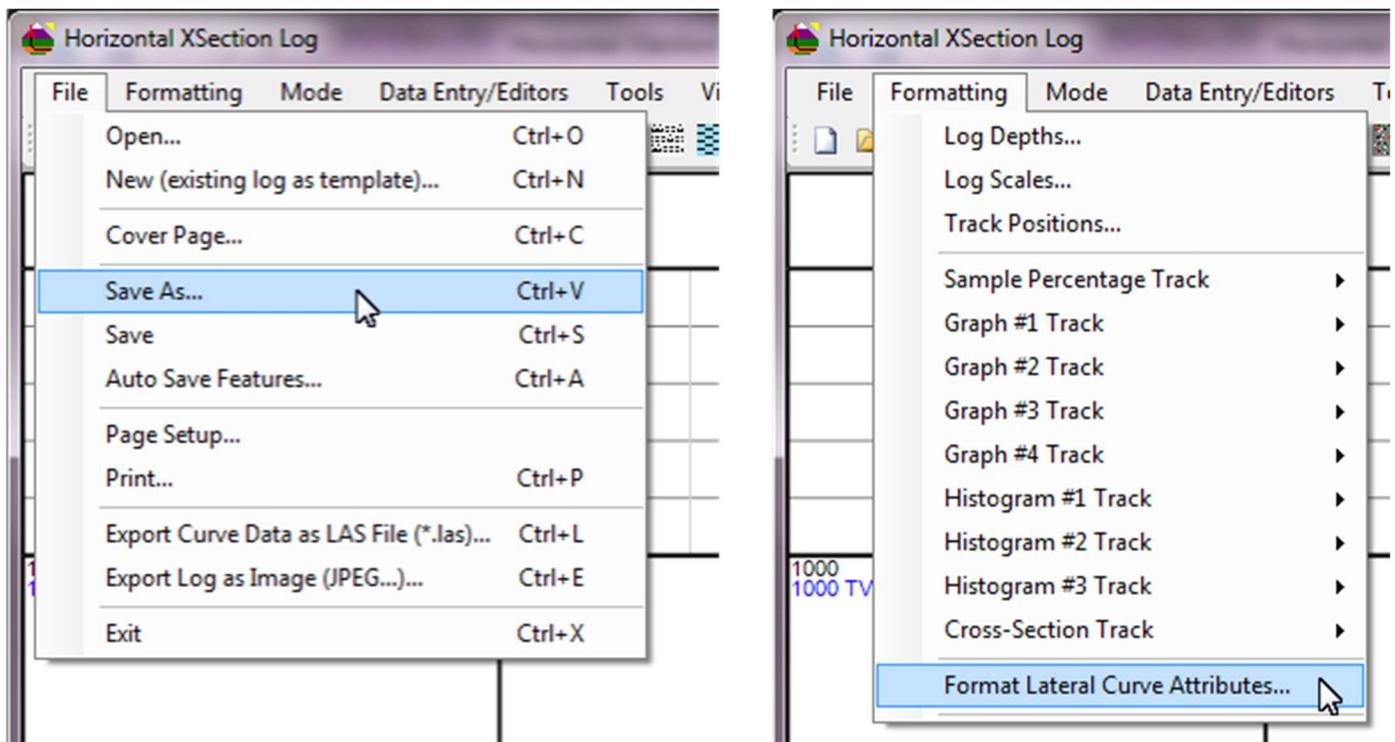


Chapter 3 - The File and Formatting Menus

The "File" menu holds many of the menu items found in all windows programs. The "Format" menu allows the user to easily and quickly format their log in a variety of ways. The following chapter discusses some of these features.



The File Menu

Open and New

The File->Open selection will open a saved file. Use the File->New (existing log as template)... option to begin a new file with the same file formatting as the file presently open.

Cover Page

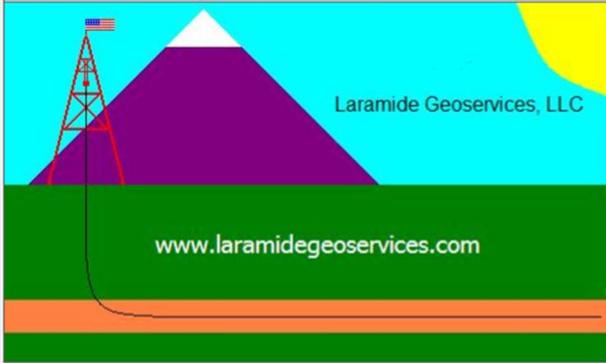
Select File->Cover Page... from the Menu Bar to open the Title Page Editor.

This editor is used to fill in the title or cover page header that begins every log (see below image) Click the "Import Header File" button to load a template cover page, or use the "Export Header File" button to save a template cover page. Drag and drop an image to the upper left-hand corner image box with your company logo or any image file (JPEG, TIFF, BITMAP, PNG, GIF, etc...) that you desire. Images that are larger than 5" x 3" will automatically be resized to fit, and print in the upper left-hand corner of the title page.

Click on the "Notes" button to open the edit notes window. This is the lower right-hand corner area (red circle) of the title page, and is a blank area that can be used for many purposes. For example casing data, or mud data or a short well synopsis can be entered in this area (see below).

Title Page Editor

Logging / Consultant Company and Personnel Information



Well Information

Well Name: Southerm Ute 32-12 NB #2-1H

Field: Wildcat - Niobrara Member of the Mancos Shale

Region: San Juan Basin

Coordinates: 37.04915°, -108.12668°

Location: SWNW Sec. 2, T32N 12W - 1752' FNL, 523' FWL

State / County: La Plata, CO

API Index: 05-067-09872-00

Rig Operator: Key #887

Rig Supervisor: Bruce Patterson & Dee Giles / David Wood

Directional Company: Pathfinder

Ground Elevation: 6297.0 **K. B. Elevation:** 6317.0

Spud Date: 2/10/2012

Drilling Completed Date: 3/08/2012

Company / Operator Information

Company: Red Willow

Company Address: PO Box 369
Ignacio, CO 81137

Company Geologist(s): Jason Hooten, Rebecca Helms

Geologists: Peter Falk, Kyle Welty and David Stich

Company: Laramide GeoServices, LLC

Company Address: PO Box 20658
Albuquerque, NM 87154

Buttons: Clear, Drag and drop logo, use clear to delete, Import Header File (*.hdf), Export Header File (*.hdf), Done, Notes

Notes Editor

Edit Notes

Title: Well Synopsis

Main Text:

The Four Paws Resources' Husky #1 consist of a single lateral targeting the Lower Ignacio Coal seam. the well was drilled as a J-hook lateral in November of 2009. The main purpose of this lateral was to drill as much coal as possible, but also to keep doglegs to a minimum so as to run an EPC liner to TD.

The Fruitland Coal Seam tops came in as expected with the target Lower Ignacio Coal top at 3080' TVD. However, a 3' to 4' shale stringer was encountered in the middle of the Lower Ignacio Coal Seam. The decision was made to try to stay below this interbed. This was successful, and 1608' of target coal was drilled.

A second Lateral #2 targeting the Upper Ignacio Coal is planned for the future.

Done

Cover Page

	<p>Well Information</p> <p>Field: Chihuahua Formation</p> <p>Region: Poodle Basin</p> <p>Coordinates: Lat 37° 01' 31.935", Long 107° 27' 50.310</p> <p>Location: 458' FSL, 2156 FEL, Section 26 T34N, R14W</p> <p>State: Colorado, La Plata County</p> <p>API Index: 12-34567-89</p> <p>Rig Operator: Husky Drilling Rig #1</p> <p>Rig Supervisor: Mr. Harry Mutt</p> <p>Directional Company: Labrador Drilling</p> <p>Four Paws Resources Geologist: Spot</p> <p>-----</p> <p>Ground Elevation(ft): 6547.0 KB Elevation(ft): 6559.0</p> <p>Spud Date: 11/17/2009</p> <p>Drilling Concluded: 12/1/2009</p>
<p>Well-Site Geologists</p> <p>Chinle Falk and Yesa Falk</p> <p>Furry Dog Mudlogging 12345 Perro St. Vizsla, WY</p>	<p>Well Synopsis</p> <p>The Four Paws Resources' Husky #1 consist of a single lateral targeting the Lower Ignacio Coal seam. the well was drilled as a J-hook lateral in November of 2009. The main purpose of this lateral was to drill as much coal as possible, but also to keep doglegs to a minimum so as to run an EPC liner to TD.</p> <p>The Fruitland Coal Seam tops came in as expected with the target Lower Ignacio Coal top at 3080' TVD. However, a 3' to 4' shale stringer was encountered in the middle of the Lower Ignacio Coal Seam. The decision was made to try to stay below this interbed. This was successful, and 1608' of target coal was drilled.</p> <p>A second Lateral #2 targeting the Upper Ignacio Coal is planned for the future.</p>
<p>Well Name and Company</p> <p>Well Name: Husky #1</p> <p>Four Paws Resources 98765 Rawhide Ave. Likestobark, MT 56534</p>	

Auto Save Features

Automatic and Backup Saving Features

Automatic Backup File Feature

Automatic Save Feature

Done

Select File->Auto Save Features... from the menu bar to open the "Automatic and Backup Saving Features" window.

There are two features: Automatic Backup and Automatic Save.

Automatic Backup File Feature

By default, the "Automatic Backup File Feature" is enabled whenever you start a new Horizontal XSection session. The "Automatic Backup File Feature" will create a folder called "XSectionBackup" in the same folder that you are saving your Horizontal XSection Log file. The

"XSectionBackup" folder will contain a backup version (*.hxl) of the file that you are working on. This file will be called "BACKUP + file name". For example, if you create a new XSection file called "Lateral1" and save it to "My Documents", the Horizontal XSection Log will create a folder called "XSectionBackup" in "My documents" and create a backup of your lateral1 file named "BACKUPLateral1".

Moreover, the backup file will be updated after changes are made to your file. If the program or the computer crashes, the backup file will be the most up-to-date file. If you remove either the "XSectionBackup" folder or the "BACKUP + filename" file, the Horizontal XSection program will create a new folder and/or file. This creates a handy way of backing up your files. The process is to move either the backup file or the XSectionBackup folder to a removable drive, and the Horizontal XSection software will create a new one in its place.

If you use one of the BACKUP files to recover a session, quickly rename the file and move its location. Otherwise XSection will create a new XSectionBackup folder in the old XSectionBackup folder with the name BACKUP + filename + Backup + filename. This can become confusing fast. The work around is to quickly rename the file in a new location as soon as you open the backup file.

Automatic Save Feature

The Automatic Save Feature is slightly different. This option, by default, is **not enabled** when you begin a new XSection session. The Automatic Save Feature, when enabled, saves your file before you make new changes to your log. For example, if your file is named "lateral1" and located in the "my documents" folder, and you select the "Text" editing Mode after just entering lithology beds using the "Lithology" editing mode, XSection will save the "lateral1" file without the user being prompted.

The automatic save feature, when enabled, automatically saves your file whenever you:

- change editing Modes (i.e. select either Lithology, Text, Add Image, Draw Line, or TVD Log),
- open the Survey Editor for any lateral,
- open the Graph Editor for any graph tracks,
- open the Histogram editor for any of the histogram tracks
- open any of the formatting menu items,
- open the "Log Depths..." menu item,
- open the Log Scale..." menu item,
- open the Format Lateral Curve Attributes... menu item,
- open the "Track Positions..." menu item.

Page Setup and Printing

These menu items are discussed in the Chapter on printing (Chapter 8)

Export Log as Image (JPEG, TIFF, BMP....)

The "Export Log as Image (JPEG, TIFF, BMP....)" menu item allows the user to export a complete log (with title page and legend) as either a JPEG, TIFF, BITMAP, GIFF or PNG file. Each of these file types have their advantages, which are listed below, file sizes are for average logs:

JPEG - easily uploaded by photo processing software, ~ 2 MB fileⁱ.

TIFF - common oil field file type, high quality graphics usually over 2 MB fileⁱⁱ.

BITMAP - A great way to fill up your hard drive (euphemism for very large files ~50 MB fileⁱⁱⁱ).

GIFF - small files (usually under 1 MB file^{iv}), low quality, web browser friendly.

PNG - web browser friendly, high quality, ~2mb file^v - use this file format to send to your clients if file size is not an issue.

Export Curve Data as LAS File (*.las)...

The “Export Curve Data as LAS File (*.las)...” menu item saves all the curve data in all the graphs as a LAS file. Presently, data is saved in LAS 2.0 file format.

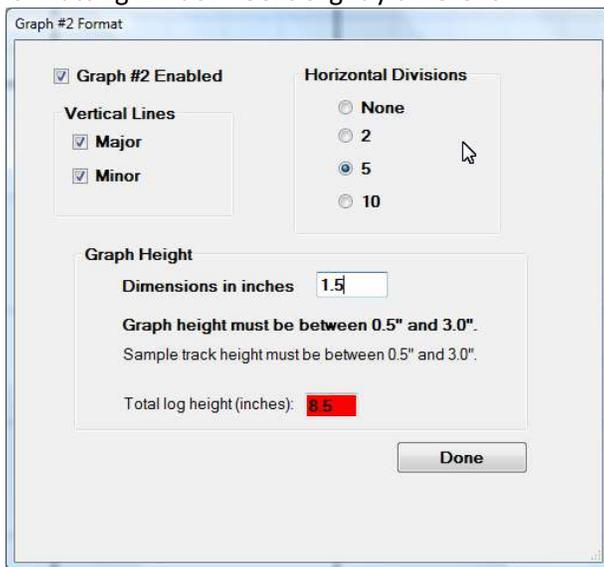
The Format Menu

Log Formatting

Click on Formatting->Log Depths..., Formatting->Log Scales..., or Formatting->Track Positions... to set the log depths, the log scales or the track positions, respectively.

Formatting Menus

Each track has its own formatting window, and all follow a similar layout. For example, the below screen example is the format menu for “linear-type” Graph #2 (Formatting->Graph 2 Track->Formatting...). If the graph is set for semi-log, the formatting window looks slightly different.



The format window allows the user to enable or disable the track (except the cross-section track which cannot be disabled), set the vertical lines, set the horizontal divisions, and set the height dimension. The format window also keeps track of the total log height in inches, and turns red if the total height exceeds 8". This indicates that the total height is too large for landscape printing on 11" x 8.5" inch paper. Note the program will not stop the user from setting a height dimension that is over 8", rather the red is a warning to indicate possible printing problems.

Histogram Format Menu

The Histogram Formatting menu has a few added features that differentiate it from the other format menus. These added features are a "Histogram Name" section, a "Scale" drop down menu, a

"Divisions" drop down menu, a "Value Properties" section a "Which Way is Up" check box (see below example), and a "Factors" section.

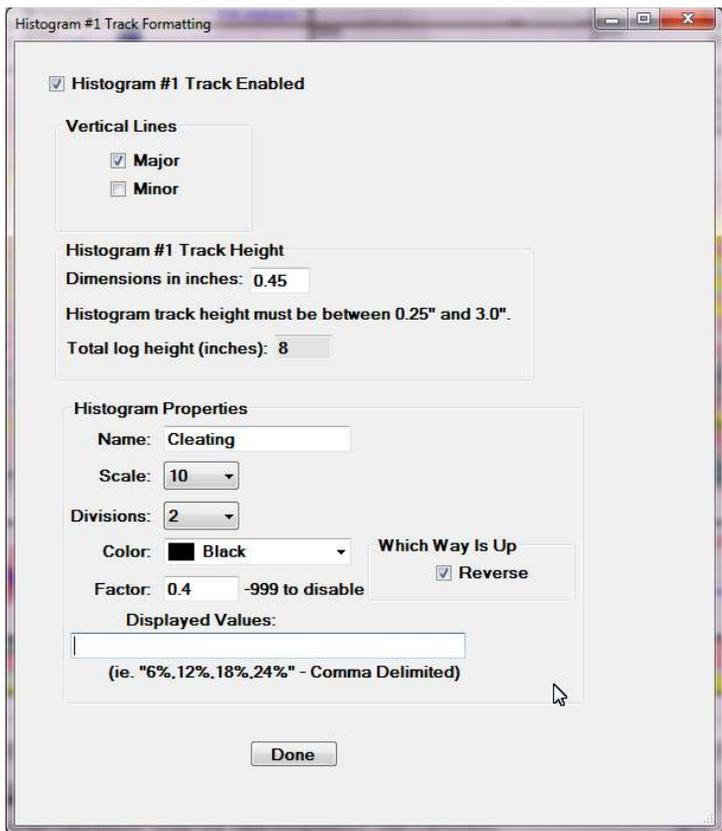
Histogram Name

This section names the Histogram track. For example if you want the Histogram track to be used for porosity, type in "Porosity". Alternately, you could also use the histogram for cleating, grain size, rounding, flare length, directional driller ego size, etc. The name the user gives the histogram will be displayed on the histogram track when the log is printed.

Value versus Factor Mode

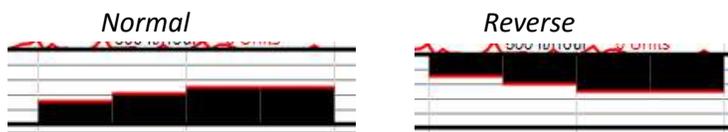
Simply, if the "Factor" text box is set to the value "-999", the histogram is in values mode and will have the values shown in the displayed values text box. Otherwise, the histogram will have a scale dependent on the "Scale" drop down menu value multiplied by the "Factor" value. In value mode, the scale drop-down menu is ignored, similarly, in factor mode, the "Displayed Values" values are ignored.

Chapter 9 goes into more detail about the difference between value and factor mode and the histogram track in general.



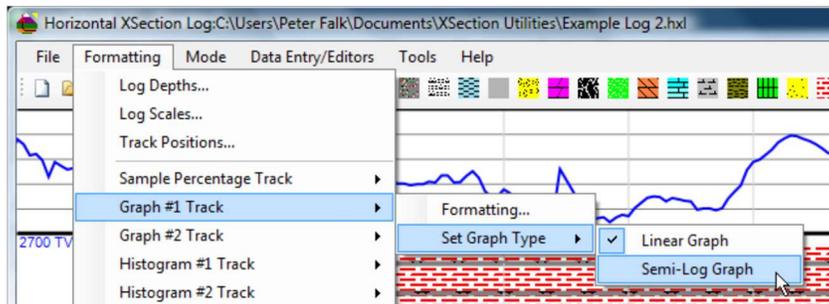
Which Way is Up

This section of the histogram format window sets the direction the histogram will be drawn. Normal (the default setting) draws the histogram bottom to top. Check reverse and the program draws the histogram top to bottom.



The Graph Tracks

The graph tracks also have the additional menu item that allows the user to select either a linear or semi-logarithmic format.



See "Chapter 4 - Graph Data" for more information on both linear and the semi-log formats and how to edit their corresponding scales using the "Graph Data Editors" under the "Data Entry/Editors" main-menu item.

Formatting the Cross-Section TVD Scales

From the menu bar, click Formatting->Cross-Section Track->Edit TVD Scales... to open the "Set TVD Scales" window. Each scale has three parts: The measured depth (MD) where the scale change begins, the TVD for the top of the scale, and the vertical TVD Scale.

These three parameters are set by the user. The vertical TVD scale is limited to the following selections: 50', 100', 200', 300', 400', 500', 1000', 2000', 3000', or 5000'. The TVD for the bottom of the scale is the TVD top + the vertical TVD scale. For example, the highlighted scale change, in the below example, shows a scale change occurring at 4400' MD, with the top of cross-section being at 2900' TVD and a 50' vertical TVD scale. Though it is not shown, this would put the bottom of the scale at 2950' TVD.

When you load the Horizontal XSection program, it begins with a default TVD scale of 500', set at 1000' MD with the TVD top scale set at 1000' TVD. There must always be at least one scale for the cross-section, and the first scale cannot be deleted. To change a scale, select the scale from the list of scales on the left, change the TVD Top Depth or the Vertical TVD Scale by choosing the appropriate radio button, and click the "Add or Change Scale" button. To create a new scale, type in a measured depth value in the text box labeled "Scale at MD" that does not exist in the list of scales. Then choose a TVD top value and a vertical scale value, and click the "Add or Change Scale" button. To delete a scale, simply select the scale from the list and click the "Delete" button.

Tip: Do not set a new scale right before or right after a 100' interval (i.e. 2195' MD or 2205' MD), this will result in overlap between the new scale text and the MD text values that occur every 100'. It is fine to set a new scale at a 100' interval (i.e. 2100' MD). Other safe values are to set the scale at 50' (i.e. 2150' MD).

MD	TVD Top	Vertical Scale (ft)
2540	2570	200
2800	2725	200
3200	2840	100
4400	2900	50

Add New or Change Existing Scale

Add or Change Scale

Scale at MD: 4400

TVD Top Depth: 2900

Vertical TVD Scale for Cross-Section

50' 500'

100' 1000'

200' 2000'

300' 3000'

400' 5000'

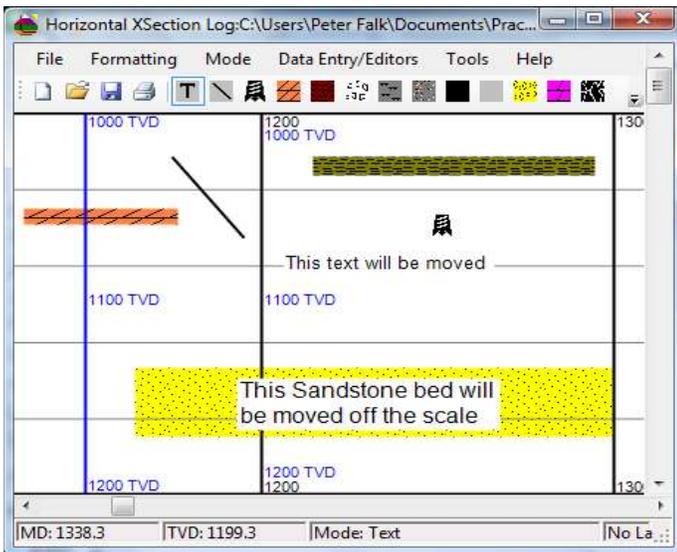
Delete Scale Close

The Effects of Adding a New TVD Scale

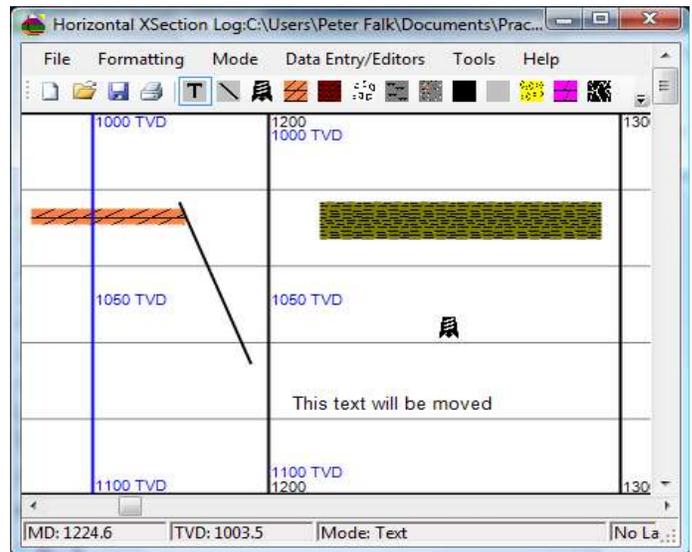
If you create a new TVD scale, or change an existing scale, all text blocks, lines, images, TVD logs, and lithology beds in the area of the new scale, will be affected. However, changes in scales affect objects differently. For example, lithology beds as well as TVD logs, are dependent on the vertical scale of the TVD scale. If you change the vertical scale of a TVD scale from 200' to 100' (see below picture), all lithology beds in the new scale area will become twice as large. Moreover, lines will move in relation to the new scale. Images and text will move their position, but their size will remain the same. The location of all elements is dependent on the position of the upper left corner of each element. A scale change to the right of the left-hand corner of an object will

not move or affect that object. The below example shows what happens to different objects when the vertical TVD scale is changed from 200' to 100'. Notice the anhydrite (orange) lithology bed is not affected by the scale change because the left-hand corner of the element is to the left of the scale.

Before Scale Change



After Scale Change



A common occurrence when adding or changing scales is to move, either on purpose or accidentally, elements out of the viewing area (i.e. the sandstone and accompanying text above). The elements still exist in computer memory but are no longer visible. Change the scale back and the elements will appear again. It does not hurt anything, other than taking up memory, to have elements that are not visible, but if you feel the need to delete elements that are no longer visible, use the "Clean-Up Log Utility" in the Tool menu. This utility will delete all elements that are wholly and some elements that are partly out of the viewing area. The same is true if you shorten the log length (Formatting->Log Depths...).

Format Lateral Curve Attributes

Use this menu item too format the lateral curve attributes like line, width, rotate color, slide colors, etc. This menu items is described in more detail in the Chapter "Getting Started" (Chapter 2), and anyway, is self-explanatory.

ⁱ Created a 1.98 MF file from the Example Log.hxl - easily opened by Windows Photo Gallery and good quality.

ⁱⁱ Created a 2.38 MB file from the Example Log.hxl - easily opened by Windows Photo Gallery and high quality (better than JPEG).

ⁱⁱⁱ Created a 46 MB file from the Example Log.hxl - cannot see any reason to use this format.

^{iv} Created a 857 KB file from the Example Log.hxl - opens easily in Windows Explorer or Mozilla Firefox, but low quality.

^v Created a 1.76 MB file from the Example Log.hxl - opens easily in Windows Explorer or Mozilla Firefox, and high quality.