



TIGHT GAS IN THE GIPPSLAND BASIN





TIGHT GAS

- WHAT IS IT
- WHERE IS IT
- HOW MUCH IS THERE
- HOW WILL IT BE DEVELOPED
- WHO OWNS IT
- WHAT IS IT WORTH

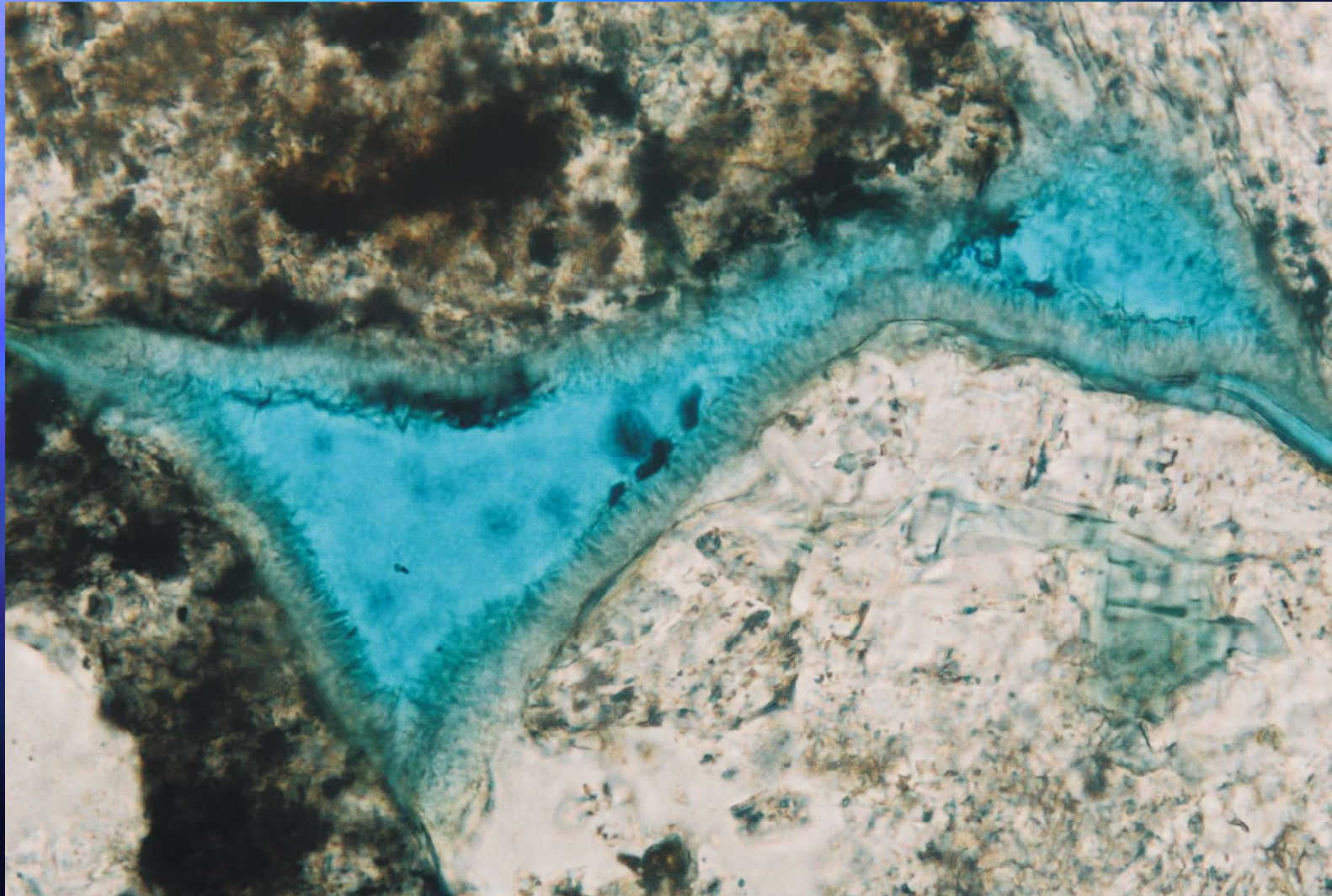


WHAT IS IT

- Gas reservoir in low permeability rocks
- In North America < 0.1 md
- Usually clay rich
- Smectites swell 48 times by volume when hydrated
- Conventional drilling and completions unlikely to succeed

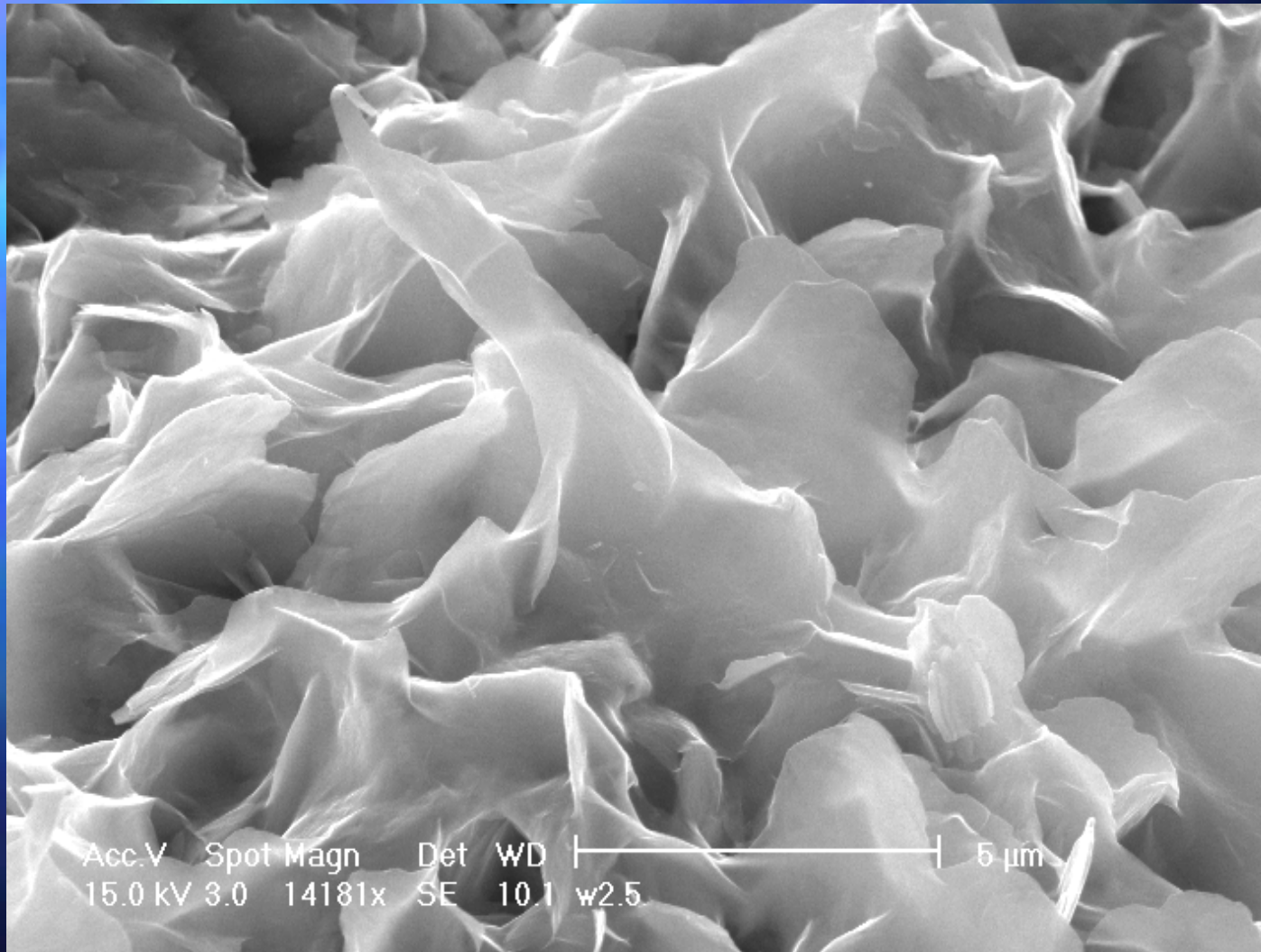


Clay coating in pore throat



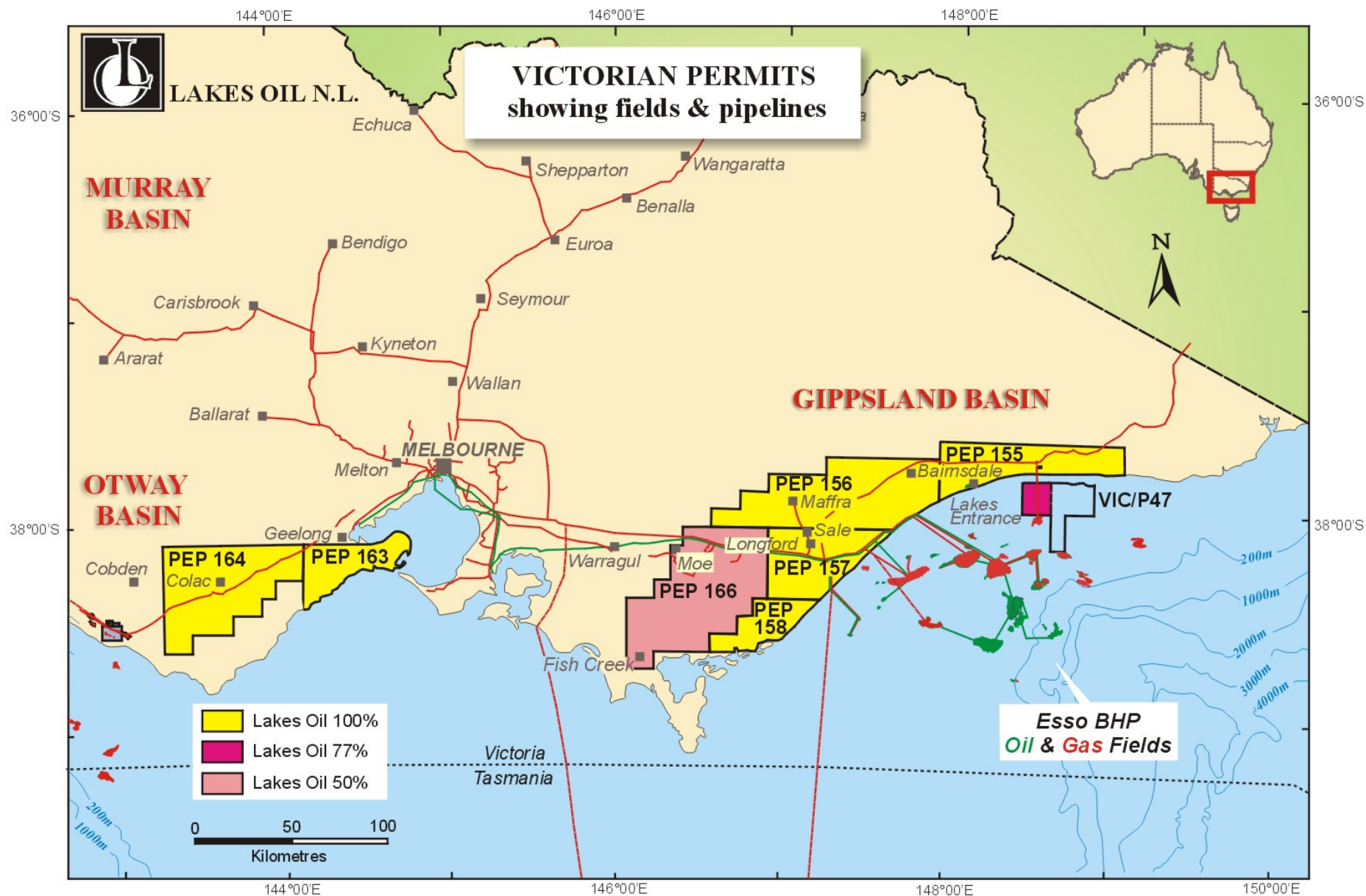


Wombat 2 Smectite





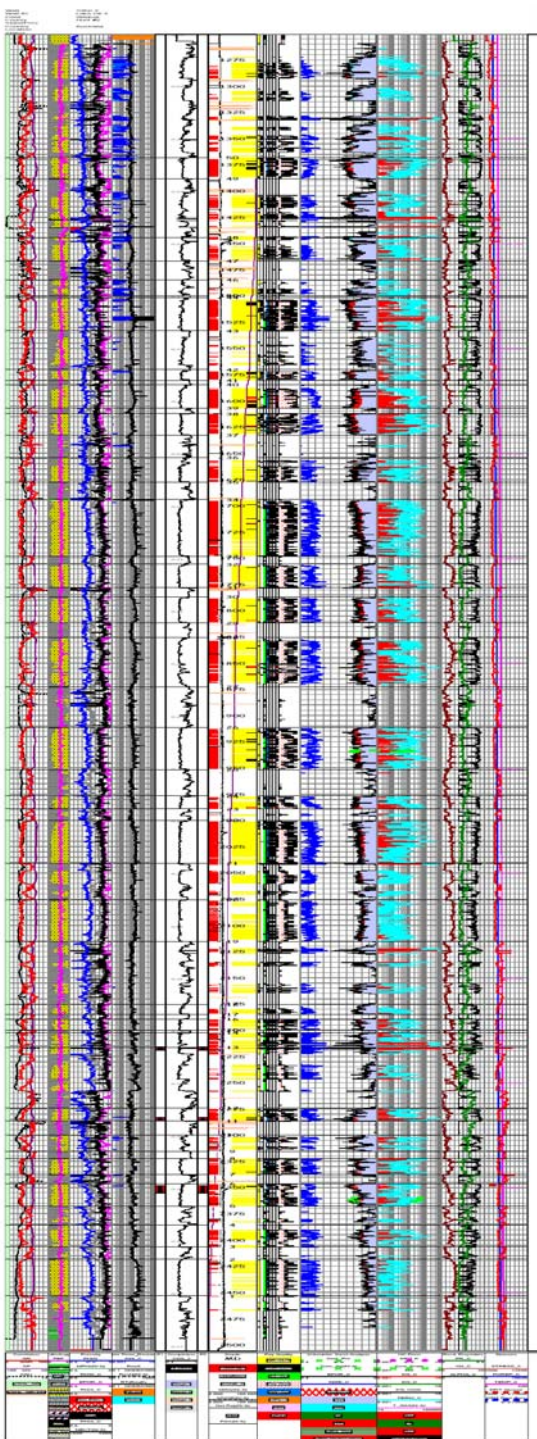
VICTORIA PERMIT LOCATION MAP





WHERE IS IT

- Onshore Gippsland Basin
- Eastern Australian hub
- Strzelecki Group sediments
- Clay rich clastics with disseminated coal
- Poor permeability around 0.2 md
- Long gas columns
- Two fields Trifon and Wombat





HOW MUCH IS THERE

- Trifon could be as much as 2.8 Tcf
- Wombat could be as much as 0.8 Tcf
- Numerous stacked reservoirs each 20m to 50m thick



HOW WILL IT BE DEVELOPED

■ FRACTURE STIMULATION

- Creates a superhighway to the well bore
- 5 fracs conducted
- Frac gradient 0.5 psi per foot
- Technically feasible







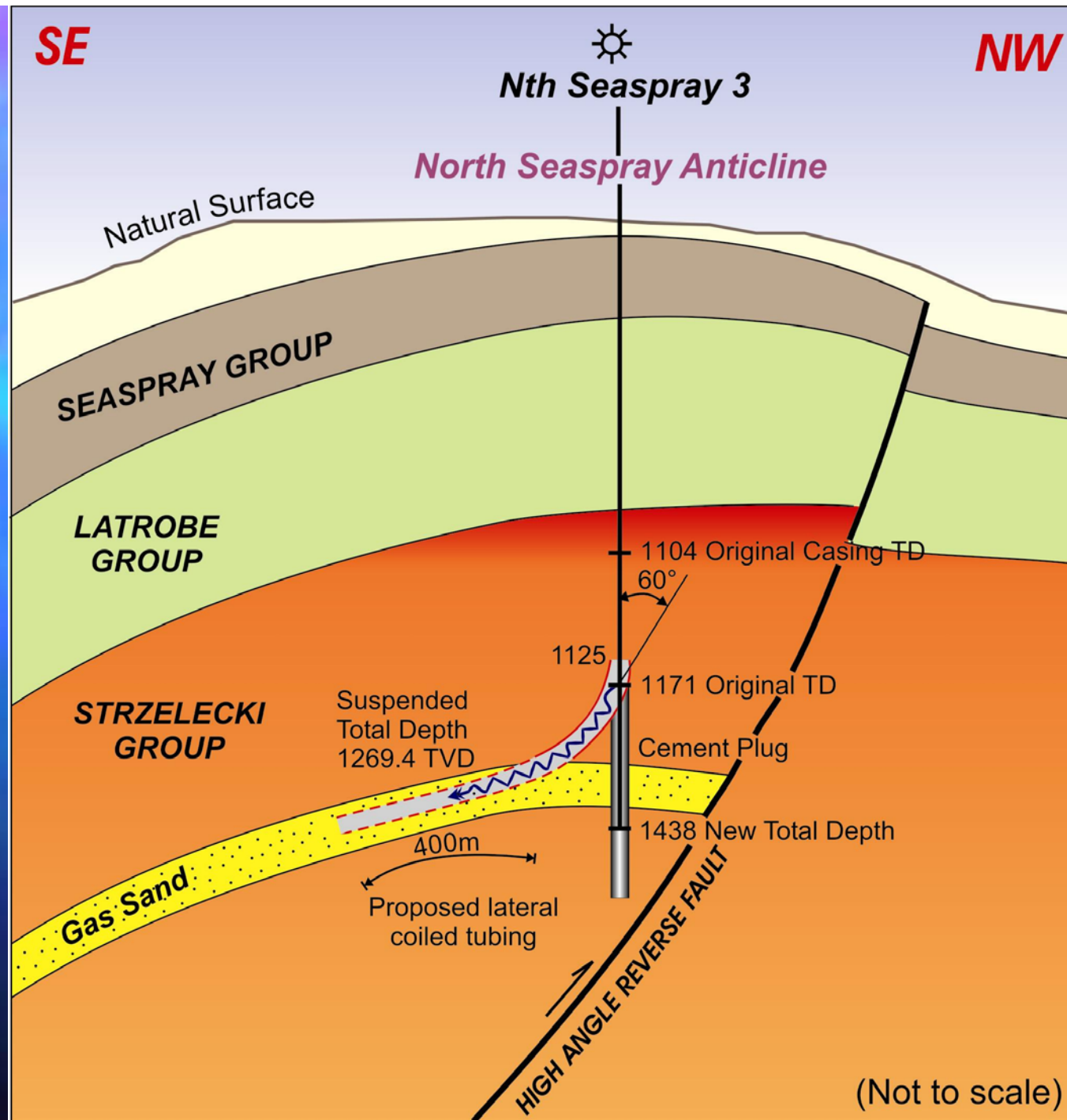




HOW WILL IT BE DEVELOPED

UNDERBALANCED DRILLING

- Horizontal lateral
- 300 m length
- Coil tubing drilling
- Base oil with N₂





Coil Tubing Drilling





WHO OWNS IT

■ Trifon

- 50% Lakes (LKO), 50% Jarden Corporation (unlisted)

■ Wombat

- 92.5% Lakes
- Roma 5% ORR (LKO holds 16% of RPM)
- 7.5% private investors



WHAT IS IT WORTH

- Australian trade sales for developed proved and probable reserves sell for around A\$1 million per Bcf
- A 500 Bcf gas field therefore worth around A\$500 million
- AWE and Origin spending A\$500 million to develop 300 Bcf
- LKO market cap at 5 cents is A\$ 63 million



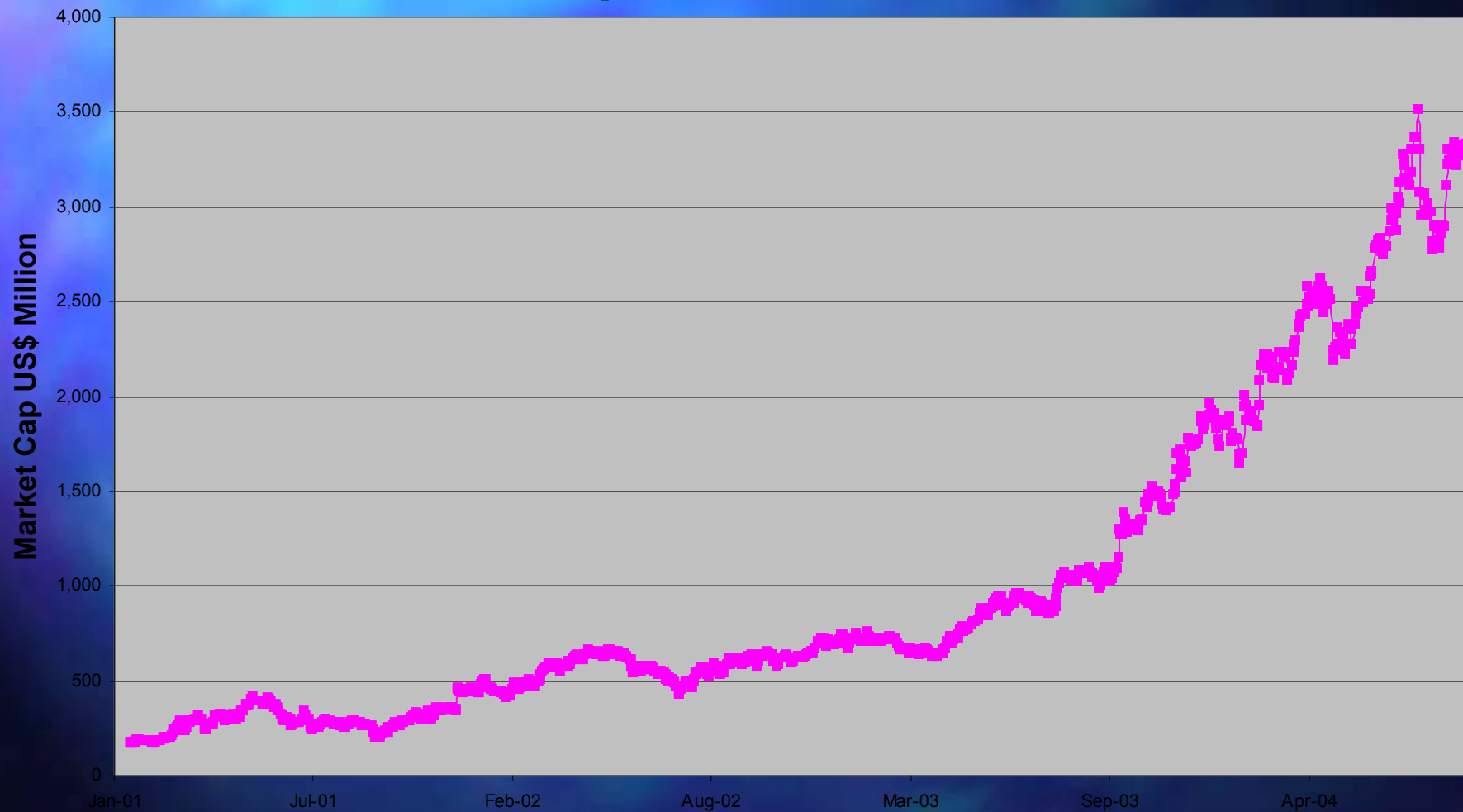
WHAT IS IT WORTH

■ Case Study Ultra Petroleum

- Reserve currently quoted at 1073 Bcf
- Market Cap US\$3.5 billion
- Market Cap growth from US\$ 177 million in January 2001 to US\$ 3,500 million today
- Represents an average growth rate of US\$70 million per month
- Growth resulted from development of the Pinedale tight gas resource
- Same rock type as Strezlecki Group

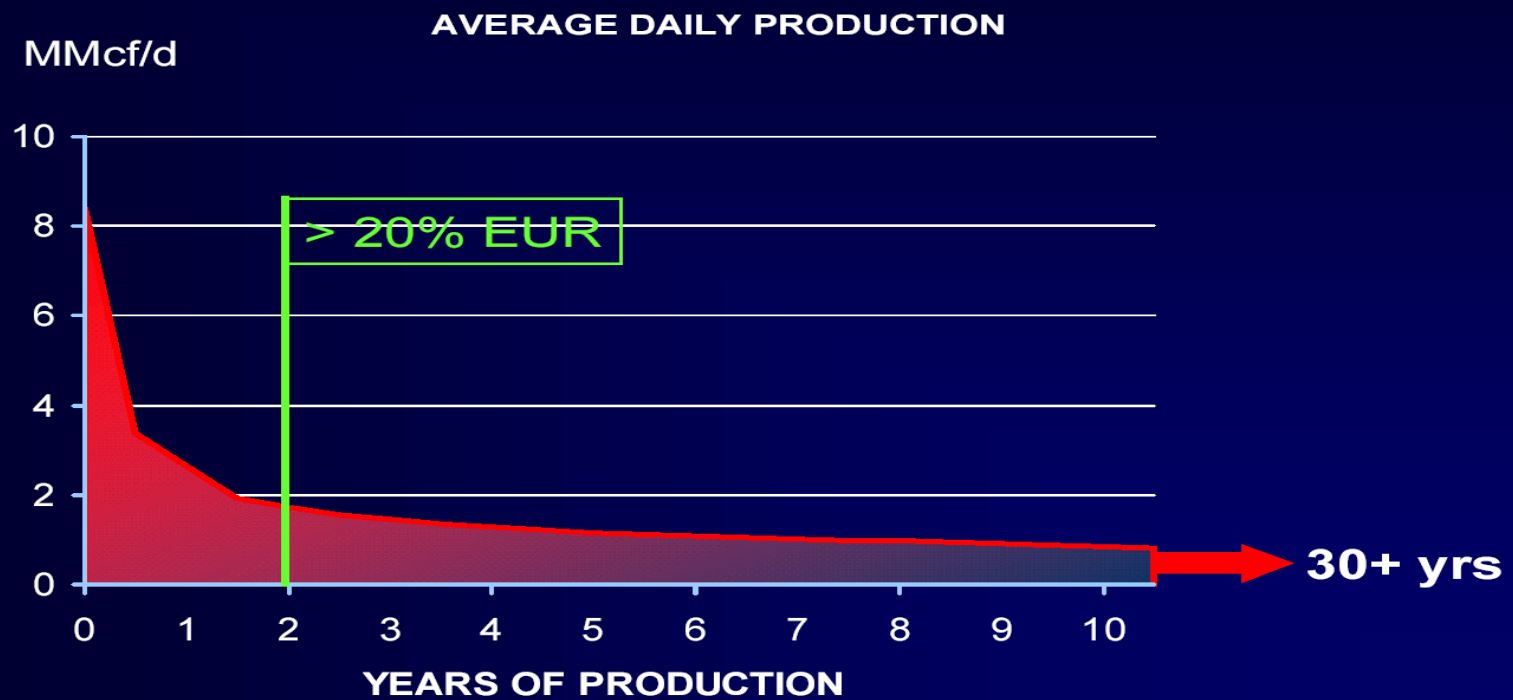


Ultra Petroleum Market Capitalization





Typical Pinedale Well Production Profile







Gippsland Programme

■ Wombat 2

- One zone fracture stimulated
- Flowed at rates between 1.2 and 0.6 mmcfpd

■ Wombat 1

- Multiple zone completion
- One frac attempted
- Completion includes a water leg
- Gas production inhibited by water holdup



Gippsland Programme

■ TRIFON 2

- Monobore well construction
- Requires bottom up treatment
- Three fracs conducted
- Bottom one flowed back gas
- Second one not flowed back for expediency
- Third frac intersected fault zone
- Produced water
- Workover will squeeze water zone continue up hole with fracs



Gippsland Programme

■ NORTH SEASPRAY 3

- Top hole completed deviated 4 ½ inch casing set in top of reservoir
- Production hole to be drilled with a coil in mid November
- Underbalanced with base oil and Nitrogen



Gippsland Programme

■ WOMBAT 3

- Located between W#1 and W# 2
- Spuds today
- 7 inch casing to be set in top reservoir
- Top reservoir to be drilled with KCl treated water



Gippsland Programme

■ ECHIDNA 1

- Strzelecki Group target in structural trap
- Same style as Trifon/ Wombat
- Ready to be drilled

