

PetroQuest Africa's PSAs, (131,190 and 206) Offshore Somalia, comprise 15,000 km2 of unexplored, highly accessible, frontier acreage that likely hosts billions of barrels of as yet untapped oil.

Offshore Somalia remains one of the last truly frontier oil & gas basins in the World, with only two exploration wells, drilled offshore along the 1,000 km-long margin. It could become one of the most significant hydrocarbon plays in East Africa.

Source: TGS

# Somalia's Exploration Journey

Offshore Somalia remains one of the last truly frontier passive margins in the world. Only one exploration well has been drilled offshore along the 1,000 km-long margin, the well is located near-shore in less than 100m water depth.

Exploration in Somalia began onshore in 1956 with the drilling of the Sagaleh-1 well, followed by a number of wells drilled mostly in the north of the country. These clearly established the presence of a working Jurassic hydrocarbon system, as illustrated by the Sagaleh-1 and Dagah Shabel-1 (1959) discovery wells. Following successes within the Yemeni Jurassic basins during the 1980s, renewed a great deal of interest in the country.

The collapse of the government in 1991 ushered in a period where Somalia remained inaccessible to exploration companies for more than 25 years. During this time, the majority of Somalia's legacy geological and geophysical data were lost or destroyed.

An offshore 2D acquisition program for Soma Oil and Gas concluded in June 2014 with over 20,500 km of seismic data acquired across a 122,000 km<sup>2</sup> area. In 2015, a further 20,000 km Multi-Client (MC) seismic data was acquired by Spectrum which has been used to de-risk source rock presence, distribution, and maturity. There are strong indications of widespread distribution of good quality source rocks that modelling has shown to be in the oil window, potentially charging significant traps.

### **Our License Blocks**

The recently signed 2020 Somali Petroleum Law has been designed to provide a stable, long-term legal and regulatory framework that promotes cooperation between IOC's and consortium's to protect the investments of the exploration companies participating. A revised Production Sharing Agreement (PSA) model and Tender Protocol have also been designed to encourage exploration.

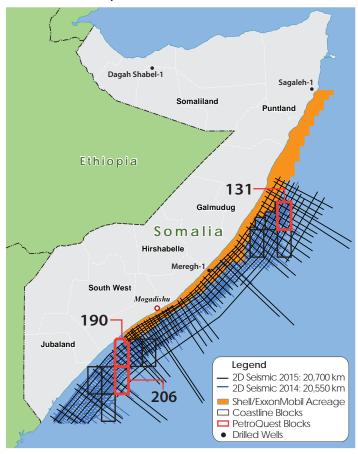
Fiscal terms reflect TECOP (technical, economic, commercial, operational, and political) considerations.

The Somali Petroleum Authority recently awarded PetroQuest Africa (PQA) three high impact offshore license areas, the following table outlines the blocks:

Table 1 - PetroQuest Africa Block Details

Blocks	131	190	206
Offshore Basin	Obbia	Juba-Lamu	Juba-Lamu
Block Size (km <sup>2</sup> )	5000	4978	5000
Water Depth (m)	1500-3000	1500-3000	2500-3500
2D Seismic Data (km)	1569	1087	887
Licence Term (yrs)	5	5	5
Renewal Terms (yrs)	3+2	3+2	3+2

Map 1 - Somalia Offshore Blocks

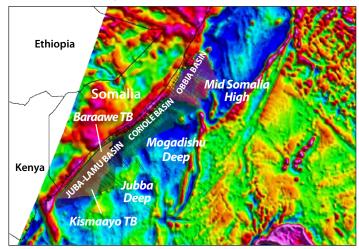


What is Somalia's hydrocarbon potential? In 2020, Norwegian seismic survey company, TGS, estimated that the Somali basin as a whole likely holds offshore reserves of about 30 billion barrels.

## Regional Geology

Offshore Somalia, overlain by the current seismic grid, can be divided into three basins, each defined by their own individual structural regimes: Obbia Basin in the north, the central Coriole Basin, and the southerly Juba-Lamu Basin.

Figure 1 - Seismic Basins Map



**Obbia Basin:** The post Early Cretaceous stratigraphy in this basin is primarily calcareous mudstone 1.5 to 3 km thick, which overlies very large Jurassic tilted fault block structures, some of which are crowned by carbonate build-ups. Karoo and Jurassic source rocks are a very likely source of oil for these potentially very large traps.

**Coriole Basin:** is characterized by large scale flower structures and inversion anticlines, stratigraphic traps at Cretaceous and Tertiary levels are likely to have had prolonged access to oil-rich hydrocarbons generated from Jurassic and Cretaceous source rocks.

Juba-Lamu Basin: The Juba-Lamu Basin in the south has the thickest post-rift stratigraphy, up to 12 km. The Cenozoic section is characterized by mobile shales and large gravity slides which have created enormous, stacked toe thrust structures downdip. Thick Cretaceous sequences of basin floor turbidite fans drape tilted fault blocks and stacked post-rift mass transportsystem deposits.

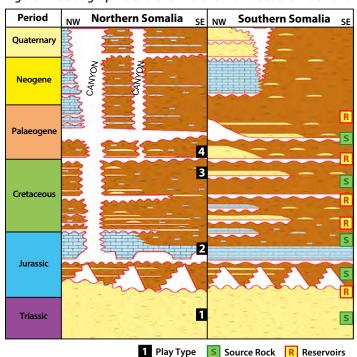
# Somali Prospectivity

Four source rock intervals in Somalia have been identified: a pre-rift Karoo source of Triassic age; a syn-rift Jurassic source deposited in rifts formed by the breakup of the Gondwana super-continent post-rift Late Cretaceous; and Early Tertiary source rocks deposited in discrete global

ocean anoxia events.

Basin modeling has identified the potential for all four of these source environments to be (or have been) mature for oil and gas generation in discrete areas across the Somalian offshore.

Figure 2 - Stratigraphic Chart for Northern and Southern Somalia



# Gigantic Structures

New seismic data from offshore Somalia have revealed extraordinary structures, in an oil-prone frontier province that have never been seen or explored before. The data correlate closely with the potential field results, and the most recent seismic is imaging gigantic structures that have never been mapped until now. Offshore Somalia has all the ingredients for finding big volumes of oil and gas, with reservoirs, source rocks and seals and multiple playtypes including large fold-belt structures and enormous reef closures. Offshore Somalia has the potential for huge discoveries with multi-billion-barrel oil reserves.

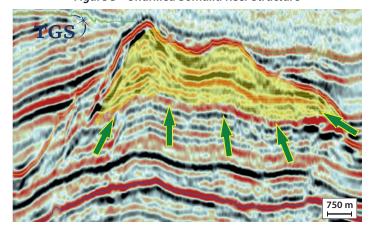
### Block 131

Block 131 comprises 5000 km<sup>2</sup> of unexplored geology on the North Eastern flank of the Mid-Somalia High (MSH). Two petroleum plays are recognized as being present;

• A syn/pre-rift (Liassic) lower Jurassic oil play, dominated by conventional clastic reservoirs, (with oil shows) penetrated in the conjugate margin, offshore Seychelles, is interpreted to be intercalated with oil prone (organic-rich) lacustrine source rocks (primary migration evoked) that also function as competent seals. These rocks are mapped with high-confidence within syn-rift half grabens visible on the seismic across the entire license area and the play is interpreted (from the conjugate margin) to be in the late oil to early gas generative window.

- An earliest post-rift sequence of middle to an upper Jurassic aged carbonate oil prone play with seismically mapped bioherm features that are 10's of kilometers in length. These are interpreted to be part of a middle Jurassic barrier reef systems.
- ♦ Stratigraphic traps comprising the reefs are mappable on the seismic as are massive 100 km² combined traps where reefs have grown and are now structurally draped along the apices of underlying rotated tilted fault-blocks of the syn rift. The seismic clearly shows mappable barrier reef systems, overlain by an interpreted thick upper Jurassic shale sequence.

Figure 3 - Undrilled Somalia Reef Structure



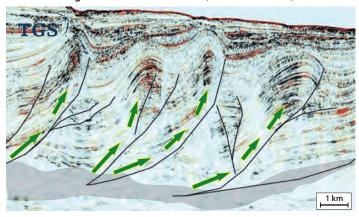
#### Block 190

Block 190 comprises 4978 km<sup>2</sup> of unexplored geology on the northern-most margin of the Juba-Lamu Basin. Three key petroleum plays are recognized as being present, all associated with the drift sequence of the East African Passive Margin;

♦ A passive margin, 'late drift' sequence of shales and sandstones of Tertiary age, deposited at the mouths of antecedent drainage conduits (rivers and deltas) of early Paleocene to early Eocene age. The play is caught up, in block 190 within the Baraawe Thrust Belt (BTB), which

is a series of propagated toe thrusts and associated anticlines that provide a significant number of drill worthy structures. This play type is proven as hydrocarbon bearing billions of barrels of oil equivalent (boe) offshore Mozambique where it is almost identical in age.

Figure 4 - BTB Toe Thrusts (AVO Anomalies)



- ♦ Along the inboard margin of the block, a pervasive down-thrown roll-over is developed against a major basin bounding synthetic normal fault that extends for tens of kilometers along the basin margin. Both an upper and lower Cretaceous roll-over is clearly imaged on the seismic and interpreted.
- ♦ At the south eastern margin of the block, middle-to-upper Cretaceous deep-water fan systems are clearly imaged on the seismic to the south and these may form both stratigraphic and combined traps. Hydrocarbons (billions of boe) are reservoired in these deep-water fan and supra-fan systems offshore Tanzania to the south, so the play-type is proven as being hydrocarbon bearing.

### Block 206

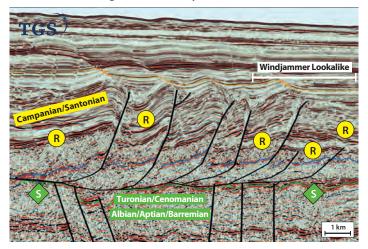
Block 206 comprises 5000 km<sup>2</sup> of unexplored geology within the central to north-eastern portion of the Juba Basin. Two key petroleum plays are recognized as being present, one dominated by structural compression and a second, a stratigraphic play, comprising lobate basin floor fans of Cretaceous age, not unlike those that host the super-giant oil discoveries offshore Namibia, such as Venus-1X (2022), Graff-1X (2022) and Mopane-1X (2024).

• Overall, the geology comprises a passive margin, 'late drift' sequence of siliciclastics (shales and sandstones), early to late Cretaceous in age that were deposited at the mouth of antecedent drainage conduits of early Albian to latest Campanian in age. The play is caught up within the

north eastern reaches of the Kismaayo Thrust Belt (KTB), which is a series of propagated toe thrusts and associated anticlines that provide a significant number of large drill worthy targets. Seal is provided by late Cretaceous (late Campanian) shales. Structures include Windjammer-1 look-a-likes, a large natural gas discovery made offshore Mozambique in 2010.

• The second play, a series of detached Basin Floor Fans (BFF), comprises Albian aged turbidites deposited directly on top of Aptian aged source rocks (thought to be within the peak oil window). There is the potential for a mega Albian 'aged' strat-trap that is over 1500 km² in the area.

Figure 5 - Kismaayo Thrust Belt



The seismic line above shows reservoirs including Campanian sands deposited on top of Turonian aged source rocks that are interpreted to be in the early oil generative window, as opposed to the gas window.

### Orange & Rovuma Basin Analogues

The southern part of the Somali offshore is remarkably similar in many respects to the Orange Basin in Namibia and the Rovuma Basin in Mozambique which are now both established as extraordinary super-giant hydrocarbon provinces. In all three basins there are gravity slides that detach onto source rocks which create down-slope thrust belts. In the Orange Basin and Somali Basin there are detachment surfaces at multiple levels. In the Rovuma and Orange basins most of the hydrocarbons are trapped in sands immediately in front of and under the fold belts. In the Rovuma Basin there are also some hydrocarbons trapped within the fold belt. All of these play types are present in the Juba-Lamu Basin offshore Somalia. The same prolific Aptian and Cenomanian/Turonian source rocks in Namibia are also believed to be present in the Juba-Lamu Basin where they appear to be in juxtaposition

with potential fan sequences. The Somali offshore offers these analogue type plays plus a whole range of other play types with a wide range of potential petroleum system elements.

## Namibia - A Recent Analog Study

Recent discoveries in the Orange Basin offshore Namibia provide some insight on emerging oil plays with significant offshore potential. The Orange Basin has very similar play elements and timing with respect to trapping styles, source, reservoirs, seals and migration and provides an analogue with the petroleum geology offshore Somalia.

Breakthrough discoveries at Venus, Graff and Mopane opened new oil plays with preliminary estimates of more than 21 billion boe of discovered oil and gas resources. According to Rystad Energy, Venus and Graff contained over 85% of total discovered volumes in Africa representing the largest global finds in 2022. In 2024 Galp announced drill stem test results at Mopane with a massive in-place estimate of 10+ BBOE.

Similar to Somalia the Orange Basin was underexplored and had no commercial oil finds, over the past 2 years 13 of 15 wells drilled has resulted in a major discovery, an exceptional drilling success rate of 87%.

• LUDERITZ Saturn NAMIBIA galp **PEL PEL** 90 83 **BW ENERGY MOPANE OIL** DISCOVERIES 2815/15-1 Mangetti-1X\* nus-1X Jonker-1A Lesedi-1X Jonker-1X onker-2A Jonker-1X Prospect Areas Oil/Gas Well -₩-Gas Well Oil Show

Map 2 - Orange Basin, Namibia

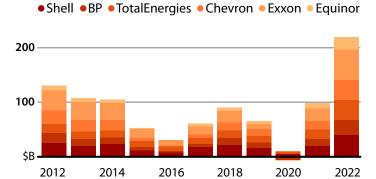
**Drill Locations** 

To date, Liberty has facilitated over US\$1.7 billion dollars in exploration and development work program expenditures resulting in numerous discoveries both onshore and offshore.

The oil and gas exploration sector saw its best year in over a decade with discoveries up along with greater quality prospects, creating \$33 billion in value and full cycle returns of 22% based on \$60/bbl Brent prices, according to Wood Mackenzie.

The EIA forecasts global upstream oil and gas investments are set to increase by around 11% to \$528 billion in 2023, the highest level since 2015. Barclays expects the number of offshore projects to get approval this year will reach a 10-year high. Wood Mackenzie predicts the commitment of up to \$185 billion with international oil companies focused on the higher-cost, higher-return deepwater developments. The top Western energy companies' profits soared in 2022.

Chart 1 - Big Oil's Record Profits (US\$Billions)



Source: Company results

# Our Track-Record of Success

Since our inception in 1997 we have acquired over 17 distinct exploration blocks worldwide. The giant Poseidon gas/condensate field operated by **ConocoPhillips** was

ranked by Rigzone as one of the ten largest global discoveries of 2009. ExxonMobil negotiated a farm-in from Liberty in 2019 on the VIC-P70 permit in the offshore Gippsland Basin that resulted in the drilling of three wells (~US\$200M) including the Sculpin well, drilled in the deepest water depths ever undertaken in Australia. In April of 2021, the government of Australia awarded Liberty two additional deep water permits in the Gippsland Basin. These large permits are designated as VIC-P77 & VIC-P78 and are contiguous to the Exxon VIC-P70 permit.

### The Opportunity

Liberty Petroleum (LPC) specializes in acquiring high impact offshore exploration licenses globally. LPC's business model is to capture early stage and/or frontier areas that have major (billion barrels) exploration opportunities. Once captured, LPC seeks to find a world class operator to de-risk the opportunity through seismic and drilling commitments.

PetroQuest Africa 1&2 are available for direct equity investment and farm-in partnership.

For more information please scan the QR Code below:



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