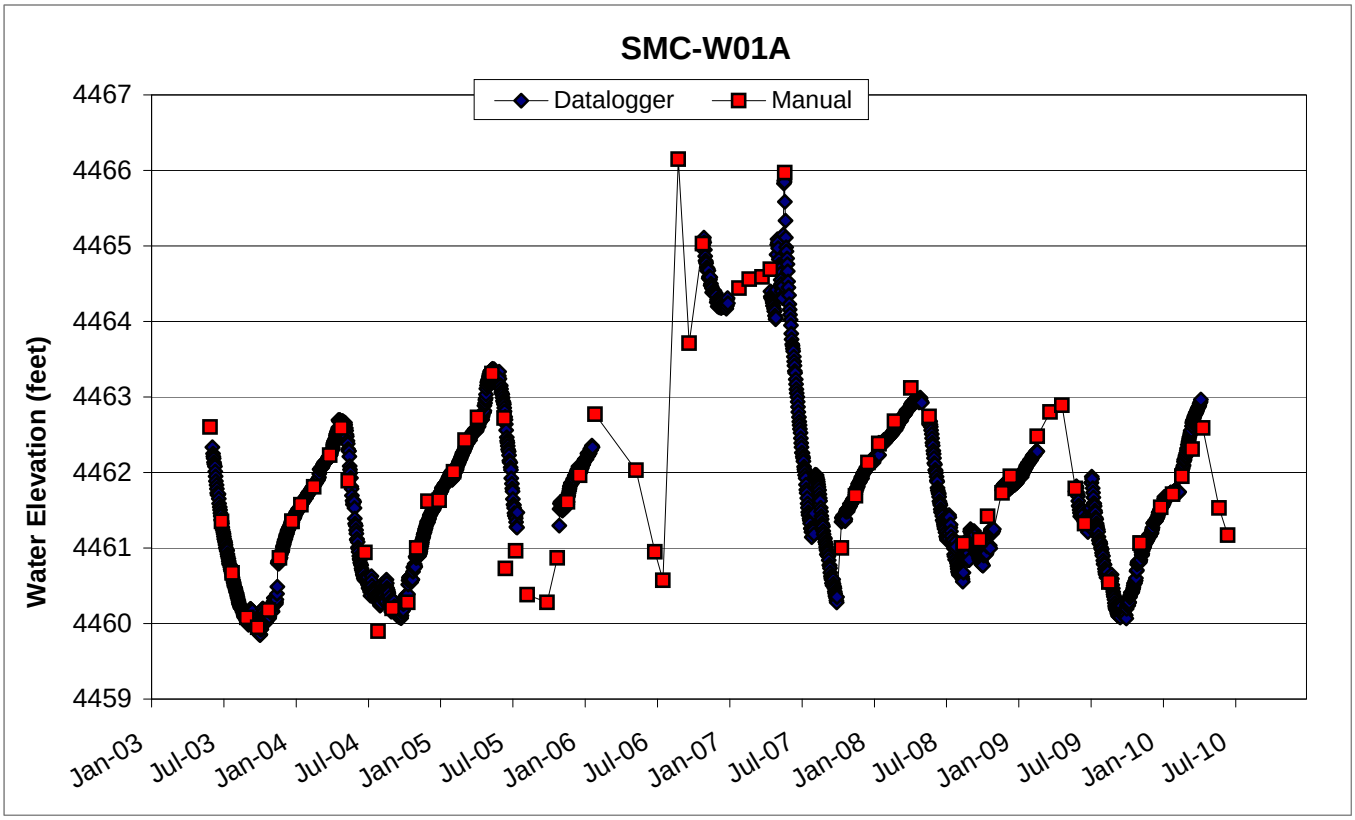

SBB-W06A
Datalogger
Manual
Water Elevation (feet)
4483
4482
4481
4480
4479
4478
4477
4476
4475
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

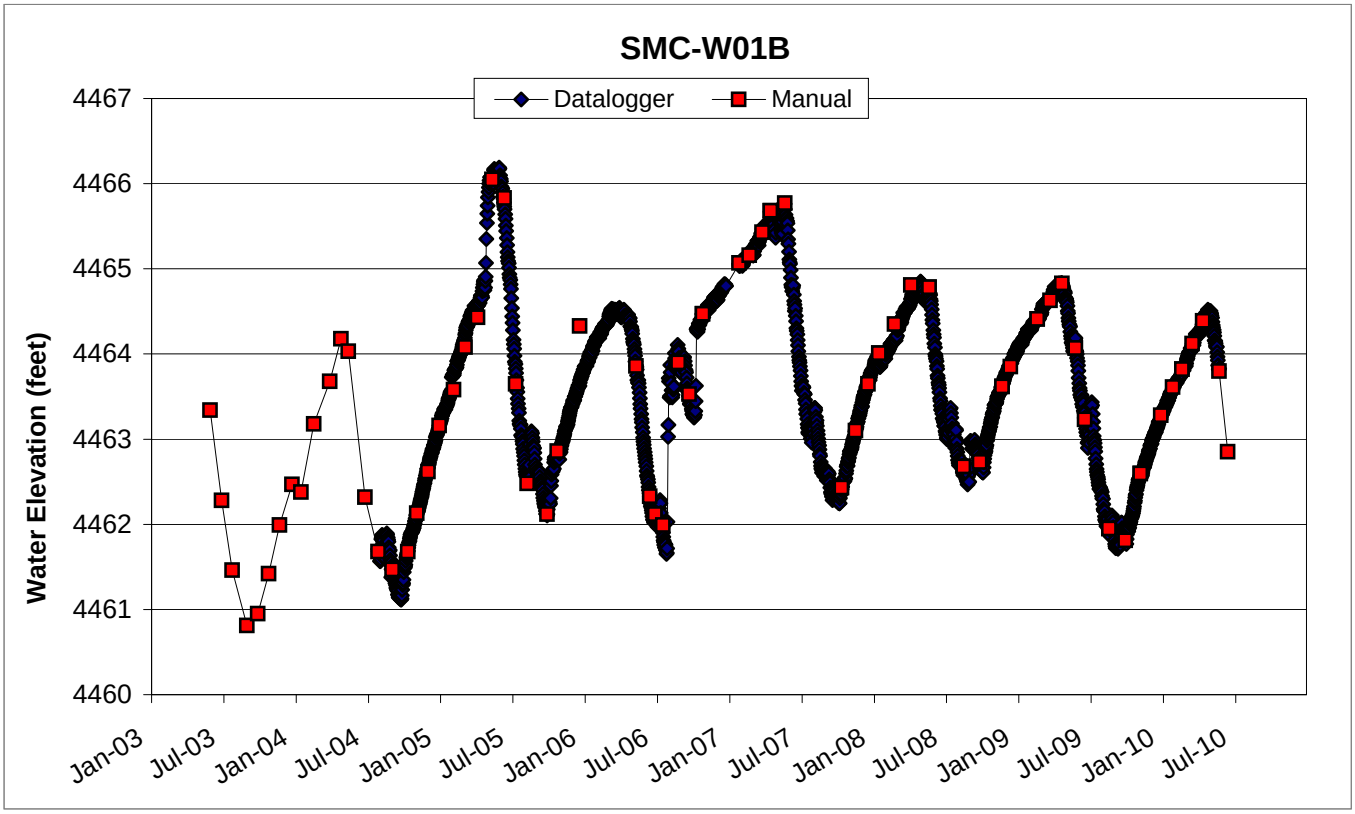

SBB-W06B
Datalogger
Manual
Water Elevation (feet)
4483
4482
4481
4480
4479
4478
4477
4476
4475
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

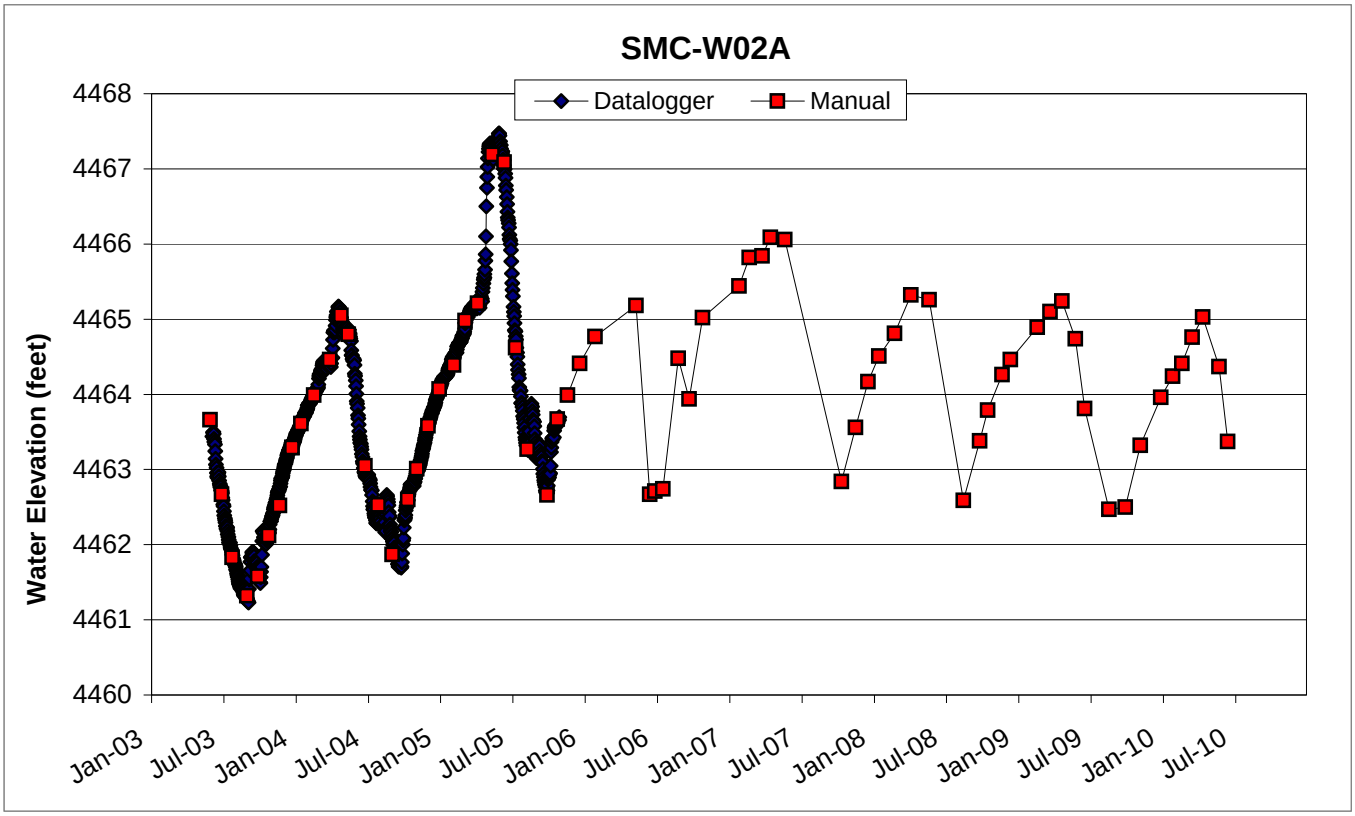

SBB-W07B
Datalogger
Manual
Water Elevation (feet)
4483
4482
4481
4480
4479
4478
4477
4476
4475
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

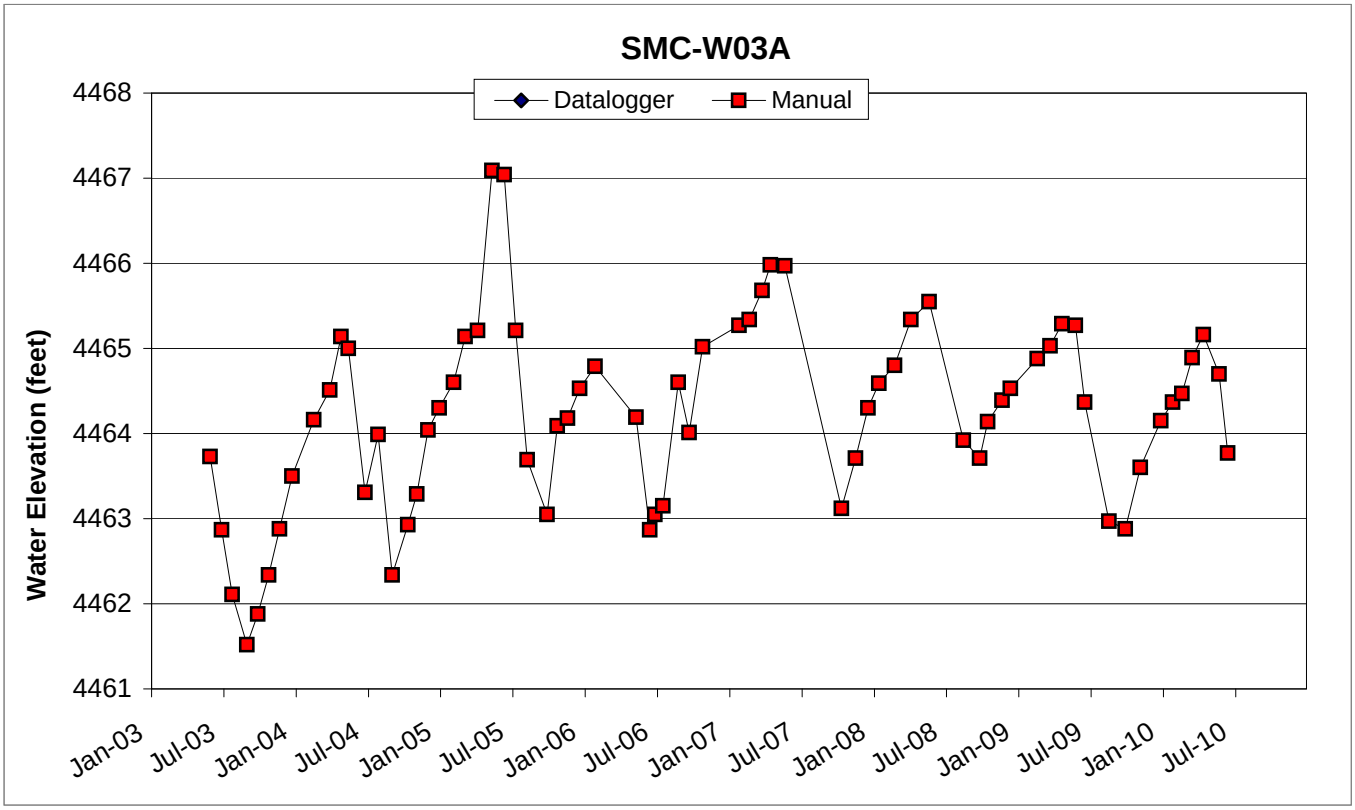

SBB-W07C
Datalogger
Manual
Water Elevation (feet)
4483
4482
4481
4480
4479
4478
4477
4476
4475
4474
4473
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

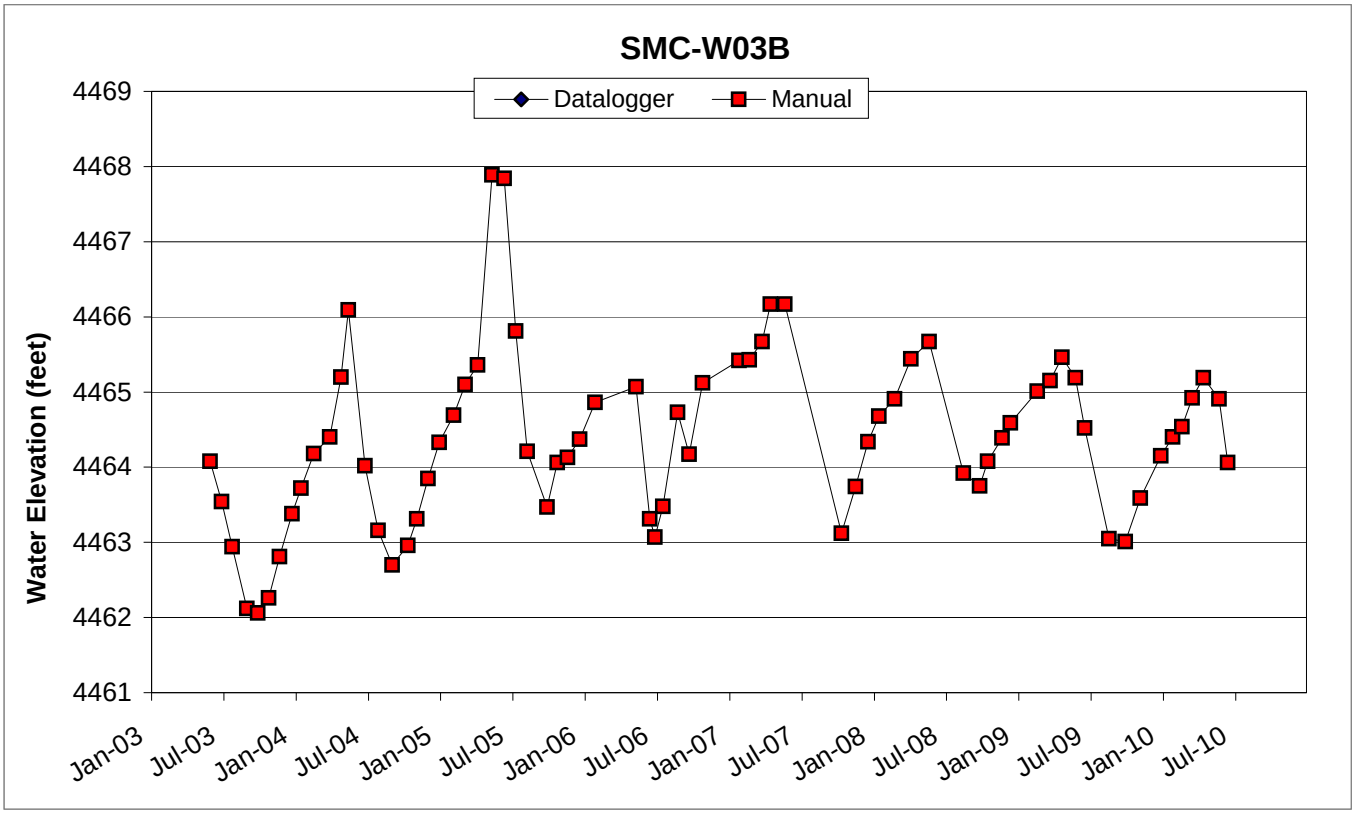

SBB-W08EX
Datalogger
Manual
Water Elevation (feet)
4483
4482
4481
4480
4479
4478
4477
4476
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

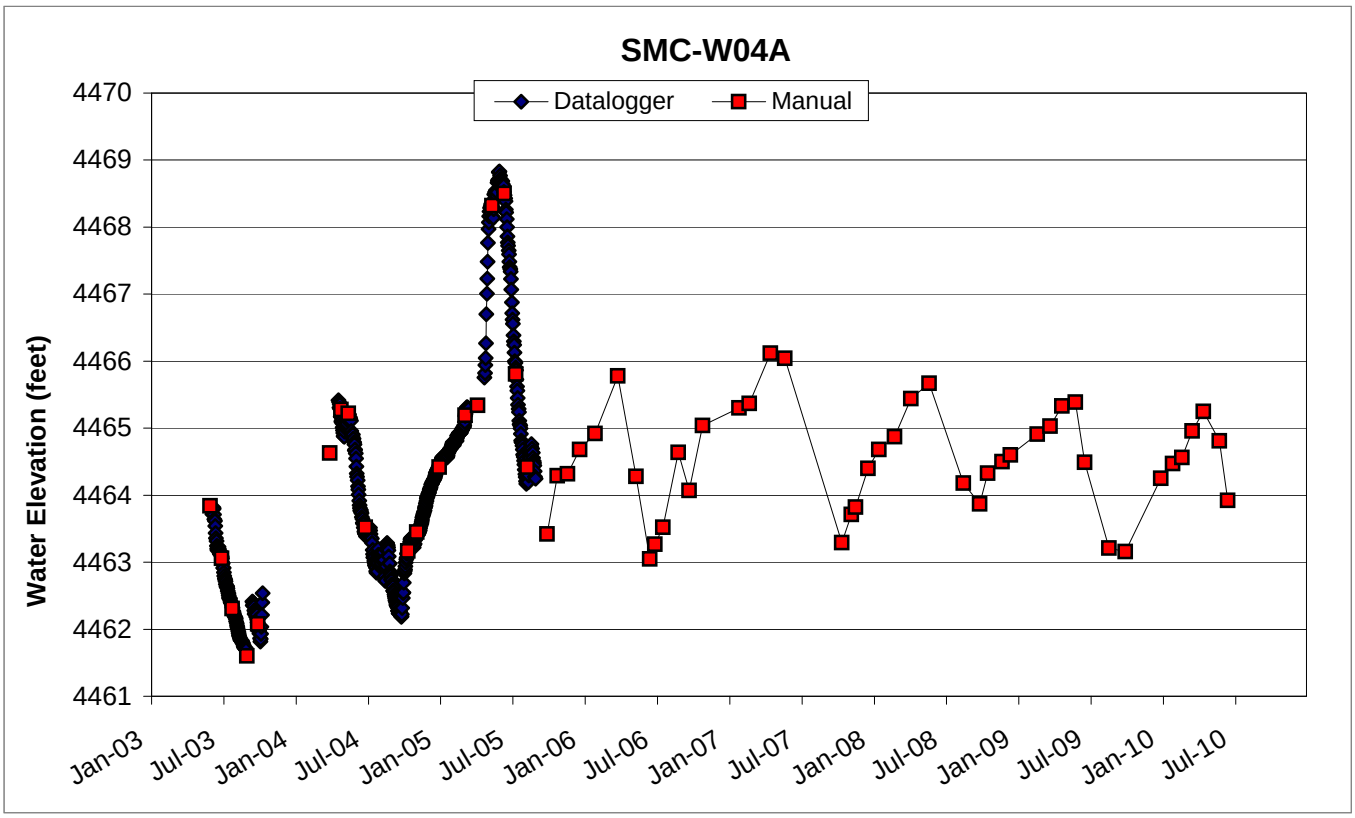

SMC-W01A
Datalogger
Manual
Water Elevation (feet)
4467
4466
4465
4464
4463
4462
4461
4460
4459
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

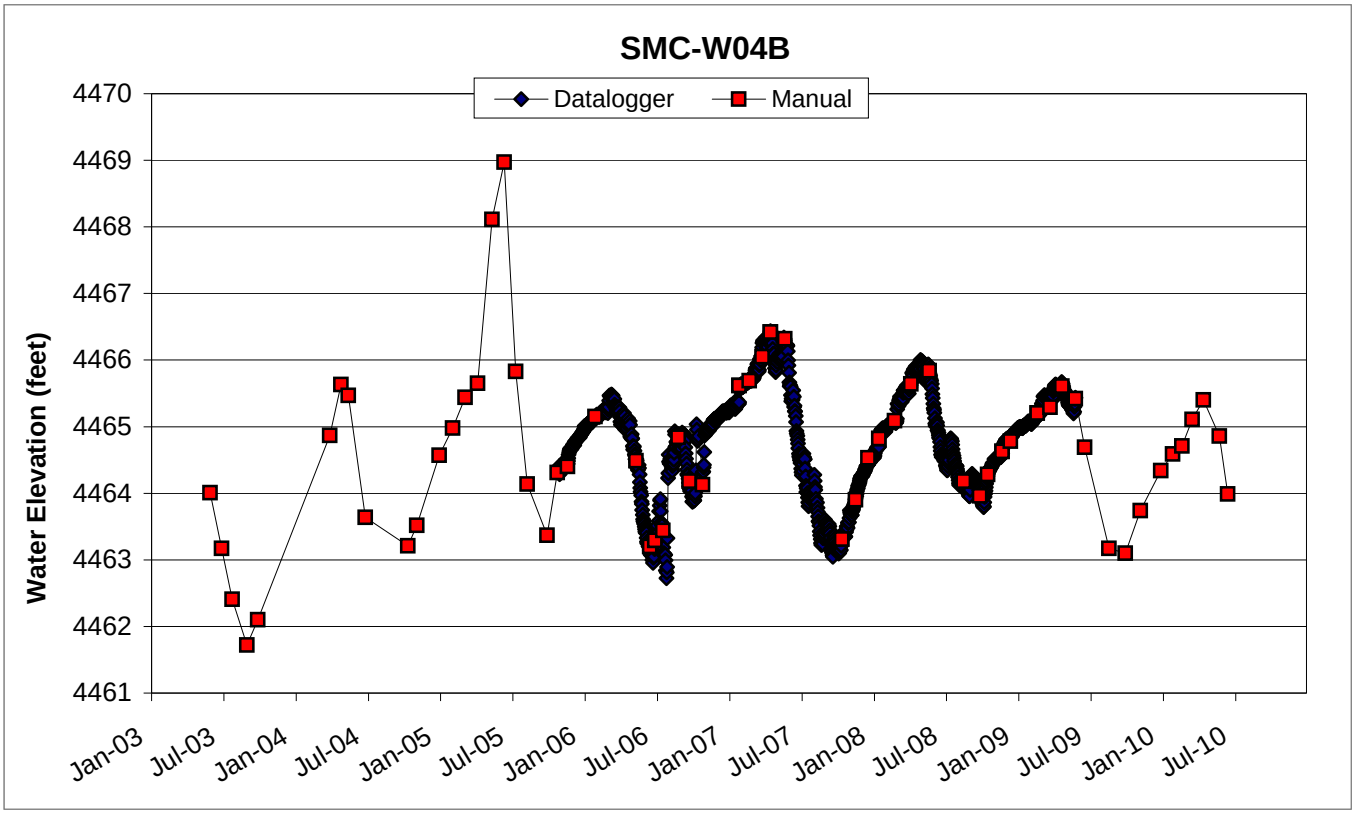

SMC-W01B
Datalogger
Manual
Water Elevation (feet)
4467
4466
4465
4464
4463
4462
4461
4460
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

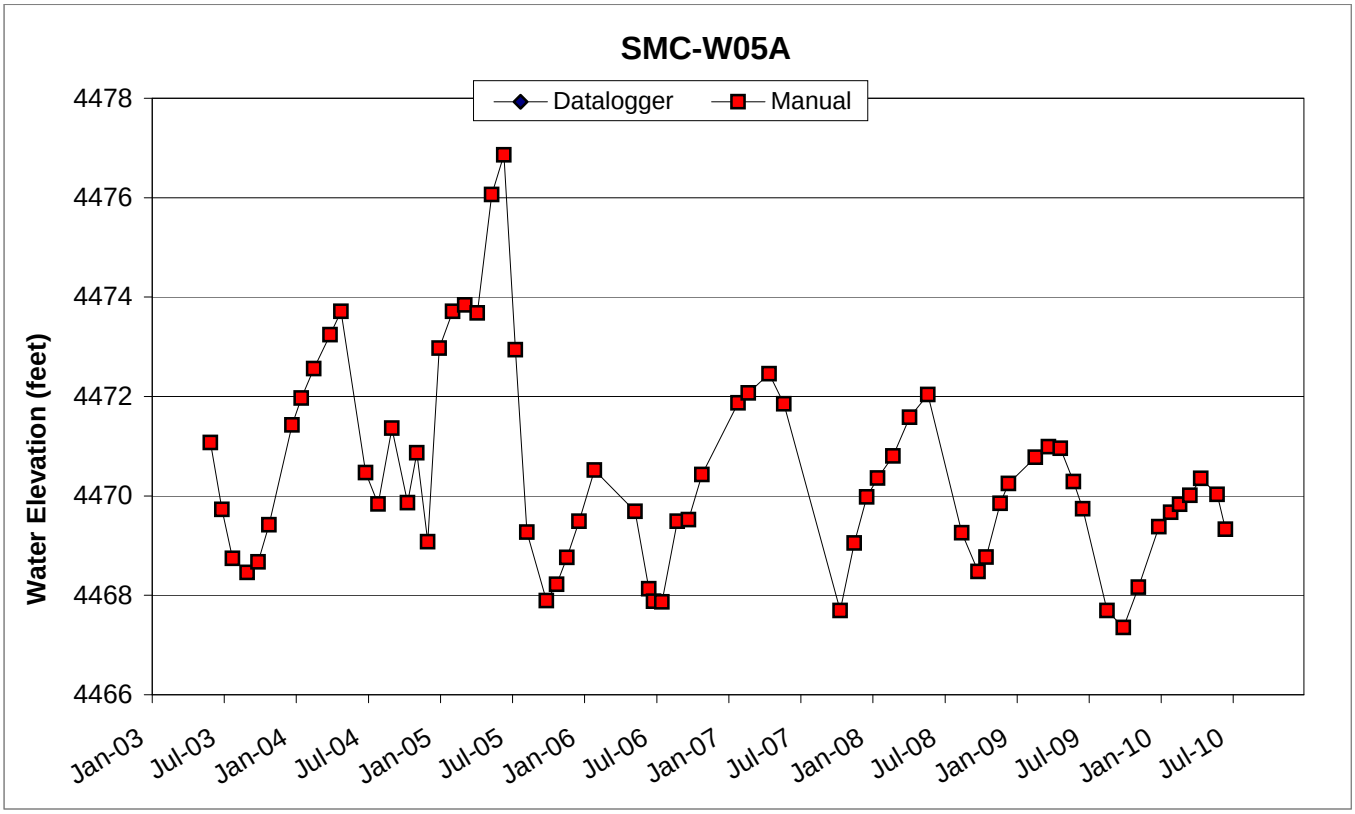

SMC-W02A
Datalogger
Manual
Water Elevation (feet)
4468
4467
4466
4465
4464
4463
4462
4461
4460
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

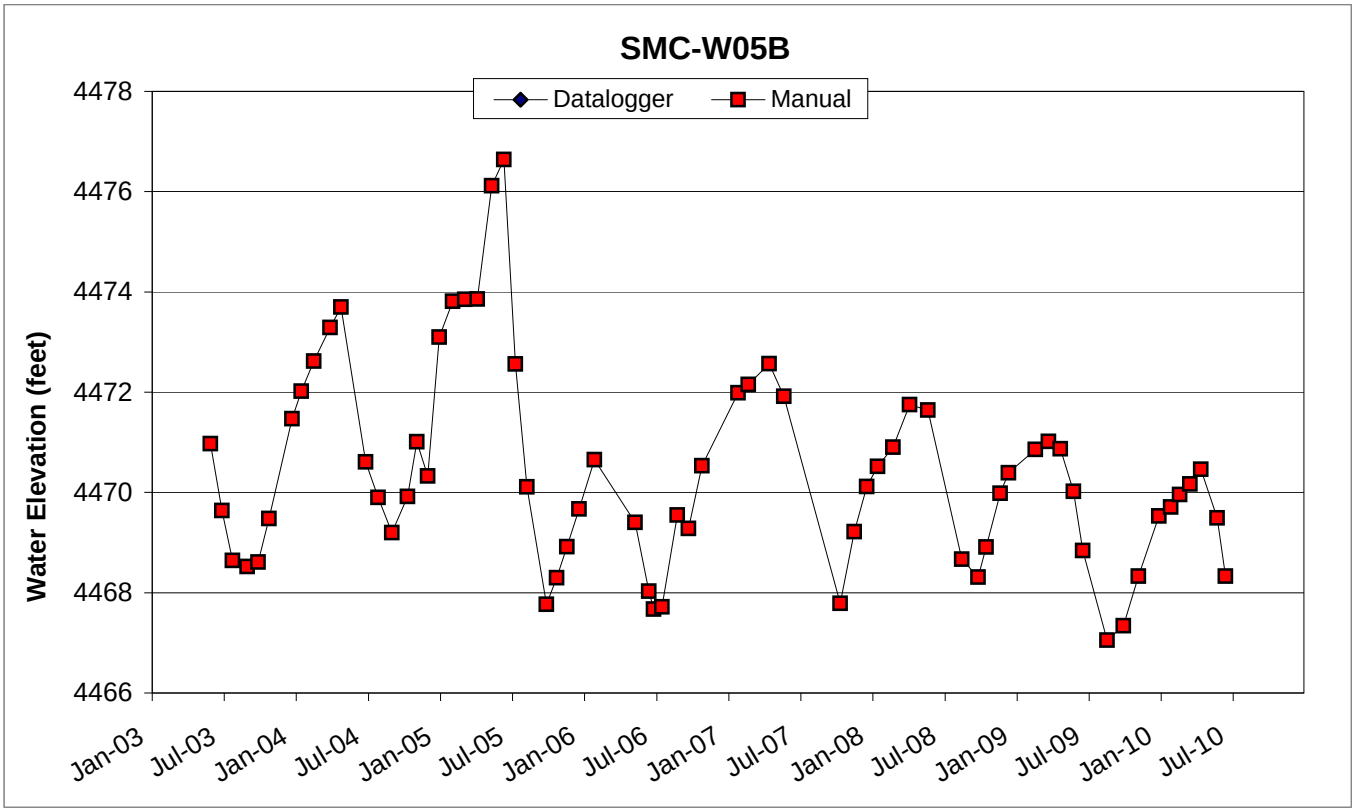

SMC-W03A
Datalogger
Manual
Water Elevation (feet)
4468
4467
4466
4465
4464
4463
4462
4461
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

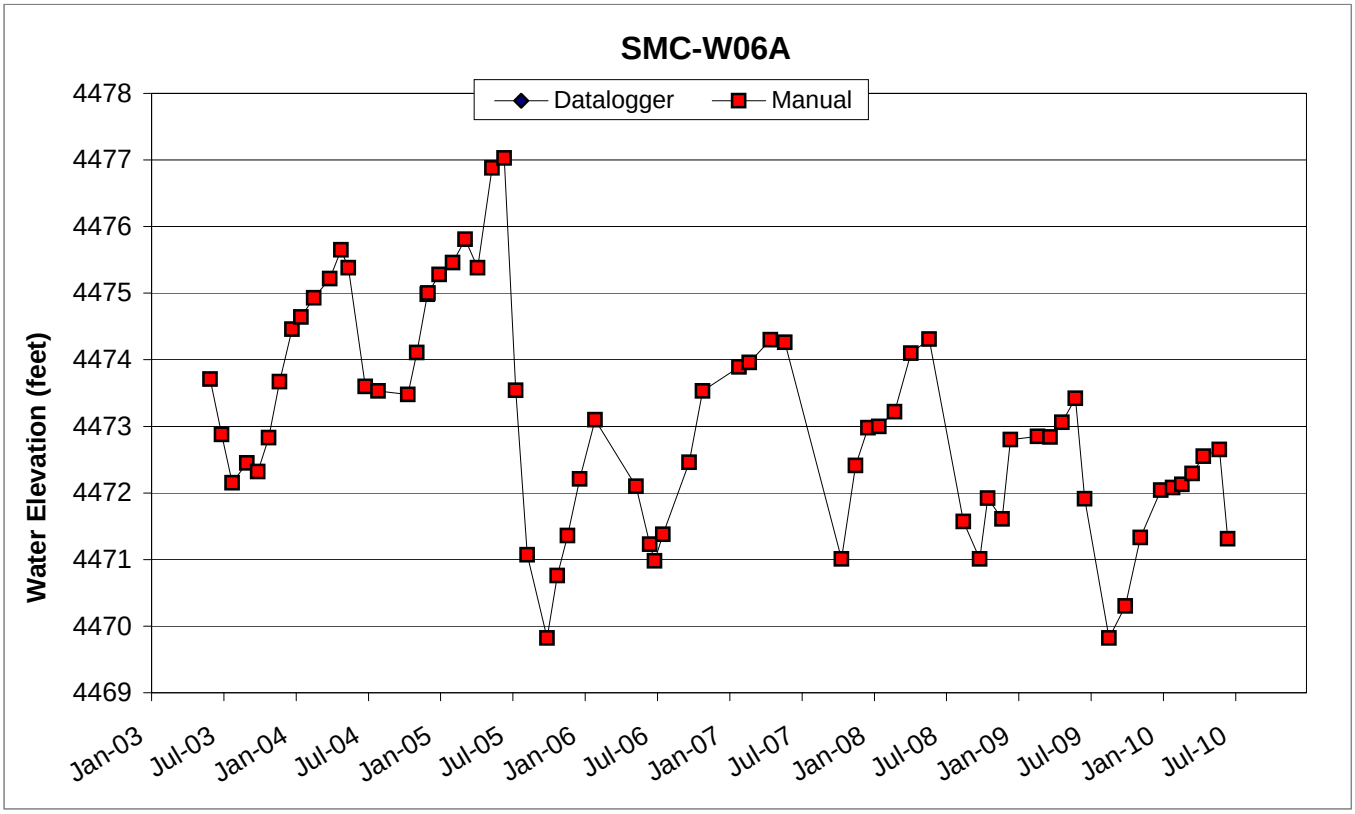

SMC-W03B
Datalogger
Manual
Water Elevation (feet)
4469
4468
4467
4466
4465
4464
4463
4462
4461
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

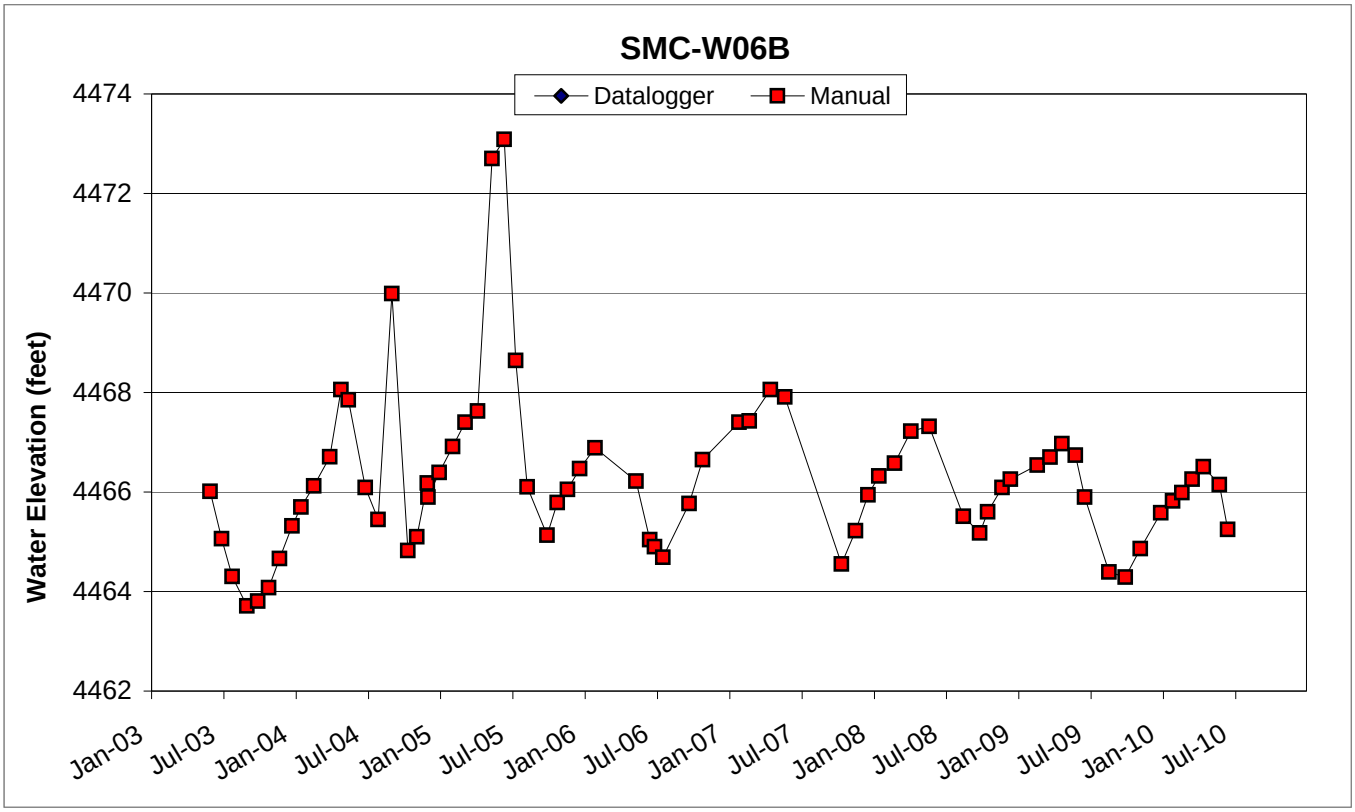

SMC-W04A
Datalogger
Manual
Water Elevation (feet)
4470
4469
4468
4467
4466
4465
4464
4463
4462
4461
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

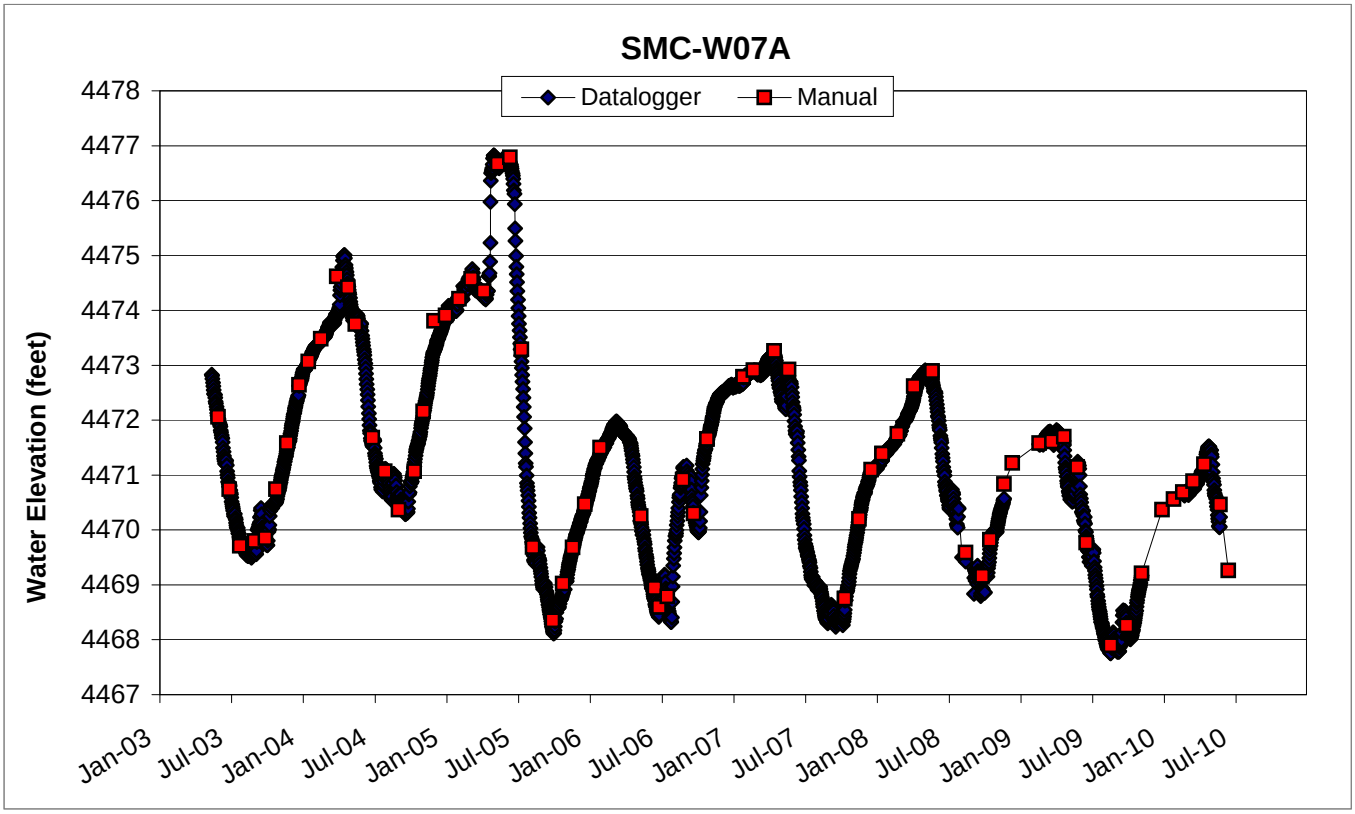

SMC-W04B
Datalogger
Manual
Water Elevation (feet)
4470
4469
4468
4467
4466
4465
4464
4463
4462
4461
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

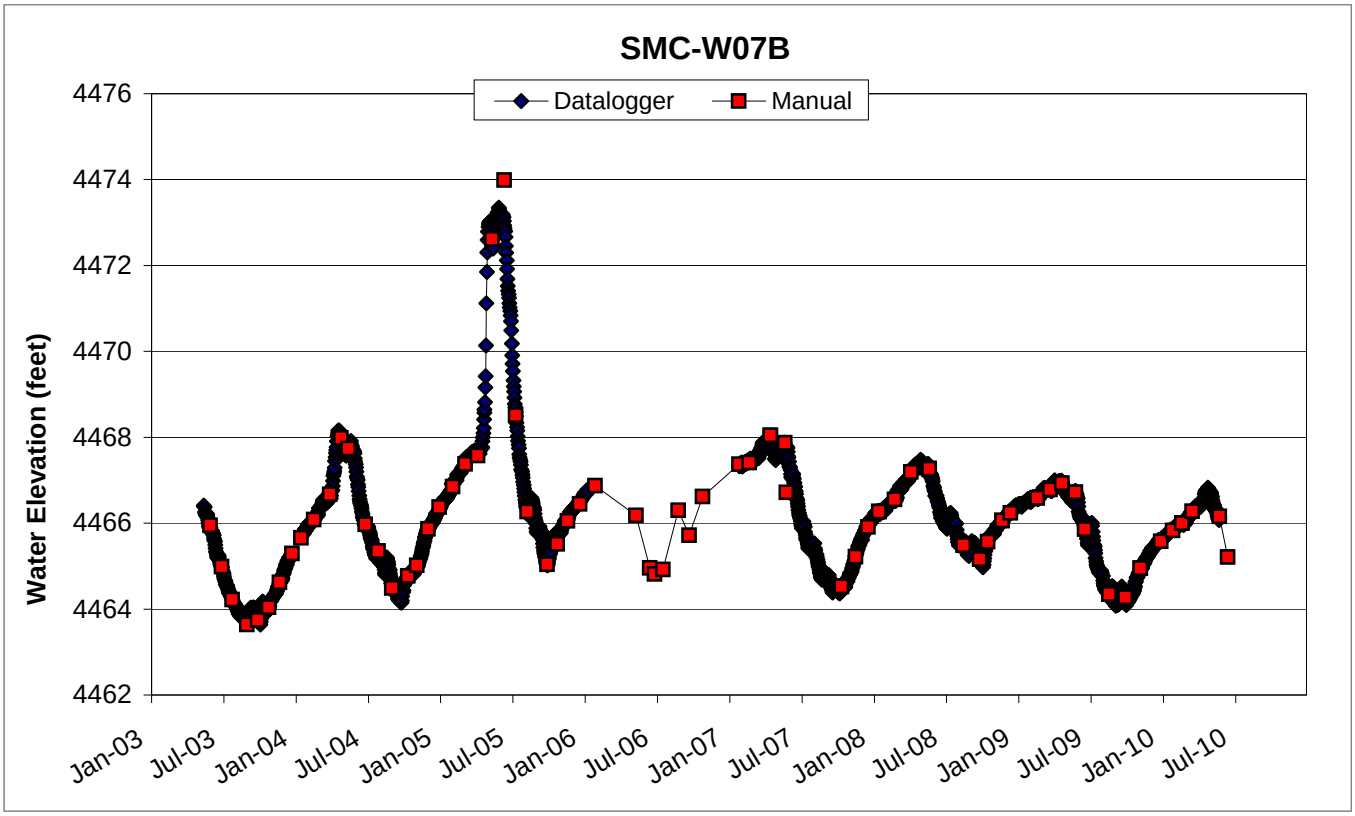

SMC-W05A
Datalogger
Manual
Water Elevation (feet)
4478
4476
4474
4472
4470
4468
4466
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

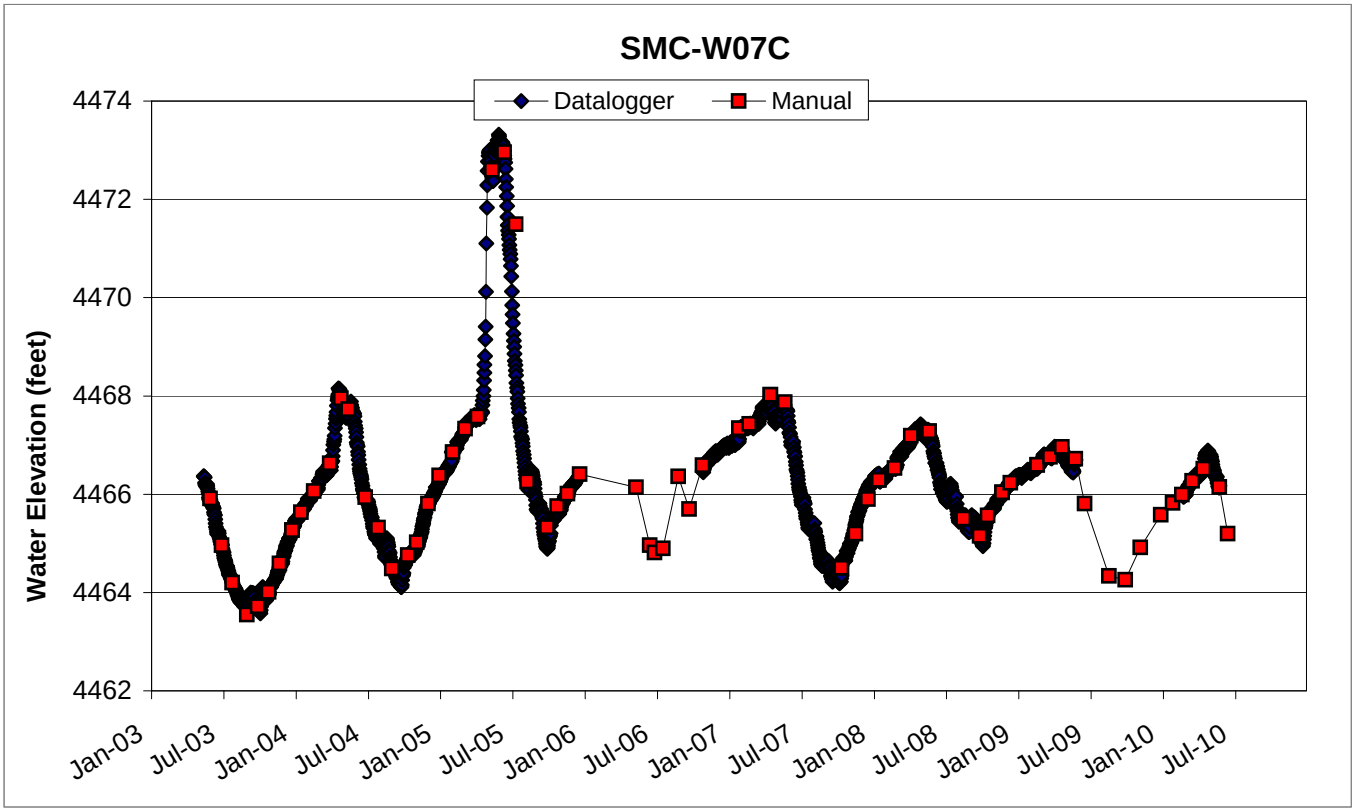

SMC-W05B
Datalogger
Manual
Water Elevation (feet)
4478
4476
4474
4472
4470
4468
4466
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

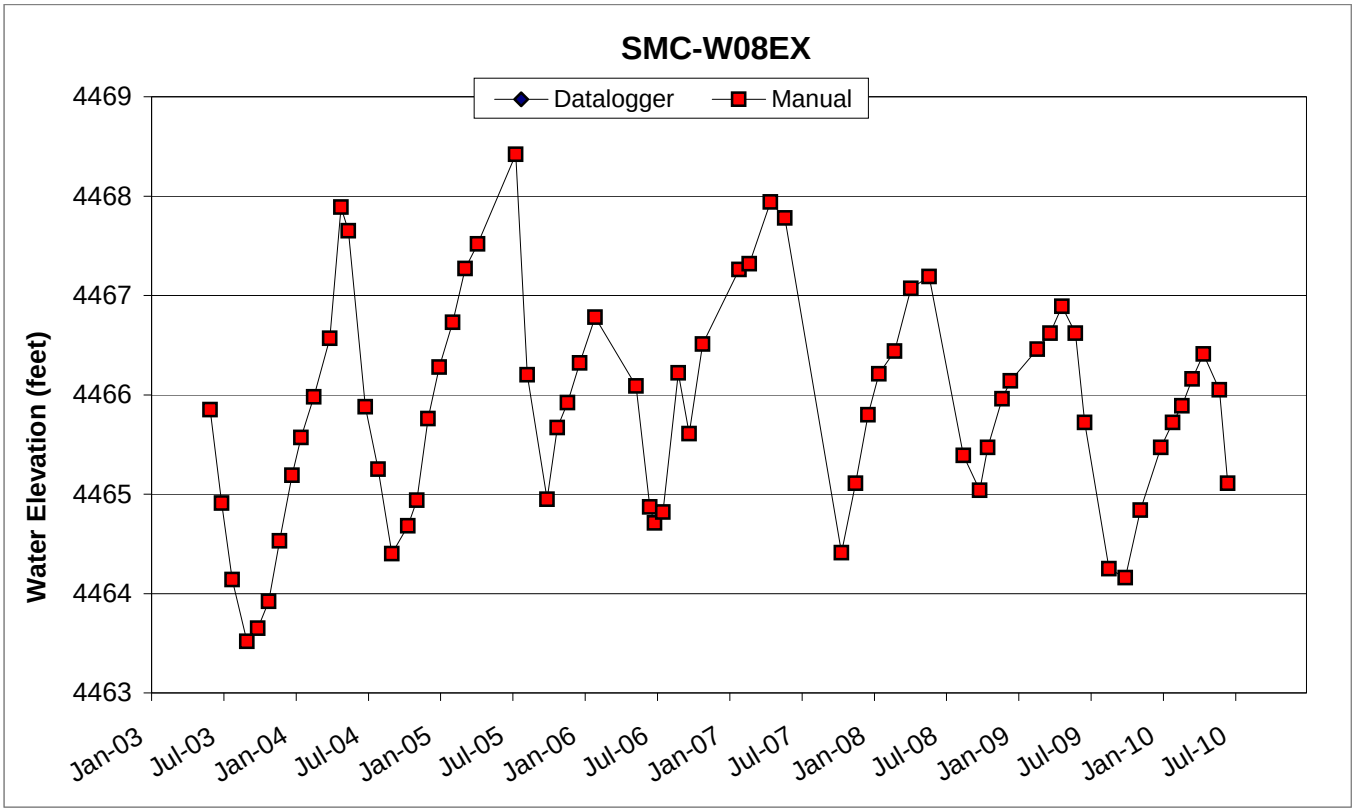

SMC-W06A
Datalogger
Manual
Water Elevation (feet)
4478
4477
4476
4475
4474
4473
4472
4471
4470
4469
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

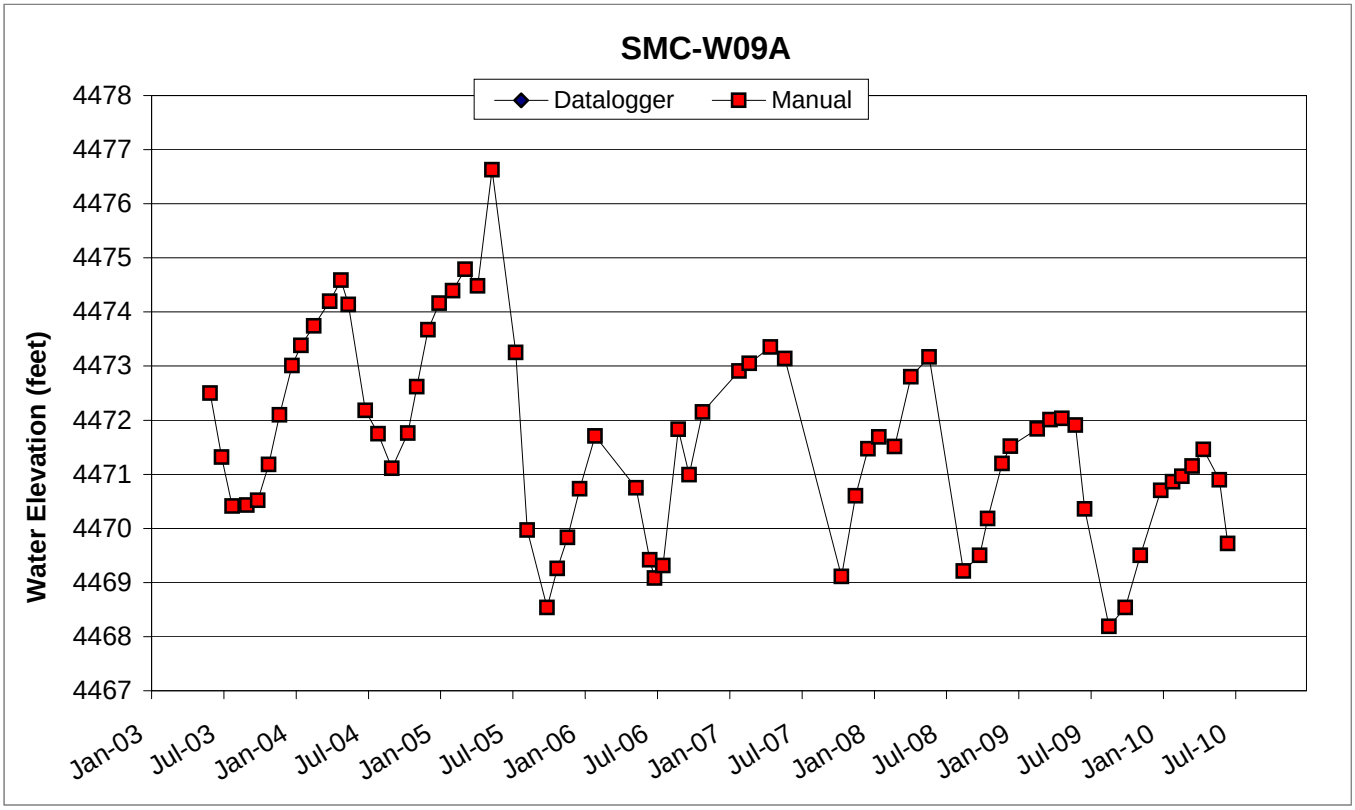

SMC-W06B
Datalogger
Manual
Water Elevation (feet)
4474
4472
4470
4468
4466
4464
4462
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

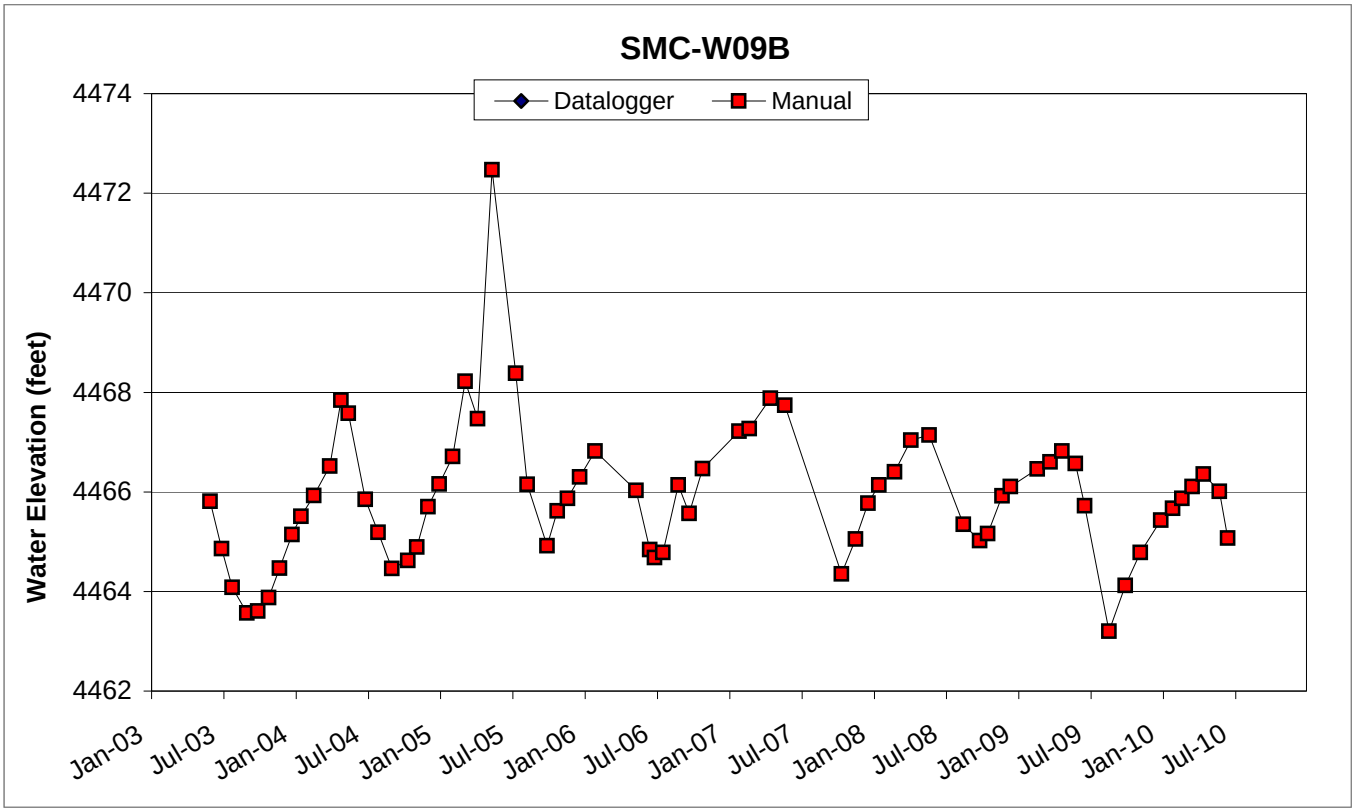

SMC-W07A
Datalogger
Manual
Water Elevation (feet)
4478
4477
4476
4475
4474
4473
4472
4471
4470
4469
4468
4467
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

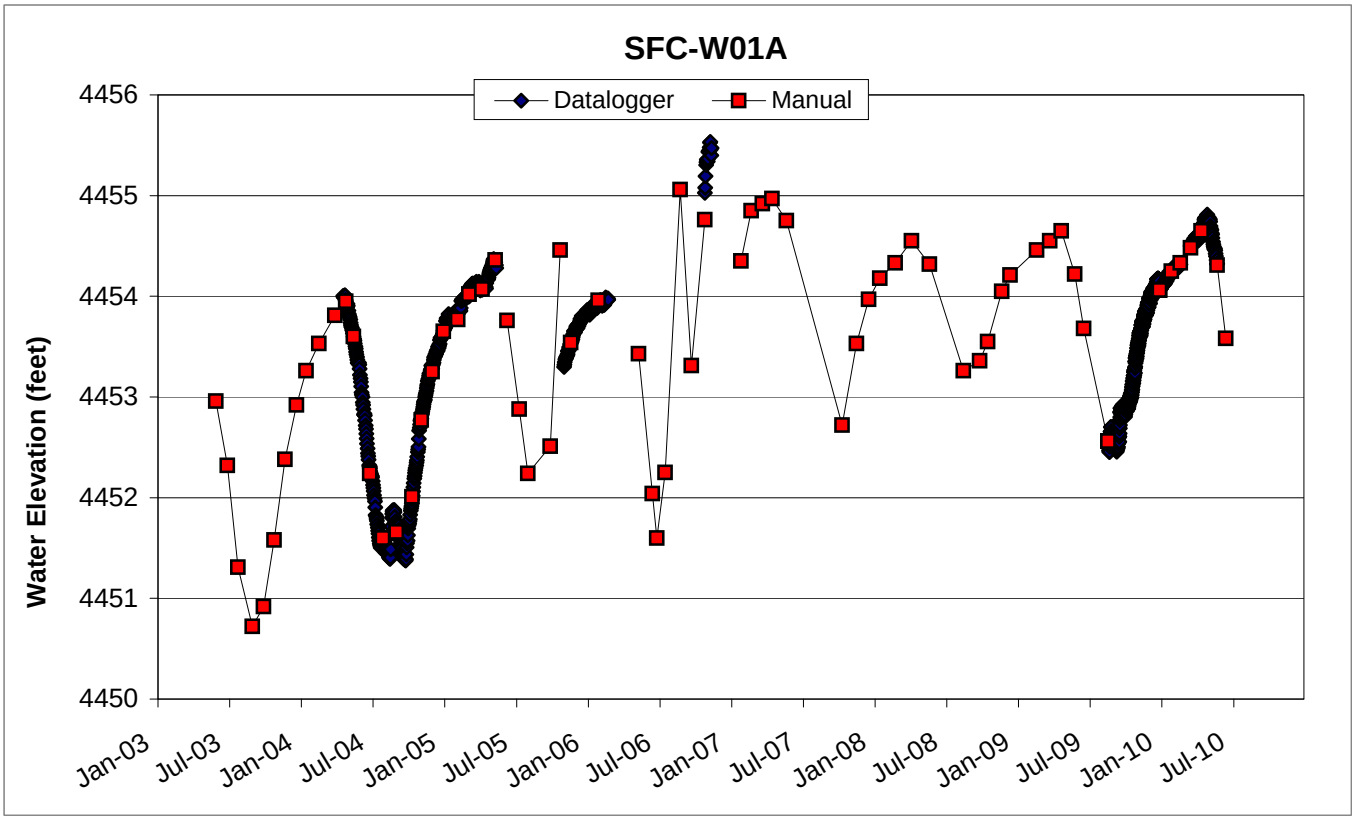

SMC-W07B
Datalogger
Manual
Water Elevation (feet)
4476
4474
4472
4470
4468
4466
4464
4462
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

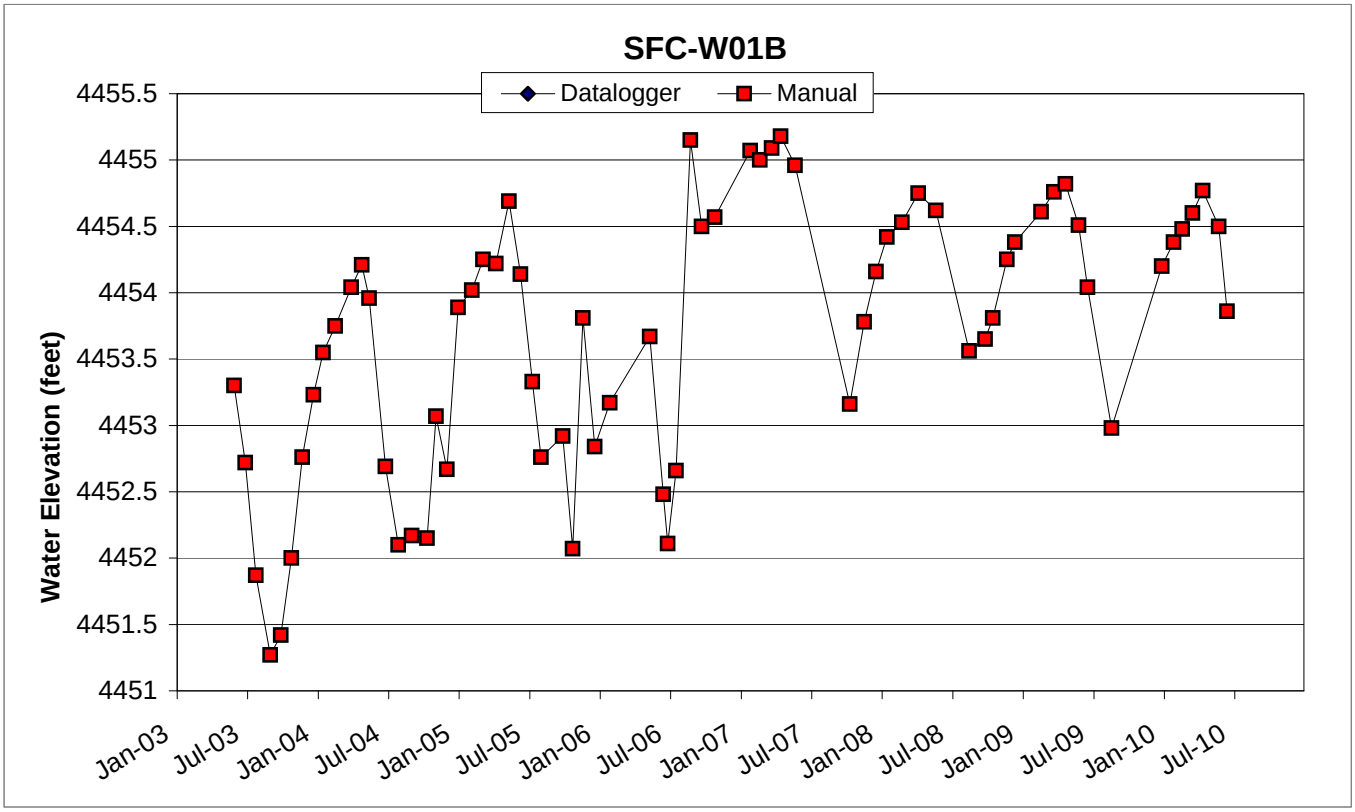

SMC-W07C
Datalogger
Manual
Water Elevation (feet)
4474
4472
4470
4468
4466
4464
4462
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

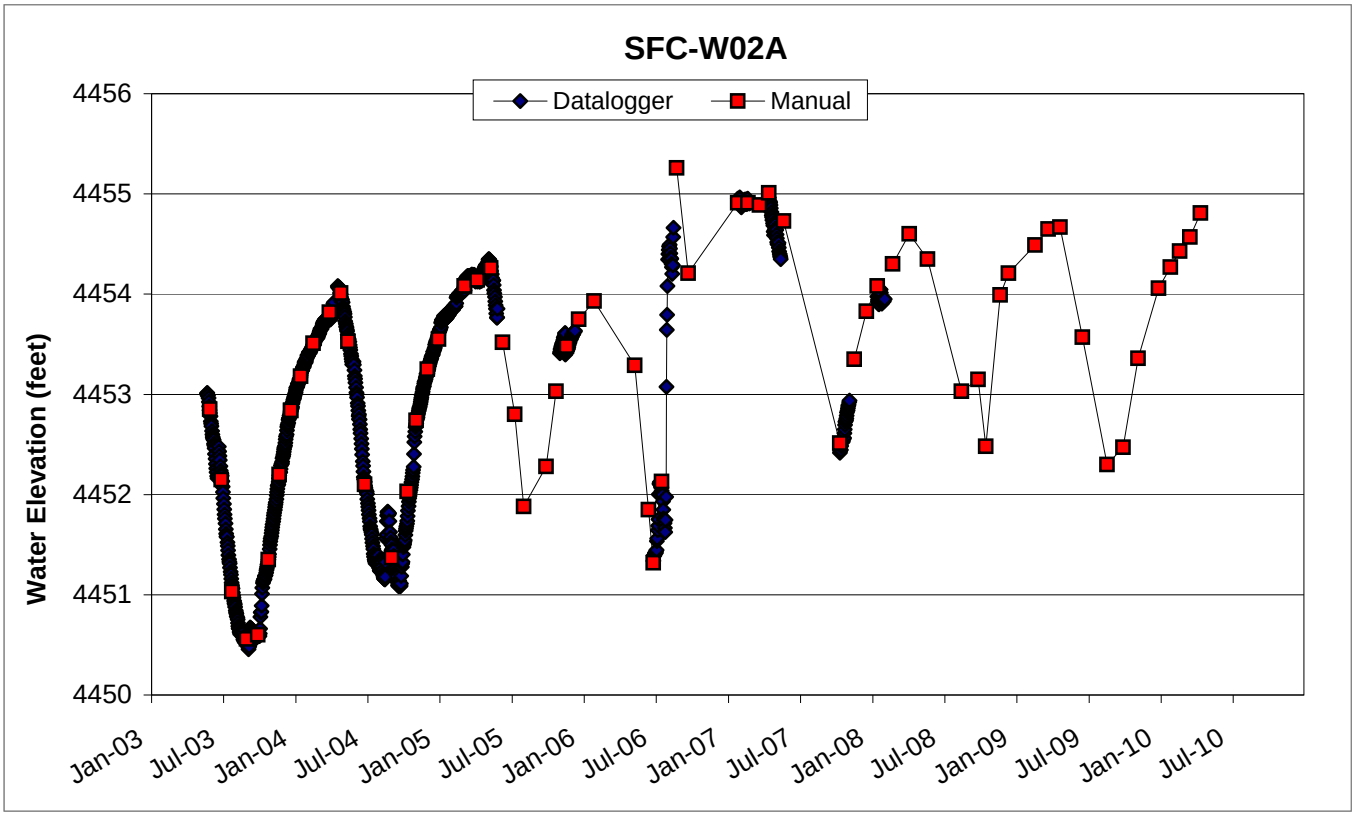

SMC-W08EX
Datalogger
Manual
Water Elevation (feet)
4469
4468
4467
4466
4465
4464
4463
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

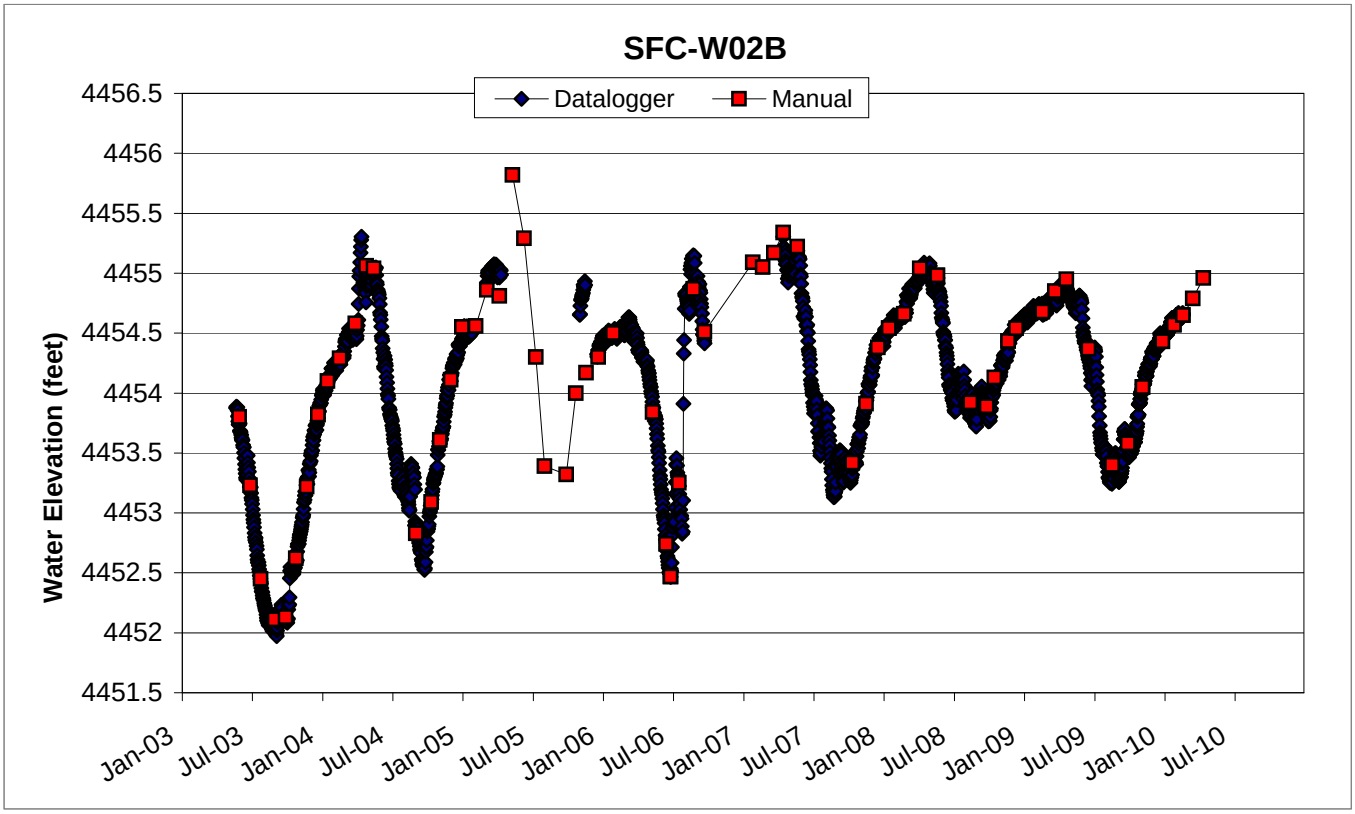

SMC-W09A
Datalogger
Manual
Water Elevation (feet)
4478
4477
4476
4475
4474
4473
4472
4471
4470
4469
4468
4467
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

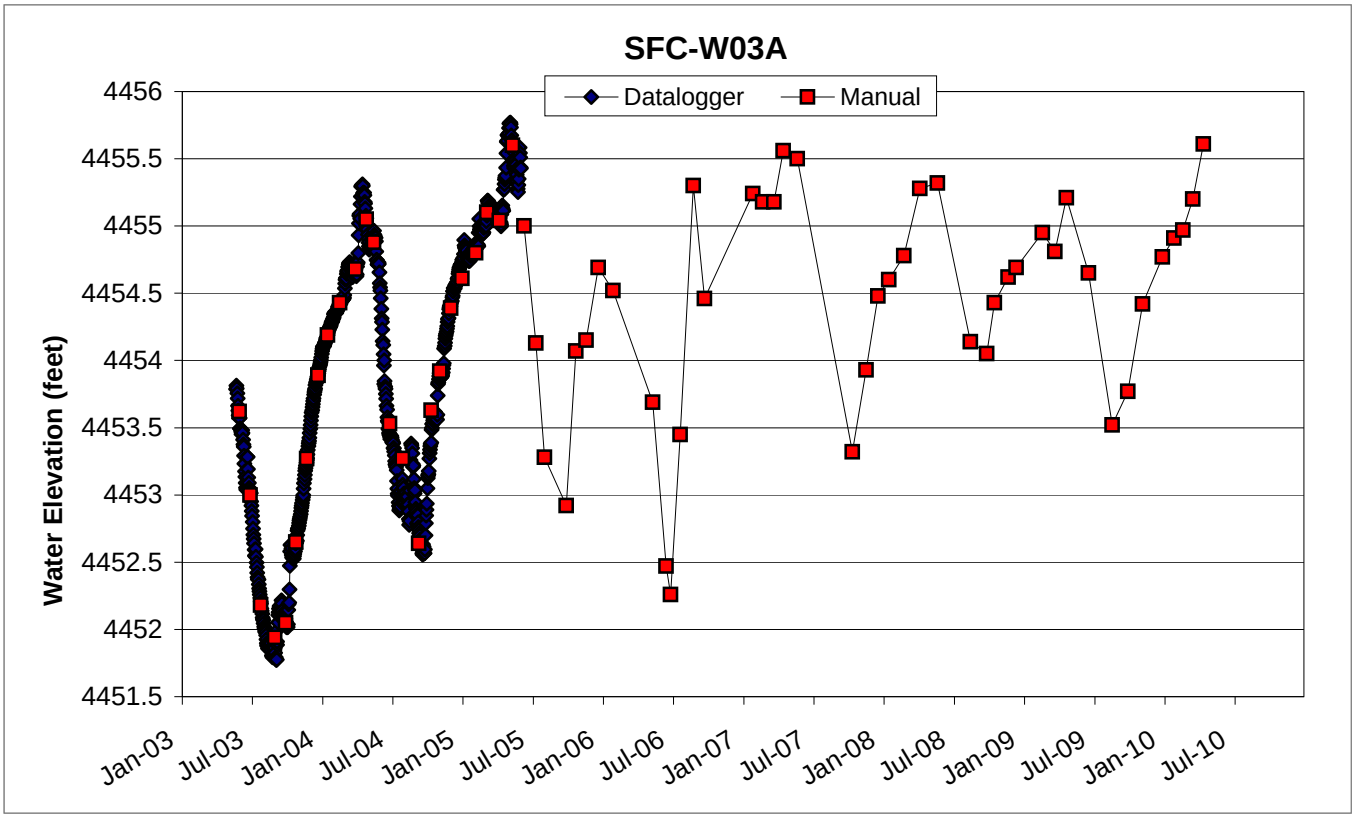

SMC-W09B
Datalogger
Manual
Water Elevation (feet)
4474
4472
4470
4468
4466
4464
4462
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

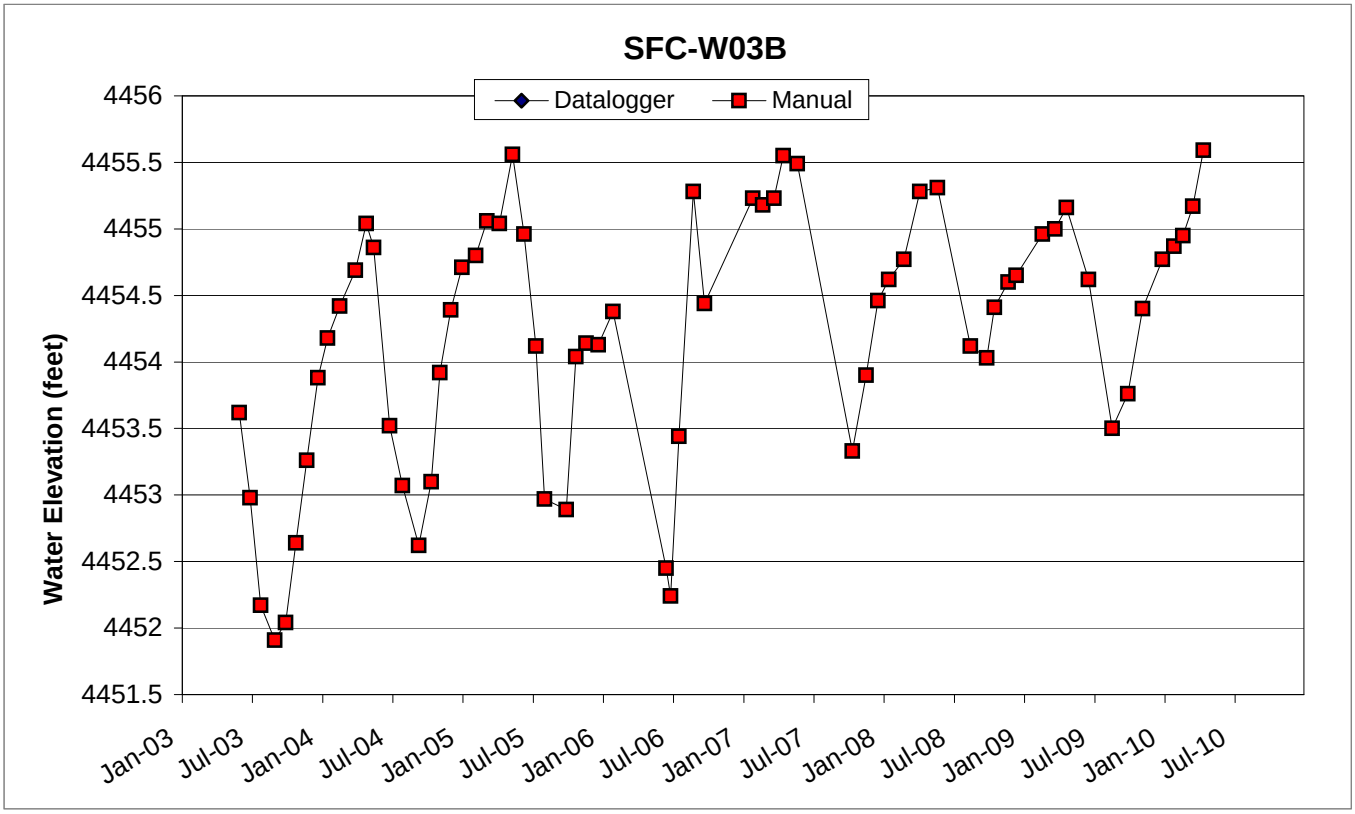

SFC-W01A
Datalogger
Manual
Water Elevation (feet)
4456
4455
4454
4453
4452
4451
4450
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

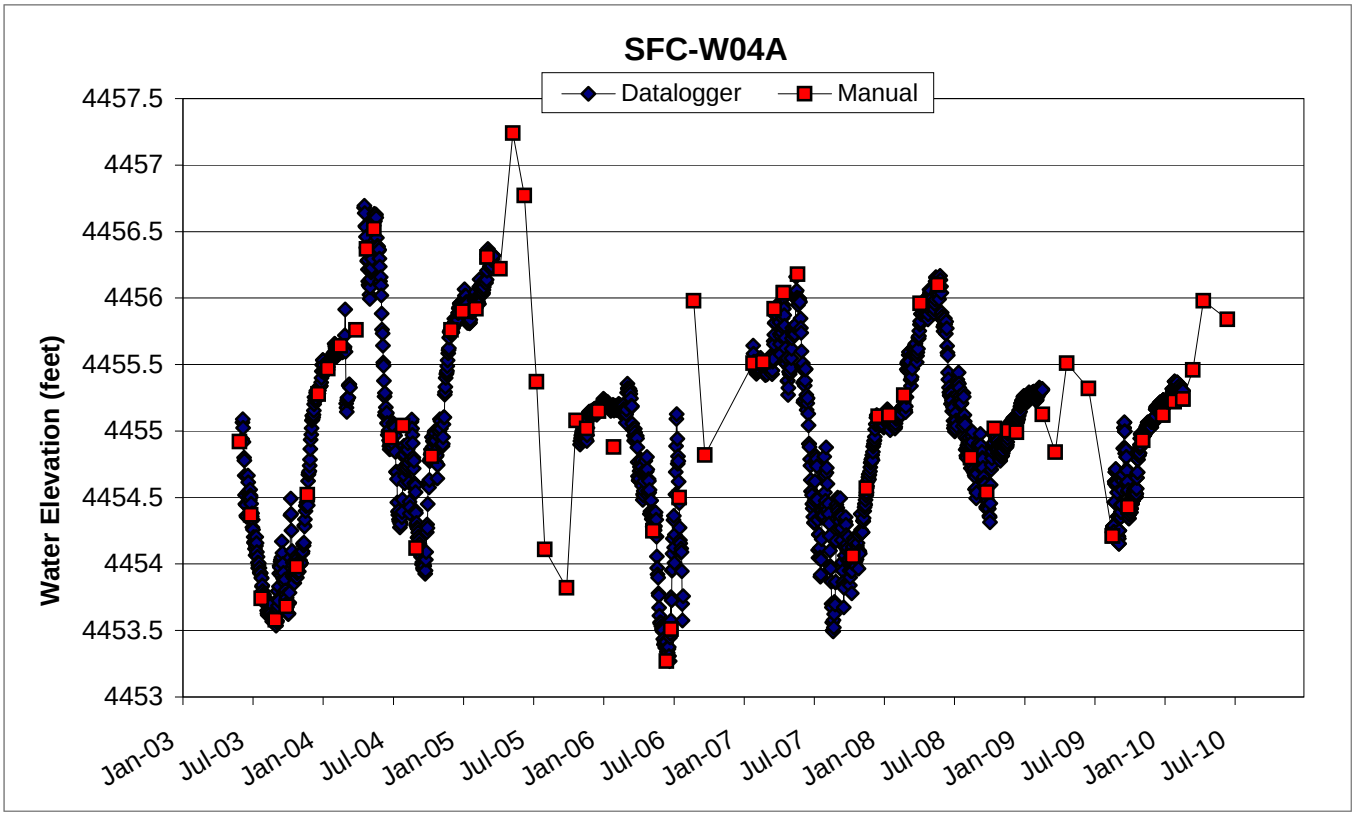

SFC-W01B
Datalogger
Manual
Water Elevation (feet)
4455.5
4455
4454.5
4454
4453.5
4453
4452.5
4452
4451.5
4451
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

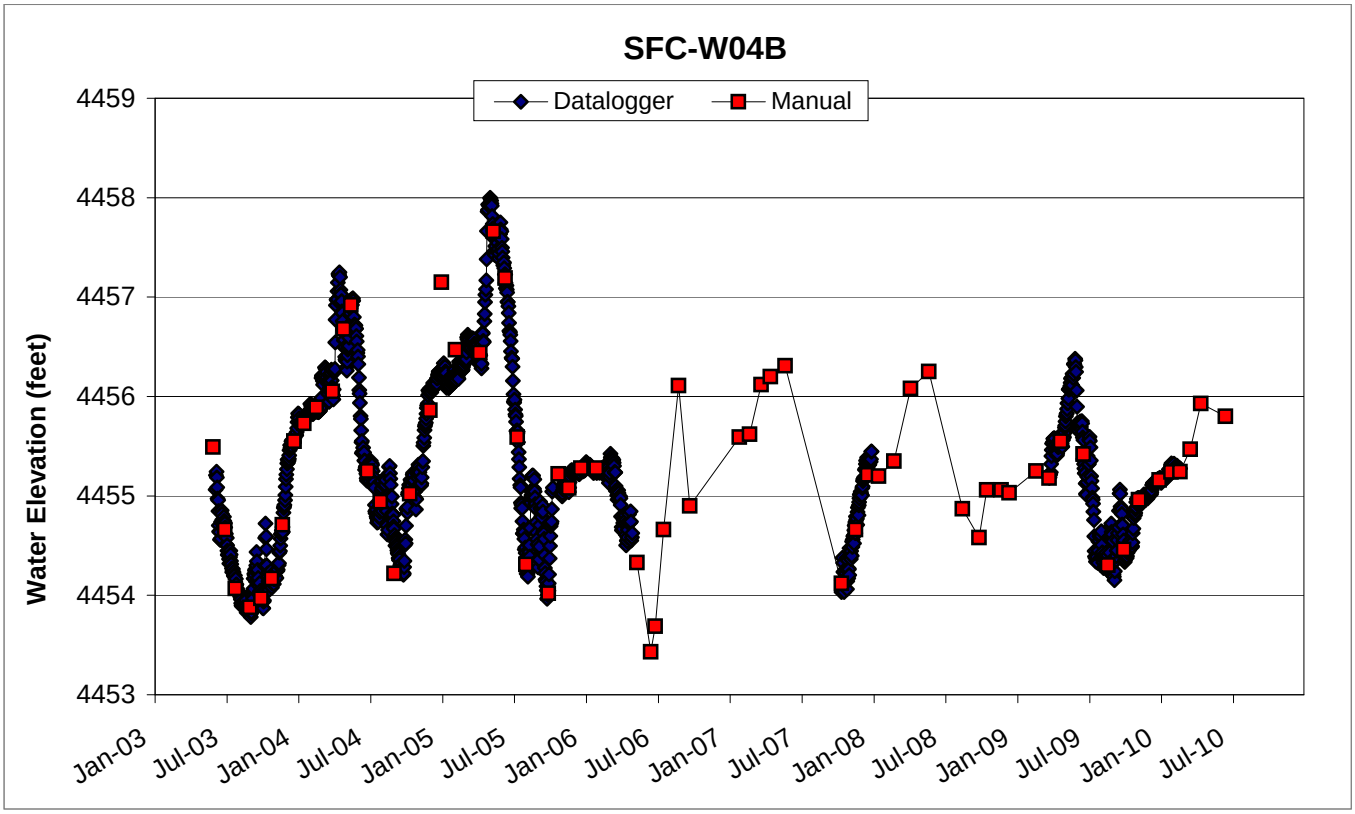

SFC-W02A
Datalogger
Manual
Water Elevation (feet)
4456
4455
4454
4453
4452
4451
4450
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

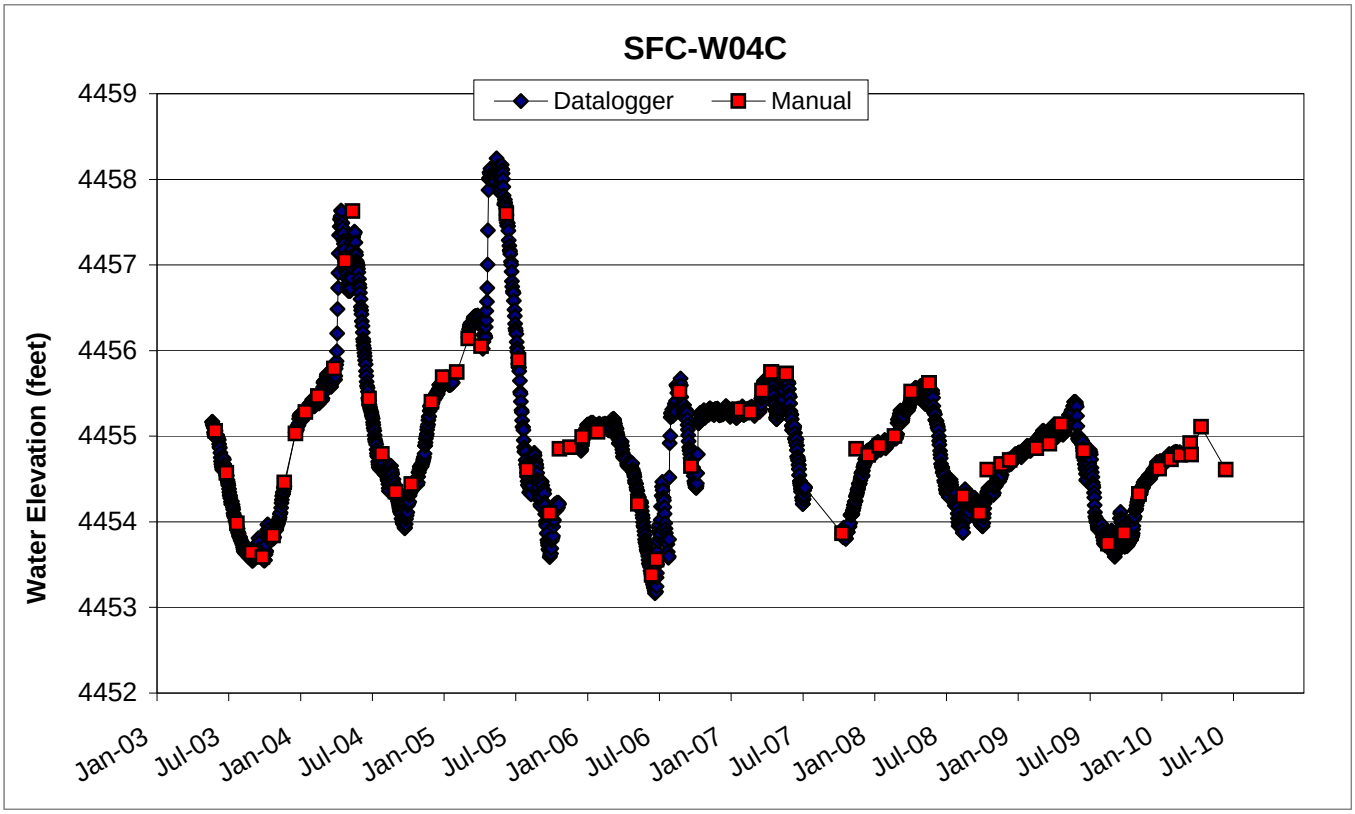

SFC-W02B
Datalogger
Manual
Water Elevation (feet)
4456.5
4456
4455.5
4455
4454.5
4454
4453.5
4453
4452.5
4452
4451.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

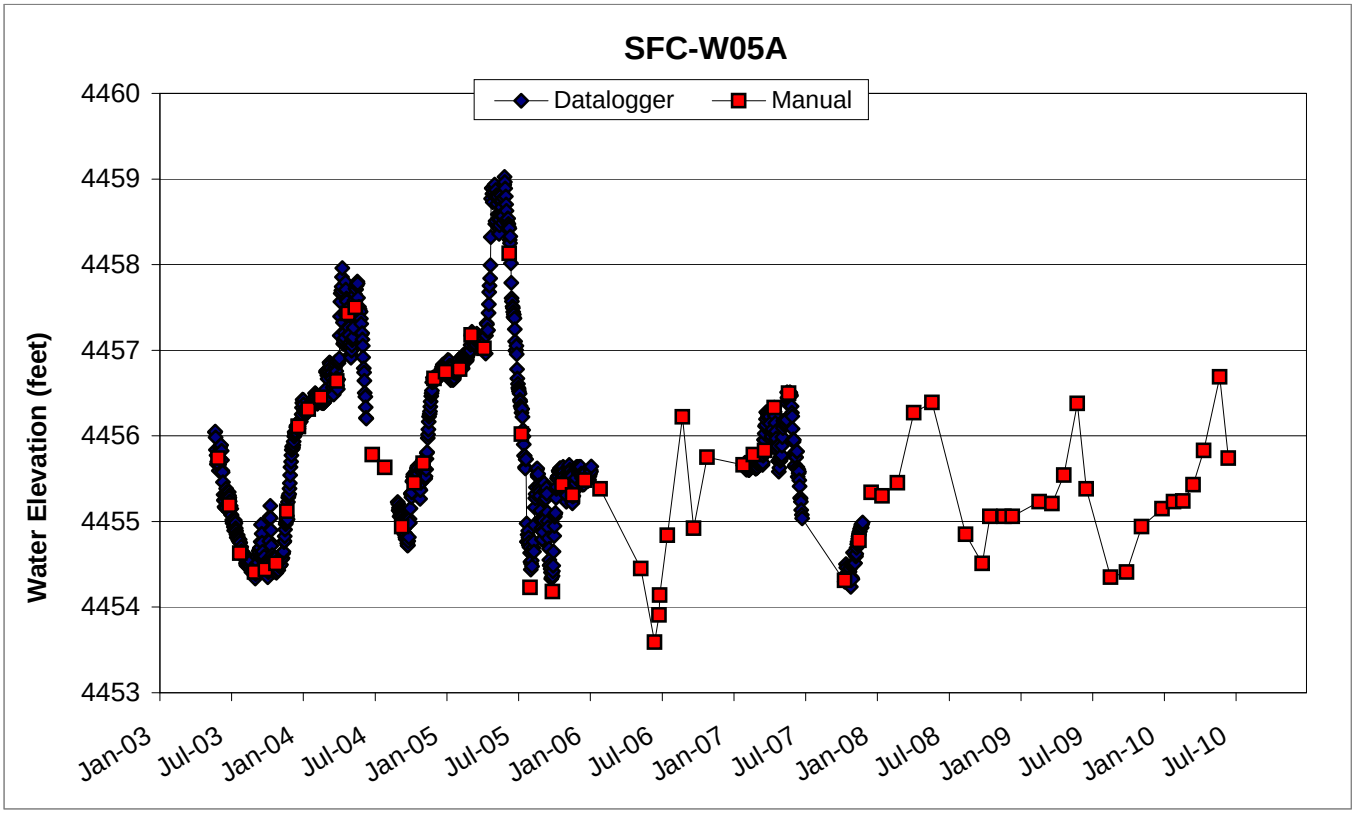

SFC-W03A
Datalogger
Manual
Water Elevation (feet)
4456
4455.5
4455
4454.5
4454
4453.5
4453
4452.5
4452
4451.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

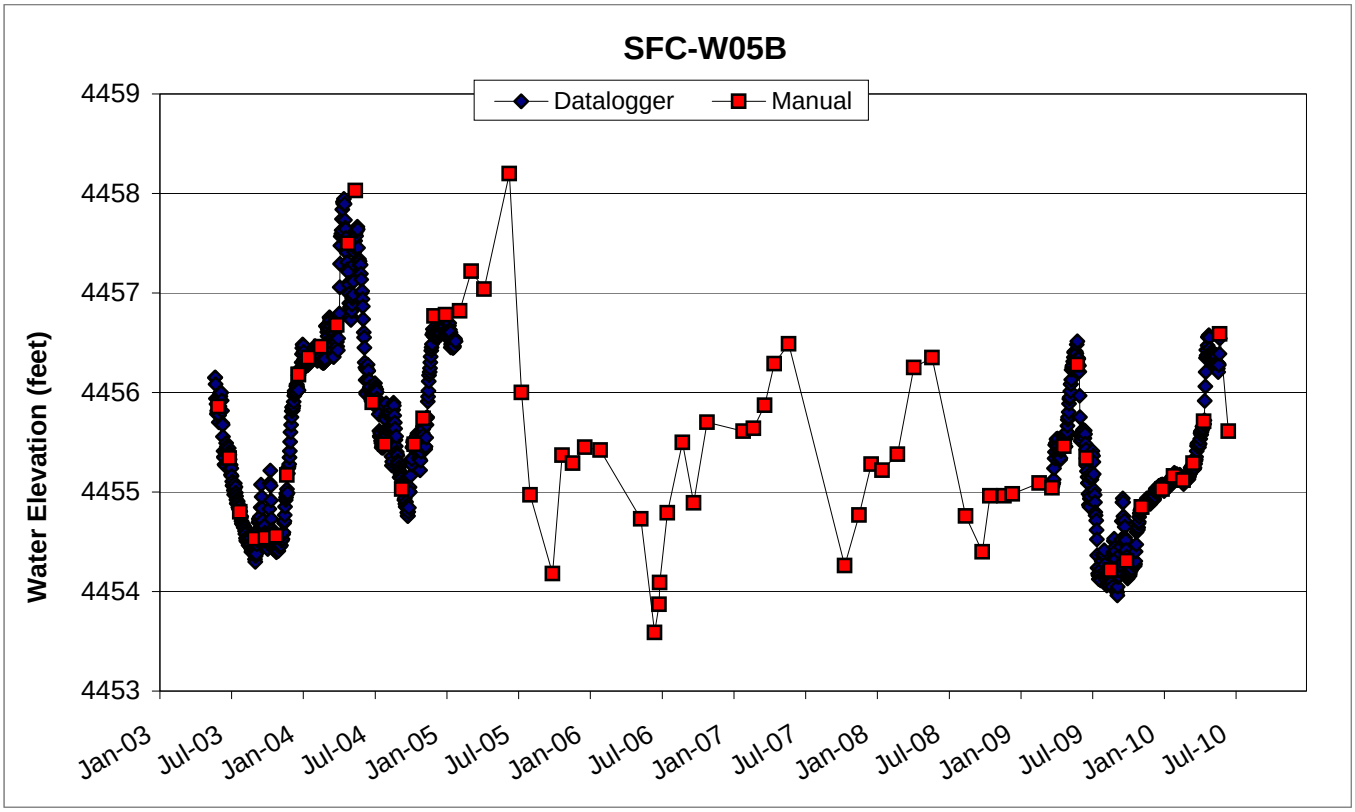

SFC-W03B
Datalogger
Manual
Water Elevation (feet)
4456
4455.5
4455
4454.5
4454
4453.5
4453
4452.5
4452
4451.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

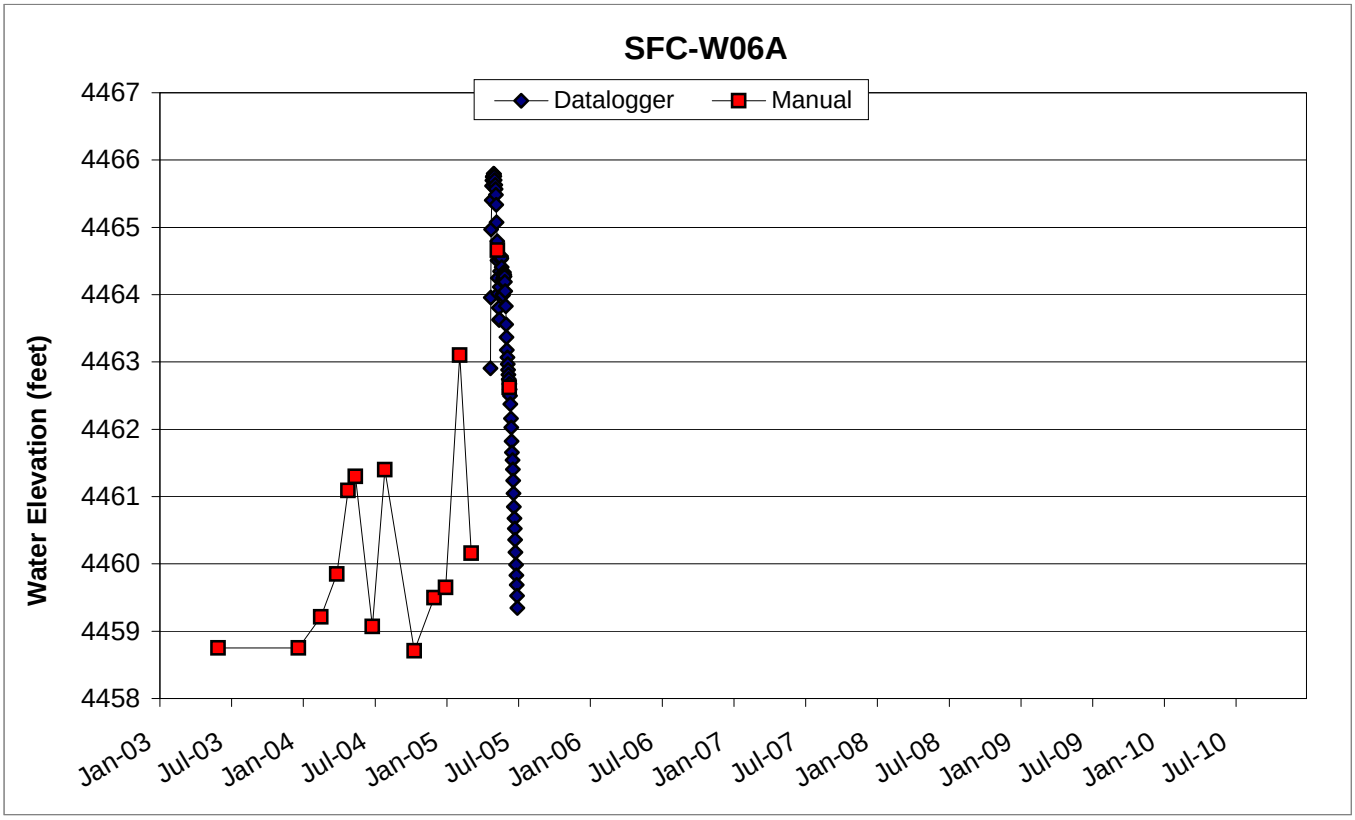

SFC-W04A
Datalogger
Manual
Water Elevation (feet)
4457.5
4457
4456.5
4456
4455.5
4455
4454.5
4454
4453.5
4453
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

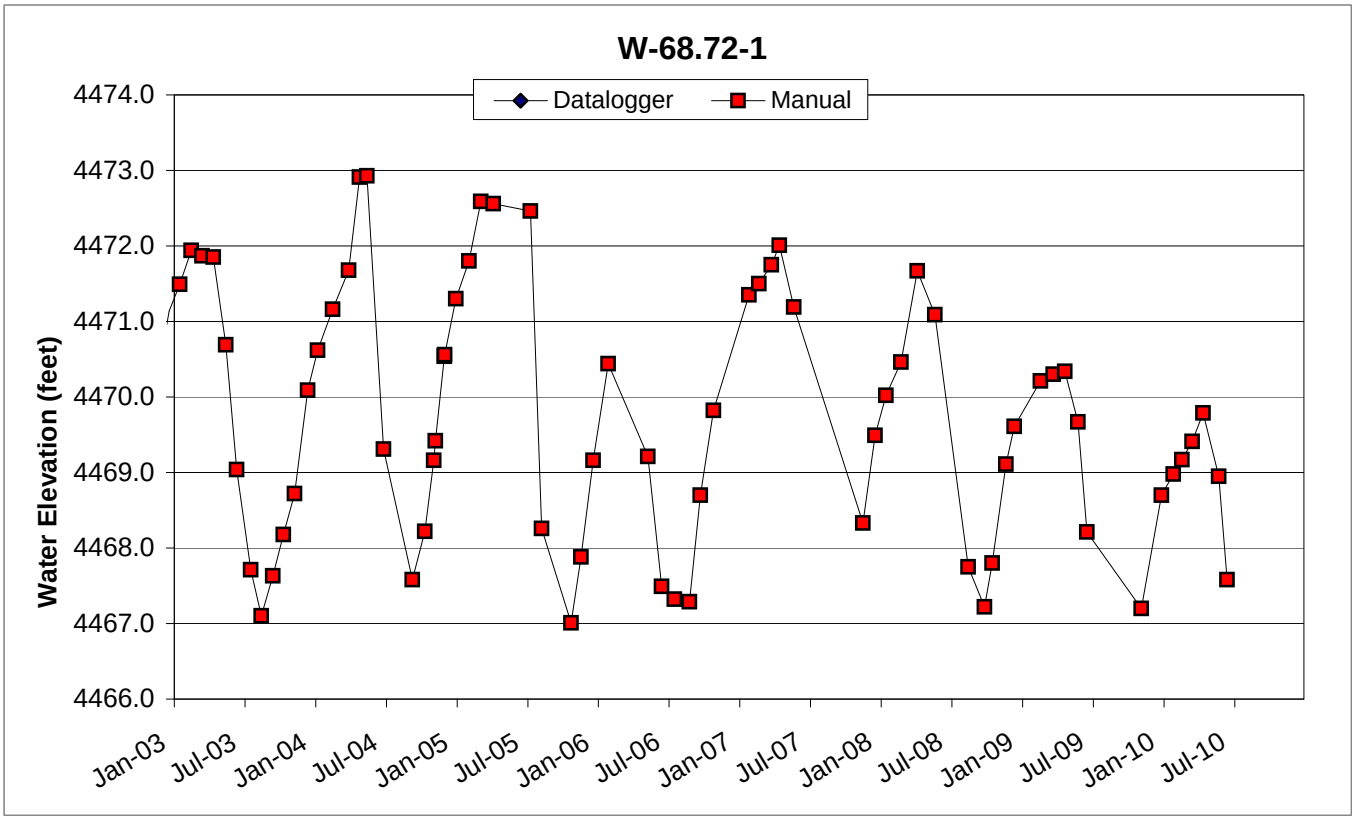

SFC-W04B
Datalogger
Manual
Water Elevation (feet)
4459
4458
4457
4456
4455
4454
4453
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

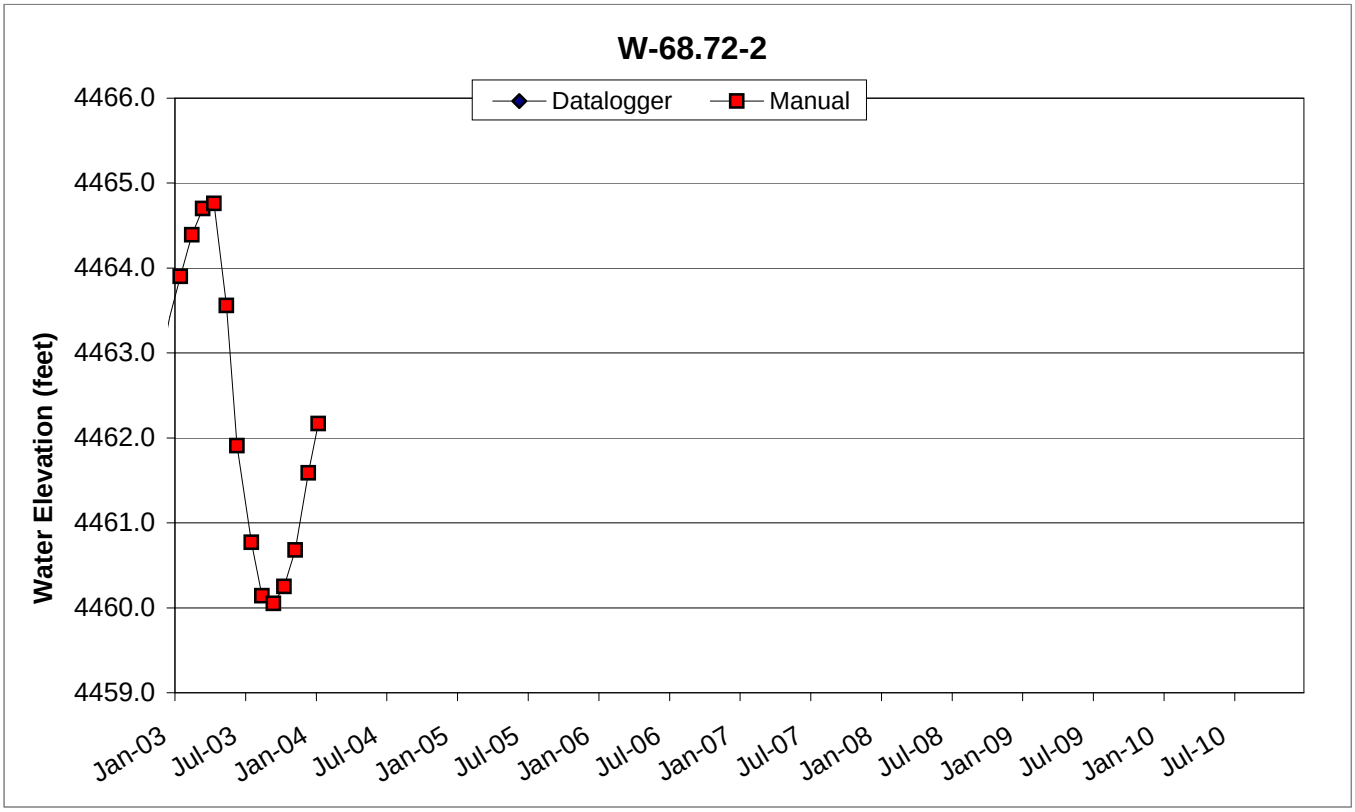

SFC-W04C
Datalogger
Manual
Water Elevation (feet)
4459
4458
4457
4456
4455
4454
4453
4452
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

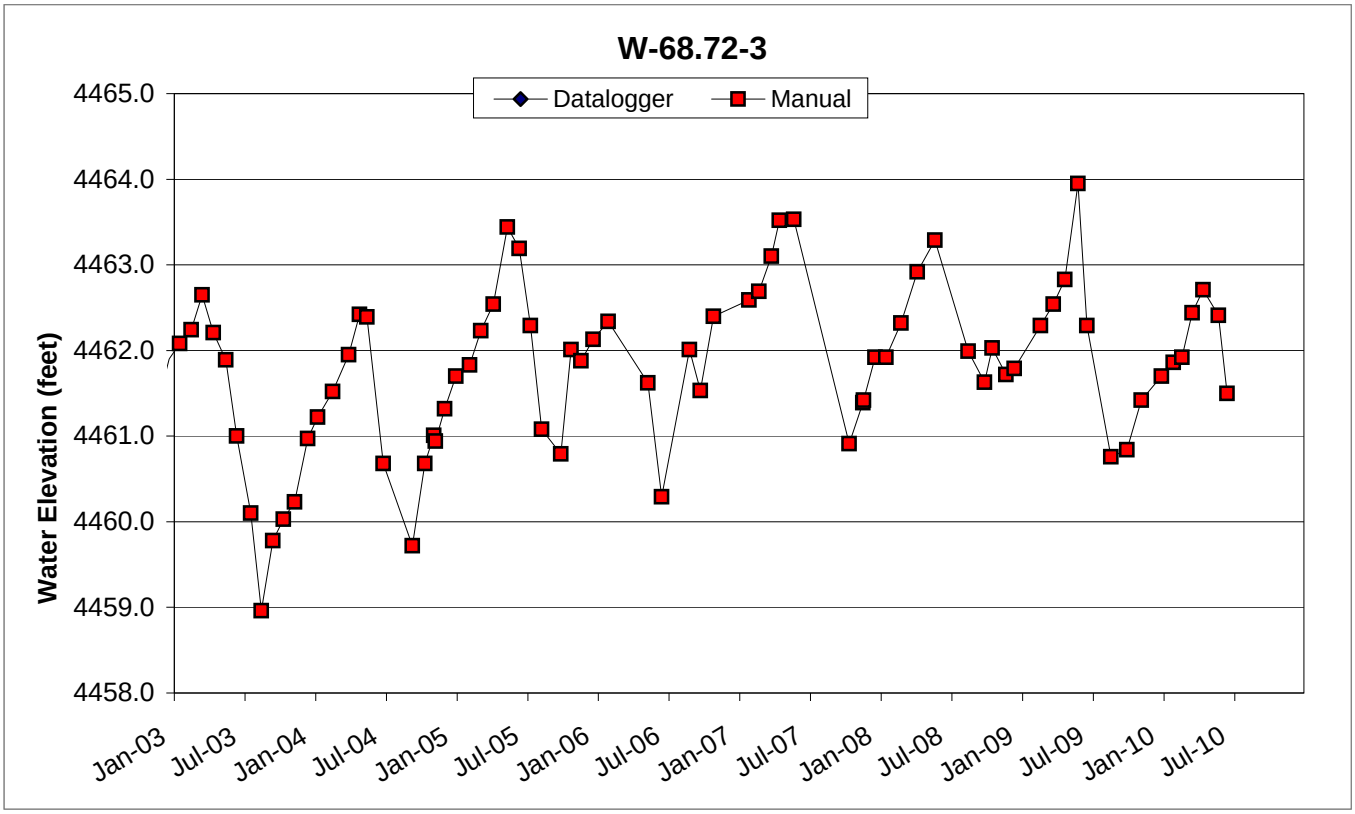

SFC-W05A
Datalogger
Manual
Water Elevation (feet)
4460
4459
4458
4457
4456
4455
4454
4453
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

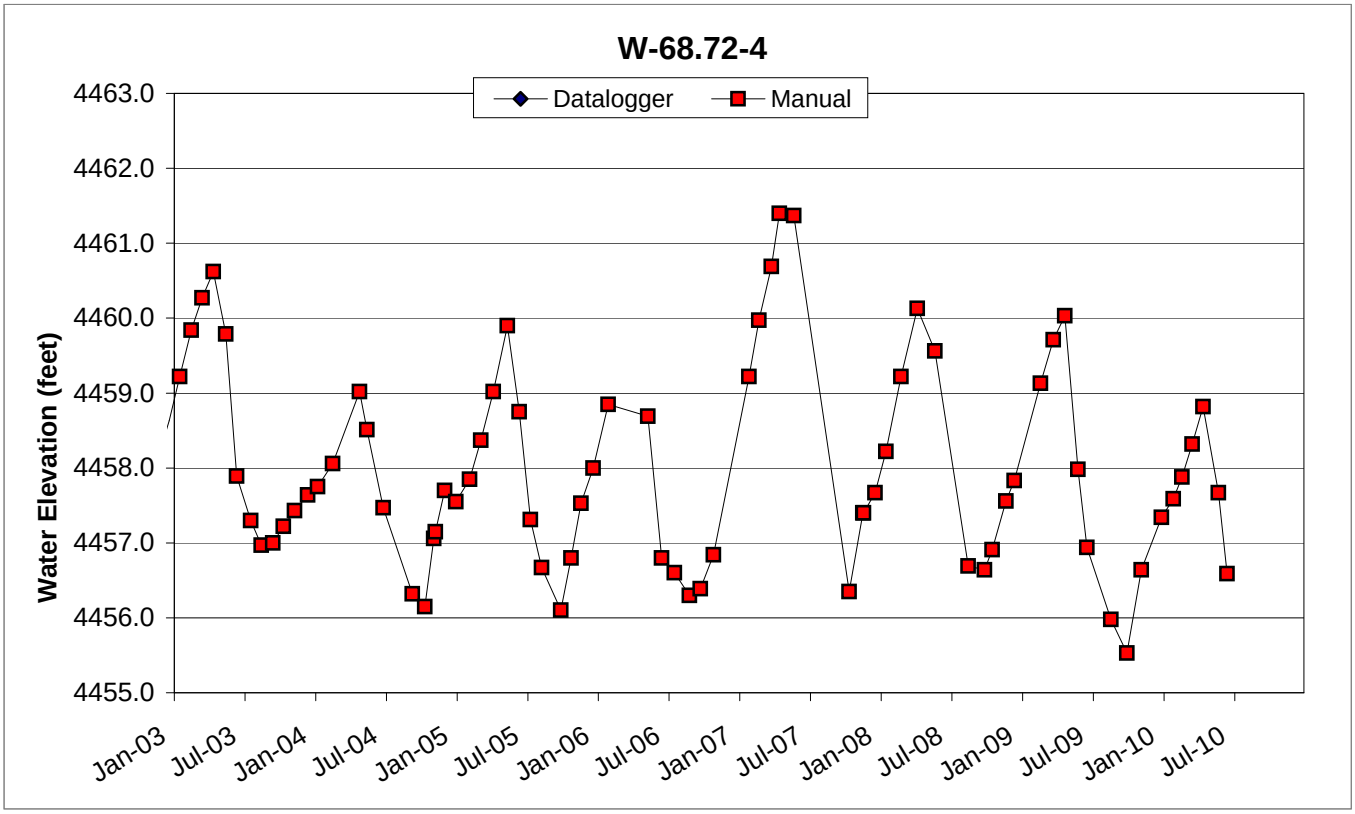

SFC-W05B
Datalogger
Manual
Water Elevation (feet)
4459
4458
4457
4456
4455
4454
4453
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

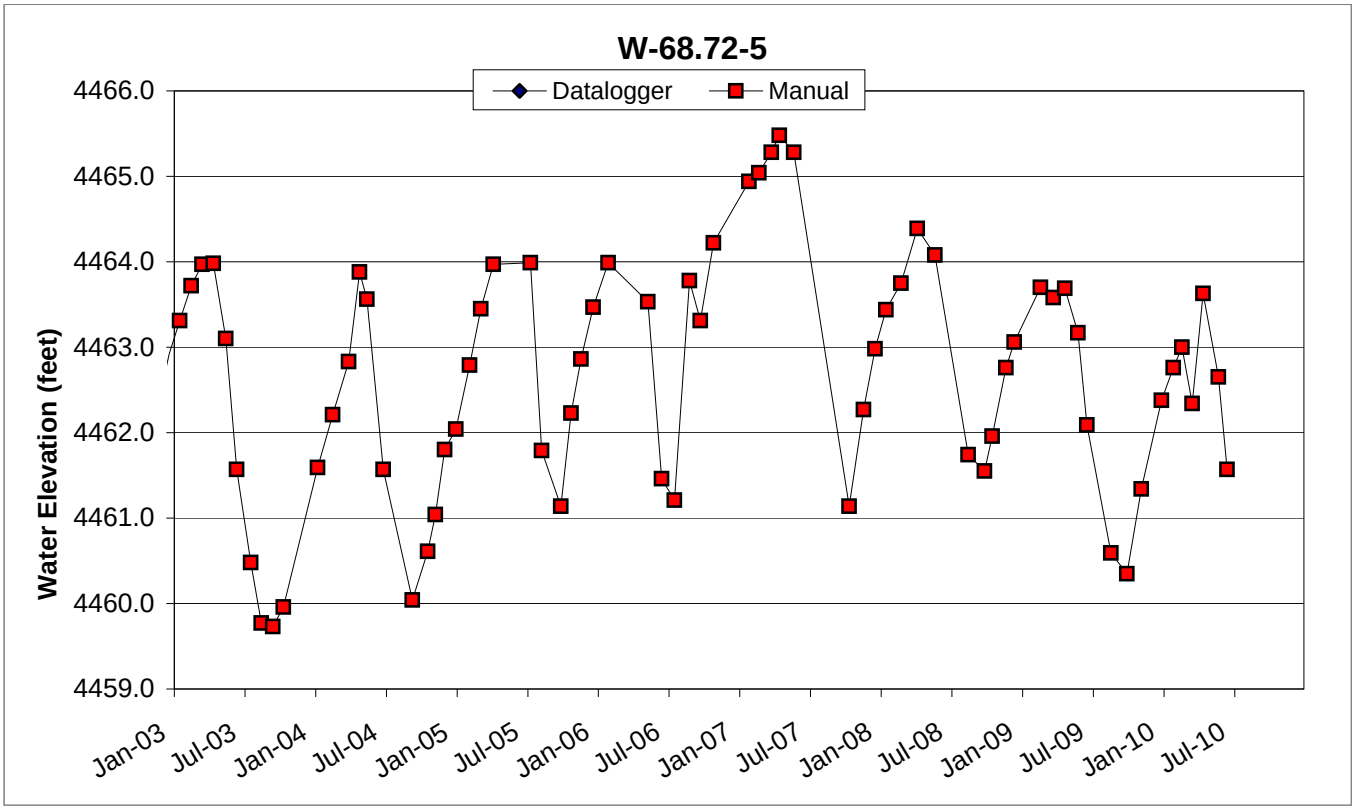

SFC-W06A
Datalogger
Manual
Water Elevation (feet)
4467
4466
4465
4464
4463
4462
4461
4460
4459
4458
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

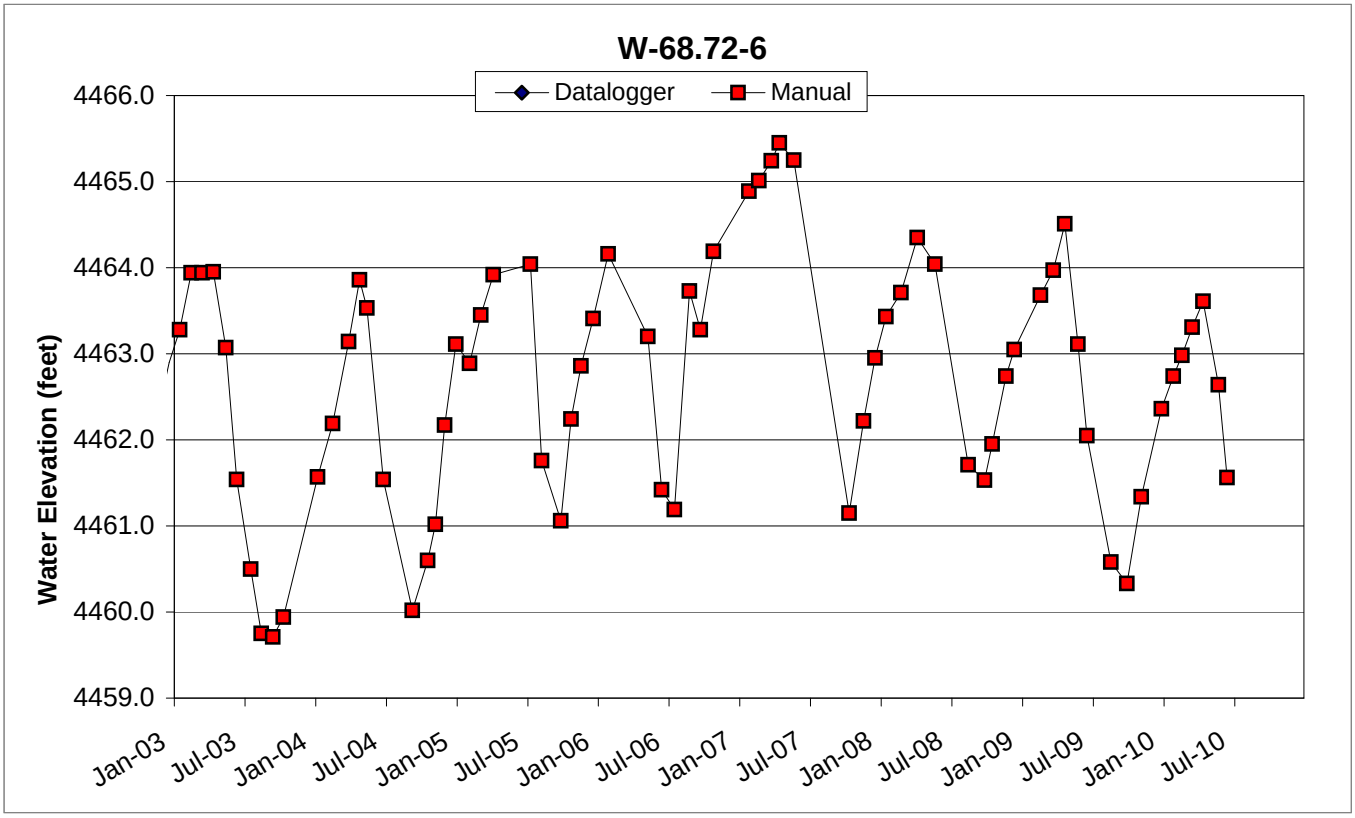

W-68.72-1
Datalogger
Manual
Water Elevation (feet)
4474.0
4473.0
4472.0
4471.0
4470.0
4469.0
4468.0
4467.0
4466.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

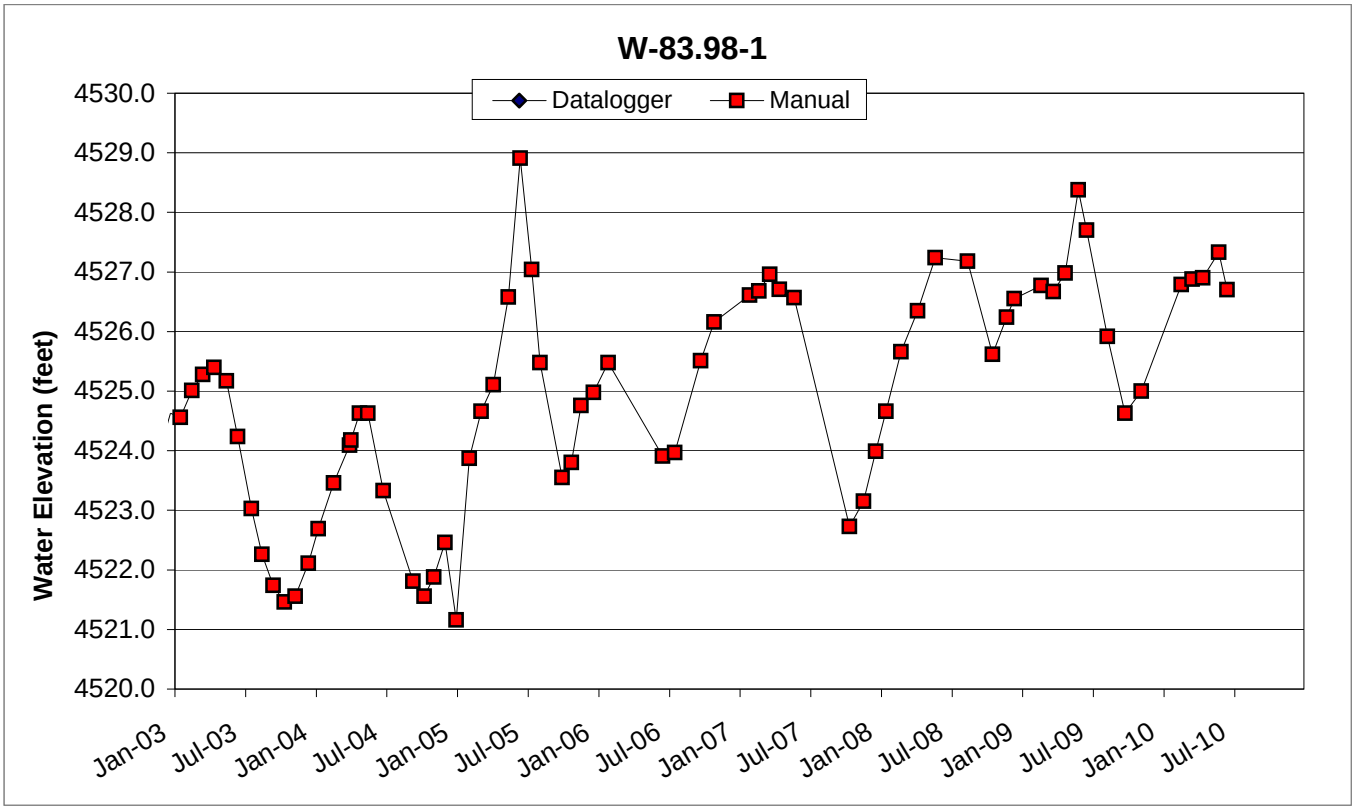

W-68.72-2
Datalogger
Manual
Water Elevation (feet)
4466.0
4465.0
4464.0
4463.0
4462.0
4461.0
4460.0
4459.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

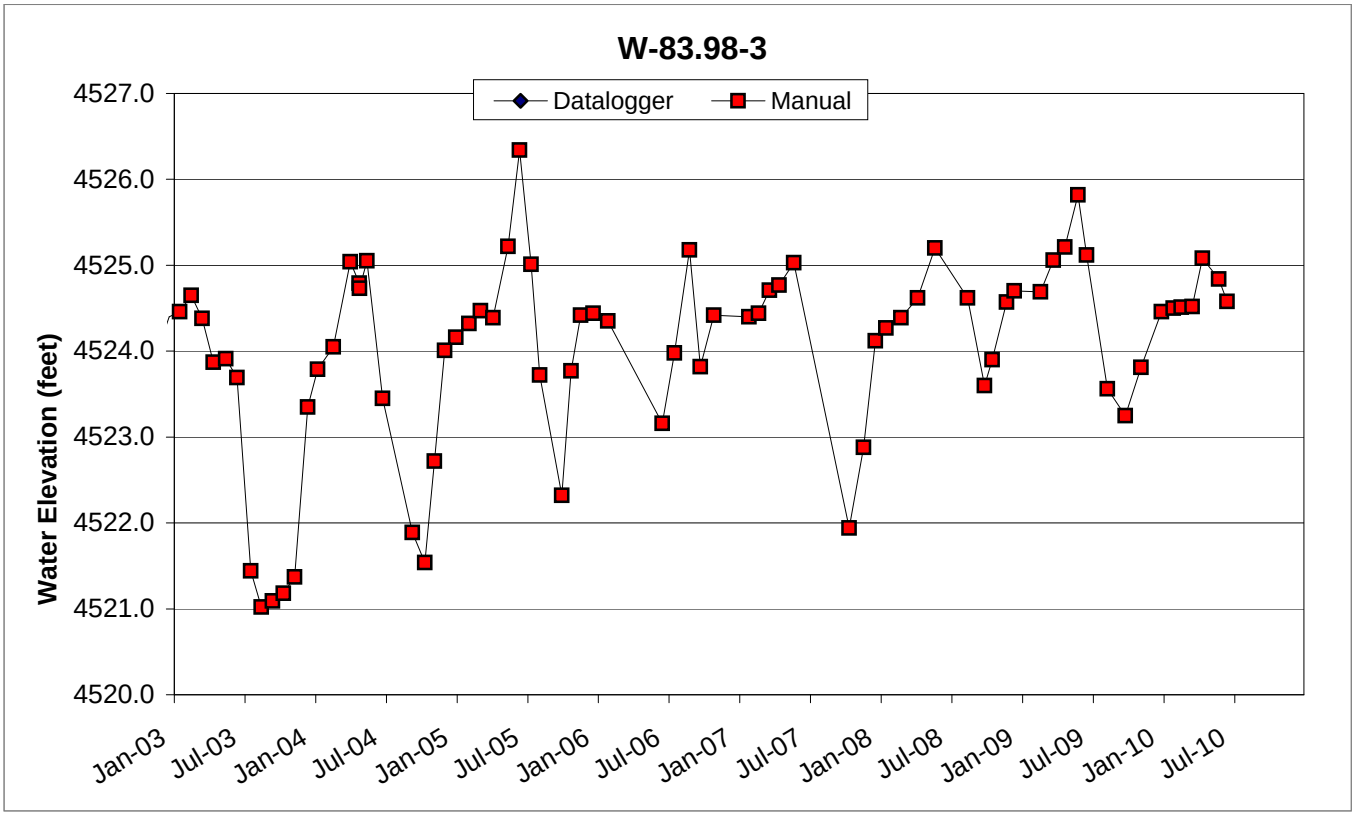

W-68.72-3
Datalogger
Manual
Water Elevation (feet)
4465.0
4464.0
4463.0
4462.0
4461.0
4460.0
4459.0
4458.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

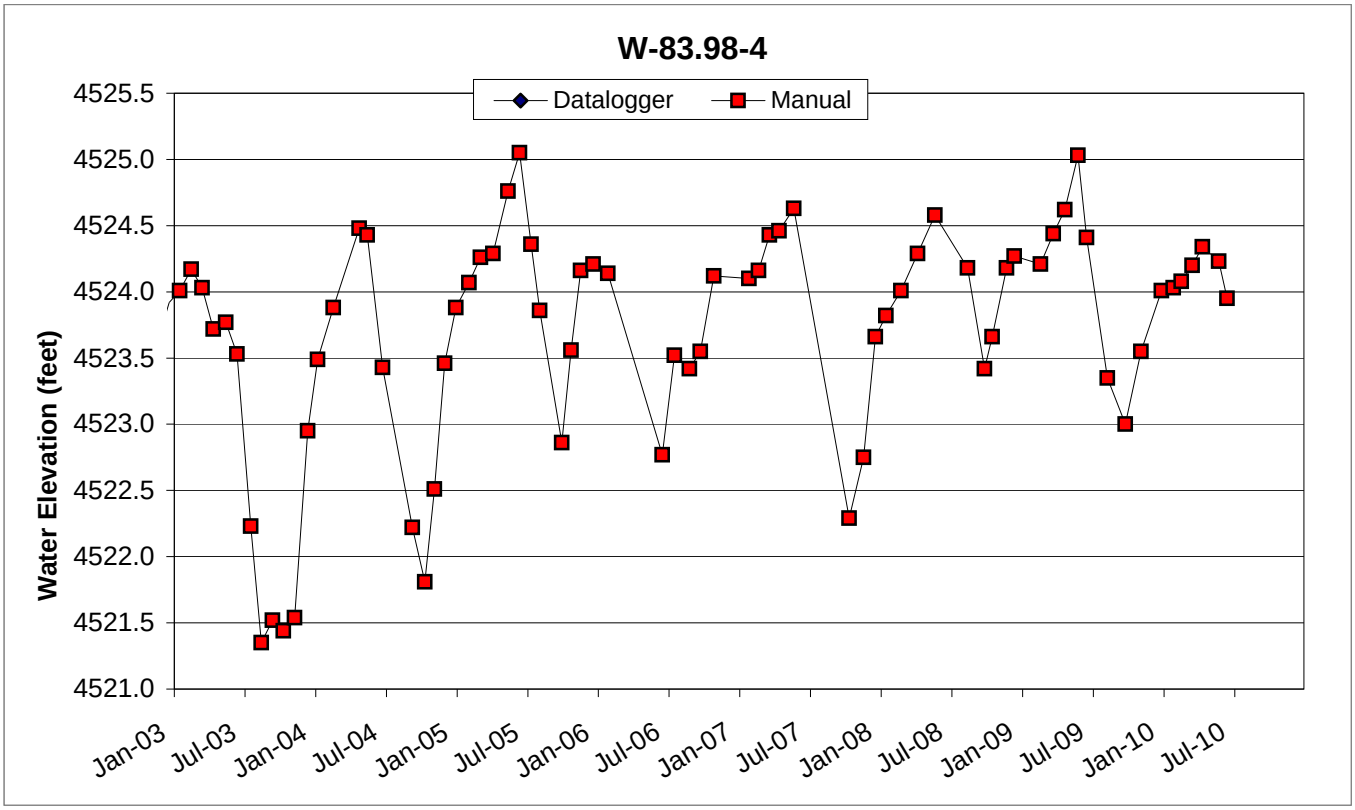

W-68.72-4
Datalogger
Manual
Water Elevation (feet)
4463.0
4462.0
4461.0
4460.0
4459.0
4458.0
4457.0
4456.0
4455.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

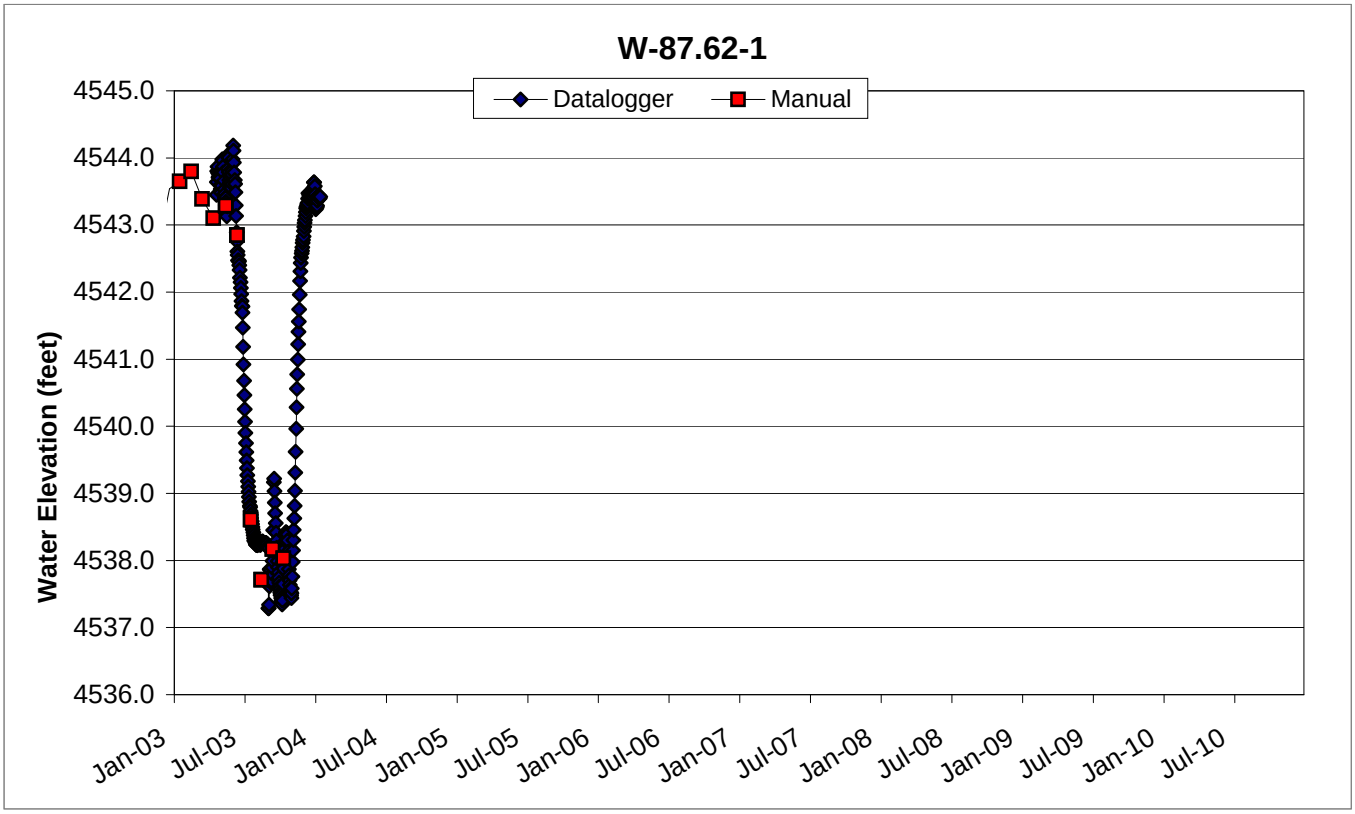

W-68.72-5
Datalogger
Manual
Water Elevation (feet)
4466.0
4465.0
4464.0
4463.0
4462.0
4461.0
4460.0
4459.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

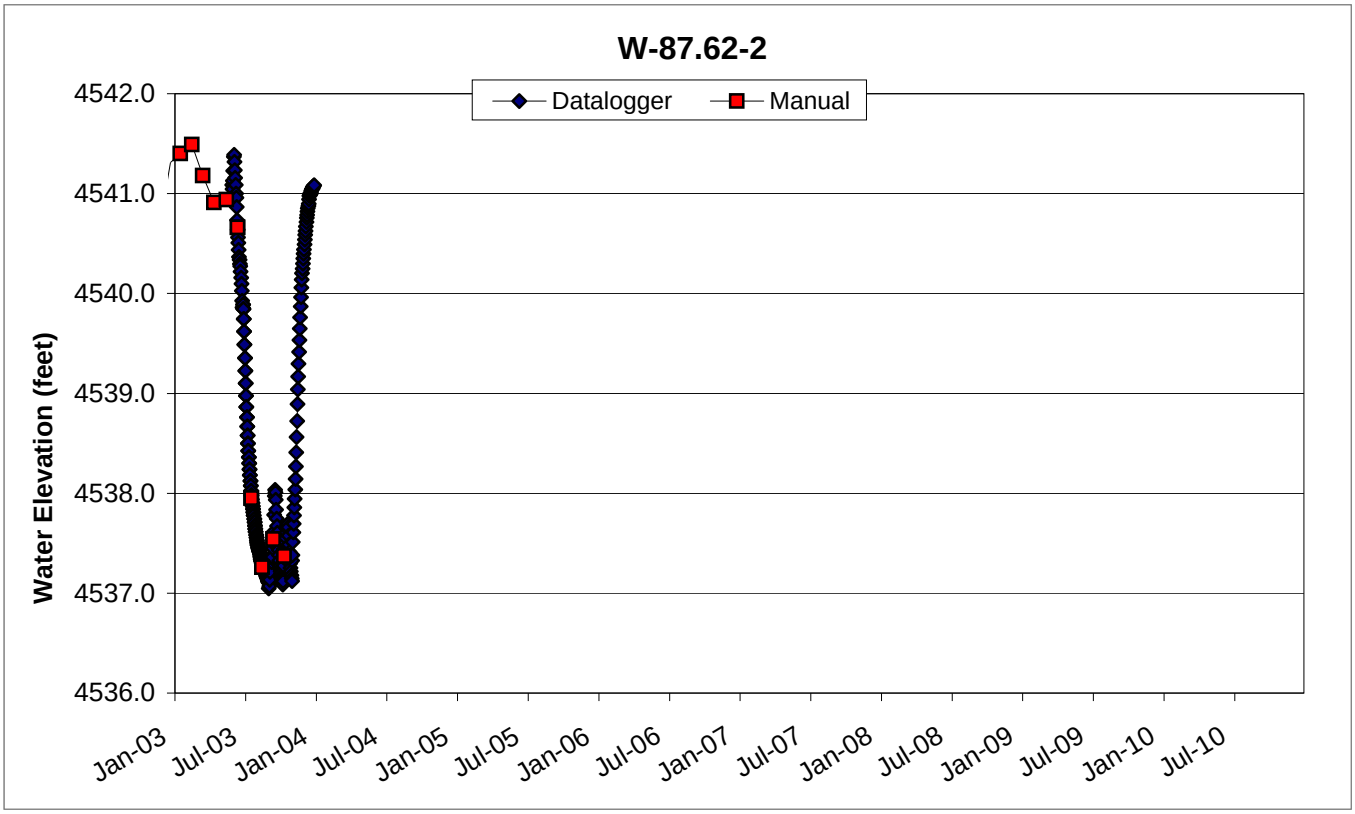

W-68.72-6
Datalogger
Manual
Water Elevation (feet)
4466.0
4465.0
4464.0
4463.0
4462.0
4461.0
4460.0
4459.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

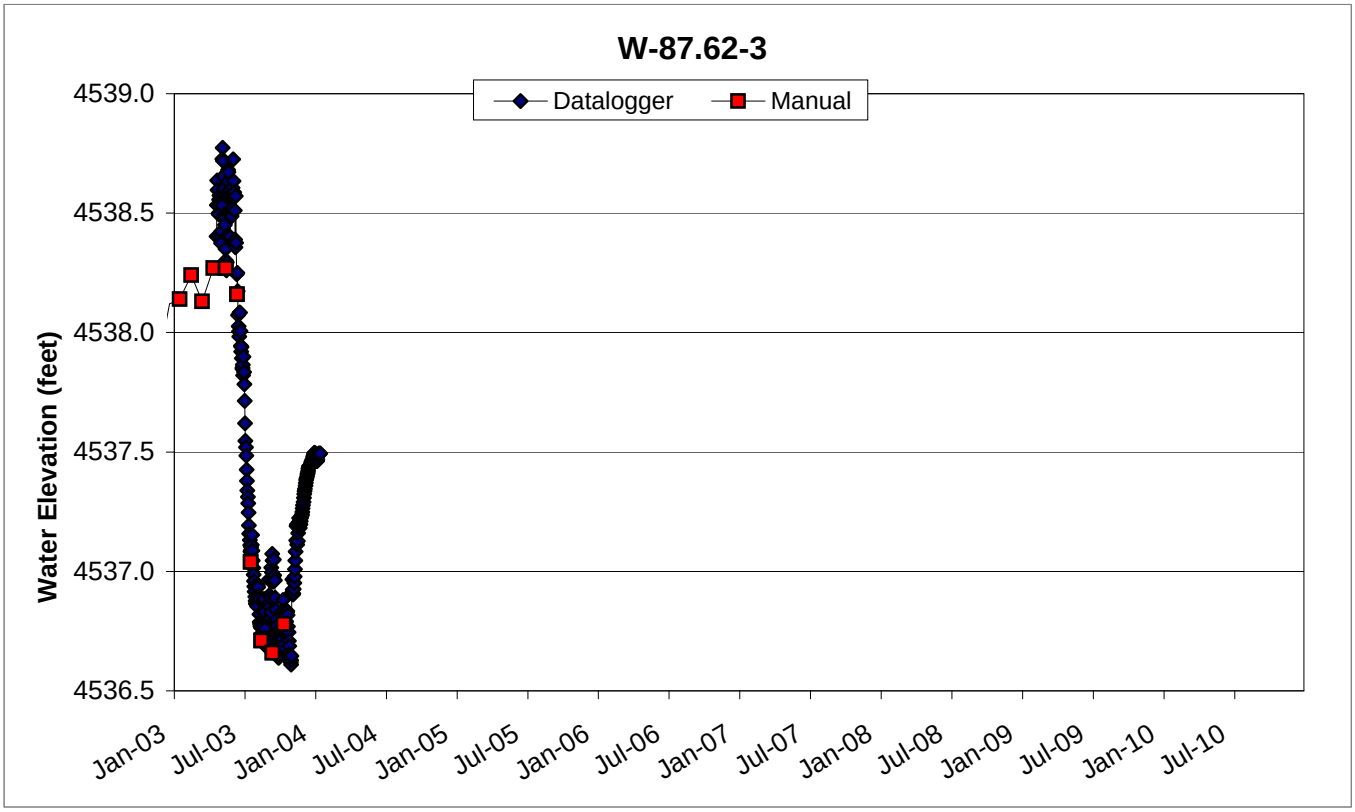

W-83.98-1
Datalogger
Manual
Water Elevation (feet)
4530.0
4529.0
4528.0
4527.0
4526.0
4525.0
4524.0
4523.0
4522.0
4521.0
4520.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

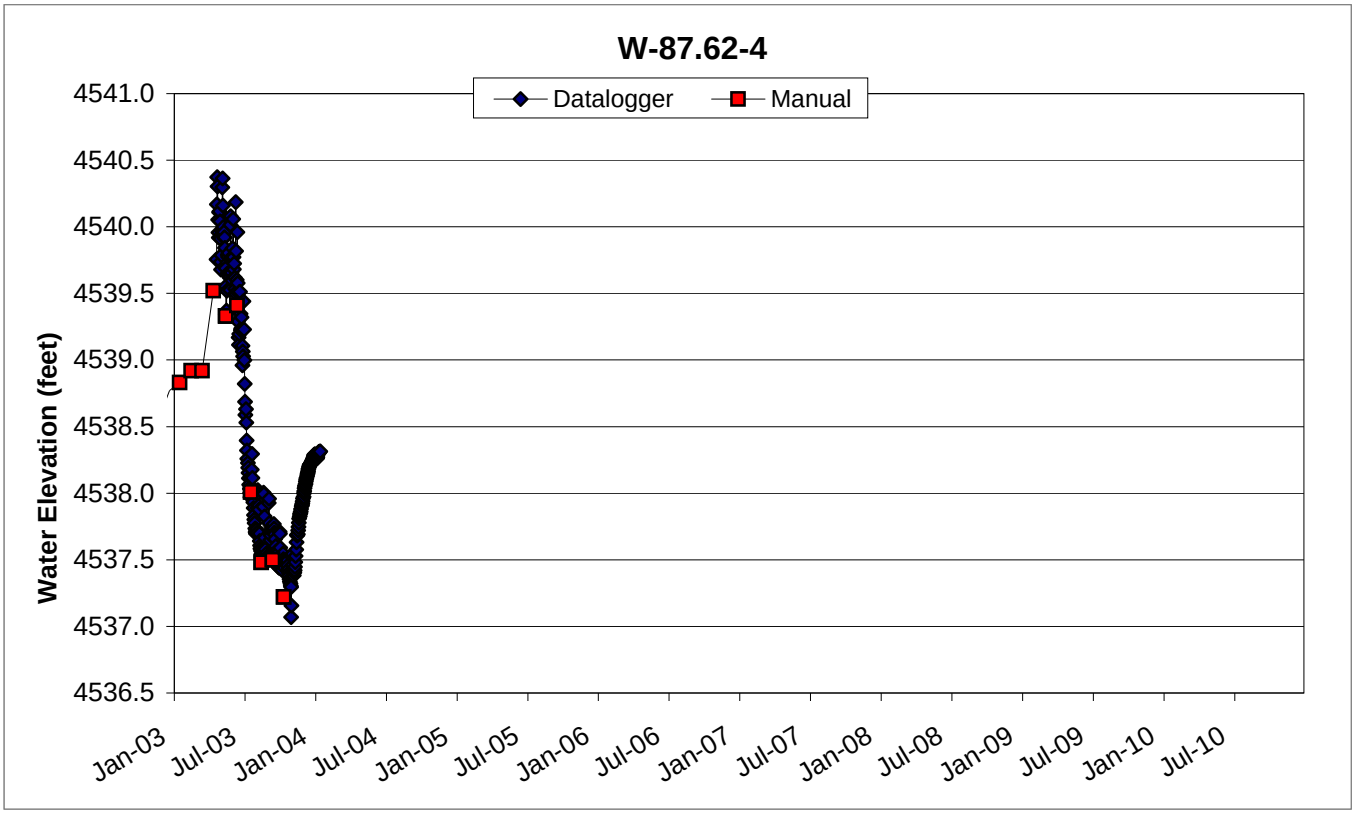

W-83.98-3
Datalogger
Manual
Water Elevation (feet)
4527.0
4526.0
4525.0
4524.0
4523.0
4522.0
4521.0
4520.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

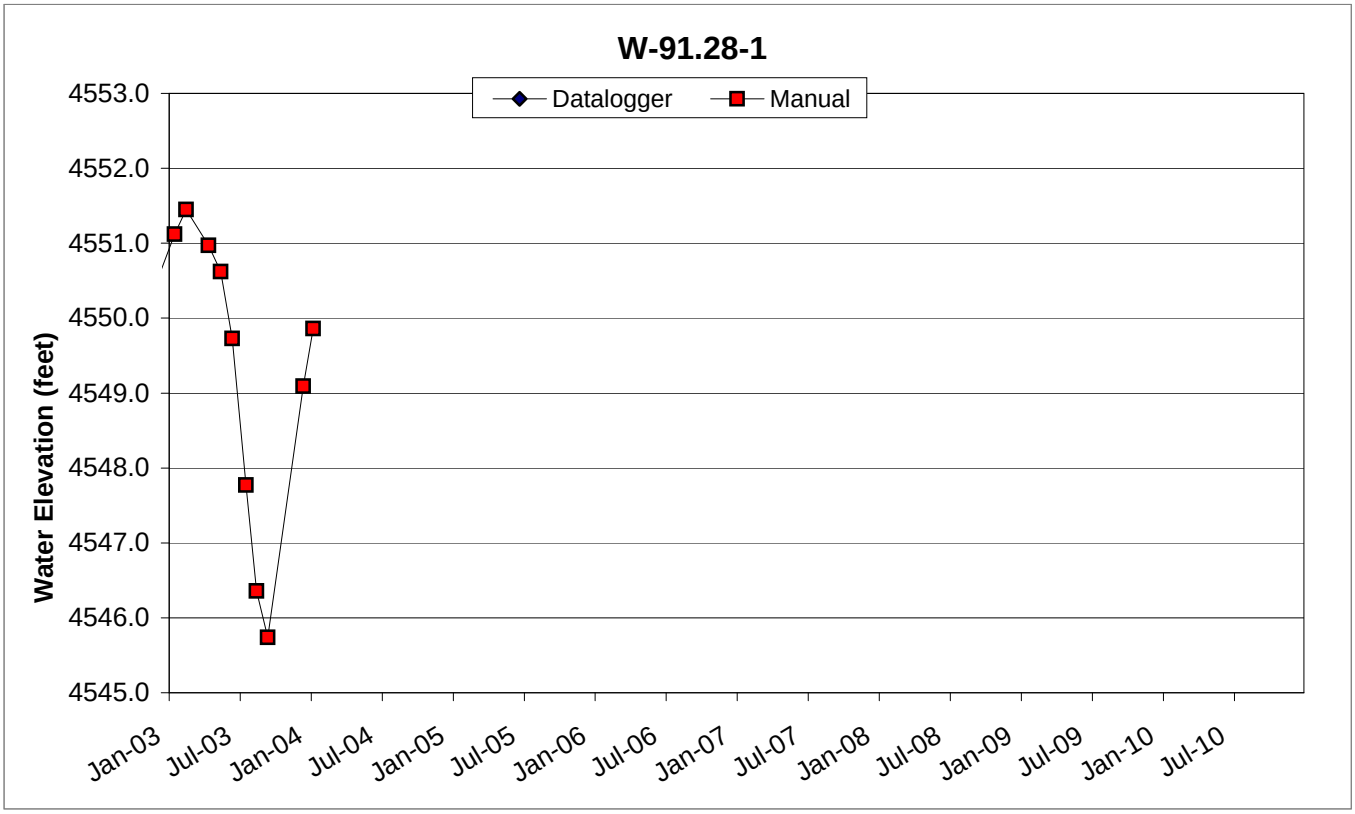

W-83.98-4
Datalogger
Manual
Water Elevation (feet)
4525.5
4525.0
4524.5
4524.0
4523.5
4523.0
4522.5
4522.0
4521.5
4521.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

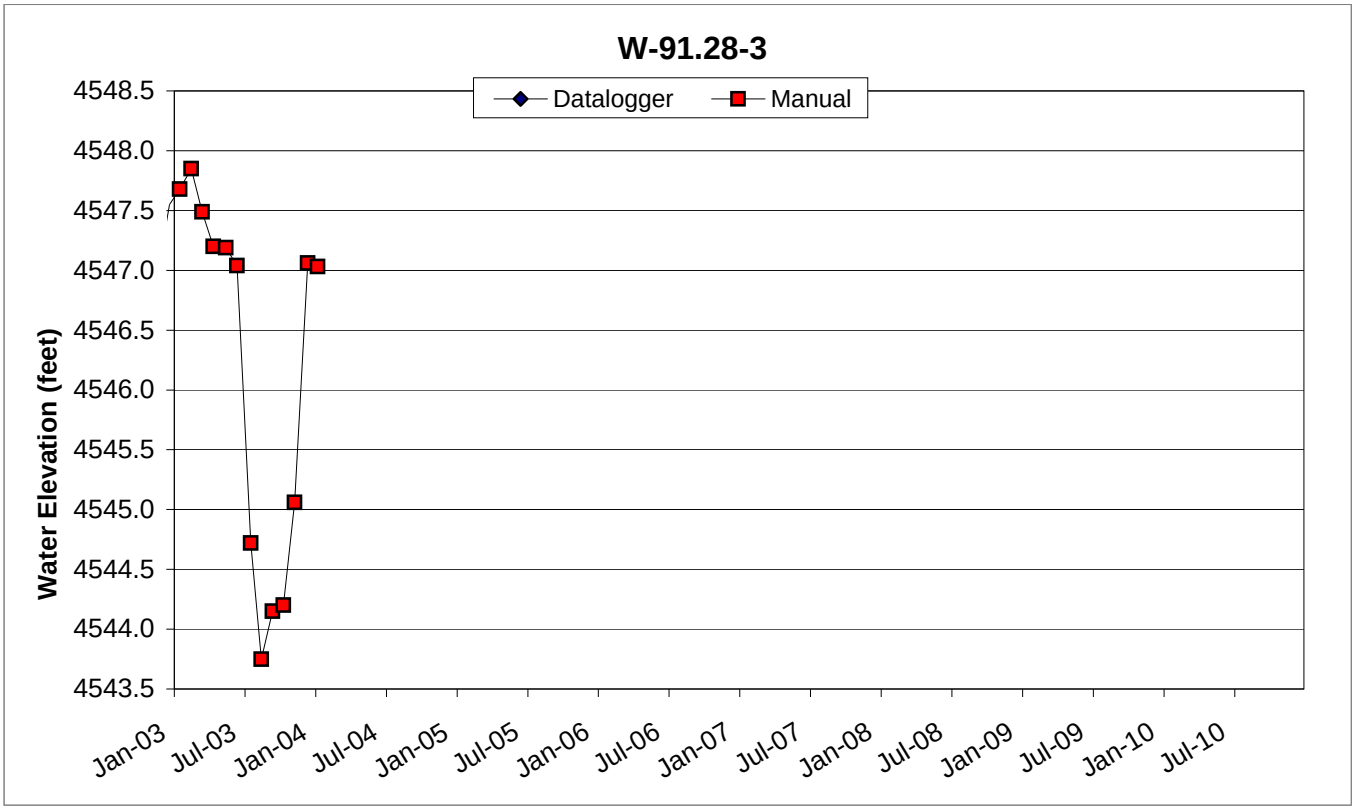

W-87.62-1
Datalogger
Manual
Water Elevation (feet)
4545.0
4544.0
4543.0
4542.0
4541.0
4540.0
4539.0
4538.0
4537.0
4536.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

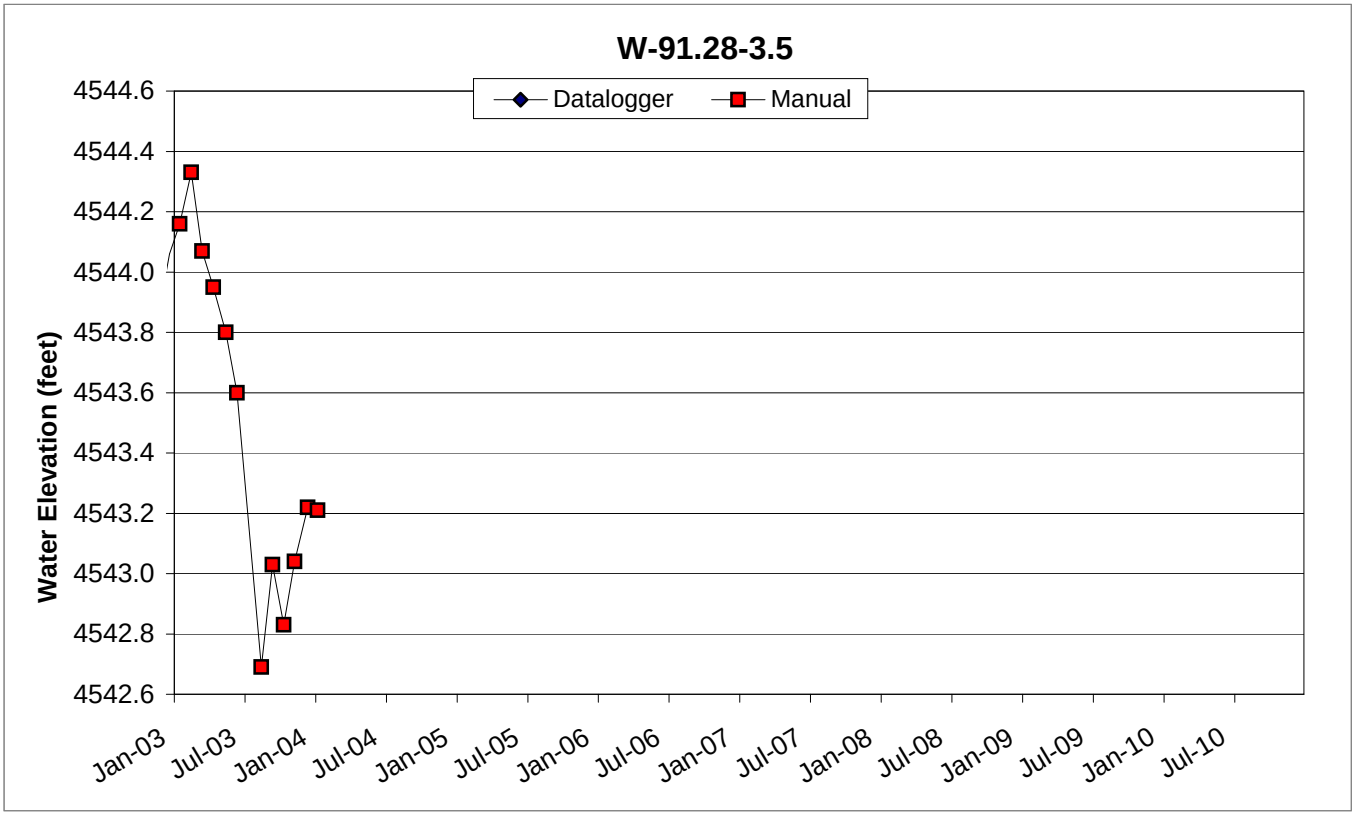

W-87.62-2
Datalogger
Manual
Water Elevation (feet)
4542.0
4541.0
4540.0
4539.0
4538.0
4537.0
4536.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

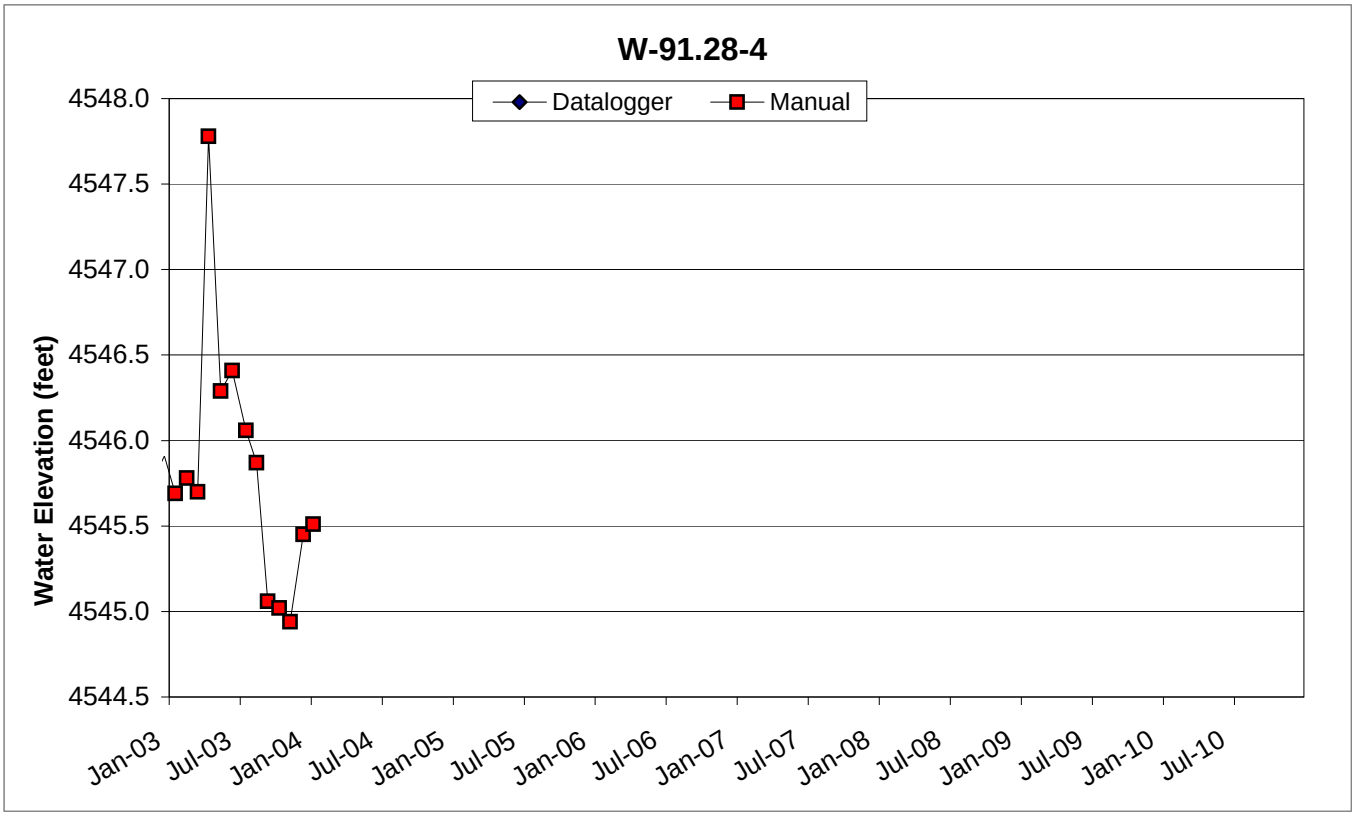

W-87.62-3
Datalogger
Manual
Water Elevation (feet)
4539.0
4538.5
4538.0
4537.5
4537.0
4536.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

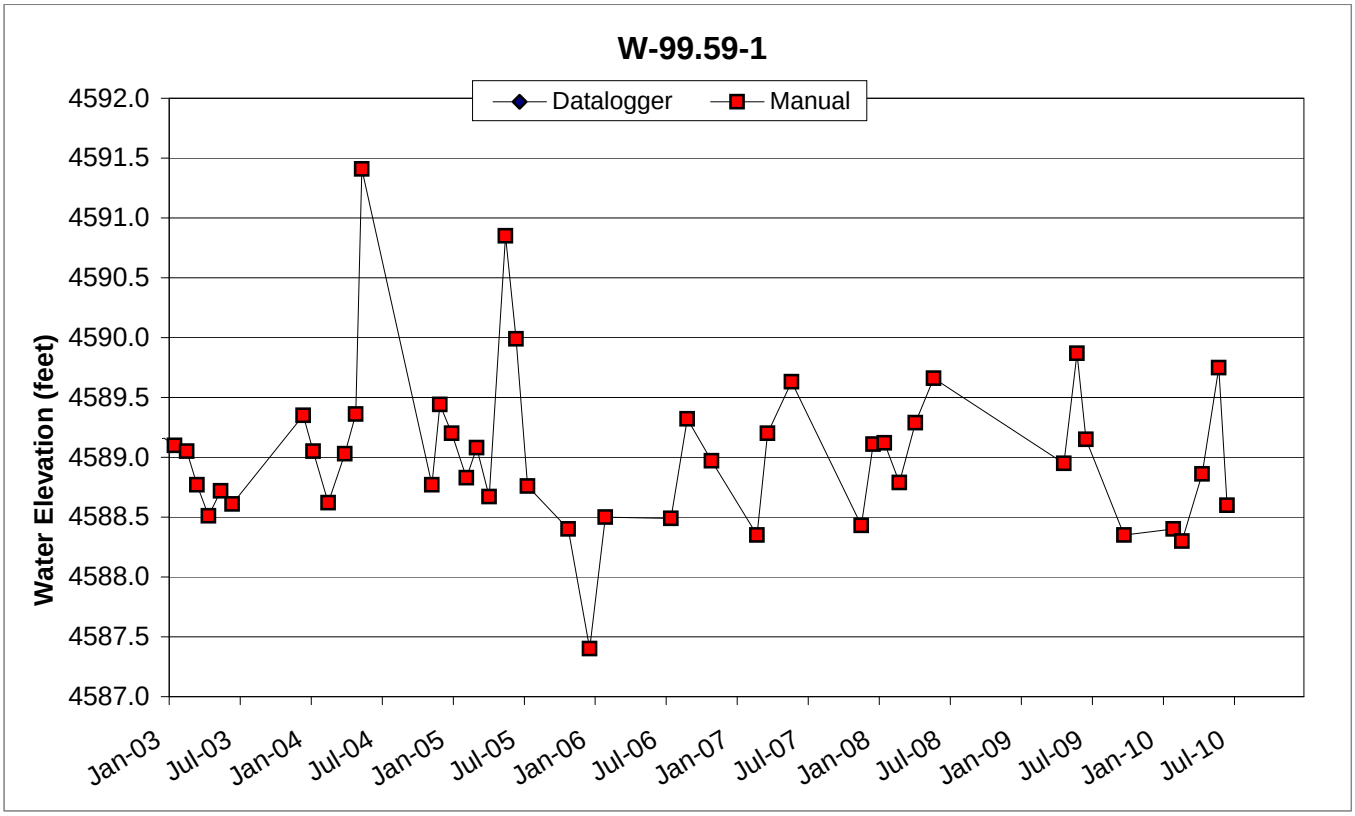

W-87.62-4
Datalogger
Manual
Water Elevation (feet)
4541.0
4540.5
4540.0
4539.5
4539.0
4538.5
4538.0
4537.5
4537.0
4536.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

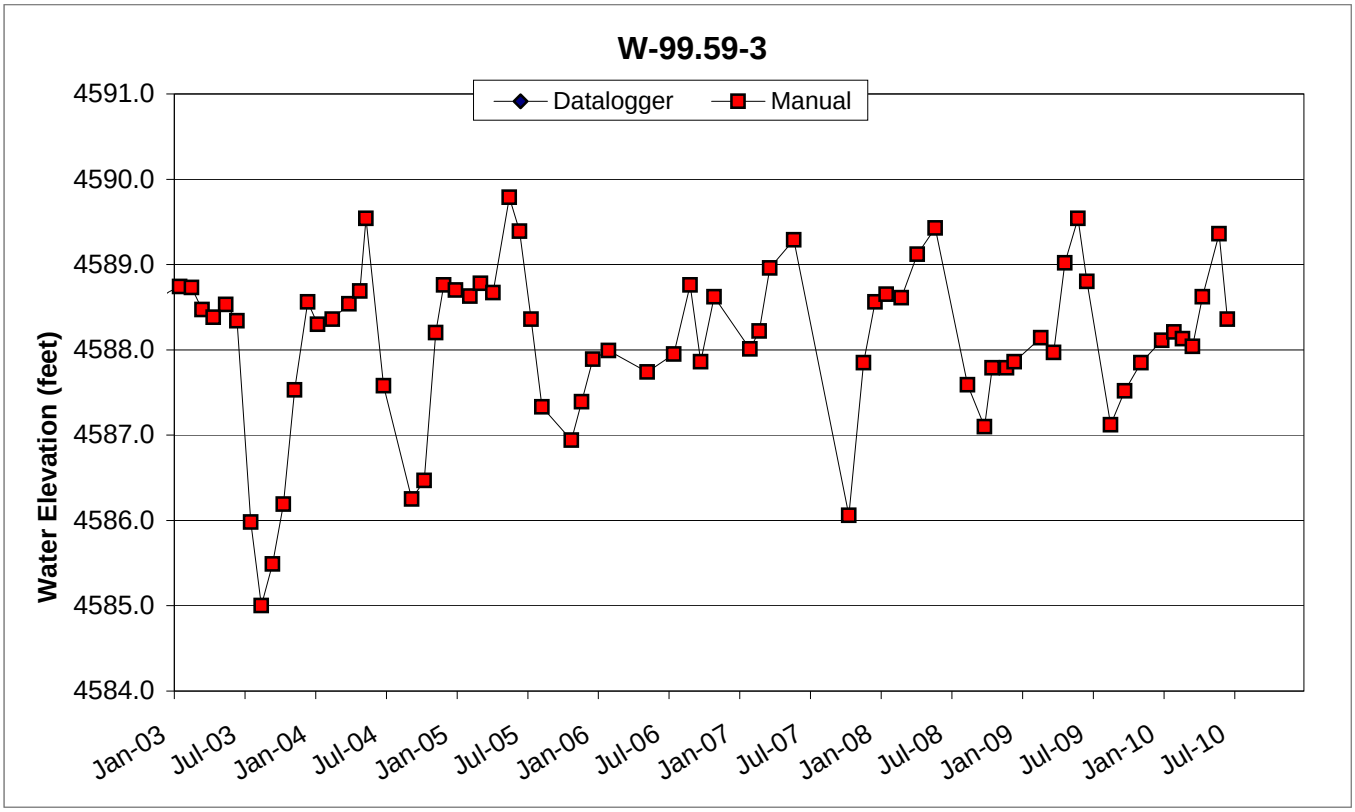

W-91.28-1
Datalogger
Manual
Water Elevation (feet)
4553.0
4552.0
4551.0
4550.0
4549.0
4548.0
4547.0
4546.0
4545.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

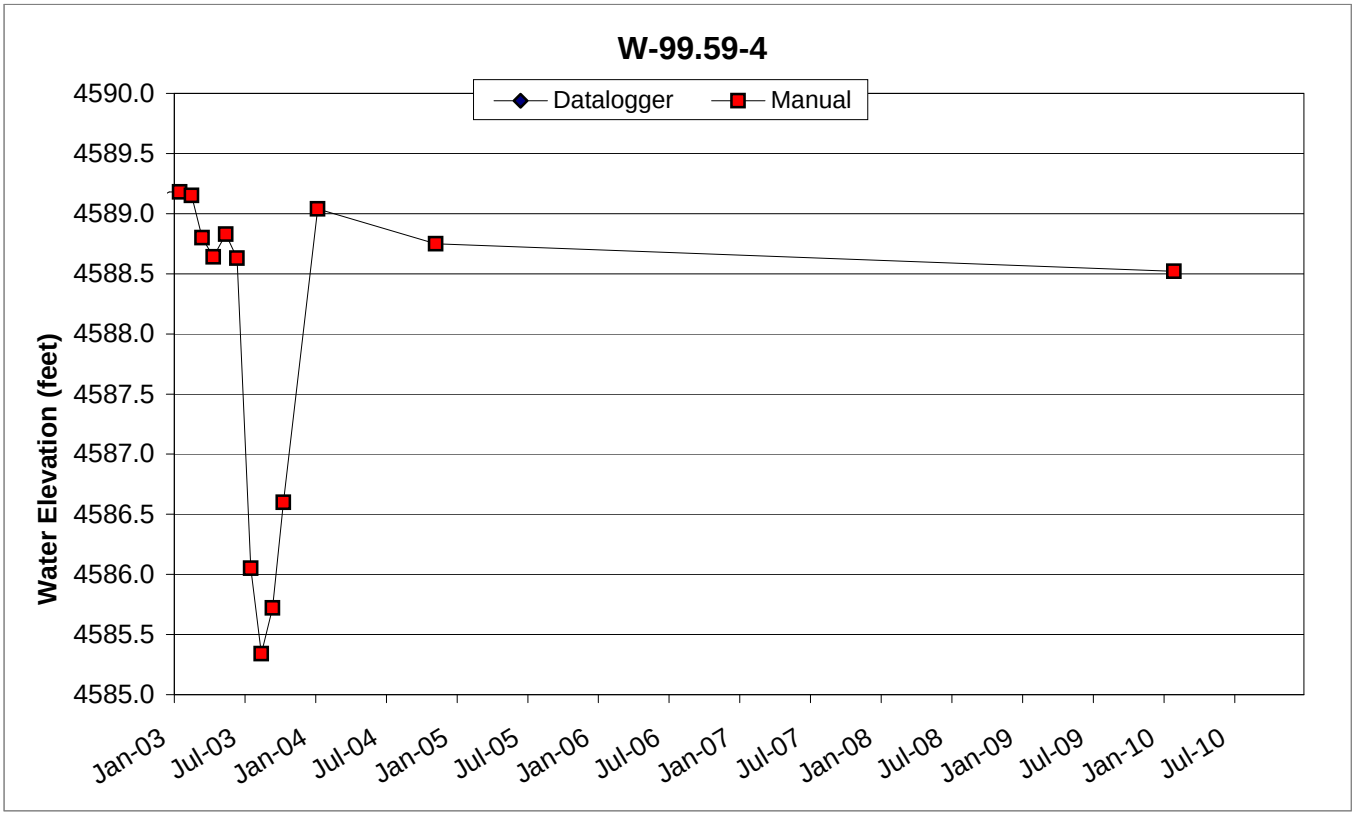

W-91.28-3
Datalogger
Manual
Water Elevation (feet)
4548.5
4548.0
4547.5
4547.0
4546.5
4546.0
4545.5
4545.0
4544.5
4544.0
4543.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

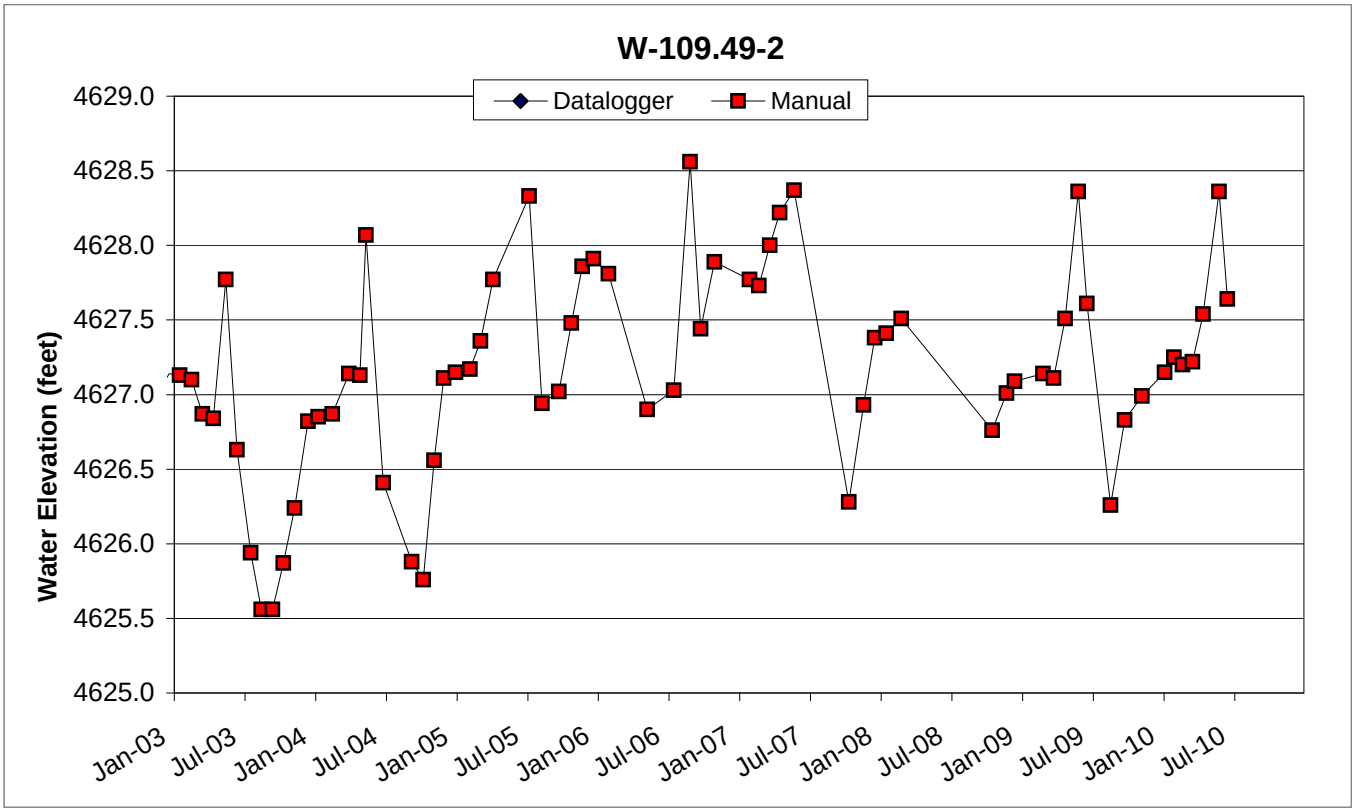

W-91.28-3.5
Datalogger
Manual
Water Elevation (feet)
4544.6
4544.4
4544.2
4544.0
4543.8
4543.6
4543.4
4543.2
4543.0
4542.8
4542.6
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

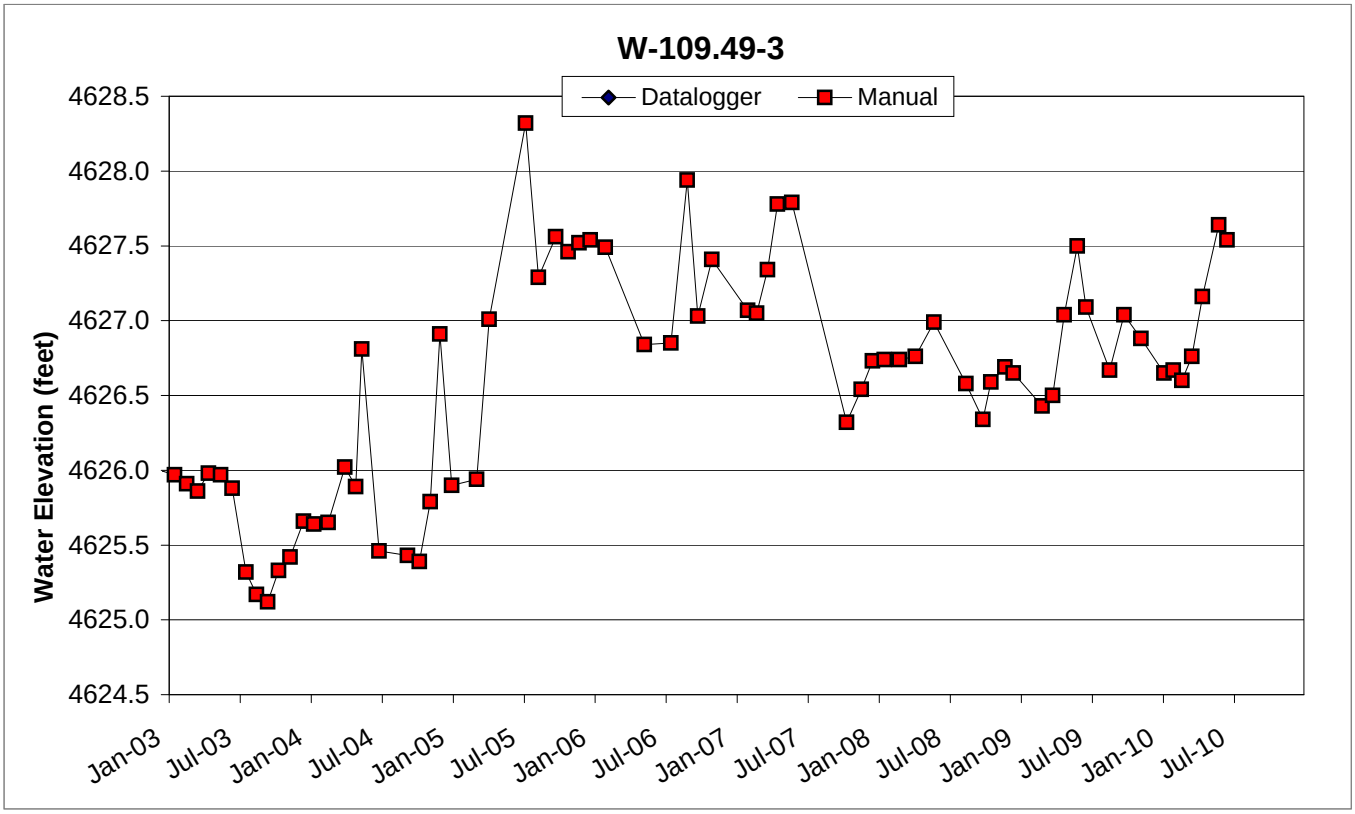

W-91.28-4
Datalogger
Manual
Water Elevation (feet)
4548.0
4547.5
4547.0
4546.5
4546.0
4545.5
4545.0
4544.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

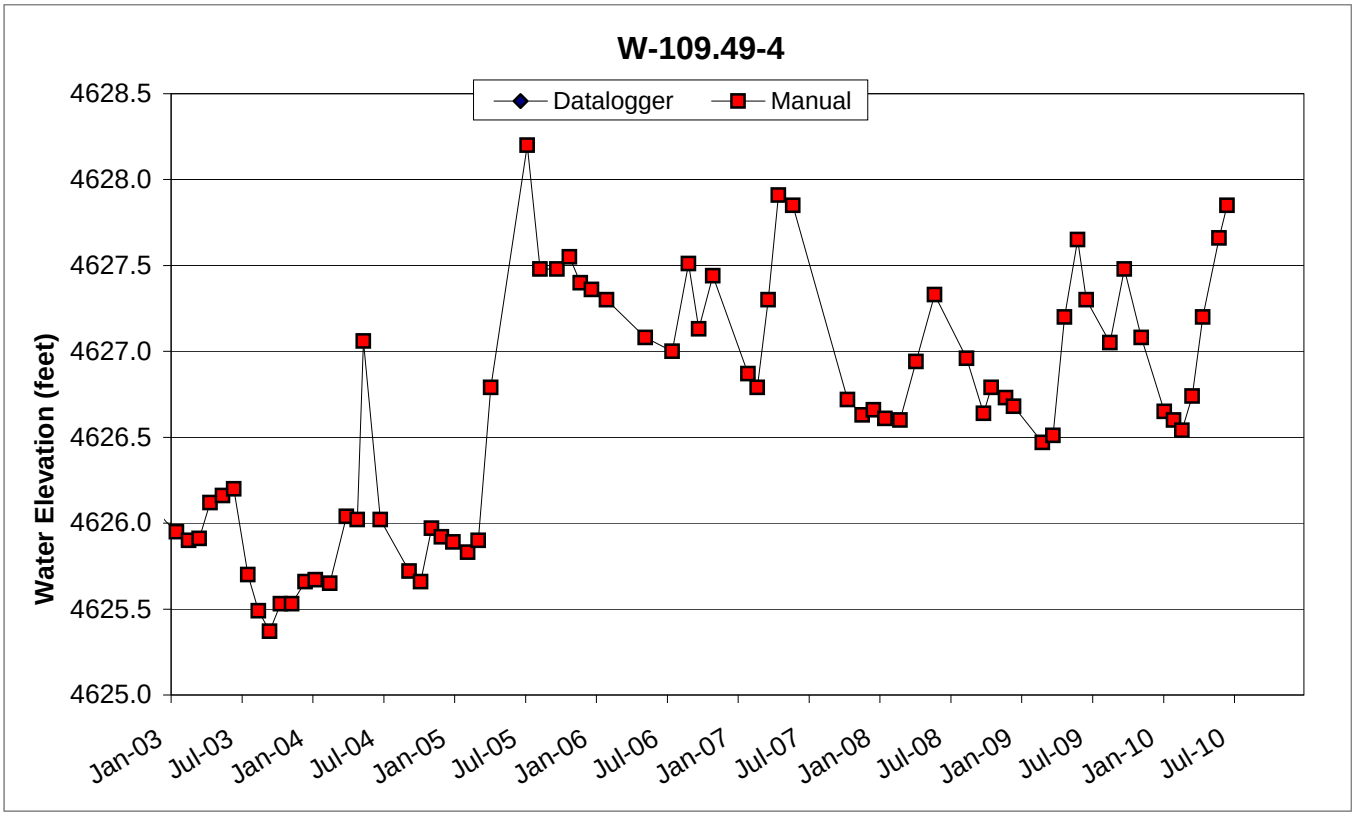

W-99.59-1
Datalogger
Manual
Water Elevation (feet)
4592.0
4591.5
4591.0
4590.5
4590.0
4589.5
4589.0
4588.5
4588.0
4587.5
4587.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

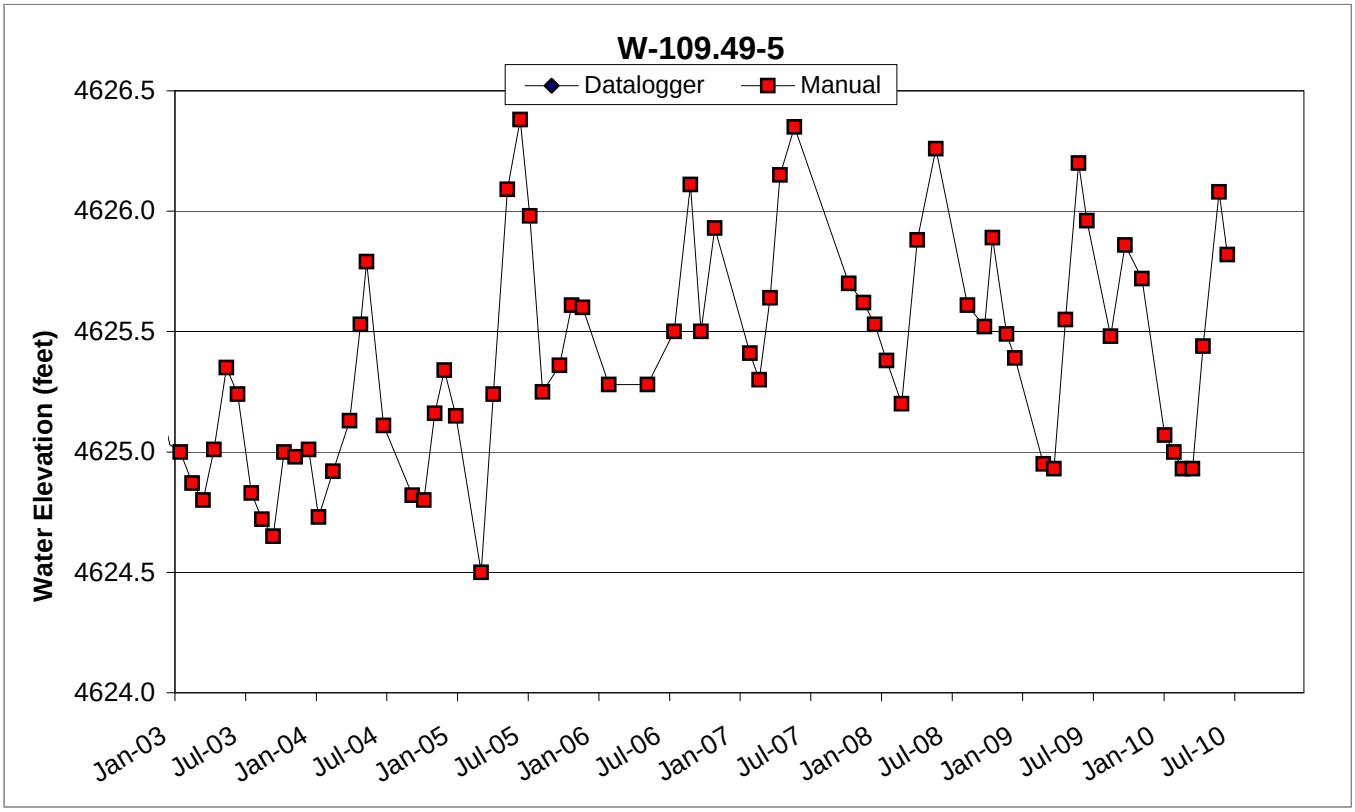

W-99.59-3
Datalogger
Manual
Water Elevation (feet)
4591.0
4590.0
4589.0
4588.0
4587.0
4586.0
4585.0
4584.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

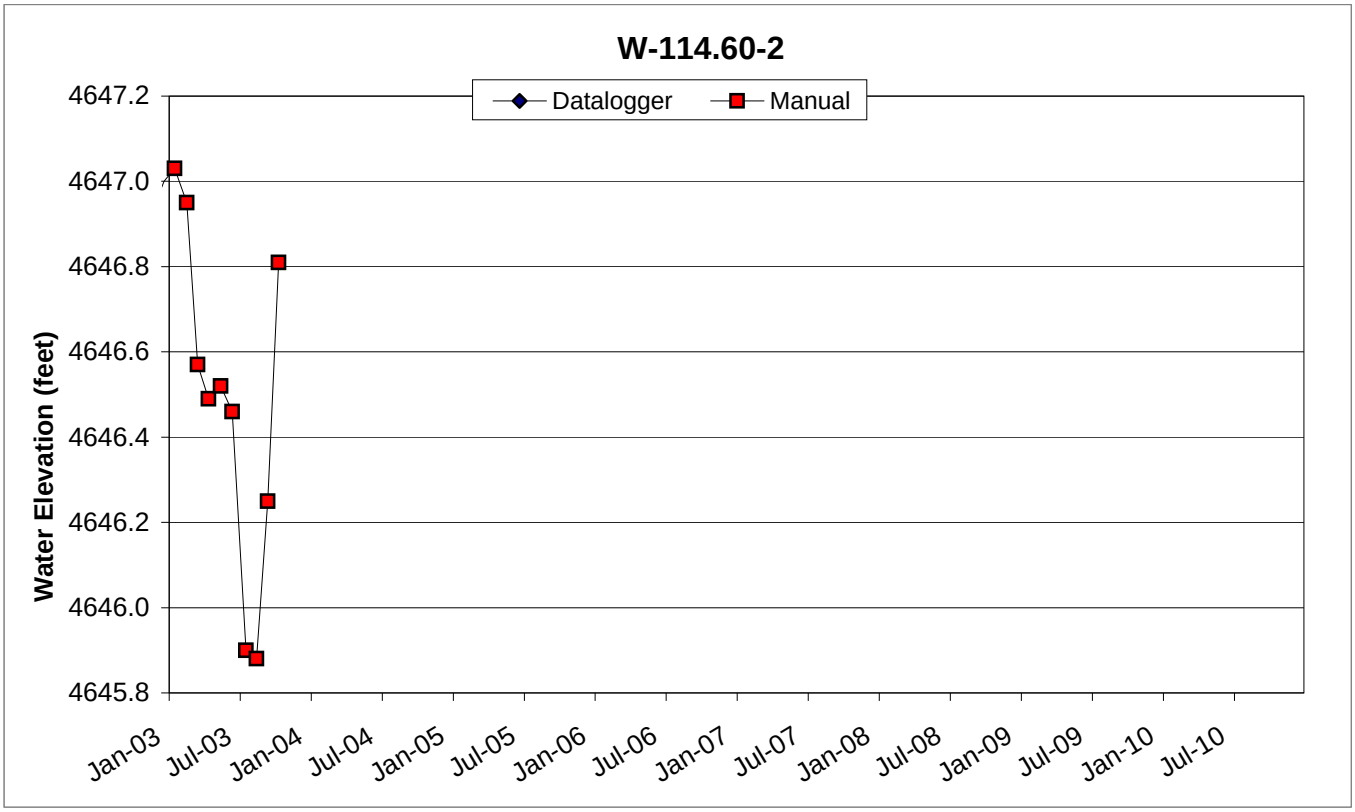

W-99.59-4
Datalogger
Manual
Water Elevation (feet)
4590.0
4589.5
4589.0
4588.5
4588.0
4587.5
4587.0
4586.5
4586.0
4585.5
4585.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

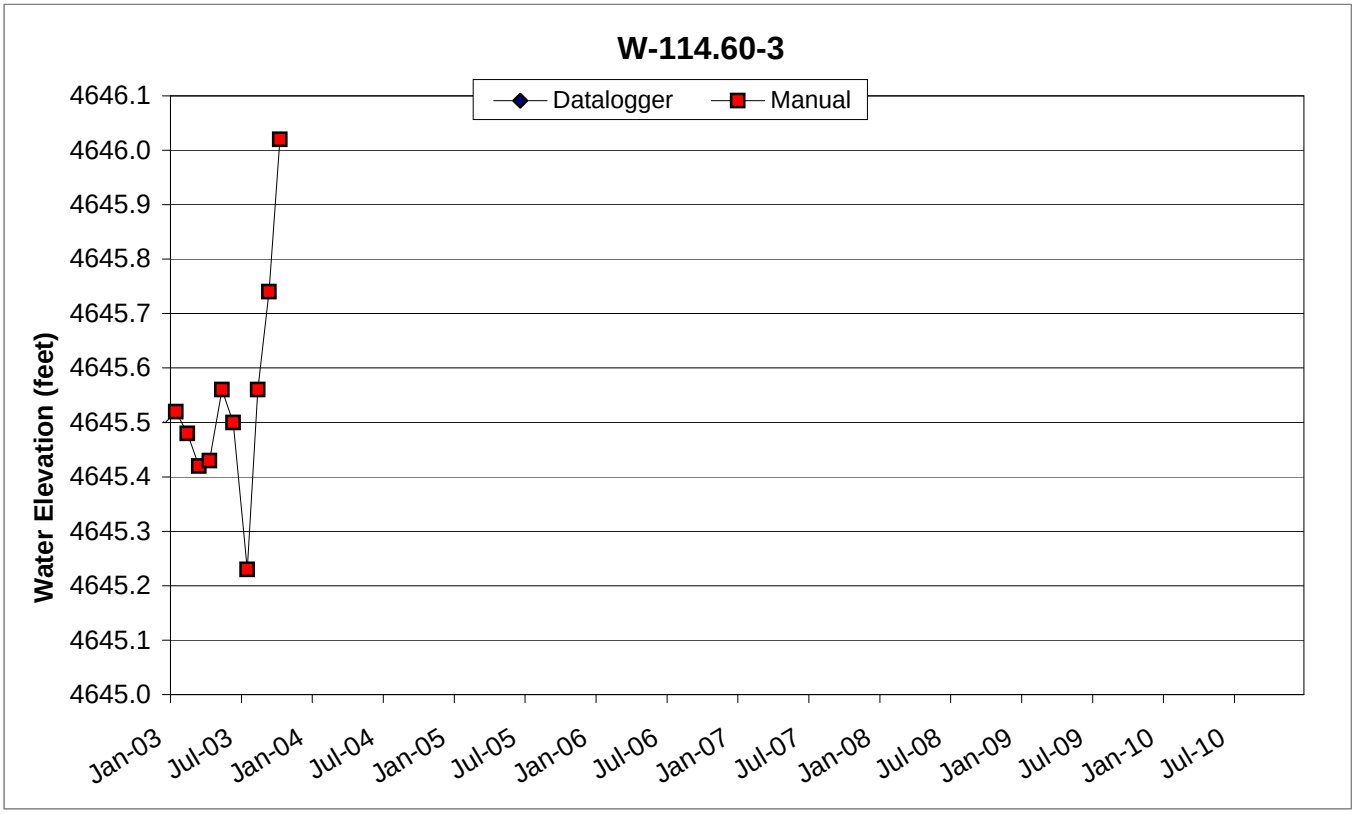

W-109.49-2
Datalogger
Manual
Water Elevation (feet)
4629.0
4628.5
4628.0
4627.5
4627.0
4626.5
4626.0
4625.5
4625.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

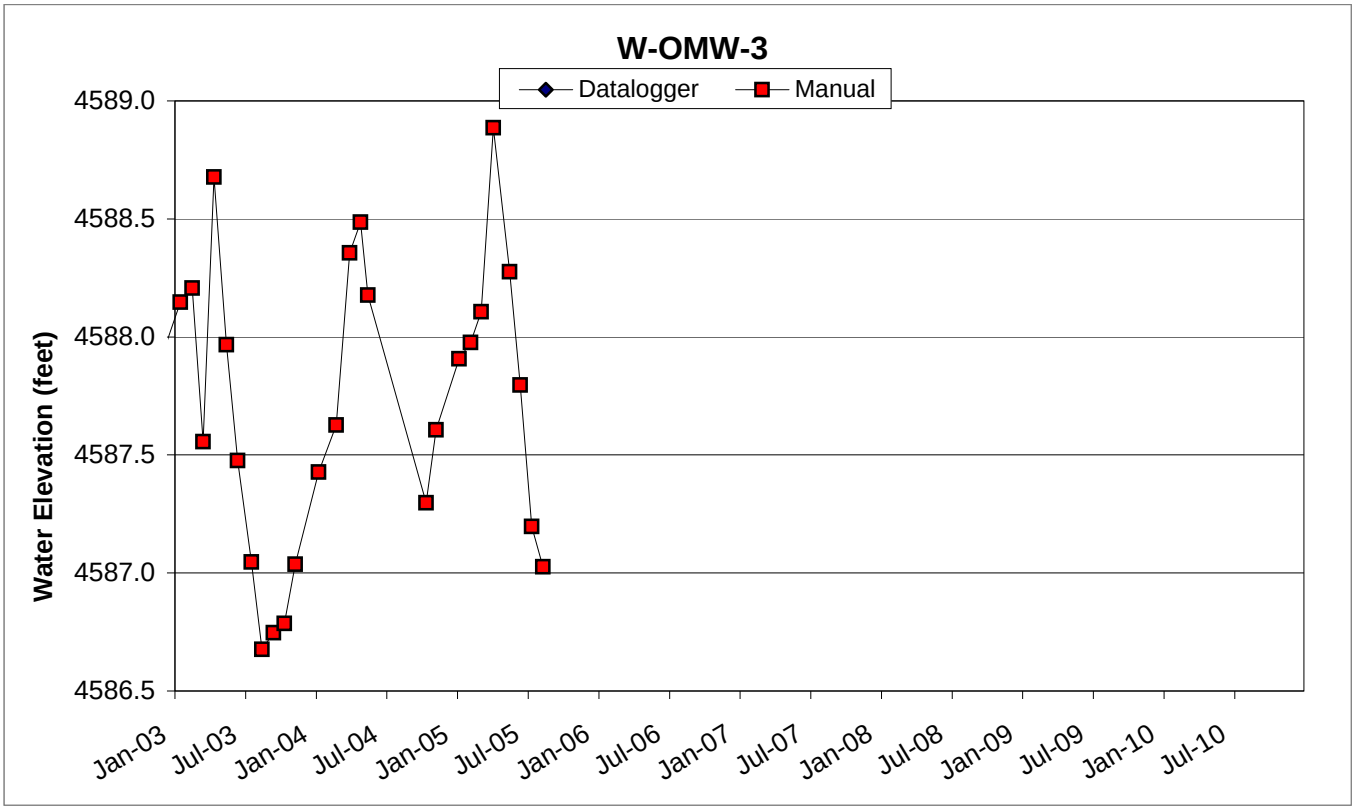

W-109.49-3
Datalogger
Manual
Water Elevation (feet)
4628.5
4628.0
4627.5
4627.0
4626.5
4626.0
4625.5
4625.0
4624.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

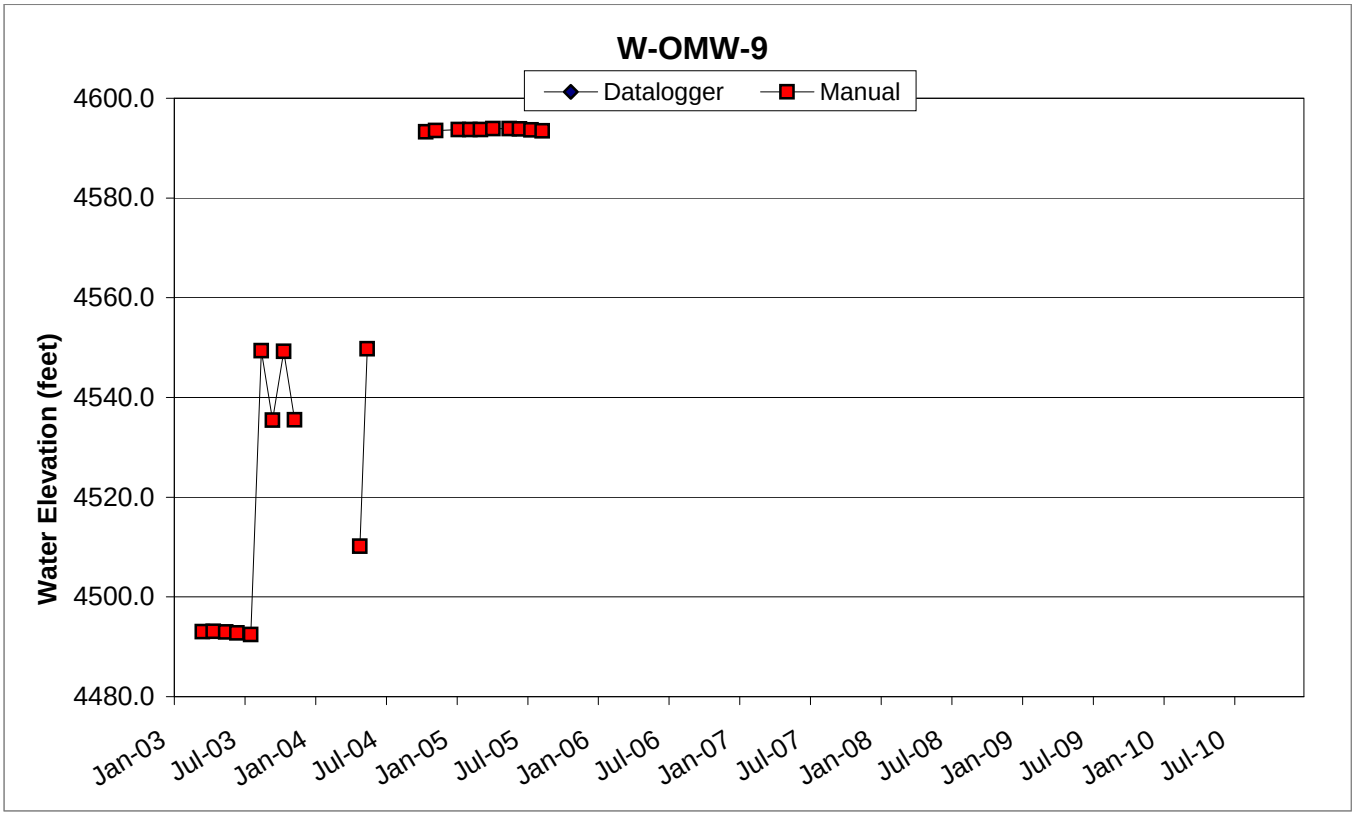

W-109.49-4
Datalogger
Manual
Water Elevation (feet)
4628.5
4628.0
4627.5
4627.0
4626.5
4626.0
4625.5
4625.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

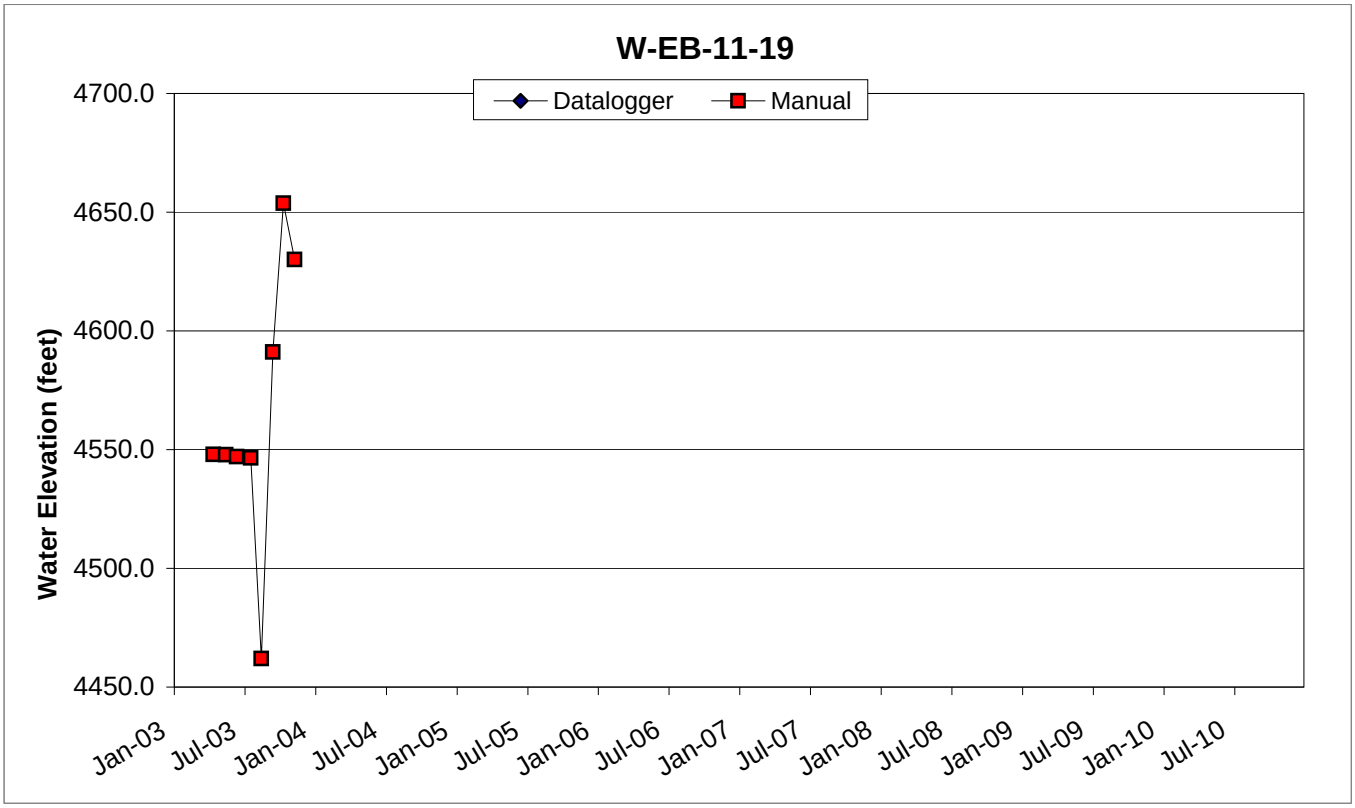

W-109.49-5
Datalogger
Manual
Water Elevation (feet)
4626.5
4626.0
4625.5
4625.0
4624.5
4624.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

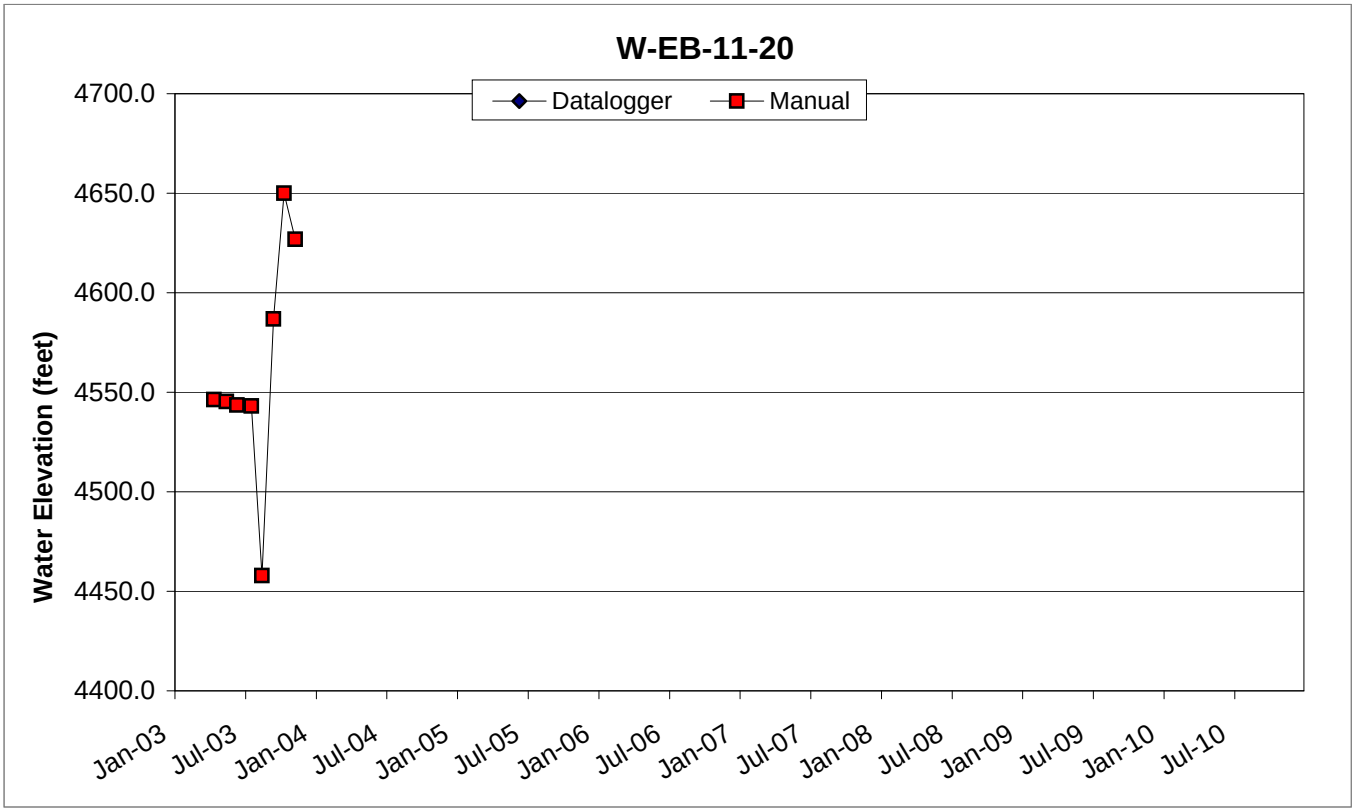

W-114.60-2
Datalogger
Manual
Water Elevation (feet)
4647.2
4647.0
4646.8
4646.6
4646.4
4646.2
4646.0
4645.8
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

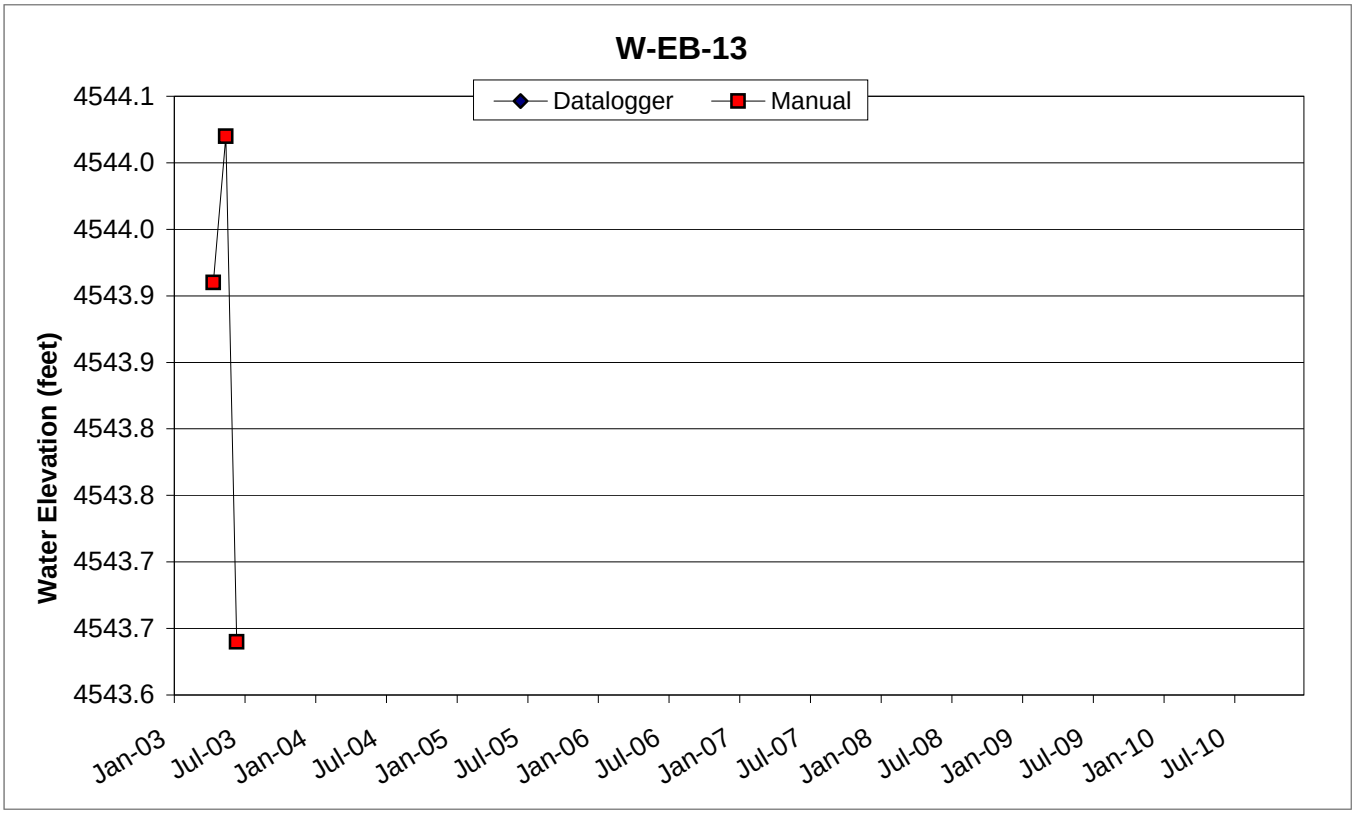

W-114.60-3
Datalogger
Manual
Water Elevation (feet)
4646.1
4646.0
4645.9
4645.8
4645.7
4645.6
4645.5
4645.4
4645.3
4645.2
4645.1
4645.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

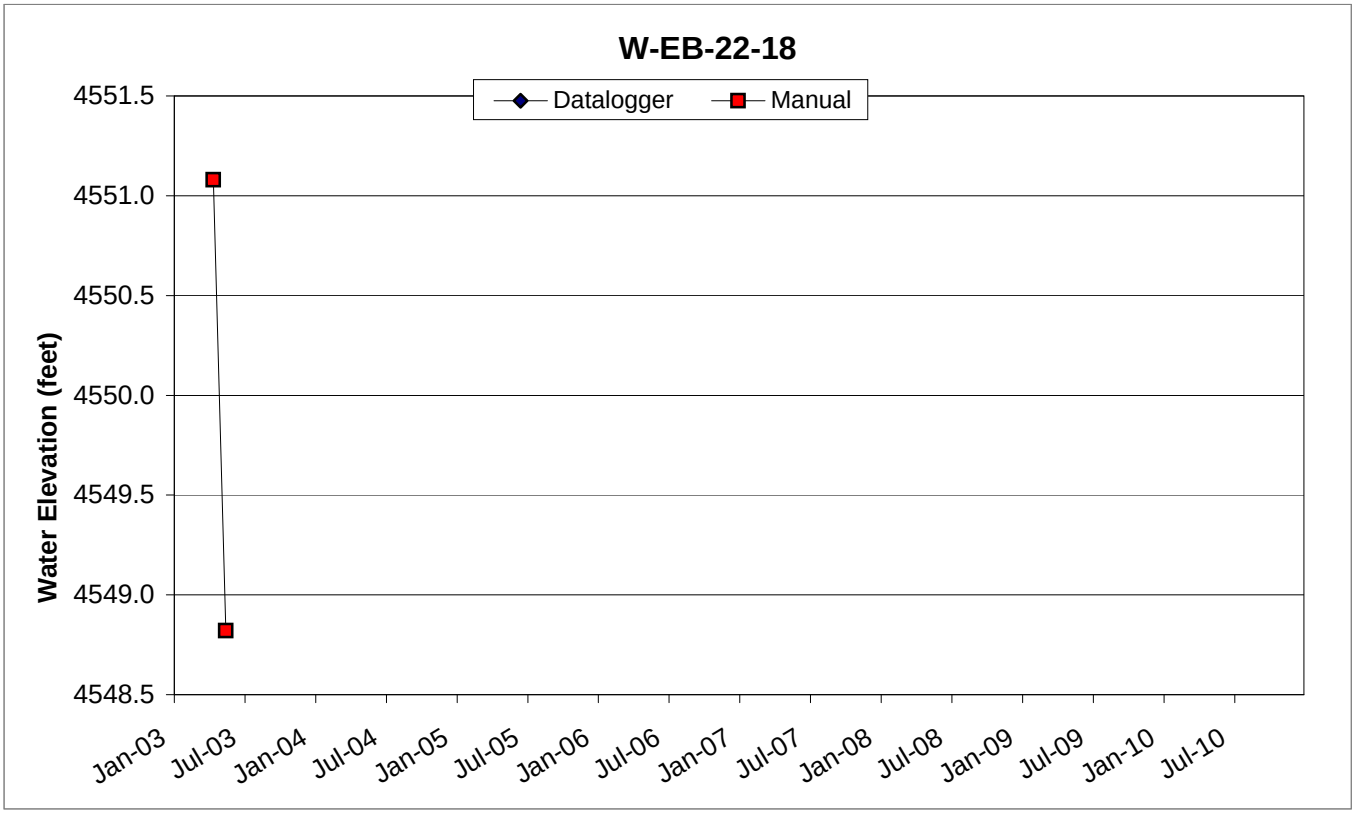

W-OMW-3
Datalogger
Manual
Water Elevation (feet)
4589.0
4588.5
4588.0
4587.5
4587.0
4586.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

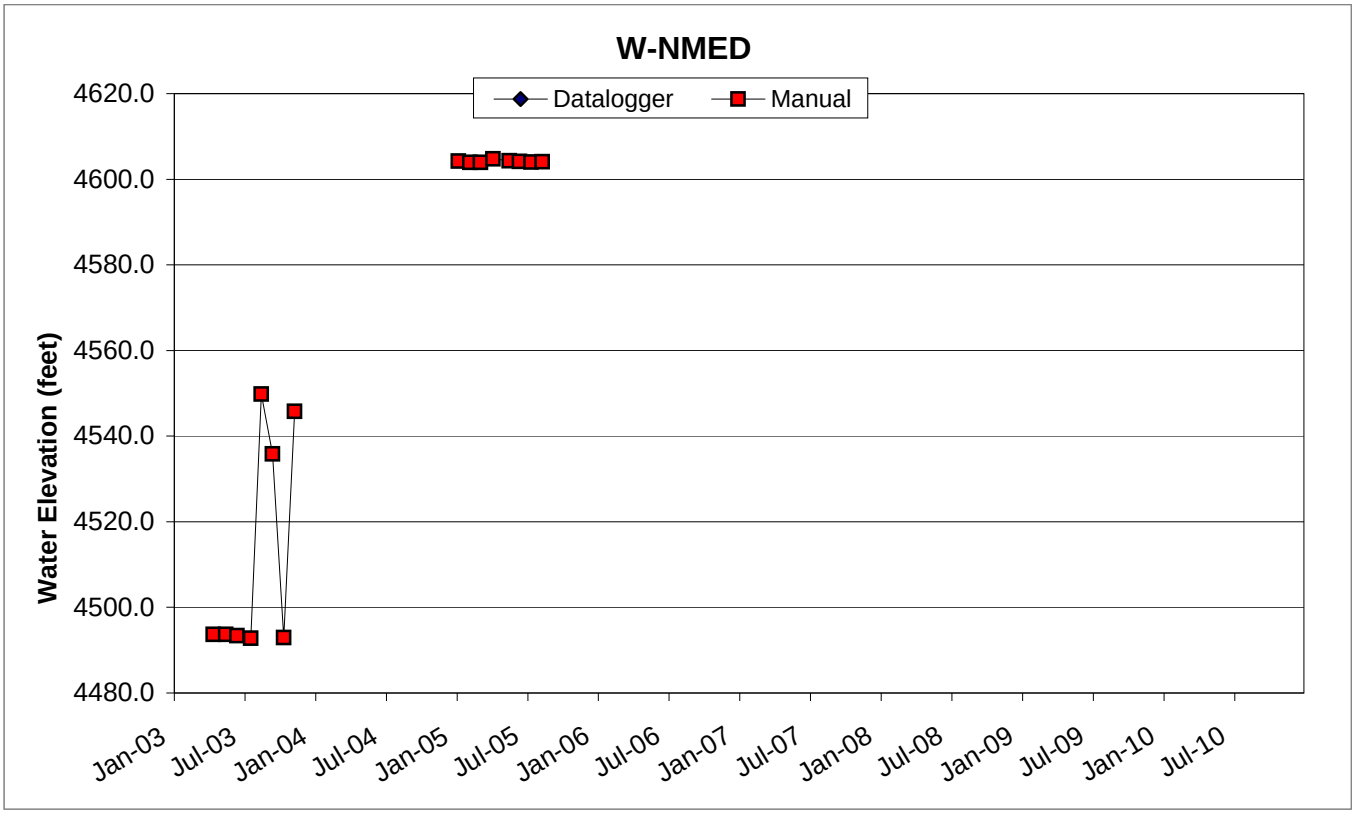

W-OMW-9
Datalogger
Manual
Water Elevation (feet)
4600.0
4580.0
4560.0
4540.0
4520.0
4500.0
4480.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

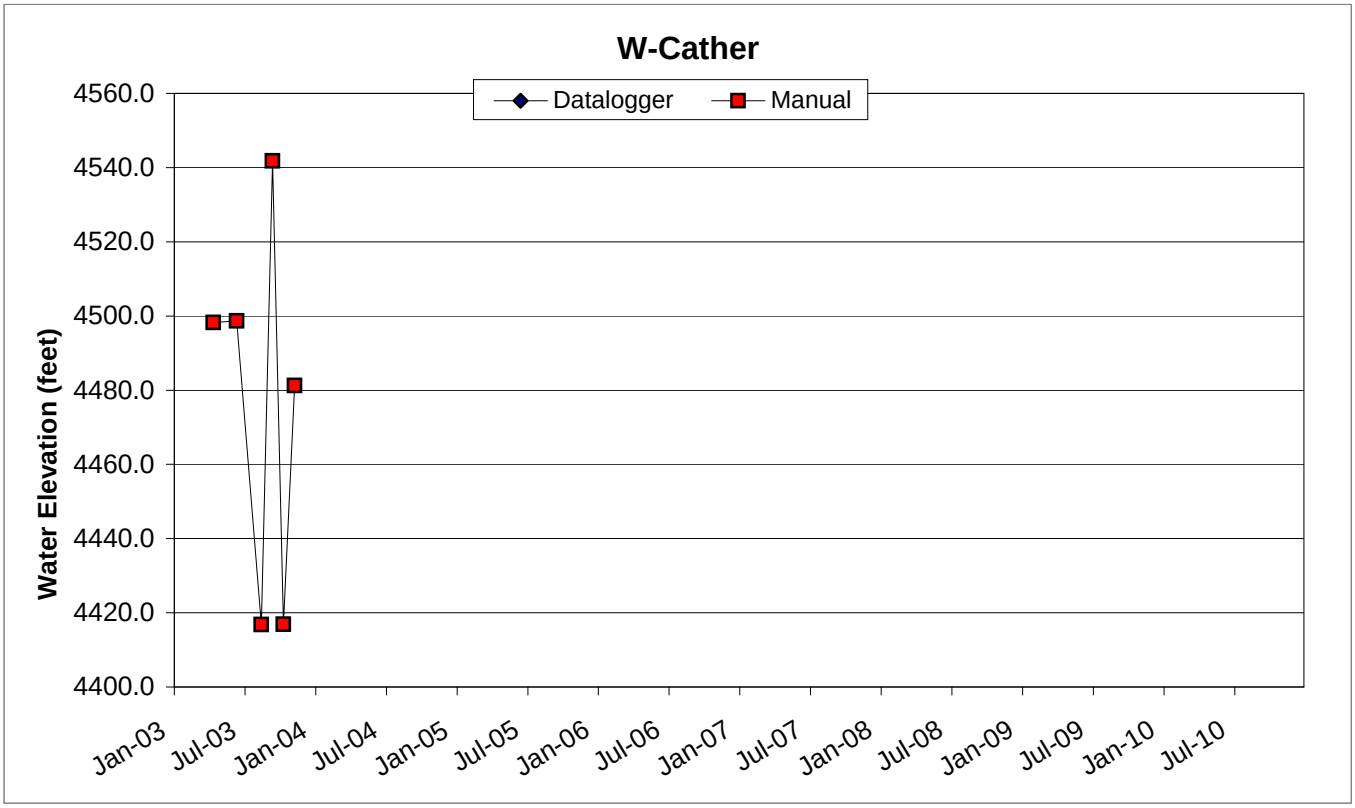

W-EB-11-19
Datalogger
Manual
Water Elevation (feet)
4700.0
4650.0
4600.0
4550.0
4500.0
4450.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

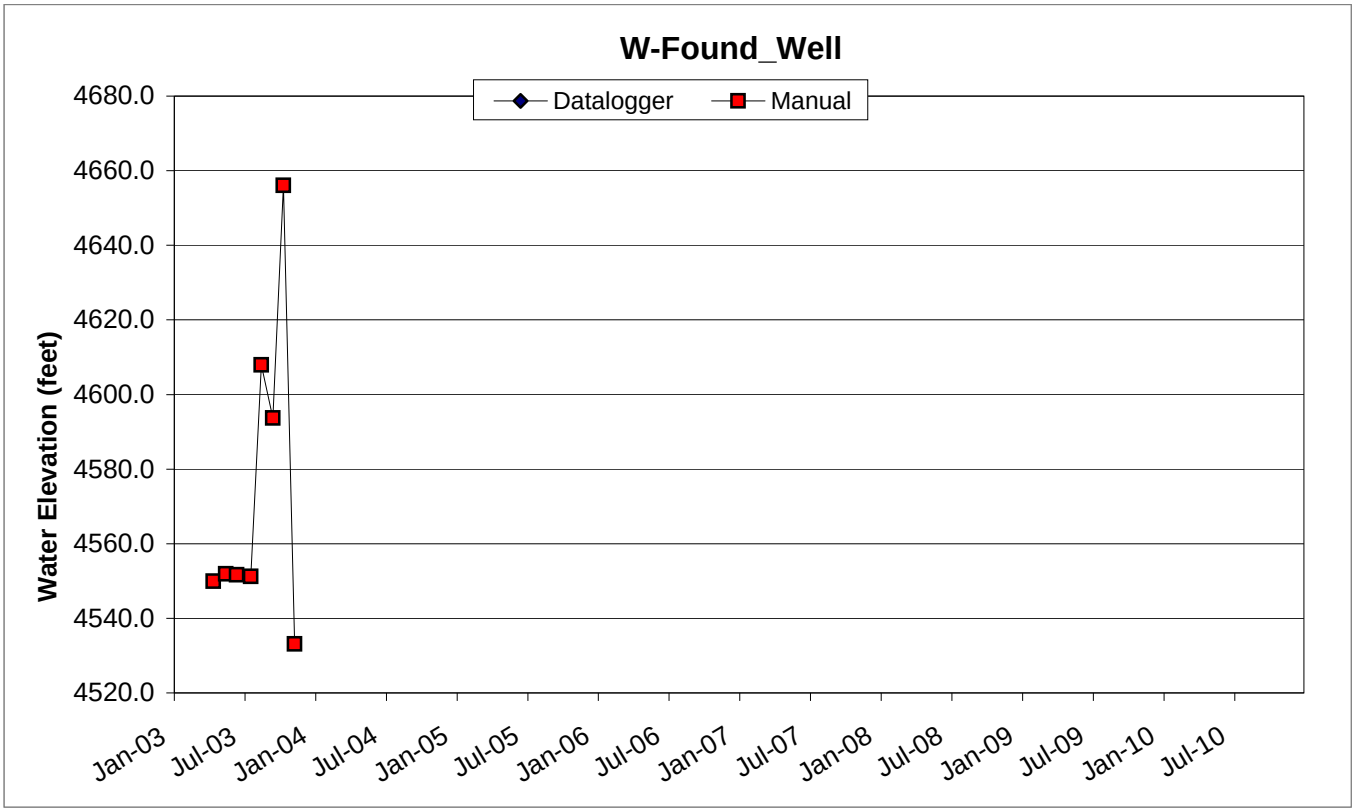

W-EB-11-20
Datalogger
Manual
Water Elevation (feet)
4700.0
4650.0
4600.0
4550.0
4500.0
4450.0
4400.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

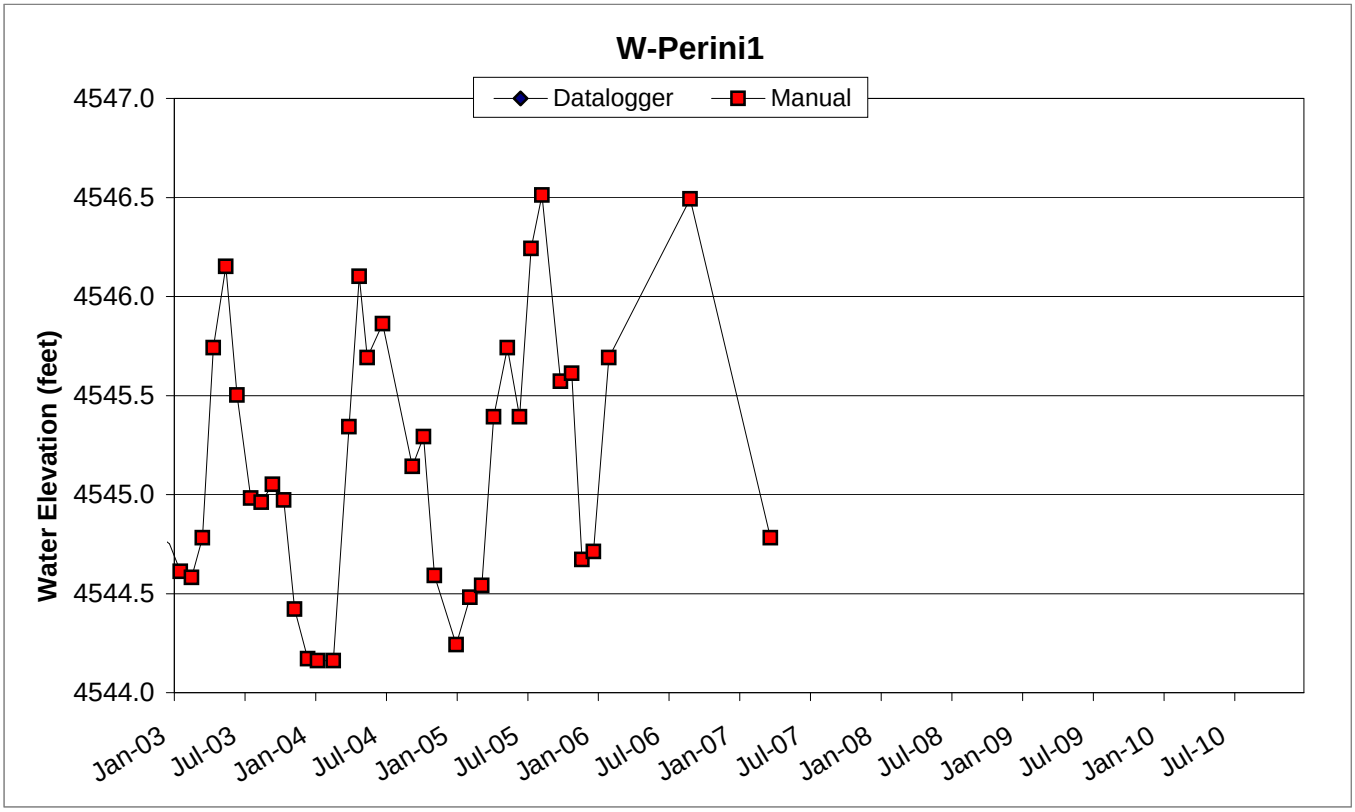

W-EB-13
Datalogger
Manual
Water Elevation (feet)
4544.1
4544.0
4544.0
4543.9
4543.9
4543.8
4543.8
4543.7
4543.7
4543.6
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

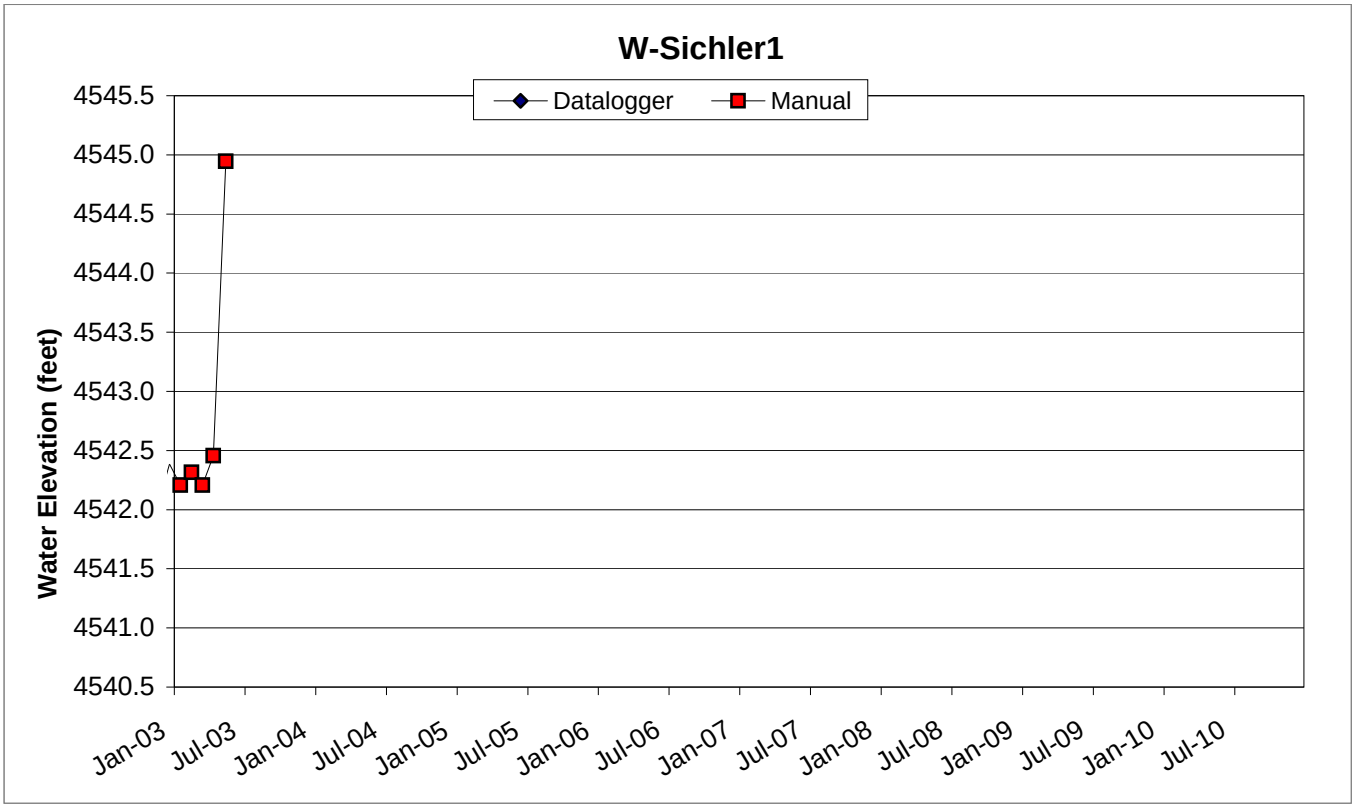

W-EB-22-18
Datalogger
Manual
Water Elevation (feet)
4551.5
4551.0
4550.5
4550.0
4549.5
4549.0
4548.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

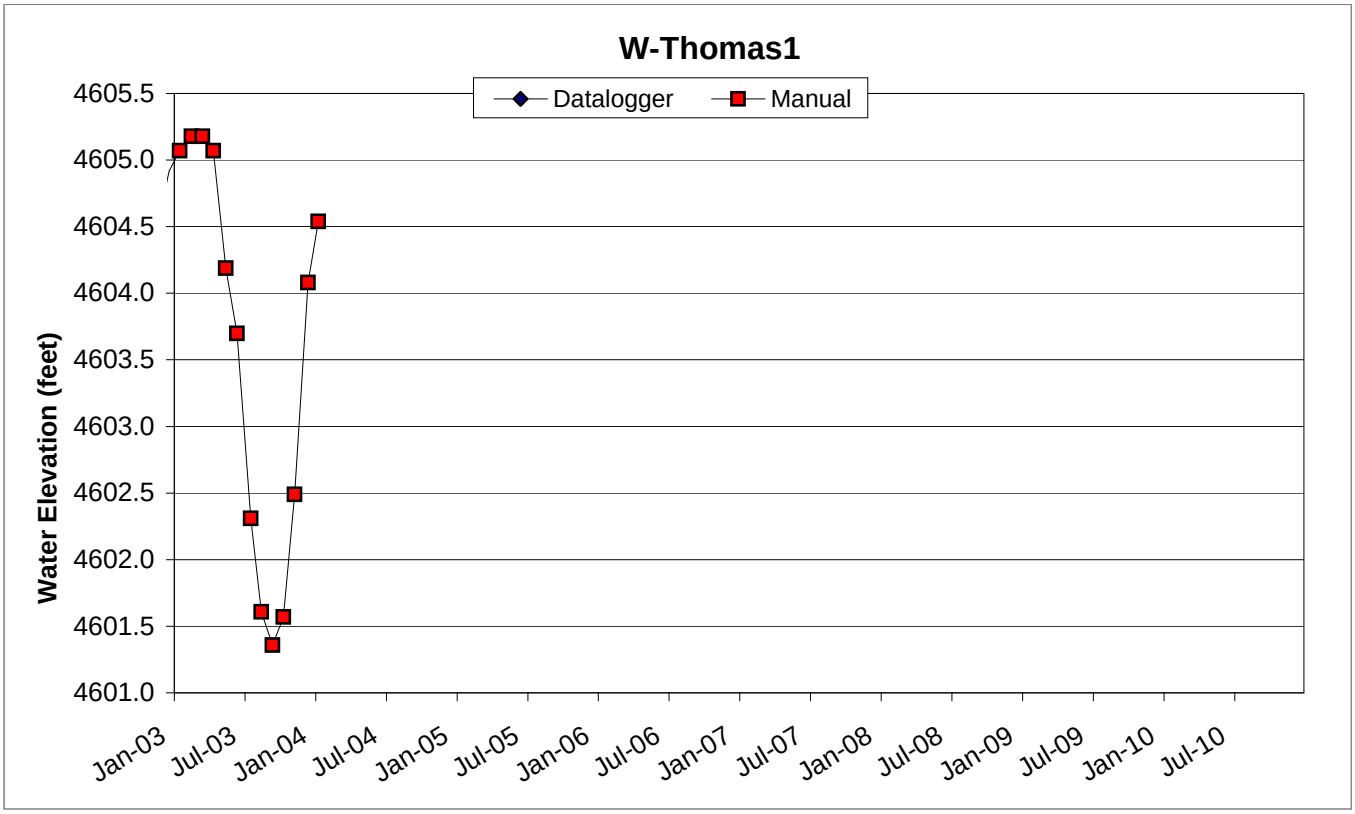

W-NMED
Datalogger
Manual
Water Elevation (feet)
4620.0
4600.0
4580.0
4560.0
4540.0
4520.0
4500.0
4480.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10


W-Cather
Datalogger
Manual
Water Elevation (feet)
4560.0
4540.0
4520.0
4500.0
4480.0
4460.0
4440.0
4420.0
4400.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10


W-Found_Well
Datalogger
Manual
Water Elevation (feet)
4680.0
4660.0
4640.0
4620.0
4600.0
4580.0
4560.0
4540.0
4520.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10


W-Perini1
Datalogger
Manual
Water Elevation (feet)
4547.0
4546.5
4546.0
4545.5
4545.0
4544.5
4544.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10


W-Sichler1
Datalogger
Manual
Water Elevation (feet)
4545.5
4545.0
4544.5
4544.0
4543.5
4543.0
4542.5
4542.0
4541.5
4541.0
4540.5
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10


W-Thomas1
Datalogger
Manual
Water Elevation (feet)
4605.5
4605.0
4604.5
4604.0
4603.5
4603.0
4602.5
4602.0
4601.5
4601.0
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10

Appendix G

Water Chemistry

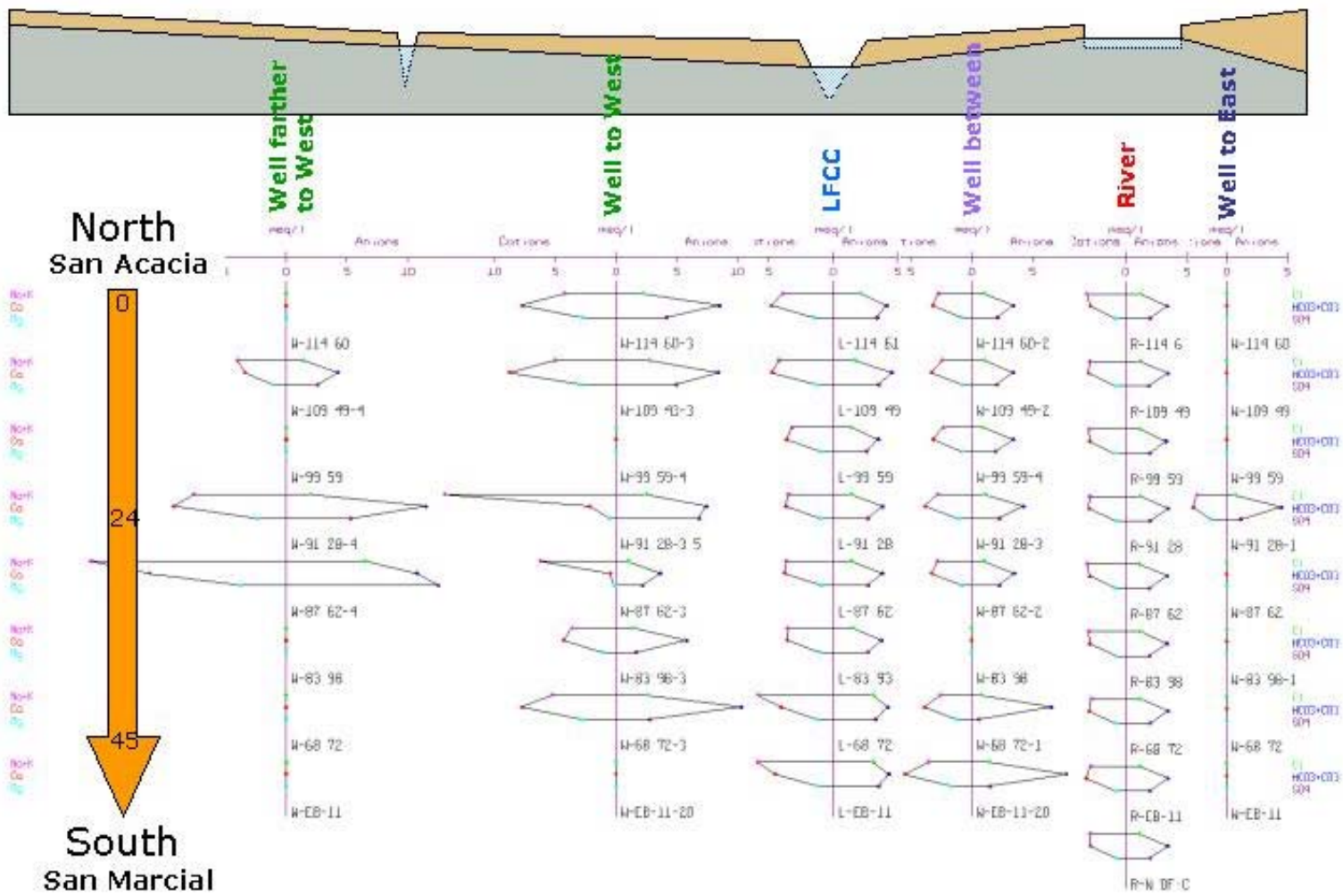


Figure G1: Stiff diagrams of water chemistry results from February, 2002

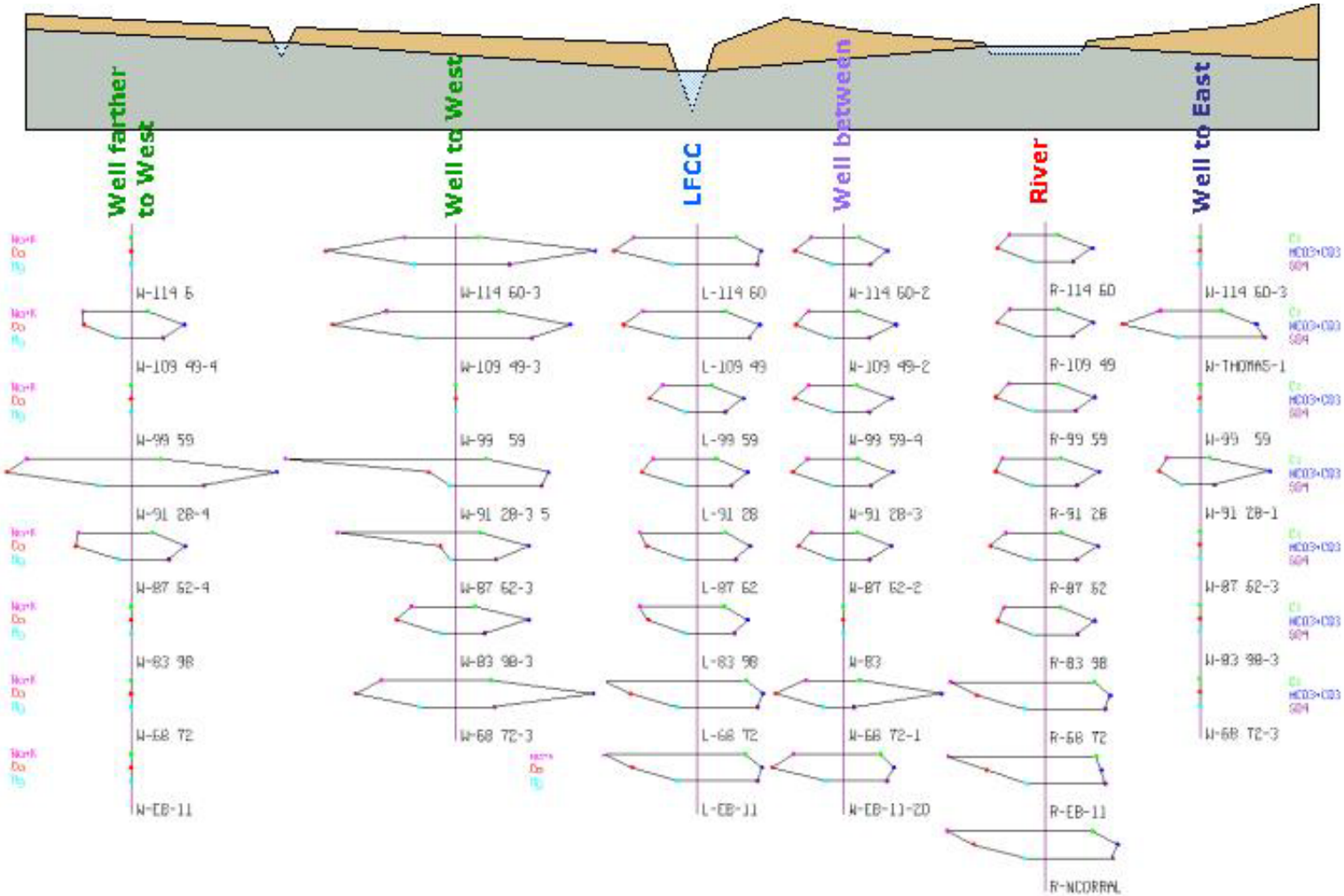


Figure G2: Stiff diagrams of water chemistry results from June, 2002

Table G1: Water Quality Data Summary; 2003 to 2005

	San Acacia		**Escondida**		
	Rio Grande	LFCC	Rio Grande	LFCC	Drain
	10 Surface Water Samples	**6 Surface Water Samples**	**4 Surface Water Samples**	**5 Surface Water Samples**	**3 Surface Water Samples**
	11/16/03 - 7/10/05	11/16/03 - 7/10/05	11/13/03 - 10/23/04	6/16/03 - 10/23/04	2/18/02 - 10/12/02
Alkalinity (ppm)	NA	NA	NA	NA	167
Aluminum (ppm)	0.002	NA	0.013	NA	0.017
Arsenic (ppm)	0.006-0.007	NA	0.006	NA	NA
Barium (ppm)	0.099-0.11	NA	0.094	NA	NA
Bicarbonate (ppm)	125-440	260-290	193-235	228-258	200-210
Boron (ppm)	0.066-0.52	0.12-0.2	0.11-0.13	0.11-0.17	0.1-0.629
Bromide (ppm)	ND-0.35	ND-0.26	0.11-0.18	0.15-0.19	ND-0.15
Cadmium (ppm)	ND	NA	ND	NA	NA
Calcium (ppm)	35-170	112-170	57-67	60-90	62-76
Carbonate (ppm)	2	NA	NA	NA	NA
Chloride (ppm)	15-380	92-160	39-56	50-93	28-35
Chromium (ppm)	ND	NA	0.001	NA	NA
Cobalt (ppm)	ND	NA	ND	NA	NA
Copper (ppm)	ND-0.005	NA	0.004	NA	NA
Electrical Conductivity (mS/cm)	0.315-695	1.024-1.675	0.571-650	0.807-807	0.568-0.587
Fluoride (ppm)	ND-0.85	ND-0.59	0.52-0.59	0.39-0.56	0.31-0.46
Hardness (ppm)	107-590	357-549	177-213	203-299	191-225
Iron (ppm)	ND	NA	ND	NA	NA
Lead (ppm)	ND	NA	ND	NA	NA
Lithium (ppm)	0.054-0.083	NA	0.076	NA	0.05
Magnesium (ppm)	5.1-46	17-32	8.5-14	13-18	8.6-9.4
Manganese (ppm)	0.007-0.008	NA	0.01-0.01	NA	NA
Mercury (ppm)	ND	NA	ND	NA	NA
Molybdenum (ppm)	0.006-0.007	NA	0.006	NA	NA
Nickel (ppm)	0.001-0.001	NA	0.001	NA	NA
Nitrate (ppm)	ND-2.6	ND	ND-2.8	ND-0.59	ND
pH (pHu)	7.8-8.51	7.55-8.1	8.06-8.4	7.7-8.11	7.7-8
Phosphate (ppm)	ND-0.9	ND	ND-0.71	ND	ND
Potassium (ppm)	3.8-10	5.3-7.3	4.7-5.8	4.7-5.8	3.3-3.8
Selenium (ppm)	ND-0.002	NA	ND	NA	NA
Silica (ppm)	17-35	21-28	19-30	24-30	22-23
Silver (ppm)	ND	NA	ND	NA	NA
Sodium (ppm)	24-380	86-135	55-79	82-110	48-52
Strontium (ppm)	0.43-0.61	1.3	0.52-0.64	0.87-1.1	0.47-0.74
Sulfate (ppm)	43-600	230-375	100-144	135-202	96-103
TDS (ppm)	191-1767	700-1024	390-497	483-680	370-400
Zinc (ppm)	0.001-0.009	NA	0.003	NA	NA
Total Anions (epm)	3.45-29.59	11.68-17.08	6.45-8.46	8-11.09	6.09-6.49
Total Cations (epm)	3.28-28.41	11.03-17.02	6.08-7.8	7.75-10.93	6-6.79
% Difference (%)	-4.68--0.54	-3.46--0.17	-4.03-0.32	-1.56-2.61	-0.78-2.81

Table G1: Water Quality Data Summary; 2003 to 2005

	Brown Arroyo		**Highway 280 Bridge**	**USBR Well Transect**	
	Rio Grande	LFCC	Rio Grande	Rio Grande	LFCC
	4 Surface Water Samples 11/15/03 - 10/24/04	**4 Surface Water Samples** 11/16/03 - 10/24/04	**4 Surface Water Samples** 11/14/03 - 10/23/04	**32 Surface Water Samples** 2/15/02 - 6/17/03	**35 Surface Water Samples** 2/15/02 - 6/17/03
Alkalinity (ppm)	NA	NA	NA	173-206	170-237
Aluminum (ppm)	0.013	NA	NA	ND	ND
Arsenic (ppm)	0.006	NA	NA	NA	NA
Barium (ppm)	0.094	NA	NA	NA	NA
Bicarbonate (ppm)	180-227	215-242	356-410	179-295	205-305
Boron (ppm)	0.11-0.14	0.1-0.14	0.27-0.35	0.096-0.26	0.098-0.25
Bromide (ppm)	0.12-0.15	0.12-0.16	0.23-0.29	ND-0.32	ND-0.59
Cadmium (ppm)	ND	NA	NA	NA	NA
Calcium (ppm)	51-74	52-85	100-117	55-100	65-125
Carbonate (ppm)	NA	NA	NA	NA	NA
Chloride (ppm)	42-47	39-57	220-265	34-145	33-138
Chromium (ppm)	0.001	NA	NA	NA	NA
Cobalt (ppm)	ND	NA	NA	NA	NA
Copper (ppm)	0.005	NA	NA	NA	NA
Electrical Conductivity (mS/cm)	0.571-740	0.717-0.818	1.635-2.145	0.498-1119	0.601-1099
Fluoride (ppm)	0.54-0.67	0.46-0.55	0.51-0.66	0.39-0.78	0.28-0.87
Hardness (ppm)	166-227	179-258	347-403	176-324	208-407
Iron (ppm)	ND	NA	NA	NA	NA
Lead (ppm)	ND	NA	NA	NA	NA
Lithium (ppm)	0.1	NA	NA	0.06-0.07	0.06-0.12
Magnesium (ppm)	6.8-12	12	24-27	9.3-18	23-Nov
Manganese (ppm)	0.001	NA	NA	NA	NA
Mercury (ppm)	ND	NA	NA	NA	NA
Molybdenum (ppm)	0.006	NA	NA	NA	NA
Nickel (ppm)	0.001	NA	NA	NA	NA
Nitrate (ppm)	1.8-2.9	0.1-0.65	ND-0.56	ND-4.6	ND-0.94
pH (pHu)	8.02-8.5	7.71-8.2	7.85-8.18	7.8-8.7	7.4-8.4
Phosphate (ppm)	ND-0.74	ND	ND	ND-0.69	ND-0.5
Potassium (ppm)	5.2-5.7	4.2-5.3	7-8.6	5.1-8.1	4.3-8.2
Selenium (ppm)	ND	NA	NA	NA	NA
Silica (ppm)	18-30	21-24	32-38	22-28	19-27
Silver (ppm)	ND	NA	NA	NA	NA
Sodium (ppm)	59-70	61-85	265-300	53-160	56-160
Strontium (ppm)	0.48-0.68	0.76	1.5	0.5-1.2	0.59-1.9
Sulfate (ppm)	105-120	120-169	320-345	92-215	105-235
TDS (ppm)	390-440	420-550	1117-1280	380-800	390-790
Zinc (ppm)	0.003	NA	NA	NA	NA
Total Anions (epm)	6.55-7.55	7.16-9.13	18.73-20.92	6.08-13.4	6.85-13.32
Total Cations (epm)	6.12-7.24	6.34-8.83	18.67-21.35	6.05-13.44	6.93-13.66
% Difference (%)	-5.83--0.57	-6.02-0.62	-1.3-2.75	-2.79-2.97	-2.79-2.88

Table G1: Water Quality Data Summary; 2003 to 2005

	South Boundary Bosque		**San Marcial**		**South of Ft Craig**	
	Rio Grande	LFCC	Rio Grande	LFCC	Rio Grande	LFCC
	6 Surface Water Samples	**7 Surface Water Samples**	**10 Surface Water Samples**	**6 Surface Water Samples**	**4 Surface Water Samples**	**4 Surface Water Samples**
	11/15/03 - 7/10/05	3/1/03 - 7/10/05	11/15/03 - 7/10/05	11/15/03 - 7/10/05	11/14/03 - 10/23/04	11/14/03 - 10/23/04
Alkalinity (ppm)	NA	NA	NA	NA	NA	NA
Aluminum (ppm)	NA	NA	0.005	NA	NA	NA
Arsenic (ppm)	NA	NA	0.007	NA	NA	NA
Barium (ppm)	NA	NA	0.098	NA	NA	NA
Bicarbonate (ppm)	150-244	225-267	130-307	245-271	175-242	248-253
Boron (ppm)	0.064-0.15	0.14-0.23	0.064-0.26	0.14-0.2	0.11-0.19	0.14-0.17
Bromide (ppm)	ND-0.16	ND-0.2	ND-0.35	ND-0.2	0.1-0.17	0.14-0.2
Cadmium (ppm)	NA	NA	ND	NA	NA	NA
Calcium (ppm)	39-91	56-84	37-69	60-91	52-84	60-91
Carbonate (ppm)	NA	NA	2.5-4	NA	NA	NA
Chloride (ppm)	14-89	82-139	15-104	67-129	35-92	66-115
Chromium (ppm)	NA	NA	ND	NA	NA	NA
Cobalt (ppm)	NA	NA	ND	NA	NA	NA
Copper (ppm)	NA	NA	0.009	NA	NA	NA
Electrical Conductivity (mS/cm)	0.325-1.06	0.834-1.28	0.315-1010	0.905-1.1	0.535-1.035	0.92-1.09
Fluoride (ppm)	0.23-0.6	0.44-0.6	0.34-1.2	0.44-0.6	0.56-0.62	0.53-0.61
Hardness (ppm)	118-264	197-280	113-285	205-297	167-255	201-277
Iron (ppm)	NA	NA	ND	NA	NA	NA
Lead (ppm)	NA	NA	ND	NA	NA	NA
Lithium (ppm)	NA	NA	0.1	NA	NA	NA
Magnesium (ppm)	5.4-14	17-Dec	5.5-30	14-17	9.1-13	13-15
Manganese (ppm)	NA	NA	0.002	NA	NA	NA
Mercury (ppm)	NA	NA	ND	NA	NA	NA
Molybdenum (ppm)	NA	NA	0.006	NA	NA	NA
Nickel (ppm)	NA	NA	ND	NA	NA	NA
Nitrate (ppm)	0.33-2.7	ND-0.63	ND-2	ND-2.3	ND-1.5	0.48-2.2
pH (pHu)	7.93-8.5	7.8-8.3	7.93-8.55	7.88-8.3	8.2-8.6	7.96-8.4
Phosphate (ppm)	ND-0.66	ND	ND-0.69	ND-0.64	ND-0.56	ND
Potassium (ppm)	4-6.4	5.5-8.2	4.2-8.5	5.7-7.4	5.1-6.8	5.7-6.4
Selenium (ppm)	NA	NA	ND	NA	NA	NA
Silica (ppm)	21-26	24-30	20-28	26-32	24-28	26-28
Silver (ppm)	NA	NA	ND	NA	NA	NA
Sodium (ppm)	24-125	110-154	25-150	95-146	54-130	91-130
Strontium (ppm)	0.71	0.81-1.1	0.66-0.74	1.1	0.59	0.98
Sulfate (ppm)	38-160	150-204	42-215	155-206	92-165	150-184
TDS (ppm)	201-604	556-760	195-702	537-760	370-608	549-680
Zinc (ppm)	NA	NA	ND	NA	NA	NA
Total Anions (epm)	3.68-9.88	9.56-12.58	3.49-11.97	9.3-12.41	6.03-10.03	9.24-11.18
Total Cations (epm)	3.5-9.78	9.31-11.91	3.46-11.96	8.93-12.5	5.82-9.76	8.94-10.87
% Difference (%)	-2.9-2.39	-2.8-0.08	-2.83-0.76	-3.31-0.37	-1.87-1.87	-2.19-2.19

Table G1: Water Quality Data Summary; 2003 to 2005

	Other			
	Rio Grande	LFCC	Drain	Pond
	8 Surface Water Samples 2/18/02 - 3/1/03	**5 Surface Water Samples** 2/18/02 - 6/16/03	**9 Surface Water Samples** 2/16/02 - 6/17/03	**4 Surface Water Samples** 6/13/02 - 10/27004
Alkalinity (ppm)	206-208	212	203-342	133
Aluminum (ppm)	ND-0.0158	ND	ND	NA
Arsenic (ppm)	NA	NA	NA	NA
Barium (ppm)	NA	NA	NA	NA
Bicarbonate (ppm)	180-330	177-300	212-417	154-283
Boron (ppm)	0.14-0.27	0.063-0.25	0.12-0.29	0.06-0.24
Bromide (ppm)	ND-0.36	ND-0.34	0.12-1.9	ND-0.23
Cadmium (ppm)	NA	NA	NA	NA
Calcium (ppm)	55-105	53-97	63-130	16-46
Carbonate (ppm)	NA	NA	NA	NA
Chloride (ppm)	37-135	24-128	46-280	11-42
Chromium (ppm)	NA	NA	NA	NA
Cobalt (ppm)	NA	NA	NA	NA
Copper (ppm)	NA	NA	NA	NA
Electrical Conductivity (mS/cm)	0.501-1.22	1.02-855	0.622-1828	0.327-0.679
Fluoride (ppm)	0.38-0.6	0.35-0.84	0.36-0.97	0.5-0.66
Hardness (ppm)	174-341	166-316	203-440	58-193
Iron (ppm)	NA	NA	NA	NA
Lead (ppm)	NA	NA	NA	NA
Lithium (ppm)	0.06-0.07	0.12	0.13	NA
Magnesium (ppm)	19-Sep	8.1-18	28-Nov	4-19
Manganese (ppm)	NA	NA	NA	NA
Mercury (ppm)	NA	NA	NA	NA
Molybdenum (ppm)	NA	NA	NA	NA
Nickel (ppm)	NA	NA	NA	NA
Nitrate (ppm)	ND-3.4	ND-0.79	ND-2.1	1.8
pH (pHu)	8-8.4	7.75-8.26	7.6-8.63	8.1-8.7
Phosphate (ppm)	ND-0.63	ND	ND	ND
Potassium (ppm)	5.5-8.3	3.7-8	4.9-8.9	2.3-7.4
Selenium (ppm)	NA	NA	NA	NA
Silica (ppm)	24-27	22-26	25-37	24-28
Silver (ppm)	NA	NA	NA	NA
Sodium (ppm)	50-160	48-155	71-325	53-86
Strontium (ppm)	0.51-1.11	0.55-1.4	0.62-1.6	0.32
Sulfate (ppm)	94-240	87-220	125-375	29-97
TDS (ppm)	370-820	340-780	460-1390	199-440
Zinc (ppm)	NA	NA	NA	NA
Total Anions (epm)	6.06-13.99	5.41-13.16	7.44-22.63	3.5-7.9
Total Cations (epm)	5.81-14	5.51-13.29	7.3-23.17	3.52-7.79
% Difference (%)	-2.3-2.59	-2.11-2.78	-2.64-2.35	-1.56-2.46

Table G1: Water Quality Data Summary; 2003 to 2005

	San Acacia	Escondida	Brown Arroyo	Highway 280 Bridge	USBR Well Transect
	21 Ground-Water Samples 11/16/03 - 7/11/05	**16 Ground-Water Samples** 6/16/03 - 10/25/04	**34 Ground-Water Samples** 6/16/03 - 7/12/05	**22 Ground-Water Samples** 6/17/03 - 10/24/04	**89 Ground-Water Samples** 2/15/02 - 11/21/03
Alkalinity (ppm)	NA	NA	NA	NA	126-870
Aluminum (ppm)	ND	NA	NA	NA	ND-0.026
Arsenic (ppm)	0.011	NA	NA	NA	NA
Barium (ppm)	0.067	NA	NA	NA	NA
Bicarbonate (ppm)	205-611	179-510	150-400	174-703	154-1080
Boron (ppm)	0.096-0.88	0.08-0.42	0.035-0.25	0.05-0.68	0.06-0.91
Bromide (ppm)	ND-1.8	ND-0.5	ND-0.42	ND-0.61	ND-10
Cadmium (ppm)	ND	NA	NA	NA	NA
Calcium (ppm)	33-660	39-230	53-210	8.4-140	8.7-770
Carbonate (ppm)	NA	NA	179-179	NA	NA
Chloride (ppm)	40-1430	22-465	26-149	24-530	20-4100
Chromium (ppm)	ND	NA	NA	NA	NA
Cobalt (ppm)	0.002	NA	NA	NA	NA
Copper (ppm)	0.026	NA	NA	NA	NA
Electrical Conductivity (mS/cm)	0.839-8.19	0.481-1409	0.601-982	0.447-609	0.42-1397
Fluoride (ppm)	ND-1.1	0.31-165	ND-0.55	0.15-4.6	ND-1.9
Hardness (ppm)	121-2380	130-811	182-643	30-467	27-3142
Iron (ppm)	5.4	NA	NA	NA	NA
Lead (ppm)	ND	NA	NA	NA	NA
Lithium (ppm)	0.47	NA	NA	NA	0.04-4
Magnesium (ppm)	9.7-185	7.8-60	8.4-31	2.2-30	1.4-296
Manganese (ppm)	6.9-6.9	NA	NA	NA	NA
Mercury (ppm)	ND	NA	NA	NA	NA
Molybdenum (ppm)	0.004	NA	NA	NA	NA
Nickel (ppm)	0.003	NA	NA	NA	NA
Nitrate (ppm)	ND-0.4	ND-0.72	ND-0.46	ND-0.17	ND-16
pH (pHu)	7.11-8.2	7.14-8.1	7.03-8.1	7.17-8.4	6.7-7.96
Phosphate (ppm)	ND-4.9	ND	ND-0.64	ND-0.89	ND-2.6
Potassium (ppm)	4.3-20	3.5-12	3.2-7.8	3.2-9.9	2.6-160
Selenium (ppm)	0.001-	NA	NA	NA	NA
Silica (ppm)	27-45	15-32	16-34	14-47	14-58
Silver (ppm)	ND	NA	NA	NA	NA
Sodium (ppm)	85-1130	50-490	29-158	50-810	47-3900
Strontium (ppm)	1.3-6.1	0.51-2.3	0.57-1.6	0.21-1.3	0.27-21
Sulfate (ppm)	205-2270	92-825	100-480	79-885	7.9-4640
TDS (ppm)	570-5912	336-2338	403-1190	313-2590	320-14250
Zinc (ppm)	ND	NA	NA	NA	NA
Total Anions (epm)	9.19-96.96	5.61-38.68	6.78-19.32	5.21-42.18	5.16-227.76
Total Cations (epm)	8.63-94.19	5.11-37.83	6.28-18.56	5.15-40.7	4.94-236.43
% Difference (%)	-3.42-3.01	-5.54-0.02	-6.87-1.02	-2.88-2.62	-2.93-2.87

Table G1: Water Quality Data Summary; 2003 to 2005

	South Boundary Bosque	**San Marcial**	**South of Ft Craig**
	16 Ground-Water Samples 11/14/03 - 7/11/05	**16 Ground-Water Samples** 11/15/03 - 7/13/05	**19 Ground-Water Samples** 11/14/03 - 7/10/05
Alkalinity (ppm)	NA	NA	NA
Aluminum (ppm)	NA	NA	NA
Arsenic (ppm)	NA	NA	NA
Barium (ppm)	NA	NA	NA
Bicarbonate (ppm)	240-1140	350-551	161-260
Boron (ppm)	0.17-0.56	0.1-0.25	0.08-0.2
Bromide (ppm)	ND-0.66	ND-0.4	ND-0.29
Cadmium (ppm)	NA	NA	NA
Calcium (ppm)	32-190	14-180	34-79
Carbonate (ppm)	NA	NA	NA
Chloride (ppm)	97-245	24-160	11-87
Chromium (ppm)	NA	NA	NA
Cobalt (ppm)	NA	NA	NA
Copper (ppm)	NA	NA	NA
Electrical Conductivity (mS/cm)	1.157-3.275	0.705-1.955	0.295-1.066
Fluoride (ppm)	ND-1.6	ND-2.1	0.18-0.79
Hardness (ppm)	102-614	51-565	99-251
Iron (ppm)	NA	NA	NA
Lead (ppm)	NA	NA	NA
Lithium (ppm)	NA	NA	NA
Magnesium (ppm)	5.7-36	3.9-28	2.8-20
Manganese (ppm)	NA	NA	NA
Mercury (ppm)	NA	NA	NA
Molybdenum (ppm)	NA	NA	NA
Nickel (ppm)	NA	NA	NA
Nitrate (ppm)	ND-0.24	ND-0.18	ND-2
pH (pHu)	7.29-8.1	6.81-8	7.27-8
Phosphate (ppm)	ND	ND-0.57	ND
Potassium (ppm)	1.6-18	3.7-7	2.3-5.5
Selenium (ppm)	NA	NA	NA
Silica (ppm)	26-38	17-60	16-41
Silver (ppm)	NA	NA	NA
Sodium (ppm)	155-580	70-450	25-110
Strontium (ppm)	1.2-1.3	0.4-1.1	0.27-1.1
Sulfate (ppm)	ND-685	26-372	14-185
TDS (ppm)	870-2030	406-1330	182-620
Zinc (ppm)	NA	NA	NA
Total Anions (epm)	14.1-34.63	7.9-21.2	3.36-10.19
Total Cations (epm)	13.91-34.06	7.47-22.2	3.24-9.94
% Difference (%)	-2.8-2.47	-6.27-2.48	-6.35-2.78

Appendix G2: Laboratory Results of Groundwater Chemistry: Data from 2002 - 2005

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
SAC-E03A	1/0/1900	0:00	1	7.68				1			
SAC-E03A	1/0/1900	0:00	38	10.54	epm			1			
SAC-E03A	1/0/1900	0:00	39	10.6	epm			1			
SAC-E03A	1/0/1900	0:00	40	-0.26	%			1			
SAC-E03A	1/0/1900	0:00	4	302	ppm			1			
SAC-E03A	1/0/1900	0:00	6	254	ppm			1			
SAC-E03A	1/0/1900	0:00	7	45	ppm			1			
SAC-E03A	1/0/1900	0:00	8	247	ppm			1			
SAC-E03A	1/0/1900	0:00	9		ppm	<	0.1	1			
SAC-E03A	1/0/1900	0:00	10		ppm	<	0.5	1			
SAC-E03A	1/0/1900	0:00	11	0.42	ppm			1			
SAC-E03A	1/0/1900	0:00	12	100	ppm			1			
SAC-E03A	1/0/1900	0:00	13	5	ppm			1			
SAC-E03A	1/0/1900	0:00	14	20	ppm			1			
SAC-E03A	1/0/1900	0:00	15	88	ppm			1			
SAC-E03A	1/0/1900	0:00	2	670	ppm			1			
SAC-E03A	1/0/1900	0:00	19	0.11	ppm			1			
SAC-E03A	1/0/1900	0:00	3	0.839	mS/cm			1			
SAC-E03A	1/0/1900	0:00	32	35	ppm			1			
SAC-E03A	1/0/1900	0:00	35	1.3	ppm			1			
SAC-E03A	1/0/1900	0:00	36	0.16	ppm			1			
W-99.59-1	2/15/2002	11:45	26	0.06	ppm			1	tn/dl		
W-99.59-1	2/15/2002	11:45	19	0.112	ppm			1	tn/dl		
W-99.59-1	2/15/2002	11:45	36	0.17	ppm			1	tn/dl		
W-99.59-1	2/15/2002	11:45	11	0.35	ppm			1	tn/dl		
W-99.59-1	2/15/2002	11:45	40	0.55	%			1	tn/dl		
W-99.59-1	2/15/2002	11:45	35	1.1	ppm			1	tn/dl		
W-99.59-1	2/15/2002	11:45	13	4.4	ppm			1	tn/dl		
W-99.59-1	2/15/2002	11:45	39	7.4	epm			1	tn/dl		
W-99.59-1	2/15/2002	11:45	38	7.48	epm			1	tn/dl		
W-99.59-1	2/15/2002	11:45	1	7.7				1	tn/dl		
W-99.59-1	2/15/2002	11:45	14	13	ppm			1	tn/dl		
W-99.59-1	2/15/2002	11:45	32	16	ppm			1	tn/dl		
W-99.59-1	2/15/2002	11:45	7	39	ppm			1	tn/dl		
W-99.59-1	2/15/2002	11:45	12	60	ppm			1	tn/dl		
W-99.59-1	2/15/2002	11:45	15	74	ppm			1	tn/dl		
W-99.59-1	2/15/2002	11:45	8	105	ppm			1	tn/dl		
W-99.59-1	2/15/2002	11:45	4	238	ppm			1	tn/dl		
W-99.59-1	2/15/2002	11:45	6	250	ppm			1	tn/dl		
W-99.59-1	2/15/2002	11:45	2	440	ppm			1	tn/dl		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-99.59-1	2/15/2002	11:45	3	0.609	mS/cm			1	tn/dl		
W-99.59-1	2/15/2002	11:45	16		ppm	<	0.001	1	tn/dl		
W-99.59-1	2/15/2002	11:45	9		ppm	<	0.1	1	tn/dl		
W-99.59-1	2/15/2002	11:45	10		ppm	<	0.5	1	tn/dl		
W-99.59-4	2/15/2002	16:44	40	-0.86	%			1	lw/ry		
W-99.59-4	2/15/2002	16:44	26	0.05	ppm			1	lw/ry		
W-99.59-4	2/15/2002	16:44	19	0.147	ppm			1	lw/ry		
W-99.59-4	2/15/2002	16:44	36	0.19	ppm			1	lw/ry		
W-99.59-4	2/15/2002	16:44	11	0.56	ppm			1	lw/ry		
W-99.59-4	2/15/2002	16:44	35	1.1	ppm			1	lw/ry		
W-99.59-4	2/15/2002	16:44	13	4.1	ppm			1	lw/ry		
W-99.59-4	2/15/2002	16:44	38	6.22	epm			1	lw/ry		
W-99.59-4	2/15/2002	16:44	39	6.33	epm			1	lw/ry		
W-99.59-4	2/15/2002	16:44	1	7.5				1	lw/ry		
W-99.59-4	2/15/2002	16:44	14	9.2	ppm			1	lw/ry		
W-99.59-4	2/15/2002	16:44	32	20	ppm			1	lw/ry		
W-99.59-4	2/15/2002	16:44	7	32	ppm			1	lw/ry		
W-99.59-4	2/15/2002	16:44	12	51	ppm			1	lw/ry		
W-99.59-4	2/15/2002	16:44	15	63	ppm			1	lw/ry		
W-99.59-4	2/15/2002	16:44	8	94	ppm			1	lw/ry		
W-99.59-4	2/15/2002	16:44	4	195	ppm			1	lw/ry		
W-99.59-4	2/15/2002	16:44	6	210	ppm			1	lw/ry		
W-99.59-4	2/15/2002	16:44	2	380	ppm			1	lw/ry		
W-99.59-4	2/15/2002	16:44	3	0.69	mS/cm			1	lw/ry		
W-99.59-4	2/15/2002	16:44	16		ppm	<	0.001	1	lw/ry		
W-99.59-4	2/15/2002	16:44	9		ppm	<	0.1	1	lw/ry		
W-99.59-4	2/15/2002	16:44	10		ppm	<	0.5	1	lw/ry		
W-109.49-2	2/16/2002	11:26	40	-0.77	%			1	lw/ck		
W-109.49-2	2/16/2002	11:26	26	0.04	ppm			1	lw/ck		
W-109.49-2	2/16/2002	11:26	36	0.12	ppm			1	lw/ck		
W-109.49-2	2/16/2002	11:26	19	0.125	ppm			1	lw/ck		
W-109.49-2	2/16/2002	11:26	11	0.61	ppm			1	lw/ck		
W-109.49-2	2/16/2002	11:26	35	1.2	ppm			1	lw/ck		
W-109.49-2	2/16/2002	11:26	13	3.4	ppm			1	lw/ck		
W-109.49-2	2/16/2002	11:26	38	6.53	epm			1	lw/ck		
W-109.49-2	2/16/2002	11:26	39	6.63	epm			1	lw/ck		
W-109.49-2	2/16/2002	11:26	1	7.46				1	lw/ck		
W-109.49-2	2/16/2002	11:26	14	9.7	ppm			1	lw/ck		
W-109.49-2	2/16/2002	11:26	32	21	ppm			1	lw/ck		
W-109.49-2	2/16/2002	11:26	7	38	ppm			1	lw/ck		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-109.49-2	2/16/2002	11:26	12	54	ppm			1	lw/ck		
W-109.49-2	2/16/2002	11:26	15	66	ppm			1	lw/ck		
W-109.49-2	2/16/2002	11:26	8	100	ppm			1	lw/ck		
W-109.49-2	2/16/2002	11:26	4	205	ppm			1	lw/ck		
W-109.49-2	2/16/2002	11:26	6	210	ppm			1	lw/ck		
W-109.49-2	2/16/2002	11:26	2	400	ppm			1	lw/ck		
W-109.49-2	2/16/2002	11:26	3	0.787	mS/cm			1	lw/ck		
W-109.49-2	2/16/2002	11:26	16		ppm	<	0.001	1	lw/ck		
W-109.49-2	2/16/2002	11:26	9		ppm	<	0.1	1	lw/ck		
W-109.49-2	2/16/2002	11:26	10		ppm	<	0.5	1	lw/ck		
W-109.49-3	2/16/2002	11:05	10	0.11	ppm			1	tn/ry		
W-109.49-3	2/16/2002	11:05	26	0.12	ppm			1	tn/ry		
W-109.49-3	2/16/2002	11:05	26	0.12	ppm			2	tn/ry		
W-109.49-3	2/16/2002	11:05	19	0.183	ppm			1	tn/ry		
W-109.49-3	2/16/2002	11:05	19	0.184	ppm			2	tn/ry		
W-109.49-3	2/16/2002	11:05	36	0.26	ppm			1	tn/ry		
W-109.49-3	2/16/2002	11:05	36	0.32	ppm			2	tn/ry		
W-109.49-3	2/16/2002	11:05	11	0.49	ppm			2	tn/ry		
W-109.49-3	2/16/2002	11:05	11	0.52	ppm			1	tn/ry		
W-109.49-3	2/16/2002	11:05	40	0.56	%			2	tn/ry		
W-109.49-3	2/16/2002	11:05	10	0.67	ppm			2	tn/ry		
W-109.49-3	2/16/2002	11:05	40	0.89	%			1	tn/ry		
W-109.49-3	2/16/2002	11:05	35	2.9	ppm			2	tn/ry		
W-109.49-3	2/16/2002	11:05	35	3.1	ppm			1	tn/ry		
W-109.49-3	2/16/2002	11:05	13	7.3	ppm			1	tn/ry		
W-109.49-3	2/16/2002	11:05	1	7.43				2	tn/ry		
W-109.49-3	2/16/2002	11:05	1	7.46				1	tn/ry		
W-109.49-3	2/16/2002	11:05	13	7.5	ppm			2	tn/ry		
W-109.49-3	2/16/2002	11:05	39	16.27	epm			2	tn/ry		
W-109.49-3	2/16/2002	11:05	39	16.29	epm			1	tn/ry		
W-109.49-3	2/16/2002	11:05	38	16.45	epm			2	tn/ry		
W-109.49-3	2/16/2002	11:05	38	16.58	epm			1	tn/ry		
W-109.49-3	2/16/2002	11:05	32	33	ppm			1	tn/ry		
W-109.49-3	2/16/2002	11:05	14	35	ppm			1	tn/ry		
W-109.49-3	2/16/2002	11:05	32	35	ppm			2	tn/ry		
W-109.49-3	2/16/2002	11:05	14	36	ppm			2	tn/ry		
W-109.49-3	2/16/2002	11:05	7	100	ppm			1	tn/ry		
W-109.49-3	2/16/2002	11:05	7	100	ppm			2	tn/ry		
W-109.49-3	2/16/2002	11:05	12	105	ppm			2	tn/ry		
W-109.49-3	2/16/2002	11:05	12	110	ppm			1	tn/ry		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-109.49-3	2/16/2002	11:05	15	175	ppm			1	tn/ry		
W-109.49-3	2/16/2002	11:05	15	175	ppm			2	tn/ry		
W-109.49-3	2/16/2002	11:05	8	240	ppm			1	tn/ry		
W-109.49-3	2/16/2002	11:05	8	250	ppm			2	tn/ry		
W-109.49-3	2/16/2002	11:05	6	500	ppm			2	tn/ry		
W-109.49-3	2/16/2002	11:05	6	515	ppm			1	tn/ry		
W-109.49-3	2/16/2002	11:05	4	581	ppm			1	tn/ry		
W-109.49-3	2/16/2002	11:05	4	585	ppm			2	tn/ry		
W-109.49-3	2/16/2002	11:05	2	960	ppm			1	tn/ry		
W-109.49-3	2/16/2002	11:05	2	960	ppm			2	tn/ry		
W-109.49-3	2/16/2002	11:05	3	1.39	mS/cm			2	tn/ry		
W-109.49-3	2/16/2002	11:05	3	1.41	mS/cm			1	tn/ry		
W-109.49-3	2/16/2002	11:05	16		ppm	<	0.001	1	tn/ry		
W-109.49-3	2/16/2002	11:05	16		ppm	<	0.001	2	tn/ry		
W-109.49-3	2/16/2002	11:05	9		ppm	<	0.1	1	tn/ry		
W-109.49-3	2/16/2002	11:05	9		ppm	<	0.1	2	tn/ry		
W-109.49-4	2/16/2002	10:14	26	0.07	ppm			1	lw/ck		
W-109.49-4	2/16/2002	10:14	26	0.07	ppm			6	lw/ck		
W-109.49-4	2/16/2002	10:14	9	0.1	ppm			6	lw/ck		
W-109.49-4	2/16/2002	10:14	36	0.15	ppm			1	lw/ck		
W-109.49-4	2/16/2002	10:14	36	0.15	ppm			6	lw/ck		
W-109.49-4	2/16/2002	10:14	19	0.162	ppm			1	lw/ck		
W-109.49-4	2/16/2002	10:14	19	0.164	ppm			6	lw/ck		
W-109.49-4	2/16/2002	10:14	11	0.67	ppm			6	lw/ck		
W-109.49-4	2/16/2002	10:14	11	0.74	ppm			1	lw/ck		
W-109.49-4	2/16/2002	10:14	40	1.09	%			1	lw/ck		
W-109.49-4	2/16/2002	10:14	35	1.7	ppm			1	lw/ck		
W-109.49-4	2/16/2002	10:14	35	1.7	ppm			6	lw/ck		
W-109.49-4	2/16/2002	10:14	13	6	ppm			1	lw/ck		
W-109.49-4	2/16/2002	10:14	13	6	ppm			6	lw/ck		
W-109.49-4	2/16/2002	10:14	1	7.75				1	lw/ck		
W-109.49-4	2/16/2002	10:14	39	8.34	epm			1	lw/ck		
W-109.49-4	2/16/2002	10:14	38	8.53	epm			1	lw/ck		
W-109.49-4	2/16/2002	10:14	14	14	ppm			1	lw/ck		
W-109.49-4	2/16/2002	10:14	14	14	ppm			6	lw/ck		
W-109.49-4	2/16/2002	10:14	32	31	ppm			1	lw/ck		
W-109.49-4	2/16/2002	10:14	32	31	ppm			6	lw/ck		
W-109.49-4	2/16/2002	10:14	7	51	ppm			1	lw/ck		
W-109.49-4	2/16/2002	10:14	7	52	ppm			6	lw/ck		
W-109.49-4	2/16/2002	10:14	15	68	ppm			1	lw/ck		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-109.49-4	2/16/2002	10:14	15	69	ppm			6	lw/ck		
W-109.49-4	2/16/2002	10:14	12	85	ppm			6	lw/ck		
W-109.49-4	2/16/2002	10:14	12	88	ppm			1	lw/ck		
W-109.49-4	2/16/2002	10:14	8	125	ppm			1	lw/ck		
W-109.49-4	2/16/2002	10:14	8	125	ppm			6	lw/ck		
W-109.49-4	2/16/2002	10:14	4	227	ppm			1	lw/ck		
W-109.49-4	2/16/2002	10:14	4	230	ppm			6	lw/ck		
W-109.49-4	2/16/2002	10:14	6	260	ppm			1	lw/ck		
W-109.49-4	2/16/2002	10:14	2	510	ppm			1	lw/ck		
W-109.49-4	2/16/2002	10:14	3	0.76	mS/cm			1	lw/ck		
W-109.49-4	2/16/2002	10:14	16		ppm	<	0.001	1	lw/ck		
W-109.49-4	2/16/2002	10:14	16		ppm	<	0.001	6	lw/ck		
W-109.49-4	2/16/2002	10:14	9		ppm	<	0.1	1	lw/ck		
W-109.49-4	2/16/2002	10:14	10		ppm	<	0.5	1	lw/ck		
W-109.49-4	2/16/2002	10:14	10		ppm	<	0.5	6	lw/ck		
W-114.60-2	2/16/2002	12:35	4	201	ppm			1	tn/ry		
W-114.60-2	2/16/2002	12:35	6	210	ppm			1	tn/ry		
W-114.60-2	2/16/2002	12:35	2	410	ppm			1	tn/ry		
W-114.60-2	2/16/2002	12:35	3	0.607	mS/cm			1	tn/ry		
W-114.60-2	2/16/2002	12:35	16		ppm	<	0.001	1	tn/ry		
W-114.60-2	2/16/2002	12:35	10		ppm	<	0.5	1	tn/ry		
W-114.60-2	2/16/2002	12:35	26	0.07	ppm			1	tn/ry		
W-114.60-2	2/16/2002	12:35	19	0.112	ppm			1	tn/ry		
W-114.60-2	2/16/2002	12:35	9	0.13	ppm			1	tn/ry		
W-114.60-2	2/16/2002	12:35	36	0.26	ppm			1	tn/ry		
W-114.60-2	2/16/2002	12:35	40	0.37	%			1	tn/ry		
W-114.60-2	2/16/2002	12:35	11	0.69	ppm			1	tn/ry		
W-114.60-2	2/16/2002	12:35	35	1.2	ppm			1	tn/ry		
W-114.60-2	2/16/2002	12:35	13	5.3	ppm			1	tn/ry		
W-114.60-2	2/16/2002	12:35	39	6.67	epm			1	tn/ry		
W-114.60-2	2/16/2002	12:35	38	6.72	epm			1	tn/ry		
W-114.60-2	2/16/2002	12:35	1	7.96				1	tn/ry		
W-114.60-2	2/16/2002	12:35	14	10	ppm			1	tn/ry		
W-114.60-2	2/16/2002	12:35	32	23	ppm			1	tn/ry		
W-114.60-2	2/16/2002	12:35	7	37	ppm			1	tn/ry		
W-114.60-2	2/16/2002	12:35	12	59	ppm			1	tn/ry		
W-114.60-2	2/16/2002	12:35	15	64	ppm			1	tn/ry		
W-114.60-2	2/16/2002	12:35	8	103	ppm			1	tn/ry		
W-114.60-3	2/16/2002	12:45	40	-1.18	%			1	lw/ck		
W-114.60-3	2/16/2002	12:45	26	0.11	ppm			1	lw/ck		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-114.60-3	2/16/2002	12:45	19	0.168	ppm			1	lw/ck		
W-114.60-3	2/16/2002	12:45	9	0.2	ppm			1	lw/ck		
W-114.60-3	2/16/2002	12:45	36	0.33	ppm			1	lw/ck		
W-114.60-3	2/16/2002	12:45	11	0.97	ppm			1	lw/ck		
W-114.60-3	2/16/2002	12:45	35	2.9	ppm			1	lw/ck		
W-114.60-3	2/16/2002	12:45	1	7.09				1	lw/ck		
W-114.60-3	2/16/2002	12:45	13	7.7	ppm			1	lw/ck		
W-114.60-3	2/16/2002	12:45	38	14.65	epm			1	lw/ck		
W-114.60-3	2/16/2002	12:45	39	15	epm			1	lw/ck		
W-114.60-3	2/16/2002	12:45	32	27	ppm			1	lw/ck		
W-114.60-3	2/16/2002	12:45	14	33	ppm			1	lw/ck		
W-114.60-3	2/16/2002	12:45	7	80	ppm			1	lw/ck		
W-114.60-3	2/16/2002	12:45	12	92	ppm			1	lw/ck		
W-114.60-3	2/16/2002	12:45	15	155	ppm			1	lw/ck		
W-114.60-3	2/16/2002	12:45	8	200	ppm			1	lw/ck		
W-114.60-3	2/16/2002	12:45	6	520	ppm			1	lw/ck		
W-114.60-3	2/16/2002	12:45	4	523	ppm			1	lw/ck		
W-114.60-3	2/16/2002	12:45	2	860	ppm			1	lw/ck		
W-114.60-3	2/16/2002	12:45	3	1.27	mS/cm			1	lw/ck		
W-114.60-3	2/16/2002	12:45	16		ppm	<	0.001	1	lw/ck		
W-114.60-3	2/16/2002	12:45	10		ppm	<	0.5	1	lw/ck		
W-87.62-2	2/16/2002	16:02	26	0.06	ppm			1	lw/ck		
W-87.62-2	2/16/2002	16:02	19	0.12	ppm			1	lw/ck		
W-87.62-2	2/16/2002	16:02	36	0.24	ppm			1	lw/ck		
W-87.62-2	2/16/2002	16:02	40	0.39	%			1	lw/ck		
W-87.62-2	2/16/2002	16:02	11	0.69	ppm			1	lw/ck		
W-87.62-2	2/16/2002	16:02	35	1.1	ppm			1	lw/ck		
W-87.62-2	2/16/2002	16:02	13	5.9	ppm			1	lw/ck		
W-87.62-2	2/16/2002	16:02	39	6.87	epm			1	lw/ck		
W-87.62-2	2/16/2002	16:02	38	6.92	epm			1	lw/ck		
W-87.62-2	2/16/2002	16:02	1	7.88				1	lw/ck		
W-87.62-2	2/16/2002	16:02	14	10	ppm			1	lw/ck		
W-87.62-2	2/16/2002	16:02	32	23	ppm			1	lw/ck		
W-87.62-2	2/16/2002	16:02	7	36	ppm			1	lw/ck		
W-87.62-2	2/16/2002	16:02	12	61	ppm			1	lw/ck		
W-87.62-2	2/16/2002	16:02	15	66	ppm			1	lw/ck		
W-87.62-2	2/16/2002	16:02	8	110	ppm			1	lw/ck		
W-87.62-2	2/16/2002	16:02	4	206	ppm			1	lw/ck		
W-87.62-2	2/16/2002	16:02	6	215	ppm			1	lw/ck		
W-87.62-2	2/16/2002	16:02	2	420	ppm			1	lw/ck		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-87.62-2	2/16/2002	16:02	3	0.625	mS/cm			1	lw/ck		
W-87.62-2	2/16/2002	16:02	16		ppm	<	0.001	1	lw/ck		
W-87.62-2	2/16/2002	16:02	9		ppm	<	0.1	1	lw/ck		
W-87.62-2	2/16/2002	16:02	10		ppm	<	0.5	1	lw/ck		
W-87.62-3	2/16/2002	16:39	40	-1.64	%			2	lw/ck		
W-87.62-3	2/16/2002	16:39	40	-1.35	%			1	lw/ck		
W-87.62-3	2/16/2002	16:39	16	0.026	ppm			1	lw/ck		
W-87.62-3	2/16/2002	16:39	26	0.09	ppm			1	lw/ck		
W-87.62-3	2/16/2002	16:39	26	0.09	ppm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	36	0.12	ppm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	9	0.14	ppm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	19	0.151	ppm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	19	0.162	ppm			1	lw/ck		
W-87.62-3	2/16/2002	16:39	36	0.19	ppm			1	lw/ck		
W-87.62-3	2/16/2002	16:39	35	0.44	ppm			1	lw/ck		
W-87.62-3	2/16/2002	16:39	35	0.45	ppm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	10	0.52	ppm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	11	0.66	ppm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	11	0.89	ppm			1	lw/ck		
W-87.62-3	2/16/2002	16:39	14	1.4	ppm			1	lw/ck		
W-87.62-3	2/16/2002	16:39	14	1.4	ppm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	13	4.3	ppm			1	lw/ck		
W-87.62-3	2/16/2002	16:39	13	4.6	ppm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	38	6.75	epm			1	lw/ck		
W-87.62-3	2/16/2002	16:39	38	6.75	epm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	39	6.94	epm			1	lw/ck		
W-87.62-3	2/16/2002	16:39	39	6.97	epm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	1	7.74				1	lw/ck		
W-87.62-3	2/16/2002	16:39	1	8.47				2	lw/ck		
W-87.62-3	2/16/2002	16:39	15	8.5	ppm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	15	8.7	ppm			1	lw/ck		
W-87.62-3	2/16/2002	16:39	32	26	ppm			1	lw/ck		
W-87.62-3	2/16/2002	16:39	4	27	ppm			1	lw/ck		
W-87.62-3	2/16/2002	16:39	4	27	ppm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	32	30	ppm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	7	36	ppm			1	lw/ck		
W-87.62-3	2/16/2002	16:39	7	37	ppm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	8	105	ppm			1	lw/ck		
W-87.62-3	2/16/2002	16:39	8	105	ppm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	12	140	ppm			1	lw/ck		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-87.62-3	2/16/2002	16:39	12	140	ppm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	6	225	ppm			1	lw/ck		
W-87.62-3	2/16/2002	16:39	6	225	ppm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	2	430	ppm			1	lw/ck		
W-87.62-3	2/16/2002	16:39	2	440	ppm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	3	0.678	mS/cm			2	lw/ck		
W-87.62-3	2/16/2002	16:39	3	0.693	mS/cm			1	lw/ck		
W-87.62-3	2/16/2002	16:39	16		ppm	<	0.001	2	lw/ck		
W-87.62-3	2/16/2002	16:39	9		ppm	<	0.1	1	lw/ck		
W-87.62-3	2/16/2002	16:39	10		ppm	<	0.5	1	lw/ck		
W-87.62-4	2/16/2002	16:37	26	0.23	ppm			1	tn/ry		
W-87.62-4	2/16/2002	16:37	9	0.31	ppm			1	tn/ry		
W-87.62-4	2/16/2002	16:37	19	0.38	ppm			1	tn/ry		
W-87.62-4	2/16/2002	16:37	36	0.84	ppm			1	tn/ry		
W-87.62-4	2/16/2002	16:37	11	1.1	ppm			1	tn/ry		
W-87.62-4	2/16/2002	16:37	40	1.97	%			1	tn/ry		
W-87.62-4	2/16/2002	16:37	35	3.8	ppm			1	tn/ry		
W-87.62-4	2/16/2002	16:37	1	7.47				1	tn/ry		
W-87.62-4	2/16/2002	16:37	13	12	ppm			1	tn/ry		
W-87.62-4	2/16/2002	16:37	39	29.78	epm			1	tn/ry		
W-87.62-4	2/16/2002	16:37	38	30.98	epm			1	tn/ry		
W-87.62-4	2/16/2002	16:37	32	33	ppm			1	tn/ry		
W-87.62-4	2/16/2002	16:37	14	46	ppm			1	tn/ry		
W-87.62-4	2/16/2002	16:37	15	225	ppm			1	tn/ry		
W-87.62-4	2/16/2002	16:37	7	230	ppm			1	tn/ry		
W-87.62-4	2/16/2002	16:37	12	360	ppm			1	tn/ry		
W-87.62-4	2/16/2002	16:37	8	600	ppm			1	tn/ry		
W-87.62-4	2/16/2002	16:37	6	655	ppm			1	tn/ry		
W-87.62-4	2/16/2002	16:37	4	751	ppm			1	tn/ry		
W-87.62-4	2/16/2002	16:37	2	1840	ppm			1	tn/ry		
W-87.62-4	2/16/2002	16:37	3	2.53	mS/cm			1	tn/ry		
W-87.62-4	2/16/2002	16:37	16		ppm	<	0.001	1	tn/ry		
W-87.62-4	2/16/2002	16:37	10		ppm	<	0.5	1	tn/ry		
W-68.72-3	2/17/2002	17:18	1	7.31				1	tn/lw		
W-68.72-3	2/17/2002	17:18	38	15.91	epm			1	tn/lw		
W-68.72-3	2/17/2002	17:18	39	15.82	epm			1	tn/lw		
W-68.72-3	2/17/2002	17:18	40	0.31	%			1	tn/lw		
W-68.72-3	2/17/2002	17:18	4	527	ppm			1	tn/lw		
W-68.72-3	2/17/2002	17:18	6	630	ppm			1	tn/lw		
W-68.72-3	2/17/2002	17:18	7	93	ppm			1	tn/lw		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-68.72-3	2/17/2002	17:18	8	135	ppm			1	tn/lw		
W-68.72-3	2/17/2002	17:18	9	0.14	ppm			1	tn/lw		
W-68.72-3	2/17/2002	17:18	10		ppm	<	0.5	1	tn/lw		
W-68.72-3	2/17/2002	17:18	11	1	ppm			1	tn/lw		
W-68.72-3	2/17/2002	17:18	12	120	ppm			1	tn/lw		
W-68.72-3	2/17/2002	17:18	13	6.4	ppm			1	tn/lw		
W-68.72-3	2/17/2002	17:18	14	34	ppm			1	tn/lw		
W-68.72-3	2/17/2002	17:18	15	155	ppm			1	tn/lw		
W-68.72-3	2/17/2002	17:18	2	880	ppm			1	tn/lw		
W-68.72-3	2/17/2002	17:18	16		ppm	<	0.001	1	tn/lw		
W-68.72-3	2/17/2002	17:18	19	0.217	ppm			1	tn/lw		
W-68.72-3	2/17/2002	17:18	26	0.06	ppm			1	tn/lw		
W-68.72-3	2/17/2002	17:18	3	1.31	mS/cm			1	tn/lw		
W-68.72-3	2/17/2002	17:18	32	23	ppm			1	tn/lw		
W-68.72-3	2/17/2002	17:18	35	3.1	ppm			1	tn/lw		
W-68.72-3	2/17/2002	17:18	36	0.49	ppm			1	tn/lw		
W-68.72-5	2/17/2002	17:51	40	-1.57	%			1	lw/tn		
W-68.72-5	2/17/2002	17:51	26	0.06	ppm			1	lw/tn		
W-68.72-5	2/17/2002	17:51	19	0.065	ppm			1	lw/tn		
W-68.72-5	2/17/2002	17:51	36	0.12	ppm			1	lw/tn		
W-68.72-5	2/17/2002	17:51	11	0.39	ppm			1	lw/tn		
W-68.72-5	2/17/2002	17:51	35	0.71	ppm			1	lw/tn		
W-68.72-5	2/17/2002	17:51	13	2.7	ppm			1	lw/tn		
W-68.72-5	2/17/2002	17:51	38	6.43	epm			1	lw/tn		
W-68.72-5	2/17/2002	17:51	39	6.63	epm			1	lw/tn		
W-68.72-5	2/17/2002	17:51	1	7.85				1	lw/tn		
W-68.72-5	2/17/2002	17:51	14	8.4	ppm			1	lw/tn		
W-68.72-5	2/17/2002	17:51	32	25	ppm			1	lw/tn		
W-68.72-5	2/17/2002	17:51	7	38	ppm			1	lw/tn		
W-68.72-5	2/17/2002	17:51	15	56	ppm			1	lw/tn		
W-68.72-5	2/17/2002	17:51	12	66	ppm			1	lw/tn		
W-68.72-5	2/17/2002	17:51	8	140	ppm			1	lw/tn		
W-68.72-5	2/17/2002	17:51	6	160	ppm			1	lw/tn		
W-68.72-5	2/17/2002	17:51	4	174	ppm			1	lw/tn		
W-68.72-5	2/17/2002	17:51	2	420	ppm			1	lw/tn		
W-68.72-5	2/17/2002	17:51	3	0.618	mS/cm			1	lw/tn		
W-68.72-5	2/17/2002	17:51	16		ppm	<	0.001	1	lw/tn		
W-68.72-5	2/17/2002	17:51	9		ppm	<	0.1	1	lw/tn		
W-68.72-5	2/17/2002	17:51	10		ppm	<	0.5	1	lw/tn		
W-68.72-6	2/17/2002	18:09	26	0.07	ppm			1	lw/tn		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-68.72-6	2/17/2002	18:09	40	0.15	%			1	lw/tn		
W-68.72-6	2/17/2002	18:09	19	0.159	ppm			1	lw/tn		
W-68.72-6	2/17/2002	18:09	36	0.28	ppm			1	lw/tn		
W-68.72-6	2/17/2002	18:09	11	0.54	ppm			1	lw/tn		
W-68.72-6	2/17/2002	18:09	35	0.93	ppm			1	lw/tn		
W-68.72-6	2/17/2002	18:09	13	4.9	ppm			1	lw/tn		
W-68.72-6	2/17/2002	18:09	1	7.6				1	lw/tn		
W-68.72-6	2/17/2002	18:09	39	9.97	epm			1	lw/tn		
W-68.72-6	2/17/2002	18:09	38	10	epm			1	lw/tn		
W-68.72-6	2/17/2002	18:09	14	14	ppm			1	lw/tn		
W-68.72-6	2/17/2002	18:09	7	30	ppm			1	lw/tn		
W-68.72-6	2/17/2002	18:09	32	32	ppm			1	lw/tn		
W-68.72-6	2/17/2002	18:09	15	79	ppm			1	lw/tn		
W-68.72-6	2/17/2002	18:09	12	110	ppm			1	lw/tn		
W-68.72-6	2/17/2002	18:09	8	130	ppm			1	lw/tn		
W-68.72-6	2/17/2002	18:09	4	255	ppm			1	lw/tn		
W-68.72-6	2/17/2002	18:09	6	390	ppm			1	lw/tn		
W-68.72-6	2/17/2002	18:09	2	600	ppm			1	lw/tn		
W-68.72-6	2/17/2002	18:09	3	0.824	mS/cm			1	lw/tn		
W-68.72-6	2/17/2002	18:09	16		ppm	<	0.001	1	lw/tn		
W-68.72-6	2/17/2002	18:09	9		ppm	<	0.1	1	lw/tn		
W-68.72-6	2/17/2002	18:09	10		ppm	<	0.1	1	lw/tn		
W-83.98-1	2/17/2002	13:04	40	-1.9	%			1	lw/tn		
W-83.98-1	2/17/2002	13:04	19	0.628	ppm			1	lw/tn		
W-83.98-1	2/17/2002	13:04	26	4	ppm			1	lw/tn		
W-83.98-1	2/17/2002	13:04	1	7.35				1	lw/tn		
W-83.98-1	2/17/2002	13:04	36	10	ppm			1	lw/tn		This value is questionable due to interferences.
W-83.98-1	2/17/2002	13:04	35	21	ppm			1	lw/tn		
W-83.98-1	2/17/2002	13:04	32	58	ppm			1	lw/tn		
W-83.98-1	2/17/2002	13:04	13	150	ppm			1	lw/tn		
W-83.98-1	2/17/2002	13:04	38	218.66	epm			1	lw/tn		
W-83.98-1	2/17/2002	13:04	39	227.15	epm			1	lw/tn		
W-83.98-1	2/17/2002	13:04	14	270	ppm			1	lw/tn		
W-83.98-1	2/17/2002	13:04	15	530	ppm			1	lw/tn		
W-83.98-1	2/17/2002	13:04	6	1080	ppm			1	lw/tn		
W-83.98-1	2/17/2002	13:04	3	19.2	mS/cm			1	lw/tn		
W-83.98-1	2/17/2002	13:04	4	2435	ppm			1	lw/tn		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-83.98-1	2/17/2002	13:04	12	3820	ppm			1	lw/tn		
W-83.98-1	2/17/2002	13:04	7	4000	ppm			1	lw/tn		
W-83.98-1	2/17/2002	13:04	8	4640	ppm			1	lw/tn		
W-83.98-1	2/17/2002	13:04	2	14010	ppm			1	lw/tn		
W-83.98-1	2/17/2002	13:04	16		ppm	<	0.001	1	lw/tn		
W-83.98-1	2/17/2002	13:04	11		ppm	<	0.1	1	lw/tn		
W-83.98-1	2/17/2002	13:04	9		ppm	<	0.1	1	lw/tn		
W-83.98-1	2/17/2002	13:04	10		ppm	<	0.5	1	lw/tn		
W-83.98-3	2/17/2002	14:34	40	-0.22	%			1	lw/tn		
W-83.98-3	2/17/2002	14:34	26	0.06	ppm			1	lw/tn		
W-83.98-3	2/17/2002	14:34	19	0.13	ppm			1	lw/tn		
W-83.98-3	2/17/2002	14:34	36	0.19	ppm			1	lw/tn		
W-83.98-3	2/17/2002	14:34	11	0.6	ppm			1	lw/tn		
W-83.98-3	2/17/2002	14:34	35	1.5	ppm			1	lw/tn		
W-83.98-3	2/17/2002	14:34	13	4	ppm			1	lw/tn		
W-83.98-3	2/17/2002	14:34	1	7.59				1	lw/tn		
W-83.98-3	2/17/2002	14:34	38	8.94	epm			1	lw/tn		
W-83.98-3	2/17/2002	14:34	39	8.98	epm			1	lw/tn		
W-83.98-3	2/17/2002	14:34	14	13	ppm			1	lw/tn		
W-83.98-3	2/17/2002	14:34	32	26	ppm			1	lw/tn		
W-83.98-3	2/17/2002	14:34	7	52	ppm			1	lw/tn		
W-83.98-3	2/17/2002	14:34	12	80	ppm			1	lw/tn		
W-83.98-3	2/17/2002	14:34	8	80	ppm			1	lw/tn		
W-83.98-3	2/17/2002	14:34	15	86	ppm			1	lw/tn		
W-83.98-3	2/17/2002	14:34	4	268	ppm			1	lw/tn		
W-83.98-3	2/17/2002	14:34	6	355	ppm			1	lw/tn		
W-83.98-3	2/17/2002	14:34	2	520	ppm			1	lw/tn		
W-83.98-3	2/17/2002	14:34	3	0.76	mS/cm			1	lw/tn		
W-83.98-3	2/17/2002	14:34	16		ppm	<	0.001	1	lw/tn		
W-83.98-3	2/17/2002	14:34	9		ppm	<	0.1	1	lw/tn		
W-83.98-3	2/17/2002	14:34	10		ppm	<	0.5	1	lw/tn		
W-83.98-4	2/17/2002	13:55	40	-1.01	%			1	lw/tn		
W-83.98-4	2/17/2002	13:55	19	0.11	ppm			1	lw/tn		
W-83.98-4	2/17/2002	13:55	36	0.11	ppm			1	lw/tn		
W-83.98-4	2/17/2002	13:55	26	0.41	ppm			1	lw/tn		
W-83.98-4	2/17/2002	13:55	11	0.66	ppm			1	lw/tn		
W-83.98-4	2/17/2002	13:55	35	0.98	ppm			1	lw/tn		
W-83.98-4	2/17/2002	13:55	13	4.2	ppm			1	lw/tn		
W-83.98-4	2/17/2002	13:55	38	6.2	epm			1	lw/tn		
W-83.98-4	2/17/2002	13:55	39	6.33	epm			1	lw/tn		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-83.98-4	2/17/2002	13:55	1	7.68				1	lw/tn		
W-83.98-4	2/17/2002	13:55	14	11	ppm			1	lw/tn		
W-83.98-4	2/17/2002	13:55	32	22	ppm			1	lw/tn		
W-83.98-4	2/17/2002	13:55	7	26	ppm			1	lw/tn		
W-83.98-4	2/17/2002	13:55	12	47	ppm			1	lw/tn		
W-83.98-4	2/17/2002	13:55	15	63	ppm			1	lw/tn		
W-83.98-4	2/17/2002	13:55	8	78	ppm			1	lw/tn		
W-83.98-4	2/17/2002	13:55	4	203	ppm			1	lw/tn		
W-83.98-4	2/17/2002	13:55	6	240	ppm			1	lw/tn		
W-83.98-4	2/17/2002	13:55	2	370	ppm			1	lw/tn		
W-83.98-4	2/17/2002	13:55	3	0.549	mS/cm			1	lw/tn		
W-83.98-4	2/17/2002	13:55	16		ppm	<	0.001	1	lw/tn		
W-83.98-4	2/17/2002	13:55	9		ppm	<	0.1	1	lw/tn		
W-83.98-4	2/17/2002	13:55	10		ppm	<	0.1	1	lw/tn		
W-91.28-1	2/17/2002	11:17	40	-0.39	%			1	tn/ry		
W-91.28-1	2/17/2002	11:17	26	0.08	ppm			1	tn/ry		
W-91.28-1	2/17/2002	11:17	19	0.111	ppm			1	tn/ry		
W-91.28-1	2/17/2002	11:17	36	0.15	ppm			1	tn/ry		
W-91.28-1	2/17/2002	11:17	11	0.52	ppm			1	tn/ry		
W-91.28-1	2/17/2002	11:17	35	1.2	ppm			1	tn/ry		
W-91.28-1	2/17/2002	11:17	10	2.6	ppm			1	tn/ry		
W-91.28-1	2/17/2002	11:17	38	6.49	epm			1	tn/ry		
W-91.28-1	2/17/2002	11:17	39	6.54	epm			1	tn/ry		
W-91.28-1	2/17/2002	11:17	1	7.81				1	tn/ry		
W-91.28-1	2/17/2002	11:17	13	9.8	ppm			1	tn/ry		
W-91.28-1	2/17/2002	11:17	14	16	ppm			1	tn/ry		
W-91.28-1	2/17/2002	11:17	7	26	ppm			1	tn/ry		
W-91.28-1	2/17/2002	11:17	32	32	ppm			1	tn/ry		
W-91.28-1	2/17/2002	11:17	12	50	ppm			1	tn/ry		
W-91.28-1	2/17/2002	11:17	15	55	ppm			1	tn/ry		
W-91.28-1	2/17/2002	11:17	8	57	ppm			1	tn/ry		
W-91.28-1	2/17/2002	11:17	4	203	ppm			1	tn/ry		
W-91.28-1	2/17/2002	11:17	6	275	ppm			1	tn/ry		
W-91.28-1	2/17/2002	11:17	2	390	ppm			1	tn/ry		
W-91.28-1	2/17/2002	11:17	3	0.624	mS/cm			1	tn/ry		
W-91.28-1	2/17/2002	11:17	16		ppm	<	0.001	1	tn/ry		
W-91.28-1	2/17/2002	11:17	9		ppm	<	0.1	1	tn/ry		
W-91.28-3	2/17/2002	10:55	26	0.05	ppm			1	lw/ck		
W-91.28-3	2/17/2002	10:55	40	0.09	%			1	lw/ck		
W-91.28-3	2/17/2002	10:55	19	0.094	ppm			1	lw/ck		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-91.28-3	2/17/2002	10:55	36	0.25	ppm			1	lw/ck		
W-91.28-3	2/17/2002	10:55	9	0.36	ppm			1	lw/ck		
W-91.28-3	2/17/2002	10:55	11	0.6	ppm			1	lw/ck		
W-91.28-3	2/17/2002	10:55	35	1.2	ppm			1	lw/ck		
W-91.28-3	2/17/2002	10:55	13	6	ppm			1	lw/ck		
W-91.28-3	2/17/2002	10:55	39	7.66	epm			1	lw/ck		
W-91.28-3	2/17/2002	10:55	38	7.68	epm			1	lw/ck		
W-91.28-3	2/17/2002	10:55	1	7.68				1	lw/ck		
W-91.28-3	2/17/2002	10:55	14	13	ppm			1	lw/ck		
W-91.28-3	2/17/2002	10:55	32	24	ppm			1	lw/ck		
W-91.28-3	2/17/2002	10:55	7	38	ppm			1	lw/ck		
W-91.28-3	2/17/2002	10:55	12	60	ppm			1	lw/ck		
W-91.28-3	2/17/2002	10:55	15	77	ppm			1	lw/ck		
W-91.28-3	2/17/2002	10:55	8	110	ppm			1	lw/ck		
W-91.28-3	2/17/2002	10:55	4	246	ppm			1	lw/ck		
W-91.28-3	2/17/2002	10:55	6	260	ppm			1	lw/ck		
W-91.28-3	2/17/2002	10:55	2	460	ppm			1	lw/ck		
W-91.28-3	2/17/2002	10:55	3	0.675	mS/cm			1	lw/ck		
W-91.28-3	2/17/2002	10:55	16		ppm	<	0.001	1	lw/ck		
W-91.28-3	2/17/2002	10:55	10		ppm	<	0.5	1	lw/ck		
W-91.28-3.5	2/17/2002	9:49	40	-0.58	%			1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	16	0.0021	ppm			1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	26	0.24	ppm			1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	36	0.32	ppm			1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	19	0.504	ppm			1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	35	0.86	ppm			1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	11	1.6	ppm			1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	14	6	ppm			1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	13	6.7	ppm			1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	1	7.92				1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	38	16.73	epm			1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	39	16.92	epm			1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	32	37	ppm			1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	15	43	ppm			1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	7	89	ppm			1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	4	132	ppm			1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	12	320	ppm			1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	8	330	ppm			1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	6	455	ppm			1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	2	1060	ppm			1	tn/ry		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-91.28-3.5	2/17/2002	9:49	3	1.47	mS/cm			1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	9		ppm	<	0.1	1	tn/ry		
W-91.28-3.5	2/17/2002	9:49	10		ppm	<	0.5	1	tn/ry		
W-91.28-4	2/17/2002	9:26	16		ppm	<	0.001	1	lw/ck		
W-91.28-4	2/17/2002	9:26	26	0.13	ppm			1	lw/ck		
W-91.28-4	2/17/2002	9:26	19	0.315	ppm			1	lw/ck		
W-91.28-4	2/17/2002	9:26	36	0.44	ppm			1	lw/ck		
W-91.28-4	2/17/2002	9:26	40	0.66	%			1	lw/ck		
W-91.28-4	2/17/2002	9:26	11	1.9	ppm			1	lw/ck		
W-91.28-4	2/17/2002	9:26	35	3.1	ppm			1	lw/ck		
W-91.28-4	2/17/2002	9:26	13	6	ppm			1	lw/ck		
W-91.28-4	2/17/2002	9:26	1	7.16				1	lw/ck		
W-91.28-4	2/17/2002	9:26	39	18.92	epm			1	lw/ck		
W-91.28-4	2/17/2002	9:26	38	19.17	epm			1	lw/ck		
W-91.28-4	2/17/2002	9:26	32	27	ppm			1	lw/ck		
W-91.28-4	2/17/2002	9:26	14	29	ppm			1	lw/ck		
W-91.28-4	2/17/2002	9:26	7	72	ppm			1	lw/ck		
W-91.28-4	2/17/2002	9:26	12	170	ppm			1	lw/ck		
W-91.28-4	2/17/2002	9:26	15	185	ppm			1	lw/ck		
W-91.28-4	2/17/2002	9:26	8	255	ppm			1	lw/ck		
W-91.28-4	2/17/2002	9:26	4	581	ppm			1	lw/ck		
W-91.28-4	2/17/2002	9:26	6	700	ppm			1	lw/ck		
W-91.28-4	2/17/2002	9:26	2	1100	ppm			1	lw/ck		
W-91.28-4	2/17/2002	9:26	3	1.5	mS/cm			1	lw/ck		
W-91.28-4	2/17/2002	9:26	9		ppm	<	0.1	1	lw/ck		
W-91.28-4	2/17/2002	9:26	10		ppm	<	0.5	1	lw/ck		
Acid Blank	2/18/2002	22:13	35	0.06	ppm			5	tn		
Acid Blank	2/18/2002	22:13	13	0.11	ppm			5	tn		
Acid Blank	2/18/2002	22:13	12	0.8	ppm			5	tn		
Acid Blank	2/18/2002	22:13	15	1.4	ppm			5	tn		
Acid Blank	2/18/2002	22:13	14		ppm	<	0.01	5	tn		
Acid Blank	2/18/2002	22:13	32		ppm	<	5	5	tn		
DI Blank	2/18/2002	0:00	1	9				4	tn/ry		
DI Blank	2/18/2002	0:00	38	0.16	epm			4	tn/ry		
DI Blank	2/18/2002	0:00	39	0.33	epm			4	tn/ry		
DI Blank	2/18/2002	0:00	4	8	ppm			4	tn/ry		
DI Blank	2/18/2002	0:00	6	16	ppm			4	tn/ry		
DI Blank	2/18/2002	0:00	7	0.73	ppm			4	tn/ry		
DI Blank	2/18/2002	0:00	8	2.2	ppm			4	tn/ry		
DI Blank	2/18/2002	0:00	9		ppm	<	0.1	4	tn/ry		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
DI Blank	2/18/2002	0:00	10		ppm	<	0.5	4	tn/ry		
DI Blank	2/18/2002	0:00	11		ppm	<	0.1	4	tn/ry		
DI Blank	2/18/2002	0:00	12		ppm	<	1	4	tn/ry		
DI Blank	2/18/2002	0:00	13		ppm	<	0.01	4	tn/ry		
DI Blank	2/18/2002	0:00	14		ppm	<	0.01	4	tn/ry		
DI Blank	2/18/2002	0:00	15	3.2	ppm			4	tn/ry		
DI Blank	2/18/2002	0:00	2	10	ppm			4	tn/ry		
DI Blank	2/18/2002	0:00	16	0.001	ppm			4	tn/ry		
DI Blank	2/18/2002	0:00	19	0.002	ppm			4	tn/ry		
DI Blank	2/18/2002	0:00	26	0.01	ppm			4	tn/ry		
DI Blank	2/18/2002	0:00	3	0.0154	mS/cm			4	tn/ry		
DI Blank	2/18/2002	0:00	32		ppm	<	5	4	tn/ry		
DI Blank	2/18/2002	0:00	35		ppm	<	1	4	tn/ry		
DI Blank	2/18/2002	0:00	36		ppm	<	0.1	4	tn/ry		
Equipment Blank	2/18/2002	10:02	19	0.0029	ppm			3	tn/ry		
Equipment Blank	2/18/2002	10:02	26	0.01	ppm			3	tn/ry		
Equipment Blank	2/18/2002	10:02	16	0.015	ppm			3	tn/ry		
Equipment Blank	2/18/2002	17:36	13		ppm	<	0.01	3	tn/ry		
Equipment Blank	2/18/2002	17:36	26		ppm	<	0.02	3	tn/ry		
Equipment Blank	2/18/2002	17:36	36		ppm	<	0.1	3	tn/ry		
Equipment Blank	2/18/2002	17:36	11		ppm	<	0.1	3	tn/ry		
Equipment Blank	2/18/2002	17:36	9		ppm	<	0.1	3	tn/ry		
Equipment Blank	2/18/2002	17:36	10		ppm	<	0.1	3	tn/ry		
Equipment Blank	2/18/2002	17:36	12		ppm	<	0.01	3	tn/ry		
Equipment Blank	2/18/2002	17:36	7		ppm	<	1	3	tn/ry		
Equipment Blank	2/18/2002	17:36	32		ppm	<	5	3	tn/ry		
Equipment Blank	2/18/2002	17:36	6		ppm	<	10	3	tn/ry		
Equipment Blank	2/18/2002	10:02	38	0.06	epm			3	tn/ry		
Equipment Blank	2/18/2002	10:02	39	0.61	epm			3	tn/ry		
Equipment Blank	2/18/2002	10:02	15	1.1	ppm			3	tn/ry		
Equipment Blank	2/18/2002	10:02	4	3	ppm			3	tn/ry		
Equipment Blank	2/18/2002	10:02	3	0.0052	mS/cm			3	tn/ry		
Equipment Blank	2/18/2002	10:02	1	7.21				3	tn/ry		
Equipment Blank	2/18/2002	10:02	2	20	ppm			3	tn/ry		
Equipment Blank	2/18/2002	10:02	6	37	ppm			3	tn/ry		
Equipment Blank	2/18/2002	10:02	14		ppm	<	0.01	3	tn/ry		
Equipment Blank	2/18/2002	10:02	36		ppm	<	0.1	3	tn/ry		
Equipment Blank	2/18/2002	10:02	11		ppm	<	0.1	3	tn/ry		
Equipment Blank	2/18/2002	10:02	9		ppm	<	0.1	3	tn/ry		
Equipment Blank	2/18/2002	10:02	10		ppm	<	0.1	3	tn/ry		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
Equipment Blank	2/18/2002	10:02	7		ppm	<	1	3	tn/ry		
Equipment Blank	2/18/2002	10:02	13		ppm	<	1	3	tn/ry		
Equipment Blank	2/18/2002	10:02	12		ppm	<	1	3	tn/ry		
Equipment Blank	2/18/2002	10:02	35		ppm	<	1	3	tn/ry		
Equipment Blank	2/18/2002	10:02	8		ppm	<	1	3	tn/ry		
Equipment Blank	2/18/2002	10:02	32		ppm	<	5	3	tn/ry		
Equipment Blank	2/18/2002	17:36	2	0	ppm			3	tn/ry		
Equipment Blank	2/18/2002	17:36	39	0.02	epm			3	tn/ry		
Equipment Blank	2/18/2002	17:36	16	0.055	ppm			3	tn/ry		
Equipment Blank	2/18/2002	17:36	38	0.06	epm			3	tn/ry		
Equipment Blank	2/18/2002	17:36	35	0.07	ppm			3	tn/ry		
Equipment Blank	2/18/2002	17:36	8	1	ppm			3	tn/ry		
Equipment Blank	2/18/2002	17:36	15	1.1	ppm			3	tn/ry		
Equipment Blank	2/18/2002	17:36	4	3	ppm			3	tn/ry		
Equipment Blank	2/18/2002	17:36	3	0.0052	mS/cm			3	tn/ry		
Equipment Blank	2/18/2002	17:36	1	7.14				3	tn/ry		
Equipment Blank	2/18/2002	17:36	19		ppm	<	0.01	3	tn/ry		
Equipment Blank	2/18/2002	17:36	14		ppm	<	0.01	3	tn/ry		
W-68.72-1	2/18/2002	12:22	40	-1.9	%			1	tn/ry		
W-68.72-1	2/18/2002	12:22	26	0.04	ppm			1	tn/ry		
W-68.72-1	2/18/2002	12:22	19	0.109	ppm			1	tn/ry		
W-68.72-1	2/18/2002	12:22	36	0.21	ppm			1	tn/ry		
W-68.72-1	2/18/2002	12:22	11	0.67	ppm			1	tn/ry		
W-68.72-1	2/18/2002	12:22	35	1.3	ppm			1	tn/ry		
W-68.72-1	2/18/2002	12:22	13	4	ppm			1	tn/ry		
W-68.72-1	2/18/2002	12:22	1	7.49				1	tn/ry		
W-68.72-1	2/18/2002	12:22	38	7.71	epm			1	tn/ry		
W-68.72-1	2/18/2002	12:22	39	8.01	epm			1	tn/ry		
W-68.72-1	2/18/2002	12:22	14	15	ppm			1	tn/ry		
W-68.72-1	2/18/2002	12:22	32	19	ppm			1	tn/ry		
W-68.72-1	2/18/2002	12:22	7	28	ppm			1	tn/ry		
W-68.72-1	2/18/2002	12:22	8	30	ppm			1	tn/ry		
W-68.72-1	2/18/2002	12:22	12	57	ppm			1	tn/ry		
W-68.72-1	2/18/2002	12:22	15	78	ppm			1	tn/ry		
W-68.72-1	2/18/2002	12:22	4	257	ppm			1	tn/ry		
W-68.72-1	2/18/2002	12:22	6	400	ppm			1	tn/ry		
W-68.72-1	2/18/2002	12:22	2	430	ppm			1	tn/ry		
W-68.72-1	2/18/2002	12:22	3	0.678	mS/cm			1	tn/ry		
W-68.72-1	2/18/2002	12:22	16		ppm	<	0.001	1	tn/ry		
W-68.72-1	2/18/2002	12:22	9		ppm	<	0.1	1	tn/ry		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-68.72-1	2/18/2002	12:22	10		ppm	<	0.5	1	tn/ry		
W-EB-11-20	2/18/2002	16:23	40	-0.53	%			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	26	0.05	ppm			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	9	0.07	ppm			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	19	0.141	ppm			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	36	0.21	ppm			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	11	0.87	ppm			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	35	2.2	ppm			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	13	4	ppm			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	1	7.29				1	tn/ry		
W-EB-11-20	2/18/2002	16:23	38	10.76	epm			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	39	10.87	epm			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	32	20	ppm			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	14	21	ppm			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	7	53	ppm			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	8	74	ppm			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	12	79	ppm			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	15	110	ppm			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	4	361	ppm			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	6	475	ppm			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	2	600	ppm			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	3	0.9	mS/cm			1	tn/ry		
W-EB-11-20	2/18/2002	16:23	16		ppm	<	0.001	1	tn/ry		
W-EB-11-20	2/18/2002	16:23	10		ppm	<	0.5	1	tn/ry		
W-EB-22-18	2/18/2002	17:28	40	-0.78	%			1	tn/ry		
W-EB-22-18	2/18/2002	17:28	26	0.05	ppm			1	tn/ry		
W-EB-22-18	2/18/2002	17:28	19	0.192	ppm			1	tn/ry		
W-EB-22-18	2/18/2002	17:28	36	0.59	ppm			1	tn/ry		
W-EB-22-18	2/18/2002	17:28	11	0.65	ppm			1	tn/ry		
W-EB-22-18	2/18/2002	17:28	35	4.5	ppm			1	tn/ry		
W-EB-22-18	2/18/2002	17:28	1	7.11				1	tn/ry		
W-EB-22-18	2/18/2002	17:28	8	7.9	ppm			1	tn/ry		
W-EB-22-18	2/18/2002	17:28	13	8.1	ppm			1	tn/ry		
W-EB-22-18	2/18/2002	17:28	38	19.35	epm			1	tn/ry		
W-EB-22-18	2/18/2002	17:28	39	19.65	epm			1	tn/ry		
W-EB-22-18	2/18/2002	17:28	32	24	ppm			1	tn/ry		
W-EB-22-18	2/18/2002	17:28	14	54	ppm			1	tn/ry		
W-EB-22-18	2/18/2002	17:28	7	68	ppm			1	tn/ry		
W-EB-22-18	2/18/2002	17:28	12	120	ppm			1	tn/ry		
W-EB-22-18	2/18/2002	17:28	15	190	ppm			1	tn/ry		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-EB-22-18	2/18/2002	17:28	4	697	ppm			1	tn/ry		
W-EB-22-18	2/18/2002	17:28	2	1010	ppm			1	tn/ry		
W-EB-22-18	2/18/2002	17:28	6	1070	ppm			1	tn/ry		
W-EB-22-18	2/18/2002	17:28	3	1.66	mS/cm			1	tn/ry		
W-EB-22-18	2/18/2002	17:28	16		ppm	<	0.001	1	tn/ry		
W-EB-22-18	2/18/2002	17:28	9		ppm	<	0.1	1	tn/ry		
W-EB-22-18	2/18/2002	17:28	10		ppm	<	0.5	1	tn/ry		
W-Thomas1	2/18/2002	9:51	40	-0.35	%			1	lw/tn		
W-Thomas1	2/18/2002	9:51	26	0.07	ppm			1	lw/tn		
W-Thomas1	2/18/2002	9:51	19	0.073	ppm			1	lw/tn		
W-Thomas1	2/18/2002	9:51	36	0.19	ppm			1	lw/tn		
W-Thomas1	2/18/2002	9:51	11	0.41	ppm			1	lw/tn		
W-Thomas1	2/18/2002	9:51	35	1.3	ppm			1	lw/tn		
W-Thomas1	2/18/2002	9:51	13	4.8	ppm			1	lw/tn		
W-Thomas1	2/18/2002	9:51	1	7.61				1	lw/tn		
W-Thomas1	2/18/2002	9:51	38	10.31	epm			1	lw/tn		
W-Thomas1	2/18/2002	9:51	39	10.38	epm			1	lw/tn		
W-Thomas1	2/18/2002	9:51	14	17	ppm			1	lw/tn		
W-Thomas1	2/18/2002	9:51	32	28	ppm			1	lw/tn		
W-Thomas1	2/18/2002	9:51	7	56	ppm			1	lw/tn		
W-Thomas1	2/18/2002	9:51	12	69	ppm			1	lw/tn		
W-Thomas1	2/18/2002	9:51	15	116	ppm			1	lw/tn		
W-Thomas1	2/18/2002	9:51	8	225	ppm			1	lw/tn		
W-Thomas1	2/18/2002	9:51	6	250	ppm			1	lw/tn		
W-Thomas1	2/18/2002	9:51	4	360	ppm			1	lw/tn		
W-Thomas1	2/18/2002	9:51	2	640	ppm			1	lw/tn		
W-Thomas1	2/18/2002	9:51	3	0.91	mS/cm			1	lw/tn		
W-Thomas1	2/18/2002	9:51	16		ppm	<	0.001	1	lw/tn		
W-Thomas1	2/18/2002	9:51	9		ppm	<	0.1	1	lw/tn		
W-Thomas1	2/18/2002	9:51	10		ppm	<	0.5	1	lw/tn		
W-109.49-2	6/11/2002	12:49	40	-0.18	%			1	tn/cc		
W-109.49-2	6/11/2002	12:49	19	0.14	ppm			1	tn/cc		
W-109.49-2	6/11/2002	12:49	36	0.14	ppm			1	tn/cc		
W-109.49-2	6/11/2002	12:49	11	0.4	ppm			1	tn/cc		
W-109.49-2	6/11/2002	12:49	35	0.67	ppm			1	tn/cc		
W-109.49-2	6/11/2002	12:49	13	4	ppm			1	tn/cc		
W-109.49-2	6/11/2002	12:49	38	6.95	epm			1	tn/cc		
W-109.49-2	6/11/2002	12:49	39	6.98	epm			1	tn/cc		
W-109.49-2	6/11/2002	12:49	1	7.6				1	tn/cc		
W-109.49-2	6/11/2002	12:49	14	11	ppm			1	tn/cc		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-109.49-2	6/11/2002	12:49	7	38	ppm			1	tn/cc		
W-109.49-2	6/11/2002	12:49	12	56	ppm			1	tn/cc		
W-109.49-2	6/11/2002	12:49	15	70	ppm			1	tn/cc		
W-109.49-2	6/11/2002	12:49	8	93	ppm			1	tn/cc		
W-109.49-2	6/11/2002	12:49	4	220	ppm			1	tn/cc		
W-109.49-2	6/11/2002	12:49	6	240	ppm			1	tn/cc		
W-109.49-2	6/11/2002	12:49	2	390	ppm			1	tn/cc		
W-109.49-2	6/11/2002	12:49	3	0.623	mS/cm			1	tn/cc		
W-109.49-2	6/11/2002	12:49	9		ppm	<	0.1	1	tn/cc		
W-109.49-2	6/11/2002	12:49	10		ppm	<	0.5	1	tn/cc		
W-109.49-3	6/11/2002	15:34	40	-0.79	%			1	tn/cc		
W-109.49-3	6/11/2002	15:34	19	0.24	ppm			1	tn/cc		
W-109.49-3	6/11/2002	15:34	36	0.27	ppm			1	tn/cc		
W-109.49-3	6/11/2002	15:34	11	0.4	ppm			1	tn/cc		
W-109.49-3	6/11/2002	15:34	35	1.83	ppm			1	tn/cc		
W-109.49-3	6/11/2002	15:34	1	7				1	tn/cc		
W-109.49-3	6/11/2002	15:34	13	7.3	ppm			1	tn/cc		
W-109.49-3	6/11/2002	15:34	38	17.34	epm			1	tn/cc		
W-109.49-3	6/11/2002	15:34	39	17.62	epm			1	tn/cc		
W-109.49-3	6/11/2002	15:34	14	35	ppm			1	tn/cc		
W-109.49-3	6/11/2002	15:34	7	115	ppm			1	tn/cc		
W-109.49-3	6/11/2002	15:34	12	115	ppm			1	tn/cc		
W-109.49-3	6/11/2002	15:34	15	185	ppm			1	tn/cc		
W-109.49-3	6/11/2002	15:34	8	275	ppm			1	tn/cc		
W-109.49-3	6/11/2002	15:34	6	525	ppm			1	tn/cc		
W-109.49-3	6/11/2002	15:34	4	606	ppm			1	tn/cc		
W-109.49-3	6/11/2002	15:34	2	1000	ppm			1	tn/cc		
W-109.49-3	6/11/2002	15:34	3	1.35	mS/cm			1	tn/cc		
W-109.49-3	6/11/2002	15:34	9		ppm	<	0.1	1	tn/cc		
W-109.49-3	6/11/2002	15:34	10		ppm	<	0.5	1	tn/cc		
W-109.49-4	6/11/2002	14:27	36	0.14	ppm			1	tn/cc		
W-109.49-4	6/11/2002	14:27	19	0.21	ppm			1	tn/cc		
W-109.49-4	6/11/2002	14:27	11	0.55	ppm			1	tn/cc		
W-109.49-4	6/11/2002	14:27	35	0.81	ppm			1	tn/cc		
W-109.49-4	6/11/2002	14:27	40	2.33	%			1	tn/cc		
W-109.49-4	6/11/2002	14:27	13	6	ppm			1	tn/cc		
W-109.49-4	6/11/2002	14:27	1	7.4				1	tn/cc		
W-109.49-4	6/11/2002	14:27	39	7.68	epm			1	tn/cc		
W-109.49-4	6/11/2002	14:27	38	8.05	epm			1	tn/cc		
W-109.49-4	6/11/2002	14:27	14	12	ppm			1	tn/cc		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-109.49-4	6/11/2002	14:27	7	45	ppm			1	tn/cc		
W-109.49-4	6/11/2002	14:27	15	70	ppm			1	tn/cc		
W-109.49-4	6/11/2002	14:27	12	78	ppm			1	tn/cc		
W-109.49-4	6/11/2002	14:27	8	115	ppm			1	tn/cc		
W-109.49-4	6/11/2002	14:27	4	224	ppm			1	tn/cc		
W-109.49-4	6/11/2002	14:27	6	242	ppm			1	tn/cc		
W-109.49-4	6/11/2002	14:27	2	450	ppm			1	tn/cc		
W-109.49-4	6/11/2002	14:27	3	0.685	mS/cm			1	tn/cc		
W-109.49-4	6/11/2002	14:27	9		ppm	<	0.1	1	tn/cc		
W-109.49-4	6/11/2002	14:27	10		ppm	<	0.5	1	tn/cc		
W-109.49-4	6/11/2002	14:29	19	0.18	ppm			2	lw/mp		
W-109.49-4	6/11/2002	14:29	36	0.18	ppm			2	lw/mp		
W-109.49-4	6/11/2002	14:29	11	0.58	ppm			2	lw/mp		
W-109.49-4	6/11/2002	14:29	35	0.92	ppm			2	lw/mp		
W-109.49-4	6/11/2002	14:29	40	1.88	%			2	lw/mp		
W-109.49-4	6/11/2002	14:29	13	5.9	ppm			2	lw/mp		
W-109.49-4	6/11/2002	14:29	1	7.3				2	lw/mp		
W-109.49-4	6/11/2002	14:29	39	7.56	epm			2	lw/mp		
W-109.49-4	6/11/2002	14:29	38	7.85	epm			2	lw/mp		
W-109.49-4	6/11/2002	14:29	14	13	ppm			2	lw/mp		
W-109.49-4	6/11/2002	14:29	7	45	ppm			2	lw/mp		
W-109.49-4	6/11/2002	14:29	15	68	ppm			2	lw/mp		
W-109.49-4	6/11/2002	14:29	12	74	ppm			2	lw/mp		
W-109.49-4	6/11/2002	14:29	8	115	ppm			2	lw/mp		
W-109.49-4	6/11/2002	14:29	4	223	ppm			2	lw/mp		
W-109.49-4	6/11/2002	14:29	6	235	ppm			2	lw/mp		
W-109.49-4	6/11/2002	14:29	2	440	ppm			2	lw/mp		
W-109.49-4	6/11/2002	14:29	3	0.695	mS/cm			2	lw/mp		
W-109.49-4	6/11/2002	14:29	9		ppm	<	0.1	2	lw/mp		
W-109.49-4	6/11/2002	14:29	10		ppm	<	0.5	2	lw/mp		
W-114.60-2	6/11/2002	12:24	19	0.1	ppm			1	lw/mp		
W-114.60-2	6/11/2002	12:24	36	0.13	ppm			1	lw/mp		
W-114.60-2	6/11/2002	12:24	11	0.39	ppm			1	lw/mp		
W-114.60-2	6/11/2002	12:24	35	0.73	ppm			1	lw/mp		
W-114.60-2	6/11/2002	12:24	40	2.34	%			1	lw/mp		
W-114.60-2	6/11/2002	12:24	13	4.3	ppm			1	lw/mp		
W-114.60-2	6/11/2002	12:24	39	6.48	epm			1	lw/mp		
W-114.60-2	6/11/2002	12:24	38	6.8	epm			1	lw/mp		
W-114.60-2	6/11/2002	12:24	1	7.5				1	lw/mp		
W-114.60-2	6/11/2002	12:24	14	9.9	ppm			1	lw/mp		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-114.60-2	6/11/2002	12:24	7	41	ppm			1	lw/mp		
W-114.60-2	6/11/2002	12:24	12	52	ppm			1	lw/mp		
W-114.60-2	6/11/2002	12:24	15	72	ppm			1	lw/mp		
W-114.60-2	6/11/2002	12:24	8	97	ppm			1	lw/mp		
W-114.60-2	6/11/2002	12:24	6	200	ppm			1	lw/mp		
W-114.60-2	6/11/2002	12:24	4	221	ppm			1	lw/mp		
W-114.60-2	6/11/2002	12:24	2	380	ppm			1	lw/mp		
W-114.60-2	6/11/2002	12:24	3	0.607	mS/cm			1	lw/mp		
W-114.60-2	6/11/2002	12:24	9		ppm	<	0.1	1	lw/mp		
W-114.60-2	6/11/2002	12:24	10		ppm	<	0.5	1	lw/mp		
W-114.60-3	6/11/2002	10:49	36	0.18	ppm			1	lw/mp		
W-114.60-3	6/11/2002	10:49	19	0.26	ppm			1	lw/mp		
W-114.60-3	6/11/2002	10:49	11	0.47	ppm			1	lw/mp		
W-114.60-3	6/11/2002	10:49	40	1.38	%			1	lw/mp		
W-114.60-3	6/11/2002	10:49	35	1.98	ppm			1	lw/mp		
W-114.60-3	6/11/2002	10:49	9	3.7	ppm			1	lw/mp		
W-114.60-3	6/11/2002	10:49	1	6.7				1	lw/mp		
W-114.60-3	6/11/2002	10:49	13	7.6	ppm			1	lw/mp		
W-114.60-3	6/11/2002	10:49	39	16.29	epm			1	lw/mp		
W-114.60-3	6/11/2002	10:49	38	16.75	epm			1	lw/mp		
W-114.60-3	6/11/2002	10:49	14	38	ppm			1	lw/mp		
W-114.60-3	6/11/2002	10:49	7	58	ppm			1	lw/mp		
W-114.60-3	6/11/2002	10:49	12	84	ppm			1	lw/mp		
W-114.60-3	6/11/2002	10:49	15	195	ppm			1	lw/mp		
W-114.60-3	6/11/2002	10:49	8	195	ppm			1	lw/mp		
W-114.60-3	6/11/2002	10:49	6	640	ppm			1	lw/mp		
W-114.60-3	6/11/2002	10:49	4	644	ppm			1	lw/mp		
W-114.60-3	6/11/2002	10:49	2	900	ppm			1	lw/mp		
W-114.60-3	6/11/2002	10:49	3	1.3	mS/cm			1	lw/mp		
W-114.60-3	6/11/2002	10:49	10		ppm	<	0.5	1	lw/mp		
W-99.59-4	6/11/2002	8:39	36	0.11	ppm			1	lw/mp		
W-99.59-4	6/11/2002	8:39	19	0.18	ppm			1	lw/mp		
W-99.59-4	6/11/2002	8:39	11	0.43	ppm			1	lw/mp		
W-99.59-4	6/11/2002	8:39	35	0.64	ppm			1	lw/mp		
W-99.59-4	6/11/2002	8:39	40	2.65	%			1	lw/mp		
W-99.59-4	6/11/2002	8:39	13	4.1	ppm			1	lw/mp		
W-99.59-4	6/11/2002	8:39	39	6.61	epm			1	lw/mp		
W-99.59-4	6/11/2002	8:39	38	6.97	epm			1	lw/mp		
W-99.59-4	6/11/2002	8:39	1	7.5				1	lw/mp		
W-99.59-4	6/11/2002	8:39	14	10	ppm			1	lw/mp		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-99.59-4	6/11/2002	8:39	7	35	ppm			1	lw/mp		
W-99.59-4	6/11/2002	8:39	12	56	ppm			1	lw/mp		
W-99.59-4	6/11/2002	8:39	15	72	ppm			1	lw/mp		
W-99.59-4	6/11/2002	8:39	8	95	ppm			1	lw/mp		
W-99.59-4	6/11/2002	8:39	6	220	ppm			1	lw/mp		
W-99.59-4	6/11/2002	8:39	4	221	ppm			1	lw/mp		
W-99.59-4	6/11/2002	8:39	2	380	ppm			1	lw/mp		
W-99.59-4	6/11/2002	8:39	3	0.603	mS/cm			1	lw/mp		
W-99.59-4	6/11/2002	8:39	9		ppm	<	0.1	1	lw/mp		
W-99.59-4	6/11/2002	8:39	10		ppm	<	0.5	1	lw/mp		
W-Thomas1	6/11/2002	15:02	40	-1.98	%			1	lw/mp		
W-Thomas1	6/11/2002	15:02	19	0.09	ppm			1	lw/mp		
W-Thomas1	6/11/2002	15:02	36	0.15	ppm			1	lw/mp		
W-Thomas1	6/11/2002	15:02	11	0.19	ppm			1	lw/mp		
W-Thomas1	6/11/2002	15:02	35	0.89	ppm			1	lw/mp		
W-Thomas1	6/11/2002	15:02	13	4.7	ppm			1	lw/mp		
W-Thomas1	6/11/2002	15:02	1	7				1	lw/mp		
W-Thomas1	6/11/2002	15:02	38	10.18	epm			1	lw/mp		
W-Thomas1	6/11/2002	15:02	39	10.59	epm			1	lw/mp		
W-Thomas1	6/11/2002	15:02	14	19	ppm			1	lw/mp		
W-Thomas1	6/11/2002	15:02	7	57	ppm			1	lw/mp		
W-Thomas1	6/11/2002	15:02	12	64	ppm			1	lw/mp		
W-Thomas1	6/11/2002	15:02	15	114	ppm			1	lw/mp		
W-Thomas1	6/11/2002	15:02	8	230	ppm			1	lw/mp		
W-Thomas1	6/11/2002	15:02	6	255	ppm			1	lw/mp		
W-Thomas1	6/11/2002	15:02	4	363	ppm			1	lw/mp		
W-Thomas1	6/11/2002	15:02	2	620	ppm			1	lw/mp		
W-Thomas1	6/11/2002	15:02	3	0.89	mS/cm			1	lw/mp		
W-Thomas1	6/11/2002	15:02	9		ppm	<	0.1	1	lw/mp		
W-Thomas1	6/11/2002	15:02	10		ppm	<	0.5	1	lw/mp		
W-83.98-1	6/12/2002	14:48	10	0.33	ppm			1	lw/mp		
W-83.98-1	6/12/2002	14:48	11	0.34	ppm			1	lw/mp		
W-83.98-1	6/12/2002	14:48	9	0.53	ppm			1	lw/mp		
W-83.98-1	6/12/2002	14:48	19	0.73	ppm			1	lw/mp		
W-83.98-1	6/12/2002	14:48	40	1.87	%			1	lw/mp		
W-83.98-1	6/12/2002	14:48	1	7.1				1	lw/mp		
W-83.98-1	6/12/2002	14:48	36	9.9	ppm			1	lw/mp		This value is approximate due to interferences.

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-83.98-1	6/12/2002	14:48	35	12	ppm			1	lw/mp		
W-83.98-1	6/12/2002	14:48	13	146	ppm			1	lw/mp		
W-83.98-1	6/12/2002	14:48	39	227.76	epm			1	lw/mp		
W-83.98-1	6/12/2002	14:48	38	236.43	epm			1	lw/mp		
W-83.98-1	6/12/2002	14:48	14	296	ppm			1	lw/mp		
W-83.98-1	6/12/2002	14:48	15	770	ppm			1	lw/mp		
W-83.98-1	6/12/2002	14:48	6	1070	ppm			1	lw/mp		
W-83.98-1	6/12/2002	14:48	4	3142	ppm			1	lw/mp		
W-83.98-1	6/12/2002	14:48	12	3900	ppm			1	lw/mp		
W-83.98-1	6/12/2002	14:48	7	4100	ppm			1	lw/mp		
W-83.98-1	6/12/2002	14:48	8	4500	ppm			1	lw/mp		
W-83.98-1	6/12/2002	14:48	2	14250	ppm			1	lw/mp		
W-83.98-1	6/12/2002	14:48	3	17.8	mS/cm			1	lw/mp		
W-83.98-3	6/12/2002	15:02	40	-1.32	%			1	tn/cc		
W-83.98-3	6/12/2002	15:02	19	0.16	ppm			1	tn/cc		
W-83.98-3	6/12/2002	15:02	36	0.17	ppm			1	tn/cc		
W-83.98-3	6/12/2002	15:02	9	0.29	ppm			1	tn/cc		
W-83.98-3	6/12/2002	15:02	11	0.44	ppm			1	tn/cc		
W-83.98-3	6/12/2002	15:02	35	0.84	ppm			1	tn/cc		
W-83.98-3	6/12/2002	15:02	13	3.5	ppm			1	tn/cc		
W-83.98-3	6/12/2002	15:02	1	7.4				1	tn/cc		
W-83.98-3	6/12/2002	15:02	38	8.92	epm			1	tn/cc		
W-83.98-3	6/12/2002	15:02	39	9.16	epm			1	tn/cc		
W-83.98-3	6/12/2002	15:02	14	14	ppm			1	tn/cc		
W-83.98-3	6/12/2002	15:02	7	51	ppm			1	tn/cc		
W-83.98-3	6/12/2002	15:02	12	74	ppm			1	tn/cc		
W-83.98-3	6/12/2002	15:02	15	89	ppm			1	tn/cc		
W-83.98-3	6/12/2002	15:02	8	105	ppm			1	tn/cc		
W-83.98-3	6/12/2002	15:02	4	280	ppm			1	tn/cc		
W-83.98-3	6/12/2002	15:02	6	335	ppm			1	tn/cc		
W-83.98-3	6/12/2002	15:02	2	500	ppm			1	tn/cc		
W-83.98-3	6/12/2002	15:02	3	0.783	mS/cm			1	tn/cc		
W-83.98-3	6/12/2002	15:02	10		ppm	<	0.5	1	tn/cc		
W-87.62-2	6/12/2002	11:59	40	-1.27	%			1	lw/mp		
W-87.62-2	6/12/2002	11:59	19	0.09	ppm			1	lw/mp		
W-87.62-2	6/12/2002	11:59	36	0.17	ppm			1	lw/mp		
W-87.62-2	6/12/2002	11:59	11	0.49	ppm			1	lw/mp		
W-87.62-2	6/12/2002	11:59	35	0.59	ppm			1	lw/mp		
W-87.62-2	6/12/2002	11:59	13	4.5	ppm			1	lw/mp		
W-87.62-2	6/12/2002	11:59	38	6.46	epm			1	lw/mp		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-87.62-2	6/12/2002	11:59	39	6.63	epm			1	lw/mp		
W-87.62-2	6/12/2002	11:59	1	7.6				1	lw/mp		
W-87.62-2	6/12/2002	11:59	14	10	ppm			1	lw/mp		
W-87.62-2	6/12/2002	11:59	7	37	ppm			1	lw/mp		
W-87.62-2	6/12/2002	11:59	12	51	ppm			1	lw/mp		
W-87.62-2	6/12/2002	11:59	15	66	ppm			1	lw/mp		
W-87.62-2	6/12/2002	11:59	8	95	ppm			1	lw/mp		
W-87.62-2	6/12/2002	11:59	4	206	ppm			1	lw/mp		
W-87.62-2	6/12/2002	11:59	6	218	ppm			1	lw/mp		
W-87.62-2	6/12/2002	11:59	2	370	ppm			1	lw/mp		
W-87.62-2	6/12/2002	11:59	3	0.599	mS/cm			1	lw/mp		
W-87.62-2	6/12/2002	11:59	9		ppm	<	0.1	1	lw/mp		
W-87.62-2	6/12/2002	11:59	10		ppm	<	0.5	1	lw/mp		
W-87.62-3	6/12/2002	11:40	40	-0.29	%			1	lw/mp		
W-87.62-3	6/12/2002	11:40	19	0.27	ppm			1	lw/mp		
W-87.62-3	6/12/2002	11:40	35	0.27	ppm			1	lw/mp		
W-87.62-3	6/12/2002	11:40	36	0.57	ppm			1	lw/mp		
W-87.62-3	6/12/2002	11:40	9	1.06	ppm			1	lw/mp		
W-87.62-3	6/12/2002	11:40	11	1.12	ppm			1	lw/mp		
W-87.62-3	6/12/2002	11:40	14	4.4	ppm			1	lw/mp		
W-87.62-3	6/12/2002	11:40	13	6.8	ppm			1	lw/mp		
W-87.62-3	6/12/2002	11:40	1	7.9				1	lw/mp		
W-87.62-3	6/12/2002	11:40	38	10.39	epm			1	lw/mp		
W-87.62-3	6/12/2002	11:40	39	10.45	epm			1	lw/mp		
W-87.62-3	6/12/2002	11:40	15	23	ppm			1	lw/mp		
W-87.62-3	6/12/2002	11:40	7	65	ppm			1	lw/mp		
W-87.62-3	6/12/2002	11:40	4	76	ppm			1	lw/mp		
W-87.62-3	6/12/2002	11:40	8	145	ppm			1	lw/mp		
W-87.62-3	6/12/2002	11:40	12	200	ppm			1	lw/mp		
W-87.62-3	6/12/2002	11:40	6	335	ppm			1	lw/mp		
W-87.62-3	6/12/2002	11:40	2	610	ppm			1	lw/mp		
W-87.62-3	6/12/2002	11:40	3	0.93	mS/cm			1	lw/mp		
W-87.62-3	6/12/2002	11:40	10		ppm	<	0.5	1	lw/mp		
W-87.62-4	6/12/2002	12:25	4	250	ppm			1	lw/mp		
W-87.62-4	6/12/2002	12:25	2	500	ppm			1	lw/mp		
W-87.62-4	6/12/2002	12:25	3	0.768	mS/cm			1	lw/mp		
W-87.62-4	6/12/2002	12:25	9		ppm	<	0.1	1	lw/mp		
W-87.62-4	6/12/2002	12:25	10		ppm	<	0.5	1	lw/mp		
W-87.62-4	6/12/2002	12:25	19	0.2	ppm			1	lw/mp		
W-87.62-4	6/12/2002	12:25	36	0.24	ppm			1	lw/mp		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-87.62-4	6/12/2002	12:25	11	0.47	ppm			1	lw/mp		
W-87.62-4	6/12/2002	12:25	35	0.68	ppm			1	lw/mp		
W-87.62-4	6/12/2002	12:25	40	2.68	%			1	lw/mp		
W-87.62-4	6/12/2002	12:25	13	4.8	ppm			1	lw/mp		
W-87.62-4	6/12/2002	12:25	1	7.4				1	lw/mp		
W-87.62-4	6/12/2002	12:25	39	8.45	epm			1	lw/mp		
W-87.62-4	6/12/2002	12:25	38	8.92	epm			1	lw/mp		
W-87.62-4	6/12/2002	12:25	14	11	ppm			1	lw/mp		
W-87.62-4	6/12/2002	12:25	7	56	ppm			1	lw/mp		
W-87.62-4	6/12/2002	12:25	15	82	ppm			1	lw/mp		
W-87.62-4	6/12/2002	12:25	12	87	ppm			1	lw/mp		
W-87.62-4	6/12/2002	12:25	8	135	ppm			1	lw/mp		
W-87.62-4	6/12/2002	12:25	6	245	ppm			1	lw/mp		
W-91.28-1	6/12/2002	10:06	40	-2.5	%			1	lw/mp		
W-91.28-1	6/12/2002	10:06	19	0.14	ppm			1	lw/mp		
W-91.28-1	6/12/2002	10:06	36	0.21	ppm			1	lw/mp		
W-91.28-1	6/12/2002	10:06	11	0.42	ppm			1	lw/mp		
W-91.28-1	6/12/2002	10:06	35	0.68	ppm			1	lw/mp		
W-91.28-1	6/12/2002	10:06	10	2.5	ppm			1	lw/mp		
W-91.28-1	6/12/2002	10:06	38	6.75	epm			1	lw/mp		
W-91.28-1	6/12/2002	10:06	39	7.09	epm			1	lw/mp		
W-91.28-1	6/12/2002	10:06	1	7.5				1	lw/mp		
W-91.28-1	6/12/2002	10:06	13	9.7	ppm			1	lw/mp		
W-91.28-1	6/12/2002	10:06	14	16	ppm			1	lw/mp		
W-91.28-1	6/12/2002	10:06	7	26	ppm			1	lw/mp		
W-91.28-1	6/12/2002	10:06	12	50	ppm			1	lw/mp		
W-91.28-1	6/12/2002	10:06	8	52	ppm			1	lw/mp		
W-91.28-1	6/12/2002	10:06	15	60	ppm			1	lw/mp		
W-91.28-1	6/12/2002	10:06	4	216	ppm			1	lw/mp		
W-91.28-1	6/12/2002	10:06	6	315	ppm			1	lw/mp		
W-91.28-1	6/12/2002	10:06	2	370	ppm			1	lw/mp		
W-91.28-1	6/12/2002	10:06	3	0.649	mS/cm			1	lw/mp		
W-91.28-1	6/12/2002	10:06	9		ppm	<	0.1	1	lw/mp		
W-91.28-3	6/12/2002	10:05	36	0.11	ppm			1	lw/mp		
W-91.28-3	6/12/2002	10:05	19	0.12	ppm			1	lw/mp		
W-91.28-3	6/12/2002	10:05	11	0.36	ppm			1	lw/mp		
W-91.28-3	6/12/2002	10:05	35	0.64	ppm			1	lw/mp		
W-91.28-3	6/12/2002	10:05	40	2.87	%			1	lw/mp		
W-91.28-3	6/12/2002	10:05	13	4.3	ppm			1	lw/mp		
W-91.28-3	6/12/2002	10:05	39	6.89	epm			1	lw/mp		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-91.28-3	6/12/2002	10:05	38	7.3	epm			1	lw/mp		
W-91.28-3	6/12/2002	10:05	1	7.4				1	lw/mp		
W-91.28-3	6/12/2002	10:05	14	11	ppm			1	lw/mp		
W-91.28-3	6/12/2002	10:05	7	40	ppm			1	lw/mp		
W-91.28-3	6/12/2002	10:05	12	58	ppm			1	lw/mp		
W-91.28-3	6/12/2002	10:05	15	75	ppm			1	lw/mp		
W-91.28-3	6/12/2002	10:05	8	98	ppm			1	lw/mp		
W-91.28-3	6/12/2002	10:05	6	225	ppm			1	lw/mp		
W-91.28-3	6/12/2002	10:05	4	233	ppm			1	lw/mp		
W-91.28-3	6/12/2002	10:05	2	400	ppm			1	lw/mp		
W-91.28-3	6/12/2002	10:05	3	0.638	mS/cm			1	lw/mp		
W-91.28-3	6/12/2002	10:05	9		ppm	<	0.1	1	lw/mp		
W-91.28-3	6/12/2002	10:05	10		ppm	<	0.5	1	lw/mp		
W-91.28-3.5	6/12/2002	8:38	40	-1.62	%			1	tn/cc		
W-91.28-3.5	6/12/2002	8:38	9	0.15	ppm			1	tn/cc		
W-91.28-3.5	6/12/2002	8:38	36	0.25	ppm			1	tn/cc		
W-91.28-3.5	6/12/2002	8:38	35	0.44	ppm			1	tn/cc		
W-91.28-3.5	6/12/2002	8:38	19	0.5	ppm			1	tn/cc		
W-91.28-3.5	6/12/2002	8:38	11	1	ppm			1	tn/cc		
W-91.28-3.5	6/12/2002	8:38	14	5.9	ppm			1	tn/cc		
W-91.28-3.5	6/12/2002	8:38	13	6.6	ppm			1	tn/cc		
W-91.28-3.5	6/12/2002	8:38	1	7.9				1	tn/cc		
W-91.28-3.5	6/12/2002	8:38	38	15.27	epm			1	tn/cc		
W-91.28-3.5	6/12/2002	8:38	39	15.78	epm			1	tn/cc		
W-91.28-3.5	6/12/2002	8:38	15	40	ppm			1	tn/cc		
W-91.28-3.5	6/12/2002	8:38	7	80	ppm			1	tn/cc		
W-91.28-3.5	6/12/2002	8:38	4	124	ppm			1	tn/cc		
W-91.28-3.5	6/12/2002	8:38	12	290	ppm			1	tn/cc		
W-91.28-3.5	6/12/2002	8:38	8	310	ppm			1	tn/cc		
W-91.28-3.5	6/12/2002	8:38	6	425	ppm			1	tn/cc		
W-91.28-3.5	6/12/2002	8:38	2	950	ppm			1	tn/cc		
W-91.28-3.5	6/12/2002	8:38	3	1.47	mS/cm			1	tn/cc		
W-91.28-3.5	6/12/2002	8:38	10		ppm	<	0.5	1	tn/cc		
W-91.28-4	6/12/2002	8:00	36	0.12	ppm			1	lw/mp		
W-91.28-4	6/12/2002	8:00	11	0.31	ppm			1	lw/mp		
W-91.28-4	6/12/2002	8:00	19	0.35	ppm			1	lw/mp		
W-91.28-4	6/12/2002	8:00	9	1	ppm			1	lw/mp		
W-91.28-4	6/12/2002	8:00	35	1.66	ppm			1	lw/mp		
W-91.28-4	6/12/2002	8:00	40	2.38	%			1	lw/mp		
W-91.28-4	6/12/2002	8:00	13	5.1	ppm			1	lw/mp		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-91.28-4	6/12/2002	8:00	1	6.8				1	lw/mp		
W-91.28-4	6/12/2002	8:00	39	18.5	epm			1	lw/mp		
W-91.28-4	6/12/2002	8:00	38	19.4	epm			1	lw/mp		
W-91.28-4	6/12/2002	8:00	14	29	ppm			1	lw/mp		
W-91.28-4	6/12/2002	8:00	7	78	ppm			1	lw/mp		
W-91.28-4	6/12/2002	8:00	12	175	ppm			1	lw/mp		
W-91.28-4	6/12/2002	8:00	15	185	ppm			1	lw/mp		
W-91.28-4	6/12/2002	8:00	8	260	ppm			1	lw/mp		
W-91.28-4	6/12/2002	8:00	4	581	ppm			1	lw/mp		
W-91.28-4	6/12/2002	8:00	6	660	ppm			1	lw/mp		
W-91.28-4	6/12/2002	8:00	2	1060	ppm			1	lw/mp		
W-91.28-4	6/12/2002	8:00	3	1.47	mS/cm			1	lw/mp		
W-91.28-4	6/12/2002	8:00	10		ppm	<	0.5	1	lw/mp		
W-91.28-4	6/12/2002	8:00	19	0.36	ppm			6	lw/mp		
W-91.28-4	6/12/2002	8:00	36	0.41	ppm			6	lw/mp		
W-91.28-4	6/12/2002	8:00	11	0.95	ppm			6	lw/mp		
W-91.28-4	6/12/2002	8:00	9	1.17	ppm			6	lw/mp		
W-91.28-4	6/12/2002	8:00	35	1.57	ppm			6	lw/mp		
W-91.28-4	6/12/2002	8:00	40	2.2	%			6	lw/mp		
W-91.28-4	6/12/2002	8:00	13	5.2	ppm			6	lw/mp		
W-91.28-4	6/12/2002	8:00	1	7.4				6	lw/mp		
W-91.28-4	6/12/2002	8:00	39	18.56	epm			6	lw/mp		
W-91.28-4	6/12/2002	8:00	38	19.4	epm			6	lw/mp		
W-91.28-4	6/12/2002	8:00	14	29	ppm			6	lw/mp		
W-91.28-4	6/12/2002	8:00	7	79	ppm			6	lw/mp		
W-91.28-4	6/12/2002	8:00	12	175	ppm			6	lw/mp		
W-91.28-4	6/12/2002	8:00	15	185	ppm			6	lw/mp		
W-91.28-4	6/12/2002	8:00	8	260	ppm			6	lw/mp		
W-91.28-4	6/12/2002	8:00	4	581	ppm			6	lw/mp		
W-91.28-4	6/12/2002	8:00	6	660	ppm			6	lw/mp		
W-91.28-4	6/12/2002	8:00	2	1070	ppm			6	lw/mp		
W-91.28-4	6/12/2002	8:00	3	1.47	mS/cm			6	lw/mp		
W-91.28-4	6/12/2002	8:00	10		ppm	<	0.5	6	lw/mp		
Equipment Blank	6/13/2002	10:50	1	6.9				3	tn/cc	Cl and Br concentrations are high. this might indicate some type of contamination.	

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
Equipment Blank	6/13/2002	10:50	4	6	ppm				3 tn/cc	Cl and Br concentrations are high. this might indicate some type of contamination.	
Equipment Blank	6/13/2002	10:50	6		ppm	<	10		3 tn/cc	Cl and Br concentrations are high. this might indicate some type of contamination.	
Equipment Blank	6/13/2002	10:50	7	170	ppm				3 tn/cc	Cl and Br concentrations are high. this might indicate some type of contamination.	
Equipment Blank	6/13/2002	10:50	8	2	ppm				3 tn/cc	Cl and Br concentrations are high. this might indicate some type of contamination.	
Equipment Blank	6/13/2002	10:50	9		ppm	<	0.1		3 tn/cc	Cl and Br concentrations are high. this might indicate some type of contamination.	
Equipment Blank	6/13/2002	10:50	10		ppm	<	0.5		3 tn/cc	Cl and Br concentrations are high. this might indicate some type of contamination.	
Equipment Blank	6/13/2002	10:50	11		ppm	<	0.1		3 tn/cc	Cl and Br concentrations are high. this might indicate some type of contamination.	
Equipment Blank	6/13/2002	10:50	12	120	ppm				3 tn/cc	Cl and Br concentrations are high. this might indicate some type of contamination.	

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
Equipment Blank	6/13/2002	10:50	13	0.2	ppm				3 tn/cc	Cl and Br concentrations are high. this might indicate some type of contamination.	
Equipment Blank	6/13/2002	10:50	14	0.15	ppm				3 tn/cc	Cl and Br concentrations are high. this might indicate some type of contamination.	
Equipment Blank	6/13/2002	10:50	15	2	ppm				3 tn/cc	Cl and Br concentrations are high. this might indicate some type of contamination.	
Equipment Blank	6/13/2002	10:50	2	290	ppm				3 tn/cc	Cl and Br concentrations are high. this might indicate some type of contamination.	
Equipment Blank	6/13/2002	10:50	19	0.21	ppm				3 tn/cc	Cl and Br concentrations are high. this might indicate some type of contamination.	
Equipment Blank	6/13/2002	10:50	3	0.615	mS/cm				3 tn/cc	Cl and Br concentrations are high. this might indicate some type of contamination.	
Equipment Blank	6/13/2002	10:50	35	0.01	ppm				3 tn/cc	Cl and Br concentrations are high. this might indicate some type of contamination.	
Equipment Blank	6/13/2002	10:50	36		ppm	<	0.1		3 tn/cc	Cl and Br concentrations are high. this might indicate some type of contamination.	

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-68.72-1	6/13/2002	10:18	40	-0.33	%			1	tn/cc		
W-68.72-1	6/13/2002	10:18	19	0.15	ppm			1	tn/cc		
W-68.72-1	6/13/2002	10:18	36	0.22	ppm			1	tn/cc		
W-68.72-1	6/13/2002	10:18	11	0.58	ppm			1	tn/cc		
W-68.72-1	6/13/2002	10:18	35	0.95	ppm			1	tn/cc		
W-68.72-1	6/13/2002	10:18	13	3.9	ppm			1	tn/cc		
W-68.72-1	6/13/2002	10:18	1	7.1				1	tn/cc		
W-68.72-1	6/13/2002	10:18	38	9.25	epm			1	tn/cc		
W-68.72-1	6/13/2002	10:18	39	9.31	epm			1	tn/cc		
W-68.72-1	6/13/2002	10:18	14	18	ppm			1	tn/cc		
W-68.72-1	6/13/2002	10:18	8	39	ppm			1	tn/cc		
W-68.72-1	6/13/2002	10:18	7	41	ppm			1	tn/cc		
W-68.72-1	6/13/2002	10:18	12	61	ppm			1	tn/cc		
W-68.72-1	6/13/2002	10:18	15	100	ppm			1	tn/cc		
W-68.72-1	6/13/2002	10:18	4	324	ppm			1	tn/cc		
W-68.72-1	6/13/2002	10:18	6	445	ppm			1	tn/cc		
W-68.72-1	6/13/2002	10:18	2	490	ppm			1	tn/cc		
W-68.72-1	6/13/2002	10:18	3	0.78	mS/cm			1	tn/cc		
W-68.72-1	6/13/2002	10:18	9		ppm	<	0.1	1	tn/cc		
W-68.72-1	6/13/2002	10:18	10		ppm	<	0.5	1	tn/cc		
W-68.72-1	6/13/2002	10:18	19	0.14	ppm			2	tn/cc		
W-68.72-1	6/13/2002	10:18	36	0.22	ppm			2	tn/cc		
W-68.72-1	6/13/2002	10:18	11	0.59	ppm			2	tn/cc		
W-68.72-1	6/13/2002	10:18	40	0.78	%			2	tn/cc		
W-68.72-1	6/13/2002	10:18	35	0.97	ppm			2	tn/cc		
W-68.72-1	6/13/2002	10:18	13	3.9	ppm			2	tn/cc		
W-68.72-1	6/13/2002	10:18	1	7				2	tn/cc		
W-68.72-1	6/13/2002	10:18	39	9.23	epm			2	tn/cc		
W-68.72-1	6/13/2002	10:18	38	9.37	epm			2	tn/cc		
W-68.72-1	6/13/2002	10:18	14	17	ppm			2	tn/cc		
W-68.72-1	6/13/2002	10:18	8	39	ppm			2	tn/cc		
W-68.72-1	6/13/2002	10:18	7	41	ppm			2	tn/cc		
W-68.72-1	6/13/2002	10:18	12	60	ppm			2	tn/cc		
W-68.72-1	6/13/2002	10:18	15	105	ppm			2	tn/cc		
W-68.72-1	6/13/2002	10:18	4	332	ppm			2	tn/cc		
W-68.72-1	6/13/2002	10:18	6	440	ppm			2	tn/cc		
W-68.72-1	6/13/2002	10:18	2	490	ppm			2	tn/cc		
W-68.72-1	6/13/2002	10:18	3	0.79	mS/cm			2	tn/cc		
W-68.72-1	6/13/2002	10:18	9		ppm	<	0.1	2	tn/cc		
W-68.72-1	6/13/2002	10:18	10		ppm	<	0.5	2	tn/cc		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-68.72-3	6/13/2002	9:08	40	-0.33	%			1	lw/mp		
W-68.72-3	6/13/2002	9:08	40	-0.61	%			2	lw/mp		
W-68.72-3	6/13/2002	9:08	19	0.26	ppm			1	lw/mp		
W-68.72-3	6/13/2002	9:08	19	0.26	ppm			2	lw/mp		
W-68.72-3	6/13/2002	9:08	36	0.46	ppm			2	lw/mp		
W-68.72-3	6/13/2002	9:08	36	0.47	ppm			1	lw/mp		
W-68.72-3	6/13/2002	9:08	11	0.77	ppm			1	lw/mp		
W-68.72-3	6/13/2002	9:08	11	0.77	ppm			2	lw/mp		
W-68.72-3	6/13/2002	9:08	35	1.56	ppm			2	lw/mp		
W-68.72-3	6/13/2002	9:08	35	1.61	ppm			1	lw/mp		
W-68.72-3	6/13/2002	9:08	13	6	ppm			1	lw/mp		
W-68.72-3	6/13/2002	9:08	13	6	ppm			2	lw/mp		
W-68.72-3	6/13/2002	9:08	1	7				1	lw/mp		
W-68.72-3	6/13/2002	9:08	1	7				2	lw/mp		
W-68.72-3	6/13/2002	9:08	38	15.53	epm			2	lw/mp		
W-68.72-3	6/13/2002	9:08	39	15.72	epm			2	lw/mp		
W-68.72-3	6/13/2002	9:08	38	15.83	epm			1	lw/mp		
W-68.72-3	6/13/2002	9:08	39	15.93	epm			1	lw/mp		
W-68.72-3	6/13/2002	9:08	14	32	ppm			2	lw/mp		
W-68.72-3	6/13/2002	9:08	14	33	ppm			1	lw/mp		
W-68.72-3	6/13/2002	9:08	7	92	ppm			2	lw/mp		
W-68.72-3	6/13/2002	9:08	7	93	ppm			1	lw/mp		
W-68.72-3	6/13/2002	9:08	12	120	ppm			2	lw/mp		
W-68.72-3	6/13/2002	9:08	12	125	ppm			1	lw/mp		
W-68.72-3	6/13/2002	9:08	8	135	ppm			2	lw/mp		
W-68.72-3	6/13/2002	9:08	8	140	ppm			1	lw/mp		
W-68.72-3	6/13/2002	9:08	15	150	ppm			1	lw/mp		
W-68.72-3	6/13/2002	9:08	15	150	ppm			2	lw/mp		
W-68.72-3	6/13/2002	9:08	4	506	ppm			2	lw/mp		
W-68.72-3	6/13/2002	9:08	4	511	ppm			1	lw/mp		
W-68.72-3	6/13/2002	9:08	6	625	ppm			2	lw/mp		
W-68.72-3	6/13/2002	9:08	6	630	ppm			1	lw/mp		
W-68.72-3	6/13/2002	9:08	2	850	ppm			2	lw/mp		
W-68.72-3	6/13/2002	9:08	2	860	ppm			1	lw/mp		
W-68.72-3	6/13/2002	9:08	3	1.29	mS/cm			1	lw/mp		
W-68.72-3	6/13/2002	9:08	3	1.31	mS/cm			2	lw/mp		
W-68.72-3	6/13/2002	9:08	9		ppm	<	0.1	1	lw/mp		
W-68.72-3	6/13/2002	9:08	9		ppm	<	0.1	2	lw/mp		
W-68.72-3	6/13/2002	9:08	10		ppm	<	0.5	1	lw/mp		
W-68.72-3	6/13/2002	9:08	10		ppm	<	0.5	2	lw/mp		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-68.72-5	6/13/2002	11:09	19	0.08	ppm			1	lw/mp		
W-68.72-5	6/13/2002	11:09	40	0.25	%			1	lw/mp		
W-68.72-5	6/13/2002	11:09	11	0.28	ppm			1	lw/mp		
W-68.72-5	6/13/2002	11:09	35	0.41	ppm			1	lw/mp		
W-68.72-5	6/13/2002	11:09	13	2.8	ppm			1	lw/mp		
W-68.72-5	6/13/2002	11:09	39	6.63	epm			1	lw/mp		
W-68.72-5	6/13/2002	11:09	38	6.66	epm			1	lw/mp		
W-68.72-5	6/13/2002	11:09	1	7.7				1	lw/mp		
W-68.72-5	6/13/2002	11:09	14	8.2	ppm			1	lw/mp		
W-68.72-5	6/13/2002	11:09	7	38	ppm			1	lw/mp		
W-68.72-5	6/13/2002	11:09	15	60	ppm			1	lw/mp		
W-68.72-5	6/13/2002	11:09	12	67	ppm			1	lw/mp		
W-68.72-5	6/13/2002	11:09	8	140	ppm			1	lw/mp		
W-68.72-5	6/13/2002	11:09	6	160	ppm			1	lw/mp		
W-68.72-5	6/13/2002	11:09	4	184	ppm			1	lw/mp		
W-68.72-5	6/13/2002	11:09	2	400	ppm			1	lw/mp		
W-68.72-5	6/13/2002	11:09	3	0.634	mS/cm			1	lw/mp		
W-68.72-5	6/13/2002	11:09	36		ppm	<	0.1	1	lw/mp		
W-68.72-5	6/13/2002	11:09	9		ppm	<	0.1	1	lw/mp		
W-68.72-5	6/13/2002	11:09	10		ppm	<	0.5	1	lw/mp		
W-68.72-6	6/13/2002	10:12	40	0.07	%			1	lw/mp		
W-68.72-6	6/13/2002	10:12	19	0.19	ppm			1	lw/mp		
W-68.72-6	6/13/2002	10:12	11	0.36	ppm			1	lw/mp		
W-68.72-6	6/13/2002	10:12	35	0.61	ppm			1	lw/mp		
W-68.72-6	6/13/2002	10:12	13	5	ppm			1	lw/mp		
W-68.72-6	6/13/2002	10:12	1	7.3				1	lw/mp		
W-68.72-6	6/13/2002	10:12	39	9.88	epm			1	lw/mp		
W-68.72-6	6/13/2002	10:12	38	9.89	epm			1	lw/mp		
W-68.72-6	6/13/2002	10:12	14	15	ppm			1	lw/mp		
W-68.72-6	6/13/2002	10:12	7	28	ppm			1	lw/mp		
W-68.72-6	6/13/2002	10:12	15	87	ppm			1	lw/mp		
W-68.72-6	6/13/2002	10:12	12	96	ppm			1	lw/mp		
W-68.72-6	6/13/2002	10:12	8	120	ppm			1	lw/mp		
W-68.72-6	6/13/2002	10:12	4	279	ppm			1	lw/mp		
W-68.72-6	6/13/2002	10:12	6	400	ppm			1	lw/mp		
W-68.72-6	6/13/2002	10:12	2	550	ppm			1	lw/mp		
W-68.72-6	6/13/2002	10:12	3	0.85	mS/cm			1	lw/mp		
W-68.72-6	6/13/2002	10:12	36		ppm	<	0.1	1	lw/mp		
W-68.72-6	6/13/2002	10:12	9		ppm	<	0.1	1	lw/mp		
W-68.72-6	6/13/2002	10:12	10		ppm	<	0.5	1	lw/mp		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-87.62-2	6/13/2002	11:59	40	-0.86	%			6	lw/mp		
W-87.62-2	6/13/2002	11:59	9	0.04	ppm			6	lw/mp		
W-87.62-2	6/13/2002	11:59	19	0.09	ppm			6	lw/mp		
W-87.62-2	6/13/2002	11:59	36	0.14	ppm			6	lw/mp		
W-87.62-2	6/13/2002	11:59	11	0.46	ppm			6	lw/mp		
W-87.62-2	6/13/2002	11:59	35	0.59	ppm			6	lw/mp		
W-87.62-2	6/13/2002	11:59	13	4.6	ppm			6	lw/mp		
W-87.62-2	6/13/2002	11:59	38	6.63	epm			6	lw/mp		
W-87.62-2	6/13/2002	11:59	39	6.74	epm			6	lw/mp		
W-87.62-2	6/13/2002	11:59	14	10	ppm			6	lw/mp		
W-87.62-2	6/13/2002	11:59	7	37	ppm			6	lw/mp		
W-87.62-2	6/13/2002	11:59	12	49	ppm			6	lw/mp		
W-87.62-2	6/13/2002	11:59	15	71	ppm			6	lw/mp		
W-87.62-2	6/13/2002	11:59	8	95	ppm			6	lw/mp		
W-87.62-2	6/13/2002	11:59	4	219	ppm			6	lw/mp		
W-87.62-2	6/13/2002	11:59	6	225	ppm			6	lw/mp		
W-87.62-2	6/13/2002	11:59	2	380	ppm			6	lw/mp		
W-87.62-2	6/13/2002	11:59	10		ppm	<	0.5	6	lw/mp		
W-EB-11-20	6/13/2002	13:31	36	0.27	ppm			1	tn/cc		
W-EB-11-20	6/13/2002	13:31	11	0.44	ppm			1	tn/cc		
W-EB-11-20	6/13/2002	13:31	19	0.91	ppm			1	tn/cc		
W-EB-11-20	6/13/2002	13:31	35	1.03	ppm			1	tn/cc		
W-EB-11-20	6/13/2002	13:31	40	1.94	%			1	tn/cc		
W-EB-11-20	6/13/2002	13:31	13	4.4	ppm			1	tn/cc		
W-EB-11-20	6/13/2002	13:31	1	7				1	tn/cc		
W-EB-11-20	6/13/2002	13:31	39	9.87	epm			1	tn/cc		
W-EB-11-20	6/13/2002	13:31	38	10.26	epm			1	tn/cc		
W-EB-11-20	6/13/2002	13:31	14	16	ppm			1	tn/cc		
W-EB-11-20	6/13/2002	13:31	12	82	ppm			1	tn/cc		
W-EB-11-20	6/13/2002	13:31	7	98	ppm			1	tn/cc		
W-EB-11-20	6/13/2002	13:31	15	105	ppm			1	tn/cc		
W-EB-11-20	6/13/2002	13:31	8	155	ppm			1	tn/cc		
W-EB-11-20	6/13/2002	13:31	6	230	ppm			1	tn/cc		
W-EB-11-20	6/13/2002	13:31	4	328	ppm			1	tn/cc		
W-EB-11-20	6/13/2002	13:31	2	580	ppm			1	tn/cc		
W-EB-11-20	6/13/2002	13:31	3	0.91	mS/cm			1	tn/cc		
W-EB-11-20	6/13/2002	13:31	9		ppm	<	0.1	1	tn/cc		
W-EB-11-20	6/13/2002	13:31	10		ppm	<	0.5	1	tn/cc		
W-Perini1	6/13/2002	15:56	40	0.45	%			1	lw/mp		
W-Perini1	6/13/2002	15:56	36	0.12	ppm			2	lw/mp		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-Perini1	6/13/2002	15:56	19	0.19	ppm			1	lw/mp		
W-Perini1	6/13/2002	15:56	19	0.19	ppm			2	lw/mp		
W-Perini1	6/13/2002	15:56	36	0.19	ppm			1	lw/mp		
W-Perini1	6/13/2002	15:56	40	0.9	%			2	lw/mp		
W-Perini1	6/13/2002	15:56	11	0.49	ppm			1	lw/mp		
W-Perini1	6/13/2002	15:56	11	0.49	ppm			2	lw/mp		
W-Perini1	6/13/2002	15:56	35	0.6	ppm			1	lw/mp		
W-Perini1	6/13/2002	15:56	35	0.6	ppm			2	lw/mp		
W-Perini1	6/13/2002	15:56	13	6.2	ppm			1	lw/mp		
W-Perini1	6/13/2002	15:56	13	6.2	ppm			2	lw/mp		
W-Perini1	6/13/2002	15:56	1	7.8				1	lw/mp		
W-Perini1	6/13/2002	15:56	1	7.9				2	lw/mp		
W-Perini1	6/13/2002	15:56	14	9.5	ppm			2	lw/mp		
W-Perini1	6/13/2002	15:56	14	9.6	ppm			1	lw/mp		
W-Perini1	6/13/2002	15:56	38	13.09	epm			2	lw/mp		
W-Perini1	6/13/2002	15:56	39	13.25	epm			1	lw/mp		
W-Perini1	6/13/2002	15:56	39	13.33	epm			2	lw/mp		
W-Perini1	6/13/2002	15:56	38	13.37	epm			1	lw/mp		
W-Perini1	6/13/2002	15:56	15	82	ppm			2	lw/mp		
W-Perini1	6/13/2002	15:56	15	83	ppm			1	lw/mp		
W-Perini1	6/13/2002	15:56	7	95	ppm			1	lw/mp		
W-Perini1	6/13/2002	15:56	7	95	ppm			2	lw/mp		
W-Perini1	6/13/2002	15:56	12	185	ppm			2	lw/mp		
W-Perini1	6/13/2002	15:56	12	190	ppm			1	lw/mp		
W-Perini1	6/13/2002	15:56	8	230	ppm			1	lw/mp		
W-Perini1	6/13/2002	15:56	8	230	ppm			2	lw/mp		
W-Perini1	6/13/2002	15:56	4	244	ppm			2	lw/mp		
W-Perini1	6/13/2002	15:56	4	247	ppm			1	lw/mp		
W-Perini1	6/13/2002	15:56	6	350	ppm			1	lw/mp		
W-Perini1	6/13/2002	15:56	6	355	ppm			2	lw/mp		
W-Perini1	6/13/2002	15:56	2	790	ppm			1	lw/mp		
W-Perini1	6/13/2002	15:56	2	790	ppm			2	lw/mp		
W-Perini1	6/13/2002	15:56	3	1.15	mS/cm			2	lw/mp		
W-Perini1	6/13/2002	15:56	3	1.17	mS/cm			1	lw/mp		
W-Perini1	6/13/2002	15:56	9		ppm	<	0.1	1	lw/mp		
W-Perini1	6/13/2002	15:56	9		ppm	<	0.1	2	lw/mp		
W-Perini1	6/13/2002	15:56	10		ppm	<	0.5	1	lw/mp		
W-Perini1	6/13/2002	15:56	10		ppm	<	0.5	2	lw/mp		
W-109.49-2	10/12/2002	15:40	8	85	ppm			1	lw/mp		
W-109.49-2	10/12/2002	15:40	37	189	ppm			1	lw/mp		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-109.49-2	10/12/2002	15:40	4	211	ppm			1	lw/mp		
W-109.49-2	10/12/2002	15:40	6	231	ppm			1	lw/mp		
W-109.49-2	10/12/2002	15:40	2	400	ppm			1	lw/mp		
W-109.49-2	10/12/2002	15:40	3	0.594	mS/cm			1	lw/mp		
W-109.49-2	10/12/2002	15:40	19	0.09	ppm			1	lw/mp		
W-109.49-2	10/12/2002	15:40	36	0.13	ppm			1	lw/mp		
W-109.49-2	10/12/2002	15:40	11	0.35	ppm			1	lw/mp		
W-109.49-2	10/12/2002	15:40	35	0.62	ppm			1	lw/mp		
W-109.49-2	10/12/2002	15:40	40	2.82	%			1	lw/mp		
W-109.49-2	10/12/2002	15:40	13	4.1	ppm			1	lw/mp		
W-109.49-2	10/12/2002	15:40	39	6.56	epm			1	lw/mp		
W-109.49-2	10/12/2002	15:40	38	6.94	epm			1	lw/mp		
W-109.49-2	10/12/2002	15:40	1	7.4				1	lw/mp		
W-109.49-2	10/12/2002	15:40	14	10	ppm			1	lw/mp		
W-109.49-2	10/12/2002	15:40	32	23	ppm			1	lw/mp		
W-109.49-2	10/12/2002	15:40	7	35	ppm			1	lw/mp		
W-109.49-2	10/12/2002	15:40	12	60	ppm			1	lw/mp		
W-109.49-2	10/12/2002	15:40	15	68	ppm			1	lw/mp		
W-109.49-2	10/12/2002	15:40	9		ppm	<	0.1	1	lw/mp		
W-109.49-2	10/12/2002	15:40	10		ppm	<	0.5	1	lw/mp		
W-109.49-3	10/12/2002	15:45	19	0.17	ppm			1	tn/bc		
W-109.49-3	10/12/2002	15:45	11	0.29	ppm			1	tn/bc		
W-109.49-3	10/12/2002	15:45	36	0.42	ppm			1	tn/bc		
W-109.49-3	10/12/2002	15:45	35	1.5	ppm			1	tn/bc		
W-109.49-3	10/12/2002	15:45	40	2.3	%			1	tn/bc		
W-109.49-3	10/12/2002	15:45	1	6.8				1	tn/bc		
W-109.49-3	10/12/2002	15:45	13	8.3	ppm			1	tn/bc		
W-109.49-3	10/12/2002	15:45	39	15.65	epm			1	tn/bc		
W-109.49-3	10/12/2002	15:45	38	16.38	epm			1	tn/bc		
W-109.49-3	10/12/2002	15:45	32	29	ppm			1	tn/bc		
W-109.49-3	10/12/2002	15:45	14	33	ppm			1	tn/bc		
W-109.49-3	10/12/2002	15:45	7	95	ppm			1	tn/bc		
W-109.49-3	10/12/2002	15:45	12	125	ppm			1	tn/bc		
W-109.49-3	10/12/2002	15:45	15	160	ppm			1	tn/bc		
W-109.49-3	10/12/2002	15:45	8	255	ppm			1	tn/bc		
W-109.49-3	10/12/2002	15:45	37	381	ppm			1	tn/bc		
W-109.49-3	10/12/2002	15:45	6	466	ppm			1	tn/bc		
W-109.49-3	10/12/2002	15:45	4	535	ppm			1	tn/bc		
W-109.49-3	10/12/2002	15:45	2	940	ppm			1	tn/bc		
W-109.49-3	10/12/2002	15:45	3	1.28	mS/cm			1	tn/bc		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-109.49-3	10/12/2002	15:45	9		ppm	<	0.1	1	tn/bc		
W-109.49-3	10/12/2002	15:45	10		ppm	<	0.5	1	tn/bc		
W-109.49-4	10/12/2002	15:35	19	0.14	ppm			1	tn/bc		
W-109.49-4	10/12/2002	15:35	36	0.29	ppm			1	tn/bc		
W-109.49-4	10/12/2002	15:35	11	0.4	ppm			1	tn/bc		
W-109.49-4	10/12/2002	15:35	9	0.61	ppm			1	tn/bc		
W-109.49-4	10/12/2002	15:35	35	0.92	ppm			1	tn/bc		
W-109.49-4	10/12/2002	15:35	40	2.62	%			1	tn/bc		
W-109.49-4	10/12/2002	15:35	13	6.9	ppm			1	tn/bc		
W-109.49-4	10/12/2002	15:35	1	7.2				1	tn/bc		
W-109.49-4	10/12/2002	15:35	39	8.22	epm			1	tn/bc		
W-109.49-4	10/12/2002	15:35	38	8.66	epm			1	tn/bc		
W-109.49-4	10/12/2002	15:35	14	13	ppm			1	tn/bc		
W-109.49-4	10/12/2002	15:35	32	27	ppm			1	tn/bc		
W-109.49-4	10/12/2002	15:35	7	56	ppm			1	tn/bc		
W-109.49-4	10/12/2002	15:35	15	75	ppm			1	tn/bc		
W-109.49-4	10/12/2002	15:35	12	84	ppm			1	tn/bc		
W-109.49-4	10/12/2002	15:35	8	130	ppm			1	tn/bc		
W-109.49-4	10/12/2002	15:35	37	195	ppm			1	tn/bc		
W-109.49-4	10/12/2002	15:35	6	238	ppm			1	tn/bc		
W-109.49-4	10/12/2002	15:35	4	241	ppm			1	tn/bc		
W-109.49-4	10/12/2002	15:35	2	510	ppm			1	tn/bc		
W-109.49-4	10/12/2002	15:35	3	0.78	mS/cm			1	tn/bc		
W-109.49-4	10/12/2002	15:35	10		ppm	<	0.5	1	tn/bc		
W-114.60-2	10/12/2002	13:07	36	0.12	ppm			1	lw/mp		
W-114.60-2	10/12/2002	13:07	19	0.14	ppm			1	lw/mp		
W-114.60-2	10/12/2002	13:07	11	0.29	ppm			1	lw/mp		
W-114.60-2	10/12/2002	13:07	35	0.76	ppm			1	lw/mp		
W-114.60-2	10/12/2002	13:07	40	1.84	%			1	lw/mp		
W-114.60-2	10/12/2002	13:07	13	4.8	ppm			1	lw/mp		
W-114.60-2	10/12/2002	13:07	1	7.4				1	lw/mp		
W-114.60-2	10/12/2002	13:07	39	7.42	epm			1	lw/mp		
W-114.60-2	10/12/2002	13:07	38	7.7	epm			1	lw/mp		
W-114.60-2	10/12/2002	13:07	14	12	ppm			1	lw/mp		
W-114.60-2	10/12/2002	13:07	32	14	ppm			1	lw/mp		
W-114.60-2	10/12/2002	13:07	7	45	ppm			1	lw/mp		
W-114.60-2	10/12/2002	13:07	12	65	ppm			1	lw/mp		
W-114.60-2	10/12/2002	13:07	15	75	ppm			1	lw/mp		
W-114.60-2	10/12/2002	13:07	8	130	ppm			1	lw/mp		
W-114.60-2	10/12/2002	13:07	37	171	ppm			1	lw/mp		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-114.60-2	10/12/2002	13:07	6	209	ppm			1	lw/mp		
W-114.60-2	10/12/2002	13:07	4	237	ppm			1	lw/mp		
W-114.60-2	10/12/2002	13:07	2	450	ppm			1	lw/mp		
W-114.60-2	10/12/2002	13:07	3	0.693	mS/cm			1	lw/mp		
W-114.60-2	10/12/2002	13:07	9		ppm	<	0.1	1	lw/mp		
W-114.60-2	10/12/2002	13:07	10		ppm	<	0.5	1	lw/mp		
W-114.60-3	10/12/2002	13:38	36	0.13	ppm			1	tn/bc		
W-114.60-3	10/12/2002	13:38	19	0.17	ppm			1	tn/bc		
W-114.60-3	10/12/2002	13:38	11	0.42	ppm			1	tn/bc		
W-114.60-3	10/12/2002	13:38	35	1.6	ppm			1	tn/bc		
W-114.60-3	10/12/2002	13:38	40	2.41	%			1	tn/bc		
W-114.60-3	10/12/2002	13:38	1	6.7				1	tn/bc		
W-114.60-3	10/12/2002	13:38	13	9.4	ppm			1	tn/bc		
W-114.60-3	10/12/2002	13:38	39	13.86	epm			1	tn/bc		
W-114.60-3	10/12/2002	13:38	38	14.54	epm			1	tn/bc		
W-114.60-3	10/12/2002	13:38	9	16	ppm			1	tn/bc		
W-114.60-3	10/12/2002	13:38	32	28	ppm			1	tn/bc		
W-114.60-3	10/12/2002	13:38	14	33	ppm			1	tn/bc		
W-114.60-3	10/12/2002	13:38	7	46	ppm			1	tn/bc		
W-114.60-3	10/12/2002	13:38	12	105	ppm			1	tn/bc		
W-114.60-3	10/12/2002	13:38	15	140	ppm			1	tn/bc		
W-114.60-3	10/12/2002	13:38	8	175	ppm			1	tn/bc		
W-114.60-3	10/12/2002	13:38	37	431	ppm			1	tn/bc		
W-114.60-3	10/12/2002	13:38	4	486	ppm			1	tn/bc		
W-114.60-3	10/12/2002	13:38	6	527	ppm			1	tn/bc		
W-114.60-3	10/12/2002	13:38	2	820	ppm			1	tn/bc		
W-114.60-3	10/12/2002	13:38	3	1.18	mS/cm			1	tn/bc		
W-114.60-3	10/12/2002	13:38	10		ppm	<	0.5	1	tn/bc		
W-99.59-4	10/12/2002	12:02	19	0.09	ppm			1	tn/bc		
W-99.59-4	10/12/2002	12:02	36	0.14	ppm			1	tn/bc		
W-99.59-4	10/12/2002	12:02	11	0.34	ppm			1	tn/bc		
W-99.59-4	10/12/2002	12:02	35	0.57	ppm			1	tn/bc		
W-99.59-4	10/12/2002	12:02	40	2.77	%			1	tn/bc		
W-99.59-4	10/12/2002	12:02	13	5.1	ppm			1	tn/bc		
W-99.59-4	10/12/2002	12:02	39	6.67	epm			1	tn/bc		
W-99.59-4	10/12/2002	12:02	38	7.05	epm			1	tn/bc		
W-99.59-4	10/12/2002	12:02	1	7.5				1	tn/bc		
W-99.59-4	10/12/2002	12:02	14	11	ppm			1	tn/bc		
W-99.59-4	10/12/2002	12:02	32	18	ppm			1	tn/bc		
W-99.59-4	10/12/2002	12:02	7	40	ppm			1	tn/bc		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-99.59-4	10/12/2002	12:02	12	60	ppm			1	tn/bc		
W-99.59-4	10/12/2002	12:02	15	68	ppm			1	tn/bc		
W-99.59-4	10/12/2002	12:02	8	100	ppm			1	tn/bc		
W-99.59-4	10/12/2002	12:02	37	167	ppm			1	tn/bc		
W-99.59-4	10/12/2002	12:02	6	210	ppm			1	tn/bc		
W-99.59-4	10/12/2002	12:02	4	215	ppm			1	tn/bc		
W-99.59-4	10/12/2002	12:02	2	410	ppm			1	tn/bc		
W-99.59-4	10/12/2002	12:02	3	0.637	mS/cm			1	tn/bc		
W-99.59-4	10/12/2002	12:02	9		ppm	<	0.1	1	tn/bc		
W-99.59-4	10/12/2002	12:02	10		ppm	<	0.5	1	tn/bc		
W-99.59-4	10/12/2002	12:02									
W-Thomas1	10/12/2002	18:10	19	0.1	ppm			1	tn/bc		
W-Thomas1	10/12/2002	18:10	11	0.14	ppm			1	tn/bc		
W-Thomas1	10/12/2002	18:10	36	0.15	ppm			1	tn/bc		
W-Thomas1	10/12/2002	18:10	35	1.1	ppm			1	tn/bc		
W-Thomas1	10/12/2002	18:10	40	2.78	%			1	tn/bc		
W-Thomas1	10/12/2002	18:10	13	6	ppm			1	tn/bc		
W-Thomas1	10/12/2002	18:10	1	6.9				1	tn/bc		
W-Thomas1	10/12/2002	18:10	39	13.76	epm			1	tn/bc		
W-Thomas1	10/12/2002	18:10	38	14.55	epm			1	tn/bc		
W-Thomas1	10/12/2002	18:10	14	25	ppm			1	tn/bc		
W-Thomas1	10/12/2002	18:10	32	33	ppm			1	tn/bc		
W-Thomas1	10/12/2002	18:10	12	88	ppm			1	tn/bc		
W-Thomas1	10/12/2002	18:10	7	100	ppm			1	tn/bc		
W-Thomas1	10/12/2002	18:10	15	170	ppm			1	tn/bc		
W-Thomas1	10/12/2002	18:10	37	240	ppm			1	tn/bc		
W-Thomas1	10/12/2002	18:10	6	292	ppm			1	tn/bc		
W-Thomas1	10/12/2002	18:10	8	295	ppm			1	tn/bc		
W-Thomas1	10/12/2002	18:10	4	528	ppm			1	tn/bc		
W-Thomas1	10/12/2002	18:10	2	860	ppm			1	tn/bc		
W-Thomas1	10/12/2002	18:10	3	1.2	mS/cm			1	tn/bc		
W-Thomas1	10/12/2002	18:10	9		ppm	<	0.1	1	tn/bc		
W-Thomas1	10/12/2002	18:10	10		ppm	<	0.5	1	tn/bc		
Equipment Blank	10/13/2002	13:45	3	0.018	mS/cm			3	tn/bc		conductivity value entered
Equipment Blank	10/13/2002	0:00	13	0.21	ppm			3	lw/mp		
Equipment Blank	10/13/2002	0:00	14	0.21	ppm			3	lw/mp		
Equipment Blank	10/13/2002	0:00	15	1.9	ppm			3	lw/mp		
Equipment Blank	10/13/2002	0:00	19	0.1	ppm			3	lw/mp		
Equipment Blank	10/13/2002	0:00	3	0.019	mS/cm			3	lw/mp		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
Equipment Blank	10/13/2002	0:00	32		ppm	<	3	3	lw/mp		
Equipment Blank	10/13/2002	0:00	35	0.012	ppm			3	lw/mp		
Equipment Blank	10/13/2002	0:00	36		ppm	<	0.1	3	lw/mp		
Equipment Blank	10/13/2002	0:00	37		ppm	<	1	3	lw/mp		
Equipment Blank	10/13/2002	13:45	1	6.3				3	tn/bc		
Equipment Blank	10/13/2002	13:45	6		ppm	<	1	3	tn/bc		
Equipment Blank	10/13/2002	13:45	7	2.1	ppm			3	tn/bc		
Equipment Blank	10/13/2002	13:45	8	1.1	ppm			3	tn/bc		
Equipment Blank	10/13/2002	13:45	9		ppm	<	0.1	3	tn/bc		
Equipment Blank	10/13/2002	13:45	10		ppm	<	0.5	3	tn/bc		
Equipment Blank	10/13/2002	13:45	11		ppm	<	0.1	3	tn/bc		
Equipment Blank	10/13/2002	13:45	12	3.7	ppm			3	tn/bc		
Equipment Blank	10/13/2002	13:45	13	0.17	ppm			3	tn/bc		
Equipment Blank	10/13/2002	13:45	14	0.16	ppm			3	tn/bc		
Equipment Blank	10/13/2002	13:45	15	1.6	ppm			3	tn/bc		
Equipment Blank	10/13/2002	13:45	19	0.11	ppm			3	tn/bc		
Equipment Blank	10/13/2002	13:45	32		ppm	<	3	3	tn/bc		
Equipment Blank	10/13/2002	13:45	35	0.008	ppm			3	tn/bc		
Equipment Blank	10/13/2002	13:45	36		ppm	<	0.1	3	tn/bc		
Equipment Blank	10/13/2002	13:45	37		ppm	<	1	3	tn/bc		
Equipment Blank	10/13/2002	0:00	1	6.7				3	lw/mp		
Equipment Blank	10/13/2002	0:00	6		ppm	<	1	3	lw/mp		
Equipment Blank	10/13/2002	0:00	7	1.4	ppm			3	lw/mp		
Equipment Blank	10/13/2002	0:00	8	3.7	ppm			3	lw/mp		
Equipment Blank	10/13/2002	0:00	9		ppm	<	0.1	3	lw/mp		
Equipment Blank	10/13/2002	0:00	10		ppm	<	0.5	3	lw/mp		
Equipment Blank	10/13/2002	0:00	11		ppm	<	0.1	3	lw/mp		
Equipment Blank	10/13/2002	0:00	12	3.4	ppm			3	lw/mp		
W-68.72-1	10/13/2002	8:37	19	0.1	ppm			1	tn/bc		
W-68.72-1	10/13/2002	8:37	36	0.18	ppm			1	tn/bc		
W-68.72-1	10/13/2002	8:37	11	0.53	ppm			1	tn/bc		
W-68.72-1	10/13/2002	8:37	35	0.91	ppm			1	tn/bc		
W-68.72-1	10/13/2002	8:37	40	2.65	%			1	tn/bc		
W-68.72-1	10/13/2002	8:37	13	4.1	ppm			1	tn/bc		
W-68.72-1	10/13/2002	8:37	1	6.8				1	tn/bc		
W-68.72-1	10/13/2002	8:37	39	8.46	epm			1	tn/bc		
W-68.72-1	10/13/2002	8:37	38	8.92	epm			1	tn/bc		
W-68.72-1	10/13/2002	8:37	14	17	ppm			1	tn/bc		
W-68.72-1	10/13/2002	8:37	32	22	ppm			1	tn/bc		
W-68.72-1	10/13/2002	8:37	12	60	ppm			1	tn/bc		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-68.72-1	10/13/2002	8:37	7	76	ppm			1	tn/bc		
W-68.72-1	10/13/2002	8:37	15	96	ppm			1	tn/bc		
W-68.72-1	10/13/2002	8:37	8	110	ppm			1	tn/bc		
W-68.72-1	10/13/2002	8:37	6	244	ppm			1	tn/bc		
W-68.72-1	10/13/2002	8:37	4	310	ppm			1	tn/bc		
W-68.72-1	10/13/2002	8:37	2	510	ppm			1	tn/bc		
W-68.72-1	10/13/2002	8:37	3	0.8	mS/cm			1	tn/bc		
W-68.72-1	10/13/2002	8:37	9		ppm	<	0.1	1	tn/bc		
W-68.72-1	10/13/2002	8:37	10		ppm	<	0.5	1	tn/bc		
W-68.72-3	10/13/2002	8:18	19	0.2	ppm			1	lw/mp		
W-68.72-3	10/13/2002	8:18	9	0.21	ppm			1	lw/mp		
W-68.72-3	10/13/2002	8:18	11	0.59	ppm			1	lw/mp		
W-68.72-3	10/13/2002	8:18	36	0.65	ppm			1	lw/mp		
W-68.72-3	10/13/2002	8:18	35	1.5	ppm			1	lw/mp		
W-68.72-3	10/13/2002	8:18	40	1.78	%			1	lw/mp		
W-68.72-3	10/13/2002	8:18	13	6.1	ppm			1	lw/mp		
W-68.72-3	10/13/2002	8:18	1	6.9				1	lw/mp		
W-68.72-3	10/13/2002	8:18	39	14.02	epm			1	lw/mp		
W-68.72-3	10/13/2002	8:18	38	14.53	epm			1	lw/mp		
W-68.72-3	10/13/2002	8:18	32	24	ppm			1	lw/mp		
W-68.72-3	10/13/2002	8:18	14	35	ppm			1	lw/mp		
W-68.72-3	10/13/2002	8:18	7	90	ppm			1	lw/mp		
W-68.72-3	10/13/2002	8:18	12	120	ppm			1	lw/mp		
W-68.72-3	10/13/2002	8:18	15	125	ppm			1	lw/mp		
W-68.72-3	10/13/2002	8:18	8	140	ppm			1	lw/mp		
W-68.72-3	10/13/2002	8:18	37	426	ppm			1	lw/mp		
W-68.72-3	10/13/2002	8:18	4	456	ppm			1	lw/mp		
W-68.72-3	10/13/2002	8:18	6	520	ppm			1	lw/mp		
W-68.72-3	10/13/2002	8:18	2	800	ppm			1	lw/mp		
W-68.72-3	10/13/2002	8:18	3	1.41	mS/cm			1	lw/mp		
W-68.72-3	10/13/2002	8:18	10		ppm	<	0.5	1	lw/mp		
W-68.72-5	10/13/2002	8:52	19	0.06	ppm			1	lw/mp		
W-68.72-5	10/13/2002	8:52	36	0.1	ppm			1	lw/mp		
W-68.72-5	10/13/2002	8:52	11	0.22	ppm			1	lw/mp		
W-68.72-5	10/13/2002	8:52	35	0.38	ppm			1	lw/mp		
W-68.72-5	10/13/2002	8:52	40	1.66	%			1	lw/mp		
W-68.72-5	10/13/2002	8:52	13	2.6	ppm			1	lw/mp		
W-68.72-5	10/13/2002	8:52	39	6.57	epm			1	lw/mp		
W-68.72-5	10/13/2002	8:52	38	6.79	epm			1	lw/mp		
W-68.72-5	10/13/2002	8:52	1	7.4				1	lw/mp		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-68.72-5	10/13/2002	8:52	14	9.7	ppm			1	lw/mp		
W-68.72-5	10/13/2002	8:52	32	27	ppm			1	lw/mp		
W-68.72-5	10/13/2002	8:52	7	36	ppm			1	lw/mp		
W-68.72-5	10/13/2002	8:52	15	55	ppm			1	lw/mp		
W-68.72-5	10/13/2002	8:52	12	73	ppm			1	lw/mp		
W-68.72-5	10/13/2002	8:52	37	126	ppm			1	lw/mp		
W-68.72-5	10/13/2002	8:52	8	145	ppm			1	lw/mp		
W-68.72-5	10/13/2002	8:52	6	154	ppm			1	lw/mp		
W-68.72-5	10/13/2002	8:52	4	177	ppm			1	lw/mp		
W-68.72-5	10/13/2002	8:52	2	430	ppm			1	lw/mp		
W-68.72-5	10/13/2002	8:52	3	0.612	mS/cm			1	lw/mp		
W-68.72-5	10/13/2002	8:52	9		ppm	<	0.1	1	lw/mp		
W-68.72-5	10/13/2002	8:52	10		ppm	<	0.5	1	lw/mp		
W-68.72-6	10/13/2002	9:51	19	0.13	ppm			1	lw/mp		
W-68.72-6	10/13/2002	9:51	9	0.16	ppm			1	lw/mp		
W-68.72-6	10/13/2002	9:51	36	0.28	ppm			1	lw/mp		
W-68.72-6	10/13/2002	9:51	11	0.28	ppm			1	lw/mp		
W-68.72-6	10/13/2002	9:51	35	0.61	ppm			1	lw/mp		
W-68.72-6	10/13/2002	9:51	40	2.17	%			1	lw/mp		
W-68.72-6	10/13/2002	9:51	13	5	ppm			1	lw/mp		
W-68.72-6	10/13/2002	9:51	1	7.1				1	lw/mp		
W-68.72-6	10/13/2002	9:51	39	9.7	epm			1	lw/mp		
W-68.72-6	10/13/2002	9:51	38	10.13	epm			1	lw/mp		
W-68.72-6	10/13/2002	9:51	14	17	ppm			1	lw/mp		
W-68.72-6	10/13/2002	9:51	7	28	ppm			1	lw/mp		
W-68.72-6	10/13/2002	9:51	32	33	ppm			1	lw/mp		
W-68.72-6	10/13/2002	9:51	15	85	ppm			1	lw/mp		
W-68.72-6	10/13/2002	9:51	12	100	ppm			1	lw/mp		
W-68.72-6	10/13/2002	9:51	8	120	ppm			1	lw/mp		
W-68.72-6	10/13/2002	9:51	4	282	ppm			1	lw/mp		
W-68.72-6	10/13/2002	9:51	37	320	ppm			1	lw/mp		
W-68.72-6	10/13/2002	9:51	6	390	ppm			1	lw/mp		
W-68.72-6	10/13/2002	9:51	2	580	ppm			1	lw/mp		
W-68.72-6	10/13/2002	9:51	3	0.85	mS/cm			1	lw/mp		
W-68.72-6	10/13/2002	9:51	10		ppm	<	0.5	1	lw/mp		
W-83.98-1	10/13/2002	16:41	36	3	ppm			1	lw/mp	Bromide value is approximate due to interferences.	

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-83.98-1	10/13/2002	16:41	36	3	ppm			2	lw/mp	Bromide value is approximate due to interferences	
W-83.98-1	10/13/2002	16:41	40	-2.07	%			2	lw/mp		
W-83.98-1	10/13/2002	16:41	40	-1.23	%			1	lw/mp		
W-83.98-1	10/13/2002	16:41	19	0.77	ppm			2	lw/mp		
W-83.98-1	10/13/2002	16:41	19	0.79	ppm			1	lw/mp		
W-83.98-1	10/13/2002	16:41	9	1.6	ppm			1	lw/mp		
W-83.98-1	10/13/2002	16:41	9	1.9	ppm			2	lw/mp		
W-83.98-1	10/13/2002	16:41	1	6.8				1	lw/mp		
W-83.98-1	10/13/2002	16:41	1	6.8				2	lw/mp		
W-83.98-1	10/13/2002	16:41	35	14	ppm			1	lw/mp		
W-83.98-1	10/13/2002	16:41	35	14	ppm			2	lw/mp		
W-83.98-1	10/13/2002	16:41	32	50	ppm			1	lw/mp		
W-83.98-1	10/13/2002	16:41	32	51	ppm			2	lw/mp		
W-83.98-1	10/13/2002	16:41	13	160	ppm			1	lw/mp		
W-83.98-1	10/13/2002	16:41	13	160	ppm			2	lw/mp		
W-83.98-1	10/13/2002	16:41	38	205.43	epm			2	lw/mp		
W-83.98-1	10/13/2002	16:41	38	212.98	epm			1	lw/mp		
W-83.98-1	10/13/2002	16:41	39	214.13	epm			2	lw/mp		
W-83.98-1	10/13/2002	16:41	39	218.29	epm			1	lw/mp		
W-83.98-1	10/13/2002	16:41	14	270	ppm			2	lw/mp		
W-83.98-1	10/13/2002	16:41	14	290	ppm			1	lw/mp		
W-83.98-1	10/13/2002	16:41	15	445	ppm			2	lw/mp		
W-83.98-1	10/13/2002	16:41	15	450	ppm			1	lw/mp		
W-83.98-1	10/13/2002	16:41	37	870	ppm			1	lw/mp		
W-83.98-1	10/13/2002	16:41	37	879	ppm			2	lw/mp		
W-83.98-1	10/13/2002	16:41	6	1060	ppm			1	lw/mp		
W-83.98-1	10/13/2002	16:41	6	1060	ppm			2	lw/mp		
W-83.98-1	10/13/2002	16:41	4	2223	ppm			2	lw/mp		
W-83.98-1	10/13/2002	16:41	4	2318	ppm			1	lw/mp		
W-83.98-1	10/13/2002	16:41	12	3600	ppm			2	lw/mp		
W-83.98-1	10/13/2002	16:41	12	3730	ppm			1	lw/mp		
W-83.98-1	10/13/2002	16:41	7	3800	ppm			1	lw/mp		
W-83.98-1	10/13/2002	16:41	7	3800	ppm			2	lw/mp		
W-83.98-1	10/13/2002	16:41	8	4300	ppm			2	lw/mp		
W-83.98-1	10/13/2002	16:41	8	4500	ppm			1	lw/mp		
W-83.98-1	10/13/2002	16:41	2	13170	ppm			2	lw/mp		
W-83.98-1	10/13/2002	16:41	2	13530	ppm			1	lw/mp		
W-83.98-1	10/13/2002	16:41	3	19.5	mS/cm			2	lw/mp		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-83.98-1	10/13/2002	16:41	3	19.7	mS/cm			1	lw/mp		
W-83.98-1	10/13/2002	16:41	10		ppm	<	0.5	1	lw/mp		
W-83.98-1	10/13/2002	16:41	10		ppm	<	0.5	2	lw/mp		
W-83.98-1	10/13/2002	16:41	11		ppm	<	0.1	1	lw/mp		
W-83.98-1	10/13/2002	16:41	11		ppm	<	0.1	2	lw/mp		
W-83.98-3	10/13/2002	15:05	19	0.14	ppm			1	lw/mp		
W-83.98-3	10/13/2002	15:05	36	0.25	ppm			1	lw/mp		
W-83.98-3	10/13/2002	15:05	11	0.35	ppm			1	lw/mp		
W-83.98-3	10/13/2002	15:05	35	0.91	ppm			1	lw/mp		
W-83.98-3	10/13/2002	15:05	40	2.56	%			1	lw/mp		
W-83.98-3	10/13/2002	15:05	13	4.3	ppm			1	lw/mp		
W-83.98-3	10/13/2002	15:05	1	7.1				1	lw/mp		
W-83.98-3	10/13/2002	15:05	39	9.27	epm			1	lw/mp		
W-83.98-3	10/13/2002	15:05	38	9.76	epm			1	lw/mp		
W-83.98-3	10/13/2002	15:05	14	16	ppm			1	lw/mp		
W-83.98-3	10/13/2002	15:05	32	29	ppm			1	lw/mp		
W-83.98-3	10/13/2002	15:05	7	63	ppm			1	lw/mp		
W-83.98-3	10/13/2002	15:05	12	81	ppm			1	lw/mp		
W-83.98-3	10/13/2002	15:05	15	96	ppm			1	lw/mp		
W-83.98-3	10/13/2002	15:05	8	115	ppm			1	lw/mp		
W-83.98-3	10/13/2002	15:05	37	254	ppm			1	lw/mp		
W-83.98-3	10/13/2002	15:05	4	306	ppm			1	lw/mp		
W-83.98-3	10/13/2002	15:05	6	310	ppm			1	lw/mp		
W-83.98-3	10/13/2002	15:05	2	560	ppm			1	lw/mp		
W-83.98-3	10/13/2002	15:05	3	0.82	mS/cm			1	lw/mp		
W-83.98-3	10/13/2002	15:05	9		ppm	<	0.1	1	lw/mp		
W-83.98-3	10/13/2002	15:05	10		ppm	<	0.5	1	lw/mp		
W-87.62-2	10/13/2002	17:33	19	0.16	ppm			1	lw/mp		
W-87.62-2	10/13/2002	17:33	36	0.28	ppm			1	lw/mp		
W-87.62-2	10/13/2002	17:33	11	0.3	ppm			1	lw/mp		
W-87.62-2	10/13/2002	17:33	35	0.61	ppm			1	lw/mp		
W-87.62-2	10/13/2002	17:33	40	1.56	%			1	lw/mp		
W-87.62-2	10/13/2002	17:33	13	5.1	ppm			1	lw/mp		
W-87.62-2	10/13/2002	17:33	39	7.22	epm			1	lw/mp		
W-87.62-2	10/13/2002	17:33	38	7.45	epm			1	lw/mp		
W-87.62-2	10/13/2002	17:33	1	7.5				1	lw/mp		
W-87.62-2	10/13/2002	17:33	14	12	ppm			1	lw/mp		
W-87.62-2	10/13/2002	17:33	32	17	ppm			1	lw/mp		
W-87.62-2	10/13/2002	17:33	7	45	ppm			1	lw/mp		
W-87.62-2	10/13/2002	17:33	12	65	ppm			1	lw/mp		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-87.62-2	10/13/2002	17:33	15	70	ppm			1	lw/mp		
W-87.62-2	10/13/2002	17:33	8	115	ppm			1	lw/mp		
W-87.62-2	10/13/2002	17:33	37	180	ppm			1	lw/mp		
W-87.62-2	10/13/2002	17:33	6	216	ppm			1	lw/mp		
W-87.62-2	10/13/2002	17:33	4	224	ppm			1	lw/mp		
W-87.62-2	10/13/2002	17:33	2	440	ppm			1	lw/mp		
W-87.62-2	10/13/2002	17:33	3	0.577	mS/cm			1	lw/mp		
W-87.62-2	10/13/2002	17:33	9		ppm	<	0.1	1	lw/mp		
W-87.62-2	10/13/2002	17:33	10		ppm	<	0.5	1	lw/mp		
W-87.62-3	10/13/2002	15:10	36	0.14	ppm			1	tn/bc		
W-87.62-3	10/13/2002	15:10	19	0.22	ppm			1	tn/bc		
W-87.62-3	10/13/2002	15:10	11	0.39	ppm			1	tn/bc		
W-87.62-3	10/13/2002	15:10	35	0.85	ppm			1	tn/bc		
W-87.62-3	10/13/2002	15:10	40	2.69	%			1	tn/bc		
W-87.62-3	10/13/2002	15:10	1	7.3				1	tn/bc		
W-87.62-3	10/13/2002	15:10	39	11.98	epm			1	tn/bc		
W-87.62-3	10/13/2002	15:10	38	12.64	epm			1	tn/bc		
W-87.62-3	10/13/2002	15:10	13	13	ppm			1	tn/bc		
W-87.62-3	10/13/2002	15:10	14	17	ppm			1	tn/bc		
W-87.62-3	10/13/2002	15:10	32	37	ppm			1	tn/bc		
W-87.62-3	10/13/2002	15:10	15	70	ppm			1	tn/bc		
W-87.62-3	10/13/2002	15:10	7	78	ppm			1	tn/bc		
W-87.62-3	10/13/2002	15:10	12	170	ppm			1	tn/bc		
W-87.62-3	10/13/2002	15:10	8	200	ppm			1	tn/bc		
W-87.62-3	10/13/2002	15:10	4	245	ppm			1	tn/bc		
W-87.62-3	10/13/2002	15:10	37	279	ppm			1	tn/bc		
W-87.62-3	10/13/2002	15:10	6	341	ppm			1	tn/bc		
W-87.62-3	10/13/2002	15:10	2	760	ppm			1	tn/bc		
W-87.62-3	10/13/2002	15:10	3	1.11	mS/cm			1	tn/bc		
W-87.62-3	10/13/2002	15:10	9		ppm	<	0.1	1	tn/bc		
W-87.62-3	10/13/2002	15:10	10		ppm	<	0.5	1	tn/bc		
W-87.62-4	10/13/2002	16:35	19	0.16	ppm			1	tn/bc		
W-87.62-4	10/13/2002	16:35	36	0.23	ppm			1	tn/bc		
W-87.62-4	10/13/2002	16:35	11	0.32	ppm			1	tn/bc		
W-87.62-4	10/13/2002	16:35	35	0.82	ppm			1	tn/bc		
W-87.62-4	10/13/2002	16:35	40	2.28	%			1	tn/bc		
W-87.62-4	10/13/2002	16:35	13	6.2	ppm			1	tn/bc		
W-87.62-4	10/13/2002	16:35	1	7				1	tn/bc		
W-87.62-4	10/13/2002	16:35	39	10.11	epm			1	tn/bc		
W-87.62-4	10/13/2002	16:35	38	10.58	epm			1	tn/bc		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-87.62-4	10/13/2002	16:35	14	16	ppm			1	tn/bc		
W-87.62-4	10/13/2002	16:35	32	27	ppm			1	tn/bc		
W-87.62-4	10/13/2002	16:35	7	65	ppm			1	tn/bc		
W-87.62-4	10/13/2002	16:35	15	95	ppm			1	tn/bc		
W-87.62-4	10/13/2002	16:35	12	100	ppm			1	tn/bc		
W-87.62-4	10/13/2002	16:35	8	155	ppm			1	tn/bc		
W-87.62-4	10/13/2002	16:35	37	251	ppm			1	tn/bc		
W-87.62-4	10/13/2002	16:35	4	303	ppm			1	tn/bc		
W-87.62-4	10/13/2002	16:35	6	307	ppm			1	tn/bc		
W-87.62-4	10/13/2002	16:35	2	620	ppm			1	tn/bc		
W-87.62-4	10/13/2002	16:35	3	0.94	mS/cm			1	tn/bc		
W-87.62-4	10/13/2002	16:35	9		ppm	<	0.1	1	tn/bc		
W-87.62-4	10/13/2002	16:35	10		ppm	<	0.5	1	tn/bc		
W-Cather	10/13/2002	14:06	19	0.09	ppm			1	tn/bc		
W-Cather	10/13/2002	14:06	35	0.49	ppm			1	tn/bc		
W-Cather	10/13/2002	14:06	11	0.57	ppm			1	tn/bc		
W-Cather	10/13/2002	14:06	9	0.78	ppm			1	tn/bc		
W-Cather	10/13/2002	14:06	40	2.05	%			1	tn/bc		
W-Cather	10/13/2002	14:06	13	4.1	ppm			1	tn/bc		
W-Cather	10/13/2002	14:06	39	5.22	epm			1	tn/bc		
W-Cather	10/13/2002	14:06	38	5.44	epm			1	tn/bc		
W-Cather	10/13/2002	14:06	1	7.5				1	tn/bc		
W-Cather	10/13/2002	14:06	14	7.7	ppm			1	tn/bc		
W-Cather	10/13/2002	14:06	7	21	ppm			1	tn/bc		
W-Cather	10/13/2002	14:06	32	37	ppm			1	tn/bc		
W-Cather	10/13/2002	14:06	15	40	ppm			1	tn/bc		
W-Cather	10/13/2002	14:06	8	59	ppm			1	tn/bc		
W-Cather	10/13/2002	14:06	12	62	ppm			1	tn/bc		
W-Cather	10/13/2002	14:06	4	132	ppm			1	tn/bc		
W-Cather	10/13/2002	14:06	37	168	ppm			1	tn/bc		
W-Cather	10/13/2002	14:06	6	205	ppm			1	tn/bc		
W-Cather	10/13/2002	14:06	2	330	ppm			1	tn/bc		
W-Cather	10/13/2002	14:06	3	0.494	mS/cm			1	tn/bc		
W-Cather	10/13/2002	14:06	36		ppm	<	0.1	1	tn/bc		
W-Cather	10/13/2002	14:06	10		ppm	<	0.5	1	tn/bc		
W-EB-11-20	10/13/2002	10:34	19	0.2	ppm			1	tn/bc		
W-EB-11-20	10/13/2002	10:34	36	0.39	ppm			1	tn/bc		
W-EB-11-20	10/13/2002	10:34	11	0.46	ppm			1	tn/bc		
W-EB-11-20	10/13/2002	10:34	35	0.85	ppm			1	tn/bc		
W-EB-11-20	10/13/2002	10:34	40	1.88	%			1	tn/bc		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-EB-11-20	10/13/2002	10:34	13	6.9	ppm			1	tn/bc		
W-EB-11-20	10/13/2002	10:34	1	7.1				1	tn/bc		
W-EB-11-20	10/13/2002	10:34	39	10.94	epm			1	tn/bc		
W-EB-11-20	10/13/2002	10:34	38	11.36	epm			1	tn/bc		
W-EB-11-20	10/13/2002	10:34	14	15	ppm			1	tn/bc		
W-EB-11-20	10/13/2002	10:34	32	22	ppm			1	tn/bc		
W-EB-11-20	10/13/2002	10:34	15	90	ppm			1	tn/bc		
W-EB-11-20	10/13/2002	10:34	7	91	ppm			1	tn/bc		
W-EB-11-20	10/13/2002	10:34	12	125	ppm			1	tn/bc		
W-EB-11-20	10/13/2002	10:34	8	200	ppm			1	tn/bc		
W-EB-11-20	10/13/2002	10:34	37	208	ppm			1	tn/bc		
W-EB-11-20	10/13/2002	10:34	6	255	ppm			1	tn/bc		
W-EB-11-20	10/13/2002	10:34	4	287	ppm			1	tn/bc		
W-EB-11-20	10/13/2002	10:34	2	680	ppm			1	tn/bc		
W-EB-11-20	10/13/2002	10:34	3	1.02	mS/cm			1	tn/bc		
W-EB-11-20	10/13/2002	10:34	9		ppm	<	0.1	1	tn/bc		
W-EB-11-20	10/13/2002	10:34	10		ppm	<	0.5	1	tn/bc		
W-91.28-1	10/14/2002	12:57	19	0.13	ppm			1	tn/bc		
W-91.28-1	10/14/2002	12:57	36	0.22	ppm			1	tn/bc		
W-91.28-1	10/14/2002	12:57	11	0.49	ppm			1	tn/bc		
W-91.28-1	10/14/2002	12:57	35	0.61	ppm			1	tn/bc		
W-91.28-1	10/14/2002	12:57	40	0.63	%			1	tn/bc		
W-91.28-1	10/14/2002	12:57	10	2	ppm			1	tn/bc		
W-91.28-1	10/14/2002	12:57	39	6.72	epm			1	tn/bc		
W-91.28-1	10/14/2002	12:57	38	6.81	epm			1	tn/bc		
W-91.28-1	10/14/2002	12:57	1	7.2				1	tn/bc		
W-91.28-1	10/14/2002	12:57	13	9.9	ppm			1	tn/bc		
W-91.28-1	10/14/2002	12:57	14	17	ppm			1	tn/bc		
W-91.28-1	10/14/2002	12:57	7	25	ppm			1	tn/bc		
W-91.28-1	10/14/2002	12:57	32	32.7	ppm			1	tn/bc		
W-91.28-1	10/14/2002	12:57	12	54	ppm			1	tn/bc		
W-91.28-1	10/14/2002	12:57	8	54	ppm			1	tn/bc		
W-91.28-1	10/14/2002	12:57	15	56	ppm			1	tn/bc		
W-91.28-1	10/14/2002	12:57	4	210	ppm			1	tn/bc		
W-91.28-1	10/14/2002	12:57	37	240	ppm			1	tn/bc		
W-91.28-1	10/14/2002	12:57	6	293	ppm			1	tn/bc		
W-91.28-1	10/14/2002	12:57	2	400	ppm			1	tn/bc		
W-91.28-1	10/14/2002	12:57	3	0.64	mS/cm			1	tn/bc		
W-91.28-1	10/14/2002	12:57	9		ppm	<	0.1	1	tn/bc		
W-91.28-3	10/14/2002	8:06	19	0.14	ppm			1	tn/bc		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-91.28-3	10/14/2002	8:06	19	0.15	ppm			2	tn/bc		
W-91.28-3	10/14/2002	8:06	36	0.15	ppm			1	tn/bc		
W-91.28-3	10/14/2002	8:06	11	0.4	ppm			2	tn/bc		
W-91.28-3	10/14/2002	8:06	11	0.41	ppm			1	tn/bc		
W-91.28-3	10/14/2002	8:06	9	0.47	ppm			2	tn/bc		This valu is significantly less than the normal sample.
W-91.28-3	10/14/2002	8:06	35	0.61	ppm			1	tn/bc		
W-91.28-3	10/14/2002	8:06	35	0.61	ppm			2	tn/bc		
W-91.28-3	10/14/2002	8:06	40	2.29	%			1	tn/bc		
W-91.28-3	10/14/2002	8:06	40	2.69	%			2	tn/bc		
W-91.28-3	10/14/2002	8:06	9	3.3	ppm			1	tn/bc		
W-91.28-3	10/14/2002	8:06	13	5.4	ppm			1	tn/bc		
W-91.28-3	10/14/2002	8:06	13	5.6	ppm			2	tn/bc		
W-91.28-3	10/14/2002	8:06	1	7.3				1	tn/bc		
W-91.28-3	10/14/2002	8:06	1	7.4				2	tn/bc		
W-91.28-3	10/14/2002	8:06	39	7.74	epm			2	tn/bc		
W-91.28-3	10/14/2002	8:06	39	7.89	epm			1	tn/bc		
W-91.28-3	10/14/2002	8:06	38	8.16	epm			2	tn/bc		
W-91.28-3	10/14/2002	8:06	38	8.26	epm			1	tn/bc		
W-91.28-3	10/14/2002	8:06	14	13	ppm			1	tn/bc		
W-91.28-3	10/14/2002	8:06	14	13	ppm			2	tn/bc		
W-91.28-3	10/14/2002	8:06	32	17	ppm			1	tn/bc		
W-91.28-3	10/14/2002	8:06	32	18	ppm			2	tn/bc		
W-91.28-3	10/14/2002	8:06	7	40	ppm			1	tn/bc		
W-91.28-3	10/14/2002	8:06	7	40	ppm			2	tn/bc		
W-91.28-3	10/14/2002	8:06	12	70	ppm			1	tn/bc		
W-91.28-3	10/14/2002	8:06	12	70	ppm			2	tn/bc		
W-91.28-3	10/14/2002	8:06	15	78	ppm			2	tn/bc		
W-91.28-3	10/14/2002	8:06	15	80	ppm			1	tn/bc		
W-91.28-3	10/14/2002	8:06	8	120	ppm			2	tn/bc		
W-91.28-3	10/14/2002	8:06	8	125	ppm			1	tn/bc		
W-91.28-3	10/14/2002	8:06	37	204	ppm			1	tn/bc		
W-91.28-3	10/14/2002	8:06	37	204	ppm			2	tn/bc		
W-91.28-3	10/14/2002	8:06	4	248	ppm			2	tn/bc		
W-91.28-3	10/14/2002	8:06	6	249	ppm			1	tn/bc		
W-91.28-3	10/14/2002	8:06	6	249	ppm			2	tn/bc		
W-91.28-3	10/14/2002	8:06	4	253	ppm			1	tn/bc		
W-91.28-3	10/14/2002	8:06	2	470	ppm			2	tn/bc		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-91.28-3	10/14/2002	8:06	2	480	ppm			1	tn/bc		
W-91.28-3	10/14/2002	8:06	3	0.616	mS/cm			1	tn/bc		
W-91.28-3	10/14/2002	8:06	3	0.715	mS/cm			2	tn/bc		
W-91.28-3	10/14/2002	8:06	36		ppm	<	0.1	2	tn/bc		
W-91.28-3	10/14/2002	8:06	10		ppm	<	0.5	1	tn/bc		
W-91.28-3	10/14/2002	8:06	10		ppm	<	0.5	2	tn/bc		
W-91.28-3.5	10/14/2002	16:38	40	0.2	%			2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	19	0.26	ppm			1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	19	0.26	ppm			2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	11	0.31	ppm			2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	11	0.32	ppm			1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	35	0.79	ppm			2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	36	0.83	ppm			1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	35	0.85	ppm			1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	36	1	ppm			2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	40	2.01	%			1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	1	7.1				1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	1	7.1				2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	13	8.6	ppm			1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	13	8.7	ppm			2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	14	13	ppm			2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	14	14	ppm			1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	39	19.69	epm			2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	39	19.73	epm			1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	38	19.76	epm			2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	38	20.54	epm			1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	32	54	ppm			2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	32	55	ppm			1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	15	56	ppm			2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	15	70	ppm			1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	7	95	ppm			1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	7	95	ppm			2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	4	193	ppm			2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	4	232	ppm			1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	8	310	ppm			1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	8	310	ppm			2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	12	360	ppm			1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	12	360	ppm			2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	37	535	ppm			2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	37	537	ppm			1	lw/mp		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-91.28-3.5	10/14/2002	16:38	6	642	ppm			2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	6	645	ppm			1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	2	1220	ppm			2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	2	1240	ppm			1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	3	1.82	mS/cm			2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	3	1.84	mS/cm			1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	9		ppm	<	0.1	1	lwmp		
W-91.28-3.5	10/14/2002	16:38	9		ppm	<	0.1	2	lw/mp		
W-91.28-3.5	10/14/2002	16:38	10		ppm	<	0.5	1	lw/mp		
W-91.28-3.5	10/14/2002	16:38	10		ppm	<	0.5	2	lw/mp		
W-91.28-4	10/14/2002	11:48	36	0.1	ppm			1	tn/bc		
W-91.28-4	10/14/2002	11:48	19	0.21	ppm			1	tn/bc		
W-91.28-4	10/14/2002	11:48	35	1.4	ppm			1	tn/bc		
W-91.28-4	10/14/2002	11:48	11	1.6	ppm			1	tn/bc		
W-91.28-4	10/14/2002	11:48	9	2	ppm			1	tn/bc		
W-91.28-4	10/14/2002	11:48	40	2.33	%			1	tn/bc		
W-91.28-4	10/14/2002	11:48	13	5.2	ppm			1	tn/bc		
W-91.28-4	10/14/2002	11:48	1	6.7				1	tn/bc		
W-91.28-4	10/14/2002	11:48	39	16.05	epm			1	tn/bc		
W-91.28-4	10/14/2002	11:48	38	16.81	epm			1	tn/bc		
W-91.28-4	10/14/2002	11:48	14	26	ppm			1	tn/bc		
W-91.28-4	10/14/2002	11:48	32	27	ppm			1	tn/bc		
W-91.28-4	10/14/2002	11:48	7	85	ppm			1	tn/bc		
W-91.28-4	10/14/2002	11:48	12	150	ppm			1	tn/bc		
W-91.28-4	10/14/2002	11:48	15	160	ppm			1	tn/bc		
W-91.28-4	10/14/2002	11:48	8	265	ppm			1	tn/bc		
W-91.28-4	10/14/2002	11:48	37	400	ppm			1	tn/bc		
W-91.28-4	10/14/2002	11:48	6	489	ppm			1	tn/bc		
W-91.28-4	10/14/2002	11:48	4	507	ppm			1	tn/bc		
W-91.28-4	10/14/2002	11:48	2	970	ppm			1	tn/bc		
W-91.28-4	10/14/2002	11:48	3	1.43	mS/cm			1	tn/bc		
W-91.28-4	10/14/2002	11:48	10		ppm	<	0.5	1	tn/bc		
W-Perini1	10/14/2002	15:19	40	-0.64	%			1	lw/mp		
W-Perini1	10/14/2002	15:19	19	0.13	ppm			1	lw/mp		
W-Perini1	10/14/2002	15:19	36	0.17	ppm			1	lw/mp		
W-Perini1	10/14/2002	15:19	35	0.56	ppm			1	lw/mp		
W-Perini1	10/14/2002	15:19	11	0.61	ppm			1	lw/mp		
W-Perini1	10/14/2002	15:19	13	5.9	ppm			1	lw/mp		
W-Perini1	10/14/2002	15:19	1	7.7				1	lw/mp		
W-Perini1	10/14/2002	15:19	14	9.5	ppm			1	lw/mp		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-Perini1	10/14/2002	15:19	38	12.15	epm			1	lw/mp		
W-Perini1	10/14/2002	15:19	39	12.31	epm			1	lw/mp		
W-Perini1	10/14/2002	15:19	32	30	ppm			1	lw/mp		
W-Perini1	10/14/2002	15:19	15	72	ppm			1	lw/mp		
W-Perini1	10/14/2002	15:19	7	90	ppm			1	lw/mp		
W-Perini1	10/14/2002	15:19	12	175	ppm			1	lw/mp		
W-Perini1	10/14/2002	15:19	4	219	ppm			1	lw/mp		
W-Perini1	10/14/2002	15:19	8	225	ppm			1	lw/mp		
W-Perini1	10/14/2002	15:19	37	257	ppm			1	lw/mp		
W-Perini1	10/14/2002	15:19	6	308	ppm			1	lw/mp		
W-Perini1	10/14/2002	15:19	2	760	ppm			1	lw/mp		
W-Perini1	10/14/2002	15:19	3	1.18	mS/cm			1	lw/mp		
W-Perini1	10/14/2002	15:19	9		ppm	<	0.1	1	lw/mp		
W-Perini1	10/14/2002	15:19	10		ppm	<	0.5	1	lw/mp		
Equipment Blank	3/1/2003	0:00	1	7.02				3	Wilcox		
Equipment Blank	3/1/2003	0:00	38	0.07	epm			3	Wilcox		
Equipment Blank	3/1/2003	0:00	39	0	epm			3	Wilcox		
Equipment Blank	3/1/2003	0:00	4	3	ppm			3	Wilcox		
Equipment Blank	3/1/2003	0:00	6		ppm	<	1	3	Wilcox		
Equipment Blank	3/1/2003	0:00	7		ppm	<	1	3	Wilcox		
Equipment Blank	3/1/2003	0:00	8		ppm	<	1	3	Wilcox		
Equipment Blank	3/1/2003	0:00	9		ppm	<	0.1	3	Wilcox		
Equipment Blank	3/1/2003	0:00	10		ppm	<	0.5	3	Wilcox		
Equipment Blank	3/1/2003	0:00	11		ppm	<	0.1	3	Wilcox		
Equipment Blank	3/1/2003	0:00	12	0.2	ppm			3	Wilcox		
Equipment Blank	3/1/2003	0:00	13		ppm	<	0.1	3	Wilcox		
Equipment Blank	3/1/2003	0:00	14	0.1	ppm			3	Wilcox		
Equipment Blank	3/1/2003	0:00	15	1.1	ppm			3	Wilcox		
Equipment Blank	3/1/2003	0:00	2	0	ppm			3	Wilcox		
Equipment Blank	3/1/2003	0:00	19	0.05	ppm			3	Wilcox		
Equipment Blank	3/1/2003	0:00	3	8.9	mS/cm			3	Wilcox		
Equipment Blank	3/1/2003	0:00	32		ppm	<	1	3	Wilcox		
Equipment Blank	3/1/2003	0:00	35	0.007	ppm			3	Wilcox		
Equipment Blank	3/1/2003	0:00	36		ppm	<	0.1	3	Wilcox		
Equipment Blank	3/1/2003	0:00	2	0	ppm			6	Wilcox		
Equipment Blank	3/1/2003	0:00	19	0.05	ppm			6	Wilcox		
Equipment Blank	3/1/2003	0:00	32		ppm	<	1	6	Wilcox		
Equipment Blank	3/1/2003	0:00	35	0.007	ppm			6	Wilcox		
Equipment Blank	3/1/2003	0:00	36		ppm	<	0.1	6	Wilcox		
Equipment Blank	3/1/2003	0:00	38	0.09	epm			3	Newton		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
Equipment Blank	3/1/2003	0:00	39	0.02	epm			3	Newton		
Equipment Blank	3/1/2003	0:00	4	3	ppm			3	Newton		
Equipment Blank	3/1/2003	0:00	6		ppm	<	1	3	Newton		
Equipment Blank	3/1/2003	0:00	7	0.83	ppm			3	Newton		
Equipment Blank	3/1/2003	0:00	8		ppm	<	1	3	Newton		
Equipment Blank	3/1/2003	0:00	9		ppm	<	0.1	3	Newton		
Equipment Blank	3/1/2003	0:00	10		ppm	<	0.5	3	Newton		
Equipment Blank	3/1/2003	0:00	11		ppm	<	0.1	3	Newton		
Equipment Blank	3/1/2003	0:00	12	0.69	ppm			3	Newton		
Equipment Blank	3/1/2003	0:00	13	0.3	ppm			3	Newton		
Equipment Blank	3/1/2003	0:00	14		ppm	<	0.1	3	Newton		
Equipment Blank	3/1/2003	0:00	15	1.1	ppm			3	Newton		
Equipment Blank	3/1/2003	0:00	2	0	ppm			3	Newton		
Equipment Blank	3/1/2003	0:00	19	0.05	ppm			3	Newton		
Equipment Blank	3/1/2003	0:00	32		ppm	<	1	3	Newton		
Equipment Blank	3/1/2003	0:00	35	0.006	ppm			3	Newton		
Equipment Blank	3/1/2003	0:00	36		ppm	<	0.1	3	Newton		
Equipment Blank	3/1/2003	0:00	38	0.07	epm			6	Wilcox		
Equipment Blank	3/1/2003	0:00	39	0	epm			6	Wilcox		
Equipment Blank	3/1/2003	0:00	4	3	ppm			6	Wilcox		
Equipment Blank	3/1/2003	0:00	6		ppm	<	1	6	Wilcox		
Equipment Blank	3/1/2003	0:00	7		ppm	<	1	6	Wilcox		
Equipment Blank	3/1/2003	0:00	9		ppm	<	0.1	6	Wilcox		
Equipment Blank	3/1/2003	0:00	10		ppm	<	0.5	6	Wilcox		
Equipment Blank	3/1/2003	0:00	11		ppm	<	0.1	6	Wilcox		
Equipment Blank	3/1/2003	0:00	12	0.18	ppm			6	Wilcox		
Equipment Blank	3/1/2003	0:00	13		ppm	<	0.1	6	Wilcox		
Equipment Blank	3/1/2003	0:00	14	0.1	ppm			6	Wilcox		
Equipment Blank	3/1/2003	0:00	15	1.1	ppm			6	Wilcox		
W-114.60-2	3/1/2003	0:00	40	-2.93	%			1	Wilcox		
W-114.60-2	3/1/2003	0:00	4	179	ppm			1	Wilcox		
W-114.60-2	3/1/2003	0:00	6	193	ppm			1	Wilcox		
W-114.60-2	3/1/2003	0:00	7	40	ppm			1	Wilcox		
W-114.60-2	3/1/2003	0:00	8	115	ppm			1	Wilcox		
W-114.60-2	3/1/2003	0:00	9		ppm	<	0.1	1	Wilcox		
W-114.60-2	3/1/2003	0:00	10		ppm	<	0.5	1	Wilcox		
W-114.60-2	3/1/2003	0:00	11	0.57	ppm			1	Wilcox		
W-114.60-2	3/1/2003	0:00	12	60	ppm			1	Wilcox		
W-114.60-2	3/1/2003	0:00	13	4.9	ppm			1	Wilcox		
W-114.60-2	3/1/2003	0:00	14	9	ppm			1	Wilcox		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-114.60-2	3/1/2003	0:00	15	57	ppm			1	Wilcox		
W-114.60-2	3/1/2003	0:00	2	400	ppm			1	Wilcox		
W-114.60-2	3/1/2003	0:00	19	0.11	ppm			1	Wilcox		
W-114.60-2	3/1/2003	0:00	3	0.546	mS/cm			1	Wilcox		
W-114.60-2	3/1/2003	0:00	32	21	ppm			1	Wilcox		
W-114.60-2	3/1/2003	0:00	35	0.67	ppm			1	Wilcox		
W-114.60-2	3/1/2003	0:00	36	0.12	ppm			1	Wilcox		
W-114.60-2	3/1/2003	0:00	1	7.76				1	Wilcox		
W-114.60-2	3/1/2003	0:00	38	6.34	epm			1	Wilcox		
W-114.60-2	3/1/2003	0:00	39	6.72	epm			1	Wilcox		
W-114.60-3	3/1/2003	0:00	1	6.99				1	Wilcox		
W-114.60-3	3/1/2003	0:00	38	13.91	epm			1	Wilcox		
W-114.60-3	3/1/2003	0:00	39	14.28	epm			1	Wilcox		
W-114.60-3	3/1/2003	0:00	40	-1.29	%			1	Wilcox		
W-114.60-3	3/1/2003	0:00	4	506	ppm			1	Wilcox		
W-114.60-3	3/1/2003	0:00	6	535	ppm			1	Wilcox		
W-114.60-3	3/1/2003	0:00	7	57	ppm			1	Wilcox		
W-114.60-3	3/1/2003	0:00	8	185	ppm			1	Wilcox		
W-114.60-3	3/1/2003	0:00	9	0.64	ppm			1	Wilcox		
W-114.60-3	3/1/2003	0:00	10		ppm	<	0.5	1	Wilcox		
W-114.60-3	3/1/2003	0:00	11	0.71	ppm			1	Wilcox		
W-114.60-3	3/1/2003	0:00	12	82	ppm			1	Wilcox		
W-114.60-3	3/1/2003	0:00	13	7.5	ppm			1	Wilcox		
W-114.60-3	3/1/2003	0:00	14	32	ppm			1	Wilcox		
W-114.60-3	3/1/2003	0:00	15	150	ppm			1	Wilcox		
W-114.60-3	3/1/2003	0:00	2	810	ppm			1	Wilcox		
W-114.60-3	3/1/2003	0:00	19	0.19	ppm			1	Wilcox		
W-114.60-3	3/1/2003	0:00	3	1.063	mS/cm			1	Wilcox		
W-114.60-3	3/1/2003	0:00	32	29	ppm			1	Wilcox		
W-114.60-3	3/1/2003	0:00	35	1.7	ppm			1	Wilcox		
W-114.60-3	3/1/2003	0:00	36	0.17	ppm			1	Wilcox		
W-68.72-1	3/1/2003	0:00	1	6.99				1	Newton		
W-68.72-1	3/1/2003	0:00	38	12.25	epm			1	Newton		
W-68.72-1	3/1/2003	0:00	39	12.89	epm			1	Newton		
W-68.72-1	3/1/2003	0:00	40	-2.55	%			1	Newton		
W-68.72-1	3/1/2003	0:00	4	432	ppm			1	Newton		
W-68.72-1	3/1/2003	0:00	6	409	ppm			1	Newton		
W-68.72-1	3/1/2003	0:00	7	100	ppm			1	Newton		
W-68.72-1	3/1/2003	0:00	8	160	ppm			1	Newton		
W-68.72-1	3/1/2003	0:00	9		ppm	<	0.1	1	Newton		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-68.72-1	3/1/2003	0:00	10		ppm	<	0.5	1	Newton		
W-68.72-1	3/1/2003	0:00	11	0.6	ppm			1	Newton		
W-68.72-1	3/1/2003	0:00	12	80	ppm			1	Newton		
W-68.72-1	3/1/2003	0:00	13	4.2	ppm			1	Newton		
W-68.72-1	3/1/2003	0:00	14	23	ppm			1	Newton		
W-68.72-1	3/1/2003	0:00	15	135	ppm			1	Newton		
W-68.72-1	3/1/2003	0:00	2	730	ppm			1	Newton		
W-68.72-1	3/1/2003	0:00	19	0.1	ppm			1	Newton		
W-68.72-1	3/1/2003	0:00	3	1.024	mS/cm			1	Newton		
W-68.72-1	3/1/2003	0:00	32	20	ppm			1	Newton		
W-68.72-1	3/1/2003	0:00	35	1.4	ppm			1	Newton		
W-68.72-1	3/1/2003	0:00	36	0.2	ppm			1	Newton		
W-68.72-1	3/1/2003	0:00	1	7.07				2	Newton		
W-68.72-1	3/1/2003	0:00	38	12.33	epm			2	Newton		
W-68.72-1	3/1/2003	0:00	39	12.91	epm			2	Newton		
W-68.72-1	3/1/2003	0:00	40	-2.28	%			2	Newton		
W-68.72-1	3/1/2003	0:00	4	436	ppm			2	Newton		
W-68.72-1	3/1/2003	0:00	6	410	ppm			2	Newton		
W-68.72-1	3/1/2003	0:00	7	100	ppm			2	Newton		
W-68.72-1	3/1/2003	0:00	8	160	ppm			2	Newton		
W-68.72-1	3/1/2003	0:00	9		ppm	<	0.1	2	Newton		
W-68.72-1	3/1/2003	0:00	10		ppm	<	0.5	2	Newton		
W-68.72-1	3/1/2003	0:00	11	0.62	ppm			2	Newton		
W-68.72-1	3/1/2003	0:00	12	80	ppm			2	Newton		
W-68.72-1	3/1/2003	0:00	13	4.2	ppm			2	Newton		
W-68.72-1	3/1/2003	0:00	14	24	ppm			2	Newton		
W-68.72-1	3/1/2003	0:00	15	135	ppm			2	Newton		
W-68.72-1	3/1/2003	0:00	2	730	ppm			2	Newton		
W-68.72-1	3/1/2003	0:00	19	0.1	ppm			2	Newton		
W-68.72-1	3/1/2003	0:00	3	0.984	mS/cm			2	Newton		
W-68.72-1	3/1/2003	0:00	32	20	ppm			2	Newton		
W-68.72-1	3/1/2003	0:00	35	1.5	ppm			2	Newton		
W-68.72-1	3/1/2003	0:00	36	0.21	ppm			2	Newton		
W-68.72-3	3/1/2003	0:00	1	7.15				1	Newton		
W-68.72-3	3/1/2003	0:00	38	13.25	epm			1	Newton		
W-68.72-3	3/1/2003	0:00	39	13.88	epm			1	Newton		
W-68.72-3	3/1/2003	0:00	40	-2.33	%			1	Newton		
W-68.72-3	3/1/2003	0:00	4	415	ppm			1	Newton		
W-68.72-3	3/1/2003	0:00	6	520	ppm			1	Newton		
W-68.72-3	3/1/2003	0:00	7	92	ppm			1	Newton		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-68.72-3	3/1/2003	0:00	8	130	ppm			1	Newton		
W-68.72-3	3/1/2003	0:00	9	0.27	ppm			1	Newton		
W-68.72-3	3/1/2003	0:00	10		ppm	<	0.5	1	Newton		
W-68.72-3	3/1/2003	0:00	11	0.9	ppm			1	Newton		
W-68.72-3	3/1/2003	0:00	12	110	ppm			1	Newton		
W-68.72-3	3/1/2003	0:00	13	5.4	ppm			1	Newton		
W-68.72-3	3/1/2003	0:00	14	28	ppm			1	Newton		
W-68.72-3	3/1/2003	0:00	15	120	ppm			1	Newton		
W-68.72-3	3/1/2003	0:00	2	770	ppm			1	Newton		
W-68.72-3	3/1/2003	0:00	19	0.21	ppm			1	Newton		
W-68.72-3	3/1/2003	0:00	3	1.082	mS/cm			1	Newton		
W-68.72-3	3/1/2003	0:00	32	25	ppm			1	Newton		
W-68.72-3	3/1/2003	0:00	35	1.5	ppm			1	Newton		
W-68.72-3	3/1/2003	0:00	36	0.33	ppm			1	Newton		
W-68.72-4	3/1/2003	0:00	1	7.28				1	Newton		
W-68.72-4	3/1/2003	0:00	38	14.15	epm			1	Newton		
W-68.72-4	3/1/2003	0:00	39	14.67	epm			1	Newton		
W-68.72-4	3/1/2003	0:00	40	-1.82	%			1	Newton		
W-68.72-4	3/1/2003	0:00	4	373	ppm			1	Newton		
W-68.72-4	3/1/2003	0:00	6	625	ppm			1	Newton		
W-68.72-4	3/1/2003	0:00	7	55	ppm			1	Newton		
W-68.72-4	3/1/2003	0:00	8	135	ppm			1	Newton		
W-68.72-4	3/1/2003	0:00	9		ppm	<	0.1	1	Newton		
W-68.72-4	3/1/2003	0:00	10		ppm	<	0.5	1	Newton		
W-68.72-4	3/1/2003	0:00	11	1.2	ppm			1	Newton		
W-68.72-4	3/1/2003	0:00	12	150	ppm			1	Newton		
W-68.72-4	3/1/2003	0:00	13	5.4	ppm			1	Newton		
W-68.72-4	3/1/2003	0:00	14	30	ppm			1	Newton		
W-68.72-4	3/1/2003	0:00	15	100	ppm			1	Newton		
W-68.72-4	3/1/2003	0:00	2	830	ppm			1	Newton		
W-68.72-4	3/1/2003	0:00	19	0.31	ppm			1	Newton		
W-68.72-4	3/1/2003	0:00	3	1.102	mS/cm			1	Newton		
W-68.72-4	3/1/2003	0:00	32	35	ppm			1	Newton		
W-68.72-4	3/1/2003	0:00	35	1.2	ppm			1	Newton		
W-68.72-4	3/1/2003	0:00	36	0.32	ppm			1	Newton		
W-87.62-1	3/1/2003	0:00	1	7.49				1	Wilcox		
W-87.62-1	3/1/2003	0:00	38	6.61	epm			1	Wilcox		
W-87.62-1	3/1/2003	0:00	39	6.77	epm			1	Wilcox		
W-87.62-1	3/1/2003	0:00	40	-1.21	%			1	Wilcox		
W-87.62-1	3/1/2003	0:00	4	200	ppm			1	Wilcox		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-87.62-1	3/1/2003	0:00	6	203	ppm			1	Wilcox		
W-87.62-1	3/1/2003	0:00	7	40	ppm			1	Wilcox		
W-87.62-1	3/1/2003	0:00	8	110	ppm			1	Wilcox		
W-87.62-1	3/1/2003	0:00	9		ppm	<	0.1	1	Wilcox		
W-87.62-1	3/1/2003	0:00	10		ppm	<	0.5	1	Wilcox		
W-87.62-1	3/1/2003	0:00	11	0.47	ppm			1	Wilcox		
W-87.62-1	3/1/2003	0:00	12	57	ppm			1	Wilcox		
W-87.62-1	3/1/2003	0:00	13	4.6	ppm			1	Wilcox		
W-87.62-1	3/1/2003	0:00	14	11	ppm			1	Wilcox		
W-87.62-1	3/1/2003	0:00	15	62	ppm			1	Wilcox		
W-87.62-1	3/1/2003	0:00	2	400	ppm			1	Wilcox		
W-87.62-1	3/1/2003	0:00	19	0.07	ppm			1	Wilcox		
W-87.62-1	3/1/2003	0:00	3	0.59	mS/cm			1	Wilcox		
W-87.62-1	3/1/2003	0:00	32	17	ppm			1	Wilcox		
W-87.62-1	3/1/2003	0:00	35	0.61	ppm			1	Wilcox		
W-87.62-1	3/1/2003	0:00	36	0.13	ppm			1	Wilcox		
W-87.62-2	3/1/2003	0:00	9		ppm	<	0.1	1	Wilcox		
W-87.62-2	3/1/2003	0:00	10		ppm	<	0.5	1	Wilcox		
W-87.62-2	3/1/2003	0:00	11	0.55	ppm			1	Wilcox		
W-87.62-2	3/1/2003	0:00	12	63	ppm			1	Wilcox		
W-87.62-2	3/1/2003	0:00	13	5.7	ppm			1	Wilcox		
W-87.62-2	3/1/2003	0:00	14	11	ppm			1	Wilcox		
W-87.62-2	3/1/2003	0:00	15	65	ppm			1	Wilcox		
W-87.62-2	3/1/2003	0:00	2	450	ppm			1	Wilcox		
W-87.62-2	3/1/2003	0:00	19	0.13	ppm			1	Wilcox		
W-87.62-2	3/1/2003	0:00	3	0.588	mS/cm			1	Wilcox		
W-87.62-2	3/1/2003	0:00	32	25	ppm			1	Wilcox		
W-87.62-2	3/1/2003	0:00	35	0.66	ppm			1	Wilcox		
W-87.62-2	3/1/2003	0:00	36	0.11	ppm			1	Wilcox		
W-87.62-2	3/1/2003	0:00	1	7.51				1	Wilcox		
W-87.62-2	3/1/2003	0:00	38	7.05	epm			1	Wilcox		
W-87.62-2	3/1/2003	0:00	39	7.28	epm			1	Wilcox		
W-87.62-2	3/1/2003	0:00	40	-1.6	%			1	Wilcox		
W-87.62-2	3/1/2003	0:00	4	208	ppm			1	Wilcox		
W-87.62-2	3/1/2003	0:00	6	210	ppm			1	Wilcox		
W-87.62-2	3/1/2003	0:00	7	39	ppm			1	Wilcox		
W-87.62-2	3/1/2003	0:00	8	130	ppm			1	Wilcox		
W-87.62-3	3/1/2003	0:00	1	7.7				1	Wilcox		
W-87.62-3	3/1/2003	0:00	38	20.64	epm			1	Wilcox		
W-87.62-3	3/1/2003	0:00	39	21.85	epm			1	Wilcox		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-87.62-3	3/1/2003	0:00	40	-2.84	%			1	Wilcox		
W-87.62-3	3/1/2003	0:00	4	187	ppm			1	Wilcox		
W-87.62-3	3/1/2003	0:00	6	318	ppm			1	Wilcox		
W-87.62-3	3/1/2003	0:00	7	330	ppm			1	Wilcox		
W-87.62-3	3/1/2003	0:00	8	350	ppm			1	Wilcox		
W-87.62-3	3/1/2003	0:00	9		ppm	<	0.1	1	Wilcox		
W-87.62-3	3/1/2003	0:00	10		ppm	<	0.5	1	Wilcox		
W-87.62-3	3/1/2003	0:00	11	0.65	ppm			1	Wilcox		
W-87.62-3	3/1/2003	0:00	12	380	ppm			1	Wilcox		
W-87.62-3	3/1/2003	0:00	13	14	ppm			1	Wilcox		
W-87.62-3	3/1/2003	0:00	14	12	ppm			1	Wilcox		
W-87.62-3	3/1/2003	0:00	15	55	ppm			1	Wilcox		
W-87.62-3	3/1/2003	0:00	2	1330	ppm			1	Wilcox		
W-87.62-3	3/1/2003	0:00	19	0.55	ppm			1	Wilcox		
W-87.62-3	3/1/2003	0:00	3	1.898	mS/cm			1	Wilcox		
W-87.62-3	3/1/2003	0:00	32	33	ppm			1	Wilcox		
W-87.62-3	3/1/2003	0:00	35	0.85	ppm			1	Wilcox		
W-87.62-3	3/1/2003	0:00	36	0.28	ppm			1	Wilcox		
W-87.62-4	3/1/2003	0:00	1	7.37				1	Wilcox		
W-87.62-4	3/1/2003	0:00	38	9.54	epm			1	Wilcox		
W-87.62-4	3/1/2003	0:00	39	10.06	epm			1	Wilcox		
W-87.62-4	3/1/2003	0:00	40	-2.68	%			1	Wilcox		
W-87.62-4	3/1/2003	0:00	4	274	ppm			1	Wilcox		
W-87.62-4	3/1/2003	0:00	6	285	ppm			1	Wilcox		
W-87.62-4	3/1/2003	0:00	7	72	ppm			1	Wilcox		
W-87.62-4	3/1/2003	0:00	8	160	ppm			1	Wilcox		
W-87.62-4	3/1/2003	0:00	9		ppm	<	0.1	1	Wilcox		
W-87.62-4	3/1/2003	0:00	10		ppm	<	0.5	1	Wilcox		
W-87.62-4	3/1/2003	0:00	11	0.5	ppm			1	Wilcox		
W-87.62-4	3/1/2003	0:00	12	90	ppm			1	Wilcox		
W-87.62-4	3/1/2003	0:00	13	5	ppm			1	Wilcox		
W-87.62-4	3/1/2003	0:00	14	15	ppm			1	Wilcox		
W-87.62-4	3/1/2003	0:00	15	85	ppm			1	Wilcox		
W-87.62-4	3/1/2003	0:00	2	590	ppm			1	Wilcox		
W-87.62-4	3/1/2003	0:00	19	0.15	ppm			1	Wilcox		
W-87.62-4	3/1/2003	0:00	3	0.802	mS/cm			1	Wilcox		
W-87.62-4	3/1/2003	0:00	32	23	ppm			1	Wilcox		
W-87.62-4	3/1/2003	0:00	35	0.81	ppm			1	Wilcox		
W-87.62-4	3/1/2003	0:00	36	0.16	ppm			1	Wilcox		
W-EB-11-20	3/1/2003	0:00	1	7.32				1	Newton		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-EB-11-20	3/1/2003	0:00	38	7.8	epm			1	Newton		
W-EB-11-20	3/1/2003	0:00	39	8.26	epm			1	Newton		
W-EB-11-20	3/1/2003	0:00	40	-2.88	%			1	Newton		
W-EB-11-20	3/1/2003	0:00	4	199	ppm			1	Newton		
W-EB-11-20	3/1/2003	0:00	6	285	ppm			1	Newton		
W-EB-11-20	3/1/2003	0:00	7	52	ppm			1	Newton		
W-EB-11-20	3/1/2003	0:00	8	100	ppm			1	Newton		
W-EB-11-20	3/1/2003	0:00	9		ppm	<	0.1	1	Newton		
W-EB-11-20	3/1/2003	0:00	10		ppm	<	0.5	1	Newton		
W-EB-11-20	3/1/2003	0:00	11	0.74	ppm			1	Newton		
W-EB-11-20	3/1/2003	0:00	12	85	ppm			1	Newton		
W-EB-11-20	3/1/2003	0:00	13	4	ppm			1	Newton		
W-EB-11-20	3/1/2003	0:00	14	12	ppm			1	Newton		
W-EB-11-20	3/1/2003	0:00	15	60	ppm			1	Newton		
W-EB-11-20	3/1/2003	0:00	2	480	ppm			1	Newton		
W-EB-11-20	3/1/2003	0:00	19	0.14	ppm			1	Newton		
W-EB-11-20	3/1/2003	0:00	3	0.688	mS/cm			1	Newton		
W-EB-11-20	3/1/2003	0:00	32	21	ppm			1	Newton		
W-EB-11-20	3/1/2003	0:00	35	0.74	ppm			1	Newton		
W-EB-11-20	3/1/2003	0:00	36	0.16	ppm			1	Newton		
DI Blank	3/2/2003	0:00	1	5.6				4	Newton		
DI Blank	3/2/2003	0:00	38	0.03	epm			4	Newton		
DI Blank	3/2/2003	0:00	39	0.08	epm			4	Newton		
DI Blank	3/2/2003	0:00	4	1	ppm			4	Newton		
DI Blank	3/2/2003	0:00	6	5	ppm			4	Newton		
DI Blank	3/2/2003	0:00	7		ppm	<	1	4	Newton		
DI Blank	3/2/2003	0:00	8		ppm	<	1	4	Newton		
DI Blank	3/2/2003	0:00	9		ppm	<	0.1	4	Newton		
DI Blank	3/2/2003	0:00	10		ppm	<	0.5	4	Newton		
DI Blank	3/2/2003	0:00	11		ppm	<	0.1	4	Newton		
DI Blank	3/2/2003	0:00	12		ppm	<	0.1	4	Newton		
DI Blank	3/2/2003	0:00	13		ppm	<	0.1	4	Newton		
DI Blank	3/2/2003	0:00	14		ppm	<	0.1	4	Newton		
DI Blank	3/2/2003	0:00	15	0.6	ppm			4	Newton		
DI Blank	3/2/2003	0:00	2	0	ppm			4	Newton		
DI Blank	3/2/2003	0:00	19	0.05	ppm			4	Newton		
DI Blank	3/2/2003	0:00	3	0.0056	mS/cm			4	Newton		
DI Blank	3/2/2003	0:00	32	0.17	ppm			4	Newton		
DI Blank	3/2/2003	0:00	35	0.001	ppm			4	Newton		
DI Blank	3/2/2003	0:00	36		ppm	<	0.1	4	Newton		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
BRN-E01A	6/16/2003	0:00	1	7.28				1	Wilcox		
BRN-E01A	6/16/2003	0:00	38	8.18	epm			1	Wilcox		
BRN-E01A	6/16/2003	0:00	39	8.14	epm			1	Wilcox		
BRN-E01A	6/16/2003	0:00	40	0.23	%			1	Wilcox		
BRN-E01A	6/16/2003	0:00	4	271	ppm			1	Wilcox		
BRN-E01A	6/16/2003	0:00	6	264	ppm			1	Wilcox		
BRN-E01A	6/16/2003	0:00	7	39	ppm			1	Wilcox		
BRN-E01A	6/16/2003	0:00	8	129	ppm			1	Wilcox		
BRN-E01A	6/16/2003	0:00	9		ppm	<	0.1	1	Wilcox		
BRN-E01A	6/16/2003	0:00	10		ppm	<	0.5	1	Wilcox		
BRN-E01A	6/16/2003	0:00	11	0.44	ppm			1	Wilcox		
BRN-E01A	6/16/2003	0:00	12	60	ppm			1	Wilcox		
BRN-E01A	6/16/2003	0:00	13	5.3	ppm			1	Wilcox		
BRN-E01A	6/16/2003	0:00	14	13	ppm			1	Wilcox		
BRN-E01A	6/16/2003	0:00	15	87	ppm			1	Wilcox		
BRN-E01A	6/16/2003	0:00	2	490	ppm			1	Wilcox		
BRN-E01A	6/16/2003	0:00	19	0.074	ppm			1	Wilcox		
BRN-E01A	6/16/2003	0:00	3	625	mS/cm			1	Wilcox		
BRN-E01A	6/16/2003	0:00	32	25	ppm			1	Wilcox		
BRN-E01A	6/16/2003	0:00	35	0.84	ppm			1	Wilcox		
BRN-E01A	6/16/2003	0:00	36	0.15	ppm			1	Wilcox		
BRN-E01B	6/16/2003	0:00	1	7.56				1	Wilcox		
BRN-E01B	6/16/2003	0:00	38	6.96	epm			1	Wilcox		
BRN-E01B	6/16/2003	0:00	39	7.05	epm			1	Wilcox		
BRN-E01B	6/16/2003	0:00	40	-0.6	%			1	Wilcox		
BRN-E01B	6/16/2003	0:00	4	220	ppm			1	Wilcox		
BRN-E01B	6/16/2003	0:00	6	201	ppm			1	Wilcox		
BRN-E01B	6/16/2003	0:00	7	39	ppm			1	Wilcox		
BRN-E01B	6/16/2003	0:00	8	126	ppm			1	Wilcox		
BRN-E01B	6/16/2003	0:00	9	0.11	ppm			1	Wilcox		
BRN-E01B	6/16/2003	0:00	10		ppm	<	0.5	1	Wilcox		
BRN-E01B	6/16/2003	0:00	11	0.42	ppm			1	Wilcox		
BRN-E01B	6/16/2003	0:00	12	56	ppm			1	Wilcox		
BRN-E01B	6/16/2003	0:00	13	4.4	ppm			1	Wilcox		
BRN-E01B	6/16/2003	0:00	14	11	ppm			1	Wilcox		
BRN-E01B	6/16/2003	0:00	15	70	ppm			1	Wilcox		
BRN-E01B	6/16/2003	0:00	2	430	ppm			1	Wilcox		
BRN-E01B	6/16/2003	0:00	19	0.14	ppm			1	Wilcox		
BRN-E01B	6/16/2003	0:00	3	608	mS/cm			1	Wilcox		
BRN-E01B	6/16/2003	0:00	32	23	ppm			1	Wilcox		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
BRN-E01B	6/16/2003	0:00	35	0.7	ppm			1	Wilcox		
BRN-E01B	6/16/2003	0:00	36	0.42	ppm			1	Wilcox		
BRN-E01C	6/16/2003	0:00	1	7.68				1	Newton		
BRN-E01C	6/16/2003	0:00	38	7.14	epm			1	Newton		
BRN-E01C	6/16/2003	0:00	39	7.42	epm			1	Newton		
BRN-E01C	6/16/2003	0:00	40	-1.94	%			1	Newton		
BRN-E01C	6/16/2003	0:00	4	203	ppm			1	Newton		
BRN-E01C	6/16/2003	0:00	6	247	ppm			1	Newton		
BRN-E01C	6/16/2003	0:00	7	45	ppm			1	Newton		
BRN-E01C	6/16/2003	0:00	8	100	ppm			1	Newton		
BRN-E01C	6/16/2003	0:00	9		ppm	<	0.1	1	Newton		
BRN-E01C	6/16/2003	0:00	10		ppm	<	0.5	1	Newton		
BRN-E01C	6/16/2003	0:00	11	0.43	ppm			1	Newton		
BRN-E01C	6/16/2003	0:00	12	68	ppm			1	Newton		
BRN-E01C	6/16/2003	0:00	13	4.7	ppm			1	Newton		
BRN-E01C	6/16/2003	0:00	14	11	ppm			1	Newton		
BRN-E01C	6/16/2003	0:00	15	63	ppm			1	Newton		
BRN-E01C	6/16/2003	0:00	2	440	ppm			1	Newton		
BRN-E01C	6/16/2003	0:00	19	0.12	ppm			1	Newton		
BRN-E01C	6/16/2003	0:00	3	627	mS/cm			1	Newton		
BRN-E01C	6/16/2003	0:00	32	20	ppm			1	Newton		
BRN-E01C	6/16/2003	0:00	35	0.68	ppm			1	Newton		
BRN-E01C	6/16/2003	0:00	36	0.14	ppm			1	Newton		
BRN-E06A	6/16/2003	0:00	8	240	ppm			1	Wilcox		
BRN-E06A	6/16/2003	0:00	9	0.13	ppm			1	Wilcox		
BRN-E06A	6/16/2003	0:00	10		ppm	<	0.5	1	Wilcox		
BRN-E06A	6/16/2003	0:00	11	0.37	ppm			1	Wilcox		
BRN-E06A	6/16/2003	0:00	12	87	ppm			1	Wilcox		
BRN-E06A	6/16/2003	0:00	13	7.8	ppm			1	Wilcox		
BRN-E06A	6/16/2003	0:00	14	23	ppm			1	Wilcox		
BRN-E06A	6/16/2003	0:00	15	120	ppm			1	Wilcox		
BRN-E06A	6/16/2003	0:00	2	730	ppm			1	Wilcox		
BRN-E06A	6/16/2003	0:00	19	0.085	ppm			1	Wilcox		
BRN-E06A	6/16/2003	0:00	3	982	mS/cm			1	Wilcox		
BRN-E06A	6/16/2003	0:00	32	30	ppm			1	Wilcox		
BRN-E06A	6/16/2003	0:00	35	0.99	ppm			1	Wilcox		
BRN-E06A	6/16/2003	0:00	36	0.17	ppm			1	Wilcox		
BRN-E06A	6/16/2003	0:00	1	7.03				1	Wilcox		
BRN-E06A	6/16/2003	0:00	38	11.89	epm			1	Wilcox		
BRN-E06A	6/16/2003	0:00	39	12.03	epm			1	Wilcox		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
BRN-E06A	6/16/2003	0:00	40	-0.58	%			1	Wilcox		
BRN-E06A	6/16/2003	0:00	4	394	ppm			1	Wilcox		
BRN-E06A	6/16/2003	0:00	6	288	ppm			1	Wilcox		
BRN-E06A	6/16/2003	0:00	7	81	ppm			1	Wilcox		
ESC-W03A	6/16/2003	0:00	1	7.46				1	Wilcox		
ESC-W03A	6/16/2003	0:00	38	16.82	epm			1	Wilcox		
ESC-W03A	6/16/2003	0:00	39	16.81	epm			1	Wilcox		
ESC-W03A	6/16/2003	0:00	40	0.02	%			1	Wilcox		
ESC-W03A	6/16/2003	0:00	4	374	ppm			1	Wilcox		
ESC-W03A	6/16/2003	0:00	6	310	ppm			1	Wilcox		
ESC-W03A	6/16/2003	0:00	7	175	ppm			1	Wilcox		
ESC-W03A	6/16/2003	0:00	8	325	ppm			1	Wilcox		
ESC-W03A	6/16/2003	0:00	9		ppm	<	0.1	1	Wilcox		
ESC-W03A	6/16/2003	0:00	10		ppm	<	0.5	1	Wilcox		
ESC-W03A	6/16/2003	0:00	11	0.38	ppm			1	Wilcox		
ESC-W03A	6/16/2003	0:00	12	210	ppm			1	Wilcox		
ESC-W03A	6/16/2003	0:00	13	7.3	ppm			1	Wilcox		
ESC-W03A	6/16/2003	0:00	14	21	ppm			1	Wilcox		
ESC-W03A	6/16/2003	0:00	15	115	ppm			1	Wilcox		
ESC-W03A	6/16/2003	0:00	2	1040	ppm			1	Wilcox		
ESC-W03A	6/16/2003	0:00	19	0.22	ppm			1	Wilcox		
ESC-W03A	6/16/2003	0:00	3	1409	mS/cm			1	Wilcox		
ESC-W03A	6/16/2003	0:00	32	26	ppm			1	Wilcox		
ESC-W03A	6/16/2003	0:00	35	1.2	ppm			1	Wilcox		
ESC-W03A	6/16/2003	0:00	36	0.23	ppm			1	Wilcox		
W-114.60-2	6/16/2003	0:00	1	7.74				1	Wilcox		
W-114.60-2	6/16/2003	0:00	38	6.7	epm			1	Wilcox		
W-114.60-2	6/16/2003	0:00	39	6.7	epm			1	Wilcox		
W-114.60-2	6/16/2003	0:00	40	-0.04	%			1	Wilcox		
W-114.60-2	6/16/2003	0:00	4	200	ppm			1	Wilcox		
W-114.60-2	6/16/2003	0:00	6	203	ppm			1	Wilcox		
W-114.60-2	6/16/2003	0:00	7	42	ppm			1	Wilcox		
W-114.60-2	6/16/2003	0:00	8	104	ppm			1	Wilcox		
W-114.60-2	6/16/2003	0:00	9		ppm	<	0.1	1	Wilcox		
W-114.60-2	6/16/2003	0:00	10		ppm	<	0.5	1	Wilcox		
W-114.60-2	6/16/2003	0:00	11	0.41	ppm			1	Wilcox		
W-114.60-2	6/16/2003	0:00	12	59	ppm			1	Wilcox		
W-114.60-2	6/16/2003	0:00	13	4.4	ppm			1	Wilcox		
W-114.60-2	6/16/2003	0:00	14	11	ppm			1	Wilcox		
W-114.60-2	6/16/2003	0:00	15	62	ppm			1	Wilcox		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-114.60-2	6/16/2003	0:00	2	400	ppm			1	Wilcox		
W-114.60-2	6/16/2003	0:00	19	0.083	ppm			1	Wilcox		
W-114.60-2	6/16/2003	0:00	3	591	mS/cm			1	Wilcox		
W-114.60-2	6/16/2003	0:00	32	19	ppm			1	Wilcox		
W-114.60-2	6/16/2003	0:00	35	0.78	ppm			1	Wilcox		
W-114.60-2	6/16/2003	0:00	36	0.12	ppm			1	Wilcox		
W-114.60-3	6/16/2003	0:00	1	6.82				1	Wilcox		
W-114.60-3	6/16/2003	0:00	38	14.44	epm			1	Wilcox		
W-114.60-3	6/16/2003	0:00	39	14.48	epm			1	Wilcox		
W-114.60-3	6/16/2003	0:00	40	-0.15	%			1	Wilcox		
W-114.60-3	6/16/2003	0:00	4	515	ppm			1	Wilcox		
W-114.60-3	6/16/2003	0:00	6	585	ppm			1	Wilcox		
W-114.60-3	6/16/2003	0:00	7	49	ppm			1	Wilcox		
W-114.60-3	6/16/2003	0:00	8	165	ppm			1	Wilcox		
W-114.60-3	6/16/2003	0:00	9	2.8	ppm			1	Wilcox		
W-114.60-3	6/16/2003	0:00	10		ppm	<	0.5	1	Wilcox		
W-114.60-3	6/16/2003	0:00	11	0.5	ppm			1	Wilcox		
W-114.60-3	6/16/2003	0:00	12	90	ppm			1	Wilcox		
W-114.60-3	6/16/2003	0:00	13	7.8	ppm			1	Wilcox		
W-114.60-3	6/16/2003	0:00	14	34	ppm			1	Wilcox		
W-114.60-3	6/16/2003	0:00	15	150	ppm			1	Wilcox		
W-114.60-3	6/16/2003	0:00	2	830	ppm			1	Wilcox		
W-114.60-3	6/16/2003	0:00	19	0.15	ppm			1	Wilcox		
W-114.60-3	6/16/2003	0:00	3	1155	mS/cm			1	Wilcox		
W-114.60-3	6/16/2003	0:00	32	32	ppm			1	Wilcox		
W-114.60-3	6/16/2003	0:00	35	1.7	ppm			1	Wilcox		
W-114.60-3	6/16/2003	0:00	36	0.16	ppm			1	Wilcox		
W-87.62-2	6/16/2003	0:00	1	7.68				1	Newton		
W-87.62-2	6/16/2003	0:00	38	6.74	epm			1	Newton		
W-87.62-2	6/16/2003	0:00	39	6.71	epm			1	Newton		
W-87.62-2	6/16/2003	0:00	40	0.18	%			1	Newton		
W-87.62-2	6/16/2003	0:00	4	195	ppm			1	Newton		
W-87.62-2	6/16/2003	0:00	6	206	ppm			1	Newton		
W-87.62-2	6/16/2003	0:00	7	42	ppm			1	Newton		
W-87.62-2	6/16/2003	0:00	8	102	ppm			1	Newton		
W-87.62-2	6/16/2003	0:00	9		ppm	<	0.1	1	Newton		
W-87.62-2	6/16/2003	0:00	10		ppm	<	0.5	1	Newton		
W-87.62-2	6/16/2003	0:00	11	0.54	ppm			1	Newton		
W-87.62-2	6/16/2003	0:00	12	62	ppm			1	Newton		
W-87.62-2	6/16/2003	0:00	13	5	ppm			1	Newton		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-87.62-2	6/16/2003	0:00	14	11	ppm			1	Newton		
W-87.62-2	6/16/2003	0:00	15	60	ppm			1	Newton		
W-87.62-2	6/16/2003	0:00	2	410	ppm			1	Newton		
W-87.62-2	6/16/2003	0:00	19	0.073	ppm			1	Newton		
W-87.62-2	6/16/2003	0:00	3	600	mS/cm			1	Newton		
W-87.62-2	6/16/2003	0:00	32	20	ppm			1	Newton		
W-87.62-2	6/16/2003	0:00	35	0.67	ppm			1	Newton		
W-87.62-2	6/16/2003	0:00	36	0.13	ppm			1	Newton		
W-87.62-3	6/16/2003	0:00	1	7.69				1	Newton		
W-87.62-3	6/16/2003	0:00	38	15.36	epm			1	Newton		
W-87.62-3	6/16/2003	0:00	39	14.76	epm			1	Newton		
W-87.62-3	6/16/2003	0:00	40	1.98	%			1	Newton		
W-87.62-3	6/16/2003	0:00	4	188	ppm			1	Newton		
W-87.62-3	6/16/2003	0:00	6	360	ppm			1	Newton		
W-87.62-3	6/16/2003	0:00	7	136	ppm			1	Newton		
W-87.62-3	6/16/2003	0:00	8	240	ppm			1	Newton		
W-87.62-3	6/16/2003	0:00	9		ppm	<	0.1	1	Newton		
W-87.62-3	6/16/2003	0:00	10		ppm	<	0.5	1	Newton		
W-87.62-3	6/16/2003	0:00	11	0.47	ppm			1	Newton		
W-87.62-3	6/16/2003	0:00	12	260	ppm			1	Newton		
W-87.62-3	6/16/2003	0:00	13	11	ppm			1	Newton		
W-87.62-3	6/16/2003	0:00	14	11	ppm			1	Newton		
W-87.62-3	6/16/2003	0:00	15	57	ppm			1	Newton		
W-87.62-3	6/16/2003	0:00	2	930	ppm			1	Newton		
W-87.62-3	6/16/2003	0:00	19	0.21	ppm			1	Newton		
W-87.62-3	6/16/2003	0:00	3	1260	mS/cm			1	Newton		
W-87.62-3	6/16/2003	0:00	32	34	ppm			1	Newton		
W-87.62-3	6/16/2003	0:00	35	0.72	ppm			1	Newton		
W-87.62-3	6/16/2003	0:00	36	0.18	ppm			1	Newton		
W-87.62-4	6/16/2003	0:00	1	7.13				1	Newton		
W-87.62-4	6/16/2003	0:00	38	9.85	epm			1	Newton		
W-87.62-4	6/16/2003	0:00	39	10.23	epm			1	Newton		
W-87.62-4	6/16/2003	0:00	40	-1.89	%			1	Newton		
W-87.62-4	6/16/2003	0:00	4	267	ppm			1	Newton		
W-87.62-4	6/16/2003	0:00	6	307	ppm			1	Newton		
W-87.62-4	6/16/2003	0:00	7	69	ppm			1	Newton		
W-87.62-4	6/16/2003	0:00	8	155	ppm			1	Newton		
W-87.62-4	6/16/2003	0:00	9		ppm	<	0.1	1	Newton		
W-87.62-4	6/16/2003	0:00	10		ppm	<	0.5	1	Newton		
W-87.62-4	6/16/2003	0:00	11	0.45	ppm			1	Newton		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-87.62-4	6/16/2003	0:00	12	100	ppm			1	Newton		
W-87.62-4	6/16/2003	0:00	13	5.4	ppm			1	Newton		
W-87.62-4	6/16/2003	0:00	14	14	ppm			1	Newton		
W-87.62-4	6/16/2003	0:00	15	84	ppm			1	Newton		
W-87.62-4	6/16/2003	0:00	2	610	ppm			1	Newton		
W-87.62-4	6/16/2003	0:00	19	0.15	ppm			1	Newton		
W-87.62-4	6/16/2003	0:00	3	869	mS/cm			1	Newton		
W-87.62-4	6/16/2003	0:00	32	29	ppm			1	Newton		
W-87.62-4	6/16/2003	0:00	35	0.88	ppm			1	Newton		
W-87.62-4	6/16/2003	0:00	36	0.15	ppm			1	Newton		
W-91.28-3.5	6/16/2003	0:00	1	7.56				1	Newton		
W-91.28-3.5	6/16/2003	0:00	38	15.09	epm			1	Newton		
W-91.28-3.5	6/16/2003	0:00	39	15.95	epm			1	Newton		
W-91.28-3.5	6/16/2003	0:00	40	-2.77	%			1	Newton		
W-91.28-3.5	6/16/2003	0:00	4	199	ppm			1	Newton		
W-91.28-3.5	6/16/2003	0:00	6	440	ppm			1	Newton		
W-91.28-3.5	6/16/2003	0:00	7	83	ppm			1	Newton		
W-91.28-3.5	6/16/2003	0:00	8	305	ppm			1	Newton		
W-91.28-3.5	6/16/2003	0:00	9		ppm	<	0.1	1	Newton		
W-91.28-3.5	6/16/2003	0:00	10		ppm	<	0.5	1	Newton		
W-91.28-3.5	6/16/2003	0:00	11	0.86	ppm			1	Newton		
W-91.28-3.5	6/16/2003	0:00	12	250	ppm			1	Newton		
W-91.28-3.5	6/16/2003	0:00	13	8.4	ppm			1	Newton		
W-91.28-3.5	6/16/2003	0:00	14	12	ppm			1	Newton		
W-91.28-3.5	6/16/2003	0:00	15	60	ppm			1	Newton		
W-91.28-3.5	6/16/2003	0:00	2	970	ppm			1	Newton		
W-91.28-3.5	6/16/2003	0:00	19	0.27	ppm			1	Newton		
W-91.28-3.5	6/16/2003	0:00	3	1397	mS/cm			1	Newton		
W-91.28-3.5	6/16/2003	0:00	32	33	ppm			1	Newton		
W-91.28-3.5	6/16/2003	0:00	35	0.84	ppm			1	Newton		
W-91.28-3.5	6/16/2003	0:00	36	0.17	ppm			1	Newton		
W-91.28-3.5	6/16/2003	0:00	1	7.47				2	Newton		
W-91.28-3.5	6/16/2003	0:00	38	15.7	epm			2	Newton		
W-91.28-3.5	6/16/2003	0:00	39	15.87	epm			2	Newton		
W-91.28-3.5	6/16/2003	0:00	40	-0.55	%			2	Newton		
W-91.28-3.5	6/16/2003	0:00	4	197	ppm			2	Newton		
W-91.28-3.5	6/16/2003	0:00	6	435	ppm			2	Newton		
W-91.28-3.5	6/16/2003	0:00	7	83	ppm			2	Newton		
W-91.28-3.5	6/16/2003	0:00	8	305	ppm			2	Newton		
W-91.28-3.5	6/16/2003	0:00	9		ppm	<	0.1	2	Newton		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-91.28-3.5	6/16/2003	0:00	10		ppm	<	0.5	2	Newton		
W-91.28-3.5	6/16/2003	0:00	11	0.85	ppm			2	Newton		
W-91.28-3.5	6/16/2003	0:00	12	265	ppm			2	Newton		
W-91.28-3.5	6/16/2003	0:00	13	8.5	ppm			2	Newton		
W-91.28-3.5	6/16/2003	0:00	14	12	ppm			2	Newton		
W-91.28-3.5	6/16/2003	0:00	15	59	ppm			2	Newton		
W-91.28-3.5	6/16/2003	0:00	2	990	ppm			2	Newton		
W-91.28-3.5	6/16/2003	0:00	19	0.31	ppm			2	Newton		
W-91.28-3.5	6/16/2003	0:00	3	1390	mS/cm			2	Newton		
W-91.28-3.5	6/16/2003	0:00	32	37	ppm			2	Newton		
W-91.28-3.5	6/16/2003	0:00	35	0.83	ppm			2	Newton		
W-91.28-3.5	6/16/2003	0:00	36	0.18	ppm			2	Newton		
Equipment Blank	6/17/2003	0:00	1	5.45				3	Newton		
Equipment Blank	6/17/2003	0:00	38	0	epm			3	Newton		
Equipment Blank	6/17/2003	0:00	39	0.03	epm			3	Newton		
Equipment Blank	6/17/2003	0:00	4	0	ppm			3	Newton		
Equipment Blank	6/17/2003	0:00	6	1.7	ppm			3	Newton		
Equipment Blank	6/17/2003	0:00	7		ppm	<	1	3	Newton		
Equipment Blank	6/17/2003	0:00	8		ppm	<	1	3	Newton		
Equipment Blank	6/17/2003	0:00	9		ppm	<	0.1	3	Newton		
Equipment Blank	6/17/2003	0:00	10		ppm	<	0.5	3	Newton		
Equipment Blank	6/17/2003	0:00	11		ppm	<	0.1	3	Newton		
Equipment Blank	6/17/2003	0:00	12		ppm	<	1	3	Newton		
Equipment Blank	6/17/2003	0:00	13		ppm	<	0.3	3	Newton		
Equipment Blank	6/17/2003	0:00	14		ppm	<	0.5	3	Newton		
Equipment Blank	6/17/2003	0:00	15		ppm	<	1	3	Newton		
Equipment Blank	6/17/2003	0:00	2	0	ppm			3	Newton		
Equipment Blank	6/17/2003	0:00	19		ppm	<	0.001	3	Newton		
Equipment Blank	6/17/2003	0:00	3	4.5	mS/cm			3	Newton		
Equipment Blank	6/17/2003	0:00	32		ppm	<	1	3	Newton		
Equipment Blank	6/17/2003	0:00	35	0.004	ppm			3	Newton		
Equipment Blank	6/17/2003	0:00	36		ppm	<	0.1	3	Newton		
HWY-W07A	6/17/2003	0:00	1	7.6				1	Wilcox		
HWY-W07A	6/17/2003	0:00	38	7.12	epm			1	Wilcox		
HWY-W07A	6/17/2003	0:00	39	7.11	epm			1	Wilcox		
HWY-W07A	6/17/2003	0:00	40	0.11	%			1	Wilcox		
HWY-W07A	6/17/2003	0:00	4	213	ppm			1	Wilcox		
HWY-W07A	6/17/2003	0:00	6	223	ppm			1	Wilcox		
HWY-W07A	6/17/2003	0:00	7	44	ppm			1	Wilcox		
HWY-W07A	6/17/2003	0:00	8	105	ppm			1	Wilcox		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
HWY-W07A	6/17/2003	0:00	9		ppm	<	0.1	1	Wilcox		
HWY-W07A	6/17/2003	0:00	10		ppm	<	0.5	1	Wilcox		
HWY-W07A	6/17/2003	0:00	11	0.43	ppm			1	Wilcox		
HWY-W07A	6/17/2003	0:00	12	63	ppm			1	Wilcox		
HWY-W07A	6/17/2003	0:00	13	4.6	ppm			1	Wilcox		
HWY-W07A	6/17/2003	0:00	14	11	ppm			1	Wilcox		
HWY-W07A	6/17/2003	0:00	15	67	ppm			1	Wilcox		
HWY-W07A	6/17/2003	0:00	2	430	ppm			1	Wilcox		
HWY-W07A	6/17/2003	0:00	19	0.11	ppm			1	Wilcox		
HWY-W07A	6/17/2003	0:00	3	609	mS/cm			1	Wilcox		
HWY-W07A	6/17/2003	0:00	32	18	ppm			1	Wilcox		
HWY-W07A	6/17/2003	0:00	35	0.7	ppm			1	Wilcox		
HWY-W07A	6/17/2003	0:00	36	0.13	ppm			1	Wilcox		
HWY-W07B	6/17/2003	0:00	1	7.63				1	Wilcox		
HWY-W07B	6/17/2003	0:00	38	6.69	epm			1	Wilcox		
HWY-W07B	6/17/2003	0:00	39	6.91	epm			1	Wilcox		
HWY-W07B	6/17/2003	0:00	40	-1.61	%			1	Wilcox		
HWY-W07B	6/17/2003	0:00	4	206	ppm			1	Wilcox		
HWY-W07B	6/17/2003	0:00	6	210	ppm			1	Wilcox		
HWY-W07B	6/17/2003	0:00	7	41	ppm			1	Wilcox		
HWY-W07B	6/17/2003	0:00	8	110	ppm			1	Wilcox		
HWY-W07B	6/17/2003	0:00	9		ppm	<	0.1	1	Wilcox		
HWY-W07B	6/17/2003	0:00	10		ppm	<	0.5	1	Wilcox		
HWY-W07B	6/17/2003	0:00	11	0.38	ppm			1	Wilcox		
HWY-W07B	6/17/2003	0:00	12	56	ppm			1	Wilcox		
HWY-W07B	6/17/2003	0:00	13	4.8	ppm			1	Wilcox		
HWY-W07B	6/17/2003	0:00	14	10	ppm			1	Wilcox		
HWY-W07B	6/17/2003	0:00	15	66	ppm			1	Wilcox		
HWY-W07B	6/17/2003	0:00	2	410	ppm			1	Wilcox		
HWY-W07B	6/17/2003	0:00	19	0.05	ppm			1	Wilcox		
HWY-W07B	6/17/2003	0:00	3	570	mS/cm			1	Wilcox		
HWY-W07B	6/17/2003	0:00	32	17	ppm			1	Wilcox		
HWY-W07B	6/17/2003	0:00	35	0.72	ppm			1	Wilcox		
HWY-W07B	6/17/2003	0:00	36	0.13	ppm			1	Wilcox		
HWY-W07B	6/17/2003	0:00	1	7.68				2	Wilcox		
HWY-W07B	6/17/2003	0:00	38	6.7	epm			2	Wilcox		
HWY-W07B	6/17/2003	0:00	39	6.82	epm			2	Wilcox		
HWY-W07B	6/17/2003	0:00	40	-0.88	%			2	Wilcox		
HWY-W07B	6/17/2003	0:00	4	206	ppm			2	Wilcox		
HWY-W07B	6/17/2003	0:00	6	200	ppm			2	Wilcox		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
HWY-W07B	6/17/2003	0:00	7	42	ppm			2	Wilcox		
HWY-W07B	6/17/2003	0:00	8	112	ppm			2	Wilcox		
HWY-W07B	6/17/2003	0:00	9		ppm	<	0.1	2	Wilcox		
HWY-W07B	6/17/2003	0:00	10		ppm	<	0.5	2	Wilcox		
HWY-W07B	6/17/2003	0:00	11	0.37	ppm			2	Wilcox		
HWY-W07B	6/17/2003	0:00	12	56	ppm			2	Wilcox		
HWY-W07B	6/17/2003	0:00	13	5	ppm			2	Wilcox		
HWY-W07B	6/17/2003	0:00	14	10	ppm			2	Wilcox		
HWY-W07B	6/17/2003	0:00	15	66	ppm			2	Wilcox		
HWY-W07B	6/17/2003	0:00	2	410	ppm			2	Wilcox		
HWY-W07B	6/17/2003	0:00	19	0.05	ppm			2	Wilcox		
HWY-W07B	6/17/2003	0:00	3	582	mS/cm			2	Wilcox		
HWY-W07B	6/17/2003	0:00	32	17	ppm			2	Wilcox		
HWY-W07B	6/17/2003	0:00	35	0.72	ppm			2	Wilcox		
HWY-W07B	6/17/2003	0:00	36	0.12	ppm			2	Wilcox		
HWY-W07C	6/17/2003	0:00	1	7.69				1	wilcox		
HWY-W07C	6/17/2003	0:00	38	6.68	epm			1	wilcox		
HWY-W07C	6/17/2003	0:00	39	6.83	epm			1	wilcox		
HWY-W07C	6/17/2003	0:00	40	-1.12	%			1	wilcox		
HWY-W07C	6/17/2003	0:00	4	205	ppm			1	wilcox		
HWY-W07C	6/17/2003	0:00	6	205	ppm			1	wilcox		
HWY-W07C	6/17/2003	0:00	7	41	ppm			1	wilcox		
HWY-W07C	6/17/2003	0:00	8	110	ppm			1	wilcox		
HWY-W07C	6/17/2003	0:00	9		ppm	<	0.1	1	wilcox		
HWY-W07C	6/17/2003	0:00	10		ppm	<	0.5	1	wilcox		
HWY-W07C	6/17/2003	0:00	11	0.39	ppm			1	wilcox		
HWY-W07C	6/17/2003	0:00	12	56	ppm			1	wilcox		
HWY-W07C	6/17/2003	0:00	13	5	ppm			1	wilcox		
HWY-W07C	6/17/2003	0:00	14	11	ppm			1	wilcox		
HWY-W07C	6/17/2003	0:00	15	64	ppm			1	wilcox		
HWY-W07C	6/17/2003	0:00	2	410	ppm			1	wilcox		
HWY-W07C	6/17/2003	0:00	19	0.074	ppm			1	wilcox		
HWY-W07C	6/17/2003	0:00	3	579	mS/cm			1	wilcox		
HWY-W07C	6/17/2003	0:00	32	20	ppm			1	wilcox		
HWY-W07C	6/17/2003	0:00	35	0.66	ppm			1	wilcox		
HWY-W07C	6/17/2003	0:00	36	0.13	ppm			1	wilcox		
HWY-W07C	6/17/2003	0:00	1	7.7				2	Wilcox		
HWY-W07C	6/17/2003	0:00	38	6.68	epm			2	Wilcox		
HWY-W07C	6/17/2003	0:00	39	6.82	epm			2	Wilcox		
HWY-W07C	6/17/2003	0:00	40	-1.09	%			2	Wilcox		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
HWY-W07C	6/17/2003	0:00	4	205	ppm			2	Wilcox		
HWY-W07C	6/17/2003	0:00	6	203	ppm			2	Wilcox		
HWY-W07C	6/17/2003	0:00	7	42	ppm			2	Wilcox		
HWY-W07C	6/17/2003	0:00	8	110	ppm			2	Wilcox		
HWY-W07C	6/17/2003	0:00	9		ppm	<	0.1	2	Wilcox		
HWY-W07C	6/17/2003	0:00	10		ppm	<	0.5	2	Wilcox		
HWY-W07C	6/17/2003	0:00	11	0.39	ppm			2	Wilcox		
HWY-W07C	6/17/2003	0:00	12	56	ppm			2	Wilcox		
HWY-W07C	6/17/2003	0:00	13	5	ppm			2	Wilcox		
HWY-W07C	6/17/2003	0:00	14	11	ppm			2	Wilcox		
HWY-W07C	6/17/2003	0:00	15	64	ppm			2	Wilcox		
HWY-W07C	6/17/2003	0:00	2	410	ppm			2	Wilcox		
HWY-W07C	6/17/2003	0:00	19	0.08	ppm			2	Wilcox		
HWY-W07C	6/17/2003	0:00	3	577	mS/cm			2	Wilcox		
HWY-W07C	6/17/2003	0:00	32	20	ppm			2	Wilcox		
HWY-W07C	6/17/2003	0:00	35	0.67	ppm			2	Wilcox		
HWY-W07C	6/17/2003	0:00	36	0.13	ppm			2	Wilcox		
W-68.72-1	6/17/2003	0:00	1	7.05				1	Newton		
W-68.72-1	6/17/2003	0:00	38	12.35	epm			1	Newton		
W-68.72-1	6/17/2003	0:00	39	12.83	epm			1	Newton		
W-68.72-1	6/17/2003	0:00	40	-1.89	%			1	Newton		
W-68.72-1	6/17/2003	0:00	4	423	ppm			1	Newton		
W-68.72-1	6/17/2003	0:00	6	450	ppm			1	Newton		
W-68.72-1	6/17/2003	0:00	7	89	ppm			1	Newton		
W-68.72-1	6/17/2003	0:00	8	140	ppm			1	Newton		
W-68.72-1	6/17/2003	0:00	9		ppm	<	0.1	1	Newton		
W-68.72-1	6/17/2003	0:00	10		ppm	<	0.5	1	Newton		
W-68.72-1	6/17/2003	0:00	11	0.5	ppm			1	Newton		
W-68.72-1	6/17/2003	0:00	12	86	ppm			1	Newton		
W-68.72-1	6/17/2003	0:00	13	4.7	ppm			1	Newton		
W-68.72-1	6/17/2003	0:00	14	24	ppm			1	Newton		
W-68.72-1	6/17/2003	0:00	15	130	ppm			1	Newton		
W-68.72-1	6/17/2003	0:00	2	720	ppm			1	Newton		
W-68.72-1	6/17/2003	0:00	19	0.092	ppm			1	Newton		
W-68.72-1	6/17/2003	0:00	3	1010	mS/cm			1	Newton		
W-68.72-1	6/17/2003	0:00	32	24	ppm			1	Newton		
W-68.72-1	6/17/2003	0:00	35	1.4	ppm			1	Newton		
W-68.72-1	6/17/2003	0:00	36	0.2	ppm			1	Newton		
W-68.72-3	6/17/2003	0:00	11	0.66	ppm			1	Newton		
W-68.72-3	6/17/2003	0:00	12	112	ppm			1	Newton		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-68.72-3	6/17/2003	0:00	13	4.9	ppm			1	Newton		
W-68.72-3	6/17/2003	0:00	14	31	ppm			1	Newton		
W-68.72-3	6/17/2003	0:00	15	122	ppm			1	Newton		
W-68.72-3	6/17/2003	0:00	2	790	ppm			1	Newton		
W-68.72-3	6/17/2003	0:00	19	0.12	ppm			1	Newton		
W-68.72-3	6/17/2003	0:00	3	1125	mS/cm			1	Newton		
W-68.72-3	6/17/2003	0:00	32	20	ppm			1	Newton		
W-68.72-3	6/17/2003	0:00	35	1.5	ppm			1	Newton		
W-68.72-3	6/17/2003	0:00	36	0.32	ppm			1	Newton		
W-68.72-3	6/17/2003	0:00	1	6.96				1	Newton		
W-68.72-3	6/17/2003	0:00	38	13.67	epm			1	Newton		
W-68.72-3	6/17/2003	0:00	39	14.35	epm			1	Newton		
W-68.72-3	6/17/2003	0:00	40	-2.44	%			1	Newton		
W-68.72-3	6/17/2003	0:00	4	432	ppm			1	Newton		
W-68.72-3	6/17/2003	0:00	6	560	ppm			1	Newton		
W-68.72-3	6/17/2003	0:00	7	92	ppm			1	Newton		
W-68.72-3	6/17/2003	0:00	8	122	ppm			1	Newton		
W-68.72-3	6/17/2003	0:00	9		ppm	<	0.1	1	Newton		
W-68.72-3	6/17/2003	0:00	10		ppm	<	0.5	1	Newton		
W-91.28-3	6/17/2003	0:00	1	7.45				1	Newton		
W-91.28-3	6/17/2003	0:00	38	7.92	epm			1	Newton		
W-91.28-3	6/17/2003	0:00	39	8.13	epm			1	Newton		
W-91.28-3	6/17/2003	0:00	40	-1.34	%			1	Newton		
W-91.28-3	6/17/2003	0:00	4	247	ppm			1	Newton		
W-91.28-3	6/17/2003	0:00	6	240	ppm			1	Newton		
W-91.28-3	6/17/2003	0:00	7	45	ppm			1	Newton		
W-91.28-3	6/17/2003	0:00	8	140	ppm			1	Newton		
W-91.28-3	6/17/2003	0:00	9		ppm	<	0.1	1	Newton		
W-91.28-3	6/17/2003	0:00	10		ppm	<	0.5	1	Newton		
W-91.28-3	6/17/2003	0:00	11	0.25	ppm			1	Newton		
W-91.28-3	6/17/2003	0:00	12	64	ppm			1	Newton		
W-91.28-3	6/17/2003	0:00	13	6.7	ppm			1	Newton		
W-91.28-3	6/17/2003	0:00	14	14	ppm			1	Newton		
W-91.28-3	6/17/2003	0:00	15	76	ppm			1	Newton		
W-91.28-3	6/17/2003	0:00	2	490	ppm			1	Newton		
W-91.28-3	6/17/2003	0:00	19	0.1	ppm			1	Newton		
W-91.28-3	6/17/2003	0:00	3	677	mS/cm			1	Newton		
W-91.28-3	6/17/2003	0:00	32	24	ppm			1	Newton		
W-91.28-3	6/17/2003	0:00	35	0.81	ppm			1	Newton		
W-91.28-3	6/17/2003	0:00	36	0.12	ppm			1	Newton		

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
ESC-E04A	11/13/2003	0:00	2	460	ppm			1			
ESC-E04A	11/13/2003	0:00	19	0.15	ppm			1			
ESC-E04A	11/13/2003	0:00	3	0.631	mS/cm			1			
ESC-E04A	11/13/2003	0:00	32	24	ppm			1			
ESC-E04A	11/13/2003	0:00	35	0.67	ppm			1			
ESC-E04A	11/13/2003	0:00	36	0.15	ppm			1			
ESC-E04A	11/13/2003	0:00	1	7.7				2			
ESC-E04A	11/13/2003	0:00	38	7.39	epm			2			
ESC-E04A	11/13/2003	0:00	39	7.84	epm			2			
ESC-E04A	11/13/2003	0:00	40	-2.93	%			2			
ESC-E04A	11/13/2003	0:00	4	222	ppm			2			
ESC-E04A	11/13/2003	0:00	6	232	ppm			2			
ESC-E04A	11/13/2003	0:00	7	46	ppm			2			
ESC-E04A	11/13/2003	0:00	8	130	ppm			2			
ESC-E04A	11/13/2003	0:00	9		ppm	<	0.1	2			
ESC-E04A	11/13/2003	0:00	10		ppm	<	0.5	2			
ESC-E04A	11/13/2003	0:00	11	0.53	ppm			2			
ESC-E04A	11/13/2003	0:00	12	64	ppm			2			
ESC-E04A	11/13/2003	0:00	13	6.3	ppm			2			
ESC-E04A	11/13/2003	0:00	14	12	ppm			2			
ESC-E04A	11/13/2003	0:00	15	69	ppm			2			
ESC-E04A	11/13/2003	0:00	2	470	ppm			2			
ESC-E04A	11/13/2003	0:00	19	0.15	ppm			2			
ESC-E04A	11/13/2003	0:00	3	0.626	mS/cm			2			
ESC-E04A	11/13/2003	0:00	32	24	ppm			2			
ESC-E04A	11/13/2003	0:00	35	0.67	ppm			2			
ESC-E04A	11/13/2003	0:00	36	0.15	ppm			2			
ESC-E04A	11/13/2003	0:00	1	7.72				1			
ESC-E04A	11/13/2003	0:00	38	7.34	epm			1			
ESC-E04A	11/13/2003	0:00	39	7.52	epm			1			
ESC-E04A	11/13/2003	0:00	40	-1.22	%			1			
ESC-E04A	11/13/2003	0:00	4	219	ppm			1			
ESC-E04A	11/13/2003	0:00	6	218	ppm			1			
ESC-E04A	11/13/2003	0:00	7	45	ppm			1			
ESC-E04A	11/13/2003	0:00	8	127	ppm			1			
ESC-E04A	11/13/2003	0:00	9		ppm	<	0.1	1			
ESC-E04A	11/13/2003	0:00	10		ppm	<	0.5	1			
ESC-E04A	11/13/2003	0:00	11	0.53	ppm			1			
ESC-E04A	11/13/2003	0:00	12	64	ppm			1			
ESC-E04A	11/13/2003	0:00	13	6.1	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
ESC-E04A	11/13/2003	0:00	14	12	ppm			1			
ESC-E04A	11/13/2003	0:00	15	68	ppm			1			
ESC-E04C	11/13/2003	0:00	1	7.83				1			
ESC-E04C	11/13/2003	0:00	38	6.49	epm			1			
ESC-E04C	11/13/2003	0:00	39	6.64	epm			1			
ESC-E04C	11/13/2003	0:00	40	-1.17	%			1			
ESC-E04C	11/13/2003	0:00	4	197	ppm			1			
ESC-E04C	11/13/2003	0:00	6	198	ppm			1			
ESC-E04C	11/13/2003	0:00	7	42	ppm			1			
ESC-E04C	11/13/2003	0:00	8	105	ppm			1			
ESC-E04C	11/13/2003	0:00	9		ppm	<	0.1	1			
ESC-E04C	11/13/2003	0:00	10		ppm	<	0.5	1			
ESC-E04C	11/13/2003	0:00	11	0.45	ppm			1			
ESC-E04C	11/13/2003	0:00	12	56	ppm			1			
ESC-E04C	11/13/2003	0:00	13	4.2	ppm			1			
ESC-E04C	11/13/2003	0:00	14	9.6	ppm			1			
ESC-E04C	11/13/2003	0:00	15	63	ppm			1			
ESC-E04C	11/13/2003	0:00	2	400	ppm			1			
ESC-E04C	11/13/2003	0:00	19	0.1	ppm			1			
ESC-E04C	11/13/2003	0:00	3	0.547	mS/cm			1			
ESC-E04C	11/13/2003	0:00	32	19	ppm			1			
ESC-E04C	11/13/2003	0:00	35	0.51	ppm			1			
ESC-E04C	11/13/2003	0:00	36	0.14	ppm			1			
HWY-E03A	11/14/2003	15:10	40	1.07	%			1			
HWY-E03A	11/14/2003	15:10	4	42	ppm			1			
HWY-E03A	11/14/2003	15:10	6	494	ppm			1			
HWY-E03A	11/14/2003	15:10	7	55	ppm			1			
HWY-E03A	11/14/2003	15:10	8	225	ppm			1			
HWY-E03A	11/14/2003	15:10	9		ppm	<	0.1	1			
HWY-E03A	11/14/2003	15:10	10	0.89	ppm			1			
HWY-E03A	11/14/2003	15:10	11	4.6	ppm			1			
HWY-E03A	11/14/2003	15:10	12	320	ppm			1			
HWY-E03A	11/14/2003	15:10	13	5.9	ppm			1			
HWY-E03A	11/14/2003	15:10	14	4.8	ppm			1			
HWY-E03A	11/14/2003	15:10	15	9	ppm			1			
HWY-E03A	11/14/2003	15:10	2	920	ppm			1			
HWY-E03A	11/14/2003	15:10	19	0.51	ppm			1			
HWY-E03A	11/14/2003	15:10	3	1.172	mS/cm			1			
HWY-E03A	11/14/2003	15:10	32	43	ppm			1			
HWY-E03A	11/14/2003	15:10	35	0.21	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
HWY-E03A	11/14/2003	15:10	36	0.16	ppm			1			
HWY-E03A	11/14/2003	15:10	1	7.86				1			
HWY-E03A	11/14/2003	15:10	38	14.92	epm			1			
HWY-E03A	11/14/2003	15:10	39	14.6	epm			1			
HWY-W07C	11/14/2003	16:47	1	7.77				1			
HWY-W07C	11/14/2003	16:47	38	7.33	epm			1			
HWY-W07C	11/14/2003	16:47	39	7.06	epm			1			
HWY-W07C	11/14/2003	16:47	40	1.89	%			1			
HWY-W07C	11/14/2003	16:47	4	224	ppm			1			
HWY-W07C	11/14/2003	16:47	6	211	ppm			1			
HWY-W07C	11/14/2003	16:47	7	44	ppm			1			
HWY-W07C	11/14/2003	16:47	8	112	ppm			1			
HWY-W07C	11/14/2003	16:47	9		ppm	<	0.1	1			
HWY-W07C	11/14/2003	16:47	10		ppm	<	0.5	1			
HWY-W07C	11/14/2003	16:47	11	0.42	ppm			1			
HWY-W07C	11/14/2003	16:47	12	62	ppm			1			
HWY-W07C	11/14/2003	16:47	13	5.3	ppm			1			
HWY-W07C	11/14/2003	16:47	14	12	ppm			1			
HWY-W07C	11/14/2003	16:47	15	70	ppm			1			
HWY-W07C	11/14/2003	16:47	2	430	ppm			1			
HWY-W07C	11/14/2003	16:47	19	0.12	ppm			1			
HWY-W07C	11/14/2003	16:47	3	0.578	mS/cm			1			
HWY-W07C	11/14/2003	16:47	32	21	ppm			1			
HWY-W07C	11/14/2003	16:47	35	0.65	ppm			1			
HWY-W07C	11/14/2003	16:47	36	0.15	ppm			1			
SBB-E03B	11/14/2003	0:00	1	7.31				1			
SBB-E03B	11/14/2003	0:00	38	20.54	epm			1			
SBB-E03B	11/14/2003	0:00	39	20.65	epm			1			
SBB-E03B	11/14/2003	0:00	40	-0.25	%			1			
SBB-E03B	11/14/2003	0:00	4	202	ppm			1			
SBB-E03B	11/14/2003	0:00	6	596	ppm			1			
SBB-E03B	11/14/2003	0:00	7	140	ppm			1			
SBB-E03B	11/14/2003	0:00	8	329	ppm			1			
SBB-E03B	11/14/2003	0:00	9		ppm	<	0.1	1			
SBB-E03B	11/14/2003	0:00	10		ppm	<	0.5	1			
SBB-E03B	11/14/2003	0:00	11	1.4	ppm			1			
SBB-E03B	11/14/2003	0:00	12	369	ppm			1			
SBB-E03B	11/14/2003	0:00	13	17	ppm			1			
SBB-E03B	11/14/2003	0:00	14	15	ppm			1			
SBB-E03B	11/14/2003	0:00	15	56	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
SBB-E03B	11/14/2003	0:00	2	1260	ppm			1			
SBB-E03B	11/14/2003	0:00	19	0.38	ppm			1			
SBB-E03B	11/14/2003	0:00	3	1.61	mS/cm			1			
SBB-E03B	11/14/2003	0:00	32	31	ppm			1			
SBB-E03B	11/14/2003	0:00	35	1.3	ppm			1			
SBB-E03B	11/14/2003	0:00	36	0.38	ppm			1			
SFC-W01A	11/14/2003	0:00	1	7.6				1			
SFC-W01A	11/14/2003	0:00	38	6.78	epm			1			
SFC-W01A	11/14/2003	0:00	39	7.12	epm			1			
SFC-W01A	11/14/2003	0:00	40	-2.42	%			1			
SFC-W01A	11/14/2003	0:00	4	129	ppm			1			
SFC-W01A	11/14/2003	0:00	6	228	ppm			1			
SFC-W01A	11/14/2003	0:00	7	68	ppm			1			
SFC-W01A	11/14/2003	0:00	8	67	ppm			1			
SFC-W01A	11/14/2003	0:00	9	1.9	ppm			1			
SFC-W01A	11/14/2003	0:00	10		ppm	<	0.5	1			
SFC-W01A	11/14/2003	0:00	11	0.67	ppm			1			
SFC-W01A	11/14/2003	0:00	12	95	ppm			1			
SFC-W01A	11/14/2003	0:00	13	2.7	ppm			1			
SFC-W01A	11/14/2003	0:00	14	4	ppm			1			
SFC-W01A	11/14/2003	0:00	15	45	ppm			1			
SFC-W01A	11/14/2003	0:00	2	440	ppm			1			
SFC-W01A	11/14/2003	0:00	19	0.1	ppm			1			
SFC-W01A	11/14/2003	0:00	3	0.62	mS/cm			1			
SFC-W01A	11/14/2003	0:00	32	41	ppm			1			
SFC-W01A	11/14/2003	0:00	35	0.27	ppm			1			
SFC-W01A	11/14/2003	0:00	36	0.25	ppm			1			
SFC-W04A	11/14/2003	0:00	1	7.63				1			
SFC-W04A	11/14/2003	0:00	38	7.03	epm			1			
SFC-W04A	11/14/2003	0:00	39	7.33	epm			1			
SFC-W04A	11/14/2003	0:00	40	-2.07	%			1			
SFC-W04A	11/14/2003	0:00	4	173	ppm			1			
SFC-W04A	11/14/2003	0:00	6	198	ppm			1			
SFC-W04A	11/14/2003	0:00	7	55	ppm			1			
SFC-W04A	11/14/2003	0:00	8	120	ppm			1			
SFC-W04A	11/14/2003	0:00	9		ppm	<	0.1	1			
SFC-W04A	11/14/2003	0:00	10		ppm	<	0.5	1			
SFC-W04A	11/14/2003	0:00	11	0.59	ppm			1			
SFC-W04A	11/14/2003	0:00	12	80	ppm			1			
SFC-W04A	11/14/2003	0:00	13	3.3	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
SFC-W04A	11/14/2003	0:00	14	9.2	ppm			1			
SFC-W04A	11/14/2003	0:00	15	54	ppm			1			
SFC-W04A	11/14/2003	0:00	2	440	ppm			1			
SFC-W04A	11/14/2003	0:00	19	0.12	ppm			1			
SFC-W04A	11/14/2003	0:00	3	0.616	mS/cm			1			
SFC-W04A	11/14/2003	0:00	32	21	ppm			1			
SFC-W04A	11/14/2003	0:00	35	0.66	ppm			1			
SFC-W04A	11/14/2003	0:00	36	0.16	ppm			1			
SFC-W04C	11/14/2003	0:00	1	7.6				1			
SFC-W04C	11/14/2003	0:00	38	6.86	epm			1			
SFC-W04C	11/14/2003	0:00	39	7.02	epm			1			
SFC-W04C	11/14/2003	0:00	40	-1.15	%			1			
SFC-W04C	11/14/2003	0:00	4	190	ppm			1			
SFC-W04C	11/14/2003	0:00	6	256	ppm			1			
SFC-W04C	11/14/2003	0:00	7	25	ppm			1			
SFC-W04C	11/14/2003	0:00	8	101	ppm			1			
SFC-W04C	11/14/2003	0:00	9		ppm	<	0.1	1			
SFC-W04C	11/14/2003	0:00	10		ppm	<	0.5	1			
SFC-W04C	11/14/2003	0:00	11	0.19	ppm			1			
SFC-W04C	11/14/2003	0:00	12	68	ppm			1			
SFC-W04C	11/14/2003	0:00	13	3.5	ppm			1			
SFC-W04C	11/14/2003	0:00	14	4.9	ppm			1			
SFC-W04C	11/14/2003	0:00	15	68	ppm			1			
SFC-W04C	11/14/2003	0:00	2	430	ppm			1			
SFC-W04C	11/14/2003	0:00	19	0.1	ppm			1			
SFC-W04C	11/14/2003	0:00	3	0.567	mS/cm			1			
SFC-W04C	11/14/2003	0:00	32	29	ppm			1			
SFC-W04C	11/14/2003	0:00	35	0.54	ppm			1			
SFC-W04C	11/14/2003	0:00	36	0.11	ppm			1			
SFC-W05A	11/14/2003	0:00	1	7.27				1			
SFC-W05A	11/14/2003	0:00	38	7.52	epm			1			
SFC-W05A	11/14/2003	0:00	39	7.7	epm			1			
SFC-W05A	11/14/2003	0:00	40	-1.18	%			1			
SFC-W05A	11/14/2003	0:00	4	250	ppm			1			
SFC-W05A	11/14/2003	0:00	6	234	ppm			1			
SFC-W05A	11/14/2003	0:00	7	64	ppm			1			
SFC-W05A	11/14/2003	0:00	8	97	ppm			1			
SFC-W05A	11/14/2003	0:00	9		ppm	<	0.1	1			
SFC-W05A	11/14/2003	0:00	10		ppm	<	0.5	1			
SFC-W05A	11/14/2003	0:00	11	0.79	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
SFC-W05A	11/14/2003	0:00	12	56	ppm			1			
SFC-W05A	11/14/2003	0:00	13	2.9	ppm			1			
SFC-W05A	11/14/2003	0:00	14	20	ppm			1			
SFC-W05A	11/14/2003	0:00	15	67	ppm			1			
SFC-W05A	11/14/2003	0:00	2	450	ppm			1			
SFC-W05A	11/14/2003	0:00	19	0.1	ppm			1			
SFC-W05A	11/14/2003	0:00	3	0.646	mS/cm			1			
SFC-W05A	11/14/2003	0:00	32	24	ppm			1			
SFC-W05A	11/14/2003	0:00	35	1.1	ppm			1			
SFC-W05A	11/14/2003	0:00	36	0.16	ppm			1			
BRN-E01A	11/15/2003	15:55	1	7.52				1			
BRN-E01A	11/15/2003	15:55	38	7.08	epm			1			
BRN-E01A	11/15/2003	15:55	39	7.14	epm			1			
BRN-E01A	11/15/2003	15:55	40	-0.45	%			1			
BRN-E01A	11/15/2003	15:55	4	212	ppm			1			
BRN-E01A	11/15/2003	15:55	6	213	ppm			1			
BRN-E01A	11/15/2003	15:55	7	40	ppm			1			
BRN-E01A	11/15/2003	15:55	8	120	ppm			1			
BRN-E01A	11/15/2003	15:55	9		ppm	<	0.1	1			
BRN-E01A	11/15/2003	15:55	10		ppm	<	0.5	1			
BRN-E01A	11/15/2003	15:55	11	0.48	ppm			1			
BRN-E01A	11/15/2003	15:55	12	62	ppm			1			
BRN-E01A	11/15/2003	15:55	13	5.4	ppm			1			
BRN-E01A	11/15/2003	15:55	14	12	ppm			1			
BRN-E01A	11/15/2003	15:55	15	65	ppm			1			
BRN-E01A	11/15/2003	15:55	2	440	ppm			1			
BRN-E01A	11/15/2003	15:55	19	0.11	ppm			1			
BRN-E01A	11/15/2003	15:55	3	602	mS/cm			1			
BRN-E01A	11/15/2003	15:55	32	24	ppm			1			
BRN-E01A	11/15/2003	15:55	35	0.67	ppm			1			
BRN-E01A	11/15/2003	15:55	36	0.14	ppm			1			
BRN-E01C	11/15/2003	16:24	1	7.67				1			
BRN-E01C	11/15/2003	16:24	38	7.32	epm			1			
BRN-E01C	11/15/2003	16:24	39	7.61	epm			1			
BRN-E01C	11/15/2003	16:24	40	-1.96	%			1			
BRN-E01C	11/15/2003	16:24	4	237	ppm			1			
BRN-E01C	11/15/2003	16:24	6	211	ppm			1			
BRN-E01C	11/15/2003	16:24	7	40	ppm			1			
BRN-E01C	11/15/2003	16:24	8	144	ppm			1			
BRN-E01C	11/15/2003	16:24	9		ppm	<	0.1	1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
BRN-E01C	11/15/2003	16:24	10		ppm	<	0.5	1			
BRN-E01C	11/15/2003	16:24	11	0.43	ppm			1			
BRN-E01C	11/15/2003	16:24	12	57	ppm			1			
BRN-E01C	11/15/2003	16:24	13	3.7	ppm			1			
BRN-E01C	11/15/2003	16:24	14	12	ppm			1			
BRN-E01C	11/15/2003	16:24	15	75	ppm			1			
BRN-E01C	11/15/2003	16:24	2	460	ppm			1			
BRN-E01C	11/15/2003	16:24	19	0.12	ppm			1			
BRN-E01C	11/15/2003	16:24	3	0.601	mS/cm			1			
BRN-E01C	11/15/2003	16:24	32	19	ppm			1			
BRN-E01C	11/15/2003	16:24	35	0.57	ppm			1			
BRN-E01C	11/15/2003	16:24	36	0.13	ppm			1			
BRN-E04A	11/15/2003	14:54	1	7.4				1			
BRN-E04A	11/15/2003	14:54	38	18.56	epm			1			
BRN-E04A	11/15/2003	14:54	39	19.32	epm			1			
BRN-E04A	11/15/2003	14:54	40	-2.01	%			1			
BRN-E04A	11/15/2003	14:54	4	575	ppm			1			
BRN-E04A	11/15/2003	14:54	6	311	ppm			1			
BRN-E04A	11/15/2003	14:54	7	149	ppm			1			
BRN-E04A	11/15/2003	14:54	8	480	ppm			1			
BRN-E04A	11/15/2003	14:54	9		ppm	<	0.1	1			
BRN-E04A	11/15/2003	14:54	10		ppm	<	0.5	1			
BRN-E04A	11/15/2003	14:54	11	0.4	ppm			1			
BRN-E04A	11/15/2003	14:54	12	158	ppm			1			
BRN-E04A	11/15/2003	14:54	13	6.2	ppm			1			
BRN-E04A	11/15/2003	14:54	14	22	ppm			1			
BRN-E04A	11/15/2003	14:54	15	194	ppm			1			
BRN-E04A	11/15/2003	14:54	2	1190	ppm			1			
BRN-E04A	11/15/2003	14:54	19	0.09	ppm			1			
BRN-E04A	11/15/2003	14:54	3	1.585	mS/cm			1			
BRN-E04A	11/15/2003	14:54	32	21	ppm			1			
BRN-E04A	11/15/2003	14:54	35	1.6	ppm			1			
BRN-E04A	11/15/2003	14:54	36	0.42	ppm			1			
BRN-E06A	11/15/2003	12:35	35	0.89	ppm			2			
BRN-E06A	11/15/2003	12:35	36	0.14	ppm			2			
BRN-E06A	11/15/2003	12:35	1	7.25				1			
BRN-E06A	11/15/2003	12:35	38	9.51	epm			1			
BRN-E06A	11/15/2003	12:35	39	9.84	epm			1			
BRN-E06A	11/15/2003	12:35	40	-1.73	%			1			
BRN-E06A	11/15/2003	12:35	4	375	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
BRN-E06A	11/15/2003	12:35	6	217	ppm			1			
BRN-E06A	11/15/2003	12:35	7	56	ppm			1			
BRN-E06A	11/15/2003	12:35	8	225	ppm			1			
BRN-E06A	11/15/2003	12:35	9		ppm	<	0.1	1			
BRN-E06A	11/15/2003	12:35	10		ppm	<	0.5	1			
BRN-E06A	11/15/2003	12:35	11	0.37	ppm			1			
BRN-E06A	11/15/2003	12:35	12	43	ppm			1			
BRN-E06A	11/15/2003	12:35	13	5.3	ppm			1			
BRN-E06A	11/15/2003	12:35	14	20	ppm			1			
BRN-E06A	11/15/2003	12:35	15	117	ppm			1			
BRN-E06A	11/15/2003	12:35	2	600	ppm			1			
BRN-E06A	11/15/2003	12:35	19	0.05	ppm			1			
BRN-E06A	11/15/2003	12:35	3	773	mS/cm			1			
BRN-E06A	11/15/2003	12:35	32	20	ppm			1			
BRN-E06A	11/15/2003	12:35	35	0.83	ppm			1			
BRN-E06A	11/15/2003	12:35	36	0.16	ppm			1			
BRN-E06A	11/15/2003	12:35	1	7.23				2			
BRN-E06A	11/15/2003	12:35	38	9.52	epm			2			
BRN-E06A	11/15/2003	12:35	39	9.88	epm			2			
BRN-E06A	11/15/2003	12:35	40	-1.85	%			2			
BRN-E06A	11/15/2003	12:35	4	377	ppm			2			
BRN-E06A	11/15/2003	12:35	6	219	ppm			2			
BRN-E06A	11/15/2003	12:35	7	56	ppm			2			
BRN-E06A	11/15/2003	12:35	8	225	ppm			2			
BRN-E06A	11/15/2003	12:35	9		ppm	<	0.1	2			
BRN-E06A	11/15/2003	12:35	10		ppm	<	0.5	2			
BRN-E06A	11/15/2003	12:35	11	0.38	ppm			2			
BRN-E06A	11/15/2003	12:35	12	42	ppm			2			
BRN-E06A	11/15/2003	12:35	13	5.3	ppm			2			
BRN-E06A	11/15/2003	12:35	14	20	ppm			2			
BRN-E06A	11/15/2003	12:35	15	118	ppm			2			
BRN-E06A	11/15/2003	12:35	2	600	ppm			2			
BRN-E06A	11/15/2003	12:35	19	0.05	ppm			2			
BRN-E06A	11/15/2003	12:35	3	0.77	mS/cm			2			
BRN-E06A	11/15/2003	12:35	32	25	ppm			2			
BRN-E06B	11/15/2003	13:33	1	7.68				1			
BRN-E06B	11/15/2003	13:33	38	7.8	epm			1			
BRN-E06B	11/15/2003	13:33	39	7.93	epm			1			
BRN-E06B	11/15/2003	13:33	40	-0.8	%			1			
BRN-E06B	11/15/2003	13:33	4	316	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
BRN-E06B	11/15/2003	13:33	5	179	ppm			1			
BRN-E06B	11/15/2003	13:33	7	40	ppm			1			
BRN-E06B	11/15/2003	13:33	8	185	ppm			1			
BRN-E06B	11/15/2003	13:33	9		ppm	<	0.1	1			
BRN-E06B	11/15/2003	13:33	10		ppm	<	0.5	1			
BRN-E06B	11/15/2003	13:33	11	0.23	ppm			1			
BRN-E06B	11/15/2003	13:33	12	32	ppm			1			
BRN-E06B	11/15/2003	13:33	13	3.3	ppm			1			
BRN-E06B	11/15/2003	13:33	14	16	ppm			1			
BRN-E06B	11/15/2003	13:33	15	100	ppm			1			
BRN-E06B	11/15/2003	13:33	2	480	ppm			1			
BRN-E06B	11/15/2003	13:33	19	0.04	ppm			1			
BRN-E06B	11/15/2003	13:33	3	0.642	mS/cm			1			
BRN-E06B	11/15/2003	13:33	32	17	ppm			1			
BRN-E06B	11/15/2003	13:33	35	0.87	ppm			1			
BRN-E06B	11/15/2003	13:33	36	0.12	ppm			1			
HWY-W02A	11/15/2003	9:56	1	7.17				1			
HWY-W02A	11/15/2003	9:56	38	20.44	epm			1			
HWY-W02A	11/15/2003	9:56	39	20.95	epm			1			
HWY-W02A	11/15/2003	9:56	40	-1.22	%			1			
HWY-W02A	11/15/2003	9:56	4	381	ppm			1			
HWY-W02A	11/15/2003	9:56	6	403	ppm			1			
HWY-W02A	11/15/2003	9:56	7	249	ppm			1			
HWY-W02A	11/15/2003	9:56	8	349	ppm			1			
HWY-W02A	11/15/2003	9:56	9		ppm	<	0.1	1			
HWY-W02A	11/15/2003	9:56	10		ppm	<	0.5	1			
HWY-W02A	11/15/2003	9:56	11	0.97	ppm			1			
HWY-W02A	11/15/2003	9:56	12	290	ppm			1			
HWY-W02A	11/15/2003	9:56	13	7.4	ppm			1			
HWY-W02A	11/15/2003	9:56	14	27	ppm			1			
HWY-W02A	11/15/2003	9:56	15	108	ppm			1			
HWY-W02A	11/15/2003	9:56	2	1270	ppm			1			
HWY-W02A	11/15/2003	9:56	19	0.41	ppm			1			
HWY-W02A	11/15/2003	9:56	3	1.733	mS/cm			1			
HWY-W02A	11/15/2003	9:56	32	33	ppm			1			
HWY-W02A	11/15/2003	9:56	35	1.3	ppm			1			
HWY-W02A	11/15/2003	9:56	36	0.3	ppm			1			
HWY-W07A	11/15/2003	10:50	1	7.57				1			
HWY-W07A	11/15/2003	10:50	38	7.34	epm			1			
HWY-W07A	11/15/2003	10:50	39	7.12	epm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
HWY-W07A	11/15/2003	10:50	40	1.55	%			1			
HWY-W07A	11/15/2003	10:50	4	195	ppm			1			
HWY-W07A	11/15/2003	10:50	6	206	ppm			1			
HWY-W07A	11/15/2003	10:50	7	40	ppm			1			
HWY-W07A	11/15/2003	10:50	8	124	ppm			1			
HWY-W07A	11/15/2003	10:50	9		ppm	<	0.1	1			
HWY-W07A	11/15/2003	10:50	10		ppm	<	0.5	1			
HWY-W07A	11/15/2003	10:50	11	0.52	ppm			1			
HWY-W07A	11/15/2003	10:50	12	76	ppm			1			
HWY-W07A	11/15/2003	10:50	13	4.7	ppm			1			
HWY-W07A	11/15/2003	10:50	14	11	ppm			1			
HWY-W07A	11/15/2003	10:50	15	60	ppm			1			
HWY-W07A	11/15/2003	10:50	2	440	ppm			1			
HWY-W07A	11/15/2003	10:50	19	0.18	ppm			1			
HWY-W07A	11/15/2003	10:50	3	0.578	mS/cm			1			
HWY-W07A	11/15/2003	10:50	32	21	ppm			1			
HWY-W07A	11/15/2003	10:50	35	0.61	ppm			1			
HWY-W07A	11/15/2003	10:50	36	0.13	ppm			1			
SBB-W04B	11/15/2003	11:36	1	7.76				1			
SBB-W04B	11/15/2003	11:36	38	13.95	epm			1			
SBB-W04B	11/15/2003	11:36	39	14.1	epm			1			
SBB-W04B	11/15/2003	11:36	40	-0.51	%			1			
SBB-W04B	11/15/2003	11:36	4	350	ppm			1			
SBB-W04B	11/15/2003	11:36	6	262	ppm			1			
SBB-W04B	11/15/2003	11:36	7	163	ppm			1			
SBB-W04B	11/15/2003	11:36	8		ppm	<	0.5	1			
SBB-W04B	11/15/2003	11:36	9		ppm	<	0.1	1			
SBB-W04B	11/15/2003	11:36	11	0.34	ppm			1			
SBB-W04B	11/15/2003	11:36	12	155	ppm			1			
SBB-W04B	11/15/2003	11:36	13	7.7	ppm			1			
SBB-W04B	11/15/2003	11:36	14	17	ppm			1			
SBB-W04B	11/15/2003	11:36	15	112	ppm			1			
SBB-W04B	11/15/2003	11:36	2	870	ppm			1			
SBB-W04B	11/15/2003	11:36	19	0.17	ppm			1			
SBB-W04B	11/15/2003	11:36	3	1.157	mS/cm			1			
SBB-W04B	11/15/2003	11:36	32	29	ppm			1			
SBB-W04B	11/15/2003	11:36	35	1.2	ppm			1			
SBB-W04B	11/15/2003	11:36	36	0.19	ppm			1			
SMC-W07A	11/15/2003	10:10	1	6.94				1			
SMC-W07A	11/15/2003	10:10	38	9.53	epm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
SMC-W07A	11/15/2003	10:10	39	10.06	epm			1			
SMC-W07A	11/15/2003	10:10	40	-2.71	%			1			
SMC-W07A	11/15/2003	10:10	4	291	ppm			1			
SMC-W07A	11/15/2003	10:10	6	385	ppm			1			
SMC-W07A	11/15/2003	10:10	7	70	ppm			1			
SMC-W07A	11/15/2003	10:10	8	83	ppm			1			
SMC-W07A	11/15/2003	10:10	9		ppm	<	0.1	1			
SMC-W07A	11/15/2003	10:10	10		ppm	<	0.5	1			
SMC-W07A	11/15/2003	10:10	11	0.94	ppm			1			
SMC-W07A	11/15/2003	10:10	12	81	ppm			1			
SMC-W07A	11/15/2003	10:10	13	7	ppm			1			
SMC-W07A	11/15/2003	10:10	14	16	ppm			1			
SMC-W07A	11/15/2003	10:10	15	90	ppm			1			
SMC-W07A	11/15/2003	10:10	2	570	ppm			1			
SMC-W07A	11/15/2003	10:10	19	0.14	ppm			1			
SMC-W07A	11/15/2003	10:10	3	0.783	mS/cm			1			
SMC-W07A	11/15/2003	10:10	32	26	ppm			1			
SMC-W07A	11/15/2003	10:10	35	1	ppm			1			
SMC-W07A	11/15/2003	10:10	36	0.17	ppm			1			
SMC-W07A	11/15/2003	10:10	1	7.02				2			
SMC-W07A	11/15/2003	10:10	38	9.95	epm			2			
SMC-W07A	11/15/2003	10:10	39	10.13	epm			2			
SMC-W07A	11/15/2003	10:10	40	-0.88	%			2			
SMC-W07A	11/15/2003	10:10	4	286	ppm			2			
SMC-W07A	11/15/2003	10:10	6	398	ppm			2			
SMC-W07A	11/15/2003	10:10	7	70	ppm			2			
SMC-W07A	11/15/2003	10:10	8	76	ppm			2			
SMC-W07A	11/15/2003	10:10	9		ppm	<	0.1	2			
SMC-W07A	11/15/2003	10:10	10		ppm	<	0.5	2			
SMC-W07A	11/15/2003	10:10	11	0.93	ppm			2			
SMC-W07A	11/15/2003	10:10	12	94	ppm			2			
SMC-W07A	11/15/2003	10:10	13	5.2	ppm			2			
SMC-W07A	11/15/2003	10:10	14	16	ppm			2			
SMC-W07A	11/15/2003	10:10	15	88	ppm			2			
SMC-W07A	11/15/2003	10:10	2	580	ppm			2			
SMC-W07A	11/15/2003	10:10	19	0.13	ppm			2			
SMC-W07A	11/15/2003	10:10	3	0.78	mS/cm			2			
SMC-W07A	11/15/2003	10:10	32	26	ppm			2			
SMC-W07A	11/15/2003	10:10	35	1.1	ppm			2			
SMC-W07A	11/15/2003	10:10	36	0.18	ppm			2			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
SMC-W07C	11/15/2003	11:18	1	7.35				1	Richards		
SMC-W07C	11/15/2003	11:18	38	10.58	epm			1	Richards		
SMC-W07C	11/15/2003	11:18	39	10.62	epm			1	Richards		
SMC-W07C	11/15/2003	11:18	40	-0.19	%			1	Richards		
SMC-W07C	11/15/2003	11:18	4	370	ppm			1	Richards		
SMC-W07C	11/15/2003	11:18	6	430	ppm			1	Richards		
SMC-W07C	11/15/2003	11:18	7	34	ppm			1	Richards		
SMC-W07C	11/15/2003	11:18	8	125	ppm			1	Richards		
SMC-W07C	11/15/2003	11:18	9		ppm	<	0.1	1	Richards		
SMC-W07C	11/15/2003	11:18	10		ppm	<	0.5	1	Richards		
SMC-W07C	11/15/2003	11:18	11	0.26	ppm			1	Richards		
SMC-W07C	11/15/2003	11:18	12	70	ppm			1	Richards		
SMC-W07C	11/15/2003	11:18	13	5	ppm			1	Richards		
SMC-W07C	11/15/2003	11:18	14	17	ppm			1	Richards		
SMC-W07C	11/15/2003	11:18	15	120	ppm			1	Richards		
SMC-W07C	11/15/2003	11:18	2	610	ppm			1	Richards		
SMC-W07C	11/15/2003	11:18	19	0.11	ppm			1	Richards		
SMC-W07C	11/15/2003	11:18	3	0.808	mS/cm			1	Richards		
SMC-W07C	11/15/2003	11:18	32	27	ppm			1	Richards		
SMC-W07C	11/15/2003	11:18	35	1.1	ppm			1	Richards		
SMC-W07C	11/15/2003	11:18	36	0.15	ppm			1	Richards		
BRN-W02A	11/16/2003	14:56	1	7.07				1			
BRN-W02A	11/16/2003	14:56	38	11.1	epm			1			
BRN-W02A	11/16/2003	14:56	39	10.88	epm			1			
BRN-W02A	11/16/2003	14:56	40	0.99	%			1			
BRN-W02A	11/16/2003	14:56	4	335	ppm			1			
BRN-W02A	11/16/2003	14:56	6	337	ppm			1			
BRN-W02A	11/16/2003	14:56	7	64	ppm			1			
BRN-W02A	11/16/2003	14:56	8	169	ppm			1			
BRN-W02A	11/16/2003	14:56	9		ppm	<	0.1	1			
BRN-W02A	11/16/2003	14:56	10		ppm	<	0.5	1			
BRN-W02A	11/16/2003	14:56	11	0.54	ppm			1			
BRN-W02A	11/16/2003	14:56	12	97	ppm			1			
BRN-W02A	11/16/2003	14:56	13	6.4	ppm			1			
BRN-W02A	11/16/2003	14:56	14	17	ppm			1			
BRN-W02A	11/16/2003	14:56	15	106	ppm			1			
BRN-W02A	11/16/2003	14:56	2	660	ppm			1			
BRN-W02A	11/16/2003	14:56	19	0.16	ppm			1			
BRN-W02A	11/16/2003	14:56	3	0.865	mS/cm			1			
BRN-W02A	11/16/2003	14:56	32	28	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
BRN-W02A	11/16/2003	14:56	35	1.1	ppm			1			
BRN-W02A	11/16/2003	14:56	36	0.18	ppm			1			
Equipment Blank	11/16/2003	15:30	15	0.03	ppm			3			
Equipment Blank	11/16/2003	15:30	2	0	ppm			3			
Equipment Blank	11/16/2003	15:30	19	0.004	ppm			3			
Equipment Blank	11/16/2003	15:30	3	0.003	mS/cm			3			
Equipment Blank	11/16/2003	15:30	32	0.64	ppm			3			
Equipment Blank	11/16/2003	15:30	35	0.003	ppm			3			
Equipment Blank	11/16/2003	15:30	36		ppm	<	0.1	3			
Equipment Blank	11/16/2003	15:30	1	6.45				3			
Equipment Blank	11/16/2003	15:30	38	0.02	epm			3			
Equipment Blank	11/16/2003	15:30	39	0.06	epm			3			
Equipment Blank	11/16/2003	15:30	40	-49.38	%			3			
Equipment Blank	11/16/2003	15:30	4	0	ppm			3			
Equipment Blank	11/16/2003	15:30	5	3.9	ppm			3			
Equipment Blank	11/16/2003	15:30	7		ppm	<	1	3			
Equipment Blank	11/16/2003	15:30	8		ppm	<	1	3			
Equipment Blank	11/16/2003	15:30	9		ppm	<	0.1	3			
Equipment Blank	11/16/2003	15:30	10		ppm	<	0.5	3			
Equipment Blank	11/16/2003	15:30	11		ppm	<	0.1	3			
Equipment Blank	11/16/2003	15:30	12	0.37	ppm			3			
Equipment Blank	11/16/2003	15:30	13	0.06	ppm			3			
Equipment Blank	11/16/2003	15:30	14	0.03	ppm			3			
Equipment Blank	11/16/2003	13:38	1	6.37				3			
Equipment Blank	11/16/2003	13:38	38	0.01	epm			3			
Equipment Blank	11/16/2003	13:38	39	0.06	epm			3			
Equipment Blank	11/16/2003	13:38	4	0	ppm			3			
Equipment Blank	11/16/2003	13:38	6	3.9	ppm			3			
Equipment Blank	11/16/2003	13:38	7		ppm	<	1	3			
Equipment Blank	11/16/2003	13:38	8		ppm	<	1	3			
Equipment Blank	11/16/2003	13:38	9		ppm	<	0.1	3			
Equipment Blank	11/16/2003	13:38	10		ppm	<	0.5	3			
Equipment Blank	11/16/2003	13:38	11		ppm	<	0.1	3			
Equipment Blank	11/16/2003	13:38	12	0.17	ppm			3			
Equipment Blank	11/16/2003	13:38	13	0.02	ppm			3			
Equipment Blank	11/16/2003	13:38	14	0.01	ppm			3			
Equipment Blank	11/16/2003	13:38	15	0.04	ppm			3			
Equipment Blank	11/16/2003	13:38	2	0	ppm			3			
Equipment Blank	11/16/2003	13:38	19	0.003	ppm			3			
Equipment Blank	11/16/2003	13:38	3	3	mS/cm			3			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
Equipment Blank	11/16/2003	13:38	32	0.18	ppm			3			
Equipment Blank	11/16/2003	13:38	35		ppm	<	0.001	3			
Equipment Blank	11/16/2003	13:38	36		ppm	<	0.1	3			
ESC-W01A	11/16/2003	13:58	1	7.14				1			
ESC-W01A	11/16/2003	13:58	38	30.53	epm			1			
ESC-W01A	11/16/2003	13:58	39	31.67	epm			1			
ESC-W01A	11/16/2003	13:58	40	-1.83	%			1			
ESC-W01A	11/16/2003	13:58	4	697	ppm			1			
ESC-W01A	11/16/2003	13:58	6	446	ppm			1			
ESC-W01A	11/16/2003	13:58	7	342	ppm			1			
ESC-W01A	11/16/2003	13:58	8	705	ppm			1			
ESC-W01A	11/16/2003	13:58	9		ppm	<	0.1	1			
ESC-W01A	11/16/2003	13:58	10		ppm	<	0.5	1			
ESC-W01A	11/16/2003	13:58	11	0.55	ppm			1			
ESC-W01A	11/16/2003	13:58	12	374	ppm			1			
ESC-W01A	11/16/2003	13:58	13	11	ppm			1			
ESC-W01A	11/16/2003	13:58	14	45	ppm			1			
ESC-W01A	11/16/2003	13:58	15	205	ppm			1			
ESC-W01A	11/16/2003	13:58	2	1940	ppm			1			
ESC-W01A	11/16/2003	13:58	19	0.26	ppm			1			
ESC-W01A	11/16/2003	13:58	3	2.442	mS/cm			1			
ESC-W01A	11/16/2003	13:58	32	28	ppm			1			
ESC-W01A	11/16/2003	13:58	35	2.3	ppm			1			
ESC-W01A	11/16/2003	13:58	36	0.5	ppm			1			
SAC-W01B	11/16/2003	11:33	1	7.28				1			
SAC-W01B	11/16/2003	11:33	38	20.23	epm			1			
SAC-W01B	11/16/2003	11:33	39	21.36	epm			1			
SAC-W01B	11/16/2003	11:33	40	-2.7	%			1			
SAC-W01B	11/16/2003	11:33	4	175	ppm			1			
SAC-W01B	11/16/2003	11:33	6	561	ppm			1			
SAC-W01B	11/16/2003	11:33	7	198	ppm			1			
SAC-W01B	11/16/2003	11:33	8	315	ppm			1			
SAC-W01B	11/16/2003	11:33	9		ppm	<	0.1	1			
SAC-W01B	11/16/2003	11:33	10		ppm	<	0.5	1			
SAC-W01B	11/16/2003	11:33	11	0.27	ppm			1			
SAC-W01B	11/16/2003	11:33	12	381	ppm			1			
SAC-W01B	11/16/2003	11:33	13	4.5	ppm			1			
SAC-W01B	11/16/2003	11:33	14	22	ppm			1			
SAC-W01B	11/16/2003	11:33	15	34	ppm			1			
SAC-W01B	11/16/2003	11:33	2	1260	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
SAC-W01B	11/16/2003	11:33	19	0.18	ppm			1			
SAC-W01B	11/16/2003	11:33	3	1.704	mS/cm			1			
SAC-W01B	11/16/2003	11:33	32	27	ppm			1			
SAC-W01B	11/16/2003	11:33	35	1.7	ppm			1			
SAC-W01B	11/16/2003	11:33	36	0.24	ppm			1			
SMC-W01A	11/16/2003	13:58	1	7.23				1			
SMC-W01A	11/16/2003	13:58	38	22.2	epm			1			
SMC-W01A	11/16/2003	13:58	39	21.2	epm			1			
SMC-W01A	11/16/2003	13:58	40	2.48	%			1			
SMC-W01A	11/16/2003	13:58	4	124	ppm			1			
SMC-W01A	11/16/2003	13:58	6	551	ppm			1			
SMC-W01A	11/16/2003	13:58	7	150	ppm			1			
SMC-W01A	11/16/2003	13:58	8	372	ppm			1			
SMC-W01A	11/16/2003	13:58	9		ppm	<	0.1	1			
SMC-W01A	11/16/2003	13:58	10		ppm	<	0.5	1			
SMC-W01A	11/16/2003	13:58	11	2.1	ppm			1			
SMC-W01A	11/16/2003	13:58	12	450	ppm			1			
SMC-W01A	11/16/2003	13:58	13	5.3	ppm			1			
SMC-W01A	11/16/2003	13:58	14	8.3	ppm			1			
SMC-W01A	11/16/2003	13:58	15	36	ppm			1			
SMC-W01A	11/16/2003	13:58	2	1330	ppm			1			
SMC-W01A	11/16/2003	13:58	19	0.23	ppm			1			
SMC-W01A	11/16/2003	13:58	3	1.69	mS/cm			1			
SMC-W01A	11/16/2003	13:58	32	31	ppm			1			
SMC-W01A	11/16/2003	13:58	35	0.4	ppm			1			
SMC-W01A	11/16/2003	13:58	36	0.4	ppm			1			
W-Cather	11/21/2003	12:55	1	7.78				1			
W-Cather	11/21/2003	12:55	38	4.94	epm			1			
W-Cather	11/21/2003	12:55	39	5.16	epm			1			
W-Cather	11/21/2003	12:55	40	-2.16	%			1			
W-Cather	11/21/2003	12:55	4	120	ppm			1			
W-Cather	11/21/2003	12:55	6	208	ppm			1			
W-Cather	11/21/2003	12:55	7	20	ppm			1			
W-Cather	11/21/2003	12:55	8	55	ppm			1			
W-Cather	11/21/2003	12:55	9		ppm	<	0.1	1			
W-Cather	11/21/2003	12:55	10		ppm	<	0.5	1			
W-Cather	11/21/2003	12:55	11	0.84	ppm			1			
W-Cather	11/21/2003	12:55	12	56	ppm			1			
W-Cather	11/21/2003	12:55	13	3.5	ppm			1			
W-Cather	11/21/2003	12:55	14	6.2	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
W-Cather	11/21/2003	12:55	15	38	ppm			1			
W-Cather	11/21/2003	12:55	2	320	ppm			1			
W-Cather	11/21/2003	12:55	19	0.08	ppm			1			
W-Cather	11/21/2003	12:55	3	0.42	mS/cm			1			
W-Cather	11/21/2003	12:55	32	37	ppm			1			
W-Cather	11/21/2003	12:55	35	0.54	ppm			1			
W-Cather	11/21/2003	12:55	36		ppm	<	0.1	1			
ESC-E03A	2/27/2004	16:40	1	7.77				1			
ESC-E03A	2/27/2004	16:40	38	7.38	epm			1			
ESC-E03A	2/27/2004	16:40	39	7.73	epm			1			
ESC-E03A	2/27/2004	16:40	40	-2.31	%			1			
ESC-E03A	2/27/2004	16:40	4	241	ppm			1			
ESC-E03A	2/27/2004	16:40	6	233	ppm			1			
ESC-E03A	2/27/2004	16:40	7	27	ppm			1			
ESC-E03A	2/27/2004	16:40	8	150	ppm			1			
ESC-E03A	2/27/2004	16:40	9	0.1	ppm			1			
ESC-E03A	2/27/2004	16:40	10		ppm	<	0.5	1			
ESC-E03A	2/27/2004	16:40	11	0.47	ppm			1			
ESC-E03A	2/27/2004	16:40	12	57	ppm			1			
ESC-E03A	2/27/2004	16:40	13	3.6	ppm			1			
ESC-E03A	2/27/2004	16:40	14	13	ppm			1			
ESC-E03A	2/27/2004	16:40	15	75	ppm			1			
ESC-E03A	2/27/2004	16:40	2	470	ppm			1			
ESC-E03A	2/27/2004	16:40	19	0.094	ppm			1			
ESC-E03A	2/27/2004	16:40	3	0.792	mS/cm			1			
ESC-E03A	2/27/2004	16:40	32	26	ppm			1			
ESC-E03A	2/27/2004	16:40	36	0.17	ppm			1			
ESC-E04A	2/27/2004	11:24	1	7.55				1			
ESC-E04A	2/27/2004	11:24	38	8.7	epm			1			
ESC-E04A	2/27/2004	11:24	39	9.17	epm			1			
ESC-E04A	2/27/2004	11:24	40	-2.65	%			1			
ESC-E04A	2/27/2004	11:24	4	215	ppm			1			
ESC-E04A	2/27/2004	11:24	6	290	ppm			1			
ESC-E04A	2/27/2004	11:24	7	41	ppm			1			
ESC-E04A	2/27/2004	11:24	8	155	ppm			1			
ESC-E04A	2/27/2004	11:24	9		ppm	<	0.1	1			
ESC-E04A	2/27/2004	11:24	10		ppm	<	0.5	1			
ESC-E04A	2/27/2004	11:24	11	0.68	ppm			1			
ESC-E04A	2/27/2004	11:24	12	96	ppm			1			
ESC-E04A	2/27/2004	11:24	13	8.9	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
ESC-E04A	2/27/2004	11:24	14	11	ppm			1			
ESC-E04A	2/27/2004	11:24	15	68	ppm			1			
ESC-E04A	2/27/2004	11:24	2	560	ppm			1			
ESC-E04A	2/27/2004	11:24	19	0.12	ppm			1			
ESC-E04A	2/27/2004	11:24	3	0.913	mS/cm			1			
ESC-E04A	2/27/2004	11:24	32	30	ppm			1			
ESC-E04A	2/27/2004	11:24	36	0.16	ppm			1			
ESC-E04C	2/27/2004	12:08	1	7.87				1			
ESC-E04C	2/27/2004	12:08	38	6.96	epm			1			
ESC-E04C	2/27/2004	12:08	39	7.34	epm			1			
ESC-E04C	2/27/2004	12:08	40	-2.65	%			1			
ESC-E04C	2/27/2004	12:08	4	210	ppm			1			
ESC-E04C	2/27/2004	12:08	6	215	ppm			1			
ESC-E04C	2/27/2004	12:08	7	42	ppm			1			
ESC-E04C	2/27/2004	12:08	8	125	ppm			1			
ESC-E04C	2/27/2004	12:08	9		ppm	<	0.1	1			
ESC-E04C	2/27/2004	12:08	10		ppm	<	0.5	1			
ESC-E04C	2/27/2004	12:08	11	0.49	ppm			1			
ESC-E04C	2/27/2004	12:08	12	61	ppm			1			
ESC-E04C	2/27/2004	12:08	13	4.2	ppm			1			
ESC-E04C	2/27/2004	12:08	14	11	ppm			1			
ESC-E04C	2/27/2004	12:08	15	66	ppm			1			
ESC-E04C	2/27/2004	12:08	2	440	ppm			1			
ESC-E04C	2/27/2004	12:08	19	0.15	ppm			1			
ESC-E04C	2/27/2004	12:08	3	0.775	mS/cm			1			
ESC-E04C	2/27/2004	12:08	32	20	ppm			1			
ESC-E04C	2/27/2004	12:08	36	0.14	ppm			1			
ESC-W01A	2/27/2004	15:10	9		ppm	<	0.1	1			
ESC-W01A	2/27/2004	15:10	10		ppm	<	0.5	1			
ESC-W01A	2/27/2004	15:10	11	165	ppm			1			
ESC-W01A	2/27/2004	15:10	12	110	ppm			1			
ESC-W01A	2/27/2004	15:10	13	5.7	ppm			1			
ESC-W01A	2/27/2004	15:10	14	17	ppm			1			
ESC-W01A	2/27/2004	15:10	15	80	ppm			1			
ESC-W01A	2/27/2004	15:10	2	640	ppm			1			
ESC-W01A	2/27/2004	15:10	19	0.16	ppm			1			
ESC-W01A	2/27/2004	15:10	3	1.08	mS/cm			1			
ESC-W01A	2/27/2004	15:10	32	31	ppm			1			
ESC-W01A	2/27/2004	15:10	36	0.2	ppm			1			
ESC-W01A	2/27/2004	15:10	1	7.56				1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
ESC-W01A	2/27/2004	15:10	38	10.32	epm			1			
ESC-W01A	2/27/2004	15:10	39	10.75	epm			1			
ESC-W01A	2/27/2004	15:10	40	-2.02	%			1			
ESC-W01A	2/27/2004	15:10	4	270	ppm			1			
ESC-W01A	2/27/2004	15:10	6	315	ppm			1			
ESC-W01A	2/27/2004	15:10	7	75	ppm			1			
ESC-W01A	2/27/2004	15:10	8	165	ppm			1			
SAC-W01B	2/27/2004	12:05	1	7.59				1			
SAC-W01B	2/27/2004	12:05	38	21.59	epm			1			
SAC-W01B	2/27/2004	12:05	39	22.55	epm			1			
SAC-W01B	2/27/2004	12:05	40	-2.18	%			1			
SAC-W01B	2/27/2004	12:05	4	224	ppm			1			
SAC-W01B	2/27/2004	12:05	6	545	ppm			1			
SAC-W01B	2/27/2004	12:05	7	220	ppm			1			
SAC-W01B	2/27/2004	12:05	8	355	ppm			1			
SAC-W01B	2/27/2004	12:05	9		ppm	<	0.1	1			
SAC-W01B	2/27/2004	12:05	10		ppm	<	0.5	1			
SAC-W01B	2/27/2004	12:05	11	0.28	ppm			1			
SAC-W01B	2/27/2004	12:05	12	390	ppm			1			
SAC-W01B	2/27/2004	12:05	13	6.1	ppm			1			
SAC-W01B	2/27/2004	12:05	14	27	ppm			1			
SAC-W01B	2/27/2004	12:05	15	45	ppm			1			
SAC-W01B	2/27/2004	12:05	2	1360	ppm			1			
SAC-W01B	2/27/2004	12:05	19	0.28	ppm			1			
SAC-W01B	2/27/2004	12:05	3	2.285	mS/cm			1			
SAC-W01B	2/27/2004	12:05	32	45	ppm			1			
SAC-W01B	2/27/2004	12:05	36	0.27	ppm			1			
BRN-E01A	2/28/2004	16:20	1	7.71				1			
BRN-E01A	2/28/2004	16:20	38	8.39	epm			1			
BRN-E01A	2/28/2004	16:20	39	8.7	epm			1			
BRN-E01A	2/28/2004	16:20	40	-1.77	%			1			
BRN-E01A	2/28/2004	16:20	4	270	ppm			1			
BRN-E01A	2/28/2004	16:20	6	245	ppm			1			
BRN-E01A	2/28/2004	16:20	7	43	ppm			1			
BRN-E01A	2/28/2004	16:20	8	165	ppm			1			
BRN-E01A	2/28/2004	16:20	9	0.46	ppm			1			
BRN-E01A	2/28/2004	16:20	10		ppm	<	0.5	1			
BRN-E01A	2/28/2004	16:20	11	0.42	ppm			1			
BRN-E01A	2/28/2004	16:20	12	66	ppm			1			
BRN-E01A	2/28/2004	16:20	13	5	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
BRN-E01A	2/28/2004	16:20	14	14	ppm			1			
BRN-E01A	2/28/2004	16:20	15	85	ppm			1			
BRN-E01A	2/28/2004	16:20	2	520	ppm			1			
BRN-E01A	2/28/2004	16:20	19	0.095	ppm			1			
BRN-E01A	2/28/2004	16:20	3	0.895	mS/cm			1			
BRN-E01A	2/28/2004	16:20	32	21	ppm			1			
BRN-E01A	2/28/2004	16:20	36	0.13	ppm			1			
BRN-E01C	2/28/2004	16:53	39	6.78	epm			1			
BRN-E01C	2/28/2004	16:53	40	-1.66	%			1			
BRN-E01C	2/28/2004	16:53	4	191	ppm			1			
BRN-E01C	2/28/2004	16:53	6	200	ppm			1			
BRN-E01C	2/28/2004	16:53	7	42	ppm			1			
BRN-E01C	2/28/2004	16:53	8	110	ppm			1			
BRN-E01C	2/28/2004	16:53	9		ppm	<	0.1	1			
BRN-E01C	2/28/2004	16:53	10		ppm	<	0.5	1			
BRN-E01C	2/28/2004	16:53	11	0.55	ppm			1			
BRN-E01C	2/28/2004	16:53	12	61	ppm			1			
BRN-E01C	2/28/2004	16:53	13	3.6	ppm			1			
BRN-E01C	2/28/2004	16:53	14	9.4	ppm			1			
BRN-E01C	2/28/2004	16:53	15	61	ppm			1			
BRN-E01C	2/28/2004	16:53	2	410	ppm			1			
BRN-E01C	2/28/2004	16:53	19	0.1	ppm			1			
BRN-E01C	2/28/2004	16:53	3	0.728	mS/cm			1			
BRN-E01C	2/28/2004	16:53	32	22	ppm			1			
BRN-E01C	2/28/2004	16:53	36	0.15	ppm			1			
BRN-E01C	2/28/2004	16:53	1	7.89				6			
BRN-E01C	2/28/2004	16:53	38	6.63	epm			6			
BRN-E01C	2/28/2004	16:53	39	6.79	epm			6			
BRN-E01C	2/28/2004	16:53	40	-1.16	%			6			
BRN-E01C	2/28/2004	16:53	4	192	ppm			6			
BRN-E01C	2/28/2004	16:53	6	196	ppm			6			
BRN-E01C	2/28/2004	16:53	7	43	ppm			6			
BRN-E01C	2/28/2004	16:53	8	112	ppm			6			
BRN-E01C	2/28/2004	16:53	9		ppm	<	0.1	6			
BRN-E01C	2/28/2004	16:53	10		ppm	<	0.5	6			
BRN-E01C	2/28/2004	16:53	11	0.56	ppm			6			
BRN-E01C	2/28/2004	16:53	12	62	ppm			6			
BRN-E01C	2/28/2004	16:53	13	3.7	ppm			6			
BRN-E01C	2/28/2004	16:53	14	9.7	ppm			6			
BRN-E01C	2/28/2004	16:53	15	61	ppm			6			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
BRN-E01C	2/28/2004	16:53	2	410	ppm			6			
BRN-E01C	2/28/2004	16:53	19	0.1	ppm			6			
BRN-E01C	2/28/2004	16:53	3	0.723	mS/cm			6			
BRN-E01C	2/28/2004	16:53	32	22	ppm			6			
BRN-E01C	2/28/2004	16:53	1	7.89				1			
BRN-E01C	2/28/2004	16:53	38	6.56	epm			1			
BRN-E01C	2/28/2004	16:53	36	0.16	ppm			6			
BRN-E04A	2/28/2004	15:20	19	0.08	ppm			1			
BRN-E04A	2/28/2004	15:20	3	1.355	mS/cm			1			
BRN-E04A	2/28/2004	15:20	32	30	ppm			1			
BRN-E04A	2/28/2004	15:20	36	0.29	ppm			1			
BRN-E04A	2/28/2004	15:20	1	7.68				1			
BRN-E04A	2/28/2004	15:20	38	13.61	epm			1			
BRN-E04A	2/28/2004	15:20	39	13.82	epm			1			
BRN-E04A	2/28/2004	15:20	40	-0.76	%			1			
BRN-E04A	2/28/2004	15:20	4	443	ppm			1			
BRN-E04A	2/28/2004	15:20	6	258	ppm			1			
BRN-E04A	2/28/2004	15:20	7	81	ppm			1			
BRN-E04A	2/28/2004	15:20	8	350	ppm			1			
BRN-E04A	2/28/2004	15:20	9		ppm	<	0.1	1			
BRN-E04A	2/28/2004	15:20	10		ppm	<	0.5	1			
BRN-E04A	2/28/2004	15:20	11	0.31	ppm			1			
BRN-E04A	2/28/2004	15:20	12	106	ppm			1			
BRN-E04A	2/28/2004	15:20	13	5.5	ppm			1			
BRN-E04A	2/28/2004	15:20	14	24	ppm			1			
BRN-E04A	2/28/2004	15:20	15	138	ppm			1			
BRN-E04A	2/28/2004	15:20	2	860	ppm			1			
BRN-E06A	2/28/2004	14:07	1	7.42				1			
BRN-E06A	2/28/2004	14:07	38	10.88	epm			1			
BRN-E06A	2/28/2004	14:07	39	11.37	epm			1			
BRN-E06A	2/28/2004	14:07	40	-2.24	%			1			
BRN-E06A	2/28/2004	14:07	4	440	ppm			1			
BRN-E06A	2/28/2004	14:07	6	235	ppm			1			
BRN-E06A	2/28/2004	14:07	7	74	ppm			1			
BRN-E06A	2/28/2004	14:07	8	260	ppm			1			
BRN-E06A	2/28/2004	14:07	9		ppm	<	0.1	1			
BRN-E06A	2/28/2004	14:07	10		ppm	<	0.5	1			
BRN-E06A	2/28/2004	14:07	11	0.36	ppm			1			
BRN-E06A	2/28/2004	14:07	12	45	ppm			1			
BRN-E06A	2/28/2004	14:07	13	4.9	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
BRN-E06A	2/28/2004	14:07	14	25	ppm			1			
BRN-E06A	2/28/2004	14:07	15	135	ppm			1			
BRN-E06A	2/28/2004	14:07	2	700	ppm			1			
BRN-E06A	2/28/2004	14:07	19	0.045	ppm			1			
BRN-E06A	2/28/2004	14:07	3	1.13	mS/cm			1			
BRN-E06A	2/28/2004	14:07	32	34	ppm			1			
BRN-E06A	2/28/2004	14:07	36	0.21	ppm			1			
BRN-E06B	2/28/2004	14:38	1	7.88				1			
BRN-E06B	2/28/2004	14:38	38	7.88	epm			1			
BRN-E06B	2/28/2004	14:38	39	8.18	epm			1			
BRN-E06B	2/28/2004	14:38	40	-1.84	%			1			
BRN-E06B	2/28/2004	14:38	4	320	ppm			1			
BRN-E06B	2/28/2004	14:38	6	180	ppm			1			
BRN-E06B	2/28/2004	14:38	7	41	ppm			1			
BRN-E06B	2/28/2004	14:38	8	195	ppm			1			
BRN-E06B	2/28/2004	14:38	9		ppm	<	0.1	1			
BRN-E06B	2/28/2004	14:38	10		ppm	<	0.5	1			
BRN-E06B	2/28/2004	14:38	11	0.21	ppm			1			
BRN-E06B	2/28/2004	14:38	12	32	ppm			1			
BRN-E06B	2/28/2004	14:38	13	4	ppm			1			
BRN-E06B	2/28/2004	14:38	14	17	ppm			1			
BRN-E06B	2/28/2004	14:38	15	100	ppm			1			
BRN-E06B	2/28/2004	14:38	2	510	ppm			1			
BRN-E06B	2/28/2004	14:38	19	0.035	ppm			1			
BRN-E06B	2/28/2004	14:38	3	834	mS/cm			1			
BRN-E06B	2/28/2004	14:38	32	28	ppm			1			
BRN-E06B	2/28/2004	14:38	36	0.1	ppm			1			
BRN-W02A	2/28/2004	18:28	1	7.34				1			
BRN-W02A	2/28/2004	18:28	38	12.02	epm			1			
BRN-W02A	2/28/2004	18:28	39	12.62	epm			1			
BRN-W02A	2/28/2004	18:28	40	-2.41	%			1			
BRN-W02A	2/28/2004	18:28	4	365	ppm			1			
BRN-W02A	2/28/2004	18:28	6	400	ppm			1			
BRN-W02A	2/28/2004	18:28	7	66	ppm			1			
BRN-W02A	2/28/2004	18:28	8	200	ppm			1			
BRN-W02A	2/28/2004	18:28	9	0.36	ppm			1			
BRN-W02A	2/28/2004	18:28	10		ppm	<	0.5	1			
BRN-W02A	2/28/2004	18:28	11	0.49	ppm			1			
BRN-W02A	2/28/2004	18:28	12	105	ppm			1			
BRN-W02A	2/28/2004	18:28	13	6	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
BRN-W02A	2/28/2004	18:28	14	19	ppm			1			
BRN-W02A	2/28/2004	18:28	15	115	ppm			1			
BRN-W02A	2/28/2004	18:28	2	740	ppm			1			
BRN-W02A	2/28/2004	18:28	19	0.17	ppm			1			
BRN-W02A	2/28/2004	18:28	3	1.21	mS/cm			1			
BRN-W02A	2/28/2004	18:28	32	30	ppm			1			
BRN-W02A	2/28/2004	18:28	36	0.21	ppm			1			
HWY-E03A	2/28/2004	10:00	1	7.97				1			
HWY-E03A	2/28/2004	10:00	38	17.14	epm			1			
HWY-E03A	2/28/2004	10:00	39	16.79	epm			1			
HWY-E03A	2/28/2004	10:00	40	1.01	%			1			
HWY-E03A	2/28/2004	10:00	4	64	ppm			1			
HWY-E03A	2/28/2004	10:00	6	535	ppm			1			
HWY-E03A	2/28/2004	10:00	7	77	ppm			1			
HWY-E03A	2/28/2004	10:00	8	270	ppm			1			
HWY-E03A	2/28/2004	10:00	9		ppm	<	0.1	1			
HWY-E03A	2/28/2004	10:00	10	0.56	ppm			1			
HWY-E03A	2/28/2004	10:00	11	4	ppm			1			
HWY-E03A	2/28/2004	10:00	12	360	ppm			1			
HWY-E03A	2/28/2004	10:00	13	7.6	ppm			1			
HWY-E03A	2/28/2004	10:00	14	7.7	ppm			1			
HWY-E03A	2/28/2004	10:00	15	13	ppm			1			
HWY-E03A	2/28/2004	10:00	2	1050	ppm			1			
HWY-E03A	2/28/2004	10:00	19	0.42	ppm			1			
HWY-E03A	2/28/2004	10:00	3	1.68	mS/cm			1			
HWY-E03A	2/28/2004	10:00	32	47	ppm			1			
HWY-E03A	2/28/2004	10:00	36	0.24	ppm			1			
HWY-W02A	2/28/2004	12:34	1	7.42				1			
HWY-W02A	2/28/2004	12:34	38	19.06	epm			1			
HWY-W02A	2/28/2004	12:34	39	19.34	epm			1			
HWY-W02A	2/28/2004	12:34	40	-0.73	%			1			
HWY-W02A	2/28/2004	12:34	4	335	ppm			1			
HWY-W02A	2/28/2004	12:34	6	370	ppm			1			
HWY-W02A	2/28/2004	12:34	7	225	ppm			1			
HWY-W02A	2/28/2004	12:34	8	330	ppm			1			
HWY-W02A	2/28/2004	12:34	9		ppm	<	0.1	1			
HWY-W02A	2/28/2004	12:34	10		ppm	<	0.5	1			
HWY-W02A	2/28/2004	12:34	11	0.99	ppm			1			
HWY-W02A	2/28/2004	12:34	12	280	ppm			1			
HWY-W02A	2/28/2004	12:34	13	6.9	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
HWY-W02A	2/28/2004	12:34	14	22	ppm			1			
HWY-W02A	2/28/2004	12:34	15	98	ppm			1			
HWY-W02A	2/28/2004	12:34	2	1180	ppm			1			
HWY-W02A	2/28/2004	12:34	19	0.37	ppm			1			
HWY-W02A	2/28/2004	12:34	3	1.965	mS/cm			1			
HWY-W02A	2/28/2004	12:34	32	32	ppm			1			
HWY-W02A	2/28/2004	12:34	36	0.26	ppm			1			
HWY-W07A	2/28/2004	11:05	1	7.77				1			
HWY-W07A	2/28/2004	11:05	38	6.69	epm			1			
HWY-W07A	2/28/2004	11:05	39	6.52	epm			1			
HWY-W07A	2/28/2004	11:05	40	1.28	%			1			
HWY-W07A	2/28/2004	11:05	4	174	ppm			1			
HWY-W07A	2/28/2004	11:05	6	195	ppm			1			
HWY-W07A	2/28/2004	11:05	7	39	ppm			1			
HWY-W07A	2/28/2004	11:05	8	105	ppm			1			
HWY-W07A	2/28/2004	11:05	9		ppm	<	0.1	1			
HWY-W07A	2/28/2004	11:05	10		ppm	<	0.5	1			
HWY-W07A	2/28/2004	11:05	11	0.69	ppm			1			
HWY-W07A	2/28/2004	11:05	12	71	ppm			1			
HWY-W07A	2/28/2004	11:05	13	5.2	ppm			1			
HWY-W07A	2/28/2004	11:05	14	10	ppm			1			
HWY-W07A	2/28/2004	11:05	15	53	ppm			1			
HWY-W07A	2/28/2004	11:05	2	410	ppm			1			
HWY-W07A	2/28/2004	11:05	19	0.093	ppm			1			
HWY-W07A	2/28/2004	11:05	3	0.708	mS/cm			1			
HWY-W07A	2/28/2004	11:05	32	26	ppm			1			
HWY-W07A	2/28/2004	11:05	36	0.13	ppm			1			
HWY-W07C	2/28/2004	11:43	11	0.55	ppm			1			
HWY-W07C	2/28/2004	11:43	12	68	ppm			1			
HWY-W07C	2/28/2004	11:43	13	5.4	ppm			1			
HWY-W07C	2/28/2004	11:43	14	11	ppm			1			
HWY-W07C	2/28/2004	11:43	15	61	ppm			1			
HWY-W07C	2/28/2004	11:43	2	430	ppm			1			
HWY-W07C	2/28/2004	11:43	19	0.16	ppm			1			
HWY-W07C	2/28/2004	11:43	3	0.732	mS/cm			1			
HWY-W07C	2/28/2004	11:43	32	26	ppm			1			
HWY-W07C	2/28/2004	11:43	36	0.11	ppm			1			
HWY-W07C	2/28/2004	11:43	1	7.93				1			
HWY-W07C	2/28/2004	11:43	38	7.04	epm			1			
HWY-W07C	2/28/2004	11:43	39	6.82	epm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
HWY-W07C	2/28/2004	11:43	40	1.65	%			1			
HWY-W07C	2/28/2004	11:43	4	198	ppm			1			
HWY-W07C	2/28/2004	11:43	6	200	ppm			1			
HWY-W07C	2/28/2004	11:43	7	38	ppm			1			
HWY-W07C	2/28/2004	11:43	8	117	ppm			1			
HWY-W07C	2/28/2004	11:43	9		ppm	<	0.1	1			
HWY-W07C	2/28/2004	11:43	10		ppm	<	0.5	1			
SBB-E03A	2/28/2004	14:40	1	7.42				1			
SBB-E03A	2/28/2004	14:40	38	31.65	epm			1			
SBB-E03A	2/28/2004	14:40	39	30.64	epm			1			
SBB-E03A	2/28/2004	14:40	40	1.62	%			1			
SBB-E03A	2/28/2004	14:40	4	309	ppm			1			
SBB-E03A	2/28/2004	14:40	6	1085	ppm			1			
SBB-E03A	2/28/2004	14:40	7	110	ppm			1			
SBB-E03A	2/28/2004	14:40	8	465	ppm			1			
SBB-E03A	2/28/2004	14:40	9		ppm	<	0.1	1			
SBB-E03A	2/28/2004	14:40	10		ppm	<	0.5	1			
SBB-E03A	2/28/2004	14:40	11	1.3	ppm			1			
SBB-E03A	2/28/2004	14:40	12	580	ppm			1			
SBB-E03A	2/28/2004	14:40	13	9.3	ppm			1			
SBB-E03A	2/28/2004	14:40	14	23	ppm			1			
SBB-E03A	2/28/2004	14:40	15	86	ppm			1			
SBB-E03A	2/28/2004	14:40	2	1860	ppm			1			
SBB-E03A	2/28/2004	14:40	19	0.36	ppm			1			
SBB-E03A	2/28/2004	14:40	3	2.895	mS/cm			1			
SBB-E03A	2/28/2004	14:40	32	38	ppm			1			
SBB-E03A	2/28/2004	14:40	36	0.43	ppm			1			
SAC-E03A	2/29/2004	12:46	3	0.93	mS/cm			1			
SAC-E03A	2/29/2004	12:46	32	29	ppm			1			
SAC-E03A	2/29/2004	12:46	36	0.14	ppm			1			
SAC-E03A	2/29/2004	12:46	1	7.83				1			
SAC-E03A	2/29/2004	12:46	38	8.63	epm			1			
SAC-E03A	2/29/2004	12:46	39	9.19	epm			1			
SAC-E03A	2/29/2004	12:46	40	-3.12	%			1			
SAC-E03A	2/29/2004	12:46	4	242	ppm			1			
SAC-E03A	2/29/2004	12:46	6	230	ppm			1			
SAC-E03A	2/29/2004	12:46	7	40	ppm			1			
SAC-E03A	2/29/2004	12:46	8	205	ppm			1			
SAC-E03A	2/29/2004	12:46	9		ppm	<	0.1	1			
SAC-E03A	2/29/2004	12:46	10		ppm	<	0.5	1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
SAC-E03A	2/29/2004	12:46	11	0.43	ppm			1			
SAC-E03A	2/29/2004	12:46	12	85	ppm			1			
SAC-E03A	2/29/2004	12:46	13	4.3	ppm			1			
SAC-E03A	2/29/2004	12:46	14	15	ppm			1			
SAC-E03A	2/29/2004	12:46	15	72	ppm			1			
SAC-E03A	2/29/2004	12:46	2	570	ppm			1			
SAC-E03A	2/29/2004	12:46	19	0.096	ppm			1			
SFC-W01A	2/29/2004	11:24	1	7.48				1			
SFC-W01A	2/29/2004	11:24	38	7.7	epm			1			
SFC-W01A	2/29/2004	11:24	39	8.17	epm			1			
SFC-W01A	2/29/2004	11:24	40	-2.95	%			1			
SFC-W01A	2/29/2004	11:24	4	138	ppm			1			
SFC-W01A	2/29/2004	11:24	6	260	ppm			1			
SFC-W01A	2/29/2004	11:24	7	79	ppm			1			
SFC-W01A	2/29/2004	11:24	8	78	ppm			1			
SFC-W01A	2/29/2004	11:24	9	1.1	ppm			1			
SFC-W01A	2/29/2004	11:24	10		ppm	<	0.5	1			
SFC-W01A	2/29/2004	11:24	11	0.69	ppm			1			
SFC-W01A	2/29/2004	11:24	12	110	ppm			1			
SFC-W01A	2/29/2004	11:24	13	2.6	ppm			1			
SFC-W01A	2/29/2004	11:24	14	4.5	ppm			1			
SFC-W01A	2/29/2004	11:24	15	50	ppm			1			
SFC-W01A	2/29/2004	11:24	2	490	ppm			1			
SFC-W01A	2/29/2004	11:24	19	0.087	ppm			1			
SFC-W01A	2/29/2004	11:24	3	0.842	mS/cm			1			
SFC-W01A	2/29/2004	11:24	32	36	ppm			1			
SFC-W01A	2/29/2004	11:24	36	0.29	ppm			1			
SFC-W01A	2/29/2004	11:24	1	7.48				2			
SFC-W01A	2/29/2004	11:24	38	7.72	epm			2			
SFC-W01A	2/29/2004	11:24	39	8.02	epm			2			
SFC-W01A	2/29/2004	11:24	40	-1.94	%			2			
SFC-W01A	2/29/2004	11:24	4	138	ppm			2			
SFC-W01A	2/29/2004	11:24	6	260	ppm			2			
SFC-W01A	2/29/2004	11:24	7	79	ppm			2			
SFC-W01A	2/29/2004	11:24	8	78	ppm			2			
SFC-W01A	2/29/2004	11:24	9	1.1	ppm			2			
SFC-W01A	2/29/2004	11:24	10		ppm	<	0.5	2			
SFC-W01A	2/29/2004	11:24	11	0.7	ppm			2			
SFC-W01A	2/29/2004	11:24	12	112	ppm			2			
SFC-W01A	2/29/2004	11:24	13	2.6	ppm			2			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
SFC-W01A	2/29/2004	11:24	14	4.5	ppm			2			
SFC-W01A	2/29/2004	11:24	15	48	ppm			2			
SFC-W01A	2/29/2004	11:24	2	490	ppm			2			
SFC-W01A	2/29/2004	11:24	19	0.088	ppm			2			
SFC-W01A	2/29/2004	11:24	3	0.848	mS/cm			2			
SFC-W01A	2/29/2004	11:24	32	36	ppm			2			
SFC-W01A	2/29/2004	11:24	36	0.31	ppm			2			
SFC-W04A	2/29/2004	13:03	1	7.67				1			
SFC-W04A	2/29/2004	13:03	38	8.66	epm			1			
SFC-W04A	2/29/2004	13:03	39	8.86	epm			1			
SFC-W04A	2/29/2004	13:03	40	-1.11	%			1			
SFC-W04A	2/29/2004	13:03	4	211	ppm			1			
SFC-W04A	2/29/2004	13:03	6	215	ppm			1			
SFC-W04A	2/29/2004	13:03	7	77	ppm			1			
SFC-W04A	2/29/2004	13:03	8	150	ppm			1			
SFC-W04A	2/29/2004	13:03	9		ppm	<	0.1	1			
SFC-W04A	2/29/2004	13:03	10		ppm	<	0.5	1			
SFC-W04A	2/29/2004	13:03	11	0.65	ppm			1			
SFC-W04A	2/29/2004	13:03	12	100	ppm			1			
SFC-W04A	2/29/2004	13:03	13	3.8	ppm			1			
SFC-W04A	2/29/2004	13:03	14	13	ppm			1			
SFC-W04A	2/29/2004	13:03	15	63	ppm			1			
SFC-W04A	2/29/2004	13:03	2	540	ppm			1			
SFC-W04A	2/29/2004	13:03	19	0.1	ppm			1			
SFC-W04A	2/29/2004	13:03	3	0.922	mS/cm			1			
SFC-W04A	2/29/2004	13:03	32	22	ppm			1			
SFC-W04A	2/29/2004	13:03	36	0.17	ppm			1			
SFC-W04C	2/29/2004	13:45	1	7.78				1			
SFC-W04C	2/29/2004	13:45	38	6.62	epm			1			
SFC-W04C	2/29/2004	13:45	39	6.98	epm			1			
SFC-W04C	2/29/2004	13:45	40	-2.62	%			1			
SFC-W04C	2/29/2004	13:45	4	176	ppm			1			
SFC-W04C	2/29/2004	13:45	6	255	ppm			1			
SFC-W04C	2/29/2004	13:45	7	25	ppm			1			
SFC-W04C	2/29/2004	13:45	8	100	ppm			1			
SFC-W04C	2/29/2004	13:45	9		ppm	<	0.1	1			
SFC-W04C	2/29/2004	13:45	10		ppm	<	0.5	1			
SFC-W04C	2/29/2004	13:45	11	0.24	ppm			1			
SFC-W04C	2/29/2004	13:45	12	69	ppm			1			
SFC-W04C	2/29/2004	13:45	13	4.3	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
SFC-W04C	2/29/2004	13:45	14	5.1	ppm			1			
SFC-W04C	2/29/2004	13:45	15	62	ppm			1			
SFC-W04C	2/29/2004	13:45	2	420	ppm			1			
SFC-W04C	2/29/2004	13:45	19	0.1	ppm			1			
SFC-W04C	2/29/2004	13:45	3	0.72	mS/cm			1			
SFC-W04C	2/29/2004	13:45	32	29	ppm			1			
SFC-W04C	2/29/2004	13:45	36	0.11	ppm			1			
SFC-W05B	2/29/2004	14:46	1	7.84				1			
SFC-W05B	2/29/2004	14:46	38	9.94	epm			1			
SFC-W05B	2/29/2004	14:46	39	10.19	epm			1			
SFC-W05B	2/29/2004	14:46	40	-1.27	%			1			
SFC-W05B	2/29/2004	14:46	4	251	ppm			1			
SFC-W05B	2/29/2004	14:46	6	235	ppm			1			
SFC-W05B	2/29/2004	14:46	7	87	ppm			1			
SFC-W05B	2/29/2004	14:46	8	185	ppm			1			
SFC-W05B	2/29/2004	14:46	9		ppm	<	0.1	1			
SFC-W05B	2/29/2004	14:46	10		ppm	<	0.5	1			
SFC-W05B	2/29/2004	14:46	11	0.61	ppm			1			
SFC-W05B	2/29/2004	14:46	12	110	ppm			1			
SFC-W05B	2/29/2004	14:46	13	5.5	ppm			1			
SFC-W05B	2/29/2004	14:46	14	13	ppm			1			
SFC-W05B	2/29/2004	14:46	15	79	ppm			1			
SFC-W05B	2/29/2004	14:46	2	620	ppm			1			
SFC-W05B	2/29/2004	14:46	19	0.2	ppm			1			
SFC-W05B	2/29/2004	14:46	3	1.066	mS/cm			1			
SFC-W05B	2/29/2004	14:46	32	26	ppm			1			
SFC-W05B	2/29/2004	14:46	36	0.19	ppm			1			
SMC-W01A	2/29/2004	10:05	1	7.67				1			
SMC-W01A	2/29/2004	10:05	38	17.54	epm			1			
SMC-W01A	2/29/2004	10:05	39	18.18	epm			1			
SMC-W01A	2/29/2004	10:05	40	-1.8	%			1			
SMC-W01A	2/29/2004	10:05	4	68	ppm			1			
SMC-W01A	2/29/2004	10:05	6	485	ppm			1			
SMC-W01A	2/29/2004	10:05	7	122	ppm			1			
SMC-W01A	2/29/2004	10:05	8	320	ppm			1			
SMC-W01A	2/29/2004	10:05	9		ppm	<	0.1	1			
SMC-W01A	2/29/2004	10:05	10	0.57	ppm			1			
SMC-W01A	2/29/2004	10:05	11	2	ppm			1			
SMC-W01A	2/29/2004	10:05	12	370	ppm			1			
SMC-W01A	2/29/2004	10:05	13	3.7	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
SMC-W01A	2/29/2004	10:05	14	5.5	ppm			1			
SMC-W01A	2/29/2004	10:05	15	18	ppm			1			
SMC-W01A	2/29/2004	10:05	2	1110	ppm			1			
SMC-W01A	2/29/2004	10:05	19	0.25	ppm			1			
SMC-W01A	2/29/2004	10:05	3	1.88	mS/cm			1			
SMC-W01A	2/29/2004	10:05	32	28	ppm			1			
SMC-W01A	2/29/2004	10:05	36	0.4	ppm			1			
SMC-W07A	2/29/2004	17:09	1	7.56				1			
SMC-W07A	2/29/2004	17:09	38	19.71	epm			1			
SMC-W07A	2/29/2004	17:09	39	19.28	epm			1			
SMC-W07A	2/29/2004	17:09	40	1.12	%			1			
SMC-W07A	2/29/2004	17:09	4	565	ppm			1			
SMC-W07A	2/29/2004	17:09	6	530	ppm			1			
SMC-W07A	2/29/2004	17:09	7	160	ppm			1			
SMC-W07A	2/29/2004	17:09	8	290	ppm			1			
SMC-W07A	2/29/2004	17:09	9		ppm	<	0.1	1			
SMC-W07A	2/29/2004	17:09	10		ppm	<	0.5	1			
SMC-W07A	2/29/2004	17:09	11	0.72	ppm			1			
SMC-W07A	2/29/2004	17:09	12	190	ppm			1			
SMC-W07A	2/29/2004	17:09	13	6.4	ppm			1			
SMC-W07A	2/29/2004	17:09	14	28	ppm			1			
SMC-W07A	2/29/2004	17:09	15	180	ppm			1			
SMC-W07A	2/29/2004	17:09	2	1140	ppm			1			
SMC-W07A	2/29/2004	17:09	19	0.18	ppm			1			
SMC-W07A	2/29/2004	17:09	3	1.825	mS/cm			1			
SMC-W07A	2/29/2004	17:09	32	17	ppm			1			
SMC-W07A	2/29/2004	17:09	36	0.21	ppm			1			
SMC-W07C	2/29/2004	16:16	1	7.72				1			
SMC-W07C	2/29/2004	16:16	38	10.44	epm			1			
SMC-W07C	2/29/2004	16:16	39	10.62	epm			1			
SMC-W07C	2/29/2004	16:16	40	-0.86	%			1			
SMC-W07C	2/29/2004	16:16	4	357	ppm			1			
SMC-W07C	2/29/2004	16:16	6	430	ppm			1			
SMC-W07C	2/29/2004	16:16	7	34	ppm			1			
SMC-W07C	2/29/2004	16:16	8	125	ppm			1			
SMC-W07C	2/29/2004	16:16	9		ppm	<	0.1	1			
SMC-W07C	2/29/2004	16:16	10		ppm	<	0.5	1			
SMC-W07C	2/29/2004	16:16	11	0.25	ppm			1			
SMC-W07C	2/29/2004	16:16	12	73	ppm			1			
SMC-W07C	2/29/2004	16:16	13	5.1	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
SMC-W07C	2/29/2004	16:16	14	17	ppm			1			
SMC-W07C	2/29/2004	16:16	15	115	ppm			1			
SMC-W07C	2/29/2004	16:16	2	610	ppm			1			
SMC-W07C	2/29/2004	16:16	19	0.12	ppm			1			
SMC-W07C	2/29/2004	16:16	3	0.865	mS/cm			1			
SMC-W07C	2/29/2004	16:16	32	28	ppm			1			
SMC-W07C	2/29/2004	16:16	36	0.15	ppm			1			
Equipment Blank	3/1/2004	17:02	1	6.8				3			
Equipment Blank	3/1/2004	17:02	38	0.01	epm			3			
Equipment Blank	3/1/2004	17:02	39	0.02	epm			3			
Equipment Blank	3/1/2004	17:02	40	-55.95	%			3			
Equipment Blank	3/1/2004	17:02	4	0	ppm			3			
Equipment Blank	3/1/2004	17:02	6	1.3	ppm			3			
Equipment Blank	3/1/2004	17:02	7		ppm	<	1	3			
Equipment Blank	3/1/2004	17:02	8		ppm	<	1	3			
Equipment Blank	3/1/2004	17:02	9		ppm	<	0.1	3			
Equipment Blank	3/1/2004	17:02	10		ppm	<	0.5	3			
Equipment Blank	3/1/2004	17:02	11		ppm	<	0.1	3			
Equipment Blank	3/1/2004	17:02	12		ppm	<	0.1	3			
Equipment Blank	3/1/2004	17:02	13		ppm	<	0.1	3			
Equipment Blank	3/1/2004	17:02	14		ppm	<	0.1	3			
Equipment Blank	3/1/2004	17:02	15	0.12	ppm			3			
Equipment Blank	3/1/2004	17:02	2	0	ppm			3			
Equipment Blank	3/1/2004	17:02	16		ppm	<	0.001	3			
Equipment Blank	3/1/2004	17:02	17		ppm	<	0.001	3			
Equipment Blank	3/1/2004	17:02	18		ppm	<	0.001	3			
Equipment Blank	3/1/2004	17:02	19	0.005	ppm			3			
Equipment Blank	3/1/2004	17:02	20		ppm	<	0.001	3			
Equipment Blank	3/1/2004	17:02	21		ppm	<	0.001	3			
Equipment Blank	3/1/2004	17:02	22		ppm	<	0.001	3			
Equipment Blank	3/1/2004	17:02	23		ppm	<	0.001	3			
Equipment Blank	3/1/2004	17:02	24		ppm	<	0.05	3			
Equipment Blank	3/1/2004	17:02	25		ppm	<	0.001	3			
Equipment Blank	3/1/2004	17:02	26		ppm	<	0.001	3			
Equipment Blank	3/1/2004	17:02	27		ppm	<	0.001	3			
Equipment Blank	3/1/2004	17:02	3	0.005	mS/cm			3			
Equipment Blank	3/1/2004	17:02	28		ppm	<	0.0001	3			
Equipment Blank	3/1/2004	17:02	29		ppm	<	0.001	3			
Equipment Blank	3/1/2004	17:02	30		ppm	<	0.001	3			
Equipment Blank	3/1/2004	17:02	31		ppm	<	0.001	3			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
Equipment Blank	3/1/2004	17:02	32		ppm	<	0.1	3			
Equipment Blank	3/1/2004	17:02	33		ppm	<	0.001	3			
Equipment Blank	3/1/2004	17:02	34	0.001	ppm			3			
Equipment Blank	3/1/2004	17:02	35		ppm	<	0.001	3			
Equipment Blank	3/1/2004	17:02	36		ppm	<	0.1	3			
Equipment Blank	3/1/2004	17:50	1	6.78				3			
Equipment Blank	3/1/2004	17:50	38	0.01	epm			3			
Equipment Blank	3/1/2004	17:50	39	0.02	epm			3			
Equipment Blank	3/1/2004	17:50	40	-36.2	%			3			
Equipment Blank	3/1/2004	17:50	4	0	ppm			3			
Equipment Blank	3/1/2004	17:50	6	1.3	ppm			3			
Equipment Blank	3/1/2004	17:50	7		ppm	<	1	3			
Equipment Blank	3/1/2004	17:50	8		ppm	<	1	3			
Equipment Blank	3/1/2004	17:50	9		ppm	<	0.1	3			
Equipment Blank	3/1/2004	17:50	10		ppm	<	0.5	3			
Equipment Blank	3/1/2004	17:50	11		ppm	<	0.1	3			
Equipment Blank	3/1/2004	17:50	12		ppm	<	0.1	3			
Equipment Blank	3/1/2004	17:50	13		ppm	<	0.1	3			
Equipment Blank	3/1/2004	17:50	14		ppm	<	0.1	3			
Equipment Blank	3/1/2004	17:50	15	0.2	ppm			3			
Equipment Blank	3/1/2004	17:50	2	0	ppm			3			
Equipment Blank	3/1/2004	17:50	19		ppm	<	0.001	3			
Equipment Blank	3/1/2004	17:50	3	0.005	mS/cm			3			
Equipment Blank	3/1/2004	17:50	32		ppm	<	0.1	3			
Equipment Blank	3/1/2004	17:50	36		ppm	<	0.1	3			
SAC-W09B	3/1/2004	15:17	1	7.4				1			
SAC-W09B	3/1/2004	15:17	38	66.67	epm			1			
SAC-W09B	3/1/2004	15:17	39	70.22	epm			1			
SAC-W09B	3/1/2004	15:17	40	-2.59	%			1			
SAC-W09B	3/1/2004	15:17	4	1576	ppm			1			
SAC-W09B	3/1/2004	15:17	6	545	ppm			1			
SAC-W09B	3/1/2004	15:17	7	1050	ppm			1			
SAC-W09B	3/1/2004	15:17	8	1520	ppm			1			
SAC-W09B	3/1/2004	15:17	9		ppm	<	0.1	1			
SAC-W09B	3/1/2004	15:17	10		ppm	<	0.5	1			
SAC-W09B	3/1/2004	15:17	11	0.2	ppm			1			
SAC-W09B	3/1/2004	15:17	12	800	ppm			1			
SAC-W09B	3/1/2004	15:17	13	15	ppm			1			
SAC-W09B	3/1/2004	15:17	14	125	ppm			1			
SAC-W09B	3/1/2004	15:17	15	425	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
SAC-W09B	3/1/2004	15:17	2	4240	ppm			1			
SAC-W09B	3/1/2004	15:17	19	0.88	ppm			1			
SAC-W09B	3/1/2004	15:17	3	6.125	mS/cm			1			
SAC-W09B	3/1/2004	15:17	32	34	ppm			1			
SAC-W09B	3/1/2004	15:17	36	0.92	ppm			1			
SAC-W09C	3/1/2004	16:00	1	7.68				1			
SAC-W09C	3/1/2004	16:02	32	30	ppm			6			
SAC-W09C	3/1/2004	16:02	36	0.57	ppm			6			
SAC-W09C	3/1/2004	16:00	38	39.75	epm			1			
SAC-W09C	3/1/2004	16:00	39	42.04	epm			1			
SAC-W09C	3/1/2004	16:00	40	-2.8	%			1			
SAC-W09C	3/1/2004	16:00	4	987	ppm			1			
SAC-W09C	3/1/2004	16:00	6	330	ppm			1			
SAC-W09C	3/1/2004	16:00	7	700	ppm			1			
SAC-W09C	3/1/2004	16:00	8	810	ppm			1			
SAC-W09C	3/1/2004	16:00	9		ppm	<	0.1	1			
SAC-W09C	3/1/2004	16:00	10		ppm	<	0.5	1			
SAC-W09C	3/1/2004	16:00	11	0.32	ppm			1			
SAC-W09C	3/1/2004	16:00	12	455	ppm			1			
SAC-W09C	3/1/2004	16:00	13	9.6	ppm			1			
SAC-W09C	3/1/2004	16:00	14	85	ppm			1			
SAC-W09C	3/1/2004	16:00	15	255	ppm			1			
SAC-W09C	3/1/2004	16:00	2	2510	ppm			1			
SAC-W09C	3/1/2004	16:00	19	0.52	ppm			1			
SAC-W09C	3/1/2004	16:00	3	4.025	mS/cm			1			
SAC-W09C	3/1/2004	16:00	32	31	ppm			1			
SAC-W09C	3/1/2004	16:00	36	0.58	ppm			1			
SAC-W09C	3/1/2004	16:02	1	7.7				6			
SAC-W09C	3/1/2004	16:02	38	40.24	epm			6			
SAC-W09C	3/1/2004	16:02	39	42.53	epm			6			
SAC-W09C	3/1/2004	16:02	40	-2.77	%			6			
SAC-W09C	3/1/2004	16:02	4	979	ppm			6			
SAC-W09C	3/1/2004	16:02	6	330	ppm			6			
SAC-W09C	3/1/2004	16:02	7	710	ppm			6			
SAC-W09C	3/1/2004	16:02	8	820	ppm			6			
SAC-W09C	3/1/2004	16:02	9		ppm	<	0.1	6			
SAC-W09C	3/1/2004	16:02	10		ppm	<	0.5	6			
SAC-W09C	3/1/2004	16:02	11	0.31	ppm			6			
SAC-W09C	3/1/2004	16:02	12	470	ppm			6			
SAC-W09C	3/1/2004	16:02	13	9.5	ppm			6			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
SAC-W09C	3/1/2004	16:02	14	80	ppm			6			
SAC-W09C	3/1/2004	16:02	15	260	ppm			6			
SAC-W09C	3/1/2004	16:02	2	2550	ppm			6			
SAC-W09C	3/1/2004	16:02	19	0.58	ppm			6			
SAC-W09C	3/1/2004	16:02	3	4.025	mS/cm			6			
SBB-W01A	3/1/2004	16:15	1	7.3				1			
SBB-W01A	3/1/2004	16:15	38	17.32	epm			1			
SBB-W01A	3/1/2004	16:15	39	16.49	epm			1			
SBB-W01A	3/1/2004	16:15	40	2.47	%			1			
SBB-W01A	3/1/2004	16:15	4	432	ppm			1			
SBB-W01A	3/1/2004	16:15	6	405	ppm			1			
SBB-W01A	3/1/2004	16:15	7	97	ppm			1			
SBB-W01A	3/1/2004	16:15	8	340	ppm			1			
SBB-W01A	3/1/2004	16:15	9		ppm	<	0.1	1			
SBB-W01A	3/1/2004	16:15	10		ppm	<	0.5	1			
SBB-W01A	3/1/2004	16:15	11	0.57	ppm			1			
SBB-W01A	3/1/2004	16:15	12	195	ppm			1			
SBB-W01A	3/1/2004	16:15	13	8.3	ppm			1			
SBB-W01A	3/1/2004	16:15	14	26	ppm			1			
SBB-W01A	3/1/2004	16:15	15	130	ppm			1			
SBB-W01A	3/1/2004	16:15	2	1040	ppm			1			
SBB-W01A	3/1/2004	16:15	19	0.27	ppm			1			
SBB-W01A	3/1/2004	16:15	3	1.6	mS/cm			1			
SBB-W01A	3/1/2004	16:15	32	38	ppm			1			
SBB-W01A	3/1/2004	16:15	36	0.21	ppm			1			
SBB-W02B	3/1/2004	15:20	1	7.56				1			
SBB-W02B	3/1/2004	15:20	38	13.91	epm			1			
SBB-W02B	3/1/2004	15:20	39	14.59	epm			1			
SBB-W02B	3/1/2004	15:20	40	-2.37	%			1			
SBB-W02B	3/1/2004	15:20	4	183	ppm			1			
SBB-W02B	3/1/2004	15:20	6	340	ppm			1			
SBB-W02B	3/1/2004	15:20	7	185	ppm			1			
SBB-W02B	3/1/2004	15:20	8	180	ppm			1			
SBB-W02B	3/1/2004	15:20	9		ppm	<	0.1	1			
SBB-W02B	3/1/2004	15:20	10		ppm	<	0.5	1			
SBB-W02B	3/1/2004	15:20	11	0.81	ppm			1			
SBB-W02B	3/1/2004	15:20	12	230	ppm			1			
SBB-W02B	3/1/2004	15:20	13	9.4	ppm			1			
SBB-W02B	3/1/2004	15:20	14	13	ppm			1			
SBB-W02B	3/1/2004	15:20	15	52	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY	ENTNOTES	QANOTES
SBB-W02B	3/1/2004	15:20	2	880	ppm			1			
SBB-W02B	3/1/2004	15:20	19	0.38	ppm			1			
SBB-W02B	3/1/2004	15:20	3	1.525	mS/cm			1			
SBB-W02B	3/1/2004	15:20	32	35	ppm			1			
SBB-W02B	3/1/2004	15:20	36	0.27	ppm			1			

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
L-114.60	2/15/2002	13:38	38	10.14	epm			1	tn/ry
L-114.60	2/15/2002	13:38	14	18	ppm			1	tn/ry
L-114.60	2/15/2002	13:38	32	24	ppm			1	tn/ry
L-114.60	2/15/2002	13:38	7	76	ppm			1	tn/ry
L-114.60	2/15/2002	13:38	12	86	ppm			1	tn/ry
L-114.60	2/15/2002	13:38	15	96	ppm			1	tn/ry
L-114.60	2/15/2002	13:38	8	165	ppm			1	tn/ry
L-114.60	2/15/2002	13:38	6	255	ppm			1	tn/ry
L-114.60	2/15/2002	13:38	4	314	ppm			1	tn/ry
L-114.60	2/15/2002	13:38	2	600	ppm			1	tn/ry
L-114.60	2/15/2002	13:38	3	0.92	mS/cm			1	tn/ry
L-114.60	2/15/2002	13:38	16		ppm	<	0.001	1	tn/ry
L-114.60	2/15/2002	13:38	36		ppm	<	0.1	1	tn/ry
L-114.60	2/15/2002	13:38	9		ppm	<	0.1	1	tn/ry
L-114.60	2/15/2002	13:38	10		ppm	<	0.5	1	tn/ry
L-114.60	2/15/2002	13:38	26	0.07	ppm			1	tn/ry
L-114.60	2/15/2002	13:38	19	0.136	ppm			1	tn/ry
L-114.60	2/15/2002	13:38	11	0.6	ppm			1	tn/ry
L-114.60	2/15/2002	13:38	40	1.76	%			1	tn/ry
L-114.60	2/15/2002	13:38	35	1.9	ppm			1	tn/ry
L-114.60	2/15/2002	13:38	13	5.1	ppm			1	tn/ry
L-114.60	2/15/2002	13:38	1	7.52				1	tn/ry
L-114.60	2/15/2002	13:38	39	9.79	epm			1	tn/ry
L-99.59	2/15/2002	16:28	26	0.06	ppm			1	tn/dl
L-99.59	2/15/2002	16:28	26	0.06	ppm			6	tn/dl
L-99.59	2/15/2002	16:28	19	0.127	ppm			6	tn/dl
L-99.59	2/15/2002	16:28	19	0.129	ppm			1	tn/dl
L-99.59	2/15/2002	16:28	36	0.23	ppm			1	tn/dl
L-99.59	2/15/2002	16:28	36	0.23	ppm			6	tn/dl
L-99.59	2/15/2002	16:28	40	0.38	%			1	tn/dl
L-99.59	2/15/2002	16:28	11	0.6	ppm			1	tn/dl
L-99.59	2/15/2002	16:28	11	0.63	ppm			6	tn/dl
L-99.59	2/15/2002	16:28	35	1.3	ppm			1	tn/dl
L-99.59	2/15/2002	16:28	35	1.3	ppm			6	tn/dl
L-99.59	2/15/2002	16:28	13	4.4	ppm			1	tn/dl
L-99.59	2/15/2002	16:28	13	4.4	ppm			6	tn/dl
L-99.59	2/15/2002	16:28	39	7.6	epm			1	tn/dl
L-99.59	2/15/2002	16:28	38	7.66	epm			1	tn/dl
L-99.59	2/15/2002	16:28	1	7.81				1	tn/dl
L-99.59	2/15/2002	16:28	14	11	ppm			1	tn/dl
L-99.59	2/15/2002	16:28	14	11	ppm			6	tn/dl
L-99.59	2/15/2002	16:28	32	21	ppm			1	tn/dl
L-99.59	2/15/2002	16:28	32	21	ppm			6	tn/dl
L-99.59	2/15/2002	16:28	7	51	ppm			1	tn/dl
L-99.59	2/15/2002	16:28	7	51	ppm			6	tn/dl
L-99.59	2/15/2002	16:28	12	67	ppm			6	tn/dl
L-99.59	2/15/2002	16:28	12	70	ppm			1	tn/dl
L-99.59	2/15/2002	16:28	15	72	ppm			1	tn/dl
L-99.59	2/15/2002	16:28	15	72	ppm			6	tn/dl
L-99.59	2/15/2002	16:28	8	125	ppm			1	tn/dl
L-99.59	2/15/2002	16:28	8	125	ppm			6	tn/dl
L-99.59	2/15/2002	16:28	6	215	ppm			1	tn/dl
L-99.59	2/15/2002	16:28	4	225	ppm			1	tn/dl
L-99.59	2/15/2002	16:28	4	225	ppm			6	tn/dl
L-99.59	2/15/2002	16:28	2	460	ppm			1	tn/dl
L-99.59	2/15/2002	16:28	3	1.2	mS/cm			1	tn/dl
L-99.59	2/15/2002	16:28	16		ppm	<	0.001	1	tn/dl
L-99.59	2/15/2002	16:28	16		ppm	<	0.001	6	tn/dl
L-99.59	2/15/2002	16:28	9		ppm	<	0.1	1	tn/dl
L-99.59	2/15/2002	16:28	9		ppm	<	0.1	6	tn/dl
L-99.59	2/15/2002	16:28	10		ppm	<	0.5	1	tn/dl
L-99.59	2/15/2002	16:28	10		ppm	<	0.5	6	tn/dl
R-114.60	2/15/2002	13:03	26	0.07	ppm			1	tn/ry
R-114.60	2/15/2002	13:03	19	0.148	ppm			1	tn/ry
R-114.60	2/15/2002	13:03	36	0.19	ppm			1	tn/ry
R-114.60	2/15/2002	13:03	11	0.74	ppm			1	tn/ry
R-114.60	2/15/2002	13:03	40	0.84	%			1	tn/ry

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
R-114.60	2/15/2002	13:03	35	0.91	ppm			1	tn/ry
R-114.60	2/15/2002	13:03	9	4.2	ppm			1	tn/ry
R-114.60	2/15/2002	13:03	13	5.8	ppm			1	tn/ry
R-114.60	2/15/2002	13:03	39	6.69	epm			1	tn/ry
R-114.60	2/15/2002	13:03	38	6.8	epm			1	tn/ry
R-114.60	2/15/2002	13:03	1	8.31				1	tn/ry
R-114.60	2/15/2002	13:03	14	9.8	ppm			1	tn/ry
R-114.60	2/15/2002	13:03	32	24	ppm			1	tn/ry
R-114.60	2/15/2002	13:03	7	44	ppm			1	tn/ry
R-114.60	2/15/2002	13:03	15	57	ppm			1	tn/ry
R-114.60	2/15/2002	13:03	12	69	ppm			1	tn/ry
R-114.60	2/15/2002	13:03	8	95	ppm			1	tn/ry
R-114.60	2/15/2002	13:03	4	183	ppm			1	tn/ry
R-114.60	2/15/2002	13:03	6	205	ppm			1	tn/ry
R-114.60	2/15/2002	13:03	2	410	ppm			1	tn/ry
R-114.60	2/15/2002	13:03	3	0.62	mS/cm			1	tn/ry
R-114.60	2/15/2002	13:03	16		ppm	<	0.001	1	tn/ry
R-114.60	2/15/2002	13:03	10		ppm	<	0.5	1	tn/ry
R-99.59	2/15/2002	16:06	26	0.06	ppm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	19	0.141	ppm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	36	0.28	ppm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	10	0.5	ppm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	11	0.73	ppm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	35	0.93	ppm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	40	0.98	%			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	9	4.2	ppm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	13	5.9	ppm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	39	6.51	epm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	38	6.64	epm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	1	7.89				1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	14	9.9	ppm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	32	25	ppm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	7	41	ppm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	15	58	ppm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	12	64	ppm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	8	94	ppm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	4	186	ppm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	6	200	ppm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	2	400	ppm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	3	0.69	mS/cm			1	tn/lw/dl/ry
R-99.59	2/15/2002	16:06	16		ppm	<	0.001	1	tn/lw/dl/ry
D-SRD-87.62	2/16/2002	15:40	9	0.1	ppm			1	tn/ry
D-SRD-87.62	2/16/2002	15:40	26	0.13	ppm			1	tn/ry
D-SRD-87.62	2/16/2002	15:40	19	0.239	ppm			1	tn/ry
D-SRD-87.62	2/16/2002	15:40	36	0.28	ppm			1	tn/ry
D-SRD-87.62	2/16/2002	15:40	11	0.93	ppm			1	tn/ry
D-SRD-87.62	2/16/2002	15:40	40	0.97	%			1	tn/ry
D-SRD-87.62	2/16/2002	15:40	35	1.5	ppm			1	tn/ry
L-109.49	2/16/2002	10:39	36	0.16	ppm			1	lw/ck
L-109.49	2/16/2002	10:39	11	0.48	ppm			1	lw/ck
L-109.49	2/16/2002	10:39	35	1.8	ppm			1	lw/ck
L-109.49	2/16/2002	10:39	40	1.8	%			1	lw/ck
L-109.49	2/16/2002	10:39	13	5.3	ppm			1	lw/ck
L-109.49	2/16/2002	10:39	1	7.98				1	lw/ck
L-109.49	2/16/2002	10:39	39	9.88	epm			1	lw/ck
L-109.49	2/16/2002	10:39	38	10.24	epm			1	lw/ck
L-109.49	2/16/2002	10:39	14	16	ppm			1	lw/ck
L-109.49	2/16/2002	10:39	32	24	ppm			1	lw/ck
L-109.49	2/16/2002	10:39	7	61	ppm			1	lw/ck
L-109.49	2/16/2002	10:39	12	93	ppm			1	lw/ck
L-109.49	2/16/2002	10:39	15	95	ppm			1	lw/ck
L-109.49	2/16/2002	10:39	8	170	ppm			1	lw/ck
L-109.49	2/16/2002	10:39	6	280	ppm			1	lw/ck
L-109.49	2/16/2002	10:39	4	303	ppm			1	lw/ck
L-109.49	2/16/2002	10:39	2	600	ppm			1	lw/ck
L-109.49	2/16/2002	10:39	3	0.86	mS/cm			1	lw/ck
L-109.49	2/16/2002	10:39	16		ppm	<	0.001	1	lw/ck

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
L-109.49	2/16/2002	10:39	9		ppm	<	0.1	1	lw/ck
L-109.49	2/16/2002	10:39	10		ppm	<	0.5	1	lw/ck
D-SRD-87.62	2/16/2002	15:40	13	6.6	ppm			1	tn/ry
D-SRD-87.62	2/16/2002	15:40	1	7.6				1	tn/ry
D-SRD-87.62	2/16/2002	15:40	39	12.66	epm			1	tn/ry
D-SRD-87.62	2/16/2002	15:40	38	12.91	epm			1	tn/ry
D-SRD-87.62	2/16/2002	15:40	14	14	ppm			1	tn/ry
D-SRD-87.62	2/16/2002	15:40	32	28	ppm			1	tn/ry
D-SRD-87.62	2/16/2002	15:40	15	84	ppm			1	tn/ry
D-SRD-87.62	2/16/2002	15:40	7	125	ppm			1	tn/ry
D-SRD-87.62	2/16/2002	15:40	12	170	ppm			1	tn/ry
D-SRD-87.62	2/16/2002	15:40	8	200	ppm			1	tn/ry
D-SRD-87.62	2/16/2002	15:40	4	267	ppm			1	tn/ry
D-SRD-87.62	2/16/2002	15:40	6	300	ppm			1	tn/ry
D-SRD-87.62	2/16/2002	15:40	2	780	ppm			1	tn/ry
D-SRD-87.62	2/16/2002	15:40	3	1.04	mS/cm			1	tn/ry
D-SRD-87.62	2/16/2002	15:40	16		ppm	<	0.001	1	tn/ry
D-SRD-87.62	2/16/2002	15:40	10		ppm	<	0.5	1	tn/ry
L-109.49	2/16/2002	10:39	26	0.07	ppm			1	lw/ck
L-109.49	2/16/2002	10:39	19	0.147	ppm			1	lw/ck
L-87.62	2/16/2002	16:00	26	0.07	ppm			1	tn/ry
L-87.62	2/16/2002	16:00	26	0.07	ppm			6	tn/ry
L-87.62	2/16/2002	16:00	19	0.138	ppm			6	tn/ry
L-87.62	2/16/2002	16:00	19	0.139	ppm			1	tn/ry
L-87.62	2/16/2002	16:00	36	0.27	ppm			1	tn/ry
L-87.62	2/16/2002	16:00	36	0.27	ppm			6	tn/ry
L-87.62	2/16/2002	16:00	9	0.28	ppm			1	tn/ry
L-87.62	2/16/2002	16:00	9	0.28	ppm			6	tn/ry
L-87.62	2/16/2002	16:00	11	0.53	ppm			1	tn/ry
L-87.62	2/16/2002	16:00	11	0.53	ppm			6	tn/ry
L-87.62	2/16/2002	16:00	35	1.1	ppm			1	tn/ry
L-87.62	2/16/2002	16:00	35	1.1	ppm			6	tn/ry
L-87.62	2/16/2002	16:00	40	1.25	%			1	tn/ry
L-87.62	2/16/2002	16:00	13	5.3	ppm			1	tn/ry
L-87.62	2/16/2002	16:00	13	5.3	ppm			6	tn/ry
L-87.62	2/16/2002	16:00	39	8.06	epm			1	tn/ry
L-87.62	2/16/2002	16:00	38	8.26	epm			1	tn/ry
L-87.62	2/16/2002	16:00	1	8.28				1	tn/ry
L-87.62	2/16/2002	16:00	14	11	ppm			1	tn/ry
L-87.62	2/16/2002	16:00	14	12	ppm			6	tn/ry
L-87.62	2/16/2002	16:00	32	20	ppm			1	tn/ry
L-87.62	2/16/2002	16:00	32	20	ppm			6	tn/ry
L-87.62	2/16/2002	16:00	7	52	ppm			1	tn/ry
L-87.62	2/16/2002	16:00	7	52	ppm			6	tn/ry
L-87.62	2/16/2002	16:00	15	75	ppm			1	tn/ry
L-87.62	2/16/2002	16:00	15	75	ppm			6	tn/ry
L-87.62	2/16/2002	16:00	12	80	ppm			1	tn/ry
L-87.62	2/16/2002	16:00	12	80	ppm			6	tn/ry
L-87.62	2/16/2002	16:00	8	130	ppm			1	tn/ry
L-87.62	2/16/2002	16:00	8	130	ppm			6	tn/ry
L-87.62	2/16/2002	16:00	4	233	ppm			1	tn/ry
L-87.62	2/16/2002	16:00	6	235	ppm			1	tn/ry
L-87.62	2/16/2002	16:00	4	237	ppm			6	tn/ry
L-87.62	2/16/2002	16:00	2	490	ppm			1	tn/ry
L-87.62	2/16/2002	16:00	3	0.715	mS/cm			1	tn/ry
L-87.62	2/16/2002	16:00	16		ppm	<	0.001	1	tn/ry
L-87.62	2/16/2002	16:00	16		ppm	<	0.001	6	tn/ry
L-87.62	2/16/2002	16:00	10		ppm	<	0.5	1	tn/ry
L-87.62	2/16/2002	16:00	10		ppm	<	0.5	6	tn/ry
L-87.62	2/16/2002	17:03	26	0.07	ppm			2	lw/ck
L-87.62	2/16/2002	17:03	19	0.138	ppm			2	lw/ck
L-87.62	2/16/2002	17:03	36	0.14	ppm			2	lw/ck
L-87.62	2/16/2002	17:03	11	0.55	ppm			2	lw/ck
L-87.62	2/16/2002	17:03	40	1.07	%			2	lw/ck
L-87.62	2/16/2002	17:03	35	1.1	ppm			2	lw/ck
L-87.62	2/16/2002	17:03	13	5.2	ppm			2	lw/ck
L-87.62	2/16/2002	17:03	39	8	epm			2	lw/ck

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
L-87.62	2/16/2002	17:03	38	8.17	epm			2	lw/ck
L-87.62	2/16/2002	17:03	1	8.41				2	lw/ck
L-87.62	2/16/2002	17:03	14	12	ppm			2	lw/ck
L-87.62	2/16/2002	17:03	32	22	ppm			2	lw/ck
L-87.62	2/16/2002	17:03	7	53	ppm			2	lw/ck
L-87.62	2/16/2002	17:03	15	69	ppm			2	lw/ck
L-87.62	2/16/2002	17:03	12	83	ppm			2	lw/ck
L-87.62	2/16/2002	17:03	8	130	ppm			2	lw/ck
L-87.62	2/16/2002	17:03	4	222	ppm			2	lw/ck
L-87.62	2/16/2002	17:03	6	230	ppm			2	lw/ck
L-87.62	2/16/2002	17:03	2	490	ppm			2	lw/ck
L-87.62	2/16/2002	17:03	3	0.725	mS/cm			2	lw/ck
L-87.62	2/16/2002	17:03	16		ppm	<	0.001	2	lw/ck
L-87.62	2/16/2002	17:03	9		ppm	<	0.1	2	lw/ck
L-87.62	2/16/2002	17:03	10		ppm	<	0.5	2	lw/ck
R-109.49	2/16/2002	12:02	26	0.07	ppm			1	lw/ck
R-109.49	2/16/2002	12:02	36	0.14	ppm			1	lw/ck
R-109.49	2/16/2002	12:02	19	0.15	ppm			1	lw/ck
R-109.49	2/16/2002	12:02	40	0.49	%			1	lw/ck
R-109.49	2/16/2002	12:02	11	0.58	ppm			1	lw/ck
R-109.49	2/16/2002	12:02	35	0.87	ppm			1	lw/ck
R-109.49	2/16/2002	12:02	9	4.1	ppm			1	lw/ck
R-109.49	2/16/2002	12:02	13	5.8	ppm			1	lw/ck
R-109.49	2/16/2002	12:02	39	6.64	epm			1	lw/ck
R-109.49	2/16/2002	12:02	38	6.71	epm			1	lw/ck
R-109.49	2/16/2002	12:02	1	8.25				1	lw/ck
R-109.49	2/16/2002	12:02	14	10	ppm			1	lw/ck
R-109.49	2/16/2002	12:02	32	26	ppm			1	lw/ck
R-109.49	2/16/2002	12:02	7	42	ppm			1	lw/ck
R-109.49	2/16/2002	12:02	15	60	ppm			1	lw/ck
R-109.49	2/16/2002	12:02	12	63	ppm			1	lw/ck
R-109.49	2/16/2002	12:02	8	92	ppm			1	lw/ck
R-109.49	2/16/2002	12:02	4	191	ppm			1	lw/ck
R-109.49	2/16/2002	12:02	6	210	ppm			1	lw/ck
R-109.49	2/16/2002	12:02	2	410	ppm			1	lw/ck
R-109.49	2/16/2002	12:02	3	0.612	mS/cm			1	lw/ck
R-109.49	2/16/2002	12:02	16		ppm	<	0.001	1	lw/ck
R-109.49	2/16/2002	12:02	10		ppm	<	0.5	1	lw/ck
R-87.62	2/16/2002	15:24	26	0.07	ppm			1	lw/ck
R-87.62	2/16/2002	15:24	19	0.136	ppm			1	lw/ck
R-87.62	2/16/2002	15:24	36	0.14	ppm			1	lw/ck
R-87.62	2/16/2002	15:24	11	0.49	ppm			1	lw/ck
R-87.62	2/16/2002	15:24	35	0.84	ppm			1	lw/ck
R-87.62	2/16/2002	15:24	40	2.09	%			1	lw/ck
R-87.62	2/16/2002	15:24	9	3.3	ppm			1	lw/ck
R-87.62	2/16/2002	15:24	13	6.1	ppm			1	lw/ck
R-87.62	2/16/2002	15:24	39	6.5	epm			1	lw/ck
R-87.62	2/16/2002	15:24	38	6.78	epm			1	lw/ck
R-87.62	2/16/2002	15:24	1	8.35				1	lw/ck
R-87.62	2/16/2002	15:24	14	9.4	ppm			1	lw/ck
R-87.62	2/16/2002	15:24	32	26	ppm			1	lw/ck
R-87.62	2/16/2002	15:24	7	40	ppm			1	lw/ck
R-87.62	2/16/2002	15:24	15	58	ppm			1	lw/ck
R-87.62	2/16/2002	15:24	12	68	ppm			1	lw/ck
R-87.62	2/16/2002	15:24	8	93	ppm			1	lw/ck
R-87.62	2/16/2002	15:24	4	184	ppm			1	lw/ck
R-87.62	2/16/2002	15:24	6	205	ppm			1	lw/ck
R-87.62	2/16/2002	15:24	2	410	ppm			1	lw/ck
R-87.62	2/16/2002	15:24	3	0.601	mS/cm			1	lw/ck
R-87.62	2/16/2002	15:24	16		ppm	<	0.001	1	lw/ck
R-87.62	2/16/2002	15:24	10		ppm	<	0.5	1	lw/ck
L-68.72	2/17/2002	16:39	9	0.1	ppm			1	lw/tn
L-68.72	2/17/2002	16:39	26	0.12	ppm			1	lw/tn
L-68.72	2/17/2002	16:39	19	0.183	ppm			1	lw/tn
L-68.72	2/17/2002	16:39	36	0.24	ppm			1	lw/tn
L-68.72	2/17/2002	16:39	10	0.5	ppm			1	lw/tn
L-68.72	2/17/2002	16:39	11	0.87	ppm			1	lw/tn

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
L-68.72	2/17/2002	16:39	40	1.55	%			1	lw/tn
L-68.72	2/17/2002	16:39	35	1.6	ppm			1	lw/tn
L-68.72	2/17/2002	16:39	13	6.6	ppm			1	lw/tn
L-68.72	2/17/2002	16:39	1	8.2				1	lw/tn
L-68.72	2/17/2002	16:39	39	10.76	epm			1	lw/tn
L-68.72	2/17/2002	16:39	38	11.1	epm			1	lw/tn
L-68.72	2/17/2002	16:39	14	15	ppm			1	lw/tn
L-68.72	2/17/2002	16:39	32	24	ppm			1	lw/tn
L-68.72	2/17/2002	16:39	15	81	ppm			1	lw/tn
L-68.72	2/17/2002	16:39	7	110	ppm			1	lw/tn
L-68.72	2/17/2002	16:39	12	130	ppm			1	lw/tn
L-68.72	2/17/2002	16:39	8	160	ppm			1	lw/tn
L-68.72	2/17/2002	16:39	6	260	ppm			1	lw/tn
L-68.72	2/17/2002	16:39	4	264	ppm			1	lw/tn
L-68.72	2/17/2002	16:39	2	660	ppm			1	lw/tn
L-68.72	2/17/2002	16:39	3	0.88	mS/cm			1	lw/tn
L-68.72	2/17/2002	16:39	16		ppm	<	0.001	1	lw/tn
L-83.98	2/17/2002	15:30	26	0.07	ppm			1	lw/tn
L-83.98	2/17/2002	15:30	19	0.141	ppm			1	lw/tn
L-83.98	2/17/2002	15:30	36	0.24	ppm			1	lw/tn
L-83.98	2/17/2002	15:30	9	0.33	ppm			1	lw/tn
L-83.98	2/17/2002	15:30	40	0.34	%			1	lw/tn
L-83.98	2/17/2002	15:30	11	0.54	ppm			1	lw/tn
L-83.98	2/17/2002	15:30	35	1.1	ppm			1	lw/tn
L-83.98	2/17/2002	15:30	13	5.4	ppm			1	lw/tn
L-83.98	2/17/2002	15:30	39	8.01	epm			1	lw/tn
L-83.98	2/17/2002	15:30	38	8.06	epm			1	lw/tn
L-83.98	2/17/2002	15:30	1	8.4				1	lw/tn
L-83.98	2/17/2002	15:30	14	12	ppm			1	lw/tn
L-83.98	2/17/2002	15:30	32	19	ppm			1	lw/tn
L-83.98	2/17/2002	15:30	7	53	ppm			1	lw/tn
L-83.98	2/17/2002	15:30	15	71	ppm			1	lw/tn
L-83.98	2/17/2002	15:30	12	78	ppm			1	lw/tn
L-83.98	2/17/2002	15:30	8	130	ppm			1	lw/tn
L-83.98	2/17/2002	15:30	4	227	ppm			1	lw/tn
L-83.98	2/17/2002	15:30	6	230	ppm			1	lw/tn
L-83.98	2/17/2002	15:30	2	480	ppm			1	lw/tn
L-83.98	2/17/2002	15:30	3	0.727	mS/cm			1	lw/tn
L-83.98	2/17/2002	15:30	16		ppm	<	0.001	1	lw/tn
L-83.98	2/17/2002	15:30	10		ppm	<	0.5	1	lw/tn
L-91.28	2/17/2002	10:09	26	0.06	ppm			1	lw/ck
L-91.28	2/17/2002	10:09	19	0.136	ppm			1	lw/ck
L-91.28	2/17/2002	10:09	36	0.16	ppm			1	lw/ck
L-91.28	2/17/2002	10:09	40	0.24	%			1	lw/ck
L-91.28	2/17/2002	10:09	9	0.26	ppm			1	lw/ck
L-91.28	2/17/2002	10:09	11	0.62	ppm			1	lw/ck
L-91.28	2/17/2002	10:09	35	1.1	ppm			1	lw/ck
L-91.28	2/17/2002	10:09	13	5.4	ppm			1	lw/ck
L-91.28	2/17/2002	10:09	39	8.03	epm			1	lw/ck
L-91.28	2/17/2002	10:09	38	8.07	epm			1	lw/ck
L-91.28	2/17/2002	10:09	1	8.09				1	lw/ck
L-91.28	2/17/2002	10:09	14	12	ppm			1	lw/ck
L-91.28	2/17/2002	10:09	32	22	ppm			1	lw/ck
L-91.28	2/17/2002	10:09	7	51	ppm			1	lw/ck
L-91.28	2/17/2002	10:09	15	73	ppm			1	lw/ck
L-91.28	2/17/2002	10:09	12	76	ppm			1	lw/ck
L-91.28	2/17/2002	10:09	8	130	ppm			1	lw/ck
L-91.28	2/17/2002	10:09	4	232	ppm			1	lw/ck
L-91.28	2/17/2002	10:09	6	235	ppm			1	lw/ck
L-91.28	2/17/2002	10:09	2	490	ppm			1	lw/ck
L-91.28	2/17/2002	10:09	3	0.714	mS/cm			1	lw/ck
L-91.28	2/17/2002	10:09	16		ppm	<	0.001	1	lw/ck
L-91.28	2/17/2002	10:09	10		ppm	<	0.5	1	lw/ck
R-83.98	2/17/2002	15:34	26	0.07	ppm			1	lw/tn
R-83.98	2/17/2002	15:34	19	0.14	ppm			1	lw/tn
R-83.98	2/17/2002	15:34	36	0.16	ppm			1	lw/tn
R-83.98	2/17/2002	15:34	11	0.69	ppm			1	lw/tn

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
R-83.98	2/17/2002	15:34	35	0.79	ppm			1	lw/tn
R-83.98	2/17/2002	15:34	40	0.97	%			1	lw/tn
R-83.98	2/17/2002	15:34	9	2.9	ppm			1	lw/tn
R-83.98	2/17/2002	15:34	13	6	ppm			1	lw/tn
R-83.98	2/17/2002	15:34	39	6.54	epm			1	lw/tn
R-83.98	2/17/2002	15:34	38	6.66	epm			1	lw/tn
R-83.98	2/17/2002	15:34	1	8.32				1	lw/tn
R-83.98	2/17/2002	15:34	14	9.6	ppm			1	lw/tn
R-83.98	2/17/2002	15:34	32	24	ppm			1	lw/tn
R-83.98	2/17/2002	15:34	7	41	ppm			1	lw/tn
R-83.98	2/17/2002	15:34	15	58	ppm			1	lw/tn
R-83.98	2/17/2002	15:34	12	65	ppm			1	lw/tn
R-83.98	2/17/2002	15:34	8	93	ppm			1	lw/tn
R-83.98	2/17/2002	15:34	4	184	ppm			1	lw/tn
R-83.98	2/17/2002	15:34	6	205	ppm			1	lw/tn
R-83.98	2/17/2002	15:34	2	400	ppm			1	lw/tn
R-83.98	2/17/2002	15:34	3	0.597	mS/cm			1	lw/tn
R-83.98	2/17/2002	15:34	16		ppm	<	0.001	1	lw/tn
R-83.98	2/17/2002	15:34	10		ppm	<	0.5	1	lw/tn
R-91.28	2/17/2002	11:35	40	-0.75	%			1	lw/ck
R-91.28	2/17/2002	11:35	26	0.06	ppm			1	lw/ck
R-91.28	2/17/2002	11:35	19	0.143	ppm			1	lw/ck
R-91.28	2/17/2002	11:35	36	0.32	ppm			1	lw/ck
R-91.28	2/17/2002	11:35	35	0.76	ppm			1	lw/ck
R-91.28	2/17/2002	11:35	11	0.78	ppm			1	lw/ck
R-91.28	2/17/2002	11:35	9	3.5	ppm			1	lw/ck
R-91.28	2/17/2002	11:35	13	6	ppm			1	lw/ck
R-91.28	2/17/2002	11:35	38	6.6	epm			1	lw/ck
R-91.28	2/17/2002	11:35	39	6.7	epm			1	lw/ck
R-91.28	2/17/2002	11:35	1	8.31				1	lw/ck
R-91.28	2/17/2002	11:35	14	9.3	ppm			1	lw/ck
R-91.28	2/17/2002	11:35	32	25	ppm			1	lw/ck
R-91.28	2/17/2002	11:35	7	42	ppm			1	lw/ck
R-91.28	2/17/2002	11:35	15	59	ppm			1	lw/ck
R-91.28	2/17/2002	11:35	12	63	ppm			1	lw/ck
R-91.28	2/17/2002	11:35	8	95	ppm			1	lw/ck
R-91.28	2/17/2002	11:35	4	186	ppm			1	lw/ck
R-91.28	2/17/2002	11:35	6	210	ppm			1	lw/ck
R-91.28	2/17/2002	11:35	2	410	ppm			1	lw/ck
R-91.28	2/17/2002	11:35	3	0.565	mS/cm			1	lw/ck
R-91.28	2/17/2002	11:35	16		ppm	<	0.001	1	lw/ck
R-91.28	2/17/2002	11:35	10		ppm	<	0.5	1	lw/ck
D-ESC E-Side	2/18/2002	10:20	40	-0.78	%			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	16	0.017	ppm			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	26	0.05	ppm			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	36	0.1	ppm			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	11	0.46	ppm			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	19	0.629	ppm			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	35	0.74	ppm			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	13	3.8	ppm			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	38	6	epm			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	39	6.09	epm			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	1	7.76				1	lw/tn
D-ESC E-Side	2/18/2002	10:20	14	8.7	ppm			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	32	23	ppm			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	7	28	ppm			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	12	48	ppm			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	15	62	ppm			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	8	96	ppm			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	4	191	ppm			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	6	200	ppm			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	2	370	ppm			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	3	0.568	mS/cm			1	lw/tn
D-ESC E-Side	2/18/2002	10:20	9		ppm	<	0.1	1	lw/tn
D-ESC E-Side	2/18/2002	10:20	10		ppm	<	0.5	1	lw/tn
R-EB-11	2/18/2002	15:30	1	8.39				1	tn/ry
R-EB-11	2/18/2002	15:30	14	9.9	ppm			1	tn/ry

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
R-EB-11	2/18/2002	15:30	32	25	ppm			1	tn/ry
R-EB-11	2/18/2002	15:30	7	41	ppm			1	tn/ry
R-EB-11	2/18/2002	15:30	12	61	ppm			1	tn/ry
R-EB-11	2/18/2002	15:30	15	64	ppm			1	tn/ry
R-EB-11	2/18/2002	15:30	8	95	ppm			1	tn/ry
R-EB-11	2/18/2002	15:30	4	201	ppm			1	tn/ry
R-EB-11	2/18/2002	15:30	6	210	ppm			1	tn/ry
R-EB-11	2/18/2002	15:30	2	410	ppm			1	tn/ry
R-EB-11	2/18/2002	15:30	3	0.616	mS/cm			1	tn/ry
R-RGCOR	2/18/2002	18:35	40	-1.13	%			1	tn/ry
R-RGCOR	2/18/2002	18:35	26	0.06	ppm			2	tn/ry
R-RGCOR	2/18/2002	18:35	26	0.07	ppm			1	tn/ry
R-RGCOR	2/18/2002	18:35	19	0.143	ppm			2	tn/ry
R-RGCOR	2/18/2002	18:35	19	0.145	ppm			1	tn/ry
R-RGCOR	2/18/2002	18:35	11	0.59	ppm			1	tn/ry
R-RGCOR	2/18/2002	18:35	11	0.65	ppm			2	tn/ry
R-RGCOR	2/18/2002	18:35	35	0.78	ppm			1	tn/ry
R-RGCOR	2/18/2002	18:35	40	0.78	%			2	tn/ry
R-RGCOR	2/18/2002	18:35	35	0.79	ppm			2	tn/ry
R-RGCOR	2/18/2002	18:35	9	3.3	ppm			1	tn/ry
R-RGCOR	2/18/2002	18:35	9	3.3	ppm			2	tn/ry
R-RGCOR	2/18/2002	18:35	13	6	ppm			1	tn/ry
R-RGCOR	2/18/2002	18:35	13	6	ppm			2	tn/ry
R-RGCOR	2/18/2002	18:35	38	6.48	epm			1	tn/ry
R-RGCOR	2/18/2002	18:35	39	6.53	epm			2	tn/ry
R-RGCOR	2/18/2002	18:35	39	6.63	epm			1	tn/ry
R-RGCOR	2/18/2002	18:35	38	6.64	epm			2	tn/ry
R-RGCOR	2/18/2002	18:35	1	8.33				1	tn/ry
R-RGCOR	2/18/2002	18:35	1	8.37				2	tn/ry
R-RGCOR	2/18/2002	18:35	14	9.6	ppm			1	tn/ry
R-RGCOR	2/18/2002	18:35	14	9.7	ppm			2	tn/ry
R-RGCOR	2/18/2002	18:35	32	24	ppm			2	tn/ry
R-RGCOR	2/18/2002	18:35	32	25	ppm			1	tn/ry
R-RGCOR	2/18/2002	18:35	7	40	ppm			1	tn/ry
R-RGCOR	2/18/2002	18:35	7	40	ppm			2	tn/ry
R-RGCOR	2/18/2002	18:35	15	57	ppm			1	tn/ry
R-RGCOR	2/18/2002	18:35	15	59	ppm			2	tn/ry
R-RGCOR	2/18/2002	18:35	12	62	ppm			1	tn/ry
R-RGCOR	2/18/2002	18:35	12	63	ppm			2	tn/ry
R-RGCOR	2/18/2002	18:35	8	94	ppm			2	tn/ry
R-RGCOR	2/18/2002	18:35	8	95	ppm			1	tn/ry
R-RGCOR	2/18/2002	18:35	4	182	ppm			1	tn/ry
R-RGCOR	2/18/2002	18:35	4	187	ppm			2	tn/ry
R-RGCOR	2/18/2002	18:35	6	205	ppm			2	tn/ry
R-RGCOR	2/18/2002	18:35	6	210	ppm			1	tn/ry
R-RGCOR	2/18/2002	18:35	2	400	ppm			1	tn/ry
R-RGCOR	2/18/2002	18:35	2	400	ppm			2	tn/ry
R-RGCOR	2/18/2002	18:35	3	0.606	mS/cm			2	tn/ry
R-RGCOR	2/18/2002	18:35	3	0.609	mS/cm			1	tn/ry
R-RGCOR	2/18/2002	18:35	16		ppm	<	0.001	1	tn/ry
R-RGCOR	2/18/2002	18:35	16		ppm	<	0.001	2	tn/ry
R-RGCOR	2/18/2002	18:35	36		ppm	<	0.1	1	tn/ry
R-RGCOR	2/18/2002	18:35	36		ppm	<	0.1	2	tn/ry
R-RGCOR	2/18/2002	18:35	10		ppm	<	0.5	1	tn/ry
R-RGCOR	2/18/2002	18:35	10		ppm	<	0.5	2	tn/ry
L-EB-11	2/18/2002	16:54	26	0.12	ppm			1	tn/ry
L-EB-11	2/18/2002	16:54	19	0.183	ppm			1	tn/ry
L-EB-11	2/18/2002	16:54	36	0.34	ppm			1	tn/ry
L-EB-11	2/18/2002	16:54	11	0.84	ppm			1	tn/ry
L-EB-11	2/18/2002	16:54	35	1.4	ppm			1	tn/ry
L-EB-11	2/18/2002	16:54	40	2	%			1	tn/ry
L-EB-11	2/18/2002	16:54	13	7.2	ppm			1	tn/ry
L-EB-11	2/18/2002	16:54	1	8.26				1	tn/ry
L-EB-11	2/18/2002	16:54	39	11.03	epm			1	tn/ry
L-EB-11	2/18/2002	16:54	38	11.48	epm			1	tn/ry
L-EB-11	2/18/2002	16:54	14	14	ppm			1	tn/ry
L-EB-11	2/18/2002	16:54	32	24	ppm			1	tn/ry

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
L-EB-11	2/18/2002	16:54	15	90	ppm			1	tn/ry
L-EB-11	2/18/2002	16:54	7	110	ppm			1	tn/ry
L-EB-11	2/18/2002	16:54	12	130	ppm			1	tn/ry
L-EB-11	2/18/2002	16:54	8	170	ppm			1	tn/ry
L-EB-11	2/18/2002	16:54	6	265	ppm			1	tn/ry
L-EB-11	2/18/2002	16:54	4	282	ppm			1	tn/ry
L-EB-11	2/18/2002	16:54	2	680	ppm			1	tn/ry
L-EB-11	2/18/2002	16:54	3	1.02	mS/cm			1	tn/ry
L-EB-11	2/18/2002	16:54	16		ppm	<	0.001	1	tn/ry
L-EB-11	2/18/2002	16:54	9		ppm	<	0.1	1	tn/ry
L-EB-11	2/18/2002	16:54	10		ppm	<	0.5	1	tn/ry
R-68.72	2/18/2002	13:26	40	-1.28	%			1	tn/ry
R-68.72	2/18/2002	13:26	26	0.06	ppm			1	tn/ry
R-68.72	2/18/2002	13:26	36	0.14	ppm			1	tn/ry
R-68.72	2/18/2002	13:26	19	0.142	ppm			1	tn/ry
R-68.72	2/18/2002	13:26	10	0.39	ppm			1	tn/ry
R-68.72	2/18/2002	13:26	11	0.68	ppm			1	tn/ry
R-68.72	2/18/2002	13:26	35	0.76	ppm			1	tn/ry
R-68.72	2/18/2002	13:26	9	3	ppm			1	tn/ry
R-68.72	2/18/2002	13:26	13	6	ppm			1	tn/ry
R-68.72	2/18/2002	13:26	38	6.51	epm			1	tn/ry
R-68.72	2/18/2002	13:26	39	6.67	epm			1	tn/ry
R-68.72	2/18/2002	13:26	1	8.36				1	tn/ry
R-68.72	2/18/2002	13:26	14	9.7	ppm			1	tn/ry
R-68.72	2/18/2002	13:26	32	26	ppm			1	tn/ry
R-68.72	2/18/2002	13:26	7	41	ppm			1	tn/ry
R-68.72	2/18/2002	13:26	15	59	ppm			1	tn/ry
R-68.72	2/18/2002	13:26	12	60	ppm			1	tn/ry
R-68.72	2/18/2002	13:26	8	95	ppm			1	tn/ry
R-68.72	2/18/2002	13:26	4	187	ppm			1	tn/ry
R-68.72	2/18/2002	13:26	6	210	ppm			1	tn/ry
R-68.72	2/18/2002	13:26	2	410	ppm			1	tn/ry
R-68.72	2/18/2002	13:26	3	0.598	mS/cm			1	tn/ry
R-68.72	2/18/2002	13:26	16		ppm	<	0.001	1	tn/ry
R-EB-11	2/18/2002	15:30	16	0.0158	ppm			1	tn/ry
R-EB-11	2/18/2002	15:30	26	0.06	ppm			1	tn/ry
R-EB-11	2/18/2002	15:30	36	0.13	ppm			1	tn/ry
R-EB-11	2/18/2002	15:30	19	0.14	ppm			1	tn/ry
R-EB-11	2/18/2002	15:30	11	0.56	ppm			1	tn/ry
R-EB-11	2/18/2002	15:30	10	0.6	ppm			1	tn/ry
R-EB-11	2/18/2002	15:30	35	0.77	ppm			1	tn/ry
R-EB-11	2/18/2002	15:30	40	1.07	%			1	tn/ry
R-EB-11	2/18/2002	15:30	9	3.4	ppm			1	tn/ry
R-EB-11	2/18/2002	15:30	13	6.3	ppm			1	tn/ry
R-EB-11	2/18/2002	15:30	39	6.68	epm			1	tn/ry
R-EB-11	2/18/2002	15:30	38	6.82	epm			1	tn/ry
L-114.60	6/11/2002	11:10	19	0.19	ppm			1	lw/mp
L-114.60	6/11/2002	11:10	36	0.23	ppm			1	lw/mp
L-114.60	6/11/2002	11:10	9	0.34	ppm			1	lw/mp
L-114.60	6/11/2002	11:10	11	0.42	ppm			1	lw/mp
L-114.60	6/11/2002	11:10	35	1.39	ppm			1	lw/mp
L-114.60	6/11/2002	11:10	40	1.46	%			1	lw/mp
L-114.60	6/11/2002	11:10	13	5.7	ppm			1	lw/mp
L-114.60	6/11/2002	11:10	1	7.5				1	lw/mp
L-114.60	6/11/2002	11:10	39	12.42	epm			1	lw/mp
L-114.60	6/11/2002	11:10	38	12.79	epm			1	lw/mp
L-114.60	6/11/2002	11:10	14	22	ppm			1	lw/mp
L-114.60	6/11/2002	11:10	7	105	ppm			1	lw/mp
L-114.60	6/11/2002	11:10	12	105	ppm			1	lw/mp
L-114.60	6/11/2002	11:10	15	125	ppm			1	lw/mp
L-114.60	6/11/2002	11:10	8	220	ppm			1	lw/mp
L-114.60	6/11/2002	11:10	6	295	ppm			1	lw/mp
L-114.60	6/11/2002	11:10	4	403	ppm			1	lw/mp
L-114.60	6/11/2002	11:10	2	730	ppm			1	lw/mp
L-114.60	6/11/2002	11:10	3	1.07	mS/cm			1	lw/mp
L-114.60	6/11/2002	11:10	10		ppm	<	0.5	1	lw/mp
D-ESC E-Side	6/11/2002	14:42	36	0.15	ppm			1	lw/mp

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
D-ESC E-Side	6/11/2002	14:42	11	0.37	ppm			1	lw/mp
D-ESC E-Side	6/11/2002	14:42	35	0.53	ppm			1	lw/mp
D-ESC E-Side	6/11/2002	14:42	40	2.81	%			1	lw/mp
D-ESC E-Side	6/11/2002	14:42	13	3.3	ppm			1	lw/mp
D-ESC E-Side	6/11/2002	14:42	39	6.4	epm			1	lw/mp
D-ESC E-Side	6/11/2002	14:42	38	6.77	epm			1	lw/mp
D-ESC E-Side	6/11/2002	14:42	1	7.7				1	lw/mp
D-ESC E-Side	6/11/2002	14:42	14	8.6	ppm			1	lw/mp
D-ESC E-Side	6/11/2002	14:42	7	30	ppm			1	lw/mp
D-ESC E-Side	6/11/2002	14:42	12	50	ppm			1	lw/mp
D-ESC E-Side	6/11/2002	14:42	15	76	ppm			1	lw/mp
D-ESC E-Side	6/11/2002	14:42	8	100	ppm			1	lw/mp
D-ESC E-Side	6/11/2002	14:42	6	210	ppm			1	lw/mp
D-ESC E-Side	6/11/2002	14:42	4	225	ppm			1	lw/mp
D-ESC E-Side	6/11/2002	14:42	2	370	ppm			1	lw/mp
D-ESC E-Side	6/11/2002	14:42	3	0.587	mS/cm			1	lw/mp
D-ESC E-Side	6/11/2002	14:42	9		ppm	<	0.1	1	lw/mp
D-ESC E-Side	6/11/2002	14:42	10		ppm	<	0.5	1	lw/mp
L-109.49	6/11/2002	13:51	19	0.2	ppm			1	lw/mp
L-109.49	6/11/2002	13:51	36	0.24	ppm			1	lw/mp
L-109.49	6/11/2002	13:51	11	0.39	ppm			1	lw/mp
L-109.49	6/11/2002	13:51	40	0.94	%			1	lw/mp
L-109.49	6/11/2002	13:51	35	1.18	ppm			1	lw/mp
L-109.49	6/11/2002	13:51	13	5.3	ppm			1	lw/mp
L-109.49	6/11/2002	13:51	1	7.8				1	lw/mp
L-109.49	6/11/2002	13:51	39	10.92	epm			1	lw/mp
L-109.49	6/11/2002	13:51	38	11.13	epm			1	lw/mp
L-109.49	6/11/2002	13:51	14	19	ppm			1	lw/mp
L-109.49	6/11/2002	13:51	7	77	ppm			1	lw/mp
L-109.49	6/11/2002	13:51	12	90	ppm			1	lw/mp
L-109.49	6/11/2002	13:51	15	110	ppm			1	lw/mp
L-109.49	6/11/2002	13:51	8	190	ppm			1	lw/mp
L-109.49	6/11/2002	13:51	6	290	ppm			1	lw/mp
L-109.49	6/11/2002	13:51	4	353	ppm			1	lw/mp
L-109.49	6/11/2002	13:51	2	640	ppm			1	lw/mp
L-109.49	6/11/2002	13:51	3	0.92	mS/cm			1	lw/mp
L-109.49	6/11/2002	13:51	9		ppm	<	0.1	1	lw/mp
L-109.49	6/11/2002	13:51	10		ppm	<	0.5	1	lw/mp
D-ESC E-Side	6/11/2002	14:42	19	0.13	ppm			1	lw/mp
L-99.59	6/11/2002	9:36	36	0.1	ppm			1	lw/mp
L-99.59	6/11/2002	9:36	9	0.13	ppm			1	lw/mp
L-99.59	6/11/2002	9:36	19	0.15	ppm			1	lw/mp
L-99.59	6/11/2002	9:36	11	0.41	ppm			1	lw/mp
L-99.59	6/11/2002	9:36	35	0.66	ppm			1	lw/mp
L-99.59	6/11/2002	9:36	40	1.16	%			1	lw/mp
L-99.59	6/11/2002	9:36	13	4.3	ppm			1	lw/mp
L-99.59	6/11/2002	9:36	39	6.85	epm			1	lw/mp
L-99.59	6/11/2002	9:36	38	7.01	epm			1	lw/mp
L-99.59	6/11/2002	9:36	1	7.7				1	lw/mp
L-99.59	6/11/2002	9:36	14	11	ppm			1	lw/mp
L-99.59	6/11/2002	9:36	7	39	ppm			1	lw/mp
L-99.59	6/11/2002	9:36	12	56	ppm			1	lw/mp
L-99.59	6/11/2002	9:36	15	71	ppm			1	lw/mp
L-99.59	6/11/2002	9:36	8	105	ppm			1	lw/mp
L-99.59	6/11/2002	9:36	6	215	ppm			1	lw/mp
L-99.59	6/11/2002	9:36	4	223	ppm			1	lw/mp
L-99.59	6/11/2002	9:36	2	390	ppm			1	lw/mp
L-99.59	6/11/2002	9:36	3	0.613	mS/cm			1	lw/mp
L-99.59	6/11/2002	9:36	10		ppm	<	0.5	1	lw/mp
R-109.49	6/11/2002	11:54	36	0.13	ppm			1	tn/cc
R-109.49	6/11/2002	11:54	19	0.15	ppm			1	tn/cc
R-109.49	6/11/2002	11:54	11	0.48	ppm			1	tn/cc
R-109.49	6/11/2002	11:54	35	0.53	ppm			1	tn/cc
R-109.49	6/11/2002	11:54	40	2.18	%			1	tn/cc
R-109.49	6/11/2002	11:54	13	5.8	ppm			1	tn/cc
R-109.49	6/11/2002	11:54	39	6.65	epm			1	tn/cc
R-109.49	6/11/2002	11:54	38	6.95	epm			1	tn/cc

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
R-109.49	6/11/2002	11:54	1	8				1	tn/cc
R-109.49	6/11/2002	11:54	14	11	ppm			1	tn/cc
R-109.49	6/11/2002	11:54	7	34	ppm			1	tn/cc
R-109.49	6/11/2002	11:54	12	55	ppm			1	tn/cc
R-109.49	6/11/2002	11:54	15	70	ppm			1	tn/cc
R-109.49	6/11/2002	11:54	8	100	ppm			1	tn/cc
R-109.49	6/11/2002	11:54	6	218	ppm			1	tn/cc
R-109.49	6/11/2002	11:54	4	220	ppm			1	tn/cc
R-109.49	6/11/2002	11:54	2	390	ppm			1	tn/cc
R-109.49	6/11/2002	11:54	3	0.594	mS/cm			1	tn/cc
R-109.49	6/11/2002	11:54	9		ppm	<	0.1	1	tn/cc
R-109.49	6/11/2002	11:54	10		ppm	<	0.5	1	tn/cc
R-114.60	6/11/2002	11:51	19	0.15	ppm			1	lw/mp
R-114.60	6/11/2002	11:51	9	0.16	ppm			1	lw/mp
R-114.60	6/11/2002	11:51	11	0.46	ppm			1	lw/mp
R-114.60	6/11/2002	11:51	35	0.59	ppm			1	lw/mp
R-114.60	6/11/2002	11:51	40	2.84	%			1	lw/mp
R-114.60	6/11/2002	11:51	13	5.6	ppm			1	lw/mp
R-114.60	6/11/2002	11:51	39	6.6	epm			1	lw/mp
R-114.60	6/11/2002	11:51	38	6.99	epm			1	lw/mp
R-114.60	6/11/2002	11:51	1	8.4				1	lw/mp
R-114.60	6/11/2002	11:51	14	11	ppm			1	lw/mp
R-114.60	6/11/2002	11:51	7	34	ppm			1	lw/mp
R-114.60	6/11/2002	11:51	12	56	ppm			1	lw/mp
R-114.60	6/11/2002	11:51	15	70	ppm			1	lw/mp
R-114.60	6/11/2002	11:51	8	100	ppm			1	lw/mp
R-114.60	6/11/2002	11:51	6	215	ppm			1	lw/mp
R-114.60	6/11/2002	11:51	4	220	ppm			1	lw/mp
R-114.60	6/11/2002	11:51	2	380	ppm			1	lw/mp
R-114.60	6/11/2002	11:51	3	0.588	mS/cm			1	lw/mp
R-114.60	6/11/2002	11:51	36		ppm	<	0.1	1	lw/mp
R-114.60	6/11/2002	11:51	10		ppm	<	0.5	1	lw/mp
R-99.59	6/11/2002	9:19	36	0.14	ppm			1	tn/cc
R-99.59	6/11/2002	9:19	19	0.16	ppm			1	tn/cc
R-99.59	6/11/2002	9:19	11	0.48	ppm			1	tn/cc
R-99.59	6/11/2002	9:19	35	0.56	ppm			1	tn/cc
R-99.59	6/11/2002	9:19	40	1.07	%			1	tn/cc
R-99.59	6/11/2002	9:19	13	5.6	ppm			1	tn/cc
R-99.59	6/11/2002	9:19	39	7.06	epm			1	tn/cc
R-99.59	6/11/2002	9:19	38	7.22	epm			1	tn/cc
R-99.59	6/11/2002	9:19	1	8.5				1	tn/cc
R-99.59	6/11/2002	9:19	14	12	ppm			1	tn/cc
R-99.59	6/11/2002	9:19	7	37	ppm			1	tn/cc
R-99.59	6/11/2002	9:19	12	57	ppm			1	tn/cc
R-99.59	6/11/2002	9:19	15	72	ppm			1	tn/cc
R-99.59	6/11/2002	9:19	8	110	ppm			1	tn/cc
R-99.59	6/11/2002	9:19	6	225	ppm			1	tn/cc
R-99.59	6/11/2002	9:19	4	229	ppm			1	tn/cc
R-99.59	6/11/2002	9:19	2	410	ppm			1	tn/cc
R-99.59	6/11/2002	9:19	3	0.633	mS/cm			1	tn/cc
R-99.59	6/11/2002	9:19	9		ppm	<	0.1	1	tn/cc
R-99.59	6/11/2002	9:19	10		ppm	<	0.5	1	tn/cc
D-SRD-87.62	6/12/2002	12:42	36	0.12	ppm			1	lw/mp
D-SRD-87.62	6/12/2002	12:42	9	0.13	ppm			1	lw/mp
D-SRD-87.62	6/12/2002	12:42	19	0.19	ppm			1	lw/mp
D-SRD-87.62	6/12/2002	12:42	11	0.46	ppm			1	lw/mp
D-SRD-87.62	6/12/2002	12:42	35	0.66	ppm			1	lw/mp
D-SRD-87.62	6/12/2002	12:42	40	1.76	%			1	lw/mp
D-SRD-87.62	6/12/2002	12:42	13	4.9	ppm			1	lw/mp
D-SRD-87.62	6/12/2002	12:42	1	7.6				1	lw/mp
D-SRD-87.62	6/12/2002	12:42	39	8.43	epm			1	lw/mp
D-SRD-87.62	6/12/2002	12:42	38	8.74	epm			1	lw/mp
D-SRD-87.62	6/12/2002	12:42	14	11	ppm			1	lw/mp
D-SRD-87.62	6/12/2002	12:42	7	62	ppm			1	lw/mp
D-SRD-87.62	6/12/2002	12:42	15	80	ppm			1	lw/mp
D-SRD-87.62	6/12/2002	12:42	12	85	ppm			1	lw/mp
D-SRD-87.62	6/12/2002	12:42	8	130	ppm			1	lw/mp

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
D-SRD-87.62	6/12/2002	12:42	6	240	ppm			1	lw/mp
D-SRD-87.62	6/12/2002	12:42	4	245	ppm			1	lw/mp
D-SRD-87.62	6/12/2002	12:42	2	490	ppm			1	lw/mp
D-SRD-87.62	6/12/2002	12:42	3	0.757	mS/cm			1	lw/mp
D-SRD-87.62	6/12/2002	12:42	10		ppm	<	0.5	1	lw/mp
L-83.98	6/12/2002	15:40	19	0.19	ppm			1	tn/cc
L-83.98	6/12/2002	15:40	40	0.39	%			1	tn/cc
L-83.98	6/12/2002	15:40	11	0.42	ppm			1	tn/cc
L-83.98	6/12/2002	15:40	35	0.67	ppm			1	tn/cc
L-83.98	6/12/2002	15:40	13	6.3	ppm			1	tn/cc
L-83.98	6/12/2002	15:40	1	8.1				1	tn/cc
L-83.98	6/12/2002	15:40	39	8.79	epm			1	tn/cc
L-83.98	6/12/2002	15:40	38	8.86	epm			1	tn/cc
L-83.98	6/12/2002	15:40	14	11	ppm			1	tn/cc
L-83.98	6/12/2002	15:40	15	73	ppm			1	tn/cc
L-83.98	6/12/2002	15:40	7	74	ppm			1	tn/cc
L-83.98	6/12/2002	15:40	12	95	ppm			1	tn/cc
L-83.98	6/12/2002	15:40	8	135	ppm			1	tn/cc
L-83.98	6/12/2002	15:40	4	228	ppm			1	tn/cc
L-83.98	6/12/2002	15:40	6	235	ppm			1	tn/cc
L-83.98	6/12/2002	15:40	2	510	ppm			1	tn/cc
L-83.98	6/12/2002	15:40	3	0.815	mS/cm			1	tn/cc
L-83.98	6/12/2002	15:40	36		ppm	<	0.1	1	tn/cc
L-83.98	6/12/2002	15:40	9		ppm	<	0.1	1	tn/cc
L-83.98	6/12/2002	15:40	10		ppm	<	0.5	1	tn/cc
L-87.62	6/12/2002	11:11	40	-0.64	%			1	lw/mp
L-87.62	6/12/2002	11:11	36	0.2	ppm			1	lw/mp
L-87.62	6/12/2002	11:11	19	0.21	ppm			1	lw/mp
L-87.62	6/12/2002	11:11	11	0.42	ppm			1	lw/mp
L-87.62	6/12/2002	11:11	35	0.67	ppm			1	lw/mp
L-87.62	6/12/2002	11:11	13	5.9	ppm			1	lw/mp
L-87.62	6/12/2002	11:11	1	8				1	lw/mp
L-87.62	6/12/2002	11:11	38	9.03	epm			1	lw/mp
L-87.62	6/12/2002	11:11	39	9.15	epm			1	lw/mp
L-87.62	6/12/2002	11:11	14	12	ppm			1	lw/mp
L-87.62	6/12/2002	11:11	15	75	ppm			1	lw/mp
L-87.62	6/12/2002	11:11	7	77	ppm			1	lw/mp
L-87.62	6/12/2002	11:11	12	95	ppm			1	lw/mp
L-87.62	6/12/2002	11:11	8	140	ppm			1	lw/mp
L-87.62	6/12/2002	11:11	4	237	ppm			1	lw/mp
L-87.62	6/12/2002	11:11	6	245	ppm			1	lw/mp
L-87.62	6/12/2002	11:11	2	530	ppm			1	lw/mp
L-87.62	6/12/2002	11:11	3	0.806	mS/cm			1	lw/mp
L-87.62	6/12/2002	11:11	9		ppm	<	0.1	1	lw/mp
L-87.62	6/12/2002	11:11	10		ppm	<	0.5	1	lw/mp
L-91.28	6/12/2002	8:29	19	0.18	ppm			1	lw/mp
L-91.28	6/12/2002	8:29	36	0.18	ppm			1	lw/mp
L-91.28	6/12/2002	8:29	11	0.46	ppm			1	lw/mp
L-91.28	6/12/2002	8:29	35	0.64	ppm			1	lw/mp
L-91.28	6/12/2002	8:29	40	2.5	%			1	lw/mp
L-91.28	6/12/2002	8:29	13	4.9	ppm			1	lw/mp
L-91.28	6/12/2002	8:29	1	7.7				1	lw/mp
L-91.28	6/12/2002	8:29	39	7.99	epm			1	lw/mp
L-91.28	6/12/2002	8:29	38	8.4	epm			1	lw/mp
L-91.28	6/12/2002	8:29	14	12	ppm			1	lw/mp
L-91.28	6/12/2002	8:29	7	53	ppm			1	lw/mp
L-91.28	6/12/2002	8:29	12	72	ppm			1	lw/mp
L-91.28	6/12/2002	8:29	15	83	ppm			1	lw/mp
L-91.28	6/12/2002	8:29	8	125	ppm			1	lw/mp
L-91.28	6/12/2002	8:29	6	235	ppm			1	lw/mp
L-91.28	6/12/2002	8:29	4	257	ppm			1	lw/mp
L-91.28	6/12/2002	8:29	2	470	ppm			1	lw/mp
L-91.28	6/12/2002	8:29	3	0.713	mS/cm			1	lw/mp
L-91.28	6/12/2002	8:29	9		ppm	<	0.1	1	lw/mp
L-91.28	6/12/2002	8:29	10		ppm	<	0.5	1	lw/mp
R-83.98	6/12/2002	16:20	19	0.17	ppm			1	tn/cc
R-83.98	6/12/2002	16:20	36	0.19	ppm			1	tn/cc

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
R-83.98	6/12/2002	16:20	11	0.47	ppm			1	tn/cc
R-83.98	6/12/2002	16:20	40	0.6	%			1	tn/cc
R-83.98	6/12/2002	16:20	35	0.61	ppm			1	tn/cc
R-83.98	6/12/2002	16:20	13	6	ppm			1	tn/cc
R-83.98	6/12/2002	16:20	39	7.34	epm			1	tn/cc
R-83.98	6/12/2002	16:20	38	7.43	epm			1	tn/cc
R-83.98	6/12/2002	16:20	1	8.7				1	tn/cc
R-83.98	6/12/2002	16:20	14	12	ppm			1	tn/cc
R-83.98	6/12/2002	16:20	7	43	ppm			1	tn/cc
R-83.98	6/12/2002	16:20	12	65	ppm			1	tn/cc
R-83.98	6/12/2002	16:20	15	69	ppm			1	tn/cc
R-83.98	6/12/2002	16:20	8	115	ppm			1	tn/cc
R-83.98	6/12/2002	16:20	4	222	ppm			1	tn/cc
R-83.98	6/12/2002	16:20	6	225	ppm			1	tn/cc
R-83.98	6/12/2002	16:20	2	420	ppm			1	tn/cc
R-83.98	6/12/2002	16:20	3	0.666	mS/cm			1	tn/cc
R-83.98	6/12/2002	16:20	9		ppm	<	0.1	1	tn/cc
R-83.98	6/12/2002	16:20	10		ppm	<	0.5	1	tn/cc
R-87.62	6/12/2002	10:40	9	0.1	ppm			1	lw/mp
R-87.62	6/12/2002	10:40	36	0.17	ppm			1	lw/mp
R-87.62	6/12/2002	10:40	19	0.18	ppm			1	lw/mp
R-87.62	6/12/2002	10:40	11	0.46	ppm			1	lw/mp
R-87.62	6/12/2002	10:40	35	0.63	ppm			1	lw/mp
R-87.62	6/12/2002	10:40	40	1.74	%			1	lw/mp
R-87.62	6/12/2002	10:40	13	5.2	ppm			1	lw/mp
R-87.62	6/12/2002	10:40	39	7.56	epm			1	lw/mp
R-87.62	6/12/2002	10:40	38	7.82	epm			1	lw/mp
R-87.62	6/12/2002	10:40	1	8.1				1	lw/mp
R-87.62	6/12/2002	10:40	14	12	ppm			1	lw/mp
R-87.62	6/12/2002	10:40	7	42	ppm			1	lw/mp
R-87.62	6/12/2002	10:40	12	62	ppm			1	lw/mp
R-87.62	6/12/2002	10:40	15	80	ppm			1	lw/mp
R-87.62	6/12/2002	10:40	8	115	ppm			1	lw/mp
R-87.62	6/12/2002	10:40	6	240	ppm			1	lw/mp
R-87.62	6/12/2002	10:40	4	249	ppm			1	lw/mp
R-87.62	6/12/2002	10:40	2	440	ppm			1	lw/mp
R-87.62	6/12/2002	10:40	3	0.66	mS/cm			1	lw/mp
R-87.62	6/12/2002	10:40	10		ppm	<	0.5	1	lw/mp
R-91.28	6/12/2002	9:22	19	0.17	ppm			1	lw/mp
R-91.28	6/12/2002	9:22	36	0.17	ppm			1	lw/mp
R-91.28	6/12/2002	9:22	40	0.36	%			1	lw/mp
R-91.28	6/12/2002	9:22	11	0.5	ppm			1	lw/mp
R-91.28	6/12/2002	9:22	35	0.63	ppm			1	lw/mp
R-91.28	6/12/2002	9:22	13	5.5	ppm			1	lw/mp
R-91.28	6/12/2002	9:22	39	7.64	epm			1	lw/mp
R-91.28	6/12/2002	9:22	38	7.69	epm			1	lw/mp
R-91.28	6/12/2002	9:22	1	8.2				1	lw/mp
R-91.28	6/12/2002	9:22	14	12	ppm			1	lw/mp
R-91.28	6/12/2002	9:22	7	42	ppm			1	lw/mp
R-91.28	6/12/2002	9:22	12	68	ppm			1	lw/mp
R-91.28	6/12/2002	9:22	15	72	ppm			1	lw/mp
R-91.28	6/12/2002	9:22	8	115	ppm			1	lw/mp
R-91.28	6/12/2002	9:22	4	229	ppm			1	lw/mp
R-91.28	6/12/2002	9:22	6	245	ppm			1	lw/mp
R-91.28	6/12/2002	9:22	2	440	ppm			1	lw/mp
R-91.28	6/12/2002	9:22	3	0.66	mS/cm			1	lw/mp
R-91.28	6/12/2002	9:22	9		ppm	<	0.1	1	lw/mp
R-91.28	6/12/2002	9:22	10		ppm	<	0.5	1	lw/mp
L-68.72	6/13/2002	8:15	9	0.13	ppm			1	lw/mp
L-68.72	6/13/2002	8:15	36	0.24	ppm			1	lw/mp
L-68.72	6/13/2002	8:15	19	0.25	ppm			1	lw/mp
L-68.72	6/13/2002	8:15	11	0.5	ppm			1	lw/mp
L-68.72	6/13/2002	8:15	35	1.03	ppm			1	lw/mp
L-68.72	6/13/2002	8:15	40	1.28	%			1	lw/mp
L-68.72	6/13/2002	8:15	1	8				1	lw/mp
L-68.72	6/13/2002	8:15	13	8.2	ppm			1	lw/mp
L-68.72	6/13/2002	8:15	39	13.32	epm			1	lw/mp

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
L-68.72	6/13/2002	8:15	38	13.66	epm			1	lw/mp
L-68.72	6/13/2002	8:15	14	18	ppm			1	lw/mp
L-68.72	6/13/2002	8:15	15	100	ppm			1	lw/mp
L-68.72	6/13/2002	8:15	7	130	ppm			1	lw/mp
L-68.72	6/13/2002	8:15	12	160	ppm			1	lw/mp
L-68.72	6/13/2002	8:15	8	220	ppm			1	lw/mp
L-68.72	6/13/2002	8:15	6	305	ppm			1	lw/mp
L-68.72	6/13/2002	8:15	4	324	ppm			1	lw/mp
L-68.72	6/13/2002	8:15	2	790	ppm			1	lw/mp
L-68.72	6/13/2002	8:15	3	1.2	mS/cm			1	lw/mp
L-68.72	6/13/2002	8:15	10		ppm	<	0.5	1	lw/mp
R-EB-11	6/13/2002	14:00	36	0.23	ppm			1	tn/cc
R-EB-11	6/13/2002	14:00	19	0.26	ppm			1	tn/cc
R-EB-11	6/13/2002	14:00	11	0.51	ppm			1	tn/cc
R-EB-11	6/13/2002	14:00	35	0.98	ppm			1	tn/cc
R-EB-11	6/13/2002	14:00	40	1.11	%			1	tn/cc
R-EB-11	6/13/2002	14:00	13	8.1	ppm			1	tn/cc
R-EB-11	6/13/2002	14:00	1	8.4				1	tn/cc
R-EB-11	6/13/2002	14:00	39	12.52	epm			1	tn/cc
R-EB-11	6/13/2002	14:00	38	12.8	epm			1	tn/cc
R-EB-11	6/13/2002	14:00	14	16	ppm			1	tn/cc
R-EB-11	6/13/2002	14:00	15	86	ppm			1	tn/cc
R-EB-11	6/13/2002	14:00	7	135	ppm			1	tn/cc
R-EB-11	6/13/2002	14:00	12	160	ppm			1	tn/cc
R-EB-11	6/13/2002	14:00	8	215	ppm			1	tn/cc
R-EB-11	6/13/2002	14:00	6	255	ppm			1	tn/cc
R-EB-11	6/13/2002	14:00	4	281	ppm			1	tn/cc
R-EB-11	6/13/2002	14:00	2	750	ppm			1	tn/cc
R-EB-11	6/13/2002	14:00	3	1.18	mS/cm			1	tn/cc
R-EB-11	6/13/2002	14:00	9		ppm	<	0.1	1	tn/cc
R-EB-11	6/13/2002	14:00	10		ppm	<	0.5	1	tn/cc
R-RGCOR	6/13/2002	12:44	40	0.05	%			1	lw/mp
R-RGCOR	6/13/2002	12:44	9	0.1	ppm			1	lw/mp
R-RGCOR	6/13/2002	12:44	9	0.13	ppm			6	lw/mp
R-RGCOR	6/13/2002	12:44	36	0.24	ppm			6	lw/mp
R-RGCOR	6/13/2002	12:44	19	0.26	ppm			6	lw/mp
R-RGCOR	6/13/2002	12:44	36	0.26	ppm			1	lw/mp
R-RGCOR	6/13/2002	12:44	19	0.27	ppm			1	lw/mp
R-RGCOR	6/13/2002	12:44	11	0.5	ppm			6	lw/mp
R-RGCOR	6/13/2002	12:44	11	0.51	ppm			1	lw/mp
R-RGCOR	6/13/2002	12:44	35	1.11	ppm			1	lw/mp
R-RGCOR	6/13/2002	12:44	40	3.04	%			6	lw/mp
R-RGCOR	6/13/2002	12:44	1	8.1				1	lw/mp
R-RGCOR	6/13/2002	12:44	1	8.1				6	lw/mp
R-RGCOR	6/13/2002	12:44	13	8.3	ppm			1	lw/mp
R-RGCOR	6/13/2002	12:44	13	8.3	ppm			6	lw/mp
R-RGCOR	6/13/2002	12:44	39	13.96	epm			6	lw/mp
R-RGCOR	6/13/2002	12:44	39	13.99	epm			1	lw/mp
R-RGCOR	6/13/2002	12:44	38	14	epm			1	lw/mp
R-RGCOR	6/13/2002	12:44	38	14.84	epm			6	lw/mp
R-RGCOR	6/13/2002	12:44	14	19	ppm			1	lw/mp
R-RGCOR	6/13/2002	12:44	14	19	ppm			6	lw/mp
R-RGCOR	6/13/2002	12:44	15	100	ppm			6	lw/mp
R-RGCOR	6/13/2002	12:44	15	105	ppm			1	lw/mp
R-RGCOR	6/13/2002	12:44	7	125	ppm			1	lw/mp
R-RGCOR	6/13/2002	12:44	7	125	ppm			6	lw/mp
R-RGCOR	6/13/2002	12:44	12	160	ppm			1	lw/mp
R-RGCOR	6/13/2002	12:44	12	160	ppm			6	lw/mp
R-RGCOR	6/13/2002	12:44	8	240	ppm			1	lw/mp
R-RGCOR	6/13/2002	12:44	8	240	ppm			6	lw/mp
R-RGCOR	6/13/2002	12:44	4	328	ppm			6	lw/mp
R-RGCOR	6/13/2002	12:44	6	330	ppm			1	lw/mp
R-RGCOR	6/13/2002	12:44	6	330	ppm			6	lw/mp
R-RGCOR	6/13/2002	12:44	4	341	ppm			1	lw/mp
R-RGCOR	6/13/2002	12:44	2	820	ppm			1	lw/mp
R-RGCOR	6/13/2002	12:44	2	820	ppm			6	lw/mp
R-RGCOR	6/13/2002	12:44	3	1.22	mS/cm			1	lw/mp

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
R-RGCOR	6/13/2002	12:44	3	1.22	mS/cm			6	lw/mp
R-RGCOR	6/13/2002	12:44	10		ppm	<	0.5	1	lw/mp
R-RGCOR	6/13/2002	12:44	10		ppm	<	0.5	6	lw/mp
L-EB-11	6/13/2002	12:05	36	0.24	ppm			1	lw/mp
L-EB-11	6/13/2002	12:05	19	0.25	ppm			1	lw/mp
L-EB-11	6/13/2002	12:05	40	0.5	%			1	lw/mp
L-EB-11	6/13/2002	12:05	11	0.5	ppm			1	lw/mp
L-EB-11	6/13/2002	12:05	35	1.03	ppm			1	lw/mp
L-EB-11	6/13/2002	12:05	13	8	ppm			1	lw/mp
L-EB-11	6/13/2002	12:05	1	8.1				1	lw/mp
L-EB-11	6/13/2002	12:05	39	13.16	epm			1	lw/mp
L-EB-11	6/13/2002	12:05	38	13.29	epm			1	lw/mp
L-EB-11	6/13/2002	12:05	14	18	ppm			1	lw/mp
L-EB-11	6/13/2002	12:05	15	97	ppm			1	lw/mp
L-EB-11	6/13/2002	12:05	7	128	ppm			1	lw/mp
L-EB-11	6/13/2002	12:05	12	155	ppm			1	lw/mp
L-EB-11	6/13/2002	12:05	8	220	ppm			1	lw/mp
L-EB-11	6/13/2002	12:05	6	300	ppm			1	lw/mp
L-EB-11	6/13/2002	12:05	4	316	ppm			1	lw/mp
L-EB-11	6/13/2002	12:05	2	780	ppm			1	lw/mp
L-EB-11	6/13/2002	12:05	3	1.18	mS/cm			1	lw/mp
L-EB-11	6/13/2002	12:05	9		ppm	<	0.1	1	lw/mp
L-EB-11	6/13/2002	12:05	10		ppm	<	0.5	1	lw/mp
P-S.Bosque	6/13/2002	15:00	40	-0.69	%			1	tn/cc
P-S.Bosque	6/13/2002	15:00	36	0.23	ppm			1	tn/cc
P-S.Bosque	6/13/2002	15:00	19	0.24	ppm			1	tn/cc
P-S.Bosque	6/13/2002	15:00	11	0.59	ppm			1	tn/cc
P-S.Bosque	6/13/2002	15:00	13	7.4	ppm			1	tn/cc
P-S.Bosque	6/13/2002	15:00	38	7.79	epm			1	tn/cc
P-S.Bosque	6/13/2002	15:00	39	7.9	epm			1	tn/cc
P-S.Bosque	6/13/2002	15:00	1	8.7				1	tn/cc
P-S.Bosque	6/13/2002	15:00	14	19	ppm			1	tn/cc
P-S.Bosque	6/13/2002	15:00	7	42	ppm			1	tn/cc
P-S.Bosque	6/13/2002	15:00	15	46	ppm			1	tn/cc
P-S.Bosque	6/13/2002	15:00	12	86	ppm			1	tn/cc
P-S.Bosque	6/13/2002	15:00	8	97	ppm			1	tn/cc
P-S.Bosque	6/13/2002	15:00	4	193	ppm			1	tn/cc
P-S.Bosque	6/13/2002	15:00	6	283	ppm			1	tn/cc
P-S.Bosque	6/13/2002	15:00	2	440	ppm			1	tn/cc
P-S.Bosque	6/13/2002	15:00	3	0.679	mS/cm			1	tn/cc
P-S.Bosque	6/13/2002	15:00	10		ppm	<	0.5	1	tn/cc
R-68.72	6/13/2002	9:16	19	0.26	ppm			1	tn/cc
R-68.72	6/13/2002	9:16	36	0.29	ppm			1	tn/cc
R-68.72	6/13/2002	9:16	11	0.5	ppm			1	tn/cc
R-68.72	6/13/2002	9:16	35	1.08	ppm			1	tn/cc
R-68.72	6/13/2002	9:16	40	1.65	%			1	tn/cc
R-68.72	6/13/2002	9:16	13	8	ppm			1	tn/cc
R-68.72	6/13/2002	9:16	1	8.4				1	tn/cc
R-68.72	6/13/2002	9:16	39	13.01	epm			1	tn/cc
R-68.72	6/13/2002	9:16	38	13.44	epm			1	tn/cc
R-68.72	6/13/2002	9:16	14	18	ppm			1	tn/cc
R-68.72	6/13/2002	9:16	15	100	ppm			1	tn/cc
R-68.72	6/13/2002	9:16	7	130	ppm			1	tn/cc
R-68.72	6/13/2002	9:16	12	155	ppm			1	tn/cc
R-68.72	6/13/2002	9:16	8	215	ppm			1	tn/cc
R-68.72	6/13/2002	9:16	6	295	ppm			1	tn/cc
R-68.72	6/13/2002	9:16	4	324	ppm			1	tn/cc
R-68.72	6/13/2002	9:16	2	770	ppm			1	tn/cc
R-68.72	6/13/2002	9:16	3	1.2	mS/cm			1	tn/cc
R-68.72	6/13/2002	9:16	9		ppm	<	0.1	1	tn/cc
R-68.72	6/13/2002	9:16	10		ppm	<	0.5	1	tn/cc
D-ESC E-Side	10/12/2002	17:09	19	0.1	ppm			1	lw/mp
D-ESC E-Side	10/12/2002	17:09	19	0.1	ppm			6	lw/mp
D-ESC E-Side	10/12/2002	17:09	11	0.31	ppm			1	lw/mp
D-ESC E-Side	10/12/2002	17:09	11	0.32	ppm			6	lw/mp
D-ESC E-Side	10/12/2002	17:09	35	0.47	ppm			1	lw/mp
D-ESC E-Side	10/12/2002	17:09	35	0.48	ppm			6	lw/mp

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
D-ESC E-Side	10/12/2002	17:09	40	2.22	%			1	lw/mp
D-ESC E-Side	10/12/2002	17:09	40	2.82	%			6	lw/mp
D-ESC E-Side	10/12/2002	17:09	13	3.8	ppm			1	lw/mp
D-ESC E-Side	10/12/2002	17:09	13	3.8	ppm			6	lw/mp
D-ESC E-Side	10/12/2002	17:09	39	6.27	epm			6	lw/mp
D-ESC E-Side	10/12/2002	17:09	39	6.49	epm			1	lw/mp
D-ESC E-Side	10/12/2002	17:09	38	6.64	epm			6	lw/mp
D-ESC E-Side	10/12/2002	17:09	38	6.79	epm			1	lw/mp
D-ESC E-Side	10/12/2002	17:09	1	7.9				6	lw/mp
D-ESC E-Side	10/12/2002	17:09	1	8				1	lw/mp
D-ESC E-Side	10/12/2002	17:09	14	9.4	ppm			1	lw/mp
D-ESC E-Side	10/12/2002	17:09	14	9.4	ppm			6	lw/mp
D-ESC E-Side	10/12/2002	17:09	32	22	ppm			1	lw/mp
D-ESC E-Side	10/12/2002	17:09	32	22	ppm			6	lw/mp
D-ESC E-Side	10/12/2002	17:09	7	30	ppm			6	lw/mp
D-ESC E-Side	10/12/2002	17:09	7	35	ppm			1	lw/mp
D-ESC E-Side	10/12/2002	17:09	12	52	ppm			1	lw/mp
D-ESC E-Side	10/12/2002	17:09	12	52	ppm			6	lw/mp
D-ESC E-Side	10/12/2002	17:09	15	70	ppm			6	lw/mp
D-ESC E-Side	10/12/2002	17:09	15	73	ppm			1	lw/mp
D-ESC E-Side	10/12/2002	17:09	8	100	ppm			6	lw/mp
D-ESC E-Side	10/12/2002	17:09	8	103	ppm			1	lw/mp
D-ESC E-Side	10/12/2002	17:09	37	166	ppm			6	lw/mp
D-ESC E-Side	10/12/2002	17:09	37	167	ppm			1	lw/mp
D-ESC E-Side	10/12/2002	17:09	6	203	ppm			6	lw/mp
D-ESC E-Side	10/12/2002	17:09	6	204	ppm			1	lw/mp
D-ESC E-Side	10/12/2002	17:09	4	214	ppm			6	lw/mp
D-ESC E-Side	10/12/2002	17:09	4	221	ppm			1	lw/mp
D-ESC E-Side	10/12/2002	17:09	2	390	ppm			6	lw/mp
D-ESC E-Side	10/12/2002	17:09	2	400	ppm			1	lw/mp
D-ESC E-Side	10/12/2002	17:09	3	0.578	mS/cm			1	lw/mp
D-ESC E-Side	10/12/2002	17:09	3	0.585	mS/cm			6	lw/mp
L-109.49	10/12/2002	15:50	19	0.14	ppm			1	tn/bc
L-109.49	10/12/2002	15:50	9	0.19	ppm			1	tn/bc
L-109.49	10/12/2002	15:50	11	0.28	ppm			1	tn/bc
L-109.49	10/12/2002	15:50	36	0.35	ppm			1	tn/bc
L-109.49	10/12/2002	15:50	35	1.1	ppm			1	tn/bc
L-109.49	10/12/2002	15:50	40	2.88	%			1	tn/bc
L-109.49	10/12/2002	15:50	13	6.3	ppm			1	tn/bc
L-109.49	10/12/2002	15:50	1	7.6				1	tn/bc
L-109.49	10/12/2002	15:50	39	11.08	epm			1	tn/bc
L-109.49	10/12/2002	15:50	38	11.74	epm			1	tn/bc
L-109.49	10/12/2002	15:50	14	19	ppm			1	tn/bc
L-109.49	10/12/2002	15:50	32	26	ppm			1	tn/bc
L-109.49	10/12/2002	15:50	7	76	ppm			1	tn/bc
L-109.49	10/12/2002	15:50	15	100	ppm			1	tn/bc
L-109.49	10/12/2002	15:50	12	115	ppm			1	tn/bc
L-109.49	10/12/2002	15:50	8	200	ppm			1	tn/bc
L-109.49	10/12/2002	15:50	37	237	ppm			1	tn/bc
L-109.49	10/12/2002	15:50	6	290	ppm			1	tn/bc
L-109.49	10/12/2002	15:50	4	328	ppm			1	tn/bc
L-109.49	10/12/2002	15:50	2	690	ppm			1	tn/bc
L-109.49	10/12/2002	15:50	3	1.03	mS/cm			1	tn/bc
L-114.60	10/12/2002	14:30	36	0.13	ppm			1	tn/bc
L-114.60	10/12/2002	14:30	19	0.14	ppm			1	tn/bc
L-114.60	10/12/2002	14:30	9	0.23	ppm			1	tn/bc
L-114.60	10/12/2002	14:30	11	0.3	ppm			1	tn/bc
L-114.60	10/12/2002	14:30	35	1.4	ppm			1	tn/bc
L-114.60	10/12/2002	14:30	40	2.15	%			1	tn/bc
L-114.60	10/12/2002	14:30	13	5	ppm			1	tn/bc
L-114.60	10/12/2002	14:30	1	7.4				1	tn/bc
L-114.60	10/12/2002	14:30	39	12.52	epm			1	tn/bc
L-114.60	10/12/2002	14:30	38	13.07	epm			1	tn/bc
L-114.60	10/12/2002	14:30	14	23	ppm			1	tn/bc
L-114.60	10/12/2002	14:30	32	23	ppm			1	tn/bc
L-114.60	10/12/2002	14:30	7	110	ppm			1	tn/bc
L-114.60	10/12/2002	14:30	12	110	ppm			1	tn/bc

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
L-114.60	10/12/2002	14:30	15	125	ppm			1	tn/bc
L-114.60	10/12/2002	14:30	37	229	ppm			1	tn/bc
L-114.60	10/12/2002	14:30	8	235	ppm			1	tn/bc
L-114.60	10/12/2002	14:30	6	275	ppm			1	tn/bc
L-114.60	10/12/2002	14:30	4	407	ppm			1	tn/bc
L-114.60	10/12/2002	14:30	2	770	ppm			1	tn/bc
L-114.60	10/12/2002	14:30	3	1.15	mS/cm			1	tn/bc
L-99.59	10/12/2002	12:14	19	0.11	ppm			1	lw/mp
L-99.59	10/12/2002	12:14	36	0.17	ppm			1	lw/mp
L-99.59	10/12/2002	12:14	11	0.32	ppm			1	lw/mp
L-99.59	10/12/2002	12:14	35	0.59	ppm			1	lw/mp
L-99.59	10/12/2002	12:14	40	1.94	%			1	lw/mp
L-99.59	10/12/2002	12:14	13	4.7	ppm			1	lw/mp
L-99.59	10/12/2002	12:14	39	6.86	epm			1	lw/mp
L-99.59	10/12/2002	12:14	38	7.13	epm			1	lw/mp
L-99.59	10/12/2002	12:14	1	7.5				1	lw/mp
L-99.59	10/12/2002	12:14	14	11	ppm			1	lw/mp
L-99.59	10/12/2002	12:14	32	20	ppm			1	lw/mp
L-99.59	10/12/2002	12:14	7	33	ppm			1	lw/mp
L-99.59	10/12/2002	12:14	12	62	ppm			1	lw/mp
L-99.59	10/12/2002	12:14	15	68	ppm			1	lw/mp
L-99.59	10/12/2002	12:14	8	120	ppm			1	lw/mp
L-99.59	10/12/2002	12:14	37	170	ppm			1	lw/mp
L-99.59	10/12/2002	12:14	6	208	ppm			1	lw/mp
L-99.59	10/12/2002	12:14	4	215	ppm			1	lw/mp
L-99.59	10/12/2002	12:14	2	420	ppm			1	lw/mp
L-99.59	10/12/2002	12:14	3	0.601	mS/cm			1	lw/mp
R-109.49	10/12/2002	16:32	19	0.12	ppm			1	lw/mp
R-109.49	10/12/2002	16:32	36	0.16	ppm			1	lw/mp
R-109.49	10/12/2002	16:32	11	0.41	ppm			1	lw/mp
R-109.49	10/12/2002	16:32	35	0.6	ppm			1	lw/mp
R-109.49	10/12/2002	16:32	9	1.9	ppm			1	lw/mp
R-109.49	10/12/2002	16:32	40	2.64	%			1	lw/mp
R-109.49	10/12/2002	16:32	13	6.5	ppm			1	lw/mp
R-109.49	10/12/2002	16:32	39	6.82	epm			1	lw/mp
R-109.49	10/12/2002	16:32	38	7.19	epm			1	lw/mp
R-109.49	10/12/2002	16:32	1	8.2				1	lw/mp
R-109.49	10/12/2002	16:32	14	11	ppm			1	lw/mp
R-109.49	10/12/2002	16:32	32	22	ppm			1	lw/mp
R-109.49	10/12/2002	16:32	7	36	ppm			1	lw/mp
R-109.49	10/12/2002	16:32	12	60	ppm			1	lw/mp
R-109.49	10/12/2002	16:32	15	70	ppm			1	lw/mp
R-109.49	10/12/2002	16:32	8	110	ppm			1	lw/mp
R-109.49	10/12/2002	16:32	37	173	ppm			1	lw/mp
R-109.49	10/12/2002	16:32	6	211	ppm			1	lw/mp
R-109.49	10/12/2002	16:32	4	220	ppm			1	lw/mp
R-109.49	10/12/2002	16:32	2	420	ppm			1	lw/mp
R-109.49	10/12/2002	16:32	3	0.625	mS/cm			1	lw/mp
R-114.60	10/12/2002	14:12	19	0.12	ppm			1	lw/mp
R-114.60	10/12/2002	14:12	36	0.23	ppm			1	lw/mp
R-114.60	10/12/2002	14:12	11	0.41	ppm			1	lw/mp
R-114.60	10/12/2002	14:12	35	0.55	ppm			1	lw/mp
R-114.60	10/12/2002	14:12	9	1.4	ppm			1	lw/mp
R-114.60	10/12/2002	14:12	40	2.77	%			1	lw/mp
R-114.60	10/12/2002	14:12	13	6.5	ppm			1	lw/mp
R-114.60	10/12/2002	14:12	39	6.8	epm			1	lw/mp
R-114.60	10/12/2002	14:12	38	7.19	epm			1	lw/mp
R-114.60	10/12/2002	14:12	1	8.1				1	lw/mp
R-114.60	10/12/2002	14:12	14	11	ppm			1	lw/mp
R-114.60	10/12/2002	14:12	32	24	ppm			1	lw/mp
R-114.60	10/12/2002	14:12	7	35	ppm			1	lw/mp
R-114.60	10/12/2002	14:12	12	60	ppm			1	lw/mp
R-114.60	10/12/2002	14:12	15	70	ppm			1	lw/mp
R-114.60	10/12/2002	14:12	8	110	ppm			1	lw/mp
R-114.60	10/12/2002	14:12	37	173	ppm			1	lw/mp
R-114.60	10/12/2002	14:12	6	212	ppm			1	lw/mp
R-114.60	10/12/2002	14:12	4	220	ppm			1	lw/mp

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
R-114.60	10/12/2002	14:12	2	420	ppm			1	lw/mp
R-114.60	10/12/2002	14:12	3	0.637	mS/cm			1	lw/mp
R-99.59	10/12/2002	11:40	19	0.13	ppm			1	lw/mp
R-99.59	10/12/2002	11:40	36	0.22	ppm			1	lw/mp
R-99.59	10/12/2002	11:40	11	0.39	ppm			1	lw/mp
R-99.59	10/12/2002	11:40	35	0.62	ppm			1	lw/mp
R-99.59	10/12/2002	11:40	9	1.2	ppm			1	lw/mp
R-99.59	10/12/2002	11:40	40	1.81	%			1	lw/mp
R-99.59	10/12/2002	11:40	13	6.6	ppm			1	lw/mp
R-99.59	10/12/2002	11:40	39	7.61	epm			1	lw/mp
R-99.59	10/12/2002	11:40	38	7.89	epm			1	lw/mp
R-99.59	10/12/2002	11:40	1	8.2				1	lw/mp
R-99.59	10/12/2002	11:40	14	12	ppm			1	lw/mp
R-99.59	10/12/2002	11:40	32	22	ppm			1	lw/mp
R-99.59	10/12/2002	11:40	7	52	ppm			1	lw/mp
R-99.59	10/12/2002	11:40	15	72	ppm			1	lw/mp
R-99.59	10/12/2002	11:40	12	72	ppm			1	lw/mp
R-99.59	10/12/2002	11:40	8	120	ppm			1	lw/mp
R-99.59	10/12/2002	11:40	37	180	ppm			1	lw/mp
R-99.59	10/12/2002	11:40	6	220	ppm			1	lw/mp
R-99.59	10/12/2002	11:40	4	229	ppm			1	lw/mp
R-99.59	10/12/2002	11:40	2	470	ppm			1	lw/mp
R-99.59	10/12/2002	11:40	3	0.647	mS/cm			1	lw/mp
D-ESC E-Side	10/12/2002	17:09	36		ppm	<	0.1	1	lw/mp
D-ESC E-Side	10/12/2002	17:09	36		ppm	<	0.1	6	lw/mp
D-ESC E-Side	10/12/2002	17:09	9		ppm	<	0.1	1	lw/mp
D-ESC E-Side	10/12/2002	17:09	9		ppm	<	0.1	6	lw/mp
D-ESC E-Side	10/12/2002	17:09	10		ppm	<	0.5	1	lw/mp
D-ESC E-Side	10/12/2002	17:09	10		ppm	<	0.5	6	lw/mp
L-109.49	10/12/2002	15:50	10		ppm	<	0.5	1	tn/bc
L-114.60	10/12/2002	14:30	10		ppm	<	0.5	1	tn/bc
L-99.59	10/12/2002	12:14	9		ppm	<	0.1	1	lw/mp
L-99.59	10/12/2002	12:14	10		ppm	<	0.5	1	lw/mp
R-109.49	10/12/2002	16:32	10		ppm	<	0.5	1	lw/mp
R-114.60	10/12/2002	14:12	10		ppm	<	0.5	1	lw/mp
R-99.59	10/12/2002	11:40	10		ppm	<	0.5	1	lw/mp
D-SRD-87.62	10/13/2002	17:10	36	0.13	ppm			1	tn/bc
D-SRD-87.62	10/13/2002	17:10	19	0.16	ppm			1	tn/bc
D-SRD-87.62	10/13/2002	17:10	11	0.36	ppm			1	tn/bc
D-SRD-87.62	10/13/2002	17:10	35	0.64	ppm			1	tn/bc
D-SRD-87.62	10/13/2002	17:10	40	2.35	%			1	tn/bc
D-SRD-87.62	10/13/2002	17:10	13	7.3	ppm			1	tn/bc
D-SRD-87.62	10/13/2002	17:10	1	7.7				1	tn/bc
D-SRD-87.62	10/13/2002	17:10	39	9.25	epm			1	tn/bc
D-SRD-87.62	10/13/2002	17:10	38	9.69	epm			1	tn/bc
D-SRD-87.62	10/13/2002	17:10	14	14	ppm			1	tn/bc
D-SRD-87.62	10/13/2002	17:10	32	25	ppm			1	tn/bc
D-SRD-87.62	10/13/2002	17:10	7	65	ppm			1	tn/bc
D-SRD-87.62	10/13/2002	17:10	15	80	ppm			1	tn/bc
D-SRD-87.62	10/13/2002	17:10	12	100	ppm			1	tn/bc
D-SRD-87.62	10/13/2002	17:10	8	160	ppm			1	tn/bc
D-SRD-87.62	10/13/2002	17:10	37	203	ppm			1	tn/bc
L-68.72	10/13/2002	11:03	36	0.14	ppm			1	lw/mp
L-68.72	10/13/2002	11:03	19	0.17	ppm			1	lw/mp
L-68.72	10/13/2002	11:03	9	0.25	ppm			1	lw/mp
L-68.72	10/13/2002	11:03	11	0.38	ppm			1	lw/mp
L-68.72	10/13/2002	11:03	35	0.84	ppm			1	lw/mp
L-68.72	10/13/2002	11:03	40	2.17	%			1	lw/mp
L-68.72	10/13/2002	11:03	13	6.9	ppm			1	lw/mp
D-SRD-87.62	10/13/2002	17:10	6	248	ppm			1	tn/bc
D-SRD-87.62	10/13/2002	17:10	4	257	ppm			1	tn/bc
D-SRD-87.62	10/13/2002	17:10	2	580	ppm			1	tn/bc
D-SRD-87.62	10/13/2002	17:10	3	0.83	mS/cm			1	tn/bc
L-68.72	10/13/2002	11:03	1	7.9				1	lw/mp
L-68.72	10/13/2002	11:03	39	10.71	epm			1	lw/mp
L-68.72	10/13/2002	11:03	38	11.19	epm			1	lw/mp
L-68.72	10/13/2002	11:03	14	16	ppm			1	lw/mp

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
L-68.72	10/13/2002	11:03	32	25	ppm			1	lw/mp
L-68.72	10/13/2002	11:03	15	85	ppm			1	lw/mp
L-68.72	10/13/2002	11:03	7	95	ppm			1	lw/mp
L-68.72	10/13/2002	11:03	12	125	ppm			1	lw/mp
L-68.72	10/13/2002	11:03	8	180	ppm			1	lw/mp
L-68.72	10/13/2002	11:03	37	213	ppm			1	lw/mp
L-68.72	10/13/2002	11:03	6	260	ppm			1	lw/mp
L-68.72	10/13/2002	11:03	4	278	ppm			1	lw/mp
L-68.72	10/13/2002	11:03	2	660	ppm			1	lw/mp
L-68.72	10/13/2002	11:03	3	1.01	mS/cm			1	lw/mp
L-83.98	10/13/2002	15:44	36	0.12	ppm			1	lw/mp
L-83.98	10/13/2002	15:44	19	0.14	ppm			1	lw/mp
L-83.98	10/13/2002	15:44	9	0.14	ppm			1	lw/mp
L-83.98	10/13/2002	15:44	11	0.33	ppm			1	lw/mp
L-83.98	10/13/2002	15:44	35	0.68	ppm			1	lw/mp
L-83.98	10/13/2002	15:44	40	1.74	%			1	lw/mp
L-83.98	10/13/2002	15:44	13	6	ppm			1	lw/mp
L-83.98	10/13/2002	15:44	1	7.9				1	lw/mp
L-83.98	10/13/2002	15:44	39	8.76	epm			1	lw/mp
L-83.98	10/13/2002	15:44	38	9.07	epm			1	lw/mp
L-83.98	10/13/2002	15:44	14	13	ppm			1	lw/mp
L-83.98	10/13/2002	15:44	32	22	ppm			1	lw/mp
L-83.98	10/13/2002	15:44	7	66	ppm			1	lw/mp
L-83.98	10/13/2002	15:44	15	75	ppm			1	lw/mp
L-83.98	10/13/2002	15:44	12	94	ppm			1	lw/mp
L-83.98	10/13/2002	15:44	8	150	ppm			1	lw/mp
L-83.98	10/13/2002	15:44	37	187	ppm			1	lw/mp
L-83.98	10/13/2002	15:44	6	229	ppm			1	lw/mp
L-83.98	10/13/2002	15:44	4	241	ppm			1	lw/mp
L-83.98	10/13/2002	15:44	2	540	ppm			1	lw/mp
L-83.98	10/13/2002	15:44	3	0.83	mS/cm			1	lw/mp
L-87.62	10/13/2002	16:01	9	0.1	ppm			1	lw/mp
L-87.62	10/13/2002	16:01	19	0.14	ppm			2	lw/mp
L-87.62	10/13/2002	16:01	19	0.15	ppm			1	lw/mp
L-87.62	10/13/2002	16:01	36	0.22	ppm			2	lw/mp
L-87.62	10/13/2002	16:01	36	0.27	ppm			1	lw/mp
L-87.62	10/13/2002	16:01	11	0.34	ppm			1	lw/mp
L-87.62	10/13/2002	16:01	11	0.34	ppm			2	lw/mp
L-87.62	10/13/2002	16:01	35	0.68	ppm			2	lw/mp
L-87.62	10/13/2002	16:01	35	0.69	ppm			1	lw/mp
L-87.62	10/13/2002	16:01	40	2.28	%			1	lw/mp
L-87.62	10/13/2002	16:01	40	2.63	%			2	lw/mp
L-87.62	10/13/2002	16:01	13	6.4	ppm			1	lw/mp
L-87.62	10/13/2002	16:01	13	6.4	ppm			2	lw/mp
L-87.62	10/13/2002	16:01	1	7.7				1	lw/mp
L-87.62	10/13/2002	16:01	1	7.7				2	lw/mp
L-87.62	10/13/2002	16:01	39	9	epm			2	lw/mp
L-87.62	10/13/2002	16:01	39	9.16	epm			1	lw/mp
L-87.62	10/13/2002	16:01	38	9.49	epm			2	lw/mp
L-87.62	10/13/2002	16:01	38	9.59	epm			1	lw/mp
L-87.62	10/13/2002	16:01	14	13	ppm			1	lw/mp
L-87.62	10/13/2002	16:01	14	13	ppm			2	lw/mp
L-87.62	10/13/2002	16:01	32	23	ppm			1	lw/mp
L-87.62	10/13/2002	16:01	32	23	ppm			2	lw/mp
L-87.62	10/13/2002	16:01	7	65	ppm			2	lw/mp
L-87.62	10/13/2002	16:01	7	70	ppm			1	lw/mp
L-87.62	10/13/2002	16:01	15	78	ppm			2	lw/mp
L-87.62	10/13/2002	16:01	15	80	ppm			1	lw/mp
L-87.62	10/13/2002	16:01	12	100	ppm			1	lw/mp
L-87.62	10/13/2002	16:01	12	100	ppm			2	lw/mp
L-87.62	10/13/2002	16:01	8	160	ppm			1	lw/mp
L-87.62	10/13/2002	16:01	8	160	ppm			2	lw/mp
L-87.62	10/13/2002	16:01	37	191	ppm			1	lw/mp
L-87.62	10/13/2002	16:01	37	191	ppm			2	lw/mp
L-87.62	10/13/2002	16:01	6	233	ppm			2	lw/mp
L-87.62	10/13/2002	16:01	6	234	ppm			1	lw/mp
L-87.62	10/13/2002	16:01	4	248	ppm			2	lw/mp

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
L-87.62	10/13/2002	16:01	4	253	ppm			1	lw/mp
L-87.62	10/13/2002	16:01	2	560	ppm			2	lw/mp
L-87.62	10/13/2002	16:01	2	570	ppm			1	lw/mp
L-87.62	10/13/2002	16:01	3	0.84	mS/cm			1	lw/mp
L-87.62	10/13/2002	16:01	3	0.84	mS/cm			2	lw/mp
R-EB-11	10/13/2002	11:15	19	0.17	ppm			1	tn/bc
R-EB-11	10/13/2002	11:15	36	0.31	ppm			1	tn/bc
R-EB-11	10/13/2002	11:15	11	0.4	ppm			1	tn/bc
R-EB-11	10/13/2002	11:15	9	0.46	ppm			1	tn/bc
R-EB-11	10/13/2002	11:15	35	0.83	ppm			1	tn/bc
R-EB-11	10/13/2002	11:15	40	2.59	%			1	tn/bc
R-EB-11	10/13/2002	11:15	13	6.7	ppm			1	tn/bc
R-EB-11	10/13/2002	11:15	1	8				1	tn/bc
R-EB-11	10/13/2002	11:15	39	9.89	epm			1	tn/bc
R-EB-11	10/13/2002	11:15	38	10.42	epm			1	tn/bc
R-EB-11	10/13/2002	11:15	14	15	ppm			1	tn/bc
R-EB-11	10/13/2002	11:15	32	26	ppm			1	tn/bc
R-EB-11	10/13/2002	11:15	15	80	ppm			1	tn/bc
R-EB-11	10/13/2002	11:15	7	85	ppm			1	tn/bc
R-EB-11	10/13/2002	11:15	12	115	ppm			1	tn/bc
R-EB-11	10/13/2002	11:15	8	160	ppm			1	tn/bc
R-EB-11	10/13/2002	11:15	37	206	ppm			1	tn/bc
R-EB-11	10/13/2002	11:15	6	252	ppm			1	tn/bc
R-EB-11	10/13/2002	11:15	4	262	ppm			1	tn/bc
R-EB-11	10/13/2002	11:15	2	610	ppm			1	tn/bc
R-EB-11	10/13/2002	11:15	3	0.95	mS/cm			1	tn/bc
R-RGCOR	10/13/2002	11:45	19	0.17	ppm			1	lw/mp
R-RGCOR	10/13/2002	11:45	36	0.36	ppm			1	lw/mp
R-RGCOR	10/13/2002	11:45	11	0.38	ppm			1	lw/mp
R-RGCOR	10/13/2002	11:45	35	0.9	ppm			1	lw/mp
R-RGCOR	10/13/2002	11:45	40	2.1	%			1	lw/mp
R-RGCOR	10/13/2002	11:45	13	7.2	ppm			1	lw/mp
R-RGCOR	10/13/2002	11:45	1	8.1				1	lw/mp
R-RGCOR	10/13/2002	11:45	39	10.37	epm			1	lw/mp
R-RGCOR	10/13/2002	11:45	38	10.82	epm			1	lw/mp
R-RGCOR	10/13/2002	11:45	14	17	ppm			1	lw/mp
R-RGCOR	10/13/2002	11:45	32	27	ppm			1	lw/mp
R-RGCOR	10/13/2002	11:45	15	80	ppm			1	lw/mp
R-RGCOR	10/13/2002	11:45	7	90	ppm			1	lw/mp
R-RGCOR	10/13/2002	11:45	12	120	ppm			1	lw/mp
R-RGCOR	10/13/2002	11:45	8	175	ppm			1	lw/mp
R-RGCOR	10/13/2002	11:45	37	208	ppm			1	lw/mp
R-RGCOR	10/13/2002	11:45	6	254	ppm			1	lw/mp
R-RGCOR	10/13/2002	11:45	4	270	ppm			1	lw/mp
R-RGCOR	10/13/2002	11:45	2	640	ppm			1	lw/mp
R-RGCOR	10/13/2002	11:45	3	0.98	mS/cm			1	lw/mp
L-EB-11	10/13/2002	11:53	36	0.13	ppm			1	tn/bc
L-EB-11	10/13/2002	11:53	19	0.17	ppm			1	tn/bc
L-EB-11	10/13/2002	11:53	9	0.27	ppm			1	tn/bc
L-EB-11	10/13/2002	11:53	11	0.38	ppm			1	tn/bc
L-EB-11	10/13/2002	11:53	35	0.85	ppm			1	tn/bc
L-EB-11	10/13/2002	11:53	40	2.78	%			1	tn/bc
L-EB-11	10/13/2002	11:53	13	7.6	ppm			1	tn/bc
L-EB-11	10/13/2002	11:53	1	8				1	tn/bc
L-EB-11	10/13/2002	11:53	39	10.6	epm			1	tn/bc
L-EB-11	10/13/2002	11:53	38	11.21	epm			1	tn/bc
L-EB-11	10/13/2002	11:53	14	16	ppm			1	tn/bc
L-EB-11	10/13/2002	11:53	32	26	ppm			1	tn/bc
L-EB-11	10/13/2002	11:53	15	85	ppm			1	tn/bc
L-EB-11	10/13/2002	11:53	7	91	ppm			1	tn/bc
L-EB-11	10/13/2002	11:53	12	125	ppm			1	tn/bc
L-EB-11	10/13/2002	11:53	8	180	ppm			1	tn/bc
L-EB-11	10/13/2002	11:53	37	212	ppm			1	tn/bc
L-EB-11	10/13/2002	11:53	6	260	ppm			1	tn/bc
L-EB-11	10/13/2002	11:53	4	278	ppm			1	tn/bc
L-EB-11	10/13/2002	11:53	2	660	ppm			1	tn/bc
L-EB-11	10/13/2002	11:53	3	1.02	mS/cm			1	tn/bc

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
P-SocorroSprings	10/13/2002	18:00	19	0.07	ppm			1	tn/bc
P-SocorroSprings	10/13/2002	18:00	35	0.32	ppm			1	tn/bc
P-SocorroSprings	10/13/2002	18:00	11	0.5	ppm			1	tn/bc
P-SocorroSprings	10/13/2002	18:00	40	1.5	%			1	tn/bc
P-SocorroSprings	10/13/2002	18:00	9	1.8	ppm			1	tn/bc
P-SocorroSprings	10/13/2002	18:00	13	3.4	ppm			1	tn/bc
P-SocorroSprings	10/13/2002	18:00	39	3.65	epm			1	tn/bc
P-SocorroSprings	10/13/2002	18:00	38	3.76	epm			1	tn/bc
P-SocorroSprings	10/13/2002	18:00	14	4	ppm			1	tn/bc
P-SocorroSprings	10/13/2002	18:00	1	8.1				1	tn/bc
P-SocorroSprings	10/13/2002	18:00	7	12	ppm			1	tn/bc
P-SocorroSprings	10/13/2002	18:00	15	19	ppm			1	tn/bc
P-SocorroSprings	10/13/2002	18:00	32	25	ppm			1	tn/bc
P-SocorroSprings	10/13/2002	18:00	8	29	ppm			1	tn/bc
P-SocorroSprings	10/13/2002	18:00	12	55	ppm			1	tn/bc
P-SocorroSprings	10/13/2002	18:00	4	64	ppm			1	tn/bc
P-SocorroSprings	10/13/2002	18:00	37	133	ppm			1	tn/bc
P-SocorroSprings	10/13/2002	18:00	6	162	ppm			1	tn/bc
P-SocorroSprings	10/13/2002	18:00	2	230	ppm			1	tn/bc
P-SocorroSprings	10/13/2002	18:00	3	0.346	mS/cm			1	tn/bc
R-68.72	10/13/2002	9:25	19	0.16	ppm			1	tn/bc
R-68.72	10/13/2002	9:25	36	0.3	ppm			1	tn/bc
R-68.72	10/13/2002	9:25	9	0.31	ppm			1	tn/bc
R-68.72	10/13/2002	9:25	11	0.39	ppm			1	tn/bc
R-68.72	10/13/2002	9:25	35	0.81	ppm			1	tn/bc
R-68.72	10/13/2002	9:25	40	2.71	%			1	tn/bc
R-68.72	10/13/2002	9:25	13	6.5	ppm			1	tn/bc
R-68.72	10/13/2002	9:25	1	8.1				1	tn/bc
R-68.72	10/13/2002	9:25	39	10.1	epm			1	tn/bc
R-68.72	10/13/2002	9:25	38	10.66	epm			1	tn/bc
R-68.72	10/13/2002	9:25	14	15	ppm			1	tn/bc
R-68.72	10/13/2002	9:25	32	24	ppm			1	tn/bc
R-68.72	10/13/2002	9:25	7	82	ppm			1	tn/bc
R-68.72	10/13/2002	9:25	15	85	ppm			1	tn/bc
R-68.72	10/13/2002	9:25	12	115	ppm			1	tn/bc
R-68.72	10/13/2002	9:25	8	175	ppm			1	tn/bc
R-68.72	10/13/2002	9:25	37	206	ppm			1	tn/bc
R-68.72	10/13/2002	9:25	6	251	ppm			1	tn/bc
R-68.72	10/13/2002	9:25	4	274	ppm			1	tn/bc
R-68.72	10/13/2002	9:25	2	630	ppm			1	tn/bc
R-68.72	10/13/2002	9:25	3	0.88	mS/cm			1	tn/bc
R-83.98	10/13/2002	14:37	19	0.11	ppm			1	lw/mp
R-83.98	10/13/2002	14:37	36	0.11	ppm			1	lw/mp
R-83.98	10/13/2002	14:37	11	0.42	ppm			1	lw/mp
R-83.98	10/13/2002	14:37	35	0.65	ppm			1	lw/mp
R-83.98	10/13/2002	14:37	9	0.8	ppm			1	lw/mp
R-83.98	10/13/2002	14:37	40	2.92	%			1	lw/mp
R-83.98	10/13/2002	14:37	13	6.3	ppm			1	lw/mp
R-83.98	10/13/2002	14:37	39	7.16	epm			1	lw/mp
R-83.98	10/13/2002	14:37	38	7.6	epm			1	lw/mp
R-83.98	10/13/2002	14:37	1	8.2				1	lw/mp
R-83.98	10/13/2002	14:37	14	12	ppm			1	lw/mp
R-83.98	10/13/2002	14:37	32	23	ppm			1	lw/mp
R-83.98	10/13/2002	14:37	7	40	ppm			1	lw/mp
R-83.98	10/13/2002	14:37	12	63	ppm			1	lw/mp
R-83.98	10/13/2002	14:37	15	74	ppm			1	lw/mp
R-83.98	10/13/2002	14:37	8	115	ppm			1	lw/mp
R-83.98	10/13/2002	14:37	37	179	ppm			1	lw/mp
R-83.98	10/13/2002	14:37	6	220	ppm			1	lw/mp
R-83.98	10/13/2002	14:37	4	234	ppm			1	lw/mp
R-83.98	10/13/2002	14:37	2	440	ppm			1	lw/mp
R-83.98	10/13/2002	14:37	3	0.667	mS/cm			1	lw/mp
R-83.98	10/13/2002	14:37	19	0.12	ppm			6	lw/mp
R-83.98	10/13/2002	14:37	36	0.12	ppm			6	lw/mp
R-83.98	10/13/2002	14:37	11	0.41	ppm			6	lw/mp
R-83.98	10/13/2002	14:37	35	0.64	ppm			6	lw/mp
R-83.98	10/13/2002	14:37	9	0.79	ppm			6	lw/mp

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
R-83.98	10/13/2002	14:37	40	2.73	%			6	lw/mp
R-83.98	10/13/2002	14:37	13	6.5	ppm			6	lw/mp
R-83.98	10/13/2002	14:37	39	7.2	epm			6	lw/mp
R-83.98	10/13/2002	14:37	38	7.6	epm			6	lw/mp
R-83.98	10/13/2002	14:37	1	8.2				6	lw/mp
R-83.98	10/13/2002	14:37	14	12	ppm			6	lw/mp
R-83.98	10/13/2002	14:37	32	23	ppm			6	lw/mp
R-83.98	10/13/2002	14:37	7	40	ppm			6	lw/mp
R-83.98	10/13/2002	14:37	12	63	ppm			6	lw/mp
R-83.98	10/13/2002	14:37	15	74	ppm			6	lw/mp
R-83.98	10/13/2002	14:37	8	115	ppm			6	lw/mp
R-83.98	10/13/2002	14:37	37	182	ppm			6	lw/mp
R-83.98	10/13/2002	14:37	6	222	ppm			6	lw/mp
R-83.98	10/13/2002	14:37	4	234	ppm			6	lw/mp
R-83.98	10/13/2002	14:37	2	450	ppm			6	lw/mp
R-83.98	10/13/2002	14:37	3	0.669	mS/cm			6	lw/mp
R-87.62	10/13/2002	18:20	19	0.12	ppm			1	lw/mp
R-87.62	10/13/2002	18:20	36	0.21	ppm			1	lw/mp
R-87.62	10/13/2002	18:20	11	0.42	ppm			1	lw/mp
R-87.62	10/13/2002	18:20	35	0.63	ppm			1	lw/mp
R-87.62	10/13/2002	18:20	9	1.1	ppm			1	lw/mp
R-87.62	10/13/2002	18:20	40	2.97	%			1	lw/mp
R-87.62	10/13/2002	18:20	13	5.9	ppm			1	lw/mp
R-87.62	10/13/2002	18:20	39	7.15	epm			1	lw/mp
R-87.62	10/13/2002	18:20	38	7.59	epm			1	lw/mp
R-87.62	10/13/2002	18:20	1	8.2				1	lw/mp
R-87.62	10/13/2002	18:20	14	12	ppm			1	lw/mp
R-87.62	10/13/2002	18:20	32	25	ppm			1	lw/mp
R-87.62	10/13/2002	18:20	7	40	ppm			1	lw/mp
R-87.62	10/13/2002	18:20	12	62	ppm			1	lw/mp
R-87.62	10/13/2002	18:20	15	75	ppm			1	lw/mp
R-87.62	10/13/2002	18:20	8	115	ppm			1	lw/mp
R-87.62	10/13/2002	18:20	37	179	ppm			1	lw/mp
R-87.62	10/13/2002	18:20	6	219	ppm			1	lw/mp
R-87.62	10/13/2002	18:20	4	237	ppm			1	lw/mp
R-87.62	10/13/2002	18:20	2	450	ppm			1	lw/mp
R-87.62	10/13/2002	18:20	3	0.657	mS/cm			1	lw/mp
D-SRD-87.62	10/13/2002	17:10	9		ppm	<	0.1	1	tn/bc
D-SRD-87.62	10/13/2002	17:10	10		ppm	<	0.5	1	tn/bc
L-68.72	10/13/2002	11:03	10		ppm	<	0.5	1	lw/mp
L-83.98	10/13/2002	15:44	10		ppm	<	0.5	1	lw/mp
L-87.62	10/13/2002	16:01	9		ppm	<		2	lw/mp
L-87.62	10/13/2002	16:01	10		ppm	<		1	lw/mp
L-87.62	10/13/2002	16:01	10		ppm	<		2	lw/mp
L-87.62	10/13/2002	16:01							
L-EB-11	10/13/2002	11:53	10		ppm	<	0.5	1	tn/bc
P-SocorroSprings	10/13/2002	18:00	10		ppm	<	0.5	1	tn/bc
P-SocorroSprings	10/13/2002	18:00	36		ppm	<	0.1	1	tn/bc
R-68.72	10/13/2002	9:25	10		ppm	<	0.5	1	tn/bc
R-83.98	10/13/2002	14:37	10		ppm	<	0.5	1	lw/mp
R-83.98	10/13/2002	14:37	10		ppm	<	0.5	6	lw/mp
R-87.62	10/13/2002	18:20	10		ppm	<	0.5	1	lw/mp
R-EB-11	10/13/2002	11:15	10		ppm	<	0.5	1	tn/bc
R-RGCOR	10/13/2002	11:45	10		ppm	<	0.5	1	lw/mp
D-LLDR4	10/14/2002	13:34	19	0.28	ppm			1	lw/mp
D-LLDR4	10/14/2002	13:34	9	0.78	ppm			1	lw/mp
D-LLDR4	10/14/2002	13:34	11	0.97	ppm			1	lw/mp
D-LLDR4	10/14/2002	13:34	40	1.19	%			1	lw/mp
D-LLDR4	10/14/2002	13:34	35	1.4	ppm			1	lw/mp
D-LLDR4	10/14/2002	13:34	36	1.9	ppm			1	lw/mp
D-LLDR4	10/14/2002	13:34	1	7.9				1	lw/mp
D-LLDR4	10/14/2002	13:34	13	8.3	ppm			1	lw/mp
D-LLDR4	10/14/2002	13:34	39	22.63	epm			1	lw/mp
D-LLDR4	10/14/2002	13:34	38	23.17	epm			1	lw/mp
D-LLDR4	10/14/2002	13:34	14	28	ppm			1	lw/mp
D-LLDR4	10/14/2002	13:34	32	35	ppm			1	lw/mp
D-LLDR4	10/14/2002	13:34	15	130	ppm			1	lw/mp

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
D-LLDR4	10/14/2002	13:34	7	280	ppm			1	lw/mp
D-LLDR4	10/14/2002	13:34	12	325	ppm			1	lw/mp
D-LLDR4	10/14/2002	13:34	37	342	ppm			1	lw/mp
D-LLDR4	10/14/2002	13:34	8	375	ppm			1	lw/mp
D-LLDR4	10/14/2002	13:34	6	417	ppm			1	lw/mp
D-LLDR4	10/14/2002	13:34	4	440	ppm			1	lw/mp
D-LLDR4	10/14/2002	13:34	2	1390	ppm			1	lw/mp
D-LLDR4	10/14/2002	13:34	3	2.07	mS/cm			1	lw/mp
L-91.28	10/14/2002	9:30	19	0.11	ppm			1	tn/bc
L-91.28	10/14/2002	9:30	9	0.23	ppm			1	tn/bc
L-91.28	10/14/2002	9:30	11	0.49	ppm			1	tn/bc
L-91.28	10/14/2002	9:30	36	0.59	ppm			1	tn/bc
L-91.28	10/14/2002	9:30	35	0.62	ppm			1	tn/bc
L-91.28	10/14/2002	9:30	40	0.66	%			1	tn/bc
L-91.28	10/14/2002	9:30	13	5.6	ppm			1	tn/bc
L-91.28	10/14/2002	9:30	1	7.6				1	tn/bc
L-91.28	10/14/2002	9:30	39	8.8	epm			1	tn/bc
L-91.28	10/14/2002	9:30	38	8.92	epm			1	tn/bc
L-91.28	10/14/2002	9:30	14	13	ppm			1	tn/bc
L-91.28	10/14/2002	9:30	32	23	ppm			1	tn/bc
L-91.28	10/14/2002	9:30	7	49	ppm			1	tn/bc
L-91.28	10/14/2002	9:30	15	80	ppm			1	tn/bc
L-91.28	10/14/2002	9:30	12	85	ppm			1	tn/bc
L-91.28	10/14/2002	9:30	8	175	ppm			1	tn/bc
L-91.28	10/14/2002	9:30	37	187	ppm			1	tn/bc
L-91.28	10/14/2002	9:30	6	228	ppm			1	tn/bc
L-91.28	10/14/2002	9:30	4	253	ppm			1	tn/bc
L-91.28	10/14/2002	9:30	2	550	ppm			1	tn/bc
L-91.28	10/14/2002	9:30	3	0.757	mS/cm			1	tn/bc
R-91.28	10/14/2002	8:58	19	0.12	ppm			1	tn/bc
R-91.28	10/14/2002	8:58	11	0.53	ppm			1	tn/bc
R-91.28	10/14/2002	8:58	35	0.63	ppm			1	tn/bc
R-91.28	10/14/2002	8:58	9	0.89	ppm			1	tn/bc
R-91.28	10/14/2002	8:58	40	2.83	%			1	tn/bc
R-91.28	10/14/2002	8:58	13	5.6	ppm			1	tn/bc
R-91.28	10/14/2002	8:58	39	7.44	epm			1	tn/bc
R-91.28	10/14/2002	8:58	38	7.88	epm			1	tn/bc
R-91.28	10/14/2002	8:58	1	8.1				1	tn/bc
R-91.28	10/14/2002	8:58	14	13	ppm			1	tn/bc
R-91.28	10/14/2002	8:58	32	24	ppm			1	tn/bc
R-91.28	10/14/2002	8:58	7	40	ppm			1	tn/bc
R-91.28	10/14/2002	8:58	12	68	ppm			1	tn/bc
R-91.28	10/14/2002	8:58	15	74	ppm			1	tn/bc
R-91.28	10/14/2002	8:58	8	125	ppm			1	tn/bc
R-91.28	10/14/2002	8:58	37	187	ppm			1	tn/bc
R-91.28	10/14/2002	8:58	6	224	ppm			1	tn/bc
R-91.28	10/14/2002	8:58	4	238	ppm			1	tn/bc
R-91.28	10/14/2002	8:58	2	460	ppm			1	tn/bc
R-91.28	10/14/2002	8:58	3	0.691	mS/cm			1	tn/bc
D-LLDR4	10/14/2002	13:34	10		ppm	<	0.5	1	lw/mp
L-91.28	10/14/2002	9:30	10		ppm	<	0.5	1	tn/bc
R-91.28	10/14/2002	8:58	36		ppm	<	0.1	1	tn/bc
R-91.28	10/14/2002	8:58	10		ppm	<	0.5	1	tn/bc
L-68.72	3/1/2003	0:00	1	8.01				1	Newton
L-68.72	3/1/2003	0:00	38	9.53	epm			1	Newton
L-68.72	3/1/2003	0:00	39	10.08	epm			1	Newton
L-68.72	3/1/2003	0:00	40	-2.79	%			1	Newton
L-68.72	3/1/2003	0:00	4	228	ppm			1	Newton
L-68.72	3/1/2003	0:00	6	239	ppm			1	Newton
L-68.72	3/1/2003	0:00	7	95	ppm			1	Newton
L-68.72	3/1/2003	0:00	8	165	ppm			1	Newton
L-68.72	3/1/2003	0:00	9	0.75	ppm			1	Newton
L-68.72	3/1/2003	0:00	10		ppm	<	0.5	1	Newton
L-68.72	3/1/2003	0:00	11	0.57	ppm			1	Newton
L-68.72	3/1/2003	0:00	12	110	ppm			1	Newton
L-68.72	3/1/2003	0:00	13	6.4	ppm			1	Newton
L-68.72	3/1/2003	0:00	14	13	ppm			1	Newton

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
L-68.72	3/1/2003	0:00	15	70	ppm			1	Newton
L-68.72	3/1/2003	0:00	2	610	ppm			1	Newton
L-68.72	3/1/2003	0:00	19	0.2	ppm			1	Newton
L-68.72	3/1/2003	0:00	3	0.849	mS/cm			1	Newton
L-68.72	3/1/2003	0:00	32	27	ppm			1	Newton
L-68.72	3/1/2003	0:00	35	0.83	ppm			1	Newton
L-68.72	3/1/2003	0:00	36	0.17	ppm			1	Newton
L-EB-11	3/1/2003	0:00	1	8.02				1	Newton
L-EB-11	3/1/2003	0:00	38	9.85	epm			1	Newton
L-EB-11	3/1/2003	0:00	39	10.28	epm			1	Newton
L-EB-11	3/1/2003	0:00	40	-2.11	%			1	Newton
L-EB-11	3/1/2003	0:00	4	245	ppm			1	Newton
L-EB-11	3/1/2003	0:00	6	245	ppm			1	Newton
L-EB-11	3/1/2003	0:00	7	95	ppm			1	Newton
L-EB-11	3/1/2003	0:00	8	170	ppm			1	Newton
L-EB-11	3/1/2003	0:00	9	0.79	ppm			1	Newton
L-EB-11	3/1/2003	0:00	10		ppm	<	0.5	1	Newton
L-EB-11	3/1/2003	0:00	11	0.57	ppm			1	Newton
L-EB-11	3/1/2003	0:00	12	110	ppm			1	Newton
L-EB-11	3/1/2003	0:00	13	6.1	ppm			1	Newton
L-EB-11	3/1/2003	0:00	14	14	ppm			1	Newton
L-EB-11	3/1/2003	0:00	15	75	ppm			1	Newton
L-EB-11	3/1/2003	0:00	2	620	ppm			1	Newton
L-EB-11	3/1/2003	0:00	19	0.2	ppm			1	Newton
L-EB-11	3/1/2003	0:00	3	855	mS/cm			1	Newton
L-EB-11	3/1/2003	0:00	32	26	ppm			1	Newton
L-EB-11	3/1/2003	0:00	35	0.84	ppm			1	Newton
L-EB-11	3/1/2003	0:00	36	0.17	ppm			1	Newton
L-SBB	3/1/2003	0:00	1	7.97				0	Newton
L-SBB	3/1/2003	0:00	38	9.44	epm			0	Newton
L-SBB	3/1/2003	0:00	39	9.88	epm			0	Newton
L-SBB	3/1/2003	0:00	40	-2.26	%			0	Newton
L-SBB	3/1/2003	0:00	4	224	ppm			0	Newton
L-SBB	3/1/2003	0:00	6	225	ppm			0	Newton
L-SBB	3/1/2003	0:00	7	100	ppm			0	Newton
L-SBB	3/1/2003	0:00	8	160	ppm			0	Newton
L-SBB	3/1/2003	0:00	9	0.34	ppm			0	Newton
L-SBB	3/1/2003	0:00	10		ppm	<	0.5	0	Newton
L-SBB	3/1/2003	0:00	11	0.55	ppm			0	Newton
L-SBB	3/1/2003	0:00	12	110	ppm			0	Newton
L-SBB	3/1/2003	0:00	13	6.1	ppm			0	Newton
L-SBB	3/1/2003	0:00	14	12	ppm			0	Newton
L-SBB	3/1/2003	0:00	15	70	ppm			0	Newton
L-SBB	3/1/2003	0:00	2	600	ppm			0	Newton
L-SBB	3/1/2003	0:00	19	0.2	ppm			0	Newton
L-SBB	3/1/2003	0:00	3	0.834	mS/cm			0	Newton
L-SBB	3/1/2003	0:00	32	24	ppm			0	Newton
L-SBB	3/1/2003	0:00	35	0.81	ppm			0	Newton
L-SBB	3/1/2003	0:00	36	0.17	ppm			0	Newton
R-RGCOR	3/1/2003	0:00	1	8.22				1	Newton
R-RGCOR	3/1/2003	0:00	38	5.87	epm			1	Newton
R-RGCOR	3/1/2003	0:00	39	6.15	epm			1	Newton
R-RGCOR	3/1/2003	0:00	40	-2.3	%			1	Newton
R-RGCOR	3/1/2003	0:00	4	175	ppm			1	Newton
R-RGCOR	3/1/2003	0:00	6	184	ppm			1	Newton
R-RGCOR	3/1/2003	0:00	7	38	ppm			1	Newton
R-RGCOR	3/1/2003	0:00	8	94	ppm			1	Newton
R-RGCOR	3/1/2003	0:00	9	3.3	ppm			1	Newton
R-RGCOR	3/1/2003	0:00	10	0.63	ppm			1	Newton
R-RGCOR	3/1/2003	0:00	11	0.6	ppm			1	Newton
R-RGCOR	3/1/2003	0:00	12	51	ppm			1	Newton
R-RGCOR	3/1/2003	0:00	13	5.6	ppm			1	Newton
R-RGCOR	3/1/2003	0:00	14	9.2	ppm			1	Newton
R-RGCOR	3/1/2003	0:00	15	55	ppm			1	Newton
R-RGCOR	3/1/2003	0:00	2	370	ppm			1	Newton
R-RGCOR	3/1/2003	0:00	19	0.14	ppm			1	Newton
R-RGCOR	3/1/2003	0:00	3	0.501	mS/cm			1	Newton

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
R-RGCOR	3/1/2003	0:00	32	24	ppm			1	Newton
R-RGCOR	3/1/2003	0:00	35	0.51	ppm			1	Newton
R-RGCOR	3/1/2003	0:00	36	0.13	ppm			1	Newton
DUnit7	3/1/2003	0:00	1	7.99				1	Wilcox
DUnit7	3/1/2003	0:00	38	7.3	epm			1	Wilcox
DUnit7	3/1/2003	0:00	39	7.44	epm			1	Wilcox
DUnit7	3/1/2003	0:00	40	-0.97	%			1	Wilcox
DUnit7	3/1/2003	0:00	4	203	ppm			1	Wilcox
DUnit7	3/1/2003	0:00	6	212	ppm			1	Wilcox
DUnit7	3/1/2003	0:00	7	46	ppm			1	Wilcox
DUnit7	3/1/2003	0:00	8	125	ppm			1	Wilcox
DUnit7	3/1/2003	0:00	9	2.1	ppm			1	Wilcox
DUnit7	3/1/2003	0:00	10		ppm	<	0.5	1	Wilcox
DUnit7	3/1/2003	0:00	11	0.57	ppm			1	Wilcox
DUnit7	3/1/2003	0:00	12	71	ppm			1	Wilcox
DUnit7	3/1/2003	0:00	13	5.7	ppm			1	Wilcox
DUnit7	3/1/2003	0:00	14	11	ppm			1	Wilcox
DUnit7	3/1/2003	0:00	15	63	ppm			1	Wilcox
DUnit7	3/1/2003	0:00	2	460	ppm			1	Wilcox
DUnit7	3/1/2003	0:00	19	0.16	ppm			1	Wilcox
DUnit7	3/1/2003	0:00	3	0.622	mS/cm			1	Wilcox
DUnit7	3/1/2003	0:00	32	27	ppm			1	Wilcox
DUnit7	3/1/2003	0:00	35	0.62	ppm			1	Wilcox
DUnit7	3/1/2003	0:00	36	0.13	ppm			1	Wilcox
R-EB-11	3/1/2003	0:00	1	8.18				1	Newton
R-EB-11	3/1/2003	0:00	38	5.81	epm			1	Newton
R-EB-11	3/1/2003	0:00	39	6.06	epm			1	Newton
R-EB-11	3/1/2003	0:00	40	-2.12	%			1	Newton
R-EB-11	3/1/2003	0:00	4	174	ppm			1	Newton
R-EB-11	3/1/2003	0:00	6	180	ppm			1	Newton
R-EB-11	3/1/2003	0:00	7	37	ppm			1	Newton
R-EB-11	3/1/2003	0:00	8	95	ppm			1	Newton
R-EB-11	3/1/2003	0:00	9	2.7	ppm			1	Newton
R-EB-11	3/1/2003	0:00	10	0.54	ppm			1	Newton
R-EB-11	3/1/2003	0:00	11	0.56	ppm			1	Newton
R-EB-11	3/1/2003	0:00	12	50	ppm			1	Newton
R-EB-11	3/1/2003	0:00	13	5.5	ppm			1	Newton
R-EB-11	3/1/2003	0:00	14	9	ppm			1	Newton
R-EB-11	3/1/2003	0:00	15	55	ppm			1	Newton
R-EB-11	3/1/2003	0:00	2	370	ppm			1	Newton
R-EB-11	3/1/2003	0:00	19	0.14	ppm			1	Newton
R-EB-11	3/1/2003	0:00	3	0.517	mS/cm			1	Newton
R-EB-11	3/1/2003	0:00	32	26	ppm			1	Newton
R-EB-11	3/1/2003	0:00	35	0.51	ppm			1	Newton
R-EB-11	3/1/2003	0:00	36	0.11	ppm			1	Newton
R-114.60	3/1/2003	0:00	1	8.14				1	Wilcox
R-114.60	3/1/2003	0:00	38	6.17	epm			1	Wilcox
R-114.60	3/1/2003	0:00	39	6.53	epm			1	Wilcox
R-114.60	3/1/2003	0:00	40	-2.76	%			1	Wilcox
R-114.60	3/1/2003	0:00	4	179	ppm			1	Wilcox
R-114.60	3/1/2003	0:00	6	191	ppm			1	Wilcox
R-114.60	3/1/2003	0:00	7	42	ppm			1	Wilcox
R-114.60	3/1/2003	0:00	8	100	ppm			1	Wilcox
R-114.60	3/1/2003	0:00	9	4.6	ppm			1	Wilcox
R-114.60	3/1/2003	0:00	10	0.69	ppm			1	Wilcox
R-114.60	3/1/2003	0:00	11	0.59	ppm			1	Wilcox
R-114.60	3/1/2003	0:00	12	56	ppm			1	Wilcox
R-114.60	3/1/2003	0:00	13	5.6	ppm			1	Wilcox
R-114.60	3/1/2003	0:00	14	9.6	ppm			1	Wilcox
R-114.60	3/1/2003	0:00	15	56	ppm			1	Wilcox
R-114.60	3/1/2003	0:00	2	400	ppm			1	Wilcox
R-114.60	3/1/2003	0:00	19	0.15	ppm			1	Wilcox
R-114.60	3/1/2003	0:00	3	0.529	mS/cm			1	Wilcox
R-114.60	3/1/2003	0:00	32	26	ppm			1	Wilcox
R-114.60	3/1/2003	0:00	35	0.51	ppm			1	Wilcox
R-114.60	3/1/2003	0:00	36	0.13	ppm			1	Wilcox
L-114.60	3/1/2003	0:00	1	7.68				1	Wilcox

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
L-114.60	3/1/2003	0:00	38	9.83	epm			1	Wilcox
L-114.60	3/1/2003	0:00	39	10.33	epm			1	Wilcox
L-114.60	3/1/2003	0:00	40	-2.44	%			1	Wilcox
L-114.60	3/1/2003	0:00	4	300	ppm			1	Wilcox
L-114.60	3/1/2003	0:00	6	244	ppm			1	Wilcox
L-114.60	3/1/2003	0:00	7	83	ppm			1	Wilcox
L-114.60	3/1/2003	0:00	8	190	ppm			1	Wilcox
L-114.60	3/1/2003	0:00	9	0.14	ppm			1	Wilcox
L-114.60	3/1/2003	0:00	10		ppm	<	0.5	1	Wilcox
L-114.60	3/1/2003	0:00	11	0.48	ppm			1	Wilcox
L-114.60	3/1/2003	0:00	12	85	ppm			1	Wilcox
L-114.60	3/1/2003	0:00	13	4.8	ppm			1	Wilcox
L-114.60	3/1/2003	0:00	14	17	ppm			1	Wilcox
L-114.60	3/1/2003	0:00	15	92	ppm			1	Wilcox
L-114.60	3/1/2003	0:00	2	620	ppm			1	Wilcox
L-114.60	3/1/2003	0:00	19	0.15	ppm			1	Wilcox
L-114.60	3/1/2003	0:00	3	0.825	mS/cm			1	Wilcox
L-114.60	3/1/2003	0:00	32	23	ppm			1	Wilcox
L-114.60	3/1/2003	0:00	35	1.1	ppm			1	Wilcox
L-114.60	3/1/2003	0:00	36	0.16	ppm			1	Wilcox
L-109.49	3/1/2003	0:00	1	7.92				1	Wilcox
L-109.49	3/1/2003	0:00	38	8.76	epm			1	Wilcox
L-109.49	3/1/2003	0:00	39	9.07	epm			1	Wilcox
L-109.49	3/1/2003	0:00	40	-1.74	%			1	Wilcox
L-109.49	3/1/2003	0:00	4	259	ppm			1	Wilcox
L-109.49	3/1/2003	0:00	6	246	ppm			1	Wilcox
L-109.49	3/1/2003	0:00	7	58	ppm			1	Wilcox
L-109.49	3/1/2003	0:00	8	162	ppm			1	Wilcox
L-109.49	3/1/2003	0:00	9		ppm	<	0.1	1	Wilcox
L-109.49	3/1/2003	0:00	10		ppm	<	0.5	1	Wilcox
L-109.49	3/1/2003	0:00	11	0.45	ppm			1	Wilcox
L-109.49	3/1/2003	0:00	12	79	ppm			1	Wilcox
L-109.49	3/1/2003	0:00	13	4.8	ppm			1	Wilcox
L-109.49	3/1/2003	0:00	14	15	ppm			1	Wilcox
L-109.49	3/1/2003	0:00	15	79	ppm			1	Wilcox
L-109.49	3/1/2003	0:00	2	550	ppm			1	Wilcox
L-109.49	3/1/2003	0:00	19	0.15	ppm			1	Wilcox
L-109.49	3/1/2003	0:00	3	0.732	mS/cm			1	Wilcox
L-109.49	3/1/2003	0:00	32	24	ppm			1	Wilcox
L-109.49	3/1/2003	0:00	35	0.95	ppm			1	Wilcox
L-109.49	3/1/2003	0:00	36	0.14	ppm			1	Wilcox
R-109.49	3/1/2003	0:00	1	8.16				1	Wilcox
R-109.49	3/1/2003	0:00	38	6.06	epm			1	Wilcox
R-109.49	3/1/2003	0:00	39	6.3	epm			1	Wilcox
R-109.49	3/1/2003	0:00	40	-1.95	%			1	Wilcox
R-109.49	3/1/2003	0:00	4	176	ppm			1	Wilcox
R-109.49	3/1/2003	0:00	6	180	ppm			1	Wilcox
R-109.49	3/1/2003	0:00	7	42	ppm			1	Wilcox
R-109.49	3/1/2003	0:00	8	98	ppm			1	Wilcox
R-109.49	3/1/2003	0:00	9	4.5	ppm			1	Wilcox
R-109.49	3/1/2003	0:00	10	0.69	ppm			1	Wilcox
R-109.49	3/1/2003	0:00	11	0.6	ppm			1	Wilcox
R-109.49	3/1/2003	0:00	12	55	ppm			1	Wilcox
R-109.49	3/1/2003	0:00	13	5.5	ppm			1	Wilcox
R-109.49	3/1/2003	0:00	14	9.4	ppm			1	Wilcox
R-109.49	3/1/2003	0:00	15	55	ppm			1	Wilcox
R-109.49	3/1/2003	0:00	2	390	ppm			1	Wilcox
R-109.49	3/1/2003	0:00	19	0.15	ppm			1	Wilcox
R-109.49	3/1/2003	0:00	3	0.533	mS/cm			1	Wilcox
R-109.49	3/1/2003	0:00	32	25	ppm			1	Wilcox
R-109.49	3/1/2003	0:00	35	0.5	ppm			1	Wilcox
R-109.49	3/1/2003	0:00	36	0.12	ppm			1	Wilcox
L-99.59	3/1/2003	0:00	1	7.98				1	Wilcox
L-99.59	3/1/2003	0:00	38	7.12	epm			1	Wilcox
L-99.59	3/1/2003	0:00	39	7.31	epm			1	Wilcox
L-99.59	3/1/2003	0:00	40	-1.28	%			1	Wilcox
L-99.59	3/1/2003	0:00	4	208	ppm			1	Wilcox

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
L-99.59	3/1/2003	0:00	6	205	ppm			1	Wilcox
L-99.59	3/1/2003	0:00	7	46	ppm			1	Wilcox
L-99.59	3/1/2003	0:00	8	125	ppm			1	Wilcox
L-99.59	3/1/2003	0:00	9	0.94	ppm			1	Wilcox
L-99.59	3/1/2003	0:00	10		ppm	<	0.5	1	Wilcox
L-99.59	3/1/2003	0:00	11	0.54	ppm			1	Wilcox
L-99.59	3/1/2003	0:00	12	65	ppm			1	Wilcox
L-99.59	3/1/2003	0:00	13	5.1	ppm			1	Wilcox
L-99.59	3/1/2003	0:00	14	11	ppm			1	Wilcox
L-99.59	3/1/2003	0:00	15	65	ppm			1	Wilcox
L-99.59	3/1/2003	0:00	2	450	ppm			1	Wilcox
L-99.59	3/1/2003	0:00	19	0.14	ppm			1	Wilcox
L-99.59	3/1/2003	0:00	3	610	mS/cm			1	Wilcox
L-99.59	3/1/2003	0:00	32	25	ppm			1	Wilcox
L-99.59	3/1/2003	0:00	35	0.66	ppm			1	Wilcox
L-99.59	3/1/2003	0:00	36	0.13	ppm			1	Wilcox
R-99.59	3/1/2003	0:00	1	8.18				1	Wilcox
R-99.59	3/1/2003	0:00	38	6.16	epm			1	Wilcox
R-99.59	3/1/2003	0:00	39	6.37	epm			1	Wilcox
R-99.59	3/1/2003	0:00	40	-1.7	%			1	Wilcox
R-99.59	3/1/2003	0:00	4	181	ppm			1	Wilcox
R-99.59	3/1/2003	0:00	6	185	ppm			1	Wilcox
R-99.59	3/1/2003	0:00	7	41	ppm			1	Wilcox
R-99.59	3/1/2003	0:00	8	100	ppm			1	Wilcox
R-99.59	3/1/2003	0:00	9	3.3	ppm			1	Wilcox
R-99.59	3/1/2003	0:00	10	0.61	ppm			1	Wilcox
R-99.59	3/1/2003	0:00	11	0.57	ppm			1	Wilcox
R-99.59	3/1/2003	0:00	12	55	ppm			1	Wilcox
R-99.59	3/1/2003	0:00	13	5.5	ppm			1	Wilcox
R-99.59	3/1/2003	0:00	14	10	ppm			1	Wilcox
R-99.59	3/1/2003	0:00	15	56	ppm			1	Wilcox
R-99.59	3/1/2003	0:00	2	390	ppm			1	Wilcox
R-99.59	3/1/2003	0:00	19	0.14	ppm			1	Wilcox
R-99.59	3/1/2003	0:00	3	0.543	mS/cm			1	Wilcox
R-99.59	3/1/2003	0:00	32	25	ppm			1	Wilcox
R-99.59	3/1/2003	0:00	35	0.53	ppm			1	Wilcox
R-99.59	3/1/2003	0:00	36	0.13	ppm			1	Wilcox
L-91.28	3/1/2003	0:00	1	7.88				1	Wilcox
L-91.28	3/1/2003	0:00	38	7.16	epm			1	Wilcox
L-91.28	3/1/2003	0:00	39	7.51	epm			1	Wilcox
L-91.28	3/1/2003	0:00	40	-2.38	%			1	Wilcox
L-91.28	3/1/2003	0:00	4	208	ppm			1	Wilcox
L-91.28	3/1/2003	0:00	6	210	ppm			1	Wilcox
L-91.28	3/1/2003	0:00	7	47	ppm			1	Wilcox
L-91.28	3/1/2003	0:00	8	130	ppm			1	Wilcox
L-91.28	3/1/2003	0:00	9	0.74	ppm			1	Wilcox
L-91.28	3/1/2003	0:00	10		ppm	<	0.5	1	Wilcox
L-91.28	3/1/2003	0:00	11	0.5	ppm			1	Wilcox
L-91.28	3/1/2003	0:00	12	66	ppm			1	Wilcox
L-91.28	3/1/2003	0:00	13	5.1	ppm			1	Wilcox
L-91.28	3/1/2003	0:00	14	11	ppm			1	Wilcox
L-91.28	3/1/2003	0:00	15	65	ppm			1	Wilcox
L-91.28	3/1/2003	0:00	2	450	ppm			1	Wilcox
L-91.28	3/1/2003	0:00	19	0.14	ppm			1	Wilcox
L-91.28	3/1/2003	0:00	3	0.611	mS/cm			1	Wilcox
L-91.28	3/1/2003	0:00	32	23	ppm			1	Wilcox
L-91.28	3/1/2003	0:00	35	0.65	ppm			1	Wilcox
L-91.28	3/1/2003	0:00	36	0.13	ppm			1	Wilcox
L-91.28	3/1/2003	0:00	38	7.26	epm			6	Wilcox
L-91.28	3/1/2003	0:00	39	7.47	epm			6	Wilcox
L-91.28	3/1/2003	0:00	40	-1.46	%			6	Wilcox
L-91.28	3/1/2003	0:00	4	210	ppm			6	Wilcox
L-91.28	3/1/2003	0:00	6	209	ppm			6	Wilcox
L-91.28	3/1/2003	0:00	7	46	ppm			6	Wilcox
L-91.28	3/1/2003	0:00	8	130	ppm			6	Wilcox
L-91.28	3/1/2003	0:00	9	0.73	ppm			6	Wilcox
L-91.28	3/1/2003	0:00	10		ppm	<	0.5	6	Wilcox

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
L-91.28	3/1/2003	0:00	11	0.51	ppm			6	Wilcox
L-91.28	3/1/2003	0:00	12	67	ppm			6	Wilcox
L-91.28	3/1/2003	0:00	13	5	ppm			6	Wilcox
L-91.28	3/1/2003	0:00	14	11	ppm			6	Wilcox
L-91.28	3/1/2003	0:00	15	66	ppm			6	Wilcox
L-91.28	3/1/2003	0:00	2	460	ppm			6	Wilcox
L-91.28	3/1/2003	0:00	19	0.14	ppm			6	Wilcox
L-91.28	3/1/2003	0:00	32	24	ppm			6	Wilcox
L-91.28	3/1/2003	0:00	35	0.65	ppm			6	Wilcox
L-91.28	3/1/2003	0:00	36	0.13	ppm			6	Wilcox
R-91.28	3/1/2003	0:00	1	7.8				1	Wilcox
R-91.28	3/1/2003	0:00	38	6.08	epm			1	Wilcox
R-91.28	3/1/2003	0:00	39	6.43	epm			1	Wilcox
R-91.28	3/1/2003	0:00	40	-2.79	%			1	Wilcox
R-91.28	3/1/2003	0:00	4	179	ppm			1	Wilcox
R-91.28	3/1/2003	0:00	6	190	ppm			1	Wilcox
R-91.28	3/1/2003	0:00	7	40	ppm			1	Wilcox
R-91.28	3/1/2003	0:00	8	100	ppm			1	Wilcox
R-91.28	3/1/2003	0:00	9	3.1	ppm			1	Wilcox
R-91.28	3/1/2003	0:00	10	0.66	ppm			1	Wilcox
R-91.28	3/1/2003	0:00	11	0.57	ppm			1	Wilcox
R-91.28	3/1/2003	0:00	12	54	ppm			1	Wilcox
R-91.28	3/1/2003	0:00	13	5.5	ppm			1	Wilcox
R-91.28	3/1/2003	0:00	14	9.5	ppm			1	Wilcox
R-91.28	3/1/2003	0:00	15	56	ppm			1	Wilcox
R-91.28	3/1/2003	0:00	2	390	ppm			1	Wilcox
R-91.28	3/1/2003	0:00	19	0.13	ppm			1	Wilcox
R-91.28	3/1/2003	0:00	3	0.523	mS/cm			1	Wilcox
R-91.28	3/1/2003	0:00	32	24	ppm			1	Wilcox
R-91.28	3/1/2003	0:00	35	0.53	ppm			1	Wilcox
R-91.28	3/1/2003	0:00	36	0.13	ppm			1	Wilcox
L-87.62	3/1/2003	0:00	1	7.71				1	Wilcox
L-87.62	3/1/2003	0:00	38	7.34	epm			1	Wilcox
L-87.62	3/1/2003	0:00	39	7.7	epm			1	Wilcox
L-87.62	3/1/2003	0:00	40	-2.42	%			1	Wilcox
L-87.62	3/1/2003	0:00	4	208	ppm			1	Wilcox
L-87.62	3/1/2003	0:00	6	210	ppm			1	Wilcox
L-87.62	3/1/2003	0:00	7	50	ppm			1	Wilcox
L-87.62	3/1/2003	0:00	8	135	ppm			1	Wilcox
L-87.62	3/1/2003	0:00	9	0.67	ppm			1	Wilcox
L-87.62	3/1/2003	0:00	10		ppm	<	0.5	1	Wilcox
L-87.62	3/1/2003	0:00	11	0.51	ppm			1	Wilcox
L-87.62	3/1/2003	0:00	12	70	ppm			1	Wilcox
L-87.62	3/1/2003	0:00	13	5.1	ppm			1	Wilcox
L-87.62	3/1/2003	0:00	14	11	ppm			1	Wilcox
L-87.62	3/1/2003	0:00	15	65	ppm			1	Wilcox
L-87.62	3/1/2003	0:00	2	470	ppm			1	Wilcox
L-87.62	3/1/2003	0:00	19	0.15	ppm			1	Wilcox
L-87.62	3/1/2003	0:00	3	0.633	mS/cm			1	Wilcox
L-87.62	3/1/2003	0:00	32	23	ppm			1	Wilcox
L-87.62	3/1/2003	0:00	35	0.67	ppm			1	Wilcox
L-87.62	3/1/2003	0:00	36	0.13	ppm			1	Wilcox
R-87.62	3/1/2003	0:00	1	8.13				1	Wilcox
R-87.62	3/1/2003	0:00	38	6.35	epm			1	Wilcox
R-87.62	3/1/2003	0:00	39	6.36	epm			1	Wilcox
R-87.62	3/1/2003	0:00	40	-0.09	%			1	Wilcox
R-87.62	3/1/2003	0:00	4	186	ppm			1	Wilcox
R-87.62	3/1/2003	0:00	6	186	ppm			1	Wilcox
R-87.62	3/1/2003	0:00	7	40	ppm			1	Wilcox
R-87.62	3/1/2003	0:00	8	100	ppm			1	Wilcox
R-87.62	3/1/2003	0:00	9	3.2	ppm			1	Wilcox
R-87.62	3/1/2003	0:00	10	0.68	ppm			1	Wilcox
R-87.62	3/1/2003	0:00	11	0.57	ppm			1	Wilcox
R-87.62	3/1/2003	0:00	12	57	ppm			1	Wilcox
R-87.62	3/1/2003	0:00	13	5.6	ppm			1	Wilcox
R-87.62	3/1/2003	0:00	14	10	ppm			1	Wilcox
R-87.62	3/1/2003	0:00	15	58	ppm			1	Wilcox

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
R-87.62	3/1/2003	0:00	2	400	ppm			1	Wilcox
R-87.62	3/1/2003	0:00	19	0.13	ppm			1	Wilcox
R-87.62	3/1/2003	0:00	3	0.535	mS/cm			1	Wilcox
R-87.62	3/1/2003	0:00	32	28	ppm			1	Wilcox
R-87.62	3/1/2003	0:00	35	0.54	ppm			1	Wilcox
R-87.62	3/1/2003	0:00	36	0.12	ppm			1	Wilcox
R-83.98	3/1/2003	0:00	1	8.1				1	Wilcox
R-83.98	3/1/2003	0:00	38	6.13	epm			1	Wilcox
R-83.98	3/1/2003	0:00	39	6.46	epm			1	Wilcox
R-83.98	3/1/2003	0:00	40	-2.63	%			1	Wilcox
R-83.98	3/1/2003	0:00	4	177	ppm			1	Wilcox
R-83.98	3/1/2003	0:00	6	187	ppm			1	Wilcox
R-83.98	3/1/2003	0:00	7	43	ppm			1	Wilcox
R-83.98	3/1/2003	0:00	8	100	ppm			1	Wilcox
R-83.98	3/1/2003	0:00	9	3.3	ppm			1	Wilcox
R-83.98	3/1/2003	0:00	10	0.64	ppm			1	Wilcox
R-83.98	3/1/2003	0:00	11	0.56	ppm			1	Wilcox
R-83.98	3/1/2003	0:00	12	56	ppm			1	Wilcox
R-83.98	3/1/2003	0:00	13	5.6	ppm			1	Wilcox
R-83.98	3/1/2003	0:00	14	9.7	ppm			1	Wilcox
R-83.98	3/1/2003	0:00	15	55	ppm			1	Wilcox
R-83.98	3/1/2003	0:00	2	390	ppm			1	Wilcox
R-83.98	3/1/2003	0:00	19	0.14	ppm			1	Wilcox
R-83.98	3/1/2003	0:00	3	0.528	mS/cm			1	Wilcox
R-83.98	3/1/2003	0:00	32	24	ppm			1	Wilcox
R-83.98	3/1/2003	0:00	35	0.52	ppm			1	Wilcox
R-83.98	3/1/2003	0:00	36	0.13	ppm			1	Wilcox
L-83.98	3/1/2003	0:00	1	7.92				1	Wilcox
L-83.98	3/1/2003	0:00	38	7.53	epm			1	Wilcox
L-83.98	3/1/2003	0:00	39	7.84	epm			1	Wilcox
L-83.98	3/1/2003	0:00	40	-2.03	%			1	Wilcox
L-83.98	3/1/2003	0:00	4	213	ppm			1	Wilcox
L-83.98	3/1/2003	0:00	6	215	ppm			1	Wilcox
L-83.98	3/1/2003	0:00	7	52	ppm			1	Wilcox
L-83.98	3/1/2003	0:00	8	135	ppm			1	Wilcox
L-83.98	3/1/2003	0:00	9	0.52	ppm			1	Wilcox
L-83.98	3/1/2003	0:00	10		ppm	<	0.5	1	Wilcox
L-83.98	3/1/2003	0:00	11	0.51	ppm			1	Wilcox
L-83.98	3/1/2003	0:00	12	72	ppm			1	Wilcox
L-83.98	3/1/2003	0:00	13	5.1	ppm			1	Wilcox
L-83.98	3/1/2003	0:00	14	11	ppm			1	Wilcox
L-83.98	3/1/2003	0:00	15	67	ppm			1	Wilcox
L-83.98	3/1/2003	0:00	2	470	ppm			1	Wilcox
L-83.98	3/1/2003	0:00	19	0.15	ppm			1	Wilcox
L-83.98	3/1/2003	0:00	3	0.633	mS/cm			1	Wilcox
L-83.98	3/1/2003	0:00	32	23	ppm			1	Wilcox
L-83.98	3/1/2003	0:00	35	0.68	ppm			1	Wilcox
L-83.98	3/1/2003	0:00	36	0.13	ppm			1	Wilcox
R-68.72	3/1/2003	0:00	1	8.1				1	Newton
R-68.72	3/1/2003	0:00	38	6.05	epm			1	Newton
R-68.72	3/1/2003	0:00	39	6.08	epm			1	Newton
R-68.72	3/1/2003	0:00	40	-0.22	%			1	Newton
R-68.72	3/1/2003	0:00	4	180	ppm			1	Newton
R-68.72	3/1/2003	0:00	6	179	ppm			1	Newton
R-68.72	3/1/2003	0:00	7	38	ppm			1	Newton
R-68.72	3/1/2003	0:00	8	96	ppm			1	Newton
R-68.72	3/1/2003	0:00	9	2.7	ppm			1	Newton
R-68.72	3/1/2003	0:00	10		ppm	<	0.5	1	Newton
R-68.72	3/1/2003	0:00	11	0.58	ppm			1	Newton
R-68.72	3/1/2003	0:00	12	53	ppm			1	Newton
R-68.72	3/1/2003	0:00	13	5.6	ppm			1	Newton
R-68.72	3/1/2003	0:00	14	9.7	ppm			1	Newton
R-68.72	3/1/2003	0:00	15	56	ppm			1	Newton
R-68.72	3/1/2003	0:00	2	380	ppm			1	Newton
R-68.72	3/1/2003	0:00	19	0.13	ppm			1	Newton
R-68.72	3/1/2003	0:00	3	0.498	mS/cm			1	Newton
R-68.72	3/1/2003	0:00	32	24	ppm			1	Newton

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
R-68.72	3/1/2003	0:00	35	0.53	ppm			1	Newton
R-68.72	3/1/2003	0:00	36	0.12	ppm			1	Newton
D-ELMDR	3/1/2003	0:00	1	7.9				1	Newton
D-ELMDR	3/1/2003	0:00	38	9.64	epm			1	Newton
D-ELMDR	3/1/2003	0:00	39	10.17	epm			1	Newton
D-ELMDR	3/1/2003	0:00	40	-2.64	%			1	Newton
D-ELMDR	3/1/2003	0:00	4	245	ppm			1	Newton
D-ELMDR	3/1/2003	0:00	6	255	ppm			1	Newton
D-ELMDR	3/1/2003	0:00	7	85	ppm			1	Newton
D-ELMDR	3/1/2003	0:00	8	170	ppm			1	Newton
D-ELMDR	3/1/2003	0:00	9	1.1	ppm			1	Newton
D-ELMDR	3/1/2003	0:00	10		ppm	<	0.5	1	Newton
D-ELMDR	3/1/2003	0:00	11	0.59	ppm			1	Newton
D-ELMDR	3/1/2003	0:00	12	105	ppm			1	Newton
D-ELMDR	3/1/2003	0:00	13	6.4	ppm			1	Newton
D-ELMDR	3/1/2003	0:00	14	14	ppm			1	Newton
D-ELMDR	3/1/2003	0:00	15	75	ppm			1	Newton
D-ELMDR	3/1/2003	0:00	2	610	ppm			1	Newton
D-ELMDR	3/1/2003	0:00	19	0.2	ppm			1	Newton
D-ELMDR	3/1/2003	0:00	3	0.824	mS/cm			1	Newton
D-ELMDR	3/1/2003	0:00	32	27	ppm			1	Newton
D-ELMDR	3/1/2003	0:00	35	0.85	ppm			1	Newton
D-ELMDR	3/1/2003	0:00	36	0.16	ppm			1	Newton
D-SRD-91.28	6/16/2003	0:00	1	7.9				1	Newton
D-SRD-91.28	6/16/2003	0:00	38	8.68	epm			1	Newton
D-SRD-91.28	6/16/2003	0:00	39	8.78	epm			1	Newton
D-SRD-91.28	6/16/2003	0:00	40	-0.58	%			1	Newton
D-SRD-91.28	6/16/2003	0:00	4	213	ppm			1	Newton
D-SRD-91.28	6/16/2003	0:00	6	248	ppm			1	Newton
D-SRD-91.28	6/16/2003	0:00	7	57	ppm			1	Newton
D-SRD-91.28	6/16/2003	0:00	8	148	ppm			1	Newton
D-SRD-91.28	6/16/2003	0:00	9		ppm	<	0.1	1	Newton
D-SRD-91.28	6/16/2003	0:00	10		ppm	<	0.5	1	Newton
D-SRD-91.28	6/16/2003	0:00	11	0.49	ppm			1	Newton
D-SRD-91.28	6/16/2003	0:00	12	98	ppm			1	Newton
D-SRD-91.28	6/16/2003	0:00	13	5.4	ppm			1	Newton
D-SRD-91.28	6/16/2003	0:00	14	13	ppm			1	Newton
D-SRD-91.28	6/16/2003	0:00	15	64	ppm			1	Newton
D-SRD-91.28	6/16/2003	0:00	2	540	ppm			1	Newton
D-SRD-91.28	6/16/2003	0:00	19	0.13	ppm			1	Newton
D-SRD-91.28	6/16/2003	0:00	3	769	mS/cm			1	Newton
D-SRD-91.28	6/16/2003	0:00	32	25	ppm			1	Newton
D-SRD-91.28	6/16/2003	0:00	35	0.72	ppm			1	Newton
D-SRD-91.28	6/16/2003	0:00	36	0.14	ppm			1	Newton
R-87.62	6/16/2003	0:00	1	8.06				1	Newton
R-87.62	6/16/2003	0:00	38	7.88	epm			1	Newton
R-87.62	6/16/2003	0:00	39	7.8	epm			1	Newton
R-87.62	6/16/2003	0:00	40	0.51	%			1	Newton
R-87.62	6/16/2003	0:00	4	222	ppm			1	Newton
R-87.62	6/16/2003	0:00	6	225	ppm			1	Newton
R-87.62	6/16/2003	0:00	7	49	ppm			1	Newton
R-87.62	6/16/2003	0:00	8	130	ppm			1	Newton
R-87.62	6/16/2003	0:00	9	0.11	ppm			1	Newton
R-87.62	6/16/2003	0:00	10		ppm	<	0.5	1	Newton
R-87.62	6/16/2003	0:00	11	0.43	ppm			1	Newton
R-87.62	6/16/2003	0:00	12	76	ppm			1	Newton
R-87.62	6/16/2003	0:00	13	5.1	ppm			1	Newton
R-87.62	6/16/2003	0:00	14	12	ppm			1	Newton
R-87.62	6/16/2003	0:00	15	69	ppm			1	Newton
R-87.62	6/16/2003	0:00	2	480	ppm			1	Newton
R-87.62	6/16/2003	0:00	19	0.1	ppm			1	Newton
R-87.62	6/16/2003	0:00	3	686	mS/cm			1	Newton
R-87.62	6/16/2003	0:00	32	23	ppm			1	Newton
R-87.62	6/16/2003	0:00	35	0.72	ppm			1	Newton
R-87.62	6/16/2003	0:00	36	0.12	ppm			1	Newton
L-87.62	6/16/2003	0:00	1	7.84				1	Newton
L-87.62	6/16/2003	0:00	38	8.95	epm			1	Newton

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
L-87.62	6/16/2003	0:00	39	9.02	epm			1	Newton
L-87.62	6/16/2003	0:00	40	-0.36	%			1	Newton
L-87.62	6/16/2003	0:00	4	228	ppm			1	Newton
L-87.62	6/16/2003	0:00	6	252	ppm			1	Newton
L-87.62	6/16/2003	0:00	7	69	ppm			1	Newton
L-87.62	6/16/2003	0:00	8	140	ppm			1	Newton
L-87.62	6/16/2003	0:00	9		ppm	<	0.1	1	Newton
L-87.62	6/16/2003	0:00	10		ppm	<	0.5	1	Newton
L-87.62	6/16/2003	0:00	11	0.42	ppm			1	Newton
L-87.62	6/16/2003	0:00	12	97	ppm			1	Newton
L-87.62	6/16/2003	0:00	13	5.9	ppm			1	Newton
L-87.62	6/16/2003	0:00	14	13	ppm			1	Newton
L-87.62	6/16/2003	0:00	15	70	ppm			1	Newton
L-87.62	6/16/2003	0:00	2	550	ppm			1	Newton
L-87.62	6/16/2003	0:00	19	0.13	ppm			1	Newton
L-87.62	6/16/2003	0:00	3	779	mS/cm			1	Newton
L-87.62	6/16/2003	0:00	32	23	ppm			1	Newton
L-87.62	6/16/2003	0:00	35	0.79	ppm			1	Newton
L-87.62	6/16/2003	0:00	36	0.13	ppm			1	Newton
L-114.60	6/16/2003	0:00	1	7.48				1	Wilcox
L-114.60	6/16/2003	0:00	38	12.33	epm			1	Wilcox
L-114.60	6/16/2003	0:00	39	12.08	epm			1	Wilcox
L-114.60	6/16/2003	0:00	40	1.02	%			1	Wilcox
L-114.60	6/16/2003	0:00	4	386	ppm			1	Wilcox
L-114.60	6/16/2003	0:00	6	262	ppm			1	Wilcox
L-114.60	6/16/2003	0:00	7	105	ppm			1	Wilcox
L-114.60	6/16/2003	0:00	8	230	ppm			1	Wilcox
L-114.60	6/16/2003	0:00	9	0.53	ppm			1	Wilcox
L-114.60	6/16/2003	0:00	10		ppm	<	0.5	1	Wilcox
L-114.60	6/16/2003	0:00	11	0.39	ppm			1	Wilcox
L-114.60	6/16/2003	0:00	12	102	ppm			1	Wilcox
L-114.60	6/16/2003	0:00	13	5.5	ppm			1	Wilcox
L-114.60	6/16/2003	0:00	14	21	ppm			1	Wilcox
L-114.60	6/16/2003	0:00	15	120	ppm			1	Wilcox
L-114.60	6/16/2003	0:00	2	740	ppm			1	Wilcox
L-114.60	6/16/2003	0:00	19	0.098	ppm			1	Wilcox
L-114.60	6/16/2003	0:00	3	1043	mS/cm			1	Wilcox
L-114.60	6/16/2003	0:00	32	26	ppm			1	Wilcox
L-114.60	6/16/2003	0:00	35	1.4	ppm			1	Wilcox
L-114.60	6/16/2003	0:00	36	0.17	ppm			1	Wilcox
L-109.49	6/16/2003	0:00	1	7.78				1	Wilcox
L-109.49	6/16/2003	0:00	38	10.09	epm			1	Wilcox
L-109.49	6/16/2003	0:00	39	10.08	epm			1	Wilcox
ESC-SG01	6/16/2003	0:00	3	807	mS/cm			1	Wilcox
ESC-SG01	6/16/2003	0:00	32	24	ppm			1	Wilcox
ESC-SG01	6/16/2003	0:00	35	0.87	ppm			1	Wilcox
ESC-SG01	6/16/2003	0:00	36	0.15	ppm			1	Wilcox
R-114.60	6/16/2003	0:00	1	8.08				1	Wilcox
R-114.60	6/16/2003	0:00	38	8.24	epm			1	Wilcox
R-114.60	6/16/2003	0:00	39	8.18	epm			1	Wilcox
R-114.60	6/16/2003	0:00	40	0.34	%			1	Wilcox
R-114.60	6/16/2003	0:00	4	232	ppm			1	Wilcox
R-114.60	6/16/2003	0:00	6	240	ppm			1	Wilcox
R-114.60	6/16/2003	0:00	7	53	ppm			1	Wilcox
R-114.60	6/16/2003	0:00	8	130	ppm			1	Wilcox
R-114.60	6/16/2003	0:00	9	1	ppm			1	Wilcox
R-114.60	6/16/2003	0:00	10		ppm	<	0.5	1	Wilcox
R-114.60	6/16/2003	0:00	11	0.51	ppm			1	Wilcox
R-114.60	6/16/2003	0:00	12	78	ppm			1	Wilcox
R-114.60	6/16/2003	0:00	13	7.1	ppm			1	Wilcox
R-114.60	6/16/2003	0:00	14	14	ppm			1	Wilcox
R-114.60	6/16/2003	0:00	15	70	ppm			1	Wilcox
R-114.60	6/16/2003	0:00	2	500	ppm			1	Wilcox
R-114.60	6/16/2003	0:00	19	0.12	ppm			1	Wilcox
R-114.60	6/16/2003	0:00	3	708	mS/cm			1	Wilcox
R-114.60	6/16/2003	0:00	32	26	ppm			1	Wilcox
R-114.60	6/16/2003	0:00	35	0.75	ppm			1	Wilcox

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
R-114.60	6/16/2003	0:00	36	0.15	ppm			1	Wilcox
L-91.28	6/16/2003	0:00	1	7.64				1	Newton
L-91.28	6/16/2003	0:00	38	8.11	epm			1	Newton
L-91.28	6/16/2003	0:00	39	8.17	epm			1	Newton
L-91.28	6/16/2003	0:00	40	-0.36	%			1	Newton
L-91.28	6/16/2003	0:00	4	212	ppm			1	Newton
L-91.28	6/16/2003	0:00	6	230	ppm			1	Newton
L-91.28	6/16/2003	0:00	7	56	ppm			1	Newton
L-91.28	6/16/2003	0:00	8	134	ppm			1	Newton
L-91.28	6/16/2003	0:00	9	0.33	ppm			1	Newton
L-91.28	6/16/2003	0:00	10		ppm	<	0.5	1	Newton
L-91.28	6/16/2003	0:00	11	0.43	ppm			1	Newton
L-91.28	6/16/2003	0:00	12	86	ppm			1	Newton
L-91.28	6/16/2003	0:00	13	4.8	ppm			1	Newton
L-91.28	6/16/2003	0:00	14	12	ppm			1	Newton
L-91.28	6/16/2003	0:00	15	65	ppm			1	Newton
L-91.28	6/16/2003	0:00	2	500	ppm			1	Newton
L-91.28	6/16/2003	0:00	19	0.12	ppm			1	Newton
L-91.28	6/16/2003	0:00	3	702	mS/cm			1	Newton
L-91.28	6/16/2003	0:00	32	24	ppm			1	Newton
L-91.28	6/16/2003	0:00	35	0.71	ppm			1	Newton
L-91.28	6/16/2003	0:00	36	0.13	ppm			1	Newton
L-99.59	6/16/2003	0:00	1	7.74				1	Newton
L-99.59	6/16/2003	0:00	38	6.93	epm			1	Newton
L-99.59	6/16/2003	0:00	39	7.1	epm			1	Newton
L-99.59	6/16/2003	0:00	40	-1.18	%			1	Newton
L-99.59	6/16/2003	0:00	4	214	ppm			1	Newton
L-99.59	6/16/2003	0:00	6	208	ppm			1	Newton
L-99.59	6/16/2003	0:00	7	42	ppm			1	Newton
L-99.59	6/16/2003	0:00	8	119	ppm			1	Newton
L-99.59	6/16/2003	0:00	9		ppm	<	0.1	1	Newton
L-99.59	6/16/2003	0:00	10		ppm	<	0.5	1	Newton
L-99.59	6/16/2003	0:00	11	0.42	ppm			1	Newton
L-99.59	6/16/2003	0:00	12	58	ppm			1	Newton
L-99.59	6/16/2003	0:00	13	4.3	ppm			1	Newton
L-99.59	6/16/2003	0:00	14	12	ppm			1	Newton
L-99.59	6/16/2003	0:00	15	66	ppm			1	Newton
L-99.59	6/16/2003	0:00	2	430	ppm			1	Newton
L-99.59	6/16/2003	0:00	19	0.098	ppm			1	Newton
L-99.59	6/16/2003	0:00	3	623	mS/cm			1	Newton
L-99.59	6/16/2003	0:00	32	22	ppm			1	Newton
L-99.59	6/16/2003	0:00	35	0.7	ppm			1	Newton
L-99.59	6/16/2003	0:00	36	0.12	ppm			1	Newton
L-109.49	6/16/2003	0:00	40	0.05	%			1	Wilcox
L-109.49	6/16/2003	0:00	4	290	ppm			1	Wilcox
L-109.49	6/16/2003	0:00	6	266	ppm			1	Wilcox
L-109.49	6/16/2003	0:00	7	69	ppm			1	Wilcox
L-109.49	6/16/2003	0:00	8	180	ppm			1	Wilcox
L-109.49	6/16/2003	0:00	9		ppm	<	0.1	1	Wilcox
L-109.49	6/16/2003	0:00	10		ppm	<	0.5	1	Wilcox
L-109.49	6/16/2003	0:00	11	0.38	ppm			1	Wilcox
L-109.49	6/16/2003	0:00	12	95	ppm			1	Wilcox
L-109.49	6/16/2003	0:00	13	5.4	ppm			1	Wilcox
L-109.49	6/16/2003	0:00	14	17	ppm			1	Wilcox
L-109.49	6/16/2003	0:00	15	88	ppm			1	Wilcox
L-109.49	6/16/2003	0:00	2	610	ppm			1	Wilcox
L-109.49	6/16/2003	0:00	19	0.11	ppm			1	Wilcox
L-109.49	6/16/2003	0:00	3	880	mS/cm			1	Wilcox
L-109.49	6/16/2003	0:00	32	25	ppm			1	Wilcox
L-109.49	6/16/2003	0:00	35	1.1	ppm			1	Wilcox
L-109.49	6/16/2003	0:00	36	0.14	ppm			1	Wilcox
ESC-SG01	6/16/2003	0:00	1	7.7				1	Wilcox
ESC-SG01	6/16/2003	0:00	38	9.32	epm			1	Wilcox
ESC-SG01	6/16/2003	0:00	39	9.24	epm			1	Wilcox
ESC-SG01	6/16/2003	0:00	40	0.44	%			1	Wilcox
ESC-SG01	6/16/2003	0:00	4	272	ppm			1	Wilcox
ESC-SG01	6/16/2003	0:00	6	245	ppm			1	Wilcox

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
ESC-SG01	6/16/2003	0:00	7	64	ppm			1	Wilcox
ESC-SG01	6/16/2003	0:00	8	163	ppm			1	Wilcox
ESC-SG01	6/16/2003	0:00	9		ppm	<	0.1	1	Wilcox
ESC-SG01	6/16/2003	0:00	10		ppm	<	0.5	1	Wilcox
ESC-SG01	6/16/2003	0:00	11	0.39	ppm			1	Wilcox
ESC-SG01	6/16/2003	0:00	12	86	ppm			1	Wilcox
ESC-SG01	6/16/2003	0:00	13	5.2	ppm			1	Wilcox
ESC-SG01	6/16/2003	0:00	14	15	ppm			1	Wilcox
ESC-SG01	6/16/2003	0:00	15	84	ppm			1	Wilcox
ESC-SG01	6/16/2003	0:00	2	570	ppm			1	Wilcox
ESC-SG01	6/16/2003	0:00	19	0.11	ppm			1	Wilcox
S-LFCC10	6/16/2003	0:00	1	7.75				1	Newton
S-LFCC10	6/16/2003	0:00	38	5.51	epm			1	Newton
S-LFCC10	6/16/2003	0:00	39	5.41	epm			1	Newton
S-LFCC10	6/16/2003	0:00	40	0.9	%			1	Newton
S-LFCC10	6/16/2003	0:00	4	166	ppm			1	Newton
S-LFCC10	6/16/2003	0:00	6	177	ppm			1	Newton
S-LFCC10	6/16/2003	0:00	7	24	ppm			1	Newton
S-LFCC10	6/16/2003	0:00	8	87	ppm			1	Newton
S-LFCC10	6/16/2003	0:00	9		ppm	<	0.1	1	Newton
S-LFCC10	6/16/2003	0:00	10		ppm	<	0.5	1	Newton
S-LFCC10	6/16/2003	0:00	11	0.35	ppm			1	Newton
S-LFCC10	6/16/2003	0:00	12	48	ppm			1	Newton
S-LFCC10	6/16/2003	0:00	13	3.7	ppm			1	Newton
S-LFCC10	6/16/2003	0:00	14	8.1	ppm			1	Newton
S-LFCC10	6/16/2003	0:00	15	53	ppm			1	Newton
S-LFCC10	6/16/2003	0:00	2	340	ppm			1	Newton
S-LFCC10	6/16/2003	0:00	19	0.063	ppm			1	Newton
S-LFCC10	6/16/2003	0:00	3	480	mS/cm			1	Newton
S-LFCC10	6/16/2003	0:00	32	22	ppm			1	Newton
S-LFCC10	6/16/2003	0:00	35	0.55	ppm			1	Newton
S-LFCC10	6/16/2003	0:00	36		ppm	<	0.1	1	Newton
D-LLDR3	6/17/2003	0:00	1	8.04				1	Wilcox
D-LLDR3	6/17/2003	0:00	38	20.26	epm			1	Wilcox
D-LLDR3	6/17/2003	0:00	39	20.9	epm			1	Wilcox
D-LLDR3	6/17/2003	0:00	40	-1.56	%			1	Wilcox
D-LLDR3	6/17/2003	0:00	4	369	ppm			1	Wilcox
D-LLDR3	6/17/2003	0:00	6	360	ppm			1	Wilcox
D-LLDR3	6/17/2003	0:00	7	280	ppm			1	Wilcox
D-LLDR3	6/17/2003	0:00	8	340	ppm			1	Wilcox
D-LLDR3	6/17/2003	0:00	9	0.11	ppm			1	Wilcox
D-LLDR3	6/17/2003	0:00	10		ppm	<	0.5	1	Wilcox
D-LLDR3	6/17/2003	0:00	11	0.38	ppm			1	Wilcox
D-LLDR3	6/17/2003	0:00	12	290	ppm			1	Wilcox
D-LLDR3	6/17/2003	0:00	13	8.9	ppm			1	Wilcox
D-LLDR3	6/17/2003	0:00	14	23	ppm			1	Wilcox
D-LLDR3	6/17/2003	0:00	15	110	ppm			1	Wilcox
D-LLDR3	6/17/2003	0:00	2	1270	ppm			1	Wilcox
D-LLDR3	6/17/2003	0:00	19	0.29	ppm			1	Wilcox
D-LLDR3	6/17/2003	0:00	3	1828	mS/cm			1	Wilcox
D-LLDR3	6/17/2003	0:00	32	37	ppm			1	Wilcox
D-LLDR3	6/17/2003	0:00	35	1.6	ppm			1	Wilcox
D-LLDR3	6/17/2003	0:00	36	0.28	ppm			1	Wilcox
R-68.72	6/17/2003	0:00	1	8.19				2	Newton
R-68.72	6/17/2003	0:00	38	12.75	epm			2	Newton
R-68.72	6/17/2003	0:00	39	13.06	epm			2	Newton
R-68.72	6/17/2003	0:00	40	-1.18	%			2	Newton
R-68.72	6/17/2003	0:00	4	289	ppm			2	Newton
R-68.72	6/17/2003	0:00	6	282	ppm			2	Newton
R-68.72	6/17/2003	0:00	7	143	ppm			2	Newton
R-68.72	6/17/2003	0:00	8	210	ppm			2	Newton
R-68.72	6/17/2003	0:00	9		ppm	<	0.1	2	Newton
R-68.72	6/17/2003	0:00	10		ppm	<	0.5	2	Newton
R-68.72	6/17/2003	0:00	11	0.47	ppm			2	Newton
R-68.72	6/17/2003	0:00	12	155	ppm			2	Newton
R-68.72	6/17/2003	0:00	13	8.3	ppm			2	Newton
R-68.72	6/17/2003	0:00	14	18	ppm			2	Newton

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
R-68.72	6/17/2003	0:00	15	86	ppm			2	Newton
R-68.72	6/17/2003	0:00	2	790	ppm			2	Newton
R-68.72	6/17/2003	0:00	19	0.15	ppm			2	Newton
R-68.72	6/17/2003	0:00	3	1134	mS/cm			2	Newton
R-68.72	6/17/2003	0:00	32	27	ppm			2	Newton
R-68.72	6/17/2003	0:00	35	1.1	ppm			2	Newton
R-68.72	6/17/2003	0:00	36	0.19	ppm			2	Newton
L-83.98	6/17/2003	0:00	1	7.96				1	Newton
L-83.98	6/17/2003	0:00	38	8.39	epm			1	Newton
L-83.98	6/17/2003	0:00	39	8.51	epm			1	Newton
L-83.98	6/17/2003	0:00	40	-0.74	%			1	Newton
L-83.98	6/17/2003	0:00	4	212	ppm			1	Newton
L-83.98	6/17/2003	0:00	6	223	ppm			1	Newton
L-83.98	6/17/2003	0:00	7	68	ppm			1	Newton
L-83.98	6/17/2003	0:00	8	140	ppm			1	Newton
L-83.98	6/17/2003	0:00	9		ppm	<	0.1	1	Newton
L-83.98	6/17/2003	0:00	10		ppm	<	0.5	1	Newton
L-83.98	6/17/2003	0:00	11	0.44	ppm			1	Newton
L-83.98	6/17/2003	0:00	12	92	ppm			1	Newton
L-83.98	6/17/2003	0:00	13	5.4	ppm			1	Newton
L-83.98	6/17/2003	0:00	14	12	ppm			1	Newton
L-83.98	6/17/2003	0:00	15	65	ppm			1	Newton
L-83.98	6/17/2003	0:00	2	520	ppm			1	Newton
L-83.98	6/17/2003	0:00	19	0.11	ppm			1	Newton
L-83.98	6/17/2003	0:00	3	740	mS/cm			1	Newton
L-83.98	6/17/2003	0:00	32	22	ppm			1	Newton
L-83.98	6/17/2003	0:00	35	0.77	ppm			1	Newton
L-83.98	6/17/2003	0:00	36	0.13	ppm			1	Newton
L-68.72	6/17/2003	0:00	1	8.21				1	Newton
L-68.72	6/17/2003	0:00	38	12.34	epm			1	Newton
L-68.72	6/17/2003	0:00	39	12.45	epm			1	Newton
L-68.72	6/17/2003	0:00	40	-0.43	%			1	Newton
L-68.72	6/17/2003	0:00	4	280	ppm			1	Newton
L-68.72	6/17/2003	0:00	6	260	ppm			1	Newton
L-68.72	6/17/2003	0:00	7	138	ppm			1	Newton
L-68.72	6/17/2003	0:00	8	205	ppm			1	Newton
L-68.72	6/17/2003	0:00	9		ppm	<	0.1	1	Newton
L-68.72	6/17/2003	0:00	10		ppm	<	0.5	1	Newton
L-68.72	6/17/2003	0:00	11	0.49	ppm			1	Newton
L-68.72	6/17/2003	0:00	12	150	ppm			1	Newton
L-68.72	6/17/2003	0:00	13	8	ppm			1	Newton
L-68.72	6/17/2003	0:00	14	17	ppm			1	Newton
L-68.72	6/17/2003	0:00	15	84	ppm			1	Newton
L-68.72	6/17/2003	0:00	2	760	ppm			1	Newton
L-68.72	6/17/2003	0:00	19	0.15	ppm			1	Newton
L-68.72	6/17/2003	0:00	3	1099	mS/cm			1	Newton
L-68.72	6/17/2003	0:00	32	24	ppm			1	Newton
L-68.72	6/17/2003	0:00	35	1.1	ppm			1	Newton
L-68.72	6/17/2003	0:00	36	0.2	ppm			1	Newton
R-91.28	6/17/2003	0:00	1	7.92				1	Newton
R-91.28	6/17/2003	0:00	38	7.5	epm			1	Newton
R-91.28	6/17/2003	0:00	39	7.77	epm			1	Newton
R-91.28	6/17/2003	0:00	40	-1.77	%			1	Newton
R-91.28	6/17/2003	0:00	4	218	ppm			1	Newton
R-91.28	6/17/2003	0:00	6	222	ppm			1	Newton
R-91.28	6/17/2003	0:00	7	48	ppm			1	Newton
R-91.28	6/17/2003	0:00	8	132	ppm			1	Newton
R-91.28	6/17/2003	0:00	9		ppm	<	0.1	1	Newton
R-91.28	6/17/2003	0:00	10		ppm	<	0.5	1	Newton
R-91.28	6/17/2003	0:00	11	0.44	ppm			1	Newton
R-91.28	6/17/2003	0:00	12	69	ppm			1	Newton
R-91.28	6/17/2003	0:00	13	5.1	ppm			1	Newton
R-91.28	6/17/2003	0:00	14	11	ppm			1	Newton
R-91.28	6/17/2003	0:00	15	69	ppm			1	Newton
R-91.28	6/17/2003	0:00	2	470	ppm			1	Newton
R-91.28	6/17/2003	0:00	19	0.096	ppm			1	Newton
R-91.28	6/17/2003	0:00	3	666	mS/cm			1	Newton

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
R-91.28	6/17/2003	0:00	32	22	ppm			1	Newton
R-91.28	6/17/2003	0:00	35	0.71	ppm			1	Newton
R-91.28	6/17/2003	0:00	36	0.12	ppm			1	Newton
R-68.72	6/17/2003	0:00	1	8.11				1	Newton
R-68.72	6/17/2003	0:00	38	12.87	epm			1	Newton
R-68.72	6/17/2003	0:00	39	13.4	epm			1	Newton
R-68.72	6/17/2003	0:00	40	-2.02	%			1	Newton
R-68.72	6/17/2003	0:00	4	284	ppm			1	Newton
R-68.72	6/17/2003	0:00	6	293	ppm			1	Newton
R-68.72	6/17/2003	0:00	7	145	ppm			1	Newton
R-68.72	6/17/2003	0:00	8	215	ppm			1	Newton
R-68.72	6/17/2003	0:00	9		ppm	<	0.1	1	Newton
R-68.72	6/17/2003	0:00	10		ppm	<	0.5	1	Newton
R-68.72	6/17/2003	0:00	11	0.47	ppm			1	Newton
R-68.72	6/17/2003	0:00	12	160	ppm			1	Newton
R-68.72	6/17/2003	0:00	13	8.1	ppm			1	Newton
R-68.72	6/17/2003	0:00	14	18	ppm			1	Newton
R-68.72	6/17/2003	0:00	15	84	ppm			1	Newton
R-68.72	6/17/2003	0:00	2	800	ppm			1	Newton
R-68.72	6/17/2003	0:00	19	0.15	ppm			1	Newton
R-68.72	6/17/2003	0:00	3	1119	mS/cm			1	Newton
R-68.72	6/17/2003	0:00	32	25	ppm			1	Newton
R-68.72	6/17/2003	0:00	35	1.2	ppm			1	Newton
R-68.72	6/17/2003	0:00	36	0.2	ppm			1	Newton
D-SMC-91.28	6/17/2003	0:00	1	8.63				1	Wilcox
D-SMC-91.28	6/17/2003	0:00	38	8.55	epm			1	Wilcox
D-SMC-91.28	6/17/2003	0:00	39	8.88	epm			1	Wilcox
D-SMC-91.28	6/17/2003	0:00	40	-1.88	%			1	Wilcox
D-SMC-91.28	6/17/2003	0:00	4	227	ppm			1	Wilcox
D-SMC-91.28	6/17/2003	0:00	6	245	ppm			1	Wilcox
D-SMC-91.28	6/17/2003	0:00	7	57	ppm			1	Wilcox
D-SMC-91.28	6/17/2003	0:00	8	155	ppm			1	Wilcox
D-SMC-91.28	6/17/2003	0:00	9		ppm	<	0.1	1	Wilcox
D-SMC-91.28	6/17/2003	0:00	10		ppm	<	0.5	1	Wilcox
D-SMC-91.28	6/17/2003	0:00	11	0.49	ppm			1	Wilcox
D-SMC-91.28	6/17/2003	0:00	12	88	ppm			1	Wilcox
D-SMC-91.28	6/17/2003	0:00	13	6.2	ppm			1	Wilcox
D-SMC-91.28	6/17/2003	0:00	14	14	ppm			1	Wilcox
D-SMC-91.28	6/17/2003	0:00	15	68	ppm			1	Wilcox
D-SMC-91.28	6/17/2003	0:00	2	540	ppm			1	Wilcox
D-SMC-91.28	6/17/2003	0:00	19	0.12	ppm			1	Wilcox
D-SMC-91.28	6/17/2003	0:00	3	727	mS/cm			1	Wilcox
D-SMC-91.28	6/17/2003	0:00	32	25	ppm			1	Wilcox
D-SMC-91.28	6/17/2003	0:00	35	0.82	ppm			1	Wilcox
D-SMC-91.28	6/17/2003	0:00	36	0.14	ppm			1	Wilcox
ESC-SG01	11/13/2003	17:10	1	7.78				1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	38	10.93	epm			1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	39	11.09	epm			1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	40	-0.71	%			1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	4	299	ppm			1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	6	258	ppm			1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	7	93	ppm			1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	8	202	ppm			1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	9		ppm	<	0.1	1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	10		ppm	<	0.5	1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	11	0.5	ppm			1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	12	110	ppm			1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	13	5.8	ppm			1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	14	18	ppm			1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	15	90	ppm			1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	2	680	ppm			1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	19	0.17	ppm			1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	3	0.921	mS/cm			1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	32	26	ppm			1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	35	1.1	ppm			1	Newton/Richards/Jakubowski
ESC-SG01	11/13/2003	17:10	36	0.19	ppm			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	1	8.06				1	Newton/Richards/Jakubowski

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
ESC-SG02	11/13/2003	16:55	38	7.1	epm			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	39	7.06	epm			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	40	0.32	%			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	4	213	ppm			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	6	211	ppm			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	7	42	ppm			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	8	112	ppm			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	9	1.8	ppm			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	10	0.71	ppm			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	11	0.56	ppm			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	12	62	ppm			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	13	5.6	ppm			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	14	11	ppm			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	15	67	ppm			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	2	440	ppm			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	19	0.11	ppm			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	3	0.571	mS/cm			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	32	27	ppm			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	35	0.64	ppm			1	Newton/Richards/Jakubowski
ESC-SG02	11/13/2003	16:55	36	0.11	ppm			1	Newton/Richards/Jakubowski
HWY-SG03	11/14/2003	17:38	1	8.18				1	Ryan/Fletcher
HWY-SG03	11/14/2003	17:38	38	21.35	epm			1	Ryan/Fletcher
HWY-SG03	11/14/2003	17:38	39	20.2	epm			1	Ryan/Fletcher
HWY-SG03	11/14/2003	17:38	40	2.75	%			1	Ryan/Fletcher
HWY-SG03	11/14/2003	17:38	4	403	ppm			1	Ryan/Fletcher
HWY-SG03	11/14/2003	17:38	6	391	ppm			1	Ryan/Fletcher
HWY-SG03	11/14/2003	17:38	7	239	ppm			1	Ryan/Fletcher
HWY-SG03	11/14/2003	17:38	8	337	ppm			1	Ryan/Fletcher
HWY-SG03	11/14/2003	17:38	9		ppm	<	0.1	1	Ryan/Fletcher
HWY-SG03	11/14/2003	17:38	10		ppm	<	0.5	1	Ryan/Fletcher
HWY-SG03	11/14/2003	17:38	11	0.59	ppm			1	Ryan/Fletcher
HWY-SG03	11/14/2003	17:38	12	300	ppm			1	Ryan/Fletcher
HWY-SG03	11/14/2003	17:38	13	7.9	ppm			1	Ryan/Fletcher
HWY-SG03	11/14/2003	17:38	14	27	ppm			1	Ryan/Fletcher
SFC-SG02	11/14/2003	11:50	6	199	ppm			1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	7	35	ppm			1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	8	101	ppm			1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	9	1.5	ppm			1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	10	0.56	ppm			1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	11	0.56	ppm			1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	12	56	ppm			1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	13	5.4	ppm			1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	14	9.6	ppm			1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	15	60	ppm			1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	2	390	ppm			1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	19	0.11	ppm			1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	3	0.535	mS/cm			1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	32	25	ppm			1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	35	0.59	ppm			1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	36	0.1	ppm			1	Newton/Bowman
HWY-SG03	11/14/2003	17:38	15	117	ppm			1	Ryan/Fletcher
HWY-SG03	11/14/2003	17:38	2	1260	ppm			1	Ryan/Fletcher
HWY-SG03	11/14/2003	17:38	19	0.31	ppm			1	Ryan/Fletcher
HWY-SG03	11/14/2003	17:38	3	1.635	mS/cm			1	Ryan/Fletcher
HWY-SG03	11/14/2003	17:38	32	38	ppm			1	Ryan/Fletcher
HWY-SG03	11/14/2003	17:38	35	1.5	ppm			1	Ryan/Fletcher
HWY-SG03	11/14/2003	17:38	36	0.25	ppm			1	Ryan/Fletcher
SFC-SG01	11/14/2003	11:25	1	8.09				1	Newton/Bowman
SFC-SG01	11/14/2003	11:25	38	10.87	epm			1	Newton/Bowman
SFC-SG01	11/14/2003	11:25	39	11.18	epm			1	Newton/Bowman
SFC-SG01	11/14/2003	11:25	40	-1.41	%			1	Newton/Bowman
SFC-SG01	11/14/2003	11:25	4	252	ppm			1	Newton/Bowman
SFC-SG01	11/14/2003	11:25	6	248	ppm			1	Newton/Bowman
SFC-SG01	11/14/2003	11:25	7	115	ppm			1	Newton/Bowman
SFC-SG01	11/14/2003	11:25	8	184	ppm			1	Newton/Bowman
SFC-SG01	11/14/2003	11:25	9	0.48	ppm			1	Newton/Bowman
SFC-SG01	11/14/2003	11:25	10		ppm	<	0.5	1	Newton/Bowman

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
SFC-SG01	11/14/2003	11:25	11	0.56	ppm			1	Newton/Bowman
SFC-SG01	11/14/2003	11:25	12	130	ppm			1	Newton/Bowman
SFC-SG01	11/14/2003	11:25	13	6.4	ppm			1	Newton/Bowman
SFC-SG01	11/14/2003	11:25	14	15	ppm			1	Newton/Bowman
SFC-SG01	11/14/2003	11:25	15	76	ppm			1	Newton/Bowman
SFC-SG01	11/14/2003	11:25	2	680	ppm			1	Newton/Bowman
SFC-SG01	11/14/2003	11:25	19	0.17	ppm			1	Newton/Bowman
SFC-SG01	11/14/2003	11:25	3	0.933	mS/cm			1	Newton/Bowman
SFC-SG01	11/14/2003	11:25	32	26	ppm			1	Newton/Bowman
SFC-SG01	11/14/2003	11:25	35	0.98	ppm			1	Newton/Bowman
SFC-SG01	11/14/2003	11:25	36	0.15	ppm			1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	1	8.2				1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	38	6.37	epm			1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	39	6.42	epm			1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	40	-0.42	%			1	Newton/Bowman
SFC-SG02	11/14/2003	11:50	4	189	ppm			1	Newton/Bowman
SBB-SG02	11/15/2003	15:04	1	7.93				1	Richards/Chudnoff
SBB-SG02	11/15/2003	15:04	38	7.15	epm			1	Richards/Chudnoff
SBB-SG02	11/15/2003	15:04	39	7.41	epm			1	Richards/Chudnoff
SBB-SG02	11/15/2003	15:04	40	-1.82	%			1	Richards/Chudnoff
SBB-SG02	11/15/2003	15:04	4	204	ppm			1	Richards/Chudnoff
SBB-SG02	11/15/2003	15:04	6	204	ppm			1	Richards/Chudnoff
SBB-SG02	11/15/2003	15:04	7	47	ppm			1	Richards/Chudnoff
SBB-SG02	11/15/2003	15:04	8	127	ppm			1	Richards/Chudnoff
SBB-SG02	11/15/2003	15:04	9	2.7	ppm			1	Richards/Chudnoff
SBB-SG02	11/15/2003	15:04	10	0.63	ppm			1	Richards/Chudnoff
SBB-SG02	11/15/2003	15:04	11	0.59	ppm			1	Richards/Chudnoff
SBB-SG02	11/15/2003	15:04	12	67	ppm			1	Richards/Chudnoff
SBB-SG02	11/15/2003	15:04	13	5.8	ppm			1	Richards/Chudnoff
SBB-SG02	11/15/2003	15:04	14	10	ppm			1	Richards/Chudnoff
SBB-SG02	11/15/2003	15:04	15	65	ppm			1	Richards/Chudnoff
SBB-SG02	11/15/2003	15:04	2	450	ppm			1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	7	129	ppm			1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	8	206	ppm			1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	9	0.44	ppm			1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	10		ppm	<	0.5	1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	11	0.55	ppm			1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	12	146	ppm			1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	13	7.2	ppm			1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	14	17	ppm			1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	15	91	ppm			1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	2	760	ppm			1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	19	0.17	ppm			1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	3	1.02	mS/cm			1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	32	30	ppm			1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	35	1.1	ppm			1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	36	0.2	ppm			1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	1	7.8				1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	38	11.91	epm			1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	39	12.58	epm			1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	40	-2.76	%			1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	4	280	ppm			1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	6	267	ppm			1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	7	139	ppm			1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	8	204	ppm			1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	9	0.34	ppm			1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	10		ppm	<	0.5	1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	11	0.57	ppm			1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	12	140	ppm			1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	13	7.9	ppm			1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	14	17	ppm			1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	15	84	ppm			1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	2	760	ppm			1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	19	0.2	ppm			1	Richards/Chudnoff
SBB-SG02	11/15/2003	15:04	19	0.11	ppm			1	Richards/Chudnoff
SBB-SG02	11/15/2003	15:04	3	0.606	mS/cm			1	Richards/Chudnoff
SBB-SG02	11/15/2003	15:04	32	23	ppm			1	Richards/Chudnoff

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
SBB-SG02	11/15/2003	15:04	35	0.71	ppm			1	Richards/Chudnoff
SBB-SG02	11/15/2003	15:04	36	0.12	ppm			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	1	7.93				1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	38	6.46	epm			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	39	6.72	epm			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	40	-1.93	%			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	4	196	ppm			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	6	207	ppm			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	7	38	ppm			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	8	104	ppm			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	9	2	ppm			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	10	0.69	ppm			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	11	0.58	ppm			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	12	55	ppm			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	13	5.4	ppm			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	14	10	ppm			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	15	62	ppm			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	2	410	ppm			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	19	0.1	ppm			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	3	0.553	mS/cm			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	32	24	ppm			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	35	0.66	ppm			1	Richards/Chudnoff
SMC-SG02	11/15/2003	11:49	36	0.11	ppm			1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	1	7.88				1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	38	12.5	epm			1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	39	12.41	epm			1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	40	0.37	%			1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	4	297	ppm			1	Richards/Chudnoff
SMC-SG01	11/15/2003	16:02	6	271	ppm			1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	3	1.042	mS/cm			1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	32	30	ppm			1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	35	1.1	ppm			1	Richards/Chudnoff
SBB-SG01	11/15/2003	14:05	36	0.19	ppm			1	Richards/Chudnoff
BRN-SG02	11/15/2003	17:10	1	8.02				1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	38	6.58	epm			1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	39	6.95	epm			1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	40	-2.74	%			1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	4	180	ppm			1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	6	205	ppm			1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	7	42	ppm			1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	8	111	ppm			1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	9	2.9	ppm			1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	10	0.55	ppm			1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	11	0.59	ppm			1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	12	65	ppm			1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	13	5.3	ppm			1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	14	6.8	ppm			1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	15	61	ppm			1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	2	420	ppm			1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	19	0.11	ppm			1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	3	0.571	mS/cm			1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	32	18	ppm			1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	35	0.68	ppm			1	Newton/Jakubowski
BRN-SG02	11/15/2003	17:10	36	0.13	ppm			1	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	8	169	ppm			1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	9	0.65	ppm			1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	10		ppm	<	0.5	1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	11	0.5	ppm			1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	12	85	ppm			1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	13	5.3	ppm			1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	14	12	ppm			1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	15	80	ppm			1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	2	550	ppm			1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	19	0.12	ppm			1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	3	0.752	mS/cm			1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	32	23	ppm			1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	35	0.76	ppm			1	Newton/Jaukubowski

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
BRN-SG01	11/16/2003	15:45	36	0.14	ppm			1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	1	7.78				2	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	38	8.93	epm			2	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	39	9.1	epm			2	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	40	-0.96	%			2	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	4	265	ppm			2	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	6	244	ppm			2	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	7	57	ppm			2	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	8	166	ppm			2	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	9	0.65	ppm			2	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	10		ppm	<	0.5	2	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	11	0.52	ppm			2	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	12	80	ppm			2	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	13	5.4	ppm			2	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	14	14	ppm			2	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	15	83	ppm			2	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	2	550	ppm			2	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	19	0.12	ppm			2	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	3	0.748	mS/cm			2	Newton/Jakubowski
SAC-SG01	11/16/2003	13:05	8	254	ppm			1	Richards/Jakubowski
SAC-SG01	11/16/2003	13:05	9		ppm	<	0.1	1	Richards/Jakubowski
SAC-SG01	11/16/2003	13:05	10		ppm	<	0.5	1	Richards/Jakubowski
SAC-SG01	11/16/2003	13:05	11	0.46	ppm			1	Richards/Jakubowski
SAC-SG01	11/16/2003	13:05	12	105	ppm			1	Richards/Jakubowski
SAC-SG01	11/16/2003	13:05	13	5.4	ppm			1	Richards/Jakubowski
SAC-SG01	11/16/2003	13:05	14	17	ppm			1	Richards/Jakubowski
SAC-SG01	11/16/2003	13:05	15	115	ppm			1	Richards/Jakubowski
SAC-SG01	11/16/2003	13:05	2	750	ppm			1	Richards/Jakubowski
SAC-SG01	11/16/2003	13:05	19	0.12	ppm			1	Richards/Jakubowski
SAC-SG01	11/16/2003	13:05	3	1.024	mS/cm			1	Richards/Jakubowski
SAC-SG01	11/16/2003	13:05	32	21	ppm			1	Richards/Jakubowski
SAC-SG01	11/16/2003	13:05	35	1.3	ppm			1	Richards/Jakubowski
SAC-SG01	11/16/2003	13:05	36	0.16	ppm			1	Richards/Jakubowski
BRN-SG01	11/16/2003	15:45	1	7.71				1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	38	8.83	epm			1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	39	9.13	epm			1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	40	-1.68	%			1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	4	249	ppm			1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	6	242	ppm			1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	7	57	ppm			1	Newton/Jaukubowski
BRN-SG01	11/16/2003	15:45	32	25	ppm			2	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	35	0.83	ppm			2	Newton/Jakubowski
BRN-SG01	11/16/2003	15:45	36	0.14	ppm			2	Newton/Jakubowski
SAC-SG02	11/16/2003	13:30	1	7.97				1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	38	7.04	epm			1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	39	7.13	epm			1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	40	-0.65	%			1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	4	198	ppm			1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	6	199	ppm			1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	7	44	ppm			1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	8	122	ppm			1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	9	2.1	ppm			1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	10	0.78	ppm			1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	11	0.56	ppm			1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	12	68	ppm			1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	13	4.7	ppm			1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	14	11	ppm			1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	15	61	ppm			1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	2	430	ppm			1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	19	0.12	ppm			1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	3	0.578	mS/cm			1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	32	17	ppm			1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	35	0.61	ppm			1	Richards/Jakubowski
SAC-SG02	11/16/2003	13:30	36	0.15	ppm			1	Richards/Jakubowski
SAC-SG01	11/16/2003	13:05	1	7.55				1	Richards/Jakubowski
SAC-SG01	11/16/2003	13:05	38	11.87	epm			1	Richards/Jakubowski
SAC-SG01	11/16/2003	13:05	39	12.57	epm			1	Richards/Jakubowski

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
SAC-SG01	11/16/2003	13:05	40	-2.85	%			1	Richards/Jakubowski
SAC-SG01	11/16/2003	13:05	4	357	ppm			1	Richards/Jakubowski
SAC-SG01	11/16/2003	13:05	6	267	ppm			1	Richards/Jakubowski
SAC-SG01	11/16/2003	13:05	7	102	ppm			1	Richards/Jakubowski
HWY-SG03	2/28/2004	12:54	1	7.85				1	
HWY-SG03	2/28/2004	12:54	38	20.54	epm			1	
HWY-SG03	2/28/2004	12:54	39	20.92	epm			1	
HWY-SG03	2/28/2004	12:54	40	-0.91	%			1	
HWY-SG03	2/28/2004	12:54	4	365	ppm			1	
HWY-SG03	2/28/2004	12:54	6	380	ppm			1	
HWY-SG03	2/28/2004	12:54	7	265	ppm			1	
HWY-SG03	2/28/2004	12:54	8	345	ppm			1	
HWY-SG03	2/28/2004	12:54	9		ppm	<	0.1	1	
HWY-SG03	2/28/2004	12:54	10		ppm	<	0.5	1	
HWY-SG03	2/28/2004	12:54	11	0.53	ppm			1	
HWY-SG03	2/28/2004	12:54	12	300	ppm			1	
HWY-SG03	2/28/2004	12:54	13	7.6	ppm			1	
HWY-SG03	2/28/2004	12:54	14	25	ppm			1	
HWY-SG03	2/28/2004	12:54	15	105	ppm			1	
HWY-SG03	2/28/2004	12:54	2	1280	ppm			1	
HWY-SG03	2/28/2004	12:54	19	0.34	ppm			1	
HWY-SG03	2/28/2004	12:54	3	2.135	mS/cm			1	
HWY-SG03	2/28/2004	12:54	32	38	ppm			1	
HWY-SG03	2/28/2004	12:54	36	0.27	ppm			1	
SMC-SG02	2/29/2004	17:13	1	8.17				1	
SMC-SG02	2/29/2004	17:13	38	6.23	epm			1	
SMC-SG02	2/29/2004	17:13	39	6.43	epm			1	
SMC-SG02	2/29/2004	17:13	40	-1.56	%			1	
SMC-SG02	2/29/2004	17:13	4	181	ppm			1	
SMC-SG02	2/29/2004	17:13	6	180	ppm			1	
SMC-SG02	2/29/2004	17:13	7	47	ppm			1	
SMC-SG02	2/29/2004	17:13	8	100	ppm			1	
SMC-SG02	2/29/2004	17:13	9	1.3	ppm			1	
SMC-SG02	2/29/2004	17:13	10	0.62	ppm			1	
SMC-SG02	2/29/2004	17:13	11	0.58	ppm			1	
SMC-SG02	2/29/2004	17:13	12	57	ppm			1	
SMC-SG02	2/29/2004	17:13	13	5.3	ppm			1	
SMC-SG02	2/29/2004	17:13	14	8.8	ppm			1	
SMC-SG02	2/29/2004	17:13	15	58	ppm			1	
SMC-SG02	2/29/2004	17:13	2	390	ppm			1	
SMC-SG02	2/29/2004	17:13	19	0.13	ppm			1	
SMC-SG02	2/29/2004	17:13	3	0.69	mS/cm			1	
SMC-SG02	2/29/2004	17:13	32	21	ppm			1	
SMC-SG02	2/29/2004	17:13	36	0.16	ppm			1	
SMC-SG02	2/29/2004	17:13	1	8.09				6	
SMC-SG02	2/29/2004	17:13	38	6.28	epm			6	
SMC-SG02	2/29/2004	17:13	39	6.46	epm			6	
SMC-SG02	2/29/2004	17:13	40	-1.47	%			6	
SMC-SG02	2/29/2004	17:13	4	181	ppm			6	
SMC-SG02	2/29/2004	17:13	6	183	ppm			6	
SMC-SG02	2/29/2004	17:13	7	47	ppm			6	
SMC-SG02	2/29/2004	17:13	8	100	ppm			6	
SMC-SG02	2/29/2004	17:13	9	1.3	ppm			6	
SMC-SG02	2/29/2004	17:13	10		ppm	<	0.5	6	
SMC-SG02	2/29/2004	17:13	11	0.63	ppm			6	
SMC-SG02	2/29/2004	17:13	12	58	ppm			6	
SMC-SG02	2/29/2004	17:13	13	5.3	ppm			6	
SMC-SG02	2/29/2004	17:13	14	8.8	ppm			6	
SMC-SG02	2/29/2004	17:13	15	58	ppm			6	
SMC-SG02	2/29/2004	17:13	2	390	ppm			6	
SMC-SG02	2/29/2004	17:13	19	0.13	ppm			6	
SMC-SG02	2/29/2004	17:13	3	0.67	mS/cm			6	
SMC-SG02	2/29/2004	17:13	32	21	ppm			6	
SMC-SG02	2/29/2004	17:13	36	0.16	ppm			6	
SAC-SG02	2/29/2004	14:00	1	8.24				1	
SAC-SG02	2/29/2004	14:00	38	5.9	epm			1	
SAC-SG02	2/29/2004	14:00	39	5.97	epm			1	

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
SAC-SG02	2/29/2004	14:00	40	-0.56	%			1	
SAC-SG02	2/29/2004	14:00	4	164	ppm			1	
SAC-SG02	2/29/2004	14:00	6	180	ppm			1	
SAC-SG02	2/29/2004	14:00	7	38	ppm			1	
SAC-SG02	2/29/2004	14:00	8	90	ppm			1	
SAC-SG02	2/29/2004	14:00	9	1.2	ppm			1	
SAC-SG02	2/29/2004	14:00	10	0.56	ppm			1	
SAC-SG02	2/29/2004	14:00	11	0.62	ppm			1	
SAC-SG02	2/29/2004	14:00	12	57	ppm			1	
SAC-SG02	2/29/2004	14:00	13	5.2	ppm			1	
SAC-SG02	2/29/2004	14:00	14	8.3	ppm			1	
SAC-SG02	2/29/2004	14:00	15	52	ppm			1	
SAC-SG02	2/29/2004	14:00	2	360	ppm			1	
SAC-SG02	2/29/2004	14:00	16	0.002	ppm			1	
SAC-SG02	2/29/2004	14:00	17	0.006	ppm			1	
SAC-SG02	2/29/2004	14:00	18	0.099	ppm			1	
SAC-SG02	2/29/2004	14:00	19	0.11	ppm			1	
SAC-SG02	2/29/2004	14:00	20		ppm	<	0.001	1	
SAC-SG02	2/29/2004	14:00	21		ppm	<	0.001	1	
SAC-SG02	2/29/2004	14:00	22		ppm	<	0.001	1	
SAC-SG02	2/29/2004	14:00	23	0.005	ppm			1	
SAC-SG02	2/29/2004	14:00	24		ppm	<	0.05	1	
SAC-SG02	2/29/2004	14:00	25		ppm	<	0.001	1	
SAC-SG02	2/29/2004	14:00	26	0.083	ppm			1	
SAC-SG02	2/29/2004	14:00	27	0.007	ppm			1	
SAC-SG02	2/29/2004	14:00	3	0.647	mS/cm			1	
SAC-SG02	2/29/2004	14:00	28		ppm	<	0.0001	1	
SAC-SG02	2/29/2004	14:00	29	0.006	ppm			1	
SAC-SG02	2/29/2004	14:00	30	0.001	ppm			1	
SAC-SG02	2/29/2004	14:00	31		ppm	<	0.001	1	
SAC-SG02	2/29/2004	14:00	32	21	ppm			1	
SAC-SG02	2/29/2004	14:00	33		ppm	<	0.001	1	
SAC-SG02	2/29/2004	14:00	34	0.009	ppm			1	
SAC-SG02	2/29/2004	14:00	35	0.43	ppm			1	
SAC-SG02	2/29/2004	14:00	36	0.14	ppm			1	
SAC-SG01	2/29/2004	16:45	1	7.81				1	
SAC-SG01	2/29/2004	16:45	38	11.03	epm			1	
SAC-SG01	2/29/2004	16:45	39	11.68	epm			1	
SAC-SG01	2/29/2004	16:45	40	-2.87	%			1	
SAC-SG01	2/29/2004	16:45	4	358	ppm			1	
SAC-SG01	2/29/2004	16:45	6	260	ppm			1	
SAC-SG01	2/29/2004	16:45	7	92	ppm			1	
SAC-SG01	2/29/2004	16:45	8	230	ppm			1	
SAC-SG01	2/29/2004	16:45	9		ppm	<	0.1	1	
SAC-SG01	2/29/2004	16:45	10		ppm	<	0.5	1	
SAC-SG01	2/29/2004	16:45	11	0.59	ppm			1	
SAC-SG01	2/29/2004	16:45	12	86	ppm			1	
SAC-SG01	2/29/2004	16:45	13	5.3	ppm			1	
SAC-SG01	2/29/2004	16:45	14	19	ppm			1	
SAC-SG01	2/29/2004	16:45	15	112	ppm			1	
SAC-SG01	2/29/2004	16:45	2	700	ppm			1	
SAC-SG01	2/29/2004	16:45	19	0.12	ppm			1	
SAC-SG01	2/29/2004	16:45	3	1.17	mS/cm			1	
SAC-SG01	2/29/2004	16:45	32	23	ppm			1	
SAC-SG01	2/29/2004	16:45	36	0.24	ppm			1	
BRN-SG01	2/29/2004	10:45	1	8.04				1	
BRN-SG01	2/29/2004	10:45	38	7.56	epm			1	
BRN-SG01	2/29/2004	10:45	39	7.88	epm			1	
BRN-SG01	2/29/2004	10:45	40	-2.11	%			1	
BRN-SG01	2/29/2004	10:45	4	227	ppm			1	
BRN-SG01	2/29/2004	10:45	6	220	ppm			1	
BRN-SG01	2/29/2004	10:45	7	47	ppm			1	
BRN-SG01	2/29/2004	10:45	8	140	ppm			1	
BRN-SG01	2/29/2004	10:45	9	0.47	ppm			1	
BRN-SG01	2/29/2004	10:45	10		ppm	<	0.5	1	
BRN-SG01	2/29/2004	10:45	11	0.55	ppm			1	
BRN-SG01	2/29/2004	10:45	12	67	ppm			1	

LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
BRN-SG01	2/29/2004	10:45	13	4.5	ppm			1	
BRN-SG01	2/29/2004	10:45	14	12	ppm			1	
BRN-SG01	2/29/2004	10:45	15	71	ppm			1	
BRN-SG01	2/29/2004	10:45	2	470	ppm			1	
BRN-SG01	2/29/2004	10:45	19	0.11	ppm			1	
BRN-SG01	2/29/2004	10:45	3	0.818	mS/cm			1	
BRN-SG01	2/29/2004	10:45	32	22	ppm			1	
BRN-SG01	2/29/2004	10:45	36	0.14	ppm			1	
BRN-SG02	2/29/2004	11:00	1	8.32				1	
BRN-SG02	2/29/2004	11:00	38	6.12	epm			1	
BRN-SG02	2/29/2004	11:00	39	6.55	epm			1	
BRN-SG02	2/29/2004	11:00	40	-3.4	%			1	
BRN-SG02	2/29/2004	11:00	4	166	ppm			1	
BRN-SG02	2/29/2004	11:00	6	180	ppm			1	
BRN-SG02	2/29/2004	11:00	7	47	ppm			1	
BRN-SG02	2/29/2004	11:00	8	105	ppm			1	
BRN-SG02	2/29/2004	11:00	9	1.8	ppm			1	
BRN-SG02	2/29/2004	11:00	10	0.74	ppm			1	
BRN-SG02	2/29/2004	11:00	11	0.61	ppm			1	
BRN-SG02	2/29/2004	11:00	12	61	ppm			1	
BRN-SG02	2/29/2004	11:00	13	5.2	ppm			1	
BRN-SG02	2/29/2004	11:00	14	8.2	ppm			1	
BRN-SG02	2/29/2004	11:00	15	53	ppm			1	
BRN-SG02	2/29/2004	11:00	2	390	ppm			1	
BRN-SG02	2/29/2004	11:00	16	0.013	ppm			1	
BRN-SG02	2/29/2004	11:00	17	0.006	ppm			1	
BRN-SG02	2/29/2004	11:00	18	0.094	ppm			1	
BRN-SG02	2/29/2004	11:00	19	0.13	ppm			1	
BRN-SG02	2/29/2004	11:00	20		ppm	<	0.001	1	
BRN-SG02	2/29/2004	11:00	21	0.001	ppm			1	
BRN-SG02	2/29/2004	11:00	22		ppm	<	0.001	1	
BRN-SG02	2/29/2004	11:00	23	0.005	ppm			1	
BRN-SG02	2/29/2004	11:00	24		ppm	<	0.05	1	
BRN-SG02	2/29/2004	11:00	25		ppm	<	0.001	1	
BRN-SG02	2/29/2004	11:00	26	0.1	ppm			1	
BRN-SG02	2/29/2004	11:00	27	0.001	ppm			1	
BRN-SG02	2/29/2004	11:00	3	0.715	mS/cm			1	
SFC-SG02	2/29/2004	15:08	9	1.4	ppm			1	
SFC-SG02	2/29/2004	15:08	10		ppm	<	0.5	1	
SFC-SG02	2/29/2004	15:08	11	0.62	ppm			1	
SFC-SG02	2/29/2004	15:08	12	54	ppm			1	
SFC-SG02	2/29/2004	15:08	13	5.1	ppm			1	
SFC-SG02	2/29/2004	15:08	14	9.1	ppm			1	
SFC-SG02	2/29/2004	15:08	15	52	ppm			1	
SFC-SG02	2/29/2004	15:08	2	370	ppm			1	
SFC-SG02	2/29/2004	15:08	19	0.12	ppm			1	
SFC-SG02	2/29/2004	15:08	3	0.655	mS/cm			1	
SFC-SG02	2/29/2004	15:08	32	24	ppm			1	
SFC-SG02	2/29/2004	15:08	36	0.13	ppm			1	
SFC-SG01	2/29/2004	14:53	1	7.96				1	
SFC-SG01	2/29/2004	14:53	38	10.08	epm			1	
SFC-SG01	2/29/2004	14:53	39	10.41	epm			1	
SFC-SG01	2/29/2004	14:53	40	-1.61	%			1	
SFC-SG01	2/29/2004	14:53	4	247	ppm			1	
SFC-SG01	2/29/2004	14:53	6	250	ppm			1	
SFC-SG01	2/29/2004	14:53	7	93	ppm			1	
SFC-SG01	2/29/2004	14:53	8	175	ppm			1	
SFC-SG01	2/29/2004	14:53	9	0.65	ppm			1	
SFC-SG01	2/29/2004	14:53	10		ppm	<	0.5	1	
SFC-SG01	2/29/2004	14:53	11	0.6	ppm			1	
SFC-SG01	2/29/2004	14:53	12	115	ppm			1	
SFC-SG01	2/29/2004	14:53	13	5.9	ppm			1	
SFC-SG01	2/29/2004	14:53	14	15	ppm			1	
SFC-SG01	2/29/2004	14:53	15	74	ppm			1	
SFC-SG01	2/29/2004	14:53	2	630	ppm			1	
SFC-SG01	2/29/2004	14:53	19	0.17	ppm			1	
SFC-SG01	2/29/2004	14:53	3	1.09	mS/cm			1	

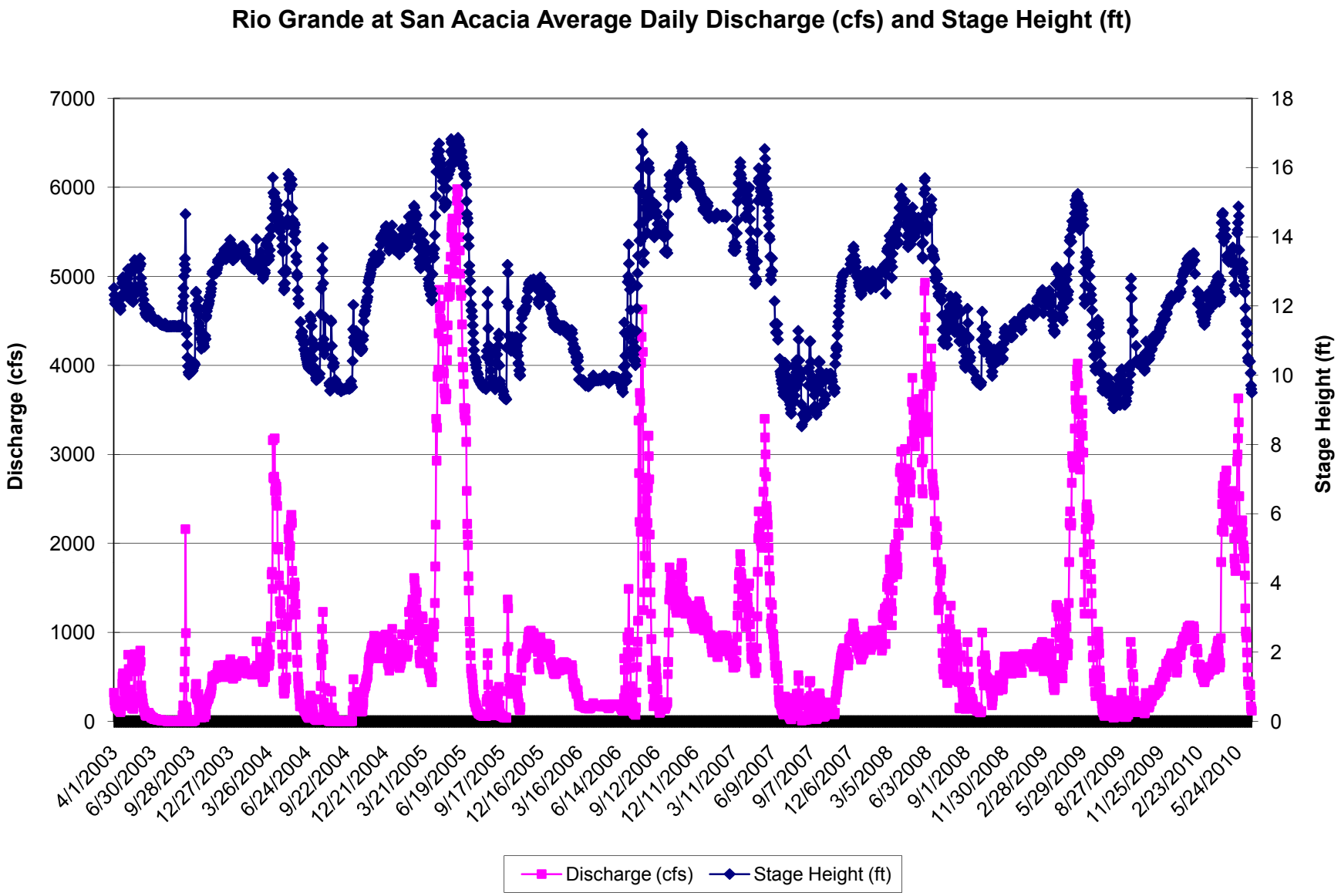
LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
SFC-SG01	2/29/2004	14:53	32	26	ppm			1	
SFC-SG01	2/29/2004	14:53	36	0.2	ppm			1	
BRN-SG02	2/29/2004	11:00	28		ppm	<	0.0001	1	
BRN-SG02	2/29/2004	11:00	29	0.006	ppm			1	
BRN-SG02	2/29/2004	11:00	30	0.001	ppm			1	
BRN-SG02	2/29/2004	11:00	31		ppm	<	0.001	1	
BRN-SG02	2/29/2004	11:00	32	21	ppm			1	
BRN-SG02	2/29/2004	11:00	33		ppm	<	0.001	1	
BRN-SG02	2/29/2004	11:00	34	0.003	ppm			1	
BRN-SG02	2/29/2004	11:00	35	0.48	ppm			1	
BRN-SG02	2/29/2004	11:00	36	0.15	ppm			1	
SMC-SG01	2/29/2004	17:29	1	8.16				1	
SMC-SG01	2/29/2004	17:29	38	9.86	epm			1	
SMC-SG01	2/29/2004	17:29	39	10.42	epm			1	
SMC-SG01	2/29/2004	17:29	40	-2.73	%			1	
SMC-SG01	2/29/2004	17:29	4	240	ppm			1	
SMC-SG01	2/29/2004	17:29	6	248	ppm			1	
SMC-SG01	2/29/2004	17:29	7	93	ppm			1	
SMC-SG01	2/29/2004	17:29	8	177	ppm			1	
SMC-SG01	2/29/2004	17:29	9	0.55	ppm			1	
SMC-SG01	2/29/2004	17:29	10		ppm	<	0.5	1	
SMC-SG01	2/29/2004	17:29	11	0.6	ppm			1	
SMC-SG01	2/29/2004	17:29	12	113	ppm			1	
SMC-SG01	2/29/2004	17:29	13	6	ppm			1	
SMC-SG01	2/29/2004	17:29	14	14	ppm			1	
SMC-SG01	2/29/2004	17:29	15	73	ppm			1	
SMC-SG01	2/29/2004	17:29	2	630	ppm			1	
SMC-SG01	2/29/2004	17:29	19	0.16	ppm			1	
SMC-SG01	2/29/2004	17:29	3	1.077	mS/cm			1	
SMC-SG01	2/29/2004	17:29	32	26	ppm			1	
SMC-SG01	2/29/2004	17:29	36	0.2	ppm			1	
SFC-SG02	2/29/2004	15:08	1	8.21				1	
SFC-SG02	2/29/2004	15:08	38	5.82	epm			1	
SFC-SG02	2/29/2004	15:08	39	6.03	epm			1	
SFC-SG02	2/29/2004	15:08	40	-1.71	%			1	
SFC-SG02	2/29/2004	15:08	4	167	ppm			1	
SFC-SG02	2/29/2004	15:08	6	175	ppm			1	
SFC-SG02	2/29/2004	15:08	7	42	ppm			1	
SFC-SG02	2/29/2004	15:08	8	92	ppm			1	
SBB-SG01	3/1/2004	16:35	1	8.12				1	
SBB-SG01	3/1/2004	16:35	38	10.46	epm			1	
SBB-SG01	3/1/2004	16:35	39	11.06	epm			1	
SBB-SG01	3/1/2004	16:35	40	-2.8	%			1	
SBB-SG01	3/1/2004	16:35	4	232	ppm			1	
ESC-SG02	3/1/2004	17:00	22		ppm	<	0.001	1	
ESC-SG02	3/1/2004	17:00	23	0.004	ppm			1	
ESC-SG02	3/1/2004	17:00	24		ppm	<	0.05	1	
ESC-SG02	3/1/2004	17:00	25		ppm	<	0.001	1	
ESC-SG02	3/1/2004	17:00	26	0.076	ppm			1	
ESC-SG02	3/1/2004	17:00	27	0.01	ppm			1	
ESC-SG02	3/1/2004	17:00	3	650	mS/cm			1	
ESC-SG02	3/1/2004	17:00	28		ppm	<	0.0001	1	
ESC-SG02	3/1/2004	17:00	29	0.006	ppm			1	
ESC-SG02	3/1/2004	17:00	30	0.001	ppm			1	
ESC-SG02	3/1/2004	17:00	31		ppm	<	0.001	1	
ESC-SG02	3/1/2004	17:00	32	21	ppm			1	
ESC-SG02	3/1/2004	17:00	33		ppm	<	0.001	1	
ESC-SG02	3/1/2004	17:00	34	0.003	ppm			1	
ESC-SG02	3/1/2004	17:00	35	0.52	ppm			1	
ESC-SG02	3/1/2004	17:00	36	0.18	ppm			1	
SBB-SG02	3/1/2004	16:35	1	8.26				1	
SBB-SG02	3/1/2004	16:35	38	5.83	epm			1	
SBB-SG02	3/1/2004	16:35	39	6.17	epm			1	
SBB-SG02	3/1/2004	16:35	40	-2.9	%			1	
SBB-SG02	3/1/2004	16:35	4	156	ppm			1	
SBB-SG02	3/1/2004	16:35	6	186	ppm			1	
SBB-SG02	3/1/2004	16:35	7	39	ppm			1	

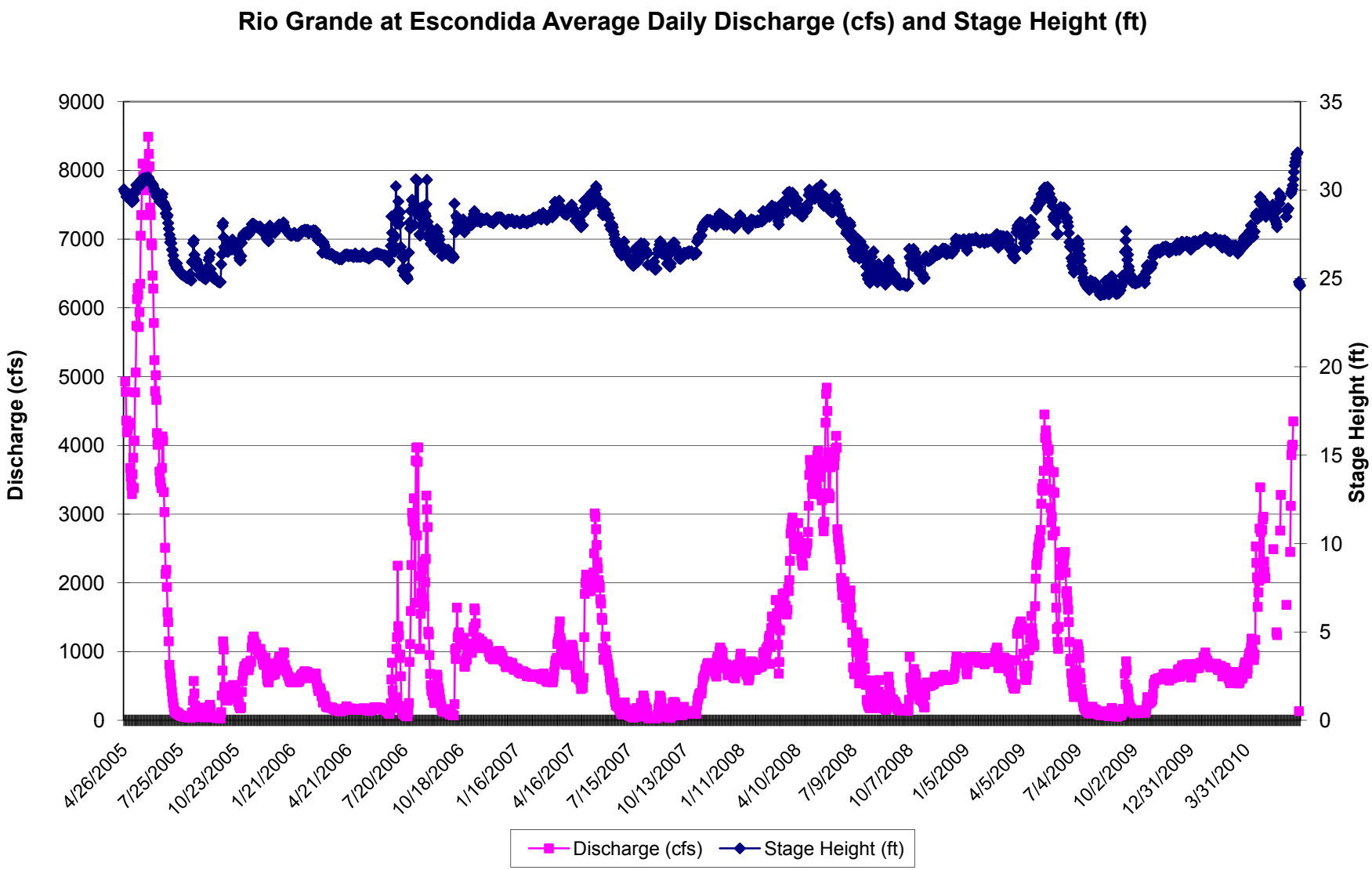
LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
SBB-SG02	3/1/2004	16:35	8	94	ppm			1	
SBB-SG02	3/1/2004	16:35	9	1.2	ppm			1	
SBB-SG02	3/1/2004	16:35	10	0.5	ppm			1	
SBB-SG02	3/1/2004	16:35	11	0.6	ppm			1	
SBB-SG02	3/1/2004	16:35	12	59	ppm			1	
SBB-SG02	3/1/2004	16:35	13	5.5	ppm			1	
SBB-SG02	3/1/2004	16:35	14	8.8	ppm			1	
SBB-SG02	3/1/2004	16:35	15	48	ppm			1	
SBB-SG02	3/1/2004	16:35	2	370	ppm			1	
SBB-SG02	3/1/2004	16:35	19	0.13	ppm			1	
SBB-SG02	3/1/2004	16:35	3	0.653	mS/cm			1	
SBB-SG02	3/1/2004	16:35	32	25	ppm			1	
SBB-SG02	3/1/2004	16:35	36	0.15	ppm			1	
ESC-SG01	3/1/2004	16:45	1	8.11				1	
ESC-SG01	3/1/2004	16:45	38	9.81	epm			1	
ESC-SG01	3/1/2004	16:45	39	9.31	epm			1	
ESC-SG01	3/1/2004	16:45	40	2.61	%			1	
ESC-SG01	3/1/2004	16:45	4	277	ppm			1	
ESC-SG01	3/1/2004	16:45	6	245	ppm			1	
ESC-SG01	3/1/2004	16:45	7	61	ppm			1	
ESC-SG01	3/1/2004	16:45	8	170	ppm			1	
ESC-SG01	3/1/2004	16:45	9		ppm	<	0.1	1	
ESC-SG01	3/1/2004	16:45	10		ppm	<	0.5	1	
ESC-SG01	3/1/2004	16:45	11	0.56	ppm			1	
ESC-SG01	3/1/2004	16:45	12	95	ppm			1	
ESC-SG01	3/1/2004	16:45	13	5.2	ppm			1	
ESC-SG01	3/1/2004	16:45	14	17	ppm			1	
ESC-SG01	3/1/2004	16:45	15	83	ppm			1	
ESC-SG01	3/1/2004	16:45	2	580	ppm			1	
ESC-SG01	3/1/2004	16:45	19	0.14	ppm			1	
ESC-SG01	3/1/2004	16:45	3	0.905	mS/cm			1	
ESC-SG01	3/1/2004	16:45	32	30	ppm			1	
ESC-SG01	3/1/2004	16:45	36	0.17	ppm			1	
SBB-SG01	3/1/2004	16:35	6	238	ppm			1	
SBB-SG01	3/1/2004	16:35	7	120	ppm			1	
SBB-SG01	3/1/2004	16:35	8	180	ppm			1	
SBB-SG01	3/1/2004	16:35	9	0.14	ppm			1	
SBB-SG01	3/1/2004	16:35	10		ppm	<	0.5	1	
SBB-SG01	3/1/2004	16:35	11	0.47	ppm			1	
SBB-SG01	3/1/2004	16:35	12	130	ppm			1	
SBB-SG01	3/1/2004	16:35	13	6.3	ppm			1	
SBB-SG01	3/1/2004	16:35	14	14	ppm			1	
SBB-SG01	3/1/2004	16:35	15	70	ppm			1	
SBB-SG01	3/1/2004	16:35	2	670	ppm			1	
SBB-SG01	3/1/2004	16:35	19	0.19	ppm			1	
SBB-SG01	3/1/2004	16:35	3	1.14	mS/cm			1	
SBB-SG01	3/1/2004	16:35	32	26	ppm			1	
SBB-SG01	3/1/2004	16:35	36	0.15	ppm			1	
ESC-SG02	3/1/2004	17:00	1	8.06				1	
ESC-SG02	3/1/2004	17:00	38	6.08	epm			1	
ESC-SG02	3/1/2004	17:00	39	6.45	epm			1	
ESC-SG02	3/1/2004	17:00	40	-2.91	%			1	
ESC-SG02	3/1/2004	17:00	4	177	ppm			1	
ESC-SG02	3/1/2004	17:00	6	193	ppm			1	
ESC-SG02	3/1/2004	17:00	7	40	ppm			1	
ESC-SG02	3/1/2004	17:00	8	100	ppm			1	
ESC-SG02	3/1/2004	17:00	9	1.2	ppm			1	
ESC-SG02	3/1/2004	17:00	10	0.6	ppm			1	
ESC-SG02	3/1/2004	17:00	11	0.59	ppm			1	
ESC-SG02	3/1/2004	17:00	12	55	ppm			1	
ESC-SG02	3/1/2004	17:00	13	5.1	ppm			1	
ESC-SG02	3/1/2004	17:00	14	8.5	ppm			1	
ESC-SG02	3/1/2004	17:00	15	57	ppm			1	
ESC-SG02	3/1/2004	17:00	2	390	ppm			1	
ESC-SG02	3/1/2004	17:00	16	0.013	ppm			1	
ESC-SG02	3/1/2004	17:00	17	0.006	ppm			1	
ESC-SG02	3/1/2004	17:00	18	0.094	ppm			1	

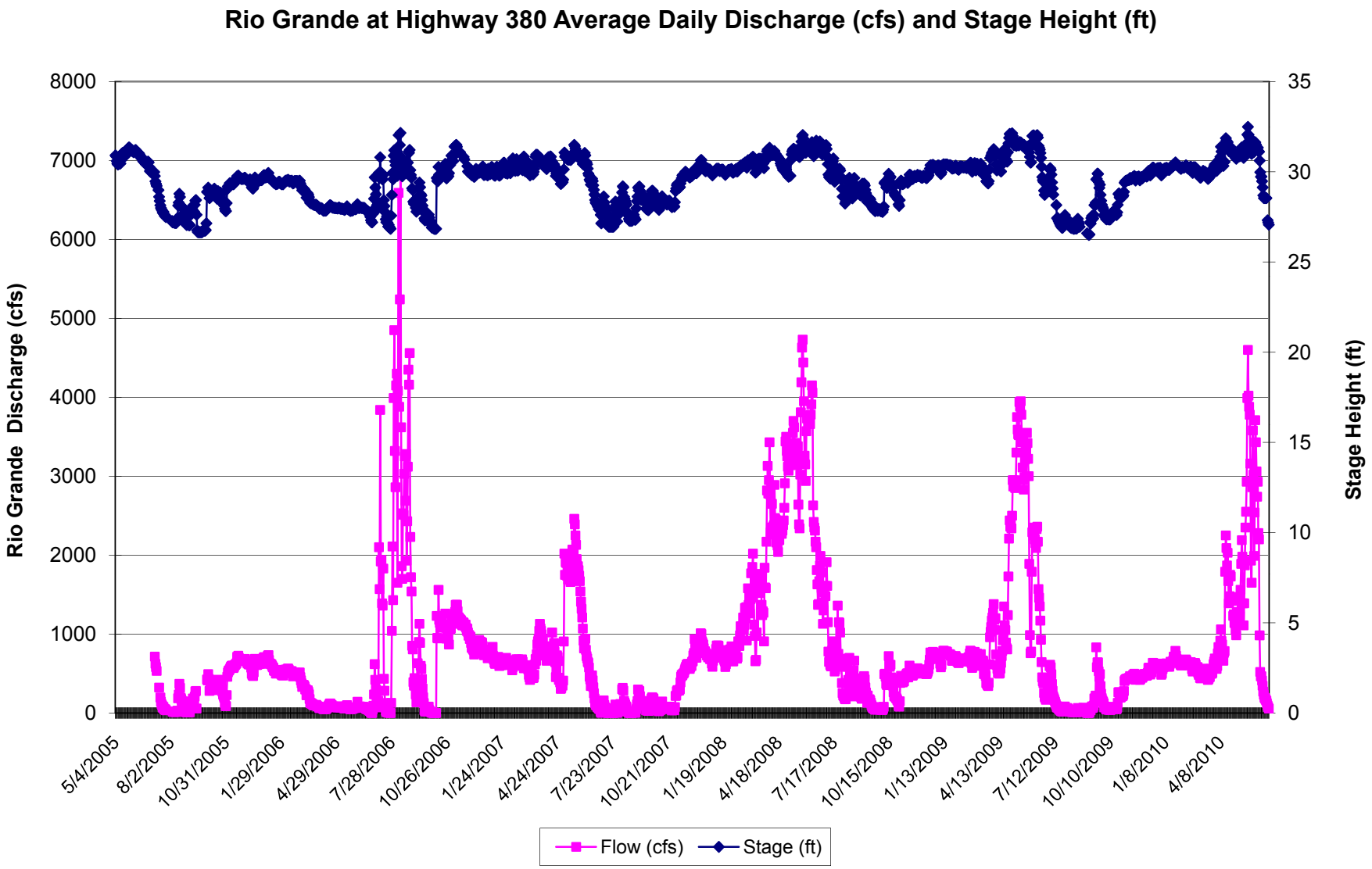
LOCID	DATE	TIME	ANALYTE	VALUE	UNITS	NDFLAG	DETLIM	LABTYPE	MEASBY
ESC-SG02	3/1/2004	17:00	19	0.11	ppm			1	
ESC-SG02	3/1/2004	17:00	20		ppm	<	0.001	1	
ESC-SG02	3/1/2004	17:00	21	0.001	ppm			1	

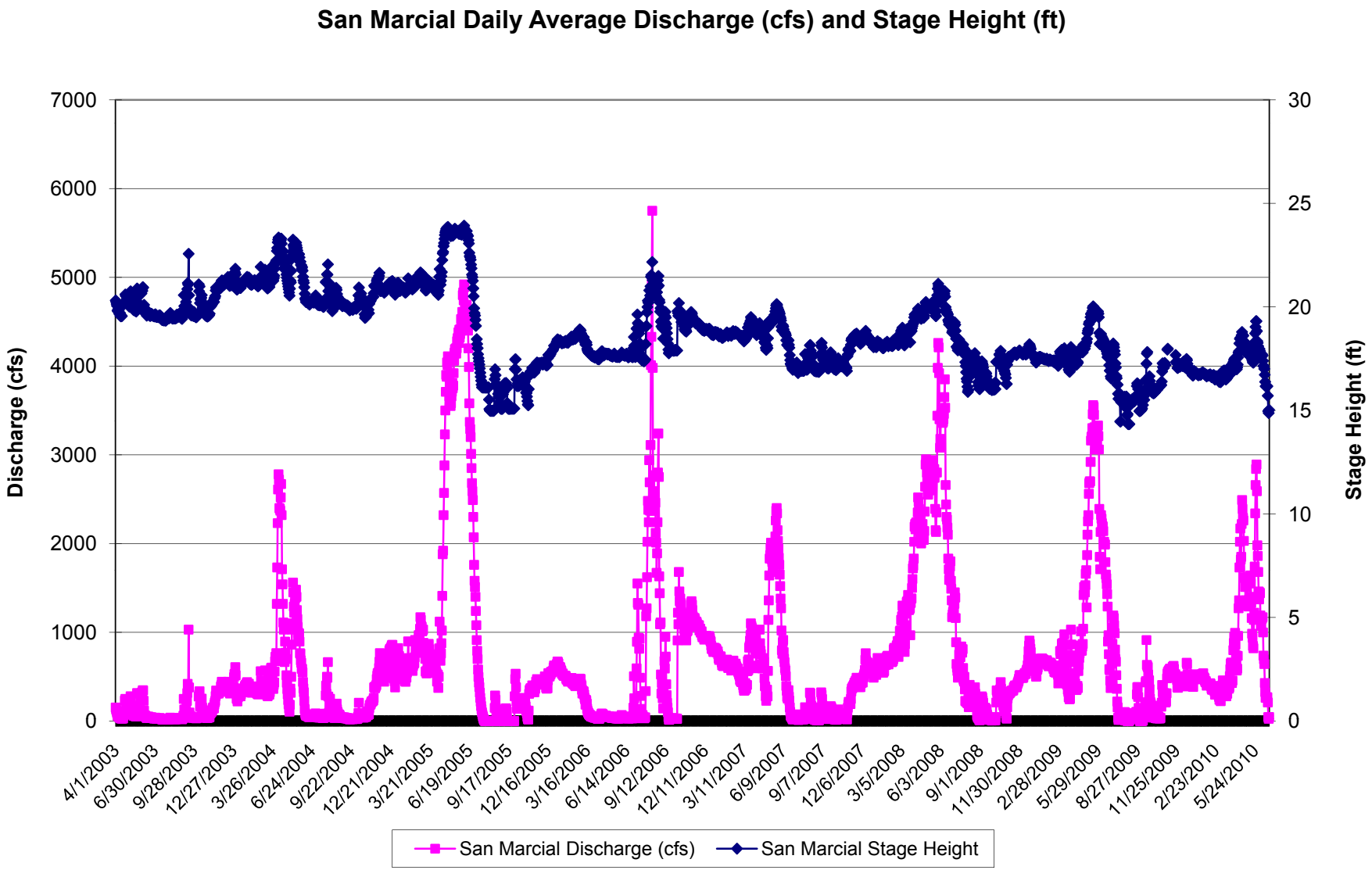
Appendix H

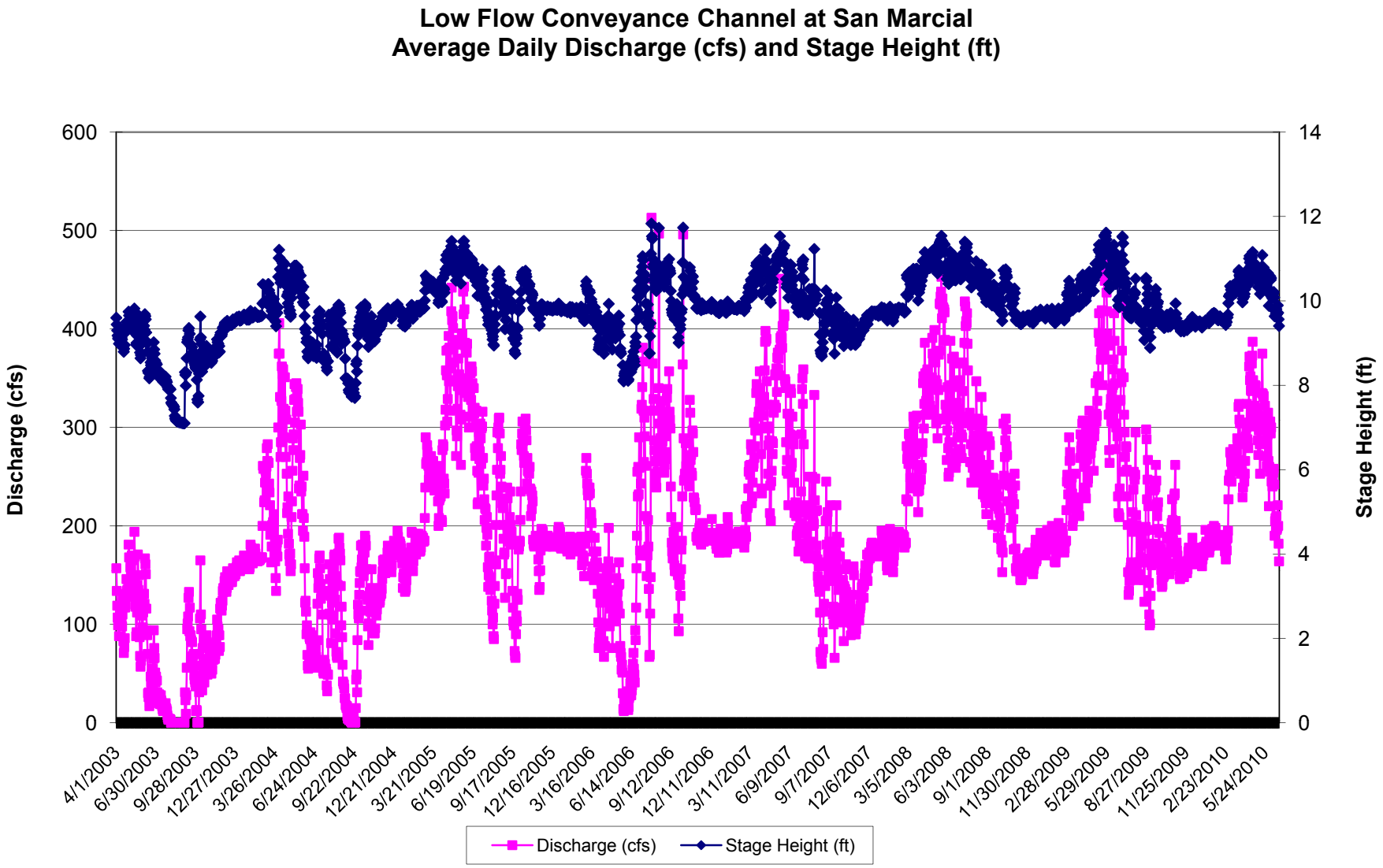
USGS Stream Gage Hydrographs

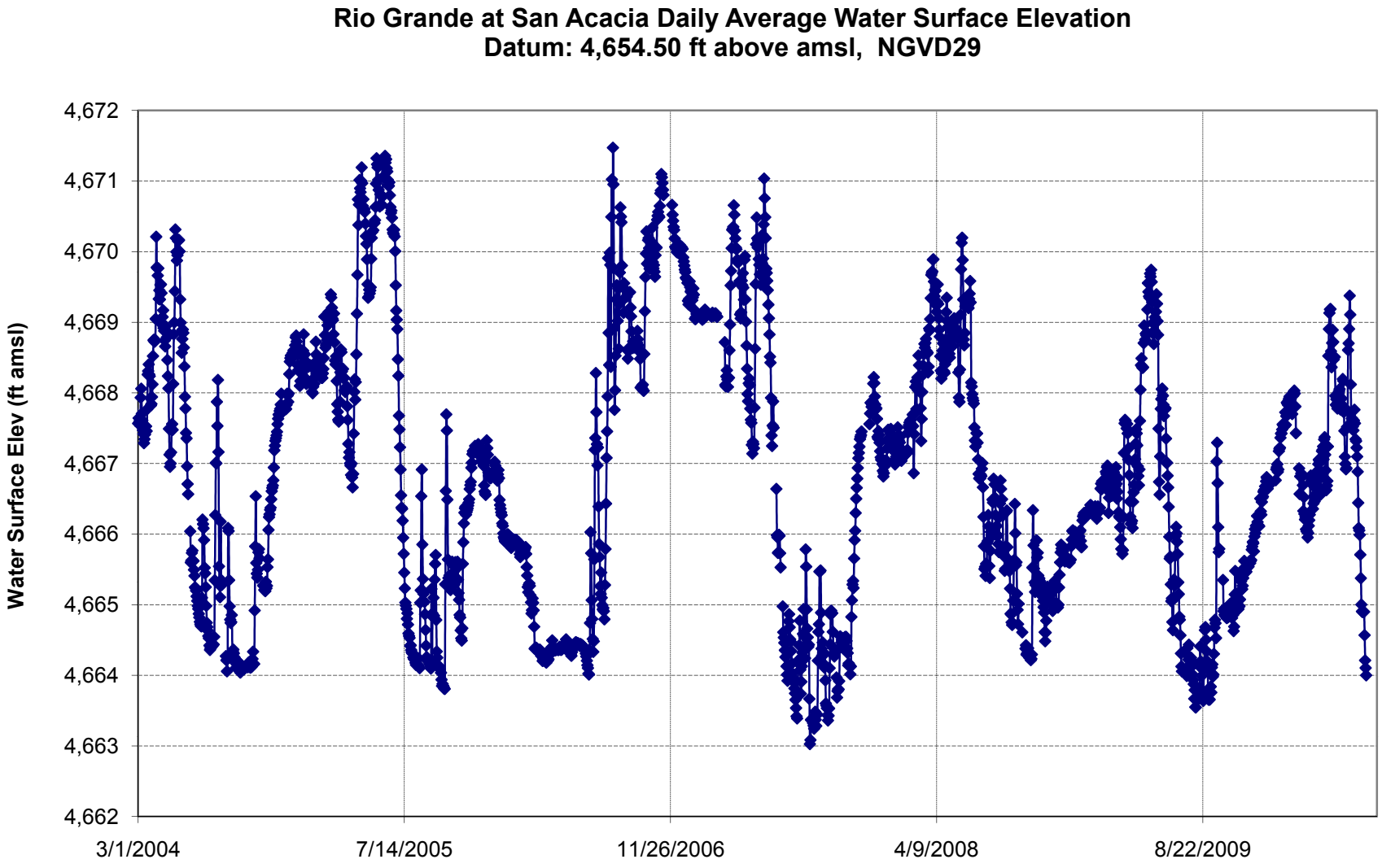

Rio Grande at San Acacia Average Daily Discharge (cfs) and Stage Height (ft)
Discharge (cfs)
Stage Height (ft)
7000
6000
5000
4000
3000
2000
1000
0
18
16
14
12
10
8
6
4
2
0
4/1/2003
6/30/2003
9/28/2003
12/27/2003
3/26/2004
6/24/2004
9/22/2004
12/21/2004
3/21/2005
6/19/2005
9/17/2005
12/16/2005
3/16/2006
6/14/2006
9/12/2006
12/11/2006
3/11/2007
6/9/2007
9/7/2007
12/6/2007
3/5/2008
6/3/2008
9/1/2008
11/30/2008
2/28/2009
5/29/2009
8/27/2009
11/25/2009
2/23/2010
5/24/2010
Discharge (cfs)
Stage Height (ft)


Rio Grande at Escondida Average Daily Discharge (cfs) and Stage Height (ft)
Discharge (cfs)
Stage Height (ft)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
35
30
25
20
15
10
5
0
4/26/2005
7/25/2005
10/23/2005
1/21/2006
4/21/2006
7/20/2006
10/18/2006
1/16/2007
4/16/2007
7/15/2007
10/13/2007
1/11/2008
4/10/2008
7/9/2008
10/7/2008
1/5/2009
4/5/2009
7/4/2009
10/2/2009
12/31/2009
3/31/2010
Discharge (cfs)
Stage Height (ft)

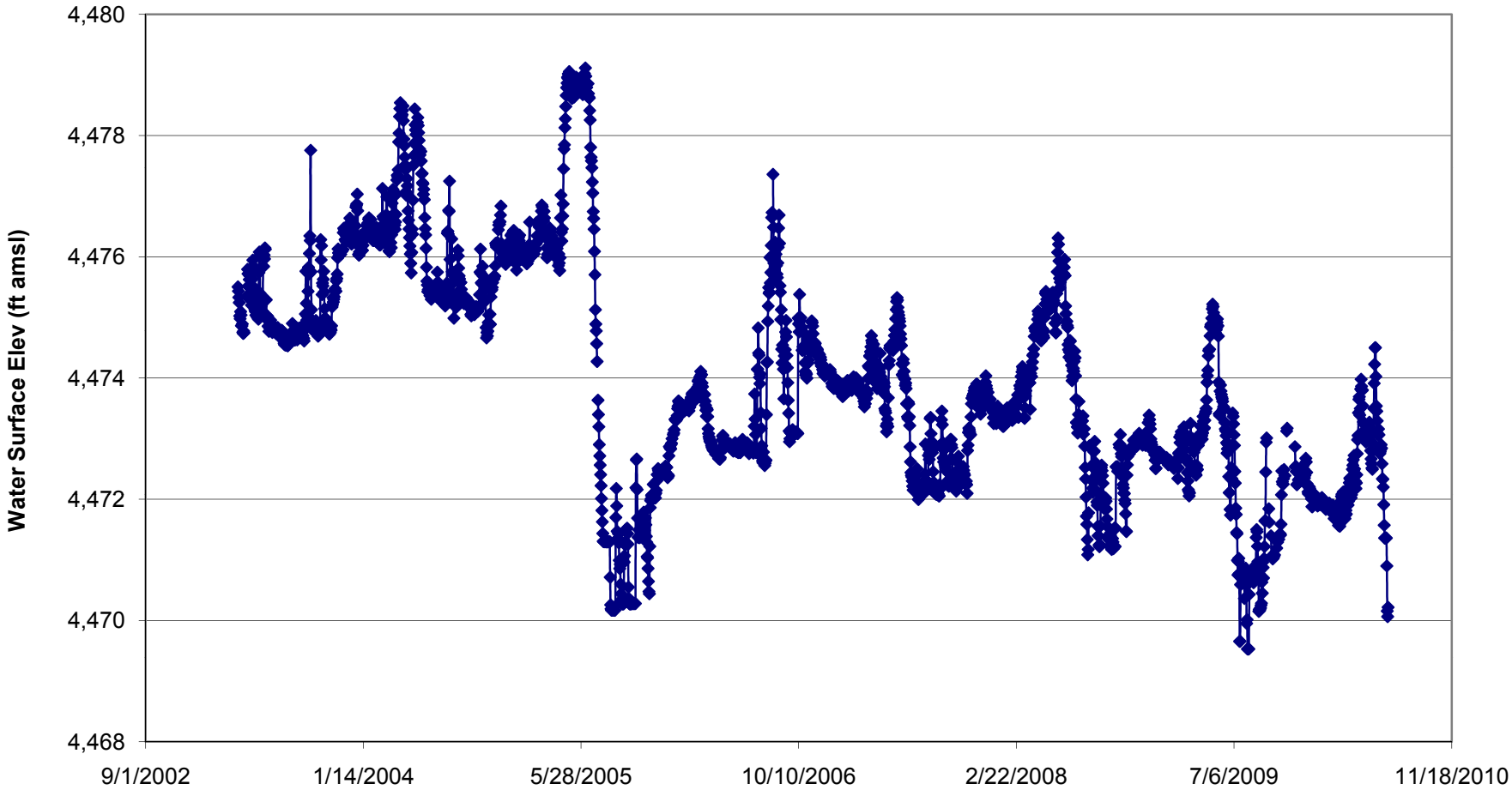

Rio Grande at Highway 380 Average Daily Discharge (cfs) and Stage Height (ft)
Rio Grande Discharge (cfs)
Stage Height (ft)
8000
7000
6000
5000
4000
3000
2000
1000
0
35
30
25
20
15
10
5
0
5/4/2005
8/2/2005
10/31/2005
1/29/2006
4/29/2006
7/28/2006
10/26/2006
1/24/2007
4/24/2007
7/23/2007
10/21/2007
1/19/2008
4/18/2008
7/17/2008
10/15/2008
1/13/2009
4/13/2009
7/12/2009
10/10/2009
1/8/2010
4/8/2010
Flow (cfs)
Stage (ft)

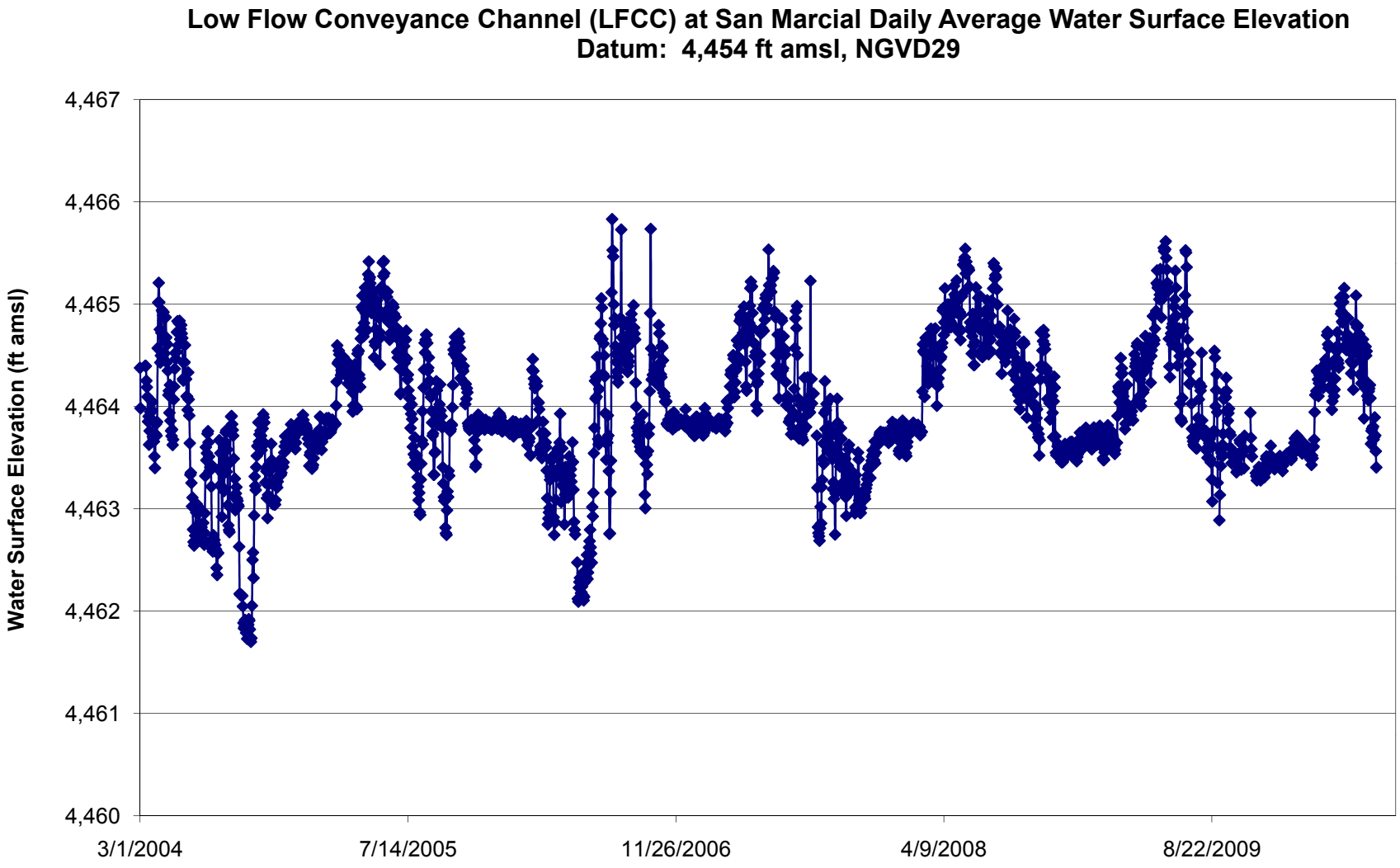

San Marcial Daily Average Discharge (cfs) and Stage Height (ft)
Discharge (cfs)
Stage Height (ft)
7000
6000
5000
4000
3000
2000
1000
0
30
25
20
15
10
5
0
4/1/2003
6/30/2003
9/28/2003
12/27/2003
3/26/2004
6/24/2004
9/22/2004
12/21/2004
3/21/2005
6/19/2005
9/17/2005
12/16/2005
3/16/2006
6/14/2006
9/12/2006
12/11/2006
3/11/2007
6/9/2007
9/7/2007
12/6/2007
3/5/2008
6/3/2008
9/1/2008
11/30/2008
2/28/2009
5/29/2009
8/27/2009
11/25/2009
2/23/2010
5/24/2010
San Marcial Discharge (cfs)
San Marcial Stage Height


Low Flow Conveyance Channel at San Marcial
Average Daily Discharge (cfs) and Stage Height (ft)
Discharge (cfs)
Stage Height (ft)
600
500
400
300
200
100
0
14
12
10
8
6
4
2
0
4/1/2003
6/30/2003
9/28/2003
12/27/2003
3/26/2004
6/24/2004
9/22/2004
12/21/2004
3/21/2005
6/19/2005
9/17/2005
12/16/2005
3/16/2006
6/14/2006
9/12/2006
12/11/2006
3/11/2007
6/9/2007
9/7/2007
12/6/2007
3/5/2008
6/3/2008
9/1/2008
11/30/2008
2/28/2009
5/29/2009
8/27/2009
11/25/2009
2/23/2010
5/24/2010
Discharge (cfs)
Stage Height (ft)


Rio Grande at San Acacia Daily Average Water Surface Elevation
Datum: 4,654.50 ft above amsl, NGVD29
Water Surface Elev (ft amsl)
4,672
4,671
4,670
4,669
4,668
4,667
4,666
4,665
4,664
4,663
4,662
3/1/2004
7/14/2005
11/26/2006
4/9/2008
8/22/2009

Rio Grande at San Marcial Water Surface Elevation, Datum 4,455.19 ft amsl, NGVD29




Low Flow Conveyance Channel (LFCC) at San Marcial Daily Average Water Surface Elevation
Datum: 4,454 ft amsl, NGVD29
Water Surface Elevation (ft amsl)
4,467
4,466
4,465
4,464
4,463
4,462
4,461
4,460
3/1/2004
7/14/2005
11/26/2006
4/9/2008
8/22/2009