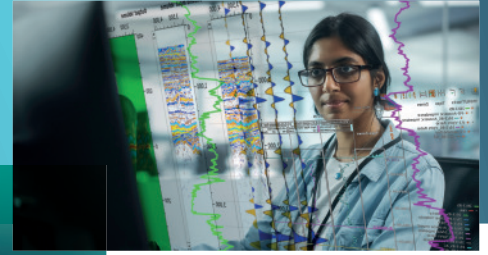


# QAI

# Quantitative Amplitude Interpretation



## Sharpen reservoir insight with multistep QAI analysis

The **QAI** toolkit gives exploration and production teams the tools they need to find and delineate reservoirs, and to predict rock and fluid properties ahead of the drill bit. As part of the Sharp Reflections platform, the toolkit uses high-performance computing power (HPC) to deliver an unprecedented degree of interactivity, even on huge multiclient seismic datasets.

With its massive parallel computing engine, the QAI toolkit operates on prestack gathers and partial angle stacks with the power to leverage the full-fidelity amplitude information. Tools for locating and mapping promising seismic amplitude anomalies are combined with forward modeling tools to calibrate prestack amplitudes to well log data. Other highlights include interactive spectral decomposition, versatile cross-plotting, and a new multihorizon deck tool that enables automating amplitude analysis for a complete set of horizons.

### Key capabilities

- Offset-to-angle conversion and amplitude variation with angle (AVA) attributes
  - Compute angle gathers, stacks and AVA attributes from offset gathers
  - Generate poststack seismic attributes for structural and stratigraphic interpretation
- Multidimensional horizon interpretation and attribute analysis
  - Seed and track events on stack
  - Extend 3D horizons to multidimensional horizons (e.g. along angles, azimuths, vintages)
  - Create multihorizon decks for rapid volume screening in defined intervals
  - Produce high-resolution maps of offset and angle attributes from prestack gathers
- Seismic forward modeling and well tie
  - Model AVA scenarios with prestack synthetics and 3D parametric models
  - Calibrate seismic data to wells with a complete prestack well tie tool
  - Design and manipulate wavelets, spectra and filters
- Advanced cross-plotting
  - Interactively cross-plot well and seismic data for fluid and lithology trends
  - Create cross plots of well log data, create target zones for modeling, analysis and evaluation of rock physics trends

>>

PRO

QAI

INV

AZI

4D

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- Advanced amplitude interpretation
  - Calculate relative elastic properties with colored inversion and extended elastic impedance (EEI)
  - Interactively decompose seismic data into spectral frequency bands and display using RGB blending tools
- Prestack and poststack data visualization (part of base module)
  - Visualize multidimensional seismic volumes, wells, and horizons in 2D and 3D viewers
  - Explore prestack and poststack data along dynamic arbitrary lines



## All the data for the best decisions

Sharp Reflections is the industry’s only software platform built on a powerful compute and display engine designed specifically for HPC, for use on your premises or in the cloud.

Our integrated platform enables you to start analyzing and interpreting seismic data as soon as post-migration processing begins. No information is wasted as you reduce uncertainty and fine tune your reservoir characterization to help achieve trustable exploration, drilling and production decisions.

**PRO**

Prestack data enhancement

**QAI**

Quantitative amplitude interpretation

**INV**

Inversion

**AZI**

Azimuthal

**4D**

4D time-lapse



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