# Sunbird-1 oil zone verified offshore Kenya

Historic first-ever oil column discovered offshore East Africa

- Sunbird-1 well, completed in March in area L10A, intersected a gross 29.6m gas column overlying a gross 14m oil column in the Sunbird Reef.
- Calculating the Sunbird results has been a lengthy process due to the complexity of the data derived from the well.
- Discovery considered to be a play opener the buried Sunbird Reef holds the first-ever oil column discovered in the Lamu Basin offshore Kenya.
- Major implications for regional exploration proprietary geochemical data puts the L10A JV in a leading position to find commercial oil.
- Pancontinental is in a prime position to explore for larger volumes of oil in its very extensive portfolio of prospects and leads now that it has identified the key components of a prospective oil system in the Lamu Basin.

Pancontinental Oil and Gas NL (ASX: PCL) is pleased to advise that, after lengthy analysis, it has been verified that the recently completed Sunbird-1 well off the southern Kenyan coast has intersected an oil column – the first-ever oil discovered off the East African coast.

The gross oil column is assessed to be **14m thick beneath a gross gas column of 29.6m** in a reefal limestone reservoir in the Sunbird Miocene Pinnacle Reef in area L10A.

The corresponding net values are 9.2m for the oil zone and 28.3 m for the gas zone. The net values are calculated for the reservoir using cut-offs of 10% porosity (Phi) and 50% shale volume (Vsh). Oil and gas samples have been recovered and analysed using sophisticated geochemical techniques.

The Sunbird Reef is an ancient Miocene pinnacle reef buried beneath approximately 900m of younger sediment.

Pancontinental believes the results are highly significant because they are the first proof of the presence a prospective oil system in the Lamu Basin offshore Kenya. The oil and gas have been geochemically typed in detail and the prospective source rocks have been dated and characterised for use in future exploration.

Analysis of the Sunbird results has been complicated by the loss of drilling mud, seawater and remedial cement pumped into the limestone reservoir during drilling operations.

Pancontinental has an 18.75 percent interest in the well and block L10A. Pancontinental has three extensive exploration areas in this highly prospective Basin covering a total area of approximately 15,000 sq km, including L10A.

The detailed oil and gas geochemical data, which are confidential to the L10A Joint Venture partners, give the age and type of the oil source rocks, as well as other crucial data that Pancontinental believes places the L10A Joint Venture in a leading position to find commercial oil offshore Kenya.

The Operator of the Block L10A Petroleum Sharing Contract, BG Group, is continuing to analyse the well data and will recommend a future exploration programme using the well results.

Pancontinental's Chief Executive Officer Barry Rushworth said the implications of the Sunbird-1 well results for regional oil exploration were truly outstanding.

"The Sunbird-1 oil is the historic first-ever oil discovery offshore Kenya," Mr Rushworth said.

SUNBIRD-1
OIL & GAS
DISCOVERY

TANZANIA

20 TO 30 + TCF
GAS DISCOVERED
OFFSHORE
TANZANIA

120 TO 150+ TCF
GAS DISCOVERED
OFFSHORE
MOZAMBIQUE
MOZAMBIQUE

"Furthermore, it is the only offshore oil column ever reported seaward of the eastern coastal margin of the African continent, from South Africa to the northwest tip of Somalia.

"We believe that this is a playopening discovery in Kenya's Lamu Basin. Because of the Sunbird discovery we expect to see a significant increase in industry interest offshore Kenya.

"We encountered a thick and effective seal over the top of the reef, which was an initial risk for us, and the regional follow-on implications of this are truly significant. Porosity, permeability and seal for the reservoir were all better than Pancontinental expected.

"Now that we know there is a prospective oil system in the Lamu Basin and we know the important

Figure 1- L10A Location Map

technical details, we are in a prime position to explore for larger volumes of oil over our very extensive portfolio of prospects and leads.

"Pancontinental's blocks offshore Kenya all contain Miocene Reefs, as well as numerous other types of geological targets.

"The Sunbird oil discovery has allowed us to geochemically type the oil source rocks, allowing the Joint Venture to effectively plan the way ahead for further oil exploration".

#### **Further Sunbird results**

- The top of the Sunbird Miocene Pinnacle Reef was reached at 1,583.7m sub-sea. The water depth is 723m.
- Below the upper oil and gas zone, indications of low Wet Gas saturation were seen, although these are not considered to be volumetrically significant.
- The age and depositional environment of the oil source rocks have been determined by geochemical analysis, and remain commercially confidential to the L10A Joint Venture.
- The presence of oil is supported by geochemical analysis of MDT samples, the
  pressure gradient of MDT samples, numerical modelling of the invasion of the oil
  zone and also fluorescence attributable to oil in samples. The reservoir zone was
  heavily flushed during well control operations, making determination of the oil and
  gas zones difficult.
- Porosity and permeability of the hydrocarbon zone were favourable overall, and were very high in parts of the reservoir as evidenced by the loss of a large volume of drilling fluid.
- Sunbird-1 was "plugged and abandoned" in accordance with the drilling program, meaning that the well has been made safe in such a way that it can be left permanently without further intervention. These measures are designed to ensure that there is no danger of leakage of oil or gas within the well or to the sea floor.

#### **Future Exploration**

The L10A joint venture is considering the details of follow-up exploration activities after the Sunbird-1 oil discovery.

The Sunbird discovery has yielded important details of the oil system in the Lamu Basin, that are held confidential by the L10A joint venture, including the age and depositional environment of the source rock and the timing of the generation of the oil phase.

L10A covers a variety of play types, prospects and leads. Many of the prospects have been mapped using the two 3D seismic surveys carried out by the joint venture (see Fig. 2). The Sunbird Prospect is one of an inboard cluster of Miocene reefs. Outboard prospects include Tertiary and Cretaceous channels, large anticlinal complexes and Cretaceous and Tertiary fault-bounded prospects.

Other offshore Kenyan activity includes an exploration well to be drilled by Anadarko, as recently announced for later in 2014.

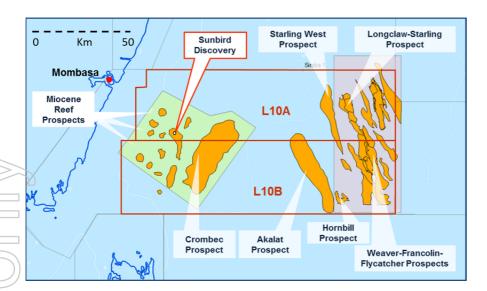


Figure 2- Prospects and Leads
Map

#### **L10A Consortium**

The Kenya L10A consortium consists of:

BG Group (Operator) 50.00% PTTEP 31.25% **Pancontinental** 18.75%

### Pancontinental increases interest in L10B

Pancontinental advises that it has increased its interest in licence L10B, immediately to the south of L10A. The increase in interest is subject to the completion of documentation; however Ministerial approval has already been given.

The Kenya L10B consortium now consists of-

BG Group (Operator) 75.00% **Pancontinental** 25.00%

#### **About Pancontinental**

Pancontinental Oil & Gas is a petroleum (oil and gas) exploration company based in Perth, Western Australia and listed on the Australian Securities Exchange (ASX: PCL).

With a focus on Africa and Australia, it has excellent exposure to a range of highpotential oil and gas targets.

High levels of project equity, together with Pancontinental's modest market capitalisation, mean that the Company is very well leveraged in the event of exploration success.

Pancontinental has interests in three exploration licences offshore Kenya: L10A, L10B and L6.

Pancontinental has a 40% interest in the offshore section of licence L6 and 16% in the onshore portion, an 18.75% interest in Kenya licence L10A (Sunbird) and 25% in L10B.

Co-venturers in these three Kenyan licences (although not in each licence) are BG Group, PTTEP, and FAR Limited.

Pancontinental holds a 30% free-carried interest in offshore Namibia licence EL0037, where Tullow Oil has recently completed a 3D seismic program as part of its farmin agreed in September 2013.

Pancontinental's website is <a href="https://www.pancon.com.au/">www.pancon.com.au/</a>

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Yours sincerely for and on behalf of Pancontinental Oil & Gas NL

Barry Rushworth, CEO and Director

The summary report on the oil and gas projects is based on information compiled by Mr R B Rushworth, BSc, MAAPG, MPESGB, MPESA, Chief Executive Officer of Pancontinental Oil & Gas NL. Mr Rushworth has the relevant degree in geology and has been practising petroleum geology for more than 30 years.

Mr Rushworth is a Director of Pancontinental Oil & Gas NL and has consented to the inclusion of the information stated in the form and context in which it appears.

#### **Disclaimers**

Any estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

This document may include forward looking statements. Forward looking statements include, and are not necessarily limited to, statements concerning Pancontinental's planned operation programme and other statements that are not historic facts. When used in this document, the words such as "could", "plan", "estimate", "expect", "intend", "may", "potential", "should" and similar expressions are forward looking statements. Although Pancontinental believes its expectations reflected in these are reasonable, such statements involve risks and uncertainties, and no assurance can be given that actual results will be consistent with these forward looking statements.