Late Palaeozoic
Mesozoic
Neoproterozoic to middle Palaeozoic

Shows in SA basins

Santos Wilkatana 1 (1955):
Cambrian oil shows focussed interest on SA
Conventional oil and gas

Frontier and mature basins

Unconventional plays:
  - shale gas, tight gas
  - coal seam gas
  - coal gasification plays
  - 9 unconventional plays being chased by 24 JVs

Work program bidding - onshore Cooper and Otway

Frontier onshore basins - over the counter at any time.
Land access agreements

A variety of access agreements with native title claimants and indigenous owners are in place for 42 PELs.

Agreements cover exploration and production phases.

Agreements are fair to indigenous people and sustainable for petroleum E&P.

Agreements are available to public via online tenement register.
CO2012-A acreage release open now

- PEL 111 relinquished acreage
- Comprises 2 parts, 392 sq km (96,865 acres)
- 1 well and 581 km 2D in the block
- 22 wells on nearby Charo /Snatcher field

Potential plays

- Western Flank oil discoveries generate high margin cash flows with pay back less than a year.
- 3D seismic a critical success factor
- New unconventional plays (e.g. Merrimelia Formation shale oil play)
- Cambro-Ordovician marine Warburton Basin

Ongoing turnover – more releases coming

The Cooper Basin is most likely onshore basin to generate significant unconventional (shale and basin centred) production in the medium term.
World class success rates

Discovery ⇒ oil production in months

Existing infrastructure minimises up-front CAPEX

Productive play trends

Proven play find-size now modest but 3D enabling <1mmbo finds

New unconventional gas plays

Cooper Basin oil discoveries

Acrasia 1 (2002)

New exploration phase

Cooper Basin gas success rate
Cooper Basin unconventional gas history

- **1998**: Cooper Basin JV – 4m Patchawarra coal seam cored for desorption analysis (Dorodillo 2).
- **2006**: Cooper Basin JV - 9.4m Roseneath Shale core (Moomba 175).
- **2007**: Cooper Basin JV – 100,000 scf/day from a fracced Patchawarra Formation coal (Moomba 77 gas development well).
- **2010**: Strike Energy drill first dedicated CSG well in the Cooper Basin – Forge 1
- **2010**: Beach Energy drill first dedicated shale gas well – Encounter 1
- **2012**: Cooper Basin JV: Moomba 191 first commercial unconventional gas production in Australia

Moomba 77 – Patchawarra Formation

Total Gas

0.1 1 10 100 1000

Moomba 77 – Coal Frac, 100,000 scf/d, 9000 ft

10m coal seam at ~2900m ~900 units Total Gas

Asphaltite, Kangaroo Island (indicates local oil source)

Otway Basin

OT2012-A block

• One large block, 5660 km²
• 22 wells, 4450 km 2D
• 90 wells in SA onshore Otway basin
• Gas production since 1991
• Conventional gas and oil, shale oil play
• Pipeline infrastructure - access to SE Australian gas market
• Bids close 4 April 2013
Acreage Release DVD available

- Work program bids close 4pm 4/4/2013
- The Minister is expected to announce the winning bidders around APPEA 2013 Conference in Brisbane, May 2013
- Get your free copy of the Acreage Release DVD from the Team Australia stand, look for the ‘roos
Welcome to a new world of free online digital data . . . .

★ Free downloads:
 ★ well completion reports
 ★ PEPS-SA™ database (oil & gas production data, wells, seismic, formation tops)
 ★ prospectivity reports
 ★ and more . . . .

www.dmitre.petroleum.sa.gov.au

Energy Resources Division
Conclusions

- South Australia has huge potential for unconventional gas, but it is early days – great opportunities exist now to learn from US experience
- Stable, objective based regulatory frameworks, easy access to data, competitive taxation & royalty regime (averages 6-7%
- Investment opportunities exist for explorers, infrastructure developers and service providers
- For more information:
  - visit Team Australia here – look for the ‘roos!
  - we are available for company visits until 13 February