



DEVELOPMENTS AND OPPORTUNITIES IN THE UPSTREAM PETROLEUM SECTOR IN UGANDA



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PRESENTATION OUTLINE

1. Introduction

- Location of Uganda
- Regional setting of Albertine Graben
- Sedimentary basins in Uganda

2. History of Petroleum Exploration

- Achievements
- Resource base
- Exploration Strategy

3. Licensing

- Status of Licensing
- Policy and Future Plans

4. Production Plans

- Properties of Uganda's Crude
- Status of Developments
- Refinery study

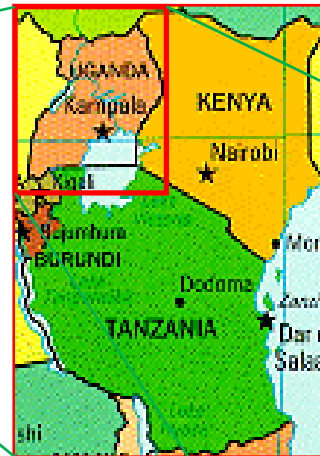
5. Opportunities

6. Conclusion



1. INTRODUCTION

1.1 LOCATION OF UGANDA



EAST AFRICAN COMMUNITY

Planned:

- Common Market 2010
- Monetary Union 2012
- Ultimately Federation

- Uganda is part of the EAC
- Other Partner States
Kenya, Uganda, Tanzania, Burundi and Rwanda
- Cooperation in Political, Economical and Social fields.

UGANDA

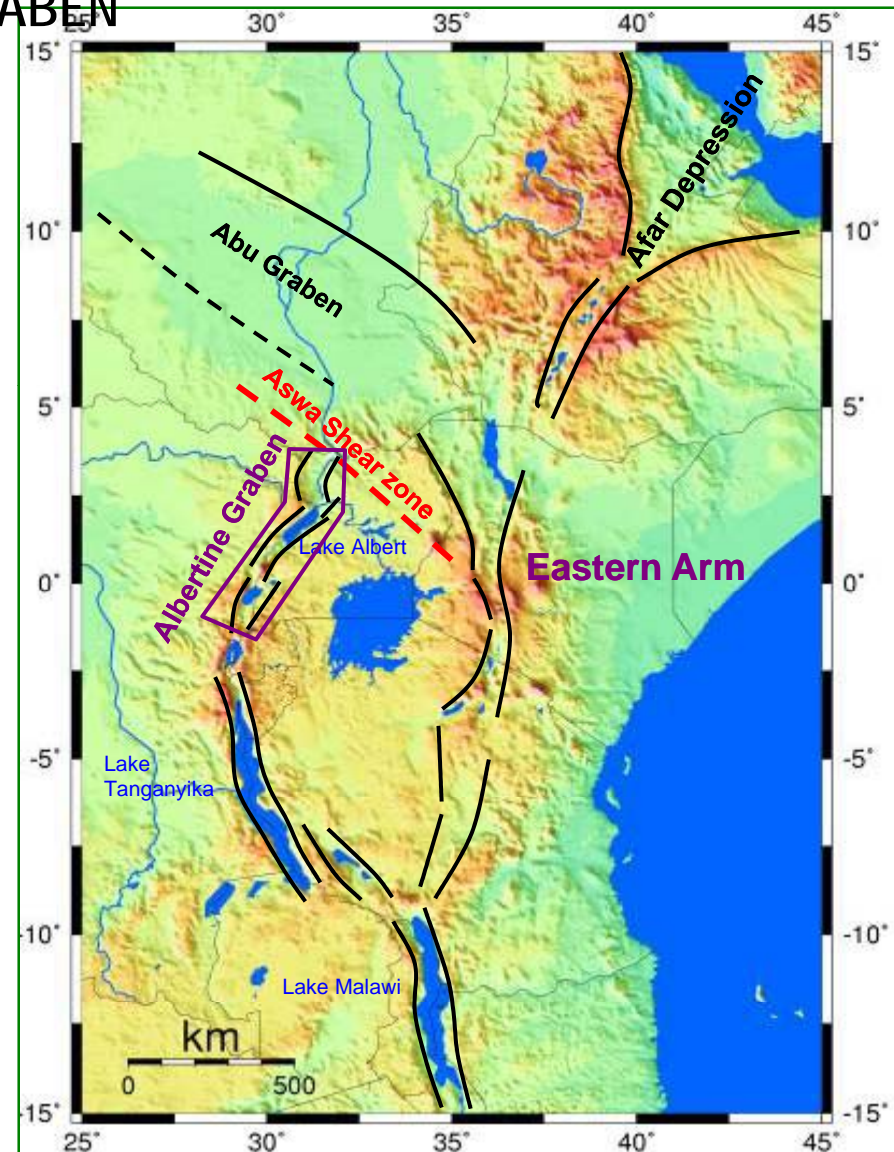
- Population: ~ 30million people
- Area: 241.038 sq. km
- Per Capita GDP : 380 US\$
- Economic growth rate : 6.1%



1. INTRODUCTION (2)

1.2 REGIONAL SETTING OF ALBERTINE GRABEN

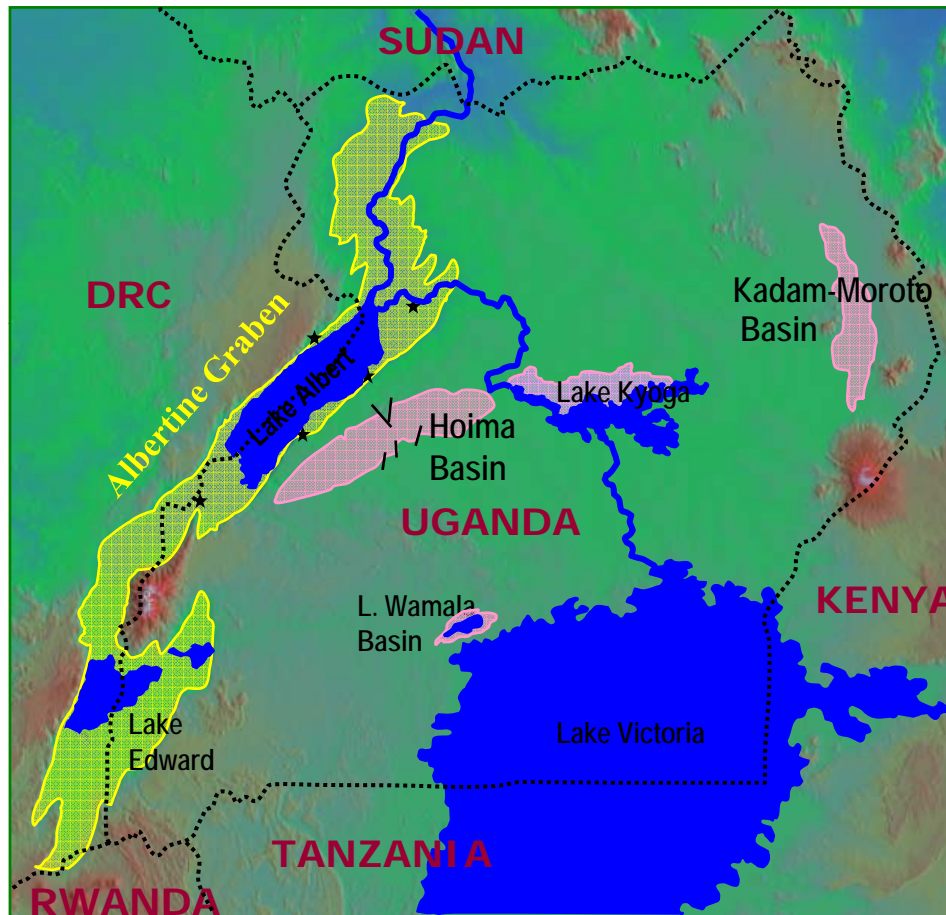
- The Albertine Graben is the northern most part of the Western arm of the East African Rift System (EARS).
- It is a Tertiary basin, 500 km long, averaging 45 km wide and 23,000 sq km in Uganda
- 1300 km from the coast
- The EARS bifurcates into two arms;
- Eastern and Western arms separated by Tanzanian Craton



1. INTRODUCTION (3)



1.3 SEDIMENTARY BASINS IN UGANDA



Six Sedimentary Basins

1. Albertine Graben
 2. Hoima Basin
 3. Kadam-Moroto Basin
 4. Lake Kyoga Basin
 5. Lake Wamala Basin
 6. Lake Victoria Basin
- Basins whose potential is under investigation
- Not Prospective

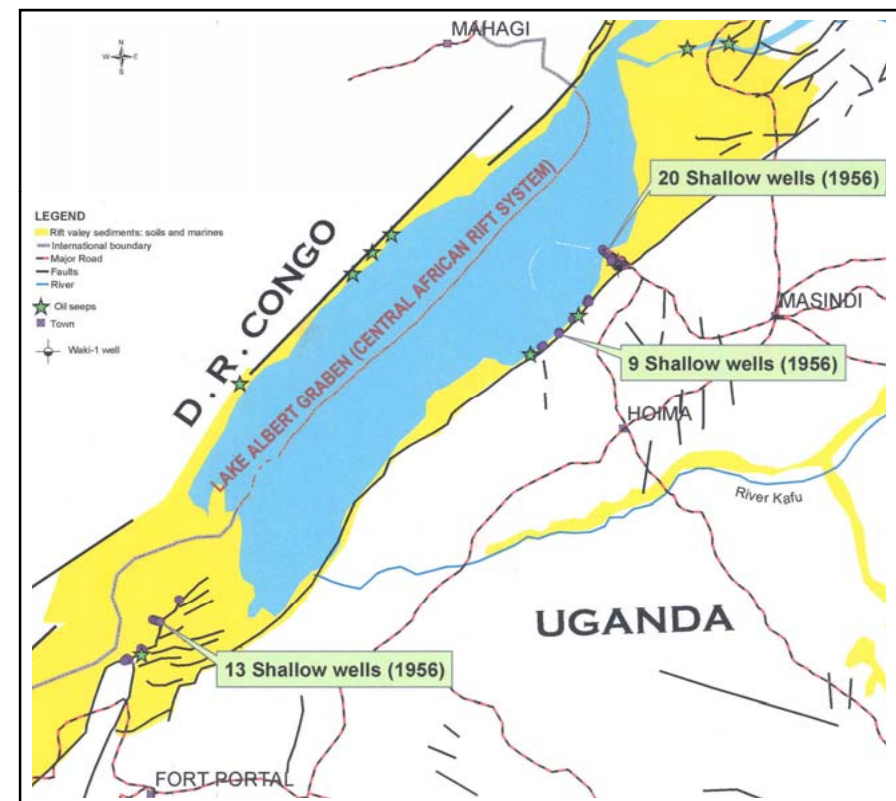
The Albertine Graben is the most prospective

2. HISTORY OF EXPLORATION

2.1 ACHIEVEMENTS

1920 – 1945: PRELIMINARY EXPLORATION

- Reporting of oil seepages
- Drilling of Waki-B1 in 1938 by Anglo European Investment Company of South Africa
- Some shallow stratigraphic wells drilled in the areas of Kibiro and Kibuku based on oil seep observations



1945 – 1980: STAGNATION

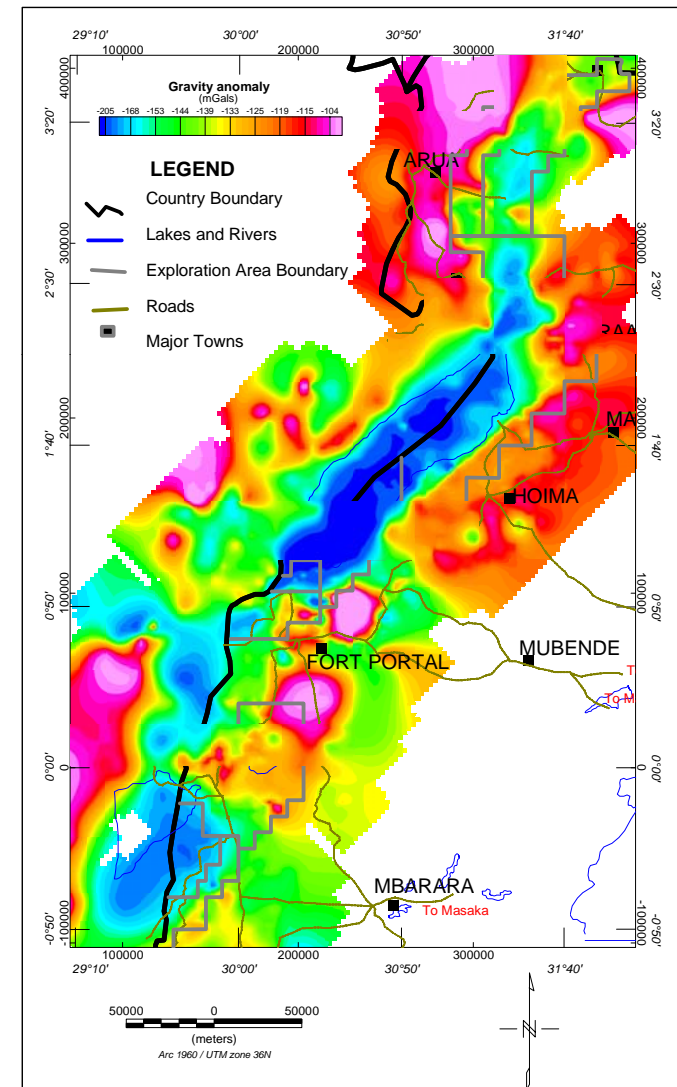
- Initially due to World War II
- Change in Policy
- Later due to political uncertainties



2. HISTORY OF EXPLORATION

1980 to Date: CONSISTENT AND MODERN EFFORTS

- Government acquisition of Gravity, Magnetic, geological and geochemical data including aeromagnetic data in 1983.
- Enactment of the Petroleum Exploration and Production Act, 1985.
- Commencement of specialized training in petroleum sciences by Ugandans.
- Formation of PEPD in 1991.
- Licensing Commences and continues until 2006.
- First Oil discovery in 2006 by Hardman Resources /Energy Africa (now **Tullow**)





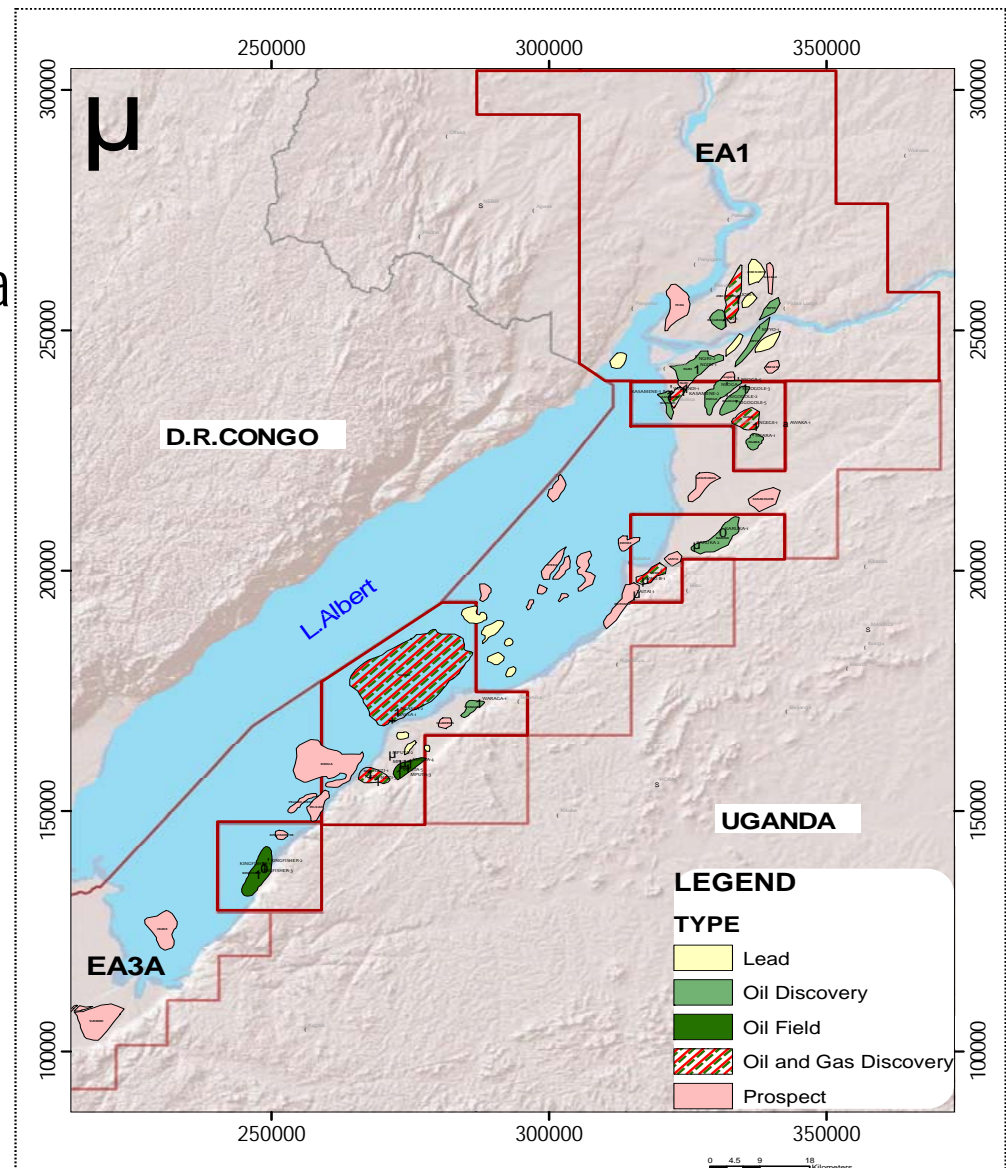
2. HISTORY OF EXPLORATION



2.2 RESOURCE BASE

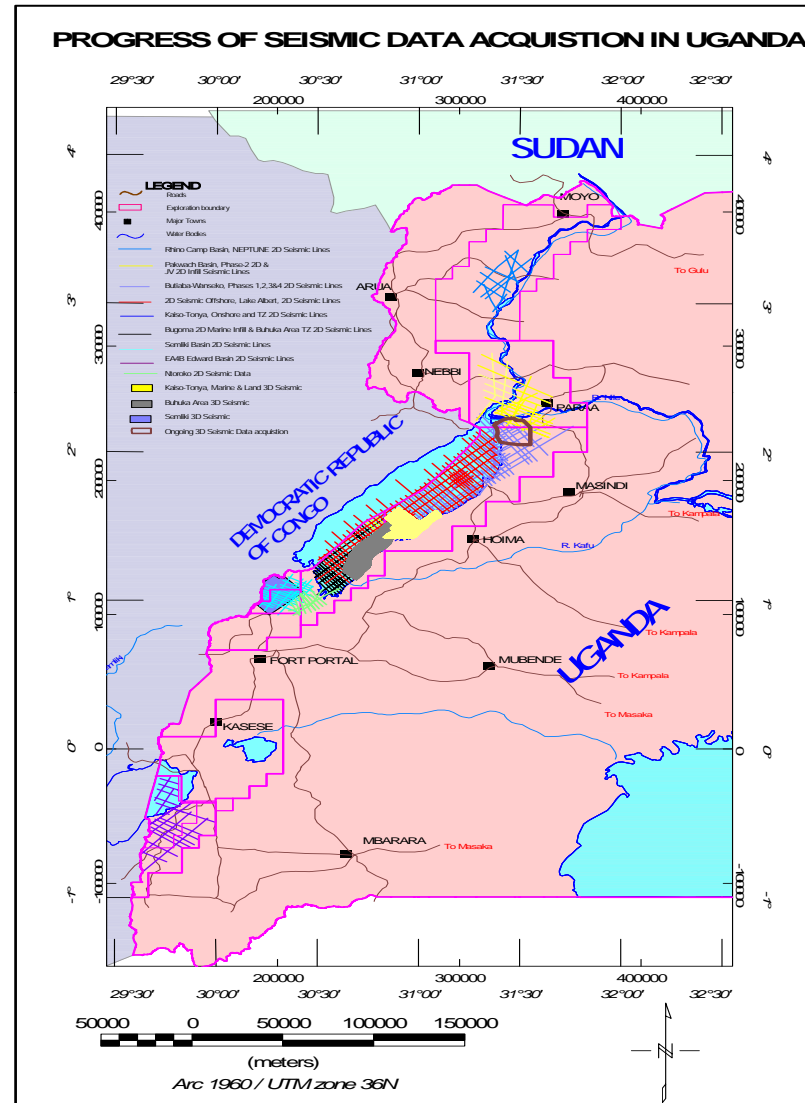
SEISMIC DATA COVERAGE

- 7,000 line km of 2D seismic data
 - 2,500km on Lake Albert
 - 4,500km on land
- 1,250km² of 3D seismic data
- Over 30 prospects mapped on seismic data
- 20 prospects drilled.
- 16 Oil Discoveries and 1 Gas discovery.



2. HISTORY OF EXPLORATION

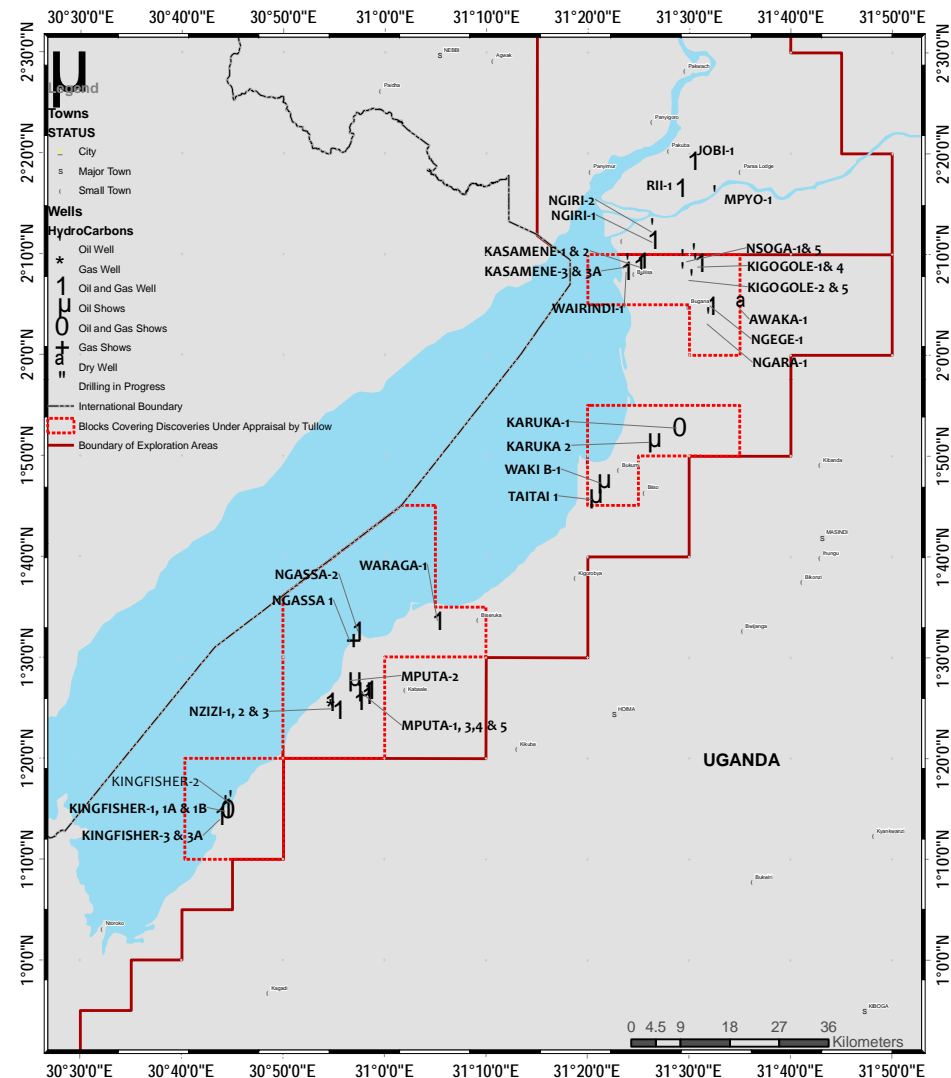
SEISMIC DATA COVERAGE



2. HISTORY OF EXPLORATION

DRILLED WELLS

- A total of 49 wells have been drilled. 44 wells have encountered hydrocarbons.
- Reserves estimated at over 2.5 billion boe in place.
- More exploration ongoing. Only about 35% covered.





2. HISTORY OF EXPLORATION



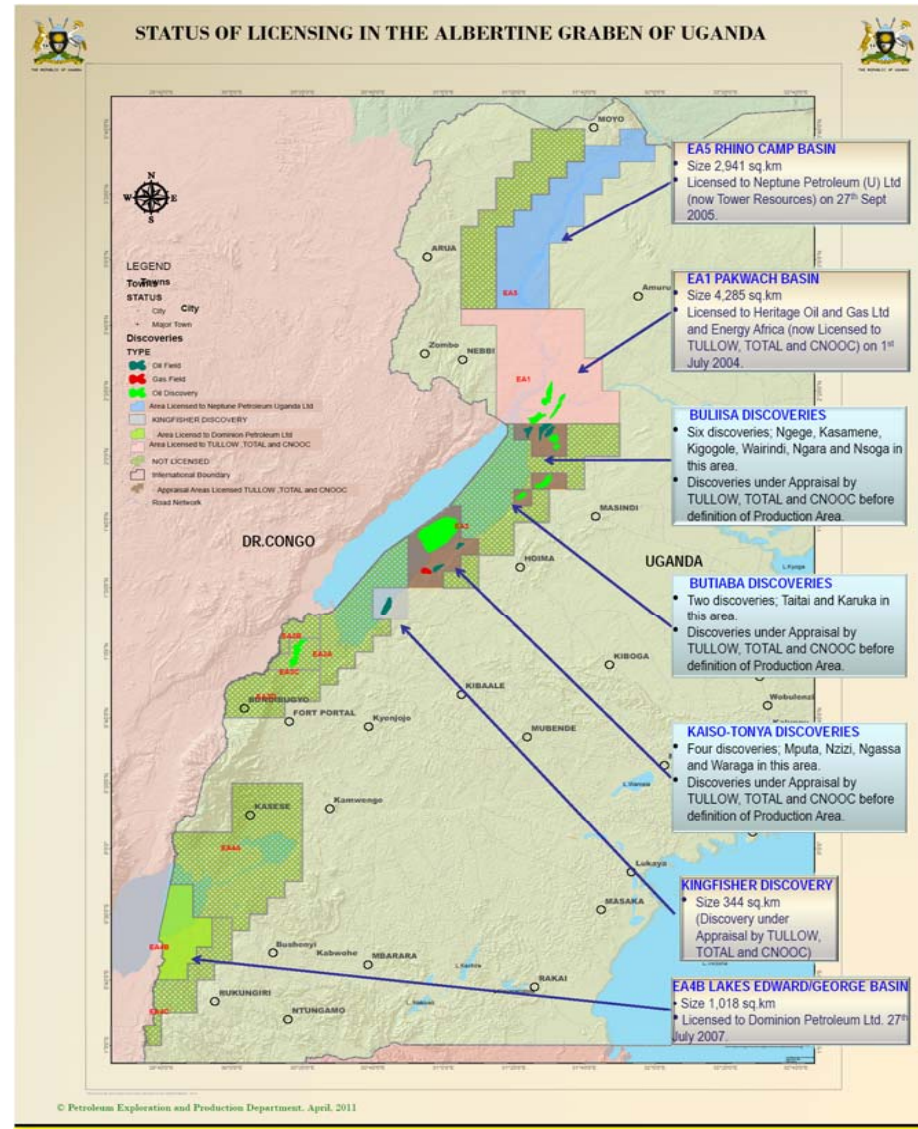
2.3 Exploration Strategy

- Training of staff in all the sectors of the petroleum industry.
- Data acquisition by Government which was used in promotion of acreage at International Conferences.
- Open door Policy Licensing and Licensing of small size of acreage.
- The early strategy of subdividing the acreage into sizes that enable small independent companies to undertake meaningful work programs.
- Environmental Protection has been a priority in all operations.
- Local involvement has made communities supportive.
- Proper and systematic data management.

3. LICENSING

3.1 Status

- Open door Policy in Licensing until 2006
- Albertine Graben sub divided into 11 Exploration Areas
- Currently 5 active Production Sharing Agreements (PSA)
- 3 Licensed Operators.
- There is a halt on licensing to update regulatory framework i.e. policy and legislation.





3. LICENSING

3.2 New Policy direction

- Previously used open door policy of Licensing
- The National Oil and Gas Policy recommends; an open, efficient, transparent and effective licensing for the unlicensed and relinquished acreage.
- Subsequent licensing in Uganda will therefore be through competitive bidding.
- Currently upgrading legislation to cover the new type of licensing and remove aspects of the law that are out of date.
- Updated law is expected to be in place during 2011.

4. PRODUCTION PLANS

4.1 Properties of Uganda's Crude

- i. Crude is 30-34⁰ API
- ii. Low Sulphur,
- iii. Waxy crude,
- iv. Pour point of 40 degrees Celsius.

Crude requires heating in order to transport it.



Kingfisher: 33⁰ API , flowed 14,000 bopd.



Waraga-1:
33.8⁰ API ,
flowed
12,050
bopd



Mputa-1:
33.3⁰ API
flowed 1,035
bopd.

4.2 Developments

- Five discoveries; Mputa, Nzizi, Kajubirizi (Kingfisher), Wahrindi and Kasamene at Field Development Stage.
- These fields hold in excess of 600 million barrels recoverable reserves and Nzizi is estimated to contain 30 bcf of gas.
- An additional 10 discoveries currently under appraisal.



5. OPPORTUNITIES

Opportunities





5. OPPORTUNITIES

- New and relinquished acreage. Government intends to undertake licensing rounds of unlicensed areas and those that will be relinquished. This awaits the completion of the new regulatory framework.
- Participation in refinery development.
- Non-exclusive surveys, in preparations for future licensing.
- Joint Ventures and farm-in/out arrangements in licences held by small independents.



5. OPPORTUNITIES

- The emerging infrastructure such as refining and transportation of commodities and hydrocarbon products.
- Power generation using hydrocarbon gas and Heavy Fuel Oil (HFO)
- Service provision and contracts in the fields of engineering, procurement,, catering, analytical laboratories, waste management, Clearing and forwarding, flight charters, insurance, ICT.



5. OPPORTUNITIES

INCENTIVES OFFERED

- a well managed and liberalised economy
- tax incentives on equipment,
- repatriation of incomes, and
- a conducive contracting and regulatory framework.



6. CONCLUSIONS

1. Exploration success in the Albertine Graben has strongly de-risked the East African Rift System.
2. Discovered resources in the Albertine Graben now estimated at over 2.5 billion barrels of oil in place.
3. Discovered Oil is sweet, 30-34⁰ API, but waxy with low pour point. This makes the transportation difficult and expensive.
4. Government Policy is to refine the discovered crude oil in the country before export options are considered. Initial steps of developing a refinery in Uganda are underway.
5. Plans to undertake a licensing round after formulation of a new law are being made.
6. Uganda will maintain the predictable and conducive environment that has facilitated the unprecedented exploration success in the Country.



THANK YOU



Further Information:
www.petroleum.go.ug