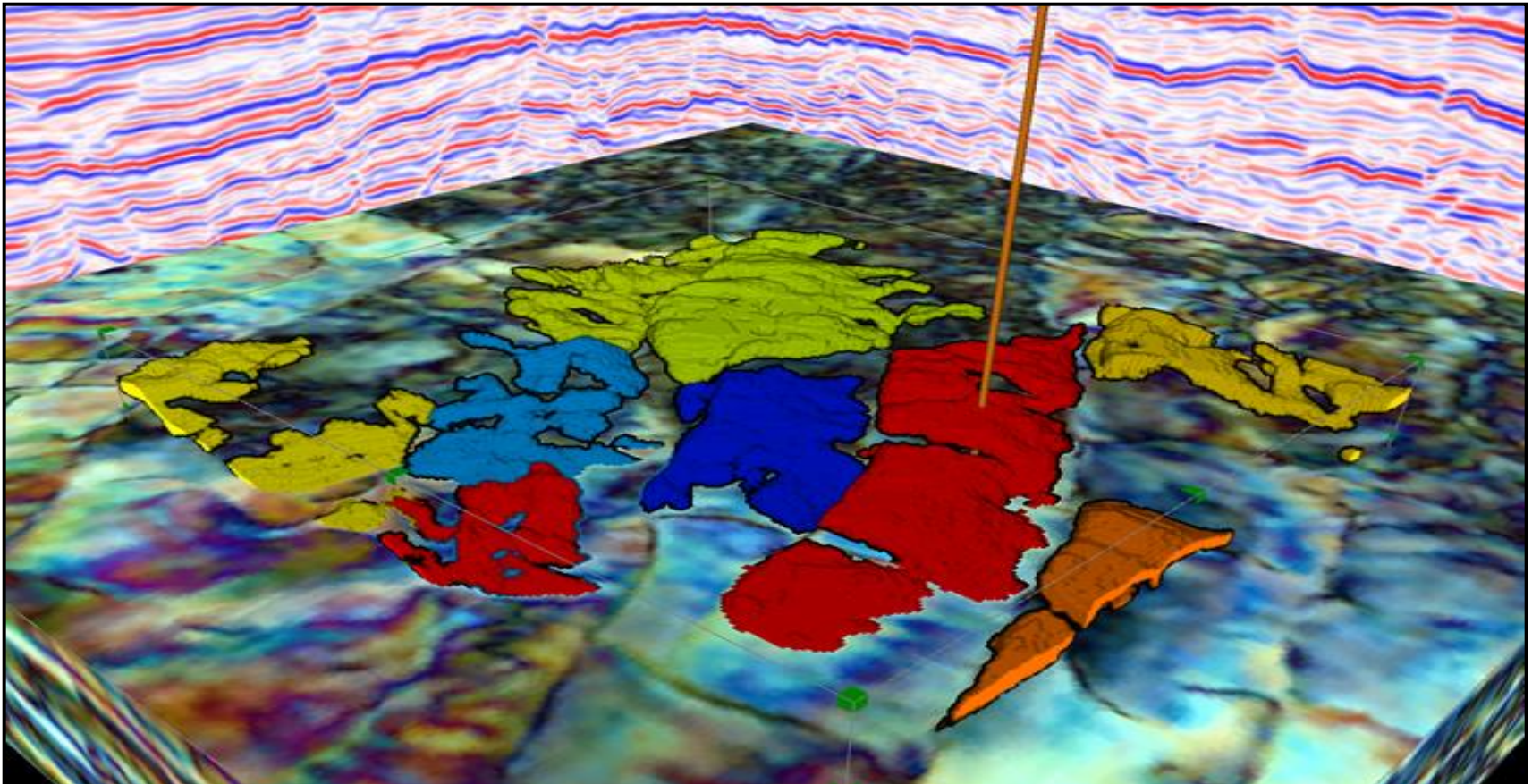


Improve E&P Success with SVI Pro



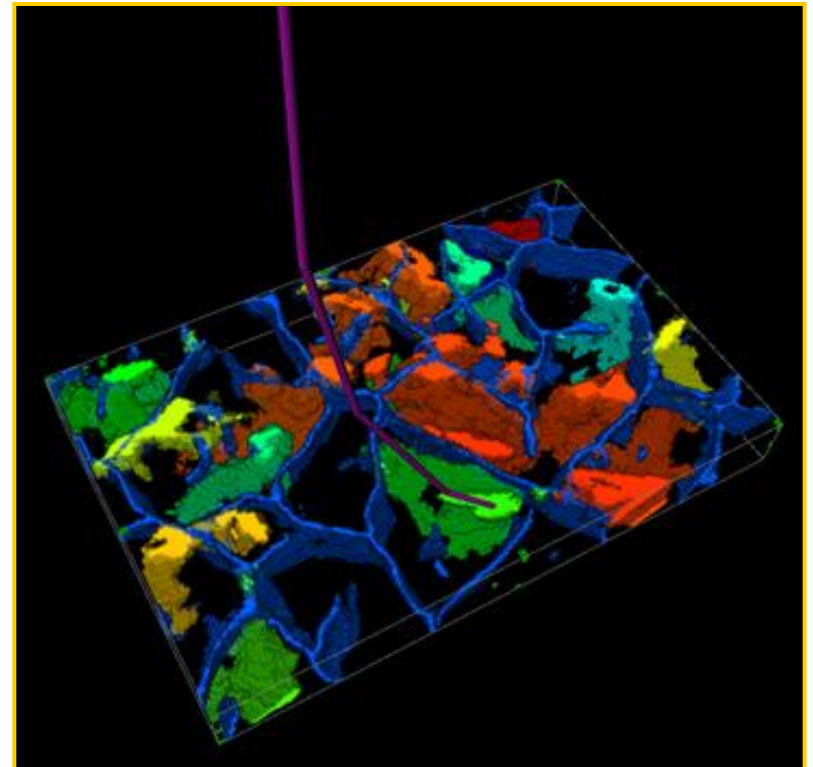
Rapid, Accurate and Objective 3D Seismic Analysis

SVI Pro: For Exploration, Development & Production

SVI Pro produces objective and accurate 3D analysis of oil and gas reservoirs with unprecedented speed and clarity

The results deliver significant gains in productivity and reduce risks at all stages of the E&P cycle, including:

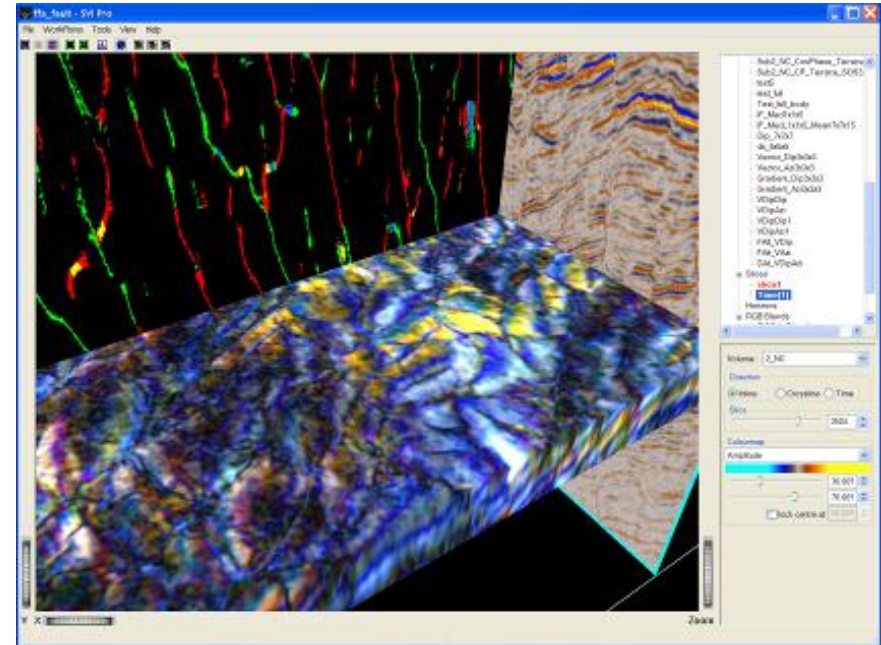
- Seismic Interpretation
- Prospect generation & evaluation
- 3D modelling
- Estimation of reserves
- Well planning & target selection



SVI Pro Core: Affordable 3D Seismic Analysis with No Quality Compromise

SVI Pro Core Includes:

- Noise Cancellation
- Structural analysis attributes
- Fault imaging workflows
- Stratigraphic workflows
- Multi-volume mathematical calculator
- Full resolution processing of 8, 16 and 32 bit data
- Large volume processing and visualisation on standard desktop and laptop hardware
- High fidelity 2D / 3D visualisation



You can complement SVI Pro Core with SVI Pro Optional Modules including Frequency Decomposition, The DHI Tool and XApp and the Batch Processor.

SVI Pro is also available as a complete bundle which includes the Core application and the Advanced Modules

SVI Pro Core: Noise Cancellation

SVI Pro Noise Cancellation improves seismic image quality to benefit all stages of the subsurface evaluation workflow

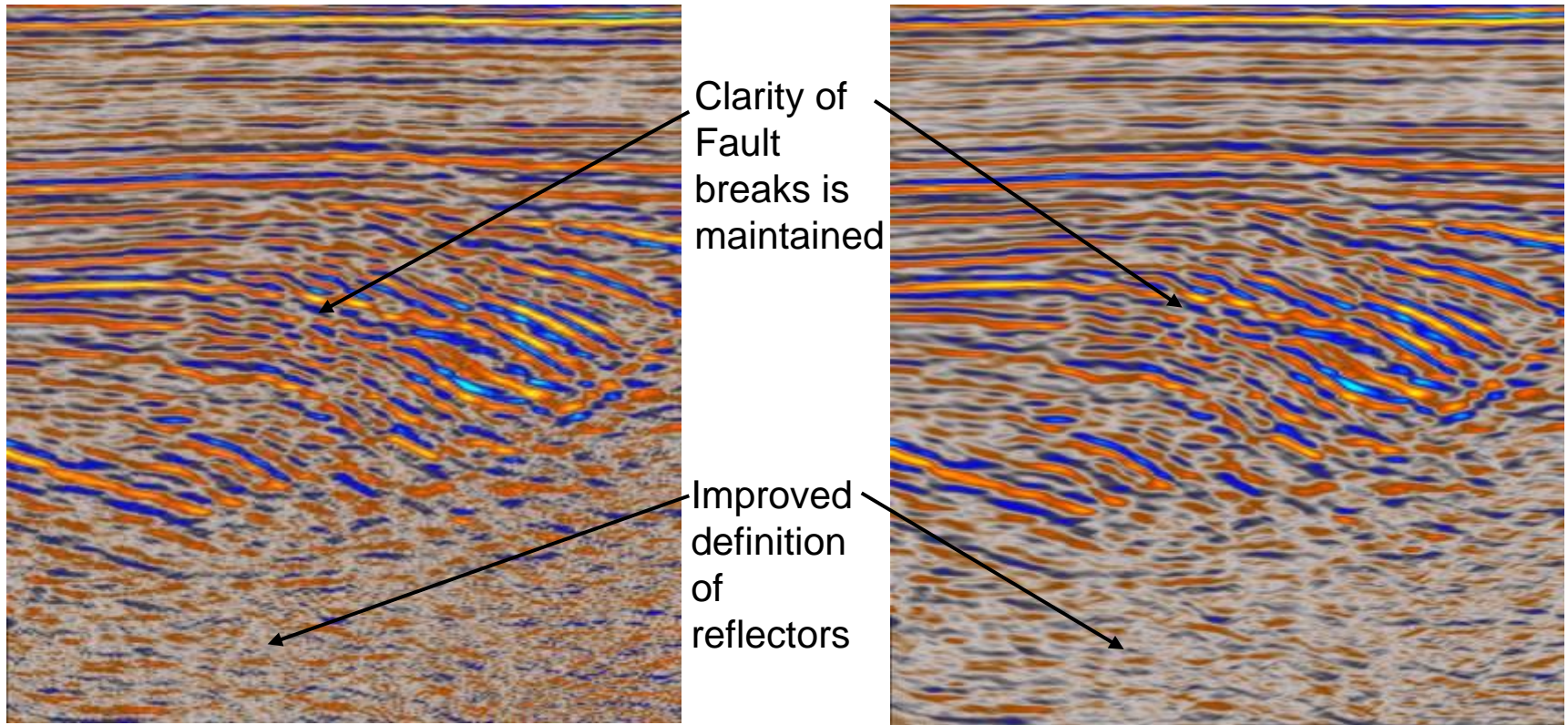
SVI Pro provides sophisticated Noise Cancellation Algorithms for:

- Seismic image enhancement
- Conditioning of seismic attributes
- Stabilisation of auto-tracking results for conventional interpretation

New in SVI Pro – TDiffusion and SOFFMH the most advanced 3D seismic noise filters available on the market

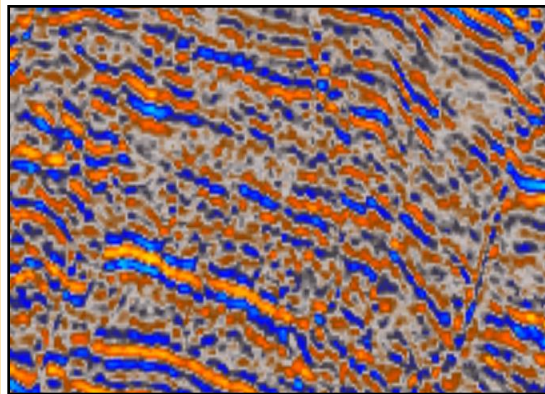
SVI Pro Core: Noise Cancellation

SVI Pro Noise cancellation applied to legacy US Gulf Coast data

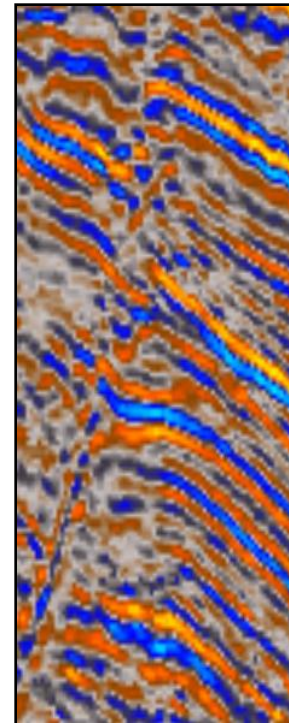
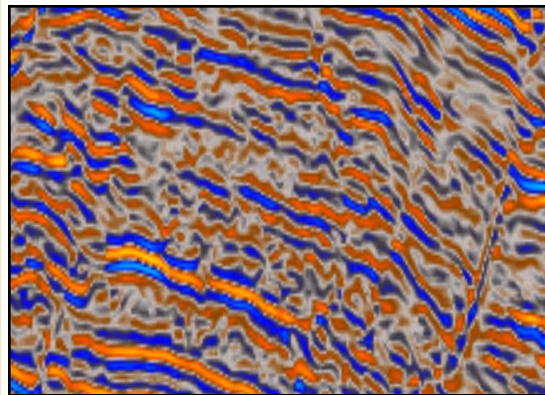


SVI Pro Core: Noise Cancellation

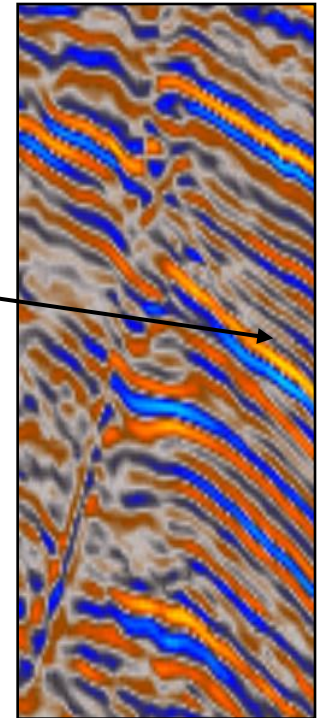
SVI Pro Noise cancellation applied to recent North Sea data



Noise is removed from chaotic regions without affecting the structural complexity.



Thin stratigraphic layers are enhanced, and the frequency content is maintained.



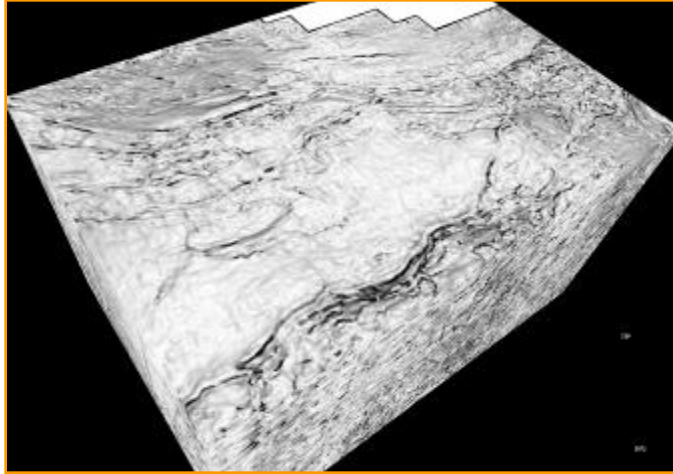
SVI Pro Core: Structural Imaging

SVI Pro Structural Imaging provides the interpreter with both structural and stratigraphic information at all levels of detail

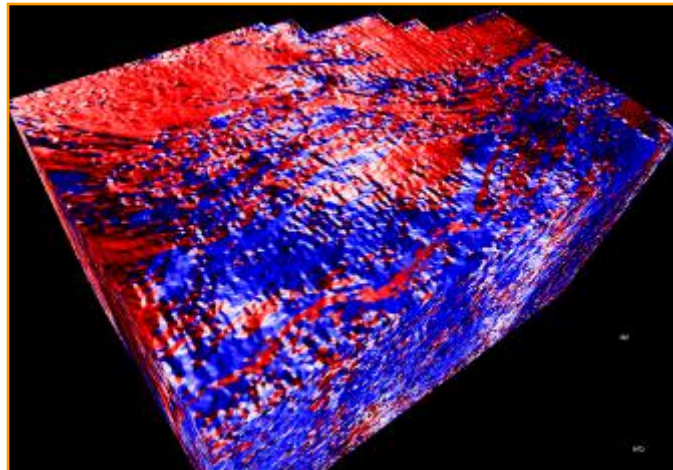
The 3D DipAzi volume combines the Dip and Azimuth information. At a regional scale it allows a rapid reconnaissance of the area, at a local scale it highlights subtle features.

Understand your geological setting without interpretation

SVI Pro Core: Structural Imaging

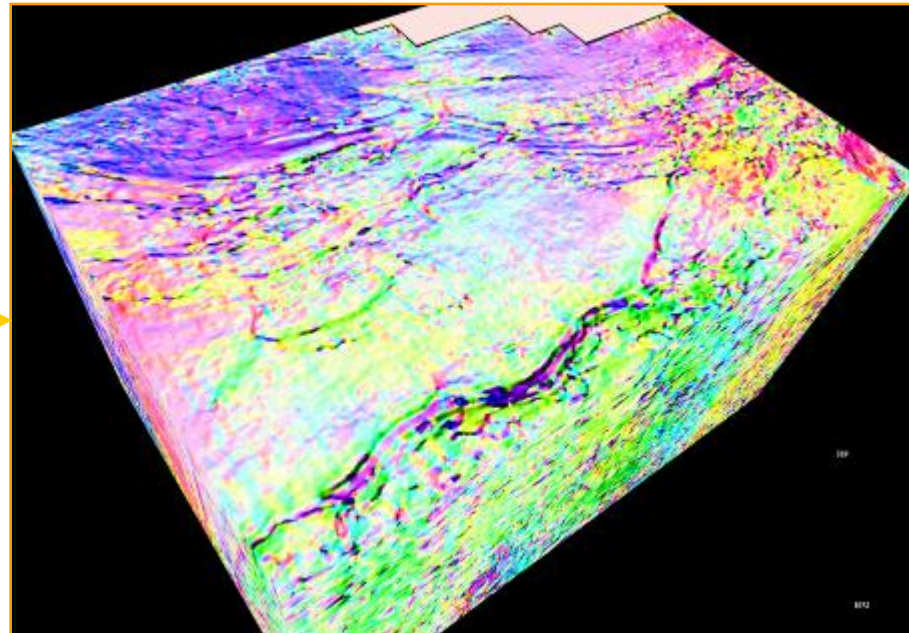


3D Instantaneous Dip



3D Instantaneous Azi

Rapid data analysis for regional and detailed structural and stratigraphic understanding



3D DipAzi Combined



SVI Pro Core: Fault Imaging

FaultApp accurately delineates the fault network enabling structural interpretation at an unprecedented level of detail

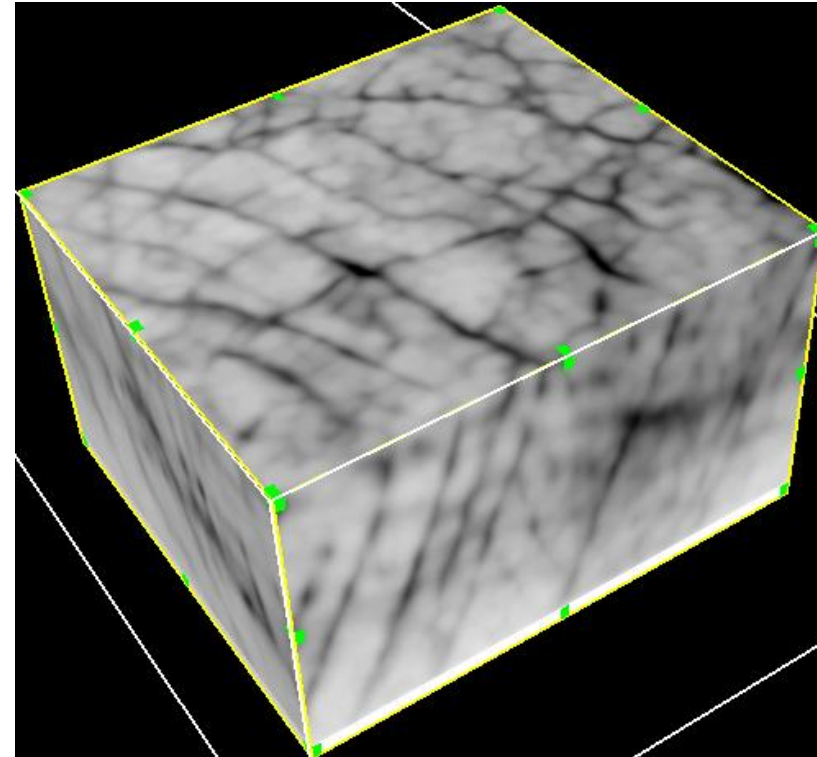
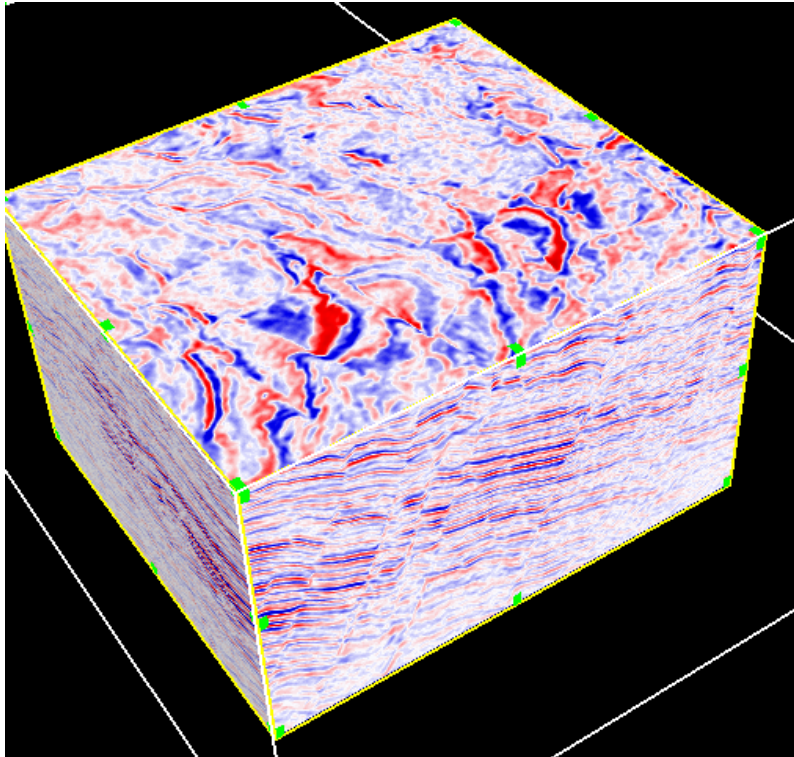
FaultApp is a user-friendly image analysis workflow designed for fault expression and optimisation independent of data quality.

The workflow provides outputs that complement different aspects of the structural interpretation workflow, e.g.

- Manual Fault Picking
- Automated Fault Surface Generation
- Horizon auto-tracking

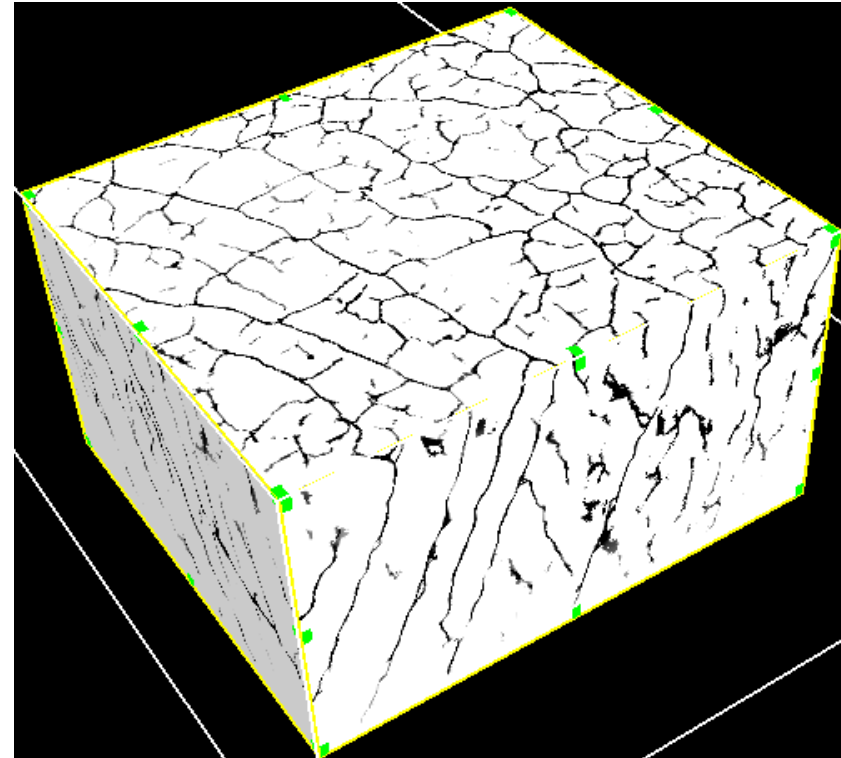
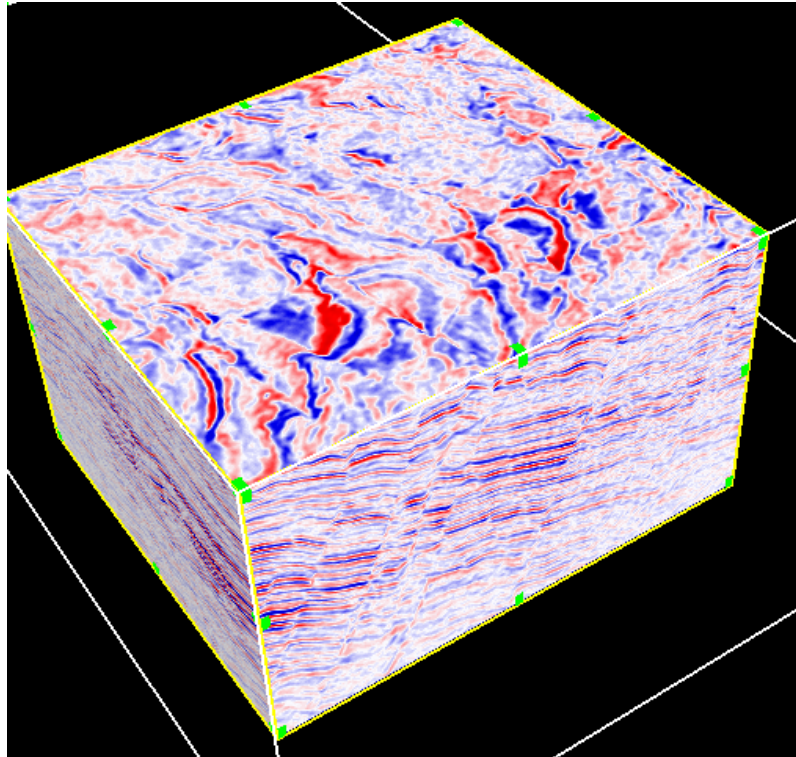
3D seismic to 3D fault network without manual interpretation

SVI Pro Core : Fault Imaging



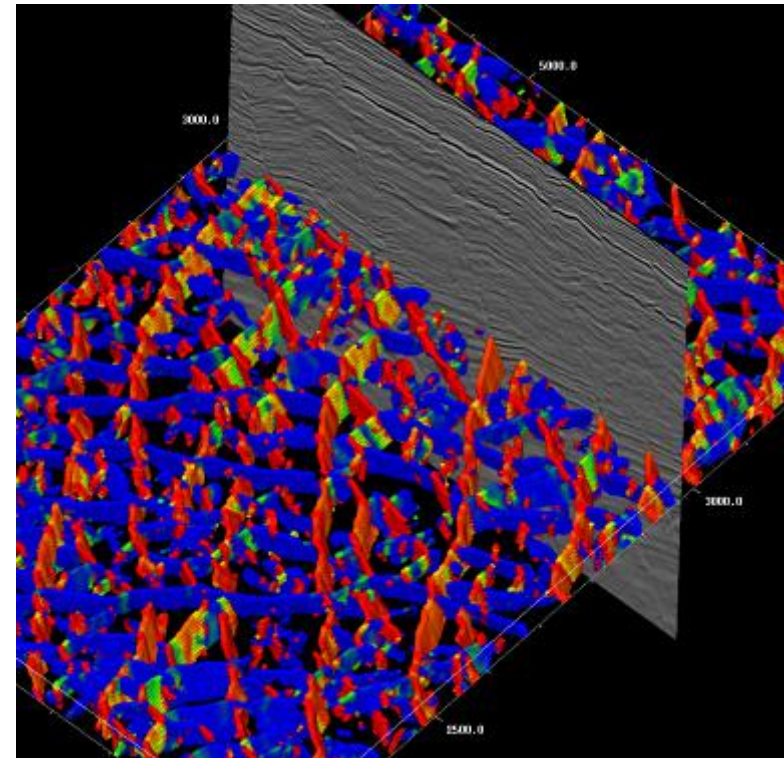
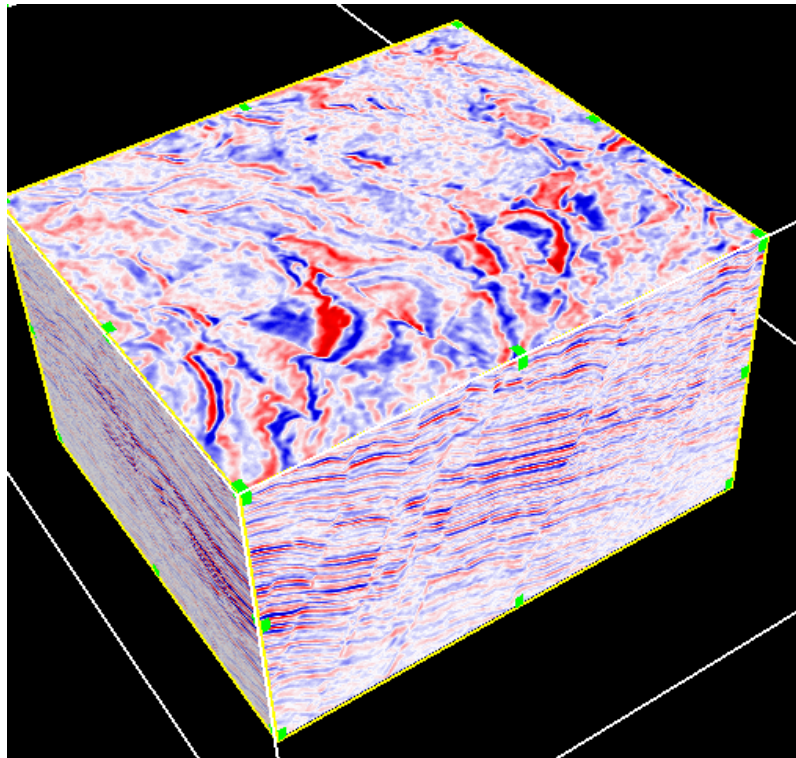
Fault Attribute: Multiple Fault Attributes with user parameterisation to maximise flexibility and minimise dependency on data quality

SVI Pro Core: Fault Imaging



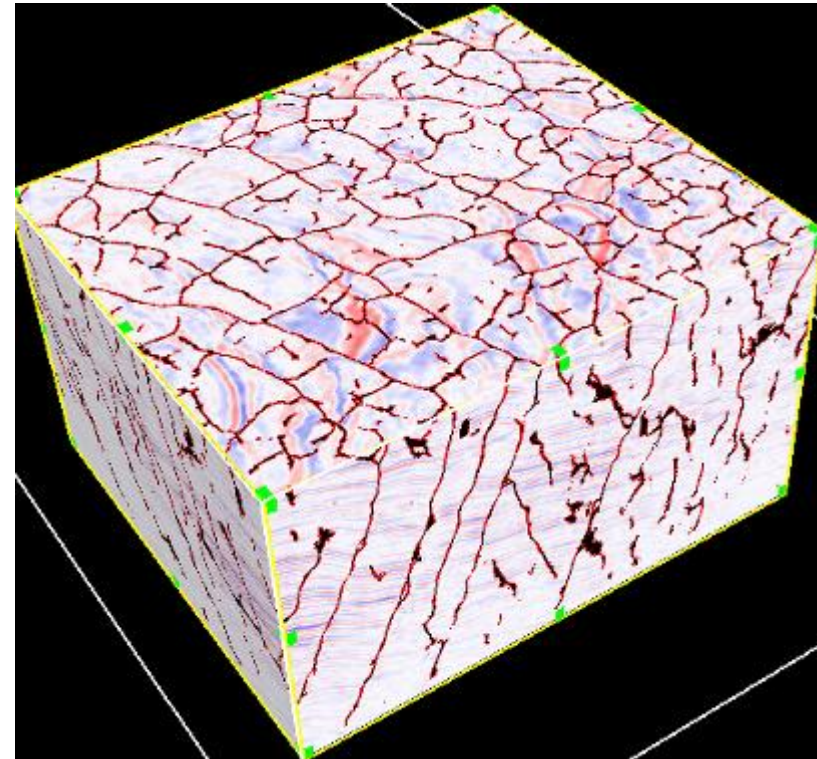
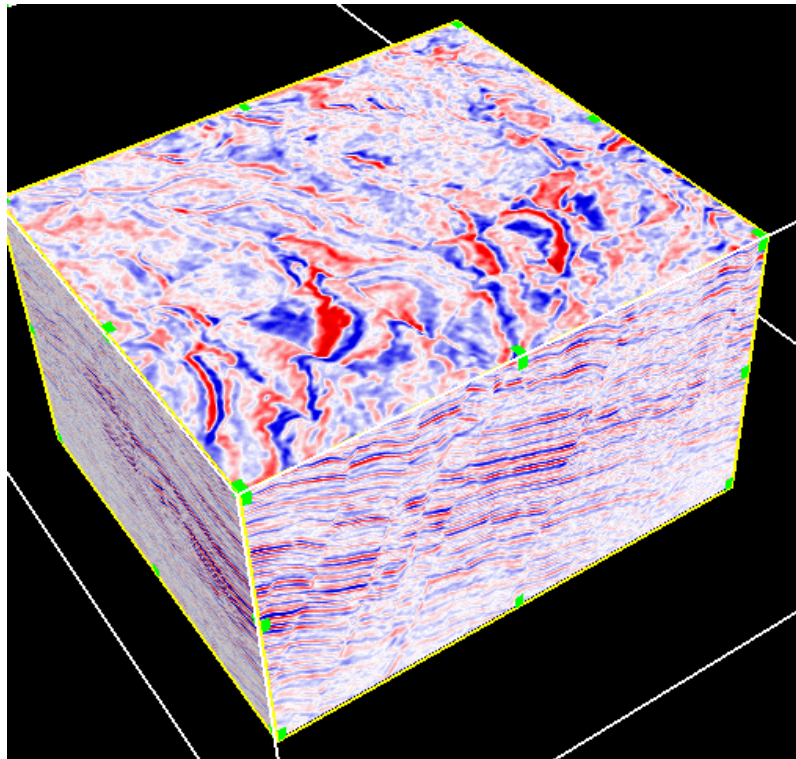
**Fault Detect: high resolution template for
manual fault interpretation and well planning**

SVI Pro Core: Fault Imaging



**Fault Trends: For automated fault interpretation
and fault auto-tracking**

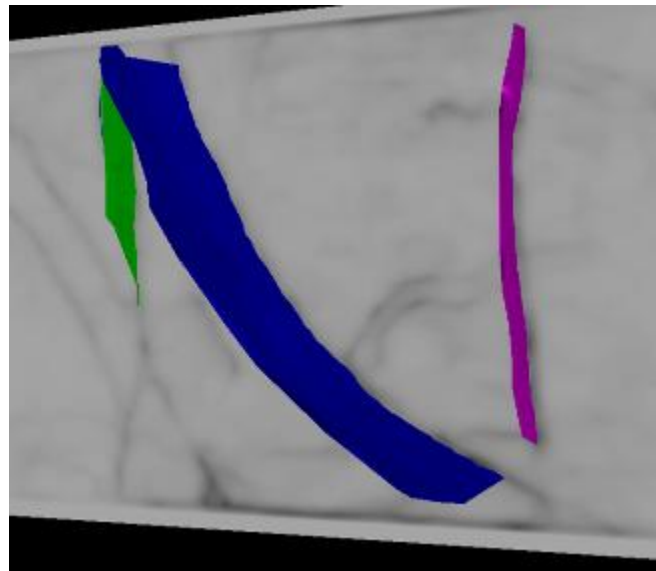
SVI Pro Core: Fault Imaging



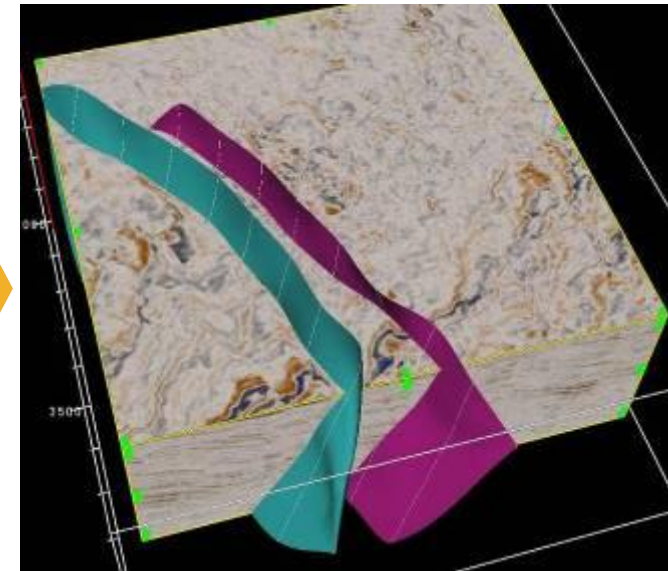
Fault In: For correlation of the fault network with stratigraphy and rapid horizon auto-tracking

SVI Pro Core: Fault Imaging

FaultApp provides the best available inputs for automated fault interpretation



FaultApp – an ideal input to the Petrel AntTracker



FaultApp - an ideal input for GeoProbe Fault auto-tracking

SVI Pro Core: Stratigraphic Imaging

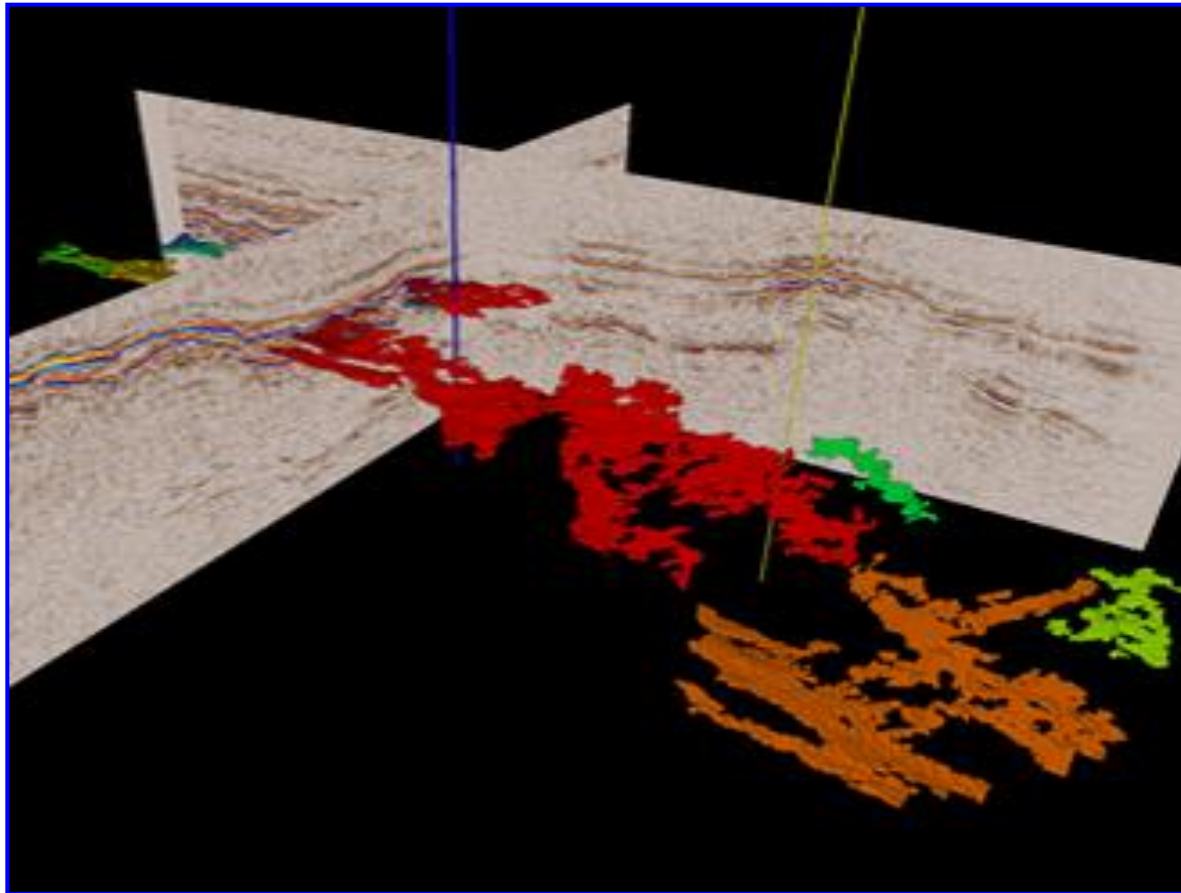
SVI Pro Stratigraphic Imaging workflows provide tools to highlight and extract even the most complex 3D geo-object

Stratigraphic workflows include:

- Single and multi-attribute computation
- Single attribute Geobody delineation
- Multi-attribute volumetric RGB visualisation and geobody delineation
- Geobody manipulation
- Measurement tools

3D Analysis Tools for all Stratigraphic Environments

SVI Pro Core: Stratigraphic Imaging

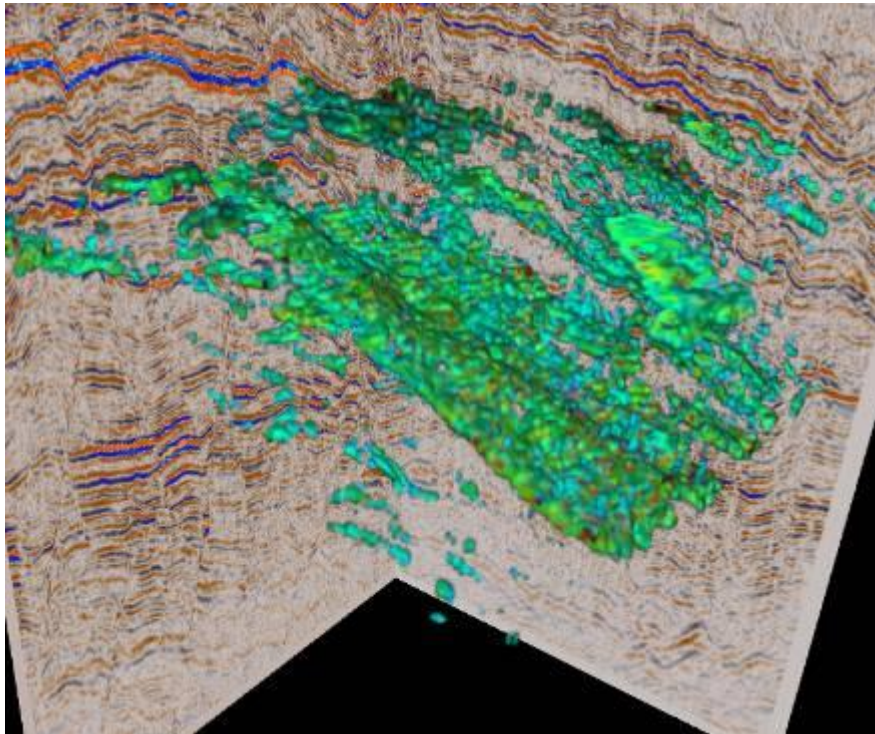


Improve:

- Interpretation
- 3D model building
- Well-planning decisions

SVI Pro Core: Stratigraphic Imaging

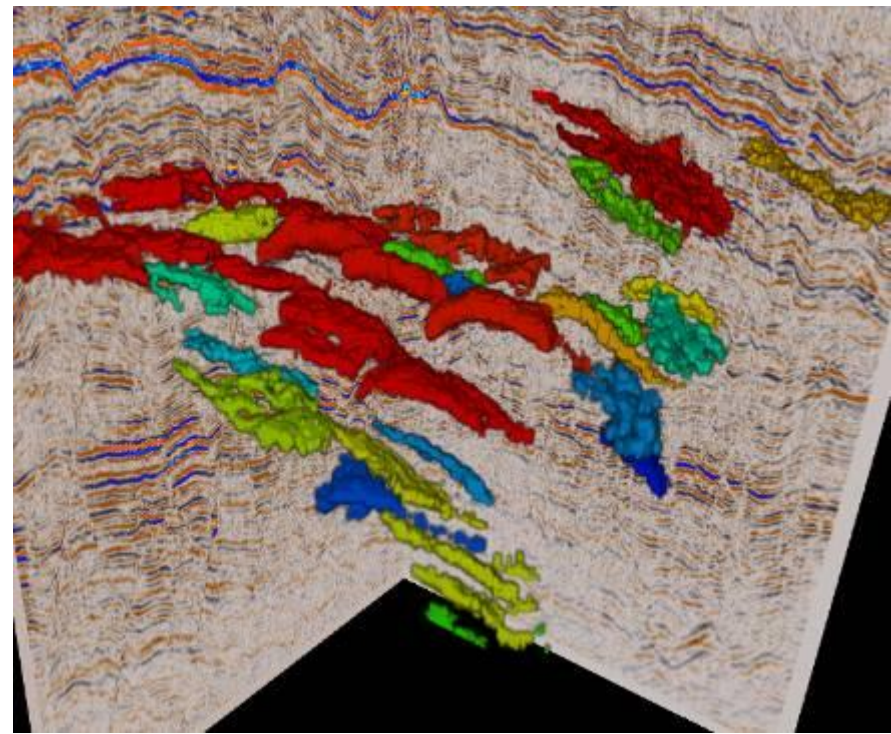
Single Attribute Geobody Delineation



Instantaneous Trace Attributes

Wavelet Attributes

Frequency Attributes



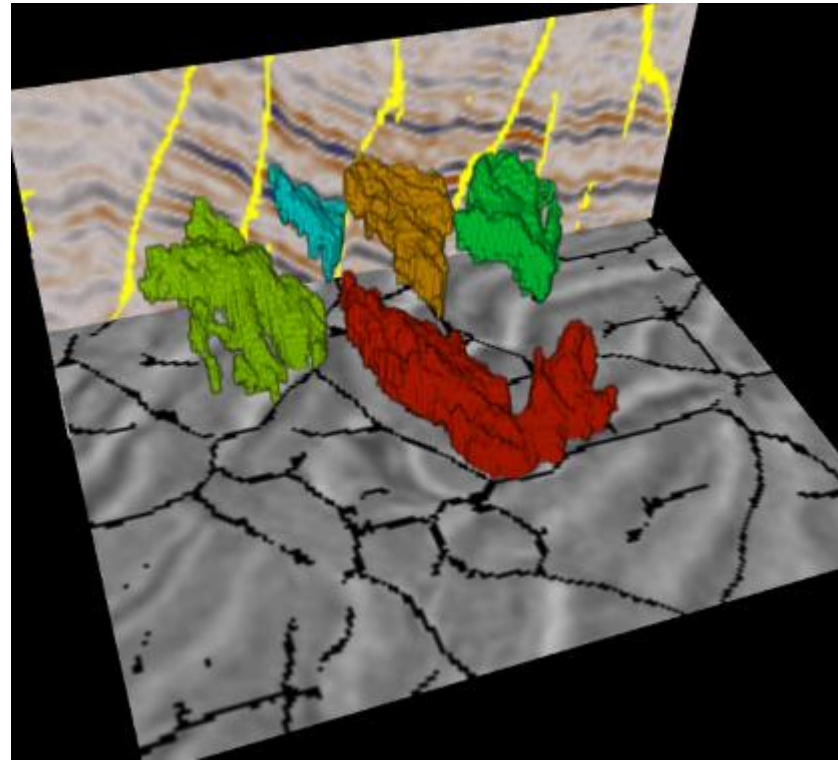
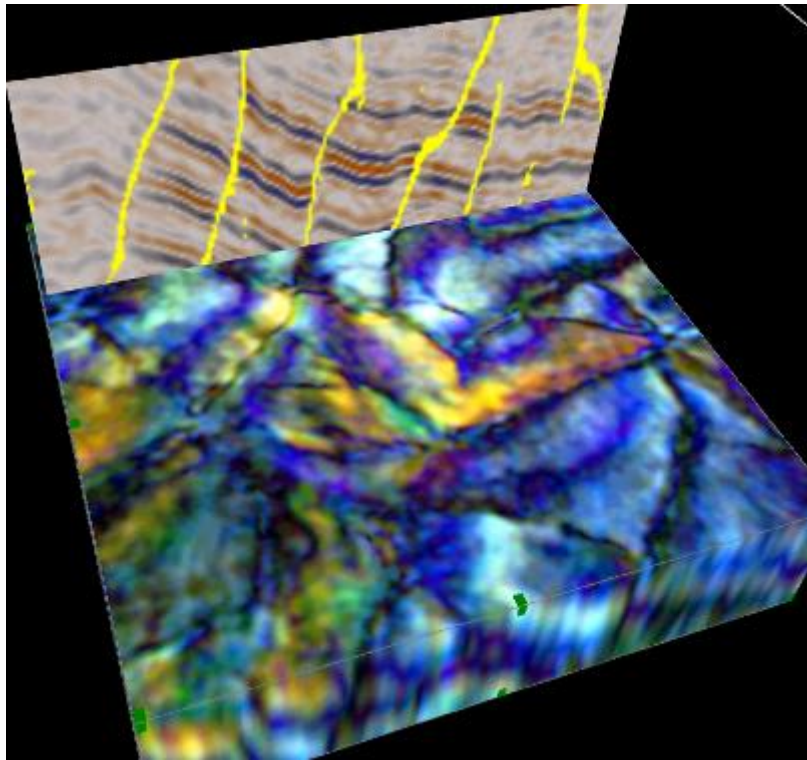
Structural Attributes

Texture Attributes

Composite Attributes

SVI Pro Core: Stratigraphic Imaging

Interactive opacity rendering of RGB volumes allows precise delineation of GeoBodies that can be imported directly into standard interpretation or 3D modelling systems

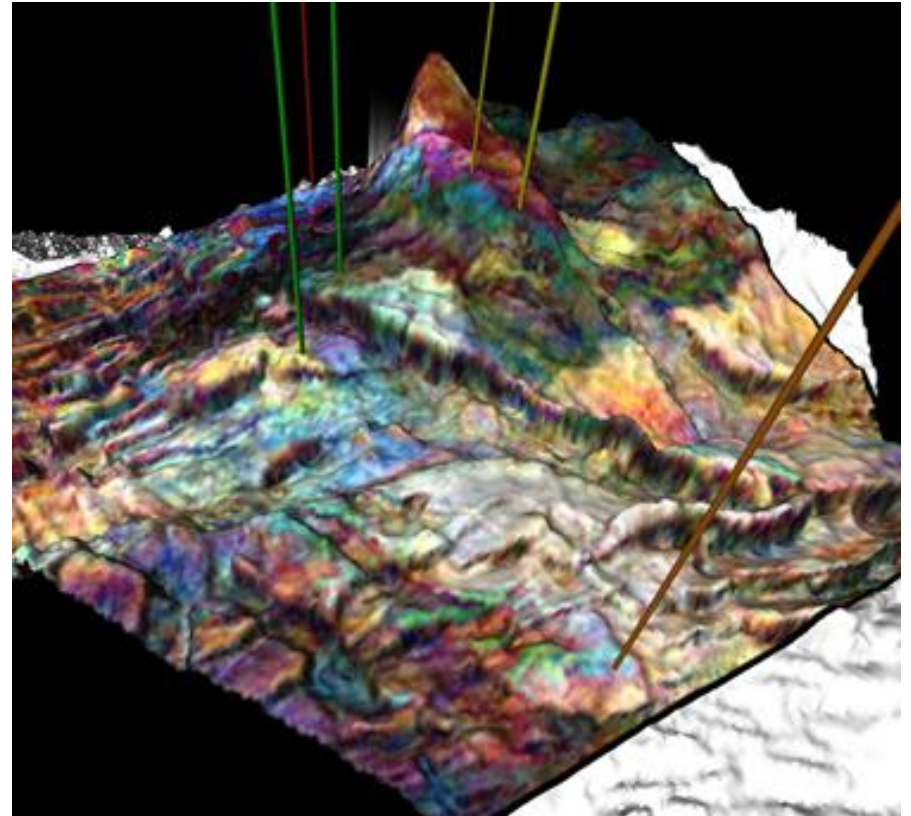


SVI Pro Advanced Optional Modules

You can complement SVI Pro Core with SVI Pro Optional Modules to tailor make your 3D seismic analysis application

Advanced optional modules include:

- Frequency Decomposition
- The DHI Tool & XApp
- Batch Processor



SVI Pro is also available as a complete bundle which includes the Core application and the Advanced Modules.

SVI Pro Module: Volumetric Frequency Decomposition



SVI Pro Volumetric Frequency Decomposition provides a dramatic increase in the clarity of structural and stratigraphic information

The SVI Pro Frequency Decomposition workflow incorporates:

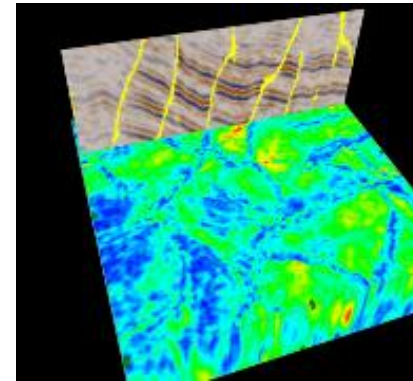
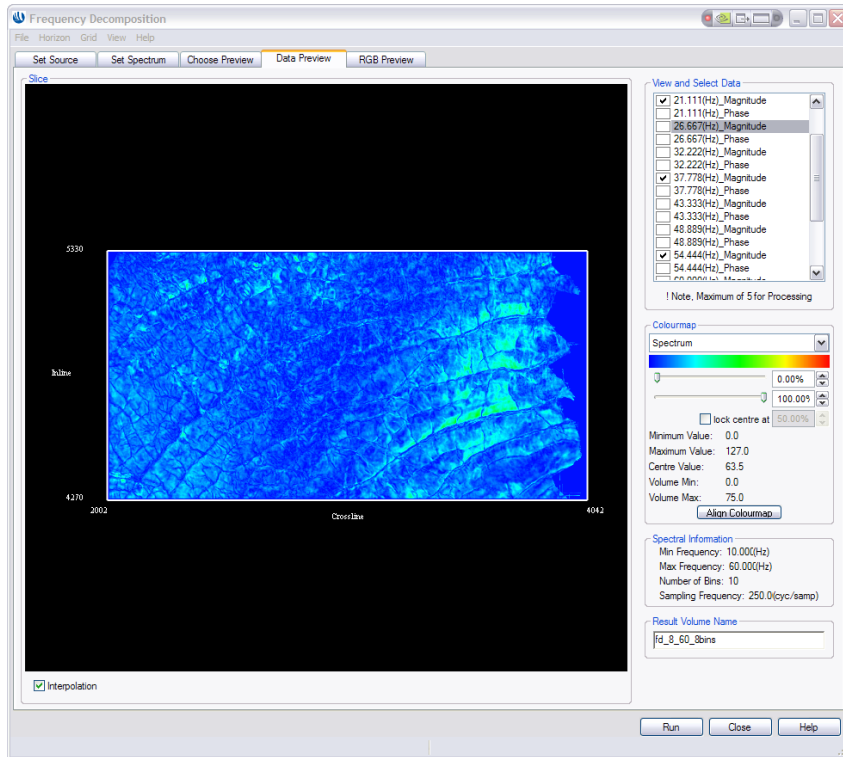
- Rapid slice / horizon based workflow parameterisation
- Volumetric magnitude and phase frequency response computation
- Volumetric multi-attribute RGB visualisation
- Interactive multi-attribute RGB GeoBody delineation

SVI Pro's Frequency Decomposition workflows provide image clarity never experienced before

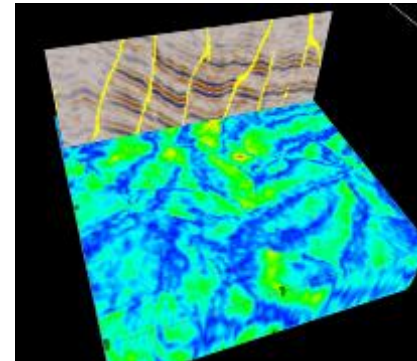
SVI Pro Module: Volumetric Frequency Decomposition



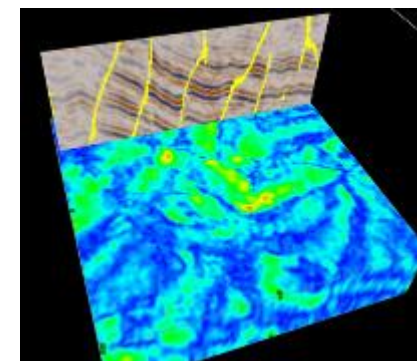
Powerful, simple-to-use workflow based frequency selection and volume computation



21 Hz



40 Hz

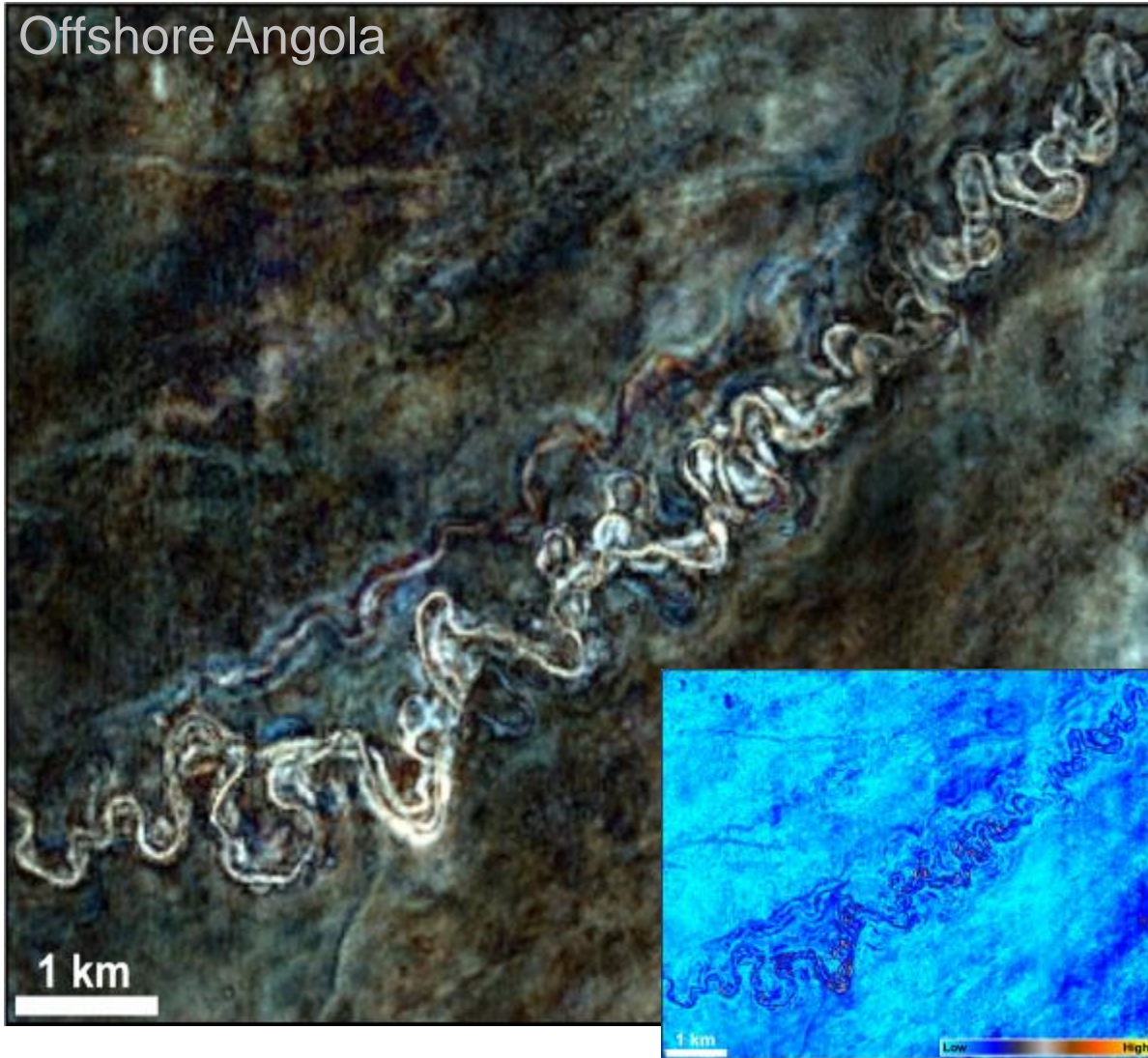


55 Hz

SVI Pro Module: Volumetric Frequency Decomposition



Offshore Angola



"The SVI Pro RGB blended frequency decomposition provided us with a dramatic increase in clarity of the depositional elements such as detail inside the channels, better edge delineation of the channel bodies, detail of wash over fans and fans developed in the salt controlled mini-basins on the slope compared with the conventional amplitude map (insert)"

Dr Chris Leppard,
Senior Geologist, Hydro
Data courtesy of Hydro



SVI Pro Module: DHI Tool & XApp

The SVI Pro DHI Tool and XApp are combined in a sophisticated, volumetric analysis and geobody delineation module to improve your stratigraphic imaging

The DHI Tool is a 3D attribute vs TWT cross plot to delineate the 3D geometry and connectivity of potential hydrocarbon anomalies within a user defined closure.

XApp is an interactive 2D / 3D seismic attribute cross-plot for detection and differentiation of geological elements based on multiple seismic attribute characteristics such as AVO response.

Intuitive Multi-attribute Analysis & Geobody Delineation

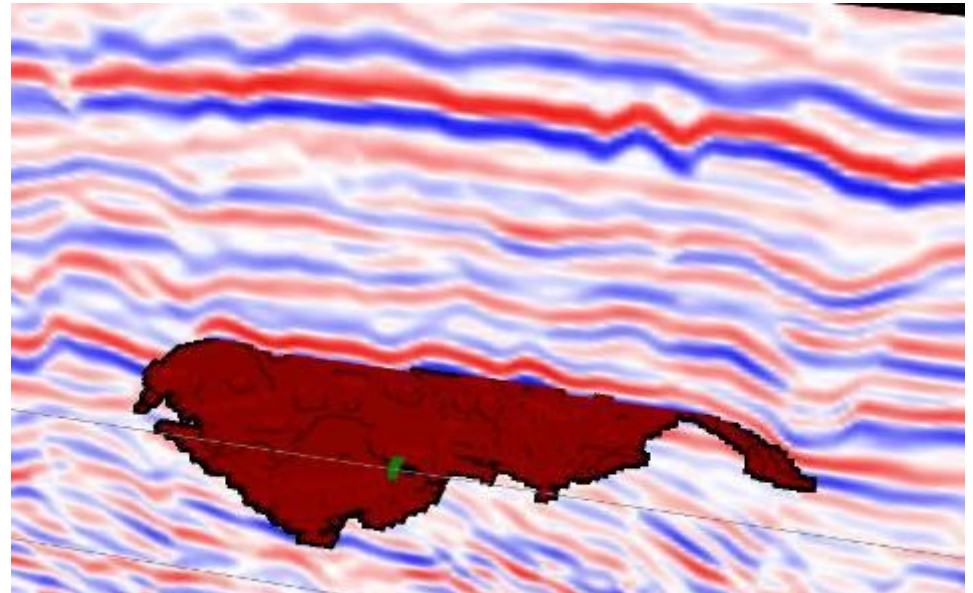
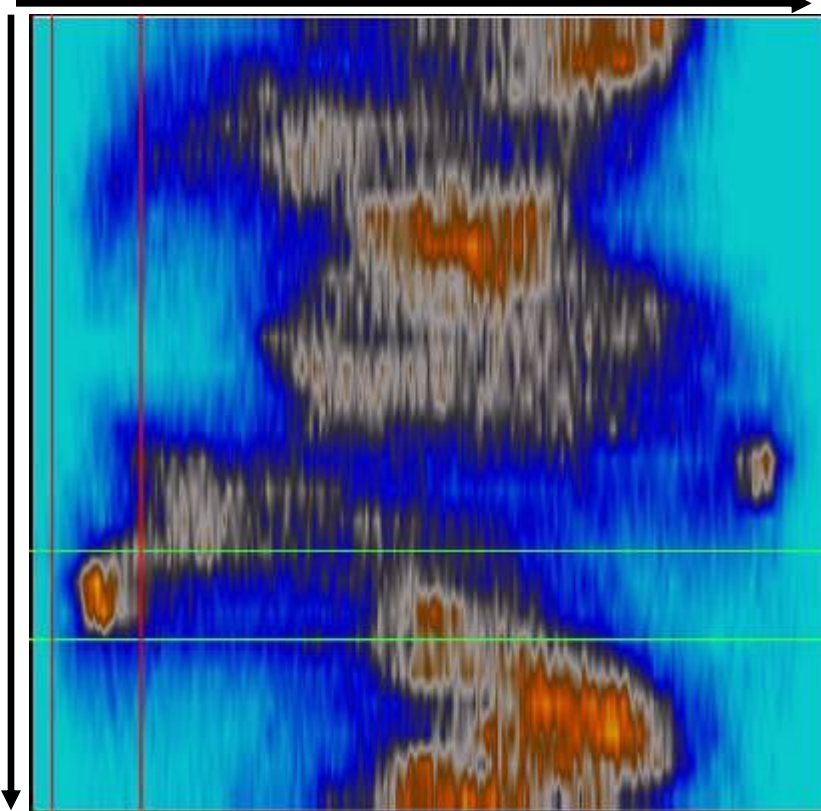
SVI Pro Module: DHI Tool & XApp

Direct Hydrocarbon Indicator

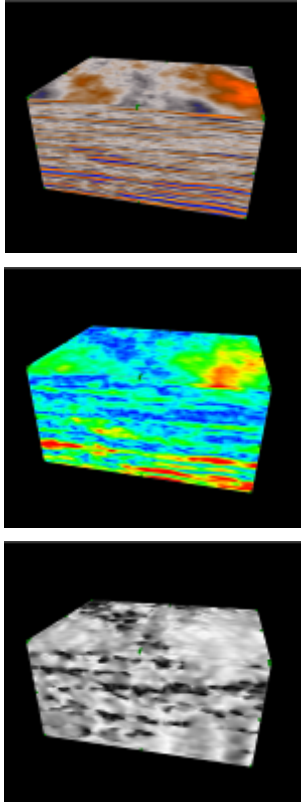
Flat spot and Amplitude cut-off identification and delineation

Attribute

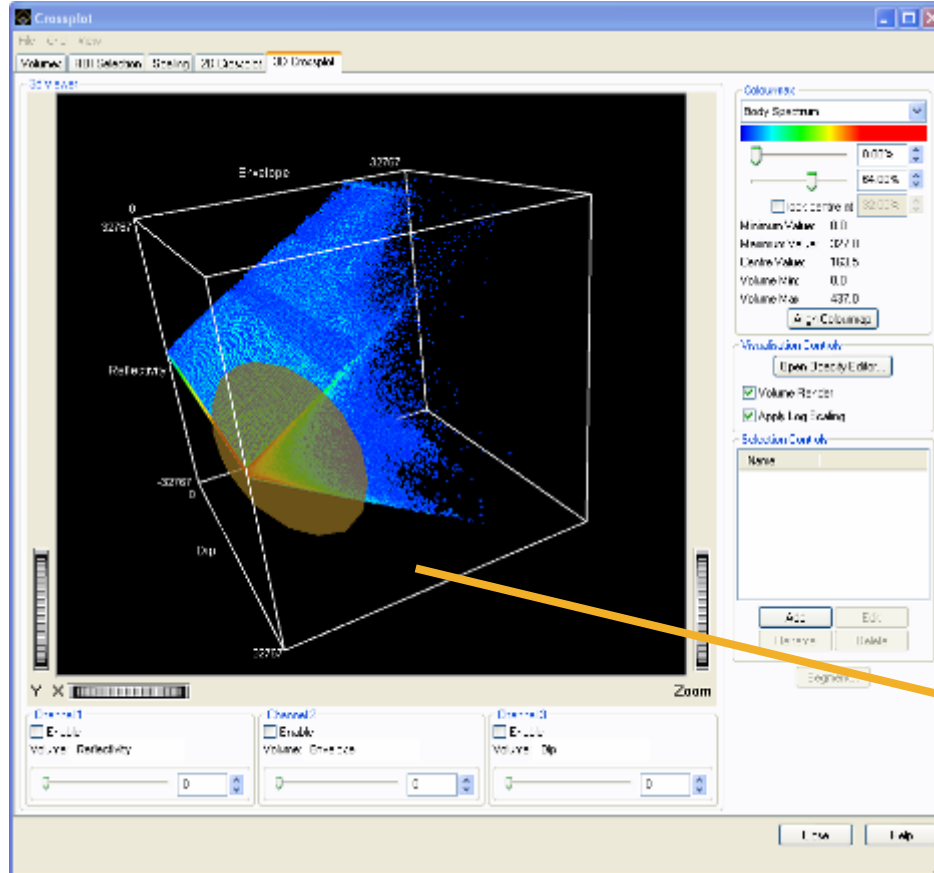
TWT



SVI Pro Module: DHI Tool & XApp

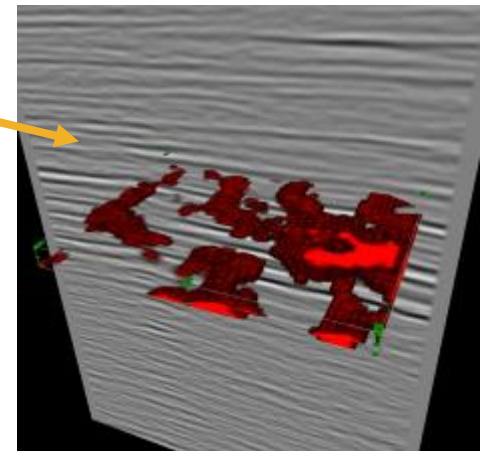


Two or three attributes can be used as an input for the Cross Plot tool



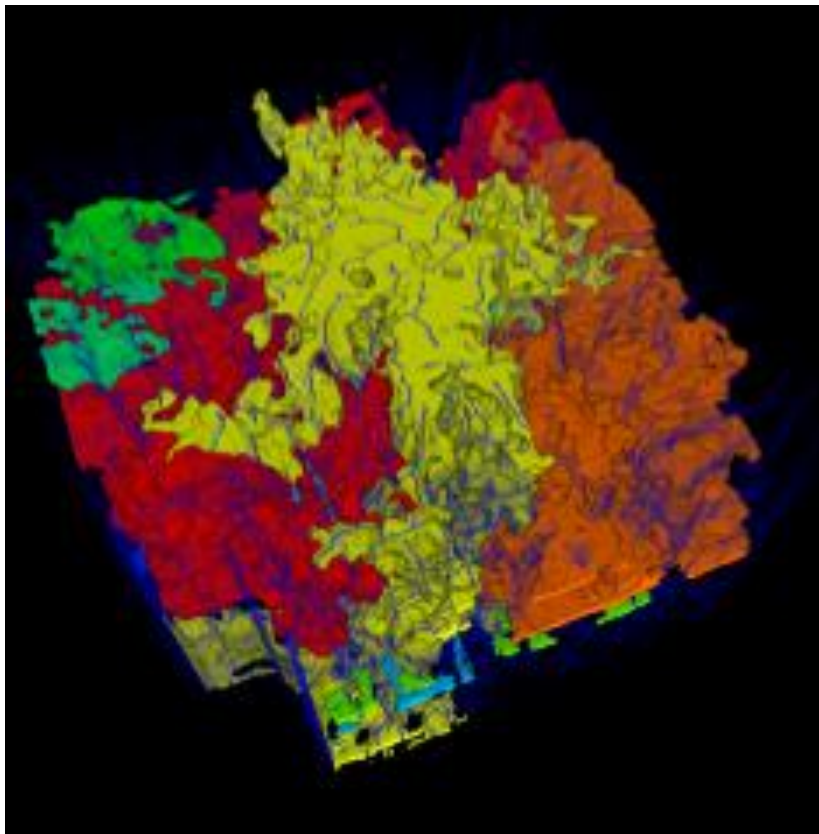
The 3D Cross Plot graph can be opacity rendered or viewed on orthogonal slices

An ROI can be selected using an ellipsoid and segmented to delineate the selected characteristics.

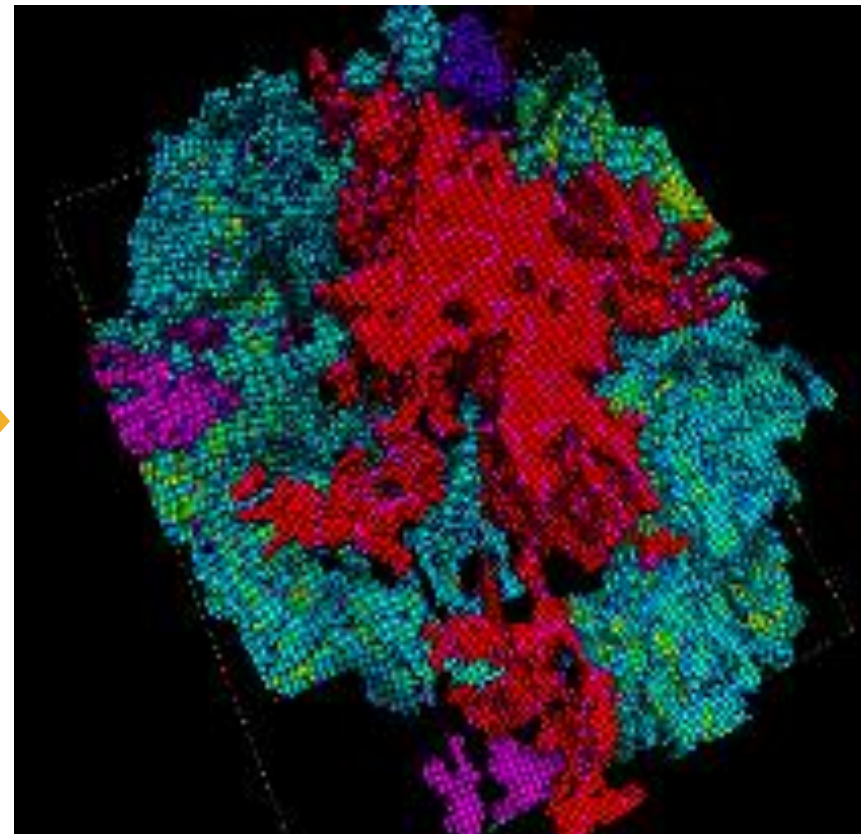


SVI Pro Module: DHI Tool & XApp

GeoBodies defined using XApp, and other SVI Pro object delineation workflows, can be input directly into your 3D model



Gas chimney surrounded by high amplitude geobodies extracted using SVI Pro



3D porosity model built using the geobody created in SVI Pro

SVI Pro: Batch Processor

The SVI Pro Batch Processor maximises 3D seismic analysis productivity

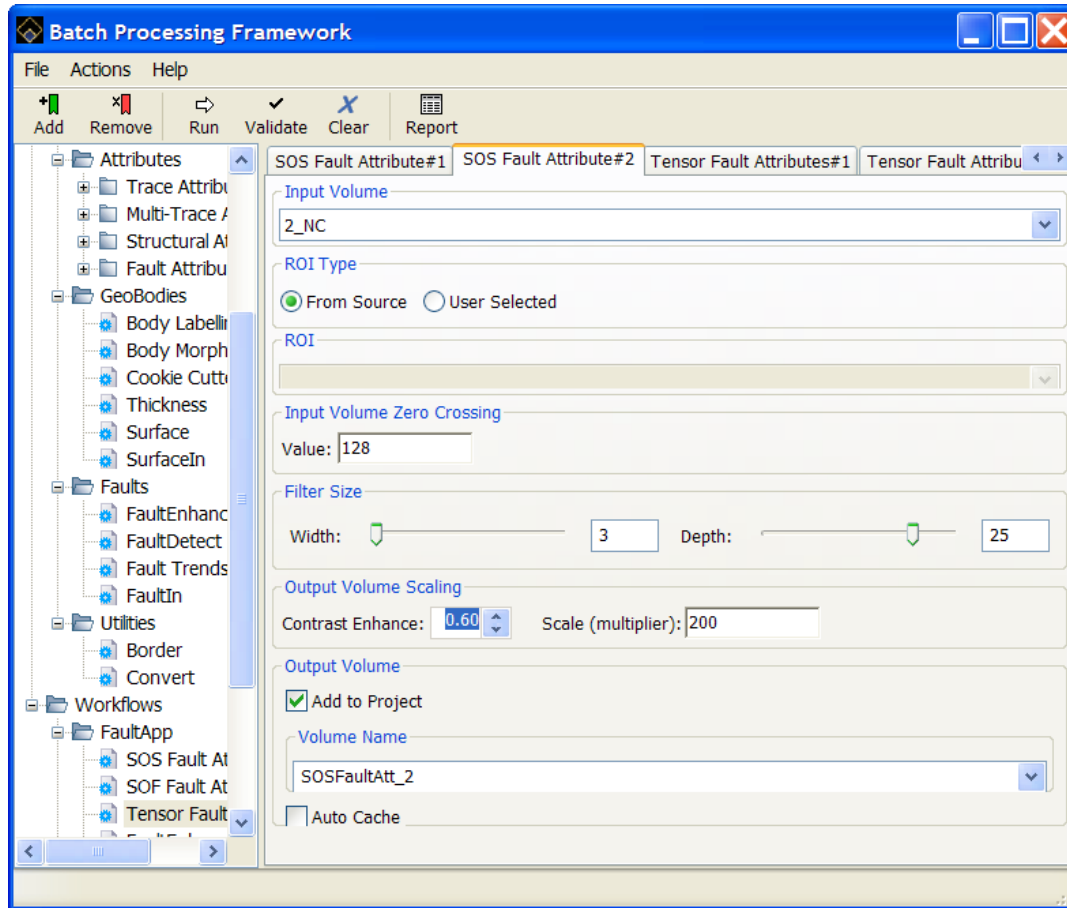
The Batch Processor enables multiple processes to be run sequentially without user intervention for:

- Simple, rapid region of interest and full volume parameter testing
- Bulk processing of multi-stage workflows

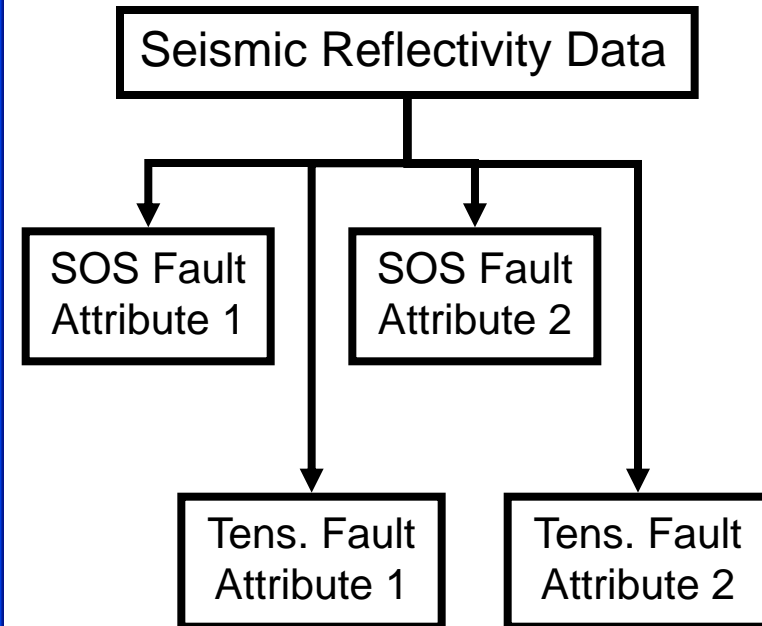
The ultimate in 3D seismic volume image analysis efficiency

SVI Pro: Batch Processor

Rapid Parameter Testing



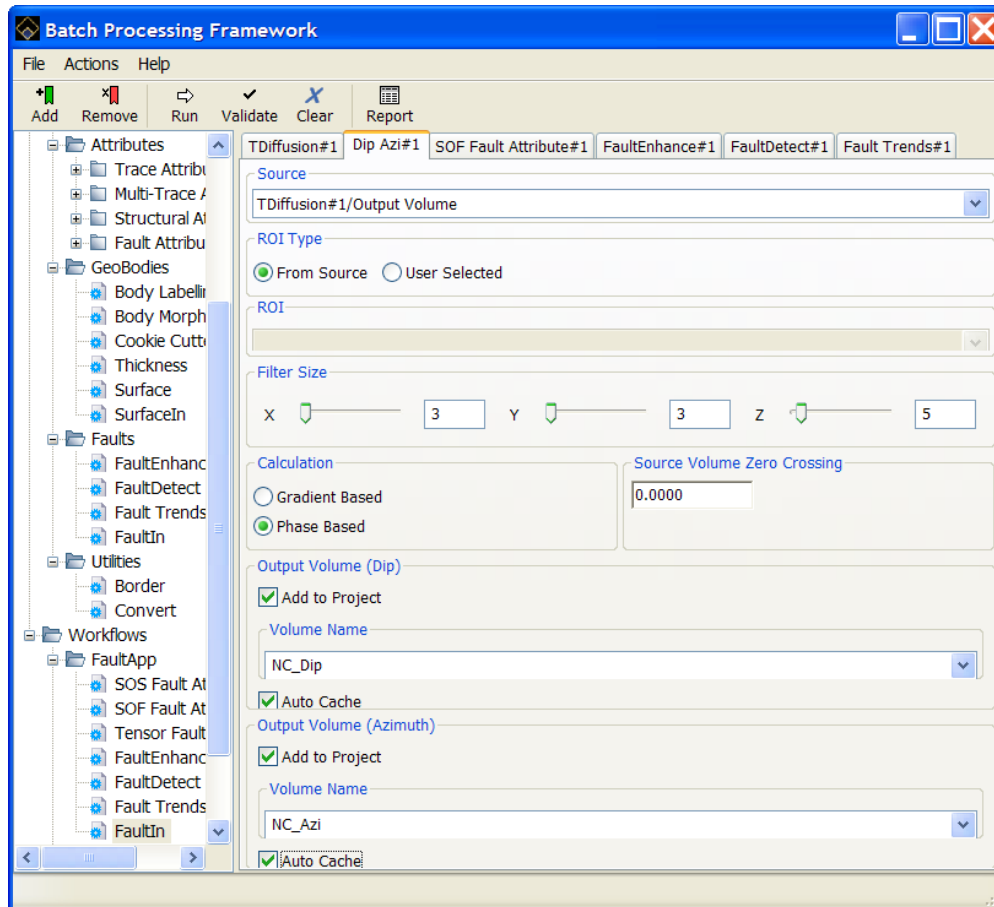
e.g. Fault Attribute Optimisation



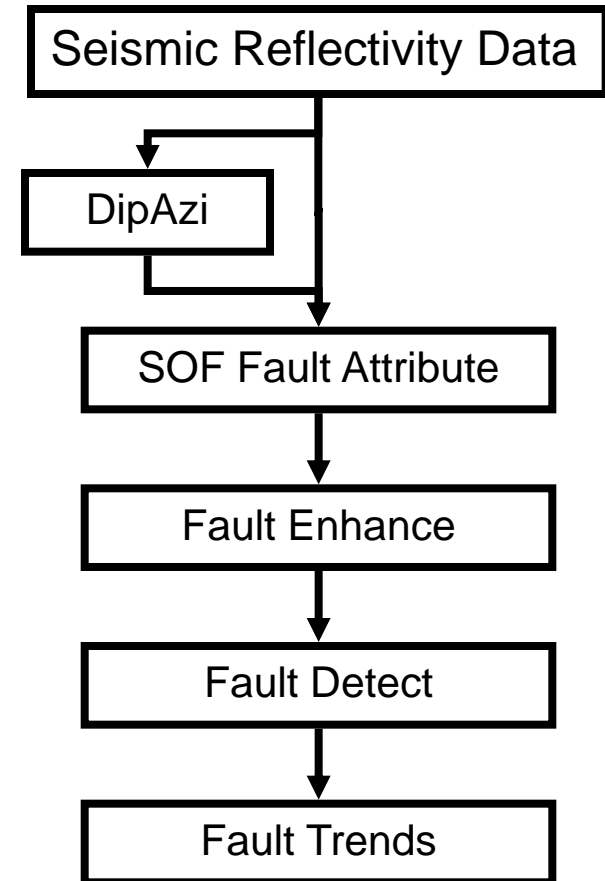
SVI Pro: Batch Processor



Bulk Workflow Processing



e.g. Fault Imaging



SVI Pro: Improve Your E&P Success

Download a **FREE SVI Pro Trial** at www.ffa.co.uk/eval

For more information contact:
Agnès Campan
Sales and Marketing Manager
Tel: +44 (0) 1224 825084
Email: info@ffa.co.uk

