

South Basin 2D and 3D surveys

Viridien, in association with Direction Générale des Hydrocarbures (DGH), has acquired an extensive high-end multi-client seismic data library to evaluate the prolific pre-salt potential of the South Gabon Basin.

Overview

Viridien's 3D **BroadSeis™** and long-offset, broadband 2D data can help to define the extent of existing and new plays in the Gabon South Basin. Additionally, this data can help to understand the thickness variations in the sediment overburden for source rock maturity analysis.

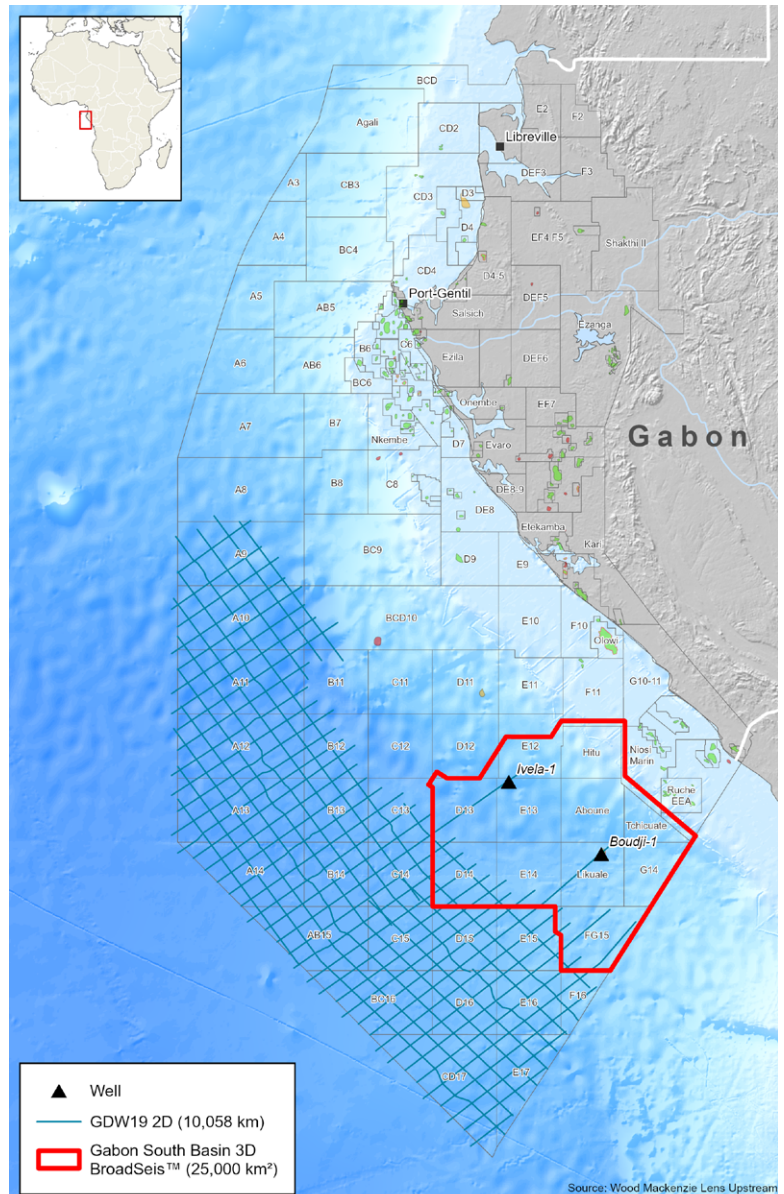
The surveys cover areas downdip and adjacent to pre-salt Aptian discoveries, such as the recent Hibiscus South field in 2023 in the Dussafu Block and Diaman in 2013 in the Diaba Block. The Ivela-1 and Boudji-1 oil discoveries were made in 2018 based on the 3D seismic dataset.

The surveys are complemented by an integrated geoscience package, **JumpStart™**, including:

- Integrated geological interpretation of seismic with gravity, magnetics, satellite seeps and well data
- Key source rock distribution and potential maturity maps
- Key reservoir rock distribution and quality maps
- Full report including basin analysis, prospectivity evaluation and play maps within the 3D seismic area

Highlights

- Over 25,000 km² of broadband 3D coverage of an unexplored pre-salt basin near recent discoveries
- Additional area of multi-azimuth coverage with 15 km offsets to enhance pre-salt imaging
- Around 9,800 km of long-offset, broadband 2D data will not only increase resolution and improve characterization of the turbidite systems it will also provide deep penetration of low frequencies to help describe the nature of the deep crust
- Optional integrated geoscience package combining geological, well, gravity and seismic data, plus advanced imaging for extensive quality control
- 2025 reimaging pilot test conducted over a subset of the 3D data shows a magnitude of uplift, with potential full survey reimaging in 2026

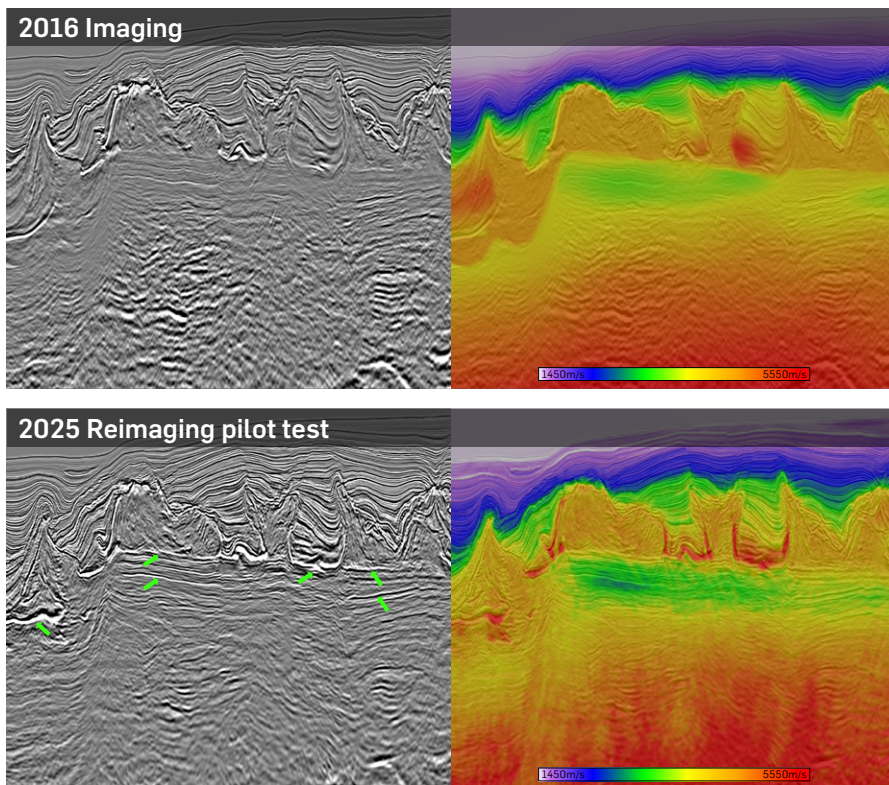


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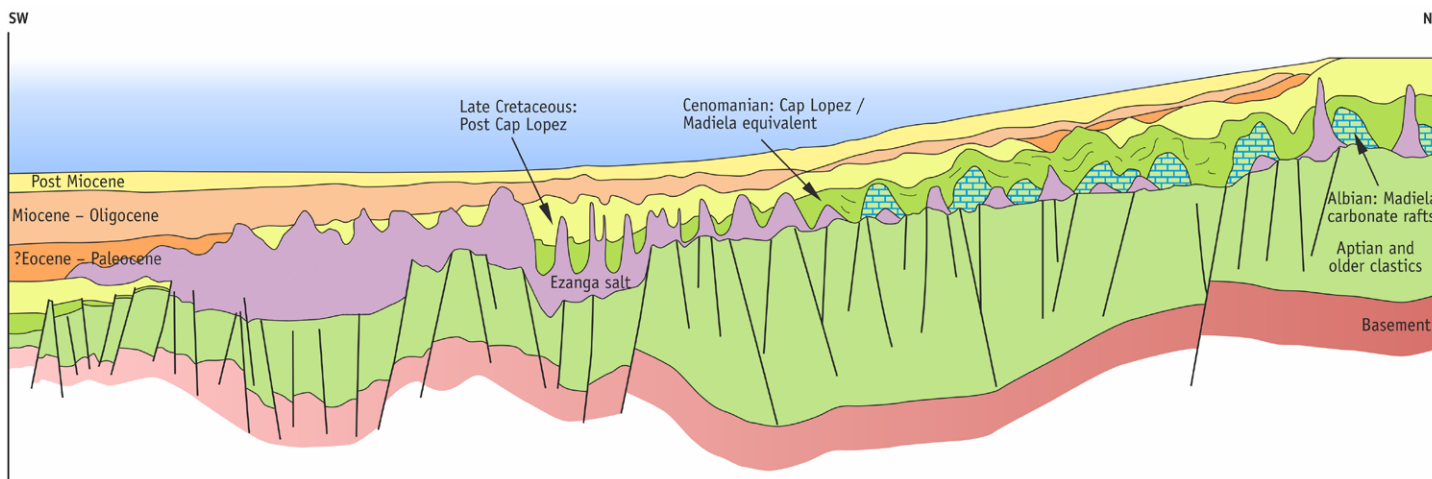
Geological setting

The Gabon deep offshore domain is one of the last underexplored areas of the West Africa Atlantic Margin. Exploration targets range from deep sub-salt Barremian to Aptian sandstones with porosities of up to 30% and permeabilities of several Darcies through suprasalt Albian-Age Madiela carbonate turtlebacks, that can constitute good-quality reservoirs locally, and Cretaceous-Tertiary turbidite sands that constitute well-known objectives further south in Angola and Congo waters.

The primary source rocks are the Neocomian to Aptian shales of the Melania and Kissenda formations, which have average TOCs of 6.1% and 1.5-2%, respectively. Pre-salt traps comprise tilted fault blocks sealed by shales or salt, and sub-crop, dome-like structures formed by differential erosion at the level of the break-up unconformity. Good Cretaceous and Tertiary source rocks are present along the margin, but their maturity still needs to be proven in the deep offshore area of the Gabon South Basin.



In 2025, Viridien performed a pilot test over a designated portion of its 3D survey to assess imaging improvements in both the pre- and post-salt sections. The updated time-lag full-waveform inversion (TLFWI) based model addresses geological complexity, with results showing an increased level of uplift across these intervals.



Schematic section through the South Gabon Basin.

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