

Seismic available, Permis Marine XXIX A

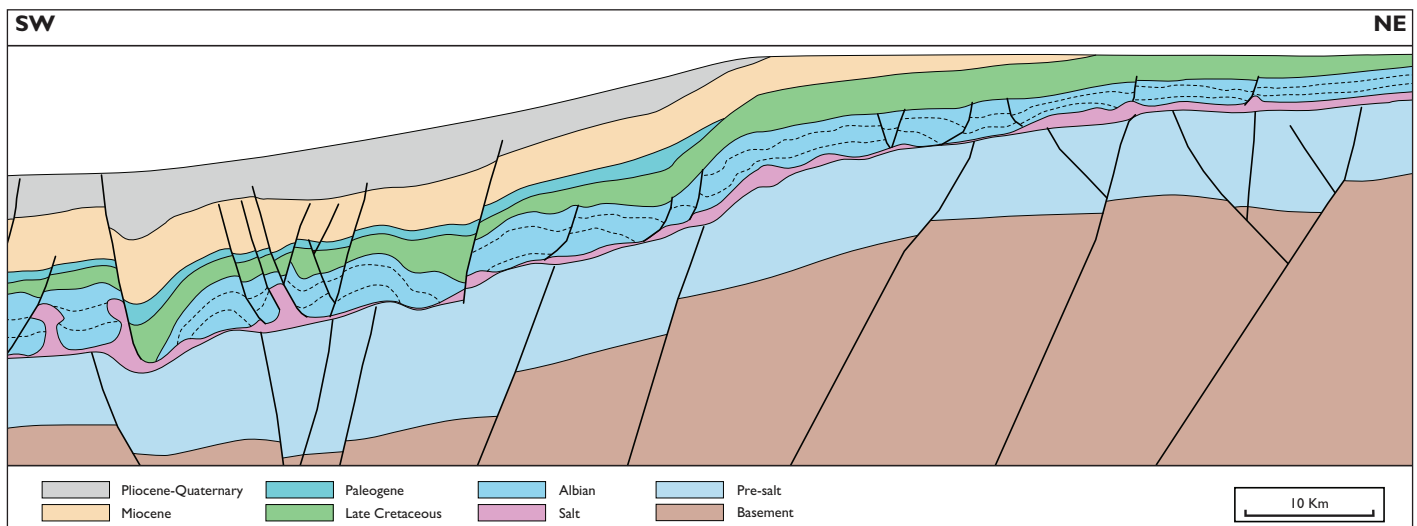
Permis Marine XXIX A is located offshore in the Congo Coastal Basin. It has an area of 745.4 Km². The bathymetry of this coastal block ranges from 0 to 50 m.

Permian Marine XXIX A contains four wells and no discoveries. The nearby Litanzi Field has reservoirs in the Albian Sendji carbonates, and the Viodo Field in an adjacent block found oil within the Pre-salt Toca carbonate reservoir interval. Typical plays expected in Permian Marine XXIX A include Cenomanian sandstones, Sendji carbonates, Pre-salt sandstones and carbonates.

The Cenomanian Likouala Sandstone Formation (Fm) forms a reservoir for the nearby Tchibouela Est and Doukdaka Fields. Hydrocarbons are sourced from the Neocomian Noires Fm (predominantly sourced from Type I/II kerogens). Trapping structures are typically related to salt-induced rollover anticlines.

The Albian Sendji Fm is the primary reservoir for the nearby Litanzi Field. Hydrocarbons are sourced from the Neocomian Noires Fm. Trapping structures are typically related to salt withdrawal turtle-back features and salt-induced rollover anticlines.

Pre-salt reservoirs include the Chela, Toca, Argiles Vertes, Djeno and Vandji formations. Within Marine XXIX A, the Djeno Marine-I well encountered a thin oil sand (8 m) with 20% porosity in the Pre-salt Argiles Vertes Fm which produced 26° API oil during testing and gas shows were observed in the Djeno Fm. Also within the block, Koga Marine-I encountered 55 m of oil bearing Pre-salt Toca Fm carbonates with porosities ranging from 9-15% but was deemed uncommercial due to low flow rates during testing. The Nongo Marine-I well tested the Toca Fm carbonates which contained oil and had an average porosity of 13.4%. The nearby Viodo Field encountered hydrocarbons within Pre-salt Toca Fm carbonates and the nearby Nene and Litchendjili fields recorded hydrocarbons within Pre-salt Djeno Fm sandstones. Trapping mechanisms are generally associated with stratigraphic pinch outs and tilted fault blocks.

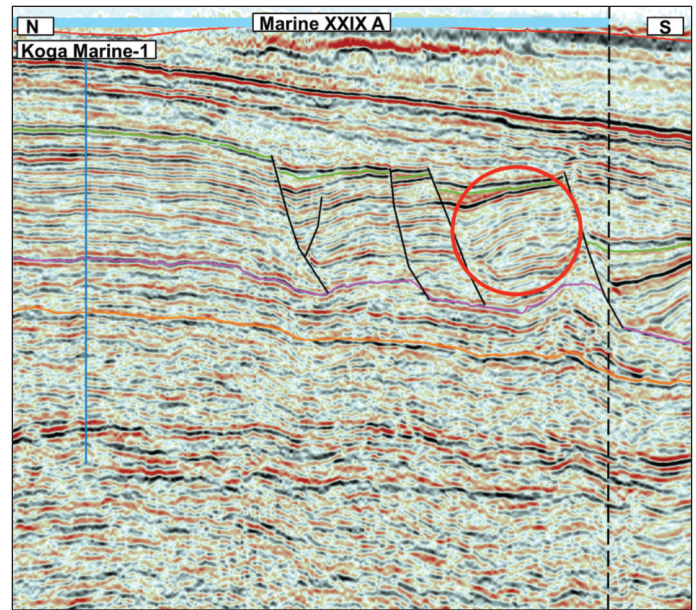


Schematic cross section

Lead 1 – Sendji Carbonates

This lead is a rotated fault block within the Sendji Fm carbonates. These carbonates consist of dolomites, oolitic limestones and interbedded sandstone units, deposited in tidal channels in the lower part and as offshore bars and shore face units in the upper part. This lead targets one of several rotated fault blocks within the Sendji Fm, there may be additional potential in similar targets at the same level within the block.

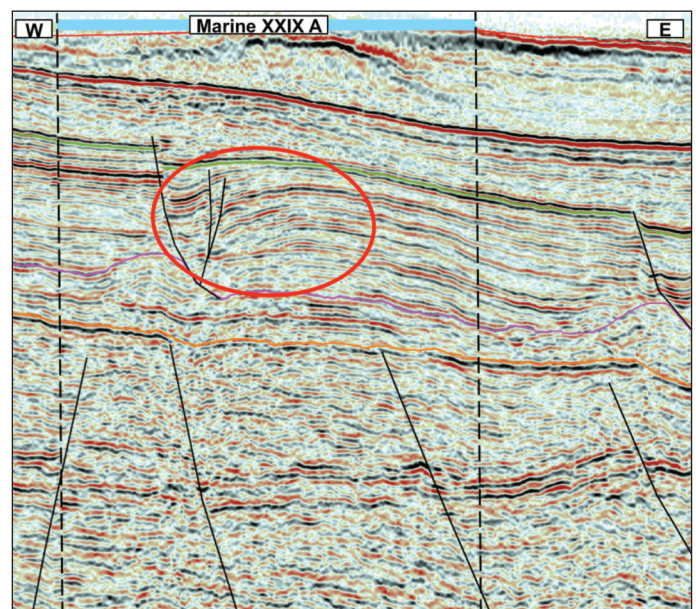
Hydrocarbons are sourced from the pre-salt Neocomian Marnes Noires Fm shales, migrating up faults. The nearby Litanzi Field has a working reservoir within the Sendji Fm.



Lead 2 – Sendji Carbonates

This lead is a salt-induced rollover anticline within the Sendji Fm carbonates. These carbonates consist of dolomites, oolitic limestones and interbedded sandstone units, deposited in tidal channels in the lower part and as offshore bars and shore face units in the upper part.

Hydrocarbons are sourced from the Neocomian Marnes Noires Fm shales via vertical migration along faults. The nearby Sendji Field has a working reservoir within the Sendji Fm.



Lead 3 – Pre-salt

This lead is a high amplitude reflector package within a tilted fault block beneath the salt. This is likely to be faulted Toca Fm carbonates. The Pointe Noire Marl and lacustrine shales of the Djeno Sandstone Fm provide effective source rocks and the Loeme salt acts as a seal. The Toca Fm carbonates provide the reservoir interval for the nearby Viodo Field in an adjacent block.

