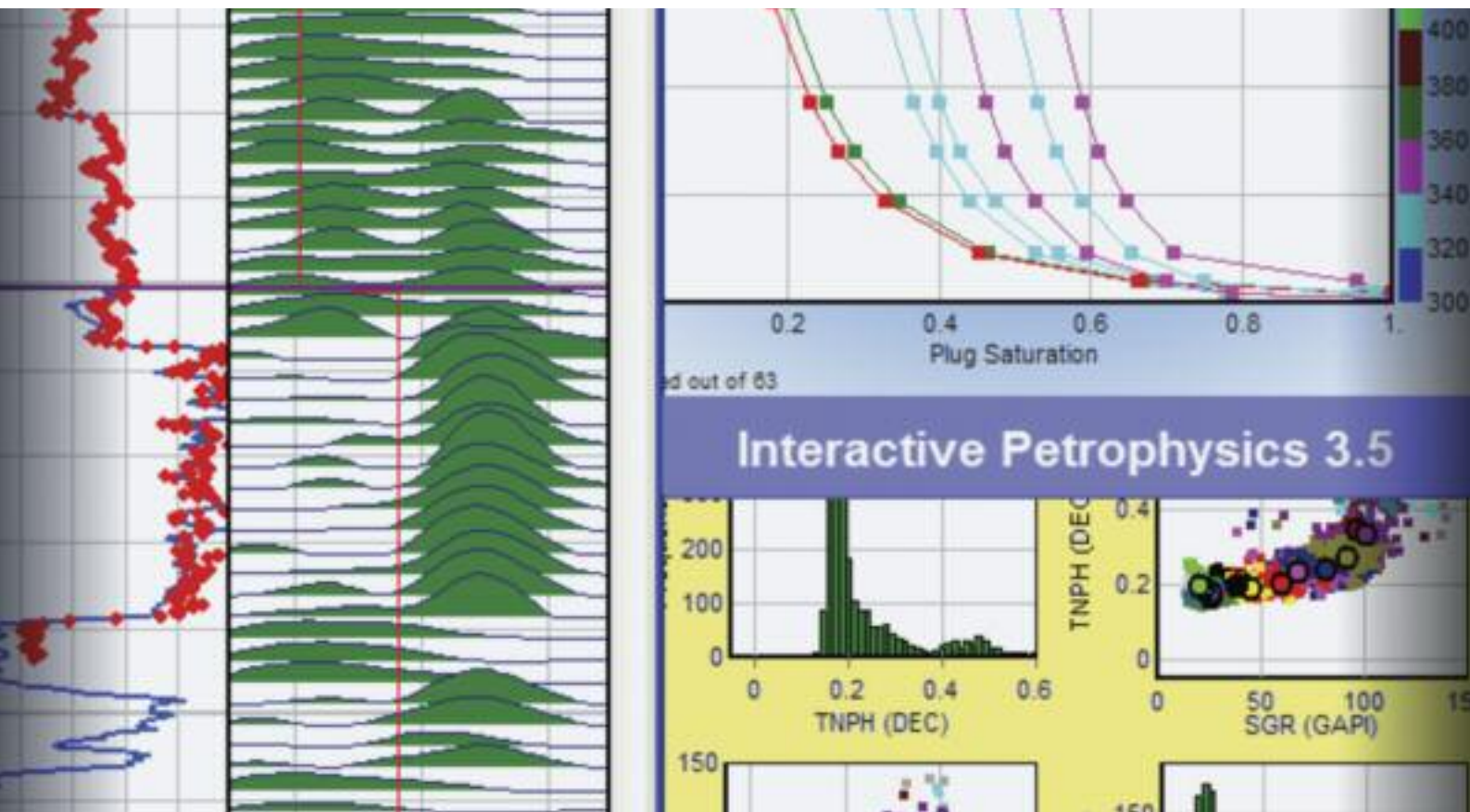




IP courses

# Fundamentals of Interactive Petrophysics 3.5

Developed by petrophysicists, for petrophysicists.



This unique, Senergy-developed course provides both experienced users and novices with enhanced skills in IP. The deeper understanding gained will enable them to make full use of software.

## Aims

Interactive Petrophysics 3.5 was developed by a petrophysicist, with a view to work as petrophysicists want to work, but never thought possible! The software is different by design - portable, quick and versatile. It is an easy-to-use log analysis tool, ideal for both geologists and petrophysicists. Geologists may wish to quality check of their log data and experienced petrophysicists can carry out multi-zone, multi-well petrophysical field analyses.

This unique, Senergy-developed course provides both experienced users and novices with enhanced skills in IP. The deeper understanding gained will enable them to make full use of software.



### Benefits

On completion, course students will:

- be familiar with IP users interface and data structure
- understand the ethos behind IP
- know how to get data in/out of IP
- be able to present data graphically
- be familiar with short cuts, alternative approaches and hidden features
- understand how the editing tools work
- be able to perform calculations
- understand how the basic interpretation modules and approaches work
- appreciate the petrophysical concepts used in IP
- be able to run through a basic petrophysical interpretation
- know how to report the parameters and results.
- understand the multiwell and batching tools

### Who should attend?

Anyone who uses or wants to use IP.

While aimed at beginners, the course will also benefit those who have experience of IP but wish to broaden their practical knowledge of the software.

Anyone who requires using log, core or drilling data in their job.

### Duration

3 days

### Course Instructors

This course will be presented by Senergy's principal petrophysicists who not only have supported the development of the software and are expert users and mentors, but are highly-experienced practising petrophysicists. Senergy's petrophysical team bring over 350 years of experience on complex petrophysical issues obtained in diverse geological and geographical areas, on both conventional and unconventional reservoirs.

This unique, Senergy-developed course provides both experienced users and novices with enhanced skills in IP



Frank Whitehead - Interactive Petrophysics Development Manager

### Course description and modules

The course will be conducted using a combination of lectures and hands-on use of the software.

The style of the training is to include an introduction to petrophysics concepts and techniques along with the subsequent application in IP. The conventional course synopsis can be fine-tuned to meet the needs of a particular audience:

### Introduction to IP

#### Data management

- database file structure
- database navigation
- well navigation
- creating new wells
- loading data from external files
- exporting data to external files well information
- curve headers, types and sets
- deleting wells and curves
- copying wells and curves
- defaults
- curve history
- user help
- licensing

#### Presentation

- log plots
- zones and formation tops
- crossplotting
- multi-curve crossplots
- histograms
- multi-well log plot
- work areas
- well map
- montage
- curve statistics

#### Data types

- array curves
- core data
- picture curves
- text curves
- lithology / facies logs

#### Editing tools

- curve listing
- curve edit
- baseline shift
- depth shifting
- splicing curves
- curve filtering, averaging and rescale
- normalisation
- curve interpolation

#### Calculations

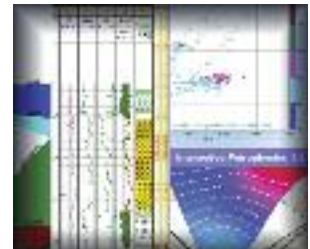
- temperature curves
- Rw from SP
- TVD
- pressure gradient analysis
- curve integration
- trend / square curves
- regression
- environmental corrections
- basic log analysis functions
- user formula
- multi line formulas

#### Petrophysical interpretation

- interpretation parameter sets
- basic interpretation
- clay volume determination
- porosity and water saturation
- cut-offs and summation reports
- parameter reporting

#### Multi-well Interpretation

- well sets
- multi-well curve headers and aliasing
- multi-well batch
- multi-well parameter distribution
- multi-well cut-offs and summations
- multi-well change parameter
- multi-well interactive crossplots and histograms
- view parameters in 3D

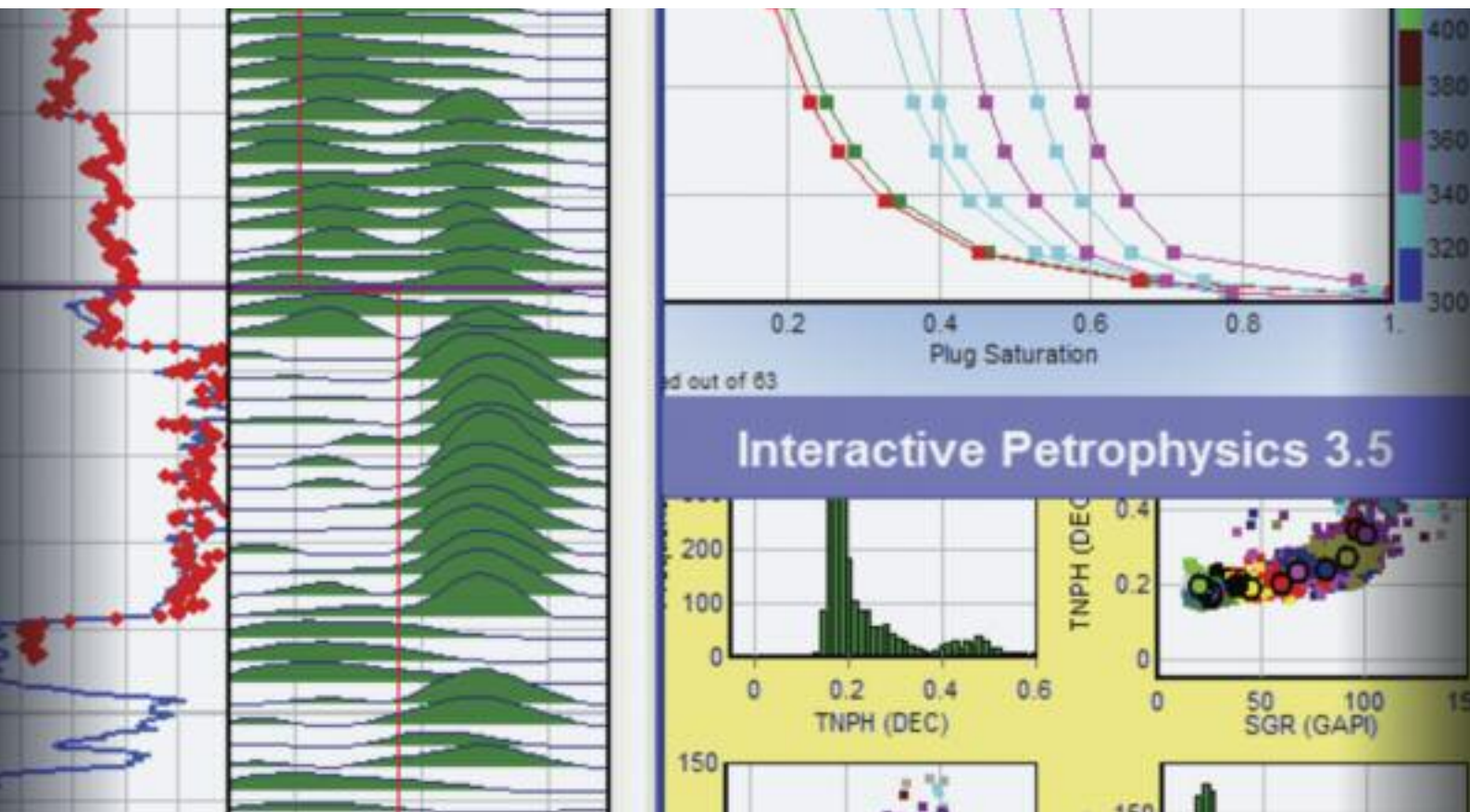




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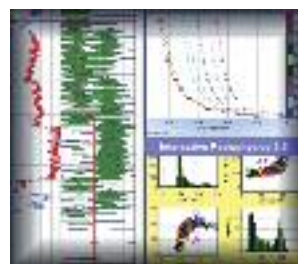
# Advanced Interactive Petrophysics 3.5

Developed by petrophysicists, for petrophysicists.



This unique, Senergy-developed course provides both experienced users and novices with enhanced skills in IP.

The deeper understanding gained will enable them to make full use of software.



Interactive Petrophysics has been developed over 10 years and is now used by over 300 companies, in more than 70 countries globally.



### IP aims

Interactive Petrophysics 3.5 was developed by a petrophysicist, with a view to work as petrophysicists want to work, but never thought possible! The software is different by design - portable, quick and versatile. It is an easy-to-use log analysis tool, ideal for both geologists and petrophysicists. Geologists may wish to quality check of their log data and experienced petrophysicists can carry out multi-zone, multi-well petrophysical field analyses.

### Course benefits

On completion, course students will: understand the fundamental concepts and approaches used be familiar with IP advanced modules user interface be aware of pitfalls and limitations be able to graphically present results be familiar with short cuts, alternative approaches and hidden features be familiar with user programming know how to report the parameters used and the results

### Who should attend?

Anyone who needs to use the advanced modules and features within IP. It is relevant for IP users who already have some experience of these modules, as well as users who have not.

### Duration

2 days

### Course Instructors

This course will be presented by Senergy's principal petrophysicists who not only have supported the development of the software and are expert users and mentors, but are highly-experienced practising petrophysicists. Senergy's petrophysical team bring over 350 years of experience on complex petrophysical issues obtained in diverse geological and geographical areas, on both conventional and unconventional reservoirs.

This unique, Senergy-developed course provides both experienced users and novices with enhanced skills in IP



Frank Whitehead - Interactive Petrophysics Development Manager

### Course description and modules

The course will be conducted using a combination of lectures and hands-on use of the software.

The style of the training is to include an introduction to petrophysics concepts and techniques along with the subsequent application in IP. The conventional course synopsis can be fine-tuned to meet the needs of a particular audience:

### Introduction to IP

#### Uncertainty analysis

- tornado plots
- Monte Carlo error analysis
- multi-well Monte Carlo

#### Statistical curve prediction

- fuzzy logic
- neural network
- multi linear regression

#### Lithology

- rock typing - cluster analysis
- mineral solver
- multi mineral option in Por/Sw module

#### Rock physics

- shear QC and prediction
- fluid substitution
- elastic impedance

#### Saturation height functions

- cap pressure QC and corrections
- capillary pressure functions
- functions from logs

#### Nuclear magnetic resonance

- NMR normalisation
- NMR interpretation

#### Pore pressure prediction

- overburden gradient
- pore and fracture pressure

#### Through casing saturation

- standalone pulsed neutron
- time-lapse pulsed neutron

#### Eastern European resistivity corrections

- with normal
- lateral only

#### User programming