

POWER CORE

Version 8.0 Metric Tutorial



The Intelligent Geological Software Solution

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Introduction

Power*Core™ (Petrographical Office Wellsite Evaluation and Reporting) is a chip and core logging management program that utilizes single-entry data capturing to produce geological striplogs. The geological data is entered into the system through the use of intuitive data entry forms to ensure standardization of data. This data is stored in an RDBMS(Relational Database Management System) to allow data manipulation using SQL access tools.

Power*Core™ software consists of four (4) main parts:

- 1.) A log editor module that allows you to change the striplogs to suit your needs and preferences.
- 2.) A data transfer module.
- 3.) Report printing modules.
- 4.) An on-line help system that is designed to familiarize you with the commands and functions available in **Power*Core™** and lead you through many of the processes involved in creating logs.

A note about navigating through Power*Log™:

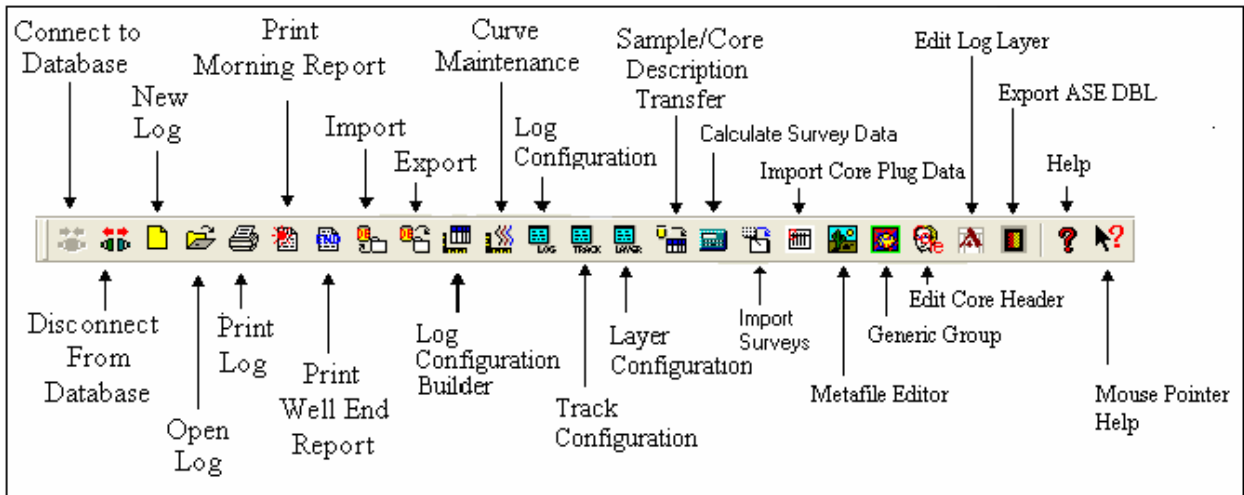
When you are entering information into data forms, you may move between boxes/fields by **pressing the Tab key** to go forward and **Shift +Tab keys** to move backwards. To exit forms that do not have an **Exit, OK, or Cancel** button, **press the Esc key** on the keyboard.

To access the On-line Help System in Power*Core™:

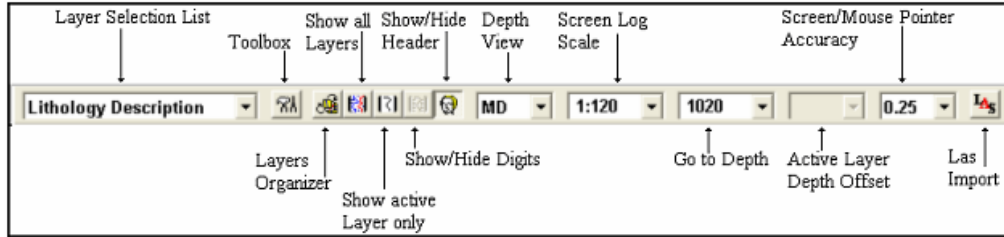
You can make use of the context sensitive help by **pressing the F1 key** when you are in a dialogue box. A pertinent help file will appear, opened to the topic relevant to the dialogue box you are in.

Below are some examples of common features within Power*Core™:

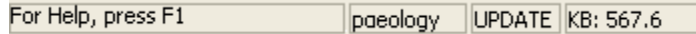
The Toolbar...



The Selection Bar...



The Status Bar...

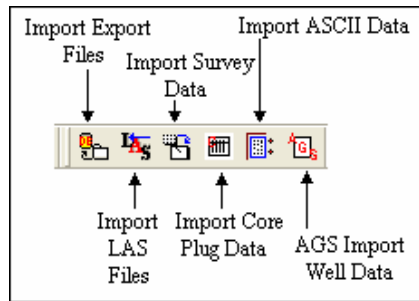


The **Status Bar** displays system status messages and any error message (associated with a field entry), in the far left corner.

Import Toolbar

This toolbar is dock able and can be moved to different places on the screen.

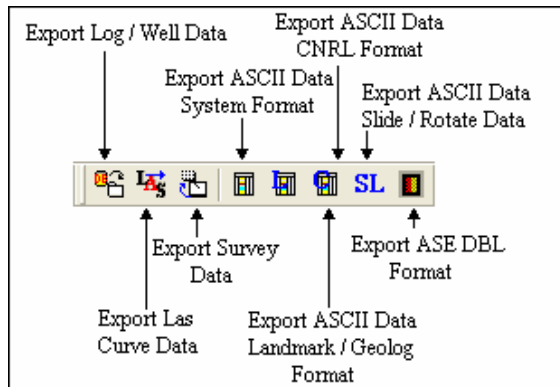
The Power*Log / Core & Curve™ Import Toolbar...



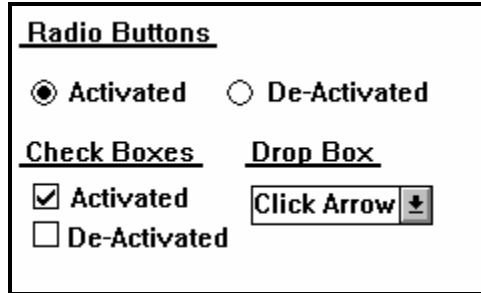
Export Toolbar

This toolbar is dock able and can be moved to different places on the screen.

The Power*Log / Core & Curve™ Export Toolbar...



The KB elevation is displayed in the lower right corner of the **Status Bar**.



The On-line Help is divided into four(4) main categories:

Commands - Descriptions of each menu command within **Power*Log™**.

Toolbar - Shortcuts to common commands are explained.

Database Table Operations - Commands/functions related to the Database Table are described.

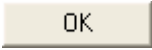
Quick Reference Guide - The portion of the **On-line Help System**, that quickly refers you to some of the more commonly performed tasks.

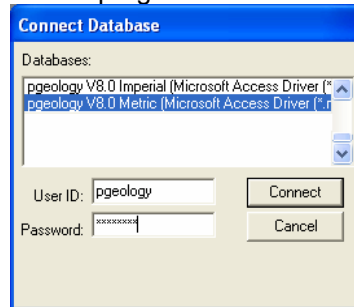
This tutorial will guide you through the process of creating and editing a core log.


Connecting to the Database




PowerCore
V8.0

- 1.) **Double click** on the  **button**. This will initiate the program and activate a **Connect Database** window.

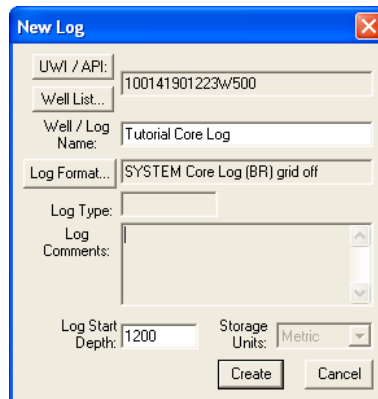


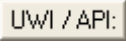
- 2.) Highlight the **pgeology access V8.0 (Microsoft Access Driver[* .mbd])** database.
- 3.) Move your mouse pointer to the **User ID** field and **click**. This will activate a flashing cursor in the **User ID** field. **Type "pgeology"** in the **User ID** field. **Press the Tab key** on the keyboard to move to the **Password** field.
- 4.) **Type "pgeology"** in the **Password** field and then **click** on the  **button**. The program will now load various dictionaries and then activate an **Open Log** window.

Creating a New Well / Log

The first step in creating a new log is to **click** on the  **New Log button** on the **Toolbar** or to **select New** under **File** on the **Selection Bar**. This will open the **New Log** window.

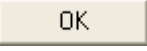

This more than likely will appear after connecting to the Database without you have to do the above procedure if this was the first time you have activated Power*Core.





- 1.) The **Well/Log Name** field is where you enter the name of the well (no more than 50 characters long). **Type "Tutorial Core Log"** into the **Well / Log Name** field.
- 2.) **Click** on the  **button** to activate the **UWI / API Format** window.

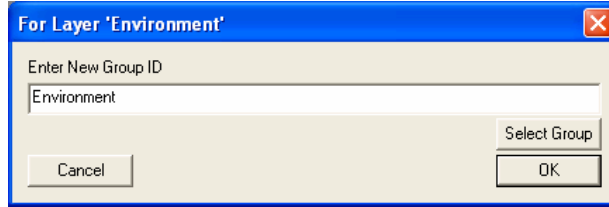
- 3.) You will be using the **DLS (Dominion Land Survey System)** format (for Alberta, Saskatchewan, Manitoba and some of BC). Enter the following information into the empty **DLS** fields and remember to **Tab** between fields.

Loc. Ex.: **00**(two zeros) LSD: **14** Sec.: **19** Township: **012** Range: **23**
 E/W: **W** Mer.: **5** O/A: **0** (zero) Event Sequence: **0** (zero)

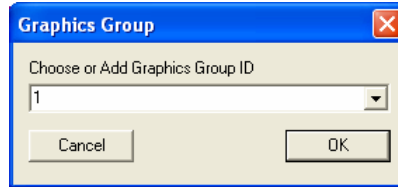
- 4.) Click on the  button when you have finished entering the **UWI**. An extended **UWI** is created by **Power*Log** from the many small fields that you just filled in.
- 5.) Click on the  button to activate the **Log Format List** window.

- 6.) Click on “**V SYSTEM Core Log (BR) grid off [SYSTEM (M)]**” to highlight it and then click on the  button. You may also double click on “**V SYSTEM Core Log (BR) grid off [SYSTEM (M)]**”
- 7.) Once you have been returned to the **New Log** window, **double click** in the **Log Start Depth** field. This will highlight the zero (**0**) and activate a flashing cursor. **Type 1200** in the **Log Start Depth** field.
- 8.) Once the information is entered, click on the  button. This will initiate the **New Log** and activate a window named **For Layer ‘Environment’**.

The log you have selected has **one generic fill categories** that can utilize existing groups (in your case none exist) or add new ones. These layers allow the user to define an interval with a color and/or pattern as well as a long name or short name displayed in various ways. These are catch all categories that can be used for all sorts of data types. The two associated with this core log are **Environments** and **Lithofacies**.

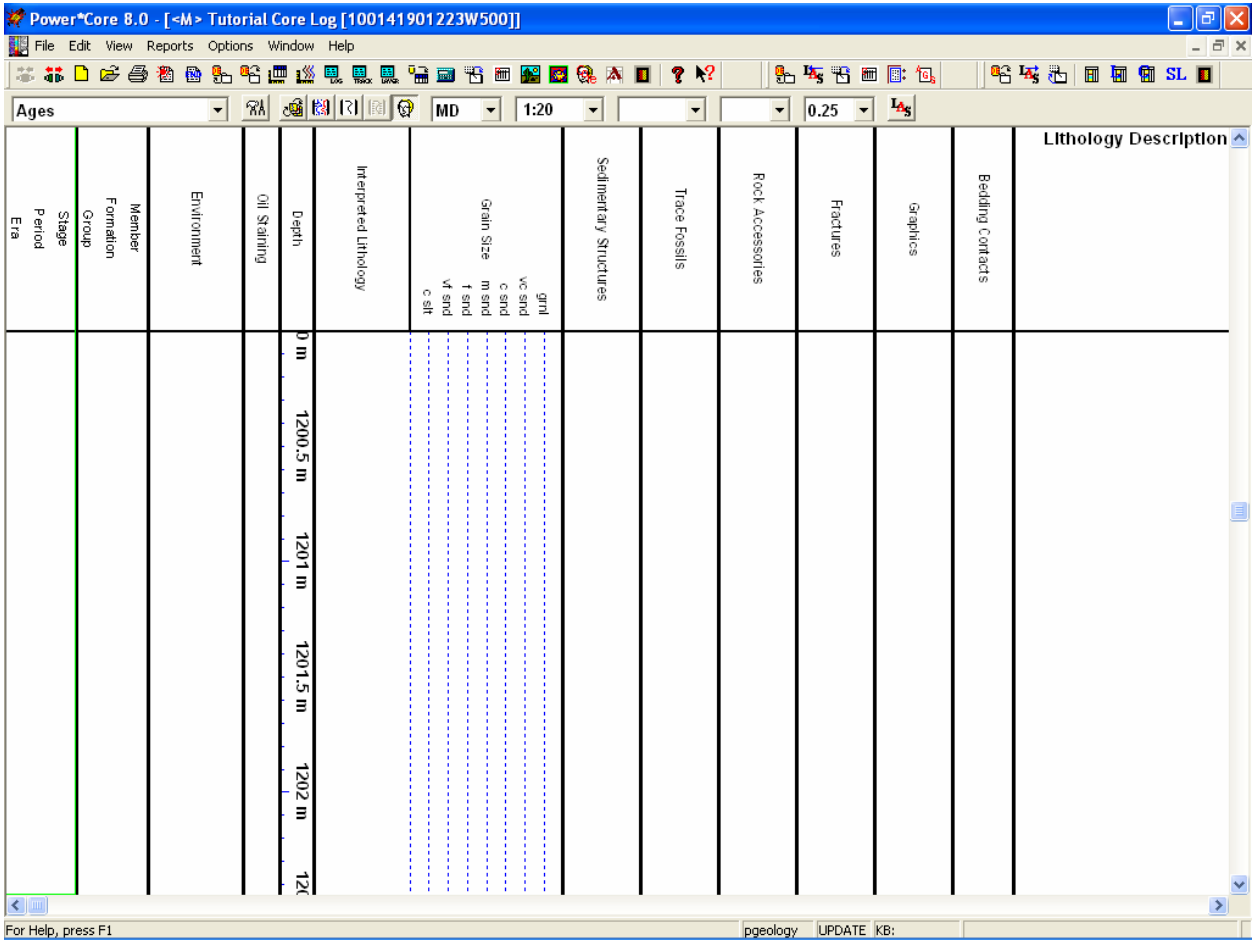


9.) **Type Environment** in the **Enter New Group ID** field and **click** on the **OK** button. This will add the Environment group and activate another window named **Graphics Group** for the Graphics layer / track on the log.



10.) **Type 1** into the drop box and **click** on the **OK** button. This will add a group of pictures to the log. If you wish to show another group call it 2 to be unique.

****When the Core log opens, it should resemble this log.****



- 1.) You can now fill in your pertinent well information by selecting **Well** under **Edit** pull down menu on the **Selection Bar** to activate the **Well** window.

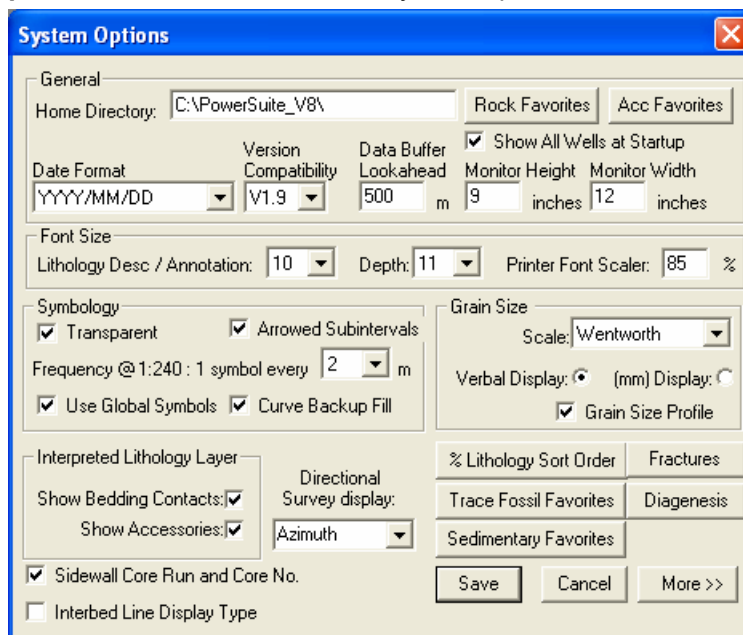
- 2.) Fill in the information you feel is necessary (The well window shown above has been filled in to give you an idea of how to complete the fields) and then **click** on the **Save** button to save any changes you have made to the database.

Note: Some of the fields in the **Well** window have character restrictions or mandatory requirements. Consequently, if any of these restrictions have been violated or if any requirements have not been met, the offending field will be highlighted. The nature of the problem will be displayed on the **Status Bar** (lower left corner of the screen), and you will be prompted with a system error message window.

- 3.) If the record has been successfully saved, **click** on the **Exit** button, when prompted with the **Shortcut Options** window.

The System Options Window

To activate the System Options window **click** on the **Options selection** on the menu toolbar and then **select** the **System Options** selection to activate the System Options window.



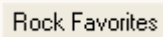
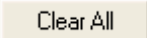
The **System Options** window is used to customize **Power*Log / Power*Curve** system settings to suit the needs of the user. Listed below are some of the more important system settings:

Date Format - Allows the user to choose from several different types of **Date Formats**.

Monitor Height - Used to determine the height of the monitor (in inches), on which the log is going to be displayed on your monitor to an exact scale (Power*Log / Power*Core).


Monitor Width - Used to determine the width of the monitor (in inches), on which the log is going to be displayed on your monitor to an exact scale (Power*Curve).

Rock Favorites - Allows the user to determine their favorite **Rock Types** and then displays them in a Toolbox menu generated by the activation of the **Rock Type Builder** window in the **Interpretive Lithology** track.

- 1.) **Click** on the  **button** in the **System Options** window.
- 2.) **Click** on the  **button** in the Rock Type Favorites list window to prepare it for the selection of your Rock Favorites.
- 3.) **Select** the following **Rock Types** from the **Rock Type Favorites** list window.

Note: Once the category has been highlighted you can start typing in the first and second letters to pinpoint to a specific portion of the list. List is activated by the short name spelling.

Cgl dk cht [Conglomerate dark chert]
Coal [Coal]
Mrlc [Marlstone calcareous]
Sh blk [Shale black]
Sh m gy [Shale medium gray]
Sh brn [Shale brown]
Ss [Sandstone]
Sltst [Siltstone] No maximum amount

4.) Click on the  button to return to the System Options window.

Accessory Favorites - Allows the user to determine their favorite **Accessories** and then displays them in a pop-up menu generated by the activation of the **Accessory Builder** window in the **Interpretive Lithology** track / layer as well as the Rock Accessories track / layer.

1.) Click on the  button in the System Options window.

2.) Click on the  button in the **Accessory Favorites** list window to prepare it for the selection of your **Accessory Favorites**.

3.) **Select** the following **Accessories** from the **Thinbed**, **Components**, and **Cement** headings in the **Accessory Favorites** list window.

Note: Once the category has been highlighted you can start typing in the first and second letters to pinpoint to a specific portion of the list. List is activated by the short name spelling.

Thinbed

cht dk pebbles [chert dark pebbles]
 pyr nods [pyrite nodules]
 sh dk gy stringers [shale dark gray stringers]
 sltst stringers [siltstone stringers]
 ss stringers [sandstone stringers]

Component

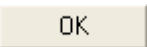
aren [arenaceous]
 arg [argillaceous]
 calcs [calcareous]
 carb [carbonaceous]
 foss [fossiliferous]
 glauc [glaucconitic]
 pl rmns [plant remains]
 pyric [pyritic]
 micmica [micromicaceous]
 slty [silty]

Matrix

arg [argillaceous]
 kao [kaolinite]

Cement

calcs [calcareous]
 sils [siliceous] no maximum

4.) Click on the  button to return to the System Options window.

Trace Fossil Favorites - Allows the user to determine their favorite Trace Fossils and then displays them in a pop-up menu generated by the activation of the Trace Fossil Builder window in the Trace Fossil track/layer

1.) Click on the  button in the System Options window.

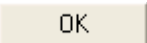
2.) Click on the  button in the **Trace Fossil Favorites** list window to prepare it for the selection of your Favorites.

3.) **Select** the following Trace Fossils from the window.

Note: Once the category has been highlighted you can start typing in the first and second letters to pinpoint to a specific portion of the list. List is activated by the short name spelling.

Trace Fossils

Asterosoma
Planolites
Zoophycoes

4.) Click on the  button to return to the System Options window.

Sedimentary Favorites - Allows the user to determine their favorite Sedimentary Structures and then displays them in a pop-up menu generated by the activation of the **Sedimentary Structures Builder** window in the **Sedimentary Structure** track / layer.

1.) Click on the  button in the System Options window.

2.) Click on the  button in the **Favorites** list window to prepare it for the selection of your **Favorites**.

3.) **Select** the following **Sedimentary Structures** from the **Bedding / Cross Bedding, Laminations / Cross laminations, and Other** headings in the **Favorites** list window.

Note: Once the category has been highlighted you can start typing in the first and second letters to pinpoint to a specific portion of the list. List is activated by the short name spelling.

Bedding / Cross Bedding

massive [massive / homogenous bedding]

normgrad [normal graded bedding]

Laminations / Cross laminations

clmbrip [climbing ripple cross laminations]

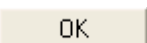
cppxlam[current ripple cross laminations]

wavylam[wavy laminations]

Other

mudchips [mud chips]

root [roots / root trace]

4.) Click on the  button to return to the System Options window.

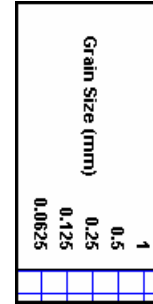
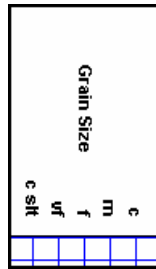
Show all Wells at Startup – This check box when activated will populate the Open Log window with all the wells in the database. The default is set to checked or yes. This will help the corporate users with thousands of wells and the time it take to retrieve all these wells from the database. The user can simply click on the Clear Query button in the Open Log window to see all their wells if this option is deactivated.

Font Size - Used to determine the default **Font Size** for **Sample/Lithology Descriptions, Annotations,** and the **Measured Depth** readings displayed on the **Depth** track.

Printer Font Scaler - Used to scale the default printer's font size up or down, so that the font size on printouts matches the font size displayed on the screen.

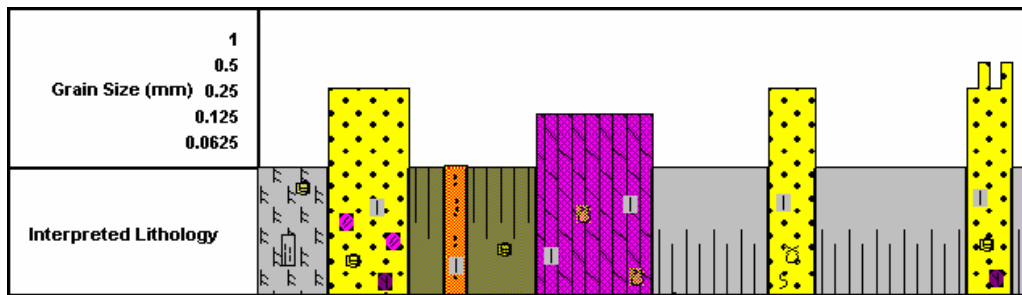
Symbol Frequency - Used to determine the frequency with which symbols will appear on the **Framework, Oil Show, Rounding, Sorting, Sedimentary Structure, Rock Accessories, and Trace Fossil** tracks, e.g. one (1) symbol for every 2 meters of Measured Depth.

Arrow Subintervals – This selection will replace the Symbol frequency for subintervals only. It will place arrowheads and lines to show where the subinterval depths top and base depths are as well as your chosen symbol in the middle of the interval.



Grain Size mm Scale Radio Button- This radio button will display the **Grain Size Track header** with the equivalent numeric grain sizes (in mm) such as .0625, .125, .25, .5, 1, 2 etc.

Grain Size Profile- This check box will activate the grain size profile option which has the interpretive lithology fill up to the maximum grain size filled in over the interval. The user may wish to turn off the track borders when this option is selected.



Fractures Favorites - Allows the user to determine their favorite **Fractures** and then displays them in a pop-up menu as well as a **Fractures Toolbox** in the **Fractures** track. Not applicable to Power*Log.

Diagenesis Favorites - Allows the user to determine their favorite **Diagenesis** and then displays them in a pop-up menu as well as a **Diagenesis Toolbox** in the **Diagenesis** track.

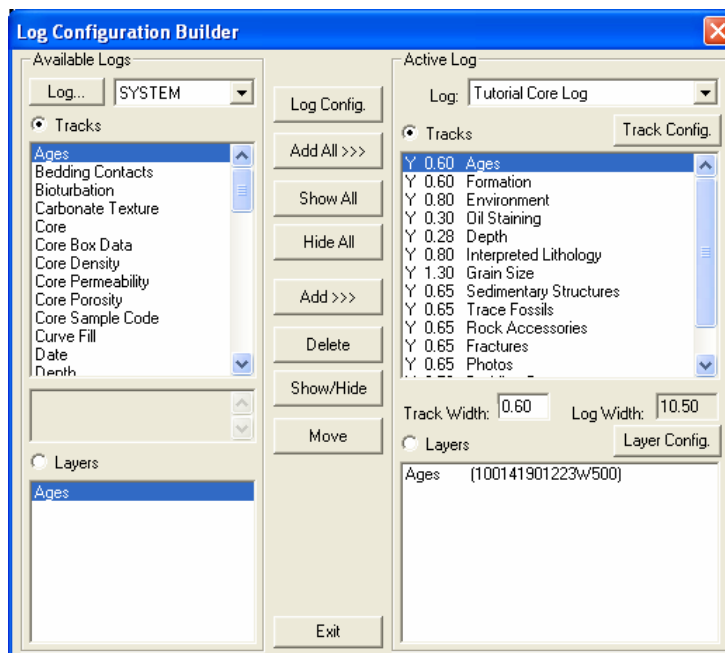
5.) Click on the  button to return to the Main Power*Core window.

The Log Configuration Builder window

- This is the heart of the Log/Track/Layer configurations and controls the way your well's information is displayed on the log.
- The well may have a lot of information stored in the database, but that information cannot be shown graphically on the log until the necessary layers are built to illustrate that information.

Click on **Log Configuration Builder** under the **Options** menu on the **Selection Bar** or click on the **Log**

Configuration Builder  button on the **Toolbar** to activate window:



Fundamentals of the Log Configuration Builder Window

The left side of the Log Configuration Builder window: Available Logs

The **Available Logs** section or **left** side of the **Log Configuration Builder** window allows you to take any track or layer from **Available Logs** and add it to the log you are currently creating/building. On the **left** side of the window, below the **Tracks** radio button **Tracks**, is a list of the tracks available for adding to the **Active Log**.

The **Available Logs** section or left side of the window contains the track and layer configuration of the **SYSTEM [SYSTEM]** log, when the window first opens. You have the option of using any of the existing **Tracks** and their associated layers or any of the existing **Layers**, that are associated with any of the

system logs in the log database. The user can click on the **Log...** **SYSTEM** button on the left side of the screen to activate a selection list of all log formats that are in your database. The list is comprised of two (2) names with the first name in the list being the system **Log Name** and the second name (in brackets), being the **UWI** of its primary well. **Double click** on the log format you wish to copy from.

Below the **Layers** radio button **Layers**, on the **left** side of the window, is a list of the layers available in the track highlighted above. They will be added all at once, if you add their parent track. However, they can also be added on an individual basis, if you only want to add one(1) layer to an existing **Active Log** track.

The right side of the Log Configuration Builder window: Active Log


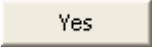
The **Active Log** section or **right** side of the window displays the track and layer configuration of the **Active Log** (the log you are currently creating), in the main **Power*Log** window. The name of the log is viewed in the **Log** field. In this case, it will be "**Tutorial Well**." Below the **Tracks** radio button **Tracks**, on the **right** side of the window, is a list of the tracks that are currently found within the **Active Log**. The track at the top of this list is drawn on the left side of the log, while the track on the bottom of the list is drawn on the far right of the log with all of the other tracks drawn in between, respectively. Below the **Layers** radio button **Layers**, on the **right** side of the window, is a list of the layers that are associated with the track highlighted above.

The middle of the Log Configuration Builder window: Selection Buttons

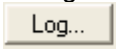
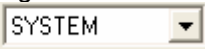
The **selection** buttons, found in the middle column of the window, are for adding layers or tracks from the **Available Logs** to the **Active Log**, activating/deactivating the **Active Log's** tracks, deleting active log tracks or layers, and moving tracks or layers within the **Active Log** itself. Step-by-step instructions for accomplishing these tasks are provided on the following pages.

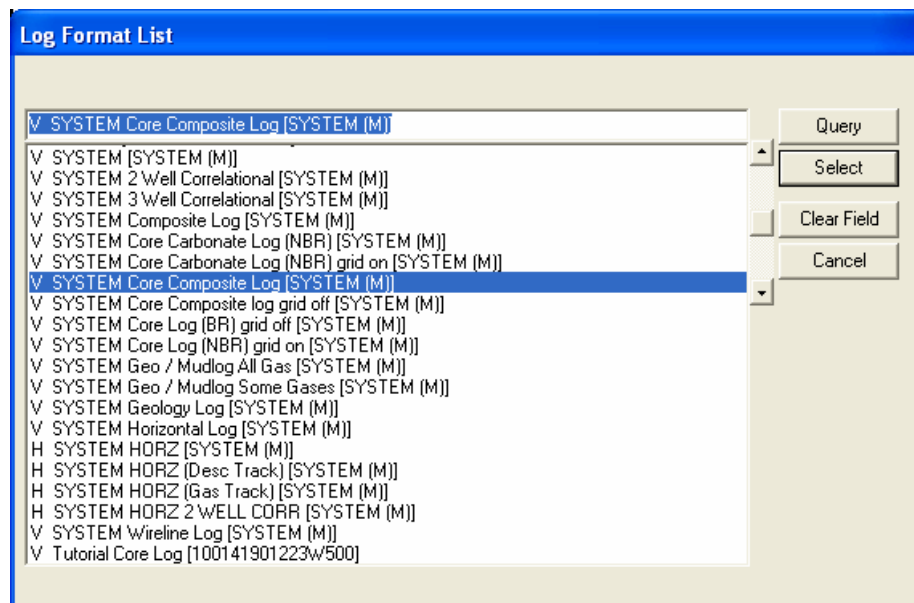
Working with the Log Configuration Builder Window


Deleting the Ages track on the Tutorial Core Log...

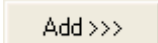
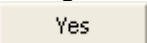
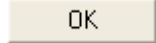
- 1.) Highlight the **Ages** track on the right hand side of the window by **clicking** on it **once**.
- 2.) Click on the  **Delete** button. This action will prompt you with a system message, "**Do you want to delete the selected track in your log?**" Click on the  **Yes** button. The **Ages** track has now been removed from the Tutorial Log.

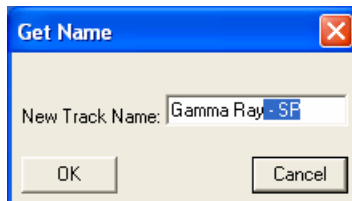
Adding a Gamma Ray – SP Curve Track to the Tutorial Core Log

- 1.) On the left hand side of the Log configuration window in the Available Logs portion of the window near the top click on the  **Log...**  **SYSTEM** button. This will activate the Available Logs window.



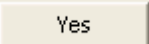


- 2.) Double Click on the **V SYSTEM Core Composite log grid off [SYSTEM (M)]** Log or click on it **once** and click on the  **Select** button. This will insert its tracks and layers into the Available log portion of the Log configuration window.
- 3.) On the left hand side of the Log configuration window scroll down the list of tracks and **click** on the **Gamma Ray – SP** track. The track will become highlighted and the Tracks radio button will become activated.
- 4.) On the right hand side of the Log configuration window **click** on the **Interpretive Lithology Track**. The track will become highlighted and the Tracks radio button will become activated.

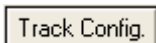
- 5.) In the middle of the Log configuration window **click** on the  **button**. This will activate a System Message asking the user “ Do you really want to ADD the selected (track) from the available log to the active log?”
- 6.) **Click** on the  **button**. This will activate a Get Name window asking the user to name the track.
- 7.) We will modify the Track name as we will only be utilizing the Gamma Ray layer. To change the name retype or delete the name to read, **Gamma Ray**, and then **click** on the  **button** and the track will be added above the Interpretive Lithology Track or to the left on the log.

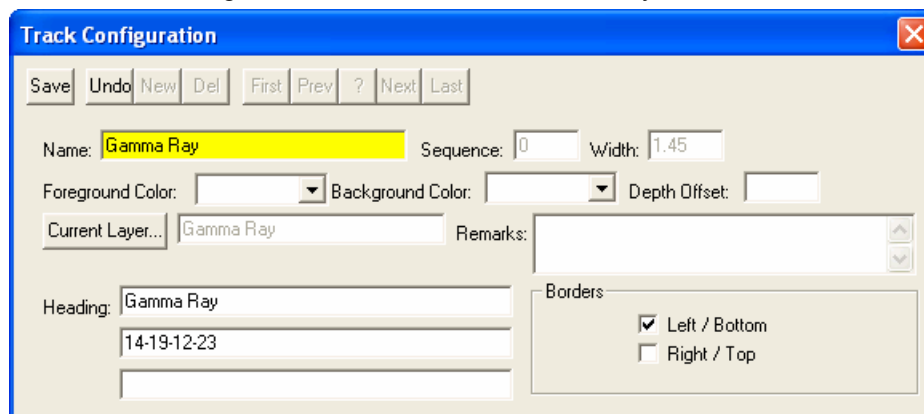


Deleting the SP layer from the Gamma Ray track...


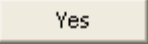
- 1.) On the **right** side of the **Log Configuration Builder** window, **click** on the **Gamma Ray** track to highlight it. Notice that the layers associated with this track are displayed below, in the **Layers** list box.
- 2.) Highlight the **SP** curve layer, in the **Layers** list box, by **clicking** on it **once**. Notice that the **Layers** radio button  is automatically activated by highlighting a given layer.
- 3.) **Click** on the  **button**. This action will prompt you with a system message, “**Do you want to delete the selected layer in your log?**” **Click** on the  **button**. The **SP** curve layer has now been removed from the log

Configuring the Gamma Ray track...



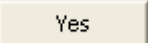
- 1.) On the **right** side of the **Log Configuration Builder** window, **click** on the **Gamma Ray** track to highlight it.
- 2.) On the **right** side of the **Log Configuration Builder** window, **click** on the  **button**. This will activate the Track Configuration window for the Gamma Ray Track.



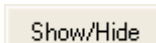
- 3.) In the Heading Field **type Gamma Ray** to replace the GR – SP. In the second heading field, **type** in the location, “**14-19-12-23**”. This would help identify the location of the well.

- 4.) Click on the **Right / Top border check box** to deactivate the check box.
- 5.) Click on the  **button**. This action will prompt you with a system message, “**Record Saved successfully. Do you wish to exit?**” Click on the  **button**.

Configuring the Interpretive Lithology track...

- 1.) On the **right** side of the **Log Configuration Builder** window, click on the **Interpretive Lithology** track to highlight it.
- 2.) On the **right** side of the **Log Configuration Builder** window, click on the  **button**. This will activate the Track Configuration window for the Interpretive Lithology Track.
- 3.) **Deselect** the **Left / Bottom border** **check box**.
- 4.) Click on the  **button**. This action will prompt you with a system message, “**Record Saved successfully. Do you wish to exit?**” Click on the  **button**.

Turning off a track...

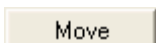
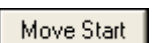
- 1.) Scroll down the tracks list, on the **right** side of the **Log Configuration Builder** window, and click on the **Bedding Contacts** track.
- 2.) Click on the  **button** to turn the “**Y**”(yes), to the left of the track name, to “**N**”(no), indicating that the track will not be shown on the log, until it is reactivated.
- 3.) Alternatively, you can simply **double click** on the **Bedding Contacts** to turn the “**Y**”(yes) to “**N**”(no). The user might notice the log width has now decrease in size from 11.32” to 10.82” wide.

Resizing some tracks...

- 1.) Scroll down the tracks list, on the **right** side of the **Log Configuration Builder** window and click on the **Lithology Description** track.
- 2.) **Double click** in the **Track Width** field and change the track width from 2.07 inches to a new width of **2.65** inches. Then, **press** the **Tab key** and the total width of the log itself will change to reflect the increase in the width of the **Lithology Description** track as well as the Log width field.
- 3.) Scroll up the tracks list, on the **right** side of the **Log Configuration Builder** window and click on the **Rock Accessories** track.
- 4.) **Double click** in the **Track Width** field and change the track width from 0.65 inches to a new width of **.42** inches.
- 5.) Click on the **Photos** track. **Double click** in the **Track Width** field and change the track width from 0.65 inches to a new width of **.3** inches.
- 6.) Click on the **Gamma Ray** track. **Double click** in the **Track Width** field and change the track width from 1.42 inches to a new width of **1.1** inches.

Note: For paper 11” x” 8.5” wide, 10.50” is the widest that you want your log to be, especially if you are printing out the log in the **Landscape** paper orientation.

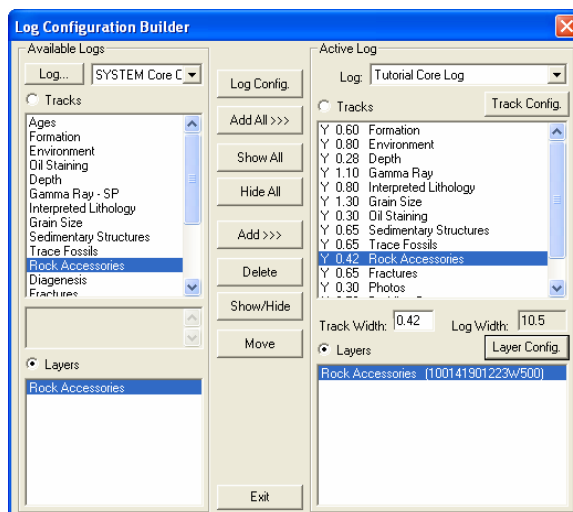
Moving the Oil Staining track...

- 1.) On the **right** side of the **Log Configuration Builder** window, and click on the **Oil Staining** track to highlight it.
- 2.) Click on the  **button** and it will change to  **button**. Then, click on the **Sedimentary Structures** track. The **Oil Staining** track will then be placed above the **Sedimentary Structures** track (to the left of the **Sedimentary Structures** track on the log).

Deleting and adding a layer...

We will be adding two (2) non-bed restricted (NBR) layers to our log to show you the difference between a bed-restricted (BR) layer and a non bed restricted layer (NBR) layer. We are assuming that the log on the left side is still the log selected earlier in this session which would be the V SYSTEM Core Composite log grid off [SYSTEM (M)]. To reselect this log click on the button and double click on it from the activated list.

- 1.) On the right side of the Log configuration window **click** on the **Rock Accessories Track**. The track will be highlighted and the Tracks radio button Tracks will be activated.

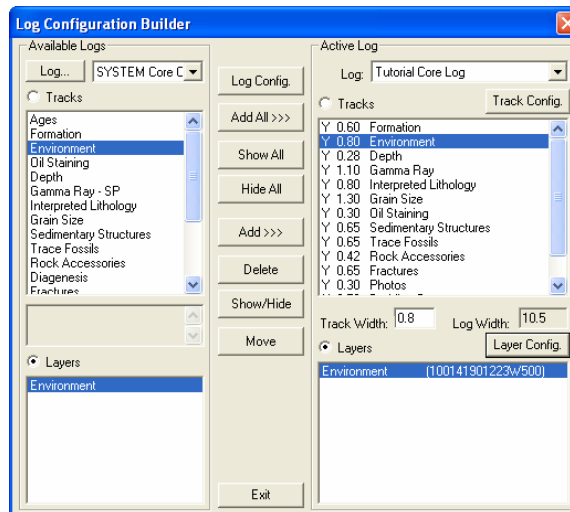


- 2.) **Click** on the Rock Accessories layer (This layer is Bed restricted but does not indicate it to be so with a (BR Label). The layer will be highlighted and the Layers radio button Layers will be activated.
- 3.) **Click** on the button in the center portion of the Log Configuration builder. This will activate a system message asking the user “**Do you want to delete the selected layer in the active Log?**” **Click** on the button. The layer will be deleted.
- 4.) On the left side of the Log configuration window scroll down the list of tracks and **click** on the **Rock Accessories** track. The track will be highlighted and the Tracks radio button Tracks will be activated.
- 5.) On the left side of the Log configuration window, **click** on the **Rock Accessories** Layer. The layer will be highlighted and the Layer radio button Layers will be activated.
- 6.) In the middle of the Log configuration window **click** on the button. This will activate a System Message asking the user “ Do you really want to ADD the selected (layer) from the available log to the active log?”
- 7.) **Click** on the button. This will activate a Get Name window asking the user to name the track.
- 8.) This will activate a system Get Name window. **Click** on the button and the layer will be added into the Rock Accessories Track to the left side.

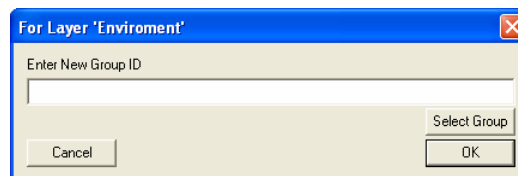
Adding the Second Layer

- 9.) On the right side of the Log configuration window **click** on the **Environment Track**. The track will be highlighted and the Tracks radio button Tracks will be activated.

- 10.) Click on the **Environment** layer (This layer is Bed restricted but does not indicate it to be so with a (BR Label). The layer will be highlighted and the Layers radio button Layers will be activated.
- 11.) Click on the button in the center portion of the Log Configuration builder. This will activate a system message asking the user “Do you want to delete the selected layer in the active Log?” Click on the button. The layer will be deleted.
- 12.) On the left side of the Log configuration window scroll down the list of tracks and click on the **Environment** track. The track will be highlighted and the Tracks radio button Tracks will be activated.
- 13.) On the left side of the Log configuration window, click on the **Environment** Layer. The layer will be highlighted and the Layer radio button Layers will be activated.
- 14.) In the middle of the Log configuration window click on the button. This will activate a System Message asking the user “ Do you really want to ADD the selected (layer) from the available log to the active log?”
- 15.) Click on the button. This will activate a Get Name window asking the user to name the track.
- 16.) This will activate a system Get Name window. Click on the button and the layer will be added into the Rock Accessories Track to the left side.

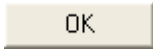


- 17.) Click on the button. This will close the builder and the log will reflect all the changes you just made and initiate the. This will activate the Group Selector Window for the New Environment Layer.
- 18.) Click on the button and select **Environment** previously added in this tutorial from the list.



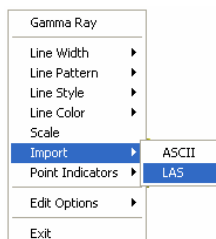
- 19.) This will close the Group selector and initiate the ADD Curve window.

- **The Add Curve window...**

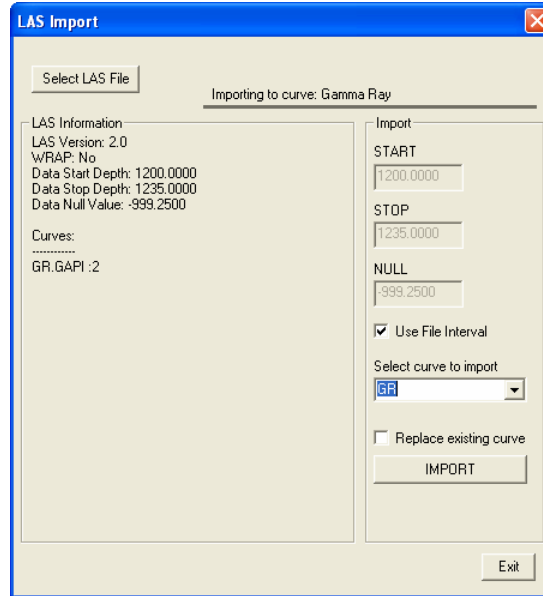
- 1.) Make sure the unit in the **Curve Units** field is correct (in this case it will be **gapi**). If not, then please **type** the correct units into this field.
- 2.) Make sure **m** is in the **Depth Units** drop box field.
- 3.) Make sure the **Null Value** field is **-1**.
- 4.) Make sure the **Depth Interval** is **0** and **0** indicating the present curve scale is applicable to any depth on the log.
- 5.) Make sure the **Curve Scale** field values (**Left / Bottom** and **Right / Top**) are **0** and **150**
- 6.) Make sure the **Backup Scale** drop box field is **Straight Shift**.
- 7.) Make sure the **Grid type** drop box field is **Linear**.
- 8.) **Click** on  **button** to add the curve layer to the Gamma Ray Track.

Importing LAS Gamma Ray Curve Data

- 1.) **Click** on the Gamma Ray track to make it active. You will notice a green trace around the outside of the track if done correctly.
- 2.) Use the drop down arrow in the **Layer Selection List** field (located at the far left side of the **Selection bar**), to display a list of the layers in the **Gamma Ray** track.
- 3.) **Select** the **Gamma Ray** layer to make it the active layer and the **Layer Selection List** will close automatically after you have made your selection.
- 4.) **Right click** on the **Gamma Ray layer** to activate a popup menu.



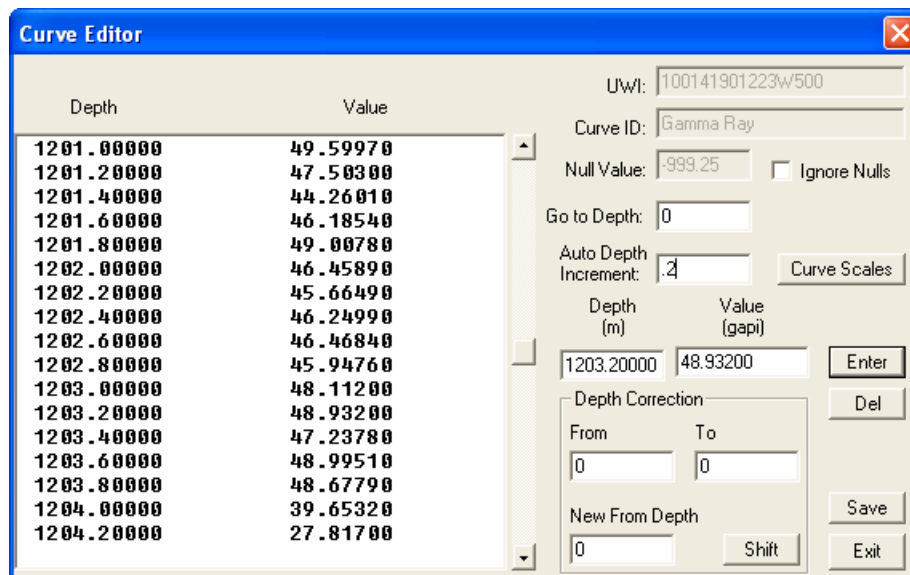
- 5.) **Select Import** from the pop-up menu to activate a pop out menu and **select LAS**. This will activate the LAS Import Window.



- 6.) Click on the **Select LAS File** button. This will activate the Open LAS File window and locate the **"Metric Core Tutorial gamma ray curve.las"** in the Powersuite_V8 / System folder.
- 7.) After locating the Drive and Directory where the **"Metric Core Tutorial gamma ray curve.las"** is the user must **select** the file by **double clicking on the file name**, or clicking on it once and **clicking on the OK** button. This will bring the file header into the LAS Import window.
- 8.) Click on the **Select Curve to Import drop box** and **select the GR** curve.
- 9.) Click on the **IMPORT** button. The curve will import and the window will disappear leaving the Gamma Ray curve data displayed on the layer.

- **Adding the Gamma Ray Curve Digits Manually**

- 1.) **Double Click** on the **Gamma Ray** layer to bring up the **Curve Editor** window for the **Gamma Ray** curve.



- 2.) In the **Curve Editor** window, change the **Auto Depth Increment** field value to **0.2**.
- 3.) Enter the values found on the following page into the **Depth (m)** and **Value (gapi)** fields, respectively.

Note: After the first value has been entered into the **Depth (m)** field, the **Curve Editor** window automatically performs each subsequent increment, according to the value placed in the **Auto Depth Increment** field. Consequently, the only values you need to enter manually, after the first entry, are the **Value (gapi)** field values.

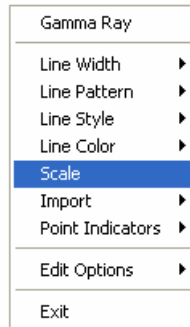
The Data to be entered is shown below.

1200.0	46.0	1200.2	49.1	1200.4	49.0	1200.6	44.6
1200.8	47.5	1201.0	49.5	1201.2	47.5	1201.4	44.2
1201.6	46.1	1201.8	49.0	1202.0	46.4	1202.2	45.6
1202.4	46.2	1202.6	46.4	1202.8	45.9	1203.0	48.1
1203.2	48.9	1203.4	47.2	1203.6	48.9	1203.8	48.6
1204.0	39.6	1204.2	27.8	1204.4	21.7	1204.6	21.9
1204.8	27.3	1205.0	30.1	1205.2	29.7	1205.4	25.9
1205.6	23.0	1205.8	22.6	1206.0	24.7	1206.2	25.6
1206.4	22.8	1206.6	18.7	1206.8	16.0	1207.0	14.3
1207.2	13.2	1207.4	12.8	1207.6	14.0	1207.8	15.8
1208.0	18.7	1208.2	24.1	1208.4	27.5	1208.6	28.0
1208.8	23.2	1209.0	17.3	1209.2	16.7	1209.4	22.4
1209.6	33.1	1209.8	38.6	1210.0	32.8	1210.2	24.9
1210.4	20.6	1210.6	18.6	1210.8	18.5	1211.0	19.7
1211.2	20.2	1211.4	22.8	1211.6	28.4	1211.8	30.9
1212.0	29.2	1212.2	27.7	1212.4	27.5	1212.6	25.9
1212.8	22.5	1213.0	18.9	1213.2	16.5	1213.4	15.4
1213.6	15.1	1213.8	13.9	1214.0	11.6	1214.2	10.3
1214.4	11.2	1214.6	12.6	1214.8	13.3	1215.0	13.3
1215.2	14.5	1215.4	15.6	1215.6	14.4	1215.8	12.7
1216.0	12.6	1216.2	12.6	1216.4	11.5	1216.6	11.8
1216.8	13.3	1217.0	13.0	1217.2	11.6	1217.4	10.5
1217.6	10.3	1217.8	11.4	1218.0	13.0	1218.2	13.1
1218.4	12.9	1218.6	12.9	1218.8	12.5	1219.0	12.7
1219.2	13.4	1219.4	14.3	1219.6	15.2	1219.8	16.7
1220.0	18.3	1220.2	19.0	1220.4	19.1	1220.6	18.5
1220.8	17.9	1221.0	17.9	1221.2	17.8	1221.4	18.5
1221.6	21.6	1221.8	24.9	1222.0	27.8	1222.2	29.4
1222.4	29.0	1222.6	24.9	1222.8	19.5	1223.0	15.6
1223.2	13.2	1223.4	12.9	1223.6	16.2	1223.8	22.0
1224.0	23.5	1224.2	20.2	1224.4	18.0	1224.6	18.6
1224.8	22.5	1225.0	32.5	1225.2	43.4	1225.4	44.0
1225.6	35.6	1225.8	26.2	1226.0	20.8	1226.2	19.2
1226.4	19.5	1226.6	20.8	1226.8	23.5	1227.0	25.4
1227.2	25.6	1227.4	25.8	1227.6	26.3	1227.8	25.2
1228.0	25.5	1228.2	29.8	1228.4	35.8	1228.6	37.9
1228.8	34.7	1229.0	29.4	1229.2	26.5	1229.4	27.4
1229.6	29.7	1229.8	31.7	1230.0	32.8	1230.2	33.9
1230.4	33.7	1230.6	31.3	1230.8	27.8	1231.0	26.4
1231.2	26.0	1231.4	23.4	1231.6	19.6	1231.8	18.2
1232.0	20.7	1232.2	24.9	1232.4	27.6	1232.6	27.8
1232.8	25.9	1233.0	25.9	1233.2	28.4	1233.4	29.1
1233.6	28.6	1233.8	29.4	1234.0	30.0	1234.2	31.7
1234.4	38.1	1234.6	46.2	1234.8	49.7	1235.0	44.2

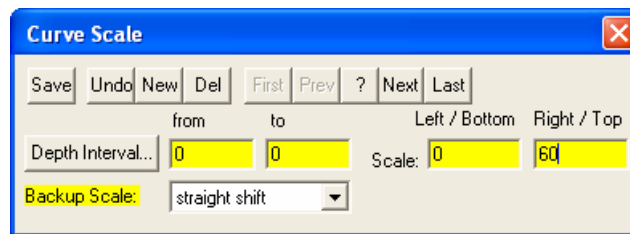
****Remember to save your work before you exit from the Curve Editor window.****

Changing Curve Scales

- 1.) **Right click** anywhere within the **Gamma Ray** track (Gamma Ray Layer) to activate the pop-up menu.



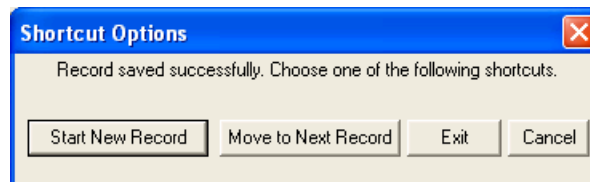
- 2.) **Select Scale** from the pop-up menu to activate the **Curve Scale** window for the **Drill Rate** curve. In this figure the user will notice the Scale has already been changed.



- 3.) Notice that the default scale (when the curve was originally added to the log), was **0 to 150 gapi**, as you would see in your window. To change the original scale from **0 – 150 gapi** to **0 – 60 gapi** simply adjust the **Right / Top Scale** value to **60** by **double clicking** in the **Right Scale** field and typing in a value of **60**.

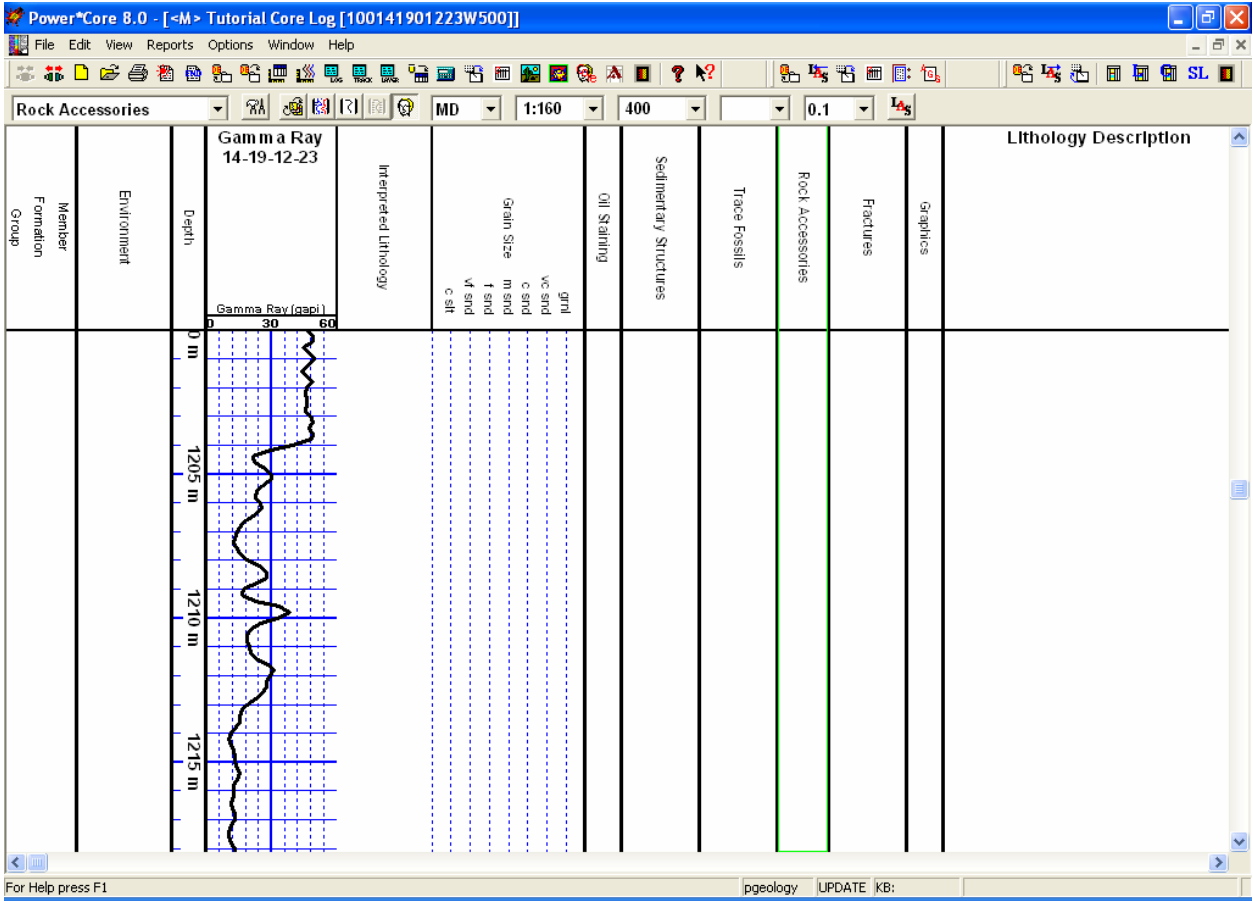
Note: The backup scale (in this case **straight shift**), is there in case the curve values go off-scale (more than **60 gapi**). A **straight shift** backup scale for an original scale of **0 to 60 gapi** would be **60 to 120 gapi** for **Left** and **Right Scale** values, respectively.

- 4.) **Click** on the **Save** button. This will activate the Shortcut Options window.

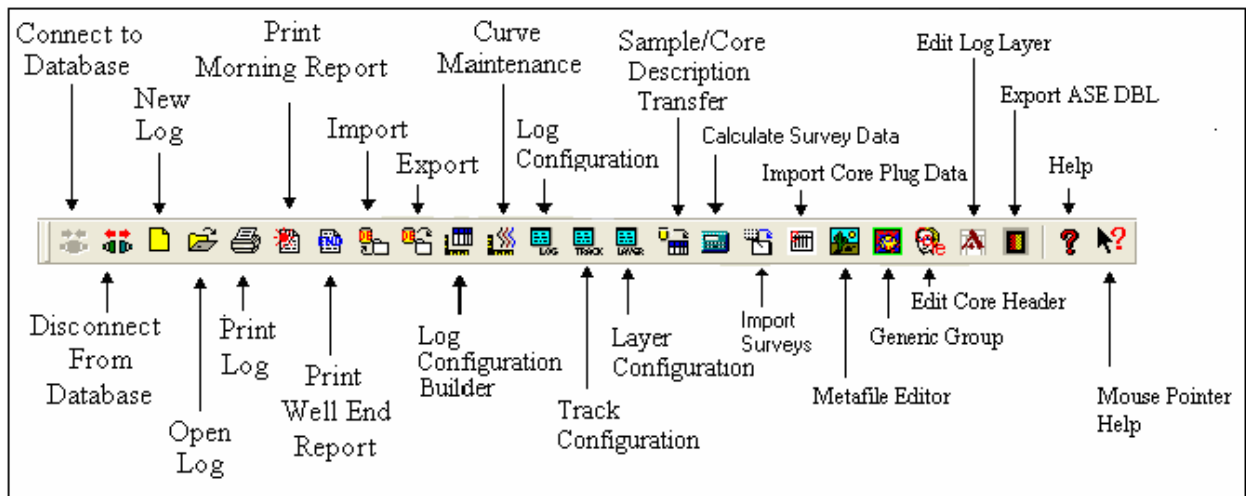


- 5.) **Click** on the **Exit** button from the ensuing **Shortcut Options** window.

****Your log should now look like the log shown below****



Changing the Log Scale and Mouse Pointer Accuracy



- 1.) **Click** on the **Log Scales** drop box and **select 1:120**. This will make your screen or monitor log scale represent your log at a 1:160 depth scale.
- 2.) **Click** on the **Screen Accuracy** drop box and **select 0.1**. This will make your mouse pointer accurate down to the decimeter.

Adding Core Descriptions

Under normal wellsite circumstances those users would use the Core Report then utilize the Core Description button within that window to enter their data. We are assuming that we will not be filling in the detailed Core Report header information usually gathered at the wellsite and that this information is not available. Therefore we will use the Core Description window to enter the core description data.

- 1.) Click on **Core Description**, under **Reports** on the **Power*Core™ Menu Bar** to open the **Core Description** window.

- 2.) Type **1200** into the **Interval (From)** field and then **press** the **tab** key.
- 3.) Type **1204** into the **Interval (To)** field and then **press** the **tab** key.
- 4.) Type **Sh** into the **Rock Type / Heading** field and then **press** the **tab** key to get to the short description field.

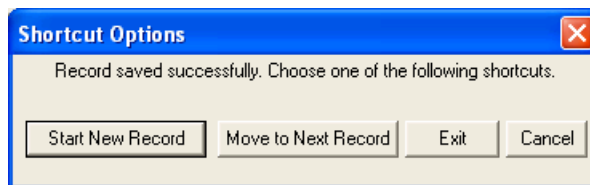
Note: The short descriptions have to be typed in correctly (according to our Geological Expansion Dictionary) in order for the Long Description fields to be expanded correctly. The Expansion dictionary is editable and can be viewed by clicking of the **Dictionary** button.

- 5.) Type the following description into the **Short Description** field, exactly as it appears below:

dk gy - blk, abnt carb pl deb, occ rtls, fis. Scour ctc / bsl Ss.

Note: The **Short or Long Descriptions** can be transferred to the **Lithology Description** layer and only the **Long Description** will be printed out in the **Sample Description Report**.

- 6.) Select the **Automatic Transfer** and **Transfer Depth Range** check boxes , as shown in the preceding sample description window.
- 7.) Click on the **Save** button. You will see your sample description on the log at 1200m with the options selected in step 6. You will be prompted with a Shortcut Options message



8.) Click on the **Start New Record** button from the **Shortcut Options** window. This will clear the sample description window excluding the depth fields and enable the user to enter another record into the database.

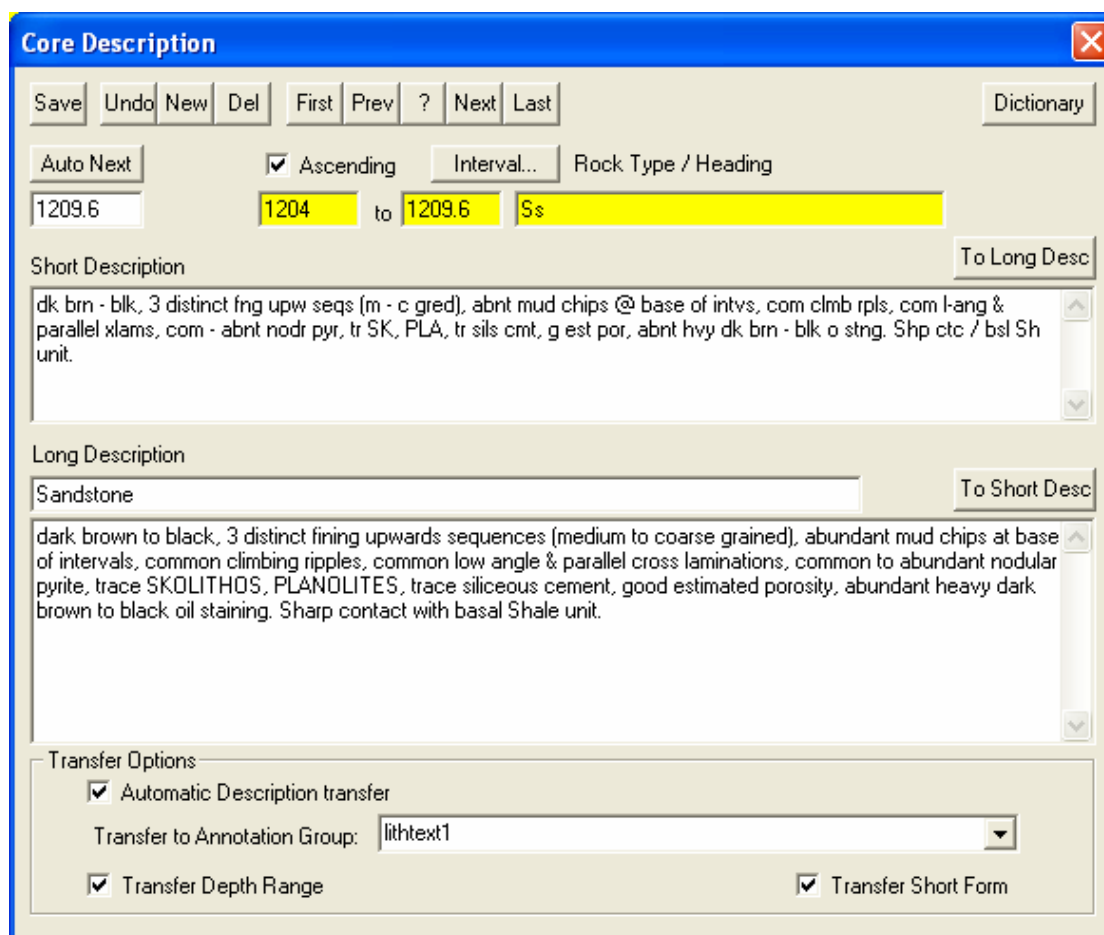
- **Adding a Sample Description to a new interval...**

1.) The depth **to** field will be highlighted. **Type** in a new depth of **1209.6** in the to depth field. **Press the tab key**. This will advance the cursor to the Rock Type / Heading field.

2.) **Type Ss** into the **Rock Type / Heading** field, **press the tab key**. This will advance the cursor to the **Short Description** field. **Type** the following description into this field **Short Description**:

dk brn - blk, 3 distinct fng upw seqs (m - c gred), abnt mud chips @ base of intvs, com clmb rpls, com l-ang & parallel xlams, com - abnt nodr pyr, tr SK, PLA, tr sils cmt, g est por, abnt hvy dk brn - blk o stng. Shp ctc / bsl Sh unit.

3.) **Select Transfer Short form** check box .





4.) Click on the **Save** button and then click on the **Start New Record** button from the **Shortcut Options** window. You will see your description at 1204m



- **Adding more Sample Descriptions to a new interval...**

- 1.) **Type** in a new depth of **1213.1** in the to depth field. **Press the tab key.**
- 2.) **Type Intbd Slst & Sh** into the **Rock Type / heading** field, **Press the tab key** and then **type** the following description into the **Short Description** field:


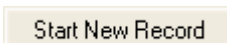
U sh m gy, sily calcs, fis. Mdl slst lt brn grdg to vf gred, arg, tt, ns. L sh m brn, com slst lams, predly tt, ns. Shp bsl ctc.

- 3.) **Click** on the  **button** and then **click** on the  **button** from the **Shortcut Options** window. You will see your description at 1209.6m in the Lithology Description track.
- 4.) **Type** in a new depth of **1220** in the to depth field. **Press the tab key.**
- 5.) **Type Ss** into the **Rock Type / heading** field, **Press the tab key** and then **type** the following description into the **Short Description** field:

dk brn, predly vc gred @ base fng upw to m gred, com cur rpl xlams, sily bioturb, com AST & PLA, glauc thru, calcs cmt @ base, grdl ctc / basal cgl, abnt dk brn o stng.


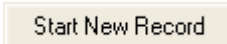
- 6.) **Click** on the  **button** and then **click** on the  **button** from the **Shortcut Options** window. You will see your description at 1213.1 in the Lithology Description track.
- 7.) **Type** in a new depth of **1221.4** in the to depth field. **Press the tab key.**
- 8.) **Type Cgl** into the **Rock Type / heading** field, **Press the tab key** and then **type** the following description into the **Short Description** field:

dk cht pbl, c - vc gred ss mtx, com dk brn o stng, occ lc / bsl sh, g est por 18-22%. Abnt mc.



- 9.) **Click** on the  **button** and then **click** on the  **button** from the **Shortcut Options** window. You will see your description at 1220 in the Lithology Description track.
- 10.) **Type** in a new depth of **1225.6** in the to depth field. **Press the tab key.**
- 11.) **Type Ss / Sh** into the **Rock Type / heading** field, **Press the tab key** and then **type** the following description into the **Short Description** field:

Ss m brn, predly f gred, com arg & kaoic mtx, hom, scr & wvy ctcs, p por 8-12%. Sh top m brn, bsl m gy, fis.

Note: The user can start a new lines or carriage returns in the Short Description field by simultaneous pressing the CTRL and ENTER Keys

- 12.) **Click** on the  **button** and then **click** on the  **button** from the **Shortcut Options** window. You will see your description at 1221.4 in the Lithology Description track.
- 13.) **Type** in a new depth of **1231.2** in the to depth field. **Press the tab key.**
- 14.) **Type Ss** into the **Rock Type / heading** field, **Press the tab key** and then **type** the following description into the **Short Description** field:

crm - lt brn, f - m gred, nor grdg, occ bioturb (PLA), com wavy lams, fr est por (10-14%), apps to be wtr sat, inclined ctc.

- 15.) **Click** on the  **button** and then **click** on the  **button** from the **Shortcut Options** window. You will see your description at 1225.6 in the Lithology Description track.
- 16.) **Type** in a new depth of **1232.2** in the to depth field. **Press the tab key.**
- 17.) **Type Coal** into the **Rock Type / heading** field, **Press the tab key** and then **type** the following description into the **Short Description** field:

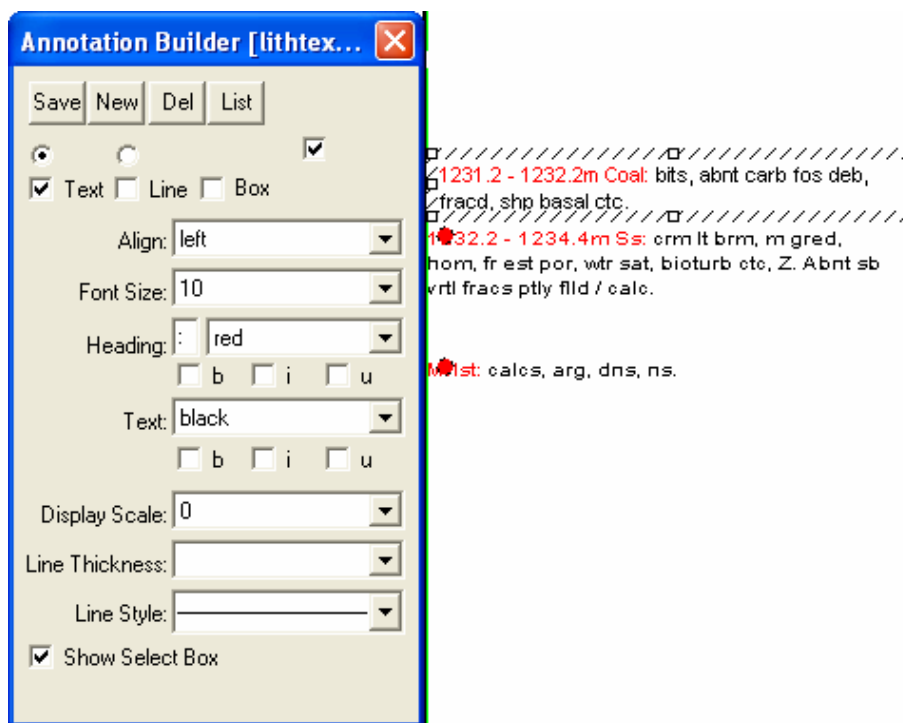
bits, abnt carb fos deb, fracd, shp basal ctc.

- 18.) Click on the **Save** button and then click on the **Start New Record** button from the **Shortcut Options** window. You will see your description at 1231.2 in the Lithology Description track.
- 19.) Type in a new depth of **1234.4** in the to depth field. **Press the tab key.**
- 20.) Type **Ss** into the **Rock Type / heading** field, **Press the tab key** and then **type** the following description into the **Short Description** field:
crm lt brm, m gred, hom, fr est por, wtr sat, bioturb ctc, Z. Abnt sb vrtl fracs ptly fld / calc.
- 21.) Click on the **Save** button and then click on the **Start New Record** button from the **Shortcut Options** window. You will see your description at 1231.2 in the Lithology Description track.
- 22.) Type in a new depth of **1235** in the to depth field. **Press the tab key.**
- 23.) Type **Mrlst** into the **Rock Type / heading** field, **Press the tab key** and then **type** the following description into the **Short Description** field:
calcs, arg, dns, ns.
- 24.) Click on the **Save** button and then click on the **Exit** button from the **Shortcut Options** window. You will see your description at 1234.4 in the Lithology Description track and Close the Sample Description window.



Editing Lithology / Core Descriptions within the Annotation layer

In these examples we will start from the lower descriptions and work our way up the transferred descriptions. We will demonstrate to the user how to change the position, delete and modify transferred sample descriptions.



- 1.) Make the **Lithology Description** layer active (in the **Layer Selection List** field), by **clicking once** anywhere within the **Lithology Description** track to highlight the **Lithology Description** track in **green**.
- 2.) **Double click** anywhere within the **Lithology Description** track to activate the **Annotation Builder** window.
- 3.) **Click** on the **scroll bar** on the right side of the window to move up and down the log.




Moving a Lithology / Core Description:


- 4.) **Click** on the **Show Select Box** check box and this will display the red dots associated with every **Sample Description** drawn on the **Lithology Description** layer.
- 5.) Highlight the desired **Sample Description** text on the layer by **clicking once** on its **red dot** by the **Coal** description at **1231.2m**. This will activate a border around the description and initiate it's attributes into the builder. You are now in the editing mode.
- 6.) **Move** your **mouse pointer onto the outline** and you will see the pointer turn into a  **crosshair**. Then **click and drag your mouse up** 1.2 meters to move the description up to **1230m**. **Release your mouse pointer**.
- 7.) **Click** on the **red dot** by the **Cgl** at **1220 m**. This action will activate a border.
- 8.) **Move** your **mouse pointer onto the outline** and you will see the pointer turn into a  **crosshair**. Then **click and drag your mouse up** 1.2 meters to move the description up to **1218.8m**. **Release your mouse pointer**.

Editing a Lithology / Core Description

- 9.) Now we will edit the **Mrlst** description at 1234.4m. **Click** on the **red dot** beside the **Mrlst** description at **1234.4m**. You will see the description become outlined on the log.
- 10.) **Move your mouse pointer** into the text field and **click and drag the mouse to highlight the depths**. **Press the BKSP (Backspace) Key to erase the depths**. Then **click** on the  **button**. Your log should look like the log shown on **page 28** at this point in time.
- 11.) Steps 11 –14 can be done or not. They are here to show how some of the functionalities of the Annotation builder. To change the **Font Size** of the **Lithology / Core Descriptions** now being displayed in the **Annotation Builder** window, simply **select** a new **Font Size** from the **Font Size** drop box field, **click** on the  **button**, and the **Font Size** of the selected **Lithology / Core Description** will be changed accordingly.

Note: The **Change Font Size** selection in the pop-up menu should only be used to change the **Font Size** for multiple **Sample Descriptions**.

- 12.) To change the text of the **Sample Description** now being displayed in the **Annotation Builder** window, simply edit the **Lithology / Core Description** text within the **Annotation Builder** window's large text field and then **click** on the  **button** when you are finished.

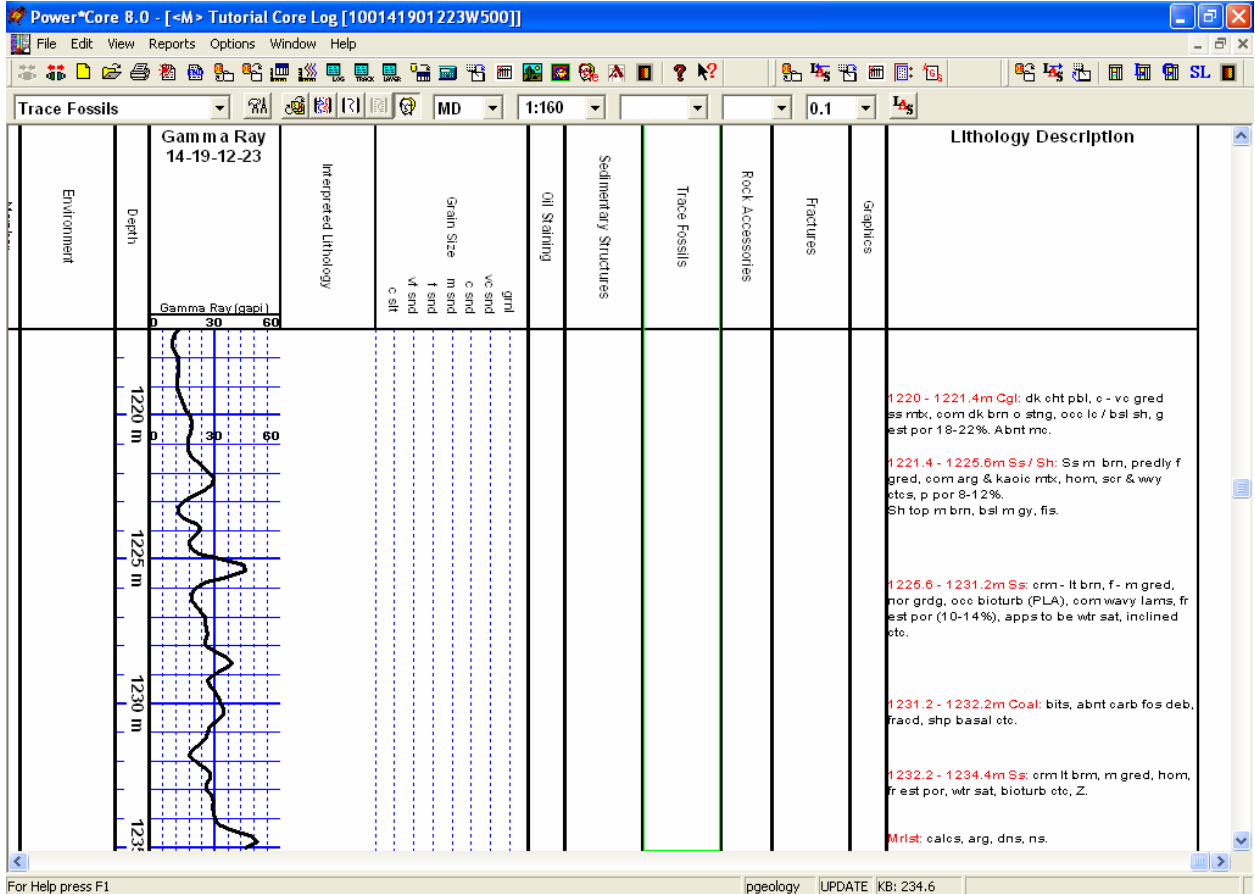
Note: If you wish to edit any other **Sample Description** parameters, including the **Display Scale**, simply make the necessary changes within the **Annotation Builder** window, **click** on the  **button**, and the **Sample Description** will be changed accordingly.

- 13.) If you wish to modify the **Sample Description** further, you can use the **Heading**, **Color**, **Bold**, **Italicize**, and **Underline** fields to modify the appearance of the **Lithology / Core Description** header and/or text. For example, The **Bold** check box (**b**) can be activated to bold the **Sample Description** header and/or text. The *Italic* check box (**i**) can be used to italicize the **Lithology / Core Description** header and/or text, and the Underline check box (**u**) can be used to underline the **Lithology / Core Description** header and/or text. Moreover, the **Lithology / Core Description** header and/or text may also be assigned different colors selected from the **Color** drop box fields. Then, decide how **Power*Log™** will distinguish what portion of the **Sample Description** is the header and what portion is the text by inserting a character, most often a colon":", in the **Heading:** field to indicate the separation of the header from the **Sample Description** text. This is applicable to every line in the **Sample Description** and you can have numerous headers as a result. For example, if you used the colon (:) displayed in the **Heading:** field by default, as your header, and then typed "**Lithology : no data**" in the main text field. "**Lithology**" would inherit whatever

modifications, if any, were made to the **Color**, **Bold**, **Italicize**, and **Underline** fields located to the right of the **Heading:** field, while the "**no data**" would inherit whatever modifications, if any, were made to the **Color**, **Bold**, **Italicize**, and **Underline** fields located to the right of the word **Text:**.


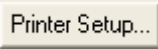
- 14.) Press the **Esc** key on the keyboard to exit from the **Annotation Builder** window, when you are finished.


****Your log should now look like the log shown below.****




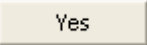
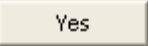
Printing out the Sample (Core) Description Report

In this particular case we entered our core descriptions into the Sample description report. We did this as we did not have had all the core data and we did not have any chip samples to describe for this particular well. That is why we are now printing out the Sample description report instead of the Core Description report.

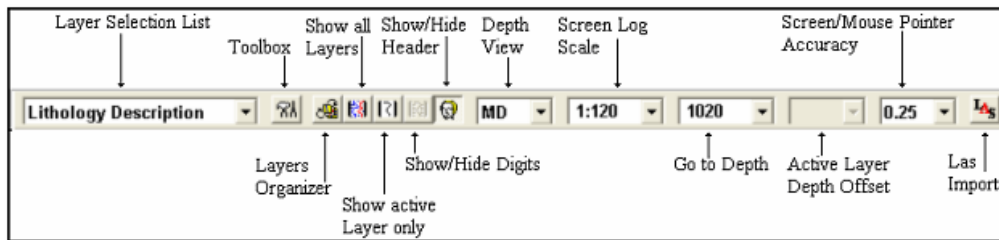
- 1.) Click on the  **Print Well End Report** button on the **Toolbar** or **select Print Well End Report**, under **File**, on the **Selection Bar** to activate the **Power*Log™ Report: Well End Report** window.
- 2.) The **Well End Report** print window will automatically default to the active **Well/Log Name** and its associated **UWI**: you will see **Tutorial Core Log (100141901223W500)** in the **Well List** field and it should be highlighted. If it is not highlighted, move the mouse pointer to the **Well List** field and **click** on the desired **Well / Log Name** to highlight the **Well** you wish to print information from.
- 3.) Highlight **Core Descriptions** in the **Reports** field by clicking on it once.
- 4.) **Select Printer** from the **Output** drop box field list.
- 5.) Click on the  **Printer Setup...** button, in the upper right corner of the **Well End Report** window, to activate the **Print Setup** window. Notice that the currently selected printer is listed beneath the

Default printer radio button , at the top left of the **Print Setup** window. Use the **Printer** section of the **Print Setup** window to specify the use of a printer other than the default printer.

Note: Power*Log™ automatically defaults to a **Paper Orientation** of **Portrait** and a **Paper Size** of **8 5 x 11**, as specified in the **Orientation** and **Paper** sections, respectively, of the **Print Setup** window. Please do **NOT** change these default settings.

- 6.) Click on the  button in the **Well End Report** window to printout the **Sample Descriptions**.
- 7.) When you are finished, **press** the **Esc** key on the keyboard to exit from the **Well End Report** window and to activate the following system message, **“Do you want to save the setup configuration?”**
 Click on the  button and all of the printer selection/settings information utilized in the **Well End Report** window will be saved to the database for any future **Well End Report** print jobs.
 Clicking on the  button will also return you to the main log window.

Changing the Log Scale



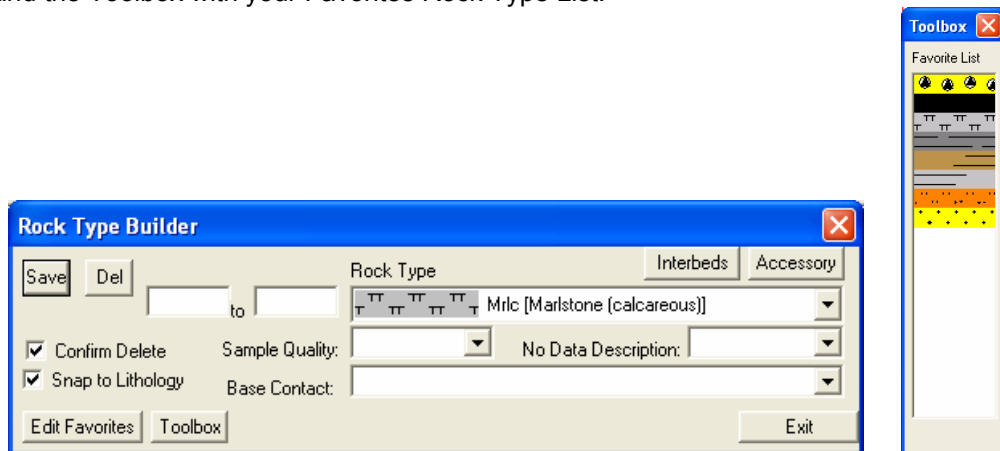
- 1.) Click on the **Log Scales** drop box and **select 1:96**. This will make your screen or monitor log scale represent your log at a 1:120 depth scale.

Drawing Interpreted Lithology

Note: To work on any layer in any track, simply **double click** on the track in which you wish to work with to activate the **“builder”** window for that particular layer. Once the **“builder”** window for a given layer is active, you are then able to access the **pop-up** menu [**right click**] associated with that **“builder”** window and may proceed to enter any necessary intervals and graphical descriptions for the given layer.

- **Drawing Rock Types...**

- 1.) **Double click** anywhere within the **Interpreted Lithology** track to activate the **Rock Type Builder** window and the **Toolbox** with your Favorites Rock Type List.



- 2.) The user can move the Tool Box to a position where it is out of the way by clicking and dragging the Tool Box menu bar.

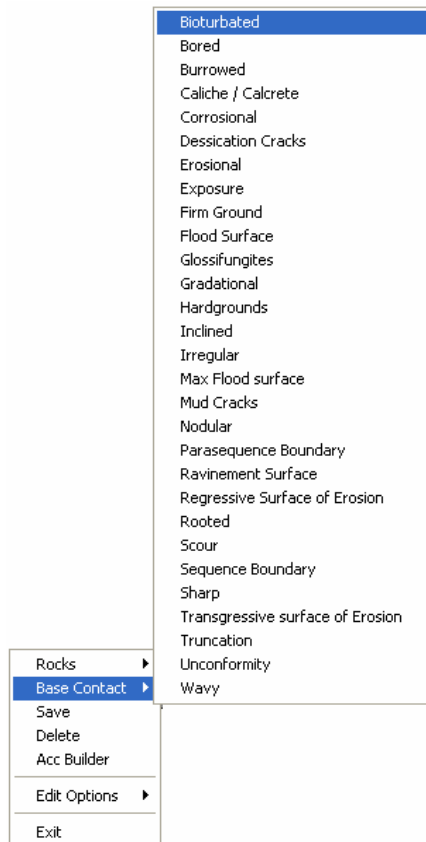
Note: The Tool Box window represent specific **Rock Types** selected by the user in the **System Options** window (See **System Options** earlier in this tutorial).

- 3.) **Select** the **Rock Type** for **Marlstone (calcareous)** from the Tool Box window and it will automatically be displayed in the **Rock Type** field within the **Rock Type Builder** window.
- 4.) Move your mouse pointer to 1235m within the Interpretive Lithology Track and **Click and drag** the mouse pointer **1235.00** to **1234.40** to **1234.4m**. Finally, release the mouse button and the interval will be drawn accordingly.

Note: While dragging the mouse the user must start and stay within the confines of the track / layer they are working on. If you stray outside the interval will start flickering and will not be drawn.

- **Drawing another Rock Type...**





- 1.) **Select Sandstone** from the Tool Box window and it will automatically be displayed in the **Rock Type** field within the **Rock Type Builder** window.
- 2.) Move your mouse pointer to **1234.4m** within the Interpretive Lithology Track and **Click and drag** the mouse pointer **1234.40** to **1232.20** to **1232.2m**. Finally, release the mouse button and the interval will be drawn accordingly.
- 3.) **Right Click** on the just drawn **Sandstone bed** to activate the pop out menu, **Select** the **Base Contact** option and **select Bioturbated** from the selection list.



And many more...

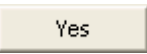
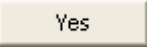
- 1.) **Select Coal** from the Tool Box window and it will automatically be displayed in the **Rock Type** field within the **Rock Type Builder** window.

- 2.) Move your mouse pointer to **1232.2m** within the Interpretive Lithology Track and **Click and drag** the mouse pointer **1232.20**
1231.20 to **1231.2m**. Finally, release the mouse button and the interval will be drawn accordingly.
- 3.) **Right Click** on the just drawn **Coal bed** to activate the pop out menu, **Select** the **Base Contact** option and **select Sharp** from the selection list.
- 4.) **Select Sandstone** from the Tool Box window and it will automatically be displayed in the **Rock Type** field within the **Rock Type Builder** window.
- 5.) Move your mouse pointer to **1231.2m** within the Interpretive Lithology Track and **Click and drag** the mouse pointer **1231.20**
1222.80 to **1222.8m**. Finally, release the mouse button and the interval will be drawn accordingly.
- 6.) **Right Click** on the just drawn **Sandstone bed** to activate the pop out menu, **Select** the **Base Contact** option and **select Inclined** from the selection list.
- 7.) **Select Shale brown** from the Tool Box window and it will automatically be displayed in the **Rock Type** field within the **Rock Type Builder** window.
- 8.) Move your mouse pointer to **1222.8m** within the Interpretive Lithology Track and **Click and drag** the mouse pointer **1222.80**
1221.40 to **1221.4m**. Finally, release the mouse button and the interval will be drawn accordingly.
- 9.) **Right Click** on the just drawn **Shale bed** to activate the pop out menu, **Select** the **Base Contact** option and **select Wavy** from the selection list.
- 10.) **Select Conglomerate (dark chert)** from the Tool Box window and it will automatically be displayed in the **Rock Type** field within the **Rock Type Builder** window.
- 11.) Move your mouse pointer to **1221.4m** within the Interpretive Lithology Track and **Click and drag** the mouse pointer **1221.40**
1220.00 to **1220m**. Finally, release the mouse button and the interval will be drawn accordingly.
- 12.) **Right Click** on the just drawn **Conglomerate bed** to activate the pop out menu, **Select** the **Base Contact** option and **select Mud Cracks** from the selection list.
- 13.) **Select Sandstone** from the Tool Box window and it will automatically be displayed in the **Rock Type** field within the **Rock Type Builder** window.
- 14.) Move your mouse pointer to **1220m** within the Interpretive Lithology Track and **Click and drag** the mouse pointer **1220.00**
1213.00 to **1213m**. Finally, release the mouse button and the interval will be drawn accordingly.
- 15.) **Right Click** on the just drawn **Sandstone bed** to activate the pop out menu, **Select** the **Base Contact** option and **select Gradational** from the selection list.
- 16.) **Select Shale brown** from the Tool Box window and it will automatically be displayed in the **Rock Type** field within the **Rock Type Builder** window.
- 17.) Move your mouse pointer to **1213m** within the Interpretive Lithology Track and **Click and drag** the mouse pointer **1213.00**
1211.40 to **1211.4m**. Finally, release the mouse button and the interval will be drawn accordingly.
- 18.) **Right Click** on the just drawn **Shale bed** to activate the pop out menu, **Select** the **Base Contact** option and **select Sharp** from the selection list.
- 19.) **Select Siltstone** from the Tool Box window and it will automatically be displayed in the **Rock Type** field within the **Rock Type Builder** window.

- 20.) Move your mouse pointer to **1211.4m** within the Interpretive Lithology Track and **Click and drag** the mouse pointer  to **1210.2m**. Finally, release the mouse button and the interval will be drawn accordingly.
- 21.) **Select Shale medium gray** from the Tool Box window and it will automatically be displayed in the **Rock Type** field within the **Rock Type Builder** window.
- 22.) Move your mouse pointer to **1210.2m** within the Interpretive Lithology Track and **Click and drag** the mouse pointer  to **1209.6m**. Finally, release the mouse button and the interval will be drawn accordingly.
- 23.) **Select Sandstone** from the Tool Box window and it will automatically be displayed in the **Rock Type** field within the **Rock Type Builder** window.
- 24.) Move your mouse pointer to **1209.6m** within the Interpretive Lithology Track and **Click and drag** the mouse pointer  to **1203m**. Finally, release the mouse button and the interval will be drawn accordingly.
- 25.) **Right Click** on the just drawn **Sandstone bed** to activate the pop out menu, **Select** the **Base Contact** option and **select Sharp** from the selection list.
- 26.) **Select Shale black** from the Tool Box window and it will automatically be displayed in the **Rock Type** field within the **Rock Type Builder** window.
- 27.) Move your mouse pointer to **1203m** within the Interpretive Lithology Track and **Click and drag** the mouse pointer  to **1200m**. Finally, release the mouse button and the interval will be drawn accordingly.
- 28.) **Right Click** on the just drawn **Shale** to activate the pop out menu, **Select** the **Base Contact** option and **select Scour** from the selection list.

Note: You may wish to resize a particular bed or lithologic interval, but remember that beds cannot completely overlap one another. Also, keep in mind that only the top or the bottom of a particular bed can be resized at any one time. Accordingly, if you wish to resize both, you will have to do it twice.

- **Resizing an interval...**

- 1.) **Press and hold** the **Ctrl key** on the keyboard **down**, while hovering over the bed boundary between the Shale and Sandstone bedding contact at **1203m**. You will view a mouse pointer turn into resize arrow and if the shale is viewed in the builder **click and drag** the **left** mouse button from **anywhere within the Shale bed** down one meter to **1204m** on the **Interpreted Lithology** track.
- 2.) Release the mouse button at **1204m**, followed by the release of the **Ctrl key** on the keyboard, and you will be prompted with the following system message, "**Do you really want to resize the interval from 1200.00 - 1203.00 to 1200.00 - 1204.00?**"
- 3.) **Click** on the  button and you will be prompted with another system message, "**Do you want to AUTOMATICALLY RESIZE the overlapped interval?**"
- 4.) **Click** on the  button to resize both the Shale and Sandstone beds.

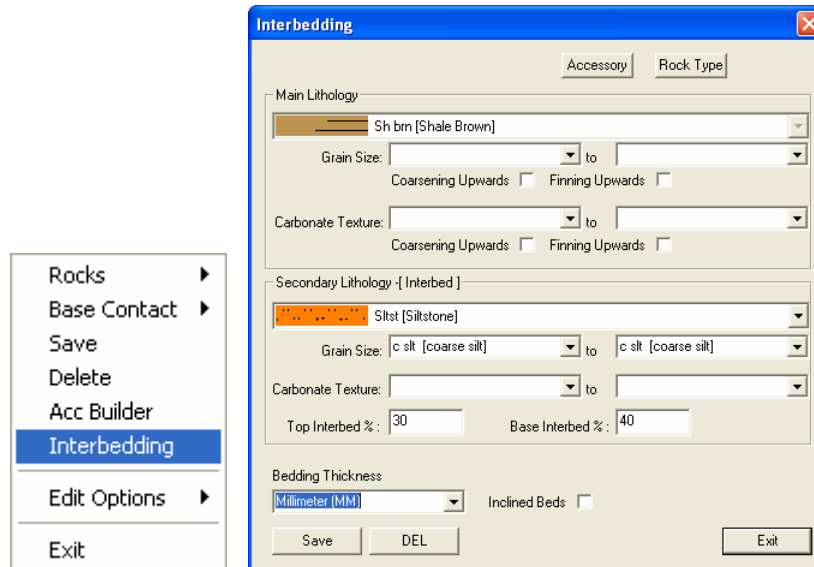
Inserting a Lithology interbed into an exiting lithology interval...

- 1.) **Select Shale medium gray** from the Tool Box window and it will automatically be displayed in the **Rock Type** field within the **Rock Type Builder** window.

- 2.) Move your mouse pointer to **1224.8m** within the Interpretive Lithology Track and **Click and drag** the mouse pointer **1225.60** to **1224.80** to **1225.6m**. Finally, release the mouse button and the interval will be drawn accordingly. This will activate a system message **"Do you want to Add an Interbedded Interval?"**
- 3.) **Click** on the **Yes** button.
- 4.) **Right Click** on the just redrawn **Sandstone bed (1222.8-1224.8)** to activate the pop out menu, **Select** the **Base Contact** option and **select Scour** from the selection list.
- 5.) **Press** the **Esc** key on the keyboard to exit from the **Rock Type Builder** window and return to the log.

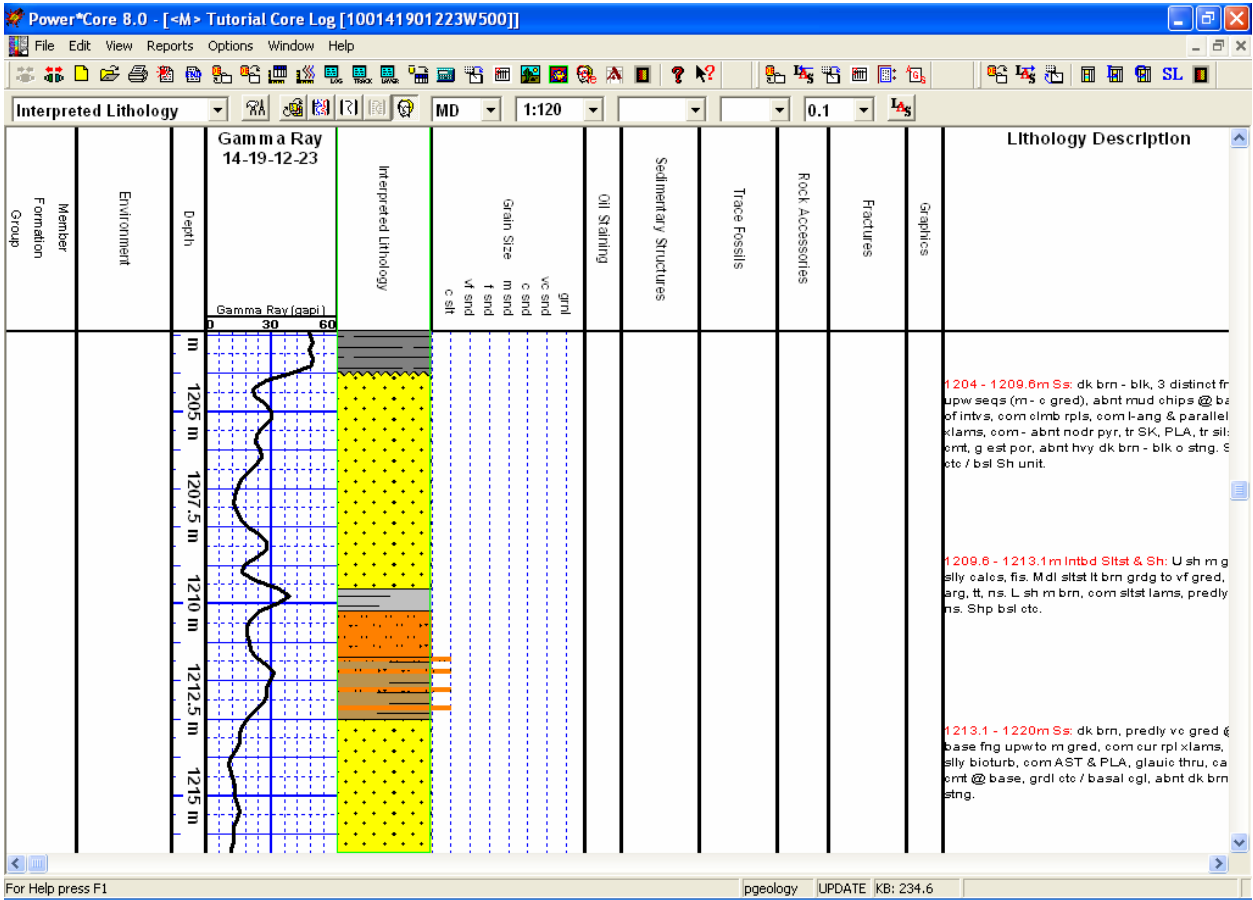
Inserting an Interbedding Lithology interval...

- 1.) **Right click** on the **Siltstone bed** that you drew from **2011.4m to 2013m**. This will activate a pop out menu and **select** the **Interbedding** option. This will activate the Interbedding window.



- 2.) **Select Siltstone** from the **Secondary lithology** drop box, **select c slt** from the **grain size** from and **to** drop list. **Type 30** and **40** in the **Top** and **Base Interbed %** boxes and **Select Millimeter (MM)** from the **bedding thickness** drop box.
- 3.) **Click** on the **Save** button.
- 4.) **Click** on the **Exit** button. You will view your interbedded interval on your log.

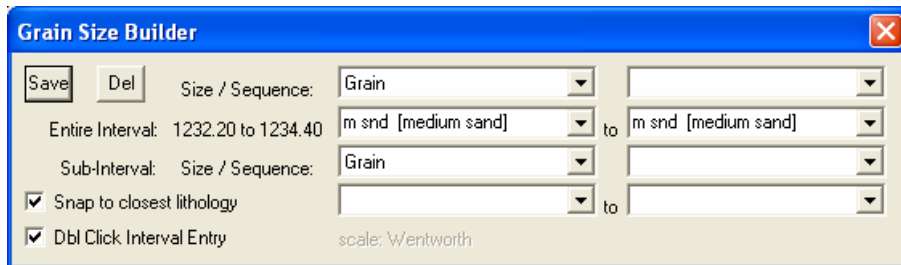
****Your log should now look like the log shown below.****



Drawing Grain Size

The Entire interval is applicable to the Interpretive Lithology interval. The entire interval would contain all of the drawn interpretive lithological interval.

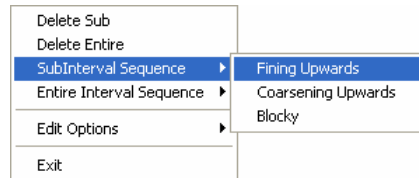
- 1.) **Double click** on the **Grain Size** track to activate the **Grain Size Builder** window.



- 2.) **Double click** the mouse pointer between the depths **1234.40** to **1232.20** **1233.10 [m snd]** on the (m snd) in the **Grain Size** track. The entire **Grain Size** interval will be drawn accordingly

Note: **Measured Depths** and **Grain Sizes** can be viewed within the mouse pointer display box, situated to the right of the mouse pointer.

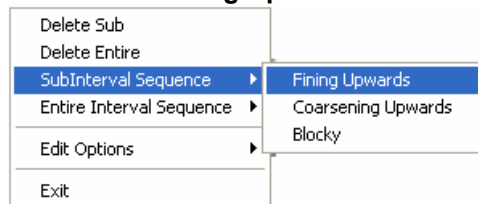
- 3.) **Click and drag** the mouse pointer from **1231.2 [f snd]** to **1225.60 [m snd]** **1231.20 [f snd]** **1225.60 [m snd]** in the **Grain Size** track. Then, release the mouse button and the entire **Grain Size** interval will be drawn accordingly.
- 4.) **Right click within the interval** (1225.6 – 1231.20) to activate the Grain size pop out menu. **Select SubInterval Sequence** and then **Select Fining Upwards** from the ensuing pop-out menu. You should now see a fining upwards on your grain size.



- 5.) **Click and drag** the mouse pointer from **1225.6 [f snd]** to **1222.8m [f snd]** **1225.60 [f snd]** **1222.80 [f snd]** on the **Grain Size** track. Then, release the mouse button and the entire **Grain Size** interval will be drawn accordingly.
 - 6.) **Double click** the mouse pointer between the depths **1221.4** to **1220.00m** on the **(f pbl)** **1220.50 [f pbl]** in the **Grain Size** track. The entire **Grain Size** interval will be drawn accordingly
 - 7.) **Double click** the mouse pointer between the depths **1211.4** to **1210.20** on the **(c slt)** **1210.80 [c slt]** in the **Grain Size** track. The entire **Grain Size** interval will be drawn accordingly.
- **Drawing Sub-Interval of Grain Sizes...**

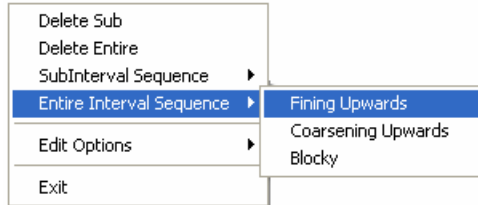
The sub interval is applicable to the Interpretive Lithology interval. A sub interval would consist of a part or portion of the lithological interval.

- 1.) **Click and drag** the mouse pointer from **1220.00 [vc snd]** to **1216.8 [vc snd]** **1220.00 [vc snd]** **1216.80 [vc snd]** on the **Grain Size** track. Release the mouse button and the **Grain Size** Sub-Interval will be drawn accordingly.
- 2.) **Click and drag** the mouse pointer from **1216.8 [vc snd]** to **1213 [m snd]** **1216.80 [vc snd]** **1213.00 [m snd]** on the **Grain Size** track. Release the mouse button and the **Grain Size** Sub-Interval will be drawn accordingly.
- 5.) **Right click within the interval** (1213 - 1216.8) to activate the Grain size pop out menu. **Select SubInterval Sequence** and then **Select Fining Upwards** from the ensuing pop-out menu.

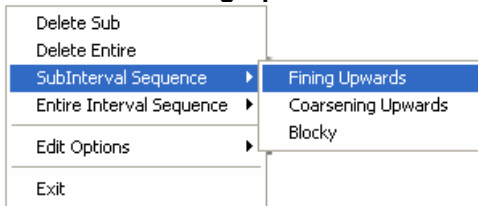


Drawing both an Entire and a Sub-Interval of Grain Sizes...

- 1.) **Click and drag** the mouse pointer from **1209.6 [c]** to **1204 [m]** **1209.60 [c snd]** **1204.00 [m snd]** on the **Grain Size** track. Then, release the mouse button and the entire **Grain Size** interval will be drawn accordingly.
- 2.) **Right click within the interval** (1204 – 1209.6) to activate the Grain size pop out menu. **Select Entire Interval Sequence** and then **Select Fining Upwards** from the ensuing pop-out menu.



- 3.) **Click and drag** the mouse pointer from **1208 [c]** to **1206 [m]** 1208.00 [c snd] 1206.00 [m snd] on the **Grain Size** track. Release the mouse button and the **Grain Size** Sub-Interval will be drawn accordingly.
- 4.) **Right click within the interval** (1206 - 1208) to activate the Grain size pop out menu. **Select SubInterval Sequence** and then **Select Fining Upwards** from the ensuing pop-out menu.

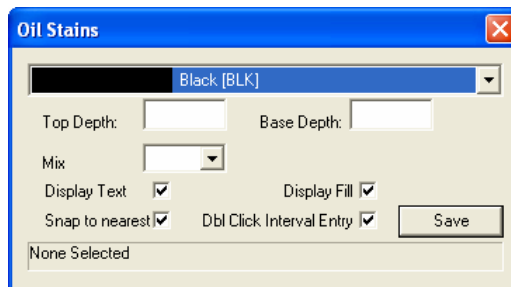


You now have one entire interval that defines the whole bed, with a sub interval that has divided the entire interval into an upper and lower.

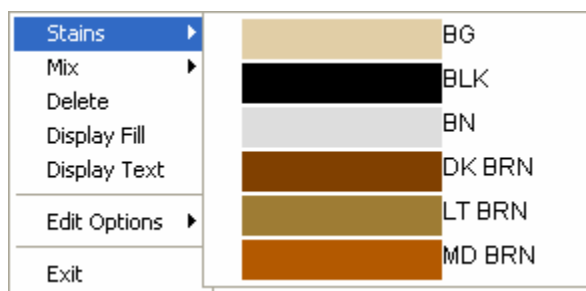
- 5.) To exit from the **Grain Size Builder** window and return to the log, **press the Esc key** on the keyboard once.

Drawing Oil Staining

- 1.) **Double click** on the **Oil Staining** track to activate the **Oil Stains Builder** window.

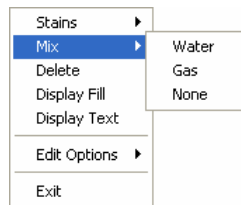


- 2.) **Right click** anywhere within the **Oil Staining** track / layer to activate the pop-up menu and **select intensity** and then **select BLK** from the pop-out menu selection.



- 3.) **Double Click** the mouse pointer between the depths **1204 to 1209.6m** within the Oil staining track layer. Your entire interval oil staining will be drawn.

- 4.) **Right click** anywhere within the **Oil Staining** track / layer and not within another already drawn interval to activate the pop-up menu and **select intensity** and then **DK BRN** from the pop-out menu selection.
- 5.) **Click and drag** the mouse pointer from **1213 to 1221.4m** 1213.00
1221.40 within the Oil staining track layer. Release the mouse pointer button and your oil staining interval will be drawn.
- 6.) **Right click** anywhere within the **Oil Staining** track / layer and not within another already drawn interval to activate the pop-up menu and **select intensity** and then **MB BRN** from the pop-out menu selection.
- 7.) **Click and drag** the mouse pointer from **1222.8 to 1224.8m** 1222.80
1224.80 within the Oil staining track layer. Release the mouse pointer button and your oil staining interval will be drawn.
- 8.) **Right click** anywhere within the **Oil Staining** track / layer and not within another already drawn interval to activate the pop-up menu and **select intensity** and then **BG** from the pop-out menu selection.
- 9.) **Right click** anywhere within the **Oil Staining** track / layer and not within another already drawn interval to activate the pop-up menu and **select mix** and then **Water** from the pop-out menu selection.

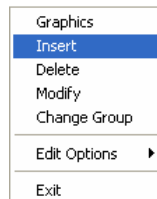


- 10.) **Click and drag** the mouse pointer from **1225.6 to 1231.2m** 1225.60
1231.20 within the Oil staining track layer. Release the mouse pointer button and your oil staining interval will be drawn.
- 11.) **Double Click** the mouse pointer between the depths **1232.2 to 1234.4m** within the Oil staining track layer. Your entire interval oil staining will be drawn.
- 12.) **Click** on the OK button or **Press** the **Esc key** on you keypad to exit the Oil Stains window.

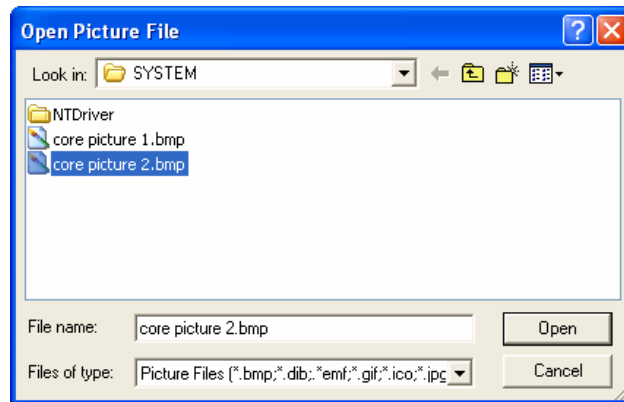
Inserting and modifying Graphics...

We are able to accept any graphical file format into our graphics layer.

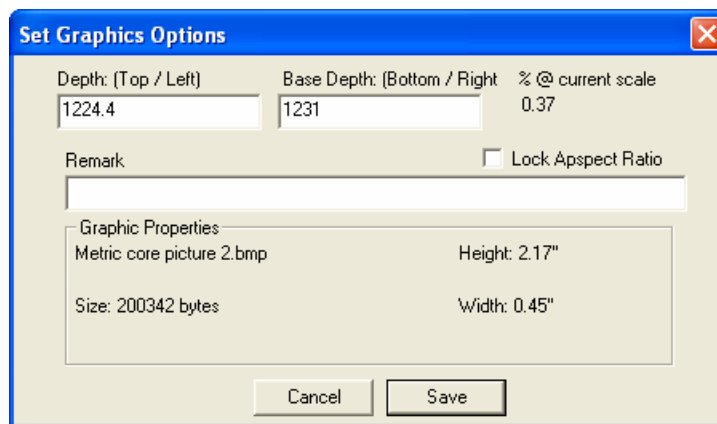
- 1.) **Click** anywhere within the **Graphics** track / layer to highlight the Graphics Track in green.
- 2.) **Right click** the mouse within the Graphics layer at a depth of **1224.4m**. This will activate the pop out menu.



- 3.) **Click** on the **Insert** Option. This will activate an Open Picture File window.



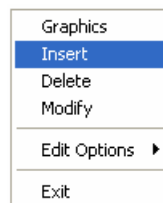
- 4.) Go to the Powersuite_V8 / System folder and **select the Metric Core picture 2.bmp by double clicking** on the file name. This will activate the Set Graphics Options window.



- 5.) **Type 1231** into the **Base Depth** field and the resulting % @ current scale should indicate 0.37 % if you are at a log screen scale of 1:120. You could deselect the Lock Aspect Ratio check box, which would make the picture fit into the width of the track (regardless of what log screen scale and would ultimately distort the picture depending on either the width of the track vs the width of the picture).
- 6.) **Click** on the **Save** button. This will insert your picture and close the window.

Inserting another Graphic.

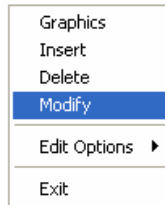
- 1.) **Right click** the mouse within the Graphics layer at a depth of **1204m**. This will activate the pop out menu.



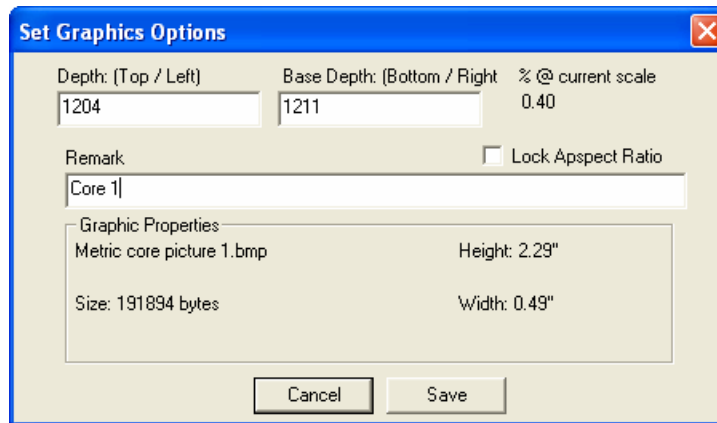
- 2.) **Click** on the **Insert** Option. This will activate an **Open Picture File** window and Select the **Core picture 1.bmp** by **double clicking** on the file name. This will activate the Set Graphics Options window.
- 3.) **Type 1210.58** into the **Base Depth** field and the resulting Scale % should be 0.38% if you are at a log screen scale of 1:120.
- 4.) **Click** on the **Save** button. This will insert your picture and close the window.

Modifying a Graphic...

- 1.) **Right click** the mouse within the Graphics layer on the Core picture 1 somewhere between the depths of 1204 and 1210.58m. This will activate the pop out menu.

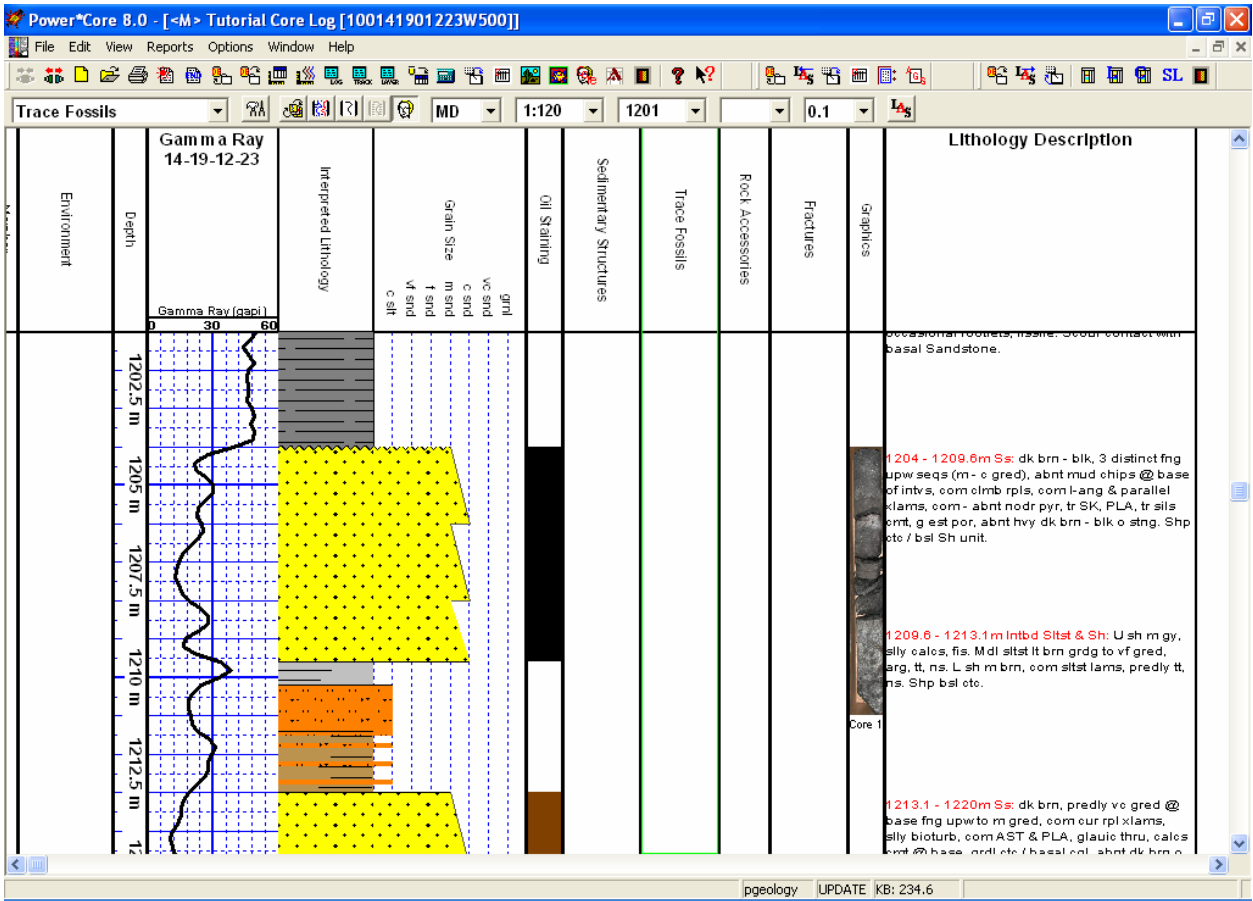


- 2.) **Click** on the **Modify** Option. This will activate the Set Graphics Options window.



- 3.) **Type 1211** into the **Base Depth** field and the resulting Scale % should be 0.40% if you are at a log screen scale of 1:120. Also **type Core 1** in the Remark field.
- 4.) **Click** on the **Save** button. This will modify the size of the picture, insert a comment under your picture and close the window.

****Your log should now look like the log below.****

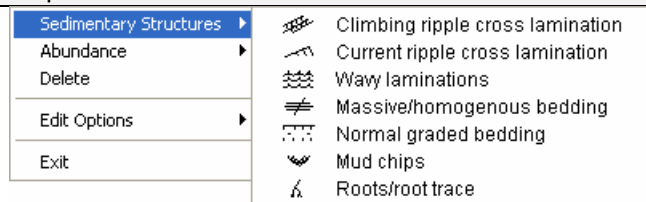


Drawing Sedimentary Structures (BR)

The BR is an acronym for Bed Restricted. You cannot enter a sedimentary structure without an associated Lithology in the Interpretive Lithology layer/ track. The top and bottom depths of the Lithology will restrict what data can be entered into an interval. With the BR in effect when you resize, delete or insert a lithology the Sedimentary structures interval will also be resized, deleted or modified by the lithology's interval.

- 1.) **Double click** anywhere within the **Sedimentary Structure** track to activate the **Sedimentary Structure Builder** window.
- 2.) **Right click** anywhere within the **Sedimentary Structure** track to activate the pop-up menu. **Select Sedimentary Structures** and then **select roots/root trace** from the pop-out menu. If it is not in your favorites list you would then select if from the Other drop box in the builder.

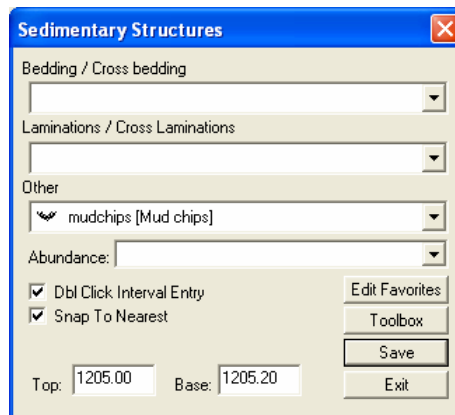
To add it to you favorites **Click** on the **Options pull down menu**, select **System Options** and then **click** on the **Sedimentary Favorites** **button** and add it from the **Other drop list**. Remember to **Save** on the way out of the System Options window



- 3.) **Double Click** (Dbl Click Interval Entry activated in the builder) the mouse pointer between **1200 to 1204m** within the Sedimentary Structure track / layer. The root structure interval will be drawn.

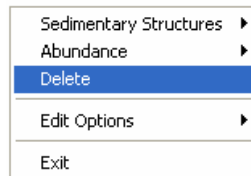
Note: There are two ways to represent this data. They are chosen under the Options pull down menu in the System Options window with the toggle on and off for the Arrow subintervals.

- 4.) **Right click** anywhere within the **Sedimentary Structure** track to activate the pop-up menu. **Select Sedimentary Structure** and then **select climbing ripple cross laminations** from the pop-out menu, or **click** on the **Laminations drop box** from the builder and **select climbing ripple cross laminations**.
- 5.) **Double Click** the mouse pointer between **1204 to 1209.6m** within the Sedimentary Structure track / layer. The climbing ripple cross laminations will be drawn within that rock interval.
- 6.) **Select** the **Other** drop list in the Sedimentary Structure Builder window and then **select mud chips**.
- 7.) **Click** the **mouse pointer** from **at 1205, 1206.6 and 1208.8m** within the Sedimentary Structure track / layer on a different grid plane. The mud chips selection has been entered as a subinterval of 0.2m or whatever has been selected in the Screen Scale accuracy selection on the selection bar.



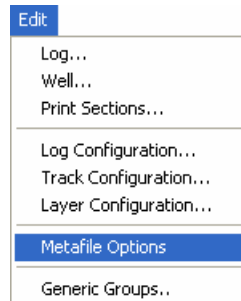
- 8.) **Right click** anywhere within the **Sedimentary Structure** track to activate the pop-up menu. **Select Laminations / Cross Laminations** and then **select current ripple cross laminations** from the pop-out menu, or **click** on the **Laminations / Cross Laminations drop box** from the builder and **select current ripple cross laminations**.
- 9.) **Double Click** the mouse pointer between **1213 to 1220m** within the Sedimentary Structure track / layer. The current ripple cross laminations will be drawn within that rock interval.
- 10.) **Right click** anywhere within the **Sedimentary Structure** track to activate the pop-up menu. **Select** the **Sedimentary Structure** and then **select massive/homogenous bedding** from the pop-out menu, or **click** on the **Bedding / Cross bedding drop box** from the builder and **select massive/homogenous bedding**.
- 11.) **Click and drag** the mouse pointer from **1222.8 to 1224.8m** 1222.80
1224.80 within the Sedimentary Structure track / layer. Release the mouse pointer button and the massive/homogeneous bedding will be drawn.
- 12.) **Double click** the mouse pointer between **1232.2 to 1234.4m** within the Sedimentary Structure track / layer. The massive/homogeneous bedding interval will be drawn.
- 13.) **Right click** anywhere within the **Sedimentary Structure** track to activate the pop-up menu. **Select Sedimentary Structure** and then **select wavy laminations** from the pop-out menu, or **click** on the **Laminations / Cross laminations drop box** from the builder and **select wavy laminations**.
- 14.) **Click and drag** the mouse pointer from **1227.6 to 1231.2m** 1227.60
1231.20 within the Sedimentary Structure track / layer. Release the mouse pointer button and the wavy laminations will be drawn.

- 15.) **Right click** anywhere within the **Sedimentary Structure** track to activate the pop-up menu. **Select Bedding / Cross bedding** and then **select normal graded bedding** from the pop-out menu, or **click** on the **Bedding / Cross bedding drop box** from the builder and **select normal graded bedding**.
- 16.) **Click and drag** the mouse pointer from **1227.6 to 1231.2m** within the Sedimentary Structure track / layer on a different grid plane. Release the mouse pointer button and the normal graded bedding will be drawn.
- 17.) If you wanted to **delete** a sedimentary structure, **right click on the interval to be deleted** and **select delete** from the pop-out menu.

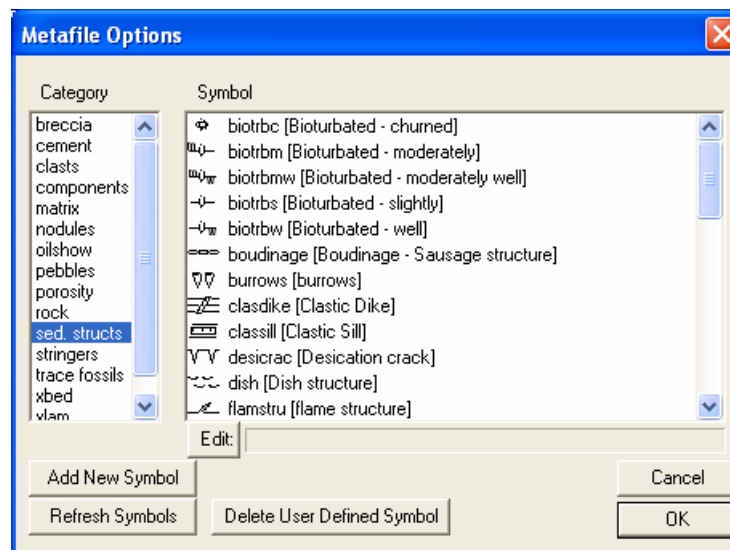


- 18.) Click on the **Exit** button or Press the **Esc key** on your keypad to close the window.

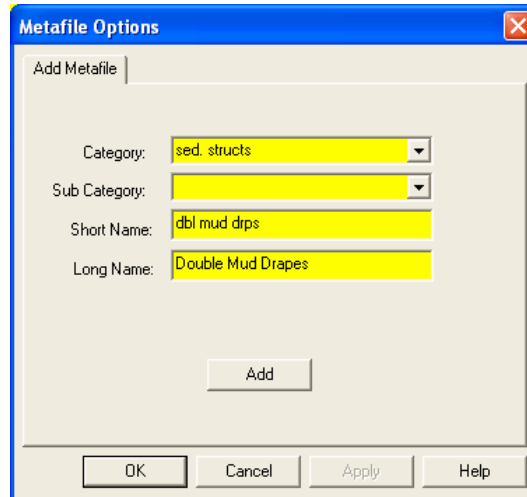
How to Add a New Sedimentary Structure Metafile...



- 1.) Click on the **Metafile Options** selection located under the **Edit pull down menu**. This will activate the Metafile Options window.

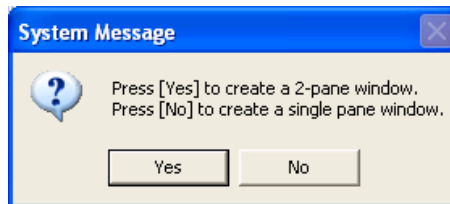


- 2.) Click on the **sed. structs** category. This will activate a list of existing symbols shown on the right hand side of the window.
- 3.) Click on the **Add New Symbol** button. This will activate the Metafile Options (Add Metafile) window.

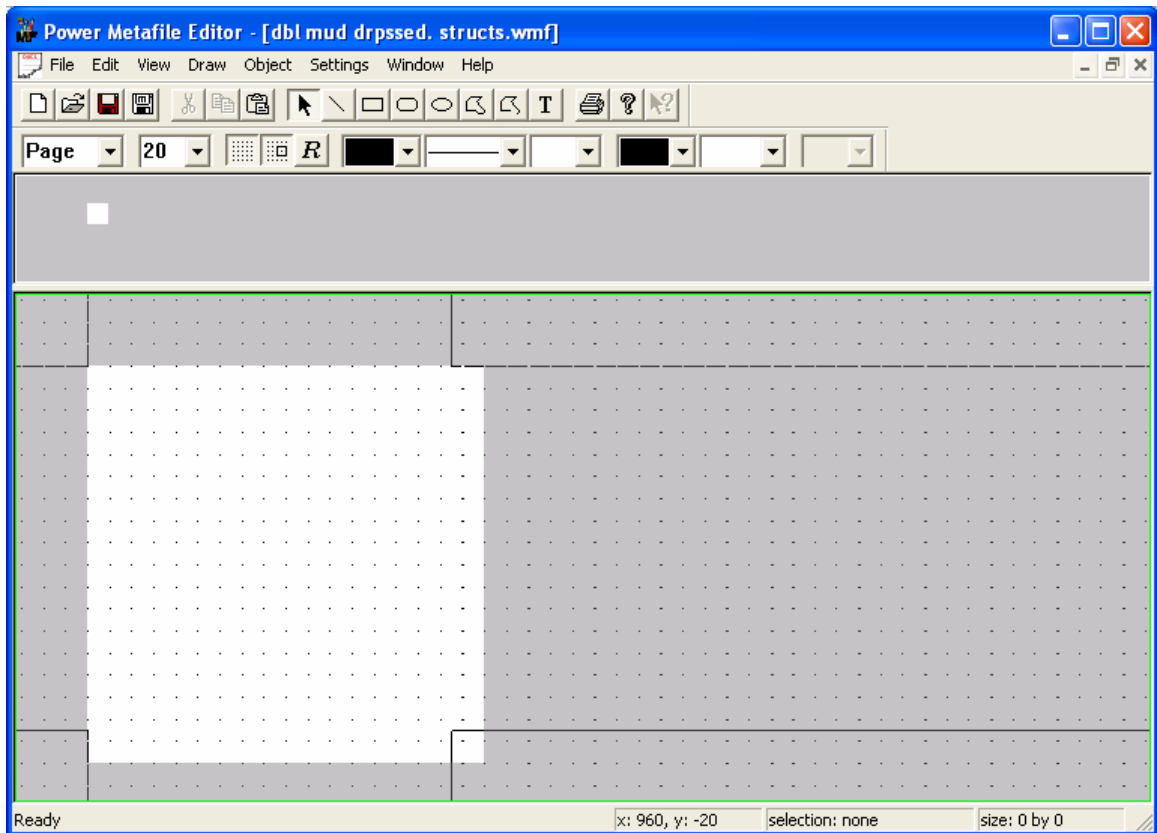


- 4.) **Type** in 'dbl mud drps' in the **short name field** and **type** in "Double Mud Drapes" in the **long name** fields. These will appear in the choice lists and will be exported in the ASCII Lithology export file.
- 5.) **Click** on the **Add** button. This will activate a System Message window if you have selected any other category other than rock.

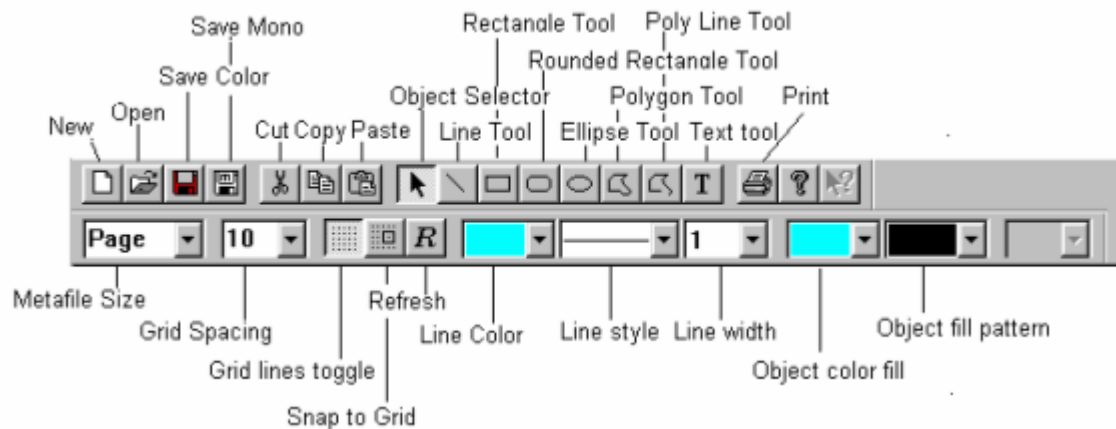
Note: A (two) **2-pane window** shows the metafile in regular and expanded views. A **single pane** window shows the metafile in an expanded view only.



- 6.) **Click** on either the **Yes** button and the Metafile editor will open a blank Power Metafile Editor window with a file name that is a combined short name and category name.

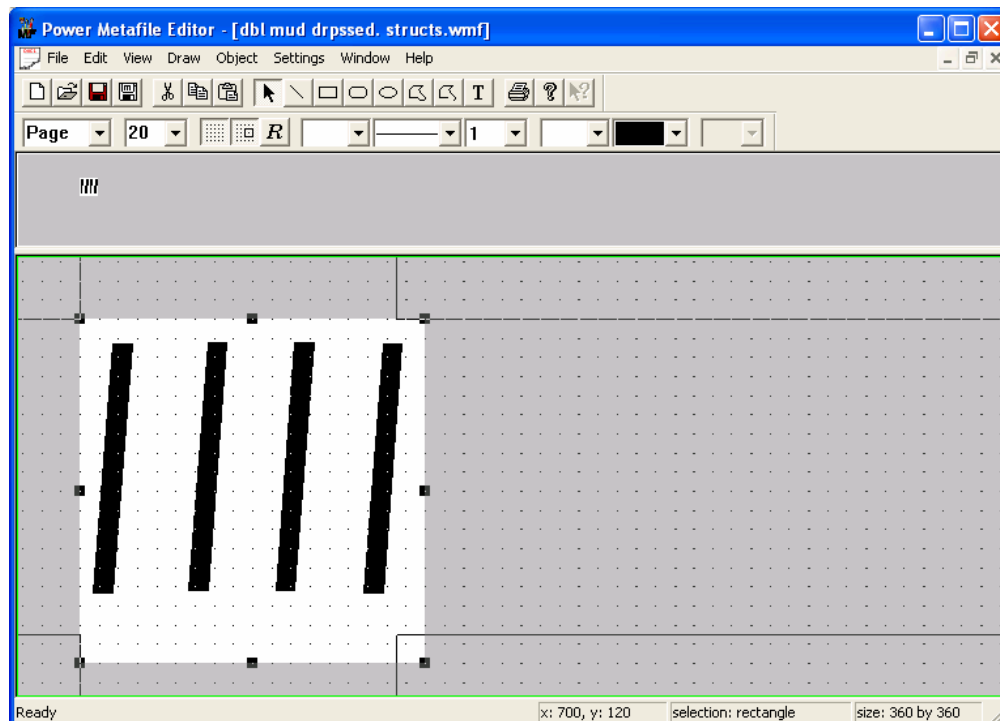



The toolbar functionality's are defined in the illustration shown below.




7.) The lower or expanded portion of the window is the editable portion. With the mouse you can select a line, rectangle, polyline or other shape tool and draw in this window. You can move the lines or shapes by dragging the shapes, copy or delete by using the toolbar or keyboard keys or buttons. Use the drop down menus or the toolbars to select the different options the user can utilize.

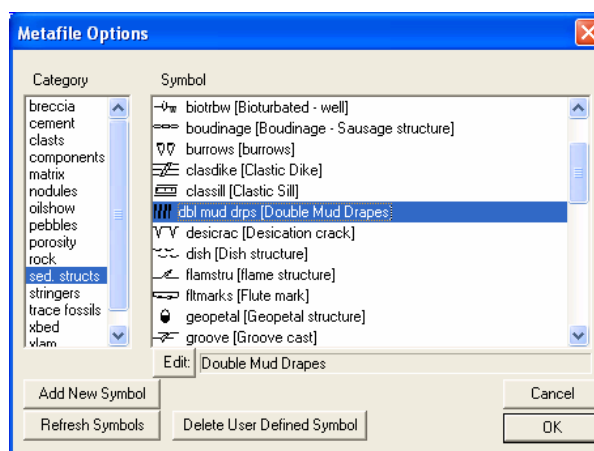
Note: The Polyline and Polygon drawing tools require a double click to finish the action. The text tool font size is determined by the height of the field. Once an action is performed the default reaction is to place the emphasis back on the select tool.



- 8.) Once the metafile has been designed to your specifications the user must **click** on the  **Save** button on the toolbar or **click** on the file pull down menu and select **Save**.

Note: There are two save choices. The Save Mono is done automatically for you when you save the metafile. In other words the color metafiles are converted to black and white metafiles and saved to the Powersuite/symbolm folder. These mono metafiles come in useful when printing to a black and white printer. The color symbols are saved to Powersuite/symbol folder.

- 9.) Exit the Power Metafile Editor by **clicking on the**  in the upper right hand corner of the window or **click** on the **Exit** selection located under the **File** pull down menu. This will put the user back into the PowerSuite Application Metafile options window. You will now view you new creation in the appropriate list.

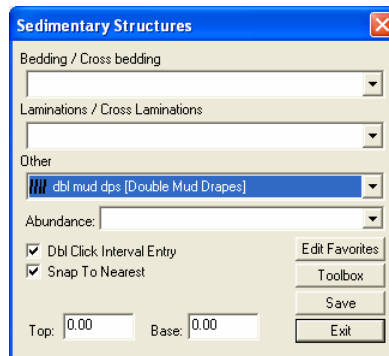



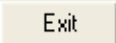
- 10.) **Repeat** steps 2-10 to add more metafiles.

- 11.) Click on the  button in the Metafile Options window to exit this window. All the changes will be reflected in the Choice lists, printed dynamic legends and will be available to draw with on your existing, new or old logs.

Adding the New Sedimentary Structure to the log...

- 1.) **Double click** on the **Sedimentary Structures** track. This will activate the Sedimentary Structures Builder
- 2.) Click on the **Other drop box** from the builder and **select Double Mud Drapes**.

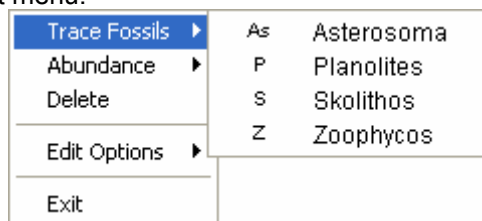




- 3.) **Click and drag** the mouse pointer from **1204 to 1209.6m**  within the Sedimentary Structure track / layer. Release the mouse pointer button and the double mud drapes will be drawn.
- 4.) Click on the  button or **Press the Esc key** on your **keypad** to close the window.

Drawing Trace Fossils (BR)

The BR is an acronym for Bed Restricted. You cannot enter a Trace Fossil without an associated Lithology in the Interpretive Lithology layer/ track. The top and bottom depths of the Lithology will restrict what data can be entered into an interval. With the BR in effect when you resize, delete or insert a lithology the Trace Fossils interval will also be resized, deleted or modified by the lithology's interval.

- 1.) **Double click** anywhere within the **Trace Fossils (BR)** track to activate the **Trace Fossils Builder** window.
- 2.) **Right click** anywhere within the **Trace Fossils** track to activate the pop-up menu and **Select Planolites** from the pop-out menu.

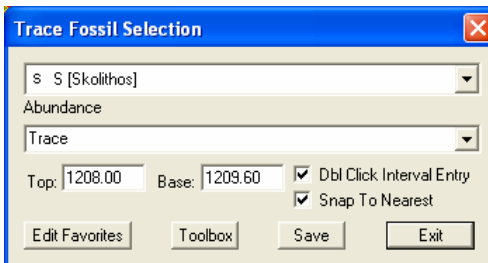


- 3.) **Click and drag** the mouse pointer from **1206 to 1208m**  within the Trace Fossils track / layer. Release the mouse pointer button and the symbol for Planolites and the interval will be drawn.
- 4.) **Click and drag** the mouse pointer from **1214.6 to 1220m**  within the Trace Fossils track / layer. Release the mouse pointer button and the symbol for Planolites and the interval will be drawn.

- 5.) **Click and drag** the mouse pointer from **1225.6 to 1231.2m** within the Trace Fossils track / layer. Release the mouse pointer button and the symbol for Planolites and the interval will be drawn.

Note: There are two ways to represent this data. They are chosen under the Options pull down menu in the System Options window with the toggle on and off for the Arrow subintervals.

- 6.) **Right click** anywhere within the **Trace Fossils** track to activate the pop-up menu. **Select Zoophycos** from the pop-out menu, or **click** on the **Trace Fossil Selection drop box** and **select Zoophycos**.



- 7.) **Click and drag** the mouse pointer from **1233.4 to 1234.4m** within the Trace Fossils track / layer. Release the mouse pointer button and the symbol for Zoophycos and the interval will be drawn.

- 8.) **Right click** anywhere within the **Trace Fossils** track to activate the pop-up menu. **Select Asterosoma** from the pop-out menu, or **click** on the **Trace Fossil Selection drop box** and **select Asterosoma**.

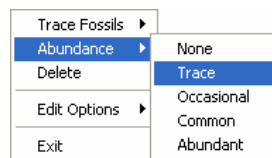
- 9.) **Click and drag** the mouse pointer from **1214.6 to 1213m** within the Trace Fossils track / layer. Release the mouse pointer button and the symbol for Asterosoma and the interval will be drawn.

- 10.) **Right click** anywhere within the **Trace Fossils** track to activate the pop-up menu. **Select Skolithos** from the pop-out menu, or **click** on the **Trace Fossil Selection drop box** and **select Skolithos**.

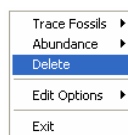
- 11.) **Click and drag** the mouse pointer from **1206 to 1204m** within the Trace Fossils track / layer. Release the mouse pointer button and the symbol for **Skolithos** and the interval will be drawn.

- 12.) **Click and drag** the mouse pointer from **1209.6 to 1208m** within the Trace Fossils track / layer. Release the mouse pointer button and the symbol for **Skolithos** and the interval will be drawn.

- 13.) **Right click** on the **1208 - 1209.6 Skolithos symbol interval** and **Select Abundance** and then **select Trace** from the ensuing pop out menu. This will change the grey line to a dotted line to indicate an abundance of that trace fossil.



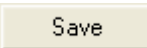

- 14.) If you wanted to **delete** a trace fossil, **right click on the interval to be deleted** and **select delete** from the pop-out menu.



15.) Click on the  button or Press the **Esc key** on your **keypad** to close the window.

Resize / Move Notes:

There are 2 ways to **resize** the interval.

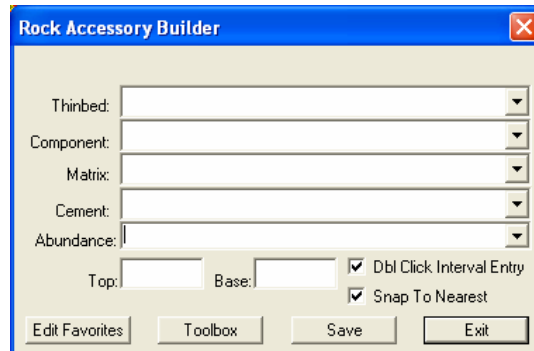
- A) Click on the **interval** to make it show up in the builder. **Type** in a new **top** or **base depth** and **click** on the  button.
- B) **Hold down** your **CTRL Key** on the **keypad** and then **mouse over** the **end marking** of the interval and your mouse pointer will turn into a  resize cursor. **Click and drag** the ends to a new depth. Release the mouse button first.

The user can **Move** Trace Fossil intervals by **clicking and dragging on the interval and moving it to a new location**. If the Trace Fossil is bed restricted then it will not move past the bed boundaries and will be truncated if moved up or down through a bed boundary.

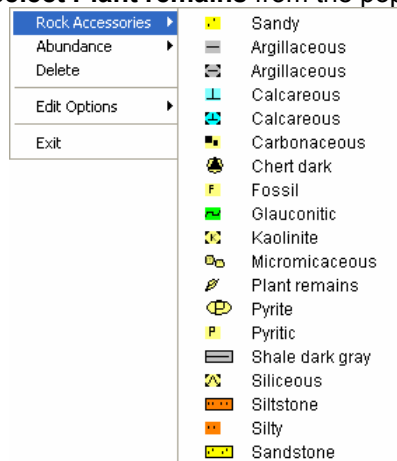
Drawing Rock Accessories (NBR)

The NBR is an acronym for Non Bed Restricted. You can enter a Rock Accessory without an associated Lithology in the Interpretive Lithology layer/ track. The top and bottom depths of the Lithology will **not** restrict what data that can be entered into any interval. With the NBR in effect when you resize, delete or insert a lithology the Rock Accessories interval will **not** be resized, deleted or modified by the lithology's interval.

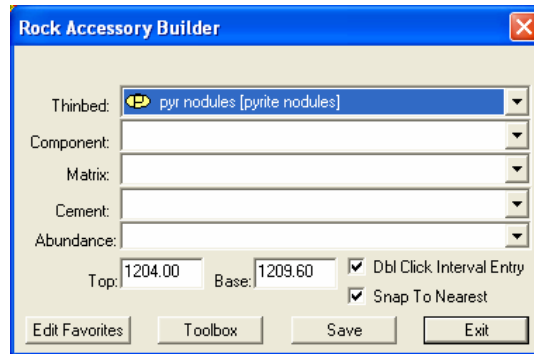
- 1.) **Double click** anywhere within the **Rock Accessories (NBR)** track to activate the **Rock Accessories Builder** window.




- 2.) **Right click** anywhere within the **Rock Accessories** track to activate the pop-up menu and **Select Rock Accessories** and then **select Plant remains** from the pop-out menu.









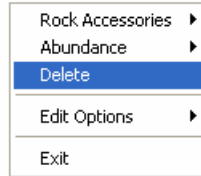
- 3.) **Double click** (with the Dbl Click Interval Entry activated within the builder) the mouse pointer between **1204 to 1200m** within the Rock Accessories track / layer. The symbol and interval for Plant remains will be drawn.
- 4.) **Right click** anywhere within the **Rock Accessories** track to activate the pop-up menu and **Select Rock Accessories and then select Pyrite (nodules)** from the pop-out menu or **click** on the **Thinbed drop box** and **select pyrite nodules**.



- 5.) **Double Click** the mouse pointer between **1213 to 1204m** within the Rock Accessories track / layer. The entire bed will be filled with Pyrite nodules over the interval.
- 6.) Resize the interval by **holding down the CTRL key** on keypad **and mousing over the lower interval of the Pyrite nodule ~1213m** and the arrow will turn into a  resize arrow. **Click and drag** the interval up to **1212m** and let the mouse pointer go before the CTRL Key.

Note: There are two ways to represent this data. They are chosen under the Options pull down menu in the System Options window with the toggle on and off for the Arrow subintervals.

- 7.) **Right click** anywhere within the **Rock Accessories** track to activate the pop-up menu. **Select Glauconitic** from the pop-out menu, or **click** on the **Component drop box** and **select Glauconitic**.
- 8.) **Click and drag** the mouse pointer from **1213 to 1221.4m** 
 within the Rock Accessories track / layer. Release the mouse pointer button and the symbol for Glauconitic and the interval will be drawn.
- 9.) **Right click** anywhere within the **Rock Accessories** track to activate the pop-up menu. **Select Chert Dark pebble** from the pop-out menu, or **click** on the **Thinbed drop box** and **select Chert Dark pebbles**.
- 10.) **Double Click** the mouse pointer between **1221.4 to 1220m** within the Rock Accessories track / layer. The entire interval will be drawn with the symbol for Chert Dark pebbles.
- 11.) **Right click** anywhere within the **Rock Accessories** track to activate the pop-up menu. **Select argillaceous** matrix from the pop-out menu, or **click** on the **Matrix drop box** and **select argillaceous**.
- 12.) **Click and drag** the mouse pointer from **1224.8 to 1222.8m** 
 within the Rock Accessories track / layer. Release the mouse pointer button and the symbol for **Argillaceous** matrix and the interval will be drawn.
- 13.) **Right click** anywhere within the **Rock Accessories** track to activate the pop-up menu. **Select fossiliferous** from the pop-out menu, or **click** on the **Components drop box** and **select fossiliferous**.
- 14.) **Click and drag** the mouse pointer from **1232.2 to 1231m** 
 within the Rock Accessories track / layer. Release the mouse pointer button and the symbol for **Fossiliferous** and the interval will be drawn.
- 15.) If you wanted to **delete** a Rock Accessory Symbol, **right click on the interval to be deleted** and **select delete** from the pop-out menu.


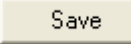


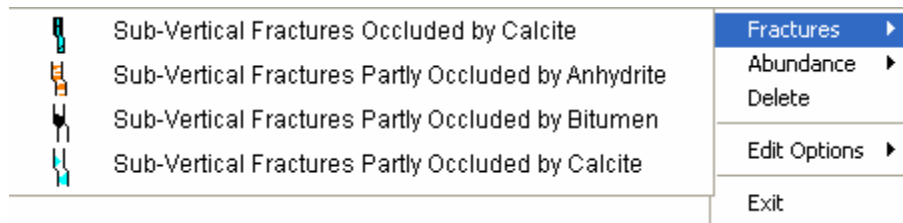
16.) Click on the  button or Press the **Esc** key on your **keypad** to close the window.

Drawing Fractures (BR)

The BR is an acronym for Bed Restricted. You cannot enter a Fracture without an associated Lithology in the Interpretive Lithology layer/ track. The top and bottom depths of the Lithology will restrict what data can be entered into an interval. With the BR in effect when you resize, delete or insert a lithology the Fractures interval will also be resized, deleted or modified by the lithology's interval.

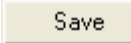
- 1.) **Double click** anywhere within the **Fracture track** to activate the **Fracture Builder** window.
- 2.) **Right click** anywhere within the **Fracture track** to activate the pop-up menu. **Select Fractures** and then **Sub-Vertical Fractures partly occluded by Calcite** from the pop-out menu. If it is not in your favorites list you would then select if from the Fractures drop box in the builder.

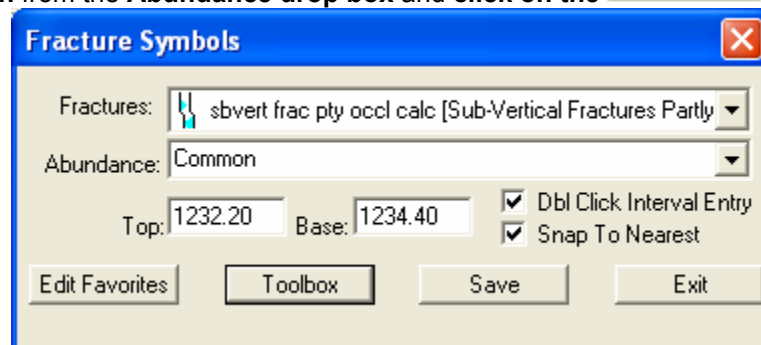
To add it to you favorites **Click** on the **Options pull down menu**, select **System Options** and then **click** on the  button and add it from the **drop list**. Remember to  on the way out of the System Options window



- 4.) **Double Click** (Dbl Click Interval Entry activated in the builder) the mouse pointer between **1232.2** to **1234.4m** within the Fracture track / layer. The interval will be drawn.

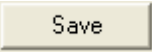

Note: There are two ways to represent this data. They are chosen under the Options pull down menu in the System Options window with the toggle on and off for the Arrow subintervals.

- 5.) **Right click** anywhere within the interval drawn to activate the pop-up menu. **Select Abundance** and then **select Common** from the pop-out menu, **OR click** on the **Interval** to populate the builder and **select Common** from the **Abundance drop box** and **click on the**  button.



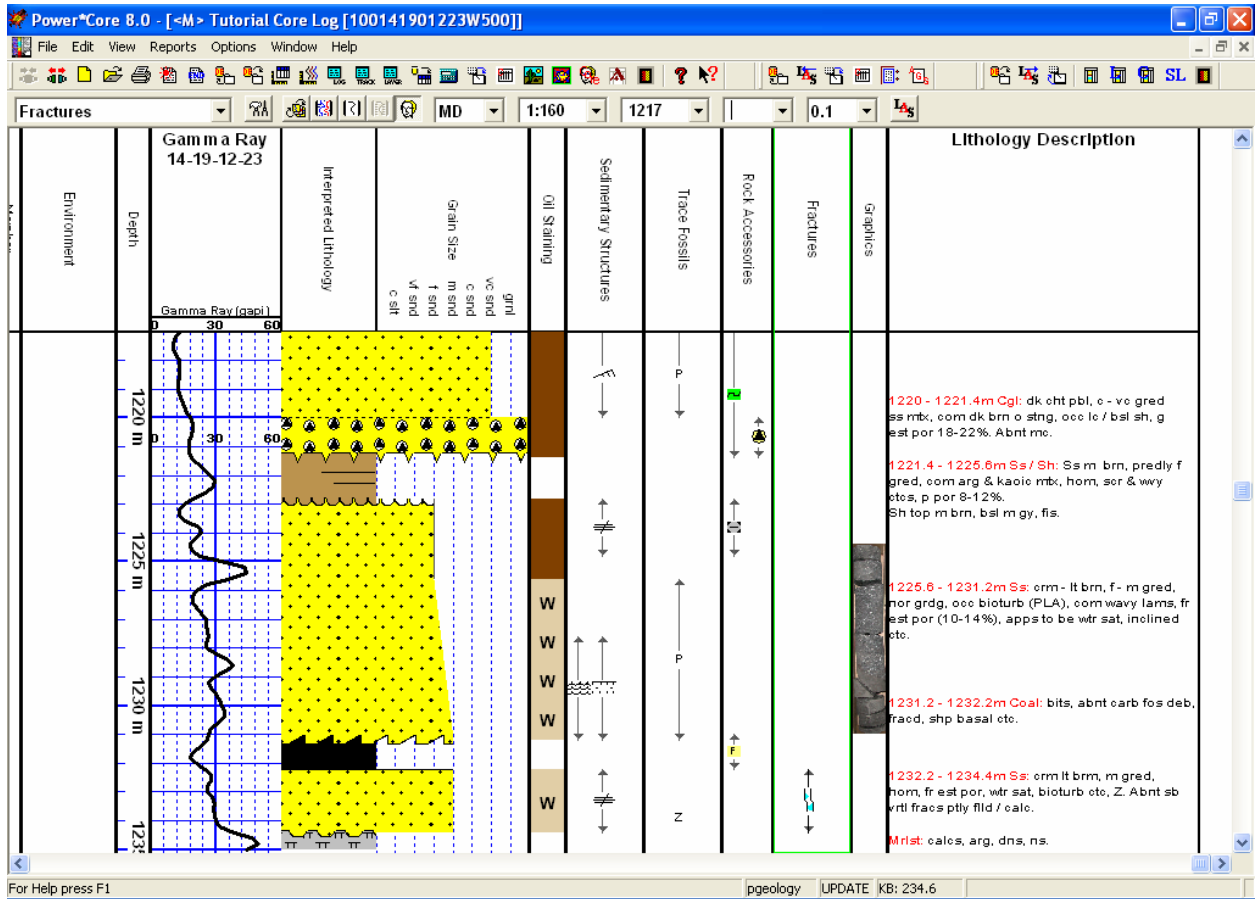
Resize / Move Notes:

There are 2 ways to **resize** the interval.

- A) Click on the **interval** to make it show up in the builder. **Type** in a new **top** or **base depth** and click on the  button.
- B) Hold down your **CTRL Key** on the **keypad** and then **mouse over** the end marking of the interval and your mouse pointer will turn into a  resize cursor. **Click and drag** the ends to a new depth. Release the mouse button first.

The user can **Move** fracture intervals by **clicking and dragging on the interval and moving it to a new location**. If the fracture is a bed restricted then it will not move past bed boundaries and will be truncated if moved up or down through a bed boundary.

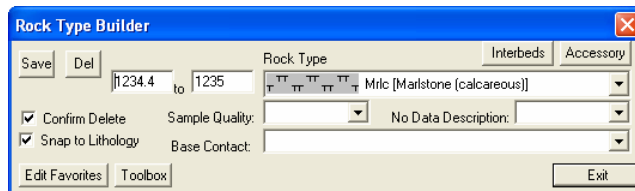
****Your log should now look like the log below.****



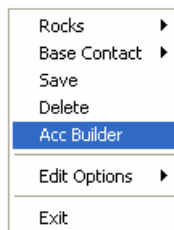
Adding Rock Accessories to the Interpretive Lithology Track

We will take some time to show the user the other way of adding accessories to the log.

- 1.) **Double click** anywhere within the **Interpreted Lithology** track to activate the **Rock Type Builder** window and the Toolbox with your Favorites Rock Type List.

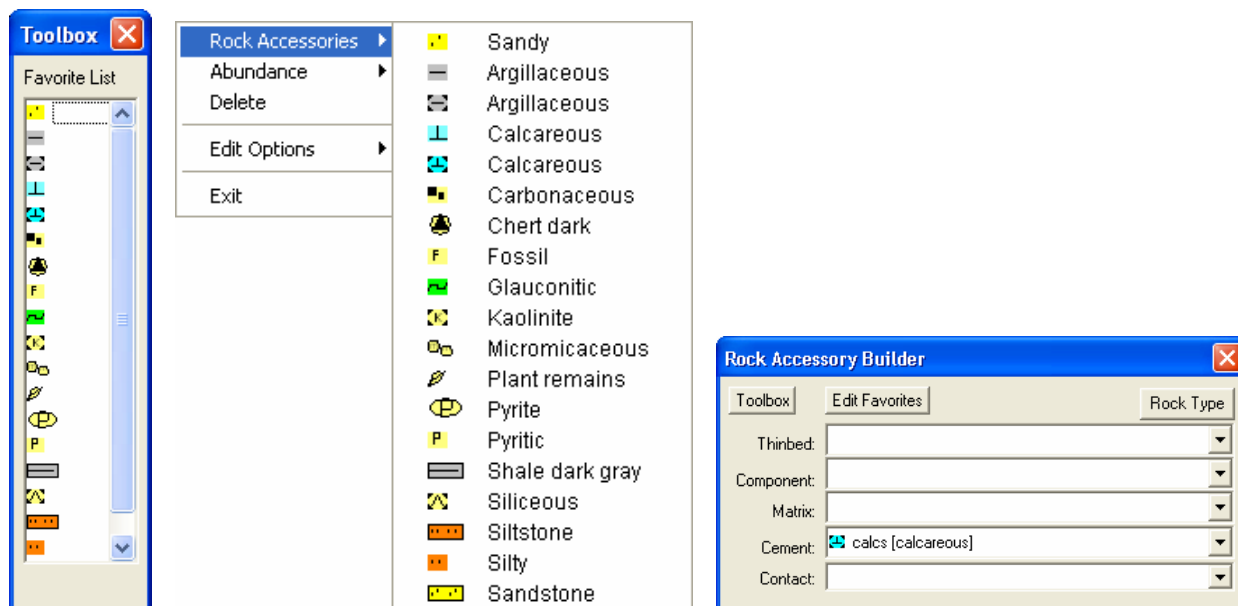


- 2.) Click on the **Accessory** button in the Rock type builder or **right click** on the interpretive lithology track to activate the pop up menu and **click** on the **Rock Builder** selection.



- 3.) This will activate the Accessory builder and its toolbox. There are many ways to **select** an accessory. 1) Favorites toolbox , 2) Favorites **right click** or 3) **Select** it from the Rock Accessory Symbols builder. Examples of each are shown below.

N.B. All clasts, nodules, breccias, stringers and pebbles for every rock type are found in the Thin bed drop list. All grains, fossils and accessories are found in the Components drop list. All pore filling matrix types and Dunham's rock modifiers are found in the Matrix drop list.



Adding a Cement...

- 1.) **Right click** anywhere within the **Interpretive Lithology** track to activate the pop-up menu. **Select calcareous** cement from the Accessories favorites pop-out menu, **OR** **click** on the **Cement drop box** and **select calcareous** **OR** **click** on the **calcareous symbol** in the **Favorites toolbox**. The 3 examples are shown above.
- 2.) **Click** the mouse pointer in the **Interpretive Lithology** track at **1219** and **1218.4m**. The calcareous symbol is place at those depths.
- 3.) **Right click** anywhere within the **Interpretive Lithology** track to activate the pop-up menu. **Select siliceous** cement from the **Accessories favorites** pop-out menu, **OR** **click** on the **Cement drop box** and **select siliceous** **OR** **click** on the **siliceous symbol** in the **Favorites toolbox**.
- 4.) **Click** anywhere within existing **Interpreted Lithology** to insert the selected **Accessory/Accessories**.

Note: To delete an **Accessory** symbol, activate the **Rock Accessory Builder** window, **right click** on the **Accessory** symbol you wish to delete, and then **select Delete** from the pop-up menu.

The user has the ability to **Move** an accessory **by clicking on the accessory symbol and dragging** the accessory to a new location. If done correctly you will see a red square following your mouse pointer.

Adding Formation Tops

- 1) **Click on Formation**, under **Reports**, **OR** the user can double **click** on the Group Formation Member Track and this will activate the **Well Formation**. The user can also utilize this window to input data for an Ages layer / track, a Formation Long Name and a formation short name layers / track. Our log has a formation short name layer in the Depth track. A Formation Evaluation and a Tops report can also be generated from this data.

The screenshot shows the 'Well Formation' dialog box with the following fields filled:

- Buttons: Save, Undo, New, Del, First, Prev, ?, Next, Last
- K.B.: 571.5, Ground: 564.6, Casing Flange: 564, Alignment: right
- Group: Short 'e', Long 'Edmonton'
- Formation: Short 'sh', Long 'Shale'
- Boundary Type: conf [conformable]
- Member: (empty)
- Seq#: (empty), Subsea: -628.50
- Era: (empty), Series: (empty)
- Period: (empty), Stage: (empty)
- Tops: Prognosis: (empty), Sample: MD '1200', TVD '1200', Log: (empty)
- Long Name Display Depth: (empty)

- 2) **Type e** into the **Group Short name** field, **tab**, **type Edmonton** into the **Group long name** field, **tab**, **type sh** into the **Formation Short name** field, **tab** and **type Shale** into the **Formation Long Name** field.
- 3) **Select conformable** from the **Boundary Type** drop box.
- 4) **Type in 1200** in the **Sample Top (MD)** field, **tab** and **type 1200** in the **Sample Top (TVD)** field.
- 5) **Click on the Save button** and then **select Start New Record** from the ensuing **Shortcut Options** window. This will clear the window and allow you to enter a new record.

The screenshot shows the 'Well Formation' dialog box with the following fields filled:

- Buttons: Save, Undo, New, Del, First, Prev, ?, Next, Last
- K.B.: 571.5, Ground: 564.6, Casing Flange: 564, Alignment: right
- Group: Short 'e', Long 'Edmonton'
- Formation: Short 'ss', Long 'Sandstone'
- Boundary Type: ersl sfc [erosional surface]
- Member: Short 'u', Long 'Upper'
- Seq#: (empty), Subsea: -632.50
- Era: (empty), Series: (empty)
- Period: (empty), Stage: (empty)
- Tops: Prognosis: (empty), Sample: MD '1204', TVD '1204', Log: (empty)
- Long Name Display Depth: (empty)

- 6) **Type e** into the **Group Short name** field, **tab**, **type Edmonton** into the **Group long name** field, **tab**, **type ss** into the **Formation Short name** field, **tab**, and **type Sandstone** into the **Formation Long**

Name field, **tab**, type **u** into the **Member Short name** field, **tab**, and type **Upper** into the **Member Long Name** field

- 7) **Select erosional surface** from the **Boundary Type** drop box.
- 8) **Type in 1204** in the **Sample Top (MD)** field, **tab** and type **1204** in the **Sample Top (TVD)** field.
- 9) **Click on the Save button** and then select **Start New Record** from the ensuing **Shortcut Options** window. This will clear the window and allow the user to enter a new record.

The screenshot shows the 'Well Formation' dialog box with the following fields and values:

- Buttons: Save, Undo, New, Del, First, Prev, ?, Next, Last
- K.B.: 571.5
- Ground: 564.6
- Casing Flange: 564
- Alignment: right
- Group Short: e
- Group Long: Edmonton
- Boundary Type: conf [conformable]
- Formation Short: ss
- Formation Long: Sandstone
- Fault Type: (empty)
- Member Short: l
- Member Long: Lower
- Seq#: (empty)
- Subsea: -654.10
- Long Name Display Depth: (empty)
- Era: (empty)
- Series: (empty)
- Period: (empty)
- Stage: (empty)
- Tops: MD, TVD
- Prognosis: (empty)
- Sample: MD=1225.6, TVD=1225.6
- Log: (empty)

- 10) **Type e** into the **Group Short name** field, **tab**, type **Edmonton** into the **Group long name** field, **tab**, type **ss** into the **Formation Short name** field, **tab**, and type **Sandstone** into the **Formation Long Name** field, **tab**, type **l** into the **Member Short name** field, **tab**, and type **Lower** into the **Member Long Name** field
- 11) **Select conformable** from the **Boundary Type** drop box.
- 12) **Type in 1225.6** in the **Sample Top (MD)** field, **tab** and type **1225.6** in the **Sample Top (TVD)** field.
- 13) **Click on the Save button** and then select **Start New Record** from the ensuing **Shortcut Options** window. This will clear the window and allow the user to enter a new record.

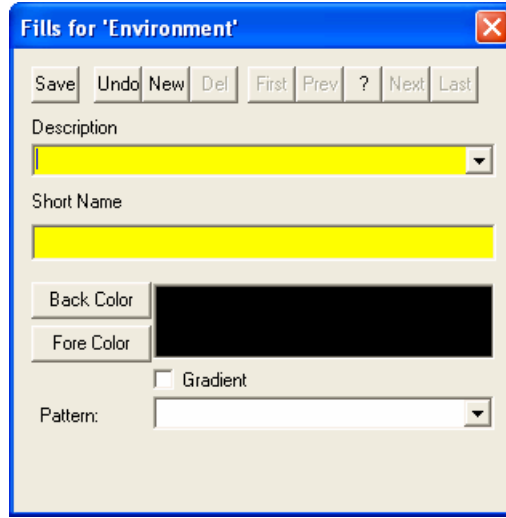
The screenshot shows the 'Well Formation' dialog box with the following fields and values:

- Buttons: Save, Undo, New, Del, First, Prev, ?, Next, Last
- K.B.: 571.5
- Ground: 564.6
- Casing Flange: 564
- Alignment: right
- Group Short: e
- Group Long: Edmonton
- Boundary Type: conf [conformable]
- Formation Short: m
- Formation Long: Marlstone
- Fault Type: (empty)
- Member Short: l
- Member Long: Lower
- Seq#: (empty)
- Subsea: -662.90
- Long Name Display Depth: (empty)
- Era: (empty)
- Series: (empty)
- Period: (empty)
- Stage: (empty)
- Tops: MD, TVD
- Prognosis: (empty)
- Sample: MD=1234.4, TVD=1234.4
- Log: (empty)

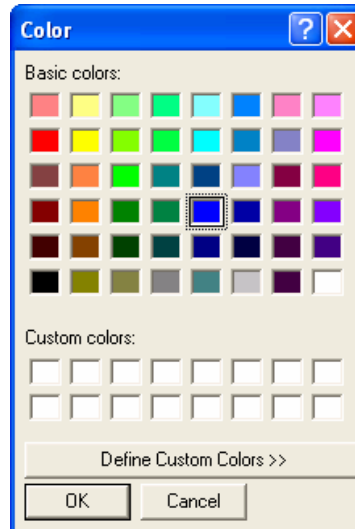
- 14) **Type m** into the **Formation Short name** field, **tab**, and type **Marlstone** into the **Formation Long Name** field.
- 15) **Select conformable** from the **Boundary Type** drop box.
- 16) **Type in 1234.4** in the **Sample Top (MD)** field, **tab** and type **1234.4** in the **Sample Top (TVD)** field.
- 17) **Click on the Save button** and then select **Exit** from the ensuing **Shortcut Options** window. This will close the window and allow you to view your data entries on the log.

Adding Environments to the Environment Track

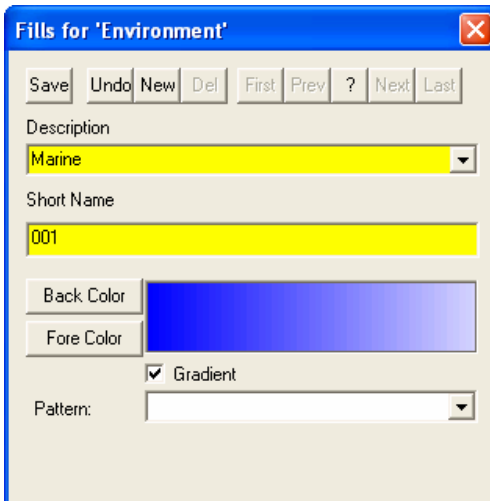
- 1.) **Double click** anywhere within the **Environment** track to activate the **Fills for Environment** window.



- 2.) **Type Marine** into the Description field.
 3.) **Type 001** into the Short name field.
 4.) **Click** on the **Back Color** button and **select a blue color** from the palette and then **click** on the **OK** button.



- 5.) **Click** on the **Fore Color** button and **select a blue color** from the palette and then **click** on the **OK** button.
 6.) **Click** on the **Gradient** **Gradient** to activate a check mark.
 7.) **Click** on the **Save** button and then **select** **Start New Record** from the ensuing **Shortcut Options** window. This will clear the window and allow the user to enter a new record.



Adding more environments to the Environment fill category...

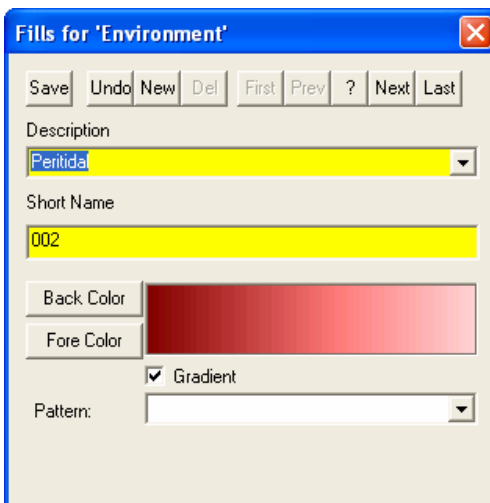
8.) **Type Peritidal** into the Description field.

9.) **Type 002** into the Short name field.

10.) Click on the **Back Color** button and **select a maroon color** from the palette and then **click on the OK** button.

11.) Click on the **Fore Color** button and **select a maroon color** from the palette and then **click on the OK** button.

12.) Click on the **Gradient** Gradient to activate a check mark.



13.) Click on the **Save** button and then **select Start New Record** from the ensuing **Shortcut Options** window. This will clear the window and allow the user to enter a new record.

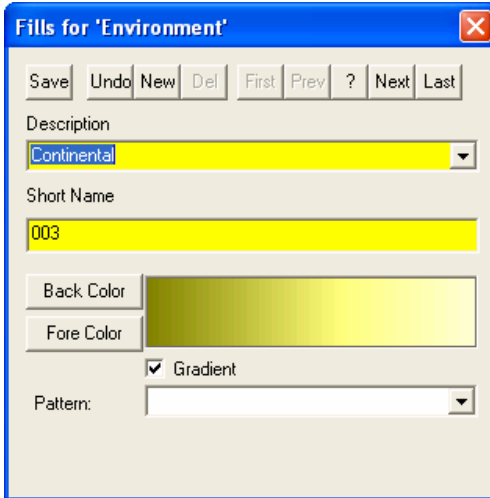
14.) **Type Continetal** into the Description field.

15.) **Type 003** into the Short name field.

16.) Click on the **Back Color** button and **select a brown color** from the palette and then **click on the OK** button.

17.) Click on the **Fore Color** button and **select a brown color** from the palette and then click on the **OK** button.

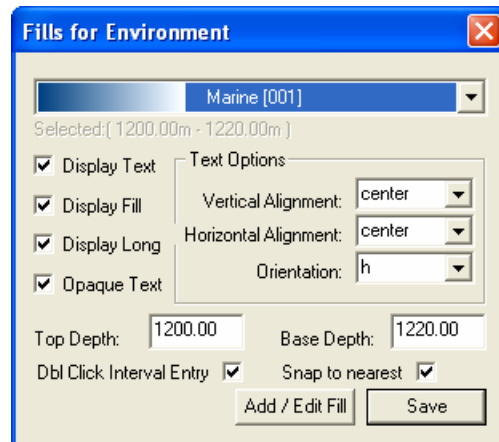
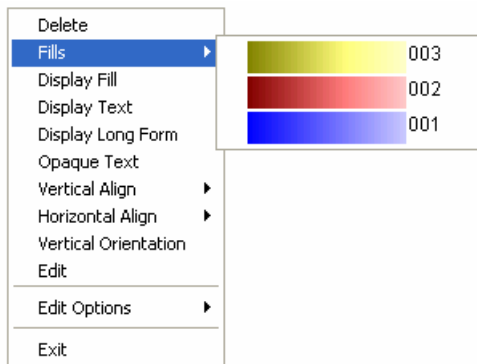
18.) Click on the **Gradient** Gradient to activate a check mark.



19.) Click on the **Save** button and then select **Exit** from the ensuing **Shortcut Options** window. This will clear the window and allow the user to enter a new record.







Drawing Environments onto the Environment Color Fill Track...


- 1.) **Double click** on the **Environment Track** to activate the window.
- 2.) **Right click** in the **Environment track** to activate the pop out window, **select fills** and **click** on the **001 selection**. Or click on the **builder drop box** and **select Marine [001]**.



3.) Define the interval by **clicking and dragging** within the environment track from **1200 to 1220** 1200.00 1220.00. The Marine environment should be displayed in that interval. You may wish to change your screen log scale to 1:240 so you can see larger intervals.


4.) **Right click** on an empty area in the **Environment track** to activate the pop out window, **select fills** and **click** on the **002 selection**. Or click on the **builder drop box** and **select Peritidal [002]**.

- 5.) Define the interval by **clicking and dragging** within the environment track from or close to (if the **Snap to nearest** is activated) **1220 to 1225.6**   . The Peritidal environment should be displayed in that interval.
- 6.) **Right click** on an empty area in the **Environment track** to activate the pop out window, **select fills** and **click** on the **003 selection**. Or **click** on the **builder drop box** and **select Continental [003]**.
- 7.) Define the interval by **clicking and dragging** within the environment track from or close to **1225.6 to 1234.4**   . The Continental environment should be displayed in that interval.
- 8.) **Right click** on an empty area in the **Environment track** to activate the pop out window, **select fills** and **click** on the **001 selection**. Or **click** on the **builder drop box** and **select Marine [001]**.
- 9.) Define the interval by **clicking and dragging** within the environment track from or close to **1234.4 to 1235**   . The Marine environment should be displayed in that interval.

To **resize** an existing fills **hold your Ctrl Key down** on your keypad and **move mouse pointer over the end part of the interval until it turns into a resize cursor**  **and then click and drag** to a new depth. Remember you cannot overwrite existing intervals.

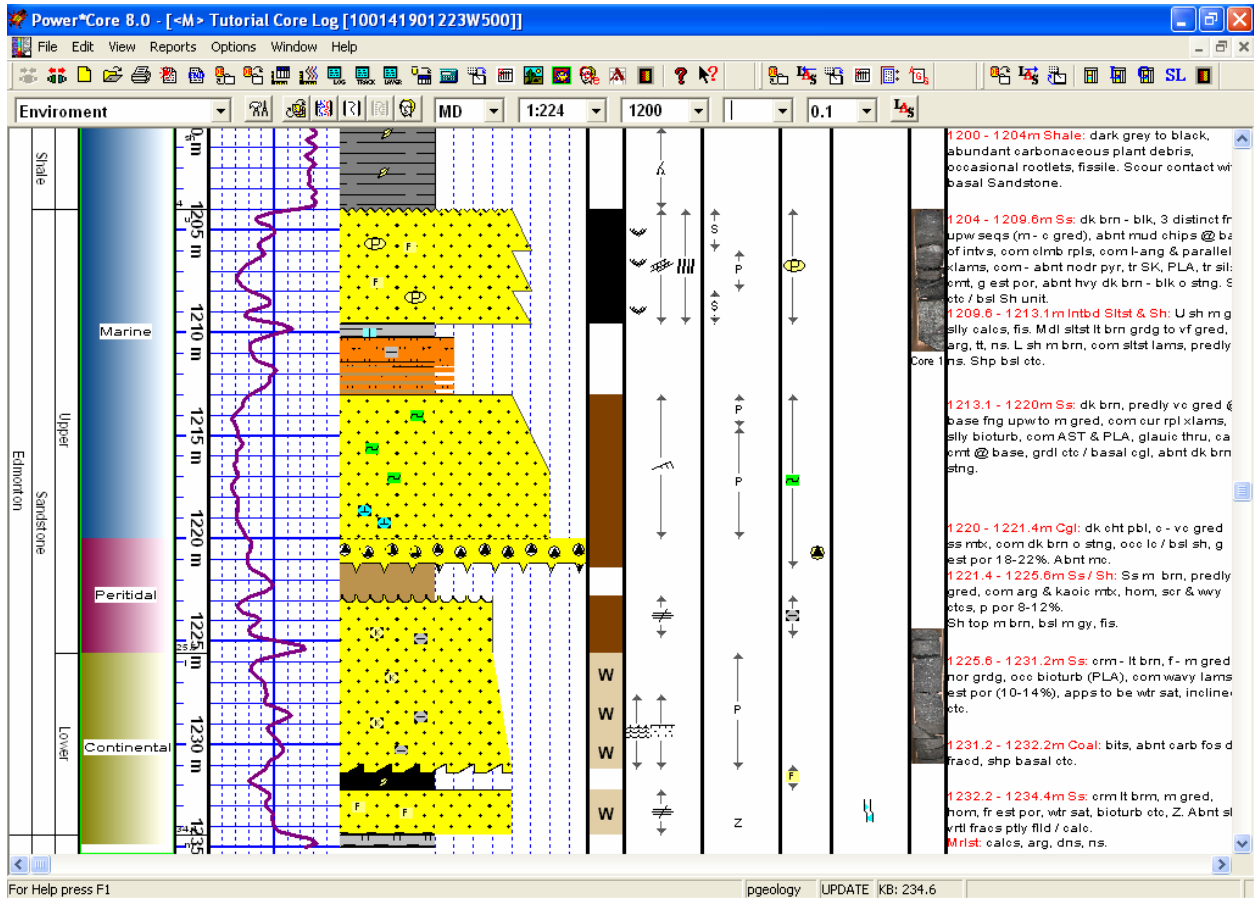
To **delete** an exiting interval **right click on the interval** and **select delete** from the pop out menu.



- 10.) Click on the  close button in the upper right hand corner of the builder. This will close down the Environment builder window.

**** Your log should now look like the log below. ****

Screen capture of the log has been taken @ a screen scale of 1:224 and the track header turned off.



Setting up a Curve Fill layer with its options.

- 1.) To set the Curve Fill Options the user must first make the Curve Fill Layer active. To do so the user must **Click** on the **Gamma Ray Track** containing the Curve Fill layer and then selecting the **Curve Fill** layer from the **Layer Selection List** field at the far **left** of the **Selection Bar**.
- 2.) **Double click** anywhere within the **Curve Fill** or layer to activate the **Curve Fill Options** window. An example is shown on the next page.

- 3.) **Click** on the button. This will activate a list of curves associated with this well.

- 4.) **Click** on the **Gamma Ray** and then **click** on the button or **double click** on the **Gamma Ray Curve**. You will view the curve name below the button.

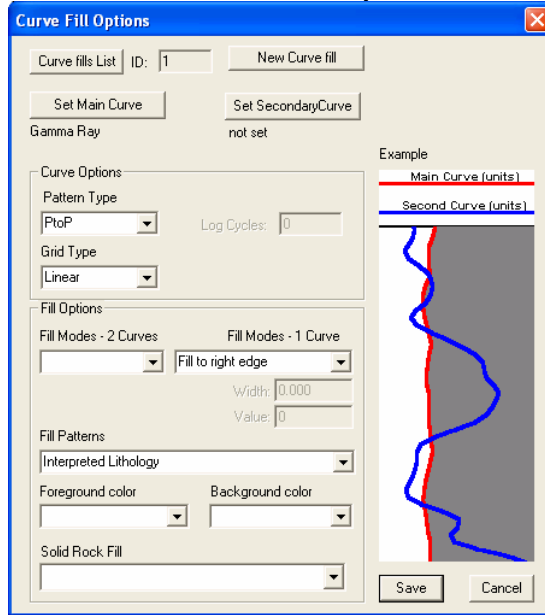
Curve Options Portion of the Window.

- 5.) **Click** on the **Pattern Type** down arrow and **select** the correct **curve pattern** for the main curve. The Gamma Ray Curve is defaulted to PtoP (Point to Point).
- 6.) **Click** on the **Grid Type** down arrow and **select** the correct **curve grid type** for the main curve. The Gamma Ray Curve is defaulted to Linear.

Fill Options 1 (One) Curve Portion of the Window.

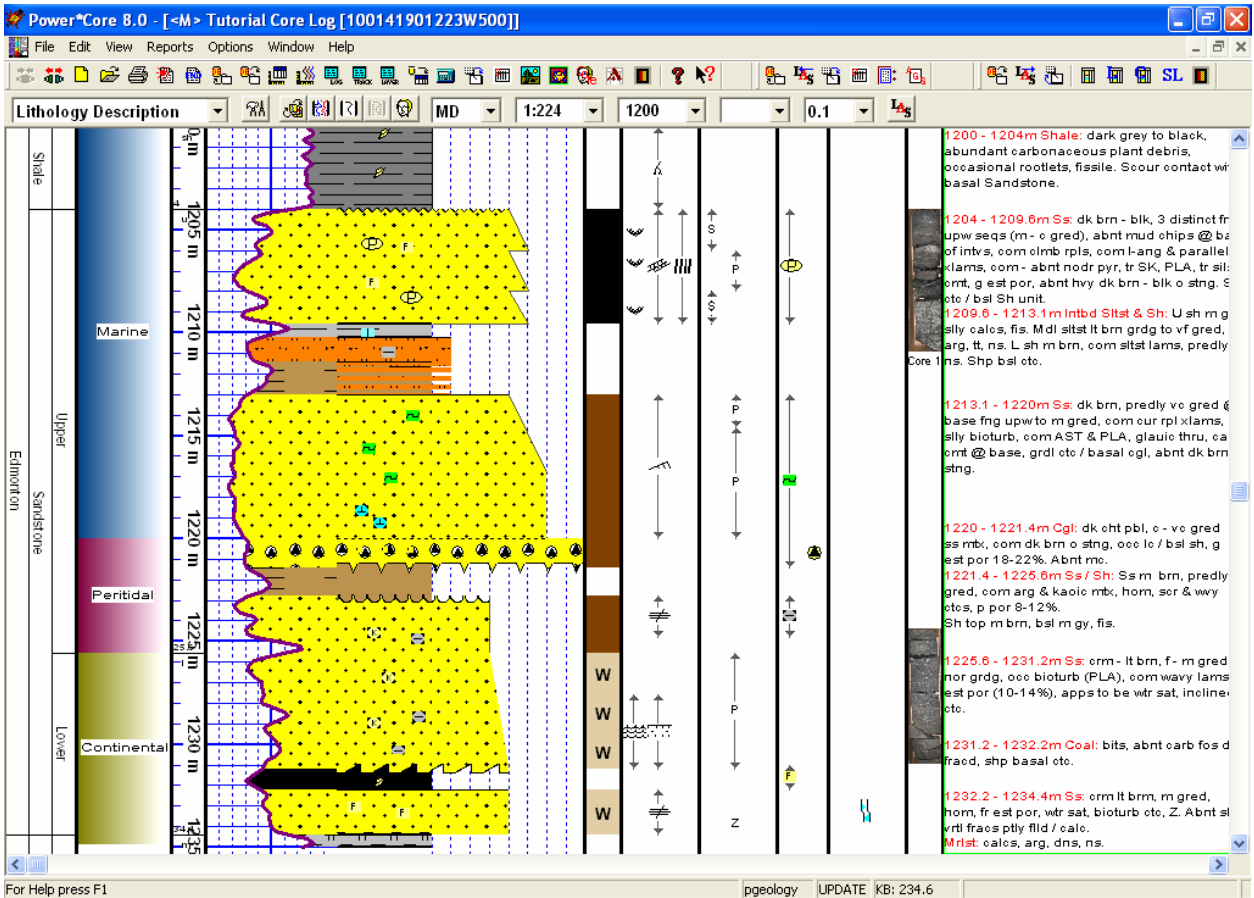
- 7.) **Click** on the **Fill Modes – 1 Curve** down arrow and **select** the **Fill to right edge**.

8.) Click on the **Fill Patterns** down arrow and **select Interpretive Lithology**.



9.) Click on the **Save** button. The Curve Fill Options window will close and the changes you have made will be shown on the layer.




***** Your Log should now look like the picture shown below*****




Adding a Core Log header

This will fill in information for the printing of a Core Log Header / title page instead of a Striplog header / title page. The striplog header / title page is built around our wellsite application where a lot of the information would not be known about a core by itself.

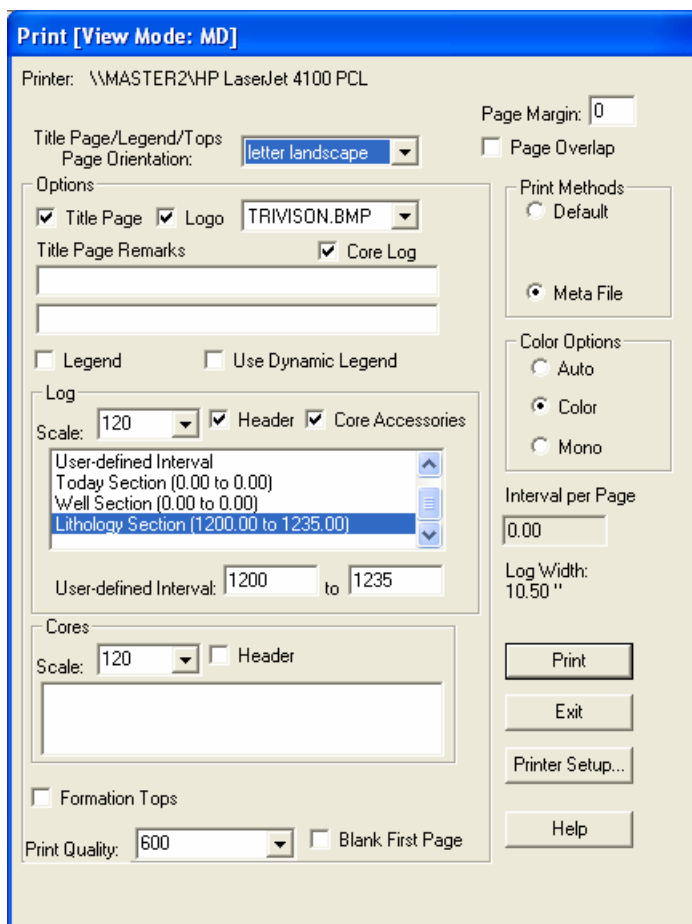
- 1.) **Click** on the **Core header** option under the **Edit** pull down menu. This will activate the Core header window shown below.

- 2.) **Type** in the **Top** and **base** depths (numbers only) as well as any other particulars you may wish to add.
- 3.) You may want to change or add info from the Well Record. **Click** on the  **button** and make changes to the well record and then **click** on the  **button** and then **click** on the **Exit option** form the record saved successfully.
- 4.) **Click** on the  **button**.

Print the Core Log

- 1.) Under the **File** menu, **click** on **Print Log** or **click** on the **Print**  **button** on the **Toolbar** to activate the **Print Log** window.

Note: The Title bar and all depths associated with the Print Log window are defaulted to the Depth View that Power*Core is in at the time of the activation of the Print Log window.



- 2.) **Select the Title page, Logo** (if you have one to use in the logo directory/folder of our application) **and Core log Check boxes** to print out a core log header (which you filled out above).
- 3.) **Select the letter landscape** paper orientation from the **Page Orientation drop box field** and the **Legend**, and **Formation Tops** will automatically conform to the selected orientation.

Note: The letter or legal landscape or portrait settings selected from within the **Print Log** window will **NOT** override the paper orientation settings selected in the printer's **Properties** window. Therefore, you must also modify the paper orientation settings in your printer's **Properties** window to letter or legal landscape.

- 4.) Activate the **Legend** if you wish to have a striplog legend printed out.
- 5.) Activate the **Dynamic Legend** if you wish to have the legend reflect only the symbols printed on the log or core portions of the printed intervals defined in the log and core portions of the print log window. Leave the Dynamic Legend unchecked if you wish to print out the entire list of symbols.

In the Log portion of the Print Log window

- 6.) **Select 1:120** from the **scale drop box** for the log to be printed out at.
- 7.) **Click** to activate the **Header** to print the track headers on the log.
- 8.) **Click** on **Lithology Section** to highlight it in the printing options selection box.

Note: The log itself must be displayed in whatever depth view you wish to print before you activate the print log window. To change the log to the desired format refer to depth view under the view pull down menu.

Page Margin The page margin field is available, primarily, when you are printing to Adobe Acrobat writer. When a numerical value in inches is typed into this field it will initiate a top and left margin for the templates (Title Page, Legend and Formation Tops) as well as a left margin for the main log.

Page Overlap Activate the **Page Overlap** if you are printing on single sheets. This will force the printer to include an additional 1/4 inch of the log at the top and bottom of each page, so that you can cut-and-paste pages manually, if you so desire.

Print Methods...

Default Activating the **Default** radio button forces Power*Log / Curve / Core to use a **raster or bitmap graphic printing method**. This printing method is generally used with Laser printers but not exclusively so.

Meta File Activating the **Meta File** radio button forces Power*Log / Curve / Core to use the **meta file technology printing method**. This printing method was developed for the newer models of printers on the market today as well as using the Adobe Acrobat Distiller or pdf printing technology.

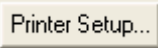
Color Options...

Auto Activating the Auto radio button forces Power*Log / Curve / Core to use the settings from the printer driver to printout the log.


Color Activating the Color radio button forces Power*Log / Curve / Core to override the printer driver settings and consequently Power*Log / Curve / Core assumes that you are using a color printer.

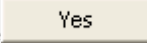
Mono Activating the Mono radio button forces Power*Log / Curve / Core to override the printer driver settings and consequently Power*Log / Curve / Core assumes that you are using a monochrome (black and white) printer.

Interval per page field indicates how many meters of log will fit on a page of selected paper size and orientation selected in the setup as well as what log scale you are printing at. This will help indicate to the user how many pages will be required by the print job.

9.) Click on the  button to activate the **Print Setup** window and confirm that the correct printer settings are in effect.

Note: If you are printing out logs in color, you must activate the **Diffusion** or **Error Diffusion** option normally found under **Graphics** in the **Properties** window for most printers.

10.)When you are ready to print your log, click on the  button.

Note: If you do exit from the **Print Log** window, you will be asked if you wish to save the print settings. If you click on the  button, the program will remember every setting that you made to the **Print Log** window and then will default to those settings the next time you enter the **Print Log** window.

This concludes the Power*Core Tutorial. If you need help with specific functions or operations, please use the Table of Contents in the Power*Log / Core User Manual to find the desired topic or use the Search function built into the On-line Help.