

Overcoming ground disturbance issues with alternative techniques

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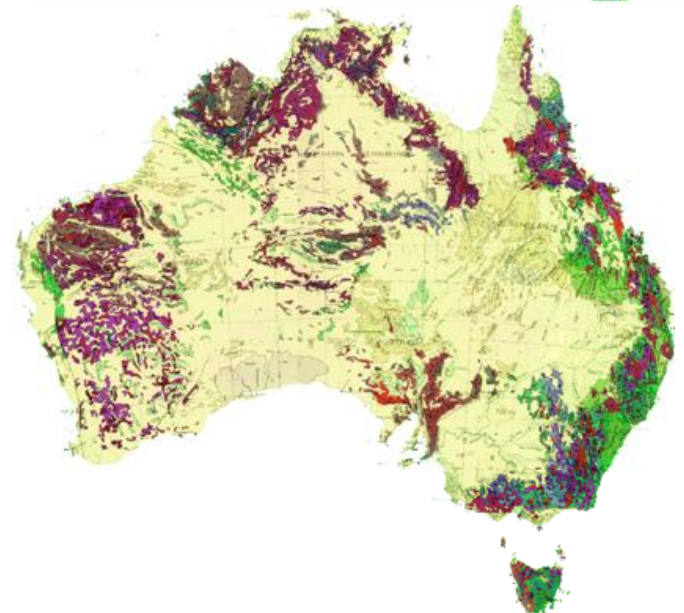
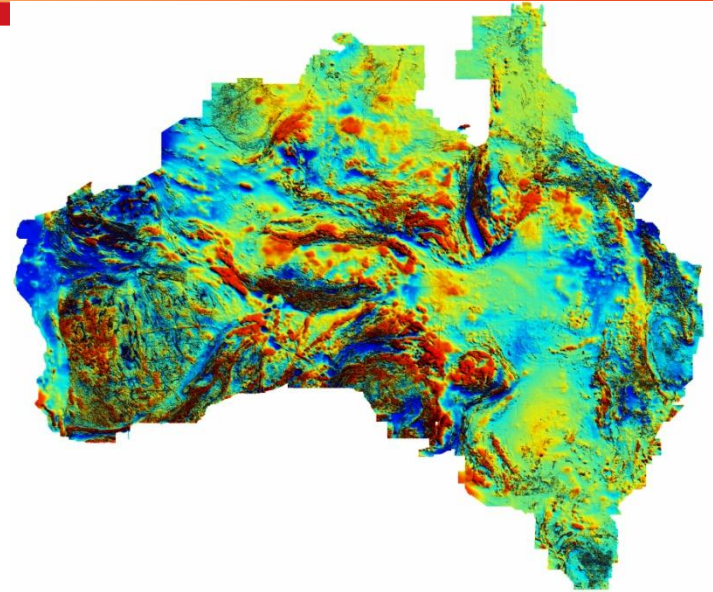
Exploration Under Cover

Challenges are many and varied

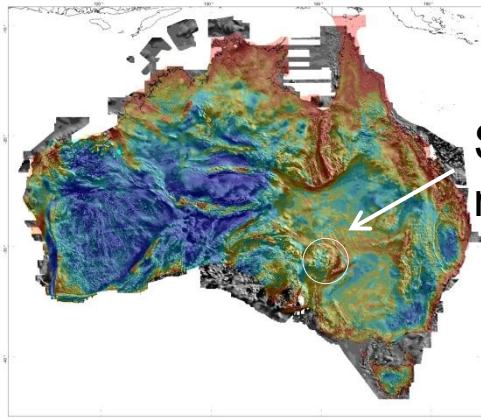
- Data acquisition
- Processing
- Imaging
- Interpretation

Technology advancements must address each stage in the exploration process

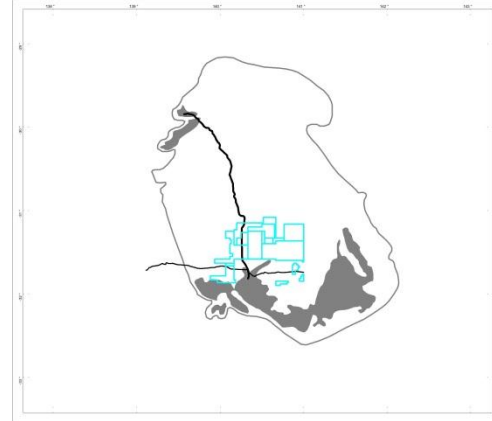
The following, an example of how alternative geophysical methods resulted in minimal impact on native title agreement (and \$\$\$)



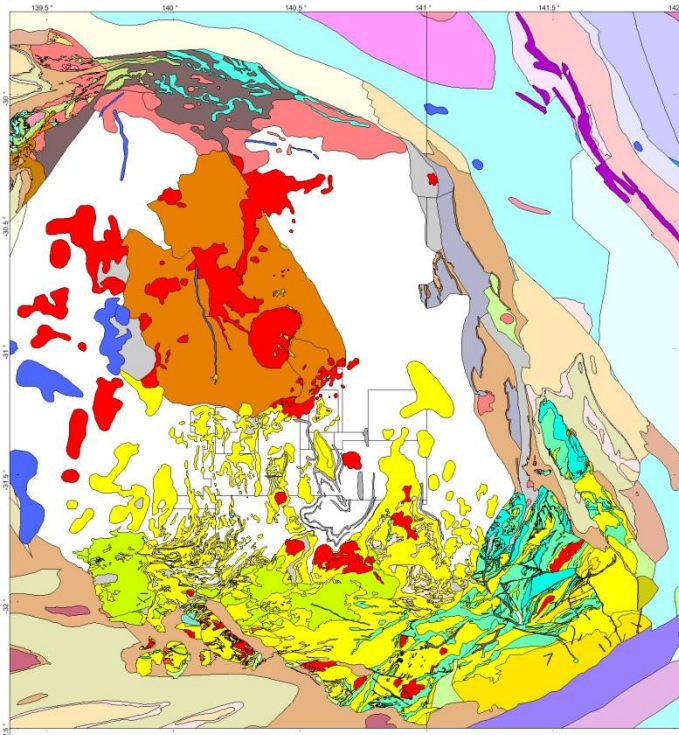
The Curnamona Province



Sub-circular
magnetic feature

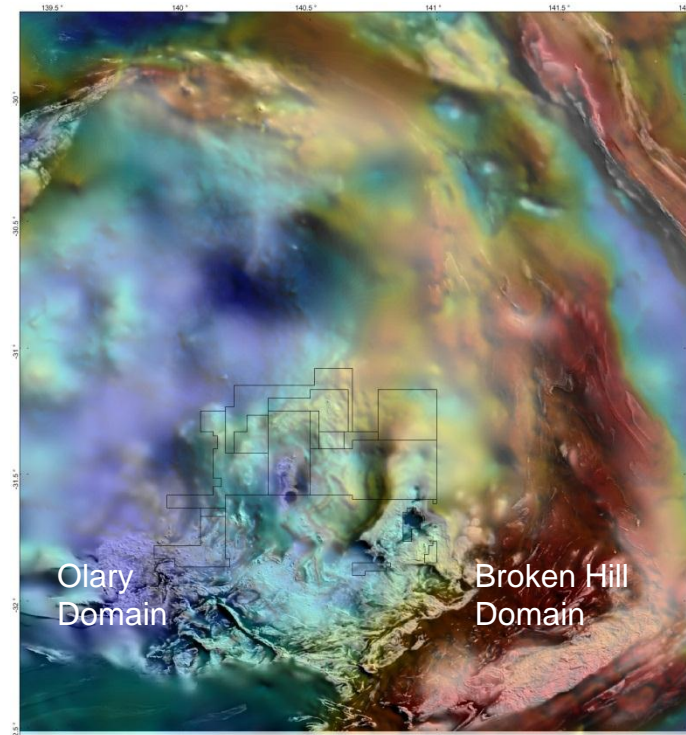


No outcrop on our
tenements



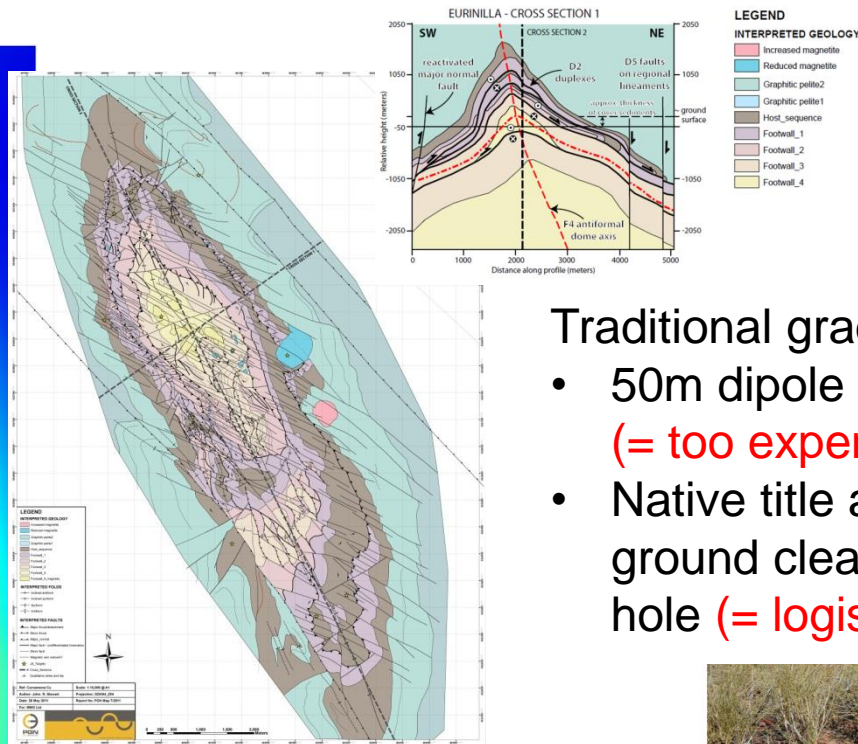
Outcropping /
interpreted
geology and
magnetic data
show poly-
deformed
basement rocks
e.g.

- Fold interference patterns
- Shear zones



The Eurinilla Dome

- Electrical survey might be able to map out conductive stratigraphy (redox boundary and graphitic pelites)
- Need high resolution data to map structures



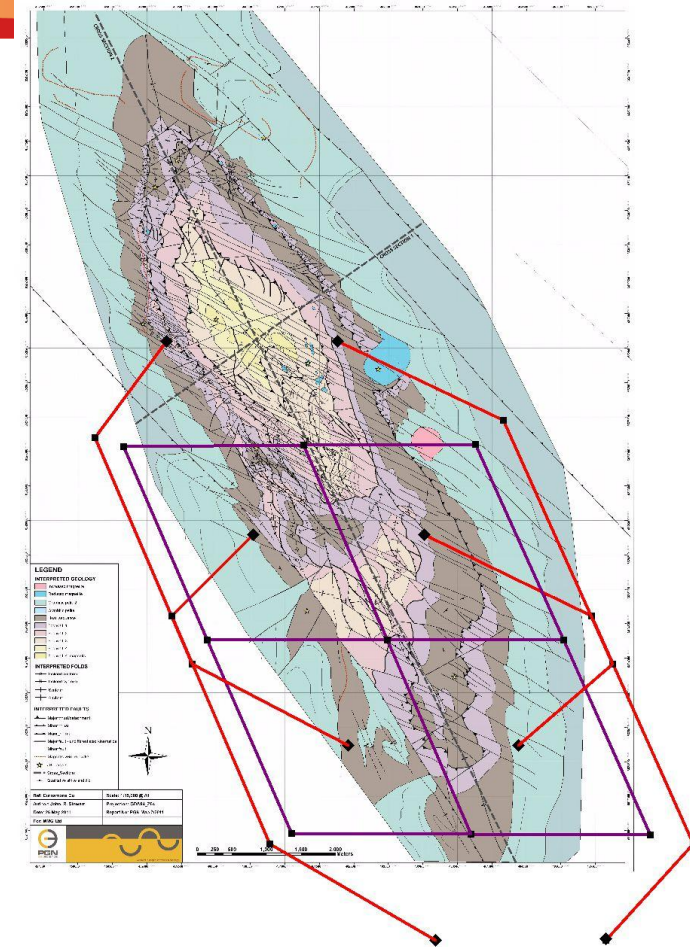
Traditional gradient array IP:

- 50m dipole on 100 m spaced lines
(= too expensive)
- Native title agreement requires ground clearance for every pot hole
(= logistically not feasible)



The Solution: Sub-Audio Magnetics (SAM)

- Based on Magnetometric Resistivity (MMR/MIP) method
- Simultaneous mapping of electrical and magnetic characteristics of the earth.
- Multiple parameters derived through signal processing:
 - Total Magnetic Intensity (TMI)
 - Total Field Magnetometric Resistivity (TFMMR)
 - Total Field Magnetometric Induced Polarisation (TFMMIP)
 - Total Field Electromagnetics (TFEM)
- Line spacing 100m, station spacing 1m (better coverage for same cost)
- High resolution (along lines)
- Minimal ground disturbance (4 transmitter dipoles only)





- Under budget
- Significantly less impact on environment (native title agreement)
- High-resolution
- Very pleasing result