



Australia PETROLEUM

South Australia



State of play in SA

- SA and Qld Cooper-Eromanga basins remain Australia's largest onshore oil and gas producer
- Huge potential for gas in Cooper Basin unconventional reservoirs, including the world's deepest coal seam gas
- Work program bidding in Cooper & Otway
- Over-the-counter applications elsewhere, max area 10,000 sqkm (2.471 million acres)
- Application fee A\$4,348

Oil & Gas licences:

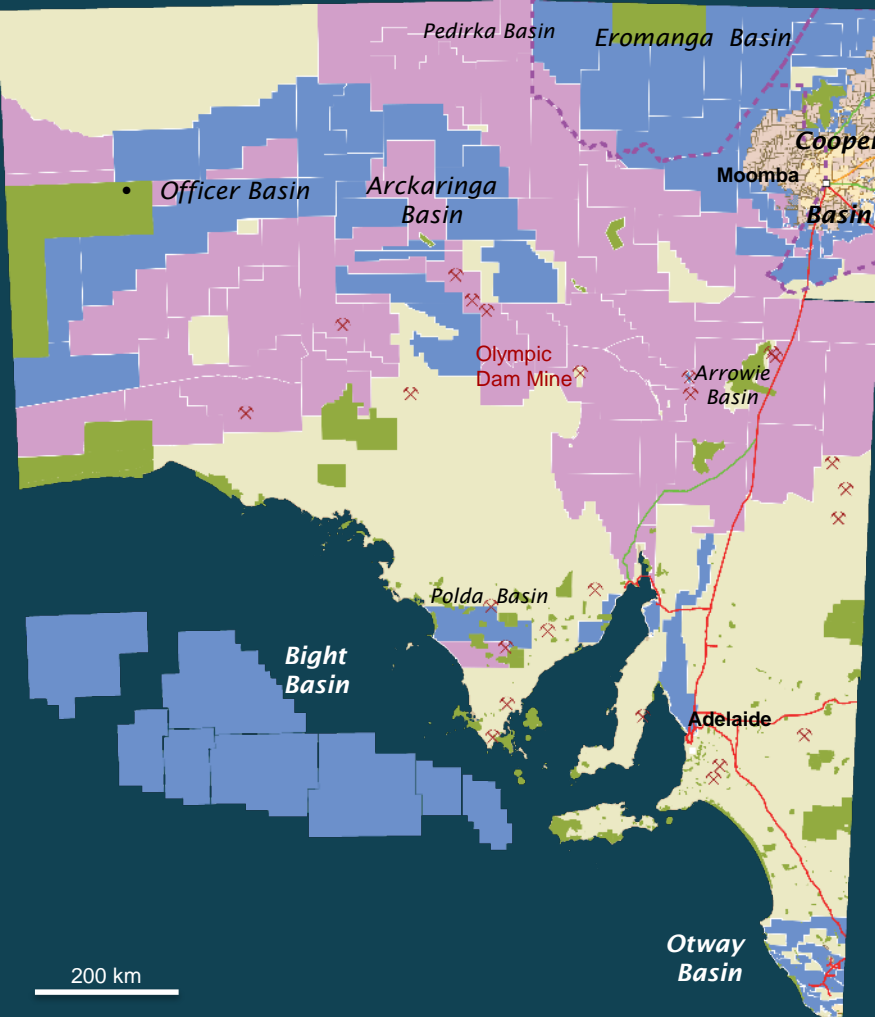
- Exploration
- Exploration - application
- Production
- Retention

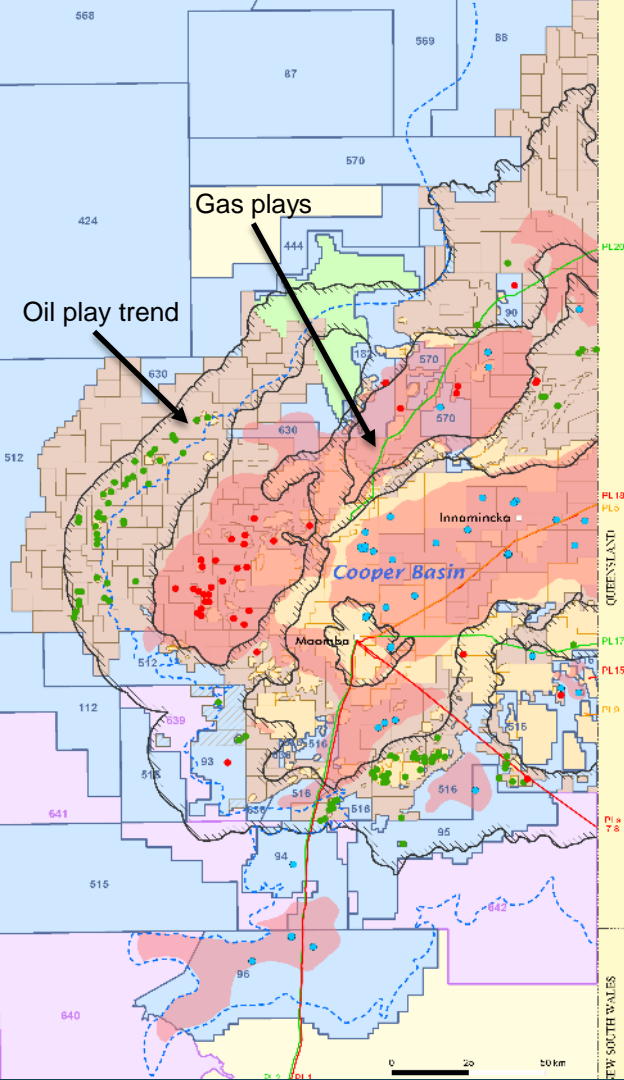
Pipelines:

- Gas
- Gas & liquids
- Oil
- Selected mine

ILUA

No access parks





Cooper Basin acreage

No current releases

Work program bidding

Acreage release bid rounds:

- 5 year work program – scoring method published, and
- evidence of financial and technical capacity.

Winning bids published

Petroleum tenements

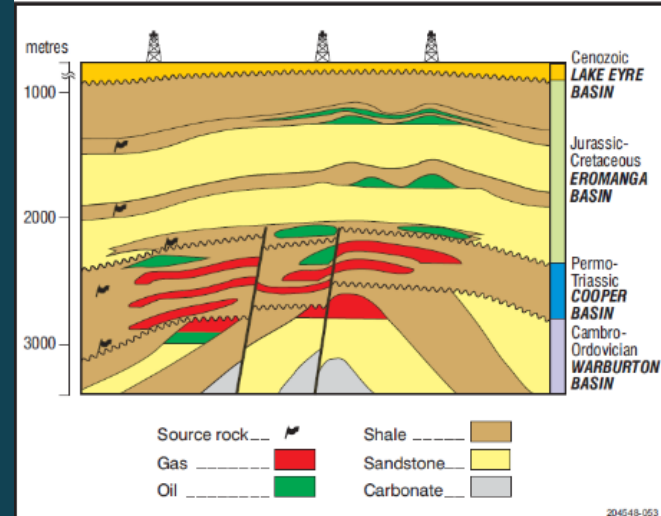
- Exploration
- Production
- Exploration application
- Retention

Pipeline

- Oil
- Gas
- Gas and liquids

Discoveries 2002–16

- Oil
- Gas
- Resource play



Cooper Basin Oil

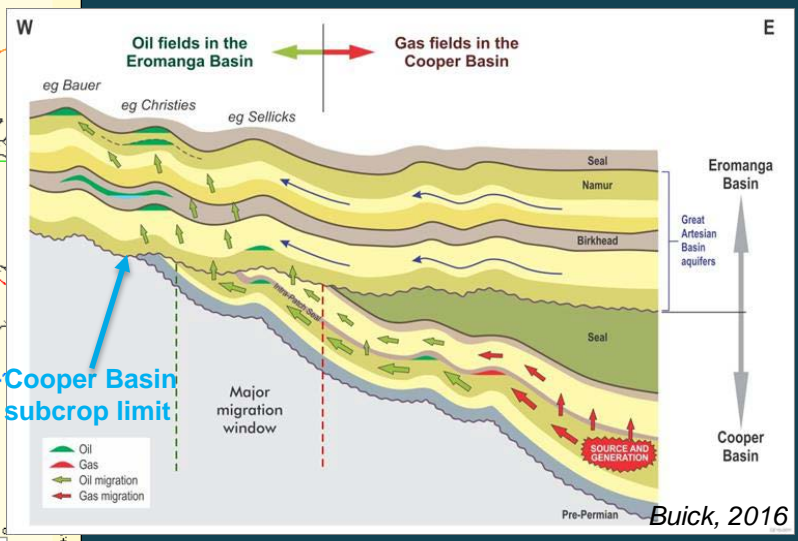
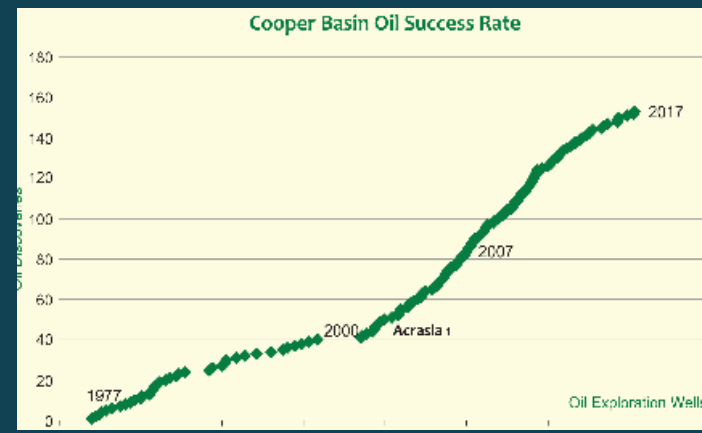
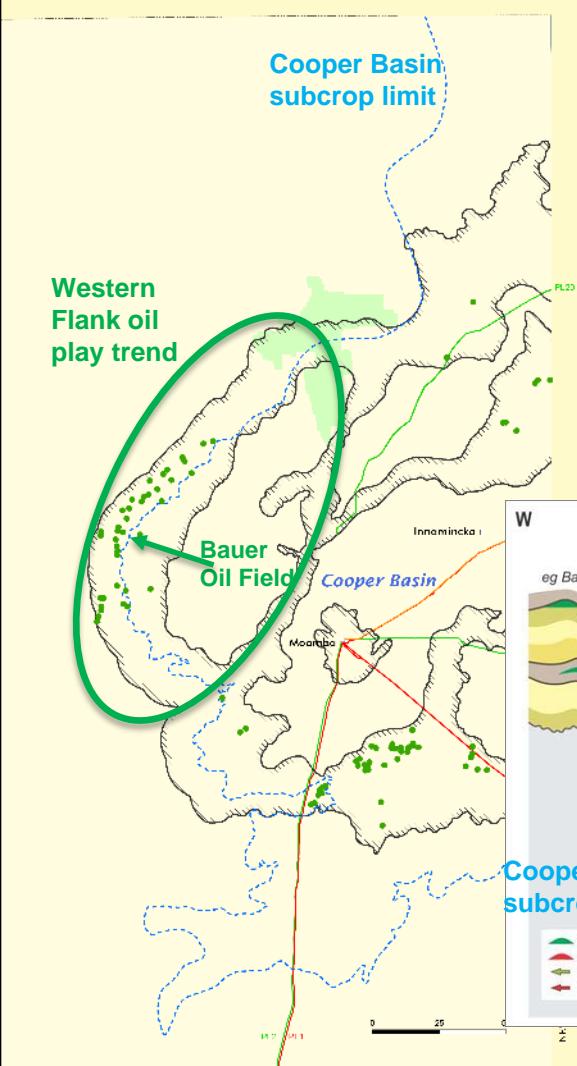
- Discoveries continue on the Western Flank oil play trend
- 3D seismic - structural & stratigraphic traps ('hose on nose')
- Excellent sandstone reservoirs
- ~ 50% success finding average 2.5 mmbo recoverable

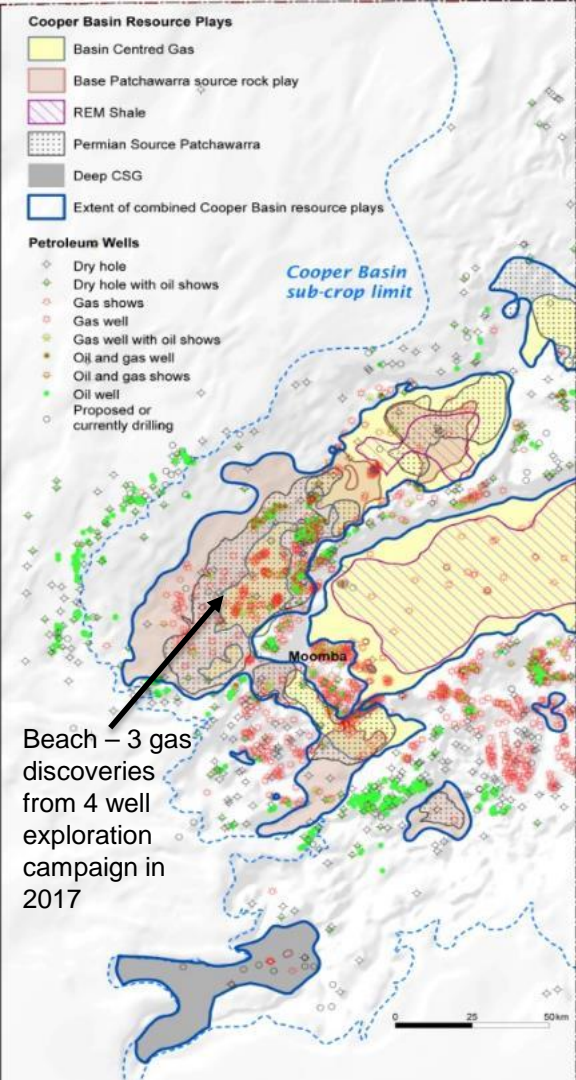
Case study - Bauer Oil field

- Subtle anticline (pre-drill mean recoverable resource 0.5 mmbbl)
- Mapped on 3D & drilled in 2011
- Reservoir 1400m, 45 API oil, recovery factor ~75%
- Production 6,900 bopd
- Bauer 26 is first horizontal well in a new oil pool - 350m net oil pay
- In 2017 - 26 wells, 2P EUR ~20 mmbbl

The Bauer Field, Cooper/Eromanga Basin: Case Study of a Low-Relief, High-Productivity Oil Field.

Glen Buick. AAPG Search and Discovery Article #110225 (2016)





Cooper Basin Gas

Conventional Gas Plays

- Structural and structure-stratigraphic traps, sandstone reservoirs, coal and shale source (6.5 TCF produced)

Unconventional Dry to Wet Gas Plays

- Deep self-sourcing coal – world's deepest CSM
- Mixed reservoirs with coal and shale source
- Tight sandstone reservoirs
- Strong focus on deep coal play

GA and DSD 2016 assessment of in place unconventional reservoirs in the Cooper Basin:

- 669 TCF C1-C5 Sales Gas-in-Place
- 80 billion C6+ Bbls Gas Liquids / Oil-in-Place

No applications for OT2017 release.

Work program bidding.

Conventional & unconventional oil & gas plays.

Connected to SE Australian gas market,
Katnook gas plant currently mothballed.

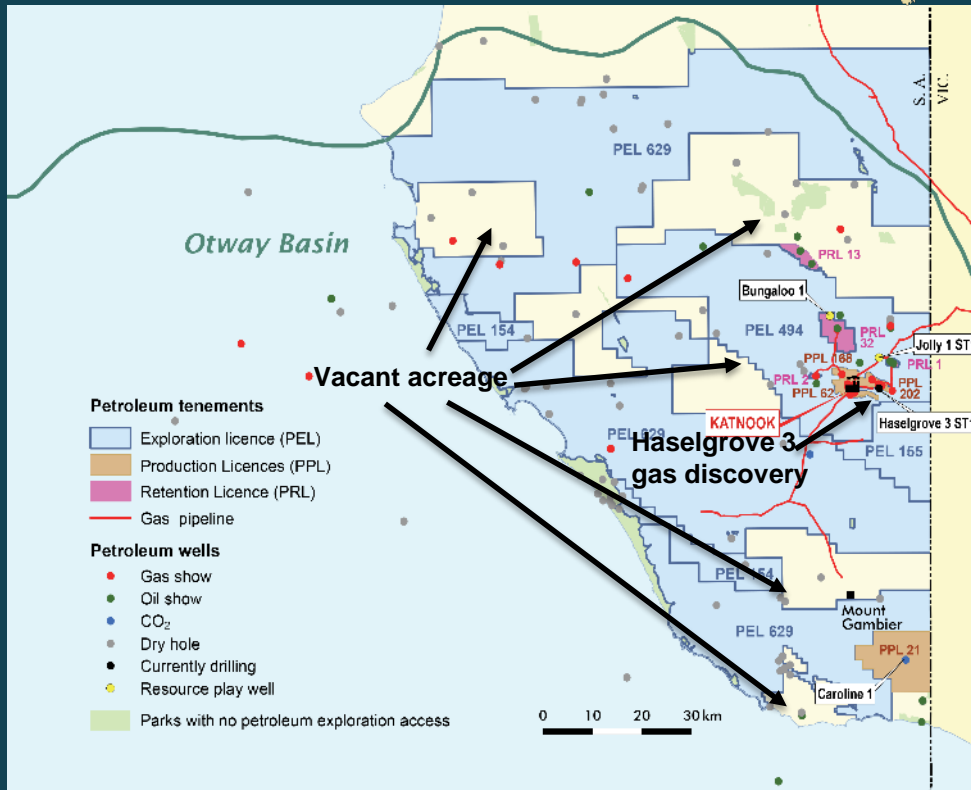
PEL 629 granted to Ouro Preto Resources
(Cabot Energy Plc) in 2014.

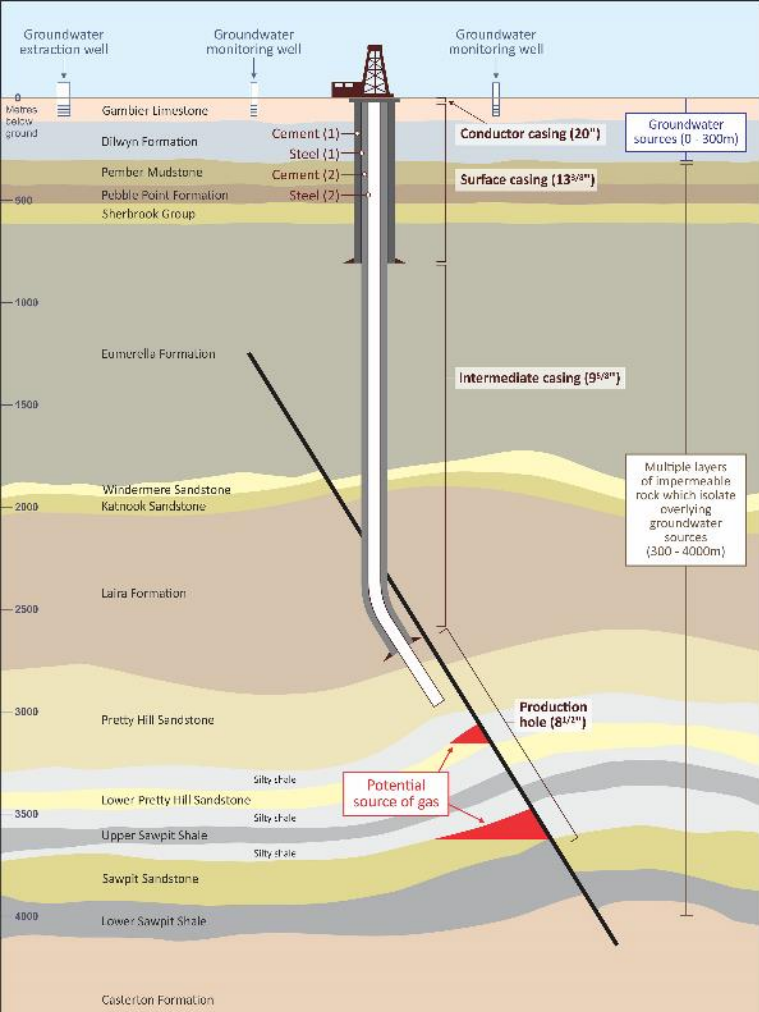
PELs 494 and 495 - Beach Energy Jolly 1 &
Bungaloo 1 (2014) targeted conventional
reservoirs + deeper unconventional targets.

Recent Beach Haselgrove 3 gas discovery

Caroline 1 – Air Liquide CO₂ well to be
decommissioned, has produced up to ~60 bbl
heavy oil/yr.

Otway Basin

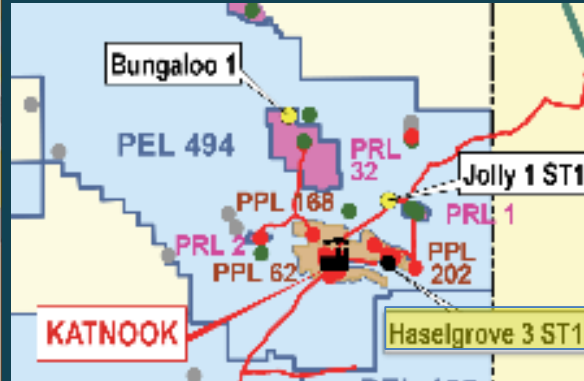




From Beach Energy

Haselgrove 3 gas discovery

- New Otway Basin gas discovery
- Made possible by a US\$4.8m *PACE* Gas grant
- Announced by Beach Energy Jan 2018
- Constrained flow rate ~ 25 MMscfd - Sawpit Sst.
- Estimated gross gas column 104 m Sawpit Sandstone, net pay 25.6 m (TVT)
- Estimated gross gas column 11.6 m Pretty Hill Sandstone, net pay 8.5 metres (TVT)
- Initial production test planned in February 2018



Haselgrove 2 (1994)



Roundtable for Oil & Gas in SA

Designed to inform industry strategies, government policies, and regulations to facilitate oil & gas projects in ways that SA communities welcome.

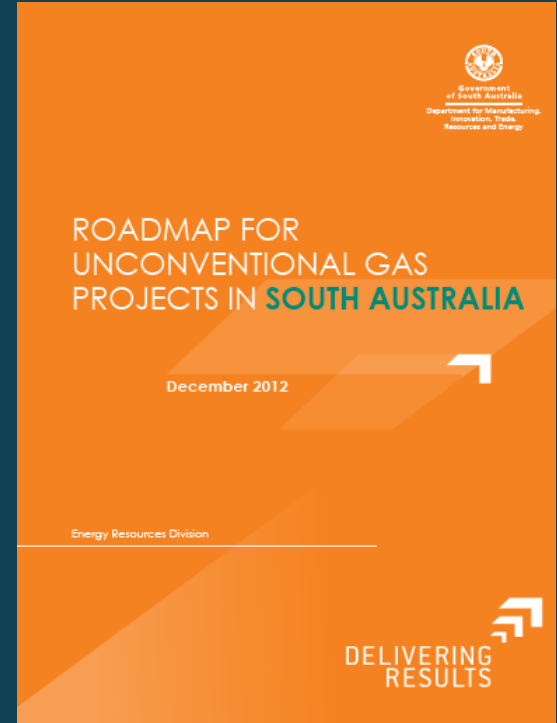
>2,000 members, >1000 organisations & ~30 individuals (including activists).

8 working groups addressing priorities ranked by Roundtable membership:

- Training – Tonsley Centre of Excellence;
- Cooper Basin supply hubs, roads & air strips;
- Cooper Basin water use;
- Transport – minimise cross border red tape;
- GHG detection;
- Supplier forum;
- Gaseous fuels for transport & heavy machinery;
- Sharing Information.

New members are welcome

http://petroleum.statedevelopment.sa.gov.au/roundtable_for_oil_and_gas



Strategies

- **Objective-based legislation and regulation** - gain and sustain public and investor trust.
- Sustain **'one window into government'** for petroleum projects.
- Native Title **land access agreements** that are fair and sustainable.
- **Pre-competitive studies** to reduce critical uncertainties.
- Focus on **building trust and reducing uncertainties**.
- **Oil and Gas Royalty Return Scheme** – provides freehold landowners and perpetual leaseholders with a 10% share of State royalty collected from new discoveries - a first for Australia.
- State Energy Plan **A\$48 m PACE (Plan to ACcelerate Exploration) Gas Grants** to deliver more gas soonest to SA power generators. Two grant rounds produced a diverse portfolio from plant optimization to free up gas to market, pipelines for stranded gas and drilling Haselgrove 3 gas discovery.

South Australia's door is open.

Rated most attractive petroleum jurisdiction in Australia by Fraser Institute

Bight Basin attracting billions in exploration investment

Cooper Basin remains Australia's largest onshore oil and gas province

A framework placing local companies into a global supply chain

Australia's first roadmap for unconventional gas projects

Oil and gas roundtable with hundreds of members working to address priorities



www.petroleum.dpc.sa.gov.au

