Earth Data - Seismic

CÔTE D'IVOIRE

Unleashing the Tano Basin's potential with high-quality 3D seismic data

Viridien, in association with the DGH and PETROCI, is reimaging a significant portion of the Ivorian margin to provide the industry with the tools to de-risk the Tano Basin's play potential.

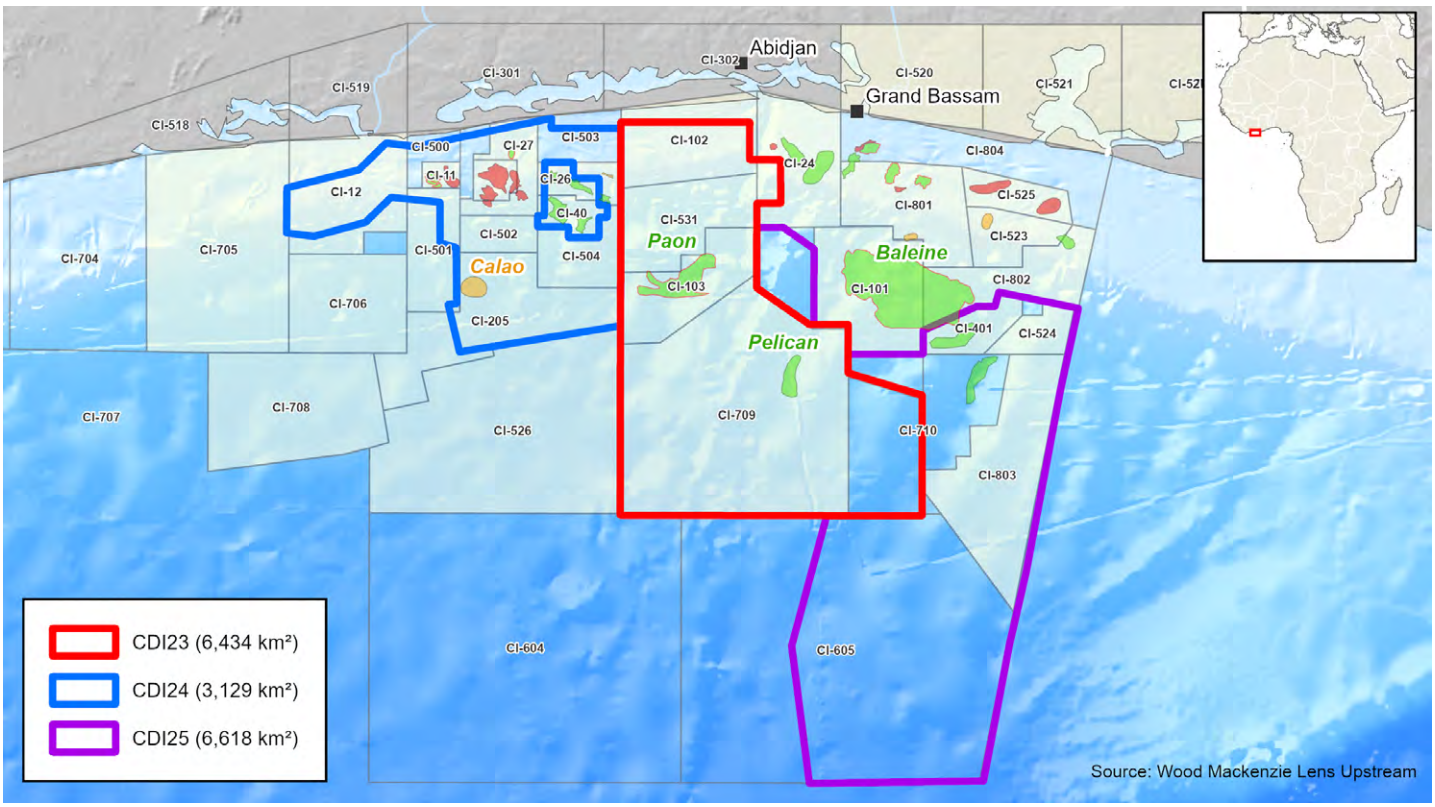
Côte d'Ivoire is a hotspot for oil and gas exploration. The recent Calao discovery and the giant Baleine field, along with favourable geological conditions and government support, make it an attractive destination for energy companies. Ongoing exploration and production efforts indicate a promising future for hydrocarbon development in the country. Viridien's advanced 3D seismic dataset is your gateway to uncovering the area's full potential.

Highlights

- Data coverage enveloping the recent Calao discovery and adjacent to the renowned Baleine field
- CDI23 available now
- CDI24 fast-track available now, with final volume due October 2024
- Unrivaled detail: full-bandwidth data for high-resolution imaging targeting the Cretaceous reservoir intervals

Next steps

Additional data from the current reimaging multi-client programs (CDI24 and CDI25) will be merged with the completed CDI23 project, creating a seamless and contiguous volume of over 16,000 km².



Project	Area	Start	Fast Track	Completion
CDI23	6,434 km²	2023	-	2024
CDI24	3,129 km²	2024	Available	Q4 2025
CDI25	6,618 km²	2025	-	-

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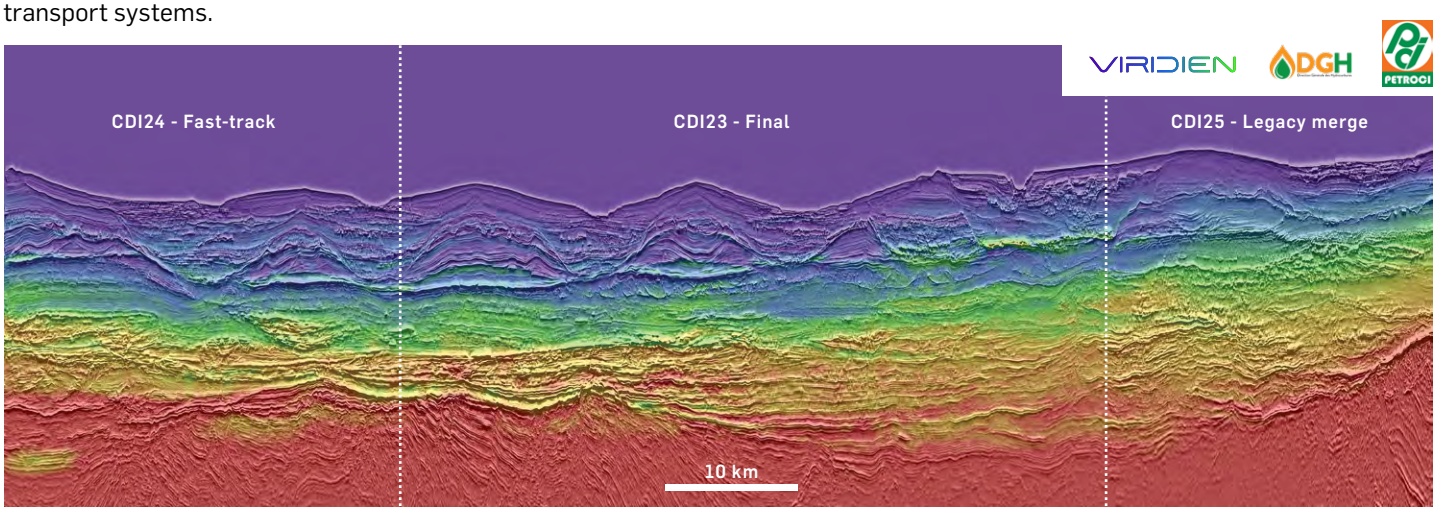
Reimaging projects

The completed CDI23 3D reimaging volume shows a significant imaging uplift compared to the legacy data. This uplift in data quality is due to improved bandwidth and a detailed velocity model, enabling better imaging of the basin architecture, better resolution and delineation of faults and better imaging of Cretaceous reservoir intervals.

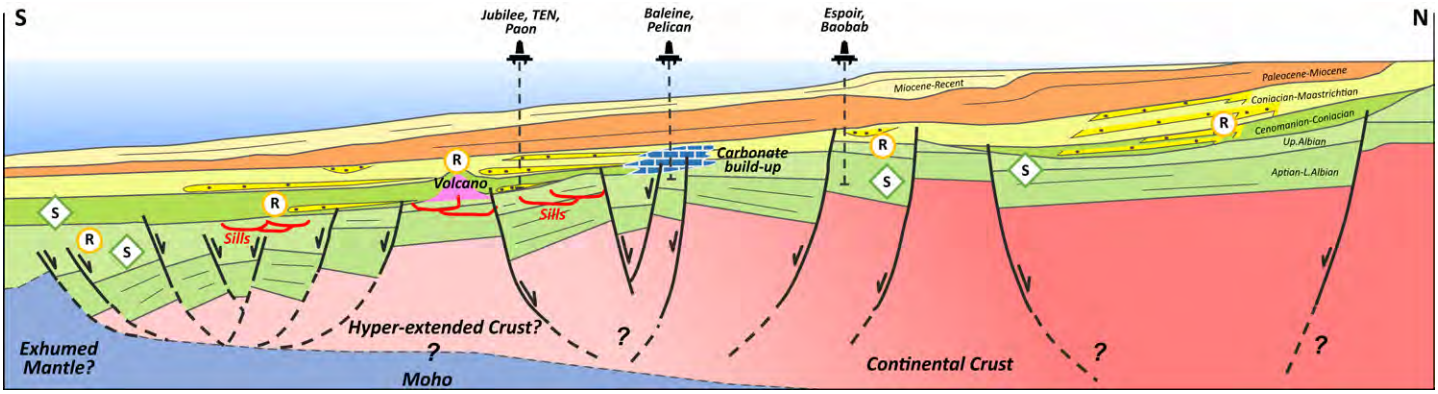
The 3D Ghost Wavefield Elimination (GWE) in the sparse Tau-p domain was crucial in aligning signals across different surveys with differing acquisition parameters; Wave Equation Deconvolution (WEDECON) and Model-based Water Layer Demultiple (MWD) for modelling the shallow water multiples, and Time-Lag Full-Waveform Inversion (TLFWI) up to 15 Hz for building the high-frequency velocity model able to accurately capture the velocity variations in the complex shelf slope with multiple mass transport systems.



Composite seismic line showing CDI23 (final), CDI24 (fast-track), and CDI25 (legacy merge) datasets, with velocity overlay illustrating project evolution.

Geological setting

The Tano basin is one of the last segments of the Atlantic Margin to open. The African Transform Margin cuts across the structural pattern observed in other regions of the South Atlantic, where rifting typically followed the Pan-African/Brasiliano lineaments. It results in a relatively complex rift topography marked by volcanic intrusions formed during the rifting stage. Exploration-wise, this basin is one of the recent prolific hydrocarbon regions discovered in the Gulf of Guinea.



Schematic section through the Tano Basin.

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25FY-ED-2436-V2