

# Veritas Hampson-Russell Software Release CE7 / R1

November 15, 2004

## Release Notes

Product Name	Main Programs Supplied and Version Numbers			
AFI	<a href="#">afi (2.0)</a>			embedding <a href="#">avo (6.0)</a>
AVO	<a href="#">avo (6.0)</a>	<a href="#">geoview (4.0)</a>	<a href="#">elog (4.0)</a>	embedding <a href="#">pro3d (6.0)</a>
eLOG	<a href="#">elog (4.0)</a>	<a href="#">geoview (4.0)</a>	--	--
EMERGE	<a href="#">emerge (4.0)</a>	<a href="#">geoview (4.0)</a>	<a href="#">elog (4.0)</a>	--
GLI3D	<a href="#">gli3d (7.0)</a>	embedding <a href="#">glipick (7.0)</a>	--	--
ISMap	<a href="#">ismap (5.0)</a>	<a href="#">geoview (4.0)</a>	--	--
PRO4D	<a href="#">pro4d (2.1)</a>	<a href="#">geoview (4.0)</a>	--	--
PROMC	<a href="#">promc (1.6)</a>	<a href="#">geoview (4.0)</a>	--	--
STRATA	<a href="#">strata (6.0)</a>	<a href="#">geoview (4.0)</a>	<a href="#">elog (4.0)</a>	batch bstrata (6.0)

### New Features and Enhancements:

This list covers changes since CE6/R5 released in May 2004. Please see <http://www.veritasdgc.com/vhr> for details of previous software updates. In this release, all programs will have access to a New Features presentation, an Adobe PDF file, from the Help button of the main window. The PDF presentation there will give you a better picture of some of the advanced features listed below.

### Geoview (4.0):

The user interface of this program has been completely rewritten to improve loading and quality control of well log database which is the first step and is critical for most other Veritas Hampson-Russell applications. Adding to the existing features (such as communicating with OpenWorks / OpenSpirit / GeoFrame data stores, importing and exporting logs as ASCII/LAS files and Well Type Mapping, Log Type Mapping, etc.), we made the following new changes to improve the software.

1. Replaced the old **Display Well List** dialog with an **Explorer Window** which displays a more user-friendly interactive table of wells, log curves and tops.
2. Allowed easy **copy of depth-time table** from other P-Wave logs.
3. Improved options in **duplicating log** within current wells and **duplicating well** within current database.
4. Provided a sophisticated **selection filter** to select wells and logs based on names and types before data QC. You can even build your own selection filter.
5. Provided a **detailed summary report** for logs and tops. This option gives an excellent overview of all the data amplitudes and ranges stored in the database.
6. Supported log amplitude **unit conversion** based on its measurement type. For example, you can easily convert data from meters to feet and convert sonic amplitudes from transit time to velocity.
7. Allowed changing of log type and unit globally based on log name. For example, you can set all logs in all wells with the name "DT" to "P-Wave" with unit "us/m".
8. Provided a **base map view** right within Geoview itself. This feature helps you verify if all well XY locations are loaded correctly.
9. Added options in the log data table view to **search data samples**, for example that have undefined or bogus values. This option is an addition to the original one which checks for monotonic changes.
10. Allowed **export of all data tables** as external ASCII text files.
11. Allowed **copy-and-paste** of table data to exchange it with that of the system clipboard. For example, you can copy log data to an Excel spreadsheet.
12. **Captured all runtime messages** to a text file. These message files are stored in the "<welldatabase>.wdb/messages" subdirectory. This option is implemented under the Help button of the main program.
13. Added interactive interface for changing **default directory paths** and default look-and-feel of the interfaces. This option is available under the File button of the main program.
14. *Included improvement in the [OpenWorks WLExchange](#) below.*

### eLOG (4.0):

1. Added **horizon picking** options to the log display window.
2. Added **LMR transformation** of logs.
3. Added **S-Impedance transform**.
4. Added ability to read the default log ranges and units from a **user preferences** file (Scale and Details dialog page).
5. Allowed users to set log plot amplitude ranges globally for all the wells.
6. Allowed log correlation using wavelet with sample interval (say 3 ms) different from that of the seismic (say 4 ms).
7. Added **Frequency Filter** as a Math option, together with options such as running average and median filter, to smooth any log curve.
8. Improved the amplitude readout at the cursor location.
9. Added a wavelet phase rotation slider in the Log Correlation option.
10. Added a preset 2 x zoom/unzoom on the display vertical scale.
11. Improved handling of zone filters in the Cross Plot module.
12. **Captured all runtime messages** to a text file. These message files are stored in the "<project>.prj/messages" subdirectory. The option is implemented under the Help button of the main program.

### AFI (2.0):

1. Brought the program from research to production mode and made it available from Geoview.
2. Allowed to share project with AVO.
3. Added **automatic scaling** of seismic volume amplitudes with well log data along a horizon.
4. A new User Guide, User Reference and Guide data were added.
5. *This program includes all the [AVO Analysis](#) capabilities below.*

### AVO (6.0):

#### AVO Modeling

1. Allowed **picking of synthetics / seismic** directly within the modeling window.
2. Handled **Q Log** in modeling.
3. Added an option to generate **Zoeppritz synthetics as an angle gather**.
4. Improved Roy White wavelet extraction interface.
5. Improved iso-angle display for check-shot corrected logs.
6. **Rock Physics Template** from the well log data cross-plot dialog.
7. Added an option to have a minimum block size for speeding up Zoeppritz and Aki-Richards synthetics.
8. *This module includes all the capabilities and enhancements under [eLOG](#), the general log curves editing and processing module.*

#### AVO Analysis

1. Added a new high-resolution **Radon Transform** for multiple and noise attenuation.
2. Provided a new pre-processing option to perform **AVO offset scaling and balancing**.
3. Added **AVO seismic amplitude analysis** on Near/Far, Min/Max, etc. (similar to the current Intercept/Gradient methods). It is implemented in both the AVO Attribute Map and the Pre-stack Pick Analysis options.
4. Add CDP/trace smoothing and normalization in the Pre-stack Pick Analysis option.
5. Added **Inverse Q** Filtering.
6. Allowed building of velocity model from **time-velocity table (e.g. stacking velocities) together with horizons**. This velocity model can then be used as a standard velocity data volume in all AVO analysis and processing options.
7. **Rock Physics Template** from the seismic data cross-plot dialog.
8. Add more controls to improve pre-stack data **navigation** in AVO seismic dialog.
9. *This module includes all the capabilities and enhancements under the [general seismic processing](#) section below.*

### EMERGE (4.0):

1. Added an option to shift the target logs from any application window.
2. Added an option to export the Difference Logs to database from the application window.
3. The prediction errors at well locations can now be exported into a file along with the X and Y coordinates.
4. Added warning messages when previous training lists are about to be reset.
5. Shift tops when shifting logs in the main Emerge window.
6. Corrected the apply transform option to a target log under NN training.
7. Fixed handling of transforms and cross plots done for a subset of wells.
8. Allowed the double click action in all the lists.
9. Some revisions to the well data loading interface.
10. *This program includes most of the capabilities and enhancements under the [general seismic processing](#) section below.*

#### GLI3D (7.0):

1. Allowed input of a variable V0 for each shot point.
2. Allowed output of the tomographic grid as a SEG-Y depth file.
3. Compiled LINUX version.
4. Sped up the SGI version by a factor of 6.
5. Extended color capability to screens not supporting pseudo-color visual.
6. Corrected errors in static displays.
7. Added ability to reach all three help files: main user documentation, user guide and detailed theory, from the main window.
8. Post "original" shot IDs and receiver IDs.
9. Added Import/Export Control Points as an ASCII file.

#### ISMap (5.0):

1. Allowed output of the Map Maths option as a new input seismic type for further geostatistical analysis.
2. Fixed a bug in the output data when a seismic mask is applied.
3. Added a general Map Maths (with user defined formula) for multiple ISMap maps and for maps from different data sessions.
4. *This program includes most of the capabilities and enhancements under the [general seismic processing](#) section below.*

#### PRO4D (2.1):

1. Most new features were updated in the **CE6/R5** release. Some new features are also found in the shared eLOG and General Items sections of this document.
2. *This program includes most of the capabilities and enhancements under the [general seismic processing](#) section below.*

#### PROMC (1.6):

1. Most new features were updated in the **CE6/R5** release.
2. Attached shaping filter.
3. Attached cross normalization.
4. Attached old depth-time S-Wave to new FRM S-Wave.
5. Fixed Vp/Vs calculations from depth-time; it did not use selected input.
6. Put warning on rebinning menu regarding spacing too small.
7. *This program includes most of the capabilities and enhancements under the [general seismic processing](#) section below.*

#### STRATA (6.0):

1. Allowed more user controls on the parameters in **Colored Inversion**.

2. Allowed adding of low frequency trend from model to the output of Colored Inversion.
3. Added **LMR Transforms** automation.
4. Changed the default of an initial model to be a smooth one.
5. Handled multiple 2D lines better in wavelet extraction, inversion and data slicing. (It works for SEG-Y input data format only.)
6. *This program includes all the capabilities and enhancements listed under the [general seismic processing](#) section below, and the [OpenSpirit](#) and [SeisWorks](#) links further below.*

### General Seismic Processing Items:

1. Added a **Data Manager** button to put together all the data import/export options.
2. Added a **Data Explorer** window to list all the data stores within a project together into a single explorer type window. It is a much friendlier user interface, allowing better data management and easier access of data internal information and processing history. It also lists some new and extremely practical information. For example, it can tell you which well has been modified within the project and has been exported to the external Geoview database.
3. Added a comprehensive set of **Map Utilities** under the Process menu of most Seismic Dialogues. It allows all different types of utilities including masking, cross-plotting and a general Map Maths calculator. Many of these options were originally available in the ProMC and Pro4D packages. Also under Map Utilities, there is a new **Map Maths** which is similar to the current Log Maths and Trace Maths. It allows you to build your own comprehensive math functions to operate on multiple data slices and horizons, or to convert from one data type to the other.
4. Improved **Arbitrary Line Creation**:
  - a) Added an option to create an arbitrary line by joining the selected wells.
  - b) Added an option to create an arbitrary line along a deviated well.
  - c) Added "insert a node" and "delete a node" buttons in the arbitrary line menu.
  - d) Allowed creation of an arbitrary line from a horizon map.
5. Added option to do direct **Time-to-Depth Conversion of Horizons**.
6. Allowed handling of **wavelet with an odd sample interval**.
7. Improved **Roy White's Seismic Scanning** menu and documentation.
8. Add a **Frequency Domain Merge** processing option to sum any two data volumes together in frequency domain. A typical use of it is to add together a low and a high frequency velocity model from different sources before using them as one initial SEG-Y model in the Strata Inversion.
9. Sped up project save and restore when it has a lot of window sessions.
10. Fixed up most of the initial default data directory in file choosers for import/export of external data.
11. **Captured all runtime messages** to a text file. These message files are stored in the "<project>.prj/messages" subdirectory. The option is implemented under the Help button of the main program.

## Connectivities:

### WLEXchange / GeoFrame (Solaris)

No changes.

### WLEXchange / OpenWorks (Solaris, Linux, Irix)

1. Corrected handling of UWI for both import and export.
2. (Solaris & Linux Only) Upgrade to Landmark 2003.12 (Emerald City).

### SeisWorks (swsv) (Solaris, Linux, Irix)

1. Allowed **reading of horizons** from Landmark.
2. (Solaris & Linux Only) Upgrade to Landmark 2003.12 (Emerald City).

### OpenSpirit (Windows, Solaris, Linux)

1. Added exchange of horizons.
2. Added cursor-tracking broadcast from all seismic windows & basemap.
3. Added connections for ISMap, Emerge, Pro4D, ProMC
4. Added Linux version.

## Platforms Supported / Tested:

### 1) **SUN, Solaris 8, 9**

- i) Note: **Solaris 2.6** is not officially supported but except for the new version of Geoview, all applications are expected to run with no problem. To run on Solaris 2.6, please rename the executable "**geoview.v3**" (which comes with the same installation) to "**geoview**". This version supports Solaris 2.6 but only with an older style of interfaces as in Geoview version 3.

### 2) **SGI, IRIX 6.5.x (6.5.12m, 6.5.19f)**

### 3) **Linux, Red Hat 7.2, 9.0, Enterprise 3**

### 4) **Windows 2000, XP**

### 5) **Exceed 7.1+. Exceed 3D extension is needed for using the 3D well path viewer in GEOVIEW.**

## CD Labels and Compilation Dates:

<b>Platforms</b>	<b>Label</b>	<b>Date</b>
SUN / Solaris	CE7/R1	November 15, 2004.
SGI / IRIX	CE7/R1	November 15, 2004.
PC / Windows	CE7/R1	November 15, 2004.
Linux / Red Hat	CE7/R1	November 15, 2004.

<b>Program compilation date:</b>	<b>Solaris</b>	<b>IRIX</b>	<b>Red Hat</b>	<b>Windows</b>
<b>AFI</b>	Nov. 4, 2004.	Nov. 7, 2004.	Nov. 4, 2004.	Nov. 4, 2004.
<b>AVO</b>	Nov. 12, 2004.	Nov. 12, 2004.	Nov. 12, 2004.	Nov. 12, 2004.
<b>eLOG</b>	Nov. 4, 2004.	Nov. 4, 2004.	Nov. 4, 2004.	Nov. 4, 2004.
<b>EMERGE</b>	Nov. 4, 2004.	Nov. 4, 2004.	Nov. 4, 2004.	Nov. 4, 2004.
<b>GEOVIEW</b>	Nov. 9, 2004.	Nov. 9, 2004.	Nov. 9, 2004.	Nov. 9, 2004.
<b>GLI3D</b>	Oct. 30, 2004.	Oct. 31, 2004.	Nov. 1, 2004.	---
<b>ISMap</b>	Nov. 4, 2004.	Nov. 4, 2004.	Nov. 4, 2004.	Nov. 4, 2004.
<b>PRO4D</b>	Nov. 12, 2004.	Nov. 12, 2004.	Nov. 12, 2004.	Nov. 12, 2004.
<b>PROMC</b>	Nov. 12, 2004.	Nov. 12, 2004.	Nov. 12, 2004.	Nov. 12, 2004.
<b>STRATA</b>	Nov. 4, 2004.	Nov. 4, 2004.	Nov. 4, 2004.	Nov. 4, 2004.
	<b>Solaris</b>	<b>IRIX</b>	<b>Red Hat</b>	<b>Windows</b>
swsv (SeisWorks) R2003	Nov. 4, 2004.	Nov. 5, 2004.	Nov. 5, 2004.	---
swsv (SeisWorks) Emerald City	Nov. 4, 2004.	---	Nov. 4, 2004.	---
WLEx (OpenWorks) R2003	Oct. 18, 2004.	Oct. 19, 2004.	Oct. 19, 2004.	---
WLEx (OpenWorks) Emerald City	Oct. 18, 2004.	---	Oct. 19, 2004.	---
WLEx (GeoFrame) 3.8.1	Oct. 24, 2004.	---	---	---
WLEx (GeoFrame) 4.0.2	Oct. 24, 2004.	---	---	---
WLEx (GeoFrame) 4.04	Oct. 24, 2004.	---	---	---
OpenSpirit Version Supported	2.5 & 2.6	---	2.5 & 2.6	2.5 & 2.6
OpenSpirit Version Compiled (Hampson-Russell client side)	2.4	---	2.4	2.4
FlexLM Applications (geoview, avo, etc.)	8.1b	7.0d	9.0	8.1
FlexLM License Manager (Hamp-Russ, and Imgrd package)	8.1b	8.1b	9.0	8.1

*Prepared by Arthur Lee. Last revised on March 11, 2005.*

[Table of Contents](#)