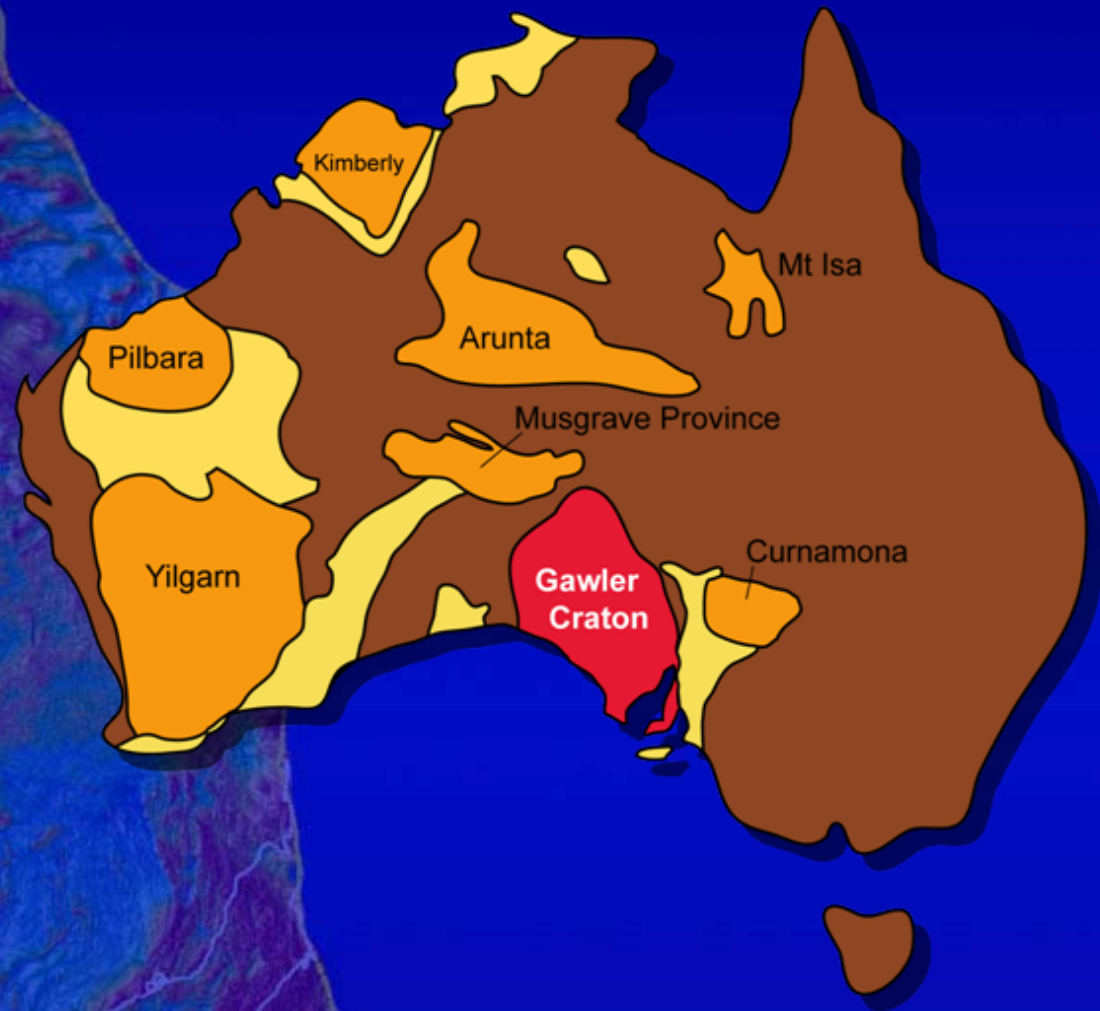


An overview of the Gawler Craton



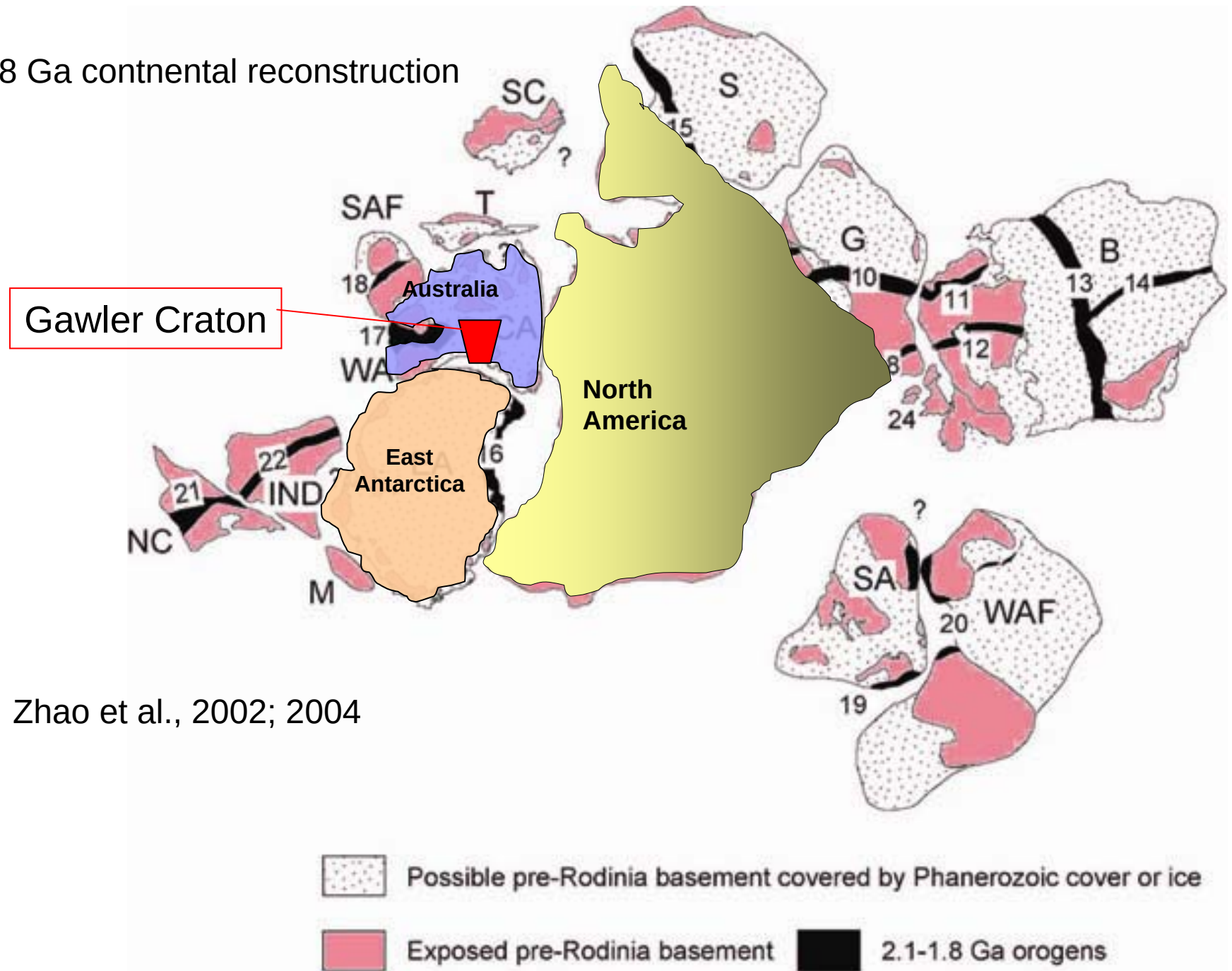
Anthony Reid & Michael Szpunar
Mineral Resources Group PIRSA



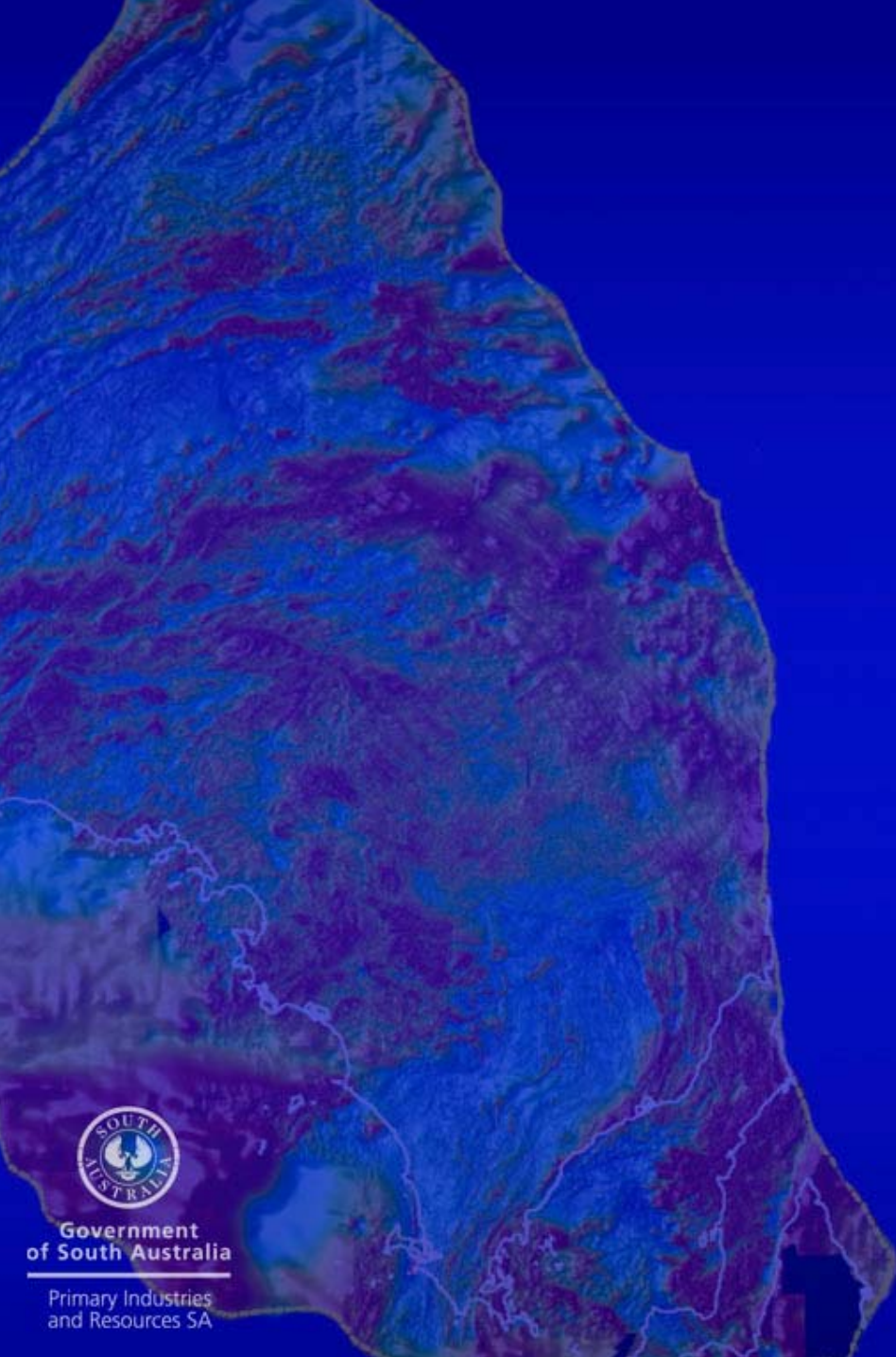
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1.8 Ga continental reconstruction

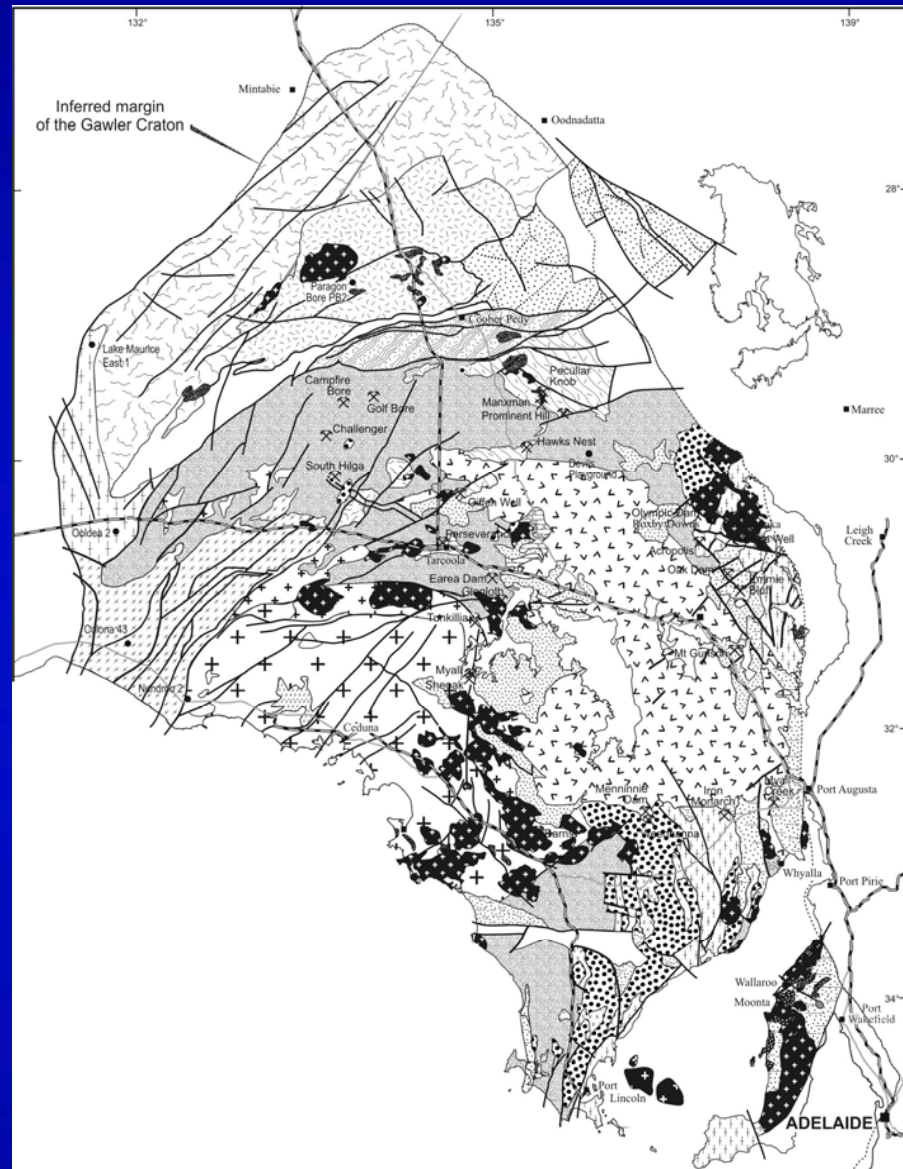


Zhao et al., 2002; 2004



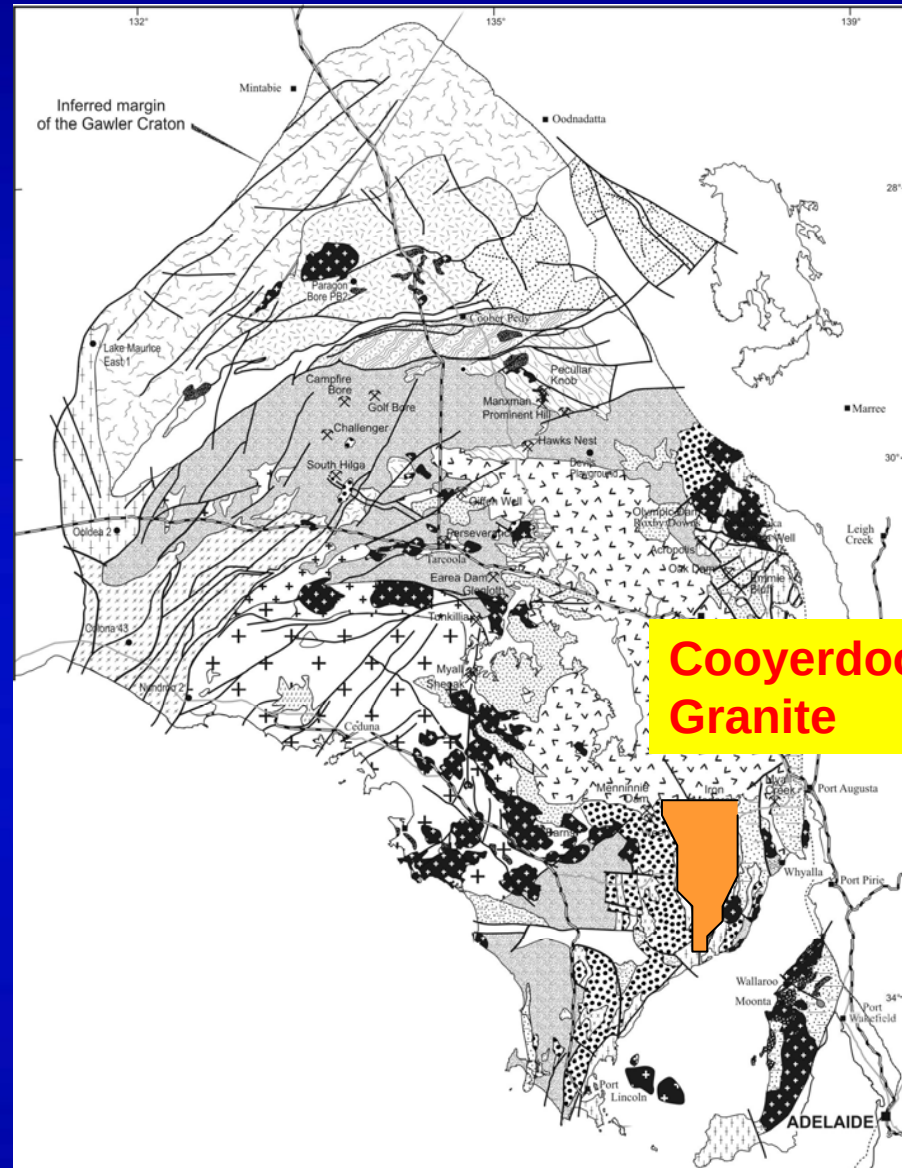
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3150 Ma

- Cooyerdoo Granite; weakly deformed



**Cooyerdoo
Granite**

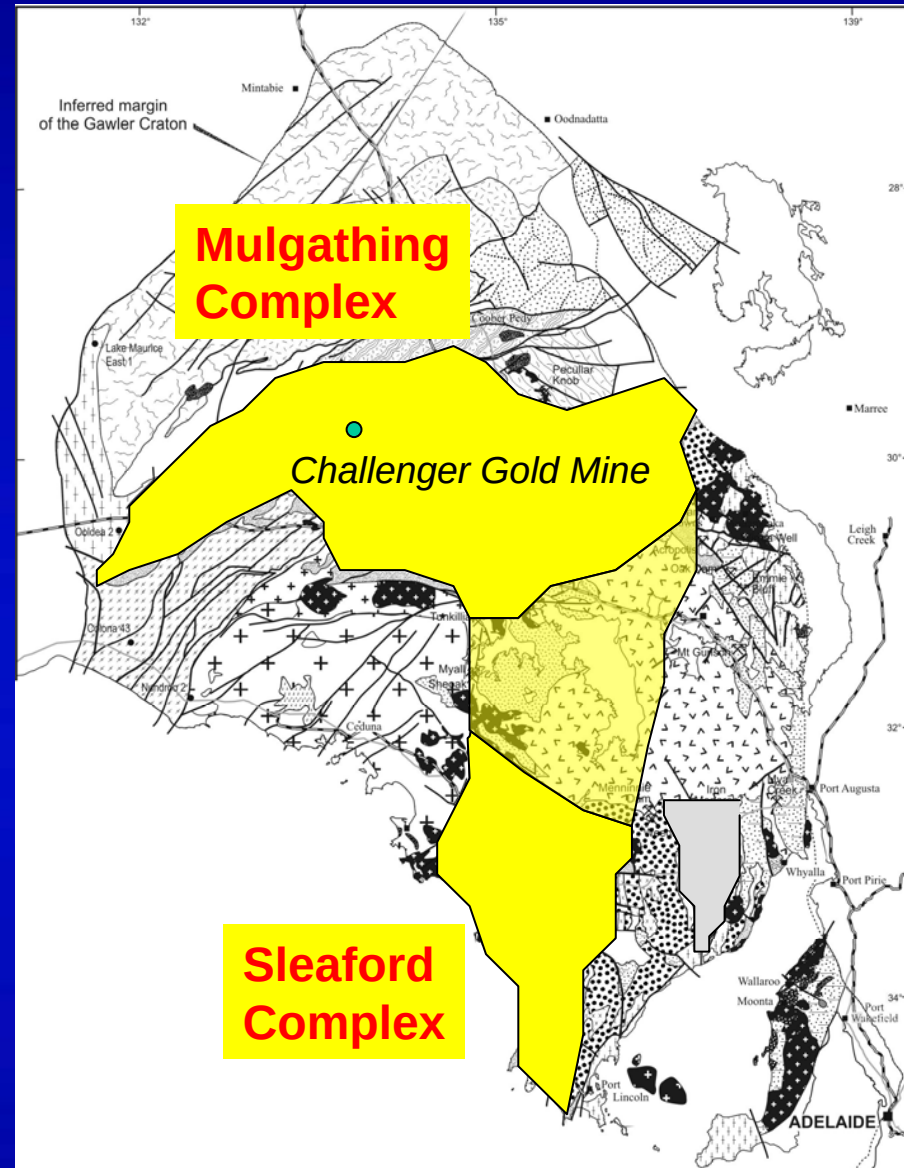
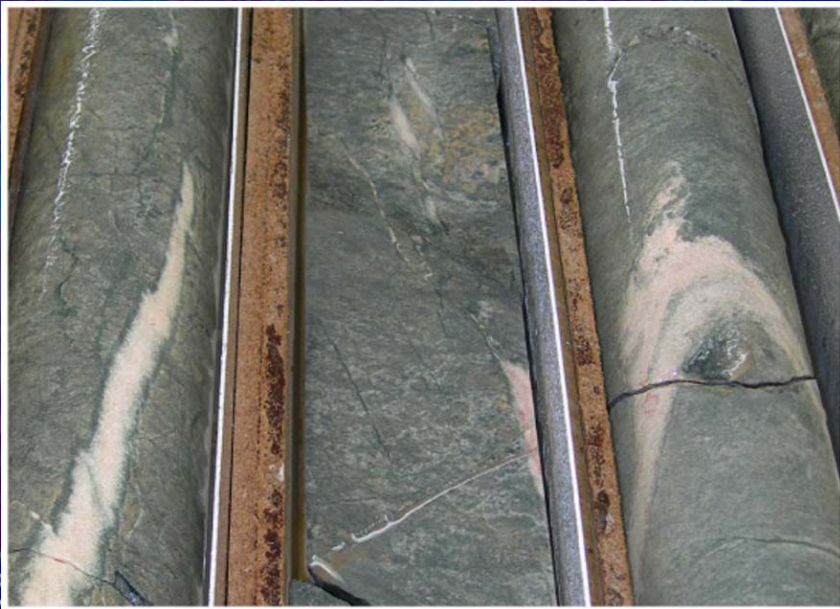


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2800-2400 Ma

- c.2800 Ma - orthogneiss
- 2550-2480 Ma: Rift-related sediments & bimodal magmatism



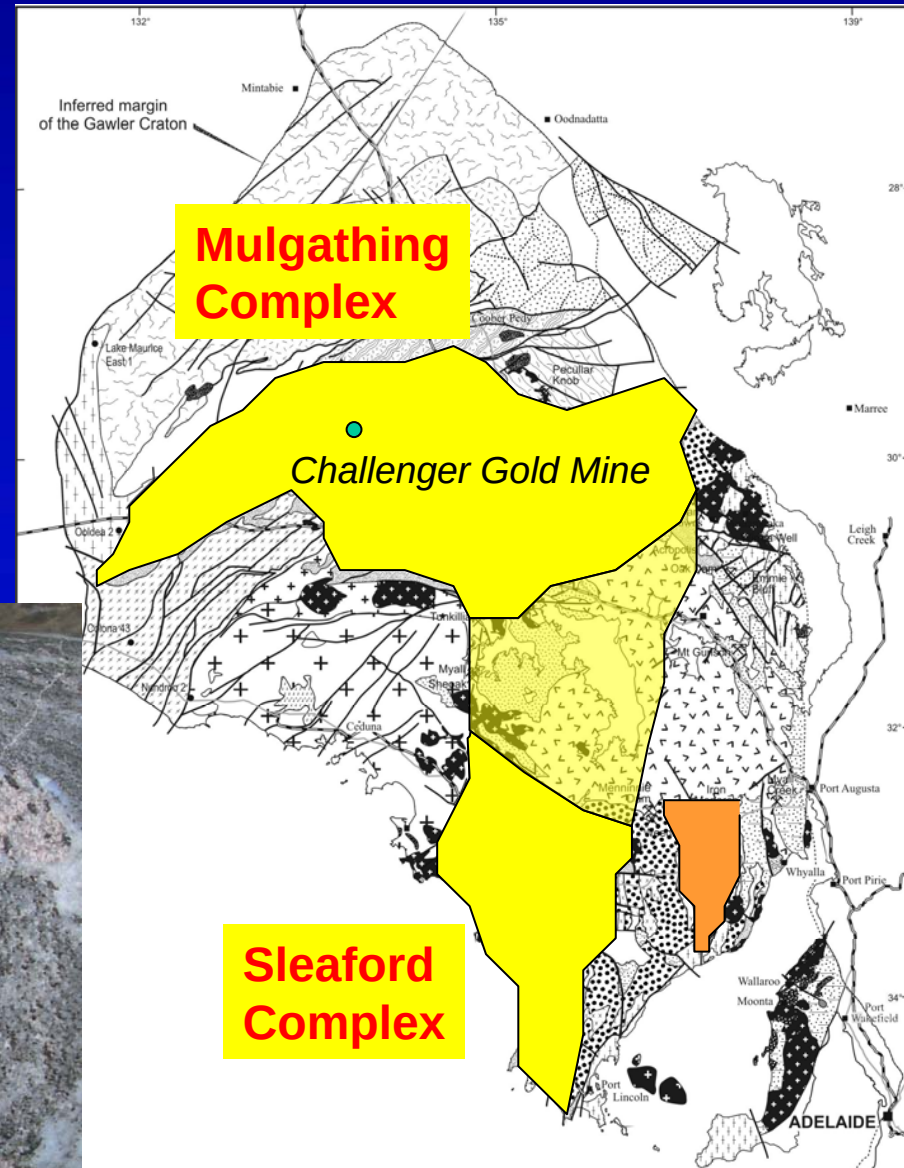
2553 ± 9 Ma Devils Playground Volcanics

2470-2410 Ma

- Sleafordian Orogeny
- 2500 Ma – overgrowths in Cooyerdoo area



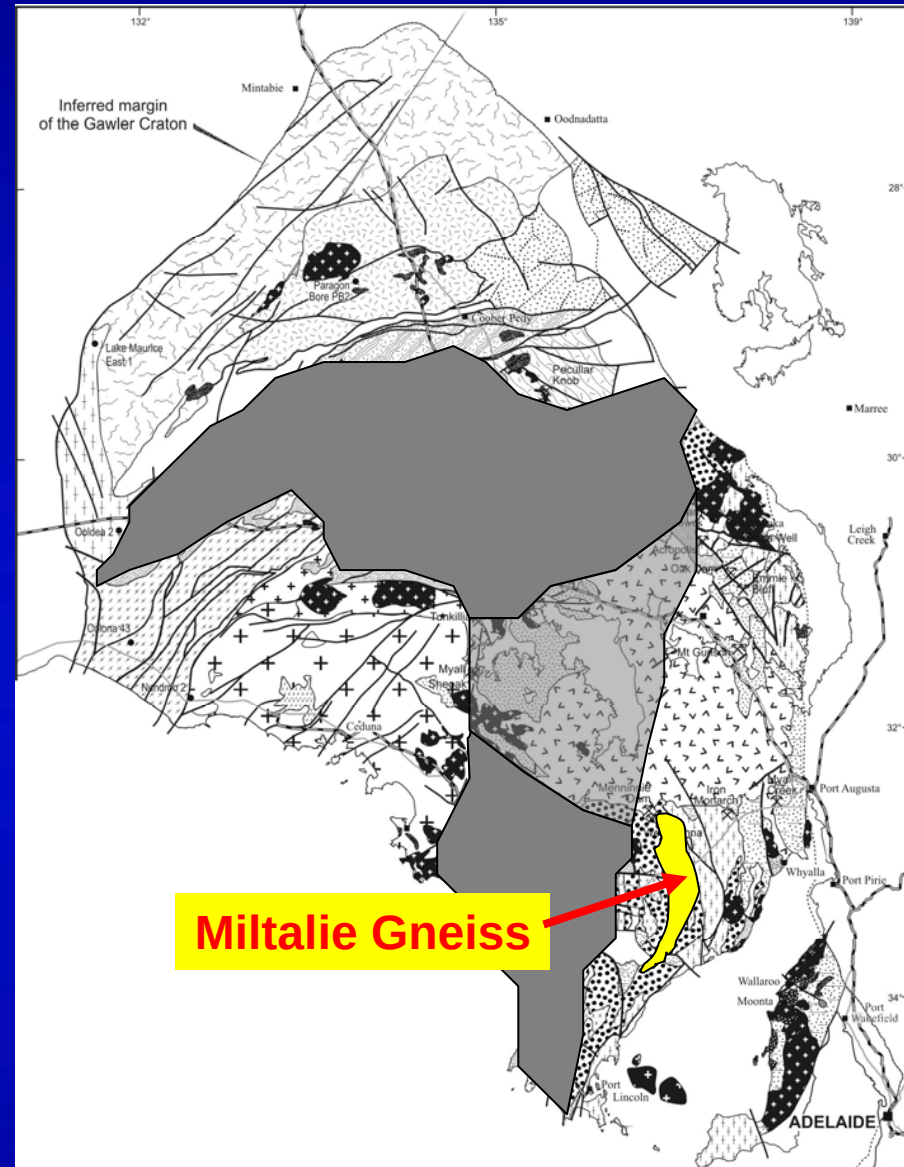
Christie Gneiss, Challenger Mine



2000 Ma

Mitalie Gneiss

- Localised magmatism

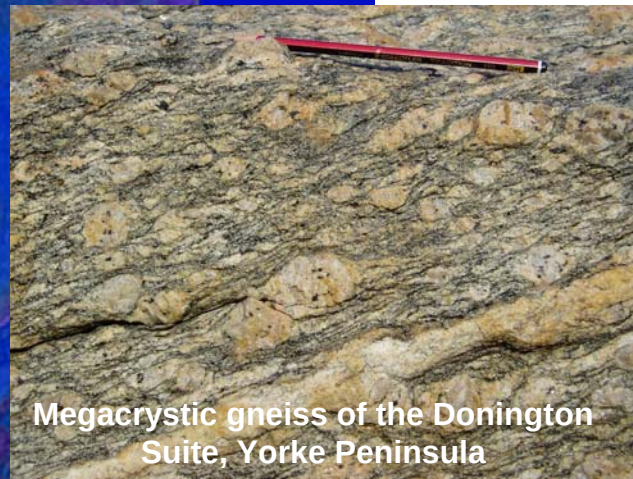
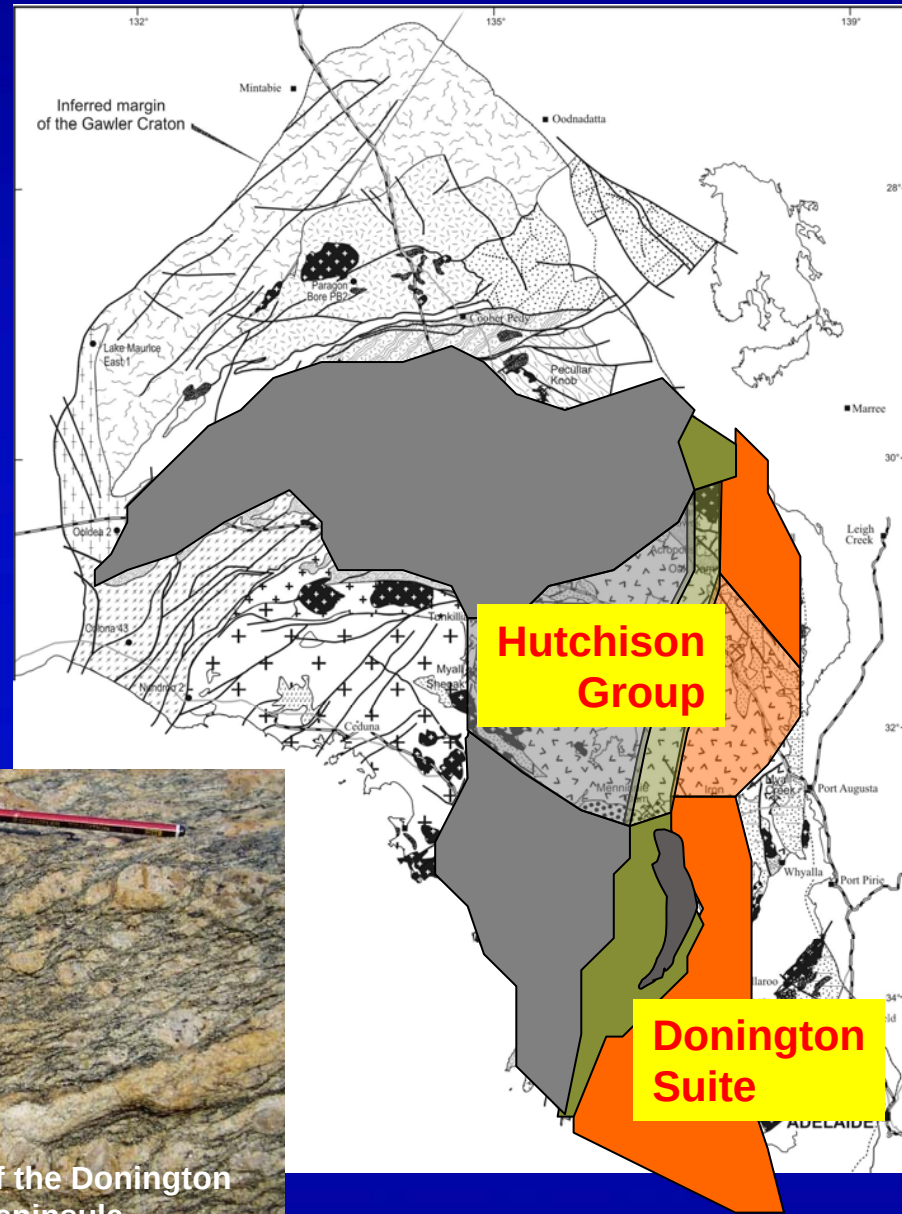


1870-1850 Ma

- “Lower” Hutchison Group basin development; including the Bosanquet Volcanics
- Emplacement of Donington Suite

1850 Ma: Cornian Orogeny

- HT-MP



Megacrystic gneiss of the Donington Suite, Yorke Peninsula



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1790-1730 Ma

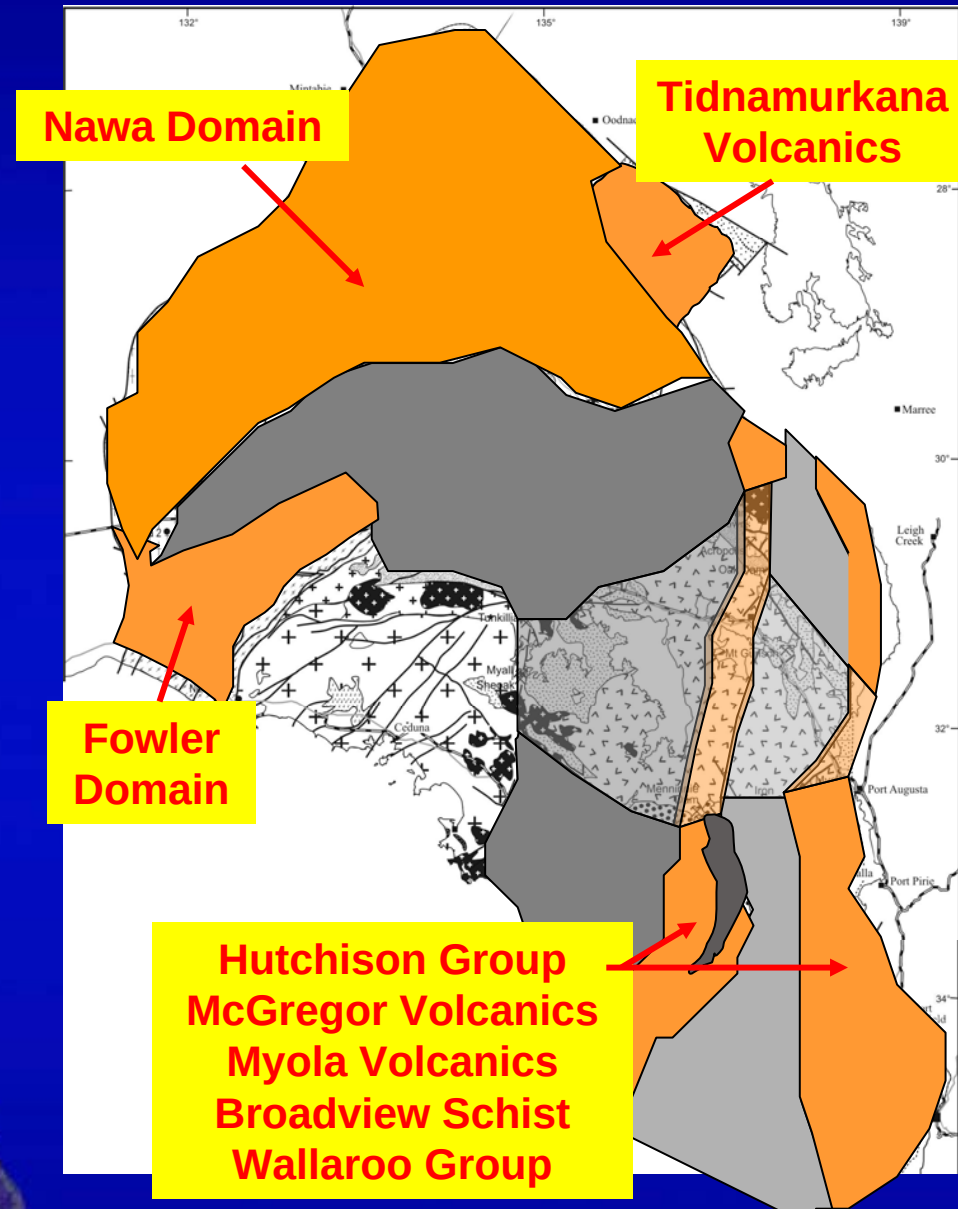
Bimodal volcanic basins

- Hutchison Group
- McGregor Volcanics
- Myola Volcanics
- Broadview Schist
- Wallaroo Group
- Tidnamurkana Volcanics
- Nawa Domain



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1730-1690 Ma

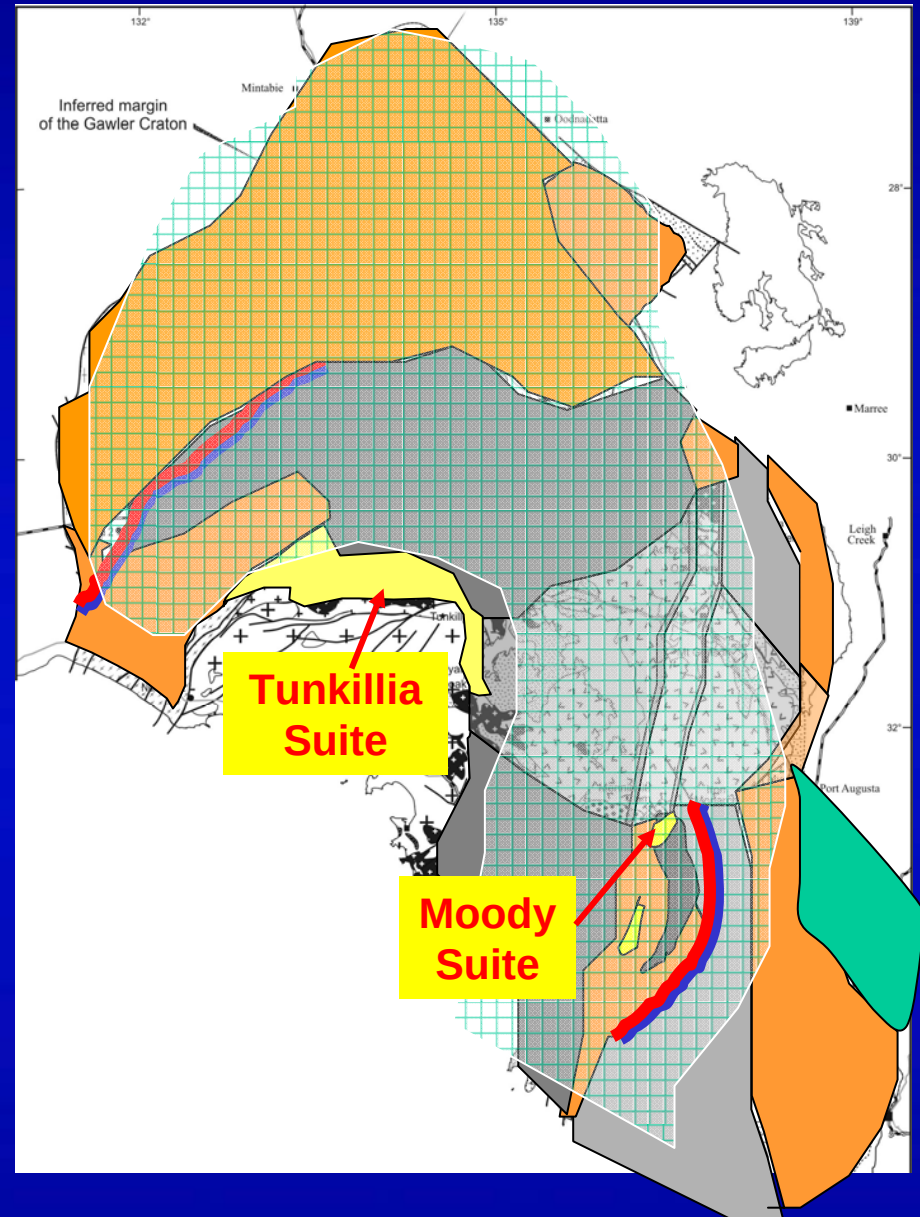
Kimban Orogeny

- Note: Lower Barossa Complex and Willyama SG deposited at this time
- Syn to post tectonic granites:
- Moody Suite
- Tunkillia Suite



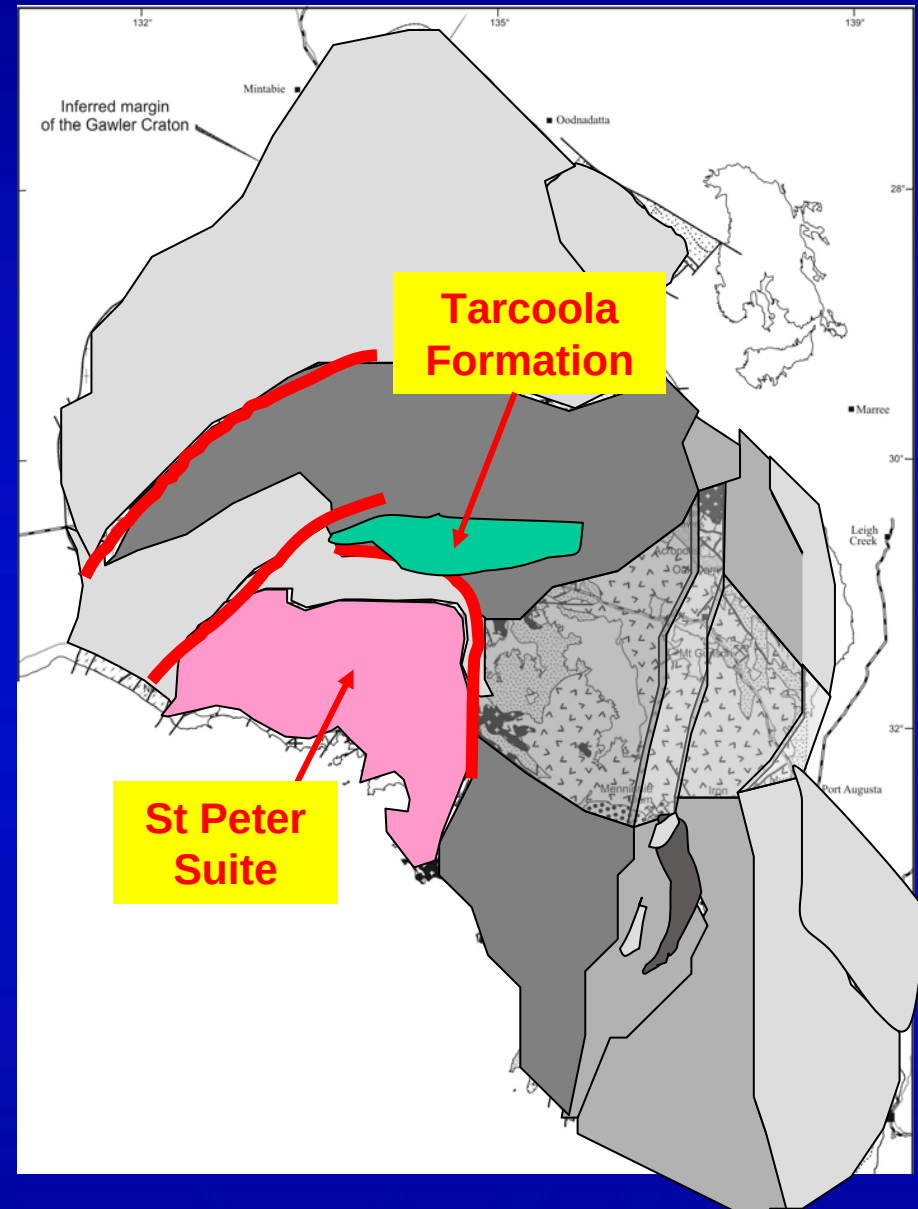
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1650-1620 Ma

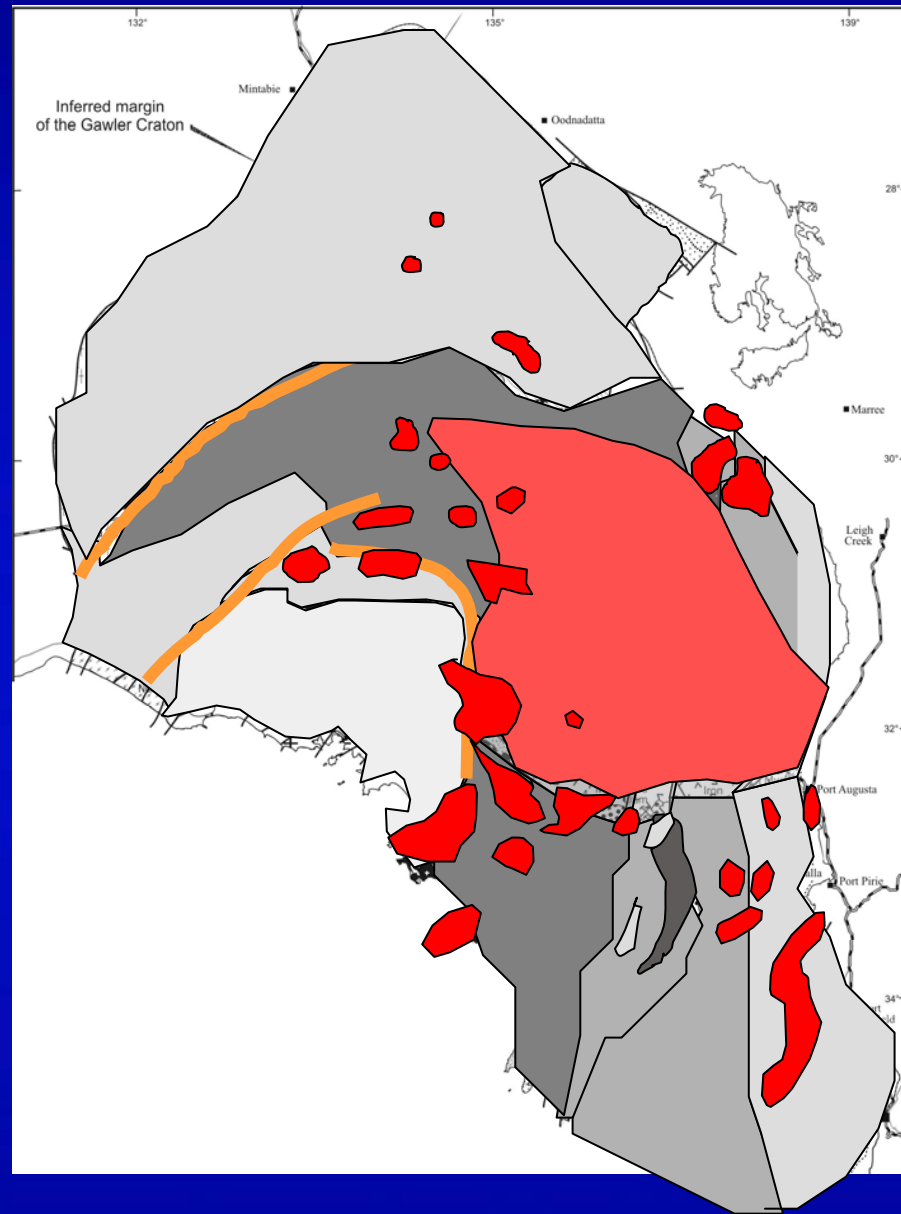
- Tarcoola Formation
- St Peter Suite: felsic and mafic syn- deformation magmatism
- arc geochemistry ?



1590-1570 Ma

Hiltaba Suite

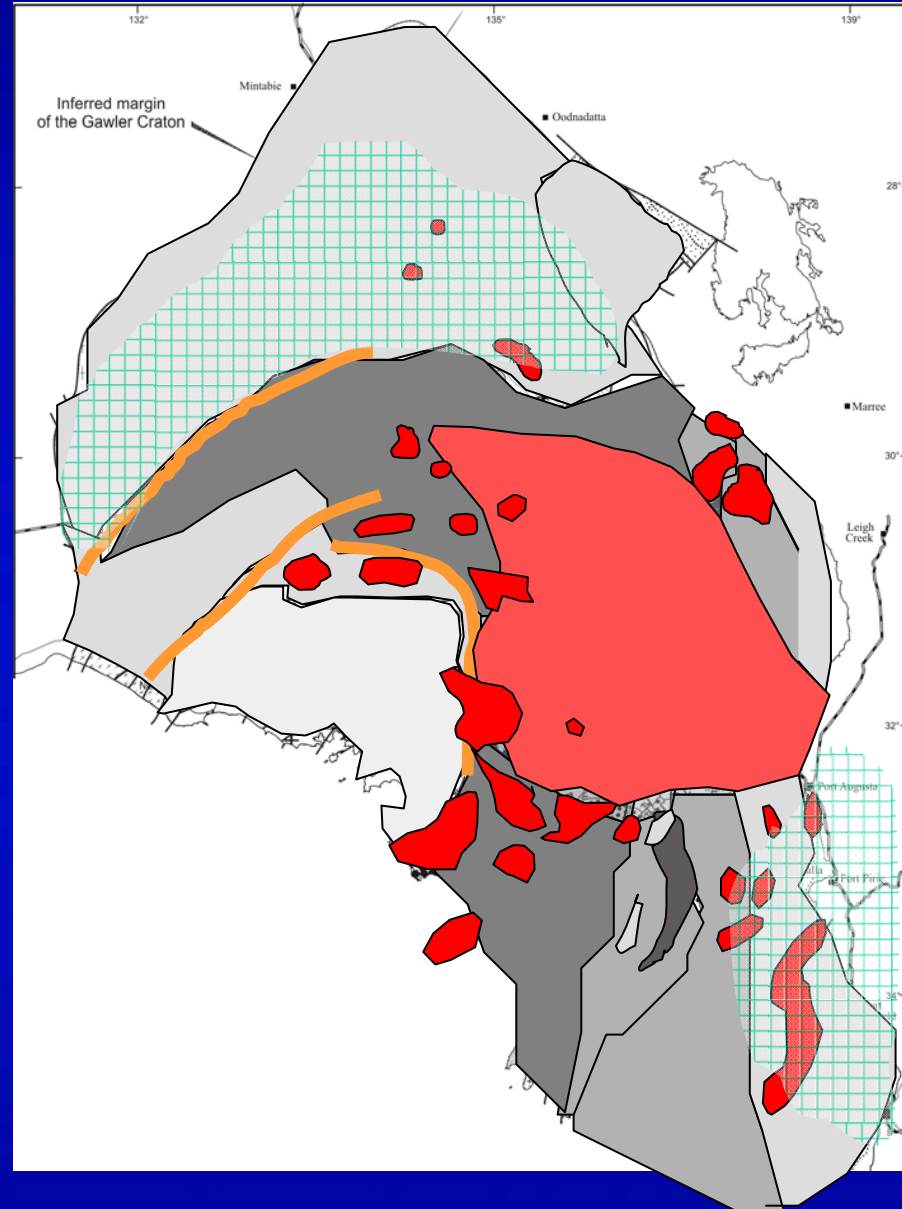
Gawler Range Volcanics



1590-1560 Ma

Kararan Orogeny

- Ultrahigh-T metamorphism in NW Gawler,
- shear zones in central and southern Gawler

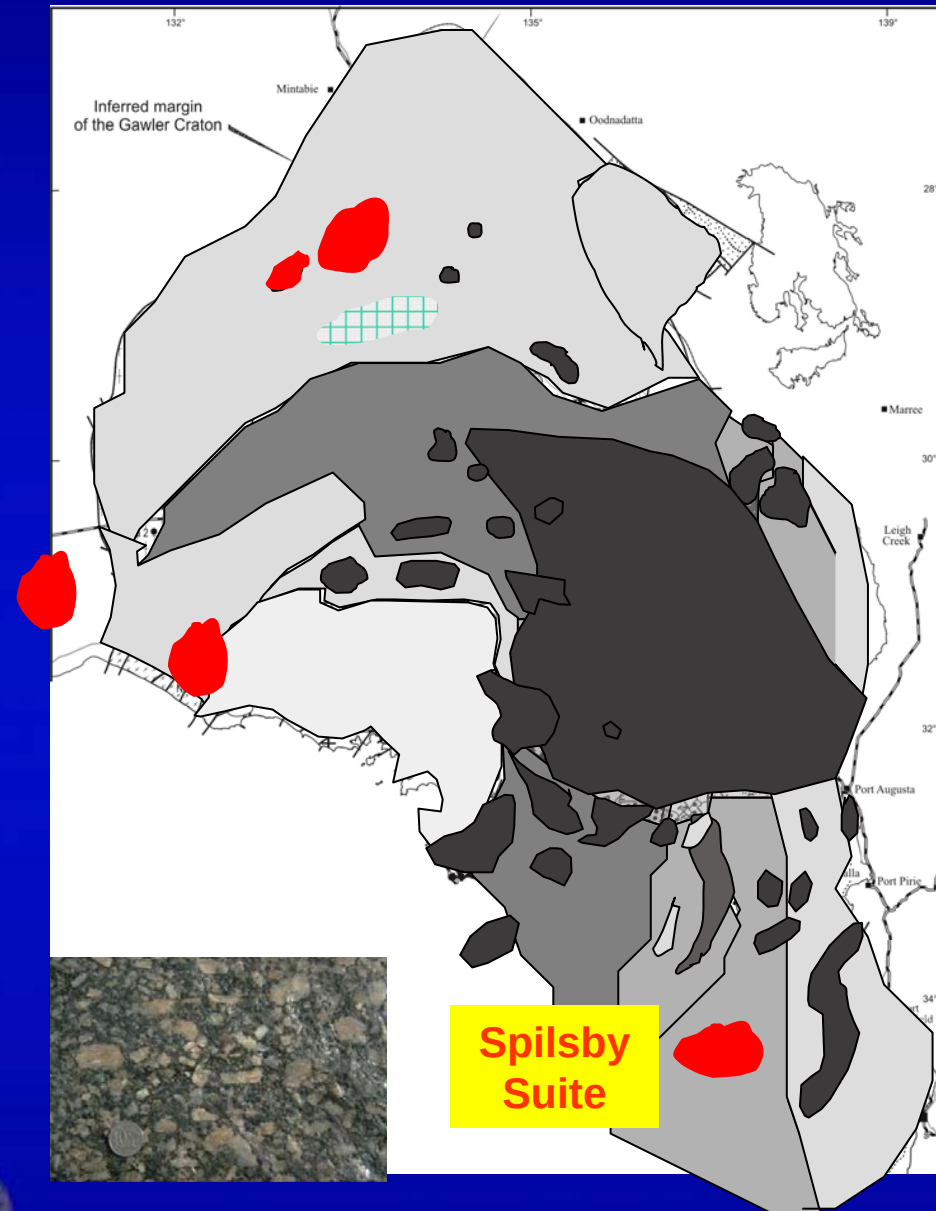


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1510-1450 Ma

- Spilsby Suite: localised hornblende-bearing granites
- 1490 Ma magmatism in Fowler Domain
- ~1500 Ma granodiorite in Coompana Block
- ~1512 Ma metamorphism Nawa Domain
- Shear zone movement and exhumation across southern Gawler Craton



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