



Oil & Gas Upstream & Energy Projects Opportunities in Africa

High Level Overview

JUNE 2012



Opportunities on our Doorstep

- East Coast of Africa O&G Developments
- West Coast of Africa O&G Developments
- DRC Inga Project
- RSA a regional client
- RSA participation in these projects
- Closing thoughts

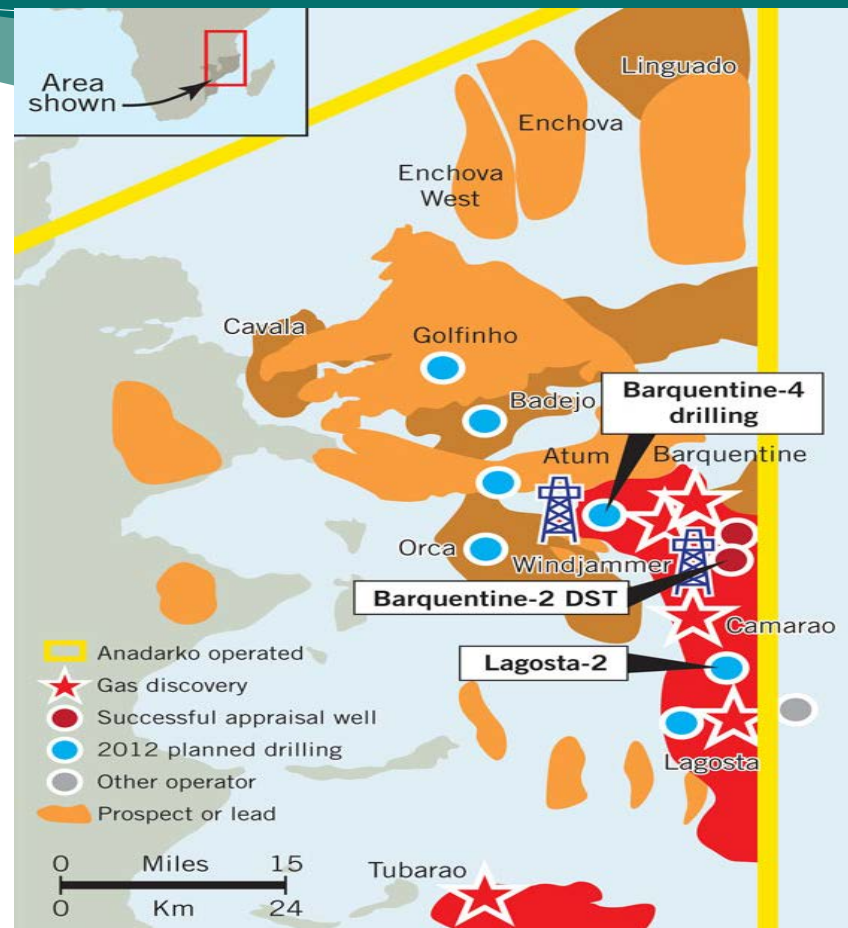
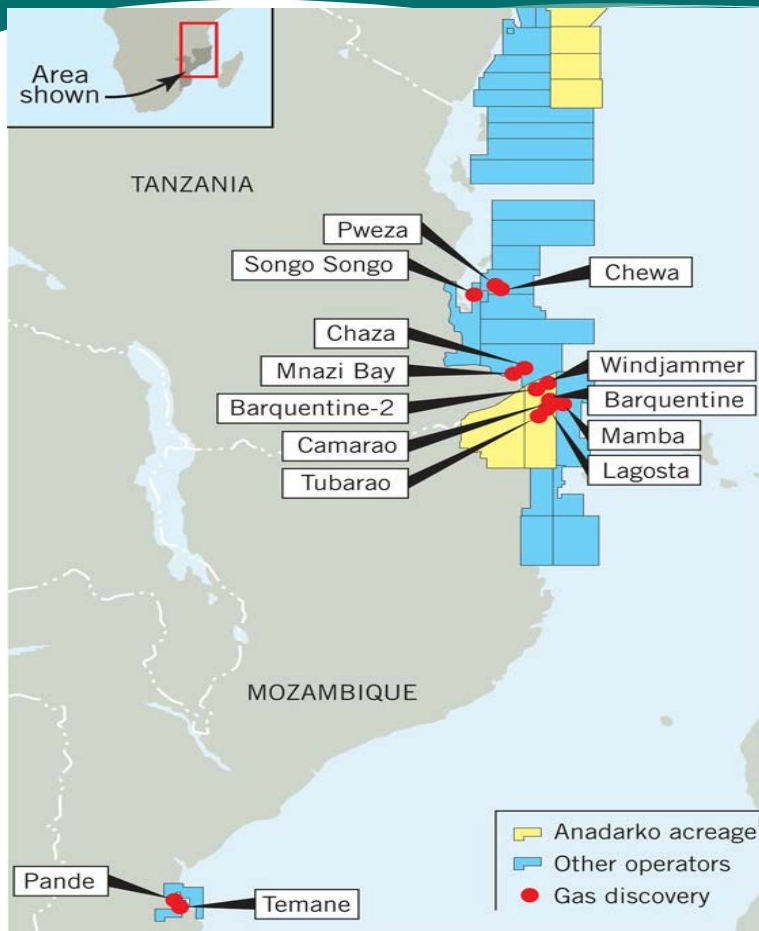
East Africa yielded a series of huge discoveries...

- **Mozambique** and **Tanzania** until recently did not even feature on the world energy map, have become some of the gas industry's **hottest real estate**...
- Statoil made big oil industry news late last month announcing huge natural gas finds off the coast of Tanzania thus confirming **east Africa's** reputation as one of the **energy world's most promising new frontiers**.
- World-class **deepwater natural gas discoveries offshore** in the Indian Ocean have turned the East African margin into one of the **planet's hottest exploration theatres**.

East Africa yielded a series of huge discoveries...cont

- U.S. Geological Survey estimates **253 tcf** off Kenya, **Tanzania** and **Mozambique** – compare that with the 186 tcf Nigeria, Africa's biggest energy producer.
- These finds will lead to massive **LNG** (liquefied natural gas) plants ... and will make the zone akin to the Northwest Shelf in Australia," which can produce 23 billion cubic meters/year
- These fields are going to be It's **transformational** for **Mozambique** and **Tanzania** and the region (hopefully **RSA**)

East Africa yielded a series of huge discoveries...cont



East Africa yielded a series of huge discoveries...cont

- **Huge spinoffs** from these prospects are **LNG/LPG** export facilities, **GTL** facilities, gas **condensate**, **petrochemicals** - exporting products to the region and further afield
- Mozambique discoveries could cost **\$50 billion** to develop.
- 30-40 million tonnes/yr LNG will generate revenues **\$30 billion dollars** revenue for **Mozambique** – 3 x Moz GDP
- **Mozambique**, and even **South Africa**, are potentially not the primary markets, exploration companies are looking at **Asia**, in particular **India**.

East Africa yielded a series of huge discoveries...cont

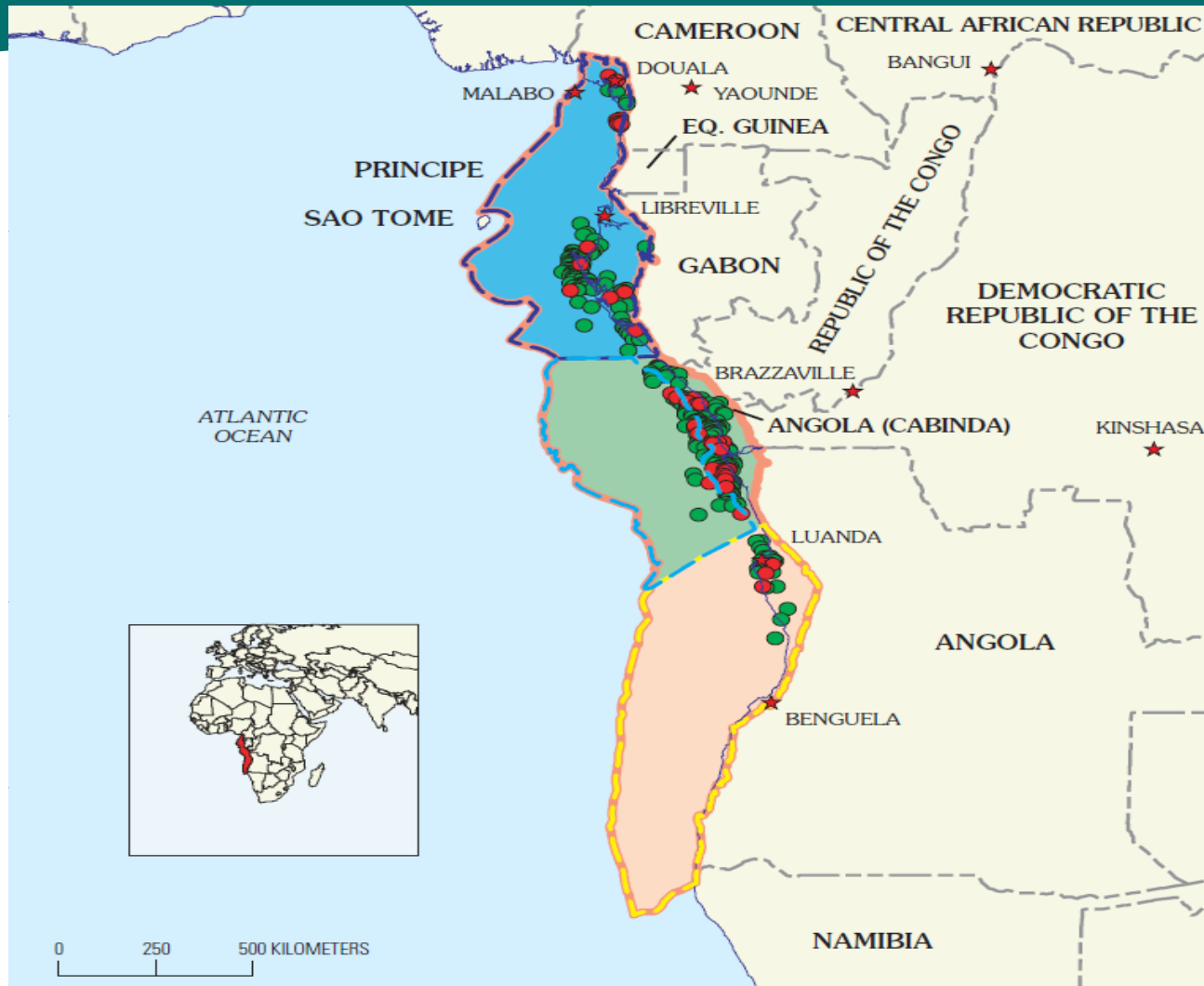
- However **East Africa's** oil, gas discoveries **requires** dose of **reality** – and this is where RSA could add value:
 - Stranded gas – no substantial local markets
 - Need to be converted to LNG/GTL products or petrochemicals for exports
 - Offshore & land based infrastructure need to be developed
 - Pipelines and/or LNG to RSA?
 - Harbours/oil Industry services infrastructure needed
 - Technical & engineering support
 - Regional banking and financial support



West Africa Potential...

- While East Africa is generating buzz as a new oil and gas frontier, the **West Africa's** more developed oil region still has plenty of **unexplored terrain** and massive **untapped potential**
- Namibia is attracting attention from the oil industry; last year prospectors discovered an estimated **11 billion barrels of oil reserves** around the country's southern coast.

West Africa Potential...cont



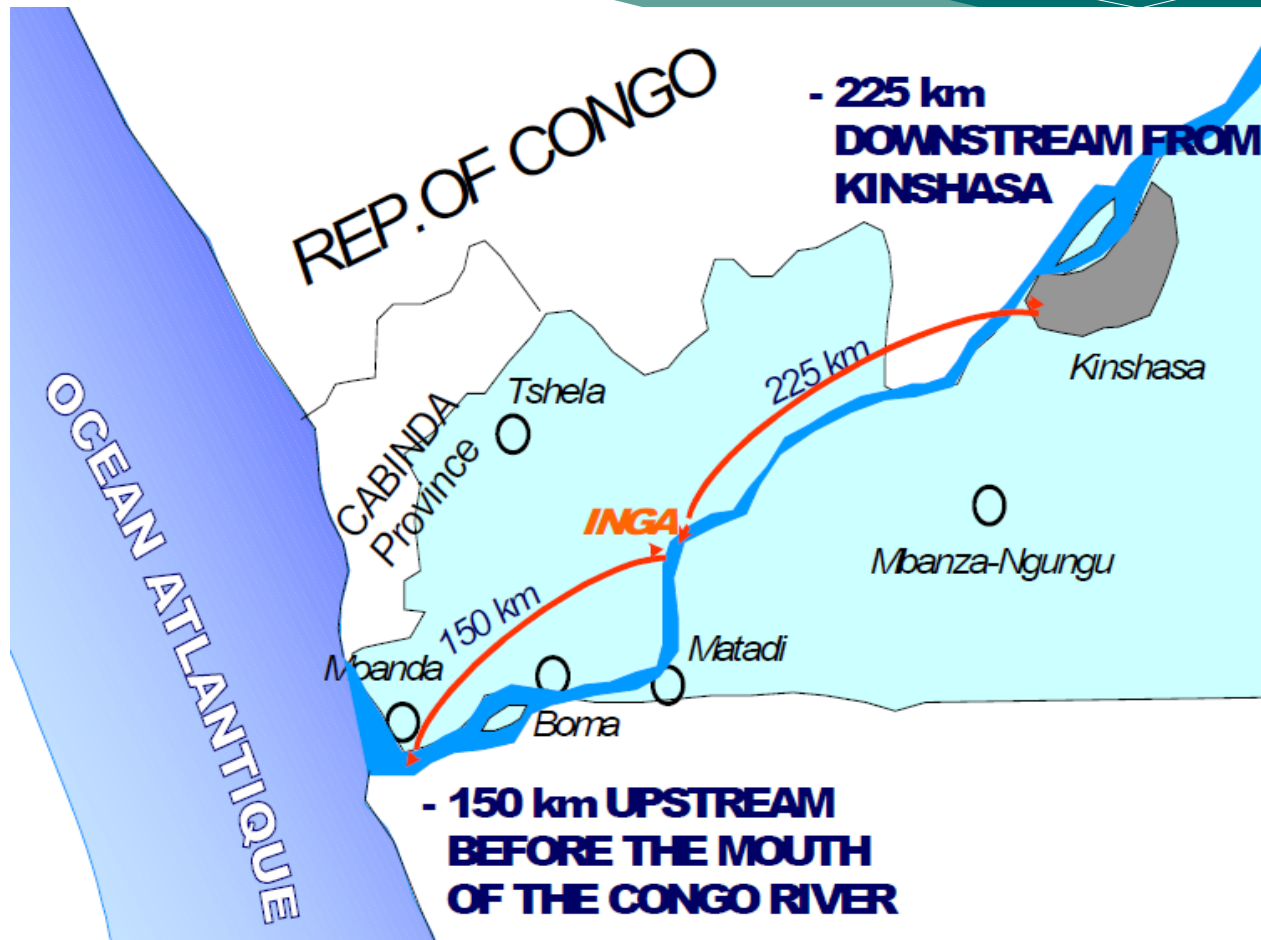
West Africa Potential...cont

- **Angola** aims to top Nigeria as Africa's top oil producer as it cranks up from current levels of close to **2 million barrels** of oil per day. Estimates of its reserves run as high as **13.5 billion barrels**
- Much exploration potential was missed or ignored in West Africa in the past because of the **limits of technology** or the **political situation** in various countries.
- Ghana, Liberia, Sierra Leone, Ivory Coast, Namibia, Southern Angola etc. – potential huge gas & oil discoveries

Energy Projects Inga...

- The Inga Site on the Congo River – the most important **energy source for Africa** – and its **100% renewable**
- The Congo River is the **second largest river in the world**, after the Amazon in South America
- Crosses Northern & Southern hemispheres, **separate weather systems** – **most stable river in the world** suitable for power generation
- This make the Inga site the **biggest source of hydropower in the world concentrated at a single point**, amounting to **370 billion kWh per annum**

Energy Projects Inga...cont



Energy Projects Inga...

- With its huge potential in hydropower energy, more than **44 000 MW** can be generated at the **Inga site alone**.
- Other rivers across the DRC can generate hydropower to bring the total amount the **DRC can generate** to more than **100,000 MW**
- Inga is connected to the Katanga network by the Inga – Kolwezi HVDC System, with 1774 km long line. Inga is also connected to **Eskom/South Africa**, where it supply some **120 MW**.

Energy Projects Inga...Cont

- Inga present **transformational potential** for the African continent:
 - **Mega aluminium and mineral beneficiation plants** for Africa – mostly coastal for exports
 - **Cheap green power** to RSA and rest of Africa
 - **Direct participation** in this mega project supplying engineers, logistics, fabrication etc.
 - **Indirect participation** in spin off projects i.e. smelters, aluminium plants, etc.

Conclusion...maritime opportunities

- Engineering & PM
- Labour
 - Work & construction barges
- Project Logistics
- Oil industry services
- Fabrication of Modules
- Fabrication of structures
- Maintenance & work overs
 - Import of energy products (LNG, Condensate, power)
 - Export of commodities for projects
 - Marine maintenance
- Equipment supplies
- Training
- Financing
- Commercial
- Protection & security