

South Basin 2D and 3D surveys

CGG, in association with DGH, has acquired an extensive high-end multi-client portfolio to evaluate the prolific pre-salt potential of the South Gabon Basin.

Overview

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

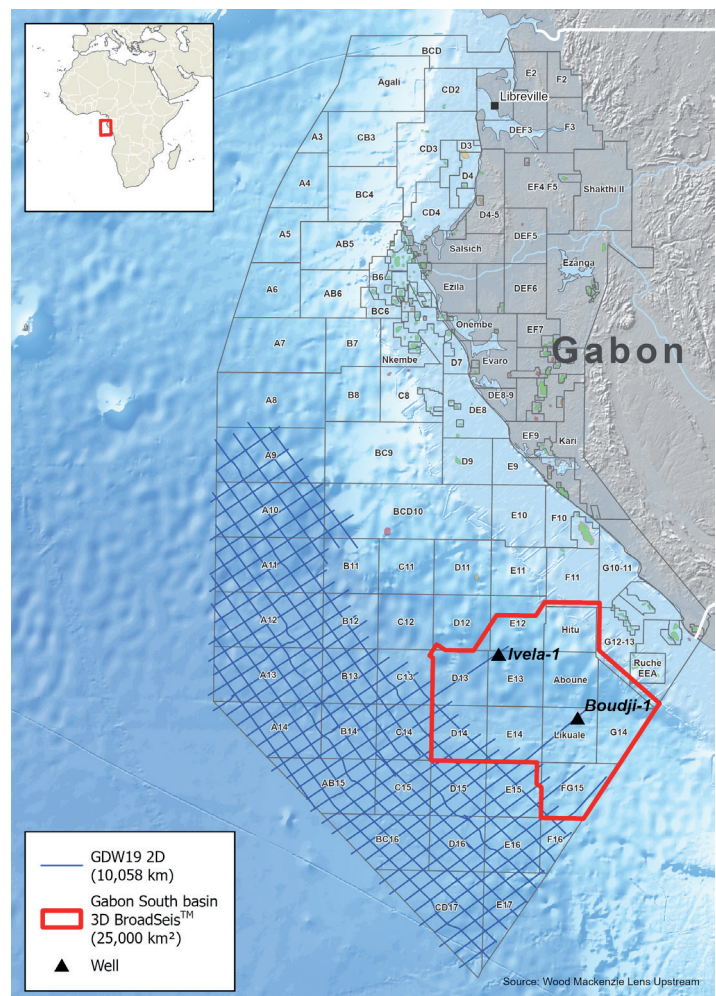
The surveys cover areas downdip and adjacent to pre-Aptian salt discoveries, such as the recent Hibiscus South field in 2023 in the Dussafu Block and Diaman in 2013 in the Diaba Block. The Ivela-1 and Boudji-1 oil discoveries were made in 2018 based on the 3D seismic dataset.

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

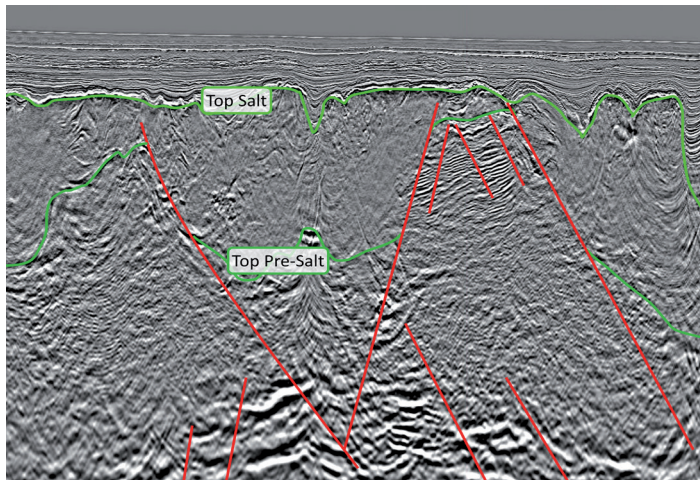
- Integrated geological interpretation of seismic with gravity, magnetics, satellite seeps and well data
- Key source rock distribution and potential maturity maps
- Key reservoir rock distribution and quality maps
- Full report including basin analysis, prospectivity evaluation and play maps within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

Highlights

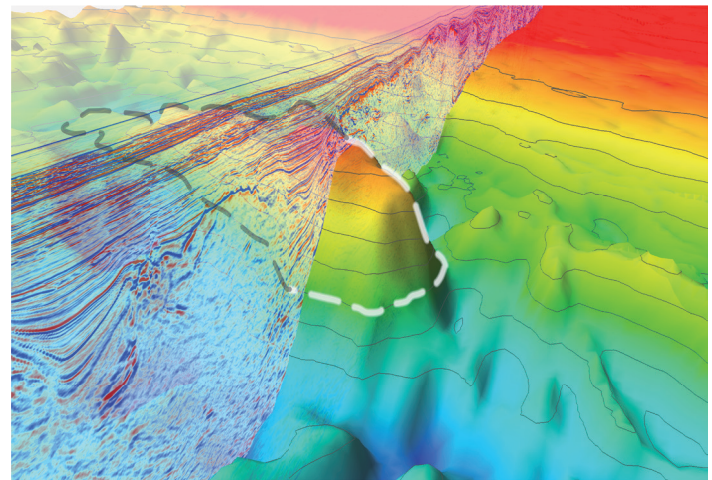
- Over 25,000 km² of broadband 3D coverage of an unexplored pre-salt basin near recent discoveries
- Additional area of multi-azimuth coverage with 15 km offsets to enhance pre-salt imaging
- The main objectives were to improve the imaging of potential prospective structures at the base salt level and below without compromising the quality of the shallower post-salt image
- Around 9,800 km of long-offset, broadband 2D data will not only increase resolution and improve characterization of the turbidite systems but 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



GABON



An arbitrary seismic line showing a prominent structural high / horst.

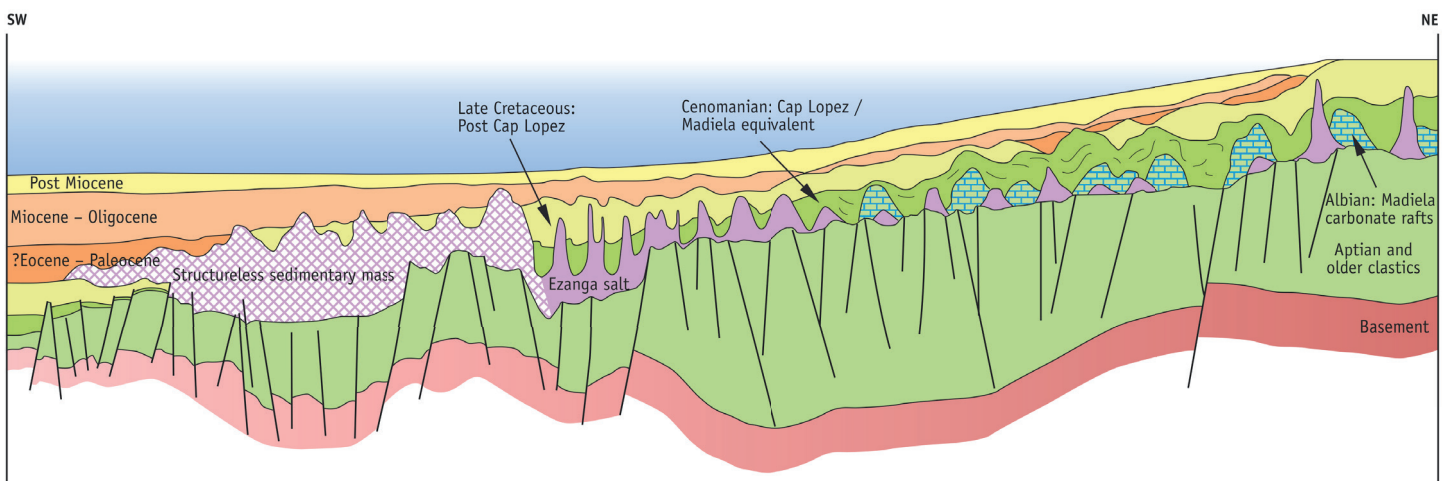


The same high / horst and a seismic line crossing it are shown in a 3D view.

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 Albianage Madiela carbonate turtlebacks, that can provide good reservoirs locally, and Cretaceous-Tertiary turbidite sands that constitute well-known objectives further south in Angola and Congo waters.

The most important 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.



Schematic section through the South Gabon Basin.

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