

Earth Imaging and Structure

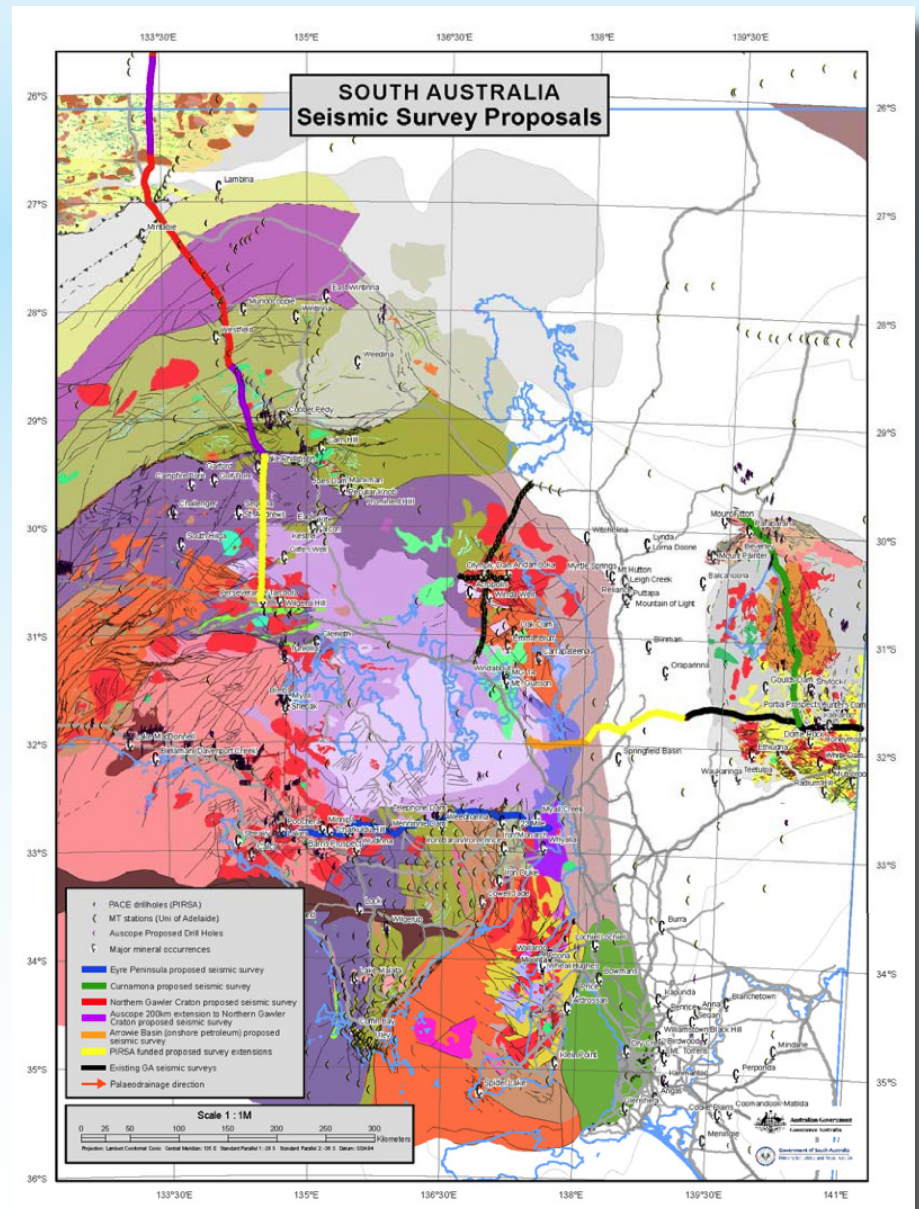
Earth imaging and structure infrastructure investments will enable the geoscience community to build an increasingly clear and rich picture of the subsurface. This component builds on the resources of the ANSIR National Research Facility In Earth Sounding. Based at the ANU, ANSIR has a pool of state-of-the-art seismic equipment suitable for experiments on a wide variety of scales, from the investigation of geologic structures on environmental and mine scales through to studies at the continental scale of the entire lithosphere.

AuScope investment for this component is in three main categories:

1. An upgrade of existing passive seismic and magnetotelluric (MT) equipment to present state-of-the-art. This includes the purchase of broadband seismic recorder systems based at the ANU, MT broadband systems based at University of Adelaide and the ANU, and MT low frequency systems based at the University of Adelaide.

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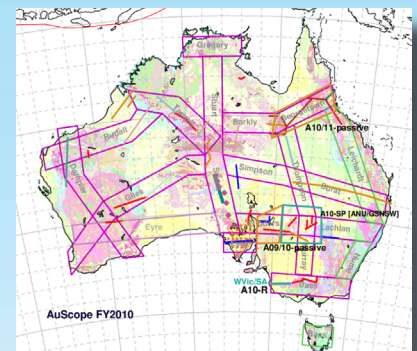
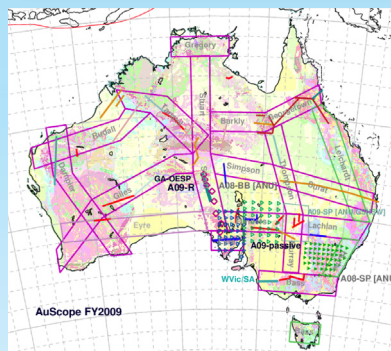
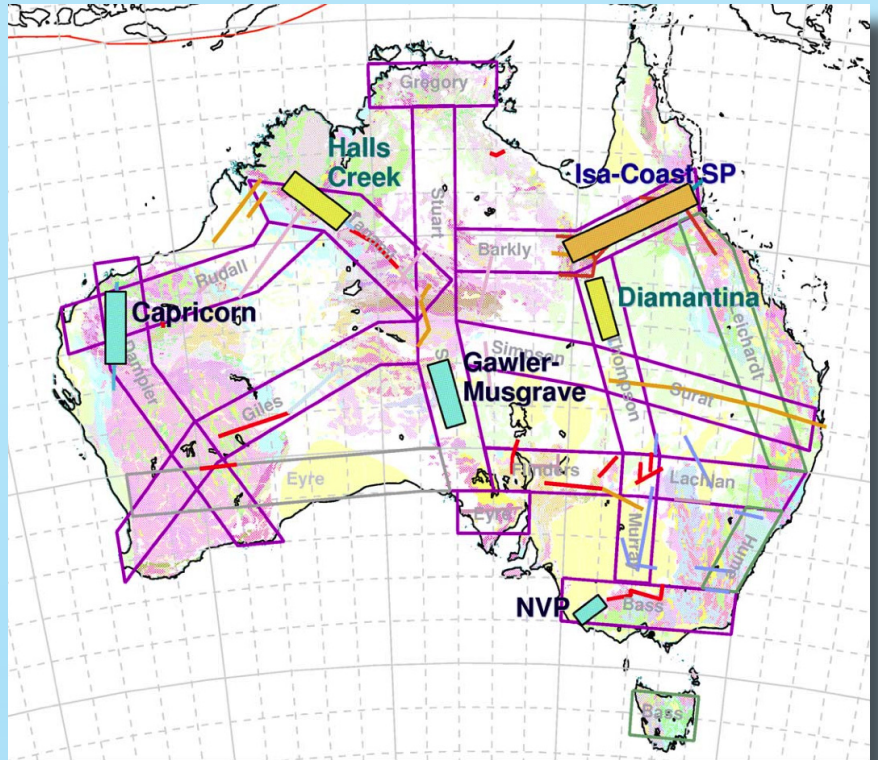
Building an increasingly clear and rich picture of Australia's subsurface



AuScope investment in South Australia complements Federal and State initiatives.

2. The acquisition of ~250 line-km per annum of seismic (reflection and portable instrument) and MT imaging. The AuScope investment will enable the university-based research community to have a seat at the proposed National GeoTransect planning table, and to use its 250 line-km contribution to leverage access to a much larger Earth Imaging dataset.
3. Operating and maintaining the instrumentation, and for coordinating and managing the AuScope National GeoTransect Program. These tasks include ensuring that the data / information from transects is processed, stored and managed appropriately, and in liaising with the AuScope Grid manager to ensure broad access and interoperability.

AuScope Transect Plans



Contacts

Earth Imaging and Structure

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Transect in northern SA

- AuScope passive seismic to complement reflection profiles
- Support of broadband, SP and MT experiments
- Further SP work in northwest NSW from May 2009

Transect in W Victoria SA

- AuScope passive seismic to complement reflection profiles (SA, QLD)
- Support of broadband, SP and MT experiments
- Planning for NW WA for 2010