SHERRILL ENVIRONMENTAL, INC.
Environmental and Geologic Services

October 31, 2003

Mr. Robert J. Waldrop
ReUse Technology, Inc.
665 Molly Lane, Suite 100
Woodstock, GA 30189

Subject: Groundwater Flow Direction
Swift Creek Project
US Highway 301, Nash County, North Carolina

Dear Mr. Waldrop:

The groundwater flow direction at the Swift Creek project is to the east. Two USGS Topographic Quadrangle Maps; Whitakers, NC and Drake, NC were spliced together to produce Figure 1. The Swift Creek project is isolated to the north by Lane Swamp, to the south by Swift Creek and to the east by the confluence of both creating a half mile wide swamp. The direction of flow for the surface water bodies is to the east. Typically, the water table is not a level surface, but a subdued reflection of the land surface topography. Figure 1 shows that surface topography decreases from west to east and therefore the general direction of regional groundwater flow should be to the east. Any groundwater flow from the project site westward across Highway 301 would be against the interpreted gradient and therefore unlikely.

On October 30, 2003 Sherrill Environmental, Inc. (Sherrill) performed a survey for water supply wells in the area of the Swift Creek project. There are no residences or water supply wells within a radius of 2000 feet from the project (Figure 2). Two residences with water supply wells were identified within a half mile radius from the property. The closest water supply well is at double wide trailer located north of the project on Highway 301. The second closest water supply well is at a small residence located on the farm to the west of the project. Sherrill located approximately 6 additional water supply wells within a one-mile radius of the project. Clover Farms, Inc. is a hog operation located north on Highway 301. Clover Farms has one water supply well that provides for two residential trailers and one well that supplies water for the hog operation. An agricultural irrigation well and a water supply well for a small residence are present on

7309 Still Pond Ct. • Raleigh, NC • 27613
Tel. (919) 420-7822 • Fax (919) 571-0757 • Mobile (919) 418-3894 • E-Mail Roxchem@aol.com

the farm to the west. The USGS topographic maps that were used to prepare this figure were last updated in 1961 and 1963. A number of the buildings shown on the map are sheds and barns and some of the buildings are no longer present. Municipally supplied water from the City of Rocky Mount is available along Highway 301 and Johnson Farm Road. In summary, no water supply wells are present within a radius of 2,000 feet from the project and no water supply wells are present within a one mile radius of the project in the downgradient direction.

The piezometric surface of shallow groundwater using January 27, 2003 data was presented as Figure 4 in the Site Investigation Report, May 2003, prepared by Sherrill. These piezometers are screened from 20 to 30 feet below the project surface and are below the sandy clay interval. Figure 4 showed that the direction of shallow groundwater flow was to the east. Sherrill has updated this figure using recent data collected on October 13, 2003. Figure 4A shows an eastward groundwater flow direction away from Highway 301.

Two piezometers, P-7 and P-8, are screened in the interval of 30 to 40 feet below the project surface. Piezometer P-7 is east of P-8. The difference in groundwater elevations between these two piezometers has ranged from 0.43 feet to 1.10 feet and averaged 0.80 feet. Figure 3 illustrates the eastward flow direction of the deeper piezometers with recent data obtained on October 13, 2003.

ReUse has proposed installing groundwater monitoring wells 250 feet from the coal ash fill. This would place the location of the monitoring wells in the swamp. If available, the installation of the monitoring wells could be performed by a specialized drilling rig. Monitoring wells could also be installed by building a small wooden platform in the swamp from which a well could be installed with a hand auger. The monitoring wells could be installed similar to a Type III well. The hand auger method could be performed by advancing an outer PVC casing and cleaning the boring out with a large hand auger bucket. The outer casing could be advanced through the swamp sediments until the underlying marine sediments were encountered. The boring would be advanced and a well could be constructed to collect groundwater samples from the interval similar to the geology in which the site groundwater piezometers are screened. Geologic materials and conditions could be different than anticipated. All information such as geology and well construction would be recorded for evaluating the relevance and quality of the groundwater data.

In summary, all of the information that we have reviewed indicates that the groundwater flow direction is eastward away from Highway 301. Sherrill's opinion is that any water leaving the project will enter the Swift Creek swamp. No water supply wells are present within a radius of 2,000 feet from the project and no water supply wells are present within a one mile radius of the project in the downgradient direction.

We appreciate the opportunity to provide you with consultation and environmental services. Thank you for your consideration. If you have any additional questions, or need additional information, please contact us at (919) 420-7822.

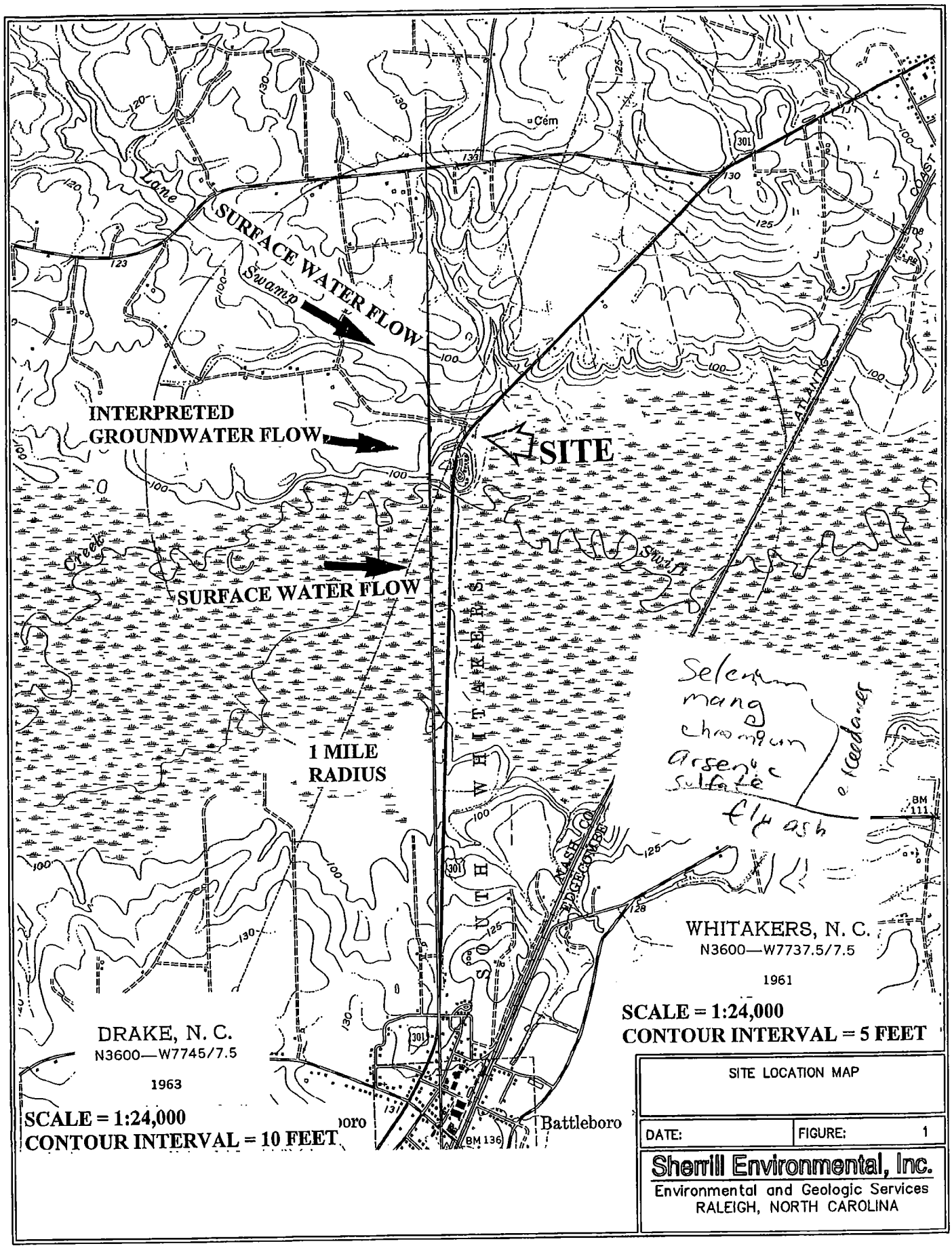
Sincerely,

SHERRILL ENVIRONMENTAL, INC.

John Sherrill

John (Jack) F. Sherrill, L.G.

NORTH CAROLINA
LICENSED
10/31/03
SEAL
1459
GEOLOGIST
JOHN F. SHERRILL, III

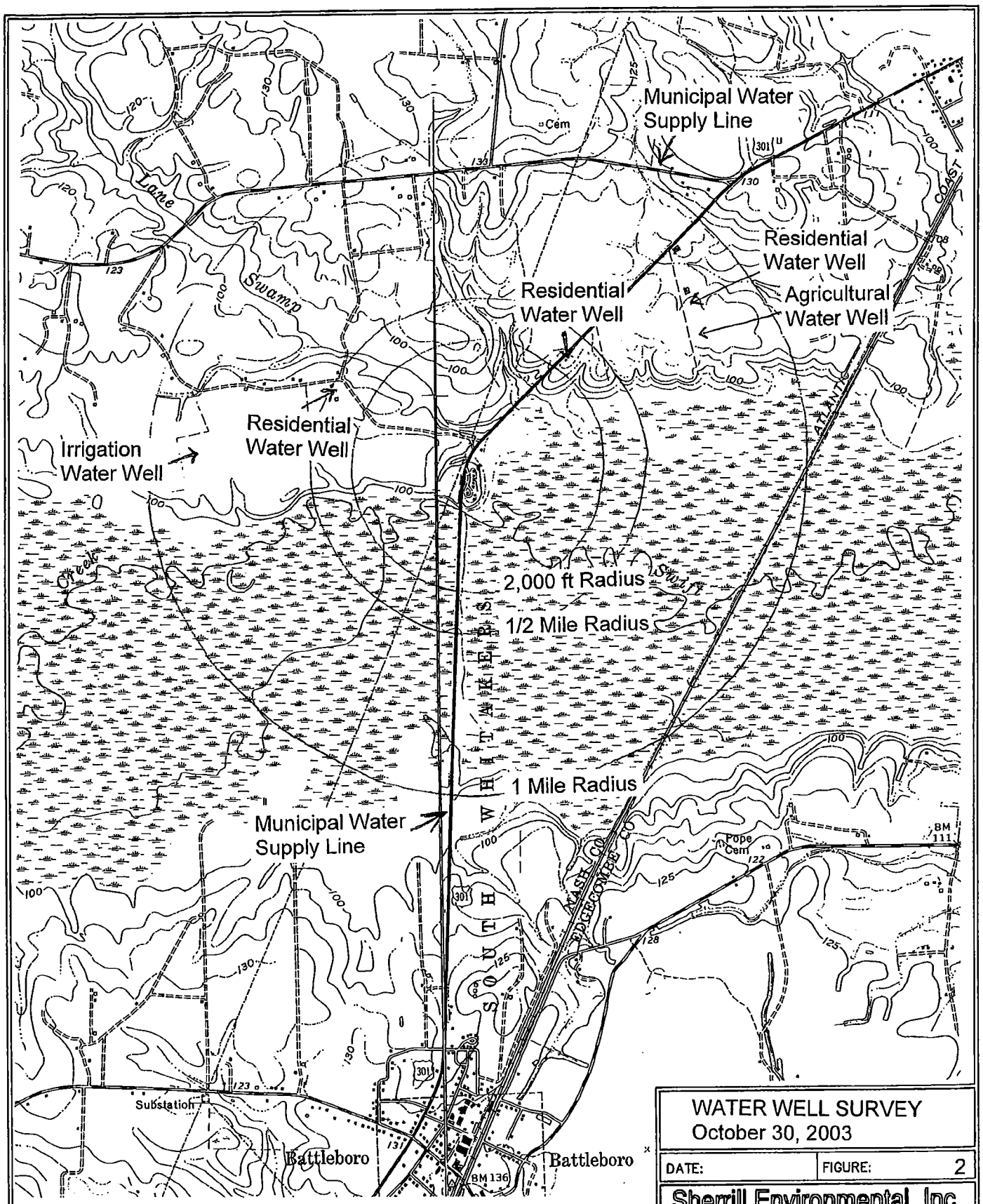


SITE LOCATION MAP

DATE:

FIGURE: 1

Sherrill Environmental, Inc.
Environmental and Geologic Services
RALEIGH, NORTH CAROLINA

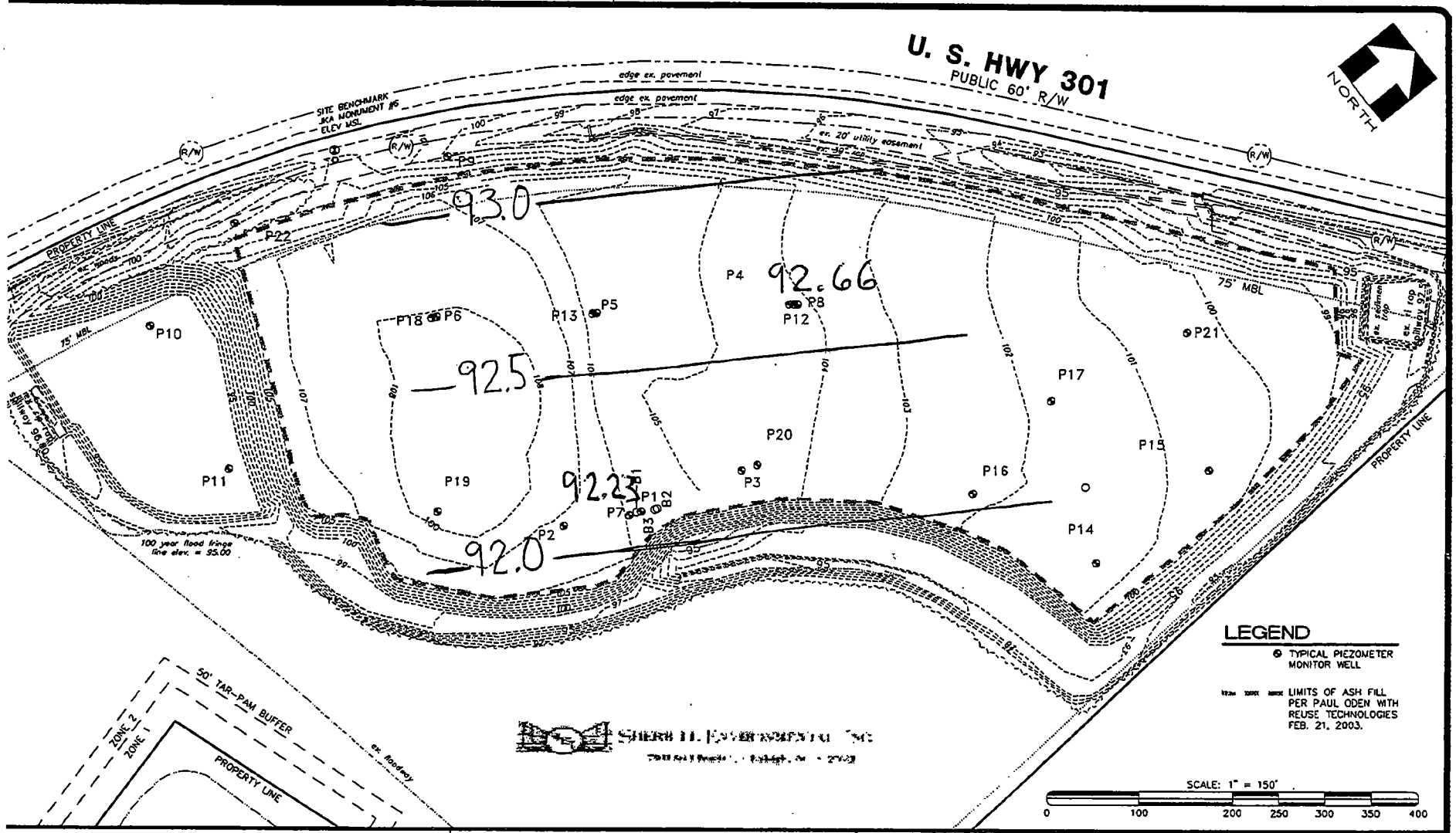


WATER WELL SURVEY
October 30, 2003

DATE:	FIGURE: 2

Sherrill Environmental, Inc.
Environmental and Geologic Services
RALEIGH, NORTH CAROLINA

C:\MIKE\d-657-reuse-swiftcreek\as-builts-geological-5-12-03\01016-g2.dwg 10/15/2003 - 1:38:19 PM - Plot by M.G.Jr.



BOUNDARY DESCRIPTION SHOWN
S NOT FOR RECORDATION.

ADA AND LEGAL DISCLAIMER
his document is not represented to comply with all requirements
ontained in the ADA or other laws. Engineers are not licensed to
nterpret laws or give advice concerning laws, the owner should have
his document reviewed by his attorney to determine legal compliance.

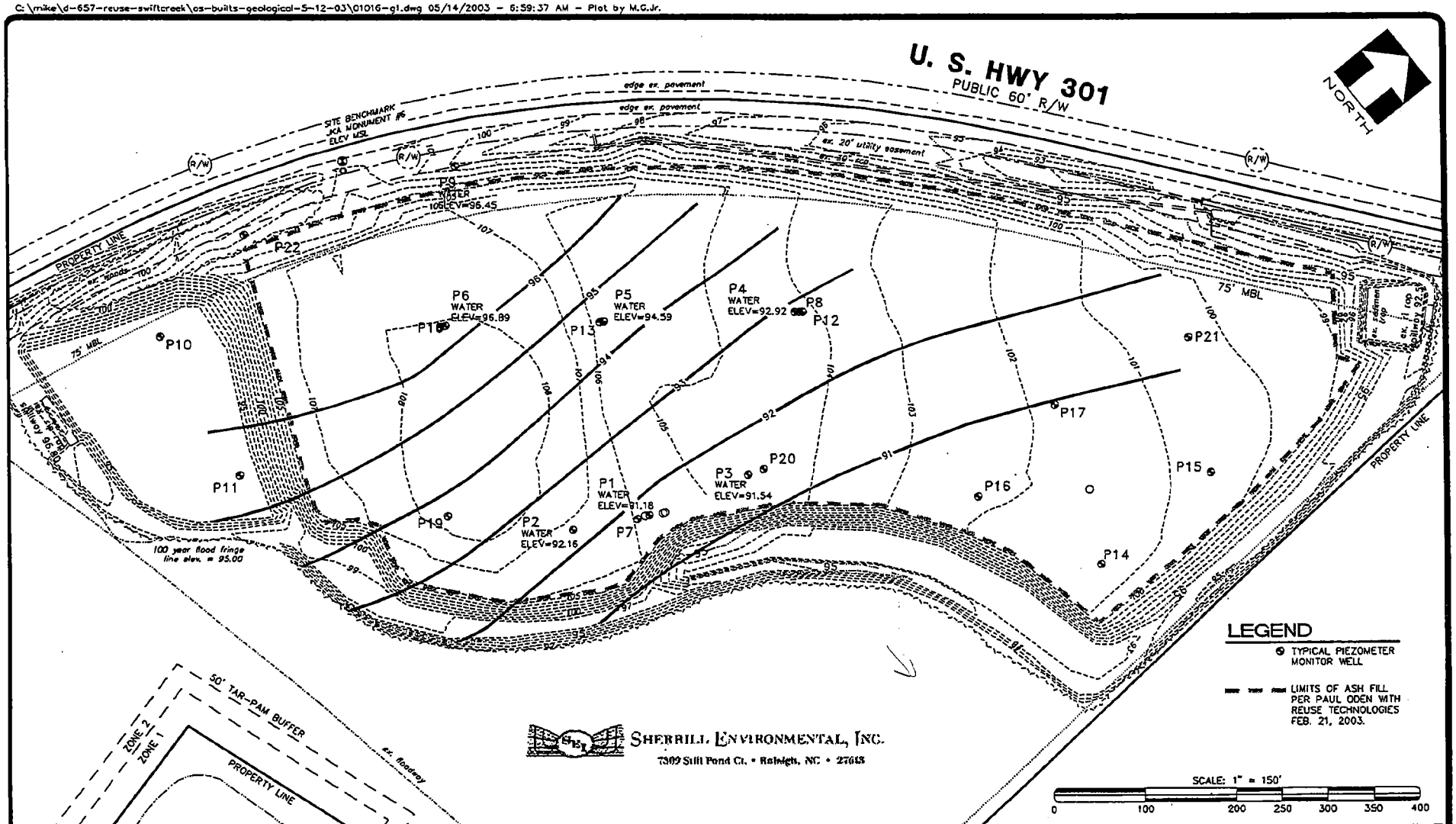
BEFORE YOU DIG CALL TOLL FREE 1-800-632-4949 NORTH CAROLINA ONE-CALL CENTER

Figure 3
Deeper Piezometric Surface
October 13, 2003
ReUSE TECHNOLOGY

DRAWN BY: Mike Gallina Jr.	J.N. 01016
SCALE: 1" = 150'	FILE NAME 01016-g2
DATE: 01/01/1901	SHEET # 1 OF 1

CONSULTING ENGINEERS, P.A.
CIVIL, MUNICIPAL & STRUCTURAL ENGINEERS
COMPREHENSIVE ENVIRONMENTAL SERVICES
www.appianengineers.com
P.O. Box 7966 / Rocky Mount, N.C. 27804
Phone: (252) 972-7703
Fax: (252) 972-7638
EMAIL: admin@appianengineers.com
APPIAN

C:\mike\d-657-reuse-swiftcreek\as-builts-geological-5-12-03\01016-gl.dwg 05/14/2003 - 6:59:37 AM - Plot by M.G.Jr.



BOUNDARY DESCRIPTION SHOWN IS NOT FOR RECORDATION.

ADA AND LEGAL DISCLAIMER
This document is not represented to comply with all requirements contained in the ADA or other laws. Engineers are not licensed to interpret laws or give advice concerning laws. The owner should have this document reviewed by his attorney to determine legal compliance.

BEFORE YOU DIG CALL TOLL FREE 1-800-632-4949 NORTH CAROLINA ONE-CALL CENTER

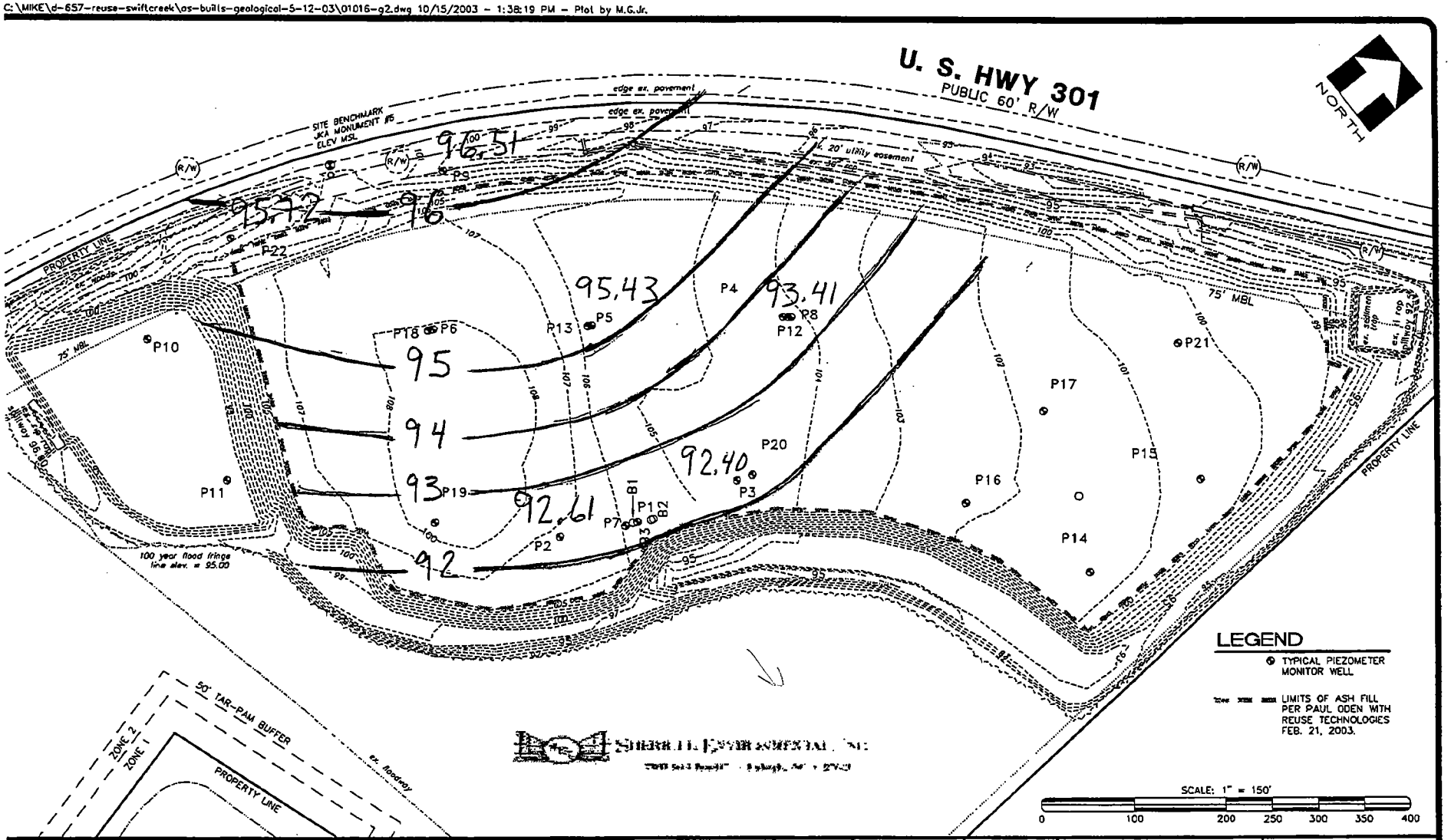
FIGURE 4
PIEZOMETRIC SURFACE of SHALLOW GROUNDWATER 01/27/2003
ReUSE TECHNOLOGY

DRAWN BY Mike Gallina Jr.	J.N. 01016	
SCALE: 1" = 150'	FILE NAME —	
DATE: 01/27/2003	SHEET # — OF —	

CONSULTING ENGINEERS, P.A.
CIVIL, MUNICIPAL & STRUCTURAL ENGINEERS
COMPREHENSIVE ENVIRONMENTAL SERVICES
www.appianengineers.com
P.O. Box 7966 / Rocky Mount, N.C. 27804
Phone: (252) 972-7763
Fax: (252) 972-7638
EMAIL: admin@appianengineers.com

APPIAN

C:\MIKE\d-657-reuse-swiftcreek\as-builts-geological-5-12-03\01016-g2.dwg 10/15/2003 - 1:38:19 PM - Plot by M.G.Jr.



BOUNDARY DESCRIPTION SHOWN
S NOT FOR RECORDATION.

ADA AND LEGAL DISCLAIMER
his document is not represented to comply with all requirements
ontained in the ADA or other laws. Engineers are not licensed to
nterpret laws or give advice concerning laws. the owner should have
his document reviewed by his attorney to determine legal compliance.

BEFORE YOU DIG CALL TOLL FREE 1-800-632-4949 NORTH CAROLINA ONE-CALL CENTER

Figure 4A
Piezometric Surface of Shallow Groundwater 10/13/2003
ReUSE TECHNOLOGY

DRAWN BY: Mike Gallina Jr.	J.N. 01016
SCALE: 1" = 150'	FILE NAME 01016-g2
DATE: 01/01/1901	SHEET #: 1 OF 1

CONSULTING ENGINEERS, P.A.
CIVIL, MUNICIPAL & STRUCTURAL ENGINEERS
COMPREHENSIVE ENVIRONMENTAL SERVICES
www.appianengineers.com
P.O. Box 7366 / Rocky Mount, N.C. 27804
Phone: (252) 972-7703
Fax: (252) 972-7538
EMAIL: admin@appianengineers.com
APPIAN