



## RokDoc<sup>®</sup> 5.3 Release Notes

### **Pressure**

- PressureView fully implemented in RokDoc - including Reference database searching tool
- P overburden pressure prediction module
- Normal compaction pressure prediction module – also generates pore pressures.
- Shale Trend pressure prediction module
- Pressure trends
- New look Pore Pressure Calculator

### **VSP**

- New functionality to load and display VSP data – available as a maintenance update.
- VSP processing, including wavefield separation, deconvolution and corridor stacks – available as a new add on module.
- Anisotropic analysis, including 3- and 4-component functions, walk-away analysis and walk-around analysis – available as new add on module.

### ***'Modelling While Picking' - The RokDoc Plug-in for Schlumberger Petrel Software***

- The Petrel user is no longer restricted to the specific functionality provided by the plugins. Once data has been transferred from Petrel to either RokDoc 1D or 2D the user can then access the complete suite of RokDoc functionality.
- Log Vs Prediction plugin
- Log Vp prediction plugin
- Log Rho prediction plugin
- Volume Fraction Generator plugin
- Saturation Generation plugin
- Wavelet Extraction plugin
- Depth/Time Conversion plugin
- Access to RokDoc WellViewer
- Export well to .rok file

### ***RokDoc-ChronoSeis***

- This is the first release of ChronoSeis<sup>®</sup> integrated with RokDoc.
- The appearance of the program has been improved to make it easier to use and more familiar to RokDoc users.
- ChronoSeis now has direct access to the RokDoc database. Hence well data, cross-plot polygons, wavelets, fluid sets etc. created in RokDoc are available in ChronoSeis 3D/4D models.



- The structural / stratigraphic framework definition has been automated whilst still allowing full user control. This makes setting up a model a much more intuitive process.
- 3D geological models in depth can be created from time surfaces (and wells) using the new Geostatistical depth conversion.
- New interactive Stochastic Inversion makes use of ChronoSeis' geological model framework and property-realisation on the fly. Fast, user-friendly Stochastic Inversion is now a part of integrated reservoir modelling.
- A host of other improvements including:
  - Improved Seismic Net Pay Mapping
  - Statistical Wavelets for 3D/4D synthetics and inversion
  - Hidden-well Validation in the Neural Network property modelling tool.

## ***RokDoc Updates***

### **Wavelet extraction**

- Can now use deviated wells
- Select between seismic and well sample intervals

### **Log Blocking for Synthetics function**

- Generates blocked Vp, Vs and Rho logs in such a way that the errors introduced into the resulting synthetic trace are minimised. Enables the optimum number of blocks to be found, and the resulting errors to be analysed.

### **Seismic operations**

- Updated and improved seismic track - display seismic sections in the Well Viewer
- Arbitrary lines and arbitrary line seismic viewer
- Smooth view in seismic track and seismic viewer
- Full waveform – Ray traced NMO, advanced options
- 2D Seismic import (need SEG Y with XY info in each trace header - we will not be able to input 2D SEG Y which requires a navigation file).
- 2D Seismic display
- Clip extents when importing a 3D volume now available for OpenSpirit.

### **Gassmann Dry Rock Modelling**

- More overlays
- Poisson's Ratio QC
- User digitised models
- Load / save models
- Export dry data points

### **Stretch & Squeeze**

- Improve well ties by applying stretch and squeeze to depth to time conversions using the new Stretch and Squeeze QC function



## General Updates

- Significant performance updates to well panels; RokDoc now has a much smaller memory footprint
- Workflower upgrade - links to pdf documents, add images
- TVDs – TWT Conversion improvements
- New linear regression methods in cross-plot
- Working intervals in cross-plot no longer linked to active flags
- Show x, y, inline and crossline at bottom of well viewer
- Export surfaces to ASCII from surface dialog
- Advanced options panel in gather function
- Bind display options in gather tracks
- Apply plot range to all logs of same type in track
- Working intervals displayed in well section of tree.
- Improved methods of selecting wells in well panel
- Easier to create RokDoc gathers from prestack seismic. Gathers can now be created at any trace location
- User definable matrix cross-plotter
- Bind multiwells horizontally
- Rose diagrams
- Chronostratigraphy and Lithostratigraphy schemes
- Reference projects – only project 'Administrators' can save changes.

## RokDoc-2D Updates

- New Functions:
  - Coloured Inversion
  - Log blocking
  - Neural Networks
  - Pressure Perturbation
  - User Programmer
  - User Calculator
  - Stretch and Squeeze
  - Gassmann Dry Rock Modelling
- Improved performance
- Smoothed rendering
- The top and bottom of the model is now ignored in the interpolation
- Can now snap (e.g. to seismic) when picking events
- Multiple snap seed points can now be added when measuring attributes
- Snapping now has a tolerance, i.e. don't snap if the point is too far from the seed (for event picking, attribute measuring and AVO maps)
- Add multiple 2D lines of section in a single session
- Multiple viewers in a single session
- Change horizontal 'trace' sampling
- Deviated well planning
- Improved attribute measurements along events, to cope with branches and phase reversals
- Fill bodies using Neural Networks and Rock Physics Overlays (cross plot trend lines)



- '2.5D' modelling – within RokDoc 2D quantities can be varied in and out of the screen, in addition to left and right, effectively adding a 3rd dimension to tuning wedges and layer cake conceptual models.
- Archie correction in Gassmann fluid substitutions.

## **EM modelling in 2D**

- Electro-Magnetic modelling capabilities added using algorithm from PGS Multi-Transient EM. Common offsets, common shot gathers and real time analysis (RTA) sections can be viewed.

## ***RokDoc Help Updates***

- Context Sensitive Help - All dialogs and functions in RokDoc include a help button or to allow the user to go directly to the help page for that functionality
- Keyword Searching – RokDoc Help allows the user to do keyword searching globally to find all entries on a certain topic
- Bookmarks – Pages that are referred to time and time again can be stored as a bookmark in RokDoc Help for a quick reference
- Menu Structure – RokDoc Help has been organised to match the menu structure used in RokDoc.
- Linking – RokDoc Help includes internal page links for related information.
- Printing – Sections can be printed separately or as a batch using the print capabilities in RokDoc Help.

## ***Notes for existing RokDoc users:***

There are no changes required to software or hardware configurations between RokDoc 5.2 and RokDoc 5.3.

### **Installation**

Older RokDoc installations do not need to be removed before installing the new version; two or more releases can work happily side-by-side. It is important, however, that the new version is installed to a different directory than previous versions. It is recommended that once the new RokDoc installation has been verified, earlier versions are uninstalled. See the RokDoc Installation Guide for more information on installing RokDoc.

RokDoc 5.3 requires a 5.3 version license to run the software. If you have any trouble or questions regarding your licenses, please contact [licensing@ikonscience.com](mailto:licensing@ikonscience.com).

### **Upgrading Projects**

RokDoc projects will automatically be upgraded when the project is opened with the new version of RokDoc. However, the upgraded project is not backwards compatible. Please contact Ikon Science for information on converting a project back to an older version.

Temperature data are now stored in the newly added Temperature Sets instead of Discrete Value Sets. The new Temperature Sets now include an option to state whether the temperature data is 'raw' or 'corrected'. During the upgrade all temperature data has been assumed to be 'corrected'. If projects previously included 'raw' data the Temperature Set will now need to be updated manually.



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Pressure sets now need to have an internal consistency between the Pressure Tool and the Pressure Type. During the project upgrade the pressure sets are checked to ensure consistency. If the pressure sets are not consistent a message will be displayed asking you to convert the pressure types to match the pressure tools or to convert the pressure tool to 'Other' and leave the currently specified pressure type.

Overburden pressure logs (LogType = P<sub>ob</sub>) are now assumed to comply with the following convention:

- Logs with a raw ZType of TVDml contain pressures relative to the pressure at the mudline / ground level (eg  $P_{TVDml} = P_{Absolute} - P_{TVDml0}$ )
- Logs with any other raw ZType contain absolute pressures.

## **RokDoc Support**

This release is fully-supported by Ikon Science. Please contact Ikon Customer Support with any questions, problems, or suggestions that you have while using RokDoc 5.3.

**Hours 7:30-18:00 GMT (UK)**  
**Hours 8:00 - 17:00 CST (US)**  
**Hours 8:00 – 17:00 Kuala Lumpur (Malaysia)**

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### Version Dependencies:

RokDoc version 5.3 has been tested and will be supported on the following platforms:

Windows XP SP2  
Windows Vista (except Petrel plugin and OpenSpirit link)  
Red Hat Enterprise Linux 5

RokDoc version 5.3 has been tested and will be supported with the following software versions:

OpenSpirit v2.9.3  
Petrel v2007.1  
OpenWorks v2003.12  
SeisWorks v2003.12.0.1

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**RokDoc<sup>®</sup> Version 5.3**