

TANZANIA PETROLEUM DEVELOPMENT CORPORATION



OIL AND GAS INVESTMENT OPPORTUNITIES-TANZANIA

Background

Oil and gas exploration, development and production opportunities exist in Tanzania. Gas discovery was made at Songo Songo Island in 1974, Mnazi Bay in 1982, Mkuranga in 2008, Ruvu in 2017 and Ruvuma in 2018. These are onshore discoveries that bring an estimated reserve of 10.41 TCF. Both the Songo Songo and Mnazi Bay gas fields have been developed and are producing gas since 2004 and 2006 respectively for power generation, industries, households and vehicles. Significant gas discovery was made between 2010 and 2014 in deep-offshore Tanzania to an estimated reserve of 47.13 TCF. This makes a total reserve of around 57.54 TCF(GIIP).

Tanzania Petroleum Development Corporation (TPDC) designated as National Oil Company (NOC) through the Petroleum Act 2015 and mandated to undertake commercial activities in upstream, midstream and downstream value chain.

Our Vision

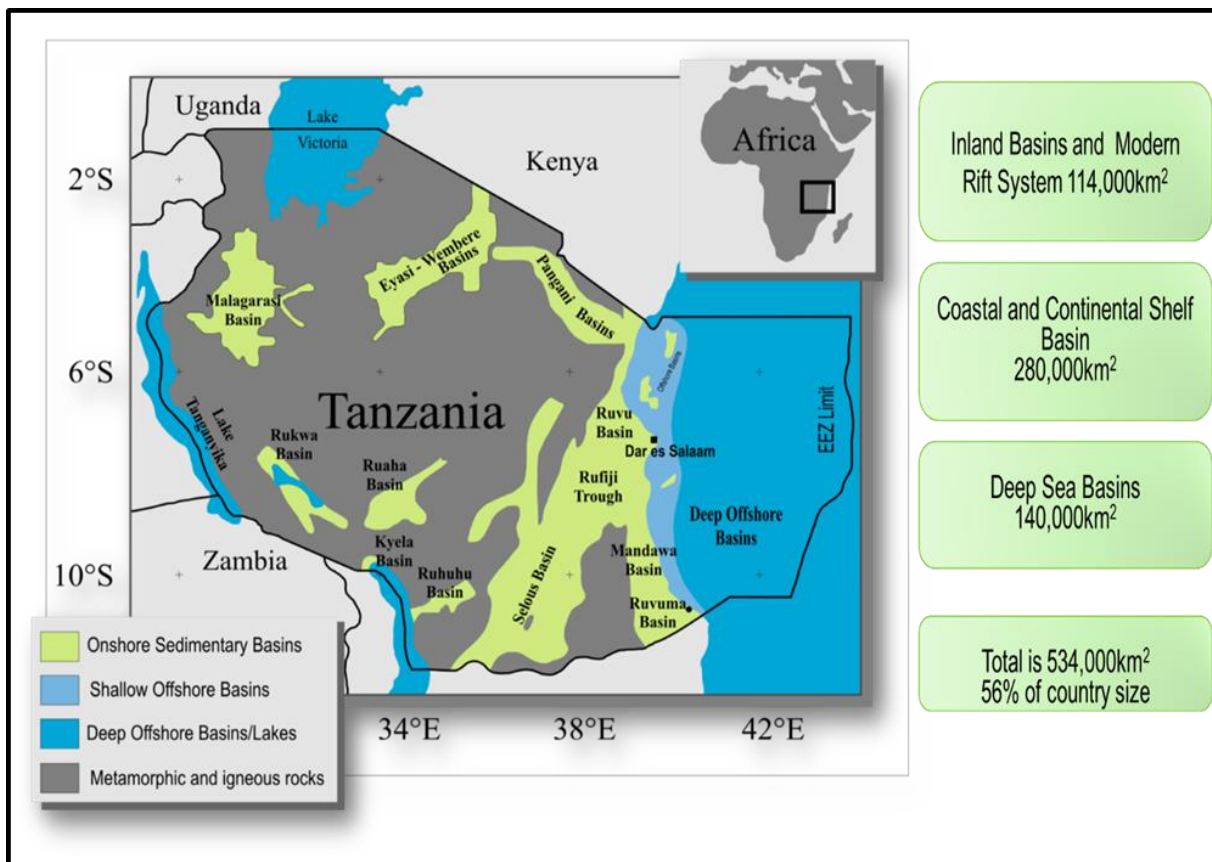
A sustainable regional company for affordable, reliable and innovative sources of energy with a global footprint.

Our Mission

To ensure energy security and access through efficient exploration, production, processing, and distribution of affordable and sustainable energy solutions to customers”.

Hydrocarbon potential in Tanzania

Tanzania has a total area of 945,000 sqkm of which 534,000 sqkm (56%) is covered with sedimentary basins that are lucrative for oil and gas exploration.

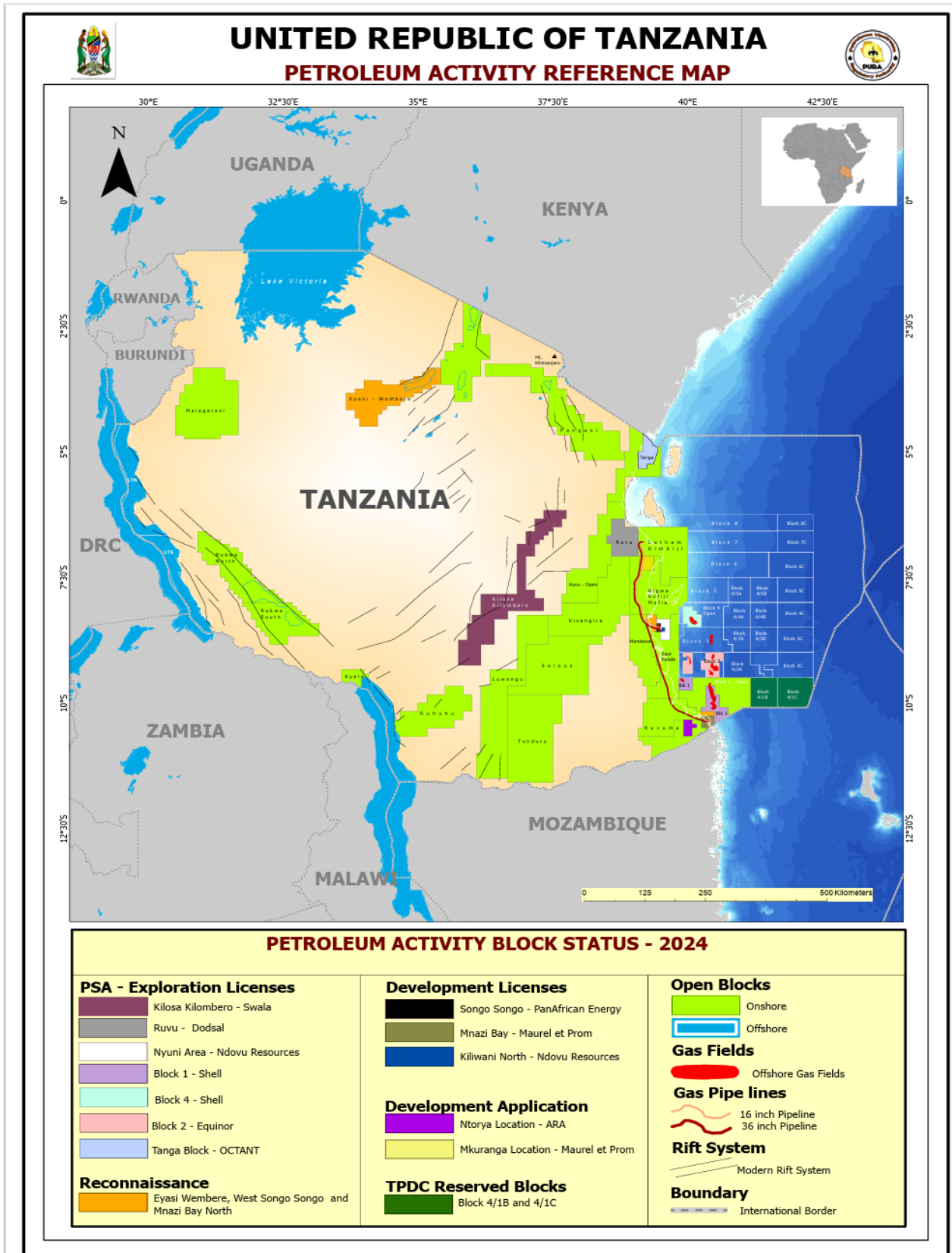


A map of Tanzania, showing Sedimentary Basins of Tanzania

Over the last 60 years, multinational petroleum companies have been conducting oil and gas exploration in Tanzania.

To date, about 140,000 line kilometres of 2D and 39,217 square kilometres of 3D seismic have been acquired offshore, onshore and interior rift basins. A total of 96 wells have been drilled providing vital geological information of the subsurface which are potential for hydrocarbons.

Tanzania Exploration Activity Map



AVAILABLE UPSTREAM PROJECTS FOR INVESTMENT

1. Eyasi Wembere
2. West Songo Songo
3. Mnazi Bay North
4. Blocks 4/1B &1C
5. Lindi-Mtwara
6. LNG Project

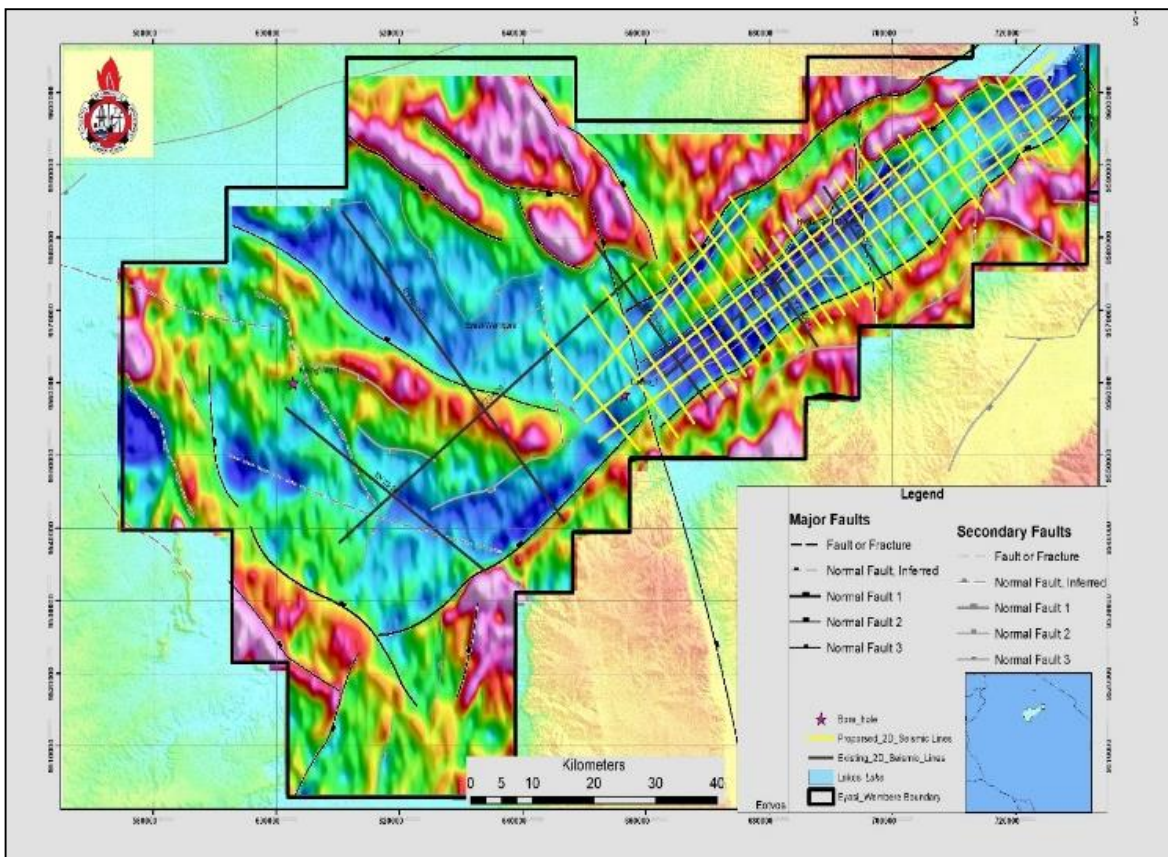
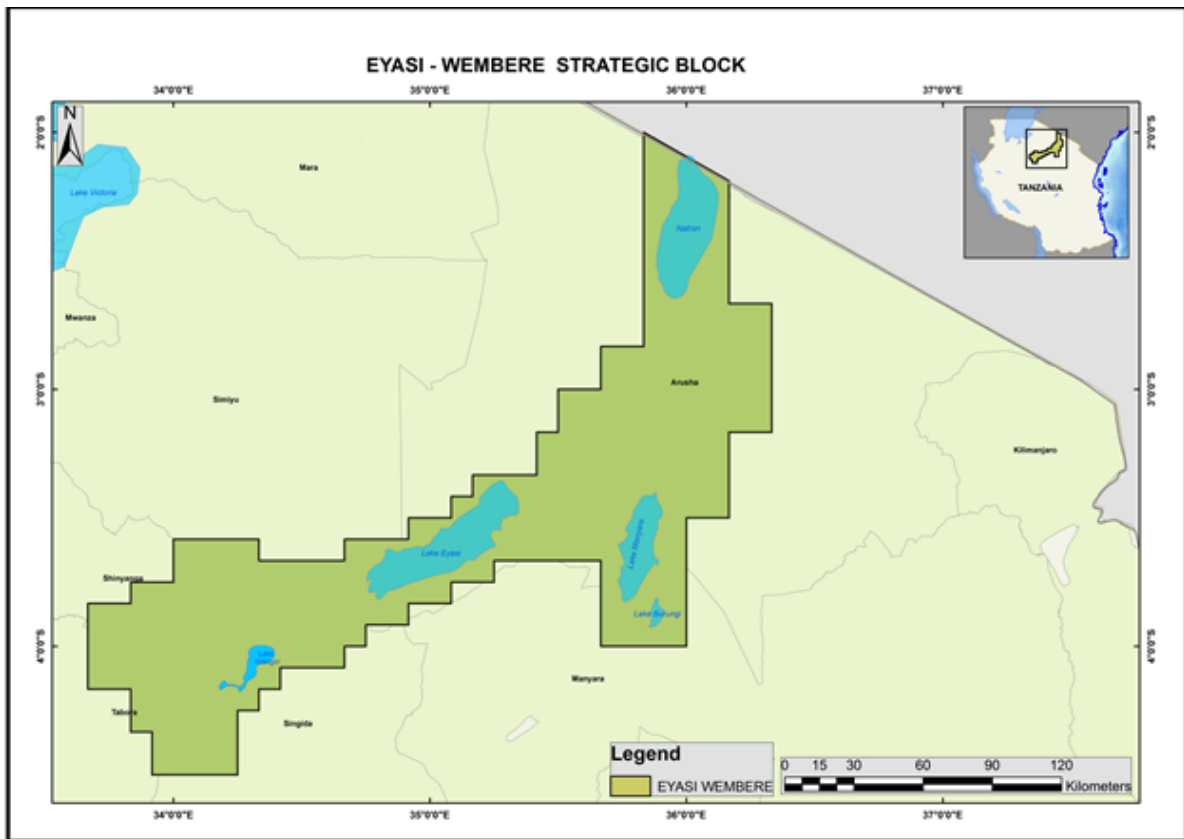
Blocks No.1-5 are under exploration and currently exploration activities are at different stages. The blocks are covered with sparse 2D seismic data, 3D seismic in some parts, Airborne Gravity Gradiometry (AGG) and Full Tensor Gradiometry (FTG).

1. EYASI WEMBERE

Eyasi Wembere Block is an inland basin located in the north eastern part of Tanzania-along the eastern arm of the East African Rift System (EARS). This block is potential for oil exploration.

Data available

- High-resolution Airborne Gravity Gradiometry (AGG) data (2016),
- Core samples of three stratigraphic boreholes (2020)
- Regional magnetic data (1976-79);
- Technical reports (AGG and Boreholes), G&G reports for surface geological mapping and satellite imagery for micro-seepage analysis
- 3D model derived from AGG data
- 260 line km of 2D Seismic data (2023)
- Acquiring 1100 line km of 2D seismic data (2024-2026)



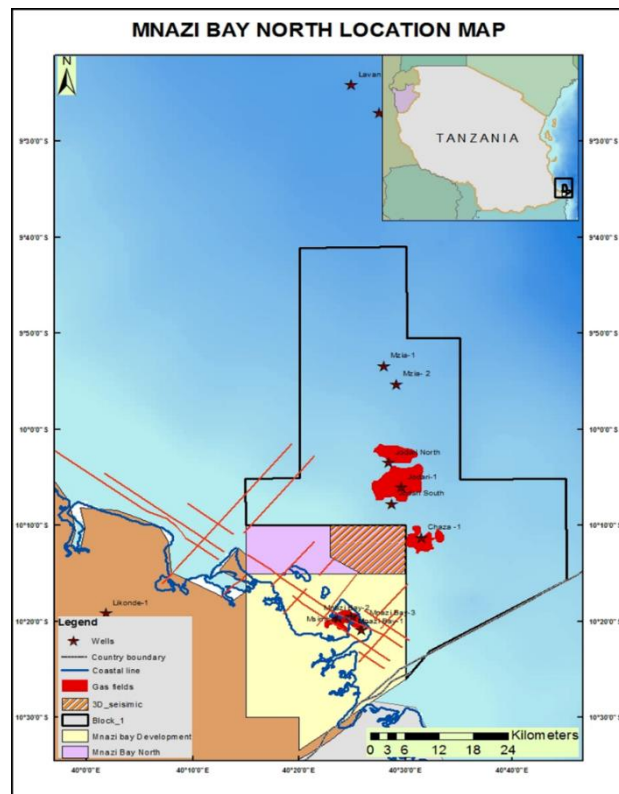
Maps showing the location and data coverage for Eyasi-Wembere Block

Hydrocarbon Potentiality

- Presence of thick sediments of up to 6 km which is enough for hydrocarbon exploration.
- The potential reservoir in the basin is anticipated to be Miocene clastic sandstones.
- The basin is characterized by Late Oligocene to Pliocene volcanoclastic sediments that are potential seals.

2. MNAZI BAY NORTH

Mnazi Bay North Block is located in the south eastern coast of Tanzania, near the Tanzanian border with Mozambique. The block is bordered with the Mnazi Bay gas field to the south and Block 1 to the East. The block covers a total area of 254 sqkm straddling across land and offshore areas. The block is geologically strategic as it lies within the Ruvuma basin where major gas discoveries have been made. Further, the Block is near to the existing natural gas processing and transportation infrastructures which makes it more economical and attractive for hydrocarbon exploration.



A map showing the location and data coverage for Mnazi Bay North Block

Data available

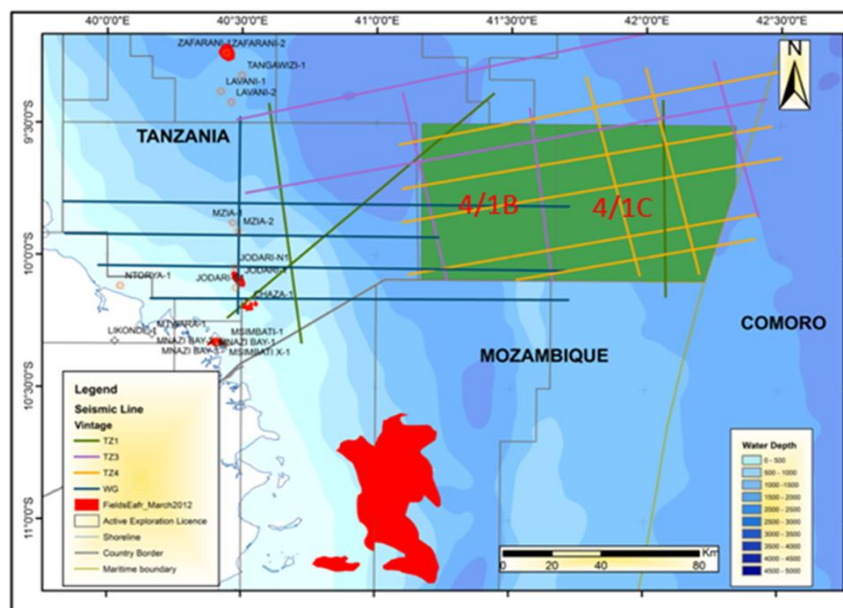
- Processed 3D seismic data.
- Processed 2D seismic data.

Potentiality

- The Block shares similar geological settings (reservoirs, source, seal and traps) as that of adjacent gas discovery blocks (Mnazi Bay, Block 1 & 2), which leads to a high chance of hydrocarbon discovery,
- Has potential prospects which share a similar reservoir interval with gas discovery in the adjacent Blocks.
- It is located strategically close to the existing facilities including Madimba gas processing plant and Mtwara to Dar es Salaam gas pipeline.

3. BLOCK 4/1B & 1C

The Blocks are located in the offshore part of Southern Tanzania at water depth between 2km to 2.5km, bordered to the east by Comoro, far West by the gas discovered Block 1 and to the South by Mozambique. Blocks 4/1B and 4/1C have area coverage of 3,586.91 and 4,538.98 square kilometres respectively.



A map showing the location and data coverage for Blocks 4/1B and 4/1C

Data available

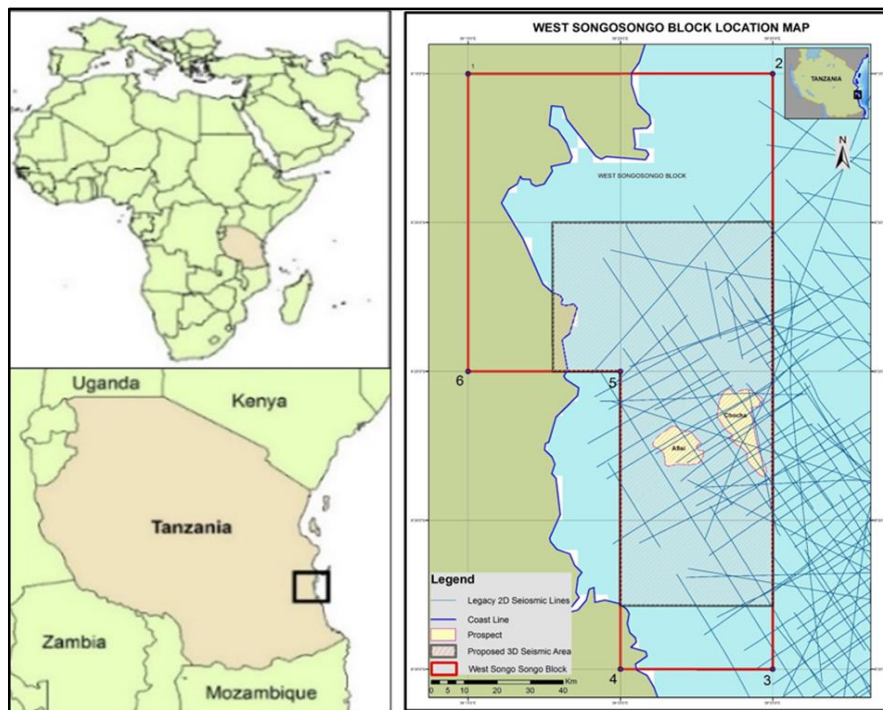
The Blocks are covered by 899 line kilometres of 2D seismic data.

Potentiality

- The Blocks are located within a basin where gas discoveries have been made.
- Presence of both Tertiary and Cretaceous reservoirs into the deeper part of the basin.
- Presence of potential intraformational and regional seals
- The presence and effectiveness of the source rock have been proven by gas discoveries within the basin.

4. WEST SONGOSONGO

The West Songosongo (WSS) Block is located in the coastal basin of Tanzania. The Block covers an area of 505.63 sqkm, occupying partly onshore and mostly in the shallow water of up to 35m deep. It is adjacent to the Songo Songo producing gas field.



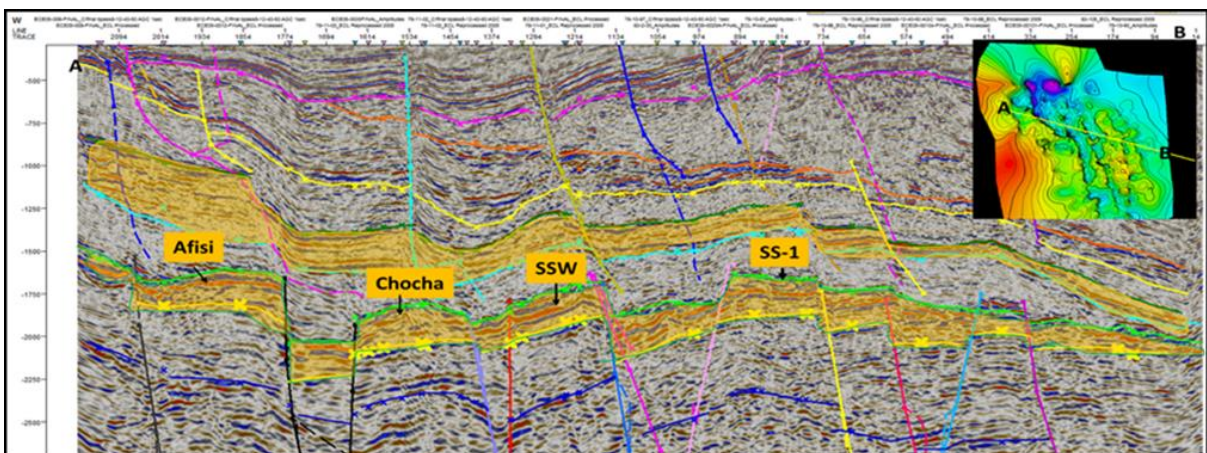
A Map showing the Block location, Chocha and Afisi prospects and 2D Seismic data coverage of West Songo Songo Block

Data available

- 240 line kilometres of 2D seismic data
- Gravity and Magnetic data

Potentiality

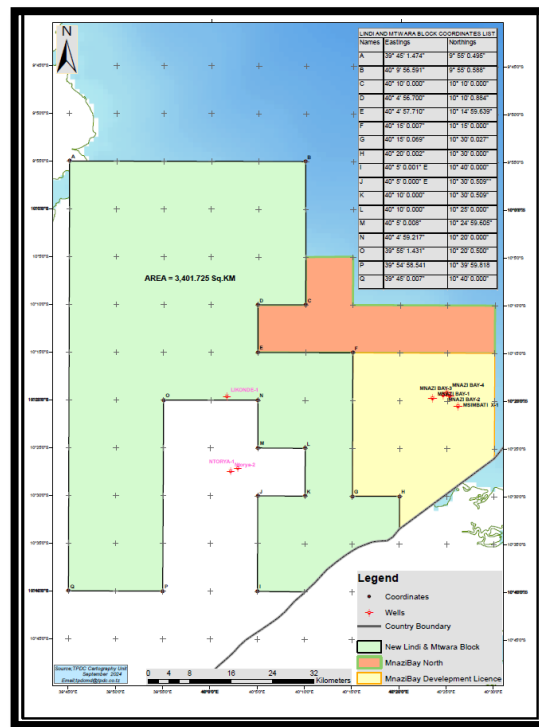
- Has similar geological settings (reservoirs, source, seal and traps) as that of Songo Songo and Kiliwani North gas fields,
- Has two identified potential prospects (Chocha and Afisi) having similar characteristics to those found in Songo Songo gas field,
- The potential reservoirs identified from Songo Songo gas field extend towards West Songo Songo Block.
- The Block is located strategically close to the existing facilities including the Songo Songo gas processing plant and Songo Songo to Dar es Salaam gas pipeline.



Petroleum System interpreted from Songo Songo Gas field and tied to West Songo Songo Block

5. LINDI-MTWARA

Lindi-Mtwara Block is an onshore Block located in Lindi and Mtwara regions, adjacent to the Ntorya Gas Field. The Block covers an area of 3401 sqkm. The study done indicates the extension of the Albian channel reservoir observed in the Ntorya Location.

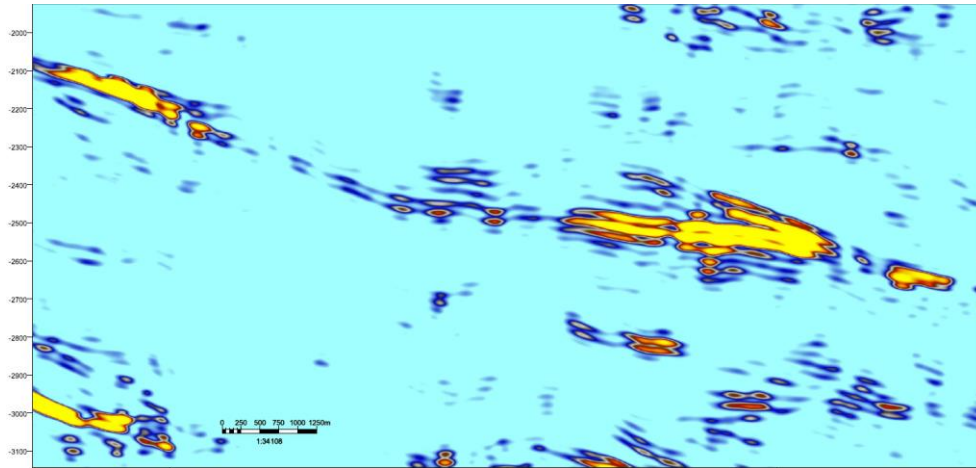


Data available

- Covered by 2D seismic Data
- Data coverage line spacing ranges from 2.5 Kms to 4.5Kms.

Potentiality

- Identified several leads that has similar geological settings (reservoirs, source, seal and traps) as that of Ntorya gas field
- The block is adjacent to the Ntorya and Mnazibay gas fields.
- Interpretation of data revealed the extension of the Albian channel reservoir outside the Ntorya Location.



One of the potential lead found in the Area

6. LNG PROJECT

This project is being implemented following a significant deep sea gas discoveries made in Tanzania offshore basins, in blocks 1, 2, and 4. These discoveries were made by Equinor in Block 2 and Shell in Blocks 1 & 4.

The gas developers completed the drilling of appraisal wells and now is ready to undertake commercial, technical, legal and regulatory discussion with the Government on how to monetise the discovered gas using the Liquefied natural gas through a land based LNG project.

Tanzania is strategically located to capture LNG markets in South East Asia, India, and Europe. Tanzania gas is competitive in quality as it offers significantly low content of CO₂ making it a cleaner energy.

OUR CAPACITY IN MIDSTREAM AND DOWNSTREAM INFRASTRUCTURES

- **Natural Gas Processing Plants-** The country has four processing plants with a combined capacity of 470 mmscfd.
- **Transportation Pipelines-** Total length of 810 line- km of transportation pipelines with the capacity to transport up to 1,177 mmscfd.
- **Distribution Infrastructure-** Total length of 130 km.



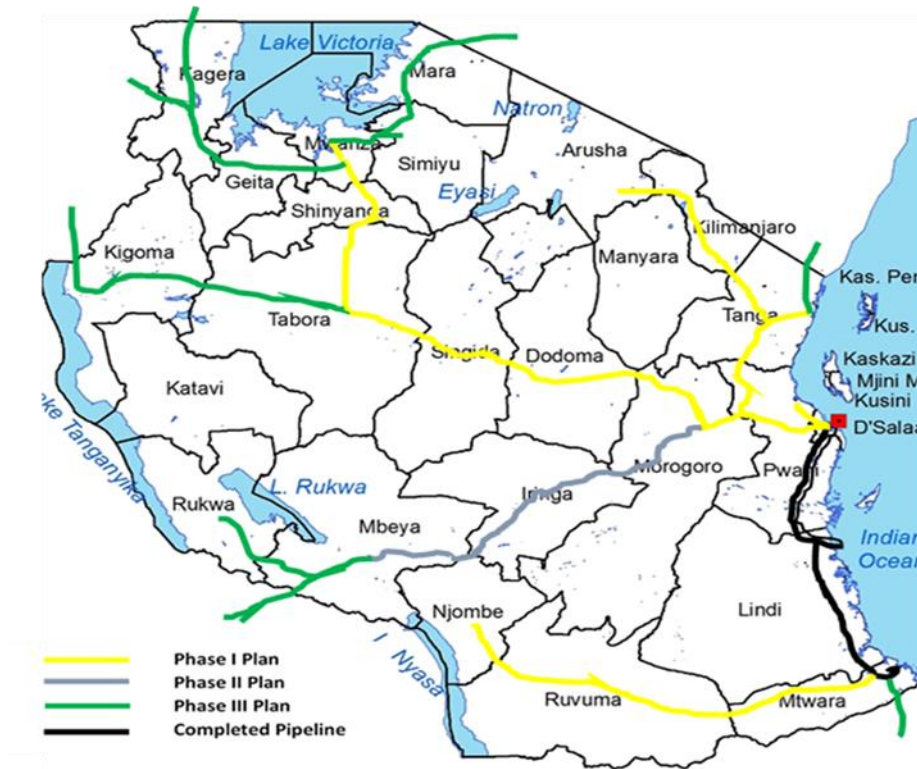
TPDC Madimba Processing Plant with a capacity of 210 mmscfd



TPDC Songo Songo Processing Plant with a capacity of 140 mmscfd

POTENTIAL INVESTMENT OPPORTUNITIES IN DOWNSTREAM VALUE CHAIN

Growth of the natural gas distribution in Tanzania is still at the infant level. Natural gas distribution network is available in a few areas of the four (4) regions of Tanzania which are passed the transmission pipeline. The regions are; Mtwara, Lindi, Coast Region, and Dar es Salaam. This calls for investment in natural gas distribution infrastructures in other areas in Tanzania as shown on the map below.



Map of a proposed plan for natural gas pipeline network from National Gas Utilization Master Plan

The opportunities available include:

1. Natural gas distribution project

Private Investors may invest in construction, owning and operating CNG and min-LNG stations. The investors may also invest in CNG Conversion workshops.

2. Manufacturing Industries for Gas Equipment

Since most of the gas equipment used in Tanzania are imported, investors are encouraged to set up manufacturing factories for among others the following; pipelines, gas meters, various fittings, pressure reduction stations and spare parts applicable in natural gas processing plants.

ENABLING ENVIRONMENT

1. Supporting Legal Framework

The oil and gas sector is well supported with conducive available legal and institutional framework that promote and safeguard investment in the sector. Further, the **existing**

legal framework allows private firms to collaborate with TPDC or invest itself in the oil and gas value chain.

- Favourable transportation networks** across the county and neighbouring countries. This includes Roads, Railways and water Transport.



A map showing Railway, Airport and road network in Tanzania

3. **Availability of Oil and Gas Transportation Networks**

- National Natural Gas Infrastructure to foster exploration in the South east blocks.
- East Africa Crude Oil Pipeline to stir exploration in Lake Tanganyika and Eyasi Wembere Blocks.

4. **Security and Political will** – Tanzania has been politically stable since its Independency providing a safe environment for investment.

5. **Strategic Position-** Tanzania is strategically positioned to serve East and Central African Countries and beyond therefore providing large markets.

6. **Human Resource-** Tanzania provide both skilled and semi-skilled human resources.

7. **Availability of technical manpower**

The technical manpower in the oil and gas sector is sourced from within and foreign countries.

8. **Availability of experienced service provider**

The available service providers include among others companies specialized in construction, consultancy, operating and maintenance of the oil and gas infrastructures. This creates opportunities to foreign companies to hire and or partner with local companies to implement the oil and gas projects.

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