



Changes between GLOBEClaritas V7.1 and V7.2

30 June 2020 to 23 December 2020 (Revisions 15633:16000, libclaritas 1055:1115, python-shared 946:987)

The GLOBEClaritas team is pleased to deliver another quality release to all our users, with significant improvements to the user experience and the third of 2020 under the Petrosys banner.

We would like to take this opportunity to remind users of the change of email addresses for support, support@globeclaritas.com and for general information info@globeclaritas.com. We appreciate your continued support of the GLOBEClaritas software and welcome your feedback that enables us to continually improve the software.

Release Highlights

- GLOBEClaritas now supported on Redhat Enterprise Linux (RHEL/CentOS) 8 and Ubuntu20.04 Linux operating systems.
- Support of Python3 across all operating systems and move to PyQt5 for graphical applications. As of this release Python 2 and PyQt4 are no longer supported.
- SeisCAT application now allows users to manage and interact with Geometry/Statics and Velocity files. Users can choose to display a list of Data, Geometry, Static or Velocity files on the data pane. The user can interact with the different data formats using suitable editors, applications, or utilities.
- The crooked (wiggly) line CDP binning solution from the GLOBEClaritas Geometry application can now be added as a batch process using a new standalone application "batch_wiggly_line".
- Support for Schlumberger eNode SegD Revision 3 format.
- Support for UKOOA P1/11 format navigation data, the ADDP190 module can now read and merge P1//11 as well as P1/90 formats.

Supported platforms

Supported platforms for this release (V7.2) are RHEL7/8, Ubuntu 18.04/20.04, and on Windows via Cygwin-64 or Windows Subsystem for Linux.

Windows are incorporating an X-server into the Windows Subsystem for Linux (WSL 2), this will allow us to retire support of Cygwin, (early 2021), as part of the 7.3 release cycle., This will benefit users on Windows, with the opportunity to have stable and beta releases installed and improved runtimes for jobs.

Claritas now supported on RHEL 8 and Ubuntu 20.04.

GLOBEClaritas is now supported on RedHat Enterprise Linux (CentOS) 8 and Ubuntu 20.04-64 Linux operating systems. Support has been dropped for RHEL 6 and Ubuntu 16.04-64.

Support for Python 3 and PyQt5.

With the transition to RHEL 8 and Ubuntu 20 we have transitioned GLOBEClaritas to Python 3 and PyQt5, as suitable PyQt4 packages were not easily available for these operating systems.

The decision was also taken to cease support of Python 2 and PyQt4 on Cygwin-64, RHEL 7 and Ubuntu18.04. This has optimised future development work allowing us to focus on one version of Python/PyQt and makes working cross platform simpler for users and the support team.

Existing Python scripts supplied by GLOBEClaritas for Griffon or as examples of what you can do with Python have been updated to be Python 3 compliant.

SeisCAT now manages Geometry/Statics and Velocity files.

One of the challenges for a file based processing system like GLOBEClaritas is the management of both seismic data files and associated support meta data files such as velocities/geometry and statics files. New functionality has been added to the GLOBEClaritas SeisCAT application to allow users to manage these support files not only within the application but also the seismic data file it already manages.

The SeisCAT application has a simple dropdown menu where the user can choose what files they want to display. The choices are; Seismic; Geometry; Statics or Velocities and as you toggle between the file types the display will update to show the relevant datasets.

As with the Seismic datasets, a single Left Mouse Button (LMB) click will highlight the relevant file, a Double LMB click will open the file with the most suitable editor or application. For example; a GLOBEClaritas NMO file will open in the ISOVELS application on a highlighted file; a single Right Mouse Button (RMB) click will open the dropdown menu where the user can select other applications/utilities or editors to use with a file, rename/delete the file or even view the file properties.

If you have any suggestions for other file types that should be accessible from the SeisCAT application or other utilities/applications that it would be useful to see in the selection menu for the existing file types, please let us know.

Batch application of Crooked line binning

One of the key stages of any processing project is the creation of the CDP geometry, on 2D projects for Land or Marine surveys where you need to use the surveyed real world coordinates. The

interactive Geometry application can be quite labour intensive if you are applying the same CDP binning parameters to multiple lines.

In the V7.2 release we have implemented new functionality that enables users to perform the 2D CDP binning process as a scriptable command line process by creating a new command line utility called “batch_wiggly_line”.

The application allows users to update an existing GLOBEClaritas geometry database (.geom file) with the 2D CDP information based on information supplied by the user in a simple text file. The user need only supply the parameters they want to vary from the standard parameters, the other parameters will then use the standard defaults for this process. For example, in the supplied text file the user might only list the CDP_Spacing, Binsize in the inline crossline direction and First CDP ID as shown below:-

```
# Example of parameter file for the Claritas batch_wiggly_line utility
#
CDP_SPACING:12.5
BINSIZE_ALONG:7.0
BINSIZE_PERP:50
FIRST_CDP_ID:1001
```

The utility is run using the command `batch_wiggly_line -params binning_parameters.txt -geom line123.geom`

Users can create a shell script where multiple .geom files can be updated one after the other with minimal input from the user. In conjunction with the GLOBEClaritas ADDSPS or ADDP190 and the MAKEGEOM module the geometry database can be created, and CDP binning applied without the need to use the GLOBEClaritas Geometry application. However, it would be advisable to utilise the capabilities of the application to QC the geometry you have created.

Support for Schlumberger eNode SEG-D Revision 3 format

The READSEGD module is now able to read the SEG-D Revision 3 format recorded by the new Schlumberger eNode nodal acquisition system.

Other SEG-D Revision 3 datasets may require additional updates to the READSEGD module to extract the data and headers successfully. If so, please send us some example data and we would be happy to investigate further.

Support for UKOOA P1/11 format nav data.

The GLOBEClaritas ADDP190 module can now read UKOOA P1/11 format navigation data as well as P1/90 format and merge with the seismic data.

Bugs found and fixed

3397: In the *REFSTAT2D* application, for shots that were not at the physical peg location, and for which the shot-receiver raypath was at a high angle from the CDP line, and if some picks were being left out of the solution, then the geometry would be incorrect for those shots.

3401/3402: Resolved a 64 character limit to input file names in the HVA module and the ISOVELS application. The filename, including the directory pathname, now has no limitation.

3405: The JCS functionality could result in the XSJE job editor aborting if the user didn't press the 'Check Vars' button before clicking on the 'JCS run' button. This has been resolved.

3409: The RESSTAT module was aborting when the trace count * 32 exceeded 2Gb of memory.

3421: IMAGE_K3D – When reading from multiple input datasets, the list of traces to process had a bug that resulted in the application trying to read all traces from a single file.

3429: IMAGE_K2D – This module requires an HDF5 dataset as input. If user-supplied CSEG-Y format data was specified, the module would abort without any error message. The module now informs users if the input format is not valid.

3430: The sv_recover application was aborting when run on HDF5 input datasets when trying to write to the HDF5 dataset trace header.

3440: IMAGE_K2D – A memory leak has been resolved which could cause the job to fail.

3444: The segy_analyser application would abort if a SEG-Y file was supplied whose binary header had the number of samples coded to 0. The user is now warned, and the application will continue.

3445: The viewmodel application would crash if the user opened the vels window, closed it, and then tried to reopen it.

3450: The SRME3D module was failing when reading multiple input files.