SuperLog
User's Manual

Version 4 and up

Borehole Log
and Test Pit Log
Drawing Program
for
Geotechnical, Geological,
Environmental, Mining
and Oil Industries

9.1.08

CivilTech Software

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SUPERLOG FOR WINDOWS USER'S MANUAL

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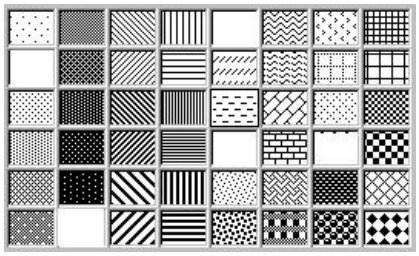
CHAPTER 1 INTRODUCTION

About the Program



SuperLog generates boring log and test pit reports for field drilling and geotechnical investigations. It saves countless hours spent preparing and retrieving boring logs. This benefit can begin immediately since the program is extremely easy to learn and use. With a laptop computer you can even enter in the data during the actual drilling.

Advanced capabilities include rapid input, e.g., typing "f to m sa" will pop out "fine to medium sand." The user can personalize the abbreviation list. Automatic depth generation, boilerplate, and spell check make the input fast and enjoyable.

The program offers many templates for outputting log information. Users can modify any of the templates included with the program.

The program license is for one user on a single computer only.

Features

- Supports multiple borings and multiple pages
- Uses graphical symbols and patterns
- Handles English and metric units
- Provides a graphical interface and instant preview
- Logs piezometers/monitoring wells
- Shows dual patterns and USCS symbols
- Incorporates boilerplate to reduce repetitive typing
- Produces high quality output with laser fonts
- Has unlimited user-editable templates
- Spell checks

About the Company

The software was developed by **CivilTech Software,** a subsidiary of CivilTech Corporation. CivilTech Software employs engineers with experience in structural, geotechnical, and software engineering. These engineers have many years of experience in design and analysis in these fields as well as in special studies including seismic analysis, soil-structure interaction, and finite element analysis. CivilTech has developed a series of engineering programs that are efficient, easy to learn, engineering oriented, practical, and accurate. CivilTech Software programs include PlanTrack, TimeTrack, DailyReport, WinMarket, Shoring, Heave, Lpres, Epres, Upres, Tunnel, Buried Structures, All-Pile, SuperLog, Pinned Pile, and Lab Testing programs. These programs are widely used in the U.S. and around the world. For more information, visit our Web site at www.civiltech.com.

CHAPTER 2 INSTALLATION AND REGISTRATION

Installation

Setup

Insert the setup disk into floppy drive A: or B.

In Windows 3.1, go to the [FILE] menu and select [RUN].

In Windows 95, 98, 2000, or NT press <START> and select [RUN].

Type: `A: setup` or `B: setup`

Press <OK> and follow the directions on the screen. The installation program will automatically create a shortcut icon called "SuperLog" on your Windows desktop and a SuperLog folder. When you first start the program you will be in unregistered mode. To register the software, see the instructions in the Registration Section below.

Configuration

The software configuration uses your existing Windows settings. However, you can change your configuration later in Windows. (Consult your Windows manual for instructions.) The recommended resolution is higher than 800 x 600.

Starting the Program

Double click the shortcut icon called "SuperLog" on your Windows desktop or from <START> select [Programs/Superlog].

Quit Program

Press [Exit] from the [File] menu.

Registration

You will need to register your copy of this software to use its full capabilities. When you first start the program, the Registration Panel will appear (Figure 2-1.) If you do not register at this time you can always open this window which is located under the [HELP] menu as the option [REGISTER]. After your registration has been accepted, this window will disappear.

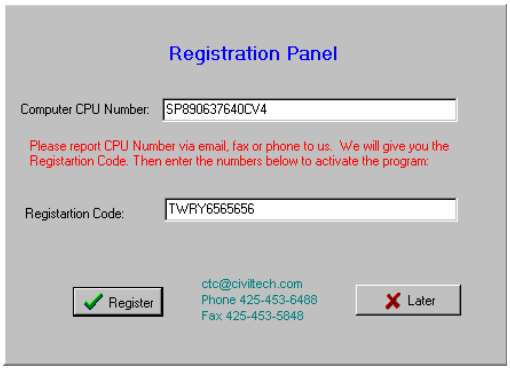


Figure 2-1 Registration Panel

The program will find the CPU ID number of your computer and indicate it at the top of the registration panel. You may provide this number to CivilTech by telephone, email, or fax. In return, you will be given a registration code to enter into the panel, along with your user name and company name. Click Register to close the program. Re-open it and you will have full program capabilities. *You will need to have one license for each computer running the program. Additional licenses may be obtained at discounted rates. If further information is desired, please contact CivilTech.*

Changing Firm Name or User Data

You can change the Firm Name and User Data that the program has been registered to. Please bear in mind that if the registered user or firm changes, you should contact us to re-register it under the name. This will allow you to still be eligible for upgrades and support.

To change the registered Firm Name and User Data, click on <Help> on the upper menu bar and then <Register> to open up the registration window. Enter in the new name (user or firm) with the current registration code. (If your old code does not work any more, contact us for a new one). You will need to quit and restart the program.

For instructions on changing the logo and company name in the log reports, please refer to Chapter 6.

Terminology

Log	A log representing a boring, test pit, or well.
Log File	A file containing several logs. The log file has the extension ".log".
Template	Also called a form. This is the format associated with the log. The program can handle an unlimited number of templates and provides a template design utility. A log file can only have one template. You can change the template after the log file has been created.
Template File	A file containing a template. A template file has the extension ".fom".
Report	A printed graphical report of the logs. One report may have multiple pages.
Current Log File	The log file you are currently working on.
Current Log	A log file may have many logs. The one you are currently editing is called the current log.
Current Template	The template used by the current log file (in data input mode).
Default Template	You can save the template you use most often as the default template. When you create a new log, the program will use the default template on the new log file (and if you change your mind, you can always change the template later.) See Chapter 6 for instructions.

Files and File Locations

The SuperLog default folder is “C:/Superlog”. You can also install the program in the folder of your choice during installation, such as “D:/engineer/SuperLog”. This folder contains major executive files, a dictionary, and template files.

The template files have the extension “.fom”. Typical file names are “F1. fom”, “Default.fom”, etc. The template files are located in the same folder as the other program files.

The log files are the files containing the data for the boring logs and the project. They have the extension “.log”. In the initial installation, the sample log files are installed in a sub folder named “project”. The typical location is “C:/Superlog/project/”. The user may save the log files into a different folder such as “/project2/”, “/logfile/”, etc. The user can set these folders as a default folder so that when the program is opened, the default folder is the first choice. To set a folder as default, click “File” on the main menu bar and select “Save Path as Default”.

There are three EXE programs in the program package:

SuperLog.EXE	The main program to generate log reports. The design utility is also inside.
ViewDemo.EXE	A program demonstrating all attached templates.
View.EXE	A royalty-free viewing utility to view the saved report (see “All Logs Report” in Chapter 5).

FAQs

Q: Can I change templates after a log is created?
A: Yes. Click “Tools” then “Change Template”. However, the new template may not have the same data structures as the previous one. Some adjustments may be necessary.

Q: Can I have different templates for each log in the same project?
A: Only one template per log file is allowed. You can create two log files for one project, each having its own template. Or you can change the template for a single log, print it, and then change the format back again.

Q: Does the program support a graphical format for the test data?
A: Yes. In the Template Design area, you can specify whether the test data will be presented graphically. You also need to set the lower limit and upper limit of the test data. For example, SPT or Moisture Contents can be presented with graphics.

Q: Does the program support monitoring wells?
A: Yes. See the Well section.

Q: How do I start a new line in the Description?
A: Entering a tilde (~) between two letters moves the next letter to a new line.

CHAPTER 3 DATA INPUT

The following sections describe how to enter data into the program, page by page.

Cover Page

The cover page (Figure 3 – 1) can be accessed after launching the program by clicking "File/New" on the toolbar.

[Open File]	Opens an existing log file.
[Create New]	Creates a new log file.
Total Logs	Enters the number of logs for the new log file. You can always add or duplicate new logs to existing files later.
[Template]	You can either use the default template or change to a different template. Press this button to open a dialog box that allows you to select a pre-designed template file. After selecting a template, press [Create New].

Note: Each template is presented in a template file; the name of the current template file selected is shown beside the [Template] button.

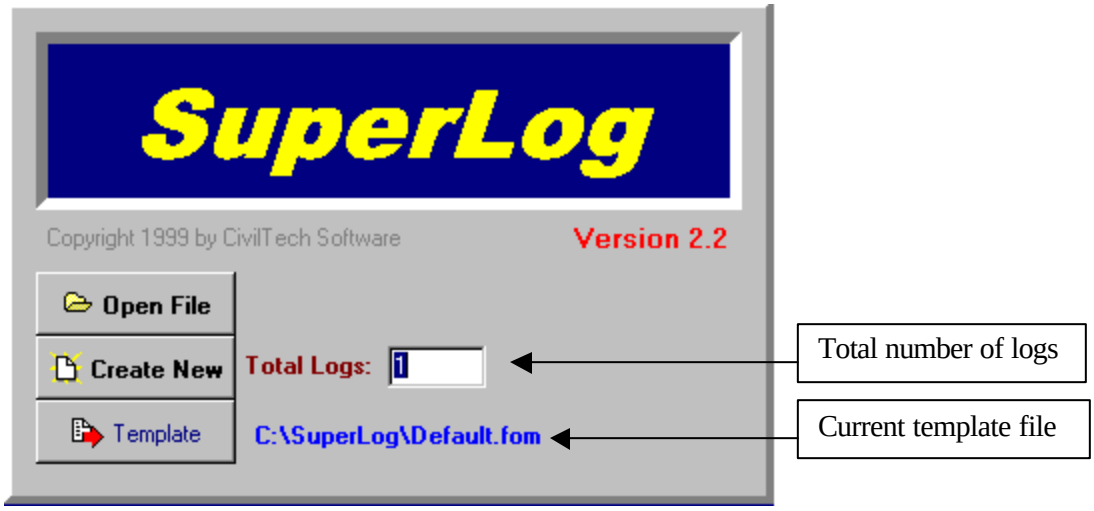


Figure 3-1 Cover Page

Input Page 1 – General

The first, or "General," input page is divided into halves. The left half pertains to the project and file information, and the right half contains log information.

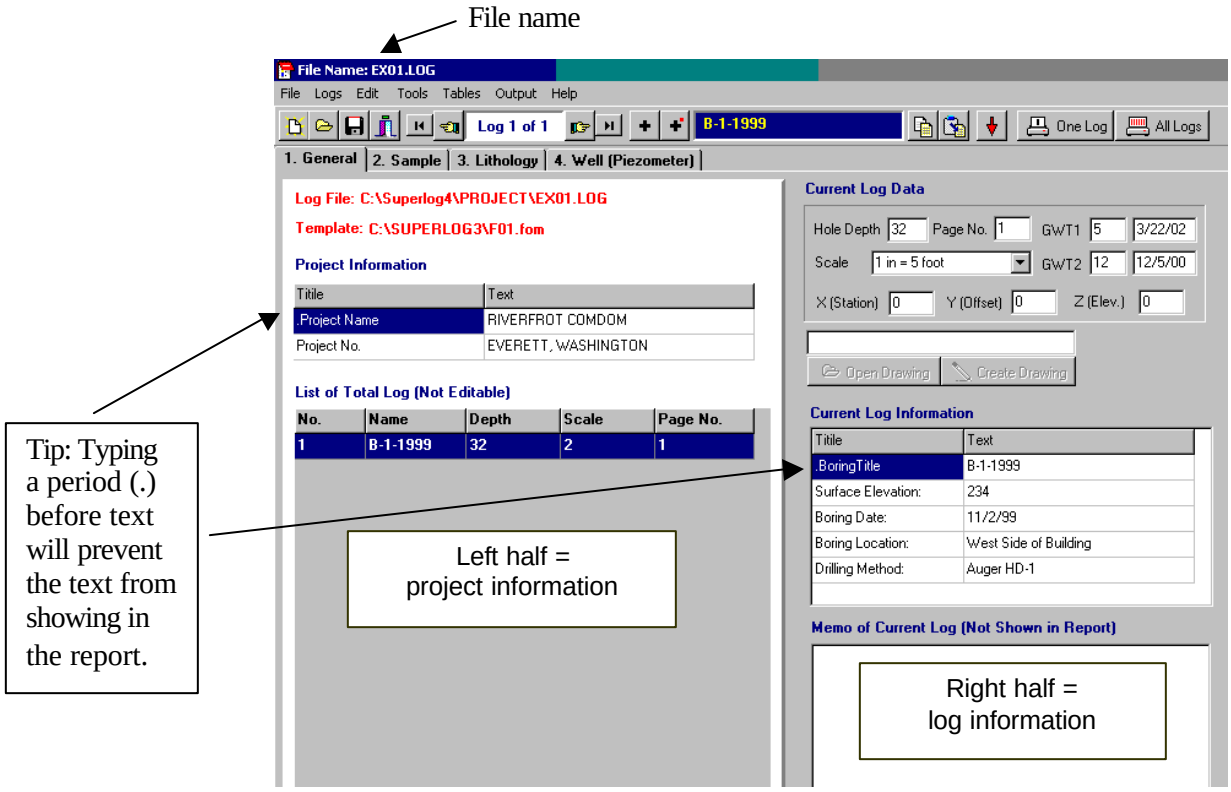


Figure 3-2 Page 1, General

Log File: The path and file name of the log file. The file name also shows in the top left corner of the screen.
Template: The template associated with the log file.

Project Information

The Project Information fields contain the general information about the project, which shows on every log report.

If a period (.) is present before the title name in the left column, the information in the right column will not be shown on the report.

Total Log List

This table is a non-editable list of the individual logs in the log file. (It cannot be edited directly, as the information is input from other places.)

No.	Log number
Name	Log name
Depth	Borehole depth in feet or meters

Scale	Scale index number
Page	Page starting number of the current log

Current Log Data

Current log data pertain to the current individual log.

Hole Depth	The maximum depth of the hole
GWT1	Depth of the groundwater table encountered during drilling and encountered date. If this box is blank, a text, "GWT not encountered" is presented in water column. If "–1" is inputted, the text will not presented.
GWT2	Second water table measurement, e.g., several days after Drilling and date of measurement.
Scale	The vertical scale used in the log report
Page Number	The beginning page number of the log
X (sta.)	X coordinate or station of the log location
Y (off.)	Y coordinate or offset of the log location
Z (elev.)	Elevation of the top of the boring hole
Drawing	If the template has a drawing, you can open and attach it to the log.
Draw	Create or edit drawings

Current Log Information

If a period (.) is inserted before the title name, the text will not be shown in the report.

Memo of Current Log

The memo field is for reference only and will not show in the report unless the current template has a "Remarks" field for this purpose (see Template 16).

Water Table Date

The date of ground water measurement can be input and presented in the report. The input is on the Page 1, General Page. If there is no date to input, leave the input box blank.

The default setting is showing the date above the water symbol in the report. You can also rotate the date 90 degrees. To set this option, open the Template Design Screen (Tools/Design Template), then in the Design Page 1, Main Table-3, set the <Style> property in <Water> row = 1 as shown in Figure 3. The default setting is 0

Page Number Options

There are two options for page numbering.

1. The default option has the pages numbered sequentially in each log. If the first log has 3 pages, the number of each page is Page 1, Page 2, and Page3.

2. The other option is to number all the pages in a log with the same page number. If the first log has three pages, each page will be numbered Page 1. The second log has all page numbers Page 2. To set this option, open the Template Design Screen (Tools/Design Template), then in the Design Page 1, Main Table-3, set the <Line/w> property in <Page No.> row = 1 as shown in Figure 3. The default setting is 0 for the option 2.

Input Page 2 – Sample Table

This page is for inputting sample information. Depending on the template you choose, the items in this example may be different from the template you view. However, the following information is provided on a typical template.

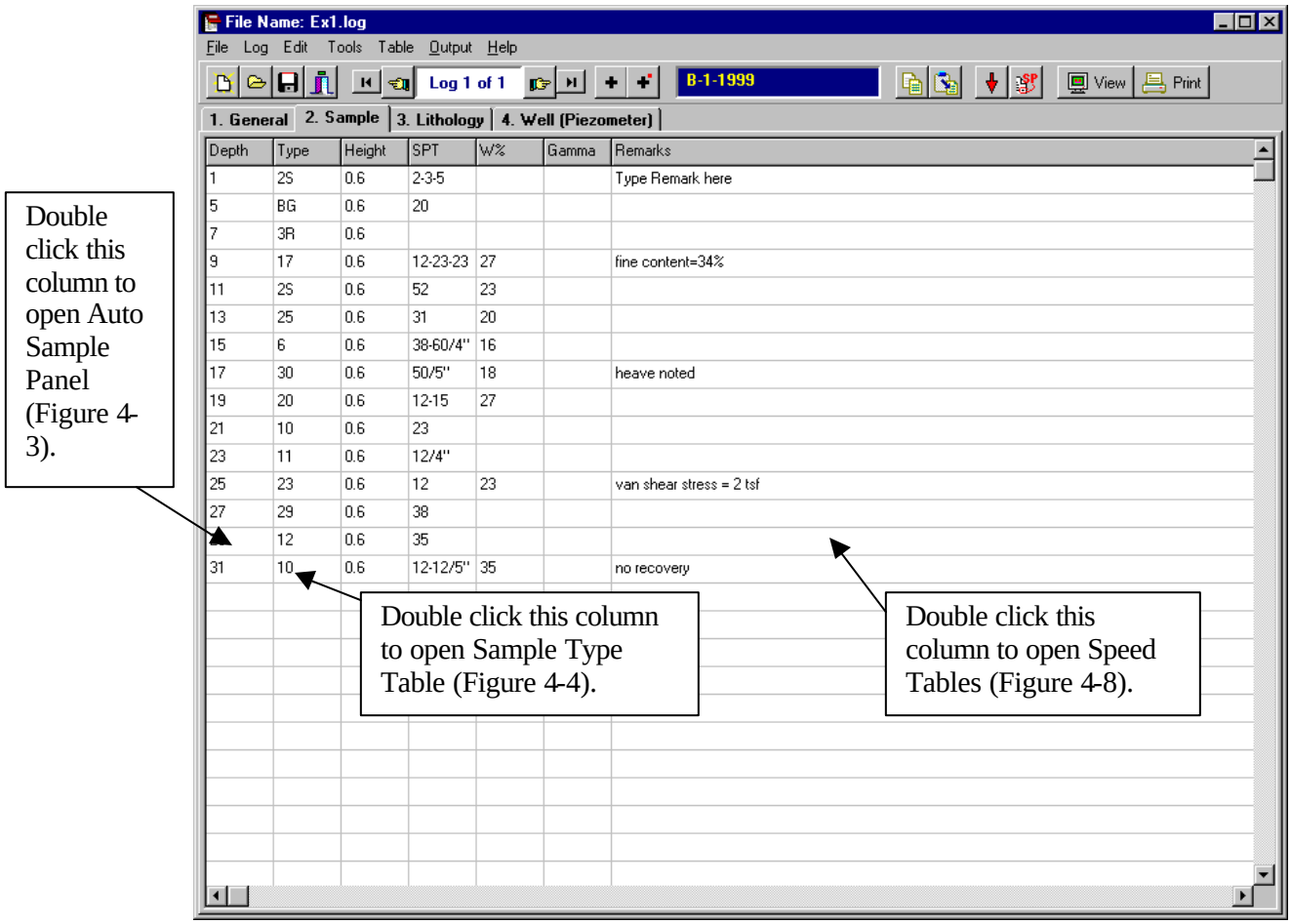


Figure 3-3 Page 2, Sample

Depth The depth of the sample top. The Auto Sample Panel can be opened by double-clicking on this column. See Figure 4-3.

Type	The sample type, e.g., SPT sample, bag sample, etc. Double click on this column to open Sample Type Table (Figure 4-4).
Height	The sample height in feet or meters
SPT	The SPT reading. "12", "6/15", "3,4,5" are typical inputs. "5-2-3" will split the data vertically on the report, if your template allows it.
W%, Gamma	The test results
Remarks	A text field with a maximum length of 100 letters. Double click on this field to open the Abbreviation and Boilerplate speed tables. These functions are available for this field. See Figure 4-8

Input Page 3 – Lithology Table

This input page presents the ground layer information. The items shown here may be different from what you see, depending on the template selected.

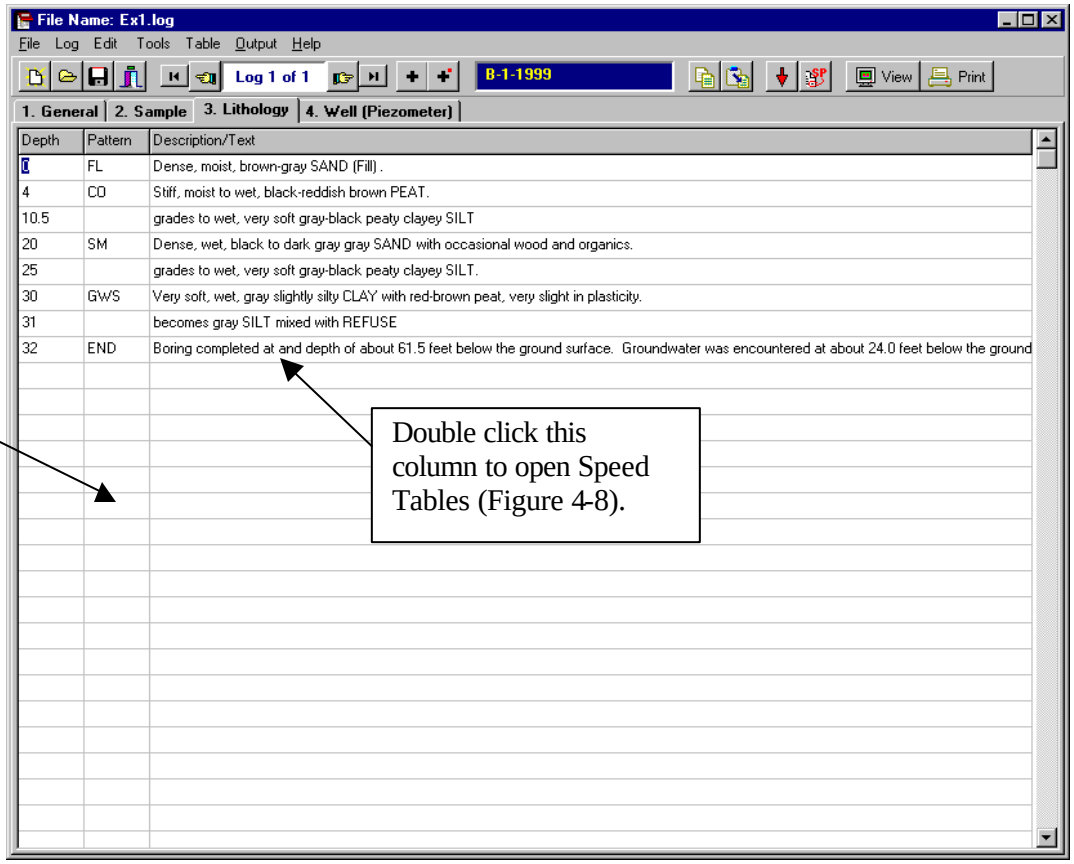


Figure 3-4 Page 3, Lithology

Depth	The depth of the soil layers and soil information. If the depth you input is greater than the hole depth in Input Page 1, the program will add END as the pattern and add the ending description.
Pattern	The soil pattern for the layer. Double click this field to open the Soil Pattern Table. If a period (.) is present before the text, the text will not be shown in the report.

Description The description or comments at the selected depth. Use a tilde (~) to create a line break so that the text will move to a new line in the report.

If you want to input information at a certain depth without changing the soil layer, you can leave the pattern of this row blank and only input the depth and description.

Input Page 4 – Monitoring Well

This page is for inputting well construction information.

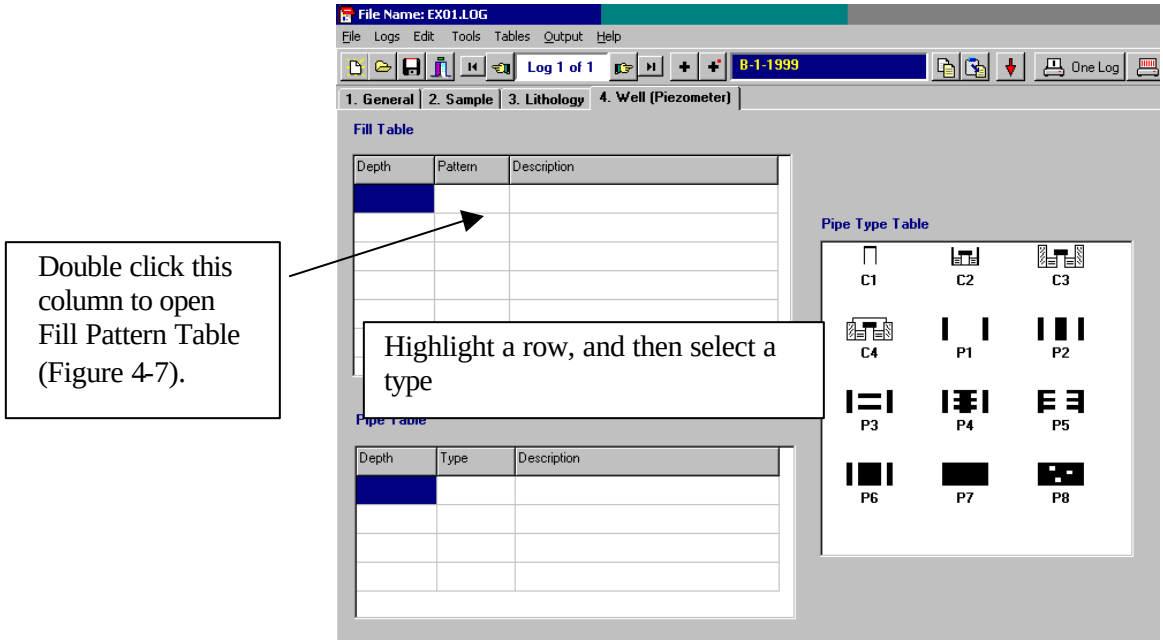


Figure 3-5 Page 4, Monitoring Well

Fill Table

Input fill of the hole:

Depth Depth of top of fill (change of fill material).
Pattern Fill Pattern. Double click to open Fill Pattern Table (Figure 4–7).
Description Description of fill.

This table works the same way as the Lithology Table. Type "END" at the bottom of the well hole. The description will or will not be shown depending on which template you selected.

Pipe Table

Input pipe information:

Depth Depth of well cap (the first row) and depth of pipe type end (rows 2 to 4)
Type Type of well cap and pipe type.

Description Text description of cap and pipe.

- The first row is for the well cap. You can select from C1 to C4 based on the Pipe Type Table.
- The next 3 rows are for pipe type. You can select from P1 to P8 based on the Pipe Type Table
- The pipe span starts from the depth of the previous row to the depth of the current row. Note: Rows 2 to 4 show the pipe type end. It is the end of the pipe type specified in the second column of the same row.

Use the Pipe Type Table to select pipe type.

- Select a type from C1 to C4 for the well cap. It must be imported in the first row of the Pipe Table.
- Select a type from P1 to P8 for the pipe type. It must be imported to the 2nd to 4th rows of the Pipe Table. You can highlight the row in the Pipe Table then click the pipe type from the Pipe Type Table. The selected pipe type goes to the Pipe Table. The row should be highlighted before clicking the pipe type.

Tips for Data Input

There are two modes of inputting data into a table:

Overwrite Mode – When you click on a cell or use the arrow keys to move the cursor to a cell, all the text in the cell will be automatically highlighted. Simply begin typing and all the text will be overwritten. This is a default mode. Press F2 to change to Edit Mode.

Edit Mode – By pressing the F2 key or using the Enter key to move the cursor down, the cursor will automatically go to the end of the existing text. Any new typing will follow the existing text.

Inputting data into a table cell is easy. The following tips may also help:

1. If the cell is not empty, new typing will overwrite the existing text unless you press F2. Pressing F2 will move the cursor to the end of the existing text. Then the text you type will be added to the end of the existing text.
2. Clicking a cell twice will open a table if the cell is associated with a table.
3. Abbreviation typing is available in the Remark Column (Input Page 2 – Sample), and the Description Column (Input Page 3 – Lithology). For example, if you type “f to m sa” and press the enter key, the text will read “fine to medium sand”. You can create your own abbreviations on the Abbreviation Table.
4. You can add common phrases into the Boilerplate and reuse them later. This is available by double clicking on the Remarks column (Input Page 2 – Sample) and the Description/Text column (Input Page 3 – Lithology).
5. Copy Text – Use the mouse to click the cell you wish to copy. The text in the cell will be highlighted. Then, press the **right** mouse button and select “copy” from the edit panel. See Figure 3-6.
6. Paste Text – Move the mouse to the desired cell and press the right mouse button again. Select “paste” from the edit panel.

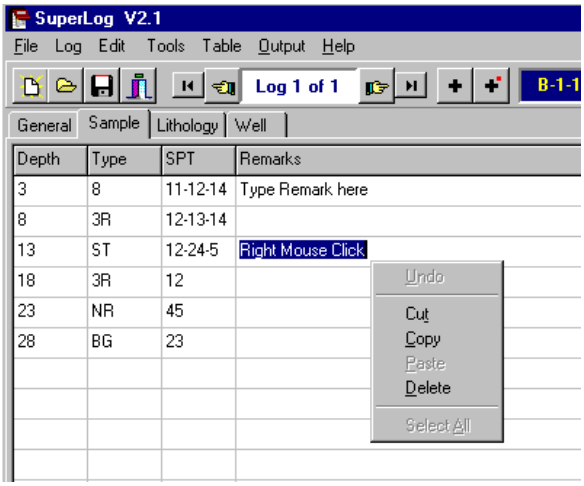


Figure 3-6 Use Right Mouse Click to Cut/Copy/Paste Text

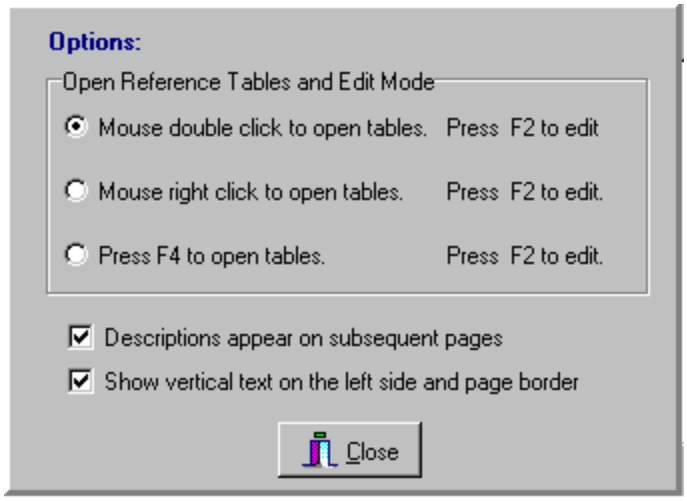


Figure 3-7 Options

Options Panel

From the pull-down menu, Tools/Options, the **Options** panel can be opened. Three items can be changed by users:

1. **Method for opening the pop-up reference tables for Symbol, Pattern, and Abbreviation**. Choose a mouse operation or the function key.
2. **Descriptions on multiple pages.** If a log splits into several pages and one soil type also splits into two pages, the descriptions of the soil type will appear on the subsequent page. If you do not want the descriptions to appear on the subsequent page, you can turn the function off.
3. **Show vertical text.** You can turn off the page border and the vertical text on the left side of the page. It is useful if you want to copy the graphical report to other Windows programs or save it to a metafile.

CHAPTER 4 MENUS, TOOLBARS, AND TABLES

The Main Menu

Each item in the main menu has a pull-down menu.

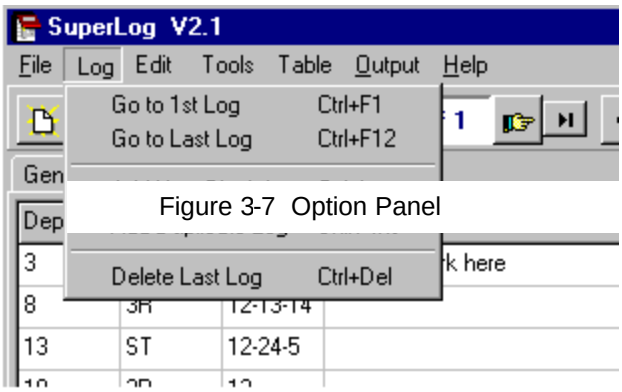


Figure 3-7 Option Panel

Figure 4-1 The Log Pull-Down Menu

File

Contains file-handling operations.

New	Create a new log file.
Open	Open an existing log file.
Save	Save the current log file.
Save As	Save the current log file as a new name.
Save Path as Default	Save the path of the current log file as the default path so that you can go to the directory directly when the program opens.
Exit	Exit the program.

Log

Contains log-handling operations.

Go to first log	Move to the first log.
Go to last log	Move to the last log.
Add new blank log	Adds a new blank log at the end.
Add duplicate log	Adds a new log at the end that is the same as the current log.
Delete last log	Deletes the last log. Only the last log is deletable.

Edit

Operations for editing text.

Copy row	Copies the current row.
Paste row	Pastes the copied row into the current row.
	Note: the depth value is not pasted.
Insert row	Makes a new row above the one selected.
Delete row	Deletes the current row and shifts subsequent rows up.
Clear column	Clears all data in the current column.

Tools

Tools for spelling, rapid data entry, and template.

Auto Sample Panel	Opens the Auto Sample Panel.
Spell Check	Checks the spelling of the input data.
Change Template	Changes the current template.
Design Template	Opens the template design utility.

Table

Tables for rapid input. Each can also be accessed by double-clicking on the related column.

Sample Type Table	Opens the table for Sample Type input**.**
Soil Pattern Table	Opens the table for Soil Pattern input**.**
Abbreviation and Boiler Tables	Opens the Abbreviation and Boilerplate**.**
Well Table	Opens the Fill Pattern Table for well input**.**

Output

Options for previewing and printing.

View/Print Current Log	Preview or print the report of the current log only**.**
Output	Preview and print reports of multiple logs.
Print Setup	Set up the printer**.**

Help

Help and Registration

Contents	Opens contents of help menu.
Search for Help on	Opens index of help menu.
How to Use Help	Opens Windows help for help menu.
Registration	Opens registration panel.

The Toolbar

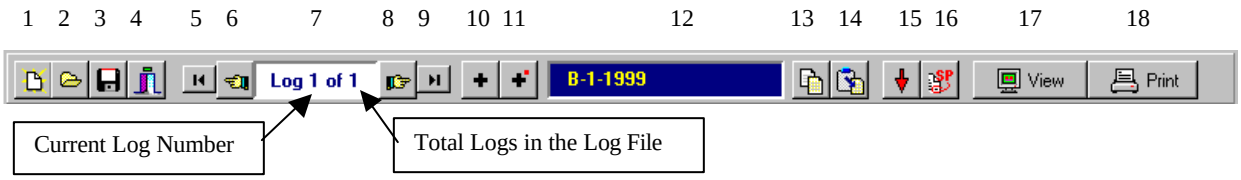


Figure 4-2 The Toolbar

The toolbar is located below the main menu. The buttons are from left to right.

1. Create a new log file.
2. Open an existing log file.
3. Save the current log file.
4. Exit program.
5. Jump to the first log.
6. Go to the previous log.
7. The current log and the total number of logs.
8. Go to the next log.
9. Jump to the last log.
10. Add a blank log at the end.
11. Add a duplicate log at the end.
12. Current log name – it changes to print information during a print session.
13. Copy row of a table.
14. Paste row of a table.
15. Open Auto Sample Panel.
16. Spell check.
17. Preview and print the current log.
18. Preview and print multiple logs.

Auto Sample Panel

This panel automatically generates depths for all samples. (You can also change them later.) This panel only works with the Input Page 2 – Sample (Figure 3 – 3). It can be opened by double-clicking the Depth column on the Sample Table.

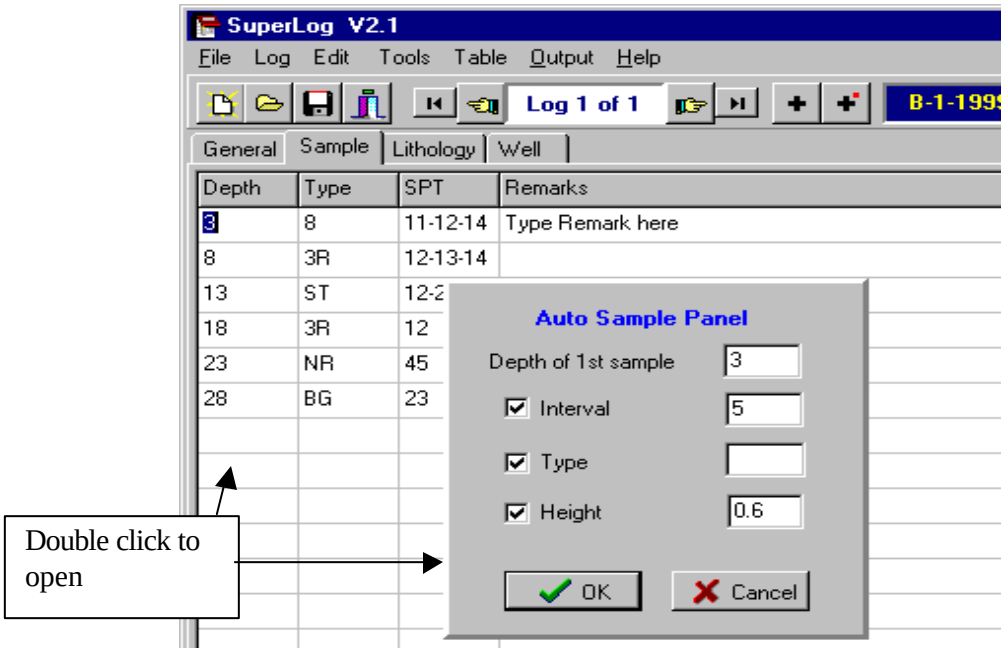


Figure 4-3 Automatic Sample Panel

Depth of First Sample	The depth of the first sample of the hole.
Interval	The spacing between each sample in feet or metes.
Type	The general sample type from Sample Type Table (Figure 4-4).
Height	The general sample height in feet or meters. This is also a default sample height if there is no height input in the Sample Table (defined in the template).

Sample Type Table

This panel only works with the Input Page 2 – Sample (Figure 3-3). It can be opened by double-clicking the Type column.

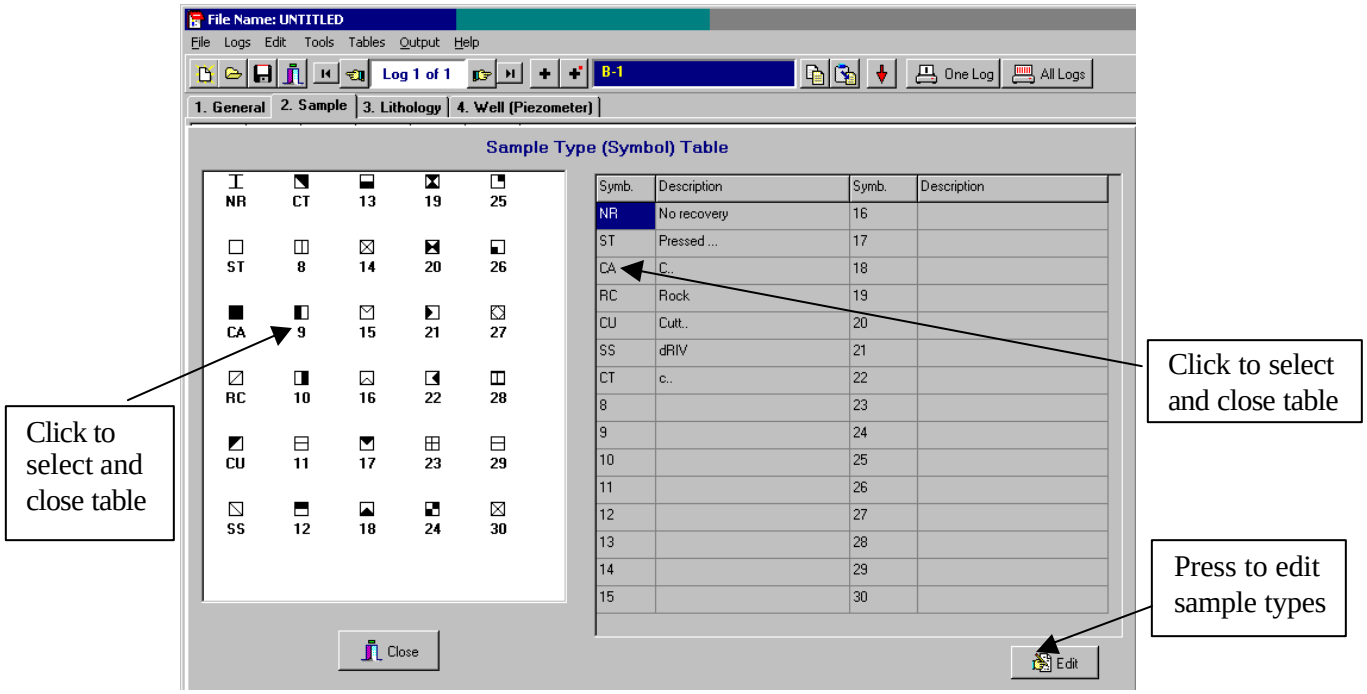


Figure 4-4 Sample Type Table

Selection You can either select a symbol on the left side of the table or text on the right side. The table will close and the symbol name will import automatically into the Type column on Input Page 2 - Sample.

Edit The symbol name and description can be edited. Press the [EDIT] button to change to edit mode. In edit mode, the [EDIT] button changes to [SAVE].

Save After editing, you should press [SAVE] to save your work. This turns off editing mode.

Close Select [CLOSE] to close the table without selecting a sample type.

Note: A total of 30 symbols are available for your selection. You can define the name and text for each symbol based on the standard of your firm. The name of symbol should be easy to remember so that you can directly type in the cell without selecting from the table.

Soil Pattern Table

This table only works with Input Page 3 - Lithology. It can be opened by double clicking on the Pattern column (Figure 3-4).

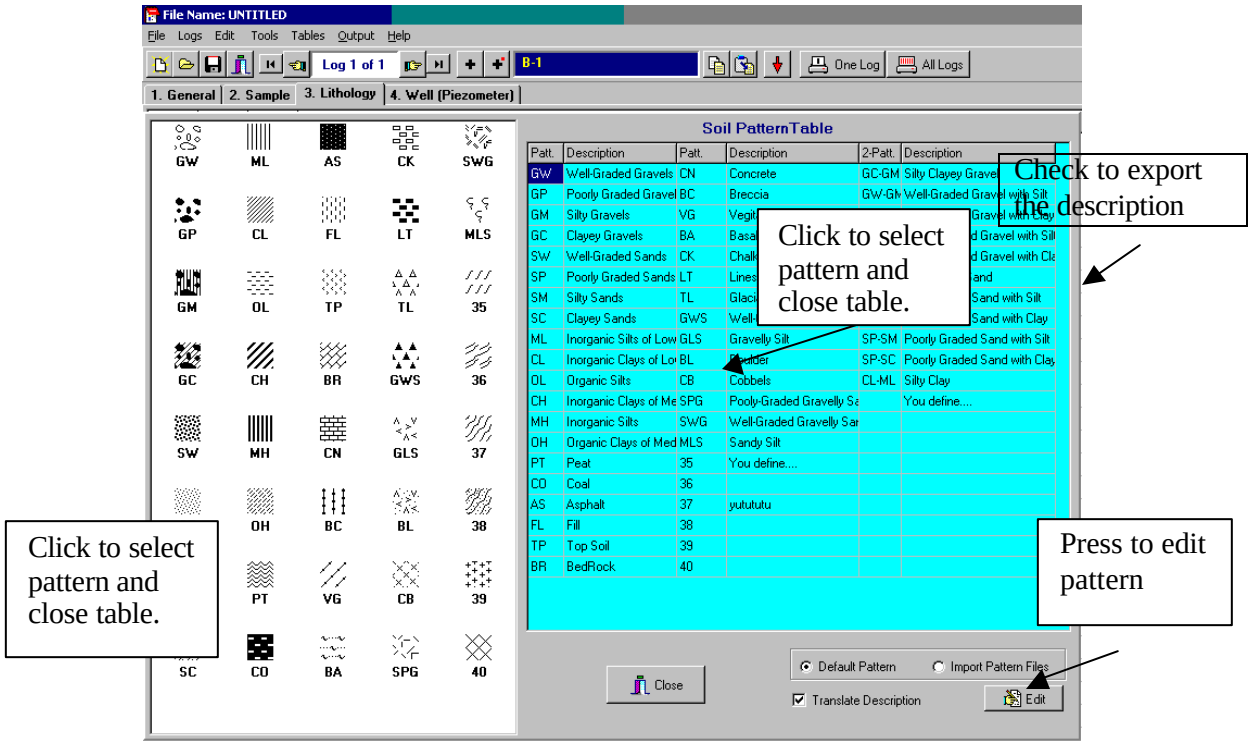


Figure 4-5 Soil Pattern Table

Selection User can either select a pattern on the left side of the table or select text from the right side. The table will automatically close and the pattern will be imported into the pattern column (Input Page 3 - Lithology). If there is already a pattern in the same row of the column, a Dual Patterns Panel will open (Figure 4-6).

Edit The pattern name and text can be edited. You can press [EDIT] to change to editing mode, so you can edit the text.

Save After editing, press [SAVE] to save your work and close editing mode.

Close Close the table without selection.

Copy Description When the Copy Description box is checked, the description of the pattern will be imported into the Description column (Input Page 3 - Lithology, Figure 3-4).

Note 1: A total of 40 patterns are available for your selection. You can set the name and text for each pattern.

Note 2: Dual patterns are listed on the third column of the Soil Pattern text table. Dual patterns also can be created through the Dual Patterns Panel (Figure 4-6).

Dual Patterns Panel

This panel will open if you select a pattern from the Soil Pattern Table (Figure 4-5) and a pattern already exists in the row of the Pattern column (Figure 3-4) that you specified. You can use the panel to decide whether you should:

- Keep the existing pattern.
- Overwrite the existing pattern with the new one.
- Add the new one to the existing one using the dual pattern method.

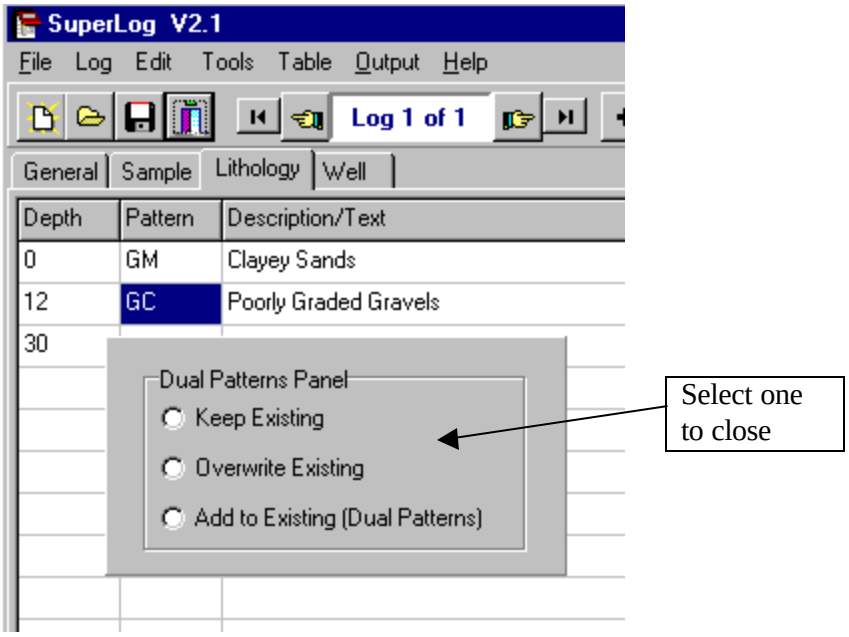


Figure 4-6 Dual Patterns Panel

Test Data Greater than Maximum Limits

If a template uses the graphical test data (see Example files 12, 16, 20, and 24), the test data show in graphical symbols in a chart. If data are greater than the maximum limits of the chart, a "+" will appear on the top of the symbol.

User Defined Symbols and Patterns

The program has default symbol and pattern tables. If you want to use different symbols and patterns, follow the steps below:

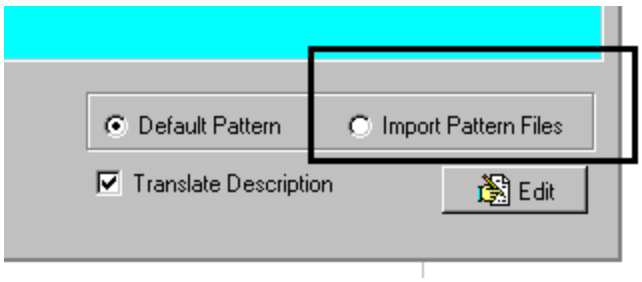
1. *Modify the pattern and symbol files*

In the folder, SUPERLOG/KEY, a group of files can be found named "0.bmp" to "39.bmp" (soil patterns) and "R0.bmp" to "R29.bmp" (sample symbols). You can open

these files using Windows' Paint program. You can edit or modify these files, then save them under new file names.

2. *Import the pattern and symbol files*

   After editing and saving the files, you must import the files into the program. From the pull-down menu, Table/Soil Pattern Table, open the Soil Pattern table. Select "Import Pattern Files", and the files will be imported.



Fill Pattern Table

This table only works with Input Page 4 - Well (Figure 3-5). It can be opened by double-clicking the Pattern column in the Fill Table on Input Page 4.

Selection Select a pattern by clicking a pattern on the left side of the table, or selecting a text row on the right side. The selection will go to the Pattern column of Fill Table on Input Page 4 - Well (Figure 3-5).

Edit The Pattern name and Description can be edited by pressing [EDIT], which will open editing mode.

Save Save your editing by pressing [SAVE], which will close editing mode.

Close Close the table without selecting a pattern.

Copy Description Copy the description to the Description column on the Fill Table Input Page 4 - Well (Figure 3-5).

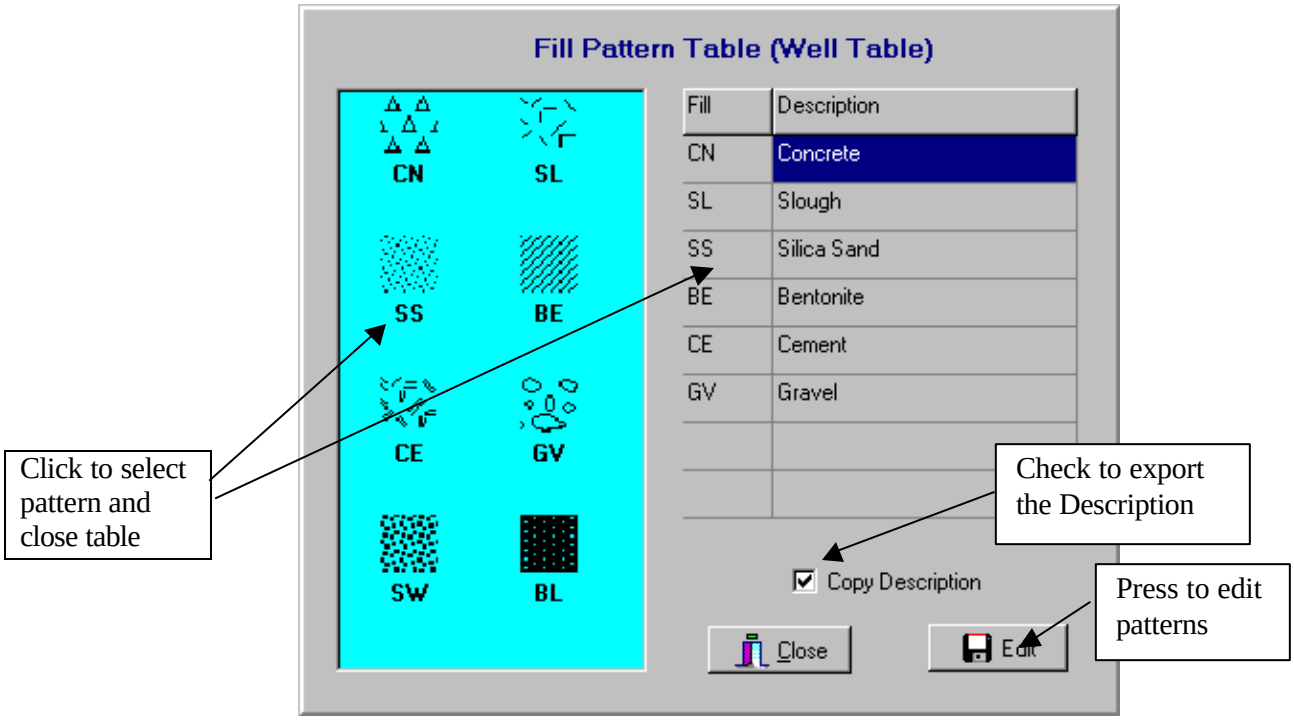


Figure 4-7 Fill Pattern Table

Abbreviation and Boiler Tables (Speed Tables)

The Abbreviation and Boilerplate work with the Remarks column on Input Page 2 - Sample (Figure 3-3) and the Description column on Input Page 3 - Lithology (Figure 3-4). Double-click on those columns to open the "speed tables."

Boilerplate – Clicking a row exports the text on this row. If you want to add new text to the boilerplate from the input table, you should copy the desired text on the input table, and then press [EDIT] on the speed tables. Place the cursor in the row you want to paste to and press [COPY TO BOILER].

Abbreviation Table – To edit abbreviations, press [EDIT] to open editing mode. When you are done, click [SAVE]. In the input field you merely type the abbreviation and press the enter key. The abbreviation will be replaced with the word or phrase specified in the Replacement column on the speed table.

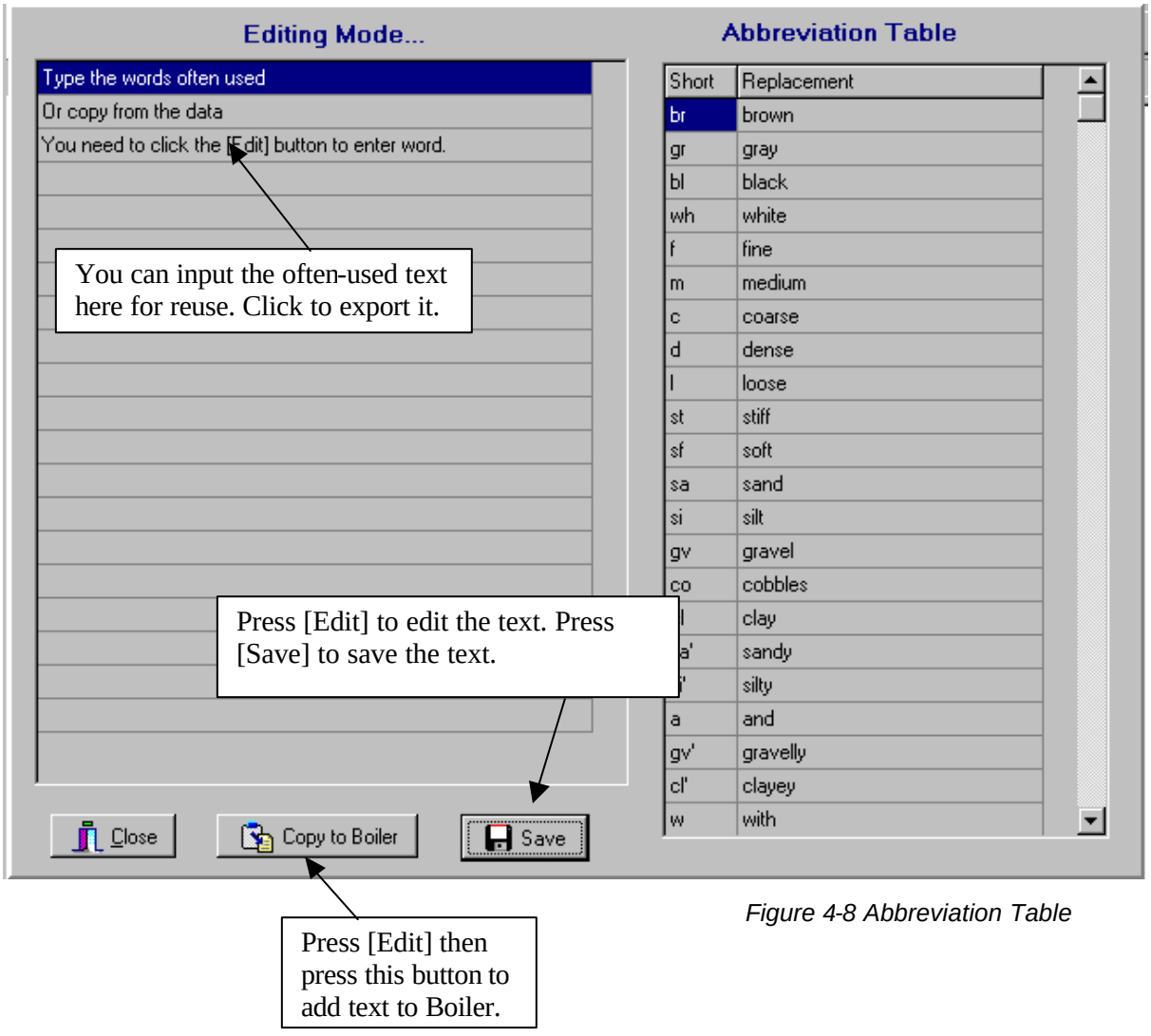


Figure 4-8 Abbreviation Table

CHAPTER 5 VIEW AND PRINT REPORT

Pressing the View button on the toolbar will open a Preview and Print screen, similar to Figure 5-1. (If the log has multiple pages, you can jump to different pages using the page shift buttons.) You can print the current log only, or an All Logs report.

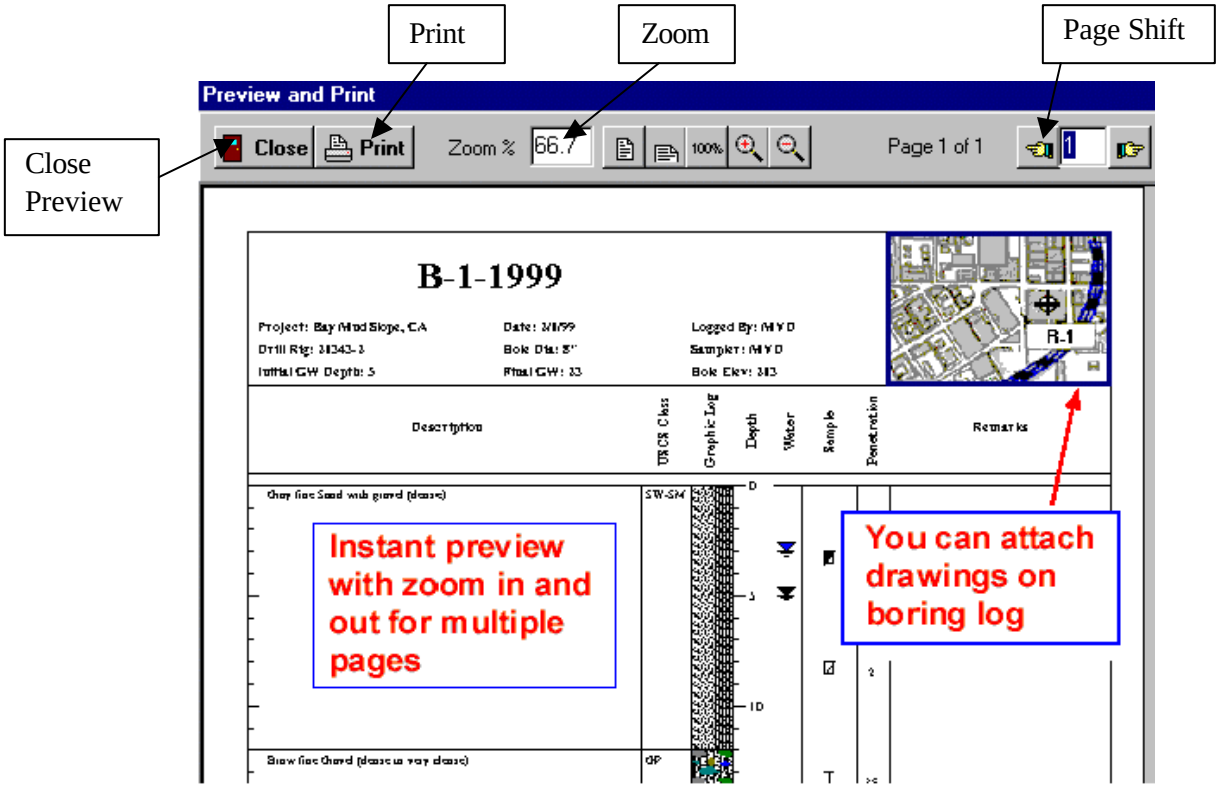


Figure 5-1 Preview and Print Screen

Pressing the Print button on the toolbar will open a Preview and Print panel (Figure 5-2).

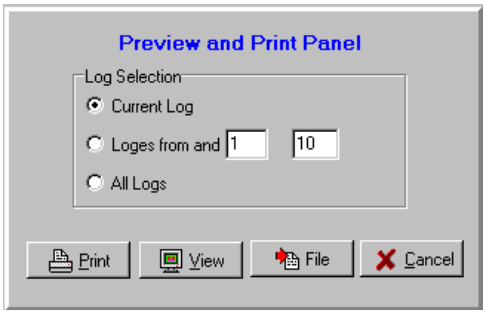


Figure 5-2 Print and View Panel

Log selection:

Current Log	Prints or views the current log only.
Logs from _ to _	Selects the logs you want to print or view. The program automatically enters the first and last log numbers.
All Logs	Prints or views all the logs.

Operation buttons:

Print	Sends selections to the printer.
View	Opens the Preview and Print screen (Figure 5-1) for the selected logs.
File	Saves the report as a report file "view.vie" instead of printing to a hard copy. This file can be viewed and printed by the VIEW.EXE program which is included in the program disk and installed in the same folder as the program. The VIEW.EXE file is royalty free. You can send the "view.vie" file along with the VIEW.EXE to anyone via e-mail so that the person can view and print the log report. ***Note:*** *The two files should be in the same folder and the file name cannot be changed. If VIEW.EXE cannot find the "view.vie" file, it will prompt you to find another file.*
Cancel	Exit without printing or viewing.

View and Print Utility

A utility program called "VIEW.EXE" is included with SuperLog. The VIEW.EXE utility is royalty free. You can send the "view.vie" file along with the VIEW.EXE to a client or colleague via disk or e-mail so that the person can view and print the log report. It can be integrated into your database or GIS system and executed by a command line as follows:

View xxxx.vie

(xxxx.vie would be the name of the report file created in Figure 5-2.) If the report file is not specified in the command line, the program looks for "view.vie." If "view.vie" cannot be found, it will prompt you to find another file. The command line can be put in program source code, a macro, or the execute line of your database (e.g., Access).

CHAPTER 6 TEMPLATE DESIGN

Each log file requires a template to attach to it so that the report can have a particular format. The template is saved in a file. When the user creates a new log file, he or she can select one of many standardized template files or create a custom template. The custom template can be based on existing templates or created from scratch. The Template Design screen can be opened from the main menu by [Tools/Design Template].

Note 1: If you are using an existing template, you only need to change the logo and company name. You should go directly to Design Page 3 (Fig. 6-4). After making your changes, you can save the template as the Default template.

Note 2: The current template in the Template Design screen may not be the same as the template in the current log in the Input screen. Make sure you check the template file name at the top of the Template Design screen, Page 1 (see Figure 6-1).

Note 3: No programming skills are necessary to design your own template. ***It does, however, require patience and practice of the procedures described in this chapter****. Generally, it will take 1 to 5 hours to design a new template. It is much easier to modify an existing template rather than start a new one. CivilTech staff will gladly design a template for you for a reasonable fee, saving you time and money. Please contact us for a quote on your specific needs.*

The Main Menu

The main menu bar for Template Design pages have [File], [Edit], and [View] pull-down menus at the top similar to the main menu on the data input pages (Chapter 3). The [File] pull-down menu has the following items:

New Template	Clear the table and create a new template file.
Open Template	Open an existing template file.
Save Template	Save the current design template.
Save As	Save the template file under a different name.
As Default	Save the template as the default template. The default template is the one that will load automatically when the user opens the program.
As Current/Close	Load the template as the current template for the current log in the Log data input screen (Figure 3-2) and close the Template Design screen (Figure 6-1).

The Toolbar

The Template Design screen toolbar includes the following items:

Open	Open an existing template file.
Save	Save the current template on the design screen.
Close	Close Template Design screen (Figure 6-1) and go back to the Log input screen (Figure 3-2).
View	Preview and print the template (Figure 6-5).
Template Name	The path and name of the current template in the Design Screen (Figure 6-1).

Design Page 1

The Template Design screen has three pages. Page 1 has three tables. Project Table 1 is for project information, Log Table 2 is for log information, and Main Table 3 is for sample information and page format. Each table is described below.

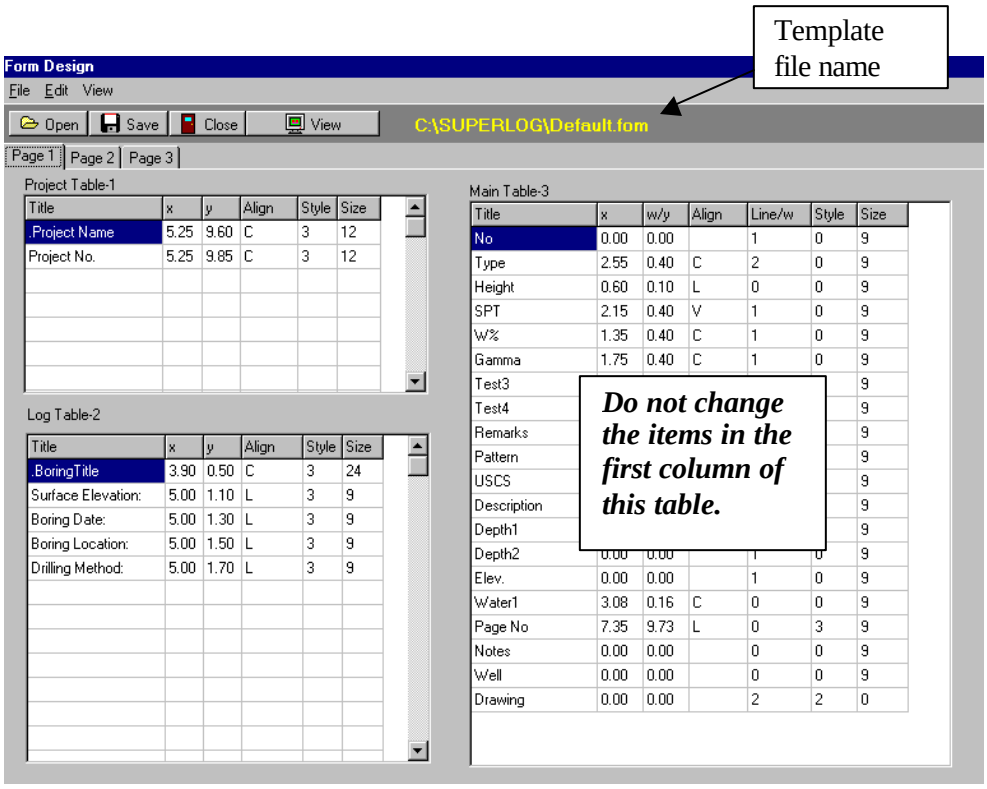


Figure 6-1 Design Screen

Project Table - 1

As shown in Figure 6-1, the items in this table correspond to the input items in the left half of Log Data Input Page 1 - General (see Chapter 3, Figure 3-2).

Title title of item, if a period (.) is in front of the text, the title will not show in report.

X x-coordinate of item

Y y-coordinate of item

Align

- L left alignment
- C center alignment
- R right alignment
- <blank> item not shown

Style

- 0 normal fonts
- 1 *italic* fonts
- 2 ***italic and bold*** fonts
- 3 **bold** fonts

Size font size (points)

Log Table - 2

As shown in Figure 6-1, the items in this table correspond to the input items on the right half of Log Input Page 1 – General (Chapter 3).

Title	title of item, if a period (.) is in front of the text, the text will not show in the report.
X	x-coordinate of the title
Y	y-coordinate of the title
Align	
L	left alignment
C	center alignment
R	right alignment
V	vertical spread
<blank>	item not shown
Style	
0	normal fonts
1	*italic* fonts
2	***italic and bold*** fonts
3	**bold** fonts
Size	font size (points)

Main Table - 3

This is a major table for the items input on Log Input Pages 2 and 3 (Chapter 3). ***Each item in this table should be in a specific row (location). Do not add or delete any items! Do not move any item to a different row.*** The title (name) of the items can be modified, but the meaning should be the same in that row. The valid column input for Main Table 3 is summarized in Table 6-1.

The general meaning of each column is described below.

Title	title of item
X	left x-coordinate of item
W/Y	width or y-coordinate of item
Align	
L	left alignment
C	center alignment
R	right alignment
V	vertical spread
<blank>	item not shown
Line/W	specifies type of border
0	no border
1	left side border
2	both sides border
3	right side border
Style	
0	normal fonts
1	*italic* fonts
2	***italic and bold*** fonts
3	**bold** fonts
4	show symbol, see symbol list in Figure 6-2
5	show symbol, see symbol list in Figure 6-2
6	show symbol, see symbol list in Figure 6-2
7	show symbol, see symbol list in Figure 6-2

	8	show symbol, see symbol list in Figure 6-2
	9	show symbol, see symbol list in Figure 6-2
	10	show symbol, see symbol list in Figure 6-2
	11	show symbol, see symbol list in Figure 6-2
Size		font size (points)

Row	***Item***	***X***	***W/Y***	***Align***	***Line/W***	***Style***	***Size***
1	No	X	Width	L, C, R, <*blank*>	0-3	0-3	6-12
2	Type	X	Width	L, <*blank*>	0-3	0	0
3	Height	(Height)	(Width)	L, <*blank*>	0	0	0
4	SPT	X	Width	L, C, R, V, X,Y,Z <*blank*>	0-253	0-10	6-12
5	Test1	X	Width	L, C, R, X,Y,Z <*blank*>	0-253	0-10	6-12
6	Test2	X	Width	L, C, R, X,Y,Z <*blank*>	0-253	0-10	6-12
7	Test3	X	Width	L, C, R, X,Y,Z <*blank*>	0-253	0-10	6-12
8	Test4	X	Width	L, C, R, X,Y,Z <*blank*>	0-253	0-10	6-12
9	Remarks	X	Width	L, <*blank*>	0-3	0-3	6-12
10	Pattern	X	Width	L, <*blank*>	0-3	0-3	0
11	USCS	X	Width	L, C, R, V, <*blank*>	0-3	0-3	6-12
12	Description	X	Width	L, <*blank*>	0-3	0-3	6-12
13	Depth1	X	0-1	L, R,<*blank*>	0-1	0-3	6-12
14	Depth2	X	0-1	L, R ,<*blank*>	0-1	0-3	6-12
15	Elevation	X	0-2	L, R,<*blank*>	0-1	0-3	6-12
16	Water1	X	(Width)	L, C, R,<*blank*>	0	0	0
17	Page No.	X	Y	L, C, R,<*blank*>	0	0-3	6-12

Table 6-1 Valid Input for Template Design Page 1, Main Table 3

The details of rows and columns are described below. Items 1 through 8 are for the Sample Table (see Chapter 3, Figure 3-3). Items 9 through 11 are for the Lithology Table (see Chapter 3, Figure 3-4).

1. No. — **Number of samples in Sample Table (Chapter 3)**

- **X** — left x-coordinate of item
- **W/Y** — width of item
- **Align**
  - L — left alignment
  - C — center alignment
  - R — right alignment
  - <blank> — item not shown
- **Line/W** — specifies type of border
  - 0 — no border
  - 1 — left side border
  - 2 — both sides
  - 3 — right side border
- **Style**
  - 0 — normal fonts
  - 1 — *italic* fonts
  - 2 — ***italic and bold*** fonts
  - 3 — **bold** fonts
- **Size** — font size

2. Type — **Type of sample. The sample height and width are defined in height row (see below).**

- **X** — left x-coordinate of item
- **W/Y** — width of item
- **Align**
  - L — left alignment
  - C — center alignment
  - R — right alignment
  - <blank> — item not shown
- **Line/W** — specifies type of border
  - 0 — no border
  - 1 — left side border
  - 2 — both sides

3. Height — **Height of samples**

- **X** — default height of the sample. It will show in the Auto Sample Panel (Figure 4 – 3).
- **W/Y** — default width of the sample
- **Align**
  - L — item shown
  - <blank> — item not shown

4. Sample — **SPT data or test**

If item text of Row 4 is same as that of Row 2 (Type), then the text will be automatically becomes the same in Row 2 during input.

5. Samp1e — **Test, typical use for w%**

6. Samp1e — **Test, typical use for gamma**

7. Samp1e **Test, typical use for fine constant**

8. Test **Additional test if needed**

- **X** left x-coordinate of item
- **W/Y** width of item
- **Align**
  - L left alignment
  - C center alignment
  - R right alignment
  - V vertical spread
  - X Test X
  - Y Test Y
  - Z Test Z
  - <blank> item not shown
- **Line/W** a 3-digit number representing:
- Digits in 100's Line connection between data points
  - 0 no line connection
  - 1 line connection between points at different depth
  - 2 line connection between two points at the same depth (One sample with two tests. The tests should be specified in Align as X and Y)
- Digits in 10's Fill pattern in the symbol
  - 0 no fill
  - 1 black solid fills
  - 2 fill with vertical and horizontal lines
  - 3 fill with vertical lines
  - 4 fill with cross lines
  - 5 fill with diagonal lines
- Digit in 1's Border as other item
  - 0 no border
  - 1 left side border
  - 2 both sides
  - 3 right side border
- **Style**
  - 0 normal fonts
  - 1 *italic* fonts
  - 2 ***italic and bold*** fonts
  - 3 **bold** fonts
  - 4 if XYZ is in Align, show symbol from Figure 6-2
  - 5 if XYZ is in Align, show symbol from Figure 6-2
  - 6 if XYZ is in Align, show symbol from Figure 6-2
  - 7 if XYZ is in Align, show symbol from Figure 6-2
  - 8 if XYZ is in Align, show symbol from Figure 6-2
  - 9 if XYZ is in Align, show symbol from Figure 6-2
  - 10 if XYZ is in Align, show symbol from Figure 6-2
- **Size** font or symbol size

9. Remarks **Text with text wrap**

- **X** left x-coordinate of item
- **W / Y** width of item
- **Align**
  - L left alignment

<blank> item not shown

Line/W specifies type of border
- 0 no border
- 1 left side border
- 2 both sides
- 3 right side border

Style
- 1 normal fonts
- 2 *italic* fonts
- 3 ***italic and bold*** fonts
- 4 **bold**fonts

Size font size

10. Pattern **Soil pattern (defined in USCS of Lithology Table Chapter 3, Figure 3-4)**

X left x-coordinate of item

W / Y width of item

Line / W specifies type of border
- 0 no border
- 1 left side border
- 2 both sides
- 3 right side border

Align
- L left alignment, line at layers for all Lith input (Rows 11,26,27)
- A left alignment, no line at layers for all Lith input (Rows 11,26,27)
- <blank> this item will not show on Lith Table

11. Lith **USCS Text to define layer (Figure 3-4)**

If item text of Row 11 is same as that of Row 10 (Pattern), then the text will be automatically becomes the same in Row 10 during input.

X left x-coordinate of item

W / Y width of item

Align
- L left alignment
- C center alignment
- R right alignment
- <blank> item not shown

Line / W specifies type of border
- 0 no border
- 1 left side border
- 2 both sides
- 3 right side border

Style
- *0* normal fonts
- *1* italic fonts
- *2* italic and bold fonts
- *3* bold fonts

Size font size

12. Description **Text with text wrap in Lithology Table (Figure 3-4)**

X left x-coordinate of item

W/Y width of item

Align

L	left alignment, line at layers for all Lith input (Rows 12)
A	left alignment, no line at layers for all Lith input (Rows 12)
<blank>	this item will not show on Lith Table

<blank>	item not shown

Line/W specifies type of border

0	no border
1	left side border
2	both sides
3	right side border

Style

0	normal fonts
1	*italic* fonts
2	***italic and bold*** fonts
3	**bold** fonts

Size font size

13. Depth (1) **Show depth scale on report**

X x-coordinate of item

W/Y

0	no depth number beside tick mark
1	increasing depth number beside tick mark
2	as 1, but not shows top number
3	as 1, but not shows bottom number
4	as 1, but not shows top and bottom number

Align

L	tick marks to the left
R	tick marks to the right
<blank>	item not shown

Line/W specifies type of line

0	no line
1	with line

Style

0	normal fonts
1	*italic* fonts
2	***italic and bold*** fonts
3	**bold** fonts

Size font size

14. Depth (2) **Show additional depth scale on report**

X x-coordinate of item

W/Y

0	no depth number beside tick mark
1	increasing depth number beside tick mark
2	as 1, but not shows top number
3	as 1, but not shows bottom number
4	as 1, but not shows top and bottom number

Align

L	tick marks to the left
R	tick marks to the right
<blank>	item not shown

Line/W specifies type of line
- 0 no line
- 1 with line

Style
- 0 normal fonts
- 1 italic fonts
- 2 italic and bold fonts
- 3 bold fonts

Size font size

15. Elevation **Show elevation scale**

X x-coordinate of item

W/Y
- 0 no depth beside tick mark
- 1 increasing depth beside tick mark
- 2 decreasing depth beside tick mark
- 3 as 2, but not shows top number
- 4 as 2, but not shows bottom number
- 5 as 2, but not shows top and bottom number

Align
- L tick marks to the left
- R tick marks to the right
- <blank> item not shown

Line/W specifies type of line
- 0 no line
- 1 with line

Style
- 0 normal fonts
- 1 *italic* fonts
- 2 ***italic and bold*** fonts
- 3 **bold**fonts

Size font size

16. Water **Water tables**

X x-coordinate of center of water table

Align
- L left alignment
- C center alignment
- R right alignment
- <blank> item not shown

Style
- 0 horizontal date
- 1 vertical date

17. Page No **Show page number on report**

X left x-coordinate of item

W/Y y-coordinate of item

Align
- L left alignment
- C center alignment
- R right alignment

<blank> item not shown

Style

0 normal fonts
1 *italic* fonts
2 ***italic and bold*** fonts
3 **bold** fonts

Size font size

18. Notes **Shows a memo or note**

X left x-coordinate of item
W/Y y-coordinate of item
Align

L left alignment
<blank> item not shown

Line/W width of notes block. Height is automatically defined by text length

Style

0 normal fonts
1 *italic* fonts
2 ***italic and bold*** fonts
3 **bold** fonts

Size font size

19. Well **Piezometer Well**

X x-coordinate of item
W/Y width of item
Align **description of well**

L well on the left side, text on the right
R well on the right side, text on the left
B text in both sides of well
V vertical text in both sides of well
N no text
<blank> no well

Line/W ratio of total width/pipe width

3 pipe is 1/3 of total width, no cup
5 pipe is 1/5 of total width, with small cup
>8 provide space for description of well and show large cup

Style

0 normal fonts
1 *italic* fonts
2 ***italic and bold*** fonts
3 **bold** fonts

Size font size

20. Drawing **Show a bitmap**

X left x-coordinate of item
W/Y y-coordinate of item
Align

L left alignment, line at layers
A left alignment, no line at layers
<blank> item not shown

Line/W		width of drawing. Height is automatically defined by drawing ratio. The drawing file should have recommended ratio of 1:1.5.
Style	0	height based on drawing ratio
	>0	drawing height
Size	0	No frame on drawing
	1	Frame on drawing

21-25. Samp1e additional input for samples
26-27. Lith additional input for Lithology

Graphical Symbols for Test Data

Graphical symbols can be shown in the report. Symbols can be defined in Main Table 3 on Page 1 of the Template Design screen (Figure 6-1), rows 4 through 7, as SPT, Test 1, Test 2, Test 3, and Test 4. In these rows, XYZ are specified in the Align Column and numbers 4 through 10 are defined in the Style Column. The style numbers have the following meanings:

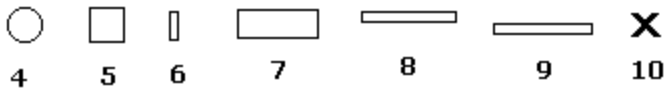
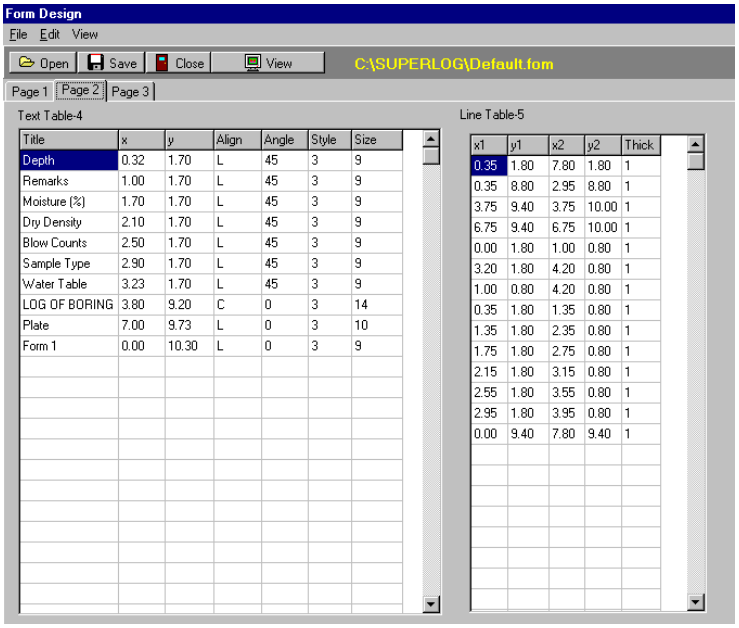


Figure 6-2 Test Data Symbols

Note: The range of Test XYZ is defined in Template Design Page 3.

Design Page 2

This page presents the fixed items such as line and text. (See Figure 6-3.)



Title	x	y	Align	Angle	Style	Size
Depth	0.32	1.70	L	45	3	9
Remarks	1.00	1.70	L	45	3	9
Moisture (%)	1.70	1.70	L	45	3	9
Dry Density	2.10	1.70	L	45	3	9
Blow Counts	2.50	1.70	L	45	3	9
Sample Type	2.90	1.70	L	45	3	9
Water Table	3.23	1.70	L	45	3	9
LOG OF BORING	3.80	9.20	C	0	3	14
Plate	7.00	9.73	L	0	3	10
Form 1	0.00	10.30	L	0	3	9

x1	y1	x2	y2	Thick
0.35	1.80	7.80	1.80	1
0.35	8.80	2.95	8.80	1
3.75	9.40	3.75	10.00	1
6.75	9.40	6.75	10.00	1
0.00	1.80	1.00	0.80	1
3.20	1.80	4.20	0.80	1
1.00	0.80	4.20	0.80	1
0.35	1.80	1.35	0.80	1
1.35	1.80	2.35	0.80	1
1.75	1.80	2.75	0.80	1
2.15	1.80	3.15	0.80	1
2.55	1.80	3.55	0.80	1
2.95	1.80	3.95	0.80	1
0.00	9.40	7.80	9.40	1

Figure 6-3 Design Screen, Page 2

Text Table 4

This table allows you to insert miscellaneous text into your template.

Title enter the text you want your template to contain
X x-coordinate of the text
Y y-coordinate of the text
Align
- L left
- C center
- R right

If symbol is specified in Style then the following data apply:

Style
- 0 no fill
- 1 black solid fill and horizontal
- 2 fill with vertical lines
- 3 fill with vertical lines
- 4 fill with cross lines
- 5 fill with diagonal lines

- 0 normal fonts
- 1 *italic* fonts
- 2 ***italic and bold*** fonts
- 3 **bold** fonts
- 4 – 9 show symbol, see symbol list in Figure 6-2
- 11 water symbol 1
- 12 water symbol 2
- 13-33 sample symbol in Figure 4-4.

Size font or symbol size

Line Table 5

This table allows you to draw lines on your template.

X1	x-coordinate of line's initial point
X2	x-coordinate of line's end point
Y1	y-coordinate of line's initial point
Y2	y-coordinate of line's end point
Thick	thickness of line

Design Page 3

Figure 6-4 shows Template Design Page 3. Each section is described below.

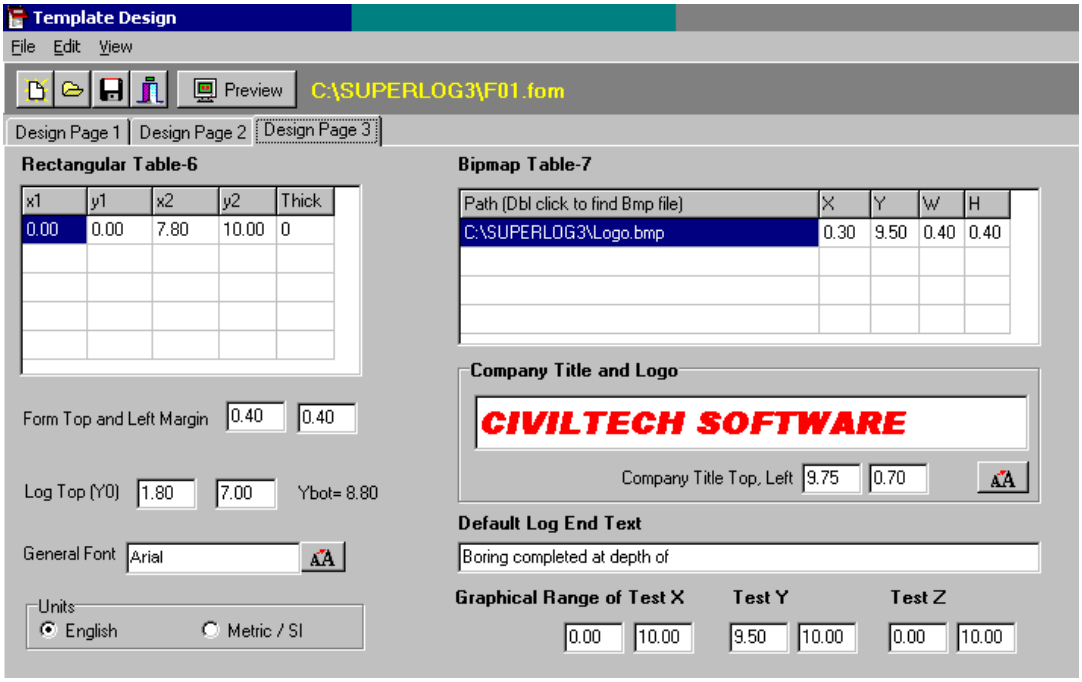


Figure 6-4 Template Design Screen, Page 3

Rectangle Table 6

This table formats the rectangular box bordering the log report.

X1	x-coordinate of upper left corner of rectangle
X2	x-coordinate of lower right corner of rectangle
Y1	y-coordinate of upper left corner of rectangle
Y2	y-coordinate of lower right corner of rectangle
Thick	thickness of line

Bitmap Table 7

This table helps you to load up to 4 bitmap files for company logos. The files must in bmp, emf, or wmf format. Double click a raw to open a bmp file. The file path and file name will be loaded in the table. You must have the file in a short name and easy path. A long path or long file name will be truncated. In the X, Y columns type the location of the up right corner of the logo. W, and H are for the height and width of the logo.

Page Layout Items

Template Top and Left Margin	The x and y-coordinates of the upper-left corner of the template.
Log Top (Y0)	The y-coordinate on the paper, where the log drawing starts.
Log Length	Define the length of the log. Input 6 or 7 (inches)
Y bottom (Ybot)	The y-coordinate on the paper, where the log drawing ends. (Ybot is automatically set and is not changeable.)
General Font	Specifies the font you wish to use in your template. The button next to it allows you to change the font settings.
Units	Allows you to control which units you'd like to use.
English	Check to use English units (e.g., feet)
Metric/S.I.	Check to use Metric units (e.g., meters)

Company Title and Logo

Company Title	Allows you to specify the location of your company title and logo on the template. Type your company name in the text field. You may change font settings by clicking the font button below it.
Company Title Top, Left	Enter the x and y-coordinates where you want the company title to appear on the template.
Logo File Path	The path where your logo file is located, or browse and search for it by clicking the […] button. The logo file can be in BMP, or WMF format.
Logo Top, Left, Height, Width	The x-coordinate, y-coordinate, height, and width of the logo
Show Logo (checkbox)	Check the box if you wish to show the logo

Default Log End Text

The text entered here will be automatically entered at the bottom of the bore hole when the depth entered in the Lithology Table (Figure 3-4) equals or is larger than the hole depth specified in Log data Input Page 1 (Figure 3-1). Typical text would be "boring completed at depth of…" If you do not want any text to be added, leave it blank.

Graphical Range

If graphical test presentation is specified in Main Table 3 on Template Design Page 1 (Figure 6-1) for SPT and Tests (Rows 4 to 7 in Main Table 3), and the X, Y, Z are specified in the Align column of Main Table 3, the corresponding test limits (see below) should be input:

Test1 X	Upper and lower limits of the test data specified for test X
Test1 Y	Upper and lower limits of the test data specified for test Y
Test1 Z	Upper and lower limits of the test data specified for test Z

Preview Screen

The Design Template can be previewed and printed through the Preview Screen as shown in Figure 6-5. This screen has the same functions described for the log Preview screen in Chapter 5 (Figure 5-1).

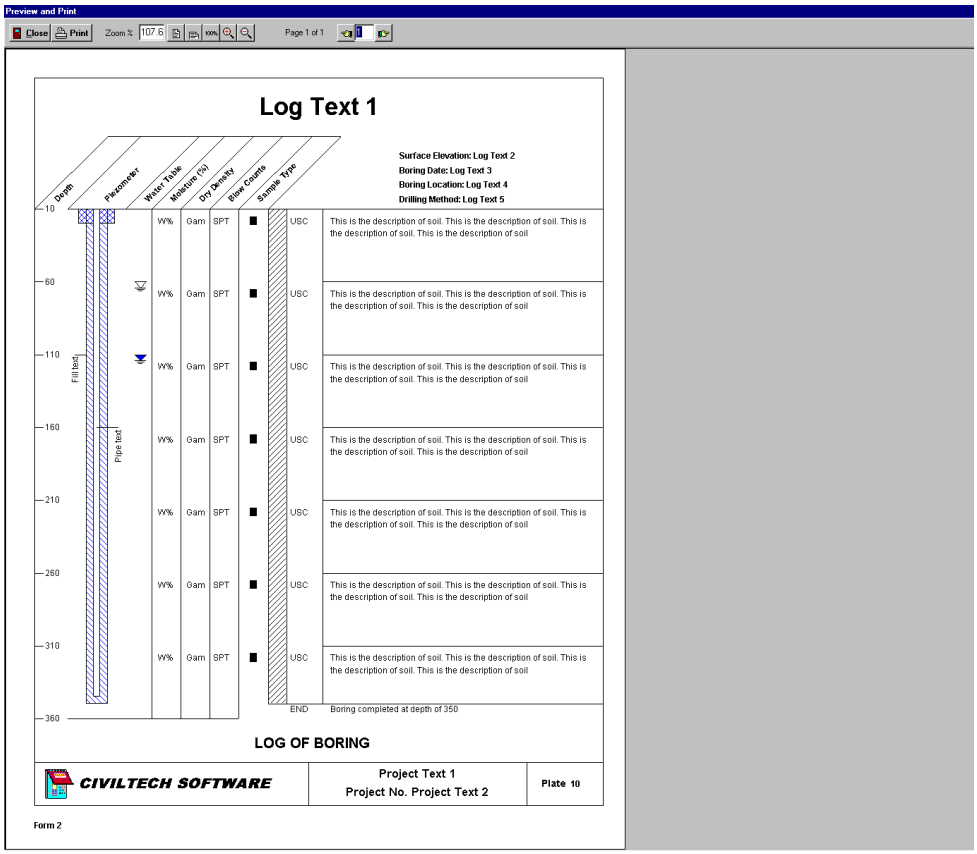


Figure 6-5 Preview Screen

APPENDIX A PRE-DESIGNED TEMPLATES AND FILES

Many pre-designed templates with files are included on the program disk. They are all installed in the same folder as the program files. Users can freely modify these templates to meet their requirements. Chapter 6 describes how to modify or design a template.

Remember that CivilTech's professionals can save you time and money by customizing a template for you at a reasonable fee. Please contact us for a quote regarding your specific requirements.

APPENDIX B KEY PAGES AND SYMBOL FILES

Pages with keys to the log reports are included in the program disk (Plate B-1 and Plate B-2). The pages are included as both a Microsoft Word file ("key.doc") and a Microsoft PowerPoint file ("key.ppt"). Users can modify these pages to meet their requirements. The two files are in the subfolder "/key/".

For your convenience in inserting the symbols and patterns on the key pages, the files of all the symbols and patterns are also included in the program package. All the bitmap files are zipped in a self-expandable file called "bmp_self.exe", located in the "/key/" subfolder. Double click on it and it will expand into many small bitmap files.

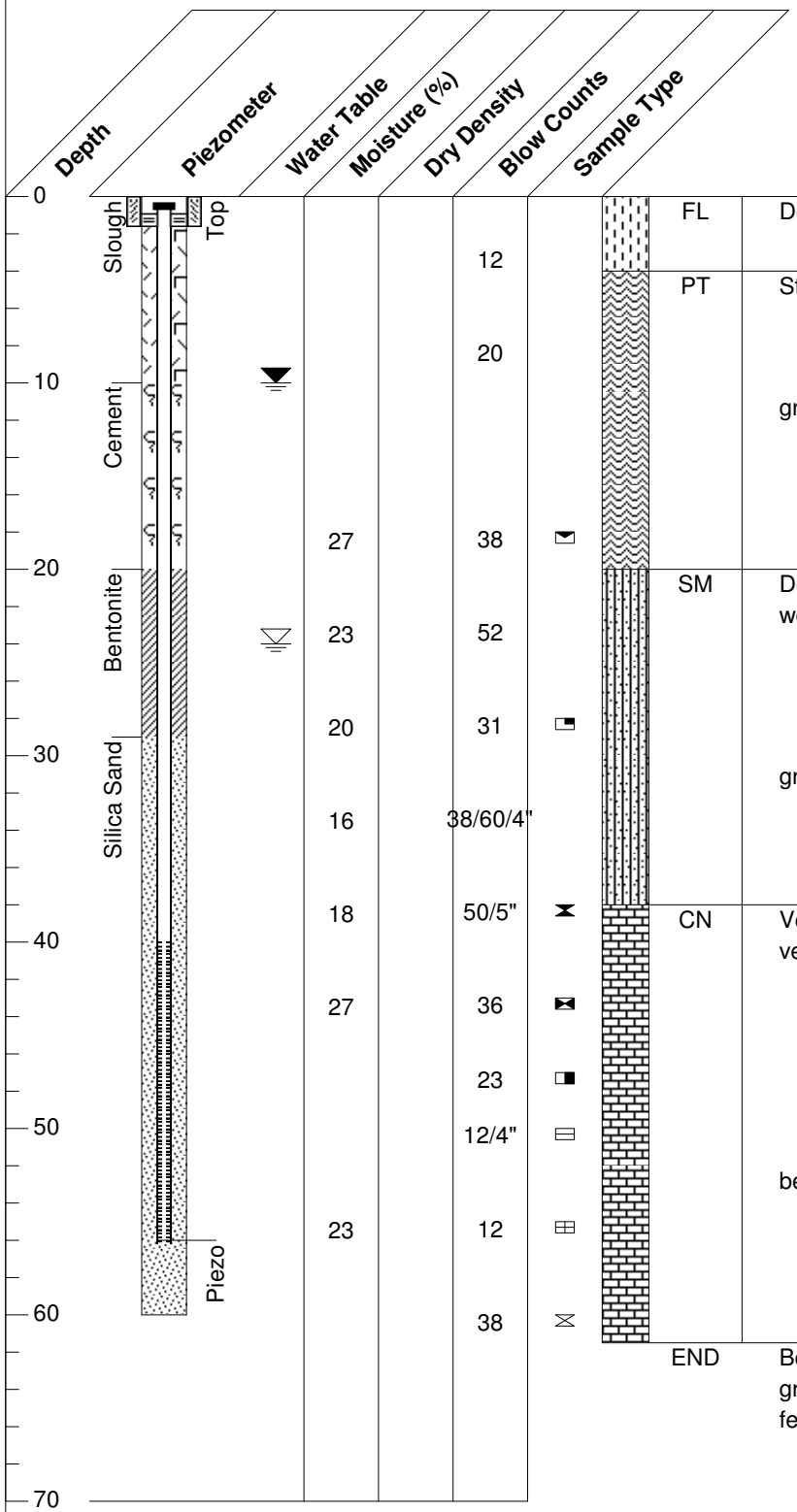
B-1-1999

Surface Elevation: 234
Boring Date: 11/2/99
Boring Location: West Side of Building
Drilling Method: Auger HD-1

Depth	Remarks	Moisture (%)	Dry Density	Blow Counts	Sample Type	Water Table		
0	Type Remark here			2 3 5			FL	Dense, moist, brown-gray SAND (Fill) .
5				20		3/22/02	CO	Stiff, moist to wet, black-reddish brown PEAT.
10	fine content=34%	27		12 23 23		12/5/00		
		23		52				grades to wet, very soft gray-black peaty clayey SILT
		20		31				
15		16		38 60/4"			SM	Dense, wet, black to dark gray gray SAND with occasional wood and organics.
	heave noted	18		50/5"				
		27		12 15				
20				23				grades to wet, very soft gray-black peaty clayey SILT.
				12/4"				
25	van shear stress = 2 tsf	23		12			GWS	Very soft, wet, gray slightly silty CLAY with red-brown peat, very slight in plasticity.
				38				
				35				becomes gray SILT mixed with REFUSE
30	no recovery	35		12 12/5"				
35							END	Boring completed at and depth of about 61.5 feet below the ground surface. Groundwater was encountered at about 24.0 feet.

LOG OF BORING

B-1-1999



Surface Elevation: HS Auger
Boring Date: SPT
Boring Location: 2 Inch.
Drilling Method: 46.5 feet

FL	Dense, moist, brown-gray SAND (Fill) .
PT	Stiff, moist to wet, black-reddish brown PEAT.
	grades to wet, very soft gray-black peaty clayey SILT
SM	Dense, wet, black to dark gray gray SAND with occasional wood and organics.
	grades to wet, very soft gray-black peaty clayey SILT.
CN	Very soft, wet, gray slightly silty CLAY with red-brown peat, very slight in plasticity.
	becomes gray SILT mixed with REFUSE
END	Boring completed at and depth of about 61.5 feet below the ground surface. Groundwater was encountered at about 10 feet below the ground surface at the time of drilling.

SuperLog CivilTech Software, USA www.civiltech.com File: C:\Superlog4\PROJECT\Ex02_piez.log Date: 09/04/08

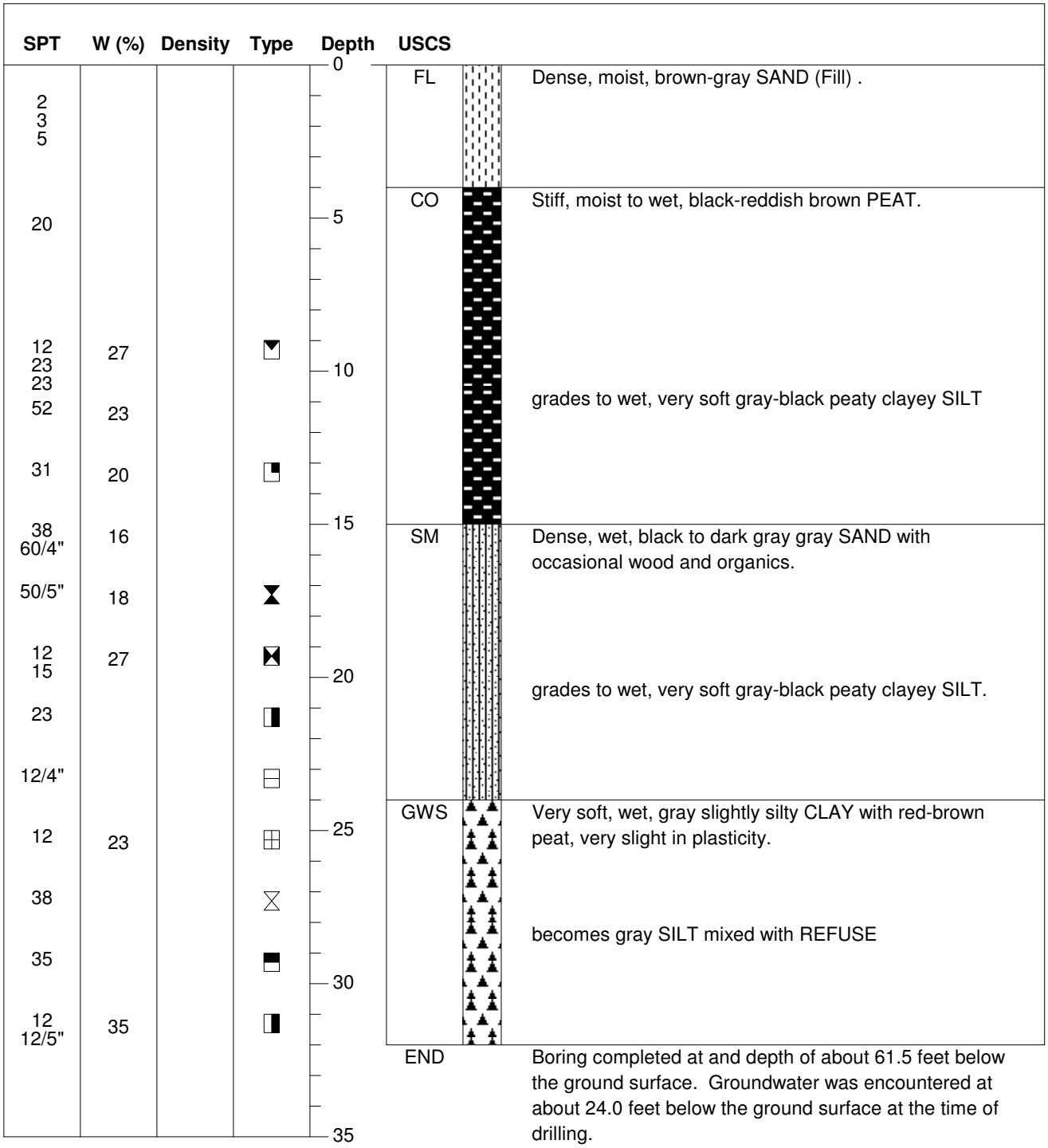
LOG OF BORING

CIVILTECH SOFTWARE	**RIVERFROT COMDOM** **Project No. EVERETT, WASHINGTON**	**Plate 2**

B-1-1999

Logged by: 11/2/99
Log Date: West Side of Building

Elevation: 234
Drilling Date: Auger HD-1



B-1-1999

Project: RIVERFROT COMDOM | **Date: 2/3/99** | **Logged By: 10' BGS ATD**

Drill Rig: Auger F-123 | **Hole Dia: 2 Inch.** | **Sampler: HKJ**

Initial GW Depth: 10 feet | **Final GW: 46.5 feet** | **Hole Elev: 123**

Description	USCS Class	Depth	Penetration	Remarks
Dense, moist, brown-gray SAND (Fill) .	FL	0	12	Type Remark here
Stiff, moist to wet, black-reddish brown PEAT.	PT	5	20	
grades to wet, very soft gray-black peaty clayey SILT		10	38	fine content=34%
Dense, wet, black to dark gray gray SAND with occasional wood and organics.	SM	20	52	
grades to wet, very soft gray-black peaty clayey SILT.		25	31	
		30	12	
		35		

Water: 5

Sample: 38, 31

CivilTech Software
Bellevue, WA

Notes:
This is note. It shows on report.

A234-1
Page 4

B-1-1999

Project: RIVERFROT COMDOM | **Date: 11/2/99** | **Logged By: WJS**
Drill Rig: | **Hole Dia: 2 inch** | **Sampler: CGF**
Initial GW Depth: 234 | **Final GW: 256** | **Hole Elev: 200**

Description	USCS Class	Depth	Penetration	Remarks
Dense, moist, brown-gray SAND (Fill) .	FL	0	2 3 5	Type Remark here
Stiff, moist to wet, black-reddish brown PEAT.	CO	5	20	
grades to wet, very soft gray-black peaty clayey SILT		10	12 23 23 52 31	fine content=34%
Dense, wet, black to dark gray gray SAND with occasional wood and organics.	SM	15	38 50 12 15	heave noted
grades to wet, very soft gray-black peaty clayey SILT.		20	23 12/4"	
Very soft, wet, gray slightly silty CLAY with red-brown peat, very slight in plasticity.	GWS	25	12 38	van shear stress = 2 tsf
becomes gray SILT mixed with REFUSE		30	35 12 12	no recovery
Boring completed at and depth of about 61.5 feet below the ground surface. Groundwater was encountered at about 24.0 feet.	END	35		

CivilTech Software
Bellevue, WA

Notes:

NO12-98
Page 1

B-1-1999

Project: RIVERFROT COMDOM | **Date Drilled: 10' BGS ATD**
Drill Rig: HS Auger | **Logged By: HKJ**
Hole Dia.: 2 Inch. | **Sampler: TDG**
Initial Water Depth: 10 feet | **Hole Elev.: 32.5**
Final GW Depth: 46.5 feet | **Total Depth: 61.5 feet**

Description	Soil Type	Graphic Log	Soil Depth	Samples	SPT	Remarks
Dense, moist, brown-gray SAND (Fill) .	FL		0		12	Type Remark here
Stiff, moist to wet, black-reddish brown PEAT.	PT				20	
grades to wet, very soft gray-black peaty clayey SILT			10		38	fine content=34%
Dense, wet, black to dark gray gray SAND with occasional wood and organics.	SM		20		52	
grades to wet, very soft gray-black peaty clayey SILT.			30		31	
					38/60/4"	
Very soft, wet, gray slightly silty CLAY with red-brown peat, very slight in plasticity.	CN		40		50/5"	heave noted
					36	
					23	
becomes gray SILT mixed with REFUSE			50		12/4"	
					12	van shear stress = 2 tsf
			60		38	
Boring completed at and depth of about 61.5 feet below the ground surface. Groundwater was encountered at about 10 feet below the ground surface at the time of drilling.	END		70			

Boring Log

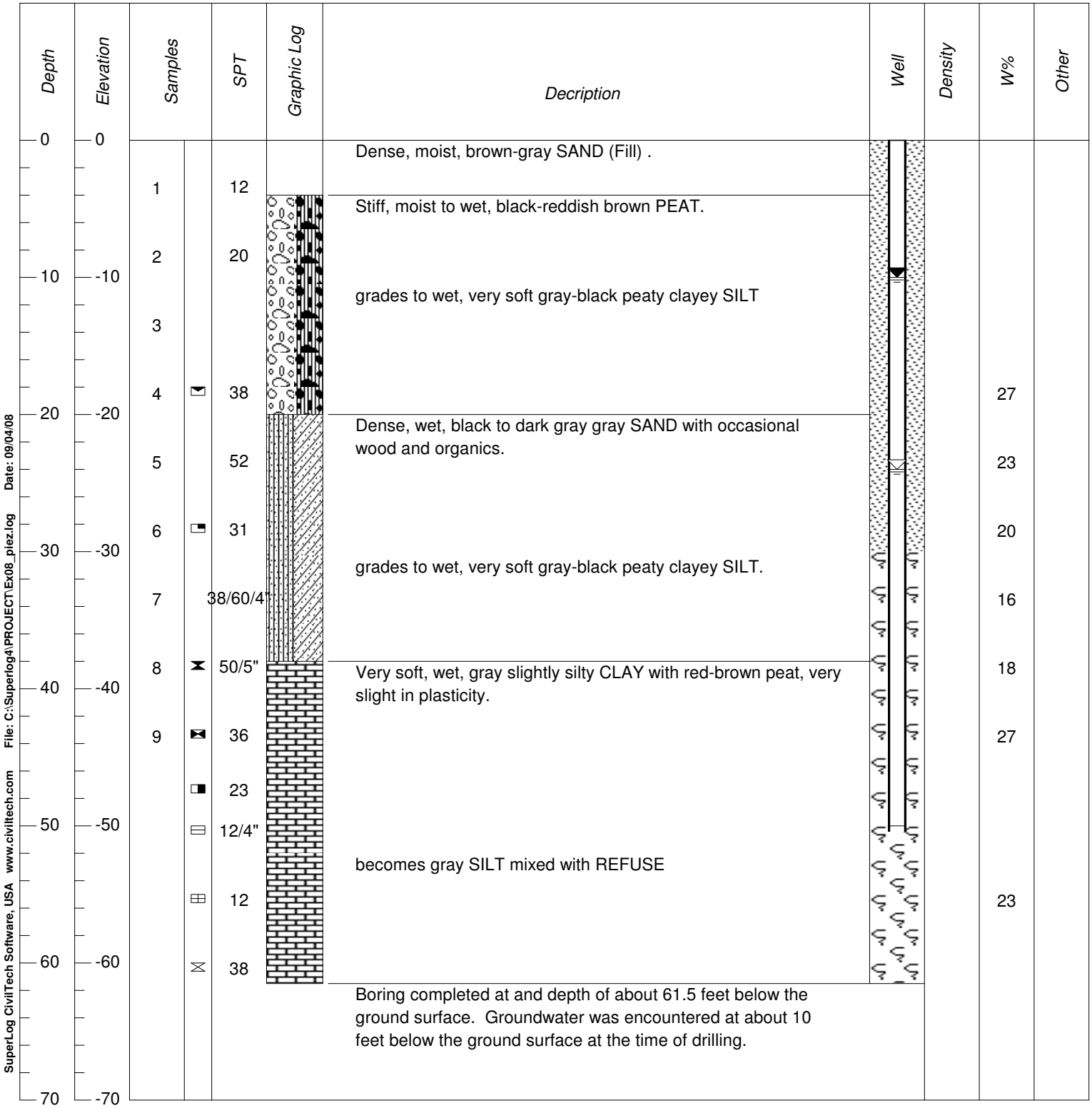
CivilTech Software 555 116th Ave. NE, Suite 180 Bellevue, WA 98004	B-1-1999 *RIVERFROT COMDOM* *EVERETT, WASHINGTON* *AS3698*	Page 7 Job Number: Elevation:

Driller: Gregry Drilling		Drilling	Date:	Time:
Drill Method: Steam Auger		Started:	3/12/99	12:30 AM
Sample Method: 2" SPT		Finished:	3/12/99	4:30 PM
Borehold Diameter: 2 Inch.	Water Level : 10	Logged By: WFG		Checked By: CHL

Sample	Recovery	Blow Counts	PID/FID	Depth	Graphic Log	Materials Description	Moisture	Remarks
				0		Dense, moist, brown-gray SAND (Fill) .		
1		12				Stiff, moist to wet, black-reddish brown PEAT.		Type Remark here
2		20		10		grades to wet, very soft gray-black peaty clayey SILT		
3								
4	27	38		20		Dense, wet, black to dark gray gray SAND with occasional wood and organics.		fine content=34%
5	23	52						
6	20	31		30		grades to wet, very soft gray-black peaty clayey SILT.		
7	16	38/60/4"						
8	18	50/5"		40		Very soft, wet, gray slightly silty CLAY with red-brown peat, very slight in plasticity.		heave noted
9	27	36						
		23						
		12/4"		50		becomes gray SILT mixed with REFUSE		
	23	12						van shear stress = 2 tsf
		38		60		Boring completed at and depth of about 61.5 feet below the ground surface. Groundwater was encountered at about 10 feet below the ground surface at the time of drilling.		
				70				

B-1-1999

Date Drilled: Gregry Drilling **Driving Weight and Drop: Steam Auger** **Elevation: 2" SPT**



RIVERFROT COMDOM
EVERETT, WASHINGTON
AS3698

CivilTech Software *Geotechnical Engineering* and Applied Earth Sciences **Figure No. 8**

B-1-1999

Client Name: City of Everett
Date Drilled: Gregry Drilling
Surface Elevation: 234
Total Depth of Hole: 61.5

Depth	SPT	PID	Samples	Symbols	Materials Description	Water
0				FL	Dense, moist, brown-gray SAND (Fill) .	
4	12			PT	Stiff, moist to wet, black-reddish brown PEAT.	
8	20					
10						▼
12					grades to wet, very soft gray-black peaty clayey SILT	
18	38	27	▼			
20				SM	Dense, wet, black to dark gray gray SAND with occasional wood and organics.	
24	52	23				▽
28	31	20	▙			
30					grades to wet, very soft gray-black peaty clayey SILT.	
34	38/60/4"	16				
38	50/5"	18	⧗	CN	Very soft, wet, gray slightly silty CLAY with red-brown peat, very slight in plasticity.	
40						

SuperLog CivilTech Software, USA www.civiltech.com File: C:\Superlog4\PROJECT\Ex09.log Date: 09/04/08

Job Number RIVERFROT COMDOM
Location EVERETT, WASHINGTON

CivilTech Software
Engineering and Environmental

Plate A-9

Project: RIVERFROT COMDOM
EVERETT, WASHINGTON

B-1-1999

Boring Location: West Coenrt of teh Building

Date Started: 3/11/99 **Date Finished:** 3/12/99

Drilling Method: Steam Auger

Hammer Weight: 300# **Drop:** 30 Inches

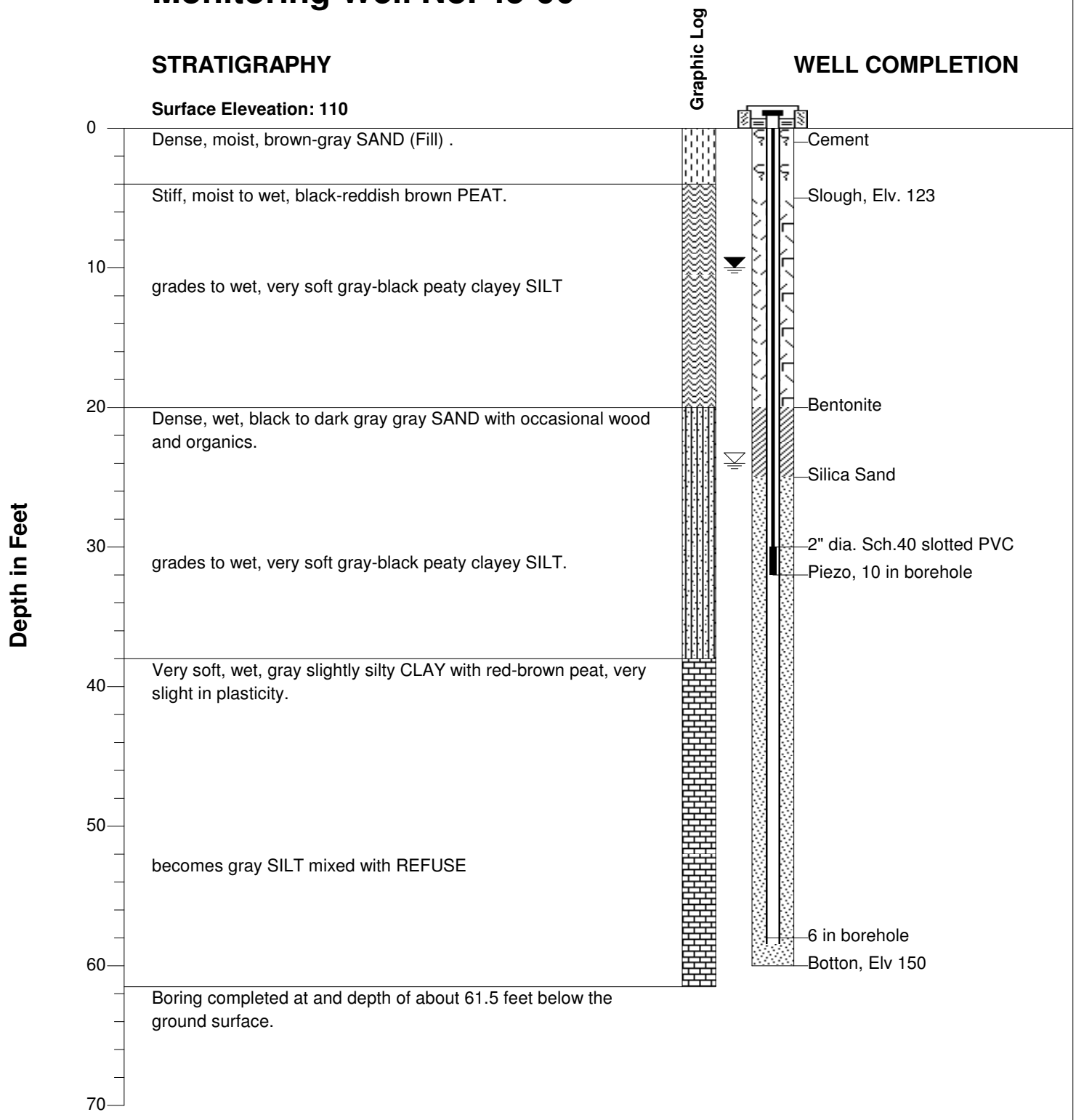
Sampler: Split Spoon

Water encountered at 10 feet during drilling. It droped down to 24 feet 5 days late.

Surface Elevation: 234

Depth (feet)	Lith-ology	Material Description	Samples Number	Type	SPT	Laboratory W%	Density	UU (psf)
0		Dense, moist, brown-gray SAND (Fill) .	1		12			120
		Stiff, moist to wet, black-reddish brown PEAT.	2		20		120	
10		grades to wet, very soft gray-black peaty clayey SILT	3					
			4		38	27		
20		Dense, wet, black to dark gray gray SAND with occasional wood and organics.	5		52	23	98	250
			6		31	20		
30		grades to wet, very soft gray-black peaty clayey SILT.	7		38/60/4"	16		
		Very soft, wet, gray slightly silty CLAY with red-brown peat, very slight in plasticity.	8		50/5"	18		
40			9		36	27	68	500
			10		23			
50		becomes gray SILT mixed with REFUSE	11		12/4"		110	
			12		12	23	120	275
60			13		38			
		Boring completed at and depth of about 61.5 feet below the ground surface. Groundwater was encountered at about 10 feet below the ground surface at the time of drilling.						
70								

Monitoring Well No. 45-90



Company Logo

RIVERFROT COMDOM

EVERETT, WASHINGTON

Stratigraphy and Well Completion

Plate - 11

RIVERFROT COMDOM
2345-A
City of Seattle

B-1-1999

Geologist: 2/23/99

Elevation: Tacoma Drilling

Date Drilled: Hollow Stem, Continous Flight, 6" Auger

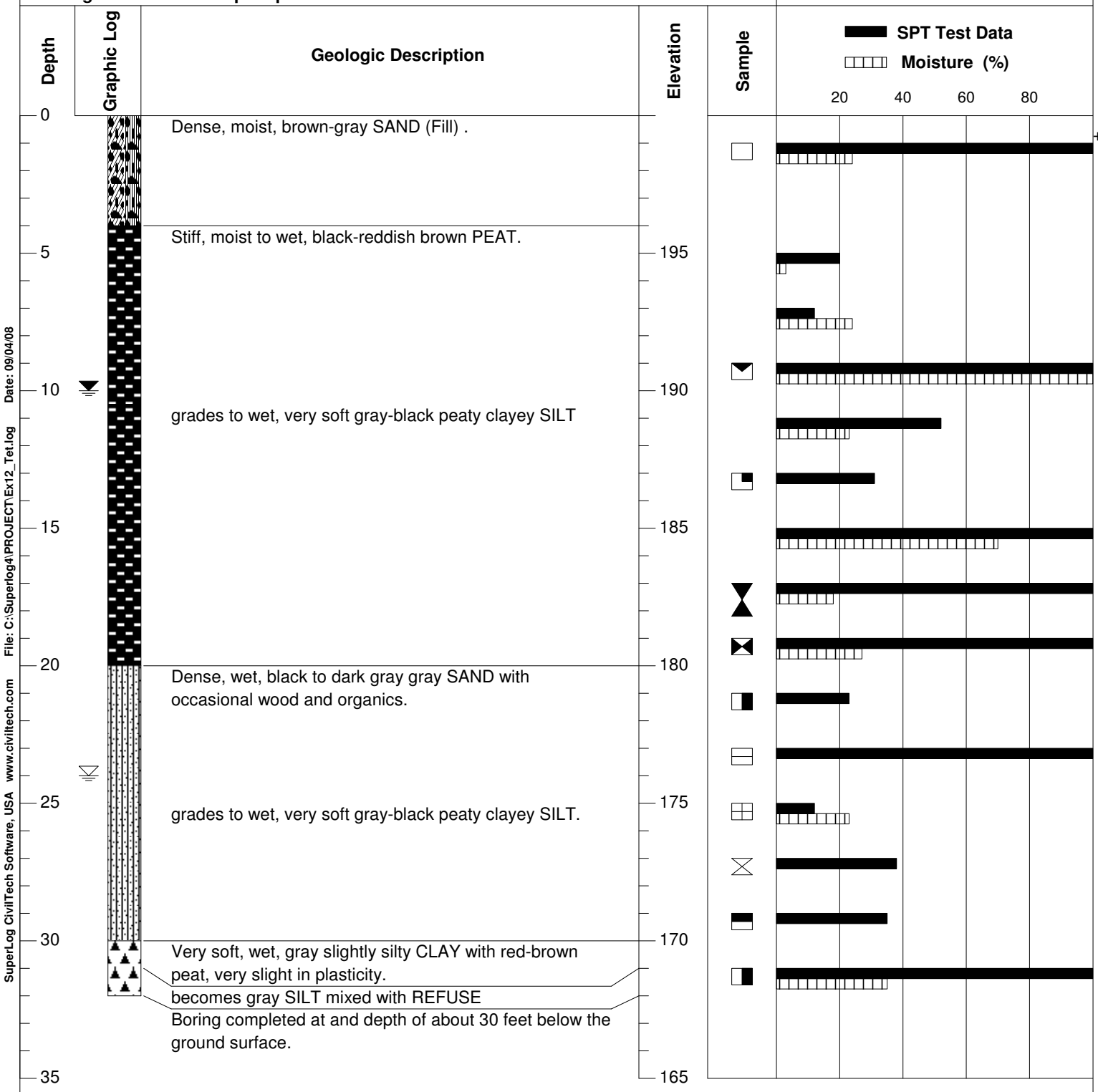
Boring Depth: 10 feet

Driller: Pnumatic Downhole Hammer

Water Level: 300#

Drilling Method: 2" OD Split-spoon

This is remarks. This is for typing text, text, text, all you want to type for the boring is here. Up to 255 words can be typed in here. Here, here, here, here.



CivilTech Software

Job No: JKN

TEST PIT TP-1-1999

Project RIVERFROT COMDOM
Project No: SD97869
Client: Washington Stat
Location: West Building
Elevation: 123

Exc. Date: 12/2/98
Exc. Depth: 12 feet
Logged By: GHF
Plotted By: HJK
Water Level: 5 feet

Description	Soil Type	Graphic Test Pit	Soil Depth	Water	Samples
Dense, moist, brown-gray SAND (Fill) .	FL		0		
			2		
Stiff, moist to wet, black-reddish brown PEAT.	CO				
			4		
grades to wet, very soft gray-black peaty clayey SILT				▼	
Dense, wet, black to dark gray gray SAND with occasional wood and organics.	SM		6		
grades to wet, very soft gray-black peaty clayey SILT.					
			8	▽	
Very soft, wet, gray slightly silty CLAY with red-brown peat, very slight in plasticity.	GWS				
becomes gray SILT mixed with REFUSE					
			10		
			12		
Test Pit completed at and depth of about xx feet below the ground surface.	END				
			14		

Test Pit

CivilTech Software 555 116th Ave. NE, Suite 180 Bellevue, WA 98004	B-1-1999 *RIVERFROT COMDOM* *EVERETT, WASHINGTON* *AS3698*	**Page** 14 **Job Number:** **Elevation:**

Driller: Gregry Drilling	**Drilling**	**Date:**	**Time:**
Drill Method: Steam Auger	**Started:**	3/12/99	12:30 AM
Sample Method: 2" SPT	**Finished:**	3/12/99	4:30 PM
Borehold Diameter: 2 Inch. **Water Level : 10**	**Logged By: WFG**	**Checked By: CHL**	

Sample	Recovery	Blow Counts	Samples	Depth	Graphic Log	Materials Description	Well	Remarks
1		12		0		Dense, moist, brown-gray SAND (Fill) .		Well Information
2		20				Stiff, moist to wet, black-reddish brown PEAT.		
3				10		grades to wet, very soft gray-black peaty clayey SILT		
4	27	38						Well Information
5	23	52		20		Dense, wet, black to dark gray gray SAND with occasional wood and organics.		
6	20	31						
7	16	38/60/4"		30		grades to wet, very soft gray-black peaty clayey SILT.		
8	18	50/5"						Well Information
9	27	36		40		Very soft, wet, gray slightly silty CLAY with red-brown peat, very slight in plasticity.		
		23						
		12/4"		50		becomes gray SILT mixed with REFUSE		
	23	12						Well Information
		38		60		Boring completed at and depth of about 61.5 feet below the ground surface. Groundwater was encountered at about 10 feet below the ground surface at the time of drilling.		
				70				

B-1-1999

RIVERFROT COMDOM
EVERETT, WASHINGTON

Drill Rig: HS Auger
Sampling: SPT
Logged By: 2 Inch.
Total Depth: 46.5 feet
Groundwater: 10' BGS ATD

Date Started: 3-19-99
Date Completed: 3-22-99
Elevation: 32.2 feet
Coordinates: N 4503.9
E 6981.03

Description	Graphic Log	Depth	Sample Type	SPT N-Value	MC (%)	Remarks
Dense, moist, brown-gray SAND (Fill) .		0	GWT not encountered	12		Type Remark here
Stiff, moist to wet, black-reddish brown PEAT.				20		
grades to wet, very soft gray-black peaty clayey SILT		10		38	27	fine content=34%
Dense, wet, black to dark gray gray SAND with occasional wood and organics.		20		52	23	
grades to wet, very soft gray-black peaty clayey SILT.		30		31	20	
				38/60/4"	16	
Very soft, wet, gray slightly silty CLAY with red-brown peat, very slight in plasticity.		40		50/5"	18	heave noted
				36	27	
becomes gray SILT mixed with REFUSE		50		23		
				12/4"		
				12	23	van shear stress = 2 tsf
		60		38		
Boring completed at and depth of about 61.5 feet below the ground surface. Groundwater was encountered at about 24.0 feet below the ground surface at the time of drilling.		70				

CivilTech Software

Boring Log No. B-1-1999
RIVERFROT COMDOM

Location: City of Seattle			**WO#: 2345-A**
Method: Hollow Stem, Continous Flight, 6" Auger			**Ground EL: 231**
Hammer: Pnumatic Downhole Hammer		**Hammer weight (lb): 300#**	**Hole depth (ft): 32**
Sampler: 2" OD Split-spoon	**Drop (in): 30**	**G.W.T. @ Drilling (ft): 10 feet**	**Sampled by: JKN**
Driller: Tacoma Drilling		**Drill Date: 2/23/99**	**Logged by: VNF**

Depth	No.	Type	Blows Per 6"	USCS	Soil Description	Notes
0	1		2-3-5	GC-GM	Dense, moist, brown-gray SAND (Fill) .	Type Remark here
5	2		20	CO	Stiff, moist to wet, black-reddish brown PEAT.	
	3		12			
10	4		12-23-23			fine content=34%
	5		52		grades to wet, very soft gray-black peaty clayey SILT	
	6		31			
15	7		38-60/4"			
	8		50/5"			heave noted
	9		12-15			
20	10		23	SM	Dense, wet, black to dark gray gray SAND with occasional wood and organics.	
	11		12/4"			
25	12		12		grades to wet, very soft gray-black peaty clayey SILT.	van shear stress = 2 tsf
	13		38			
	14		35			
30	15		12-12/5"	GWS	Very soft, wet, gray slightly silty CLAY with red-brown peat, very slight in plasticity. becomes gray SILT mixed with REFUSE	no recovery
				END	Boring completed at and depth of about 30 feet below the ground surface.	
35						

SPT. blow/ft
Moisture %
0 20 40 60

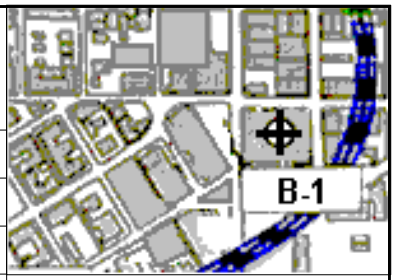
Remarks:

This is remarks. This is for typing text, text, text, all you want to type for the boring is here. Up to 255 words can be typed in here. Here, here, here, here.

Company Name

B-1-1999

RIVERFROT COMDOM
Maintai Ranier
Washington



Project FGH	Driller Tacoma Drilling	
Proj No. ED89698-23	Date West Side of Building	
Drilling Method: Auger	Elevation: 234	
Diameter: 2" / Water Table : 12	Logged by: Auger HD-1	Drawing 23

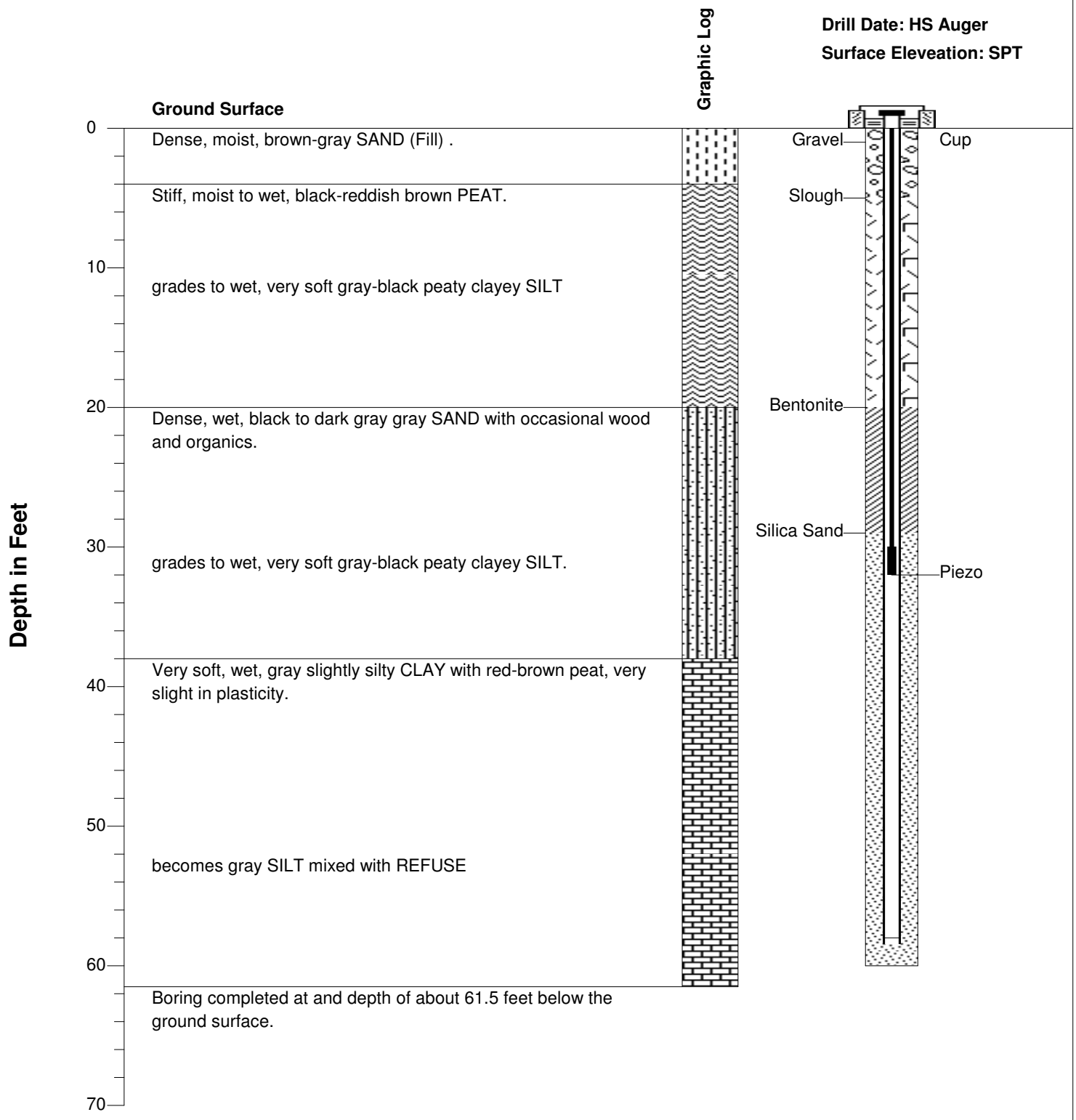
Sample No.	Sample Type	Recovery (%)	RQD (%)	Blow Count per 6 inches	Blows/Foot (N)	Water Table	Depth (ft BGS)	Graphic Log		Materials Description	Moisture (%)	Remarks
							0		FL	Dense, moist, brown-gray SAND (Fill) .		
1				2-3-5								Type Remark here
2				20			5		CO	Stiff, moist to wet, black-reddish brown PEAT.		
3												
4				12-23-23	27		10					fine content=34%
5				52	23					grades to wet, very soft gray-black peaty clayey SILT		
6				31	20							
7				38-60/4"	16		15					
8				50/5"	18							heave noted
9				12-15	27		20		SM	Dense, wet, black to dark gray gray SAND with occasional wood and organics.		
10				23								
11				12/4"								
12				12	23		25			grades to wet, very soft gray-black peaty clayey SILT.		van shear stress = 2 tsf
13				38								
14				35								
15				12-12/5"	35		30		GWS	Very soft, wet, gray slightly silty CLAY with red-brown peat, very slight in plasticity.		no recovery
										becomes gray SILT mixed with REFUSE		
									END	Boring completed at and depth of about xx feet below the ground surface.		

STRATIGRAPHY

WELL COMPLETION

Drill Date: HS Auger

Surface Eleveation: SPT



B-1-1999

RIVERFROT COMDOM

EVERETT, WASHINGTON

Company Logo

Stratigraphy and Well Completion

Plate - 18

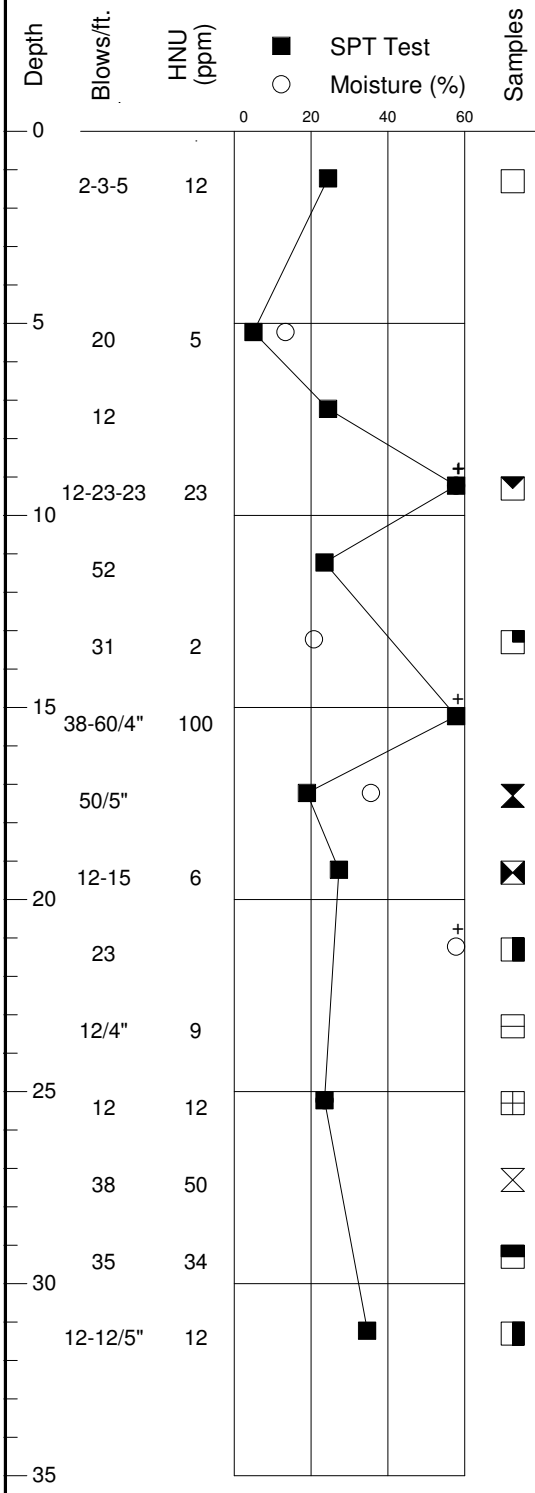
Boring: B-1-1999

Client Name: RIVERFROT COMDOM

Date Drilled: 12/12/89

Surface Elevation: 2/23/99

Total Depth of Hole: 32 feet



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Job Number: 2345-A

Location: City of Seattle

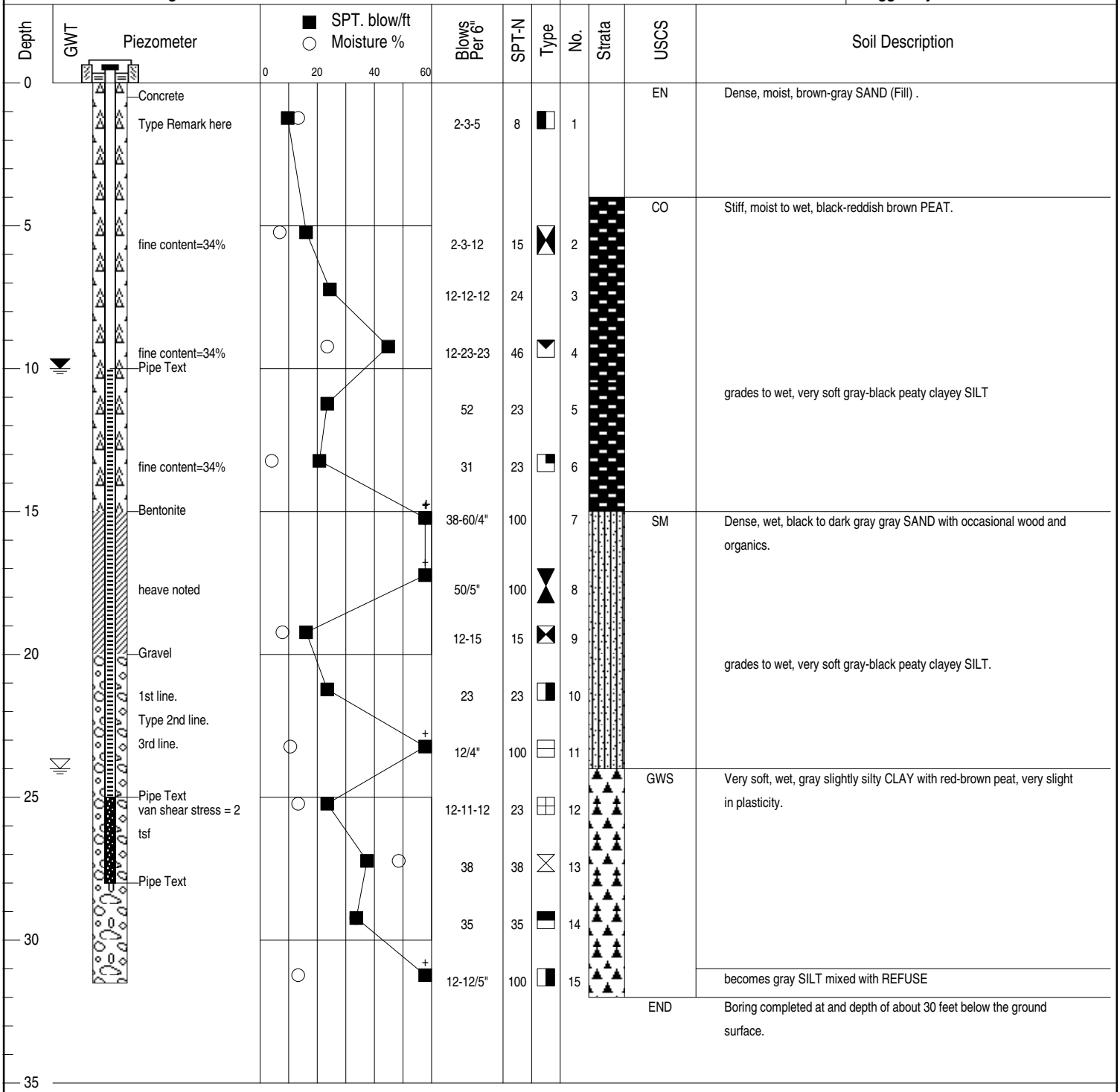
CivilTech Software

Plate 20

Your Firm Name

Boring Log No. B-1-1999
RIVERFRONT CONDOM

Location: City of Seattle			**WO#: 2345-A**
Method: Hollow Stem, Continous Flight, 6" Auger			**Ground EL: 231**
Hammer: Pnumatic Downhole Hammer		**Hammer weight (lb): 300#**	**Hole depth (ft): 32**
Sampler: 2" OD Split-spoon	**Drop (in): 30**	**G.W.T. @ Drilling (ft): 10 feet**	**Sampled by: JKN**
Driller: Tacoma Drilling		**Drill Date: 2/23/99**	**Logged by: VNF**



Remarks:

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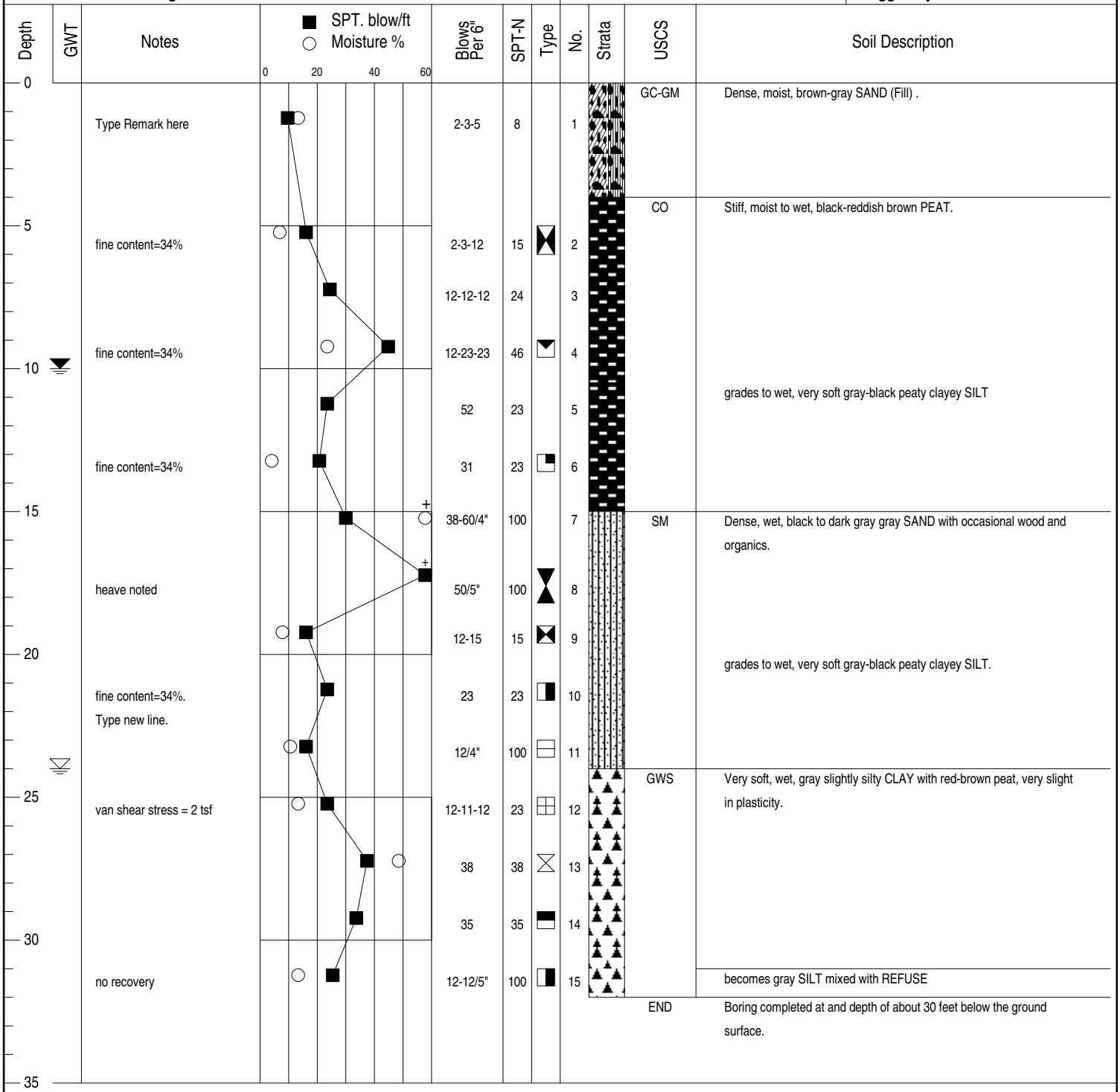
Your Firm Name	Boring Log No. B-1-1999 RIVERFRONT CONDOM

Location: City of Seattle			**WO#: 2345-A**
Method: Hollow Stem, Continous Flight, 6" Auger			**Ground EL: 231**
Hammer: Pnumatic Downhole Hammer		**Hammer weight (lb): 300#**	**Hole depth (ft): 32**
Sampler: 2" OD Split-spoon	**Drop (in): 30**	**G.W.T. @ Drilling (ft): 10 feet**	**Sampled by: JKN**
Driller: Tacoma Drilling		**Drill Date: 2/23/99**	**Logged by: VNF**



Remarks:

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MY GEOTECHNICAL ENGINEERING, INC
BORING LOG NO. B-1-2000

PROJECT NAME: RIVERFRONT CONDOM | **PROJECT NO. WS4687-3**

LOCATION: CAPITAL HILL 2346 STR. | **GROUND EL.: 234**

DRILLER: JKN | **LOGGER: SDF** | **HOLE DEPTH (ft): 24**

DRILL DATE: 8/23/00 | **METHOD: 8" Auger** | **LABORATORY TEST RESULTS**

Depth	Elevation	Type No.	Recovery (in./in.)	Blows Per 6"	USCS	Soil Description	Moisture (%)	Liquid Limit / Plastic Limit	Dry Density (pcf)	Unconfined Compressive Strength (ksf)	Depth
0	200	1		12	SM	Brown silty sand with gray gravel. very dense UYyoyu poiupo opioi[pi[pi[pi[p p[ip[i	8	8	12		0
5	195	2		5	CO	Stiff, moist to wet, black-reddish brown PEAT.	15	15	5		5
		3		13			24	24			
		4		9			46	46	23	22	
10	190	5		8		grades to wet, very soft gray-black peaty clayey SILT	23	23		122	10
		6		31			23	20	2		
15	185	7		60	GM	Silty Gravels VFDSGSDGSGSG	100	100	100	22	15
		8		35			100	100		100	
		9		25			15	15	6		
20	180	10		12		grades to wet, very soft gray-black peaty clayey SILT.	23	23		12	20
		11		40			100	100	9		
25	175	12		23	GWS	Very soft, wet, gray slightly silty CLAY with red-brown peat, very slight in plasticity.	23	23	12	23	25
		13		38			38	38	50		
		14		35			35	34	34		
30	170	15		46		becomes gray SILT mixed with REFUSE	100	100	12		30
					END	Boring completed at and depth of about 30 feet below the ground surface.					
35	165										35

Remarks:

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SOIL DESCRIPTION

Surface Elevation: Approx. 230

Brown silty sand with gray gravel. very dense UYyoyu poiupo opioi[pi[pi[pi[p p[ip[i

Stiff, moist to wet, black-reddish brown PEAT.

grades to wet, very soft gray-black peaty clayey SILT

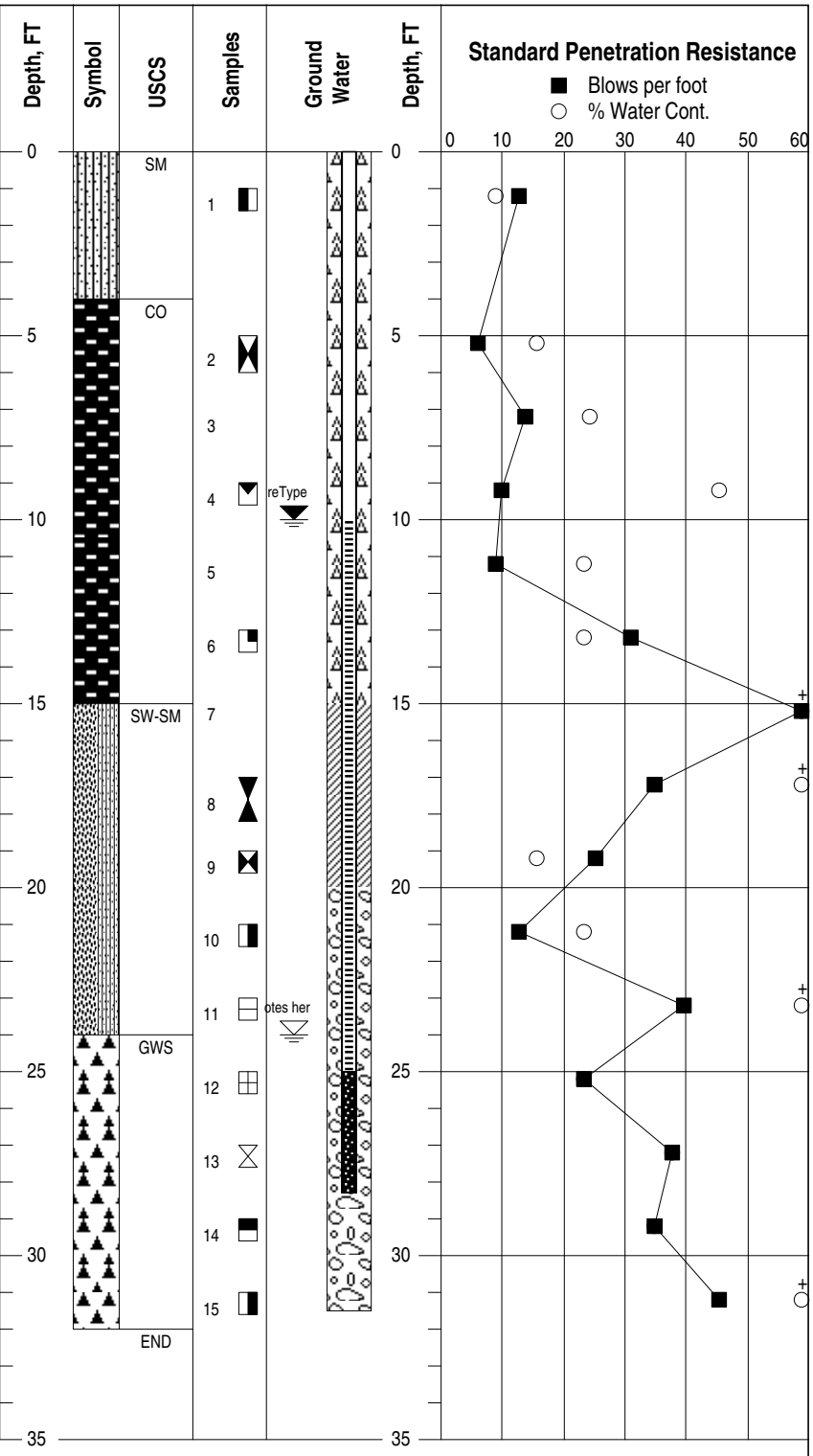
Well-Graded Sand with SiltGSSDG PODSIO PODSI TSP[I[STI[P[ITS[PDIT[PIS
TP[ST DKLFJ Z ;LDKL;k;lk ;lkdf;lkfd;lkfds;f dsfdfdsfd
VFDSGSDGSGSG

grades to wet, very soft gray-black peaty clayey SILT.

Very soft, wet, gray slightly silty CLAY with red-brown peat, very slight in plasticity.

becomes gray SILT mixed with REFUSE

Boring completed at and depth of about 30 feet below the ground surface.



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Date Completed: 8/23/00
Driller: Gragry Drilling
Equipment: Hollow Stem, Continous Flight
Drilling Method: 6" Auger
Hammer System: Downhole 144# Hammer

RIVERFRONT CONDOM

CAPITAL HILL 2346 STR.

SEATTLE PUBLIC UTILITIES MATERIALS LABORATORY

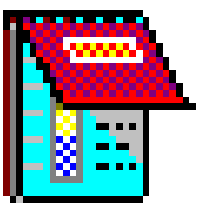
LOG OF BORING B-1-2000

WA 67897A-2 **FIGURE A- 21**

Logged by: JKN Reviewed by: VNF

DRILL RIG Auger steam	SURFACE ELEVATION 234	LOGGED BY WRS
DEPTH TO GROUNDWATER 24	BORING DIAMETER 8" -inch	DATE DRILLED 12/24/00

DESCRIPTION AND CLASSIFICATION			DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	DRY DENSITY (PCF)	UNCONFINED COMPRESSIVE STRENGTH (KSF)	OTHER TESTS
DESCRIPTION AND REMARKS	CONSIST	SOIL TYPE							
Brown silty sand with gray gravel. very dense UYyoyu poiupo opioi[pi[pi[pi[p p[ip[i	Very Dense		0		12	8	8	12	
Stiff, moist to wet, black-reddish brown PEAT.			5		5	15	15	5	
					13	24	24		
grades to wet, very soft gray-black peaty clayey SILT	Firm		10		9	46	46	23	22
					8	23	23		CPT=23"
					31	23	20	2	
Silty Gravels VFDSGSDGSGSG			15		40	100	100	9	Van Shear=234psf
grades to wet, very soft gray-black peaty clayey SILT.	Hard to Very Hard		20		23	23	23	12	23
Very soft, wet, gray slightly silty CLAY with red-brown peat, very slight in plasticity.			25		38	38	38	50	
becomes gray SILT mixed with REFUSE			30		35	35	34	34	
Boring completed at depth of 34			35		46	100	100	12	
Type your notes here. Type your notes here.									



1470 Enea Circle
Suite 1551
Concord, CA 94520
TEL 925.688.1001
FAX 925.688.1005

EXPLORATION BORING LOG

RIVERFRONT CONDOM

Oakland, CA

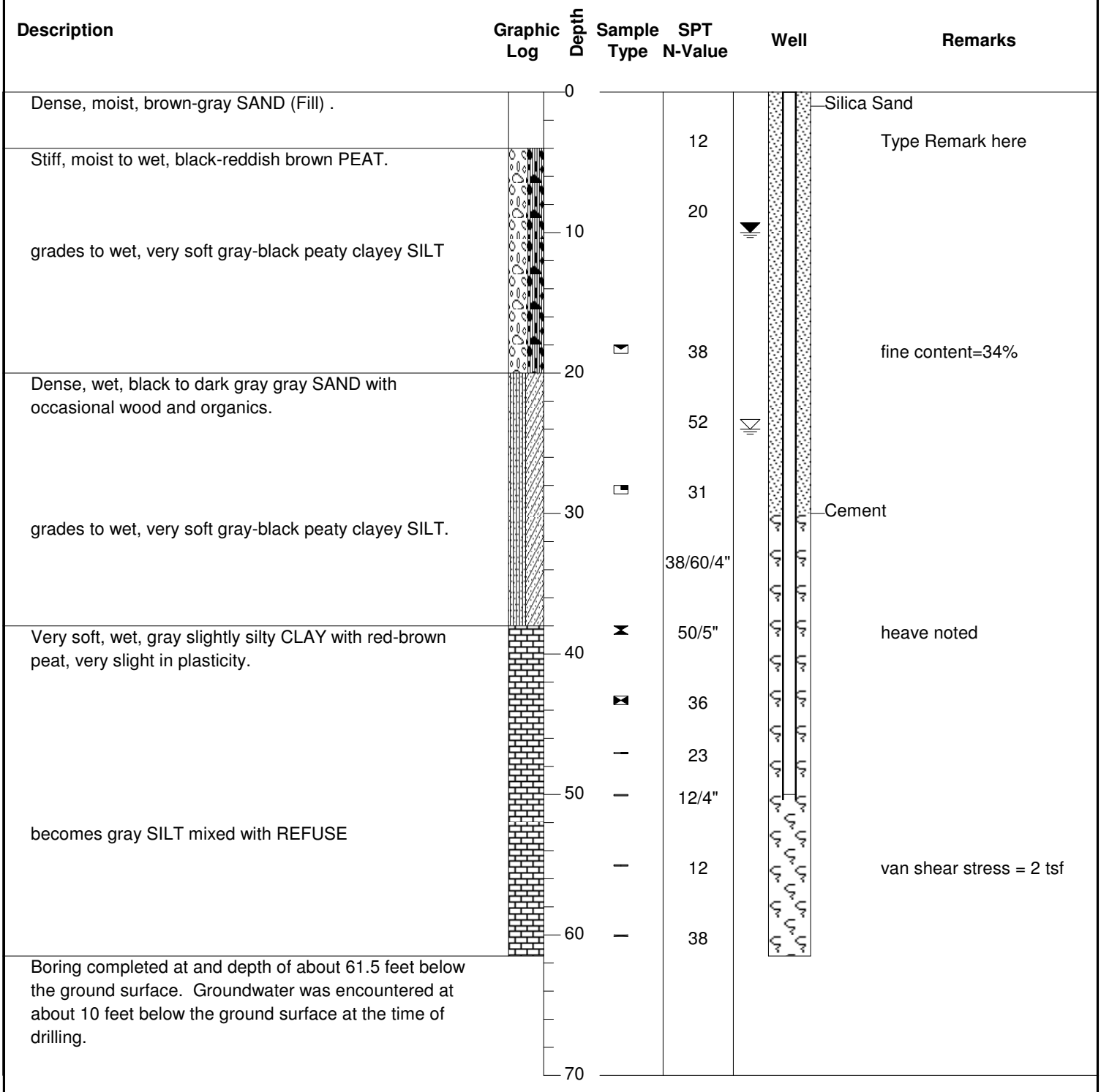
PROJECT NO.	DATE	BORING NO.
Proj. No. 78234-34243	12/12/00	**B-1-2000**

B-1-1999

RIVERFROT COMDOM
EVERETT, WASHINGTON

Drill Rig: Gregry Drilling
Sampling: Steam Auger
Logged By: 2" SPT
Total Depth: Auger HD-1

Date Started: CGF
Date Completed: 200
Elevation: erewr
Groundwater: 12/24/00



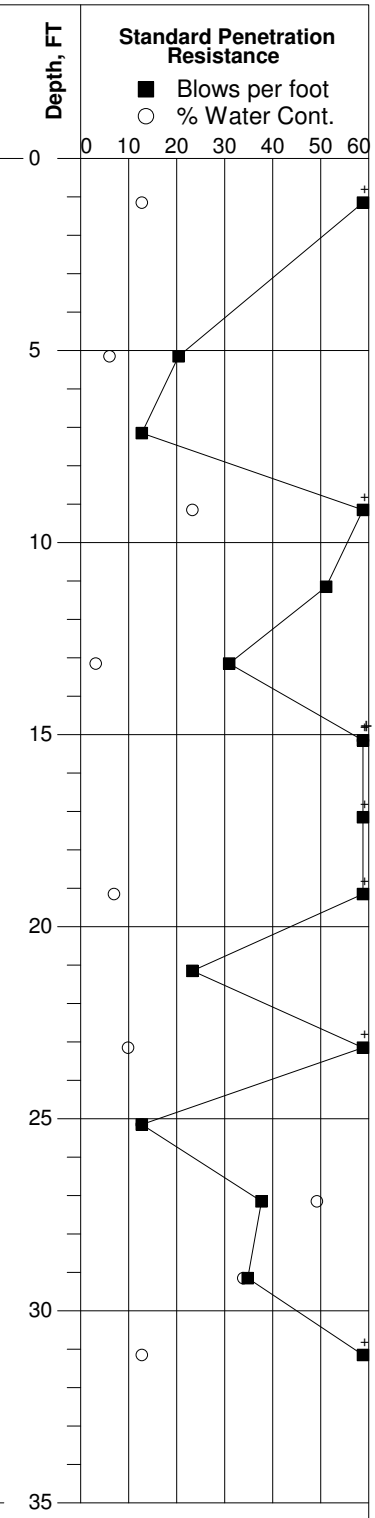
CIVILTECH CORPORATION

Plate A-26

SOIL DESCRIPTION

Surface Elevation: Approx. CGF

Depth, FT	Symbol	USCS	Samples	Blow/6"	Lab Test	Ground Water
0						
Dense, moist, brown-gray SAND (Fill) .		GM	1	24		
Stiff, moist to wet, black-reddish brown PEAT.		CO	2	3	12	
5			3	24		
			4	100	80	
grades to wet, very soft gray-black peaty clayey SILT			5	23		
10			6		20	
			7	70		
15			8	18	36	
			9	27		
Dense, wet, black to dark gray gray SAND with occasional wood and organics.		SM	10		100	
			11			
20						
grades to wet, very soft gray-black peaty clayey SILT.			12	23	23	
25						
Very soft, wet, gray slightly silty CLAY with red-brown peat, very slight in plasticity.		GWS	13			
becomes gray SILT mixed with REFUSE			14			
30			15	35		
Boring completed at and depth of about 30 feet below the ground surface.		END				
35						



This is remarks. This is for typing text, text, text, all you want to type for the boring is here. Up to 255 words can be typed in here. Here, here, here, here.

Date Completed: 2/23/99
Driller: 32 feet
Equipment: 12/12/89
Drilling Method: Auger HD-1
Hammer System: 12/24/00

RIVERFROT COMDOM
2345-A

CivilTech Software

LOG OF BORING B-1-1999

City of Seattle **FIGURE A- 20**

Logged by: JKN Reviewed by: VNF

Log of Test Boring TB-1

Project No. MI-022001-50

Project: JB Kenehan

Location: Waukesha, WI

Depth ft	Description of Material Ground Surface Elevation	Elevation	Geological Origin	WL	Sample No.	Sample Type	Testing N	Testing W	Testing OC	Testing DD	Testing Pq (tsf)
	3 1/2" Asphault, Crushed Limestone Basecourse		Pavement		1	FAS	---	20	sd	233	45
	Fill, brown, very moist	98.4	Fill								
	Fill, silty sand with gravel, brown, very moist	95.9			2	SB	46		1233		54
5					3	SB	19	17			
	Fill, silty sand with gravel	92.4									
	Organic Lean Cllay (OR)	90.9	Buried Topsoil		4	SB	4		23		
10				1/14/02 ▼							
15					5	SB	19		232	33	45
					6	SB	38	23			
20	Silty Sand (SM)	88.4	Coarse Alluvial		7	SB	63/7	11			11
		84.4									
25											
30	End of Boring										
35											

*Sample from 0 to 12 inches with no set ret yoturet uretopureretpour putre ret tretr

Water Level Measurements

Date	Time	Depth (ft)	Elevation (ft)

Date: 12/12/01

Crew Chief: Paul K.

Drilling Method: Paul K.

Drilling Co.: 2-1/4" HSA 13.5'

Plugging Procedure: Bentonite Chip

SuperLog CivilTech Software, USA www.civiltech.com File: C:\Superlog4\PROJECTF28.log Date: 09/04/08

KTE Consultants

Figure No. **1**

602 Lila Avenue
Milford, OH 45150
Phone: (513) 831-6868
Fax: (513) 831-6894

TEST BORING LOG

CLIENT Cingular Wireless
PROJECT NAME Radio Tower DAY-AAFX059
PROJECT LOCATION SE 4231 SR 370
Yellow Springs, Green Co., Ohio

BORING # B-1-2002
JOB NO. 72.75127.0149
DRAWN BY Sgfu iufiudsfp
APPROVED BY Seewr ewrwer

DRILLING and SAMPLING INFO

Date Started 06/02/01
Date Completed D. Jamison
Drill Foreman Terewrewr
Inspector Wyt uiyiui
Boring Method 140 lbs
Hammer Wt. 30 in
Hammer Drop 2 in
Spoon Sampler OD erewr
Rock Core Dia. ewrewr
Shelby Tube OD ewrr

TEST DATA

SOIL CLASSIFICATION SURFACE ELEVATION: 200 feet	Stratum	Depth Scale	Sample No.	Sample Type	Sample Graphics	Recovery (%)	Groundwater	Standard Penetration Test, blows per foot	Qu - tsf Unconfined Compressive Strength	PP - tsf Pocket Penetrometer	Moisture Content %	Liquid Limit (LL)	Plastic Limit (PL)	Remarks
Well-Graded Gravels	0													
Top Soil	1		1	SS		0.5		12		2.75	19			
Brown, SANDY CLAY (CL) moist, stiff		5	2	CU		0.6		6		15				
Dense, tan, moist, silty SAND (SM)	7													
Very dense, tan grey, moist, gravelly, silty SAND (SM)		10	3	CA		0	6/4/01	40						No recovery @ 8'
		15	4	RC		1		68	120		21	20	5	
Hard, grey, moist, sandy SILT (MH)	18													
		20	5	CU		0.8		50/3"						
Hard, grey, moist, CLAY with some silt (CH)							7/3/01							

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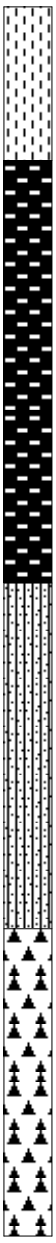
Sample Type:
SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Depth of Ground Water:
At Drilling
After Drilling

Boring Method:
HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

B-1

B-1-1999



Dense, moist, brown-gray SAND (Fill) .

Stiff, moist to wet, black-reddish brown PEAT.

grades to wet, very soft gray-black peaty clayey SILT

Dense, wet, black to dark gray gray SAND with occasional wood and organics.

grades to wet, very soft gray-black peaty clayey SILT.

Very soft, wet, gray slightly silty CLAY with red-brown peat, very slight in plasticity.