WinLoG RT

User Guide

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Version 6

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WinLoG RT can be used to create boring and well logs and manage boring and well data. The program can be used on tablets, laptops and desktops that have the Windows operating system. The user interface has been specifically designed to make data collection easier on tablets and laptops. WinLoG RT can be used separately or as a field extension of the WinLoG/GaeaSynergy application.

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Chapter 1 Introduction

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When used separately it operates very similar to WinLoG. All of the data is stored on the local device and the logs can be printed directly from the local device. WinLoG RT can be used completely independently of WinLoG and does not require any other software.

When used in conjunction with the network version of WinLoG/GaeaSynergy, WinLoG RT can act as a remote data collection device for boring and well data. The data collected in the field can be sent to the network as an Electronic Data Exchange (EDI) file. In addition, boring and well creation tasks can be automatically sent to personnel using WinLoG RT.

Benefits

- Scheduling of boring and well creation tasks can be generated by GaeaSynergy/WinLoG and automatically received by WinLoG RT..
- Can be used in conjunction with GaeaSynergy/WinLoG or entirely independently.
- Standardize the procedures for data collection within and across projects,
- Reduce the time and effort required for data handling and reporting,
- Provide a secure database system for the storage, retrieval, and backup of all boring and well data.
- Print or save to PDF boring and well logs.
- Can upload boring and well data to GaeaSynergy/WinLoG using EDI.

1.1 Overview

WinLoG and WinLoG RT are used to improve and standardize environmental data collection, management, and reporting in an efficient and cost-effective manner. This is accomplished by implementing a documented, auditable process for the collection, storage, and reporting of boring and well data. WinLoG RT can be used as an entirely separate and independent program or in can be used in conjunction with the network version of GaeaSynergy/WinLoG. When used with the network version, WinLoG RT can receive task notifications and exchange data with the GaeaSynergy/WinLoG network.

This boring and well creation process can be divided into three stages. This process can be divided between WinLoG RT and GaeaSynergy/WinLoG or accomplished by WinLoG RT alone.

1. Scheduling and planning

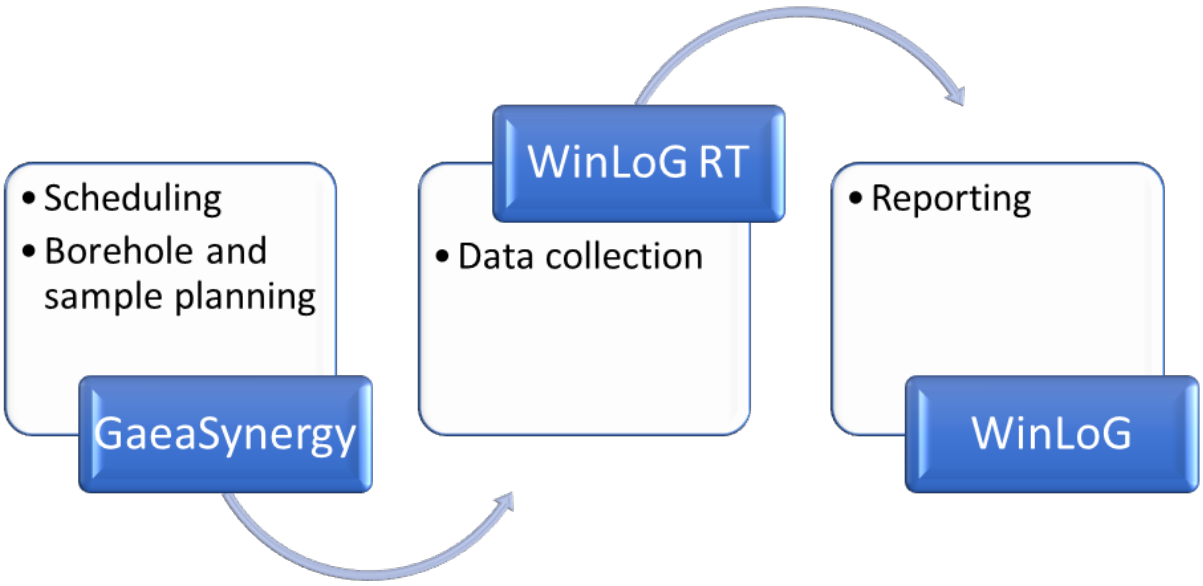
The first stage in any field program is the scheduling and planning of boring and well creation events. GaeaSynergy/WinLoG allows project managers to design, delegate, and monitor these events. Notification of these events can be automatically sent to WinLoG RT as email or SMS (text) messages.

2. Data Collection

Detailed boring and well information can be recorded in the field on a Windows laptop or tablet using WinLoG RT. Boring and well data collected using WinLoG RT can be uploaded to the network main database remotely as an Electronic Data Interchange (EDI) file. The remote uploading of data using an EDI provides for faster more comprehensive data reporting and reduces the possibility of transcription errors.

3. Reporting

Boring and well data can be reported on a variety of logs. These logs can be easily customized to meet internal and external needs. In addition, boring and well data is fully integrated and available for use by other modules within GaeaSynergy.



1.1.1 Electronic Data Interchange

Electronic Data Interchange (EDI) files are used to exchange data between the GaeaSynergy/WinLoG and WinLoG RT. To use this feature the network version of GaeaSynergy/WinLoG must be installed and the GaeaSynergy Network Manager service running on the main network.

All EDI files are stored in XML format and are transferred either by email or FTP. These EDI files are automatically imported by the receiving application when that application is started.

Types of EDI files used by WinLoG RT

EDI Type	Originator	Receiver
Boring/Well Task Data	GaeaSynergy	WinLoG RT
Lookup List Data	GaeaSynergy	WinLoG RT
Template Data	GaeaSynergy	WinLoG RT
Project Data	GaeaSynergy	WinLoG RT
Project Data	WinLoG RT	GaeaSynergy
Boring/Well Data	WinLoG RT	GaeaSynergy

1.1.2 Notifications

When using the network version of GaeaSynergy, notifications can be sent throughout the work process. These notifications can only be setup in tasks and can only be used when tasks are used to control the work flow.

Notification	Originator
Boring/Well required	GaeaSynergy
Boring/Well completed	WinLoG RT
Boring/Well received	GaeaSynergy

*These notifications can also be generated from GaeaSynergy and are sent using the Network Manager Service.

Notifications can be sent via email, SMS (text message), or internally within the program. When being sent using email the email address specified for the personnel is used, If they are being notified using SMS the cell number and country code for the personnel is used. And if the method is internal notification, the personnel will be notified the next time they login to the GaeaSynergy program.

1.2 Installation

To get WinLoG RT up and running, the program first needs to be installed on your computer. The program can be downloaded from GAEA's website at http:\\www.gaeatech.com\public\WinlogRT4_Setup.msi.

When installing WinLoG RT you must be logged in as an administrator.

The following steps occur during the installation:
- The WinLoG RT application is installed on your computer
- Files for the databases and data store are copied to your computer
- Shortcuts are placed on your Start menu and desktop

After the application has been installed, there are a few more steps before it is ready for use. The datastore needs to be setup and example projects can be imported. All these steps are accomplished by running the WinLoG RT for the first time. The program can be started using the icon on your desktop or the WinLoG RT application menu on the Start menu.

1.2.1 First Run and Program Setup

When the program is started for the first time you will need to select the industry that you will be using to register the software. The price, features, and settings in the application will change depending on the industry selected.

After the above steps are completed, the application will start initially in demo mode. You can use the application in demo mode for up to 20 times before you need to register 24 it.

1.2.2 Directory Permissions

The data for the application is stored in the database and data store directories. The location of these directories will depend on the operating system and is defaulted to the common application data directory. **All of the users must have full read and write access to these directories. When possible the install program for WinLoG RT will try to set the permissions of these directories properly.** For administrative users this will not be a problem; however, limited users may need to be given permission to read and write to these directories. The location and method of setting the permissions will vary with the type of Windows operating system as described below.

Windows 8 and above

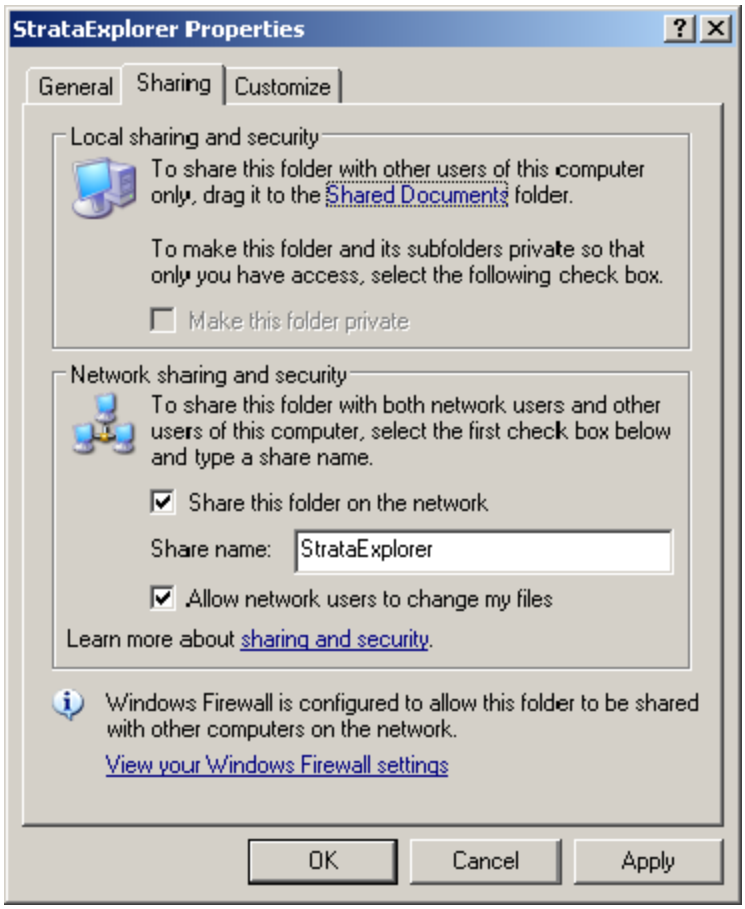
The default location for the database and data store files is "c:\ProgramData\GAEA\WinlogRT6". Typically non-administrative (limited) users may only have read access to this directory. To change the permissions on this directory to grant limited users full control follow the steps below.

1. Log in as an administrator
2. In Windows Explorer browse to the directory "c:\ProgramData" and highlight the folder "WinlogRT4".
3. Right click on the WinlogRT6 folder and select "Properties" from the popup menu, the form below will be displayed.
4. On the Security tab make sure that the group "Everyone" has "Full Control" permissions.

Windows XP Home

The default directory where the database and datastore directories are located for Windows XP is "c:\Documents and Settings\All Users\Application Data\WinLoG RT". Typically non-administrative (limited) users may only have read access to this directory. To change the permissions on this directory to grant limited users full control follow the steps below.

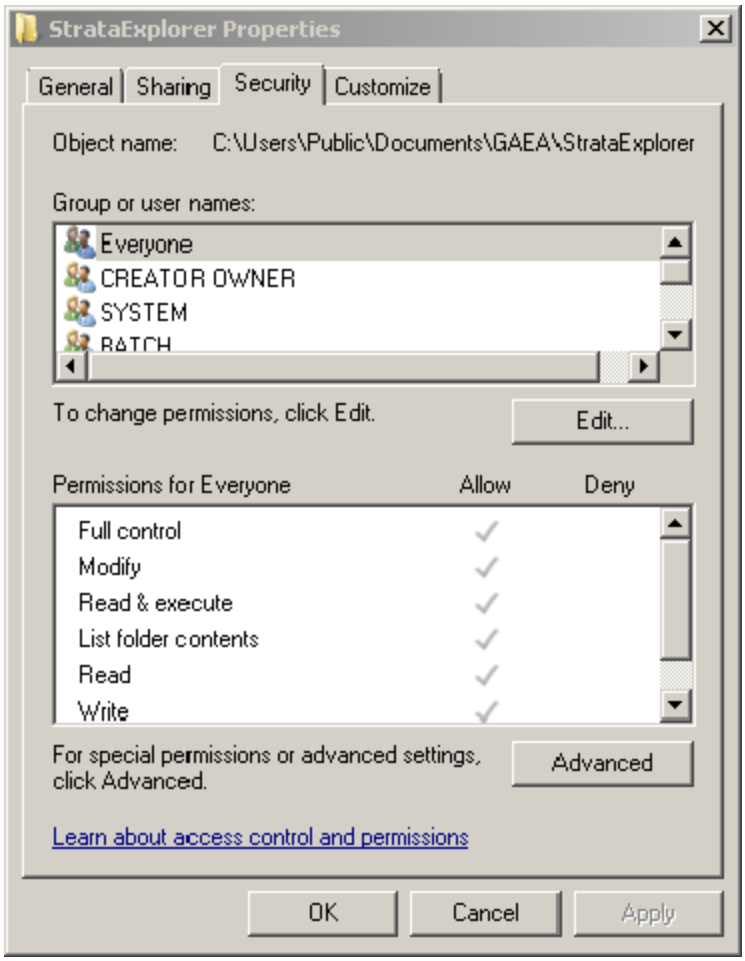
1. Log in as an administrator
2. In Windows Explorer browse to the directory "c:\Documents and Settings\All Users\Application Data" and highlight the folder "WinLoG RT".
3. Right click on the WinLoG RT folder and select "Sharing and Security" from the popup menu, the form below will be displayed.
4. On the Sharing tab check the boxes for "Share this folder on the network" and "Allow network users to change my files".



Windows Vista and XP Professional

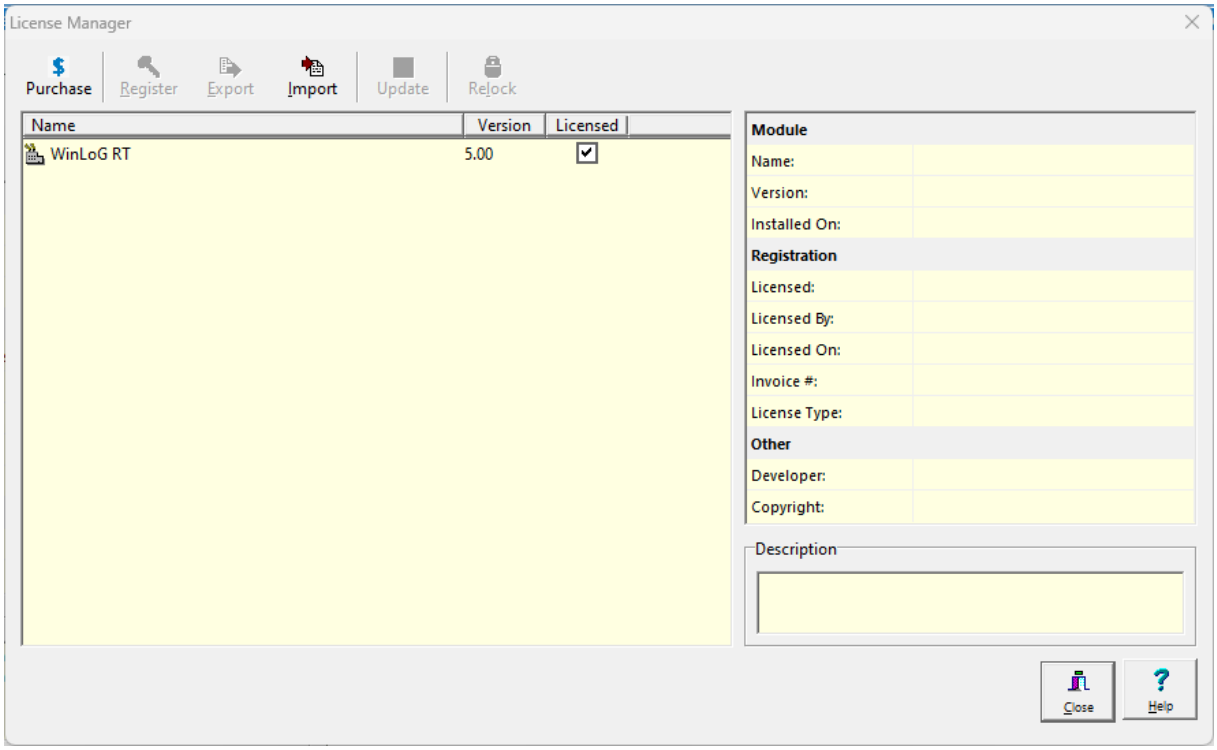
The default location for the database and data store files in Windows Vista is "c:\Users\Public\Application Data\WinLoG RT". Typically non-administrative (limited) users only have read access to this directory. To change the permissions on this directory to grant limited users full control follow the steps below.

1. Log in as an administrator
2. In Windows Explorer browse to the directory "c:\Users\Public\Application Data" and highlight the folder "WinLoG RT".
3. Right click on the WinLoG RT folder and select "Properties" from the popup menu, the form below will be displayed.
4. On the Security tab make sure that the group "Everyone" has "Full Control" permissions.



1.3 Purchasing and Registration

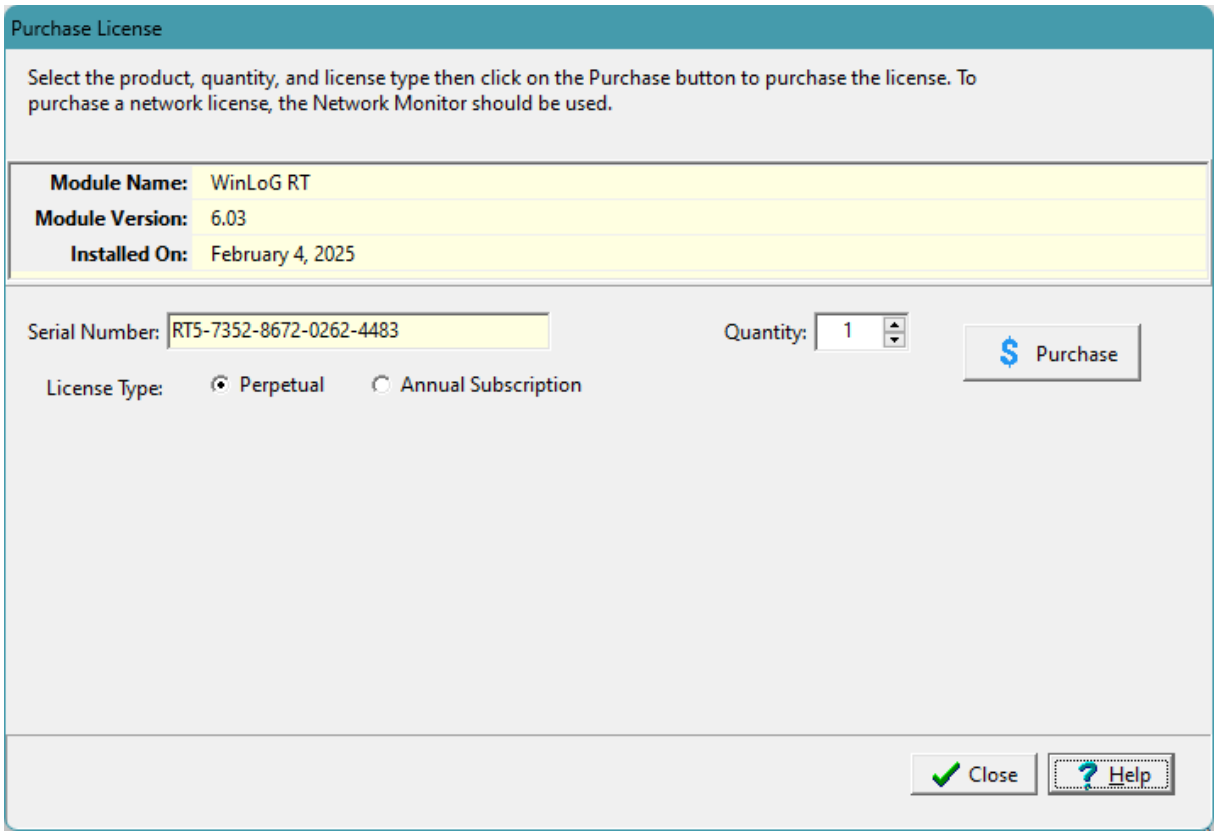
Licenses for the WinLoG RT can be purchased and registered by going to *Tools > Manage Licenses*.The License Manager form will be displayed with a table that shows the current licensing of the modules. To get detailed information about a module click on it in the table. The detailed information will be displayed to the right.



At the top of this form there are buttons to Purchase a license, Register a license, Export serial numbers, Import registration codes, Update a license, and Relock (transfer) a license for the selected module. These buttons will be enabled and disabled depending upon whether the selected module is licensed. .These functions are explained in the sections below.

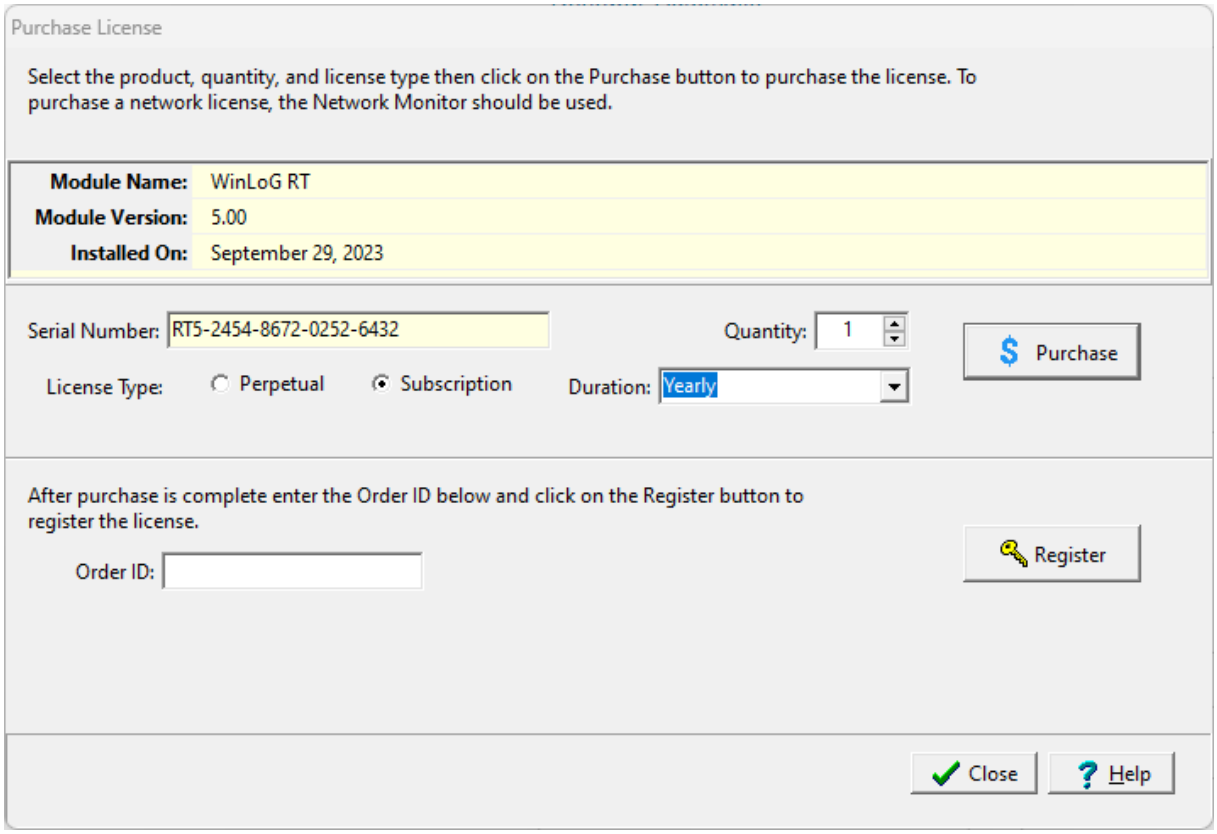
1.3.1 Purchasing a License

Licenses for WinLoG RT can be purchased by selecting the WinLoG RT module and clicking on the Purchase button the License Manager form. The Purchase License form will then be displayed.



This form shows the serial number for WinLoG RT, these serial numbers are unique for each computer and module. Either perpetual or subscription licenses can be purchased. When purchasing a subscription, the duration of the subscription must also be selected.

After the license type and quantity have been selected, click on the Purchase button to proceed with the purchase. A secure web page will hen be opened in your browser where you can enter the purchase information.

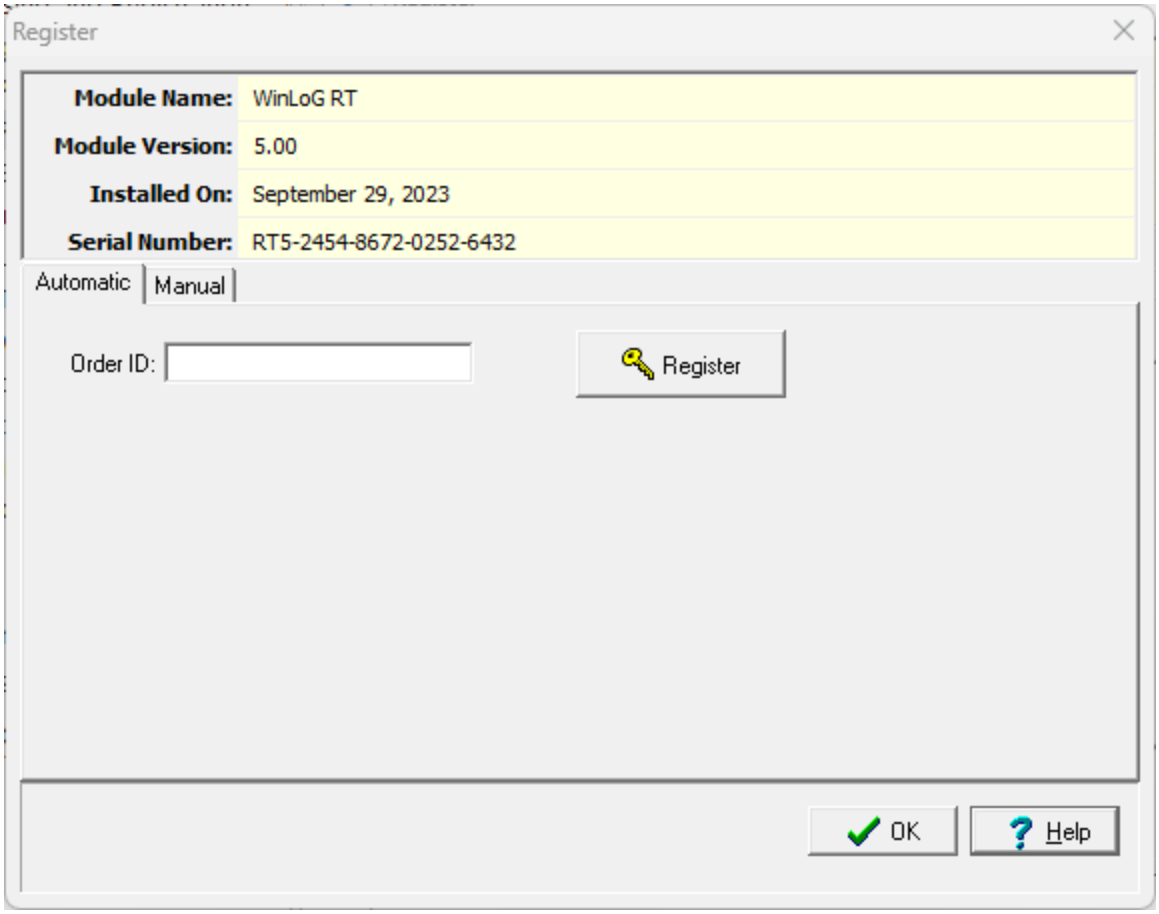


When the purchase has been completed, you will be provided by email with a unique order/purchase ID. Enter this ID on the form and click on the Register button to register the module. If the purchase or email is delayed, the license can later be registered as described in the Registering a License 27 section.

If a subscription is purchased it can be automatically renewed and the renewal information will be sent to WinLoG RT.

1.3.2 Registering a License

After a license has been purchased and not yet registered, it can be registered by selecting the WinLoG RT module on the License Manager form and clicking the Register button. The Register form below will then be displayed.

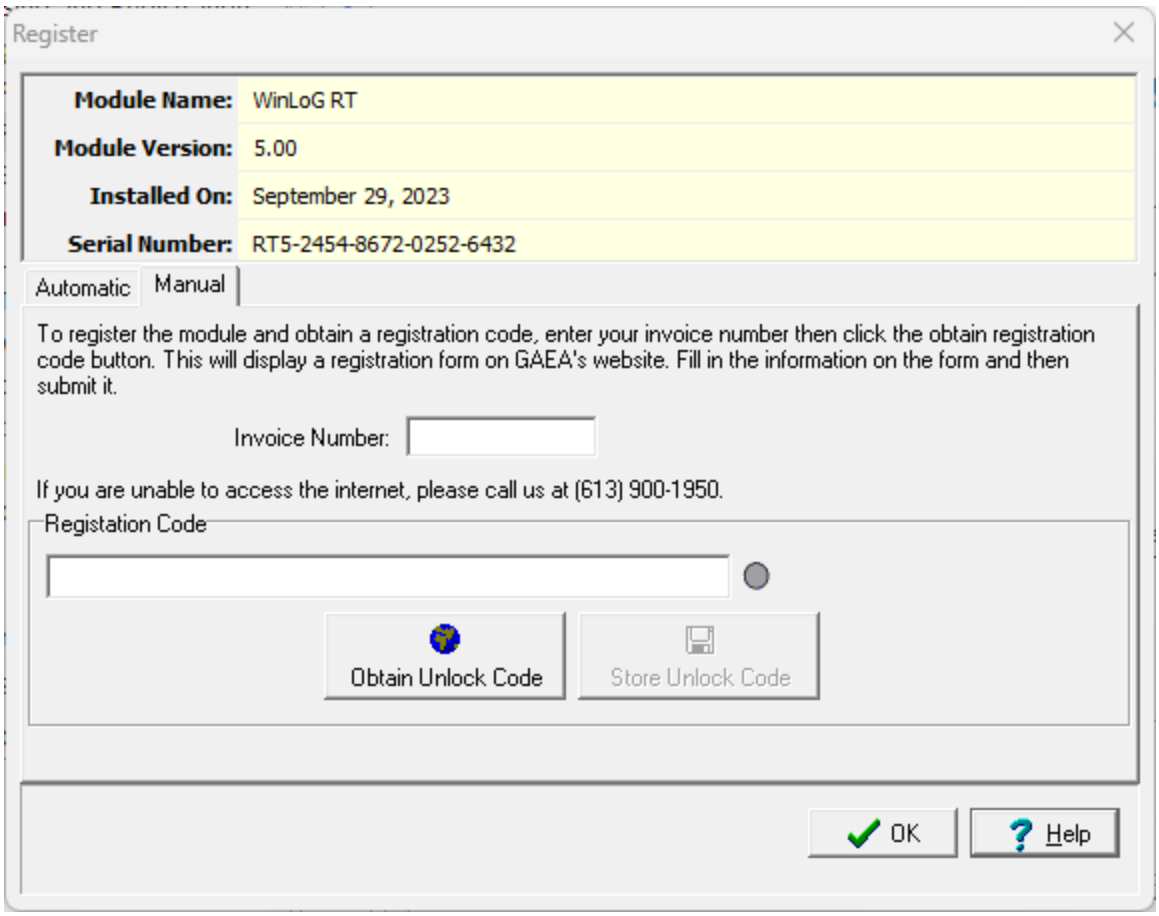


This form has two tabs, one for automatic registrations and one for manual registrations.

Automatic Registration

If you purchased the license online and have an order/purchase ID you can enter on the Automatic tab to register the license.

Manual Registration



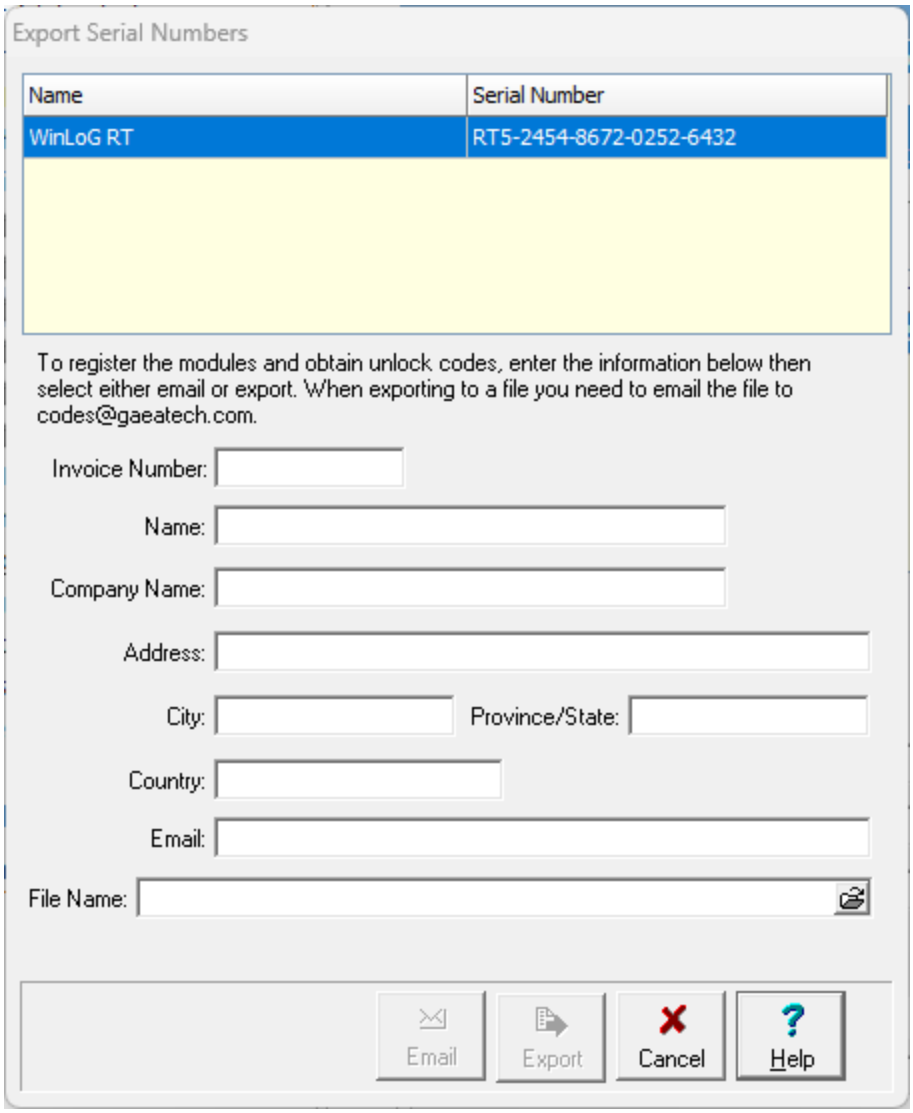
To manually register the license, contact GAEA with your invoice number and the unique serial number shown on the form. GAEA can be contacted either by clicking on the Obtain Unlock Code button or be emailing us at codes@gaeatech.com. When the Obtain Registration button is used an email form will be displayed where you can enter your contact information and email it directly to GAEA.

After you receive the registration code from GAEA you can enter it on the form and then save it by clicking on the Store Unlock Code button.

1.3.3 Exporting the Serial Number

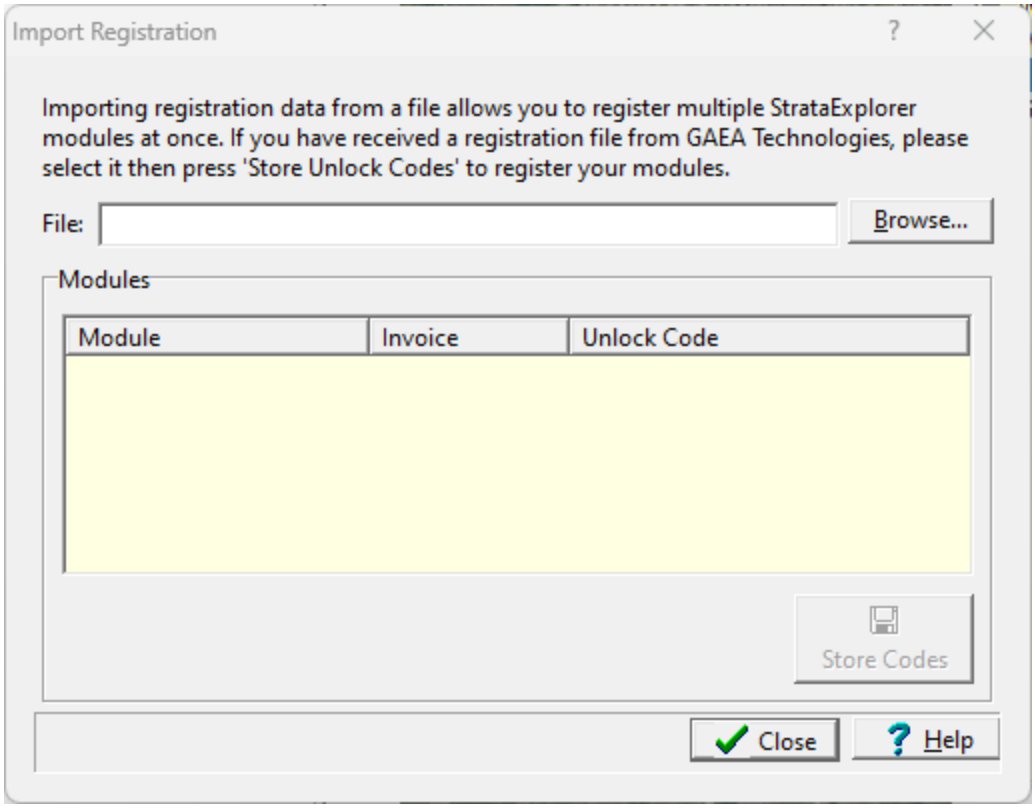
The serial numbers of the WinLoG RT module can be exported to a file and emailed to GAEA. After the file has been processed a registration file will be emailed back from GAEA. This registration file can then be imported and the registration codes saved.

To export the serial number file, select the WinLoG RT module on the License Manager form and then click on the Export button on the toolbar of the form. The Export Serial Number form will be displayed where you can enter the invoice number and your contact details. After you enter the information you can either email the file directly to GAEA by clicking on the Email button or save it to your disk and email it yourself by clicking on the Save button.



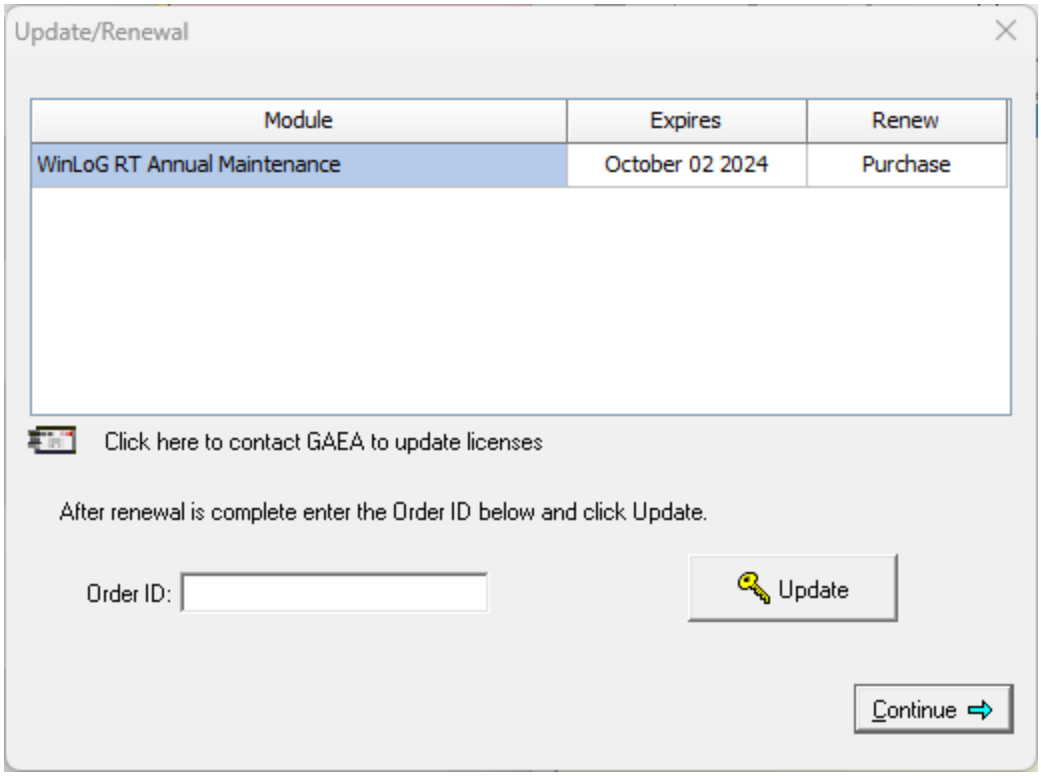
1.3.4 Importing the Registration Code

After the file has been received and processed by GAEA you will receive a registration file back by email. When you receive this file save it to your hard drive. To import the file click on the Import button on the License Manager form and the Import Registration Codes form will be displayed. Select the file you saved using the Open button on the form and the registration codes will be imported and saved by the program.



1.3.5 Updating a License

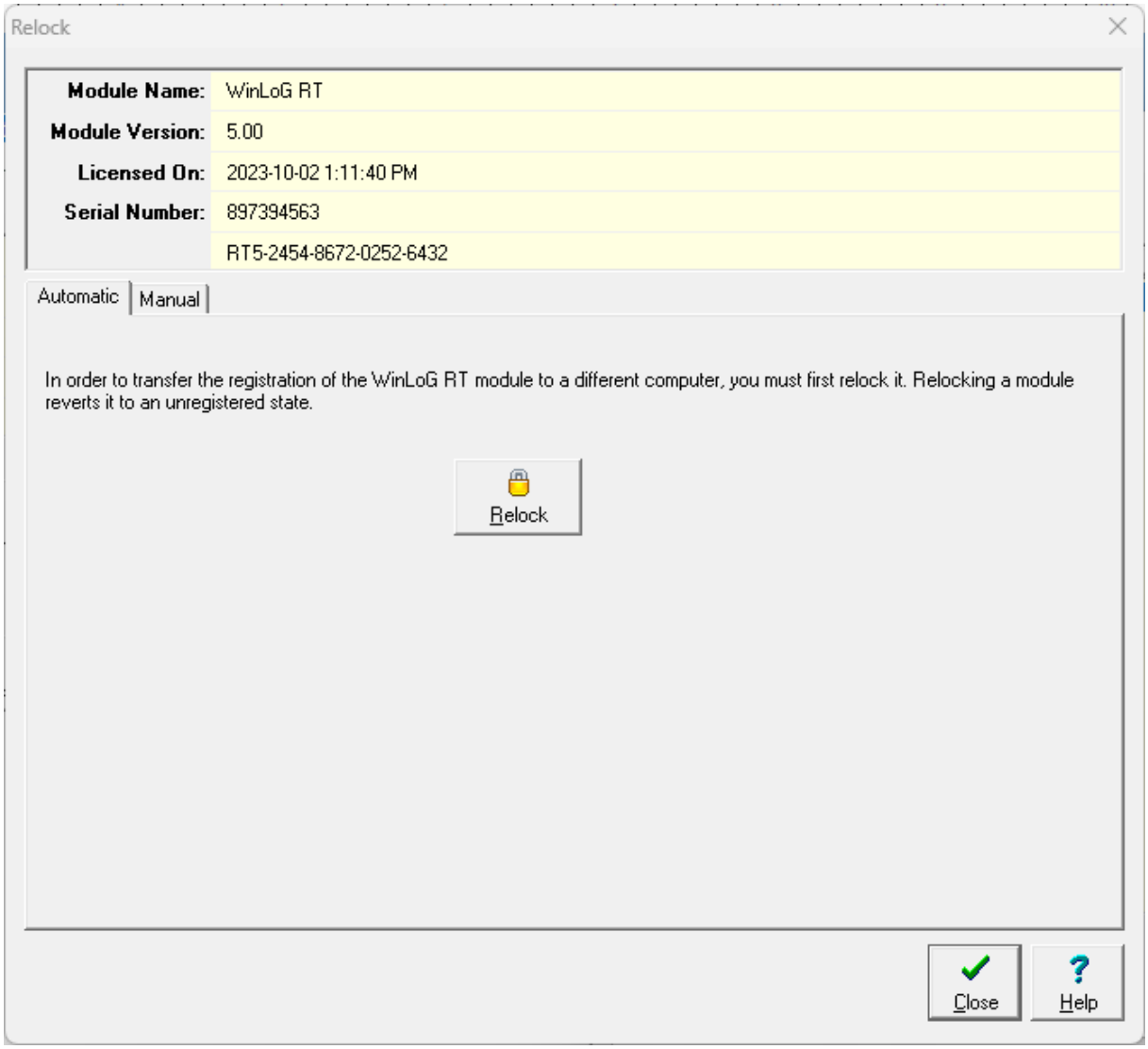
The annual maintenance for a perpetual license or subscription can be manually renewed and updated by selecting the module in the License Manager form and then clicking on the Update button. The Update/Renewal form will be displayed.



The annual maintenance or subscription can be manually renewed by double clicking on the Renew column. A secure web page will hen be opened in your browser where you can enter the purchase information. When the purchase has been completed, you will be provided by email with a unique order/purchase ID. Enter this ID on the form and click on the Update button.

1.3.6 Transferring a License

If you need to transfer the license from one computer to another, select the WinLoG RT module on the License Manager form and click on the Relock button. The Relock form will then be displayed.

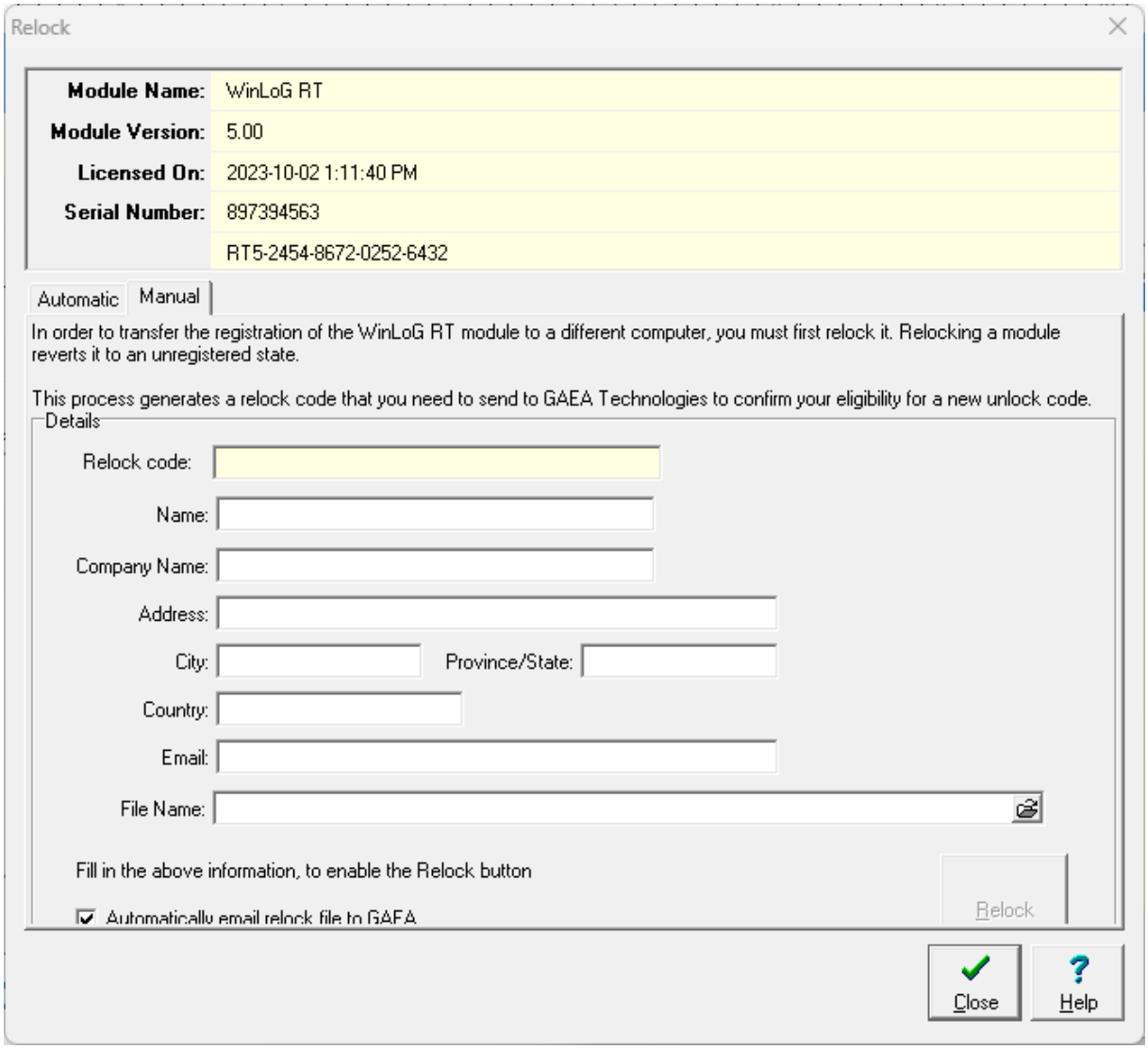


This form has two tabs, one yo automatically transfer the license and the other to manually transfer the license.

Automatic Transfer

To automatically transfer the registration to a new computer click on the Relock button. The module will no longer be registered on this computer and the order/purchase ID can be used to register it on a different computer as described in the Automatic Registration 27 section..

Manual Transfer



To manually transfer the license fill in all of the information on the form, including the file name. After the information is entered click on the Relock button to email the relock file to GAEA. After the button is clicked the Relock code will be displayed and the module will no longer be licensed on this computer.

After you have sent GAEA the relock file follow the instructions for Manual Registration 27 on the new computer.

1.4 Upgrading from Version 4 or 5

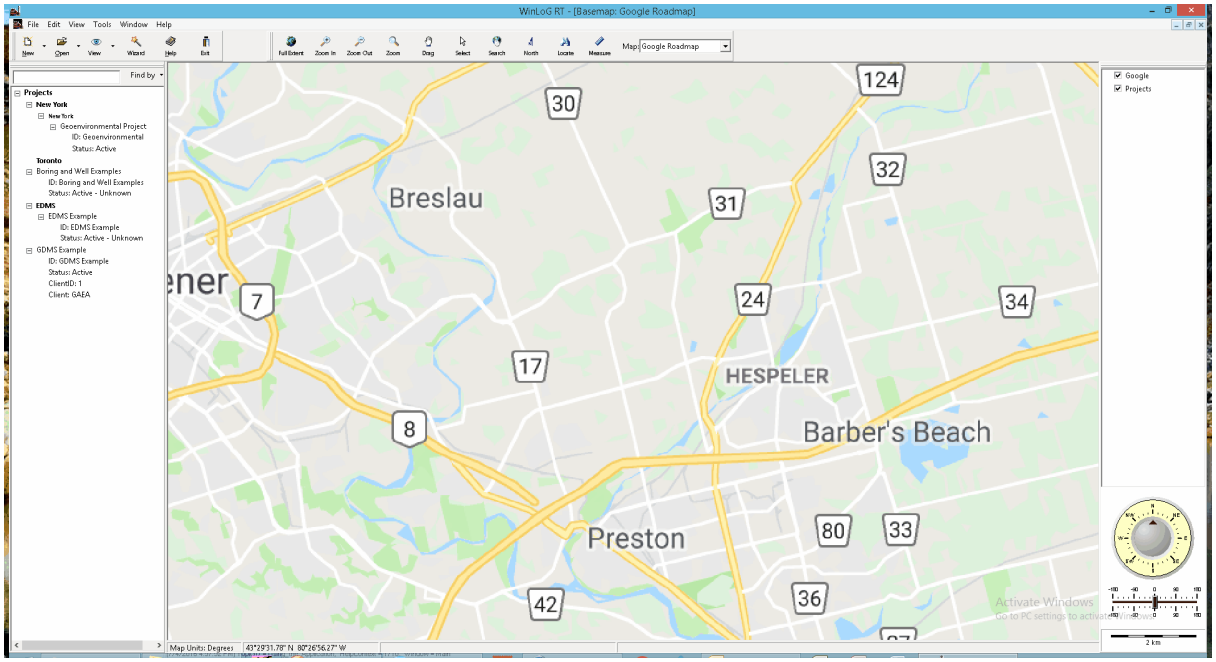
The upgrade can also be initiated by selecting *Tools > Upgrade*. During the upgrade the main database, project databases and datastore information will be copied from version 4 to 5. None of the original version 4 data will be changed or deleted.

It is not recommended to continue to use version 4 or 5 after version 6 has been installed, since version 6 will not see any new data created in version 4 or 5 after the upgrade.

1.5 Using the Application

Initial Display

The initial display will consist of a basemap or a list of projects depending on your settings in Preferences. The basemap shows your existing projects and any GIS data contained in the basemap. To the left of the basemap the sidebar usually shows a list of your projects. And to the right of the basemap the sidebar usually shows a list of layers, scale, and an index map. At the top of the display there are also toolbars and menus for controlling and using the program. These are described briefly below and in detail in the chapters throughout this manual.



Menus

The main menu appears at the top of the screen and is composed of several submenus for Files, Tools, and Help. Depending upon what is open at the time, an Edit submenu may also be present. The File submenu is used to create, open, and delete projects, libraries, and templates; import and export data; and set program preferences. Several types of tools are included in the Tools submenu for the geodatabase, projects, adding and editing a variety of list data, and managing the program licenses.

The Edit submenu will appear when you are editing a boring/well, cross-section, contour map, structure, or basemap. It is used to access various edit features depending upon what is being edited.

In this User's Guide menu items and paths have been abbreviated to make it easier to understand. All menu items are shown in *blue italics* and start with the uppermost menu then an arrow to the next menu or menu item. For example, the Project menu item of the Open submenu of the File menu is abbreviated as *File > Open > Project*.

A popup menu can also be displayed by clicking the right mouse button, the menu items in the popup menu will vary depending on what is being displayed and where on the screen the mouse is clicked. In this manual menu items that can be obtained from the popup menu are shown as *Popup > menu item*.

Toolbars

Initially two toolbars will be displayed, a Main toolbar and a Basemap toolbar.

The Main toolbar is used to create, open, and close projects, templates, and libraries. If a project is open you can also create and open boring/well with the Main toolbar. In addition it can be used to display the help wizard, help guide and exit the program.

The Basemap toolbar is used to access various features and functionality of the basemap. This toolbar is described briefly in the Basemaps section below and in detail in Chapter 2.

Sidebars

The sidebars can be on the left, right, or both sides and contain the contents described below.

Projects

The projects region has a Find Project toolbar and a list of projects. You can locate a project in the list using the Find toolbar by entering the project name and pressing the Find button. The project will then be highlighted in the project list and be zoomed to in the basemap. You can also zoom to a project in the project list by selecting the *Popup > Locate* after the project has been highlighted in the list.

To open a project using the Project List, highlight the project and then select *Popup > Open* or double-click on it in the sidebar. If no project is selected, the Open Project form will be displayed. This form lists the projects and lets you select one to open.

For a detailed description of how to create and use projects see the section below and Chapter 3.

Layers

The layers region lists the layers in the basemap. These layers can be turned on and off by checking and unchecking the box beside the layer. The layers in the basemap can be edited, added and removed by editing the basemap, this is described in detail in Chapter 2. The order of the layers in the sidebar controls the order in which they are displayed in the basemap, with the layers at the top being drawn on the layers at the bottom.

Scale Bar

The scale bar displays the current scale of the basemap or project shown in the GIS window.

North Direction

The compass on the bottom right shows the current direction for North. When the application is started this is at the top of the screen. To change the direction slide the bar to the left or right below the

compass. Sliding to the left will rotate the GIS windows to the West, sliding to the right will rotate to the East. Double-click on the slider to adjust the display so that North is at the top of the screen again.

1.5.1 Basemaps

Basemaps are the starting point for WinLoG RT, they are used to organize, find, and select projects. In addition, basemaps are used as the basis for the Geographic Information System (GIS) in WinLoG RT. The GIS stores all of the basemap, project, boring/well, and other spatial data for the application.

Web map services use a standard protocol to serve georeferenced map images over the Internet. This protocol was developed and published by the Open Geospatial Consortium. Several web map services are available within the application and more are being added with each update.

The web map service displayed for the basemap can either be selected from the basemap toolbar or in Preferences. If it is selected in Preferences it will be the default basemap display and will be shown every time the application is started. When it is selected from the basemap toolbar it will be effective only until it is changed again or the application is closed.

On the basemap toolbar, the North arrow can be turned on and off using the North Arrow button. The basemap can also be rotated from North by specifying the angle of rotation in the Rot field.

Distances can be measured on the basemap using the Measure tool on the basemap toolbar. When this is selected you can measure the distance between two points in a variety of units.

You can locate an address using the Locate button on the basemap toolbar. When this button is selected an address form will be displayed where you can enter the address to be located. Enter as much information about the address as possible and then click on the Goto Address button to zoom the basemap to that address. The address will be highlighted with a flag.

1.5.2 Projects

Projects are the primary building block of WinLoG RT and are used to encapsulate all the data in the application. Prior to use projects must either be created or imported. After this they can be selected from the basemap and edited. Below is a brief introduction on how to create and edit projects, detailed information is provided in Chapter 3.

Creating Projects

Projects can either be positioned locally or georeferenced. Local projects have coordinates that are referenced to an object within the project boundaries; such as, a street corner. Georeferenced projects have coordinates that are referenced to the globe, these coordinates are typically collected with GPS devices. The majority of GPS devices specify coordinates in the WGS84 coordinate system.

New projects can be created by either clicking on the New Project button on the toolbar or by selecting *Edit > New > Project*. If the project is georeferenced, the project boundaries are then specified on the basemap. After this the New Project form will be displayed where you can enter the project information and default templates.

Selecting Projects

After a project has been created or imported it can be selected for editing either using the menus or sidebar. To open the project using the menus select *File > Open > Project*, then select the project from the list. To open it using the sidebar, click on the project and then select *Popup > Open*.

Editing Projects

After the project has been opened the project's data can be edited and displayed. The project display is broken into two areas, sidebars and a display window. The display window shows a map view of the project and its data. And the sidebars can be used to edit the data and to control the display of the data in the display window.

Additional layers can be added to the project using *Edit > Add Layer*. Several types of layers can be added such as Shape, CAD, and Raster files. When these files are added to the project a copy of the file is stored in the datastore and is used for the project. The original file can be moved or deleted without impacting the project.

Alternatively, layers can be linked to the project using *Tools > Link Layer*. When a layer is linked to the project, the original file is used by the project and thus any changes to the file will be reflected in the project.

The added or linked layers will only appear on the project and will not be shown on the basemap when the project is closed.

After a layer has been added it can be edited double clicking on the layer on the sidebar. When the layer is edited the Layer Properties form will be displayed. This form can be used to edit a variety of properties of the layer such as:

- Caption
- Transparency
- Scale range that the layer is shown

- Symbology used for the layer
- Whether the features of the layer are labeled
- Whether the features are labeled the same way or grouped into classes
- Which feature to label and the font and placement of the label
- Scale range to display the label

Layers can also be removed from the project by clicking on the label in the sidebar and selecting *Popup > Remove Layer*. Instead of removing the layer, it's display can be turned off using the checkbox next to the layer in the sidebar. If the layer is a Shape, CAD, or Raster file that was added to the project, the copied layer file will be deleted from the Datastore. If the layer was linked to the project, the original layer file will not be deleted.

In addition to layer data a variety of annotation can be added, edited, and deleted using the Edit menu or Edit Project toolbar. Rectangles, polygons, polylines, and circles can be placed anywhere on the project and used to show and describe features of the project.

Exporting Projects

Existing projects can be exported to XML exchange files so that they can be sent to other offices, technical support, or archived. To export a project select *File > Export > XML Exchange > Project*. Then specify the file name for the exported project.

Importing Projects

Projects that have been exported to XML exchange files can be imported by selecting *File > Import > XML Exchange > Project*. Then specify the file name for the imported project.

When WinLoG RT is installed demo projects are provided in XML exchange format. These project files are stored in the Demo Projects directory in the Datastore. The names of the demo projects begin with the country name and then project name. These demo projects can be used to get a better understanding of how to use the application prior to entering your own data.

Importing WinLoG Projects

Existing WinLoG version 4 projects can be imported into WinLoG RT either one at a time or several at once using *File > Import > WinLoG 4 Data*.

To import an individual project select *File > Import > WinLoG 4 Data > WinLoG Project* and the Import a WinLoG Project form will be displayed. This wizard form will direct you how to select boring/wells to import and then import the project. When importing a project you will be asked to specify a geographic reference system for the project so that it can located on the basemap. If you are not sure of the reference system you can specify "Unknown", and then the project will be stored with a local reference.

To import a list of projects select *File > Import > WinLoG 4 Data > WinLoG Project List* and the Import a List of WinLoG Projects form will be displayed. The wizard form will direct you on selecting projects, resolving name conflicts, and the importing the projects.When importing the projects you will be asked to specify a geographic reference system for them so that they can be located on the basemap. If you are not sure of the reference system you can specify "Unknown", and then the projects will be stored with a local reference.

1.5.3 Boreholes/Wells

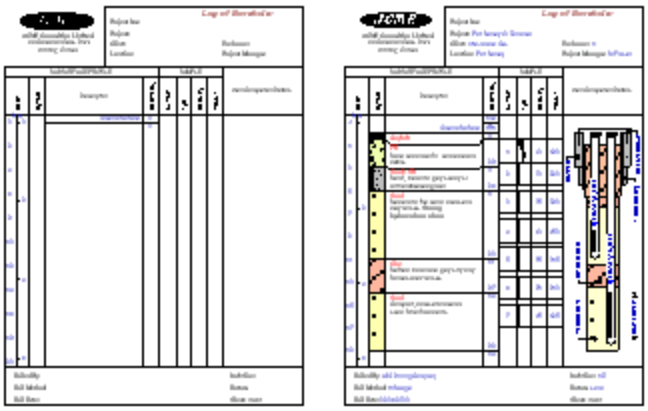
One of the primary data sources in the application comes from boring/wells. Logs can contain a very wide variety of data; such as, general boring/well data (ex. location, client, project number); lithologic descriptions and symbols; sample data; well completion details; water level measurements; geophysical logs; petrophysics data, and numerous graphs and text comments.

Below is a brief introduction on how to create and edit boring/wells, detailed information is provided in Chapter 4.

Using Templates

Templates are used to control the layout and formatting of boring/well logs. In general, all of the boring/wells in a project would use one or two templates to format the logs. In this way a consistent format can be established within a project and across projects. The default template used by the project when creating a boring/well is specified in the project information.

Template + Boring/Well Data = Boring/Well Log



The program comes with numerous easily customized templates, which can be edited and saved as new templates. Each template consists of a header, footer, and several columns. Templates can be customized to display different header and footer titles, number and type of columns, and fonts. A company logo or site map, stored as a bitmap can also be included in a template.

Creating a Boring/Well

To create a new boring/well log either select *File > New > Boring/Well* or click on the New Boring/Well button on the Project toolbar.

Then click on the Project display at the location of the boring/well. The New Boring/Well form will be displayed where you can specify the name, symbol, depth, and coordinates of the boring/well.

Next select the template to use from the Select Template form. After the template has been selected, the new blank boring/well log will be displayed and can be edited.

Selecting a boring/well

An existing boring/well in the project can be opened by either selecting *File > Open > Boring/Well* or by selecting the boring/well on the sidebar and then selecting *Popup > Open*.

Editing a boring/well

After a boring/well has been opened or created it can be edited by:

- using the Edit menu,
- using the popup menu for the boring/well display,
- selecting the data object on the sidebar and then *Popup > Edit*,
- or by clicking on the data object on the boring/well display.

Data objects consist of header and footer data, column data, and draw objects. Draw objects can be placed anywhere on the log and consist of text, tables, rectangles, lines, and bitmaps. The column data contains all of the depth related data of the boring/well. The Edit menu contains menu items for all of the types of data that can be entered in the log; whereas, the popup menu for the boring/well display contains only the data that can be displayed by the template used for the log.

The types of data that can be entered for a log include:

- header and footer data
- depths and elevations
- lithology
- samples data
- well data
- graph data
- geophysical data
- petrophysical data
- calculated graph data
- tables
- water content data
- core data and photos

The entry and editing of the data in a boring/well log is described in detail in the Chapter 4.

The finished boring/well can be saved by clicking on the Save button on the toolbar or selecting the Save menu item from the File menu.

Printing a boring/well

The boring/well can be printed by pressing the Print button on the Log toolbar. Alternatively, boring/well logs can be included in a page layout for the project and printed. This is described in more detail in the Page Layouts section below.

1.6 Help and Support

GAEA Technologies strives to make this application easy to use and learn. Several tools and features are provided to assist the user to learn the program and when necessary get technical support. These features can be found in the Help menu of the main menu and are described below.

1.6.1 Help System

In addition to the User's Guide in PDF format, context sensitive help can be found within the application. The help system can be displayed by either selecting *Help > Contents* or clicking on the Help button on a form. When the Help button on a form is used, the help displayed will be specific to that specific form.

1.6.2 Tutorials

Numerous online tutorial videos are available to assist you in learning the program. These tutorials can be accessed by selecting *Help > Online Tutorials* or going to the web page:

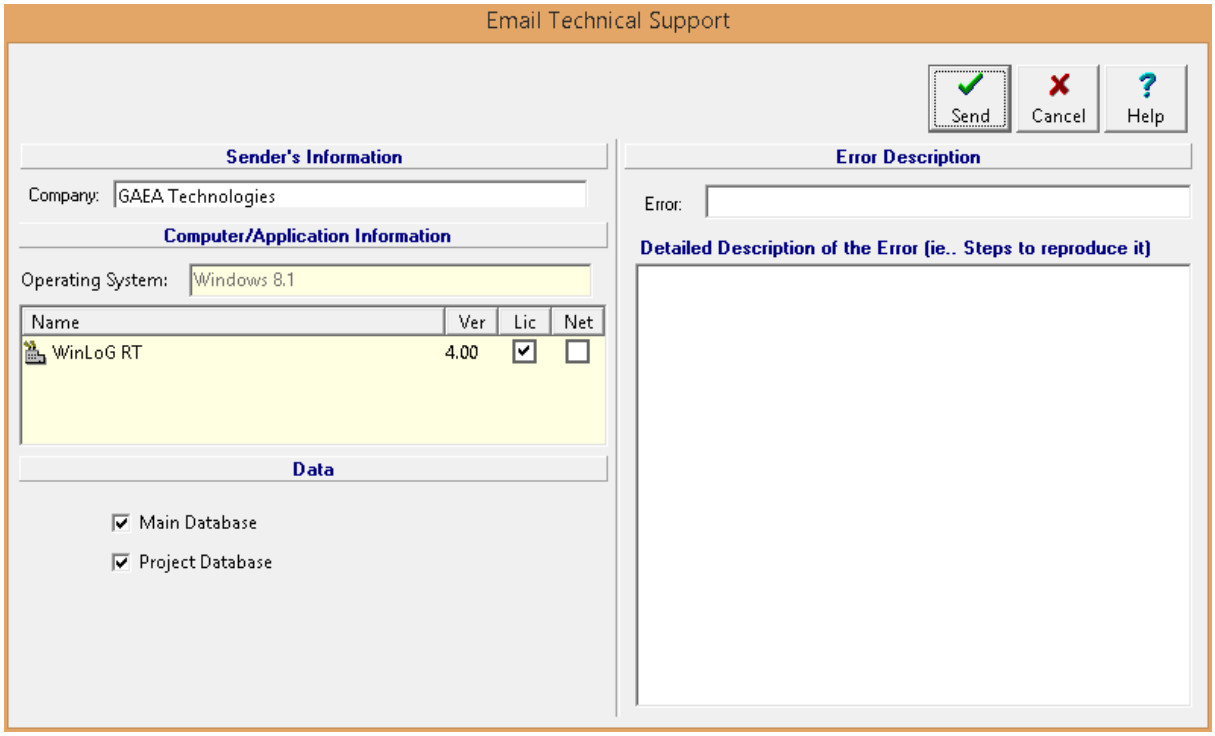
http://gaea.ca/tutorial_videos.php

1.6.3 Wizard

A help Wizard can be displayed by selecting Help > Wizard. This wizard will provide a guided tutorial on how to accomplish a variety of tasks.

1.6.4 Technical Support

Customers with a current technical maintenance agreement can receive technical support by selecting *Help > Email Technical Support*. This is the preferred method of obtaining technical support since it provides us wit the maximum amount of information and data concerning your problem. Before emailing technical support you will need to provide the outgoing email settings in preferences 67 for the email to be sent by the application.



The following is displayed and/or edited on this form:

Company: This is your company or organization name that has the license for the program.

Operating System: This is Windows operating system of the computer. It is automatically filled in by the application and can not be changed.

Main Database: Check this to attach the main database for the application. It include project boundaries, templates and project documents. It is highly recommended that this database is included in your email.

Project Database: If a project is opened, this will be displayed. Check this to include the project database with your email. If your problem involves project specific data (boreholes, cross-sections, samples, etc.) please include this database.

Error: This is brief description of the error that will be shown in the subject of the email.

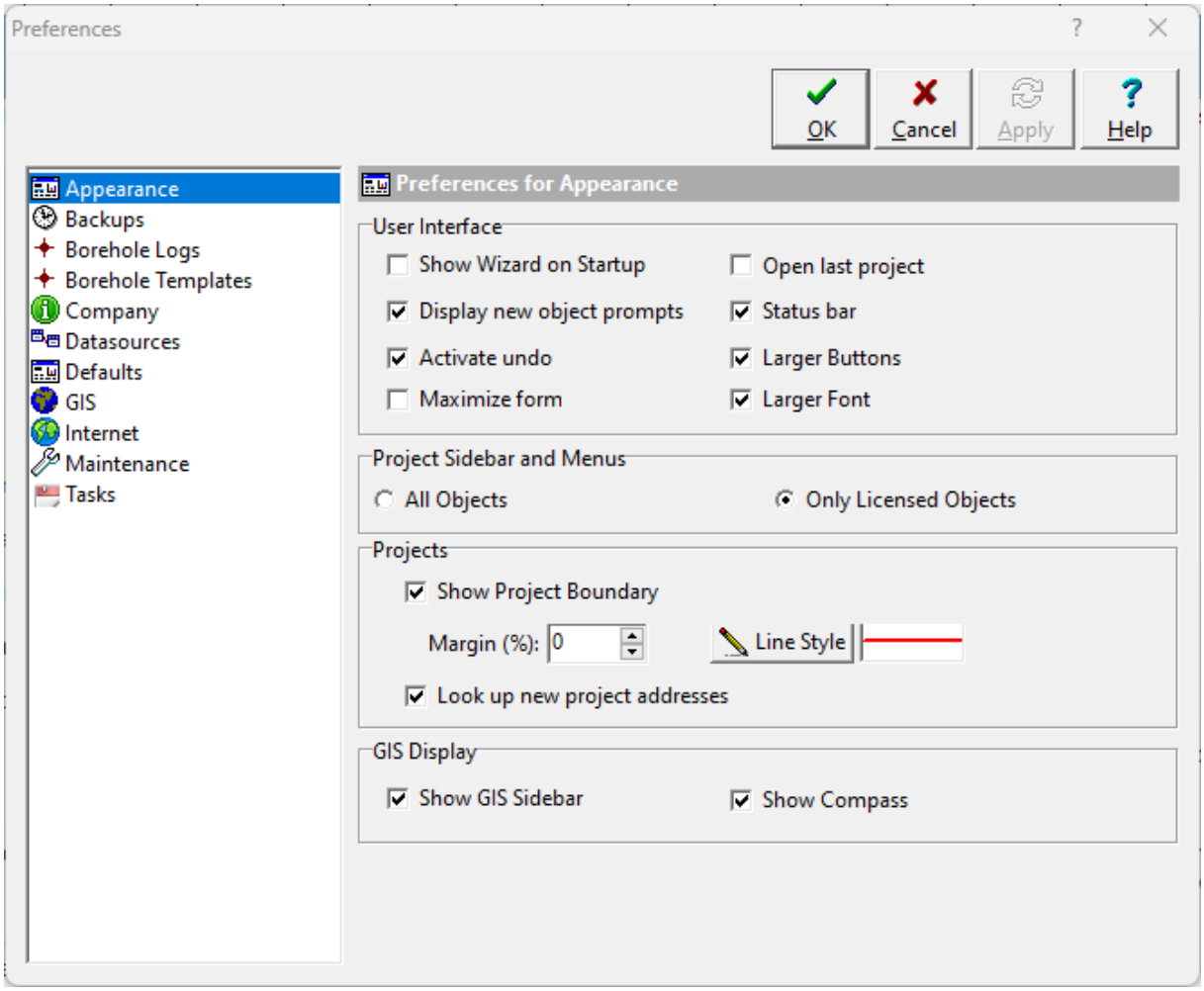
Description: This is a detailed description of the error or problem. Please provide as much information as possible.

1.6.5 Updates

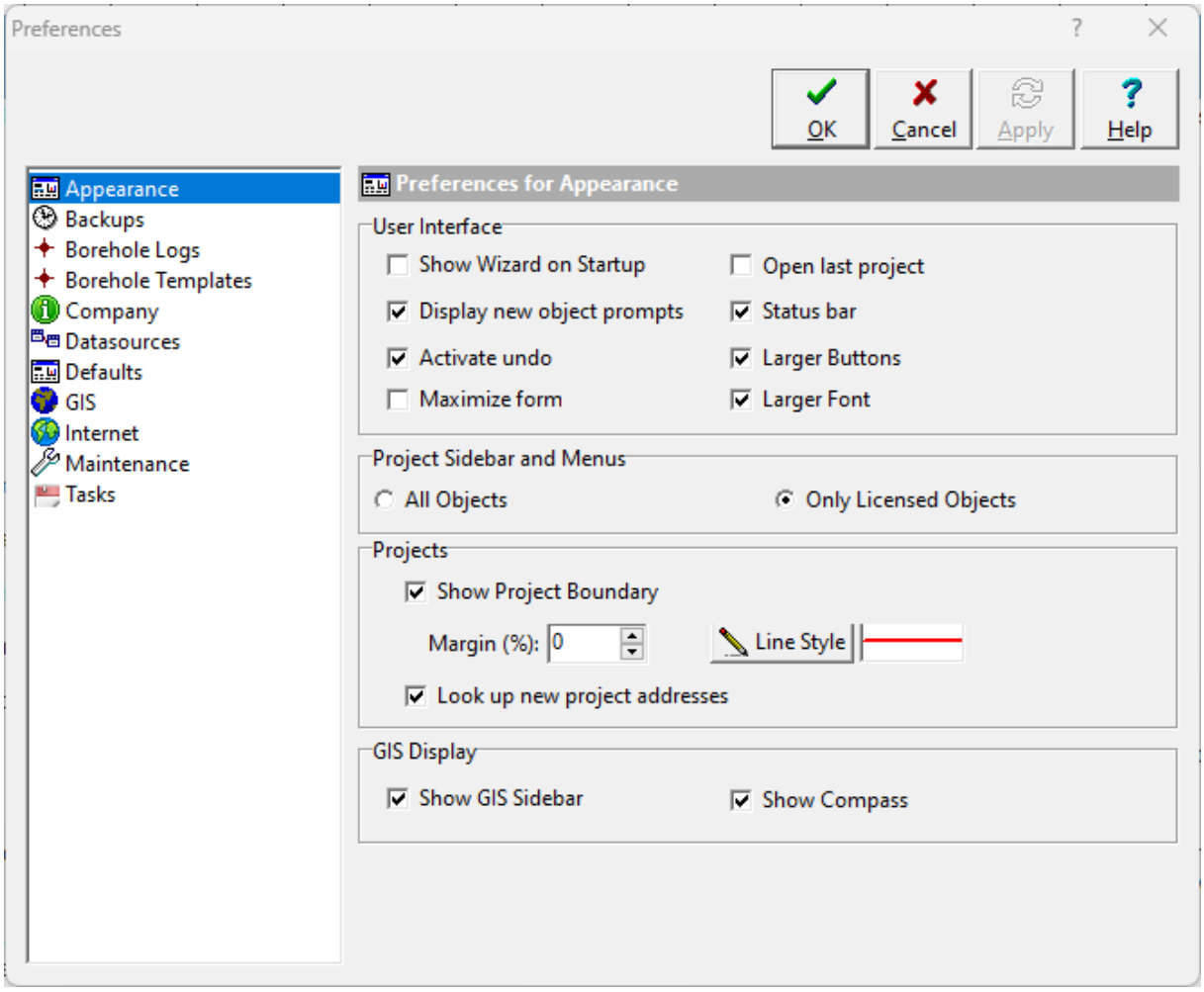
Updates to the program are periodically published online and can be installed by selecting *Help > Check for Updates*. If an update is available from the Internet, you will be asked whether to install it or not. We strongly recommend you install all updates.

1.7 Program Preferences

To set the preferences for WinLoG RT no project can be open. Select *File > Preferences*. The Preferences form will be displayed. This form has a list of preference categories on the left side and the details of the selected category are displayed on the left. Each of the categories are described in the sections below.



1.7.1 Appearances



The following can be edited in the Appearances category:

User Interface

Show Wizard on Startup: Check this box to display the help wizard when the program starts.

Open last project: Check this box to open the last opened project when the program is started.

Display new object prompts: Check this box to display prompts for new objects.

Status bar: Check this box to display a status bar on the main form.

Activate undo: Check this box to activate the undo feature so that some operations can be undone.

Show toolbar button text: Check this to show the text on buttons.

Project Sidebar and Menus

All Objects: Check to display all project objects in the sidebar and menus for projects. Project objects include borings, wells, cross-sections, samples, stations, maps, etc.

Only Licensed Objects: Check to display only licensed objects (modules) in the sidebar and menus. If no modules are licensed all objects will be displayed.

Projects

Show Project Boundary: Check this box to display the project boundary on the map.

Margin: This is the percentage margin from the project boundary to the edge of the map.

Line Style: This is the line style to use for the project boundary.

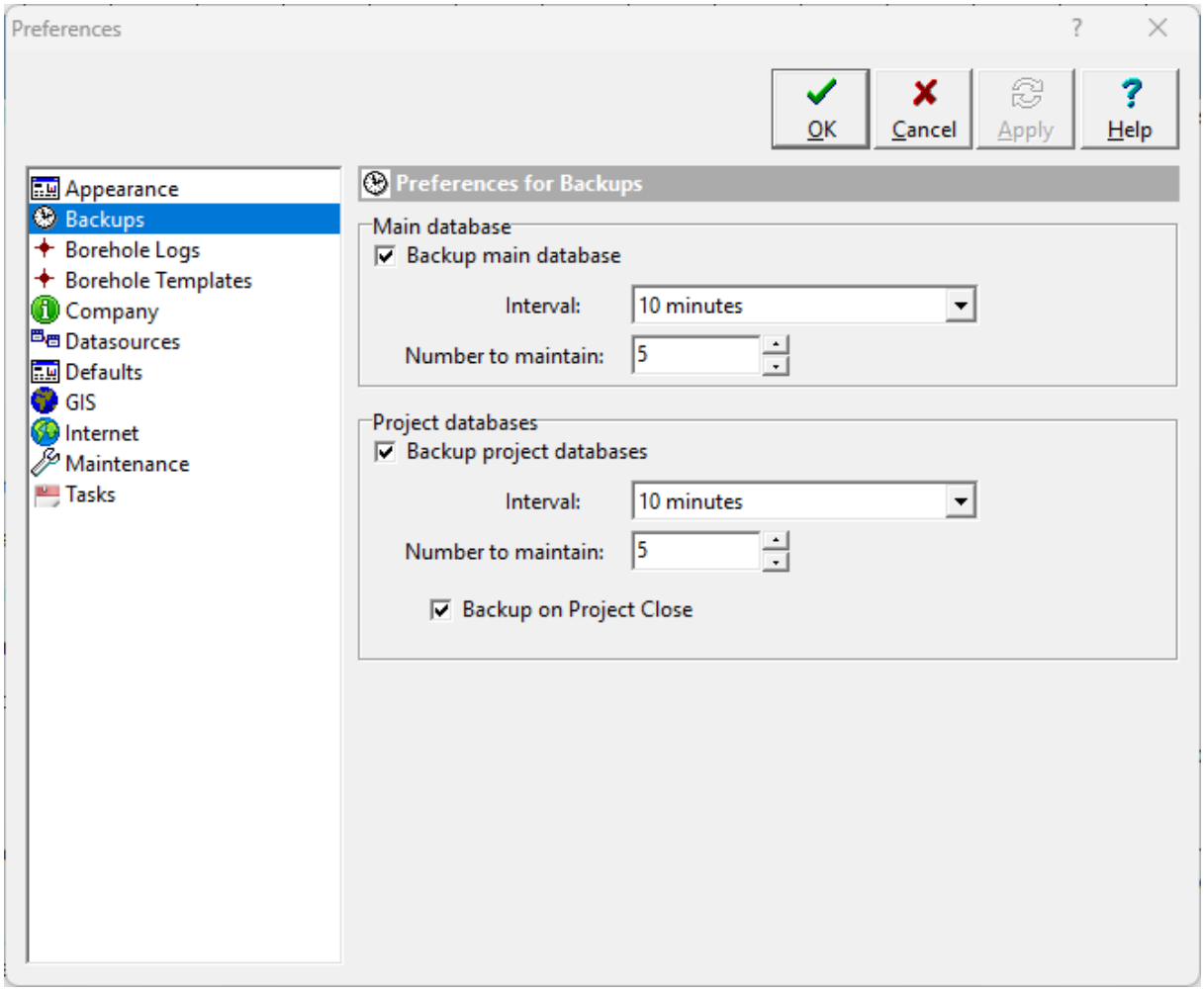
Look up new project addresses: Check this box to look up the address when creating a new project.

GIS Display

Show GIS Sidebar: Check to show the GIS sidebar.

Show Compass: Check to show the GIS compass.

1.7.2 Backups



The following can be edited in the Backups category:

Main Database

Back Up: If this checkbox is checked then the main databases will be backed up at regular intervals. If this checkbox is not selected then the main databases will not be backed up.

Interval: This is used to select the interval to use when backing up the main databases.

Number to maintain: This is the number of backups to maintain, older backups will be deleted.

Project Databases

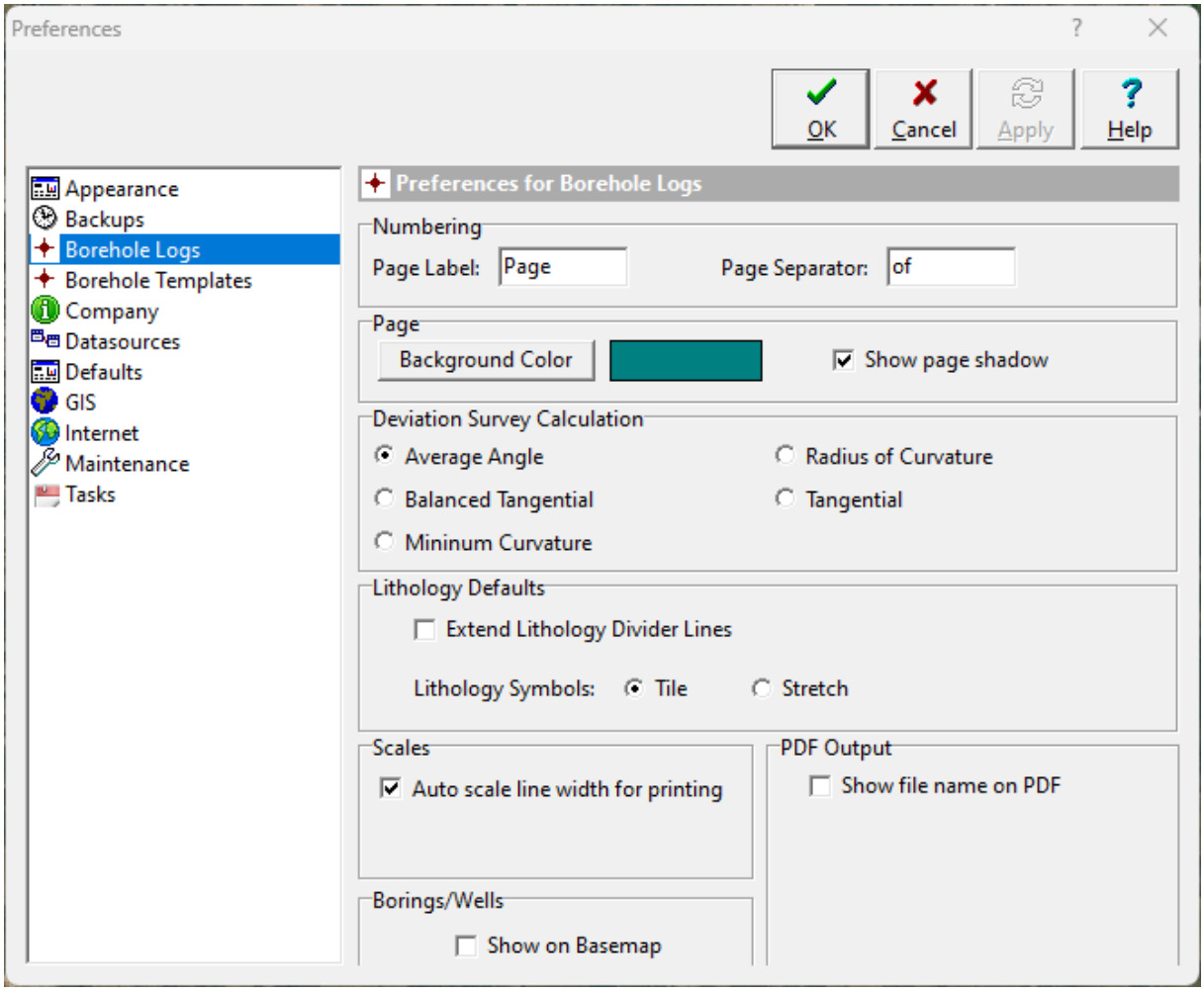
Back Up: If this checkbox is checked then the currently open project will be backed up at regular intervals. If this checkbox is not selected then the currently open project will not be backed up.

Interval: This is used to select the interval to use when backing up the project database.

Number to maintain: This is the number of backups to maintain, older backups will be deleted.

Backup on Project Close: Check this to create a backup of the project when it is clsed.

1.7.3 Borehole Logs



The following can be edited in the Logs category:

Numbering

Page Label: This is the label to check for in a template when adding page labels to a log.

Page Separator: This is the separator label to use when labeling pages in a log. For example, "Page 1 of 10".

Page

Background Color: Click this button to change the background color used for some modules. A Color form will be displayed where the color can be selected.

Show Page Shadow: Click this box to show a page shadow in some modules.

Deviation Survey Calculation

The Deviation Survey tab is used to specify the method to calculate borehole X,Y, and Z coordinates based on a deviation survey which includes the measured depth, inclination angle, and the azimuth

angle. Select either Average Angle, Balanced Tangential, Minimum Curvature, Radius Of Curvature, Tangential method.

Lithology Defaults

Extend Divider Lines: Check this to extend the divider lines in the lithologic descriptions to make the contact depths more visible when the descriptions push down the contact lines.

Lithology Symbols: The lithology symbols on the boring or well log can either be tiled across the column (default) or stretched across the column. If they are stretched the symbol width will be adjusted to fit the width of the column and the symbol height will be adjusted to maintain the aspect ratio.

Scales

Auto scale line width for printing: Check this box to automatically scale the line widths so that they appear the same on logs.

PDF Output

Show file name on PDF: Check this to show the file name of the PDF on one of the sides of the PDF.

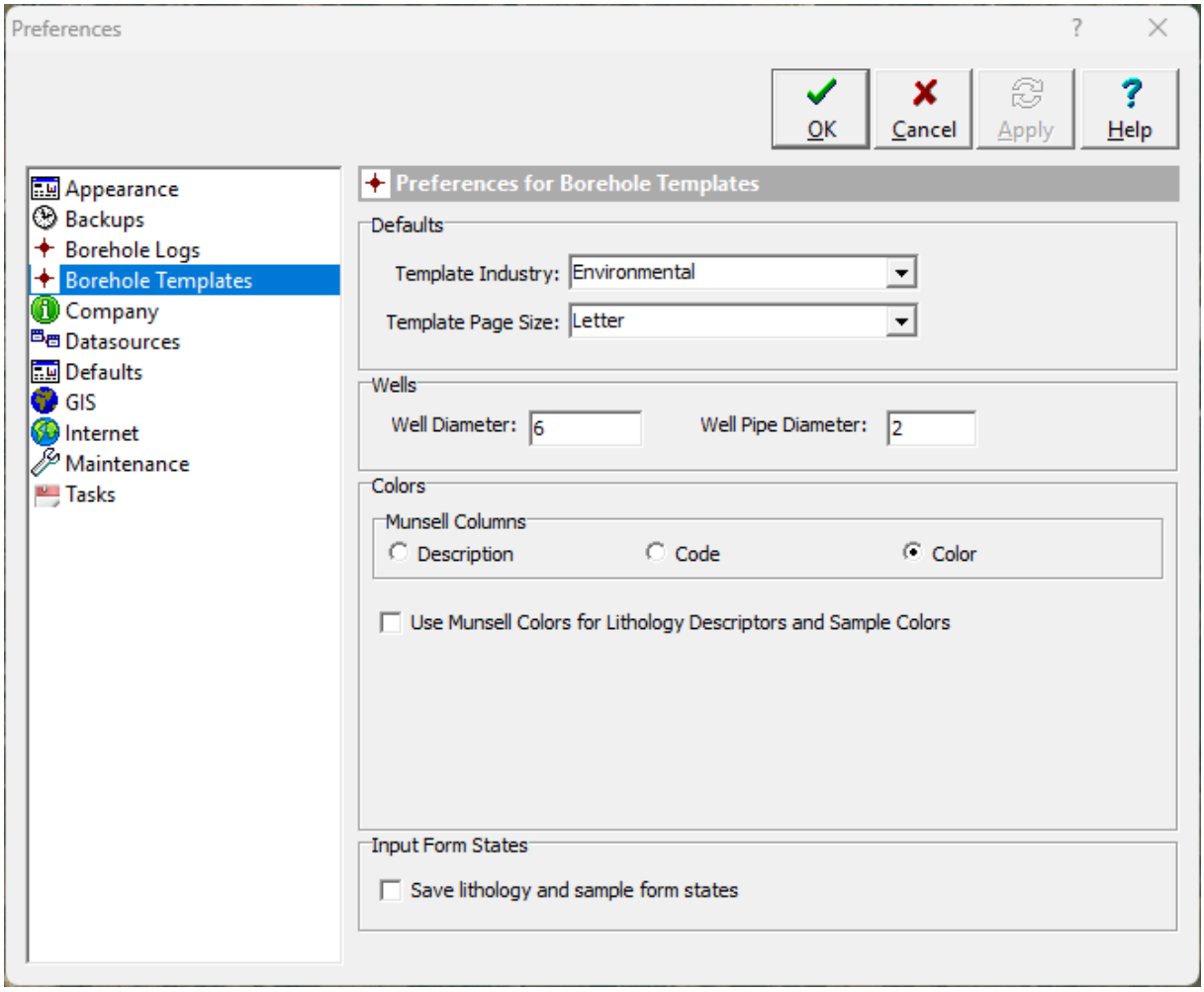
Location: This is used to select the side of the page to show the PDF file name.

Font: This is used to select the font for the PDF file name.

Borings/Wells

Show on Basemap: Check this box to show the borings/wells on the basemap.

1.7.4 Borehole Templates



The following can be edited in the Logs category:

Defaults

Template Industry: This is used to specify the default industry to use when selecting a template.

Template Page Size: This is used to specify the default page size to use when selecting a template.

Wells

Well Diameter: This is the default well diameter to use when adding wells to logs.

Well Pipe Diameter: This is the default pipe diameter to be used when adding pipes and screens to well columns.

Colors

Munsell Column: This is used to select what is displayed in Munsell Code columns. It can either be the description, Munsell Code, or a color box.

Use Munsell Colors: Check this to use Munsell colors in Lithology and Sample Color columns.

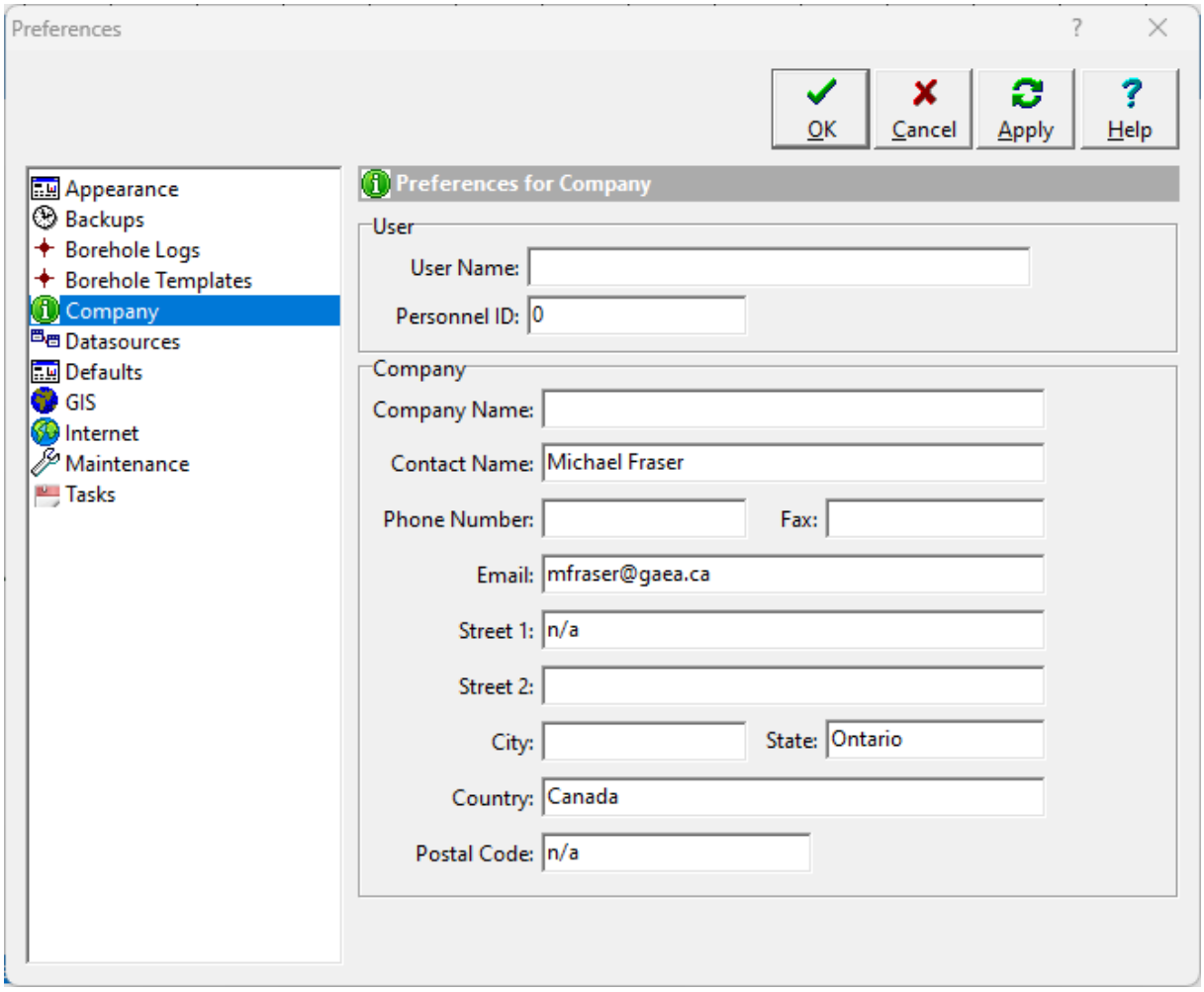
Lithology Descriptors: This is used to select what is displayed for the Munsell color in lithology columns. It can be either the description, Munsell Code, or both.

Sample Colors: This is used to select what is displayed in Sample Color columns. It can be either the description, Munsell Code, or a color box.

Input Form States

Save lithology and sample form states: Check this box to save the size and location of the lithology and sample data forms. If the forms are not showing up on the screen they may be hidden or moved off the screen,, unchecking this box will restore them to their default position and size.

1.7.5 Company



Company information is used in different parts of the application for addressing emails, creating sample labels, etc. The following can be edited in the Company category:

User Name: This is the user name for sending and receiving data using the EDI. It is assigned in the main GaeaSynergy program.

Personnel ID: This is the personnel ID for sending and receiving data using the EDI. It is assigned in the main GaeaSynergy program.

Company Name: This is your company name.

Contact Name: This is the contact name to use in correspondence from the application.

Phone Number: This is the phone number for the company.

Fax Number: This is the fax number for the company.

Email: This is the main email address for the company.

Street 1: This is the first line of the street address.

Street 2: This is the second line of the street address.

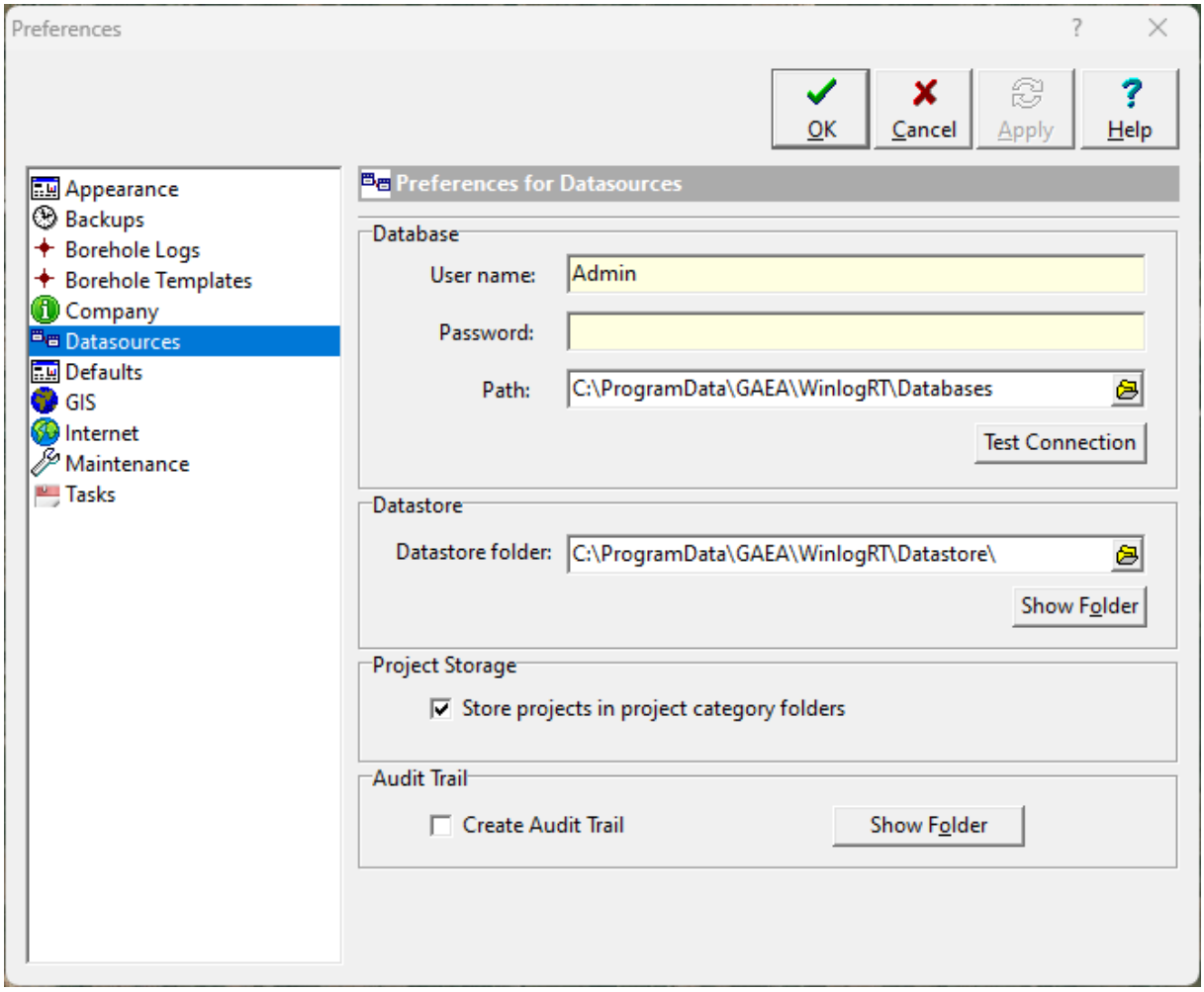
City: The is the city for the company.

State: This is the state or province for the company.

Country: This is the country for the company.

Postal Code: This is the postal or zip code for the company.

1.7.6 Datasources



The following can be edited in the Datasources category (these features should not be changed without consulting your database administrator):

User name: This is the user name for the main database. Normally, it should be Admin.

Password: This is the password for the main database. Normally, it is blank.

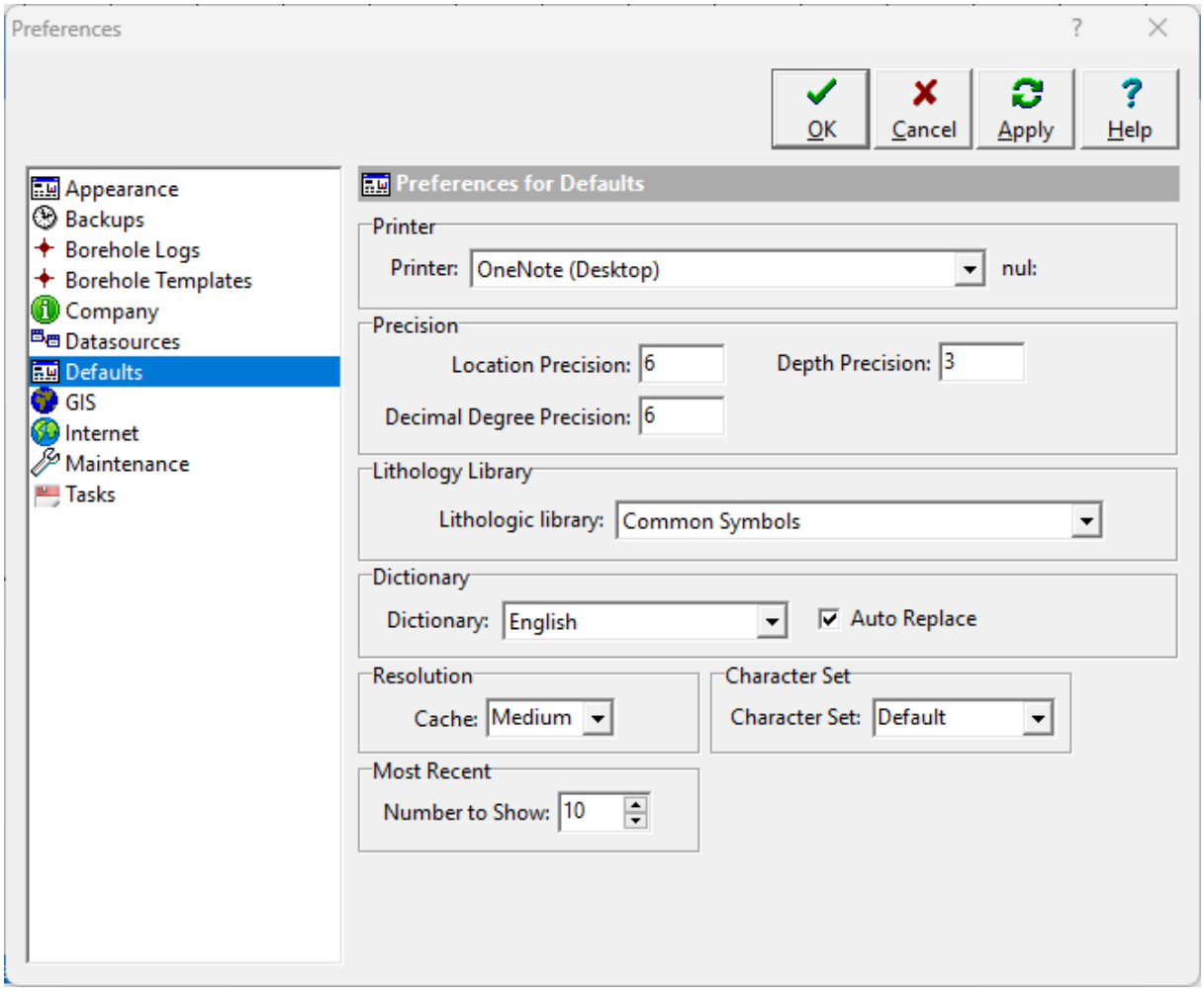
Path: This is the path to the main database.

Datastore folder: This is the folder containing the datastore.

Create Audit Trail: Check this box to create an audit trail of 96 all database transactions.

Clear Audit File: Click this button to clear the audit file.

1.7.7 Defaults



The following can be edited in the Defaults category:

Printer: This is used to select the default printer to use in some modules.

Location Precision: This is the precision (number of decimal places) to use when displaying location information.

Depth Precision: This is the precision (number of decimal places) to use when displaying depth information.

Decimal Degree Precision: This is the precision (number of decimal places) to use when displaying decimal degrees.

Lithologic Library: This is used to select the default lithologic library for some modules.

Dictionary: This is used to select the dictionary to use for some modules when performing spell checking. One of the following dictionaries can be selected: American, British, Dutch, English, French, German, Italian, and Spanish.

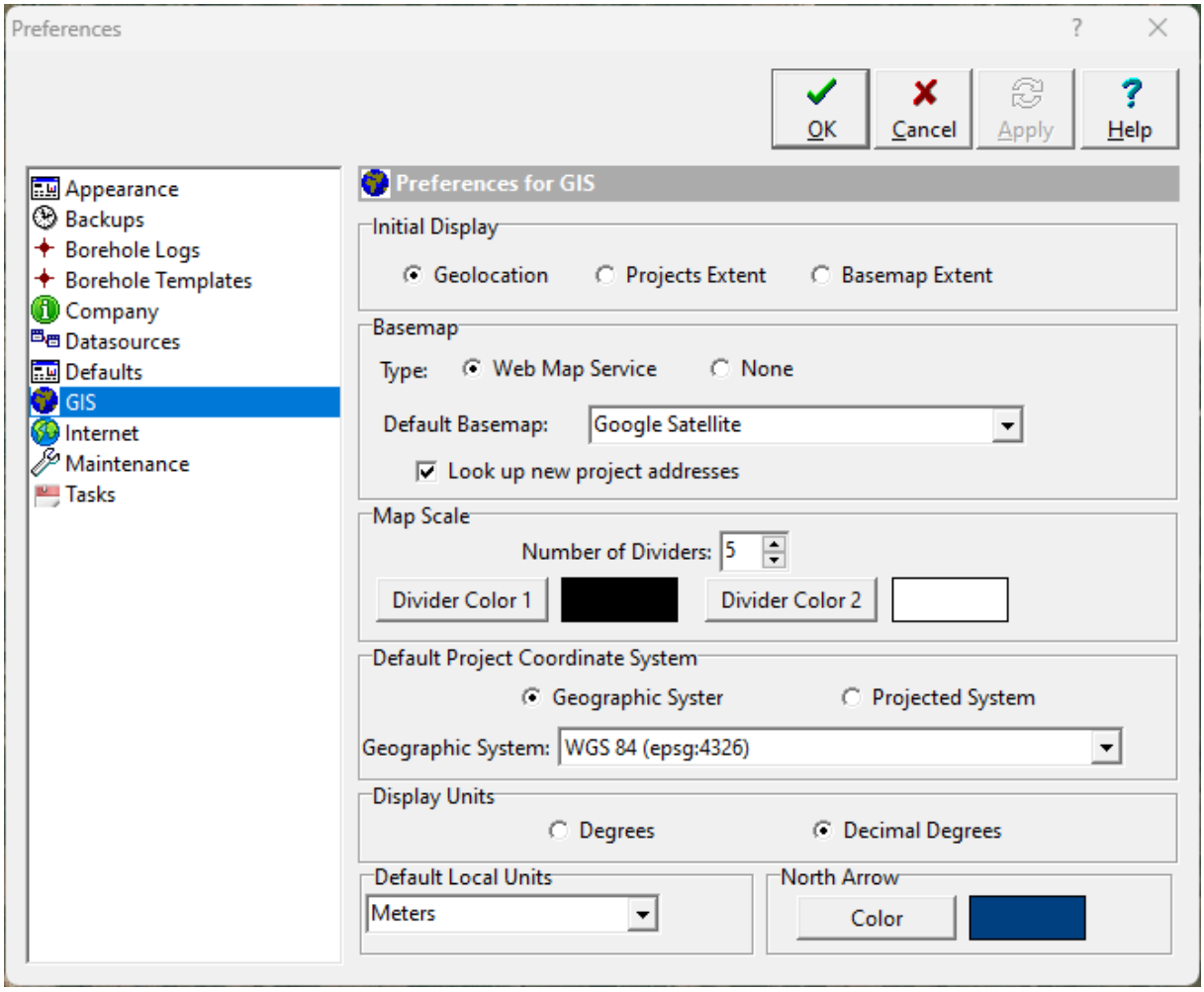
Auto Replace: If checked, common misspelled words will be automatically replaced when conducting spell checking.

Cache Resolution: This is the resolution to save images of borings/wells, cross-sections, and maps in the datastore. The resolution can be set to low (100 dpi), medium (300 dpi), or high (600 dpi). These images are used when displaying or printing a page document. Typically, low or medium is sufficient. The higher the resolution the more disk space and time is required when images are saved.

Character Set: This is used to select the character set used by some modules. Normally, the default character set can be used.

Most Recent: This is used to set the number of most recent objects (projects, borings, templates, etc.) to show.

1.7.8 GIS



The following can be edited in the GIS category:

Initial Display

This is used to select the initial display when the application is started. It can either show an area around where you are located based on your Internet IP address, an area showing the extent of all of your projects, or an area based upon the company address specified on the Company tab.

Basemap

Type: Select the type of basemap to use for the default. The type of basemap can be a web map service or none.

Default Basemap: This is the basemap to for a web map service or static basemap. The list of basemaps available will depend on the type of basemap.

Look up new project addresses: Check this box to look up new project addresses when a project is created.

Map Scale

Number of Dividers: This is the number of dividers in the scale bar.

Divider Color 1: Click this button to change the color of the first divider in the scale bar.

Divider Color 2: Click this button to change the color of the second divider in the scale bar.

Default Project Coordinate System

Geographic System: Select this to specify in geographic coordinates.

Projected System: Select this to specify in projected coordinates.

Coordinate System: This is used to select the geographic or projected coordinate system.

Display Units

Display Units: This is used to select the units for the current cursor location shown in the status bar at the bottom of the display.

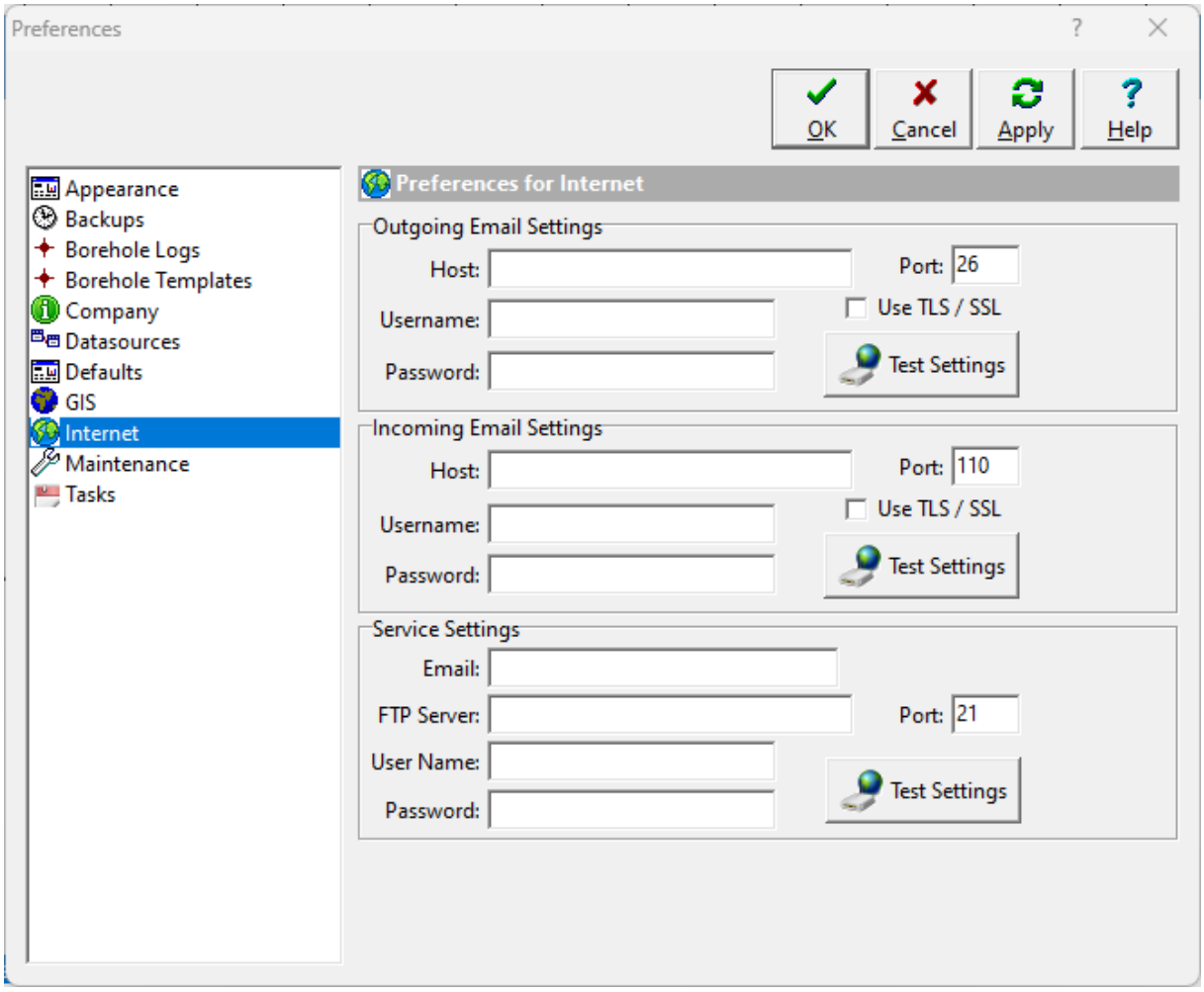
North Arrow

Color: Click this button to change the color of the North arrow on the map.

Default Local Units

Units: This is the default local units to use for projects

1.7.9 Internet



The following can be specified for the Internet category:

Outgoing Email Settings

Outgoing email settings are used to send data directly by email.

Host: This is the name of the host for outgoing emails.

Port: This is the port to use for outgoing emails.

Username: This is the username to use for outgoing emails.

Password: This is the password to use for outgoing emails.

Use TLS/SSL: Check this to use TLS or SSL for outgoing emails.

Test Settings: Click this button to test the outgoing email settings.

Incoming Email Settings

Incoming email settings are not currently used by the program.

Host: This is the name of the host for incoming emails.

Port: This is the port to use for incoming emails.

Username: This is the username to use for incoming emails.

Password: This is the password to use for incoming emails.

Use TLS/SSL: Check this to use TLS or SSL for incoming emails.

Test Settings: Click this button to test the incoming email settings.

Service Settings

Service settings are used to send data directly to GaeaSynergy and WinLoG.

Email: This is the email address used for the GaeaSynergy service.

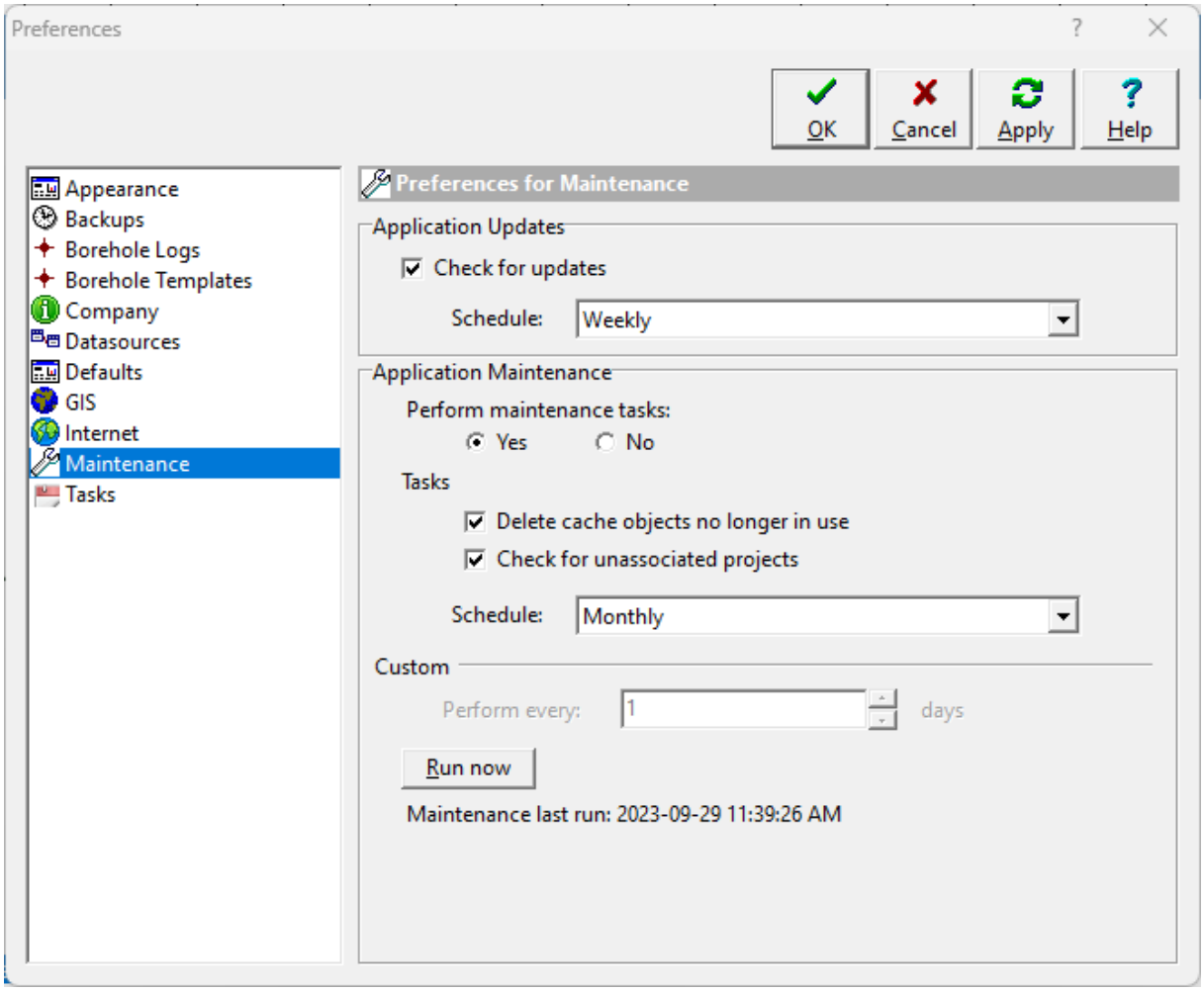
FTP Server: This is the name of the FTP server.

Username: This is the username to use for the FTP server.

Password: This is the password to use for the FTP server.

Test Settings: Click this button to test the FTP settings.

1.7.10 Maintenance



The following can be edited in the Maintenance category:

Application Updates

Check for updates: Check this box to automatically check for program updates on the Internet.

Schedule: Select the schedule to check for program updates.

Application Maintenance

Perform maintenance tasks: This is used to select whether to perform maintenance tasks.

Delete expired cache objects: Check this box to delete cache images of objects when maintenance is performed.

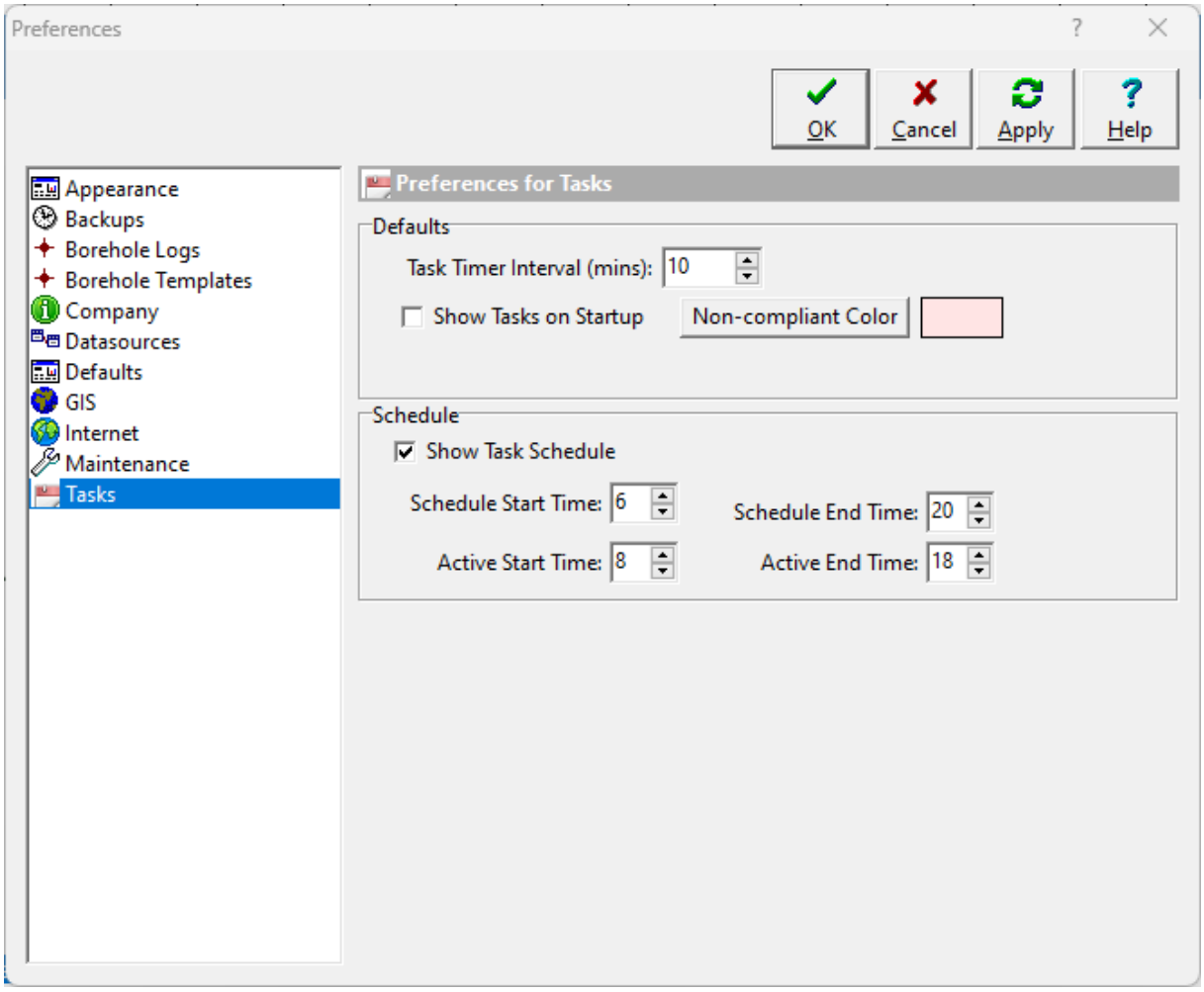
Check for unassociated projects: Check this box to find and delete projects that are in the project database but not in the project list.

Schedule Tasks: Select the schedule to perform maintenance.

Perform every: If the schedule is custom, this is used to specify the number of days between maintenance tasks.

Run now: Click this button to run maintenance tasks now.

1.7.11 Tasks



The following can be specified for the Tasks category:

Task Timer Interval: This is the interval in minutes to check and upload incoming EDDs and notifications from the EDMS service.

Show Tasks on Startup: Check this box to show a list of tasks when the program is started.

Non-Compliant: This is the background color to use for tasks that are non-compliant.

Show Task Schedule: Check this box to show the schedule for tasks below the list of tasks.

Schedule Start Time: This is the hour for the start of the schedule display.

Schedule End Time: This is the hour for the end of the schedule display.

Active Start Time: This is the hour for the start of the active part of the schedule display.

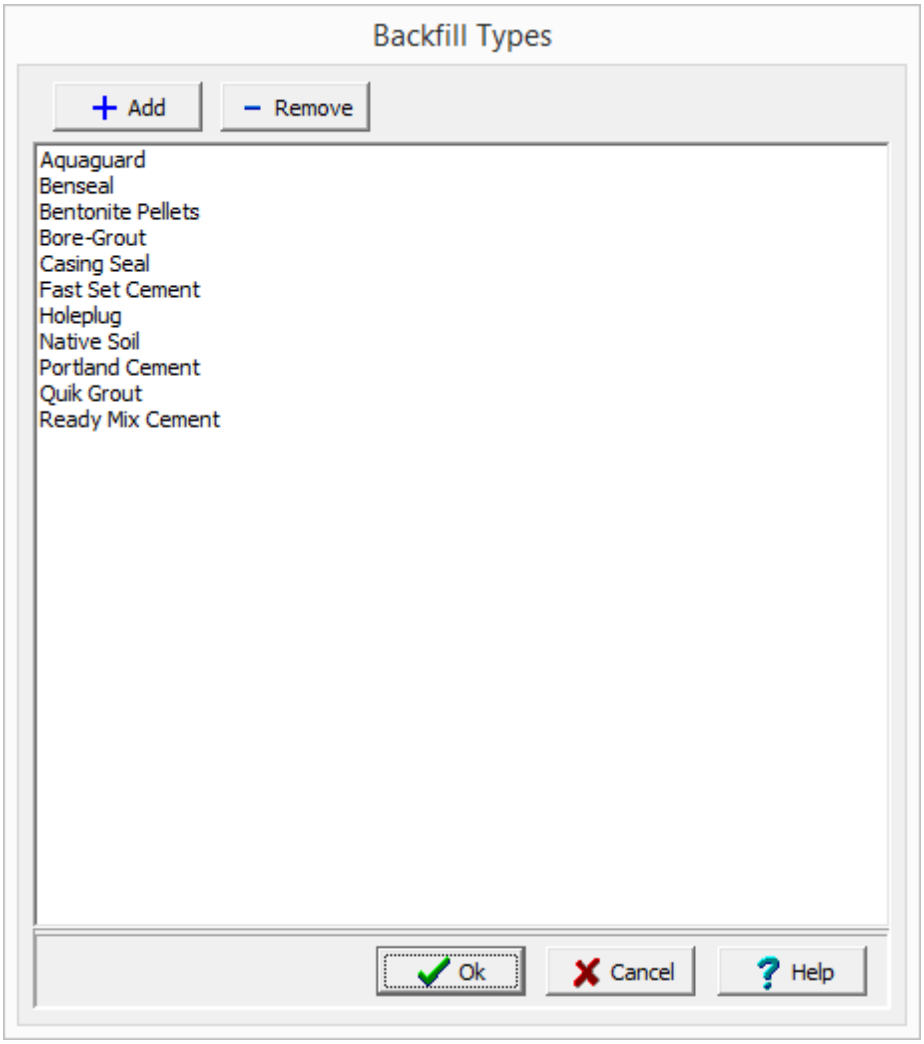
Active End Time: This is the hour for the end of the active part of the schedule display.

1.8 Lookup List Data

Lookup list data is used to control and simplify the data entry in WinLoG RT. These lists of predefined data can be edited as described in the sections below and then used when entering information.

1.8.1 Backfill Types

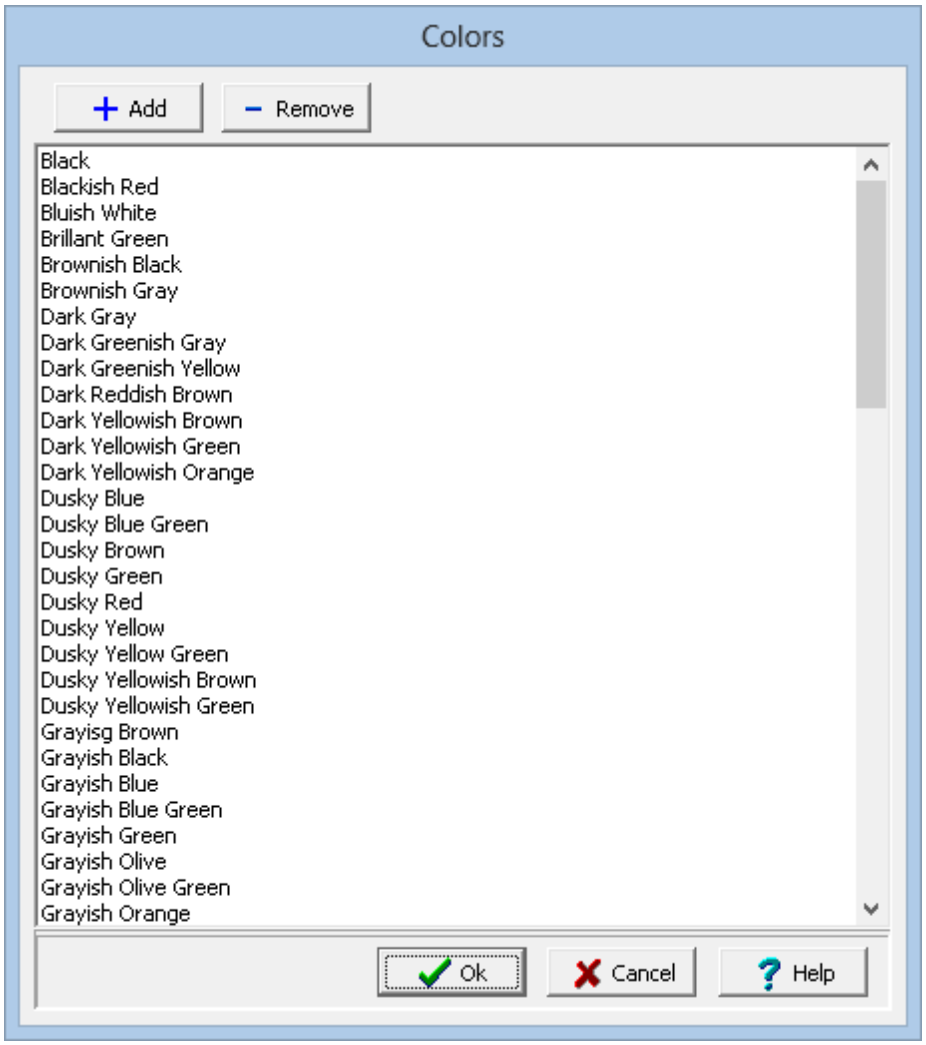
Backfill types that can be selected when specifying a boring or well can be edited by selecting *Tools > Lists > Backfill Types*. The Backfill Types form will be displayed.



Backfill types can be added and removed using the buttons at the top of the form. To edit a type, select it in the list and then click on it again to edit it.

1.8.2 Colors

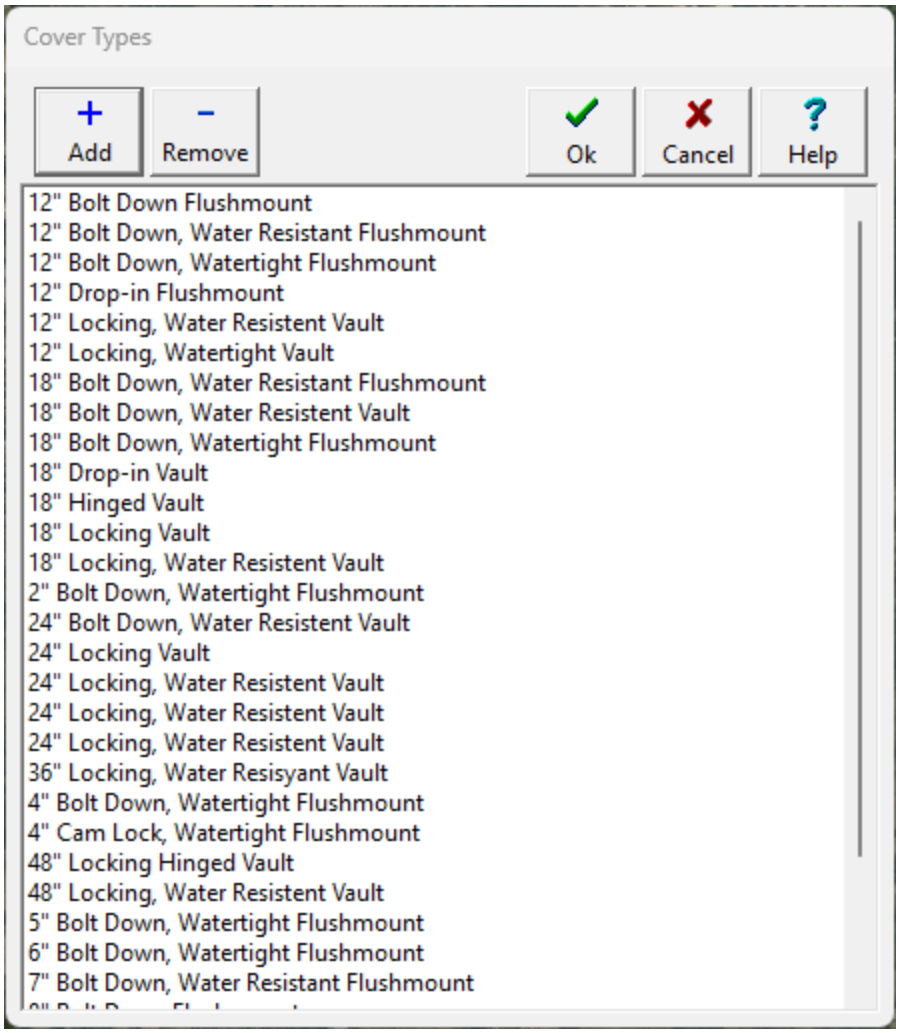
Colors that can be selected when specifying a sample, can be edited by selecting *Tools > Lists > Colors*. The Colors form will be displayed.



Colors can be added and removed using the buttons at the top of the form. To edit a color, select it in the list and then click on it again to edit it.

1.8.3 Cover Types

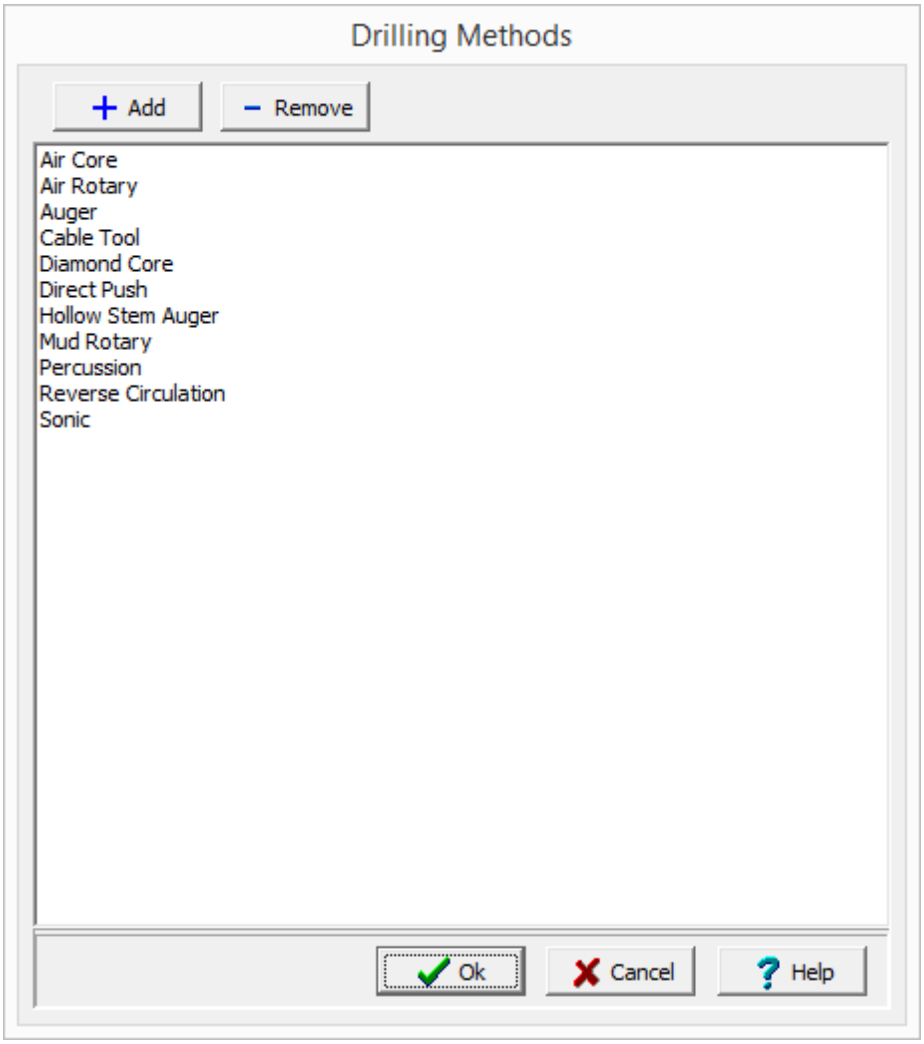
Well cover types that can be selected when specifying a well can be edited by selecting *Tools > Lists > Cover Types*. The Cover Types form will be displayed.



Cover types can be added and removed using the buttons at the top of the form. To edit a type, select it in the list and then click on it again to edit it,.

1.8.4 Drilling Methods

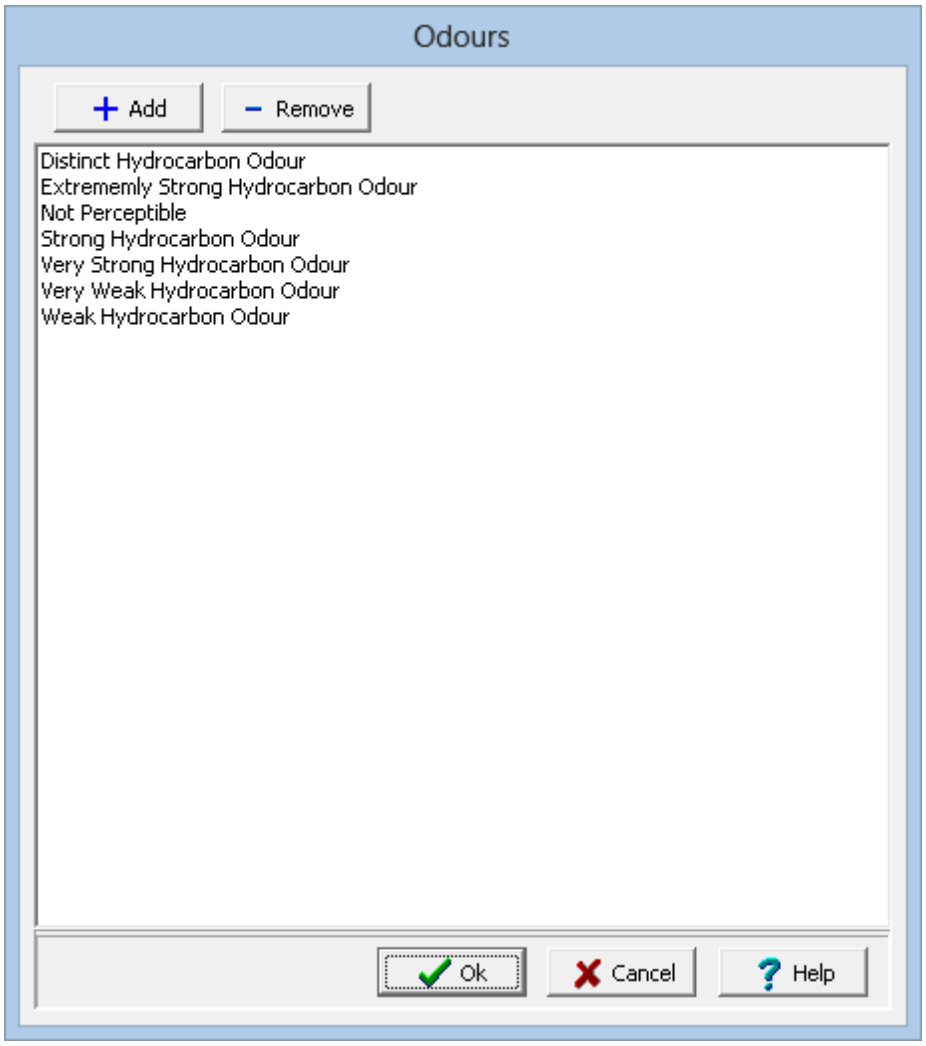
Drilling methods that can be selected when specifying a boring or well can be edited by selecting *Tools > Lists > Drilling Methods*. The Drilling Methods form will be displayed.



Drilling methods can be added and removed using the buttons at the top of the form. To edit a type, select it in the list and then click on it again to edit it,.

1.8.5 Odours

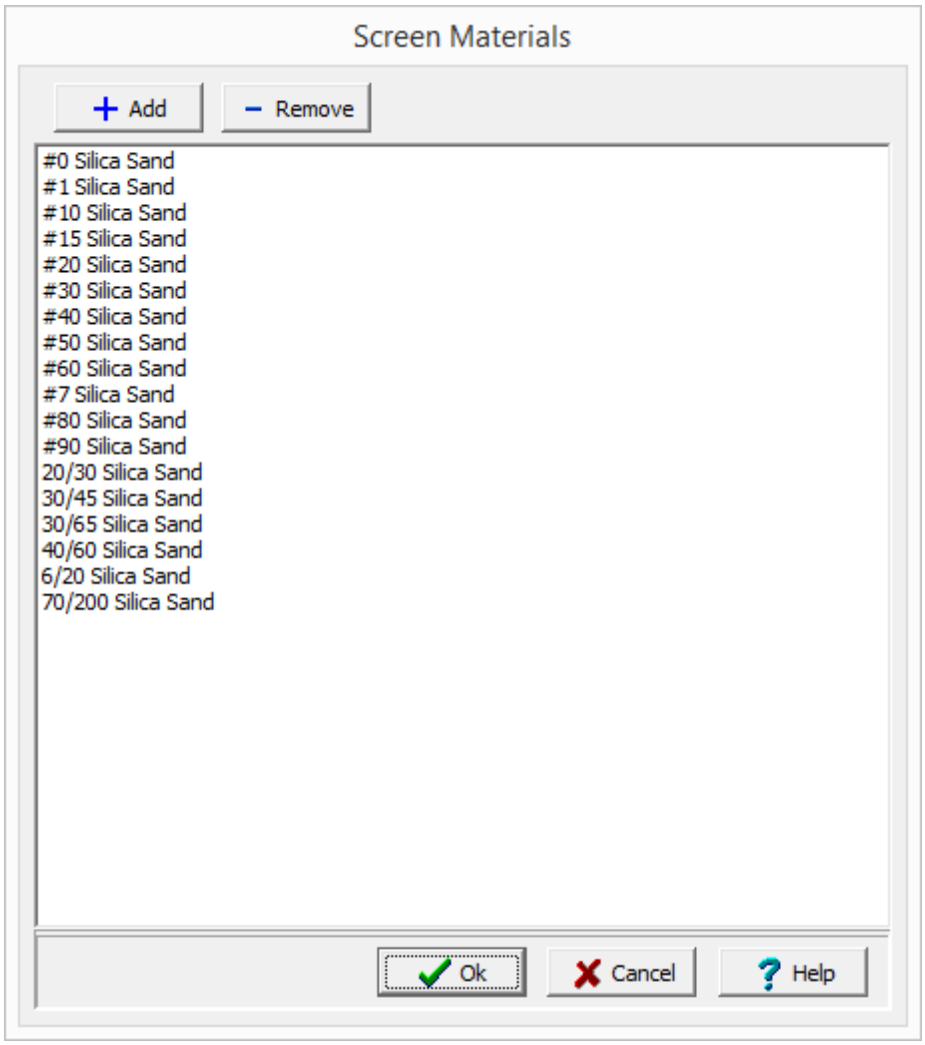
Odours that can be selected when specifying a sample, can be edited by selecting *Tools > Lists > Odours*. The Odours form will be displayed.



Odours can be added and removed using the buttons at the top of the form. To edit an odour, select it in the list and then click on it again to edit it.

1.8.6 Screen Materials

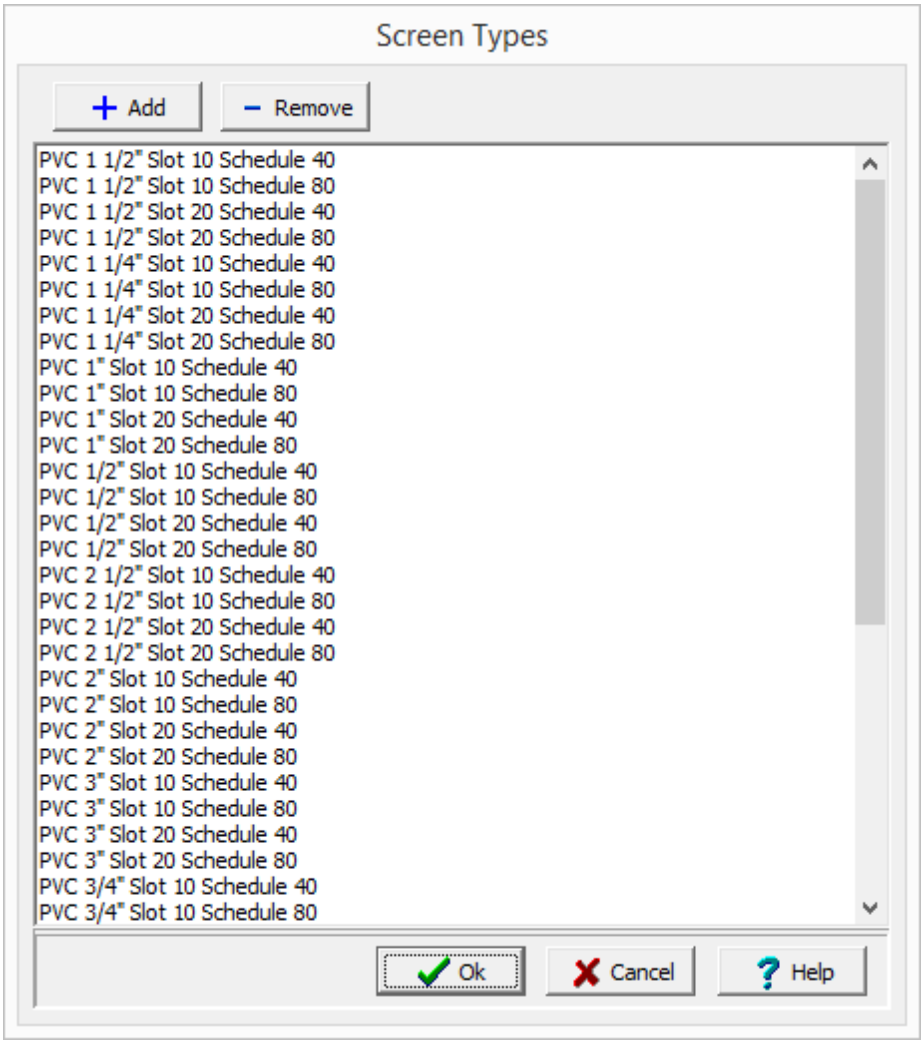
Screen pack materials that can be selected when specifying a well can be edited by selecting *Tools > Lists > Screen Materials*. The Screen Materials form will be displayed.



Screen materials can be added and removed using the buttons at the top of the form. To edit a type, select it in the list and then click on it again to edit it,.

1.8.7 Screen Types

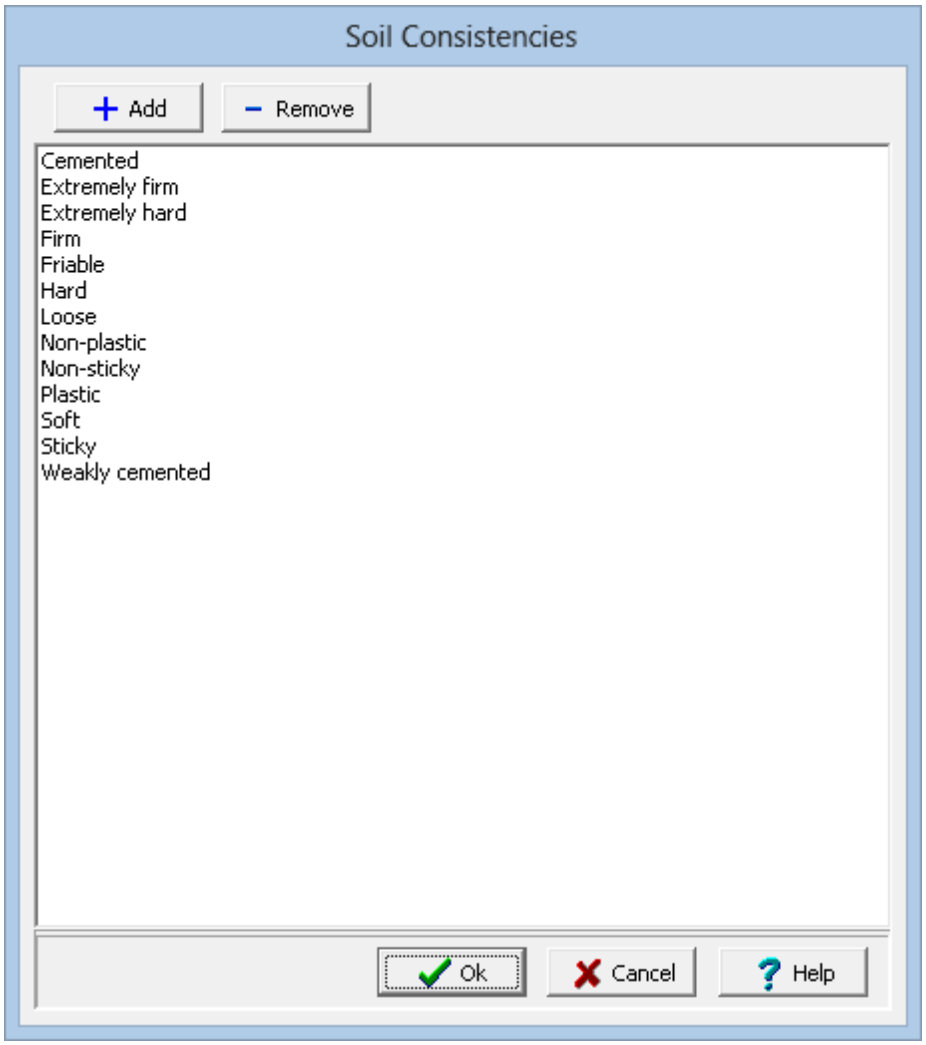
Screen types that can be selected when specifying a well can be edited by selecting *Tools > Lists > Screen Types*. The Screen Types form will be displayed.



Screen types can be added and removed using the buttons at the top of the form. To edit a type, select it in the list and then click on it again to edit it,.

1.8.8 Soil Consistencies

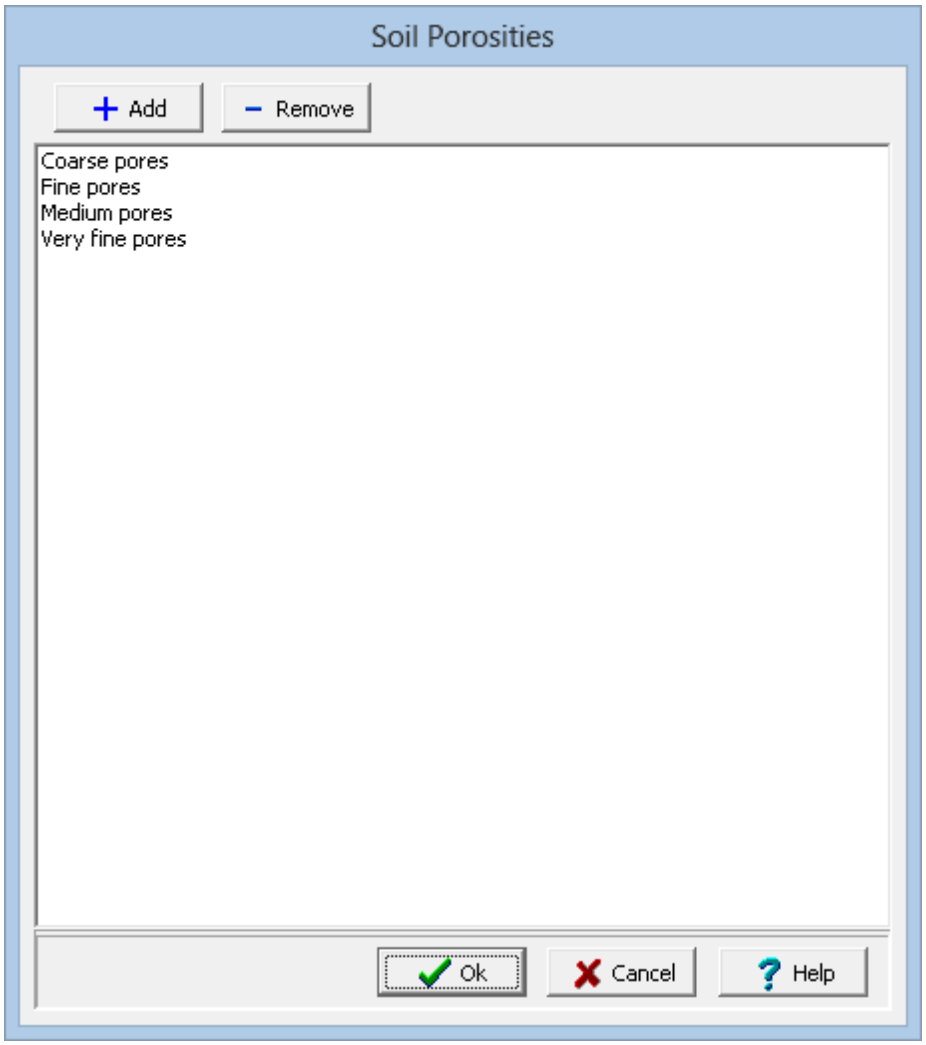
Soil consistencies that can be selected when specifying a sample, can be edited by selecting *Tools > Lists > Soil Consistencies*. The Soil Consistencies form will be displayed.



Soil consistencies can be added and removed using the buttons at the top of the form. To edit a soil consistency, select it in the list and then click on it again to edit it.

1.8.9 Soil Porosities

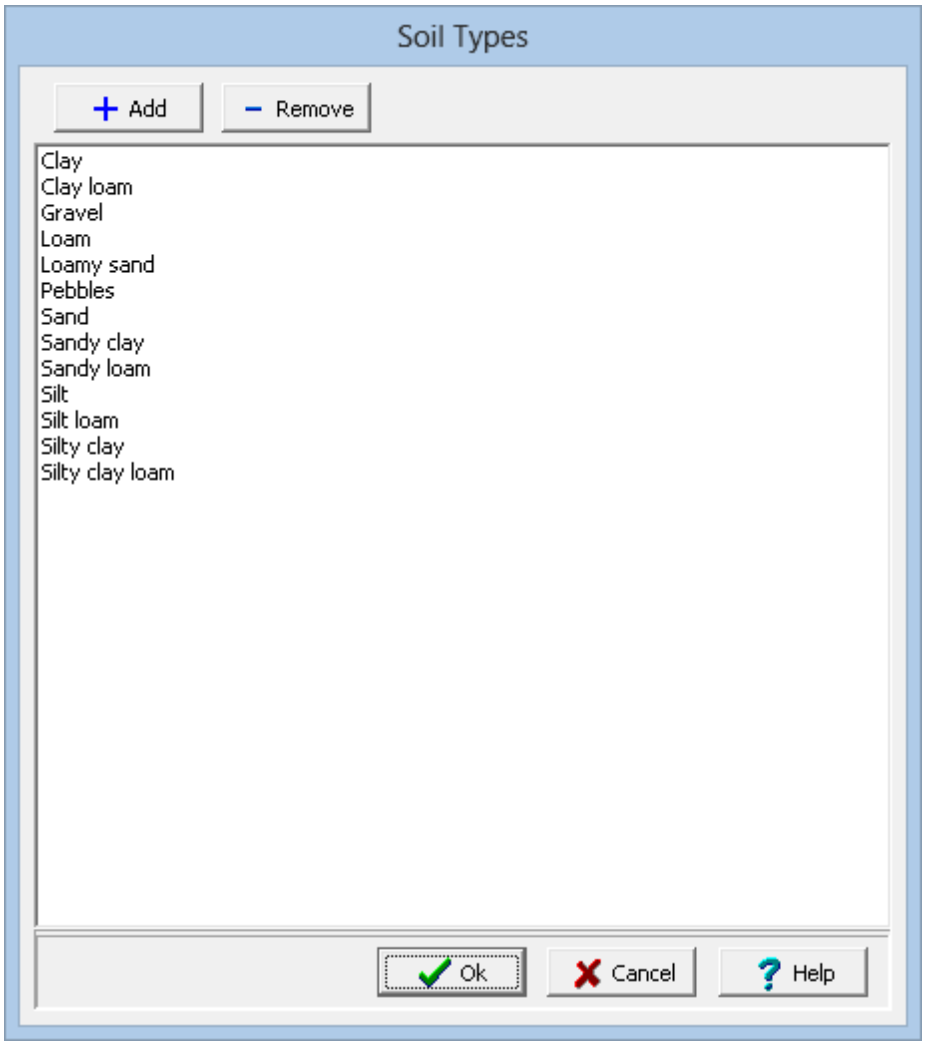
Soil porosities that can be selected when specifying a sample, can be edited by selecting *Tools > Lists > Soil Porosities*. The Soil Porosities form will be displayed.



Soil porosities can be added and removed using the buttons at the top of the form. To edit a soil porosity, select it in the list and then click on it again to edit it.

1.8.10 Soil Types

Soil types that can be selected when specifying a sample, can be edited by selecting *Tools > Lists > Soil Types*. The Soil Types form will be displayed.

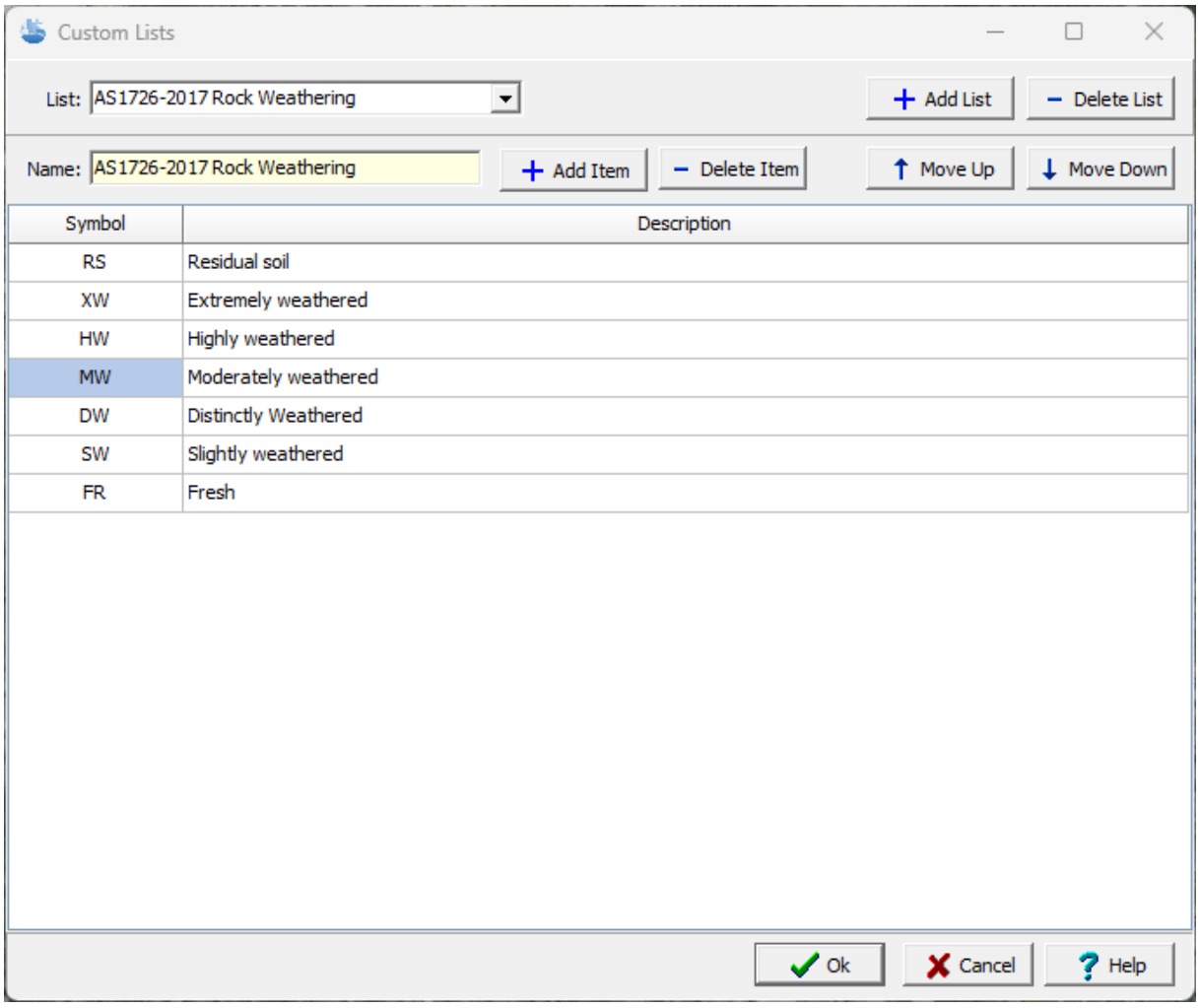


Soil types can be added and removed using the buttons at the top of the form. To edit a soil type, select it in the list and then click on it again to edit it.

1.8.11 Custom Lists

Custom lists can be used to create lookup lists for interval text, sample, and lithology data. These lists can be for data such as Rock and Soil Defects, Weathering, Strength, etc. The custom lookup list data can be displayed in Custom List Columns 421, Lithologic Custom Columns, Sample Custom Columns and Linked Text Interval Columns. On the log the list data can be displayed as a symbol, description or both depending on the settings in the template.

The custom lists can be added and edited by selecting *Tools > Lists > Custom*. The Custom Lists form will be displayed.



Custom lists can be added and removed using the buttons at the top of the form. And an existing custom list can be selected at the top of the form. When a custom list is added or selected the custom list is displayed and can be edited.

At the top of the list there are buttons to add and delete an item as well as to move the current selected item up or down in the list.

Name: This the name of the custom list and can only be edited when adding a custom list.

Symbol: This is the symbol of the item in the custom list.

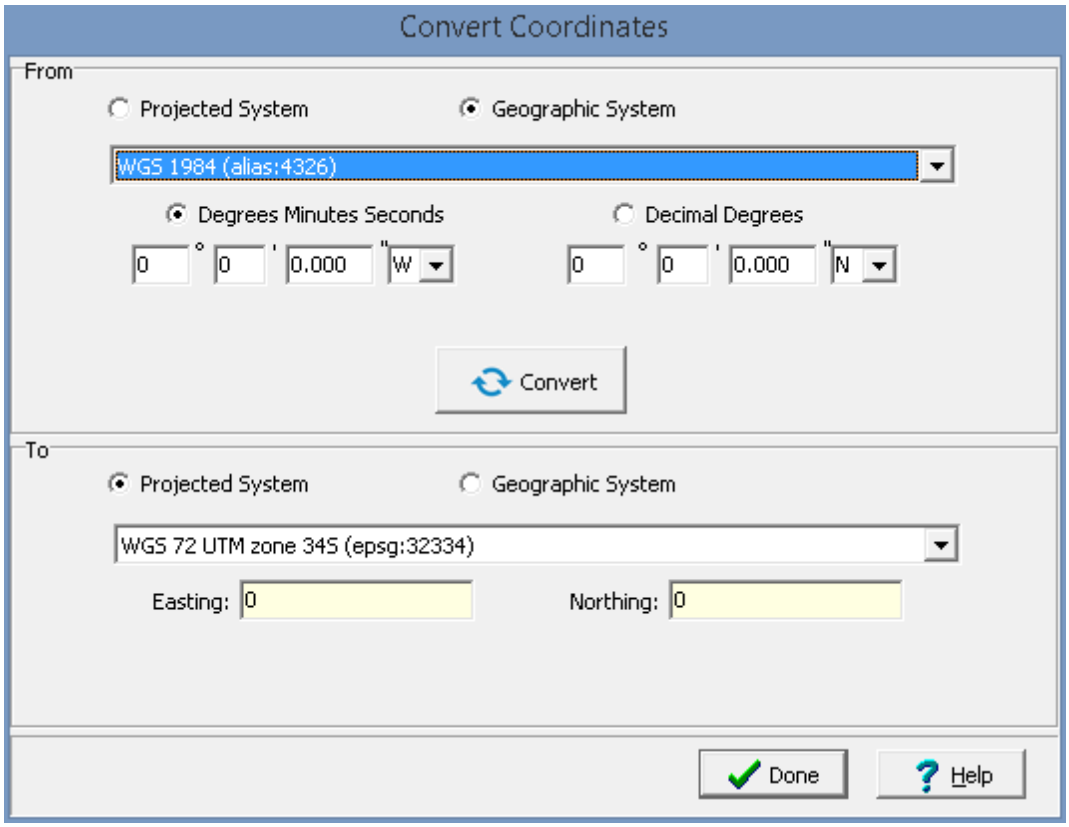
Description: This is the description of the item in the custom list.

1.9 Other

Other tools are listed in the sections below.

1.9.1 Convert Coordinates

Coordinates can be converted from one coordinate system to another using the coordinate conversion function by selecting *Tools > GIS > Convert Coordinates*, the Convert Coordinates form will be displayed.



Coordinates can be converted from either a projected coordinate system or geographic coordinate system to either a projected coordinate system or geographic coordinate system. To convert coordinates select the projected or geographic coordinate system to convert from and to. If the coordinate system is geographic they can be entered or displayed either in decimal degrees or in degrees, minutes and seconds. After the coordinates have been entered, press the Convert button to convert them to the selected coordinate system.

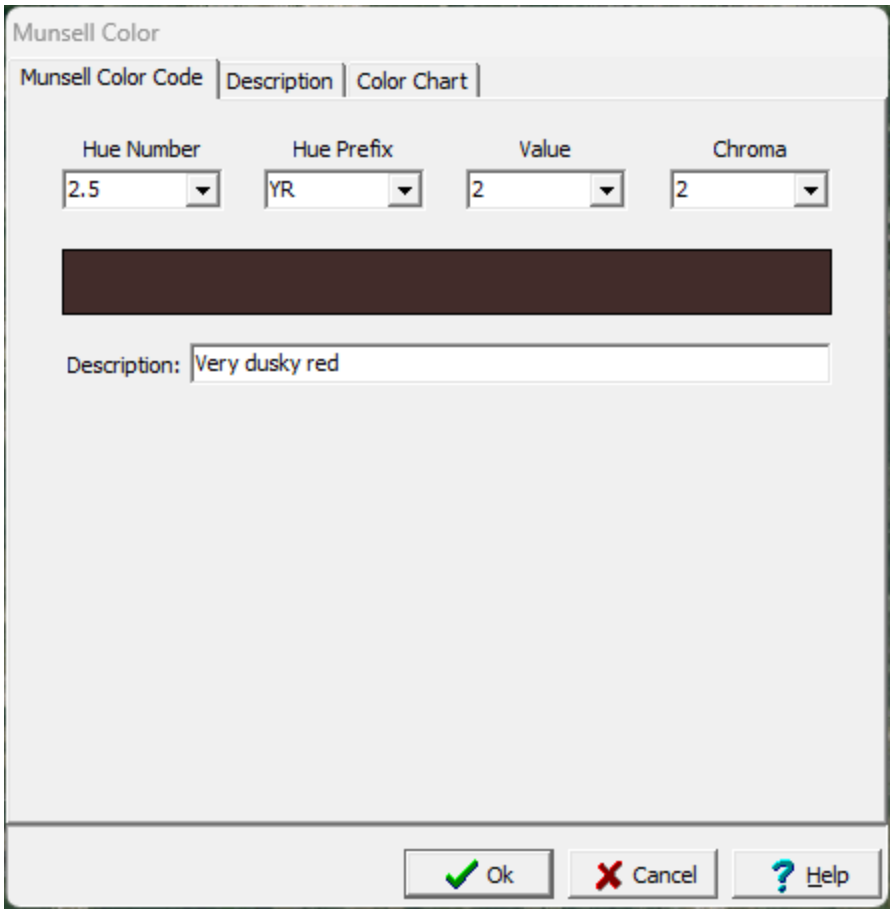
1.9.2 Munsell Colors

The Munsell color system specifies colors based on three properties: hue (basic color), value (lightness), and chroma (purity). It was created by Albert H. Munsell in the first decade of the 20th century and adopted by the United States Department of Agriculture (USDA) as the official color system for soil research in the 1930s.

The hue is noted as the letter abbreviation of the color of the rainbow (e.g. R for red). The quality of the color is modified by the preceding value (0-10). Value (lightness) is rated on a scale from 0 to 10, with 0 being black and 10 being white. And the chroma consists of a scale with lower numbers being more washed out (less pure).

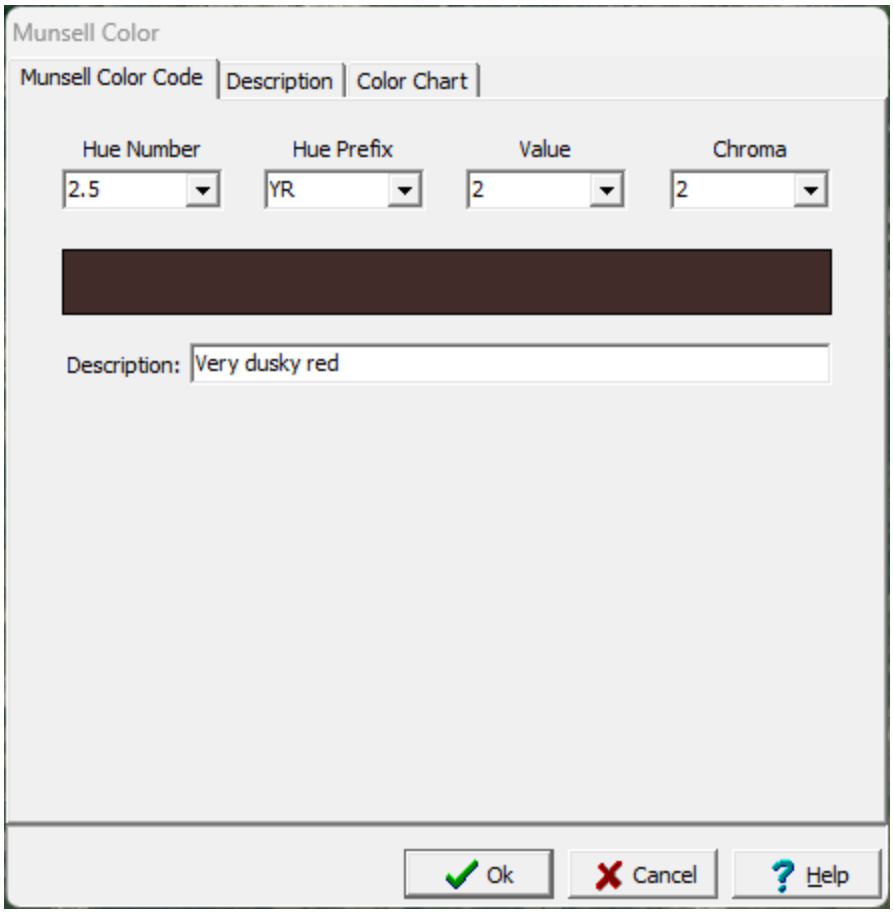
A color is fully specified using the three properties for hue, value, and chroma. The hue is specified using the hue number and hue prefix. For each color and optional description can be specified.

To display and specify descriptions for the Munsell colors select *Tools > Other > Munsell Colors*. The Munsell Color form below will be displayed.



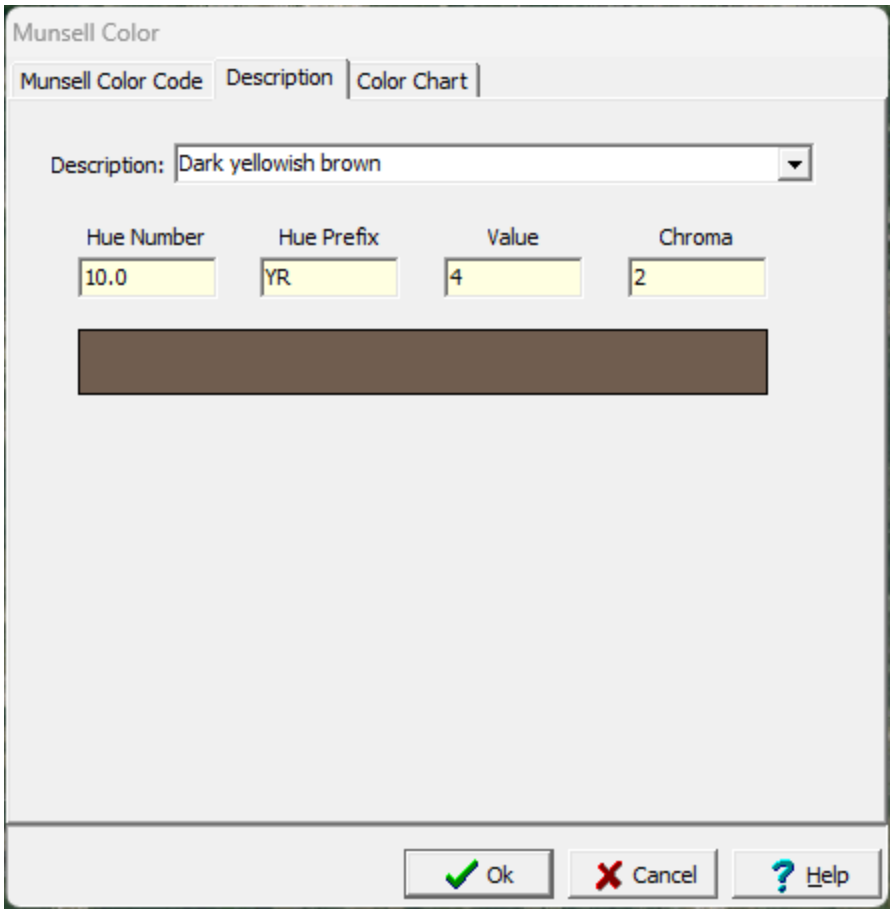
This form has three tabs for displaying and selecting Munsell Colors as described in the sections below.

1.9.2.1 Munsell Color Code tab



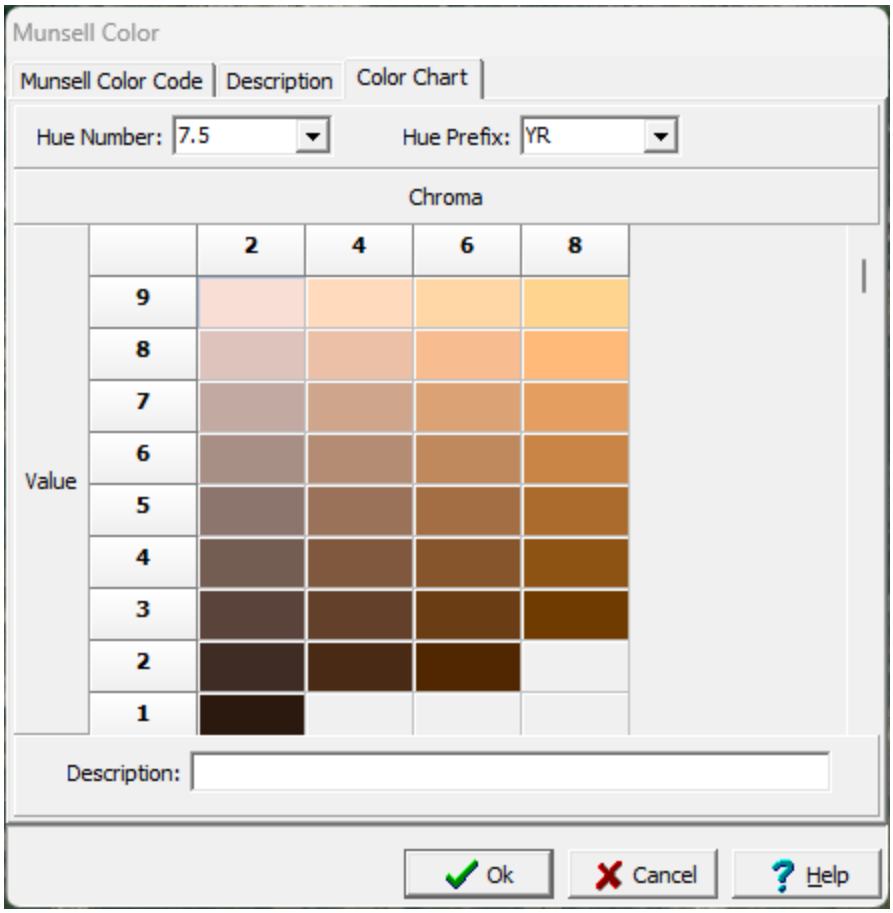
On this tab the Munsell color can be specified by selecting the hue number, hue prefix, value, and chroma. After these are selected the color and description will be displayed. When this form is accessed from the Tools menu, the description for the color can be added and edited.

1.9.2.2 Description tab



This tab is used to select a Munsell color using the description for the color. After a description is selected the hue number, hue prefix, value, chroma, and color will be displayed.

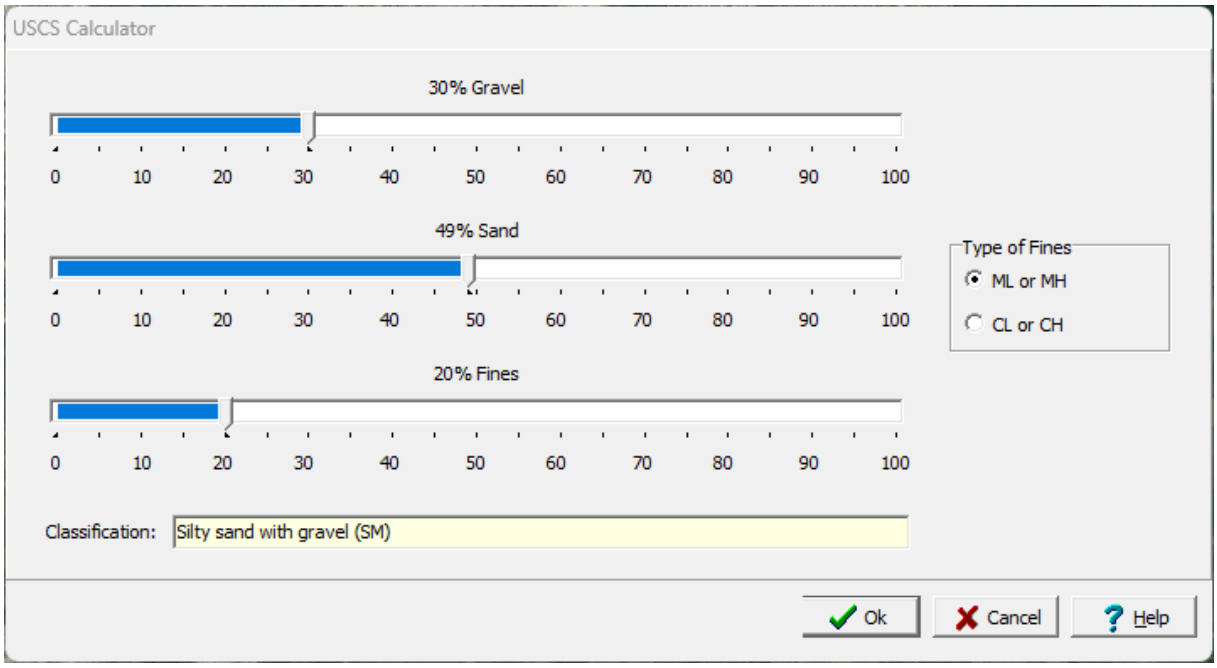
1.9.2.3 Color Chart tab



This tab can be used to select a Munsell Color using the hue number and hue prefix. After the hue number and hue prefix are selected a chart will be displayed with the value specified vertically and the chroma specified horizontally. A specific color can be selected by clicking on it in the chart. After a color is selected the description will be displayed. When this form is accessed from the Tools menu, the description for the color can be added and edited.

1.9.3 USCS Classification

The USCS calculator is used to calculate the USCS classification. To access the calculator select *Tools > Other > USCS Classification*.



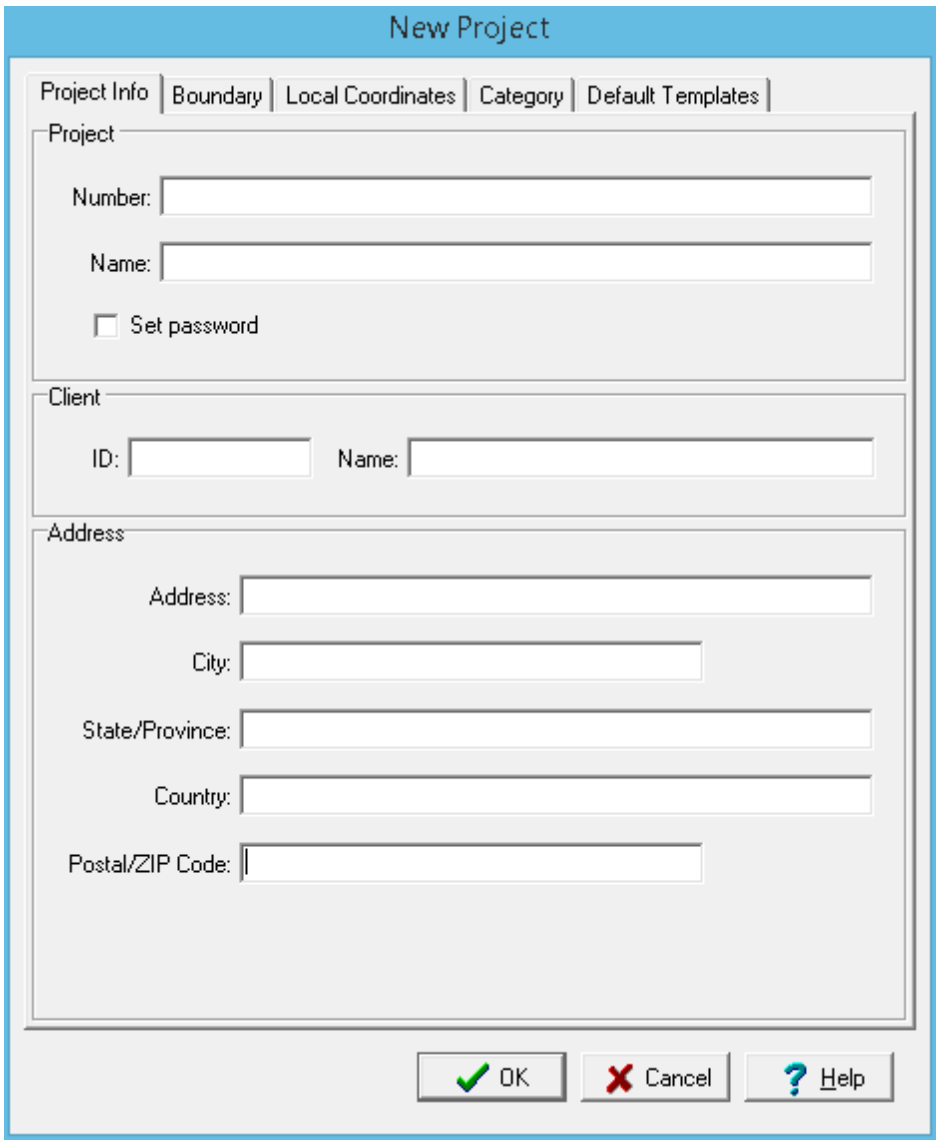
The classification is calculated by specifying the percent gravel, sand and fines as well as the grading and type of fines. The percentages must add to 100 for the classification to be calculated.

1.10 Security

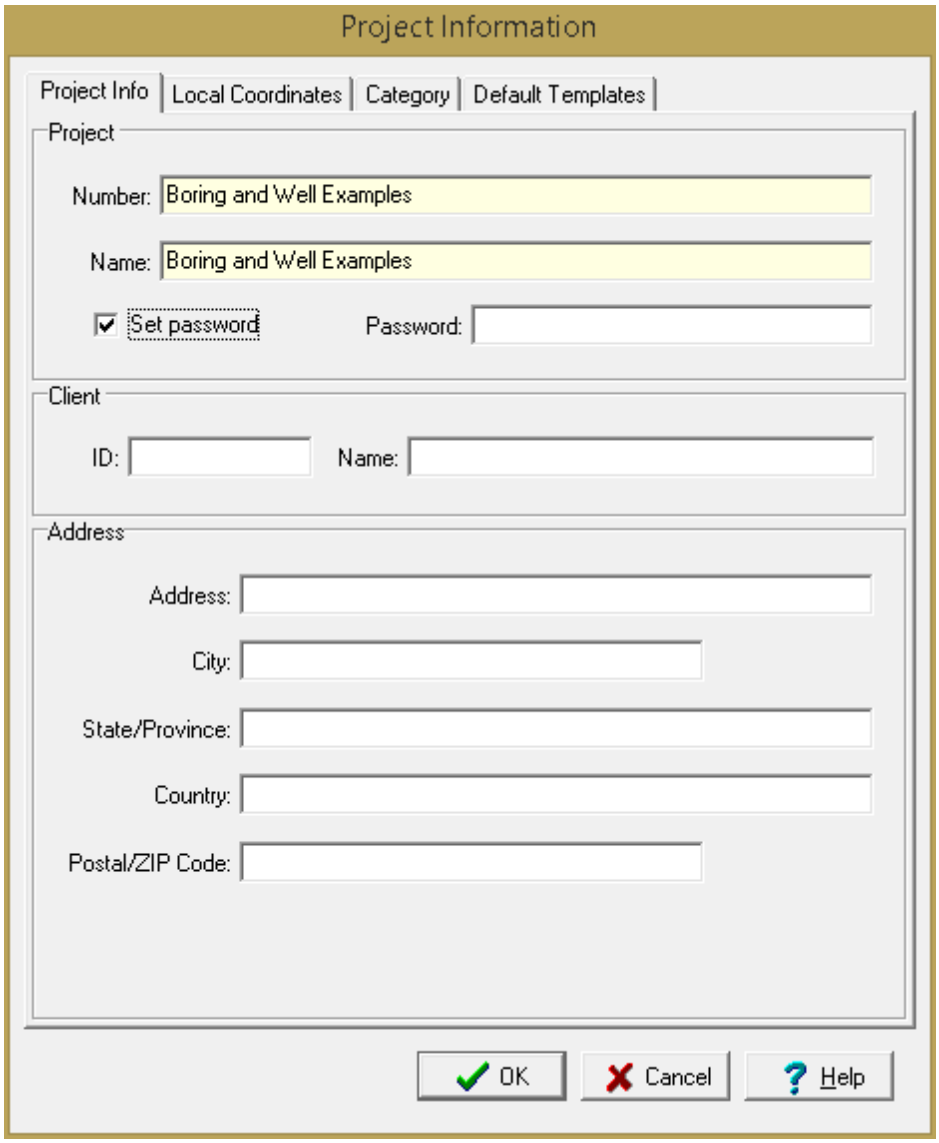
WinLoG RT has several features to provide data security.

1.10.1 Project Security

To provide data security to some projects a password can be added specifically for that project. This password must then be entered every time the project is opened. To add a password when creating a new project, check the box for Set Password and enter the Password on the New Project form.

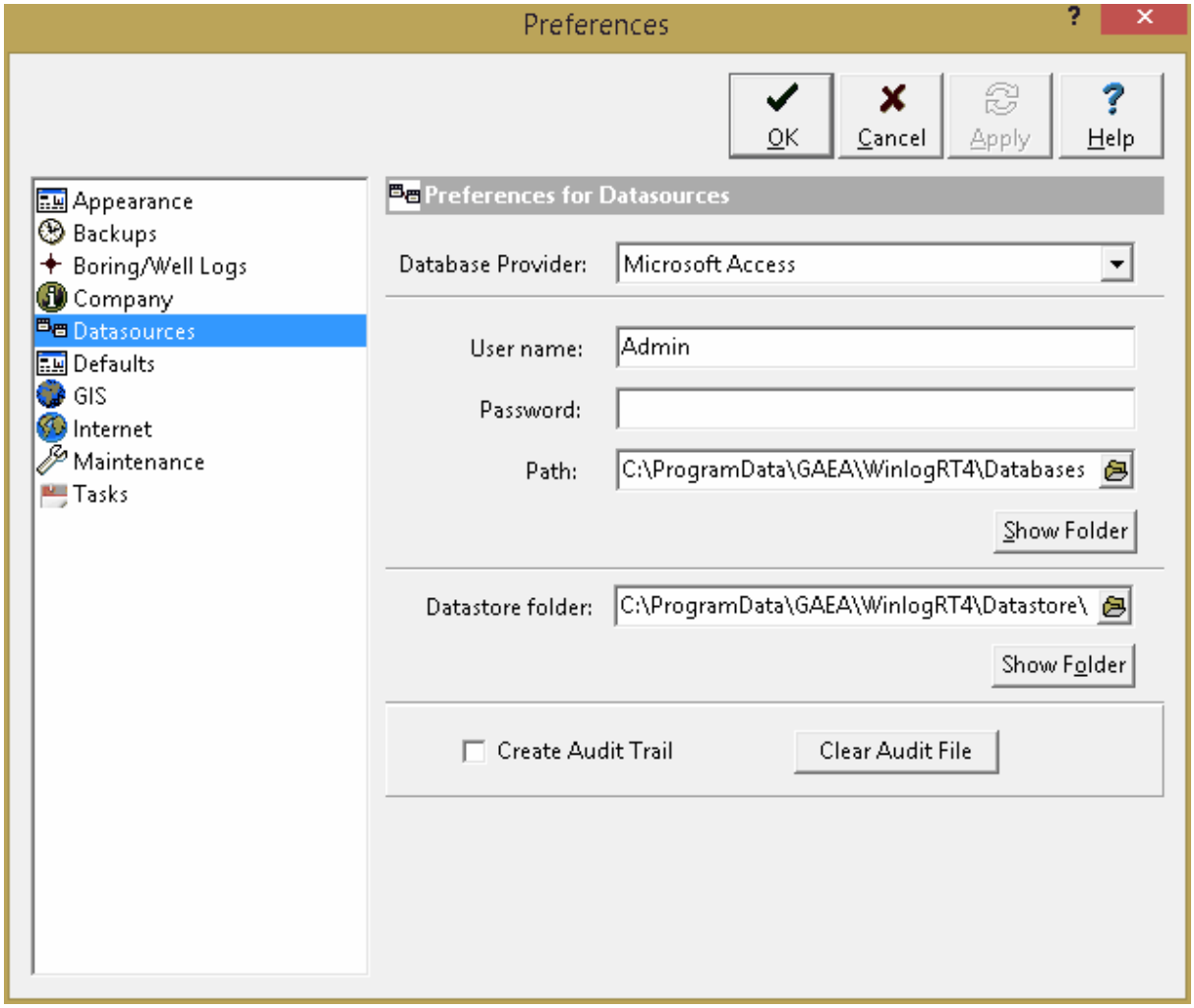


To add or change a password for an existing project, open the project and select *Edit > Project Information* to display the Project Information form. Then check the box for Set Password and enter the Password

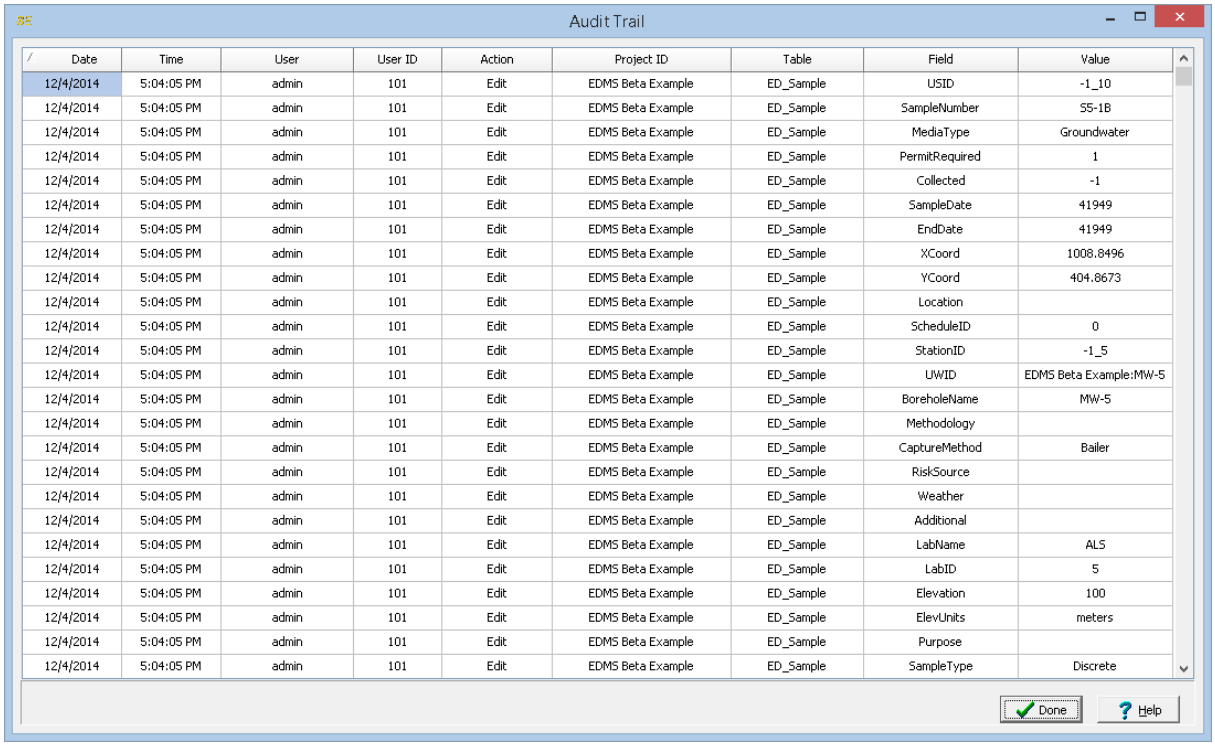


1.10.2 Database Audit

An audit trail of all database changes can be created by checking the Create Audit Trail 62 on the Datasources tab of Preferences. This will log all additions, edits, and deletions to any of the databases used by WinLoG RT. The log file can get very large quickly and is only recommended if required by company policy or for support activities. To clear the log file click on the Clear Audit File on the Datasources tab.



The audit trail can be viewed by selecting Tools > View Audit Trail. The Audit Trail form will be displayed showing the date, time, user, user ID, action, project ID, table, field, and value of all database transactions since the creation of the audit file.



Date	Time	User	User ID	Action	Project ID	Table	Field	Value
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	USID	-1_10
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	SampleNumber	SS-1B
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	MediaType	Groundwater
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	PermitRequired	1
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	Collected	-1
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	SampleDate	41949
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	EndDate	41949
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	XCoord	1008.8496
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	YCoord	404.8673
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	Location	
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	ScheduleID	0
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	StationID	-1_5
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	UWID	EDMS Beta Example:MW-5
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	BoreholeName	MW-5
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	Methodology	
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	CaptureMethod	Bailer
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	RiskSource	
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	Weather	
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	Additional	
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	LabName	ALS
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	LabID	5
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	Elevation	100
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	ElevUnits	meters
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	Purpose	
12/4/2014	5:04:05 PM	admin	101	Edit	EDMS Beta Example	ED_Sample	SampleType	Discrete

1.11 Database Management

The data in WinLoG RT is stored in a main database and project databases. These databases are backed up at regular intervals and if necessary can be restored from backup copies.

1.11.1 Backing up a database

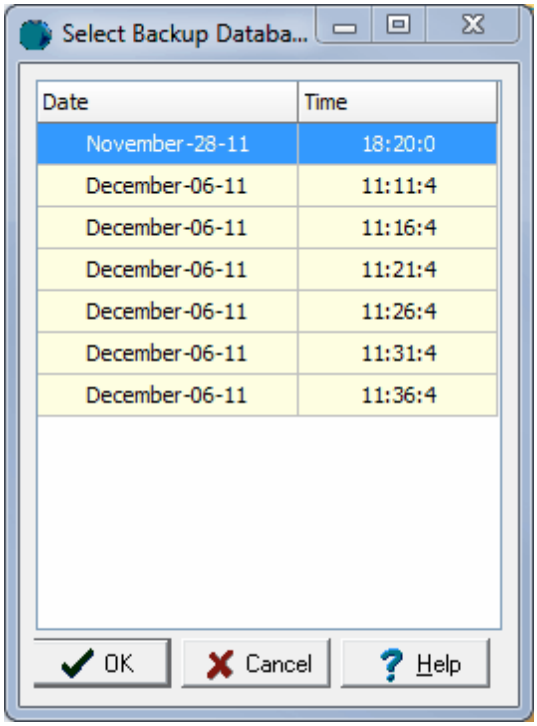
The main database and current project database are backed up at regular intervals. These intervals are set in the preferences 54 for the program. A project database will only be backed up if the project is currently open.

1.11.2 Restoring a database

If necessary due to data corruption or some other problem, a database can be restored from a backup. The sections below describe how to restore the main database and project databases.

1.11.2.1 Restoring the Main Database

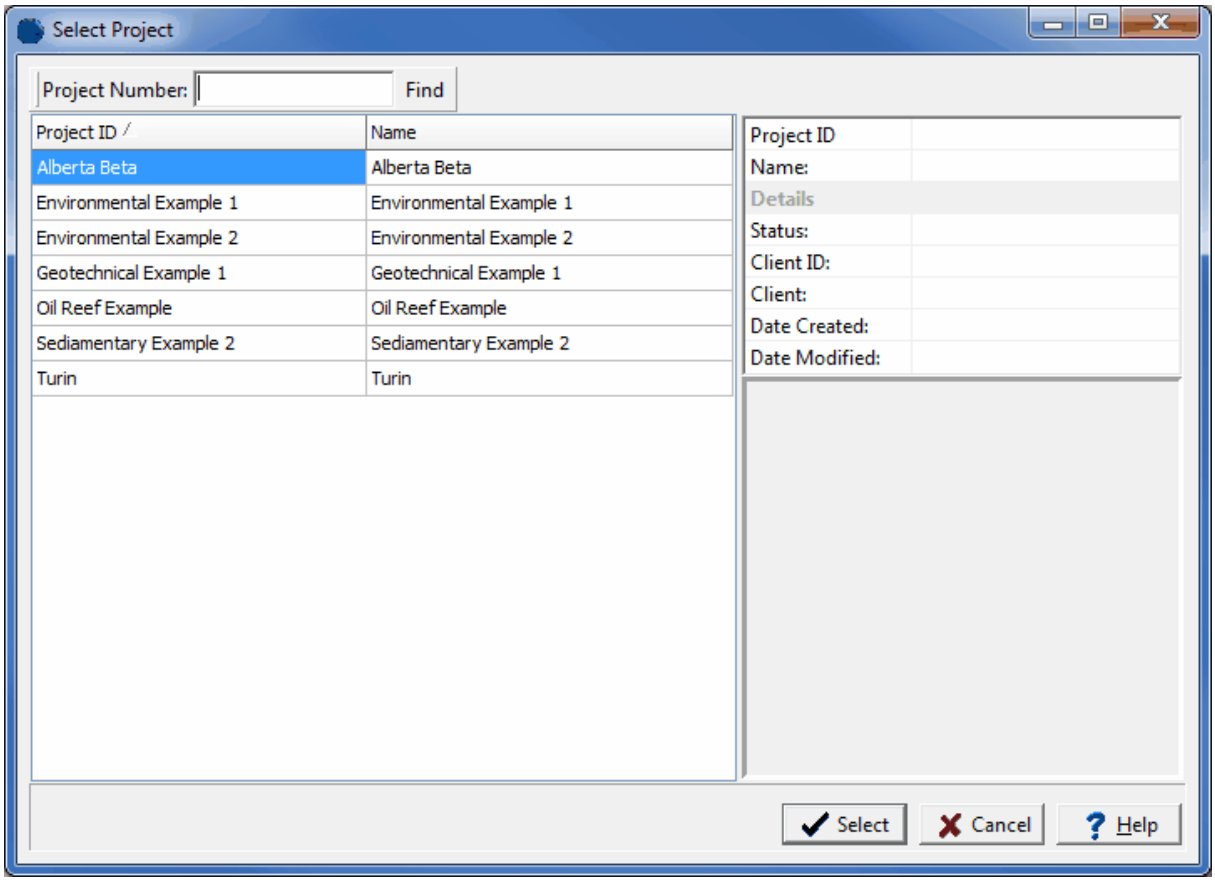
To restore the main database, select *Tools > Databases > Restore > Main Database* and the Select Backup Database form below will be displayed.



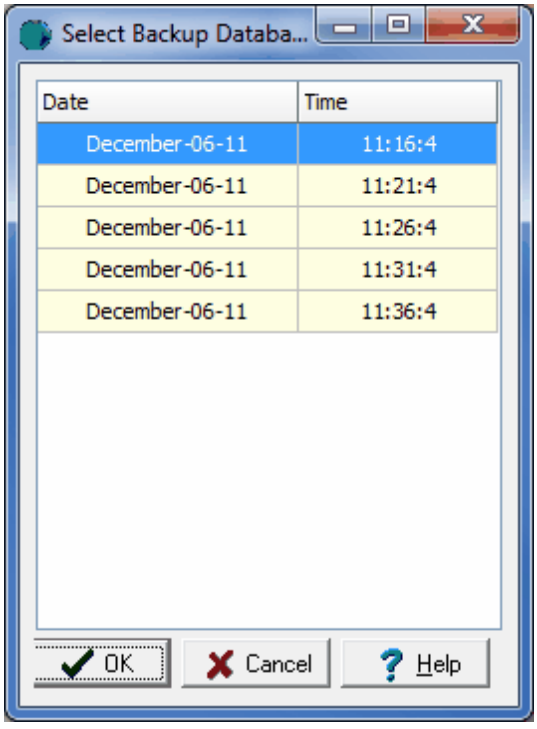
This form lists the backups by date and time. Select the database to restore from the list and then click on the Ok button. If you choose to proceed with the restoration, the main database will be replaced by the backup and the application will be restarted.

1.11.2.2 Restoring a project database

To restore a project database, select *Tools > Databases > Restore > Project Database* and the Select Project form below will be displayed. To backup a project database, no project can be currently open.



This form lists the projects in the application. Select the project to restore from a backup and then press the Select button. The Select Backup Database form below will be displayed.



This form lists the backups by date and time. Select the database to restore from the list and then click on the Ok button.

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Chapter 2 Geographical Information System

Chapter 2 Geographical Information System

The Geographical Information System (GIS) is the starting point for WinLoG RT, it is used to organize, find, and select projects. The application can also be used with no GIS, in this case a list of projects is displayed instead. If the application is not licensed and the maximum demo count has been reached, the no basemap mode will be the only view possible and no GIS data will be displayed.

2.1 Web Map Services

The GIS in WinLoG RT can display a variety of web map services. Web map services use a standard protocol to serve georeferenced map images over the Internet. This protocol was developed and published by the Open Geospatial Consortium. Several web map services are available within the application and more are being added with each update.

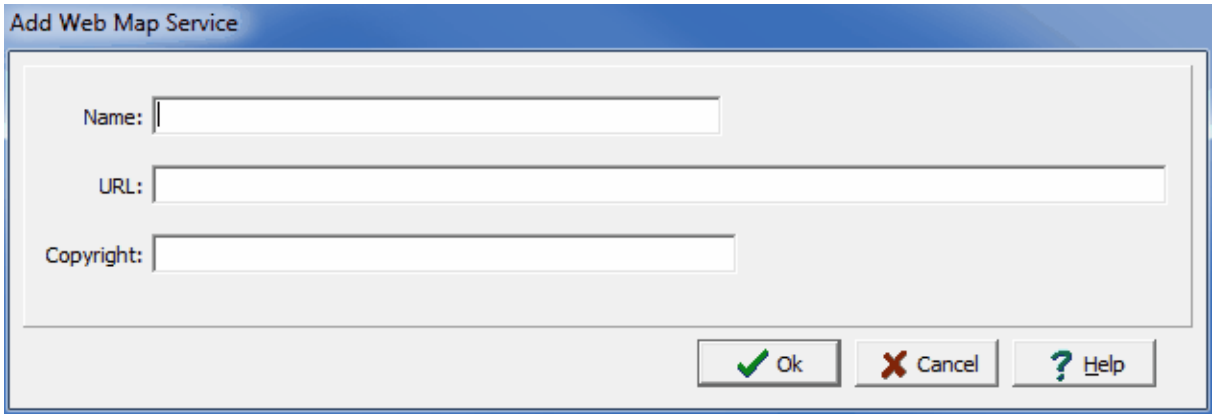
2.1.1 Selecting Web Map Services

The web map service displayed for the basemap can either be selected from the basemap toolbar or in *File > Preferences*. If it is selected in Preferences it will be the default basemap display and will be shown every time the application is started. When it is selected from the basemap toolbar it will be effective only until it is changed again or the application is closed. New web map services are being added all the time. If you would like to have a web map service added that is not in the list please contact us.

Before displaying the web map service the application checks to see if there is an Internet connection. If there is no connection you are given the choice of selecting a static basemap, no basemap, or ignoring the connection problem.

2.1.2 Adding a Web Map Service

Additional custom web map services (WMS) can be added to the application by selecting *Tools > GIS > Add Web Map Service*. The form below will then be displayed. A custom web map service can be used to add user subscribed services such as First Base Solutions (a Canadian based service for high resolution orthoimagery).



The following information can be specified on this form:

Name: This is the name of the custom WMS. It will be displayed when selecting a WMS from the GIS toolbar.

URL: This is the URL for the custom WMS. The URL is usually specified by the service provider.

Copyright: This the copyright for the custom WMS. It will be displayed on the status bar at the bottom of the screen.

2.2 Using the GIS

The display of the GIS can be controlled using the GIS toolbar and compass control as described in the sections below. The use of the GIS to create and locate projects is described in the Chapter 3.

2.2.1 GIS Toolbar

The GIS toolbar can be used to adjust the display; find, identify and select features.

Full Extent

The Full Extent button will display the full extent of the basemap or project

Zoom In

The Zoom In button is used to zoom in to a smaller scale on the basemap.

Zoom-out

The Zoom Out button is used to zoom out to a larger scale on the basemap.

Dynamic Zoom

The Dynamic Zoom button can be used to zoom in and out using the mouse.

To zoom in
1. Click on the View/Zoom mode menu item.
2. Within the Map area choose a rectangular area to which you would like to zoom in.
3. Move the mouse pointer to the top left corner of the area and press the left mouse button.
4. Move the mouse pointer to the bottom right corner of the area and release the left mouse button.

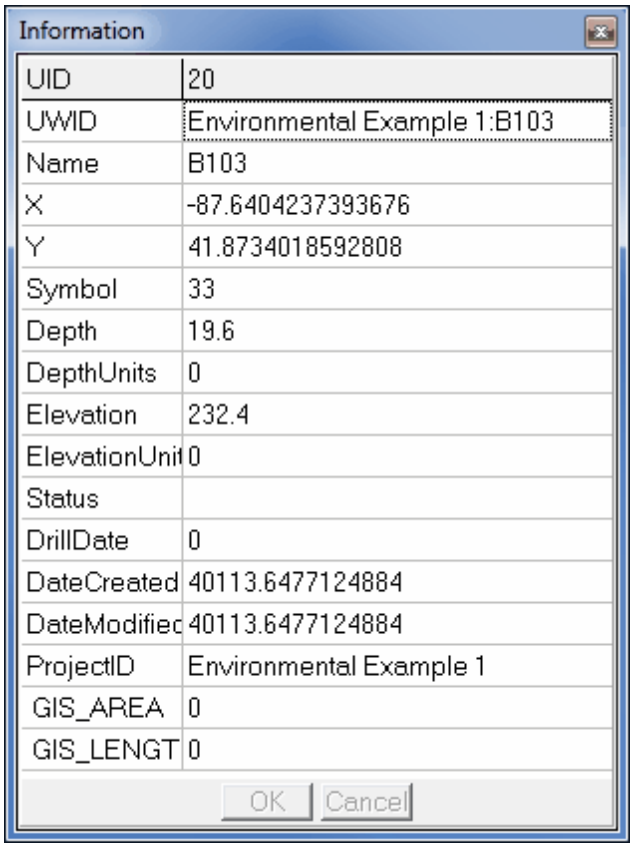
To zoom out
1. Click on the View/Zoom mode menu item.
2. Within the Map area decide how large should be the area containing the currently visible extent and wh
3. Move the mouse pointer to the bottom right corner of this area and press the left mouse button.
4. Move the mouse pointer to the top left corner of this area and release the left mouse button.

Drag

The Drag button is used to move the visible area on the screen. To move the visible area click on the screen and while holding the mouse button down move the cursor in the desired direction to see that area displayed.

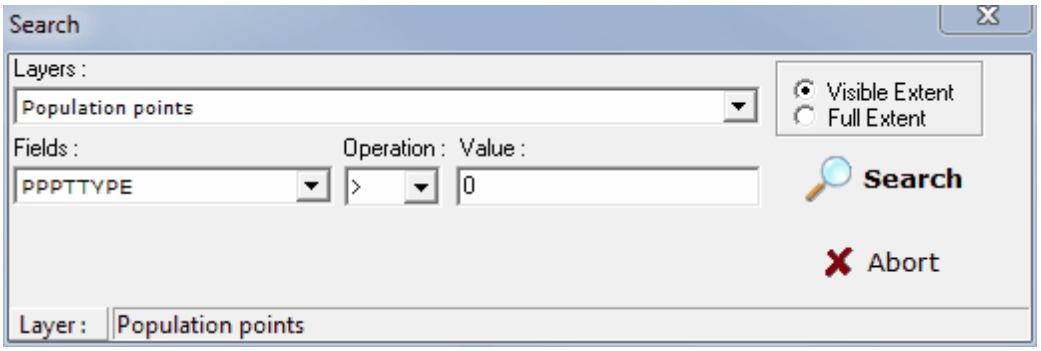
Select Feature

The Select Feature button can be used to select a feature on the map. To select a feature click on the button and then click on the feature on the map. The attributes of the selected feature will then be displayed as shown below.



Search

The Search button can be used to search for features on the map that meet a specified criteria. When this button is pressed the Search form below will be displayed. This form can be used to specify the layer, field. and search criteria. When the Search button on this form is pressed any features that meet this criteria will be momentarily highlighted.

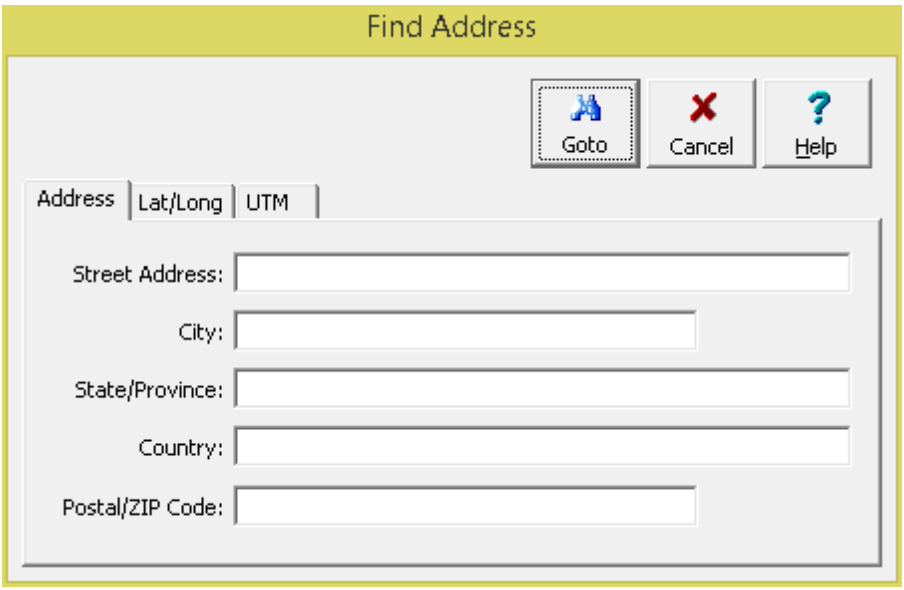


North Arrow

The North arrow on the basemap can be turned on and off using the North Arrow button. The color of this arrow is specified in Preferences.

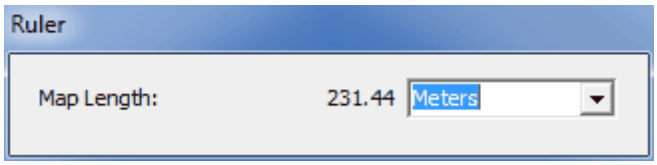
Locate

The Locate button is used to find an address or location on the map. When it is pressed the Find Address form will be displayed. Either an address, latitude and longitude, or UTM coordinates can be entered and located on the map.



Measure Distance

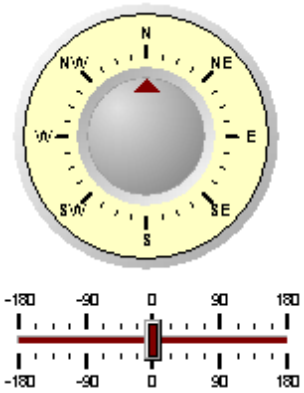
Distances can be measured on the basemap using the Measure tool on the basemap toolbar. When this tool is selected the Ruler control below will be displayed. The distance units can be set using the drop down list on the right. To measure a distance click on the first point and then click on the second. To hide the Ruler control click on the Measure tool again.



Web Map Service

This drop down list can be used to select the current web map service being displayed.

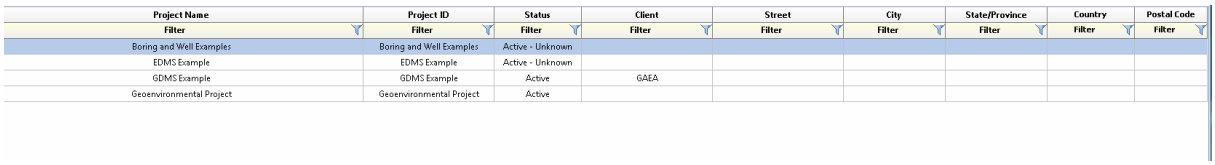
2.2.2 Compass Control



The compass on the bottom right shows the current direction for North. When the application is started this is at the top of the screen. To change the direction slide the bar to the left or right below the compass. Sliding to the left will rotate the GIS windows to the West, sliding to the right will rotate to the East. Double-click on the slider to adjust the display so that North is at the top of the screen again.

2.3 No Basemap

If no basemap is specified in Preferences or when the program is first run, the main window will display a list of projects as shown below. A project can be opened by double-clicking it in the list or by highlighting it and selecting *Popup > Open*.



Project Name	Project ID	Status	Client	Street	City	State/Province	Country	Postal Code
Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter
Boring and Well Examples	Boring and Well Examples	Active - Unknown						
EDMS Example	EDMS Example	Active - Unknown						
GDMS Example	GDMS Example	Active	GAEA					
Geoenvironmental Project	Geoenvironmental Project	Active						

WinLoG RT

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Chapter 3 Projects

Chapter 3 Projects

Projects are the primary building block of WinLoG RT and are used to encapsulate all the data in the application. A wide variety of data can be stored in a project. The sections below describe how to manage projects, import data into projects, and export data from projects.

3.1 Project Management

The initial display of WinLoG RT will consist of a basemap (or project list) and sidebars on the left and right. The basemap shows your existing projects and any GIS data contained in the basemap. To the left of the basemap, the sidebar usually shows a list of your projects. And the right sidebar usually shows a list of layers in the basemap and an index map. Prior to use projects must either be created or imported. After this they can be selected from the basemap or sidebar and edited.

On the project tree sidebar, projects can be grouped into categories and subcategories. These groupings can be used to sort projects by things such as year, office, and client. The creation and editing of these categories and subcategories is described in the section on editing project categories 143 below.

Projects can be assigned to a category or subcategory when they are created 118 or edited.

3.1.1 Creating a Project

There are two types of projects, georeferenced or local. Georeferenced projects have GIS based coordinates, normally in decimal degrees, and can be seen on basemaps.Whereas, local projects have coordinates in feet or meters and are not shown on basemaps.

Georeferenced Project

If the project is to be georeferenced, the area of the basemap where the project is located should be zoomed in on first before creating the project. To assign the project to a category or subcategory on the project tree, highlight the category or subcategory first and then create the project. To create a new georeferenced project either select *File > New > Project > Georeferenced* or click the New button on the main toolbar and select *Project > Georeferenced*.

After this you will need to specify the boundaries of the project on the basemap. To do this click the left mouse button at each of the points on the project boundary, then double click or right click when done. Projects can be square or polygonal. The New Project form will then be displayed. This form has five tabs for a georeferenced project as described in the sections below.

Local Project

To create a new local project either select *File > New > Project > Local* or click the New button on the main toolbar and select *Project > Local*. The New Project form will then be displayed. This form has four tabs for a local project as described in the sections below.

3.1.1.1 Project Info Tab

(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be specified on this tab:

Project Number: This is the unique project number.

Project Name: This is the name of the project.

Set Password: Check this box to set a password for the project.

Password: If Set Password is checked the password can be specified,

Client ID: This is an optional client identification.

Client Name: This an optional client name.

Address: This is the street address of the project.

City: This is the city of the project.

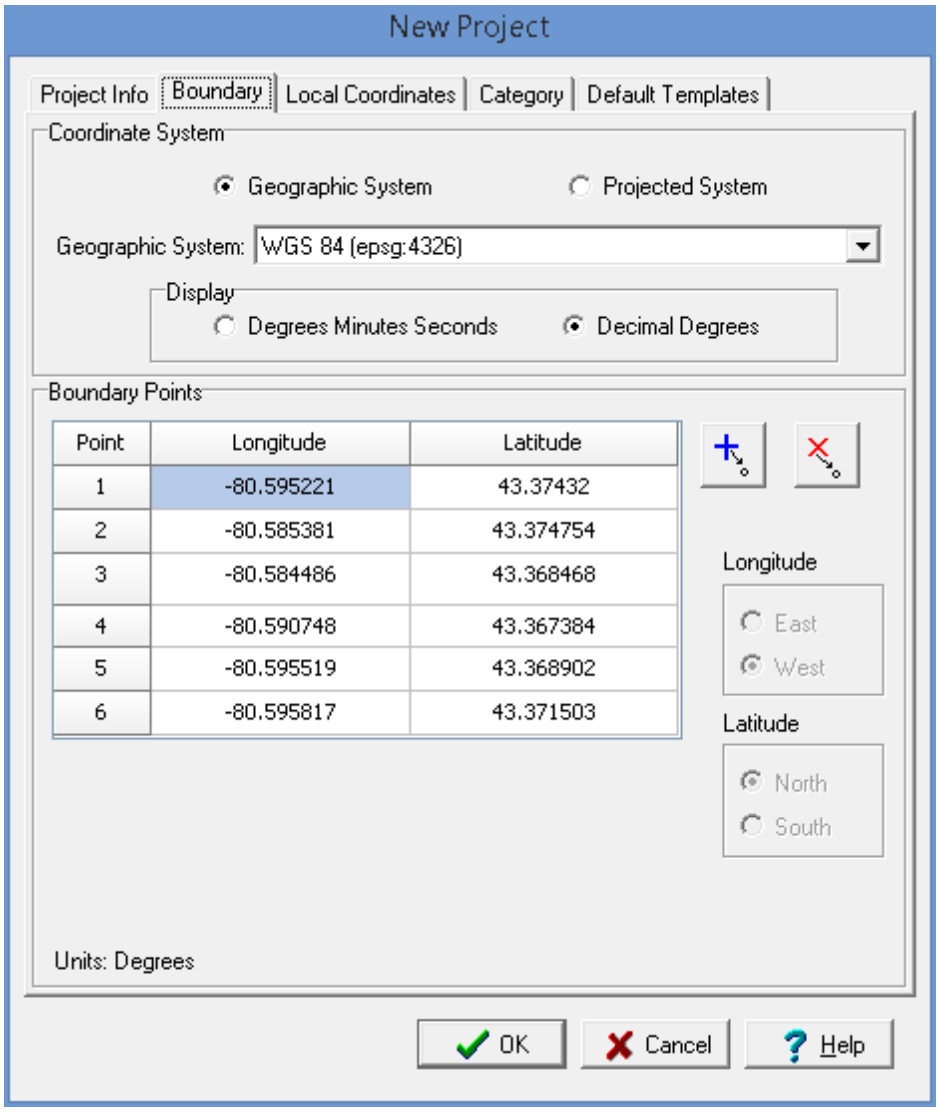
State/Province: This is the state or province of the project.

Country: This is the country of the project.

Postal/ZIP Code: This is the postal or ZIP code of the project.

3.1.1.2 Boundary Tab

This tab is shown for georeferenced projects only.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The default coordinate system for georeferenced projects is the WGS 84 geographic system. Alternate geographic or projected coordinate systems can be selected; however, the coordinates stored in the database will be in the default system.

Coordinate System

Geographic System: Select this to specify the boundary in geographic coordinates.

Projected System: Select this to specify the boundary in projected coordinates.

Coordinate System: This is used to select the geographic or projected coordinate system.

Degrees Minutes Seconds: If the selected coordinate system is geographic, select this to specify the coordinates as degrees, minutes, and seconds.

Decimal Degrees: If the selected coordinate system is geographic, select this to specify the coordinates in decimal degrees.

Boundary Points

Longitude: If it is a geographic coordinate system, this is the longitude of the boundary point in either decimal degrees or degrees, minutes, and seconds.

Latitude: If it is a geographic coordinate system, this is the latitude of the boundary point in either decimal degrees or degrees, minutes, and seconds.

X Coordinates: If it is a projected coordinate system, this is the x coordinate of the boundary point.

Y Coordinates: If it is a projected coordinate system, this is the y coordinate of the boundary point.

Add Point: Press this button to add a point to the boundary.

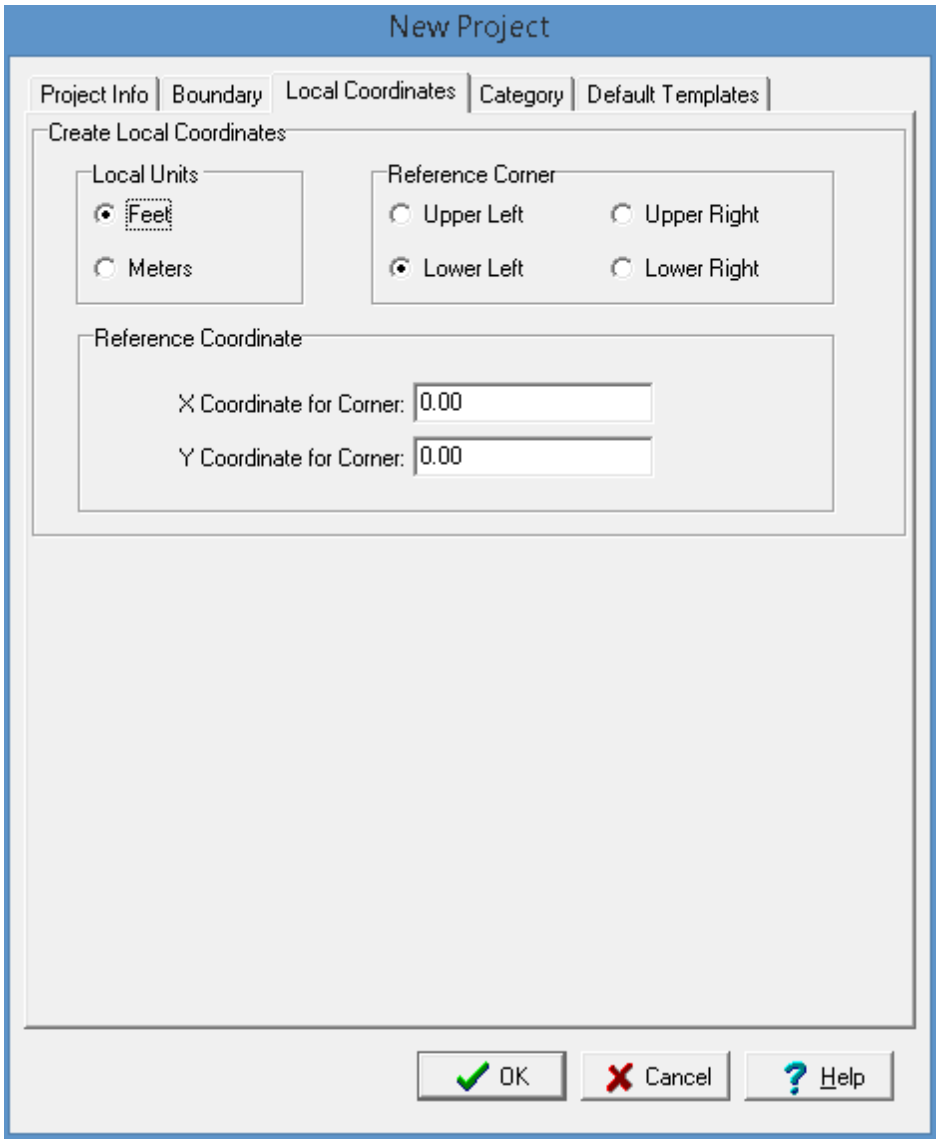
Delete Point: Press this button to delete the selected boundary point.

3.1.1.3 Local Coordinates Tab

The information on the local coordinates tab will depend on whether it is a local or georeferenced project.

3.1.1.3.1 Georeferenced

If the project is a georeferenced project the map coordinates will be in decimal degrees. For display in 3D local coordinates in either feet or meters will need to be assigned. Changing the local coordinates for a project after it has been created is not advisable using this tab, since only project coordinates will be changed and not the borehole or well coordinates. If it is necessary to change the coordinates after boreholes or wells have been created the Assign Local Coordinates 141 function should be used.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be specified on this tab:

Local Units: Select either feet or meters.

Reference Corner: Select the corner of the project to use as a reference. The x and y coordinates below will be assigned to this corner.

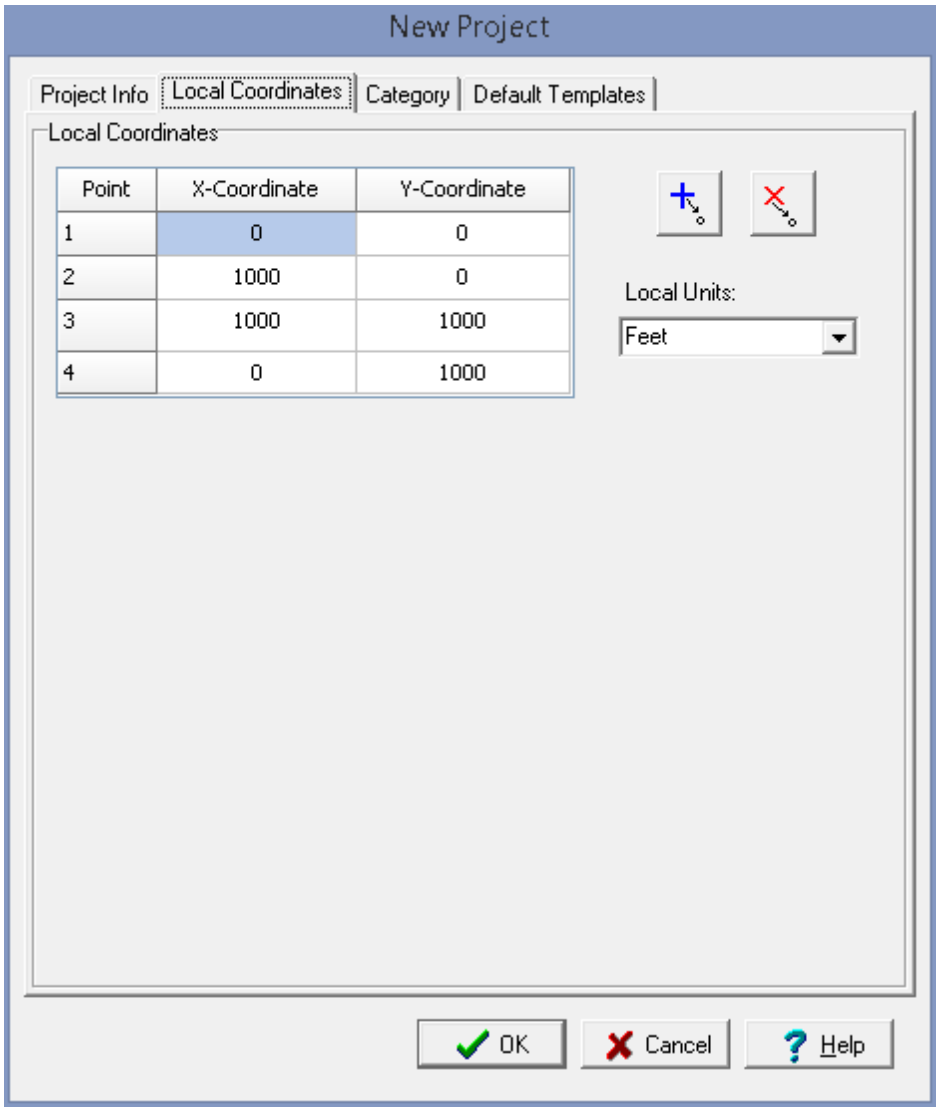
X Coordinate to Corner: This is the x coordinate of the reference corner.

Y Coordinate to Corner: This is the y coordinate of the reference corner.

3.1.1.3.2 Local

If the project is a local project the coordinates will be either feet or meters. Changing the local coordinates for a project after it has been created is not advisable using this tab, since only project

coordinates will be changed and not the borehole or well coordinates. If it is necessary to change the coordinates after boreholes or wells have been created the Assign Local Coordinates 141 function should be used.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be specified on this tab:

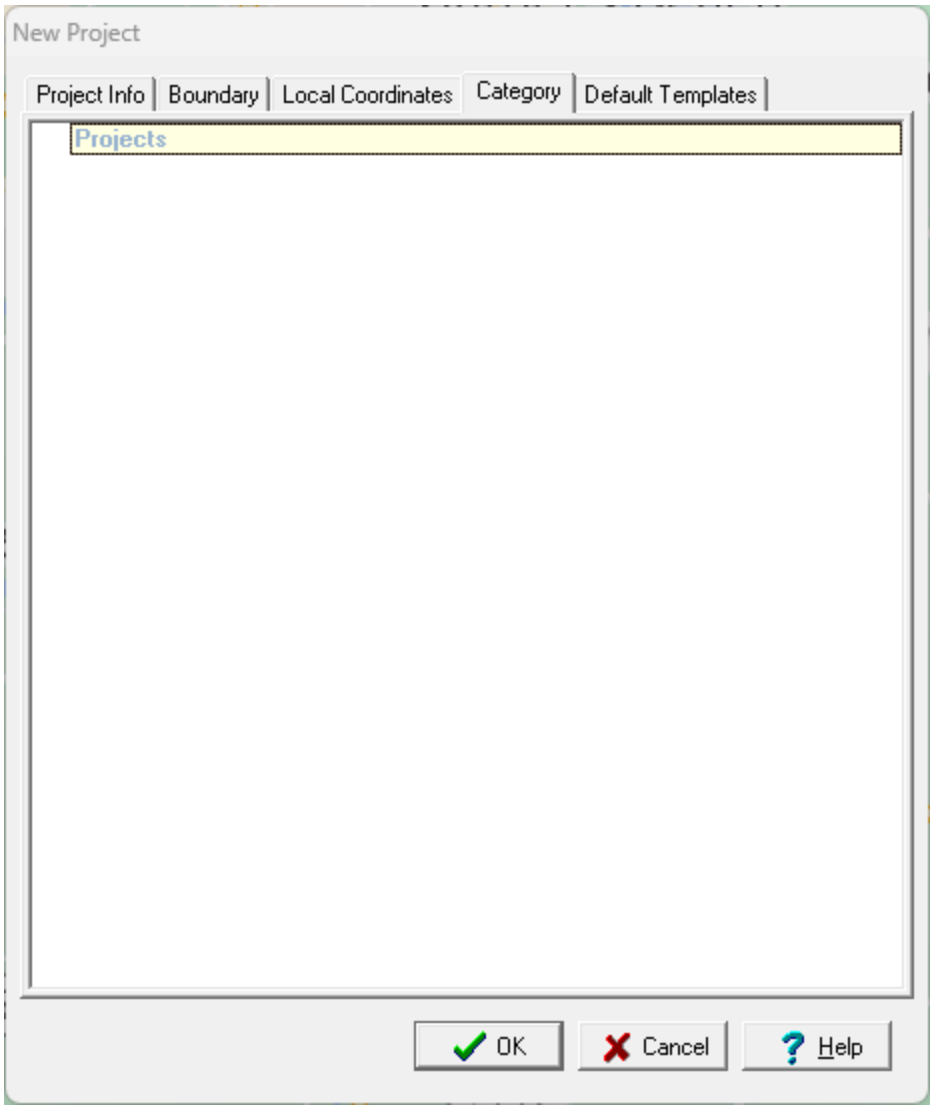
Local Units: Select either feet or meters.

X-Coordinate: This is the x-coordinate of the boundary point.

Y-Coordinate: This is the y-coordinate of the boundary point.

On the right side of the tab there are buttons to add and delete points.

3.1.1.4 Category Tab



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

Highlight the category or subcategory to assign the project to on the project tree. To create a project that uses a specific type of data, such as MEWS, select the subcategory in the Data Specific category.

3.1.1.5 Default Templates Tab

(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be specified on this tab:

Boring/Well: Select the default template to use when creating a boring/well.

3.1.2 Locating a Project

Georeferenced projects can be located on the basemap by clicking on the project in the sidebar and then selecting *Popup > Locate*. The basemap will then be zoomed in so that the project can easily be identified.

3.1.3 Opening a Project

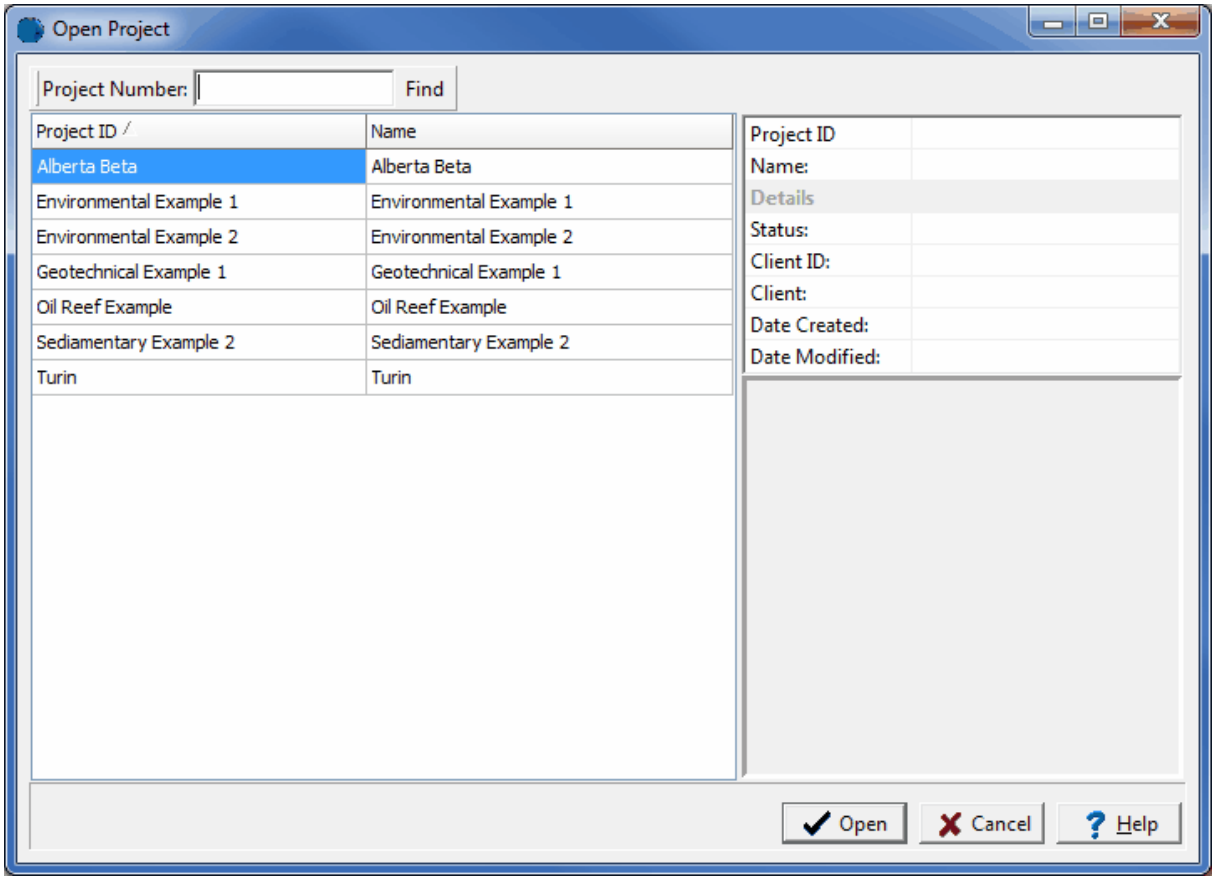
Projects can either be opened by selecting them from a list or selecting them on the sidebar.

Selecting from the Sidebar

To select the project from the sidebar either click on it once and then select *Popup > Open* or double-click on the project on the sidebar.

Selecting from a List

To select the project from a list either select *File > Open > Project* or click on the Open button on the main toolbar and select Project. The Open Project form below will then be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

On the left of this form is a list of projects and on the right side of the form the details of the highlighted project are shown. At the top of the form is a toolbar that can be used to find a project by specifying the project number. To select a project to open, highlight it and then click on the Open button.

3.1.4 Editing a Project

The location maps used for projects are derived from basemaps and form part of the GIS. When a project is created all of the layers in the basemap are automatically included in the project map. In addition, layers for boring/well and annotation are also added.

After a project has been created or opened; additional layers and annotation can be added, the default templates changed, and the display of the project can be adjusted as described in the sections below.

The project is also used to create and open boring/wells. The details of the creation and use of these objects is described in chapter Chapter 4 214.

The project information, local coordinates, category, address, and default templates can be edited by selecting *Edit > Project Information*. The Project Information form will be displayed and can edited as described in Creating a Project 118.

3.1.4.1 Adding Layers

Additional layers can also be added to the project map that are not part of the basemap. These layers may include aerial photos, satellite images, and CAD drawings. The methodology for working with layers is the same as for basemaps and is described in that section.

3.1.4.2 Working with Annotation

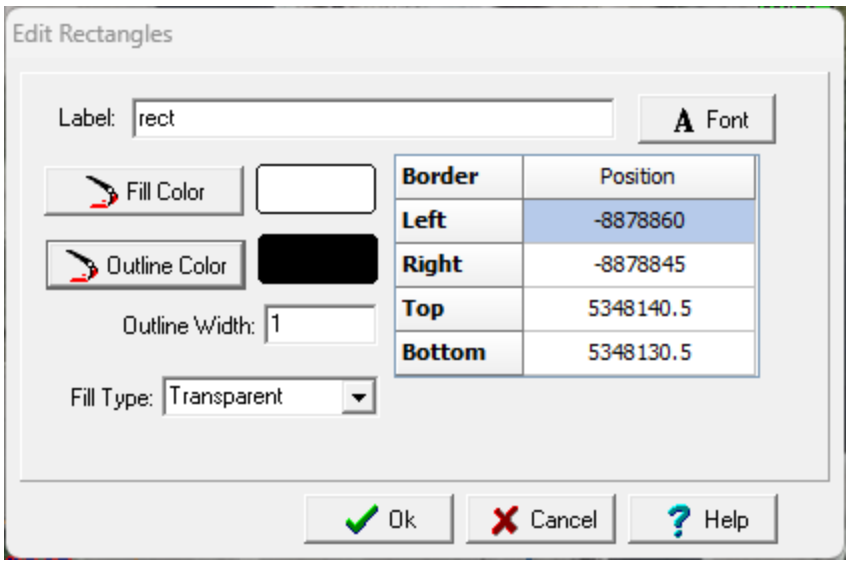
In addition to layer data a variety of annotation can be added, edited, and deleted using the Edit menu or Edit toolbar.

Rectangles, polygons, polylines, and points can be placed anywhere on the project and used to show and describe features of the project.

3.1.4.2.1 Rectangles

Adding

Rectangles can be added to the project using either *Edit > Rectangles > Add* or clicking on the Add option of the Rectangle button menu. You will then need to draw the extents of the rectangle on the map by clicking on one corner and then while holding down the mouse button move the mouse to opposite corner and then release the button. After this the Edit Rectangle form below will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be specified on this form:

Label: This is an optional label for the rectangle.

Fill Color: Click this button to adjust the color of the fill.

Outline Color: Click this button to adjust the color of the outline.

Outline Width: This is the width of the line used to draw the rectangle.

Fill Type: This is used to select the fill style, either solid or transparent.

Position: This is the position of the rectangle on the map.

Font: This is used to change the font used for the labels 133. The same font is used for all annotation (rectangles, polygons, polylines, and points) labels.

Editing

Existing rectangles can be edited using either *Edit > Rectangles > Edit* or clicking on the Edit option of the Rectangle button menu. After this the rectangle to be edited should be clicked on, the Edit Rectangles form above will then be displayed.

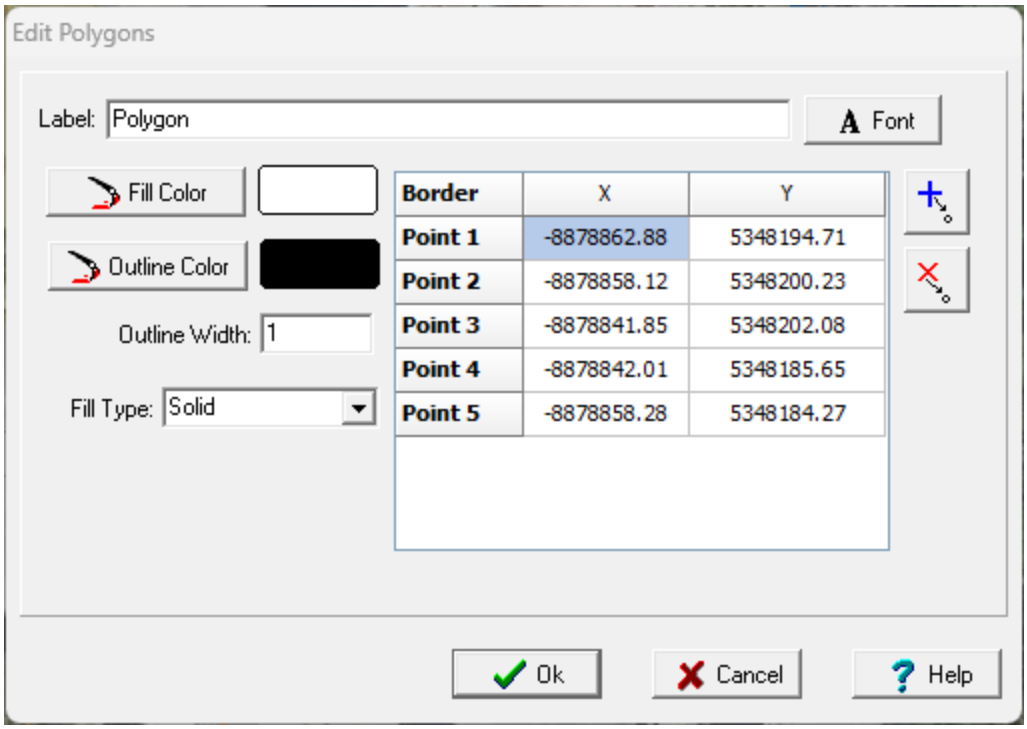
Deleting

Rectangles can be deleted using either *Edit > Rectangles > Delete* or clicking on the Delete option of the Rectangle button menu. After this you will need to select the rectangle to delete by clicking on it with the mouse.

3.1.4.2.2 Polygons

Adding

Polygons can be added to the map using either *Edit > Polygons > Add* or clicking on the Add option of the Polygon button menu. You will then need to draw the vertices of the polygon on the map by clicking on them with the mouse. After this the Edit Polygon form below will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be specified on this form:

Label: This is an optional label for the polygon.

Fill Color: Click this button to adjust the color of the fill.

Outline Color: Click this button to adjust the color of the outline.

Outline Width: This is the width of the line used to draw the rectangle.

Fill Type: This is used to select the fill style, either solid or transparent.

X and Y Position: This is the position of the points of the polygon.

Font: This is used to change the font used for the labels 133. The same font is used for all annotation (rectangles, polygons, polylines, and points) labels.

The buttons on the right side of the form can be used to add and remove points in the polygon.

Editing

Existing polygons can be edited using either *Edit > Polygons > Edit* or clicking on the Edit option of the Polygon button menu. After this the polygon to be edited should be clicked on, the Edit Polygons form above will then be displayed.

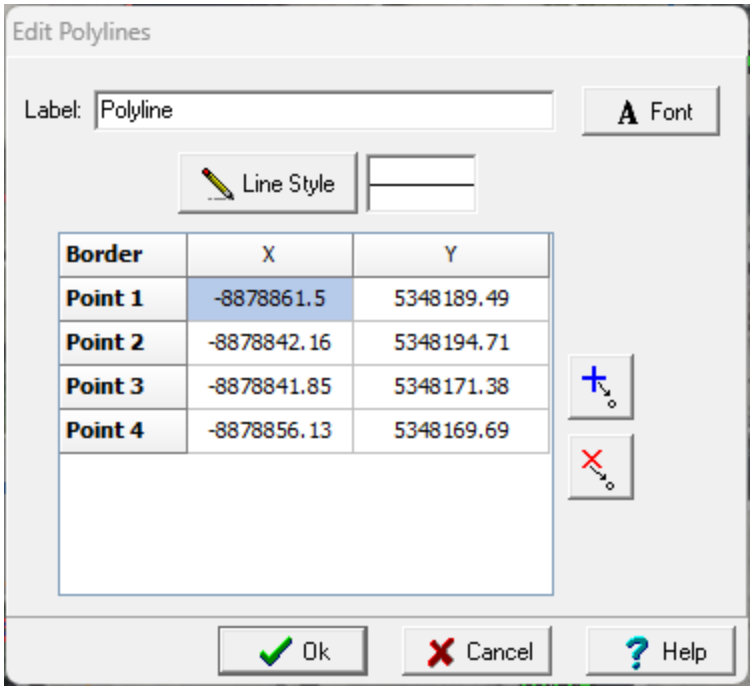
Deleting

Polygons can be deleted from the map using either *Edit > Polygons > Delete* or clicking on the Delete option of the Polygon button menu. After this you will need to select the polygon to delete by clicking on it with the mouse.

3.1.4.2.3 Polylines

Adding

Polylines can be added to the map using either *Edit > Polylines > Add* or clicking on the Add option of the Polyline button menu. You will then need to draw the vertices of the polyline on the map by clicking on them with the mouse. After this the Edit Polyline form below will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be specified on this form:

Label: This is an optional label for the polyline.

Line Style: This is the style of line used to draw the polyline.

X and Y Position: This is the position of the points of the polyline.

Font: This is used to change the font used for the labels 133. The same font is used for all annotation (rectangles, polygons, polylines, and points) labels.

The buttons on the right side of the form can be used to add and remove points in the polyline.

Editing

Existing polylines can be edited using either *Edit > Polylines > Edit* or clicking on the Edit option of the Polyline button menu. After this the polyline to be edited should be clicked on, the Edit Polyline form above will then be displayed.

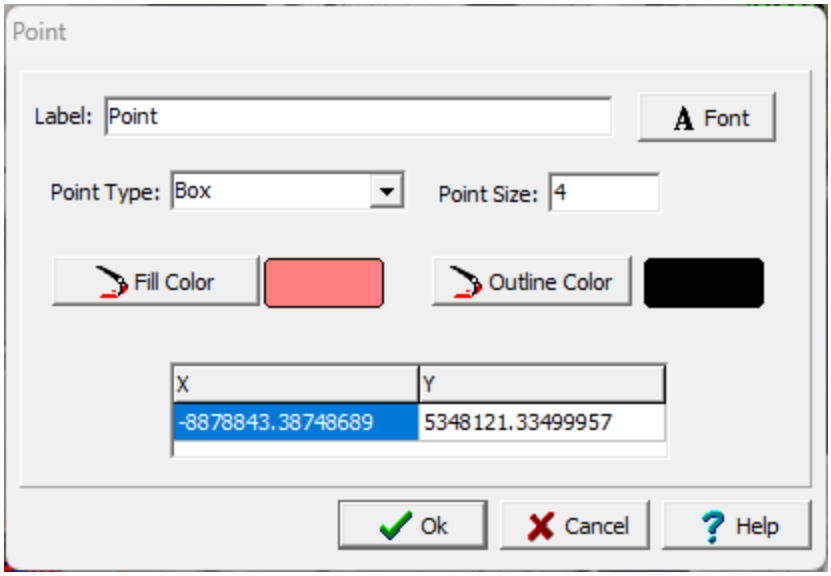
Deleting

Polygons can be deleted from the map using either *Edit > Polylines > Delete* or clicking on the Delete option of the Polyline button menu. After this you will need to select the polyline to delete by clicking on it with the mouse.

3.1.4.2.4 Points

Adding

Points can be added to the map using either *Edit > Points > Add* or clicking on the Add option of the Points button menu. You will then need to click on the center of the point on the map. After this the Edit Point form below will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be specified on this form:

Label: This is an optional label for the point.

Point Type: This is used to select the type of point (circle, box, cross, triangle up, triangle down, triangle left, or triangle right).

Point Size: This is the size of the point.

Fill Color: Click this button to adjust the color of the fill.

Outline Color: Click this button to adjust the color of the outline.

Position: This is the position of the point on the map.

Font: This is used to change the font used for the labels 133. The same font is used for all annotation (rectangles, polygons, polylines, and points) labels.

Editing

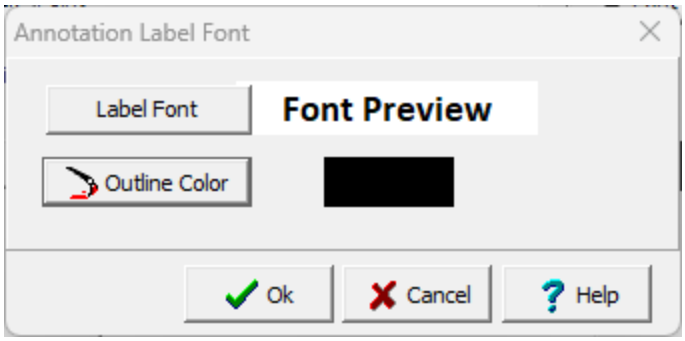
Existing points can be edited using either *Edit > Points > Edit* or clicking on the Edit option of the Point button menu. After this the point to be edited should be clicked on, the Edit Point form above will then be displayed.

Deleting

Points can be deleted using either *Edit > Points > Delete* or clicking on the Delete option of the Point button menu. After this you will need to select the point to delete by clicking on it with the mouse.

3.1.4.2.5 Label Font

The same font is used for all annotation (rectangles, polygons, polylines, and points) labels.



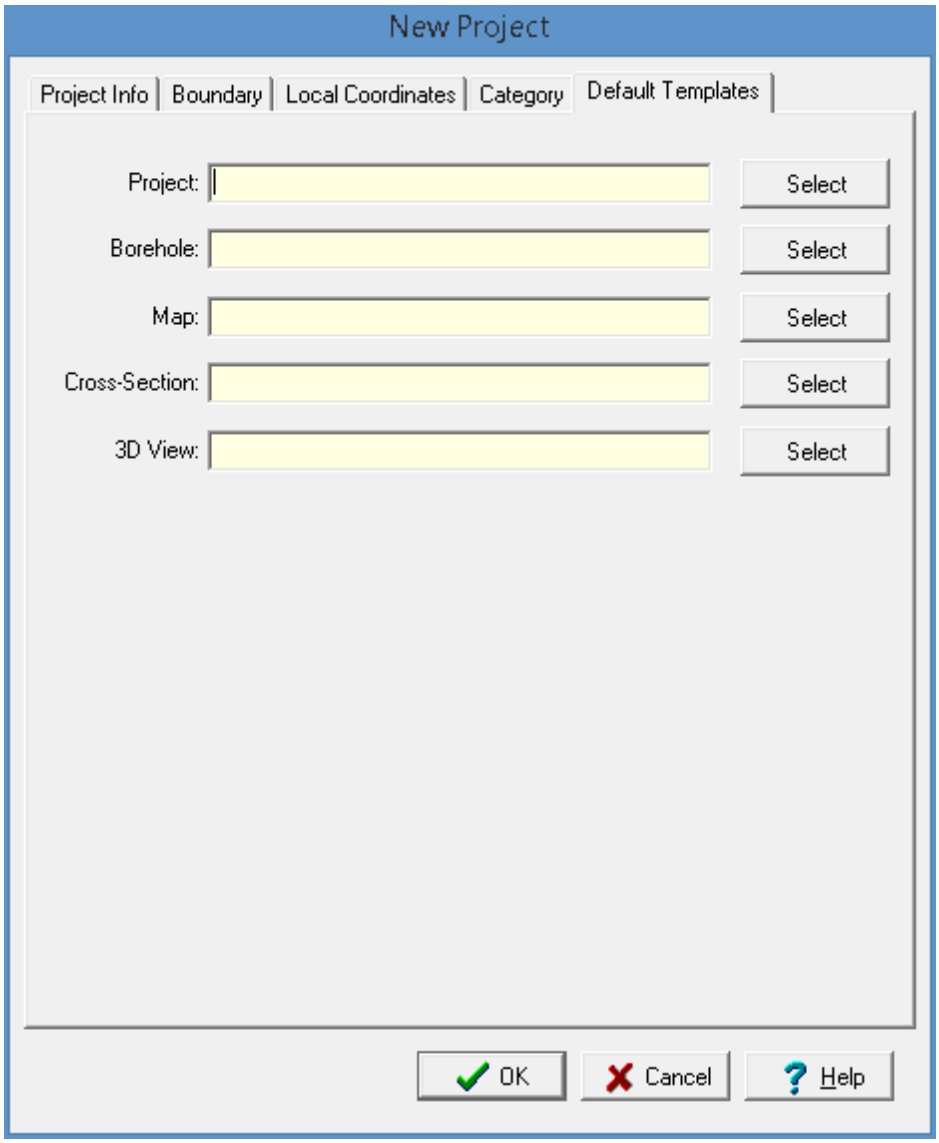
The following information can be specified on this form:

Label Font: Click this button to change the font for the labels.

Outline Color: Click this button to change the outline color of the font. To specify no outline set the outline color the same as the font color.

3.1.4.3 Changing the Default Templates

To change the default templates for a project select *Edit > Project Information*, the Project Information form below will be displayed. The templates can be changed on the Templates tab. The creation and editing of these templates is described in the Page Templates section.



The following information can be specified on this tab:

Project: Select the default template to use when creating a page layout for the project.

Boring/Well: Select the default template to use when creating a boring/well.

Map: Select the default template to use when creating a page layout for a map.

Cross-section: Select the default template to use when creating a page layout for a cross-section.

3D View: Select the default template to use when creating a page layout for a 3D view.

3.1.4.4 Changing the Default Templates

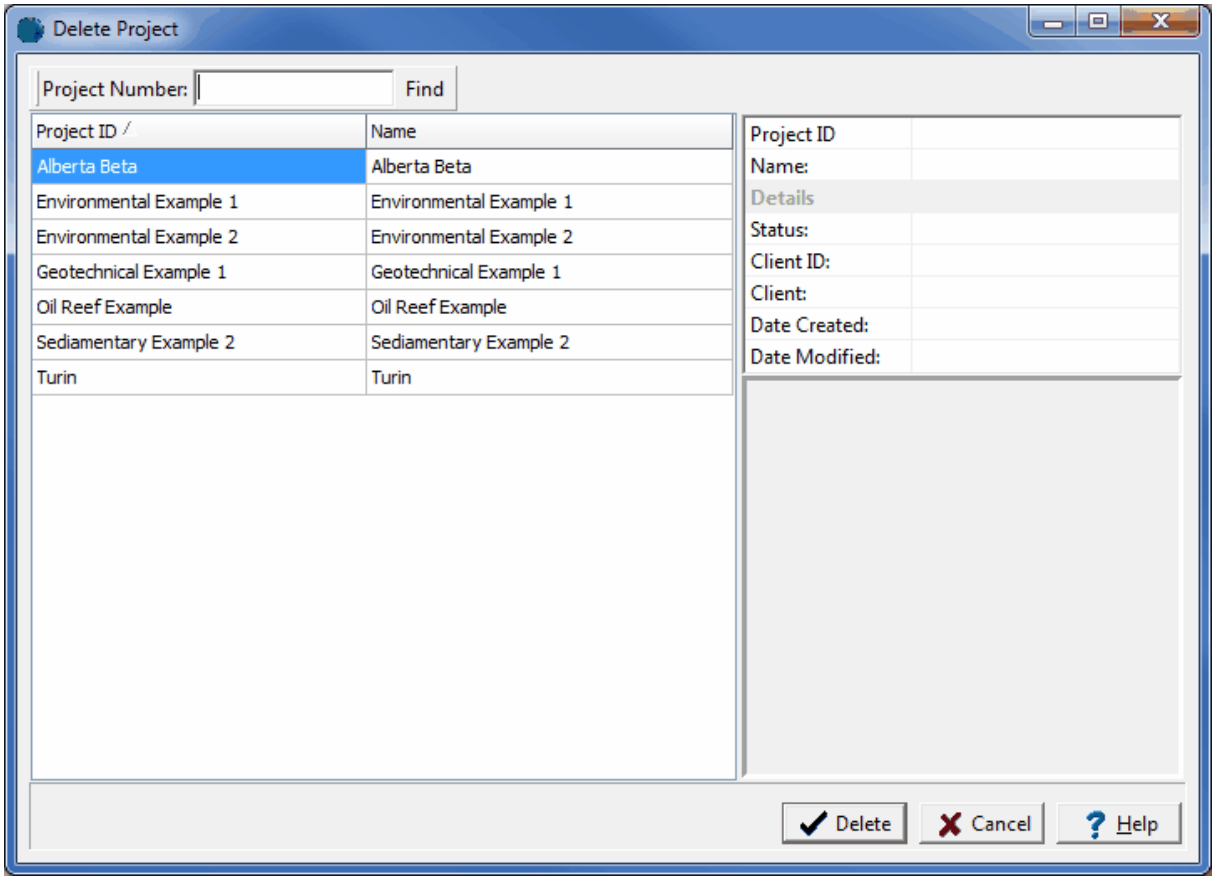
To change the default templates for a project select *Edit > Project Information*, the Project Information form below will be displayed. The templates can be changed on the Templates tab. The creation and editing of these templates is described in the Page Templates section.

The following information can be specified on this tab:

Boring/Well: Select the default template to use when creating a boring/well.

3.1.5 Deleting a Project

An existing project can be deleting by selecting *File > Delete > Project*. The Delete Project form below will be displayed.



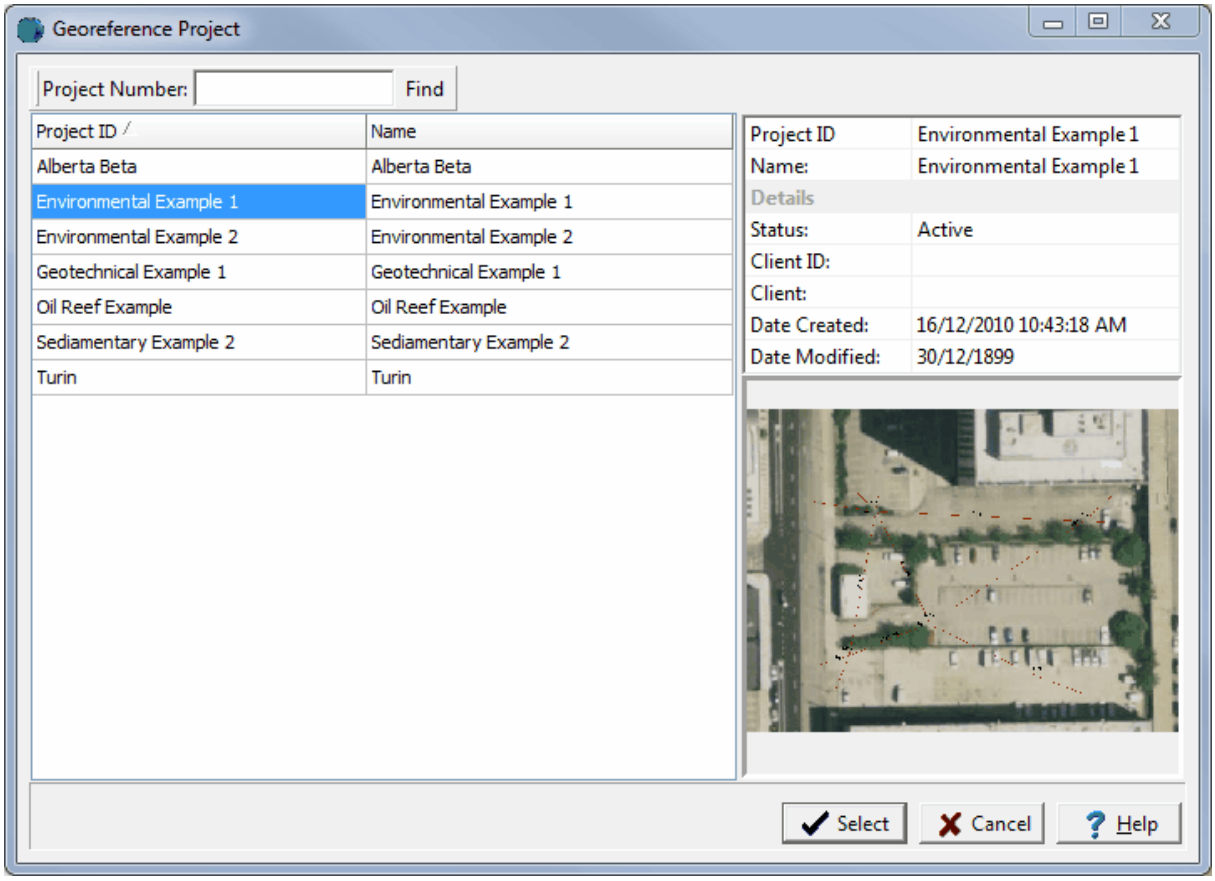
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

On the left of this form is a list of projects and on the right side of the form the details of the highlighted project are shown. At the top of the form is a toolbar that can be used to find a project by specifying he project number. To select a project to delete, highlight it and then click on the Delete button.

3.1.6 Georeferencing a Project

When projects are imported or created their spatial reference may not be known at the time of import. Georeferencing specifies a spatial location on the basemap for the project. Georeferencing can either be done manually or the location of the project can be located on the basemap.

To georeference a project on the basemap, select either *Tools > Projects > Georeference on Map* or *Tools > Projects > Georeference Manually*. The Georeference Project form below will be displayed where you can select the project to be georeferenced.



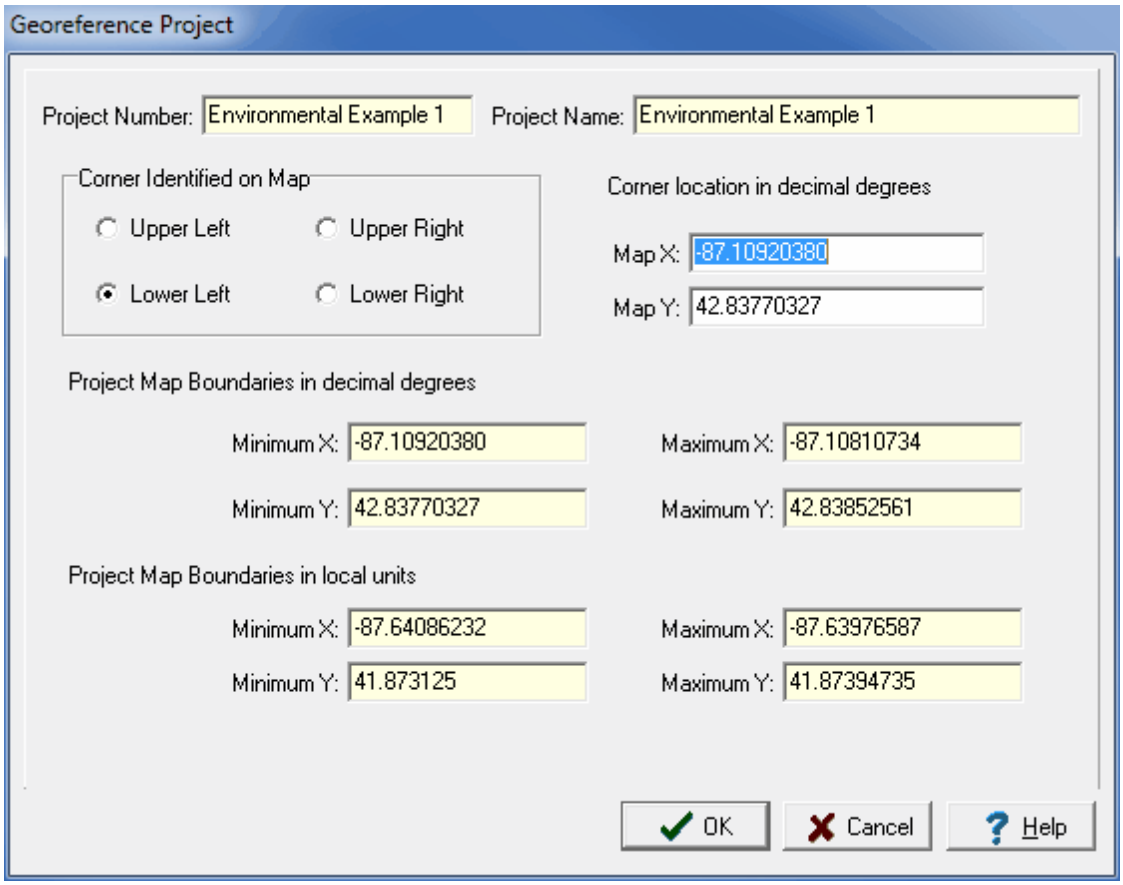
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

On the left of this form is a list of projects and on the right side of the form the details of the highlighted project are shown. At the top of the form is a toolbar that can be used to find a project by specifying he project number. To select a project to georeference, highlight it and then click on the Select button.

The sections below describe the different methods for georeferencing a project.

3.1.6.1 Georeferencing to a Point

If the project is to be georeferenced to a point on the map you will then need to click on the basemap at one of the corners of the project. After this the Georeference Project form below will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be specified on this form:

Corner Identified on Map: This is the corner of the project that was used to identify the location on the basemap.

Map X: This is the X location, normally longitude, for the corner on the basemap.

Map Y: This is the Y location, normally latitude, for the corner on the basemap.

Local Project Units: This is the local units for the project. If the project has already been georeferenced and is only being re-positioned this will not appear.

The following information can be viewed on this form:

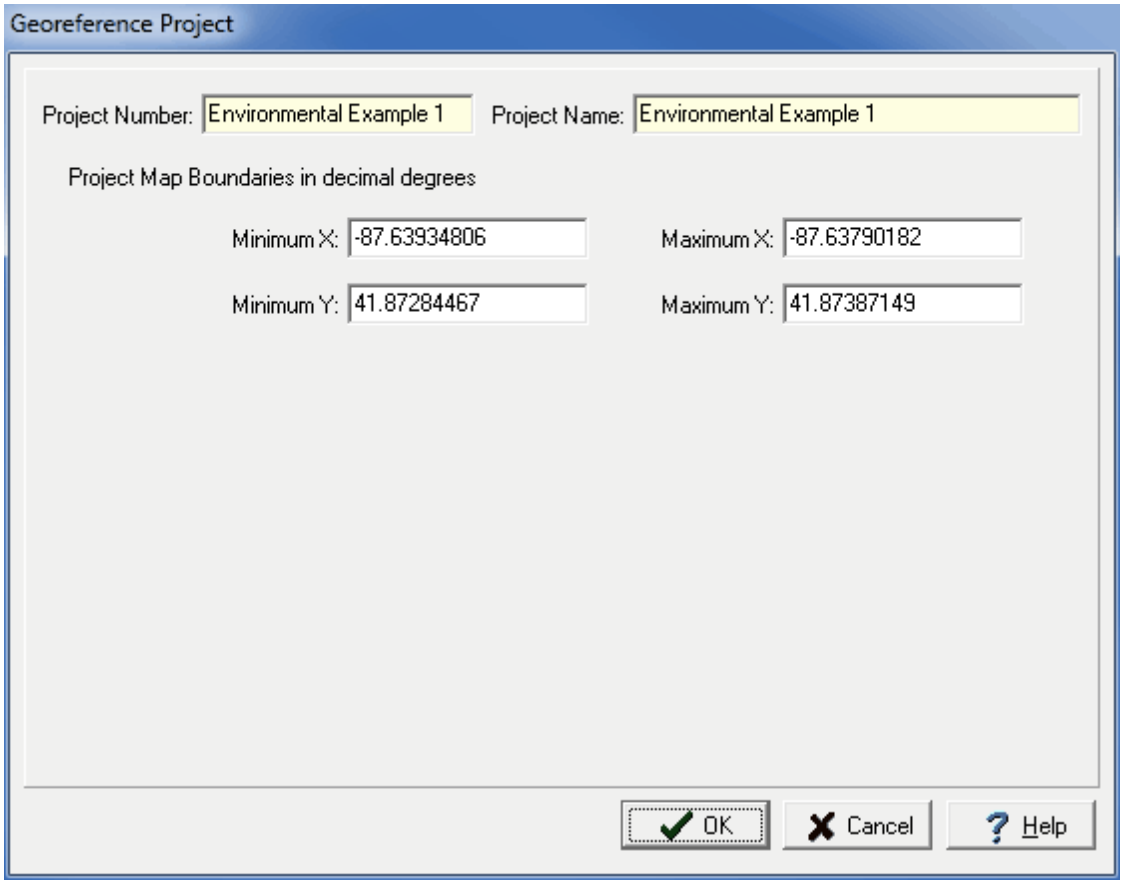
Project Number: This is the project number.

Project Name: This is the project name.

Project Map Boundaries: These are the project's boundaries on the basemap in map and local units. These boundaries will change as the corner identified on the map is changed.

3.1.6.2 Georeferencing to an Area

If the project is to be georeferenced to an area on the map you will then need to click on the basemap at one of the corners of the project and then while holding down the mouse button drag the cursor to the opposite corner and release the button. After this the Georeference Project form below will be displayed. The locations of the borings, wells, and cross-sections will be adjusted to within the new project area relative to the center of the project area.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be viewed on this form:

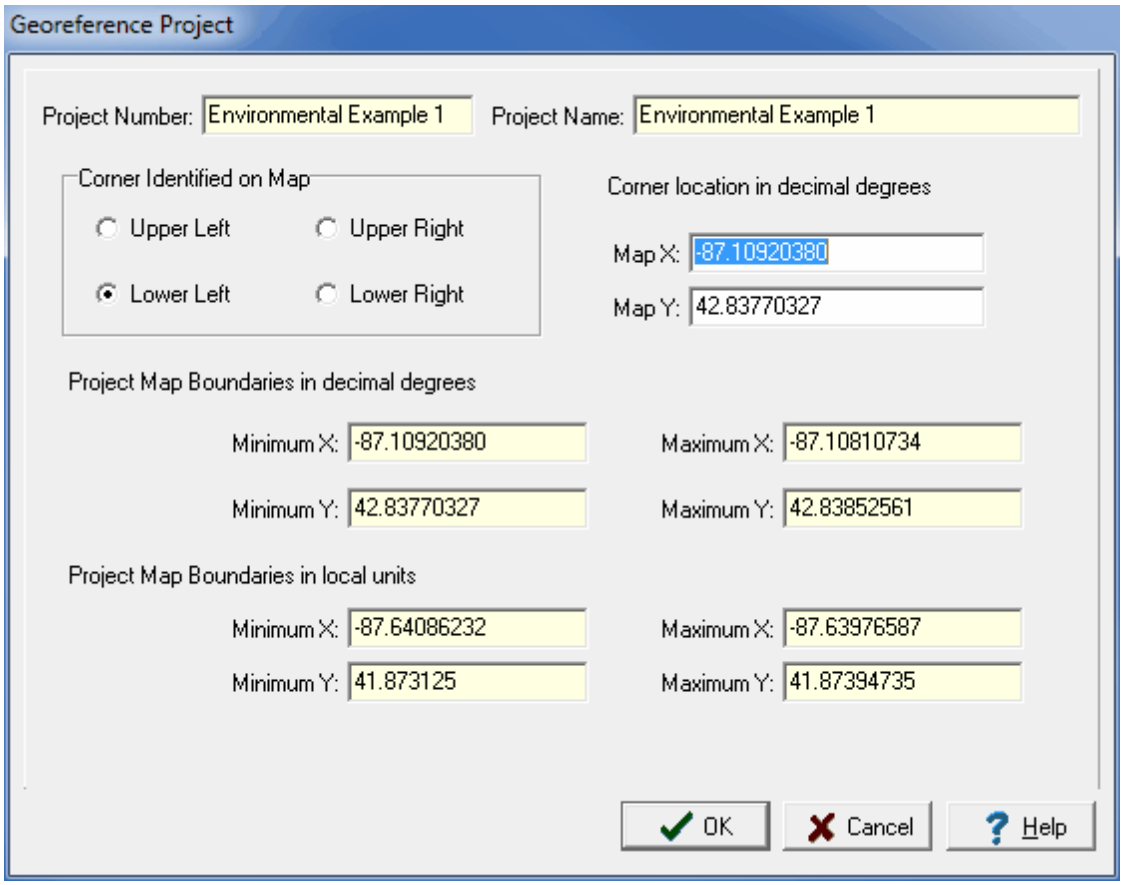
Project Number: This is the project number.

Project Name: This is the project name.

Project Map Boundaries: These are the project's boundaries on the basemap in map units.

3.1.6.3 Georeferencing Manually

After the project has been selected. the Georeference Project form below will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be specified on this form:

Project Number: This is the project number.

Project Name: This is the project name.

Project Map Boundaries: These are the project's boundaries on the basemap in map and local units. These boundaries will change as the corner identified on the map is changed.

Corner Identified on Map: This is the corner of the project that was used to identify the location on the basemap.

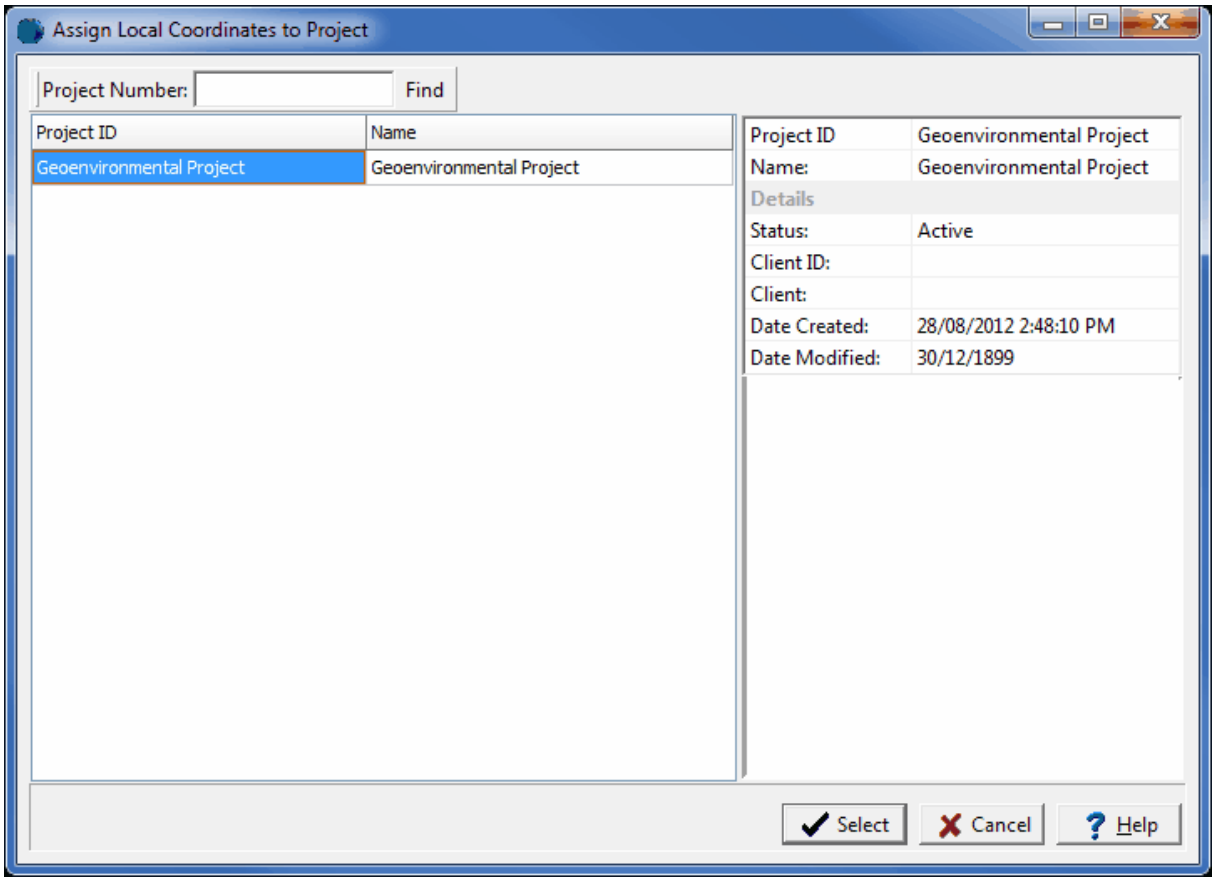
Map X: This is the X location, normally longitude, for the corner on the basemap.

Map Y: This is the Y location, normally latitude, for the corner on the basemap.

Local Project Units: This is the local units for the project. If the project has already been georeferenced and is only being re-positioned this will not appear.

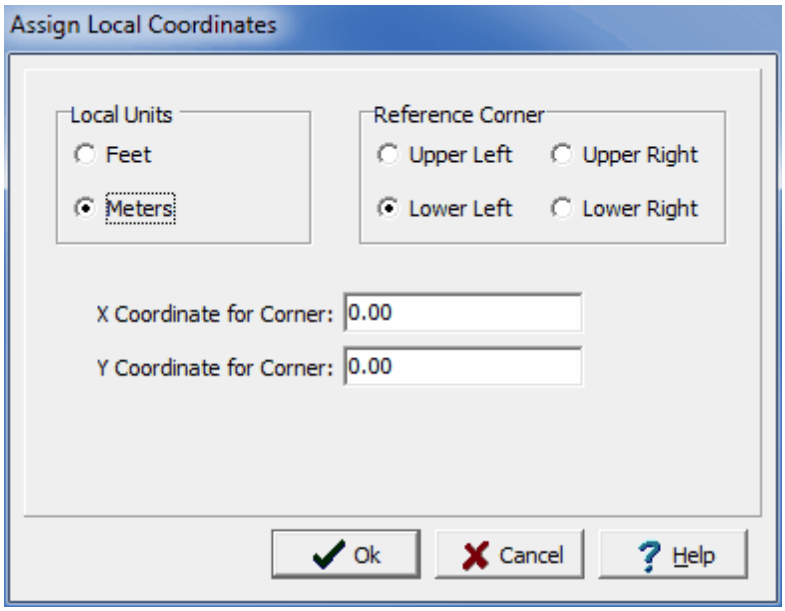
3.1.7 Assigning Local Coordinates

If the project is a georeferenced project the map coordinates will be in decimal degrees, for display in 3D local coordinates either feet or meters will need to be assigned. Sometimes, it may be necessary to assign these local coordinates to a project and its boreholes after the project has been created or imported. To do this select *Tools > Projects > Assign Local Coordinates*. The select project form below will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

Use this form to select the project and then press the Select button. The Assign Local Coordinates form below will be displayed.



The following information can be specified on this form:

Local Units: Select either feet or meters.

Reference Corner: Select the corner of the project to use as a reference. The x and y coordinates below will be assigned to this corner.

X Coordinate to Corner: This is the x coordinate of the reference corner.

Y Coordinate to Corner: This is the y coordinate of the reference corner.

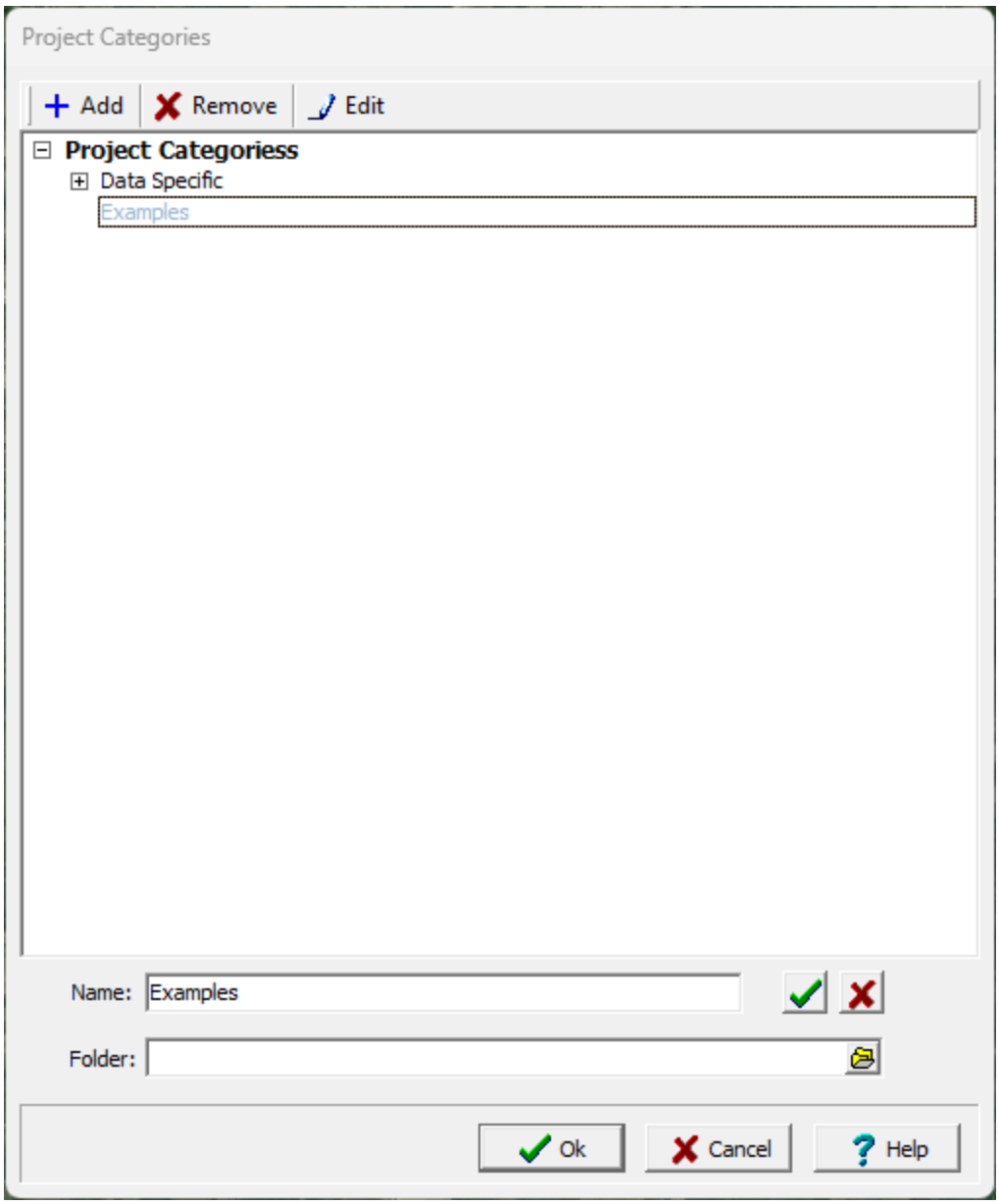
After the Ok button is pressed the local coordinates will be assigned to the project and its boreholes and wells.

3.1.8 Editing Project Categories

Project categories can be used to group similar projects together. They can be organized by office, client, year, etc. If the option to Use Project Storage is checked in Preferences the project databases will be stored in the folders specified for the project category. This can be used to store groups of projects in different folders, drives, computers, or networks.

The project categories and subcategories on the project tree on the sidebar can be edited by selecting *Tools > Projects > Edit Project Tree*. The Edit Project Tree Categories form will be displayed. This form displays the project categories and subcategories in tree consisting of nodes and sub-nodes.

There is a category called Data Specific that is used to store projects relating to specific type of data; such as, MEWS (Ontario Ministry of Environment Wastewater System). This category should not be edited.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The buttons at the top of the form can be used for the following:

Add: To add a project category, highlight the Projects node and click on the Add button then enter the name below. To add a project subcategory, highlight the category and click on the Add button then enter the name below.

Edit: To edit a project category or subcategory, highlight it and click on the Edit button.

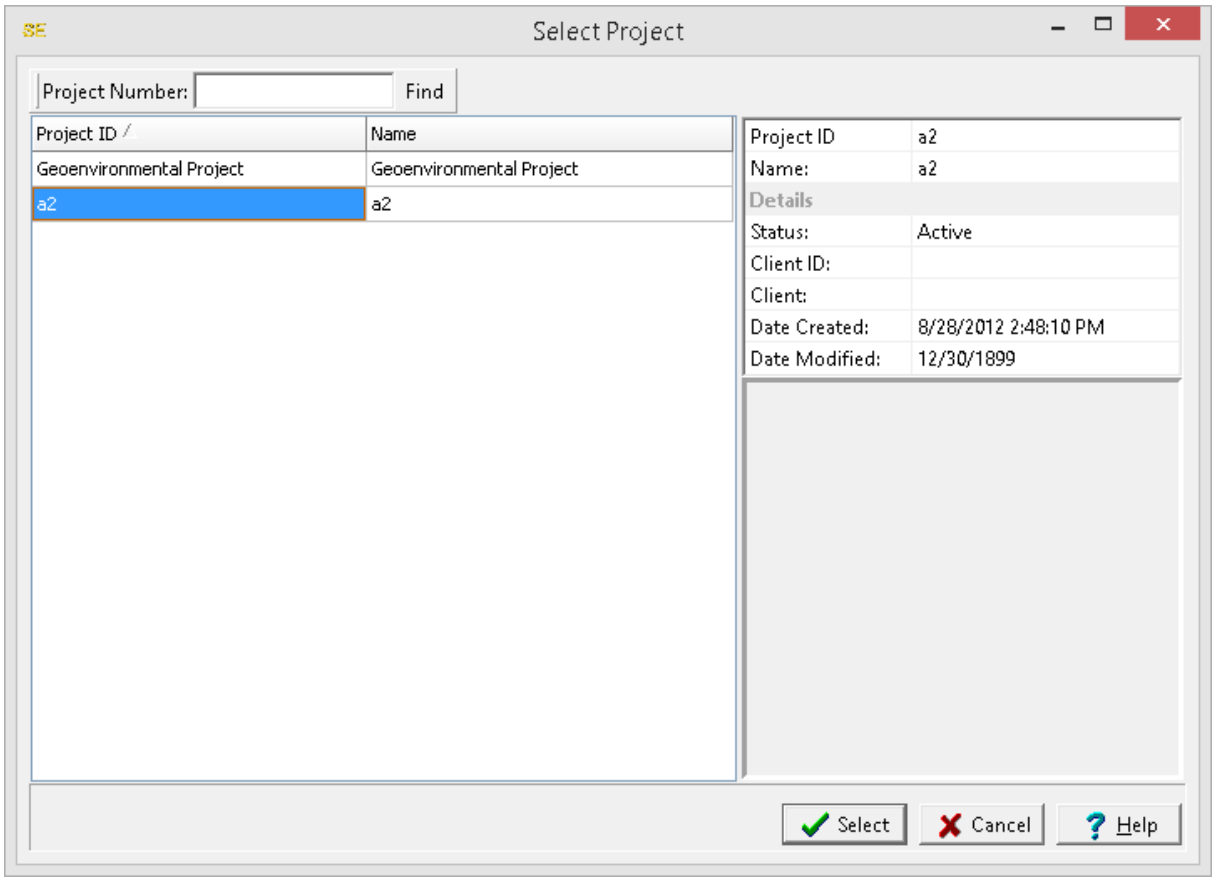
Remove: To remove a project category or subcategory, highlight it and click on the Remove button.

Adding and Editing a Project Category

When adding or editing a project category the name can be specified and if Use Project Storage is specified in Preferences the folder can be specified by clicking on the button on the the right of the folder name. If the folder for the project category is changed you will have the option to move all of the projects in the project category to the new project folder.

3.1.9 Changing a Project Number

The project number is used to uniquely identify all objects associated with the project and should not normally be changed. However, if it is required to be changed the menu item *Edit > Change Project Number* can be used. This menu item i only available when no project is open. When selected the Select Project form below will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

Using this form select the project number to change and press select. The Enter New Project ID and Name form will be displayed.

(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

This form is used to enter the unique new project number and name. After this is entered press the Ok button to finalize the change. The existing project will then be exported to a temporary XML file, then the XML file will be imported with the new project number and name, and finally the old project will be deleted.

3.2 Importing Data

A wide variety of data can be imported into WinLoG RT. In this chapter the importation of entire projects is discussed. The importation of data related to individual boring/wells is discussed in Chapter 4.

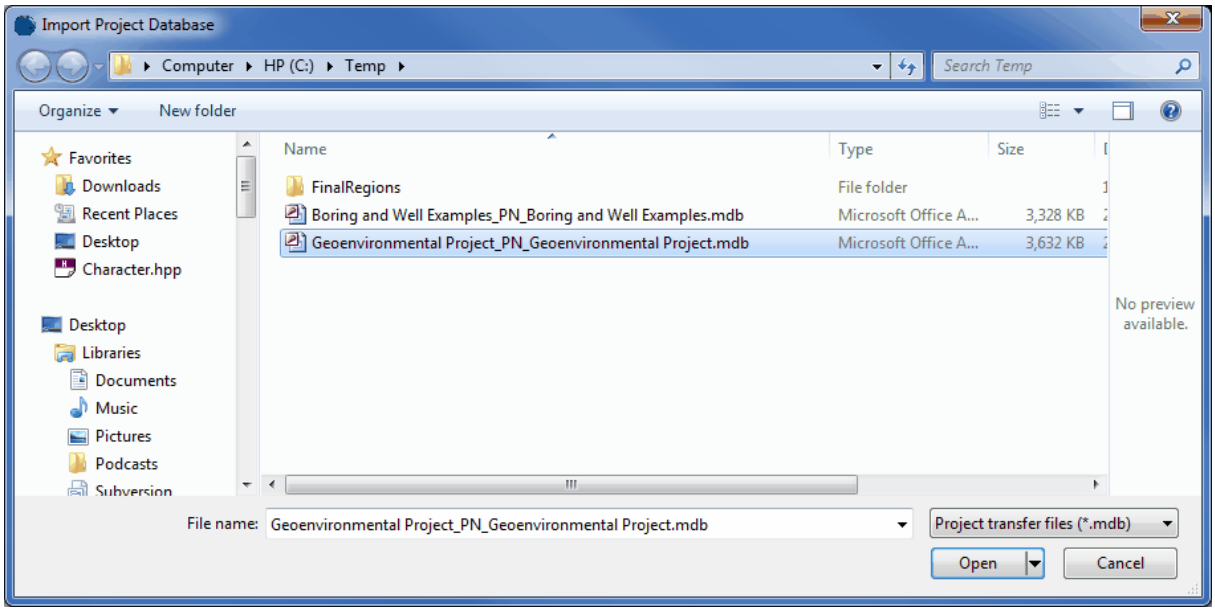
When importing a project, no project can be open at the time. Projects can only be imported when the basemap is being displayed.

3.2.1 Importing WinLoG RT Projects

WinLoG RT projects can be imported from XML Exchange files and Access database files. The format of the XML files is specific to WinLoG RT. In addition, projects can be imported and exported from and to GaeaSynergy. The importation of project files is described in the sections below.

3.2.1.1 Importing Access Project Databases

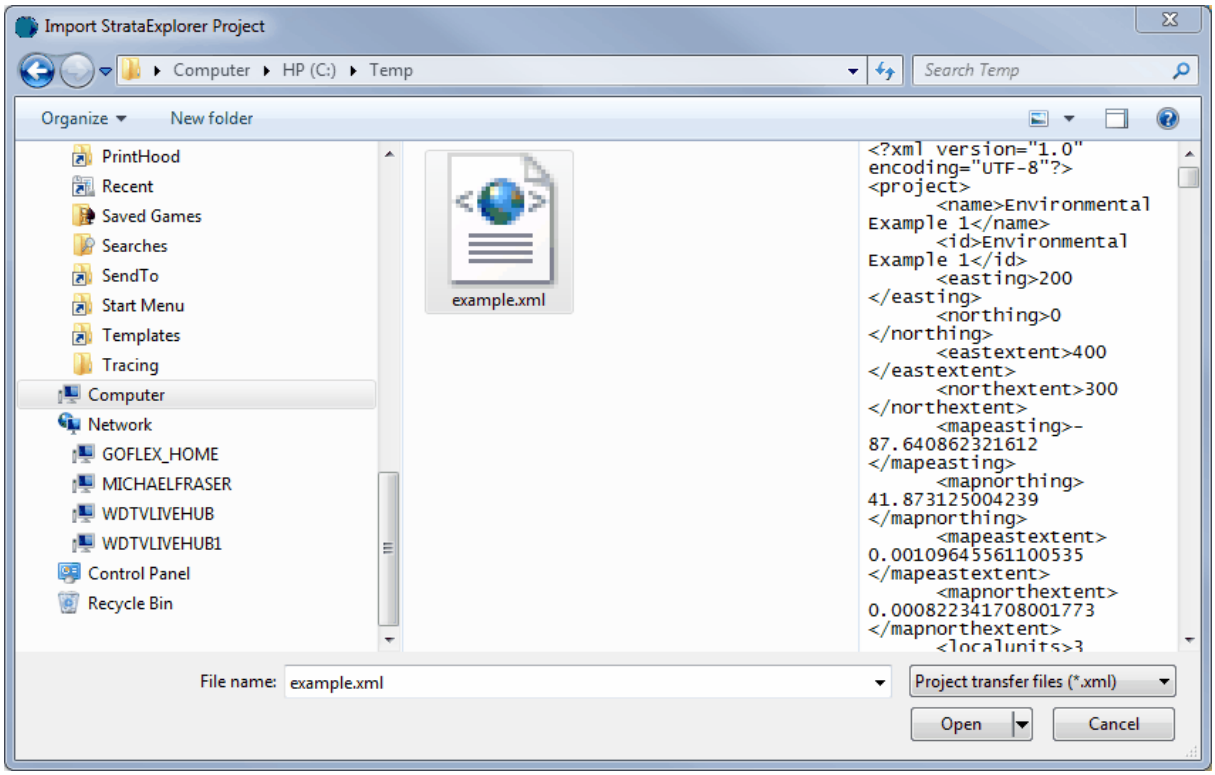
When importing a project, no project can be open at the time. Projects can only be imported when the basemap or project list is being displayed. To import a project database select *File > Import > Project > From MDB*, the Import Project Database form below will be displayed. Use this form select the project database file to be imported.



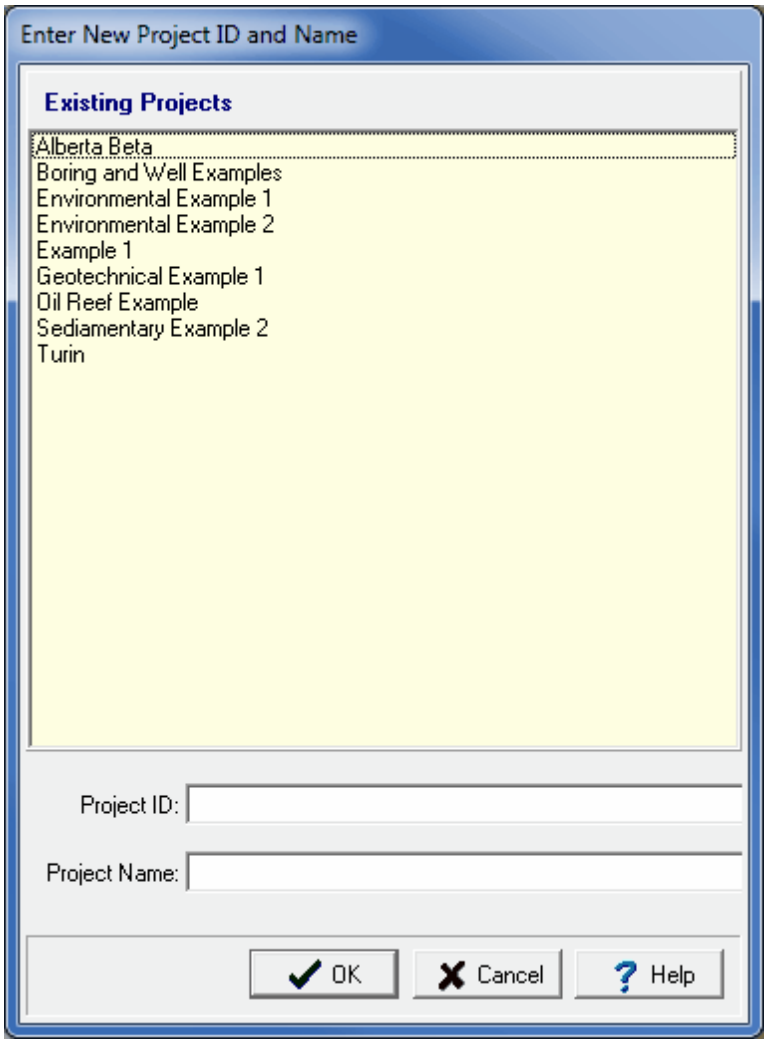
The file name consists of the project ID the text "_PN_" and the project name with the extension ".mdb". The project ID must be unique and can not already exist in WinLoG RT.

3.2.1.2 Importing XML Projects

When importing a project, no project can be open at the time. Projects can only be imported when the basemap or project list is being displayed. To import a project from an XML Exchange file select *File > Import > Project > From XML*, the Import Project form below will be displayed. Use this form select the file to be imported.



If the project number (stored in the file) is already in WinLoG RT a new unique project number will need to be specified using the form below.



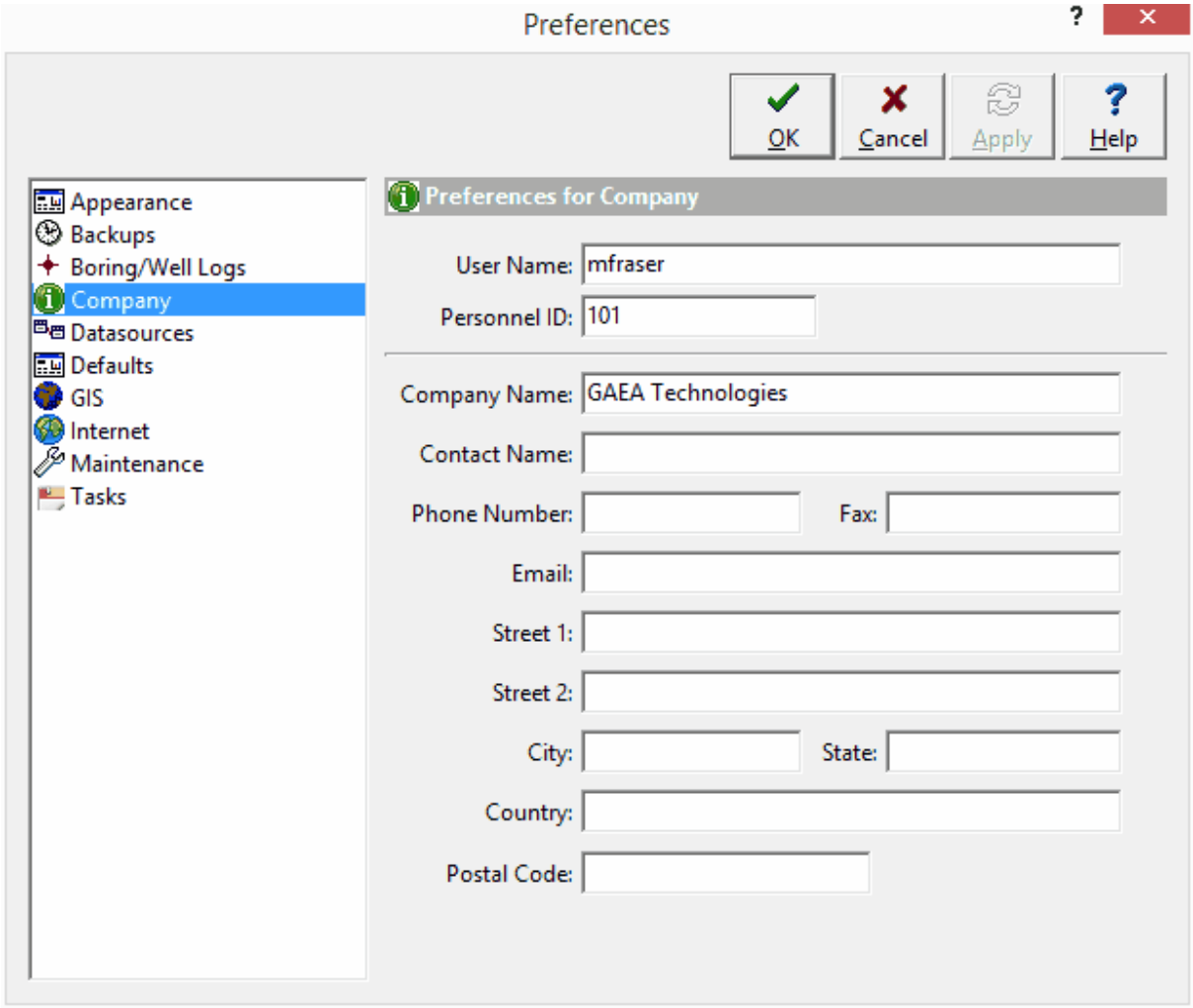
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

After this the project will be imported and added to the project list.

3.2.1.3 Importing Projects from GaeaSynergy

WinLoG RT can automatically receive projects from GaeaSynergy via email or FTP. To use this feature, the network version of GaeaSynergy must be installed and the GaeaSynergy Service running. The projects sent from GaeaSynergy will then be imported when the WinLoG RT application is started.

When sending the project from the GaeaSynergy network, the User Name and Personnel ID to receive the project must be specified. In WinLoG RT, the User Name and Personnel ID for receiving projects is specified on the Company tab of Preferences.



3.2.2 Importing Projects from WinLoG RT 5

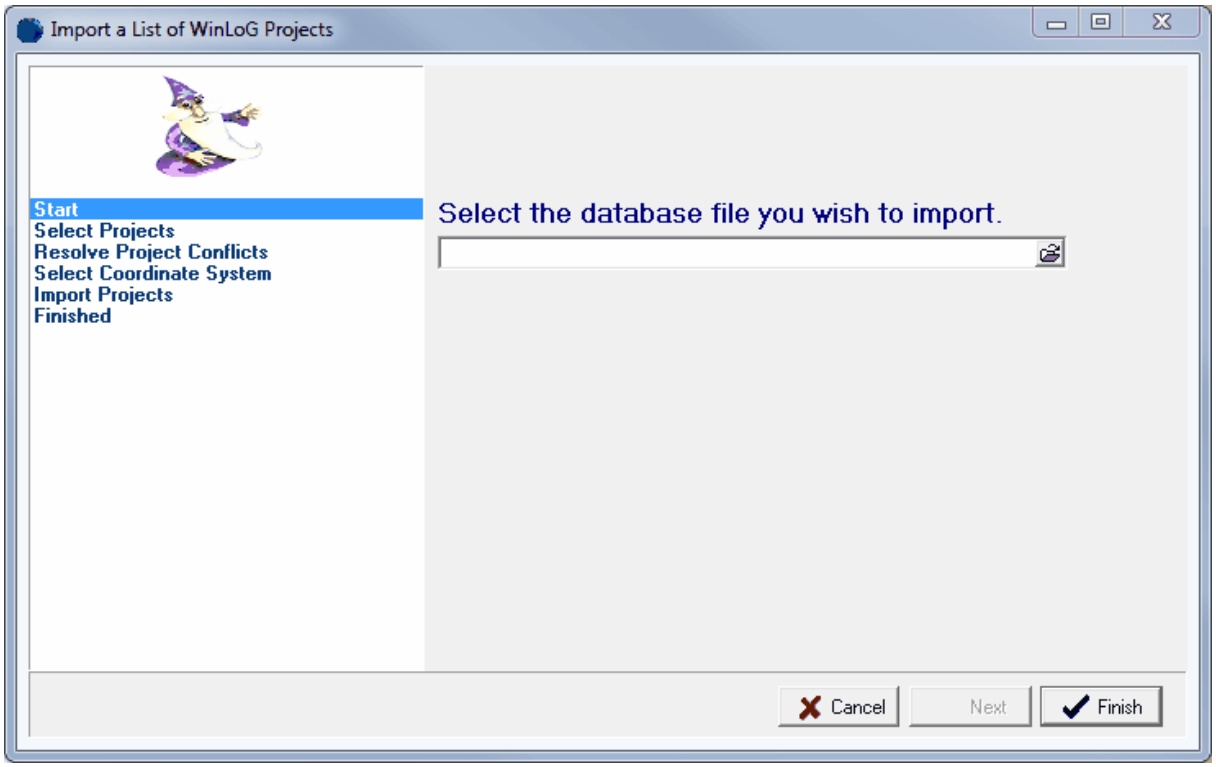
WinLoG RT version 5 projects can be imported either one at a time or from a list. The importation of the project data is discussed in the sections below.

In addition, templates and lithologic libraries from GaeaSynergy 5 can be imported. The importation of this data is discussed in the Boring/Well Logs Chapter 583.

3.2.2.1 Importing a List of Projects

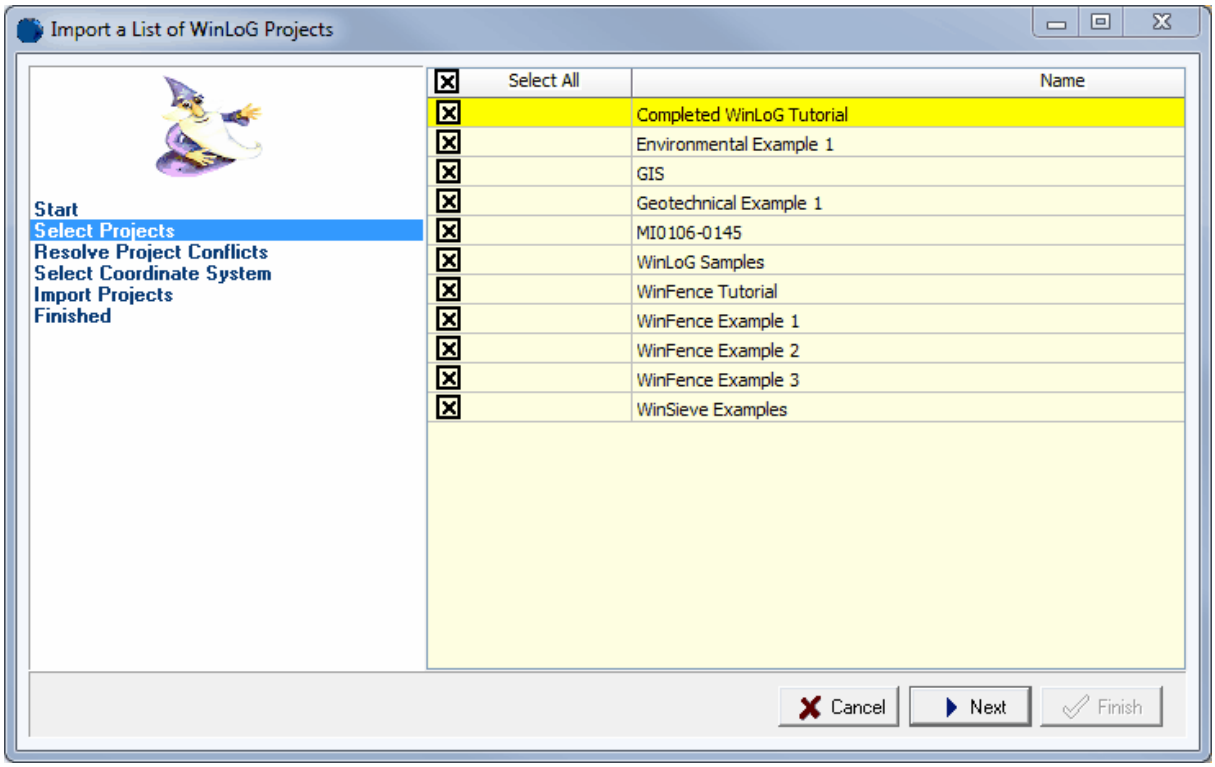
When importing a project list, no project can be open at the time. Multiple WinLoG RT version 5 projects can be imported by selecting *File > Import > WinLoG RT 5 Data > Project List*. The Import wizard form below will then be displayed. This form will guide you through the steps of importing a list of projects.

Step 1. Select Project List File



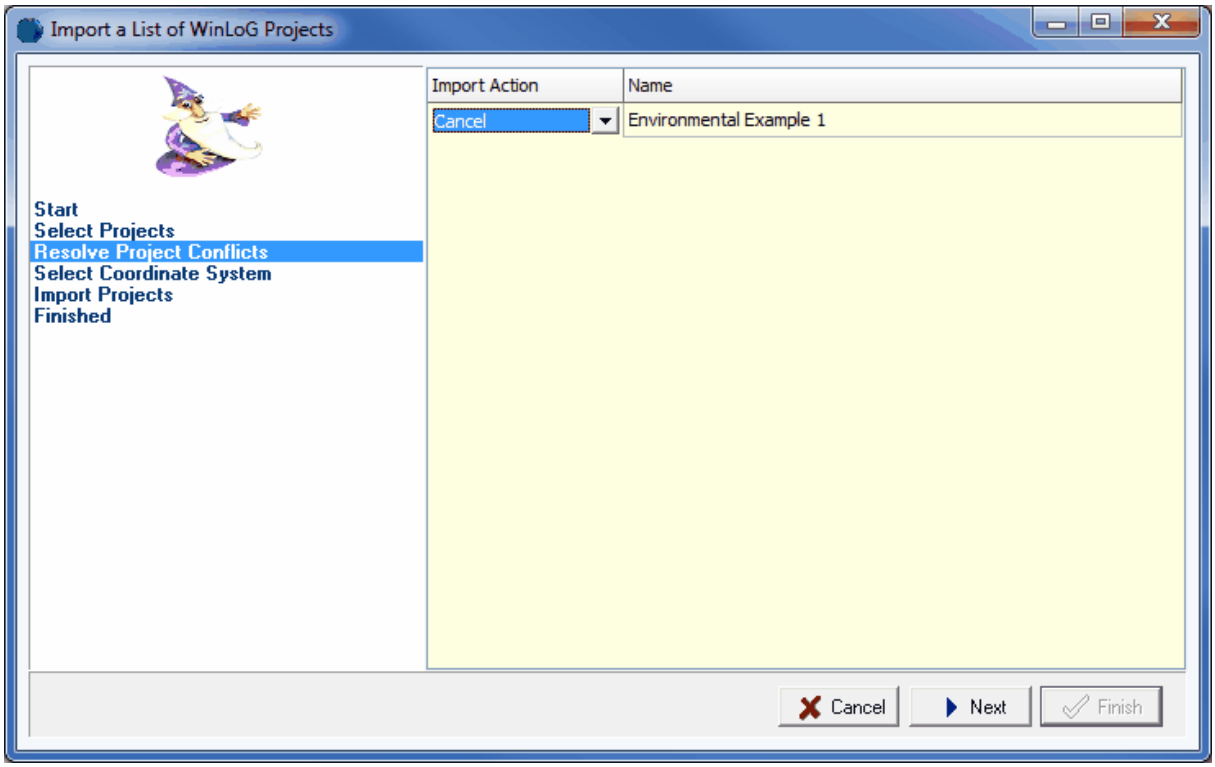
The first step is to select the WinLoG RT version 5 database containing the project list. This database is an Microsoft Access file named "gaeaproject.mdb". If the WinLoG RT 5 program was installed and used locally on the computer the file is normally stored in the "c:\Program Data\GAEA\WinlogRT5\Databases" directory.

Step 2 Select Projects



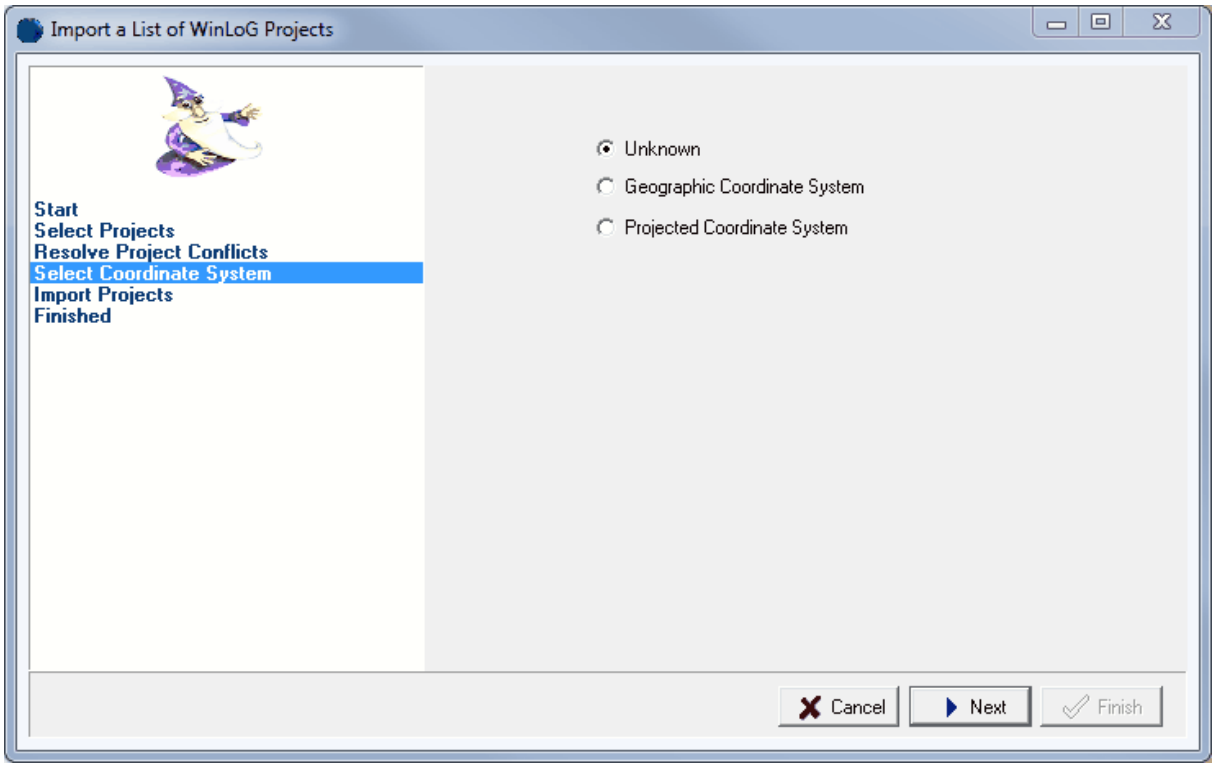
The next step is to select the projects to import. A list of projects will be displayed using the project list database specified in the previous step. Select the projects by clicking on the box next to the project. All of the projects can be selected and de-selected by clicking on the Select All box. After the projects have been selected click the Next button.

Step 3 Resolve Project Conflicts



The next step is to resolve any conflicts with project numbers. This will happen when the project number of an imported project is the same as the project number of a project already in WinLoG RT. These conflicts can be resolved either by specifying a different project number for the imported project or by not importing the project. After any project conflicts have been resolved, click the Next button to continue.

Step 4 Select Coordinate System

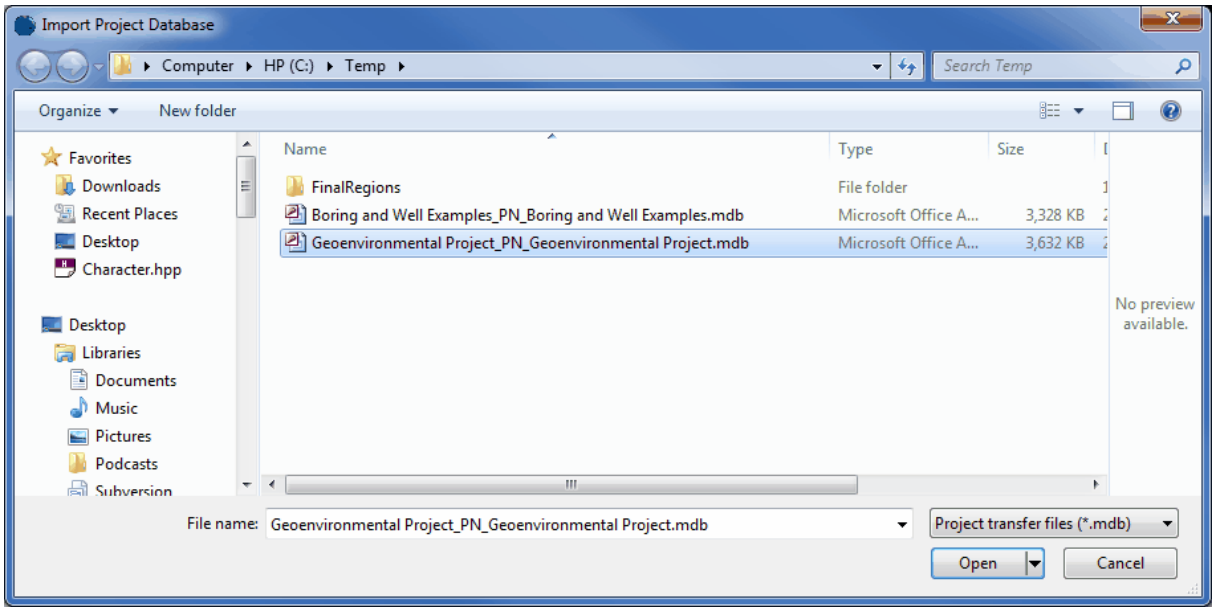


Before the projects can be imported, their coordinate system must be specified so that they can be spatially referenced. If the coordinate system is not known select Unknown and the projects can be georeferenced 137 later. If the coordinate system is known, select whether it is a geographic or projected system, a combo list of possible coordinate systems will then be displayed to select from. After the coordinate system has been selected, click the Next button to import the projects.

After the projects have been imported they will be added to the project list.

3.2.2.2 Importing Individual Projects

When importing a project, no project can be open at the time. An individual WinLoG RT version 5 project can be imported by selecting *File > Import > WinLoG RT 5 Data > Project*. the Import Project Database form below will be displayed. Use this form select the project database file to be imported.



The file name consists of the project ID the text "_PN_" and the project name with the extension ".mdb". The project ID must be unique and can not already exist in WinLoG RT.

3.2.3 Importing Projects from WinLoG RT 4

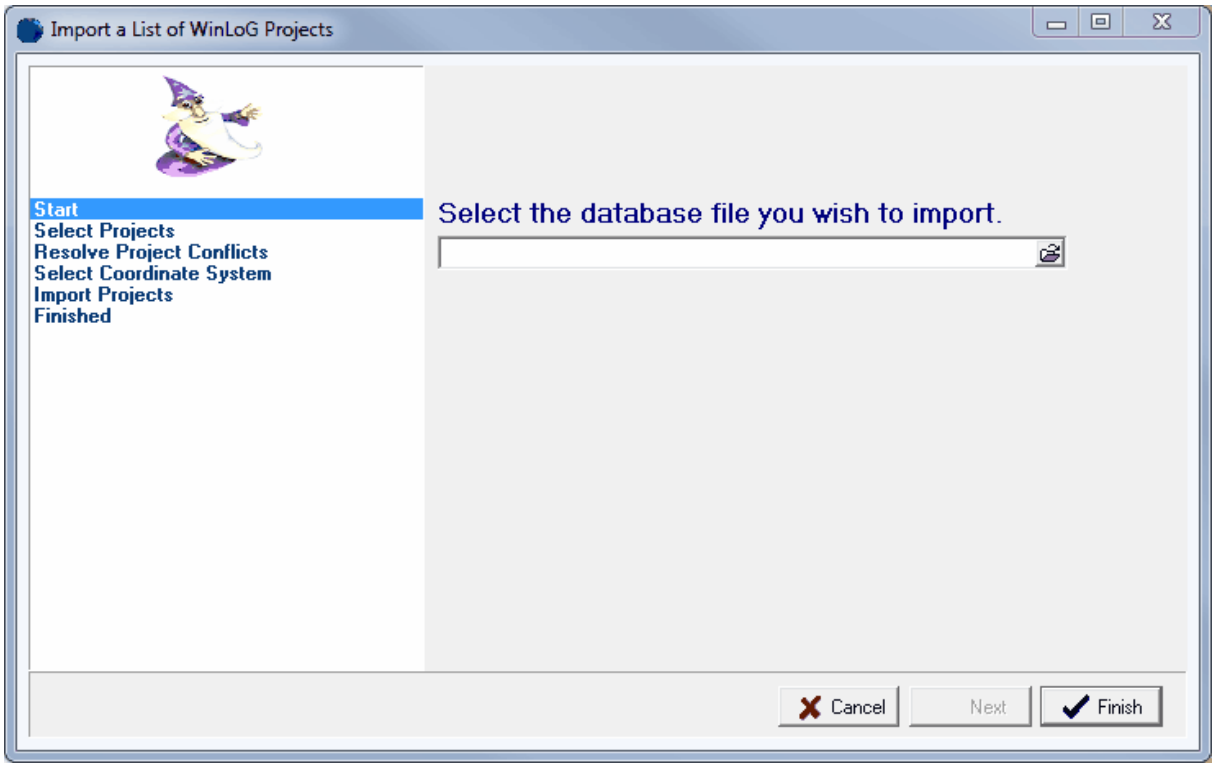
WinLoG RT version 4 projects can be imported either one at a time or from a list. The importation of the project data is discussed in the sections below.

In addition, templates and lithologic libraries from GaeaSynergy 5 can be imported. The importation of this data is discussed in the Boring/Well Logs Chapter 583.

3.2.3.1 Importing a List of Projects

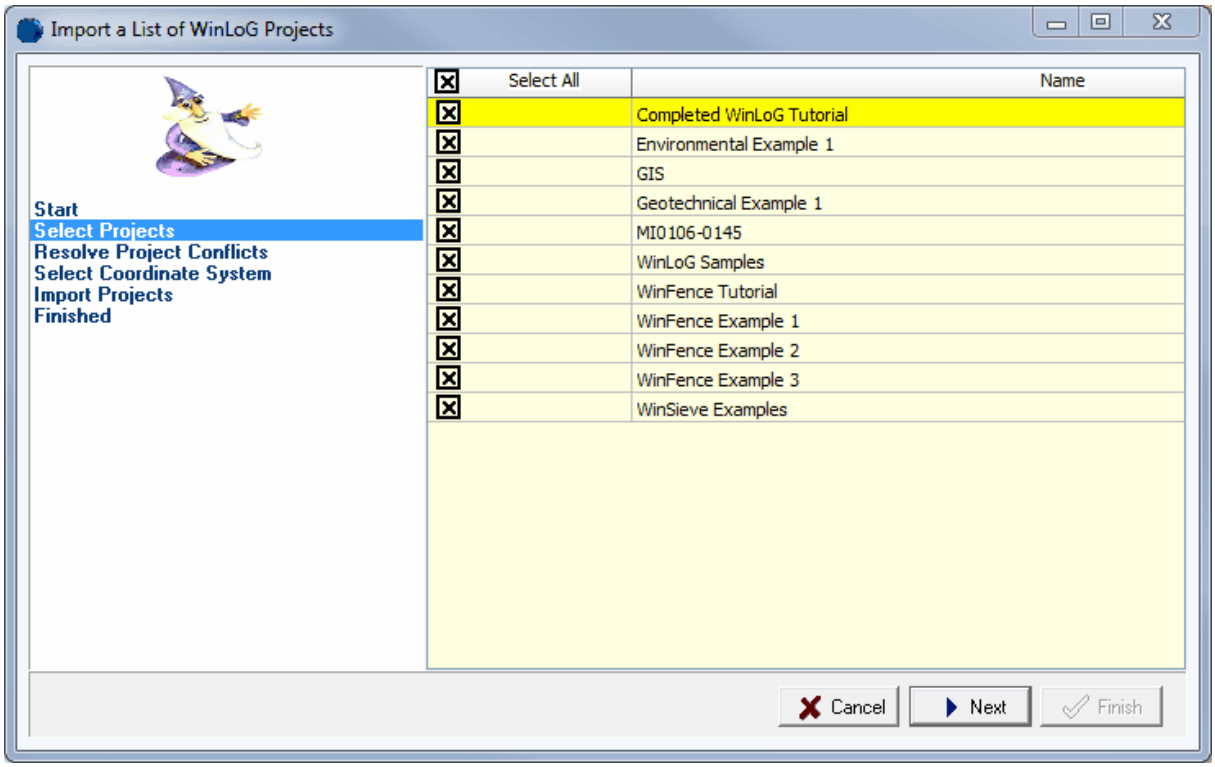
When importing a project list, no project can be open at the time. Multiple WinLoG RT version 4 projects can be imported by selecting *File > Import > WinLoG RT 4 Data > Project List*. The Import wizard form below will then be displayed. This form will guide you through the steps of importing a list of projects.

Step 1. Select Project List File



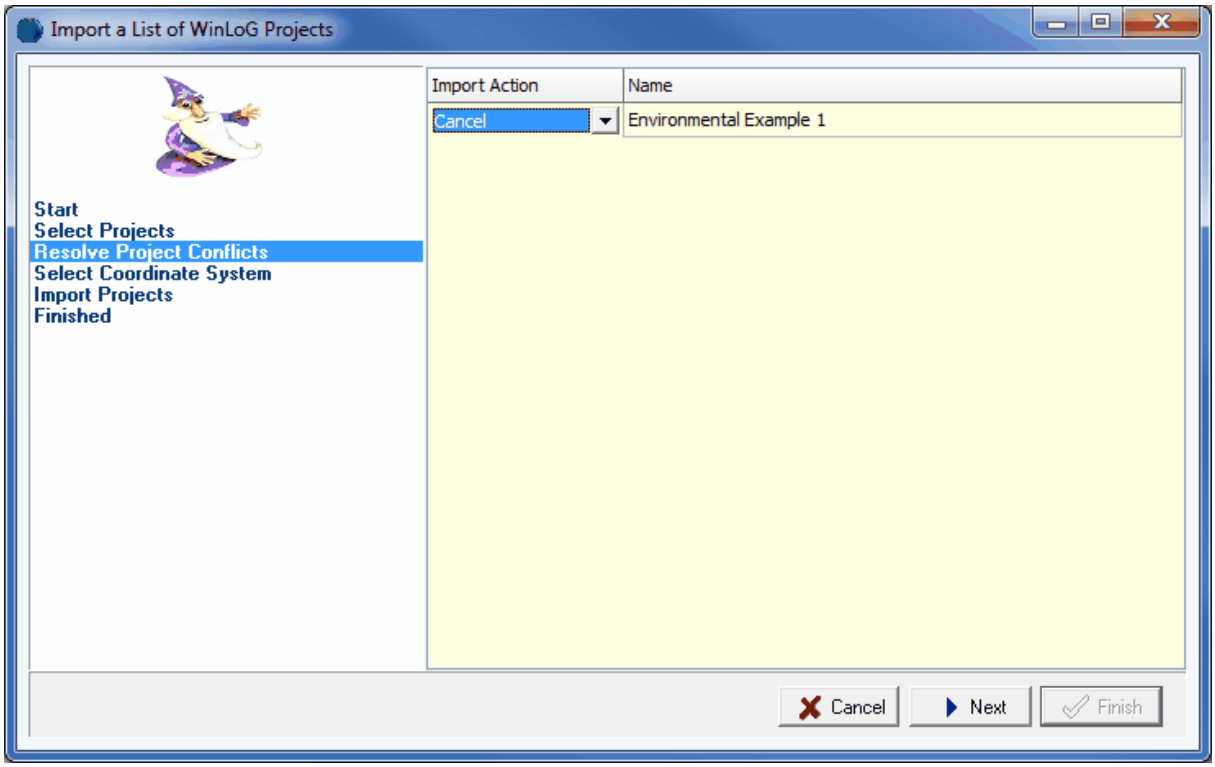
The first step is to select the WinLoG RT version 5 database containing the project list. This database is an Microsoft Access file named "gaeaproject.mdb". If the WinLoG RT 5 program was installed and used locally on the computer the file is normally stored in the "c:\Program Data\GAEA\WinlogRT5\Databases" directory.

Step 2 Select Projects



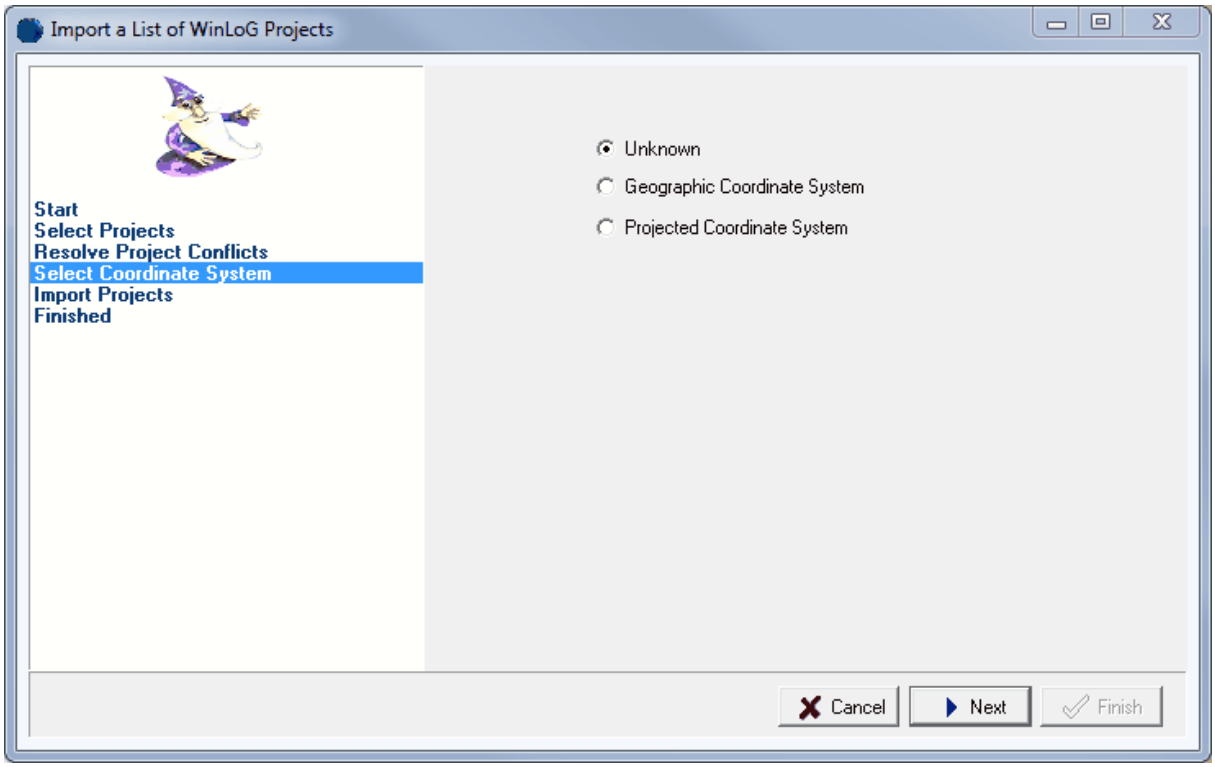
The next step is to select the projects to import. A list of projects will be displayed using the project list database specified in the previous step. Select the projects by clicking on the box next to the project. All of the projects can be selected and de-selected by clicking on the Select All box. After the projects have been selected click the Next button.

Step 3 Resolve Project Conflicts



The next step is to resolve any conflicts with project numbers. This will happen when the project number of an imported project is the same as the project number of a project already in WinLoG RT. These conflicts can be resolved either by specifying a different project number for the imported project or by not importing the project. After any project conflicts have been resolved, click the Next button to continue.

Step 4 Select Coordinate System

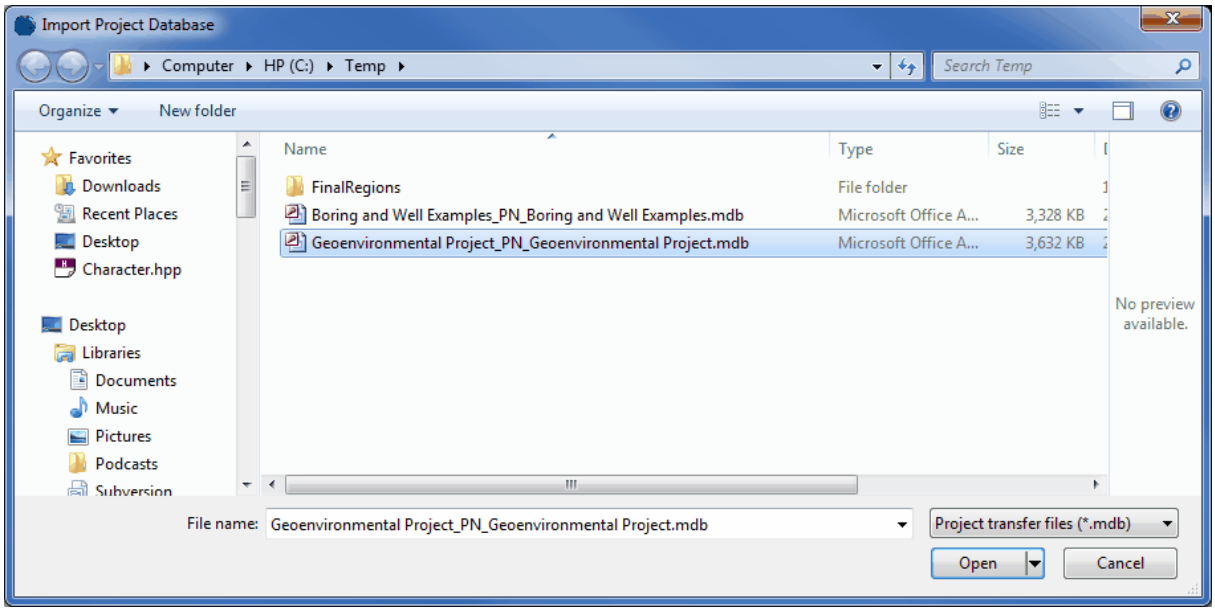


Before the projects can be imported, their coordinate system must be specified so that they can be spatially referenced. If the coordinate system is not known select Unknown and the projects can be georeferenced 137 later. If the coordinate system is known, select whether it is a geographic or projected system, a combo list of possible coordinate systems will then be displayed to select from. After the coordinate system has been selected, click the Next button to import the projects.

After the projects have been imported they will be added to the project list.

3.2.3.2 Importing Individual Projects

When importing a project, no project can be open at the time. An individual WinLoG RT version 4 project can be imported by selecting *File > Import > WinLoG RT 4 Data > Project*. the Import Project Database form below will be displayed. Use this form select the project database file to be imported.



The file name consists of the project ID the text "_PN_" and the project name with the extension ".mdb". The project ID must be unique and can not already exist in WinLoG RT.

3.2.4 Importing Projects from WinLoG RT 3

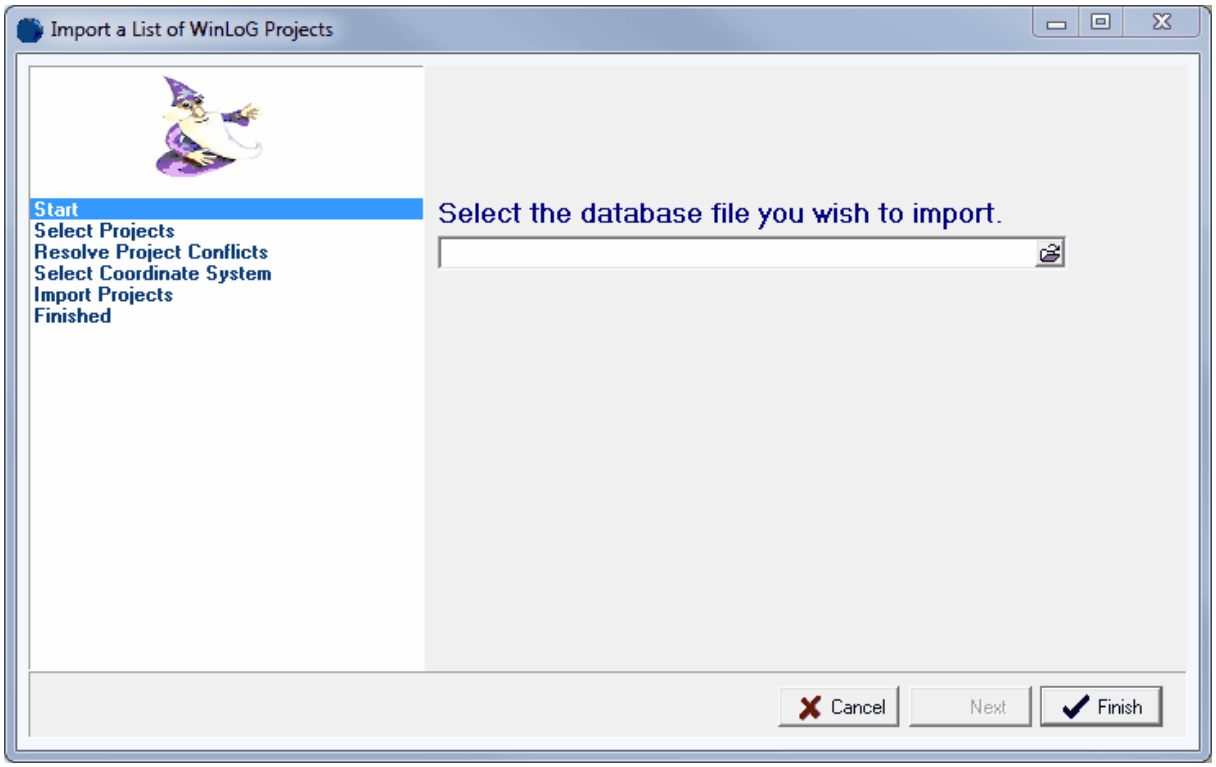
WinLoG RT version 3 projects can be imported either one at a time or from a list. The importation of the project data is discussed in the sections below.

In addition, templates and lithologic libraries from GaeaSynergy 5 can be imported. The importation of this data is discussed in the Boring/Well Logs Chapter 583.

3.2.4.1 Importing a List of Projects

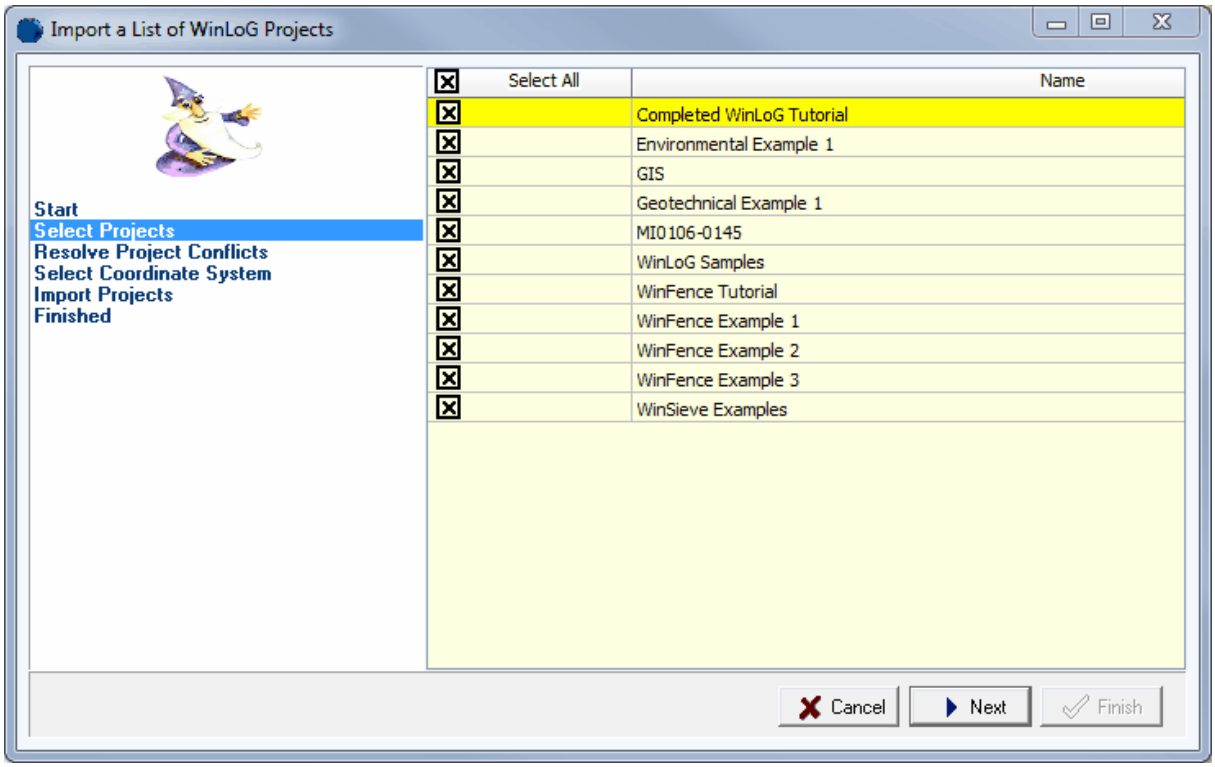
When importing a project list, no project can be open at the time. Multiple WinLoG RT version 3 projects can be imported by selecting *File > Import > WinLoG RT 3 Data > Project List*. The Import wizard form below will then be displayed. This form will guide you through the steps of importing a list of projects.

Step 1. Select Project List File



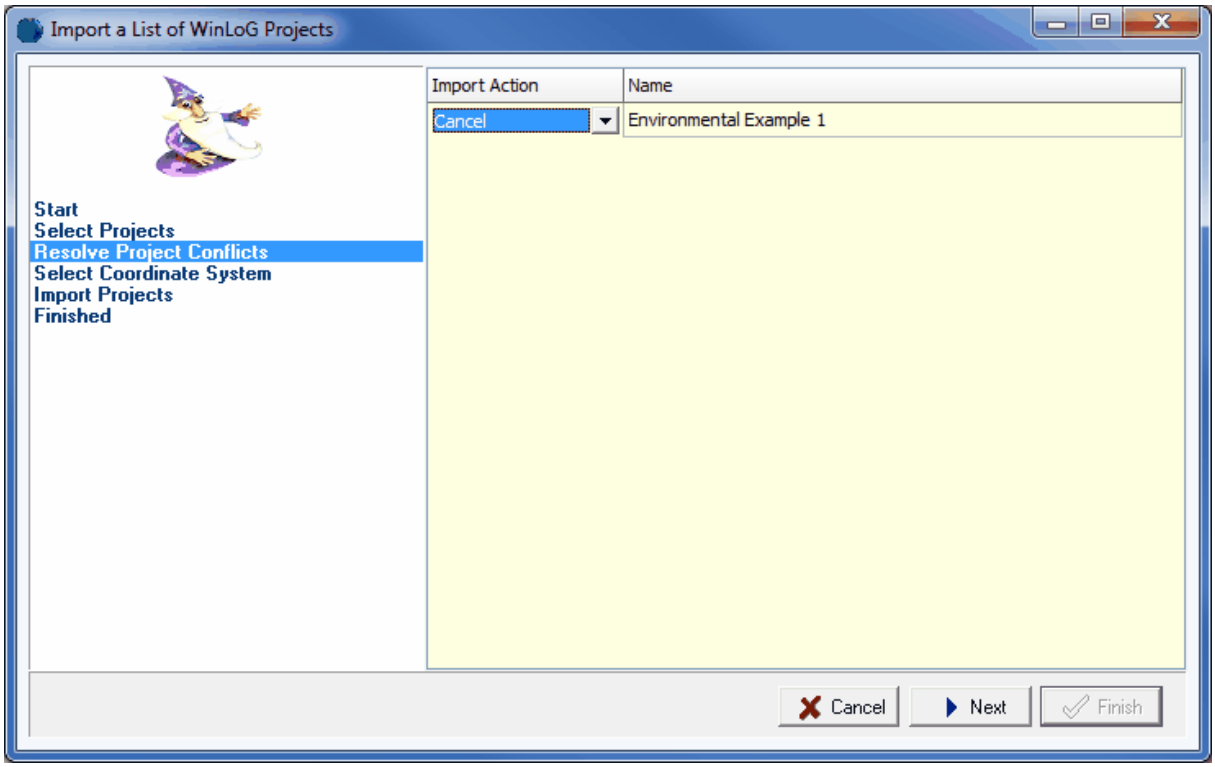
The first step is to select the WinLoG RT version 5 database containing the project list. This database is an Microsoft Access file named "gaeaproject.mdb". If the WinLoG RT 5 program was installed and used locally on the computer the file is normally stored in the "c:\Program Data\GAEA\WinlogRT5\Databases" directory.

Step 2 Select Projects



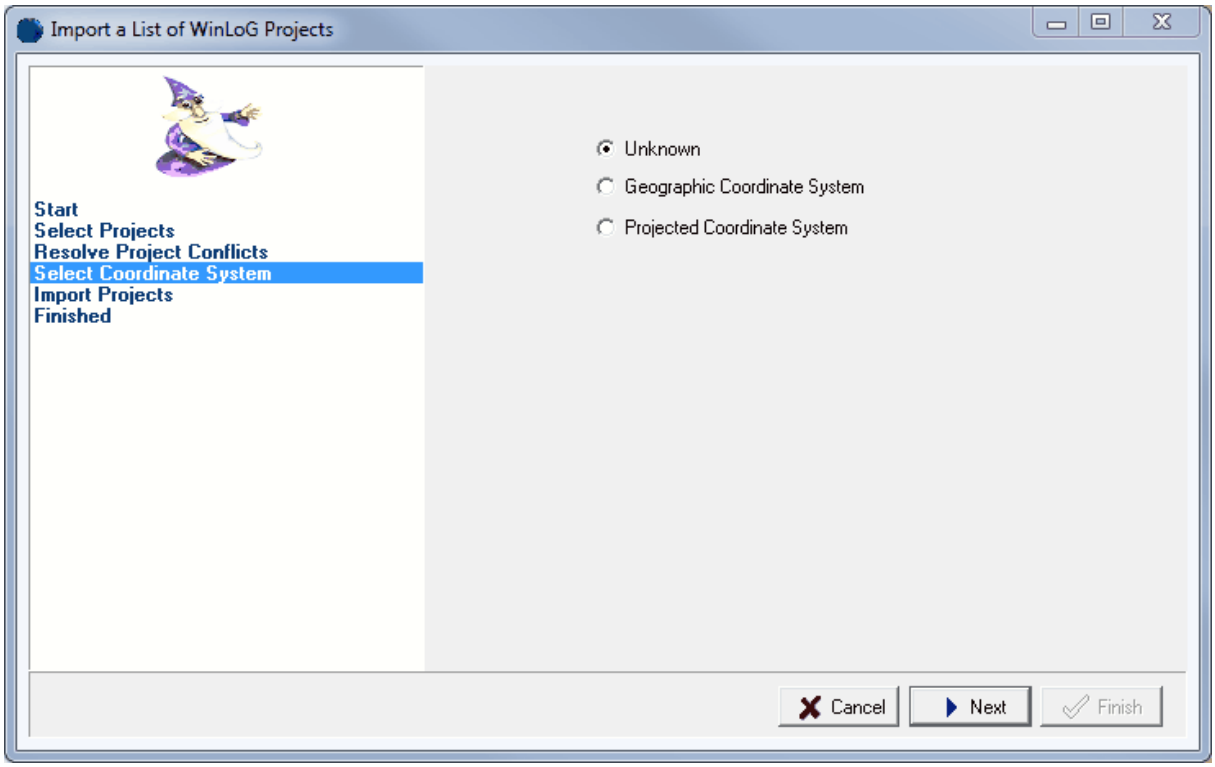
The next step is to select the projects to import. A list of projects will be displayed using the project list database specified in the previous step. Select the projects by clicking on the box next to the project. All of the projects can be selected and de-selected by clicking on the Select All box. After the projects have been selected click the Next button.

Step 3 Resolve Project Conflicts



The next step is to resolve any conflicts with project numbers. This will happen when the project number of an imported project is the same as the project number of a project already in WinLoG RT. These conflicts can be resolved either by specifying a different project number for the imported project or by not importing the project. After any project conflicts have been resolved, click the Next button to continue.

Step 4 Select Coordinate System

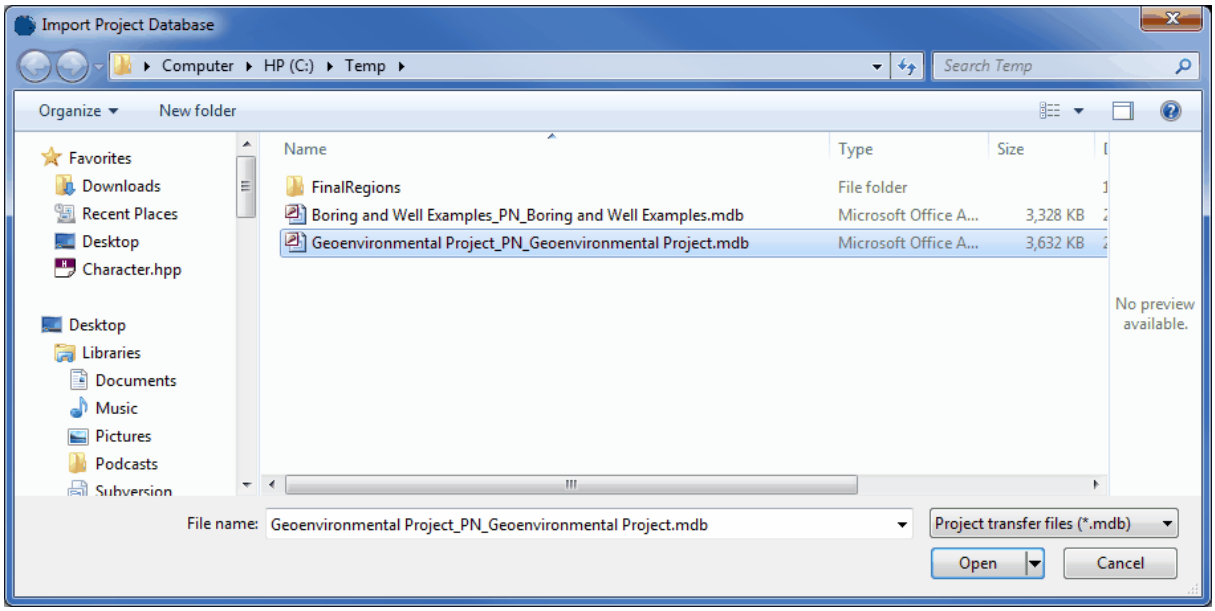


Before the projects can be imported, their coordinate system must be specified so that they can be spatially referenced. If the coordinate system is not known select Unknown and the projects can be georeferenced 137 later. If the coordinate system is known, select whether it is a geographic or projected system, a combo list of possible coordinate systems will then be displayed to select from. After the coordinate system has been selected, click the Next button to import the projects.

After the projects have been imported they will be added to the project list.

3.2.4.2 Importing Individual Projects

When importing a project, no project can be open at the time. An individual WinLoG RT version 3 project can be imported by selecting *File > Import > WinLoG RT 3 Data > Project*. the Import Project Database form below will be displayed. Use this form select the project database file to be imported.



The file name consists of the project ID the text "_PN_" and the project name with the extension ".mdb". The project ID must be unique and can not already exist in WinLoG RT.

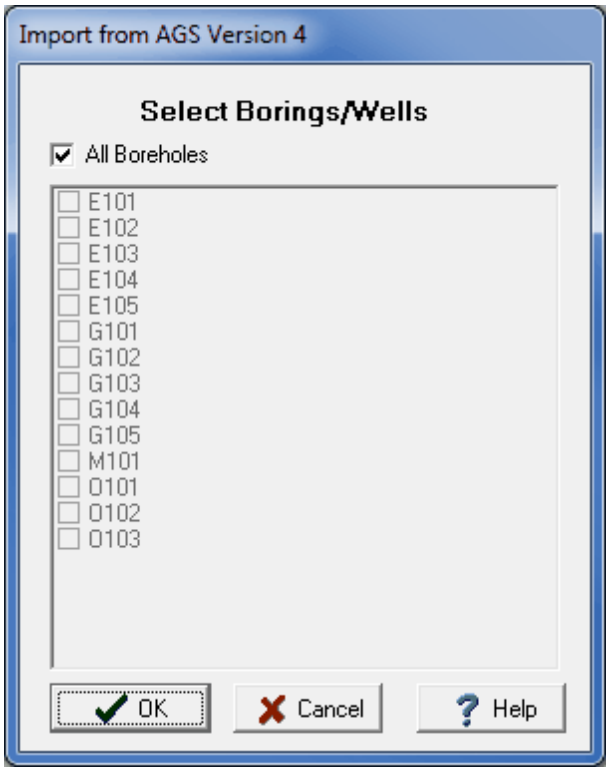
3.2.5 Importing AGS Data

The Association of Geotechnical and Geoenvironmental Specialists (AGS) is a non-profit making trade association established to improve the profile and quality of geotechnical and geoenvironmental engineering. The AGS Format is for the electronic transfer of data in the geotechnical and geoenvironmental industries. The newest version is known as "AGS4" which contains an updated Data Dictionary and revised rules for AGS Format files.The previous version 3 format is also supported for importing and exporting from WinLoG RT.

A variety of boring and well data can be imported and exported in AGS4 and AGS3 format. For a list of the data groups click on the links below:

- AGS Version 3 203
- AGS Version 4 204

Before any data can be imported the project must first be opened 127. After a project has been opened, boring and well data can be imported from an AGS file by selecting *File > Import > AGS Data > Version 4 or Version 3*. A file dialog will be displayed to specify the file to import. Next, the borings/wells to be imported must be selected on the Import form below. Either all of them can be imported or they can be imported individually using the checkboxes.

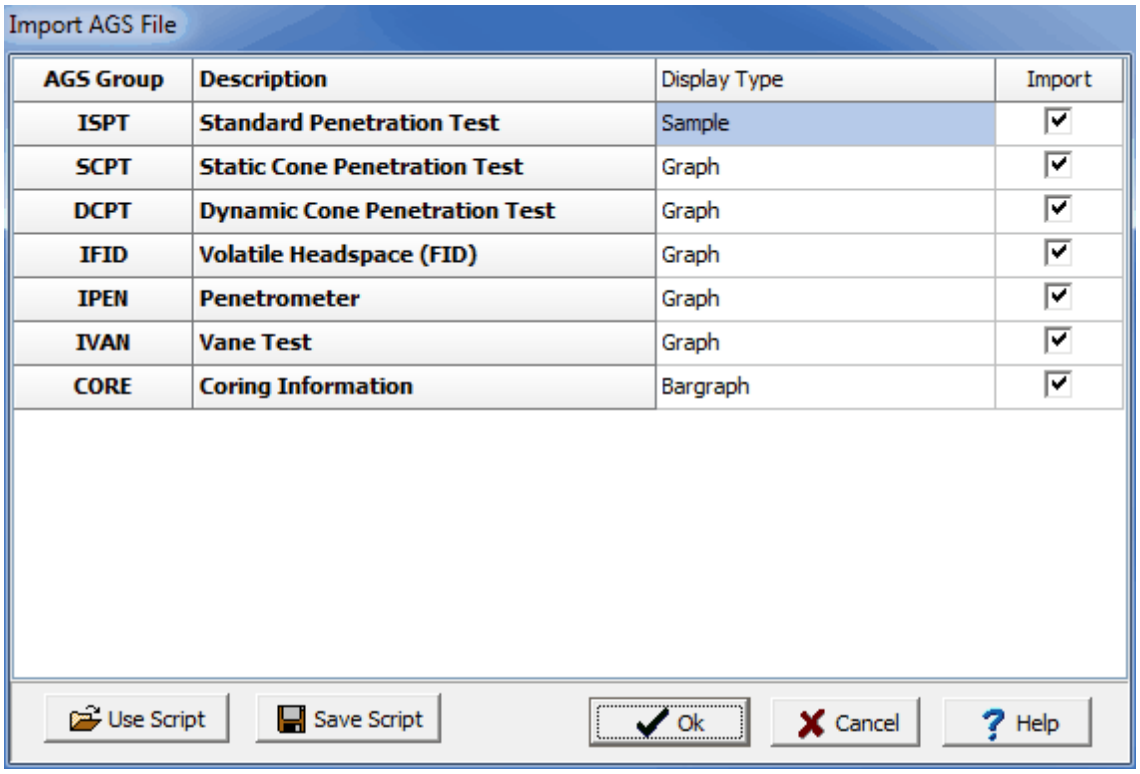


(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

After the borings and wells have been selected, the display types must be selected for the AGS datasets and a template setup for the imported data. These steps are covered in the topics below.

3.2.5.1 Specifying Display Types

On the form below the display type for each AGS dataset can be selected by clicking on it and selecting a new one from the combo box. The display types possible will change depending on the AGS group.



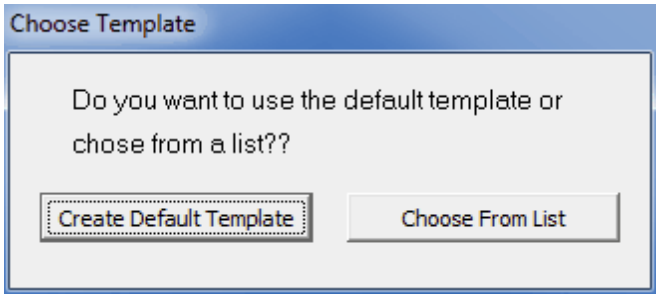
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

To make this process easier if you are importing AGS files a lot, you can create and use script files to set the display types. To create a new script file with the current display type settings click on the Save Script button and enter a file name for the script. To open and use an existing script file, click on the Use Script button and select the file. Script files should have the extension ".scp".

When the display types have been specified, click the Ok button to setup the template to use for the imported data.

3.2.5.2 Specifying the Template

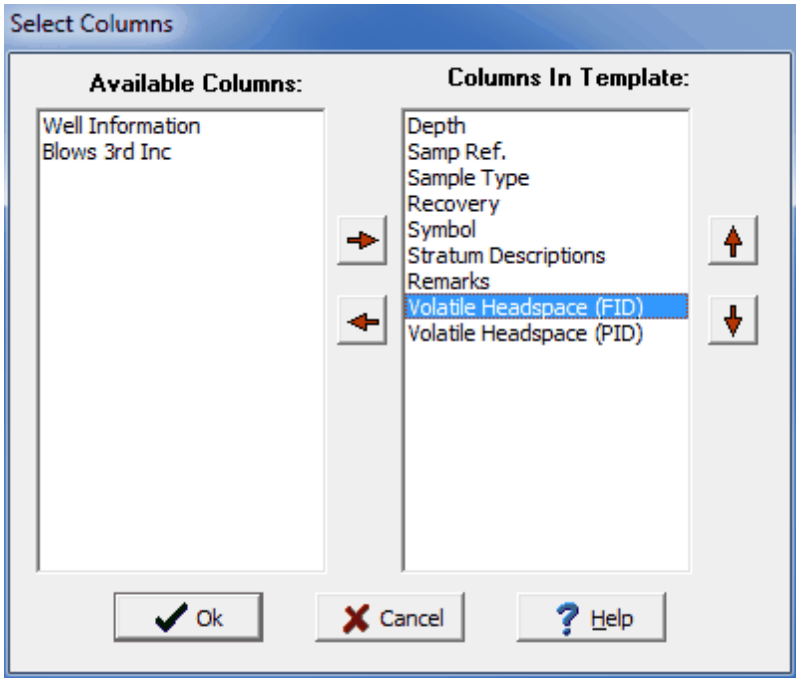
The template used to display the imported boring and well data can either be created automatically by the program or an existing template can be selected. These two options are discussed in the topics below.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

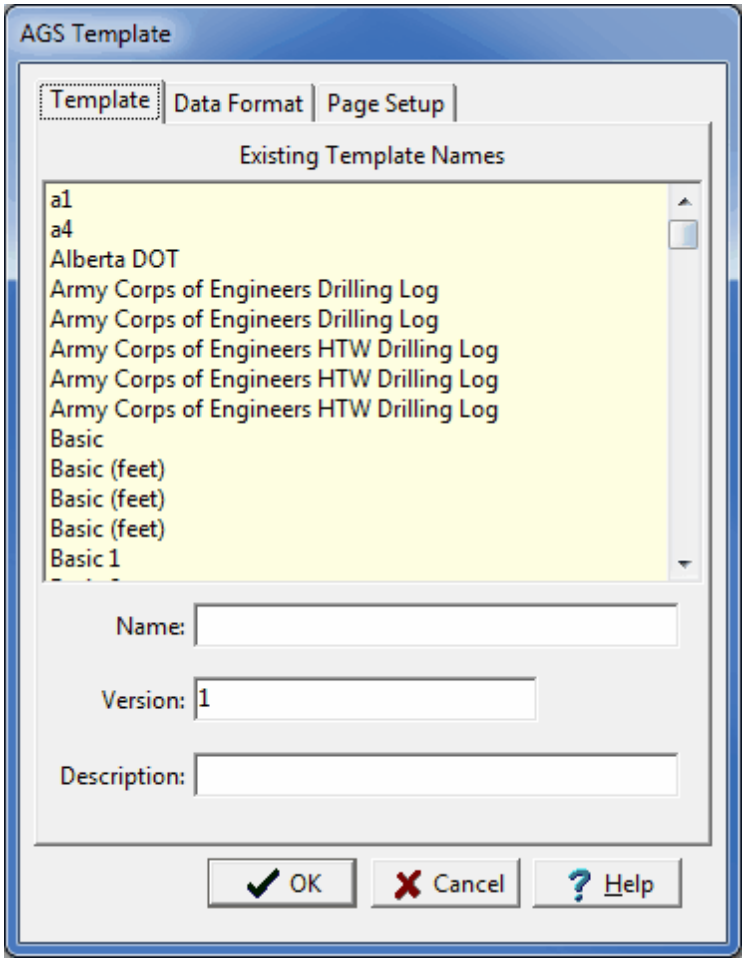
3.2.5.2.1 Creating a Default Template

If create a default template is selected the form below will be displayed. This form is used to select the columns to include in the template. The columns are determined by the data contained in the AGS file that is being imported. Columns can be moved between the available list to those to be included in the template using the left and right arrow buttons, The order of the columns to be shown in the template can be adjusted using the up and down arrow buttons. Columns at the top of the template list will be displayed on the left side of the template.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

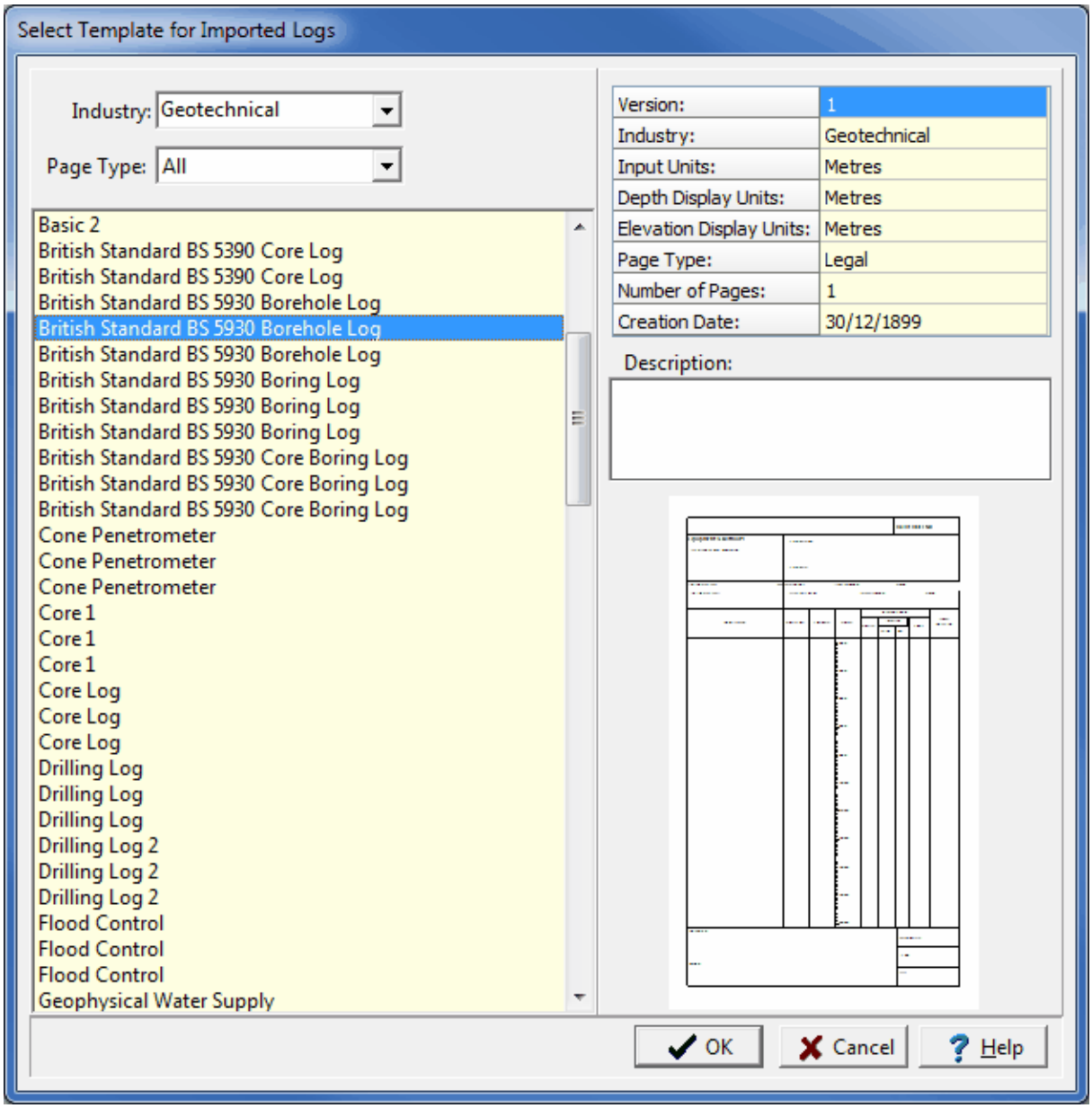
After the columns have been selected, press the Ok button to display the form below. This form is used to specify the template name, data format, and page setup. When his information has been specified click the Ok button to finish importing the data.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

3.2.5.2.2 Selecting an Existing Template

If select an existing template is chosen the form below will be displayed. This form displays the templates that can be selected for use with the imported data. Select the template and then click the Ok button to finish importing the data.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

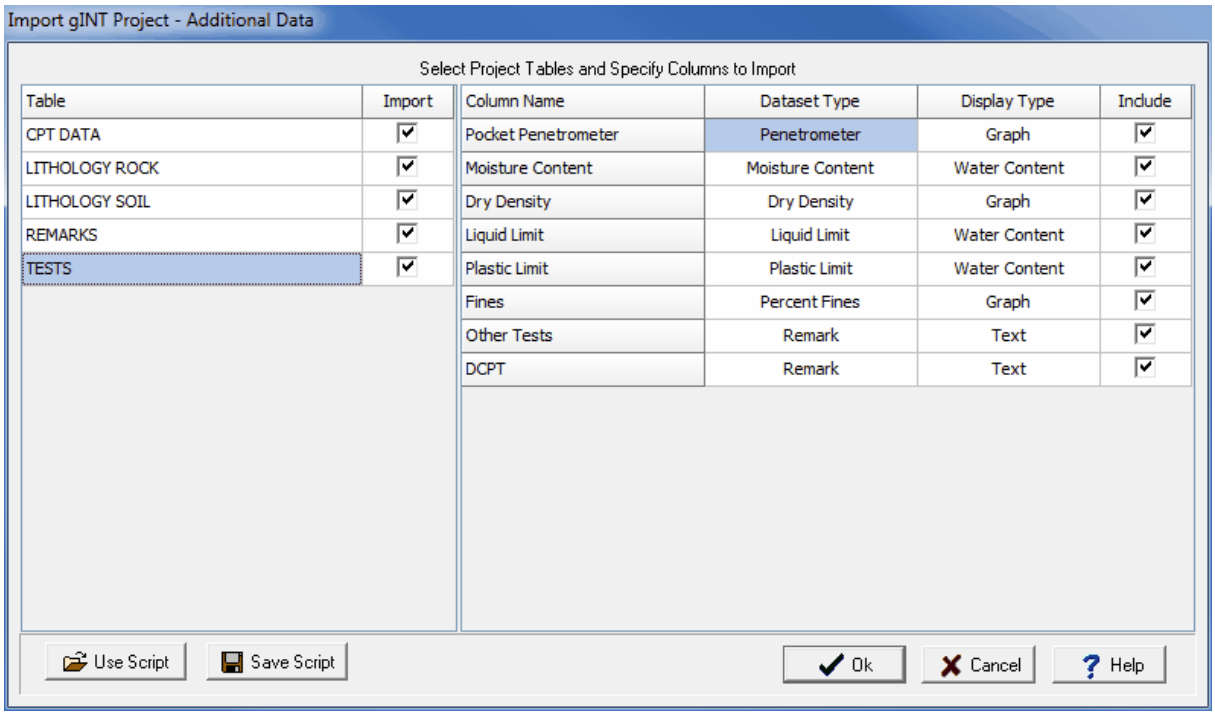
3.2.6 Importing gINT Data

Boring and well data can be imported and export to and from gINT version 8 project databases. These project database have the extension "gpj" and are the same as a Microsoft Access database file.

Before any data can be imported the project must first be opened[127]. After a project has been opened, boring and well data can be imported from a gINT project database file by selecting *File > Import > gINT Data > Version 8*. A file dialog will be displayed to specify the gINT project file to import.

After the file has been selected, the import form below will be displayed. On the left side of this form is a list of tables in the gINT project database. When a table is selected, the right side of the form will display the columns in the table. The entire table can be excluded from the import by unchecking the Import box.

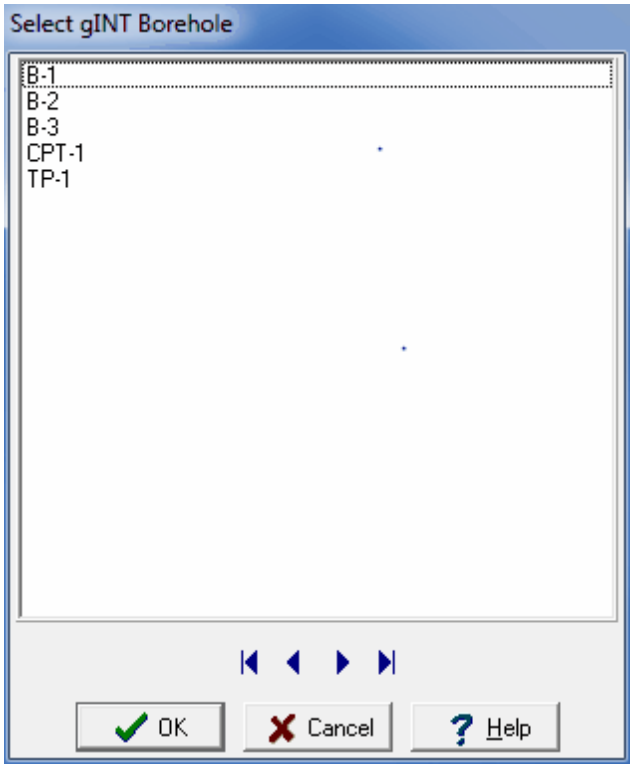
When a table is selected to import, the form will display the columns (fields) in the table that can be imported. The type of dataset within WinLoG RT can be selected for each column as well as the way that data will be displayed. In addition, individual columns (fields) can be included or excluded by clicking on the Include box.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

To make this process easier if you are importing gINT project files a lot, you can create and use script files for the import settings. To create a new script file with the current display type settings click on the Save Script button and enter a file name for the script. The script file should only be saved after all of the export settings have been entered. To open and use an existing script file, click on the Use Script button and select the file. An existing script file should be opened prior to entering any export settings. Script files should have the extension ".scp".

When the dataset and display types have been specified, click the Ok button to proceed. Next, the borings/wells to be imported must be selected on the Import form below. One or more borings/wells can be selected using the CRTL and SHIFT keys.

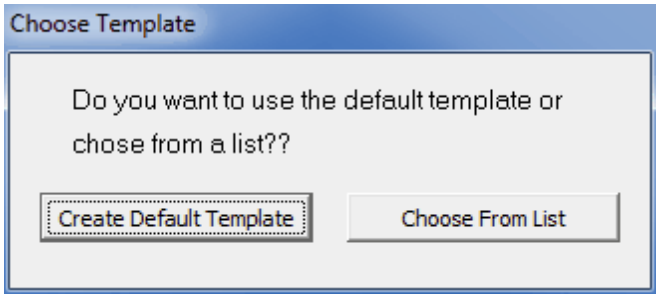


(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

After the borings and wells have been selected, a template must be selected or setup for the imported data. These steps are covered in the topics below.

3.2.6.1 Specifying the Template

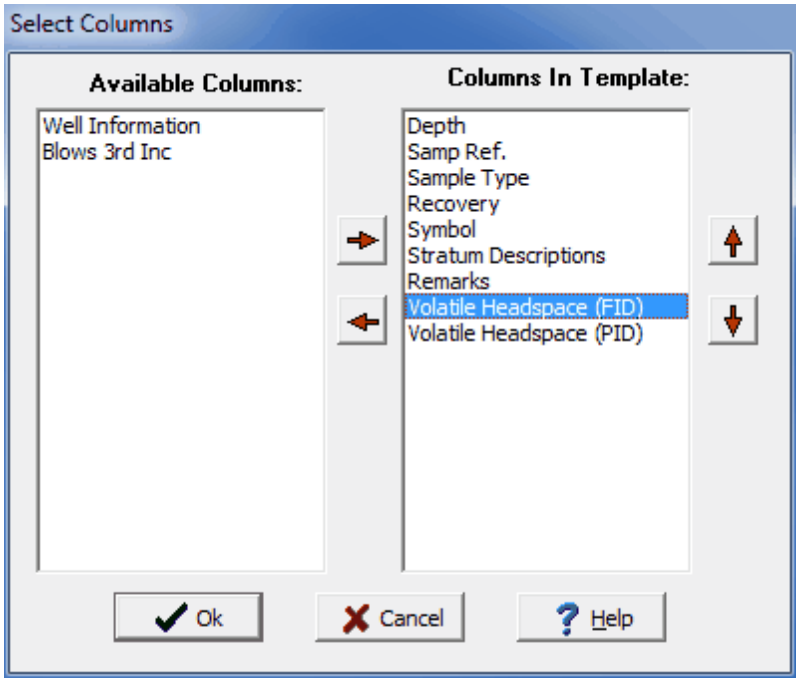
The template used to display the imported boring and well data can either be created automatically by the program or an existing template can be selected. These two options are discussed in the topics below.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

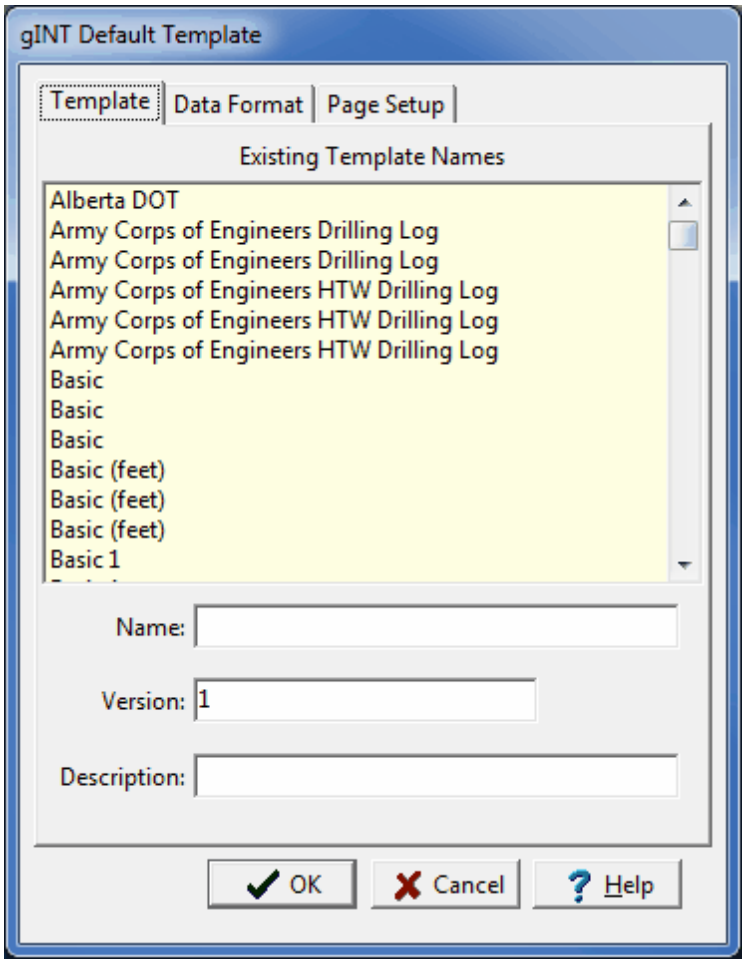
3.2.6.1.1 Creating a Default Template

If create a default template is selected the form below will be displayed. This form is used to select the columns to include in the template. The columns are determined by the data contained in the gINT project file that is being imported. Columns can be moved between the available list to those to be included in the template using the left and right arrow buttons, The order of the columns to be shown in the template can be adjusted using the up and down arrow buttons. Columns at the top of the template list will be displayed on the left side of the template and the ones at the bottom on the right side of the template.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

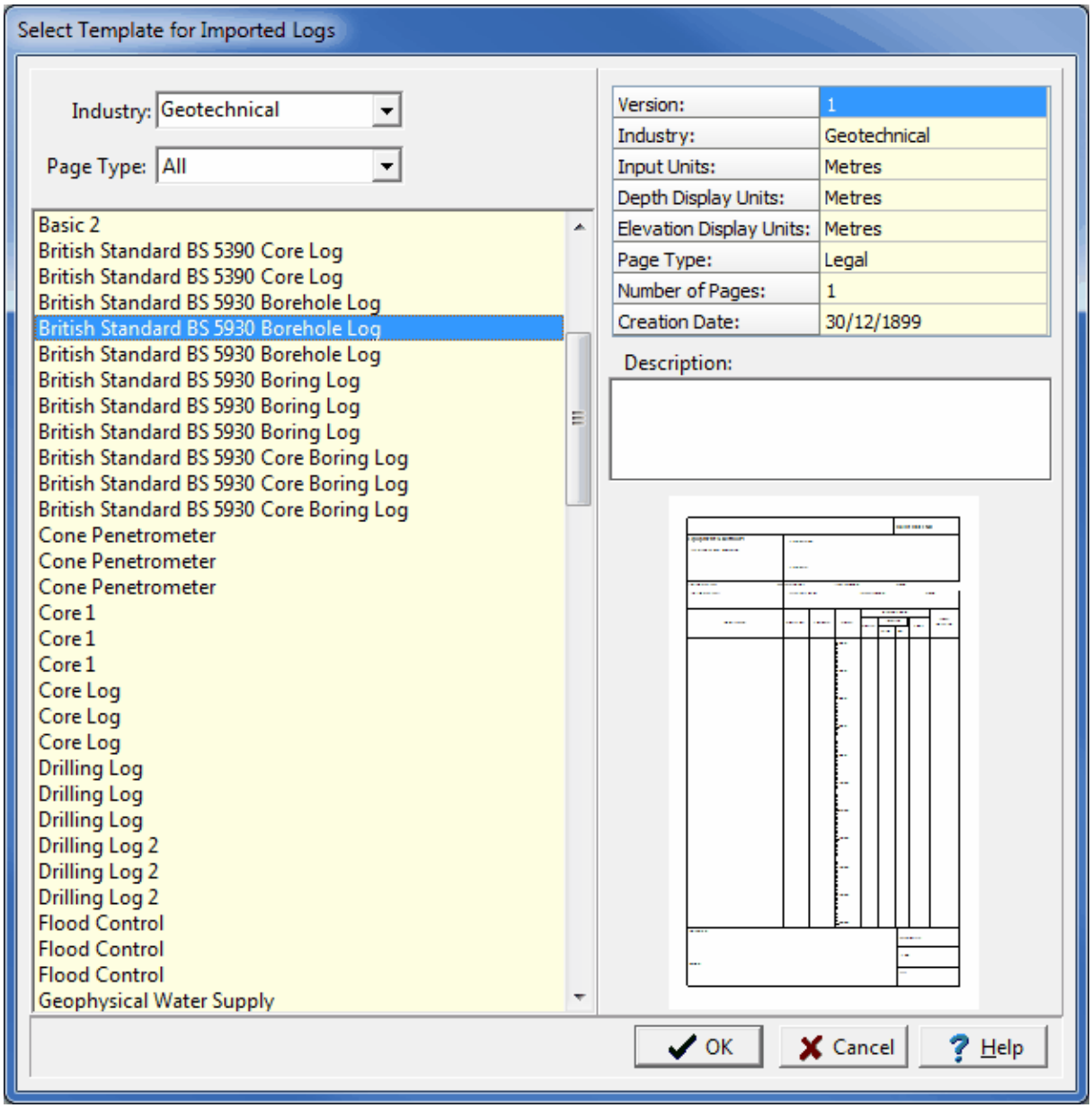
After the columns have been selected, press the Ok button to display the form below. This form is used to specify the template name, data format, and page setup. When his information has been specified click the Ok button to finish importing the data.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

3.2.6.1.2 Selecting an Existing Template

If select an existing template is chosen the form below will be displayed. This form displays the templates that can be selected for use with the imported data. Select the template and then click the Ok button to finish importing the data.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

3.2.7 Importing Government Data

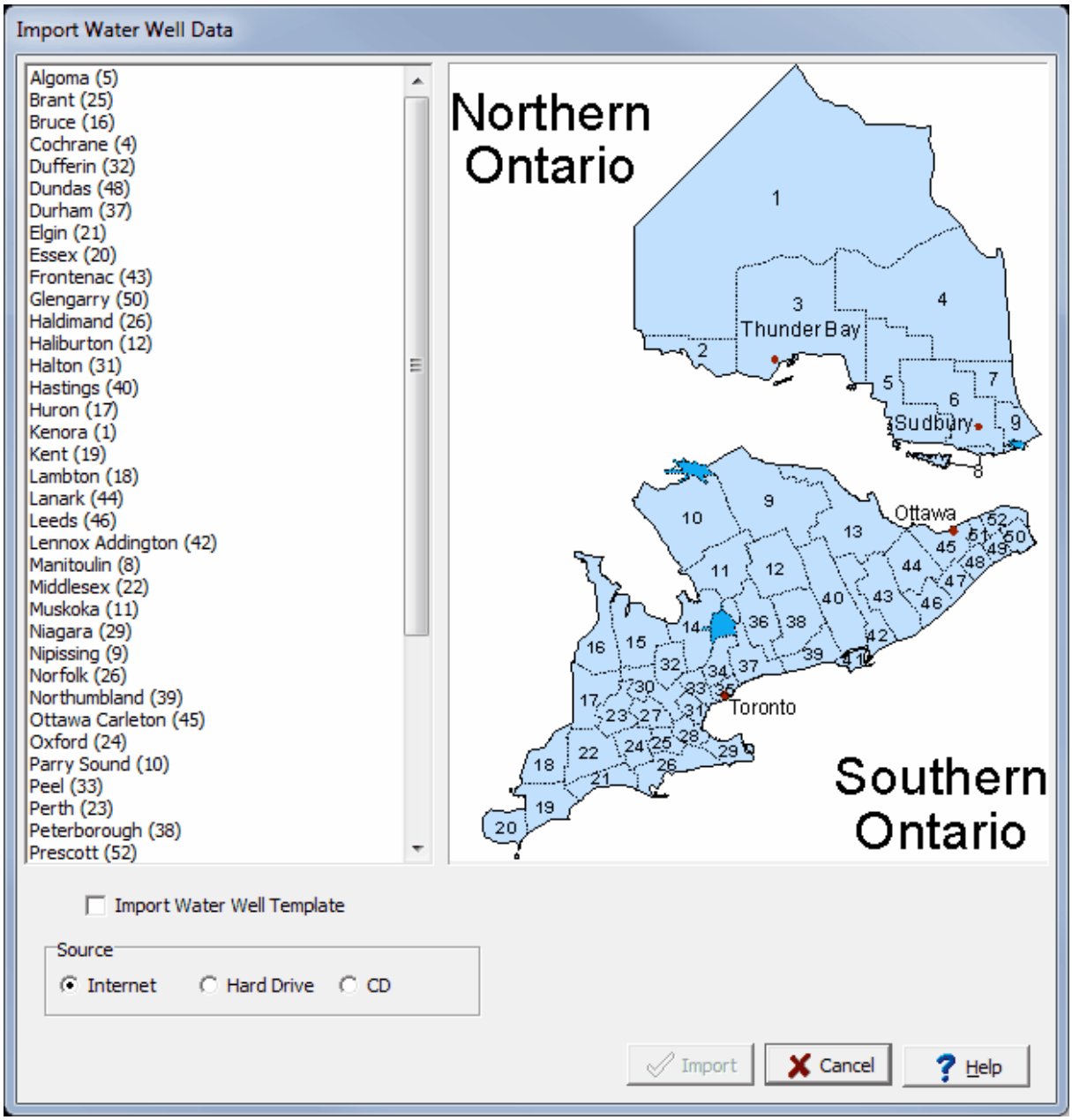
Data from various government sources can be imported as described in the sections below. Additional types of data are been added with future updates.

3.2.7.1 Ontario Water Well Data

Water well data submitted by contractors to the Ontario Ministry of Environment as prescribed by Regulation 903 can be imported. This data has been grouped by counties and reformatted intoWinLoG RT project databases. The number of wells in each county database varies by county and can be up to 50,000. After a county database has been imported it can be worked with directly or a subset of the wells can be copied to another project.

A default template has been created and assigned to the well logs called "Ontario Water Well Record". This template can also be imported with the water well data.

To import Ontario water well data select *File > Import > Government Data > Ontario Water Well Data*. The Import Water Well Data form below will then be displayed. This form displays a list of counties on the left and an index map of Ontario on the right. The numbers in brackets next to the county can be used to identify the county on the index map.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be specified on this form:

County: Select the county of water well data to be imported by clicking on it in the list.

Import Water Well Template: Check this box to import the water well template.

Source: This is used to select the source for the imported data. It can be imported from the Internet, a hard drive or a CD. If the data is imported from a hard drive, you will be asked to select the file after the Import button is clicked. If the data is to be imported from a CD, the CD dive box will be displayed that is used to select the CD drive.

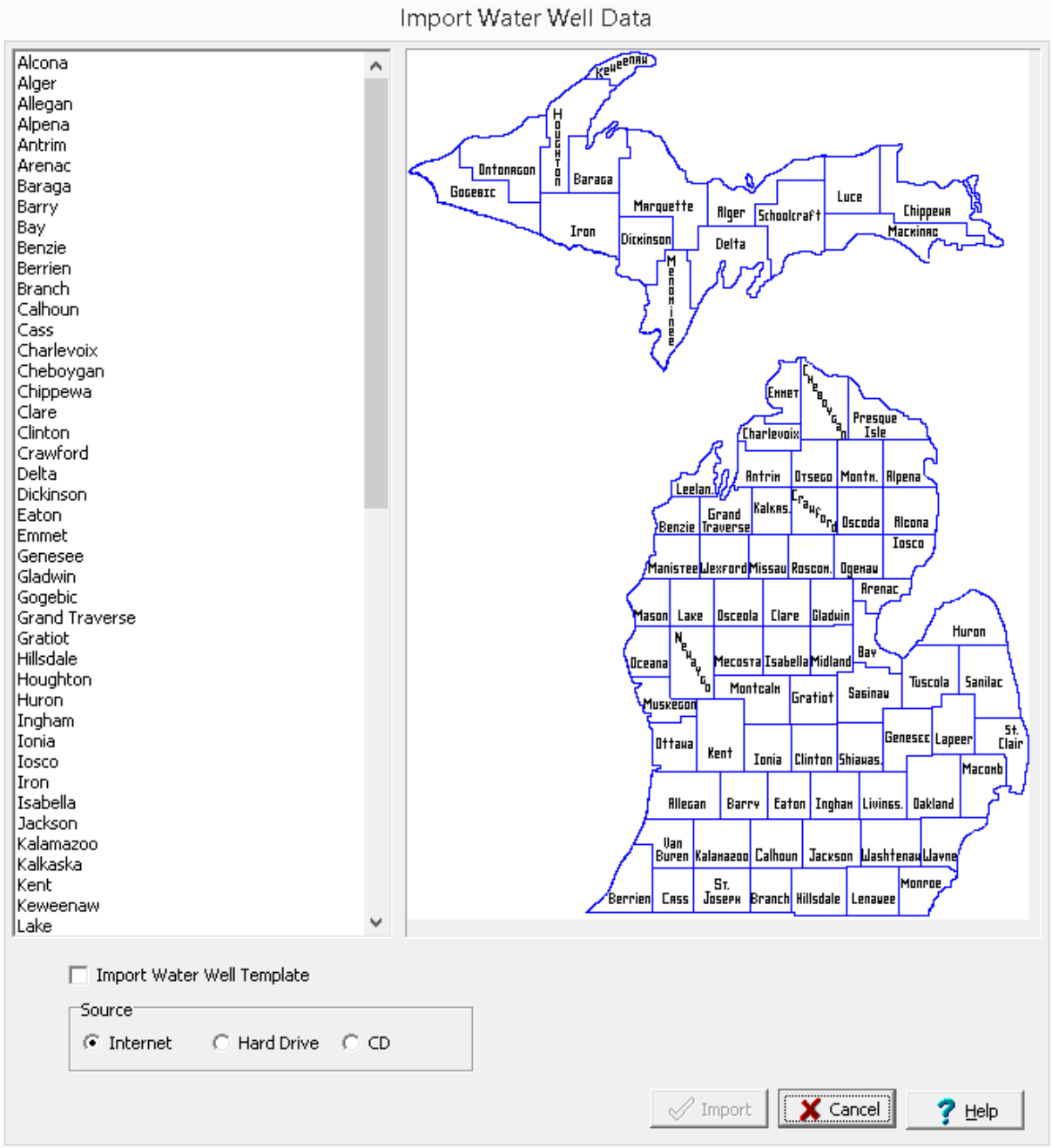
After the information has been specified click on the Import button to import the data.

3.2.7.2 Michigan Water Well Data

Water well data submitted by contractors to the State of Michigan can be imported. This data has been grouped by counties and reformatted into WinLoG RT project databases. The number of wells in each county database varies by county. After a county database has been imported it can be worked with directly or a subset of the wells can be copied to another project.

A default template has been created and assigned to the well logs called "Michigan Water Well Record". This template can also be imported with the water well data.

To import water well data select *File > Import > Government Data > Michigan Water Well Data*. The Import Water Well Data form below will then be displayed. This form displays a list of counties on the left and an index map of Michigan on the right. The numbers in brackets next to the county can be used to identify the county on the index map.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be specified on this form:

County: Select the county of water well data to be imported by clicking on it in the list.

Import Water Well Template: Check this box to import the water well template.

Source: This is used to select the source for the imported data. It can be imported from the Internet, a hard drive or a CD. If the data is imported from a hard drive, you will be asked to select the file after the

Import button is clicked. If the data is to be imported from a CD, the CD dive box will be displayed that is used to select the CD drive.

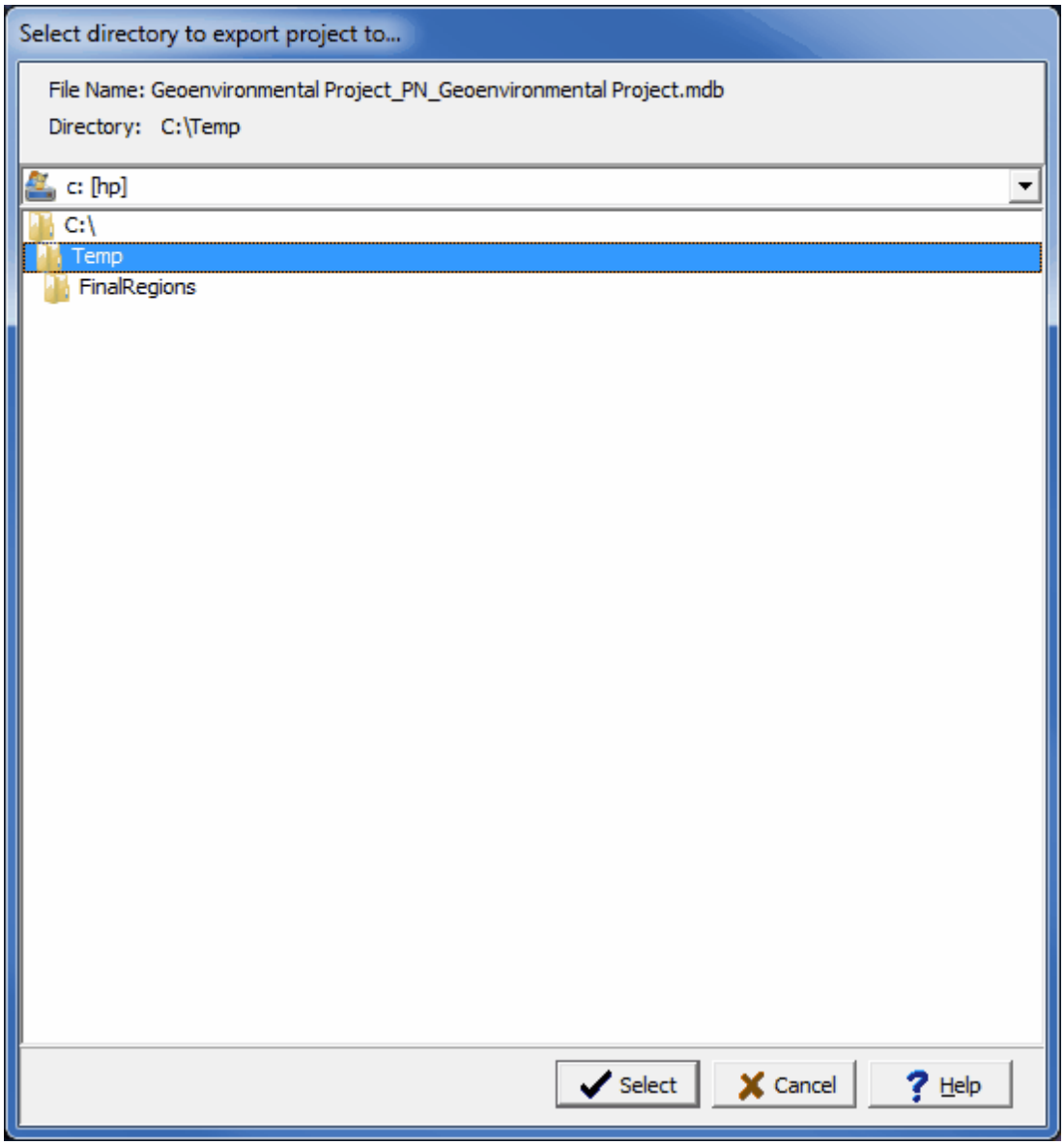
After the information has been specified click on the Import button to import the data.

3.3 Exporting Data

Projects can be exported to WinLoG RT XML Exchange, Access database files, EDMS Field, WinLoG RT,AGS, and gINT files so that they can be archived or sent to others for import. In addition the GIS data in a project can be exported to a file. The sections below describes how to export data from a project.

3.3.1 Exporting a Project to Access Database

Before the project can be exported it must first be opened 127. After a project has been opened it can be exported to a project database file by selecting *File > Export > Project > To MDB*. The select directory form below will be displayed, where you can specify the directory to store the exported project database.

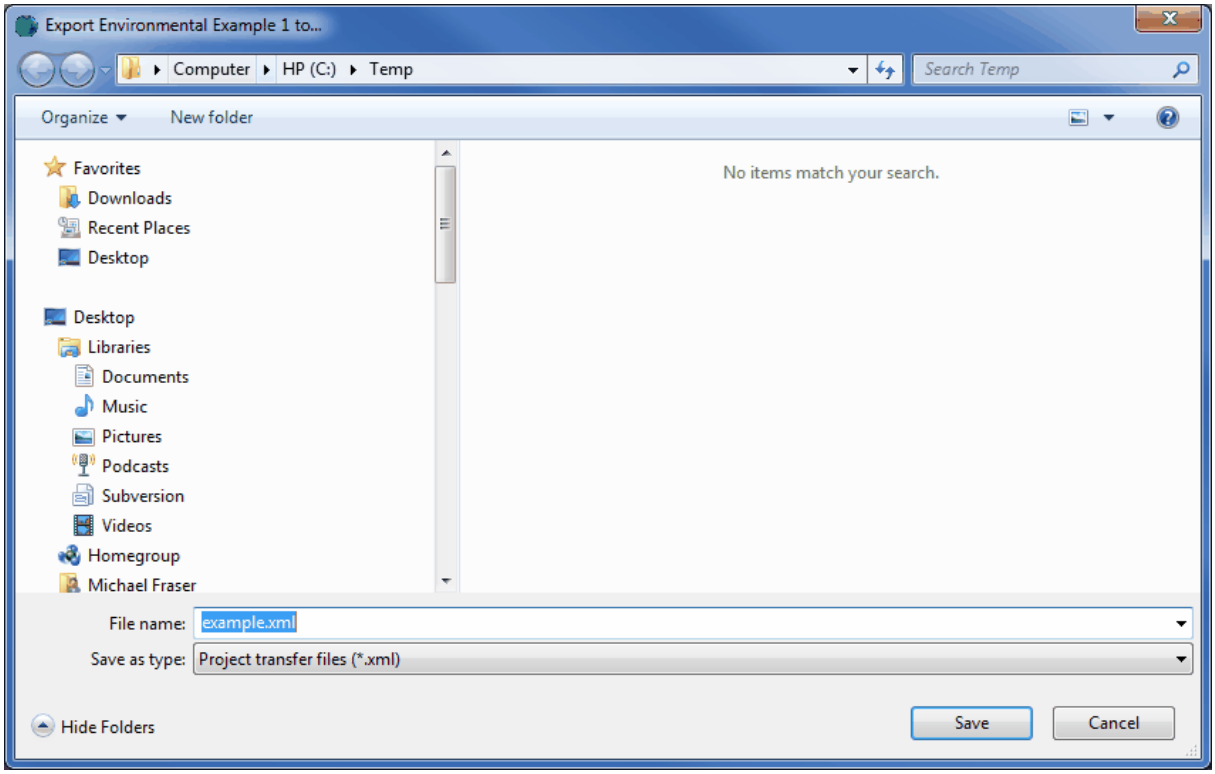


(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

Select the directory and then press the Select button. The exported file name consists of the project ID the letters "_PN_" and the project name with the extension ".mdb". This file name should not be changed, if it is the file will not be able to be imported. If it is necessary to change the name it is recommended that the file be zipped and the zip file name changed.

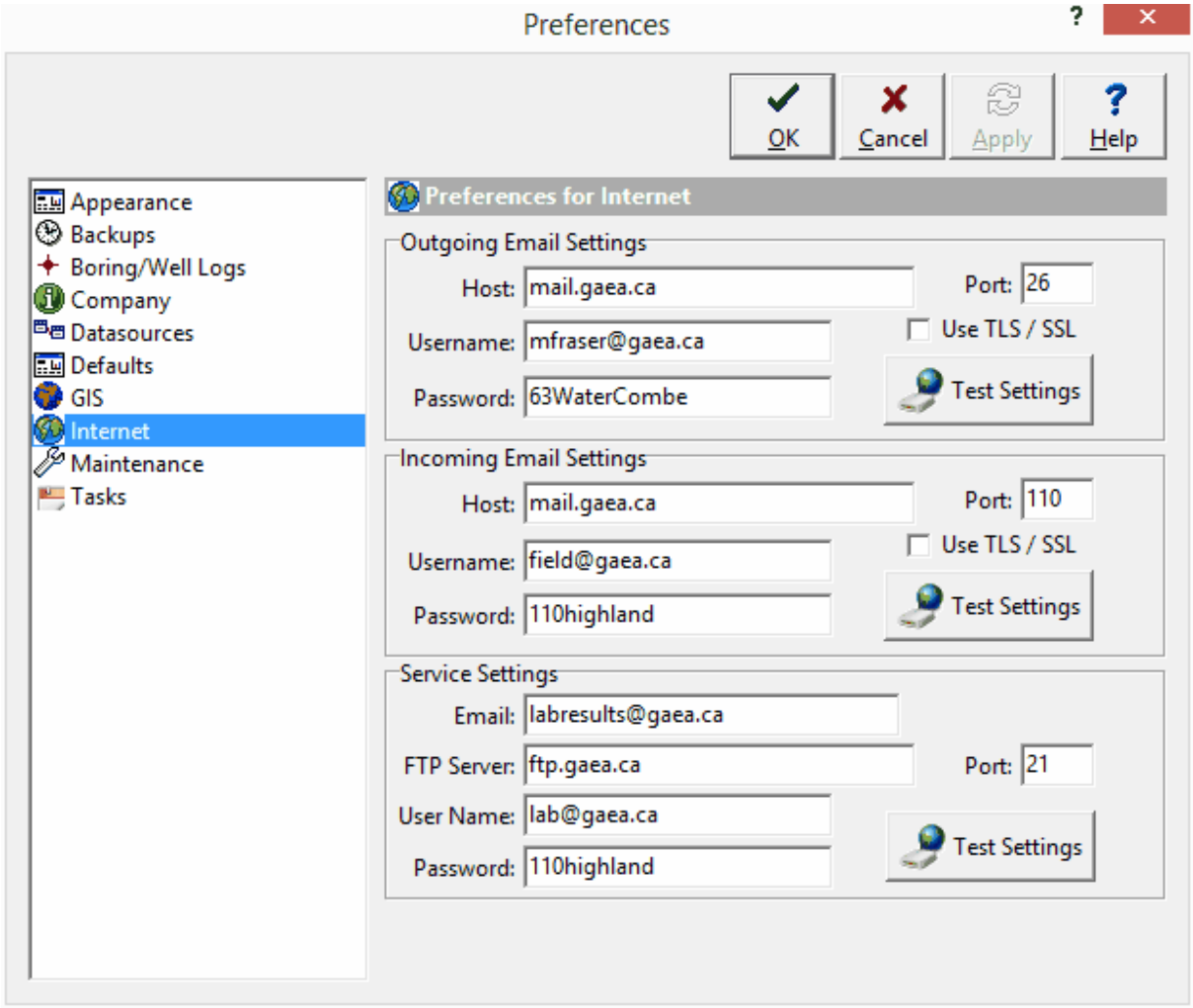
3.3.2 Exporting a Project to XML

Before the project can be exported it must first be opened 127. After a project has been opened it can be exported to an XML Exchange file by selecting *File > Export > Project > To XML*. The Export form below will be displayed, where you can specify the file name of the exported project.



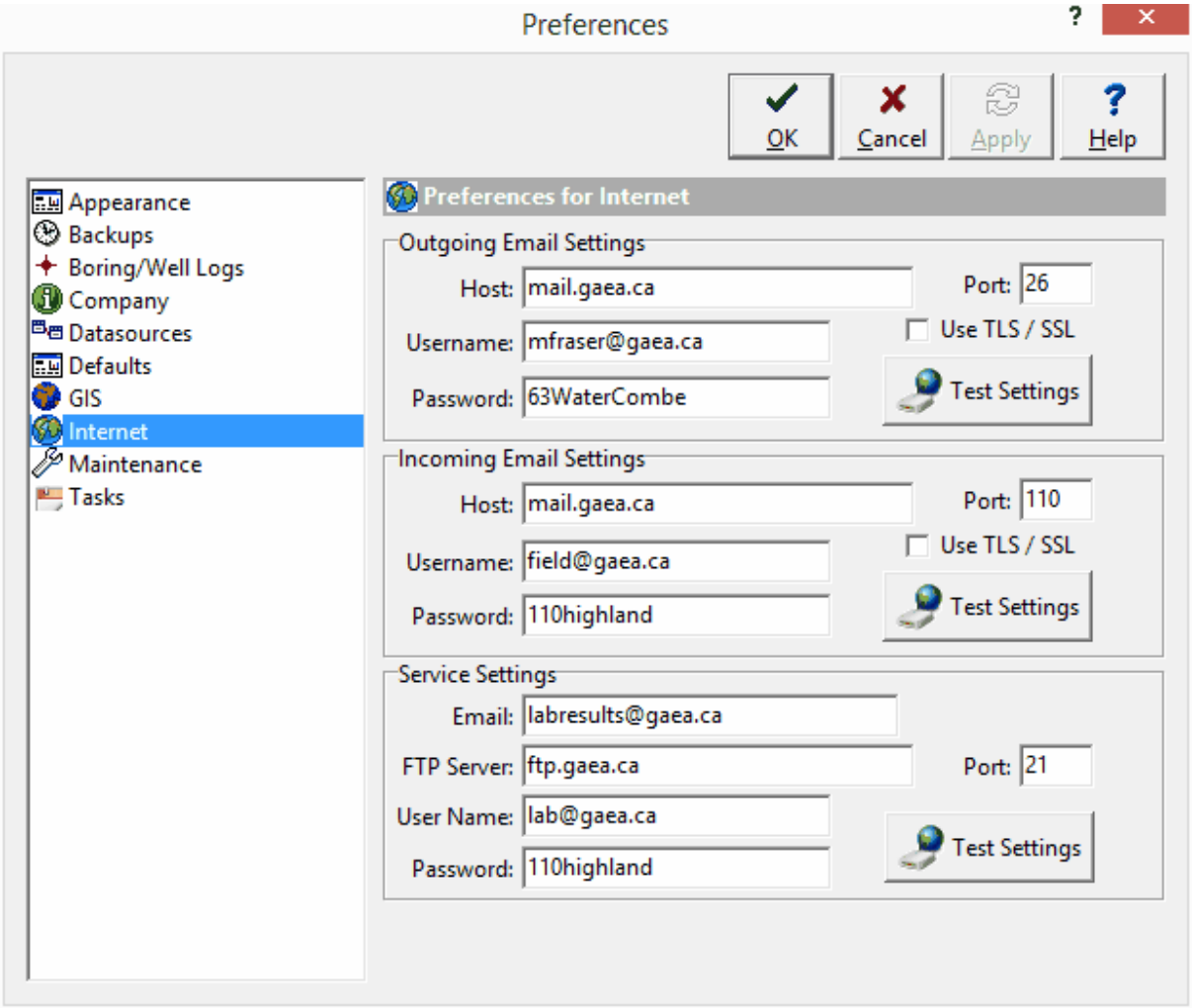
3.3.3 Exporting a Project to Service FTP

Projects can be exported from WinLoG RT and then imported into GaeaSynergy by FTP. Before exporting the project first must be opened. To export the project and send it by FTP, select *File > Export > Project > To Service FTP*. The project will then be exported and uploaded to the GaeaSynergy FTP site specified in Preferences. The GaeaSynergy service will then automatically import the project.



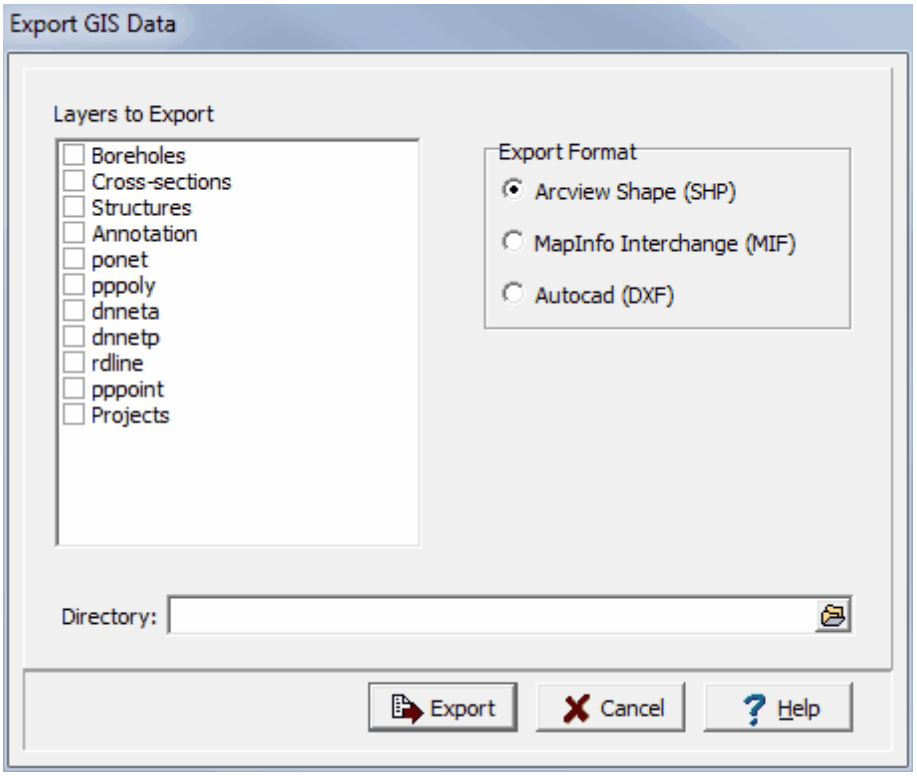
3.3.4 Exporting a Project to Service Email

Projects can be exported from WinLoG RT and then imported into GaeaSynergy by email. Before exporting the project first must be opened. To export the project and send it by email, select *File > Export > Project > To Service Email*. The project will then be exported and emailed to the GaeaSynergy email address specified in Preferences. The GaeaSynergy service will then automatically import the project.



3.3.5 Exporting GIS Data

The GIS data in a project can be exported by opening a project and selecting *File > Export > GIS Data*. The Export GIS Data form below will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be specified on the form:

Layers to Export: Check the boxes beside the layers to export from the GIS.

Export Format: The exported data can be in either Arcview Shape, MapInfo Interchange, or Autocad DXF format.

Directory: This is the directory where the exported data will be stored. To select a directory use the button on the right.

When the above information has been specified press the Export button to complete the process.

3.3.6 Exporting Tables

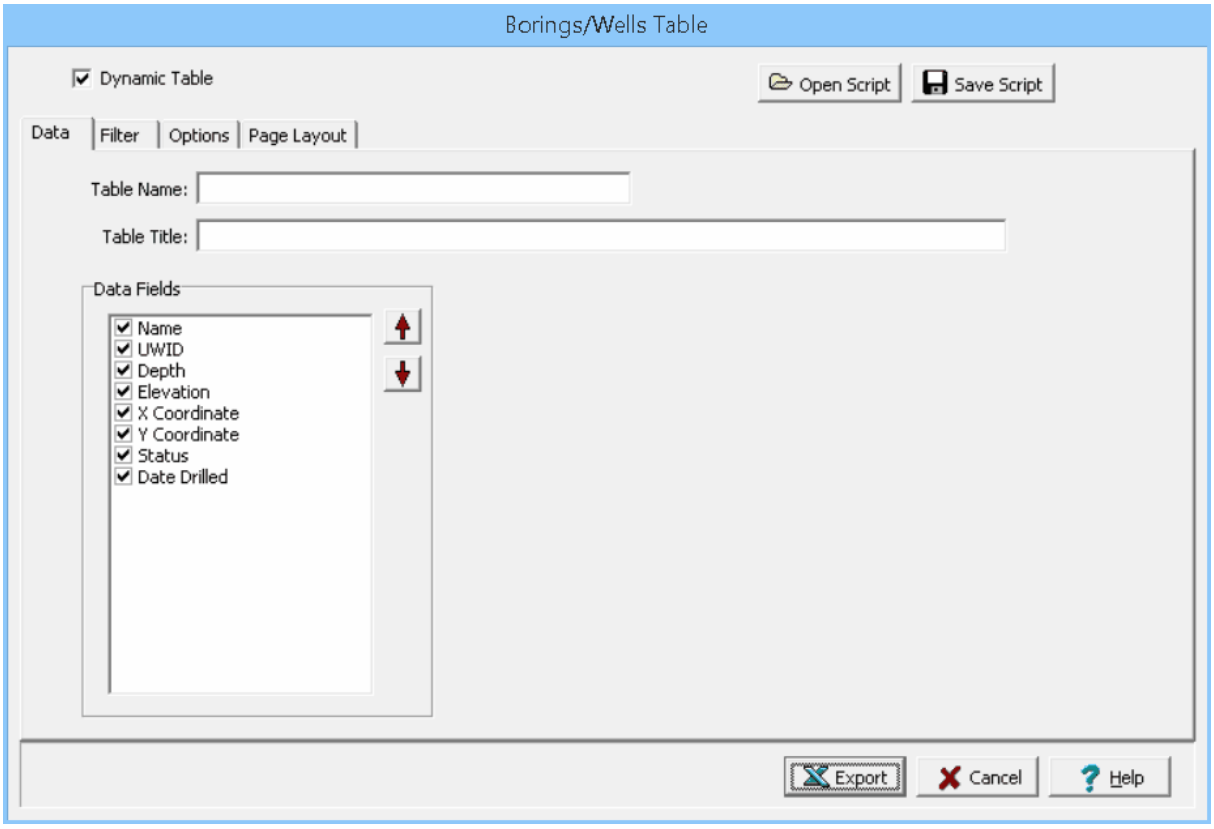
Several types of tables can be generated and exported to Excel. These tables can tabulate and summarize the data obtained from borings and wells. Once a table is created it will be listed in the Documents section on the sidebar of the project display and can be opened as described in the Opening an Excel Table 193 section.

3.3.6.1 Creating a Borings/Wells Table

Borings and well tables can be used to list selected boring and well data as shown in the spreadsheet below. To create a new boring/well table for a project select *File > Export > Excel Tables > Borings/Wells*.. The Borings/Wells Table form will be displayed.

At the top of the form there are buttons for opening and saving script files. Script files are used to save the settings in a form and can be used to generate tables with similar settings.

Tables can be either dynamic or non-dynamic. Dynamic tables are created with the latest data every time they are opened. Non-dynamic tables are static and stored in the Datastore, these tables will show the data at the time they were created.



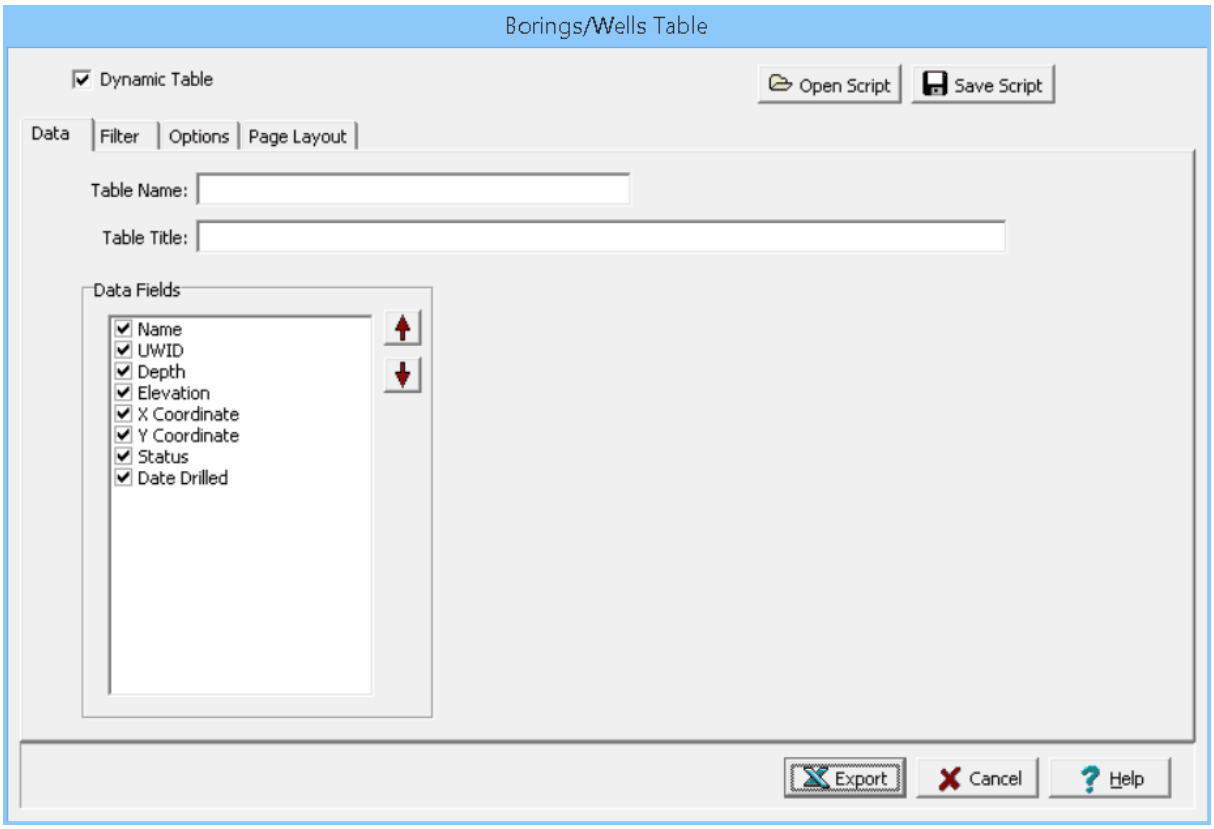
This form has four tabs for Data, Filter, Options, and Page Layout. The editing of these tabs is described in the sections below.

After the information on the tabs has been entered, the Export button at the bottom of the form will export the data to an Excel spreadsheet. When the spreadsheet has been generated it will be opened in Excel.

	A	B	C	D	E	F	G	H
1	Borings Table Example							
2								
3	**Name**	**UWID**	**Depth**	**Elevation**	**X Coordinate**	**Y Coordinate**	**Status**	**Date Drilled**
4	MW-1	EDMS Example;MW-1	26	100	769.911504	1347.345133	Well point	9/4/2014
5	MW-2	EDMS Example;MW-2	27	99.5	1493.362832	400.442478	Well point	9/2/2014
6	MW-3	EDMS Example;MW-3	26.5	98	573.00885	699.115044	Well point	9/5/2014
7	MW-4	EDMS Example;MW-4	26.5	98	1486.725664	1466.814159	Well point	9/8/2014
8	MW-5	EDMS Example;MW-5	27	99.5	1011.061947	404.8672566	Well point	9/10/2014
9	MW-6	EDMS Example;MW-6	25.5	101	480.088496	1818.584071	Well point	9/12/2014
10	MW-7	EDMS Example;MW-7	26.5	98	431.415929	254.424779	Well point	9/16/2014
11	MW-8	EDMS Example;MW-8	26	99.5	1871.681416	1152.654867	Well point	9/23/2014

3.3.6.1.1 Data Tab

The Data tab is used to specify the data that will be included in the table.



The following can be specified on this tab:

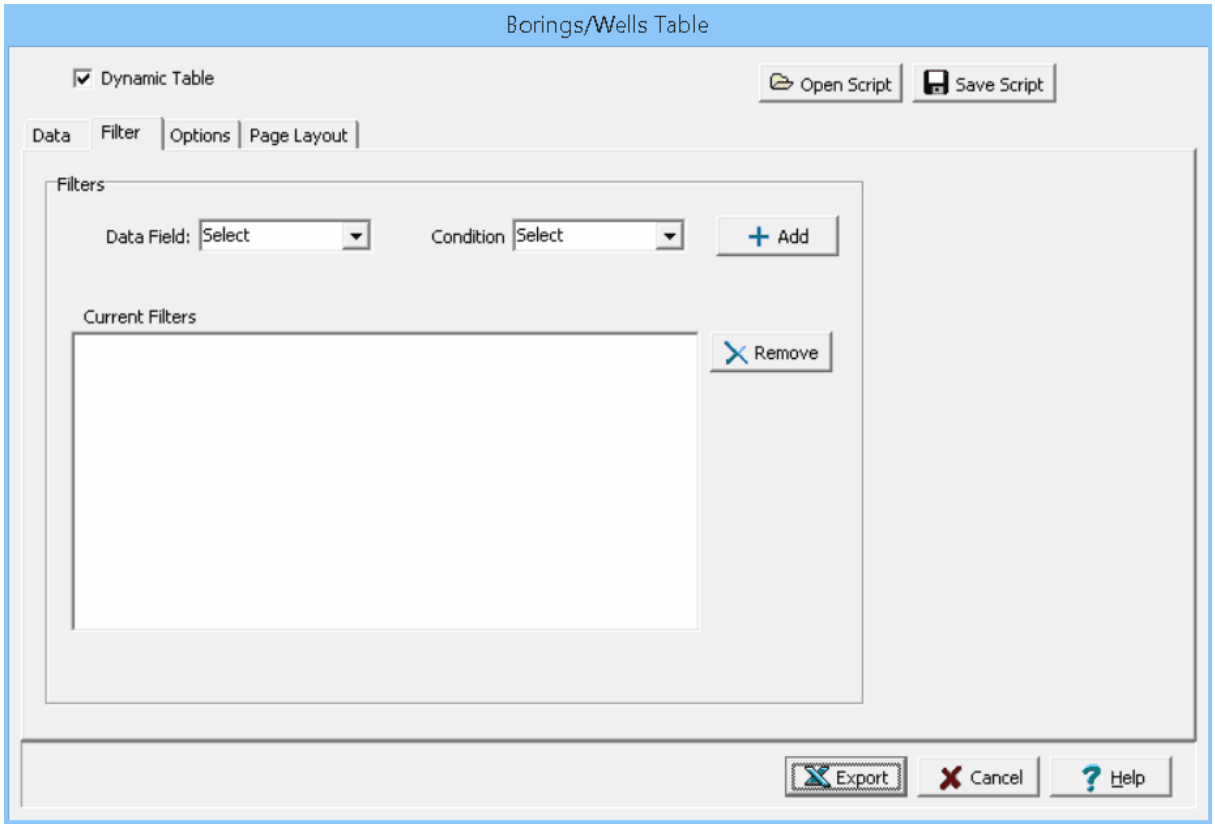
Table Name: This is name of the table for the data.

Table Title: This is used to specify the title that will appear at the top of the table.

Data Fields: The data fields to be included in the table can be selected using the check boxes next to the data field. The up and down arrows at the side can be used to move the selected data field up or down in the list. Each data field will represent either a row or column in the table depending on the orientation set on the Options 191 tab.

3.3.6.1.2 Filter Tab

The Filter tab is used to filter the data and only display the data that meets the filter criteria.



The following can be specified on this tab:

Data Field: This is used to select the data field for the filter.

Condition: This is used to select the filter condition to apply to the selected data field. It can be greater than, less than, between, equals, starting with, is null, or not null.

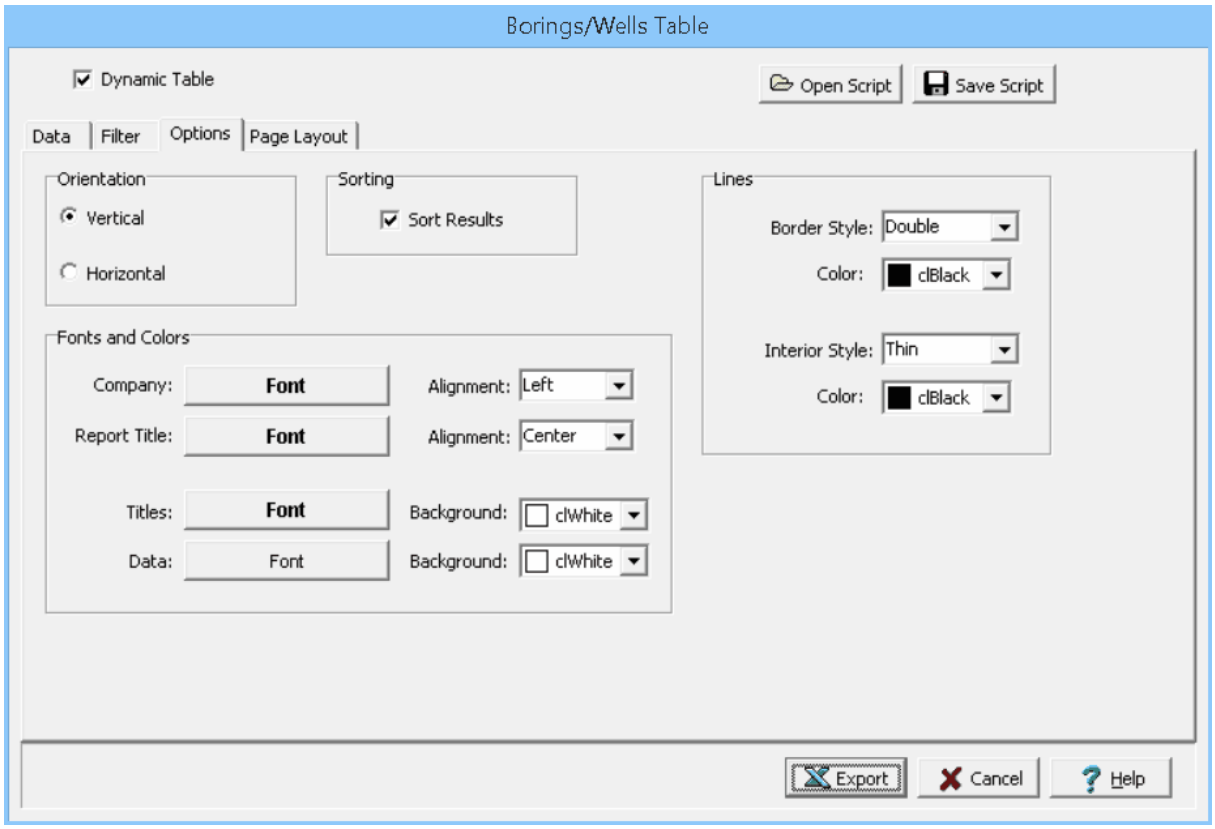
Condition Value: This is used to specify the value of the condition. It will be labeled Equals, Greater than, Less than, Starting with, or Greater than and Less than depending on the condition selected.

Add: The Add button will add the specified filter to the list of current filters.

Remove: The Remove button will remove the selected filter in the list of current filters.

3.3.6.1.3 Options Tab

The Options tab is used to specify a variety of format options for the table.



The following can be specified on this tab:

Orientation: The orientation can be either vertical or horizontal. If the orientation is vertical, the data fields will be in columns and the borings/wells (or samples or water levels) in rows. If the orientation if horizontal the data fields will be in rows and the borings/wells (or samples or water levels) in columns.

Sorting: Check this box to sort the borings/wells (or samples or water levels) using the first data field in the table.

Company Font: Click this button to select the font for the company name to be placed on the table specified in the Page Layout 192 tab.

Company Alignment: This is used to select the text alignment for the company name.

Report Title Font: Click this button to select the font for the title.

Report Title Alignment: This is used to select the text alignment for the title.

Titles Font: Click this button to select the font for the data titles.

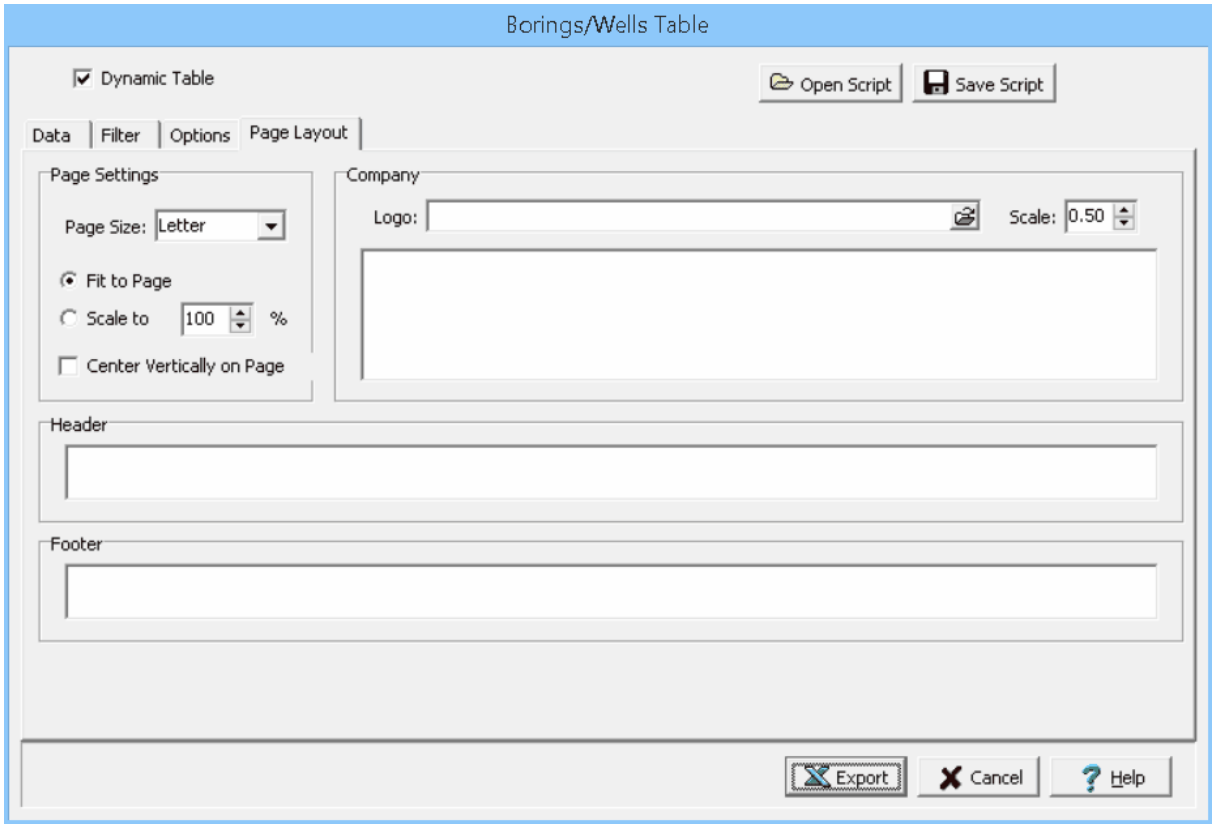
Titles Background: This is used to select the background color for the data title cells.

Data Font: Click this button to select the font for the data.

Data Background: This is used to select the background color for the data cells.

3.3.6.1.4 Page Layout Tab

The Page Layout tab is used to specify the layout, company name and logo, and header and footer for the table.



The following can be specified on this tab:

Page Settings: This is used to select the paper size for the table and how the table will be placed on the page.

Company Logo: The button on the right of the logo can be used to select an optional company logo bitmap file to be placed on the page. The scale for the company logo can be adjusted using the scale on the right.

Company: This is used to specify an optional company name and address to be placed on the page.

Header: This is used to specify an optional header for the table.

Footer: This is used to specify an optional header for the table.

3.3.6.2 Opening an Excel Table

After an Excel table has been created, it will be listed under Documents on the sidebar. To open a table either:

1. Double click on it on the sidebar, or
2. Select *File > Open > Document* and select it from the list of documents, or.
3. Click on the Open button and select *Document* and select it from the list of documents.

The table will then be opened in Excel. If it is a dynamic table it will be updated with the latest data from the project before it is opened.

3.3.6.3 Deleting an Excel Table

To delete a table select *File > Delete > Document* and select it from the list of documents.

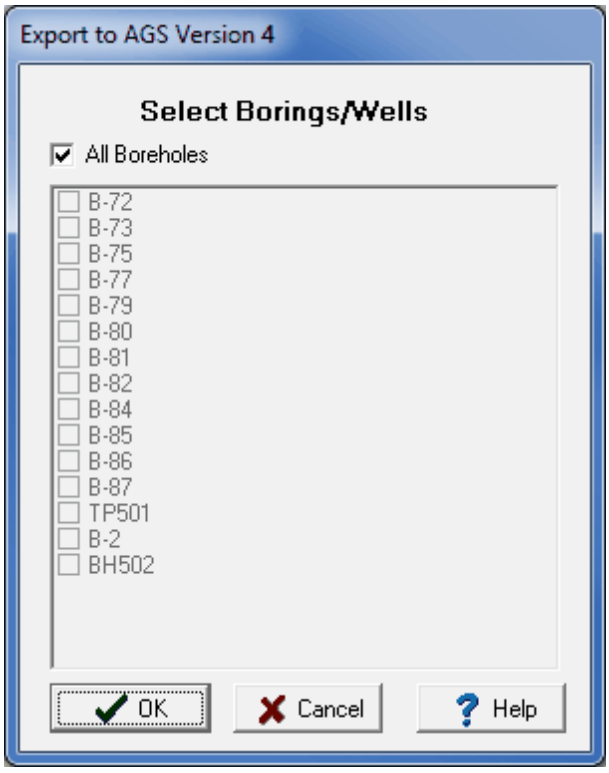
3.3.7 Exporting AGS Data

The Association of Geotechnical and Geoenvironmental Specialists (AGS) is a non-profit making trade association established to improve the profile and quality of geotechnical and geoenvironmental engineering. The AGS Format is for the electronic transfer of data in the geotechnical and geoenvironmental industries. The newest version is known as "AGS4" which contains an updated Data Dictionary and revised rules for AGS Format files. The previous version 3 format is also supported for importing and exporting from WinLoG RT.

A variety of boring and well data can be imported and exported in AGS4 and AGS3 format. For a list of the data groups click on the links below:

- AGS Version 3 203
- AGS Version 4 204

Before any data can be exported the project must first be opened 127. After a project has been opened boring and well data can be exported to an AGS file by selecting *File > Export > AGS > Version 4 or Version 3*. A file dialog will be displayed to specify the file to save the exported data. Next, the borings/wells to be exported must be selected on the Export form below. Either all of them can be exported or they can be exported individually using the checkboxes.

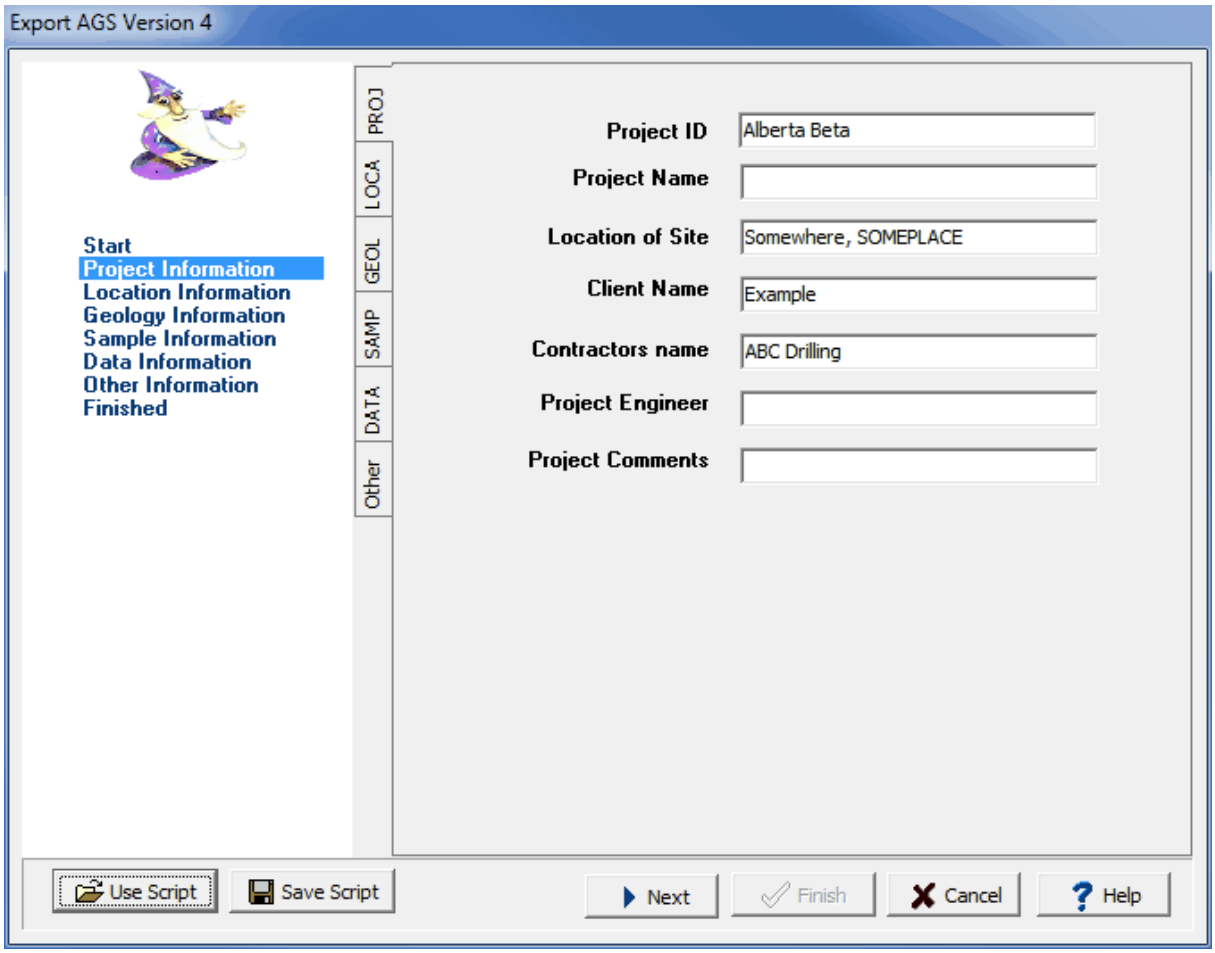


(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The next step is to specify the data to be exported and add any additional information for the data. A wizard form 195 is used to guide you through this process. This wizard guides you through the six steps required to export the data and is discussed in the topics below.

3.3.7.1 Exporting AGS Project Information

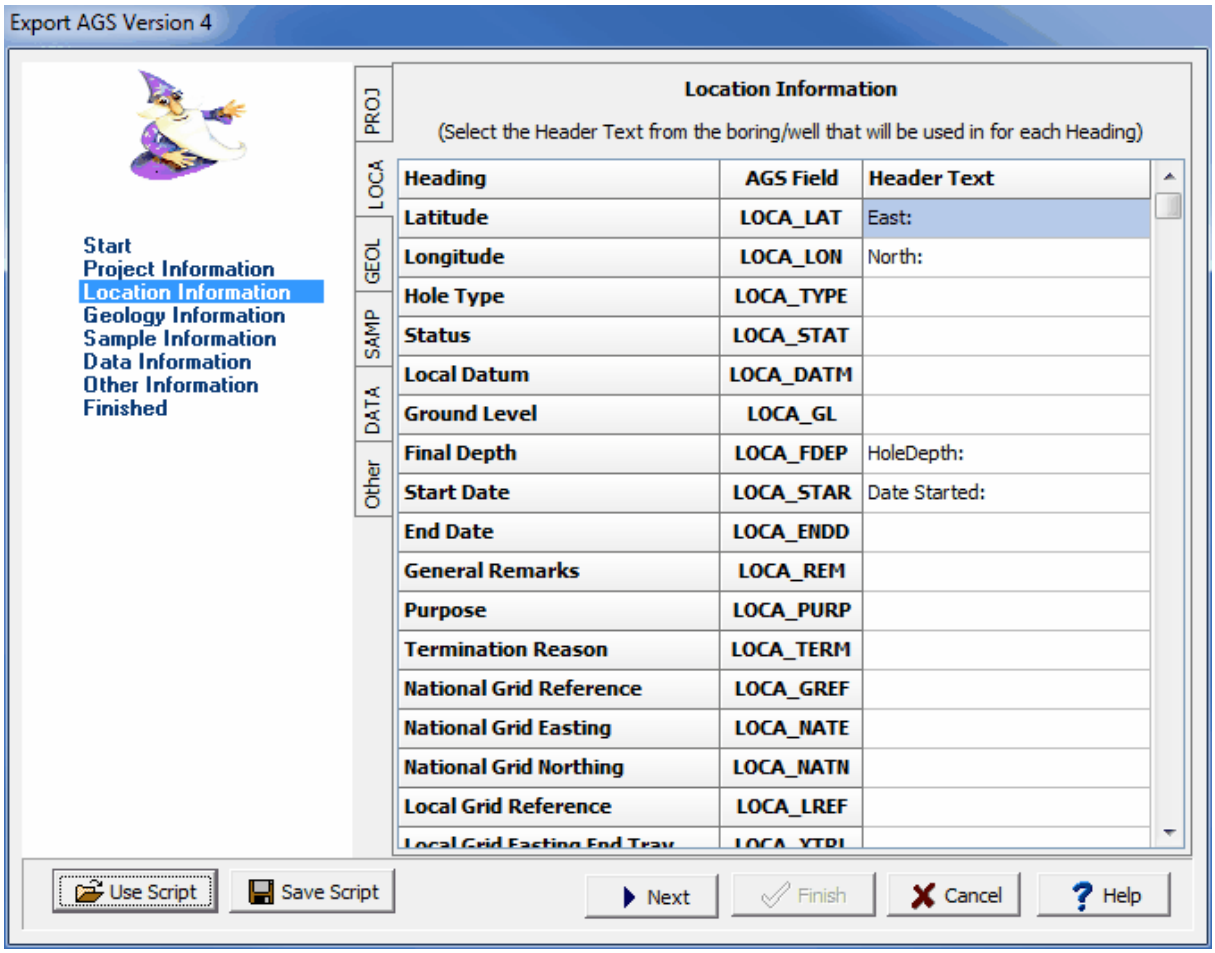
The first step is to specify any additional project information to be exported. After the information has been entered, the Next button can be used to go to the next step.



To make this process easier if you are exporting to AGS files a lot, you can create and use script files to for the export settings. To create a new script file with the export settings click on the Save Script button and enter a file name for the script. The script file should only be saved after all of the export settings have been entered. To open and use an existing script file, click on the Use Script button and select the file. An existing script file should be opened prior to entering any export settings. Script files should have the extension ".scp".

3.3.7.2 Exporting AGS Location Information

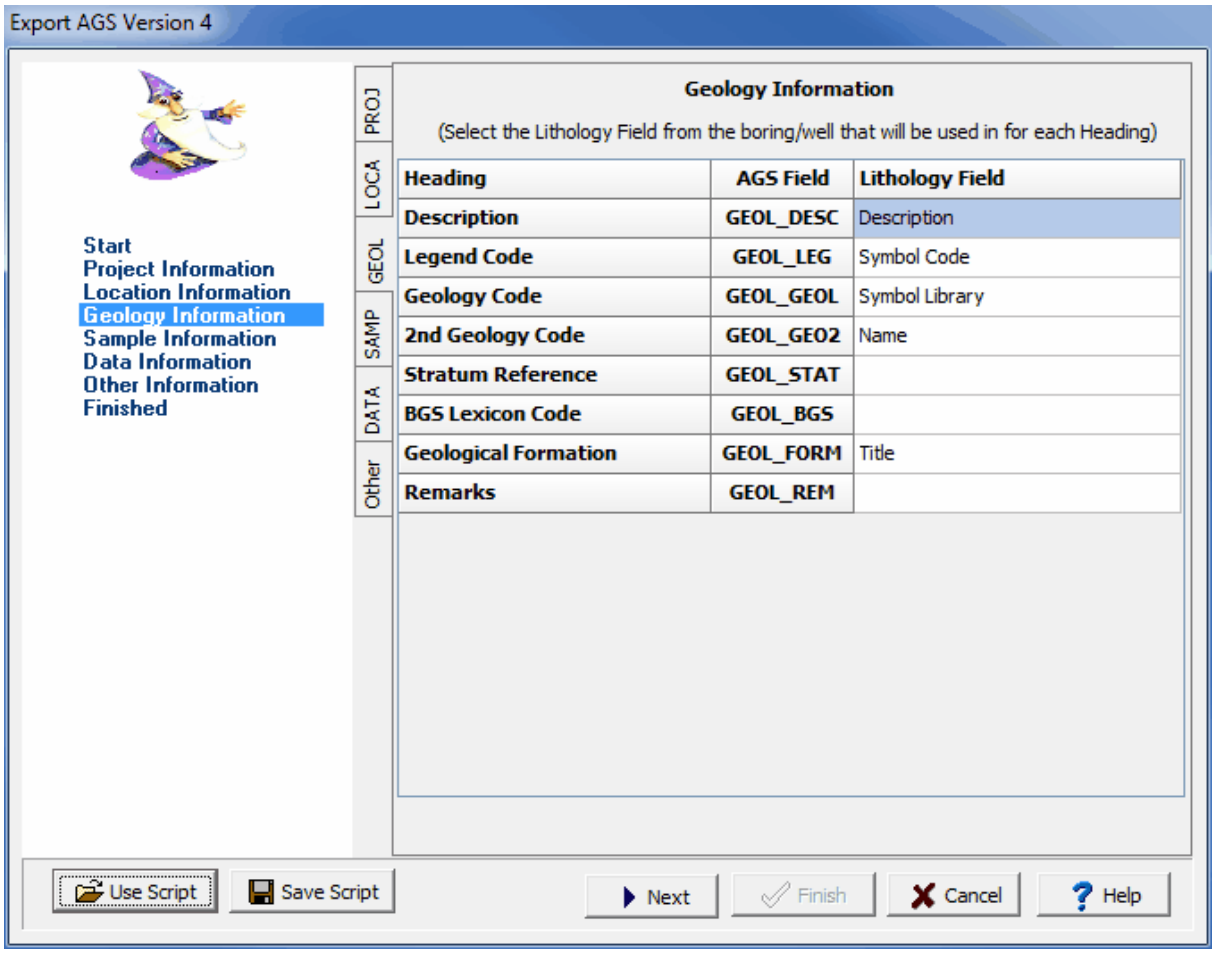
This step is used to specify the location (borehole/well) information to export. The table shown below can be used to specify what header text from the boring/well log is used for each heading to be exported. To change the header text to be used click on it and select it from the combobox. For AGS version 4 data the dataset group is called "LOCA" and for version 3 it is called "HOLE".



After the information has been entered, the Next button can be used to go to the next step.

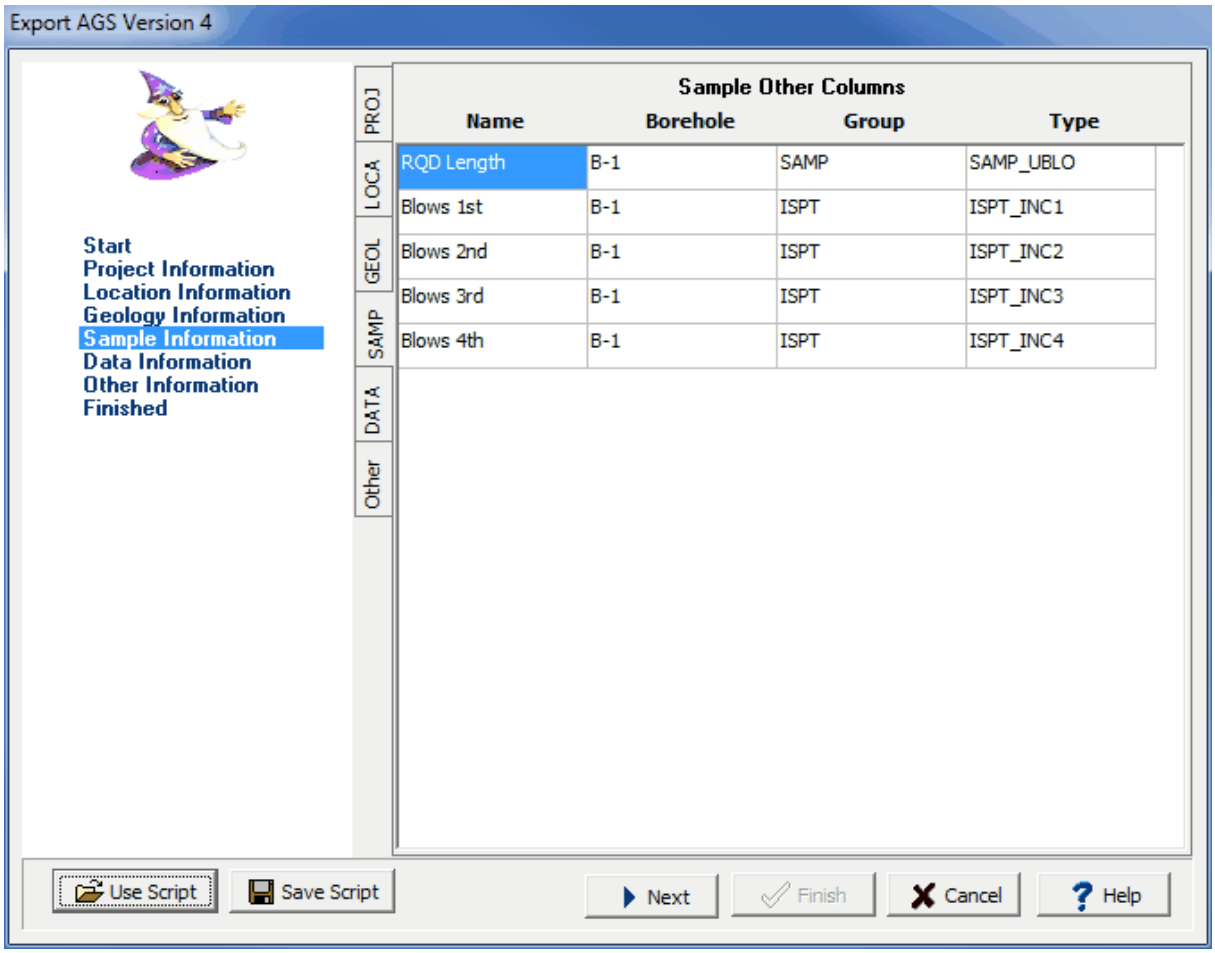
3.3.7.3 Exporting AGS Geological Information

This step is used to specify the lithology information to be exported. The lithology field to be exported for each heading can be specified by clicking on it and selecting the field from the combo box. After the information has been entered, the Next button can be used to go to the next step.

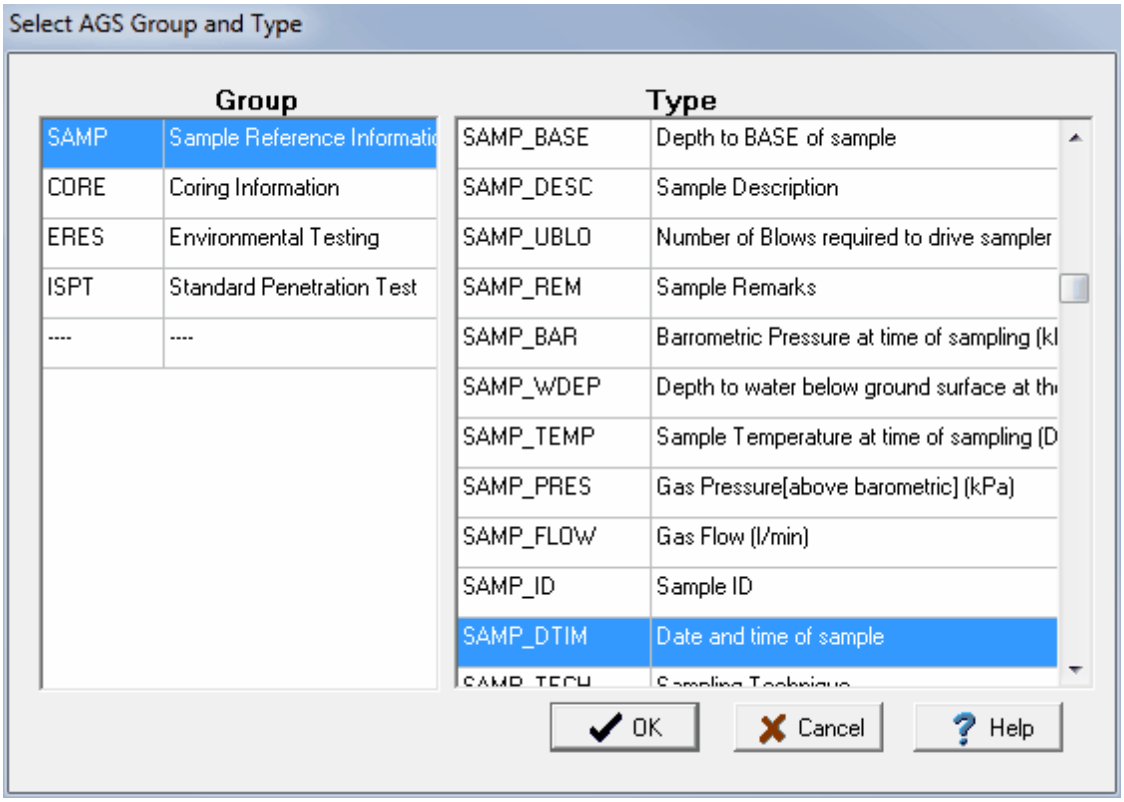


3.3.7.4 Exporting AGS Sample Information

This step is used to select sample other data from the borings/wells to be exported and what AGS group and type to use for the export.



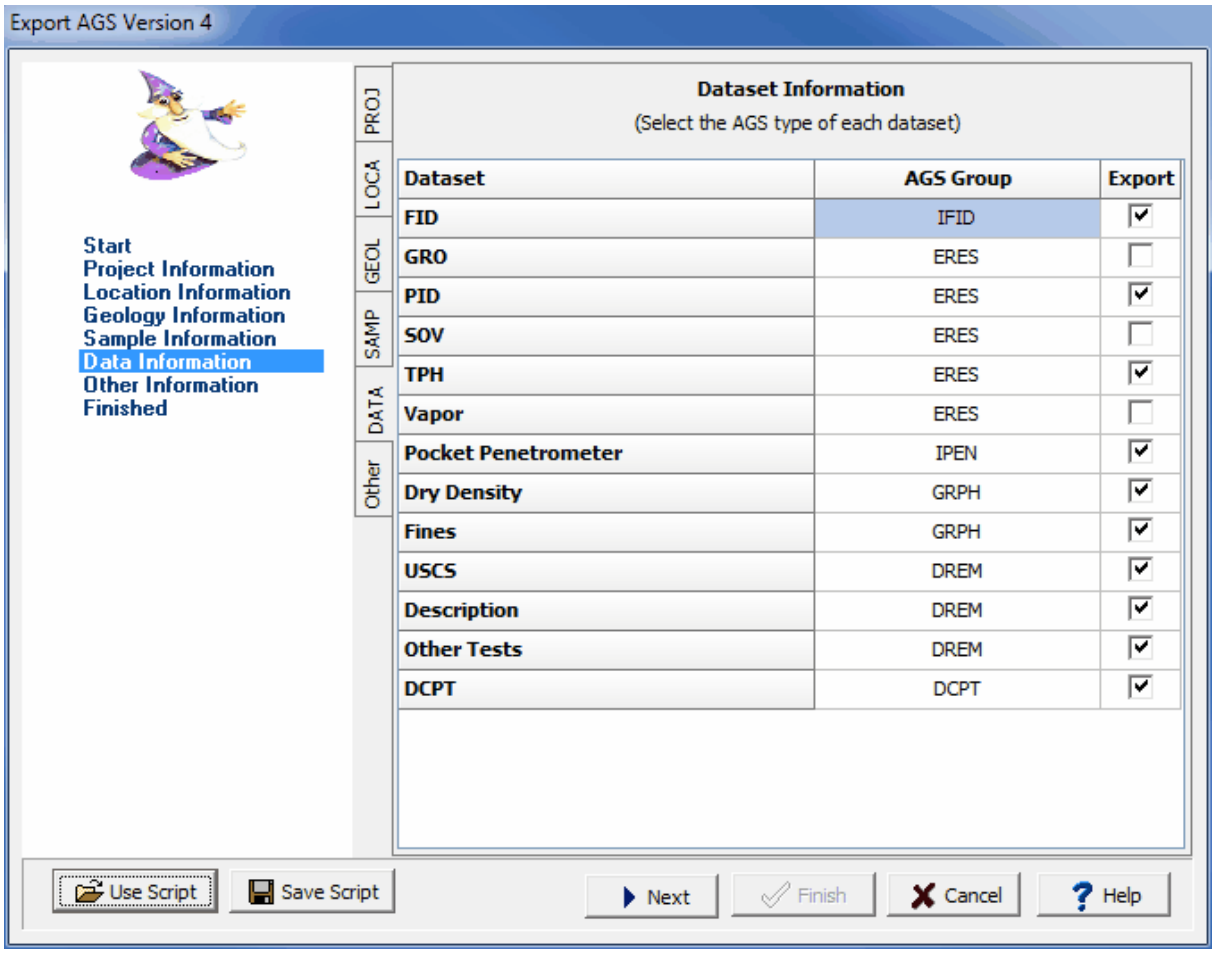
To specify the AGS group and type for each other data field, double click on the Type column and the form below will be shown. This form can then be used to select the AGS group and type. The AGS groups that can be selected will depend on whether exporting to AGS version 3 or 4 format.



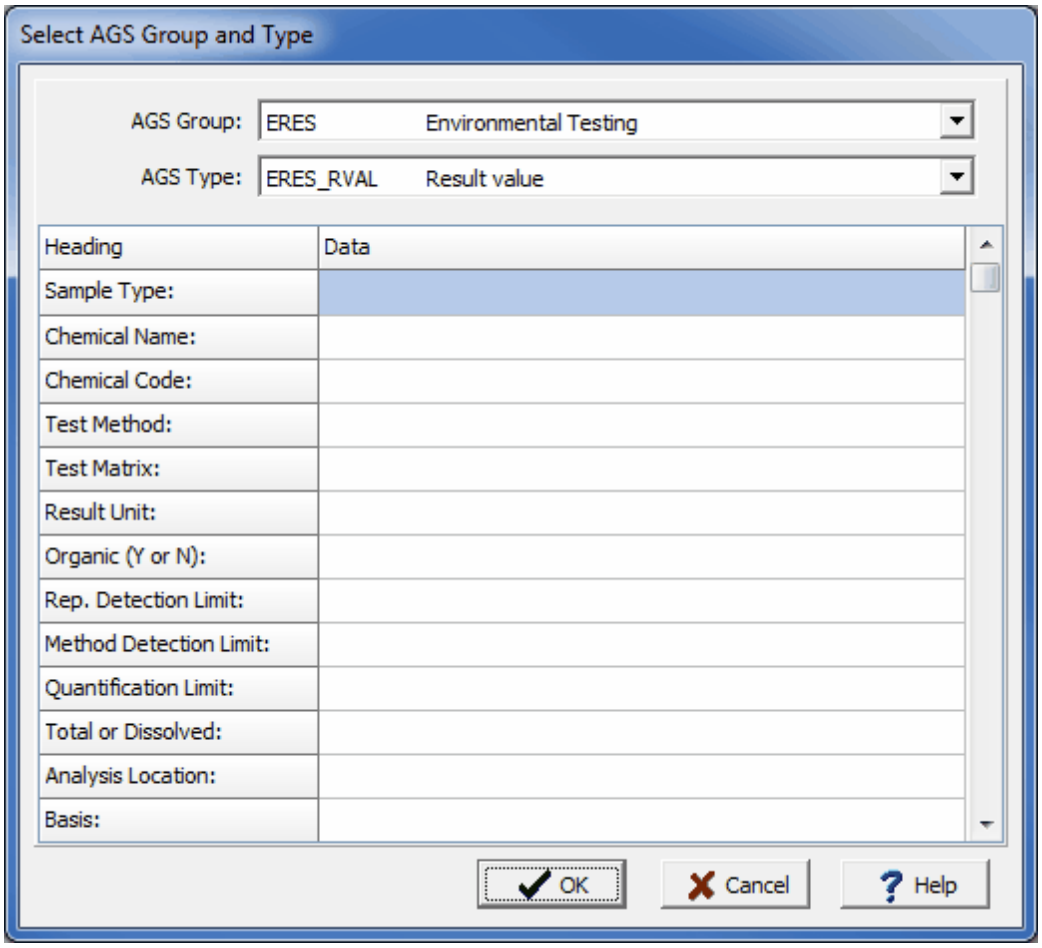
After the information has been entered, the Next button can be used to go to the next step.

3.3.7.5 Exporting AGS Data Information

This step is used to specify what datasets from the borings/wells are to be exported. The datasets present in the borings/wells are displayed in the table along with the AGS group to use for the dataset. The checkbox on the right is used to determine if the dataset is to be included in the export.



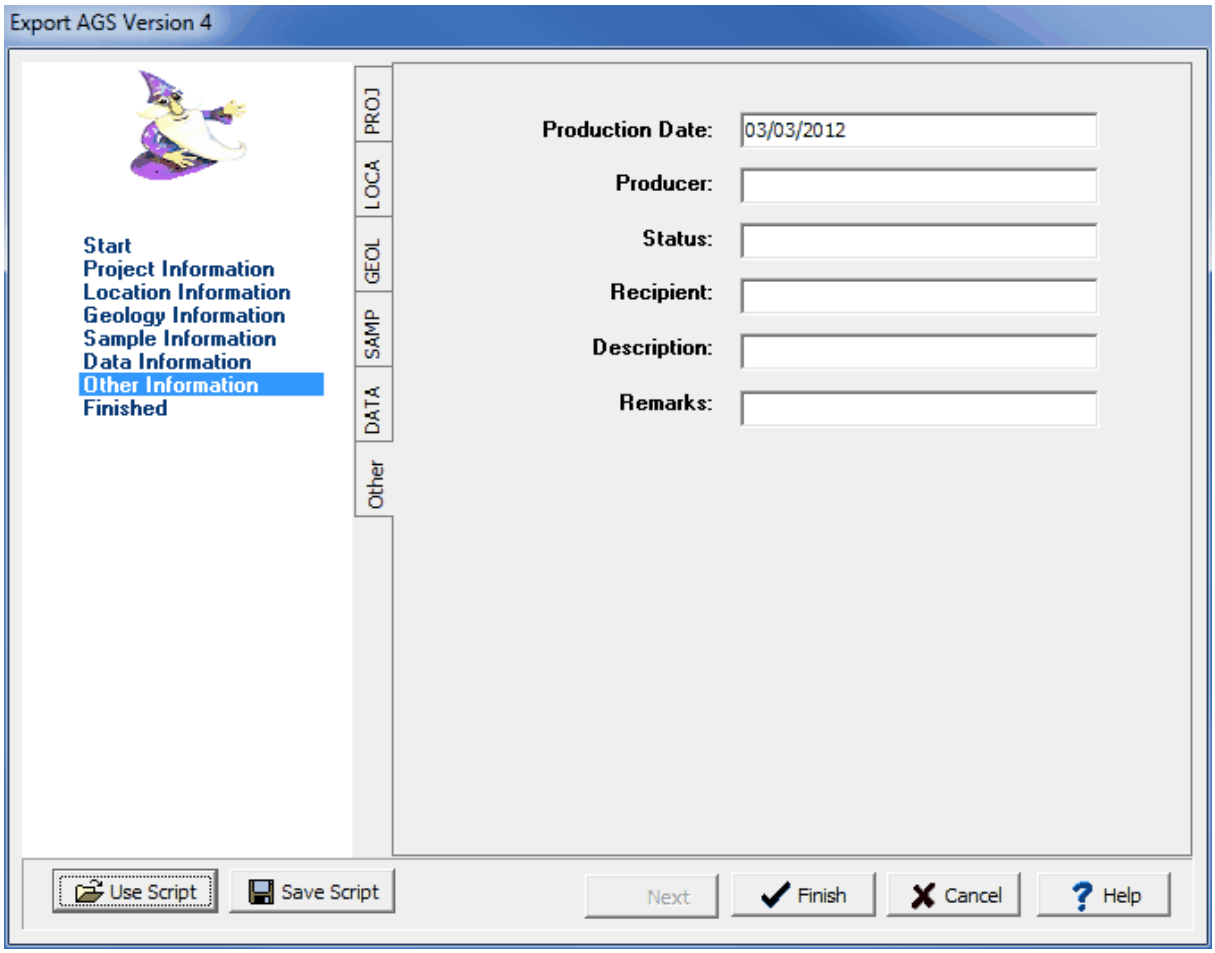
To specify the AGS group and type to use for the dataset, double click on it and the form below will be displayed. This form is used to select the AGS group, AGS type, and specify any additional information for the AGS group. The AGS groups that can be selected will depend on whether exporting version 3 or 4.



After the information has been entered, the Next button can be used to go to the next step.

3.3.7.6 Exporting AGS Other Information

The last step is to specify any other information for the export. This information to be exported will depend on the version of AGS to be exported. After the information has been entered, press the Finish button to complete the export.



3.3.7.7 AGS 3 Data

A wide variety of boring and well data can be imported and exported in AGS 3 format. The AGS format imports and exports data from ASCII text files in a specified format. This format is divided into a series of data groups that represent different types of geotechnical and environmental data. Some of these data groups must be present in all files and the rest are optional. For a complete description of the data dictionary click on the web site below or contact us at GAEA Technologies.

http://www.ags.org.uk/site/datatransfer/intro.cfm

Below is a list of the AGS 3 data groups currently supported by WinLoG RT. If there is data in a group not currently supported please contact us and we will do our best to add support for that group in the next update.

Required	Group Name	Description
Yes	PROJ	Project Information
Yes	ABBR	Abbreviation Definitions
Yes	UNIT	Definition of Units
No	DICT	User Defined Groups and Headings
No	CORE	Coring Information
No	DREM	Depth Related Remarks
No	GEOL	Geological Descriptions
No	HOLE	Boring and Well Location Data

No	IDEN	Density Tests
No	?IFID	Volatile Headspace Testing (Flame Ionization)
No	?IPID	Volatile Headspace Testing (Photo Ionization)
No	ISPT	Standard Penetration Tests
No	IVAN	Vane Tests
No	SAMP	Sample Information
No	STCN	Static Cone Penetration Test
No	WSTK	Water Strike General
No	GRPH	Graph Data

3.3.7.8 AGS 4 Data

A wide variety of boring and well data can be imported and exported in AGS 4 format. The AGS format imports and exports data from ASCII text files in a specified format. This format is divided into a series of data groups that represent different types of geotechnical and environmental data. Some of these data groups must be present in all files and the rest are optional. For a complete description of the data dictionary click on the web site below or contact us at GAEA Technologies.

http://www.ags.org.uk/site/datatransfer/intro.cfm

Below is a list of the data groups currently supported by WinLoG RT. If there is data in a group not currently supported please contact us and we will do our best to add support for that group in the next update.

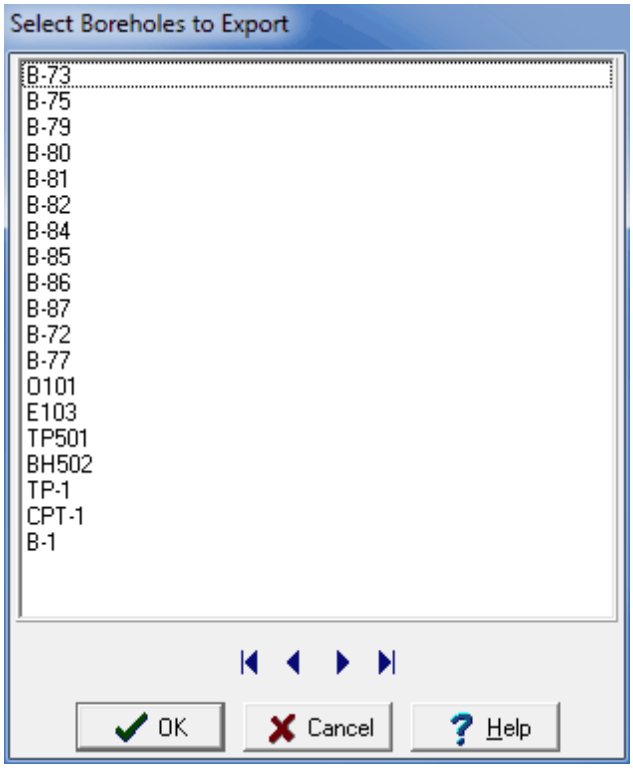
Required	Group Name	Description
Yes	PROJ	Project Information
Yes	ABBR	Abbreviation Definitions
Yes	TRAN	Data Transmission Information
Yes	TYPE	Definition of Data Types
Yes	UNIT	Definition of Units
No	DICT	User Defined Groups and Headings
No	CORE	Coring Information
No	DCPG	Dynamic Cone Penetration - General
No	DCPT	Dynamic Cone Penetration - Data
No	DREM	Depth Related Remarks
No	ERES	Environmental Contaminant Testing
No	GEOL	Geological Descriptions
No	HORN	Hole Orientation and Inclination
No	IDEN	Density Tests
No	IFID	Volatile Headspace Testing (Flame Ionization)
No	IPID	Volatile Headspace Testing (Photo Ionization)
No	IPEN	Hand Penetrometer Tests
No	ISPT	Standard Penetration Tests
No	IVAN	Vane Tests
No	LOCA	Boring and Well Location Data
No	SAMP	Sample Information
No	SCPG	Static Cone Penetration - General
No	SCPT	Static Cone Penetration - Data

No	WSTD	Water Strike General
No	GRPH	Graph Data

3.3.8 Exporting gINT Data

Boring and well data can be imported and export to and from gINT version 8 project databases. These project database have the extension "gpj" and are the same as a Microsoft Access database file.

Before any data can be exported the project must first be opened[127]. After a project has been opened, boring and well data can be exported to a gINT project database file by selecting *File > Export > gINT > Version 8*. A file dialog will be displayed to specify the file to save the exported data. Next, the borings/wells to be exported must be selected on the Export form below. One or more borings/wells can be selected using the CRTL and SHIFT keys.

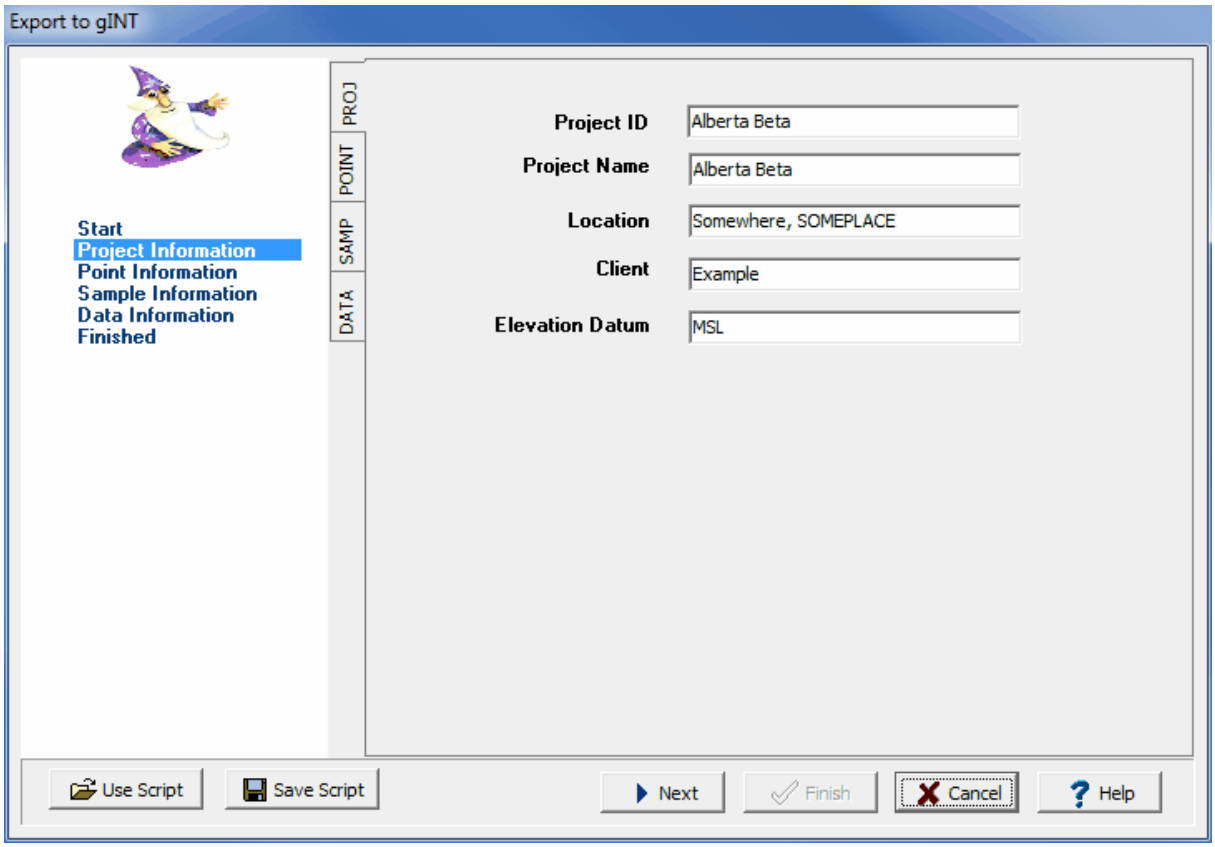


(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The next step is to specify the data to be exported and add any additional tables for the data. A wizard is used to guide you through this process. This wizard guides you through the steps required to export the data and is discussed in the topics below.

3.3.8.1 Exporting gINT Project Information

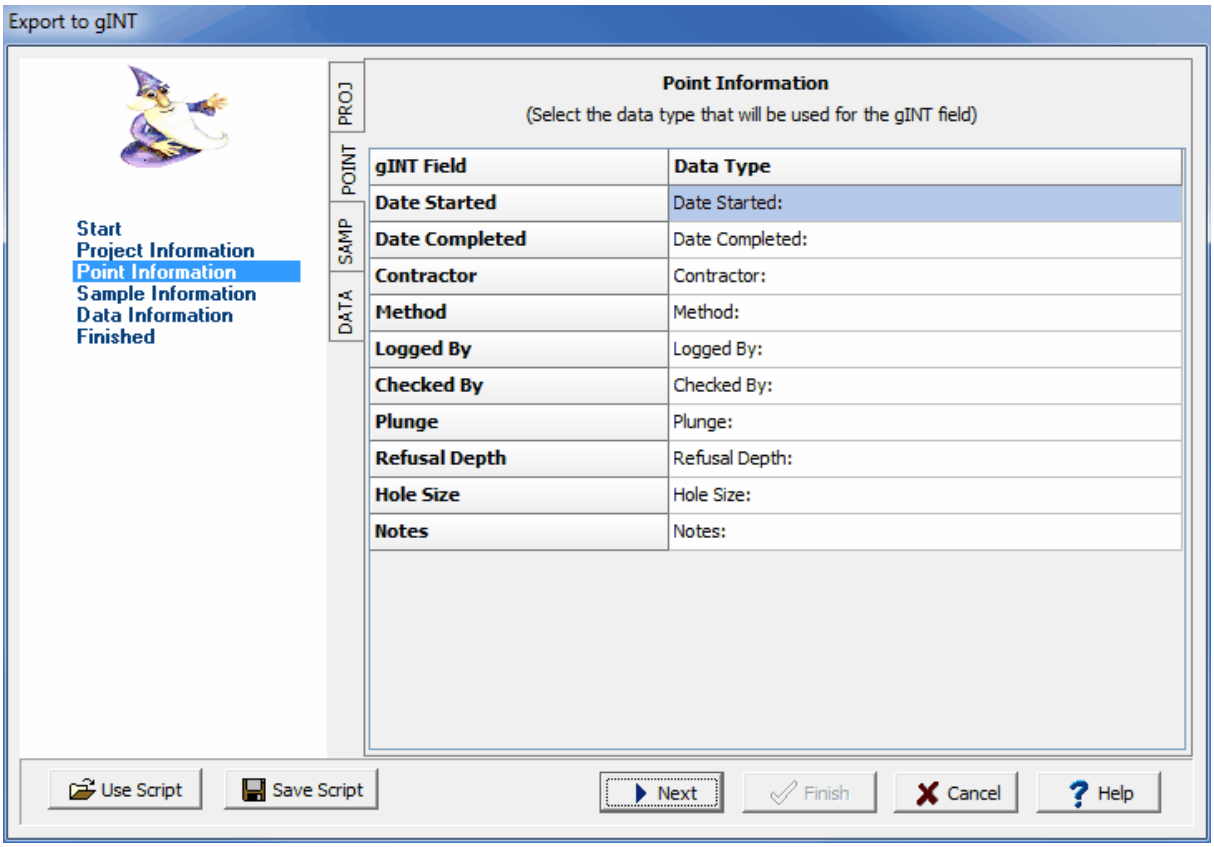
The first step is to specify any additional project information to be exported. After the information has been entered, the Next button can be used to go to the next step.



To make this process easier if you are exporting to gINT files a lot, you can create and use script files to for the export settings. To create a new script file with the export settings click on the Save Script button and enter a file name for the script. The script file should only be saved after all of the export settings have been entered. To open and use an existing script file, click on the Use Script button and select the file. An existing script file should be opened prior to entering any export settings. Script files should have the extension ".scp".

3.3.8.2 Exporting gINT Point Information

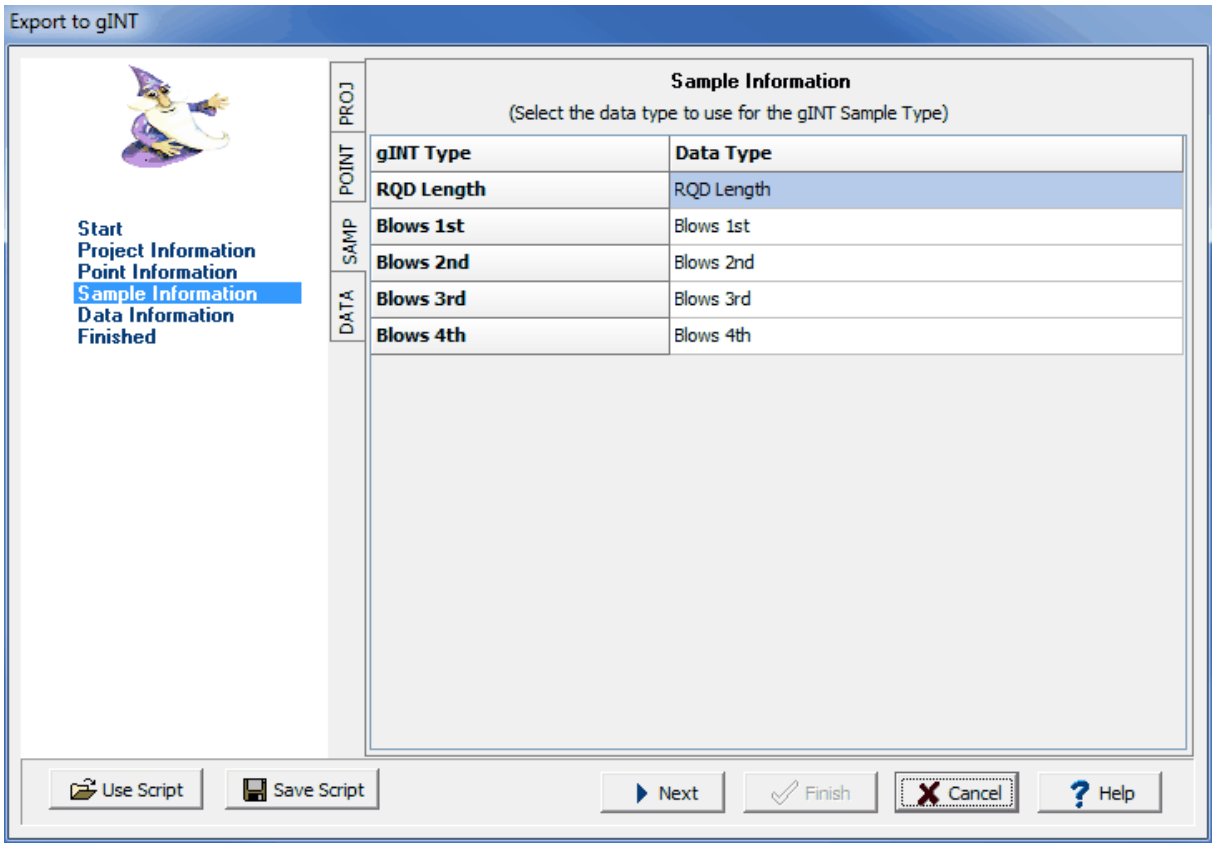
This step is used to specify the location (borehole/well) information to export. The table shown below can be used to specify what data type from the boring/well log is used for each gINT field. To change the data type to be used click on it and select it from the combobox.



After the information has been entered, the Next button can be used to go to the next step.

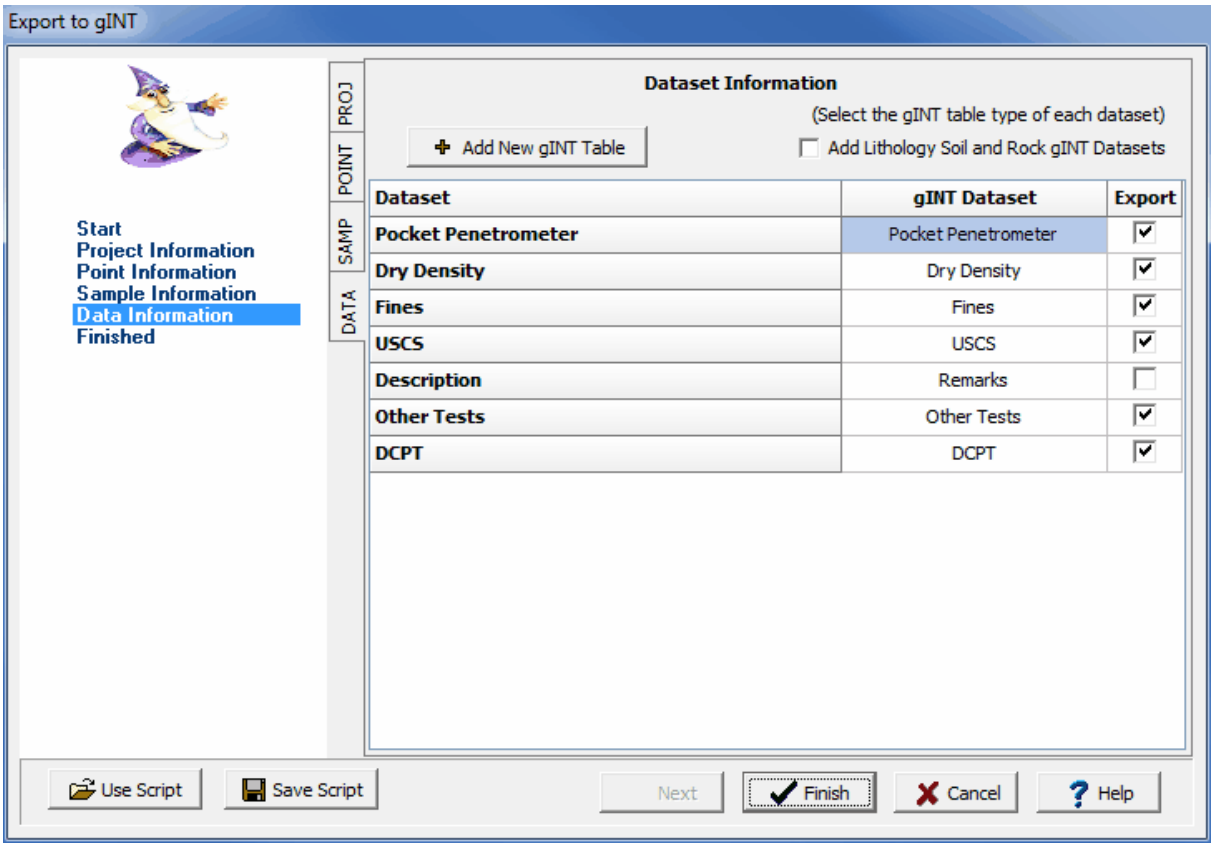
3.3.8.3 Exporting gINT Sample Information

This step is used to select the sample data type for each gINT sample type.



3.3.8.4 Exporting gINT Data Information

This step is used to specify what datasets from the borings/wells are to be exported. The datasets present in the borings/wells are displayed in the table along with the gINT dataset to use for the dataset. The gINT dataset can be changed by clicking on the dataset and selecting it from the combobox.The checkbox on the right is used to determine if the dataset is to be included in the export.



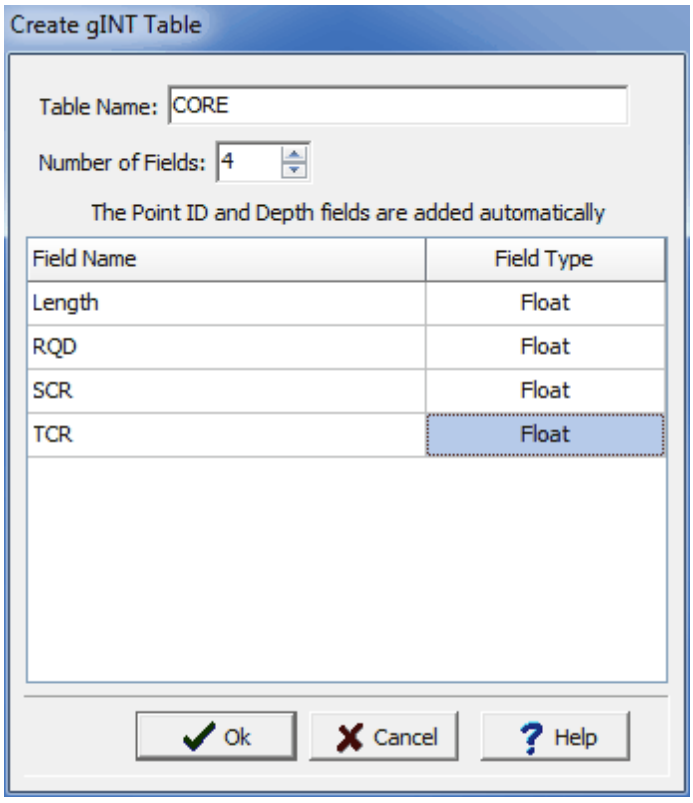
The gINT datasets that can be selected are from the tables TESTS and REMARKS in the gINT database. If you would like to add datasets for the LITHOLOGY SOIL and LITHOLOGY ROCK tables click on the box "Add Lithology Soil and Rock Datasets".

Additional tables can be added to the standard gINT project database by clicking on the "Add New gINT Table" button. These tables can be used to export data from WinLoG RT that is not normally contained in the gINT database. The creation of the tables is described in the topic below. When the table is created the new field types specified for the table will be added to the list of gINT datasets that can be selected.

If no CPT data is present in the borings and wells to be exported, this is the last step, Click the Finish button to complete the export process.

3.3.8.4.1 Creating a new gINT table

Additional tables can be added to the gINT database using this form.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be specified on this form:

Table Name: This is the name of the table to be added to the gINT project database. The table name must be unique and there can not be a table already with that name in the gINT database.

Number of Fields: This is the number of fields (columns) in the table, The Point ID and Depth fields are automatically added to the table.

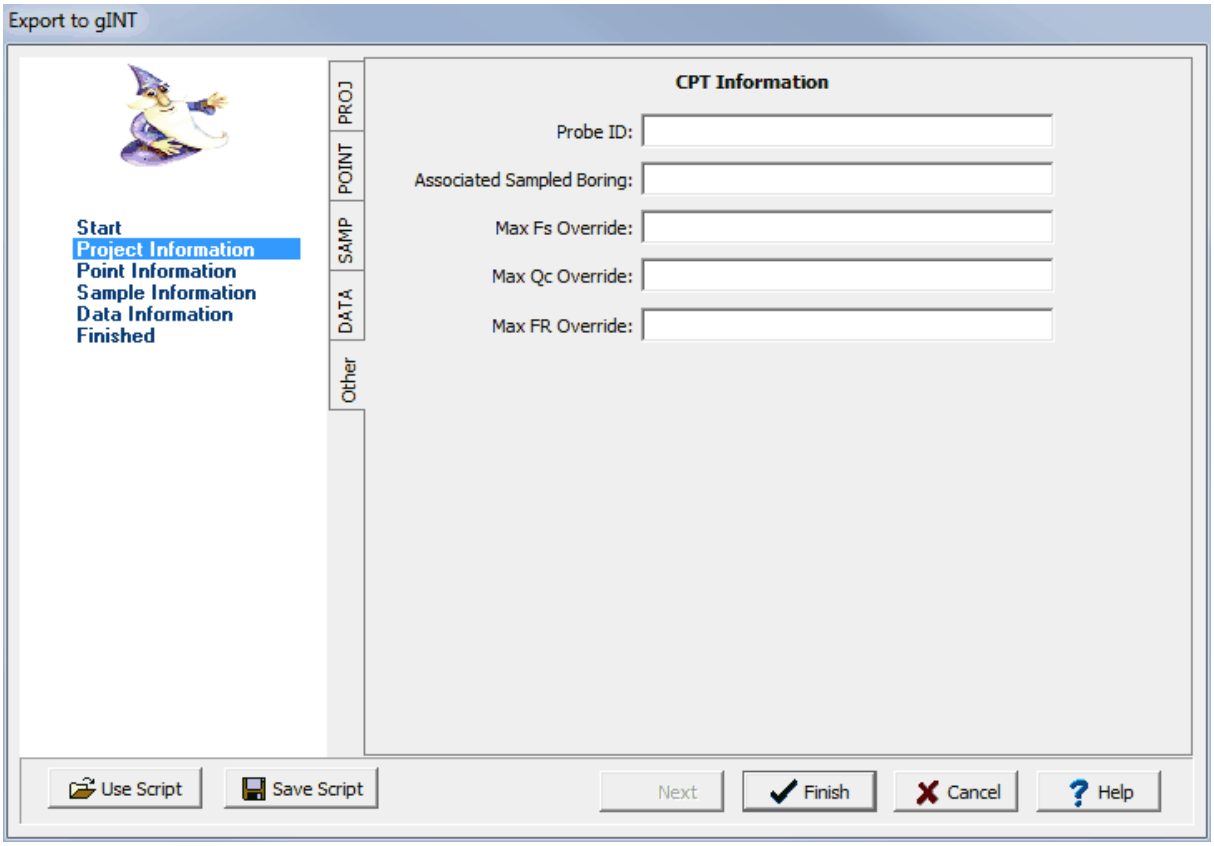
Field Name: This is the name of the field (column) in the table. The field name can not be PointID, Depth, TEXT, FLOAT, INT, or DESC.

Field Type: This is the type of data that will be stored for the field. It can be either text, integer, or float.

When the Ok button is pressed the table will be created in the gINT database.

3.3.8.5 Exporting gINT CPT Information

If there is CPT data in the borings and wells to be exported, the Other tab will be shown, This tab is used to specify additional (optional) information for the CPT data.



After the additional information has been entered, click the Finish button complete the exportation process.

WinLoG RT

User Guide

Chapter 4 Boring/Wells

Chapter 4 Boring/Wells

WinLoG and WinLoG RT are used to improve and standardize boring and well data collection, management, and reporting in an efficient and cost-effective manner. This is accomplished by implementing a documented, auditable process for the collection, storage, and reporting of boring and well data. Throughout this process all stages of the drilling are tracked and notifications can be sent via email or SMS (text message).

This process can be divided into three stages:.

1. Scheduling and Planning

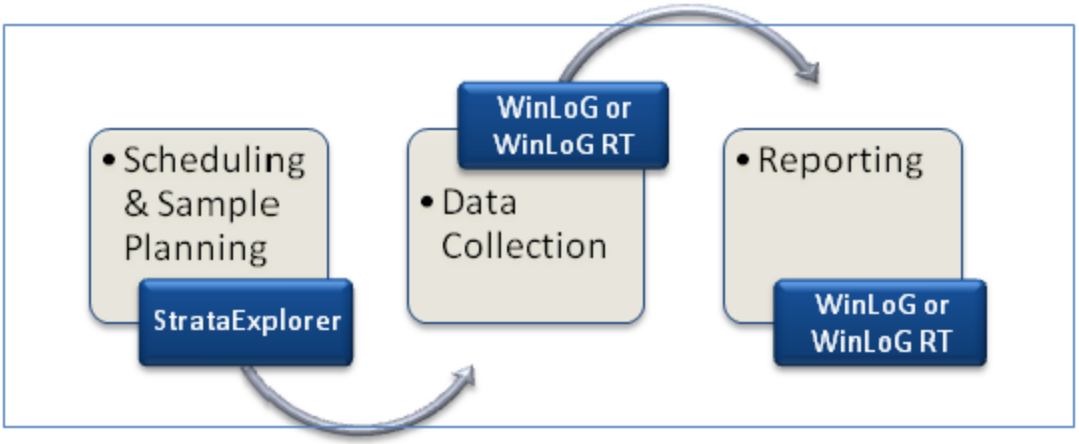
The first stage in any field program is the scheduling and planning of borings and wells. GaeaSynergy allows project managers to design, delegate, and monitor boring and well events. Prior to drilling, the locations, equipment, construction, sampling and personnel can be specified.

2. Data Collection

The collection of drill data can be done by either WinLoG RT or the WinLoG module of GaeaSynergy. Data collected using WinLoG RT can be uploaded to the main database remotely as an Electronic Data Interchange (EDI) file. The remote uploading of data using an EDI file provides for faster more comprehensive data reporting and reduces the possibility of transcription errors.

3. Reporting

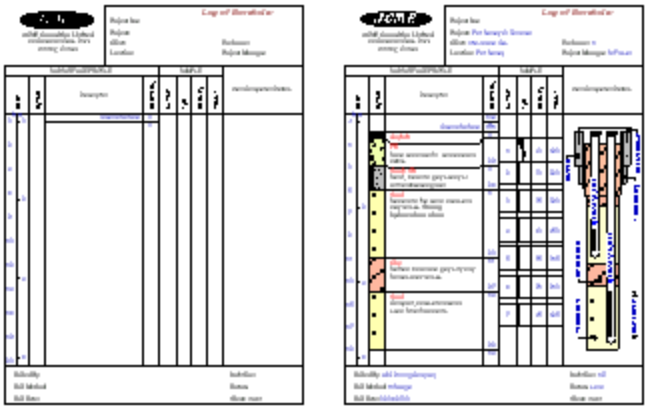
Drilling results can be collated and reported on boring and well logs. These logs can be easily customized to meet internal and external needs. In addition, WinLoG data is fully integrated and available for use by other modules within GaeaSynergy. Boring and well data can be viewed and used in the EDMS, WinFence, SE-GIS, and SE-Map modules.



Boring and well logs can contain general data (ex. location, client, project number); lithologic descriptions and symbols; sample data; well completion details; water level measurements; geophysical logs; and numerous graphs and text comments.

In general, all of the Borings/Wells in a project would use one or two templates to format the logs. In this way a consistent format can be established within a project and across projects. Once a template is created it is available to all projects.

Template + Boring/Well Data = Boring/Well Log



The program comes with numerous easily customized templates, which can be edited and saved as new templates. Each template consists of a header, footer, and several columns. Templates can be customized to display different header and footer titles, number and type of columns, and fonts. In addition, the size and location of the above can be easily changed using the mouse. A company logo or site map, stored as a bitmap can also be included in a template.

Legends can be created and customized to shown lithologic symbol, well symbol, and sample symbol definitions. These legends can then be printed for inclusion with the borehole logs.

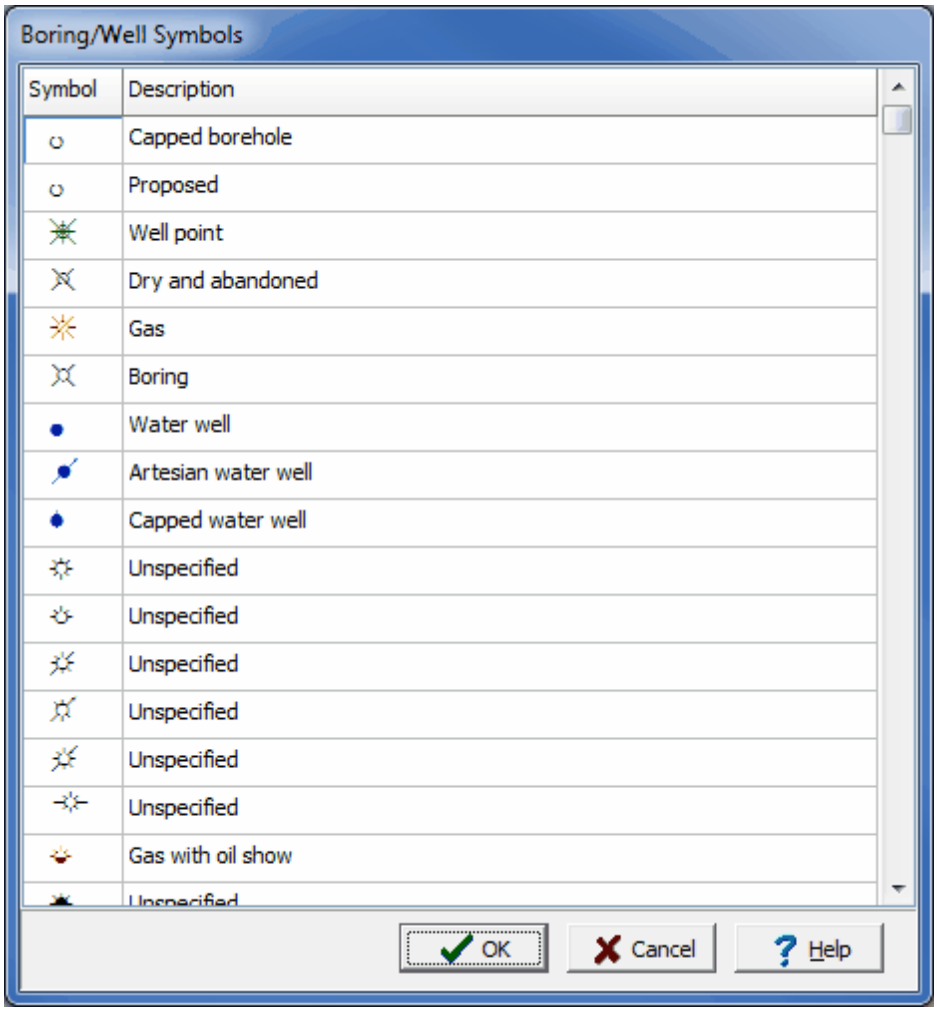
4.1 Borings/Wells

Borings/Wells are used to display the results of oil and gas, mining, geotechnical and environmental drilling and sampling. Logs can be used to display soil, rock, and ice sample. Using WinLoG RT, there are no limits to the type of boring/well that can be created. In WinLoG RT the term borehole logs also includes boring logs and well logs.

Logs can contain general borehole data (ex. location, client, project number); lithologic descriptions and symbols for each layer; sample data; well completion details; water level measurements; geophysical logs; etc. The sections below describe how to create and edit the data for logs.

4.1.1 Boring/Well Symbols

The symbols and their descriptions used to represent borings and wells on maps can be modified by selecting *Tools > Boring/Well > Boring/Well Symbols*. The Boring/Well Symbols form below will then be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

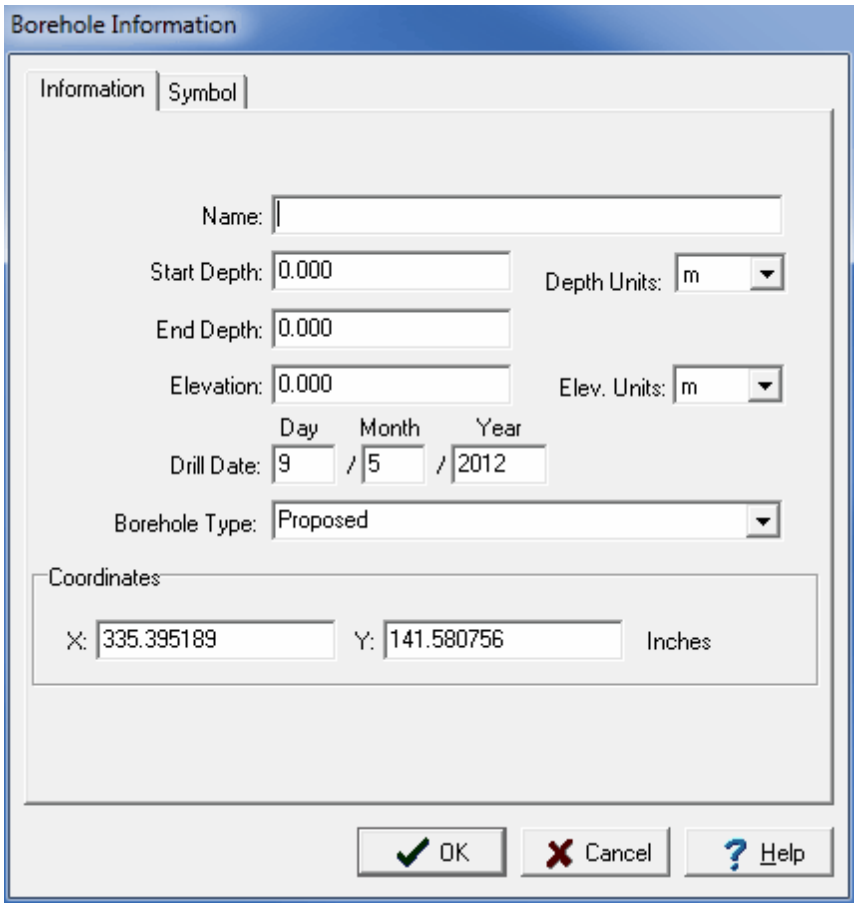
This form displays a list of the symbols and their descriptions. These symbols are part of the GAEA Well Symbols font distributed with the application. To change the color of the symbol, double click on it and select the new color in the Color Dialog form. To edit the description, change it directly beside the symbol. After the changes are completes click on the Ok button to save them. These changes will apply to all boring and well symbols for all projects. The changes will not go into effect until the application is restarted.

4.1.2 Creating a Boring/Well

Boring/Wells can be either creating by positioning them on the project map or by entering their coordinates manually.

- To create a new boring/well by positioning it on the project map either click on the New Boring/Well button on the toolbar, click on the New button on the main toolbar and select *Boring/Well > Locate on Map*, or select *File > New > Boring/Well > Locate on Map*. After this you will need to click on the location of the boring/well on the project map. When the location has been clicked on the Boring/Well Information form below will be displayed.
- To create a new boring/well by entering the coordinates manually either click on the New button on the main toolbar and select *Boring/Well > Locate Manually*, or select *File > New > Boring/Well > Locate Manually*. After this the Boring/Well Information form below will be displayed.

Information Tab



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be entered on this tab:

Unique Boring/Well ID: This is the unique well ID for the boring/well.

Name: This is the name of the borehole/well.

Start Depth: This is the start depth of the boring/well relative to the ground level. If the boring/well starts above the ground, this value will be negative.

Depth Units: This is the units for the depth, either feet or metres.

End Depth: This is the end depth of the boring/well. If the boring/well is deviated this will be the depth down the hole and not the true vertical depth.

Elevation: This is the elevation of the boring/well relative to sea level. If the project is georeferenced and there is an Internet connection this will initially be filled in using the Google elevation at the location of the borehole.

Elevation Units: This is the units for the elevation, either feet or metres.

Spud Date: This is the date the boring/well started drilling.

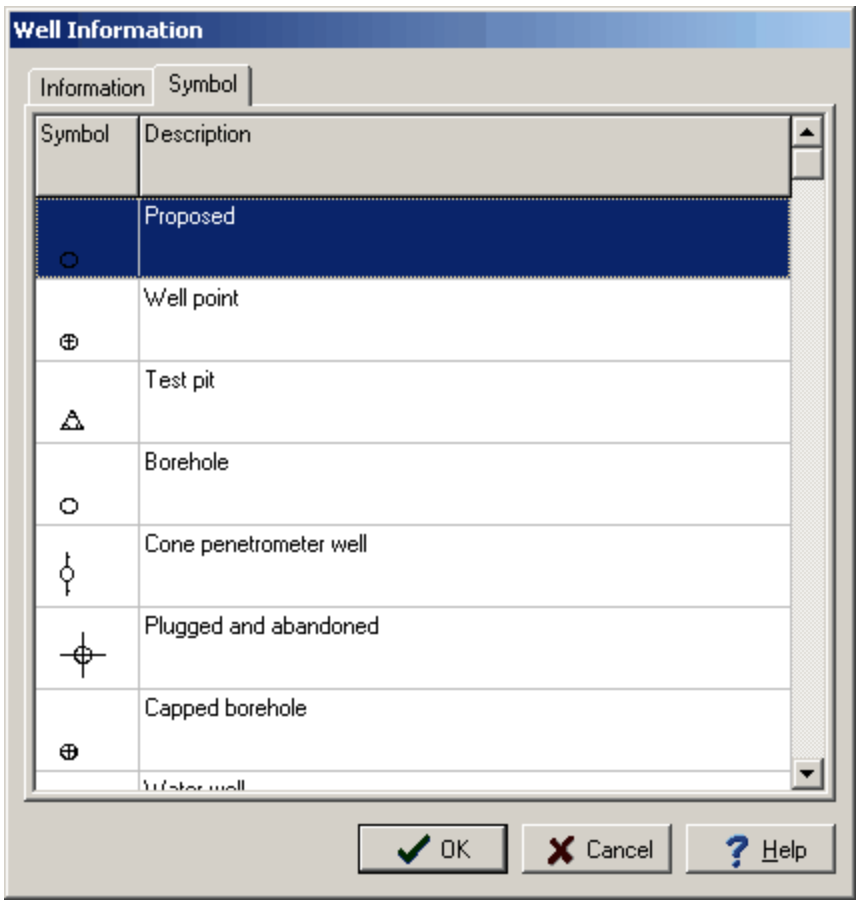
Boring/Well Status: This is the status of the boring/well.

Units: This is the units for the X and Y coordinates of the boring/well. Normally these will be in decimal degrees.

X-Coordinate: This is the X coordinate for the boring/well. Normally this will be the longitude.

Y-Coordinate: This is the Y coordinate for the boring/well. Normally this will be the latitude.

Symbol Tab

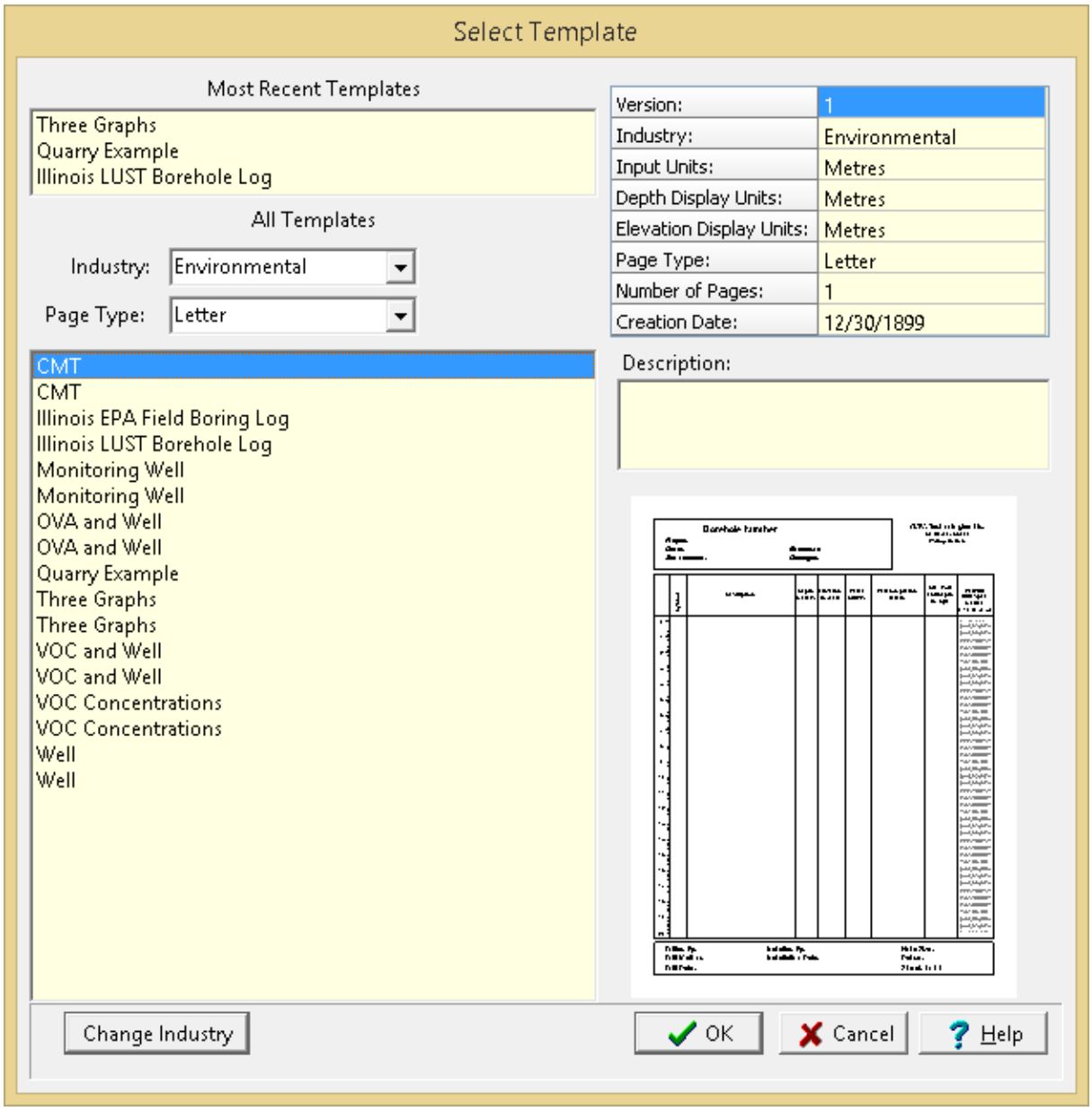


(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

This tab is used to select the symbol used to display the boring/well on the project maps.

Selecting the Template

After the boring/well information and symbol have been specified, the Select Template form below will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

This form displays lists of most recently used templates and all templates on the left side. The right side will display the details of the highlight template, some of the details of the most recently used templates are not displayed. At the top of the all templates list the industry type and page type for the template can be selected, these can be used to refine the list of templates. To select a template, highlight and press the Ok button.The boring/well log will then be created and displayed. It can be edited as described in the sections below.

4.1.3 Opening a Log

Boring/Wells can either be opened by selecting it from a list, selecting it on the sidebar, or selecting it on the map.

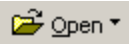
Selecting from the Sidebar

To select the boring/well from the sidebar either click on it once and then select *Popup > Open* or double-click on the log on the sidebar.

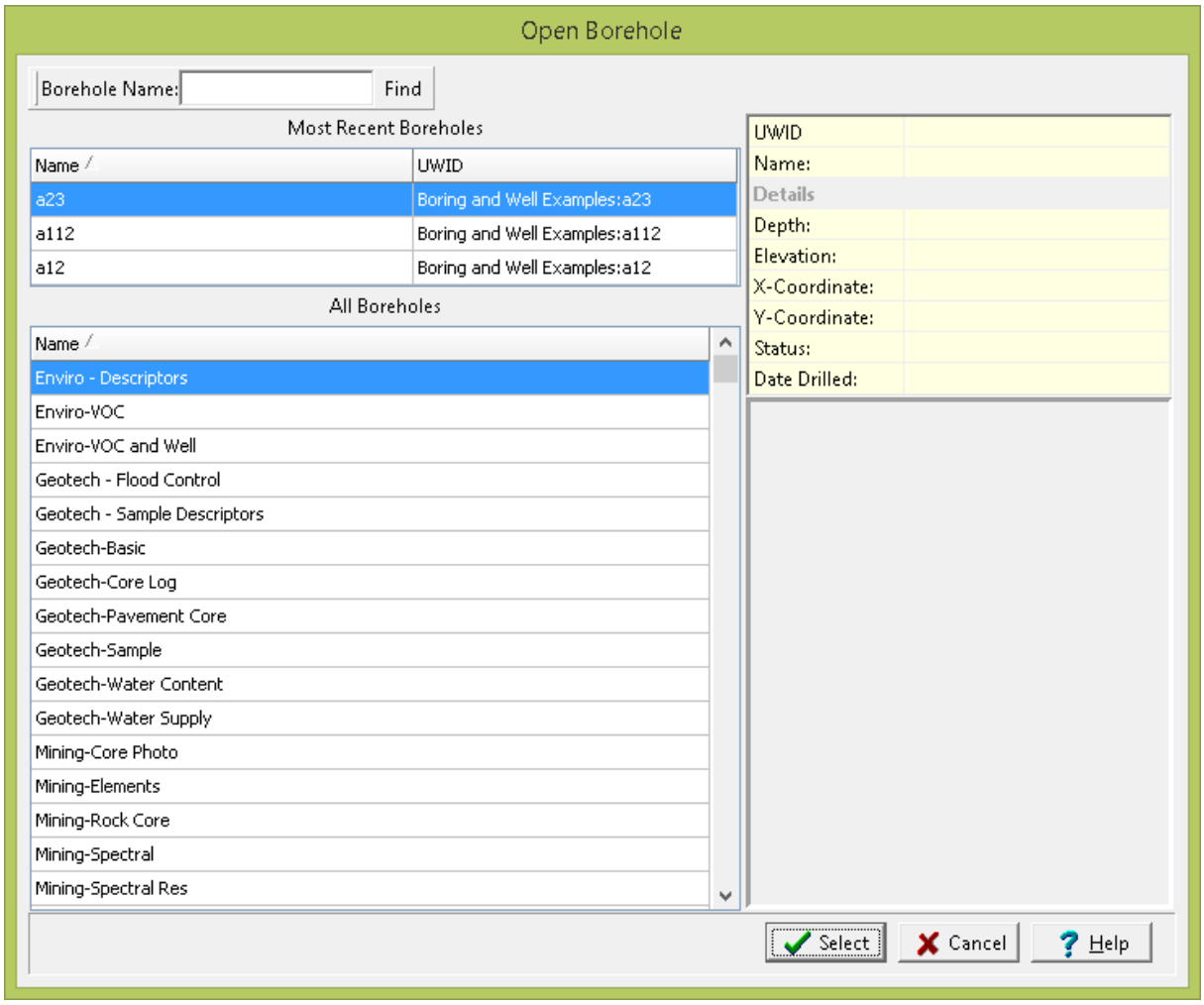
Selecting from the Map

To select the boring/well from the map, double click on it on the map.

Selecting from a List



To select it from a list, select *File > Open > Boring/Well* or click on the Open button on the main toolbar and then Boring/Well. The Open Boring/Well form below will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

On the left of this form are lists of the most recently used logs and all the boring/wells. The right side of the form the details of the highlighted boring/well are shown, some of these details are not shown for the most recently used logs. The list of will also show the UWID if the industry type is Oil. At the top of the form is a toolbar that can be used to find a boring/well by specifying the name. To select a boring/well to open, highlight it and then click on the Open button.

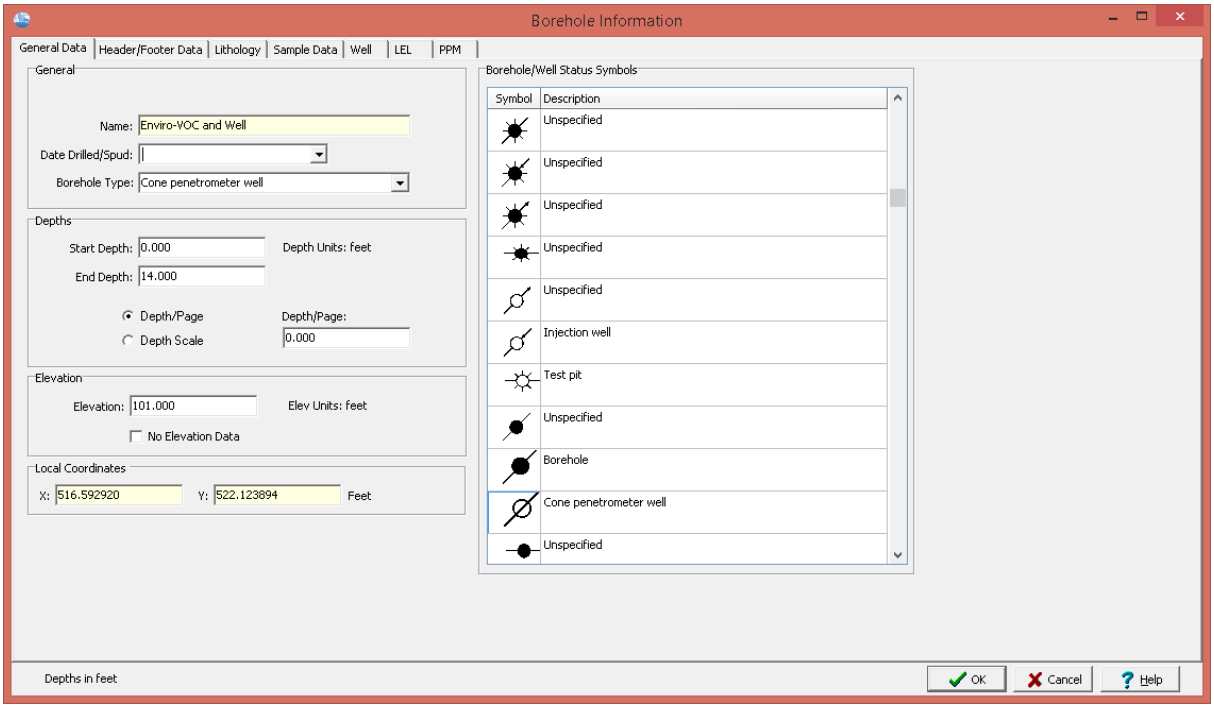
4.1.4 Editing a boring/well

When a boring/well is opened it will be displayed in the main window with a sidebar on the left. The data in the log can be edited using the sidebar, Edit or popup menus, or by clicking on the data in the main window. The menu items in the Edit and popup menus reflect the data that can be displayed on the log for the given template; in addition, the Edit menu has an additional menu item for all data types that can be entered.

The sections below describe how to edit the wide variety of data in a boring/well. How and whether this data is displayed in the log depends upon the template being used.

4.1.4.1 Quick Data Entry

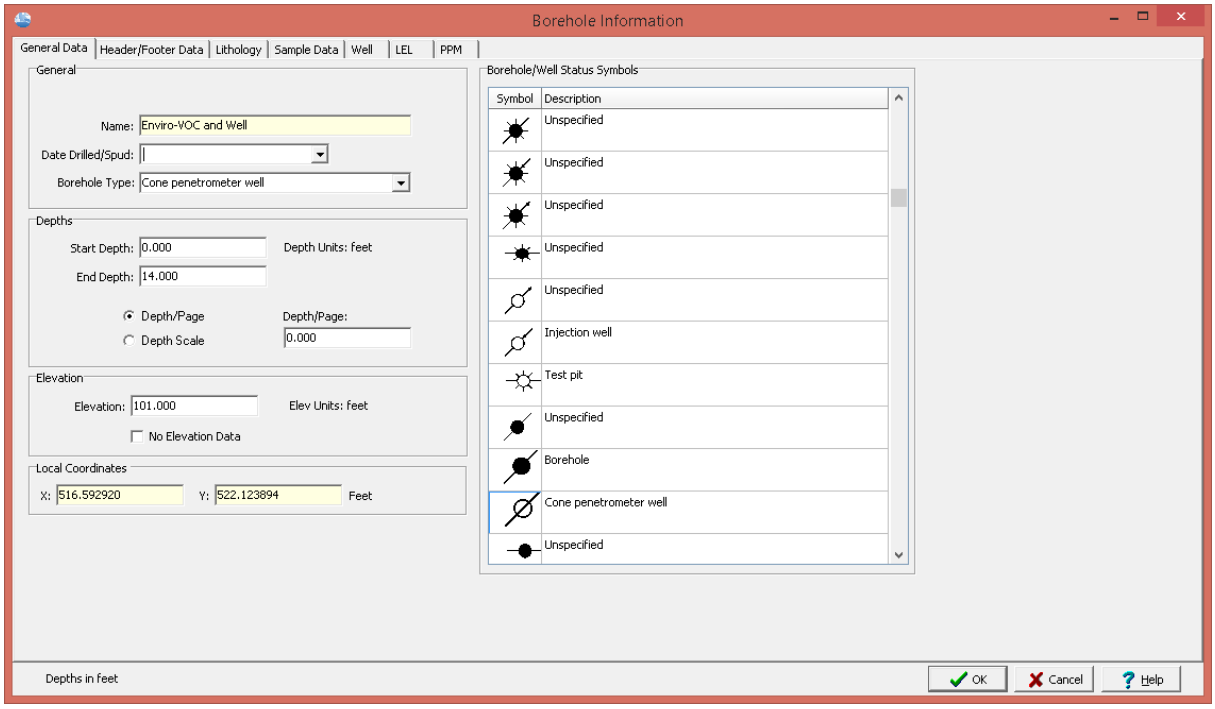
The Quick Entry form can be used to enter the majority of the data for a log on one form. This data includes general information, header and footer data, depth and elevation data, lithology data, sample data, well data, text and text interval data, graph, and bargraph data. To edit this information for a log either select the button on the toolbar, *Edit > Quick Data Entry,* or *Popup > Quick Data Entry* and the Quick Data Entry form below will be displayed.



This form has tabs for General Data, Header/Footer Data, Lithology, and Sample Data. In addition, it will have tabs for Well Data, Text and Text Interval Data, Graph Data, and Bargraph Data if this information is displayed on the template. These tabs are explained in the sections below.

4.1.4.1.1 General Data

The General Information for a log includes information about the borehole number, drill date, well/borehole symbol, depths, elevations, and X and Y coordinates.



The following information can be specified on this tab:

Unique Boring/Well ID: If the module type is Oil & Gas, this is the unique ID for the boring/well.Otherwise, this is not displayed. The Unique ID can not be edited after the boring//well log has been created.

Name: This is the name of the boring/well. The name can not be edited after the boring//well log has been created.

Date Drilled/Spud: This is the date drilling started.

Well/Borehole Type: This is the type of the boring/well and is linked to the status symbols on the right of the tab. If the symbol selected is changed the well/borehole type will be changed.

Start Depth: This is the start depth. To indicate an aboveground boring/well completion a negative value can be entered.

End Depth: This is the end depth.

Depth Type: The depth per page specified in the template normally determines the plot depth per page; however, this can be overridden in the log by specifying a depth per page here. This feature allows you to change plot depths per page without changing the template. The depth per page can be overridden by either specifying a new depth/page or a new depth scale. To accept the default template plot depth per page, specify the plot depth per page as zero when editing the log.

Depth/Page: If the Depth Type is Depth/Page the new depth per page can be entered.

Depth Scale: If the Depth Type is Depth Scale the new depth scale can be entered.

Elevation: This is the elevation of the ground surface of the boring/well.

No Elevation Data: If checked only the depths at each layer boundary will be shown. Otherwise, both the depth and elevation will be shown at each layer boundary.

Local X-Coordinate: This is the x coordinate in local units. The X and Y coordinates can not be edited on this form after the boring//well log has been created. To edit the coordinates the General Information 242 form must be used.

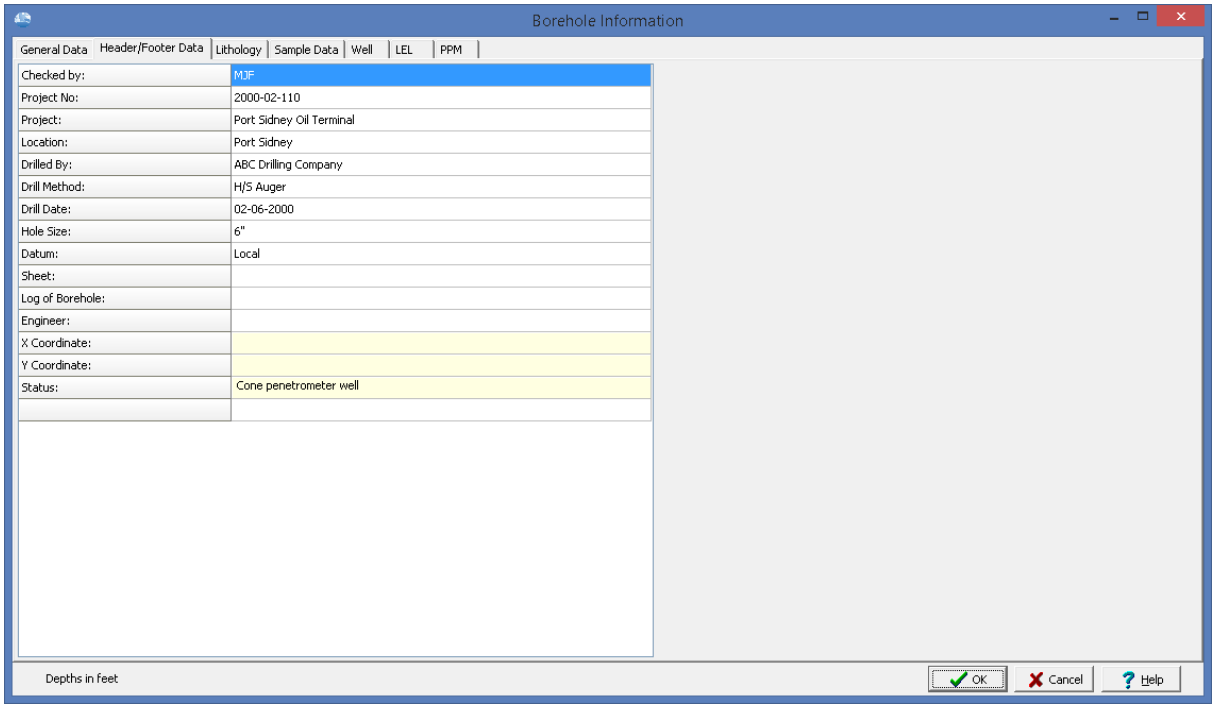
Local Y-Coordinate: This is the y coordinate in local units. The X and Y coordinates can not be edited on this form after the boring//well log has been created. To edit the coordinates the General Information 242 form must be used.

If the project is georeferenced the map coordinates are not displayed on this form. To edit the map coordinates the General Information 242 form must be used.

4.1.4.1.2 Header/Footer Data

Header and footer data is displayed at the top and bottom of the log. The data being displayed will depend on the template. This data can include information such as project name, location, client, date, drill method, etc.

The header and footer data can be represented either as text or memo data. The difference between text data and memo data is that there is no limit to the length of memo data and memo data can contain rich text. The method used to represent the data is set in the template. In the Quick Data Entry form only text data can be edited.



On this form a list of the header and footer data is displayed, with the type of data on the left and the data on the right. If the data type is filled out automatically (eg. borehole/well name, project name) then it can not be edited on this form.

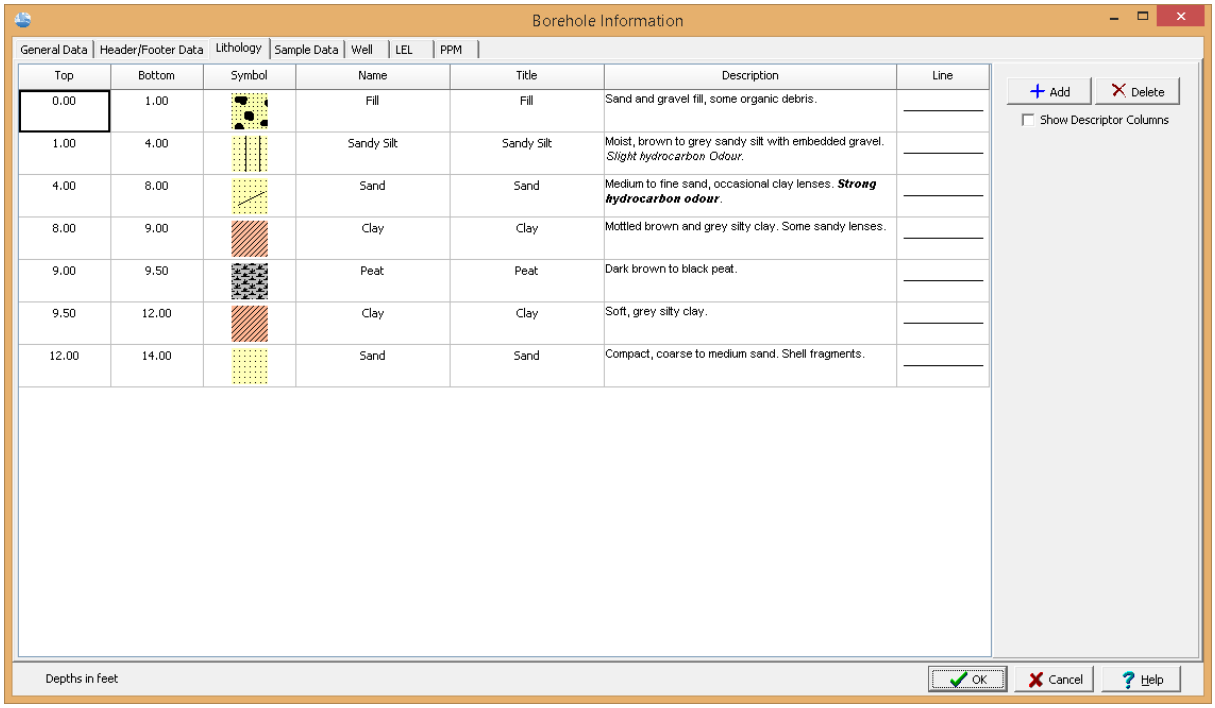
The header and footer field names are specified in the template, if the template of the log is changed it is possible to have header and footer fields that no longer show up on the log.

4.1.4.1.3 Lithology

Lithologic layers are used to indicate the subsurface strata encountered during drilling. A lithologic layer primarily consists of:

- an optional title (up to 255 characters),
- description (no limit on the number of characters),
- a top depth,
- an optional bottom depth, and
- the symbol to use for the layer.

The bottom depth of the lithologic layer can either be specified or the top depth of the next lithologic layer is used. The lithologic descriptions are usually displayed in a Description column and the lithologic symbols are usually displayed in a Symbol column.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Top: This is the top depth of the layer and should be between the start and end depths of the log.

Bottom: The bottom depth of the layer is optional. If it is not specified or is less than the top depth, the top depth of the next layer is used.

Symbol: This is the symbol used for the layer in the Lithology Symbol column. The symbol can be changed by clicking on it with the left or right mouse buttons. For more information see the section on Changing the Lithologic Symbol 300.

Name: This is the strata name for the layer selected from the list of lithologic macros. It is used to quickly fill in the symbol, title, and description of the layer using the information specified in the lithology macro. It is also used in the Cross-Section module to quickly and accurately automatically generate strata for the cross-section. If the template for the log specifies the Title Edit mode as "Text" for the lithology description column, the Name column will not appear on this form. For more information see the section on Selecting Strata Names 302.

Title: The optional name of the layer displayed above the description.

Description: The description is used to describe the lithology of the layer. At the right of the form there is a Rich Text toolbar that is used to format the description, add symbols, insert lithology macros, and perform spell checking on the description. The use of the Rich Text toolbar is described section on Specifying the Lithology Description 298.

Lithology: This is used to select the lithology descriptor of the layer from a predefined list. This descriptor can be shown on the log depending on the settings for this column in the template.

Color: This is used to select the color descriptor of the layer from a predefined list. This descriptor can be shown on the log depending on the settings for this column in the template.

Porosity: This is used to select the porosity descriptor of the layer from a predefined list. This descriptor can be shown on the log depending on the settings for this column in the template.

Consistency: This is used to select the consistency descriptor of the layer from a predefined list. This descriptor can be shown on the log depending on the settings for this column in the template.

Odour: This is used to select the odour descriptor of the layer from a predefined list. This descriptor can be shown on the log depending on the settings for this column in the template.

Top Line Style: This is the line style to be used for the top layer boundary. If the bottom depth is specified this line style is also used for the bottom boundary. When the line is clicked on the Line Properties form is displayed. This form is used to set the line style, thickness, and color. The line style can be set to none to display no line at the boundary.

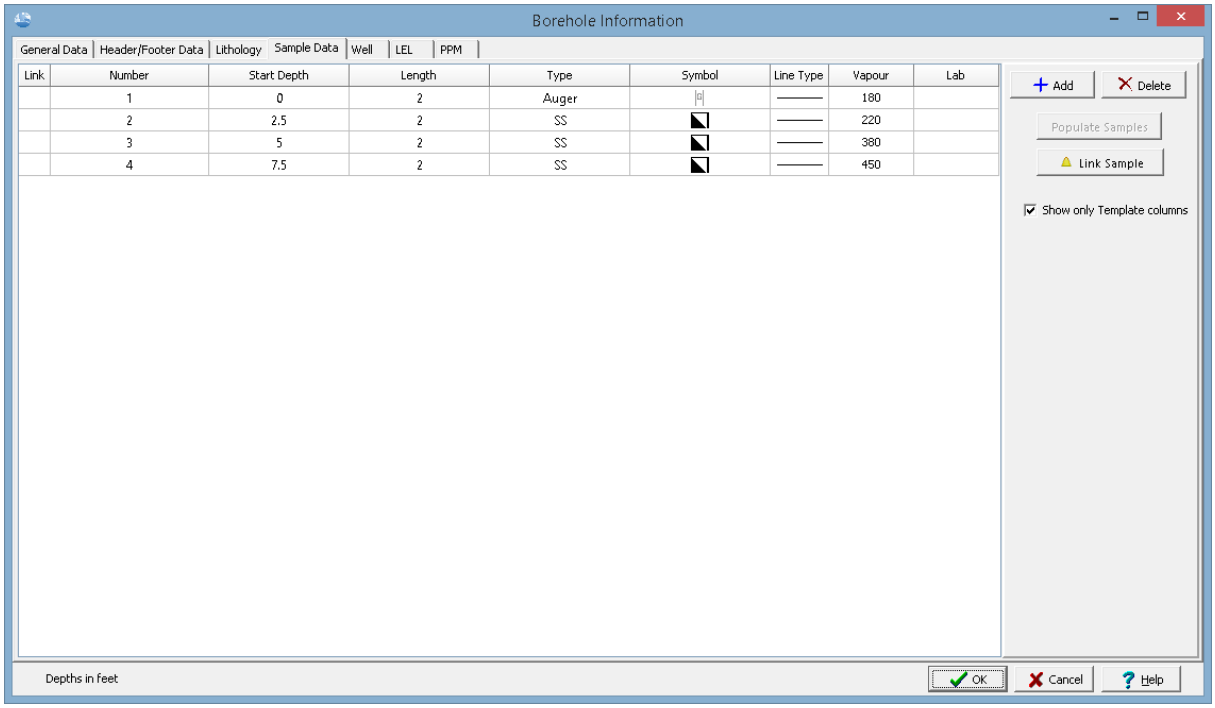
Show Descriptor Columns: Check this to show the descriptor columns for lithology, color, porosity, consistency, and odour on the form.

The column widths on the form can be adjusted by sliding the column boundaries using the left mouse button in the column header.

On the right side of the form there are buttons for adding and deleting layers. In addition, layers can be added using the insert button on the keyboard.

4.1.4.1.4 Sample Data

Soil, rock, ice, and other samples are generally taken with split-spoon samplers, Shelby tubes, Core Barrels, etc. at various depths of the borehole. These samples are later used for detailed identification, lab analysis, and other purposes.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Link: To link a sample to an EDMS soil sample click on the Link column for that sample, then click on the button that appears. A list of EDMS soil samples that are associated with the boring/well will be displayed, select the soil sample to link. The data from the EDMS soil sample will automatically be shown on the Sample Data form and appropriate log columns. In the Link column for this sample a triangle symbol will be shown to indicate that the sample is linked to an EDMS sample. Except for the sample type, N Value, symbol, line type, and any sample other types the data for this linked sample cannot be edited in the boring/well log. For more information see the Soil Sample Integration section in Chapter 4.

Number: This is the sample number.

Start Depth: This is the start depth of the sample. The depth should be specified in the same units as shown at the bottom of the form. The start depth is the only field that must be specified for the sample all of the other information is optional.

Length: This is the length of the sample. The length should be specified in the same units as shown at the bottom of the form. Initially when a sample is created the default length set in the template is displayed.

Type: This is the type of sample.

Symbol: This is the symbol used to represent the sample. When this column is selected, a button will be displayed for the sample symbol. After this button is pressed, the Sample Symbol form is displayed. This form can be used to select the sample symbol, foreground color, and background color.

Line Type: This is the style of line that is used to draw the top and bottom boundaries of the sample. When this column is selected, a button will be displayed for the line type. After this button is pressed, the Line Properties form is displayed. This form is used to set the line style, thickness, and color. The line style can be set to none to display no line at the boundaries.

Blows/ft: This is the blow count or N-Value of the sample. When entering N-Value data a line break can be added to the data by specifying a "/" between data values (e.g. 12/18/16/22). In addition, the 4 N-Values normally specified, can be spaced equally across the column by specifying a "^" at the beginning of the data. This column is only available with some industry versions of the module (Geotechnical, Environmental and Mining).

Recovery: This is the sample recovery, usually expressed as a percentage or as a length measurement. Depending upon the template settings the recovery can be represented on the log as text or as a shaded box that covers the specified portion of the sample interval. For example, if the recovery were 75% then a box covering 75% of the sample interval would be drawn.

Soil Type: This can be used to select a soil type from a predefined list of soil types. This list can be edited by going to *Tools > EDMS > Samples > Soil Types*.

Color: This can be used to select a soil color from a predefined list of soil colors. This list can be edited by going to *Tools > EDMS > Samples > Colors*.

Odour: This can be used to select a odour from a predefined list of odours. This list can be edited by going to *Tools > EDMS > Samples > Odours*.

Porosity: This can be used to select a porosity type from a predefined list of porosity types. This list can be edited by going to *Tools > EDMS > Samples > Soil Porosities*.

Consistency: This can be used to select a soil consistency from a predefined list of soil consistencies. This list can be edited by going to *Tools > EDMS > Samples > Soil Consistencies*.

VOC: This can be used to specify the VOC for the sample.

Dry Weight: This can be used to specify the dry weight for the sample.

Wet Weight: This can be used to specify the wet weight for the sample.

Units: This can be used to select the units for the dry and wet weight.

Other: In addition to the above data, other types of data can be entered for each sample. The number of other data types and the names for this data is specified in the template. Other data is stored and displayed as text strings. The name of the other data is specified as the column name. This string is displayed at the top of each other data column when the log is edited.

Show Only Template Columns: Check this to show only the columns that are displayed using the current template.

Auto Population

If no samples have been specified yet, the program can automatically create samples using some sampling information by clicking on the Populate Samples button.

The buttons on the right can be used to add and delete samples.

4.1.4.1.5 Well Data

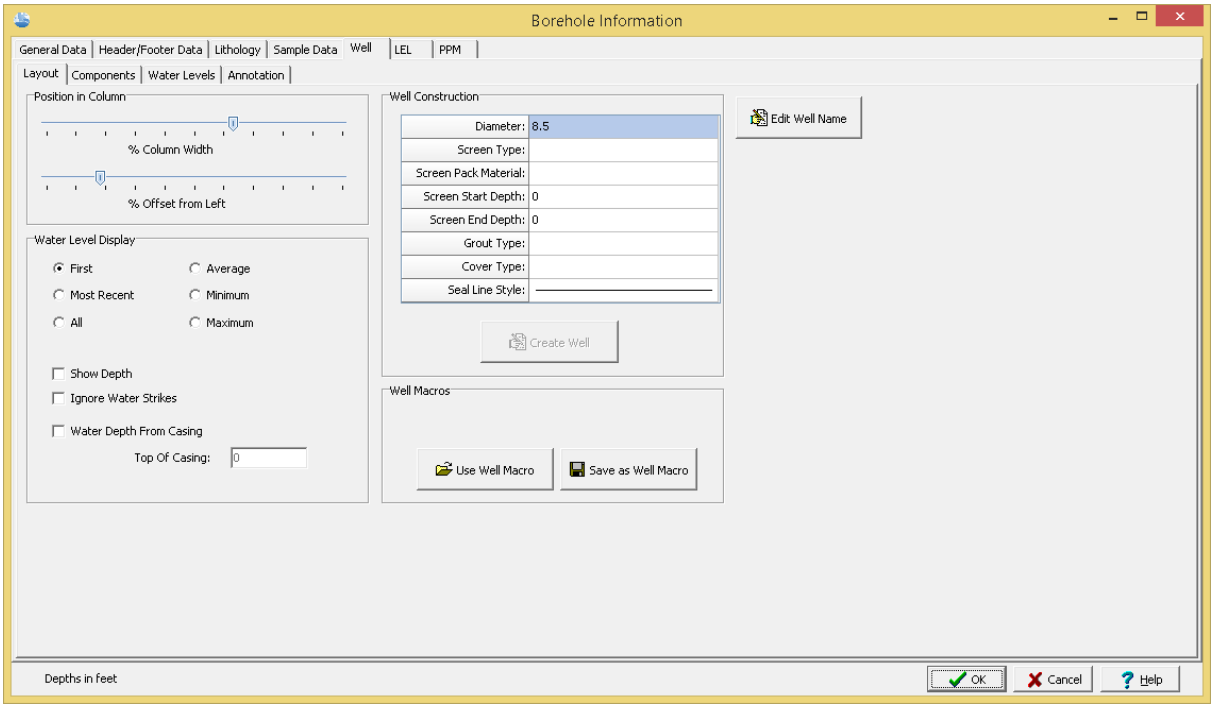
WinLoG RT can display a wide variety of wells at varying levels of detail and complexity. Monitoring, extraction, injection, and almost any other type of well can be displayed on the log. Well completion details and data can be displayed graphically in one or more columns of the log. Almost all of the well information is drawn to scale; including casings, screens, covers, caps, and miscellaneous fittings. The log can contain an unlimited number of well columns; however, the Quick Data Entry form can only be used for the first well column. When a new log is created, well datasets will be automatically created for whatever well columns are specified in the template.

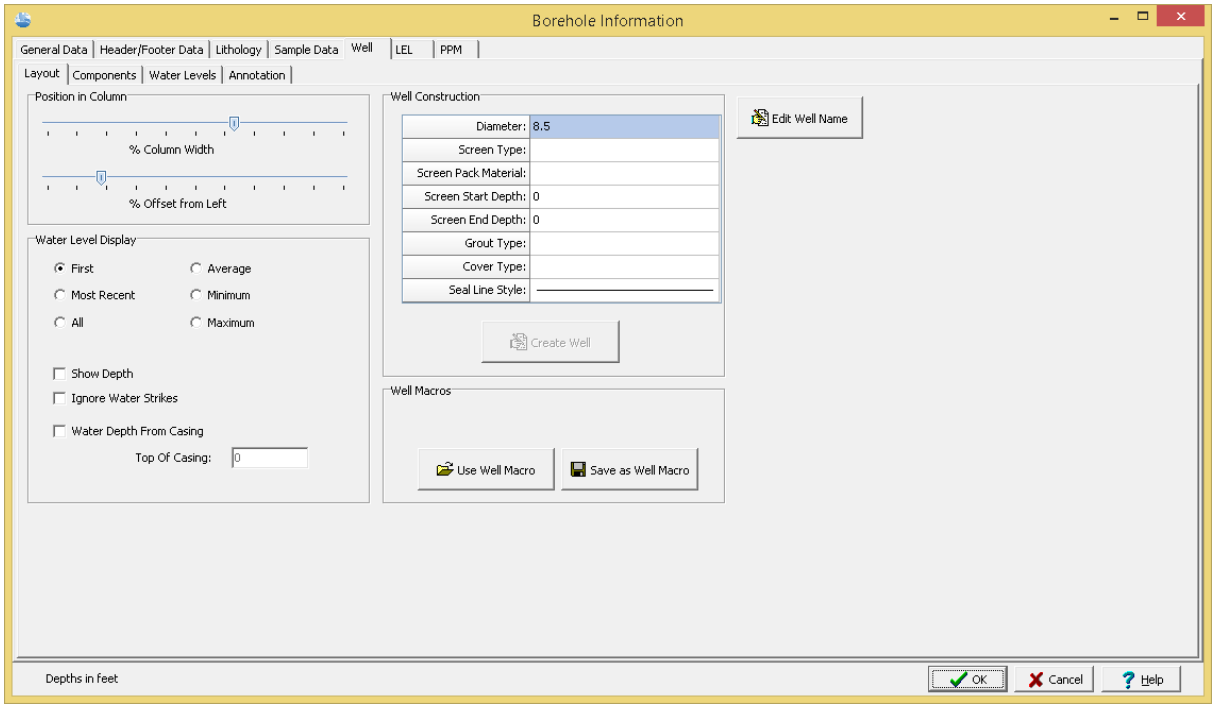
Well data can be entered individually for each log or by using a well macro. Well macros can be used to quickly add standard well components, water level information, and text annotation to a log. Macros can be used for single well installation, complex nested wells, above-ground well casings, etc.

The data for a well consists of:

- hole diameter and layout,
- well components,
- water level measurements, and annotation.

This tab has four sub-tabs; one for the layout, one for the components, one for the water levels, and one for the annotation.





(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited using the Layout tab:

Position in Column

% Column Width: This is the percentage of the width of the column to use for the hole. The horizontal scale of the well column will then be set such that the hole diameter specified above is equal to this percentage of column width. When setting the % of Column Width space should be made on the sides of the hole for annotation.

% Offset Left: This is the percentage of the column width to offset the hole from the left side of the column. This parameter is used to position the hole inside the column. The sum of the % Offset and % of Column Width should always be less than or equal to 100. For example, if the % of Column Width is 70 and the % Offset is 10. Then the leftmost 10% of the column would be used for annotation, the next 70% of the column would contain the well components, and the last 20% of the column would be used for annotation.

Water Level Display

Water Level Display Type: This is used to select the type of water levels to display when there are multiple water levels.

Show Depth: This will automatically annotate the water depth on the log.

Ignore Water Strikes: When there are multiple water levels, check this box to not include water strikes.

Water Depth from Casing: Check this box to indicate that the water depths are measured from the top of the casing.

Well Construction

The components and annotation can be automatically created by the program using the information specified for the well construction.

Diameter: This is the outside diameter of the well.

Screen Type: This is used to select the type and diameter of the screen.

Screen Pack Material: This is used to select the packing material around the screen.

Screen Start Depth: This is used to specify the start depth of the screen.

Screen End Depth: This is used to specify the end depth of the screen.

Grout Type: This is used to select the type of grout used in the well.

Cover Type: This is used to select the type and height of the well cover.

Seal Line Style: This is used to select the line style for the seal.

After this information has been specified click on the Create Well button to automatically generate the components and annotation for the well.

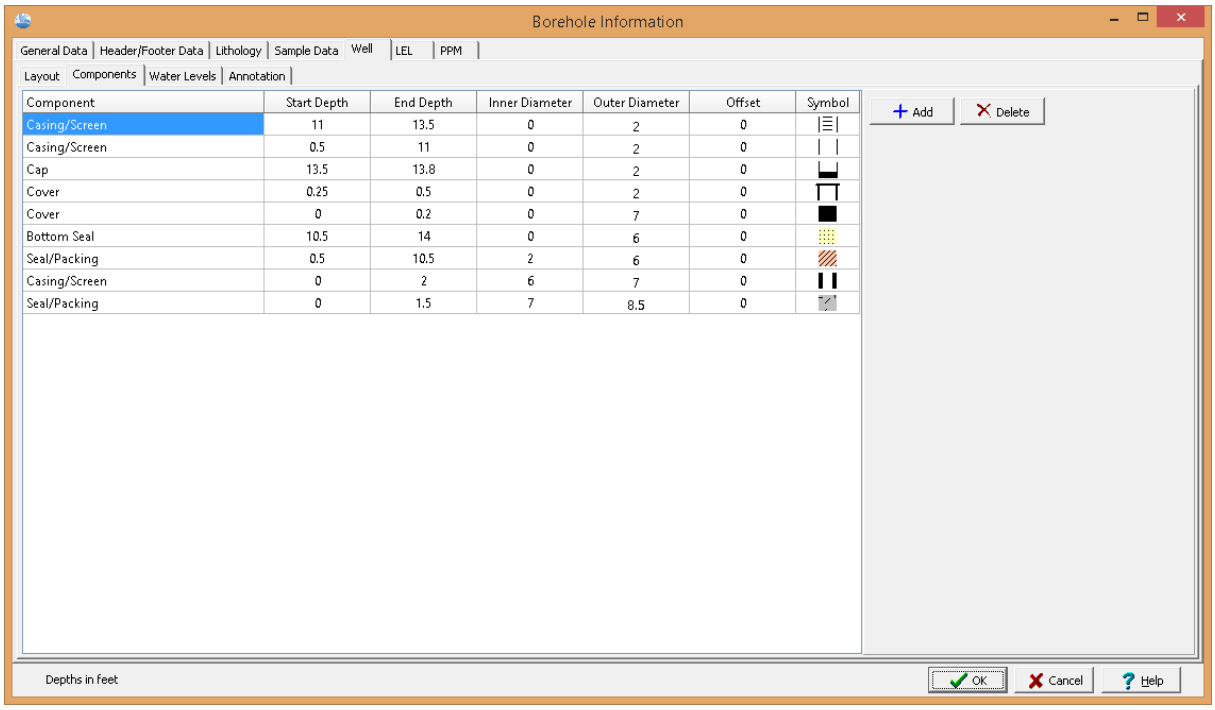
Well Macros

If a well macro is to be used it should be selected first by pressing the Use Well Macro button on the Layout tab. Well macros can also be created after the well data has been input for a log, using the Save as Well Macro button on the Layout tab. When this button is pressed a form will be displayed where you can specify the name of the well macro.

Well Name

The name of the well dataset can be changed by clicking on the Edit Well Name button at the bottom of the tab. A new unique well name can then be entered in the Edit Well Name form shown on the next page. Changing the name of the well dataset will affect whether the well is displayed in the log. For the well to be displayed the template must contain a well column with the same name.

The Components tab is used to enter the well components. These components consist of covers, caps, casings/screens, seals/packing, bottom seals, joints, and miscellaneous fittings.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited using this tab:

Component: This is the type of well component. When the cursor is clicked in this column, a combo box will be displayed. By clicking on the arrow to the right of this box, the type of component can be selected. The types of components that can be selected are Cover, Cap, Joint/Misc., Casing/Screen, Seal/Packing, and Bottom Seal.

Start Depth: This is the start depth of the component.

End Depth: This is the end depth of the component

Inner Diameter: This is the inner diameter of the component. It is only used for Seal and some Casing/Misc. components. These components will be drawn such that the shading and symbol patterns will fill the gap between the inner and outer diameters of the component. The components that use the inner diameter are discussed under the appropriate symbol at the end of this section.

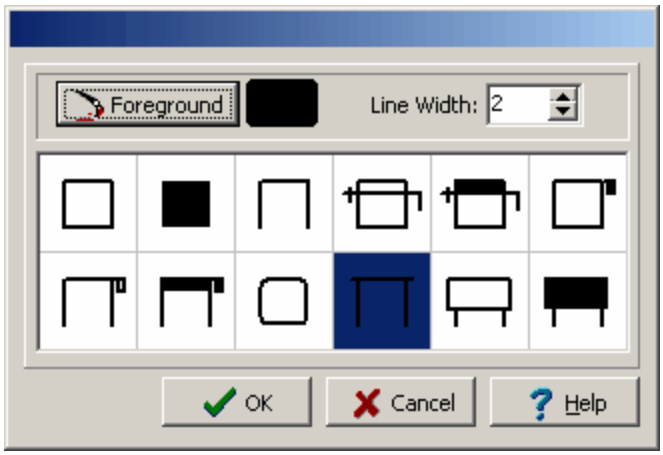
Outer Diameter: This is the outer diameter of the component and is used by all of the types of components. The outer diameter must be less than the hole diameter. The width of the component inside the well column is determined by the ratio of the outer diameter and hole diameter. For example; if the outer diameter is 2 inches and the hole diameter is 8 inches, then the components width would be ¼ of the hole width.

Offset: This is the offset of the component from the center of the hole. Offsets to the left are negative and offsets to the right are positive. By specifying an offset to the component, multiple casings and piezometers can be placed within a single well column. For example; to specify two piezometers in a hole 10 inches in diameter. One piezometer could have an offset of –3 inches and the other piezometer could have an offset of 3 inches. The first piezometer would then be between 2 and 4 inches on the left side of the hole, and the second piezometer would be between 2 and 4 inches on the right side of the hole.

Symbol: This is the symbol to use for the component. The symbols available will vary depending upon the type of component. When the cursor is clicked inside this column one of the symbol forms described below will be displayed, depending on the type of component.

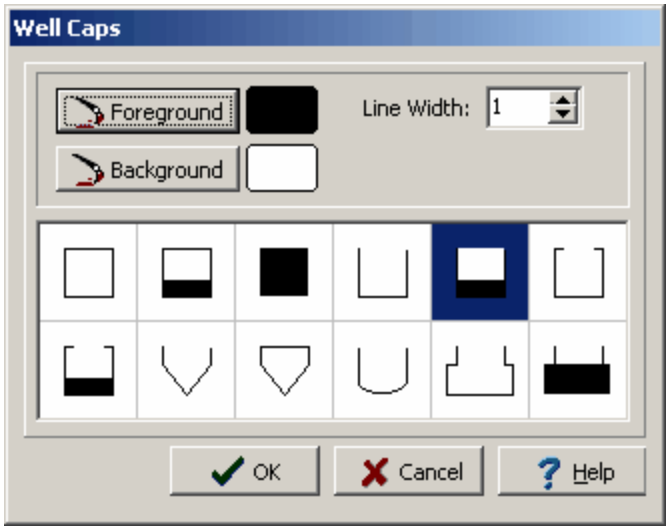
Cover

If the type of component is Cover then the Well Covers form will be displayed. Using this form the foreground color, line width, and symbol of the well cover can be selected.



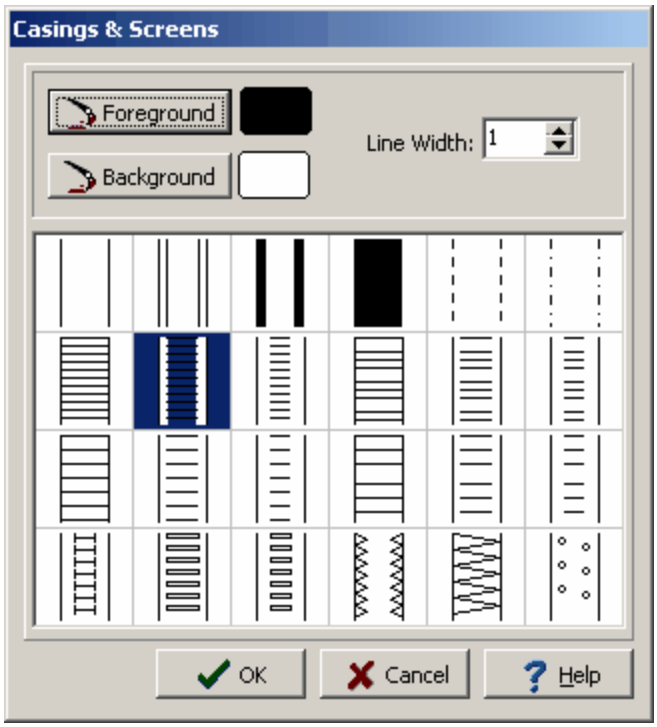
Cap

If the type of component is Cap then the Well Caps form will be displayed. This form is used to select the foreground and background colors, line width, and symbol for the cap.



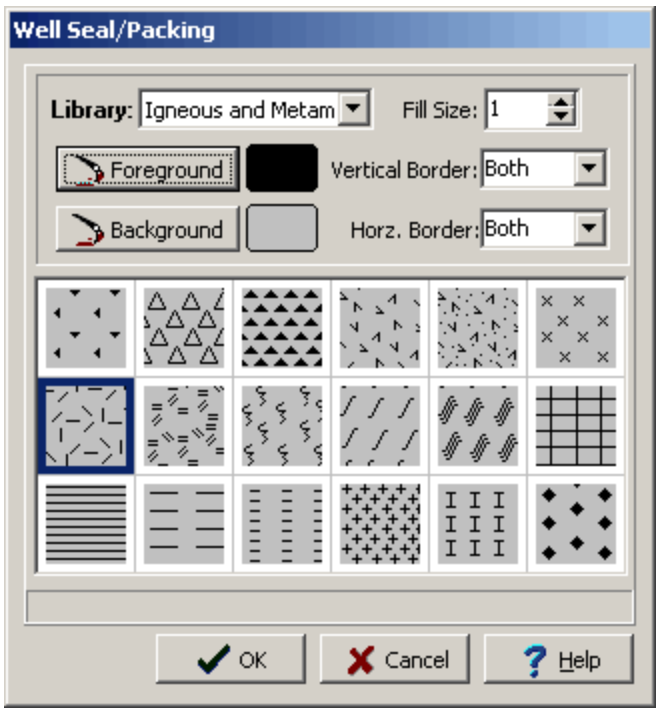
Casing/Screen

If the type of component is Casing/Screen then the Casings & Screens form will be displayed. This form is used to select the foreground and background colors, line width, and symbol for the casing or screen. If the inner diameter is specified, these symbols will fill the gap between the inner and outer diameter with the background color. Except for the third symbol, which will fill the gap with the foreground color.



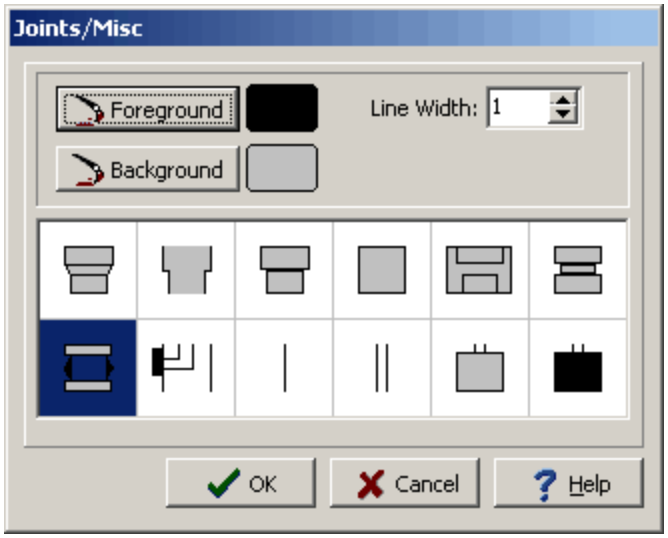
Seal/Packing

If the type of component is Seal/Packing or Bottom Seal then the Well Seal/Packing form will be displayed. This form is used to select the lithologic library, foreground and background colors, line width, vertical and horizontal borders, and symbol for the seal or packing. The line style used for the vertical and horizontal borders is set in the Layout tab. If the component is not a Bottom Seal and the inner diameter is specified, these symbols will fill the gap between the inner and outer diameter with the selected symbol. A Bottom Seal will fill everything between the outer diameter and any interior components with the selected symbol.



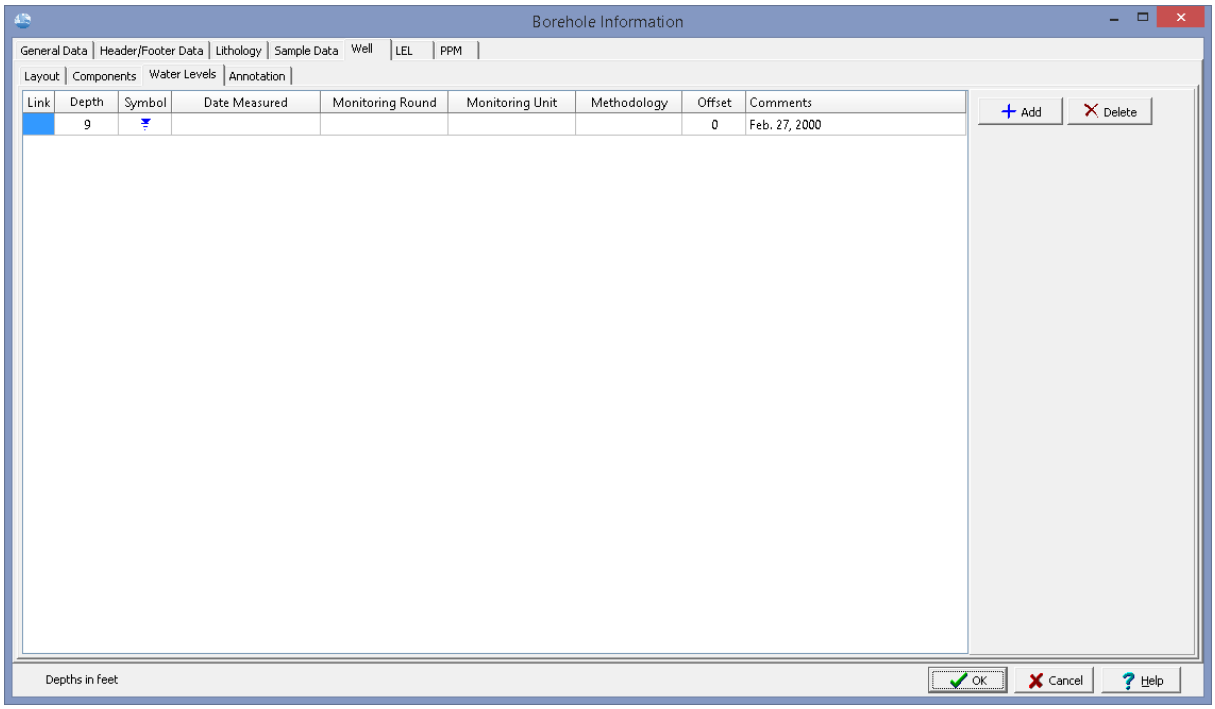
Joint/Misc.

If the type of component is Joint/Misc. then the Joints/Miscellaneous form will be displayed. This form is used to select the foreground and background colors, line width, and symbol. The first 6 symbols are used to represent couplings between pipes. All these couplings except for the 4th and 6th, will use the inner diameter as the bottom diameter of the connector. The bottom 6 symbols can be used for packers, sampling ports, cables, tubes, probes, and bailers. Of these 6 symbols, only the packer uses both the inner and outer diameters of the component.



The buttons on the right can be used to add and delete components.

The Water Levels tab below is used to edit the water levels measured in the well.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited using this tab:

Link: To link a water level to an EDMS groundwater sample click on the Link column for that water level. Then click on the button that appears. A list of EDMS groundwater samples that are associated with the boring/well will be displayed, select the groundwater sample to link. The data from the EDMS groundwater sample will automatically be shown on the Water Levels tab and well column. In the Link column for this water level a triangle symbol will be shown to indicate that the water level is linked to an EDMS groundwater sample. Except for the symbol and comments, the data for this linked water level cannot be edited in the boring/well log. More information see the Water Level Integration section in Chapter 4..This field is not used in WinLoG RT.

Depth: This is the measured depth of the water level in the same units as set in the template.

Symbol: This is the symbol to use to represent the water table. When the cursor is clicked on this column, the Water Level Symbol form is displayed. This form is used to select the symbol, symbol size, color, and line width.

Date Measured: This can be used to select the date that the water level was measured.

Monitoring Round: This is used to specify the monitoring round for the water level.

Monitoring Unit: This is used to specify the monitoring unit for the water level.

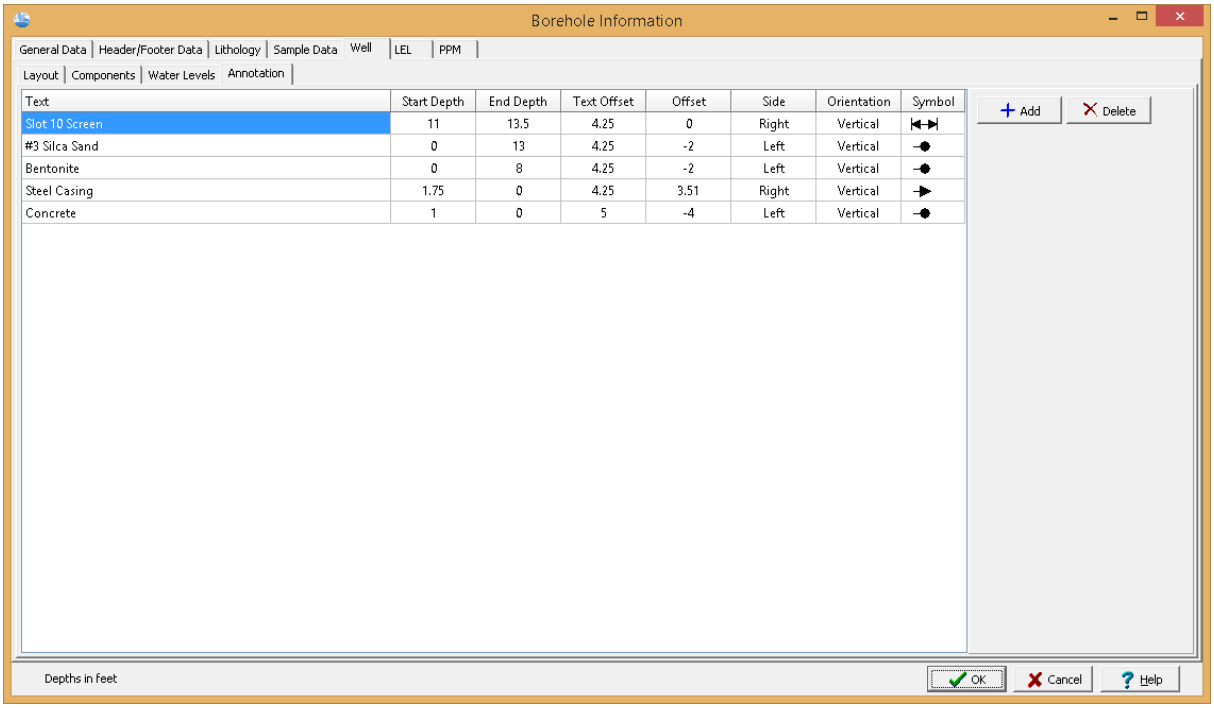
Methodology: This is used to specify the methodology used to measure the water level.

Offset: This is the offset to place the water level symbol from the center of the hole. Offsets to the left are negative and offsets to the right are positive.

Comments: This is the text to display above the water level symbol. The text will be oriented vertically above the symbol.

The buttons on the right can be used to add and delete water levels.

The Annotations tab is used to enter the text describing the well completion details and other information.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited using this tab:

Text: This is the text to use for annotation.

Start Depth: This is the starting depth to display the text, the text will be positioned below this start depth. If the start depth is zero and the symbol type is not a double arrow, the start depth will be ignored and the end depth will be used to position the text.

End Depth: This is the end depth to use for displaying the text. The text will be positioned above this depth. If the end depth is zero and the symbol type is not a double arrow, the end depth will be ignored and the start depth will be used to position the text.

Text Offset: This is the offset to place the text from the center of the hole. The sign of the offset is ignored, and the Side is used to determine which side of the hole to place the text. In order for the text to appear outside of the well components, the text offset must be greater than the hole radius.

Offset: This is the offset used to position the start of the arrow or circle inside of the well components. Offsets to the left are negative and offsets to the right are positive. In order for the arrow or circle that leads to the text to start in the well components, the offset must be less than the hole radius.

Side: This is the side of the hole to place the text. When the cursor is clicked inside of this column, a combo box will be displayed, and either the left or right side can be selected.

Orientation: This is the orientation of the text. When the cursor is clicked inside of this column, a combo box will be displayed and the orientation can be set to either horizontal or vertical.

Symbol: This is the symbol to use to draw the text leaders. When the cursor is clicked inside this column, the Annotation Symbol form will be displayed. This form can be used to select the symbol type, symbol size, and line style. If the symbol type is Double Arrow and the text orientation is horizontal, the double arrows will not be drawn.

The buttons on the right can be used to add and delete annotations.

4.1.4.1.6 Text Data

Text data can be used to display any information that varies with depth; such as soil classification, RQD, chemical testing, lithologic consistency, laboratory results, drilling rates, etc. Depending on the template if the column is displayed as text, a tab for text data will be added. The tab name will be the same as the column name in the template.

At the top of tab there are buttons to *Add* or *Delete* text data. The following information can be edited for each data point:

Depth: This is the depth to display the text.

Text: This is the text to display at the specified depth.

4.1.4.1.7 Text Interval Data

Text interval data can be used to display any information that varies with depth; such as soil classification, RQD, chemical testing, lithologic consistency, laboratory results, drilling rates, etc. Depending on the template if the column is displayed as a text interval, a tab for text interval data will be added.The tab name will be the same as the column name in the template.

At the top of tab there are buttons to *Add* or *Delete* text interval data. The following information can be edited for each data point:

Top Depth: This is the top depth to display the text.

Bottom Depth: This is the bottom depth to display the text.

Text: This is the text to display between the specified depths.

Line Type: This is used to select the type of line to show at the top and bottom depths.

4.1.4.1.8 Graph Data

Graph and bargraph data can be used to display numerical information that varies with depth; such as shear strength, water content, hydraulic conductivity, contaminant concentrations, volatile hydrocarbon readings, etc. Depending on the template if the column is displayed as a graph or bargraph, a tab for the data will be added.The tab name will be the same as the graph name in the template.

At the top of tab there are buttons to *Add* or *Delete* graph data.

If the graph type is not a bargraph the following information can be edited for each data point:

Depth: This is the depth to display the data.

Data: This is the numerical data for the graph at the specified depth.

Label: This is an optional text label to display at the specified depth.

If the graph type is a bargraph the following can be edited for each data point:

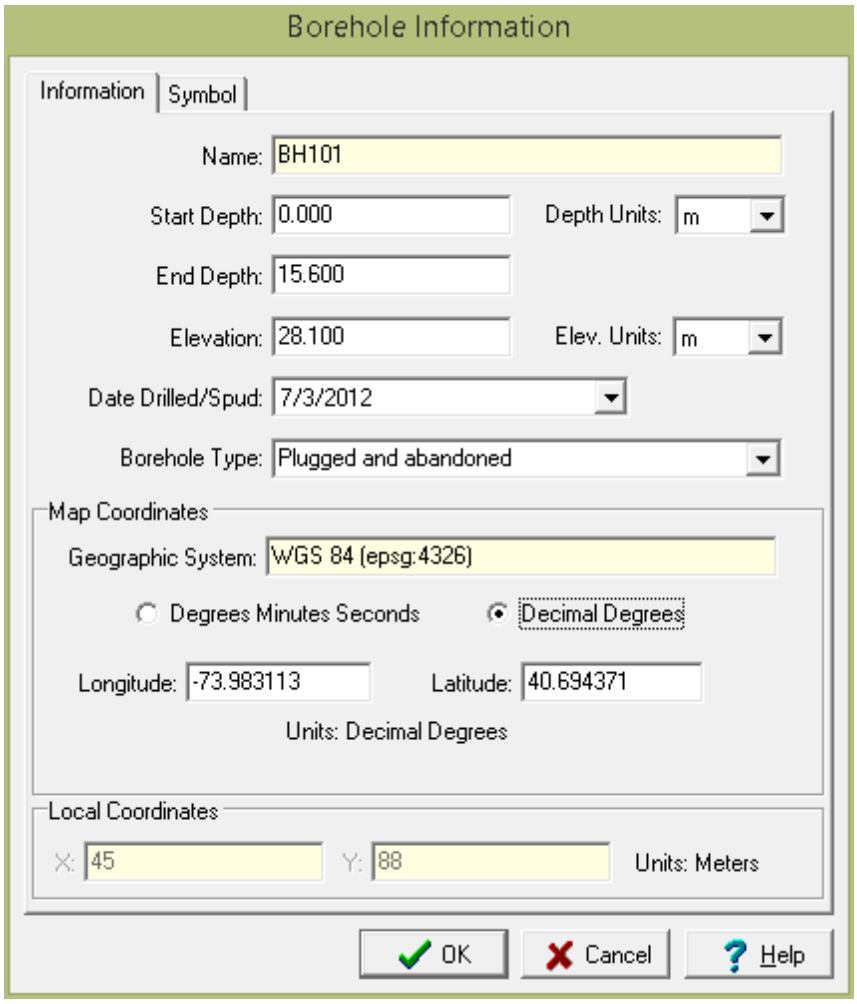
Top Depth: This is the top depth to display the data.

Bottom Depth: This is the bottom depth to display the data.

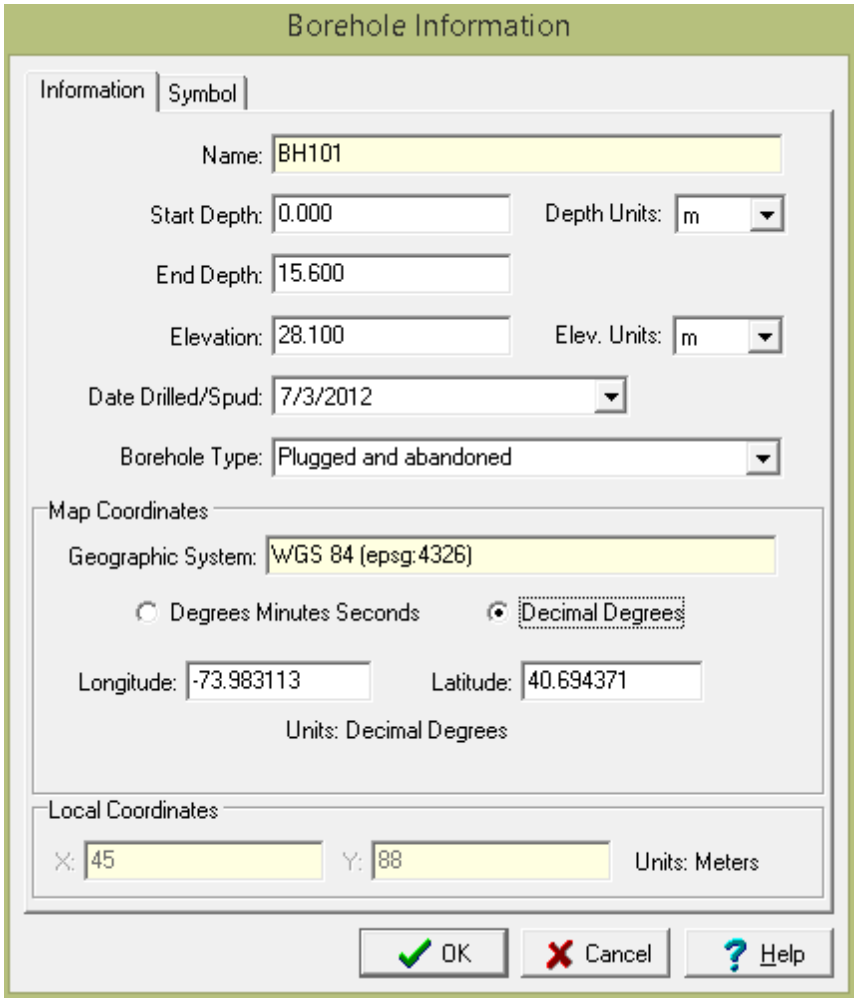
Data: This is the numerical data for the graph at the specified depths.

4.1.4.2 General Information

The General Information for a log includes information about the borehole number, X and Y coordinates, well symbol, depths, and status. To edit the General Information for a log either select *Edit > General Information* or *Popup > General Information* and the Boring/Well Information form below will be displayed. This form has two tabs for specifying the information and select the boring/well symbol.



4.1.4.2.1 Information



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be specified on this tab:

Unique Boring/Well ID: If the module type is Oil & Gas, this is the unique ID for the boring/well.Otherwise, this is not displayed. The Unique ID can not be edited after the boring//well log has been created.

Name: This is the name of the boring/well. The Name can not be edited after the boring//well log has been created.

Start Depth: This is the start depth. To indicate an aboveground boring/well completion a negative value can be entered.

End Depth: This is the end depth.

Depth Units: These are the units for the depths.

Elevation: This is the elevation of the ground surface of the boring/well.

Elevation Units: These are the units for the elevation.

Spud Date: This is the date drilling started.

Well/Borehole Type: This is the type of the boring/well.

Map Coordinates

If it is a local project the following are not displayed.

Coordinate System: This is the coordinate system specified when the project is created. It can be either a geographic or projected coordinate system. The default is the WGS 1984 geographic coordinate system used internally by the program to store location data.

Degrees Minutes Seconds or Decimal Degrees: If the coordinate system is geographic, this can be used to display the coordinates in either degrees, minutes, and seconds or decimal degrees.

Longitude: For a geographic coordinate system this is the longitude in either degrees, minutes, and seconds or decimal degrees.

Latitude: For a geographic coordinate system this is the latitude in either degrees, minutes, and seconds or decimal degrees.

Easting: For a projected coordinate system this is the x coordinate in map units.

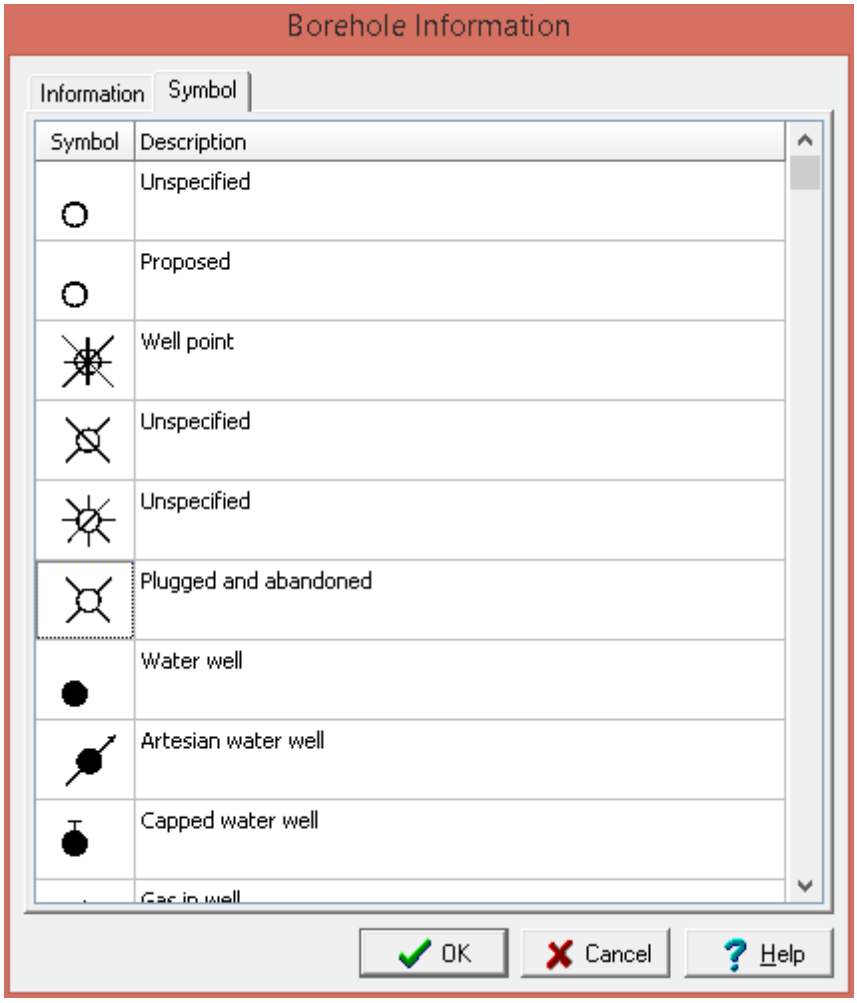
Northing: For a projected coordinate system this is the y coordinate in map units.

Local Coordinates

Local X-Coordinate: This is the x coordinate in local units. If the project is georeferenced the local coordinates are calculated automatically.

Local Y-Coordinate: This is the y coordinate in local units. If the project is georeferenced the local coordinates are calculated automatically

4.1.4.2.2 Symbol



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

This tab is used to select the symbol used to display the boring/well on the map.

4.1.4.3 Header and Footer Data

Header and footer data is displayed at the top and bottom of the log. The data being displayed will depend on the template. This data can include information such as project name, location, client, date, drill method, etc.

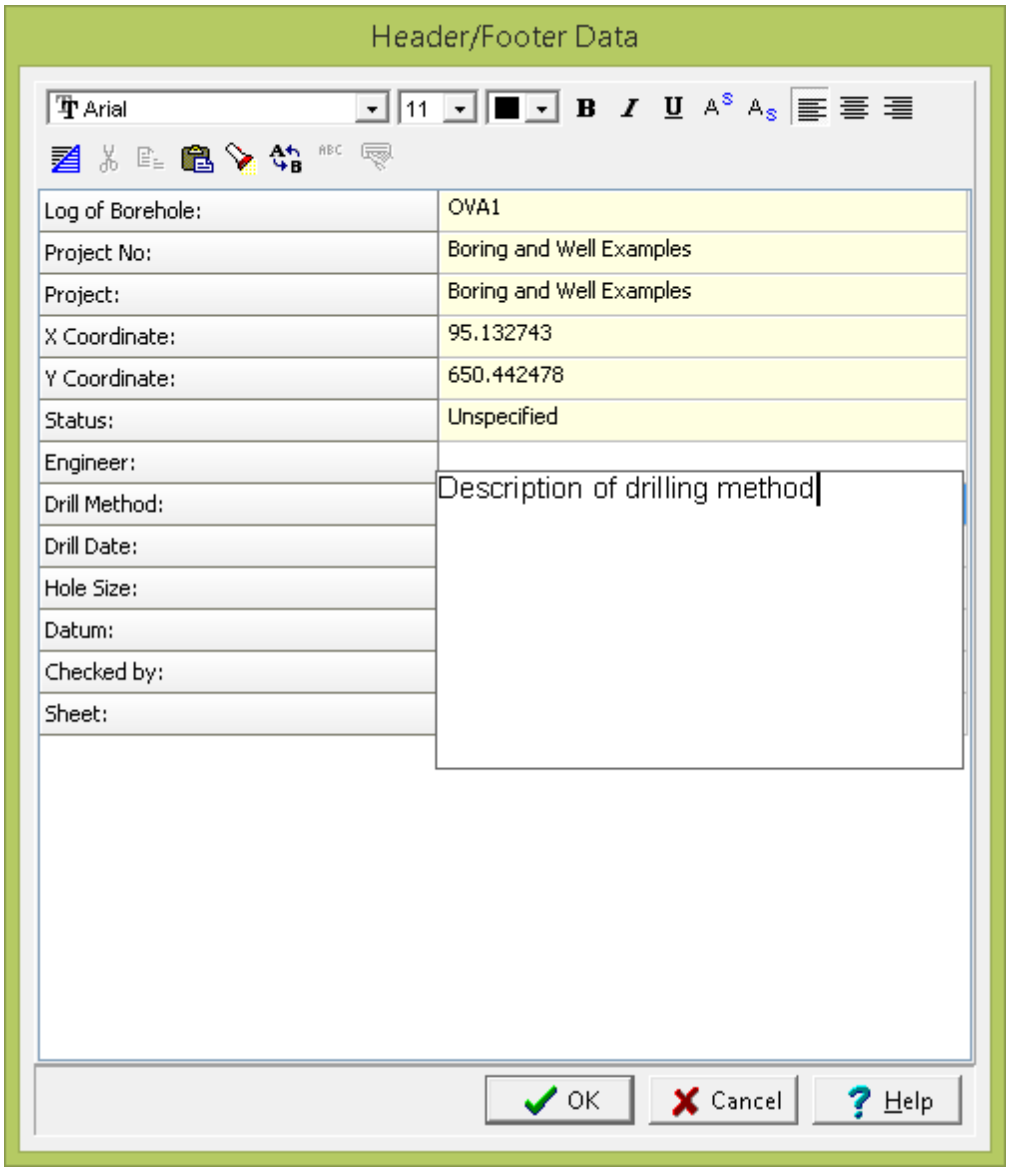
The header and footer data can be represented either as text or memo data. The difference between text data and memo data is that there is no limit to the length of memo data and memo data can contain rich text. The method used to represent the data is set in the template.

There are several ways to edit the header and footer data, either:

- click on the header or footer on the log
- double click on the Header/Footer Data object on the sidebar
- select *Edit > Header/Footer Data*

- or select *Popup > Header/Footer Data*

After this the Header/Footer Data form below will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

On this form a list of the header and footer data is displayed, with the type of data on the left and the data on the right. If the data type is filled out automatically (eg. borehole/well name, project name) then it can not be edited on this form.

If the data is represented by a memo, the rich text toolbar at the top will be activated. The buttons of the toolbar perform the following functions:

- The **Font Typeface** box is used to select the name of the font to use for the selected text.
- The **Font Size** box is used to set the size of the font for the selected text.
- The **Font Color** box is used to select the color of the font for the selected text.
- The **Bold** button is used to toggle the bold attribute of the selected text on and off.

- The **Italics** button is used to toggle the italic attribute of the selected text on and off.
- The **Underline** button is used to toggle the underline attribute of the selected text on and off.
- The **Superscript** button is used to toggle the superscript attribute of the selected text on and off.
- The **Subscript** button is used to toggle the subscript attribute of the selected text on and off.
- The **Left Justify** button will left justify the selected text.
- The **Center Justify** button will center justify the selected text.
- The **Right Justify** button will right justify the selected text.
- The **Select All** button will select all of the text in the memo field.
- The **Cut** button will remove the selected text and place it in the clipboard.
- The **Copy** button will copy the selected text to the clipboard.
- The **Paste** button will paste the text in the clipboard, at the current position of the cursor in the memo field.
- The **Find** button will find the specified text in the memo field.
- The **Replace** button will replace the specified text in the memo field.
- The **Spell Check** button will display the Spell Checker form and will check the spelling in the memo field.
- The **Symbol** button will display the Symbol form. This form is used to place a symbol at the current cursor position in the memo field. To select a symbol use the Font box to select the font containing the symbol and then select the desired symbol. After the desired symbol has been selected, press the Ok button to insert it into the memo field.

Header and footer fields (type of data) can be edited or removed from the log by right-clicking on them in the list. The header and footer field names are specified in the template, if the template of the log is changed it is possible to have header and footer fields that no longer show up on the log.

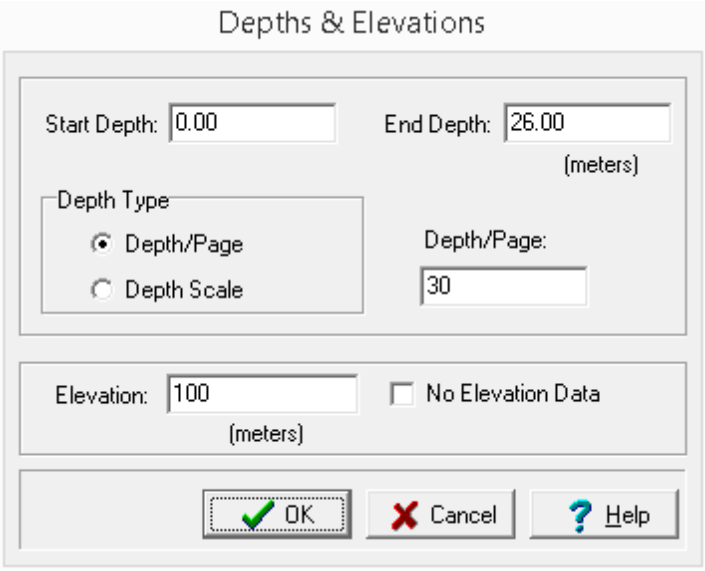
4.1.4.4 Depths and Elevations

Before entering any depth related log data, the boring/well depth should be entered. There is no limit to the depth of a log. The depth entered must be in the same units as the input units for the template.

The depth and elevation parameters of the borehole log can be edited by:

- clicking on the depth or elevation column on the log
- double click on the Depth object on the sidebar
- select *Edit > Depths & Elevations*
- or select *Popup > Depths & Elevations*

After this the form below will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Start Depth: This is the start depth, normally equal to 0 for ground surface. If you would like to show an aboveground well cover or "stick- up", enter a negative number.

End Depth: This is the bottom depth. There is no limit to the depth of the borehole.

Depth Type: The depth per page specified in the template normally determines the plot depth per page; however, this can be overridden in the log by specifying a depth per page here. This feature allows you to change plot depths per page without changing the template. The depth per page can be overridden by either specifying a new depth/page or a new depth scale. To accept the default template plot depth per page, specify the plot depth per page as zero when editing the log.

Depth/Page: If the Depth Type is Depth/Page the new depth per page can be entered.

Depth Scale: If the Depth Type is Depth Scale the new depth scale can be entered.

Elevation: The elevation of the boring/well at ground surface.

No Elevation Data: If checked only the depths at each layer boundary will be shown. Otherwise, both the depth and elevation will be shown at each layer boundary.

4.1.4.5 Depth Related Data

Boring/well logs can contain numerous types of depth related data such as lithologic descriptions and symbols for each layer; sample data; well completion details; water level measurements; geophysical logs; etc. The sections below describe how to create and edit the depth related data for logs.

4.1.4.5.1 Airlift Q Data

Airlift Q data can be entered either as text interval or graph data depending on the settings in the template. Depending on how the column is displayed the editing of the data is the same as described in Text Interval Data 333, or Graph Data 283.

4.1.4.5.2 Alteration Data

Alteration data is entered the same as text interval. The editing of the data is the same as described in Text Interval Data 333.

4.1.4.5.3 Calculated Columns

Calculated columns are used to display the results of calculations performed on one or more other depth related datasets. The datasets and calculations are specified in the template. These columns are for display only and can not be edited on the log.

4.1.4.5.4 Caliper Data

Caliper data are a type of geophysical log and the importation and editing of the data is the same as described in the Geophysical data 272 section.

4.1.4.5.5 Cementation Data

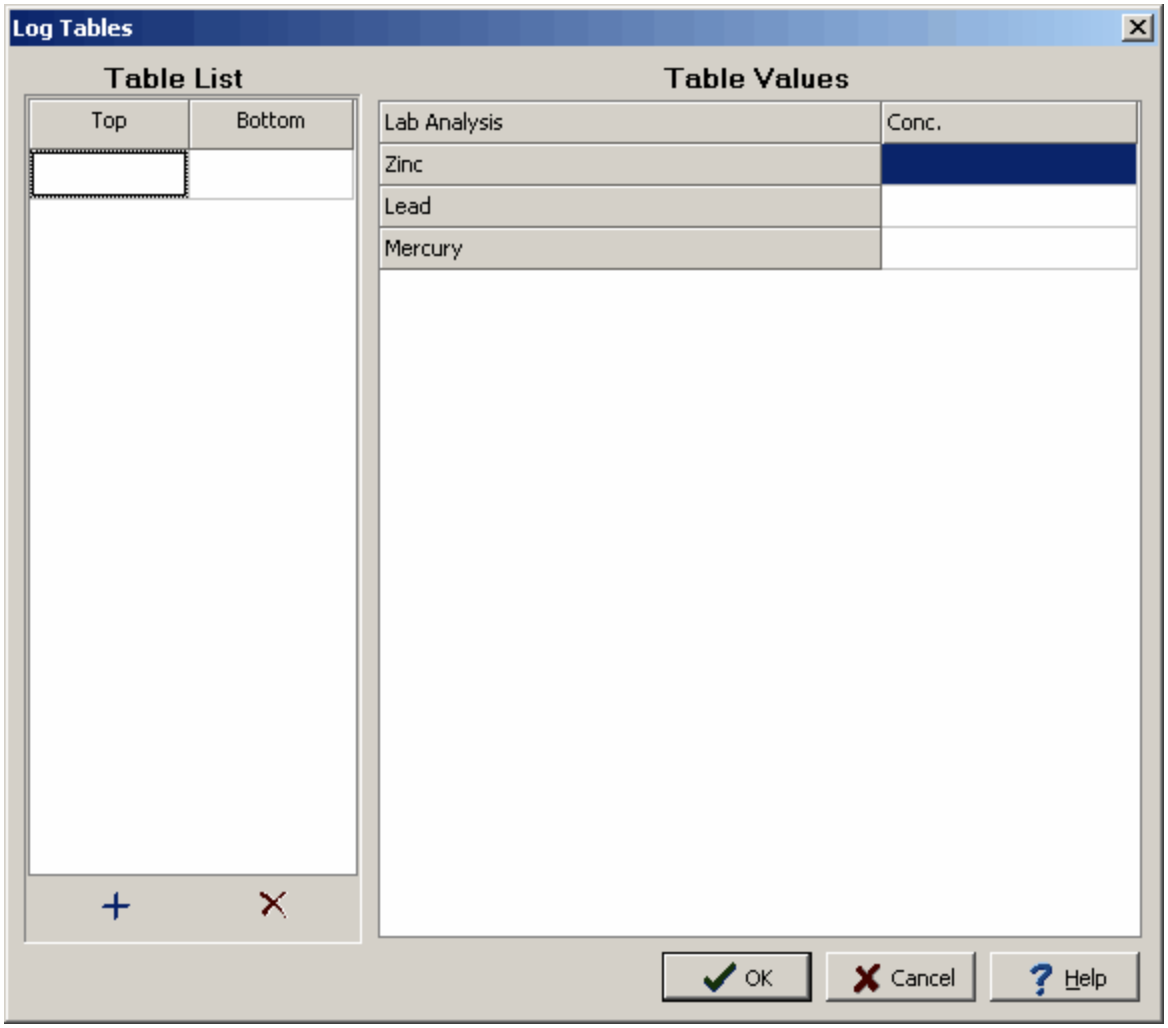
Cementation data is entered text interval data. The editing of the data is the same as described in Text Interval Data 333.

4.1.4.5.6 Column of Tables

This column is used to display a series of tables at specified depths. For example, it could be used to display lab results for various elements collected at a variety of depths. The format of the tables is specified in the template. There are several ways to edit the column of tables, either:

- click on the column of tables on the log
- double click on the column of tables object on the sidebar
- select *Edit > Column of Tables*
- or select *Popup > Column of Tables.*

After this the Log Tables form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

On the left side of this form is a table list showing the top and bottom depths of the tables on the log. Additional tables can be added using the Add button at the bottom and tables can be deleted using the Delete button at the bottom.

When a table is selected in the list, the table values will be displayed and can be edited on the right side of the form.

4.1.4.5.7 Concentration Data

Concentration data can be entered either as text, text interval, or graph data depending on the settings in the template. Depending on how the column is displayed the editing of the data is the same as described in Text Data 327, Text Interval Data 333, or Graph Data 283.

Concentration data from the EDMS module can be automatically displayed using a Linked Concentration 289 column.

4.1.4.5.8 Conductivity Data

Conductivity data are a type of geophysical log and the importation and editing of the data is the same as described in the Geophysical data 272 section.

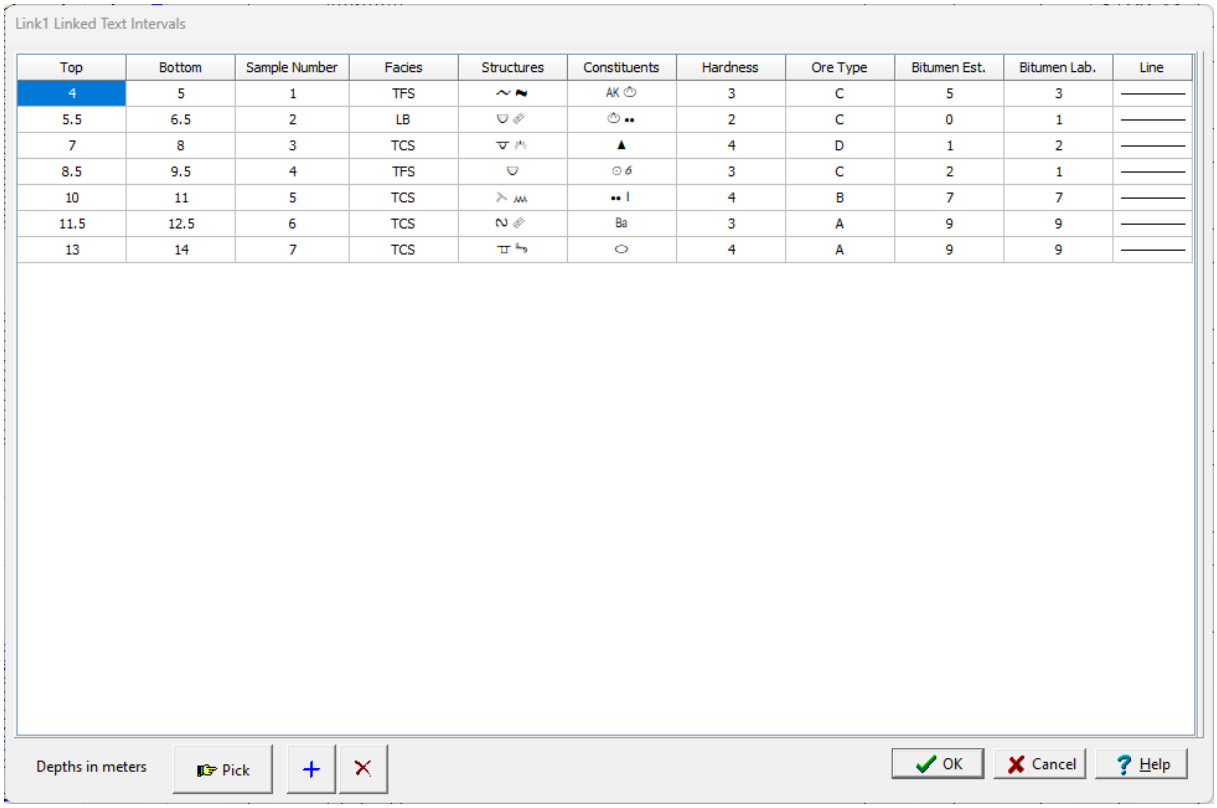
4.1.4.5.9 Constituents Data

Constituents data is treated the same way as text interval data. Constituents columns can also be linked to text interval columns.

There are several ways to edit constituent data, either:

- click on the constituent data column on the log
- double click on the constituent data object on the sidebar
- select *Edit > Constituents*
- or select *Popup > Constituents*

After this the Linked Text Interval Data form will be displayed. This form will have three or more columns depending on whether the constituent data is linked to other interval text data on the template. At the bottom of this form there are buttons to move to the first, previous, next, and last interval or to add and delete intervals.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

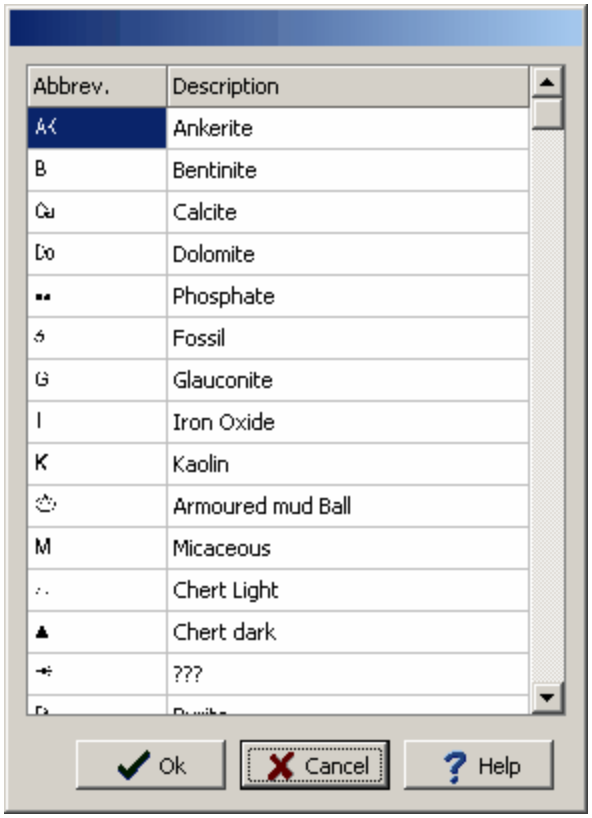
Top Depth: This is the top depth of the interval.

Bottom Depth: This is the bottom depth of the interval.

Text: If there are other linked text intervals in the template, this is the text to display in the text interval. The name of this column will be the name of the text interval data.

Line Type: This is the line style to be used for the top and bottom boundaries of the text interval. When the line is clicked on the Line Properties form is displayed. This form is used to set the line style, thickness, and color. The line style can be set to none to display no line at the boundary

Constituents: This is the constituents to display in the interval. A specially designed font is provided with the program for use with this column called GAEA Constituents. When this column is double clicked on the Constituents form below will be displayed. This form has two columns. one with the constituent symbol and one with the description. Constituents can be added to the interval by selecting them on this form and clicking the Ok button or by double-clicking on them.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

At the bottom of this form there are buttons to Pick, Add and Delete text intervals.When the Pick button is pressed you can specify the bottom depth of the interval by clicking on the location on the log.

4.1.4.5.10 Contacts Data

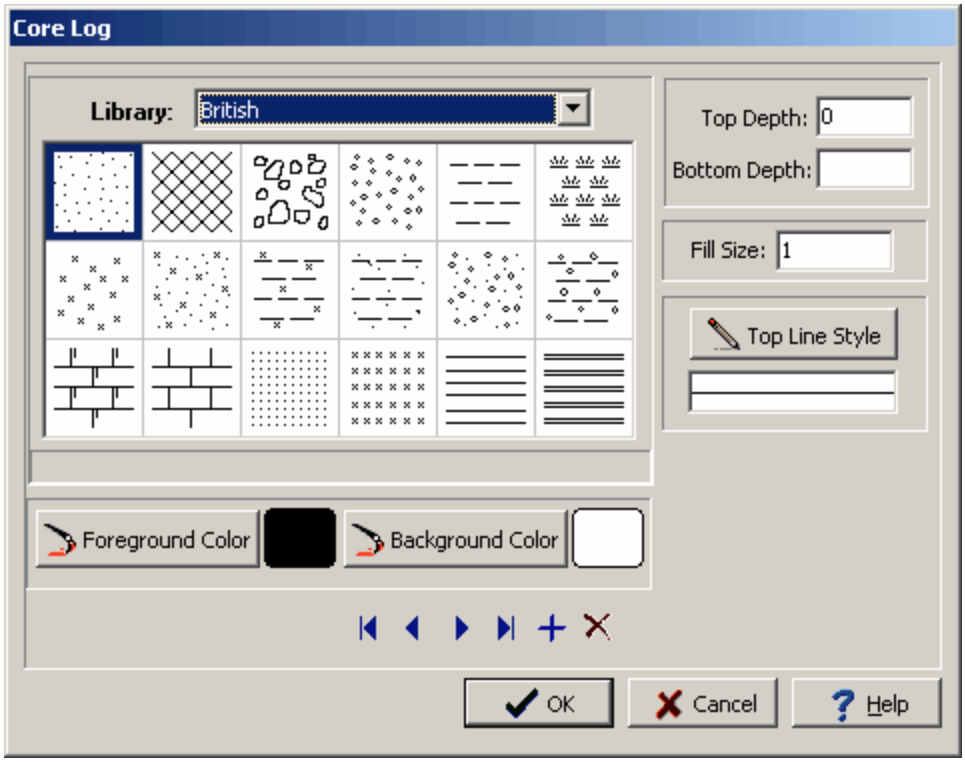
Contacts data is entered the same as text data. The editing of the data is the same as described in Text Data 327.

4.1.4.5.11 Core Log Data

Core logs are used to represent lithologic samples collected in a boring/well, that do not necessarily correspond with any lithologic layers. The lithologic symbols shown in a core log are independent of those specified in the lithology. Core log data can be entered and edited by:

- clicking on the core log column
- double click on the core log data object on the sidebar
- select *Edit > Core Log*
- or select *Popup > Core Log*

After performing one of the above tasks, the Core Log form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be entered and edited using this form:

Top Depth: This is the top depth of the sample and should be between the start and end depths of the boring/well.

Bottom Depth: The bottom depth of the sample is optional. If it is not specified or is less than the top depth, the top depth of the next sample is used.

Library: This combo box is used to select the symbol library for the sample. When the arrow at the right is pressed a list will display the available symbol libraries. After a library has been selected, the symbols displayed will be updated.

Symbol: The symbol for the sample can be selected by clicking on one of the 18 symbols displayed for the current library. The selected symbol is highlighted with a blue border.

Foreground Color: This is the color to use for the shaded parts of the symbol. The foreground color can be changed by pressing the Foreground Color button. When this button is pressed the Color form will be displayed. Using this form, a basic color can be selected or a custom color can be specified.

Background Color: This is the color to use for the unshaded parts of the symbol. The background color can be changed by pressing the Background Color button. When this button is pressed the Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified.

Fill Size: The fill size is used to expand or condense the symbol before it is drawn on the log. The size of the symbol is multiplied by the fill size and then the symbol is drawn. For example, a fill size of 2 will result in the symbol being doubled in size. The fill size must be greater than 0.

Top Line Style: The Top Line Style button is used to change the line style for the top sample boundary in the symbol column. If the bottom depth of the sample is specified this line style is also used for the bottom boundary. When the button is pressed, the Line Properties form described in the Description tab is displayed. If the Same as Description box is checked, the line style will be set to the same as set in the Description tab for the sample.

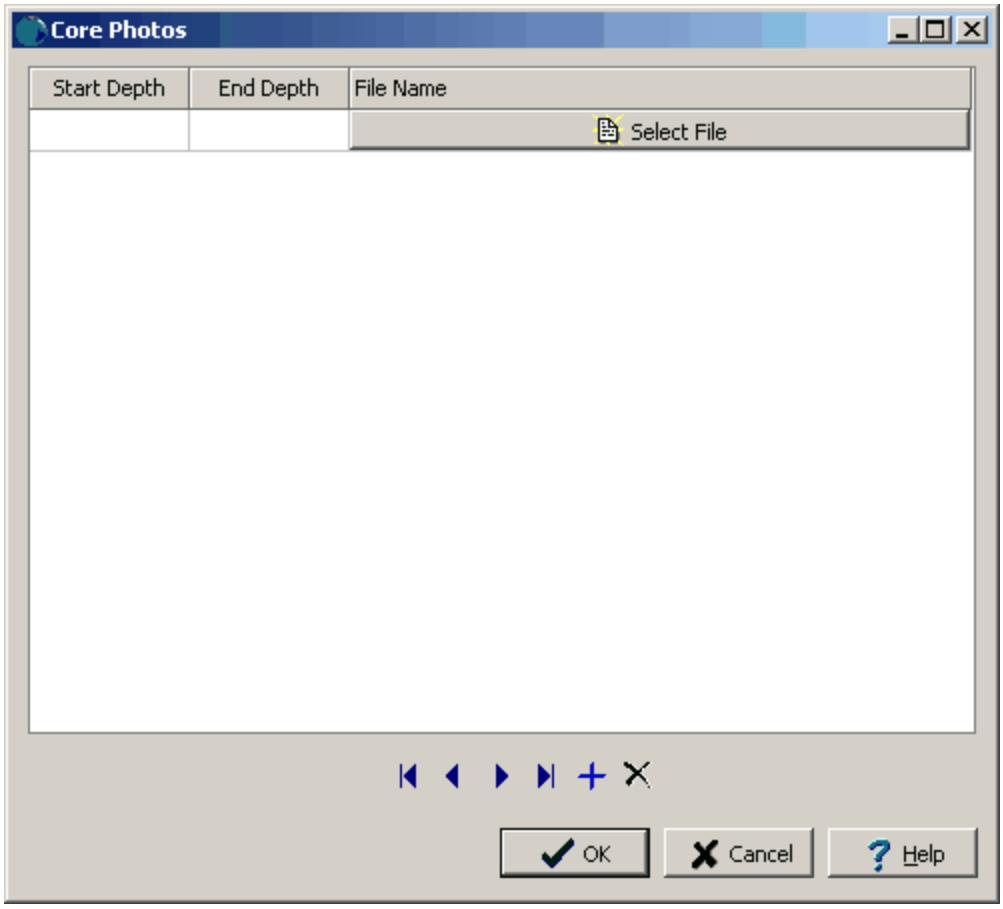
4.1.4.5.12 Core Photo Data

Core photo columns are used to display photos taken of cores at different depths or can be used to display photos taken inside the boring/well itself. The photos can be in either BMP or JPEG format.

There are several ways to edit core photo data, either:

- click on the core photo column on the log
- double click on the core photo object on the sidebar
- select *Edit > Core Photo*
- or select *Popup > Core Photo*

After this the Core Photo Data form will be displayed. At the bottom of this form there are buttons to move to the first, previous, next, and last measurement or to add and delete measurements.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

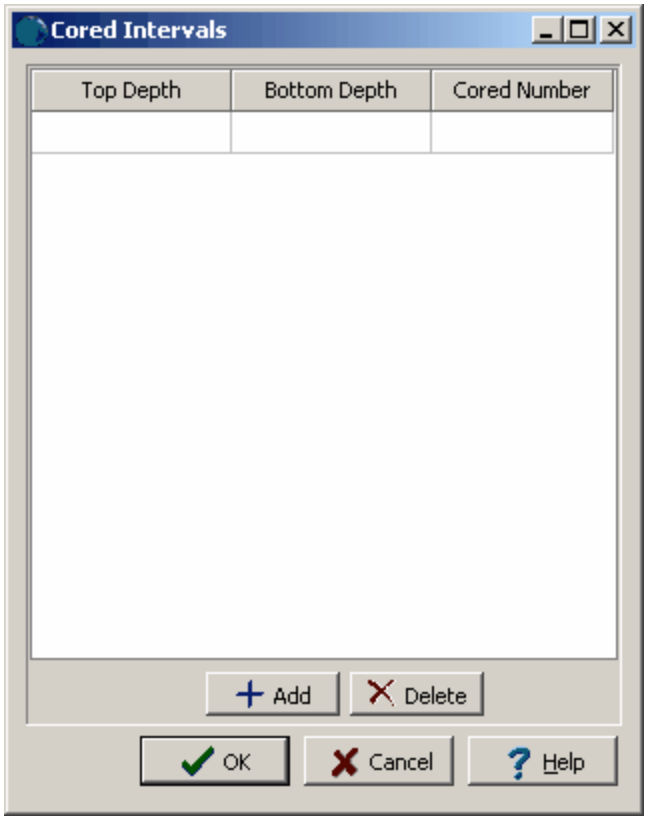
Using this form you can specify the start and end depths and file names of the core photos. When the File Name column is clicked on a button will be displayed. Press this button to select the file containing the core photo.

4.1.4.5.13 Cored Interval Data

Cored interval columns display a shaded box with a core interval number at specified depth intervals. There are several ways to edit the cored interval data, either:

- click on the cored interval data column on the log
- double click on the cored interval data object on the sidebar
- select *Edit > Cored Intervals*
- or select *Popup > Cored Intervals.*

After this the Cored Intervals form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Top Depth: This is the top depth of the text interval.

Bottom Depth: This is the bottom depth of the text interval.

Cored Number: This is the cored interval number to display.

At the bottom of this form there are buttons to add and delete cored intervals.

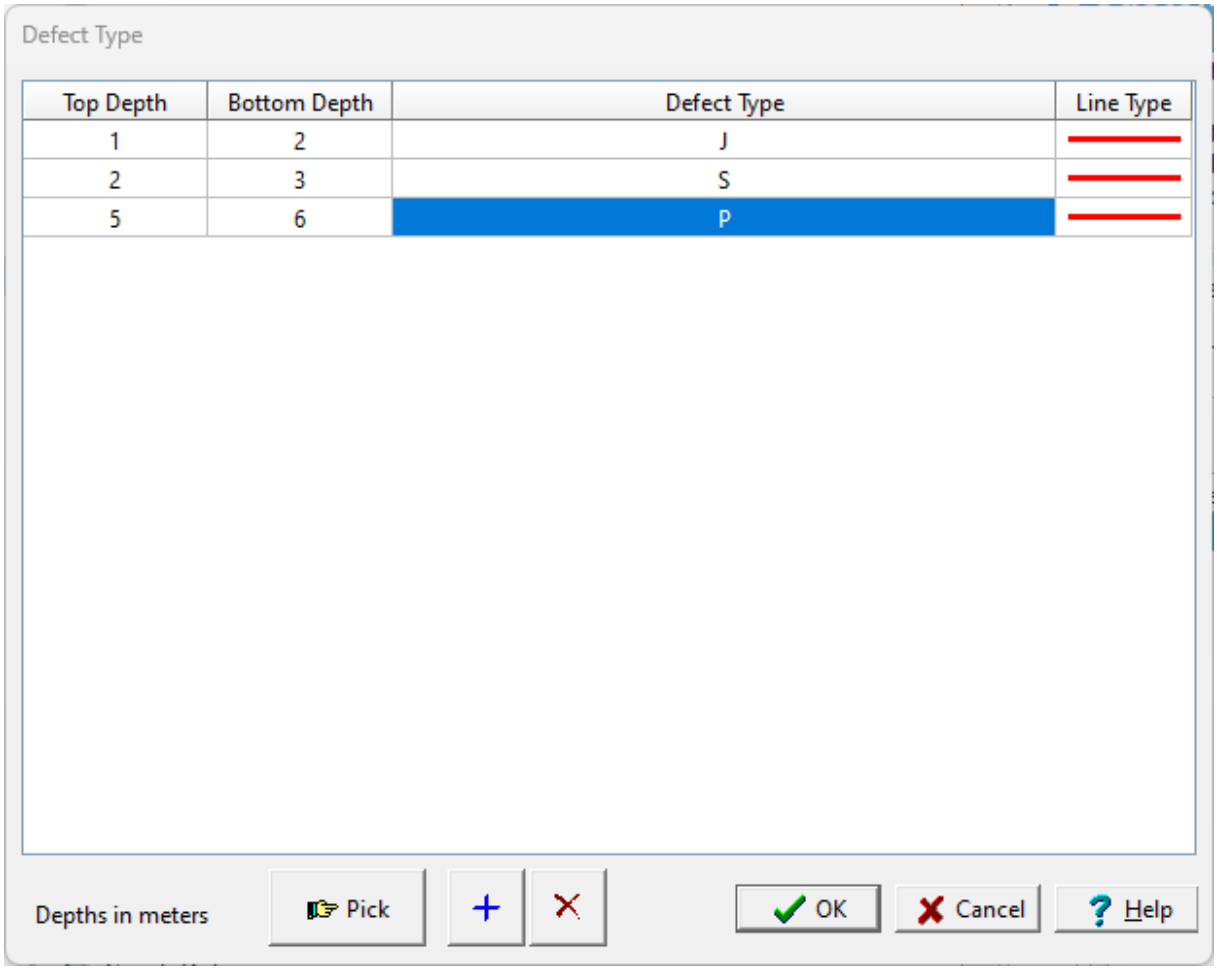
4.1.4.5.14 Custom List Interval Text Data

Custom list interval text data is used to display text selected from a custom list at specified depth intervals similar to text interval data. There are several ways to edit the data, either:

- click on the data column on the log
- double click on the data object on the sidebar
- select *Edit > Text Interval Data > Custom List Data Name*

The menu item that will appear in the Edit and sidebar will have the name of the column specified in the template for the log. For example, if the template specified the name of the column as "Penetration Rate", the menu items will also be named "Penetration Rate".This is used to distinguish between different data columns within the same template.

After this the Custom List Data form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Top Depth: This is the top depth of the text interval.

Bottom Depth: This is the bottom depth of the text interval.

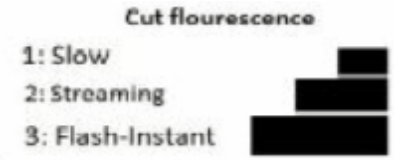
Text: This is the text to display in the text interval. The name of this column will be the name of the data column in the template. When this column is selected a drop down list showing the symbols and description in the custom list is displayed. The text can be selected from this list.

Line Type: This is the line style to be used for the top and bottom boundaries of the text interval. When the line is clicked on the Line Properties form is displayed. This form is used to set the line style, thickness, and color. The line style can be set to none to display no line at the boundary

At the bottom of this form there are buttons to Pick, Add and Delete text intervals.When the Pick button is pressed you can specify the bottom depth of the interval by clicking on the location on the log.

4.1.4.5.15 Cut Flourescence

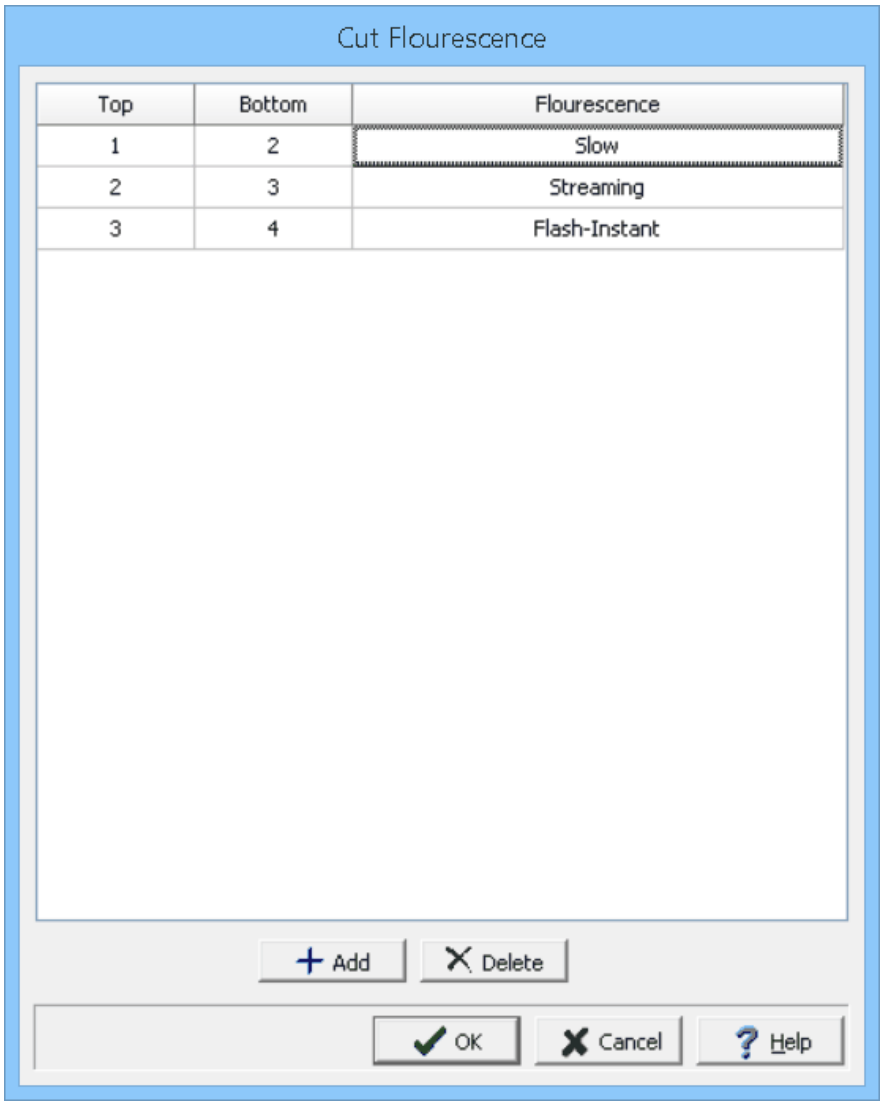
This column is used to display Cut Flourescence data as a bargraph.



There are several ways to edit Cut Flourescence data, either:

- click on the Cut Flourescence data column on the log
- double click on the Cut Flourescence data object on the sidebar
- select *Edit > Cut Flourescence*
- or select *Popup > Cut Flourescence*

After this the Cut Flourescence form will be displayed. At the bottom of this form there are buttons to add and delete data.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

Top: This is the top depth for the data.

Bottom: This is the bottom depth for the data.

Flourescence: This is used to select the type of flourescence.

4.1.4.5.16 Density Data

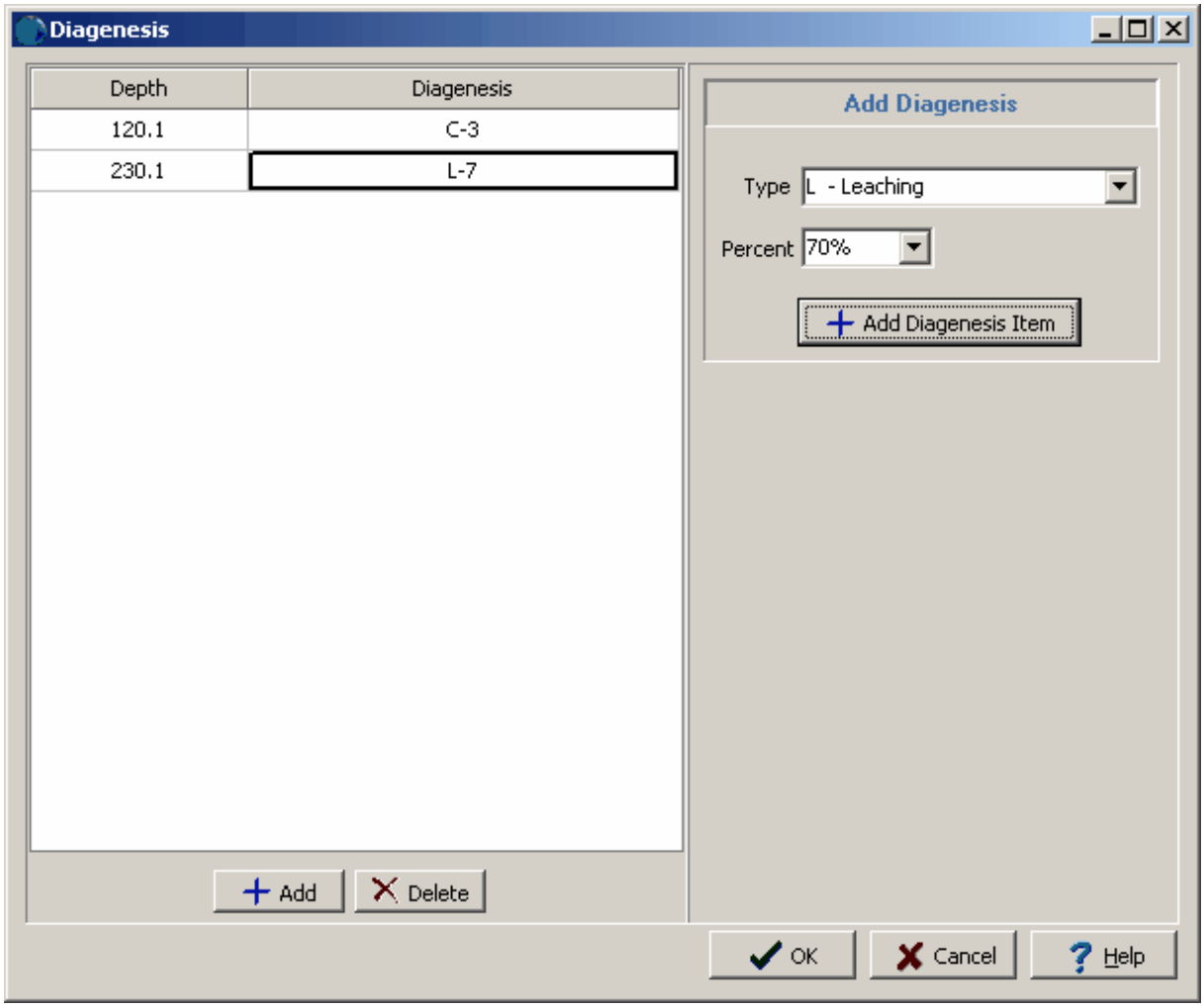
Density data are a type of geophysical log and the importation and editing of the data is the same as described in the Geophysical data 272 section.

4.1.4.5.17 Diagenesis Data

This column is used to display the types and percentages of diagenesis at specified depths. There are several ways to edit diagenesis data, either:

- click on the diagenesis data column on the log
- double click on the diagenesis data object on the sidebar
- select *Edit > Diagenesis*
- or select *Popup > Diagenesis*

After this the Diagenesis form will be displayed. At the bottom of this form there are buttons to add and delete depth measurements.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following data can be edited on this form:

Depth: This is the depth of the measurement.

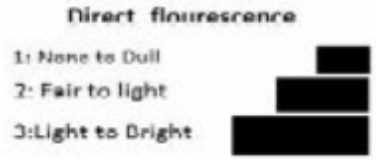
Diagenesis: This is the type of diagenesis and percentage at the measured depth. The type and percentage can be selected on the left of the form and entered for the depth using the Add Diagenesis Item.

4.1.4.5.18 Dipmeter Data

Dipmeter data are a type of geophysical log and the importation and editing of the data is the same as described in the Geophysical data 272 section.

4.1.4.5.19 Direct Flourescence

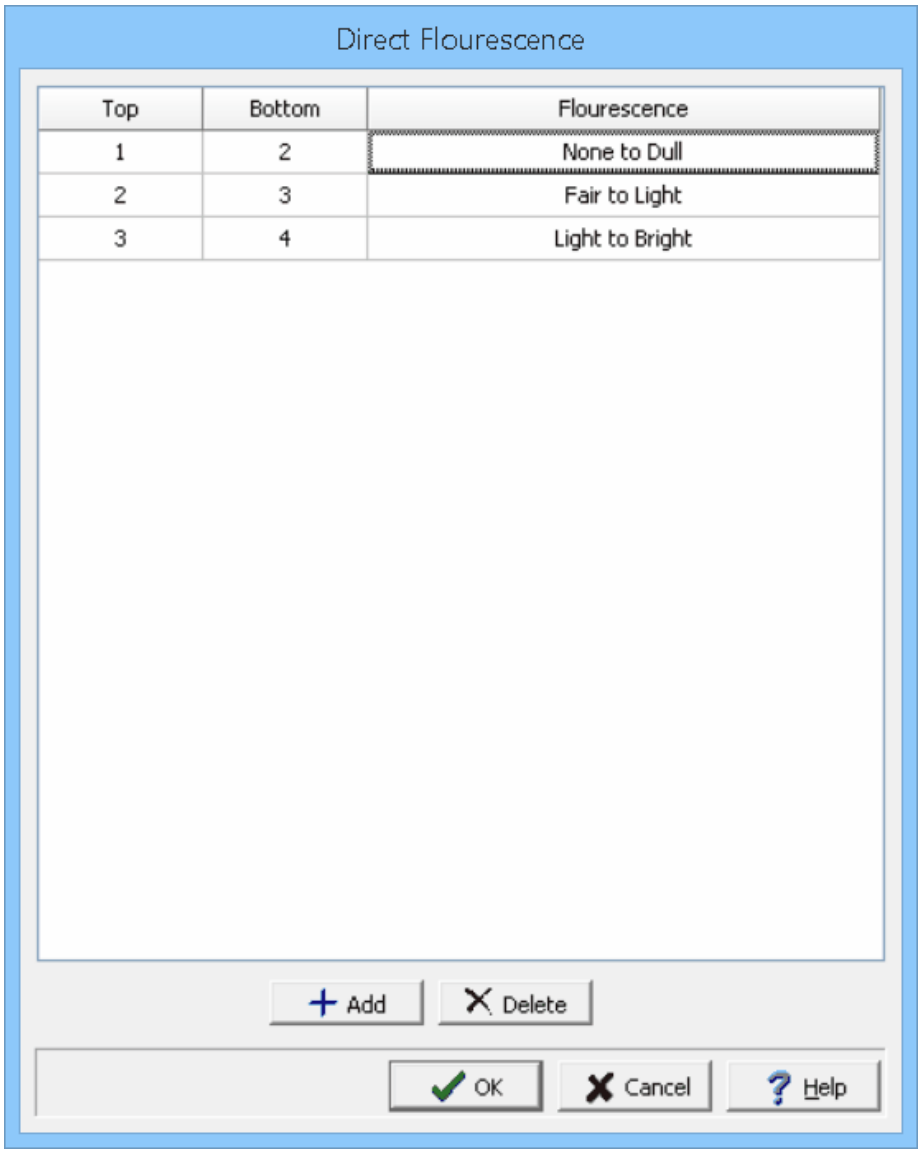
This column is used to display Direct Flourescence data as a bargraph.



There are several ways to edit Direct Flourescence data, either:

- click on the Direct Flourescence data column on the log
- double click on the Direct Flourescence data object on the sidebar
- select *Edit > Direct Flourescence*
- or select *Popup > Direct Flourescence*

After this the Direct Flourescence form will be displayed. At the bottom of this form there are buttons to add and delete data.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

Top: This is the top depth for the data.

Bottom: This is the bottom depth for the data.

Flourescence: This is used to select the type of flourescence.

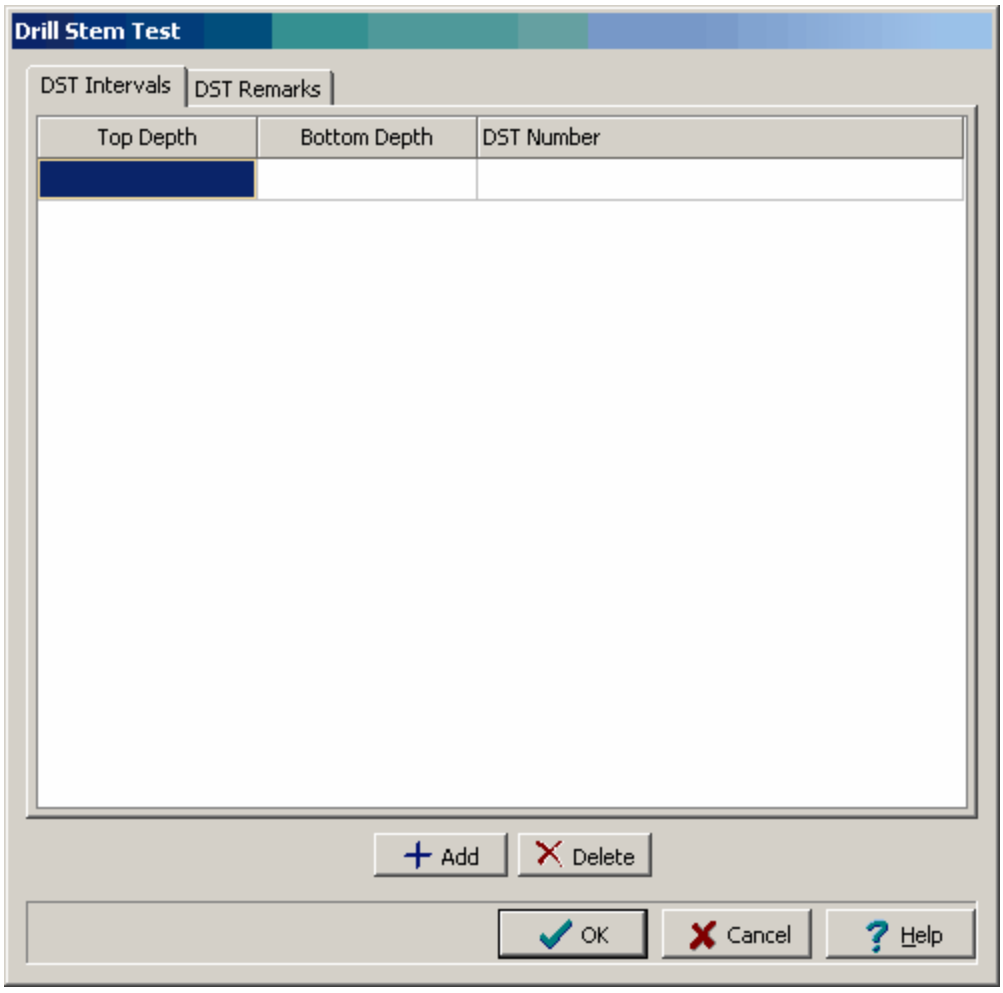
4.1.4.5.20 Drill Stem Tests

The drill stem data column is used to drill stem tests (DST) at various depths. There are several ways to edit drill stem test data, either:

- click on the drill stem test column on the log
- double click on the DST object on the sidebar
- select *Edit > Drill Stem Test*
- or select *Popup > Drill Stem Test*

After this the Drill Stem Test form will be displayed. At the bottom of this form there are buttons to add and delete tests. This form has two tabs, one for the DST intervals and one for the DST remarks.

DST Intervals Tab



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

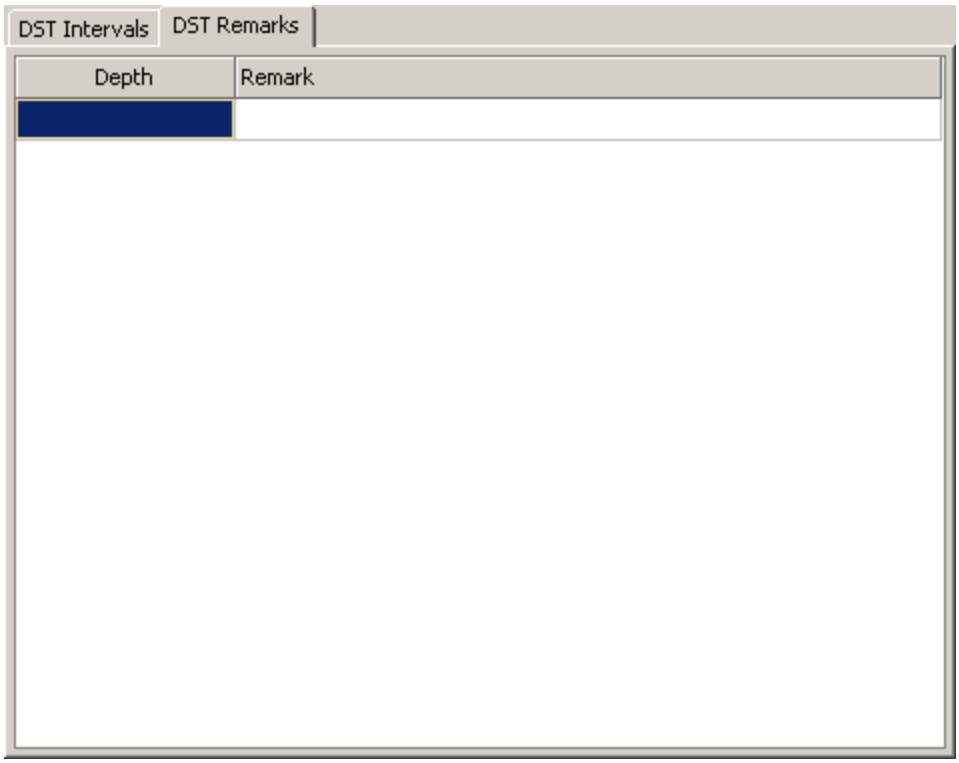
The following information can be edited on this tab:

Top Depth: This is the top depth of the DST.

Bottom Depth: This is the bottom depth of the DST.

DST Number: This is the DST number.

DST Remarks Tab



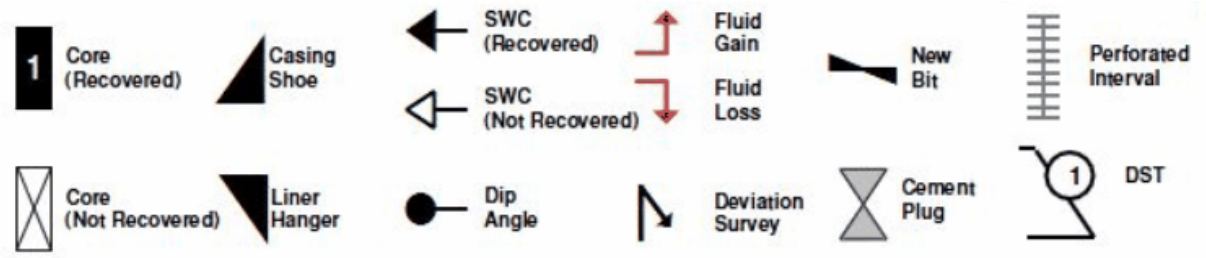
The following can be edited on this tab:

Depth: This is the depth to place the remark.

Remark: This is the remark or text for the DST.

4.1.4.5.21 Drilling Data

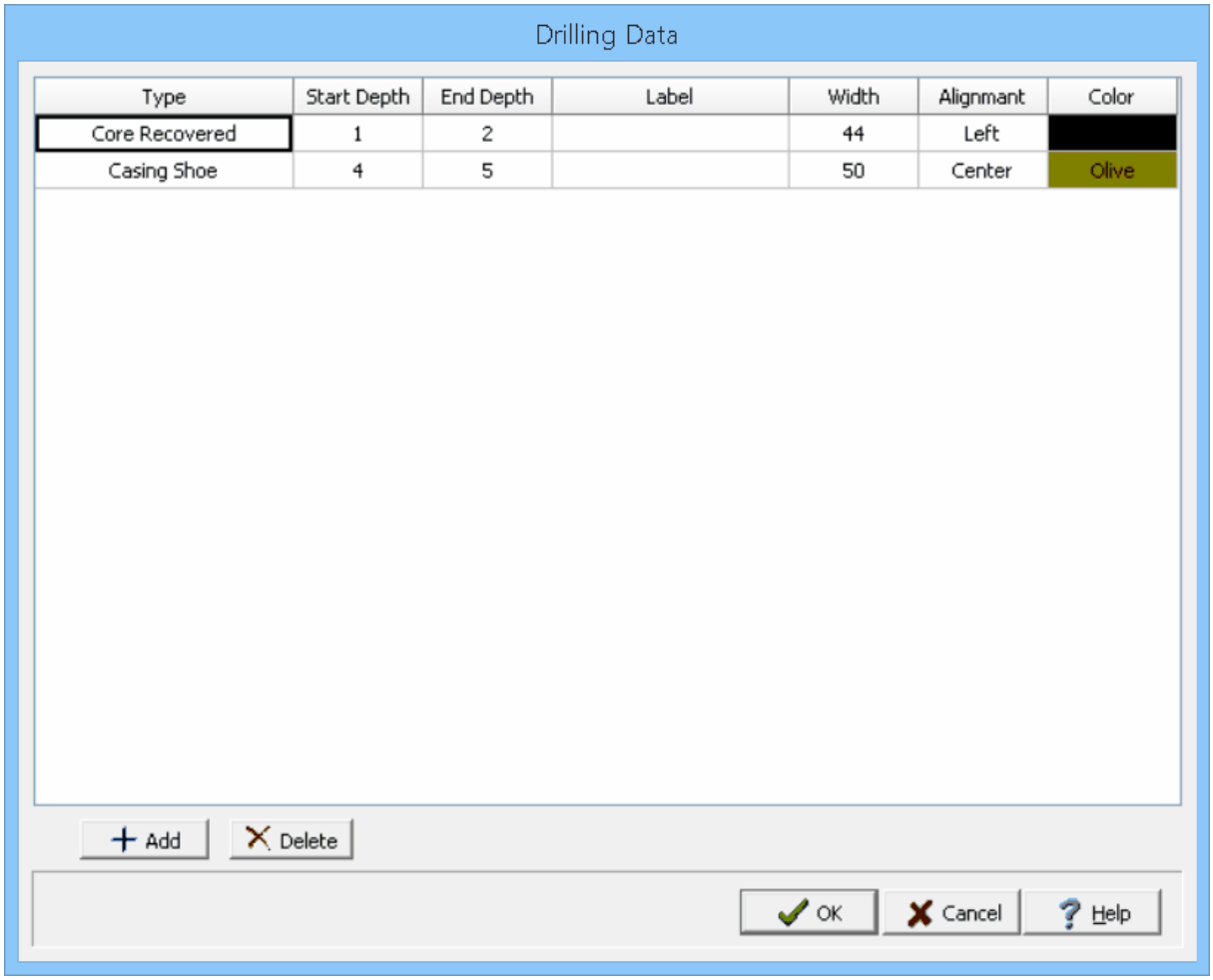
The drilling data column is used to display drill data at various depths. The types of drilling data that can be displayed are shown below.



There are several ways to edit drilling data, either:

- click on the drilling data column on the log
- double click on the Drilling Data object on the sidebar
- select *Edit > Drilling Data*
- or select *Popup > Drilling Data*

After this the Drilling Data form will be displayed. At the bottom of this form there are buttons to add and delete drilling data.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

Type: This is used to select the type of drilling data.

Start Depth: This is the start depth for the drilling data symbol.

End Depth: This is the end depth for the drilling data symbol.

Label: This is used to specify an optional label. For Core symbols the label will appear in the center of the symbol, for DST symbols the label will appear in the center of the circle, for Deviation Survey symbols the label will appear next to the arrow, and for all other symbols the label will appear next to it.

Width: This is the percentage of the column width to use for the symbol.

Alignment: This is used to select whether to align the symbol to the left, center, or right in the column.

Color: This is used to select the color of the symbol. The default color is specified in the template.

4.1.4.5.22 Estimated Bitumen Data

Estimated bitumen data can be entered either as text, text interval, or graph data depending on the settings in the template. Depending on how the column is displayed the editing of the data is the same as described in Text Data 327, Text Interval Data 333, or Graph Data 283.

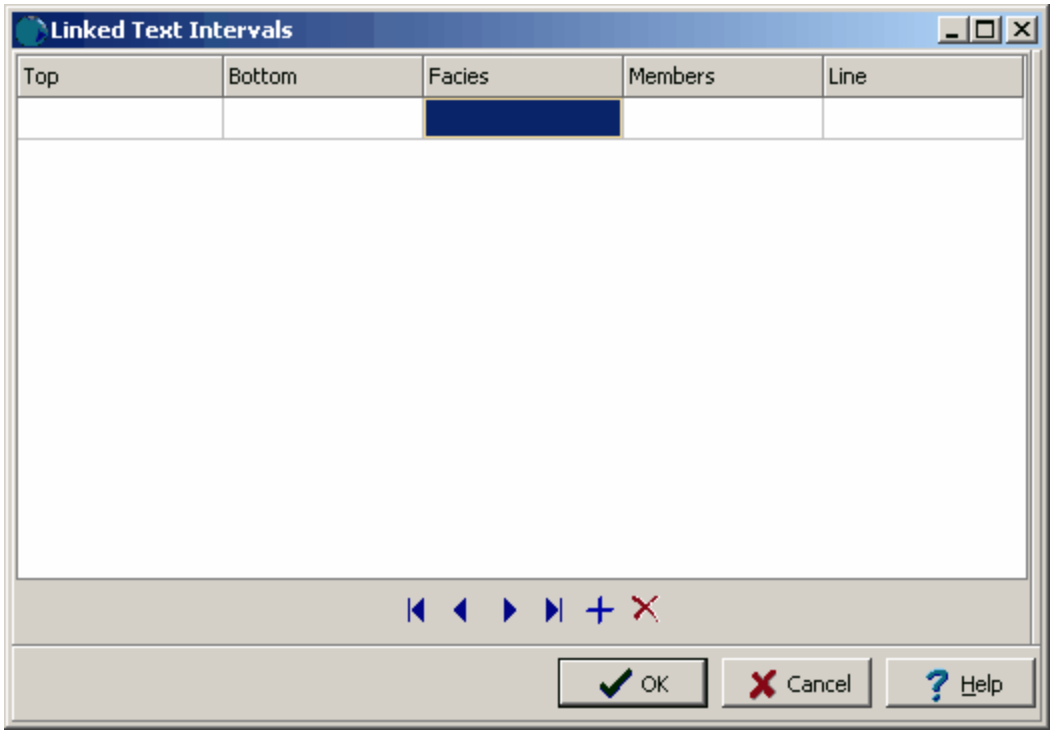
4.1.4.5.23 Facies Data

Facies data is treated the same way as text interval data. Facies columns can also be linked to text interval columns.

There are several ways to edit facies data, either:

- click on the facies data column on the log
- double click on the facies data object on the sidebar
- select *Edit > Facies*
- or select *Popup > Facies*

After this the Linked Text Interval Data form will be displayed. This form will have three or more columns depending on whether the facies data is linked to other interval text data on the template. At the bottom of this form there are buttons to move to the first, previous, next, and last interval or to add and delete intervals.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Top Depth: This is the top depth of the interval.

Bottom Depth: This is the bottom depth of the interval.

Facies: This is the facies to display in the interval.

Text: If there are other linked text intervals in the template, this is the text to display in the text interval. The name of this column will be the name of the text interval data.

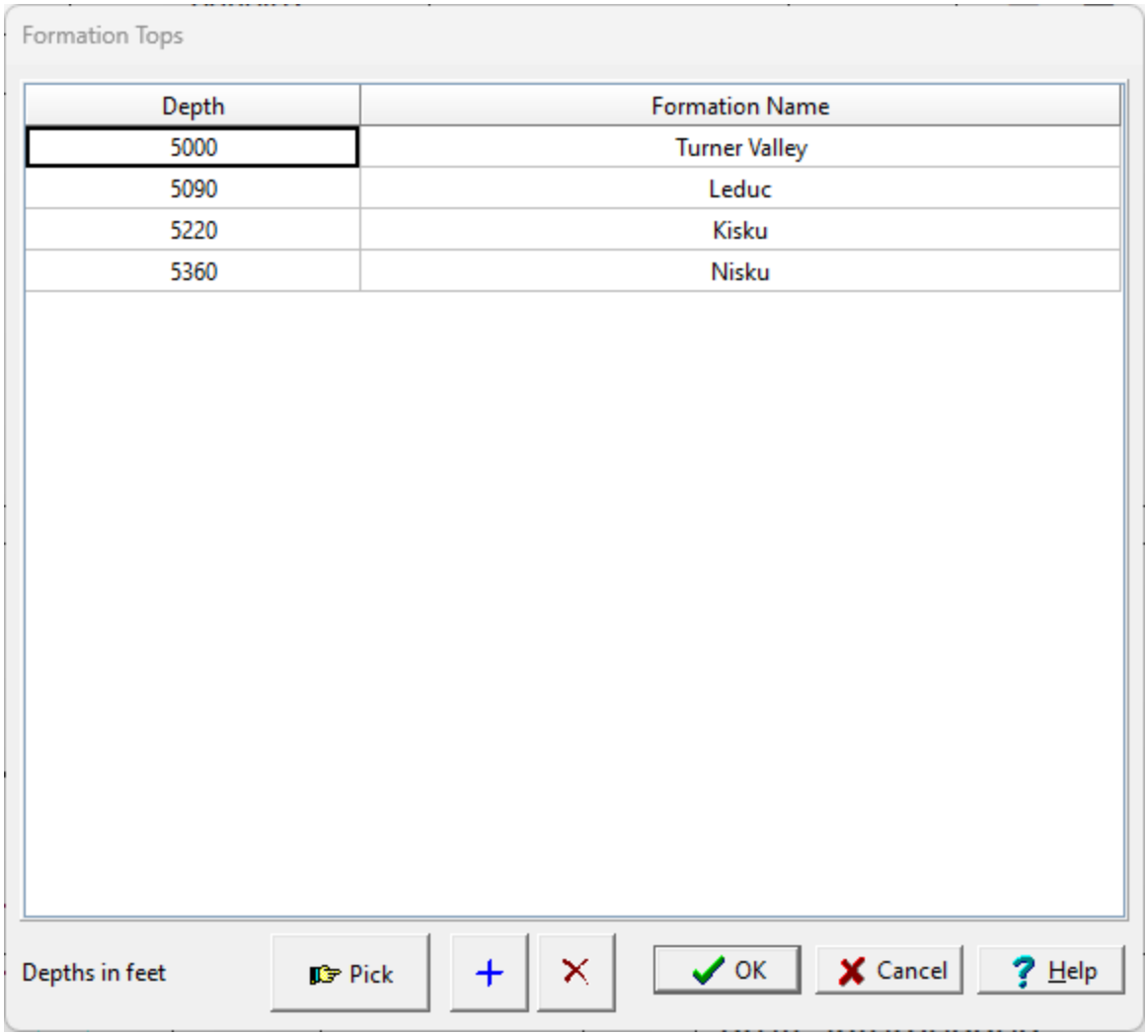
Line Type: This is the line style to be used for the top and bottom boundaries of the text interval. When the line is clicked on the Line Properties form is displayed. This form is used to set the line style, thickness, and color. The line style can be set to none to display no line at the boundary

4.1.4.5.24 Formation Top

This column is used to display the tops of formations at various depths. There are several ways to edit formation top data, either:

- click on the formation top data column on the log
- double click on the formation top data object on the sidebar
- select *Edit > Formation Tops*
- or select *Popup > Formation Tops*

After this the Formation Tops form will be displayed. At the bottom of this form there are buttons to add and delete formation tops.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

Depth: This is the depth to place the top.

Formation Name: This is the name of the formation.

At the bottom of the form there are buttons to Pick, Add and Delete a depth. When the Pick button is pressed you can specify the depth by clicking on the location on the log.

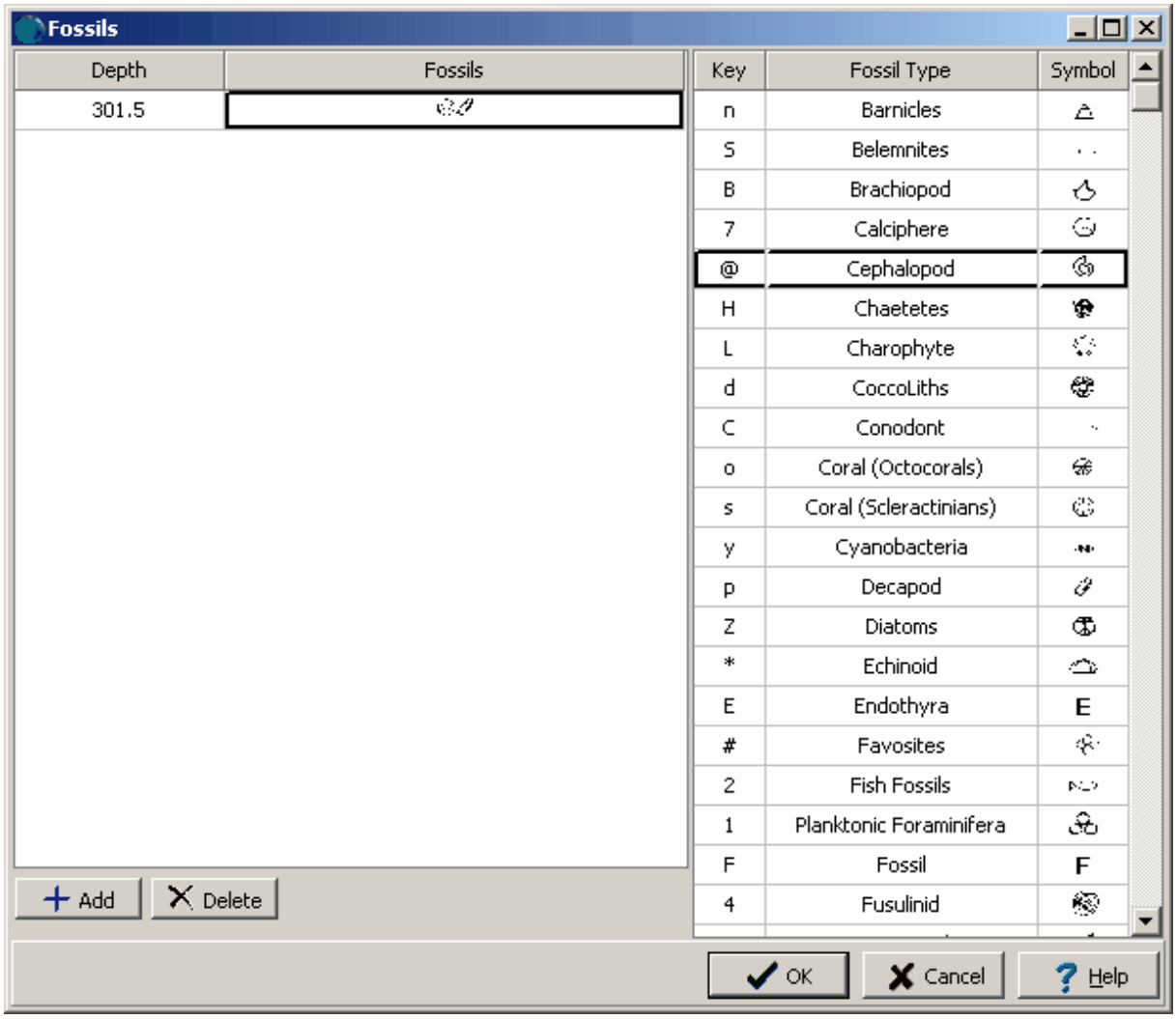
4.1.4.5.25 Fossils Data

This column is used to display fossil data at specified depths. There are several ways to edit fossil data, either:

- click on the fossil data column on the log
- double click on the fossil data object on the sidebar

- select *Edit > Fossils*
- or select *Popup > Fossils*

After this the Fossils form will be displayed. At the bottom of this form there are buttons to add and delete fossil data.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

Depth: This is the depth to place the fossil symbols.

Fossils: These are the fossil symbols to display at this depth. The fossil symbols can be selected from the list on the left by double clicking on them.

4.1.4.5.26 Fracture Data

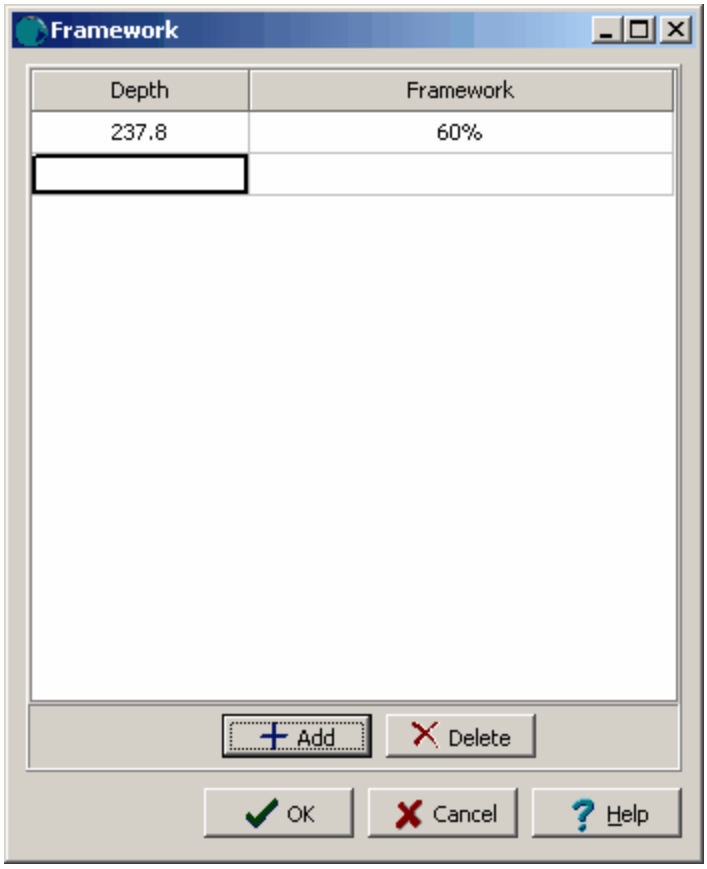
Fracture data is entered the same as text data. The editing of the data is the same as described in Text Data 327.

4.1.4.5.27 Framework Data

This column is used to display the percentage framework at specified depths. There are several ways to edit framework data, either:

- click on the framework data column on the log
- double click on the framework data object on the sidebar
- select *Edit > Framework*
- or select *Popup > Framework*

After this the Framework form will be displayed. At the bottom of this form there are buttons to add and delete measurements.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

Depth: This is the depth of the measurements.

Framework: This is used to select the percentage for the framework.

4.1.4.5.28 Gamma Data

Gamma data are a type of geophysical log and the importation and editing of the data is the same as described in the Geophysical data 272 section.

4.1.4.5.29 Geophysical Data

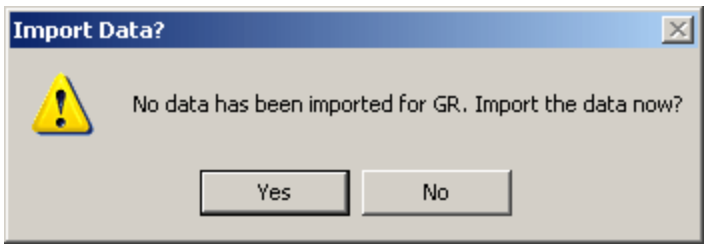
A wide variety of geophysical logs can be displayed as graphs. An unlimited number of geophysical logs can be displayed in a boring/well log, and there is no limit on the number of points each geophysical log can contain. A column can contain either one or multiple geophysical logs. In addition, the geophysical data can be cross-plotted with the lithology.

To display a geophysical log in a log, the file containing the geophysical log must be imported. After the file has been imported, the geophysical data can be displayed and edited. Any editing of the geophysical data will only affect the imported data and will not affect the original data in the geophysical file.

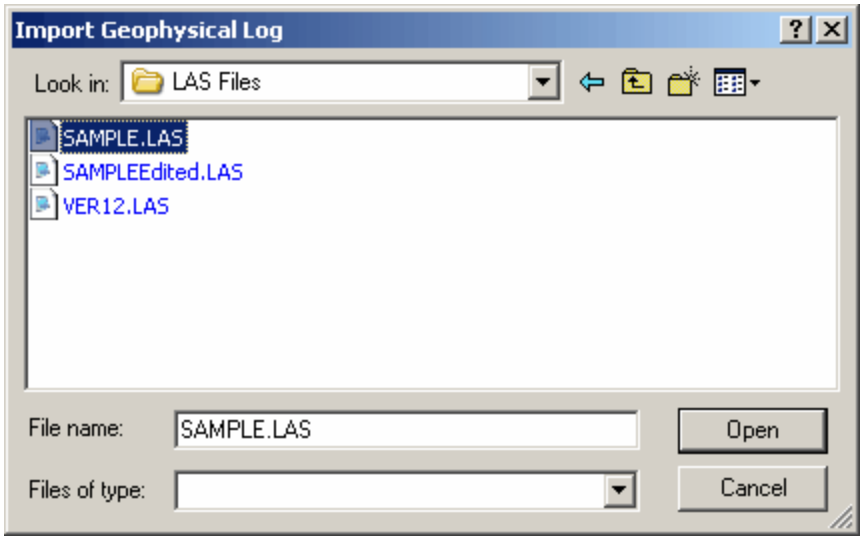
Geophysical data can either be imported into a specific column of a log or just into the log itself. If no geophysical data has previously been imported for the column:

- click on the geophysical column on the log
- double-click on the geophysical object on the sidebar
- select *Edit > Geophysical Data > Geophysical Column Name*
- select *Popup > Geophysical Column Name*

After this the Import Data form will be displayed, asking to confirm the importing of the data into that column. After this the Import Geophysical Log form will be displayed.

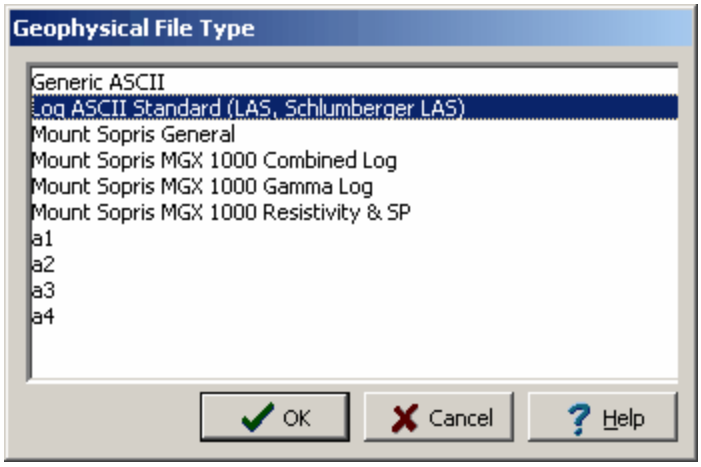


If the data is to be imported into the log and not a specific column, select Edit > Geophysical Data > Import Geophysical Log. The Import Geophysical Log form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

Select the name of the file to import and this form and then press the Open button and the Geophysical File Type form will be displayed.

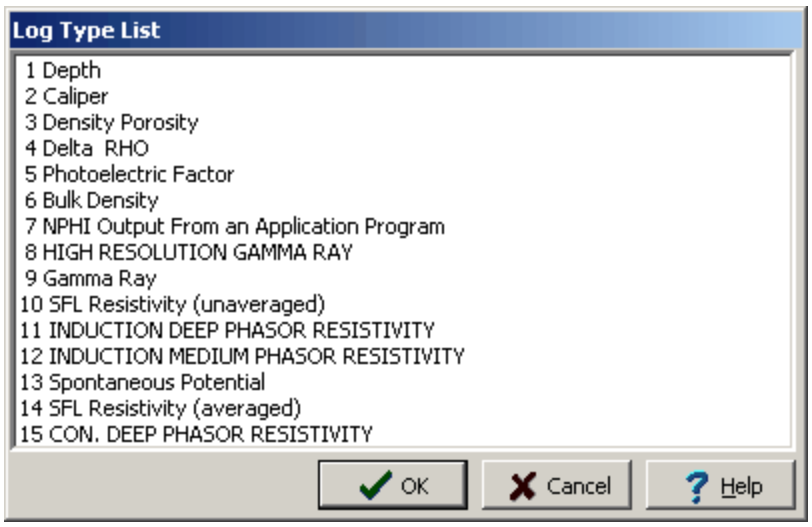


(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

Several types of file formats are shown, if the format of your log is not shown try to use the Generic ASCII format; otherwise, contact GAEA to see if support for that format can be added. Select the format of the geophysical log file and then press the OK button. Depending upon the format of the geophysical file, you will then be prompted to select which curve (gamma ray, resistivity, SP, etc.) in the file to display. Some geophysical file formats support multiple curves in one file.

LAS Format

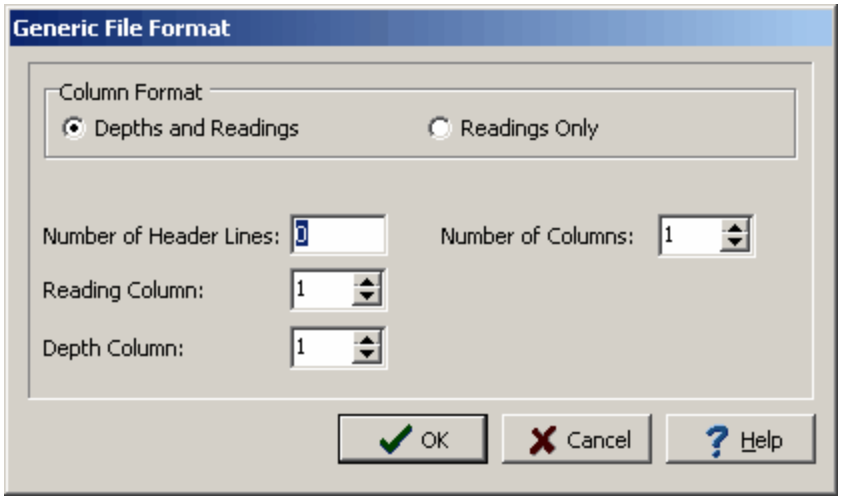
If the file format is LAS the Log Type List form will be displayed. Select the curve to display from the list of available curves in that file.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

ASCII Format

If the file format is Generic ASCII the Generic File Format form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be entered on this form:

Column Format: The file can have either the depths and readings in columns or only the readings in a column. If the column format is “Depths and Readings” the depths of the data points will be extracted from the depth column. If the column format is “Readings Only” the depths of the data points will be calculated using the specified start depth and increment.

Number of Header Lines: This is the number of header lines in the file to skip before reading the data from the columns.

Number of Columns: This is the number of data columns in the file.

Reading Column: This is the number of the column (starting with column 1 at the left side of the file) that has the readings.

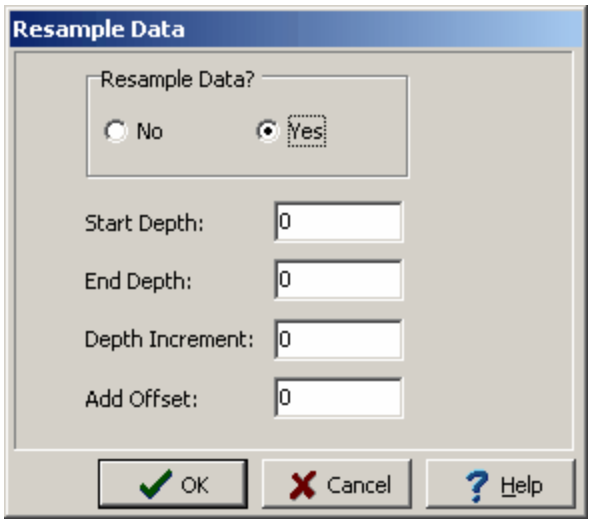
Depth Column: This is the number of the column that has the depths. If the Column Format is "Readings Only", this field will not be displayed.

Start Depth: This is the start depth to use for the readings. If the Column Format is "Depths and Readings", this field will not be displayed.

Depth Interval: This is the depth interval to use between readings. If the Column Format is "Depths and Readings", this field will not be displayed.

Resample Data

In order to save time and memory when displaying geophysical data, the data can be resampled at the time it is imported into the log. After the log type is selected, the Resample Data form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following parameters can be entered on this form:

Resample Data: This is used to select if the data is to be resampled. If No is checked the fields below will not be displayed.

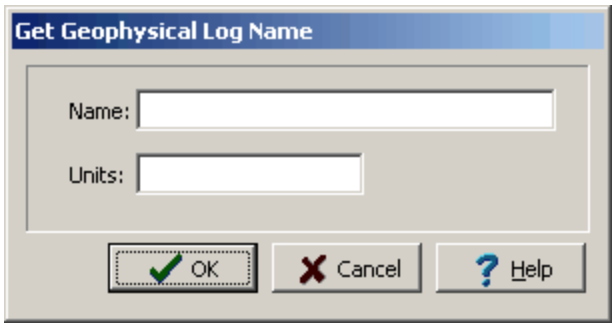
Start Depth: The depth to start importing data, all samples from depths before the Start Depth will be ignored.

End Depth: The depth to stop importing data, all samples from depths after the End Depth will be ignored.

Depth Increment: The increment to use between depths when importing, any samples at depths between increments will be ignored. For example, if the Depth Increment is 1 and the file contains samples at depths 1.1, 1.6, and 2.1. The sample at depth 1.6 will be ignored.

Add Offset: This is an offset depth to be added to the depths in the file. This is used to adjust for instrument height if necessary. If Resample Data is set to No this field will not be displayed.

After the above information has been entered, the geophysical file will be imported. If the data is to be imported into the log and not a specific column the Get Geophysical Log Name form will be displayed. This form is used to specify the name and units of the log.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

After the geophysical log has been imported, the data can be edited by:

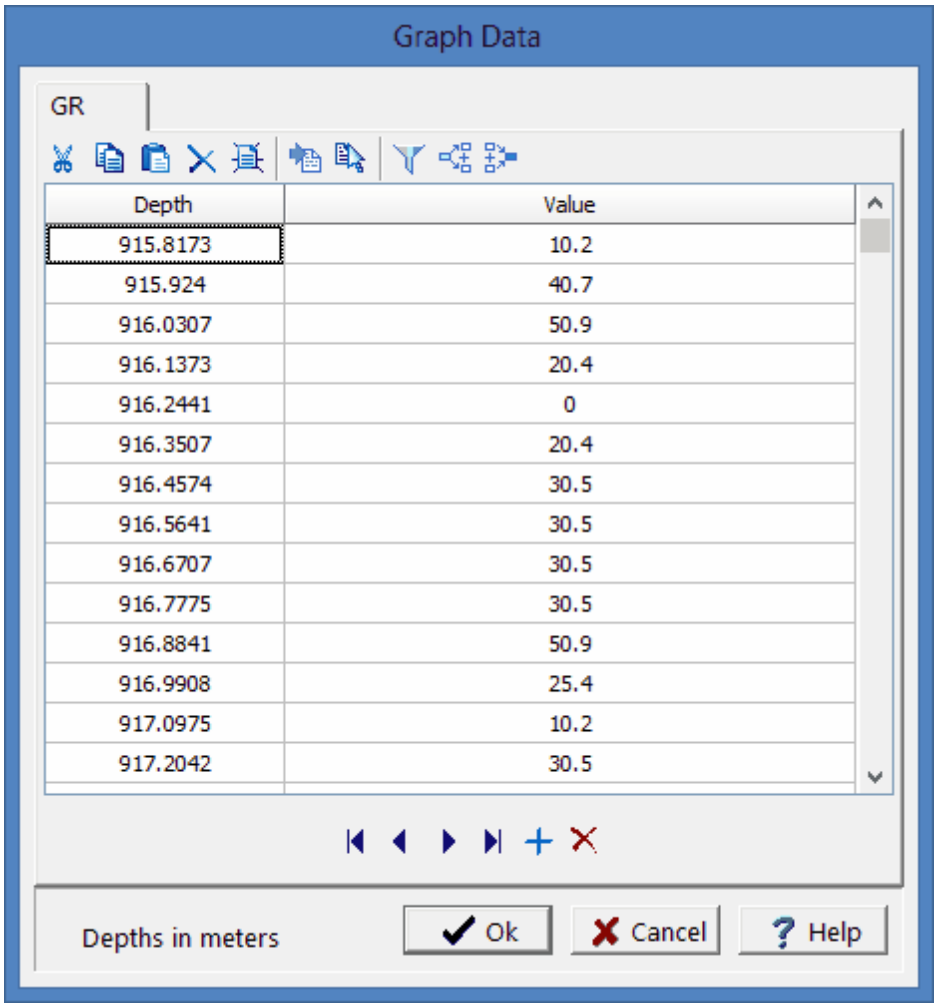
- click on the geophysical column on the log
- double click on the geophysical object on the sidebar
- select *Edit > Geophysical Data > Geophysical Log Name*
- or select *Popup > Geophysical Log Name*

The menu item that will appear in the Edit, Popup, and sidebar will have the name of the column specified in the template for the log. For example, if the template specified the name of the column as "Caliber", the menu items will also be named "Caliber".This is used to distinguish between different geophysical columns within the same template.

After this the geophysical form that is be displayed will depend on whether it is a single or multiple geophysical data column.

Single Geophysical Log

If the column type is single geophysical log, the Graph Data form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be entered and edited using this form:

Depth: This is the depth of the data point in the same units as set in the template.

Value: This is the value of the data point in the same units as set in the template.

The toolbar at the top of the form can be used for the following functions:

Cut: Moves the selected text to the clipboard.

Copy: Copies the selected text to the clipboard.

Paste: Copies the clipboard to the selected cell.

Delete: Deletes the selected text.

Clear: Clears the entire dataset.

Import: Imports a geophysical log for the dataset. 272

Use Existing: Uses an existing dataset for this dataset 278.

Filter: Filters the data 279.

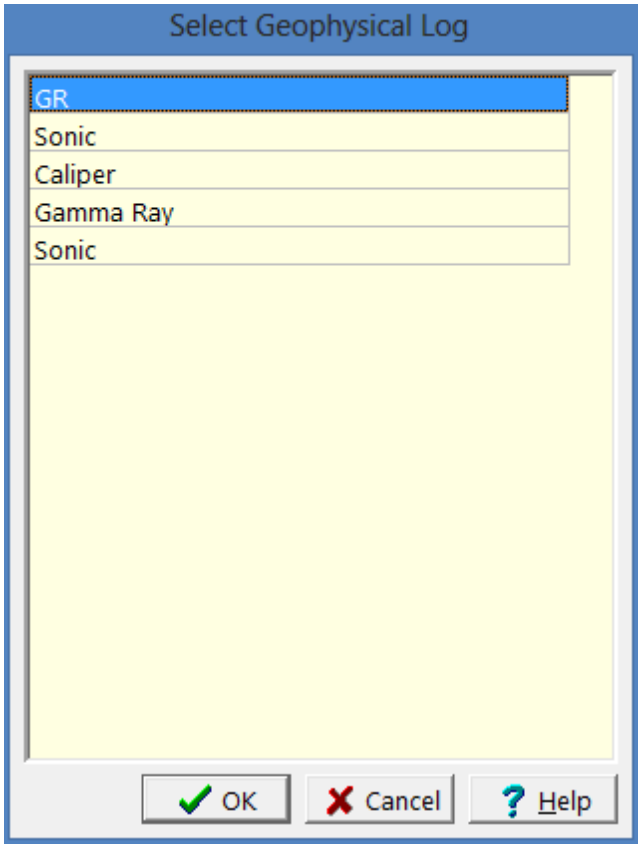
Splice: Splices another dataset into this dataset 279.

Merge: Merges this dataset with another dataset 280.

Multiple Geophysical Log

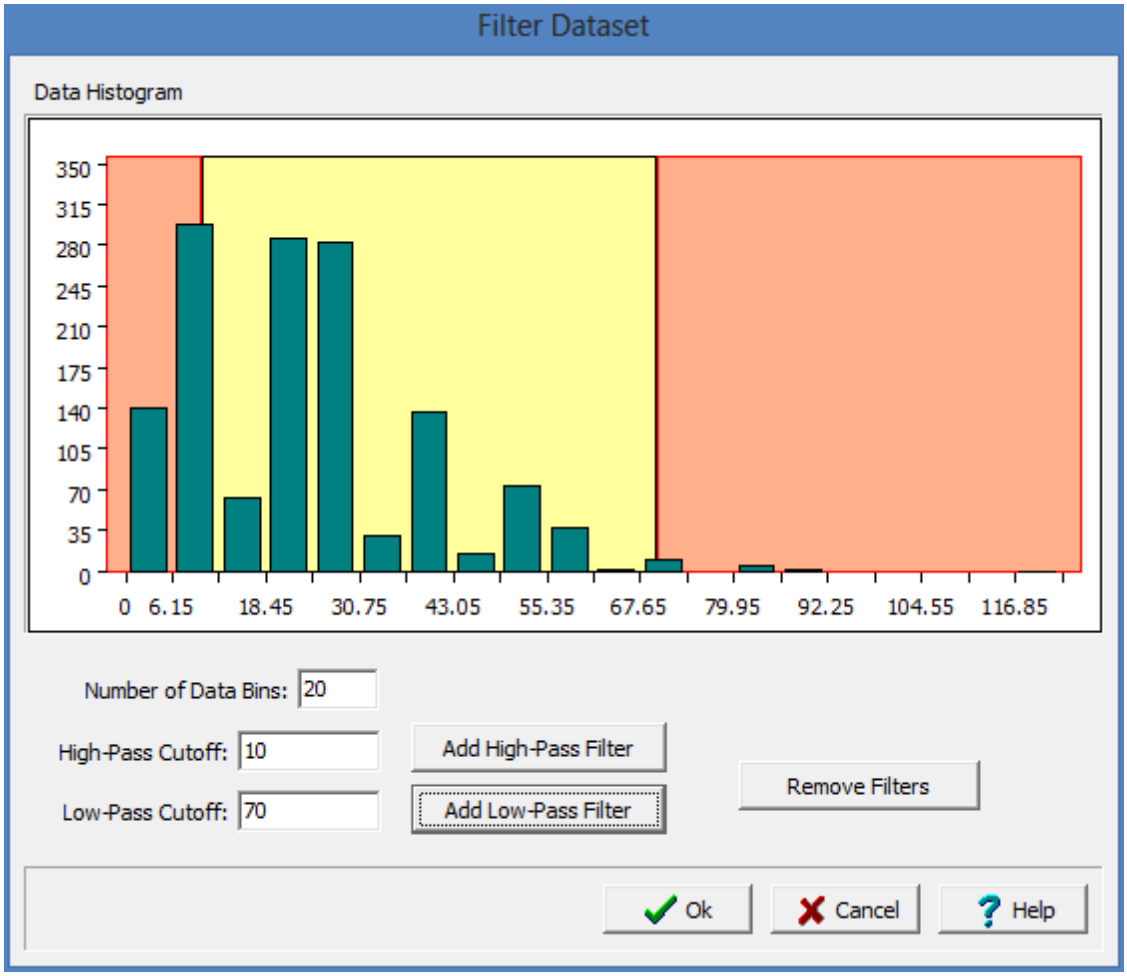
If the type is multiple geophysical logs, the Multiple Graph form will be displayed. This form has tabs for each geophysical log to display in the column. For example, if there are two geophysical logs in the column then there will be two columns. The data entry for the tabs is identical and the same as that for a single geophysical log, the data on the first tab is displayed for the first geophysical log and likewise for the other tabs.

The Use Existing function can be used to select another existing dataset to use for this dataset. It will display a list of datasets that can be selected. Select the dataset to use on the form and then click the Ok button.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

This function is used to filter the dataset using the form below.



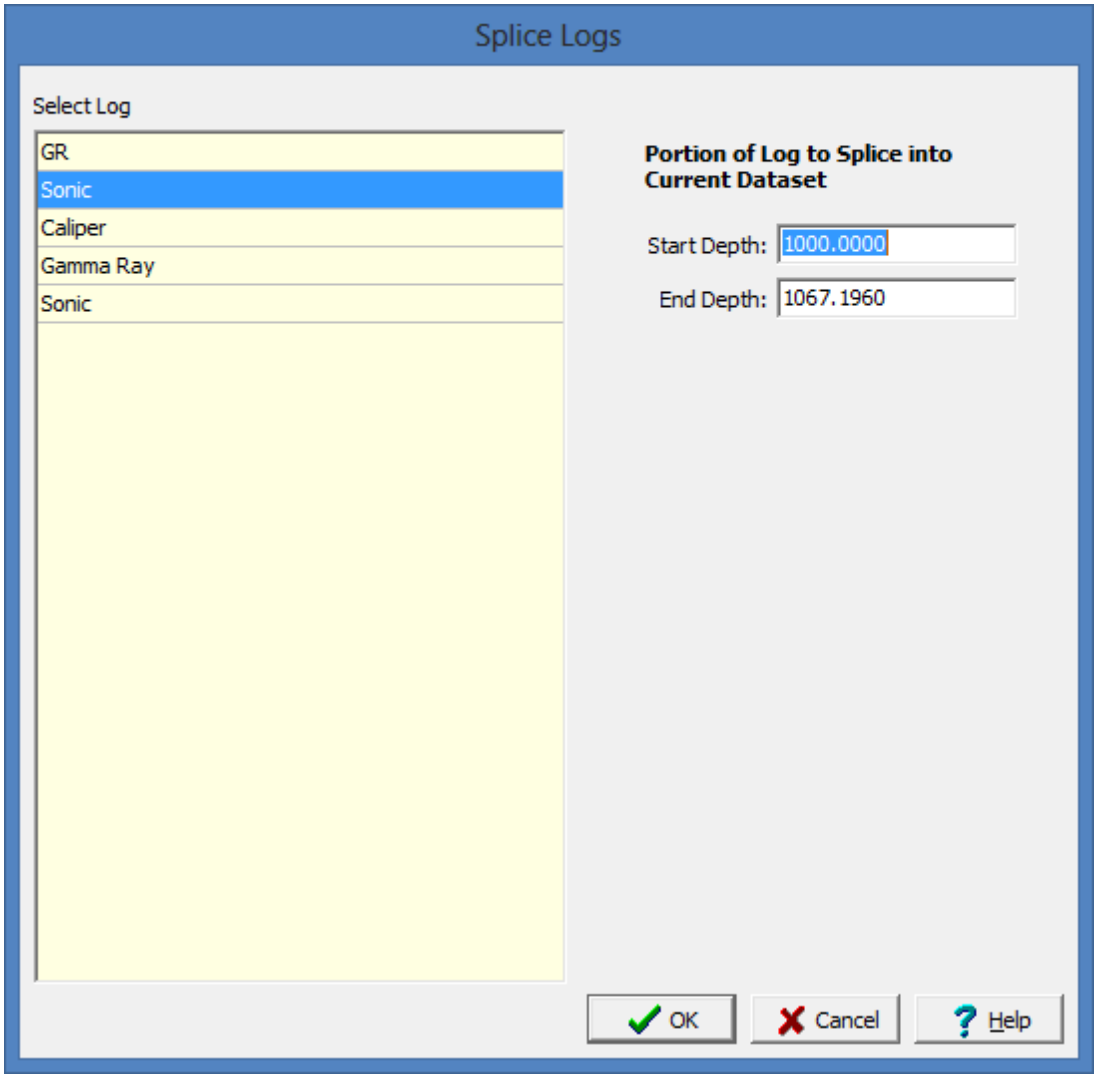
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The data can be filtered using a high-pass filter, low-pass filter or both. A histogram will be displayed for the data grouping it into bins. The horizontal axis shows the data values and the vertical axis is the number of occurrences of that value.

A high-pass filter will remove all data values below the cutoff value. It is represented by the region in red on the left side of the histogram.

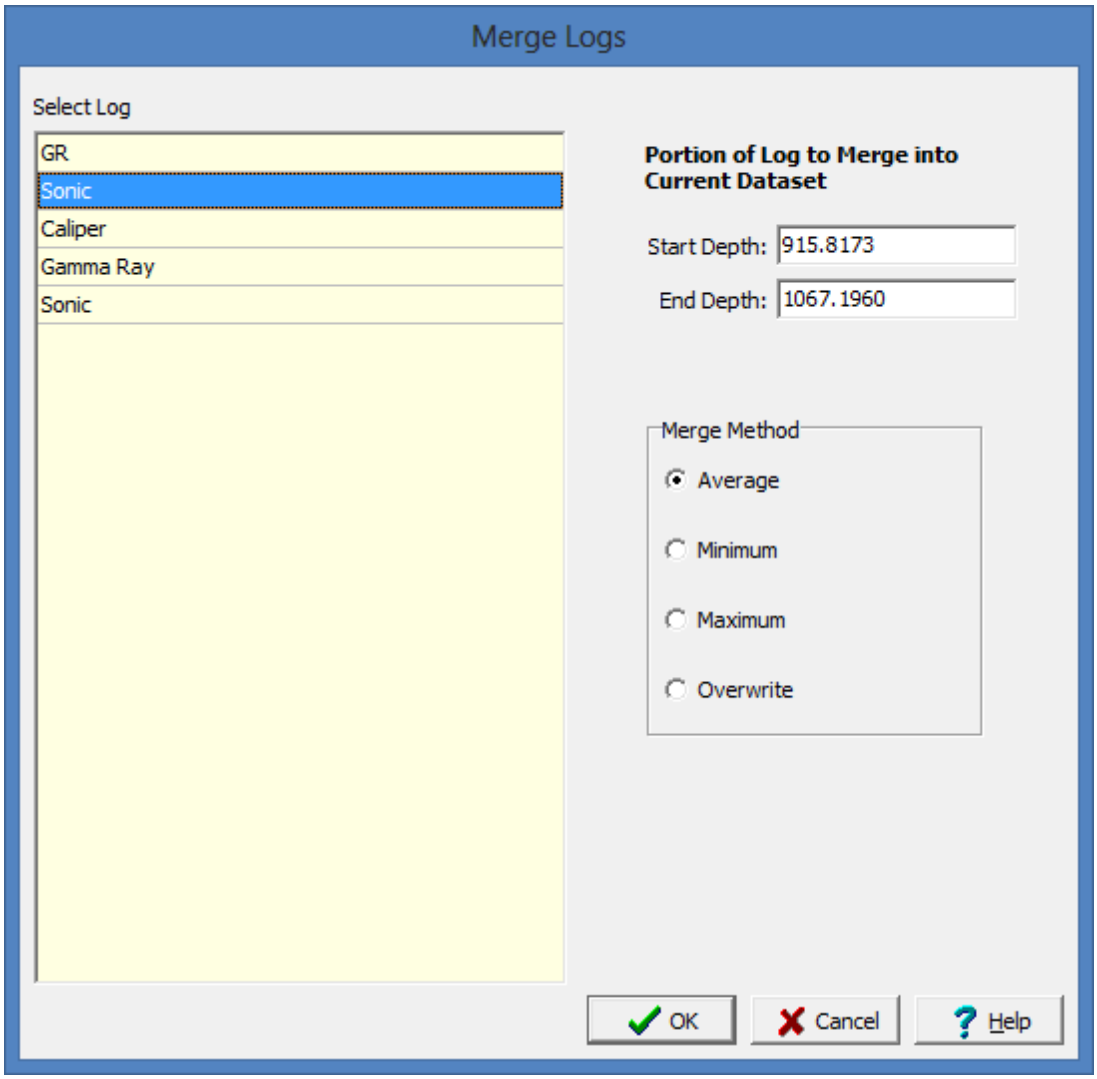
A low-pass filter will remove all data values above the cutoff value. It is represented by the region in red on the right side of the histogram.

This function is used to splice a dataset into the current dataset. The spliced dataset will be added from the start and end depths specified. If the current dataset has a value within the spliced depths it will be deleted.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

This function is used to merge a dataset with the current dataset. The selected dataset will be merged with the current dataset from the specified start and end depths. The merged data value can be either the average of the two values, minimum of the two values, maximum of the two values, or the selected log value can be overwrite the current log value.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

To delete a geophysical log select *Edit > Geophysical Data > Delete Geophysical Log*. The Delete Geophysical Log form will be displayed. Select the geophysical log to be deleted and press the Ok button.

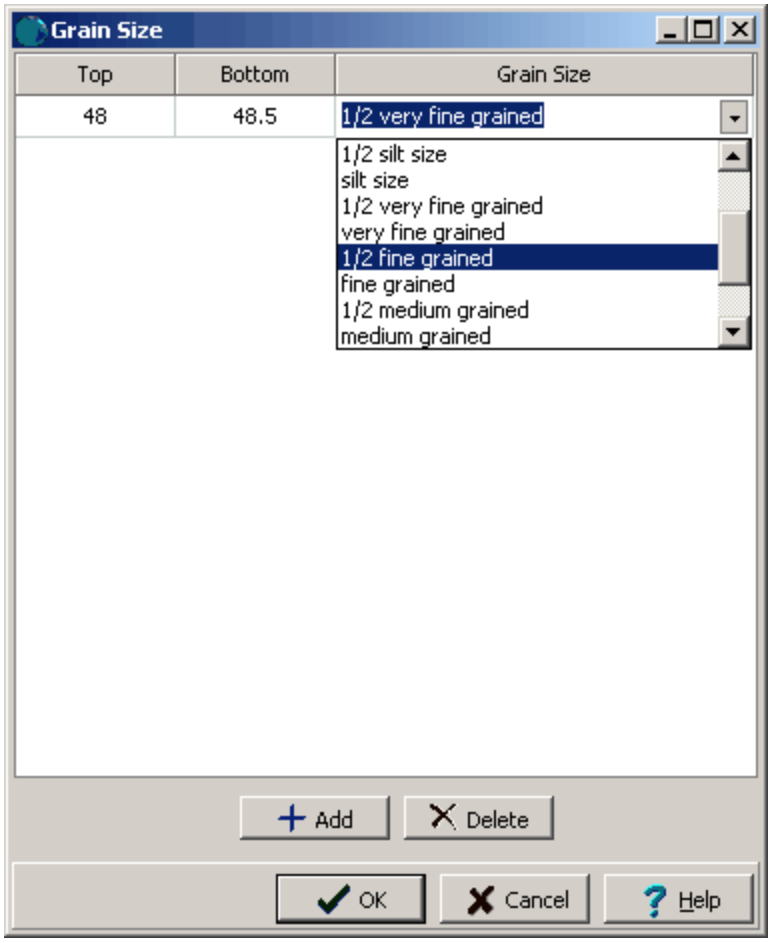
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

4.1.4.5.30 Grain Size Data

This column is used to display the grain size data at specified depths. There are several ways to edit grain size data, either:

- click on the grain size data column on the log
- double click on the grain size data object on the sidebar
- select *Edit > Grain Size*
- or select *Popup > Grain Size*

After this the Grain Size form will be displayed. At the bottom of this form there are buttons to add and delete measurements.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

Top Depth: This is the top depth of the grain size measurement.

Bottom Depth: This is the bottom depth of the grain size measurement.

Grain Size: This is used to select the grain size.

4.1.4.5.31 Graph Data

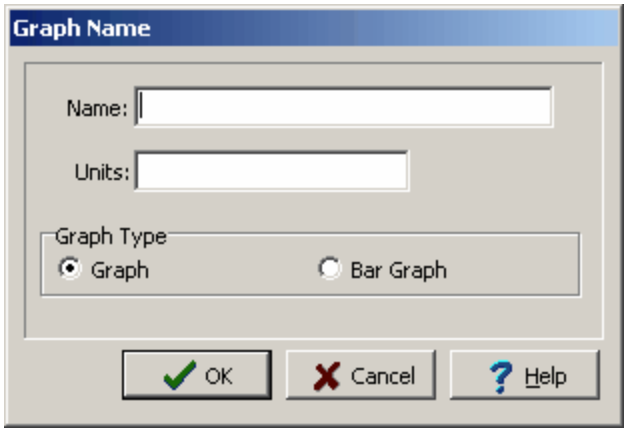
Graph data can be used to display any information that varies with depth; such as shear strength, water content, hydraulic conductivity, contaminant concentrations, volatile hydrocarbon readings, etc. There are several types of graphs that can be used to display data:

- single graphs
- multiple graphs
- bar graphs (histograms)
- graph cross-plots
- bar graph cross-plots

The type of graph and its display format are set in the template. When a new log is created, graphs will be automatically created for whatever graph columns are specified in the template. The names of these

graphs will appear in the Graph Data submenu of the Edit menu and also the Popup menu. It is also possible to create additional graphs or delete graphs as described in the sections below.

To add a new graph to a log select *Edit > Graph Data > Add Graph Data*. The Graph Name form will then be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

To add a new graph specify a unique name, the units, and whether it is a graph or bargraph. The graph will not be displayed on the log unless the template contains a graph column with the same name.

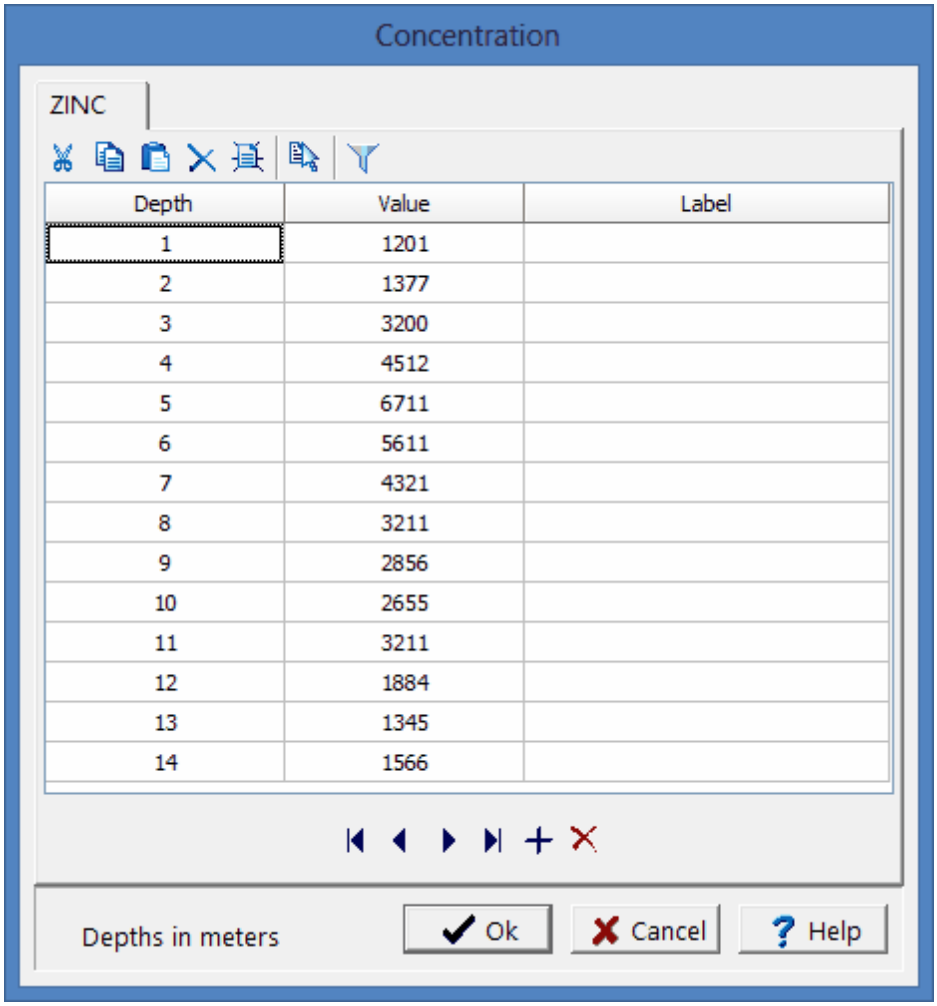
There are several ways to edit a graph, either:

- click on the graph column on the log
- double click on the graph object on the sidebar
- select *Edit > Graph Data > Graph Name*
- or select *Popup > Graph Name*

The menu item that will appear in the Edit, Popup, and sidebar will have the name of the column specified in the template for the log. For example, if the template specified the name of the column as "Shear Strength", the menu items will also be named "Shear Strength".This is used to distinguish between different graph columns within the same template.

After this the graph form that is be displayed will depend on the type of graph as described in the sections below.

If the graph type is single, the Graph form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be entered and edited using this form:

Depth: This is the depth of the data point in the same units as set in the template.

Value: This is the value of the data point in the same units as set in the template. If the graph uses a text scale, the text value can be selected from a drop down list of values.

Label: This is an optional label to display beside the data point. The display of the labels is specified in the template.

The toolbar at the top of the form can be used for the following functions:

Cut: Moves the selected text to the clipboard.

Copy: Copies the selected text to the clipboard.

Paste: Copies the clipboard to the selected cell.

Delete: Deletes the selected text.

Clear: Clears the entire dataset.

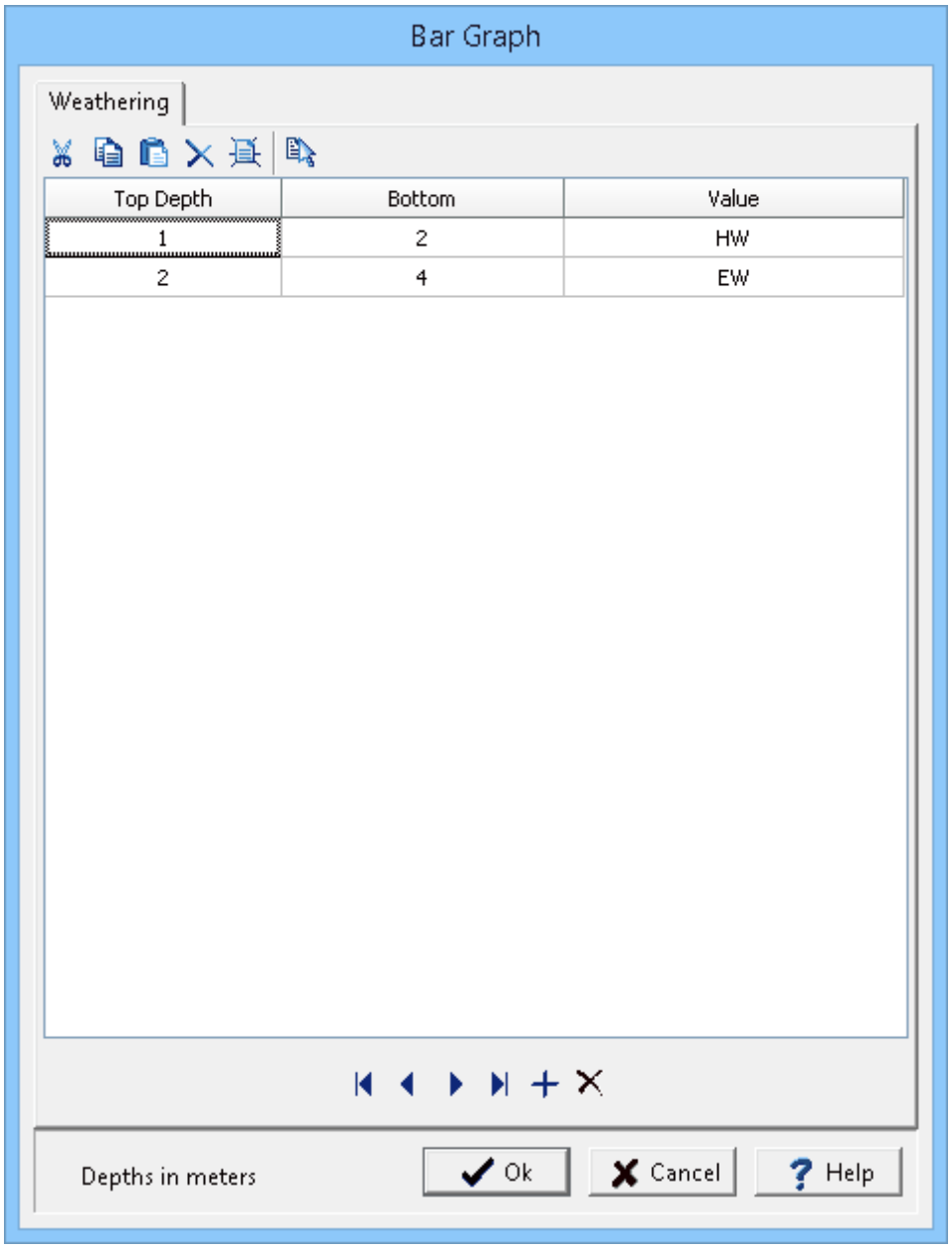
Import: Imports a geophysical log for the dataset. 272

Use Existing: Uses an existing dataset for this dataset 278.

Filter: Filters the data 279.

If the type is multiple graph, the Multiple Graph form will be displayed. This Graph form has tabs for each graph to display in the column. For example, if there are two graphs in the column then there will be two columns. The data entry for the tabs is identical to that for a single graph, the data on the first tab is displayed for the first graph and likewise for the other tabs.

If the graph type is bargraph, the Bar Graph form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be entered and edited using this form:

Top Depth: This is the top depth of the data point in the same units as set in the template.

Bottom Depth: This is the bottom depth of the data point in the same units as set in the template.

Value: This is the value of the data point in the same units as set in the template. If the graph uses a text scale, the text value can be selected from a drop down list of values.

The toolbar at the top of the form can be used for the following functions:

Cut: Moves the selected text to the clipboard.

Copy: Copies the selected text to the clipboard.

Paste: Copies the clipboard to the selected cell.

Delete: Deletes the selected text.

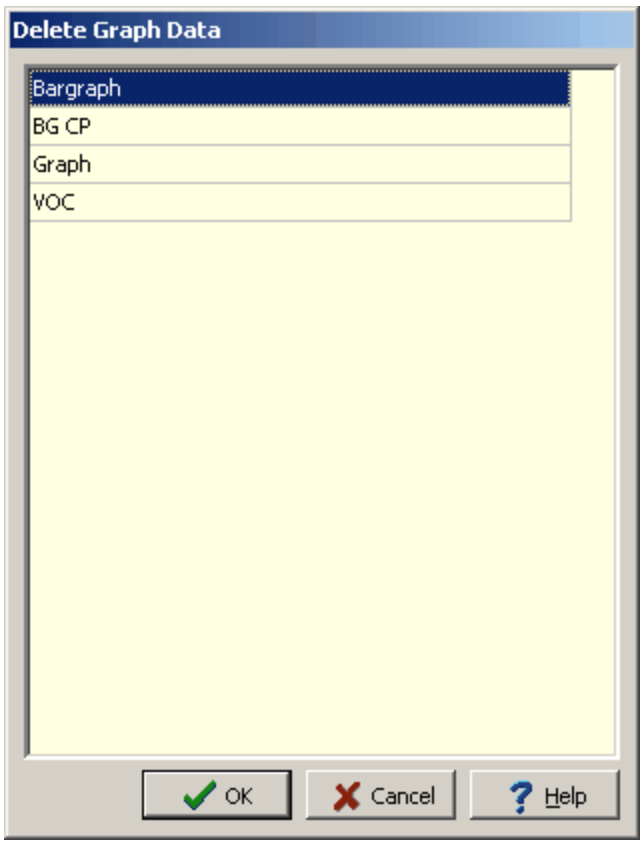
Clear: Clears the entire dataset.

Use Existing: Uses an existing dataset for this dataset 278.

Graph and bargraph cross-plots are used to show the relationship between lithology and a depth dependent variable (for example, porosity, lead content, resistivity). A graph or bargraph can represent the depth dependent variable. The cross-plot is generated by filling the region on the left side of the curve formed by the graph or bar graph with the lithology symbols for each layer.

Other then setting the column type in the template to a graph or bargraph cross-plot, the editing of data for cross-plots is identical to that of graphs and bargraphs.

To delete a graph from a log select *Edit > Graph Data > Delete Graph*. The Delete Graph Data form will be displayed. Select the graph to be deleted and press the Ok button.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

4.1.4.5.32 H2O Injection Data

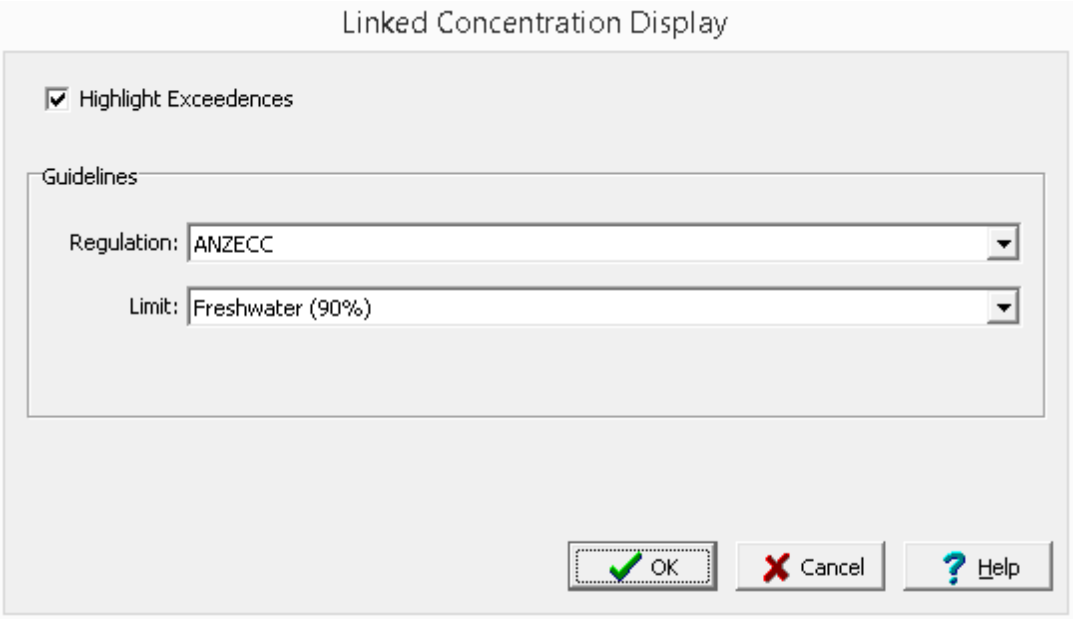
H2O Injection data can be entered either as text, text interval, or graph data depending on the settings in the template. Depending on how the column is displayed the editing of the data is the same as described in Text Data 327, Text Interval Data 333, or Graph Data 283.

4.1.4.5.33 Lab Bitumen Data

Lab bitumen data can be entered either as text, text interval, or graph data depending on the settings in the template. Depending on how the column is displayed the editing of the data is the same as described in Text Data 327, Text Interval Data 333, or Graph Data 283.

4.1.4.5.34 Linked Concentration

Linked concentration data is linked to lab analyses entered in the EDMS module.The data in the EDMS module will be automatically shown in the column for the parameter selected in the template. The concentrations shown in this column can be highlighted based on exceedences of the selected regulation and limit. To select the regulation and limit, click on the column.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be specified on this form:

Highlight Exceedences: Check this box to change the color of the exceedence symbols. The highlight color is selected in Preferences.

Regulation: This is used to select the regulation to use for highlighting exceedences.

Limit: This is used to select the limit of the regulation to use for exceedences.

4.1.4.5.35 Linked Interval Text

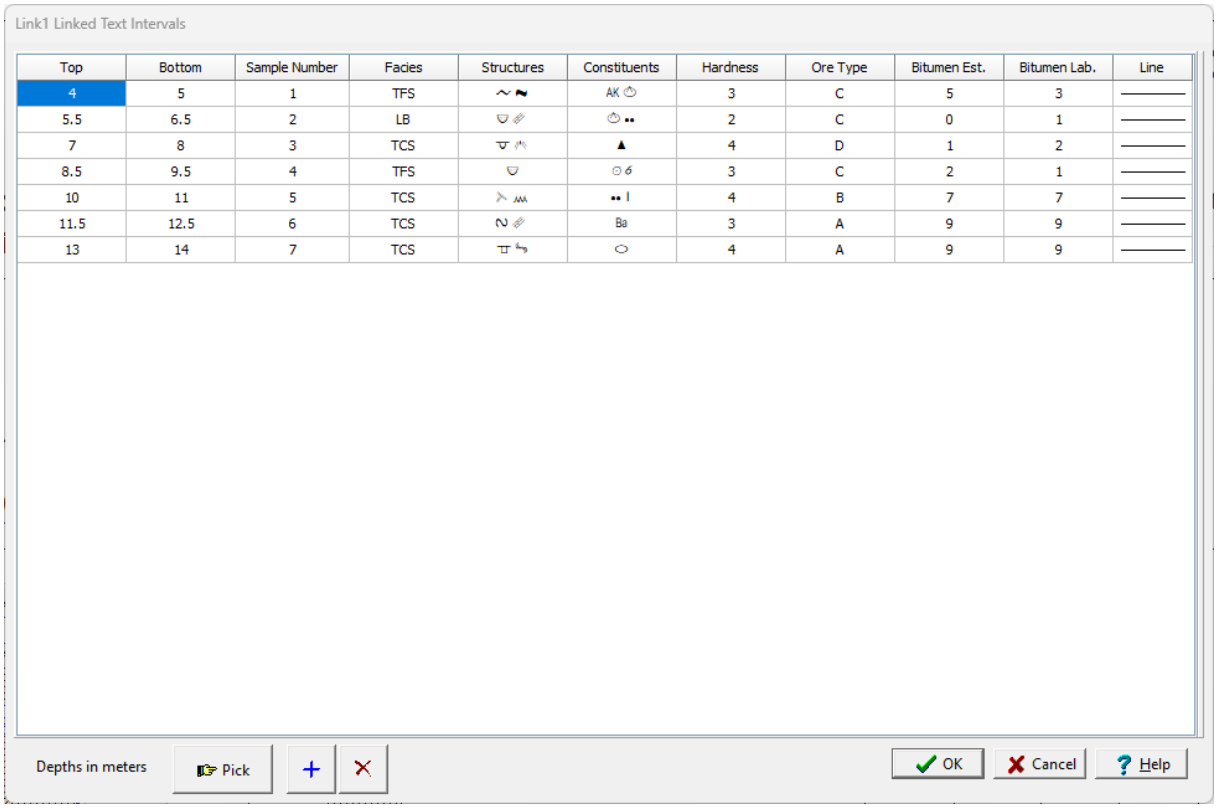
Columns displayed as interval text or custom list interval text can be linked to other interval text display columns so that the depths for the data only have to entered once. The Link Name in the Template column is used to link interval text columns.

There are several ways to edit linked interval text data, either:

- click on the interval text data column on the log
- double click on the interval text data object on the sidebar
- select *Edit > Interval Text Data Name*
- or select *Popup > Interval Text Data Name*

The menu item that will appear in the Edit, Popup, and sidebar will have the name of the column specified in the template for the log. For example, if the template specified the name of the column as "Remarks", the menu items will also be named "Remarks".This is used to distinguish between different interval text data columns within the same template.

After this the Linked Text Intervals form will be displayed. This form has columns for the top and bottom depths, and for each linked interval text column.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Top: This is the top depth for the text interval in the same units as set in the template.

Bottom: This is the bottom depth for the text interval in the same units as set in the template.

Text: This is the text to display for each linked interval text column. The default alignment of the text is set in the template. The name of this column will be the name of the data column in the template. If the text column is a custom list, when this column is selected a drop down list showing the symbols and description in the custom list is displayed. The text can be selected from this list.

At the bottom of this form there are buttons to Pick, Add and Delete text intervals.When the Pick button is pressed you can specify the bottom depth of the interval by clicking on the location on the log.

4.1.4.5.36 Linked Text

Columns displayed as text can be linked to other text display columns so that the depths for the data only have to entered once. The Link Name in the Template column is used to link text columns.

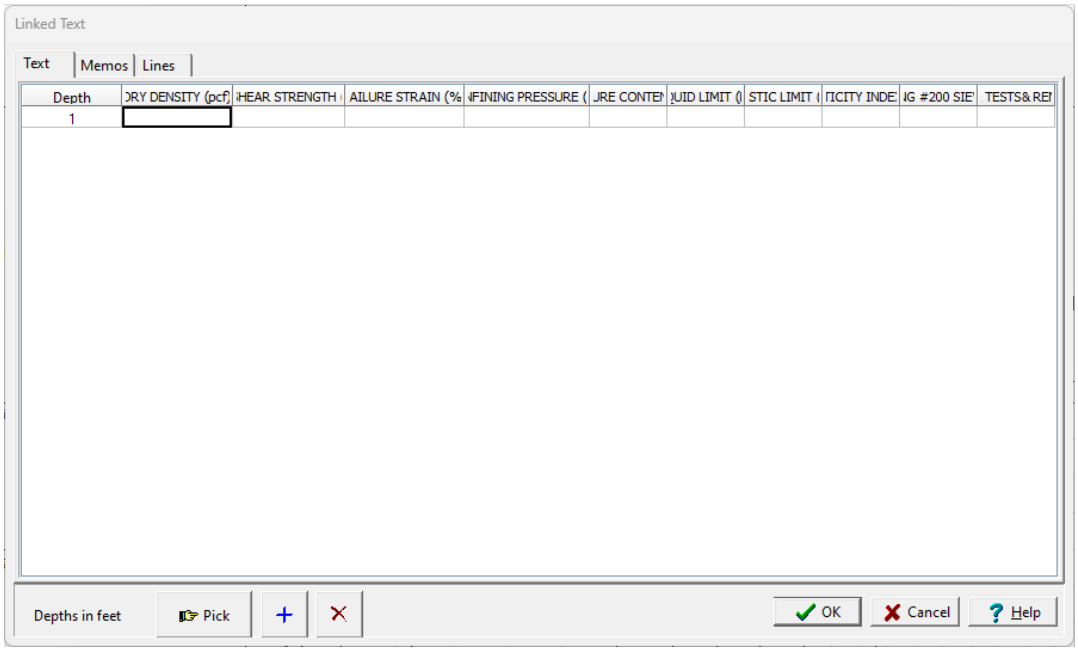
There are several ways to edit linked text data, either:

- click on the text data column on the log
- double click on the text data object on the sidebar
- select *Edit > Text Data Name*

- or select *Popup > Text Data Name*

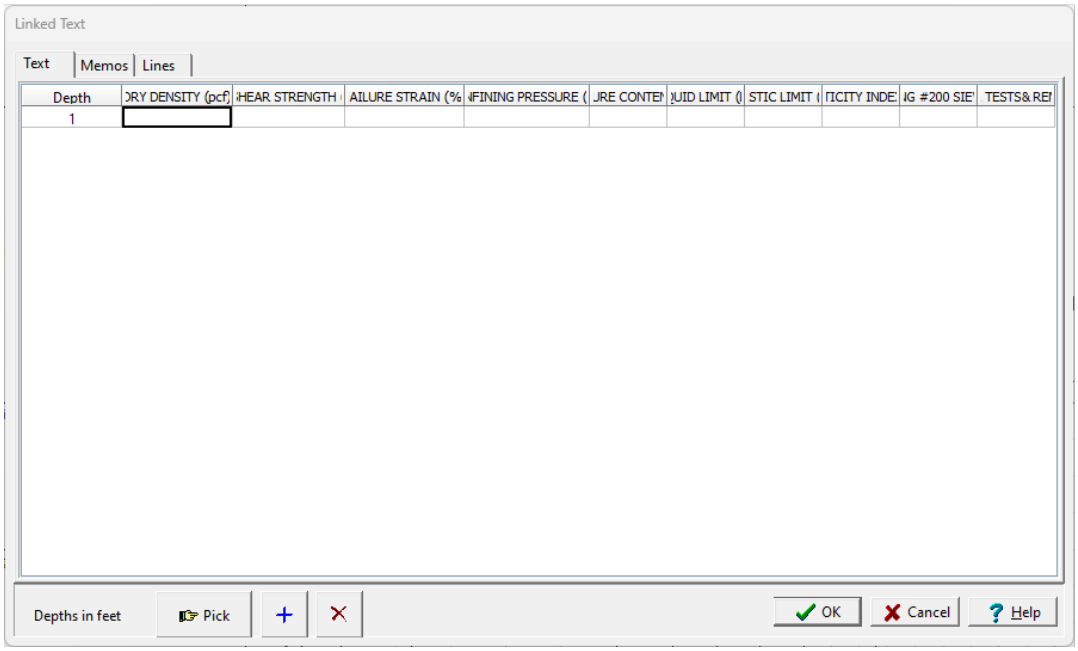
The menu item that will appear in the Edit, Popup, and sidebar will have the name of the column specified in the template for the log. For example, if the template specified the name of the column as "Remarks", the menu items will also be named "Remarks".This is used to distinguish between different text data columns within the same template.

After this the Linked Text form will be displayed. This form has three tabs; one for the text data, one for memo data, and one for line data.



At the bottom of the form there are buttons to Pick, Add and Delete a depth. When the Pick button is pressed you can specify the depth by clicking on the location on the log.

This tab has columns for the depth and for each linked text column.



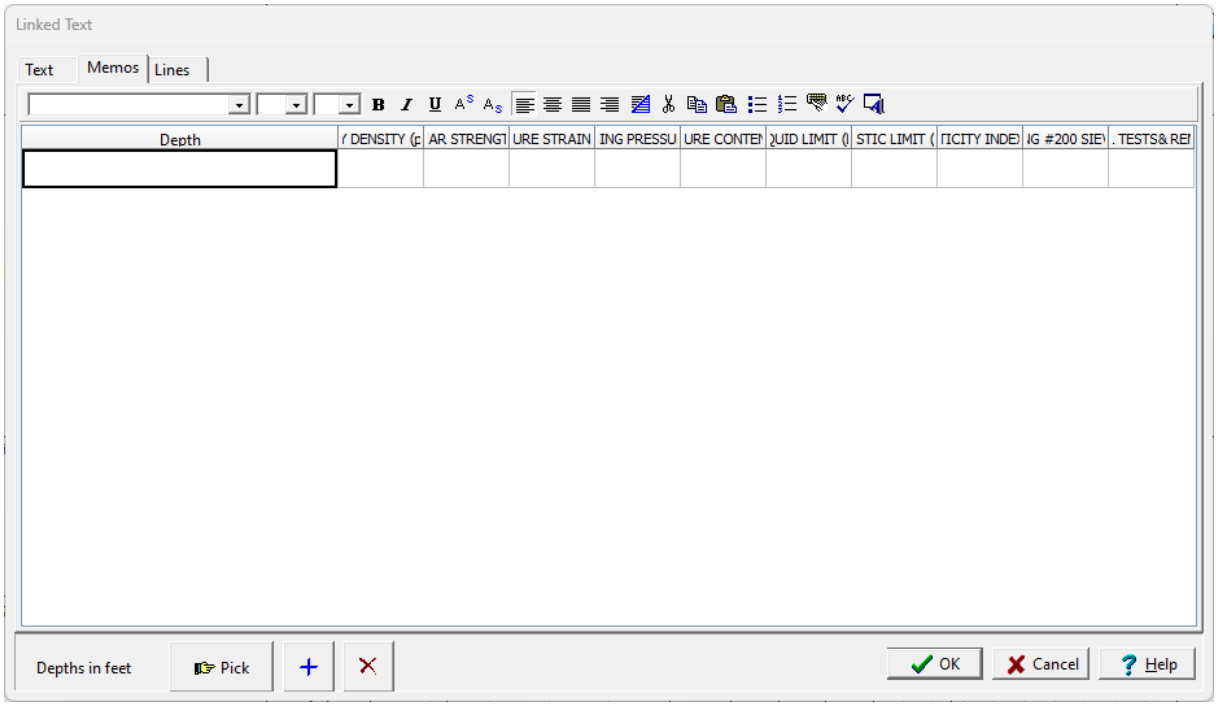
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited using the Text tab:

Depth: This is the depth to display the text in the same units as set in the template.

Text: This is the text to display for each linked text column. The default alignment of the text is set in the template.

This tab has columns for the depth and for each linked text column.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited using the Memos tab:

Depth: This is the depth to display the memo in the same units as set in the template.

Memo: This is the text to display for each column. There is no limit to the length of the text. At the top of the tab there is a Rich Text toolbar that is used to format the text, add symbols, and perform spell checking on the text. The use of the Rich Text toolbar is described below.

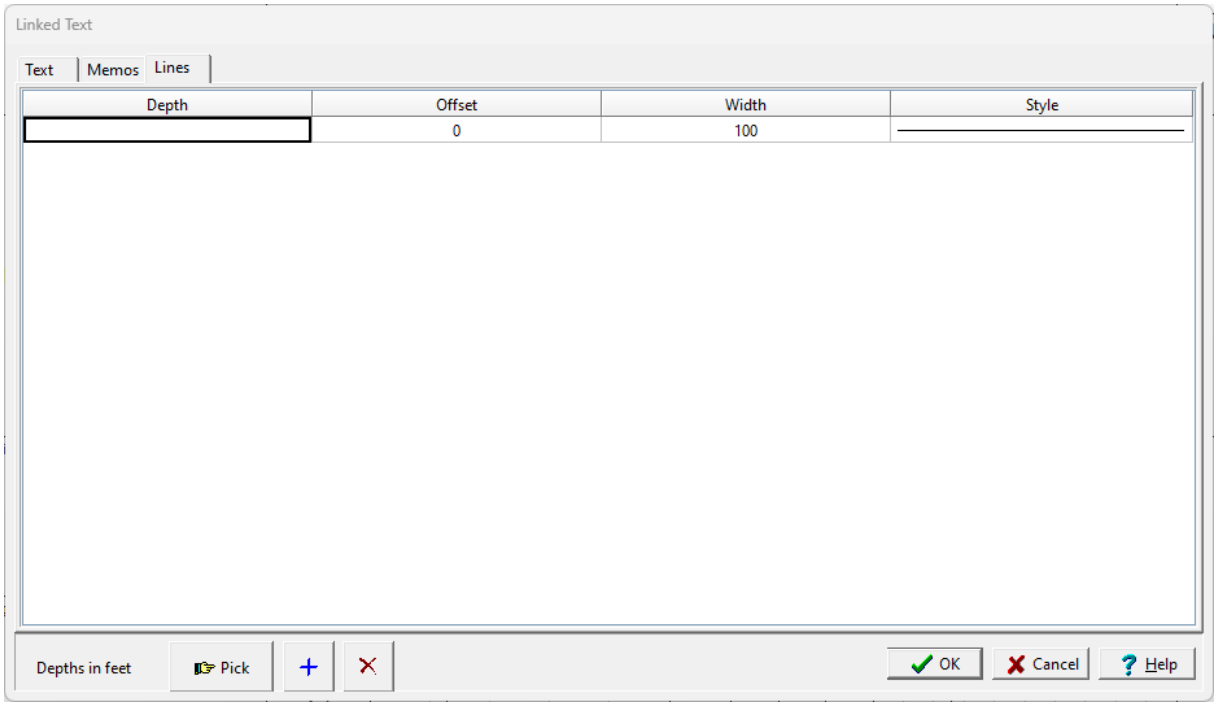
At the top of the Memos tab is the Rich Text toolbar, this toolbar can be used to modify the font characteristics, add symbols, and spell check the text. Before selecting a speed button, the text to be modified should be selected with the mouse or the cursor should be placed at the desired insertion point.

The speed buttons of the toolbar perform the following functions:

- The **Font Typeface** box is used to select the name of the font to use for the selected text.
- The **Font Size** box is used to set the size of the font for the selected text.
- The **Font Color** box is used to select the color of the font for the selected text.
- The **Bold** button is used to toggle the bold attribute of the selected text on and off.
- The **Italics** button is used to toggle the italic attribute of the selected text on and off.
- The **Underline** button is used to toggle the underline attribute of the selected text on and off.
- The **Superscript** button is used to toggle the superscript attribute of the selected text on and off.
- The **Subscript** button is used to toggle the subscript attribute of the selected text on and off.
- The **Left Justify** button will left justify the selected text.
- The **Center Justify** button will center justify the selected text.
- The **Right Justify** button will right justify the selected text.
- The **Select All** button will select all of the text in the memo field.
- The **Cut** button will remove the selected text and place it in the clipboard.
- The **Copy** button will copy the selected text to the clipboard.

- The **Paste** button will paste the text in the clipboard, at the current position of the cursor in the memo field.
- The **Find** button will find the specified text in the memo field.
- The **Replace** button will replace the specified text in the memo field.
- The **Symbol** button will display the Symbol form. This form is used to place a symbol at the current cursor position in the memo field. To select a symbol use the Font box to select the font containing the symbol and then select the desired symbol. After the desired symbol has been selected, press the Ok button to insert it into the memo field. The WinLoG program comes with a font called “GAEA Symbols” that contains a variety of well and other symbols.
- The **Spell Check** button will display the Spell Checker form and will check the spelling in the memo field. The dictionary used to check the spelling is set in the program Preferences (see). When the Add button is pressed the word will be appended to the custom dictionary.

This tab has columns for the lines to use for the linked columns. The lines will be the same for all linked columns.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited using the Lines tab:

Depth: This is the depth to display the line in the same units as set in the template.

Offset: This is the percentage offset from the left side of the column to start to draw the line. For example, an offset of zero will start the line on the left side of the column and an offset of 50 will start the line in the center of the column.

Width: This is the width of the line, expressed as a percentage of the column width. For example, a width of 50 would draw a line halfway across the column width and a width of 100 would draw a line across the column. The width and offset should be less than or equal to 100.

Style: This is the style of the line. When this column is selected, a button will be displayed for the line type. After this button is pressed, the Line Properties form is displayed. This form is used to set the line style, thickness, and color.

4.1.4.5.37 Liquid Limit Data

The liquid limit data is entered with the water content data and is described in the Water Content Data 338 section.

4.1.4.5.38 Lithology

Lithologic layers are used to indicate the subsurface strata encountered during drilling. Boring/Wells can contain an unlimited number of lithologic layers. A lithologic layer primarily consists of:

- an optional title (up to 255 characters),
- description (no limit on the number of characters),
- a top depth,
- an optional bottom depth, and
- the symbol to use for the layer.

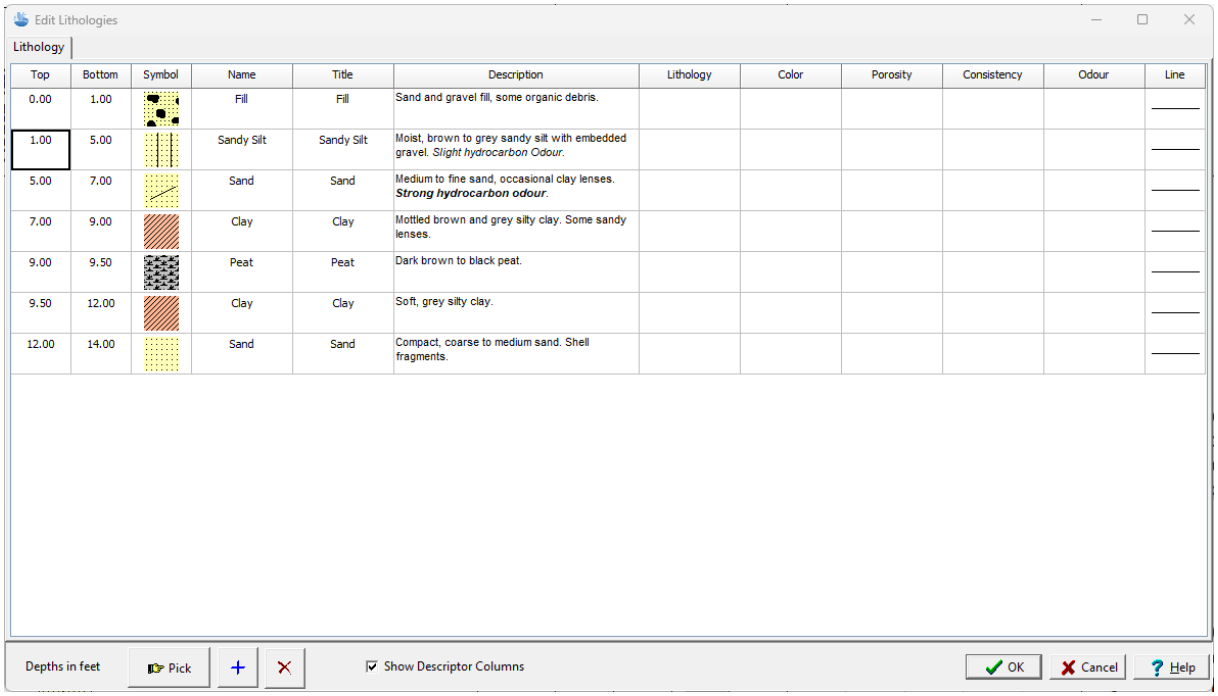
The bottom depth of the lithologic layer can either be specified or the top depth of the next lithologic layer is used.

The lithologic descriptions are usually displayed in a Description column and the lithologic symbols are usually displayed in a Symbol column.

There are several ways to edit lithology data, either:

- click on the lithology description or symbol column on the log
- double click on the Symbol or Description object on the sidebar
- select *Edit > Lithology*
- or select *Popup > Lithology*

After this the Edit Lithologies form below will be displayed. The data columns to be displayed can be changed by right clicking on the first header row. A popup menu will be displayed showing all of the columns that can be displayed. Check the box next to the columns to display in the list.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Top: This is the top depth of the layer and should be between the start and end depths of the log.

Bottom: The bottom depth of the layer is optional. If it is not specified or is less than the top depth, the top depth of the next layer is used.

Symbol: This is the symbol used for the layer in the Lithology Symbol column. The symbol can be changed by clicking on it with the left or right mouse buttons. For more information see the section on Changing the Lithologic Symbol 300 below.

Name: This is the strata name for the layer selected from the list of lithologic macros. It is used to quickly fill in the symbol, title, and description of the layer using the information specified in the lithology macro. It is also used in the Cross-Section module to quickly and accurately automatically generate strata for the cross-section. If the template for the log specifies the Title Edit mode as “Text” for the lithology description column, the Name column will not appear on this form. For more information see the section on Selecting Strata Names 302 below.

Title: The optional name of the layer displayed above the description.

Description: The description is used to describe the lithology of the layer. At the right of the form there is a Rich Text toolbar that is used to format the description, add symbols, insert lithology macros, and perform spell checking on the description. The use of the Rich Text toolbar is described section below on Specifying the Lithology Description 298.

Lithology: This is used to select the lithology descriptor of the layer from a predefined list. This descriptor can be shown on the log depending on the settings for this column in the template.

Color: This can be used to select the color descriptor of the layer from a predefined list of soil colors or a Munsell color. The type of color to be selected and how it is displayed is specified in Preferences.This descriptor can be shown on the log depending on the settings for this column in the template.

Porosity: This is used to select the porosity descriptor of the layer from a predefined list. This descriptor can be shown on the log depending on the settings for this column in the template.

Consistency: This is used to select the consistency descriptor of the layer from a predefined list. This descriptor can be shown on the log depending on the settings for this column in the template.

Odour: This is used to select the odour descriptor of the layer from a predefined list. This descriptor can be shown on the log depending on the settings for this column in the template.

Custom List Data: Custom list data can be entered for each layer using the Lithologic Custom column in the template. The name of this column will be the name of the data column in the template. When this column is selected a drop down list showing the symbols and description in the custom list is displayed. The text can be selected from this list. Up to 5 custom list columns can be added for a layer.

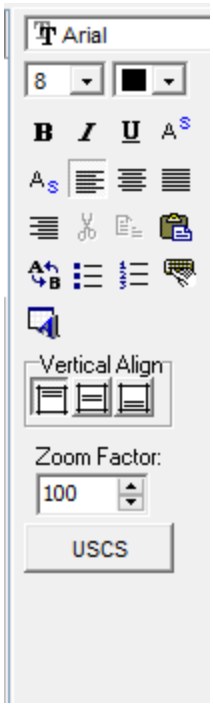
Top Line Style: This is the line style to be used for the top layer boundary. If the bottom depth is specified this line style is also used for the bottom boundary. When the line is clicked on the Line Properties form is displayed. This form is used to set the line style, thickness, and color. The line style can be set to none to display no line at the boundary.

Show Descriptor Columns: Check this to show the descriptor columns for lithology, color, porosity, consistency, and odour on the form.

The column widths on the form can be adjusted by sliding the column boundaries using the left mouse button in the column header.

At the bottom of the form there are buttons for Picking the next layer bottom, and Adding and Deleting layers. In addition, layers can be added using the insert button on the keyboard. When the Pick button is pressed you can specify the bottom depth of the layer by clicking on the location on the log.

When entering the lithologic description, the Rich Text toolbar on the right can be used to modify the font characteristics, add symbols, spell check the description, and add lithology macros. Before selecting a speed button, the text to be modified should be selected with the mouse or the cursor should be placed at the desired insertion point.



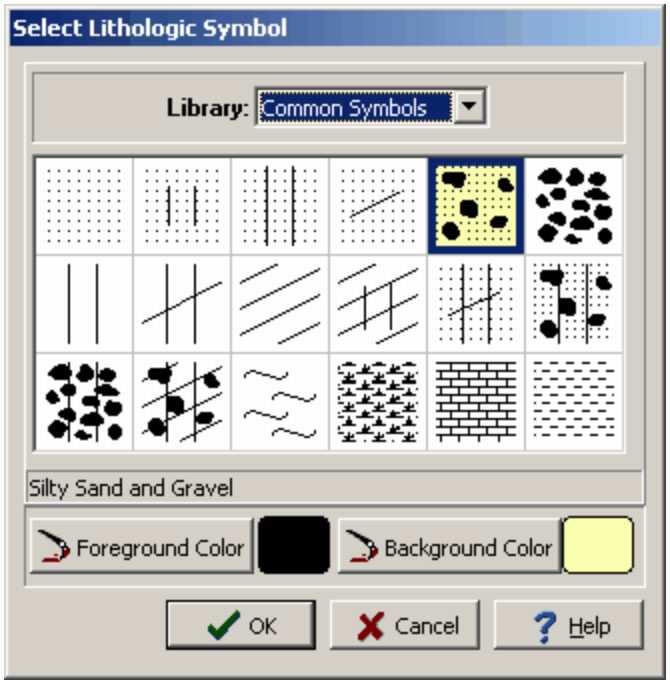
The buttons of the toolbar perform the following functions:

- The **Font Typeface** box is used to select the name of the font to use for the selected text.
- The **Font Size** box is used to set the size of the font for the selected text.
- The **Font Color** box is used to select the color of the font for the selected text.
- The **Bold** button is used to toggle the bold attribute of the selected text on and off.
- The **Italics** button is used to toggle the italic attribute of the selected text on and off.
- The **Underline** button is used to toggle the underline attribute of the selected text on and off.
- The **Superscript** button is used to toggle the superscript attribute of the selected text on and off.
- The **Subscript** button is used to toggle the subscript attribute of the selected text on and off.
- The **Left Justify** button will left justify the selected text.
- The **Center Justify** button will center justify the selected text.
- The **Right Justify** button will right justify the selected text.
- The **Cut** button will remove the selected text and place it in the clipboard.
- The **Copy** button will copy the selected text to the clipboard.
- The **Paste** button will paste the text in the clipboard, at the current position of the cursor in the memo field.
- The **Replace** button will replace the specified text in the description.
- The **Bullets** button will format the selected text into bullets.
- The **Numbers** button will format the selected text into numbered lines.
- The **Symbol** button will display the Symbol form shown on the next page. This form is used to place a symbol at the current cursor position in the description. To select a symbol use the Font box to select the font containing the symbol and then select the desired symbol. After the desired symbol has been selected, press the Ok button to insert it into the description.
- The **Spell Check** button will display the Spell Checker form shown below and will check the spelling in the description.
- The **Macro** button will display the Lithology Macros form. This form can be used to select a lithology macro to insert into the name, title, symbol and description. For more information see the Selecting Strata Names section below.
- **Vertical Alignment**: The three vertical alignment buttons are used to set the vertical alignment of the text. Using these buttons, the alignment can be set to the top, middle, or bottom of the layer.

- The **Zoom Factor** is used to adjust the amount of text that is displayed in the Description column on the form. It only affects the text on the form and will not adjust the text size on the borehole log.
- The **USCS** button is used to calculate and insert the USCS description. When it is pressed the USCS Calculator 338 form is displayed.

Lithology symbols are stored in symbol libraries containing 18 symbols each. The program comes supplied with numerous symbol libraries. These libraries can be edited and new libraries created using the Libraries submenu of the File menu. See the Symbol Libraries section in this chapter for a detailed description on how to create and edit symbol libraries.

To change the lithologic symbol for a layer click on the symbol with the left mouse button in the Symbol column of the Edit Lithologies form, the Select Lithologic Symbol form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be entered and edited on this form:

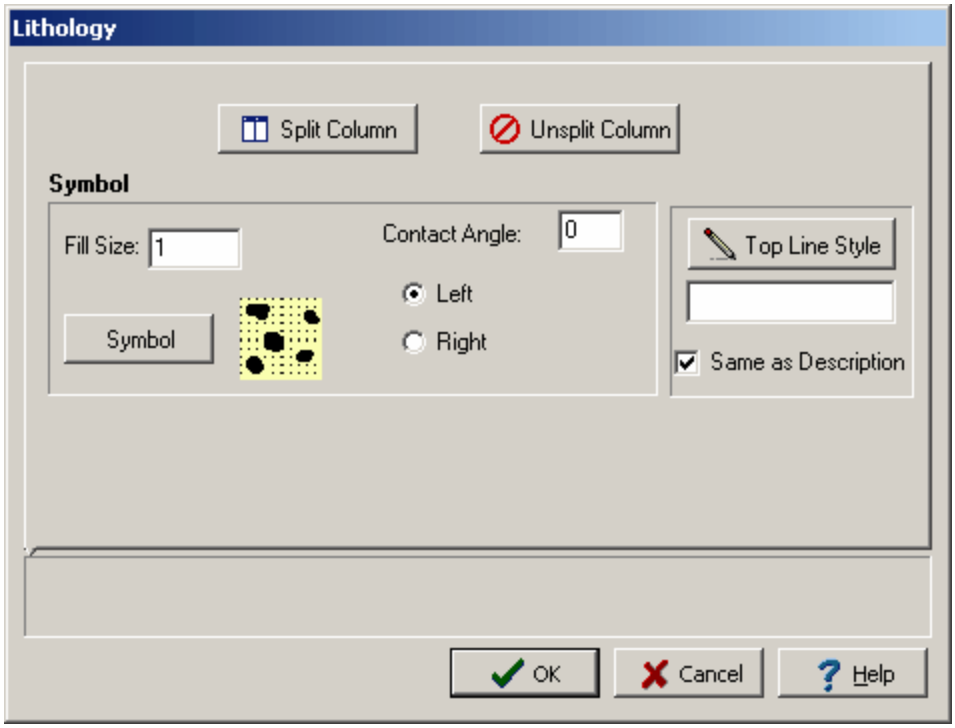
Library: This combo box is used to select the symbol library for the layer. When the arrow at the right is pressed a list will display the available symbol libraries. After a library has been selected, the symbols displayed in the tab will be updated.

Symbol: The symbol for the layer can be selected by clicking on one of the 18 symbols displayed for the current library. The selected symbol is highlighted with a blue border.

Foreground Color: This is the color to use for the shaded parts of the symbol. The foreground color can be changed by pressing the Foreground Color button. When this button is pressed, either a Color form or Munsell Color form is displayed depending on the setting in Preferences.

Background Color: This is the color to use for the unshaded parts of the symbol. The background color can be changed by pressing the Background Color button. When this button is pressed, either a Color form or Munsell Color form is displayed depending on the setting in Preferences.

In addition to the above, the symbols fill size, contact angle, line style, and splitting can also be specified by clicking the right mouse button on the symbol in the Symbol column. The Lithology form will then be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be entered on this form:

Fill Size: The fill size is used to expand or condense the symbol before it is drawn on the log. The size of the symbol is multiplied by the fill size and then the symbol is drawn. For example, a fill size of 2 will result in the symbol being doubled in size. The fill size must be greater than 0.

Symbol: The symbol for the layer can be changed by clicking on this button.

Contact Angle: This is the contact angle for the top of the layer and can be used to indicate gradational or dipping contacts. A contact angle of zero is used to specify a horizontal contact. The contact angle must be between -80 and +80.

Left or Right: This is used to select whether the contact angle is specified from the left side of the symbol column or right side of the symbol column.

Top Line Style: The Top Line Style button is used to change the line style for the top layer boundary in the symbol column. If the bottom depth of the layer is specified this line style is also used for the bottom boundary. When the button is pressed, a Line Properties form is displayed. If the Same as Description box is checked, the line style will be set to the same as set in the Description tab for the layer.

Split Column: This button is used to divide the symbol column for the layer vertically and display two symbols for the layer. When the button is pressed the Symbol 2 part tab will be displayed on the form. This can be used to select a second lithology symbol for the layer. The symbol selected in the Symbol tab will be displayed on the left side of the column and the symbol selected in the Symbol 2 tab will be displayed on the right side of the column.

% Split: This is used to specify the percentage of the layer that is split between the two symbols. A 50% split would give create a layer using the left half of the symbol from the first symbol tab and the right half using the symbol from this tab.

Split Angle: This is used to specify the angle of the split between the first and second symbols. An angle of 90 degrees will show the symbols splitting vertically.

Split Line Style: This is used to specify the line style of the line between the two symbols. When the Split Line Style button is pressed a Line Properties form is displayed.

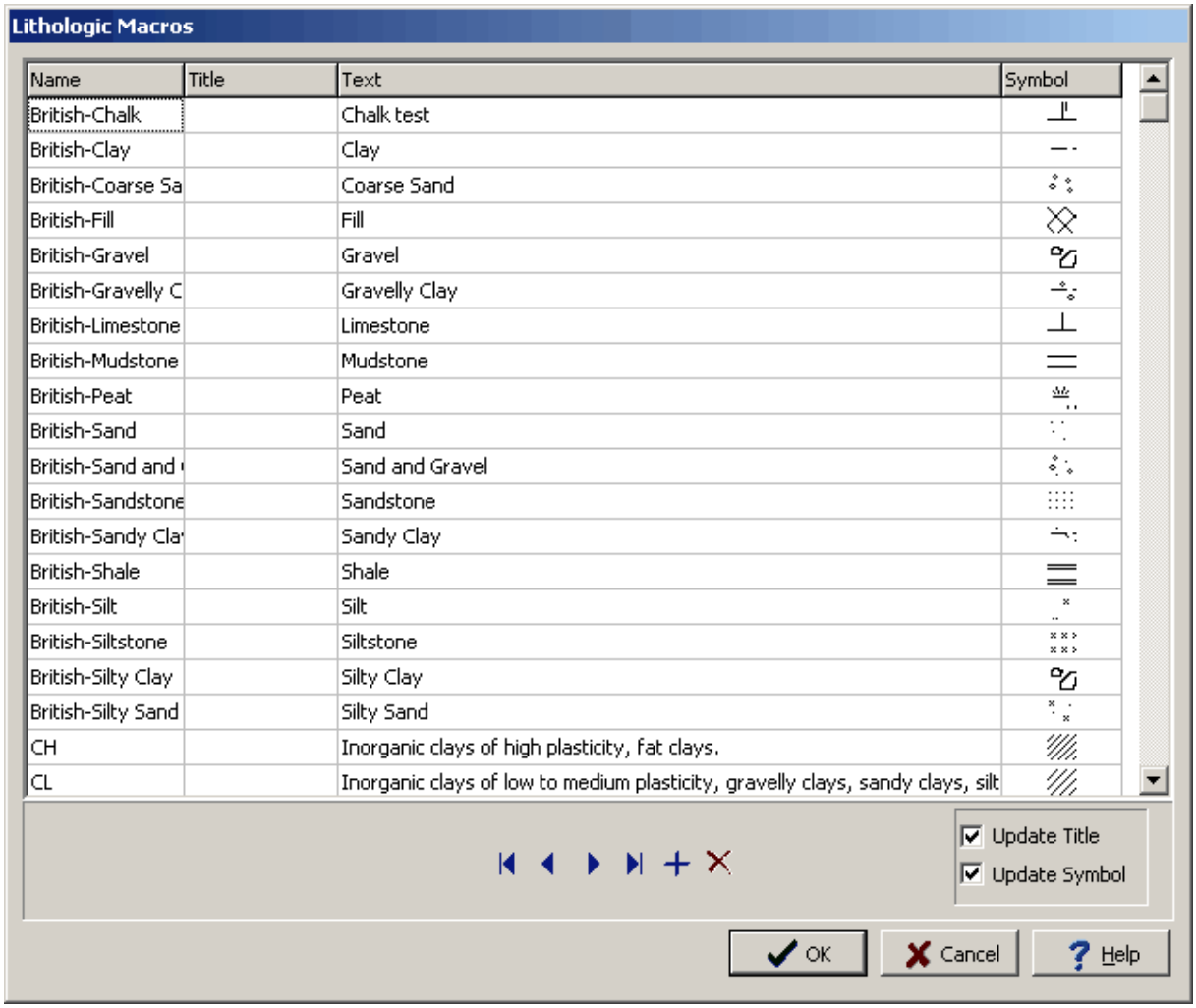
Unsplit Column: This button is used to remove the second symbol from the layer and display only one symbol. When this button is pressed the Symbol 2 part of the form will disappear.

The strata name for the layer can be used to quickly fill in the symbol, title and description of the layer from a list of previously defined strata referred to as Lithologic Macros. These strata names can also be used later by the Cross-Section module to automatically generate the strata for a cross-section.

If the template for the log specifies the Title Edit mode as “Text” for the lithology description column, the Name column will not appear on the Lithology List form and not be used.

If the “Use Strata Names List” option is selected in the template, the names will need to selected from the list of lithology macros. The strata names selected for each layer in this situation will have to be unique for each layer. By using this option and specifying unique strata names, the auto-generation of the strata in the cross-section will be greatly improved.

To select a strata name for a layer click on the Name column on the Edit Lithologies form, the Lithology Macros form below will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

An existing lithology macro can be selected for the strata or a new one can be added using the Add button at the bottom of the form. The title and symbol can also be updated for the layer using the checkboxes at the bottom of the form.

In addition to the Add button, lithology macros can also be created from previously defined layers on the Lithology List form by clicking on the layer with the right mouse button and selecting “Add Current as Macro” from the popup menu.

The Lithology Macros form can also be displayed by selecting *Tools > Boring/Wells > Lithology Macros*.

4.1.4.5.39 Lost Core Data

Lost core data can be entered either as text, text interval, or graph data depending on the settings in the template. Depending on how the column is displayed the editing of the data is the same as described in Text Data 327, Text Interval Data 333, or Graph Data 283.

4.1.4.5.40 Lost Circulation Data

Lost circulation data can be entered either as text, text interval, or graph data depending on the settings in the template. Depending on how the column is displayed the editing of the data is the same as described in Text Data 327, Text Interval Data 333, or Graph Data 283.

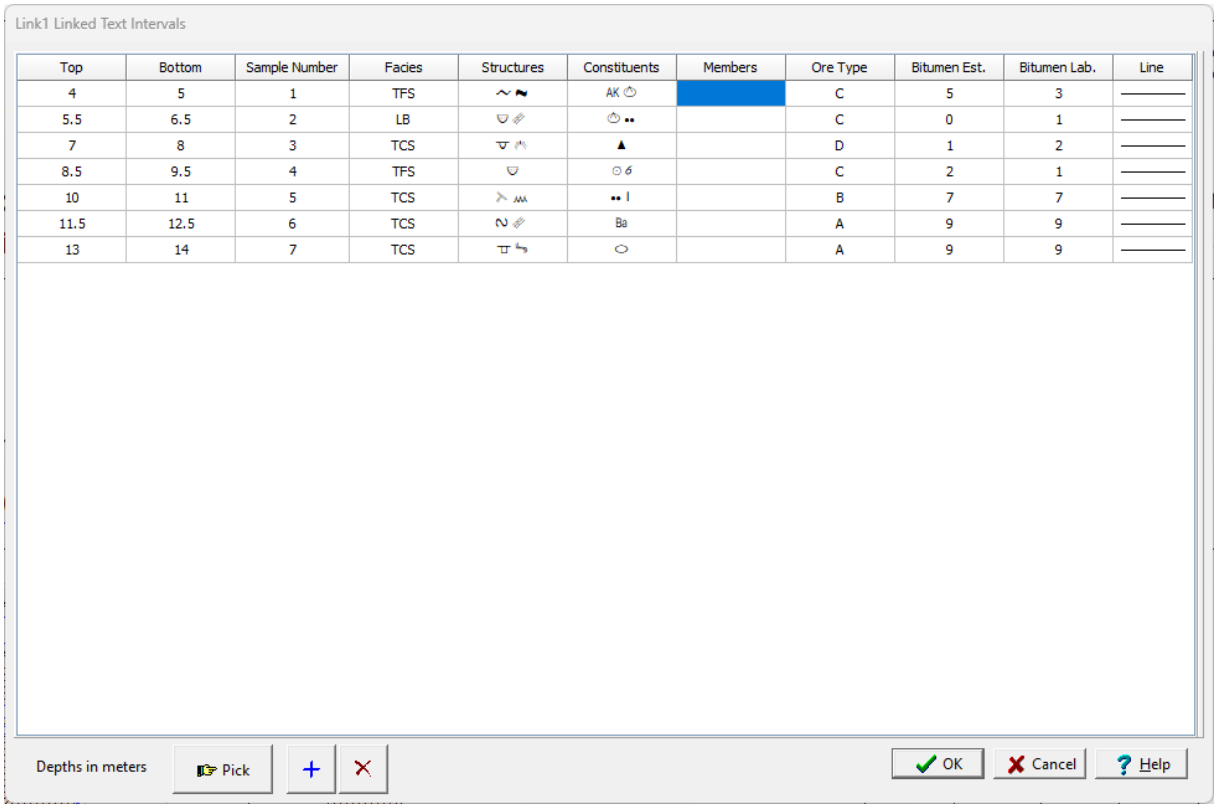
4.1.4.5.41 Members Data

Members data is treated the same way as text interval data. Members columns can also be linked to text interval columns.

There are several ways to edit members data, either:

- click on the members data column on the log
- double click on the members data object on the sidebar
- select *Edit > Members*
- or select *Popup > Members*

After this the Linked Text Interval Data form will be displayed. This form will have three or more columns depending on whether the members data is linked to other interval text data on the template. At the bottom of this form there are buttons to move to the first, previous, next, and last interval or to add and delete intervals.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Top Depth: This is the top depth of the interval.

Bottom Depth: This is the bottom depth of the interval.

Members: This is the members to display in the interval.

Text: If there are other linked text intervals in the template, this is the text to display in the text interval. The name of this column will be the name of the text interval data.

Line Type: This is the line style to be used for the top and bottom boundaries of the text interval. When the line is clicked on the Line Properties form is displayed. This form is used to set the line style, thickness, and color. The line style can be set to none to display no line at the boundary

At the bottom of this form there are buttons to Pick, Add and Delete text intervals.When the Pick button is pressed you can specify the bottom depth of the interval by clicking on the location on the log.

4.1.4.5.42 Munsell Code Data

The Munsell color system specifies colors based on three properties: hue (basic color), value (lightness), and chroma (purity). It was created by Albert H. Munsell in the first decade of the 20th century and adopted by the United States Department of Agriculture (USDA) as the official color system for soil research in the 1930s.

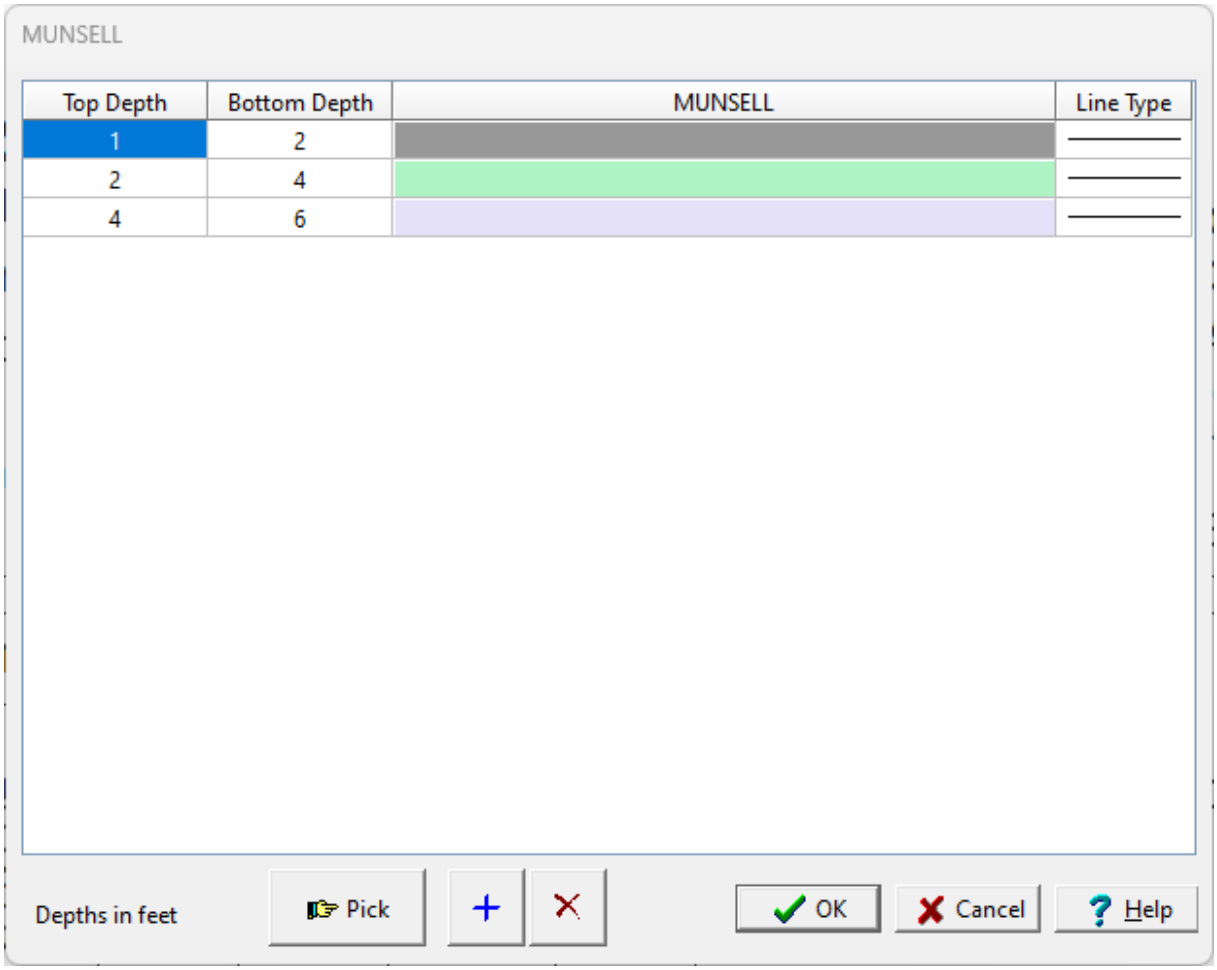
The hue is noted as the letter abbreviation of the color of the rainbow (e.g. R for red). The quality of the color is modified by the preceding value (0-10). Value (lightness) is rated on a scale from 0 to 10, with 0 being black and 10 being white. And the chroma consists of a scale with lower numbers being more washed out (less pure).

A color is fully specified using the three properties for hue, value, and chroma. The hue is specified using the hue number and hue prefix. For each color and optional description can be specified.

The Munsell Code column is used to display Munsell codes, colors, or descriptions for specified depth intervals. The type of display is set in Preferences.To edit the Munsell color data in a column:

- click on the data column on the log
- double click on the Munsell Code data object on the sidebar
- select *Edit > Munsell Code*
- or select *Popup > Munsell Code*

After this the Munsell form will be displayed. At the bottom of this form there are buttons to add and delete depth intervals.



The Munsell color can be selected by double-clicking on the Munsell cell.

4.1.4.5.43 Neutron Porosity Data

Neutron porosity data are a type of geophysical log and the importation and editing of the data is the same as described in the Geophysical data 272 section.

4.1.4.5.44 Oil and Gas Show Data

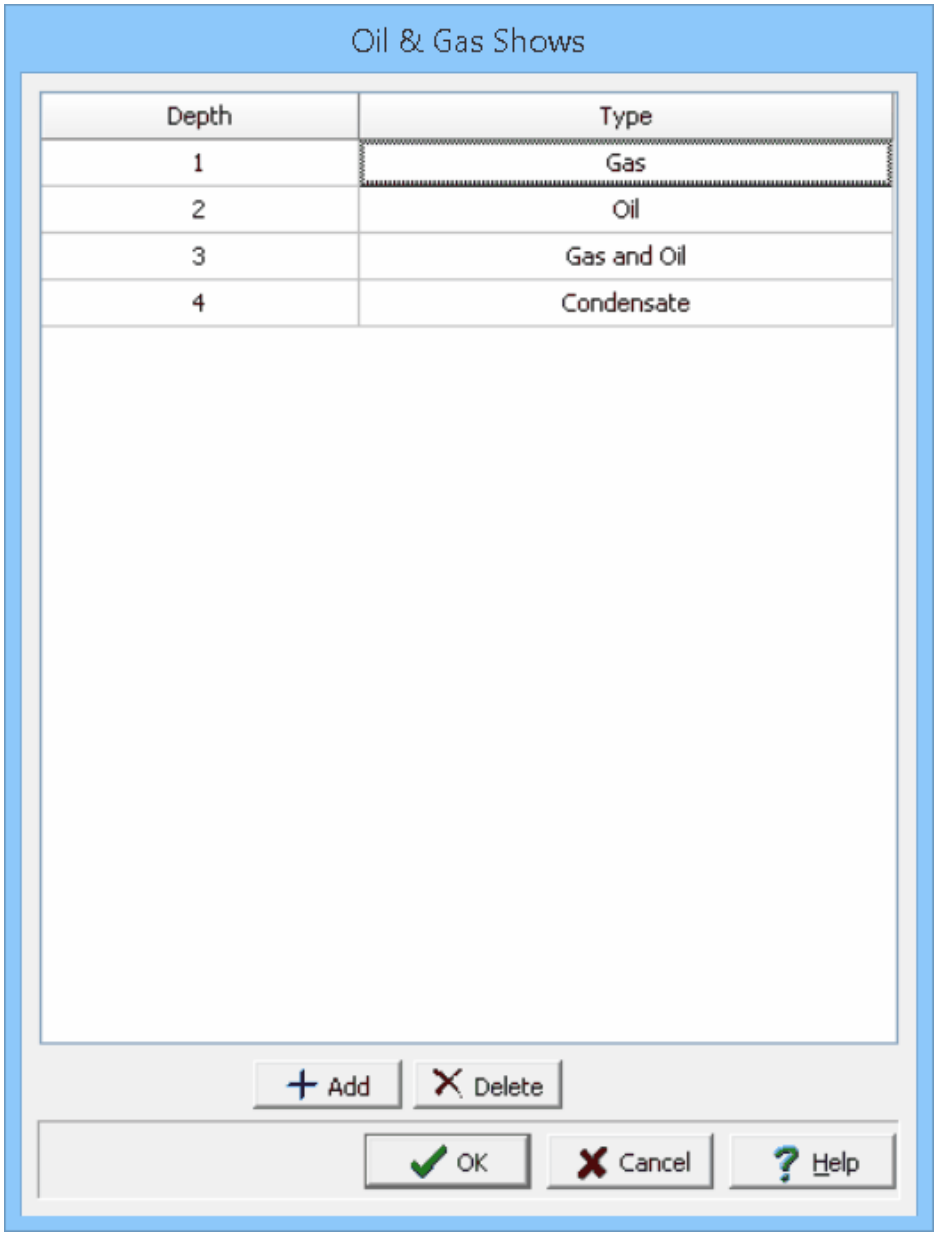
This column is used to display the oil and gas show data as symbols.

Gas show Oil and gas show Oil show Condensate show

There are several ways to edit oil and gas show data, either:

- click on the oil and gas show data column on the log
- double click on the oil and gas show data object on the sidebar
- select *Edit > Oil & Gas Shows*
- or select *Popup > Oil & Gas Shows*

After this the Oil & Gas Shows form will be displayed. At the bottom of this form there are buttons to add and delete oil & gas shows.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

Depth: This is the depth of the symbol.

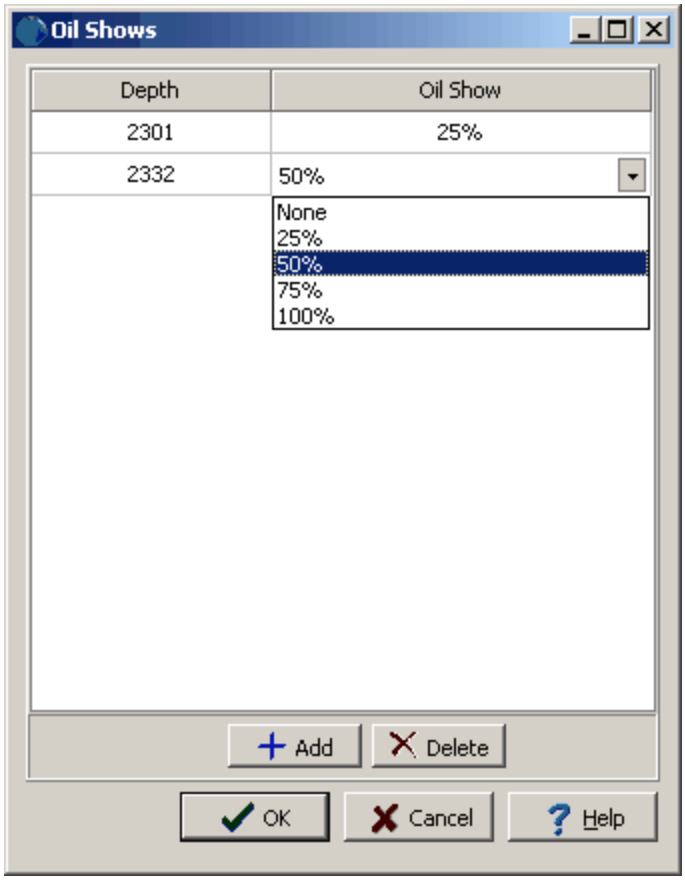
Type: This is the type of oil and gas show.

4.1.4.5.45 Oil Show Data

This column is used to display the oil show data as symbols based on the percentage. There are several ways to edit oil show data, either:

- click on the oil show data column on the log
- double click on the oil show data object on the sidebar
- select *Edit > Oil Shows*
- or select *Popup > Oil Shows*

After this the Oil Shows form will be displayed. At the bottom of this form there are buttons to add and delete oil shows.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

Depth: This is the depth to place the top.

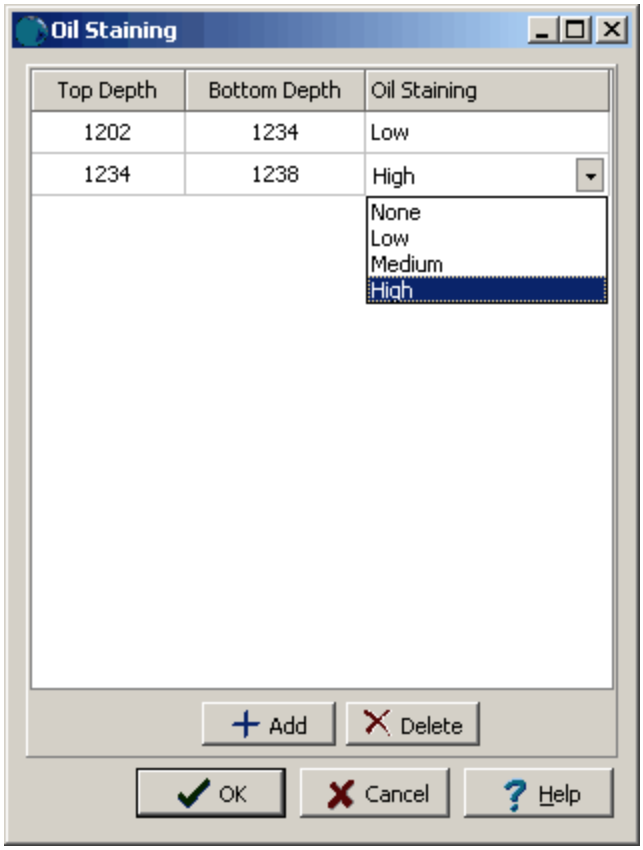
Oil Show: This is used to select the percentage for the oil show.

4.1.4.5.46 Oil Staining (Color) Data

This column is used to display the oil staining data as colors based on the amount of staining. There are several ways to edit oil staining data, either:

- click on the oil staining data column on the log
- double click on the oil staining data object on the sidebar
- select *Edit > Oil Staining (Color)*
- or select *Popup > Oil Staining (Color)*

After this the Oil Staining form will be displayed. At the bottom of this form there are buttons to add and delete oil staining data.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

Top Depth: This is the top depth for the oil staining.

Bottom Depth: This is the bottom depth for the oil staining.

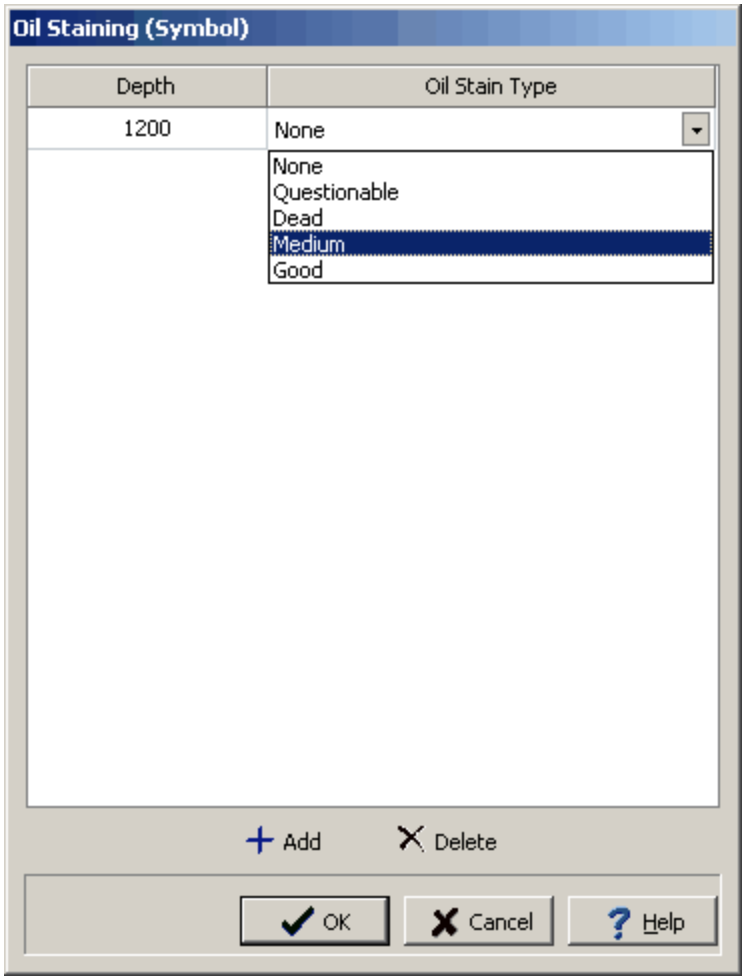
Oil Staining: This is used to select the amount of oil staining.

4.1.4.5.47 Oil Staining (Symbol) Data

This column is used to display the oil staining data as symbols based on the type of staining. There are several ways to edit oil staining data, either:

- click on the oil staining data column on the log
- double click on the oil staining data object on the sidebar
- select *Edit > Oil Staining (Symbol)*
- or select *Popup > Oil Staining (Symbol)*

After this the Oil Staining form will be displayed. At the bottom of this form there are buttons to add and delete oil staining data.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

Depth: This is the depth for the oil staining.

Oil Staining Type: This is used to select the type of oil staining.

4.1.4.5.48 Ore Type Data

Ore type data is entered the same as text data. The editing of the data is the same as described in Text Data 327.

4.1.4.5.49 Penetration Rate Data

Penetration rate data can be entered either as text, text interval, or graph data depending on the settings in the template. Depending on how the column is displayed the editing of the data is the same as described in Text Data 327, Text Interval Data 333, or Graph Data 283.

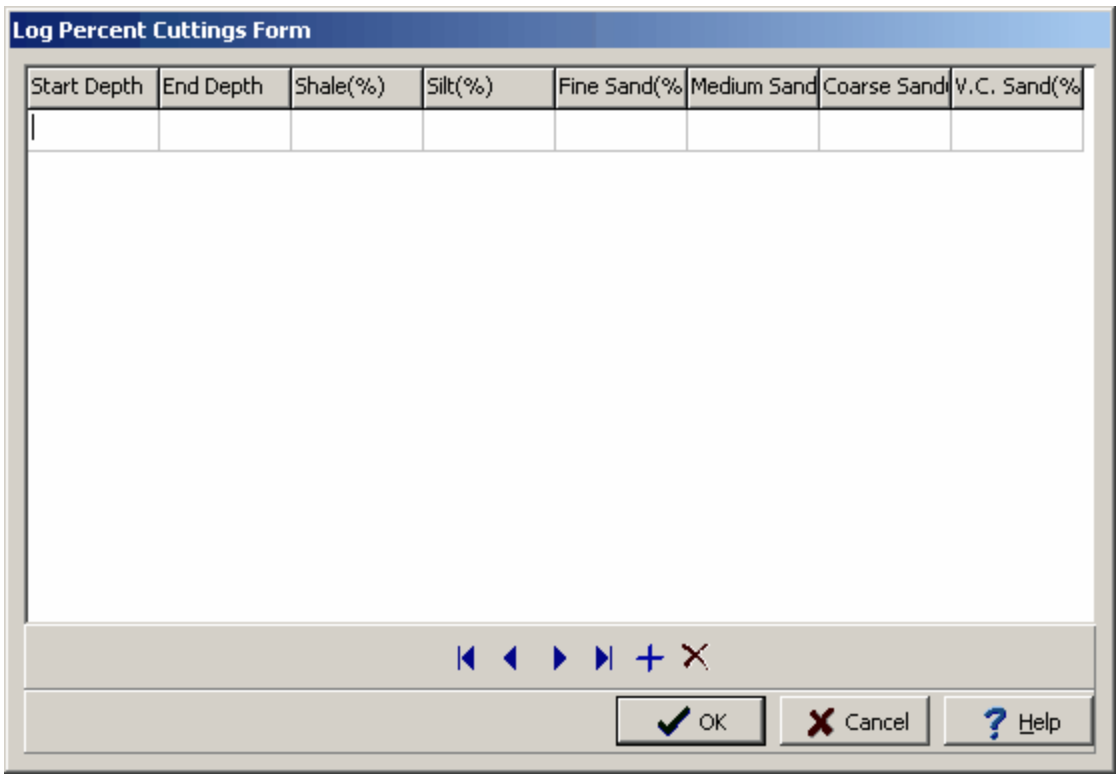
4.1.4.5.50 Percent Cutting Data

Percent cuttings data are collected normally during mud-logging and are used to denote the relative percentage of different lithologies at a depth. For example, the relative percentages of sand, shale, and silt may be entered at several depth intervals. The lithologies that can be entered for the percent cuttings are specified in the percent cuttings column of the template. The symbols for each of the lithologies will be scaled and drawn at each of the depth intervals.

There are several ways to edit percent cuttings data, either:

- click on the percent cuttings column on the log
- double click on the percent cuttings object on the sidebar
- select *Edit > Percent Cuttings*
- or select *Popup > Percent Cuttings*

After this the Percent Cuttings form will be displayed. At the bottom of this form there are buttons to move to the first, previous, next, and last interval or to add and delete intervals.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

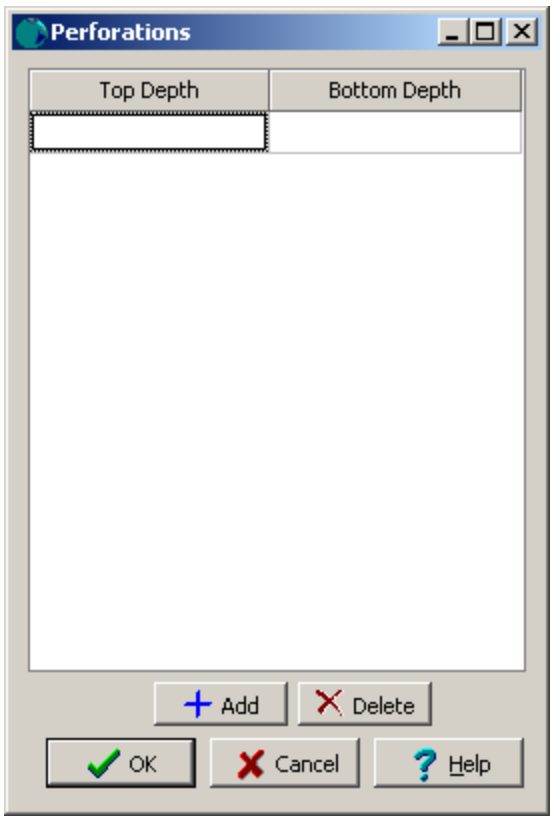
On this form you can enter the Start and End Depths of the cuttings interval and the percentage of each lithology type that shows up in the borehole cuttings.The total percentage of all lithologies must be less than or equal to 100%.

4.1.4.5.51 Perforation Data

This column is used to display the perforation data as color shaded depth intervals. There are several ways to edit perforation data, either:

- click on the perforation data column on the log
- double click on the perforation data object on the sidebar
- select *Edit > Perforations*
- or select *Popup > Perforations*

After this the Perforations form will be displayed. At the bottom of this form there are buttons to add and delete oil staining data.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

Top Depth: This is the top depth for the perforation.

Bottom Depth: This is the bottom depth for the perforation.

4.1.4.5.52 Plastic Limit Data

The plastic limit data is entered with the water content data and is described in the Water Content Data 338 section.

4.1.4.5.53 Plasticity Index Data

Plasticity Index data can be entered either as text, text interval, or graph data depending on the settings in the template. Depending on how the column is displayed the editing of the data is the same as described in Text Data 327, Text Interval Data 333, or Graph Data 283.

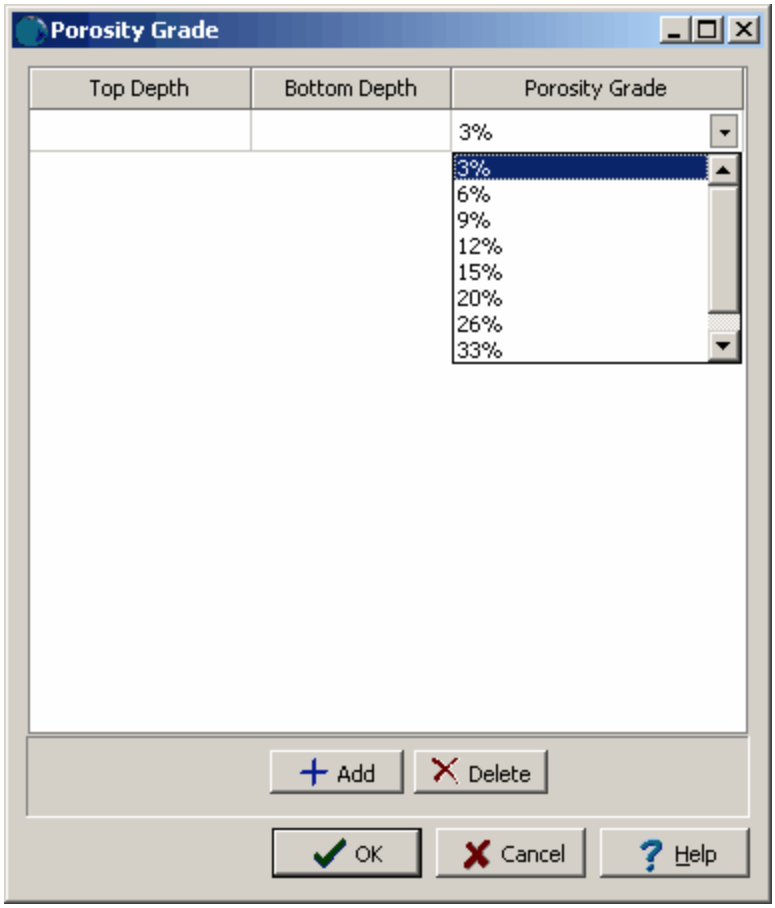
4.1.4.5.54 Porosity Grade Data

This column is used to display the porosity grade data based on the percentage of porosity. There are several ways to edit porosity grade data, either:

- click on the porosity grade data column on the log

- double click on the porosity grade data object on the sidebar
- select *Edit > Porosity Grade*
- or select *Popup > Porosity Grade*

After this the Porosity Grade form will be displayed. At the bottom of this form there are buttons to add and delete data.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

Top Depth: This is the top depth for the data.

Bottom Depth: This is the bottom depth for the data.

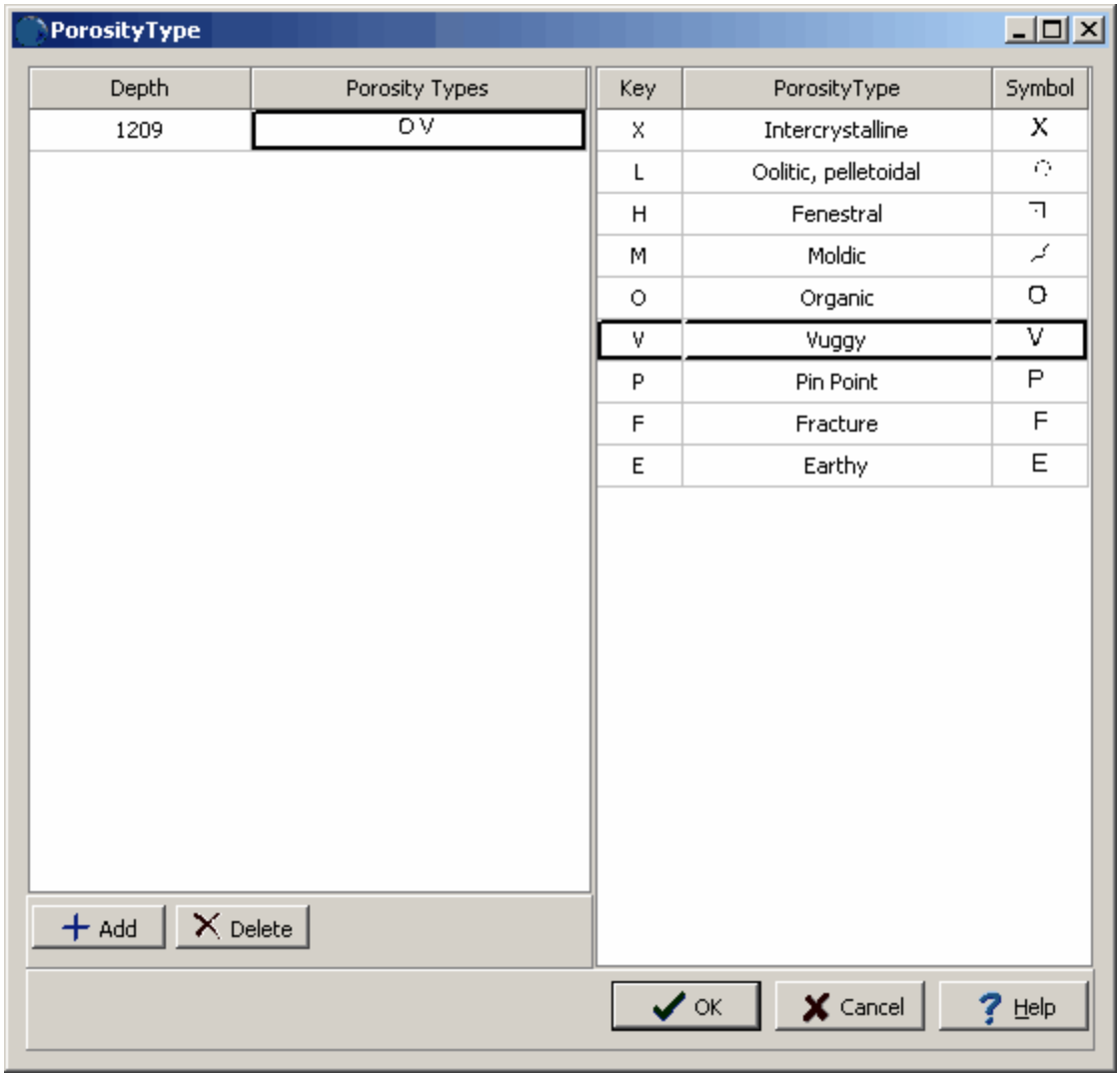
Porosity Grade: This is used to select the percentage of porosity.

4.1.4.5.55 Porosity Type Data

This column is used to display the porosity type data as symbols at specified depths. There are several ways to edit porosity type data, either:

- click on the porosity type data column on the log
- double click on the porosity type data object on the sidebar
- select *Edit > Porosity Type*
- or select *Popup > Porosity Type*

After this the Porosity Type form will be displayed. At the bottom of this form there are buttons to add and delete data.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

Depth: This is the depth to place the porosity type symbols.

Porosity Types: These are the porosity type symbols to display at this depth. The porosity type symbols can be selected from the list on the left by double clicking on them.

4.1.4.5.56 Resistivity Deep Data

Resistivity deep data are a type of geophysical log and the importation and editing of the data is the same as described in the Geophysical data 272 section.

4.1.4.5.57 Resistivity Medium Data

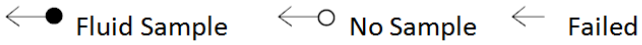
Resistivity medium data are a type of geophysical log and the importation and editing of the data is the same as described in the Geophysical data 272 section.

4.1.4.5.58 Resistivity Shallow Data

Resistivity shallow data are a type of geophysical log and the importation and editing of the data is the same as described in the Geophysical data 272 section.

4.1.4.5.59 RFT Pressure

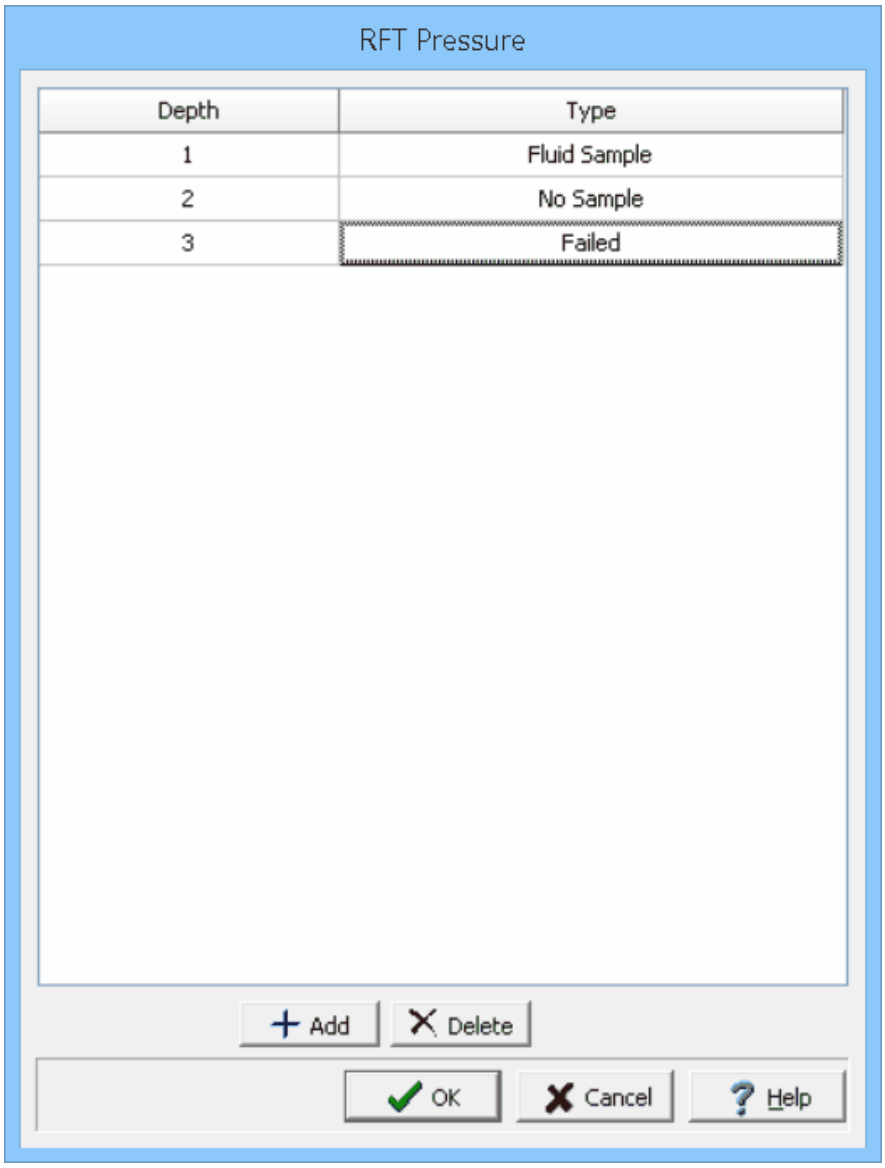
This column is used to display RFT pressure points as symbols.



There are several ways to edit RFT pressure data, either:

- click on the RFT Pressure data column on the log
- double click on the RFT Pressure data object on the sidebar
- select *Edit > RFT Pressure*
- or select *Popup > RFT Pressure*

After this the RFT Pressure form will be displayed. At the bottom of this form there are buttons to add and delete RFT pressure points.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

Depth: This is the depth of the pressure point.

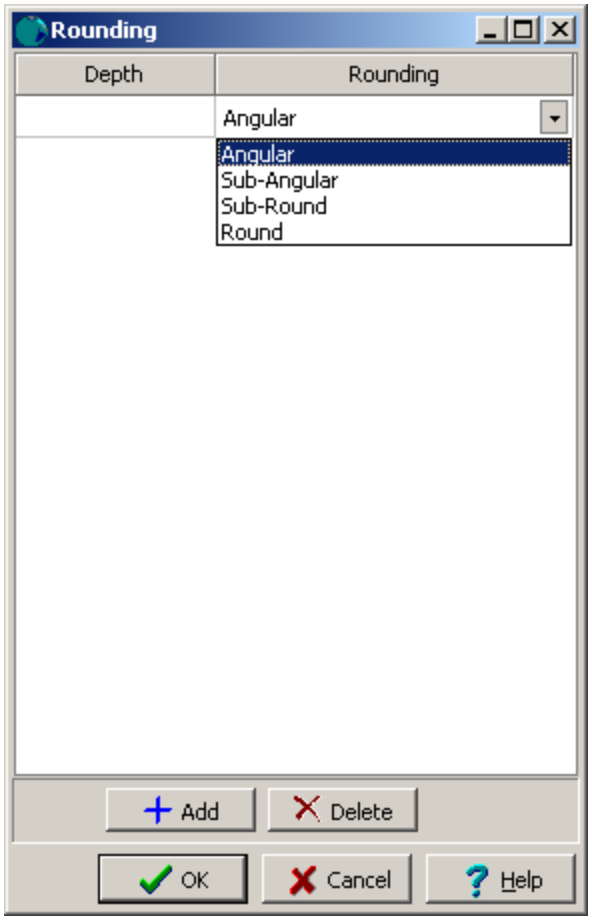
Type: This is the type of pressure point.

4.1.4.5.60 Rounding Data

This column is used to display rounding data at specified depths. There are several ways to edit rounding data, either:

- click on the rounding data column on the log
- double click on the rounding data object on the sidebar
- select *Edit > Rounding*
- or select *Popup > Rounding*

After this the Rounding form will be displayed. At the bottom of this form there are buttons to add and delete data.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

Depth: This is the depth for the data.

Rounding: This is used to select the type of rounding.

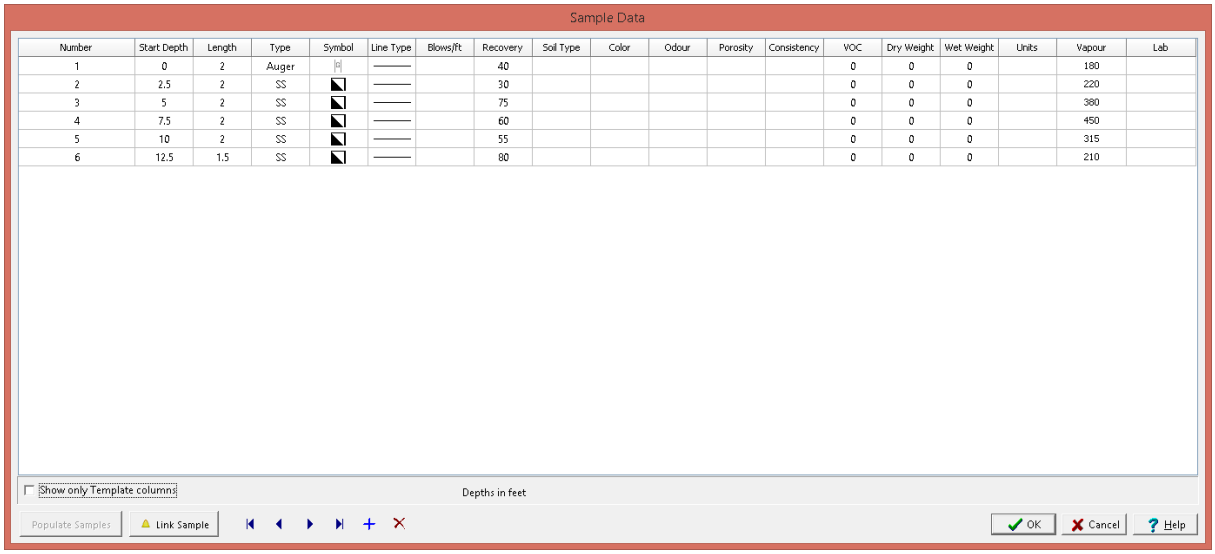
4.1.4.5.61 Sample Data

Soil, rock, ice, and other samples are generally taken with split-spoon samplers, Shelby tubes, Core Barrels, etc. at various depths of the borehole. These samples are later used for detailed identification, lab analysis, and other purposes.

There are several ways to edit the sample data, either:

- click on any of the sample data columns (Number, Type, Recovery, etc.) on the log
- double click on one of the Sample Data objects (Number, Type, Recovery, etc.) on the sidebar
- select *Edit > Sample Data*
- or select *Popup > Sample Data*

After this the Sample Data form below will be displayed. This form is used to edit the data for each sample, that is displayed in one or more columns of the log. The template determines the type of information displayed on the log for the sample. The data columns to be displayed can be changed by right clicking on the first header row. A popup menu will be displayed showing all of the columns that can be displayed. Check the box next to the columns to display in the list.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Link: To link a sample to an EDMS soil sample click on the Link column for that sample, then click on the button that appears. A list of EDMS soil samples that are associated with the boring/well will be displayed, select the soil sample to link. The data from the EDMS soil sample will automatically be shown on the Sample Data form and appropriate log columns. In the Link column for this sample a triangle symbol will be shown to indicate that the sample is linked to an EDMS sample. Except for the sample type, N Value, symbol, line type, and any sample other types the data for this linked sample cannot be edited in the boring/well log. For more information see the Soil Sample Integration section in Chapter 4.

Number: This is the sample number.

Start Depth: This is the start depth of the sample. The depth should be specified in the same units as set in the template. The start depth is the only field that must be specified for the sample all of the other information is optional.

Length: This is the length of the sample. The length should be specified in the same units as set in the template. Initially when a sample is created the default length set in the template is displayed.

Type: This is the type of sample.

Symbol: This is the symbol used to represent the sample. When this column is selected, a button will be displayed for the sample symbol. After this button is pressed, the Sample Symbol form is displayed. This form can be used to select the sample symbol, foreground color, and background color.

Line Type: This is the style of line that is used to draw the top and bottom boundaries of the sample. When this column is selected, a button will be displayed for the line type. After this button is pressed, the Line Properties form is displayed. This form is used to set the line style, thickness, and color. The line style can be set to none to display no line at the boundaries.

Blows/ft: This is the blow count or N-Value of the sample. When entering N-Value data a line break can be added to the data by specifying a "/" between data values (e.g. 12/18/16/22). In addition, the 4 N-Values normally specified, can be spaced equally across the column by specifying a "^" at the beginning of the data. This column is only available with some industry versions of the module (Geotechnical, Environmental and Mining).

Recovery: This is the sample recovery, usually expressed as a percentage or as a length measurement. Depending upon the template settings the recovery can be represented on the log as text or as a shaded box that covers the specified portion of the sample interval. For example, if the recovery were 75% then a box covering 75% of the sample interval would be drawn.

Soil Type: This can be used to select a soil type from a predefined list of soil types.

Color: This can be used to select a soil color from a predefined list of soil colors or a Munsell color. The type of color to be selected and how it is displayed is specified in Preferences.

Odour: This can be used to select a odour from a predefined list of odours.

Porosity: This can be used to select a porosity type from a predefined list of porosity types.

Consistency: This can be used to select a soil consistency from a predefined list of soil consistencies.

VOC: This can be used to specify the VOC for the sample.

Dry Weight: This can be used to specify the dry weight for the sample.

Wet Weight: This can be used to specify the wet weight for the sample.

Units: This can be used to select the units for the dry and wet weight.

Other: Other types of data can be entered as text strings for each sample. The number of other data types and the names for this data is specified in the template as Sample Other columns. Other data is stored and displayed as text strings. The name of the other data is specified as the column name. This string is displayed at the top of each other data column when the log is edited.

Custom List Data: Custom list data can be entered for each sample using the Sample Custom column in the template. The name of this column will be the name of the data column in the template. When this column is selected a drop down list showing the symbols and description in the custom list is displayed. The text can be selected from this list.Up to 5 custom list columns can be added to a sample.

Show Only Template Columns: Check this to show only the columns that are displayed using the current template.

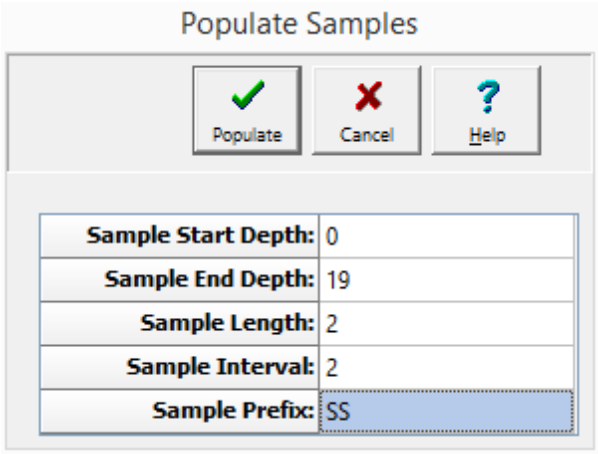
Auto Population

If no samples have been specified yet, the program can automatically create samples using some sampling information by clicking on the Populate Samples 321 button.

The buttons on the form are used for the following:

- The **Start** button moves to the first sample.
- The **Previous** button moves to the previous sample.
- The **Next** button moves to the next sample.
- The **End** button moves to the last sample.
- The **Insert** button creates a new sample.
- The **Delete** button deletes the sample.

If no samples have been specified yet, the program can automatically create samples using some sampling information by clicking on the Populate Samples button. The Populate Samples form will then be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be specified on this form:

Sample Start Depth: This is the depth that sampling started.

Sample End Depth: This is the depth that sampling ended.

Sample Length: This is the length of each sample.

Sample Interval: This is the depth between sample intervals.

Sample Prefix: This is the text to put in front of each sample number.

After the above information has been entered, click on the Populate button to create the samples. Samples will then be created starting at the start depth and going to the end depth using the sample interval to space the samples. Each sample will have the sample length specified and a sample number starting with the specified prefix together with the sample number starting at 1.

4.1.4.5.62 Slough Data

Slough data can be entered either as text, text interval, or graph data depending on the settings in the template. Depending on how the column is displayed the editing of the data is the same as described in Text Data 327, Text Interval Data 333, or Graph Data 283.

4.1.4.5.63 Sonic Data

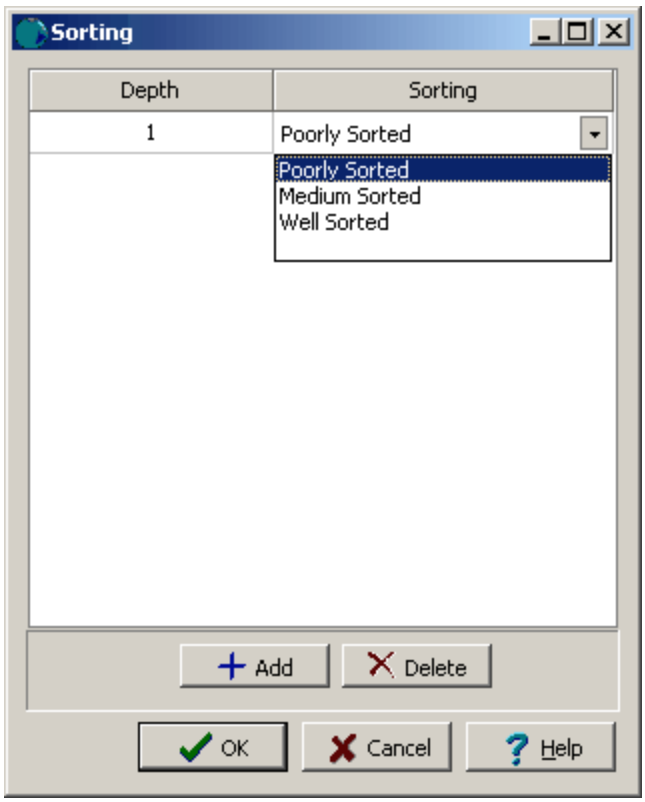
Sonic data are a type of geophysical log and the importation and editing of the data is the same as described in the Geophysical data 272 section.

4.1.4.5.64 Sorting Data

This column is used to display sorting data at specified depths. There are several ways to edit sorting data, either:

- click on the sorting data column on the log
- double click on the sorting data object on the sidebar
- select *Edit > Sorting*
- or select *Popup > Sorting*

After this the Sorting form will be displayed. At the bottom of this form there are buttons to add and delete data.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

Depth: This is the depth for the data.

Sorting: This is used to select the type of sorting.

4.1.4.5.65 Structures

Structures data is treated the same way as text interval data. Structures columns can also be linked to text interval columns.

There are several ways to edit structures data, either:

- click on the structures data column on the log
- double click on the structures data object on the sidebar
- select *Edit > Structures*
- or select *Popup > Structures*

After this the Linked Text Interval Data form will be displayed. This form will have three or more columns depending on whether the structures data is linked to other interval text data on the template. At the bottom of this form there are buttons to move to the first, previous, next, and last interval or to add and delete intervals.

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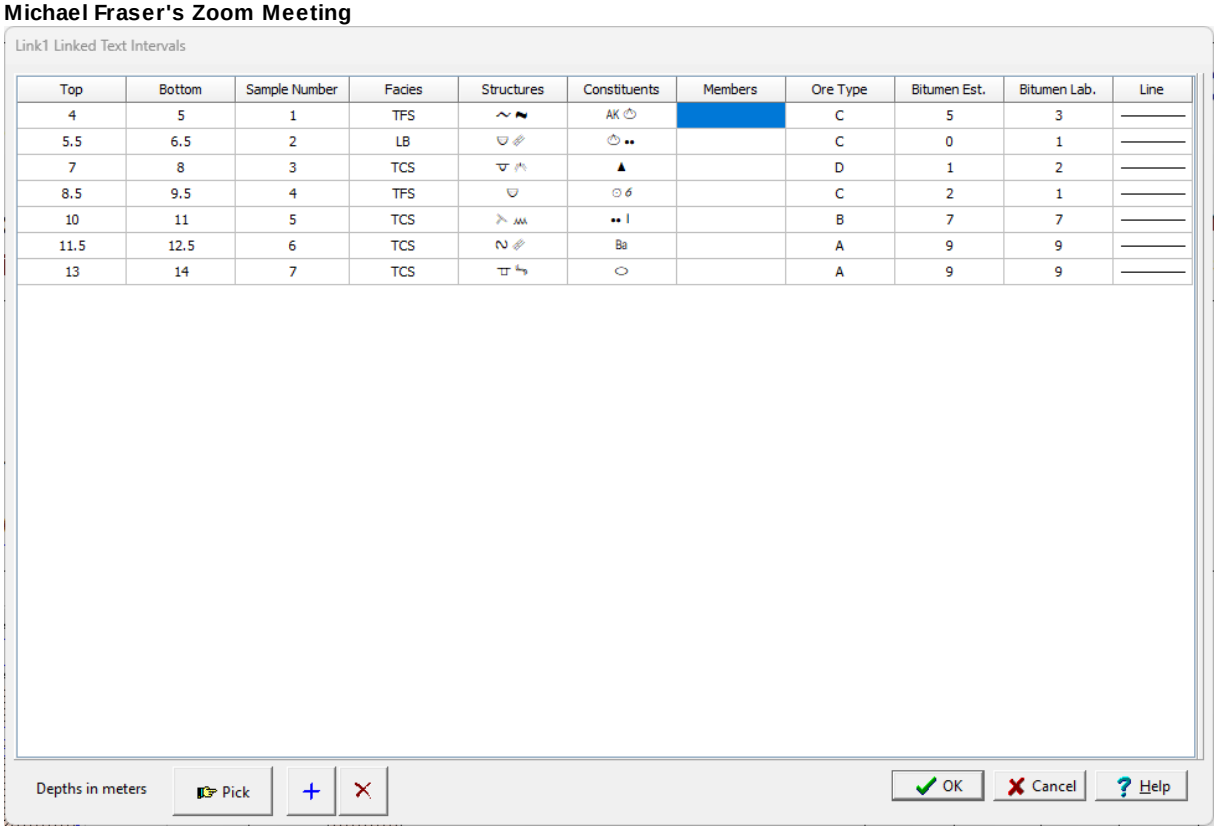


(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

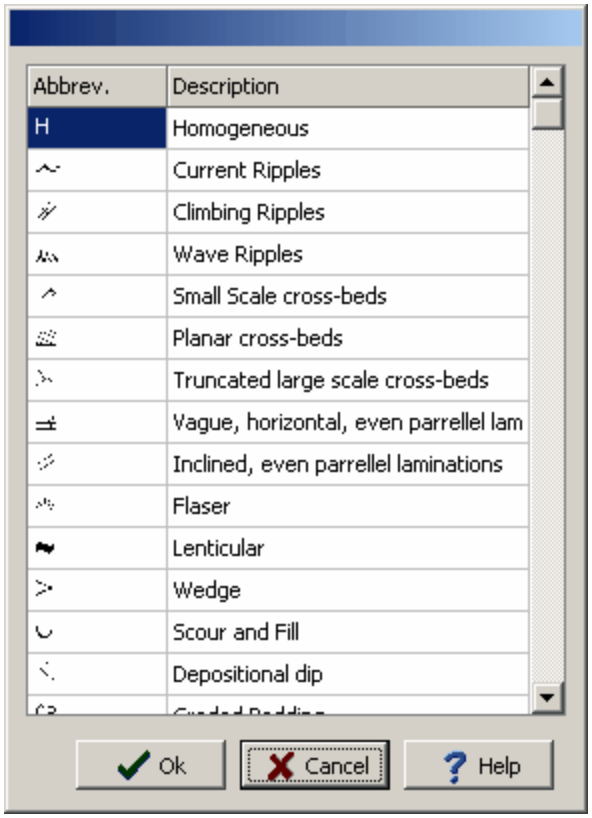
Top Depth: This is the top depth of the interval.

Bottom Depth: This is the bottom depth of the interval.

Text: If there are other linked text intervals in the template, this is the text to display in the text interval. The name of this column will be the name of the text interval data.

Line Type: This is the line style to be used for the top and bottom boundaries of the text interval. When the line is clicked on the Line Properties form is displayed. This form is used to set the line style, thickness, and color. The line style can be set to none to display no line at the boundary

Structures: This is the structures to display in the interval. A specially designed font is provided with the program for use with this column called GAEA Structures. When this column is clicked on the Structures form below will be displayed. This form has two columns. one with the structure symbol and one with the description. Structures can be added to the interval by selecting them on this form and clicking the Ok button or by double-clicking on them.



At the bottom of this form there are buttons to Pick, Add and Delete text intervals.When the Pick button is pressed you can specify the bottom depth of the interval by clicking on the location on the log.

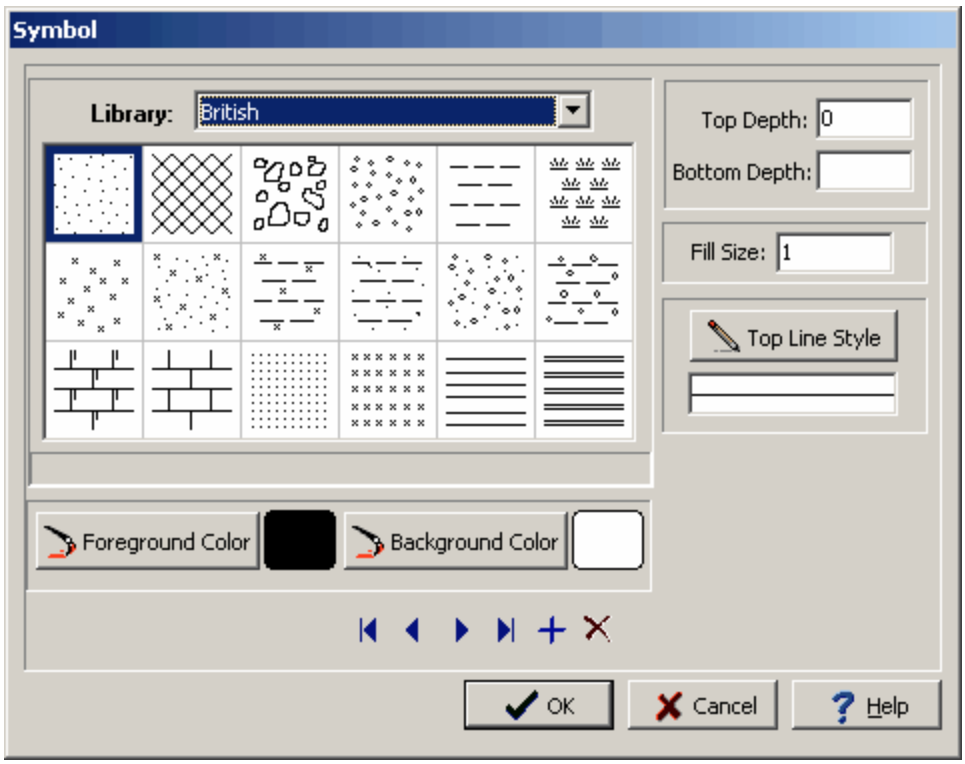
4.1.4.5.66 Symbol Log Data

Symbol logs are used to represent lithologic samples that do not necessarily correspond with any lithologic layers. The lithologic symbols shown are independent of those specified in the lithology. Unlike core logs, there can be any number of symbol log columns.

There are several ways to edit symbol log data, either:

- click on the symbol log column on the log
- double click on the symbol log object on the sidebar
- select *Edit > Symbol Log*
- or select *Popup > Symbol Log*

After this the Symbol Log form will be displayed. At the bottom of this form there are buttons to move to the first, previous, next, and last symbol or to add and delete symbols.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be entered and edited using this form:

Top Depth: This is the top depth of the symbol.

Bottom Depth: The bottom depth of the symbol.

Library: This is used to select the symbol library for the symbol. When the arrow at the right is pressed a list will display the available symbol libraries. After a library has been selected, the symbols displayed will be updated.

Symbol: The symbol can be selected by clicking on one of the 18 symbols displayed for the current library. The selected symbol is highlighted with a blue border.

Foreground Color: This is the color to use for the shaded parts of the symbol. The foreground color can be changed by pressing the Foreground Color button. When this button is pressed the Color form will be displayed. Using this form, a basic color can be selected or a custom color can be specified.

Background Color: This is the color to use for the unshaded parts of the symbol. The background color can be changed by pressing the Background Color button. When this button is pressed the Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified.

Fill Size: The fill size is used to expand or condense the symbol before it is drawn on the log. The size of the symbol is multiplied by the fill size and then the symbol is drawn. For example, a fill size of 2 will result in the symbol being doubled in size. The fill size must be greater than 0.

Top Line Style: The Top Line Style button is used to change the line style for the top symbol boundary in the symbol column. If the bottom depth of the symbol is specified this line style is also used for the bottom boundary.

4.1.4.5.67 Text Data

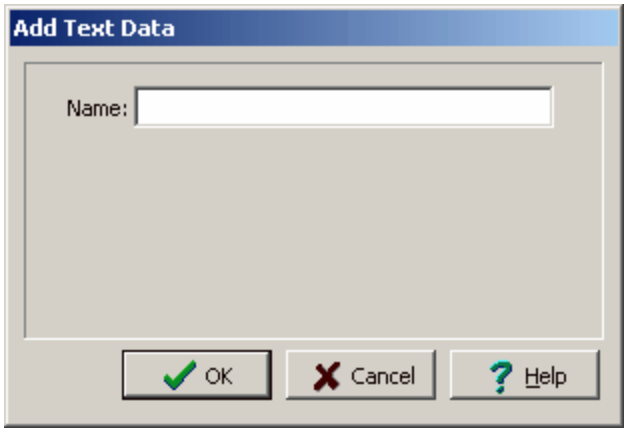
Text data columns can be used to display any information that varies with depth; such as soil classification, RQD, chemical testing, lithologic consistency, laboratory results, drilling rates, etc.

When a new log is created, text datasets will be automatically created for whatever text data columns are specified in the template. The names of these text datasets will appear in the Text Data submenu of the Edit menu and the Popup menu.

An additional text dataset is added for the Lithology Description column called Description. Any text data entered for this dataset will appear in the Lithology Description column. It can be used to add information about minor layer changes, inclusions or debris, color changes, etc.

It is also possible to create additional text datasets or delete datasets as described the sections below.

To add a new text dataset to a log select *Edit > Text Data > Add Text Data*. The Add Text Dataset form will then be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

To add a new dataset specify a unique name for the dataset. The text data for this dataset will not be displayed on the log unless the template contains a text data column with the same name.

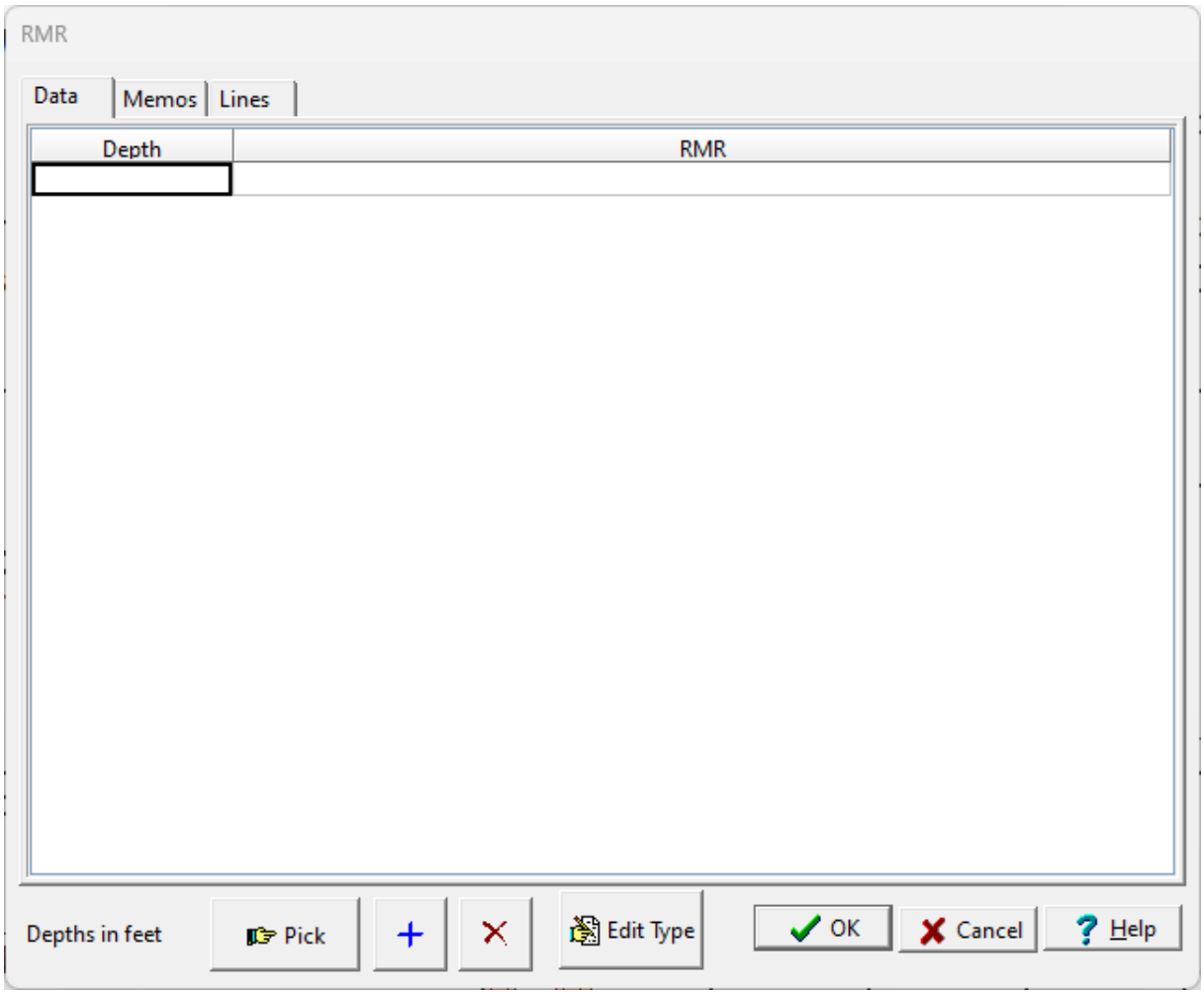
There are several ways to edit the text data, either:

- click on the text data column on the log
- double click on the text data object on the sidebar
- select *Edit > Text Data Name*

- or select *Popup > Text Data Name*

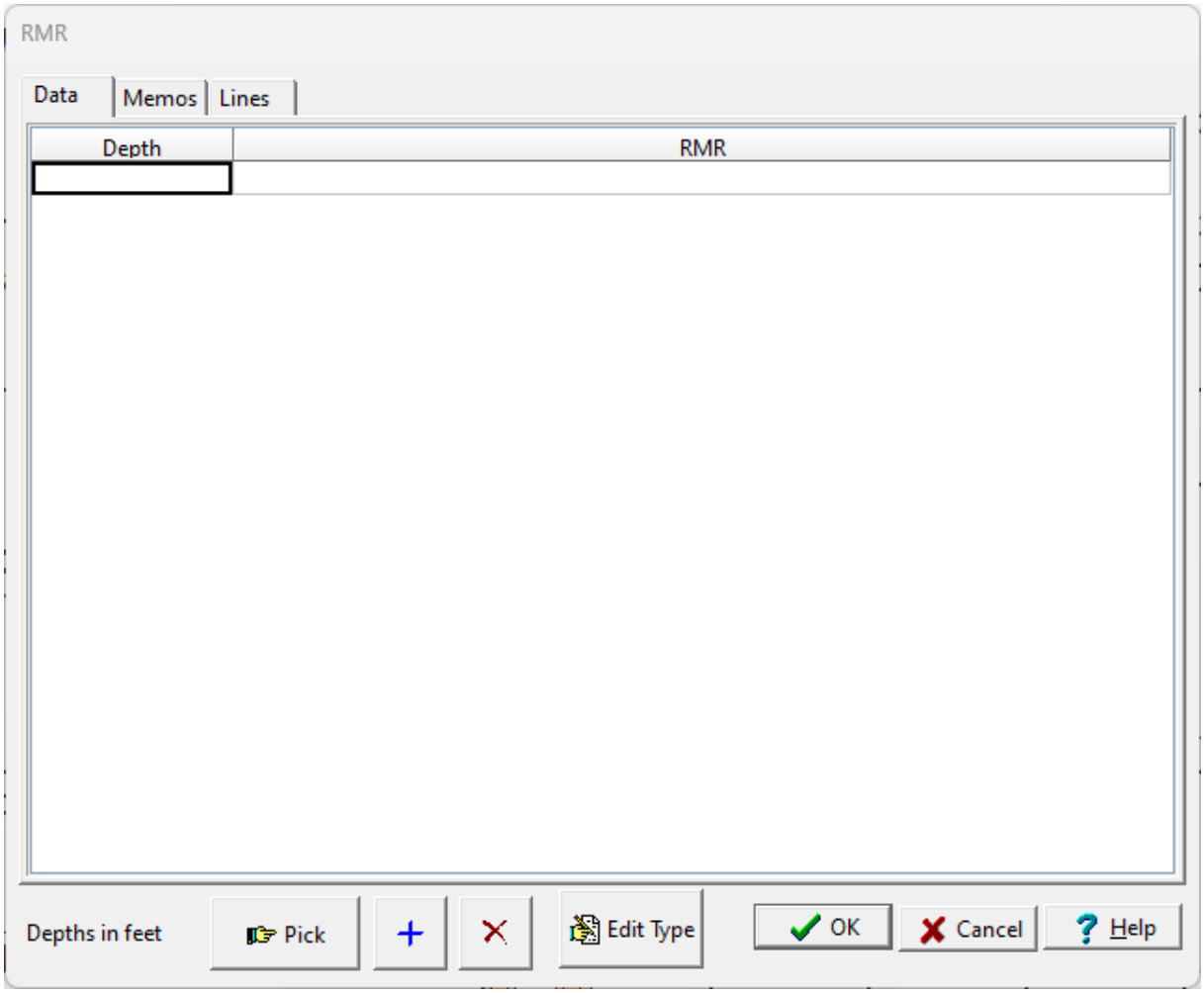
The menu item that will appear in the Edit, Popup, and sidebar will have the name of the column specified in the template for the log. For example, if the template specified the name of the column as "Remarks", the menu items will also be named "Remarks".This is used to distinguish between different text data columns within the same template.

After this the Text Data form will be displayed. This form has either two or three tabs; one for the text data, one for memo data, and one for line data. If the dataset being specified is comprised only of numbers then the memo tab will not be shown; for example, Rock Hardness.



At the bottom of the form there are buttons to Pick, Add and Delete a depth. When the Pick button is pressed you can specify the depth by clicking on the location on the log.

The name of the text dataset can be changed by clicking on the Edit Type button at the bottom of the Text tab. A new unique name can then be entered in the Edit Type form shown. Changing the name of the dataset will affect whether the dataset is displayed in the log. For the dataset to be displayed the template must contain a text data column with the same name.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited using the Text tab:

Depth: This is the depth to display the text in the same units as set in the template.

Text: This is the text to display. The default alignment of the text is set in the template. The alignment of each text line can be specified individually using the following codes.

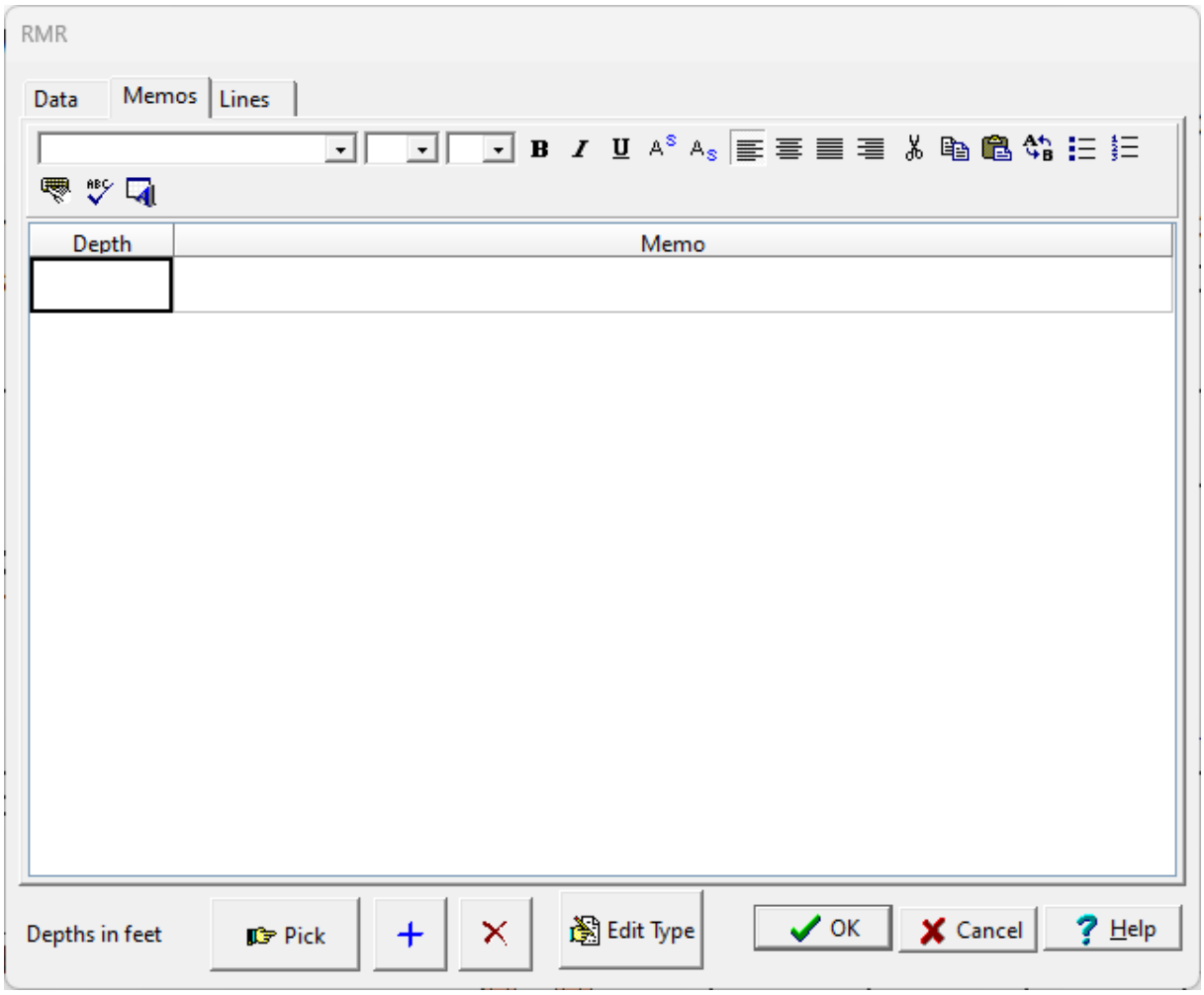
[LEFT] - Text is aligned to the left.
[CENTER] - Text is aligned in the center.
[RIGHT] - Text is aligned to the right.

In addition to text, lines and symbols can be entered using the special codes below. When entering these codes, a number preceding the code will represent the percentage of the column width that the line or symbol should cover. For example, 50 [LEFTLINE] will draw a line from the left side of the column across 50% of the width of the column.

[LINE] - Horizontal line across the column.
[LEFTLINE] – Partial horizontal line across the column starting from the left.
[RIGHTLINE] - Partial horizontal line across the column starting from the right.
[CENTERLINE] - Partial horizontal line centered in the column.

[WATERLEVEL] - Water level symbol (inverted filled triangle) in the column.
[WATERSTRIKE] – Water strike symbol (inverted hollow triangle) in the column.

The recommended method for inserting lines and symbols is to use the Lines and Memos tabs.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited using the Memos tab:

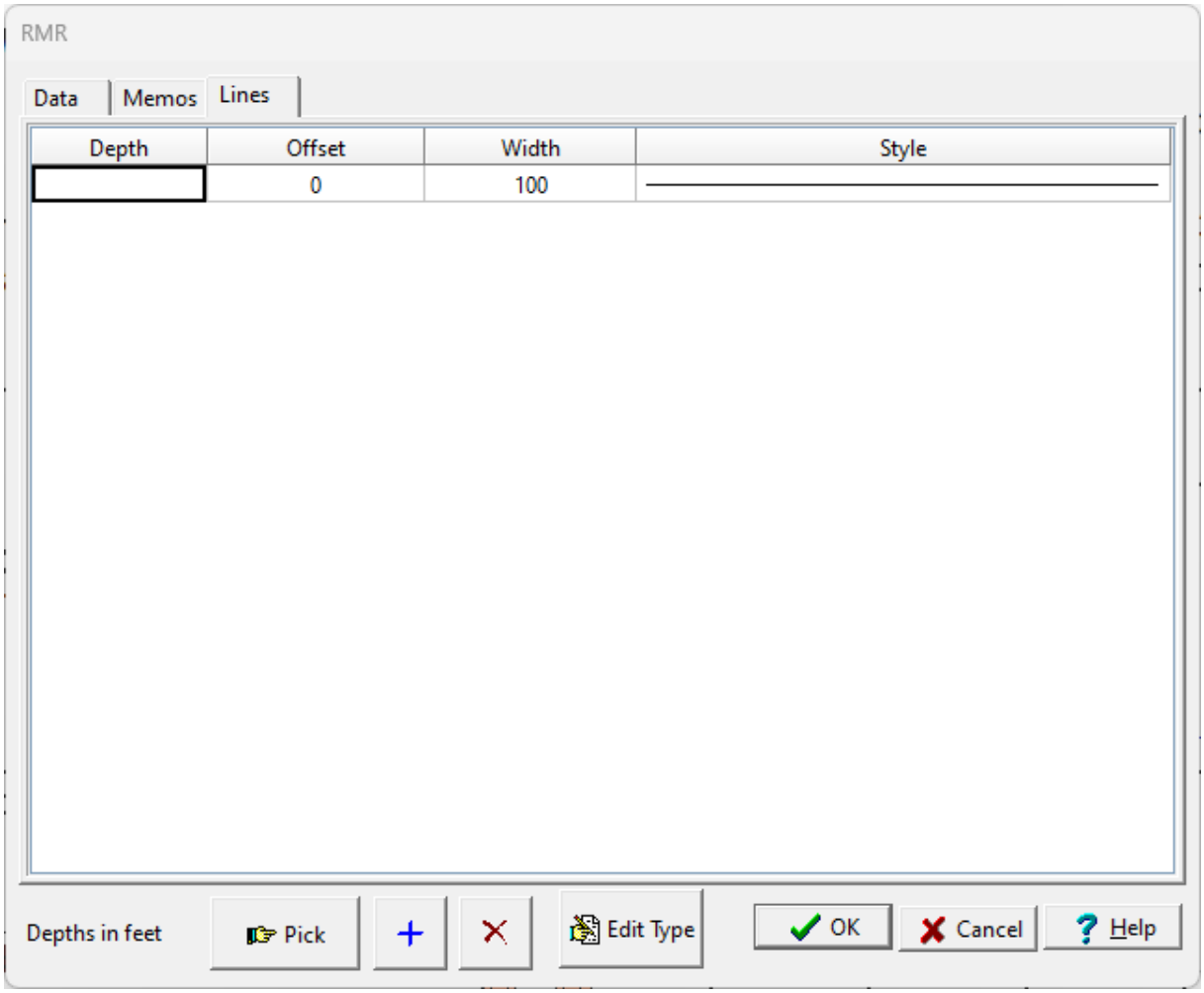
Depth: This is the depth to display the memo in the same units as set in the template.

Memo: This is the text to display. There is no limit to the length of the text. At the top of the tab there is a Rich Text toolbar that is used to format the text, add symbols, and perform spell checking on the text. The use of the Rich Text toolbar is described below.

At the top of the Memos tab is the Rich Text toolbar, this toolbar can be used to modify the font characteristics, add symbols, and spell check the text. Before selecting a speed button, the text to be modified should be selected with the mouse or the cursor should be placed at the desired insertion point.

The speed buttons of the toolbar perform the following functions:

- The **Font Typeface** box is used to select the name of the font to use for the selected text.
- The **Font Size** box is used to set the size of the font for the selected text.
- The **Font Color** box is used to select the color of the font for the selected text.
- The **Bold** button is used to toggle the bold attribute of the selected text on and off.
- The **Italics** button is used to toggle the italic attribute of the selected text on and off.
- The **Underline** button is used to toggle the underline attribute of the selected text on and off.
- The **Superscript** button is used to toggle the superscript attribute of the selected text on and off.
- The **Subscript** button is used to toggle the subscript attribute of the selected text on and off.
- The **Left Justify** button will left justify the selected text.
- The **Center Justify** button will center justify the selected text.
- The **Right Justify** button will right justify the selected text.
- The **Select All** button will select all of the text in the memo field.
- The **Cut** button will remove the selected text and place it in the clipboard.
- The **Copy** button will copy the selected text to the clipboard.
- The **Paste** button will paste the text in the clipboard, at the current position of the cursor in the memo field.
- The **Find** button will find the specified text in the memo field.
- The **Replace** button will replace the specified text in the memo field.
- The **Symbol** button will display the Symbol form. This form is used to place a symbol at the current cursor position in the memo field. To select a symbol use the Font box to select the font containing the symbol and then select the desired symbol. After the desired symbol has been selected, press the Ok button to insert it into the memo field. The WinLoG program comes with a font called “GAEA Symbols” that contains a variety of well and other symbols.
- The **Spell Check** button will display the Spell Checker form and will check the spelling in the memo field. The dictionary used to check the spelling is set in the program Preferences (see). When the Add button is pressed the word will be appended to the custom dictionary.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited using the Lines tab:

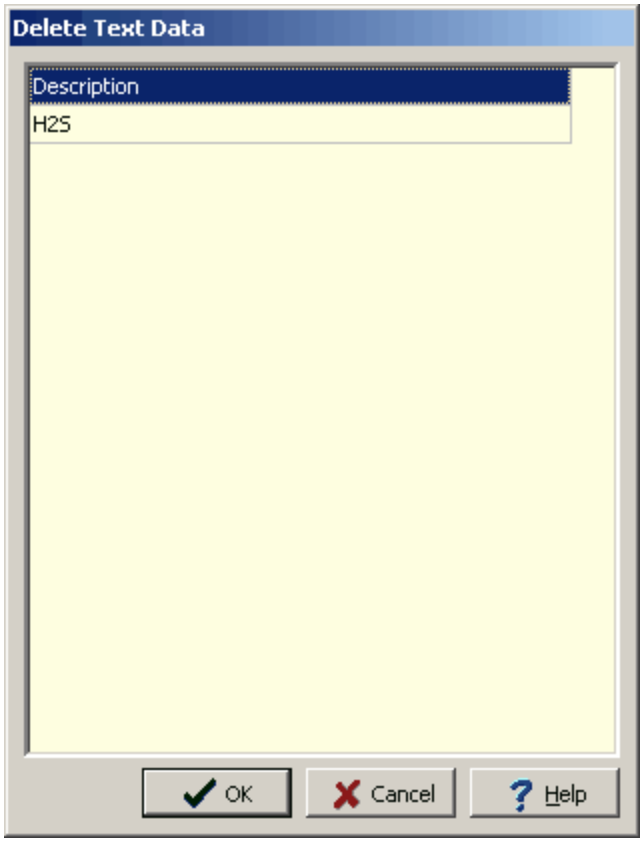
Depth: This is the depth to display the line in the same units as set in the template.

Offset: This is the percentage offset from the left side of the column to start to draw the line. For example, an offset of zero will start the line on the left side of the column and an offset of 50 will start the line in the center of the column.

Width: This is the width of the line, expressed as a percentage of the column width. For example, a width of 50 would draw a line halfway across the column width and a width of 100 would draw a line across the column. The width and offset should be less than or equal to 100.

Style: This is the style of the line. When this column is selected, a button will be displayed for the line type. After this button is pressed, the Line Properties form is displayed. This form is used to set the line style, thickness, and color.

To delete a text dataset from a log select *Edit > Text Data > Delete Text Data*. The Delete Text Data form will be displayed. Select the text dataset to be deleted and press the Ok button.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

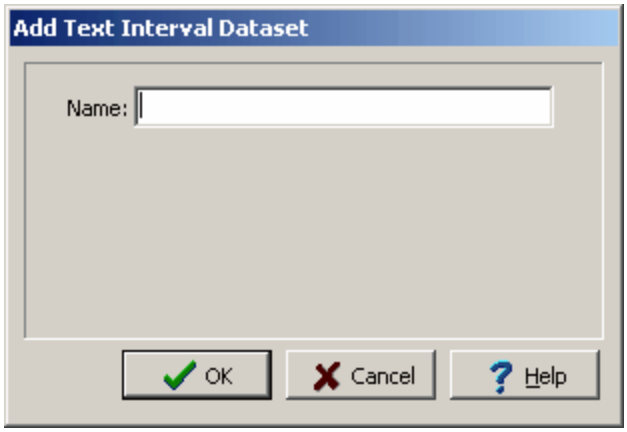
4.1.4.5.68 Text Interval Data

Text Interval columns are similar to text data columns in that they can be used to display text at any depth. In Text Interval columns a top and bottom depth for the text is specified. An optional line can be drawn across the column at these top and bottom depths.

Text Interval columns can also be linked together so that the top and bottom depths only need to be specified once for all of the linked columns. This is useful for samples and laboratory results that are shown on several columns. Facies, Constituent, and Member columns can also be linked. The template for the log specifies which columns are linked.

When a new log is created, text interval datasets will be automatically created for whatever text interval data columns are specified in the template. The names of these text interval datasets will appear in the Text Interval Data submenu of the Edit menu and the Popup menu. It is also possible to create additional text interval datasets or delete datasets as described the sections below.

To add a new text interval dataset to a log select *Edit > Text Interval Data > Add Text Interval Data*. The Add Text Interval Dataset form will then be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

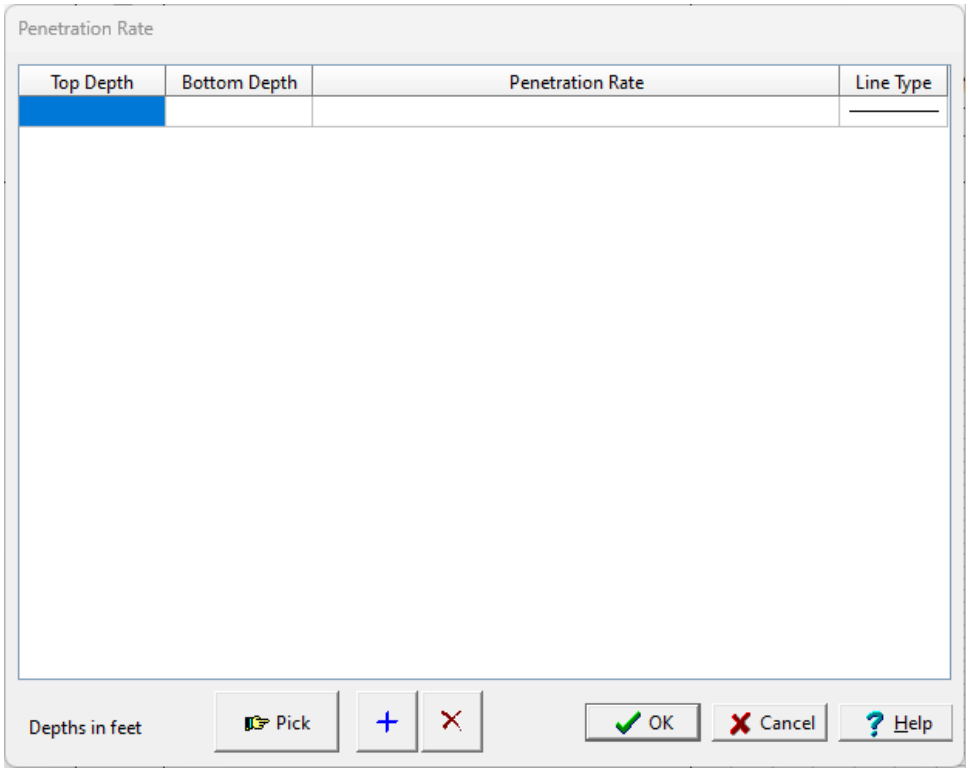
To add a new dataset specify a unique name for the dataset. The text interval data for this dataset will not be displayed on the log unless the template contains a text interval data column with the same name.

There are several ways to edit the text interval data, either:

- click on the text interval data column on the log
- double click on the text interval data object on the sidebar
- select *Edit > Text Interval Data > Text Interval Data Name*
- or select *Popup > Text Interval Data Name*

The menu item that will appear in the Edit, Popup, and sidebar will have the name of the column specified in the template for the log. For example, if the template specified the name of the column as "Penetration Rate", the menu items will also be named "Penetration Rate".This is used to distinguish between different text data columns within the same template.

After this the Text Interval Data form will be displayed. This form will have one or more text columns depending on whether the interval text data is linked to other interval text data on the template.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Top Depth: This is the top depth of the text interval.

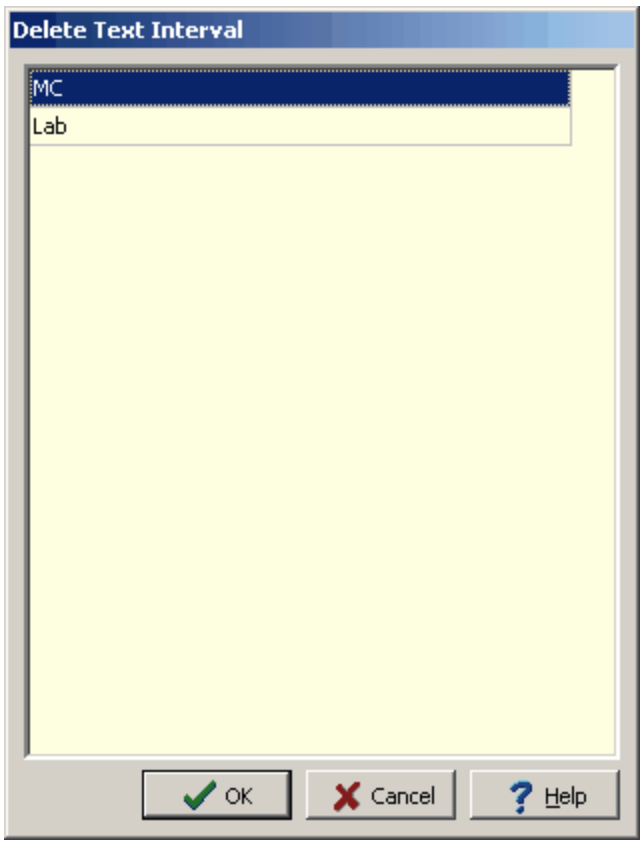
Bottom Depth: This is the bottom depth of the text interval.

Text: This is the text to display in the text interval. The name of this column will be the name of the text interval data. If the text interval data is linked to other text interval data in the template, there will be more than one text interval column.

Line Type: This is the line style to be used for the top and bottom boundaries of the text interval. When the line is clicked on the Line Properties form is displayed. This form is used to set the line style, thickness, and color. The line style can be set to none to display no line at the boundary

At the bottom of this form there are buttons to Pick, Add and Delete text intervals.When the Pick button is pressed you can specify the bottom depth of the interval by clicking on the location on the log.

To delete a text interval dataset from a log select *Edit > Text Interval Data > Delete Text Interval Data*. The Delete Text Interval Data form will be displayed. Select the text interval dataset to be deleted and press the Ok button.



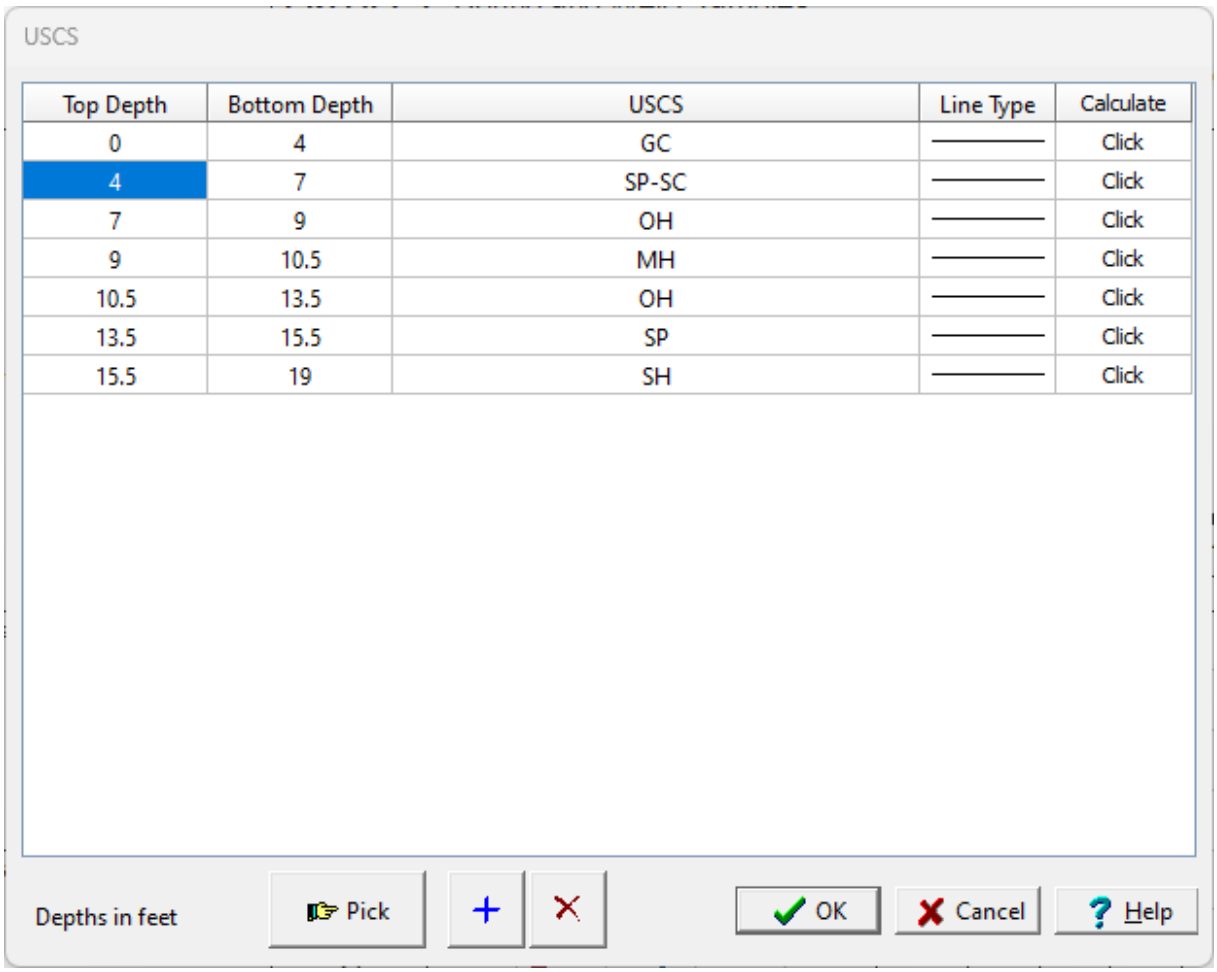
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

4.1.4.5.69 USCS Data

There are several ways to edit Unified Soil Classification System data, either:

- click on the data column on the log
- double click on the data object on the sidebar
- select *Edit > USCS Classification*
- or select *Popup > USCS Classification*

After this the USCS form will be displayed.



The following information can be edited on this form:

Top Depth: This is the top depth of the text interval.

Bottom Depth: This is the bottom depth of the text interval.

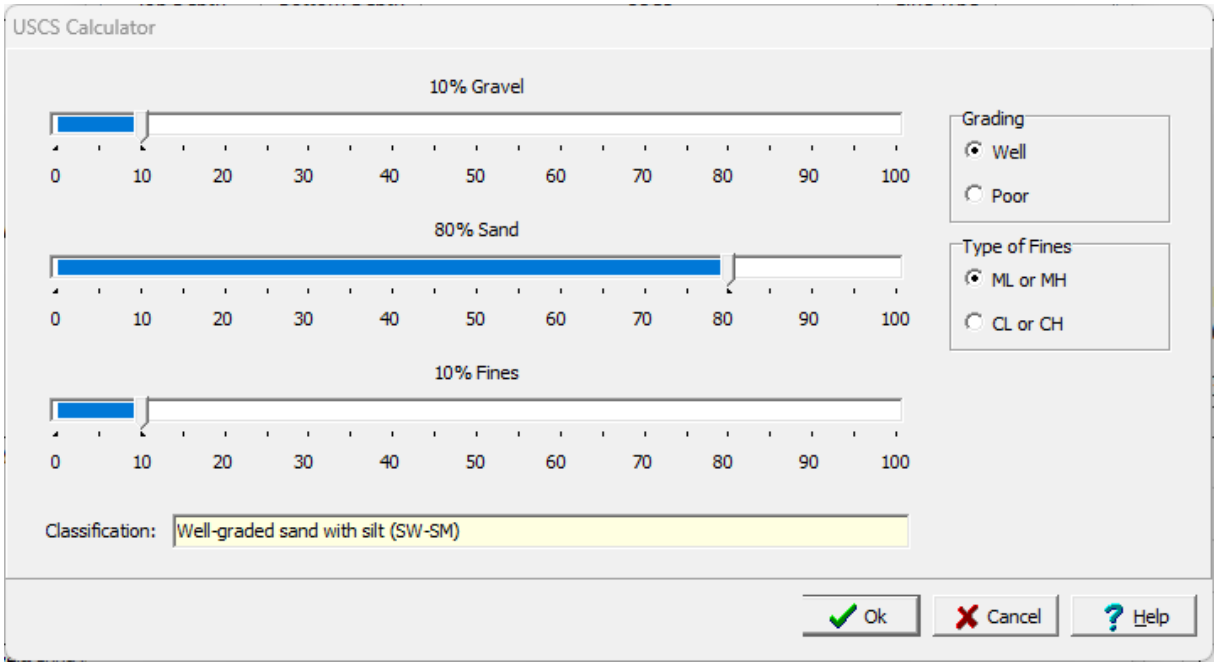
USCS: This is the USCS classification to display in the interval.

Line Type: This is the line style to be used for the top and bottom boundaries of the text interval. When the line is clicked on the Line Properties form is displayed. This form is used to set the line style, thickness, and color. The line style can be set to none to display no line at the boundary

Calculate: Click on this column to use the USCS Calculator 338 as described in the next section, to specify the classification. The classification inserted will either be the full description or only the group code depending on the column customization specified in the template 484.

At the bottom of this form there are buttons to Pick, Add and Delete intervals. When the Pick button is pressed you can specify the bottom depth of the interval by clicking on the location on the log.

The USCS calculator is used to calculate the classification and then insert it into the description.



The classification is calculated by specifying the percent gravel, sand and fines as well as the grading and type of fines. The percentages must add to 100 for the classification to be calculated.

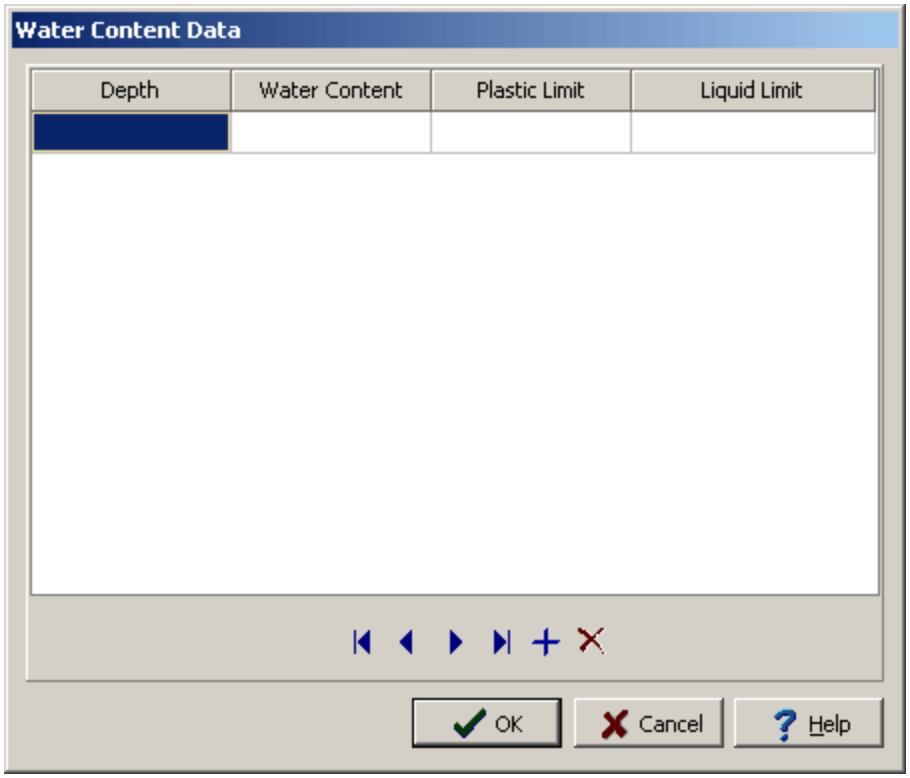
4.1.4.5.70 Water Content

Water Content graphs are used to display the water content, plastic limit, and liquid limit.

There are several ways to edit water content data, either:

- click on the water content column on the log
- double click on the water content object on the sidebar
- select *Edit > Water Content*
- or select *Popup > Water Content*

After this the Water Content Data form will be displayed. At the bottom of this form there are buttons to move to the first, previous, next, and last measurement or to add and delete measurements.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Depth: This is the depth of the water content measurement.

Water Content: This is the water content of the sample.

Plastic Limit: This is the plastic limit of the sample.

Liquid Limit: This is the liquid limit of the sample.

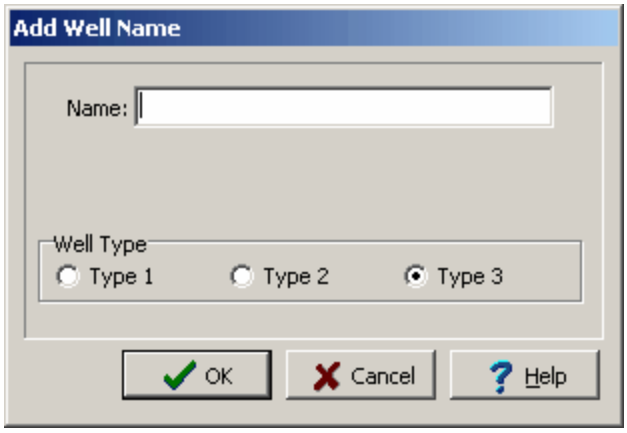
4.1.4.5.71 Well Construction Data

WinLoG RT can display a wide variety of wells at varying levels of detail and complexity. Monitoring, extraction, injection, and almost any other type of well can be displayed on the log. Well completion details and data can be displayed graphically in one or more columns of the log. Almost all of the well information is drawn to scale; including casings, screens, covers, caps, and miscellaneous fittings. This type of well column can contain multiple piezometers, casings, and screens with variable diameters, annotation, and multiple water depths.The log can contain an unlimited number of well columns. In addition, depending upon the type of well column, the well may contain an unlimited number of casings and piezometers.

The data for each well column is grouped into datasets and stored according to the name of the well column. This allows for the display of more than one set of well data on a log. If the name of the well column in the template is changed after the data is entered, the dataset will no longer be displayed in that column. You can change the name of the well dataset for the log to that in the template as described below.

When a new log is created, well datasets will be automatically created for whatever well columns are specified in the template. The names of these well datasets will appear in the Well Data submenu of the Edit menu and Popup menu. It is also possible to create additional well datasets or delete well datasets as described the sections below.

To add a new well dataset to a log select *Edit > Well Data > Add Well*. The Add Well Name form will then be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

To add a new well dataset specify a unique name for the dataset. The well data for this dataset will not be displayed on the log unless the template contains a well column with the same name.

Well data can be entered individually for each log or by using a well macro. Well macros can be used to quickly add standard well components, water level information, and text annotation to a log. Macros can be used for single well installation, complex nested wells, above-ground well casings, etc.

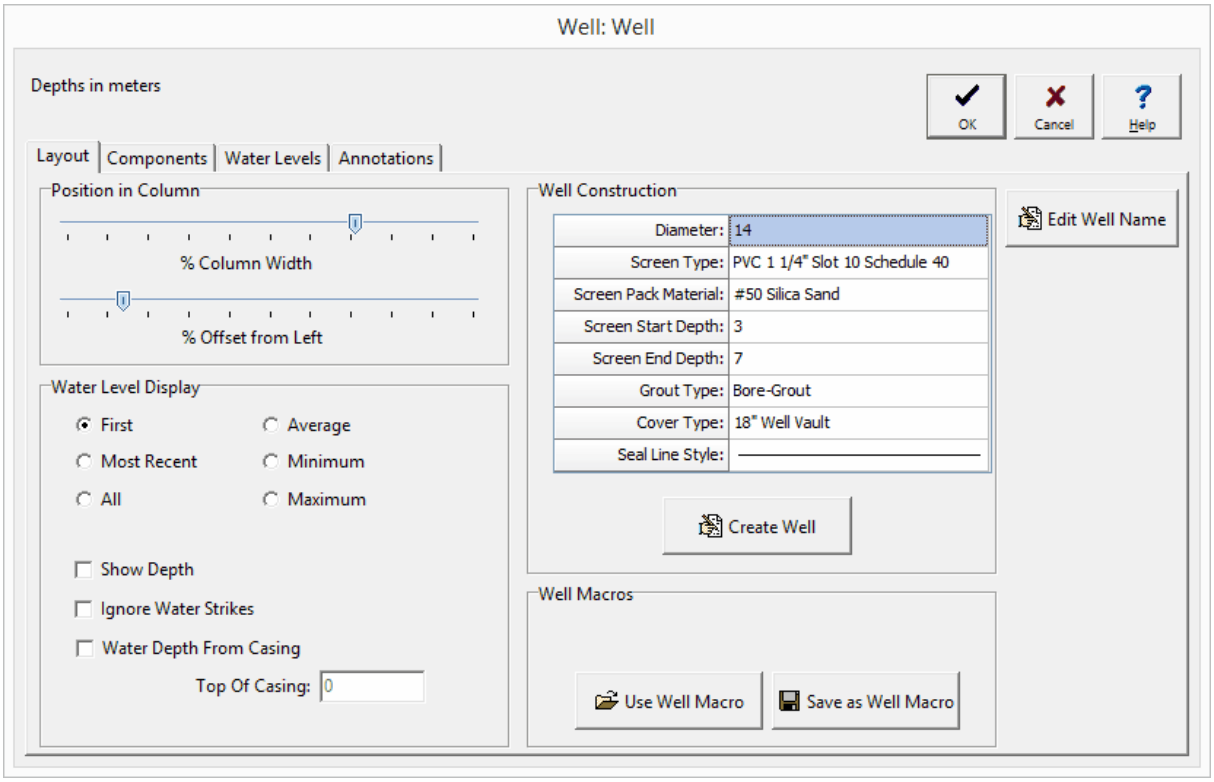
The data for a well consists of:

- hole diameter and layout,
- well components,
- water level measurements, and annotation.

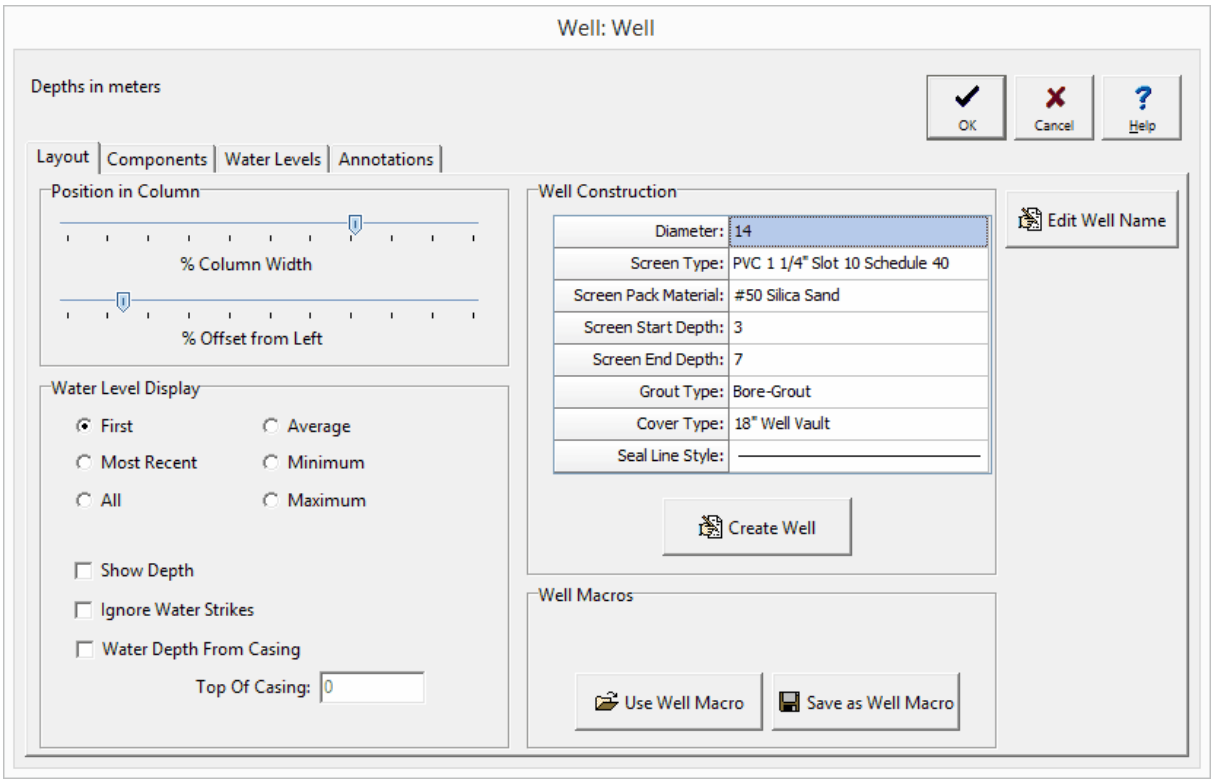
There are several ways to edit the well data, either:

- click on the well on the log
- double click on the Well object on the sidebar
- select *Edit > Well Data > Well Name*
- or select *Popup > Well Name*

After this the Well Data form will be displayed. This form has four tabs; one for the layout, one for the components, one for the water levels, and one for the annotation.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited using the Layout tab:

Position in Column

% Column Width: This is the percentage of the width of the column to use for the hole. The horizontal scale of the well column will then be set such that the hole diameter specified above is equal to this percentage of column width. When setting the % of Column Width space should be made on the sides of the hole for annotation.

% Offset Left: This is the percentage of the column width to offset the hole from the left side of the column. This parameter is used to position the hole inside the column. The sum of the % Offset and % of Column Width should always be less than or equal to 100. For example, if the % of Column Width is 70 and the % Offset is 10. Then the leftmost 10% of the column would be used for annotation, the next 70% of the column would contain the well components, and the last 20% of the column would be used for annotation.

Water Level Display

Water Level Display Type: This is used to select the type of water levels to display when there are multiple water levels.

Show Depth: This will automatically annotate the water depth on the log.

Ignore Water Strikes: When there are multiple water levels, check this box to not include water strikes.

Water Depth from Casing: Check this box to indicate that the water depths are measured from the top of the casing.

Well Construction

The components and annotation can be automatically created by the program using the information specified for the well construction.

Diameter: This is the outside diameter of the well.

Screen Type: This is used to select the type and diameter of the screen.

Screen Pack Material: This is used to select the packing material around the screen.

Screen Start Depth: This is used to specify the start depth of the screen.

Screen End Depth: This is used to specify the end depth of the screen.

Grout Type: This is used to select the type of grout used in the well.

Cover Type: This is used to select the type and height of the well cover.

Seal Line Style: This is used to select the line style for the seal.

After this information has been specified click on the Create Well button to automatically generate the components and annotation for the well.

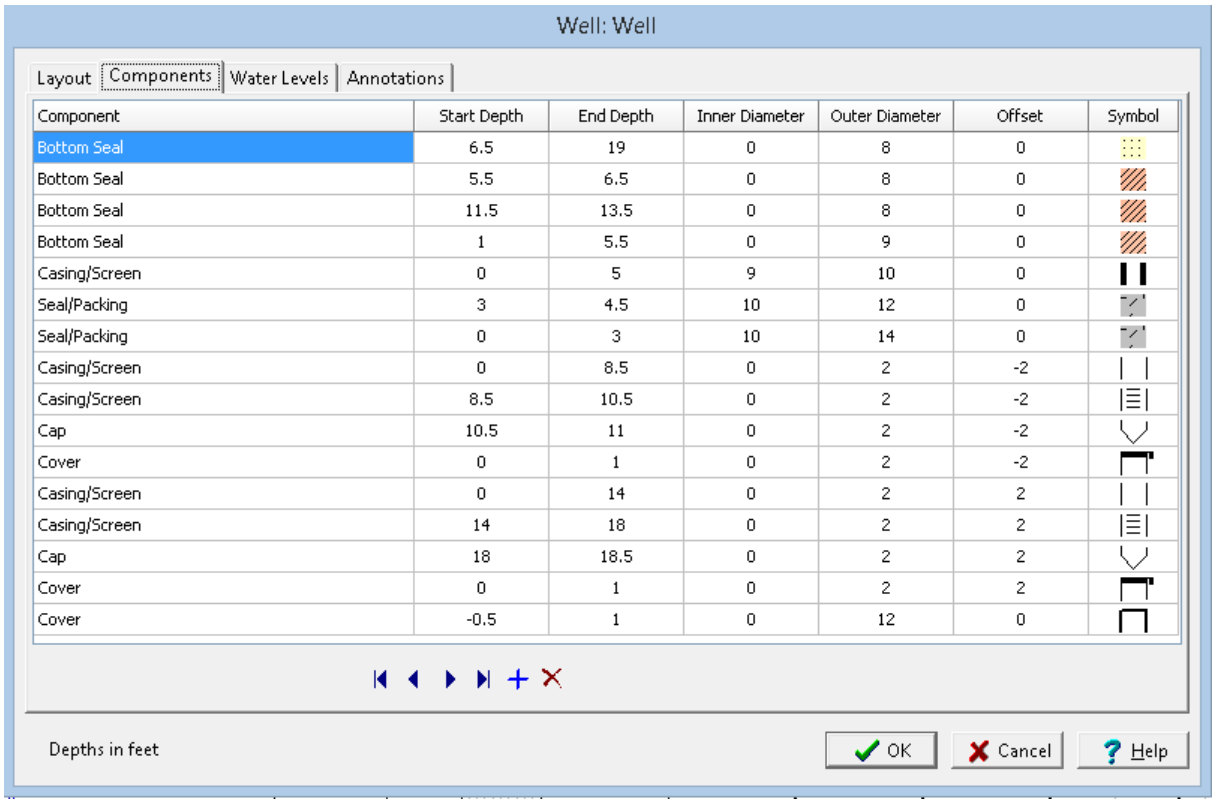
Well Macros

If a well macro is to be used it should be selected first by pressing the Use Well Macro button on the Layout tab. Well macros can also be created after the well data has been input for a log, using the Save as Well Macro button on the Layout tab. When this button is pressed a form will be displayed where you can specify the name of the well macro.

Well Name

The name of the well dataset can be changed by clicking on the Edit Well Name button at the bottom of the tab. A new unique well name can then be entered in the Edit Well Name form shown on the next page. Changing the name of the well dataset will affect whether the well is displayed in the log. For the well to be displayed the template must contain a well column with the same name.

The Components tab is used to enter the well components. These components consist of covers, caps, casings/screens, seals/packing, bottom seals, joints, and miscellaneous fittings.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited using this tab:

Component: This is the type of well component. When the cursor is clicked in this column, a combo box will be displayed. By clicking on the arrow to the right of this box, the type of component can be

selected. The types of components that can be selected are Cover, Cap, Joint/Misc., Casing/Screen, Seal/Packing, and Bottom Seal.

Start Depth: This is the start depth of the component in the same units as set in the template.

End Depth: This is the end depth of the component

Inner Diameter: This is the inner diameter of the component. It is only used for Seal and some Casing/Misc. components. These components will be drawn such that the shading and symbol patterns will fill the gap between the inner and outer diameters of the component. The components that use the inner diameter are discussed under the appropriate symbol at the end of this section.

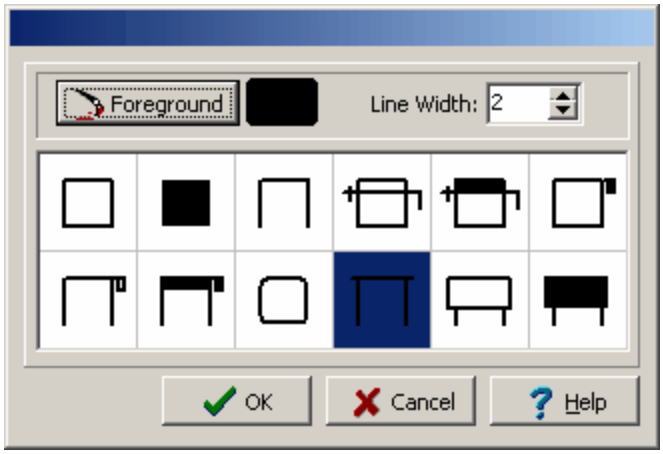
Outer Diameter: This is the outer diameter of the component and is used by all of the types of components. The outer diameter must be less than the hole diameter. The width of the component inside the well column is determined by the ratio of the outer diameter and hole diameter. For example; if the outer diameter is 2 inches and the hole diameter is 8 inches, then the components width would be ¼ of the hole width.

Offset: This is the offset of the component from the center of the hole. Offsets to the left are negative and offsets to the right are positive. By specifying an offset to the component, multiple casings and piezometers can be placed within a single well column. For example; to specify two piezometers in a hole 10 inches in diameter. One piezometer could have an offset of –3 inches and the other piezometer could have an offset of 3 inches. The first piezometer would then be between 2 and 4 inches on the left side of the hole, and the second piezometer would be between 2 and 4 inches on the right side of the hole.

Symbol: This is the symbol to use for the component. The symbols available will vary depending upon the type of component. When the cursor is clicked inside this column one of the symbol forms described below will be displayed, depending on the type of component.

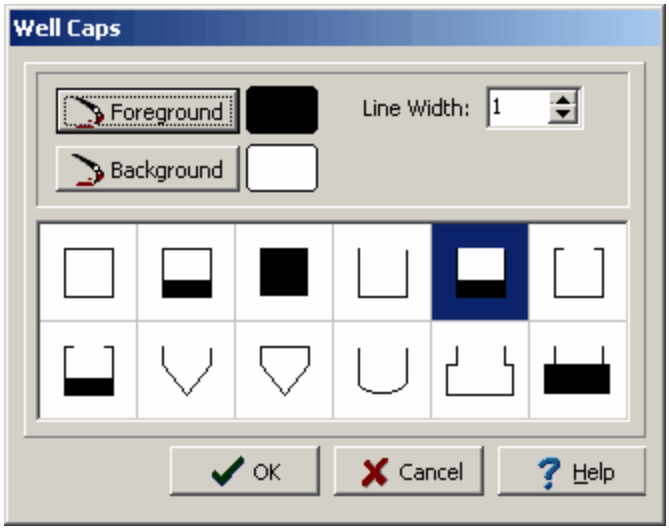
Cover

If the type of component is Cover then the Well Covers form will be displayed. Using this form the foreground color, line width, and symbol of the well cover can be selected.



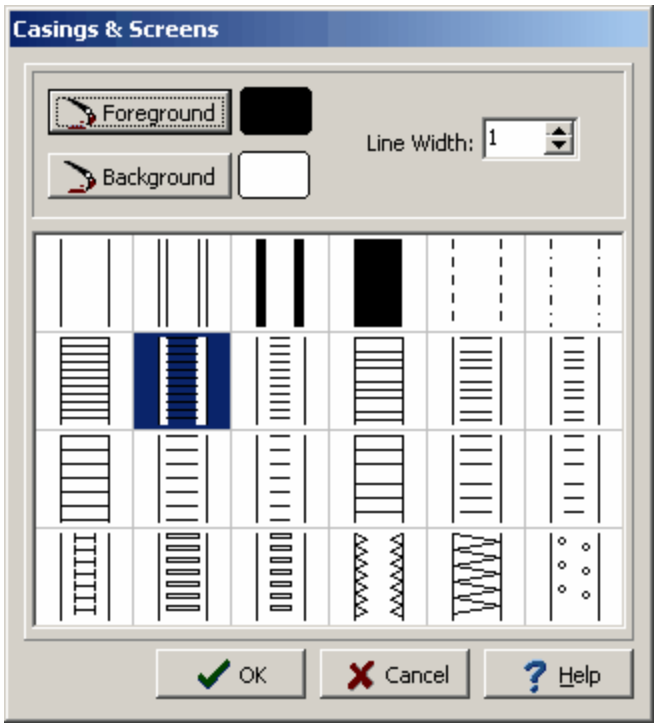
Cap

If the type of component is Cap then the Well Caps form will be displayed. This form is used to select the foreground and background colors, line width, and symbol for the cap.



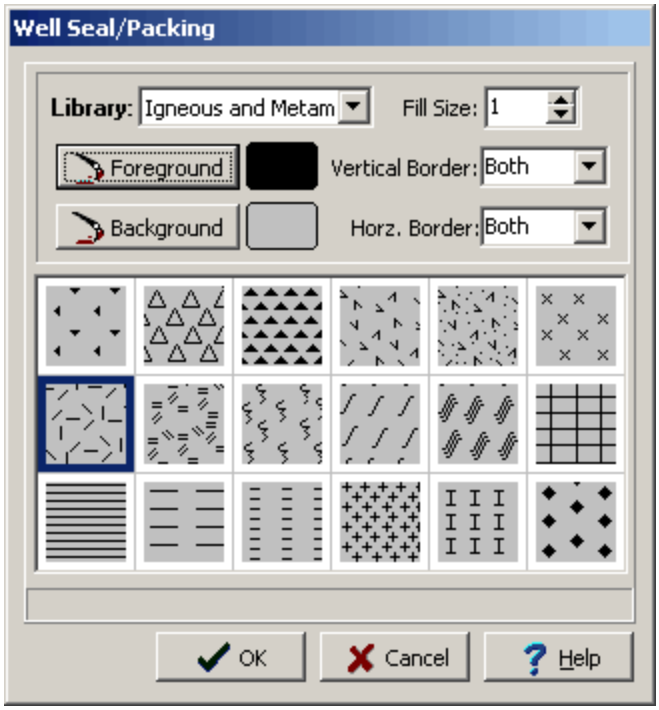
Casing/Screen

If the type of component is Casing/Screen then the Casings & Screens form will be displayed. This form is used to select the foreground and background colors, line width, and symbol for the casing or screen. If the inner diameter is specified, these symbols will fill the gap between the inner and outer diameter with the background color. Except for the third symbol, which will fill the gap with the foreground color.



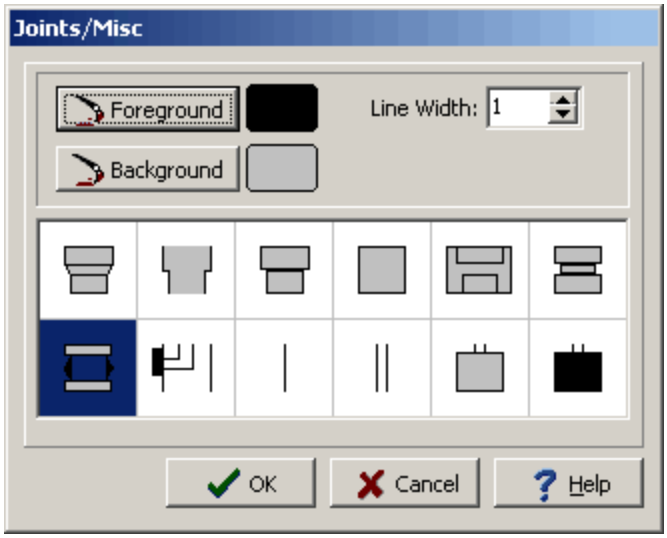
Seal/Packing

If the type of component is Seal/Packing or Bottom Seal then the Well Seal/Packing form will be displayed. This form is used to select the lithologic library, foreground and background colors, line width, vertical and horizontal borders, and symbol for the seal or packing. The line style used for the vertical and horizontal borders is set in the Layout tab. If the component is not a Bottom Seal and the inner diameter is specified, these symbols will fill the gap between the inner and outer diameter with the selected symbol. A Bottom Seal will fill everything between the outer diameter and any interior components with the selected symbol.



Joint/Misc.

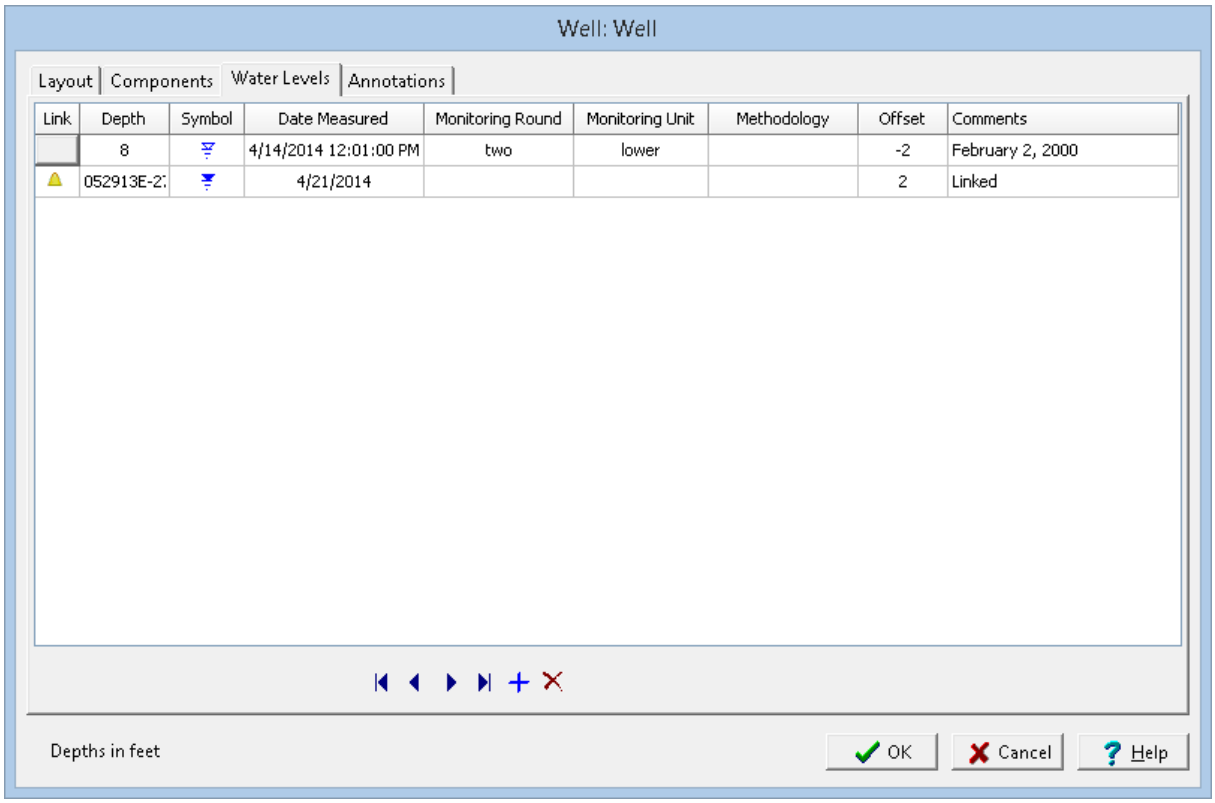
If the type of component is Joint/Misc. then the Joints/Miscellaneous form will be displayed. This form is used to select the foreground and background colors, line width, and symbol. The first 6 symbols are used to represent couplings between pipes. All these couplings except for the 4th and 6th, will use the inner diameter as the bottom diameter of the connector. The bottom 6 symbols can be used for packers, sampling ports, cables, tubes, probes, and bailers. Of these 6 symbols, only the packer uses both the inner and outer diameters of the component.



The buttons at the bottom of this tab are used for the following:

- The **Start** button moves to the first component.
- The **Previous** button moves to the previous component.
- The **Next** button moves to the next component.
- The **End** button moves to the last component.
- The **Insert** button creates a new component.
- The **Delete** button deletes this component.

The Water Levels tab below is used to edit the water levels measured in the well.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited using this tab:

Link: To link a water level to an EDMS groundwater sample click on the Link column for that water level. Then click on the button that appears. A list of EDMS groundwater samples that are associated with the boring/well will be displayed, select the groundwater sample to link. The data from the EDMS groundwater sample will automatically be shown on the Water Levels tab and well column. In the Link column for this water level a triangle symbol will be shown to indicate that the water level is linked to an EDMS groundwater sample. Except for the symbol and comments, the data for this linked water level cannot be edited in the boring/well log. More information see the Water Level Integration section in Chapter 4..This field is not used in WinLoG RT.

Depth: This is the measured depth of the water level in the same units as set in the template.

Symbol: This is the symbol to use to represent the water table. When the cursor is clicked on this column, the Water Level Symbol form is displayed. This form is used to select the symbol, symbol size, color, and line width.

Date Measured: This can be used to select the date that the water level was measured.

Monitoring Round: This is used to specify the monitoring round for the water level.

Monitoring Unit: This is used to specify the monitoring unit for the water level.

Methodology: This is used to specify the methodology used to measure the water level.

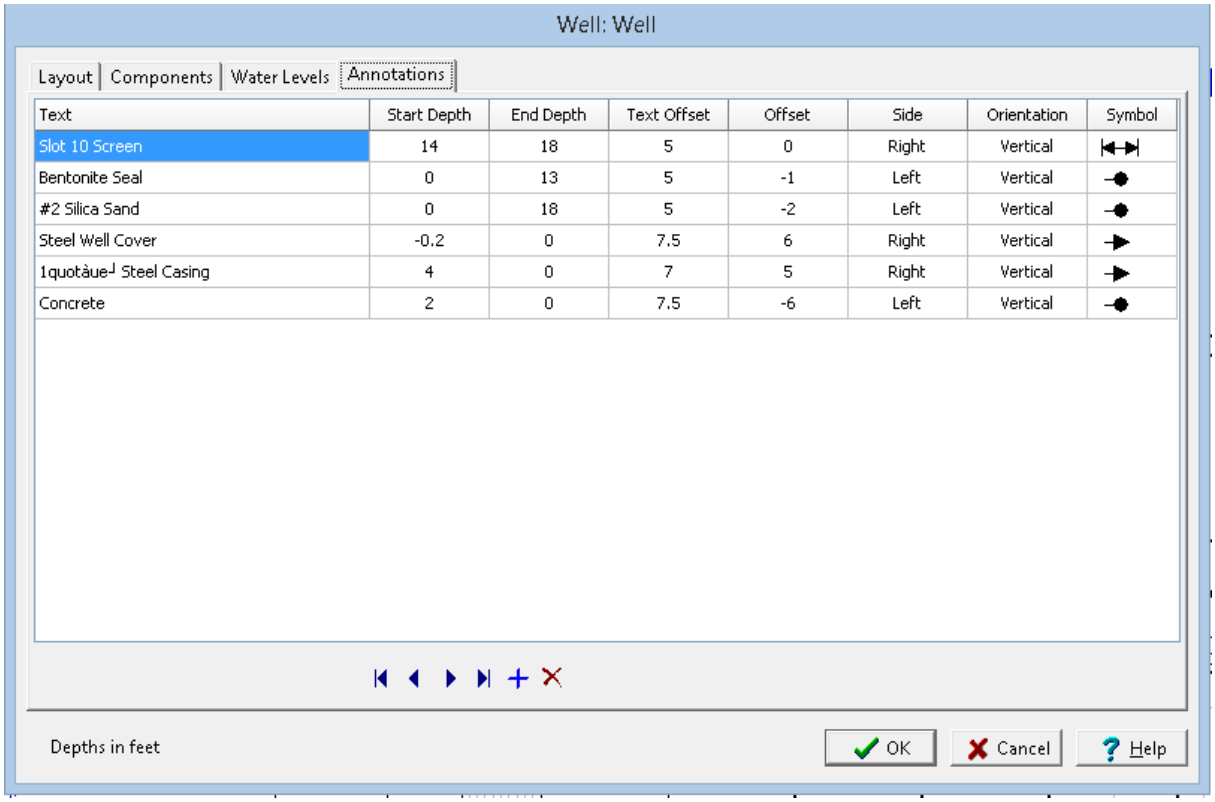
Offset: This is the offset to place the water level symbol from the center of the hole. Offsets to the left are negative and offsets to the right are positive.

Comments: This is the text to display above the water level symbol. The text will be oriented vertically above the symbol.

The buttons at the bottom of this tab are used for the following:

- The **Start** button moves to the first water level.
- The **Previous** button moves to the previous water level.
- The **Next** button moves to the next water level.
- The **End** button moves to the last water level.
- The **Insert** button creates a new water level.
- The **Delete** button deletes this water level.

The Annotations tab is used to enter the text describing the well completion details and other information.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited using this tab:

Text: This is the text to use for annotation.

Start Depth: This is the starting depth to display the text, the text will be positioned below this start depth. If the start depth is zero and the symbol type is not a double arrow, the start depth will be ignored and the end depth will be used to position the text.

End Depth: This is the end depth to use for displaying the text. The text will be positioned above this depth. If the end depth is zero and the symbol type is not a double arrow, the end depth will be ignored and the start depth will be used to position the text.

Text Offset: This is the offset to place the text from the center of the hole. The sign of the offset is ignored, and the Side is used to determine which side of the hole to place the text. In order for the text to appear outside of the well components, the text offset must be greater than the hole radius.

Offset: This is the offset used to position the start of the arrow or circle inside of the well components. Offsets to the left are negative and offsets to the right are positive. In order for the arrow or circle that leads to the text to start in the well components, the offset must be less than the hole radius.

Side: This is the side of the hole to place the text. When the cursor is clicked inside of this column, a combo box will be displayed, and either the left or right side can be selected.

Orientation: This is the orientation of the text. When the cursor is clicked inside of this column, a combo box will be displayed and the orientation can be set to either horizontal or vertical.

Symbol: This is the symbol to use to draw the text leaders. When the cursor is clicked inside this column, the Annotation Symbol form will be displayed. This form can be used to select the symbol type, symbol size, and line style. If the symbol type is Double Arrow and the text orientation is horizontal, the double arrows will not be drawn.

The buttons at the bottom of this tab are used for the following:

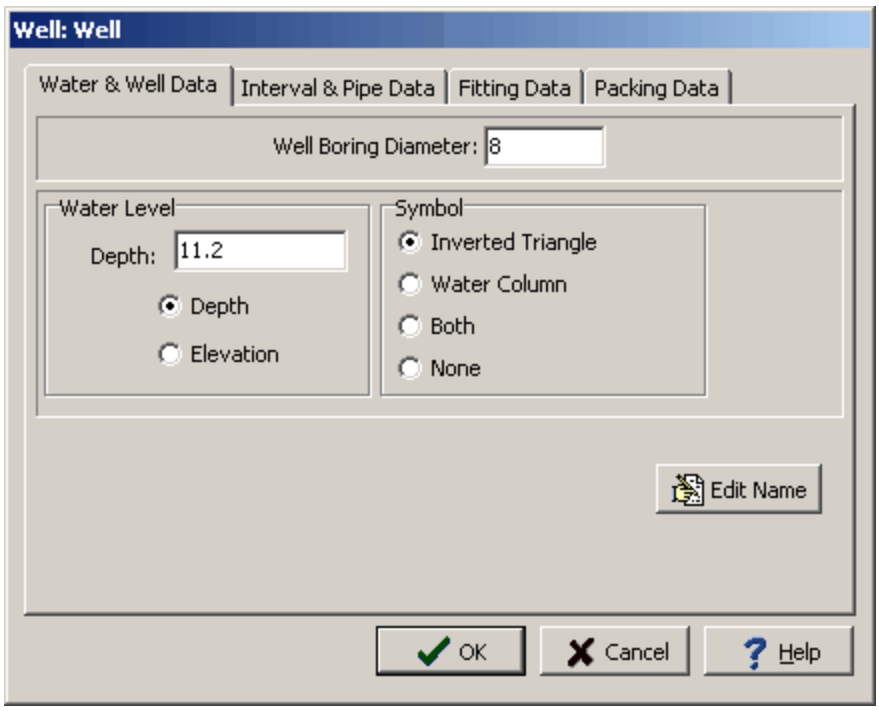
- The **Start** button moves to the first annotation.
- The **Previous** button moves to the previous annotation.
- The **Next** button moves to the next annotation.
- The **End** button moves to the last annotation.
- The **Insert** button creates a new annotation.
- The **Delete** button deletes this annotation.

Simple wells are inherited from Well Type 2 wells in version 4 of WinLoG. These well columns can be used to display more simple well constructions. In most cases regular well columns are recommended for use.

There are several ways to edit the well data, either:

- click on the well on the log
- double click on the Well object on the sidebar
- select *Edit > Well Data > Well Name*
- or select *Popup > Well Name*

After this the Well Data form will be displayed. This form has four tabs; one for the water and well data, one for the interval and pipe data, one for the fitting data, and one for the pipe data.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

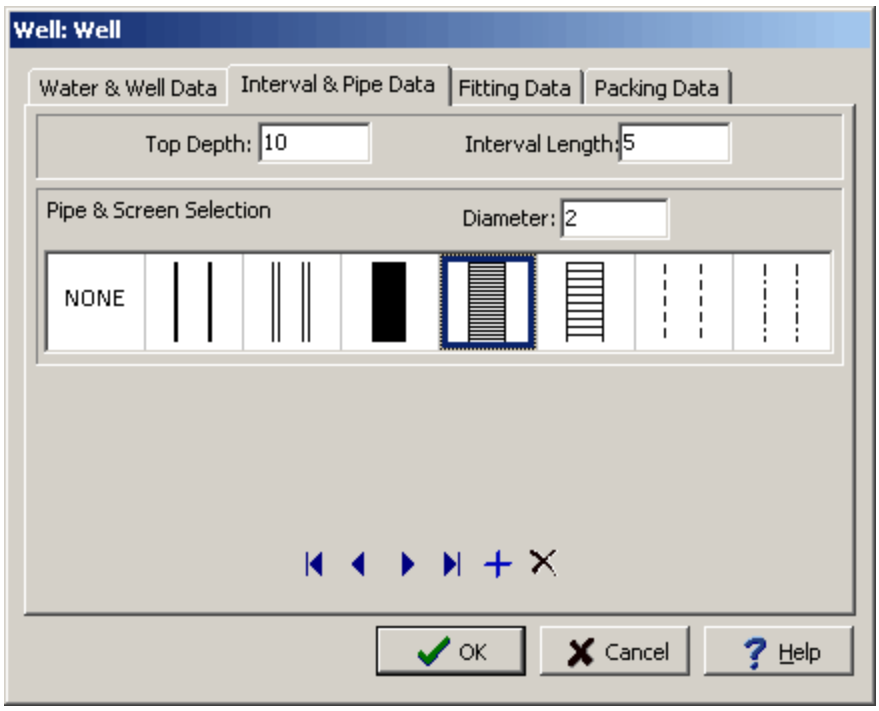
The following information can be edited on this tab:

Well Boring Diameter: This is the diameter of the hole. The well diameter will be used to scale the screen and pipe within the column.
For example, if the well diameter is specified as 10 inches, then a screen diameter of 4 inches will occupy 40% of the column width. By
specifying these diameters, varying screen and pipe diameters can be represented in the monitoring well.

Water Level: This is the depth to the water table. The input can be either depths or elevations, this will be used for the input of
the screen and pipe intervals as well.

Symbol: The symbol to use to draw the water table.

Edit Name: The name of the well dataset can be changed by clicking on the Edit Name button at the bottom of the tab. A new unique well name can then
be entered in the Edit Well Name form. Changing the name of the well dataset will affect whether the well is displayed in the borehole log. For
the well to be displayed the template must contain a well column with the same name.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this tab:

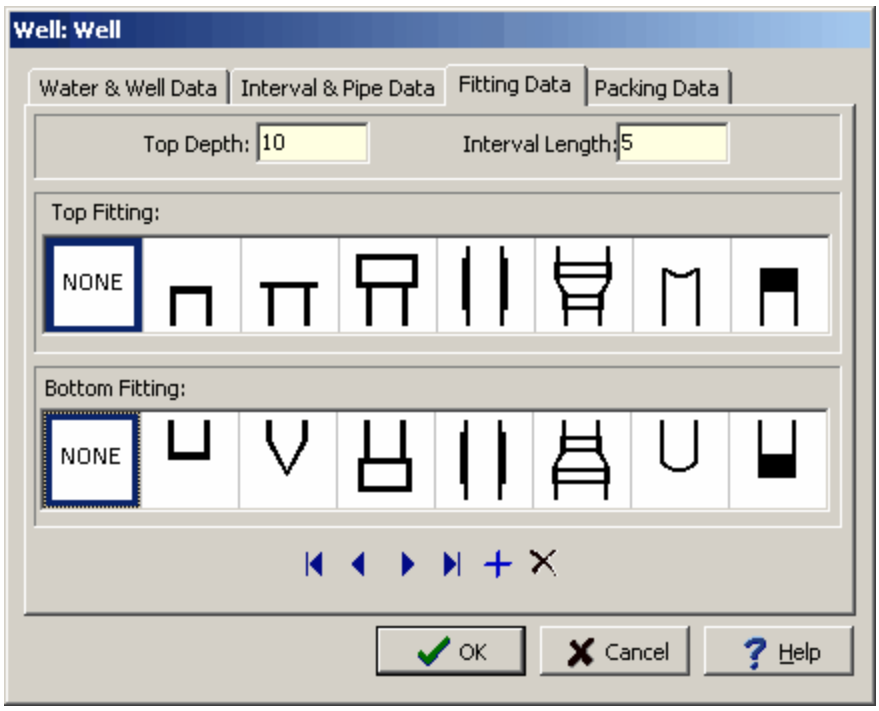
Top Depth: This is the top depth of the well interval/layer in the same units as set in the template. The bottom depth will be the top depth plus
the interval length.

Interval Length: This is the length of the interval in the same units as the top depth.

Diameter: This is the diameter of the pipe or screen in the same units as the Well Diameter. The pipe diameter will be used to scale the size of
the pipe in the column depending upon the well diameter that was previously entered. It is possible to have more than one size of pipe in the
monitoring well, and to use the reducing and enlarging fittings to switch between pipe diameters.

Symbol:This is the symbol to use for the pipe or screen. One of the 8 symbols shown can be selected by clicking on it with the mouse.

The buttons at the bottom of the tab can be used to move to the first interval, move to the previous interval, move to the next interval, move to the last interval, add an interval, delete an interval.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this tab:

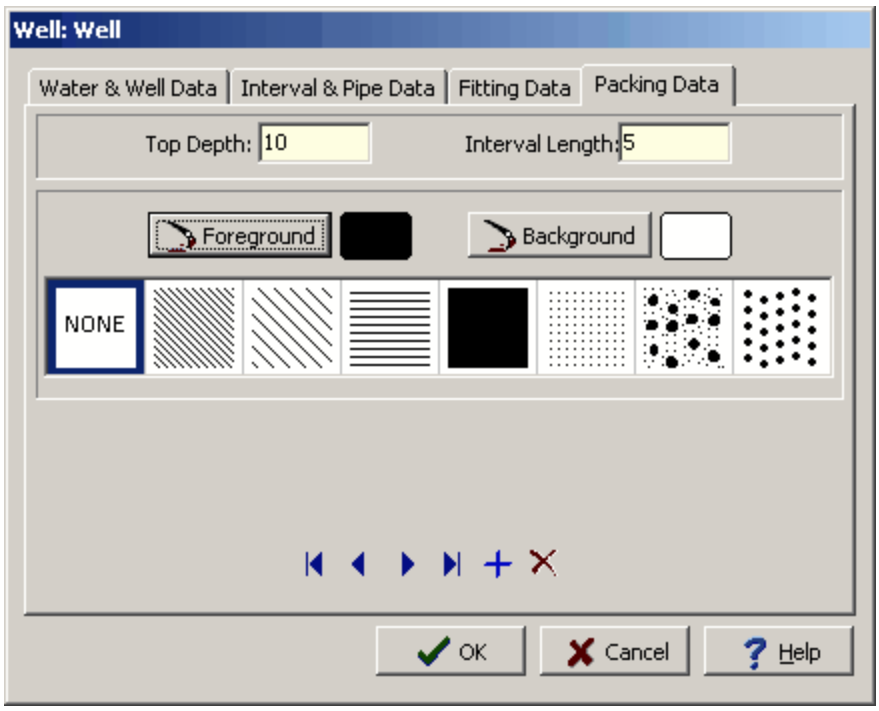
Top Depth:This is the top depth of the well interval/layer in the same units as set in the template. The bottom depth will be the top depth plus
the interval length.

Interval Length: This is the length of the interval in the same units as the top depth.

Diameter: This is the diameter of the pipe or screen in the same units as the Well Diameter. The pipe diameter will be used to scale the size of
the pipe in the column depending upon the well diameter that was previously entered. It is possible to have more than one size of pipe in the
monitoring well, and to use the reducing and enlarging fittings to switch between pipe diameters.

Symbol:This is the symbol to use for the pipe or screen. One of the 8 symbols shown can be selected by clicking on it with the mouse.

The buttons at the bottom of the tab can be used to move to the first fitting, move to the previous fitting, move to the next fitting, move to the last fitting, add a fitting, delete a fitting.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this tab:

Top Depth: This is the top depth of the well interval/layer in the same units as set in the template. The top depth of the interval must be
entered on the Interval & Pipe Data tab.

Interval Length: This is the length of the interval in the same units as the top depth. The interval length must be entered on the Interval &
Pipe Data tab.

Foreground Color:This is the color of the shaded region of the symbol. The color can be changed by clicking on the Foreground button.
The Color form on the next page will then be displayed and either a basic or a custom color can be selected.

Background Color: This is the color of the unshaded region of the symbol. The color can be changed by clicking on the Background button.
The Color form below will then be displayed and either a basic or a custom color can be selected.

Symbol: This is the symbol to use for the packing material in this interval. One of the 8 symbols shown can be selected by clicking on it with
the mouse.

The buttons at the bottom of the tab can be used to move to the first packing, move to the previous packing, move to the next packing, move to the last packing, add a packing, delete a packing.

To delete a well dataset from a log select *Edit > Well Data > Delete Well*. The Delete Well form will be displayed. Select the well to be deleted and press the Ok button.

(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

4.1.4.6 Deviation Survey Data

A boring/well deviation survey is usually accomplished by moving a probe along the hole and sensing the movement of the probe relative to one or more frames of reference which may include the earth's gravitational field, magnetic field or other inertial reference, and/or by sensing the distortion or bending of the housing of the probe itself. The different methods each have their own advantages and limitations such as ability / inability to operate inside steel casing, speed and complexity of operation, accuracy, cost, distance between measurements, ruggedness and reliability.

4.1.4.6.1 Setting the Deviation Calculation

WinLoG RT provides five different calculations from which to calculate X,Y, and Z coordinates based on a deviation survey which includes the measured depth, inclination angle, and the azimuth angle.

These include:

1. Average Angle method

2. Balanced Tangential method
3. Minimum Curvature method
4. Radius Of Curvature method
5. Tangential method

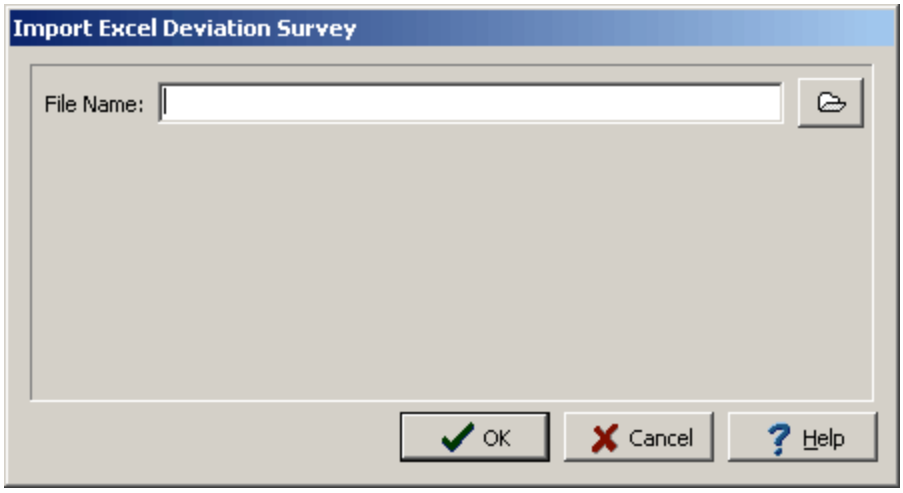
The user can select which which method to use to correct depths in the program Preferences. To set the method select *File > Preferences* and then click on the Logs tab.

4.1.4.6.2 Importing a Deviation Survey

WinLoG RT gives the user three choices when it comes to importing deviation surveys:

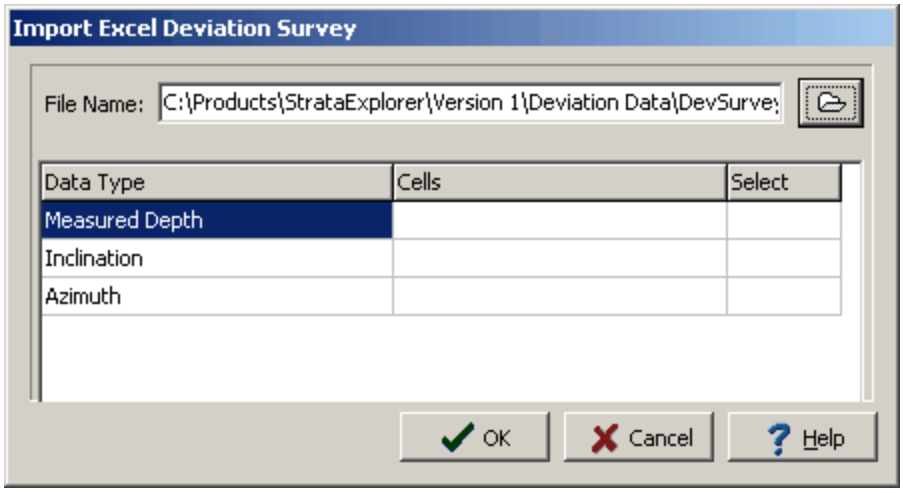
1. Excel spread sheet.
2. LAS file.
3. ASCII file.

To import a deviation survey from an Excel file select *File > Import > Deviation Survey > Excel File*, the Import Excel Deviation Survey Form below will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

After the name of the Excel File is specified, the Import Excel Deviation Survey Form will contain a grid that contains three rows and three columns as shown below.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The Row Headers are:

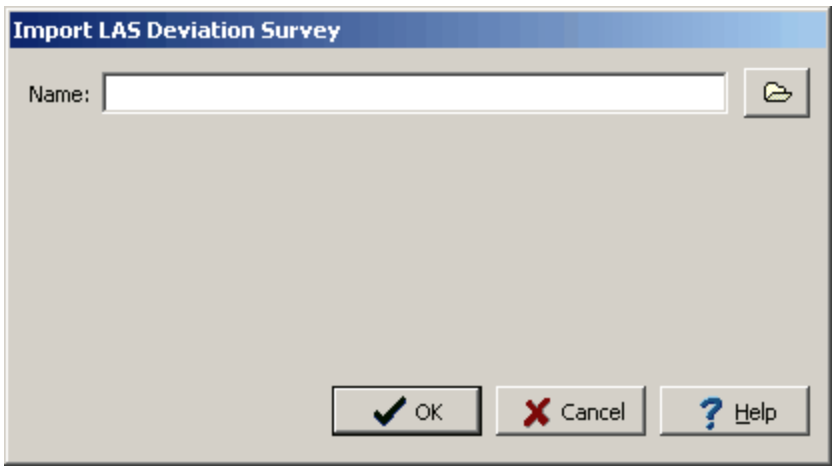
Measured Depth: The measured depth at which a deviation survey reading was taken.
Inclination: This is the dip of the borehole from true vertical. The angle is measured from the vertical, so that an angle of 0 represents vertical.
Azimuth: The azimuth angle is the compass bearing, relative to true (geographic) north, of a point on the horizon directly beneath an observed object. The horizon is defined as a huge, imaginary circle centered on the observer, equidistant from the zenith (point straight overhead).

The Column Headers are:

Data Type: The data type to be stored in a cell.
Cells: The cells chosen from the spread sheet for a data type. In general you should choose the same number of cells for the measured Depth, as you do for the Inclination and azimuth.
Select: Clicking the select column once shows the Select button for that row. Double clicking it opens up the Excel Spread sheet from which you can select the deviated survey data.

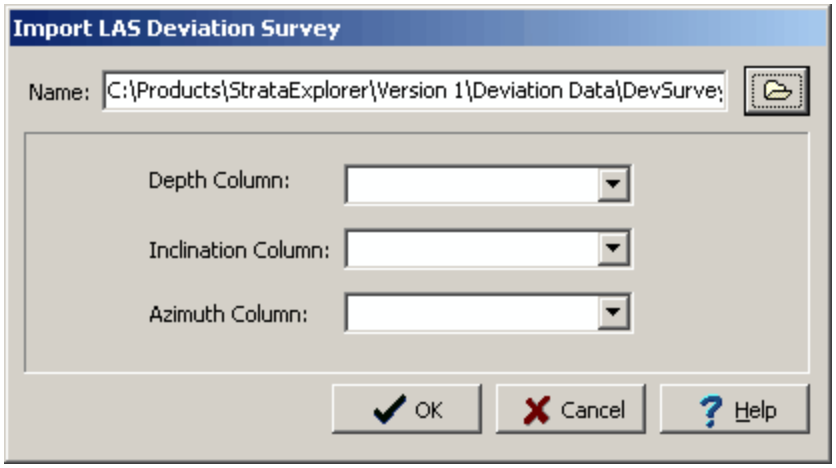
To add Measured Depth data double click the first row in the select column. This will open the excel file, select the cells you wish to use for the measured depth data then right click the mouse.Repeat this process for the inclination and azimuth. Finally click the OK button to process the data.

To import a deviation survey from an LAS file select *File > Import > Deviation Survey > LAS File*, the Import Excel Deviation Survey Form below will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

After the name of the LAS File is specified, the Import Excel Deviation Survey Form will be as shown below.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be entered on the form:.

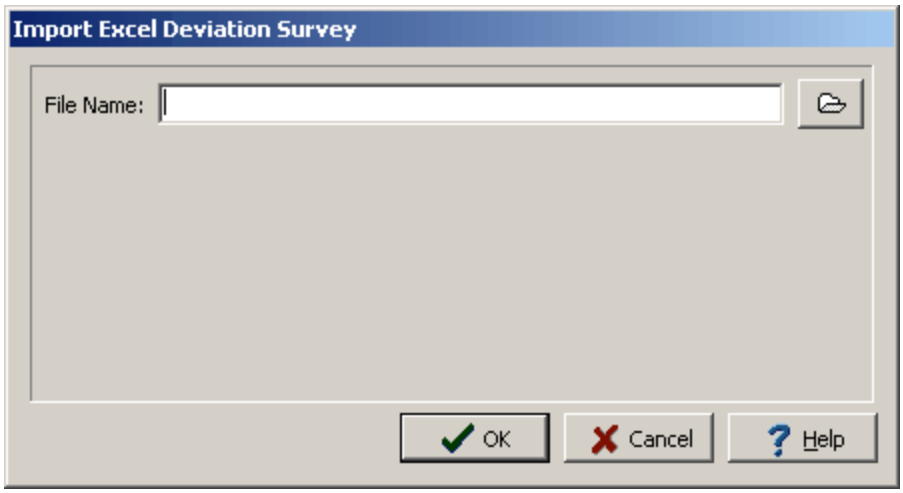
Depth Column: This is the measured depth column data in the LAS File. The user defines this column by selecting the appropriate Depth column from the list of all columns in the LAS file using the the combo box to the right.

Inclination Column: This is the Inclination column the LAS File. The user defines this column by selecting the appropriate Inclination column from the list of all columns in the LAS file using the the combo box to the right. The angle is measured from the vertical, so that an angle of 0 represents vertical.

Azimuth Column: This is the Azimuth column the LAS File. The user defines this column by selecting the appropriate Azimuth column from the list of all columns in the LAS file using the the combo box to the right.

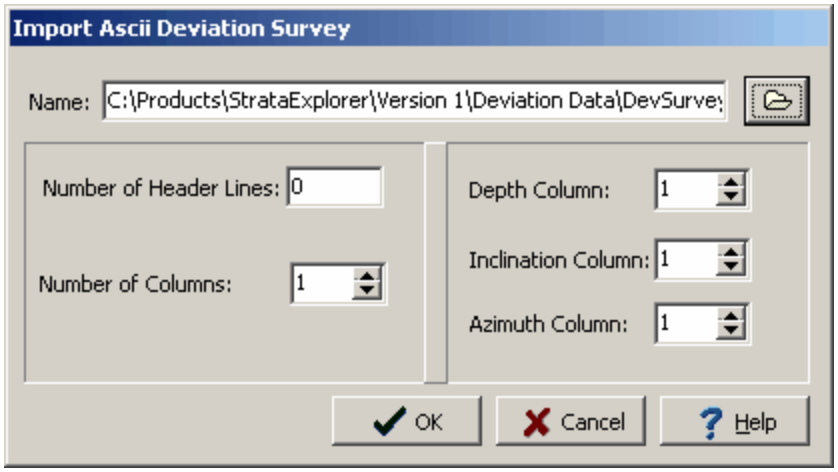
After all of the above information has been specified, press Ok to process the file.

To import a deviation survey from an ASCII select *File > Import > Deviation Survey > ASCII File*, the Import Excel Deviation Survey Form below will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

After the name of the ASCII File is specified, the Import Excel Deviation Survey Form will be as shown below.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be entered:

Number of Header Lines: This is the number of lines of header information in the ASCII file.

Number of Columns: This is the number of columns of data that in the ASCII file.

Depth Column: This is the column of data to use for the measured depth data.

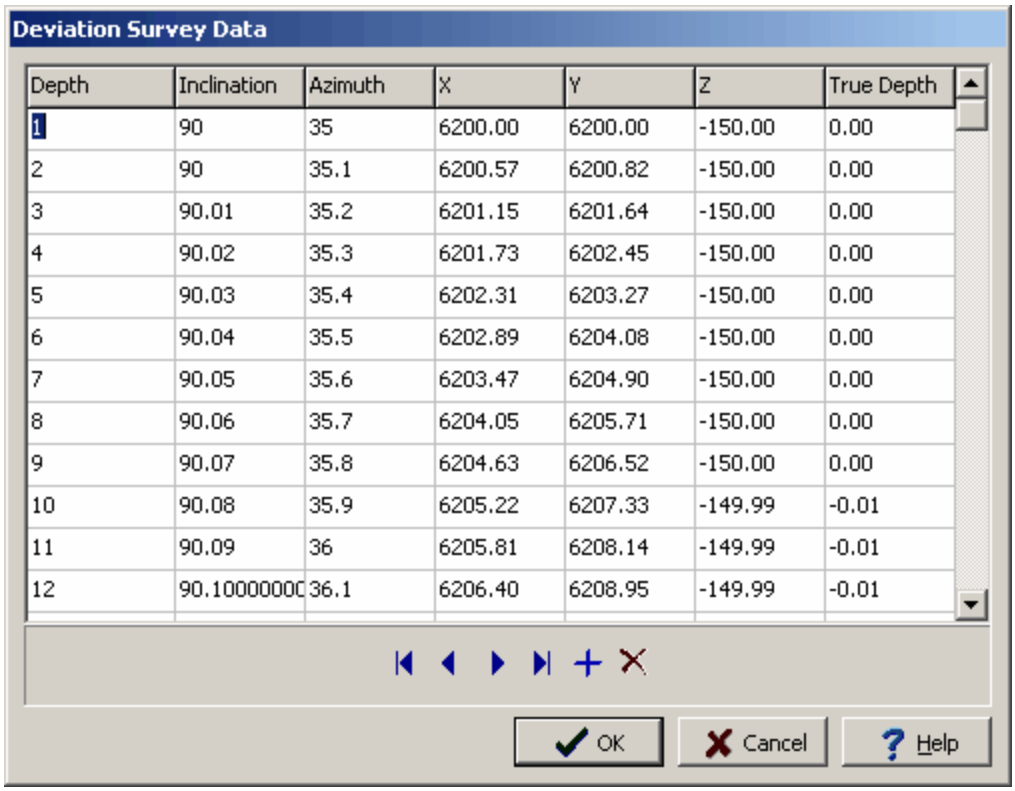
Inclination Column: This is the column of data to use for the inclination data. The angle is measured from the vertical, so that an angle of 0 represents vertical.

Azimuth Column: This is the column of data to use for the azimuth data.

After all of the above information has been specified, press Ok to process the file.

4.1.4.6.3 Editing Deviation Survey Data

You can edit a deviation survey in the event that there are some spurious points in the data. To edit the deviation data select the *Edit > Deviation Survey* or if the template does not contain a deviation survey column select *Edit > All Data Types > Deviation Survey*. The Deviation Survey Data form below will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Depth: This is the measured depth down the hole.

Inclination: This is the measured inclination at this depth.

Azimuth: This is the measured azimuth at this depth.

X: This is the calculated x-coordinate at this depth and can not be edited.

Y: This is the calculated y-coordinate at this depth and can not be edited.

Z: This is the calculated z-coordinate at this depth and can not be edited.

True Depth: This is the calculated true vertical depth and can not be edited.

The buttons at the bottom of the form can be used to move to the first point, previous point, next point, last point, insert a point, or delete a point.

4.1.4.6.4 Switching between Measured Values and True Values

You can easily switch between measured depth values and the calculated true depth values by clicking the Deviation Survey button on the log toolbar.

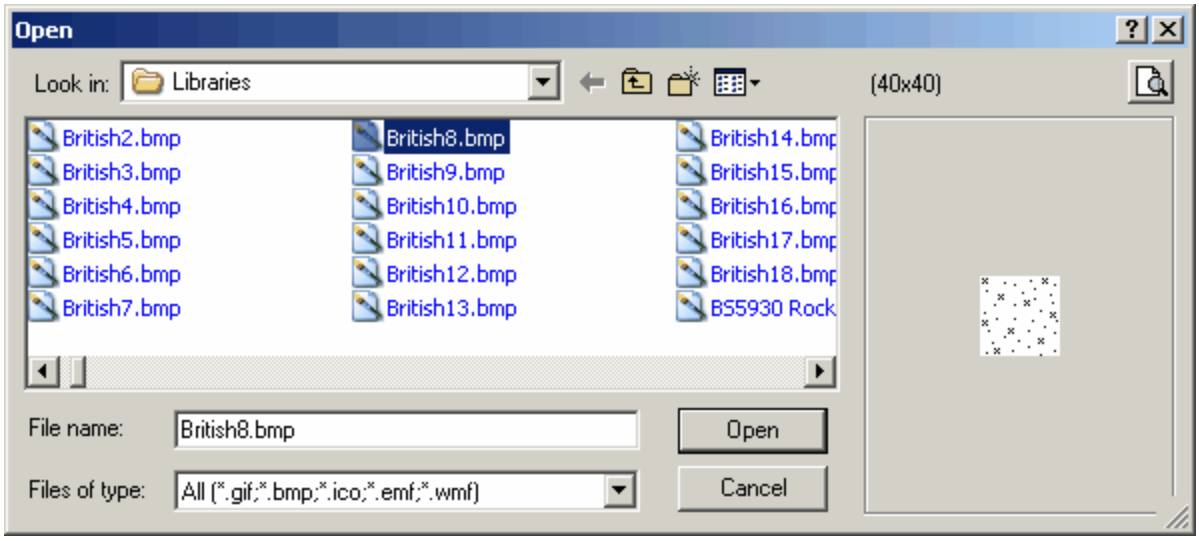
4.1.4.7 Draw Objects

Draw objects are used to place common drawing objects anywhere on a log. Types of draw objects are paragraph text, lines, bitmaps, rectangles, and tables. Draw objects are displayed over top of any information on the log.

4.1.4.7.1 Bitmaps

Bitmaps contained in common bitmap files can be added anywhere on a log. These bitmaps can be used to show company logos, site plans, legends, and other graphical information.

To add a bitmap to a log click on the Bitmap button on the toolbar. Next using the left mouse button click on the location of the center of the bitmap. The Open Bitmap form will then be displayed. Select the bitmap file and then press the Open button.

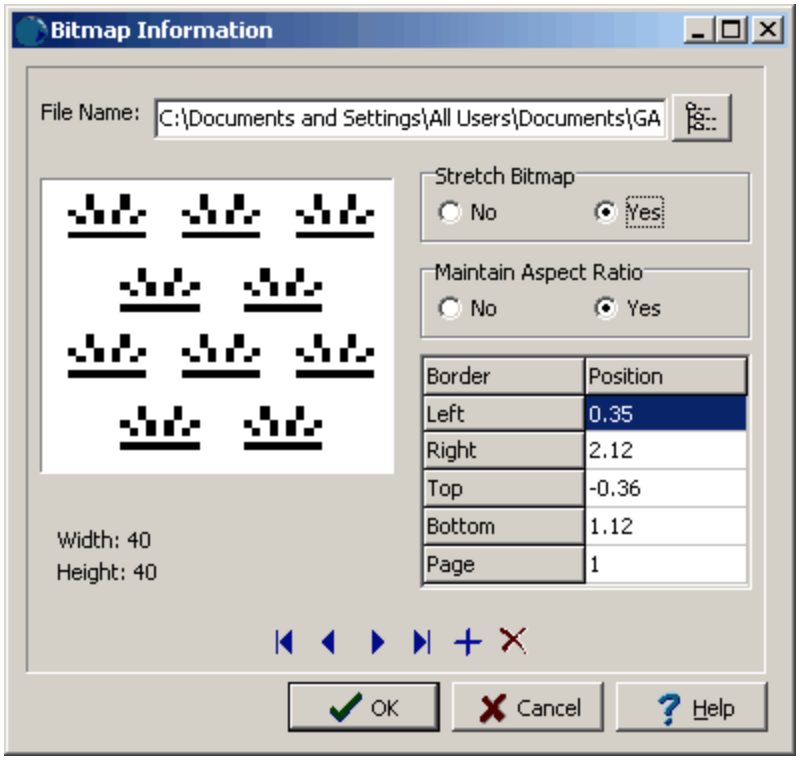


(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

Existing bitmaps on a log can be editing by:

- selecting *Edit > Bitmaps*
- double-clicking on the bitmap object on the sidebar
- clicking on the bitmap on the log

After performing one of the above tasks, the Bitmap Information form will be displayed. At the bottom of this form there are buttons to move to the first, previous, next, and last bitmap or to add and delete bitmaps.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

File Name: This is the name of the bitmap file to display on the log. To change the name of the file, edit this name or click on the button to the right of the name. If the button to the right is pressed, an Open bitmap file form will be displayed. Select the desired file and then press the Open button.

Stretch Bitmap: Select yes to stretch the bitmap to fit within the specified borders. If no is selected, only the center of the bitmap and page can be entered for the position.

Maintain Aspect Ratio: Select yes to keep the aspect ratio of the bitmap on the log the same as stored in the file. If yes is selected the bottom of the bitmap will be automatically adjusted to maintain the aspect ratio. If Stretch Bitmap is set to No, then this field will not be displayed and it is assumed that the aspect ratio is maintained.

Left: This is the position of the left border of the bitmap in inches or millimeters from the left side of the page. If Stretch Bitmap is set to No then this field will not be displayed.

Right: This is the position of the right border of the bitmap in inches or millimeters from the left side of the page. If Stretch Bitmap is set to No then this field will not be displayed.

Top: This is the position of the top border of the bitmap in inches or millimeters from the top of the page. If Stretch Bitmap is set to No, then this field will not be displayed.

Bottom: This is the position of the bottom border of the bitmap in inches or millimeters from the top of the page. If the Stretch Bitmap is set to No or Maintain Aspect Ratio is set to yes, then this field will not be displayed and the bottom will be calculated by the program.

Page: This is the page to display the bitmap.

Center X: This is the bitmap's horizontal center in inches from the left side of the page. If Stretch Bitmap is set to Yes, this field will not be displayed. If the Bitmap button on the toolbar is used to create the bitmap, this field will be filled in by the program.

Center Y: This is the bitmap's vertical center in inches from the left side of the page. If Stretch Bitmap is set to Yes, this field will not be displayed. If the Bitmap button on the toolbar is used to create the bitmap, this field will be filled in by the program.

To delete a bitmap click on the bitmap on the sidebar and select *Popup > Delete*.

4.1.4.7.2 Lines and Arrows

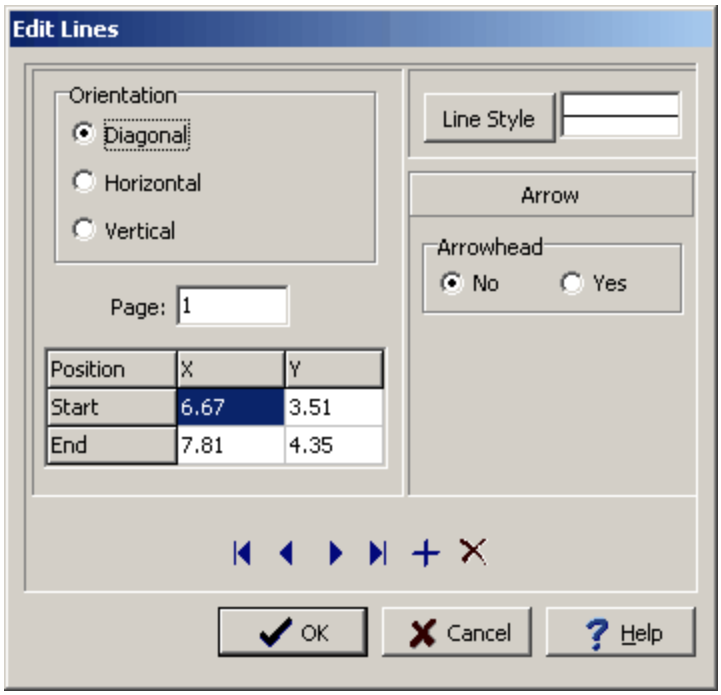
Horizontal, vertical, and diagonal lines and arrows can be added anywhere on a log.

To add a line or arrow to a log click on the Line button on the toolbar. Next using the left mouse button click on the location of the starting point of the line or arrow. Then while holding down the left mouse button, drag the cursor to the end of the line or arrow and release the mouse button. The Edit Lines form described in the next section will then be displayed.

Existing lines or arrows on a log can be editing by:

- selecting *Edit > Lines*
- double-clicking on the line object on the sidebar
- clicking on the line or arrow on the log

After performing one of the above tasks, the Edit Lines form will be displayed. At the bottom of this form there are buttons to move to the first, previous, next, and last line or to add and delete lines.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Orientation: This is the orientation of the line, either diagonal, horizontal, or vertical. If the orientation is set to horizontal, the vertical position will be set to the Y position of the start of the line. If the orientation is set to vertical, the horizontal position will be set to the X position of the start of the line.

Page: This is the page to display the line. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

Start X: This is the horizontal position of the start of the line in inches or millimeters from the left side of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

Start Y: This is the vertical position of the start of the line in inches or millimeters from the top of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

End X: This is the horizontal position of the end of the line in inches or millimeters from the left side of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

End Y: This is the vertical position of the end of the line in inches or millimeters from the top of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

Line Style: This is the style of the line. The line style can be changed by pressing the Line Style button. The Line Properties form below will then be displayed. Using this form the style, color, and width of the line can be set.

Arrowhead: To display an arrowhead at the start or end of the line select yes.

Arrow Position: This is position to place the arrowhead, either at the start or end of the line. If no arrowhead is selected above, this field will not appear.

Arrowhead Size: This is the size of the arrowhead. If no arrowhead is selected above, this field will not appear.

The size of the line or arrow can be changed using the Edit Line form or the mouse. To adjust the size using the mouse, click on the line or arrow so that marquee boxes appear on the ends and middle of the line or arrow. Click on one of the end marquee boxes and drag it to the new size.

The position of the line or arrow can be changed using the Edit Line form or the mouse. To move the line or arrow using the mouse, click on the line or arrow so that marquee boxes appear on the ends and middle of the line or arrow. Click on the center marquee box and drag it to the new position.

To delete a line or arrow click on the line or arrow on the sidebar and select *Popup > Delete*.

4.1.4.7.3 Paragraph Text

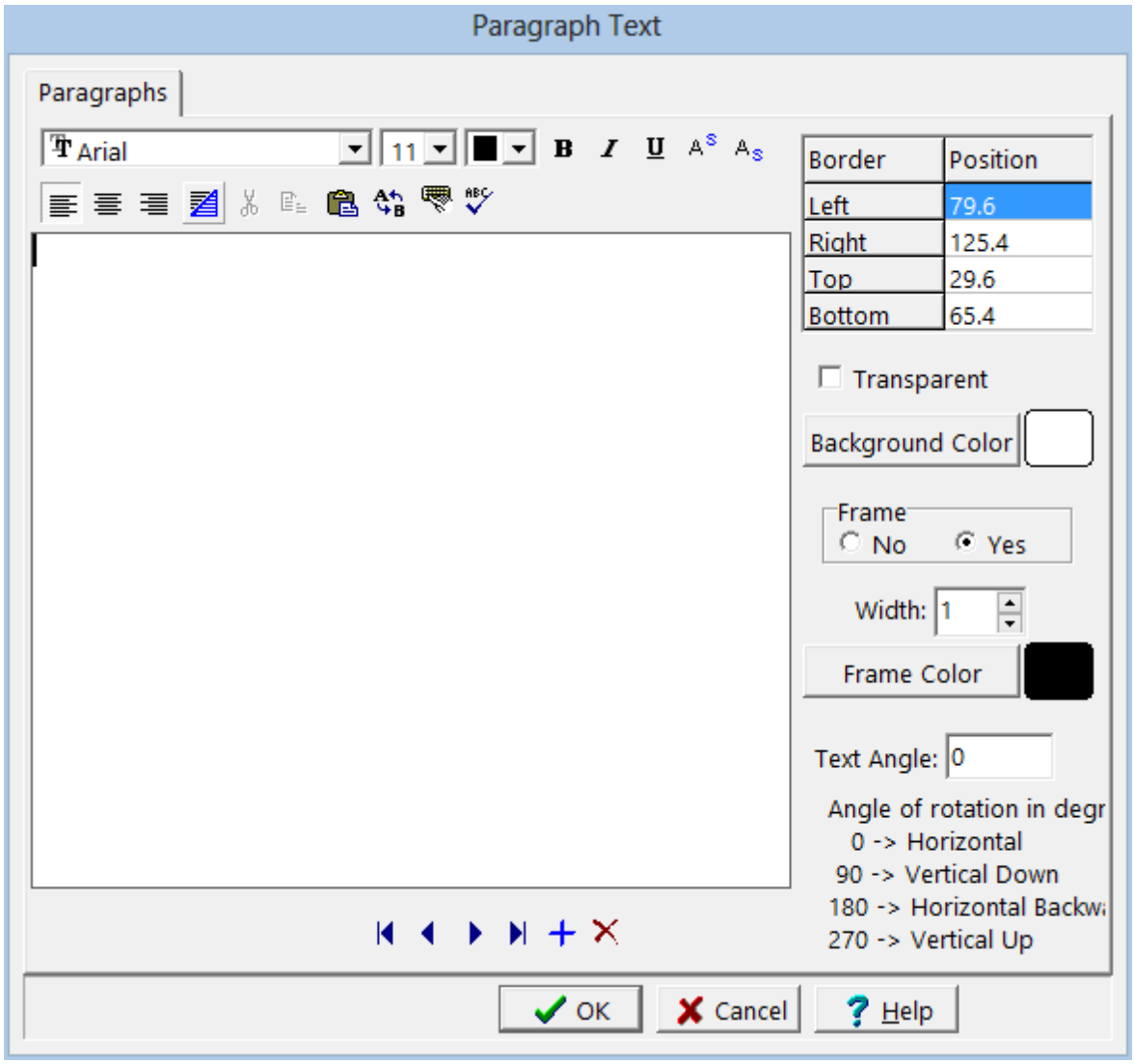
Floating paragraph text boxes can be added anywhere on a log. These boxes can overlap boundaries between the header, footer, and columns. Paragraph text boxes are typically used to add comments or a legend that applies to the entire log.

To add a paragraph to a log click on the Paragraph button on the toolbar. Next using the left mouse button click on the location of the upper left corner of the paragraph text box. Then while holding the left mouse button down drag the mouse to the location of the lower right corner, and then release the mouse button. While the mouse button is held down a marquee box will be drawn to indicate the location of the paragraph box. After the button has been released, the Paragraph Text form described in the next section will be displayed.

Existing paragraph text on a log can be editing by:

- selecting *Edit > Paragraph Text*
- double-clicking on the paragraph object on the sidebar
- clicking on the paragraph on the log

After performing one of the above tasks, the Paragraph Text form will be displayed. At the bottom of this form there are buttons to move to the first, previous, next, and last paragraph or to add and delete paragraphs.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Text: This is the text for the paragraph. There is no limit to the length of the text. The Rich Text toolbar at the top of the form is used to format the text. This toolbar is described below.

Left: This is the position of the left border of the paragraph in inches or millimeters from the left side of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Right: This is the position of the right border of the paragraph in inches or millimeters from the left side of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Top: This is the position of the top border of the paragraph in inches or millimeters from the top of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Bottom: This is the position of the bottom border of the paragraph in inches or millimeters from the top of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Page: This is the page to display the paragraph text. If the log contains only one page, this field will not appear.

Transparent: Check this box to make the paragraph text box transparent.

Background Color: This is the background color of the paragraph text box. When the Background Color button is pressed, the Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified.

Frame: Select yes to display a frame around the paragraph text.

Frame Width: This is the line width of the frame around the paragraph text. If no frame is selected above, this field will not be displayed.

Frame Color: This is the color of the frame to display around the paragraph text. When the Frame Color button is pressed, the Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified. If no frame is selected above, this field will not be displayed.

At the top of the Paragraph Text form is the Rich Text toolbar, this toolbar can be used to modify the font characteristics of the text. Before selecting a speed button, the text to be modified should be selected with the mouse.

The speed buttons of the toolbar perform the following functions:

- The **Font Typeface** box is used to select the name of the font to use for the selected text.
- The **Font Size** box is used to set the size of the font for the selected text.
- The **Font Color** box is used to select the color of the font for the selected text.
- The **Bold** button is used to toggle the bold attribute of the selected text on and off.
- The **Italics** button is used to toggle the italic attribute of the selected text on and off.
- The **Underline** button is used to toggle the underline attribute of the selected text on and off.
- The **Superscript** button is used to toggle the superscript attribute of the selected text on and off.
- The **Subscript** button is used to toggle the subscript attribute of the selected text on and off.
- The **Left Justify** button will left justify the selected text.
- The **Center Justify** button will center justify the selected text.
- The **Right Justify** button will right justify the selected text.
- The **Select All** button will select all of the text in the memo field.
- The **Cut** button will remove the selected text and place it in the clipboard.

- The **Copy** button will copy the selected text to the clipboard.
- The **Paste** button will paste the text in the clipboard, at the current position of the cursor in the memo field.
- The **Find** button will find the specified text in the memo field.
- The **Replace** button will replace the specified text in the memo field.
- The **Symbol** button will display the Symbol form. This form is used to place a symbol at the current cursor position in the memo field. To select a symbol use the Font box to select the font containing the symbol and then select the desired symbol. After the desired symbol has been selected, press the Ok button to insert it into the memo field.
- The **Spell Check** button will display the Spell Checker form and will check the spelling in the memo field.

The size of the paragraph can be changed using the Paragraph Text form or the mouse. To adjust the size using the mouse, click on the paragraph text so that marquee boxes appear on the edges of the paragraph. Click on one of the corner marquee boxes and drag it to the new size.

The position of the paragraph can be changed using the Paragraph Text form or the mouse. To move the paragraph using the mouse, click on the paragraph text so that marquee boxes appear on the edges of the paragraph. Position the mouse in the center of the paragraph and the cursor should change to am arrow with a box. Then click and drag the paragraph to the new position.

To delete a paragraph click on the paragraph on the sidebar and select *Popup > Delete*.

4.1.4.7.4 Rectangles

Rectangles can be added anywhere on a log.

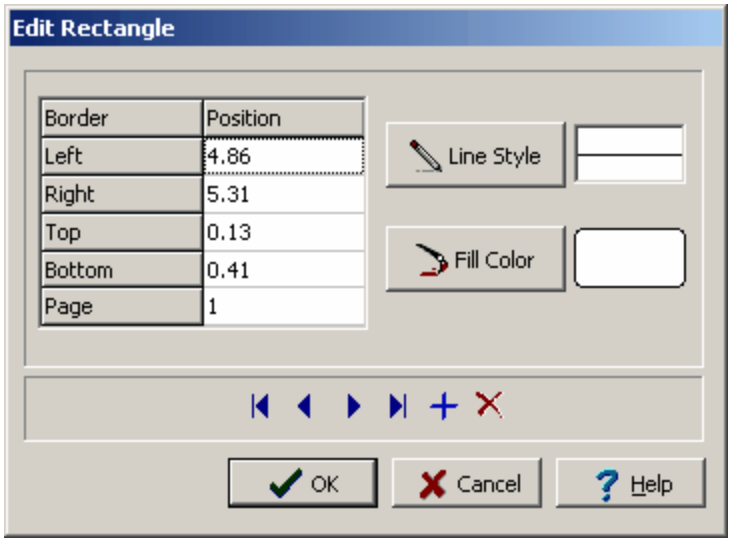
To add a rectangle to a log click on the Rectangle button on the toolbar. Next using the left mouse button click on the location of the upper left corner of the rectangle. Then while holding down the left mouse button, drag the cursor to the lower right corner of the rectangle and release the mouse button. The Edit Rectangle form described in the next section will then be displayed.

Existing rectangles on a log can be editing by:

- selecting *Edit > Rectangles*

- double-clicking on the rectangle object on the sidebar
- clicking on the rectangle on the log

After performing one of the above tasks, the Edit Rectangles form will be displayed. At the bottom of this form there are buttons to move to the first, previous, next, and last rectangle or to add and delete rectangles.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Left: This is the position of the left border of the rectangle in inches or millimeters from the left side of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Right: This is the position of the right border of the rectangle in inches or millimeters from the left side of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Top: This is the position of the top border of the rectangle in inches or millimeters from the top of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Bottom: This is the position of the bottom border of the rectangle in inches or millimeters from the top of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Page: This is the page to display the rectangle. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Line Style: This is the style of the rectangle border. The line style can be changed by pressing the Line Style button. The Line Properties form will then be displayed. Using this form the style, color, and width of the rectangle can be set.

Fill Color: This is the color to use to fill the inside of the rectangle. When the Fill Color button is pressed, the Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified.

The size of the rectangle can be changed using the Edit Rectangle form or the mouse. To adjust the size using the mouse, click on the rectangle so that marquee boxes appear on the edges of the rectangle. Click on one of the corner marquee boxes and drag it to the new size.

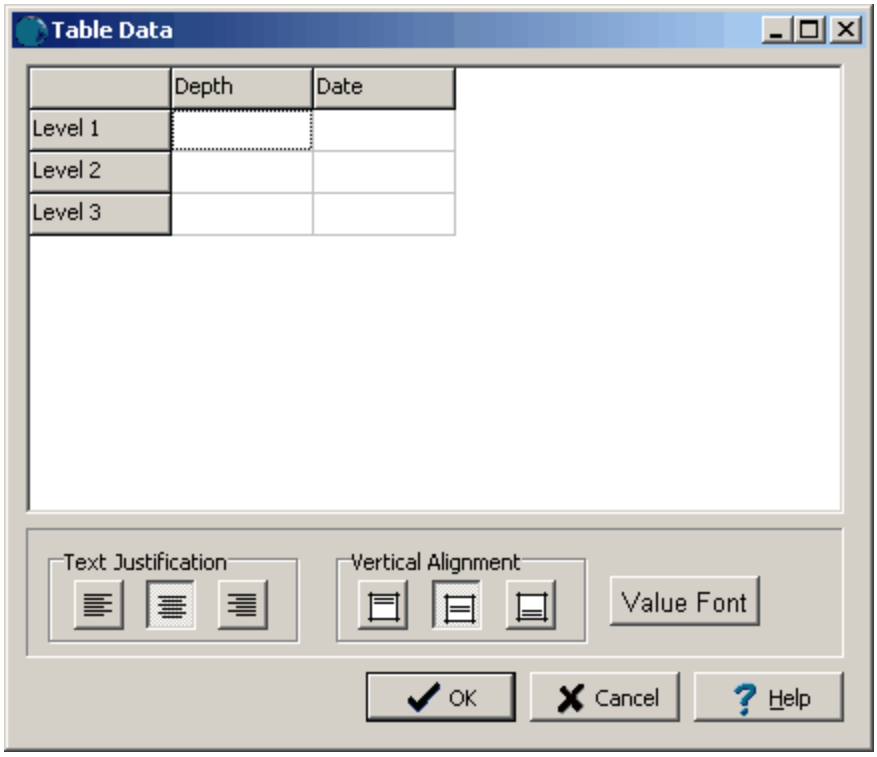
The position of the rectangle can be changed using the Edit Rectangle form or the mouse. To move the rectangle using the mouse, click on the rectangle so that marquee boxes appear on the edges of the rectangle. Position the mouse in the center of the rectangle and the cursor should change to am arrow with a box. Then click and drag the rectangle to the new position.

To delete a rectangle click on the rectangle on the sidebar and select *Popup > Delete*.

4.1.4.7.5 Tables

There are two types of tables that can be shown on a log, log based tables and template based tables. For template based tables all of the layout and formatting of the table is specified in the template, and only the data can be entered in the log. This type of table is useful when the location and format of the table should be the same for all logs. Log based tables are added to a specific log and the layout and formatting are specified for that log. This type of table is useful if the data is only to be shown on the one log.

Adding or editing data to a template based table from a log is quite simple, just click the left mouse button on the table. The table data will be displayed in the Table Data form.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The data for the table can be edited in the rows and columns on the form. The text justification and font for the log data in the table can be set separately from the template using the buttons at the bottom of the form.

- The Left Justify button will left justify the selected text.
- The Center Justify button will center justify the selected text.
- The Right Justify button will center justify the selected text.
- The Top Align button will align table headers with the top of the table cells.
- The Center Align button will align table headers in the center of the table cells.
- The Bottom Align button will align table headers with the bottom of the table cells.
- The Value Font button lets the user, set the font type of the text in the table.

Floating tables can be added anywhere on a log. These tables are displayed over top of any information on the log. These boxes can overlap boundaries between the header, footer, and columns. Log tables are typically used to groups of data with similar values such as a water level table.

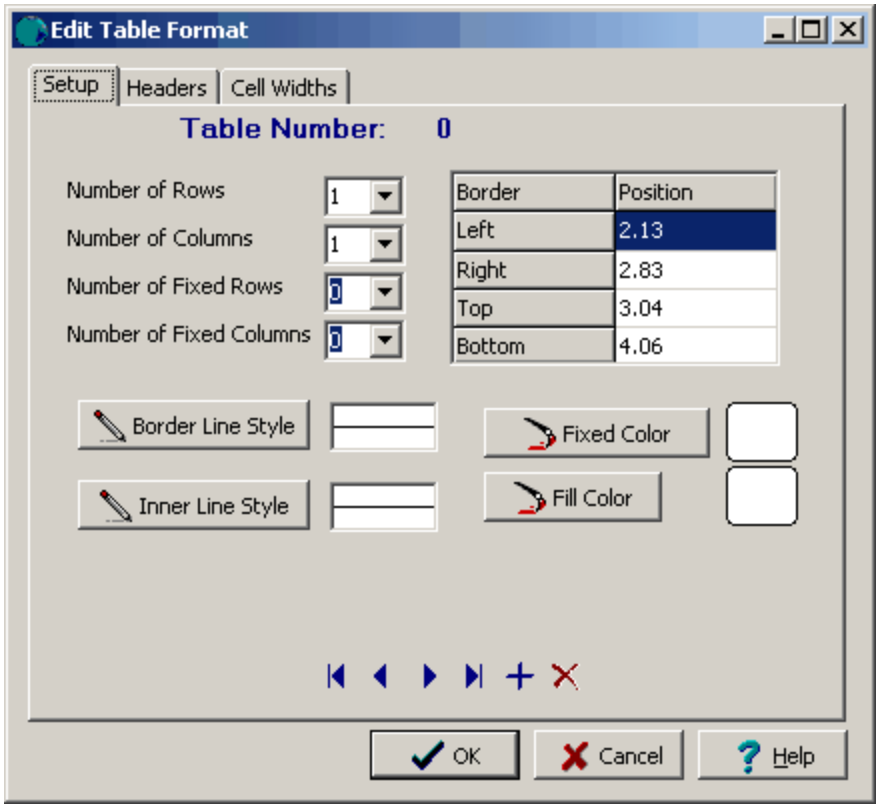
To add a table to a log click on the Table button on the toolbar. Next using the left mouse button click on the location of the upper left corner of the table. Then while holding the left mouse button down drag the mouse to the location of the lower right corner. Then release the mouse button. While the mouse button is held down a marquee box will be drawn to indicate the location of the table. After the button has been released, the Table form described in the next section will be displayed.

Existing tables on a log can be editing by:

- selecting *Edit > Tables*
- double-clicking on the table object on the sidebar
- clicking on the table on the log

After performing one of the above tasks, the Edit Tables form will be displayed. This form has three tabs for the table setup, headers, and cell widths.

Setup Tab



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this tab:

Number of Rows: The number of rows in the table.

Number of Columns: The number of columns in the table.

Number of Fixed Rows: The number of fixed rows in the table. Fixed rows contain information that can only be entered / edited from the template. Usually information such as titles for tables is entered from the template

Number of Fixed Columns: The number of fixed columns in the table. Fixed columns contain information that can only be edited / entered from the template. Usually information such as titles for tables is entered from the template.

Left: This is the position of the left border of the table in inches or millimeters from the left side of the page. .

Right: This is the position of the right border of the table in inches or millimeters from the left side of the page.

Top: This is the position of the top border of the table in inches or millimeters from the top of the page.

Bottom: This is the position of the bottom border of the table in inches or millimeters from the top of the page.

Border Line Style: This is the line style of the outside border of the template table. It includes the lines thickness and style (Solid, Dash Dot, etc.)

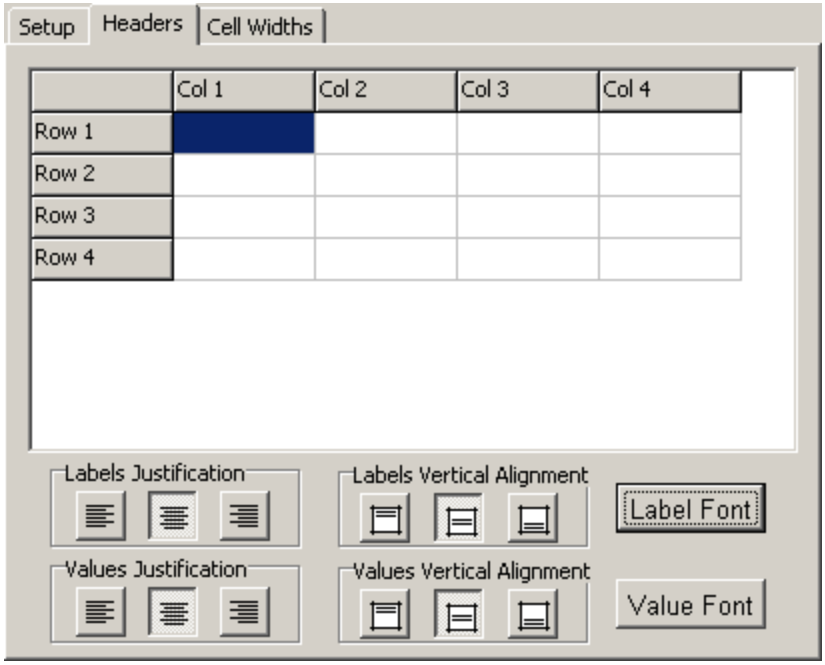
Inner Line Style: This is the line style of the lines between the individual cells of a template table. It includes the lines thickness and style (Solid, Dash Dot, etc.)

Fixed Color: This is the background color of the fixed columns of the table.When the button is pressed a Color form will be displayed.

Fill Color: This is the background color of the non-fixed columns of the table.When the button is pressed a Color form will be displayed.

At the bottom of this form there are buttons to move to the first, previous, next, and last rectangle or to add and delete rectangles.

Headers Tab



The following information can be edited on this tab:

Table Headers: Headers can be entered for each fixed column in table. In this example, there is one fixed column and one fixed row.

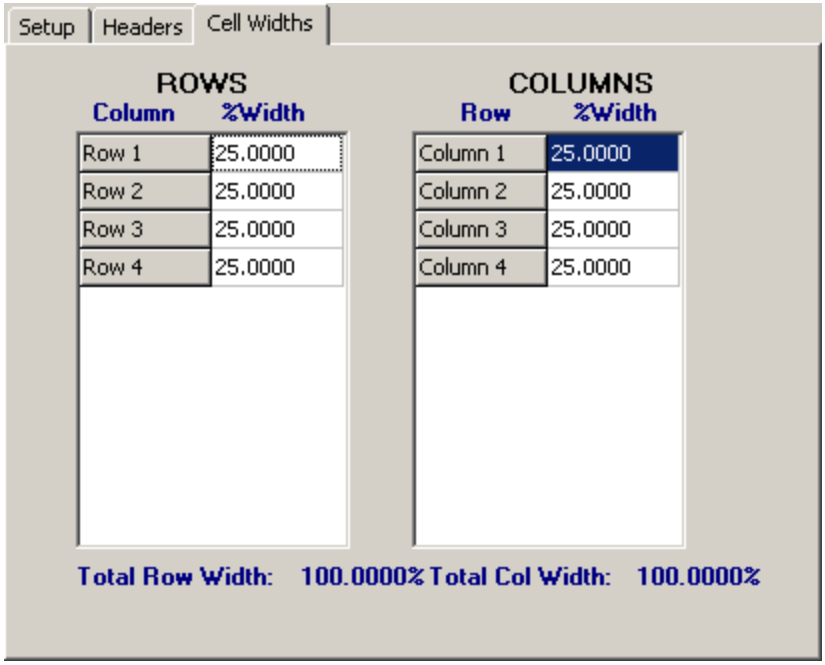
Labels and Values Justification: The Left Justify button will left justify the text, the Center Justify button will center justify the text, and the Right Justify button will right justify the text.

Labels and Values Alignment: The Top align button will align the text with the top of the table cells, the Center align button will align the text in the center of the table cells, and the Bottom align button will the text with the bottom of the table cells.

Label Font: The Label Font button lets the user set the font type of the column and row headers.

Value Font: The Value Font button lets the user set the font type of the column and row values.

Cell Widths Tab



The following information can be edited on this tab:

Column Widths: Column width is the width of a individual column as a percentage of the total table width. The value should add up to 100%

Row Widths: Row width is the width of a individual row as a percentage of the total table height. The value should add up to 100%

The size of the table can be changed using the Edit Tables form or the mouse. To adjust the size using the mouse, click on the table so that marquee boxes appear on the edges of the table. Click on one of the corner marquee boxes and drag it to the new size.

The position of the table can be changed using the Edit Tables form or the mouse. To move the rectangle using the mouse, click on the rectangle so that marquee boxes appear on the edges of the rectangle. Position the mouse in the center of the rectangle and the cursor should change to am arrow with a box. Then click and drag the rectangle to the new position.

To delete a table click on the table on the sidebar and select *Popup > Delete*.

4.1.5 Saving a boring/well

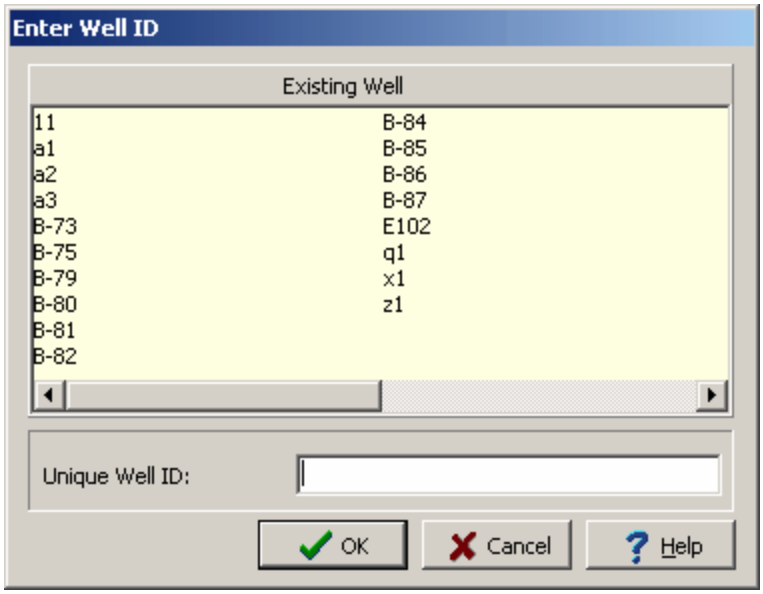
Save

To save a log after it has been edited, either:

- select *File > Save* or *Popup > Save*
- press the Save button on the toolbar

SaveAs

To save the log under a different unique boring/well ID, press the SaveAs button on the toolbar. The Enter Unique Boring/Well ID form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

Enter a unique boring/well ID and then press the Ok button.

4.1.6 Printing a boring/well

Boring/Wells can either be printed individually or multiple logs can be printed within a project.

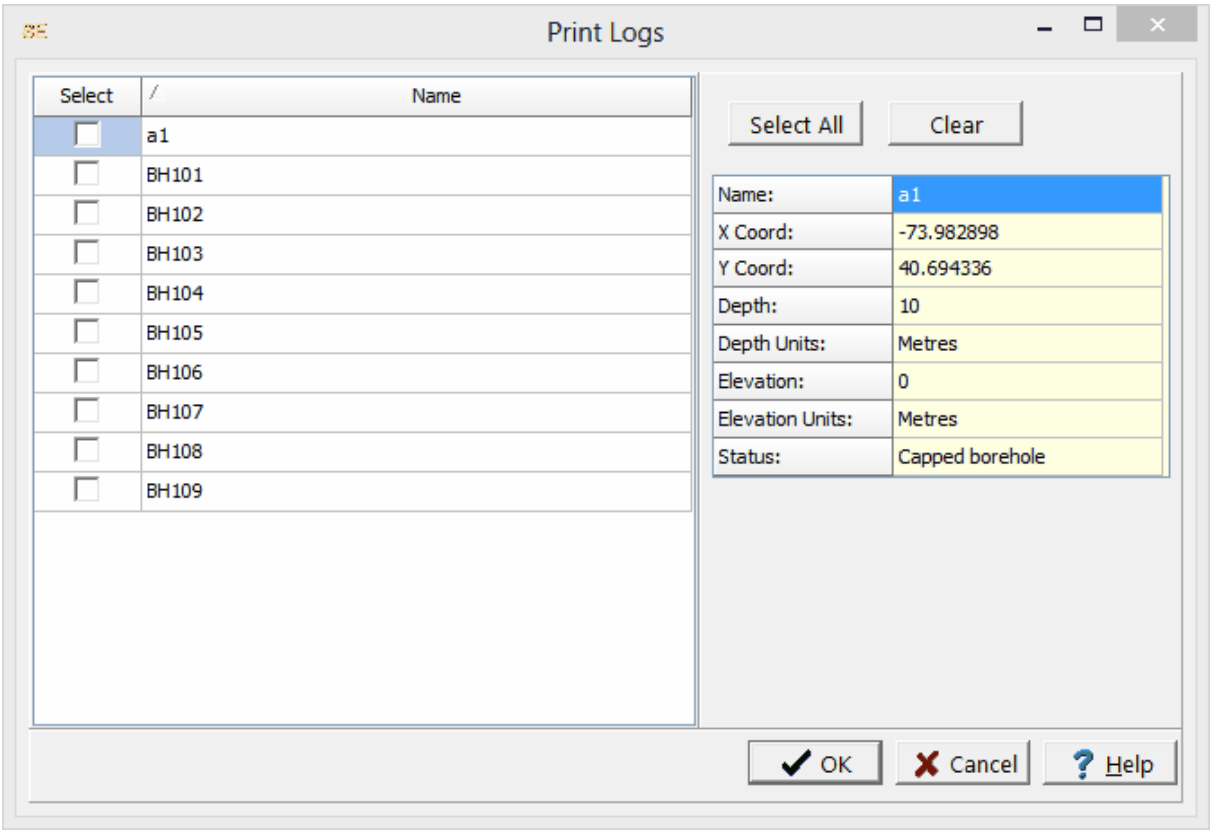
Individual Log

To print the log directly while is is opened:

- select *Popup > Print*
- click the Print button on the toolbar

Multiple Logs

To print multiple logs within a project, **the project must be displayed and no log can be opened**. Then select *File > Print Boring/Well* and the Print Logs form below will be displayed. One or more logs can be selected from this form by checking the select button next to the log. In addition, all of the logs can be selected by clicking on the Select All button and none of the logs can be selected using the Clear button.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The printing of the log as part of a page layout is described in Chapter 3 in the section of Page Layouts.

4.1.7 Sending a boring/well to PDF

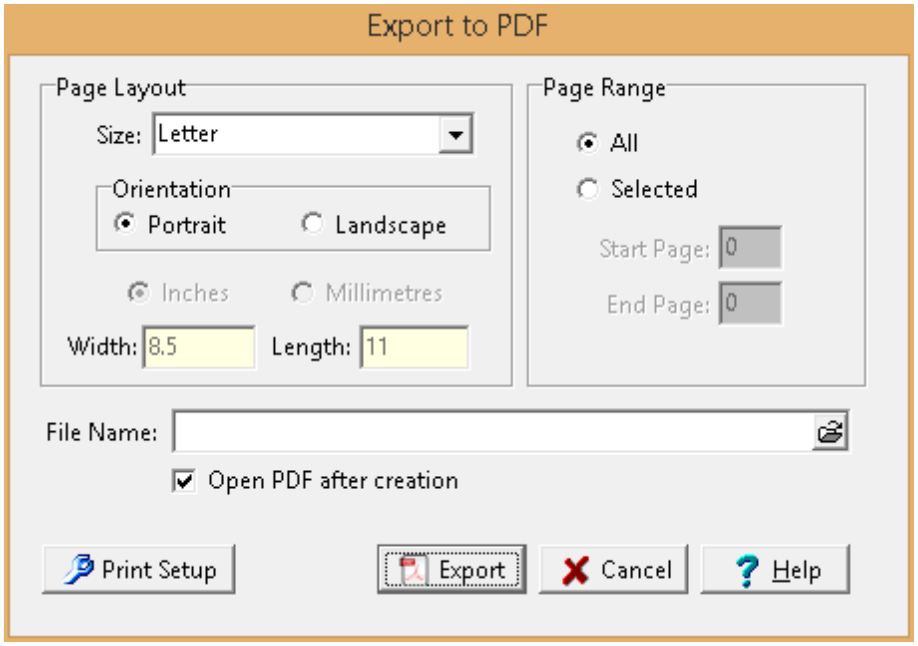
Boring/Wells can either be sent to a PDF file individually or multiple logs can be sent to one or more PDF files within a project.

Individual Log

To send the log to a PDF file while is is opened:

- select *File > Send to PDF*
- click the PDF button on the toolbar

After this the Send to PDF form below will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be entered on this form:

Size: This is the page size for the PDF file, it can be selected from the list. Both metric and Imperial page sizes can be selected as well as a custom page size specified. If it is a continuous log the page size will be adjusted to accommodate the entire log in one file.

Orientation: The long axis of the page can either be oriented vertically (Portrait) or horizontally (Landscape).

Inches or Millimeters: For custom page sizes this is used to select the page units. When standard page sizes are selected the units are selected automatically.

Width: This is the width of the page.

Height: This is the height of the page.

Page Range: Select either all of the pages or specify a start and end page to send to the PDF.

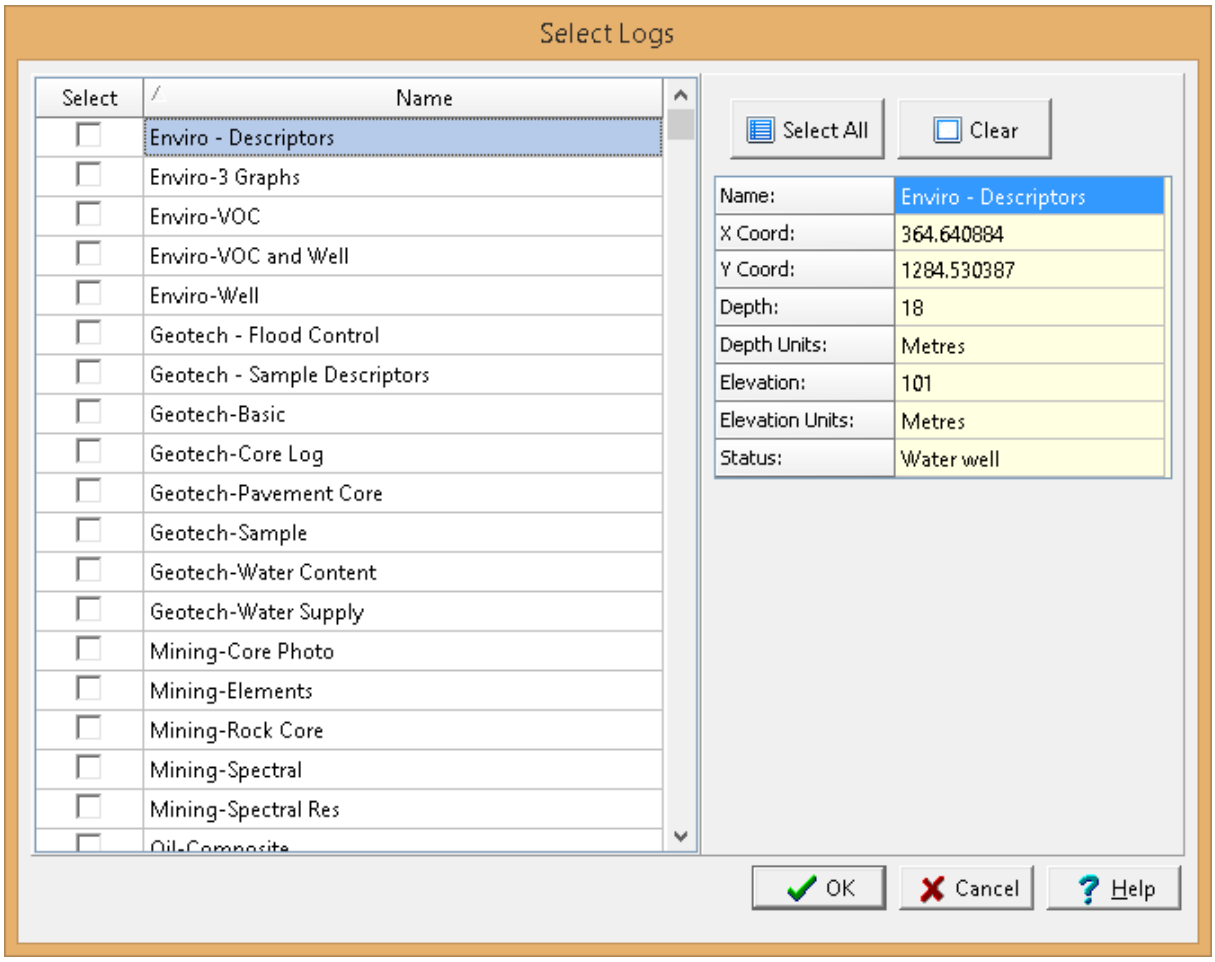
File Name: This is used to specify the name of the PDF file. The name and directory can be browsed to using the button on the right.

Open PDF after creation: If this is checked the PDF file will be opened after it has been created.

Print Setup: Click this button to specify options for the printer.

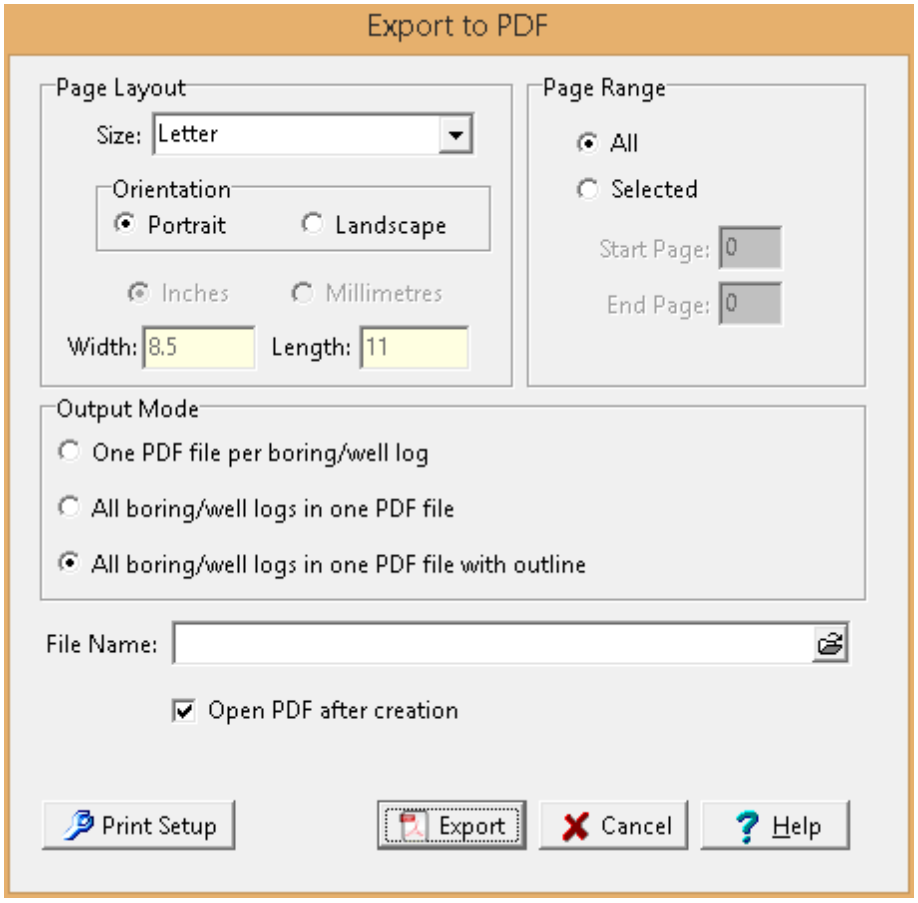
Multiple Logs

To send multiple logs within a project to a PDF, **the project must be displayed and no log can be opened**. Then select *File > Print > Send Logs to PDF* and the Select Logs form below will be displayed.



On this form the logs can be selected by checking the box beside them or all of the logs can be selected by clicking on the Select All button. To unselect all of the logs click the Clear button. When a log is clicked on in the list the information for the log will be displayed on the right.

After the logs have been selected the Send to PDF form below will be displayed.



The following can be entered on this form:

Size: This is the page size for the PDF file, it can be selected from the list. Both metric and Imperial page sizes can be selected as well as a custom page size specified.

Orientation: The long axis of the page can either be oriented vertically (Portrait) or horizontally (Landscape).

Inches or Millimeters: For custom page sizes this is used to select the page units. When standard page sizes are selected the units are selected automatically.

Width: This is the width of the page.

Height: This is the height of the page.

Page Range: Select either all of the pages or specify a start and end page to send to the PDF.

Output Mode: There are three ways that the logs can be sent to a PDF. One PDF file can be created for each log, all of the logs can be send to one file, or all of the logs can be sent to one file and an outline created for each log. The outline is similar to a table of contents entry.

File Name: This is used to specify the name of the PDF file when only one PDF file is being used for all of the logs. This field is only shown when the last two options for Output Mode are selected. The name and directory can be browsed to using the button on the right.

Open PDF after creation: If this is checked the PDF file will be opened after it has been created. This field is only shown when the last two options for Output Mode are selected.

Directory: This is the directory where the PDF files for each individual log will be saved. This field is only shown if the first option for Output Mode is selected. The directory can be browsed to using the button on the right.

Prefix: This is the prefix to be used for each individual PDF file. The file name for each log will be a combination of the prefix and log name. For example, if the boring log name is ``B105`` and the prefix is ``Project1_``, the file name would be ``Project1_B105.pdf``.

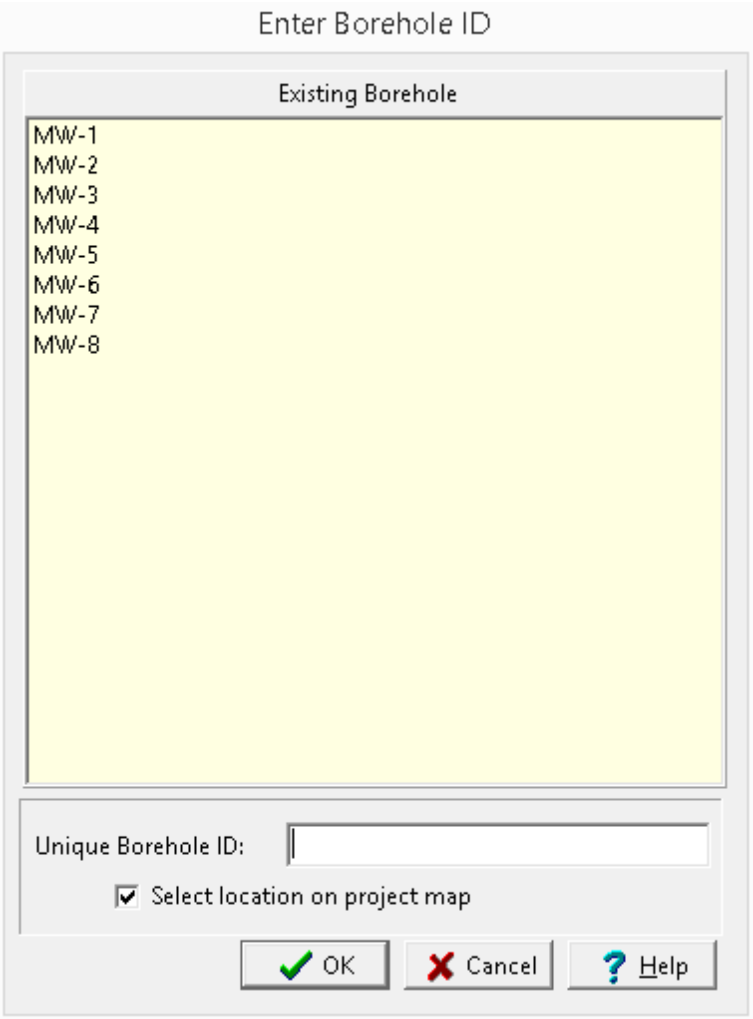
Print Setup: Click this button to specify options for the printer.

4.1.8 Copying a boring/well

Once entered, a log can be easily copied and modified. This function can be used to quickly copy and then edit logs that are very similar; such as a set of boring/wells drilled on the same site. There are two ways to copy a log depending on whether it is open or not.

1. The log to be copied is opened and displayed

To copy a log press the Copy or SaveAs buttons on the toolbar. The Enter Boring/Well ID form will then be displayed. This form lists the current boring/wells in the project. Enter a unique ID for the new log, select whether you would like to specify the location of the new log on the project map, and then press the Ok button.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

If you selected to specify the location on the project map, after the Ok button is pressed the project map will be displayed. Click on the location of the new log on the map and the location will be stored with the new log.

2. The log is not open and the project map is displayed

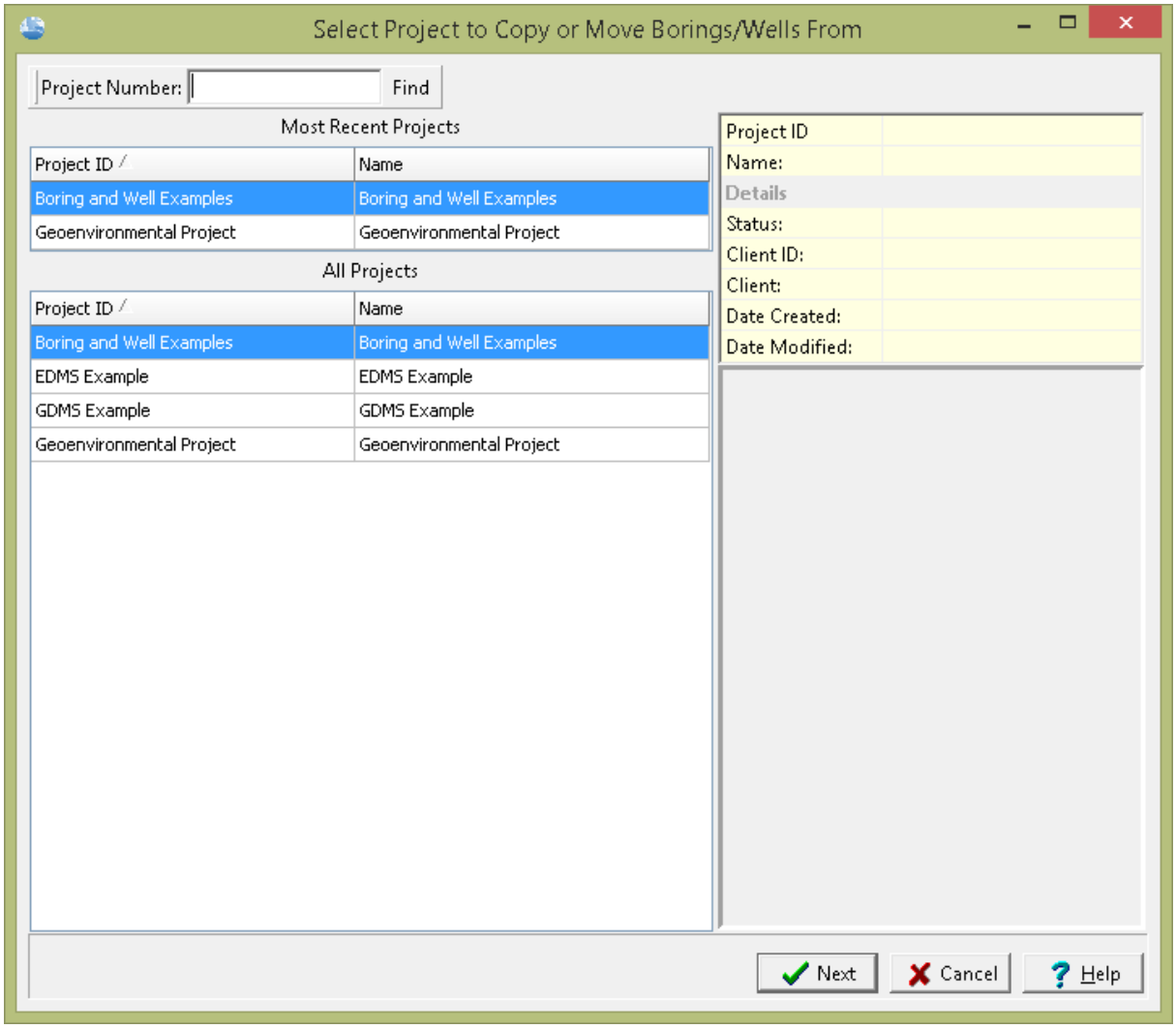
In this case, select *Edit > Copy Boring/Well Log* from the menu. You can then click on the location of the new log on the project map. After the location has been specified a list of current logs in the project will be specified. Select the log to be copied from the list, then enter the borehole information for the new log.

4.1.9 Relocating a boring/well

The location of a boring/well log can be changed by selecting *Edit > Relocate Boring/Well Log* from the menu. A list of current logs in the project will be displayed. Select the log from the list to be relocated and then click on the new location of the log on the project map.

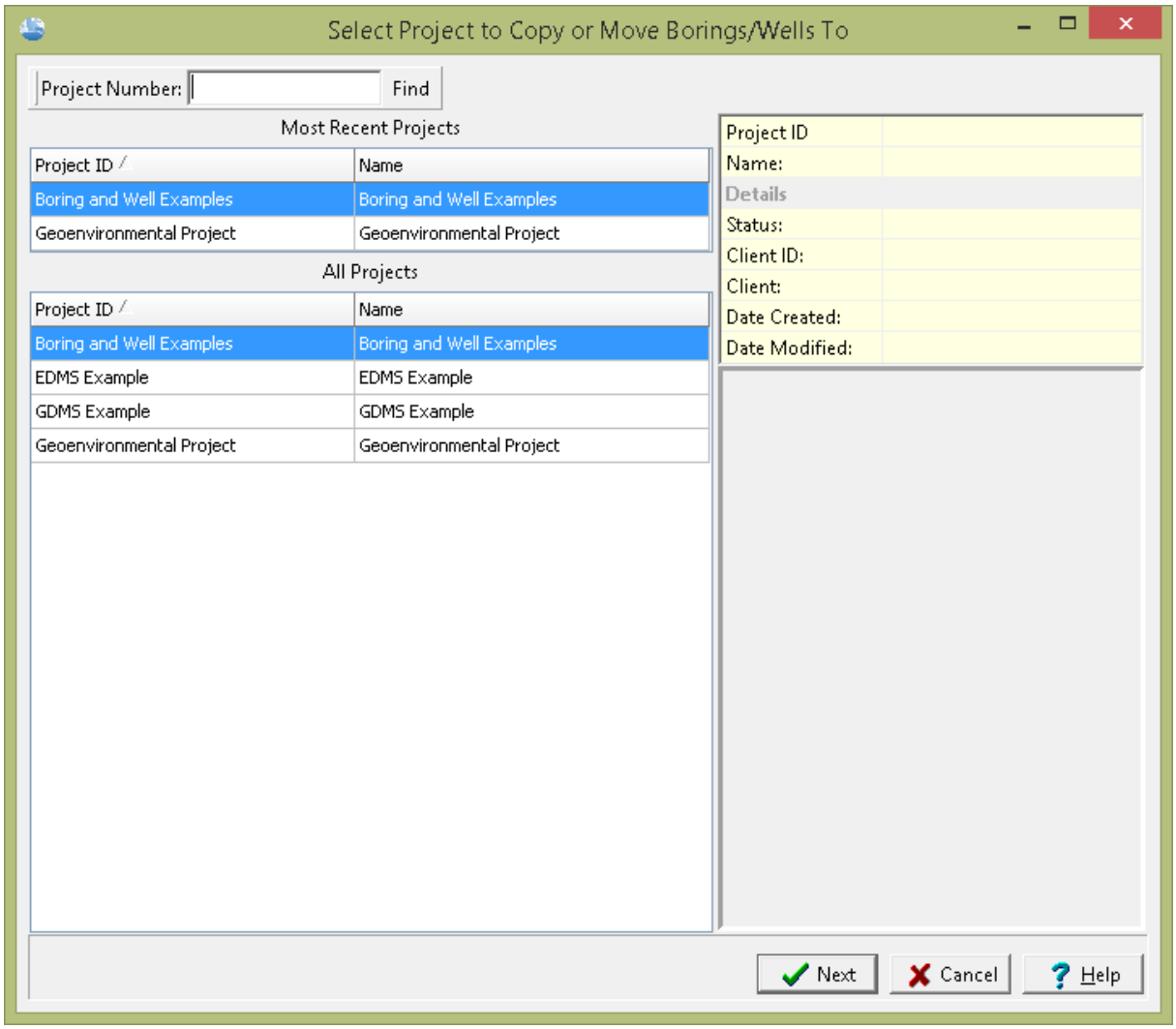
4.1.10 Copying/Moving a Log to a Different Project

One or more Borings/Wells can be moved or copied from one project to another by selecting *Tools > Projects > Copy or Move Borings/Wells*. Before selecting this make sure there is no project currently open. The Select Project to Copy or Move Borings/Wells From form below will then be displayed.



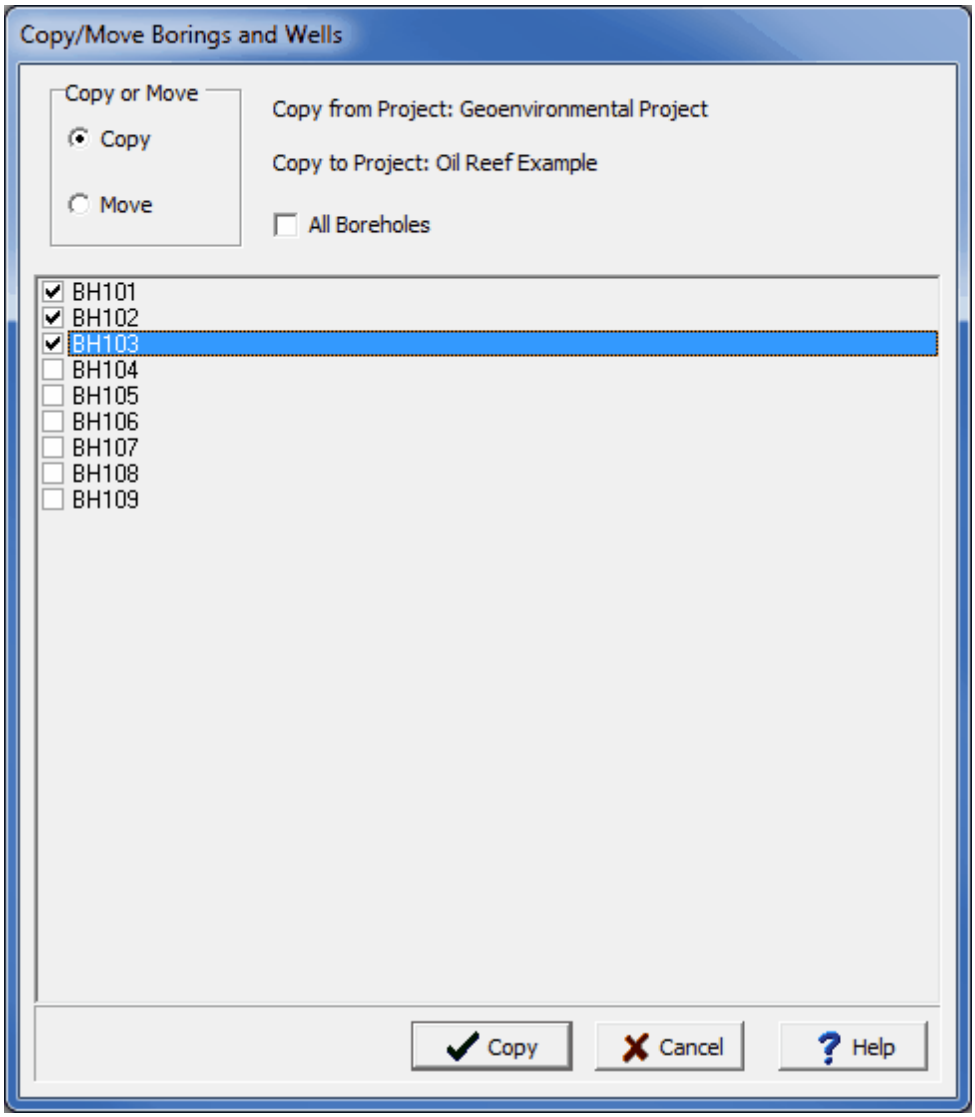
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

Select the project containing the borings or wells to be copied or moved and then press the Next button. The Select Project to Copy or Move Borings/Wells To form below will then be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

Select the project to copy or move the borings or wells to and then press the Next button. The Copy/Move Borings and Wells form below will then be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be specified on this form:

Copy or Move: Select whether to copy or move the borings and wells. If they are moved they will be deleted from the original project.

All Boreholes: Check this box to copy or move all of the borings/wells. If this box is checked the list of borings/wells below will not be enabled.

Boring/Well List: This is a list of the borings and wells in the project to copy from. Check the box beside the boring/well to copy or move it. If the All Boreholes box is checked this list will not be enabled.

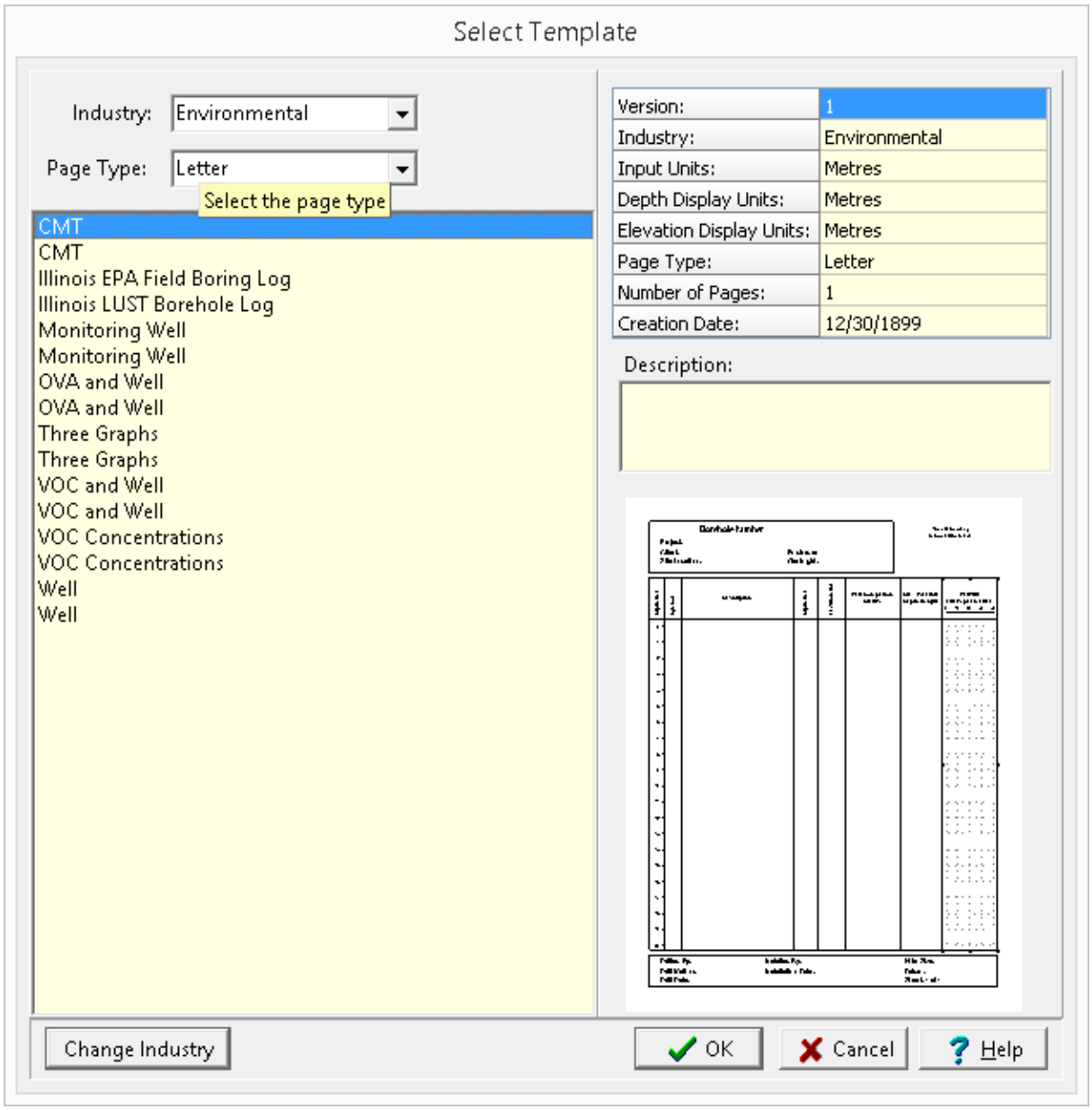
After the borings/wells have been selected press the Copy or Move button at the bottom of the form to transfer them.

4.1.11 Changing the boring/well Template

Both the template and the version of the template can be changed for a log.

Changing the Template

A different template can be selected for the log using the Change Template menu button and the selecting Change Template from the menu or selecting *Edit > Change Template*. The Select Template form lists the current templates available.

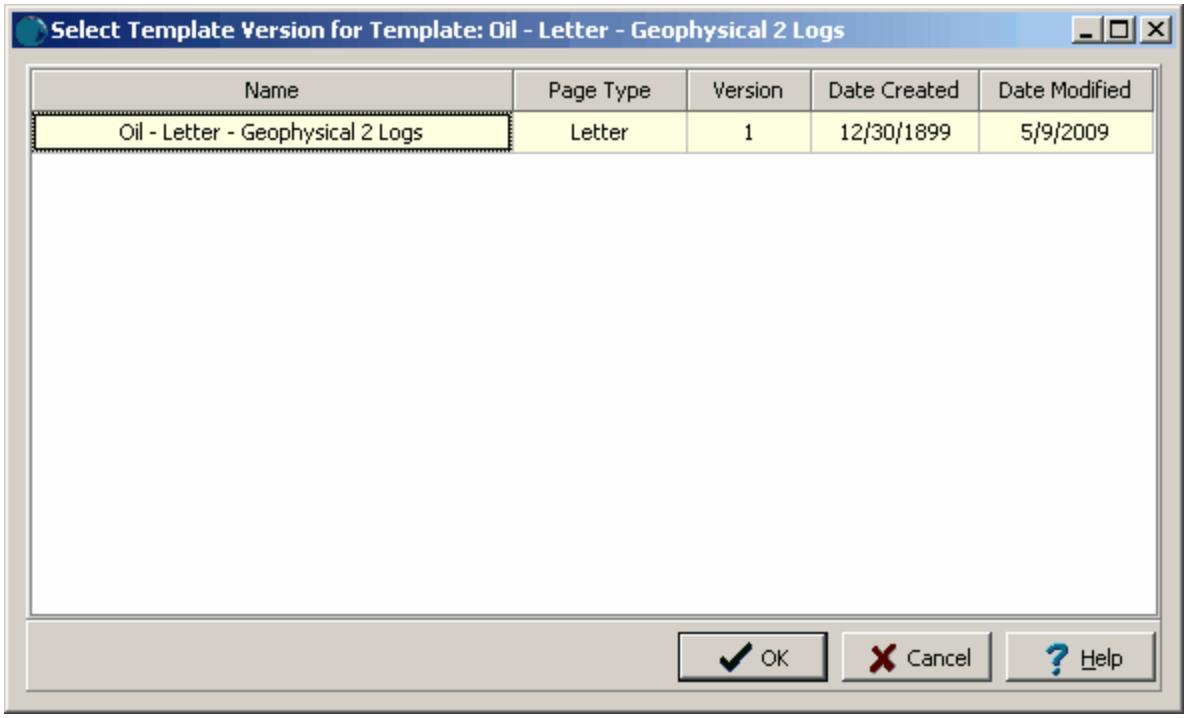


(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

Select the desired template and then press the Ok button. Changing the template for the log will only change the format, and will not affect any of the log data.

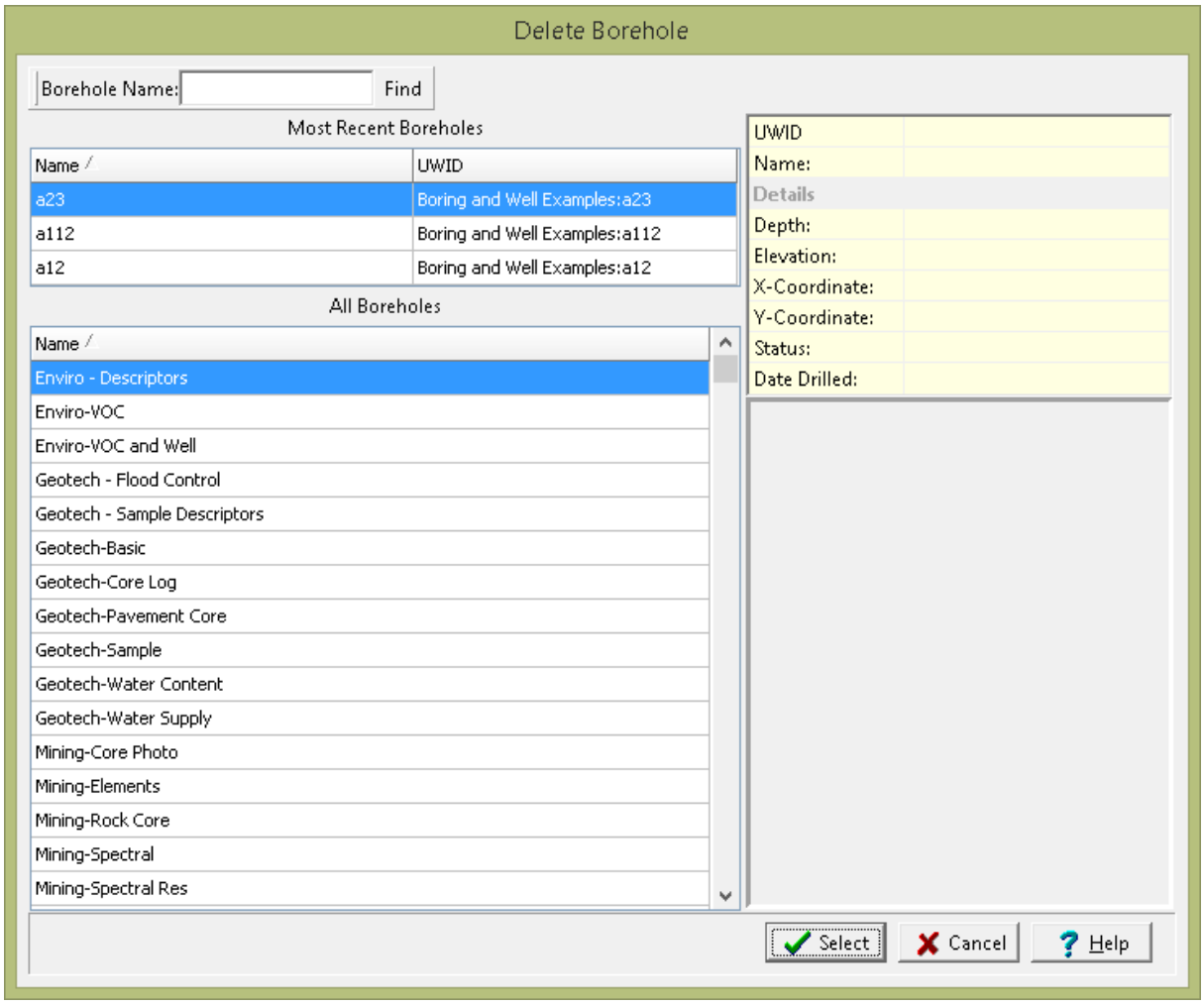
Changing the Template Version

A different template version can be selected for the log using the Change Template menu button and the selecting Change Template Version from the menu. The Select Template Version form lists the current versions of the template. Select the version to use and click on the Ok button.



4.1.12 Deleting a boring/well

To delete a log select *File > Delete > Boring/Well*, the Delete Borehole Logs form will be displayed. The log can be selected from the list and then deleted by clicking on the Select button.

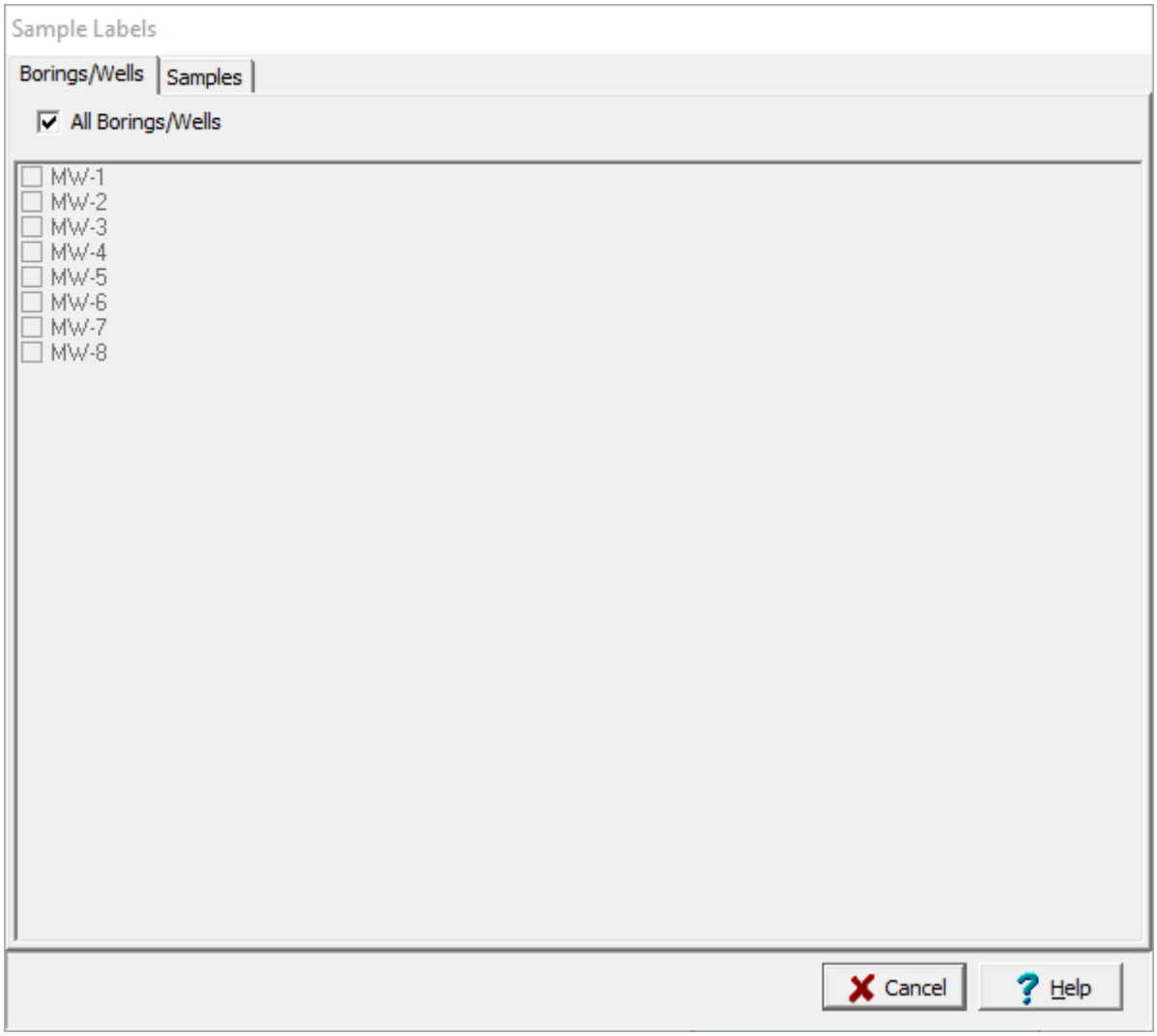


(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

On the left of this form are lists of the most recently used logs and all the boring/wells. The right side of the form the details of the highlighted boring/well are shown, some of these details are not shown for the most recently used logs. The list of will also show the UWID if the industry type is Oil. At the top of the form is a toolbar that can be used to find a boring/well by specifying the name. To select a boring/well to delete, highlight it and then click on the Select button.

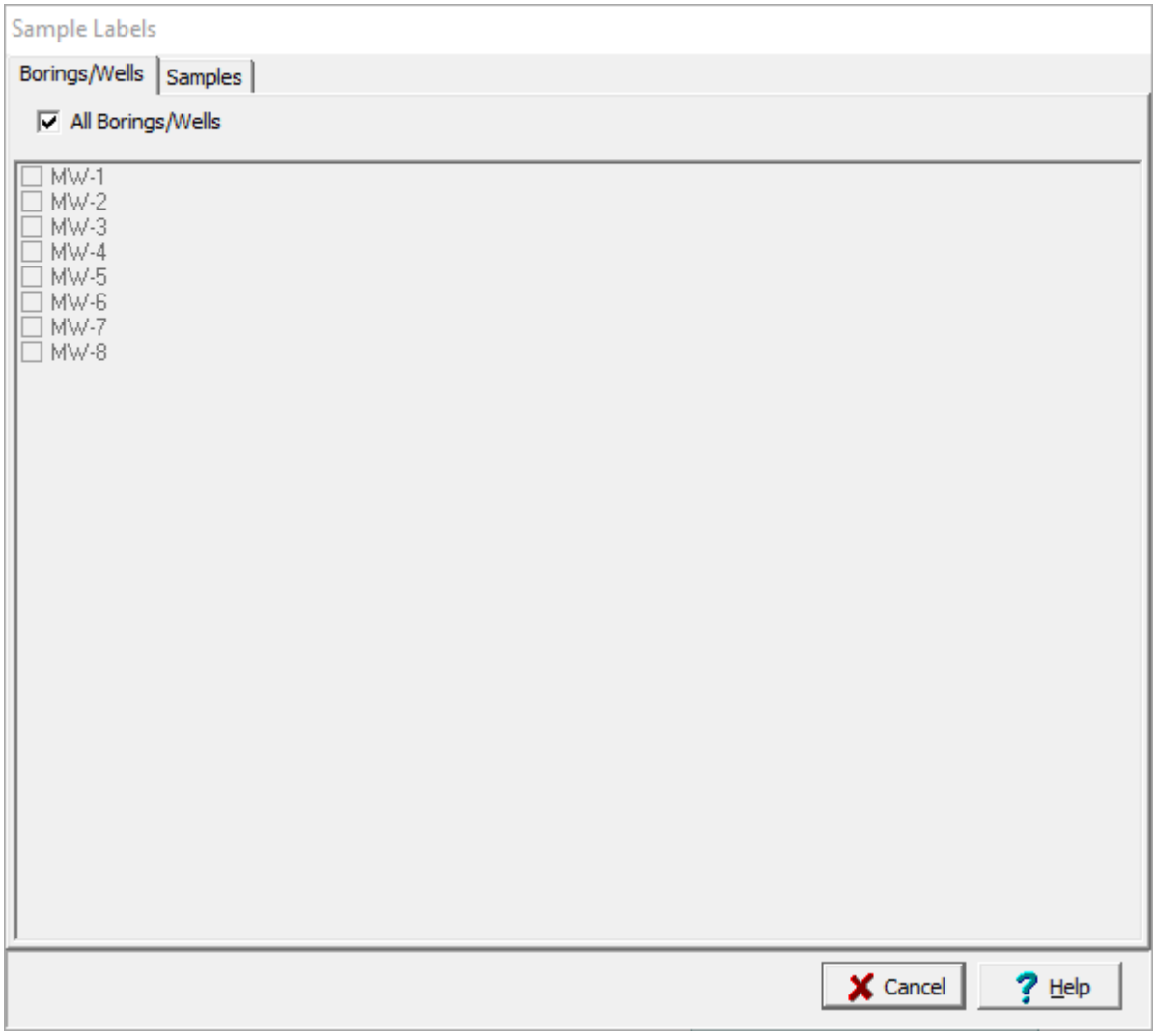
4.1.13 Printing Sample Labels

To help improve the efficiency of sample collection in the field, sample labels can be printed for each boring/well in a project or task. Before printing the sample labels the boreholes should be created within the project or task. To print the sample labels for a project select *Tools > Boreholes > Sample Labels*, and the Sample Labels form will be displayed. To print the sample labels for a task click on the Sample Labels button at the bottom of the task form.



This form has two tabs as described in the sections below.

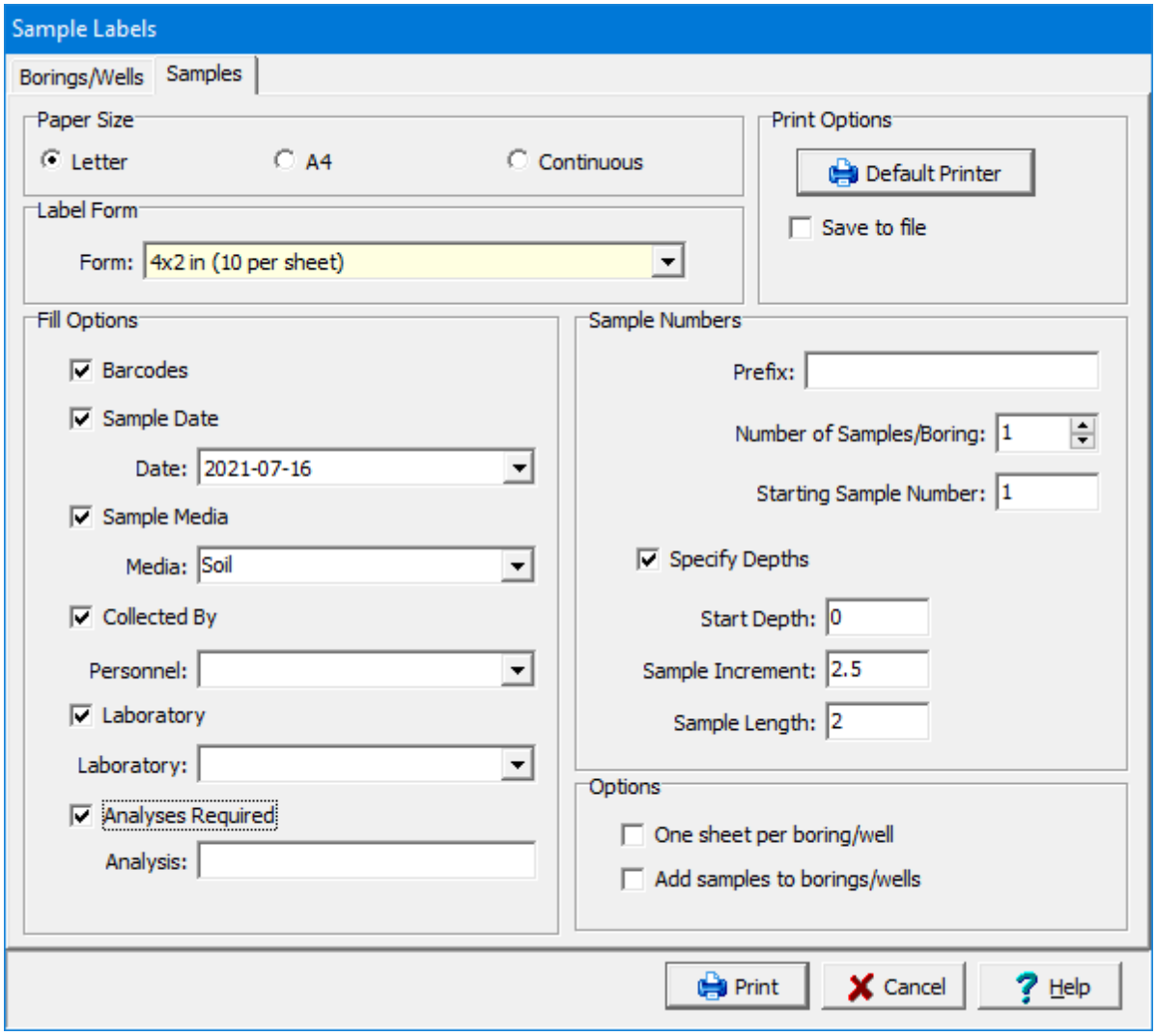
4.1.13.1 Borings and Wells



This tab is used to select the borings and wells for the sample labels. If the labels are being printed as part of a task then the list will contain all the borings and wells in the task. Otherwise, it will contain all of the borings and wells in the project.

Check All Borings/Wells to select all the borings and wells in the project or uncheck it and select the borings and wells individually.

4.1.13.2 Samples



This tab is used to specify the type and format of the samples and sample labels. The following can be specified on this tab:

Paper Size: This is the size of paper to use for the labels. It can be letter, A4, or continuous.

Label Form: This is the size of the individual label. The choices will change depending on the paper size.

Fill Options

Barcodes: Check to include a barcode on the label. The 2D barcode will include all of the sample information on the label and can be later scanned.

Sample Date: Check to include the sample date on the label. If this is checked the sample date can be selected.

Sample Media: Check to include the sample media on the label. If this is checked the sample media can be selected.

Collected By: Check to include the sampling personnel on the label. If this is checked the personnel can be selected. The personnel that can be selected are specified in *Tools > Lists > Personnel*.

Laboratory: Check to include the laboratory on the label. If this is checked the laboratory can be selected. The laboratories that can be selected are specified in *Tools > Lists > Lab Info > Laboratories*.

Analyses Required: Check to include the required analyses on the label. If checked the analysis can be specified.

Print Options

Default Printer: The labels will be printed on the default Word printer. Click this button to change the default Word printer.

Save to file: Check to save the labels to a Word file instead of printing them.

Number of Copies: This is the number of copies of the labels to print. If the labels are being saved to a file this field will not appear.

Sample Numbers

Prefix: This is the text to appear at the beginning of each sample name. The sample name is comprised of the prefix followed by the sample number.

Number of Samples/Station: This is the number of samples to generate for each boring or well.

Starting Sample Number: This is the starting sample number.

Specify Depths: If the sample media is soil or rock the sample depths can be specified.

Start Depth: If the depths are being specified this is the start depth for the sampling.

Sample Increment: If the depths are being specified this is the depth increment between samples.

Sample Length: If the depths are being specified this is the length of the sample.

Options

One sheet per boring/well: Check this to start a new sheet of labels for each boring or well.

Add samples to borings/wells: Check this to create the samples in each of the borings or wells. If the sample labels are being printed as part of a task this option is not available.

4.2 Templates

Templates are used to control the layout and formatting of boring/well logs. In general, all of the Borings/Wells in a project would use one or two templates to format the logs. In this way, a consistent format can be established within a project and across projects. Once a template is created it is available to all projects.

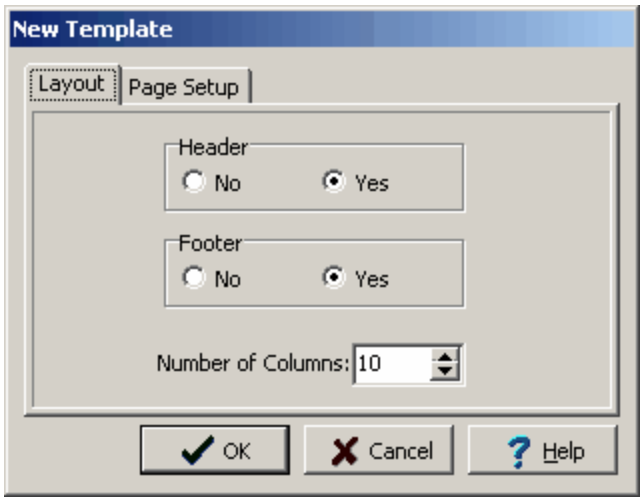
WinLoG RT comes with numerous easily customized templates for a variety of industries. These can be edited and saved as new templates. You can also create a new template by specifying the desired layout. Each template consists of a header, footer, several columns, bitmaps, lines, rectangles, and paragraph text. Templates can be customized to display different header and footer titles, number, and type of columns, fonts, colors, etc.

Templates can have a first and second page, where the second page layout is different than the first page layout. The second page will be used to format the second and subsequent pages of a log. In addition, templates can be also be created for continuous logs.

4.2.1 Creating a Template

No project can be open when creating a template. To create a new template either click on the New button on the main toolbar and select Boring/Well Template or select *File > New > Boring/Well Template*. The New Template form will be displayed. This form has two tabs for the layout and page setup.

Layout Tab



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

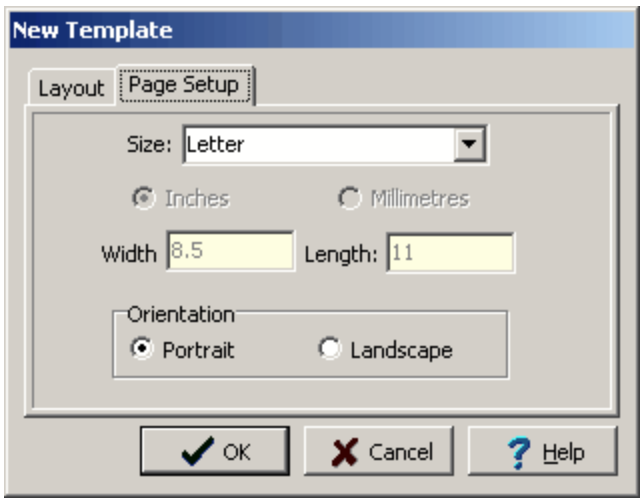
The following information can be edited on the Layout tab:

Header: Select yes to include a header box at the top of the template.

Footer: Select yes to include a footer box at the bottom of the template.

Number of Columns: This is the number of columns to include in the template. Columns can also be added and deleted while editing the template.

Page Setup Tab



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on the Page Setup tab:

Size: This is the page size of the template. When the arrow at the right is pressed, a list of available page sizes is displayed.

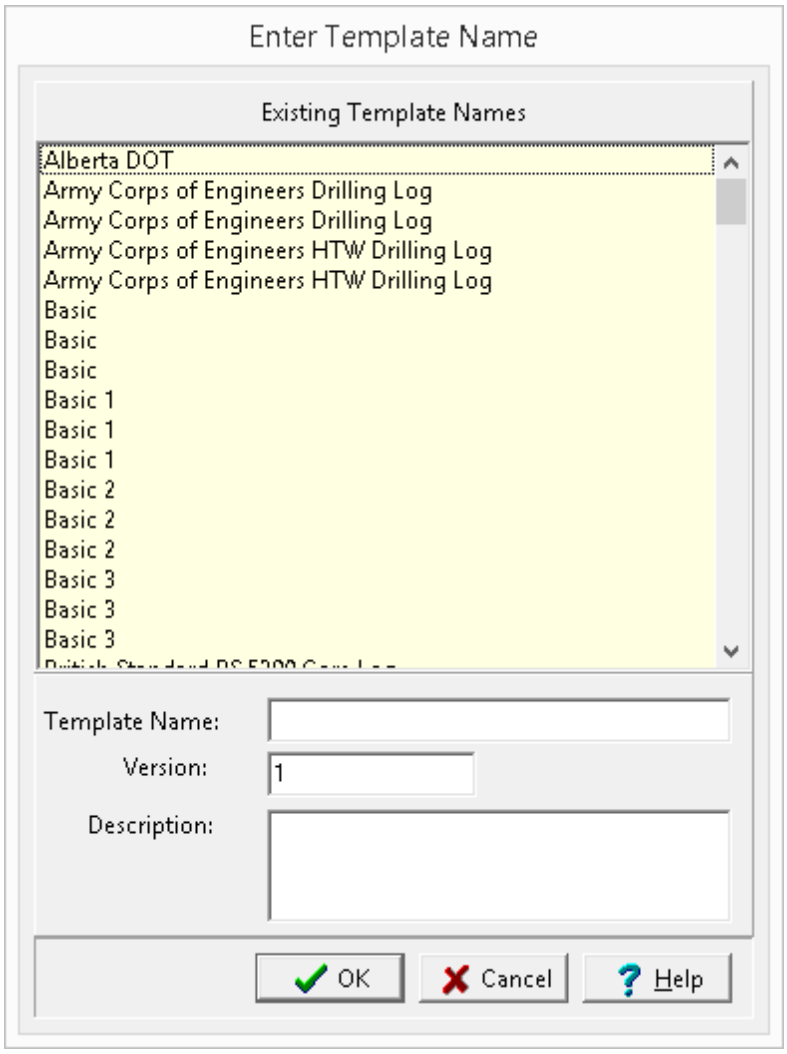
Inches or Millimeters: The units for the width and length of the page. These units will be used when specifying the layout of the legend. If the Page Size is “Custom”, the units can be set to either inches or millimeters.

Custom Width: If the page size is specified as “custom”, the page horizontal width in inches must be specified.

Custom Length: If the page size is specified as “custom”, the page vertical length in inches must be specified.

Orientation: This is the orientation of the page; either portrait (longer side is vertical) or landscape (longer side is horizontal).

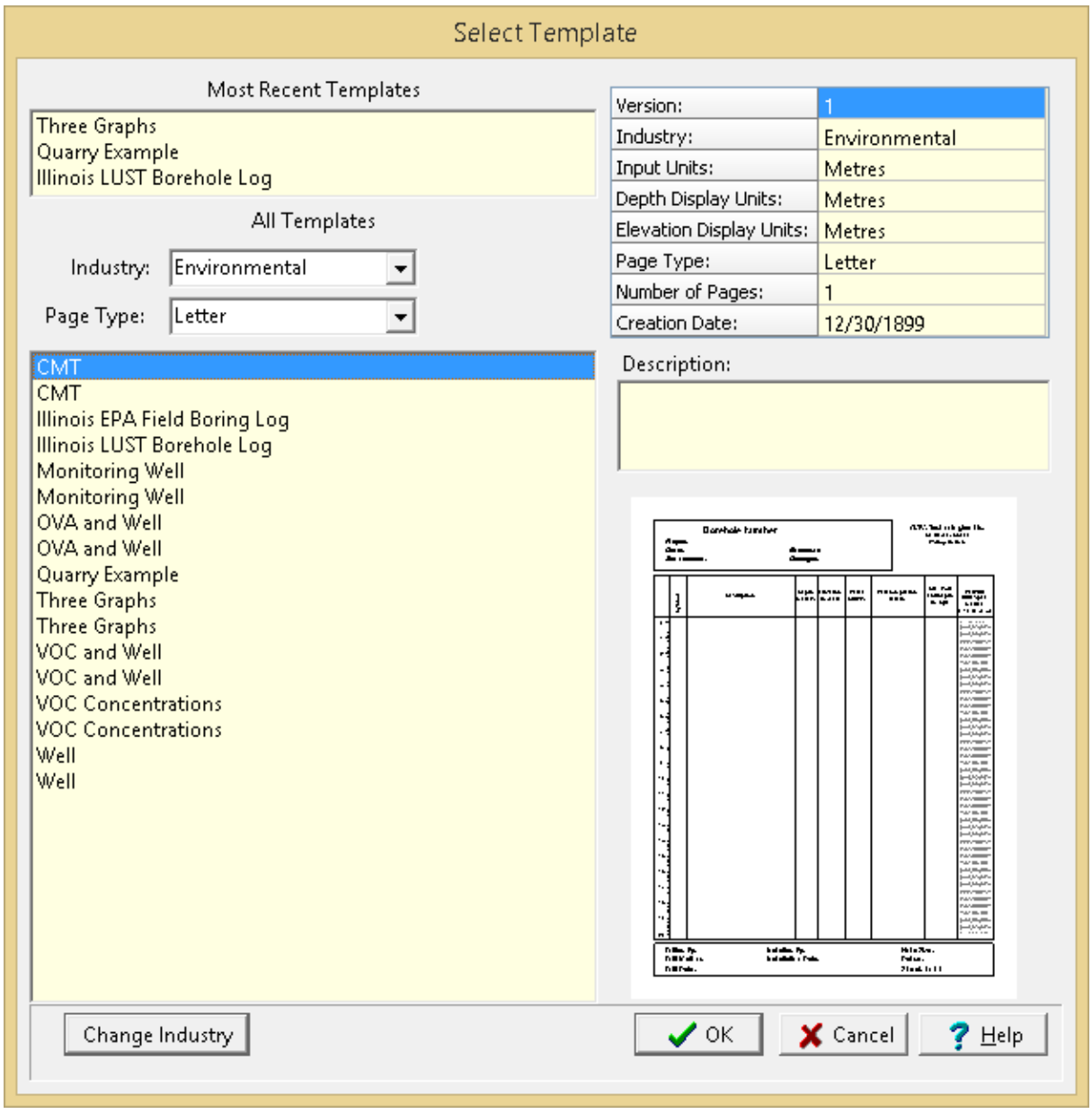
After the Ok button is pressed the new template will be displayed. When this template is saved the Enter Template Name form will be displayed. This form shows the current templates in the database. To save the template enter a unique name for the new template, version, and a description, then press the Ok button.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

4.2.2 Opening a Template

No project can be open when opening a template. Existing templates can be opened for editing by selecting *File > Open > Boring/Well Template* or clicking the Open button on the Main Toolbar and selecting Boring/Well Template. The Select Template form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

This form displays lists of the most recently used templates and all templates on the left side. The right side will display the details of the highlight template, some of the details of the most recent template may not be displayed. At the top of the list of all templates the industry type and page type for the template can be selected, these can be used to refine the list of templates. To select a template, highlight and press the Ok button.

At the bottom of the form the Change Industry button can be used to change the industry for a template. After a template is selected, when the button is pressed the new industry for the template can be selected for the template from the drop down list that will be shown next to the button.

4.2.3 Editing a Template

When a template is opened it will be displayed in the main window with a sidebar on the left. The format and layout in the template can be edited using the sidebar, Edit or popup menus, or by clicking on the data in the main window as described in the sections below.

4.2.3.1 Header and Footer

The header and footer of the template are used to display general information about the boring/well. This includes information about the unique ID, name, X and Y coordinates, text and memo information. Text and memo information can include information such as project name, location, client, date, drill method, etc. The difference between text data and memo data is that memo data can have more than one line and memo data can contain rich text.

The header is usually located at the top of the page and the footer is usually located at the bottom of the page. A template does not have to contain a header or a footer. There are no limits to the number of titles a header or footer can contain. Each title can be used to display text data, memo data, or a checkbox.

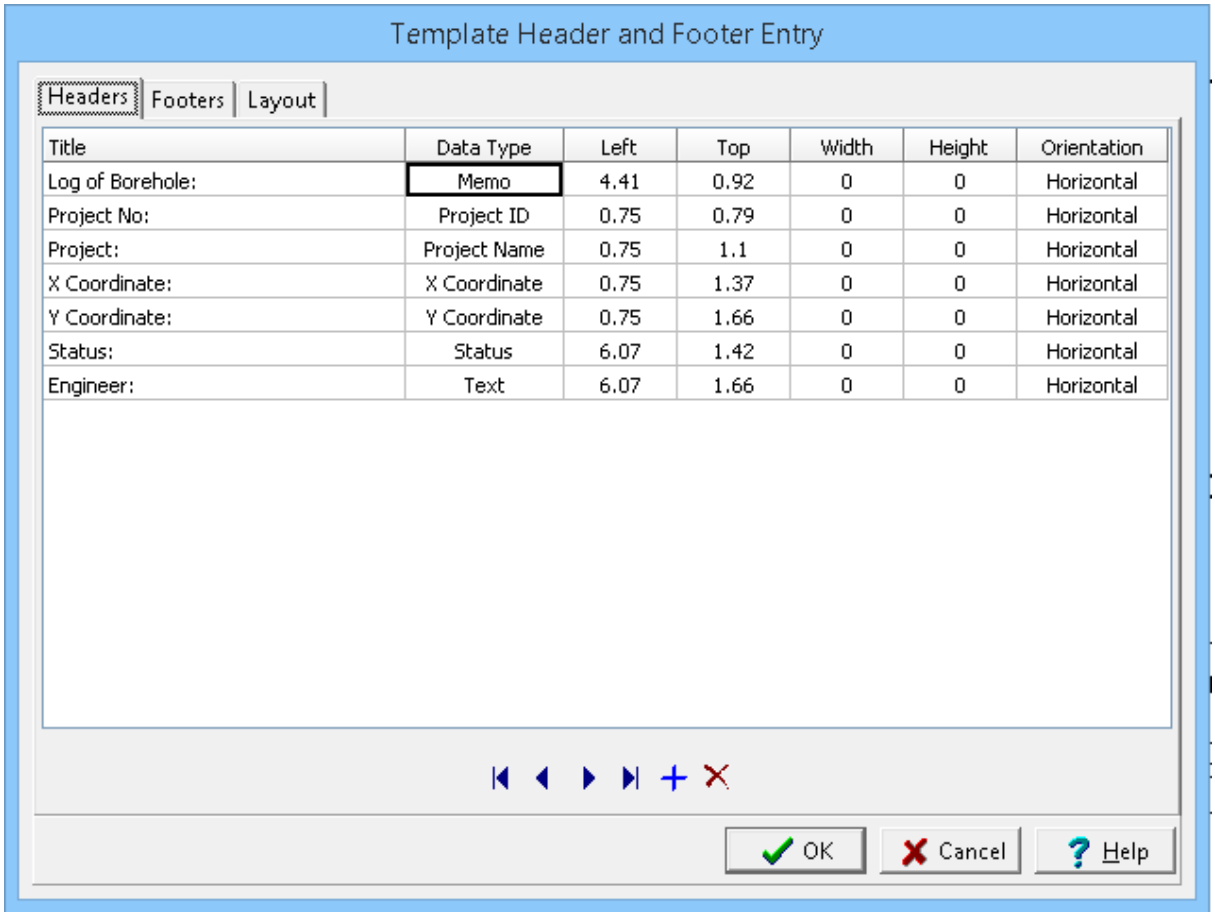
The general data is tied to the type of data in the template. This way if the template is edited or a different template is used the data will move depending upon the location within the template. For example, if the data is for the location of the boring/well and in the template the location is the first line of the header. If later the template is edited and the location is moved to the third line of the footer, when the log is displayed the location will show up in the third line of the footer.

To edit the header or footer and display the Template Header and Footer Entry form either:

- select the Header or Footer menu items from the Edit or Popup menus
- double click on the Header or Footer object on the sidebar
- click on the header or footer of the template.

After one of the above tasks has been completed, the Template Header and Footer Entry form will be displayed. The Template Header and Footer Entry form has three tabs; one for the header, one for the footer, and one for the layout of the header and footer. If the template has two pages, this form will have six tabs, three for the first page and three for the second page. Data entry and editing for the second page is identical to the first page, which is described in the sections below.

4.2.3.1.1 Header Tab



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The Headers tab and Page 2+ Headers tab can be used to edit the following information:

Title: This is the title to use for the header line (up to 255 characters). It defines the type of data for the log. The title will be used to prompt for information when entering data. If the title is for text data or a checkbox, it will be displayed on the log. If the title is for memo data, it will not be displayed on the log. If the title is, Sheet or Page the sheet number of the log will be automatically filled in by the program.

Data Type: The header line can be one several types of data such as text, date, float, integer, memo, or checkbox. In addition, the data type can be one of several; types of data that can be automatically filled in by the program; such, name, ID, X-Coordinate, etc.

Left: This is the horizontal position of the title in inches or millimeters from the left side of the page. If the header is left justified, the title will start at this position. If the header is right justified, the title will end at this position.

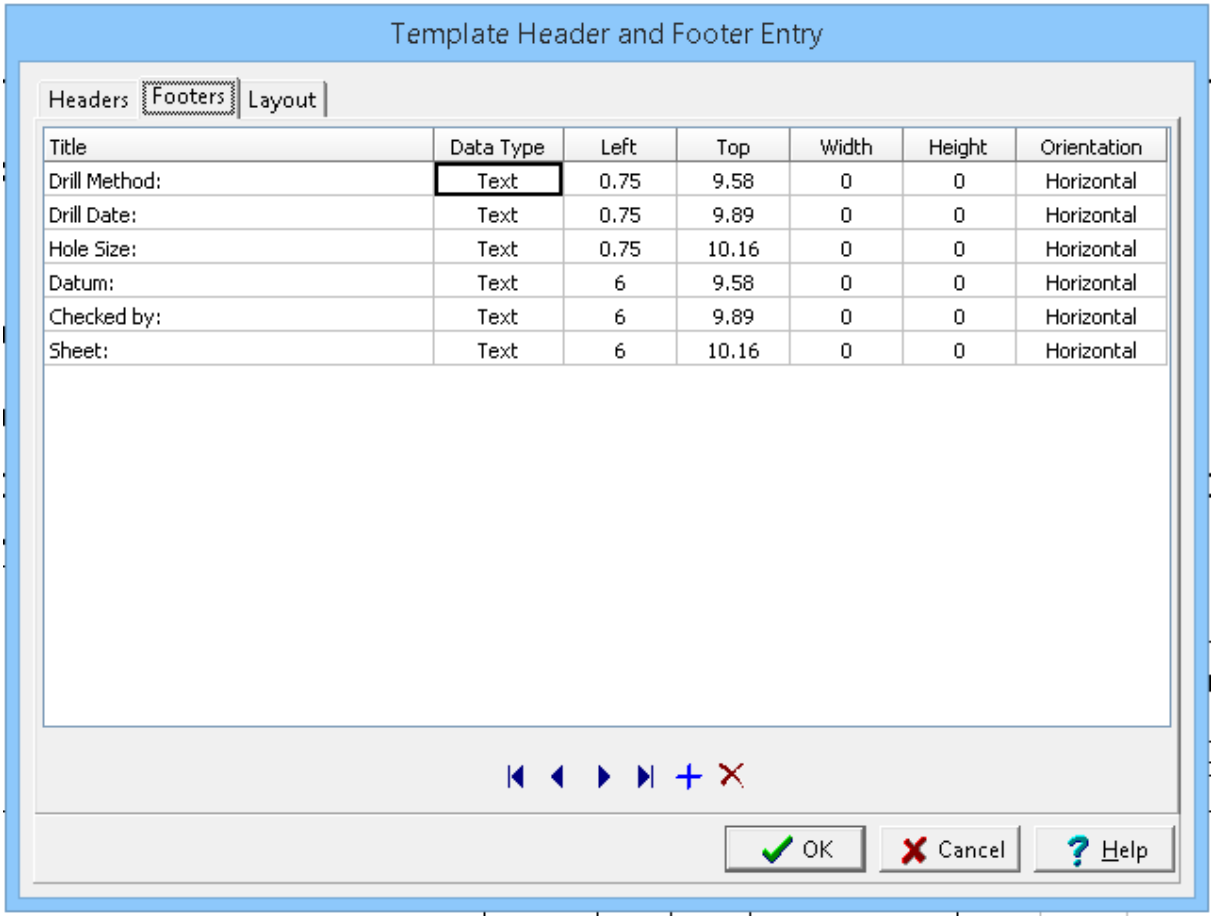
Top: This is the vertical position of the title in inches or millimeters from the top of the page.

Width: This is the horizontal width of the title and data in inches or millimeters. If set to zero, then the width is not used. The width should only be used when specifying header lines for memo data.

Height: This is the vertical height of the title and data in inches or millimeters. If set to zero, then the height is not used. The height should only be used when specifying header lines for memo data.

Orientation: This is used to select whether the header is displayed horizontally or vertically.

4.2.3.1.2 Footer Tab



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The Footers tab and Page 2+ Footers tab can be used to edit the following information:

Title: This is the title to use for the footer line (up to 255 characters). It defines the type of data for the log. The title will be used to prompt for information when entering data. If the title is for text data or a checkbox, it will be displayed on the log. If the title is for memo data, it will not be displayed on the log. If the title is, Sheet or Page the sheet number of the log will be automatically filled in by the program.

Data Type: The footer line can be one several types of data such as text, date, float, integer, memo, or checkbox. In addition, the data type can be one of several; types of data that can be automatically filled in by the program; such, name, ID, X-Coordinate, etc.

Left: This is the horizontal position of the title in inches or millimeters from the left side of the page. If the footer is left justified, the title will start at this position. If the footer is right justified, the title will end at this position.

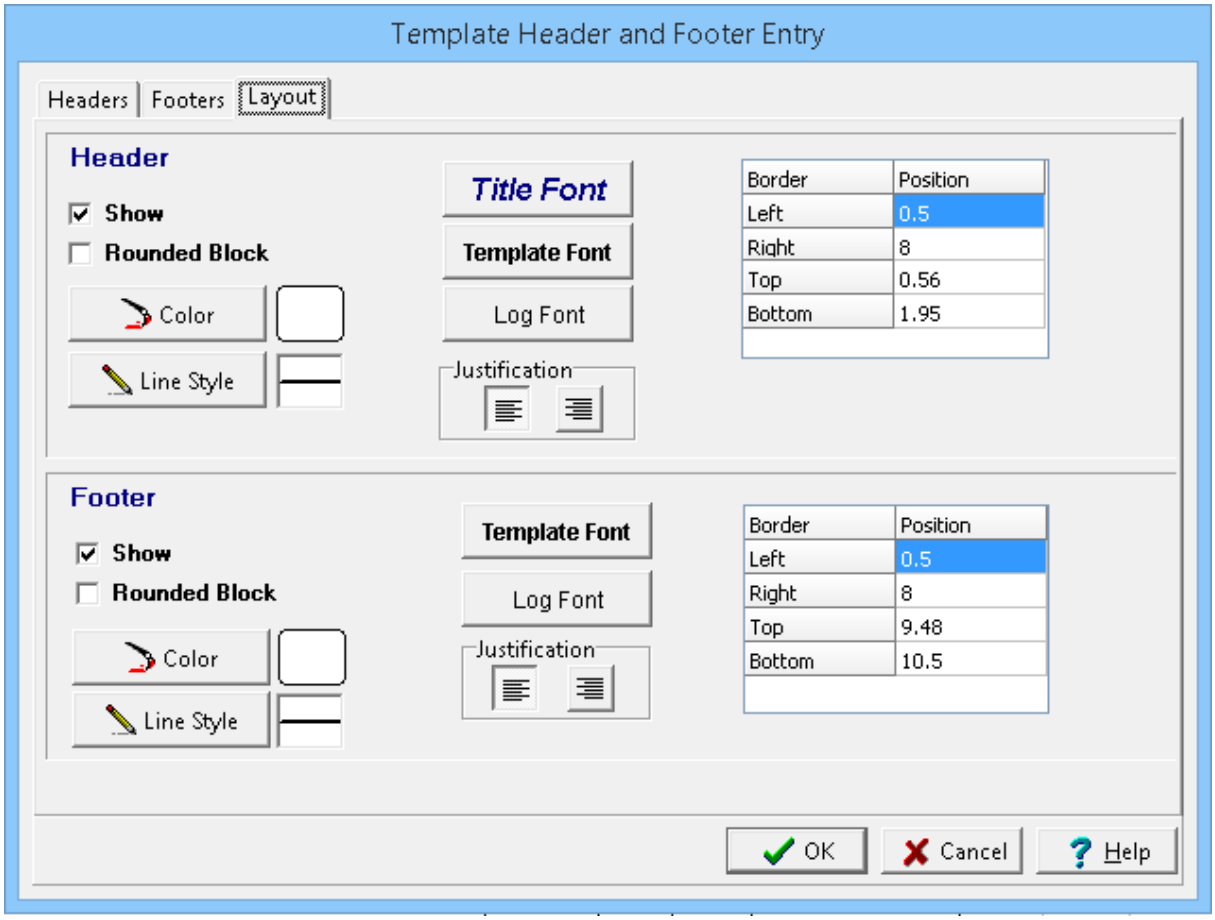
Top: This is the vertical position of the title in inches or millimeters from the top of the page.

Width: This is the horizontal width of the title and data in inches or millimeters. If set to zero, then the width is not used. The width should only be used when specifying footer lines for memo data.

Height: This is the vertical height of the title and data in inches or millimeters. If set to zero, then the height is not used. The height should only be used when specifying footer lines for memo data.

Orientation: This is used to select whether the footer is displayed horizontally or vertically.

4.2.3.1.3 Layout



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The Layout tab and Page 2+ Layout tab can be used to edit the following information:

Header

Show: If checked the header will be displayed on the template. If this is not checked the Header tab and fields below will not be displayed.

Rounded Block: If this is checked a rounded rectangle will be drawn around the header, otherwise a square rectangle will be drawn around the header.

Color: This is the background color for the header block. When the Color button is pressed the Color form will be displayed. Using this form a basic color can be selected or a custom color specified.

Line Style: This is the line style used to draw the border of the header. When the Line Style button is pressed, the Line Properties form will be displayed. This form can be used to set the line style, color, and width. To not draw a line around the header set the line style to none.

Title Font: This is the font to use when drawing the main title of the header. The main title is the first line of the header and is normally used for the boring/well number. When the Title Font button is pressed the Font form will be displayed. This form can be used to set the font name, font size, font style, and color.

Template Font: This is the font to use when drawing the titles of the header, other then the main title. When the Template Font button is pressed the Font form will be displayed. This form can be used to set the font name, font size, font style, and color.

Log Font: This is the font to use when drawing the data of the header, other then the main title. When the Log Font button is pressed the Font form. This form can be used to set the font name, font size, font style, and color.

Justification: This sets the justification of the header lines, either left or right justified.

Left: This is the position of the left border of the header in inches or millimeters from the left side of the page. .

Right: This is the position of the right border of the header in inches or millimeters from the left side of the page.

Top: This is the position of the top border of the header in inches or millimeters from the top of the page.

Bottom: This is the position of the bottom border of the header in inches or millimeters from the top of the page.

Footer

Show: If checked the footer will be displayed on the template. If this is not checked the Footer tab and fields below will not be displayed

Rounded Block: If this is checked a rounded rectangle will be drawn around the header, otherwise a square rectangle will be drawn around the header.

Color: This is the background color for the footer block. When the Color button is pressed the Color form. Using this form, a basic color can be selected or a custom color specified.

Line Style: This is the line style used to draw the border of the footer. When the Line Style button is pressed, the Line Properties form. This form can be used to set the line style, color, and width. To not draw a line around the footer set the line style to none.

Template Font: This is the font to use when drawing the titles of the footer. When the Template Font button is pressed the Font form will be displayed. This form can be used to set the font name, font size, font style, and color.

Log Font: This is the font to use when drawing the data of the footer. When the Log Font button is pressed the Font form. This form can be used to set the font name, font size, font style, and color.

Justification: This sets the justification of the footer lines, either left or right justified.

Left: This is the position of the left border of the footer in inches or millimeters from the left side of the page.

Right: This is the position of the right border of the footer in inches or millimeters from the left side of the page.

Top: This is the position of the top border of the footer in inches or millimeters from the top of the page.

Bottom: This is the position of the bottom border of the footer in inches or millimeters from the top of the page.

4.2.3.1.4 Moving Titles

Individual header and footer titles can be positioned using the Headers and Footers Entry form or by moving them with the mouse. To move them with the mouse,click on them with the mouse and a marquee box will be drawn around them. Then drag the text to the desired location.

The position of the entire header or footer can be changed using the Headers and Footers Entry form or the mouse. To move the header or footer using the mouse, click on the it so that marquee boxes appear on the edges. Position the mouse in the center of the header or footer and the cursor should change to am arrow with a box. Then click and drag it to the new position.

4.2.3.1.5 Sizing the Header or Footer

The size of the header or footer be changed using the Headers and Footers Entry form or the mouse. To adjust the size using the mouse, click on the header or footer so that marquee boxes appear on the edges. Click on one of the corner marquee boxes and drag it to the new size.

4.2.3.2 Template Columns

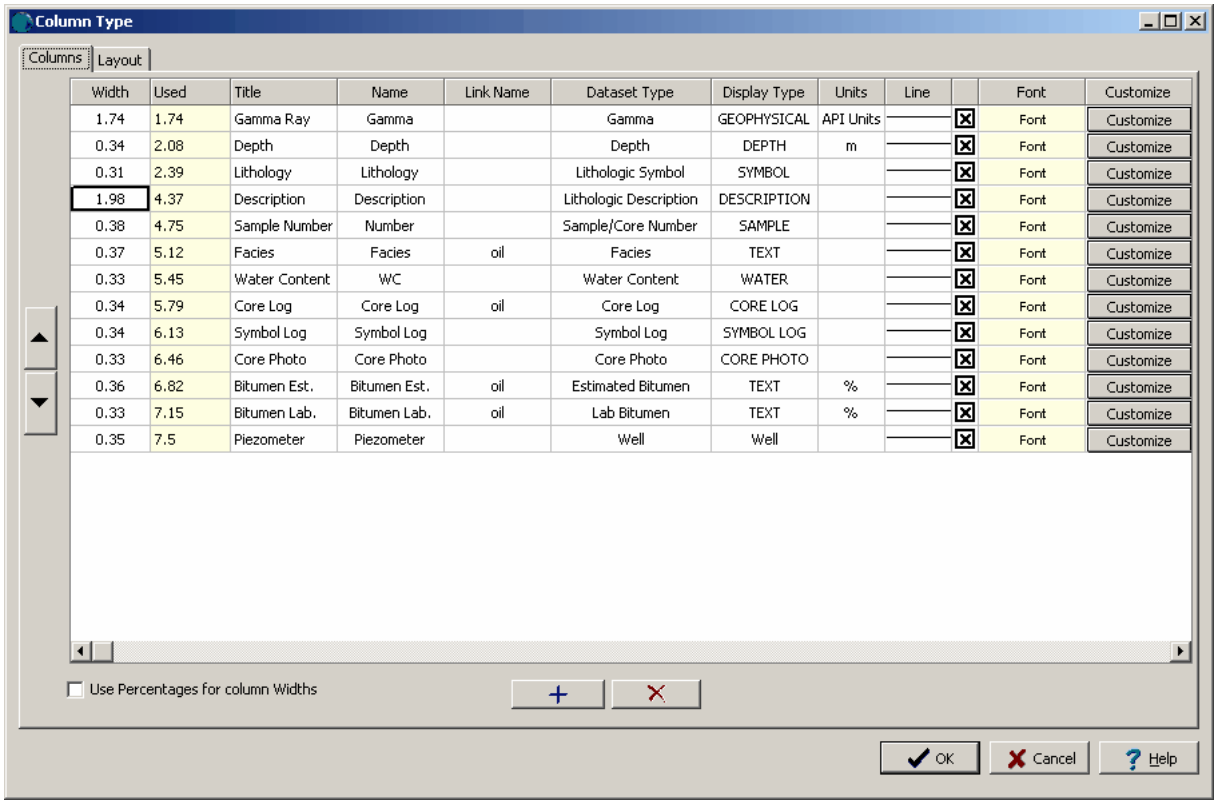
The template is used to control what boring/well data is displayed in the columns. The columns of the log are used to display all of the depth-related data. There is no limit to the number of columns that can be displayed in a boring/well log. Templates can contain multiple depth, text, graph, and well columns.

To edit a column either:

- select *Edit > Columns* or *Popup > Columns*
- double-click on the column on the template
- double-click on the column object on the sidebar

The Columns form will be displayed. This form has two tabs; one for the columns and one for the layout of the columns. If the template has two pages, this form will have four tabs two for the first page and two for the second page. Data entry and editing for the second page is identical to the first page, which is described in the sections below.

4.2.3.2.1 Columns Tab



Width	Used	Title	Name	Link Name	Dataset Type	Display Type	Units	Line		Font	Customize
1.74	1.74	Gamma Ray	Gamma		Gamma	GEOPHYSICAL	API Units		☒	Font	Customize
0.34	2.08	Depth	Depth		Depth	DEPTH	m		☒	Font	Customize
0.31	2.39	Lithology	Lithology		Lithologic Symbol	SYMBOL			☒	Font	Customize
1.98	4.37	Description	Description		Lithologic Description	DESCRIPTION			☒	Font	Customize
0.38	4.75	Sample Number	Number		Sample/Core Number	SAMPLE			☒	Font	Customize
0.37	5.12	Facies	Facies	oil	Facies	TEXT			☒	Font	Customize
0.33	5.45	Water Content	WC		Water Content	WATER			☒	Font	Customize
0.34	5.79	Core Log	Core Log	oil	Core Log	CORE LOG			☒	Font	Customize
0.34	6.13	Symbol Log	Symbol Log		Symbol Log	SYMBOL LOG			☒	Font	Customize
0.33	6.46	Core Photo	Core Photo		Core Photo	CORE PHOTO			☒	Font	Customize
0.36	6.82	Bitumen Est.	Bitumen Est.	oil	Estimated Bitumen	TEXT	%		☒	Font	Customize
0.33	7.15	Bitumen Lab.	Bitumen Lab.	oil	Lab Bitumen	TEXT	%		☒	Font	Customize
0.35	7.5	Piezometer	Piezometer		Well	Well			☒	Font	Customize

(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

This tab has one row for each column in the template. The left most columns are at the top of the list. The Columns tab and Page 2+ Columns tab can be used to edit the following information for each row:

Width: This is the width of the column in page units. The position of the column on the page is determined by the left boundary of the columns in the layout and the width of the columns before it.

Used: This is how much of the width has been used for the columns so far starting from the left. The amount of space available for the columns is determined by the left and right boundaries set in the layout.

Title: This is the title to display for the column. The title does not have to be the same as the column name and does not have to be unique. To display the title on more than one line use the Enter key. For graph columns, the title is entered on the Graph Properties form using the Customize button. When this column is clicked on a box will be displayed where the title can be entered. In addition, two checkboxes will be displayed where the title can be specified as being displayed hhorizontally or vertically.

Name: This is the unique name to use for the column. The name can be the same as the title.

Link Name: Some columns such as “Description”, "Text", “Text Interval”, “Facies”, “Constituents”, or “Members” can be linked to other columns so that the depths for the data only have to entered once. This field is used to specify the link name of the column. If left blank then the column will not be part of a linked interval. If the column can not be linked this field will not be able to be edited.

Dataset Type: This is the type of dataset that can be entered in the column. When this column is clicked on a list will be displayed showing the types of datasets available. This list of datasets will vary by industry.

Display Type: This is used to select the way to display the data for the column. For some columns such as text and graphs there is more than one way to display the data. If the dataset type supports more than one method of display, a list of display types will be shown when this column is clicked on. The majority of columns only support one display type and this field can not be changed.

Units: This is used to specify optional units for the dataset.

Line: This is the line style to use for the right border of the column. The line style of the left border will be controlled by the previous column. To change the line style, click on this column and a Line button will be displayed. When this button is clicked on the Line Properties form will be displayed. This form can be used to set the line style, width, and color.

Use Default Font: This checkbox should be checked to use the default column font specified in the layout tab. If this is checked, the Column Font button will not appear.

Column Font: Click this button to change the font to use for this column. Each column can use a different font if desired. The title of the column will still be displayed in the default column font. However, all of the column data will use this font. When pressed the Font form will be displayed. This form can be used to select the font name, font style, font size, and color.

Customize: Depending upon the type of column, this button will be enabled or disabled. If the column can be customized it will be enabled. Press the button to customize the specific properties of the column. The form displayed will depend on the type of column as described in the sections below.

At the left side of the tab there are two buttons that can be used to move the column up and down in the list. This will determine their position on the page. The columns at the top of the list will appear on the left.

At the bottom of the tab are two button that can be used to add and delete columns.

Depending upon the type of column, the column may be customizable. To customize a column on the Column Type form, press the button to customize button on the columns tab. The form that is displayed will depend on the type of column. The sections below describe how to customize the various columns.

The % Aggregate/Gravel data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

The % Clay data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

The % Coarse Sand can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

The % Fine Sand can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

The % Fines can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

The % Medium Sand can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

The % Passing 200 Sieve data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

The % Silt can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

The AASHTO Classification can be displayed either as a text interval. The customization of the column is the same as described in Customizing an Interval Text Column 447.

Airlift Q data is displayed either as text interval or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing an Interval Text Column 447 or Customizing a Graph Column 439.

Alteration data is displayed the same as text interval data. The customizing of the column is the same as described in Customizing an Interval Text Column 447.

The data for a bargraph cross-plot is entered the same as a bargraph. The customization of this column is the same as that described in Customizing a Graph Column 439.

The Bulk Density data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

A calculated column is displayed the same as a graph. The customization of this column is the same as that described in Customizing a Graph Column 439.

A Caliper column is displayed the same as a graph or geophysical column. The customization of this column is the same as that described in Customizing a Graph Column 439.

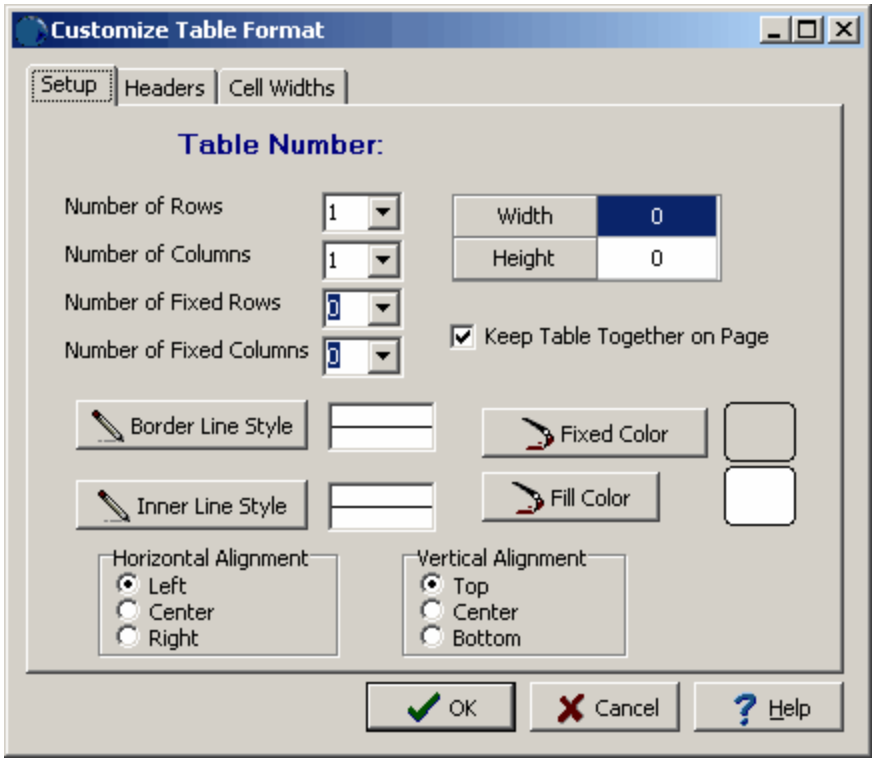
Cementation data is displayed the same as text interval data. The customizing of the column is the same as described in Customizing an Interval Text Column 447.

The CMT data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of

the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

All of the tables in this type of column use the same format. The display of a column of tables can be customized using the Customize button on the Columns tab. The Edit Table Format form will be displayed. This form has three tabs for the setup, headers, and cell widths.

Setup Tab



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this tab:

Number of Rows: This is the number of rows in the table, including the fixed rows.

Number of Columns: This is the number of columns in the table, including the fixed columns.

Number of Fixed Rows: This is the number of fixed rows in the table. The contents in fixed rows are set in the template and can not be edited in the log.

Number of Fixed Columns: This is the number of fixed columns in the table. The contents in fixed columns are set in the template and can not be edited in the log.

Width: This is the width of the table in page units. If the width is greater than the column width it will be adjusted to the column width when the log is displayed.

Height: This is the height of the table in page units.

Keep Table Together on Page: Check this box to make sure tables do not cross page boundaries. If the entire table can not be displayed on the page, it will be displayed on the next page.

Border Line Style: Click this button to change the line style of the border around the table. When the button is clicked a Line Properties form will be displayed, where the line style, color, and width can be specified.

Inner Line Style: Click this button to change the line style of the inner lines in the table. When the button is clicked a Line Properties form will be displayed, where the line style, color, and width can be specified.

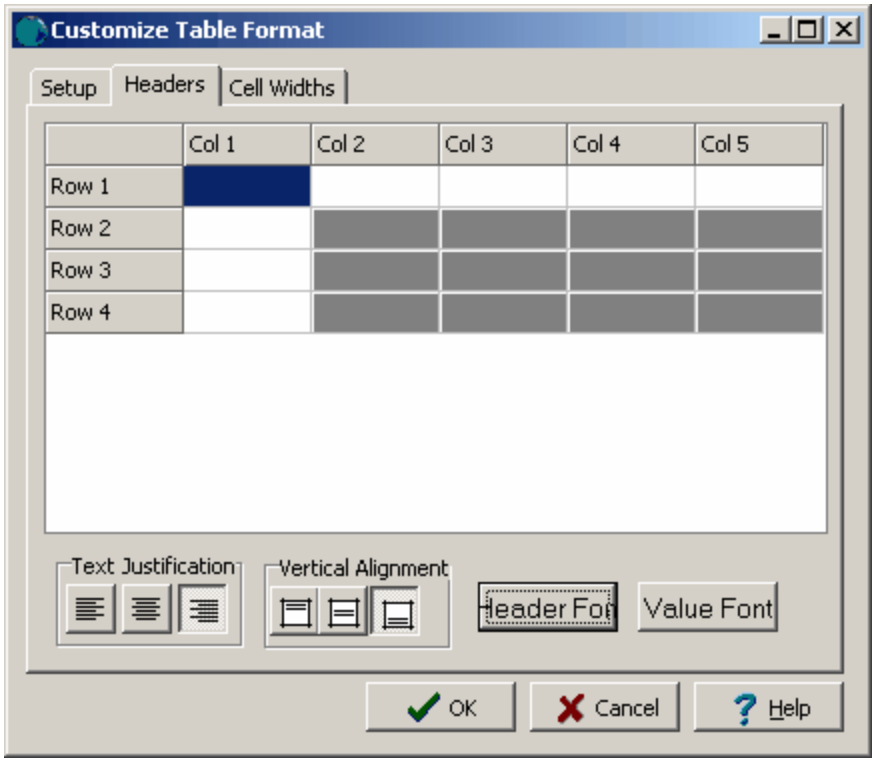
Fixed Color: Click this button to change the color of the fixed cells in the table. When the button is clicked a Color form will be displayed where the color can be selected.

Fill Color: Click this button to change the color of the non-fixed cells in the table. When the button is clicked a Color form will be displayed where the color can be selected.

Horizontal Alignment: This is used to select the horizontal alignment within in the column of the entire table.

Vertical Alignment: This is used to select the vertical alignment of the entire table within the depth interval specified in the log.

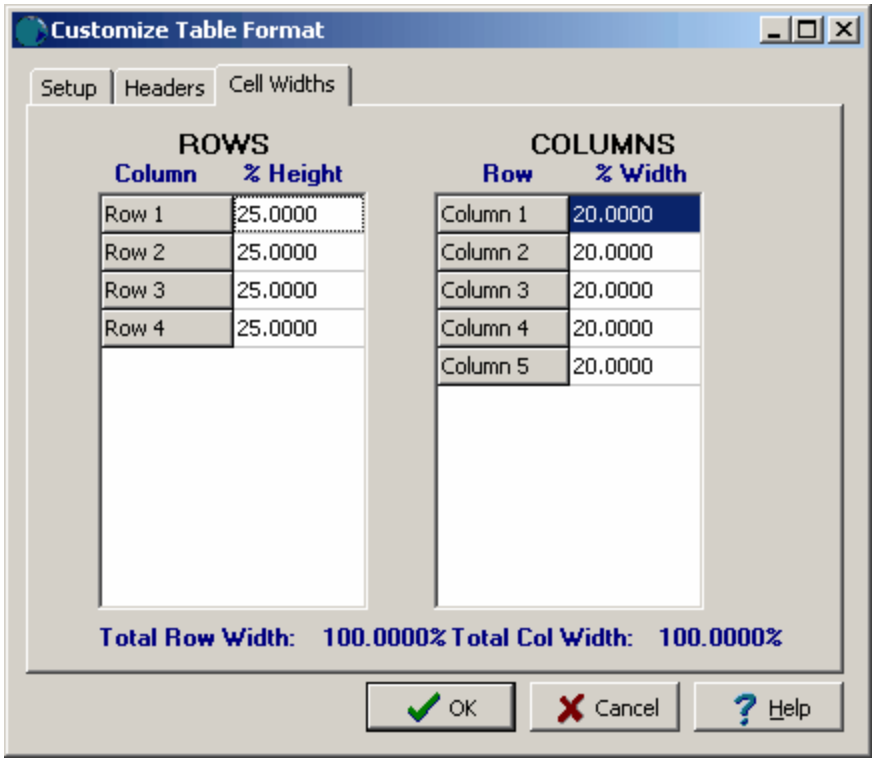
Headers Tab



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

This tab is used to specify the headers for the fixed rows and columns specified on the Setup tab. The cells are displayed and can be edited will be determined in the Setup tab. These headers can only be changed in the template and can not be edited in the log. The cells that can be edited appear in white.

Cell Widths Tab



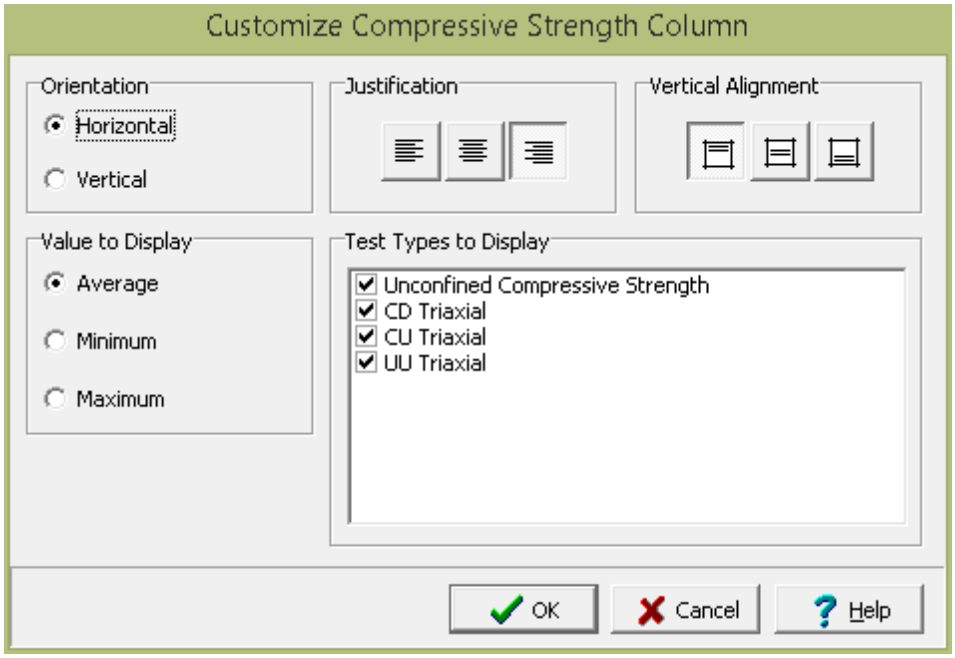
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

This tab is used to set the heights of the rows and widths of the columns as a percentage of the total height and width specified in the Setup tab.

Compressive strength data (not from the GDMS module) can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

Compressive strength data from the GDMS module can be displayed either as text, sample data, or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is described in the sections below.

If the compressive strength is being displayed as a text or sample column, the customize form below will be displayed when the Customize button is clicked.



The following can be edited on this form:

Orientation: The text can be oriented either horizontally or vertically.

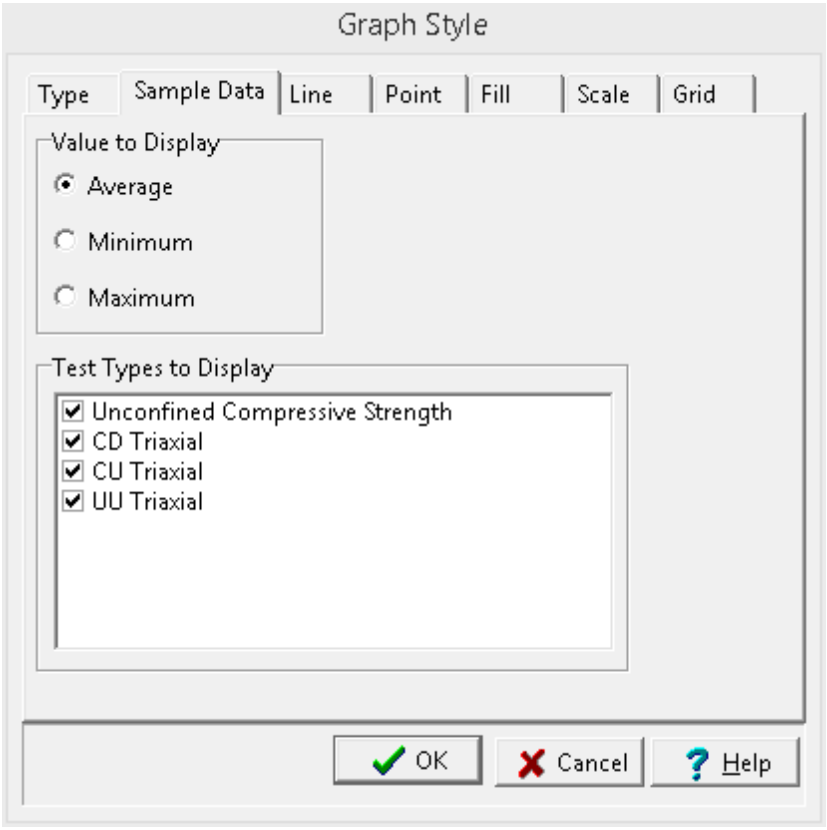
Justification: The text can be justified left, center, or right within the column.

Vertical Alignment: This is the vertical alignment of the text.

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

Test Types to Display: This is used to select the test type results to display on the log.

If the compressive strength is being displayed as a graph the customize form below will be displayed when the Customize button is clicked. This form is the same as the customize graph form with the addition of the Sample Data tab. The Type, Line, Point, Fill, Scale, and Grid tabs are described in the Customizing a Graph 439 section.



The following can be edited on the Sample Data tab:

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

Test Types to Display: This is used to select the test type results to display on the log.

This column is used to display the concentrations. To display concentrations from the EDMS module use the Concentration (EDMS) 417 column. This column can be displayed as either text or a graph. Depending on how the column is displayed the customization of the column is the same as described in Customizing an Interval Text Column 447 or Customizing a Graph Column 439.

For the Name of the column, the parameter to display is selected from a list of parameters as specified in the Editing Parameters section in Chapter 4.

For more information see the Concentration Integration section in Chapter 4.

This column is used to display the concentrations from EDMS on a boring/well log. This column can be displayed as either text or a graph. Depending on how the column is displayed the customization of the column is the same as described in Customizing an Interval Text Column 447 or Customizing a Graph Column 439.

For the Name of the column, the parameter to display is selected from a list of parameters as specified in the Editing Parameters section in Chapter 4.

For more information see the Concentration Integration section in Chapter 4.

A Conductivity column is displayed the same as a graph or geophysical column. The customization of this column is the same as that described in Customizing a Graph Column 439.

The Cone Penetration Blows data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

The Cone Resistance data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

The Confining Pressure data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

Constituents data is displayed the same as text interval data. The customizing of the column is the same as described in Customizing an Interval Text Column 447.

Contacts data is displayed the same as text interval data. The customizing of the column is the same as described in Customizing an Interval Text Column 447.

The Core Diameter data can be displayed either as a text interval or bargraph depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing an Interval Text Column 447 or Customizing a Bargraph Column 439.

The Core Drill Rate data can be displayed either as a text interval or bargraph depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing an Interval Text Column 447 or Customizing a Bargraph Column 439.

The Core Drive data can be displayed either as a text interval or bargraph depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing an Interval Text Column 447 or Customizing a Bargraph Column 439.

The Core Number data can be displayed either as a text interval or bargraph depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing an Interval Text Column 447 or Customizing a Bargraph Column 439.

Core photo columns are used to display photos taken of cores at different depths or can be used to display photos taken inside the boring/well itself. The photos can be in either BMP or JPEG format, and should be tied to a particular depth. The style of the Core Photo column can be changed using the Customize button on the Columns form. The Customize Core Photo Column will be displayed.

(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

This form can be used to adjust the Image Settings between the following:

Do Not Stretch: Using this setting the image will not be stretched at all and will be clipped if it extends outside of the column. The image will be tied to the specified top depth and will extend to a depth according to the size of the image.

Stretch to Fit Column Width and Height: Using this setting the image will be stretched such that it fits within the width of the column and extends from the specified top depth to the specified bottom depth.

Stretch While Maintaining Aspect Ratio: Using this setting the image will be stretched such that it extends from the specified top depth to the specified bottom depth. The aspect ratio of the image will be maintained during this stretching, such that the vertical and horizontal stretches are the same. This may result in the image being clipped when it extends outside of the column horizontally.

The Core Recovered (SCR) data can be displayed either as a text interval or bargraph depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of

the column is the same as described in Customizing an Interval Text Column 447 or Customizing a Bargraph Column 439.

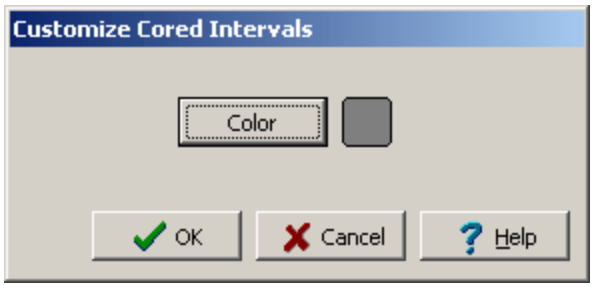
The Core Recovered (TCR) data can be displayed either as a text interval or bargraph depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing an Interval Text Column 447 or Customizing a Bargraph Column 439.

The Core RQD data can be displayed either as a text interval or bargraph depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing an Interval Text Column 447 or Customizing a Bargraph Column 439.

The Core Run data can be displayed either as a text interval or bargraph depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing an Interval Text Column 447 or Customizing a Bargraph Column 439.

The Core Time data can be displayed either as a text interval or bargraph depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing an Interval Text Column 447 or Customizing a Bargraph Column 439.

The color used to show cored intervals can be customized using the Customize button on the Columns tab. The Customize Cored Intervals form will be displayed.

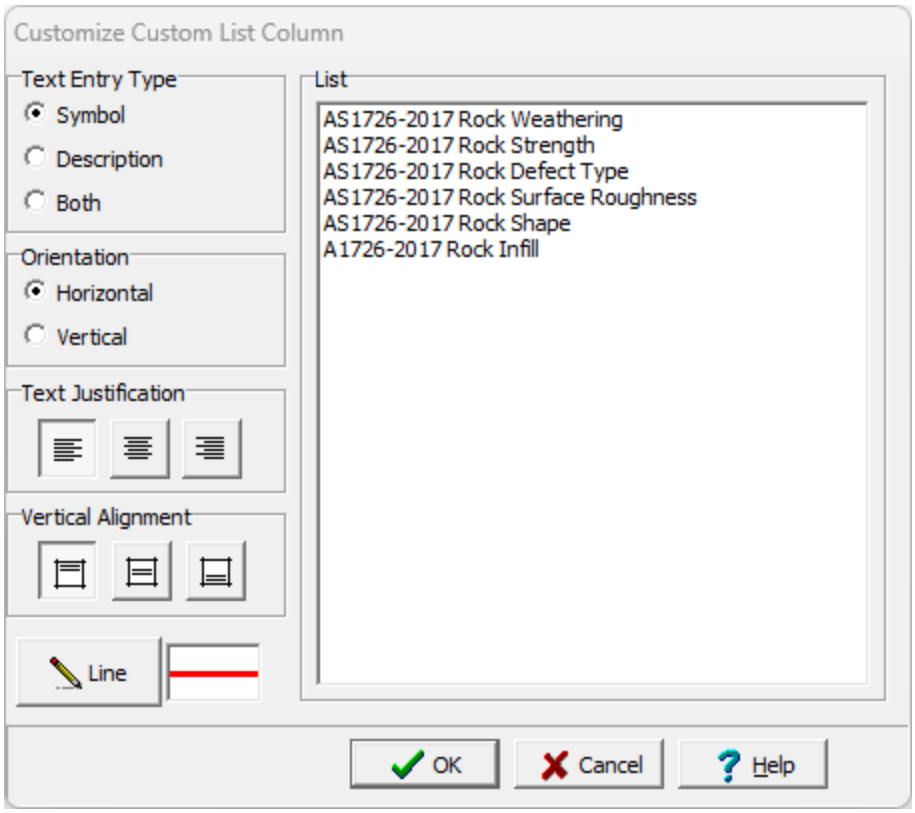


(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

Color: Click this button to change the color for the cored intervals. A Color form will be displayed that can be used to select or specify a color.

The custom list column style can be changed using the Customize button on the Columns tab. When the Customize button is pressed the Customize form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The Customize Custom List Column form can be used to set the following:

List: This is used to select the custom list of text that will be used in the column.

Text Entry Type: This is used to set what text will be entered for the column. The text can be either the symbol, description, or both from the custom list.

Orientation: The text can be oriented either horizontally or vertically. This orientation only applies to text lines, and will not apply to memos.

Justification: The text can be justified left, center, or right within the column. This justification only applies to text lines, and will not apply to memos entered in the text column.

Vertical Alignment: This is the vertical alignment of the text in the interval.

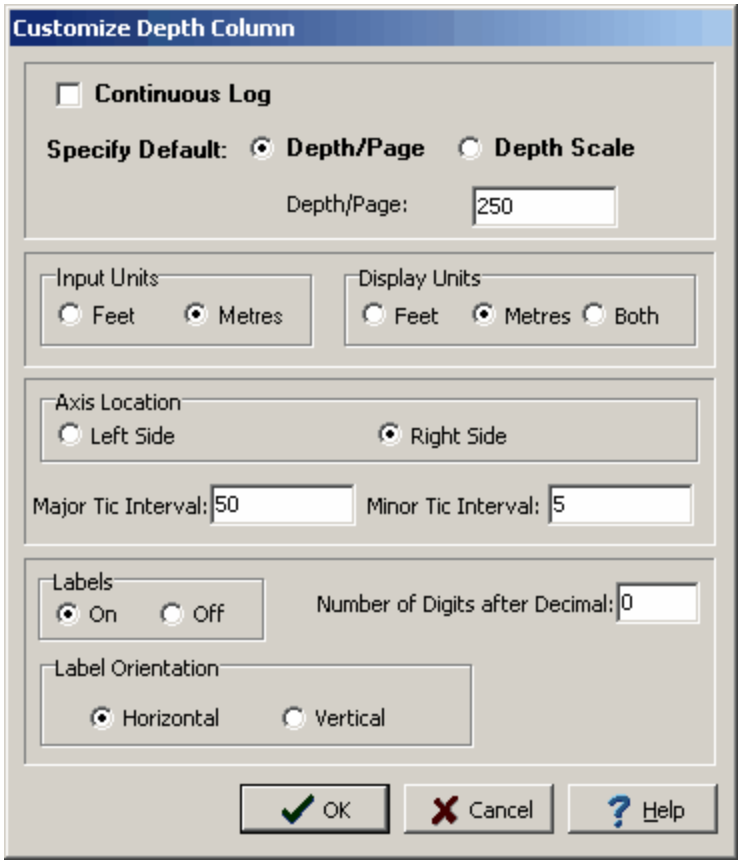
Line Style: This is the line style to use for the top and bottom of the text interval. To change the line style, press the Line Style button. A Line Properties form will be displayed. This form can be used to set

the line style, width, and color. If the custom list is for a Sample or Lithology this will not be shown and the line style will be the same as the sample or lithology description.

A Cut Flourescence column is displayed the same as a bargraph column. The customization of this column is the same as that described in Customizing a Graph Column 439. The only difference is that the scale is automatically set for the different types of flourescence.

Degree of Weathering data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

The depth column of the template can be customized to set the plot depth per page, input units, and depth axis format. To customize the depth axis, select the Depth column and click on the Customize button on the Columns tab.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The Customize Depth Column form can be used to set the following parameters:

Continuous Log: Check this box if the template is to be used to create continuous logs with no page breaks. Continuous logs have a header on the first page and a footer on the last page with no page breaks in between.

Default Depth/Page or Depth Scale : The depth/page or depth scale determines the number of feet or meters that is displayed on each log sheet. This can be specified either as the depth per page (number of feet or meters per page) or as a depth scale (one page unit equals a specified number of log units). The depth per page specified in the template normally determines the plot depth per page; however, this can be overridden in the log by specifying a depth per page when editing the log.

Input Units: These are the units that will be used when entering depths for log data. The input units do not have to be the same as the display units.

Display Units: These are the display units of the depth axis. They can be feet, meters, or both. These units do not have to be the same as the input depth units. If both are specified, then the depth axis will have feet displayed on the left and meters displayed on the right.

Axis Location: The depth axis can be located on the left or right side of the depth column. If it is located on the left side of the column, the labels will appear on the right side of the tics. If it is located on the right side of the column, the labels will appear on the left side of the tics.

Major Tic Interval: This is depth interval between labels on the depth axis.

Minor Tic Interval: This is the depth interval between tics on the depth axis.

Labels: This is used to turn the depth labels on and off. If the labels are turned off the depth axis will be drawn with tics only.

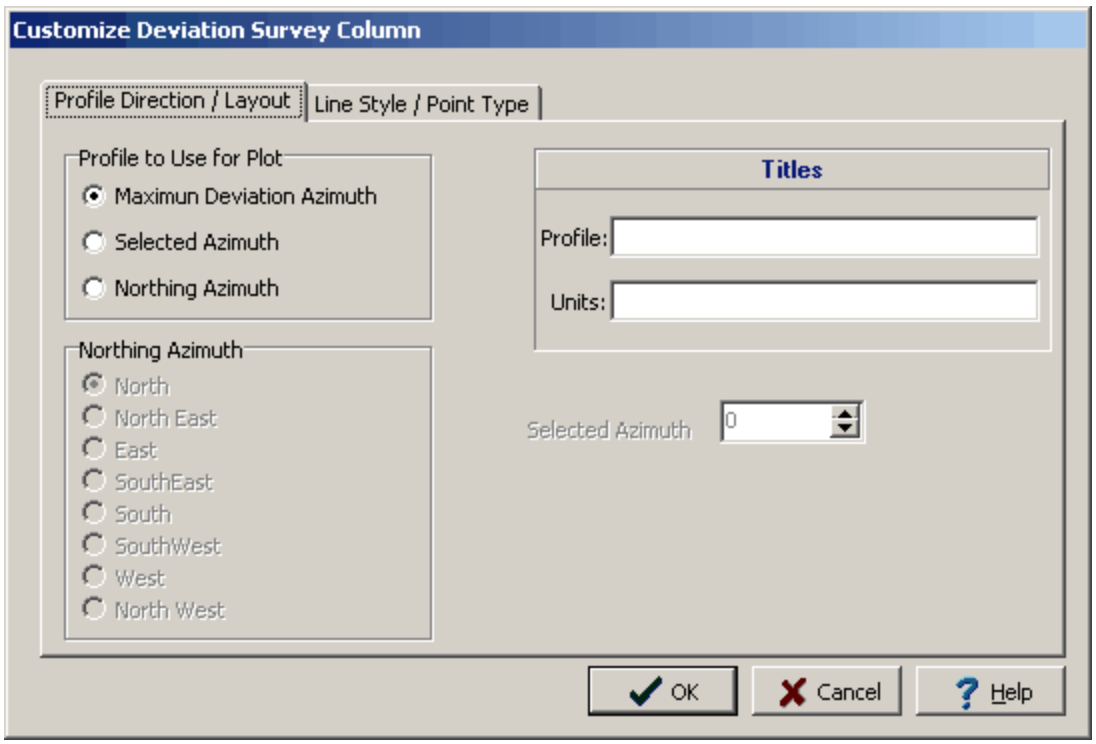
Number of Digits after Decimal: This is the number of digits to display after the decimal in the labels. For example, if the number of digits is 1, then the depth 2 feet will be labeled as 2.0.

Label Orientation: This is the orientation of the depth labels, either horizontal or vertical.

A Density column is displayed the same as a graph or geophysical column. The customization of this column is the same as that described in Customizing a Graph Column 439.

The style of the Deviation Survey column can be changed using the Customize button on the Columns tab. When the Customize button is pressed the Customize Deviation Survey Column form will be displayed. The Deviation Survey Form has two tabs one for the profile direction/layout and one for the line style/point type.

Profile Direction/Layout Tab



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

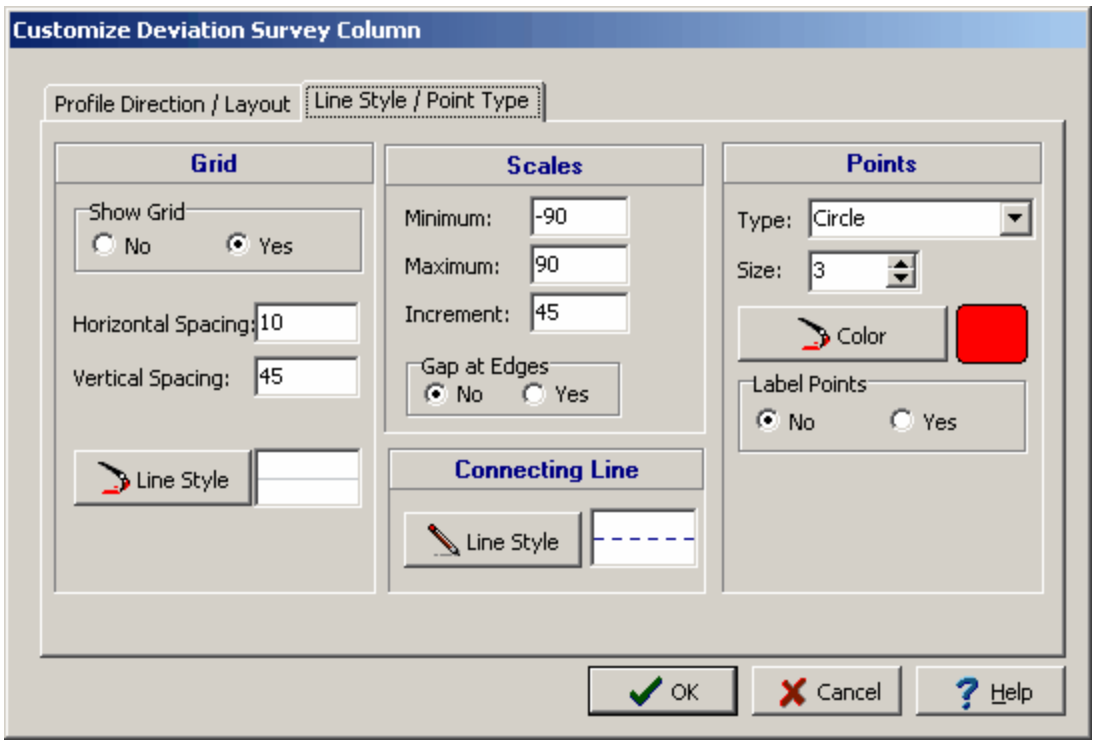
Profile To Use for the Plot: This is the profile type that is used to draw the Deviation Survey. There are three choices:

1. **Maximum Deviation Azimuth:** This is the azimuth of maximum deviation as calculated by the program using the deviation survey data.
2. **Selected Azimuth**: If the user selects the profile type as Selected Azimuth then this field is enabled and the user can select any Azimuth between 0 and 360 degrees to draw the deviation survey profile.
3. **Northing Azimuth**: If the user selects the profile type as Northing Azimuth then this radio button is enabled and the user can select any of the eight azimuths to use to draw the deviation survey profile.

Profile Title: This is the title to use for the Deviation Survey Column. The title will be displayed in the same area as the Column Title. It is recommended that either the Profile Title or Column Title be used, and not both.

Units Title: This is the units of the Deviation Survey. The unit title will be displayed below the Profile title.

Line Style/Point Type Tab



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The Line Style/Point Type tab can be used to set the following:

Grid

Show Grid: To draw horizontal and vertical grid lines, set Show Grid to yes.

Horizontal Spacing: This is the horizontal spacing of the grid lines, usually the same as the scale increment. If set to zero, the scale increment will be used. If Show Grid is set to no, this field will not appear.

Vertical Spacing: This is the vertical spacing of the grid lines, usually the same as the scale increment. If set to zero, the scale increment will be used. If Show Grid is set to no,this field will not appear.

Line Style: This is the line style to use to draw the grid. When the Line Style button is pressed a Line Properties form will be displayed. This form can be used to set the line style, width, and color.

Scales

Minimum: This is the minimum value for the horizontal axis of the profile. If the value is zero, the program will calculate the minimum value based on the data specified.

Maximum: This is the maximum value for the horizontal axis of the profile. If the value is zero, the program will calculate the maximum value based on the data specified.

Increment: This is the increment to use for labeling the horizontal axis of the profile. If the value is zero, the program will calculate the increment based on the data specified.

Gap at Edges: This is used to select whether there should be a gap on the left and right sides of the column. By putting a gap on the sides there will be room to display the minimum and maximum labels of the profile within the column.

Connecting Line

Line Style: The data points for the profile can be connected by a line. To change the line style, press the Line Style button. A Line Properties form will be displayed. This form can be used to select the line style, width, and color. If the line style is set to "none", no line will connect the points.

Points

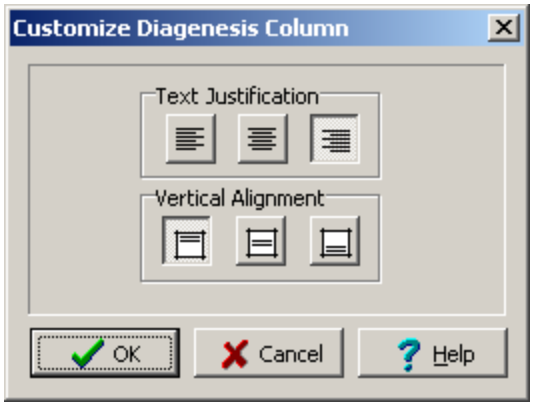
Type: The profile data can be shown as circles, crosses, squares, squares, triangles, or inverted triangles. To not show the data points, select "none".

Size: This is the size of the data points. If the Point Type is set to 'none', this field will not appear.

Color: This is the color of the data points. To change the color, press the Color button. A Color form will be displayed. This form can be used to select a basic color or a custom color. If the Point Type is set to "none", this field will not appear.

Label Points: The values of the data points can be drawn above each point. If the data value is less than the minimum value, the value will be shown with a "<" symbol. If the data value is greater than the maximum value, the value will be shown with a ">" symbol. If the Point Type is set to "none", this field will not appear.

The Diagenesis column can be customized using the Customize button on the Columns tab. The Customize Diagenesis Column will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

Text Justification: This is the horizontal justification for the text in the column.

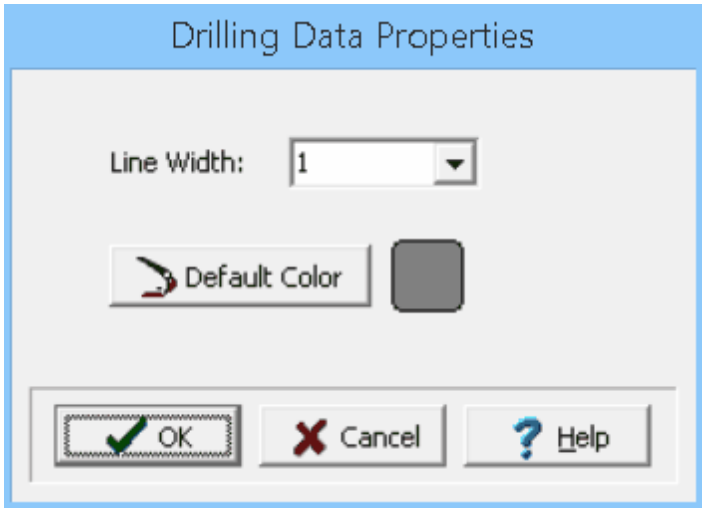
Vertical Alignment: This is the vertical alignment for the text in the column.

A Dipmeter column is displayed the same as a graph or geophysical column. The customization of this column is the same as that described in Customizing a Graph Column 439.

A Direct Flourescence column is displayed the same as a bargraph column. The customization of this column is the same as that described in Customizing a Graph Column 439. The only difference is that the scale is automatically set for the different types of flourescence.

Drill stem test data is displayed the same as text interval data. The customizing of the column is the same as described in Customizing an Interval Text Column 447.

The drilling data column can be customized by clicking on the Customize button on the Columns tab. The Drilling Data Properties form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

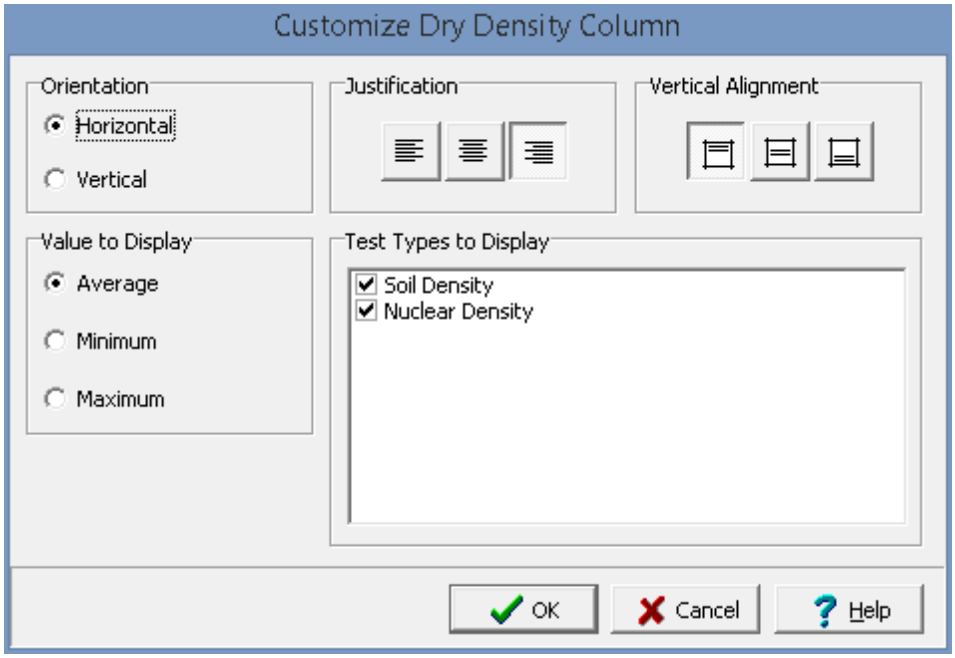
Line Width: This is used to select the line width for the drilling data symbols.

Default Color: This is used to select the default color for the drilling data symbols.

Dry Density data (not from the GDMS module) can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

Dry Density data from the GDMS module can be displayed either as text, sample data, or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is described in the sections below.

If the dry density is being displayed as a text or sample column, the customize form below will be displayed when the Customize button is clicked.



The following can be edited on this form:

Orientation: The text can be oriented either horizontally or vertically.

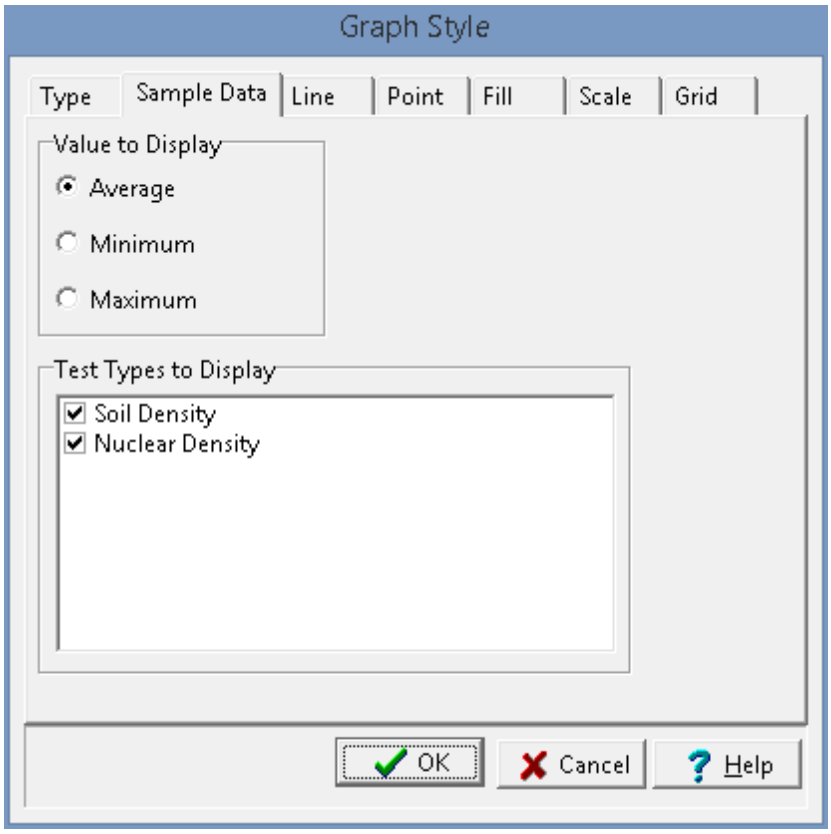
Justification: The text can be justified left, center, or right within the column.

Vertical Alignment: This is the vertical alignment of the text.

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

Test Types to Display: This is used to select the test type results to display on the log.

If the dry density is being displayed as a graph the customize form below will be displayed when the Customize button is clicked. This form is the same as the customize graph form with the addition of the Sample Data tab. The Type, Line, Point, Fill, Scale, and Grid tabs are described in the Customizing a Graph 439 section.



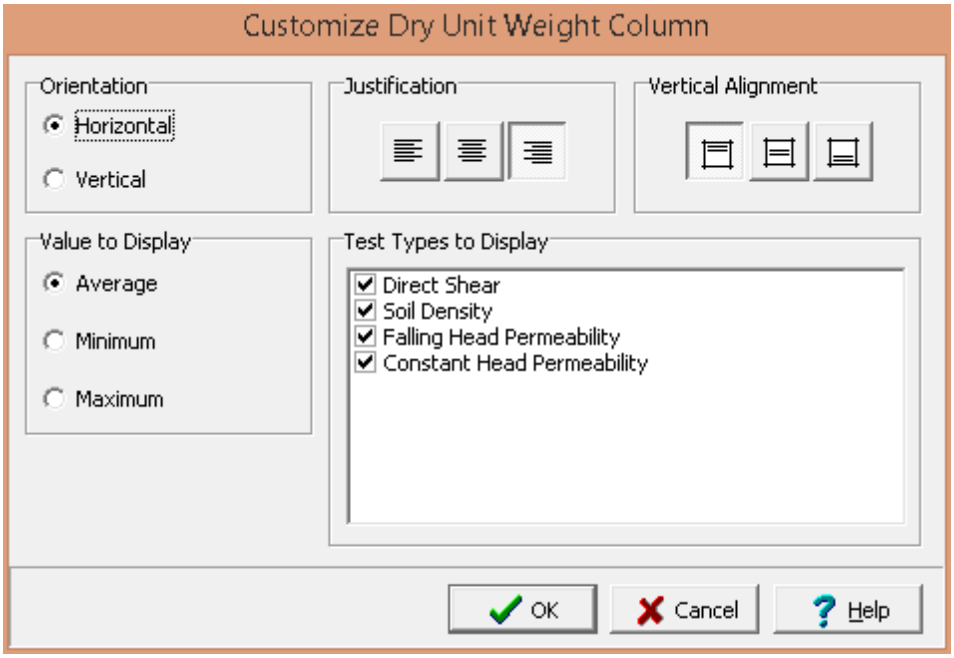
The following can be edited on the Sample Data tab:

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

Test Types to Display: This is used to select the test type results to display on the log.

Dry Unit Weight data from the GDMS module can be displayed either as text, sample data, or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is described in the sections below.

If the dry unit weight is being displayed as a text or sample column, the customize form below will be displayed when the Customize button is clicked.



The following can be edited on this form:

Orientation: The text can be oriented either horizontally or vertically.

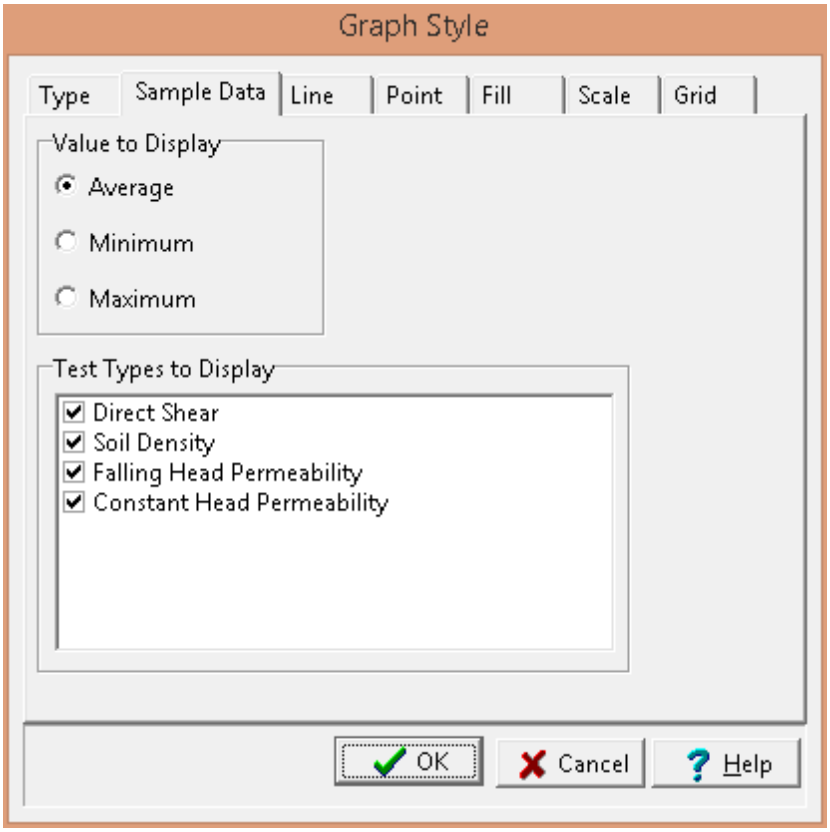
Justification: The text can be justified left, center, or right within the column.

Vertical Alignment: This is the vertical alignment of the text.

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

Test Types to Display: This is used to select the test type results to display on the log.

If the dry unit weight is being displayed as a graph the customize form below will be displayed when the Customize button is clicked. This form is the same as the customize graph form with the addition of the Sample Data tab. The Type, Line, Point, Fill, Scale, and Grid tabs are described in the Customizing a Graph 439 section.

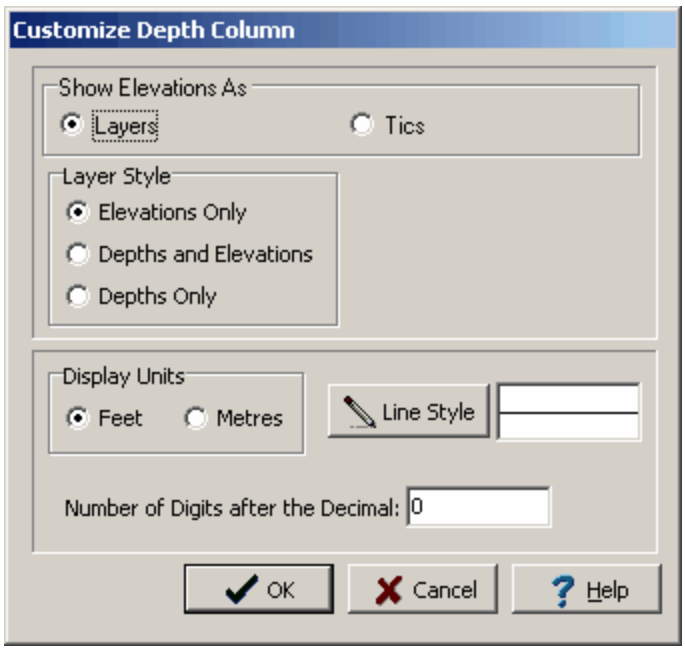


The following can be edited on the Sample Data tab:

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

Test Types to Display: This is used to select the test type results to display on the log.

The style of the elevation column can be changed using the Customize button on the Columns tab. When the Customize button is pressed the Customize Elevation Column form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The Customize Elevation Column form can be used to set the following parameters:

Show Elevations As: Elevations can be displayed as “layers” or “tics”. If “layers” is selected, a line will be drawn across the elevation column at each layer boundary and the elevation displayed. If “tics” is selected the elevation will be displayed at regular intervals similar to the depth column.

Layer Style: If the elevations are displayed as “layers”, the “elevation only” or “elevation and depth” can be displayed at each layer boundary. If the elevations are displayed as “tics”, this field will not appear.

Major Tic Interval: This is depth interval between labels on the elevation axis. If elevations are displayed as “layers” this field will not appear.

Minor Tic Interval: This is depth interval between tics on the elevation axis. If elevations are displayed as “layers” this field will not appear.

Display Units: This is the units to use to display the elevation column. The display units do not have to be the same as input units.

Line Style: This is the line style to use when drawing the layer boundaries or tics in the elevation column. When the Line Style button is pressed, a Line Properties form will be displayed. This form can be used to set the line style, width, and color.

Number of Digits after the Decimal: This is the number of digits to display after the decimal in the labels. For example, if the number of digits is 1, then the elevation 101 feet will be labeled as 101.0.

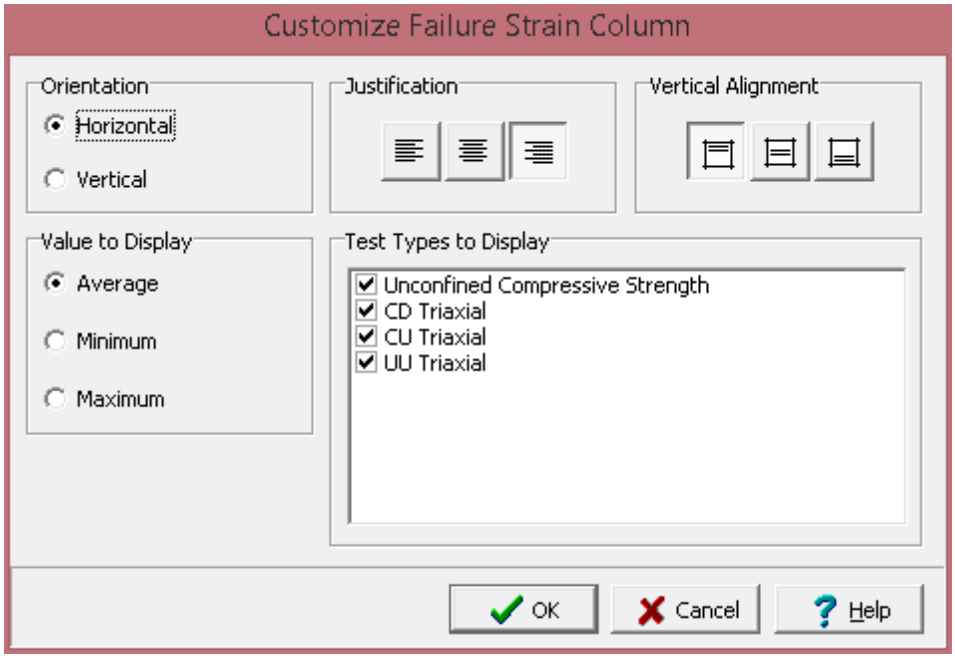
Estimated bitumen data is displayed either as text interval or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing an Interval Text Column 447 or Customizing a Graph Column 439.

Facies data is displayed the same as text interval data. The customizing of the column is the same as described in Customizing an Interval Text Column 447.

Failure Strain data (not from the GDMS module) can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

Failure Strain data from the GDMS module can be displayed either as text, sample data, or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is described in the sections below.

If the failure strain is being displayed as a text or sample column, the customize form below will be displayed when the Customize button is clicked.



The following can be edited on this form:

Orientation: The text can be oriented either horizontally or vertically.

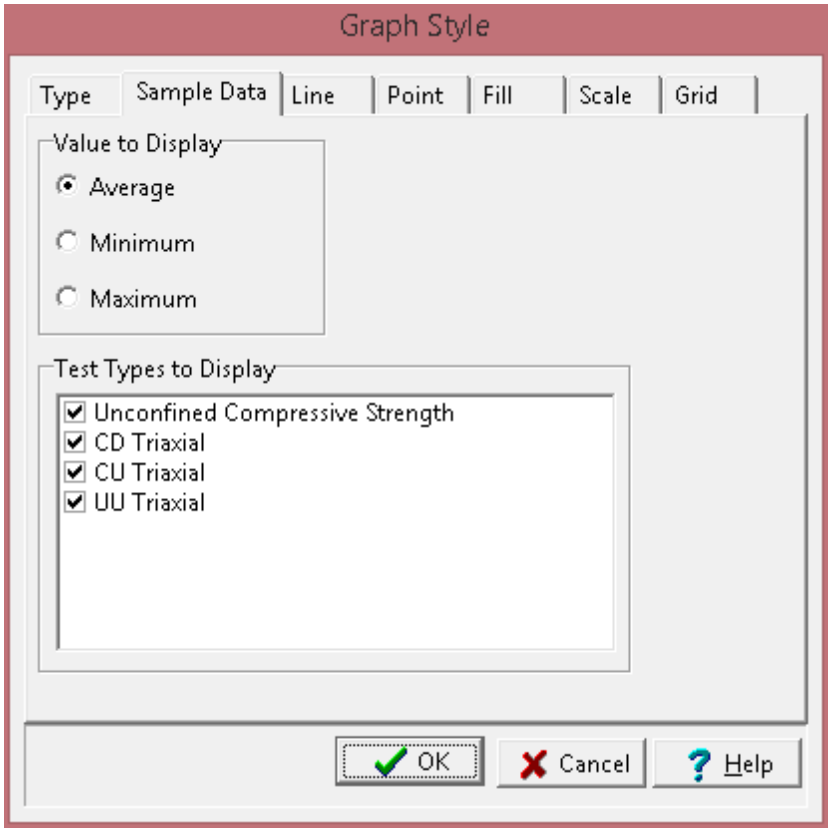
Justification: The text can be justified left, center, or right within the column.

Vertical Alignment: This is the vertical alignment of the text.

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

Test Types to Display: This is used to select the test type results to display on the log.

If the failure strain is being displayed as a graph the customize form below will be displayed when the Customize button is clicked. This form is the same as the customize graph form with the addition of the Sample Data tab. The Type, Line, Point, Fill, Scale, and Grid tabs are described in the Customizing a Graph 439 section.



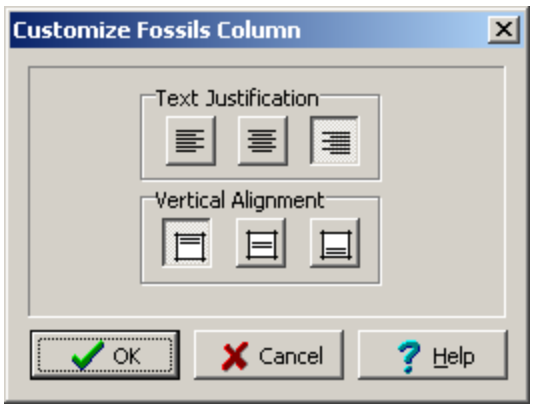
The following can be edited on the Sample Data tab:

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

Test Types to Display: This is used to select the test type results to display on the log.

Formation tops data is displayed the same as text interval data. The customizing of the column is the same as described in Customizing an Interval Text Column 447.

The Fossils column can be customized using the Customize button on the Columns tab. The Customize Fossils Column will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

Text Justification: This is the horizontal justification for the text in the column.

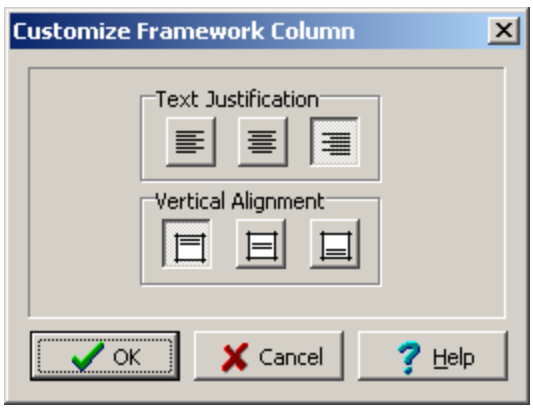
Vertical Alignment: This is the vertical alignment for the text in the column.

Fracture Index data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

Failure Spacing data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

Fractures data is displayed the same as text interval data. The customizing of the column is the same as described in Customizing an Interval Text Column 447.

The Framework column can be customized using the Customize button on the Columns tab. The Customize Framework Column will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

Text Justification: This is the horizontal justification for the text in the column.

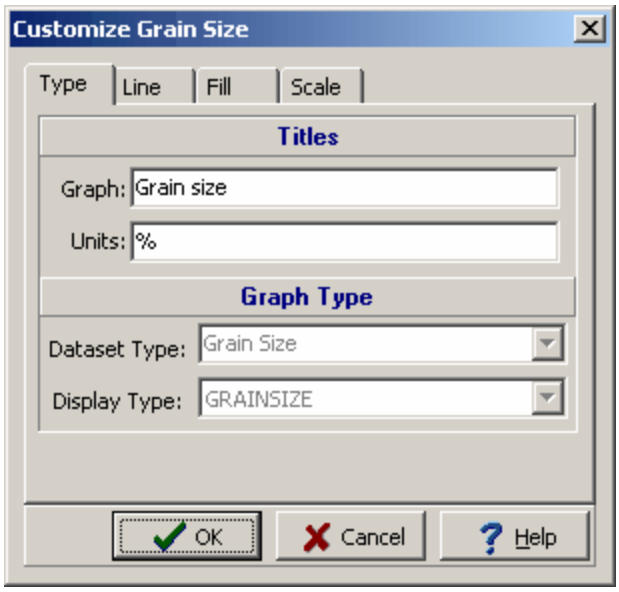
Vertical Alignment: This is the vertical alignment for the text in the column.

A Gamma column is displayed the same as a graph or geophysical column. The customization of this column is the same as that described in Customizing a Graph Column 439.

The data for a geophysical cross-plot is entered the same as a geophysical log. The customization of this column is the same as that described in Customizing a Graph Column 439.

The format of the Grain Size column can be changed using the Customize button on the Columns tab. When this button is pressed the Customize Grain Size form will be displayed. This form has four tabs for specifying the type, lines, fill, and scale.

Type Tab



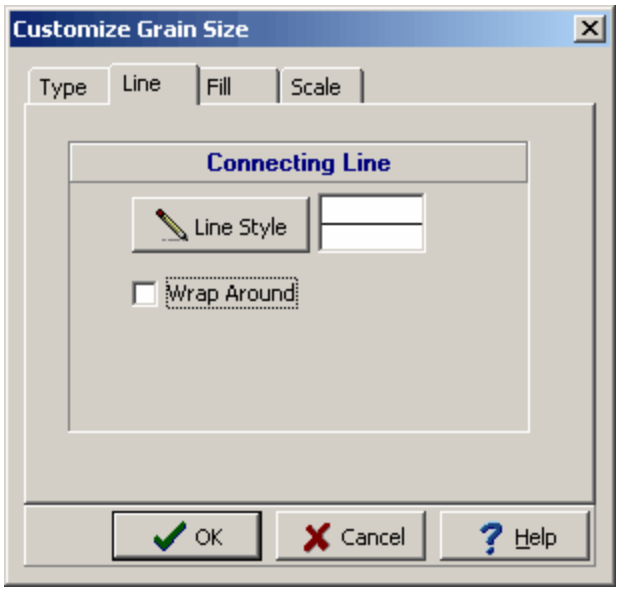
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

Graph Title: This is the title to use for the graph. The graph title will be displayed in the same area as the column title. It is recommended that either the graph title or column title be used, and not both.

Units Title: This is the units of the graph. The unit title will be displayed below the graph title.

Line Tab



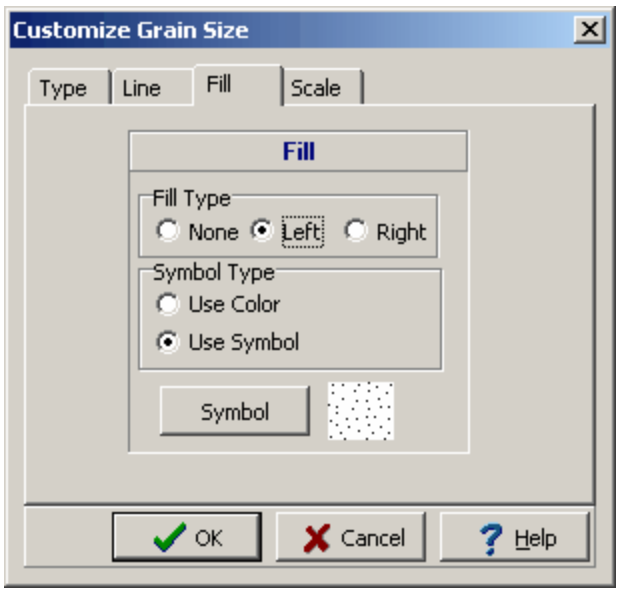
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

Connecting Line Style: The data points for the graph can be connected by a line. To change the line style, press the Line Style button. The Line Properties form will be displayed. This form can be used to select the line style, width, and color. If the line style is set to “none”, no line will connect the points.

Wrap Around: Check this box to have the connecting line wrap from the right side of the column to the left side of the column. This is useful if some values on the graph are larger than the maximum for the graph, the value and connecting line will then wrap around the graph and start again from the left.

Fill Tab



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

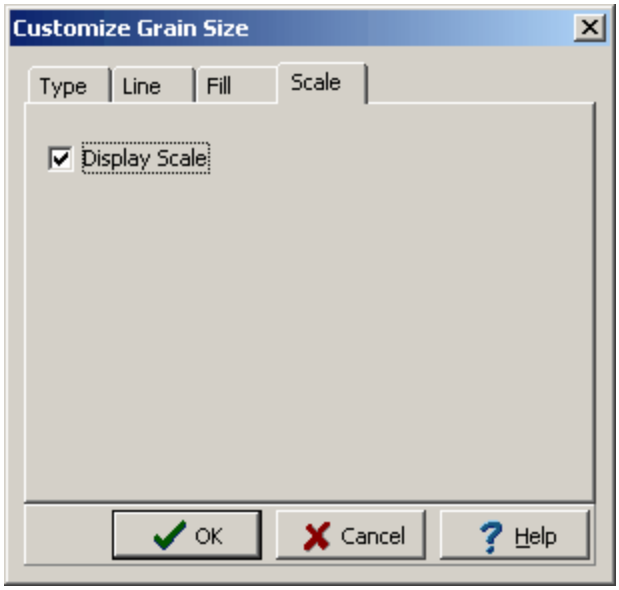
Fill Type: The curve formed by the graph points can be filled with a solid color. The fill can either be on the left or right side of the curve.

Symbol Type: The fill can either be a solid color or a symbol.. If the Fill Type is set to "none" this field will not appear.

Color: This is the color to use for the fill. When the Color button is pressed, the Color form will be displayed. This form can be used to select a basic or custom color. If the Fill Type is set to “none” or Symbol Type is set to Use Symbol, this field will not appear.

Symbol: Click this button to change the fill symbol. When this is button is pressed the Select Lithologic Symbol form will be displayed. Using this form, the library, symbol, foreground color, and background color can be selected. If the Fill Type is set to “none” or Symbol Type is set to Use Color, this field will not appear.

Scale Tab

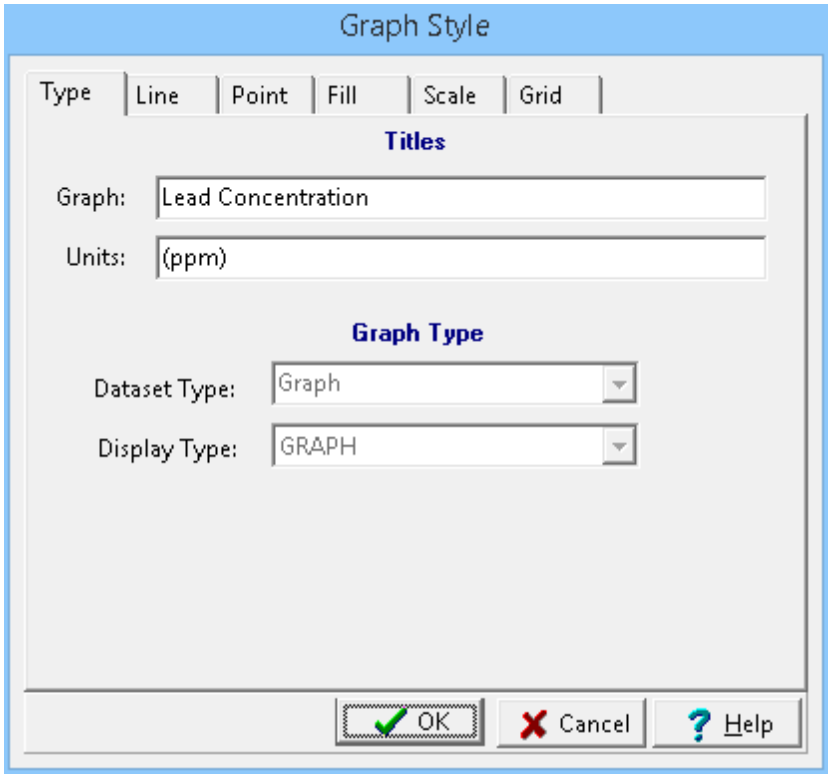


(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

Display Scale: Check this box to display the scale at the top of the graph as part of the column titles.

The format of graph, bargraph, or geophysical columns can be changed using the Customize button on the Columns tab. When this button is pressed the Graph Style form will be displayed. This form has six tabs for specifying the type, lines, points, fill, scale, and grid.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

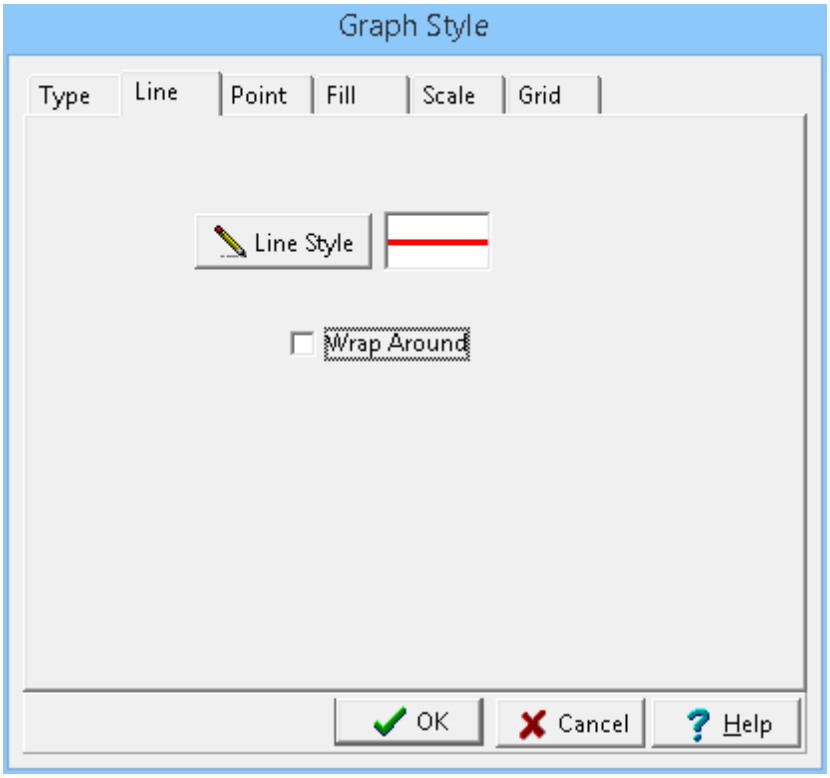
The following can be edited on this tab:

Graph Title: This is the title to use for the graph. The graph title will be displayed in the same area as the column title. It is recommended that either the graph title or column title be used, and not both.

Units Title: This is the units of the graph. The unit title will be displayed below the graph title.

Dataset Type: This is set when the column is created and can not be changed.

Display Type: This is set when the column is created and can not be changed.

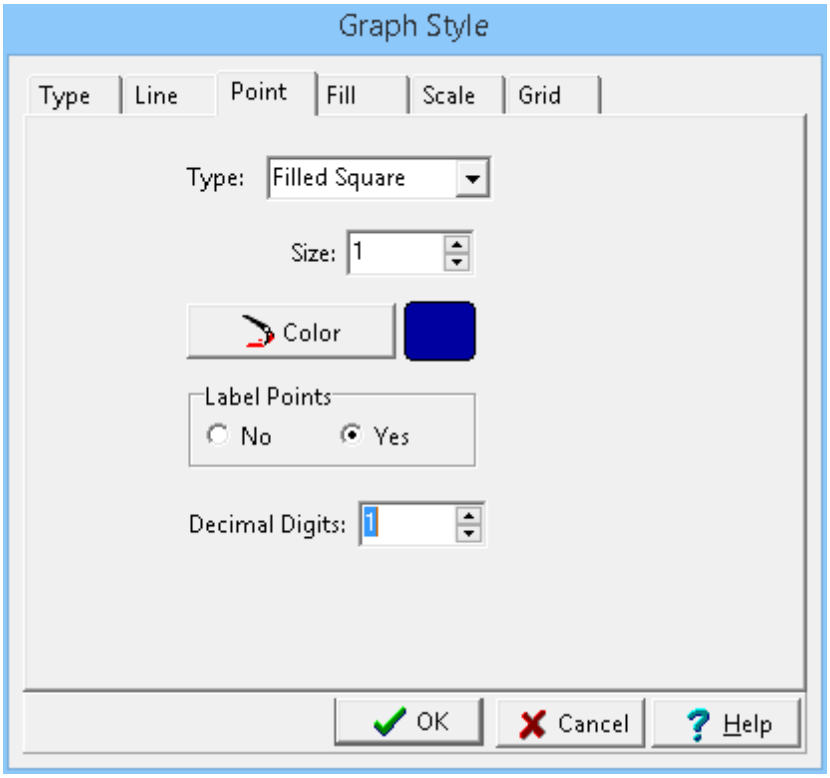


(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

Line Style: The data points for the graph can be connected by a line. To change the line style, press the Line Style button. The Line Properties form will be displayed. This form can be used to select the line style, width, and color. If the line style is set to “none”, no line will connect the points.

Wrap Around: Check this box to have the connecting line wrap from the right side of the column to the left side of the column. This is useful if some values on the graph are larger than the maximum for the graph, the value and connecting line will then wrap around the graph and start again from the left.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

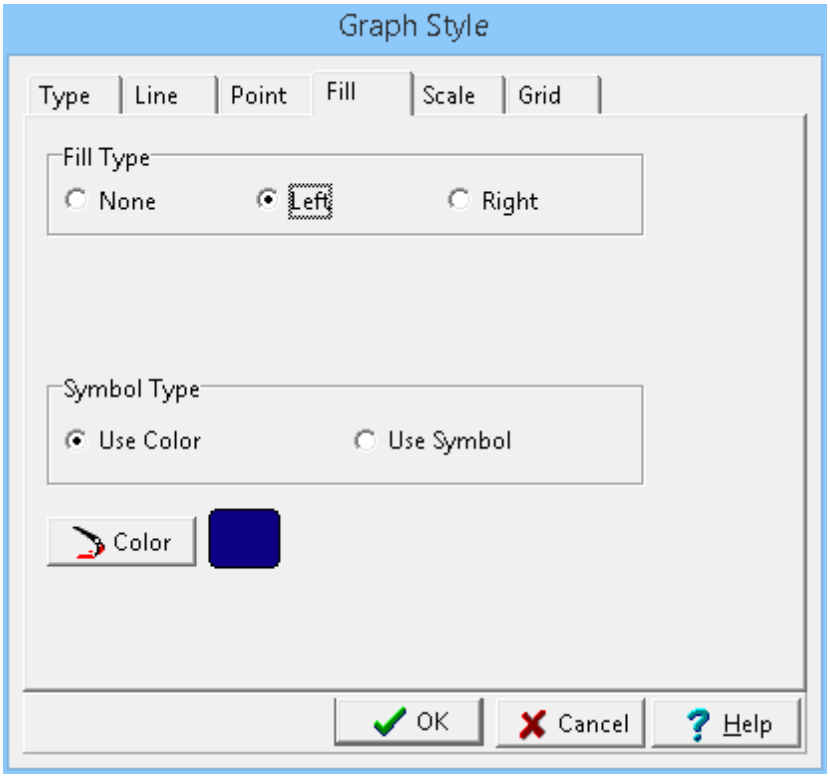
Type: The graph data can be shown as circles, crosses, squares, squares, triangles, or inverted triangles. To not show the data points, select “none”. If this is a Bargraph column, the point type is set to “none” and this field will not appear.

Size: This is the size of the data points. If the Point Type is set to ‘none’, this field will not appear.

Color: This is the color of the data points. To change the color, press the Color button. The Color form will be displayed. This form can be used to select a basic color or a custom color. If the Point Type is set to “none”, this field will not appear.

Label Points: The values of the data points can be drawn above each point. If the data value is less than the minimum value, the value will be shown with a “<” symbol. If the data value is greater than the maximum value, the value will be shown with a “>” symbol. If the Point Type is set to “none”, this field will not appear.

Decimal Digits: This is the number of digits after the decimal place to use for the label.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

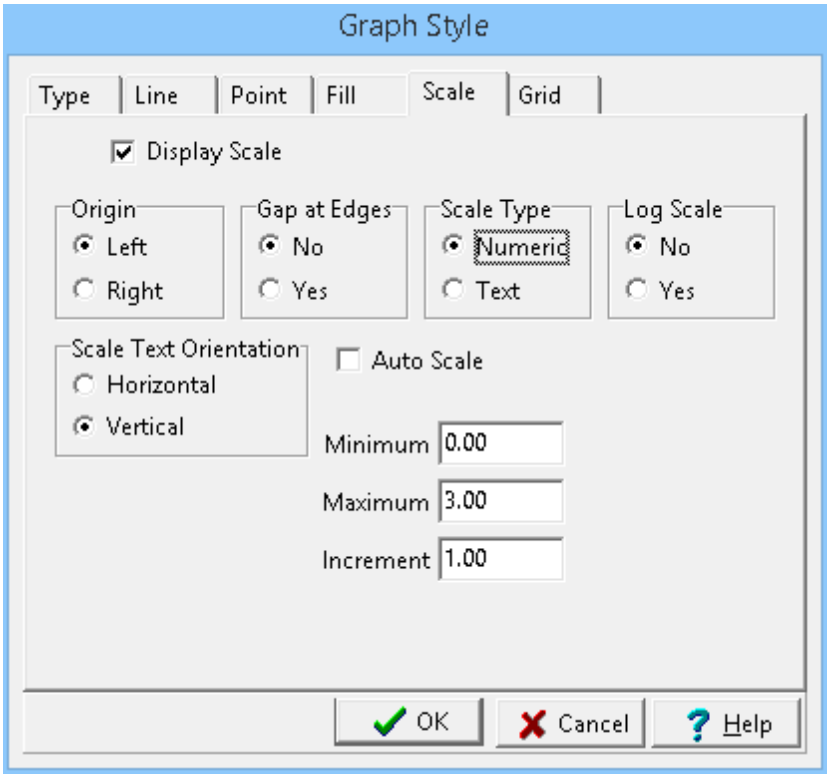
The following can be edited on this tab:

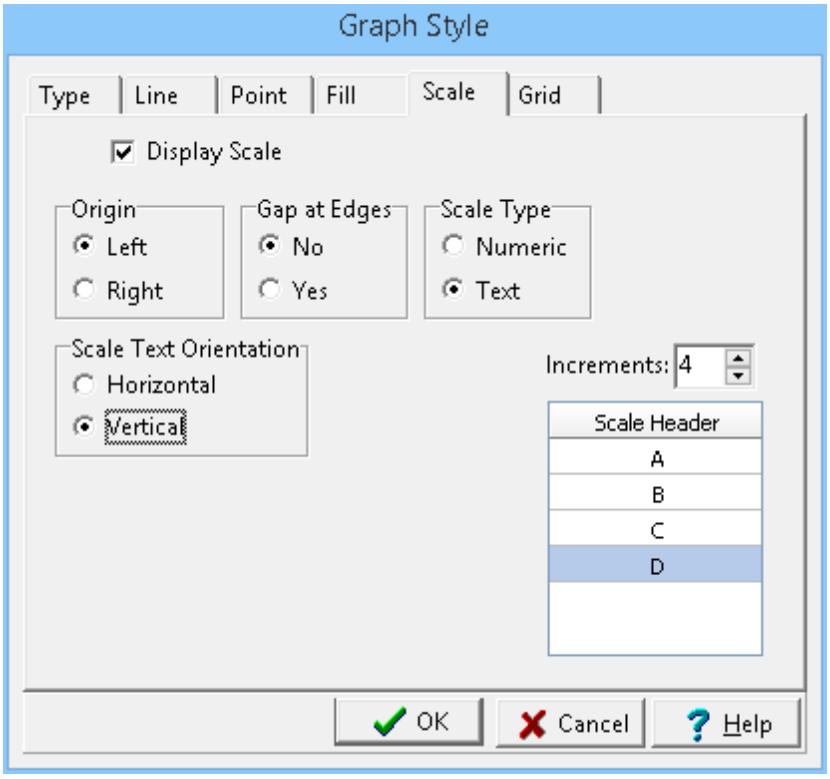
Fill Type: The curve formed by the graph points can be filled with a solid color. The fill can either be on the left or right side of the curve.

Symbol Type: The fill can either be a solid color or a symbol.. If the Fill Type is set to "none" this field will not appear.

Color: This is the color to use for the fill. When the Color button is pressed, the Color form will be displayed. This form can be used to select a basic or custom color. If the Fill Type is set to “none” or Symbol Type is set to Use Symbol, this field will not appear.

Symbol: Click this button to change the fill symbol. When this is button is pressed the Select Lithologic Symbol form will be displayed. Using this form, the library, symbol, foreground color, and background color can be selected. If the Fill Type is set to “none” or Symbol Type is set to Use Color, this field will not appear.





(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

Display Scale: Check this box to display the scale at the top of the graph as part of the column titles.

Origin: This determines whether the scale origin is on the left or right side of the column.

Gap at Edges: This is used to set whether there is a gap between the edge of the graph and the column.

Scale Type: This is used to select whether the scale is numeric or text. Numeric scales are used to graph numeric data values. Text scales are used to graph text values; such as weathering. Only numeric scales can be in log scale.

Log Scale: The horizontal axis can have either a linear or a logarithmic scale.

Scale Text Orientation: This is used to select whether the scale text should be oriented horizontally or vertically.

Auto Scale: For a numeric scale check this to automatically set the scale based on the data in the graph. If this box is checked the Minimum, Maximum, and Increment can not be edited.

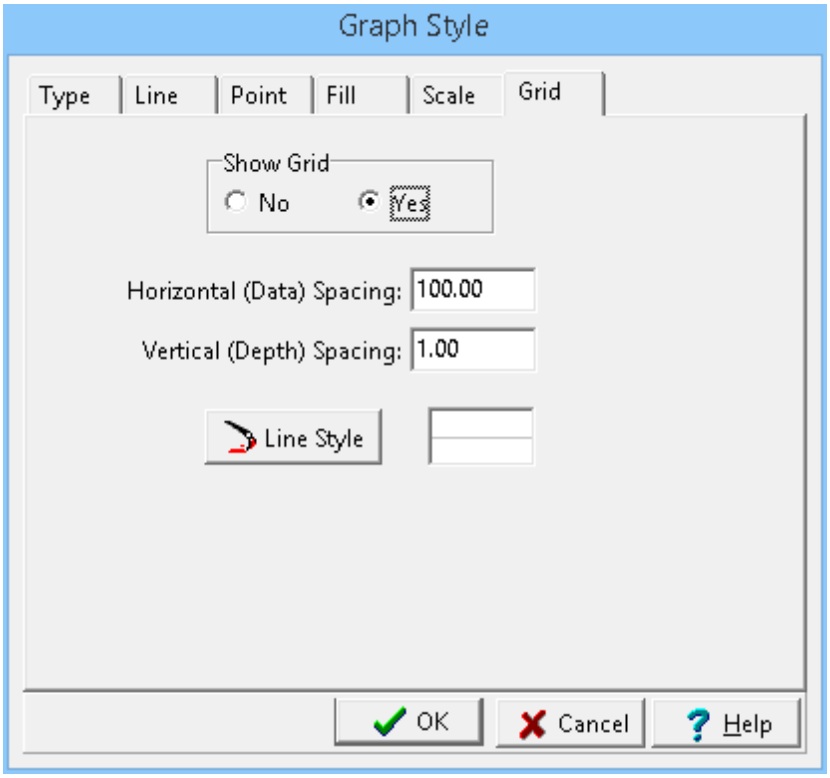
Minimum: For a numeric scale this is the minimum value for the graph. If the Auto Scale box is checked this field can not be edited.

Maximum: For a numeric scale this is the maximum value for the graph. If the Auto Scale box is checked this field can not be edited.

Increment: For a numeric scale this is the increment to use for labeling the axis of the graph. If the Auto Scale box is checked this field can not be edited.

Increments: For a text scale this is the number of text increments in the graph. It includes the first and last text headers. The first and last text headers will not be displayed unless there is a gap at the edges. Each increment will be evenly spaced on the graph.

Scale Header: For a text scale these are the headers to use for the graph. When the log is created these headers will be used to select the text values for the data points.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited in this tab:

Show Grid: Check this box to draw horizontal and vertical grid lines.

Horizontal (Data) Spacing: This is the horizontal spacing of the grid lines, usually the same as the scale increment. If set to zero, the scale increment will be used. If Show Grid is set to no, this field will not appear.

Vertical (Depth) Spacing: This is the vertical spacing of the grid lines, usually the same as the scale increment. If set to zero, the scale increment will be used. If Show Grid is set to no, this field will not appear.

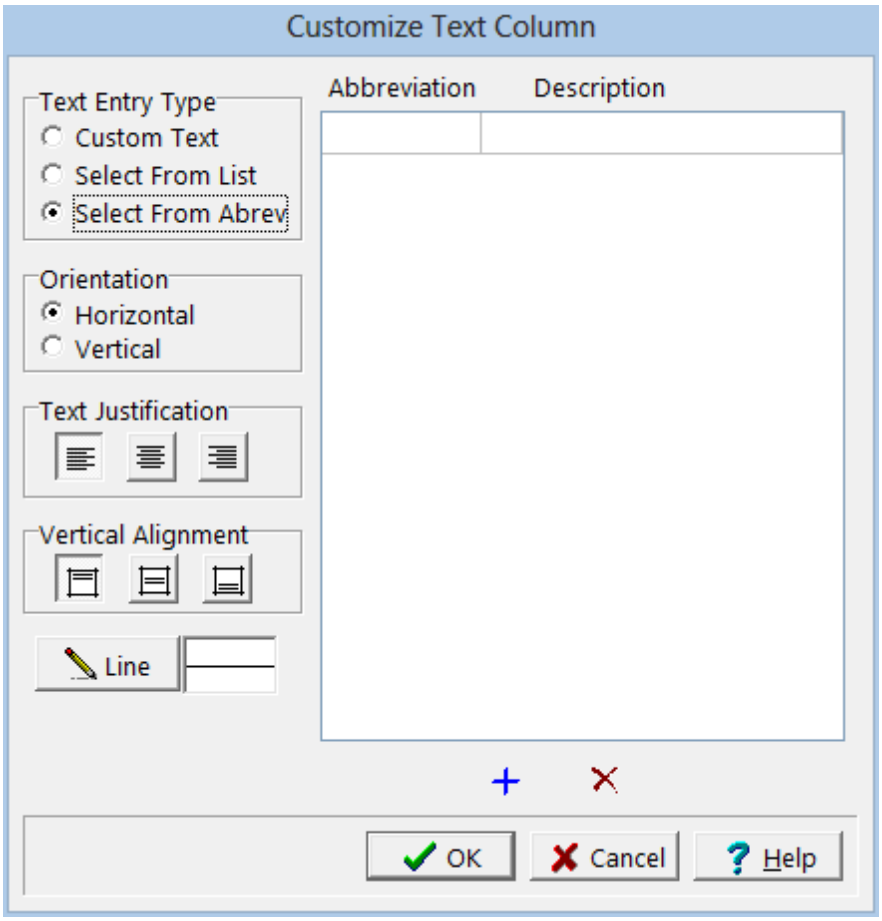
Line Style: This is the line style to use to draw the grid. When the Line Style button is pressed, the Line Properties form will be displayed. This form can be used to set the line style, width, and color.

The data for a graph cross-plot is entered the same as a graph. The customization of this column is the same as that described in Customizing a Graph Column 439.

H2O Injection data is displayed either as text interval or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing an Interval Text Column 447 or Customizing a Graph Column 439.

Hydraulic Conductivity data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

The text interval column style can be changed using the Customize button on the Columns tab. When the Customize button is pressed the Customize Text Interval Column form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The Customize Text Column form can be used to set the following:

Text Entry Type: This is used to set how the text will be entered for the column. The text can be custom text, selected from a list, or selected from an abbreviation. If is is selected from a list or abbreviation, the text items can be added or deleted for the list on the right side of the form.

Orientation: The text can be oriented either horizontally or vertically. This orientation only applies to text lines, and will not apply to memos.

Justification: The text can be justified left, center, or right within the column. This justification only applies to text lines, and will not apply to memos entered in the text column.

Vertical Alignment: This is the vertical alignment of the text in the interval.

Line Style: This is the line style to use for the top and bottom of the text interval. To change the line style, press the Line Style button. A Line Properties form will be displayed. This form can be used to set the line style, width, and color.

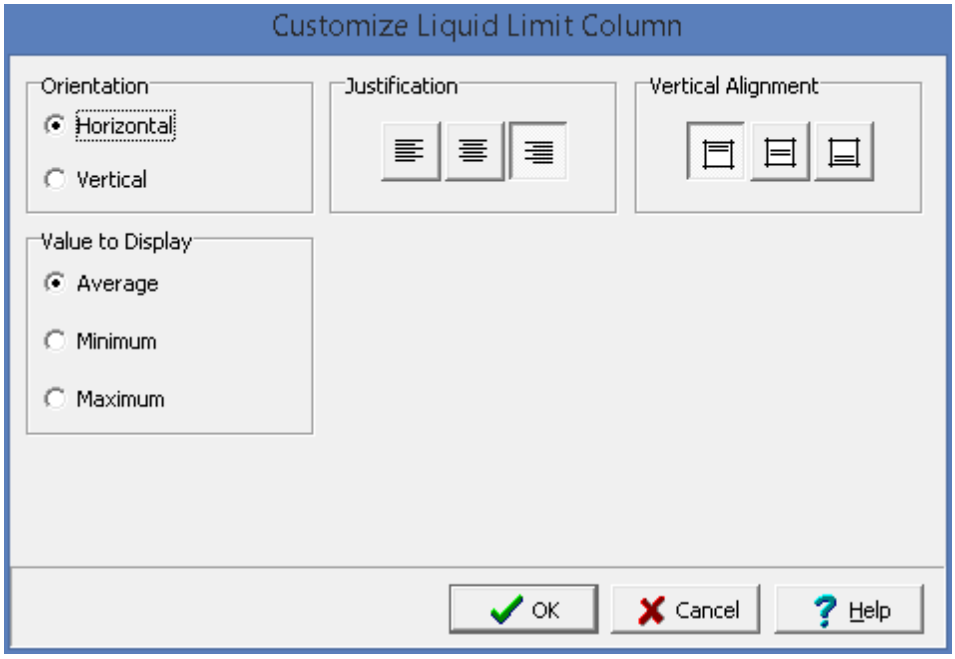
Lab bitumen data is displayed either as text interval or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing an Interval Text Column 447 or Customizing a Graph Column 439.

LEL data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

Liquid Limit data (not from the GDMS module) can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

Liquid Limit data from the GDMS module can be displayed either as text, sample data, or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is described in the sections below.

If the liquid limit data is being displayed as a text or sample column, the customize form below will be displayed when the Customize button is clicked.



The following can be edited on this form:

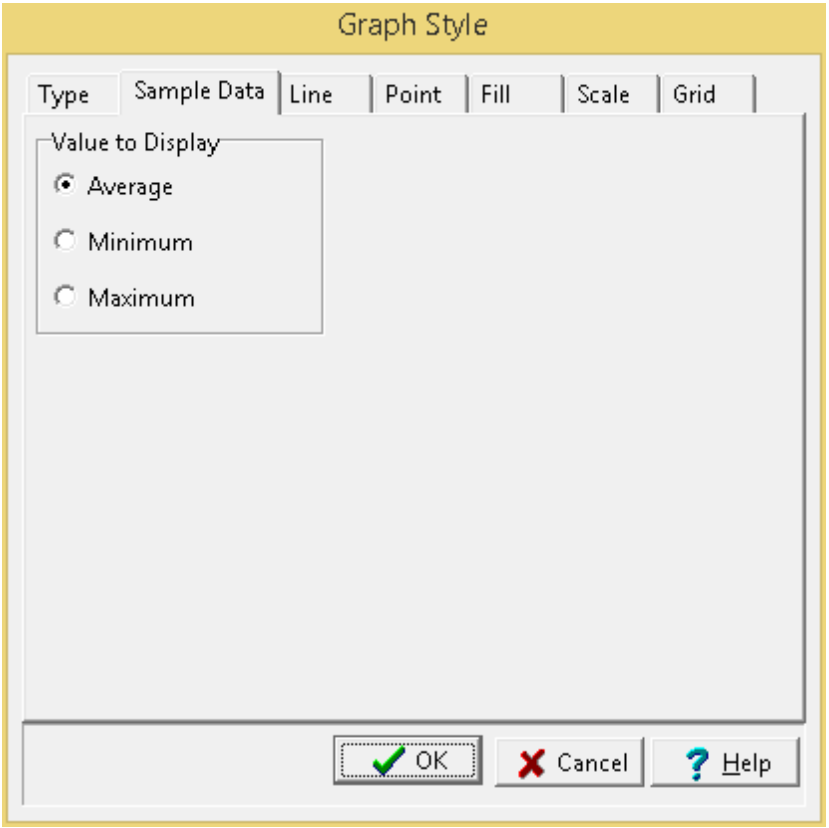
Orientation: The text can be oriented either horizontally or vertically.

Justification: The text can be justified left, center, or right within the column.

Vertical Alignment: This is the vertical alignment of the text.

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

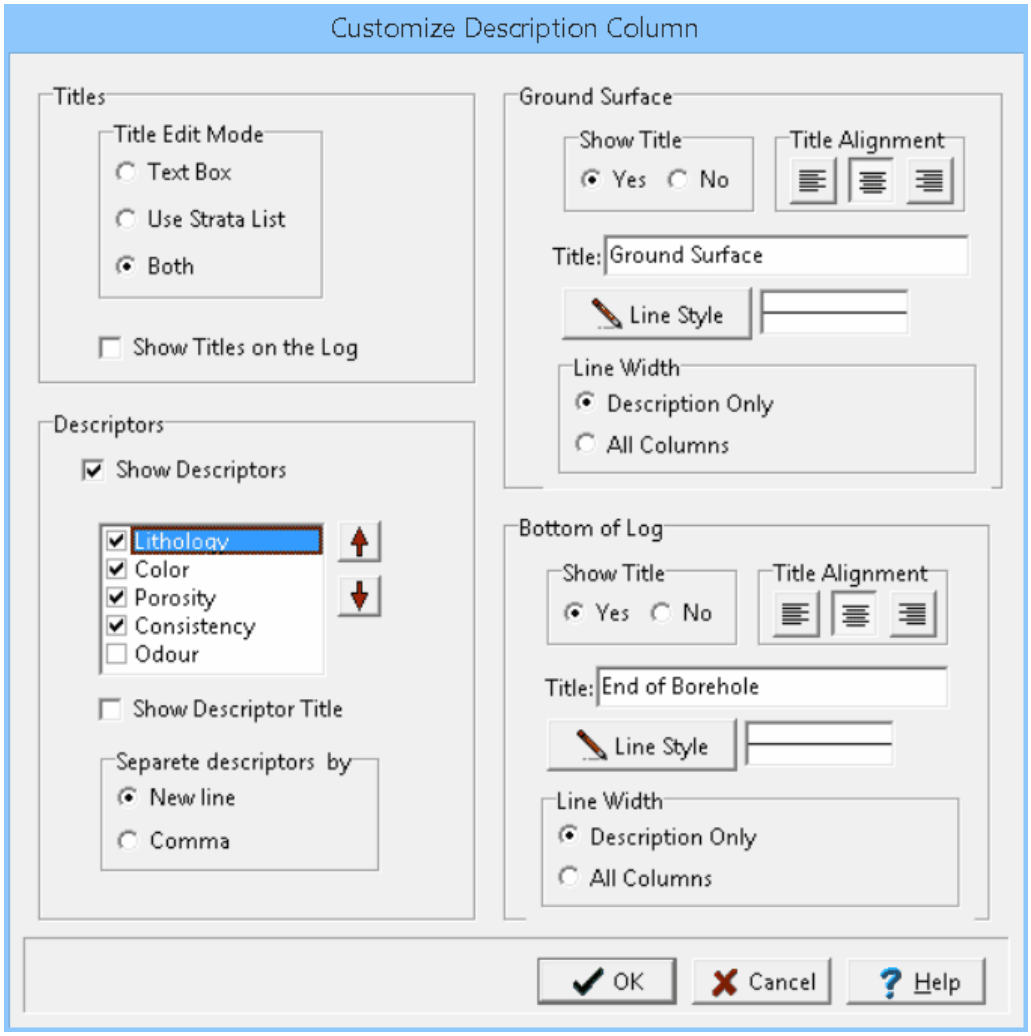
If the liquid limit data is being displayed as a graph the customize form below will be displayed when the Customize button is clicked. This form is the same as the customize graph form with the addition of the Sample Data tab. The Type, Line, Point, Fill, Scale, and Grid tabs are described in the Customizing a Graph 439 section.



The following can be edited on the Sample Data tab:

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

The style of the lithologic description column can changed using the Customize button on the Columns tab. When the Customize button is pressed the Customize Description Column form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The Customize Description Column form can be used to set the following parameters:

Title Edit Mode: The title edit mode controls the type of input that can be used when entering lithologic layers on the log. The first option “Text Box” corresponds to entering the layer titles as individual text for each layer. The second option “Use Strata List” is where the title must be selected from the list of lithologic macros. This method is very useful for controlling what can be entered for the title and to more easily and accurately auto-generate cross-sections in the cross-sections module. The last option “Both”, allows you to either enter individual text or select from the list of lithologic macros.

Show Titles on the Log: This option is used to control whether the titles specified for a lithologic layer will appear on the log.

Show Ground Surface Title: This determines whether to display a title for the ground surface. The ground surface title is displayed in the lithologic description column at the top of the log. If the show title option is turned off, the log will start immediately after the column title block. Otherwise, there will be a small gap between the column title block and the start of the log to display the ground surface title.

Ground Surface Title Alignment: The alignment of the title can be left justified, centered, or right justified.

Ground Surface Title: This is the title to display for the ground surface (up to 255 characters). To leave a gap without displaying a title, set the Show Ground Surface Title to "yes" and leave the title blank. If Show Ground Surface Title is set to "no" this field will not be displayed.

Show End of Boring/Well Title: This determines whether to display a title at the end of the boring/well. The end of log title is displayed in the layer description column at the bottom of the log.

Bottom Title Alignment: The alignment of the titles can be left justified, centered, or right justified.

End of Boring/Well Title: This is the title to display at the end of the boring/well. The depth of the boring/well can be included in the title by specifying the keyword "[depth]" in the title. For example, the title "Boring/Well Terminated at [depth] feet" would be shown on the log as "Boring/Well Terminated at 30 feet" for a 30 foot deep boring/well. If Show End of Boring/Well Title is set to "no" this field will not be displayed.

Line Style: This is the style of the line used to draw the ground surface and bottom of the boring/well. To change the line style, press the Line Style button. The Line Properties form will be displayed. This form can be used to set the line style, width, and color.

Line Width: This is used to set whether the line for the ground surface or bottom of the boring/well is drawn across only the lithology description column or all columns of the log.

Show Descriptors: Check this to show the layer descriptors on the log. These descriptors are composed of pick lists for lithology, color, porosity, consistency, and odour. These pick lists can be edited using *Tools > EDMS > Samples*.

Descriptors: The checked descriptors will be shown on the log. The position of the descriptor on the log can be adjusted using the up and down arrows.

Show Descriptor Title: Check this to show the title of the descriptor along with the chosen descriptor on the log.

Separate Descriptors By: The descriptors on the log can be separated by a new line or a comma.

Lithologic titles can be displayed as text intervals. The customization of the column is the same as described in Customizing an Interval Text Column 447.

A Lithologic Custom list column is displayed the same as a Custom List. The customization of this column is the same as that described in Customizing the Custom List Column 421. The only difference is that the line style is set to the same as the lithologic description column.

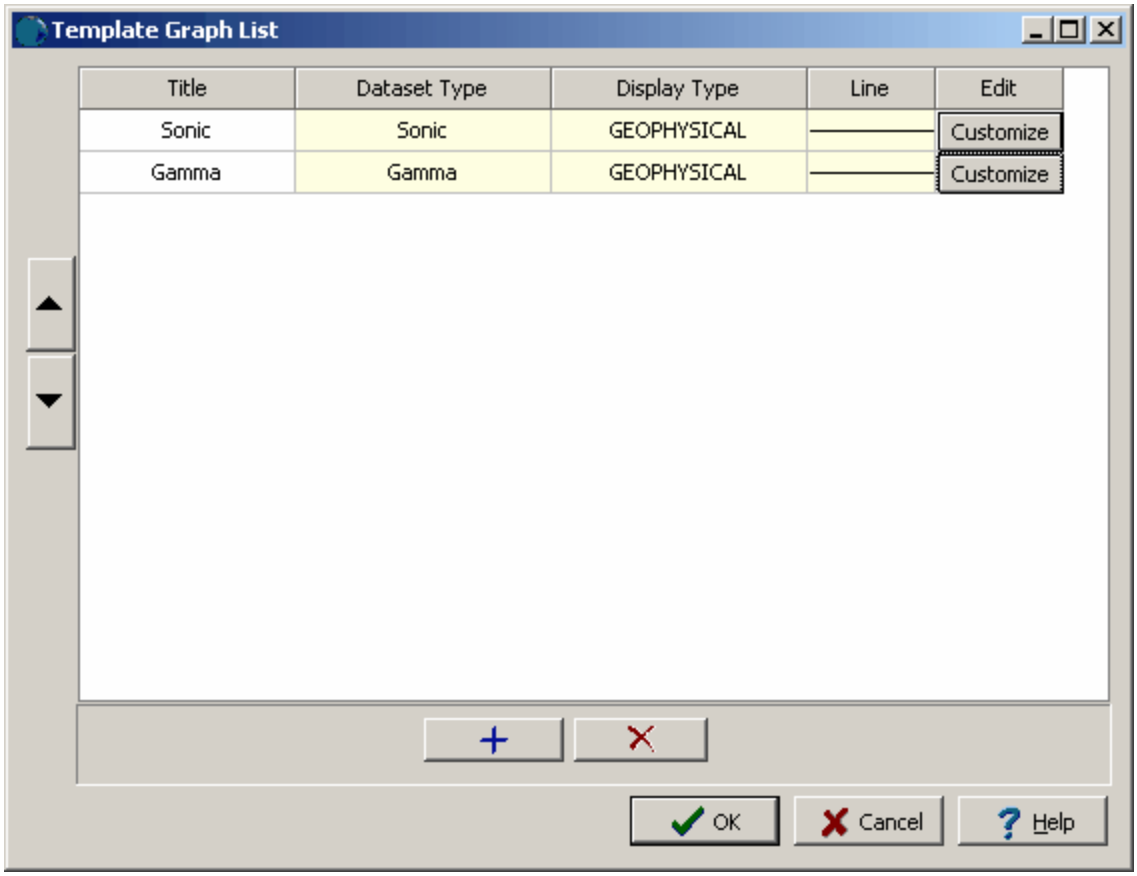
Lost core data is displayed either as text interval or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing an Interval Text Column 447 or Customizing a Graph Column 439.

Lost circulation data is displayed either as text interval or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing an Interval Text Column 447 or Customizing a Graph Column 439.

Members data is displayed the same as text interval data. The customizing of the column is the same as described in Customizing an Interval Text Column 447.

Moisture content data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

Multiple graph and geophysical columns are used to display one or more graphs or geophysical logs in one column. To select the graph or geophysical data to display in the column click on the Customize button on the Columns tab. The Template Graph List form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

This form is used to add and remove the graphs or geophysical logs to display in the column. To add a graph or geophysical log click on the Add button at the bottom. To remove a graph or geophysical log click on the Delete button at the bottom.

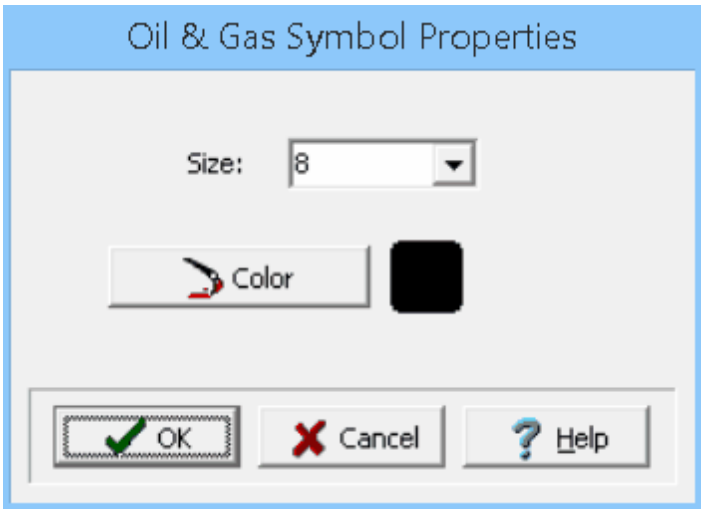
After a graph or geophysical log has been added it can be customized by clicking on the Customize button. The customization is the same as for graph data and is described in Customizing a Graph Column 439.

The order that the graph or geophysical log is displayed in the column can be adjusted using the Up and Down buttons at the left of the form.

Munsell Code data can be displayed as text. The customization of the column is the same as described in Customizing a Text Column 482.

A Neutron Porosity column is displayed the same as a graph or geophysical column. The customization of this column is the same as that described in Customizing a Graph Column 439.

The oil and gas shows column can be customized by clicking on the Customize button on the Columns tab. The Oil & Gas Symbol Properties form will be displayed.



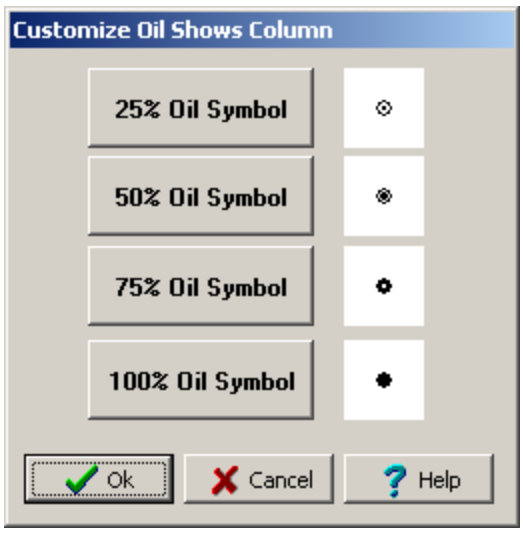
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

Size: This is used to select the size of the symbols.

Color: This is used to select the color for the symbols.

The Oil Shows column can be customized using the Customize button on the Columns tab. The Customize Oil Shows Column form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

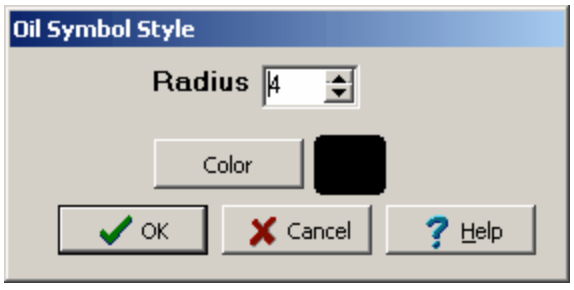
25% Oil Symbol: Click this button to change the symbol used to show a 25% oil show. The Oil Show Symbol Style form described below will be displayed.

50% Oil Symbol: Click this button to change the symbol used to show a 50% oil show. The Oil Show Symbol Style form described below will be displayed.

75% Oil Symbol: Click this button to change the symbol used to show a 75% oil show. The Oil Show Symbol Style form described below will be displayed.

100% Oil Symbol: Click this button to change the symbol used to show a 100% oil show. The Oil Show Symbol Style form described below will be displayed.

Oil Symbol Style Form



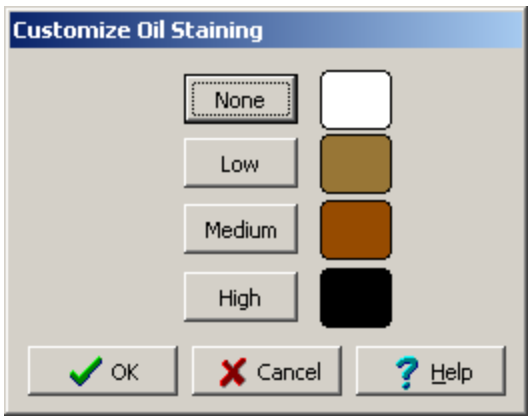
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

Radius: This is the radius of the symbol in points.

Color: Click this button to change the color of the symbol. A Color form will be displayed where the color can be selected or specified.

The Oil Staining (Color) column can be customized using the Customize button on the Columns tab. The Customize Oil Staining form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

None: Click this button to select the color for no oil staining. A Color form will be displayed where the color can be selected or specified.

Low: Click this button to select the color for low oil staining. A Color form will be displayed where the color can be selected or specified.

Medium: Click this button to select the color for medium oil staining. A Color form will be displayed where the color can be selected or specified.

High: Click this button to select the color for high oil staining. A Color form will be displayed where the color can be selected or specified.

The Oil Staining (Color) column can be customized using the Customize button on the Columns tab. The Customize Oil Staining form will be displayed.

(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

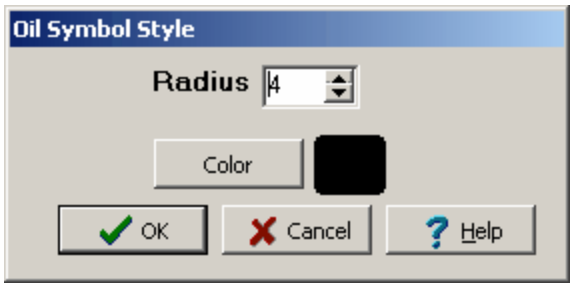
Good Stain: Click this button to change the symbol used for a good oil stain. The Oil Symbol Style form described below will be displayed.

Medium/Spotted Stain: Click this button to change the symbol used for a medium/spotted oil stain. The Oil Symbol Style form described below will be displayed.

Dead Stain: Click this button to change the symbol used for a dead oil stain. The Oil Symbol Style form described below will be displayed.

Questionable Stain: Click this button to change the symbol used for a questionable oil stain. The Oil Symbol Style form described below will be displayed.

Oil Symbol Style Form



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

Radius: This is the radius of the symbol in points.

Color: Click this button to change the color of the symbol. A Color form will be displayed where the color can be selected or specified.

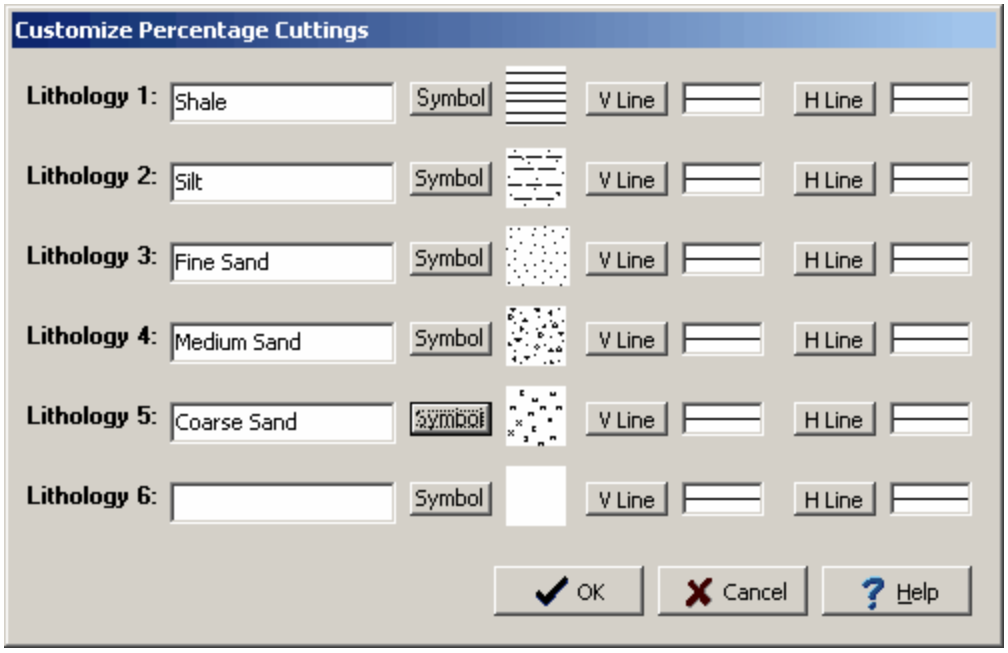
Ore type data is displayed the same as text interval data. The customizing of the column is the same as described in Customizing an Interval Text Column 447.

Penetration rate data is displayed either as text interval or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing an Interval Text Column 447 or Customizing a Graph Column 439.

Penetrometer data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

Percent cuttings data are collected normally during mud-logging and are used to denote the relative percentage of different lithologies at a depth. For example, the relative percentages of sand, shale, and silt may be entered at several depth intervals. The lithologies that can be entered for the percent cuttings are specified in the percent cuttings column of the template. The symbols for each of the lithologies will be scaled and drawn at each of the depth intervals.

The style of the Percent Cuttings column can be changed using the Customize button on the Columns form. The Percentage Cuttings form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The Percentage Cuttings form is used to specify the lithologies that will be used in the column. Up to 6 lithologies maybe added, these are listed as Lithology 1 to Lithology 6 on the percentage cuttings form. The following can be specified for each of the six lithologies:

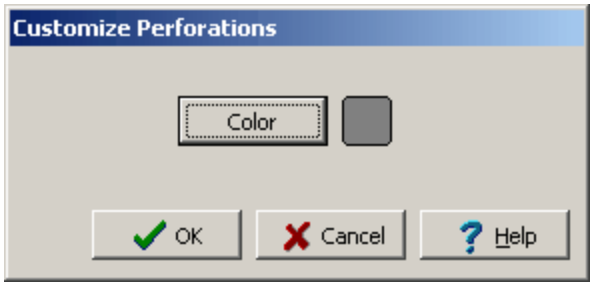
Name: This is the name of the lithology, it will be displayed when entering data for the log.

Symbol: This is the symbol to use for the lithology. Click on the Symbol button to display the Lithology Symbols form and select a symbol.

V Line: This is the vertical line that separates the current lithology from the next lithology in the Percent Cuttings column. Click on the V Line button to display the Line Properties form and select the line style.

H Line: This is the horizontal line that separates the current lithology from the next lithology in the Percent Cuttings column. Click on the H Line button to display the Line Properties form and select the line style.

The color used to show perforations can be customized using the Customize button on the Columns tab. The Customize Perforations form will be displayed.



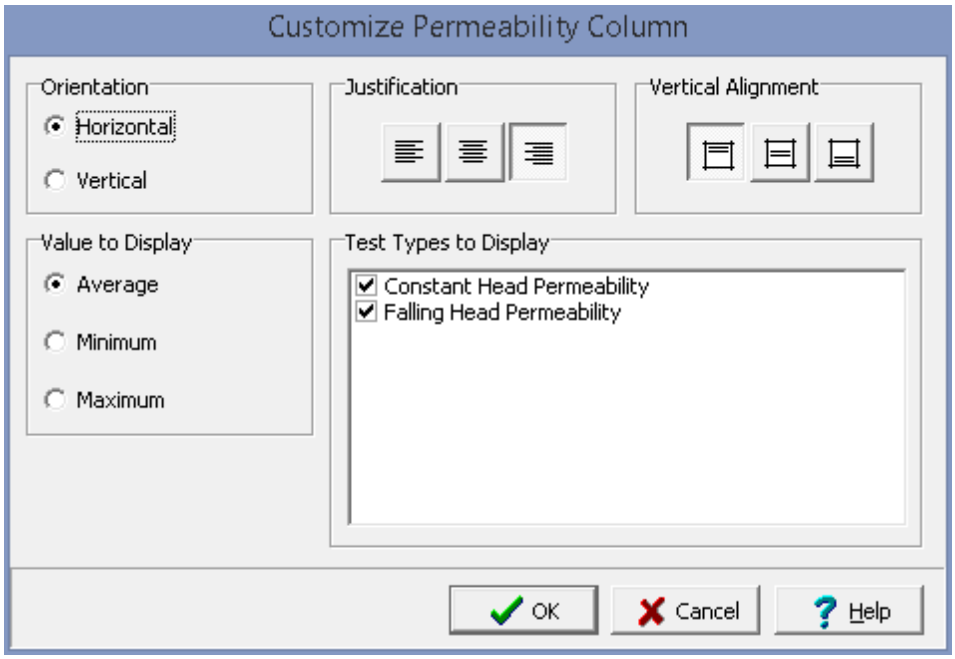
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

Color: Click this button to change the color for the perforations. A Color form will be displayed that can be used to select or specify a color.

Permeability data from the GDMS module can be displayed either as text, sample data, or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is described in the sections below.

If the permeability data is being displayed as a text or sample column, the customize form below will be displayed when the Customize button is clicked.



The following can be edited on this form:

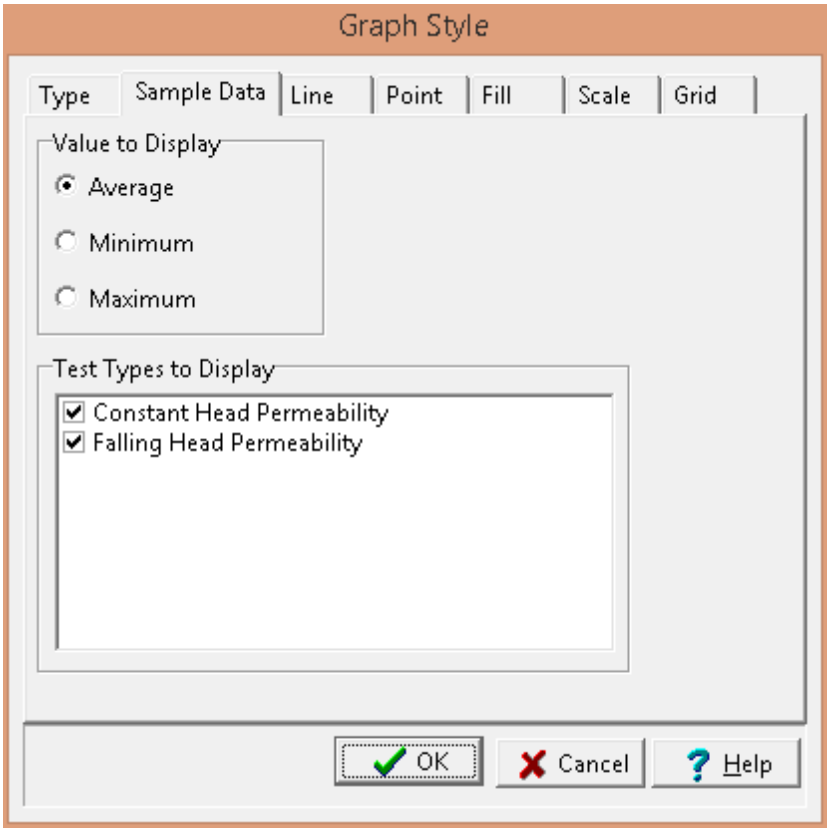
Orientation: The text can be oriented either horizontally or vertically.

Justification: The text can be justified left, center, or right within the column.

Vertical Alignment: This is the vertical alignment of the text.

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

If the permeability data is being displayed as a graph the customize form below will be displayed when the Customize button is clicked. This form is the same as the customize graph form with the addition of the Sample Data tab. The Type, Line, Point, Fill, Scale, and Grid tabs are described in the Customizing a Graph 439 section.



The following can be edited on the Sample Data tab:

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

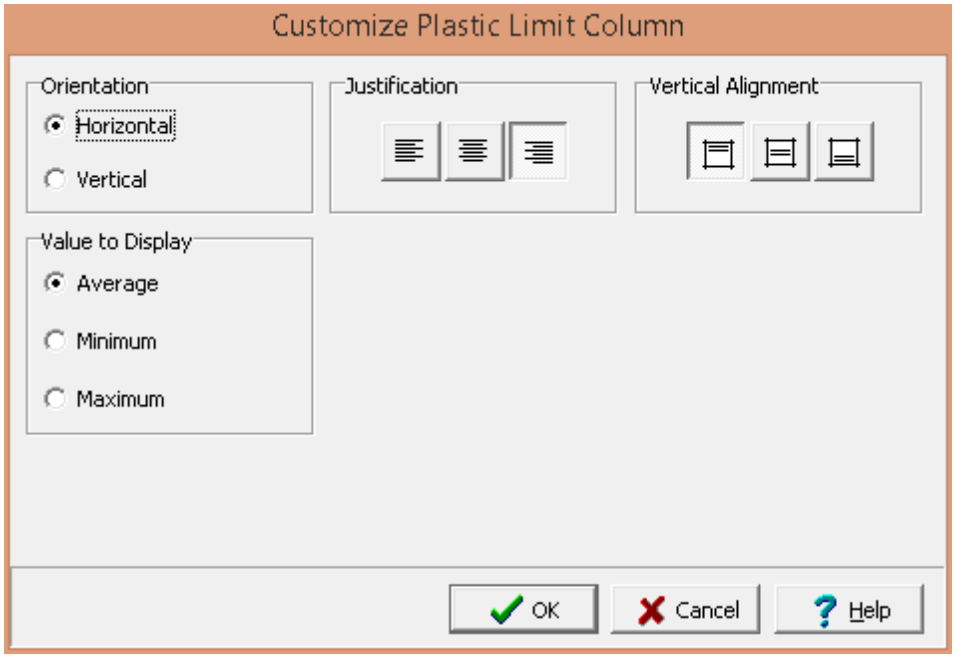
Test Types to Display: This is used to select the test type results to display on the log.

pH data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

Plastic Limit data (not from the GDMS module) can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

Plastic Limit data from the GDMS module can be displayed either as text, sample data, or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is described in the sections below.

If the plastic limit data is being displayed as a text or sample column, the customize form below will be displayed when the Customize button is clicked.



The following can be edited on this form:

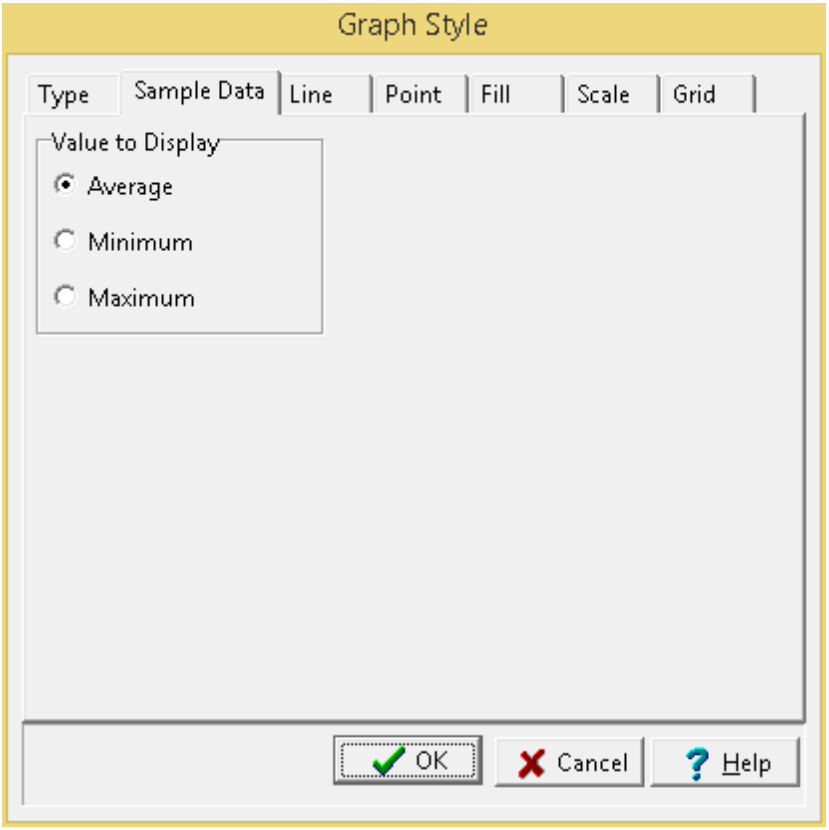
Orientation: The text can be oriented either horizontally or vertically.

Justification: The text can be justified left, center, or right within the column.

Vertical Alignment: This is the vertical alignment of the text.

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

If the plastic limit data is being displayed as a graph the customize form below will be displayed when the Customize button is clicked. This form is the same as the customize graph form with the addition of the Sample Data tab. The Type, Line, Point, Fill, Scale, and Grid tabs are described in the Customizing a Graph 439 section.



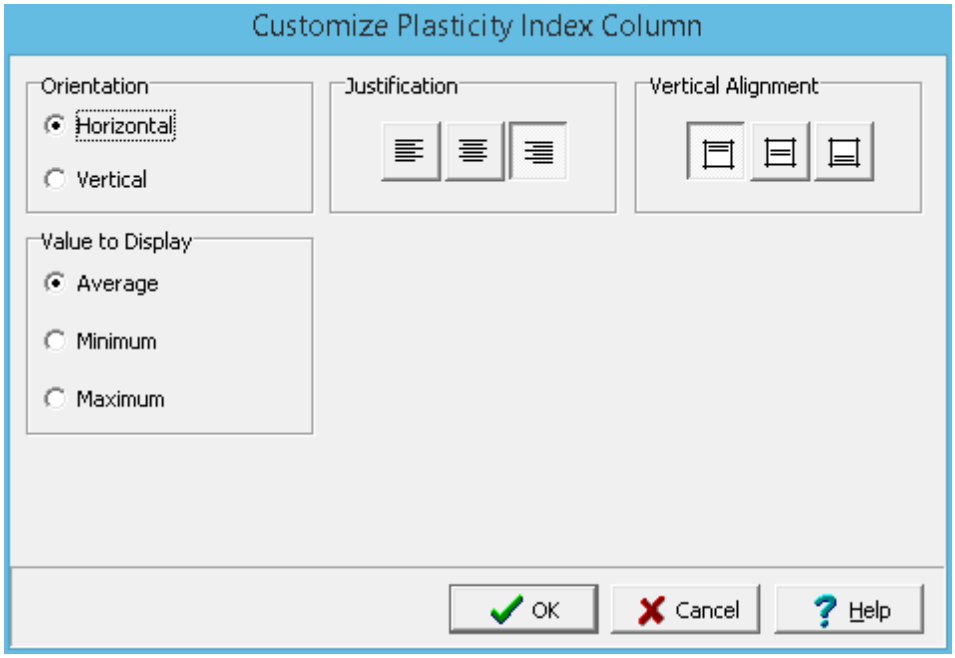
The following can be edited on the Sample Data tab:

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

Plasticity Index data (not from the GDMS module) can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

Plasticity Index data from the GDMS module can be displayed either as text, sample data, or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is described in the sections below.

If the plasticity index data is being displayed as a text or sample column, the customize form below will be displayed when the Customize button is clicked.



The following can be edited on this form:

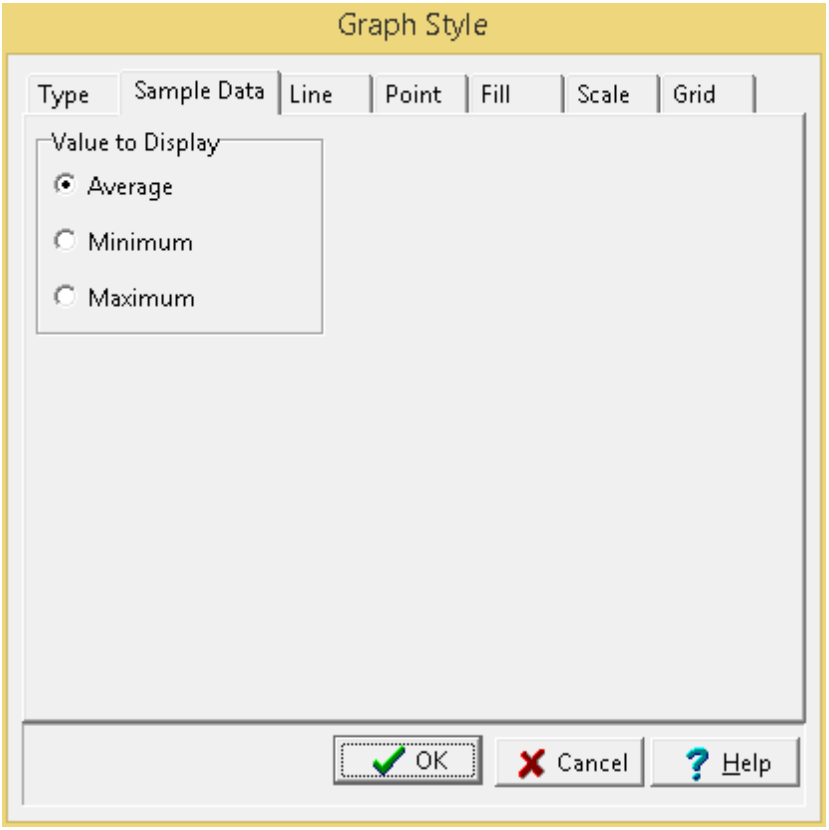
Orientation: The text can be oriented either horizontally or vertically.

Justification: The text can be justified left, center, or right within the column.

Vertical Alignment: This is the vertical alignment of the text.

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

If the plasticity index data is being displayed as a graph the customize form below will be displayed when the Customize button is clicked. This form is the same as the customize graph form with the addition of the Sample Data tab. The Type, Line, Point, Fill, Scale, and Grid tabs are described in the Customizing a Graph 439 section.



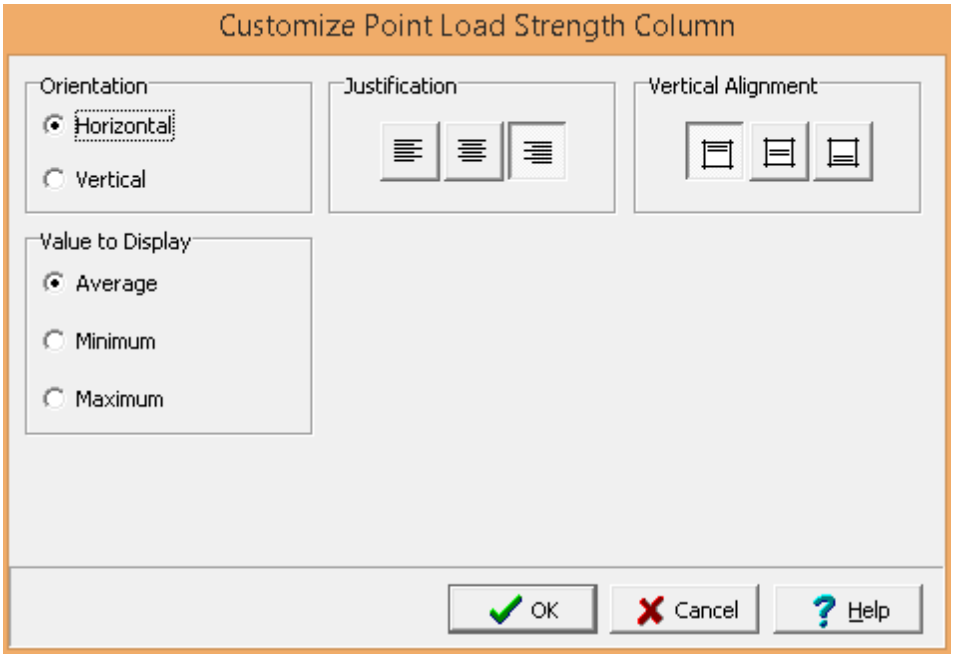
The following can be edited on the Sample Data tab:

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

Point load strength data (not from the GDMS module) can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

Point load strength data from the GDMS module can be displayed either as text, sample data, or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is described in the sections below.

If the point load strength data is being displayed as a text or sample column, the customize form below will be displayed when the Customize button is clicked.



The following can be edited on this form:

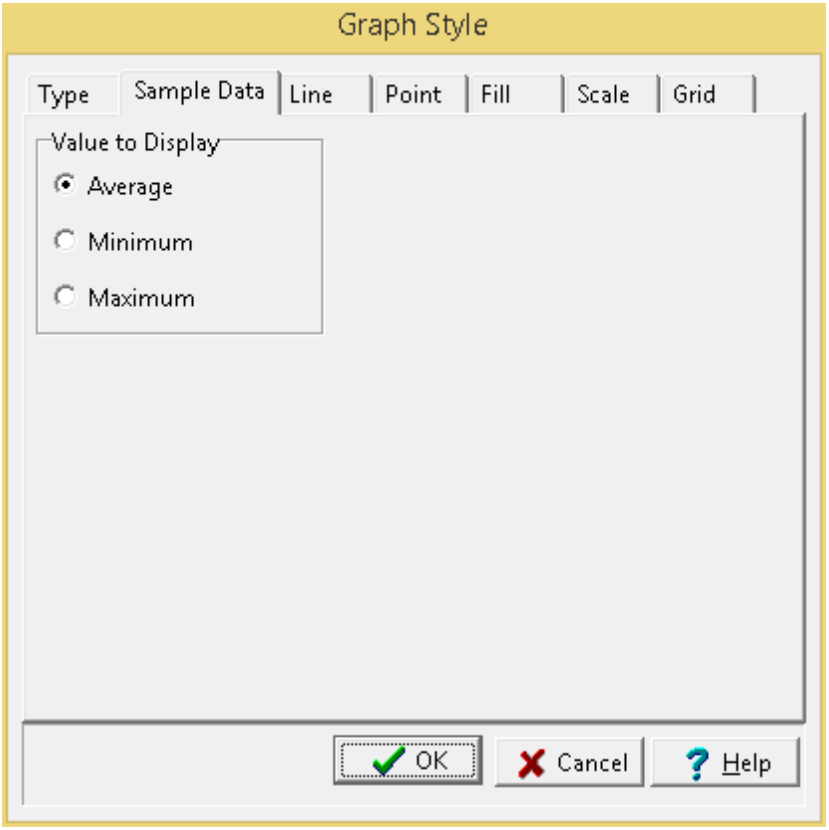
Orientation: The text can be oriented either horizontally or vertically.

Justification: The text can be justified left, center, or right within the column.

Vertical Alignment: This is the vertical alignment of the text.

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

If the point load strength data is being displayed as a graph the customize form below will be displayed when the Customize button is clicked. This form is the same as the customize graph form with the addition of the Sample Data tab. The Type, Line, Point, Fill, Scale, and Grid tabs are described in the Customizing a Graph 439 section.

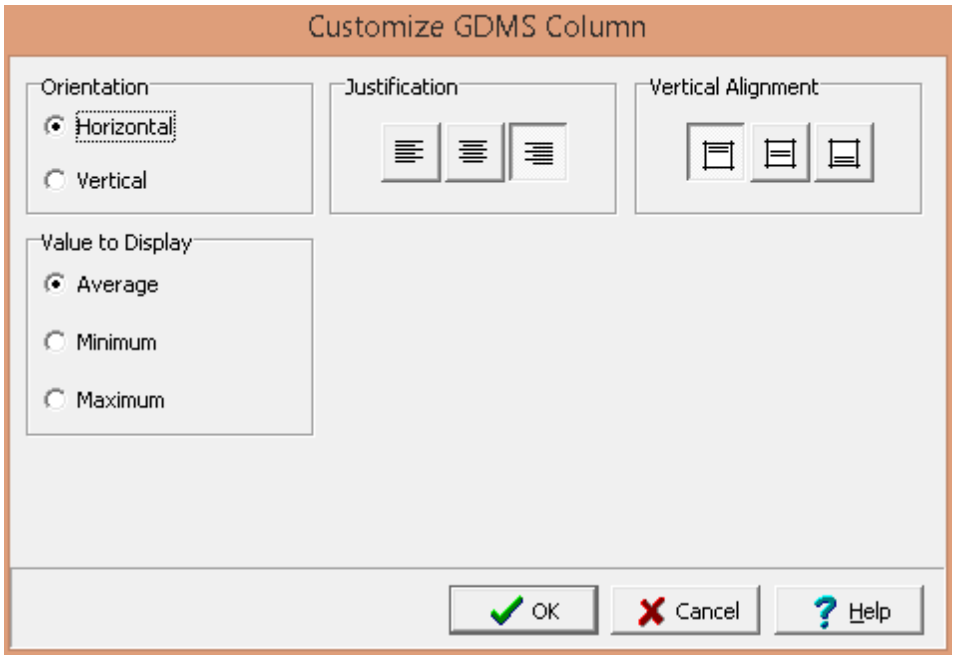


The following can be edited on the Sample Data tab:

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

Poisson's Ratio data from the GDMS module can be displayed either as text, sample data, or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is described in the sections below.

If the Poisson's Ratio data is being displayed as a text or sample column, the customize form below will be displayed when the Customize button is clicked.



The following can be edited on this form:

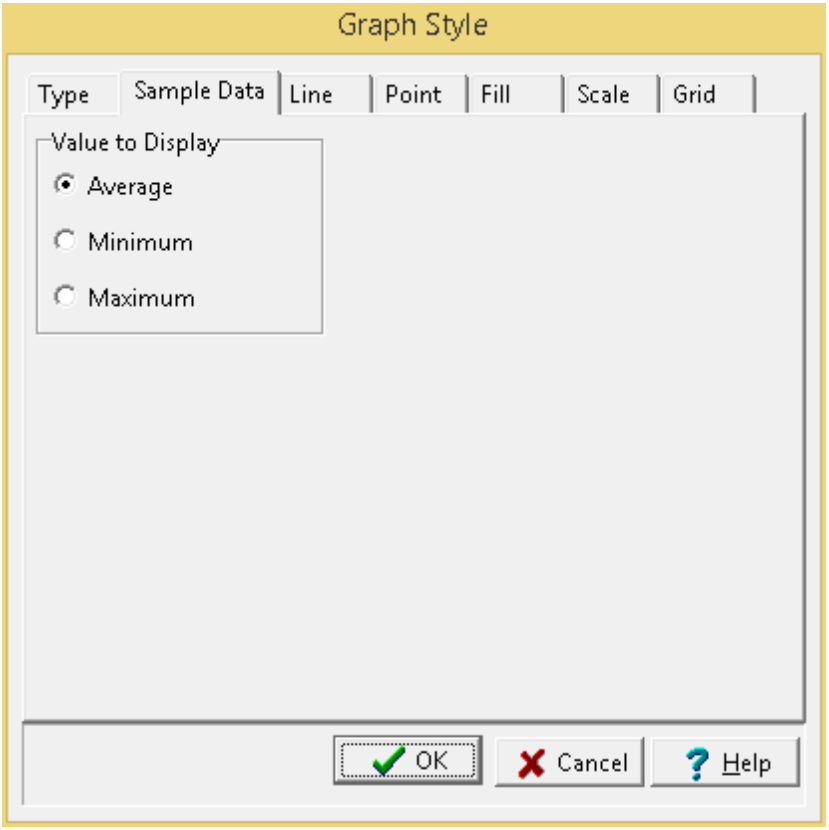
Orientation: The text can be oriented either horizontally or vertically.

Justification: The text can be justified left, center, or right within the column.

Vertical Alignment: This is the vertical alignment of the text.

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

If the Poisson's Ratio data is being displayed as a graph the customize form below will be displayed when the Customize button is clicked. This form is the same as the customize graph form with the addition of the Sample Data tab. The Type, Line, Point, Fill, Scale, and Grid tabs are described in the Customizing a Graph 439 section.



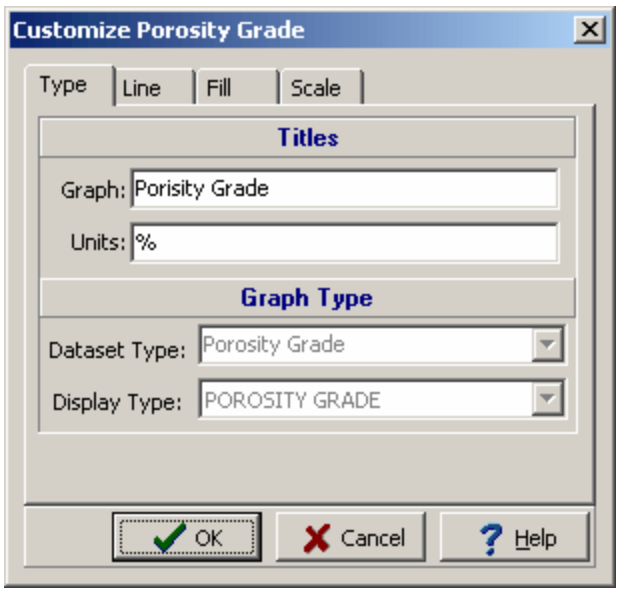
The following can be edited on the Sample Data tab:

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

Pore water pressure data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

The format of the Porosity Grade column can be changed using the Customize button on the Columns tab. When this button is pressed the Customize Porosity Grade form will be displayed. This form has four tabs for specifying the type, lines, fill, and scale.

Type Tab



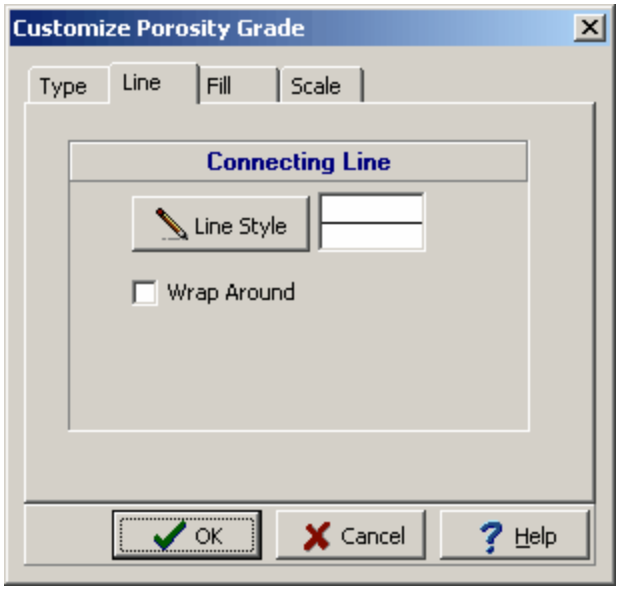
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

Graph Title: This is the title to use for the graph. The graph title will be displayed in the same area as the column title. It is recommended that either the graph title or column title be used, and not both.

Units Title: This is the units of the graph. The unit title will be displayed below the graph title.

Line Tab



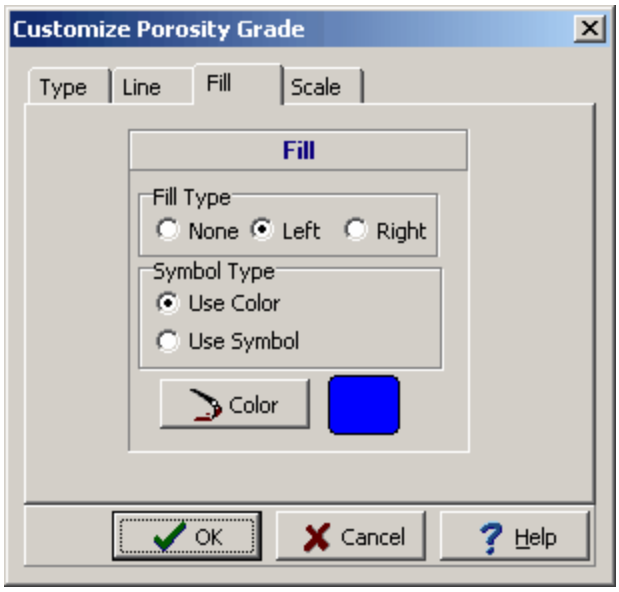
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this tab:

Connecting Line Style: The data points for the graph can be connected by a line. To change the line style, press the Line Style button. The Line Properties form will be displayed. This form can be used to select the line style, width, and color. If the line style is set to “none”, no line will connect the points.

Wrap Around: Check this box to have the connecting line wrap from the right side of the column to the left side of the column. This is useful if some values on the graph are larger than the maximum for the graph, the value and connecting line will then wrap around the graph and start again from the left.

Fill Tab



The following can be edited on this tab:

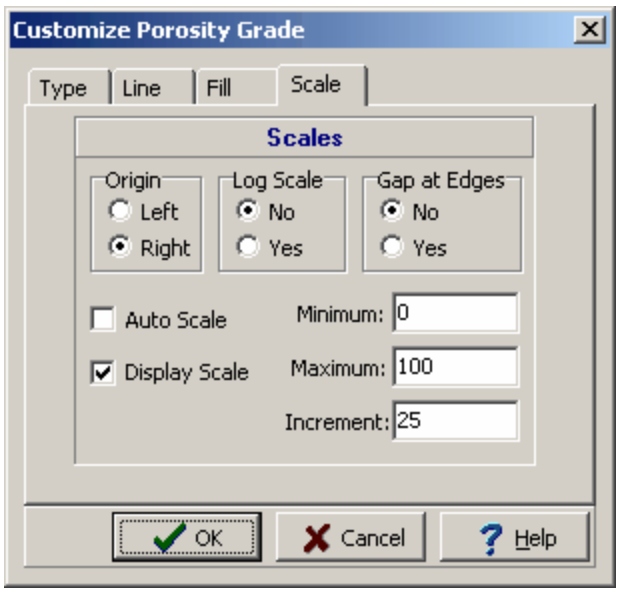
Fill Type: The curve formed by the graph points can be filled with a solid color. The fill can either be on the left or right side of the curve.

Symbol Type: The fill can either be a solid color or a symbol.. If the Fill Type is set to "none" this field will not appear.

Color: This is the color to use for the fill. When the Color button is pressed, the Color form will be displayed. This form can be used to select a basic or custom color. If the Fill Type is set to “none” or Symbol Type is set to Use Symbol, this field will not appear.

Symbol: Click this button to change the fill symbol. When this is button is pressed the Select Lithologic Symbol form will be displayed. Using this form, the library, symbol, foreground color, and background color can be selected. If the Fill Type is set to “none” or Symbol Type is set to Use Color, this field will not appear.

Scale Tab



The following can be edited on this tab:

Origin: This determines whether the scale origin is on the left or right side of the column.

Log Scale: The horizontal axis can have either a linear or a logarithmic scale.

Gap at Edges: This is used to set whether there is a gap between the edge of the graph and the column.

Auto Scale: Check this to automatically set the scale based on the data in the graph. If this box is checked the Minimum, Maximum, and Increment can not be edited.

Display Scale: Check this box to display the scale at the top of the graph as part of the column titles.

Minimum: This is the minimum value for the graph. If the Auto Scale box is checked this field can not be edited.

Maximum: This is the maximum value for the graph. If the Auto Scale box is checked this field can not be edited.

Increment: This is the increment to use for labeling the axis of the graph. If the Auto Scale box is checked this field can not be edited.
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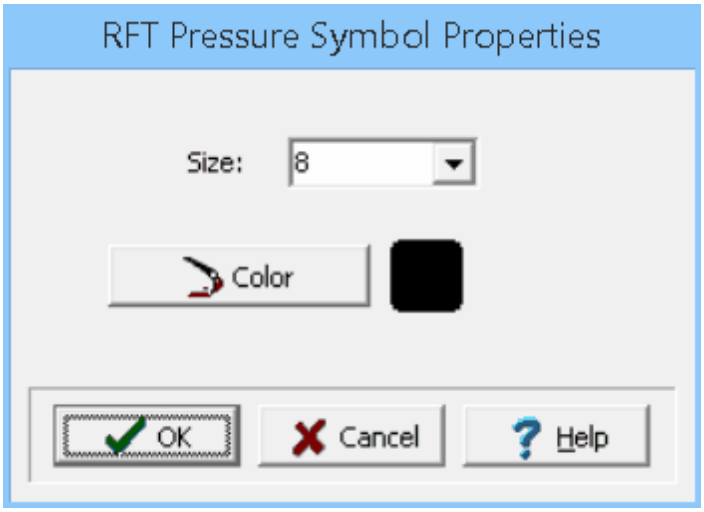
Porosity Type data is displayed similar to text interval data. The customizing of the column is the same as described in Customizing an Interval Text Column 447.

A Resistivity Deep column is displayed the same as a graph or geophysical column. The customization of this column is the same as that described in Customizing a Graph Column 439.

A Resistivity Medium column is displayed the same as a graph or geophysical column. The customization of this column is the same as that described in Customizing a Graph Column 439.

A Resistivity Shallow column is displayed the same as a graph or geophysical column. The customization of this column is the same as that described in Customizing a Graph Column 439.

The RFT Pressure column can be customized by clicking on the Customize button on the Columns tab. The RFT Pressure Symbol Properties form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

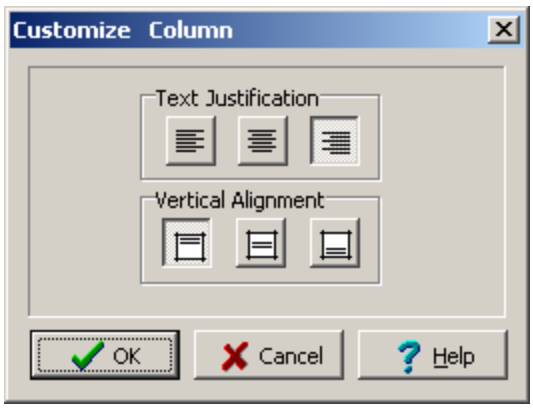
The following can be edited on this form:

Size: This is used to select the size of the symbols.

Color: This is used to select the color for the symbols.

Rock hardness data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

The Rounding column can be customized using the Customize button on the Columns tab. The Customize Column will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

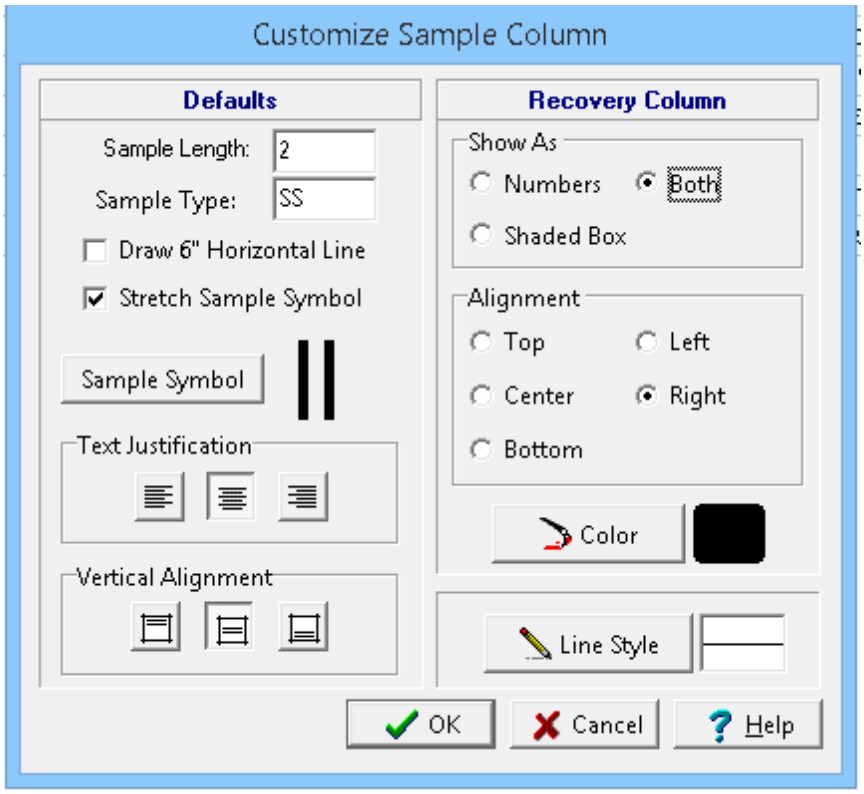
The following can be edited on this form:

Text Justification: This is the horizontal justification for the text in the column.

Vertical Alignment: This is the vertical alignment for the text in the column.

The sample default parameters for the sample columns can be changed using the Customize button on the Columns tab. These columns include the Sample Number, Type, Symbol, N-Value, Blows 1st Inc, Blows 2nd Inc, Blows 3rd Inc, Blows 4th Inc, Recovery, Code, Lithology, Color, Consistency, Porosity, Odour, Dry Weight, Wet Weight, VOC, Sample Depth and Other.

When the Customize button is pressed the Customize Sample Columns form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The Customize Sample Columns form can be used to set the following:

Defaults

Sample Length This is the default length to use when entering samples. For a typical split spoon sampler this would be 2 feet and for a core 5 or 10 feet.

Sample Type: This is the default sample type to use when entering samples. Typically "SS" for split spoon or "Core" for core.

Draw 6" Horizontal Line: Check this box to draw a horizontal line every 6" for the sample number.

Stretch Sample Symbol: Check this box to stretch the sample symbol over the sample interval. If it is not checked, the sample symbol will be tiled over the sample interval.

Sample Symbol: Click this button to select the default sample symbol.

Text Justification: This is the justification to use for displaying the sample information.

Vertical Alignment: This is the vertical alignment of the sample information.

Line Style: Click this button to change the line style used to draw lines at the top and bottom of the sample interval.

Recovery Column

Show As: The sample recovery can be displayed as a number, a shaded box representing the percentage of recovery, or both. When calculating the percentage of sample recovery, the program assumes that if the recovery number is greater than the sample size then the number is a percentage; otherwise it will assume the number is a length.

Alignment: If the recovery is displayed as a shaded box then the box can be aligned at the top, center, bottom, left or right. If the recovery is displayed as a number this field will not appear.

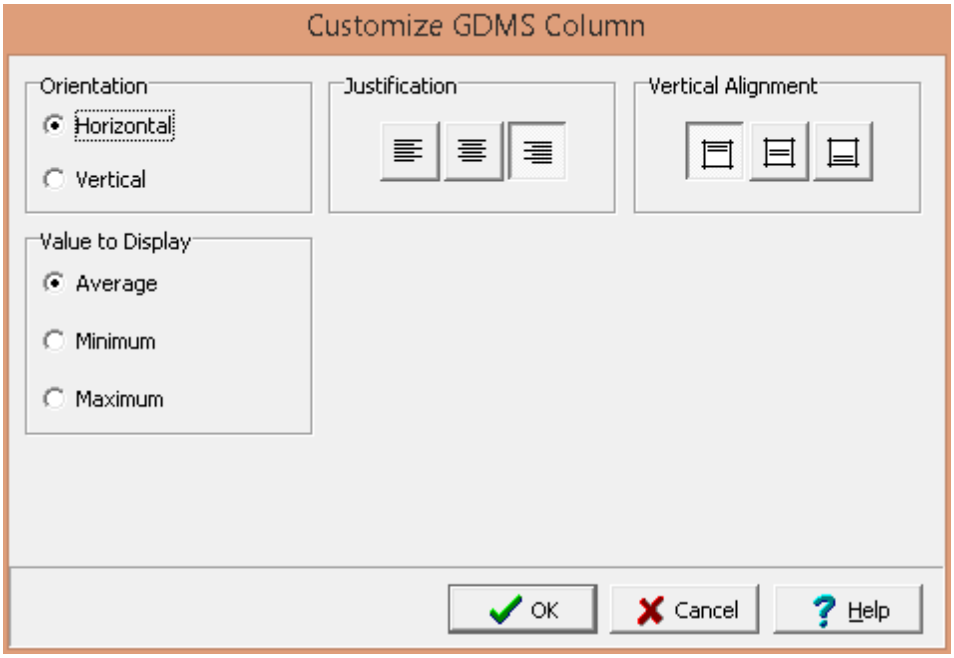
Color: This is the color of the shaded box to use for the recovery. If the recovery is displayed as a number this field will not appear.

A Sample Custom list column is displayed the same as a Custom List. The customization of this column is the same as that described in Customizing the Custom List Column 421. The only difference is that the line style is set to the same as the sample column.

Shear strength data (not from the GDMS module) can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

Shear strength data from the GDMS module can be displayed either as text, sample data, or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is described in the sections below.

If the Shear Strength data is being displayed as a text or sample column, the customize form below will be displayed when the Customize button is clicked.



The following can be edited on this form:

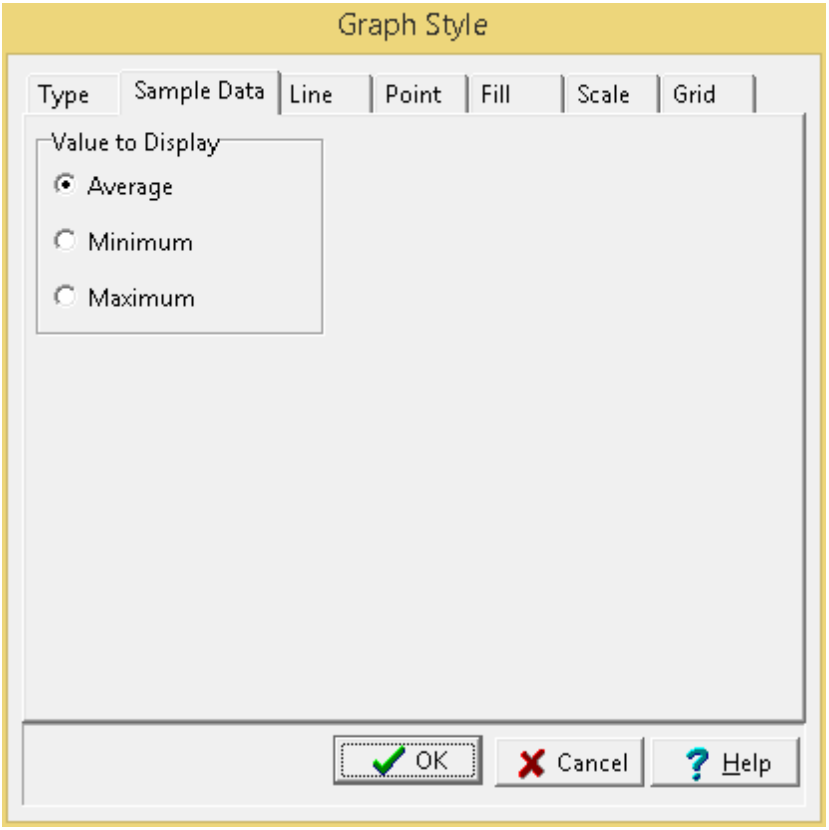
Orientation: The text can be oriented either horizontally or vertically.

Justification: The text can be justified left, center, or right within the column.

Vertical Alignment: This is the vertical alignment of the text.

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

If the Shrinkage Limit data is being displayed as a graph the customize form below will be displayed when the Customize button is clicked. This form is the same as the customize graph form with the addition of the Sample Data tab. The Type, Line, Point, Fill, Scale, and Grid tabs are described in the Customizing a Graph 439 section.

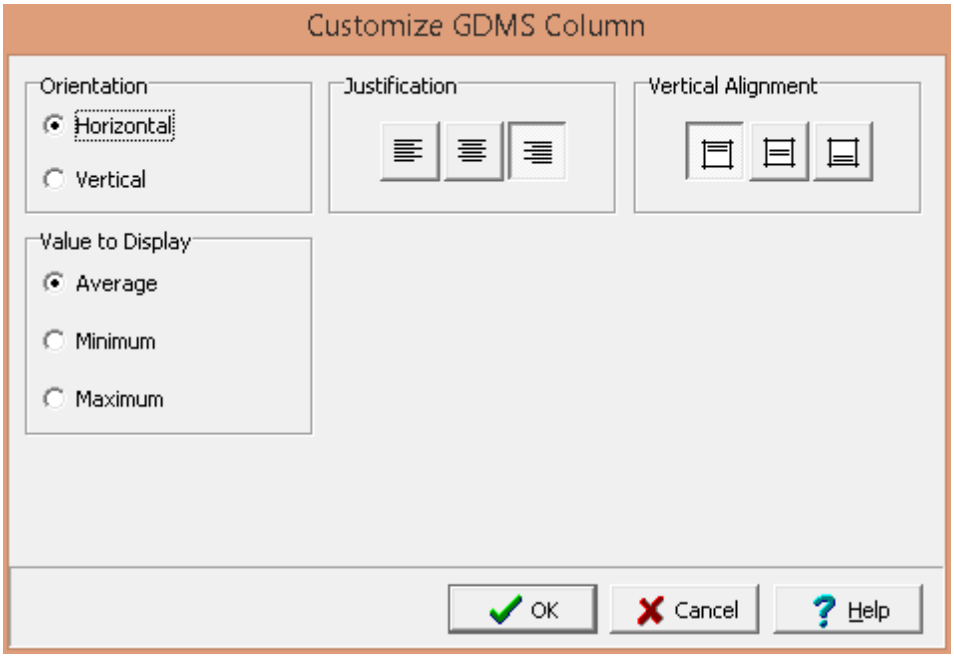


The following can be edited on the Sample Data tab:

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

Shrinkage limit data from the GDMS module can be displayed either as text, sample data, or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is described in the sections below.

If the Shrinkage Limit data is being displayed as a text or sample column, the customize form below will be displayed when the Customize button is clicked.



The following can be edited on this form:

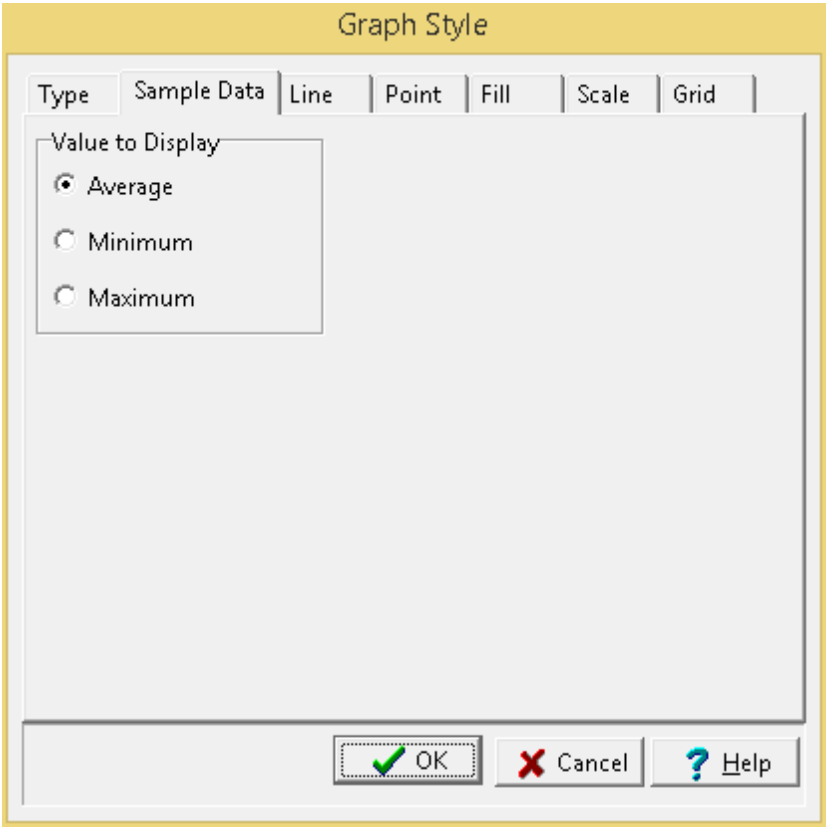
Orientation: The text can be oriented either horizontally or vertically.

Justification: The text can be justified left, center, or right within the column.

Vertical Alignment: This is the vertical alignment of the text.

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

If the Shrinkage Limit data is being displayed as a graph the customize form below will be displayed when the Customize button is clicked. This form is the same as the customize graph form with the addition of the Sample Data tab. The Type, Line, Point, Fill, Scale, and Grid tabs are described in the Customizing a Graph 439 section.



The following can be edited on the Sample Data tab:

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

Side friction data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

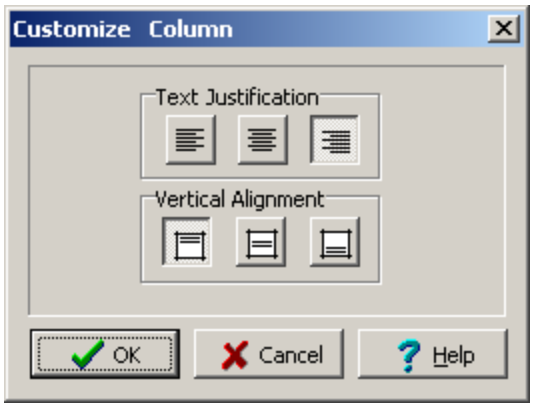
The customization for a simple well column is the same as described in Customizing a Well Column 487.

Slough data is displayed either as text interval or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing an Interval Text Column 447 or Customizing a Graph Column 439.

Soil conductivity data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

A Sonic column is displayed the same as a graph or geophysical column. The customization of this column is the same as that described in Customizing a Graph Column 439.

The Sorting column can be customized using the Customize button on the Columns tab. The Customize Column will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

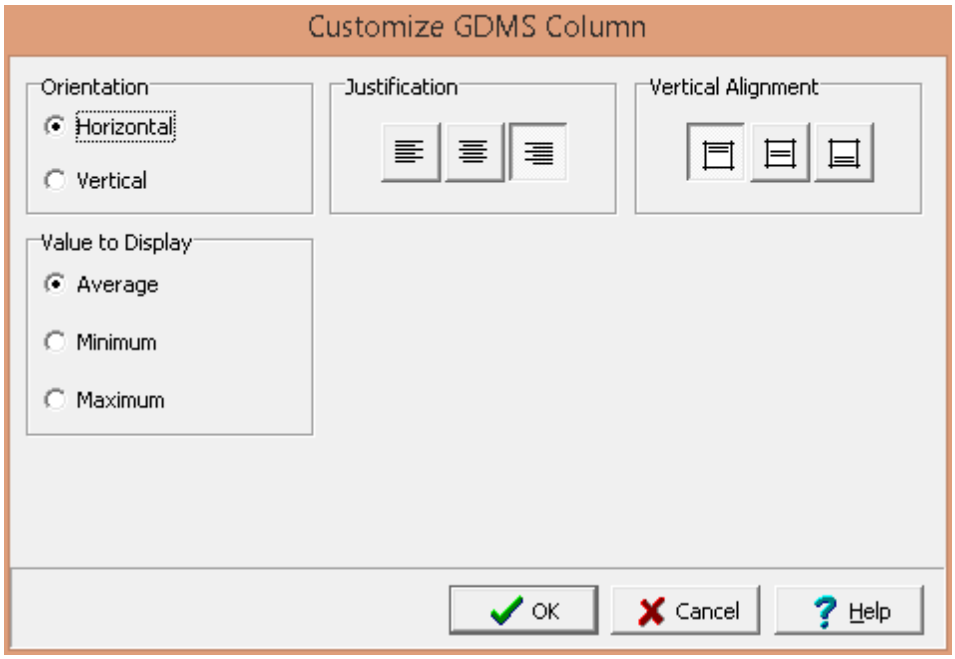
The following can be edited on this form:

Text Justification: This is the horizontal justification for the text in the column.

Vertical Alignment: This is the vertical alignment for the text in the column.

Specific gravity data from the GDMS module can be displayed either as text, sample data, or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is described in the sections below.

If the Specific Gravity data is being displayed as a text or sample column, the customize form below will be displayed when the Customize button is clicked.



The following can be edited on this form:

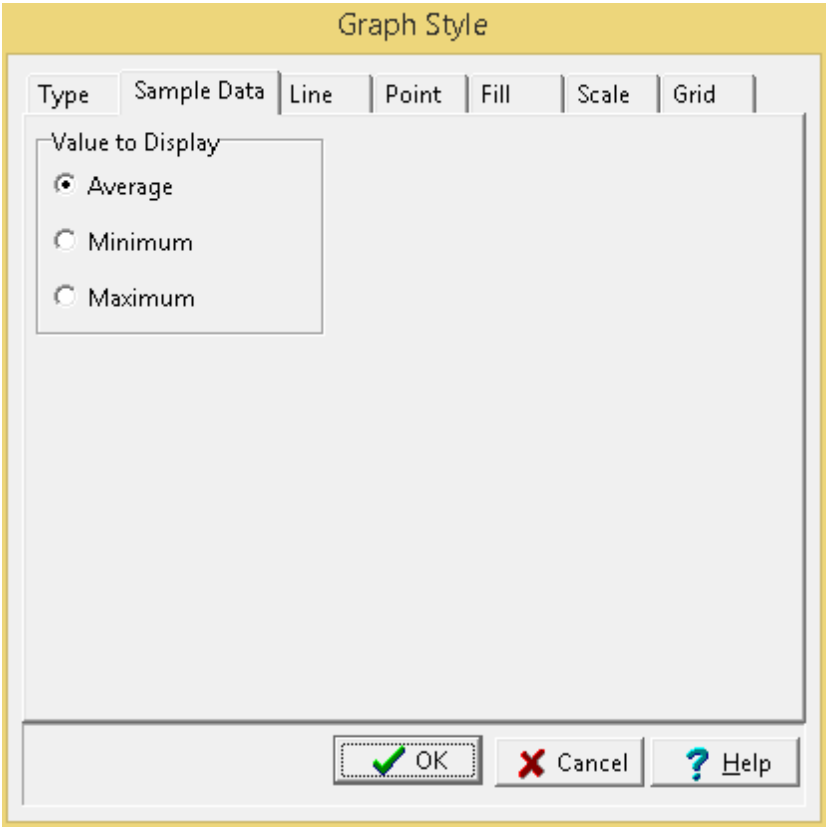
Orientation: The text can be oriented either horizontally or vertically.

Justification: The text can be justified left, center, or right within the column.

Vertical Alignment: This is the vertical alignment of the text.

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

If the Specific Gravity data is being displayed as a graph the customize form below will be displayed when the Customize button is clicked. This form is the same as the customize graph form with the addition of the Sample Data tab. The Type, Line, Point, Fill, Scale, and Grid tabs are described in the Customizing a Graph 439 section.



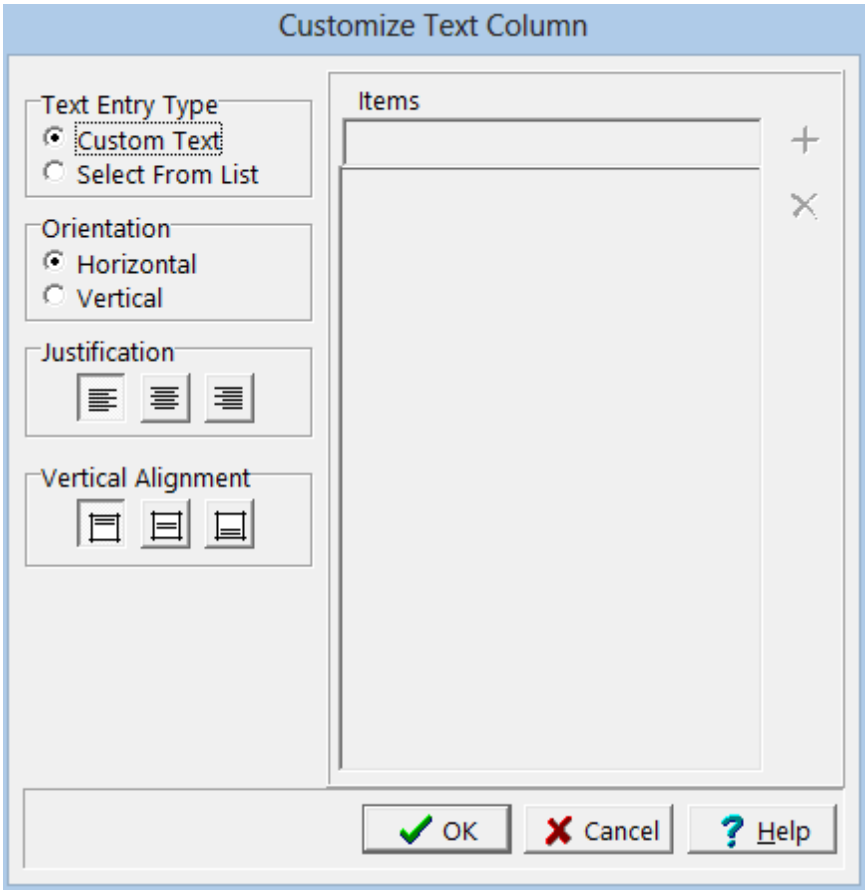
The following can be edited on the Sample Data tab:

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

A Spontaneous Potential column is displayed the same as a graph or geophysical column. The customization of this column is the same as that described in Customizing a Graph Column 439.

Structures data is displayed the same as text interval data. The customizing of the column is the same as described in Customizing an Interval Text Column 447.

The text column style can be changed using the Customize button on the Columns tab. When the Customize button is pressed the Customize Text Column form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The Customize Text Column form can be used to set the following:

Text Entry Type: The text for the column can either be entered as custom text or selected from a predefined list of text. If the text is selected from a list, the list items can be added and deleted on the right side of the form.

Orientation: The text can be oriented either horizontally or vertically. This orientation only applies to text lines, and will not apply to memos.

Justification: The text can be justified left, center, or right within the column. This justification only applies to text lines, and will not apply to memos entered in the text column.

Vertical Alignment: This is the vertical alignment of the text.

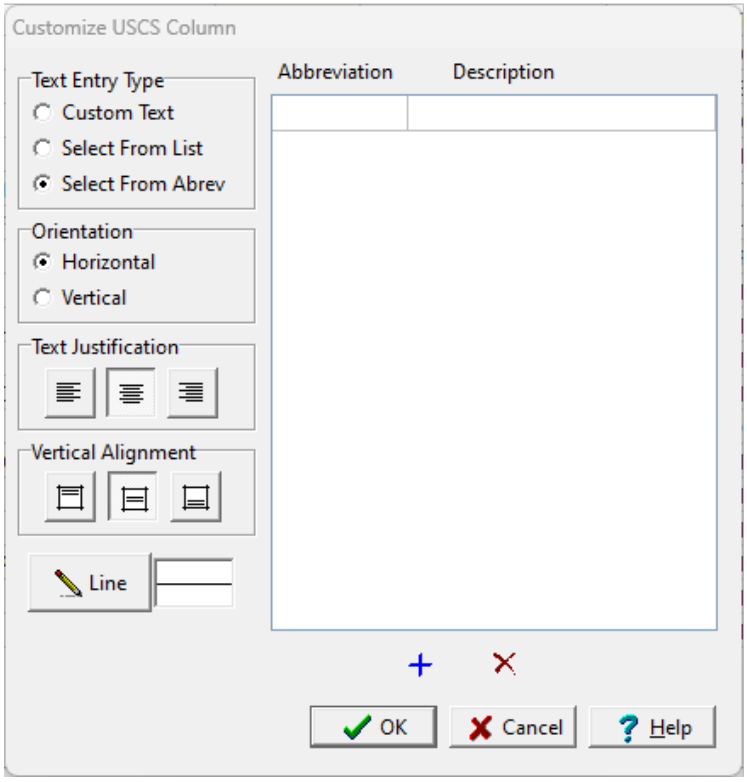
TDS data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

Temperature data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of

the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

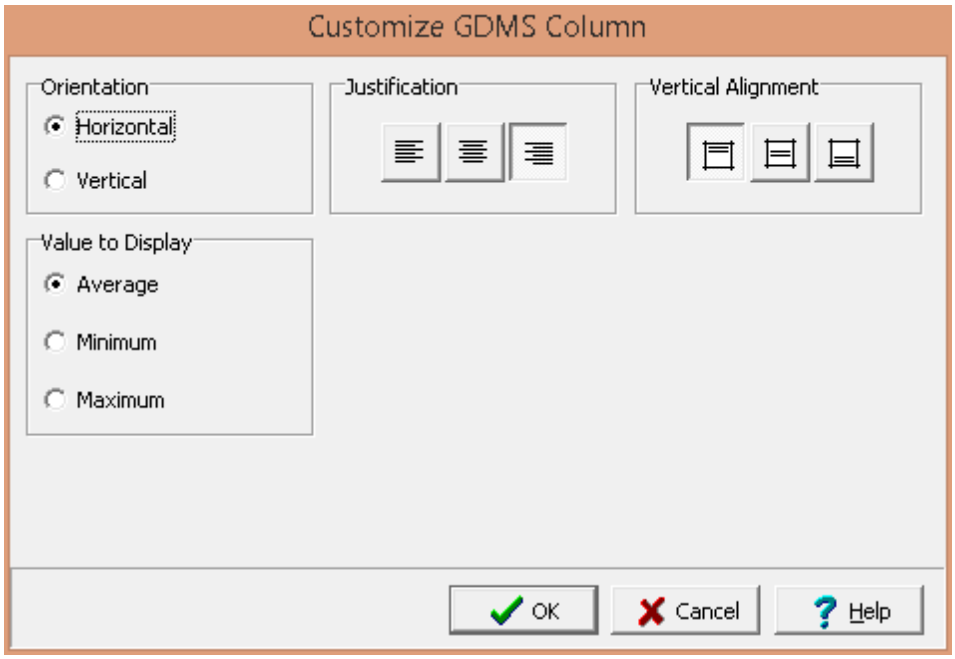
Unit Dry Weight data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

The USCS Classification can be displayed either as a text interval. The customization of the column is the same as described in Customizing an Interval Text Column 447. Except that when inserting calculated USCS classifications in the log, the Text Entry Type also determines what is inserted in the log. If it is set to "Select From Abrev' then only the USCS group will be inserted and not the entire description.



USCS classification from the GDMS module can be displayed either as text or sample data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is described in the sections below.

If the USCS classification is being displayed as a text or sample column, the customize form below will be displayed when the Customize button is clicked.



The following can be edited on this form:

Orientation: The text can be oriented either horizontally or vertically.

Justification: The text can be justified left, center, or right within the column.

Vertical Alignment: This is the vertical alignment of the text.

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

UU Shear Strength data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

Vane data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

VOC data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

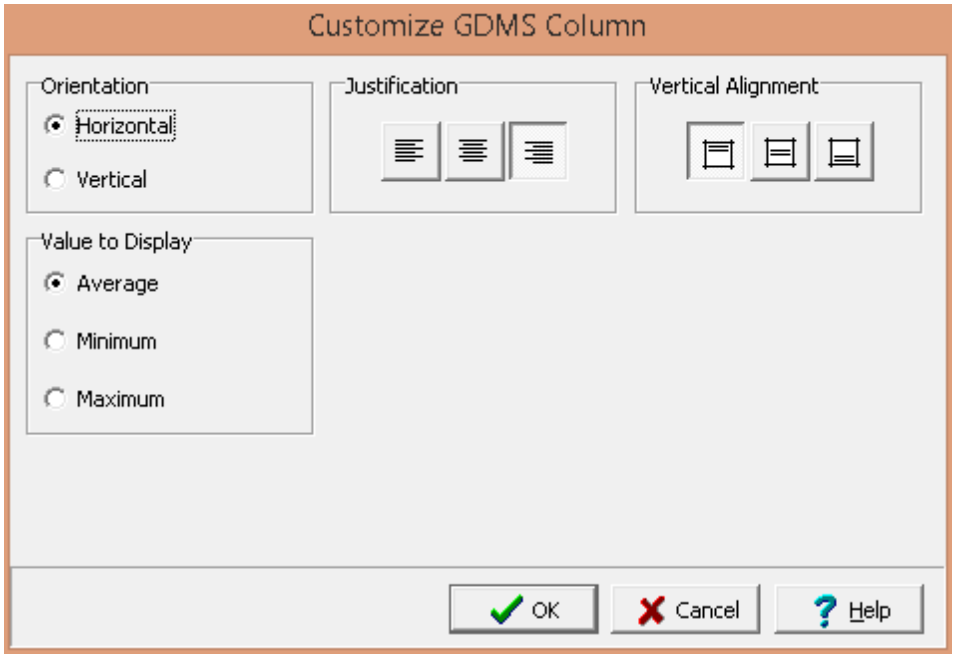
Volatile headspace (FID) data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

Volatile headspace (PID) data can be displayed either as text, text interval, bar graph or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is the same as described in Customizing a Text Column 482, Customizing an Interval Text Column 447, Customizing a Bargraph Column 439, or Customizing a Graph Column 439.

Water content data (not from the GDMS module) is displayed the same way as graph data. The only difference is that the water content is drawn with a point and a line is placed between the liquid and plastic limits. The customization of this column in the template is described in the customize a graph 439 section.

Water content data from the GDMS module can be displayed either as text, sample data, or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is described in the sections below.

If the Water Content data is being displayed as a text or sample column, the customize form below will be displayed when the Customize button is clicked.



The following can be edited on this form:

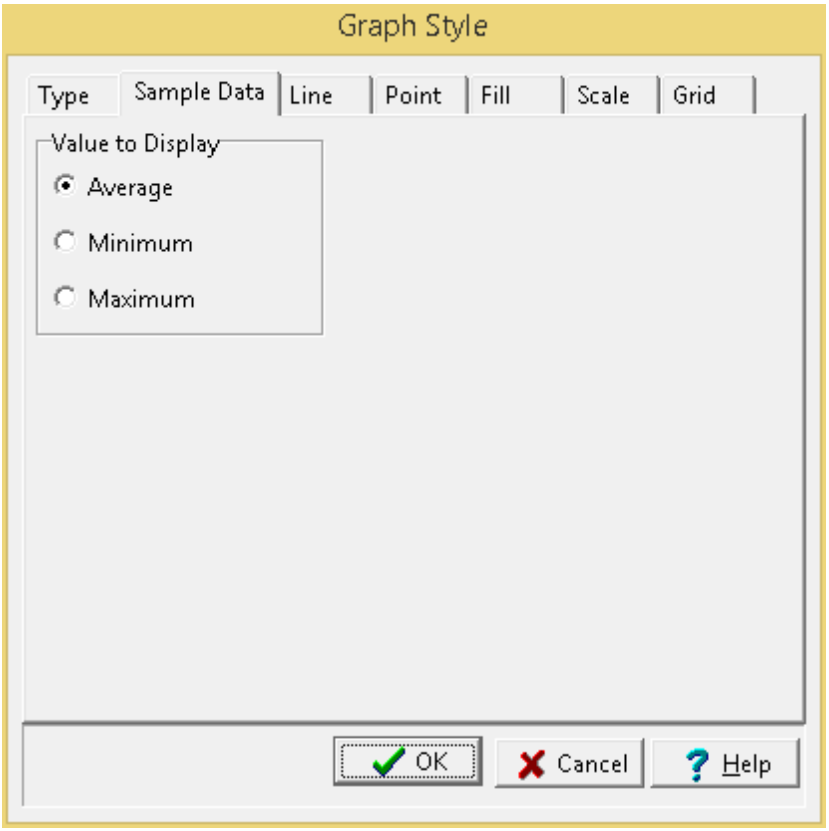
Orientation: The text can be oriented either horizontally or vertically.

Justification: The text can be justified left, center, or right within the column.

Vertical Alignment: This is the vertical alignment of the text.

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

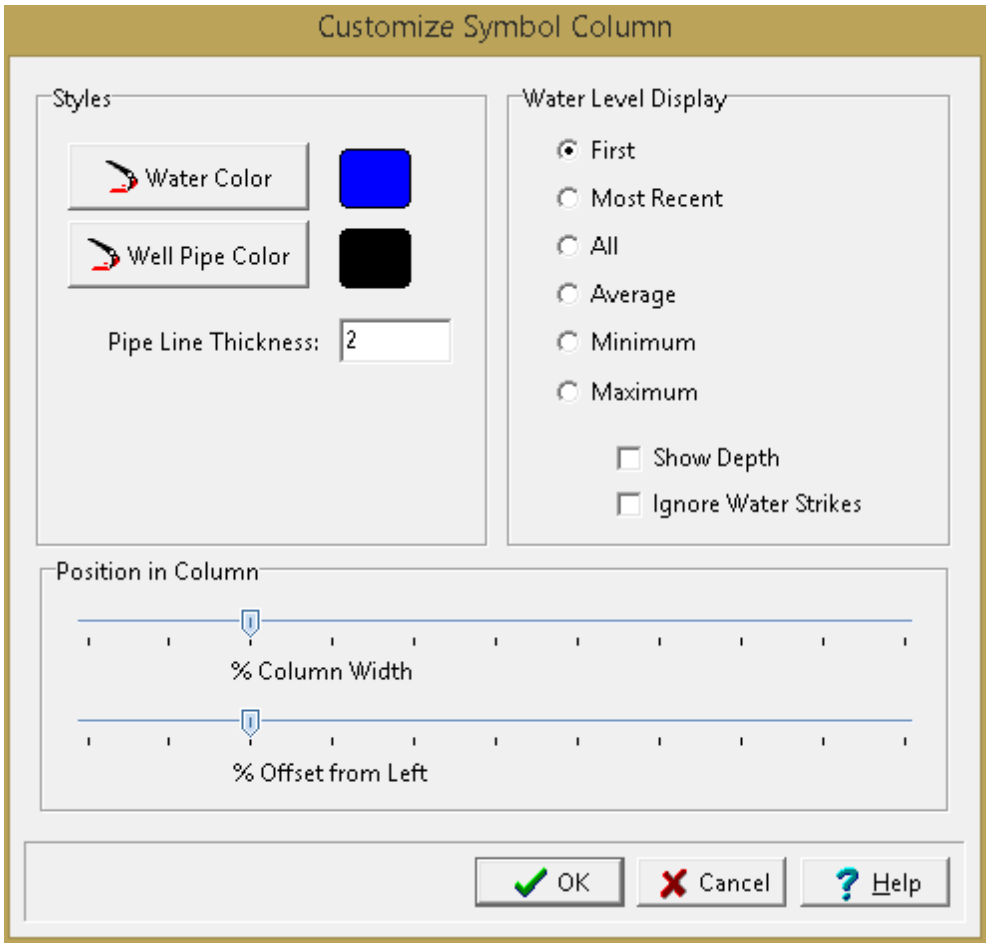
If the Water Content data is being displayed as a graph the customize form below will be displayed when the Customize button is clicked. This form is the same as the customize graph form with the addition of the Sample Data tab. The Type, Line, Point, Fill, Scale, and Grid tabs are described in the Customizing a Graph 439 section.



The following can be edited on the Sample Data tab:

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

The Well columns can be be customized using the Customize button on the Columns tab. The Customize Well Column form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

Water Color: This is the color that will be used to draw the water table symbol in the well. To change the color, press the Water Color button. The Color form page will be displayed, and either a basic or a custom color can be specified.

Well Pipe Color: This is the color to use when drawing pipes and screens in the well. To change the color, press the Well Pipe Color button. The Color form will be displayed, and either a basic or a custom color can be specified.

Pipe Line Thickness: This is the width of the line to use when drawing pipes and screens.

% of Column Width: This is the percentage of the width of the column to use for the hole. The horizontal scale of the well column will then be set such that the hole diameter specified above is equal to this percentage of column width. When setting the % of Column Width space should be made on the sides of the hole for annotation.

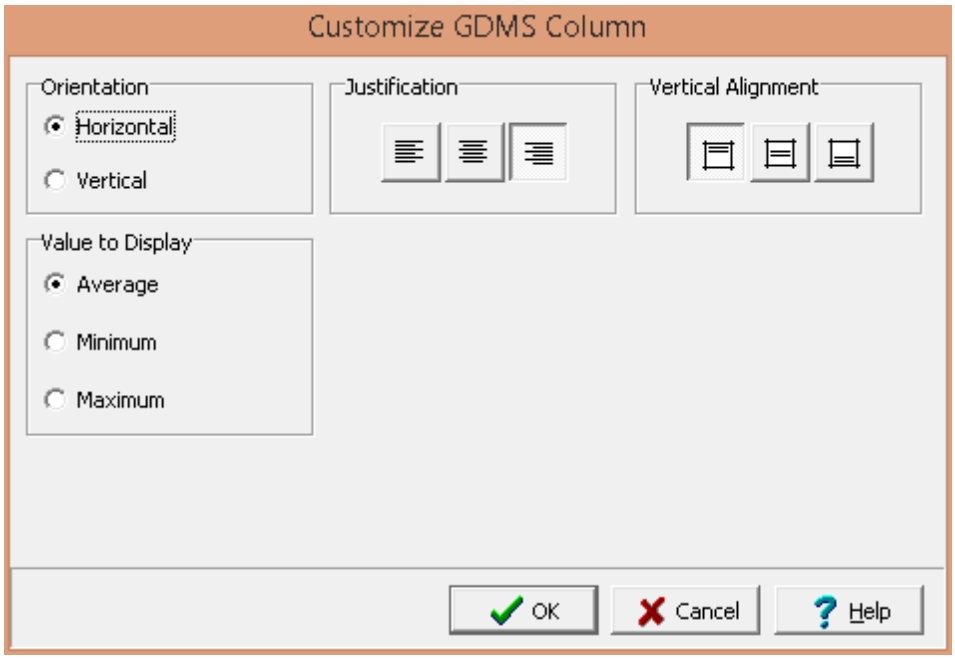
% Offset: This is the percentage of the column width to offset the hole from the left side of the column. This parameter is used to position the hole inside the column. The sum of the % Offset and % of Column Width should always be less than or equal to 100. For example, if the % of Column Width is 70 and the % Offset is 10. Then the leftmost 10% of the column would be used for annotation, the next

70% of the column would contain the well components, and the last 20% of the column would be used for annotation.

Water Level Display: This is used to select the water levels to display on the log when there are multiple water levels.

Young's Modulus data from the GDMS module can be displayed either as text, sample data, or graph data depending on the Display Type set on the Columns tab. Depending on how the column is displayed the customization of the column is described in the sections below.

If the Young's Modulus data is being displayed as a text or sample column, the customize form below will be displayed when the Customize button is clicked.



The following can be edited on this form:

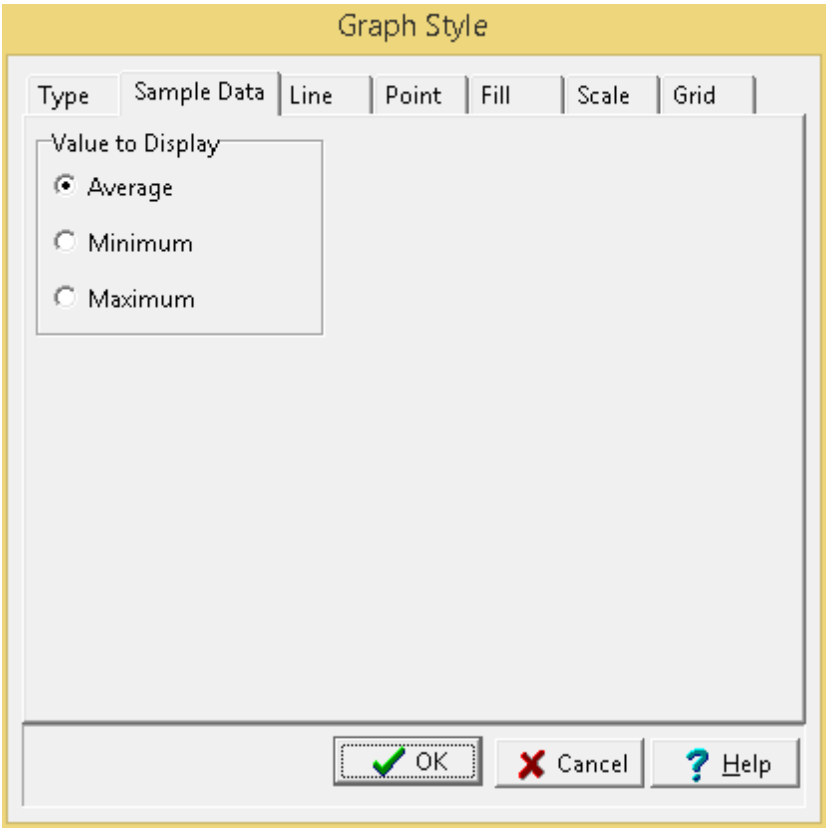
Orientation: The text can be oriented either horizontally or vertically.

Justification: The text can be justified left, center, or right within the column.

Vertical Alignment: This is the vertical alignment of the text.

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

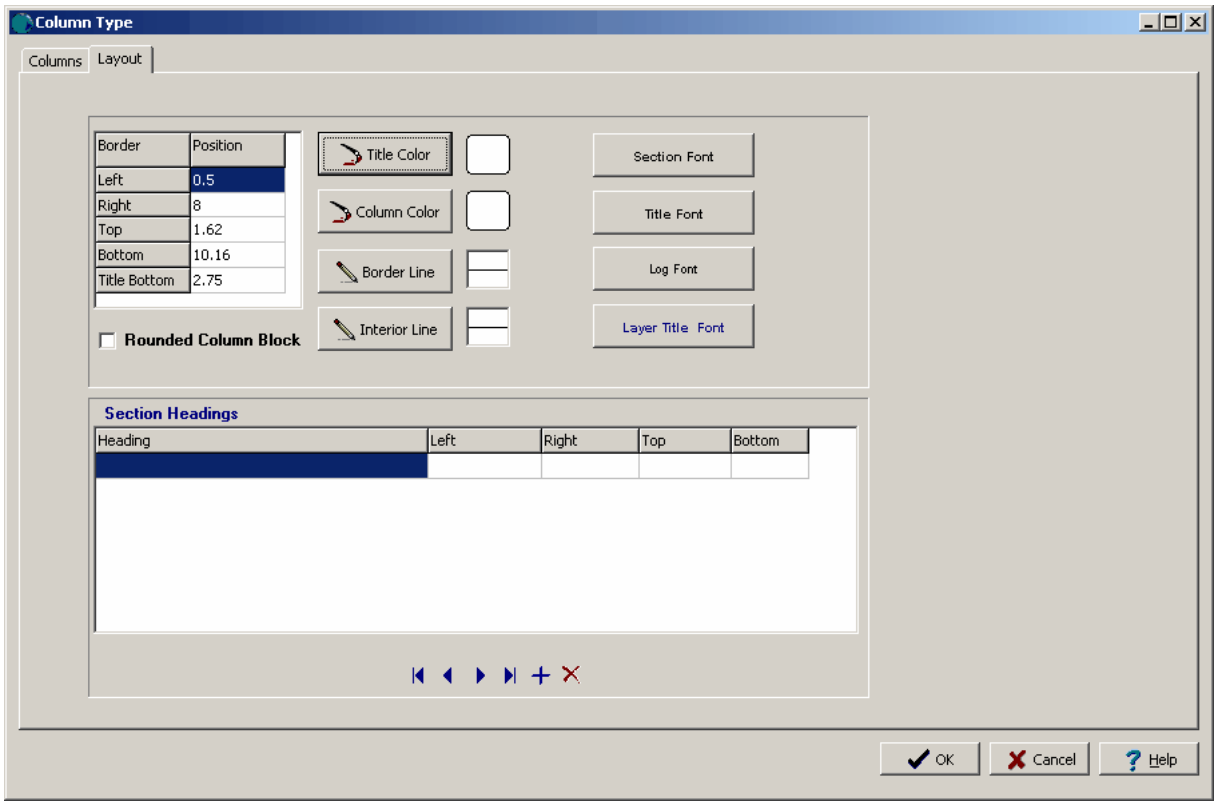
If the Young's Modulus data is being displayed as a graph the customize form below will be displayed when the Customize button is clicked. This form is the same as the customize graph form with the addition of the Sample Data tab. The Type, Line, Point, Fill, Scale, and Grid tabs are described in the Customizing a Graph 439 section.



The following can be edited on the Sample Data tab:

Value to Display: If there are multiple values for a sample on a boring or well log, this is used to select what value to display on the log.

4.2.3.2.2 Layout Tab



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The Layout tab and Page 2+ Layout tab can be used to edit the following information:

Left: This is the position of the left border of the column block in inches or millimeter from the left side of the page.

Right: This is the position of the right border of the column block in inches or millimeters from the left side of the page.

Top: This is the position of the top border of the column block in inches or millimeters from the top of the page.

Bottom: This is the position of the bottom border of the column block in inches or millimeters from the top of the page.

Title Bottom: This is the position of the bottom of the title portion of the column block in inches or millimeters from the top of the page.

Title Color: This is the color to use for the title block of the columns. Press the button to change the color. A Color form will be displayed and a basic or custom color can be selected.

Column Color: This is the color to use for the data block of the columns. Press the button to change the color. A Color form will be displayed and a basic or custom color can be selected.

Border Line: This is the line style to use for the border of the column block. When the button is pressed a Line Properties form will be displayed. Using this form the line style, width, and color can be selected.

Interior Line: This is the line style to use for the interior lines of the column block. These lines include the section title borders and bottom border of the titles. When the button is pressed a Line Properties form will be displayed. Using this form the line style, width, and color can be selected.

Section Font: This is the font to use for the section headings shown at the top of the column block and defined below. When the button is pressed a Font form will be displayed. Using this form the font name, style, size, and color can be selected.

Title Font: This is the font to use for the titles shown at the top of the column block and defined in the Columns tab. When the button is pressed a Font form will be displayed. Using this form the font name, style, size, and color can be selected.

Log Font: This is the default font to use for the log data in the columns. Individual fonts can be defined for each column in the Columns tab. When the button is pressed a Font form will be displayed. Using this form the font name, style, size, and color can be selected.

Layer Title Font: This is the font to use for the titles of the lithologic layers of the borehole data. When the button is pressed a Font form will be displayed. Using this form the font name, style, size, and color can be selected.

Section Headings

Sections are used to group a set of similar columns together such as, sample data or layer data. The section titles are displayed at the top of the column titles. The following can be edited for the section headings:

Heading: This is the text to display in the section heading (up to 255 characters).

Left: This is the position of the left side of the section heading in inches or millimeters from the left side of the page.

Right: This is the position of the right side of the section heading in inches or millimeters from the left side of the page.

Top: This is the position of the top side of the section heading in inches or millimeters from the top of the page. Normally this will be the same as the top border of the column block.

Bottom: This is the position of the bottom side of the section heading in inches or millimeters from the top of the page.

At the bottom of this tab there are buttons to move to the first, previous, next, and last section heading and to add and delete section headings.

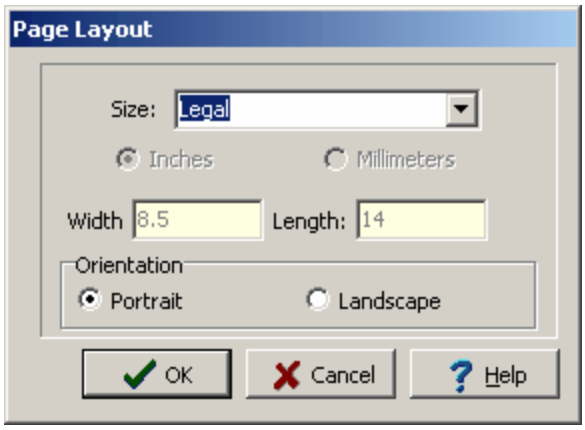
4.2.3.2.3 Sizing the Columns

The size of the individual columns and section headings can be changed using the Column Type form or the mouse. To adjust the size using the mouse, click on the column or section heading so that marquee boxes appear on the edges. Click on one of the corner marquee boxes and drag it to the new size.

In addition, all of the columns can be sized at the same time with the mouse by clicking on the outside corners of the left and right most columns so that marquee boxes appear around the edges of all the columns. Click on one of the corner marquee boxes and drag it to the new size.

4.2.3.3 Page Layout

The page layout is used to set the paper size and orientation for the printed log. To change the page layout, select *Edit > Page Layout*. The Page Layout form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be entered on the Page Layout form:

Size: This is the page size of the template. When the arrow at the right is pressed, a list of available page sizes is displayed.

Inches or Millimeters: The units for the width and length of the page. These units will be used when specifying the layout of the legend. If the Page Size is “Custom”, the units can be set to either inches or millimeters.

Width: If the page size is specified as “custom”, the page horizontal width in inches must be specified.

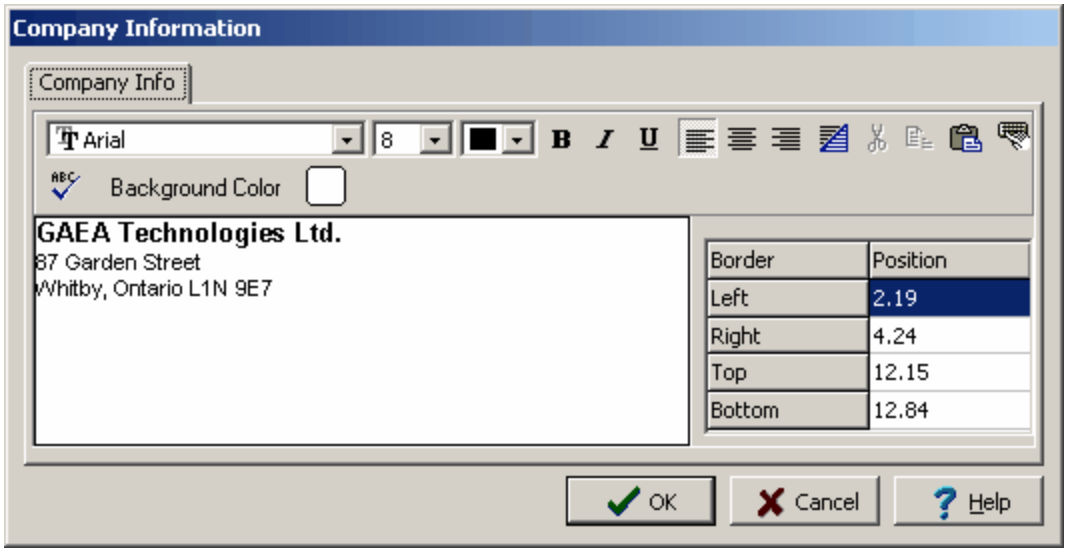
Length: If the page size is specified as “custom”, the page vertical length in inches must be specified.

Orientation: This is the orientation of the page; either portrait (longer side is vertical) or landscape (longer side is horizontal).

4.2.3.4 Company Name

The company name and address can be shown anywhere on a template. To edit the company name either:

- select *Edit > Company*
- select *Popup > Company*
- double-click on the company name on the template



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

This form can be used to edit the following information:

Company Info: This is the text to use for the company name and address. To not show any company information, keep this area blank.

Left: This is the position of the left border of the company information in inches or millimeters from the left side of the page.

Right: This is the position of the right border of the company information in inches or millimeters from the left side of the page.

Top: This is the position of the top border of the company information in inches or millimeters from the top of the page.

Bottom: This is the position of the bottom border of the company information in inches or millimeters from the bottom of the page.

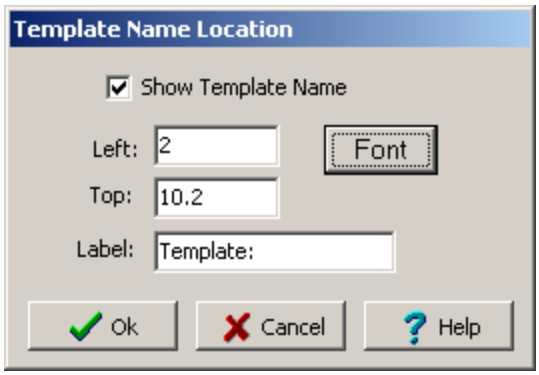
At the top of the Company Information form is the Rich Text toolbar, this toolbar can be used to modify the font characteristics of the text. Before selecting a speed button, the text to be modified should be selected with the mouse. The speed buttons of the toolbar perform the following functions:

- The **Font Typeface** box is used to select the name of the font to use for the selected text.
- The **Font Size** box is used to set the size of the font for the selected text.
- The **Font Color** box is used to select the color of the font for the selected text.
- The **Bold** button is used to toggle the bold attribute of the selected text on and off.
- The **Italics** button is used to toggle the italic attribute of the selected text on and off.
- The **Underline** button is used to toggle the underline attribute of the selected text on and off.
- The **Superscript** button is used to toggle the superscript attribute of the selected text on and off.
- The **Subscript** button is used to toggle the subscript attribute of the selected text on and off.
- The **Left Justify** button will left justify the selected text.
- The **Center Justify** button will center justify the selected text.
- The **Right Justify** button will right justify the selected text.
- The **Select All** button will select all of the text in the memo field.
- The **Cut** button will remove the selected text and place it in the clipboard.

- The **Copy** button will copy the selected text to the clipboard.
- The **Paste** button will paste the text in the clipboard, at the current position of the cursor in the memo field.
- The **Find** button will find the specified text in the memo field.
- The **Replace** button will replace the specified text in the memo field.
- The **Symbol** button will display the Symbol form. This form is used to place a symbol at the current cursor position in the memo field. To select a symbol use the Font box to select the font containing the symbol and then select the desired symbol. After the desired symbol has been selected, press the Ok button to insert it into the memo field. The program comes with a font called “GAEA Symbols” that contains a variety of well and other symbols.
- The **Spell Check** button will display the Spell Checker form and will check the spelling in the memo field. When the Add button is pressed the word will be appended to the custom dictionary.

4.2.3.5 Template Label

This is used to show the name of the template on the log. It can be useful for being able to determine what template was used to create the log after it has been printed or included in a report. To create or edit the template label select *Edit > Template Label*. The Template Name Location form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Show Template Name: Check this box to show the template label.

Left: This is the horizontal position from the left side of the page of the start of the label in page units.

Top: This is the vertical position from the top of the page of the label in page units.

Font: Click this button to change the font for the label.

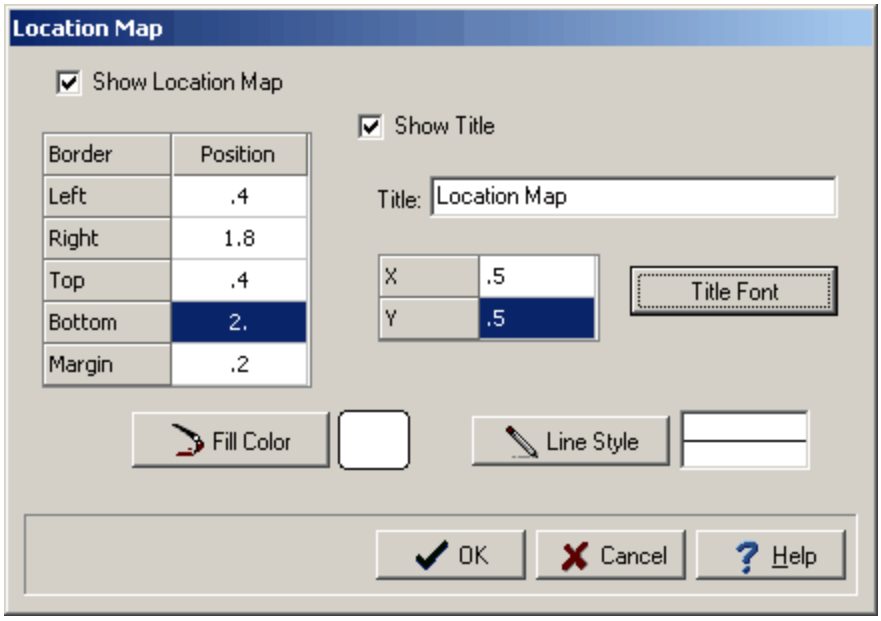
Label: This is the prefix to use for the label. The name of the template will be displayed after this prefix.

4.2.3.6 Location Map

The location map is a bitmap representation of the project map and can be shown anywhere on a template. To edit the location map either:

- select *Edit > Location Map*

- select *Popup > Location Map*
- double-click on the location map on the template



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

This form can be used to edit the following information:

Show Location Map: Check this box to show the location map on the template.

Left Position: This is the horizontal position of the left boundary of the location map.

Right Position: This is the horizontal position of the right boundary of the location map.

Top Position: This is the vertical position of the top boundary of the location map.

Bottom Position: This is the vertical position of the bottom boundary of the location map.

Margin: This is the margin between the location map and the frame.

Show Title: Check this box to show the title on the location map.

X: This is the horizontal position of the title.

Y: This is the vertical position of the title.

Title Font: Click this button to change the font for the title.

Fill Color: Click this button to change the fill color.

Line Style: Click this button to change the line style of the frame around the location map.

4.2.3.7 Legends

Previously created lithology and symbol legends 518 can be added anywhere on a template. There is no limit to the number of rectangles that can be added.

4.2.3.7.1 Adding a Legend

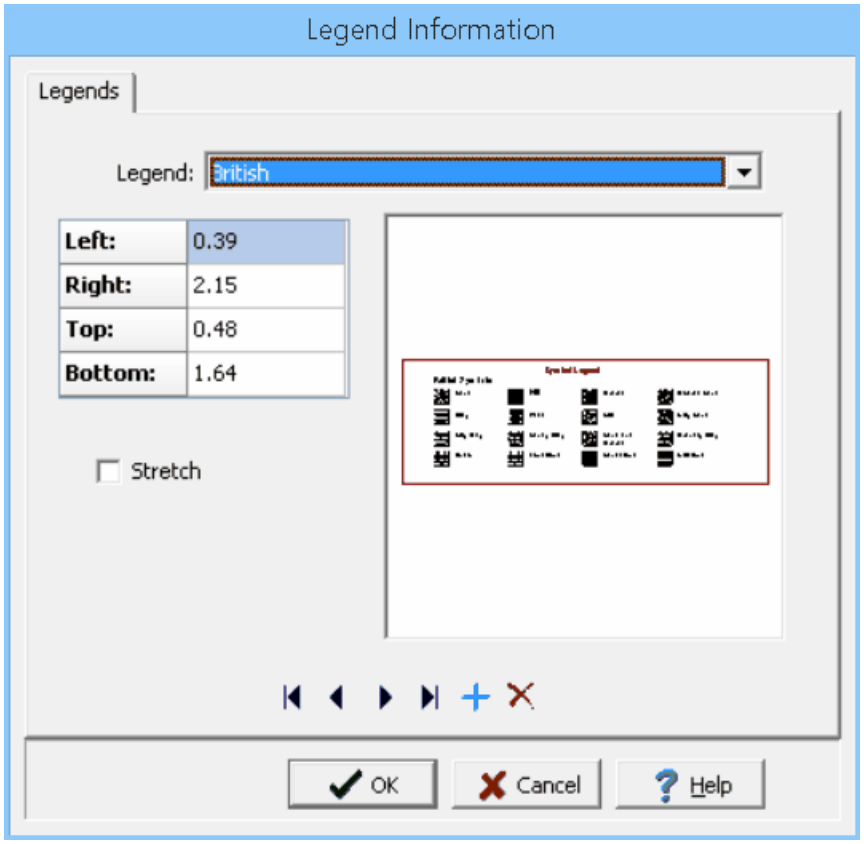
To add a legend to a template click on the Legend button on the toolbar. Next using the left mouse button click on the location of the upper left corner of the legend. Then while holding down the left mouse button, drag the cursor to the lower right corner of the legend and release the mouse button. The Legend Information form described in the next section will then be displayed. This form can also be used to add a legend using the Add button at the bottom of the form.

4.2.3.7.2 Editing a Legend

Existing legends on a template can be editing by:

- selecting *Edit > Legends*
- double-clicking on the legend object on the sidebar
- clicking on the legend on the template

After performing one of the above tasks, the Legend Information form will be displayed. At the bottom of this form there are buttons to move to the first, previous, next, and last legend or to add and delete legends.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Legend: This is used to select the legend to display on the template.

Left: This is the position of the left border of the legend in inches or millimeters from the left side of the page. If the Legend button on the toolbar is used to create the legend, this position will be filled in by the program.

Right: This is the position of the right border of the legend in inches or millimeters from the left side of the page. If the Legend button on the toolbar is used to create the legend, this position will be filled in by the program.

Top: This is the position of the top border of the legend in inches or millimeters from the top of the page. If the Legend button on the toolbar is used to create the legend, this position will be filled in by the program.

Bottom: This is the position of the bottom border of the legend in inches or millimeters from the top of the page. If the Legend button on the toolbar is used to create the legend, this position will be filled in by the program.

Stretch: Check this box to stretch the legend to fit the specified borders. Otherwise, the legend will be sized to fit within the borders and still maintain its aspect ratio.

4.2.3.7.3 Sizing a Legend

The size of the legend can be changed using the Legend Information form or the mouse. To adjust the size using the mouse, click on the legend so that marquee boxes appear on the edges of the legend. Click on one of the corner marquee boxes and drag it to the new size.

4.2.3.7.4 Moving a Legend

The position of the legend can be changed using the Legend Information form or the mouse. To move the legend using the mouse, click on the legend so that marquee boxes appear on the edges of the legend. Position the mouse in the center of the legend and the cursor should change to an arrow with a box. Then click and drag the legend to the new position.

4.2.3.7.5 Deleting a Legend

To delete a legend click on the legend on the sidebar and select *Popup > Delete*. In addition, it can be deleted on the Legend Information form using the Delete button at the bottom of the form.

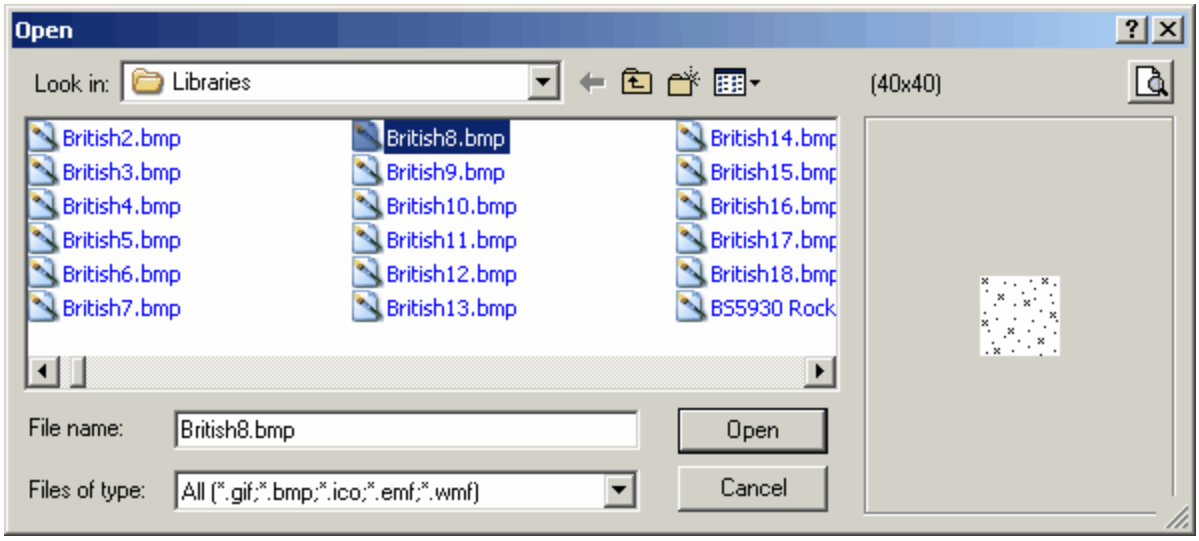
4.2.3.8 Draw Objects

Draw objects are used to place common drawing objects anywhere on a template. Types of draw objects are paragraph text, lines, bitmaps, rectangles, and tables. Draw objects on the template are displayed beneath any information on the log.

4.2.3.8.1 Bitmaps

Bitmaps contained in common bitmap files can be added anywhere on a template. These bitmaps can be used to show company logos, site plans, legends, and other graphical information. Bitmaps are displayed over top of any information on the template.

To add a bitmap to a template click on the Bitmap button on the toolbar. Next using the left mouse button click on the location of the center of the bitmap. The Open Bitmap form will then be displayed. Select the bitmap file and then press the Open button.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

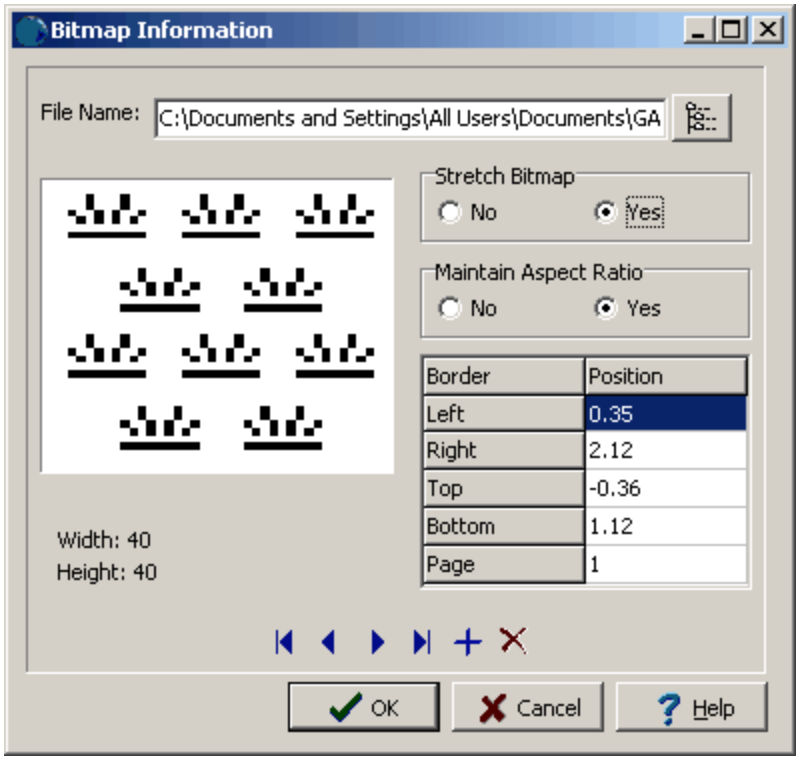
The Bitmap Information form described in the next section will then be displayed. This form can also be used to add a bitmap using the Add button at the bottom of the form.

Existing bitmaps on a template can be editing by:

- selecting *Edit > Bitmaps*
- double-clicking on the bitmap object on the sidebar
- clicking on the bitmap on the log

After performing one of the above tasks, the Bitmap Information form will be displayed. If the template has two pages the form will have two tabs, the first tab is for first page and the second tab is for the

second page. The data entry for both tabs is identical.At the bottom of this form there are buttons to move to the first, previous, next, and last bitmap or to add and delete bitmaps.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)
The following information can be edited on this form:

File Name: This is the name of the bitmap file to display on the template. To change the name of the file, edit this name or click on the button to the right of the name. If the button to the right is pressed, an Open bitmap file form will be displayed. Select the desired file and then press the Open button.

Stretch Bitmap: Select yes to stretch the bitmap to fit within the specified borders. If no is selected, only the center of the bitmap and page can be entered for the position.

Maintain Aspect Ratio: Select yes to keep the aspect ratio of the bitmap on the log the same as stored in the file. If yes is selected the bottom of the bitmap will be automatically adjusted to maintain the aspect ratio. If Stretch Bitmap is set to No, then this field will not be displayed and it is assumed that the aspect ratio is maintained.

Left: This is the position of the left border of the bitmap in inches or millimeters from the left side of the page. If Stretch Bitmap is set to No then this field will not be displayed.

Right: This is the position of the right border of the bitmap in inches or millimeters from the left side of the page. If Stretch Bitmap is set to No then this field will not be displayed.

Top: This is the position of the top border of the bitmap in inches or millimeters from the top of the page. If Stretch Bitmap is set to No, then this field will not be displayed.

Bottom: This is the position of the bottom border of the bitmap in inches or millimeters from the top of the page. If the Stretch Bitmap is set to No or Maintain Aspect Ratio is set to yes, then this field will not be displayed and the bottom will be calculated by the program.

Page: This is the page to display the bitmap.

Center X: This is the bitmap's horizontal center in inches from the left side of the page. If Stretch Bitmap is set to Yes, this field will not be displayed. If the Bitmap button on the toolbar is used to create the bitmap, this field will be filled in by the program.

Center Y: This is the bitmap's vertical center in inches from the left side of the page. If Stretch Bitmap is set to Yes, this field will not be displayed. If the Bitmap button on the toolbar is used to create the bitmap, this field will be filled in by the program.

To delete a bitmap click on the bitmap on the sidebar and select *Popup > Delete*. In addition, it can be deleted on the Bitmap Information form using the Delete button at the bottom of the form.

4.2.3.8.2 Lines and Arrows

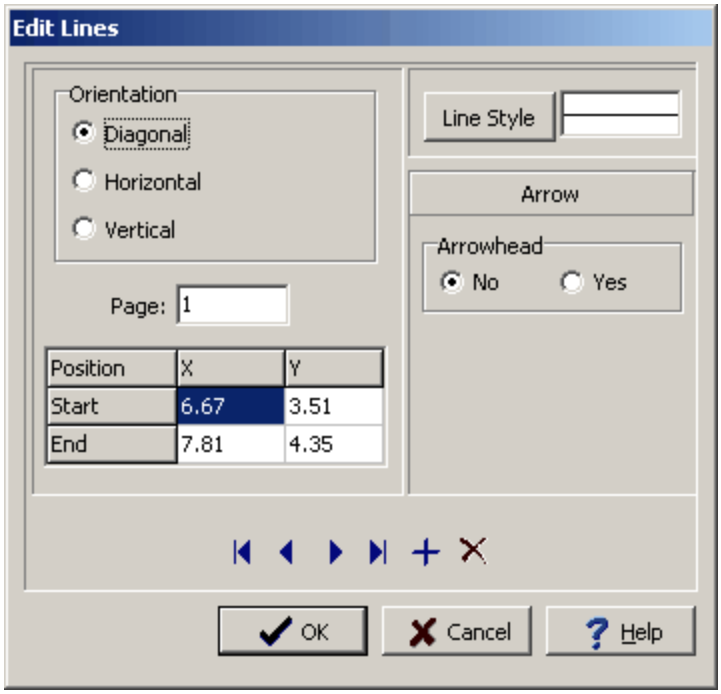
Horizontal, vertical, and diagonal lines and arrows can be added anywhere on a template.

To add a line or arrow to a template click on the Line button on the toolbar. Next using the left mouse button click on the location of the starting point of the line or arrow. Then while holding down the left mouse button, drag the cursor to the end of the line or arrow and release the mouse button. The Edit Lines form described in the next section will then be displayed. This form can also be used to add a line using the Add button at the bottom of the form.

Existing lines or arrows on a template can be editing by:

- selecting *Edit > Lines*
- double-clicking on the line object on the sidebar
- clicking on the line or arrow on the template

After performing one of the above tasks, the Edit Lines form will be displayed. If the template has two pages the form will have two tabs, the first tab is for first page and the second tab is for the second page. At the bottom of this form there are buttons to move to the first, previous, next, and last line or to add and delete lines.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Orientation: This is the orientation of the line, either diagonal, horizontal, or vertical. If the orientation is set to horizontal, the vertical position will be set to the Y position of the start of the line. If the orientation is set to vertical, the horizontal position will be set to the X position of the start of the line.

Page: This is the page to display the line. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

Start X: This is the horizontal position of the start of the line in inches or millimeters from the left side of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

Start Y: This is the vertical position of the start of the line in inches or millimeters from the top of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

End X: This is the horizontal position of the end of the line in inches or millimeters from the left side of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

End Y: This is the vertical position of the end of the line in inches or millimeters from the top of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

Line Style: This is the style of the line. The line style can be changed by pressing the Line Style button. The Line Properties form below will then be displayed. Using this form the style, color, and width of the line can be set.

Arrowhead: To display an arrowhead at the start or end of the line select yes.

Arrow Position: This is position to place the arrowhead, either at the start or end of the line. If no arrowhead is selected above, this field will not appear.

Arrowhead Size: This is the size of the arrowhead. If no arrowhead is selected above, this field will not appear.

The size of the line or arrow can be changed using the Edit Line form or the mouse. To adjust the size using the mouse, click on the line or arrow so that marquee boxes appear on the ends and middle of the line or arrow. Click on one of the end marquee boxes and drag it to the new size.

The position of the line or arrow can be changed using the Edit Line form or the mouse. To move the line or arrow using the mouse, click on the line or arrow so that marquee boxes appear on the ends and middle of the line or arrow. Click on the center marquee box and drag it to the new position.

To delete a line or arrow click on the line or arrow on the sidebar and select *Popup > Delete*. In addition, it can be deleted on the Edit Lines form using the Delete button at the bottom of the form.

4.2.3.8.3 Paragraphs

Floating paragraph text boxes can be added anywhere on a template. These text boxes are displayed over top of any information on the template. These boxes can overlap boundaries between the header, footer, and columns. Paragraph text boxes are typically used to add comments or a template.

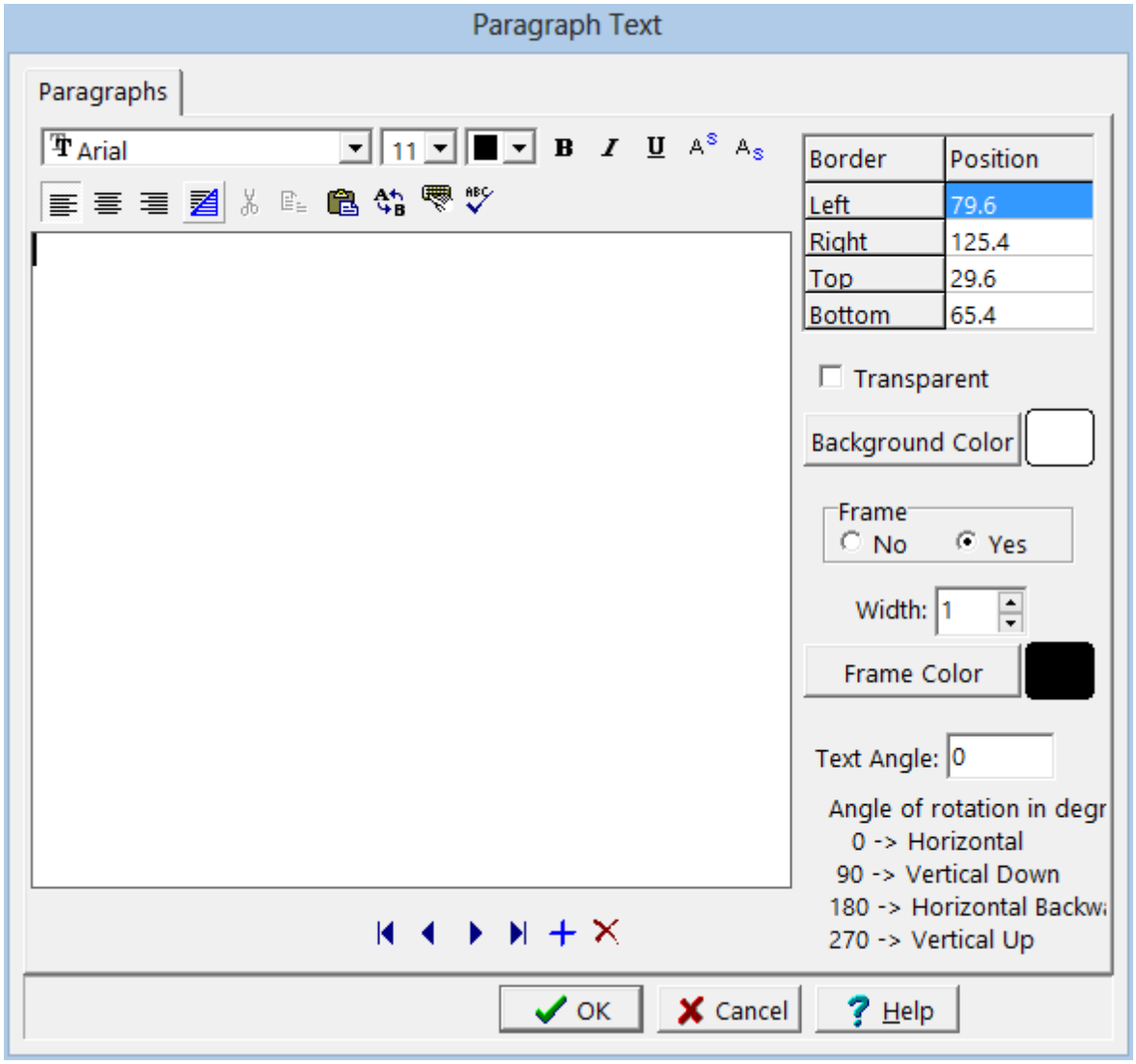
To add a paragraph to a template click on the Paragraph button on the toolbar. Next using the left mouse button click on the location of the upper left corner of the paragraph text box. Then while holding the left mouse button down drag the mouse to the location of the lower right corner, and then release the mouse button. While the mouse button is held down a marquee box will be drawn to indicate the location of the paragraph box. After the button has been released, the Paragraph Text form described in the next section will be displayed. This form can also be used to add a paragraph text using the Add button at the bottom of the form.

Existing paragraph text on a template can be editing by:

- selecting *Edit > Paragraph Text*
- double-clicking on the paragraph object on the sidebar

- clicking on the paragraph on the template

After performing one of the above tasks, the Paragraph Text form will be displayed. If the template has two pages the form will have two tabs, the first tab is for first page and the second tab is for the second page. At the bottom of this form there are buttons to move to the first, previous, next, and last paragraph or to add and delete paragraphs.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Text: This is the text for the paragraph. There is no limit to the length of the text. The Rich Text toolbar at the top of the form is used to format the text. This toolbar is described below.

Left: This is the position of the left border of the paragraph in inches or millimeters from the left side of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Right: This is the position of the right border of the paragraph in inches or millimeters from the left side of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Top: This is the position of the top border of the paragraph in inches or millimeters from the top of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Bottom: This is the position of the bottom border of the paragraph in inches or millimeters from the top of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Page: This is the page to display the paragraph text. If the log contains only one page, this field will not appear.

Transparent: Check this box to make the paragraph text box transparent.

Background Color: This is the background color of the paragraph text box. When the Background Color button is pressed, the Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified.

Frame: Select yes to display a frame around the paragraph text.

Frame Width: This is the line width of the frame around the paragraph text. If no frame is selected above, this field will not be displayed.

Frame Color: This is the color of the frame to display around the paragraph text. When the Frame Color button is pressed, the Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified. If no frame is selected above, this field will not be displayed.

Text Angle: This is used to specify the angle of rotation of the text. Zero is horizontal and 90 is vertical.

At the top of the Paragraph Text form is the Rich Text toolbar, this toolbar can be used to modify the font characteristics of the text. Before selecting a speed button, the text to be modified should be selected with the mouse.

The speed buttons of the toolbar perform the following functions:

- The **Font Typeface** box is used to select the name of the font to use for the selected text.
- The **Font Size** box is used to set the size of the font for the selected text.
- The **Font Color** box is used to select the color of the font for the selected text.
- The **Bold** button is used to toggle the bold attribute of the selected text on and off.
- The **Italics** button is used to toggle the italic attribute of the selected text on and off.
- The **Underline** button is used to toggle the underline attribute of the selected text on and off.
- The **Superscript** button is used to toggle the superscript attribute of the selected text on and off.
- The **Subscript** button is used to toggle the subscript attribute of the selected text on and off.
- The **Left Justify** button will left justify the selected text.
- The **Center Justify** button will center justify the selected text.
- The **Right Justify** button will right justify the selected text.
- The **Select All** button will select all of the text in the memo field.
- The **Cut** button will remove the selected text and place it in the clipboard.
- The **Copy** button will copy the selected text to the clipboard.
- The **Paste** button will paste the text in the clipboard, at the current position of the cursor in the memo field.

- The **Find** button will find the specified text in the memo field.
- The **Replace** button will replace the specified text in the memo field.
- The **Symbol** button will display the Symbol form. This form is used to place a symbol at the current cursor position in the memo field. To select a symbol use the Font box to select the font containing the symbol and then select the desired symbol. After the desired symbol has been selected, press the Ok button to insert it into the memo field.
- The **Spell Check** button will display the Spell Checker form and will check the spelling in the memo field.

The size of the paragraph can be changed using the Paragraph Text form or the mouse. To adjust the size using the mouse, click on the paragraph text so that marquee boxes appear on the edges of the paragraph. Click on one of the corner marquee boxes and drag it to the new size.

The position of the paragraph can be changed using the Paragraph Text form or the mouse. To move the paragraph using the mouse, click on the paragraph text so that marquee boxes appear on the edges of the paragraph. Position the mouse in the center of the paragraph and the cursor should change to an arrow with a box. Then click and drag the paragraph to the new position.

To delete a paragraph click on the paragraph on the sidebar and select *Popup > Delete*. In addition, it can be deleted on the Paragraph Text form using the Delete button at the bottom of the form.

4.2.3.8.4 Rectangles

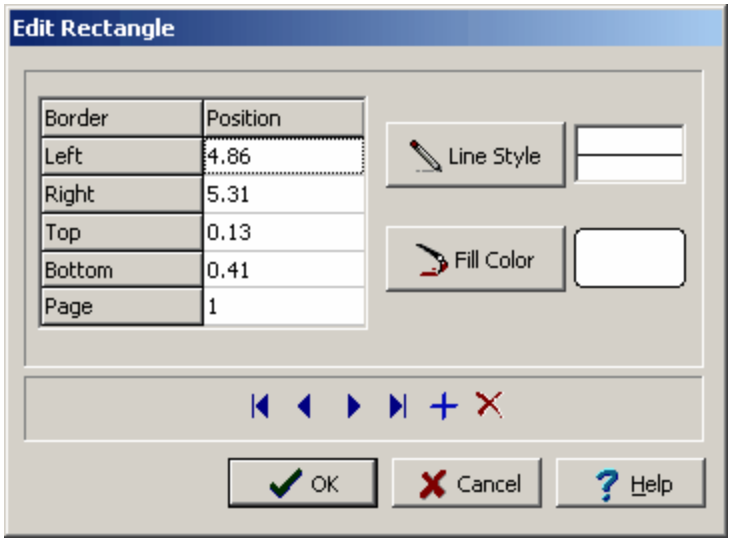
Rectangles can be added anywhere on a template. There is no limit to the number of rectangles that can be added.

To add a rectangle to a template click on the Rectangle button on the toolbar. Next using the left mouse button click on the location of the upper left corner of the rectangle. Then while holding down the left mouse button, drag the cursor to the lower right corner of the rectangle and release the mouse button. The Edit Rectangle form described in the next section will then be displayed. This form can also be used to add a rectangle using the Add button at the bottom of the form.

Existing rectangles on a template can be editing by:

- selecting *Edit > Rectangles*
- double-clicking on the rectangle object on the sidebar
- clicking on the rectangle on the template

After performing one of the above tasks, the Edit Rectangles form will be displayed. If the template has two pages the form will have two tabs, the first tab is for first page and the second tab is for the second page. At the bottom of this form there are buttons to move to the first, previous, next, and last rectangle or to add and delete rectangles.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Left: This is the position of the left border of the rectangle in inches or millimeters from the left side of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Right: This is the position of the right border of the rectangle in inches or millimeters from the left side of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Top: This is the position of the top border of the rectangle in inches or millimeters from the top of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Bottom: This is the position of the bottom border of the rectangle in inches or millimeters from the top of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Page: This is the page to display the rectangle. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Line Style: This is the style of the rectangle border. The line style can be changed by pressing the Line Style button. The Line Properties form will then be displayed. Using this form the style, color, and width of the rectangle can be set.

Fill Color: This is the color to use to fill the inside of the rectangle. When the Fill Color button is pressed, the Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified.

The size of the rectangle can be changed using the Edit Rectangle form or the mouse. To adjust the size using the mouse, click on the rectangle so that marquee boxes appear on the edges of the rectangle. Click on one of the corner marquee boxes and drag it to the new size.

The position of the rectangle can be changed using the Edit Rectangle form or the mouse. To move the rectangle using the mouse, click on the rectangle so that marquee boxes appear on the edges of the rectangle. Position the mouse in the center of the rectangle and the cursor should change to an arrow with a box. Then click and drag the rectangle to the new position.

To delete a rectangle click on the rectangle on the sidebar and select *Popup > Delete*. In addition, it can be deleted on the Edit Rectangle form using the Delete button at the bottom of the form.

4.2.3.8.5 Tables

Floating tables can be added anywhere on a template. These tables are displayed over top of any information on the template. These boxes can overlap boundaries between the header, footer, and columns. Template tables are typically used to group of data with similar values such as a water level table.

To add a table to a template click on the Table button on the toolbar. Next using the left mouse button click on the location of the upper left corner of the table. Then while holding the left mouse button down drag the mouse to the location of the lower right corner. Then release the mouse button. While the mouse button is held down a marquee box will be drawn to indicate the location of the table. After the button has been released, the Table form described in the next section will be displayed. This form can also be used to add a table using the Add button at the bottom of the form.

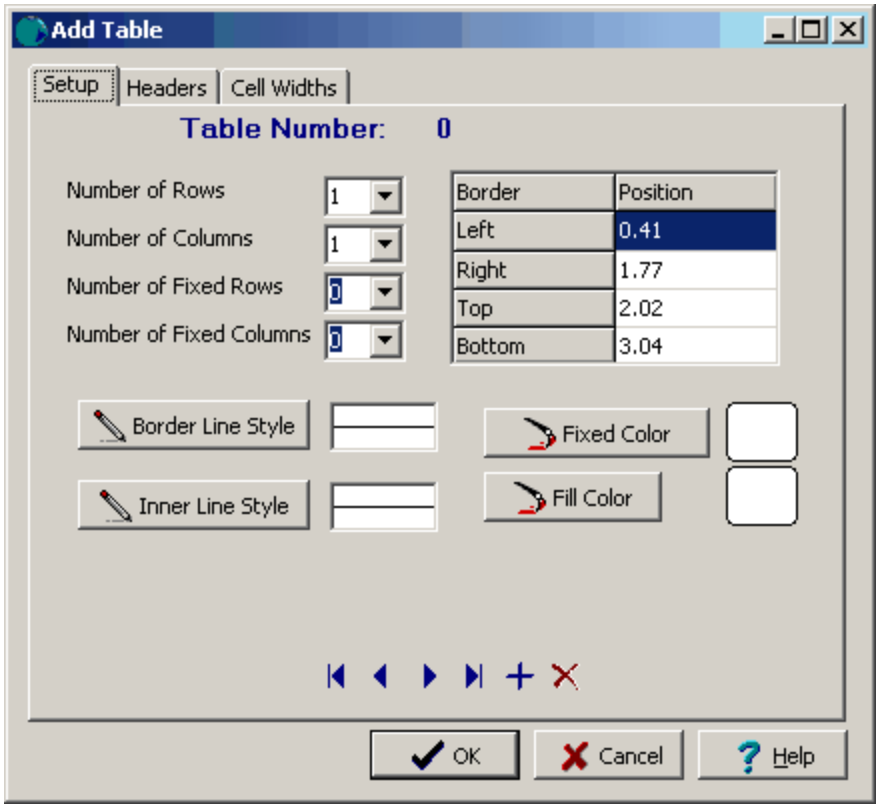
Existing tables on a template can be editing by:

- selecting *Edit > Tables*
- double-clicking on the table object on the sidebar

- clicking on the table on the template

After performing one of the above tasks, the Edit Tables form will be displayed. This form has three tabs for the table setup, headers, and cell widths.

Setup Tab



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this tab:

Number of Rows: The number of rows in the table.

Number of Columns: The number of columns in the table.

Number of Fixed Rows: The number of fixed rows in the table. Fixed rows contain information that can only be entered / edited from the template.

Number of Fixed Columns: The number of fixed columns in the table. Fixed columns contain information that can only be edited / entered from the template.

Left: This is the position of the left border of the table in inches or millimeters from the left side of the page. .

Right: This is the position of the right border of the table in inches or millimeters from the left side of the page.

Top: This is the position of the top border of the table in inches or millimeters from the top of the page.

Bottom: This is the position of the bottom border of the table in inches or millimeters from the top of the page.

Border Line Style: This is the line style of the outside border of the template table. It includes the lines thickness and style (Solid, Dash Dot, etc.)

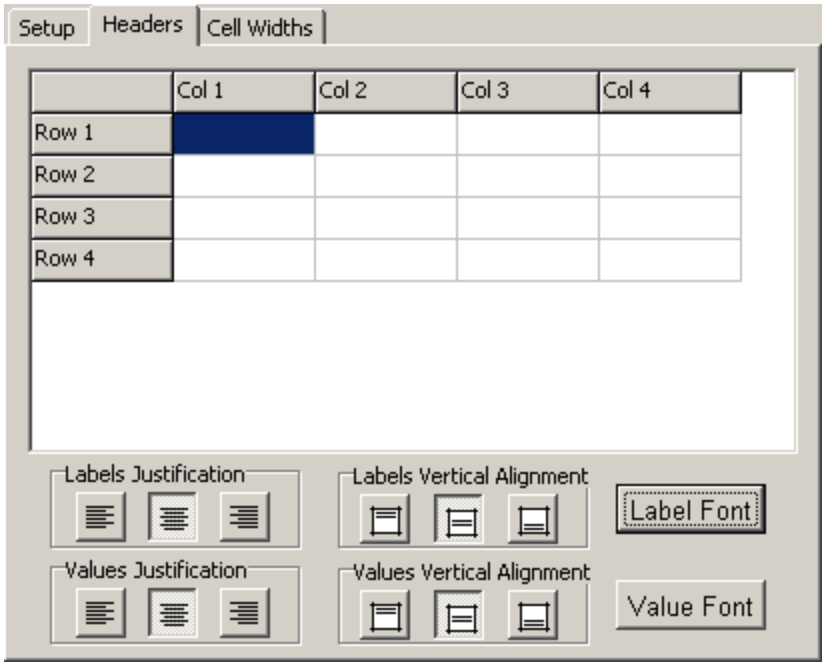
Inner Line Style: This is the line style of the lines between the individual cells of a template table. It includes the lines thickness and style (Solid, Dash Dot, etc.)

Fixed Color: This is the background color of the fixed columns of the table.When the button is pressed a Color form will be displayed.

Fill Color: This is the background color of the non-fixed columns of the table.When the button is pressed a Color form will be displayed.

At the bottom of this form there are buttons to move to the first, previous, next, and last rectangle or to add and delete rectangles.

Headers Tab



The following information can be edited on this tab:

Table Headers: Headers can be entered for each fixed column in table. In this example, there is one fixed column and one fixed row.

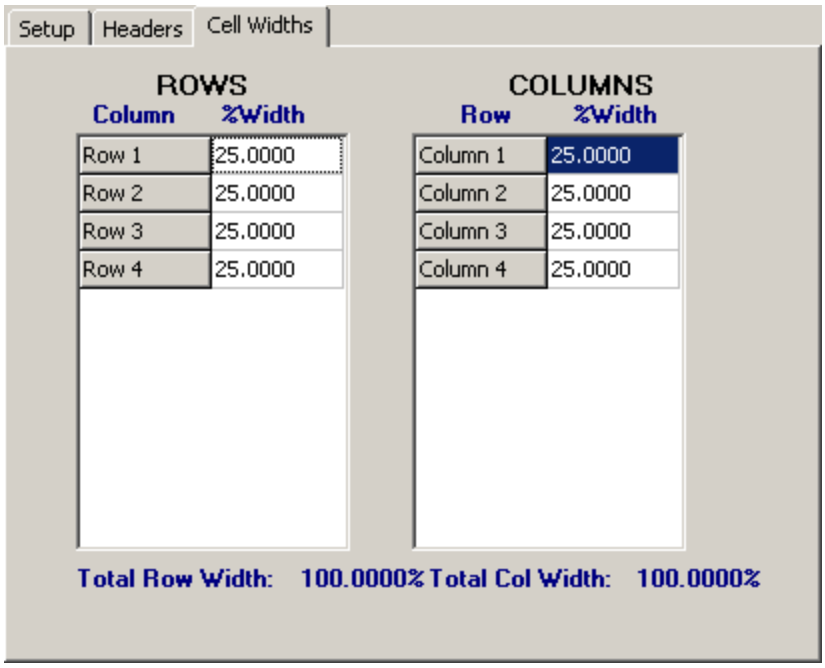
Labels and Values Justification: The Left Justify button will left justify the text, the Center Justify button will center justify the text, and the Right Justify button will right justify the text.

Labels and Values Alignment: The Top align button will align the text with the top of the table cells, the Center align button will align the text in the center of the table cells, and the Bottom align button will the text with the bottom of the table cells.

Label Font: The Label Font button lets the user set the font type of the column and row headers.

Value Font: The Value Font button lets the user set the font type of the column and row values.

Cell Widths Tab



The following information can be edited on this tab:

Column Widths: Column width is the width of a individual column as a percentage of the total table width. The value should add up to 100%

Row Widths: Row width is the width of a individual row as a percentage of the total table height. The value should add up to 100%

The size of the table can be changed using the Edit Tables form or the mouse. To adjust the size using the mouse, click on the table so that marquee boxes appear on the edges of the table. Click on one of the corner marquee boxes and drag it to the new size.

The position of the table can be changed using the Edit Tables form or the mouse. To move the rectangle using the mouse, click on the rectangle so that marquee boxes appear on the edges of the rectangle.

Position the mouse in the center of the rectangle and the cursor should change to an arrow with a box. Then click and drag the rectangle to the new position.

To delete a table click on the table on the sidebar and select *Popup > Delete*. In addition, it can be deleted on the Table form using the Delete button at the bottom of the form.

4.2.4 Creating a Second Template Page

The optional second page of the template can be used to display a different log format for the second and subsequent pages of the log. This technique is often used to display a first page with a large header or footer (with a large number of header/footer text lines), and second and subsequent pages with a smaller header or footer (with less header/footer text lines).

To create the second template page, select *Edit > # of Pages > 2 Page*. A second template page will then be created that is identical to the first page (the first page is used as a default format to save time creating the second page). This page can be modified as required and then saved.

To revert to a one page template, select *Edit > # of Pages > 1 Page*. Care should be taken when reverting back to one page, since any editing of the second page will be lost.

4.2.5 Saving a Template

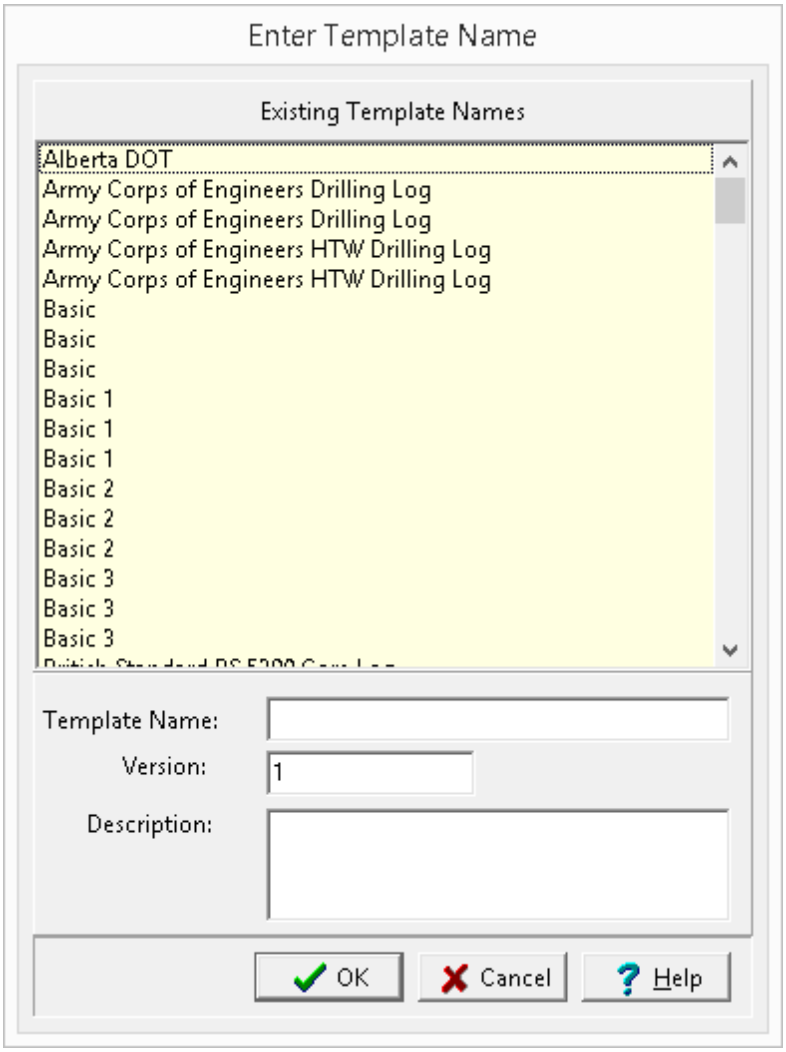
Save

To save a template after it has been edited, either:

- select *File > Save* or *Popup > Save*
- press the Save button on the toolbar

SaveAs

To save the template under a different unique name, press the SaveAs button on the toolbar. The Enter Template Name form will be displayed.

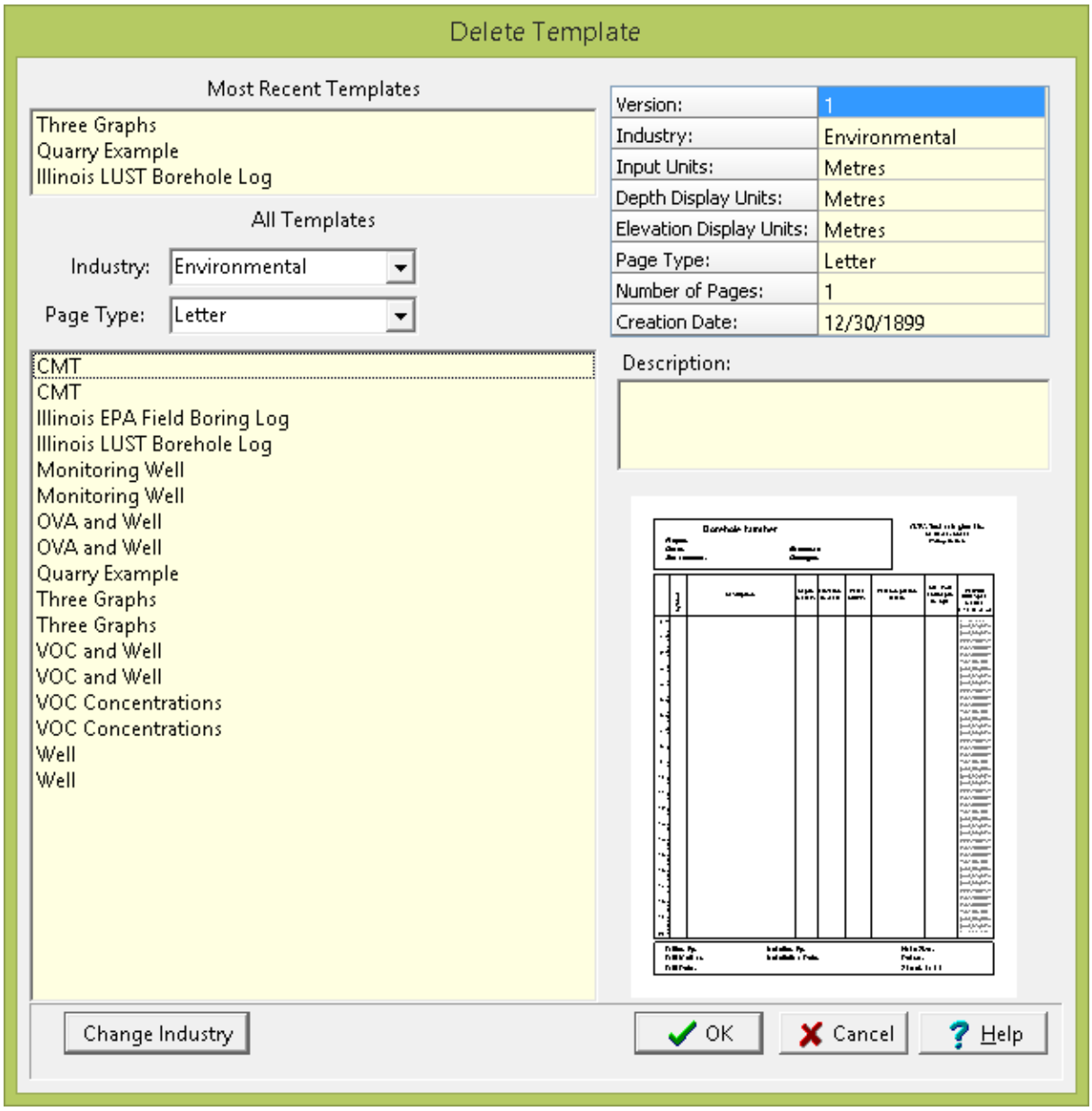


(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

Enter a unique name, version and a description and then press the Ok button.

4.2.6 Deleting a Template

To delete a template select *File > Delete > Boring/Well Template*, the Delete Template form will be displayed. The template can be selected from the list and then deleted by clicking on the Select button.

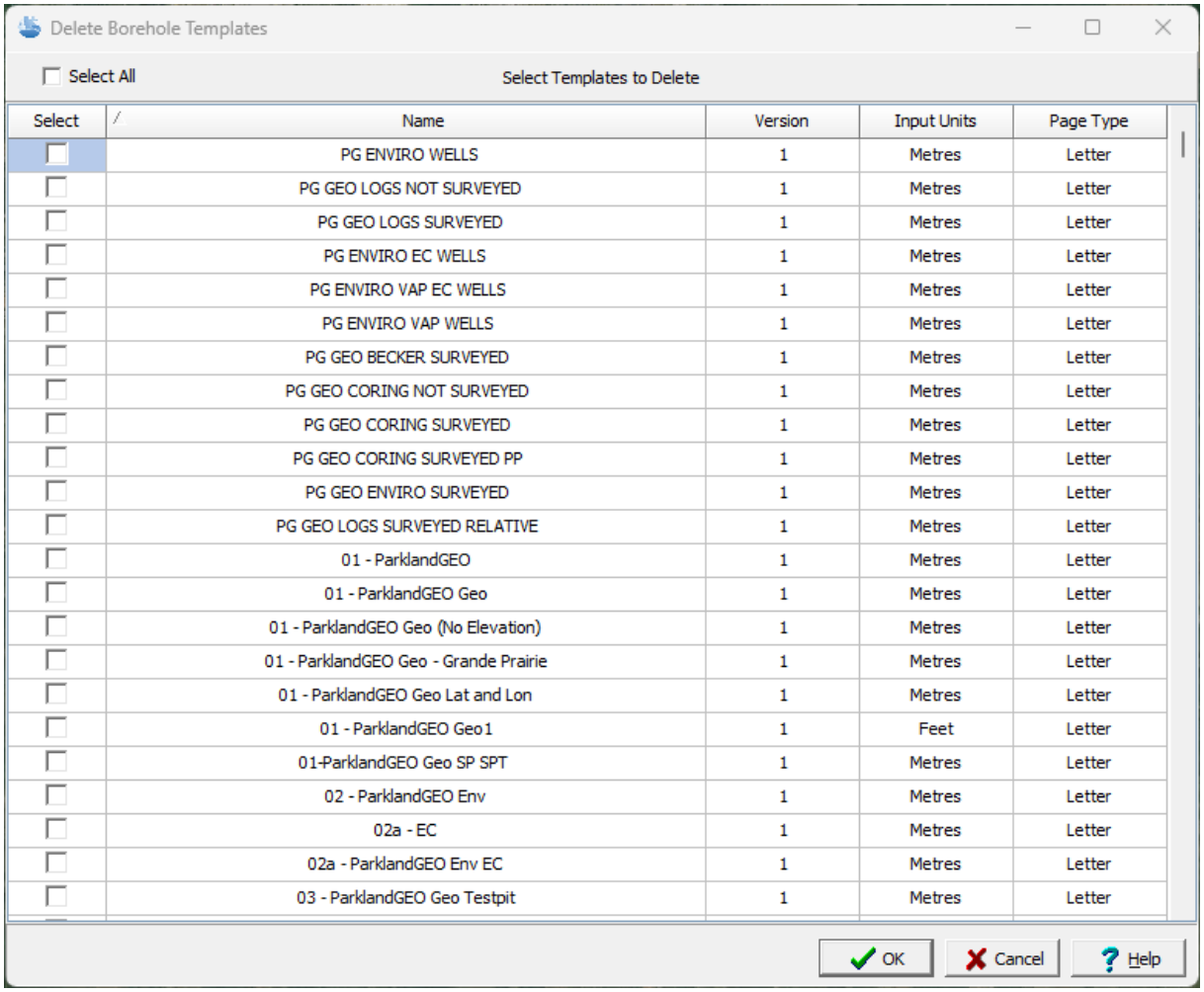


(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

This form displays lists of the most recently used templates and all templates on the left side. The right side will display the details of the highlight template, some of the details of the most recent template may not be displayed. At the top of the list of all templates the industry type and page type for the template can be selected, these can be used to refine the list of templates. To select a template, highlight and press the Ok button.

4.2.7 Deleting a List of Templates

Multiple borehole and well templates can be deleted at the same time from a list of templates. To delete a list of templates select *File > Delete > List of Templates*, the Delete Borehole Templates form will be displayed.



Select	Name	Version	Input Units	Page Type
☐	PG ENVIRO WELLS	1	Metres	Letter
☐	PG GEO LOGS NOT SURVEYED	1	Metres	Letter
☐	PG GEO LOGS SURVEYED	1	Metres	Letter
☐	PG ENVIRO EC WELLS	1	Metres	Letter
☐	PG ENVIRO VAP EC WELLS	1	Metres	Letter
☐	PG ENVIRO VAP WELLS	1	Metres	Letter
☐	PG GEO BECKER SURVEYED	1	Metres	Letter
☐	PG GEO CORING NOT SURVEYED	1	Metres	Letter
☐	PG GEO CORING SURVEYED	1	Metres	Letter
☐	PG GEO CORING SURVEYED PP	1	Metres	Letter
☐	PG GEO ENVIRO SURVEYED	1	Metres	Letter
☐	PG GEO LOGS SURVEYED RELATIVE	1	Metres	Letter
☐	01 - ParklandGEO	1	Metres	Letter
☐	01 - ParklandGEO Geo	1	Metres	Letter
☐	01 - ParklandGEO Geo (No Elevation)	1	Metres	Letter
☐	01 - ParklandGEO Geo - Grande Prairie	1	Metres	Letter
☐	01 - ParklandGEO Geo Lat and Lon	1	Metres	Letter
☐	01 - ParklandGEO Geo1	1	Feet	Letter
☐	01-ParklandGEO Geo SP SPT	1	Metres	Letter
☐	02 - ParklandGEO Env	1	Metres	Letter
☐	02a - EC	1	Metres	Letter
☐	02a - ParklandGEO Env EC	1	Metres	Letter
☐	03 - ParklandGEO Geo Testpit	1	Metres	Letter

Multiple templates can be selected for deletion using the checkboxes on the left. In addition, all of the templates can be selected or unselected using the Select All checkbox at the top of the form.

After the templates have been selected click Ok to delete them.

4.3 Legends

Legends are used to provide descriptions for the lithologic symbols, well components, sample symbols, and other symbols shown in boring/well logs. These legends are divided into lithologic legends and symbol legends. Lithologic legends are used to display lithologic libraries and can also include well and sample symbols. Symbol legends are used to display legends for various types of symbol column, such as: fossils, drilling data, constituents, structures, well symbols, sample types, and oil and gas shows.

WinLoG RT comes with several previously defined legends. In addition, any number of new legends can be easily created. Legends can be customized to display different symbol descriptions, titles, and layout. In addition, they can include bitmaps, and paragraph text. A company logo can also be included in a legend.

Although you can use an unlimited number of lithologic libraries (each with 18 symbols) in a lithologic legend, only one library can be represented on the legend. If you need to show more libraries, it is recommended to create additional legends. If more symbols are specified then can be fit on the page, they will be truncated at the bottom of the page.

Each lithologic symbol has a default symbol description stored in the lithologic library, which is used when creating legends. When a lithologic legend is created the default description will be used for the symbol description in the legend. If this description is then edited in the legend, the new description will only appear in that legend. The new description in the legend will not replace the default description in the library. To change the default description in the library, the description must be changed in the library as discussed in the Symbol Libraries 544 section. However, the actual symbols are the same in the legend as in the library and if edited in the legend the symbols in the library will change as well.

This chapter describes how to:
- Create a new legend
- Edit a legend
- Save a legend
- Print a legend
- Delete a legend

4.3.1 Creating a Legend

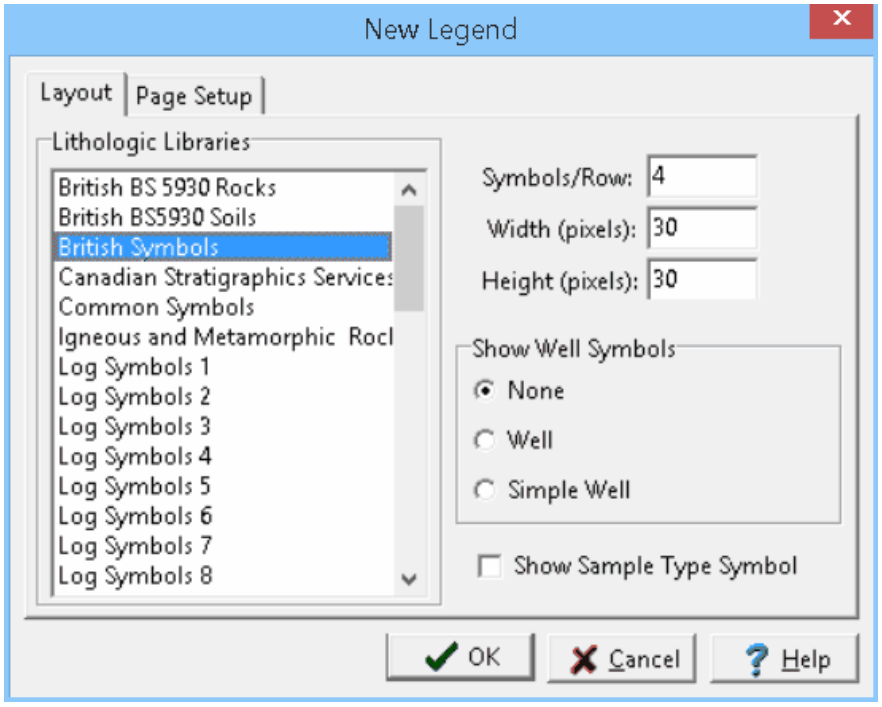
Legends can only be created or edited when o project is opened.

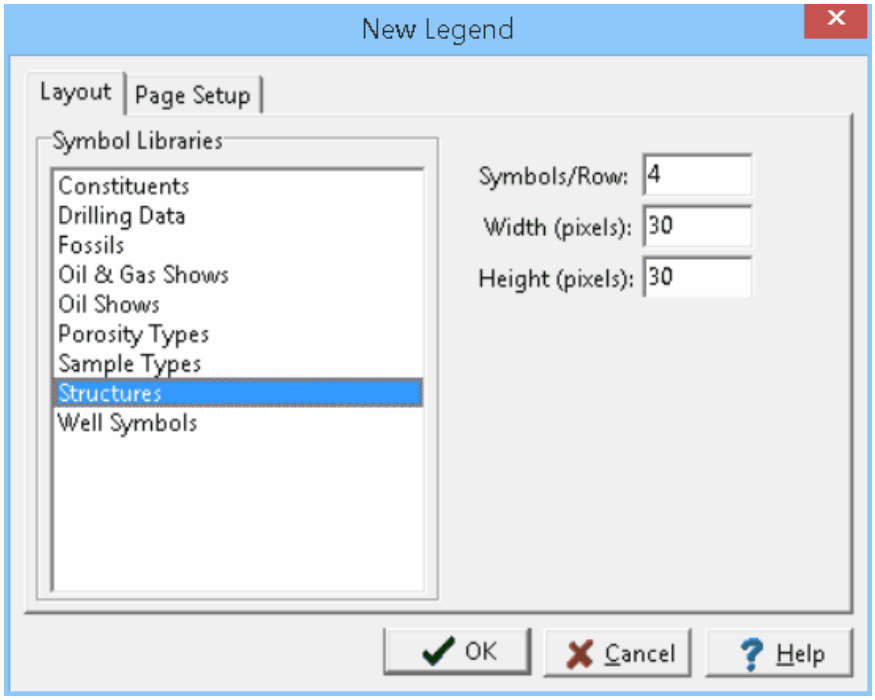
To create a legend either:

- Select *File > New > Lithology Legend* or *File > New > Symbol Legends*
- Click the New button on the Main Toolbar and select *Lithology Legend* or *Symbol Legend*

After one of the above tasks is performed, the New Legend form will be displayed. This form has two tabs, one for the layout of the legend and one for the page setup.

Layout Tab for Lithologic Legend **Layout Tab for Symbol Legend**





(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be entered on the Layout tab:

Lithologic Libraries: Select the lithologic library to include in the legend. (Lithologic legends only)

Symbol Libraries: Select the symbol library to include in the legend. (Symbol legends only)

Show Well Symbols: Select whether to show well symbols in the legend. (Lithologic legends only)

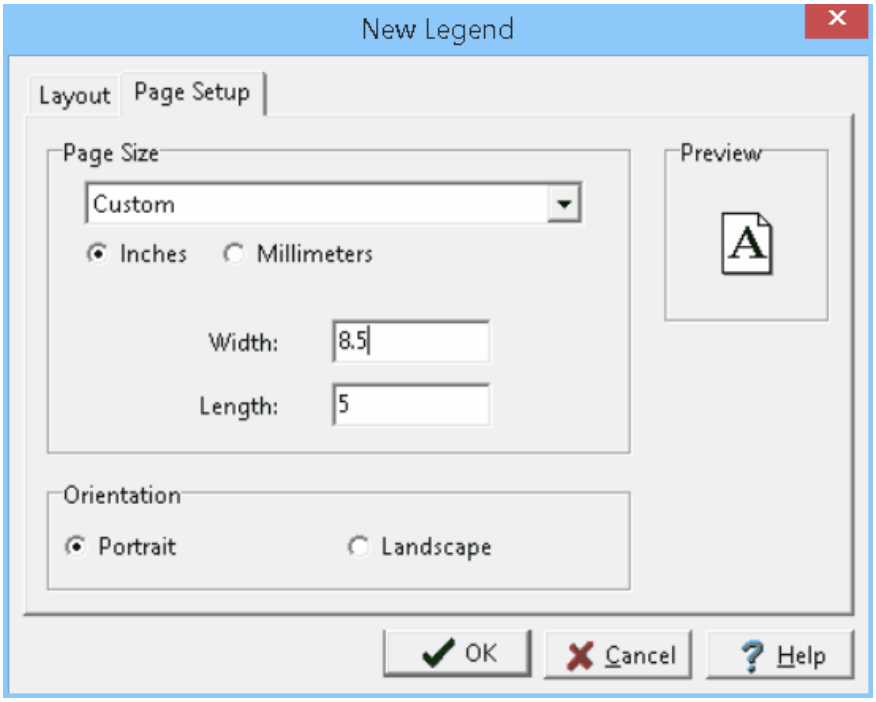
Show Sample Symbols: Check to show sample symbols in the legend. (Lithologic legends only)

Symbols/Row: This is the default number of symbols to draw per row. This can be changed when the legend is edited.

Width (pixels): This is the width to use when drawing the symbols. This can be changed when the legend is edited.

Height (pixels): This is the height to use when drawing the symbols. This can be changed when the legend is edited.

Page Setup Tab



The following information can be entered on the Page Setup tab shown above:

Page Size: This is the page size of the template. When the arrow at the right is pressed, a list of available page sizes is displayed.

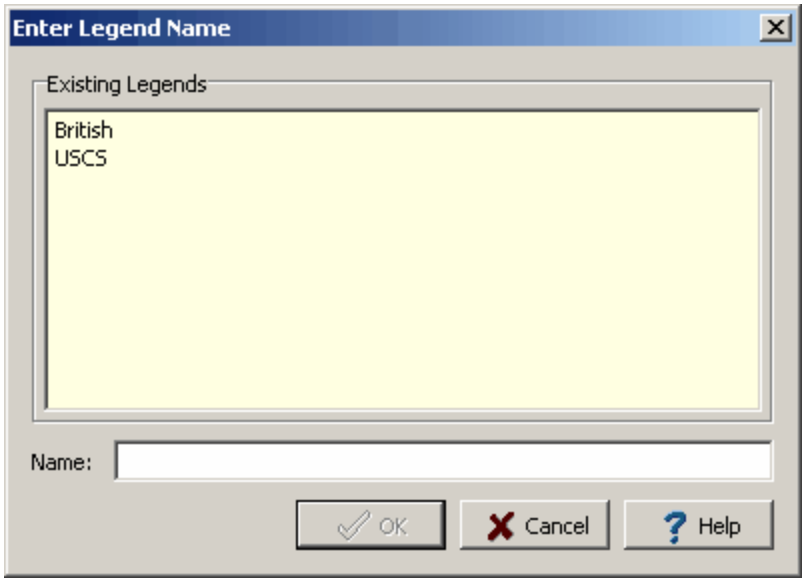
Inches or Millimeters: The units for the width and length of the page. These units will be used when specifying the layout of the legend. If the Page Size is “Custom”, the units can be set to either inches or millimeters.

Width: If the page size is specified as “custom”, the page horizontal width in inches must be specified.

Length: If the page size is specified as “custom”, the page vertical length in inches must be specified.

Orientation: This is the orientation of the page; either portrait (longer side is vertical) or landscape (longer side is horizontal).

After the Ok button is pressed on the New Legend form, the Enter Legend Name form will be displayed. Enter a unique name for the new legend and press Ok.



After this the new legend will be displayed. This legend can be edited as described in the sections below.

4.3.2 Editing a Legend

To edit a legend, the legend must first be created as described above or an existing legend opened. Existing legends can be opened for editing by:

- selecting the *File > Open > Lithology Legend* or *File > Open > Symbol Legend*
- clicking the Open button on the Main Toolbar and selecting *Lithology Legend* or *Symbol Legend*.

After the legend has been opened and displayed, the legend can be edited as described in the sections below.

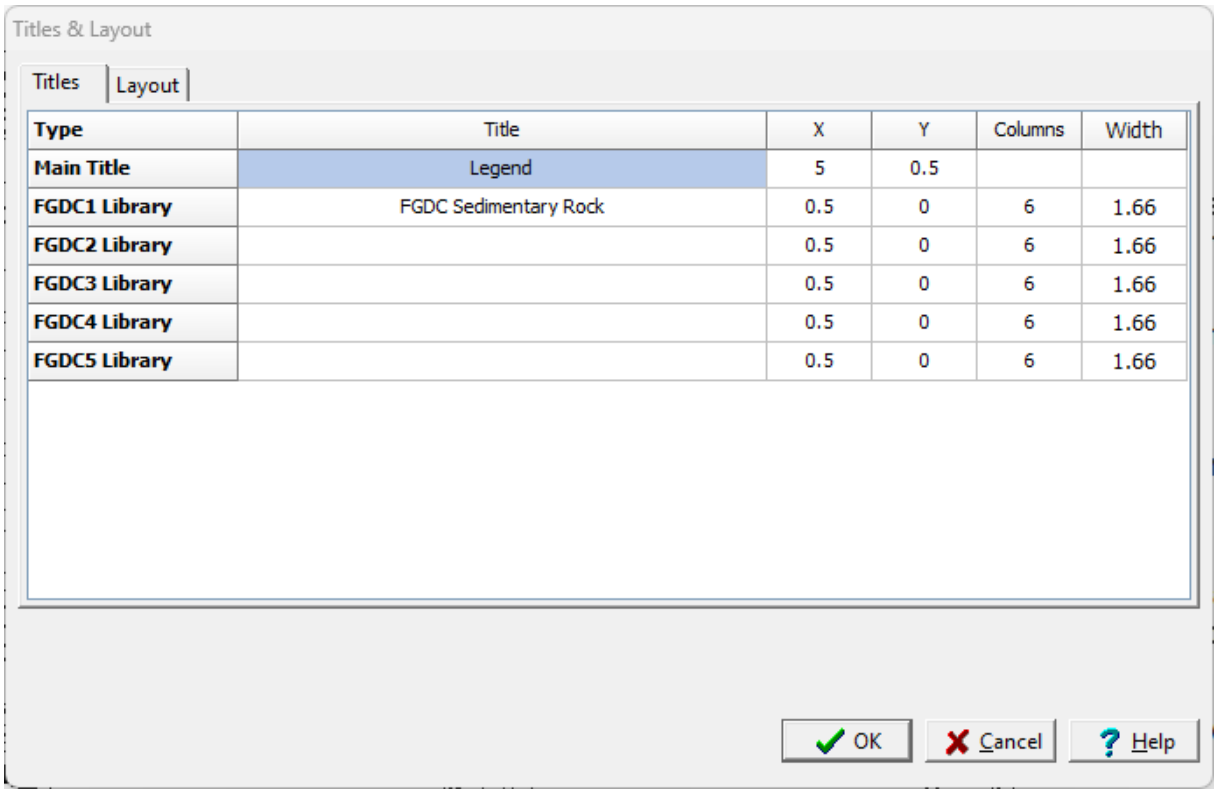
4.3.2.1 Titles and Layout

The titles and layout in the legend can be changed by:

- selecting *Edit > Titles & Layout*
- selecting *Popup > Titles & Layout*

After this the Titles & Layout form will be displayed. This form has two tabs, one for the titles and one for the layout.

Titles Tab



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The legend will contain a main title and depending on how it was created sub titles. On this tab the following can be edited for each of these titles:

Title: This is the text to use for the title.

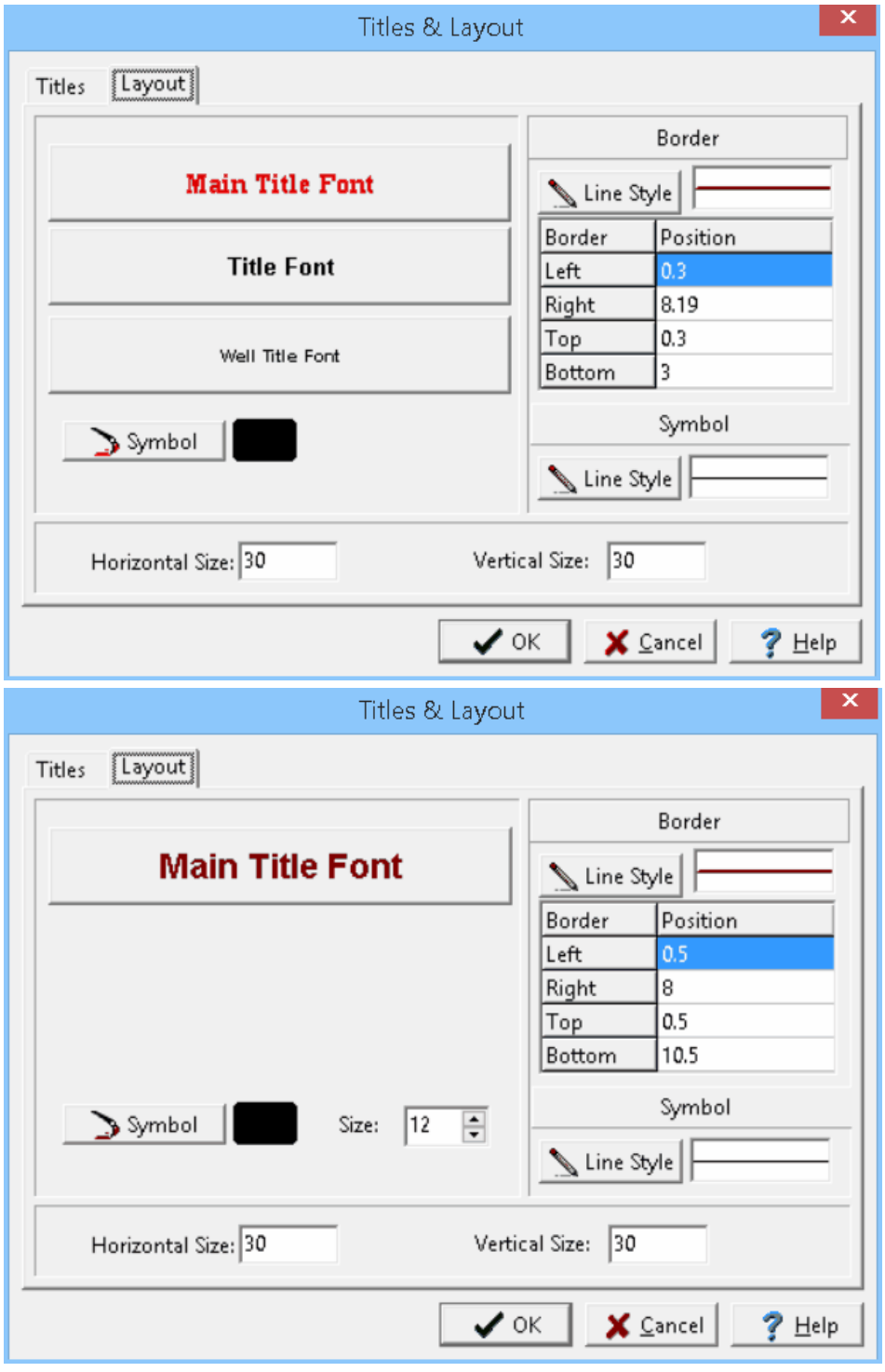
X: This is the horizontal page location for the title in inches or millimeters.

Y: This is the vertical page location for the title in inches or millimeters. If the title is blank and Y is zero the library will be directly displayed below the previous library.

Columns: This is the number of symbol columns to use for this type of symbol. If it is the Main Title, this field is not used for lithologic legends.

Width: This is the width in inches or millimeters for each column of symbols.

Layout Tab for Lithologic Legend **Layout Tab for Symbol Legend**



The following can be edited on this tab:

Main Title Font: Click this button to change the font of the main title. A Font form will be displayed where the font, size, style, and color can be selected.

Title Font: Click this button to change the font to use for the Lithologic Library Symbol Title. A Font form will be displayed where the font, size, style, and color can be selected. (Lithologic legends only)

Well Title Font: Click this button to change the font to use for the Well Symbol Title. A Font form will be displayed where the font, size, style, and color can be selected. (Lithologic or well symbol legends only)

Symbol Color: Click this button to select the color to use for the symbols.

Symbol Size: This is used to specify the size of the symbols inside the symbol borders. (Not used for lithologic, well, and sample legends)

Border Line Style: Click this button to change the line style of the border around the page. A Line Properties form will be displayed where the line style, width, and color can be selected.

Border Left: This is the left border of the page in inches or millimeters.

Border Right: This is the right border of the page in inches or millimeters.

Border Top: This is the top border of the page in inches or millimeters.

Border Bottom: This is the bottom border of the page in inches or millimeters.

Symbol Line Style: Click this button to change the line style of the border around the symbols. A Line Properties form will be displayed where the line style, width, and color can be selected.

Horizontal Size: This is the horizontal width to display the symbol in pixels.

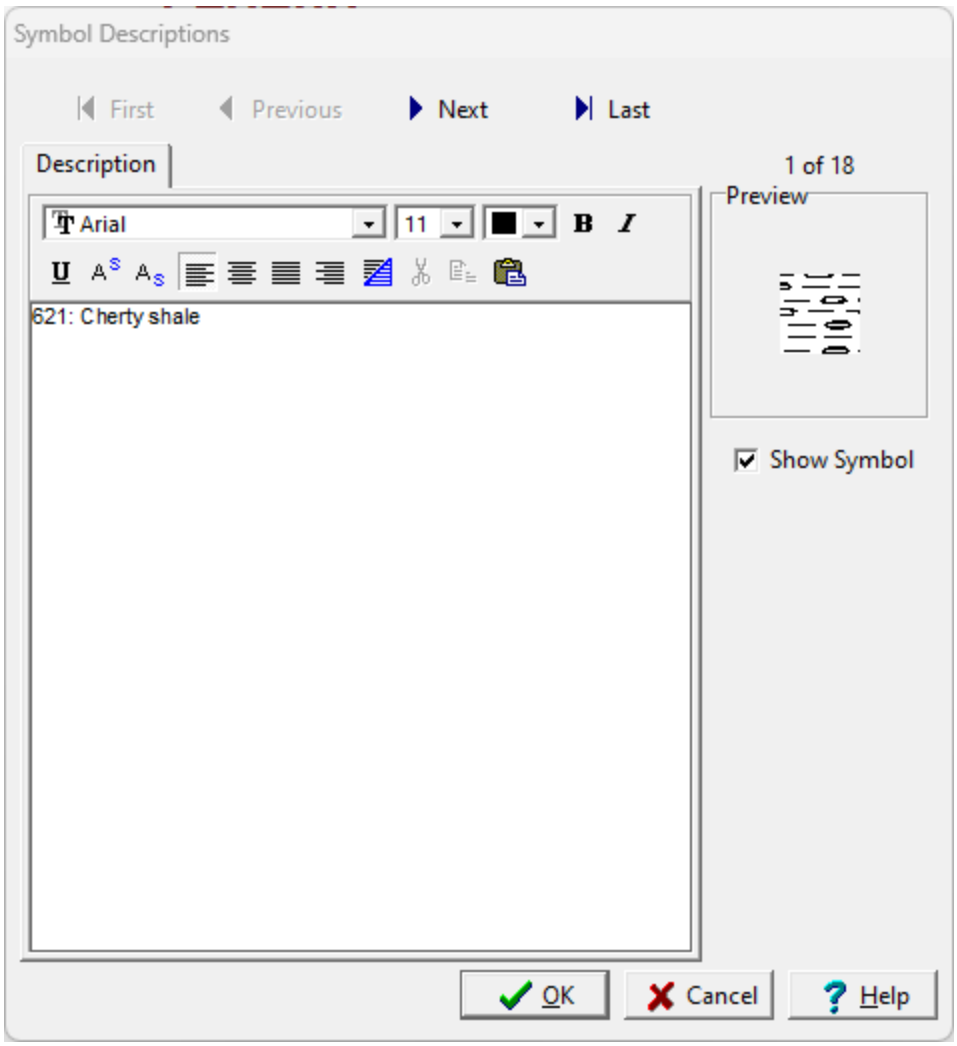
Vertical Size: This is the vertical height to display the symbol in pixels.

4.3.2.2 Symbols

The type of symbols that can be edited will depend on the type of legend. The symbols and descriptions in the legend can be changed by:

- selecting *Edit > Lithologic Symbols* or *Popup > Lithologic Symbols* for lithologic symbols
- selecting *Edit > Well Symbols > Type of Symbol* or *Popup > Well Symbols > Type of Symbol* for well symbols
- selecting *Edit > Sample Symbols* or *Popup > Sample Symbols* for sample symbols
- selecting *Edit > Symbols* or *Popup > Symbols* for all other symbols
- clicking on one of the symbol in the legend.

After this the Symbol Descriptions form will be displayed. This form has one for the description. The symbol itself can not be edited in the legend and must be edited in the library.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

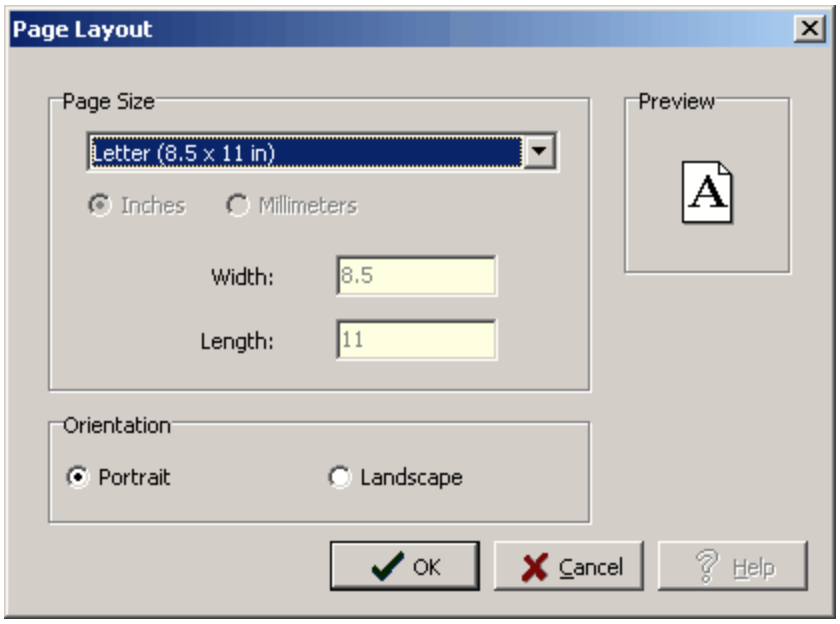
The Description tab is used to enter and edit the description for the symbol. At the top of the tab there is a Rich Text toolbar used to format the description Before selecting a speed button, the text to be modified should be selected with the mouse or the cursor should be placed at the desired insertion point. The speed buttons of the toolbar perform the following functions:

- The **Font Typeface** box is used to select the name of the font to use for the selected text.
- The **Font Size** box is used to set the size of the font for the selected text.
- The **Font Color** box is used to select the color of the font for the selected text.
- The **Bold** button is used to toggle the bold attribute of the selected text on and off.
- The **Italics** button is used to toggle the italic attribute of the selected text on and off.
- The **Underline** button is used to toggle the underline attribute of the selected text on and off.
- The **Superscript** button is used to toggle the superscript attribute of the selected text on and off.
- The **Subscript** button is used to toggle the subscript attribute of the selected text on and off.
- The **Left Justify** button will left justify the selected text.
- The **Center Justify** button will center justify the selected text.
- The **Right Justify** button will right justify the selected text.
- The **Select All** button will select all of the text in the memo field.
- The **Cut** button will remove the selected text and place it in the clipboard.

- The **Copy** button will copy the selected text to the clipboard.
- The **Paste** button will paste the text in the clipboard, at the current position of the cursor in the memo field.
- The **Find** button will find the specified text in the memo field.
- The **Replace** button will replace the specified text in the memo field.
- The **Symbol** button will display the Symbol form. This form is used to place a symbol at the current cursor position in the memo field. To select a symbol use the Font box to select the font containing the symbol and then select the desired symbol. After the desired symbol has been selected, press the Ok button to insert it into the memo field.
- The **Spell Check** button will display the Spell Checker form and will check the spelling in the memo field.

4.3.2.3 Page Layout

The page layout is used to set the paper size and orientation for the printed legend. To change the page layout, select *Edit > Page Layout*, the Page Layout form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be entered on the Page Layout form:

Size: This is the page size of the page. When the arrow at the right is pressed, a list of available page sizes is displayed.

Inches or Millimeters: The units for the width and length of the page. These units will be used when specifying the layout of the legend. If the Page Size is “Custom”, the units can be set to either inches or millimeters.

Width: If the page size is specified as “custom”, the page horizontal width in inches must be specified.

Length: If the page size is specified as “custom”, the page vertical length in inches must be specified.

Orientation: This is the orientation of the page; either portrait (longer side is vertical) or landscape (longer side is horizontal).

4.3.2.4 Draw Objects

Draw objects are used to place common drawing objects anywhere on a legend. Types of draw objects are paragraph text, lines, bitmaps, and rectangles. Draw objects on the legends are displayed beneath any information on the legend.

4.3.2.4.1 Paragraphs

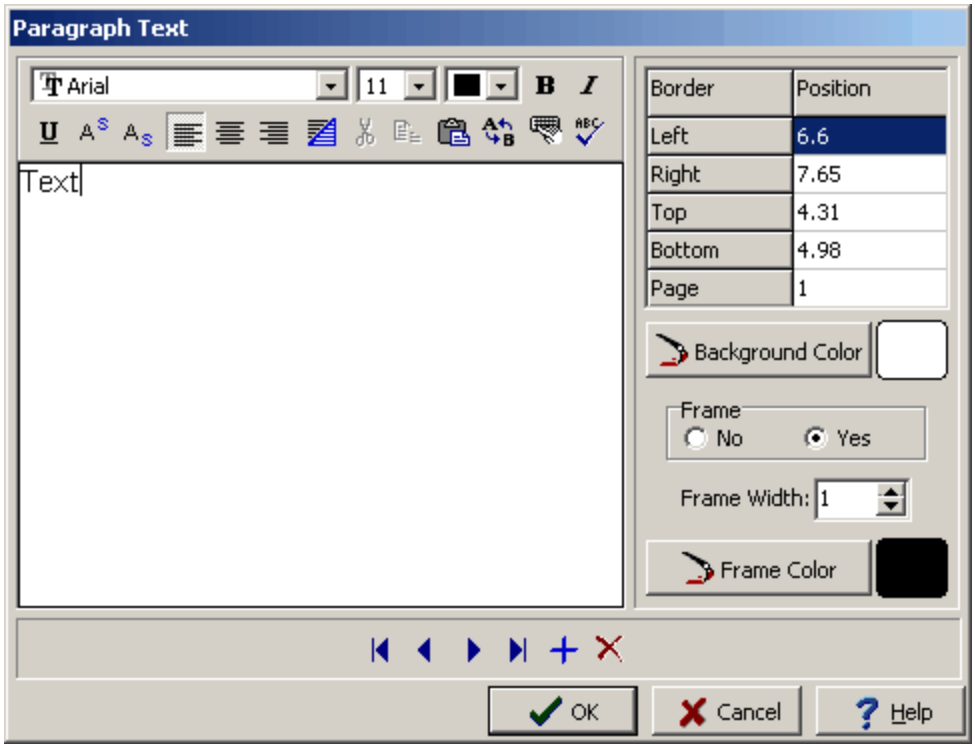
Floating paragraph text boxes can be added anywhere on a legend. These text boxes are displayed over top of any information on the legend. Paragraph text boxes are typically used to add comments or a legend.

To add a paragraph to a legend click on the Paragraph button on the toolbar. Next using the left mouse button click on the location of the upper left corner of the paragraph text box. Then while holding the left mouse button down drag the mouse to the location of the lower right corner, and then release the mouse button. While the mouse button is held down a marquee box will be drawn to indicate the location of the paragraph box. After the button has been released, the Paragraph Text form described in the next section will be displayed.

Existing paragraph text on a legend can be editing by:

- selecting *Edit > Paragraph Text*
- clicking on the paragraph on the legend

After performing one of the above tasks, the Paragraph Text form will be displayed. At the bottom of this form there are buttons to move to the first, previous, next, and last paragraph or to add and delete paragraphs.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Text: This is the text for the paragraph. There is no limit to the length of the text. The Rich Text toolbar at the top of the form is used to format the text. This toolbar is described below.

Left: This is the position of the left border of the paragraph in inches or millimeters from the left side of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Right: This is the position of the right border of the paragraph in inches or millimeters from the left side of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Top: This is the position of the top border of the paragraph in inches or millimeters from the top of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Bottom: This is the position of the bottom border of the paragraph in inches or millimeters from the top of the page. If the Paragraph button on the toolbar is used to create the paragraph, this position will be filled in by the program.

Page: This is the page to display the paragraph text. If the log contains only one page, this field will not appear.

Background Color: This is the background color of the paragraph text box. When the Background Color button is pressed, the Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified.

Frame: Select yes to display a frame around the paragraph text.

Frame Width: This is the line width of the frame around the paragraph text. If no frame is selected above, this field will not be displayed.

Frame Color: This is the color of the frame to display around the paragraph text. When the Frame Color button is pressed, the Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified. If no frame is selected above, this field will not be displayed.

At the top of the Paragraph Text form is the Rich Text toolbar, this toolbar can be used to modify the font characteristics of the text. Before selecting a speed button, the text to be modified should be selected with the mouse.

The speed buttons of the toolbar perform the following functions:

- The **Font Typeface** box is used to select the name of the font to use for the selected text.
- The **Font Size** box is used to set the size of the font for the selected text.
- The **Font Color** box is used to select the color of the font for the selected text.
- The **Bold** button is used to toggle the bold attribute of the selected text on and off.
- The **Italics** button is used to toggle the italic attribute of the selected text on and off.
- The **Underline** button is used to toggle the underline attribute of the selected text on and off.
- The **Superscript** button is used to toggle the superscript attribute of the selected text on and off.
- The **Subscript** button is used to toggle the subscript attribute of the selected text on and off.
- The **Left Justify** button will left justify the selected text.
- The **Center Justify** button will center justify the selected text.
- The **Right Justify** button will right justify the selected text.
- The **Select All** button will select all of the text in the memo field.
- The **Cut** button will remove the selected text and place it in the clipboard.
- The **Copy** button will copy the selected text to the clipboard.
- The **Paste** button will paste the text in the clipboard, at the current position of the cursor in the memo field.
- The **Find** button will find the specified text in the memo field.
- The **Replace** button will replace the specified text in the memo field.
- The **Symbol** button will display the Symbol form. This form is used to place a symbol at the current cursor position in the memo field. To select a symbol use the Font box to select the font containing the symbol and then select the desired symbol. After the desired symbol has been selected, press the Ok button to insert it into the memo field.
- The **Spell Check** button will display the Spell Checker form and will check the spelling in the memo field.

The size of the paragraph can be changed using the Paragraph Text form or the mouse. To adjust the size using the mouse, click on the paragraph text so that marquee boxes appear on the edges of the paragraph. Click on one of the corner marquee boxes and drag it to the new size.

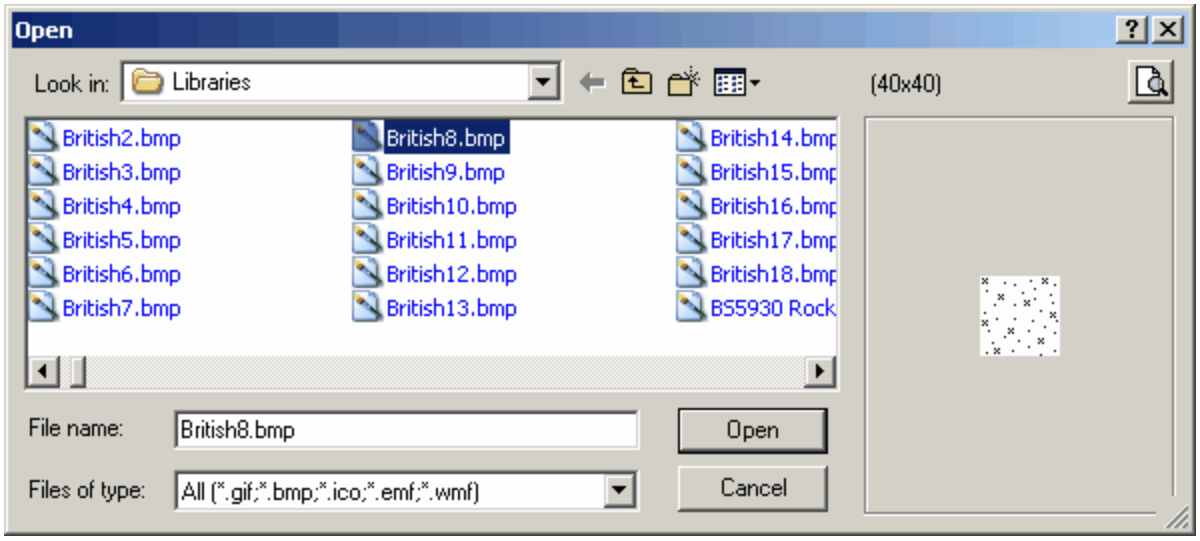
The position of the paragraph can be changed using the Paragraph Text form or the mouse. To move the paragraph using the mouse, click on the paragraph text so that marquee boxes appear on the edges of

the paragraph. Position the mouse in the center of the paragraph and the cursor should change to an arrow with a box. Then click and drag the paragraph to the new position.

4.3.2.4.2 Bitmaps

Bitmaps contained in common bitmap files can be added anywhere on a legend. These bitmaps can be used to show company logos, site plans, legends, and other graphical information. Bitmaps are displayed over top of any information on the legend.

To add a bitmap to a legend click on the Bitmap button on the toolbar. Next using the left mouse button click on the location of the center of the bitmap. The Open Bitmap form will then be displayed. Select the bitmap file and then press the Open button.

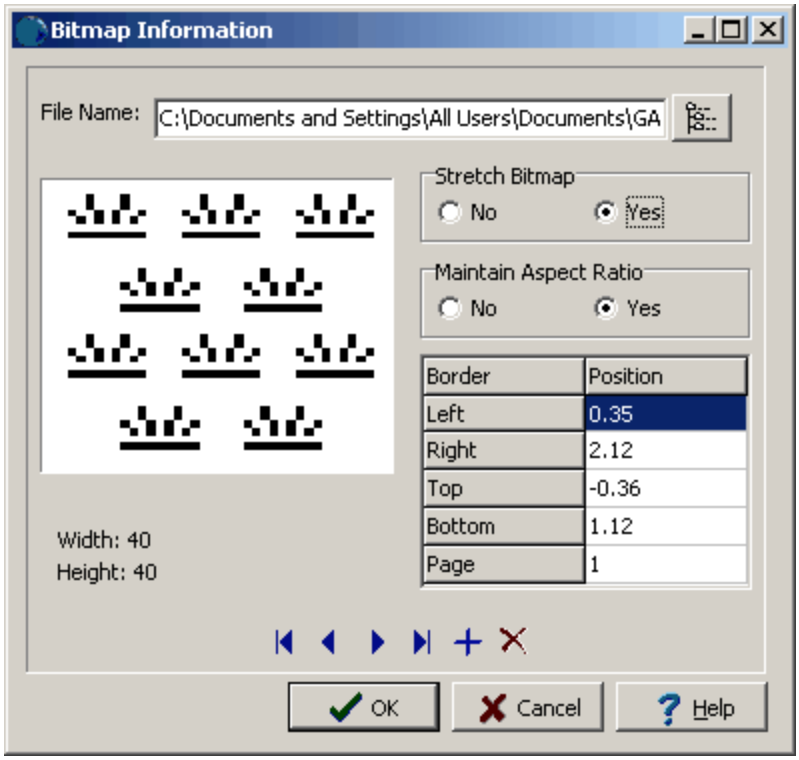


(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

Existing bitmaps on a legend can be editing by:

- selecting *Edit > Bitmaps*
- clicking on the bitmap on the log

After performing one of the above tasks, the Bitmap Information form will be displayed. At the bottom of this form there are buttons to move to the first, previous, next, and last bitmap or to add and delete bitmaps.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

File Name: This is the name of the bitmap file to display on the template. To change the name of the file, edit this name or click on the button to the right of the name. If the button to the right is pressed, an Open bitmap file form will be displayed. Select the desired file and then press the Open button.

Stretch Bitmap: Select yes to stretch the bitmap to fit within the specified borders. If no is selected, only the center of the bitmap and page can be entered for the position.

Maintain Aspect Ratio: Select yes to keep the aspect ratio of the bitmap on the log the same as stored in the file. If yes is selected the bottom of the bitmap will be automatically adjusted to maintain the aspect ratio. If Stretch Bitmap is set to No, then this field will not be displayed and it is assumed that the aspect ratio is maintained.

Left: This is the position of the left border of the bitmap in inches or millimeters from the left side of the page. If Stretch Bitmap is set to No then this field will not be displayed.

Right: This is the position of the right border of the bitmap in inches or millimeters from the left side of the page. If Stretch Bitmap is set to No then this field will not be displayed.

Top: This is the position of the top border of the bitmap in inches or millimeters from the top of the page. If Stretch Bitmap is set to No, then this field will not be displayed.

Bottom: This is the position of the bottom border of the bitmap in inches or millimeters from the top of the page. If the Stretch Bitmap is set to No or Maintain Aspect Ratio is set to yes, then this field will not be displayed and the bottom will be calculated by the program.

Page: This is the page to display the bitmap.

Center X: This is the bitmap's horizontal center in inches from the left side of the page. If Stretch Bitmap is set to Yes, this field will not be displayed. If the Bitmap button on the toolbar is used to create the bitmap, this field will be filled in by the program.

Center Y: This is the bitmap's vertical center in inches from the left side of the page. If Stretch Bitmap is set to Yes, this field will not be displayed. If the Bitmap button on the toolbar is used to create the bitmap, this field will be filled in by the program.

4.3.2.4.3 Lines and Arrows

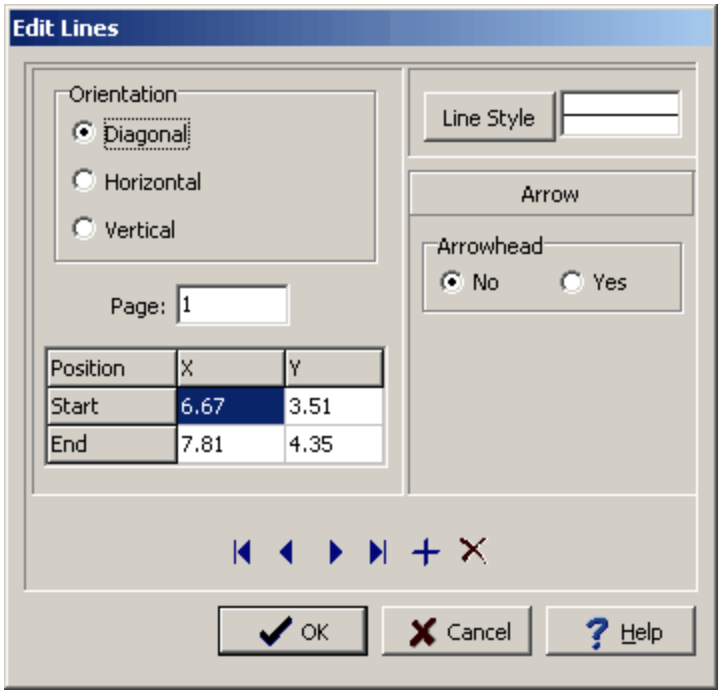
Horizontal, vertical, and diagonal lines and arrows can be added anywhere on a legend.

To add a line or arrow to a legend click on the Line button on the toolbar. Next using the left mouse button click on the location of the starting point of the line or arrow. Then while holding down the left mouse button, drag the cursor to the end of the line or arrow and release the mouse button. The Edit Lines form described in the next section will then be displayed.

Existing lines or arrows on a legend can be editing by:

- selecting *Edit > Lines*
- clicking on the line or arrow on the legend

After performing one of the above tasks, the Edit Lines form will be displayed. At the bottom of this form there are buttons to move to the first, previous, next, and last line or to add and delete lines.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Orientation: This is the orientation of the line, either diagonal, horizontal, or vertical. If the orientation is set to horizontal, the vertical position will be set to the Y position of the start of the line. If the orientation is set to vertical, the horizontal position will be set to the X position of the start of the line.

Page: This is the page to display the line. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

Start X: This is the horizontal position of the start of the line in inches or millimeters from the left side of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

Start Y: This is the vertical position of the start of the line in inches or millimeters from the top of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

End X: This is the horizontal position of the end of the line in inches or millimeters from the left side of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

End Y: This is the vertical position of the end of the line in inches or millimeters from the top of the page. If the Line button on the toolbar is used to create the line, this field will be filled in by the program.

Line Style: This is the style of the line. The line style can be changed by pressing the Line Style button. The Line Properties form below will then be displayed. Using this form the style, color, and width of the line can be set.

Arrowhead: To display an arrowhead at the start or end of the line select yes.

Arrow Position: This is position to place the arrowhead, either at the start or end of the line. If no arrowhead is selected above, this field will not appear.

Arrowhead Size: This is the size of the arrowhead. If no arrowhead is selected above, this field will not appear.

The size of the line or arrow can be changed using the Edit Line form or the mouse. To adjust the size using the mouse, click on the line or arrow so that marquee boxes appear on the ends and middle of the line or arrow. Click on one of the end marquee boxes and drag it to the new size.

The position of the line or arrow can be changed using the Edit Line form or the mouse. To move the line or arrow using the mouse, click on the line or arrow so that marquee boxes appear on the ends and middle of the line or arrow. Click on the center marquee box and drag it to the new position.

4.3.2.4.4 Rectangles

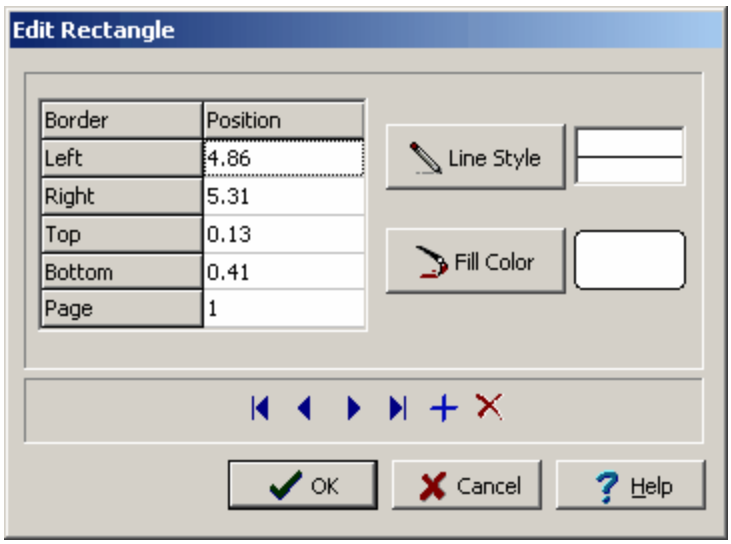
Rectangles can be added anywhere on a legend. There is no limit to the number of rectangles that can be added.

To add a rectangle to a legend click on the Rectangle button on the toolbar. Next using the left mouse button click on the location of the upper left corner of the rectangle. Then while holding down the left mouse button, drag the cursor to the lower right corner of the rectangle and release the mouse button. The Edit Rectangle form described in the next section will then be displayed.

Existing rectangles on a legend can be editing by:

- selecting *Edit > Rectangles*
- clicking on the rectangle on the legend

After performing one of the above tasks, the Edit Rectangles form will be displayed. At the bottom of this form there are buttons to move to the first, previous, next, and last rectangle or to add and delete rectangles.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be edited on this form:

Left: This is the position of the left border of the rectangle in inches or millimeters from the left side of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Right: This is the position of the right border of the rectangle in inches or millimeters from the left side of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Top: This is the position of the top border of the rectangle in inches or millimeters from the top of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Bottom: This is the position of the bottom border of the rectangle in inches or millimeters from the top of the page. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Page: This is the page to display the rectangle. If the Rectangle button on the toolbar is used to create the rectangle, this position will be filled in by the program.

Line Style: This is the style of the rectangle border. The line style can be changed by pressing the Line Style button. The Line Properties form will then be displayed. Using this form the style, color, and width of the rectangle can be set.

Fill Color: This is the color to use to fill the inside of the rectangle. When the Fill Color button is pressed, the Color form is displayed. Using this form, a basic color can be selected or a custom color can be specified.

The size of the rectangle can be changed using the Edit Rectangle form or the mouse. To adjust the size using the mouse, click on the rectangle so that marquee boxes appear on the edges of the rectangle. Click on one of the corner marquee boxes and drag it to the new size.

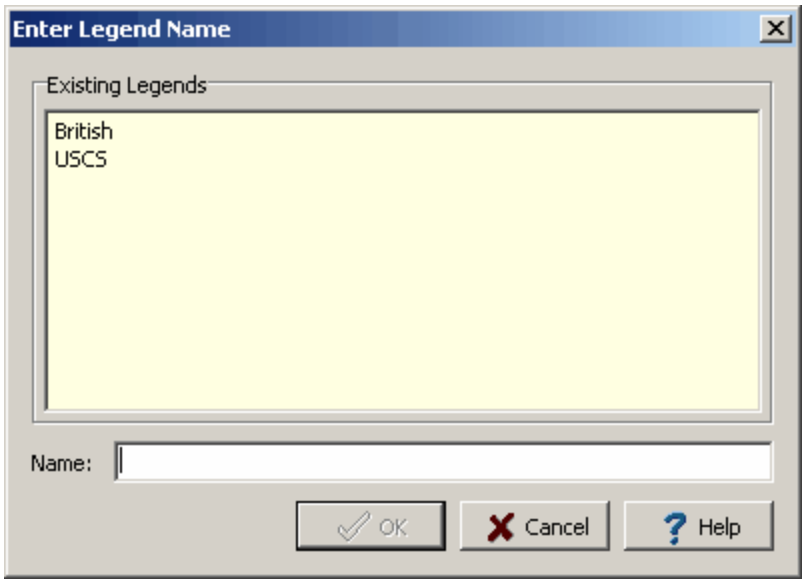
The position of the rectangle can be changed using the Edit Rectangle form or the mouse. To move the rectangle using the mouse, click on the rectangle so that marquee boxes appear on the edges of the rectangle. Position the mouse in the center of the rectangle and the cursor should change to am arrow with a box. Then click and drag the rectangle to the new position.

4.3.3 Save a Legend

To save a Legend after it has been edited, either:

- select *File > Save* or *Popup > Save*
- press the Save button on the toolbar

To save the legend under a different name, press the SaveAs button on the toolbar. The Enter Legend Name form will be displayed. Enter a unique legend name and then press the Ok button.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

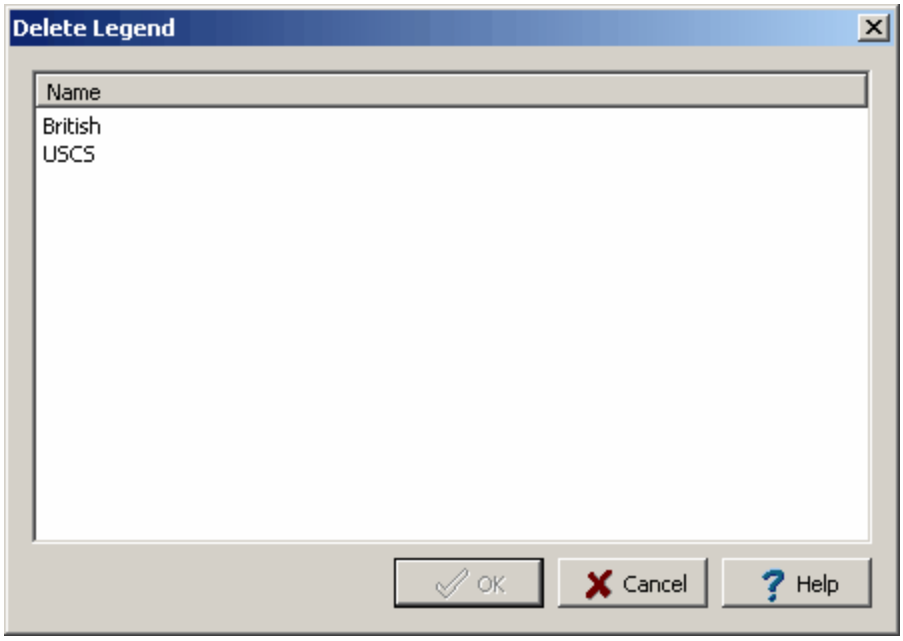
4.3.4 Printing a Legend

To print a legend either:

- select *File > Print*
- press the Print button on the toolbar

4.3.5 Deleting a Legend

To delete a legend, select *File > Delete > Lithology Legend* or *File > Delete > Symbol Legend*. The Delete Legends form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

A legend can be deleted by clicking on it and pressing the Ok button.

4.3.6 Exporting a Legend

To export a legend to an exchange file, select *File > Export > Lithology Legend* after the legend has been opened. Then specify the file name for the exchange file.

4.3.7 Importing a Legend

To import a legend from an exchange file, select *File > Import > Lithology Legend* when no project or legend is open. Then select the file name of the exchange file.

4.4 Lithology Symbol Libraries

Libraries are used to store symbols that can be used for lithologies, symbol types, and well packing materials. Lithologic libraries contain 18 symbols each. WinLoG RT comes with several previously defined libraries. In addition, any number of new libraries can be created, making the number of lithologic symbols available unlimited.

Each symbol also has a default symbol description stored in the library, which is used when selecting lithologies and creating legends. When a legend is created the default description will be used for the symbol description in the legend. If this description is then edited in the legend, the new description will only appear in that legend. The new description in the legend will not replace the default description in the library. To change the default description the description must be changed in the library as discussed below. However, the actual symbols are the same in the legend as in the library and if edited in the legend the symbols in the library will change as well.

This section describes how to:

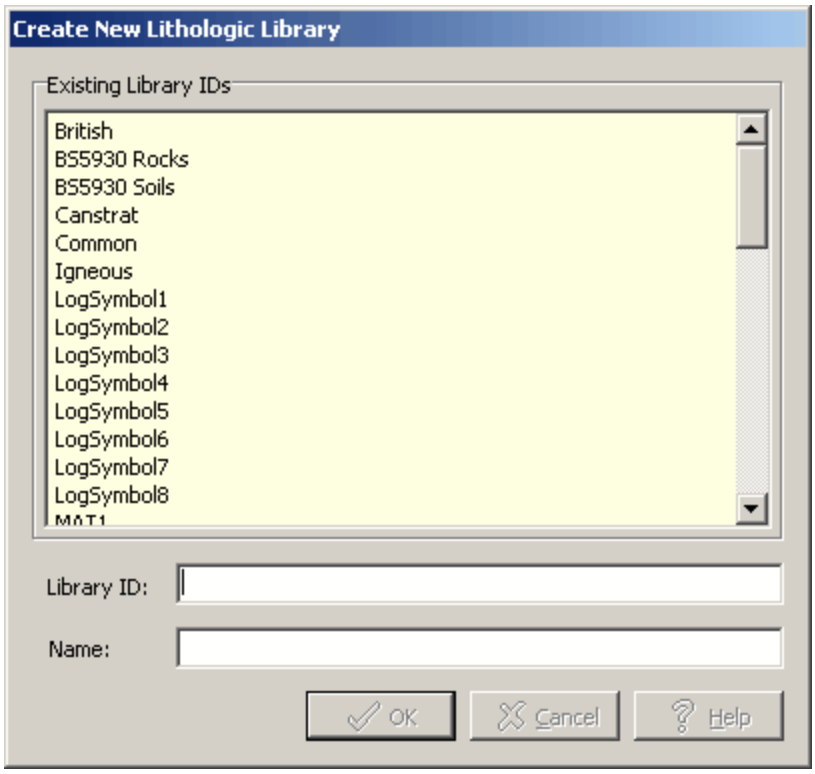
- Create a new library
- Edit a library
- Save a library
- Print a library
- Delete a library

4.4.1 Creating a Library

Libraries can be created and edited at any time (no project has to be open). To create a library either:

- Select *File > New > Lithology Library*
- Click the New button on the Main Toolbar and select Lithology Library

After this the Create New Lithologic Library form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be entered on this form:

Unique Library ID: This is a unique id or name for the library (up to 100 characters).

Name: This is the name of the library (up to 255 characters).

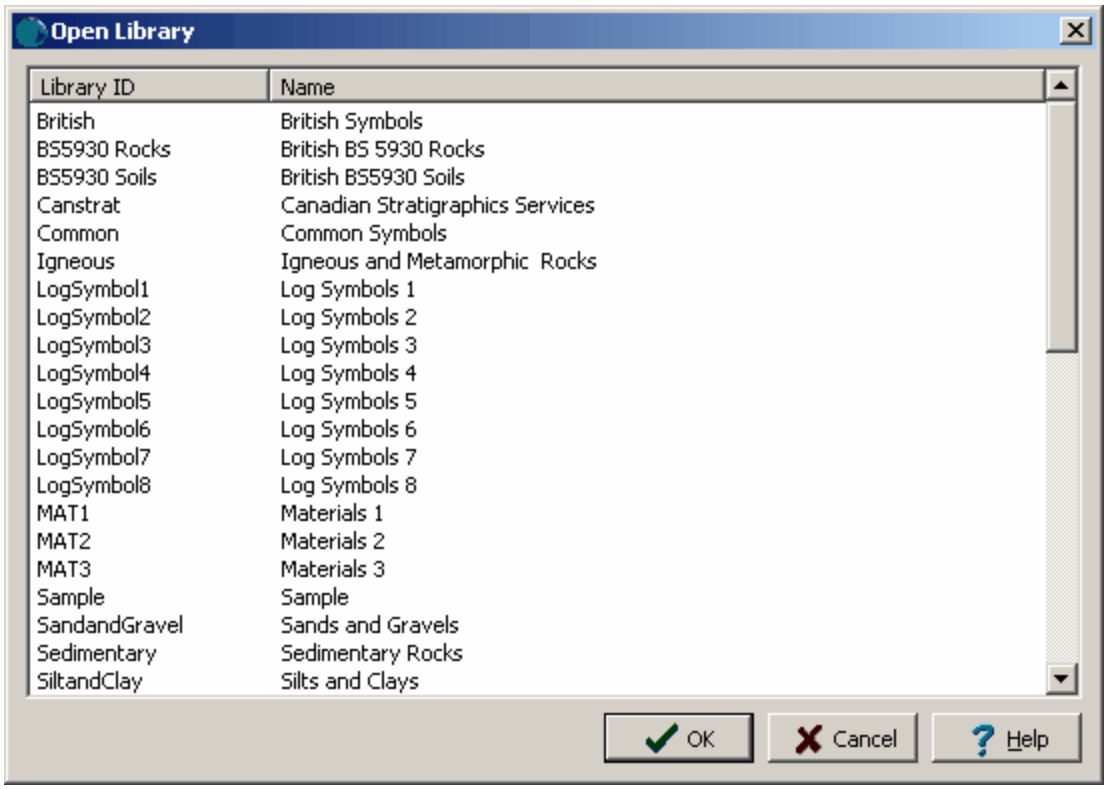
After the above information has been entered a blank library will be created and displayed. This library will contain 18 blank symbols and descriptions, which can be edited and saved as discussed below.

4.4.2 Editing a Library

To edit a library, the library must first be created as described above or an existing library opened. Existing libraries can be opened for editing by:

- selecting *File > Open > Lithology Library*
- clicking the Open button on the Main Toolbar and selecting Lithology Library

After this the Open Library form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

Select the library to open and press the Ok button. After the library has been opened and displayed, the library can be entered and edited as described in the sections below.

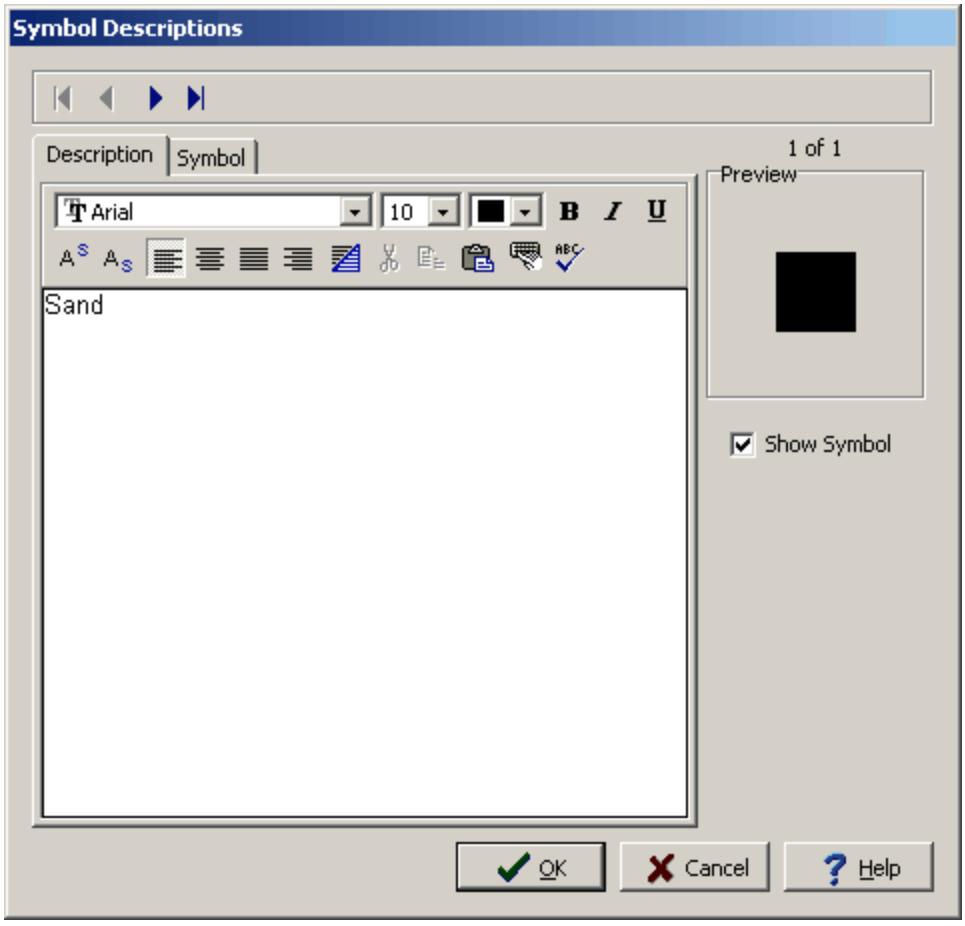
4.4.2.1 Lithologic Symbols

Each library can contain up to 18 lithologic symbols. Lithologic symbols are used to represent soils, rocks, ice, and well packing material. The lithologic symbols and descriptions in the library can be changed by:

- selecting *Edit > Lithologic Symbols* or *Popup > Lithologic Symbols*
- clicking on one of the lithologic symbols in the library

After this the Symbol Descriptions form will be displayed. This form has two tabs, one for the description and one for the symbol. At the top of the form there are buttons to move the first, previous, next, and last symbol.

4.4.2.1.1 Descriptions Tab



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

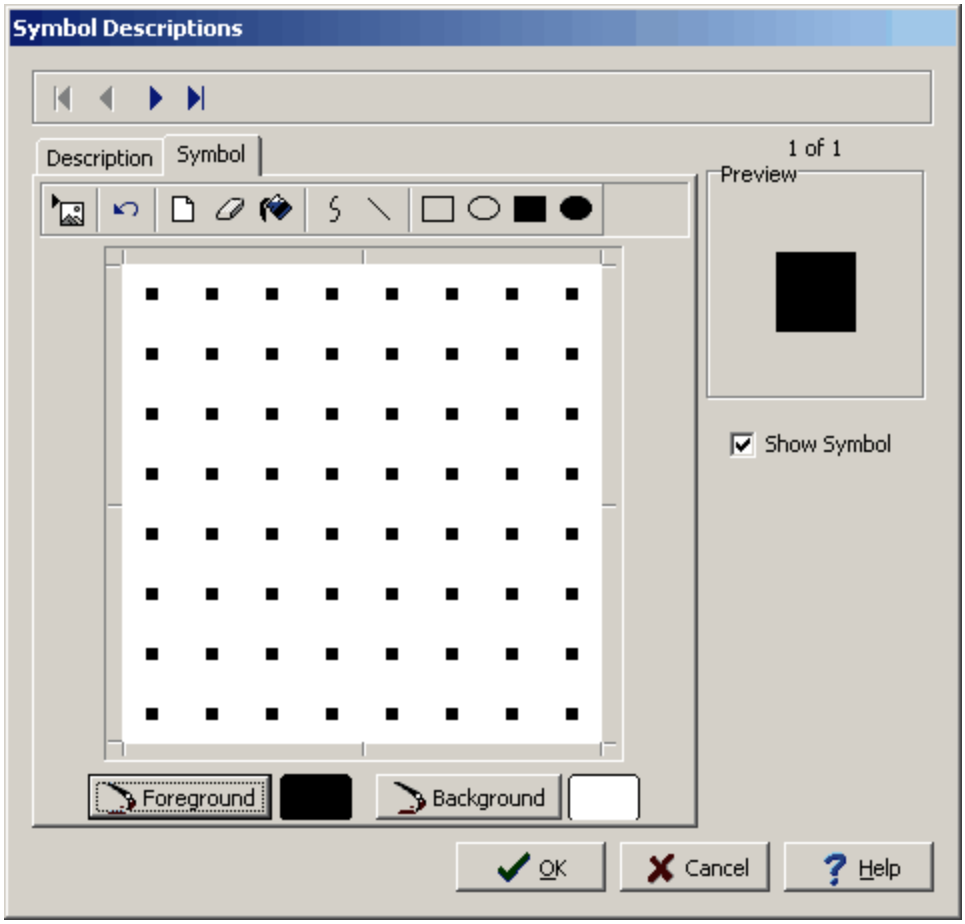
The Description tab is used to enter and edit the description for the symbol. To not show this symbol with the library uncheck the Show Symbol box.

At the top of the tab there is a Rich Text toolbar used to format the description Before selecting a speed button, the text to be modified should be selected with the mouse or the cursor should be placed at the desired insertion point. The speed buttons of the toolbar perform the following functions:

- The **Font Typeface** box is used to select the name of the font to use for the selected text.
- The **Font Size** box is used to set the size of the font for the selected text.
- The **Font Color** box is used to select the color of the font for the selected text.
- The **Bold** button is used to toggle the bold attribute of the selected text on and off.
- The **Italics** button is used to toggle the italic attribute of the selected text on and off.
- The **Underline** button is used to toggle the underline attribute of the selected text on and off.
- The **Superscript** button is used to toggle the superscript attribute of the selected text on and off.
- The **Subscript** button is used to toggle the subscript attribute of the selected text on and off.
- The **Left Justify** button will left justify the selected text.
- The **Center Justify** button will center justify the selected text.
- The **Right Justify** button will right justify the selected text.
- The **Select All** button will select all of the text in the memo field.

- The **Cut** button will remove the selected text and place it in the clipboard.
- The **Copy** button will copy the selected text to the clipboard.
- The **Paste** button will paste the text in the clipboard, at the current position of the cursor in the memo field.
- The **Find** button will find the specified text in the memo field.
- The **Replace** button will replace the specified text in the memo field.
- The **Symbol** button will display the Symbol form. This form is used to place a symbol at the current cursor position in the memo field. To select a symbol use the Font box to select the font containing the symbol and then select the desired symbol. After the desired symbol has been selected, press the Ok button to insert it into the memo field.
- The **Spell Check** button will display the Spell Checker form and will check the spelling in the memo field.

4.4.2.1.2 Symbols Tab



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The Symbol tab is used to edit the symbol. At the top of the tab there is a toolbar used to edit the symbol. The buttons on the toolbar perform the following actions:

- The **Import Picture** button is used to import a bitmap picture from a file into the current symbol. When this button is pressed, the Open bitmap form will be displayed. Select the bitmap file to import and then press the Open button.
- The **Undo** button is used to undo the previous edit operation.
- The **Clear** button is used to erase the entire symbol.
- The **Erase** button is used to delete parts of the symbol. When this button is pressed the cursor will change to an eraser. To erase a part of the symbol, hold the left mouse button down and move the cursor over the area to be erased.
- The **Fill** button is used to fill regions of symbols. When this button is pressed the cursor will change to a paint can. To fill an area click inside the region.
- The **Curve** button is used to draw a curved line on the symbol. When pressed the cursor will change to a pencil. To draw a curve, hold down the left mouse button and move the mouse. When finished drawing the line, release the mouse button.
- The **Line** button is used to draw a straight line on the symbol. When pressed the cursor will change to a pencil. To draw a line, press and hold down the left mouse button at the start of the line. Move the mouse to the end of the line and release the mouse button.
- The **Rectangle** button is used to draw a hollow rectangle on the symbol. When pressed the cursor will change to a cross. To draw a rectangle, press and hold down the left mouse button at the upper left corner of the rectangle. Move the mouse to the lower right corner of the rectangle and release the mouse button.
- The **Ellipse** button is used to draw a hollow ellipse on the symbol. When pressed the cursor will change to a cross. To draw an ellipse, press and hold down the left mouse button at the upper left corner of the ellipse. Move the mouse to the lower right corner of the ellipse and release the mouse button.
- The **Filled Rectangle** button is used to draw a filled rectangle on the symbol. When pressed the cursor will change to a cross. To draw a rectangle, press and hold down the left mouse button at the upper left corner of the rectangle. Move the mouse to the lower right corner of the rectangle and release the mouse button.
- The **Filled Ellipse** button is used to draw a filled ellipse on the symbol. When pressed the cursor will change to a cross. To draw an ellipse, press and hold down the left mouse button at the upper left corner of the ellipse. Move the mouse to the lower right corner of the ellipse and release the mouse button.

On the bottom of the tab there are buttons for changing the foreground and background colors.

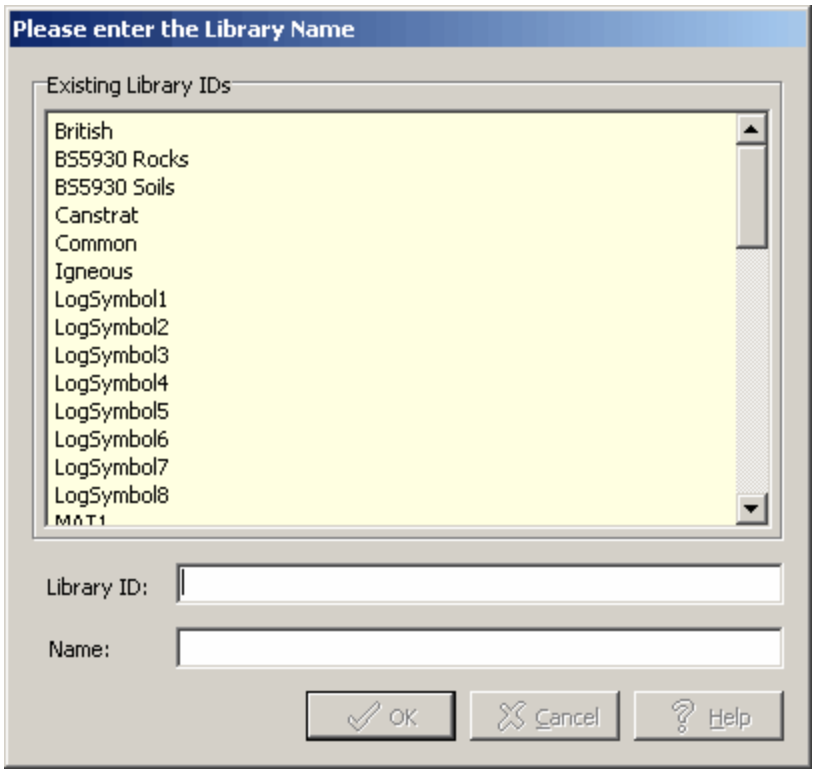
- The **Foreground** button is used to set the foreground color of the symbol. This will be the default color of the symbol when it is used in a log. The color can also be changed for an individual layer in a log, during the editing of the log.
- The **Background** button is used to set the background color of the symbol. This will be the default color of the symbol when it is used in a log. The color can also be changed for an individual layer in a log, during the editing of the log.

4.4.3 Saving a Library

To save a library after it has been edited, either:

- select *File > Save* or *Popup > Save*
- press the Save button on the toolbar

To save the library with a new name click on the SaveAs button on the toolbar.On the Library Name form, enter a new unique name for the library.



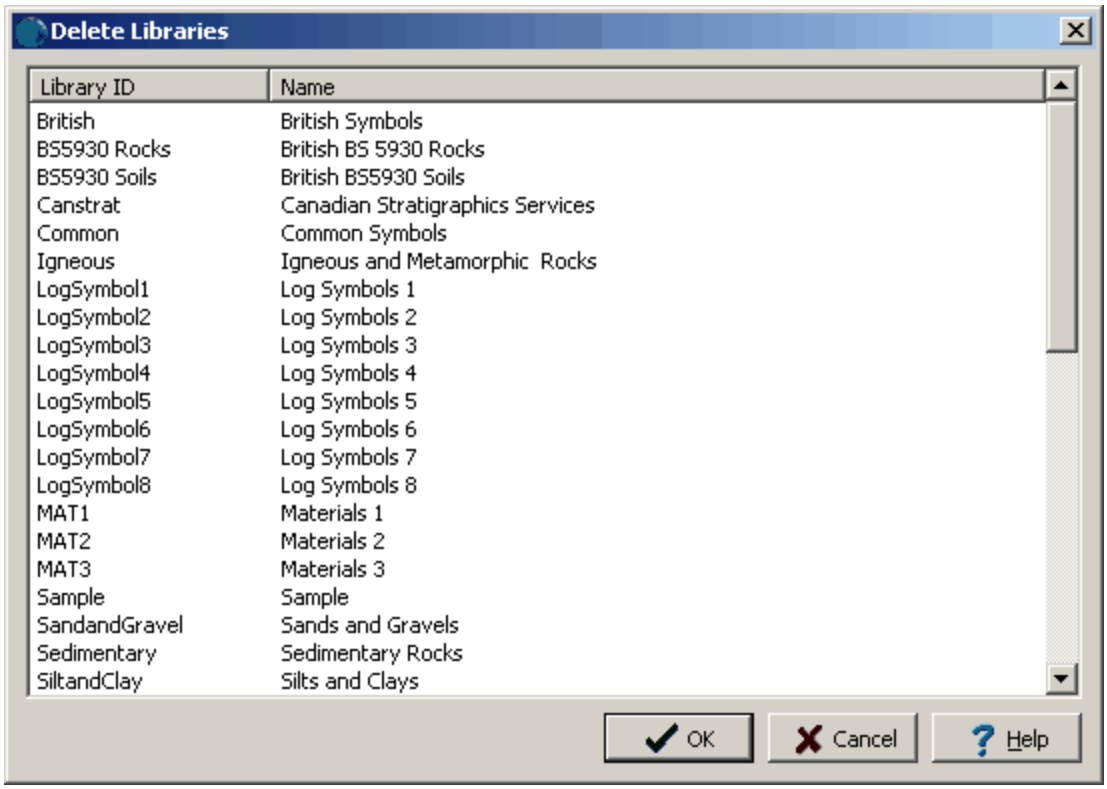
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

4.4.4 Printing a Library

To print a library click on the Print button on the toolbar.

4.4.5 Deleting a Library

To delete a library, select *File > Delete > Lithology Library*. The Delete Libraries form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

A single library can be selected by clicking on it and pressing the Ok button.

4.4.6 Exporting a Library

To export a legend to an exchange file, select *File > Export > Lithology Library* after the library has been opened. Then specify the file name for the exchange file.

4.4.7 Importing a Library

To import a library from an exchange file, select *File > Import > Lithology Library* when no project or legend is open. Then select the file name of the exchange file. Additional libraries are provided as exchange files in the Additional Libraries folder in the Datastore.

4.5 Importing Data

A wide variety of data and templates can be imported to create boring/well logs.This data can be from WinLoG RT or previous versions of StrataExplorer and WinLoG. In addition, data from Excel, AGS, DIGGS, and gINT can be imported.

4.5.1 Importing Excel Log Data

Data from Excel spreadsheets can be imported into an existing boring or well log or be used to create new borings or wells. This data can be collected in Excel on laptops, tablets, and I-Pads that support the Excel "xlsx" format.

Several types of data for a log can be imported from an Excel spreadsheet. The types of data that can be imported will depend on the template for the log. Most of the data in the template can be imported.

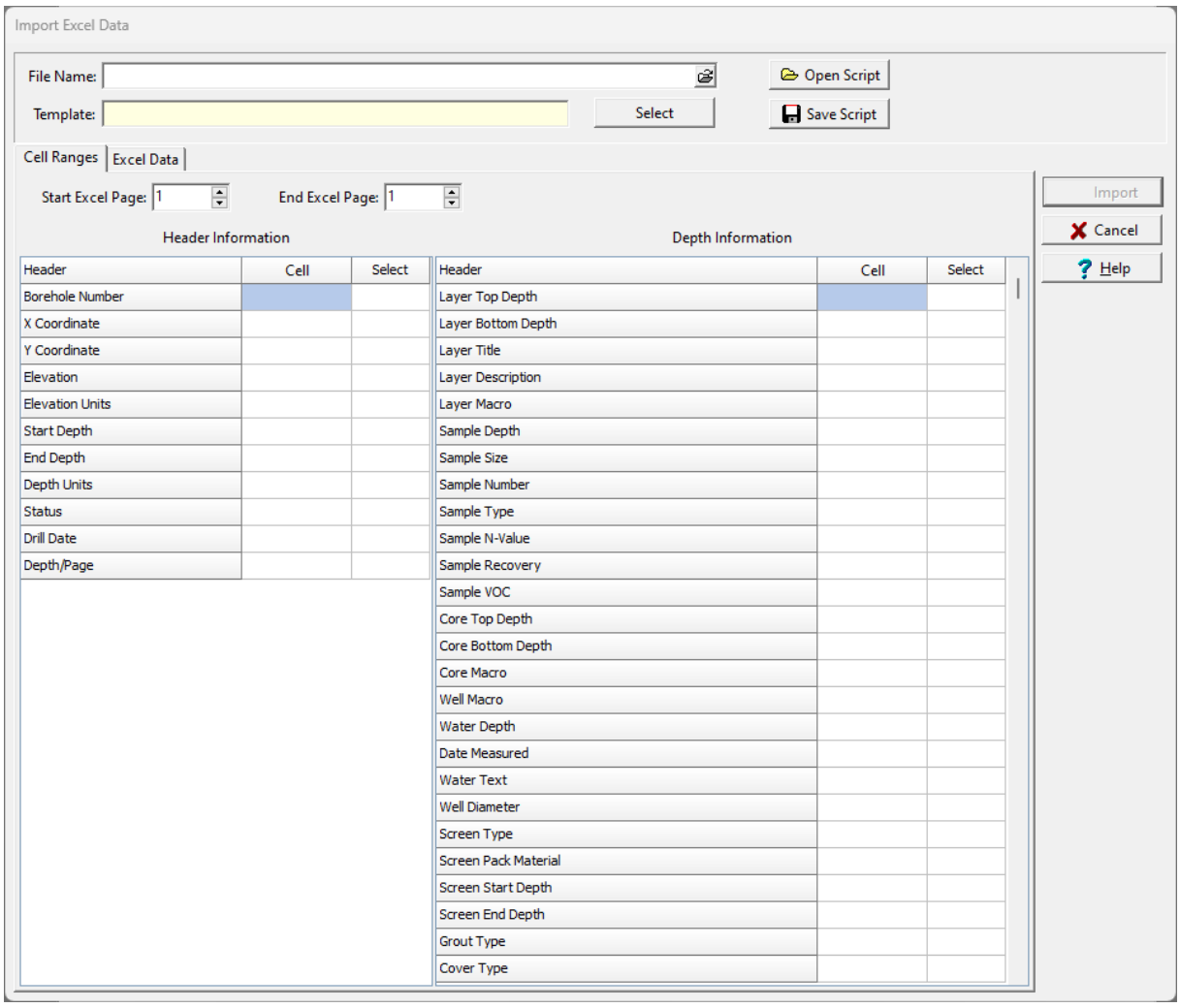
- To create new borings or wells using imported Excel data, select *File > Import > Excel Boring/Well Data* when a project is open but no boring or well is open,
- To import the data into an existing boring or well, select *File > Import > Excel Boring/Well Data* when a boring or well is open.

The Import Excel Data form will be displayed. This form is used to specify the Excel file to be imported and the cell correspondence between the Excel spreadsheet and the data in the boring/well log.

If new borings or wells are being created the Template field and select Template button will be displayed on this form. If the data is being imported into an existing boring or well the template is used from the existing boring or well.

In addition, the start and end page in the Excel spreadsheet should be specified. This can be used to import more than one boring or well at a time. When creating more than one boring or well each Excel page will be used to create one boring or well and all of the Excel pages should be formatted the same. If only one well or boring is being imported then the data to import can be spread across several Excel pages.

The template and cell correspondence specified on this form can be saved to a script file using the Save Script button. This script file then can be opened using the Open Script button and used to import boring/well data from other Excel files that have the same formatting.

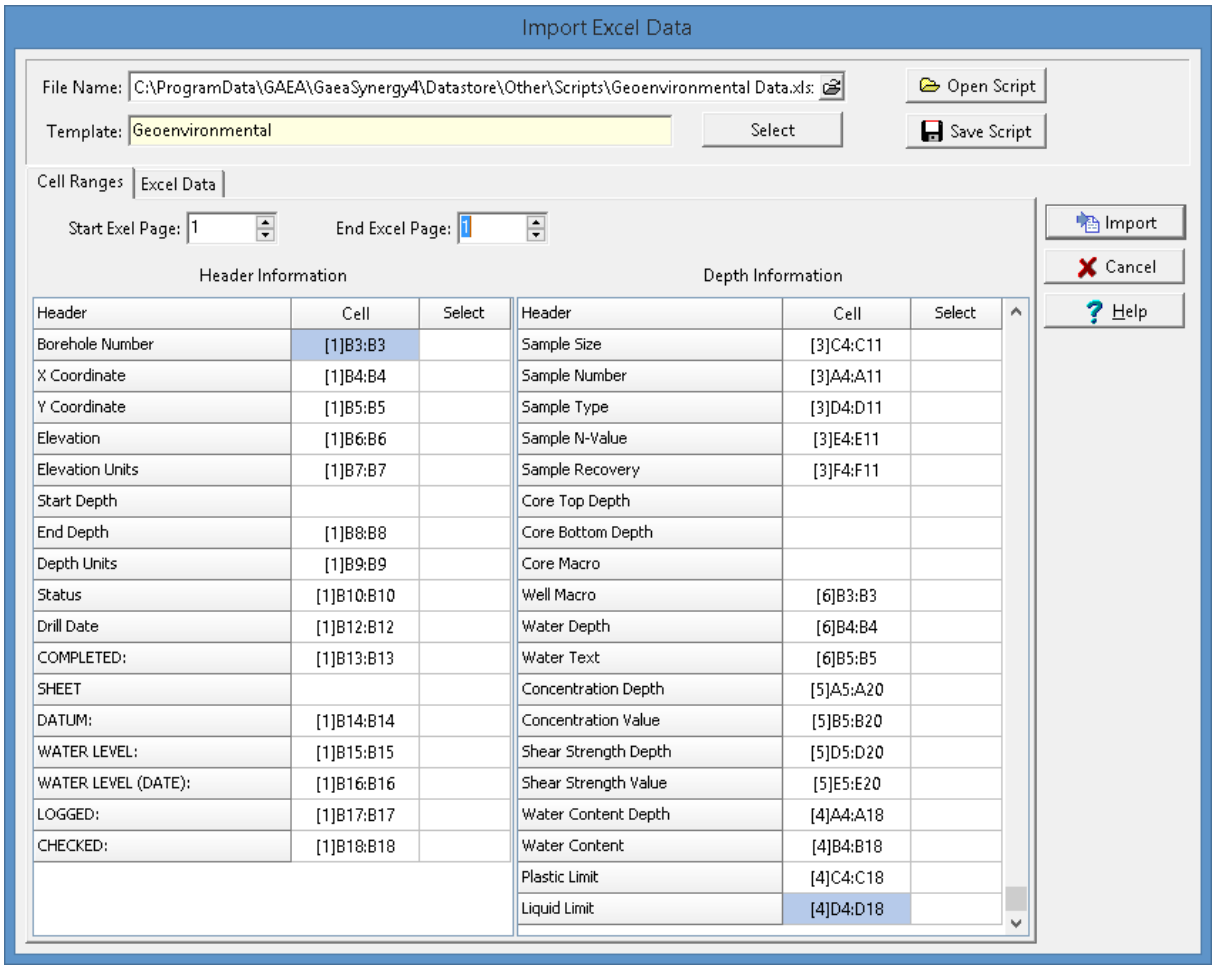


(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The Excel spreadsheet to be imported should be specified first in the File Name on the form. It can be selected using the button to the right. If the data is being imported into an existing boring/well log, after the Excel file has been specified the form will be updated with the available data that can be imported using the template of the existing boring/well log.

If a script is being used to specify the cell range data, it should be selected next by clicking on the Open Script button.

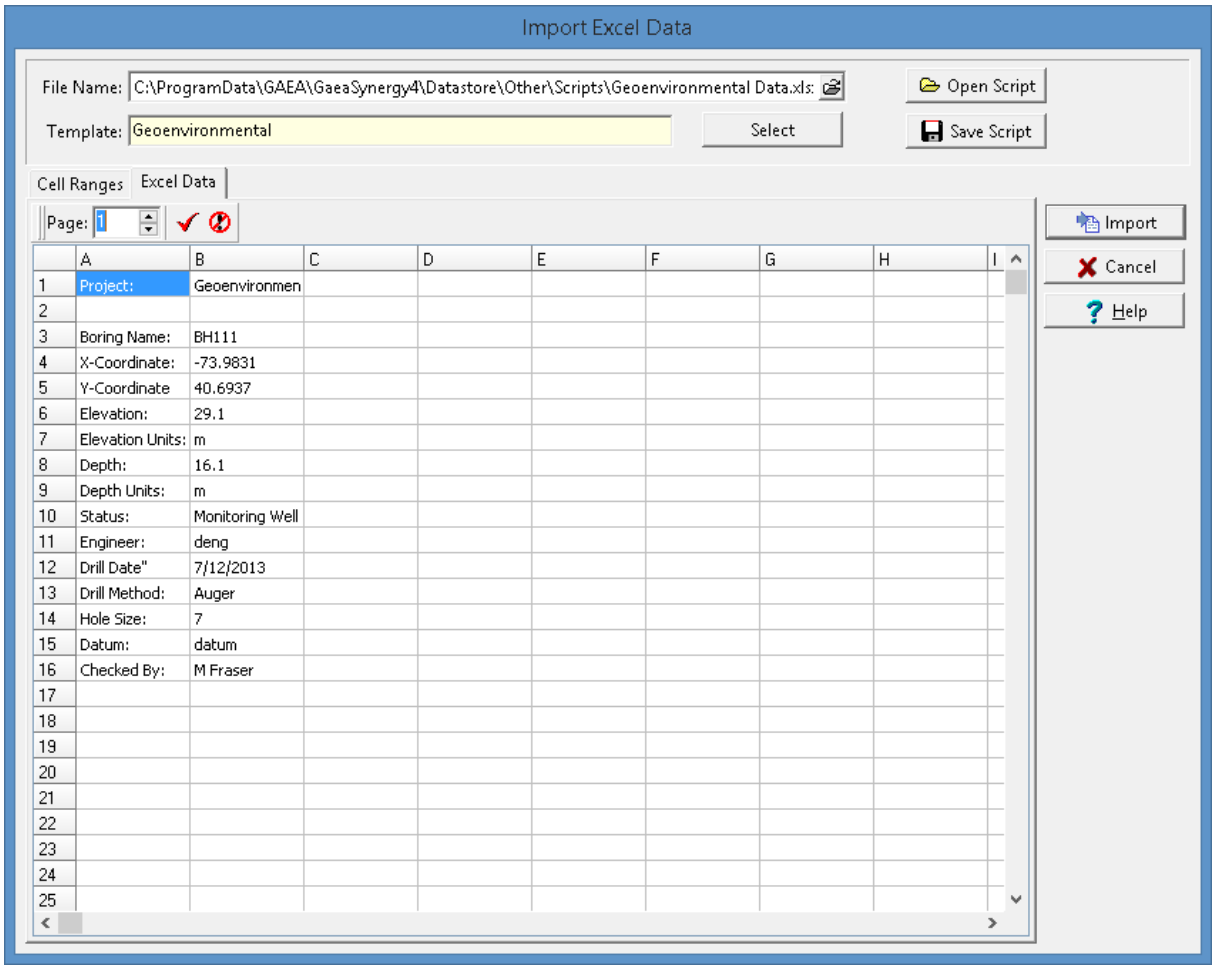
When creating new borings or wells the template also needs to be specified. This can be done by clicking on the Select button to the right of the template name or by opening an import script. After the template has been specified the form will be updated with the available data that can be imported. In addition, when new borings or wells are being created a cell range for the Borehole Number must also be specified.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The Cell Ranges tab is used to specify the correspondence between cells in the Excel spreadsheet and the data in the boring/well log. On the left side of this tab the data for the header (and footer) is specified and on the right side the data for the depth related columns is specified. One or more of these data types can be imported by specifying the cell range in the Cells column. If no cell range is specified for the data type, that data will not be imported.

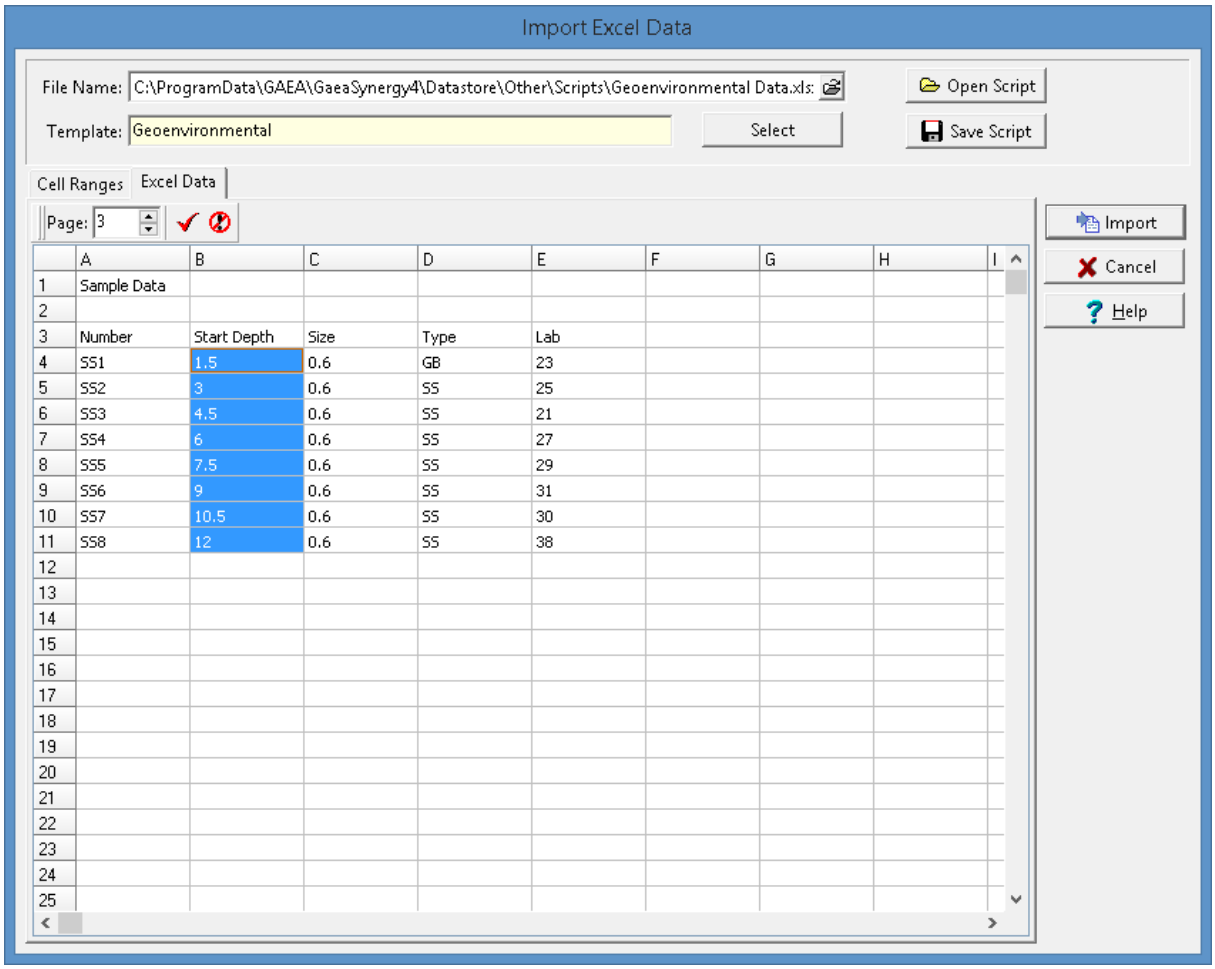
The cell range can be specified by typing it in or by clicking on the Select column to the right of the cell range. A Select button will be displayed in the column, click on this button to display the spreadsheet in the Excel Data tab.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

To select the cell range, click on the first cell and then hold the left mouse button down while selecting the cells. When the cell range has been selected, click the right mouse button or the Ok button on the toolbar above to return to the Cell Ranges tab. The selected cell range will be filled in on the form. This operation can be repeated until all of the cell ranges for the data types have been specified. The cell ranges for the header data should only contain one cell and the cell ranges for the depth data should contain either a row or column of cells.

The data in the Excel spreadsheet can be on multiple sheets. To select a cell range from a different sheet use the up and down buttons beside the Page on the toolbar.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

When all of the cell ranges that are to be imported are entered, click on the Save Script button to save the cell ranges so they can be used for the next Excel spreadsheet. To import the data, click on the Import button. If the data is being imported into an existing boring or well log the data will be shown in the log after it has been imported. If new borings or wells are being created the data will be imported and the new borings or wells will be added to the project.

Macros

Lithologic and well macros can also be used to specify data for the boring/well log.

By specifying a cell range for the lithologic macros, the lithologic name, description, and symbol for the layer can be assigned similar to the way they are when specifying the lithology for the boring log 611.

A cell can be specified that contains a well macro to use for the boring/well data. The well macro 613 is used to specify the well components, water levels, and text annotation for the well. Alternatively, the well construction information can be specified as described below.

Well Construction

The components and annotation can be automatically created by the program using the information specified for the well construction.

Well Diameter: This is the outside diameter of the well.

Screen Type: This is used to select the type and diameter of the screen.

Screen Pack Material: This is used to select the packing material around the screen.

Screen Start Depth: This is used to specify the start depth of the screen.

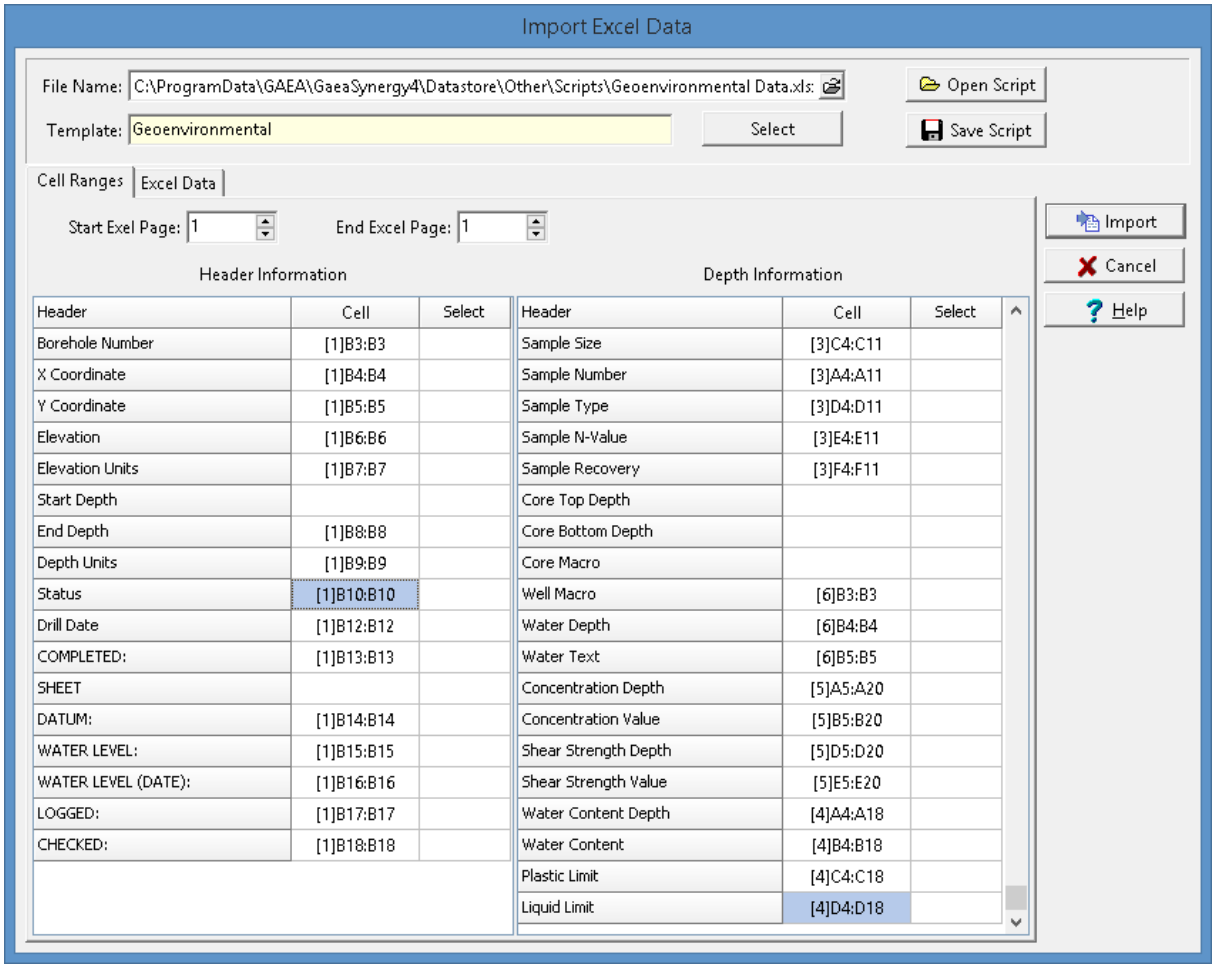
Screen End Depth: This is used to specify the end depth of the screen.

Grout Type: This is used to select the type of grout used in the well.

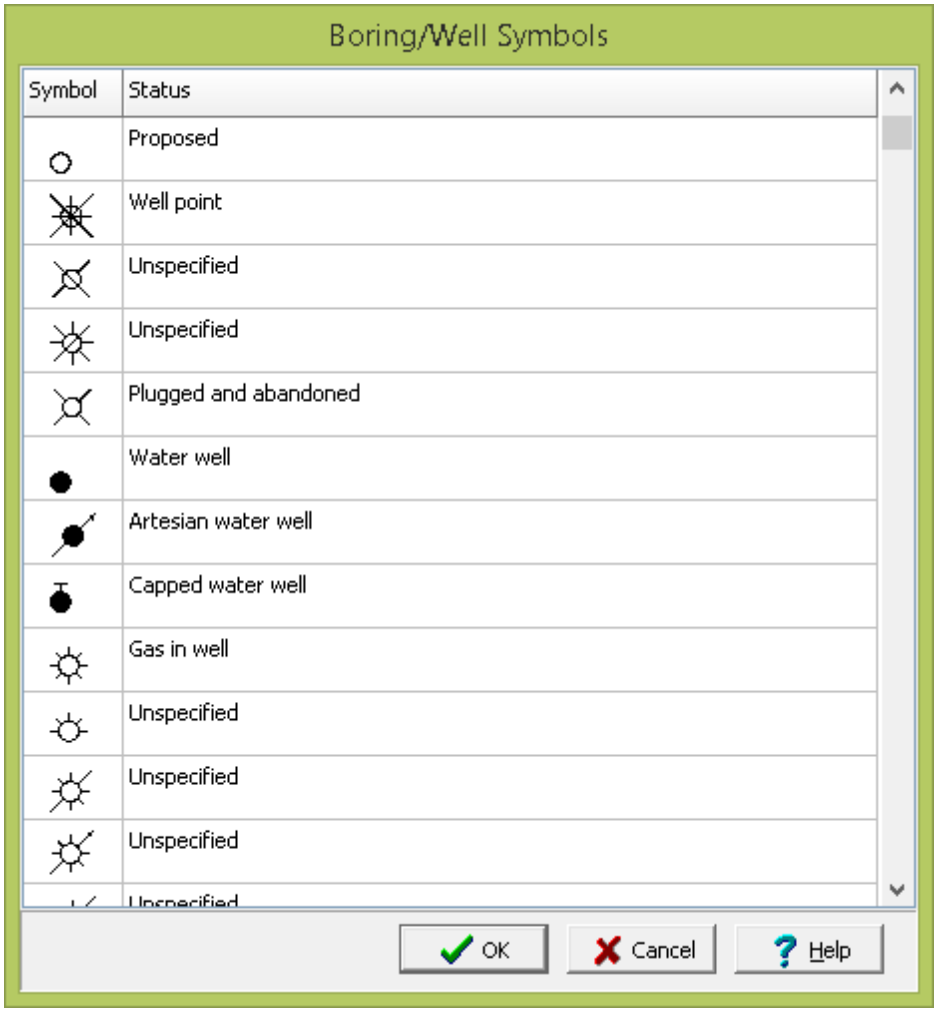
Cover Type: This is used to select the type and height of the well cover.

Well Symbols

The symbol used on the project map for the boring or well can be specified using the Well Status in the header.



The symbol used will correspond to the well status as shown in the Boring/Well Symbols form below. The status for each symbol can be edited by selecting *Tools > Boreholes > Boring/Well Symbols*.

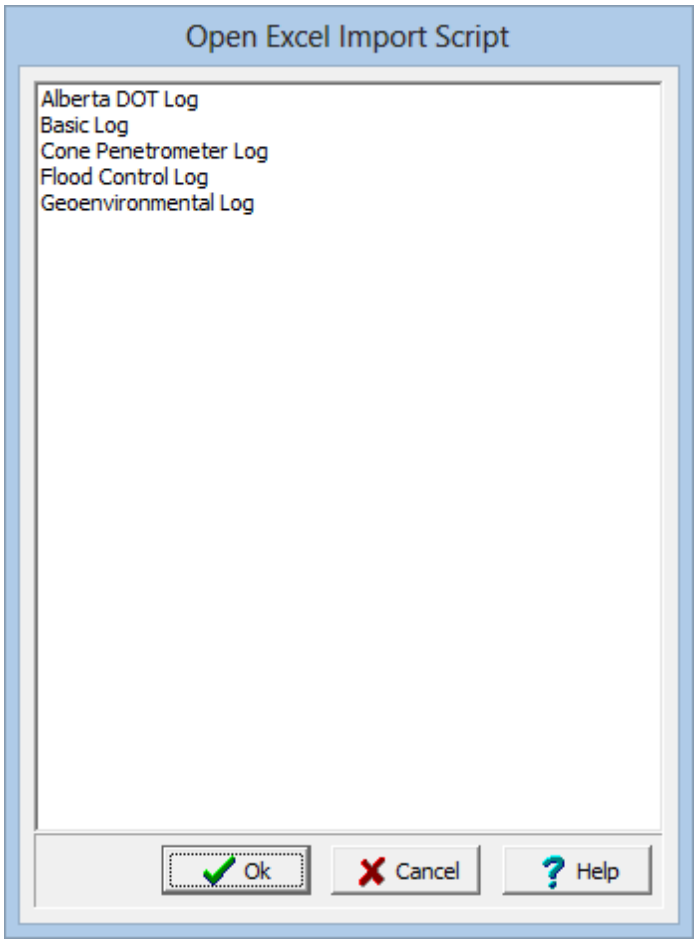


4.5.1.1 Excel Import Scripts

Excel import scripts are used to store the correspondence between an Excel spreadsheet and data in a boring/well log.In addition, for a new boring/well log the script file stores the template to be used.

Opening a Script

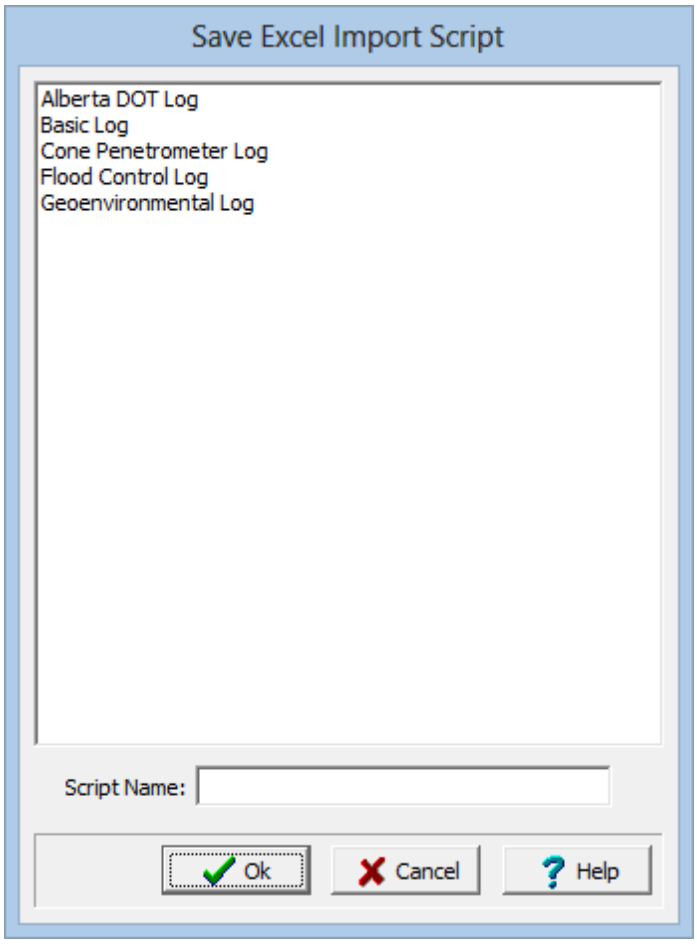
To use an existing import script, click on the Open Script button on the Import Excel Data form. The Open Excel Import Script form will display a list of available scripts to select from.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

Saving a Script

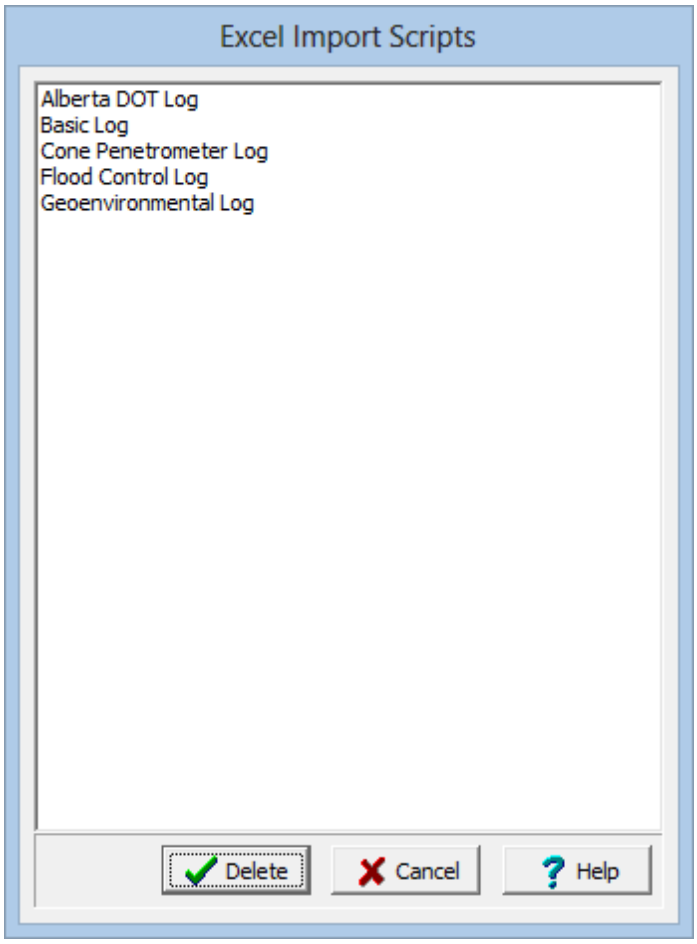
After the cell ranges have been entered on the Import Excel Data form, they can be saved to a script file by clicking on the Save Script button. If a script was previously opened, the changes will be saved to that script. If no script was previously opened, the Save Excel Import Script form will be displayed. The script name can then be entered and saved.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

Deleting a Script

Excel import scripts can be deleted by going to *File > Delete > Import Scripts > Borehole/Well*. The Excel Import Scripts form will be displayed, To delete a script, select it and then click on the delete button.



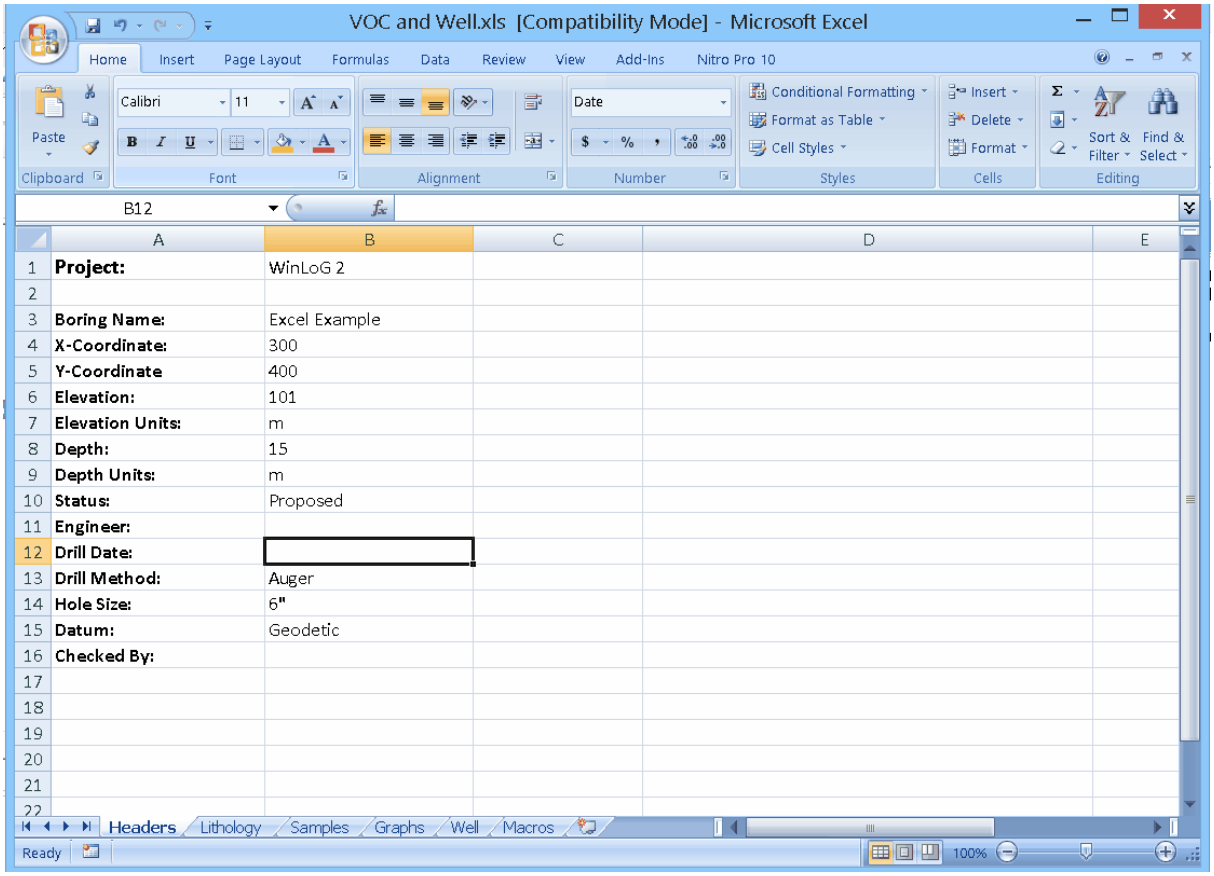
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

4.5.1.2 Predefined Spreadsheets and Import Scripts

The program comes with several previously defined Excel spreadsheets and corresponding Import Scripts. We recommend trying to use one of these first and then editing it to meet your needs. Each Excel spreadsheet and Import Script uses a specific template to determine the data to collect. These predefined files are in the Datastore in the folder "Other\Scripts".

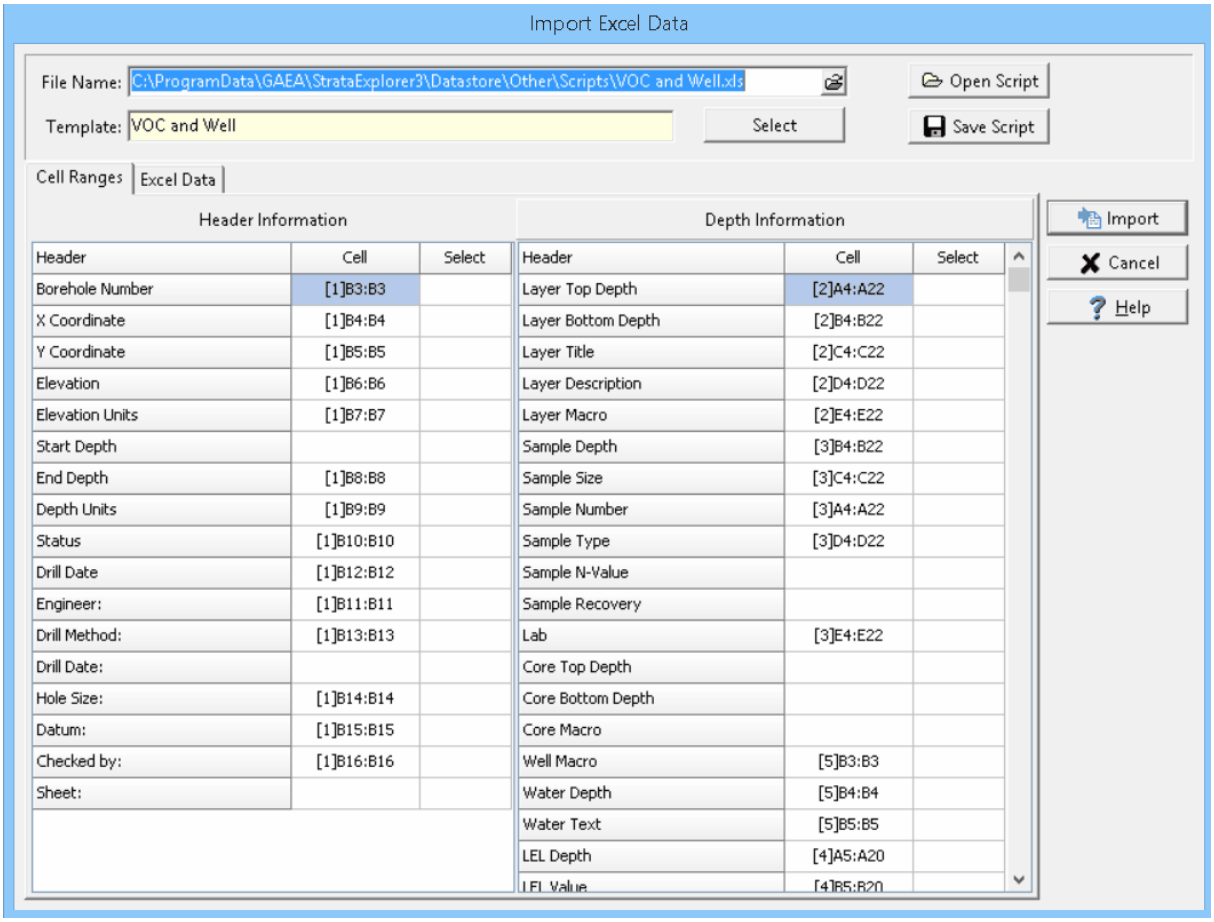
The Excel spreadsheet shows the information to be collected and should be completed in the field and saved under a different name. These files can then be sent to the office to be imported and create logs.

For example, below is the spreadsheet used to collect VOC and well data that can be imported and displayed using this template.This spreadsheet has pages for the header, lithology, samples, graphs, well, and macros.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

When the Import Script is used to import this spreadsheet, the Import Excel Data form will show the cell correspondences between the spreadsheet and boring/well data.



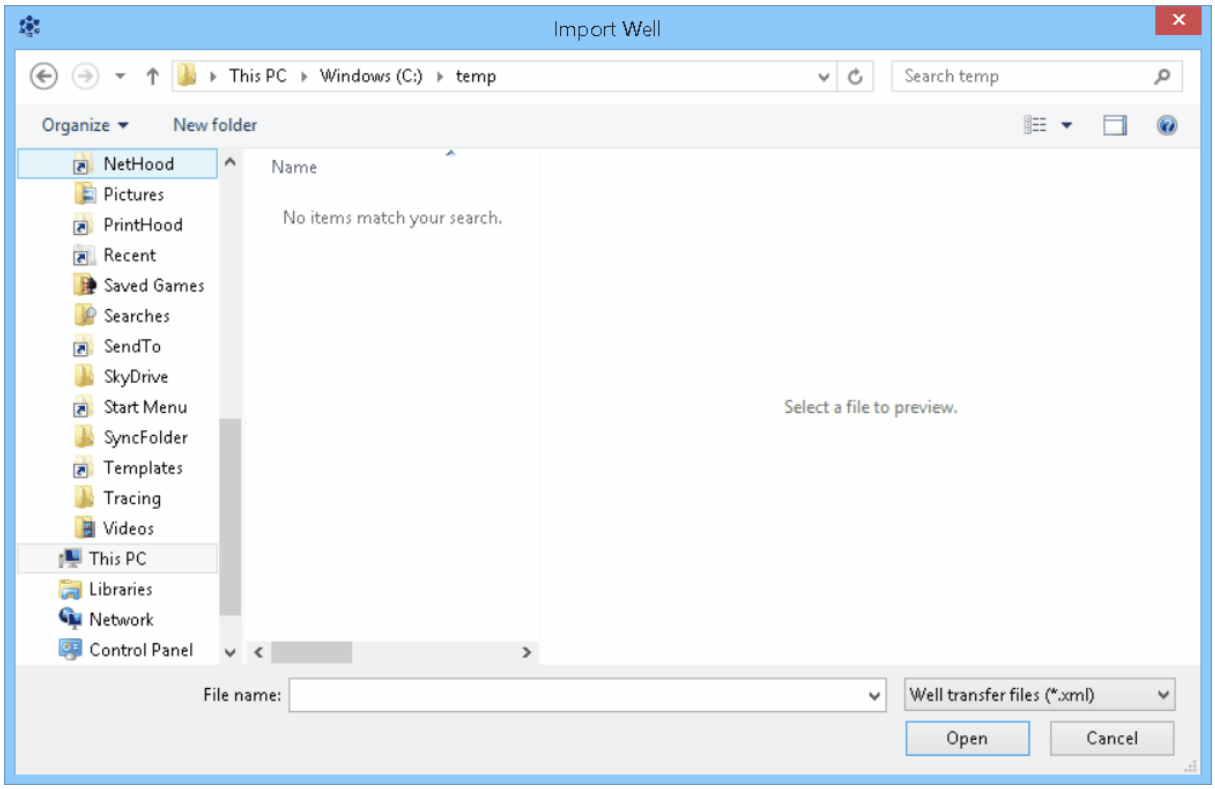
(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

4.5.2 Importing GaeaSynergy Data

Boring/well logs and templates can be imported in to GaeaSynergy and WinLoG RT. The importation of the data is described in the sections below.

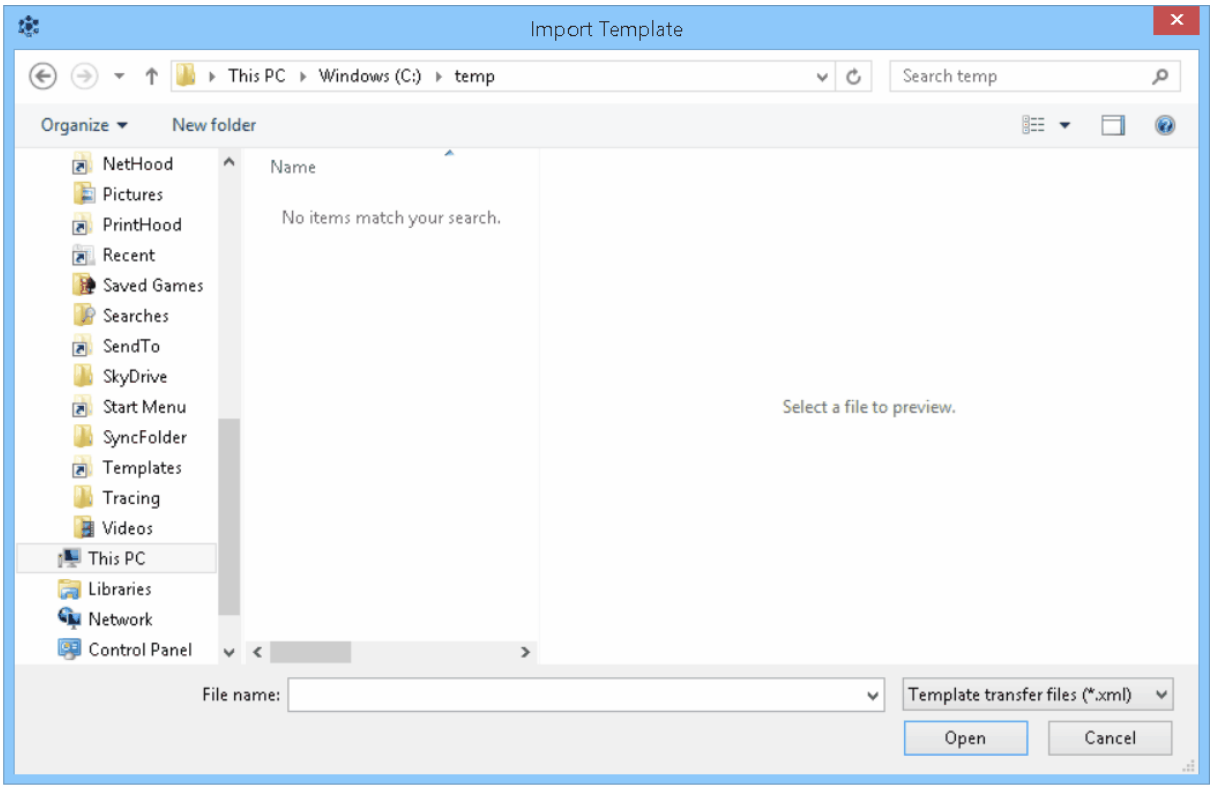
4.5.2.1 Boring/Well Log XML Exchange Files

In WinLoG RT XML Exchange files can be used to transfer boring/wells from one computer to another. Before importing a boring/well XML Exchange file a project needs to be open, the logs will be imported into this project. To import a boring/well XML Exchange file select *File > Import > XML Exchange Files > boring/well.* The Import Boring form below will then be displayed. Select the XML file containing the log to be imported and click the Open button. The log will then be imported into the project.



4.5.2.2 Template XML Exchange Files

In GaeaSynergy XML Exchange files can be used to transfer boring/well templates from one computer to another. When importing a boring/well template XML Exchange file a project can not be open. To import a boring/well Template XML Exchange file select *File > Import > boring/well Template.* The Import Template form below will then be displayed. Select the XML file containing the template to be imported and click the Open button. The template will then be imported into the project.



4.5.2.3 Boring/Well Logs from WinLoG RT

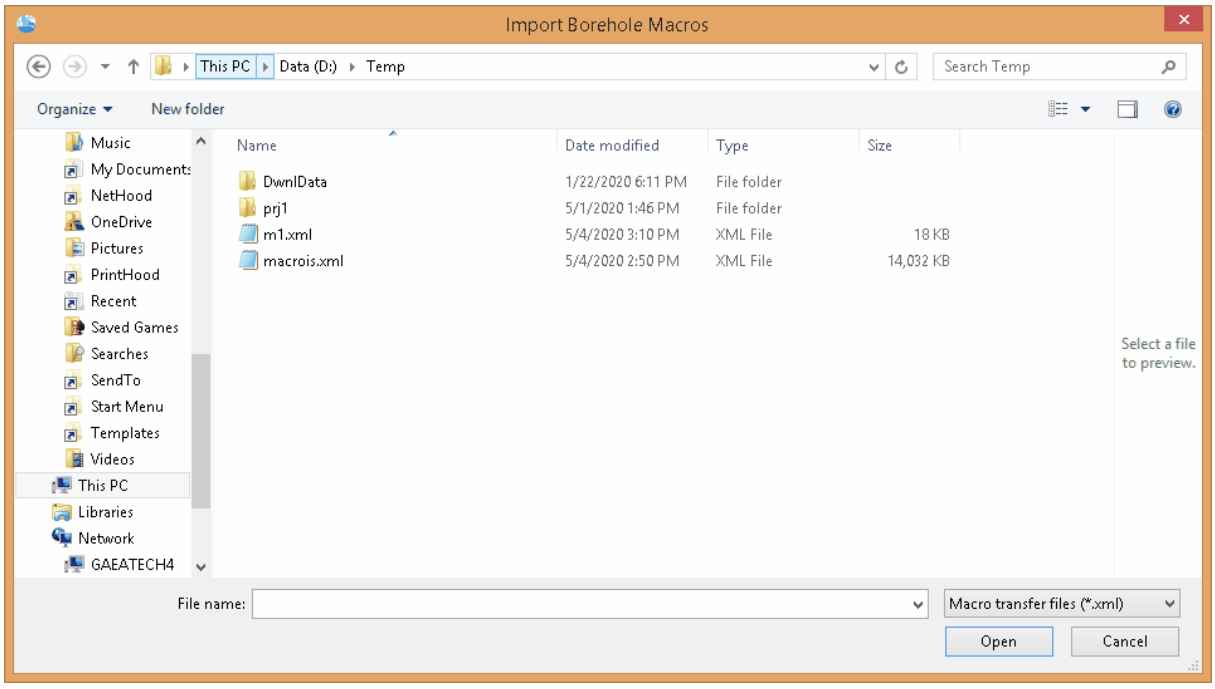
Boring and well logs can be sent from WinLoG RT and automatically loaded into GaeaSynergy. To use this feature, the network version of GaeaSynergy must be installed and the GaeaSynergy Service running. Prior to receiving the boring or well logs the project that they are for must already exist.

4.5.2.4 Templates from GaeaSynergy

WinLoG RT can automatically receive templates from GaeaSynergy via email or FTP. This process is described in the section on Importing Templates 622 from GaeaSynergy.

4.5.2.5 Lithology and Well Macros

Previously exported lithology and well macros can be imported by selecting *File > Import > Borehole Macros*. The Import Borehole Macro form below will be displayed.



Use this form to select the previously exported file. The lithology and well macros will then be imported.

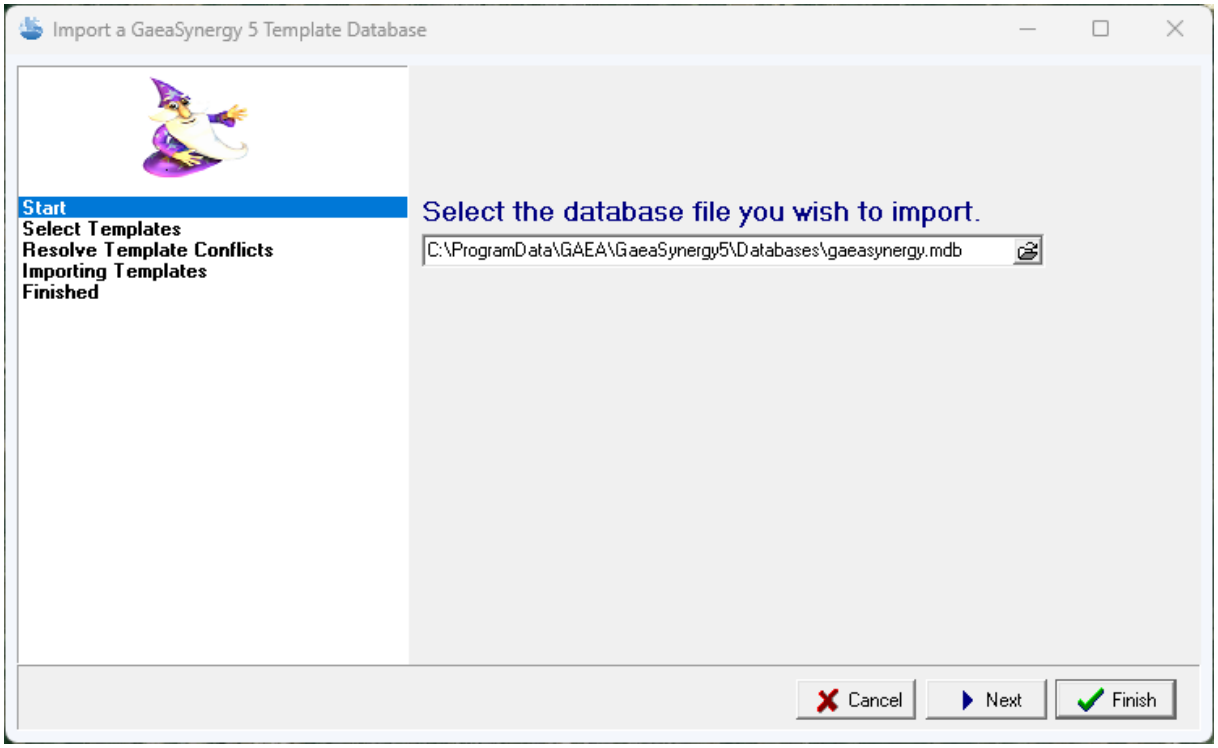
4.5.3 Importing GaeaSynergy 5

Projects, templates, and lithologic libraries from GaeaSynergy version 5 can be imported into GaeaSynergy. The importation of Gaeasynergy 5 projects is covered in the Projects chapter. The importation of GaeaSynergy 5 templates and lithologic libraries are discussed in the sections below.

4.5.3.1 GaeaSynergy 5 Template List

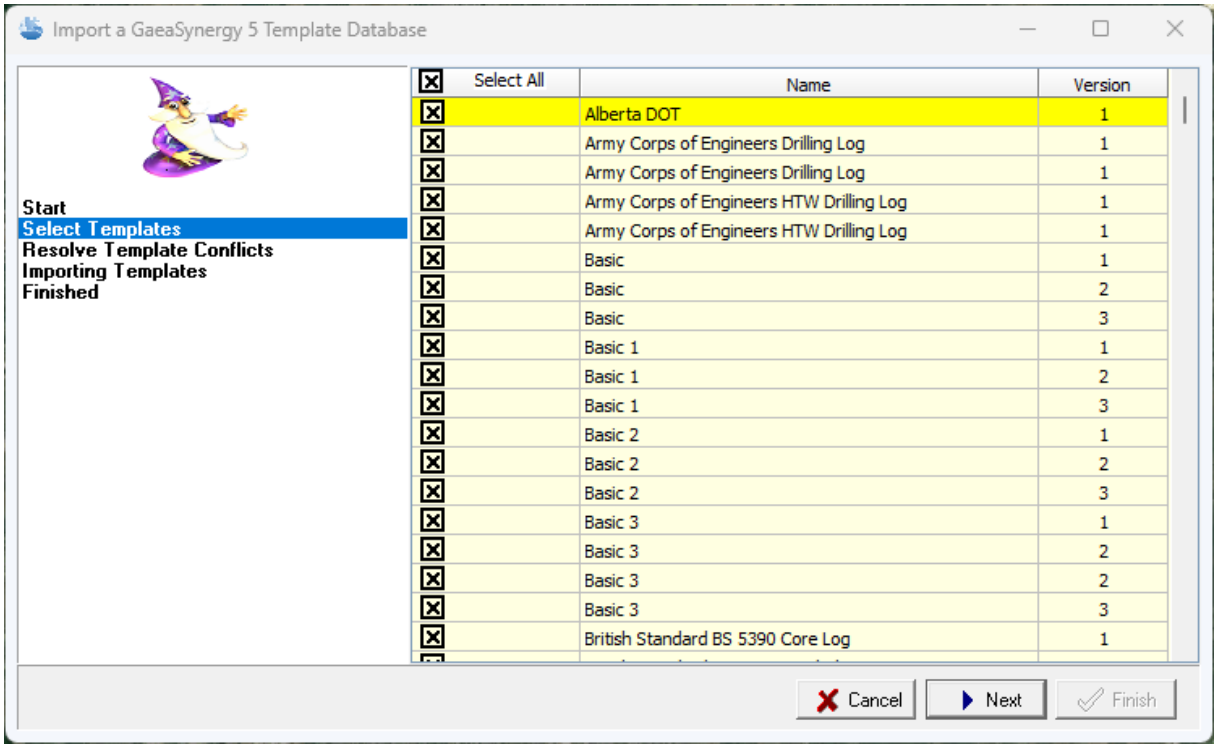
When importing templates, no project can be open at the time. Multiple GaeaSynergy 5 templates can be imported by selecting *File > Import > GaeaSynergy 5 Data > Templates*. The Import wizard form below will then be displayed. This form will guide you through the steps of importing a list of templates.

Step 1. Select the Template Database File



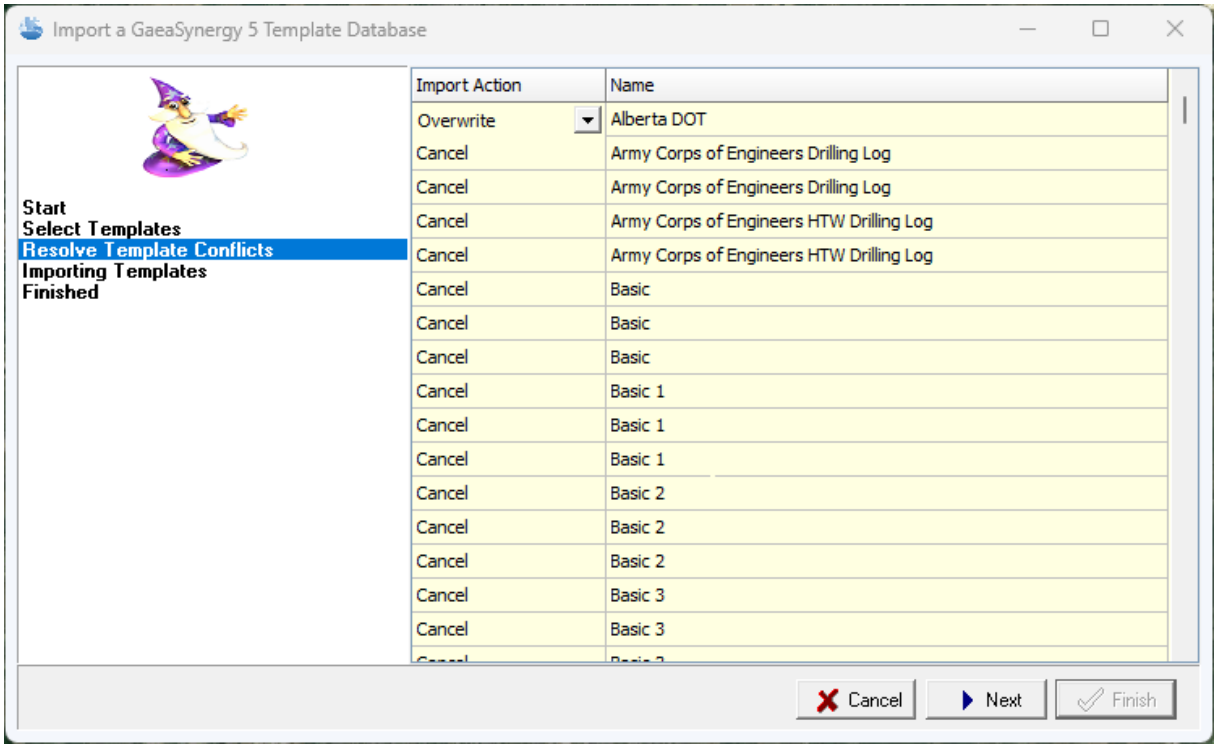
5The first step is to select the GaeaSynergy 4 database containing the templates. This database is an Microsoft Access file named "gaeasynergy.mdb". If the GaeaSynergy 4 program was installed and used locally on the computer the file is normally stored in the "c:\Program Data\GAEA\GaeaSynergy5\Databases" directory. If the GaeaSynergy 5 database was used across a network, the file will be stored on a network drive. After the file has been selected, press the Next button to continue.

Step 2 Select Templates



The next step is to select the templates to import. A list of templates will be displayed using the database specified in the previous step. Select the templates by clicking on the box next to the template name. All of the templates can be selected and deselected by clicking on the Select All box. After the templates have been selected click the Next button.

Step 3 Resolve Conflicts



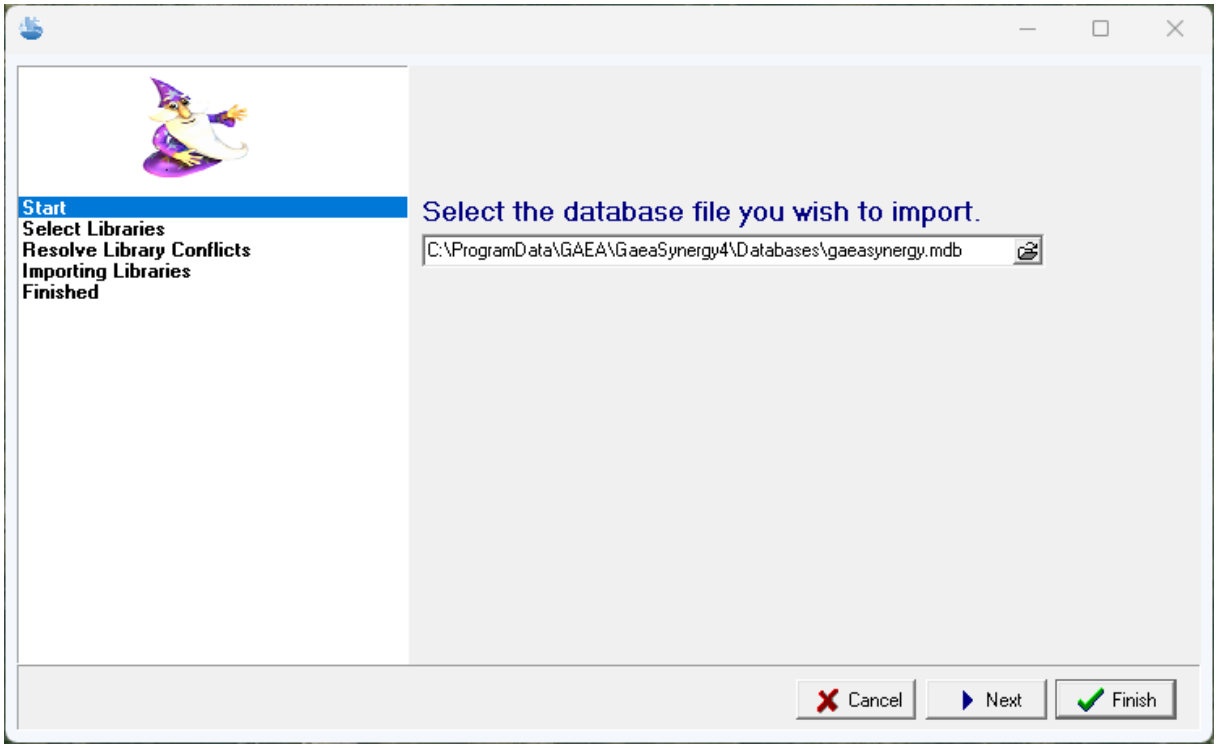
The next step is to resolve any conflicts with template names. This will happen when the name of an imported template is the same as the name of a template already in WinLoG RT. These conflicts can be resolved either by overwriting the existing template or by not importing the template. After any conflicts have been resolved, click the Next button to continue.

After the templates have been imported they will be added to the template list.

4.5.3.2 GaeaSynergy 5 Lithologic Libraries

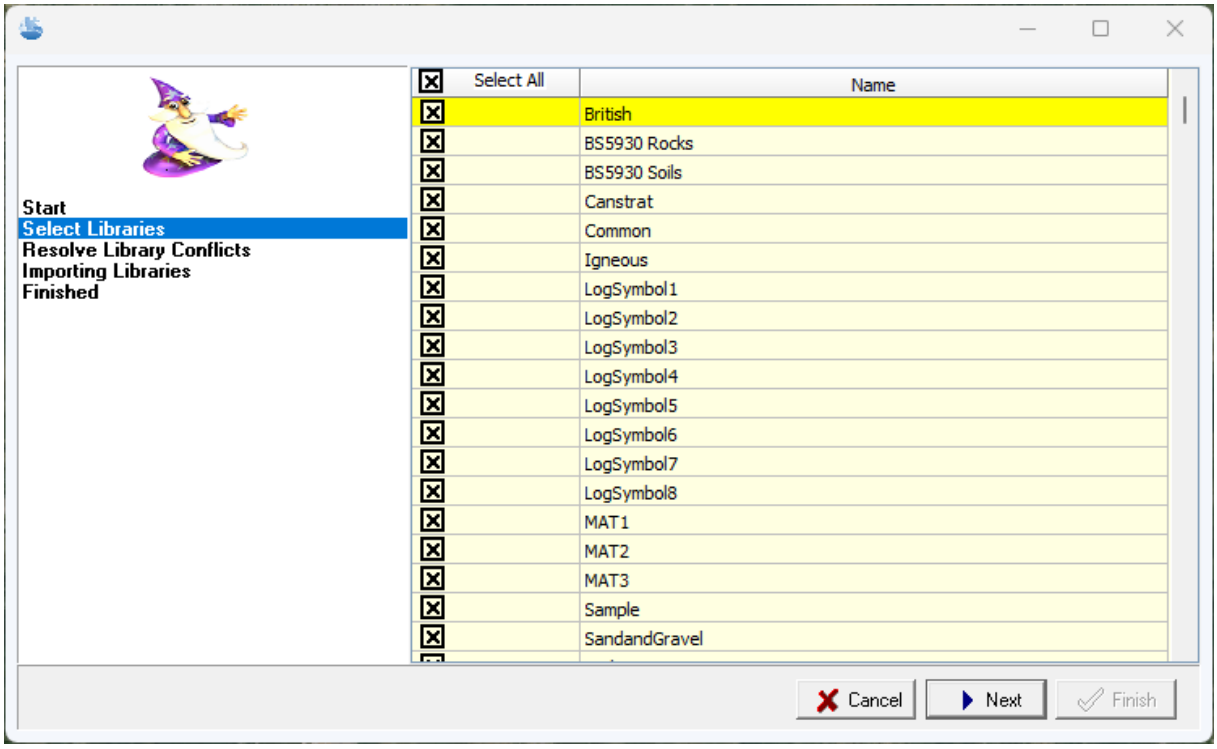
When importing lithologic libraries, no project can be open at the time. Multiple GaeaSynergy 4 lithologic libraries can be imported by selecting *File > Import > GaeaSynergy 4 Data > Lithologic Libraries*. The Import wizard form below will then be displayed. This form will guide you through the steps of importing a list of templates.

Step 1. Select the Library Database File



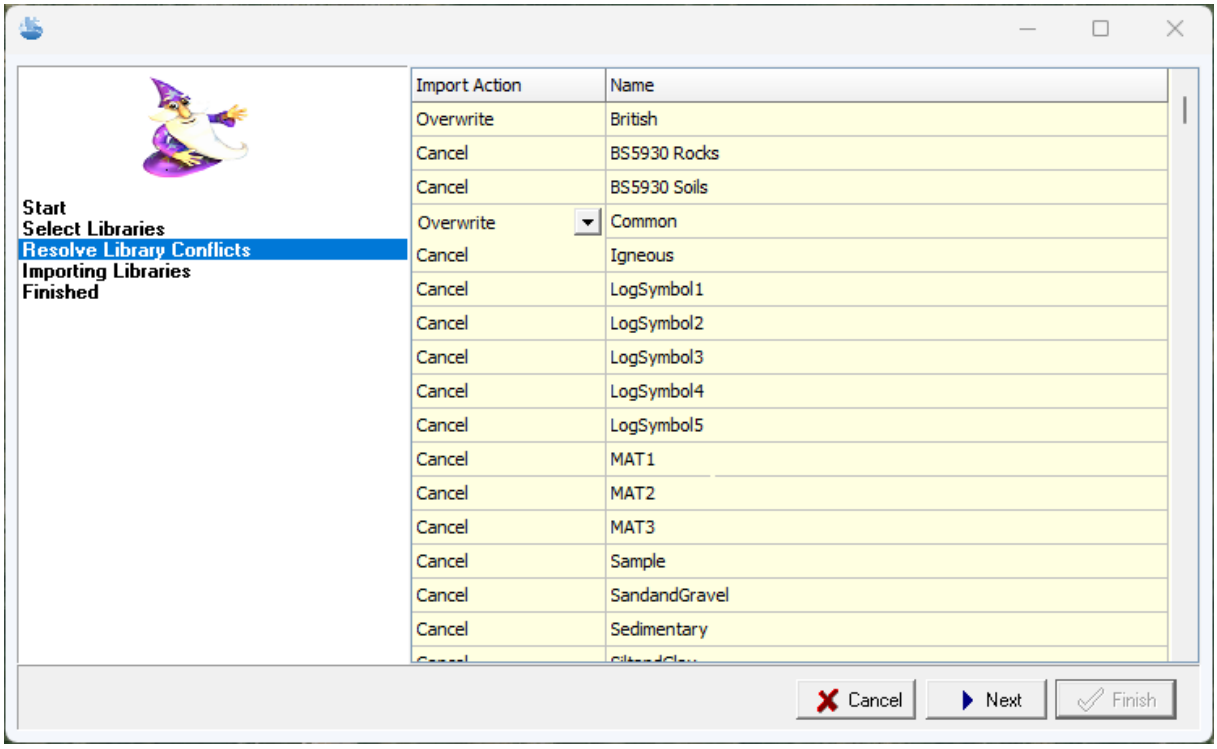
The first step is to select the GaeaSynergy 4 database containing the libraries. This database is an Microsoft Access file named "gaeasynergy.mdb". If the GaeaSynergy 4 program was installed and used locally on the computer the file is normally stored in the "c:\Program Data\GAEA\GaeaSynergy4\Databases" directory. If the GaeaSynergy 4 database was used across a network, the file will be stored on a network drive. After the file has been selected, press the Next button to continue.

Step 2 Select Libraries



The next step is to select the libraries to import. A list of libraries will be displayed using the database specified in the previous step. Select the libraries by clicking on the box next to the name. All of the libraries can be selected and deselected by clicking on the Select All box. After the libraries have been selected click the Next button.

Step 3 Resolve Conflicts



The next step is to resolve any conflicts with library names. This will happen when the name of an imported library is the same as the name of a library already in WinLoG RT. These conflicts can be resolved either by overwriting the existing library or by not importing the library. After any conflicts have been resolved, click the Next button to continue.

After the libraries have been imported they will be added to the library list.

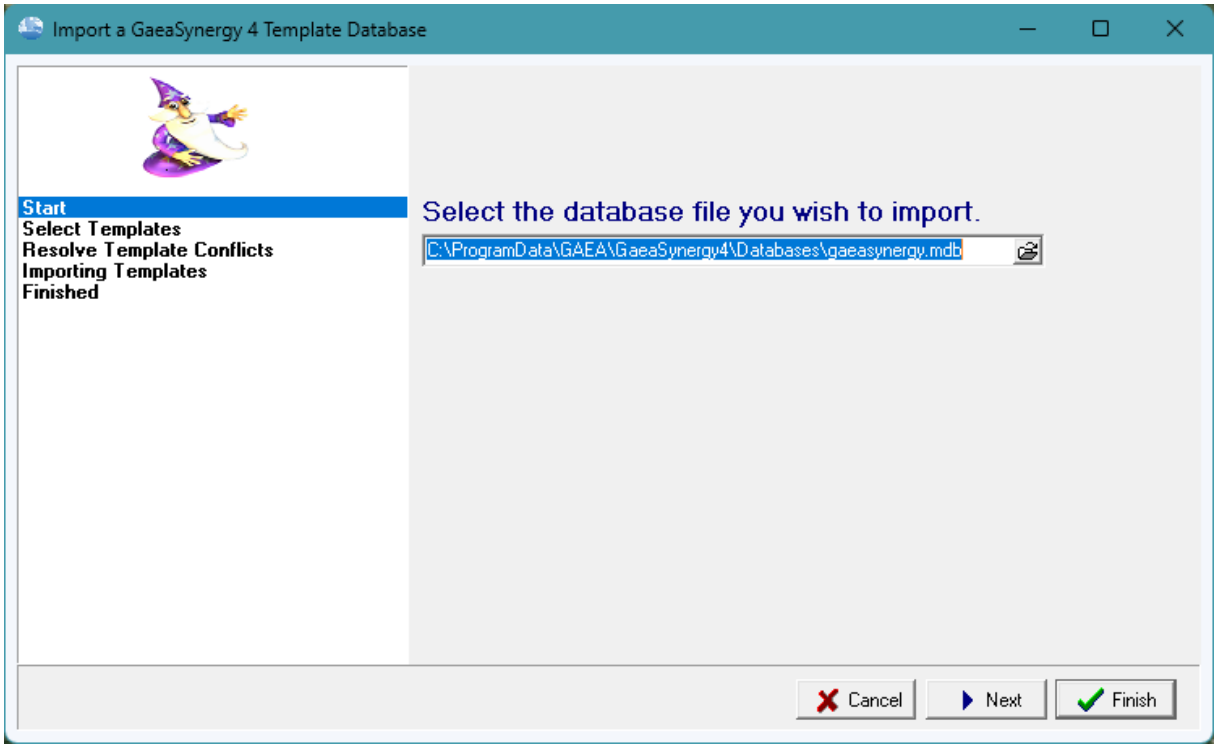
4.5.4 Importing GaeaSynergy 4 Data

Projects, templates, and lithologic libraries from GaeaSynergy version 4 can be imported into GaeaSynergy. The importation of Gaeasynergy 4 projects is covered in the Projects chapter. The importation of GaeaSynergy 4 templates and lithologic libraries are discussed in the sections below.

4.5.4.1 GaeaSynergy 4 Template List

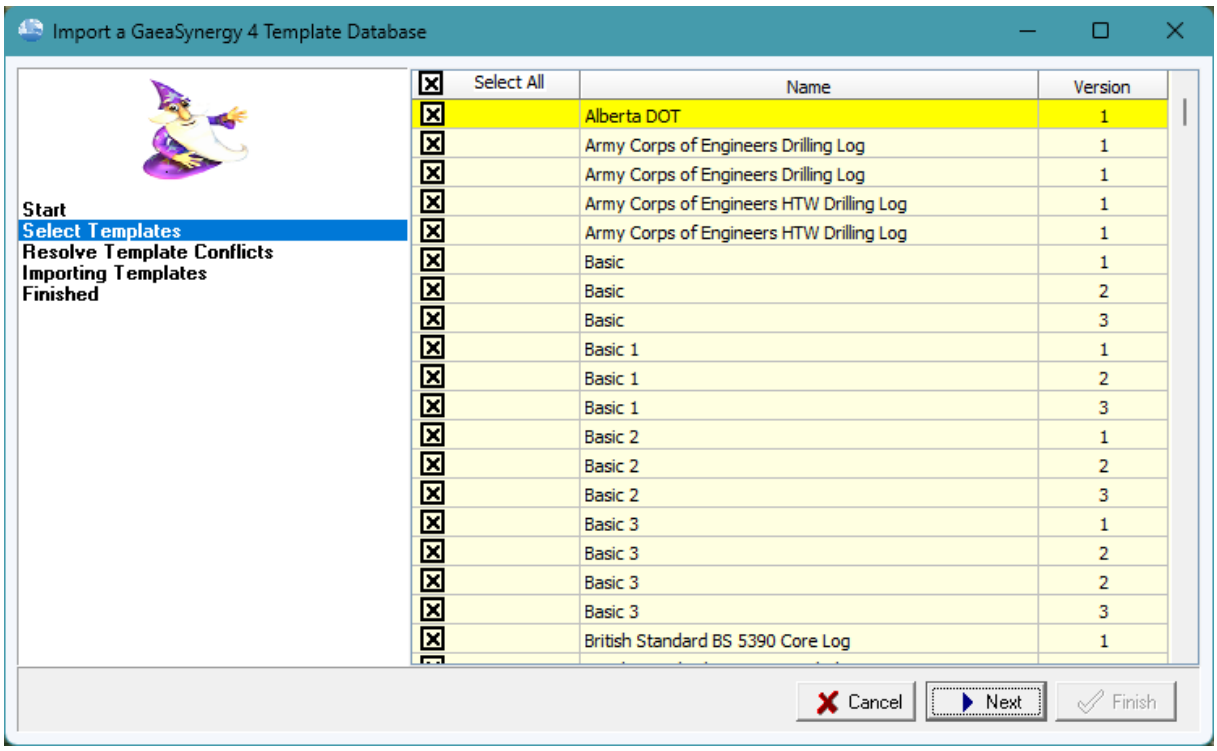
When importing templates, no project can be open at the time. Multiple GaeaSynergy 4 templates can be imported by selecting *File > Import > GaeaSynergy 4 Data > Templates*. The Import wizard form below will then be displayed. This form will guide you through the steps of importing a list of templates.

Step 1. Select the Template Database File



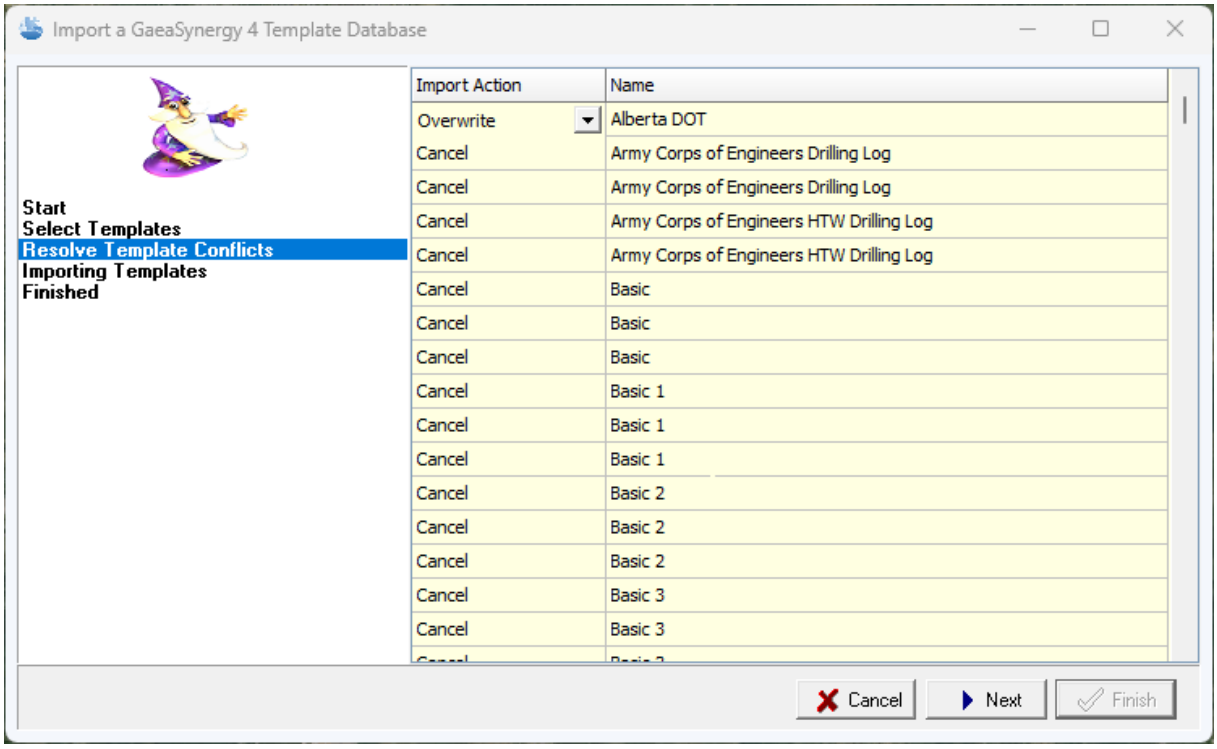
The first step is to select the GaeaSynergy 4 database containing the templates. This database is an Microsoft Access file named "gaeasynergy.mdb". If the GaeaSynergy 4 program was installed and used locally on the computer the file is normally stored in the "c:\Program Data\GAEA\GaeaSynergy4\Databases" directory. If the GaeaSynergy 4 database was used across a network, the file will be stored on a network drive. After the file has been selected, press the Next button to continue.

Step 2 Select Templates



The next step is to select the templates to import. A list of templates will be displayed using the database specified in the previous step. Select the templates by clicking on the box next to the template name. All of the templates can be selected and deselected by clicking on the Select All box. After the templates have been selected click the Next button.

Step 3 Resolve Conflicts



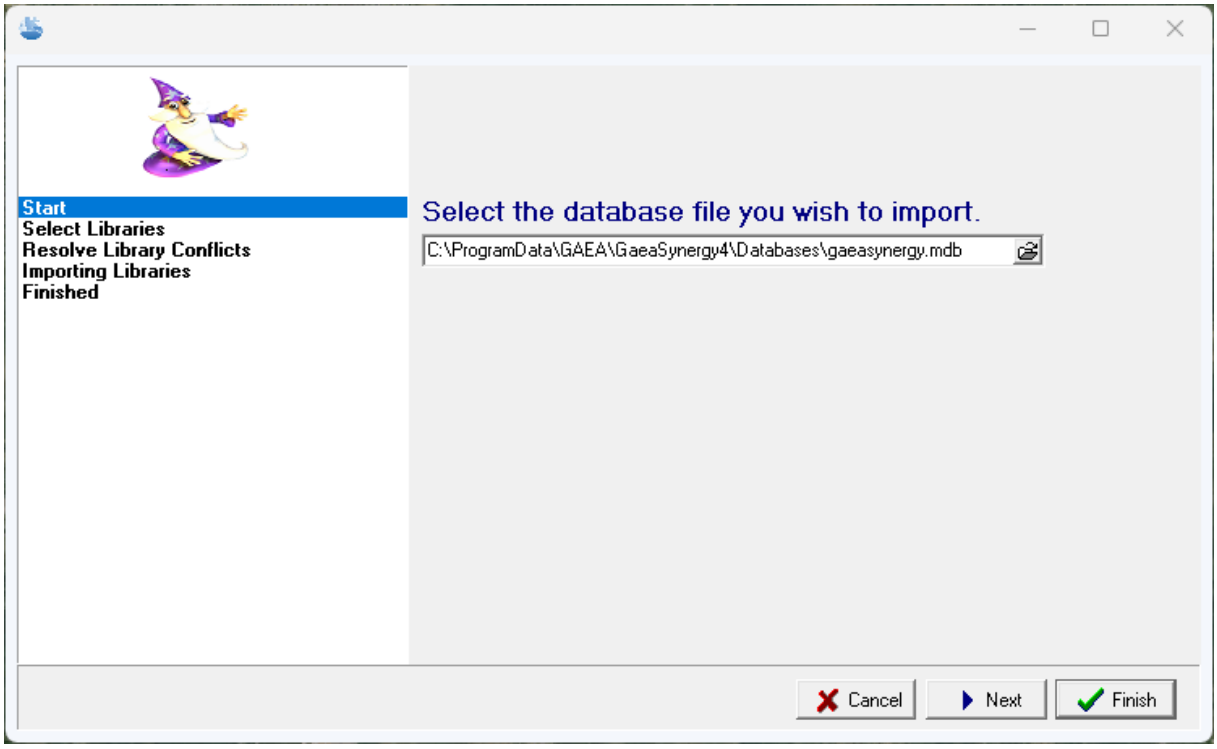
The next step is to resolve any conflicts with template names. This will happen when the name of an imported template is the same as the name of a template already in WinLoG RT. These conflicts can be resolved either by overwriting the existing template or by not importing the template. After any conflicts have been resolved, click the Next button to continue.

After the templates have been imported they will be added to the template list.

4.5.4.2 GaeaSynergy 4 Lithologic Libraries

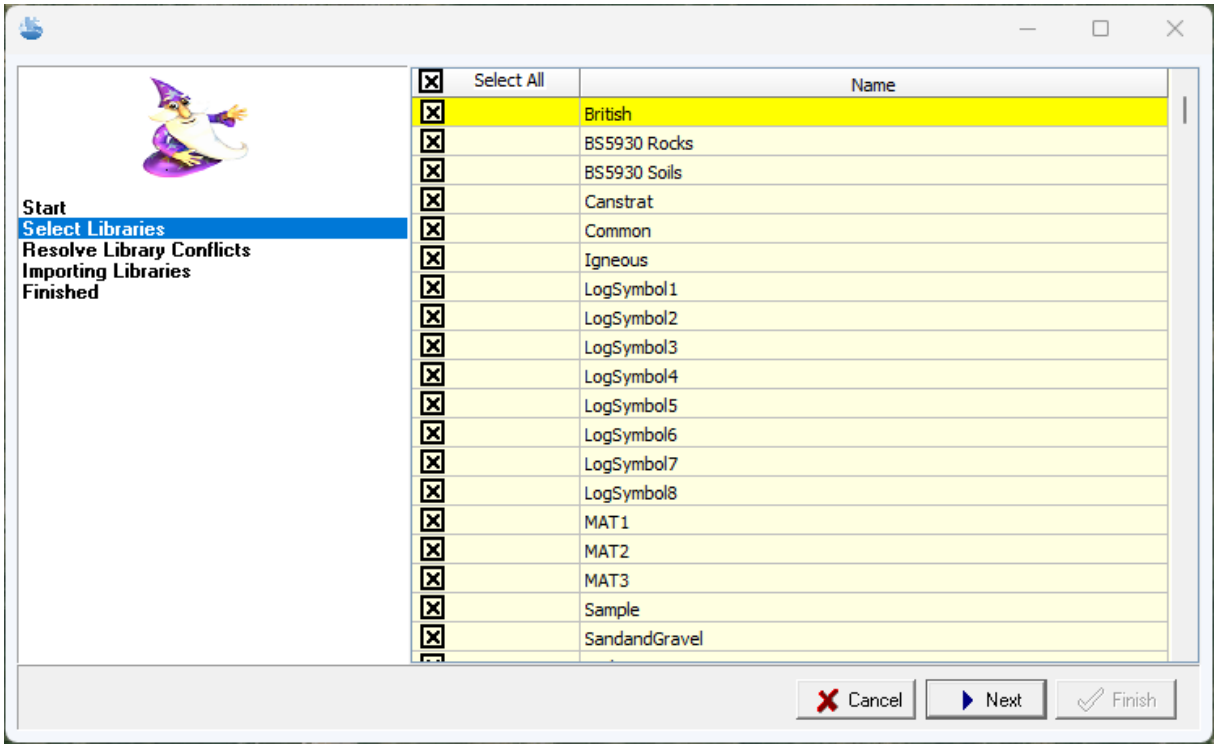
When importing lithologic libraries, no project can be open at the time. Multiple GaeaSynergy 4 lithologic libraries can be imported by selecting *File > Import > GaeaSynergy 4 Data > Lithologic Libraries*. The Import wizard form below will then be displayed. This form will guide you through the steps of importing a list of templates.

Step 1. Select the Library Database File



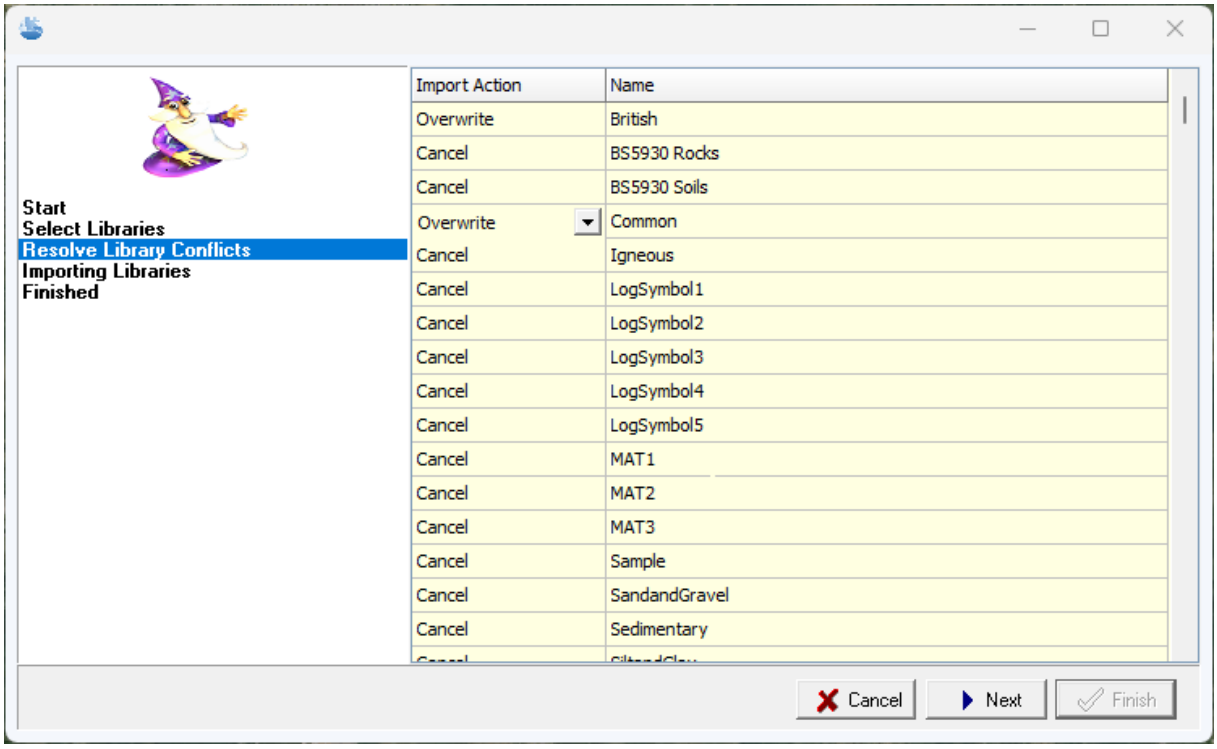
The first step is to select the GaeaSynergy 4 database containing the libraries. This database is an Microsoft Access file named "gaeasynergy.mdb". If the GaeaSynergy 4 program was installed and used locally on the computer the file is normally stored in the "c:\Program Data\GAEA\GaeaSynergy4\Databases" directory. If the GaeaSynergy 4 database was used across a network, the file will be stored on a network drive. After the file has been selected, press the Next button to continue.

Step 2 Select Libraries



The next step is to select the libraries to import. A list of libraries will be displayed using the database specified in the previous step. Select the libraries by clicking on the box next to the name. All of the libraries can be selected and deselected by clicking on the Select All box. After the libraries have been selected click the Next button.

Step 3 Resolve Conflicts



The next step is to resolve any conflicts with library names. This will happen when the name of an imported library is the same as the name of a library already in WinLoG RT. These conflicts can be resolved either by overwriting the existing library or by not importing the library. After any conflicts have been resolved, click the Next button to continue.

After the libraries have been imported they will be added to the library list.

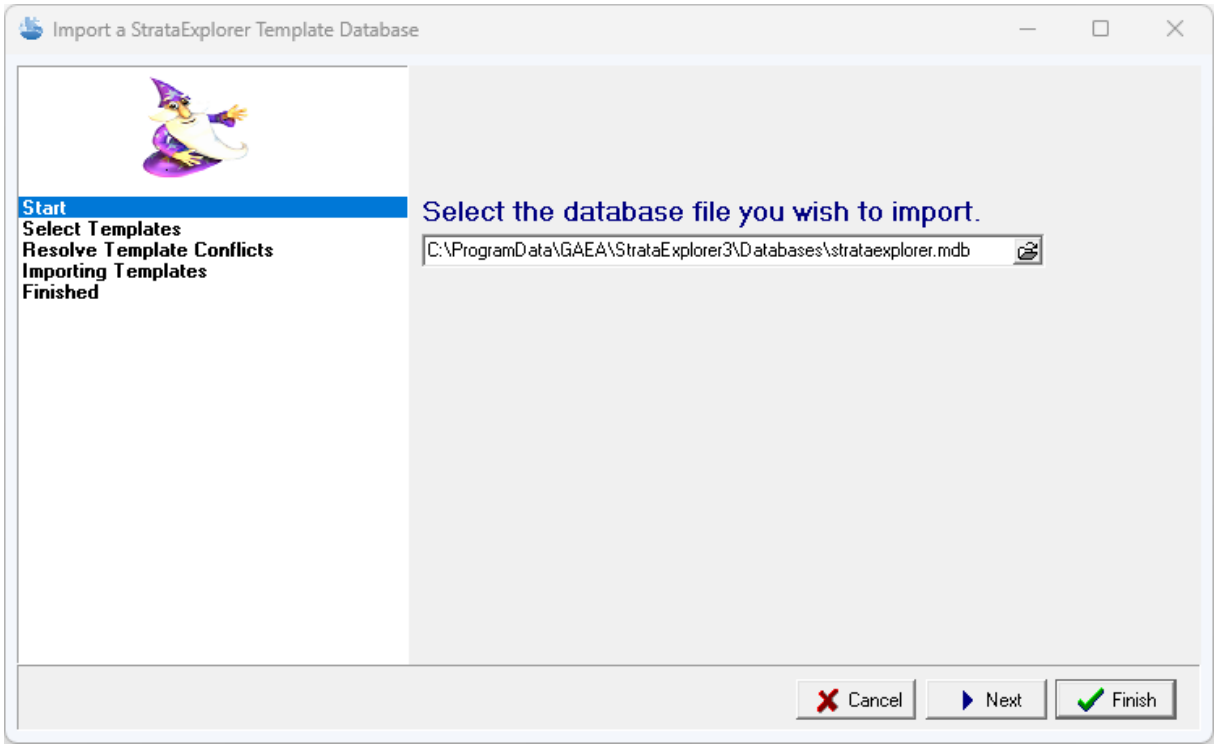
4.5.5 Importing StrataExplorer Data

Projects, templates, and lithologic libraries from StrataExplorer version 3 can be imported into GaeaSynergy. The importation of StrataExplorer projects is covered in the Projects chapter. The importation of StrataExplorer templates and lithologic libraries are discussed in the sections below.

4.5.5.1 StrataExplorer Template List

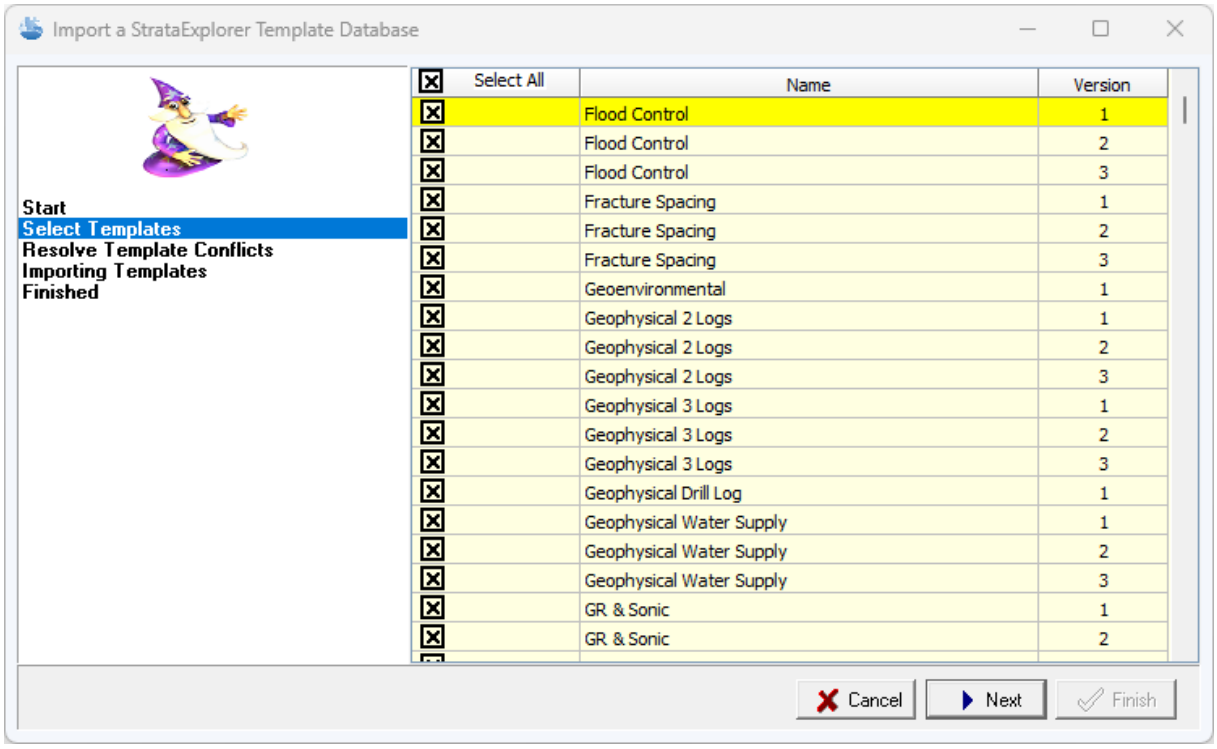
When importing templates, no project can be open at the time. Multiple StrataExplorer templates can be imported by selecting *File > Import > StrataExplorer Data > Templates*. The Import wizard form below will then be displayed. This form will guide you through the steps of importing a list of templates.

Step 1. Select the Template Database File



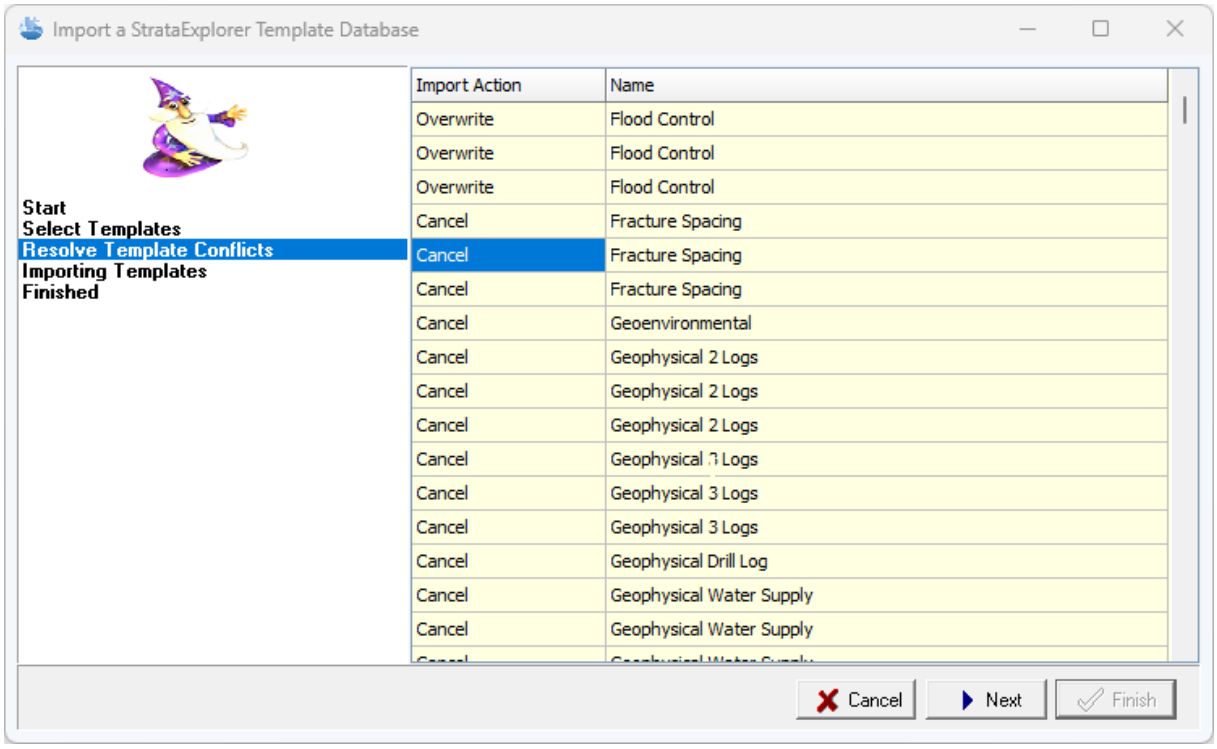
The first step is to select the StrataExplorer database containing the templates. This database is an Microsoft Access file named "strataexplorer.mdb". If the StrataExplorer program was installed and used locally on the computer the file is normally stored in the "c:\Program Data\GAEA\StrataExplorer3\Databases" directory for version 3. If the StrataExplorer database was used across a network, the file will be stored on a network drive. After the file has been selected, press the Next button to continue.

Step 2 Select Templates



The next step is to select the templates to import. A list of templates will be displayed using the database specified in the previous step. Select the templates by clicking on the box next to the template name. All of the templates can be selected and de-selected by clicking on the Select All box. After the templates have been selected click the Next button.

Step 3 Resolve Conflicts



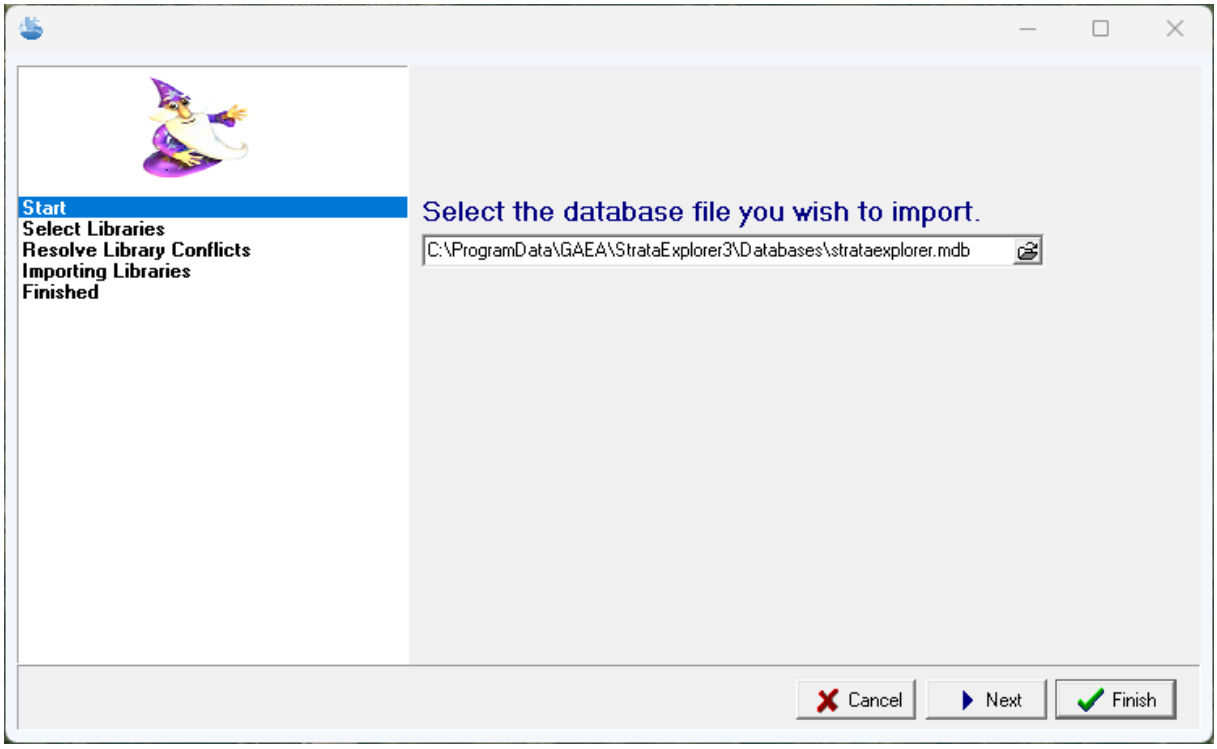
The next step is to resolve any conflicts with template names. This will happen when the name of an imported template is the same as the name of a template already in WinLoG RT. These conflicts can be resolved either by overwriting the existing template or by not importing the template. After any conflicts have been resolved, click the Next button to continue.

After the templates have been imported they will be added to the template list.

4.5.5.2 StrataExplorer Lithologic Libraries

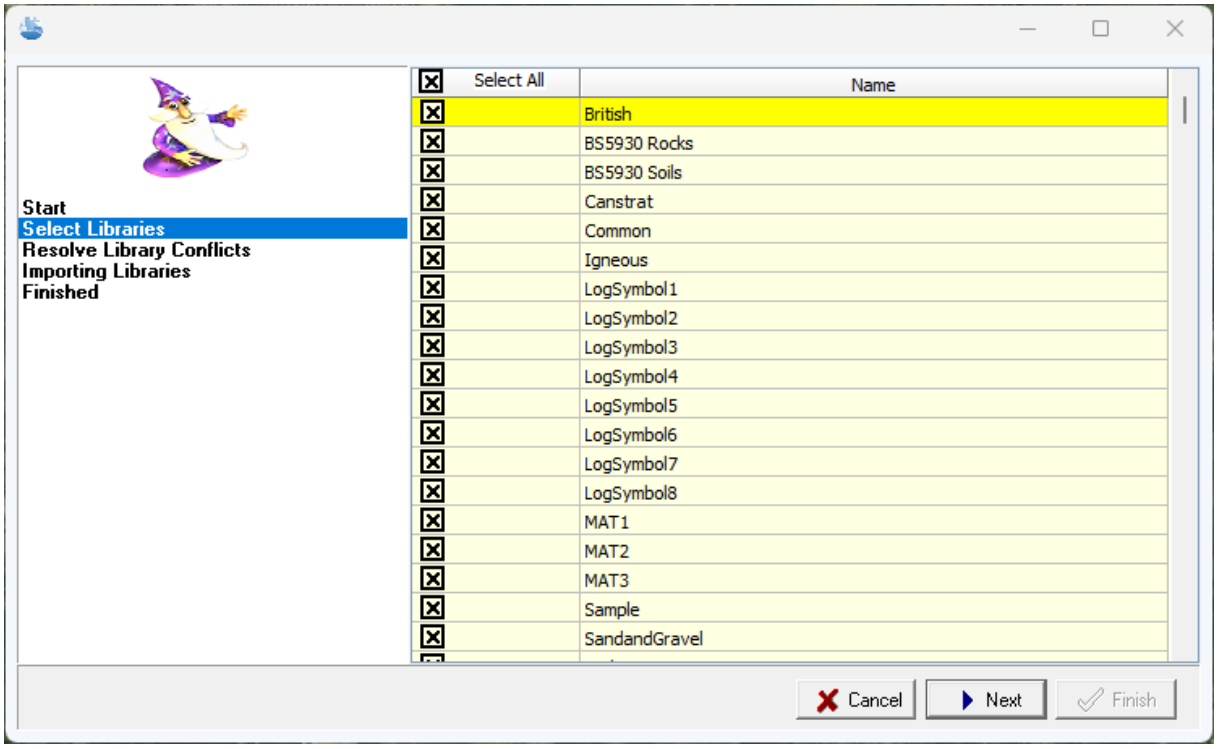
When importing lithologic libraries, no project can be open at the time. Multiple StrataExplorer lithologic libraries can be imported by selecting *File > Import > StrataExplorer Data > Lithologic Libraries*. The Import wizard form below will then be displayed. This form will guide you through the steps of importing a list of templates.

Step 1. Select the Library Database File



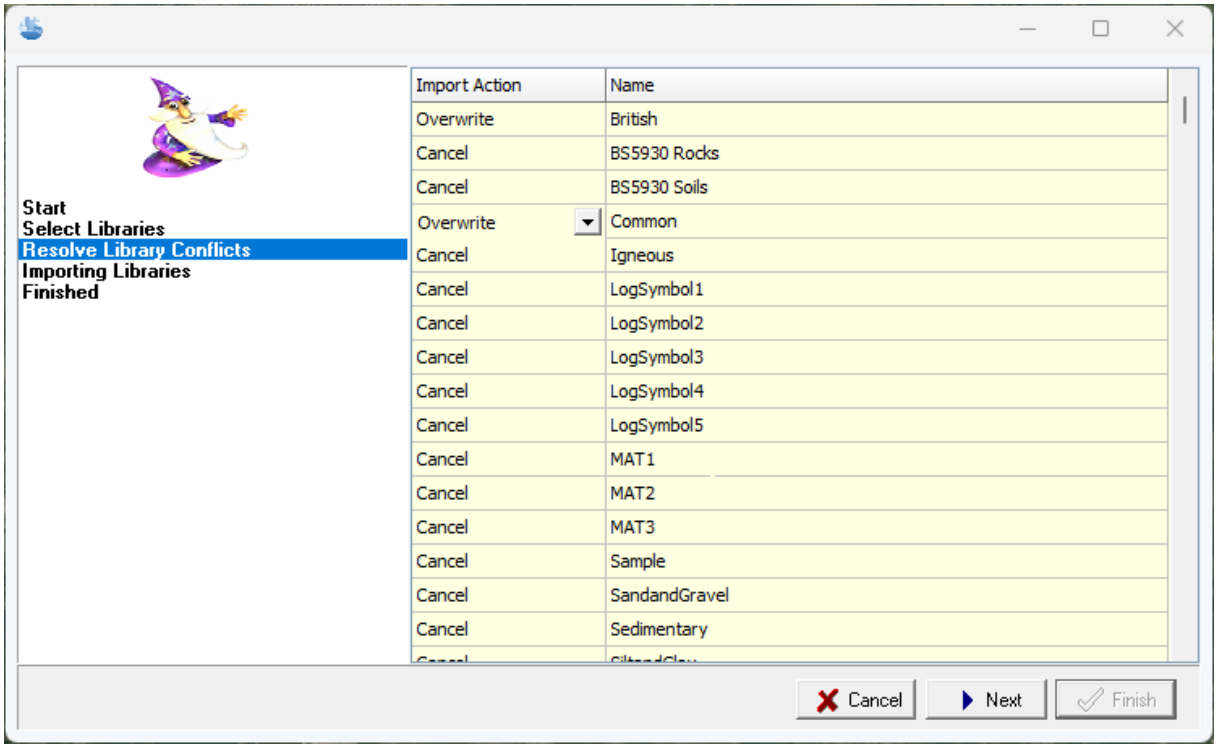
The first step is to select the StrataExplorer database containing the libraries. This database is an Microsoft Access file named "strataexplorer.mdb". If the StrataExplorer program was installed and used locally on the computer the file is normally stored in the "c:\Program Data\GAEA\StrataExplorer3\Databases" directory for version 3. If the StrataExplorer database was used across a network, the file will be stored on a network drive. After the file has been selected, press the Next button to continue.

Step 2 Select Libraries



The next step is to select the libraries to import. A list of libraries will be displayed using the database specified in the previous step. Select the libraries by clicking on the box next to the name. All of the libraries can be selected and deselected by clicking on the Select All box. After the libraries have been selected click the Next button.

Step 3 Resolve Conflicts



The next step is to resolve any conflicts with library names. This will happen when the name of an imported library is the same as the name of a library already in WinLoG RT. These conflicts can be resolved either by overwriting the existing library or by not importing the library. After any conflicts have been resolved, click the Next button to continue.

After the libraries have been imported they will be added to the library list.

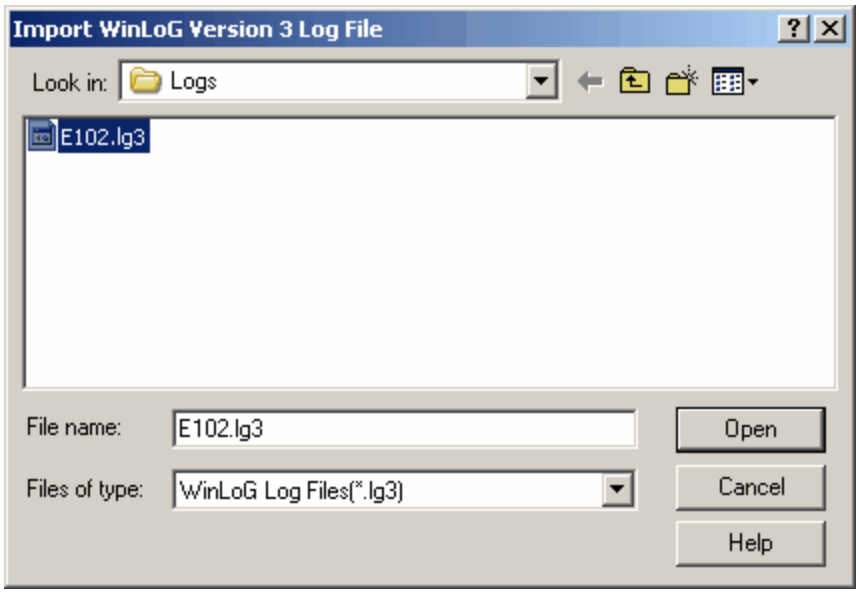
4.5.6 WinLoG Version 3 and 4 Data

Boring logs, well logs, and templates can be imported from versions 3 and 4 of WinLoG. The importation of these files is described in the sections below.

4.5.6.1 WinLoG Version 3 Log Exchange Files

Before the WinLoG version 3 exchange files can be imported into WinLoG RT they must first be exported from WinLoG as exchange files. For information on how to export the log as an exchange file see the WinLoG User's Guide. To import the data the project that it is to be added to must be opened.

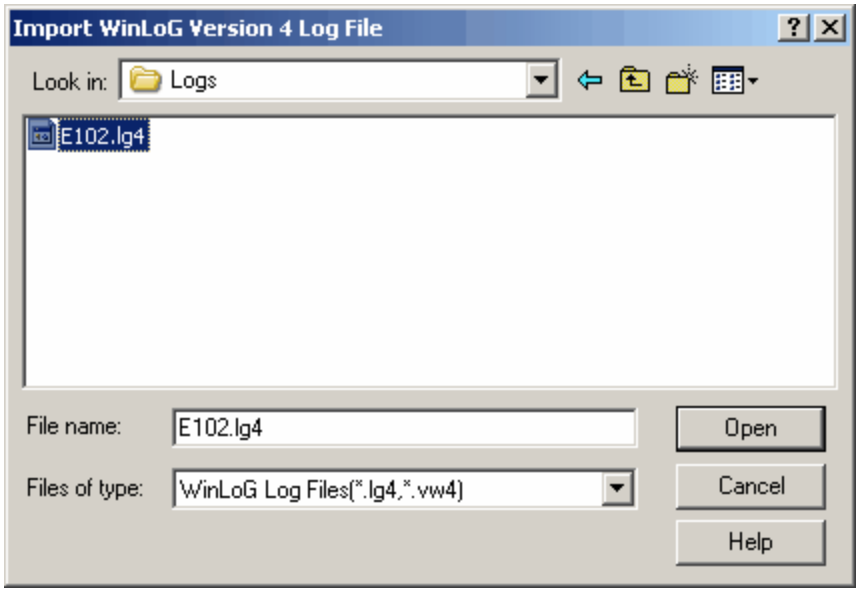
To import a WinLoG version 3 exchange file into a project select *File > Import > WinLoG, WinFence, and WinSieve Data > WinLoG version 3 log*. The import file form will be displayed. This form can be used to select the exchange file to import. After the file has been imported, the log will be opened. If the template for the log is not in the database, the Select Template form will be displayed where a template in the database can be selected for the log.



4.5.6.2 WinLoG Version 4 Log Exchange Files

Before the WinLoG version 4 exchange files can be imported into WinLoG RT they must first be exported from WinLoG as exchange files. For information on how to export the log as an exchange file see the WinLoG Version 4 User's Guide. To import the data the project that it is to be added to must be opened.

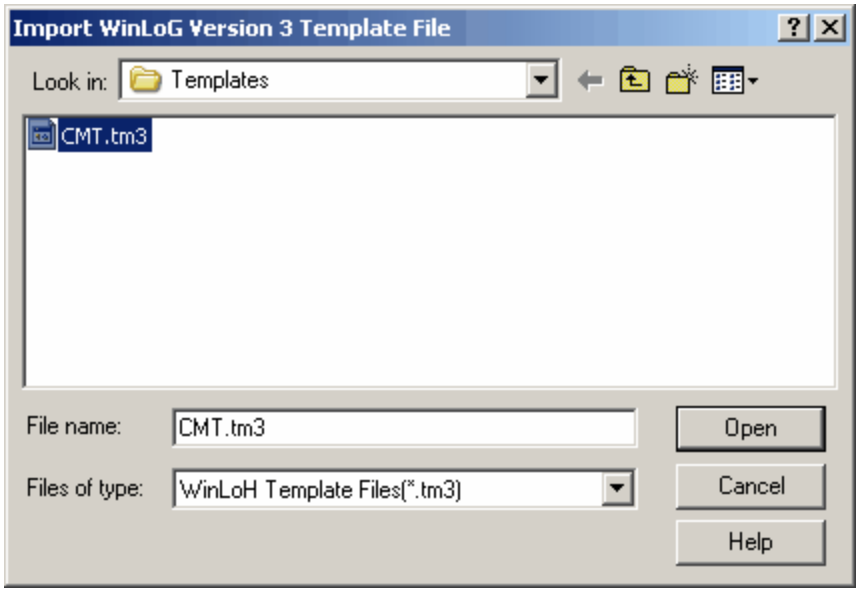
To import a WinLoG version 4 exchange file into a project select *File > Import > WinLoG, WinFence, and WinSieve Data > WinLoG version 4 log*. The import file form will be displayed. This form can be used to select the exchange file to import. After the file has been imported, the log will be opened. If the template for the log is not in the database, the Select Template form will be displayed where a template in the database can be selected for the log.



4.5.6.3 WinLoG Version 3 Template Exchange File

Before the WinLoG version 3 template exchange files can be imported into WinLoG RT they must first be exported from WinLoG as exchange files. For information on how to export the template as an exchange file see the WinLoG User's Guide.

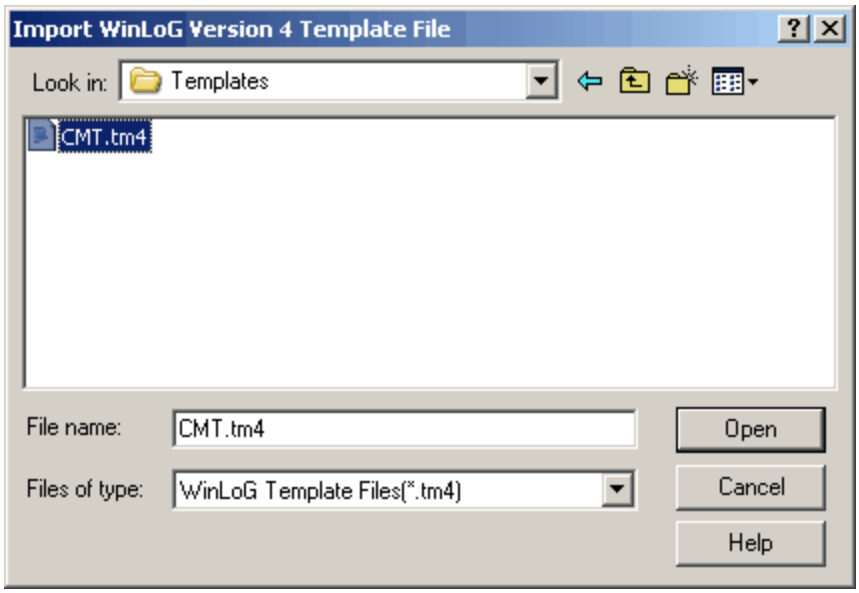
When importing a template no project can be currently be opened. To import a WinLoG version 3 template exchange file into a project select *File > Import > WinLoG, WinFence, and WinSieve Data > Templates > WinLoG version 3 Template*. The import file form will be displayed. This form can be used to select the exchange file to import. After the file has been imported, the template will be opened. If the name of the template starts with "Environmental", "Geotechnical", "Mining" or "Oil" this word will be used to set the industry for the template. If the next word in the name is "Letter", "Legal", "A3", or "A4" this word will be used to set the page size of the template. After the template has been imported it will be opened.



4.5.6.4 WinLoG Version 4 Template Exchange Files

Before the WinLoG version 4 template exchange files can be imported into WinLoG RT they must first be exported from WinLoG as exchange files. For information on how to export the template as an exchange file see the WinLoG Version 4 User's Guide.

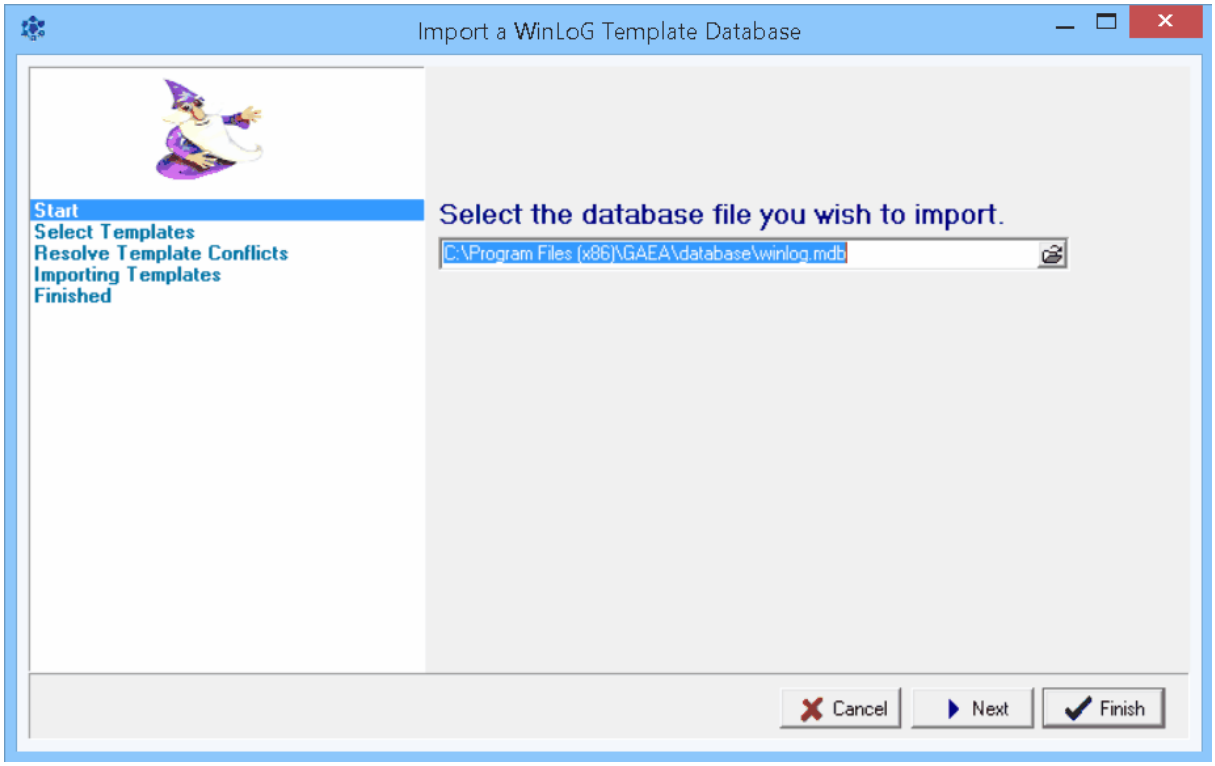
When importing a template no project can be currently open. To import a WinLoG version 4 template exchange file into a project select *File > Import > WinLoG, WinFence, and WinSieve Data > Templates > WinLoG version 4 Template*. The import file form will be displayed. This form can be used to select the exchange file to import. After the file has been imported, the template will be opened. If the name of the template starts with "Environmental", "Geotechnical", "Mining" or "Oil" this word will be used to set the industry for the template. If the next word in the name is "Letter", "Legal", "A3", or "A4" this word will be used to set the page size of the template. After the template has been imported it will be opened.



4.5.6.5 WinLoG Version 4 Template List

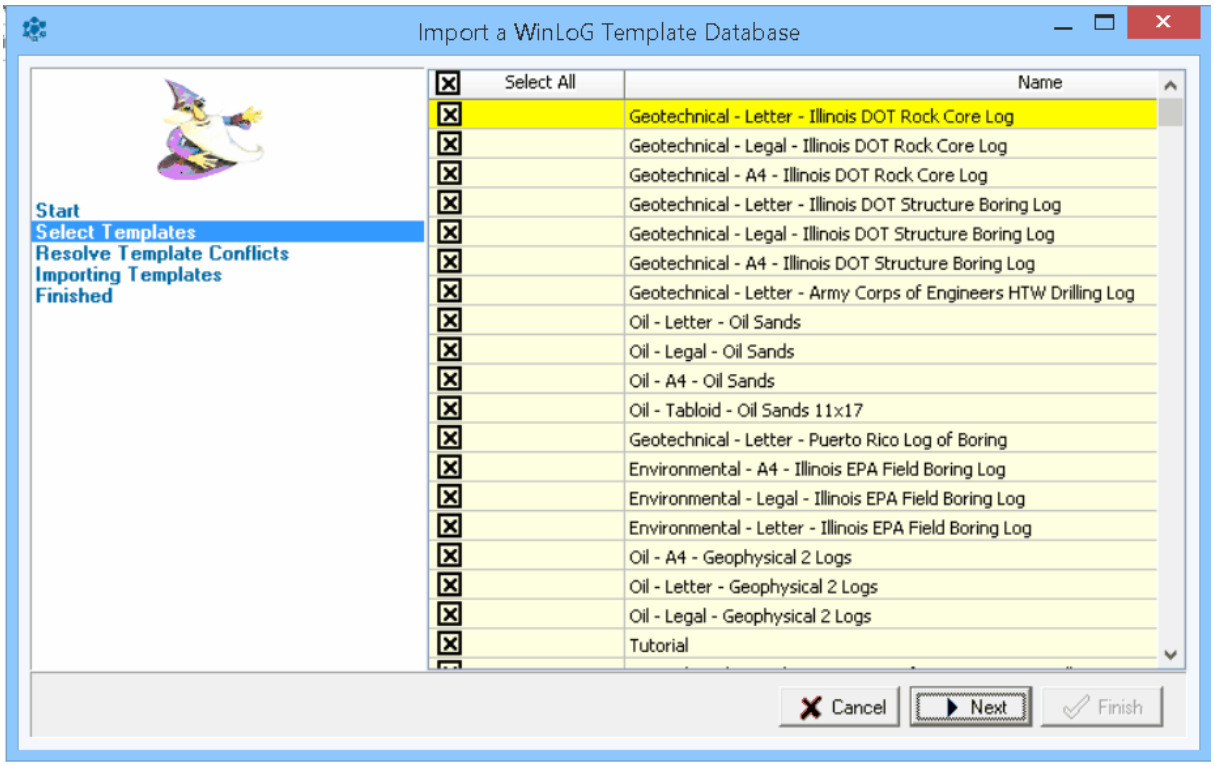
When importing a multiple templates, no project can be open at the time. Multiple WinLoG version 4 templates can be imported by selecting *File > Import > WinLoG , WinFence and WinSieve Data > Templates > WinLoG Database*. The Import a List of WinLoG Template Database wizard form below will then be displayed. This form will guide you through the steps of importing a list of templates.

Step 1. Select the Template Database File



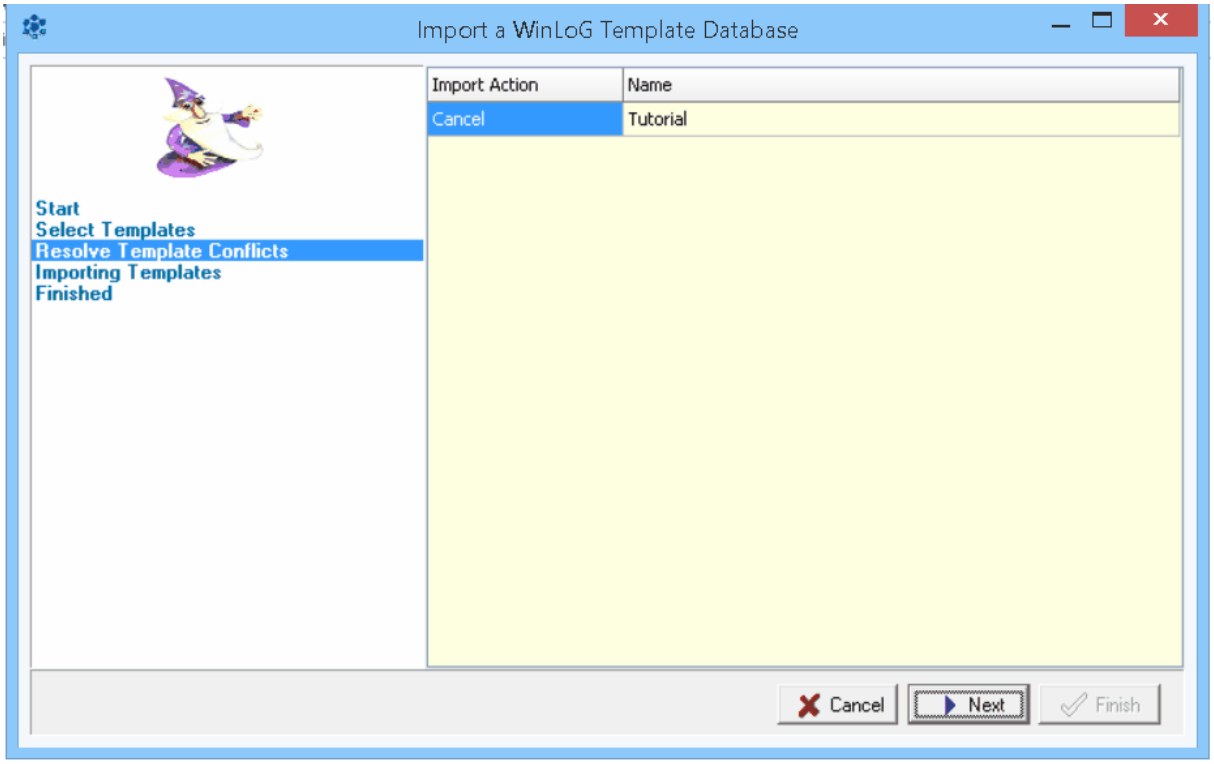
The first step is to select the WinLoG database containing the templates. This database is an Microsoft Access file named "winlog.mdb". If the WinLoG program was installed and used locally on the computer the file is normally stored in the "c:\Program Files\GAEA\database" directory. If the WinLoG database was used across a network, the file will be stored on a network drive. After the file has been selected, press the Next button to continue.

Step 2 Select Templates



The next step is to select the templates to import. A list of templates will be displayed using the database specified in the previous step. Select the templates by clicking on the box next to the template name. All of the templates can be selected and de-selected by clicking on the Select All box. After the templates have been selected click the Next button.

Step 3 Resolve Conflicts

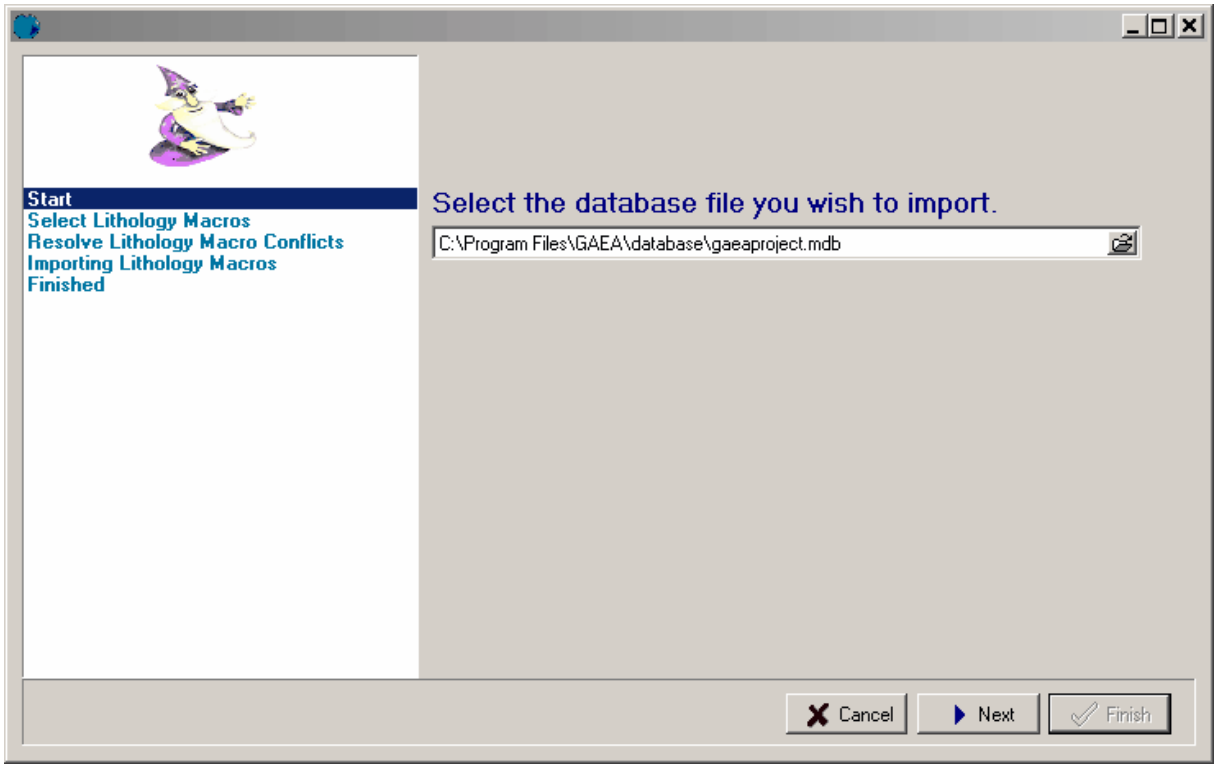


The next step is to resolve any conflicts with template names. This will happen when the name of an imported template is the same as the name of a template already in WinLoG RT. These conflicts can be resolved either by specifying a different name or by not importing the template. After any conflicts have been resolved, click the Next button to continue.

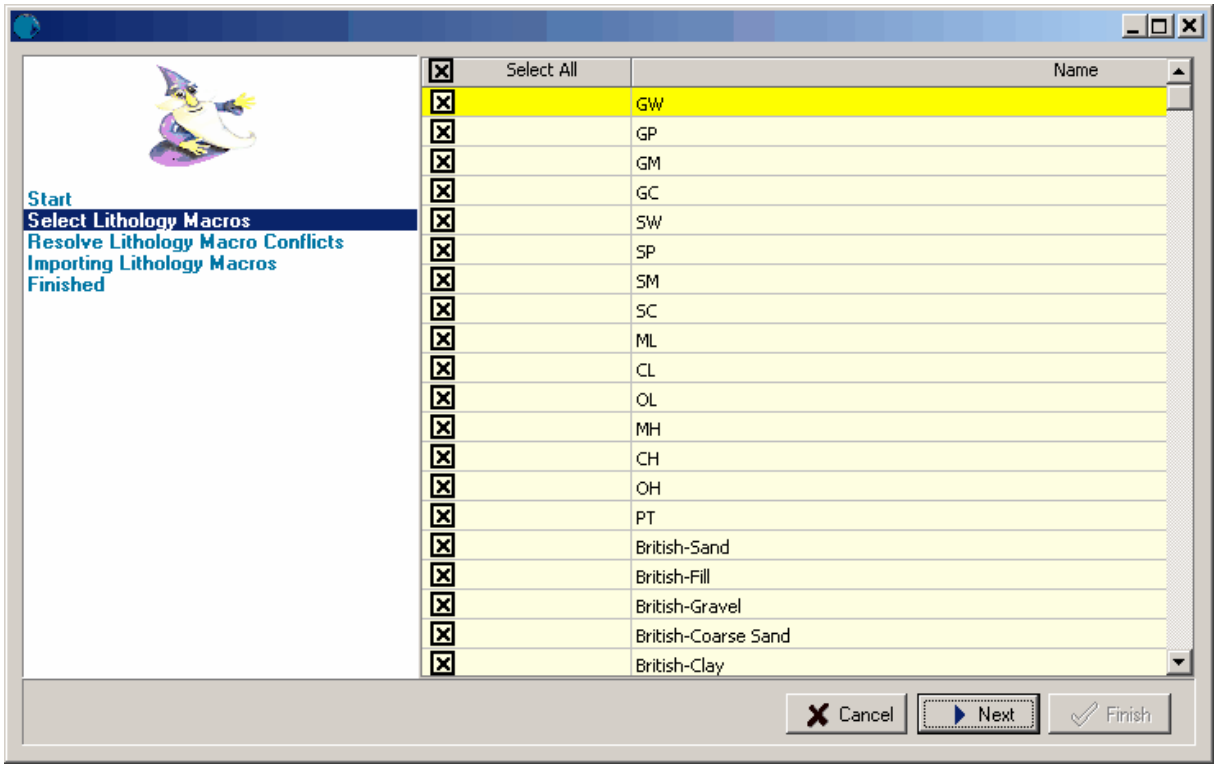
After the templates have been imported they will be added to the template list.

4.5.6.6 WinLoG Version 4 Lithologic Macros

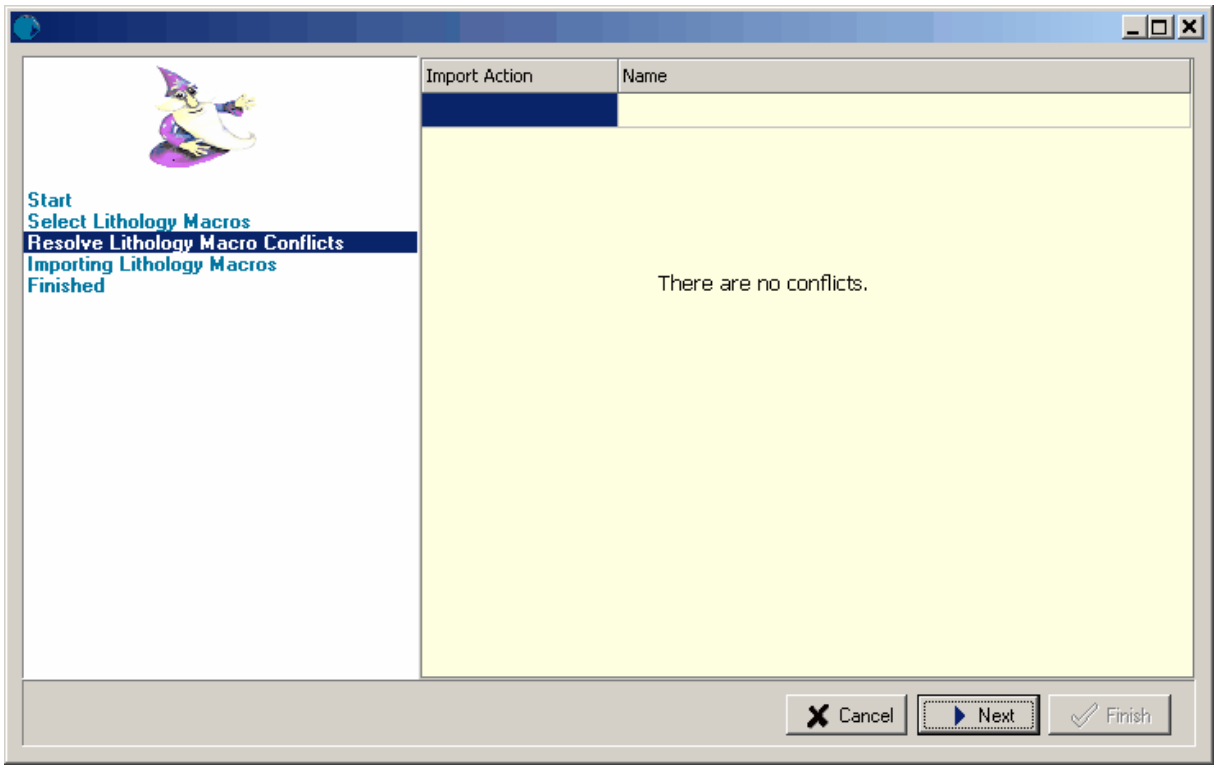
Lithologic macros can be imported from WinLoG version 4 by selecting *File > Import > WinLoG , WinFence and WinSieve Data > Lithologic Macros*. The Import Wizard form below will be displayed. You then need to select the WinLoG version 4 "gaeaproject.mdb" file containing the macros and press the Next button.



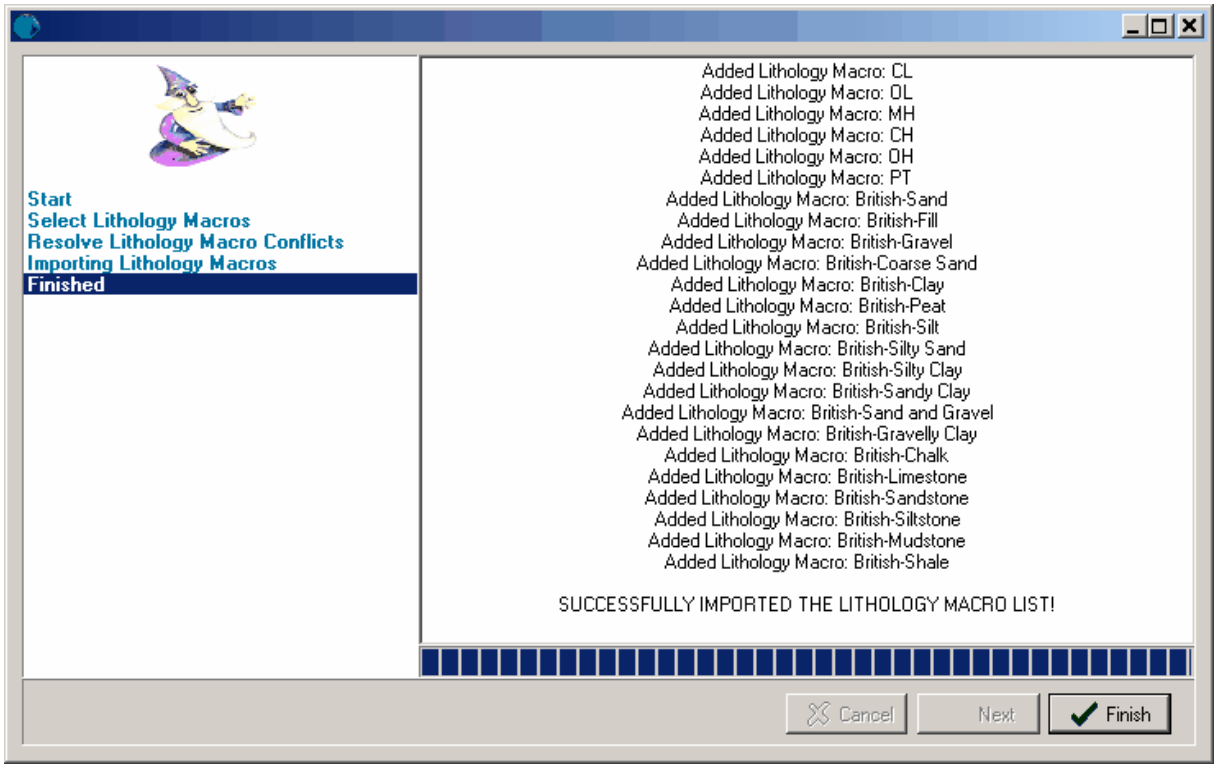
The form will then display a list of the lithologic macros contained in the database file as shown below. On this form you can select which macros to import and then click the Next button.



The form will then display any macros that conflict with the ones already in WinLoG RT and allow you to resolve the conflicts. If there are no conflicts or is they have been resolved, click the Next button to start the import.

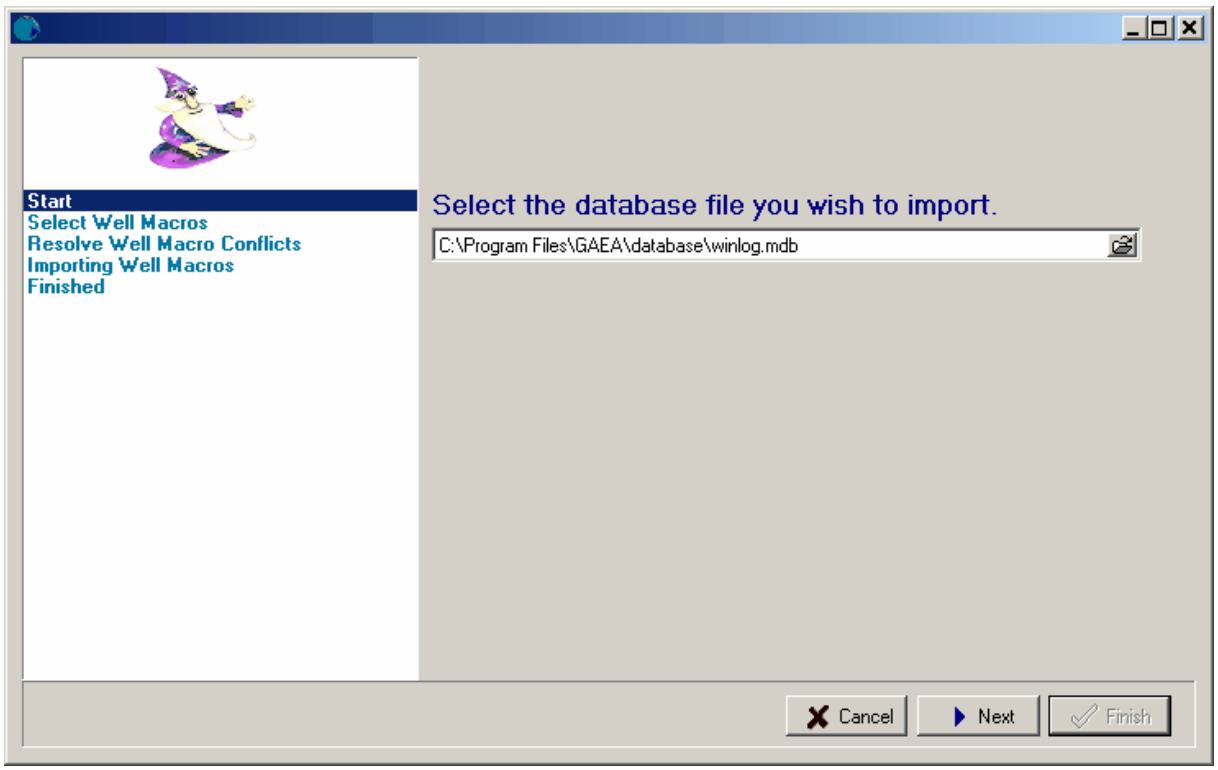


After the macros have been imported, click the Finish button.

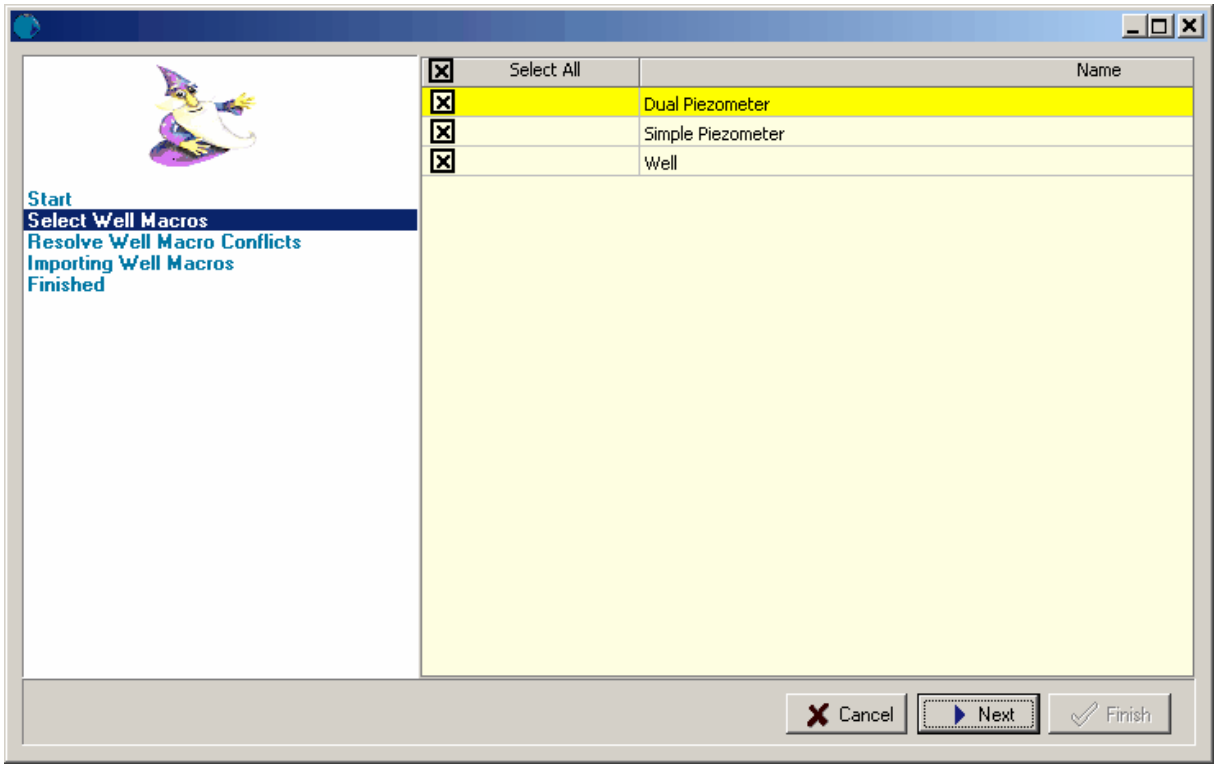


4.5.6.7 WinLoG Version 4 Well Macros

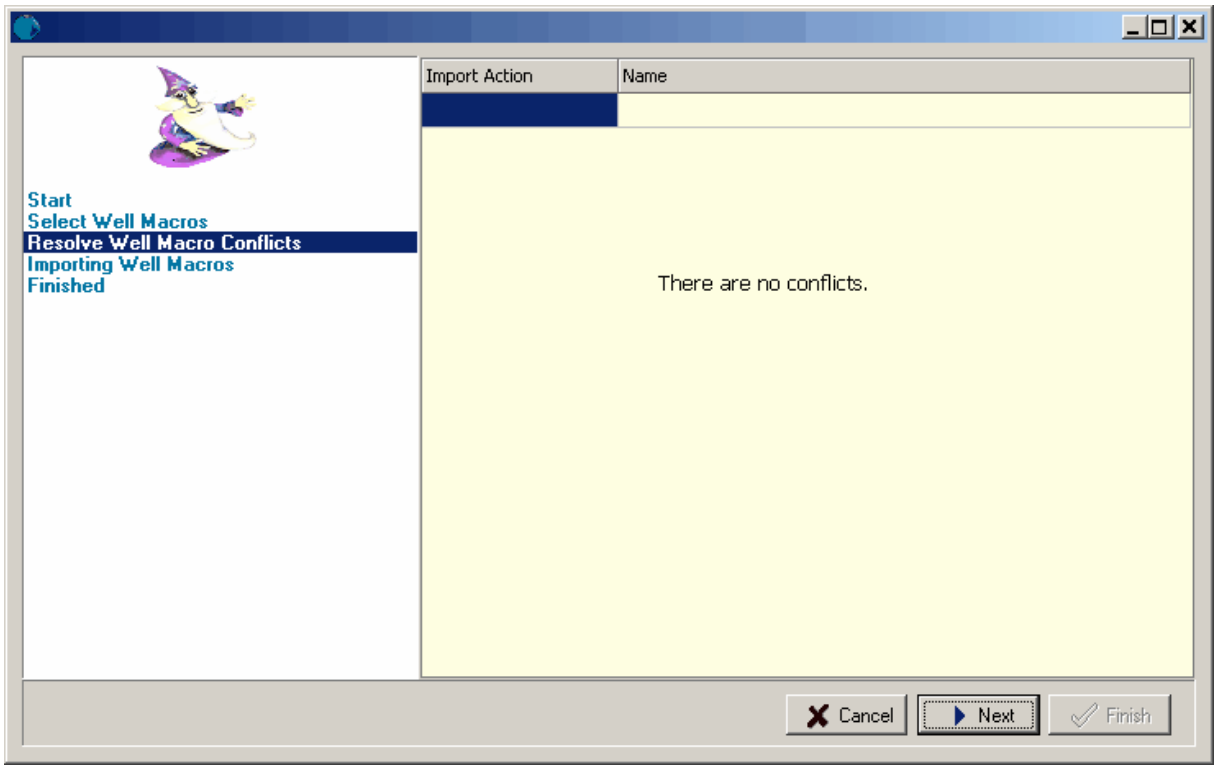
Well macros can be imported from WinLoG version 4 by selecting *File > Import > WinLoG , WinFence and WinSieve Data > Well Macros*. The Import Wizard form below will be displayed. You then need to select the WinLoG version 4 "winlog.mdb" file containing the macros and press the Next button.



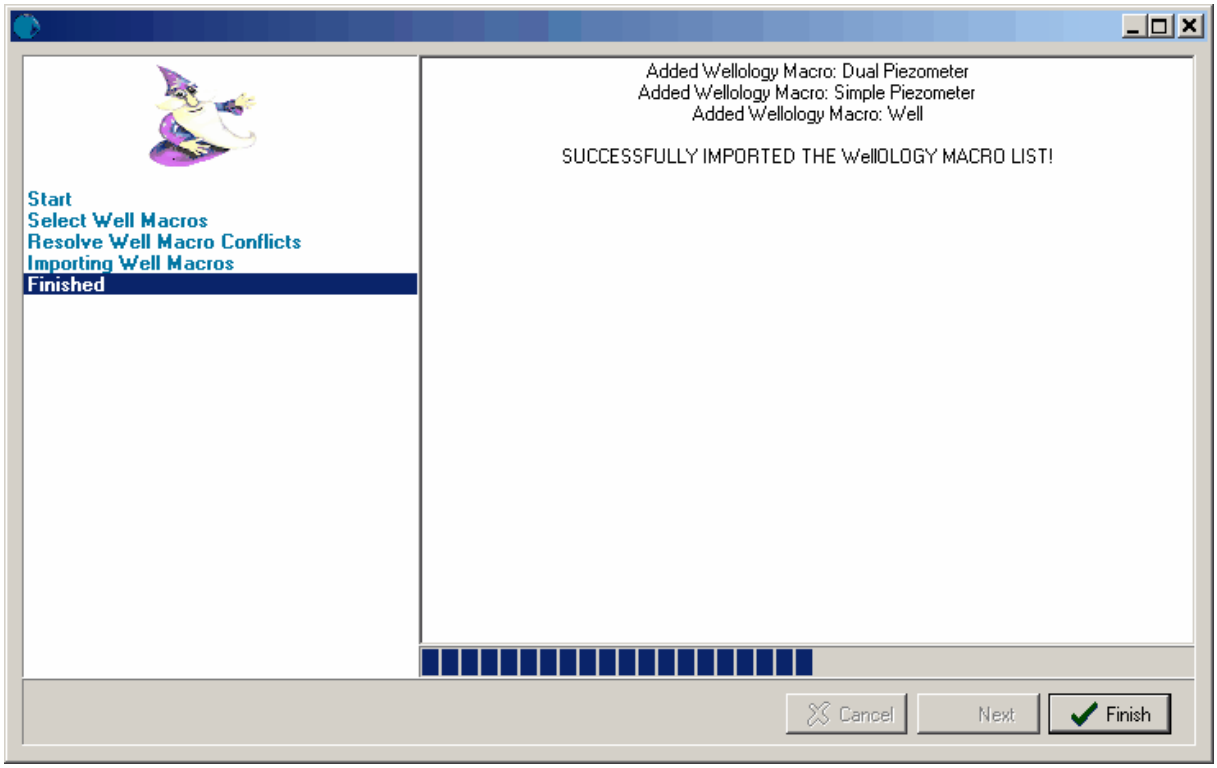
The form will then display a list of the well macros contained in the database file as shown below. On this form you can select which macros to import and then click the Next button.



The form will then display any macros that conflict with the ones already in WinLoG RT and allow you to resolve the conflicts. If there are no conflicts or is they have been resolved, click the Next button to start the import.



After the macros have been imported, click the Finish button.



4.5.7 Other Data

Other data from AGS, DIGGS, and gINT can be imported. The importation of this data is discussed in the sections below.

4.5.7.1 AGS Data

The Association of Geotechnical and Geoenvironmental Specialists (AGS) is a non-profit making trade association based in the U.K., established to improve the profile and quality of geotechnical and geoenvironmental engineering. The AGS Format is used for the electronic transfer of data in the geotechnical and geoenvironmental industries. The latest version of the format is 4. WinLoG RT supports the export and import in both version 4 and 3. Multiple borings/wells can be exported to a single AGS format file.

The importing of AGS data is covered in the Projects chapter.

4.5.7.2 DIGGS Data

The DIGGS (Data Interchange for Geotechnical and Geoenvironmental Specialists) project involves the development of a GML (XML-based) geospatial standard for the transfer of geotechnical and geoenvironmental data within an organization or between multiple organizations. DIGGS is provided by ASCE's Geo-Institute and more information can be found on their website at:

https://www.geoinstitute.org/special-projects/diggs

The importing of DIGGS data is covered in the Projects chapter.

4.5.7.3 gINT Data

Boring and well data can be imported and exported to and from gINT version 8 project databases. The importing of AGS data is covered in the Projects chapter.

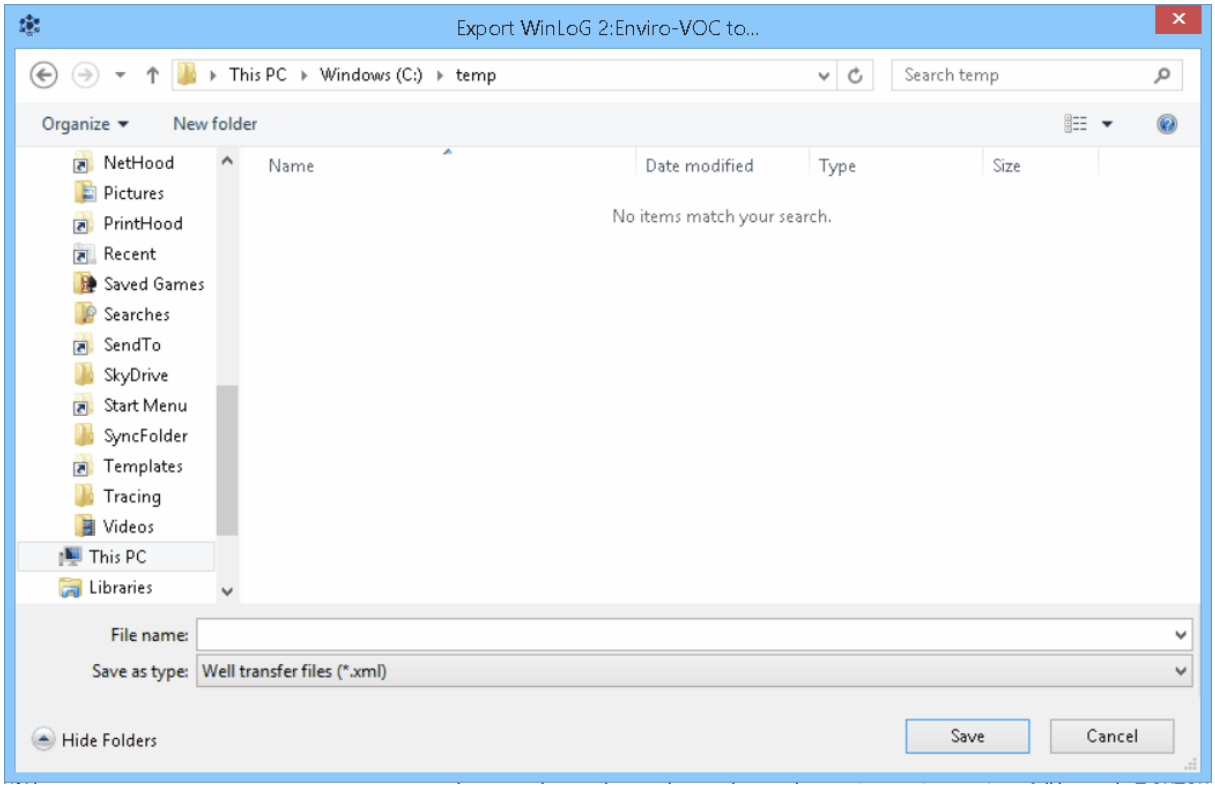
4.6 Exporting Data

Boring/well information and water level data can be exported to Excel tables and graphs. The exporting of boring/well information to Excel tables and water level data to Excel tables and Excel graphs is discussed in the Projects chapter.
In addition, borings/wells and templates can be exported to XML exchange files that can then be imported on to other computers that have WinLoG RT. Boring/well data can also be exported to AGS format files.

The sections below describe how to export Borings/Wells and templates.

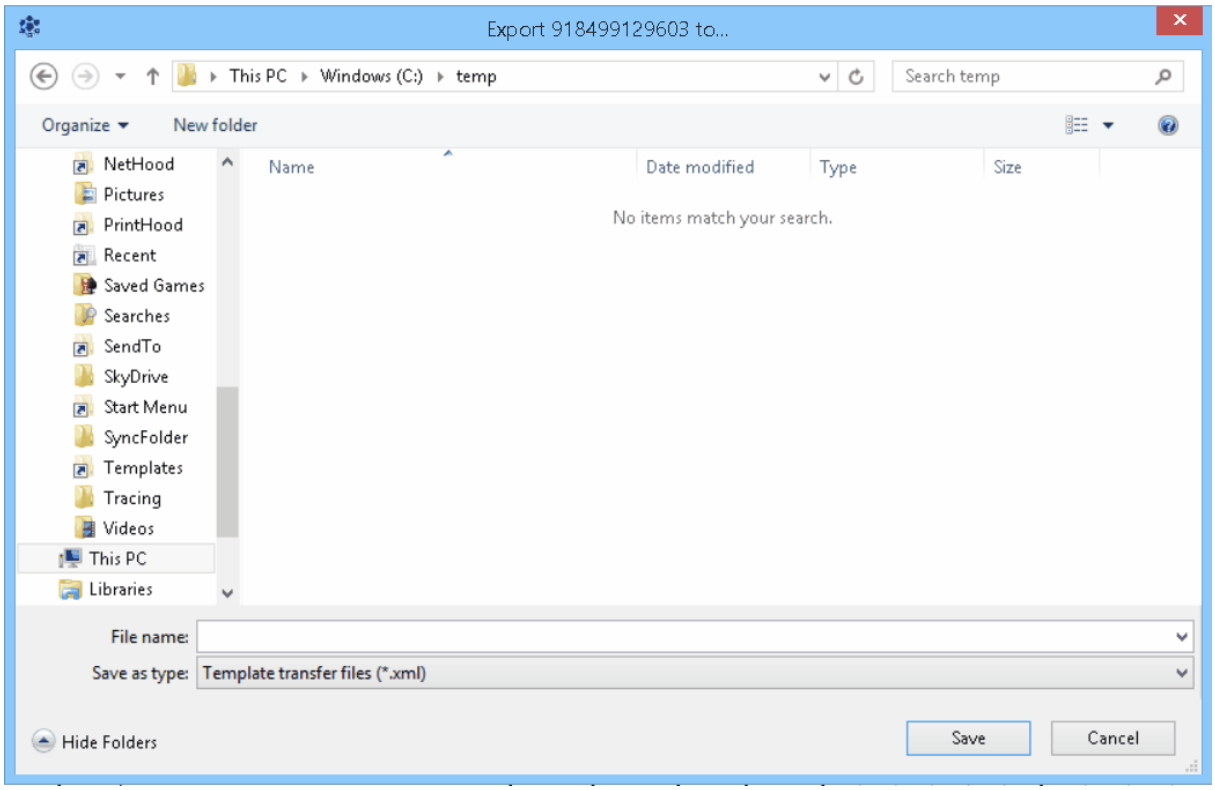
4.6.1 Boring/Well Log XML Exchange Files

In WinLoG RT XML Exchange files can be used to transfer boring/wells from one computer to another. Before exporting a boring/well to a XML Exchange file, the boring/well needs to be open. To export a boring/well to a XML Exchange file select *File > Export > boring/well.* The Export Boring form below will then be displayed. Enter the XML file name and then click the Save button. The log will then be exported to the file.



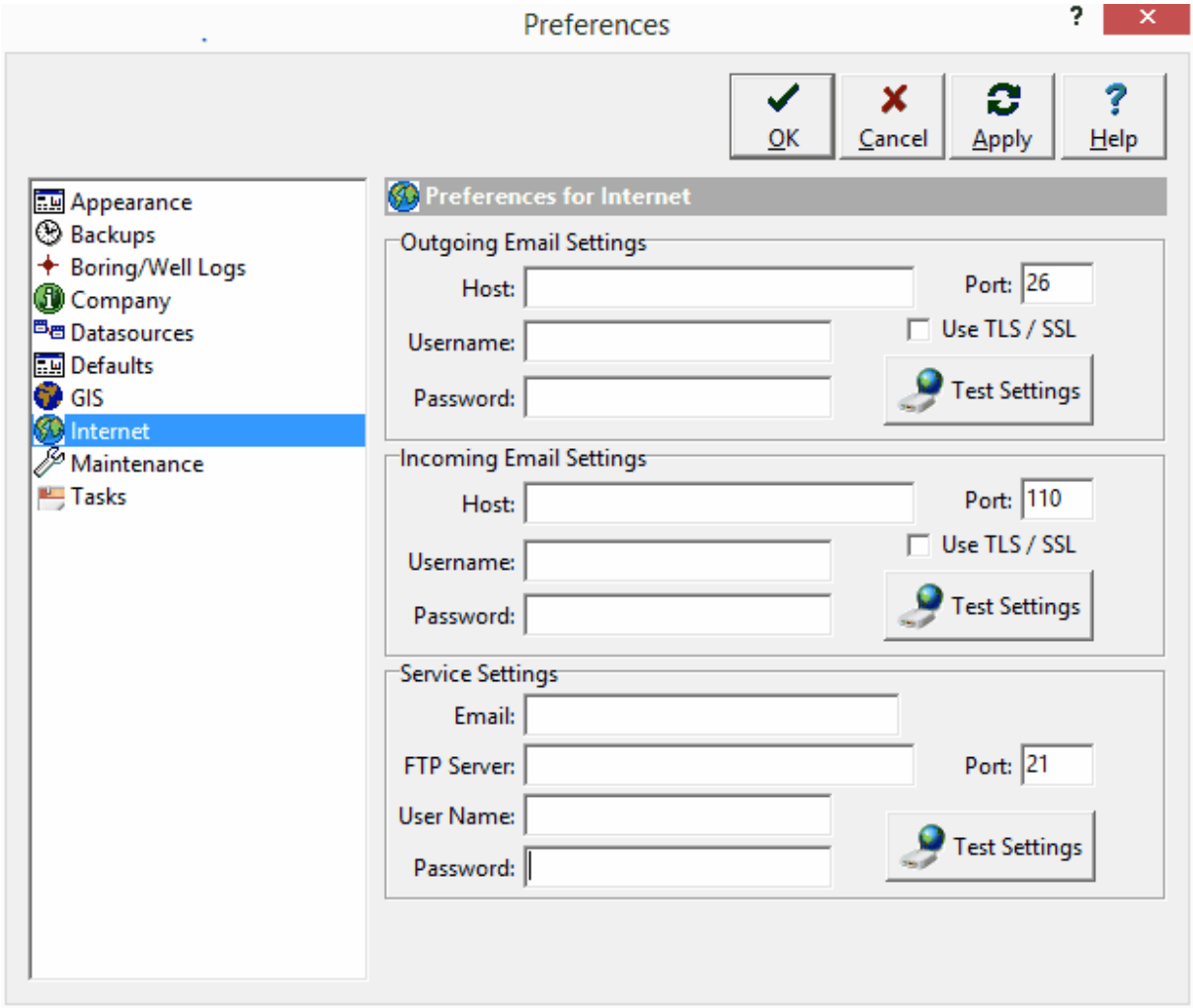
4.6.2 Template XML Exchange Files

In WinLoG RT XML Exchange files can be used to transfer boring/well templates from one computer to another. Before exporting a boring/well template to a XML Exchange file, the template needs to be open. To export a boring/well template to a XML Exchange file select *File > Export > boring/well Template.* The Export Template form below will then be displayed. Enter the XML file name and then click the Save button. The template will then be exported to the file.



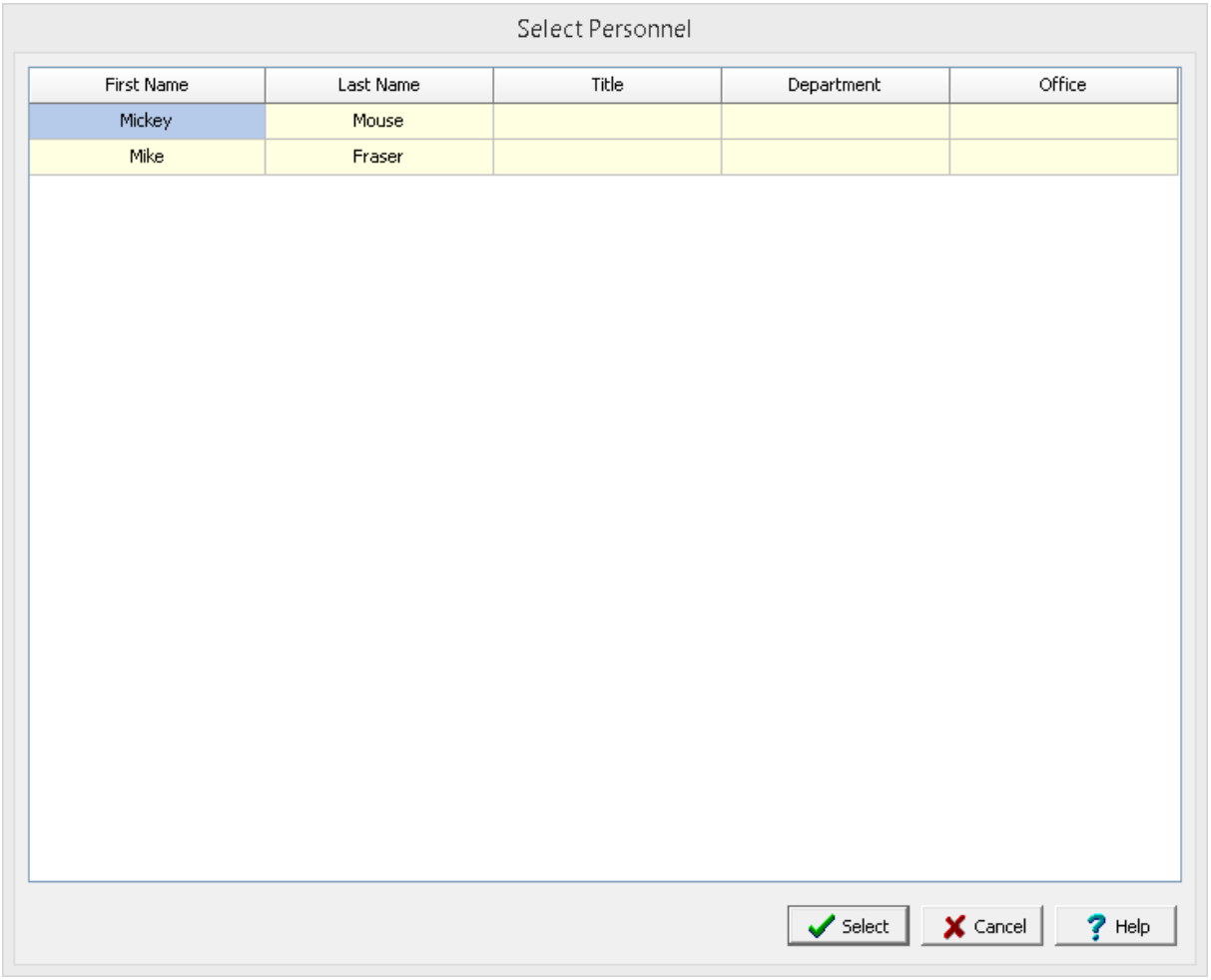
4.6.3 Boring/Well Logs to StrataExplorer

Boring and well logs can be exported from WinLoG RT and then imported into GaeaSynergy by email or FTP. Before exporting the boring or well log must be opened. To export the log either select *File > Export > Borehole > Service Email* or *File > Export > Borehole > Service FTP*. The log will then be exported and uploaded to the GaeaSynergy site specified on the Internet tab in Preferences. The GaeaSynergy service will then automatically import the log.



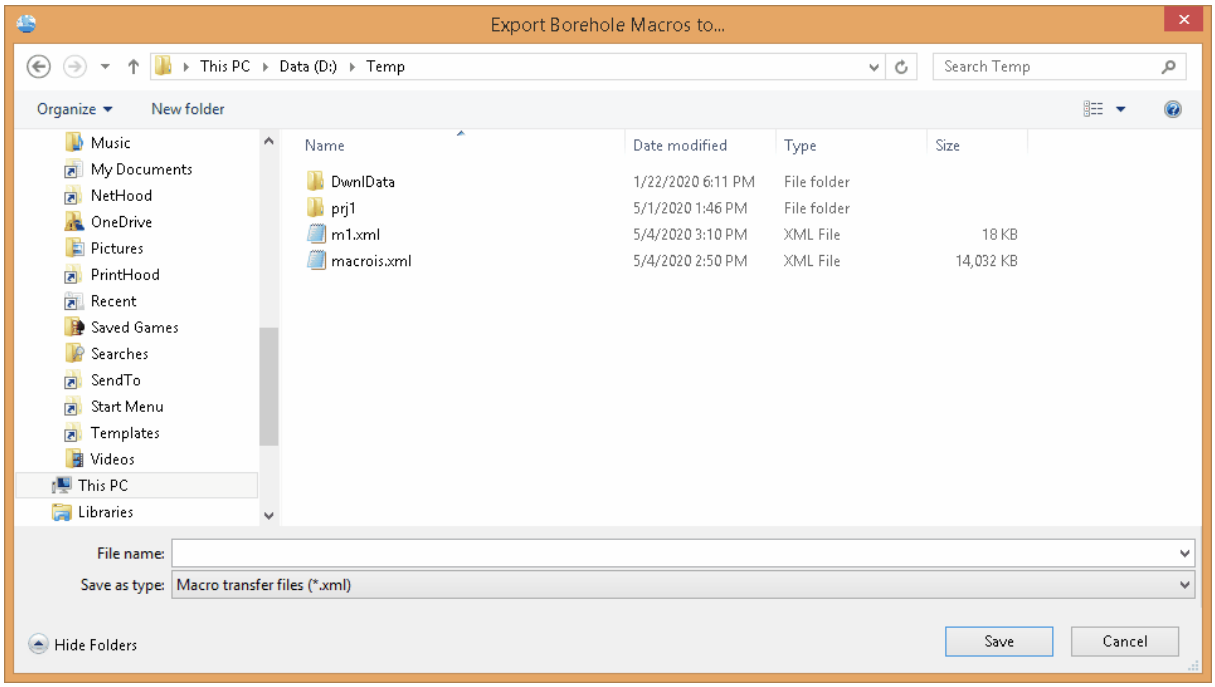
4.6.4 Templates to WinLoG RT

Templates can be sent from GaeaSynergy to WinLoG RT by email or FTP. Before sending the template it must be open. To export by FTP select *File > Export > Borehole Template > To FTP Service* then select the user from the list of personnel. And to export by email select *File > Export > Borehole Template > To Email Service* then select the user from the list of personnel. For more information on importing the template into WinLoG RT see the WinLoG RT User's Guide.



4.6.5 Lithology and Well Macros

Lithology and well macros can be exported to an XML exchange file by selecting *File > Export > Borehole Macros*. The Export Borehole Macro form will be displayed.



Use this form to specify the file name to export the macros to.

4.6.6 AGS Data

The Association of Geotechnical and Geoenvironmental Specialists (AGS) is a non-profit making trade association based in the U.K., established to improve the profile and quality of geotechnical and geoenvironmental engineering. The AGS Format is used for the electronic transfer of data in the geotechnical and geoenvironmental industries. The latest version of the format is 4. Multiple borings/wells can be exported to a single AGS format file.

The exporting of DIGGS data is covered in the Projects chapter.

4.6.7 DIGGS Data

The DIGGS (Data Interchange for Geotechnical and Geoenvironmental Specialists) project involves the development of a GML (XML-based) geospatial standard for the transfer of geotechnical and geoenvironmental data within an organization or between multiple organizations. DIGGS is provided by ASCE's Geo-Institute and more information can be found on their website at:

https://www.geoinstitute.org/special-projects/diggs

The exporting of DIGGS data is covered in the Projects chapter.

4.7 Macros

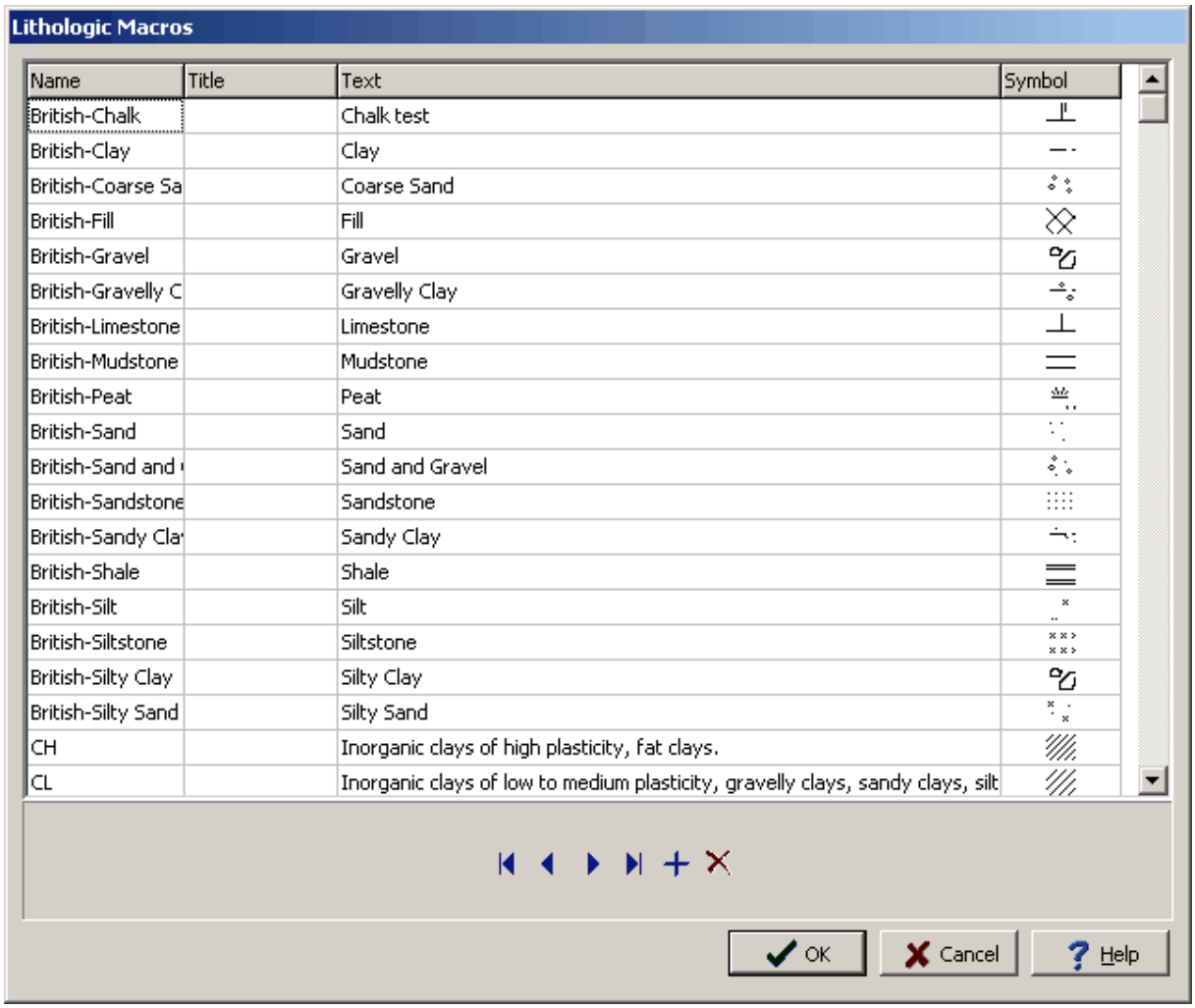
Several types of macros are provided to make the creation and editing of boring/well faster and more flexible. The following macros are described in the sections below.

- Lithology macros are used to insert previously defined text and symbols into lithologic layers.and to make the automatic generation of cross-sections more accurate.
- Well macros are used to quickly add standard well components, water level information, and text annotation to a log.
- Graph macros are used to create calculated graph columns from one or more graph or geophysical columns.
- ASCII import macros are used to create scripts that can be used to import graph and geophysical data.

4.7.1 Lithology Macros

Lithology macros are used to insert previously defined text, titles and symbols into lithologic layers. By using lithology macros, logs can be created faster and more consistently. In addition, the use of a unified naming system of layers makes the automatic generation of cross-sections more accurate. For a description on how to insert a lithology macro in a layer, see Selecting Strata Names 302.

To create or edit lithology macros select *Tools > Boring/Well > Lithology Macros*. The Lithology Macros form will be displayed.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following information can be entered on this form:

Name: This is the name of the lithology macro. The name is used only for selection and cross-section generation purposes and will not be displayed on the log.

Title: This is the title of the lithology macro. The title can be inserted into the layer and displayed on the log.

Text: This is the text of the lithology macro. The text of the macro will be inserted into the layer description.

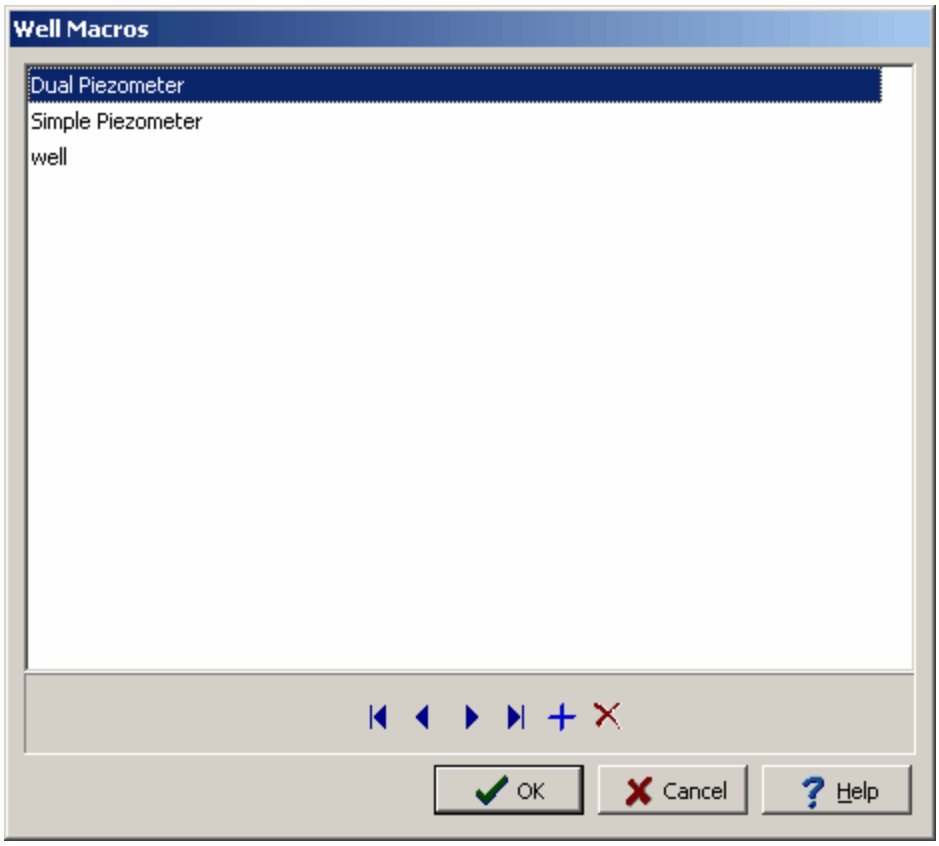
Symbol: This is the lithologic symbol for the macro. When this column is selected, a button will appear for the symbol. To change the symbol, click on the button and the Select Lithologic Symbol form will be displayed. This form can be used to select the lithologic library and symbol.

The buttons at the bottom can be used to move to the first macro, move to the previous macro, move to the next macro, move to the last macro, add a macro, and delete a macro.

4.7.2 Well Macros

Well macros can be used to quickly add standard well components, water level information, and text annotation to a log. Macros can be used for single well installation, complex nested wells, above-ground well casings, etc.

To create or edit a Well Macro using the Tools menu, select *Tools > Boring/Well > Well Macros*. The Well Macros form will be displayed, listing all of the current well macros.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

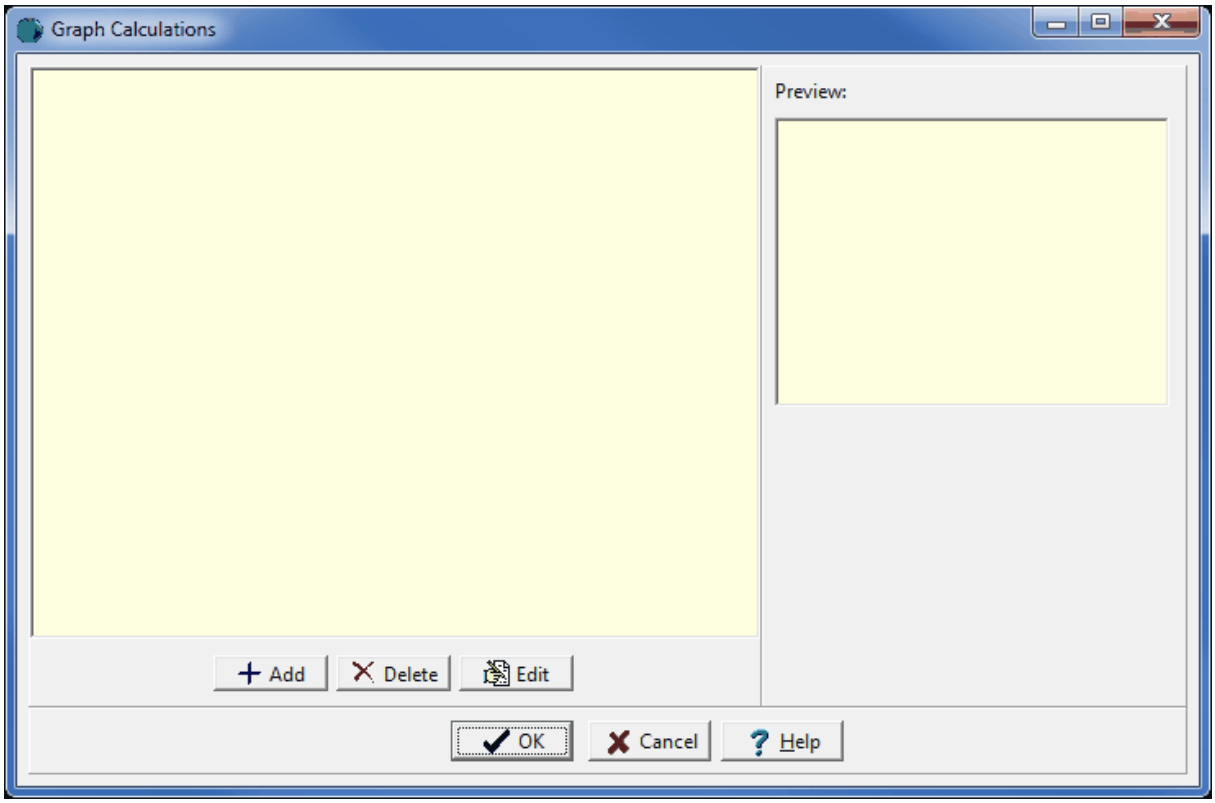
An existing well macro can be edited by double-clicking on it in the list. The creation and editing of the well macros is the same as described in editing a well. At the bottom of the form there are buttons to move to the first macro, move to the previous macro, move to the next macro, move to the last macro, add a macro, and delete a macro.

Well macros can also be created after the well data has been input for a log, using the "Save as Well Macro" button on the Well form as described in editing a well 340. When this button is pressed a form will be displayed where you can specify the name of the well macro.

4.7.3 Graph Macros

Graph macros are used to create calculated graph columns from one or more graph or geophysical columns. The calculated column can then be added to a template. When a log is displayed with the template, the calculated column will automatically be generated using the specified calculation. For example, if a log contains to graph or geophysical datasets, A and B, a calculated column could be used to display a graph of A - 2 * B.

To create or edit a graph macro select *Tools > Boring/Well > Graph Macros*. The Graph Macro form will be displayed. On the left side of this form is a list of existing macros and on the right is the description for the selected macro.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

Adding a Macro

A new macro can be added using the Add button. The Graph Macro Calculation form will be displayed and can be edited as described in the section below.

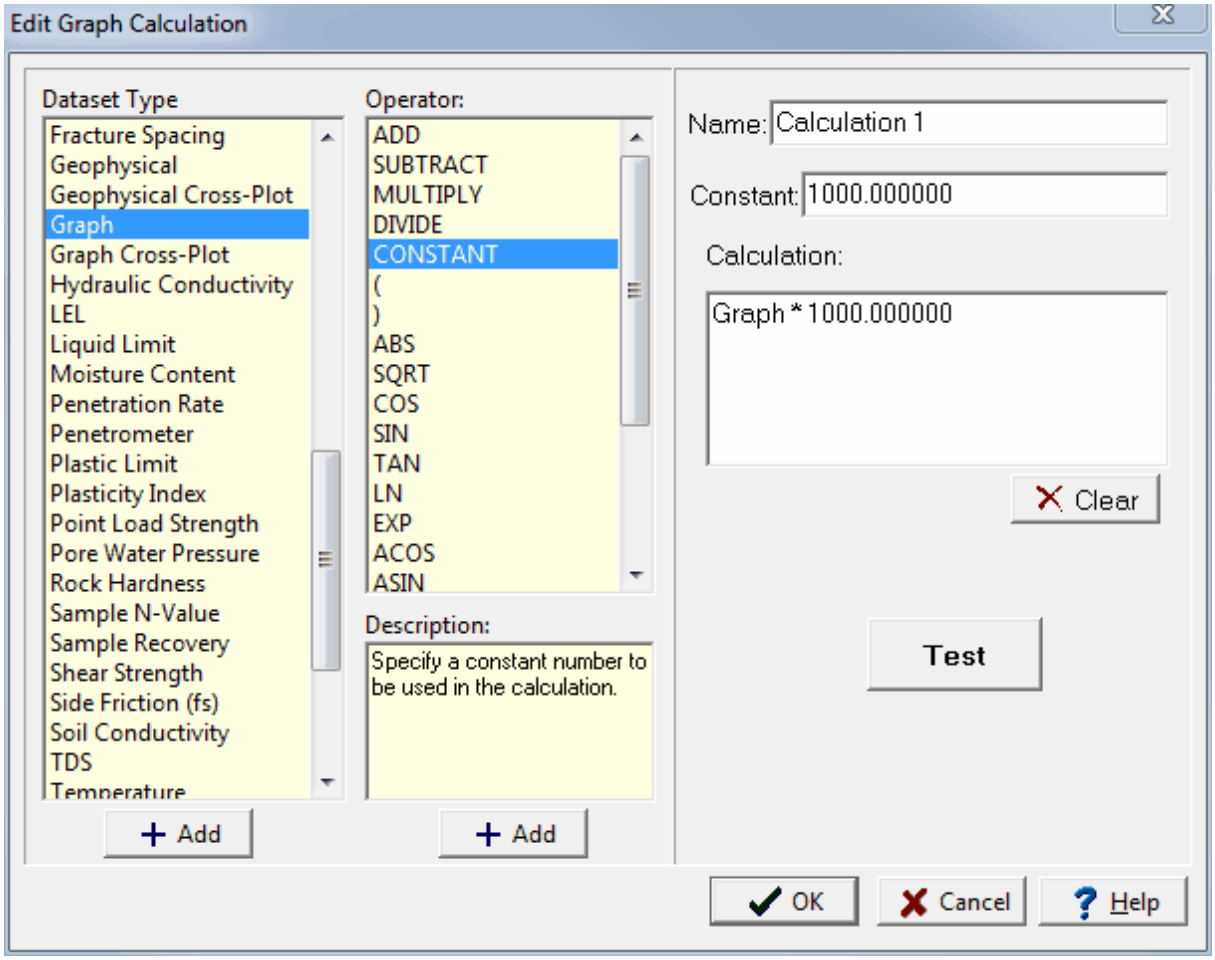
Editing a Macro

To edit a macro, select it on the list and click the Edit button. The Graph Macro Calculation form will be displayed and can be edited as described in the section below.

Deleting a Macro

To delete a macro, select it on the list and click the Delete button.

4.7.3.1 Graph Macro Calculation



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

Name: This is the unique name of the macro.

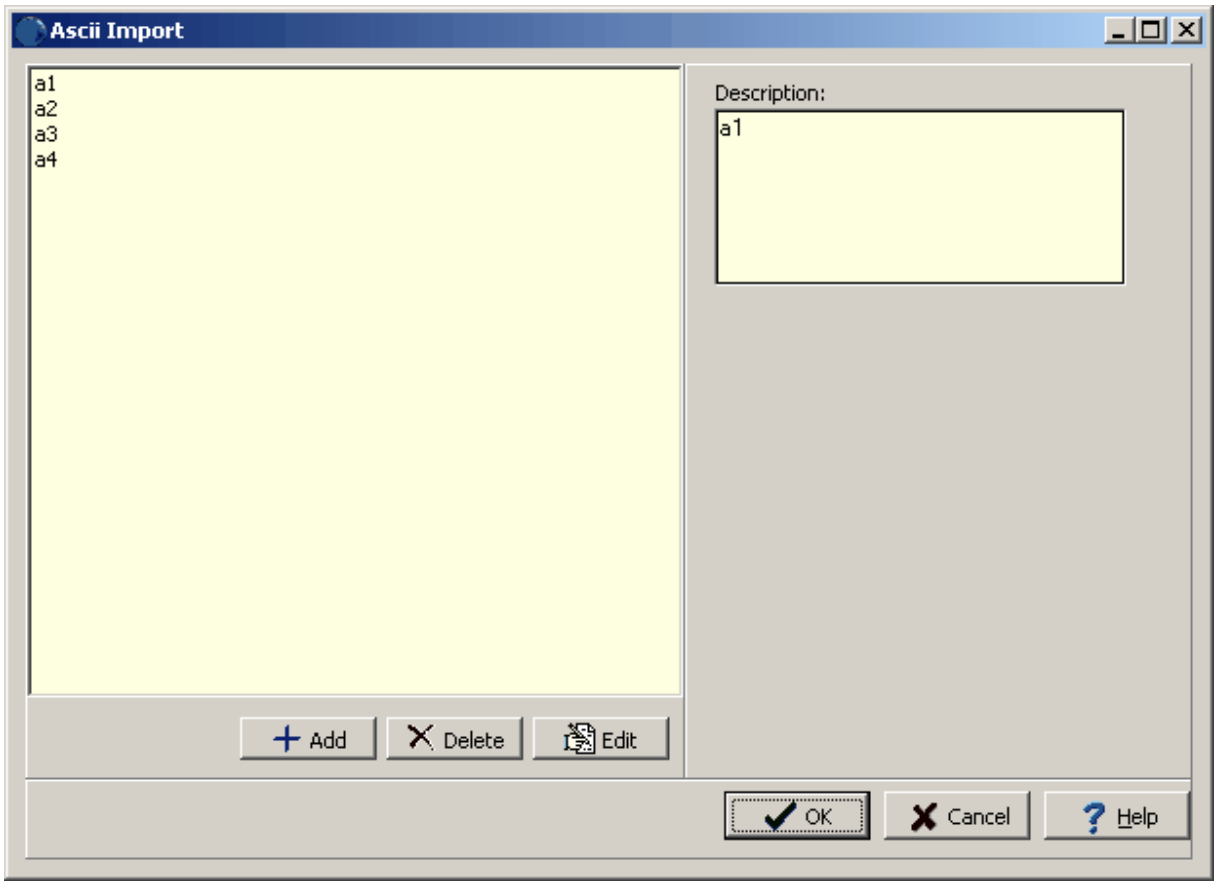
Description: This is the description of the macro.

Calculation: This is the calculation to be performed. The calculation can consist of one or more datasets, operators, and constants. At least one dataset must be included in the calculation. To add a dataset to the calculation select it in the list and click on the Add button and to add an operator select it in the list and click on the Add button. Constant can be entered directly in the calculation. After the calculation has been entered click on the Test button to ensure that it is mathematically consistent.

4.7.4 ASCII Import Macros

ASCII import macros are used to create scripts that can be used to import graph and geophysical data that are stored in ASCII files. These scripts are useful if you will be importing several files that are always in the same format. The scripts allow you to specify the number of header lines to skip and the depth and data value columns.

To create or edit an ASCII import macro select *Tools > Boring/Well > ASCII Import Macros*. The ASCII Import form will be displayed. On the left side of this form is a list of existing macros and on the right is the description for the selected macro.



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

Adding a Macro

A new macro can be added using the Add button. The ASCII Import Script Format form will be displayed and can be edited as described in the section below.

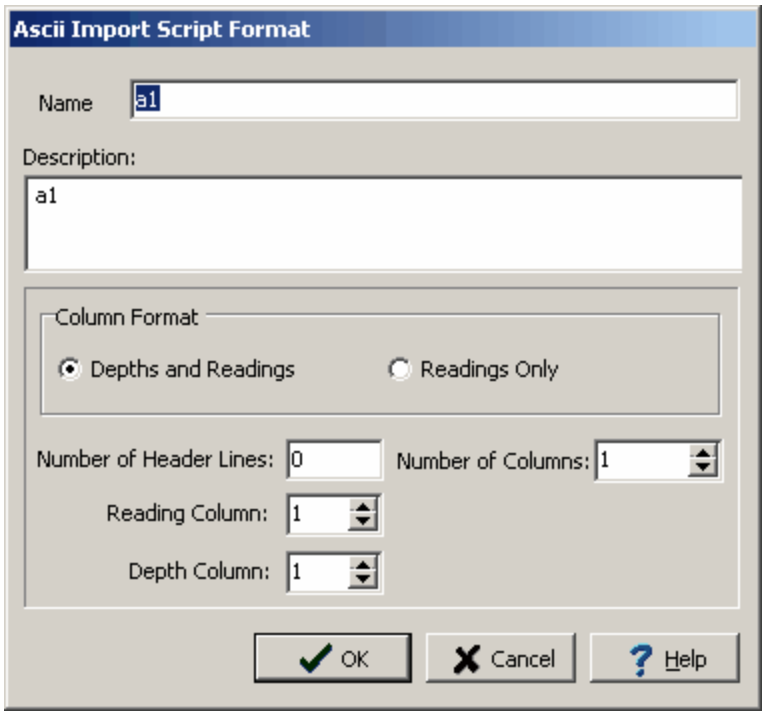
Editing a Macro

To edit a macro, select it on the list and click the Edit button. The ASCII Import Script Format form will be displayed and can be edited as described in the section below.

Deleting a Macro

To delete a macro, select it on the list and click the Delete button.

4.7.4.1 ASCII Import Script Format



(The appearance of the form will differ slightly depending on if it is WinLoG or WinLoG RT)

The following can be edited on this form:

Name: This is the unique name of the script.

Description: This is the description of the script.

Column Format: The file can have either the depths and readings in columns or only the readings in a column. If the column format is “Depths and Readings” the depths of the data points will be extracted from the depth column. If the column format is “Readings Only” the depths of the data points will be calculated using the specified start depth and increment.

Number of Header Lines: This is the number of header lines in the file to skip before reading the data from the columns.

Number of Columns: This is the number of data columns in the file.

Reading Column: This is the number of the column (starting with column 1 at the left side of the file) that has the readings.

Depth Column: This is the number of the column that has the depths. If the Column Format is “Readings Only”, this field will not be displayed.

Start Depth: This is the start depth to use for the readings. If the Column Format is “Depths & Readings”, this field will not be displayed.

Depth Interval: This is the depth interval to use between readings. If the Column Format is “Depths & Readings”, this field will not be displayed.

WinLoG RT

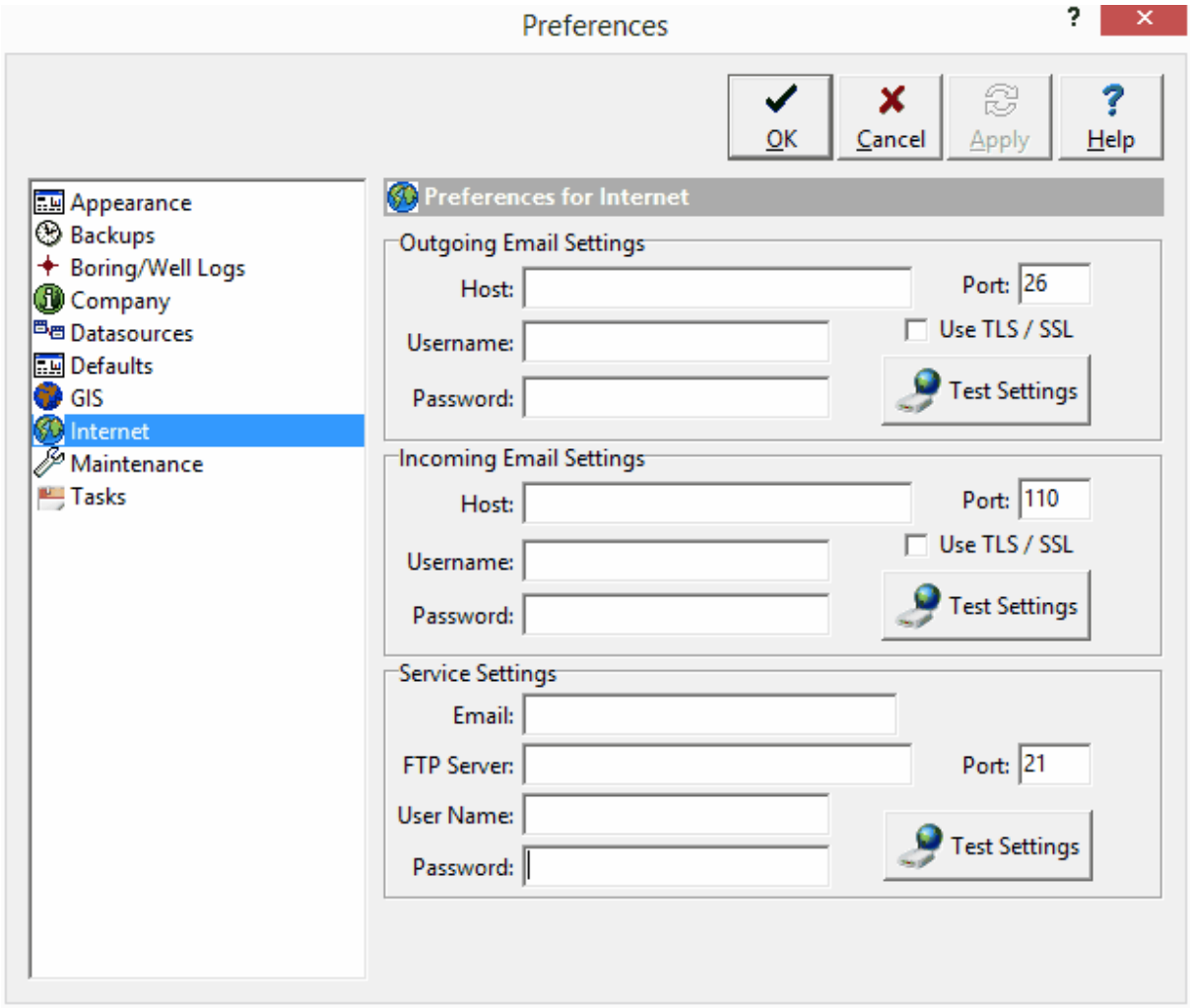
User Guide

Chapter 5 Sending and Receiving Data

Chapter 5 Sending and Receiving Data

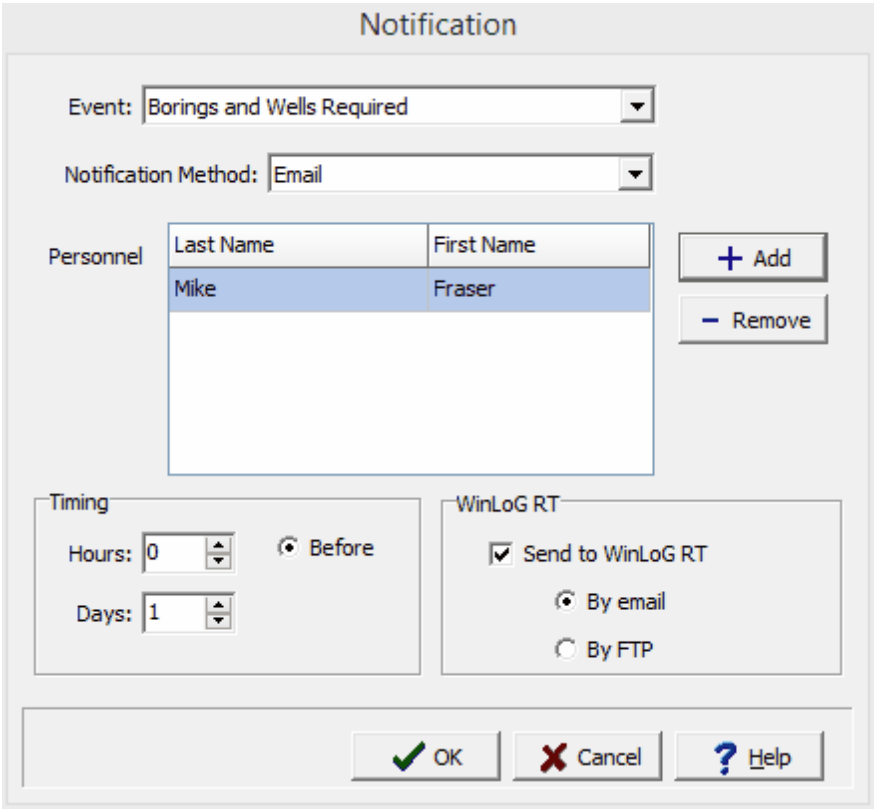
Task, project, boring, and well data can be sent and received between WinLoG RT and the GaeaSynergy network application. This enables data to be collected in the field with WinLoG RT and then sent and uploaded automatically by the GaeaSynergy network in the office. In addition, tasks, projects and templates can be sent from the GaeaSynergy network and then uploaded automatically by WinLoG RT.

The settings for the GaeaSynergy service email address and FTP site are specified on the Internet tab in Preferences.



5.1 Importing Tasks

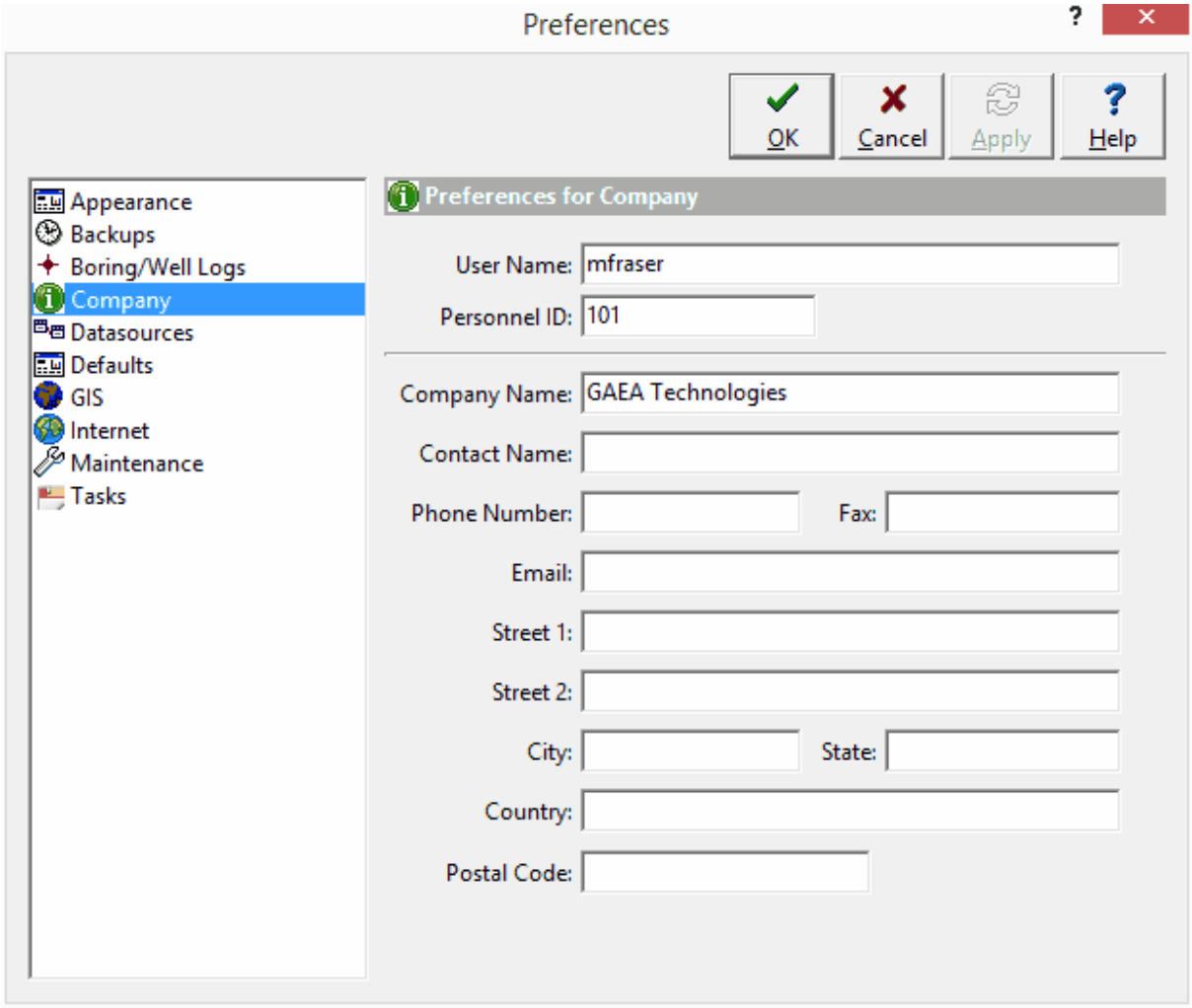
WinLoG RT can automatically receive tasks from the GaeaSynergy network application by email or FTP. These tasks will be automatically loaded when the WinLoG RT program is started. To send the task data to WinLoG RT it must be specified in the notifications for the task in GaeaSynergy.



5.2 Importing Templates

WinLoG RT can automatically receive templates from GaeaSynergy via email or FTP. To use this feature, the network version of GaeaSynergy must be installed and the GaeaSynergy Network Data Service running. The templates sent from GaeaSynergy will then be imported when the WinLoG RT application is started.

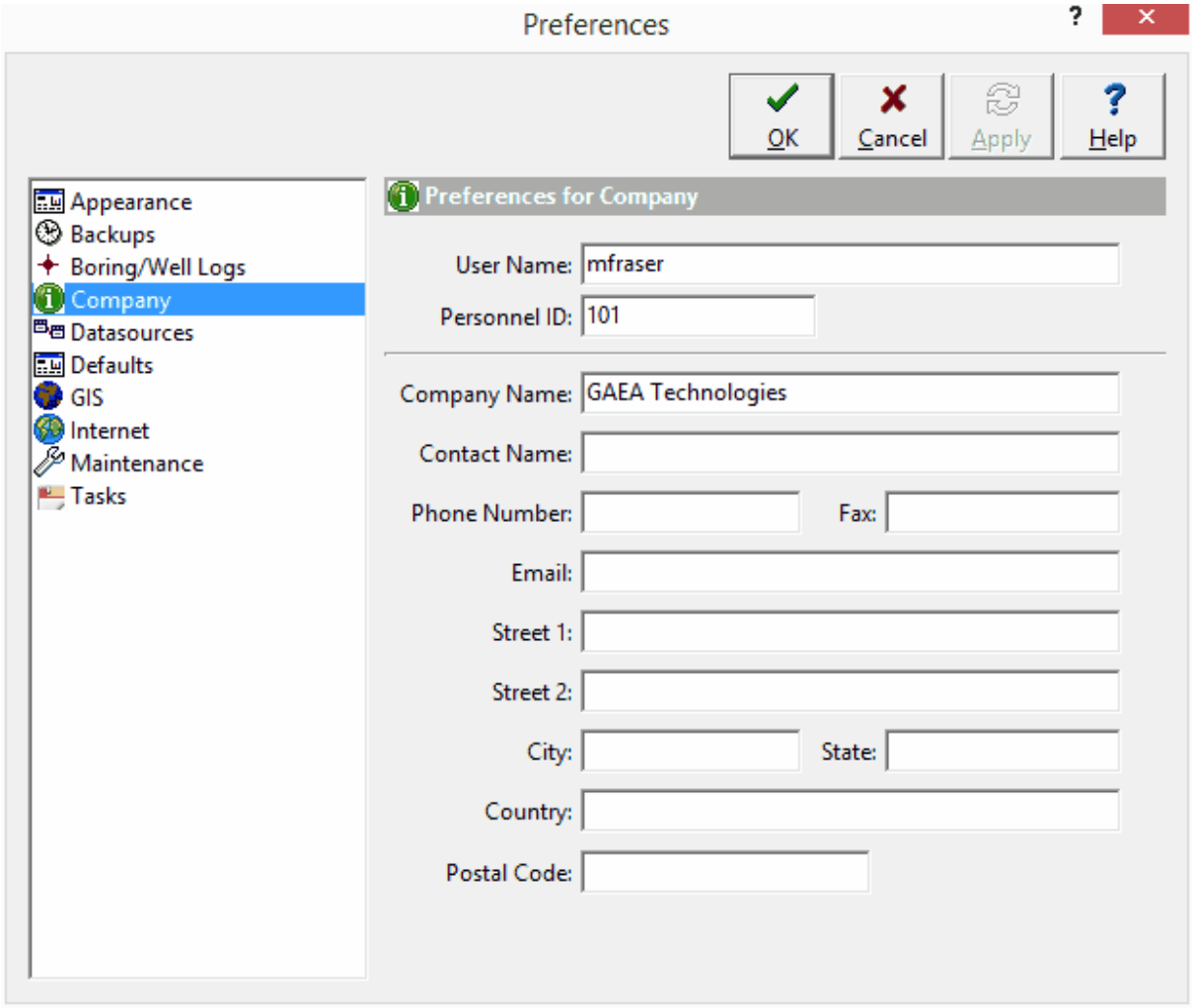
When sending the template from the GaeaSynergy network, the User Name and Personnel ID to receive the template must be specified. In WinLoG RT, the User Name and Personnel ID for receiving templates is specified on the Company tab of Preferences.



5.3 Importing Projects

WinLoG RT can automatically receive projects from GaeaSynergy via email or FTP. To use this feature, the network version of GaeaSynergy must be installed and the GaeaSynergy Network Data Service running. The projects sent from GaeaSynergy will then be imported when the WinLoG RT application is started.

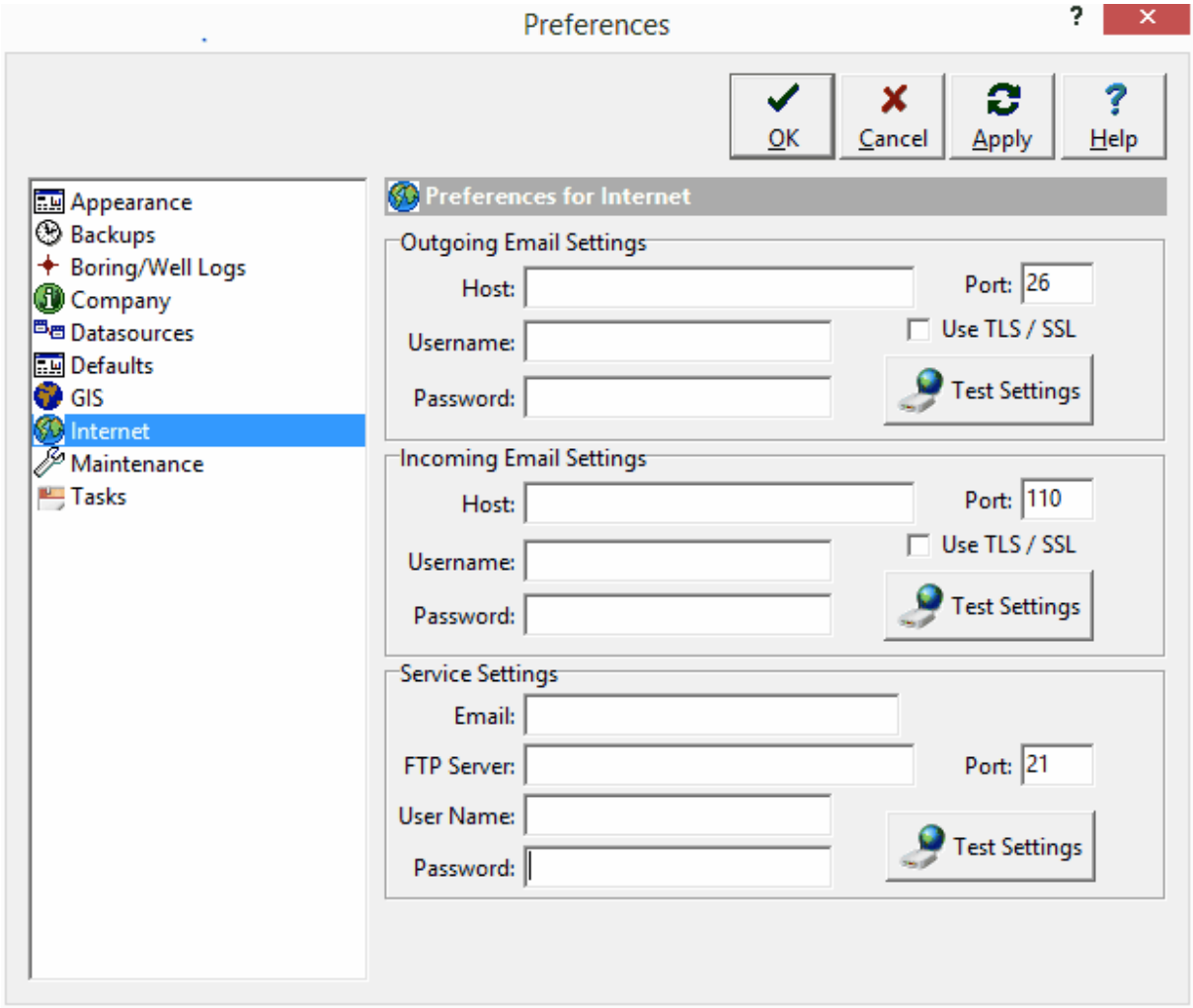
When sending the project from the GaeaSynergy network, the User Name and Personnel ID to receive the project must be specified. In WinLoG RT, the User Name and Personnel ID for receiving projects is specified on the Company tab of Preferences.



5.4 Importing Lookup Lists

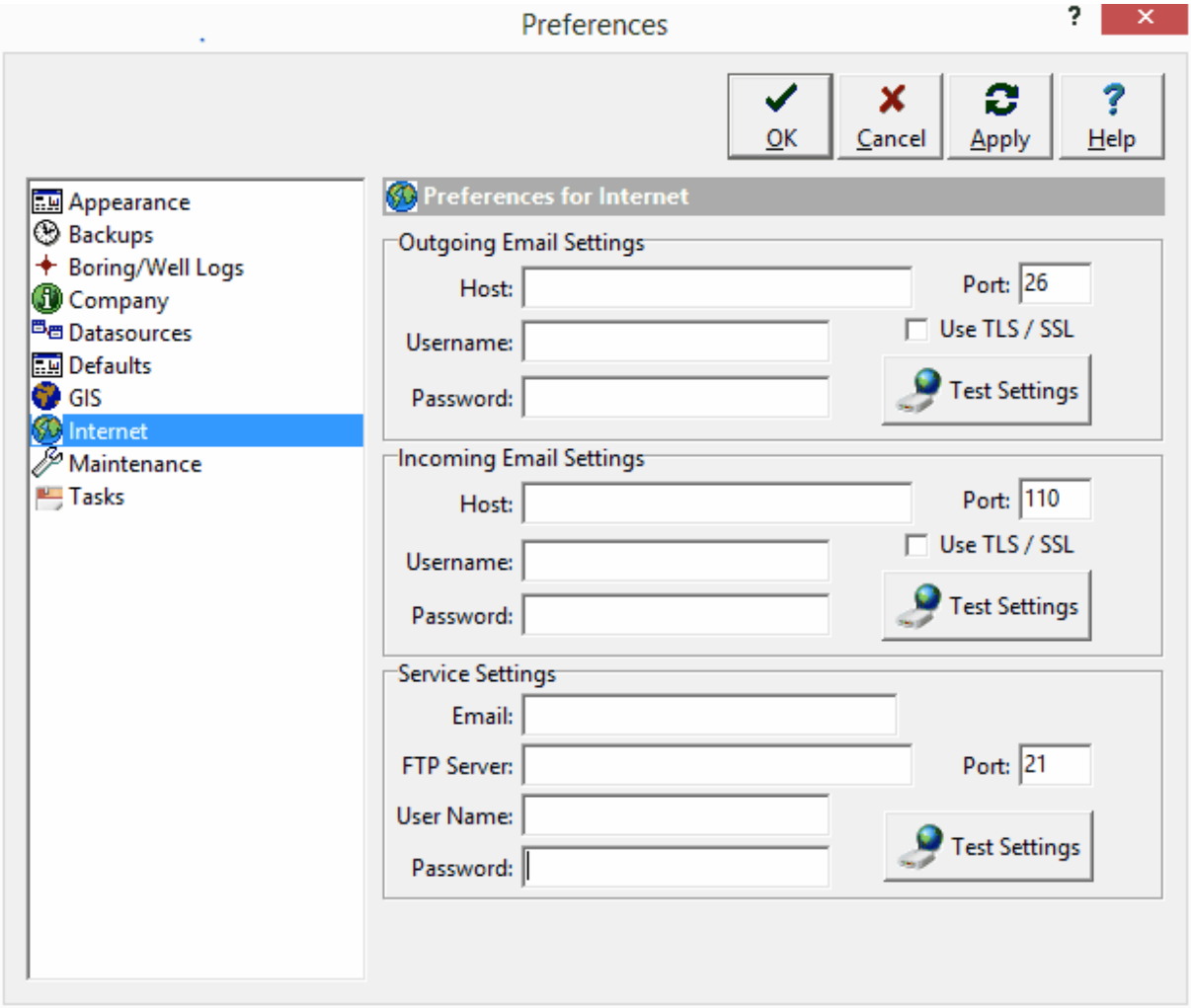
WinLoG RT can automatically receive lookup lists from GaeaSynergy via email or FTP. To use this feature, the network version of GaeaSynergy must be installed and the GaeaSynergy Network Data Service running. If the lookup list is sent via email it will be imported when the WinLoG RT application is started.

To import the lookup list via FTP select *File > Import > Lookup Lists > From FTP Service*. The lookup list will then be imported from the ftp site specified on the Internet tab in Preferences.



5.5 Exporting Projects

Projects can be exported from WinLoG RT and then imported into GaeaSynergy by email or FTP. Before exporting the project must be opened. To export the project either select *File > Export > Project > To Service Email* or *File > Export > Project > To Service FTP*. The project will then be exported and uploaded to the GaeaSynergy site specified on the Internet tab in Preferences. The GaeaSynergy network data service will then automatically import the project.



5.6 Exporting Boring and Well Logs

Boring and well logs can be exported from WinLoG RT and then imported into GaeaSynergy by email or FTP. Before exporting the boring or well log must be opened. To export the log either select *File > Export > Borehole > Service Email* or *File > Export > Borehole > Service FTP*. The log will then be exported and uploaded to the GaeaSynergy site specified on the Internet tab in Preferences. The GaeaSynergy network data service will then automatically import the log.