



# Lakes Oil NL

## Investor Information

July 2019

Chris Tonkin, Chairman

Roland Sleeman, Chief Executive Officer

# At a Glance

ASX Code	LKO
Shares on Issue	33,354,412,661
Share Price	≈0.1 cent
Market Cap.	A\$33m
Shareholders	≈12,000

Major Assets	
Victoria	608 MMBOE
South Australia	10 MMBOE
Queensland	14 MMBOE
PNG	500 MMBOE

Top Shareholders	
Dark Horse Resources	30.4%
Timeview Enterprises	9.1%
Armour Energy	6.4%
DGR Global	2.2%
Directors/Management	1.9%
	50.0%



# Board of Directors and Management



**Chris  
Tonkin**  
*Chairman*



**Ian  
Plimer**  
*Non-Executive Directors*



**Nick  
Mather**



**Kyle  
Wightman**



**Richard  
Ash**



**Roland  
Sleeman**  
*CEO*



**Tim  
O'Brien**  
*COO*



# Diversified Portfolio





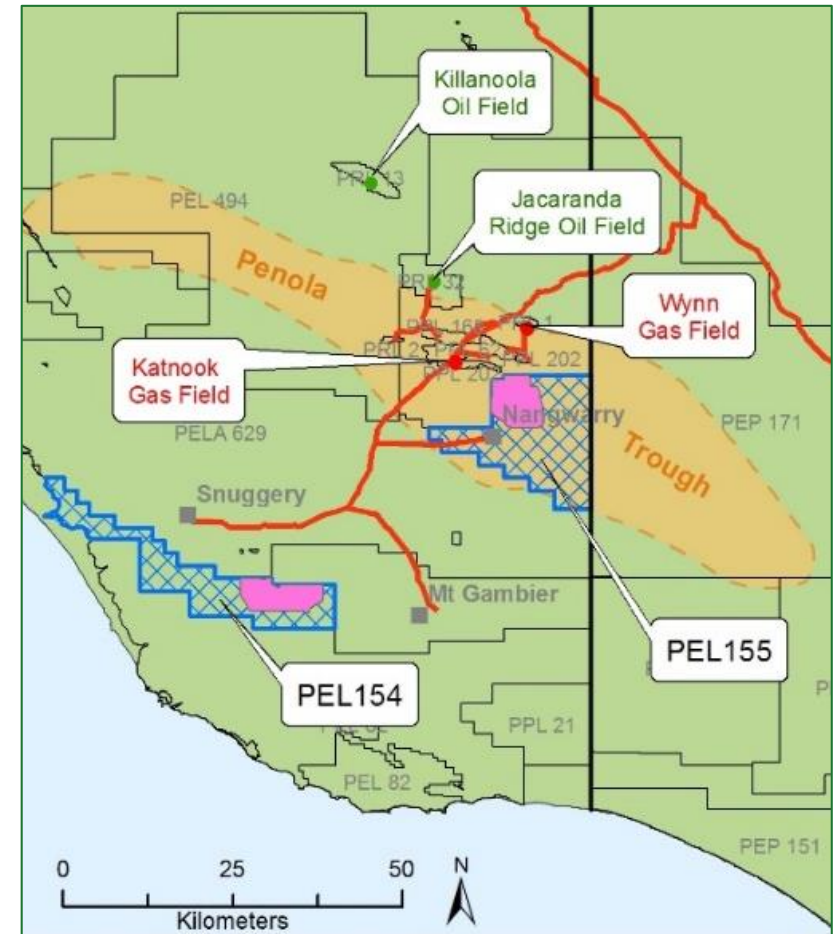
# **Exploration Opportunity**

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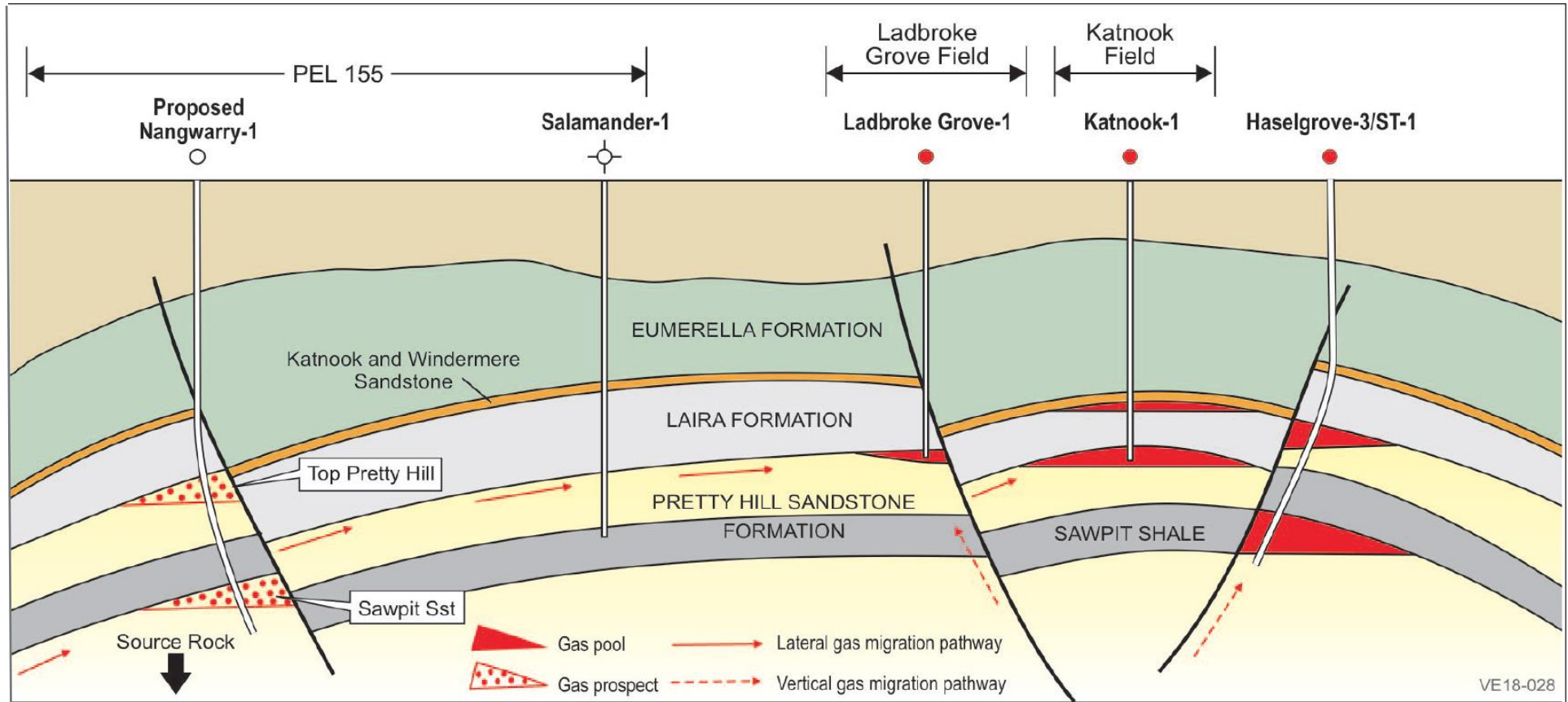
**Immediate - 2019**

# PEL 155, South Australia (Otway Basin)

- Proven Hydrocarbon Province
- Immediate focus is Nangwarry Prospect
  - **57 Bcf potential recoverable gas\***
- **Drilling rig contracted**
  - Spudding 4<sup>th</sup> quarter 2019
- Joint venture with Vintage Energy
  - Lakes Oil is Operator
- **Government Grant** for ≈40% of cost
- Gas market available
  - Eastern Australian gas prices are HIGH

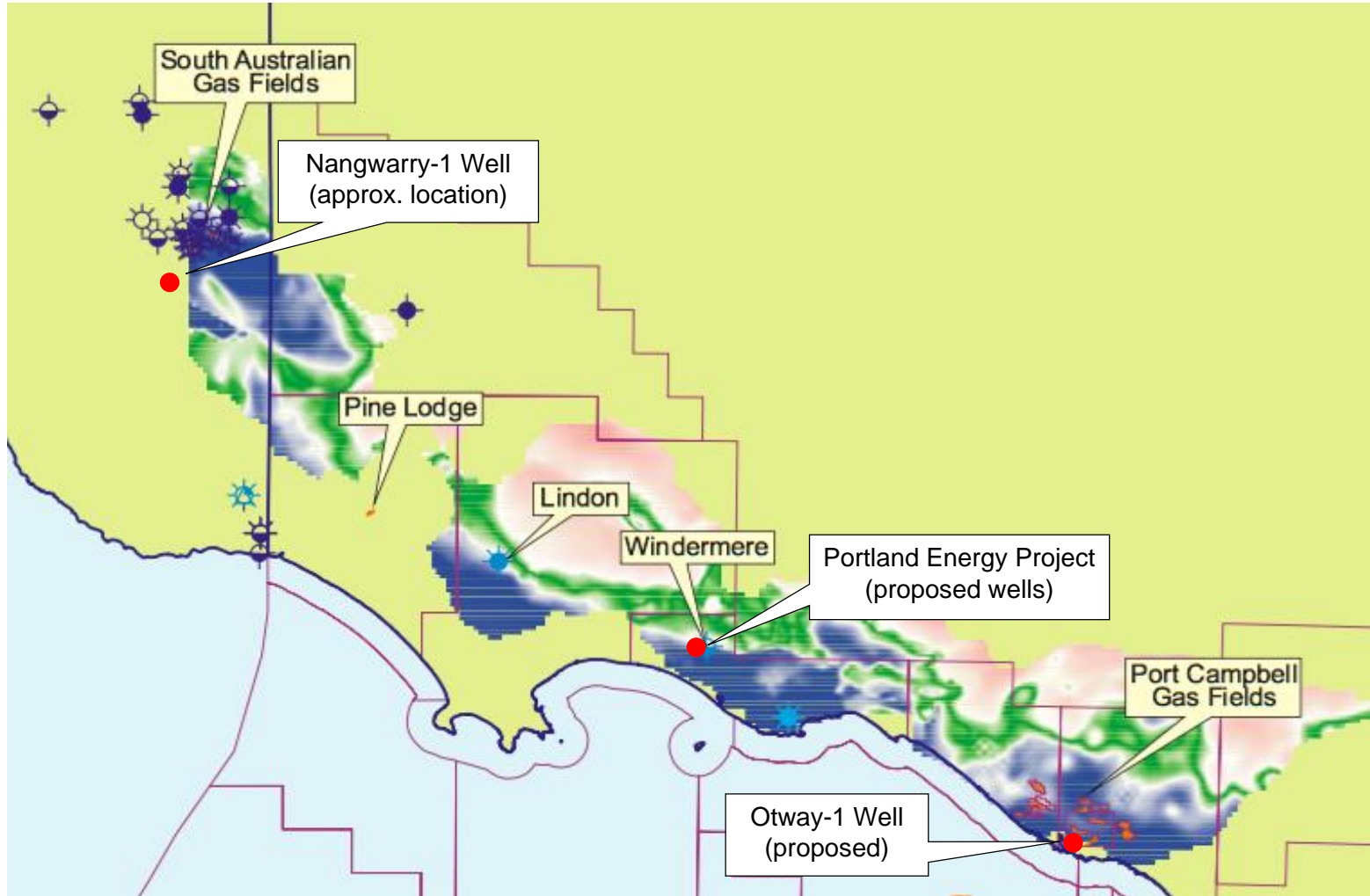


# Nangwarry Prospect





# Nangwarry – Broader Otway Significance



Astral-1 petroleum system, published by Geoscience Victoria, with areas of peak hydrocarbon generation shaded green.







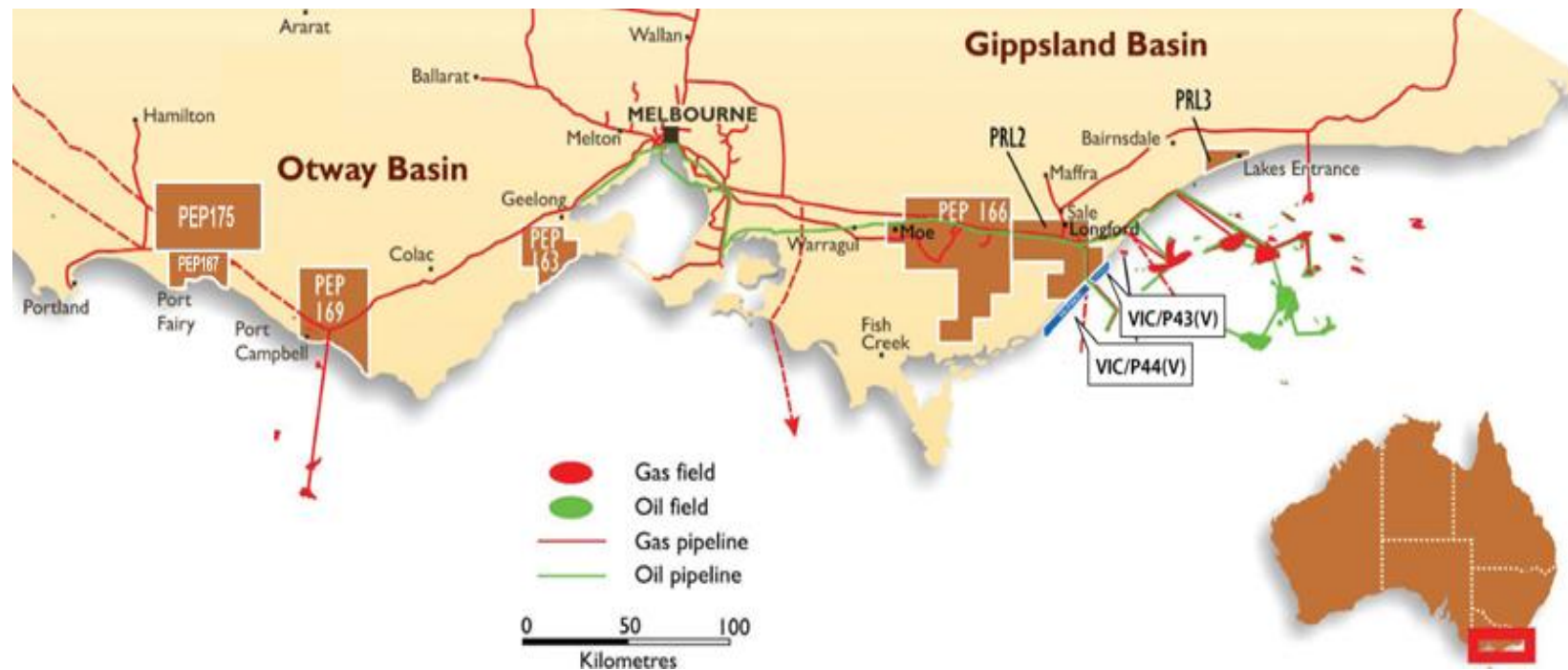
# **Key Exploration Opportunities**

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**1 to 2 year timeframe**

# Victoria

- Victorian Onshore Exploration moratorium ends mid 2020
- Lakes Oil is the major onshore Victorian exploration company
- Prospects awaiting drilling



# Wombat Gas Field – Gippsland Basin

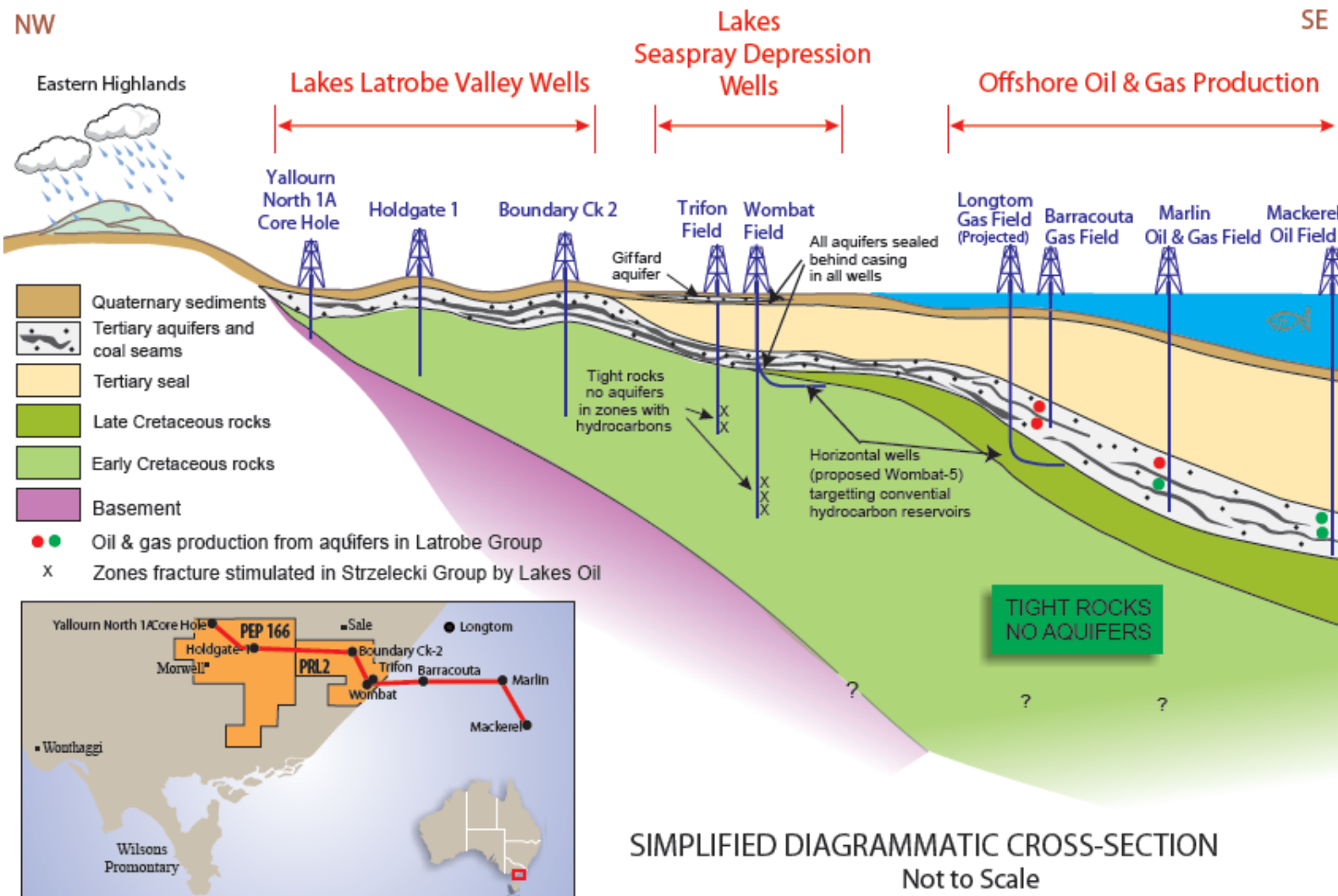
- Significant gas resource already demonstrated.
- Wombat-5 well is ready for drilling.
  - Lateral well targeting conventional potential of Strzelecki Formation.
  - 10 TJ/day gas flow rate independently predicted\*
  - Government approval sought prior to ban
  - Well can be brought on line quickly
- East Coast gas market short of supply and prices high.
- Wombat development to be followed by Trifon-Gangell ramp-up to deliver 20 PJ/a for 20 years.



Flow test Wombat-1 Gas Well



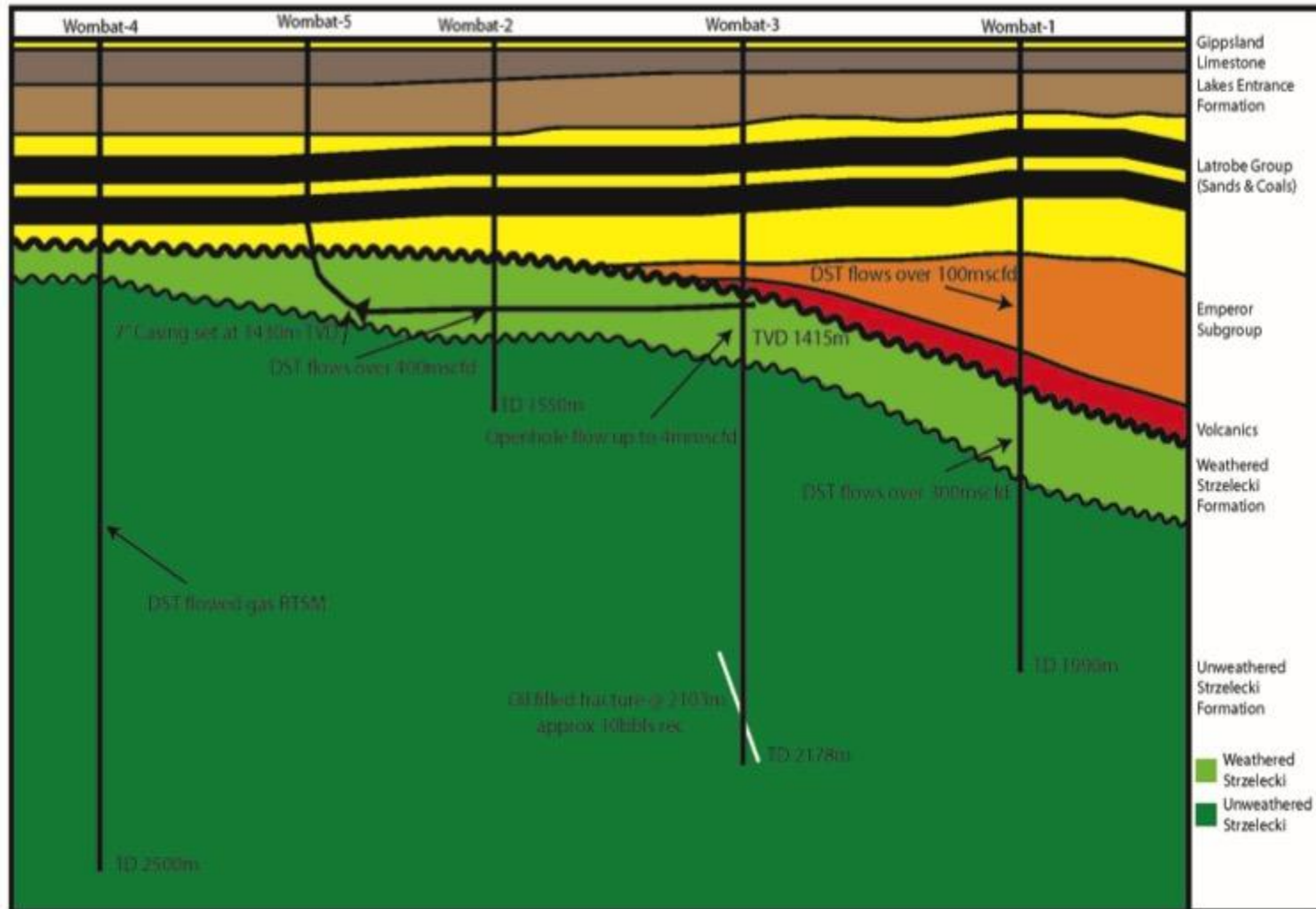
# Gippsland Basin Cross-Section



SIMPLIFIED DIAGRAMMATIC CROSS-SECTION  
Not to Scale



# Proposed Wombat-5 Well



# Otway-1 Gas Well – Otway Basin

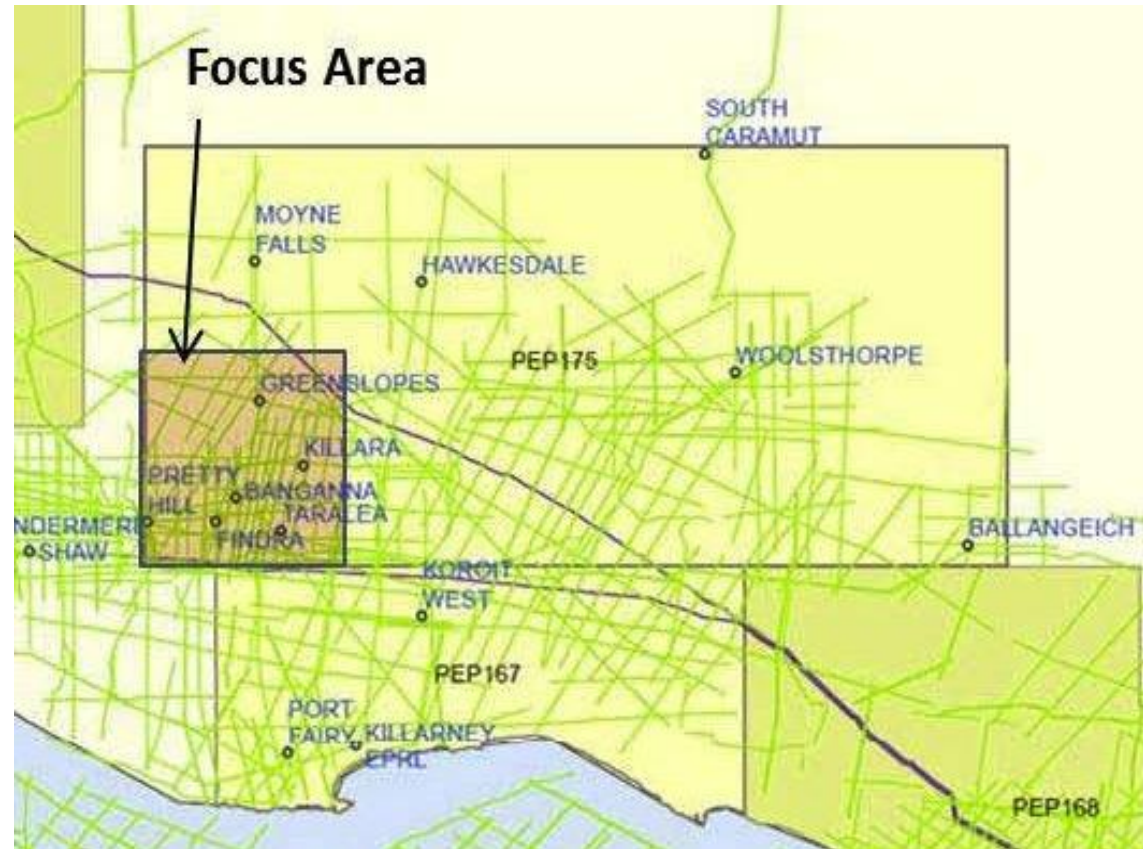
- Conventional well ready to be drilled
- Well targets Waarre Sandstone and Eumeralla Formation
- Waarre Sandstone is basis for adjacent, historic gas production
- Eumeralla Formation is known to contain and has flowed gas
- Drilling approval was sought prior to Government moratorium
- 400 metres from existing facilities - can be brought on line quickly





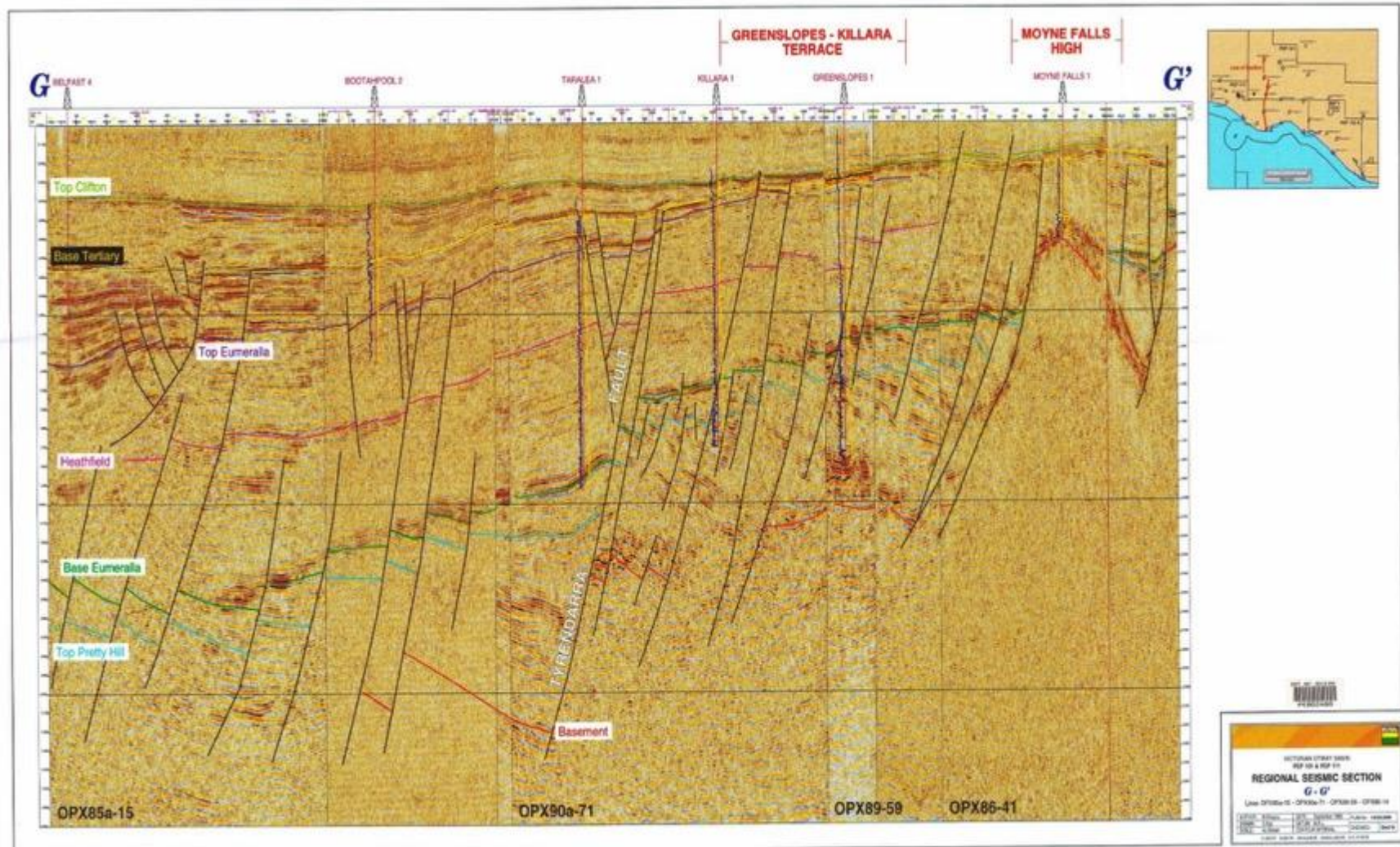
# Portland Energy Project – Otway Basin

- Massive potential – scale comparable to the Bass Strait.
- All historic wells intersecting Eumeralla Formation showed gas.
- Focus area identified for conventional pursuit.
- Sites selected for 2 proof of concept wells.





# Otway Basin Cross-Section



# Victorian Potential\*

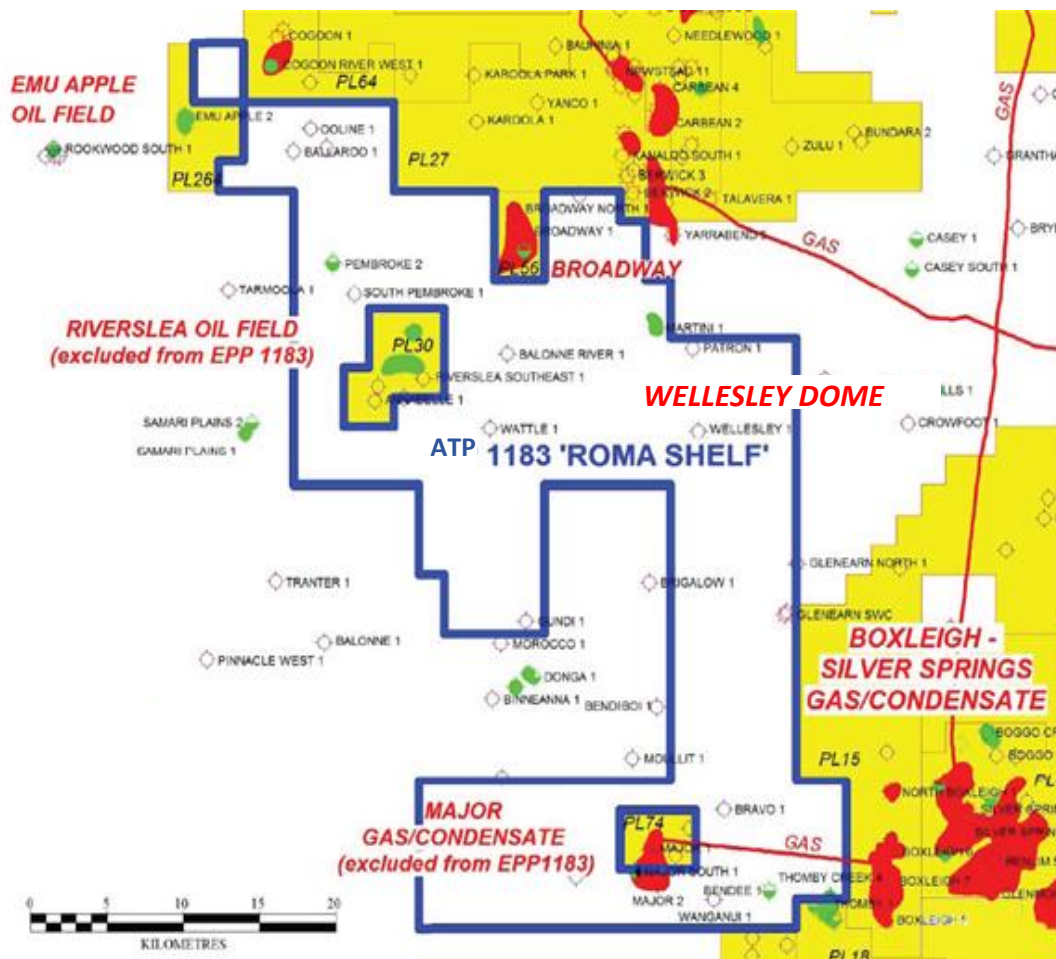
Prospect	Independently Estimated Potential	
	Annual	Total
Wombat (PRL 2)	20 Bcf	329 Bcf (2C)
Trifon-Gangell (PRL 2)		390 Bcf (2C)
PEP 175 Focus Area	~150 Bcf	>11 Tcf (P50)
Otway-1 (PEP 169)	3-5 Bcf TBD	TBD

**PRL 2 potential alone is 5 to 10% of Victorian gas demand.**



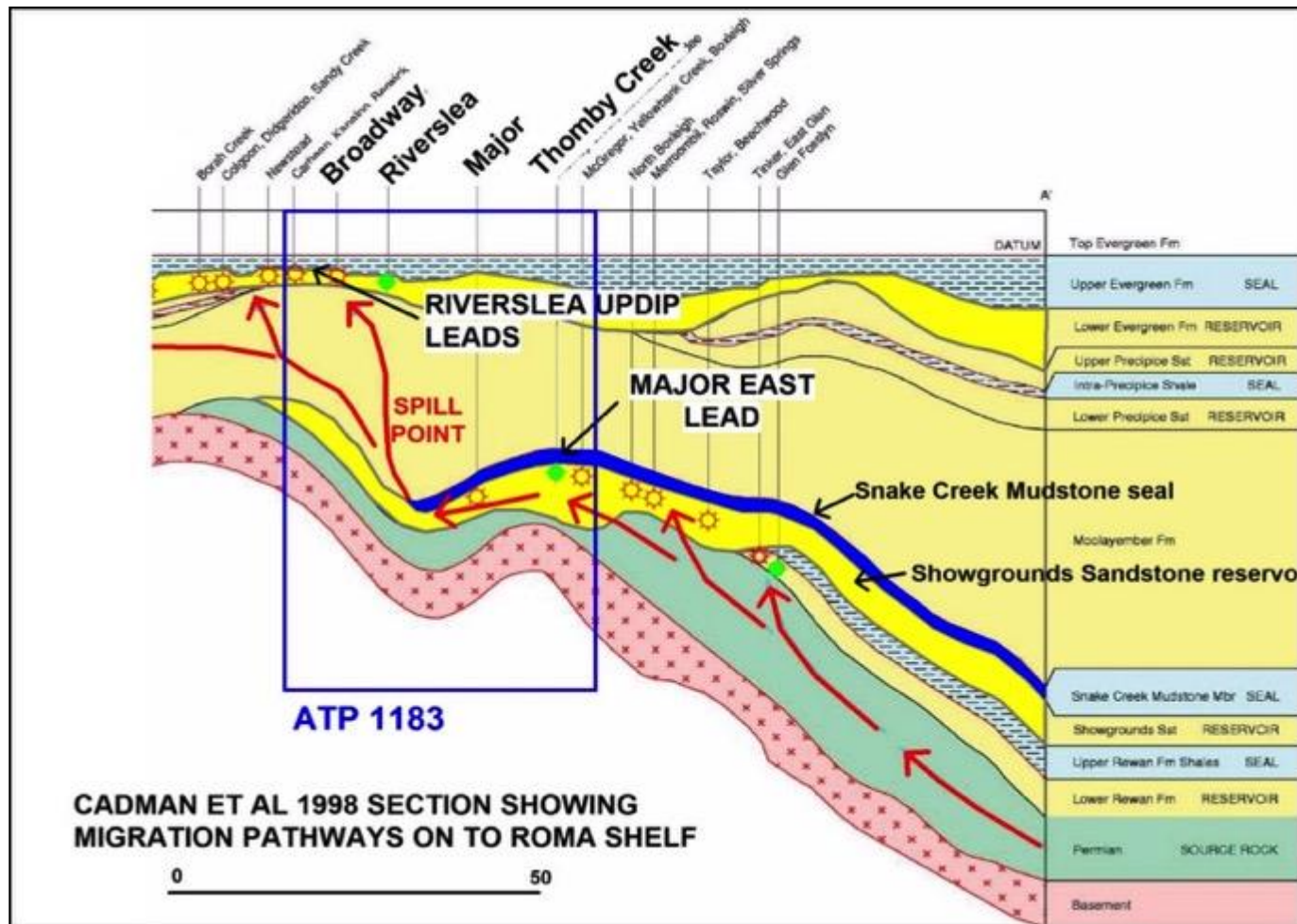
# ATP1183, Queensland

- 100% ownership
- Proven hydrocarbon province
- Multiple prospects identified\*
  - Wellesley Dome - 41 Bcf.
  - Emu Apple North - 3.4 MMBbl.
  - Bendee Prospect – 1 MMBbl.
  - Major East Lead - 13.8 Bcf.
- Exploration success can be quickly monetised:
  - Existing gas and oil infrastructure in close proximity.
  - East Coast gas market undersupplied and high priced.





# ATP1183, Queensland

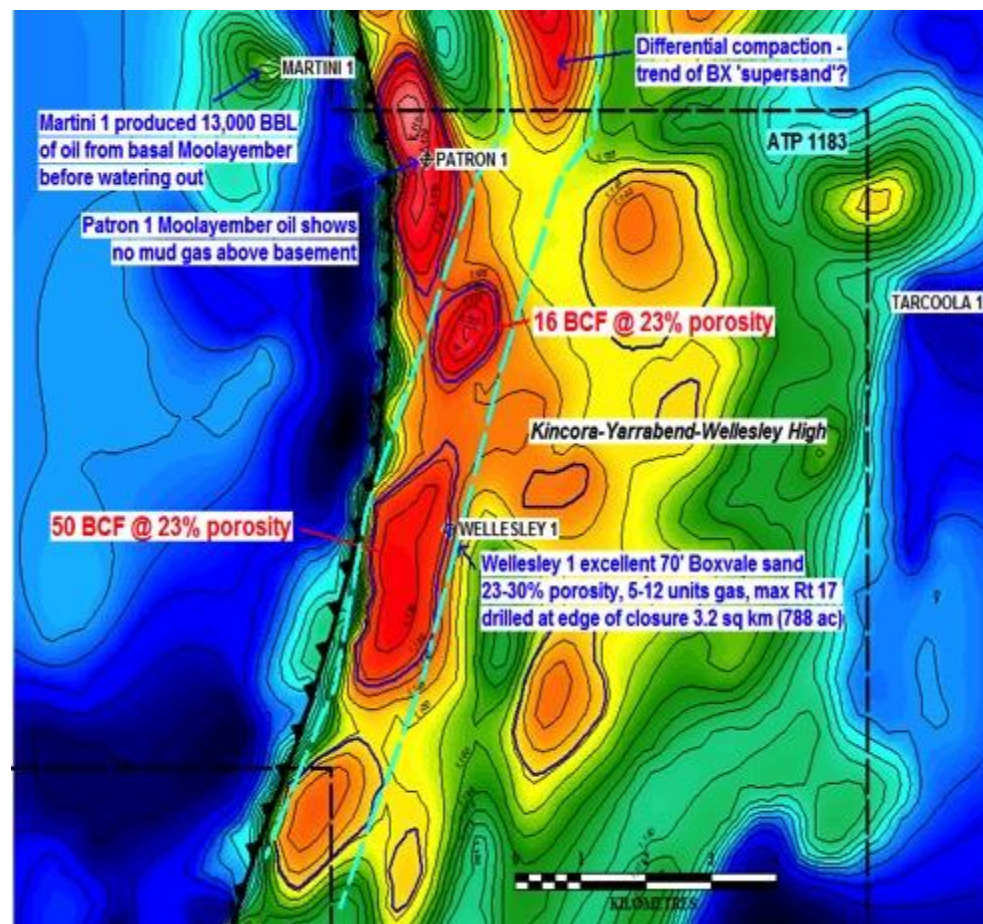


Permian coal and shale is source of oil and gas that is trapped in the Showgrounds reservoir, under the Snake Creek Mudstone (blue), and also in the shallower Evergreen sands



# Wellesley Dome, ATP1183, Queensland

- Fault-bound 3-way dip closure, 4.4 km<sup>2</sup>
- 41 Bcf Prospective Gas\*
- South of existing productive field - easily monetised
- Drilled by BHP in 1979 - good gas and porosity but not tested.
- 1,650 metre well proposed at location southwest of original well.





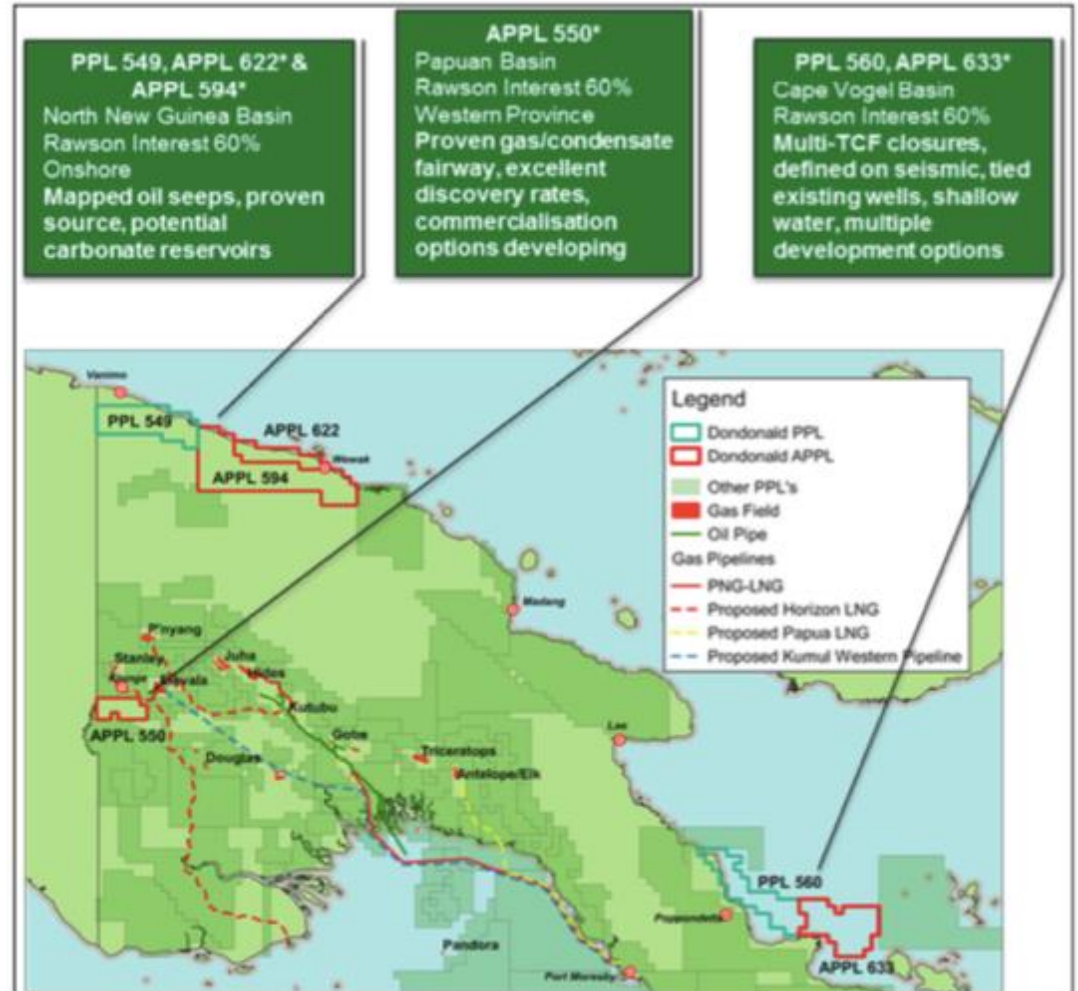
# **Offshore Involvement**

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**Papua New Guinea**

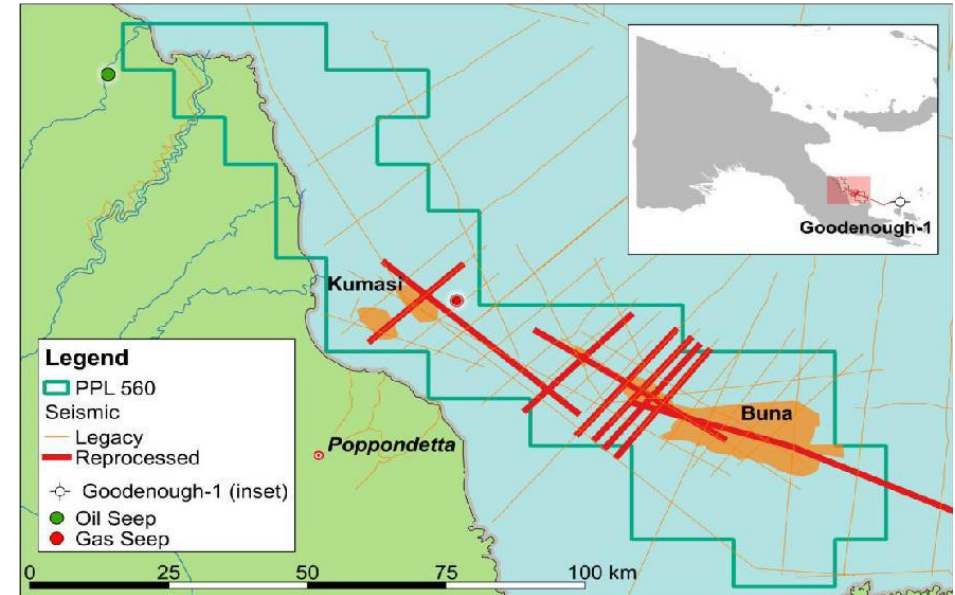
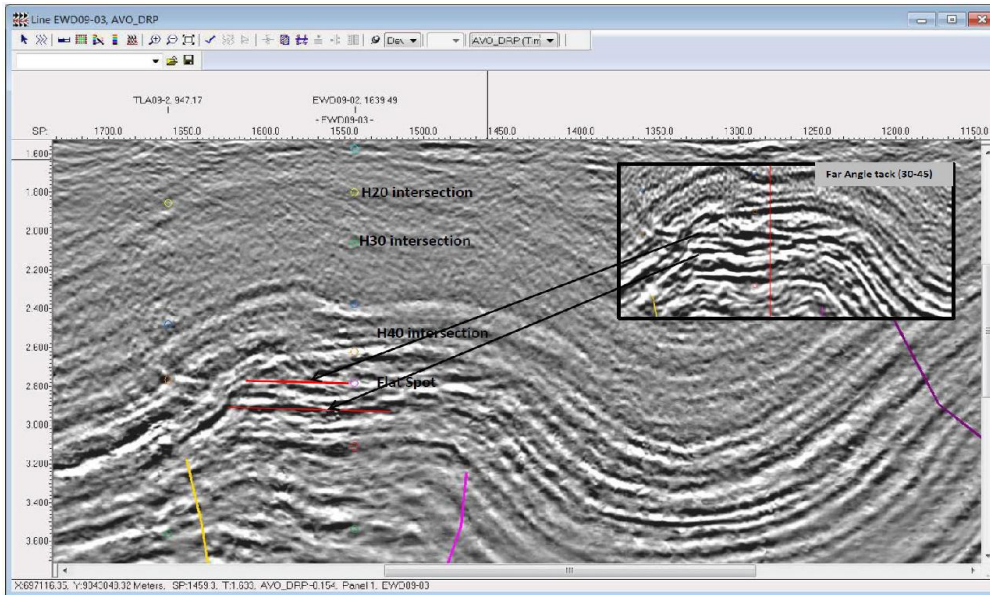
# Papua New Guinea

- Multiple Permits and Applications covering proven hydrocarbon producing areas
- Immediate focus is PPL 560
  - Contains multi-Tcf Buna prospect
  - Imminent resolution of dispute regarding tenure
  - Farm-out discussions underway





# Papua New Guinea – PPL 560



- AVO flat spots on seismic are reliable hydrocarbon indicators
- Multi Tcf Potential: P50 recoverable resource of 3.3 Tcf
- Free-carry farm-out under discussion



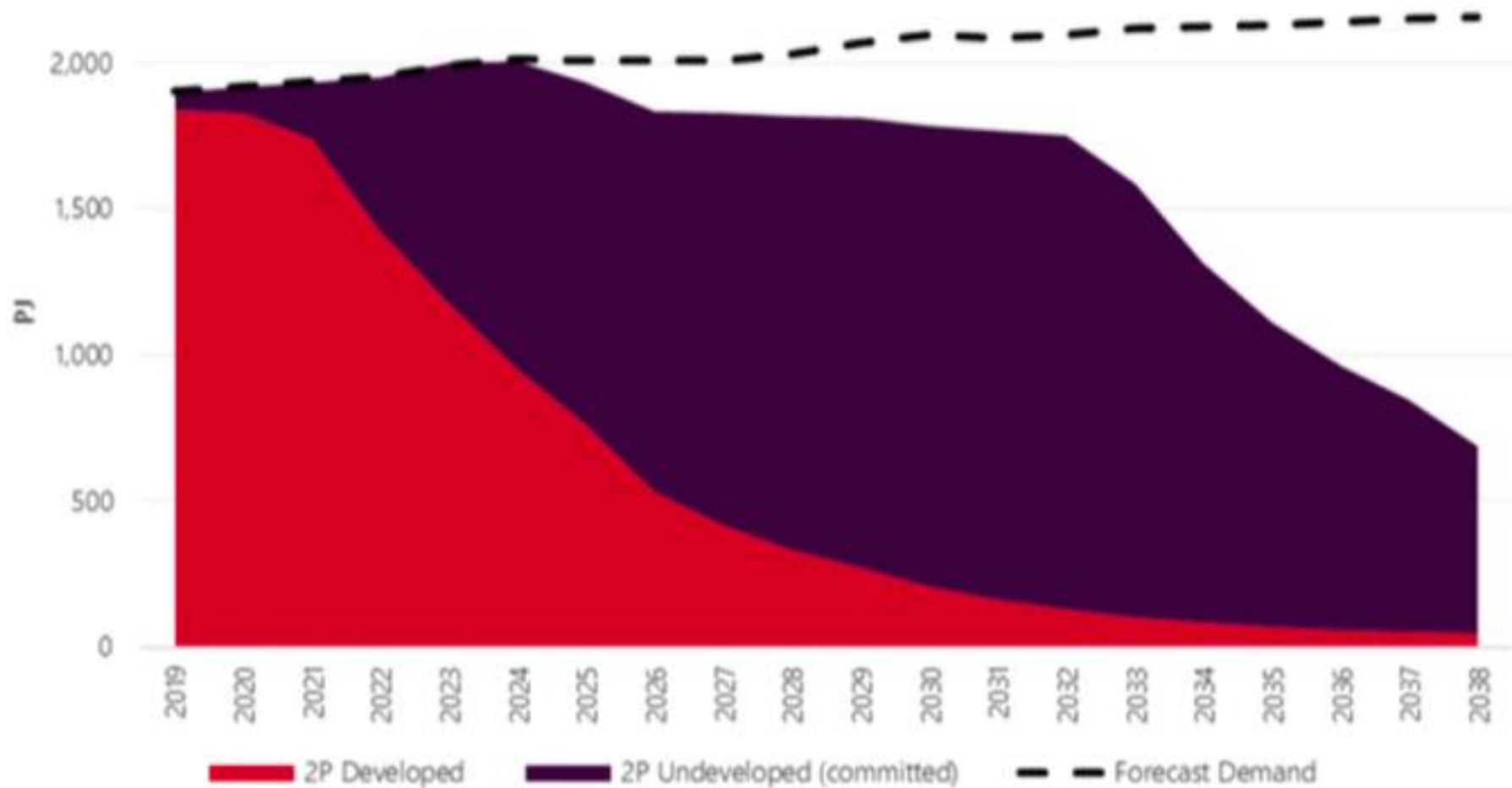


# **Reference Information**

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## **Eastern Australian Gas Market**

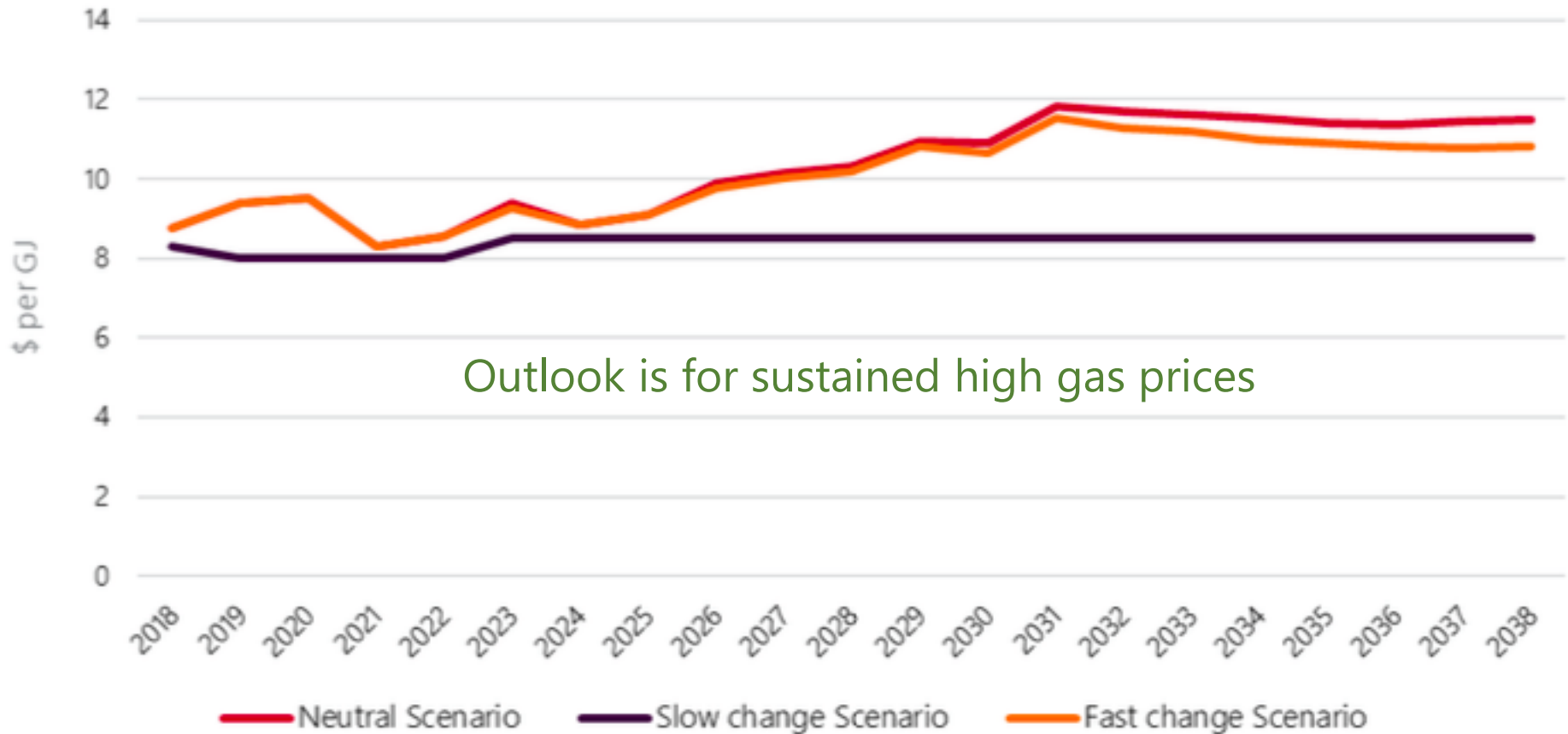
# East Coast Australia Gas Supply and Demand



Source: Gas Statement of Opportunities, Australian Energy Market Operator, 2019



# East Coast Australia Gas Pricing



Source: Gas Statement of Opportunities, Australian Energy Market Operator, 2019



# \*Sources of Information

All estimates have been prepared in accordance with the Petroleum Resources Management System ('PRMS') established by the Society of Petroleum Engineers ('SPE'), 2007, and Guidelines for Application of the PRMS (SPE, 2011). All estimates are reported in accordance with the guidelines and the definitions of reserves, prospective resources and contingent resources set out in the PRMS and approved by the Board of the SPE in 2007.

Specific sources of information are as follow:

- Nangwarry Prospect (slide 5).
  - RISC Advisory Pty Ltd - Nangwarry Prospect Prospective Resource Assessment.
- Wombat and Trifon-Gangell (slides 10 and 16).
  - Wombat-5 flow rate: SPC (Stimulation Petrophysics Consulting, LLC), "Production Forecast for the Proposed Lakes Oil Wombat 5", September 2013.
  - Resource potential: Gafney, Cline and Associates, as reproduced on pages 24-25 of "Independent Specialist Report on the petroleum assets of Navgas Pty Ltd and Lakes Oil NL", SRK Consulting (Australasia) Pty Ltd, made public in December 2016.
- PEP 175 Focus Area (slide 16).
  - SRK Consulting (Australasia) Pty Ltd, as reproduced on page 29 of "Independent Specialist Report on the petroleum assets of Navgas Pty Ltd and Lakes Oil NL", SRK Consulting (Australasia) Pty Ltd, December 2016.
- ATP 1183, Queensland (slides 17, 19)
  - Other than Major East Lead: page 17 of "Independent Specialist Report on the petroleum assets of Navgas Pty Ltd and Lakes Oil NL", SRK Consulting (Australasia) Pty Ltd, December 2016.
  - Major East Lead: Mr Peter Bubendorfer, an AAPG member qualified in accordance with the requirements of ASX Listing Rule 5.42, and who has consented to the use of the estimate in the form and context in which it appears. The estimate was finalised on 3 February 2015 and was published on the ASX Announcements Platform by Navaho Gold Limited, then owner of Navgas Pty Ltd.
- PPL 560, PNG, Buna Prospect (slide 22)
  - Rawson Oil & Gas Limited. Modified from Fekete Associates 2010 report in accordance with SPE-PRMS guidelines.



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