

Eastern Victoria Geoscience Initiative – Project Overview

The Eastern Victoria Geoscience Initiative is mapping the Southeast Lachlan Crustal Transect (Figure 1) to improve understanding of southeast Australia’s underlying geological ‘architecture’ from the surface to approximately 60 km deep within the Earth.

The greater collaborative scientific research program involves government-funded research partners: the Geological Survey of Victoria, Geoscience Australia, the Geological Survey of New South Wales and AuScope Limited. The scientific research program includes project work in Victoria and New South Wales.

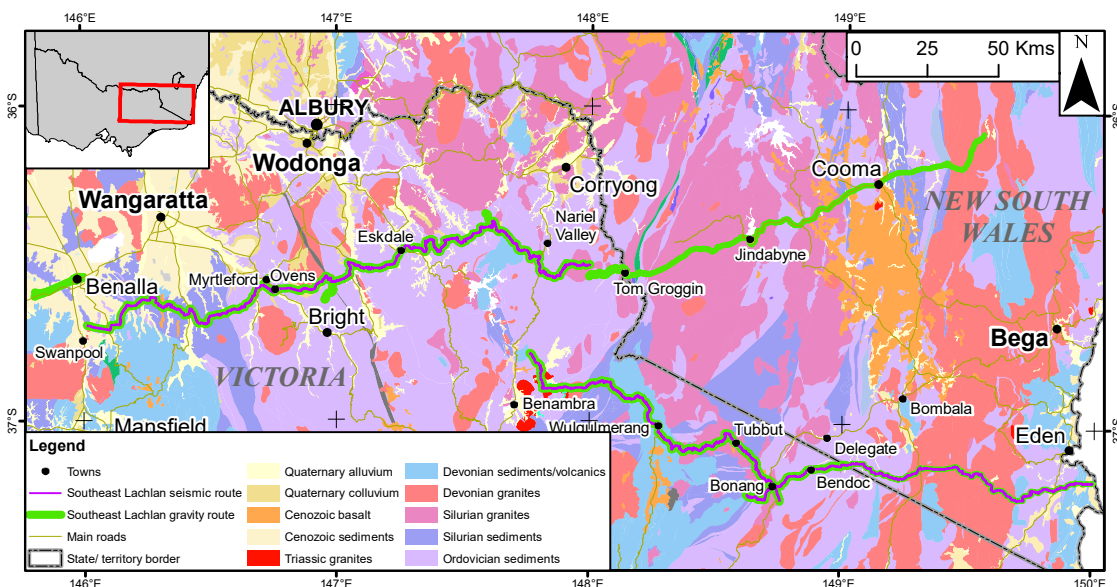


Figure 1. Geology map of Victoria and New South Wales with Southeast Lachlan Crustal Transect survey routes. Completed seismic survey route in black, planned gravity survey route in green.

PROJECT GOALS

The Initiative includes the acquisition of fundamental regional geoscience datasets, and geoscientific research that investigates the geology of eastern Victoria and how it has evolved over the past 500 million years.

The results of the Initiative will provide a key geological reference section for eastern Australia. It will improve the understanding of the earth resources potential and natural geological hazards of eastern Victoria. Government will be able to make better informed land management decisions to benefit the community, protect State infrastructure and manage earth resources.

PROJECT WORK

Additional fundamental regional geoscience datasets are required to complement the existing geoscience knowledge base. This will enable researchers to better understand the underlying geological ‘architecture’ of eastern Victoria. These datasets include:

- The Southeast Lachlan Deep Crustal Seismic Reflection Survey (acquired in 2018, Figure 2)
- The Southeast Lachlan Ground Gravity Survey (expected to begin in May-2019, Figure 3)
- The Southeast Lachlan Magnetotelluric Survey (planned for second half 2019, Figure 4)

Experienced specialist contractors will carry out these surveys under the supervision of the project partners.

PROJECT AREA

The surveys will be conducted in the eastern highlands of Victoria and in New South Wales; from Benalla, Victoria to east of Cooma, NSW and from Benambra, Victoria to near Eden, NSW.

The surveys follow local roads and tracks, passing through Crown land, some national parks, and a small number of private properties. Arrangements will be made with property owners and land managers on a case-by-case basis prior to any ground activities taking place.



Figure 2. Vibroseis trucks on seismic survey in northeast Victoria.

SURVEY AUTHORISATION

Under Victorian laws, geological surveys can be authorised on behalf of the Department of Jobs Precincts and Regions under Section 112(1) of the Mineral Resources (Sustainable Development) Act 1990.

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SITE ENTRY CONDITIONS

Site access and entry conditions will be negotiated with individual land owners and managers, with permits from the relevant authority obtained where necessary. All work in parks and reserves managed by Parks Victoria and the Department of Environment, Land, Water and Planning will be carried out under a National Parks Scientific Research Permit.

A detailed risk assessment and mitigation plan will be prepared by all contractors prior to beginning any survey to ensure the safety of the survey team, the public and the environment.

Biosecurity arrangements will be in place to avoid the transport of soil and organic material from site to site.

IS THIS RESEARCH LOOKING FOR MINERAL DEPOSITS OR PETROLEUM RESOURCES?

This research is not looking for mineral deposits. It is being conducted to improve scientific understanding of the regional geology and of how it has evolved over time at a large scale. The survey techniques cannot directly detect minerals. However, minerals such as gold are known in parts of the region and the results of the research may potentially provide a larger context for how these mineral deposits might have formed over time.

The areas to be surveyed are not prospective for oil, gas, or coal. These resources require a different type of geology that is not present in northeast Victoria.

The research has nothing to do with unconventional gas or fracking, which have been banned in Victoria.

RESULTS

Survey results acquired as part of the Eastern Victoria Geoscience Initiative will be incorporated into existing state and national public geoscience databases. They will be used by the Geological Survey of Victoria and the Southeast Lachlan Crustal Transect program partners to help build a publicly available, digital three-dimensional (3D) geological model.

The raw data from the 2018 Southeast Lachlan Deep Seismic Reflection Survey is available from Geoscience Australia. The processed data and results of the initial interpretation will be available in late 2019.

All survey results, data compilations, interpretations and new models will be made publicly available through the Department of Jobs, Precincts and Regions' Earth Resources website and the Geoscience Australia website.

MORE INFORMATION

For more information on the Eastern Victoria Geoscience Initiative

Telephone the Customer Call Centre on 136 186

Email evgi.info@ecodev.vic.gov.au

Visit the Department of Jobs, Precincts and Regions' Earth Resources website at <https://earthresources.vic.gov.au/projects/eastern-victoria-geoscience-initiative> to download the Fact Sheets

- *Eastern Victoria Geoscience Initiative Project Overview*
- *The geology of eastern Victoria*
- *Understanding a deep crustal seismic reflection survey*
- *Southeast Lachlan Deep Crustal Seismic Reflection Survey*
- *Southeast Lachlan Ground Gravity Survey*
- *Southeast Lachlan Magnetotelluric Survey*

Visit Geoscience Australia's Onshore Seismic and Magnetotelluric project webpage for information about deep crustal seismic surveys across Australia and gravity as a geophysical technique www.ga.gov.au/about/projects/resources/seismic www.ga.gov.au/scientific-topics/disciplines/geophysics/magnetotellurics www.ga.gov.au/scientific-topics/disciplines/geophysics/gravity



Figure 3. GSV vehicle with gravity meter



Figure 4. Magnetic field sensor for magnetotelluric survey