

# Version 12 Imperial Tutorial



The Intelligent Geological Software Solution

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## Introduction

**Power\*Core**<sup>™</sup>(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<sup>™</sup> 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 corelogs.

## A note about navigating through Power\*Core<sup>™</sup> Reports:

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



Selection Bar Using the Metric Style Selection Utilizing a Ratio for Screen Scale

## The Status Bar...

For Help, press F1 paeology UPDATE KB: 567.6

The **Status Bar** displays system status messages and any error message (associated with a field entry), in the far left corner. The KB elevation is displayed in the lower right corner of the **Status Bar**.

## The Import Toolbar

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

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



## The Export Toolbar

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

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



## **RTF Font Toolbar**

Turns the RTF Font Toolbar on and off. This toolbar is dock able and can be moved to different places on the screen. This is used with the New RTF Annotations used on the Log.



## **RTF Line and Boxes Toolbar**

Turns the RTF Line and Boxes Toolbar on and off. This toolbar is dock able and can be moved to different places on the screen. This is used with the New RTF Annotations used on the Log.



Button, Check box and drop box types.

Radio Buttons	
Activated (	) De-Activated
<u>Check Boxes</u> Activated	Drop Box Click Arrow ±
De-Activated	

## The Four (4) Main On-line Help System Categories:

Commands - Descriptions of each menu command within Power\*Log / Core & Curve™.

Toolbar - Shortcuts to common commands are explained.

**Database Table Operations** - Commands or 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 new core log.

## **Connecting to the Database**



1.) **Double click** on the PowerCore V12 **Icon**. Acknowledge the Security Information window by **clicking** on the

**button**. This will initiate the program and activate a **Connect Database** window.

Connect Database									
Databases: PGEOLOGY V12 IMPERIAL (Microsoft Access Dr PGEOLOGY V12 METRIC (Microsoft Access Driv									
	~								
User ID: pgeology	Connect								
Password:	Cancel								

- 2.) Highlight the PGEOLOGY V12 IMPERIAL (Microsoft Access Driver[\*.mbd])) database by clicking on it once.
- 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 **D** New Log button on the **Toolbar** or to **select New** under **File** on the **Selection Bar**. This will open the **New Log** window.

New Log	×
UWI / API:           Well List           Well / Log Name:   Tutorial Core Log	
Log Format SYSTEM Core Log (BR) grid off	
Log Type:	
Lomments:	~
Log Start Depth: 12000 Storage Units: Imperial Create Ca	

- 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 UWI / API: button to activate the UWI / API Format window.

UWI / API Format
Use: API / I _ UWI / API: DLS (Dominion Land Survey System) Survey System Loc. Ex. LSD Sec. Township Range E/W Mer. 0/A Event Sequence 1 0 0 0 0 V _ 0 0 0 0
NTS (National Topographic Series System) Survey System Loc. Ex. 1/4 Unit Block P. Ouad L. Ouad. Sixteenth Event Sequence
API Code / Name [23001201300000
OK Cancel

- 3.) The default or flashing caret is in the API Code / Name field. Type in "23001201300000". The 23 is a State Code, the 001 is a County Code, the 20130 is the Unique Well ID, the 00 is for the sidetrack code, and the last 00 is for the Event Sequence.
- OK. 4.) Click on the button when you have finished entering the UWI.
- 5.) Click on the Log Format... button to activate the Log Format List window.

V SYSTEM Core Log Lithology Restricted Layers [SYSTEM (I)]		Query
V SYSTEM [SYSTEM (I)]	i	Select
V SYSTEM 2 Well Correlational (SYSTEM (II) V SYSTEM 2 Well Correlational (SYSTEM (II)	L	50000
V SYSTEM Composite Geology Log (SYSTEM (I))	1	Clear Fie
V SYSTEM Core Carbonate Lithology Restricted Layers [SYSTEM (I)]		
V SYSTEM Core Carbonate LR Layers Depth Grid On [SYSTEM (I)]		Cance
V SYSTEM Core Carbonate No Lith Restricted Layers [SYSTEM [I]]	-	
V SYSTEM Core Composite Lithology Bestricted Layers (SYSTEM (I))	_	
V SYSTEM Core Composite LR Lavers Depth Grid On (SYSTEM (I))		
V SYSTEM Core Composite No Lith Restricted Layers [SYSTEM [I]]		
V SYSTEM Core Composite No LR Layers Depth Grid On [SYSTEM (I)]	_	
V STSTEM Cold Log Lindogy Resilicited Layers (STSTEM (II)		
V SYSTEM Core Log No Lithology Restricted Layers (SYSTEM (1))		
V SYSTEM Core Log No LR Layers Depth Grid Ón (SYSTEM (I))		
V SYSTEM Geo / Mudlog All Gas [SYSTEM (I)]		
V SYSTEM Geology Log (SYSTEM (I))		
V SYSTEM Horizontal Log PowerLog Vertical Format (SYSTEM (I))		
H SYSTEM HORZ (SYSTEM (I)]		
H SYSTEM HORZ (Desc Track) [SYSTEM (I)]		
H SYSTEM HORZ (Gas Track) [SYSTEM (I)]		

6.) Click on "V SYSTEM Core Log Lithology Restricted Layers [SYSTEM (I)]" to highlight it and then click on Select the

button. You may also double click on "V SYSTEM Core Log (BR) grid off [SYSTEM (I)]"

- 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 12000 in the Log Start Depth field.
- Create 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 category that can utilize existing groups (in your case none exist) or add new ones. This layer allows 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. This is a catch all category that can be used for all sorts of data types.

		For Layer 'Environment'	
		Enter New Group ID	
		Cancel	Select Group
9.) <b>Click</b> on	the Cancel	<b>button</b> . We will add the Enviro	onment Group later on in t



10.) Type 1 in the Choose or Add Graphics Group ID field and click on the group 1 and activate the log.

button. This will add the

0K

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

🚀 Power	*Core 12	- [ <l> Tu</l>	torial	Core Log	[2300120130	0000]]										đΧ
🕎 File E	Edit View	Reports C	Options	Window	Help											- 8 ×
🍜 🏜	0 🖻 🖨	🐮 🔛	<u> </u>		🔍  🗃 🔛	2 🕄	A I	<b>?</b> №?	$\square \square  $	<b>7</b> .   <del>]</del>	) 🍇 🔁 1	<mark>9</mark> 🛲   📑	10, 🛃	∞,∎	8	
Ages			-	RI 😼 🕇	🗿 🔟 🕅 😡	MD	-	1:48	•	-	-	3" 🔻	6	1 <b>43</b> 🖁	] 🖩 🖣 🖬 SL 🔲	
Stage Period Era	Member Formation Group	Environment	Oil Staining	Depth	Interpreted Lithology	vf snd c slt	Grain Size misnd fsnd	grnl vc snd	Sedimentary Structures	Trace Fossils	Rock Accessories	Fractures	Graphics	Bedding Contacts	Lithology Descripti	on 🔺
				12002 12004 12004 12006 12008 12010 12010 12014 12016 12018 12018												
											paeoloay	UPDATE KB				
											pgoology	S PHIL ND				

11.) 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.

		THEY I NEX		age Units: Jumps		iiginai Units:	
API	23001201300000		Surf. Location:	2300 1201 3000	00		
Well Name	Tutorial Core Log		Btm. Location:	2300 1201 3000	00		
Operator:	Anybody Oil and Gas		Licensee:	Anybody Oil and	Gas Pe	ermit # 3425	
Drilling Contractor:	Drill em Up		Pool:	Big	Fie	ld: Bigger	
County:	Lorne		Rig #:	23			
Province/State:	Texas		Beferenc	. Ground	G	round / Colla	. 38
Country:	USA		K	е. R· 56	u r	Casing Flange	26
Surface Coordinate	es			,			,
Latitude 30.161	2		N/S: 400 ft	North of the Sou	ith boundary		
Longitude 97.443	3		E/W: 550 ft	East of the Wes	t boundary		
∟ ⊢Intermediate Casin	g Point Coordinates						
Latitude			N/S:				
Longitude			E/W:				
,	•		,				
Bottom hole Coord	inates		N/S:				
Latitude			E A16				
LUTM Surface Con			L/W. J				
Newbine 334989			Easting 6211	61			
Northing: 1004000			E dourig. j				
Hole Direction: Ve	ertical 👻	Eaulted	Deviated	Hole ID: 2	300 1201 3000		
Depths				_	Date Ti	me V	Vork Schedule
Drillers T.D. Driller	rs T.D. Drillers T.D. Drillers	T.D. Loggers T.D	. Loggers T.D.	Spud:	Jan 1, 2013 12:	30	Curves
(Tally) MD (Tally	13002	12999		T.D.:	Feb 21, 2013 1	4:00	Mud Types
KB to Ground Cul	Fill	Plugback	Sidetrack	Rig Release:	Feb 26, 2013 0	8:00	Dir. Surveys
15 1				Well Status:	Potential Austin		Det. Lith.
Water Depth	Reference:	Water Depth:			Chaulk produce	ar 🔽 🗌	Abstract

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.

13.) 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 System Options under the Options menu selection.

## **General Tab**

System Options					×
General Fonts Display	Favorites				
Home Directory: C <sup>.</sup> YPo Date Format	verSuite_Viewer, Version Compatibility	V12\ Data Buffer Lookahead	Show All Wells at Startup		
				OK Cance	:

Home Directory - This is the directory on your hard drive where **Power\*Log**, **Power\*Core and Power\*Curve** is being executed. The user will not see any symbols on their log or print out any of our reports it you have the wrong home directory.

Show All Wells at Startup This check box when *cartivated will populate the Open Log window with all the wells in the database. If it is unchecked it may help our corporate users and the time it take to retrieve thousands of wells from the database and to populate the Open Log window with that information. If this check box is deactivated and* 

you wish to see all your wells then simply **click** on the **Clear Query button** in the Open Log window to see all their wells if this option is deactivated.

Date Format	
MMM DD, YYYY	-
MM/DD/YYYY	
MM-DD-YYYY	
MMM DD, YYYY	
YYYY/MM/DD	
YYYY-MM-DD	

**Date Format** - From this drop box, you can select the date format. This selection determines how every date in **Power\*Log / Core & Curve** will be entered and displayed. If you import a log with different date formats, **Power\*Log / Core & Curve** will change the dates to comply with the format you've chosen here. The user can change this at any time and all the Date formats will be changed in the database.

**Version Compatibility -** Enables the user to achieve compatibility for Annotations in the older Versions of Power\*Suite (V1.81 and before) and the Annotations in the newer Versions of Power\*Suite (V1.9 and later).

**Data Buffer Lookahead -** The number placed in this field determines how far ahead and behind the current top depth will be stored in the computers buffer. The larger the look ahead number, the longer it takes for Power\*Log / Core & Curve to refresh the screen when you exceed the look ahead value. However, until you meet or exceed the look ahead value, scrolling will be much faster, because the database is not yet being accessed.

## Fonts Tab

This tab allows the user to set up most of the fonts used in Power\*Log, Core and Curve. You can set it up to be used on the current log as well as using the fonts as your defaults when you are making new logs.

Sys	tem Options					
G	eneral Fonts Display Fav	orites				
	Fonts					
	T OTR3					
	Annotation Font		Track Header Font		Casing String Font	
	Aaebucudee	Set	Aabbucudee	Set	Aabbucubdee	Set
	Survey Font		Layer Header Font		Date Font	
	AaBbCcDdEe	Set	AaBbCcDdEe	Set	AaBbCcDdEe	Set
	Bit Record Font		Formation Top Font		Core Sample Code Fo	ont
	AaBbCcDdEe	Set	AaBbCcDdEe	Set	AaBbCcDdEe	Set
	Generic Category Font		Offscale Font		Sidewall Core Font	
	AaBbCcDdEe	Set	AaBbCcDdEe	Set	AaBbCcDdEe	Set
	Dopth Fort		Core Rey Feet		MDT Foot	
	AaBbCcDdEe	I	AaBbCcDdEe		AaBbCcDdEe	
		Set		Set		Set
	Depth Orientation: 💿 Ver	t O Hora	z Show Depth Units	Set As Defa	ult Fonts: 🔽 Apply t	o Current Log
				00(110 0 010		
_						
					OK	Cancel

**Annotation Font** - Allows you to determine the default font style, type, color and size of your annotations on your log, Also this is the default when you use any of the Sample Description Transfer options.

**Survey Font -** Allows you to determine the font style, type, color and size of your survey data associated with the Survey Layer on your log.

**Bit Record Font** - Allows you to determine the font style, type, color and size of your bit record data associated with the Bit Record Layer on your log.

**Generic Category Font -** Allows you to determine the font style, type, color and size of your Long or Short Name display option in all the Generic Category Layers displayed on your log.

**Depth Font** - This allows you to determine the font style, type, color and size of the depth markers in the **Depth** track of the log.

Depth Orientation: C Vert. • Horz - These radio buttons allows the user to change the orientation of the Depth Font on the Layer. Beware you may have to change the Track Width to accommodate the Font size and orientation. Refer to the Log Configuration Builder to do this.

**Show Depth Units** This check box **when activated will display the depth units with the depth on the Depth Layer.** ie. 1000 ft or 1000 m vs. 1000

**Track Header Font** - Allows you to determine the font style, type, color and size of your Track Headers on your log. All track headers use the same font across the entire log.

**Layer Header Font -** Allows you to determine the font style, type, color and size of your Layer Headers on your log. All Layer headers use the same font across the entire log.

**Formation Tops Font -** Allows you to determine the font style, type, color and size of your Formation Tops data associated with the Formation Tops Long and Expanded Layers on your log.

0K

**Offscale Font -** Allows you to determine the font style, type, color and size of your curve values displayed when the curve pegs off scale.

**Core Box Font -** Allows you to determine the font style, type, color and size of your Core Box data entered in the Core Box layer.

**Casing String Font -** Allows you to determine the font style, type, color and size of your Casing string data displayed on the Casing String layer. This data is entered through the Casing String Report.

Date Font - Allows you to determine the font style, type, color and size of your Date data entered in the Date layer.

**Core Sample Code Font -** Allows you to determine the font style, type, color and size of your Core Plug data entered through the Core Plug Report. This font is displayed on the Core Sample Code layer.

**Sidewall Core Font -** Allows you to determine the font style, type, color and size of your Sidewall Run and Sample Number data entered through the Sidewall Core Report. This font is displayed on the Sidewall Core layer.

**MDT Font -** Allows you to determine the font style, type, color and size of your MDT Run and Test Number data entered through the MDT Report. This font is displayed on the MDT layer.

Set As Default Fonts This check box when activated will make the font setting in this window your defaults for any new log created regardless on the Fonts stored in the template.

How to Set your Fonts.

- 1. Click on System Options selection under the Options menu selection To activate the System Options window.
- 2. Then **click** on the **Font Tab** to activate the Tab.
- 3. Click on the **Set** button beside the Font option you wish to change and this will activate the Font Window.



- Select form the Font, Font Style, Size Effects and Color. When you are finished click on the button
- 5. Repeat steps 2-4 for all Font types.
- 6. Click on the Apply to Current Log button.
- 7. If you want to set these as your default Font settings click on the Vertice Set As Default Fonts check box.
- 8. Click on the **OK** button in the Systems Options Tab dialogue window.

## **Display Tab**

System Options
General Fonte Display Favoritee
Symbology
Transparent     Libologu Profile
✓ Use Global Symbols Use Metric Style Scales ✓
<ul> <li>☐ Interbed Line Display Type</li> <li>✓ Curve Backup Fill</li> </ul>
Grain Size Scale: Wentworth Verbal Display: (* (mm) Display: C Hard Edges
Fill Pattern
Pattern Color:
Carbonate Textures Fill Pattern Pattern Color:
Hard Edges C Soft Edges
Interpreted Lithology Layer Show Bedding Contacts: 🔽 Show Accessories: 🔽
Monitor Uther Height Width Directional Survey display: Azimuth g inches 12 inches IVD
I Display SSL
🔽 Sidewall Core Run and Core No.
OK Cancel

Arrowed Subintervals - This check box vehicle when activated will indicate the top and bottom of your subintervals (portion of an interval) with an arrow rather than a set of symbols. An example is shown below.



**Transparent** - This check box  $\checkmark$  when activated, this function makes the background of the accessory symbols transparent, so that the bed in the background shows through. If deactivated, a white background surrounds the accessory symbols in order to separate them more from the beds.

**Use Global Symbols –** With the ability to edit existing metafiles the user may have imported a well that has used metafiles or symbols that have been modified to look differently than the one existing within your system symbols. If

you wish to use your symbol set instead of the revised imported ones you can select this check box 🗹 to make that change.

**Interbed Line Display Type -** This check box *k* when activated will display the interbed data with a line display splitting the two lithology types or when unchecked will display the lithology in an interbed fashion as displayed below.



Curve Backup fill – This check box 🗹 when activated will show a sideways hatching fill pattern when a curve goes off scale or in the backup mode. If unchecked there will be no hatching pattern when the curve goes off scale.

Frequency @ 5" - This drop box determines how often symbols are drawn on a Lithology Layer, with the scale of 5"=100ft. For example: 1 symbol every 10 feet at 5", 2 symbols every 10 feet at 10", 3 symbols every 10 feet at 20", and so on. These frequencies are only in effect if you utilize the entire interval in Oil Shows, Rounding, Sorting, Framework, or designated an interval in Sedimentary Structures, Traces Fossils and Rock Accessories.

Lithology Profile - This check box 🗹 when activated will fill in the Carbonate Texture and Grain Size layers with the interpretive lithology. It will draw the lithology to the maximum size filled in over the interval.

Note: The user may wish to turn off the track borders when this option is selected. You will see an example of this shown below.

Use Metric Style Scales: This option allows the Imperial Users to utilize a ratio 1:240 or 1:600 rather than 2" or 5" which would be standard selections in the United States.





Grain Size Scale List box - You may choose between Wentworth, Canstrat or Amstrat scales, when using the Grain Size Builder. The Wentworth Grain size only allows full grain size while Canstrat / Amstrat allow half grain sizes when drafting in the Grain size and matrix lavers.

Verbal Display: 📀 This 💽 radio button will display the Grain Size Track header with the equivalent verbal grain sizes such as such as C slt, VF snd, F snd, M snd, C snd etc.



(mm) Display: C This 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. as shown above.

C Hard Edges This 💽 radio button will display the grain size with strait edges and right angles between the grain sizes. The illustration below is shown with Lithology Profile activated.





Hard Edges

Soft Edges This I radio button will display the grain size with curved edges and rounded angles between the grain sizes.

Soft Edges

Grain Size Fill Pattern Upward hatch (left to right) at 45 degrees

This drop box allows the user to select a hatching pattern when using the Grain Size Layer with the Lithology Profile not activate.

edges

Grain Size Pattern Color: This color selector allows the user to pick the line color (foreground) when the fill pattern option is used. The background color is found in the Layer configuration for the Grain Size.

Qrain Size	Grain Sz
c and c and c and	fait call fand cand cand
Grain Size No Pattern Hard edges	Grain Size Pattern Soft

Carbonate Texture Fill Pattern Upward hatch (left to right) at 45 degrees This drop box allows the user to select a hatching pattern when using the Carbonate Texture Layer with the Lithology Profile not activate.

Carbonate Texture Pattern Color: This color selector allows the user to pick the line color (foreground) when the fill pattern option is used. The background color is found in the Layer configuration for the Carbonate Texture Layer.

Carbonate Textures Hard Edges This radio button will display the grain size with strait edges and right angles between the Carbonate Textures. The illustration below is shown with Lithology Profile activated.

Carbonate Textures Soft Edges This radio button will display the grain size with curved edges and rounded angles between the Carbonate Textures.

Interpreted Lithology Layer - Show Bedding Contacts: -When this check box is activated the bedding contacts (lines) between the drawn lithology types in the Interpretive Lithology Layer will be shown.

Interpreted Lithology Layer-Show Accessories: V When this check box V is activated it will turn on the accessories in the Interpretive Lithology Layer.

**Monitor Height -** This option allows you to scale your monitor for Power\*Log / Core so you may correlate on-screen wells with hard copy logs that you may have. It is recommended that you take an opportunity to measure the <u>vertical</u> viewing area of your monitor in inches and then insert that value in the **Monitor Height** field. Be aware, however, that if you adjust the screen height knob on your monitor, this will affect the monitor height setting.

**Monitor Width -** This option allows you to scale your monitor for Power\*Curve so you may correlate on-screen wells with hard copy logs that you may have. It is recommended that you take an opportunity to measure the <u>horizontal</u> viewing area of your monitor in inches and then insert that value in the **Monitor Width** field. Be aware, however, that if you adjust the screen width knob on your monitor, this will affect the monitor width setting.

Note: You must restart Power\*Log / Core & Curve for the Monitor Width / Height changes to take effect.

Directional Survey display	: Azimuth
	Azimuth
	Quadrant

This drop box option will display your directional surveys on your log in either Quadrant format N 62  $^{\rm o}$  W) or Azimuth format (AZ 298  $^{\rm o})$ 

Display TVD check box 🗹 when activated will display the survey with TVD values

Display SSL check box 🗹 when activated will display the survey with SSL values

Sidewall Core Run and Core No. This check box v when activated will display the Sidewall Core Run & Core numbers above the core triangle indicator on the Sidewall Core layer.

#### Favorites Tab

This tab allows the user to define their System favorites for all the data categories that support these choices. This tab dialogue also allows the user to access the % Lithology Sort order for the % Lithology Track.

stem Options				
General   Fonts   Display	Favorites			
Rock Favorites	% Lithology Sort Order	Fractures Favorites		
Acc Favorites	Sedimentary Favorites	Trace Fossil Favorites		
Diagenesis Favorites	Generic Sym. Favorites			

**Rock Favorites** - The **Bock Favorites** button when activated allows the user to determine the number of the activation of the Rock Type Builder window in the Interpreted and Detailed Lithology tracks.

- 1.) Click on the **Rock Favorites** button in the System Options window.
- 2.) Click on the Clear All 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.

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] to a maximum of twenry

4.) Click on the

button to return to the System Options window.

Accessory Favorites - Allows the user to determine their thirty (30) 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.

- 1.) **Click** on the Acc Favorites button in the System Options window.
- 2.) Click on the Clear All 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.

0K

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.
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] calcs [calcareous] foss [fossiliferous] glauic [glauconitic] pl rmns [plant remains] pyric [pyritic] micmica [micromicaceous] slty [silty]
arg [argillaceous] kao [kaolinite] Cement calcs [calcareous] sils [siliceous] up to a maximum of 30
4.) <b>Click</b> on the <b>button</b> to return to the System Options window.
<ul> <li>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</li> <li>1.) Click on the Trace Fossil Favorites button in the System Options window.</li> <li>2.) Click on the Clear All button in the Trace Fossil Favorites list window to prepare it for the selection of your Favorites.</li> <li>3.) Select the following Trace Fossils from the window.</li> </ul>
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.
4.) Click on the UK 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 System Options window.
2.) Click on the <b>Liear All</b> 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

Lar	massive [ma normgrad [m ninations / Cross clmbrip [ cli cppxlam[cu wavylam[wa	massive [massive / homogenous bedding] normgrad [normal graded bedding] lations / Cross laminations clmbrip [ climbing ripple cross laminations] cppxlam[current ripple cross laminations] wavylam[wavy laminations]		
0	mudchips [r root [roots /	nud chips] root trace]		
4.) Click on the	button to return	to the System Options window	<i>ı</i> .	
Fractures Favorites - Allows : m	the user to determi enu as well as a <b>Fr</b>	ne their favorite <b>Fractures</b> and ractures Toolbox in the <b>Fract</b>	d then disp <b>ures</b> track	blays them in a pop-up
<b>Diagenesis Favorites</b> - Allows m	s the user to detern enu as well as a <b>Di</b>	nine their favorite <b>Diagenesis</b> agenesis Toolbox in the Diag	and then o genesis tra	displays them in a pop-up ack.
5.) Click on the	<b>button</b> to retu	urn to the Main Power*Core	e window.	
The Log Configuratio	n Builder win	dow		
• This is the heart of the Log	g/Track/Layer confi	gurations and controls the way	y your well	's information is displayed
<ul> <li>On the log.</li> <li>The well may have a lot of</li> </ul>	f information stored	l in the database, but that infor	rmation ca	nnot be shown graphically
on the log until the necessary layers are built to illustrate that information.				
lick 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:				
-				
Active Log				
	Log SYSTEM 💌	Log: Tutorial Core Log	•	
	Tracks	Cog coning.     (     Tracks	Track Config.	
	Ages Annotations	Add All >>> Y 0.60 Ages		
	Annotation Bedding Contacts	Show All Y 0.60 Formation Y 0.60 Environment		
	Bioturbation Bit Record	Hide All Y 0.60 Depth		
	Carbonate Texture Casing	Y 0.80 Interpreted Lithology Y 1.40 Grain Size	=	
	Core Core Box Data	Add >>> Y 0.63 Sedimentary Structures Y 0.63 Trace Fossils		
	Core Density Core Permeability	Delete Y 0.63 Hock Accessories Y 0.64 Fractures		
	📔 Core Porositu 🍈 🔛	Y U.4U Photos		

## Fundamentals of the Log Configuration Builder Window

Layers

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

The Available Logs section or <u>left</u> 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.

Show/Hide

Move

Exit

Track Width: 0.6

(23001201300000)

C Layers

Ages

Log Width: 10.5

Laver Config.

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.

SYSTEM Log... • The user can click on the

**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 Lavers radio button 🕐 Lavers, on the left side of the window, is a list of the lavers 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\*Core** window. The name of the log is viewed in the Log field. In

this case, it will be "Tutorial Core Log." Below the Tracks radio button Fracks, 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 C 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.
- Delete 2.) Click on the button. This action will prompt you with a system message, "Do you want to delete

Yes the selected track in your log?" Click on the 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 Log CVCTEM

click on the	<b>button</b> . This will activate the Available Logs wir	idow.
	Log Format List	

/ SYSTEM Core Composite No Lith Restricted Layers [SYSTEM [I]]	Query
/ SYSTEM [SYSTEM [I]]	Select
V STSTEM 2 Well Correlational (SYSTEM (I))	
V SYSTEM Composite Geology Log [SYSTEM (I)]	Clear Field
/ SYSTEM Core Carbonate Lithology Restricted Layers [SYSTEM [I]]	
V SYSTEM Core Carbonate LR Layers Depth Grid On [SYSTEM [I]]	Cancel
/ SYSTEM Core Carbonate No Litri nestricted Layers [STSTEM [1]]	•
<ul> <li>SYSTEM Core Composite Lithology Restricted Layers [SYSTEM [I]]</li> </ul>	
/ SYSTEM Core Composite LR Layers Depth Grid On [SYSTEM []]	
/ SYSTEM Core Composite No Lith Restricted Layers [SYSTEM [I]]	
/ STSTEM Core Longosite No Ln Layers Depth Grid On (STSTEM (I))	
V SYSTEM Core Log LR Lavers Depth Grid On (SYSTEM (I))	
V SYSTEM Core Log No Lithology Restricted Layers [SYSTEM (I)]	
/ SYSTEM Core Log No LR Layers Depth Grid On [SYSTEM (I)]	
/ SYSTEM Geo / Mudlog All Gas (SYSTEM (I)) / SYSTEM Geo / Mudlog Some Gases (SYSTEM (I))	
/ SYSTEM Geology Log (SYSTEM (1))	
V SYSTEM Horizontal Log PowerLog Vertical Format [SYSTEM (I)]	
H SYSTEM HORZ [SYSTEM (I)]	
HI SYSTEM HURZ [Desc Track] [SYSTEM []] HI SYSTEM HORZ (Case Track) [SYSTEM []]	
T STSLEM DUDZ UJAS UACKUSTSLEM UU	

2.) Double Click on the V SYSTEM Core Composite No Lith Restricted Layers [SYSTEM (I)] 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.

- 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 **Yes 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.

Get Name	
New Track 1	Name: Gamma Ray <mark>- SP</mark>
OK	Cancel

## 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
   Layers is <u>automatically</u> activated by highlighting a given layer.
- 3.) Click on the **Delete** button. This action will prompt you with a system message, "*Do you want to delete*

the selected layer in your log?" Click on the <u>Yes</u> 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 **Track Config. button**. This will activate the Track Configuration window for the Gamma Ray Track.

Track Configuration	×
Save Undo New Del First Prev ? Next Last	
Name: Gamma Ray Sequence: 5 Width: 1.4	
Foreground Color: Depth Offset:	
Current Layer Gamma Ray Remarks:	
Heading: Gamma Ray	
23-001-20130	
v Hight / top	

- 3.) In the Heading Field **type Gamma Ray** to replace the GR SP. In the second heading field, **type** in the location, "23-001-20130". 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 **Save** button. This action will prompt you with a system message, "*Record Saved successfully. Do you wish to exit?*" Click on the **Yes** button.

Configuring the Interpretive Lithology track...

- On the right side of the Log Configuration Builder window, click on the Interpretive Lithology track to
- 2.) On the **right** side of the **Log Configuration Builder** window, **click** on the **Track Config. 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 **Save** button. This action will prompt you with a system message, "*Record Saved successfully.*

Do you	wish to exit?"	Click on the	Tes	button.
--------	----------------	--------------	-----	---------

## Turning off a track...

highlight it.

1.) Scroll down the tracks list, on the **right** side of the **Log Configuration Builder** window, and **click** on the **Bedding Contacts** track.

Show/Hide

Click on the button to turn the "Y"(yes), to the left of the track name, to "N"(no), indicating that the track will <u>not</u> 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 11.35" to 10.85" 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 2.27 inches to a new width of **2.22** 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.) Click on the Rock Accessories track. Double click in the Track Width field and change the track width from 0.63 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 0.6 inches to a new width of .3 inches.
- 6.) Click on the Depth track. Double click in the Track Width field and change the track width from 0.3 inches to a new width of 0.56 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 <u>Move</u> button and it will change to <u>Move Start</u> button. Then, click on the Sedimentary Structures track. The Oil Staining track will then be placed <u>above</u> the Sedimentary Structures track (to the left of the Sedimentary Structures track on the log).

#### Adding and deleting a layer...

We will be adding a non-bed restricted (NBR) layer to our log to show you the difference between a bed restricted (BR) layer and NBR layer.

1.) On the right 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.

- 2.) On the right side of the Log configuration window, **click** on the **Rock Accessories** Layer. The layer will be highlighted and the Layer radio button **Clayers** will be activated.
- 3.) Click on the <u>Delete</u> 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 click on the Rock Accessories Track. The track will be highlighted and the Tracks radio button
- 5.) On the left side of the Log configuration window **click** on the **Rock Accessories Layer**. The layer will be highlighted and the Layers radio button Tracks 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 **Yes 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 **DK 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 as indicated with a (BR Label)). The layer will be highlighted and the Layers radio button C Layers will be activated.
- 11.) **Click** on the **Delete 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 Yes

**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 **Clayers** 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 **Ves button.** This will activate a Get Nan

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 **DK button** and the layer will be added into the Environment Track to the left side.



- 17.) **Click** on the **Exit 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.) **Type Environment** in the **Enter New Group ID field** and **click** on the **DK button**. This will add the Environment group and activate another window named Graphics group'.

For Layer 'Environment'	
Enter New Group ID	
Environment	
	Select Group
Cancel	ОК

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

Add Curve	
UWI / API: 100141901223W500	
Curve Heading	
Name: Gamma Ray	Curve Units: gapi 💌
Depth Units: 🔳 💌	Null Value: -1.00000
Curve Scale	
Use 0 to 0 for the whole k Interval: 0.00 to 0.00	og) (Left / Bottom) (Right / Top) Scale: 0.00000 to 150.00000
Backup Scale: straight shift 💌	Grid Type: Linear 💌
	OK Cancel

- 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 **DK button** to add the curve layer to the Gamma Ray Track.

## **Changing the Depth Font**

- 1. Click on the System Options, under Options on the Power\*Core<sup>™</sup> Menu Bar to open the System Options window.
- 2. Click on the Fonts Tab to activate that page of the System Options window.

System Options			System Options			
General Fonts Display Fav	vorites		General Fonts Display Far	vorites		
Fonts			Fonts			
Annotation Font	Track Header Font	Casing String Font	Annotation Font	Track Header Font	Casing String Font	
ABDCIDGE8	Set ABBCCDdEe	Set Set	Nabucibule	Set ABDCCDUEe	Set	Set
Survey Font	Layer Header Font	Date Font	Survey Font	Layer Header Font	Date Font	
AaBbCcDdEe	Set AaBbCcDdEe	Set AaBbCcDdEe Set	AaBbCcDdEe	Set AaBbCcDdEe	Set AaBbCcDdEe	Set
Bit Record Font	Formation Top Font	Core Sample Code Font	Bit Record Font	Formation Top Font	Core Sample Code Font	
AaBbCcDdEe	Set AaBbCcDdEe	Set AaBbCcDdEe Set	AaBbCcDdEe	Set AaBbCcDdEe	Set	Set
Generic Category Font	Offscale Font	Sidewall Core Font	Generic Category Font	Offscale Font	Sidewall Core Font	
AaBbCcDdEe	Set AaBbCcDdEe	Set AaBbCcDdEe Set	AaBbCcDdEe	Set AaBbCcDdEe	Set	Set
Depth Font	Core Box Font	MDT Font	Depth Font	Core Box Font	MDT Font	
AaBbCcDdEe	Set AaBbCcDdEe	Set AaBbCcDdEe Set	AaBbCcDdEe	Set AaBbCcDdEe	Set	Set
Depth Orientation: @ Vert.	← Horz Show Depth Units	Set As Default Fonts: 🔽 Apply to Current Log	Depth Direntation: C Vert	. Ĝ Hoz Show Depth Units∐	Set As Default For Apply to Currer	nts: 🔽 nt Log
		OK Can			OK	Cancel
	Depth Orientation: 🔿 \	/ert. 🖲 Horz				

- 3. Click on the Show Depth Units (Horz) Horizontal Orientation radio button and deselect the Show Depth Units Check box.
  - Set

4.

Click on the **button** beside the **Depth Font Option**. This will activate the Font window.

Font			? 🗙
Font: Arial O Arial Black O Arial Narrow O Book Antiqua O Bookman Did Style O Bookmet Symbol 7 O Century Gothic	Font style: Bold Regular Italic Bold Bold Italic	Size: 10 11 12 14 16 18 20 V	OK Cancel
Effects Strikeout Underline Color: Black	Sample AaBbYyZ Script: Western	z	
This is an OpenType font. This printer and your screen.	same font will be used or	n both your	

5. Select Arial, from the Font List, Bold from the Font style list and 10 from the Size list and then click on the

button. This will put back into the Fonts tab of the System options window.

- 6. Click on the Apply to Current Log button.
- 7. Click on the **DK** button. This will close the window and reorient and resize your depth font to fill up the new track width we created in the Log Configuration window.

## 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 <u>active</u> 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.

	-	LAS Import	X
Gamma Ray			
Line Width		Select LAS File	Importing to curve: Gamma Bay
Line Pattern 🕨 🕨		- LAS Information	
Line Style 🕨 🕨		LAS Version: 2.0	START
Line Color 🔹 🕨		WRAP: No Data Start Depth: 1200.0000	1200.0000
Scale		Data Stop Depth: 1235.0000 Data Null Value: -999.2500	
Import 🕨	ASCII	Curver:	1235 0000
Point Indicators	LAS		1200.0000
<ul> <li>Offscale Numerics</li> </ul>		GR.GAPI :2	NULL
Edit Curve			Use File Interval
Open Curve Average Window			Select curve to import
Scale Change Line Color			GR
Scale Change Line Thickness 🕨			Replace existing curve
Scale Text Orientation			IMPORT
Edit Options			
Add / Edit / Open Link Exit			Exit

- Select LAS File
- button. This will activate the Open LAS File window and locate the "Imperial 6.) Click on the Core Tutorial gamma ray curve.las" in the Powersuite\_V11 / System folder.
- After locating the Drive and Directory where the "Imperial Core Tutorial gamma ray curve.las" is the user 7.) must select the file by double clicking on the file name, or clicking on it once and clicking on the ΟK

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.
- IMPORT. 9.) Click on the button. The curve will import and the window will disappear leaving the Gamma Ray curve data displayed on the layer.

## 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.

Curve Scale			
Save Undo New	Del First Prev	? Next Last Left / Bottom	Right / Top
Depth Interval 0 Backup Scale: st	0 raight shift _▼	Scale: 0	60

Gamma Ray	
Line Width	•
Line Pattern	•
Line Style	•
Line Color	•
Scale	
Import	•
Point Indicators	•
<ul> <li>Offscale Numerics</li> </ul>	
Edit Curve	
Open Curve Aver	age Window
Scale Change Line	Color
Scale Change Line	) Thickness 🔹 🕨
Scale Text Orienta	ation 🕨
Edit Options	•
Add / Edit / Open Exit	Link

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.

<u>Note</u>: 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.

Shortcut Options			
Record saved succe	ssfully. Choose one of the	following sh	iortcuts.
Start New Record	Move to Next Record	Exit	Cancel

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

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

Power	*Core 12	- [< > Tu	torial Core Log [23001	201 300000]								
	ait view	Reports C	paons window Help	🐼 🕅 🕰			<b>6 0 1</b>	be un un		• পলা 🔳	75 Be	- <u></u>
			പ്പം കുടവാവ								~~. c. 91.	े जिलि दा न
]  Gamm	a Ray			⊠ltop MD	▼ 1:200 ▼			<u> </u>		<u> </u>	-s (Ľ	
Member Formation Group	Environment	Depth	Gamma Ray 23-001-20130 Gamma Ray (gapi) 0 30 60	Interpreted Lithology	grn I vicsn d Grain Size misn d fsn d vfsn d cst	Oil Staining	Sedimentary Structures	Trace Fossils	Rock Accessories	Fractures	Graphics	Lithology Description 🖄
		12010 12020 12030 12040 12050 12050 12060 12080	m Martin									
												>
For Help pre	ss F1						P	geology U	PDATE K	:B: 56		

## Changing the Log Scale and Mouse Pointer Accuracy

Layer Selection List	Show all	Show/Hide	Depth	Screen Log		Screen/Mouse Pointer
	Toolbox Layers	Header	View	Scale		Accuracy
Grain Size	- 71 🤬 🕅	र। 🔯 😡	MD -	1:80 -	12000 💌	<b>3</b> " •
	Layers Organizer Sho Lay	Show/Hid w active er only	le Digits		Go to Depth	Active Layer Depth Offset

- 1.) Click on the Screen Log Scales drop box and select 1:80". This will make your screen or monitor log scale represent your log at 1:80 depth scale or at 15" = 100 ft.
- 2.) Click on the Screen Accuracy drop box and select 3".

Note: If you are more familiar with a American log scale standard the user can switch from the default the ratio scales of 1:200 and 1:500 to the American inch scale of ??inches = 100 feet. To change the log scale default.

- 1.) Click on the System Options, under Options on the Power\*Core<sup>™</sup> Menu Bar to open the System Options window.
- 2.) Click on the Display Tab to activate that page of the System Options window.

System Options
General   Fonts Display   Favorites   Symbology I Anowed Subintervals Frequency @ 5": 1 symbol every 5 ▼ ft I Transparent Lithology Profile I Use Global Symbols Use Metric Style Scales Interbed Line Display Type
✓ Curve Backup Fill       Grain Size       Scale, Wentworth ▼ Verbal Display:        ✓ Fill Pattern       ✓ Pattern Color: ■ …
Carbonate Textures Fill Pattern Color:  Fill Patte
Interpreted Lithology Layer Show Bedding Contacts:  Show Accessories:  Other Monitor Height 12 inches Directional Survey display: Azimuth Directional Survey display: Azimuth Directional Survey display: Azimuth Directional Survey display: Directional Survey display: Survey d
OK Cancel

3.) **Deselect** the **Use metric Style Scales** Check box.

4.) Click on the **DK** button. This will close the window you can now choose from a different list or type in 15" in the Screen Log Scale drop box to show the same scale we are using in this tutorial.



## 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 wellsight and that this information is not available. Therefore we will use the Core Description window to enter the core description data.

Note: The user can also use the annotation layer directly without using the Core Description or Sample Description windows and then transferring the descriptions automatically. The problem with this is there is no report generated nor is the formatting as strait forward.

1.) Click on Core Description, under Reports on the Power\*Core<sup>™</sup> Menu Bar to open the Core Description window.

Core Description	<u> </u>
Save Undo New Del First Prev ? Next Last	Dictionary
Auto Next Ascending Interval Ro	ick Type / Heading
Short Description	To Long Desc
dk.gy-blk, ab nt carb pl deb, occ ntls, fis. Scr ctc / bsl Ss.	<ul> <li>×</li> </ul>
Long Description	
Shale	To Short Desc
dark gray to black, abundant carbonaceous plant debris, occa Sandstone.	sional rootlets, fissile. Scour contact with basal
Transfer Options	
Automatic Description transfer	
Transfer to Annotation Group: lithtext1	•
Transfer Depth Range Top Depth Only	✓ Transfer Short Form

- 2.) Type 12000 into the Interval (From) field and then Press the tab key.
- 3.) Type 12011.5 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. Scr 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. Also make sure you are transferring to Annotation group lithtext1.
- 7.) Click on the Save button. You will see your sample description on the log at 12000ft with the options selected in step 6. You will be prompted with a Shortcut Options message

ully. Choose one of th	e following sł	nortcuts.
ove to Next Record	Exit	Cancel
	ove to Next Record	ove to Next Record Exit

- Start New Record button from the Shortcut Options window. This will clear the sample 8.) Click on the 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 **12025** 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 & pll 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 .

Core Description						
Save Undo New Del First Prev ? Next Last	Dictionary					
Auto Next / Ascending Interval Rock Type / Heading						
12011.50  12011.50 to  12025  Ss						
Short Description	To Long Desc					
dic bin - bik, 3 distinct fing upw seas (m g gred), abrit mud chips @ base of intvs, com olmb rple, com l xlams, com - abrit nodr pyr, tr SK, PLA, tr sits cmit, g est por, abrit hvy dik bin - bik o sting. Ship cic / bel s	ang & pll 🛛 📩 Sh unit.					
	~					
Long Description						
	To Short Desc					
dark brown to black, 3 distinct fining upwards sequences (medium to coarse grained), abundant mud chips at base of intervals, common climbing ripples, common low angle & parallel cross laminations, common to abundant nodular pyrite, trace SKOLITHOS, PHAOUITES, trace a disceaus cement, god estimated porosity, abundant heavy dark brown to black oil staining. Sharp contact with basal Shale unit.						
Transfer Define	<u>×</u>					
Automatic Description transfer						
Transfer to Annotation Group: lithtext1	•					
🔽 Transfer Depth Range 🔽 Top Depth Only 🖾 Transfer Short	Form					

- 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 12011.5ft.
- Adding more Sample Descriptions to a new interval...
- 1.) Type in a new depth of 12034 in the to depth field. Press the tab key.
- 2.) Type Intbd Sitst & Sh into the Rock Type / heading field, press the tab key and then type the following description into the Short Description field:

Intbd Sltst & Sh U sh m gy brn, slly calcs, fis. Mdl Sltst It brn grdg to cly, arg, tt, ns. L sh brn, com sltst lam, predly tt, ns. Shp bsl ctc.

- 3.) 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 12025ft in the Lithology Description track.
- 4.) Type in a new depth of **12050** in the to depth field. Press the tab key.
- 5.) **Type Ss** into the **Rock Type / heading** field, **tab** 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 xlam, slly bioturb, com AST & PLA, glauic thru, calcs cmt @ base, grdl ctc / basal cgl, abnt dk brn o stng.

- 6.) 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 12034 in the Lithology Description track.
- 7.) Type in a new depth of 12056 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.



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.

RTF Lines and Boxes	
	12079 - 12082ft Coal: bits, abnt carb fos deb, fracd, shp basal ctc. 12082 - 12087.3nt Ss. cmm comm, m
RTF Font ToolBar	gred, hom, friest por, witr sat, bioturb ctc, Z Abnt sb vrti fracs ptly fild / calc.
	12087.5 - 12090ft Mrist: calcs, arg, dns, ns.

## Moving a Lithology / Core Description:

- Click on the Core Description drawn on the Lithology Description layer that you want to move. In our case click on the Coal description at 12079 ft. This will activate a border around the description and activate the RTF Toolbars. You are now in the editing mode.
- 3.) Move your mouse pointer onto the outline and you will see the pointer turn into a trosshair. Then click and drag your mouse up 4 feet to move the description up to 12075 ft. Release your mouse pointer.
- 4.) Click anywhere outside the descriptions highlighted area to save the new location.
- 5.) Click on the Cgl at 12034 ft. This action will activate a border.
- 6.) Move your mouse pointer onto the outline and you will see the pointer turn into a **the crosshair**. Then click and drag your mouse down 6 feet to move the description up to **12040 ft. Release your mouse pointer**.
- 7.) Click anywhere outside the descriptions highlighted area to save the new location.

## Editing a Lithology / Core Description

- 8.) Now we will edit the **MrIst** description at 12087.5 ft. **Click** on the **MrIst description at 12087.5 ft.** You will see the description become outlined on the log.
- 9.) 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.
- 10.) Click anywhere outside the descriptions highlighted area to save the changes. Your log should look like the log shown on page 36 at this point in time.

<u>Note</u>: If you wish to edit any other **Sample Description** parameters, including the **Display Scale**, simply make the necessary changes within the RFT Toolbars, and **click anywhere outside the highlighted area** to save the changes



Overview of RTF Font Toolbar buttons.

**F** At the flashing cursor or with some text highlighted this button will activate a Font Dialogue window to change Font Type, style, size etc.

**B** At the flashing cursor or with some text highlighted this button will activate a Bold Font style.

At the flashing cursor or with some text highlighted this button will activate an Italic Font style.

At the flashing cursor or with some text highlighted this button will activate an Underline Font style.

At the flashing cursor or with some text highlighted this button will activate an Strikethrough Font style.

E 호 클 At the flashing cursor or with some text highlighted these buttons will orient the text line or paragraph left, centered or right within the box outline.

At the flashing cursor or with some text highlighted this button will place a bullet at the start of the text line or paragraph.

At the flashing cursor or with some text highlighted these buttons will indent or tab the text line or paragraph either left or right.

Â

At the flashing cursor or with some text highlighted this button will activate a new Font color.

K the flashing cursor or with some text highlighted this button will activate a Font background color.



Overview of RTF Lines and Boxes Toolbar buttons.

**Left Right Centered Text boxes**: With the text box or annotations outline activated these buttons will orient the text box left, centered or right within the track borders. The user can also click and drag on the box outline to any orientation on the track which will override these buttons.



**Display scale drop box**: This allows the user to change the display scale for each annotation to adapt to the printed or viewing scale of the log. The All Scales selection will display the annotation at all viewing and printing scales from 1:5 to 1:5000. If you select a different display scale then the annotation will be viewed at that viewing and printing scale and smaller. Anything larger than the display scale and the annotation will not be viewed or printed. This should alleviate the annotations overlapping each other when printed out on different scales. For example if the user were to choose 1:120 the annotation would show up on viewing / printing scales from 1:120 to 1:5 and not show up on scales from 1:121 to 1:5000.

boxes allow line thickness only have one



Line Style Selector and Line Thickness drop boxes: These drop the user to select a different line style for their drawn line as well as the for the line that is associated with each individual annotation. You can line per annotation. The line can only be redrawn and not moved.

A This button will show / hide the text for a particular annotation. The text will not hide itself until the annotation is clicked outside of or deselected.

This button will show / hide the line for a particular annotation.

This button will show / hide an outline around the annotation. The grey box you see around all annotations will not be printed. Only when this button is activated will the box be printed.

Will show / hide an arrow pointer at the end of a line draw.

Will show / hide an arrow pointer at the start of a line draw.

Will show / hide an tail at the end of a line draw.

Will show / hide an tail at the start of a line draw.

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



Printing out Sample Descriptions to Word. (Only if you have Word for Windows)

	TW	Reporting Tool	
File	1.) Click on the <b>Print Reports</b>	Well End Reports   Morning Reports	
Connect	to Word button on the Toolbar	print status	
Disconnect	or select Print Reports to	Prepared For	
Access Registration	word Selection, under the File	Company	
New Ctrl+N	menu, on the Selection Bar to	Name	
Open Ctrl+O	activate the <b>Power*Log Report</b> :	Prepared By	
Close	Well End Report window.	Company: TriVision Geosysems Ltd.	
Import / Export	2.) The <b>Reporting Tool</b> print	Name: R.W. (Bob) Sephton P. Geol.	
ASCII Export	window will automatically default	Choose a Well	
Backup	to the active Well/Log Name.:	Tutorial Core Log	-
Print Log Ctrl+P	You will see Tutorial Core Log	Depth Bange (leave blank for all)	
Print Morring Report	in the Choose a Well field If it is		
Print Well End Report	not the defaulted well then go to	I to I I Formation Top	is in Desc.
Print Setun	the Well list drop box and select it	Bit Hecords Core Plugs	
	from the List.	Core Desc.	
Exit	2) Lindicht Core Dooo in the	Wieline Logging	
Demente field by alial	3.) Highlight Core Desc in the	Directional Survey Report	E
Reports field by click	king on it once.	Directional Survey Points Deviation Survey Points	
4.) Leave the Depth Rar	nge field blank to print all the	Master Survey Points Abandonment Plug	
descriptions.		Single File	elect All
		Print to Word	Clear All
5.) Click on the M Form	ation Tops in Desc. check box		
6.) Click on the	Word button in the Well End Report wind	dow to printout the Sample Descrip	tions. This

- 6.) Click on the **Link to word** button in the Well End Report window to printout the Sample Descriptions. This will activate you word program and you will get the Sample descriptions and Formation tops that were input through the Reports window.
- 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**" Clicking on the <u>Yes</u> button and the window selections you have just made will be remembered for the next time. Clicking on the

button will remember the default selections that were set for this window.

## Printing out Core Descriptions (If you do not have Word for Windows)

In this particular case we entered our core descriptions into the core description report and we did not fill in the Core Header report. We did this as we did not supply you with the data.

- 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\*Core Report: Well End Report window.
- 2.) The Well End Report print window will automatically default to the active Well/Log Name and its associated API: you will see Tutorial Core Log (23001201300000) 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 is, 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.

<u>Note</u>: Power\*Log<sup>™</sup> 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.) Make sure that the All check box *I*, in the Sample Description section at the lower right of the Well End Report window, is activated.
- 7.) Click on the **Print** button in the Well End Report window to printout the Sample Descriptions.
- 8.) When you are finished, **press** the **Esc key** on the keyboard to exit from the **Well End Report** window and to <u>activate the following system message</u>, "*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 **Yes** button will also return you to the main log window.

## Changing the Log Scale

Yes

Layer Selection List	Show all Toolbox Layers	Show/Hide Header	Depth View	Screen Log Scale		Screen/Mou: Accuracy	se Pointer
Lithology Description	- 71	<b>6</b>	MD	✓ 20"	•   •	-	3" -
	Layers Organizer Sho Lay	Show/Hid w active er only	e Digits		Go to Depth	Active Layer Depth Offset	

1.) Click on the Screen Log Scales drop box and select 20" or 1:60 if you changed to the Ratio scales in the previous section. This will make your screen or monitor log scale represent your log at a 20" = 100 ft or 1:60 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 <u>pop-up</u> 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.

					Toolbox 🔀
					Favorite List
					<mark>* * *</mark>
Rock Type Builder				×	• • • •
Sava Del		Rock Type	Interbeds	Accessory	
		πππΜ	o [Marletone (calcareous)]		
,	to		c [mailstone (calcareous)]		
🔽 Confirm Delete	Sample Quality:	<b></b>	No Data Description:	<u> </u>	
💌 Snap to Lithology	Base Contact:			-	
leve v lie v					
Edit Favorites Toolbo	8		Liear Fields	Exit	

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.

<u>Note</u>: 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 12090' within the Interpretive Lithology Track and Click and drag the mouse pointer 12090'

12087' 6.00" to 12087' 6.00". 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 **12087' 6.00"** within the Interpretive Lithology Track and **Click and drag** the mouse 12087' 6.00"

pointer **12082'** to **12082ft**. 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.



4.) **Click** on the **Clear Fields** button to clear the depths and bedding contacts fields.

## 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 **12082**' within the Interpretive Lithology Track and **Click and drag** the mouse pointer **12082**'

12079' to **12079'**. 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.) **Click** on the **Clear Fields** button to clear the depths and bedding contacts fields.

- 5.) Select Sandstone from the Tool Box window and it will automatically be displayed in the Rock Type field within the Rock Type Builder window.
- 6.) Move your mouse pointer to **12079**' within the Interpretive Lithology Track and **Click and drag** the mouse pointer **12079**'

12058 to 12058'. Finally, release the mouse button and the interval will be drawn accordingly.

- 7.) 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.
- 8.) **Click** on the **Clear Fields** button to clear the depths and bedding contacts fields.
- 9.) 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.
- 10.) Move your mouse pointer to **12058**' within the Interpretive Lithology Track and **Click and drag** the mouse pointer **12058**'

12056' to **12056'**. Finally, release the mouse button and the interval will be drawn accordingly.

- 11.) 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.
- 12.) **Click** on the **Clear Fields** button to clear the depths and bedding contacts fields.
- 13.) 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.
- 14.) Move your mouse pointer to **12056'** within the Interpretive Lithology Track and **Click and drag** the mouse pointer 12056'

12050' to **12050'**. Finally, release the mouse button and the interval will be drawn accordingly.

- 15.) 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.
- 16.) **Click** on the **Clear Fields** button to clear the depths and bedding contacts fields.
- 17.) Select Sandstone from the Tool Box window and it will automatically be displayed in the Rock Type field within the Rock Type Builder window.
- 18.) Move your mouse pointer to 12050' within the Interpretive Lithology Track and Click and drag the mouse pointer 12050'

12034' to 12034'. Finally, release the mouse button and the interval will be drawn accordingly.

- 19.) 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.
- 20.) **Click** on the **Clear Fields** button to clear the depths and bedding contacts fields.
- 21.) Select Siltstone 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 **12034**' within the Interpretive Lithology Track and **Click and drag** the mouse pointer **12034**'

12025' to **12025'**. 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 **12025**' within the Interpretive Lithology Track and **Click and drag** the mouse pointer 12025'

12010' to **12010'**. 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.) **Click** on the **Clear Fields** button to clear the depths and bedding contacts fields.
- 27.) 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.

28.) Move your mouse pointer to **12010**' within the Interpretive Lithology Track and **Click and drag** the mouse pointer **12010**'

12000' to 12000'. Finally, release the mouse button and the interval will be drawn accordingly.

29.) 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 at12010ft. 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 1.5 ft to 12011' 6.00" on the Interpreted Lithology track.
- 2.) Release the mouse button at 12011' 6.00", 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 12000.00 12010.00 to 12000.00 12011.50?"
- 3.) **Click** on the **Yes button** and you will resize both the Shale and Sandstone beds.

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

- 1.) 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.
- 2.) Move your mouse pointer to **12065' 6.00"** within the Interpretive Lithology Track and **Click and drag** the mouse 12065' 6.00"

pointer 12064' to 12064'. 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.) Move your mouse pointer to **12060' 6.00"** within the Interpretive Lithology Track and **Click and drag** the mouse 12060' 6.00"

pointer **12061' 9.00''** to **12061' 9.00''**. 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?"* 

- 5.) Click on the <u>Yes</u> button.
- 6.) Right Click on the just redrawn Sandstone bed (12058-12060' 6.00") to activate the pop out menu, Select the Base Contact option and select Scour from the selection list and repeat for the lower sandstone unit.

#### Inserting an Interbedding Lithology interval...

1.) Right click on the Siltstone bed that you drew from 12025' to 12034'. This will activate a pop out menu and select the Interbedding option. This will activate the Interbedding window.

		Interbedding	
		Accessory Rock Type	
		Main Lithology	
		T-T-T-T Sitst [Siltstone]	-
		Grain Size: c slt [coarse silt] 💌 to	-
		Coarsening Upwards 🧮 Finning Upwards 🕅	
Rocks	•	Carbonate Texture: 💽 to	•
Page Contact		Coarsening Upwards 🧮 Finning Upwards 🧮	
base contact	·	Secondary Lithology -[Interbed ]	
Save		Sh brn [Shale Brown]	-
Delete		Grain Size: I cly [lower clay]	-
Acc Builder		Carbonate Texture:	•
Interbedding		Top Interbed % : 30 Base Interbed % : 40	
Edit Options	•	Bedding Thickness Millimeter (MM) 💽 Inclined Beds 🗆	
Exit		Save DEL E	xit

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

**Your log should now look like the log shown below at a log scale of 10".**																
🚀 Power*C	Core 12 -	[ <l> Tuto</l>	rial Cor	re Log	[23001201]	30000	0]]									X
🕎 File Edit	: View R	eports Op	tions Wi	indow	Help										- 6	5 ×
) 🏶 👪 🗅	2	🐮 📴 🗳	. 🛒 🖷	с тяюх	🔜 🔓 🖬 🖡	2	<b>G.</b> A	I 🛛 📍 😽	$ \Omega $	a   🖬 🛙	. 🗄 🍇	5 <b>16</b> 1	j 🛲   📑	6	3 8 10	
Interpret	ted Litho	logy	• %	<b>B</b>	🕄 IN 🔝 🗑	MC	) 🔻	10"	•	12000	•	-	3" 🔻	<b>1</b>	5 🍕 选 🔲 🗑 🗑 SL 🔲	
E nvironment	Depth	Gam 23-0 Gamm	m a Ra )1-2013 <u>a Ray (gap</u> 30	i <b>y</b> 30 i) <b>60</b>	Interpreted Lithology	vf snd c sit	Grain Size misnd fsnd	grnl vc snd c snd	Oil Staining	Sedimentary Structures	Trace Fossils	Rock Accessories	Fractures	Graphics	Lithology Description	
	12005 12015 12015 12025 12035 12035 12045 12045		> > >												12000 - 12011.5ft Shale: dark gray to black, abundant carbonaceous plant debris, occasional rootlets, fissile. Scour contact with basal Sandstone. 12011.5 - 12025ft Ss: dk brn - blk, 3 distinct fing upw seqs (m - c gred), abut mud chips @ base of intvs, com clmb rpls, com l-ang & pli Nams, com - abut nodr pvr, tr SK, PLA, tr sils cmt, g est por, abut hwy dk brn - blk o stng. Shp ctc / bis Sh unit. 12025 - 12034ft Intbd Sitst & Sh : dk bm, prediv vs gred @ base fing upw to m gred, com curr pl xlam, silv bioturb, com AST & PLA, glauic thru, calcs cmt @ base, grd l ct / basal 12034 - 12056ft Ss: dk brn, prediv vc gred @ base fing upw to m gred, com cur pl xlam, silv bioturb, com AST & PLA, glauic thru, calcs cmt @ base, grd l ct / basal cgl, abut dk brn o stng.	
For Help press	F1										pge	ology	UPDATE KB:	56		

## Drawing Entire Intervals of Grain Size...

The Entire interval is applicable to the Interpretive Lithology interval. The entire interval would contain all of the drawn interpretive lithological interval. To make the drawing a little easier to pin point the exact depths with your mouse pointer the user may wish to change the screen log scale to 25" or 1:48. The Entire interval is applicable to the Interpretive Lithology interval. For the following entire intervals to work the Dbl Click Interval Entry, Snap to closest lithology and Soft Edges must be activated or checked as seen in the builder below.

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

Ì	Grain Size Builder				X
	Save Del Size / Sequence: Entire Interval: 12082.00 to 12087.50	Grain m snd (medium sand)	• • to	m snd [medium sand]	•
	Sub-Interval: Size / Sequence:	Grain	•		•
	Snap to closest lithology		🔳 to	,	-
	<ul> <li>✓ Dbl Click Interval Entry</li> <li>✓ Soft Edges</li> </ul>	scale: Wentworth			

2.) **Double click** the mouse pointer anywhere between **12087.5** [ft] to **12082** [ft] <sup>[12084'</sup> [m snd]] on the Grain Size track and the entire Grain Size interval will be drawn accordingly

<u>Note</u>: **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 close to or on the 12065' 6.00" [f snd] to 12079' [m snd] 12065' 6.00" [f snd]

12079' [m snd] on 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 (12065' 6.00" – 12079) on the grain size track to activate the Grain size pop out menu. Select Entire Interval Sequence and then Select Fining Upwards from the ensuing pop-out menu.

	Delete Sub Delete Entire SubInterval Se	quence			
	Entire Interval	Sequence 🔸	Fining Upv	vards	
	✓ Soft Edge		Coarsenin	g Upwards	
	Hard Edge		Blocky		
	Edit Options	+			
	Exit				
Grain Size B	uilder				
Save Del	Size / Sequence:	Grain	•	Fining Upwards	-
Entire Interv	al: 12065.50 to 12079.00	f snd [fine sand]	to	m snd [medium san	d] 🗾
Sub-Interv	al: Size / Sequence:	Grain	-		-
🔽 Snap to clo	sest lithology		💌 to		•
Dbl Click In	terval Entry	scale: Wentworth			
Soft Edges					

- 5.) **Double click** the mouse pointer anywhere between **12064** [f snd] [ft] to **12061'** 9.00" [f snd] <sup>12063'</sup> [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 anywhere between 12060' 6.00" [f snd] to 12058' [f snd] <sup>12060'</sup> [f snd] on the Grain Size track. Then, release the mouse button and the entire Grain Size interval will be drawn accordingly.
- 7.) **Double click** the mouse pointer anywhere between **12050'** [f pbl] to **12056'** [f pbl] <sup>12053'</sup> [f pbl] on the Grain Size track. Then, release the mouse button and 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. Scroll up on the log to see the Sandstone at 12034 to 12050 ft.

1.) Click and drag the mouse pointer from 12044' [vc snd] to 12050' [vc snd] [12050' [vc snd]] on the Grain Size track. Release the mouse button and the Grain Size Sub-Interval will be drawn accordingly.

Save Del Size / Sequence:	Grain	•		•
Entire Interval: 12034.00 to 12050.0	o	💌 to		•
Sub-Interval: Size / Sequence:	Grain	•		•
<ul> <li>Snap to closest lithology</li> </ul>	vc snd [very coarse sand]	💌 to VC	snd [very coarse sand]	-
Dbl Click Interval Entry	scale: Wentworth			
Soft Edges				

- 2.) Click and drag the mouse pointer from 12044' [vc snd] to 12034' [m snd] [12034' [m snd]] on the Grain Size track. Release the mouse button and the Grain Size Sub-Interval will be drawn accordingly.
- 3.) Right click within the interval (12034' 12044') to activate the Grain size pop out menu. Select SubInterval Sequence and then Select Fining Upwards from the ensuing pop-out menu.

Delete Sub Delete Entire			
SubInterval Se	equence 🕨 Fir	ning Upwards	
Entire Interva ✓ Soft Edge Hard Edge	I Sequence  Co	parsening Upwards ocky	
Edit Options	•		
Exit			
Grain Size Builder			
Save Del Size / Sequence:	Grain	•	•
Entire Interval: 12034.00 to 12050.00		💌 to	•
Sub-Interval: Size / Sequence:	Grain	<ul> <li>Fining Upwards</li> </ul>	•
Snap to closest lithology	vc snd [very coarse sand	d] 💌 <sub>to</sub> vc snd [very co	arse sand] 💌
<ul> <li>✓ Dbl Click Interval Entry</li> <li>✓ Soft Edges</li> </ul>	scale: Wentworth		

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

12011' 6.00'' [c snd]

- 1.) Click and drag the mouse pointer from 12011' 6.00" [c snd] to 12025' [m snd] 12025' [m snd] on the Grain Size track. Then, release the mouse button and the entire Grain Size interval will be drawn accordingly.
- Right click within the interval (12011' 6.00" 12025') to activate the Grain size pop out menu. Select Entire Interval Sequence and then Select Fining Upwards from the ensuing pop-out menu.

Delete Sub		
Delete Entire		
SubInterval Sequence	•	
Entire Interval Sequence	Þ	Fining Upwards
🗸 Soft Edge		Coarsening Upwards
Hard Edge		Blocky
Edit Options	Þ	
Exit		

12020' [c snd]

- 3.) Click and drag the mouse pointer from 12020' [c snd] to 12016' [m snd] <sup>12016'</sup> [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 (12016' 12020') to activate the Grain size pop out menu. Select SubInterval Sequence and then Select Fining Upwards from the ensuing pop-out menu.

Delete Sub Delete Entire		
SubInterval Sequence	×	Fining Upwards
Entire Interval Sequence Soft Edge Hard Edge	•	Coarsening Upwards Blocky
Edit Options	Þ	
Exit		

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.

Black [BLK]       Top Depth:       Base Depth:	Oil Stains
Top Depth: Base Depth:	
Mix	Top Depth:
	Мія
Display Text 🔽 Display Fill 🔽	Display Text
Snap to nearest Dbl Click Interval Entry 🔽 Save	Snap to neare
None Selected	None Selected

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



- 3.) **Click and drag** the mouse pointer from **12011**' **6.00**" to **12025**' within the Oil staining track layer. Release the mouse pointer button and your oil staining interval will be drawn.
- 4.) Right click anywhere within the Oil Staining track / layer to activate the pop-up menu and select intensity and then Dark Brown from the pop-out menu selection.
- 5.) Click and drag the mouse pointer from 12034' to 12056' uithin the Oil staining track layer. Release the mouse pointer button and your oil staining interval will be drawn.

12034

12058

- 6.) **Right click** anywhere within the **Oil Staining** track / layer to activate the pop-up menu and **select intensity** and then **Medium Brown** from the pop-out menu selection.
- 7.) Click and drag the mouse pointer from 12058' to 12064' uithin 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 to activate the pop-up menu and **select intensity** and then **Beige** from the pop-out menu selection.
- 9.) Right click anywhere within the Oil Staining track / layer to activate the pop-up menu and select mix and then Water from the pop-out menu selection.



- 10.) **Double Click anywhere within 12065' 6.00" to 12079'** on the Oil staining track layer and your oil staining interval will be drawn.
- 11.) **Double Click anywhere within 12082' to 12087' 6.00" 12085** within the Oil staining track layer and your oil staining interval will be drawn.
- 12.) **Click** on the **DK** 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 **12065**'. This will activate the pop out menu.



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

Open Pictur	e File				? 🛛
Look in: 🗀	SYSTEM	•	æ (	b 💣 💷	
DTDriver (					
Metric core	picture 1.bmp				
File name:	Metric core picture 2.bmp			Op	en
Files of type:	Picture Files (".bmp;".db; "emf;".gif;".ico;".jpg;".wmf)		•	Car	ncel

4.) Go to the Powersuite \_V12 / System folder and select the Core picture 2.bmp by double clicking on the file name. This will activate the Set Graphics Options window.

t Graphics Options		
Depth: (Top / Left) 12065	Base Depth: (Bottom / Right % @ current scale 12074.9 1.00	
Remark	🔽 Lock Apspect Ratio	
Graphic Properties Metric core picture 2.bmp Size: 200342 bytes	Height: 5.94" Width: 1.22"	
	Cancel	

- 5.) **Type 12075** into the **Base Depth field** and the resulting % @ current scale should indicate 0.37 % if you are at a log screen scale of 1:48 or 25". 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 **12011' 6.00"**. 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 12018** into the **Base Depth field** and the resulting Scale % should be 26% if you are at a log screen scale of 1:48 or 25". You could select the Lock Bottom check box, which would show this picture between the two depth fields no matter what the log or screen scale is set to.
- 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 12011.5 and 12018 ft or the user can double click on the graphic itself. This will activate the pop out menu.

Graphics	
Insert	
Delete	
Modify	
Change Group	
Save File To Disk	
Edit Options	۲
E×it	

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

et Graphics Options		$\mathbf{\times}$
Depth: (Top / Left) 12011.5	Base Depth:         (Bottom / Right         % @ current scale           12018         0.26	
Remark Core1	🔽 Lock Apspect Ratio	
Graphic Properties Metric core picture 1.bmp	Height: 1.45"	
Size: 191894 bytes	Width: 0.31"	
	Cancel Save	

- 3.) Type 12019 into the Base Depth field and the resulting Scale % should be 27.8% if you are at a log screen scale of 1:48 or 25". Also type in Core1 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 at 10" or 1:48.\*\*

## **Drawing Sedimentary Structures (Bed Restricted)**

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 (BR) 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.



3.) **Double Click** the mouse pointer anywhere from **12000' to 12011' 9.00"** within the Sedimentary Structure track / layer and the root structure and interval will be drawn.

<u>Note</u>: 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 Structures and 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.

Sedimentary Structures	
Bedding / Cross bedding	
	•
Laminations / Cross Laminations	
🕬 clmbrip (climbing ripple cross lamination)	-
Other	
	•
Abundance:	-
Dbl Click Interval Entry	Edit Favorites
🔽 Snap To Nearest	Toolbox
	Save
Top: 12011.60 Base: 12025.00	Exit

- 5.) **Double Click** the mouse pointer anywhere from **12025**' to **12011**' **6.00**" within the Sedimentary Structure track / layer and the climbing ripple cross laminations will be drawn.
- 6.) Right click anywhere within the Sedimentary Structure track to activate the pop-up menu. Select Other and then select mud chips from the pop-out menu, or click on the Other drop box from the builder and select mud chips.
- 7.) Click the mouse pointer from at 12015', 12019' and 12024' within the Sedimentary Structure track / layer on a different grid plane. The mud chips selection has been entered as a subinterval of 3" or whatever has been selected in the Screen Scale accuracy selection on the selection bar.

Layer Selection List	Show all Toolbox Layers	Show/Hide Header	Depth View	Screen Log Scale		Screen/Mouse Accuracy	e Pointer
Lithology Description	- 71 🤬 🕅	131 🕅 😡	MD	✓ 20"	•   •		3" 🔻
	Layers Organizer Sho Lay	Show/Hid w active er only	e Digits		Go to Depth	Active Layer Depth Offset	

- 8.) Right click anywhere within the Sedimentary Structure track to activate the pop-up menu. Select Sedimentary Structure 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 anywhere from **12050' to 12034'** within the Sedimentary Structure track / layer and the current ripple cross laminations will be drawn.
- 10.) Right click anywhere within the Sedimentary Structure track to activate the pop-up menu. Select 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.) **Double Click** the mouse pointer anywhere from **12087' 6.00" to 12082'** within the Sedimentary Structure track / layer and the massive/homogeneous bedding will be drawn.
- 12.) Double Click the mouse pointer anywhere from 12061' 9.00" to 12064' within the Sedimentary Structure track / layer and the massive/homogeneous bedding will be drawn.
- 13.) **Double Click** the mouse pointer anywhere from **12058' to 12060' 6.00"** within the Sedimentary Structure track / layer and the massive/homogeneous bedding will be drawn.
- 14.) 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.



- 15.) **Click and drag** the mouse pointer from **12076' to 12065' 6.00**" **12065' 6.00**" within the Sedimentary Structure track / layer. Release the mouse pointer button and the wavy laminations will be drawn.
- 16.) Right click anywhere within the Sedimentary Structure track to activate the pop-up menu. Select Sedimentary Structure 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.
- 17.) **Double Click** the mouse pointer anywhere from **12079' to 12065' 6.00"** within the Sedimentary Structure track / layer on a different grid plane and the normal graded bedding will be drawn.
- 18.) If you wanted to **delete** a sedimentary structure, **right click on the interval to be deleted** and **select delete** from the pop-out menu.



- 21.) If you want to **RESIZE** a sedimentary structures interval hold the **CTRL key down** on your keypad and move the **mouse over the end point** (turns into a double headed arrow) and **then drag** the end in the direction you want.
- 22.) To **MOVE** a sedimentary structure **click on the interval and drag** it to a new location (remember you cannot overlap an existing trace fossil)
- 23.) **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 Me	etafile Op	otions (Add Metafile) window.
			<b>Metafile Options</b>			
			Add Metafile			
			Category:	sed. structs	·	
			Sub Category:		-	
			Short Name:	dbl mud drps		
			Long Name:	Double Mud Drapes		
				Add		
			OK	Cancel Apply	Help	
						1

- 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 **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.

System	Message 🛛 🔛					
Press [Yes] to create a 2-pane window. Press [No] to create a single pane window.						
	Yes No					

6.) **Click** on either the **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.

💥 Power Metafile Editor - [dbl	mud drpssed. structs.wmf]			
File Edit View Draw Object	Settings Window Help			_ 8 ×
		<b>?</b> №1		
Page 🗸 20 🗸 📖 🛱		<b>_</b>	▼	
	<mark></mark>			
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	<b></b>			
<u></u>	<u></u>			
			· · · · · · · · · · · ·	
			(	
Ready		x: 960, y: -20	selection: none	size: 0 by 0

## 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.

Powe File D B	er N Edit	Vie Vie	file ***   0	Ed Dra %	iito sw E		- [ ( )bje	db ect		ieti	d d ting	ir p  s	wi Wi	ind	. s ow	tru н	ielt	is. 	₩ <   -	nf T 1	@ •	) 	<b>?</b>	N.	2	]		•	Γ			-							-	-	5	1 >
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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.

Metafile Options		
Category Geo perm George Geotechnica matrix nodules oilshow pebbles porosity rock sed structs stringers trace fossils xbed xlam	Symbol         Image [Boudinage - Sausage structure]         V7       bourdinage [Boudinage - Sausage structure]         V7       burrows [burrows]         Image [Clastic Dike]       Image [Clastic Sill]         Image [Clastic Sill]       Image [Clastic Sill]         Image [Double Mud Drapes]       Image [Clastic Sill]         Image [Clastic Sill]       Image [Clastic Sill]         Im	
Rename Symbol	Edit: Double Mud Drapes	
Add New Symbol		Cancel
Refresh Symbols	Delete User Defined Symbol	OK

- 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.

Sedimentary Structures	×
Bedding / Cross bedding	
	•
Laminations / Cross Laminations	
	•
Other	
//// dbl mud dr [Double Mud Drapes]	•
Abundance:	•
Dbl Click Interval Entry	Edit Favorites
🔽 Snap To Nearest	Toolbox
	Save
Top: 12014.00 Base: 12022.00	Exit

3.) **Click and drag** the mouse pointer from **12014**' to **12022**' within the Sedimentary Structure track / layer. Release the mouse pointer button and the double mud drapes will be drawn.

12014'

4.) Click on the **Exit** 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 lithologies 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 12020' to 12016' 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 12040' to 12050' within the Trace Fossils track / layer. Release the mouse pointer button and the symbol for Planolites and the interval will be drawn.
- 5.) **Double Click** the mouse pointer anywhere from **12065**' **6.00**'' to **12079**' uithin the Trace Fossils track / layer and the entire interval will be drawn with the symbol for Planolites.

<u>Note</u>: 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.

Trace Fossil Selection	×
I Zoophycos]	•
Abundance	
ļ	•
Top: 12085.00 Base: 12087.50	Dbl Click Interval Entry
	IV Snap Io Nearest
Edit Favorites I oolbox	Save Exit
	400051
	12085

- 7.) Click and drag the mouse pointer from 12085' to 12087' 6.00" 12087' 6.00" 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 12040' to 12034' 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 12020' to 12025' within the Trace Fossils track / layer. Release the mouse pointer button and the symbol for Skolithos and the interval will be drawn.

12020

12016'

- 12.) Click and drag the mouse pointer from 12016' to 12011' 6.00" [12011' 6.00"] within the Trace Fossils track / layer. Release the mouse pointer button and the symbol for Skolithos and the interval will be drawn.
- 13.) If you wanted to **delete** a trace fossil, **right click on the interval to be deleted** and **select delete** from the popout menu. You can also delete more than one by holding the Shift key on the keypad and clicking and dragging an area.



14.) **Click** on the **Exit** 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 Save 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  $\downarrow$  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 lithologies interval.

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

Rock Access	ory Builder 🛛 🔀
Thinbed:	•
Accessories:	<b>•</b>
Grains:	<b>•</b>
Fossils:	•
Textures:	<b>•</b>
Matrix:	•
Cement:	•
Abundance:	•
Top:	Base: Dbl Click Interval Entry
Edit Favorites	Toolbox Save Exit

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** the mouse pointer anywhere from **12011' 9.00" to 12000'** within the Rock Accessories track / layer and the symbol for Plant remains and the interval 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.

Rock Access	ory Builder 🛛 🔀
Thinbed:	🕑 pyr nodules (pyrite nodules)
Accessories:	•
Grains:	•
Fossils:	▼
Textures:	▼
Matrix:	<b>•</b>
Cement:	▼
Abundance:	<b>•</b>
Тор:	12011.60 Base: 12025.00 IV Dbl Click Interval Entry ✓ Snap To Nearest
Edit Favorites	Toolbox Save Exit

5.) **Double Click** the mouse pointer anywhere from **12011' 6.00" to 12025'** within the Rock Accessories track / layer and the symbol for Pyrite nodules and the interval will be drawn.

<u>Note</u>: 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 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.

   12034'
- 7.) Click and drag the mouse pointer from 12056' to 12034' 12056' within the Rock Accessories track / layer. Release the mouse pointer button and the symbol for Glauconitic and the interval will be drawn.
- 8.) 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.
- 9.) **Double Click** the mouse pointer anywhere from **12050' to 12056'** within the Rock Accessories track / layer and the symbol for Chert Dark pebbles and the interval will be drawn.
- 10.) 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.



- 11.) **Click and drag** the mouse pointer from **12064**' to **12058**' within the Rock Accessories track / layer. Release the mouse pointer button and the symbol for **Argillaceous** matrix and the interval will be drawn.
- 12.) **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**.
- 13.) **Double Click** the mouse pointer anywhere from **12082' to 12079'** within the Rock Accessories track / layer and the symbol for **Fossiliferous** and the interval will be drawn.
- 14.) 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. You can also delete more than one by holding the Shift key on the keypad and clicking and dragging an area.



15.) **Click** on the **Exit** 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 **Fractures button** and add it from the **drop list**. Remember to OK on the way out of the System Options window.

	Fractures 🕨 🕨		R.	Sub-Vertical Fractures Occluded by Calcite
	Abundance >		ų	Sub-Vertical Fractures Partly Occluded by Anhydrite
	Delete	-	ų.	Sub-Vertical Fractures Partly Occluded by Bitumen
	Edit Options 🕨		ij	Sub-Vertical Fractures Partly Occluded by Calcite
	Ewik		•	
- 1	EXIL			

4.) **Double Click** the mouse pointer between **12082' to 12087' 6.00**" within the Fracture track / layer. The interval will be drawn.

<u>Note</u>: 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 Save button.

Fracture Symbols	×							
Fractures: 🔢 sbvert frac pty occl calc [Sub-Vertical Fractures Partly	•							
Abundance: Common								
Top: 12082.00 Base: 12087.50	ntry							
Edit Favorites Toolbox Save Exit								

## 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  $\downarrow$  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.

Rock Type Builder					, L
Save Del		Rock Type		Interbeds	Accessory
	to				-
Confirm Delete	Sample Quality:		-	No Data Description:	-
Snap to Lithology	Base Contact:				•
Edit Favorites   Toolb	ox			Clear Fields	Exit

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.

Rocks	۲
Base Contact	•
Save	
Delete	
Acc Builder	
Interbedding	
Edit Options	۲
Exit	

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.

	Accessories 🕨	Argillaceous	
	Contact 🕨	😫 Argillaceous	Bask Assessory Builder
Favorite List	Delete	💶 Calcareous	Rock Accessory Builder
	Rock Builder	📇 Calcareous	
	Edit Options	<ul> <li>Carbonaceous</li> <li>Chert dark</li> </ul>	Rock Type
	E×it	📧 Clay	
	· · · · · · · · · · · · · · · · · · ·	Coal	Thinbed:
<b>E</b>		Crptocrystalline	
		Earthy	Assessation
		🕶 Fish Remains	Accessones.
		🗉 Fossil	
8		a Glauconitic	Grains:
		😵 Intraclast	
<b>a</b>		🗉 Lithic grain	Fossils:
		Limestone mud supported	
e		💩 Micromicaceous	Tenturen
ox —		Microcrystalline	Textures: 👻
F		🗯 Mineral crystals	
		Minerals dark	Matrix:
		🖉 🛛 Plant remains	
Ŷ		P Pyritic	Compart: [1] a day factor and
		📫 Sandy	Cemeric 📥 calcs [calcareous]
		🖃 Shale gray	
		Sideritic	Contact:
0 <sub>0</sub>		📉 Siliceous	,
mx 🗸		siltstone	
		😐 Silty	Edit Franking Franking
		⊡ Sandstone	Edit Favorites Toolbox Exit
		-∕∿- Stylolitic	

#### Adding a Cement...

- 1.) Right click anywhere within the Interpretive Lithology track to activate the pop-up menu. Select calcareous cement from the 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 from 12035' and 12047'. The calcareous symbols are placed at those depths.
- 3.) Right click anywhere within the Interpretive Lithology track to activate the pop-up menu. Select siliceous cement from the 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.

<u>Note</u>: 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. You can also delete more than one by holding the Shift key on the keypad and clicking and dragging an area.

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.

Well Formation			×
Save Undo New Del Fir Short Long	st Prev ? Ne	xt Last K.B. 571.5	Ground Casing Flange
Group: a Albian Formation sh Shale		Boundary Fault	Type: conf [conformable]
Member:		Seq#:	Long Name Display Depth:
<b>F</b>		Subsea:	Alignment: right
	Series	-	MD TVD
Period	Stage		Prognosis:
<u> </u>	1	-	Sample:  12000  12000
Age: million years	Thickness		Log:
	MD:   TVD:	Calculate Thickness	Display C Prog. © Smpl. C Log

- 2.) Type a into the Group Short name field, tab, type Albian 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 12000 in the Sample Top (MD) field, tab and type 12000 in the Sample Top (TVD) field.
- 5.) Click on the Smpl radio button is the Display portion of the window.
- 6.) **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.

Well Formation			
Save Undo New Short	Del First Prev ? No	ext Last K.B. 571.5	Ground Casing Flange 564.6 564
Group: a	Albian	Boundary Type	g erst sfc [erosional surface] 🛛 💌
Formation ss	Sandstone	Fault Type	E 📃 💌
Member: u	Upper	Seq#: Lor	ng Name Display Depth:
		Subsea: -11440.00	Alignment: right 💌
Era	Series	•	Tops MD TVD
Period	Stage		Prognosis:
	<b>•</b>	▼	Sample: 12011.5 12011.5
Age: millio	on years Thickness		Log:
	MD:   TVD:	Calculate Thickness	Display O Prog. I Smpl. O Log

- 7.) Type a into the Group Short name field, tab, type Albian 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
- 8.) Select erosional surface from the Boundary Type drop box.
- 9.) Type in 12011.5 in the Sample Top (MD) field, tab and type 12011.5 in the Sample Top (TVD) field.
- 10.) Click on the Smpl radio button is the Display portion of the window.

11.) 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.

Well Formation	$\mathbf{X}$
Save Undo New Del First Prev ? No Short Long	ext Last K.B. Ground Casing Flange 571.5 564.6 564
Group: a Albian	Boundary Type: conf [conformable]
Formation ss Sandstone	Fault Type:
Member: I Lower	Seq#: Long Name Display Depth:
	Subsea: -11494.00 Alignment: right 🗨
Era Series	Tops MD TVD
Period Stage	Prognosis:
· · ·	✓ Sample: 12065.5 12065.5
Age: million years Thickness	Log:
MD:   TVD:	Calculate Thickness C Prog. © Smpl. C Log

- 12.) Type a into the Group Short name field, tab, type Albian 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 I into the Member Short name field, tab, and type Lower into the Member Long Name field
- 13.) Select conformable from the Boundary Type drop box.
- 14.) Type in 12065.5 in the Sample Top (MD) field, tab and type 12065.5 in the Sample Top (TVD) field.
- 15.) Click on the Smpl radio button is the Display portion of the window.
- 16.) **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.

Well Formation		
Save Undo New Del First Prev ? Ne Short Long	xt Last K.B. 571.5	Ground Casing Flange
Group:	Boundary Typ	pe: conf [conformable]
Formation	Fault Typ	pe:
Member:	Seq#: L	ong Name Display Depth:
	Subsea: -11516.0	0 Alignment: right 💌
Era Series	-	MD TVD
Period Stage		Prognosis:
	-	Sample: 12087.5 12087.5
Age: million years Thickness	_	Log:
MD:  12 TVD:	Calculate Thickness	Display C Prog. • Smpl. C Log

- 17.) Type m into the Formation Short name field, tab, and type Marlstone into the Formation Long Name field.
- 18.) Select conformable from the Boundary Type drop box.
- 19.) Type in 12087.5 in the Sample Top (MD) field, tab and type 12087.5 in the Sample Top (TVD) field.
- 20.) **Type** in **12'** in the thickness field so that the long name gets displayed on the formation layer. Otherwise the short name will be displayed as the system does not know where the next top is.
- 21.) Click on the Smpl radio button is the Display portion of the window.
- 22.) **Click** on the **Save button** and then **select Finit** 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.

## Power\*Core Tutorial

## POWER SUITE Version 12

Fills for 'Environment'         Save       Undo New Del         First       Prev ? Next Last         Description         Image: Short Name         Back Color         Fore Color         Gradient         Pattern:	Color  Basic colors:  Custom colors:  Define Custom Colors >>  OK Cancel	Fills for 'Environment'         Save       Undo New Del First Prev ? Next Last         Description         Marine          Short Name         001         Back Color         Fore Color         ✓ Gradient         Pattern:		
<ol> <li>Type Marine into the Description field.</li> <li>Type 001 into the Short name field.</li> <li>Click on the Back Color button and button.</li> </ol>	I <b>select a blue color</b> from the p	palette and then <b>click</b> on the		
<ul> <li>5.) Click on the Fore Color button and select a blue color from the palette and then click on the OK</li> <li>6.) Click on the Gradient Gradient Gradient to activate a check mark.</li> <li>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.</li> </ul>				
<ul> <li>Adding more environments to the En</li> <li>8.) Type Peritidal into the Description field</li> <li>9.) Type 002 into the Short name field.</li> <li>10.) Click on the Back Color button and OK button.</li> </ul>	nvironment fill category… d. d select a maroon color from th	he palette and then <b>click</b> on the		
<ul> <li>11.) Click on the Fore Lolor button and select a maroon color from the palette and then click on the OK button.</li> <li>12.) Click on the Gradient Gradient to activate a check mark.</li> </ul>				
(2) Click on the Save	Save Undo New Del First Prev ? Next Last Description Periods Short Name 002 Back Color Fore Color V Gradient Pattern:			
This will clear the window and allow the user to enter a new record.				

- 14.) Type Continental 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.

Fills for 'Environment'
Save Undo New Del First Prev ? Next Last Description Continental
Back Color Fore Color
Pattem:
Evit

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 **12000**' **to 12050**' **12050**'. The Marine environment should be displayed in that interval. You may wish to change your screen log scale to 5" 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* is activated) **12050' to 12065' 6.00"**. The Peritidal environment should be displayed in that interval.

12050

- 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 12065' 6.00" to 12065' 6.00"

**12087' 6.00"** 12087' 6.00". 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 **double clicking** within the environment track **between the depths of 12087' 6.00" to 12090'.** 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  $\downarrow$  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 Kine 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.\*\* Log Image (screen scale of 1:200 or 8") with the track header turned off.

## Setting up a Curve Fill layer with its options.

- 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 <u>left</u> 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.



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

Curve Fill Options	X
Curve fills List ID: 1 New Curve fill	
Set Main Curve Set SecondaryCurve Gamma Ray Gamma Ray	<b>F</b> 1
Curve Options Patern Type PtoP  Cog Cycles: 1 Grid Type Linear	Example Main Curve (units) Second Curve (units)
Fill Options Fill Modes - 2 Curves Fill Modes - 1 Curve Fill to right edge  Well Path Options Well Path Options Value:  Fill Patens Fill Patens Fill Patens	$\sum$
Foreground color Background color black  Solid Rock Fill	Save Cancel
Well Path Scale	

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 / Sample header Standard Format selection option under the Edit pull down menu. This will activate the Core / Sample header window shown below.

		Core / Sample H	eader		
		Save Del			
					Interval
		Date	Logged by	Top Dept	h Base Depth
		Aug 22, 2012	R.W. (Bob) Sephton P. Geol.	12000	12091
Indo Move short Symbol edo Move short Symbol		Depth Correcte	d Remark		Quality Remark
		No Depth Corr	ection	✓ Slabbed	Good
'ell 'int Sections		Remarks			
og Configuration rack Configuration ayer Configuration		No Lost Core. Gamma Ray an Printed Log sca	d Core lined up perfectly. le 15inches = 100/t		
letafile Options		2			>
elete Generic Groups		Well Record D	Jata		
eneric Group Sorting			KB: 56.00		
ore / Sample Header	Alternate Format	Ground Elev /	Collar: 38.00		
		UTM Ea	isting: 621161.00		
		UTM No	thing: 3349894.00		
		н	ole ID 2300 1201 3000		
					Edit Well
					Exit
Type in the Top	and base depths (nu	umbers only) as	well as any other particulars	s you may wish	to add.
You may want to	change or add info f	from the Well Re	cord. Click on the	button ar	nd make cha
to the well record saved successfu	d and then <b>click</b> on th	he Save	button and then click on	the <b>Exit optio</b>	<b>n</b> form the re
	Save				
) Click on the L	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.

Print [View Mode: MD]	
Printer: Adobe PDF Title Page/Legend/Tops/Surveys Page Drientation:   Options Strip Log Title Page Core Log Title Page Core Log Title Page Core Log Title Page Bore Hole Log Title Page Core Section Multi Views Cross Section Multi Views Location Map C:\PowerSuite_V12\Location maps\anywhere map_Page_1.  Title Page Remarks  Legend V Use Dynamic Legend Log Scale: 15 V Header V Core Accessories None Vsertdefined Interval Today Section (0.00 to 0.00) Well Section (0.00 to 0.00) Utibologu Section (12000 00 to 12090 50)	Page Margin: 0.25 Page Overlap Print Methods C Default Meta File Color Options C Auto C Color C Mono Interval per Page 73.33 Log Width: 10.50 ''
User-defined Interval: 11990 to 12096	Print Printer Setup Help Exit

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

<u>Note</u>: The letter or **Tabloid Portrait** or landscape settings selected from within the **Print Log** window will <u>NOT</u> 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 **Dynamic Legend** if you wish to have the legend to 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.

#### In the Log portion of the Print Log window

- 5.) Select 15" from the scale drop box for the log to be printed out at.
- 6.) Click to activate the Header 🗹 and Footer 🗹 check boxes to print the track headers and footers on the log.
- 7.) Click on Lithology Section to highlight it in the printing options selection box.

<u>Note</u>: 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.

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

<u>Note</u>: 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.

9.) When you are ready to print your log, **click** on the

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

button.

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.

click on the

## Adding a Link (Attachment) to your Log

1.) In our case **Right Click** on the **Graphics** track / layer to activate the pop out menu. **Select Add / Edit / Open** Link from the pop out menu. This will activate a blank Links window with the depth you right clicked at.

	Links
Graphics	a lundu laulanta la lu lu l Depth
Insert	Save Undo New Del First Prev ? Next Last 1000
Delete	
Modify	File Name:
Change Group	Dethe
Save File To Disk	Path:
	Remarks:
Edit Options 🔹 🕨	
Add / Edit / Open Link	
Add y Edit y Open Link	Open File in Windows® Open Folder
Exit	

2.) **Click** on the **\_\_\_\_\_ button** in the Links window and you can now pick any windows compatible file. In our case I am linking the printed well file from the next section of the tutorial printed to my backup folder and then

button. This will fill in in the details of the File Name and location in this window.

Select File to Link to	Links
Tutorial Core Log.pdf Metric core picture 2.bmp 6502.6-6505.jpg 6505-6507.5sm.JPG	Save Undo New Del First Prev ? Next Last Depth
	File Name: Tutorial Core Log.pdf
	Path: C:\PowerSuite_V12\Linked_Files\
	Remarks: PowerCore Printed File in PDF format
File name:     Tutorial Core Log pdf     Open       Files of type:     All files (".")     Cancel	Open File in Windows® Open Folder

3.) Now the user can **Type** in some **remarks** to tell the viewer what the file is (if the user wishes to identify the file they have attached) and then **click** on the **Save button**. This will activate the Shortcut Options Window.

		Shortcut Options
		Record saved successfully. Choose one of the following shortcuts.
		Start New Record Move to Next Record Exit Cancel
4.)	Click on the	<b>button</b> . This will insert the paperclip symbol where you originally right clicked and
,	link the file to the log.	

# 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.