



**PANCONTINENTAL OIL & GAS NL**

ACN 003 029 543 ASX : PCL

Ground Floor  
288 Stirling Street, Perth  
Western Australia 6000

P O Box 8260  
Perth Business Centre  
Western Australia 6849

Tel: (61 8) 9227 3220  
Fax: (61 8) 9227 3211  
Email: [info@pancon.com.au](mailto:info@pancon.com.au)  
Web: [www.pancon.com.au](http://www.pancon.com.au)

## **QUARTERLY ACTIVITIES REPORT**

### **December 2012**

#### **Highlights**

- **Kenya L8**
  - Mbawa 1 gas discovery continues to be assessed by operator Apache
- **Kenya L10A & L10B**
  - New 3D survey over western portion completed January 2013
  - Potentially a 2 well drilling programme commencing 2013
- **Kenya L6**
  - 3D survey completed over Kifaru and Tembo Prospects
  - L6 JV seeking a farminee for drilling in 2013
- **Offshore Kenya**
  - Anadarko Petroleum recently spudded the first well of a planned 2 well programme offshore Kenya
- **Namibia EL 0037**
  - Multiple leads identified and EL 0037 JV seeking a farminee for drilling
  - Nearby acreage entering major drilling phases imminently
- **Corporate**
  - Cash balance of \$40.9 million
  - Additional African oil and gas opportunities under review

Pancontinental Oil and Gas NL ("Pancontinental", the "Company") is pleased to present the following report on activities for the quarter ending 31 December 2012.

Mr Barry Rushworth, CEO and Director of Pancontinental commented:

“2012 was a major year for the Company and we look forward to making 2013 the most important year in its history yet. With the Mbawa 1 discovery proving a working hydrocarbon system, Pancontinental believes that the next 12-18 months will be a defining period for oil and gas exploration offshore Kenya.

Pancontinental is well funded for up to 4 wells offshore Kenya directly (1 well depends on the completion of a farm-out in Block L6). In addition there are up to 5 wells planned offshore Kenya (wells by other companies) over the coming 12-18 months.

Also, while we continue our work in Namibia on EL 0037, we remain excited as nearby acreage enters major drilling phases imminently, with the first of many planned wells by others expected to commence in February 2013.”

## **International Projects**

### **KENYA OFFSHORE BLOCK L8**

*Pancontinental Oil & Gas NL 15%\**

L8 covers 5,114.9 sq km offshore Kenya in water depths from 100m to 1,300m.

#### **Mbawa 1 Discovery**

The Mbawa 1 exploration well, drilled during August and September 2012 offshore Kenya, is the first natural gas discovery in the northern part of the East African offshore margin.

The three discovery zones have 51.8 net metres (~170 feet) of natural gas pay in channel and turbidite sandstones with favourable reservoir characteristics. The Mbawa 1 well has been left in a condition that will allow re-entry at a later date.

The Mbawa discovery is on the southern extremity of the overall north-south trending sub-regional Mbawa Prospect. The potential of the remainder of the four-way dip closed 160 sq km (40,000 acre) structure remains to be assessed.

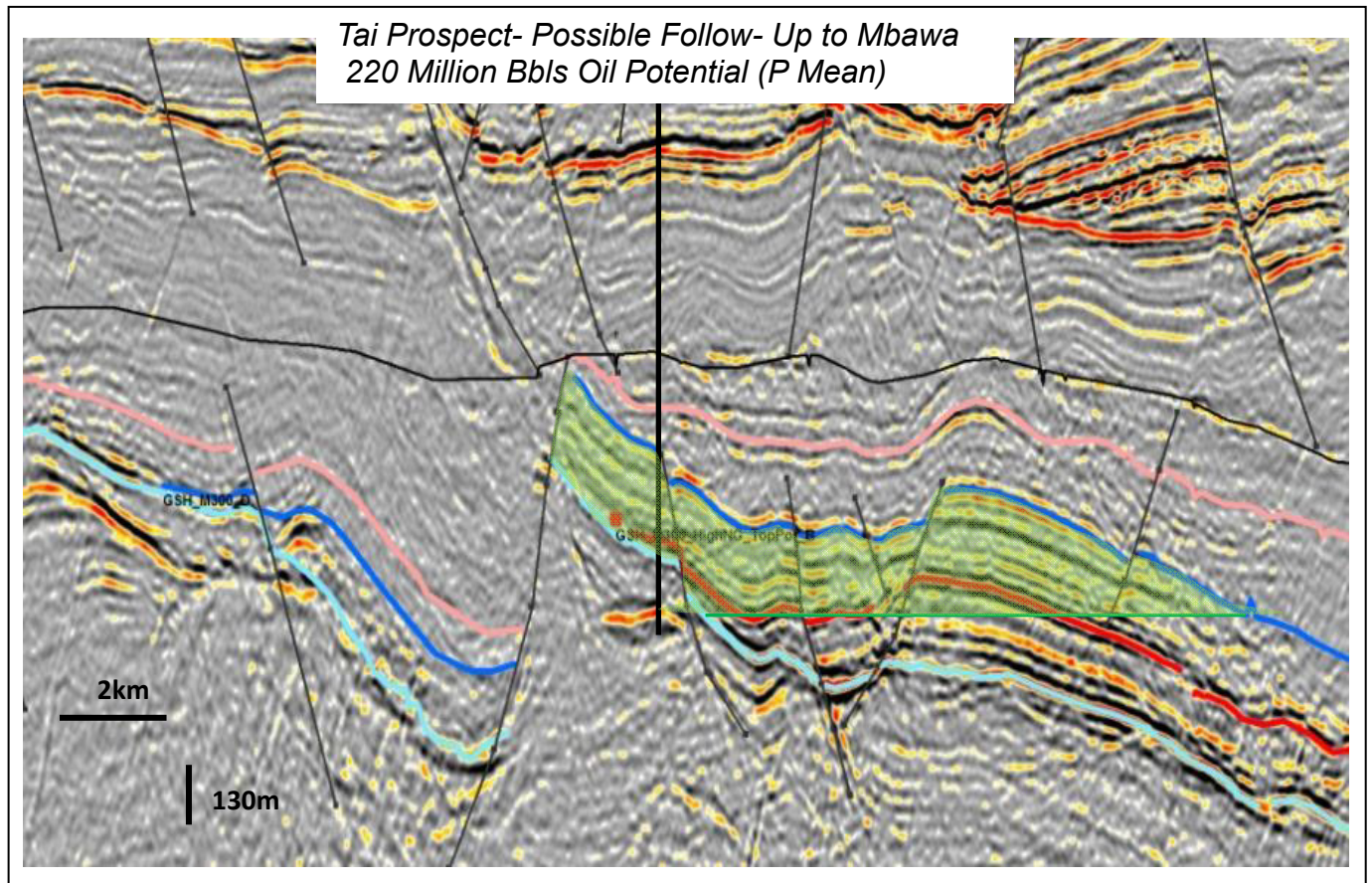
The Mbawa Prospect is the first to be drilled of numerous prospects and leads in Pancontinental's four licence areas offshore Kenya.

#### **L8 - Forward Exploration Programme**

The large amount of technical data gathered during Mbawa drilling continues to be integrated into existing exploration models. A major, second, deeper play type remains open for testing and a second well in L8 is being considered. The joint venture is calibrating the information from the Mbawa well with seismic over the other prospects in the permit. This process is ongoing.

The Tai and Nanaa Prospects are two prospects which could be the focus of any future drilling programmes.

The Tai Prospect is one of the main prospects under consideration. The Tai Sands of interpreted Middle Cretaceous age are deeper than the discovery sands in Mbawa 1 and are considered to potentially be in a separate petroleum system that is more favourable to trap oil (see figure 1 below).



**Figure 1: Tai Prospect**

The Nanaa Prospect is another prospect under consideration.

Oil remains Pancontinental's prime focus offshore Kenya and this has not been diminished by discovering gas in Mbawa 1. The deeper levels and numerous other prospects at various levels remain untested and are the subject of current exploration work.

\* Pancontinental's 15% interest through Mbawa drilling was "free-carried" under farmout to Tullow Oil plc up to a "cap" of US\$ 9 million (as reduced by other exploration expenditure). After the first earning phase Tullow has an option to earn a further 5% (thereby reducing Pancontinental to 10%) by providing funding on Pancontinental's behalf to a cap of US\$ 6 million in any second well.

## **KENYA OFFSHORE BLOCKS L10A & L10B**

***Pancontinental Oil & Gas NL – 15%***

L10A and L10B have respective areas of 4,962.03 sq km and 5,585.35 sq km in water depths of 200 to 1,900m.

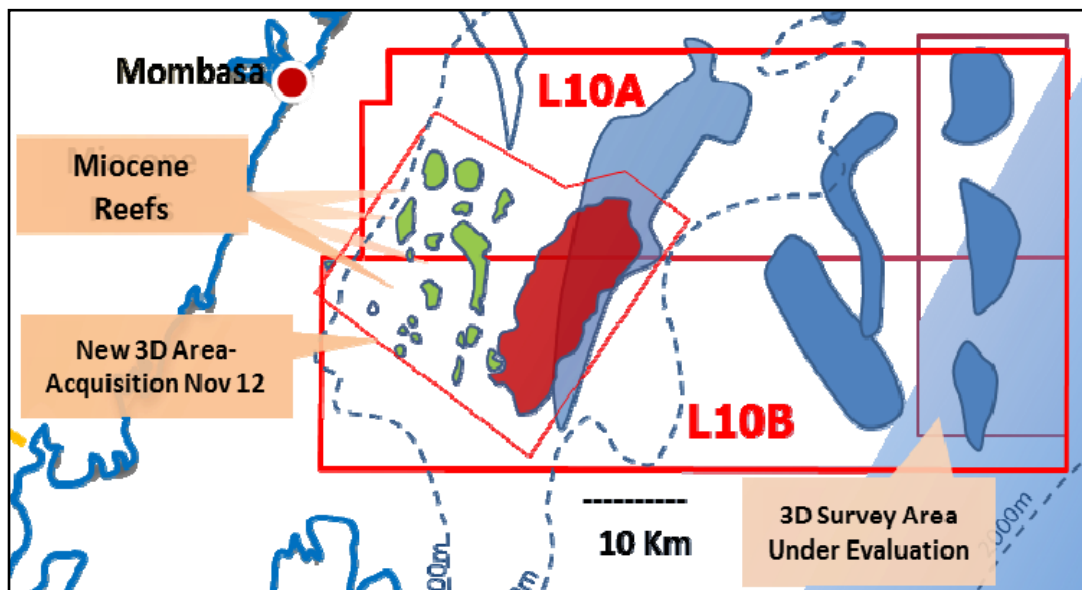
The L10 projects are operated by BG Group in a joint venture including Premier Oil and PTTEP (following the takeover of Cove Energy plc).

### **New 3D Seismic Survey Completed**

The L10A and L10B joint venture completed a new 3D survey in the western portion of the licence areas in January 2013. The acquisition was supervised by operator BG Group. Previous 2D and 3D seismic surveys were undertaken late 2011 / early 2012.

The new 3D survey covers a cluster of large Miocene reefs and the large Crombec Lead. These leads are possible drilling targets.

The new 3D survey covers the approximate area as shown below in Figure 2.



**Figure 2: Blocks L10A and L10B- New 3D Seismic Survey**

### **Current Mapping Work**

Processing and interpretation of the 2D and 3D data acquired late 2011 / early 2012 is ongoing and preliminary results are very encouraging.

In the western sector of the L10A and L10B areas, the joint venture operator BG Group has mapped a number of very large leads for further work and possible drilling. These are being covered by the new 3D survey.

The largest leads targeted by the new 3D survey in the western sector are-

- (i) A cluster of more than 10 interpreted Miocene Reefs.

Miocene reefs are known globally to have very high per-well production potential. The L10 reefs are in water depths of approximately 500m and within 50km of the major Kenyan port of Mombasa.

- (ii) The Crombec Prospect is a large anticline in the western sector of the areas. Crombec has four-way dip closure from the Tertiary to the Lower Jurassic. It has sands onlapping the crest, indicating a likely growth structure. A possible geological analogue is the Songo-Songo field offshore Tanzania.

In the eastern sector of the areas, mapping continues on a number of Prospects and play types. Two of the diverse play types are-

- (i) An extensive system of Tertiary channels. The Tertiary section holds most of the gas discovered to date offshore Mozambique and Tanzania. The channels in L10A & L10B may be gas charged, possibly representing a very large resource.



- (ii) Structural Leads in the Tertiary to Cretaceous section. Some of the Leads are dip reversal associated with a fault. These have stacked potential within Tertiary stacked channels and Cretaceous thrust and sub-thrust plays.

## **KENYA ONSHORE / OFFSHORE BLOCK L6**

*Pancontinental Oil & Gas NL – 40%*

The L6 licence covers approximately 3,100 sq km, with about one quarter onshore and the rest offshore to 400 meters water depth. L6 is areally and geologically continuous to L8.

Area L6 (see figure 3 below) off the Kenyan coast lies in the Lamu Basin and within the Tana River delta, north of recent world-scale natural gas discoveries off the coasts of Mozambique and Tanzania.

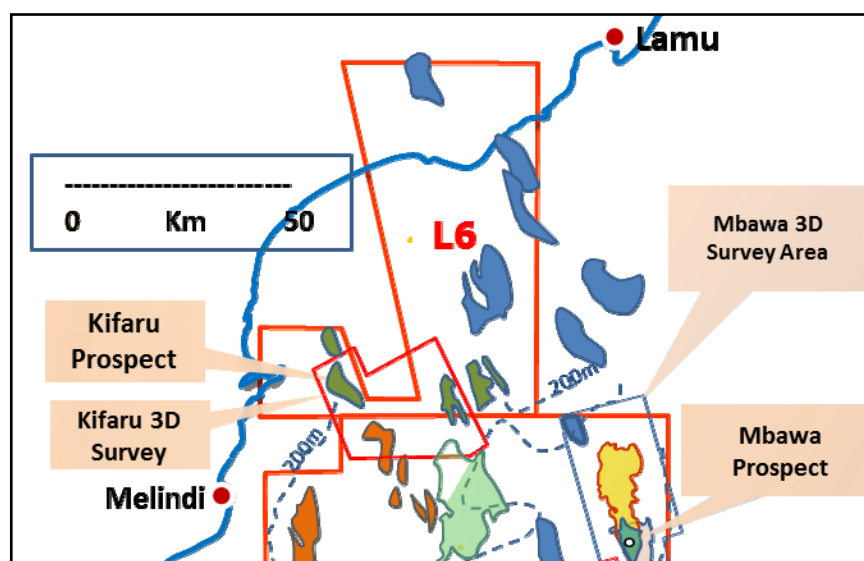
The L6 joint venture is operated by FAR Limited (ASX : FAR), with a 60% interest. The L6 joint venture group intends to seek a farminee for drilling in 2013.

### **Kifaru 3D Seismic Survey Completion**

The Kifaru 3D seismic survey of 778 sq km was completed in July over the Kifaru and Tembo Prospects in the southern offshore portion of L6. The Prospects are in water depths of 80m to 150m in the south of the L6 area.

Pancontinental expects that the 3D survey will lead to the identification of one or more locations for drilling in 2013.

Following encouraging studies, the joint venture is exploring the offshore portion of the area. A deep central graben is considered to be an oil and gas “source kitchen” and prospects have been identified immediately adjacent to this area.



**Figure 3: Offshore Kenya – Block L6**

### **Initial 3D results**

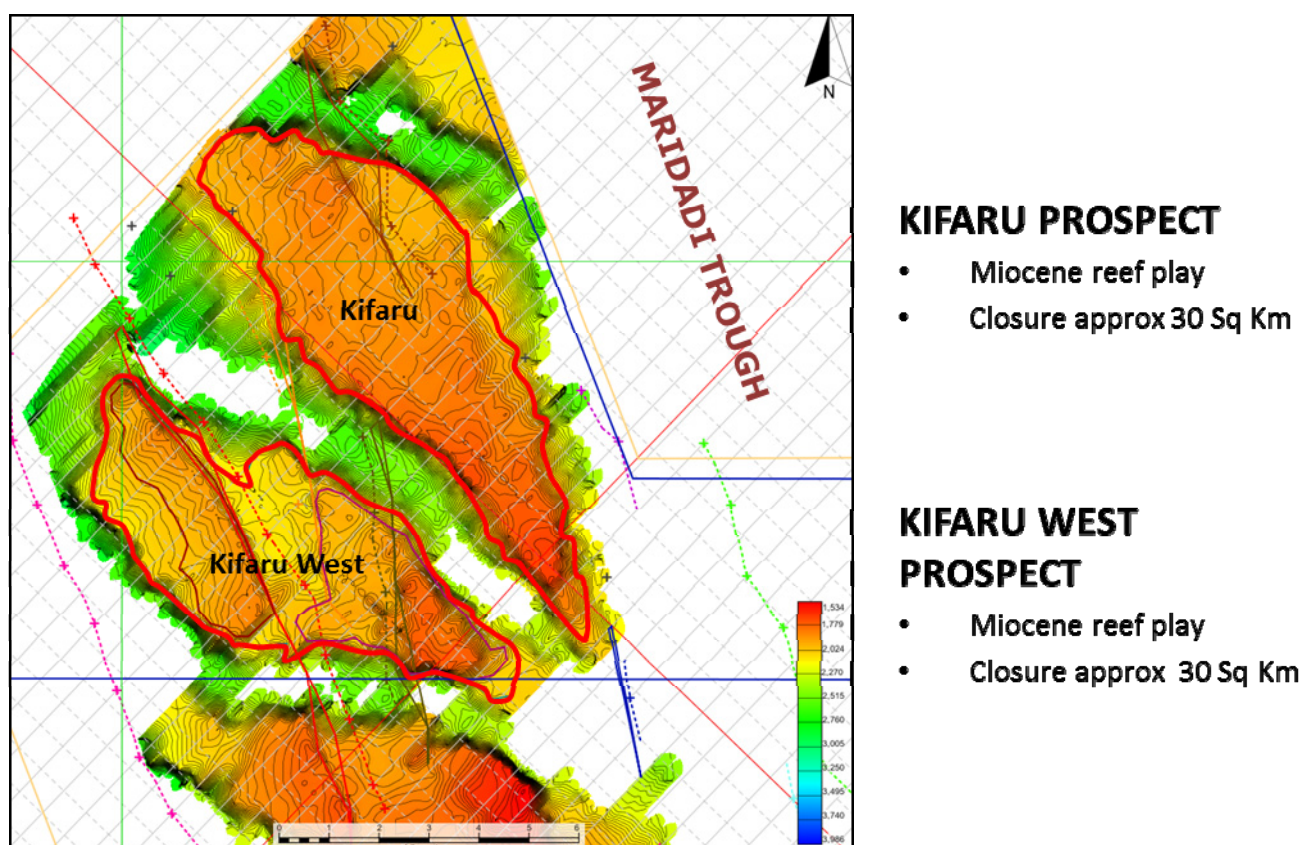
The L6 operator, FAR Limited has mapped the “fast track” results from the July 2012 Kifaru 3D Seismic Survey. The results are very encouraging and the Joint Venture is continuing to map prospects for a first exploration well planned for later in 2013.

Final drill site decisions will be made when the fully processed 3D data have been interpreted in early 2013. The Kifaru and Tembo Prospects are the main drilling candidates.

### **Kifaru Prospect**

The early 3D data shows that the Kifaru Prospect (see Figure 4 below) is a stacked series of Oligo-Miocene reefs. Good quality oil-mature source rocks are interpreted in the Eocene below and adjacent to the reefs in the Maridadi Trough.

Miocene reefs worldwide host very large oil and gas reserves and often have very high per-well production rates. Clusters of Miocene reefs, if productive, offer multiple follow-up potential after a first discovery.



**Figure 4: Block L6 – Kifaru and Kifaru West Prospects**

Approximately 20km from Kifaru, the Maridadi 1 well (drilled in 1985) had downdip oil indications at the stratigraphic level of the Kifaru Reef (see Figure 5 below).

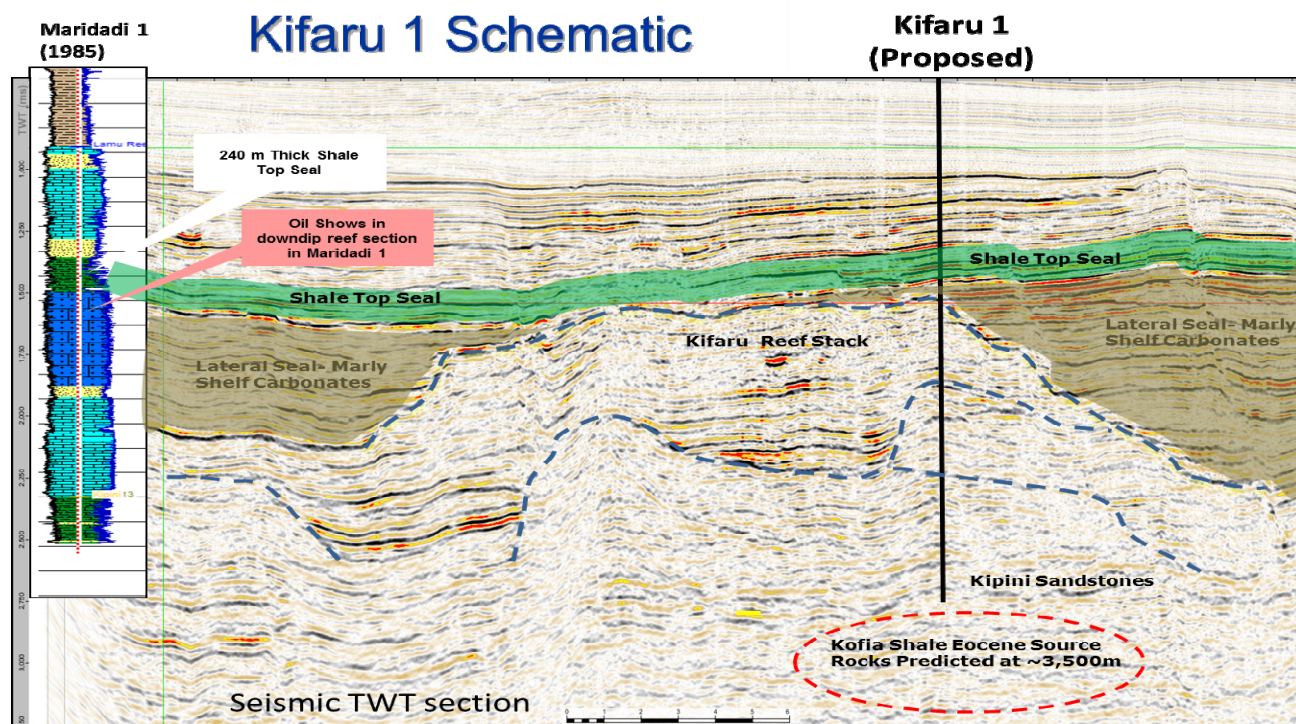


Figure 5: Kifaru 1 (Proposed) Schematic

The play characteristics of the Kifaru Prospects are considered to be very favourable, with predicted good mature mixed Eocene oil / gas source rocks below and adjacent to the Prospect and good predicted reservoir and seal characteristics (see Figure 6 below).

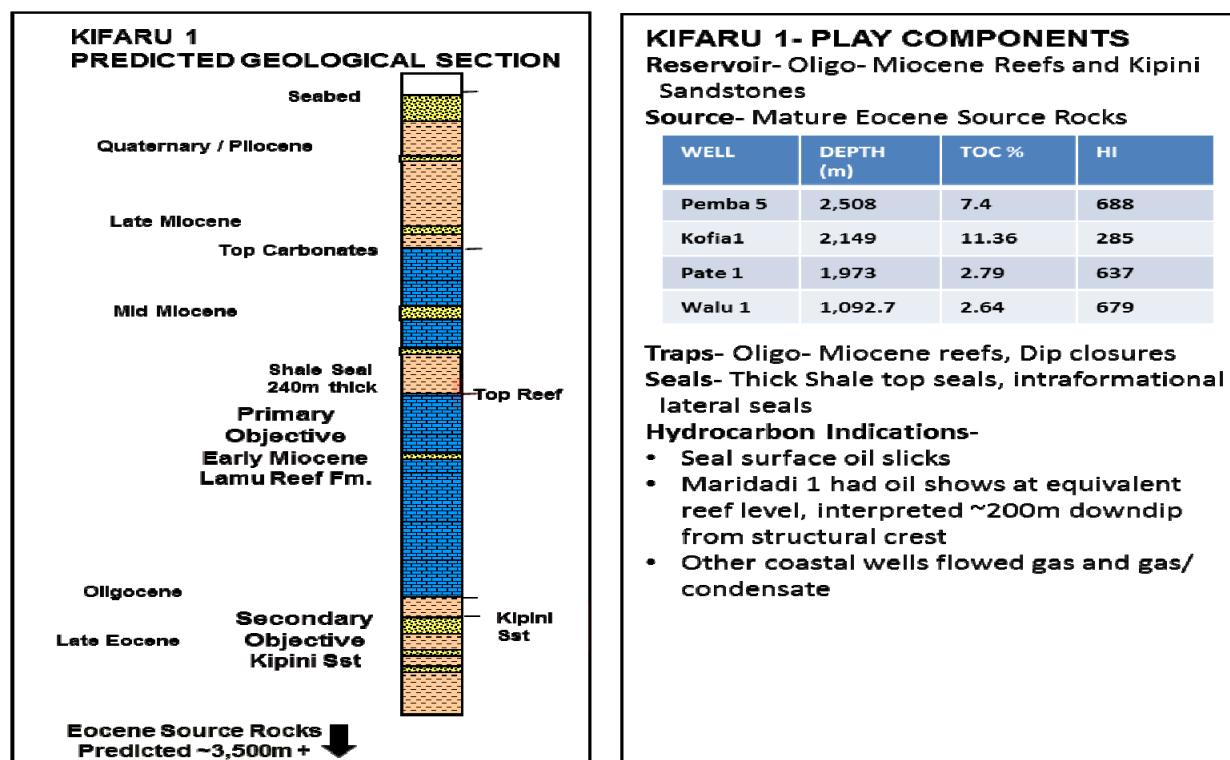
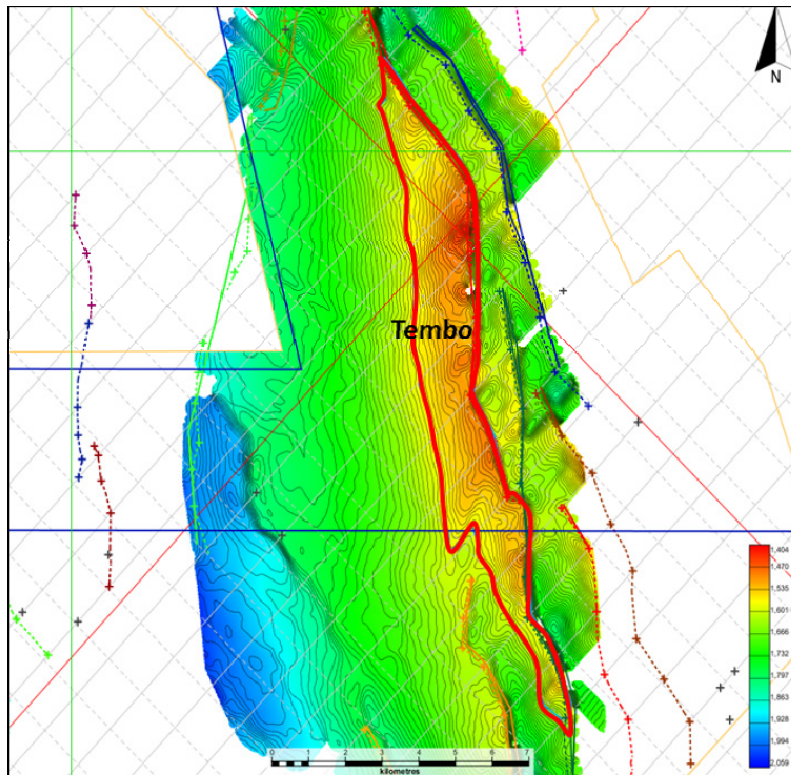


Figure 6: Kifaru 1 – Predicted Geological Section and Play Components



## Tembo Prospect

The Tembo Prospect has been mapped in 3D as a major tilted fault block trap (see Figure 7 below).

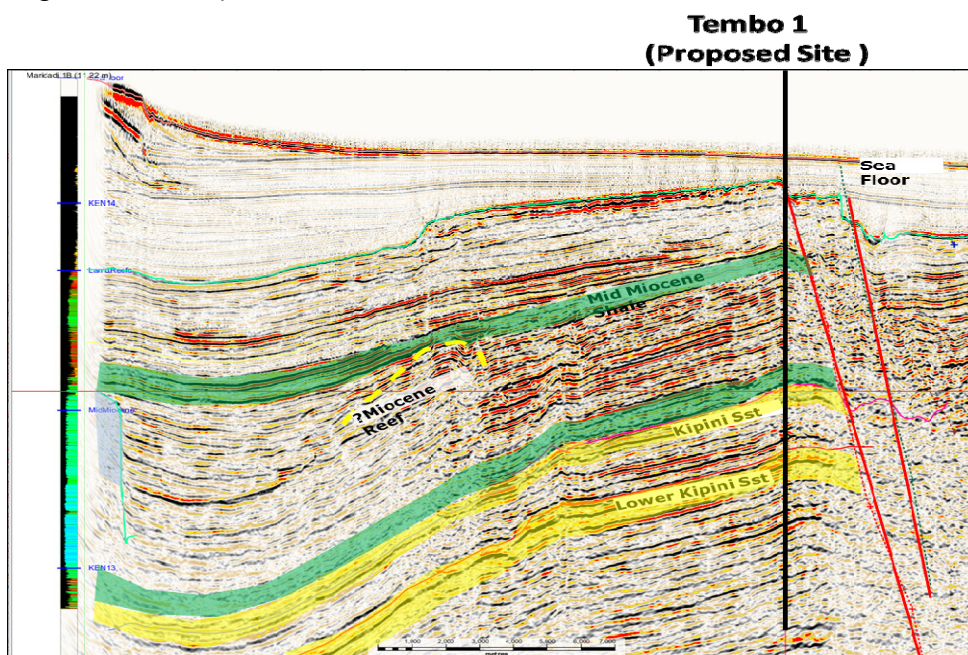


### TEMBO PROSPECT

- Eocene sand play
- Closure approx 30 Sq Km

Figure 7: Block L6 – Tembo Prospect

Timing of trap formation, migration, reservoir and seal all favour the Tembo Prospect. The Kipini Sandstone is the primary objective, with secondary objectives deeper in the section (see Figure 8 below).



### Tembo 1 (Proposed Site )

#### Tembo 1

- Eocene Kipini Sandstone Play
- Favourable trap and migration timing

Figure 8: Tembo 1 (Proposed) Schematic

## L6 Prospective Inventory and Forward Programme

The offshore Kifaru, Kifaru West and Tembo Prospects and the onshore Kudu Prospects are the main exploration targets in the L6 licence area.

The L6 Joint Venture will select a prospect for drilling after the receipt of the final 3D seismic survey results expected in January / February 2013. Planning for drilling in 2013 has already commenced and an Environmental Impact Assessment is well advanced.

## L6 - Prospect Inventory

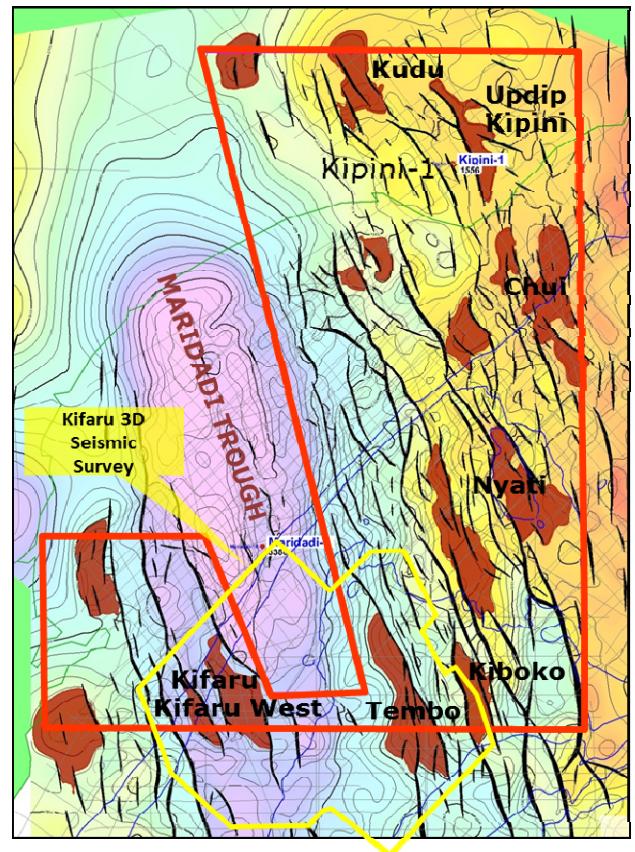
Three prospects on 3D

- Miocene Reefs
- Eocene Sandstones

Five other prospects on 2D - multiple targets

- Eocene Sandstones Targets
- Upper Cretaceous Sandstone Targets

Mapped on 3D	Play
Kifaru	Miocene Reef
Kifaru West	Miocene Reef
Tembo	Eocene (Kipini) Sand
Mapped on 2D	Play
Kudu	Eocene (Kipini) Sand
Updip Kipini	Eocene (Kipini) Sand
Kiboko	Eocene (Kipini) Sand
Chui cluster	Eocene (Kipini) Sand
Nyati	Eocene (Kipini) Sand
Totals	



L6 is proving to be a very exciting block and with a high level of activity planned offshore Kenya in 2013 and the recent Mbawa gas discovery in adjacent block L8, the L6 Joint Venture is in a strong position to secure a farminee partner for drilling.

## KENYA OFFSHORE - ACTIVITIES

Pancontinental plans to participate in up to 4 wells offshore Kenya over next 12 to 18 months. There is also up to 5 wells planned by other companies offshore Kenya over the coming 12-18 months, with the first spudded by Anadarko in January 2013 (see Figure 9 below).

With the Mbawa 1 discovery proving a working hydrocarbon system, Pancontinental believes that the next 12-18 months will be a defining period for oil and gas exploration offshore Kenya.

Pancontinental has an inventory of more than 40 Prospects and Leads offshore Kenya and is well funded for the planned activity ahead (see Figure 10 below).



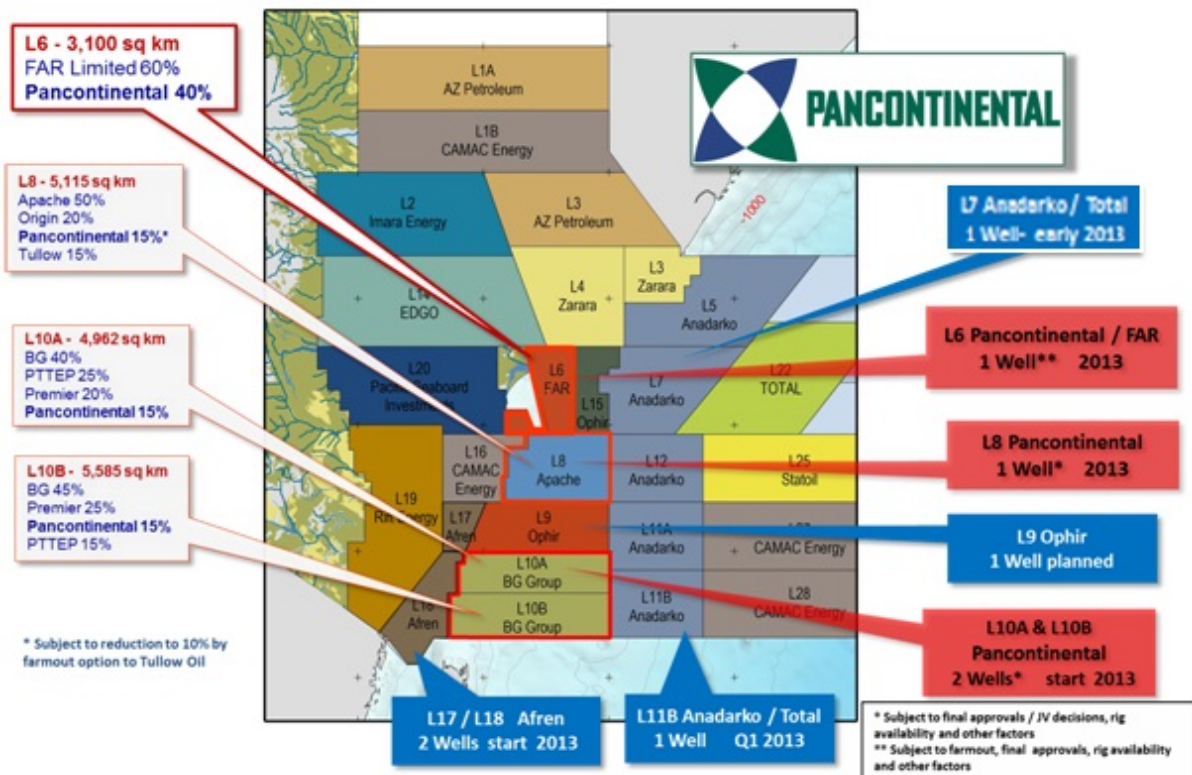


Figure 9: Offshore Kenya – Planned Drilling Activity (Indicative Only)

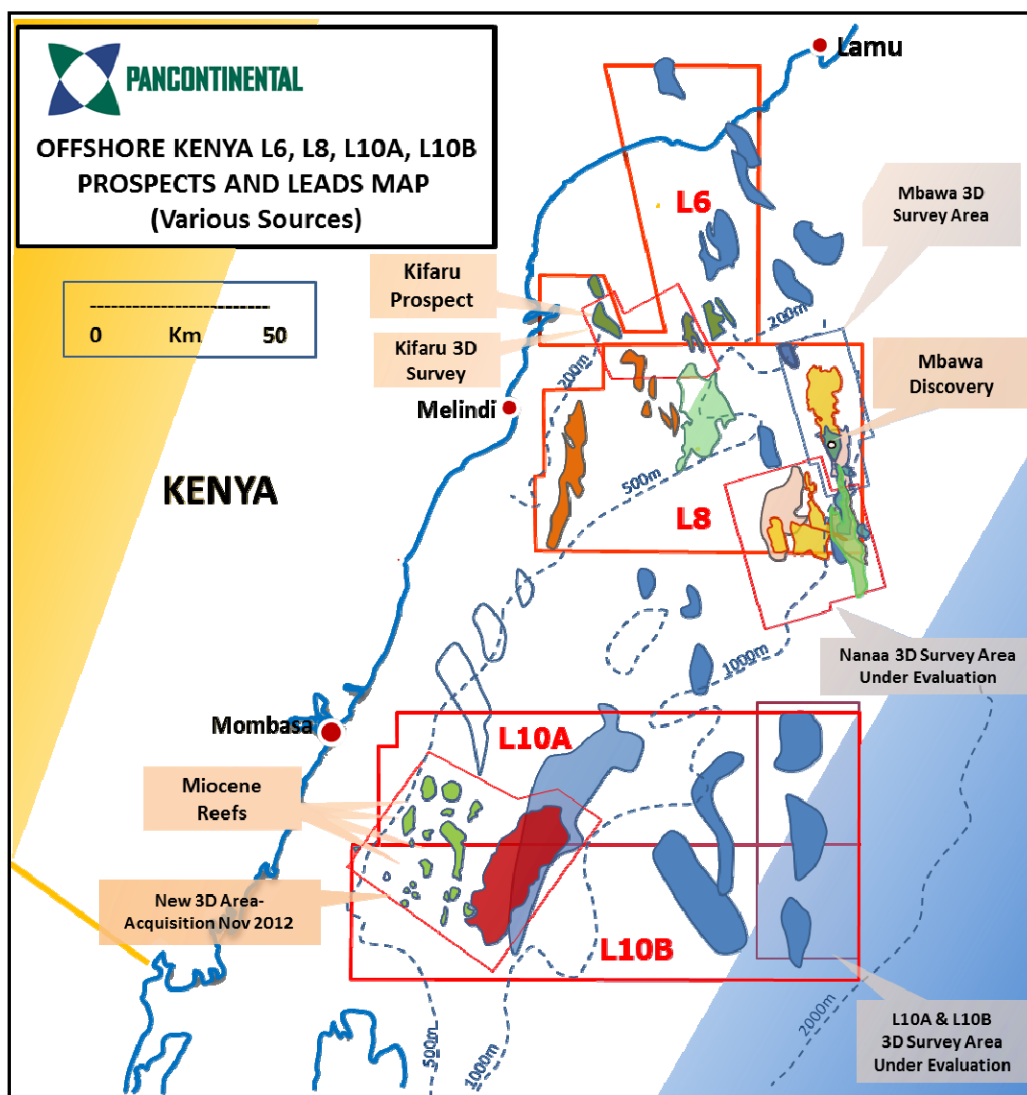


Figure 10: Offshore Kenya – Prospects and Leads Map

## **NAMIBIA OFFSHORE EL 0037**

***Pancontinental Oil & Gas NL – 95%, Operator***

Petroleum Exploration Licence No. 0037 (“EL 0037”) covers approximately 17,295 sq km in the Walvis Basin offshore northern Namibia.

### **Prospectivity offshore Namibia**

Offshore Namibia is attracting significant international interest as a prime emerging prospective oil and gas province in southwest Africa with the potential to hold very large oil and gas reserves, and is significantly under-explored. The Kudu Gas Field offshore Namibia is under development by Tullow Oil plc, and other companies are actively exploring the margin for oil.

Offshore Namibia is the plate tectonic conjugate of offshore Brazil, where world-scale oil and gas discoveries have been made and it lies on the West African continental margin adjacent to Angola, where there have also been major oil discoveries.

Pancontinental believes that its Namibian acreage is one of the few areas covering an oil generating “sweet spot” where oil prone source rocks are sufficiently buried to generate oil; similar to its four projects offshore Kenya.

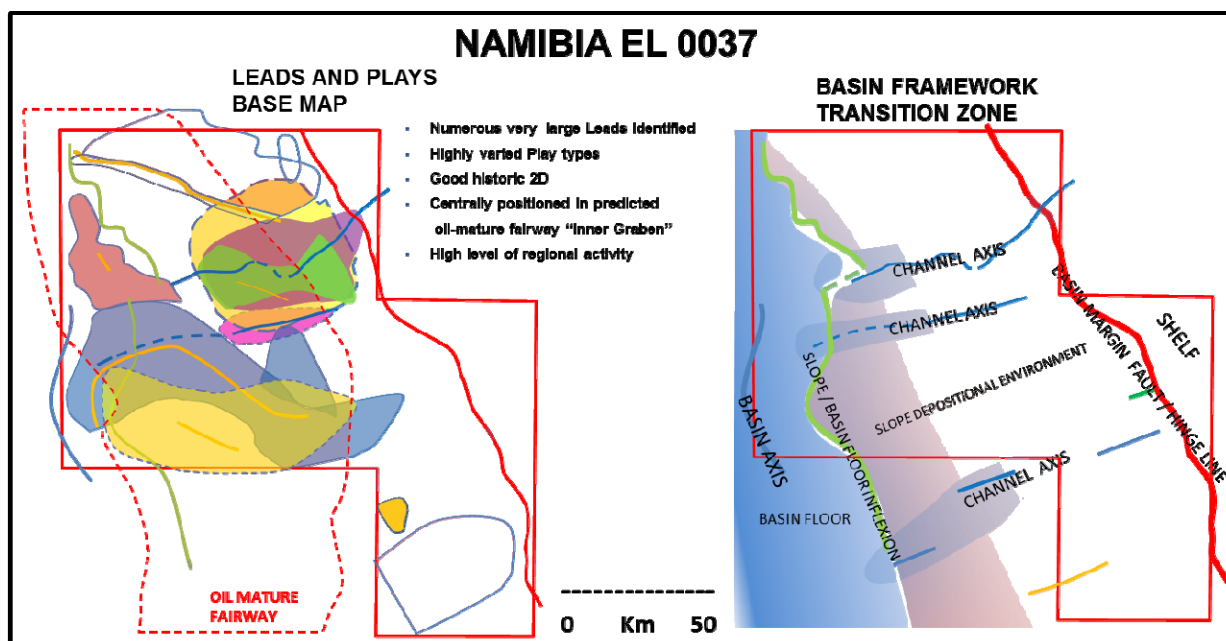
Source rock “maturity” is the key component of oil exploration offshore Namibia. EL 0037 covers a deep trough area where the oil source rocks should be sufficiently deep and mature to generate oil.

Pancontinental is exploring ponded basin floor turbidites, slope fans and channels seen on existing 2D seismic. These targets are associated with the restricted graben trough that is interpreted to hold the rich and mature oil source rocks seen in regional wells.

### **EL 0037 Mapping**

EL 0037 covers an extensive part of an “Inner Graben”, a geological trough that Pancontinental believes to be the oil-generating “fairway” offshore Northern Namibia.

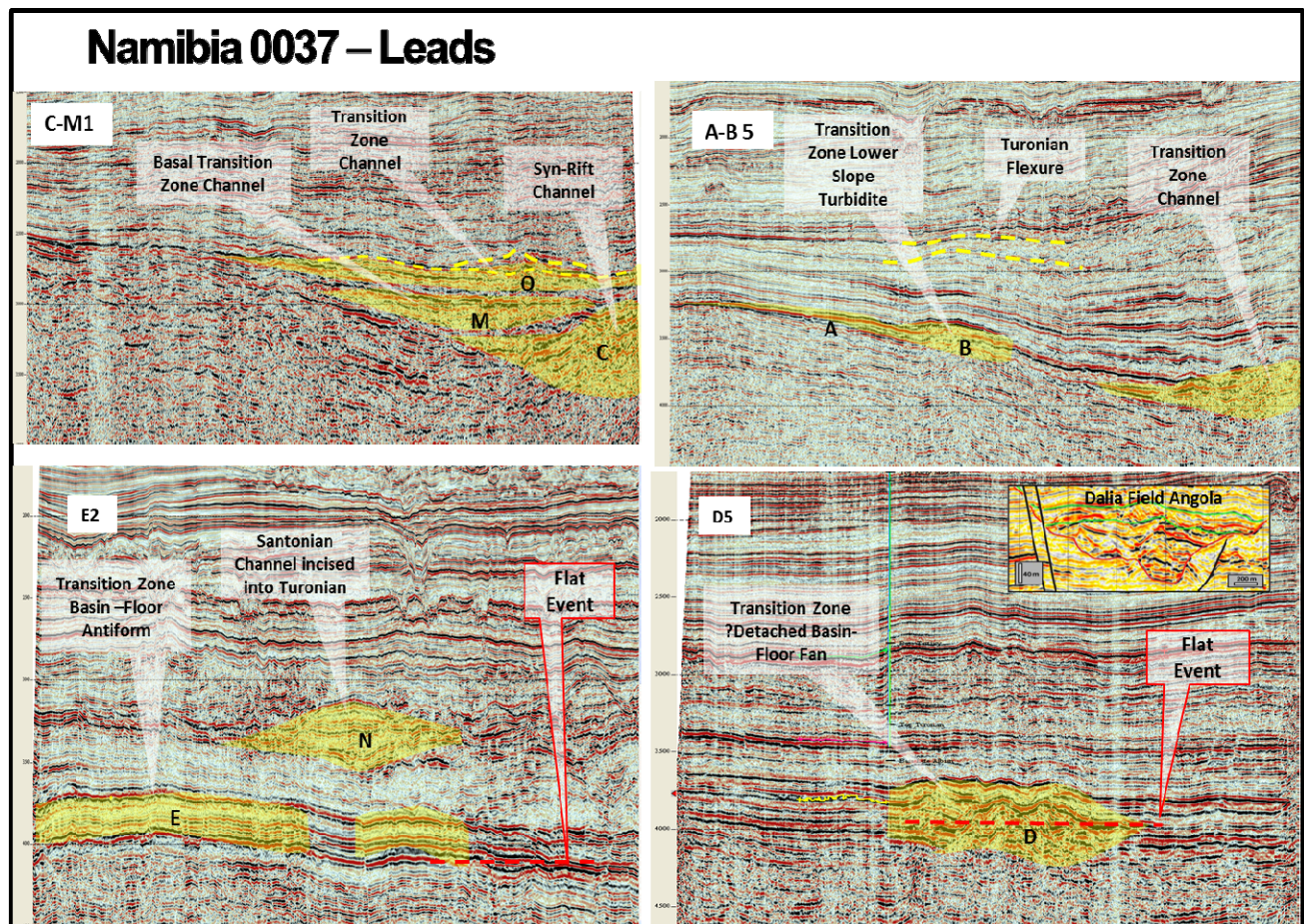
Pancontinental has mapped a number of ponded turbidite, slope turbidite, basin floor turbidite fans and channels forming large “leads” within the Inner Graben in EL 0037.



**Figure 11: Namibia EL 0037 – Leads and Plays Base Map**



A number of the leads exceed several hundred square kilometers based on current mapping, and detailed mapping will define the full extent of the structural and stratigraphic closures and potential oil-bearing traps.



**Figure 12: Namibia EL 0037 – Leads**

### **Farmout and Drilling Activity Offshore Namibia**

Offshore Namibia is continuing to attract significant international interest as an emerging oil and gas province in southwest Africa.

The EL0037 JV is seeking a farminee for drilling.

Farmout activity offshore Namibia has been active for some time. A number of the joint ventures offshore Namibia are now entering drilling phases.

At least six wells are planned in 2013 by HRT and Petrobras and others in joint venture groups that include BP and Repsol. This includes a two well drilling programme by HRT which is anticipated in the vicinity of EL 0037 commencing February 2013.

Pancontinental's 95% interest (increased from 85%) in EL 0037 sees it well placed amongst some major players offshore Namibia.

### **Forward Work Programme**

Pancontinental has commenced gathering data over the new area and will remap existing seismic and map prospects and leads for further work.

It is intended that 2D and 3D seismic data will be acquired over several prospects and drilling will be considered on the best of these.

## **Australian Projects**

### **EP 104 / R1 ONSHORE CANNING BASIN**

*Pancontinental Oil & Gas NL – 11.11%*

Petroleum Retention Lease R1 was renewed by the Minister of Mines and Petroleum of Western Australia for a period of five years from 8 November 2010.

The joint venture will now undertake an examination of the prospectivity of the licence areas and plan a new forward exploration programme.

### **L15 ONSHORE CANNING BASIN**

*Pancontinental Oil & Gas NL – 12%*

Pancontinental and its co-venturers have been granted Petroleum Production Licence L15 over the West Kora-1 oil discovery well in the Canning Basin of Western Australia. The licence is for 21 years commencing 1 April 2010.

West Kora-1 was drilled in 1984 and produced some 20,000 Barrels of oil during an extended production test, commencing at a rate of 350 BOPD.

The L15 Joint Venture aims to upgrade the existing production facility and restore oil production from West Kora -1.

With improvements in technology and significantly higher oil prices, revived production from West Kora-1 could be feasible now that the Production Licence has been secured.

The Company is examining the future potential and value of this project.

### **EP 424 OFFSHORE CARNARVON BASIN**

*Pancontinental Oil & Gas NL – 38.462%*

EP 110 is operated in conjunction with EP- 424. The parties in EP-110 have identical equities to those in permit EP-424.

Commercial negotiations to gain access to the entire Baniyas prospect have reached a point where the Operator is of the view that there is little likelihood that the adjoining acreage can be secured.

Following a technical review of the Baniyas potential and due to the absence of success in extending Joint Venture access over all of the Baniyas Prospect, it was decided to consider selling or otherwise disposing of the licences.

### **EP 110 ONSHORE CARNARVON BASIN**

*Pancontinental Oil & Gas NL - 38.462%*

This permit is operated in conjunction with EP- 424. The parties in EP-110 have identical equities to those in permit EP-424.

During the quarter the Joint Venture considered a further review aimed at outlining possible onshore leads and prospects in EP 110.

## **Corporate**

### **Cash Position**

As at 31 December 2012, Pancontinental's cash position was \$40.9 million which is expected to enable the Company to fund the currently planned programme for 2013.

### **New Ventures**

Pancontinental continues to examine a number of new exploration and acquisition opportunities in Africa with the aim of systematically growing the Company's significant African oil and gas portfolio.

### **Enquiries:**

**Barry Rushworth**

**CEO and Director**

**Tel: 08 9227 3220**

**Fax: 08 9227 3211**

**Email: [info@pancon.com.au](mailto:info@pancon.com.au)**