



# LAKES BLUE ENERGY

Extraordinary General Meeting

30 July 2025





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# CAUTIONARY STATEMENT

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## **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.

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# EXECUTIVE SUMMARY

1	Significant east coast market opportunity continues	<ul style="list-style-type: none"><li>▪ Significant gas supply shortfalls are forecast in the Australian East Coast domestic gas market from as early as 2026, with consequent high gas prices.</li><li>▪ LKO is strategically well positioned to profitably contribute to resolving this supply challenge through its key gas projects especially, initially, the Wombat and Trifon/Gangell Gas Fields within Petroleum Retention Lease 2 ("<b>PRL 2</b>") Gippsland, Victoria.</li><li>▪ The Wombat Gas Field, being onshore, conventional, close to markets and with gas of high-quality, offers a timely and cost-effective solution to Victoria's ongoing gas supply shortfall.</li></ul>
2	Paving the way to commercialisation	<ul style="list-style-type: none"><li>▪ LKO has been working towards the drilling of Wombat 5 for the last 12 months, starting with the sale of its interest in PEL169 and then its recent capital raise.</li><li>▪ LKO's Wombat Gas Field is located onshore, adjacent to existing gas pipeline infrastructure.</li><li>▪ LKO plans to drill the Wombat-5 well, targeting the upper, more permeable section of the gas-saturated Strzelecki Formation.</li><li>▪ Initial independently verified<sup>1</sup> gas flow rate potential of Wombat-05 well is ~10 terajoules per day.</li><li>▪ Approvals secured to drill the conventional, directional Wombat-5 well, with on-site preparations well-advanced and drilling expected to commence imminently.</li></ul>
3	Post Wombat-5	<ul style="list-style-type: none"><li>▪ Commence Wombat Field development feasibility study and front-end engineering design (FEED)</li><li>▪ Commercialising the Nangwarry CO<sub>2</sub> Project (in PRL249 South Australia)</li><li>▪ A farm in arrangement for ATP 1183 in Queensland and;</li><li>▪ Work has commenced to obtain drilling approval for Portland Energy Project (PRL249)</li></ul>

(1) Production Forecast for the Proposed Lakes Oil Wombat 5", September 2013, Stimulation Petrophysics Consulting LLC.

(2) Pro-forma based on reported cash balance of A\$3.3m as at 30 April 2025, plus net proceeds of the Institutional Placement of A\$9.3m



# COMPANY OVERVIEW

## PRL 2 - Wombat 5 and Trifon/Gangell

- Gippsland Basin, approximately 5km northwest of Seaspray and 30km south-southeast of Sale.
- Located onshore, within the area of Victorian Petroleum Retention Licence 2 (PRL 2), close to existing gas infrastructure and markets
- LKO owns 100% of the licence, with the appraisal well to be located on land owned by LKO.
- An 8% royalty is payable on wellhead value of petroleum produced within PRL 2.

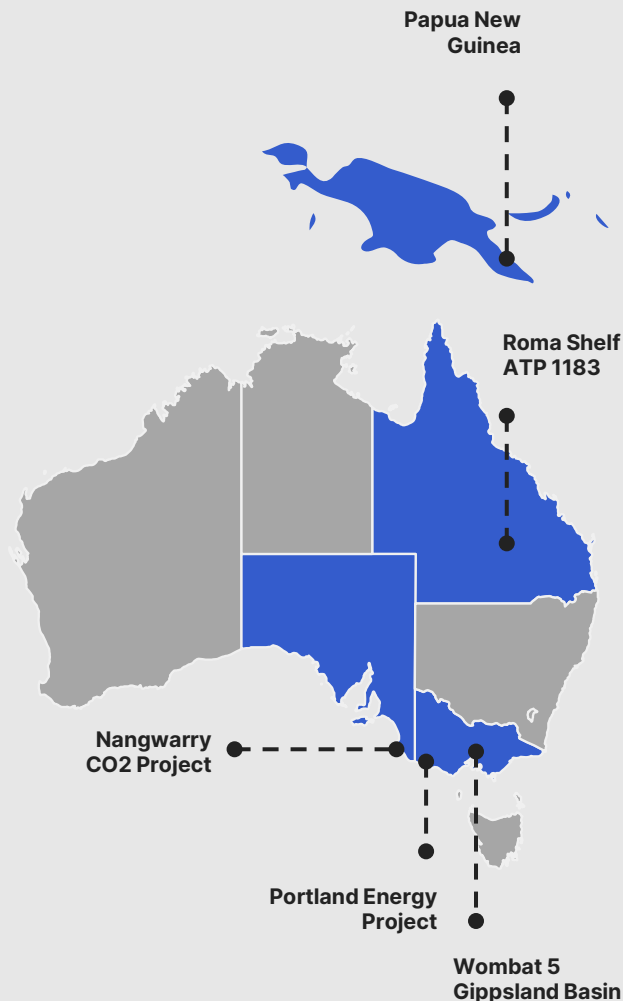
### Production potential

- Independently forecast 10 TJ/d initial production

**Drilling scheduled for 31 July 2025**

## PRL 249 - Nangwarry CO2 Project

- Centred on the Nangwarry-1 gas well, located within Petroleum Retention Licence 249 (PRL249) 35km north of Mt Gambier, South Australia.
- 50% owned by LKO.
- Feasibility studies are underway with a view to a commercial gas sales in FY 2027.



## ATP 1183, Queensland

- 100% of ATP 1183, has a number of gas and oil targets in close proximity to established production facilities and infrastructure, There are existing gas processing facilities at Silver Springs (AGL) and Kincora (ADZ Energy)
- After completion of the near-term Victorian exploration program, the Company will resume exploration activity in Queensland.

## Portland Energy Project

- 100% interest in PEP 167 and PEP 175
- Focus Area in the southwestern corner of PEP 175, to the north of Port Fairy, with multi-Tcf potential

### Focus Area

- Two wells, Greenslopes-2 and Portland Energy-1, are proposed initially as proof-of-concept wells.

## Papua New Guinea

- The Company has 100% ownership of two exploration tenements and three tenement application in Papua New Guinea, with Petroleum Prospecting Licence 560 (PPL 560) being of key interest. PPL 560 contains the large, untested Buna prospect.





# SUMMARY OF LKO'S PROSPECTIVE AND CONTINGENT RESOURCES

Location	Licence	Interest (%)	Prospect	Petroleum fluid/ Units	Resource type	Low Estimate	Best Estimate	High Estimate	COS
Gippsland	PRL 2	100.0	Wombat field	Gas (Bcf)	Contingent	258.0	329.0	628.0	-
Gippsland	PRL 2 (Trifon)	100.0	Trifon	Gas (Bcf)	Contingent	126	390	526	-
Gippsland	PRL 2	100.0	Baragwanath	Gas (Bcf)	Prospective	156	701	2,523	0.45
Otway	PRL 249	50.0	Nangwarry	Gas (Bcf)	Contingent	4.5	12.9	32.2	-
Otway	PEP 175	100.0	Portland	Gas (Bcf)	Prospective	3,943	11,469	25,477	0.15
Surat	ATP 1183	100.0	Wellesley	Gas (Bcf)	Prospective	22.1	41.0	76.0	0.20
			Bendee	Oil (MMbbl)	Prospective	0.5	1.0	2.1	0.30
			Major East	Gas (Bcf)	Prospective	7.0	13.8	26.5	0.20
			Emu Apple	Oil (MMbbl)	Prospective	1.8	3.4	6.8	0.20
PNG	PPL 560	100.0	Buna	Oil (MMbbl))	Prospective	-	590	-	-



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# REFERENCES AND NOTES

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## **Wombat, Trifon-Gangell and Baragwanath 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.

## **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.

## **ATP 1183 Queensland**

The resource estimates are best estimates prepared on a deterministic basis by Mr Peter Bubendorfer, Geotechnical Assessor, Armour Energy Limited. Mr Bubendorfer holds a BSc in Geology, is a member of AAPG, and has over 22 years of relevant experience in hydrocarbon exploration and production. He has consented to the use of the estimate in the form and context in which it appears in this report.

## **Nangwarry Energy Project**

Contingent Resource Estimation, ERCE Equipoise Pte. Ltd 2021 – ASX Announcement 12 July 2021

## **PNG Buna Project**

Unrisked Gross Recoverable UMR Estimation, Total Energies SE, presented at Workshop TTE / Dondonald - PNG PPL560 - 15/06/2023

## **Definitions**

1 TJ per day is a Terajoule or 1000 GJ (gigajoules) per day. A giga joule is the basis for quoted gas prices which typically range from \$12/ GJ (contract) to \$20/GJ on the recent spot market in Victoria. 1 million cubic feet is equal to 1GJ, and 1,000 Terajoules and 1,000,000GJ is equal to a Petajoule or 1 PJ.

## **Cautionary Statement**

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

## **Royalties**

Any future production of hydrocarbons will be subject to both State Royalties (currently 10%) and in the case of the Victorian assets the Lakes Royalty Trust arrangements. Under those arrangements an over riding royalty of 10% is payable to third party investors.

**Note:** COS = chance of Success



# LAKES BLUE ENERGY TEAM



**Roland Sleeman**

Non-Executive Chairman

Roland has extensive experience in the oil and gas, utilities and infrastructure sectors. He has held senior executive positions and has provided specialist consulting advice to both Government and Businesses, across these sectors. He has a Bachelor of Engineering (Mech.) and a Master of Business Administration and is a Graduate of the Australian Institute of Company Directors. Roland was CEO of Lakes Blue Energy from June 2016 until December 2024.



**Richard Ash**

Executive Director and  
Chief Executive Officer

Richard has focused on investing in and working with ESG related companies across a broad spectrum of industries focusing particularly on decarbonisation. Richard has previously worked in Europe, the Asia Pacific for KPMG, Macquarie Bank, Westpac and Nomura.



**Nick Mather**

Non-Executive Director

Nick's special expertise is generation of and entry into undervalued or unrecognised resource exploration opportunities. Nick has been pivotal in generating \$5.7Bn cash for shareholders including as Arrow Energy Co-Founder, sold 2010 to Shell Petro-China \$3.5Bn, Bow Energy, sold 2012 to Arrow Energy \$550M, Waratah Coal, sold 2009 to Mineralogy \$130M, Northern Energy, sold 2011 to New Hope \$250M and BeMaX Resources, sold 2003 to Cristal \$350M. Nick was founder & CEO of SolGold Plc until 2020 presiding over the discovery of world class Cascabel gold project in Ecuador. Nick is Executive Director & CEO of DGR Global Ltd.



**Boyd White**

Non-Executive Director

Mr White's qualifications include a Bachelor of Business in Accounting and a Master of Business Administration. He has had executive roles with Halliburton Company and KBR Inc. and, was Chief Executive Officer of Newpeak. Mr White has over 30 years of experience in the energy, infrastructure, and mining sectors, and expertise in areas including strategic planning, commercial operations, mergers and acquisitions, and financing.



**Elissa Hansen**

Company Secretary

Elissa has over 20 years' experience advising Boards and Management on Corporate Governance, compliance, investor relations and other corporate related issues. She has worked with the Board and management of a range of ASX listed companies and assisted companies through the IPO process. Elissa is a Chartered Secretary who brings best practice governance advice, ensuring compliance with the Listing Rules, Corporations Act and other relevant legislation.



**Tim O'Brien**

Chief Operating Officer

Tim has a wealth of on-ground experience in onshore Victorian petroleum exploration, along with a track-record of delivering projects safely and on budget. Tim has overseen all of Lakes' exploration activities for over 20 years, having joined the Company as a Petroleum Geologist after completing a MSc at Monash University. Notably Tim has been instrumental in the development of the Gippsland Basin projects for Lakes including all technical aspects and regulatory interactions. Currently, Tim is President of the Vic/Tas branch of Petroleum Exploration Society of Australasia (PESA).



# MARKET OBSERVATIONS

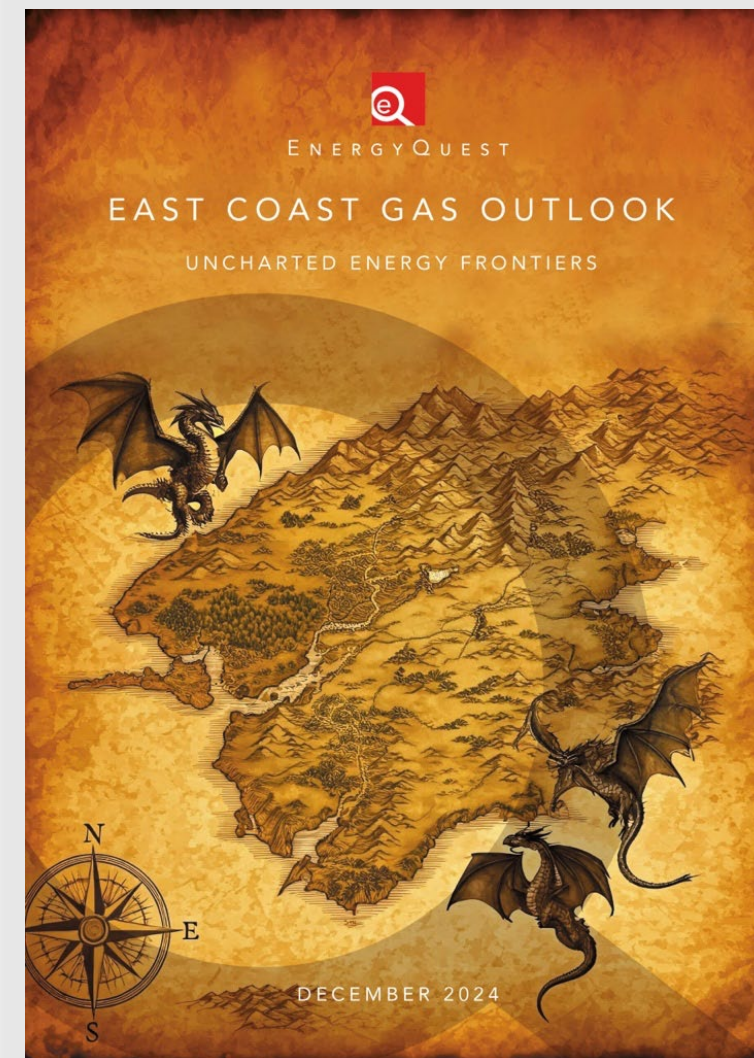
## Market observations

### EnergyQuest's sixth annual 'East Coast Gas Outlook', Nov. 2024

- East coast gas supply shortfalls expected as soon as 2026.
- Victorian offshore gas fields are running out – Longford production down 33% since 2022.
- Victoria and NSW reliant upon high-cost LNG imports within a few years.
- Raiding the Queensland LNG 'piggybank' won't work as pipelines from north are already at capacity.

## Opportunity for LKO

- ✓ LKO is uniquely positioned to capitalise on the looming east coast gas supply shortfalls due to its strategically located Wombat Gas Field in Victoria.
- ✓ With offshore production in decline and reliance on LNG imports increasing, LKO's onshore assets offer a near-term, cost-effective domestic supply solution.
- ✓ Unlike Queensland LNG, which faces infrastructure bottlenecks, LKO's proximity to Victoria's existing pipeline network ensures faster market access, making it a critical player in addressing the region's energy crisis.

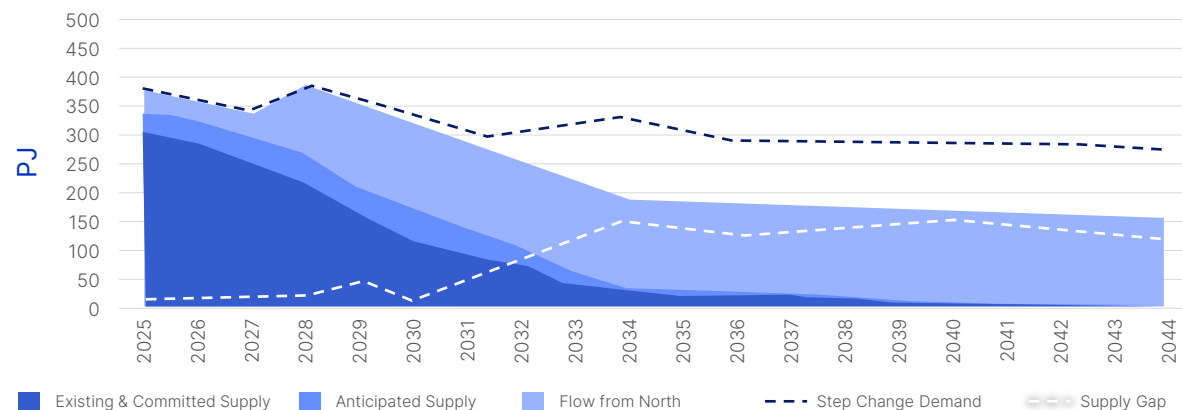






# CLOSING THE SUPPLY GAP

## Projected annual adequacy in southern regions, 2022-2044 (PJ)<sup>1</sup>



As Australia moves toward a net-zero emissions future, gas will remain essential in supporting households, businesses and industry by ensuring the stability of the electricity sector.

## Key Demand and Supply Constraints – Gas Statement of Opportunities<sup>1</sup>

- In forecasts of GPG in the National Electricity Market (NEM), greater consideration of weather variability with 10 historical weather patterns simulated (previously five patterns for the 2024 GSOO1), and new storage development delay risks consistent with the Electricity Statement of Opportunities and Reliability Forecast Methodology.
- Forecast production for Gippsland basin is lower for 2025 and 2026 than the forecasts provided for the 2024 GSOO1
- Dandenong LNG de-commissioning: Closure of the Dandenong liquefaction plant from 2025 and possible closure after 2027.
- Shutdown of Newcastle storage from 2025. The Newcastle Gas Storage Facility currently operates with government support.
- Supply volumes in QLD unable to service VIC and NSW markets.

<sup>1</sup>AEMO 2025 Gas Statement of Opportunities, Step Change scenario, Figure 41

## LKO's value proposition



### Strategically located

LKO holds significant resource and exploration assets in key basins, including the Gippsland and Cooper Basins, positioned to supply much needed domestic gas.



### Opportunity to fast-track development

With existing infrastructure in proximity to its assets, LKO has potential for faster project execution compared to greenfield developments.



### Substantial supply available

LKO estimates it can deliver 10% of Victoria's CAG supply for the foreseeable future.



### Domestic focus

LKO has committed to delivering all of the gas from PRL 2 to the domestic market.



### Lowest emissions gas

Wombat gas is high-quality, impurity free (no CO<sub>2</sub>, H<sub>2</sub>S or Mercury), reducing need for processing and greatly reducing production emissions.



# WOMBAT-5 WELL AND WOMBAT GAS FIELD CONCEPT



Wombat-5 horizontal well design specifically selected to achieve commercial production of gas



Independently forecast potential for 10 TJ/d initial production\*



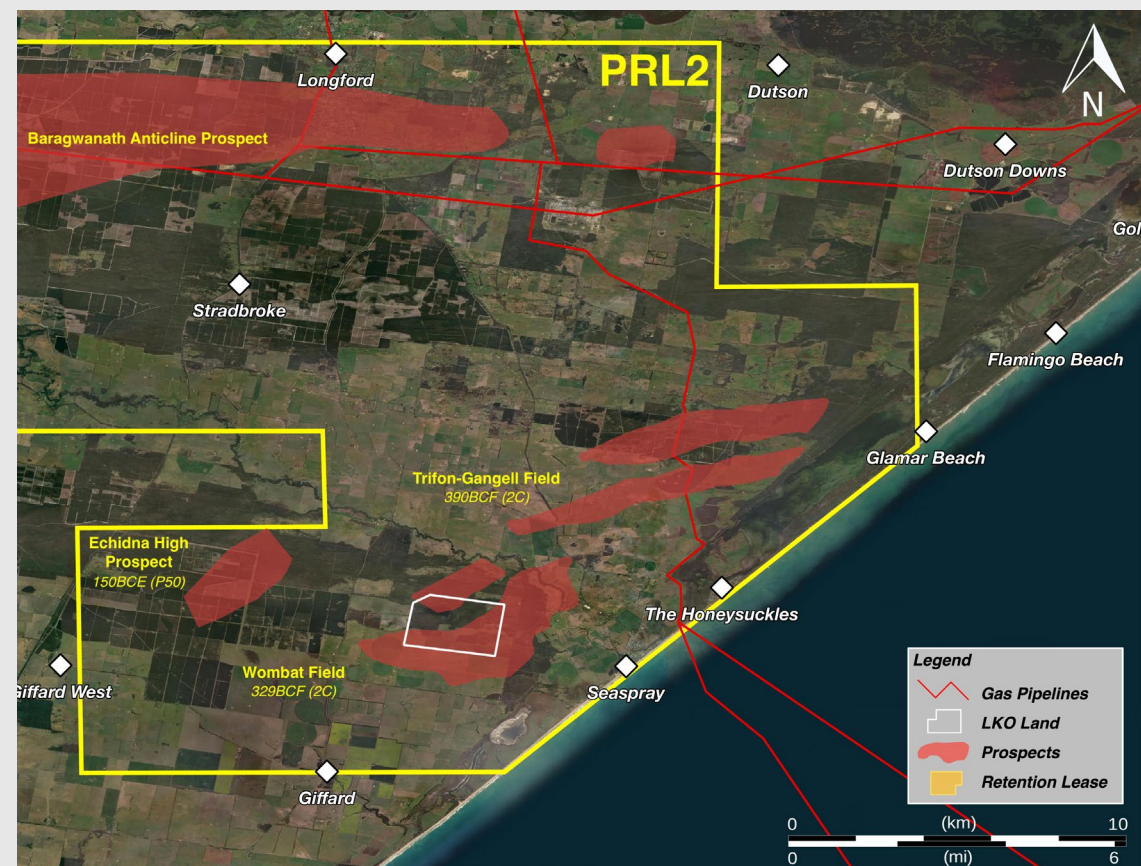
Gas Field Development Concept

- Minimal gas processing requirement, plus compression
- Link into existing pipeline infrastructure
- Commence production from Wombat Gas Field
- Prospective Trifon-Gangell ramp-up to offset Wombat decline
- Revenue generation potential is significant



Lakes has granted a 10% royalty over wellhead value of petroleum produced within PRL 2.

\* "Production Forecast for the Proposed Lakes Oil Wombat 5", September 2013, Stimulation Petrophysics Consulting LLC.



## Wombat and Trifon-Gangell Locations



# WHAT MAKES WOMBAT GAS FIELD SO APPEALING?



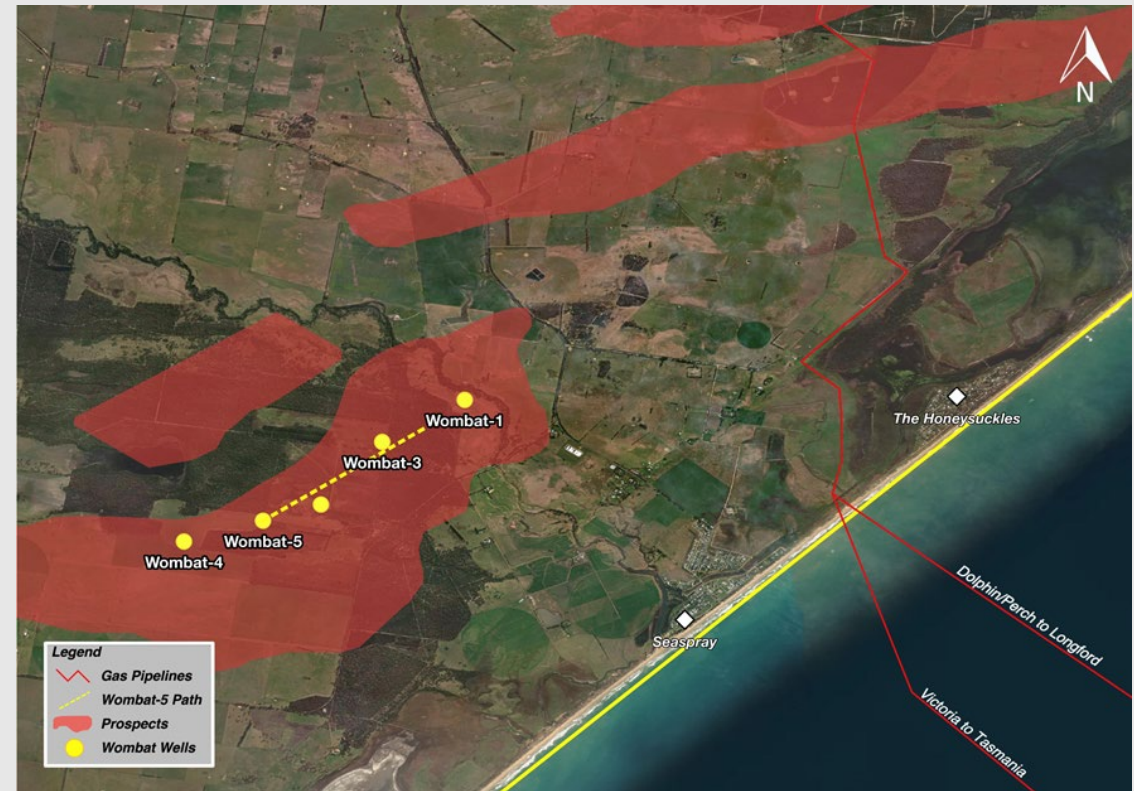
## Relative Low Risk

- Existing vertical wells all flow gas
- Certified Contingent (2C) gas resources - refer to slide 5
- Gas is high-quality
- Well design is conventional, using established technology
- No Stakeholder issues: drilling on Company owned land



## Strategic

- Significant revenue generation potential
- Victorian gas supply is very tight, and prices are very high
- Onshore Victorian exploration ban has been lifted
- Wombat-5 Operation Plan has been accepted by the Regulator with Ministerial consent to commence works received
- Project is 100% Company-owned
- Project is in very close proximity to existing pipelines

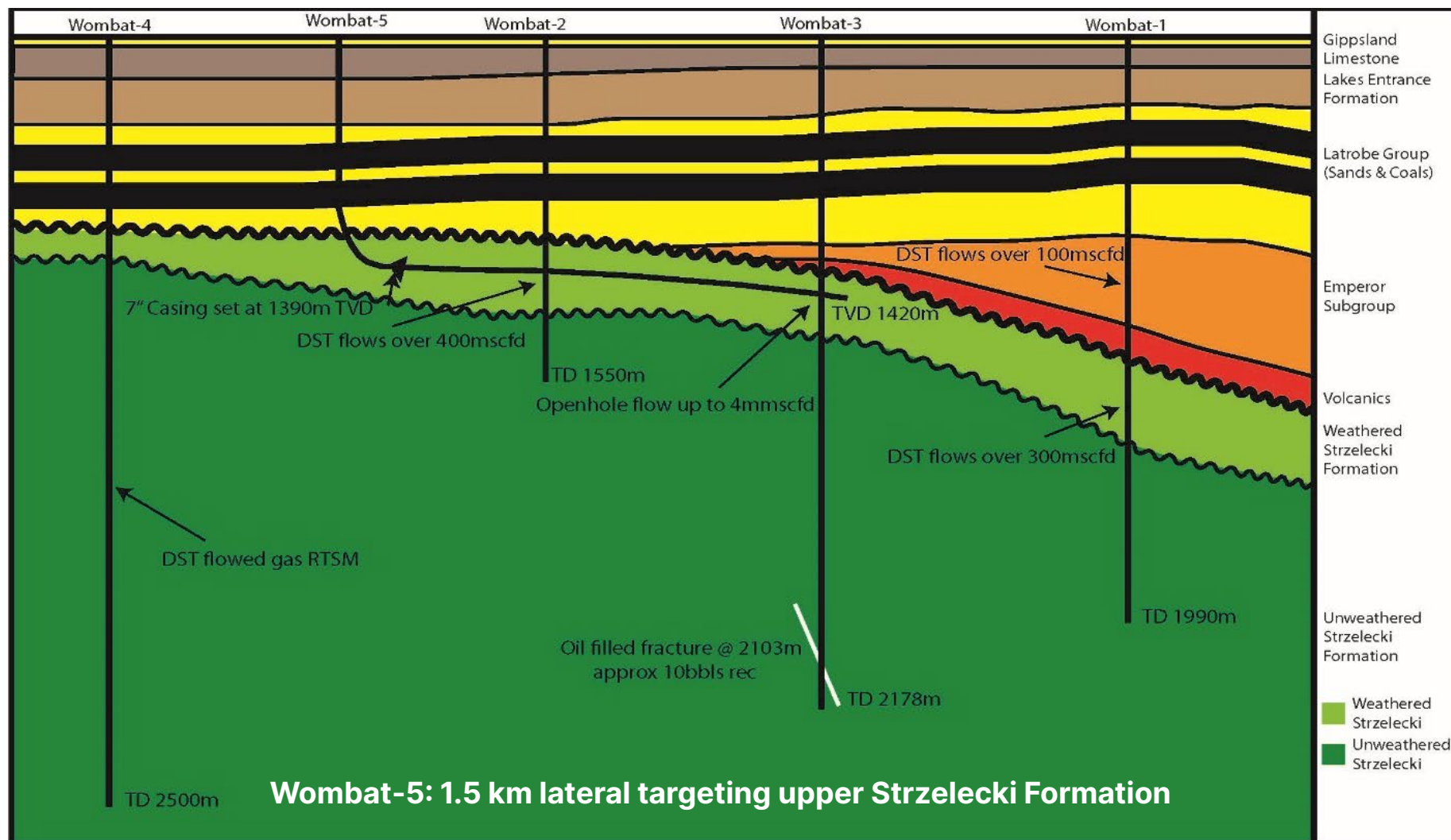


## Wombat Wells and Proximity to Pipelines





# WOMBAT-5 GAS WELL



**DST** = Drill Stem Test










**mscfd** = One thousand standard cubic feet / day

**mmscfd** = One million standard cubic feet / day





# WOMBAT PROPOSED GAS FIELD SCHEDULE

Activity	2025				2026				2027			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Wombat 5 Site Construction												
Drill and Test Wombat 5												
Pre FEED Study												
Resource Certification												
FEED												
FID												
Detailed Design & Construction												
Install & Commission												
First Gas												



# POST WOMBAT - PORTLAND ENERGY PROJECT



100% Company owned, with independently estimated prospective resources - refer to slide 5.



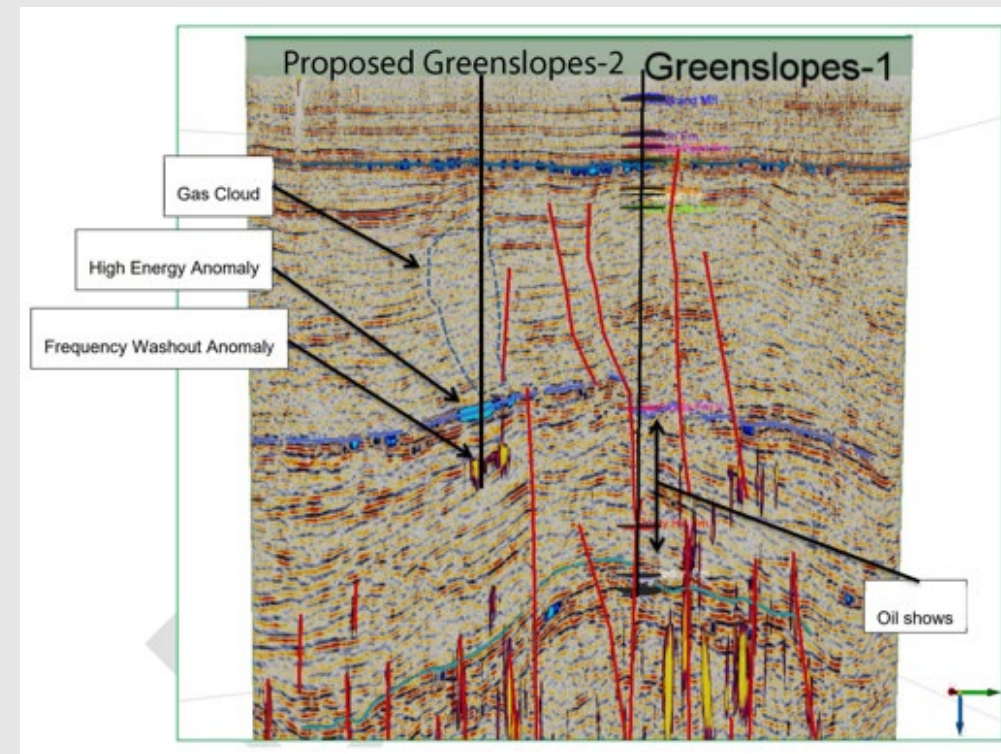
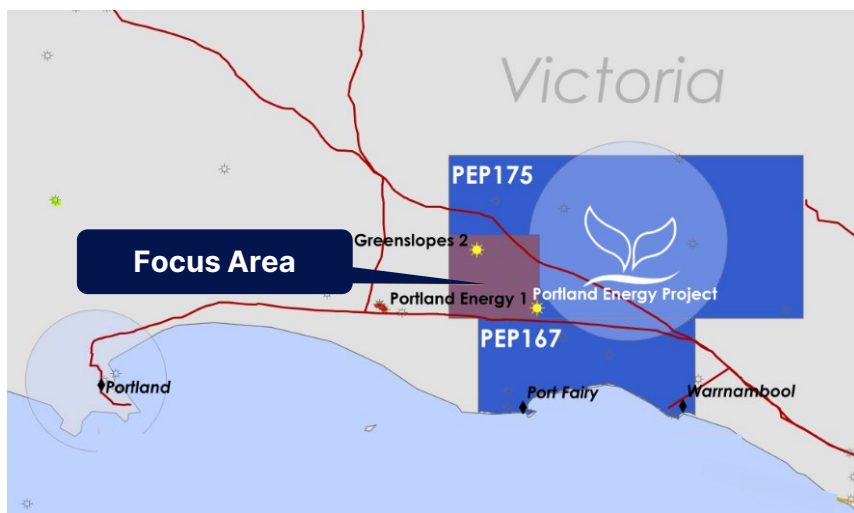
All historic wells that have intersected the Eumeralla Formation have encountered gas and or condensate tight liquids.



Greenslopes-2 and Portland Energy-1 conventional wells proposed to confirm Eumeralla gas is flowable.



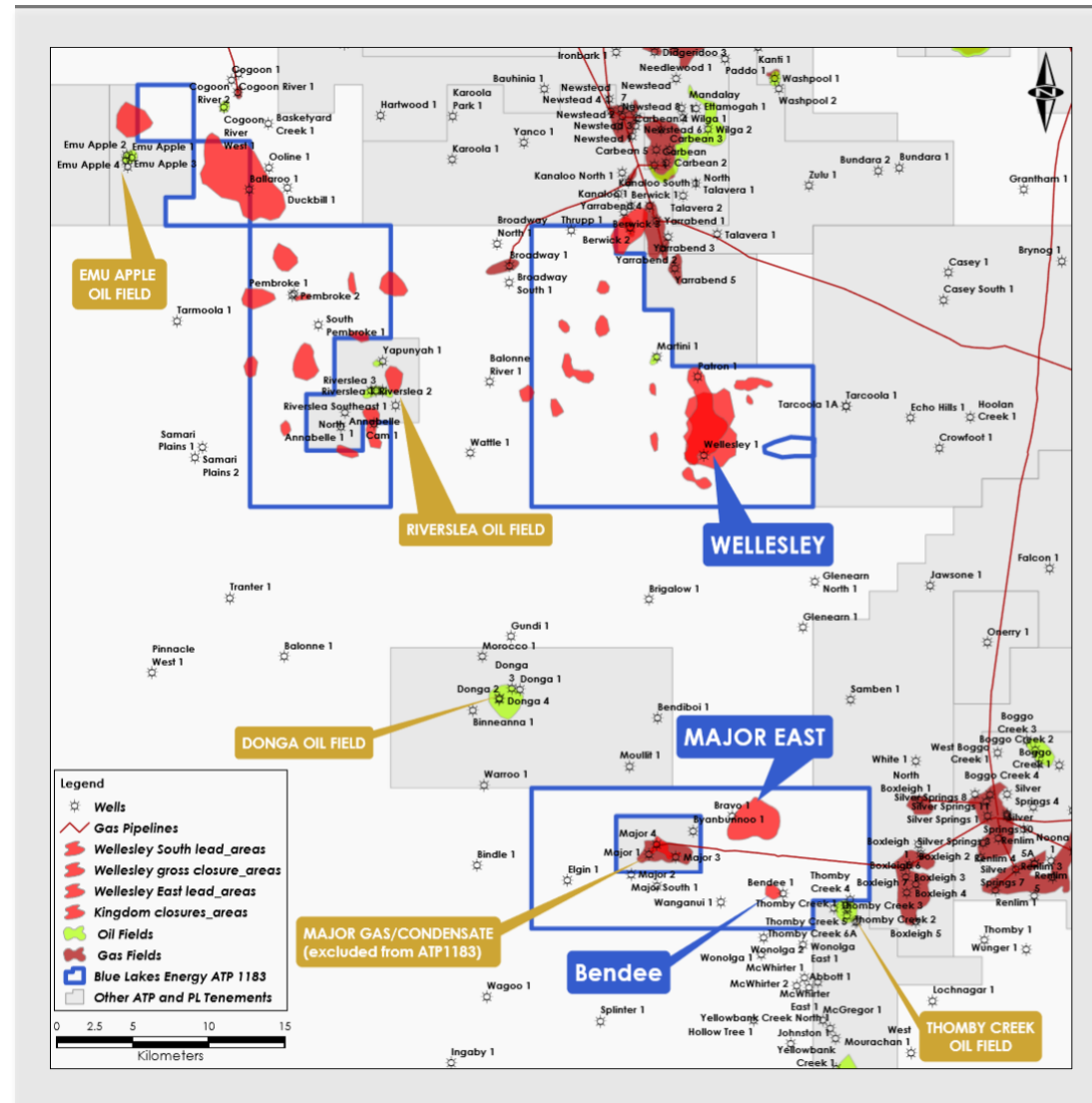
Preliminary well planning has commenced with wells to be drilled mid-late 2026.



## Proof of Concept Wells



# POST WOMBAT - ATP 1183, QUEENSLAND



100% owned by Lakes.



Close proximity to existing infrastructure.



Multiple exploration targets.



Discussions continuing with potential farminee for the Company to be free carried through drilling and testing costs.



Independently estimated prospective resources - refer to slide 5.



# NANGWARRY 1 - OPPORTUNITY

- Nangwarry-1(PRL 249 South Australia) is a Lakes operated JV, a well was drilled and tested 2019/2020.
- Well currently completed and ready to produce.
- Certified contingent (2C) resources - refer to slide 5.
- Large wellsite, sufficient space to accommodate a CO<sub>2</sub> plant.
- Retention License status granted in 2021(PRL 249)
- The JV has recently been approached by gas plant manufacturers and end users, as interest in Nangwarry continues to escalate driven by deepening supply issues. The timing aligns well with emerging market needs.
- The Company has signed an HOA with Beijing Maison Engineering Co. Ltd. (**Maison**) for them to conduct a feasibility study, at their expense, on Nangwarry liquefied CO<sub>2</sub> plant project.
- Potential for long-term cash generating project with first production possible as early as Q1 2027.
- To support the feasibility studies Lakes is undertaking a CO<sub>2</sub> market assessment. Lakes has launched an expression of interest (EOI) campaign to engage potential offtake partners.
- Current market pricing varies substantially dependent on quantity of quality of CO<sub>2</sub> required and can vary from \$200 / tonne to 2,000 / tonne.







# Australian CO<sub>2</sub> Market



## Major suppliers of food & beverage grade (99.9%) CO<sub>2</sub> to the Australian market are:

- Air Liquide (≈ 50%)
- Linde / BOC (≈ 33%)
- Others (≈ 17%)



## Major product streams:

- Food & Beverage grade (≈ 60%)
- Industrial grade (≈ 32%) (welding, decaffeinating coffee, drying, etc.)
- Laser grade (≈ 8%) (surgery)



## Market further divided into:

- Gaseous (≈70%) non-alcoholic beverages, protein industry, wine, greenhouses, water treatment, paper making, fire extinguishers, medical
- Solid – Dry Ice (≈ 30%) logistics, shipping organs, blood, food, etc. (Note: Dry-Ice loses 30% of its bulk every 24 hours, 3 tons of Dry-Ice loaded in Sydney can arrive in Melbourne weighing 2 tons. Use of Dry-Ice can be expensive and impractical.)



## Erratic / poor CO<sub>2</sub> supply side, particularly after the COVID pandemic.

\*Source: Food & Grocery Supply Group Meeting (4 May 2023)

