

Strater[®]3

Stratigraphically Superior
Well Log, Borehole & Cross
Section Plotting Software



Quick Start Guide

Golden Software, Inc.

Strater[®] Registration Information

Your **Strater** serial number is located on the CD cover or in the email download instructions, depending on how you purchased **Strater**.

Register your **Strater** serial number online at www.GoldenSoftware.com. Or, complete the *Registration Form.PDF*, located in the main directory of the installation CD. Return the *Registration Form.PDF* by mail or fax. This information will not be redistributed.

Registration entitles you to free technical support, free minor updates, and upgrade pricing on future **Strater** releases. The serial number is required when you run **Strater** the first time, contact technical support, or purchase **Strater** upgrades.

For future reference, write your serial number on the line below.

Strater®

Quick Start Guide

Stratigraphically Superior Well Log, Borehole
& Cross Section Plotting Software



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Introduction to Strater

Welcome to **Strater**, a powerful well logging and borehole plotting software package.

Strater creates 14 different log types: depth, line/symbol, crossplot, zone bar, bar, percentage, tadpole, post, classed post, complex text, graphic, lithology, well construction, and function logs. Each of the logs can be modified to suit your needs.

Strater 3 adds the ability to create maps to display well locations, base maps, and well selector lines. **Strater 3** also adds cross sections that interpolate between wells.

Strater exports to a variety of formats, including a direct export to Golden Software's **Voxler** program to create **Strater** cross sections as fence diagrams in 3D space.

Data can be imported from many sources, including ASCII text files, LAS files, and most databases. **Strater's** internal data structure can contain multiple tables. Multiple boreholes can be stored in the data tables at one time.

Strater can have multiple boreholes displayed in a single borehole view. You can specify a different well ID for each log in a borehole view with a few mouse clicks. You can also create multiple borehole views, map views, and cross section views in a single project.

Once you design a borehole view, map view, or cross section view, you can use the design repeatedly with other data. There are several features in **Strater** designed to save time with borehole graphic processing. After creating an initial design, you can take advantage of templates and schemes, which can be used in different projects with different data or in the same project multiple ways. Templates store the design elements of a project, including log items, header and footer items, data tables, and schemes.

Schemes contain detailed information of how the data relate to drawing properties. For example, a lithology log uses lithology schemes, which contain keywords, such as granite, clay, etc. Each keyword is assigned a fill pattern, contact line properties, line properties, and text properties. Schemes can be reused; therefore, you do not have to go through the process of assigning properties each time you create a log.

Who Uses Strater?

People from many different disciplines use **Strater** to display their well data. Users in the oil and gas industry, environmental monitoring firm consultants, mudloggers, mining geoscientists, water quality experts, military personnel, and people working at utilities companies use **Strater** to best display their data. Data from well studies, LAS files, drill cores, or text files based on seismic studies and subsurface mapping can be displayed in **Strater**. Anyone wanting to visualize the relationship of their data with stunning graphical output will benefit from **Strater's** powerful features!

New features of **Strater 3** are summarized:

- Online at: www.GoldenSoftware.com/products/strater/straternew.shtml
- In the program: click the **Help | Contents** command and click on the *New Features* page in the *Introduction* book

System Requirements

The minimum system requirements for **Strater** are:

- Windows XP SP2 or higher, Vista, 7, or higher
- 512 MB RAM minimum for simple data sets, 1 GB RAM recommended
- At least 100 MB of free disk space
- 1024 x 768 or higher monitor resolution with a minimum of 16-bit color depth

Installation Directions

Installing **Strater 3** requires logging onto the computer with an account that has Administrator rights. Golden Software does not recommend installing **Strater 3** over any previous version of **Strater**. **Strater 3** can coexist with older versions (i.e. **Strater 2**) as long as they are installed in different directories. By default, the program directories are different. For detailed installation directions, refer to the *Readme.rtf* file.

To install **Strater** from a CD:

1. Insert the **Strater** CD into the CD-ROM drive. The installation program automatically begins on most computers. If the installation does not begin automatically, double-click on the *Autorun.exe* file located on the **Strater** CD.
2. Click *Install Strater* from the **Strater Auto Setup** dialog to begin the installation.

To install **Strater** from a download:

1. Download **Strater** according to the emailed directions you received.
2. Double-click on the downloaded file to begin the installation process.

Updating Strater

To update **Strater**, open the program and click the **Help | Check for Update** command. The Internet Update program will check Golden Software's servers for any free updates. If there is an update for your version of **Strater** (i.e. **Strater 3.0** to **Strater 3.1**), you will be prompted to download the update.

Uninstalling Strater

Windows XP: To uninstall **Strater**, go to the Windows Control Panel and double-click *Add/Remove Programs*. Select **Strater 3** from the list of installed applications. Click the *Remove* button to uninstall **Strater 3**.

Windows Vista: To uninstall **Strater** when using the *Regular Control Panel Home*, click the *Uninstall a program* link. Select **Strater 3** from the list of installed applications. Click the *Uninstall* button to uninstall **Strater 3**.

To uninstall **Strater** when using the *Classic View Control Panel*, double-click *Programs and Features*. Select **Strater 3** from the list of installed applications. Click the *Uninstall* button to uninstall **Strater 3**.

Windows 7: To uninstall **Strater** go to the Windows Control Panel and click the *Uninstall a program* link. Select **Strater 3** from the list of installed applications. Click the *Uninstall* button to uninstall **Strater 3**.

A Note about the Documentation

The **Strater** documentation includes this quick start guide and the online help. General information is included in the quick start guide. Detailed information about each command and feature of **Strater** is included in the online help. Use the **Help | Contents** command in the program to open the online help. In the event the information you need cannot be located in the online help, other sources of **Strater** help include our support forum, knowledge base, FAQs, newsletters, blog, and contacting our technical support engineers.

You can also purchase a full PDF user's guide that includes all of the documentation for the program. This PDF user's guide can be printed by the user, if desired. The guide can be purchased on the Golden Software website at www.GoldenSoftware.com.

Various font styles are used throughout the **Strater** documentation. **Bold** text indicates menu commands, dialog names, window names, and page names. *Italic* text indicates items within a manager or dialog such as group names, options, and field names. For example, the **Save As** dialog contains a *Save as type* drop-down list. Bold and italic text also may be used occasionally for emphasis.

In addition, menu commands appear as **File | Open**. This means, "click on the **File** menu at the top of the **Strater** window, then click on **Open** within the **File** menu list." The first word is always the menu name, followed by the commands within the menu list.

Three-Minute Tour

We have included several example files with **Strater** so that you can quickly see some of **Strater's** capabilities. Only a few example files are discussed here, and these examples do not include all of **Strater's** many log types and features. The **Object Manager** is a good source of information as to what is included in each file.

Example Strater Files

To view the example **Strater** files:

1. Open **Strater**.
2. Click the **File | Open** command.
3. Click on a .SDG file located in the Samples folder. By default, the **Strater** Samples folder is located in C:\Program Files\Golden Software\Strater 3\Samples.
4. Click *Open* and the file opens.

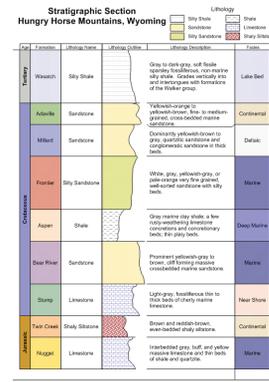
The primary graphical component to a document is a borehole view. A borehole view is either based on a template file or created from scratch by adding the necessary log, header and footer items. Boreholes views, map views, and cross section views display logs, well and base maps, and cross sections of the selected data when the tab is selected. When a data table tab is selected its data appears in the workspace.

Lith Section-1

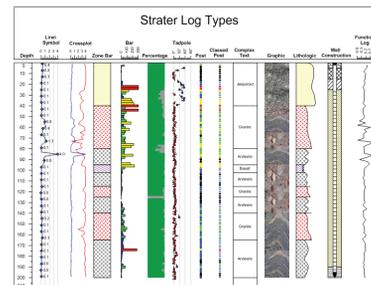
The Lith Section-1.sdg sample file contains a sample lithology log column. Age, formation, lithology type, and lithology description appear in the borehole view. Four data tables are included in the .SDG file and include the information being displayed in the borehole view.

Example Logs

The Example Logs.sdg sample file contains every type of log file that **Strater** can create. Click on a log and the **Property Manager** updates to show only that log's properties. Experiment with the properties for the logs to see how the log changes. Click on the map and cross section tabs to experiment with the properties for the map and cross section views.



The Lith Section-1.sdg file contains several zone bar logs and a lithology log.



The Example Logs.sdg file contains a sample of each type of log that can be created.

Using Strater

The general steps to progress from a data file to a borehole are as follows.

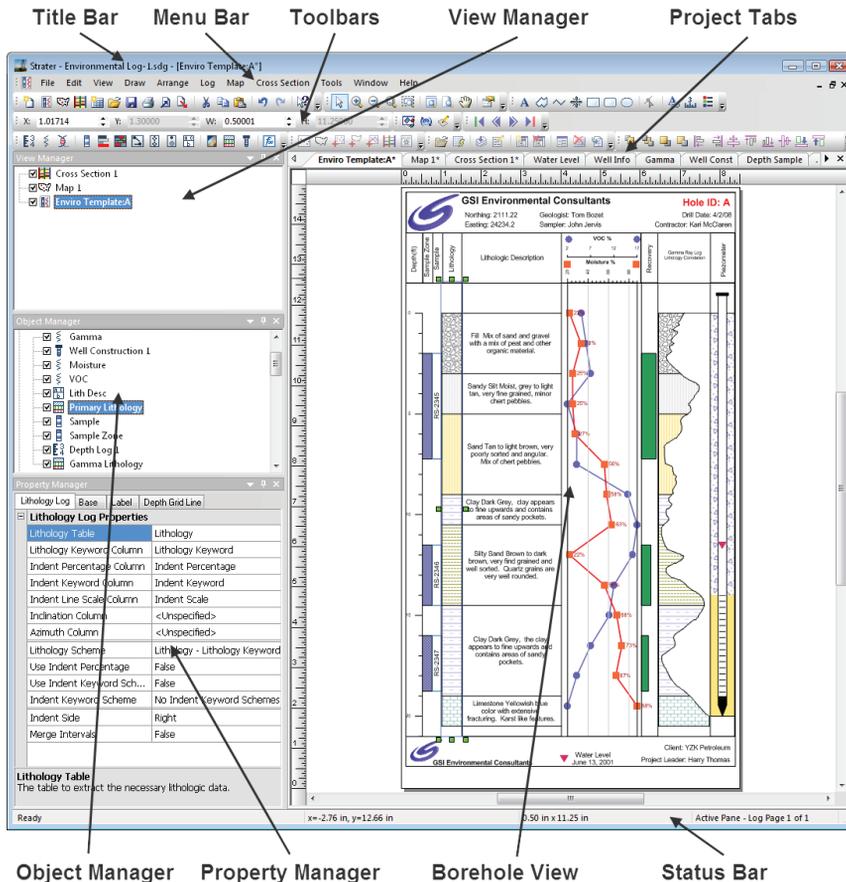
1. Open **Strater**.
2. Click the **File | Load Data** command.
3. In the **Open** dialog, select the data file and click the *Open* button. For this example, the data should have *From* and *To* columns because of the type of log created. The sample *Tutorial 1.xls* file can be used with the *Lithology* sheet.
4. In the data import dialogs, set the column names and rows to import. The data loads into **Strater** and is displayed in a table view.
5. Click on the *Borehole 1* tab.
6. Click the **Log | Depth** command to create a depth log.
7. Click on the screen in the location where you want the depth log to be displayed.
8. In the **Open** dialog, verify that *Use current table* is selected and click *Open*. The depth log is displayed.
9. Click the **Log | Zone Bar** command to create a zone bar log.
10. Click on the screen where you want the zone bar log to be displayed.
11. In the **Open** dialog, verify that *Use current table* is selected and click *Open*. The zone bar log is displayed.
12. Click the **File | Save As** command. Enter a *File name* in the **Save As** dialog and click the *Save* button to save your **Strater** project.

To proceed from the borehole to a map view and cross section view, these steps are used.

1. Click the **File | New | Map View** command to create a new blank map window.
2. Click the **Map | Create Well Map** to display the wells on the map. Select and load a collars table, if prompted. The sample *Example Data.xls* file can be used with the *Collars* sheet.
3. Click the **Map | Add Well Selector** command.
4. Click on the wells in the order they should appear in a cross section.
5. Click the **File | New | Cross Section View** command to create a new blank cross section.
6. Click the **Cross Section | Create Cross Section** command to create the default cross section from the well selector.

Strater User Interface

The **Strater** user interface consists of the title bar, menu bar, toolbars, view window, managers, and status bar. **Strater** contains four window types: borehole view, table view, map view, and cross section view. Wells are displayed in the borehole view. Map views display well locations, well selector lines, and base maps. Cross section views display connected zone bar or lithology logs for multiple wells, connecting the lithology or other stratigraphic information across wells. The table view contains all of the data stored in the project.



This is the **Strater** window with the **View Manager**, **Object Manager**, and **Property Manager** stacked on the left side. The borehole view window, where the borehole logs are displayed, is on the right side. The toolbars and menu are displayed at the top and the status bar is displayed at the bottom.

The following table summarizes the function of the **Strater** layout components.

Component Name	Component Function
Title Bar	The title bar lists the program name plus the saved Strater .SDG file name, if any. An asterisk (*) after the file name indicates the file has been modified since it was last saved.
Menu Bar	The menu bar contains the commands used to run Strater .
Toolbars	The toolbars contain Strater tool buttons, which are shortcuts to menu commands. Move the cursor over each button to display a tool tip describing the command. Toolbars can be customized with the Tools Customize command. Toolbars can be docked or floating.
Tabbed Windows	Multiple table view, borehole view, map view, and cross section view windows are displayed as tabs. Click on the tab to display a window.
View Manager	The View Manager contains a list of the borehole view, map view, and cross section views in the project. You can open or close views, add or delete views, and save or load template files in the View Manager . The View Manager is initially docked on the left side above the Object Manager and Property Manager . The View Manager can be dragged and placed at any location on the screen.
Object Manager	The Object Manager contains a hierarchical list of the objects in the window. These objects can be selected, added, arranged, edited, and renamed in the Object Manager . Changes made in the Object Manager are reflected in the view window. The Object Manager is initially docked at the left side below the View Manager . The Object Manager can be dragged and placed at any location on the screen.
Property Manager	The Property Manager allows you to edit any of the properties of the selected object. Changes made in the Property Manager are immediately reflected in the view window. The Property Manager is initially docked on the left side below the Object Manager . The Property Manager can be dragged and placed at any location on the screen.
Status Bar	The status bar displays information about the activity in Strater . The status bar is divided into four sections. The left section displays help messages and progress text. The next section displays the cursor location. The third section displays a progress gauge or the estimated time remaining for long tasks. The right section displays the page number and whether the log is in active or design mode.

Menu Commands

The menus contain commands that allow you to add, edit, and control the logs, maps, and cross sections in the windows. See the *Data Table View* and *Borehole, Cross Section, and Map View Commands* help books in the online help for details about the various menu commands.

Toolbars

Toolbars display buttons that represent menu commands for easier access. Use the **View | Toolbars** command to show or hide a toolbar. A check mark is displayed next to visible toolbars. Hold the cursor over any tool button on the toolbar to display the function of the button as a screen tip. A more detailed description is displayed in the status bar at the bottom of the window.

Status Bar

The status bar is located at the bottom of the window. Use the **View | Status Bar** command to show or hide the status bar. The status bar displays information about the current command or activity in **Strater**. The status bar is divided into four sections. The left section displays help messages and progress text. The next section displays the cursor location. The third section displays a progress gauge or the estimated time remaining for long tasks. The right section displays the page number and whether the log is in active or design mode.

View Manager

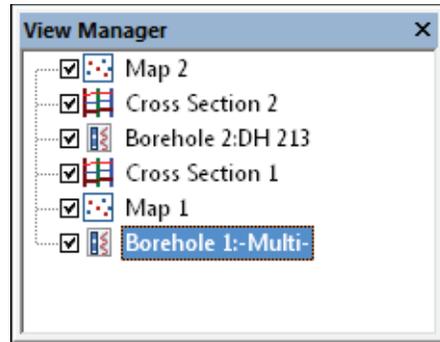
In **Strater** you can have multiple view window types in one project. This is useful in displaying multiple graphics for multiple wells, displaying different layouts for the same data, or displaying maps or cross sections. Click the **View | Managers | View Manager** command to display the **View Manager**. The **View Manager** contains a list of the various borehole views, cross section views, and map views. You can open or close views, add or delete views, and save or load template files in the **View Manager**.

The check box to the left of a view name indicates if that view is open or closed. If a view is closed (not visible), either check the box next to the view name or click the view name. Unchecking all view check boxes in the **View Manager** closes the entire project. When the last check box is unchecked a window appears asking you to save any unsaved work in the project. The project then closes.

To display the view properties associated with any view in the **View Manager** window, click on the view name. The view properties are listed in the **Property Manager**.

Right-click in the **View Manager** to see options available for adding or deleting views or for loading templates.

- **New Borehole View** creates a new blank borehole view in the current project.
- **New Map View** creates a new blank map view in the current project.
- **New Cross Section View** creates a new blank cross section view in the current project.
- **Delete** deletes the currently highlighted borehole view from the project.
- **Save Template** saves a current project as a template .TSF file.
- **Load Template** opens a template into the existing project.
- **View Properties** displays the currently selected view window's borehole, map, or cross section view properties in the **Property Manager**.



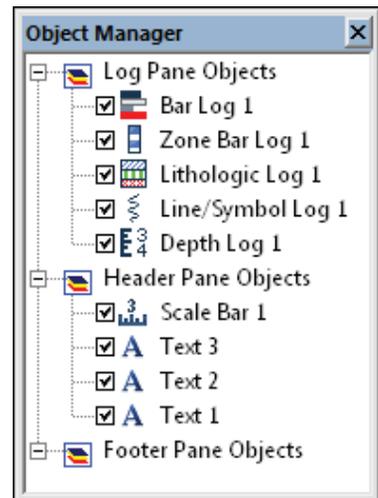
The **View Manager** allows you to create new views, delete existing views, or save and load templates.

Object Manager

The **Object Manager** contains a list of all objects. For borehole and cross section views, the objects are separated into a list for each pane. The objects can be selected, arranged, and edited in the **Object Manager** or with menu commands. Changes made in the **Object Manager** are reflected in the borehole view, map view, or cross section view, and vice versa.

Click the **View | Managers | Object Manager** command to show or hide the **Object Manager**. A check mark indicates the manager is visible. No check mark indicates the manager is hidden.

You can increase the borehole view, map view, or cross section view window space by minimizing the managers. To hide the manager, click the  button in the upper right corner of the **Object Manager**. When the manager is hidden, place the cursor directly over the tab to display the **Object Manager** again. Click the  button to return the manager to a docked position.



The **Object Manager** contains a list of all of the objects in the view window.

To select an object, click on it in the view window or click on the object name in the **Object Manager**. In complex views, it is sometimes easier to select a specific object in the **Object Manager**. To select multiple objects in the **Object Manager**, hold down the CTRL key and click on each object.

When an object is selected, properties for that object are displayed in the **Property Manager**. The **Property Manager** should be displayed by default, but if you do not see it, click the **View | Managers | Property Manager** command. The borehole view, map view, or cross section view updates to show the object with a selection bounding box around the object.

Each item in the **Object Manager** list consists of an icon indicating the object type, a text label for the object, and a check box. A indicates that the object is visible. A indicates that the object is not visible. Click the check box to change the visibility of the object. Invisible objects do not appear in the borehole view, map view, or cross section view and do not appear on exported or printed output.

If an object contains sub-objects, a or button displays to the left of the object name. Click on the or button to expand or collapse the list. For example, a *Map* object can contain four axes, multiple *Wells* layers, multiple *Wells Selection* layers, and *Base* layers. To expand the *Map* to see the axes and layers, click on the button next to *Map*. To collapse the *Map*, click on the button next to *Map*.

To edit an object's text ID, select the object and then click again on the selected item (two slow clicks). You must allow enough time between the two clicks so it is not interpreted as a double-click. Enter the new name into the box. Alternatively, you can click the **Edit | Rename Object** command. Type the new ID and press ENTER on the keyboard.

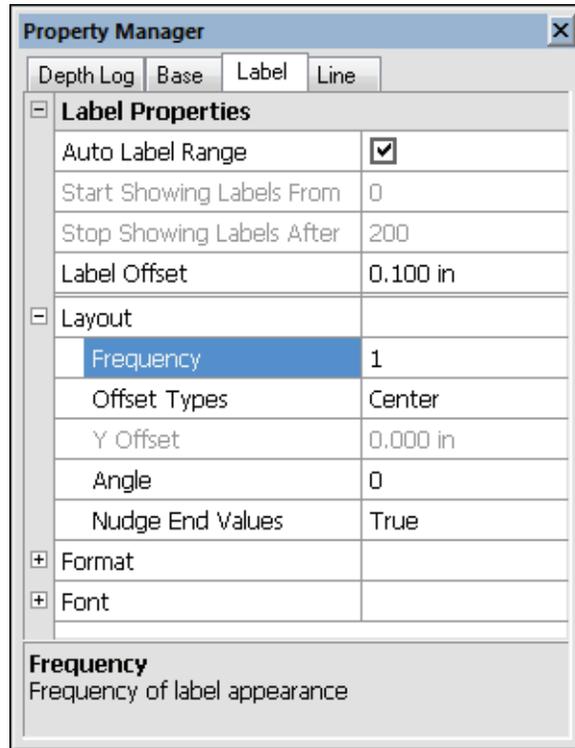
To change the display order of the objects with the mouse, select an object and drag it to a new position in the list above or below an object at the same level in the tree. The cursor changes to a black arrow if the object can be moved to the cursor location or a red circle with a diagonal line if the object cannot be moved to the indicated location. For example, a log can be moved anywhere within the *Log Pane Objects* section, but not into the *Header Pane Objects* section. In addition to dragging objects in the **Object Manager**, the order can be changed with the **Arrange | Order Objects** command.

To delete an object, select the object and press the DELETE key on the keyboard or click the **Edit | Delete** command.

Property Manager

The **Property Manager** allows you to edit the properties of the currently selected object, such as a depth log or scale bar. The **Property Manager** contains a list of all properties for a selected object. The **Property Manager** can be left open so the properties of selected objects are always visible. Information about the object properties is located in the online help.

Features with multiple options appear with a \oplus or \ominus button to the left of the name. To expand a section, click on the \oplus button. To collapse a section, click on the \ominus button. For example, click on a *Depth Log* in the **Object Manager** to select it. In the **Property Manager**, click on the **Label** tab. Click the \oplus next to *Layout* and you see several options, *Frequency*, *Offset Types*, *Angle*, and *Nudge End Values*.



*The **Property Manager** is used to change the properties of selected objects.*

To change a property, click on the property's value next to the property name. Select a new property from the list, scroll to a new number using the \updownarrow buttons, open a dialog with the \dots button, or type a new value and press ENTER on your keyboard. How a property is changed depends on the property type. For example, a *Bar Log* has a *Bar Size* option that is changed by typing a value or clicking the \updownarrow button. The *Range Scheme* option can be changed by clicking the existing scheme and selecting a new scheme from the list or by clicking the \dots button and selecting new options in the dialog.

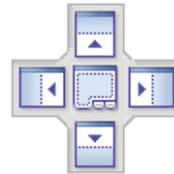
Occasionally, some properties are dependent on other selections. For example, with the *Depth Log* module, the *Y Offset* option is not available unless the *Offset Types* is set to *User Defined*.

Changing the Window Layout

The windows, toolbars, managers, and menu bar display in a docked view by default; however, they can also be displayed as floating windows. The visibility, size, and position of each item may also be changed. Refer to the *Changing the Window Layout* topic in the online help for more information on layout options.

Docking Managers

Strater has a docking mechanism feature that allows for easy docking of managers. Left-click the title bar of a manager and drag it to a new location while holding down the left mouse button. The docking mechanism displays arrow indicators as you move the manager around the screen. When the cursor touches one of the docking indicators in the docking mechanism, a blue rectangle shows the window docking position. Release the left mouse button to allow the manager to be docked in the specified location.



The docking mechanism has docking indicators.

Customizing Toolbars and Menus

You may customize **Strater's** toolbars and menus by clicking the **Tools | Customize** command. This is useful to create custom toolbars, rearrange menus, menu commands, and toolbar buttons. You can display image, text, or image and text depending on your preference. You can also create a new button appearance for a command.

View Window Types

There are four different view types available in a **Strater** workspace: borehole views, map views, cross section views, and tables. There is no limit to the number of views that can be associated with a **Strater** project.

Adding View Windows

To create a new view window, click the **File | New** command and select the appropriate view type. A new blank view will appear.

Opening, Closing, and Deleting View Windows

To open an existing view window in the current project, click the appropriate tab name, check the box next to the view in the **View Manager**, or select **Window | [view name]**.

To close a view window, right-click on the view tab and select *Close* or uncheck the box

to the left of the view name in the **View Manager**. This does not delete the view from the project, it only closes the tab and turns off the visibility of the view.

To delete a view window, right-click on the view tab and select *Delete* or right-click on the view name in the **View Manager** and select *Delete*.

Table View

All data used to generate logs in a borehole view or a cross section view, or well locations in a map view must be loaded into a **Strater** project. These data tables are represented by data tabs. Data can be loaded from a file into a new table, loaded from a file into an existing table, or manually entered into a table. Each log type requires specific setup requirements for the associated data table. Refer to the online help *Data Formatting Requirements for Logs* page in the *Log Items* book for additional information.

One important aspect of **Strater** is that data for multiple boreholes may be entered in one or several tables. In a data table, boreholes are defined by their Hole ID. There is no limit to the number of boreholes that can exist in a data table.

Creating a New Table

To create a new table, click the **File | New | Table** command or click the  button. In the **Create New Table** dialog, select the *Base Table Type* and type a name in the *Table Name* field. Click *Create* and the new table is created with the default fields. Enter data manually or import data into the table.

Loading Data

With any window active, click the **File | Load Data** command or the  button. Use the *Look In* field to locate the desired file to download. Select the data file and click *Open*. The data is opened in a new data table.

To load the data to an existing data table in the project, click on that data table tab to make it active. Click the **File | Load Data** command or the  button. Use the *Look In* field to locate the desired file to download. Select the data file and check the box next to the *Import data into current table* option. Click *Open* and the data is added to the active table.

Types of Tables

Collars tables, depth tables, interval tables, lithology tables, project settings tables, survey tables, text item tables, and well construction tables can be created in **Strater**. Each table type has a different function in **Strater**. Each table has different default required columns. Although all default columns are created, data does not need to be stored in all of the default columns to create the logs.

Collars Table

Collars tables contain location information for each borehole. The default column definitions include Hole ID, Easting, Northing, Elevation, Starting Depth, Ending Depth, Scale, Inclination, and Azimuth. The data in this table can be used for header and footer linked text, to set the scaling parameters for the borehole view, or to specify the elevation of the well collar for depth logs. The Inclination and Azimuth columns can be used to calculate true vertical depth for deviated well log displays. The collars table is also used for placing wells in a map view and for approximating distances in a cross section view.

Note that a project can have multiple collars tables, but each borehole should be listed in only a single collars table.

Depth Table

Depth tables are used for depth and variable information. The default column definitions include Hole ID, Depth, and additional parameter columns. The depth information is contained in one column. Depth tables are used for depth, line/symbol, crossplot, bar, percentage, tadpole, post, classed post, and function logs.

Interval Table

Interval tables are used to show a variable that occurs over a distance interval. There are two depth columns (From and To) in an interval table. The default column definitions are Hole ID, From, To, and additional parameter columns. Interval tables are used for depth, line/symbol, crossplot, zone bar, bar, percentage, tadpole, post, classed post, complex text, graphic, lithology, well construction, and function logs.

Lithology Table

Lithology tables are a special type of interval table. These tables define the properties of lithology logs using keywords and schemes. The default column definitions are Hole ID, From, To, Lithology Keyword, Lithology Description, Indent Percentage, Indent Keyword, and Indent Scale. Although the primary purpose of a lithology table is to create a lithology log, the lithology table can also be used for depth, line/symbol, crossplot, zone bar, bar, percentage, tadpole, post, classed post, complex text, graphic, well construction, and function logs.

Project Settings Table

Project settings tables are a special type of text table and are automatically created when you open a new **Strater** project file. They are used to store project information. The default column definitions are Project Name, Company Name, Location, Project Leader, Drilling Date, and Comments. This table stores data that is often used in linked text objects.

Survey Table

Survey tables are a special type of depth table used to indicate the direction and azimuth of a directional well as it changes down the hole. The default column definitions include Hole ID, Depth, Inclination, and Azimuth. The survey table Inclination and Azimuth columns can be used for calculating the true vertical depth of drill holes. The survey table is used in conjunction with depth or interval tables for deviated drill holes.

Note that a project can have multiple survey tables, but each borehole should be listed in only a single survey table.

Text Item Table

Text tables are tables designed to store attributes for particular boreholes. The default column definitions include Hole ID and Depth. Other columns can be added, depending on the project. For example, drilling date, temperature, geologist, location, etc. can be stored in a text item table. Any type of data can be imported into this table. If there is a Hole ID defined in the table, the data can be used for linked text.

Well Construction Table

Well construction tables are a special type of interval table used to define the geometry of specific items in a well construction log, such as casing and cap information. The default column definitions include Hole ID, From, To, Outer Diameter, Inner Diameter, Offset, and Item information. Well construction logs use keywords and schemes to define the properties for each item in the well construction table. Although the primary purpose of a well construction table is to create a well construction log, the well construction table can also be used to create depth, line/symbol, crossplot, zone bar, bar, percentage, tadpole, post, classed post, complex text, graphic, lithology, and function logs.

Borehole View

The primary graphical component to a document is a borehole view. A borehole view represents a collection of logs and drawing objects used to graphically display data for one or more wells. A borehole view may be derived from a template file or it can be created from an empty borehole view window by adding log items. The borehole view displays the true data for the project once data are loaded into the data tables.

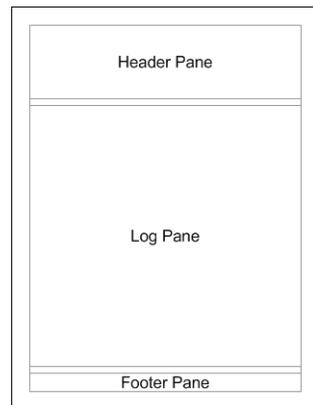
You are presented with an empty borehole view when you first start **Strater**.

To create a new blank borehole view, click the **File | New | Borehole View** command or click the  button.

Parts of the Borehole View

There are three main components of a borehole view: the log pane, header pane, and footer pane. The panes are outlined when you open up a blank view. You can change the pane line properties in the **Property Manager** on the **View** tab. The size of the panes is changed with the **File | Page Setup** command.

The header and footer panes generally contain static, unlinked information. The header and footer items are used repeatedly with minimal changes when different borehole data are applied to the view. Linked text, linked scale bars, and inserted map views can also be included in these panes. Linked text changes as new data are applied to the view. Horizontal scale bars can be associated with some log items or they can be created as a stand-alone, static object. When the scale bar is linked to a log item, the scale bar changes as changes are made to the log item to which it is linked. Inserted map views change as the map in the map view window changes.



The top rectangle is the header pane, the middle is the log pane, and the bottom is the footer pane. Logs are created in the log pane.

The information displayed in the log pane is dependent on the selected data and columns in the tables. The information displayed in the log pane is also dependent on the minimum and maximum depth and the scaling values. The data in the tables, combined with the depth and scaling values determine the size of the logs and the number of pages.

View Mode

There are two view modes in the borehole view: design mode and active mode. Design mode is used to create graphics without attaching them to data. After creating a log, a place holder is displayed that represents the log. Design mode is useful when designing templates.

Active mode is used to display logs that are linked to data. The logs update as the data changes. It is most common to work in active mode. To switch modes either click the  button or click the **Log | Design Mode** command.

Map View

Map views can display well locations and base maps, such as field outlines or exported **Surfer** maps. Drawing objects and labels can be added to a map view. A well selector line can be added to a map view to select wells for display in a cross section. Once a map view is created, it can be inserted into a borehole view or cross section view as a reference image.

To create a new blank map view, click the **File | New | Map View** command or click the  button. Only one *Map* object can be created in each map view, but each *Map* can have multiple well layers, base maps, and well selector lines.

Base Maps

Base maps display geographic and political information such as roads, streams, lakes, satellite imagery, or state and county boundaries. Base map files draw objects at precise X, Y locations on a map and can contain points, polygons, polylines, text, and images. Base maps can be created from many common map formats, including .DXF, .SHP, and a variety of image formats.

In a blank map view, click the **Map | Create Base Map** command or click the  button to create a new base map. Select the base map file, such as a .SHP, .DXF, or .TIF file and click *Open*. The base map is created.

To add a base map to an existing map, click the **Map | Add Base Layer** command, click the  button, or right-click on an existing map and choose **Add | Add Base Layer**.

If the properties of the base map should be the same as the other objects in the *Map*,

the base map properties can be edited by clicking on the *Map* in the **Object Manager** and editing the properties in the **Property Manager**. This changes the properties for all layers in the map.

If the properties of the base map should be different than other objects in the *Map*, the *Base map* layer should be selected. When the properties are edited while the *Base map* layer is selected, all of the objects in the base layer are changed to reflect the new properties. Some base maps consist of multiple objects (i.e. polygons, polylines, text, etc.). The sub-objects can be selected individually in the **Object Manager** and edited in the **Property Manager**.

Georeferencing Images

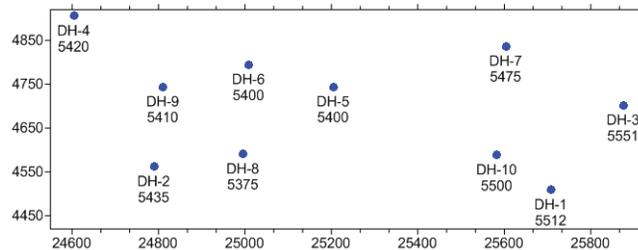
Image files should be georeferenced before adding it to the map as a base map. When an image file is imported that is not georeferenced, the image will appear at the X and Y position of (0,0). There is currently not a way to specify the real world coordinates for an image or to georeference the image in **Strater**. Golden Software's **Didger** or **Surfer** programs could be used to georeference the image prior to importing it into **Strater**.

Well Maps

Map views graphically display wells on a map. Map views display wells with X and Y locations listed in a collars table. Wells can be removed individually to customize the appearance of the map view.

To create a well map in a blank map view, click the **Map | Create Well Map** command

or click the  button to create a new well map. If a single collars table already has been created, the well map automatically uses that collars table and the new map is created displaying all the wells from the collars table. If no collars table exists, you are prompted for the data file to create a collars table. If multiple collars table exist, you are prompted to select one table.



The wells are displayed in the map view with the well name and elevation displayed below the well symbol.

Additional *Wells* layers can be added to the existing map by clicking the **Map | Add Well Layer** command, clicking the  button, or right-click on an existing map and choosing **Add | Well Layer**. Creating multiple *Wells* maps allows wells from different

collars files to be displayed on the same map. It also allows different schemes to apply to different types of wells.

If the properties of the *Wells* layer should be the same as the other objects in the *Map*, the wells properties can be edited by clicking on the *Map* in the **Object Manager** and editing the properties in the **Property Manager**. This changes the properties for all layers in the map.

If the properties of the *Wells* layer should be different than other objects in the *Map*, the *Wells* map layer should be selected. When the properties are edited while the *Wells* layer is selected, all of the objects in the wells layer are changed to reflect the new properties. The sub-object wells can be selected individually in the **Object Manager** and edited in the **Property Manager**.

Well Selector Lines

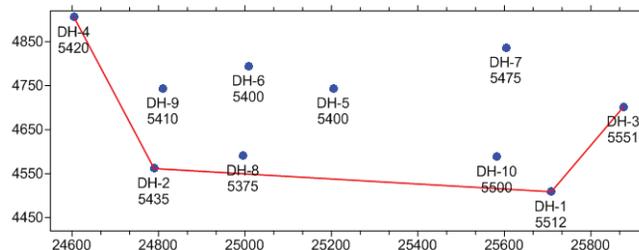
Once a well map has been created, wells can be connected for creation of a cross section. Wells are selected in the order that they should appear in the cross section, from left to right, with the first selected well being displayed on the left side of the cross section.

To connect wells:

1. Click the *Wells* map layer to select it.
2. Click the **Map | Add Well Selector** command, click the  button, or right-click on an existing map and choose **Add | Well Selector**.
3. The cursor changes to . As the cursor approaches a well, the well name appears in a floating box. This makes selecting the correct well easier. Click on the first well to select it. In the map below, this would be well DH-4.
4. Click on each additional well. The order the wells are selected is the order that the logs will appear in the cross section, from left to right. The order the additional wells were selected in the image below would be DH-2, DH-1, and finally DH-3.
5. After the last well is selected, press the ENTER key on the keyboard or double-click on the last well to end the current well selector line.

6. Press ESC on the

keyboard or click the  button to end selector mode.



The well selector appears as a line connecting the various wells in the map view.

The well selector is displayed on the map as a line. In the **Object Manager**, the line name is the names of the selected wells in the order the wells are selected.

To edit the well selector, click on the well selector object in the **Object Manager**. The line properties for the well selector are located in the **Property Manager**. The wells displayed on the line can also be edited.

To add wells to the well selector, click the on the well selector line in the **Object Manager** to select it. In the **Property Manager**, click on the **Well Selector** tab. To modify the well order, add wells, or delete wells, click the  button.

- To delete wells, on the right side of the dialog click on the well to be removed. Click the *Remove* button and the selected well is removed from the list.
- To add wells, on the left side of the dialog select the desired well to add. Click the *Add* button. The well is added to the bottom of the list of wells in the selector line.
- To modify the order the wells are connected, on the right side of the dialog click on the well to move, hold down the left mouse button, and drag the well to the desired location.
- Click *OK* when all of the wells are in the proper order on the right side of the dialog and the well selector line updates.

Cross Section View

Cross section views display multiple wells on a page. Each well can have a variety of curves, similar to a borehole view. In addition, wells are automatically connected to display layers, zones, or lithologies across the page, connecting information from the wells. Well spacing and elevation hanging can be altered to give you the look you need to display your data. The cross section view also allows data to be exported to a data file for use in **Surfer** or exported to a **Voxler** 3D display to create a fence diagram. Drawing objects and labels can be added to a cross section view.

To create a cross section:

1. To create a new blank cross section view, click the **File | New | Cross Section View** command or click the  button.
2. Click the **Cross Section | Create Cross Section** command.
3. If multiple well selector lines have been created, select the appropriate map view and well selector line and click *OK*.

The cross section is created with the default settings. The defaults include each layer assigned a separate color based on the data in the lithology or interval table. If no data appears, a lithology or interval table will need to be created. The table should

contain information for all of the wells in the well selector line that is being used to generate the cross section.

Adding Well Headers

To display well header information, click on the **Cross Section | Add Well Headers** command. Up to five different header lines can be displayed for each well, in addition to the well symbol. Distances can also be displayed between wells. To edit the well header, click on the *Well Header* object in the *Header Pane Objects* section of the **Object Manager**.

Editing the Cross Section

To remove wells displayed in the cross section, click on the well name in the *Logs* section of the **Object Manager**. Once a well is selected, press the DELETE key on the keyboard to delete the well.

To change the order that wells are displayed in the cross section, click on the well name in the *Logs* section of the **Object Manager**. Hold down the left mouse button and drag the well to a new location. The order that the wells are drawn is the bottom-most well in the **Object Manager** is displayed on the left side of the cross section and the top-most well in the **Object Manager** is displayed on the right side of the cross section.

After making any well order changes, a dialog appears prompting the user to recreate the cross section. Click Yes in the dialog to automatically recreate the cross section.

To change the layer properties, click on the *Layers* object in the **Object Manager**. In the **Property Manager**, set the keyword scheme for all of the layers. Or, uncheck the box next to *Use Scheme For Line/Fill*. Then, click on an individual layer in the **Object Manager** and set the properties for only that layer in the **Property Manager**.

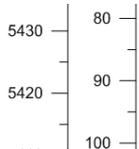
To change the lines that create the layers, click on the layer that you want to change. Make any changes by clicking and dragging the nodes that define the layer. Press ESC on the keyboard when all changes are complete. Refer to the *Reshape* page in the *Drawing Objects* book in the online help for additional information.

Log Types

Both borehole views and cross section views display logs. Several different log types can be created in **Strater**. To create a log in either the borehole view or cross section view, click the **Log | [log type]** command. Click on the screen where the log should

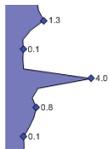
be created. In the **Open** dialog, select the table to use or data file to load and click *Open*. The log is displayed with the default options.

Depth Logs



Depth logs are used as a scale bar to display the depth or elevation of the data in the log or cross section pane. True vertical depth can be displayed on a depth log, if azimuth and inclination are available for the wells.

Line/Symbol Logs



Line/symbol logs are used to display data as symbols with connected lines. Line/symbol logs are useful for displaying assay values, geophysical parameters, moisture content, etc.

Crossplot Logs



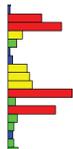
Crossplot logs are used to display intersections of two data curves on a graph. Crossplot logs can be used to characterize properties such as porosity, water saturation, or clay content by comparing where two logs intersect.

Zone Bar Logs



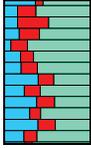
Zone bar logs display intervals for a wide variety of logging data. For instance, zone bars can represent sample intervals, alteration zones, lithology, contamination layers, etc.

Bar Logs



There are two types of bar logs: standard bars and polarity bars. Standard bar logs plot a bar from the data minimum value to the row's data value. Polarity bar logs plot data based upon zero so there are bars on both sides of zero if there is a mix of negative and positive data.

Percentage Logs



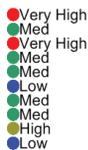
Percentage logs are similar to bar logs. This log is often used to show the different percentages of items in a sample, such as alterations, amounts of various chemicals, or amounts of various rock types, such as sand, clay, gravel, silt, etc.

Tadpole Logs



Tadpole logs plot symbols representing dip and dip direction as a function of depth. This gives an indication of strike and dip of the bedding planes, fractures, or any other structure along the depth of the borehole.

Post Logs



Post logs are used to display a symbol and text at the data position. The symbols can represent sample locations at depth or intervals, and in the case of monitoring wells, the depth to water, contamination, etc.

Classed Post Logs



Classed post logs are similar to the post logs, except classed post logs use range schemes and numerical values to determine the symbol properties.

Complex Text Logs



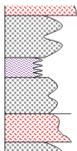
Complex text logs show text in intervals. This type of complex text is generally used for rock descriptions, alteration descriptions, or any general descriptive text contained in an interval of data. Long text blocks are wrapped to fit within the log width. Separator styles can be used to separate text in long descriptions. You can also merge the contents of two or more consecutive intervals that contain the same displayed text.

Graphic Logs



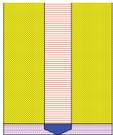
Graphic logs allow you to specify image file names and display the image as the fill for the appropriate interval. This is useful in displaying photos of core, rock type, alteration, etc.

Lithology Logs



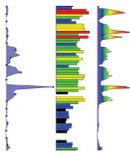
Lithology logs show the various stratigraphic layers in the borehole. The display can be as simple as a filled block from the top to bottom, or the display can be more elaborate and show weathering patterns and line types.

Well Construction Logs



Well construction logs are a visual representation of the well, and are generally used in the environmental industry. This log type shows items such as screen interval, packing material, end caps, and covers.

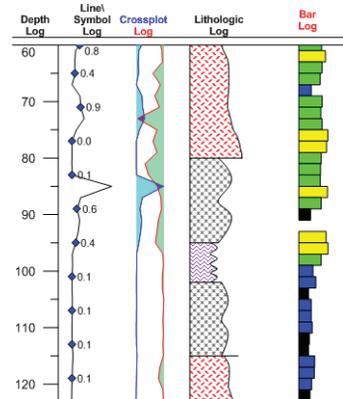
Function Logs



Function logs allow multiple log variables to be combined into a single log using a mathematical equation. The log variables being combined can contain different depth spacings and be from different tables. In this example log, the line/symbol log and the bar log are combined to create the third function log. A new table is created with the output data.

Creating Logs in the Borehole View or Cross Section View

1. With a borehole view or cross section view active, click the **Log | [log type]** command or click the toolbar button associated with the desired log item.
2. Move the cursor to the desired position in the log pane or cross section pane and click where the log should be displayed. Log items cannot be added to header or footer panes. The location can be changed later.



Create multiple logs in the borehole view to display all your data in the best way.

3. After clicking in the log or cross section pane, the **Open** dialog appears. Select a new data source from the *Look In* field or select the appropriate table in the *Use Current Table* field to select the data. Click *Open*.
4. Click through the import data options, if necessary.

Drawing Objects

You can draw text, polygons, polylines, symbols, rectangles, rounded rectangles, and ellipses in **Strater**. In addition to these drawing objects you can import graphics, link text to a data table, add scale bars for log items, and add legends for scheme data. In borehole views and cross section views, you can also insert a map view for reference.

Drawing Objects in a Borehole, Map, or Cross Section View

A drawing object is any drawing item that can be added to a borehole view, map view, or cross section view. Drawing objects include rectangles, rounded rectangles, ellipses, symbols, polylines, polygons, and text. To draw an object in the view window:

1. Click the **Draw | [drawing object]** command or click one of the drawing object toolbar buttons.
2. Move the cursor to the view window and click in the location where you want the object to appear.
3. Draw the item. For most items, this involves clicking on the screen in multiple locations or clicking and dragging the mouse on the screen to size the item appropriately. Refer to the online help for each drawing object type for the specific instructions on drawing that object type.
4. Press the ESC key on the keyboard when the object is finished to end drawing mode.

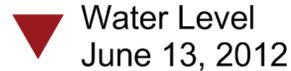
There is no limit to the number of drawing objects that can appear in a borehole view, map view, or cross section view.

Import Object

Imported objects are generally used to display information such as company logos or other graphic images. You can import images, metafiles, and vector files and can place them anywhere in the borehole view. To import an object, click the **File | Import** command. Select the file in the **Import** dialog and click *Open*. The item appears in the view window.

Linked Text

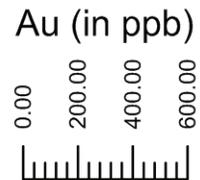
Linked text is used to show information such as location information, depth, driller name, etc. Linked text is derived from text, collars, or project settings tables or property settings. Linked text is added to the borehole, map view, or cross section view by clicking the **Draw | Linked Text** command. The text in the linked text object changes when changes are made to the contents in the linked data table or borehole property. Use the **Property Manager** to change the linked text properties.



Combine multiple items with linked text. When a new reading is recorded in the table, the text updates automatically.

Scale Bar

A scale bar is used for variables in log items. Scale bars are linked to line/symbol, crossplot, bar, tadpole, and function logs. You can also create a scale bar that is not associated with a log. Scale bars can be automatically created when the log is created or can be manually created with the **Draw | Scale Bar** command.



Scale bars show variable ranges for log items.

Legends

You can easily create legends that describe the contents of logs whose appearance is based on a scheme. Legends display user-defined colors, symbols, numerical ranges, and keywords to help readers understand the visual content of a log.

		Legend Title	
Legend 1	★ 45.00 - 49.50	☆ 67.50 - 72.00	
Hard	■ 49.50 - 54.00	■ 72.00 - 76.50	
Medium-Hard	★ 54.00 - 58.50	★ 76.50 - 81.00	
Medium-Soft	★ 58.50 - 63.00	■ 81.00 - 85.50	
Soft	★ 63.00 - 67.50	★ 85.50 - 90.00	

Legends are directly related to the scheme associated with a log. You can modify all the contents of a legend.

Inserted Map Views

To insert a map view into a borehole view or cross section view, create the map view exactly as you want it to appear. In the borehole view or cross section view:

1. Click the **Draw | Insert Map View** command.
2. If multiple map views exist, select the desired map view from the list and click *OK*.

The map is added to the view. The map appears exactly as it appears in the map view. To edit the inserted map, click on the map view tab and make adjustments. The adjustments are automatically displayed in the borehole view or cross section view. To resize the inserted map, click on the map. Hold down the left mouse button and drag the bounding box handles to the appropriate size. Click and drag the map to any location on the borehole view or cross section view to move the inserted map.

Schemes and the Scheme Editor

Data table values, schemes, and log properties are all related in the process of creating a log in the borehole view or cross section view.

The data contains depth or interval information, borehole names, and the data to be displayed on the log. Schemes contain property information that is linked to data and is based on ranges or keywords. When scheme information is found in the data, the graphical borehole log displays the properties of the scheme. The **Property Manager** determines which data table and column are used to create the log, the scheme to use (if any), and properties such as the color and location.

Scheme Requirements

Some log items are dependent on schemes for display. For example, lithology and well construction logs require schemes. Other logs, such as bar logs, can optionally use schemes. The scheme keywords are case-sensitive, so it is advisable to have **Strater** automatically create the schemes using column data in the **New Scheme** dialog. To do this, click on the table view. Highlight the column that contains the scheme data or keywords and click the **Table | Create Scheme** command.

Data and Schemes

Since schemes are linked to the data, be sure to understand the data requirements for the type of log being created and the column requirements for the associated scheme type. For example, to use schemes with lithology logs, you must have specific keywords defined in specific columns.

Opening the Scheme Editor

To open the **Scheme Editor**, click the **Draw | Scheme Editor** command, click the  button next to properties that request schemes in the **Property Manager**, or click the  button.

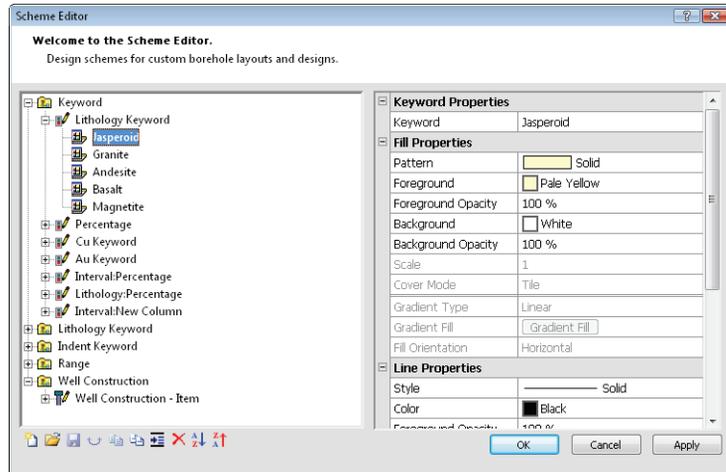
For example, you may have the word *Jasperoid* in a lithology keyword column in a

lithology table. You can create a scheme containing a fill pattern, line pattern, contact line pattern, and keyword label text properties for *Jasperoid*. When the scheme is assigned to a lithology log, every time the word *Jasperoid* is used in the data table column, **Strater** uses the properties assigned in the scheme in the graphical borehole display.

The **Scheme Editor** dialog contains a list of the scheme types on the left, each of which is indicated by the  icon. If a scheme is included in this project there is a  next to the scheme type.

Scheme Types

There are five main scheme types: keyword, lithology keyword, indent keyword, range, and well construction. The properties for each scheme item vary depending on the scheme type. Refer to the online help file for more details on each scheme type.



Use the menu on the left to expand each scheme. In this example, the Lithology Keyword scheme is expanded and the item Jasperoid is highlighted. The properties of the highlighted item are displayed on the right side of the dialog.

Opening and Saving Schemes

To create a new scheme, click the  button at the bottom of the **Scheme Editor**. The **New Scheme** dialog opens, where you define the scheme's properties such as the type of scheme and the number of scheme items. New schemes created in this way can be based on column data by selecting *Base Scheme on Column Data*. This ensures that the data matches the text in the selected table view.

If you would like to reuse schemes with other projects or share schemes with colleagues, save the scheme by clicking the  button. The scheme is saved as a

Strater .SCH scheme file. Click the  button at the bottom of the **Scheme Editor** to open a **Strater** .SCH scheme file.

Copying, Converting, and Deleting Schemes

You can copy a scheme by selecting a scheme name and clicking the  button. A duplicate of the scheme appears in the scheme type list. You can edit the copy of the scheme, including the scheme name and scheme item properties. If the copy button is not available, a scheme is not currently selected.

Click the  button to convert a lithology scheme to a keyword scheme or a keyword scheme to a lithology scheme. This option is active only when a lithology or keyword scheme is selected. This is useful if you wish to reuse schemes for different log types without the necessity of recreating complex schemes.

You can delete a scheme by clicking a scheme name and clicking the  button. If the delete option is disabled, a scheme name is not selected.

Editing Scheme Items

Select a scheme item within a scheme and click the  button to delete it. Insert a new scheme item by clicking the  button when a scheme item is selected. If the delete or insert scheme items buttons are disabled, a scheme item is not selected. To copy scheme items, click on the scheme item that contains the properties you want to copy. Click the  button to copy the item. A new scheme item is created with all of the same properties as the original item.

To reorder scheme items, click on a scheme item name. Hold down the left mouse button and drag the scheme item to the desired location. To sort scheme items in ascending or descending order, click on the scheme name or a scheme item and click either the  or  button. This reorders the list based on the scheme item name, making it easier to find items in schemes with many items.

If you have made a change to a scheme after it has been applied to a log, you can click the *Apply* button to show the changes in the borehole view or cross section view.

Templates

Once a borehole is designed you can reuse the design by saving it as a template. Templates allow you to create, save, and load borehole designs to be reused in other projects or by other **Strater** users. Template files store the borehole view, map view, cross section view, data table layout without any actual data, and the schemes.

Template .TSF files are stand-alone files from the main **Strater** project .SDG files.

Creating Templates

Templates can be created by either opening an existing project and saving it as a template, or by starting with an empty borehole view, creating the borehole view design and saving it as a template.

You can open a new, empty borehole view by:

- Clicking the **File | New | Borehole View** command,
- Clicking the  icon, or
- Right-clicking in the **View Manager** and selecting **New Borehole View**.

When the borehole view opens, design the borehole view, map view, and cross section view by adding objects to the various windows. If you do not have data for the logs, you can design the borehole view in design mode.

Saving Templates

You can save templates from either active or design mode. A saved template is stored in the exact format in which it was saved. Once the borehole is designed, click the **File | Save As** command or right-click in the **View Manager** and select *Save Template*. In the dialog, set the *Save as type* to *Strater Template Files (*.tsf)*.

Loading Templates

To load an existing template file, click the **File | Open** command or right-click in the **View Manager** and select *Load Template*. Borehole views in the template are loaded into a new borehole view, map views in the template are loaded into a new map view, cross section views in the template are loaded into a new cross section view, and the data tables are automatically created. Once the template is loaded you can import data into the data tables, edit the logs to reflect the data, and create additional objects if necessary.

Once a template has been loaded into a new **Strater** window, the appearance of the borehole view remains unchanged if the original source template is changed elsewhere. In order to use any changes made to the original template you must open that template into a new borehole view.

Only one template can be used in each borehole view, map view, or cross section view. However, you can open multiple templates into multiple view windows and save them all in a single project file.

Template Information

If there is a template associated with a borehole view it is listed on the **View** tab in the **Property Manager**. If the *Template Name* field is blank a template is not used for this borehole view.

Tutorial

The tutorial is designed to introduce you to some of **Strater's** basic features. After you have completed the tutorial, you should be able to begin to use **Strater** with your own data, creating your own boreholes, maps, and cross sections. We strongly encourage completion of the tutorial before proceeding with **Strater**. The lessons should be completed in order; however, they do not need to be completed in one session. The tutorial should take approximately one hour to complete.

Now that you have an overview of **Strater**, let's create and edit a borehole view, map view, and cross section view. We will change properties for each of the items being created and save information.

Tutorial Lesson Overview

The following is an overview of lessons included in the tutorial.

- *Lesson 1 - Loading Data* shows how to import data.
- *Lesson 2 - Creating Logs* shows how to create a *Depth* log, a *Line/Symbol* log, and a *Zone Bar* log.
- *Lesson 3 - Changing Properties* shows how to change log properties.
- *Lesson 4 - Creating and Editing Drawing Items* shows how to add text, linked text, and a legend to the borehole view.
- *Lesson 5 - Changing Boreholes* shows how to change all of the logs to another borehole and how to change an individual log to a different borehole.
- *Lesson 6 - Creating a Map View* shows how to load collar data into a table and create a map view with a well layer and a well selector line.
- *Lesson 7 - Creating a Cross Section View* shows how to create and edit a cross section view.
- *Lesson 8 - Saving Information* shows how to save the **Strater** project and how to create a template.

Using the Tutorial with the Demo Version

Some **Strater** features are disabled in the demo version, which means that some steps, such as lesson 8, cannot be completed by users running the demo version. This is noted in the tutorial lesson.

Starting Strater

To begin a **Strater** session:

1. Navigate to the installation folder, which is C:\Program Files\Golden Software\Strater 3 by default.
2. Double-click on the Strater.exe application file.
3. A new empty project is created with an empty borehole view and an empty project settings table. If this is the first time that you have opened **Strater**, you will be prompted for your serial number. Your serial number is located on the CD cover, or in the email download instructions, depending on how you purchased **Strater**.

If **Strater** is already open, click the **File | New | Project** command or the  button to open a new empty project before continuing with the tutorial.

Lesson 1 - Loading Data

Data can be loaded into **Strater** before any logs are created, while creating the logs or after the logs have been created. In this section, the initial data is loaded before any logs are created. If you prefer to create a log design first, use *Design Mode*. Design mode is discussed in the online help in the *Advanced Tutorial* book.

To load a data file into a table:

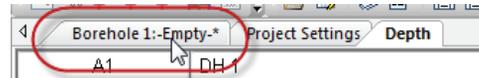
1. Click the **File | Load Data** command or click the  button.
2. In the **Open** dialog, navigate to the **Strater** Samples folder. By default, this is located in C:\Program Files\Golden Software\Strater 3\Samples. Click on the *Tutorial 1.xls* file and click *Open*.
3. In the **XLS Import Options** dialog, select the *Depth* sheet and click *OK*.
4. In the **Specify Worksheet Column Definitions** dialog, check the box next to *Specify Column Header Row*. This tells **Strater** that the column number specified contains text indicating the column name. Click *Next*.
5. In the **Specify Data Type and Column Positions** dialog, set the *Data type* to *Depth (Single Depth)*.
6. Set the *Hole ID* and *Depth* columns to the appropriate columns. Click *Load*.

The data is displayed in a table view named *Depth*. This table can now be used to create logs.

Lesson 2 - Creating Logs

The most common types of logs are depth logs and line/symbol logs. Data are immediately associated with the log when creating log items in active mode, providing an immediate image representing the log. This section will use the previously loaded data file to create a line/symbol and depth log. Another table will be loaded while creating a zone bar log.

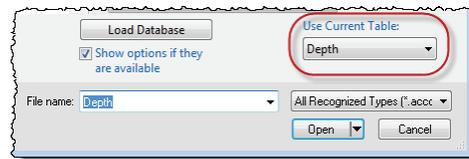
To create the logs in the borehole view, click on the *Borehole 1* tab.



Click on the *Borehole 1* tab to switch to the borehole view, where logs are created.

Creating a Depth Log

Depth logs display the borehole's depth or elevation information. For deviated wells, the depth log can be adjusted so that the true vertical depth can be displayed.



Select the *Depth* table in the *Use Current Table* section.

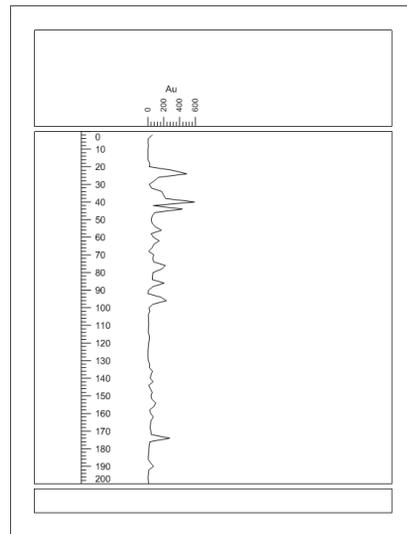
To create a depth log:

1. Click the **Log | Depth** command or click the  button.
2. Click on the left side of the log pane, where you want the depth log to be located.
3. In the **Open** dialog, make sure that *Depth* is selected in the *Use Current Table* option and click *Open*. The depth log is created with the default properties.

Creating a Line/Symbol Log

Line/symbol logs display table data connected with a line in depth order. Symbols can also be displayed, or both line and symbols can be displayed. To create a line/symbol log:

1. Click the **Log | Line/Symbol** command or click the  button.
2. Click near the center of the log pane where the line/symbol log should be located.
3. In the **Open** dialog, make sure that *Depth* is selected in the *Use Current Table* option and click *Open*. The line/symbol log is created with the default properties.



Both the depth log and line/symbol log are shown in the log pane, with a scale bar in the header pane.

Note that a scale bar appears in the header pane. The default option for line/symbol logs is to always create a scale bar. The scale bar shows the range of values for the variable being displayed. If scale bars are not desired by default, click the **Tools | Options** command. Uncheck the box next to *Auto Create Scale Bar* in the *General* section.

Creating a Zone Bar Log

Zone bar logs display a variety of well log information, such as lithology or layer information. Zone bar logs include two columns of depth data, normally labeled as *From* and *To*. Because of this, each row contains data that represents conditions in a depth range. To create a zone bar log:

1. Click the **Log | Zone Bar** command or click the  button.
2. Click in the log pane, to the right of the line/symbol log.
3. In the **Open** dialog, select *Tutorial 1.xls* from the Samples folder and click *Open*.
4. In the **XLS Import Options** dialog, select the *Lithology* sheet and click *OK*.
5. In the **Specify Worksheet Column Definitions** dialog, check the box next to *Specify Column Header Row* to use row 1 as the header row. Click *Next*.
6. In the **Specify Data Type and Column Positions** dialog, verify that *Hole ID*, *From*, and *To* have the appropriate columns selected. The rest of the columns are not mapped to one of the remaining predefined columns but will be imported into the table. Click *Load*. The zone bar log is created with the default settings. An interval table named *Lithology* is created with the data loaded from the selected sheet.

Lesson 3 - Changing Properties

The properties of an object are edited by clicking on the object and changing the properties in the **Property Manager**. The **Property Manager** is displayed by default on the lower left side of the **Strater** window. If the **Property Manager** is not visible, click the **View | Managers | Property Manager** command. A check mark appears next to the **Property Manager** if it is visible. When an object is selected, the properties are displayed in the **Property Manager**.

Editing Log Item Position and Size

The easiest way to position or size a log is to click on the log in the **Object Manager** or in the log pane and drag it to a new location or size. However, items can be more accurately positioned with menu commands and toolbars.

To accurately position and size the line/symbol log:

1. Click on the line/symbol log in the **Object Manager** or log pane to select it.

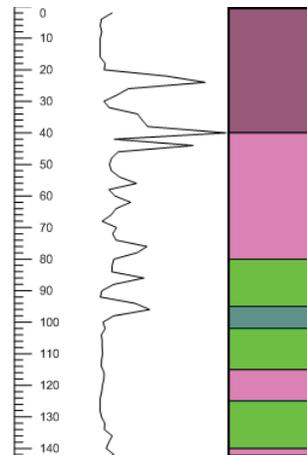
2. In the *Position/Size* toolbar, highlight the number next to X: and type in 2.0. Press ENTER on the keyboard and the line/symbol log is moved in the borehole view so the left edge is two inches from the left edge of the paper.
3. Highlight the number next to W: and type 1.5. Press ENTER on the keyboard and the line/symbol log is resized so that the log is one and a half inches wide.

You can position all items using the same method.

Spacing Objects

Log items can be positioned relative to one another with the **Arrange** menu commands. To position the depth log relative to the line/symbol log:

1. The line/symbol log should be to the right of the depth log. If the line/symbol log is to the left of the depth log, click on the depth log. Hold down the left mouse button and drag the depth log to the left of the line/symbol log.
2. Select both the depth log and the line/symbol log. There are two ways to select multiple items in the log pane:
 - Click on the first log. Press the SHIFT key on the keyboard. While holding the SHIFT key down, click the second log. Both logs are highlighted.
 - In the **Object Manager** click the name of the first log. Press the CTRL key on the keyboard. While holding the CTRL key down, click the name of the second log. Both logs are highlighted.
3. Click the **Arrange | Space Objects | Left to Right** command.



*The **Space Objects** command removes the spaces between adjacent objects to maximize the space available in the log view.*

The line/symbol log remains in the fixed location. The depth log is moved so that the right edge of the depth log bounding box is at the same location as the left edge of the line/symbol log bounding box.

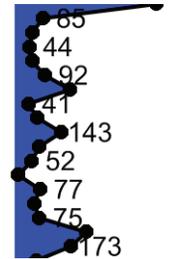
The **Arrange | Space Objects | Right to Left** command can be used when selecting the line/symbol log and the zone bar log to move the zone bar log to the immediate right of the line/symbol log.

Editing Line/Symbol Log Properties

Each object has unique properties that can be changed. Line/symbol logs can change the column that is being displayed, the scaling, the line, fill, and symbol properties,

add labels, and add a background grid behind the line/symbol log. To change the line/symbol log properties:

1. Click on the line/symbol log in either the **Object Manager** or in the plot window to select it.
2. In the **Property Manager**, click on the **Display Properties** tab.
3. Click the next to *Line Properties* to open the line properties section.
4. To increase the line thickness, highlight the value next to *Width* and type a new value, such as 0.02 inches. Press ENTER on the keyboard to make the change.
5. To open the fill properties section, click the next to *Log Fill Properties*.
6. To fill the curve to the left of the line with a blue color, make sure that the *Display Log Fill* option is set to *Left*.
7. Click the black color next to *Foreground* and select blue from the color list. The *Pattern* is automatically changed to solid and the log is filled to the left.
8. To open the symbol properties section, scroll down and click the next to the *Symbol Properties* section.
9. Highlight the zero next to *Symbol Frequency* and type 1. Press ENTER to show a symbol at all points in the table.
10. To set label properties, click on the **Label** tab.
11. Check the box next to *Show Label* to display labels.
12. To reduce the number of labels, click the next to *Layout*.
13. Highlight the number next to *Frequency* and type 2. Press ENTER on the keyboard and every other label is displayed.
14. Click the word *Center* next to *Offset Types* and select *User Defined* from the list.
15. Highlight the value next to *X Offset* and type 0.150. Press ENTER on the keyboard and the labels are moved to the right side of the symbols.



Display fill, symbols, and labels on the line/symbol log.

Editing Zone Bar Properties

Zone bar logs can change the column that is displayed, add labels, change line and fill properties, and add grid lines behind the log. Normally, the fill is controlled by a scheme, which is discussed in the next section. To edit the zone bar log:

1. Click on the zone bar log in the **Object Manager** or in the log pane to select it.
2. To display the name of the lithological layer in each zone on the



Display labels and colors in the zone bar log.

zone bar, click on the **Label** tab.

3. Change the *Show Label* option to *Show Label With Fill*. The labels are added to the display.

Editing Schemes

Schemes are an important part of **Strater**. Schemes provide a mechanism to define drawing properties, such as line, fill, and symbol properties, from a table value. Once a scheme is created, it can be used in many logs, cross sections, and other projects. This avoids the need to duplicate work. Schemes are not used in all log types, but they are used in several, including the zone bar log. Schemes are required for lithology, percentage, and well construction logs. Schemes are optional for bar, classed post, post, and zone bar logs. Scheme properties can be edited from any view by clicking the **Draw | Scheme Editor** command or click the  button.

A zone bar log uses a scheme to relate data table information to interval block properties, such as fill color or fill pattern. When you created this log, **Strater** automatically created a basic, default scheme to fill the log with random colors. To edit the scheme connected with the zone bar log:

1. Click on the  button to open the **Scheme Editor**.
2. On the left side of the **Scheme Editor**, click the next to *Lithology: Lithology Keyword*. The five scheme items are displayed below the scheme name.
3. Click the *Jasperoid* item. The item properties are displayed on the right side of the **Scheme Editor**. Set the fill properties to any desired pattern and color you wish. For instance, you may click next to *Pattern* and select the *BIF* image.
4. Select the *Granite* item and set different fill properties. For instance, click next to *Foreground* and set the color to a dark green. Click the solid fill next to *Pattern* and select a diagonal cross fill pattern.
5. Continue changing the properties for each of the remaining items until the fill properties for all five items have been changed.
6. Click *OK* and the **Scheme Editor** closes. The scheme properties are automatically applied to the zone bar log.



Change the fill properties for each item in the scheme.

Note that the scheme item names are case-sensitive. If you were to change *Granite* to *granite* in one cell in the table, the scheme item properties would not be displayed for that interval.

Lesson 4 - Creating and Editing Drawing Items

The header and footer panes typically contain information about the company, borehole, etc. Most of this information is static; however, some of the information can change depending on data changes. You can create a variety of objects such as rectangles, lines, and text to display information anywhere in the borehole view, map view, or cross section view windows.

Creating Text

To add text to the borehole view:

1. Click the **Draw | Text** command or click the  button.
2. Move the cursor into the borehole view. Click the left mouse button when the cursor is above the depth log in the header pane.
3. The **Text Editor** opens. Type *Depth (feet)*.
4. Click *OK* and *Depth (feet)* appears in the location where the mouse was clicked.
5. Press ESC on the keyboard to end drawing mode.
6. Click on the text. A bounding box appears. You can click and drag the text to move the text to the desired location.
7. With the text selected, highlight the number next to the *Points* option in the *Font* section of the **Property Manager**.
8. Type a new size value and press ENTER on the keyboard to make the change.

Creating Linked Text

Linked text shows information that changes with the borehole being displayed, such as location information, depth, driller name, or page number. Linked text is derived from a table or borehole view property setting. So, when the data changes, the text automatically updates.

1. Click the **Draw | Linked Text** command or click the  button.
2. Near the top left of the header section, click to add linked text. The default linked text object, the borehole ID, appears.
3. Click a second time below the *DH-1* text. Another *DH-1* appears.
4. Press ESC on the keyboard to end drawing mode.
5. Click on the first *DH-1* in either the **Object Manager** or in the header pane.
6. In the **Property Manager**, click on the **Linked Text** tab.
7. Next to *Prefix*, type *Borehole ID:* . Press ENTER on the keyboard and the text appears to the left of the borehole ID number.
8. Click on the second *DH-1* text in either the **Object Manager** or in the log pane.

9. With the linked text box highlighted, click the *Borehole Name* next to the *Linked Text Type* option in the **Property Manager**. Select *Current Page* from the list. The page number is displayed.
10. Next to *Prefix*, type *Page:* . The contents of the linked text box changes.

Aligning Text

There are several ways to position objects, including text boxes, in **Strater**.

- Click and drag objects to new locations.
- Click the **Arrange | Align Objects** command to automatically position objects relative to other objects.
- Click the **Arrange | Space Objects** command to control spacing between objects.
- Use the *Position/Size* toolbar to manually and precisely position objects.

To align the linked text objects:

1. Select the first linked text box by clicking on the *Linked Text 1* object in the **Object Manager**.
2. Press and hold the CTRL key on the keyboard.
3. In the **Object Manager**, click on *Linked Text 2*.
4. Click the **Arrange | Align Objects | Left** command. The text blocks are now horizontally aligned along the left edge of the text.
5. Click on the *Text 1* object in the **Object Manager**.
6. Press and hold the CTRL key on the keyboard.
7. Click on the *Scale Bar - Au* object in the **Object Manager**.
8. Click the **Arrange | Align Objects | Middle** command. The depth text and the scale bar are now vertically aligned.



Align text to create a more organized layout for the borehole.

Creating a Legend

Legends can be added to explain information contained in a log, such as the zone bar log. To add a legend:

1. Click on the zone bar log to select it.
2. Click the **Draw | Legend** command or click the  button.
3. Click on the borehole view where the legend should be located. The legend can appear in any of the panes. After clicking, the legend automatically appears.

Legend Title	
	Jasperoid
	Granite
	Andesite
	Basalt
	Magnetite

Add a legend to explain items displayed in the borehole view.

4. Press the ESC key on the keyboard to end drawing mode.

The legend can be edited in the **Property Manager** to show fill properties, symbol properties, or both. The options can appear in multiple columns and with the text on the left or right side. The online help has additional information about formatting the legend in the *Advanced Tutorial* book.

Lesson 5 - Changing Boreholes

It is very easy to change boreholes in **Strater**. As mentioned earlier, the tables can contain data for more than one borehole and the project can reference more than one table.

Changing All Logs to a New Borehole

In our example, the *Lithology* and *Depth* tables both contain DH-1 and DH-2 in the *Hole ID* column. You can easily change all of the items in the borehole view from DH-1 data to DH-2 data. To change the borehole:

1. To display the **View Properties** in the **Property Manager** on the **View** tab:
 - Click the **View | View Properties** command,
 - Click in the white space in the log pane,
 - Click the  button, or
 - Click on the view name in the **View Manager**.
2. Click *DH-1* next to *ID Filter* and select *DH-2* from the list. The borehole log items and linked text change to reflect the DH-2 data.

Changing One Log to a New Borehole

To change only one log to a different borehole:

1. Click on the log that should be changed, such as the zone bar log.
2. In the **Property Manager**, click on the **Base** tab.
3. Click the well name next to *ID Filter* and select the appropriate borehole name, such as *DH-1*. The zone bar log automatically updates to show the new borehole's data.

When changing only a single log, only the selected log changes to the new data. In this case, the depth log, line/symbol log, and linked text continue to show the DH-2 data. Only the zone bar log shows the DH-1 data. The borehole view tab and the *ID Filter* in the **Property Manager** show *-Multi-* to indicate that multiple logs are displayed in this borehole view.

Lesson 6 - Creating a Map View

A map view can represent each of the wells in a collars table as a symbol on a map. Each well in the collars table is displayed as a separate symbol. Wells can be edited as a group or individually. The map also contains a set of four axes, that can be edited individually. Maps can add base layers, additional well layers, or well selector lines.

Opening a New Map View

New map views in an existing project are created by clicking the **File | New | Map View** command or clicking the  button.

Displaying the Well Locations

In the new map view, wells can be displayed based on information in the collars table. A collars table can be imported using the **File | Load Data** command or can be imported when creating the well map.

1. Click the **Map | Create Well Map** command or click the  button.
2. In the **Open Collars File** dialog, select the *Example Data.xls* file and click *Open*.
3. In the **XLS Import Options** dialog, select the *Collars* sheet and click *OK*.
4. In the **Specify Worksheet Column Definitions** dialog, make sure that *Specify Column Header Row* is checked and click *Next*.
5. In the **Specify Data Type and Column Positions** dialog, set the *Hole ID*, *Starting Depth*, *Ending Depth*, *Elevation*, *Easting*, and *Northing* columns to the appropriate columns and click *Load*. The two wells appear on the map.

The well map is displayed with the default properties. Because only two wells are visible, the wells are located at the extremes of the map limits. Both wells contain different settings.

Changing the Well Properties

All of the well properties can be edited. To make changes to the well symbol and add well labels:

1. Click on the *Wells 1* object in the **Object Manager**.
2. In the **Property Manager**, click on the **Label** tab.
3. Check the box next to *Show ID* to display the well name. By default, the name appears below the symbol.
4. Next to *Show Table Column*, click on the word *[None]* and select *Elevation* from the list. This displays the elevation of the well below the well name.
5. To change the symbol, click on the **Symbol** tab.

6. A scheme can be used to display wells or all symbols can be the same. Uncheck the box next to the *Use Keyword Scheme* option to use a uniform symbol.
7. To change the symbol, open the *Symbol Properties* section by clicking the  next to *Symbol Properties*.
8. Change the *Symbol* by clicking on the existing symbol and selecting the desired symbol from the list.

Changing the Map Properties

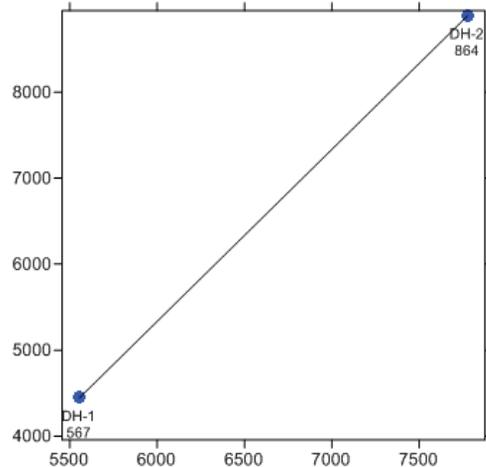
The map properties control the size of the map and symbol, line, and font properties for all of the objects in the map. To change the limits and scale of the map:

1. Click on the *Map 1* object in the **Object Manager**.
2. In the **Property Manager**, click on the **Scale** tab.
3. To use different scales in the X and Y directions, uncheck the box next to *Proportional XY Scaling*.
4. Set the *Length (Page Units)* to 7 inches for both the *X Scale* and *Y Scale* by highlighting the existing value and typing 7.0. Press ENTER on the keyboard to make the change. Creating a map that fits nicely within the page boundaries is important if you are going to insert the map view in a borehole view or cross section view because the entire map view page boundary is inserted.
5. Click on the **Limits** tab.
6. Check the box next to *Use Data Limits* to have the limits controlled exactly by the objects in the map.
7. Click the *Fit All* button to expand the limits to include all of the text associated with the wells.

Adding a Well Selector Line

A well selector line is required to create a cross section. Wells are selected in the order that they should appear in the cross section with the furthest left well in the cross section selected first on the map. To connect wells:

1. Click the *Wells 1* map layer.
2. Click the **Map | Add Well Selector** command or right-click on the map and choose **Add | Well Selector**.
3. The cursor changes to . As the cursor approaches a well, the well name appears in a floating box. This makes



The wells and well selector line are displayed in the map view.

selecting the right well easier. Click on the first well, *DH-1*, to select it.

4. Click on each additional well in the order that the logs will appear in the cross section. Click on *DH-2* next.
5. Press the ENTER key on the keyboard or double-click on the last well to end the current well selector line.
6. Press ESC on the keyboard to end selector mode.

Lesson 7 - Creating a Cross Section View

Now that the well selector line is displayed, a cross section can be created. A cross section view represents each of the wells selected in a map view. Each selected well is displayed as a zone bar or lithology log in the cross section view. Wells are connected with layers, representing the zones.

Opening a New Cross Section View

New cross section views in an existing project are created by clicking the **File | New | Cross Section View** command or clicking the  button.

Displaying Wells in the Cross Section

To add the wells on the well selector line to the cross section view, click the **Cross Section | Create Cross Section** command. Because only a single well selector line has been created, this well selector line is used for the cross section.

Editing Cross Section Properties

Some properties control options for the entire cross section, such as layer labels, well headers, and distances between wells.

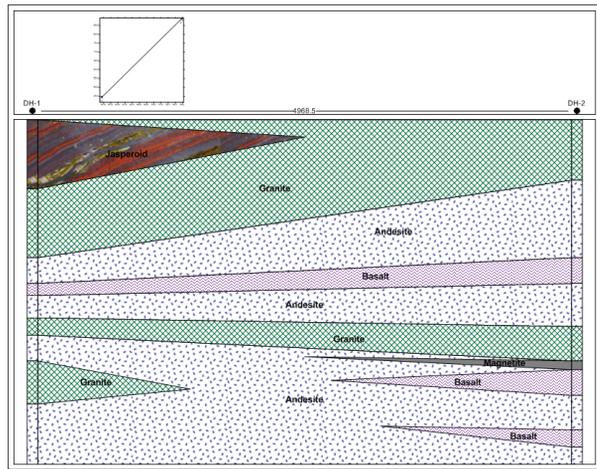
1. To add layer names, click on the *Layers* object in the **Object Manager**.
2. In the **Property Manager**, click on the **Layers** tab.
3. Check the box next to *Show Layer Labels* and the layer names are automatically displayed.
4. To add well headers, click the **Cross Section | Add Well Headers** command. The well name and symbol are automatically added to the header pane.
5. To display distances between wells, click the *Well Header 1* object in the **Object Manager**.
6. In the **Property Manager**, click on the **Distance** tab.
7. Check the box next to *Show Distance*. The distances displayed are in map units.

The map view can be inserted into the cross section by clicking the **Draw | Insert Map View** command. After the map view appears, you can click on it and drag it to the desired location. To edit the inserted map view, edit the original map view. The inserted map automatically updated.

Reshaping the Cross Section Connections

The lines connecting wells in the cross section can be edited. Currently, two pinchouts are shown connecting toward the bottom of the cross section. To separate these layers:

1. Click anywhere on the cross section to enter reshaping mode. For instance, to edit the *Granite* pinchout, click on the *Granite* pinchout on the left side of the cross section.
2. Because the *Granite* and *Basalt* pinchouts share a common central node, you can separate the two pinchouts by using the SHIFT key. Hold the SHIFT key down on the keyboard and drag the right most node toward the left side of the cross section.
3. Click on the *Basalt* pinchout on the right side of the cross section.
4. Hold the SHIFT key down on the keyboard and drag the left most nodes toward the right side of the cross section.
5. Continue editing the cross section until all of the layers have the desired shape.
6. Press ESC on the keyboard to end reshape mode.



The cross section shows the two wells and layers in the cross section pane. The well names, distance between the wells, and the inserted map view are in the header pane.

Refer to the *Reshape* page in the *Drawing Objects* book in the online help file for additional information on using the reshape command.

Lesson 8 - Saving Information

When you have completed the project, you can save the file to a **Strater** file or a template file. **Strater** files save the schemes, borehole views, cross section views, and map views to the file. The data is also saved in the file. Templates save the same information, but without the actual data. If you are using the demo version, the save command is not available. To save the file:

1. Click the **File | Save As** command.
2. Set the *Save as type* to *Strater Files (*.sdg)* or to *Strater Template Files (*.tsf)*.
3. Type a *File name*.
4. Click *Save* and the file is saved.

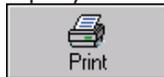
Printing the Online Help

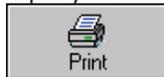
The online help topics may be printed. You can print a single topic, a section of the table of contents, or all topics in the table of contents. Open the online help by clicking the **Help | Contents** command in the **Strater** window.

Printing One Topic

To print one topic:

1. Click the topic you want to print.



2. Click the  button.
3. If the **Contents** page is open in the help navigation pane, the **Print Topics** dialog appears. Select *Print the selected topic* and click *OK*.

Printing One Book

To print one book, the tutorial for example:

1. Click the **Contents** tab on the left side of the help window.
2. Expand the **Strater 3** book and click on the *Tutorial* book.



3. Click the  button.
4. The **Print Topics** dialog appears. Select *Print the selected heading and all subtopics* and click *OK*. All the topics included in the *Tutorial* book are printed.

Printing the Entire Help File

To print all of the topics in the help file table of contents:

1. Select the top-level book in the help book, **Strater 3**.



2. Click the  button within the help window.
3. The **Print Topics** dialog appears. Select *Print the selected heading and all subtopics* and click *OK*. All the topics included in the online help table of contents are printed. **WARNING:** Printing the entire help file takes hundreds of letter-sized sheets of paper and is very time consuming to print. There is no table of contents or index printed with the file.

Getting Help

The quick start guide is a quick way to learn about the basics in **Strater**. There are also other sources of help for **Strater**.

Online Help

Extensive information about **Strater** is located in the online help. Click the **Help | Contents** command to access the online help. You can navigate the online help using the **Contents**, **Index**, **Search**, and **Favorites** tabs on the navigation pane to the left of the topic page.

Context-Sensitive Help

Strater also contains context-sensitive help. Highlight a menu command, window region, or dialog and press the F1 key to display help for the highlighted item. You may also access context-sensitive help by pressing SHIFT+F1 or clicking on the  button. Then, click on a menu command, toolbar button, or screen region to view information specific to that item. The help window appears with additional information.

In addition, most dialogs contain a help button. Click the  button in a dialog title bar to open the help topic for the displayed properties. To open help topics for the specific item highlighted in the **Property Manager**, click on the item in the **Property Manager** and press the F1 key on the keyboard.

Internet Resources

There are several internet help resources.

- Direct links to the Golden Software home page (www.GoldenSoftware.com), the **Strater** product page, frequently asked questions, and the knowledge base are available by clicking **Help | Golden Software on the Web**.
- The **Help | Feedback** commands send a problem report, suggestion, or information request by email directly to **Strater** technical support.
- Click the *Forums* button in the online help to post a question or comment in our public support forums.
- Click the *Knowledge Base* button in the online help to search for an answer in our frequently updated knowledge base.
- Browse newsletter articles on our website at www.GoldenSoftware.com/newsletter.
- Watch the training videos on our website at www.GoldenSoftware.com/support-central.shtml.
- Read through our blog items at <http://www.GoldenSoftware.com/blog>.

Technical Support

Golden Software's technical support is free to registered users of Golden Software products. Our technical support staff is trained to help you find answers to your questions quickly and accurately. We are happy to answer all of your questions about any of our products, both before and after your purchase. We also welcome suggestions for improvements to our software and encourage you to contact us with any ideas you may have for adding new features and capabilities to our programs.

Technical support is available Monday through Friday 8:00 AM to 5:00 PM Mountain Time, excluding major United States holidays. We respond to most technical questions within one business day. When contacting us with your question, have the following information available:

- Your **Strater** serial number (located on the CD shipping cover, in the download directions, and in the **Help | About Strater** dialog)
- Your **Strater** version number, found in **Help | About Strater**
- The operating system you are using (Windows XP, Vista, 7, or higher)
- Whether you are using a 32-bit or 64-bit **Strater** program and operating system

If you encounter problems with **Strater**, you are welcome to send an email message to Golden Software using the **Help | Feedback | Problem Report** command. This message is delivered directly to StraterSupport@GoldenSoftware.com. Report the steps you perform when the problem occurs and include the full text of any error messages that are displayed. You are welcome to attach a .ZIP file (10 MB maximum) containing the .SDG file that illustrates the problem or contact technical support if you have very large zipped attachments to send.

Contact Information

Telephone: 303-279-1021

Fax: 303-279-0909

Email: StraterSupport@GoldenSoftware.com

Web: www.GoldenSoftware.com (includes FAQs, knowledge base, support forum, training videos, newsletters, blog, downloads, and more!)

Mail: Golden Software, Inc., 809 14th Street, Golden, Colorado 80401-1866, USA

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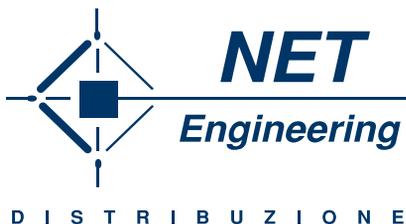
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Before calling, please check the following available resources as your question may already be answered.

Registration: Register online at www.GoldenSoftware.com or fax or mail the <i>Registration Form.PDF</i> , located in the main directory on the CD
Knowledge Base: www.GoldenSoftware.com/activekb or in the Strater program using the Help Golden Software on the Web Knowledge Base command
Forums: www.GoldenSoftware.com/forum or in the Strater program using the Help Contents command and click on <i>Forums</i>
Frequently Asked Questions: In the Strater program using the Help Golden Software on the Web Frequently Asked Questions command
Tutorial: Complete the tutorial section in this quick start guide or in the Strater program using the Help Tutorial command
Online Help: In the Strater program using the Help Contents command
Support Videos: www.GoldenSoftware.com

È il momento di ordinare Strater 3!

Chiama subito lo 0131.250313 e parla con un nostro addetto



Per informazioni commerciali:

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C.so Borsalino 19/A, Alessandria
T.0131. 250313
www.net-eng.it



www.GoldenSoftware.com