TANZANIA PETROLEUM DEVELOPMENT CORPORATION

For National Development

EXPLORATION AND PRODUCTION OPPORTUNITIES IN TANZANIA

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INTRODUCTION

- Tanzania is the 13th largest country in Africa and the 31st largest in the world. It borders Kenya and Uganda to the North; Rwanda, Burundi and Democratic Republic of the Congo to the West; and Zambia, Malawi and Mozambique to the South. It is also located on the eastern coast of Africa and has an Indian Ocean coastline approximately 1424 km long.
- Tanzania is well endowed with favorable geological settings prospective for petroleum hydrocarbons. Over a half of the country, area coverage is covered by sedimentary basins especially along the eastern Coast of Tanzania. They are classified in four major groups

TANZANIA SEDIMENTARY BASINS

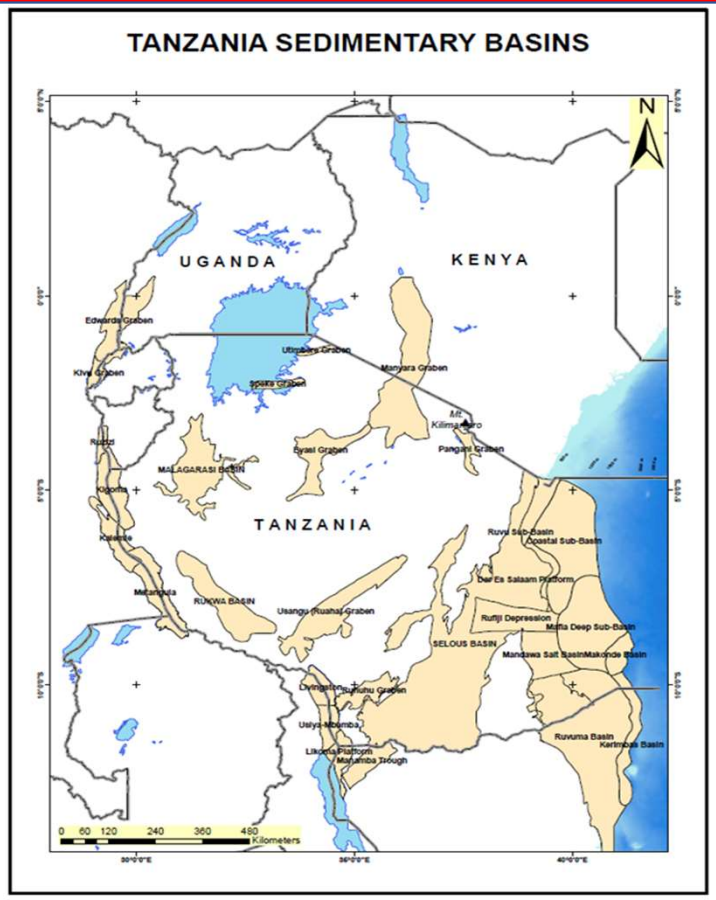
- **Modern rift basins** – They are essentially characterized by half grabens, that are controlled by major boundary faults. The basins include Lake Tanganyika, Lake Rukwa, Eyasi Wembere, Pangani and Ruhuhu basin.

- **Coastal rift Basins** - The Basins formed as due to the initiation of the Permo-Triassic Continental rift. Basically, the Coastal Basins are controlled mainly by two major rifts. The NNE-SSW Tanga failed rift accommodating some discontinuous sub-Basins namely Tanga and Ruvu Sub-Basins and the NW-SE Lindi successful rift controlling Mandawa and Ruvuma Basins. Within the Coastal Basins, there are some major gas discoveries of commercial quantity have been made.

- **Deep sea rift Basins** – The Basins were formed following a successful Jurassic Continental rift and drift of the Eastern Gondwana land mass from Western Gondwana that formed the passive continental margin. The Exploration operations for petroleum hydrocarbons since 2000's resulted into major Natural Gas discoveries in this part of Tanzania where the water depth ranges approximately from 500m to a maximum of 3300m.

- **Down-warped Basins**: Formed as due to crustal stretching effect causing downwelling in part of the Continental Crust. Such Basins include Lake Victoria and Malagarasi depression.

TANZANIA SEDIMENTARY BASINS



PREVIOUS WORK

- **Previous work done to confirm the existence of working petroleum system**
- The National Oil Company (TPDC) in collaboration with other stakeholders in petroleum industry performed various activities to confirm the existence of working petroleum system in those areas identified to be prospective for petroleum hydrocarbon. Such activities including but not limited to
  - **Technical evaluation**
  - **Reconnaissance survey**
  - **Executing an agreement** to share the production (Production Sharing Agreement) in case of discovery.

PREVIOUS WORK

- **Technical evaluation** for hydrocarbon prospectivity of the Basins conducted including geological fieldwork, drilling of stratigraphic boreholes and research activities.
- **Geological Fieldworks** – Involves geological mapping of outcrops (lithology) and tectonic and sedimentary structures and sampling for biostratigraphic and geochemical studies. The evaluation of the results are aiming at understanding the potentiality of the petroleum system elements in the Basin. Several Geological reports have been generated from geological field works describing the potentiality of sedimentary Basins of Tanzania.
- **Drilling of stratigraphic boreholes** – These are aimed at understanding the lithostratigraphic sequence in a Basin. They are usually short borehole. Several drilling projects have been conducted in Sedimentary Basins of Tanzania in such projects as Gombero drilling project (GDP) in Tanga Basin and the Tanzania Drilling project (TDP) in Mandawa Basin.

PREVIOUS WORK

- **Research Activities;** where TPDC in collaboration with academic and research institutions do conduct different scientific studies to improve understanding of different aspects of Petroleum geo-sciences. Such fields of collaborative studies done in Tanzania though not limited include;
  - Tanzania Drilling Project (TDP) that involved drilling of more than 40 short stratigraphic boreholes in Mandawa Basin
  - Joint Technical studies between neighboring countries sharing the common boundary. E.g. The MoU with DRC for joint studies of hydrocarbon potentiality of Lake Tanganyika. MoU with NOC of Mozambique for joint studies related to the oil and gas sub-sector in the respective countries
  - Stratigraphic Nomenclature studies for Tanzania sedimentary Basins in collaboration with IOCs and other research institutions aiming at defining a common naming system for the similar formations occurring in different sedimentary basins

PREVIOUS WORK

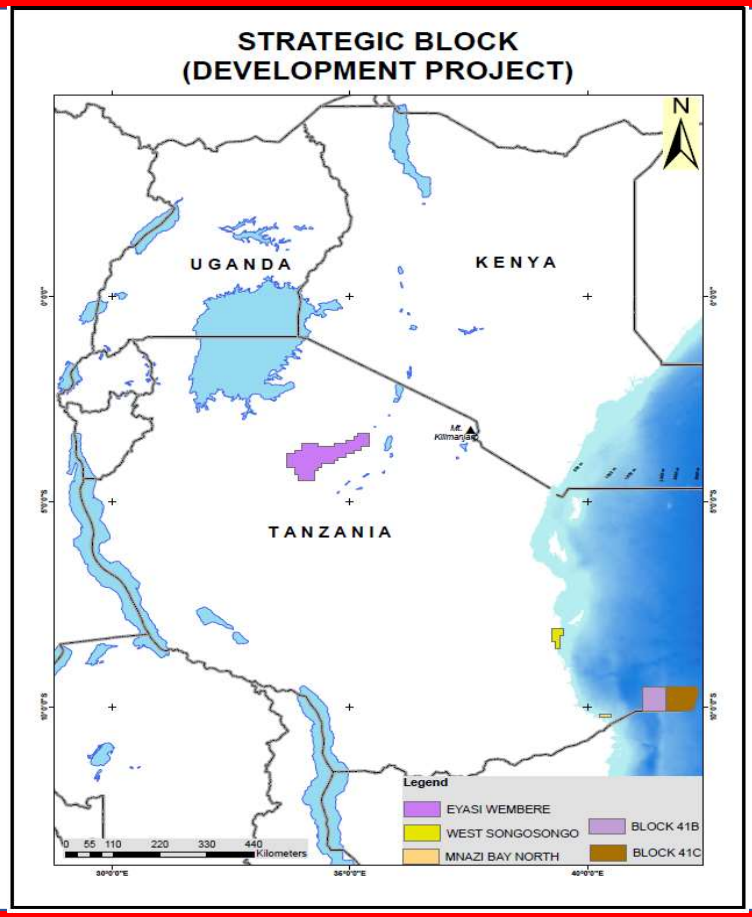
- **Reconnaissance Surveys**
- Section 34 & 35 of the PA, 2015 gives mandate to PURA for provision of a Reconnaissance permit for a period of not more than 3 years unless otherwise determined by PURA
- Currently, TPDC has been issued with a reconnaissance permit for Eyasi Wembere Block. Reconnaissance activities that have been conducted in the Block include AGG, magnetic, geological, geochemical and biostratigraphic studies.
- **Production Sharing Agreements (PSAs)**
- This is an agreement signed between the GOT, TPDC and an Oil Company for the purpose of executing petroleum operations and share the production (in the case of discovery) to enable the Oil Company to recover the Contract expenses and Profit.
- TPDC is the License holder in all PSAs and the IOCs plays the role of a Contractor.
- TPDC partners and participates in all PSA with IOCs

EXPLORATION & PRODUCTION

- **Exploration and Production Database**
- 97 deep wells have been drilled both onshore and offshore sedimentary basins and making a GIIP of 57.25 Tcf from the discovered wells;
- Onshore basins (5- discovery wells,10 appraisal wells and 45 dry wells)
- Offshore basins (14 discovery wells, 14 appraisal wells and 9 dry wells)
- Tanzania Exploration and Production database consists of numerous geological and geochemical studies, geological and drilling records from more than 100 boreholes and 97 deep wells. The database also includes thousands of kilometers of gravity, airborne magnetometer and seismic surveys. A summary of each well, a full list of electric logs, mud logs, geological and engineering reports, and composite logs are available for inspection at TPDC's Exploration Office in Dar es Salaam. Several technical reports have been prepared from these data and provide an assessment of the hydrocarbon potential of Tanzania. Data packages for each of the exploration areas are also available for purchase.
- Currently, there are thirteen (13) active Production Sharing Agreements (PSAs) operated by eight (8) International Oil Companies (IOCs). Three (3) of these PSAs namely Songo Songo, Mnazi Bay and Kiliwani Gas Fields have Development Licence. The rest are in various stages of exploration (Block 1, Block 2, Block 4, Ruvuma, Kyela, Rukwa South, Ruvu, Kilosa-Kilombero and Nyuni Area.

INVESTMENT OPPORTUNITIES

- TPDC has identified four potential strategic Blocks that can be explored in collaboration with Strategic partners.
  - **Block 4/1B** – Located in offshore part of the country. Several prospects have been identified with further 3D seismic acquisition planned;
  - **Eyasi Wembere Block** – Located in the northern part of the country. Available data include AGG, magnetic, geological, geochemical and biostratigraphic studies and reports. Further reconnaissance studies have been planned to include 2D seismic acquisition;
  - **West Songo Songo Block** – Located in the western part of the Songo Songo Gas Field. Several prospects have been identified with further 3D seismic acquisition planned; and
  - **Mnazi Bay North Block** – Located in the northern part of the Mnazi Bay Gas Filed. Available data include magnetic, gravity and 3D seismic data with further 3D seismic acquisition planned.



INVESTMENT INCENTIVES

- Decision for investment in the oil and gas sub-sector in any country will depend on three factors mainly;
- Petroleum hydrocarbon accumulation potential
- availability and access of Global and Local markets for the petroleum products,
- Fiscal and legal environments in the country.
- The geographic location of Tanzania makes it open to access the Asia and Europe market and strategically provide a hub function for the land locked country in sub-region. Exploration and Production Data available has shown the hydrocarbon accumulation potential (commercial gas discoveries and oil seeps) of the existing sedimentary basin in Tanzania.

INVESTMENT INCENTIVES

There are general tax benefits conferred by the various tax laws (VAT, Income Tax, Custom and Excise) on any company that has been granted license to engage in oil exploration and production in Tanzania. To speed up the transportation of goods the Government has invested in development of good infrastructure including road network which connect Tanzanian major port with neighboring countries (land locked), construction of strategic pipeline (National Natural Gas pipeline and East Africa Crude Oil Pipeline), and construction of standard gauge railway line. The country's stability in economy and politically as evidenced from World Bank and IMF statistics, compliment the conducive environment to invest in Tanzania

CONCLUSION

Therefore investment incentives as provided which include the following:

- Promising geology,
- Good infrastructure,
- Growing Market,
- E&P data availability,
- Fiscal (non-taxable oil and gas equipment),
- Political and Economic stability are **the reasons why Tanzania should be your 1st destination to invest.**


THANK YOU !