IP Software Overview

Delivering precise answers to tough questions

Ross Brackenridge (Subsurface Software Manager)
Paris, October 2019
IP Overview

IP is...
- Fast,
- Multi-Well,
- Flexible,
- Great Value,
and Multi-Discipline

IP – for the lifetime of your wells
IP is FAST

- Drag and Drop Loading
- Browse, Display, Interpret in minutes
- Intuitive Interface
  - Quick to Learn
  - Easy to use
- Interactive Graphical picking of parameters
  - Results immediately updated whenever parameters are adjusted
  - New Titled Parameters!
- Wellsite Data Links
  - Auto-update analysis as new data arrives
IP is ACCURATE

- IP is the best tool for the computation of Porosity and Sw which is the core task of the Petrophysicist
  - We don’t confuse Vcaly and Vshale!
- IP Basic includes workflows for many complex situations:
  - Multi-Mineral,
  - Thin Beds,
  - Organic Shales,
  - NMR Interpretation

See SPWLA paper: LIFTING THE FOG OF CONFUSION SURROUNDING CLAY AND SHALE IN PETROPHYSICS, Paul Spooner, Lloyds Register (Senergy)
IP is MULTI-WELL

- Quickly interpret multiple wells (100’s if you want!)
- Full Interactivity of parameters lines remains
- 3D Visualization allows geological trends to be identified
- Global Parameter Sets for quickly updating MW interpretations
IP is FLEXIBLE – Fully Customizable

- Build and run your own modules with our User App framework
- Coding only required when adding the background calculations and can be done in a whole range of programming languages
- Build your own modules with the Graphical Workflow Manager
- Customize all plot templates header templates etc
- Use Corporate folders to centrally store all customized templates
IP is Great Value

IP Base Module contains **everything** needed for a complete, deterministic, **multi-well**, interactive interpretation:

- Data Loaders and exporters with Drag & Drop
- Database Links (Petrel, Geolog, Geolog ASCII)
- Environmental Corrections
- Editing, splicing, filtering, depth matching, etc
- Viewing, Histograms, Crossplots, Map view
- Plotting, horizontal log plots
- Quick-look Basic Analysis
- Comprehensive Deterministic Workflow
- Calculations, Formula & User Apps (programs)
- 3D Petrophysics
- Organic Shales
- Sigma CH Sw
- NMR Interpretation
- **and even more!**
Advanced Formation Evaluation

- Monte Carlo
  - Uncertainty Analysis
- Mineral Solver
  - Non-Deterministic
  - Error minimising
IP for Curve Prediction and Rock Typing

- Curve Prediction
  - Fuzzy Logic
  - Neural Network
  - Multi-Linear Regression

- Rock Typing
  - Principal Component Analysis
  - SOM

- Domain Transfer Analysis (Industry 1st)
Multi-Discipline – IP for Wellsite Operations

- ChronoLog
- Xstream Connect (WITSML real time link)
- Cement Evaluation
- Geosteering
Multi-Discipline – IP for Geologists

- Image Log Analysis
- Facies/Rock Typing
  - SOM including 3D-SOM (industry 1st)
  - K-Mean Clustering
Multi-Discipline – IP is for Geophysicists

- Fluid Substitution
  - Average Gassman
  - Skelt Laminated Sands
- Synthetic Seismograms
- Acoustic Processing
Multi-Discipline – IP is for Reservoir Engineers

- Hydraulic Flow Units
- Saturation Height Modelling
- Formation Testing
- Production Log Analysis
Multi-Discipline – IP is for Geomechanics

- Pore Pressure
- Wellbore Stability
- SandPit3D (Sand Failure)
Fast
Accurate
Multi-Well
Flexible
Good Value
Multi-Discipline
Thank you

Please contact:
Ross Brackenridge
Subsurface Software Manager
Ross.Brackenridge@lr.org