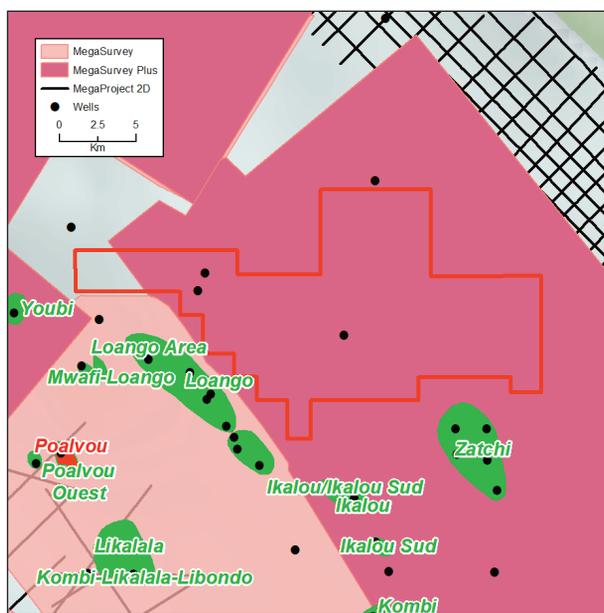


Congo Coastal Basin



Seismic available, Permis Marine XXXI A

Permis Marine XXXI A

Permis XXXI A is located offshore in the Congo Coastal Basin. It has an area of 179.1 Km². The bathymetry of this shallow-water block is <100 m.

Permis XXXI A contains three wells, none of which were discoveries. Madingo Marine-1 encountered oil shows (18° API) within the Tchala sandstones but the other wells were dry. Typical plays expected in Permis XXXI A include Cenomanian sandstones, Sendji carbonates and Pre-salt sandstones.

Cenomanian Sandstones

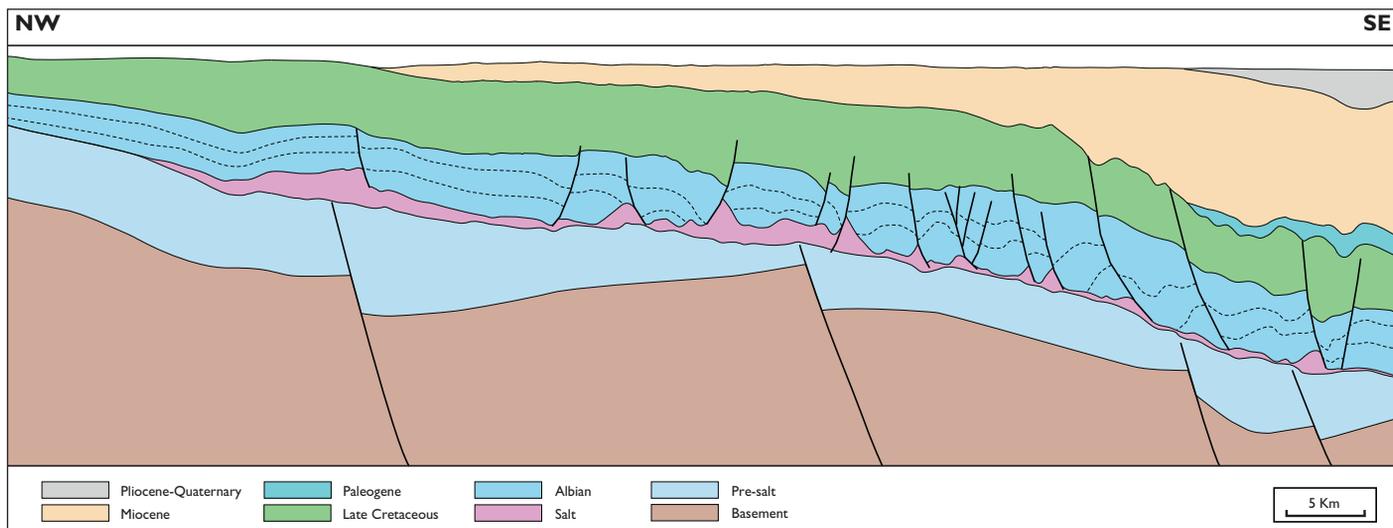
The Cenomanian Tchala Sandstone Formation (Fm) is a secondary reservoir for the nearby Loango Field. Hydrocarbons are sourced from the Neocomian Noires Fm. Trapping structures are typically related to salt-induced rollover anticlines.

Sendji Carbonates

The Albian Sendji Fm is the primary reservoir for the nearby Loango and Zatchi fields. Hydrocarbons are sourced from the Neocomian Noires Fm (predominantly sourced from Type I/II kerogens). Trapping structures are typically related to salt withdrawal turtle-back features and roll-over anticlines.

Pre-Salt Sandstones

Pre-salt reservoirs include the Chela, Djeno and Vandji formations. The nearby Vandji Marine Field encountered hydrocarbons in sandstone reservoirs within the Pre-salt Chela and Lucula formations.

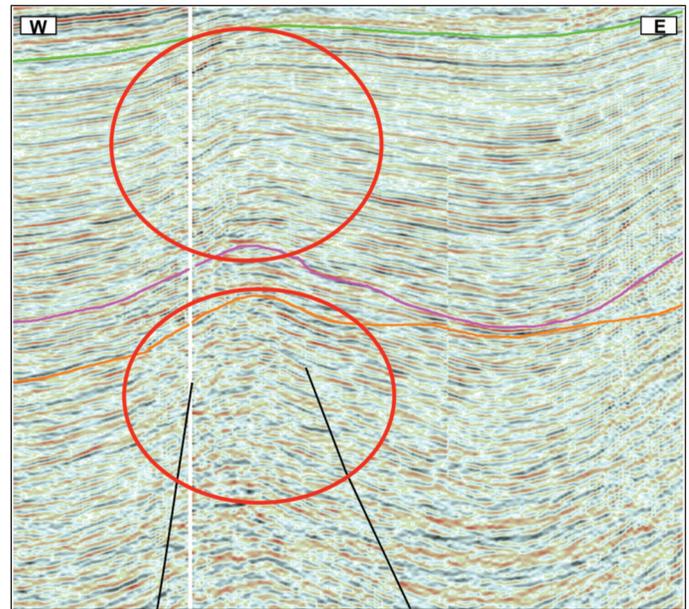


Schematic cross section

Lead 1 – Sendji Carbonates and Pre-salt

This lead has multiple target intervals. There is an anticlinal structure 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.

The second target is a reflector package within a Pre-salt tilted fault block trap. Potential reservoirs include the Djeno Fm and Vandji Fm sandstones. The Pointe Noire Marl and lacustrine shales of the Djeno Sandstone Fm provide effective source rocks and sealing facies. The Djeno Fm sandstones provide the reservoir interval for the nearby Nene Field.



Lead 2 – Sendji Carbonates and Pre-salt

This lead is anticlinal structure within the Post-salt Sendji 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. The Sendji Fm carbonates provide the reservoir unit for the Zatchi Field to the southeast of Marine XXXI A.

There is also potential within a Pre-salt tilted fault block trap. Potential reservoirs include the Djeno Fm and Vandji Fm sandstones. The Pointe Noire Marl and lacustrine shales of the Djeno Sandstone Fm provide effective source rocks and sealing facies.

