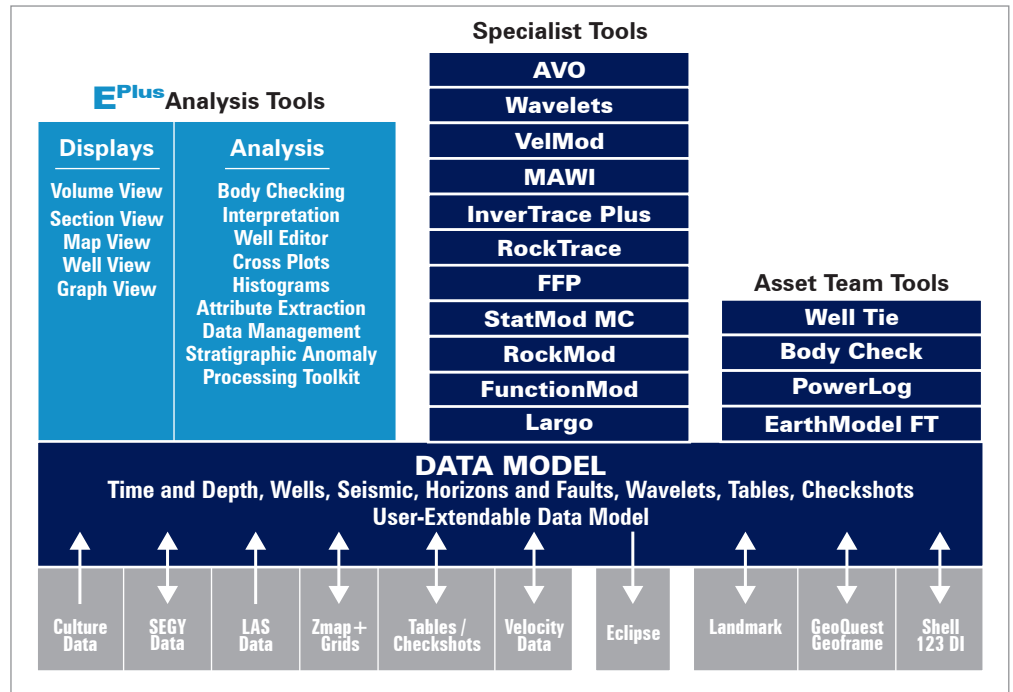


Petrophysics | Modeling | Interpretation | Characterization

Technology for Integrated Reservoir Characterization

The best way to manage hydrocarbon reservoirs is to base decisions on models constructed using all available data. To do so, you must be able to handle seismic data, geologic information, well log data and statistics. Jason™ does all this and more.

Fugro-Jason® takes a modular approach to creating applications in Jason. Rather than creating a large number of single-purpose tools, we have grouped them together in modules. These modules in turn become part of specific workflows to solve specific geoscience problems by integrating all the available information into a consistent reservoir model. This integrated earth model leads to more profitable development plans for the reservoir.



Jason is an integrated modular system sharing common data import and export interfaces, data model, and inter-process controls to work seamlessly together.

JASON™

AVO

AVO Attribute Extraction

Extract attributes from NMO gather data to make a first pass scan to detect amplitude anomalies, as well as an estimate of the seismic and elastic properties of the rocks. Intercept and gradient (*Shuey*), Vp and Vs contrast (*Smith&Gidlow*), Zp and Zs contrast (*Fatti et al.*), and the bulk, mu or density contrasts (*Gray et al.*) are supported.

Wavelets™

Normal Incidence and AVA Seismic Wavelet Estimation

Fugro-Jason has invested a great deal of resources in developing and implementing the most advanced wavelet estimation methods and a wide variety of QC capabilities to ensure that a high-quality inversion is obtained. Optional full waveform modeling method uses 1D wave propagation methods to generate PP or PS synthetic data.

VelMod™

Velocity Model Building

VelMod builds 3D velocity models from stacking velocities and calibrates these models to well control. These models can be used for time-depth conversion or as a low-frequency trend during seismic inversion.

MAWI

Multi-Attribute Well Interpolation

Low frequency models built with interpolated wells and seismic velocities are sometimes inadequate to properly characterize the reservoir. MAWI allows you to populate a low frequency model with the well data distribution based on one or multiple seismic attributes. This enables the low frequency model to follow trends seen in the seismic band, with the dense sampling that seismic data provides.

InverTrace® Plus

Constrained Sparse Spike Inversion

InverTrace Plus transforms seismic data to an acoustic impedance log at every trace. Acoustic impedance is a property of the rock layer itself, making stratigraphic interpretations easier and more accurate.

RockTrace®

Simultaneous AVA Constrained Sparse Spike Inversion

RockTrace is the only technology that quantitatively integrates well log elastic rock properties and AVA seismic to produce calibrated quantitative 3D volumes of rock properties such as p- and s-impedance, density, and lithology. An add-on module allows inversion of PP-PS data.

FFP

Facies and Fluids Probabilities

FFP is a valuable tool for understanding how to relate the elastic properties from seismic inversion to the rock properties on which drilling decisions are based.

StatMod® MC and RockMod®

Simultaneous modeling of facies and engineering properties with geostatistical inversion

StatMod MC and RockMod rely on MCMC algorithms to combine geostatistics with seismic inversion and produce highly detailed models of reservoir properties proven to be reliable beyond both well coverage and seismic resolution. Both applications create models of facies and engineering properties in depth that integrate and honor all input data and cross disciplinary knowledge of petrophysics, rock physics, geology, geophysics and reservoir engineering. StatMod MC and RockMod simultaneously invert facies and elastic properties using post and pre stack seismic data, respectively, to produce reservoir models fit for direct usage in flow simulations without rescaling. Such models are more efficiently history matched, retain geologic realism between the static/dynamic domains and offer unsurpassed levels of reliability in their predictive powers.

FunctionMod

Workbench Data Calculations

FunctionMod is a model manipulation and arithmetic tool for working with Jason Workbench data files. Complex functions can be created, including results that cascade into other computations.

Largo™

Multi-Well Rock Physics

It is important to be able to relate the elastic properties from seismic inversion to the rock properties of interest to geologists and engineers. Largo supports the building of project-specific rock physics models to establish these relationships between P-Impedance, S-Impedance and Porosity, Vshale, and Water Saturation.

Well Tie™

Multi-Well Alignment and Wavelet Estimation

Well Tie packages the Fugro-Jason industry-leading wavelet estimation algorithms and the Well Log Editor function into a single package for interpreters. Well Tie features a true multi-well wavelet estimation, and also features a straightforward workflow and QC's that give you confidence that the tie and wavelet are correct. With Well Tie, wavelet estimation is no longer a black art performed only by specialists.

Body Check

Automatic Geobody Capture

Body Check is a unique (and patented) approach to reservoir-level interpretation. From well log crossplots of elastic and petrophysical properties, you can define an area of points on the crossplot that correspond to reservoir within a certain zone. The the program automatically screens multiple data cubes to find the corresponding points in 3D. The user can review the results, tweaking the criteria and selecting the bodies to include in the final results, and then with one button click can produce a map of the top, base, and thickness of each captured body. Works in either time or depth.

PowerLog®

Petrophysical Software Suite

PowerLog is designed to be fast and efficient at what most log analysts and geologists spend most of their time on - log conditioning and editing. For advanced work, there are optional Rock Physics, Statistical Mineralogy, and Facies Classification modules that can be added to your installation.

EarthModel® FT

3D Geologic Model Builder

Build better geologic models in less time, and keep them up to date! With UpdateAbility, adding new faults, horizons, or wells to an existing model is easy. EarthModel FT also ties rock properties from geophysics into the geologic model better than any other application.

Fugro-Jason Technology

Tailor workflows to fit your project needs

Easily integrate results into other work

Update results with new well information

*Rely on continuing innovation from
dedicated team of research and technology
professionals*

*Enjoy local support and training from 20+
offices worldwide*

*Trust a tradition of quality from 25+ years of
development and almost 20 years in use*

*Gain a clearer understanding of your reservoir
in less time with results that match reality*

Fugro-Jason delivers innovative software products and services to help clients identify and produce hydrocarbon deposits by integrating information from the various geoscience disciplines. Our software applications make it possible to integrate geological, geophysical, geostatistical, petrophysical and rock physics information into a single consistent model of the reservoir. Applying Fugro-Jason's technology through its software and consulting services substantially improves E&P investment return by adding invaluable reservoir model information to reduce the risks, costs and cycle-times associated with exploration, appraisal and field development and production.

Fugro-Jason is an operating company of Fugro NV. Fugro was founded in 1962 and is listed on Euronext NV, Amsterdam, The Netherlands. Fugro has more than 13,500 staff and a permanent presence in more than 50 countries.

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