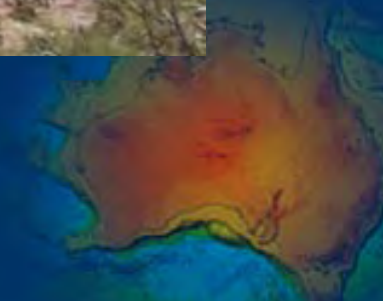


2005 Tanami Seismic Collaborative Research Project

Seismic Workshop Notes



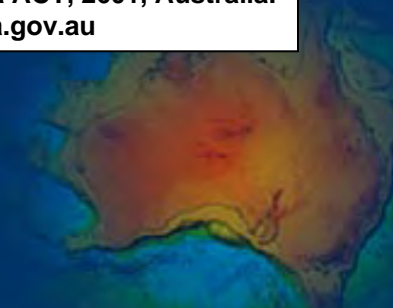
Evolution and Metallogensis of the North Australian Craton Conference



2005 Tanami Seismic Collaborative Research Project

Line	05GA-T1	05GA-T2	05GA-T3	05GA-T4
Direction	NW to SE	S to N	NE to SW	SW to NE
Length	354.28 km	101.80 km	179.24 km	84.40 km

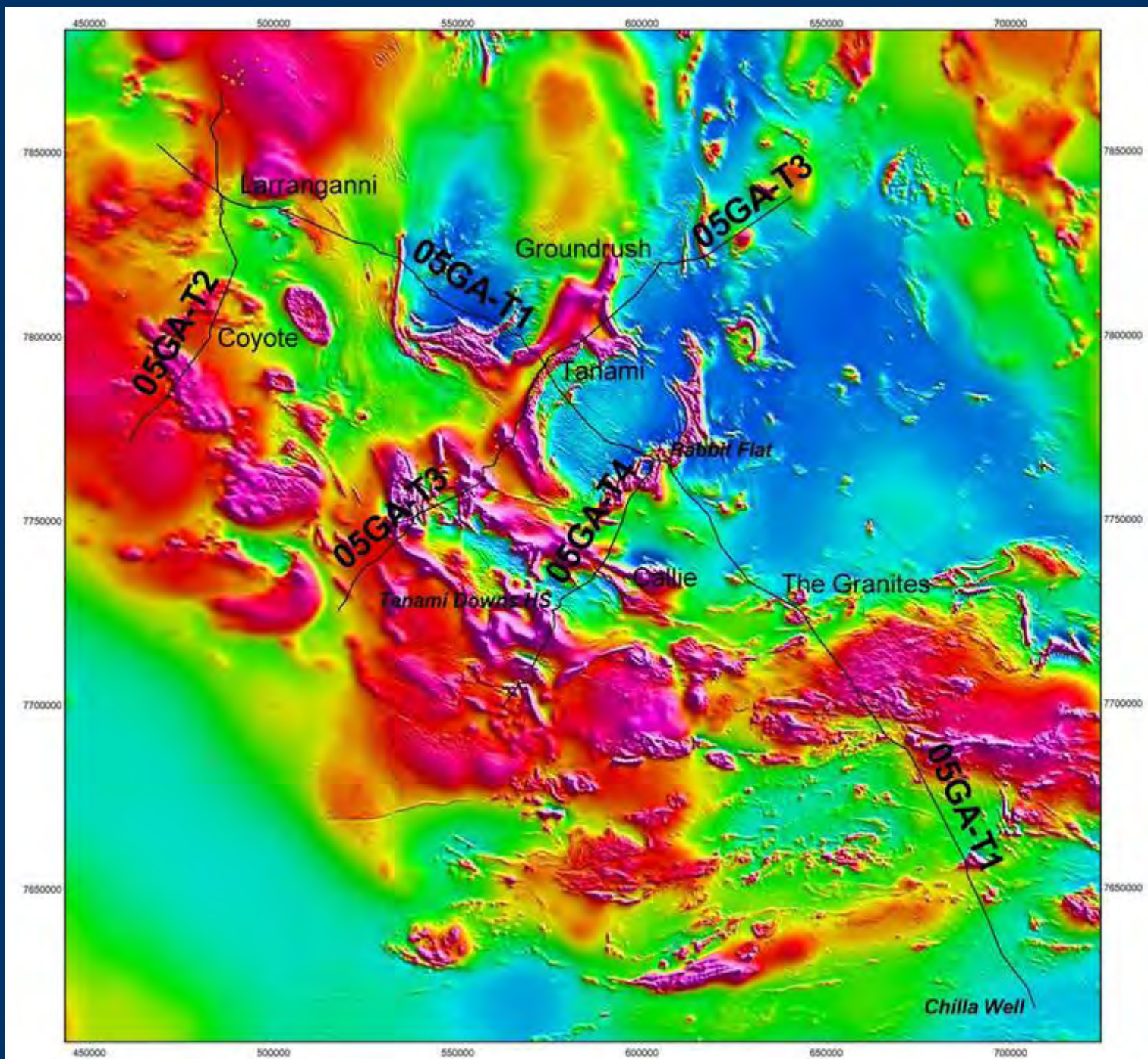
For copies of the field data please contact:
Tim Barton,
Seismic Acquisition and Processing Group,
Minerals Division,
Geoscience Australia,
P.O. Box 378 Canberra ACT, 2601, Australia.
Email: Tim.Barton@ga.gov.au



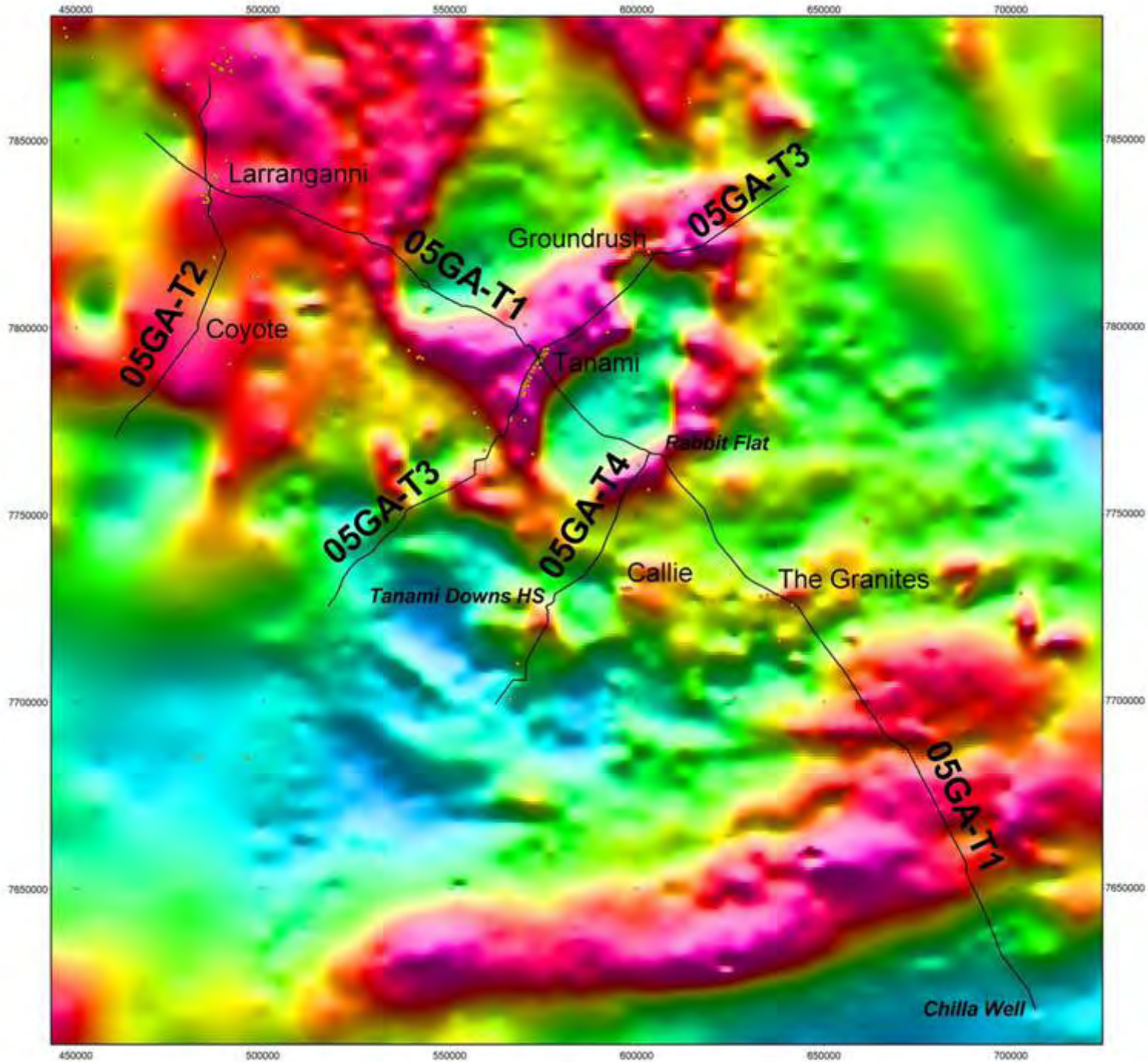


Interpreted Geology

p5



Magnetics

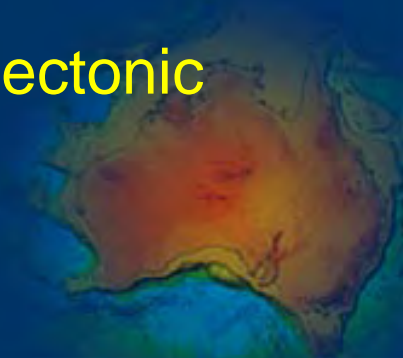


Interpretation of the Tanami region.

- Used all available data sets (mag, gravity, outcrop geology and solid geology).
- Used experience in other deep seismic interpretations (knew what to go for and what not to over interpret).
- Used all lines to calibrate and validate a 3D interpretation, were not interpreted independently.
- Involved all collaborators.

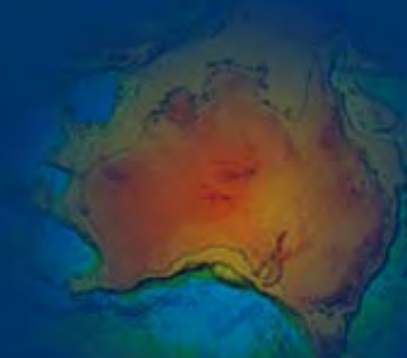
Resulted in

- First order agreement between interpretations from various collaborators, thus good correlation with geology as currently understood.
- Crustal architecture independent of any existing tectonic model.
- A few surprises!!!!



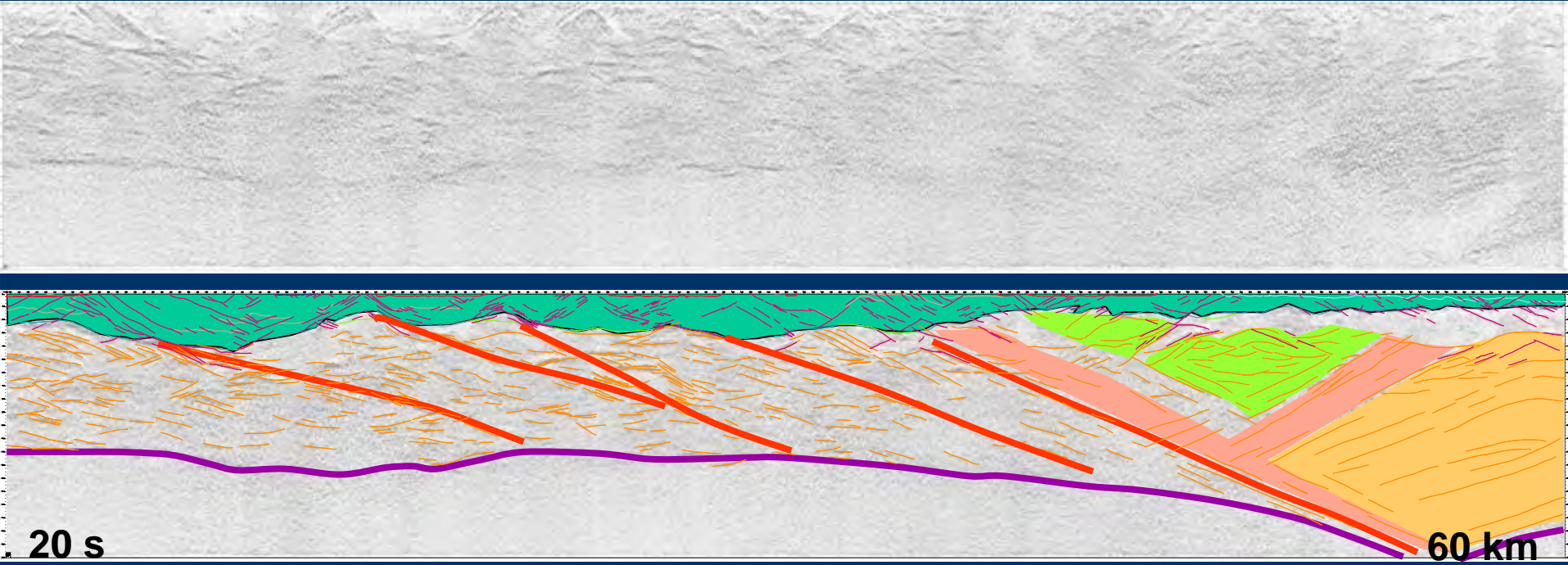
Seismic survey showed:

- Thickness of crystalline basement.
- Thickness of crust, Moho local topographic variation.
- Differences between Tanami basement and Arunta basement (big surprise).
- Thinning of the Tanami Group coinciding with the transition of the Tanami to the Arunta.



NW

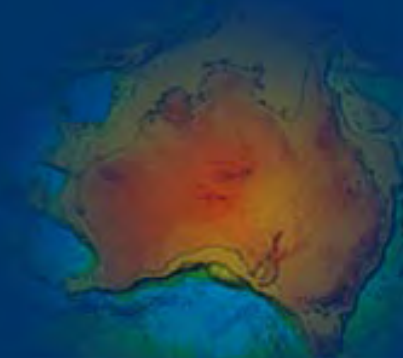
SE



354.28 km

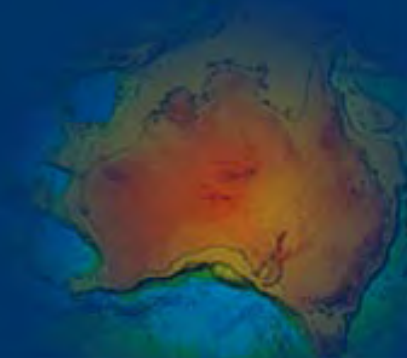
Traverse 05GA-T1

100 CDP= 2 km, V/H~1



Seismic survey showed:

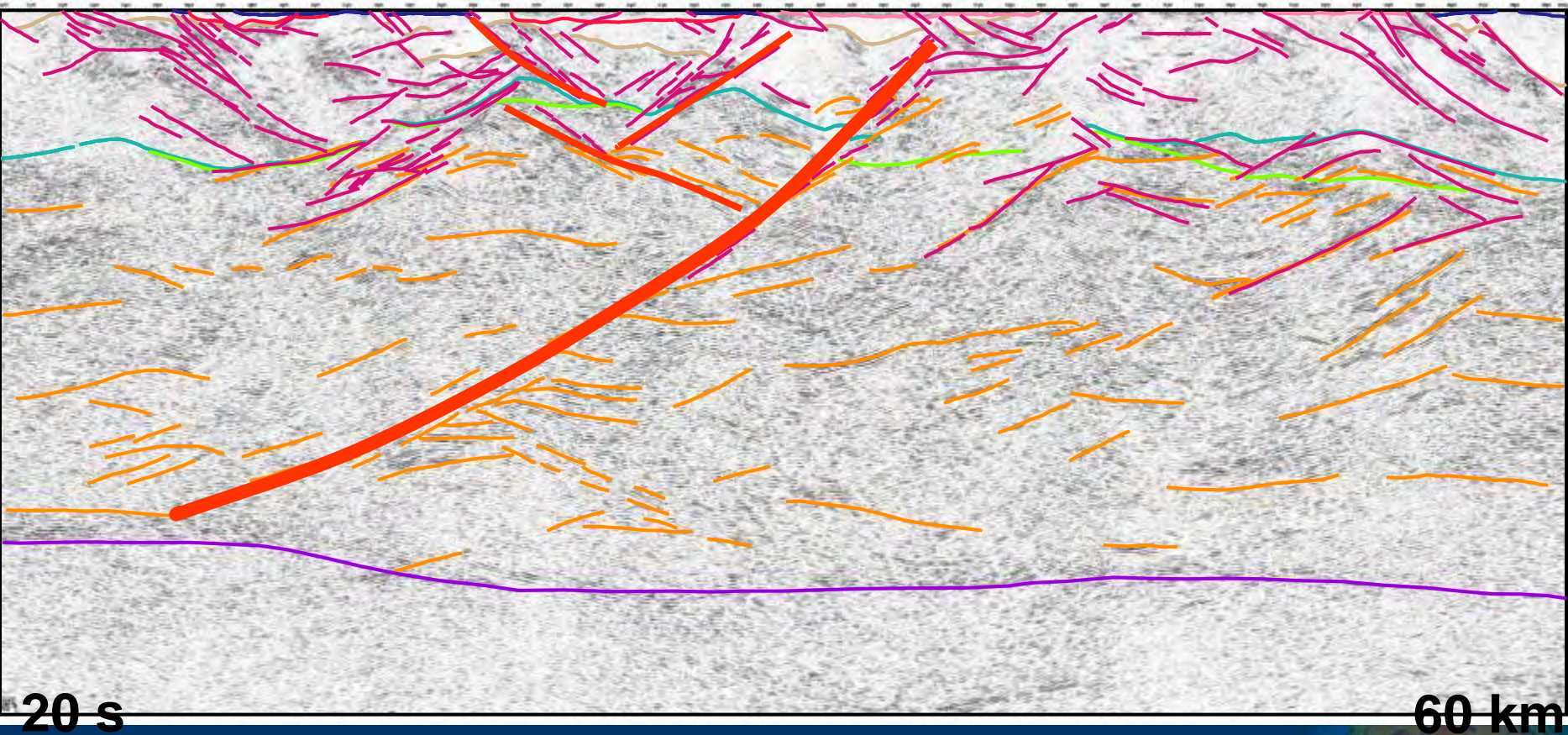
- Structures imposed on basement appear to control structures in the Tanami Group (big surprise).
- Changes in depth to Moho appear to control location of deep penetrating shear zones.
- Whole of Tanami Group plumbing system, with connectivity to crystalline basement.



SSW

Coyote
⚒

NNE



20 s

60 km

Traverse 05GA-T2

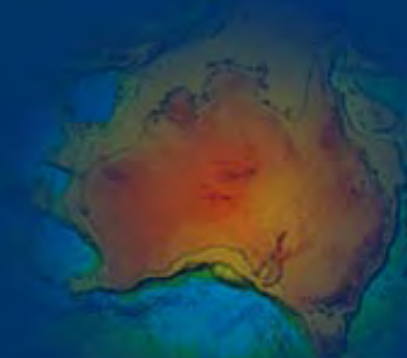
100 CDP= 2 km, V/H-1

p34



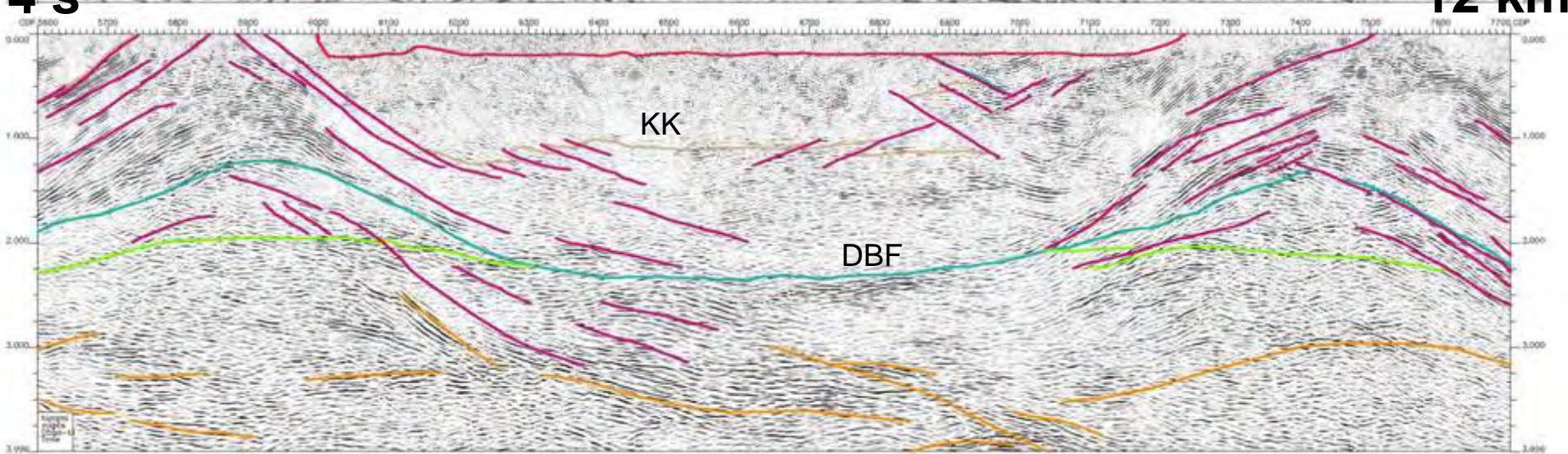
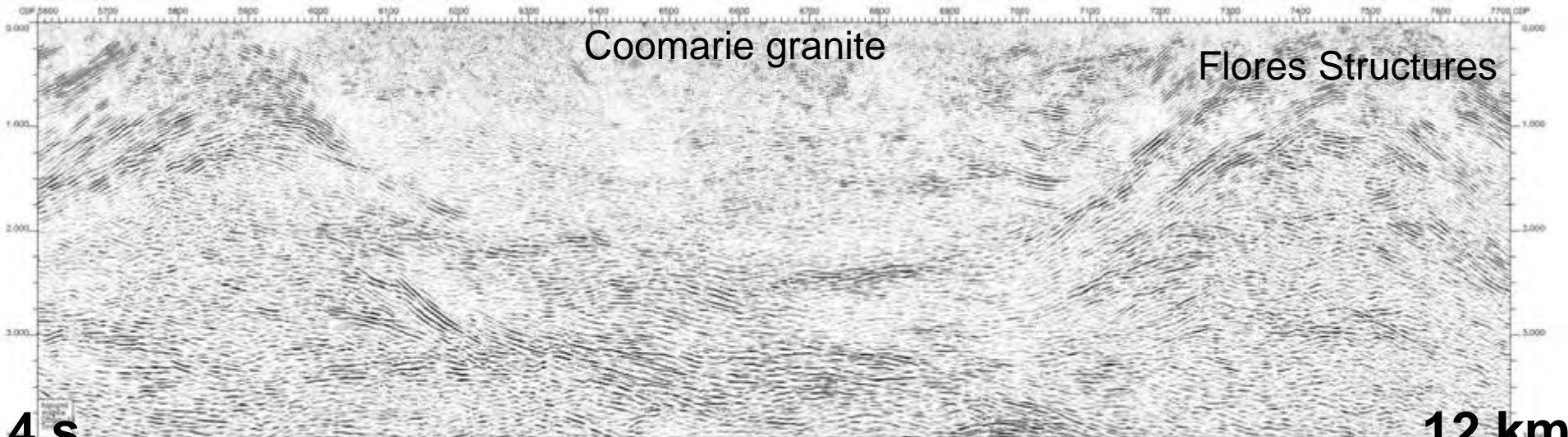
Seismic survey showed:

- Thickness of Tanami Group.
- Seismic character of Dead Bullock Formation, Killi Killi, Granites.
- Thinness of Granites (big surprise).
- Lack of identifiable granites at depth (big surprise).
- Lack of domes (big surprise).
- Cover successions.



NW

SE



Traverse 05GA-T1

100 CDP= 2 km, V/H~1

p45

2005 Tanami Seismic Collaborative Research Project

Each of traverses will be discussed in detail (6 s).

- Workshop notes will be published as a GA-NTGS-GSWA record in the near future.
- Seismic results will be incorporated into 3D modeling.
- Geometrically constrained potential field modeling (forward and inverse) of the using seismic data.
- Looking for sponsorship to present these in the Bahamas, Tahiti, Aspen, Paris etc etc, Mars and one of the Greek Islands.

