



QINTEGRAL

QUALITY DECISIONS

Drilling predictions are more likely to come true if the predrill subsurface story hangs together. Quiacito integrates diverse sources of geological and geophysical data to support seismic data interpretations.

SPEED

Quiacito is highly interactive. Studies are done in "real time" making it ideal for data rooms.

COST EFFECTIVE

Pay only for the time you need. Prices start from AUD\$688+GST for a 5-day lease.

ABOUT QINTEGRAL

Founded in 2018 by Dr Jarrod Dunne, we have global experience in using seismic amplitudes (AvO) for a range of exploration and production challenges. We offer consultancy services and software solutions with a focus on achieving true integration between geological and geophysical information.

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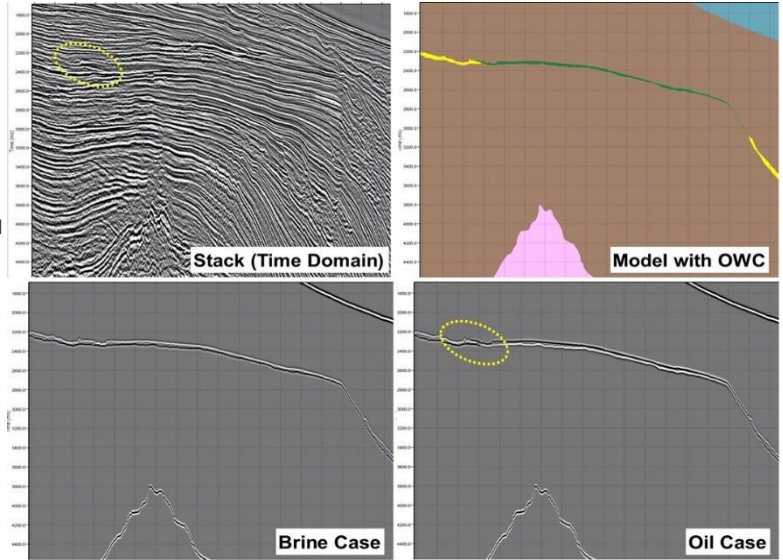
Quiacito™ Seismic Interpretation

Fast, integrated geophysical modelling

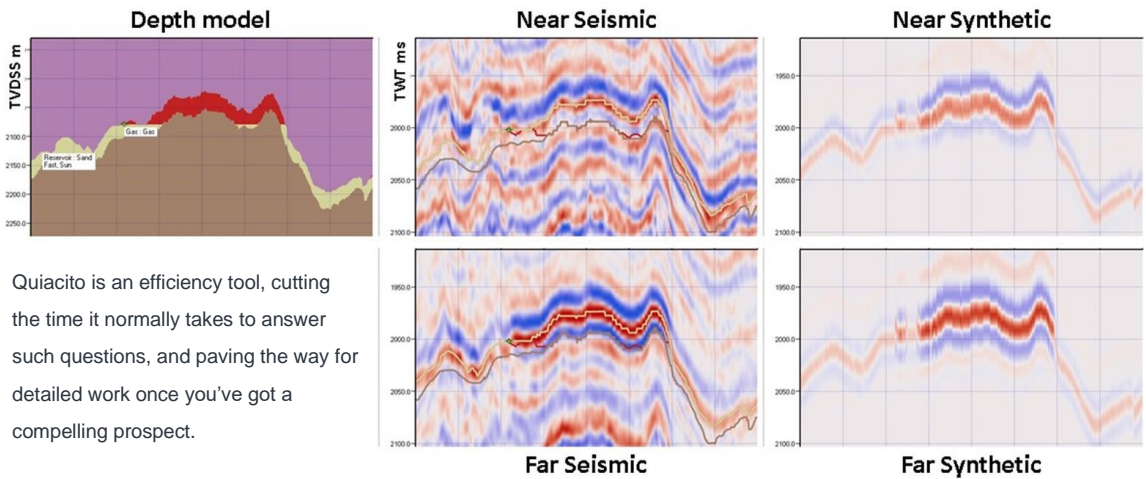
Would you propose to drill an exploration prospect without a sensible geological model that explains your seismic?

Why drill blindly, when you can quickly screen exploration targets for structure and AvO response using **Quiacito**?

Quiacito is a modelling package (Windows OS) designed to interpret and model seismic data along 2D profiles, with emphasis on the AvO response of hydrocarbon porefill in structural and stratigraphic traps. When applied well, Quantitative Interpretation (QI) tends to polarise prospect risk assessments. Quiacito was designed by, and for, seasoned oil and gas explorers.



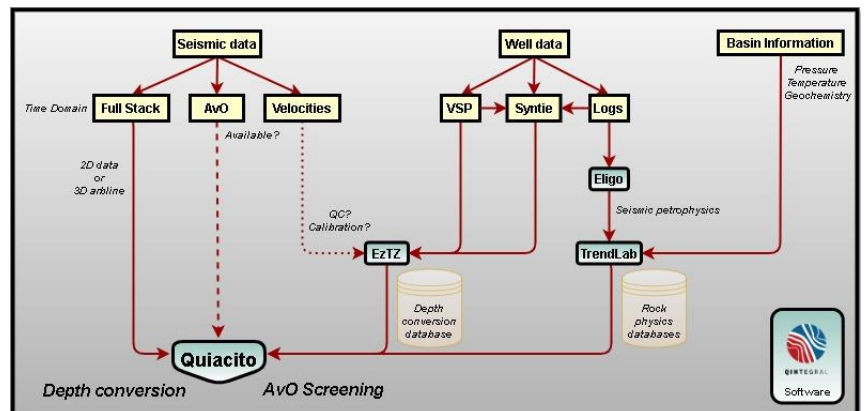
Quiacito simultaneously models both the amplitude and time-depth behaviour of your prospect in real time to answer critical questions at a glance: Do I have a trap? Where is it located? Should I expect hydrocarbon AvO anomalies, and what would they look like? Does my prospect interpretation explain the geophysical data?



Quiacito is an efficiency tool, cutting the time it normally takes to answer such questions, and paving the way for detailed work once you've got a compelling prospect.

Last step in a QI workflow

This flowchart shows a typical workflow for exploration Quantitative Interpretation. Often we can begin modelling and adapt to match the seismic using only limited well-based data to constrain the underlying rock physics and fluid property models.



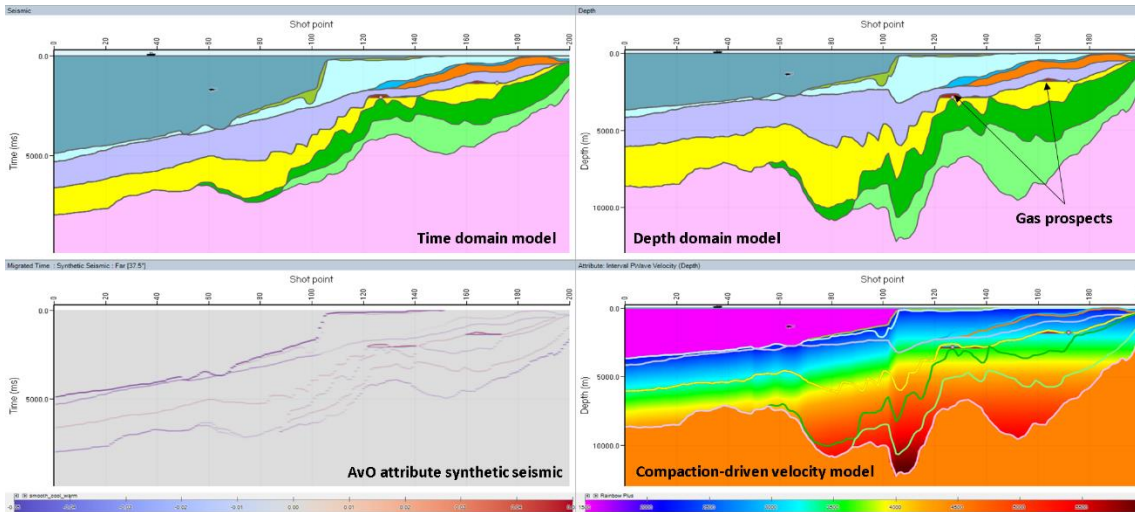
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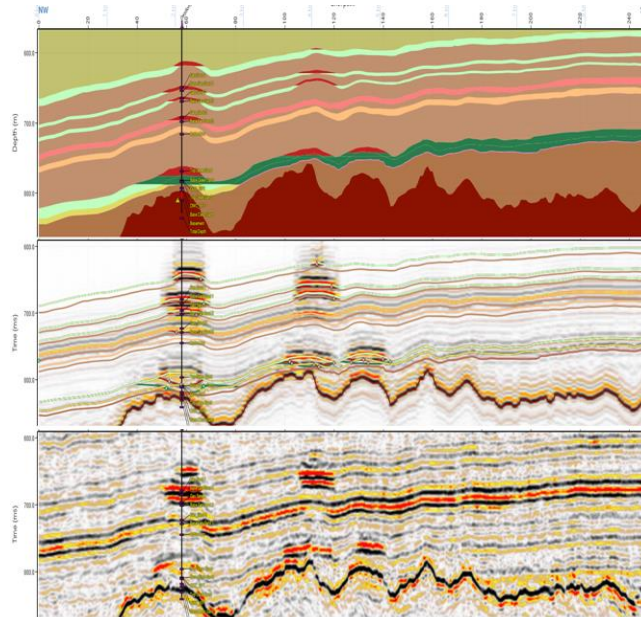
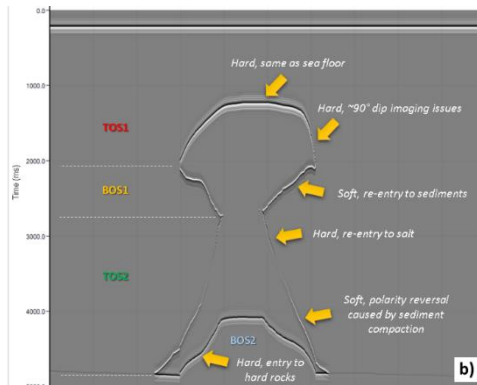
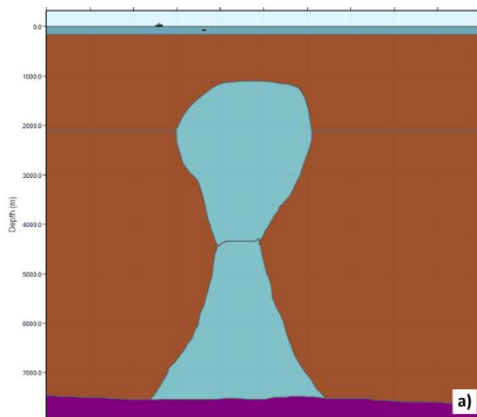


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A few of the applications of Quiacito are shown in the case study examples below. The first, from the Otway Basin, shows the use of a rock physics model, including compaction effects, for converting seismic interpretation from the time to depth domain, before identifying possible structural traps. The AvO synthetic response of gas was then modelled using Gassmann fluid substitution in porous layers and this was compared to the recorded seismic to modify prospect risk and volume estimates.



An overturned salt diapir model was built using velocity trends derived from VSP data. The synthetic shows a polarity reversal in the salt wall reflection, guiding seismic interpretation strategy near salt walls in the Santos basin, Brazil.



Detailed models, including many layers and several gas and oil contacts (some drilled and some speculative), can help to explain seismic data near an oil field in the Browse Basin. In this example, a complex interpretation of seismic amplitude indicators results from the cumulative delay effects through shallow gas traps and from low velocities within the gas filled part of a glauconitic reservoir interval.

“You can think of Quiacito as a whiteboard for testing your interpretation of geophysical datasets”

INTEGRATION

We work with a mindset that a valid model of the geology should predict the seismic response if the measurements are accurate and the modelling physics is right.

MODEL CONFIDENCE

Quickly iterate through alternative models to close the loop on possible solutions. Eliminate incongruent model cases and assess prospect risks often in a matter of minutes.

APPLICATIONS

- Predict oil and gas fill in traps
- Reservoir quality/thickness
- Explain anomalous amplitudes
- Seismic imaging QC
- Seismic velocity QA/QC
- Depth conversion challenges
- 4D seismic feasibility and QC
- CO₂/H₂ storage feasibility

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