

# Lakes Blue Energy

---

Shareholder Presentation  
Roland Sleeman, CEO  
30 November 2023

# Cautionary Statement



**This presentation has been prepared by Lakes Blue Energy NL ('Lakes Blue Energy', 'LKO' or 'Company'). By accessing this presentation you acknowledge that you have read and understood the following statement.**

## **Cautionary Statement**

The Company is not aware of any new information or data that materially affects the information included in this presentation and confirms that all the material assumptions and technical parameters underpinning the estimates in this presentation continue to apply and have not materially changed. The 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.

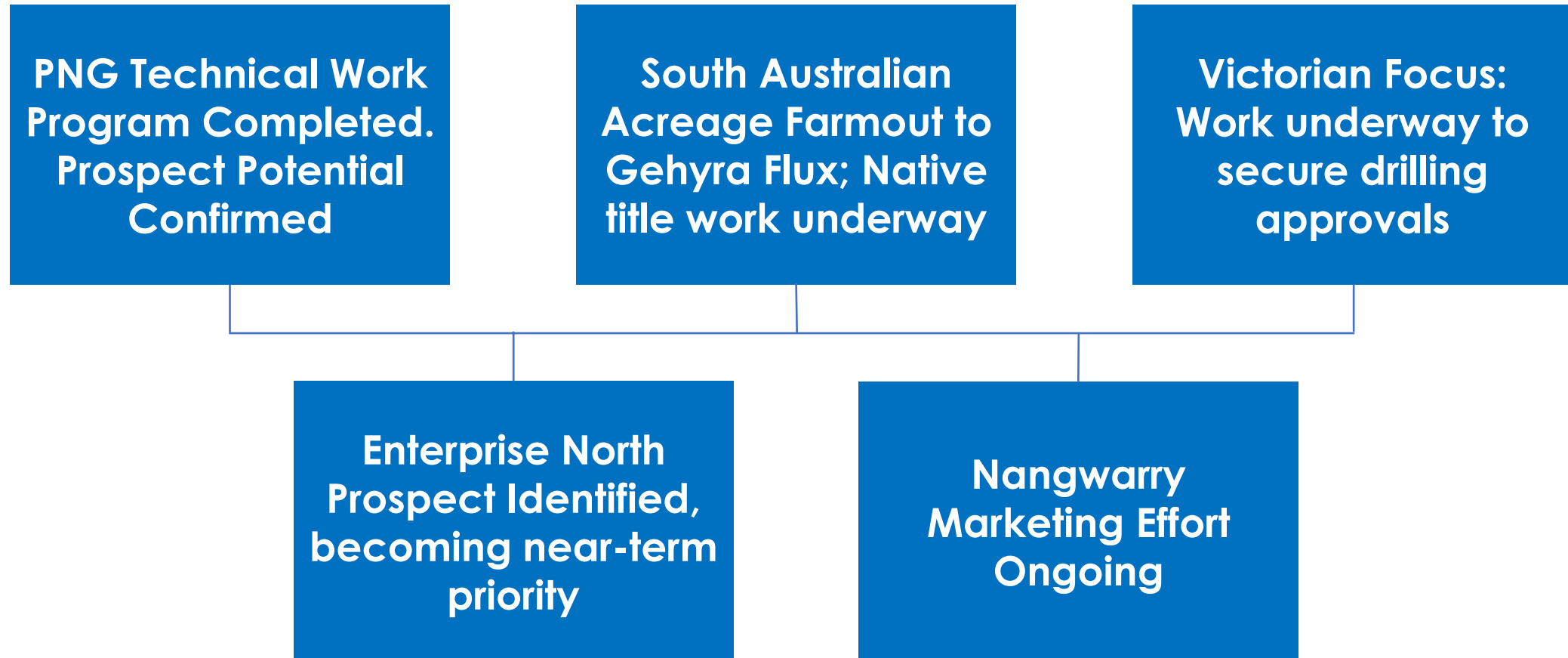
## **No Representation, Warranty or Liability**

Whilst it is provided in good faith, no representation or warranty is made by LKO or any of its advisers, agents, directors or employees as to the accuracy, completeness, currency or reasonableness of the information in this presentation or provided in connection with it, including the accuracy or attainability of any Forward Looking Statements set out in this presentation. LKO does not accept any responsibility to inform you of any matter arising or coming to LKO's notice after the date of this presentation which may affect any matter referred to in this presentation. Any liability of LKO, its advisers, agents, directors and employees to you or to any other person or entity arising out of this presentation including pursuant to common law, the Corporations Act 2001 and the Trade Practices Act 1974 or any other applicable law.

## **Future Performance**

Certain statements contained in this presentation, including information as to the future financial or operating performance of LKO and its projects, are forward-looking statements. Such forward-looking statements: are necessarily based upon a number of estimates and assumptions that, whilst considered reasonable by LKO; are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies; involve known and unknown risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements; and may include, among other things, statements regarding targets, estimates and assumptions in respect of oil and gas production and prices, operating costs and results, capital expenditures, resources and recovery rates, and are or may be based on assumptions and estimates related to future technical, economic, market, political, social and other conditions. LKO disclaims any intent or obligation to update publicly any forward-looking statements, whether as a result of new information, future events or results or otherwise. The words "believe", "expect", "anticipate", "indicate", "contemplate", "target", "plan", "intends", "continue", "budget", "estimate", "may", "will", "schedule" and other similar expressions identify forward-looking statements. All forward-looking statements made in this presentation are qualified by the foregoing cautionary statements. Investors are cautioned that forward-looking statements are not guarantees of future performance and accordingly investors are cautioned not to put undue reliance on forward-looking statements due to the inherent uncertainty therein.

# 2022/23 Overview





# 2022/23 Overview – PNG

- 4-way dip closure clearly defined.
- Unrisked Gross Recoverable ~590 Mboe (3.3 Tcf).
- Main Risks:
  - Source rock presence
  - Reservoir quality

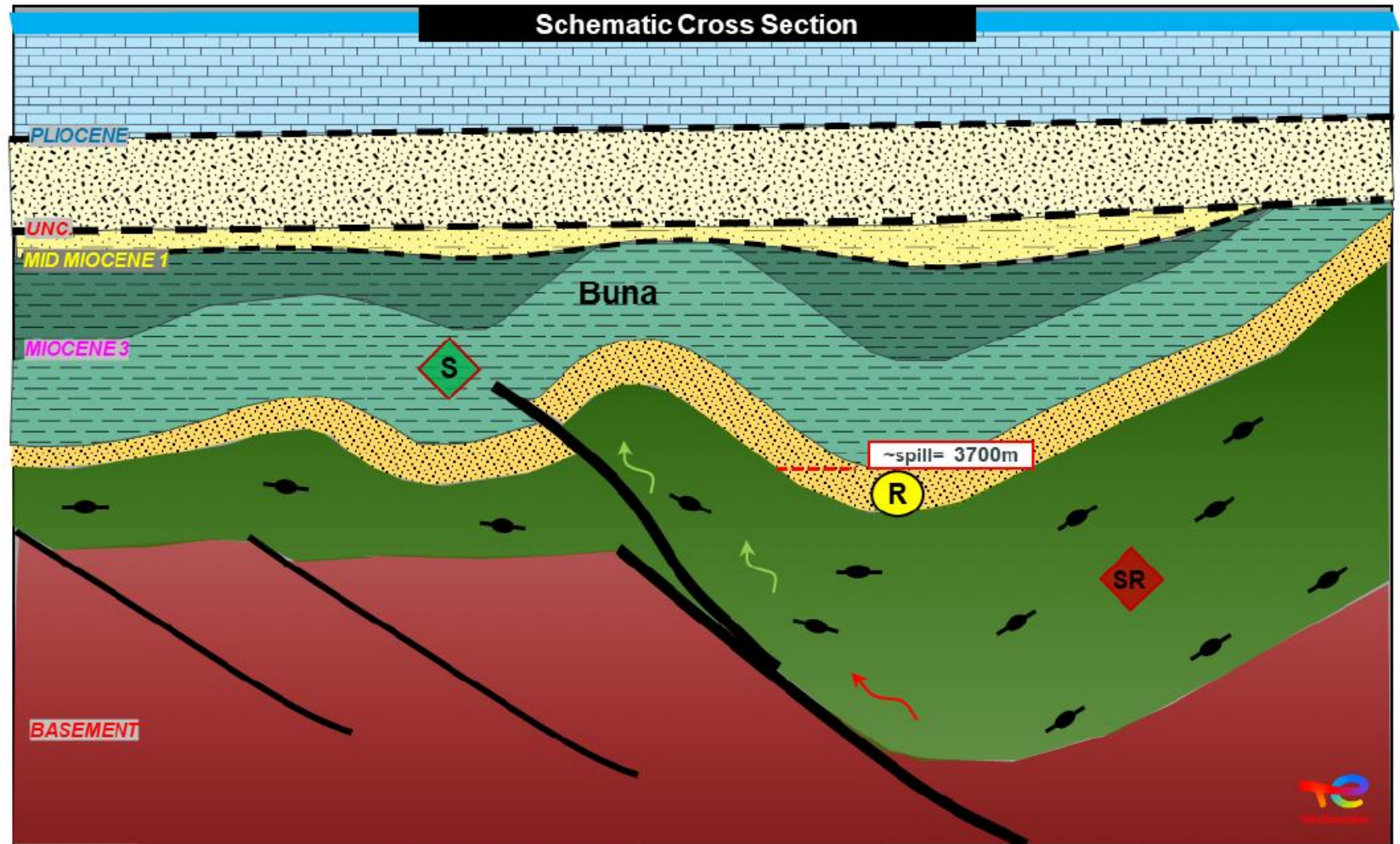


Image courtesy of TotalEnergies

# Current Issues



- **Trading of LKO Shares**

- Discussions with ASX are ongoing.
- Lakes has funding arrangements in place and is actively operating multiple near term exploration projects.

- **Funding**

- Funding arrangements are in place for 2024 through farmout arrangement with Cooper Energy.
- Objective to become self-funded through Enterprise North gas production, avoiding further dilution.

- **Armour Energy in Administration**

- No material impact upon Lakes. Most outstanding amounts owed to Lakes by Armour have been paid.
- Lakes is now Operator of PEP 169 (Enterprise North), which is 51% Armour owned.
- Lakes has pre-emptive right in event that sale of Armour's interest in PEP 169 is proposed.

# Forward Strategy



Secure Approval for and Drill the highly-prospective, relatively low-risk Enterprise North-1 well

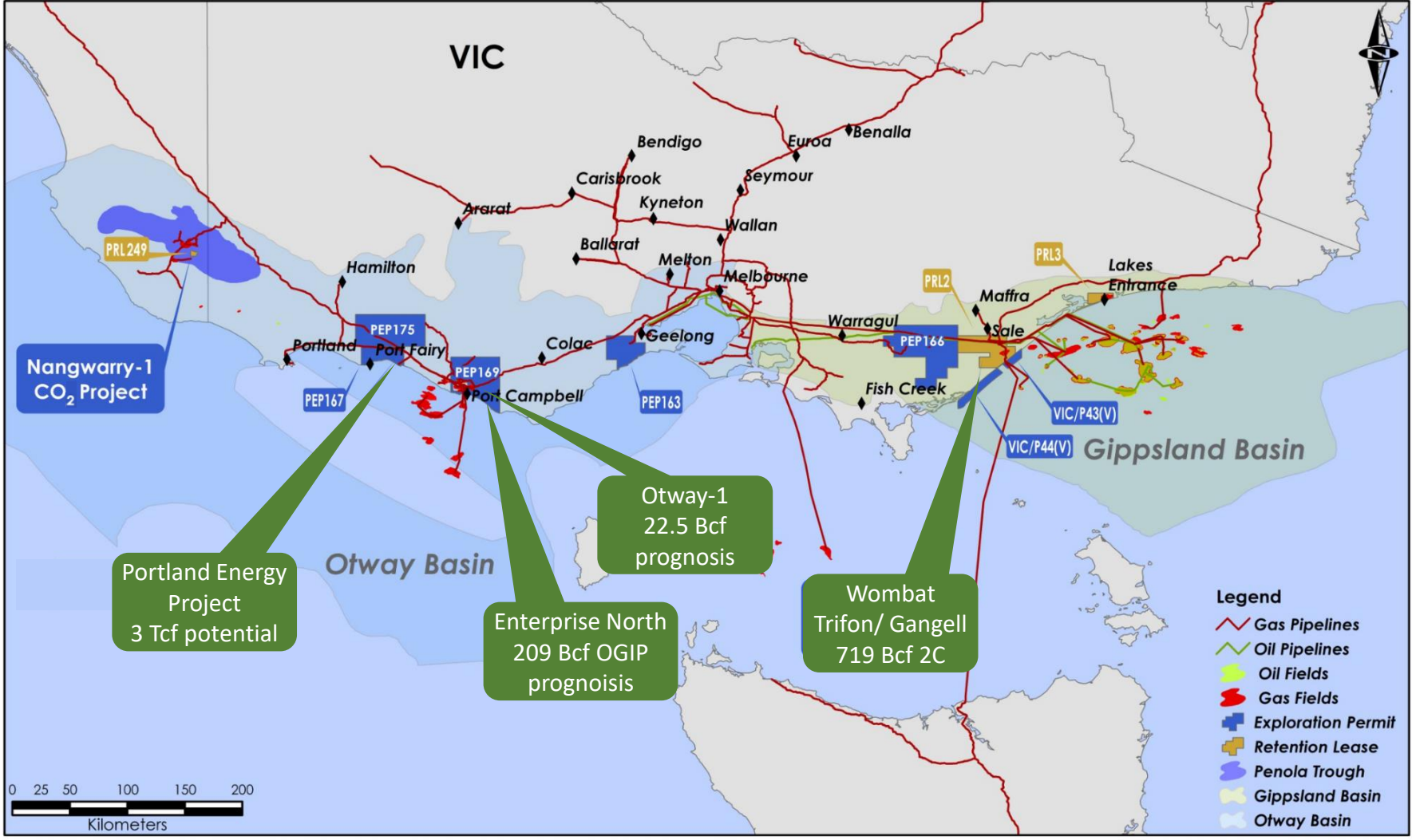
Expedite Development of Enterprise North using Adjacent Infrastructure. Generate Gas Sales Revenue

Secure Approval for Drilling of Wombat-5. Contingent (2C) Resources already independently certified

Develop Wombat, and subsequently Trifon-Gangell, gasfields to produce ~20 PJ/a

Pursue world-scale Portland Energy Project – initially drill two proof-of-concept wells

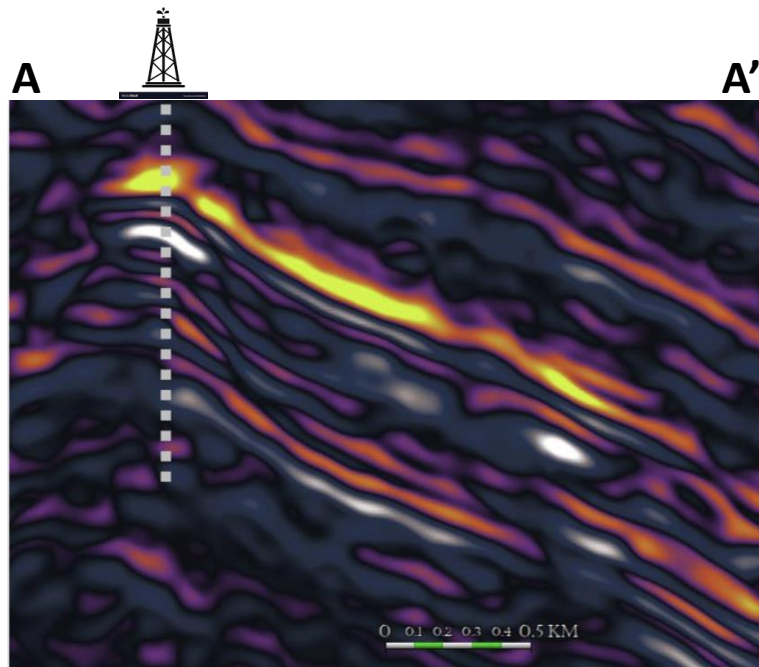
# Forward Strategy – Near Term Victorian Focus



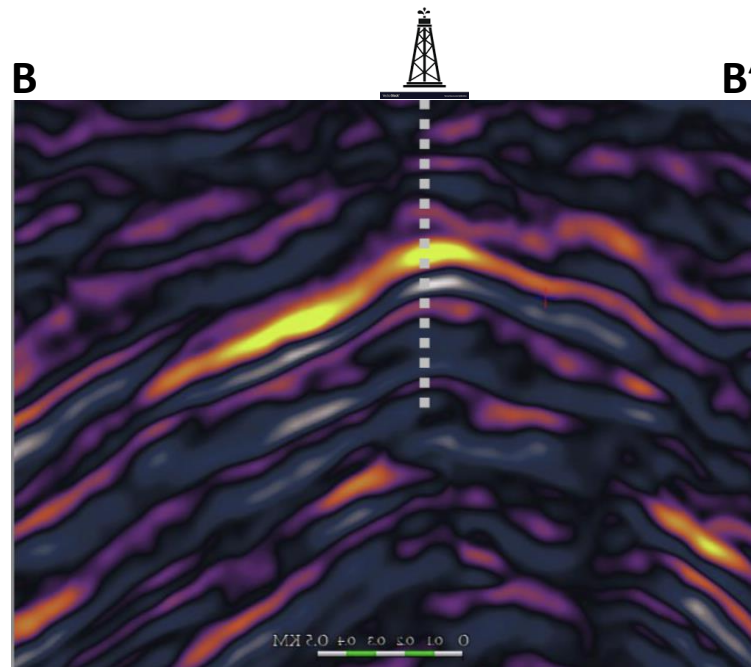


# Forward Strategy – First: Enterprise North

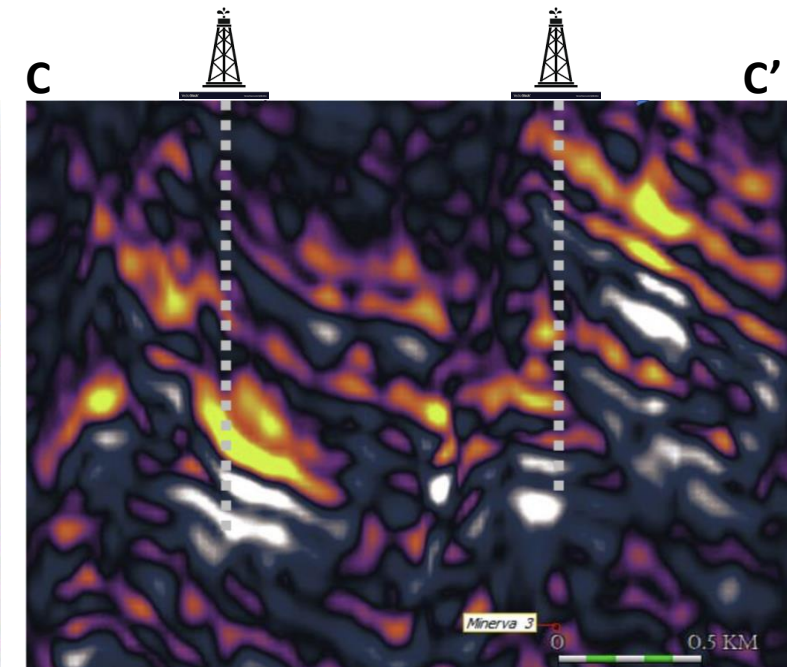
- Interpreted gas-charged sands cause bright amplitude anomaly on seismic.
- Subsurface risk reduced through correlation to known reservoirs.



Enterprise North



Enterprise



Minerva



# Forward Strategy – Rationale



- Enterprise North has advantageous onshore location, in proximity to existing, underutilised infrastructure
- Target Waarre Formation is a prolific gas producer. Nearby Enterprise well flowed ~60 TJ/d from similar Formation thickness.<sup>1</sup>
- Southeastern Australia is suffering extreme high gas prices and desperately needs new sources of supply.<sup>2</sup>
- Objective is to commercialise Enterprise North to generate revenue to fund pursuit of Lakes' other, 100% owned Victorian opportunities.

---

<sup>1</sup> as publicised by Beach Energy Ltd in ASX Release dated 15 February 2021

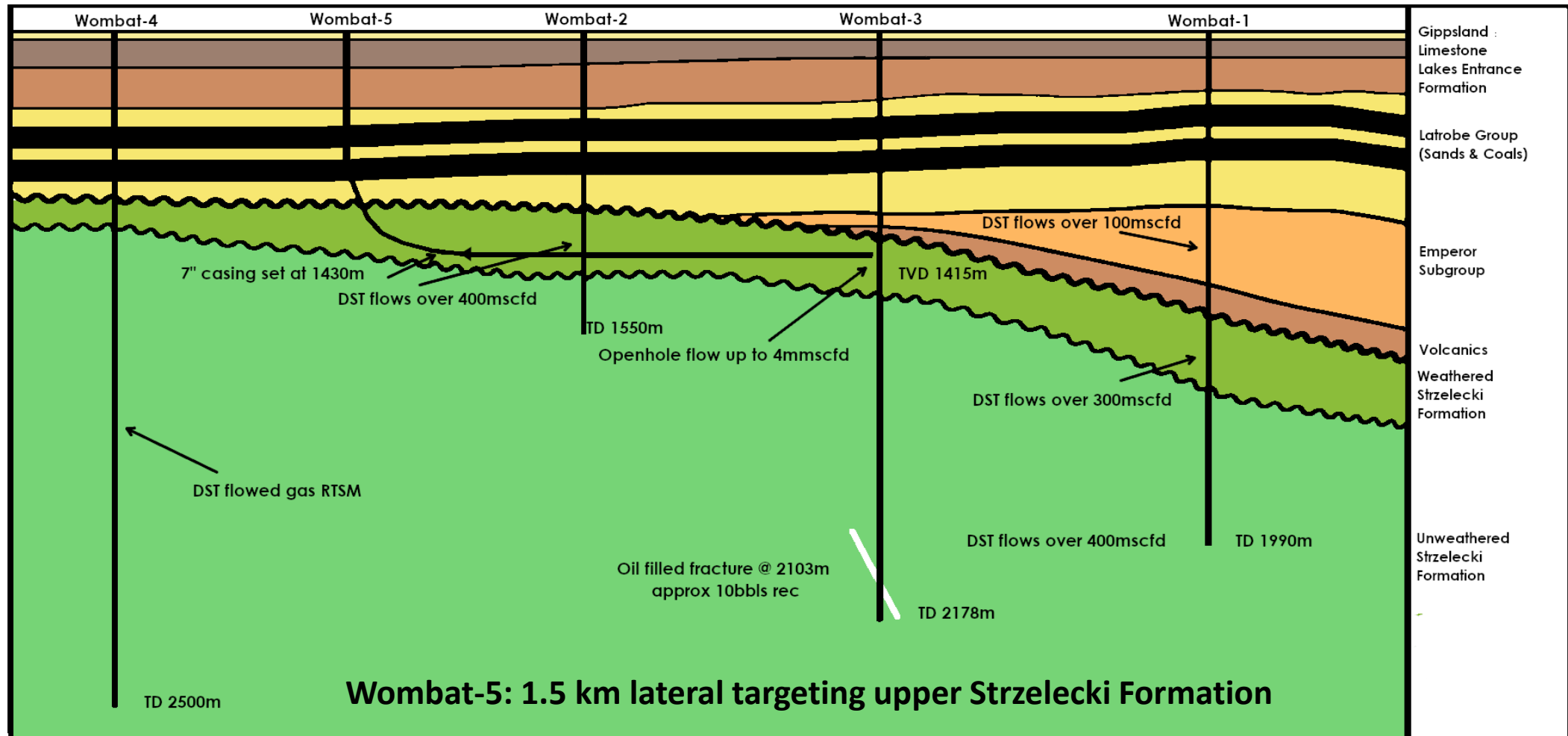
<sup>2</sup> Source: "Lakes Blue Energy Update Report – A partner for the Enterprise North Dance", Exhibits 10 and 11, Research as a Service, 23 November 2023

# Forward Strategy – Wombat Gas Field

- **Certified Contingent (2C) gas resources already in place:**
  - Wombat field – 329 Bcf.
  - Trifon/Gangell field – 390 Bcf.
- **Wombat-5 well.**
  - Conventional, lateral gas well.
  - Estimated 10 TJ/d potential.
  - Approvals process underway.
- **Development concept:**
  - Integrated Wombat – Trifon/Gangell development.
  - Fields are close to existing infrastructure.
  - Target 20 PJ/a for 20 years (10% of Victorian demand).
  - Independent research points to LKO value uplift.



# Wombat-5 Gas Well





# Forward Strategy – Otway-1 Gas Well

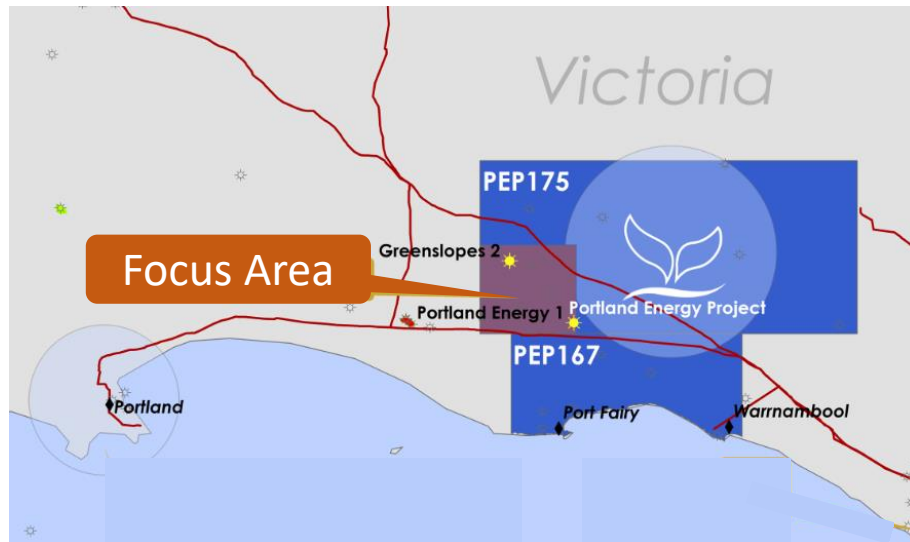


- Located within PEP 169 (49% LKO).
- Potentially drilled in campaign with Enterprise North-1 well.
- Approval process underway.
- Conventional vertical well, adjacent to Iona Gas Storage.
- Targets 3 distinct reservoirs.
  - Pebble Point Sandstone, 0.37 MM Bbl oil
  - Waarre 'C' Sandstone, 5.3 Bcf
  - Eumeralla Formation, up to 50 Bcf.
- Eumeralla flowed up to 7.5 MMcfd at nearby Skull Creek-1.

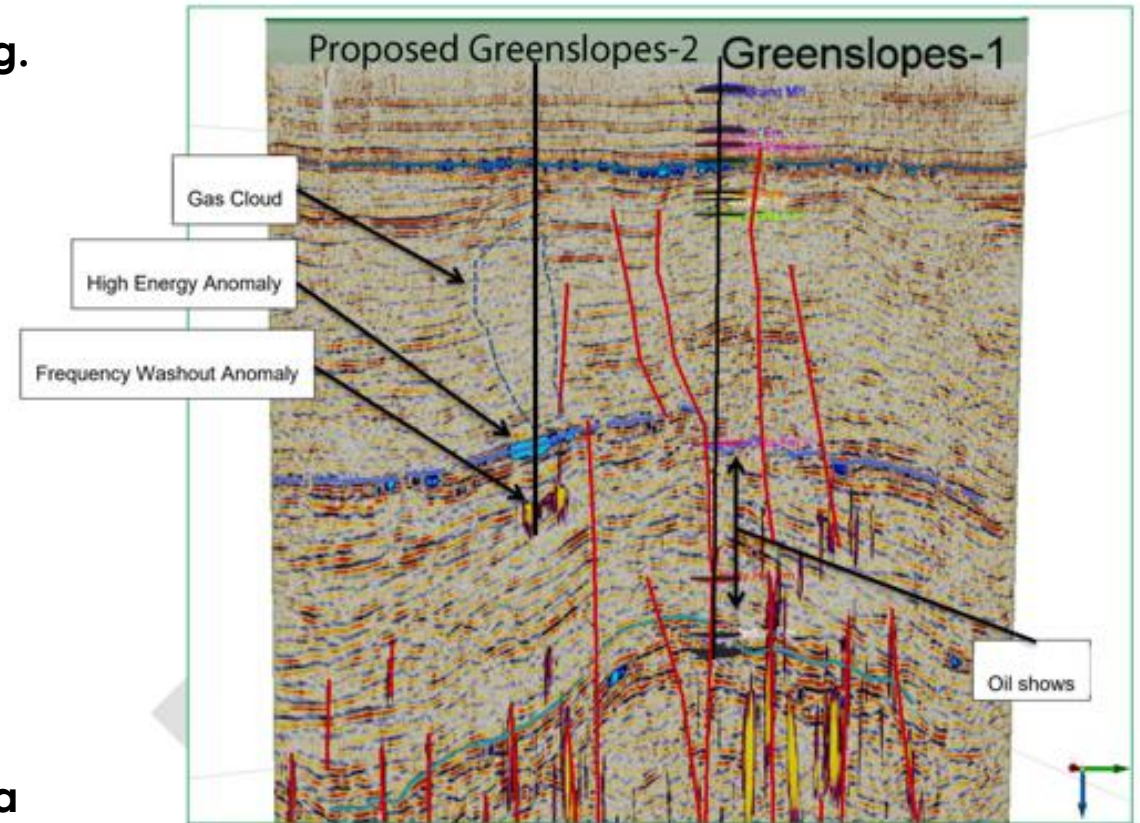


# Forward Strategy – Portland Energy Project

- Project 'Focus Area' in SW corner of PEP 175 (100% LKO)
- 3 Tcf conventional gas resource defined by SRK Consulting.



- Greenslopes-2 and Portland Energy-1 conventional wells proposed to confirm gas production potential of Eumeralla Formation.





# Highlights

- Significant Onshore Conventional Victorian Gas Opportunities being Pursued
- All Opportunities Can be Brought to Market Quickly
- Eastern Australian Gas Market is Suffering Supply Shortfalls and Very High Prices
- Onshore Conventional is Much Lower Cost than Offshore or Distant Resources
-  Points to Potential for Significant Transformative Upside



# Sources of Resource and Deliverability Estimates

## **Enterprise North**

Resource estimates have been prepared by Mr John Mackintosh, Reservoir Engineering Advisor, DGR Global Limited. Mr Mackintosh has over 25 years of diverse oil and gas industry experience and has significant reservoir engineering, production technology and operations experience in multiple basins worldwide with a variety of International Operators and Consulting firms. He has previously held roles in Santos (Australia/Houston), Halliburton Consulting (Russia), Wintershall (Norway) and Apache (Egypt). Mr Mackintosh has sufficient experience that is relevant to Armour Energy Limited and Lakes Blue Energy NL for reserves and resources to qualify as a Reserves and Resources Evaluator as defined in the ASX Listing Rules.

60 TJ/d gas flowrate from Waarre Formation is as publicised by Beach Energy Ltd in ASX Release dated 15 February 2021.

## **Wombat and Trifon / Gangell Gas Fields**

Source of Contingent Resources estimate: "Technical GIIP and EUR Estimate Update Post Wombat #4: Wombat Field", June 2010, Gaffney, Cline and Associates.

Source of Wombat-5 gas production potential: "Production Forecast for the Proposed Lakes Oil Wombat 5", September 2013, Stimulation Petrophysics Consulting LLC.

## **Otway-1**

Eumeralla: In-house estimate prepared by Mr Tim O'Brien, MSc in Geology and Geophysics, member of PESA, SPE and AAPG.

Waarre and Pebble Point: probabilistic estimate independently prepared by Dr Greg Blackburn, BSc (hons), PhD, Terratek Petroleum Consultants Pty Ltd, February 2011

## **Portland Energy Project**

From "Estimated Unconventional Gas Potential for a Defined Prospect Area in PEP 175, Otway Basin, Victoria", May 2015, SRK Consulting (Australasia) Pty Ltd.

# Sources of Resource Estimates

## **Buna Prospect, PPL 560, PNG**

Source of 3.3 Tcf estimate: "Undiscovered Hydrocarbon Resources, Petroleum Prospecting Licence (PPL) Blocks 257 and 258, Papua New Guinea", 31 August 2010, Fekete Associates Inc.

590 Mboe estimate provided by TotalEnergies EP PNG Limited pursuant to terms of Technical Collaboration Agreement between TotalEnergies and Lakes Blue Energy NL.

## **Arrowie Basin**

In-house volumetric estimate prepared by Mr Nick Mather, BSc (Hons Geology), member Australian Institute of Mining and Metallurgy.

## **Overriding Qualifications, applicable to all estimates**

The Company is not aware of any new information or data that materially affects the information included in this presentation and confirms that all the material assumptions and technical parameters underpinning the estimates in this presentation continue to apply and have not materially changed.

The 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.

# South Australia – Arrowie Basin

- PEL applications (53,000 km<sup>2</sup>) being progressed under JV.
- Hydrocarbon potential confirmed by Santos at Wilkatana.
- Aim to investigate Cambrian - Proterozoic mega field potential.

