# CARNAIN ATTRIBUTE PACKAGE

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## Innovative AI-Driven Technology and Adaptive Workflows

Our innovative solutions are revolutionizing seismic data interpretation through unique AI-driven methodologies and adaptive workflows. These technologies are designed to provide precision, efficiency, and adaptability, ensuring that your operations remain ahead of the curve.

## Unique Technology and Workflows

We harness the power of advanced data-driven AI to deliver unparalleled insights into seismic data. Our capabilities include:

- **Dip Estimation**: Accurate and reliable calculation of seismic dips for better structural understanding.
- **Fault Segmentation**: Automated fault identification to streamline subsurface interpretation.
- **Salt Delineation**: Precision mapping of salt bodies, reducing uncertainty and improving drilling outcomes.
- **Fluvial System and Facies Identification**: Seamless recognition of depositional environments, enhancing reservoir characterization.

## Unsupervised Adaptive Algorithms

Our solutions feature unsupervised methodologies that intelligently adapt to the unique characteristics of your seismic data, ensuring optimal results without extensive manual intervention:

- **Automated Parameter Adjustment**: Let the software manage the complexities of parameter tuning, saving time and effort.
- **Dynamic Algorithm Selection**: Adaptive algorithms choose the best approach for each dataset, maximizing accuracy and efficiency.
- **Seismic Adaptation**: Our workflows adjust seamlessly to the inherent properties of your data, including attenuation, texture, and frequency variations, to name a few.

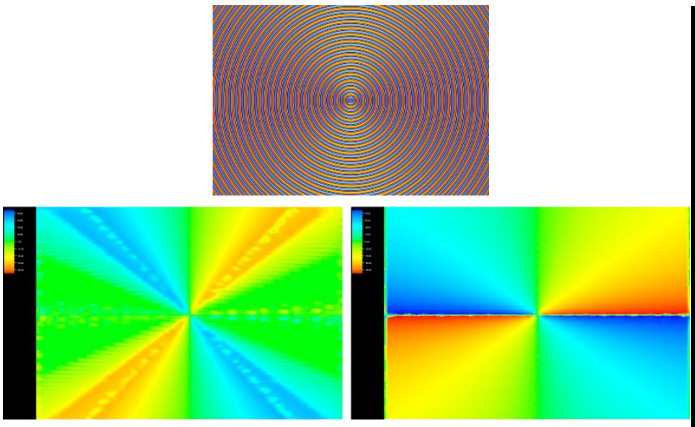
By leveraging these advanced capabilities, you can achieve unparalleled efficiency, accuracy, and scalability in seismic data processing. Additionally, our solutions are continually evolving to incorporate the latest technological advancements and can be tailored to meet your specific requirements.

# Ocean Plugin

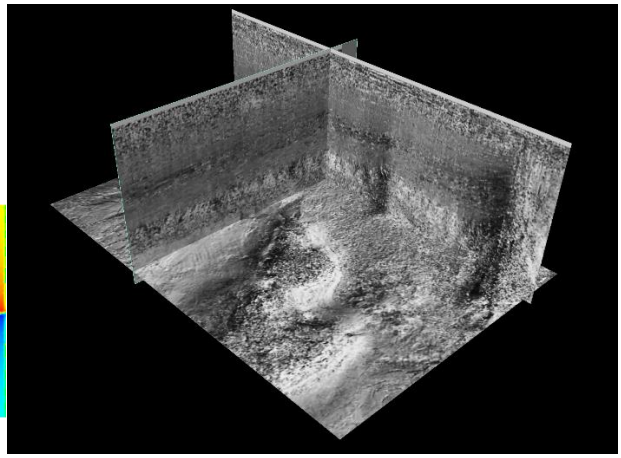
Carnain Attributes Plugin is the first Ocean Plug-in to use Unsupervised AI Methods for seismic interpretation.

## Dip Estimation

Through the integration of AI and ML algorithms, our platform delivers a highly accurate dip estimation without the need for manual input. By analyzing seismic data in an unsupervised manner, the system identifies dip angles and patterns with precision, empowering geoscientists to uncover complex subsurface structures. This is used to guide all the other solutions in this package, resulting in improved risk assessment by helping to identify potential hazards and reduce uncertainties in exploration and drilling.

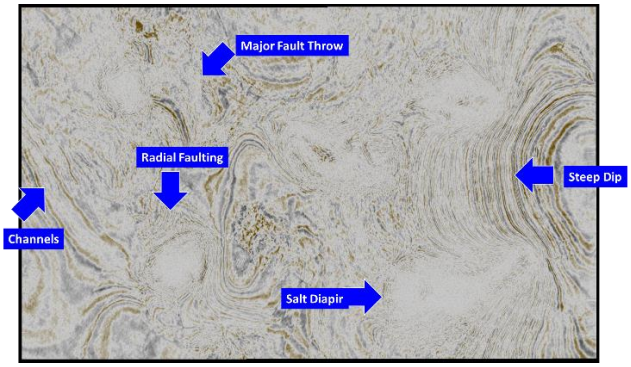


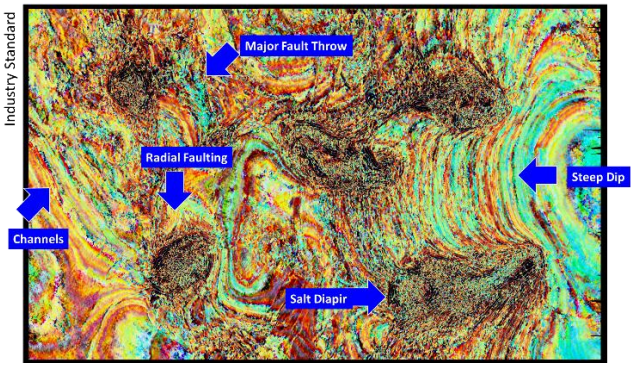
Industry Standard Carnain Dip

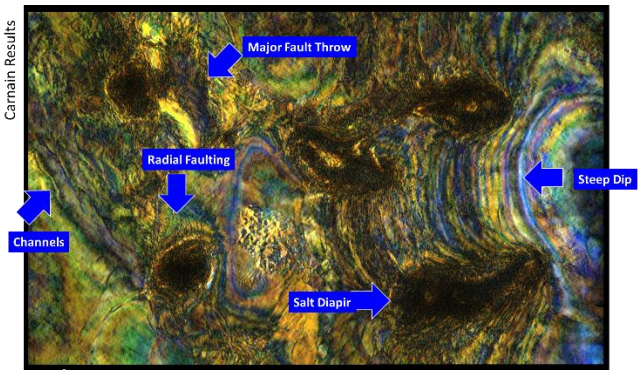


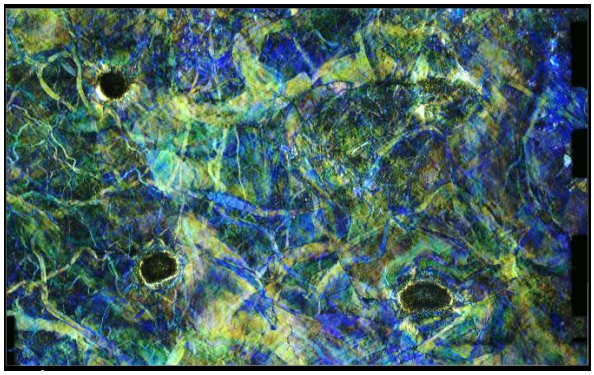
## Fluvial System and Facies Identification

Our ML-based workflows enable the identification and characterization of fluvial systems and seismic facies with minimal manual intervention. Using adaptive algorithms, the system detects depositional patterns and environmental variations, providing detailed insights into subsurface geology. This is possible with our unique signal decomposition solution, primed for RGB blending workflows and analyses.



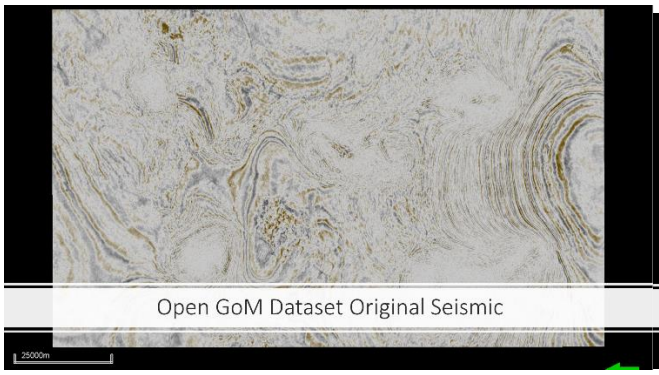



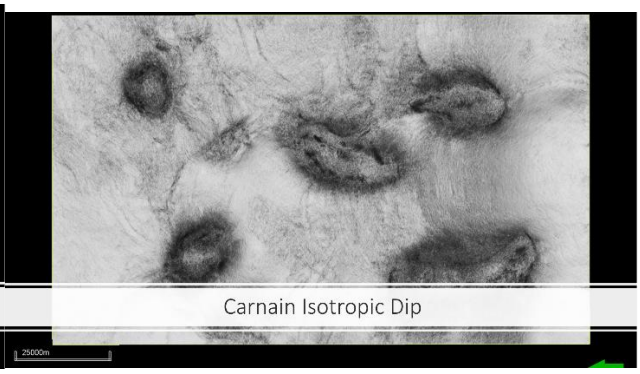



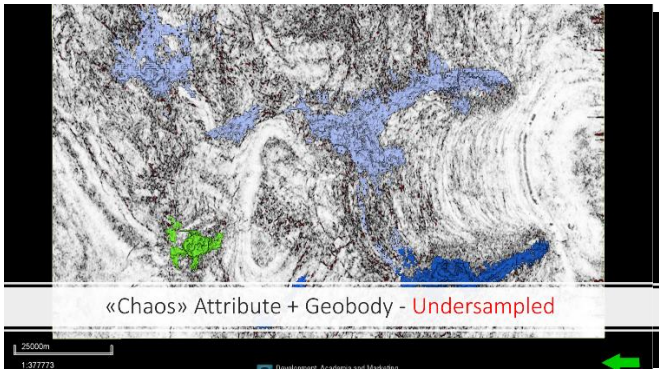



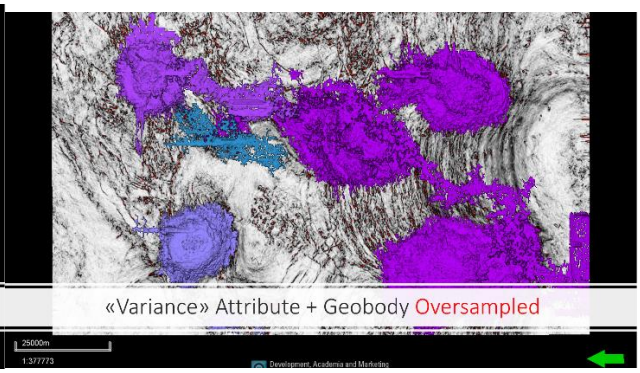
## Salt Delineation

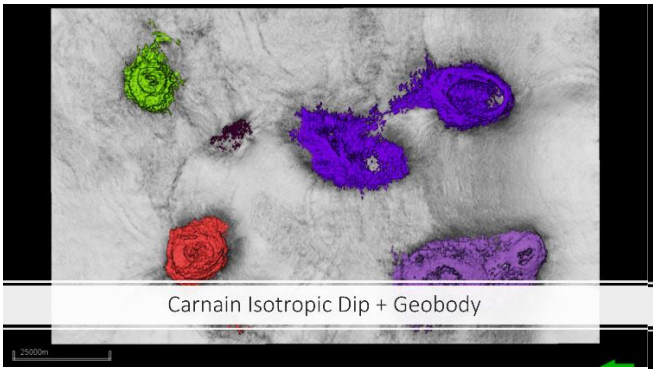
Salt interpretation has never been more efficient, thanks to our unsupervised ML-based workflows. The system dynamically adjusts its analysis based on input data, accurately identifying salt bodies and resolving imaging challenges associated with complex salt geometries. Our solutions help avoid and minimize issues with over-and-under sampling when compared to other industry leading solutions. Helping to isolate the salt bodies and give a fuller 3D model. Map diapirs, salt walls, and domes with unparalleled clarity. And it can help resolve imaging distortions caused by salt structures through data-driven modeling and analysis.

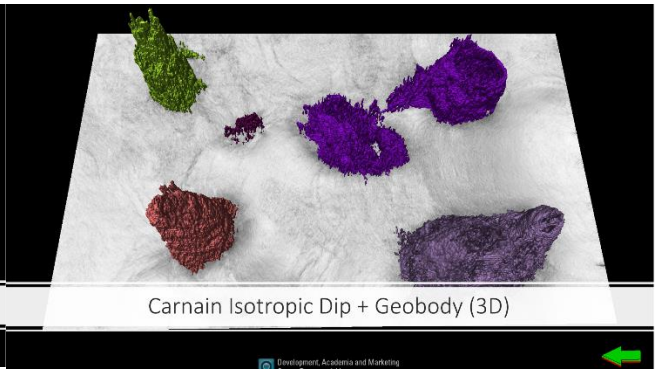


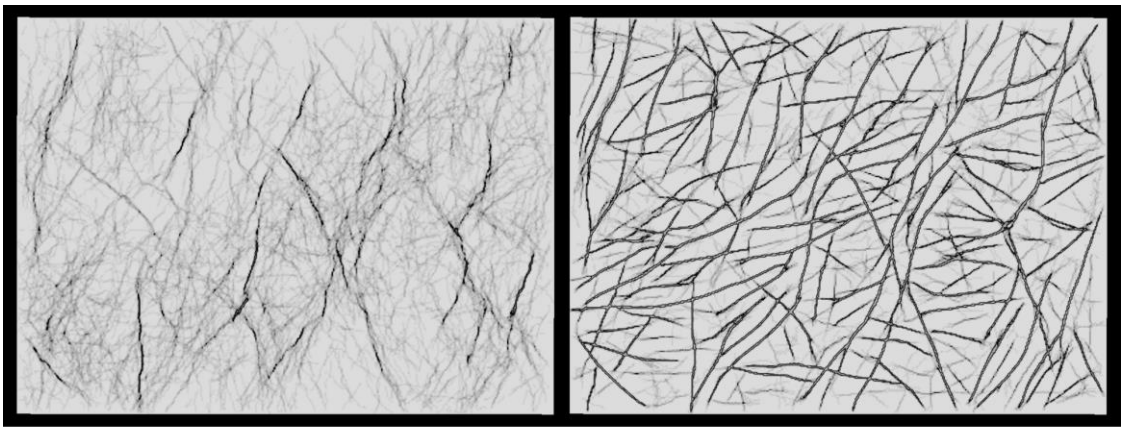



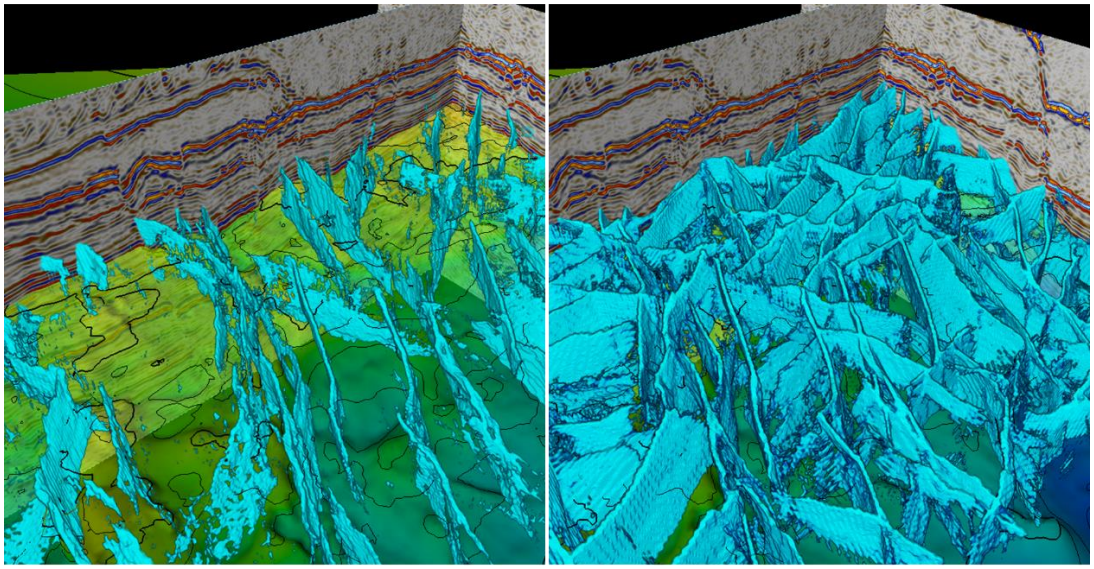




## Fault Segmentation

Our fault segmentation workflows leverage cutting-edge AI to automate the detection and characterization of faults in seismic data. Unsupervised algorithms adapt to seismic variations, delivering detailed fault maps and structural insights without the need for manual oversight. Capture both major and minor features simultaneously, identify fracture swarms, and enhance continuity of your modelling and automated extractions. Our methods have proved to provide over 90% accuracy, on both major and minor features, when compared to FMI and other image logs.



Industry standard Carnain Technology



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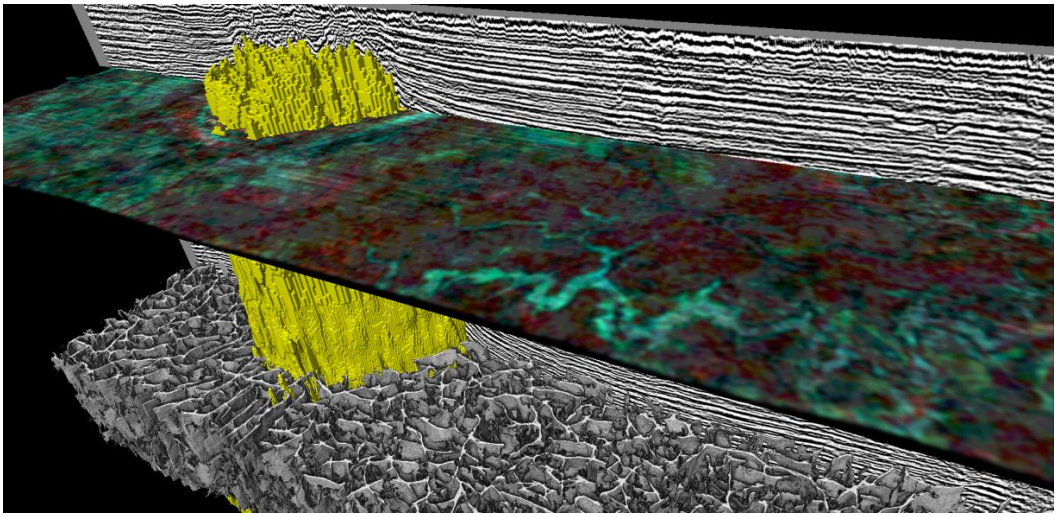


# Standalone Application

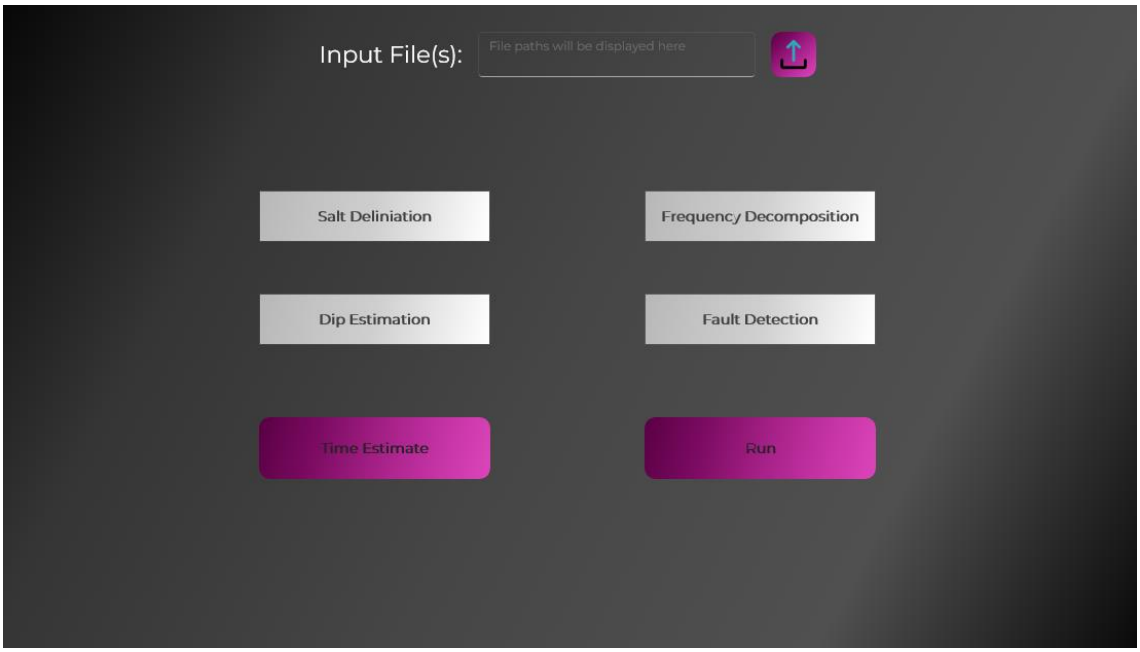
Our standalone application provides unparalleled advantages, delivering both platform independence and automated processing capabilities for all your post-stack seismic data. This innovative software is designed to streamline workflows and enhance efficiency.

## Effortless Seismic Processing & Scalable Automation

Once you have experienced the reliability and performance of our software, scaling operations becomes seamless, allowing your team to optimize resource allocation effectively.

Key features include:

- **Direct Input Cube Processing**: Start processing input seismic cubes directly from the application's homepage for effortless navigation and usage.
- **Run Time Estimation**: For time-sensitive projects, gain accurate time estimates based on prior processing runs to better plan your day.
- **Custom Attribute Selection**: Tailor your workflows by selecting individual seismic attributes for processing, ensuring precision and focus.

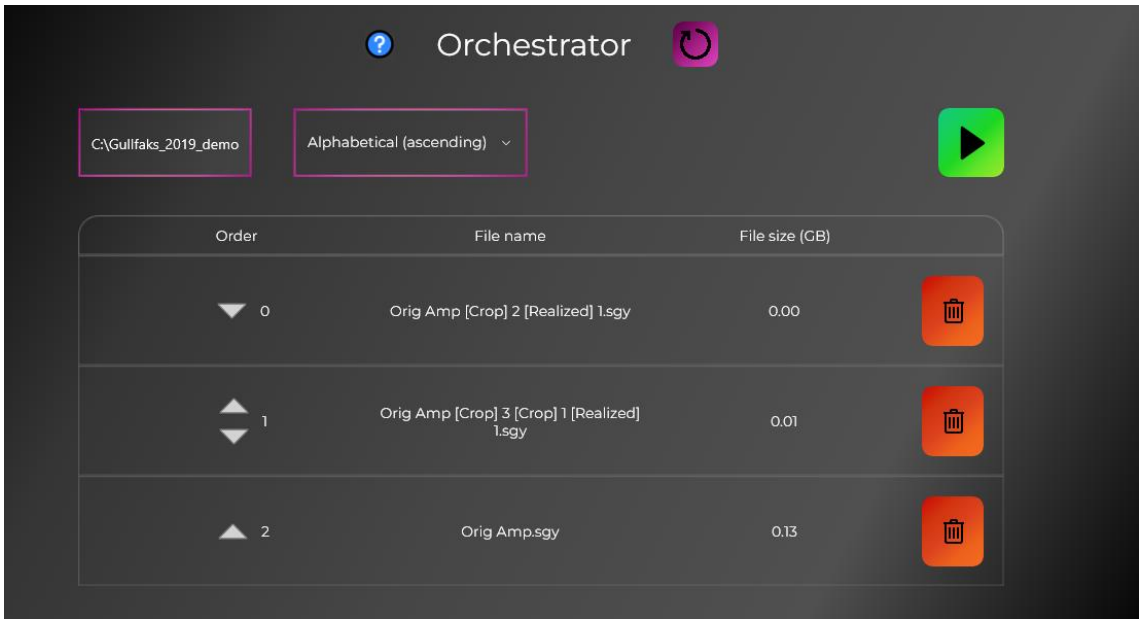



## Advanced Processing with Orchestrator Function

For more advanced use cases, our orchestrator function enables sophisticated workflows with minimal manual intervention. Simply place your SGY files into a designated folder and start the processing sequence. You can also dynamically adjust priorities as processing progresses, ensuring optimal utilization of resources.

Additional capabilities include:

- **High-Performance Computing Integration**: Leverage High Performance Computing (HPC) clusters, whether on-premises or in the cloud, for unparalleled computational power and scalability.
- **OSDU Integration**: Write processed data directly to the Open Subsurface Data Universe (OSDU) to enhance accessibility and collaboration.
- **Tailored Features**: Our application is under continuous development, with customizable functionalities available to align with your unique operational needs.




**Disrupting & challenging the status quo to inspire confidence in critical decision making.**

## Data Driven AI Based

- Parameter Adjustment
- Seismic Property Tracking
- Cloud Ready

## Quality & Benefits

- Enhanced Level of Detail
- Increased Accuracy
- Risk & Cost Reduction

## Advanced Workflows

- Structural Interpretation
- Drilling Hazzard Analysis
- EOR Application