



Lakes Oil N.L.

**Tight Gas**  
**'A Lonely Journey'**



*"Have you heard about the  
17 year – overnight sensation"*

**Rob Annells**

*November, 2011*



## Disclaimer

This presentation includes certain statements, estimates and projections with respect to the future performance of Lakes Oil. Such statements, estimates and projections reflect various assumptions concerning anticipated results, which assumptions may prove to not be correct. The projections are merely estimates by Lakes Oil, of the anticipated future performance of Lakes Oil's business based on interpretations of existing circumstances, and factual information and certain assumptions of future economic and results, which may prove to be incorrect. Such projections and estimates are not necessarily indicative of future performance, which may be significantly less favourable than as reflected herein. Lakes Oil make no representations as to the accuracy or completeness of such statements, estimates or projections and such statements, estimates and projections should not be relied upon as indicative of future value, or as a guarantee of value or future results.

ersonal use only



## Lakes Oil NL

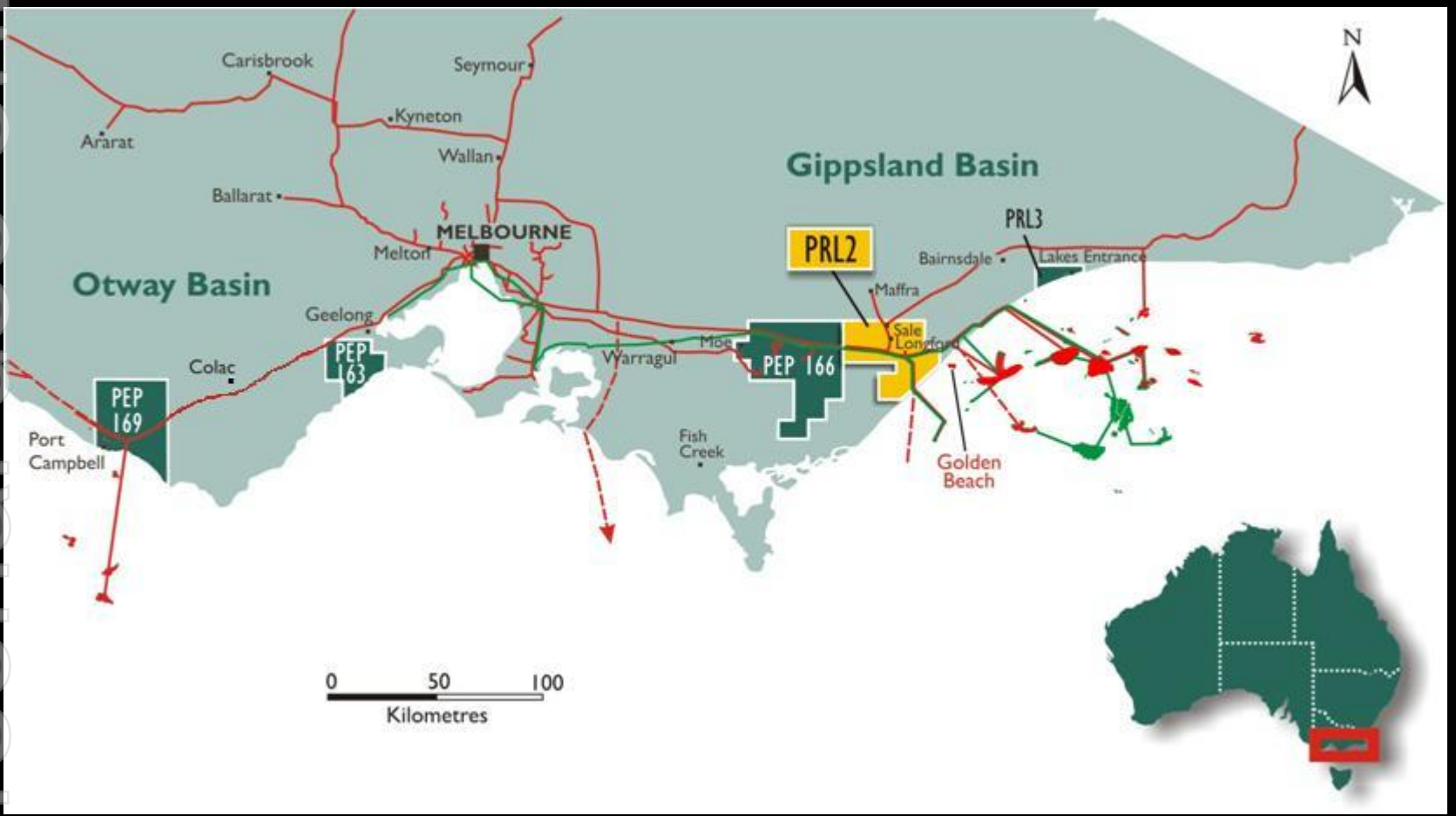
The oldest oil and gas exploration company in Australia, getting to produce from Victoria's new gas province – onshore Gippsland Basin

ersonal use only



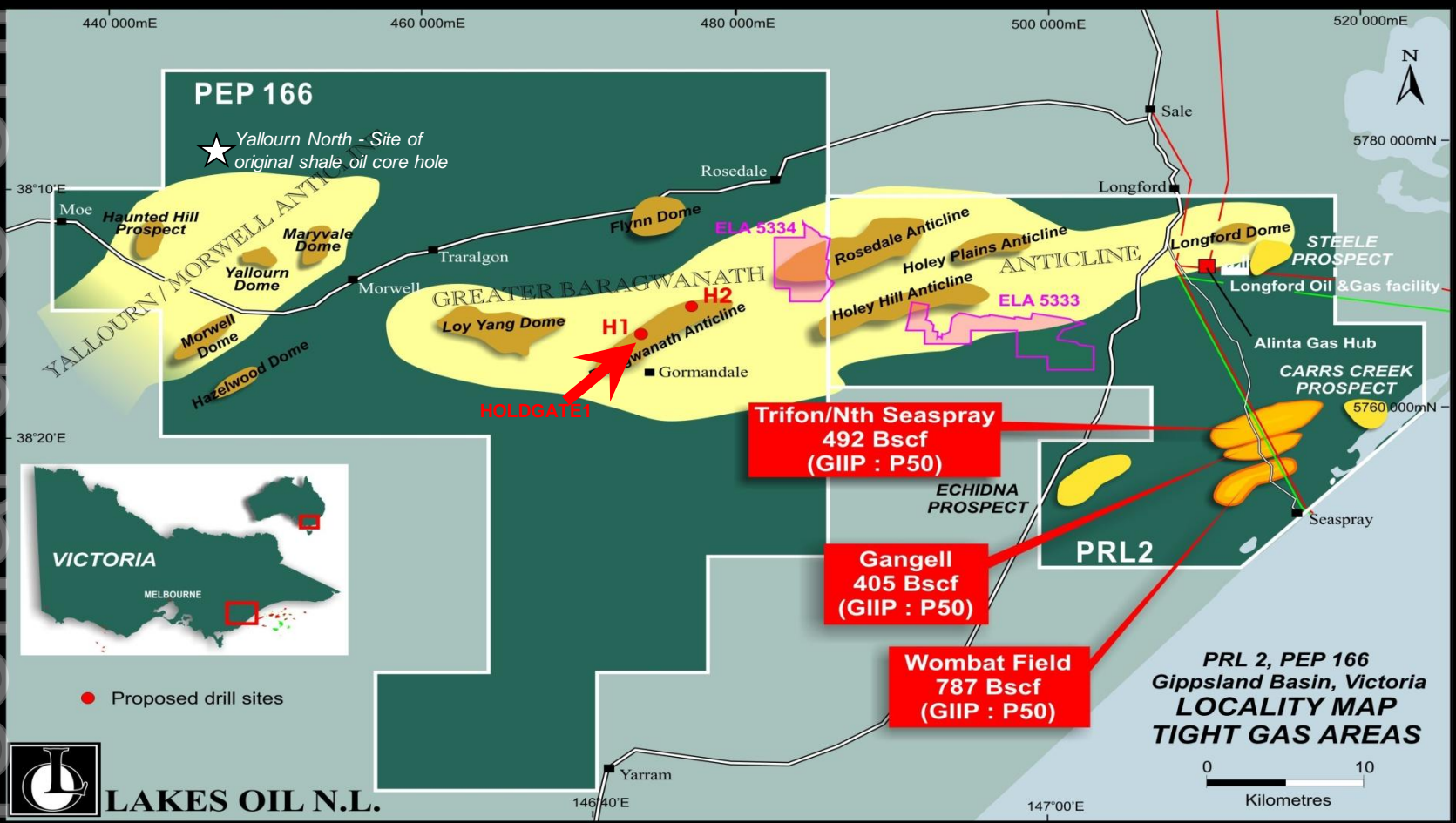


ersonal use only





Personal use only



● Proposed drill sites



LAKES OIL N.L.

**PRL 2, PEP 166  
Gippsland Basin, Victoria  
LOCALITY MAP  
TIGHT GAS AREAS**





## COMMERCIALITY THROUGH NEW TECHNOLOGY

Lakes Oil has learned a tremendous amount about the onshore Gippsland Basin following the investment of over \$50m in drilling, stimulating and testing activities:

- Unique position to market
- Next to one of Australia's major gas hubs
- Service entire eastern seaboard (commercial centre of Australia)
- Capital costs considerably lower than offshore.

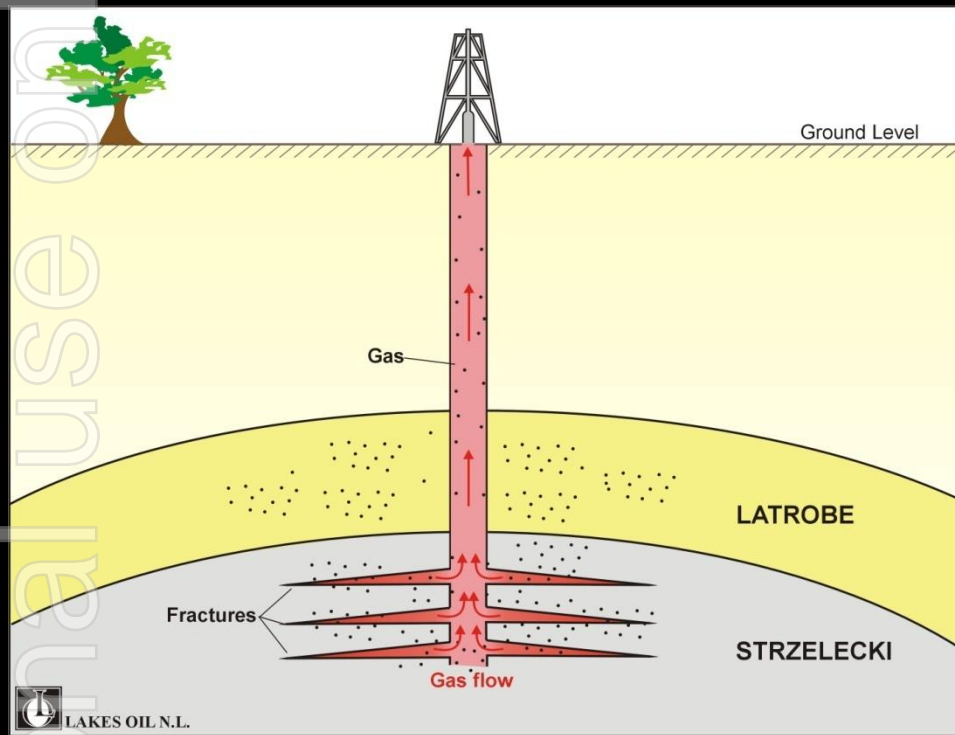


## What Is A “Hydraulic Fracture” ?

- The use of fluids to apply hydraulic pressure to create a crack in a rock formation
- The continued injection of fluids into the created crack or “fracture” to make it grow larger
- The placement of small granular solids into the crack to insure the crack remains open after the hydraulic pressure is no longer applied
- Increase the rate at which the well is capable of producing oil or gas
- Increase the economically recoverable reserves for a well (although it does not change the total reserves in place)



# Hydraulic Fracture Stimulation

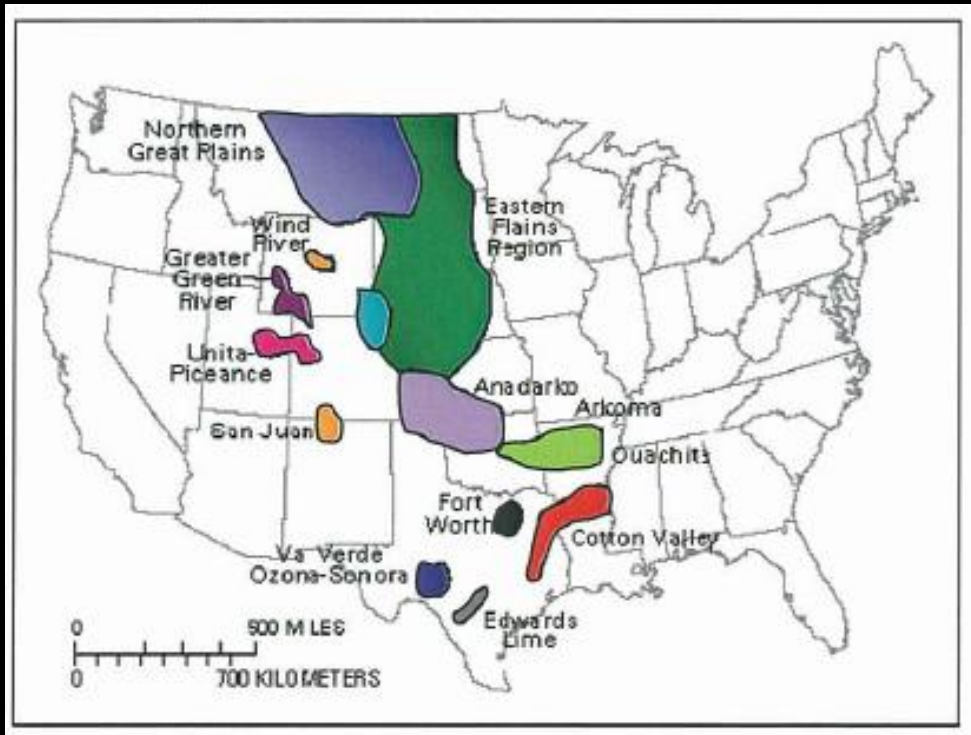


- **TECHNOLOGY CHANGES OVER THE LAST 10 YEARS**
- Sequential multiple zone stimulation.
- Increased fracture propagation length.
- Dramatic improvements in synchronised breaker technology.
- Improved computer modelling to allow accurate pre-frac predictions.
- Improved frac plug technology associated with mono-bore completions.
- Improved pinpoint fracturing with coiled tubing.

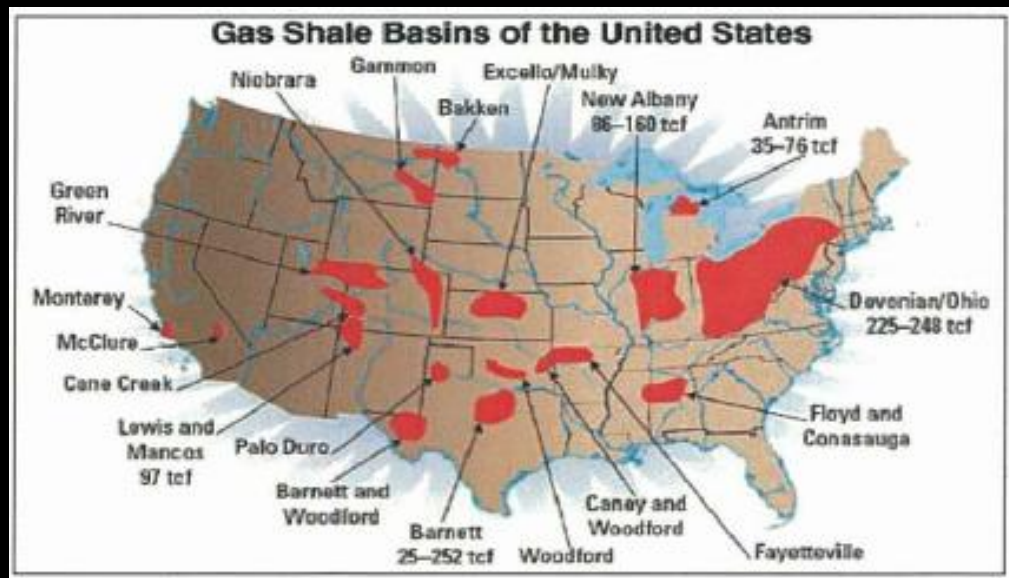




## USA Tight Sands Basins



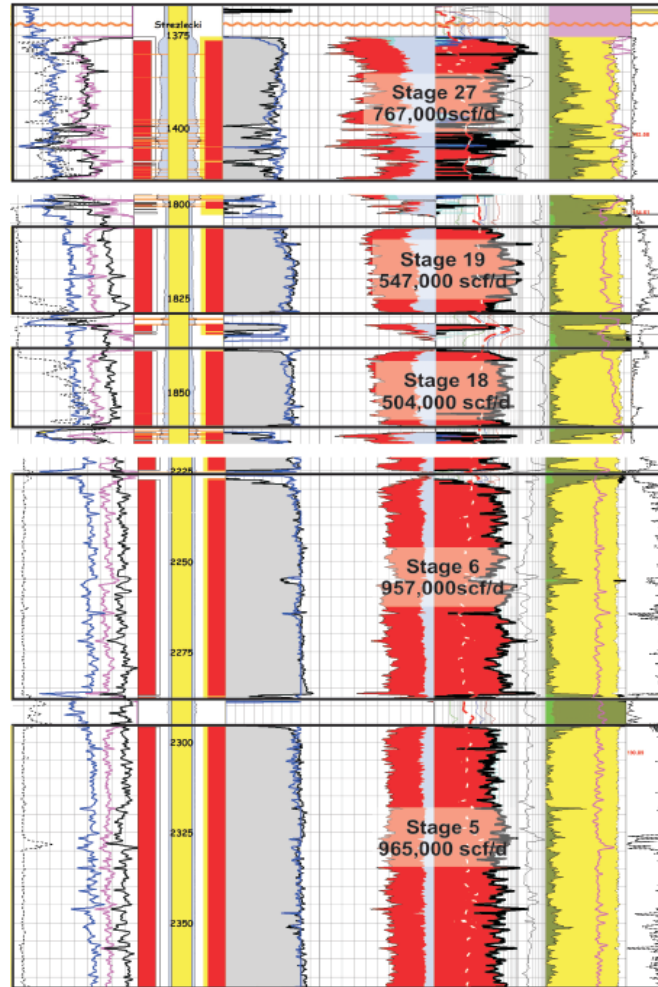
## Shale Gas Basins in U.S.



ersonal use only



# Key Assets – Wombat 4



Wombat 4:  
*5 best selected gas zones from the log of the Strzelecki Group estimated total production after fraccing of ~3.7 mmscf/d (using a 200' fracture length)*



# PRL2 Development

Lakes Oil is working towards commercial development of its Gippsland Basin tight gas sands resources in PRL2:

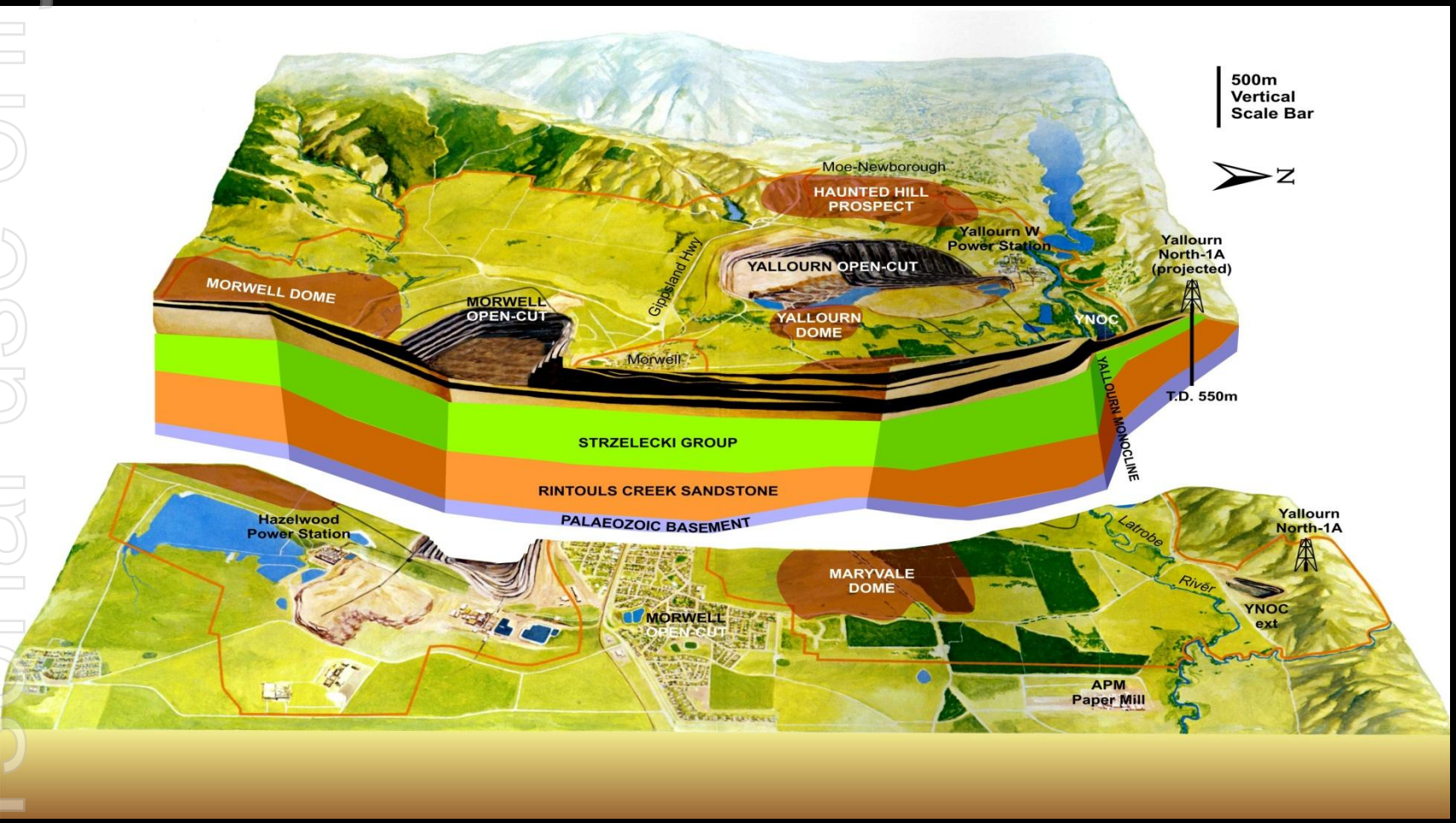
- Wombat Field estimated gas-in-place: ~787 Bscf
- Trifon Field estimated gas-in-place: ~492 Bscf
- Gangell Prospect estimated gas-in-place: ~405 Bscf

Lakes Oil plans to commercialise these fields by employing optimal drilling, fracture-stimulation, and completion techniques

ersonal use only



ersonal use only





- TOC: 7.52%
- Porosity: 10.9%
- Oil extracted
- VR: 0.64% (mature)

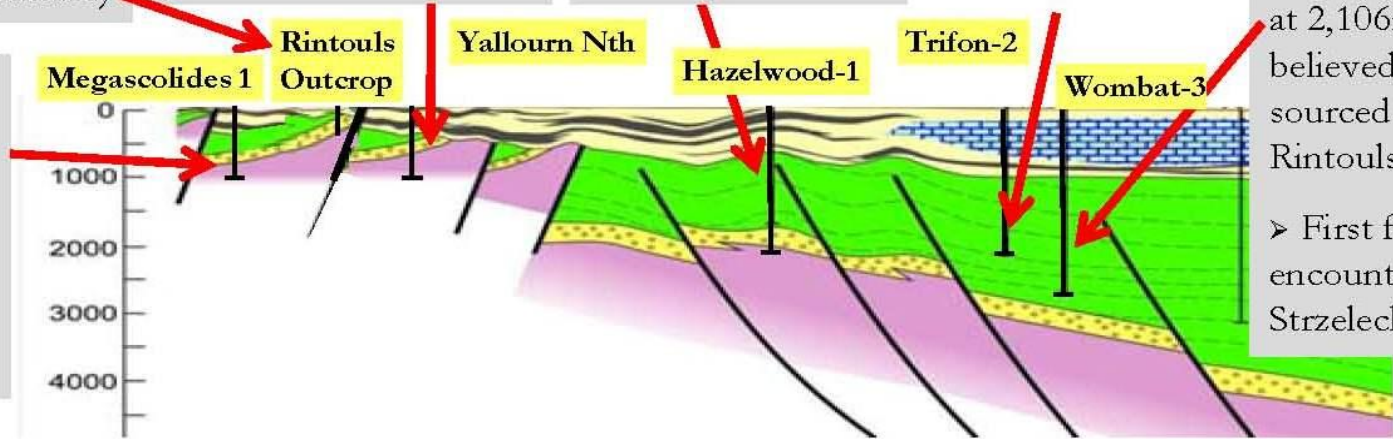
- Oil show in Strzelecki
- Rintouls section contains numerous **oil shale intervals** mature for oil

- 250m thick **carbonaceous shale** intersected below Strzelecki

- 2,000 bbl water **flow** from **fracture** at 2284m depth

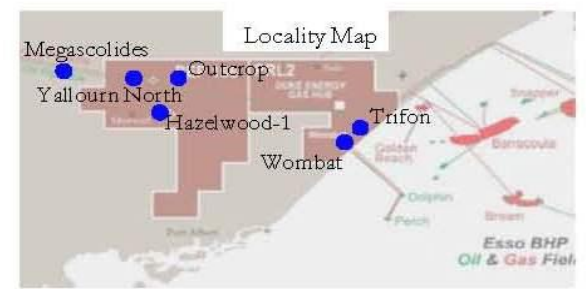
- 9 bbl free **oil** flow from **fracture** at 2,106m depth: believed to be sourced from the Rintouls Ck shales
- First free oil encountered in Strzelecki

- Oil in Rintouls sandstone:
- 60% **oil saturation**,
- 10-15% porosity



Not to scale

- Latrobe Valley Group
- Seaspray Group
- Strzelecki Group
- Rintouls Creek Formation
- Basement

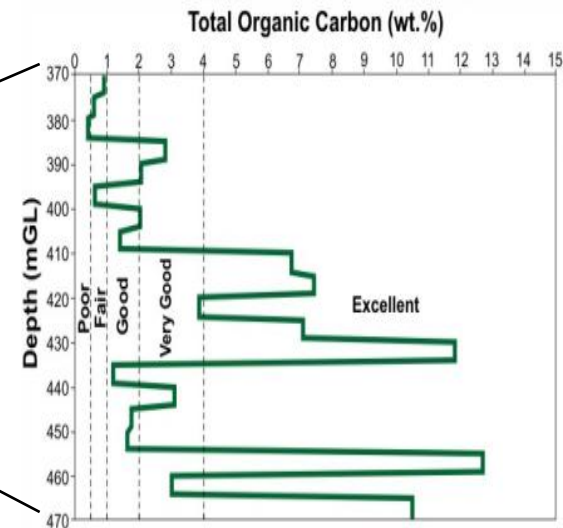
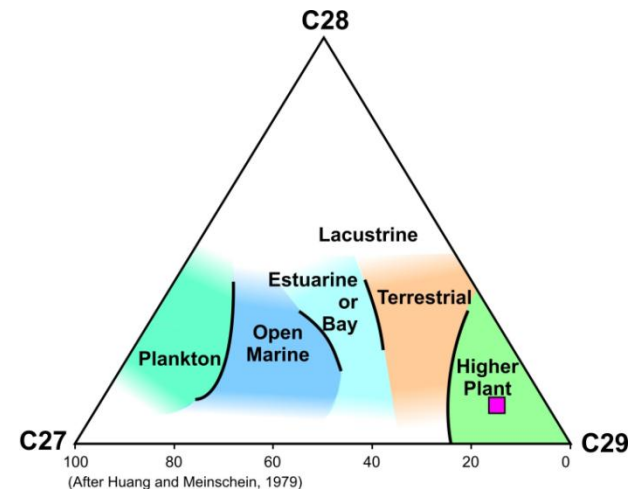
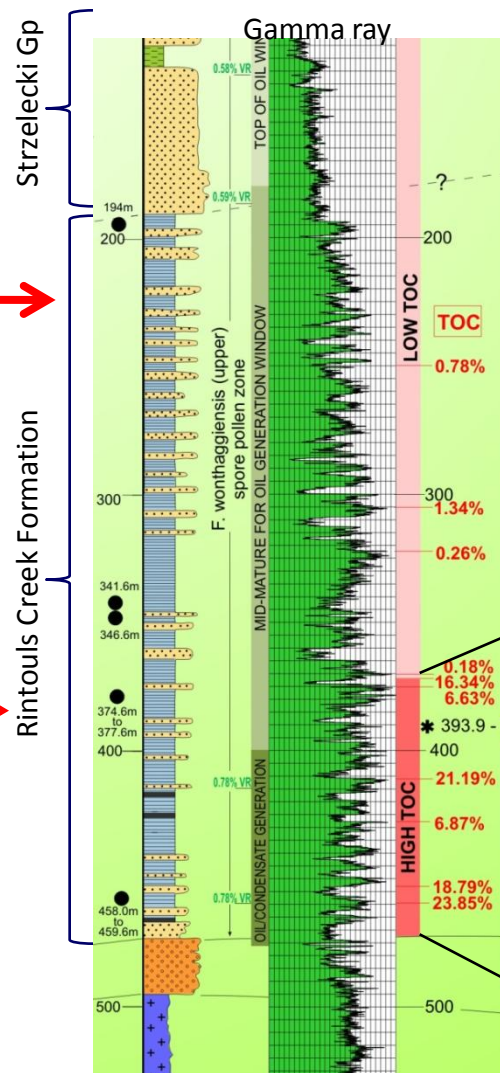




# Yallourn North Geochemistry

## Rintouls Creek Formation: Organically Rich

- Oil show within Strzelecki Group
- Interbedded porous sandstones with low-fair TOC are potentially very good reservoirs
- Fair-to-excellent TOC content in lower 100m source rock section
- Isosterane plot suggests organic matter of higher plant terrestrial source



Well continuously cored