



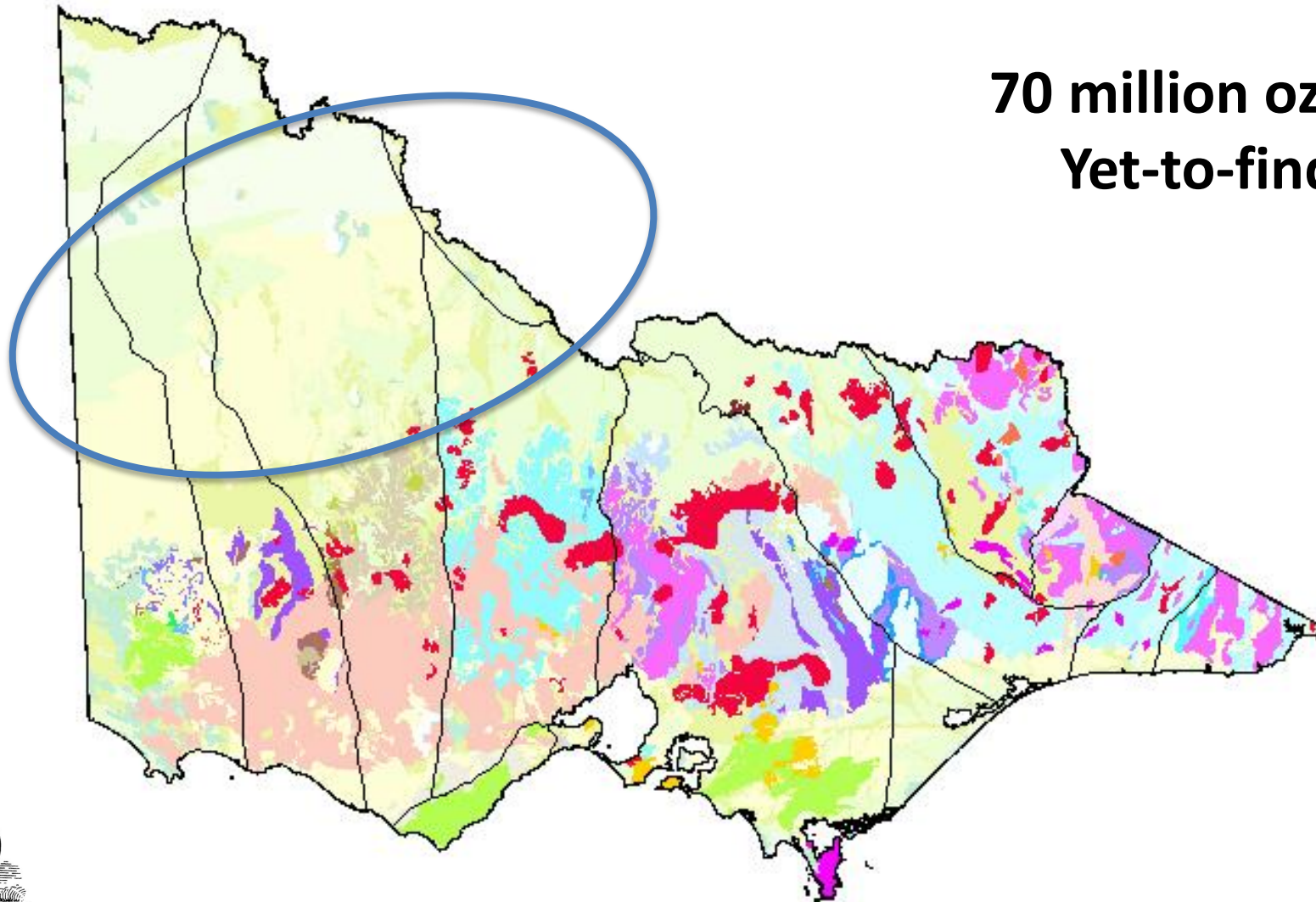
Victoria's earth resources under cover

Searching the Deep Earth Summit

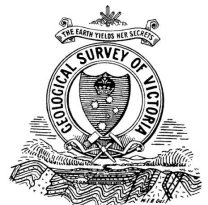
31 March – 2 April 2014



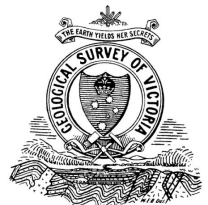
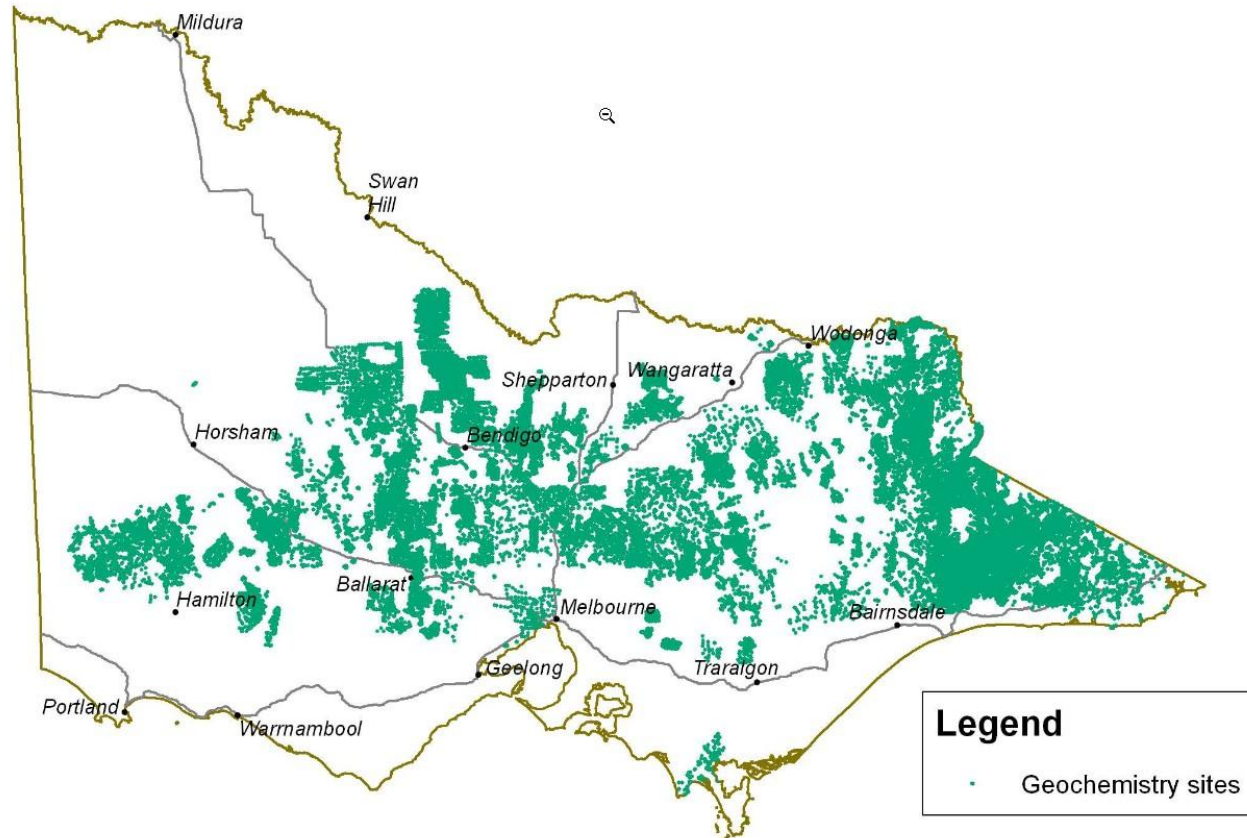
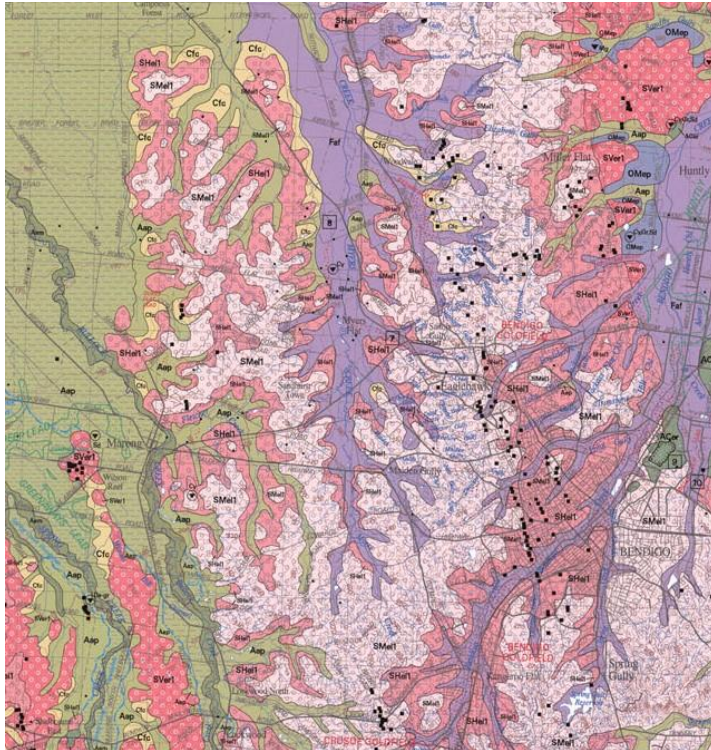
UNCOVER the prizes



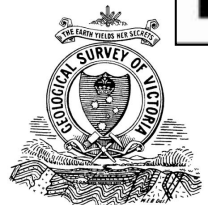
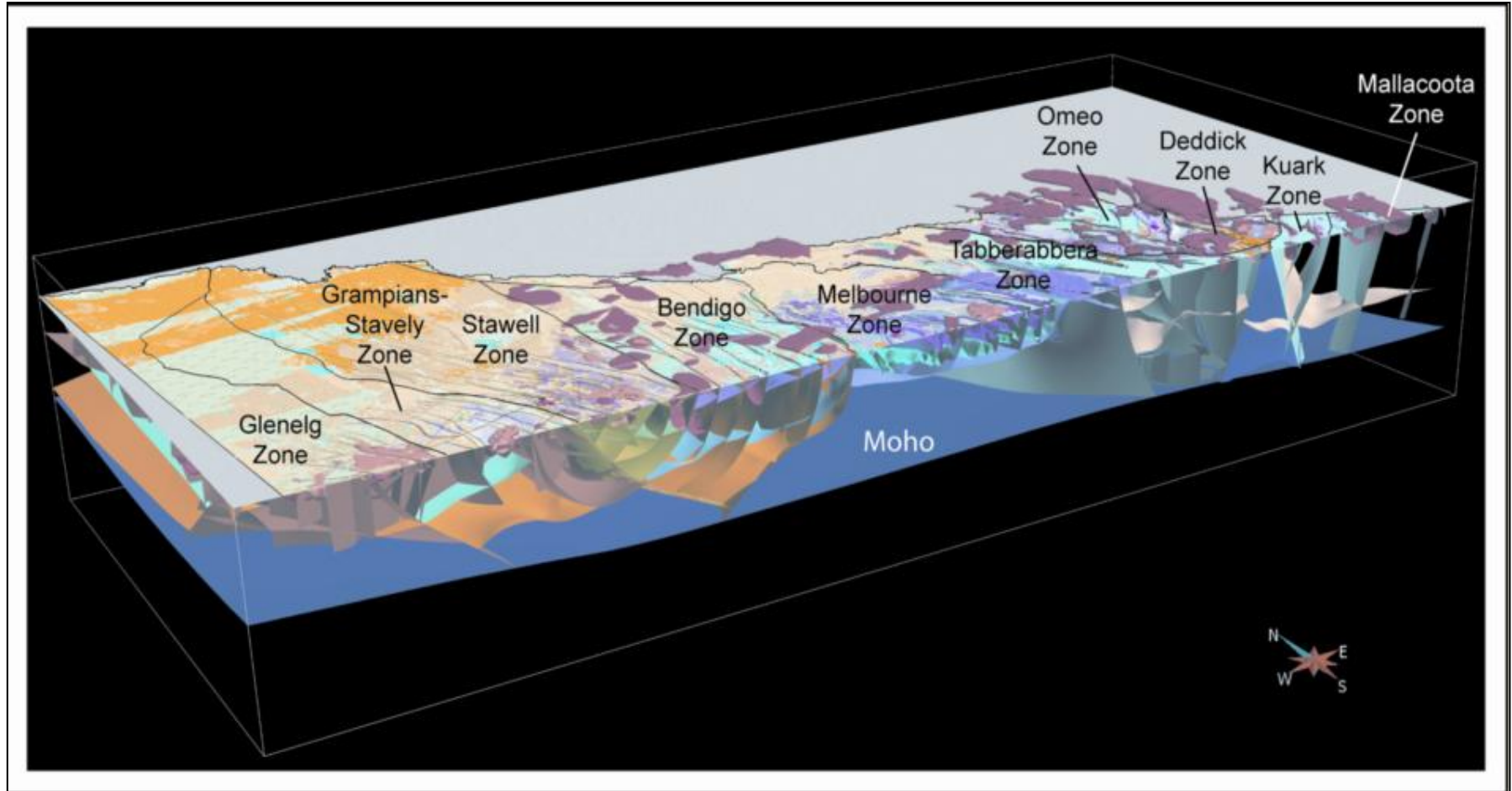
**70 million oz Au
Yet-to-find**



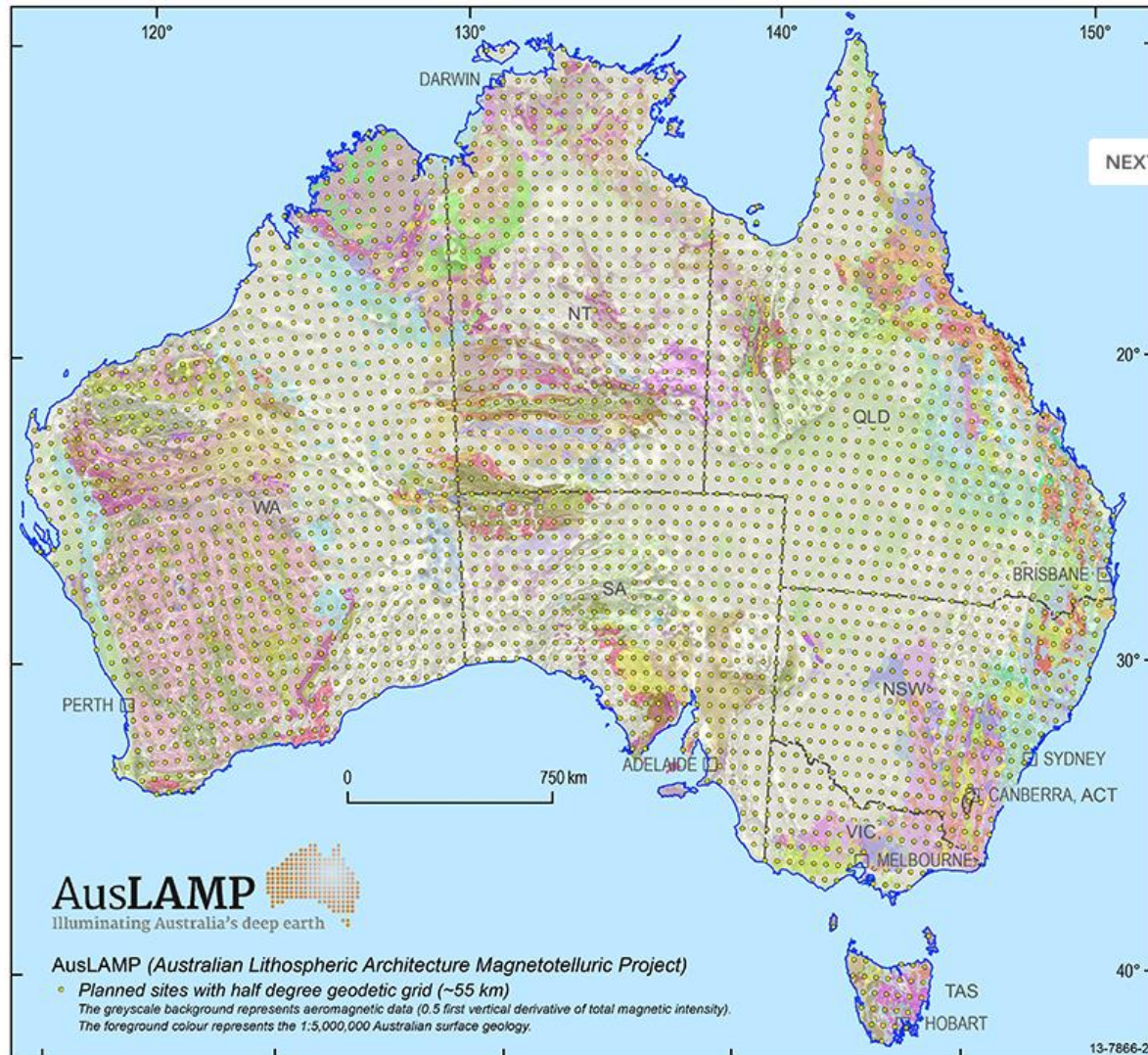
Characterising the cover Regolith/Geochemistry



Lithospheric architecture 3D geological model



Lithospheric architecture AusLAMP

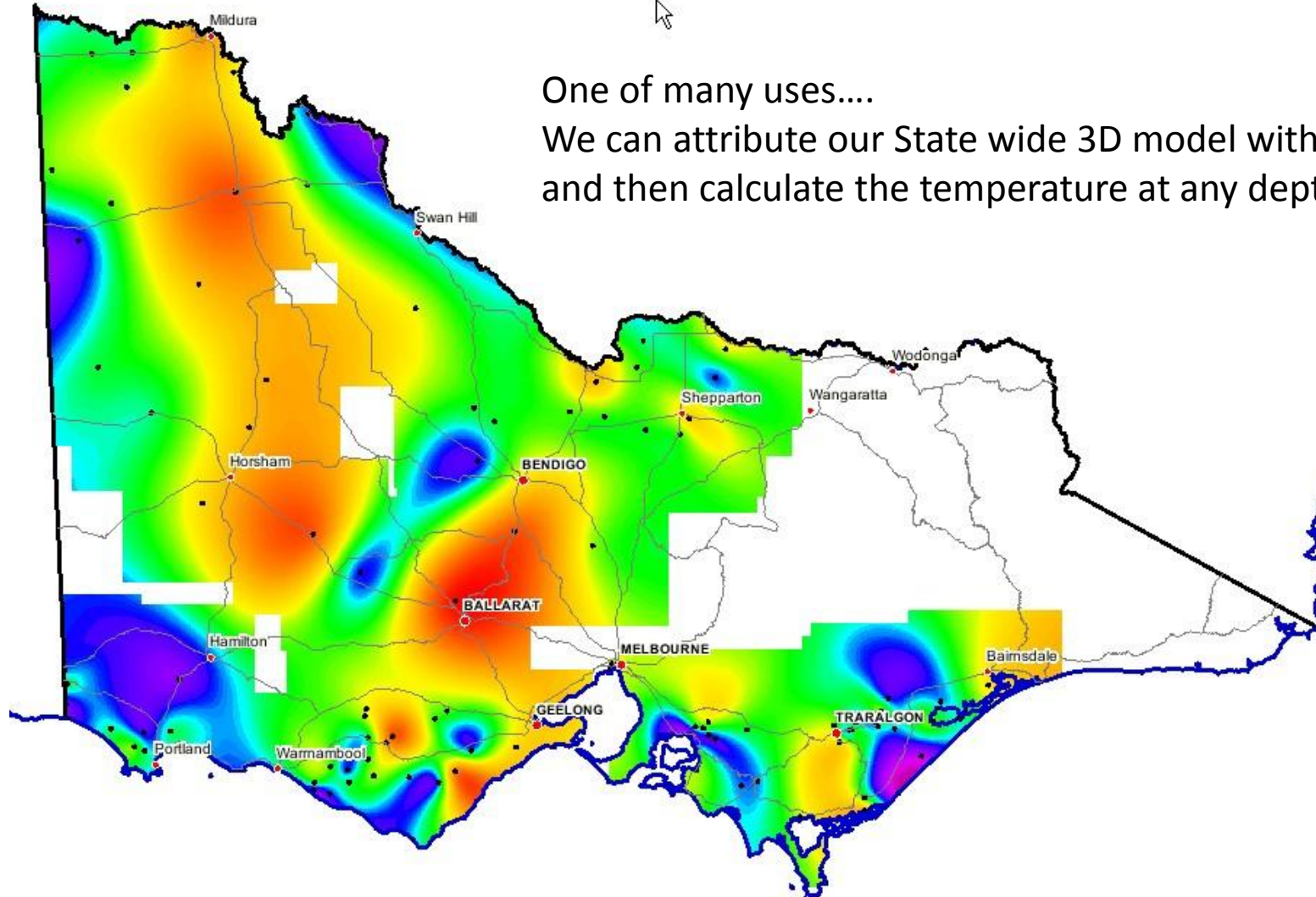


- Programme commenced (red dots)
- Half degree grid spacing (~55 km)
- Deployment ~1 month
- Maximum sensitivity to base of lithosphere



Lithospheric architecture

Heat flow



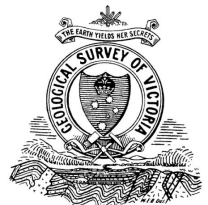
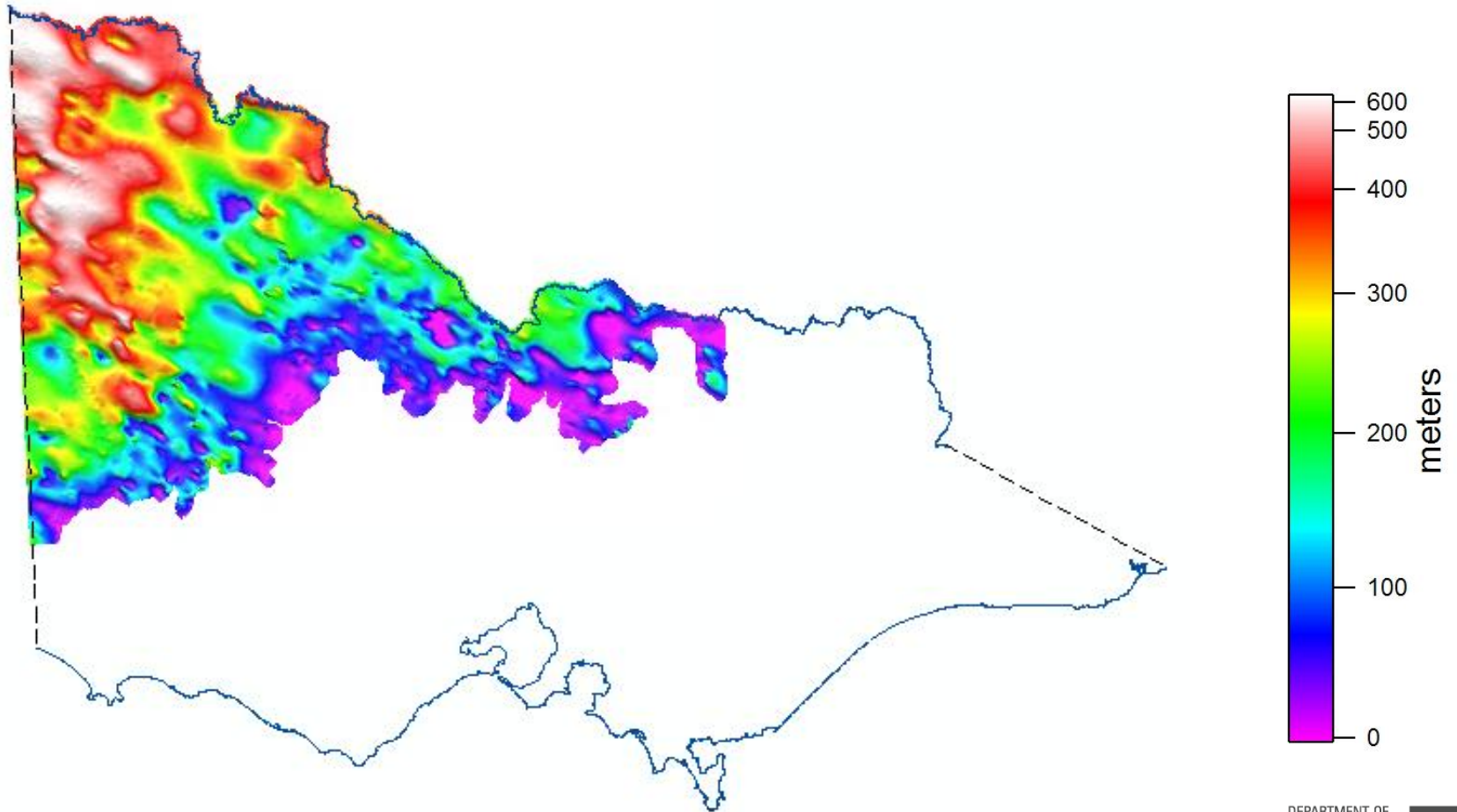
One of many uses....

We can attribute our State wide 3D model with this data and then calculate the temperature at any depth

Depth to basement



45% of area is less than 200 m



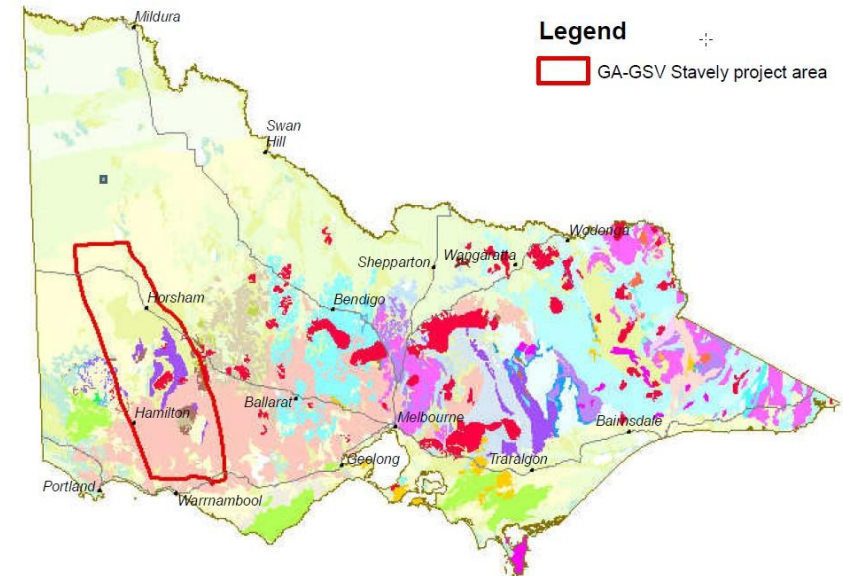
GA & GSV Stavelly Project



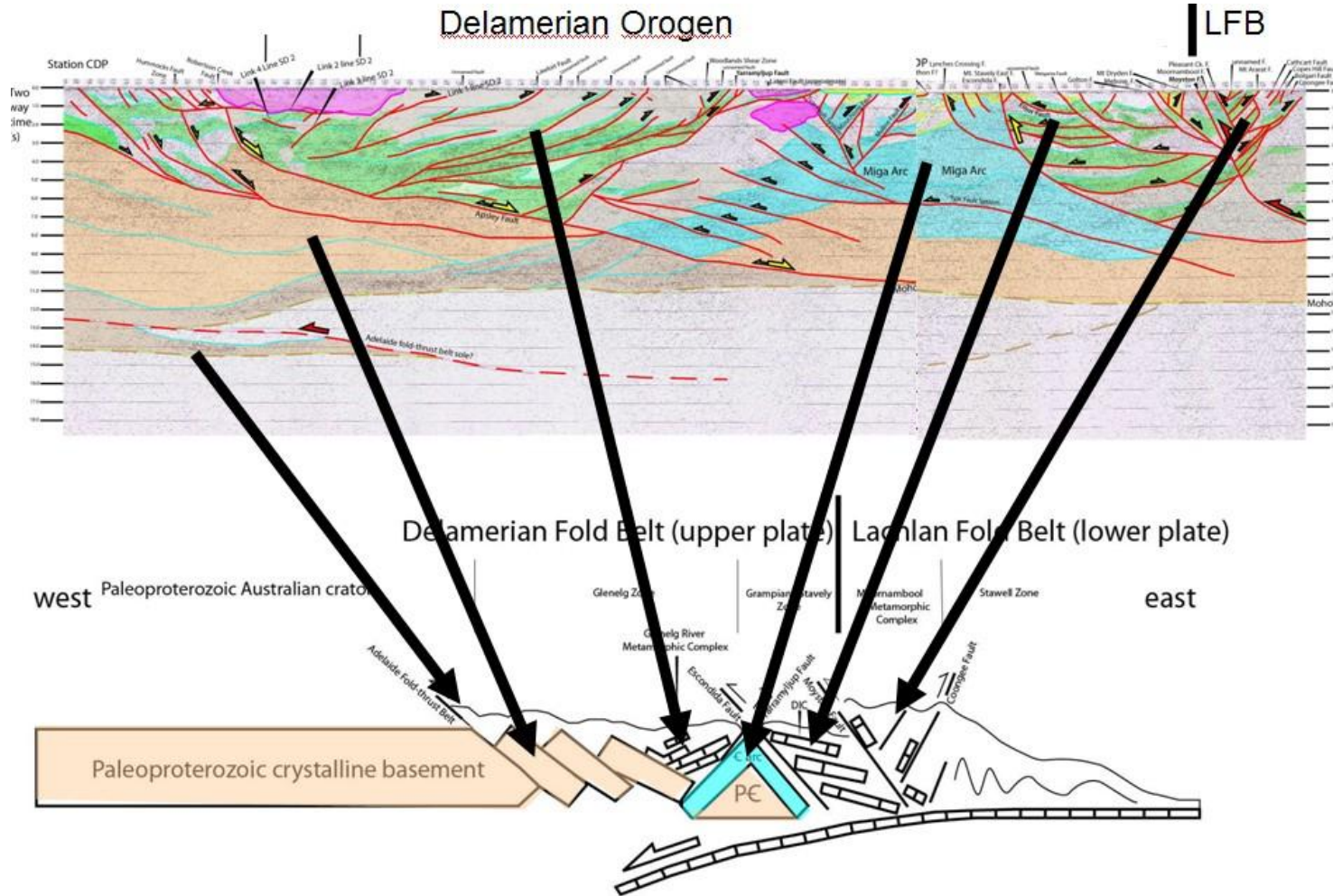
Increase exploration attractiveness through improved understanding of the subsurface geology and its implications for mineral systems in the Stavelly region

Achieved through:

1. Characterising the subsurface geology and recognition of environments where mineral systems may have been active
2. Identifying key elements that demonstrate mineral system potential
3. Understanding the depth and nature of cover



Stavely Project – buried Andean Arc



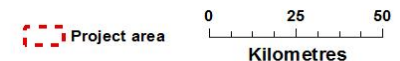
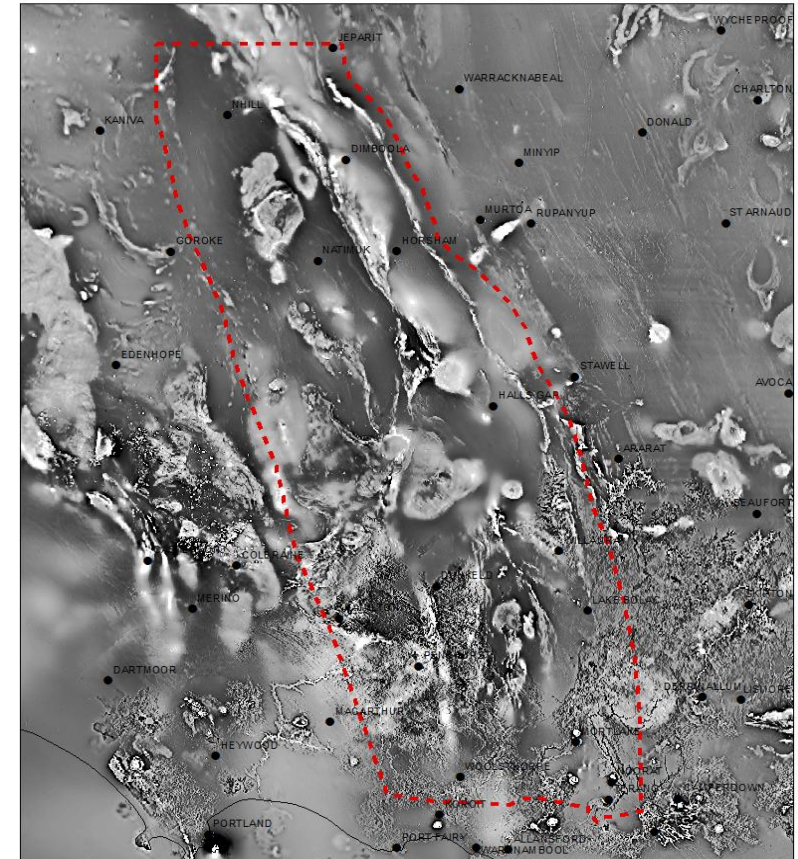
Interpreted seismic data related to a theoretical plate tectonic scenario:

An accreted Cambrian back arc – arc – fore arc succession.

Characterising the subsurface geology



- Targeted drilling to delineate the distribution of rocks prospective for porphyry-epithermal mineral systems ('Miga Arc')
- Test the core with *everything*
- Test structural models and geophysical interpretations
- Understand the geological evolution of the area to target where mineral systems may have operated



Identifying elements which demonstrate mineral system potential



Quartz-K-feldspar-biotite veins (Thursdays Gossan porphyry prospect)

- Mineral system characterisation of known prospects in the Stavelly area
- Identification of key rock packages corresponding to metallogenic events
- Toolkits to recognise distal footprints of buried mineral systems:
 - DET CRC lab-at-rig technology
 - Detailed cover geochemical profiles
 - Hydrogeochemistry
 - HyLogger

Understanding the depth and nature of cover



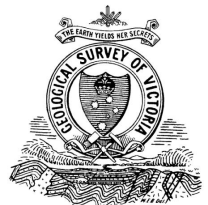
- Characterisation of cover types in the Stavely area and their geological, geochemical and geophysical expression
- Constrain the depth to potentially prospective basement rocks
- Determine the best techniques to determine depth to cover in the Stavely area by comparing pre-drilling geophysical estimates with drilling results



Pre-drilling geophysical acquisition



- High-resolution ground geophysical acquisition for geophysical depth to basement modelling
 - Refraction seismic collected on 11 sites
 - Reflection seismic collected on 5 sites
 - >450 new gravity
 - >100 km of ground magnetics
 - Electrical resistivity survey at 4 sites



Drilling program



- Up to 16 holes
- Sonic drilling to commence April 2014
- Diamond drilling to commence in June

