

# Papua New Guinea PPL 326



Larus Energy Limited (Larus) is seeking a partner to earn an interest in its PPL 326, located in the Torres Basin, on and offshore south-east Papua New Guinea (PNG)



#### **Opportunity Summary**

- An opportunity to earn a significant equity stake with oil and gas prospective resources in a high-impact frontier licence
- The area is largely unexplored and includes exploration opportunities in two different petroleum systems with Mesozoic and Tertiary targets
- 12 promising Mesozoic and 22 Tertiary strong leads/prospects have been mapped with clastic and carbonate targets. Numerous weak leads to follow up
- Initial exploration effort will focus on two high-graded offshore prospects both in excess of 13 TCF
- Commercialization infrastructure coming to the area with InterOil's potential multi-train LNG development at Elk-Antelope
- No near term well commitment

# **PPL 326 Summary**

- Signed on 27 August 2009 for an initial period of six years comprised of three 2-year phases
- Larus holds a 100% WI through its wholly owned subsidiary Larus Energy (PNG) Limited in the licence which covers 16,000 sq km (both on and offshore)
- Completed work includes the 2011 Baramata Deep Water 2D seismic survey (1,000km), and 2012 Abau Offshore 2D seismic survey (300km)
- A variation to the licence was approved in December 2014, leaving only 400km of seismic (offshore or onshore) and well planning as remaining work obligations in the current phase
- New 800km 2D marine seismic programme planned from mid-April 2015, which will comprise two regional lines and delineate specific leads and prospects





#### **Geological Setting**

- PPL 326 is situated within the frontier eastern part of the Eastern Papuan Basin, and straddles an on/offshore area between Port Moresby and the south-eastern tip of the Papuan Peninsula, south of the Owen Stanley Ranges
- Similar setting to other discoveries and fields in PNG with complex tectonic history
- The licence covers the Mesozoic Torres Basin which encompasses the regions of the Eastern Papua Plateau and the Papuan Plateau
- The deepwater Moresby Trough separates the Papuan and Eastern Plateaus from the Papuan Peninsula
- The Papuan Peninsula immediately north of PPL 326 is largely occupied by the New Guinea Orogen



#### **Basin Stratigraphy**

- With no well control the stratigraphic framework of the Torres Basin is poorly defined
- In terms of setting, stacked overthrust Tertiary systems overlie a potential Mesozoic succession in a sub-trust configuration
- Similarities with the tectonic development of Papuan Basin suggest a comparable stratigraphy exists
- Seismic evidence advocates a preserved section of Mesozoic exists in the PPL 326 area
- The development of this section would be related to syn-rift/post-rift deposition following Pangea opening of the Tetyan Sea breakup in the Early Jurassic









# **Play Types, Leads & Prospects**



- 12 potential play types and DHI in offshore seismic suggests a working hydrocarbon system
- Source rocks in the Torres Basin are represented by the Early to Middle Jurassic Maril Shale and Mio-Pliocene Aure Beds shales
- Several reservoirs could be present including the Middle Jurassic to Early Cretaceous Toro Sandstone Equivalent and Pale Sandstone; Tertiary sandstones of the Talama and Lavao; and Miocene Puri Limestone Equivalent
- The Mio-Pliocene Orubadi Shale and intraformational shales will provide seals to hydrocarbon migration



- To date Larus has mapped 12 promising Mesozoic and 22 Tertiary leads/prospects mapped within PPL 326. Numerous weak leads to follow up and sweet spot to be extended both onshore and offshore
- High-graded include:
  - Vekwala, a Jurassic target in 16-30m of water, PTD of 3,700m. Estimated unrisked resource of 13 TCFG and 180 MMBO
  - Sunday, a Cretaceous target in 600m of water, PTD of 3,000m. Estimated unrisked resource of 13.5 TCFG and 160 MMBO





# History of Exploration in the Area



- South-eastern PNG has not been seriously explored for hydrocarbons until Larus acquired the licence, and Larus is the only explorer to have reviewed and analysed all the data relevant to the area
- Data includes the regional seismic data acquired by the German BGR in 1981 known as the "1981 Sonne data" and the semi-regional seismic data in and around PPL 326 from Fugro's regional offshore seismic acquisition programme undertaken in 2006 and 2007
- This data shows the two known plays in the Papuan Basin the Miocene reef development similar to InterOil's Elk and Antelope fields and the Highlands oil fields potentially developed in PPL 326
- As a follow up, Larus has acquired two new sets of targeted seismic data Baramata 2D seismic survey in August 2011, comprising 975km of full fold data, and the Abau shallow water seismic survey in February 2012 south of Kupiano
- These surveys allowed maturing drillable prospects in the licence

# Larus Energy

- Larus was incorporated in New South Wales, Australia in November 2009 and has positioned itself to participate in the forecast growth of PNG's oil and gas sector
- Its head office is in Perth, and other assets are held by the company in the Gippsland Basin, Australia
- Larus is an unlisted public company

The additional information for this project is available upon request electronically. The access to qualified companies will be granted after execution of a Confidentiality Agreement (CA). For more information and to request the CA, please contact:



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