## PRO Prestack Data Enhancement



## Optimize seismic data quality for reliable quantitative interpretation

The Sharp Reflections **PRO** toolkit, powered by a high-performance computing (HPC) engine, equips geophysicists working together in exploration and production teams to seamlessly quality control (QC), calibrate and condition huge volumes of post-migration seismic data for targeted interpretation purposes.

The PRO processing tools operate on prestack gathers and on partial angle stacks, and let you quickly and flexibly optimize the reliability of your full-survey seismic data. With HPC, there is no need to decimate data or limit your working area. QC and processing workflows can be revisited quickly as fresh well information comes in to ensure optimal data quality throughout the life of the reservoir.

## **Key capabilities**

- → Fast visual (QC) and map-based health checks to assess
  - gather flatness
  - amplitude variation with angle (AVA) compliance
  - noise levels, both coherent and incoherent
  - amplitude and phase integrity
- → Interactive processing previews that let you test and select filter parameters more quickly
- → Robust coherent noise removal algorithms including 3D dip filters, parabolic and linear Radon and Tau-P Decon
- $\rightarrow$  2D and 3D random noise attenuation
- → Normal moveout (NMO) correction

QAI

PRO

→ Gather alignment tools, including residual moveout correction and time-variant trim statics, to produce accurate AVA attributes and improve stack resolution

INV

AZI

**4D** 

- → Velocity editor using semblance spectrum
- → Wavelet shaping including Q compensation in amplitude and phase, spectral balancing and enhancement, and match filtering to improve wavelet consistency
- Workflow editor to automate and create consistent, repeatable processing work processes
- → Offset/angle conversion and partial angle stacking
- → Broad range of prestack seismic attributes, including intercept/gradient, colored acoustic impedance (AI) and extended elastic impedance (EEI), and numerous combinations





## 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.



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