

### **Swala Energy Limited**

(ASX: SWE)

### Unlocking Frontier Basins in the East African Rift

Alicia Strother, Geoscientist 9<sup>th</sup> September 2014 Good Oil Conference Presentation

www.swala-energy.com



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#### Overview: Who we are

- Private BVI company in 2010;
- Pursued opportunities in EARS, which is the focus area for Swala. In 2012, Swala was awarded 12B, Pangani and Kilosa-Kilombero licences;
- Listed on Australian Securities Exchange (ASX) on 18th April 2013;
- Raised \$11MM in a tough and difficult market;
- 13,370km² (net) in East African Rift System (EARS), where there have already been 2 billion-4 billion barrels of oil discovered:
- High quality partners in Tullow Oil plc and Otto Energy Limited;
- Company has a Management team with proven track record of value realisation in East African oil and gas;
- Active work programmes in three licences;
- Significant regional activity planned around our assets in 2014 and beyond;
- Local content model led to listing of SOGTP on Dar es Salaam stock exchange (DSE) on 11th August 2014.



#### **Swala's Current Portfolio**

#### 12B (EARS) Kenya

**Operator:** Tullow

Swala interest: 25% net Gross acreage: 6,200 km<sup>2</sup>

In the 3<sup>rd</sup> Contract Year

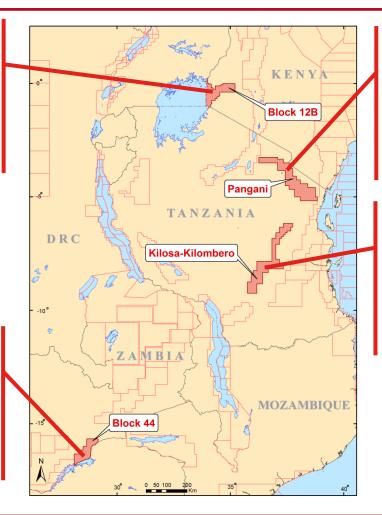
\*as of 31 August 2014

#### **Block 44 (Karoo Rift)** Zambia

Operator: Swala Zambia Swala interest: 100% net ^ Gross acreage: 6,000 km<sup>2</sup>

Pending ministerial award.

^ The net participating interest to Swala Energy Limited (ASX: SWE) is 93%.



#### Pangani (EARS) **Tanzania**

**Operator:** Swala Tanzania Swala interest: 50% net\* **Gross acreage:** 17,156 km<sup>2</sup>

In the 3<sup>rd</sup> Contract Year

#### **Kilosa-Kilombero (EARS) Tanzania**

**Operator:** Swala Tanzania Swala interest: 50% net\* Gross acreage: 17,675 km<sup>2</sup>

In the 3<sup>rd</sup> Contract Year

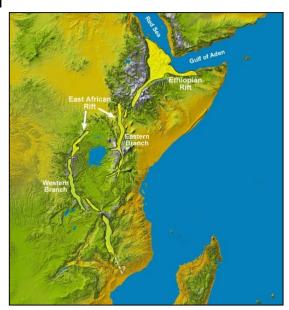
\*Following DSE listing, net participating interest to Swala Energy Limited (ASX: SWE) is 29.09% for the Pangani and Kilosa-

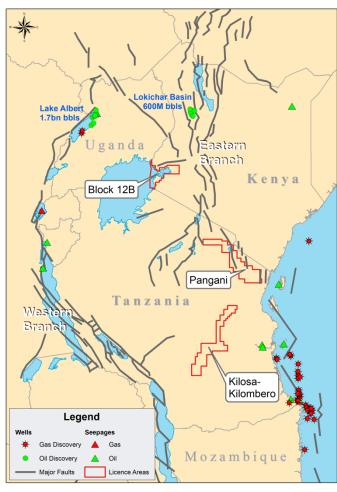
Kilombero licenses.



## Geological Setting of the EARS Why the hype?

- Extensive 3,500km-long Tertiary rift system: Ethiopia through to south of Lake Nyasa/Malawi
- Proven lacustrine hydrocarbon system
- A total 24 discoveries made in the EARS, consisting of both oil and gas.
- 1.7BBO discovered in Uganda
- 600MMBO in Lokichar Basin, Kenya
- Tullow plan to drill 15 wells in Kenya by end of 2015







### **Initial Challenges for Swala**

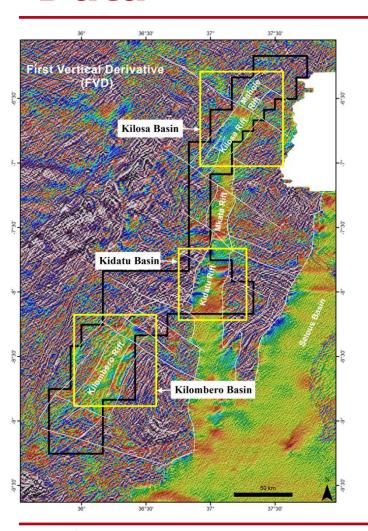


- Where are the sedimentary basins in the EARS?
- 2) Ranked Frontier
  - Lack of previous data (low-res Magnetic data only)
  - Unknown sub-surface depth-to-basement information
  - Unknown geological age and content
- 3) Size of the basins versus cost of exploring
  - Licence areas are greater than 17,000km<sup>2</sup>
- 4) Corporate strategy for mitigating the risk of a company the size of Swala taking on a frontier exploration programme
  - Early exit points achieved



## Phase I: Evaluating Vintage Data





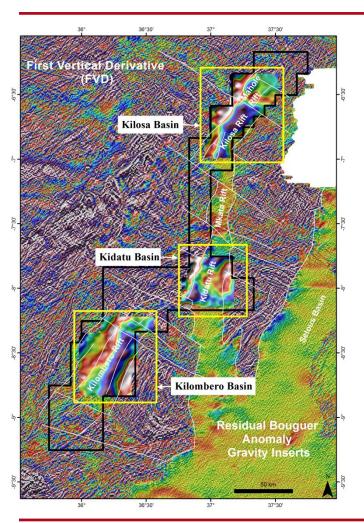
#### 1970s Getech Magnetic data

- Reprocessed by Southern Geoscience Consultants
- Regional interpretation to define the sedimentary basins
- Focus for planned magnetic & gravity (2012) surveys over deepest rifts within the licence areas



### **Phase II: Remote Sensing**





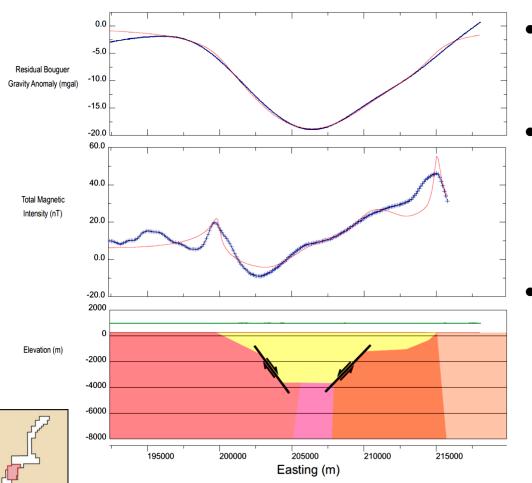
Airborne Magnetic and Gravity survey was acquired in 2012

- Geological interpretation using geological maps, topographical maps, photogeology & DEM
- Forward modelling using the mag-grav data
- Naudy modelling depth estimates produced from the magnetic data
- Use of mainly gravity data in Pangani due to near surface volcanics

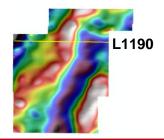


## Forward Modelling & Naudy Methodology





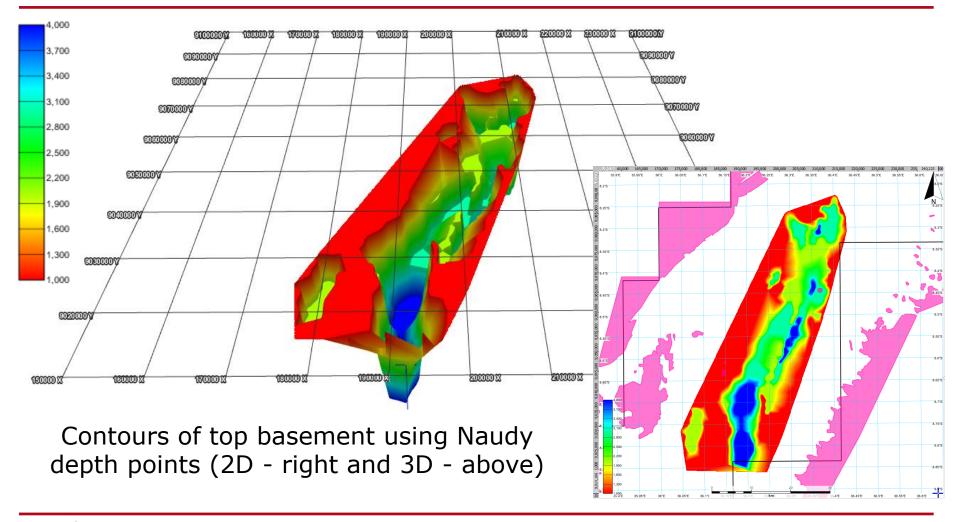
- Estimated depth to basement using forward and Naudy modelling methods
- Worked with multiple density estimates for Kilosa-Kilombero basins and Pangani basins as fill relatively unknown
- Built basin profiles for seismic programme parameters





## Forward Modelling & Naudy Methodology







## Phase III: 2D Seismic Surveys Testing the Models







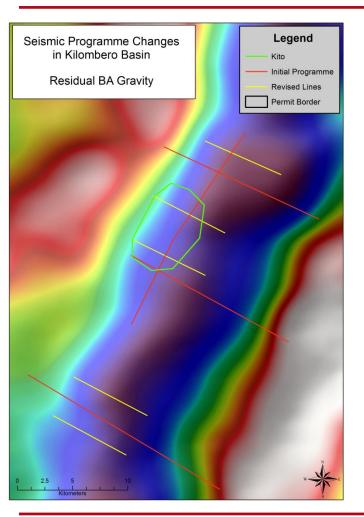


- Focus on semi-regional evaluation for each basin
- Combination weight-drop and dynamite programme
- Seismic programme using existing tracks where possible for low environmental impact
- Proactive community liaison reduced community disruption
- More challenges in Kilombero Basin with wide rivers and weather window. Highly flexible contractor, Polaris, assisted in completing the survey with limited down time



# Kilombero Basin: Basin-wide to Prospect in one go!





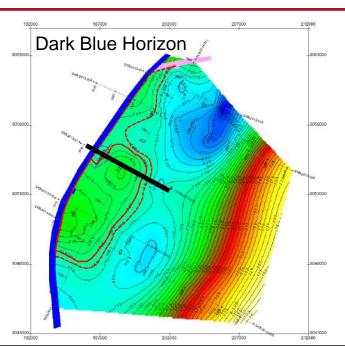
#### Kilombero Basin

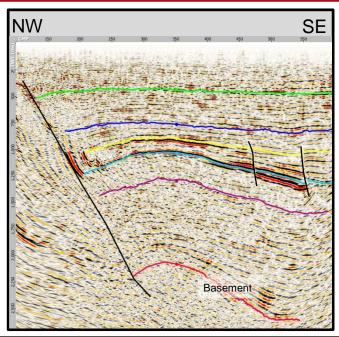
- First dip line identified a 4-way dip closure. The strike line confirmed it.
- The key was the flexibility to modify the programme while the survey was underway
- Rapid in-field processing of the data allowed alteration of the seismic programme in Kilombero
- The Kito Prospect was successfully mapped on four lines



### **Kito Prospect: Our first jewel**







Kito Prospect – Gross Prospective Unrisked Oil Resources (MMstb) (Source: RISC Report)						
	Low Estimate (P90)	Best Estimate (P50)	High Estimate (P10)			
Dark Blue Horizon	42	112	269			
Light Blue Horizon	6	39	155			
Total (arithmetic)	48	151	424			



## **Analogue to EARS success story?**

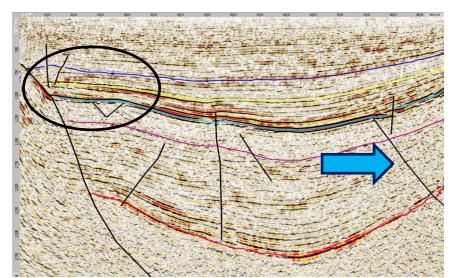


The Kilombero rift is potentially analogous to Lokichar Basin, Kenya

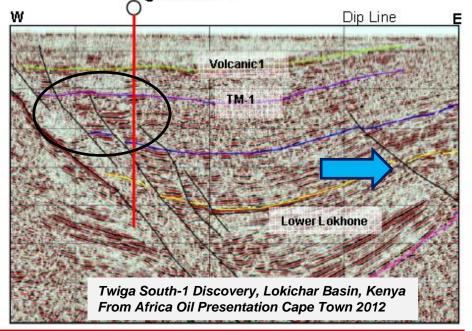
Kito already mapped as possible look-a-like hanging-wall roll-over structure identified (and drilled) in the Lokichar basin

Age of sediment fill unknown in Kilombero basin. Low seismic stacking velocities suggest a young (Neogene to Recent) sedimentary fill, similar in age to the Lokichar basin and Lake Albert in Uganda

Twiga South-1



Seismic Line over Kito Prospect

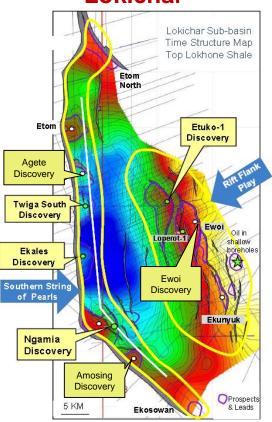




## Kilombero: Swala's "String of Pearls"?



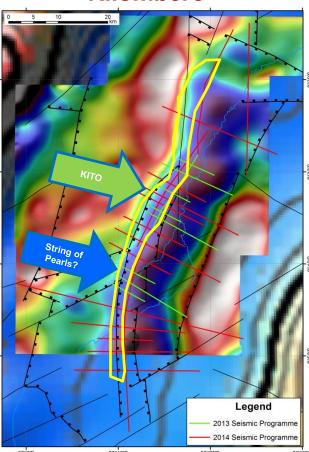
#### Lokichar



Lokichar Basin, Kenya Source: Africa Oil Presentation Cape Town 2012

\* Som e prospects renam ed to reflect local designations

#### **Kilombero**



Both basins are approximately 80km long and 20-30km wide

2014 seismic to target the basin margins along length of basin to hopefully discover our own "String of Pearls"

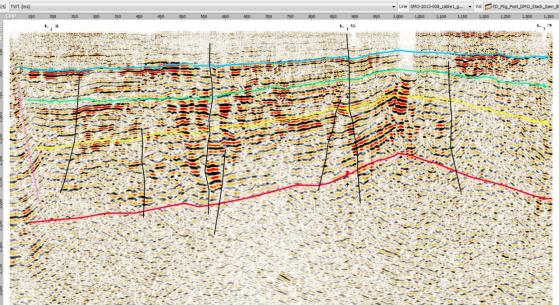
The 2013 seismic barely covered 1/5th of the length of Kilombero Basin



## Moshi Basin: Probable Neogene Age





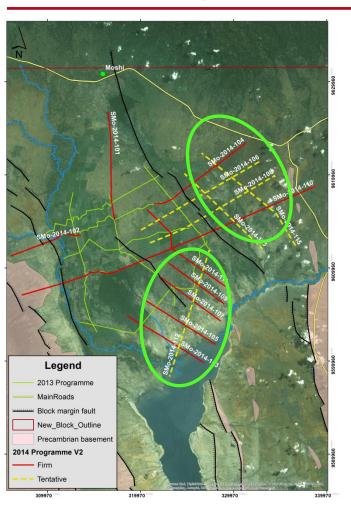


- Low seismic stacking velocities probable Neogene or younger sediment fill
- Basement probably 2–3km deep
- Three one-line leads in the basin



## Phase IV: 2014 Seismic Survey Building the Lead Inventory





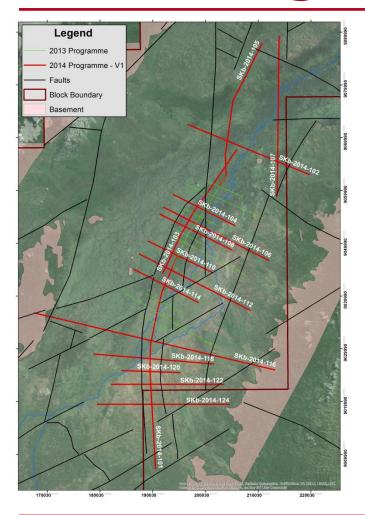
Moshi Basin (Pangani)

- 200km commitment started 25th August 2014
- Targeting fault-related structural highs along the basin edges
- Flexibility: base programme with infill as results come in
- Additional kilometres have been reserved for potential leads: 180km planned with 20km yet to be decided



## Phase IV: 2014 Seismic Survey Discovering a String of Pearls





- Focus on the more promising basin in Kilosa-Kilombero Licence
  - Kilombero Basin
- 440km commitment to start late September.
- Targeting fault-related structural highs along the basin edges
- Additional kilometres have been reserved for potential leads: 380km planned with 60km yet to be decided.



### **Successfully Unlocking Basins**

	2012	2013	2014	2015
Minimum Commitment	9,000 line km airborne data	500km 2D seismic data	640km 2D seismic data	Drill 2 wells
Completed	14,393 line km airborne data	560km 2D seismic data  Kito Prospect  Multiple leads  On time and under budget	Underway	WATCH THIS SPACE

