RokDoc
Pressure Prediction

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Analyze direct and indirect (mudweights) pressure measurements to establish the subsurface pressure distribution and geological bases for the development of overpressure through geological time. Assess drilling data, image logs and lab data and perform dynamic and static measurement calibration to determine stress regimes and interpret historical drilling and production performance. Combine pore pressure and geomechanical models with 3D elastic properties to understand risk, forecast drilling, and optimize production performance.

Benefits

Efficient
Reduce cost of complex wells
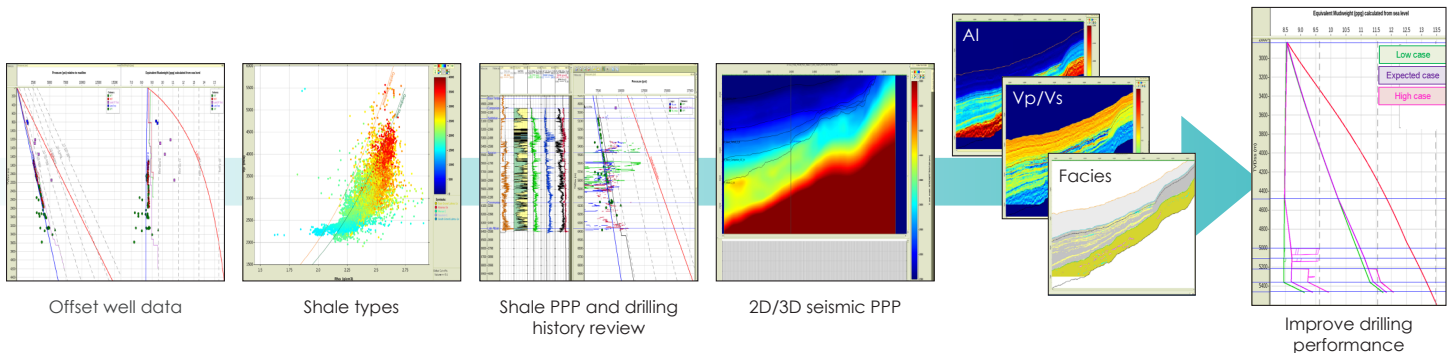
- An integrated cross-discipline platform for mitigating appropriate risks
- Consistency in database and approach across multiple assets
- Seamless interaction between pre-drill to real-time monitoring

Safer
A more systematic approach to de-risking

- Capture and interrogate all available legacy and modern datasets
- Build robust, geologically sensible pore pressure models
- Quantify uncertainty effectively

Easier
Logical workflows with intuitive GUIs

- Best practice pressure analysis captured in workflows
- Less time consuming to deliver value to assets
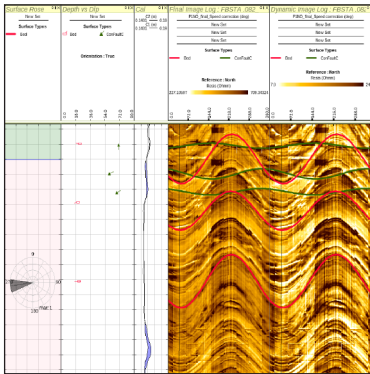- Impactful communication of risk

Pore Pressure Workflow

Offset well data	Shale types	Shale PPP and drilling history review	2D/3D seismic PPP		Improve drilling performance

Pressure Prediction Module Add-ons

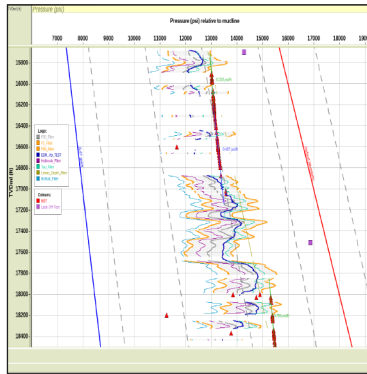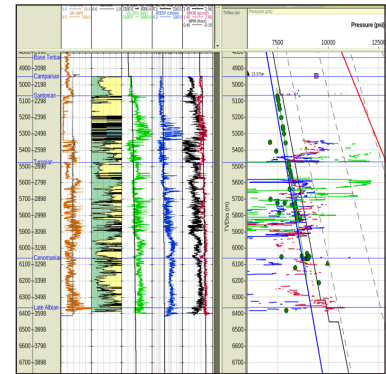| RokDoc Platform	Pressure Prediction Module		
		Geomechanics and Image Logs	Interpretation of image logs for borehole breakouts, sedimentology and fractures. Interactive geomechanical model building, analysis and scenario modeling. Key features include; surface picking and image log conditioning, static-dynamic property calibration, wellbore stability, stereonets and more.
		Seismic Pressure Calculator	Develop 3D models for prediction of subsurface pore pressures away from well control. Key features include; 3D model building, zone based overburden and normal compaction trends, seismic velocity calibration, stochastic pore pressure prediction, multi-realization analysis and well planning.
		PPC	Perform stochastic analysis of pore pressure models to assess prediction uncertainty PPC and optimize model parameters. Rank models in terms of uncertainty before applying to new well locations or 3D seismic. Key features include; 15 pressure models including Eaton, Bowers, Dutta, Tau, Miller, etc.

Technical Features

- Direct connectivity to Petrel* and other 3rd party software using Open Spirit connector
- Batch loading of core, well and seismic datasets
- Drilling event sets and drilling history plots
- Rich QC and editing via log and cross-plotter functionality
- Single, matrix and user defined cross-plotting with well viewer interactivity
- Log prediction function for missing / incomplete log data
- Recipe based pore pressure workflow
- Vertical stress (overburden) generator to compute lithostatic trend
- Shale trend for exclusion of non-shale intervals using sophisticated filtering
- Normal compaction trend to generate pore pressure profiles
- Stress / Poisson ratio trend analysis
- Pore pressure calculator provides most comprehensive suite of pore pressure models in industry
- Fracture pressure calculator
- Fracture pressure QC plot
- Pressure build up plots for QC and interpretation of direct pressure data
- PressureView direct pressure data analyzer for reservoir pressures, fluid gradients and contact analysis
- Fully integrated with Rock Physics and Reservoir Characterization Modules

Surface rose diagram, tadpole plot and interpreted image log

Pore pressure predictions and uncertainty for well planning

Geological interpretation of drilling events, mudweights and pore pressures

Supported Data Types

- Raw well logs
- Composite, processed well logs
- Interpreted well logs
- Image Logs (surface sets, DITF)
- Discrete value sets
- Checkshot data
- Directional surveys
- Formation tops / markers
- Core data (PoroPerm, Elastic)
- SCAL (Capcurves)
- Litho / chronostratigraphy schemes
- Mud logs
- Pressure data (MDT, RFT etc)
- Integrity data (FIT, LOT etc)
- Drilling event data
- Breakouts
- VSP (zero offset/walk-around)
- Post-stack seismic
- Pre-stack seismic
- Horizons
- Corner Point Grids (CPG's)
- Polygons

Data Import Formats

- LAS
- DLIS
- ASCII
- XLS
- JPEG
- TIFF
- SEG-Y (REG/IRREG)
- ECLIPSE.EGRID
- ECLIPSE.GRDCL
- SGRID
- WVL
- WAV
- WAVE
- Import from secondary project
- Import from external project
- Petrel* Interconnector
- OpenSpirit

Visit www.ikonscience.com or email info@ikonscience.com to discover more and request a demo.

System Requirements

RokDoc is supported on the following operating systems:
64bit Windows: Windows 7, Windows 10
64bit Linux: RHEL 6, RHEL7

Processor / hard disk requirement:
Preferred: dual quad core processor / SSD
Minimum: quad core processor / fast rotational speed HDD

System Memory (RAM) requirement:
Preferred: 64GB
Minimum: 8GB (16GB practical minimum for RokDoc 3D / ChronoSeis)

Graphics card requirement:
Preferred: NVIDIA Quadro K5200 (desktop) / NVIDIA Quadro K5100M (laptop)
Minimum: NVIDIA Quadro K4200 (desktop) / NVIDIA Quadro K3100M (laptop)

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*Mark of SLB