

OZ SEEBASE™: Basement Uncovered

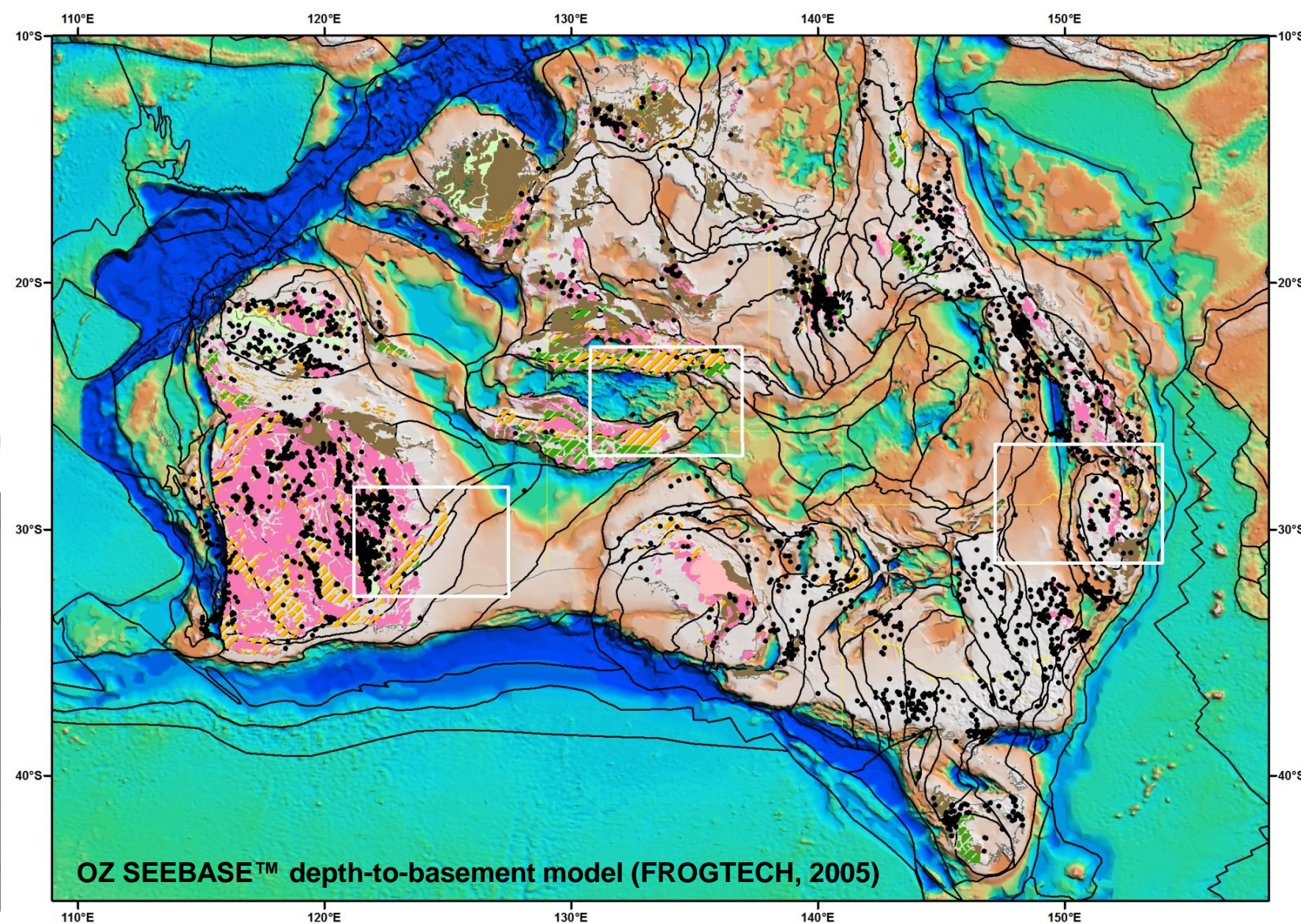
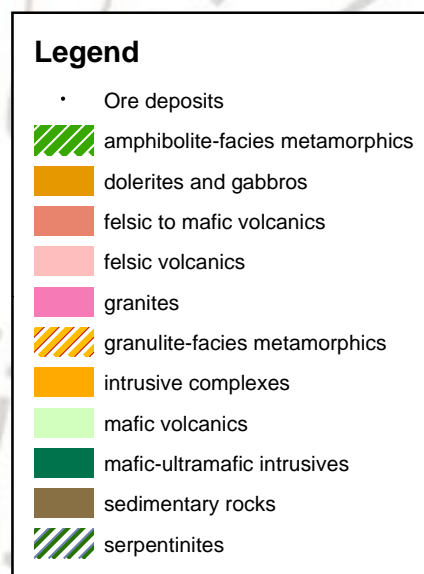
Lynn PRYER

Timothy N. DEBACKER

Karen CONNORS

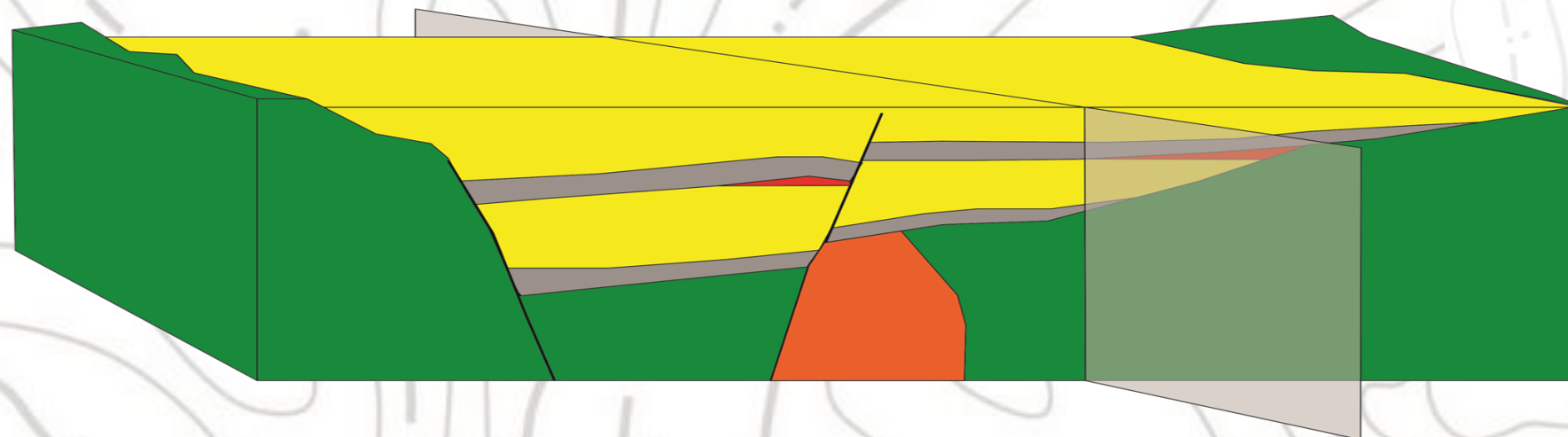
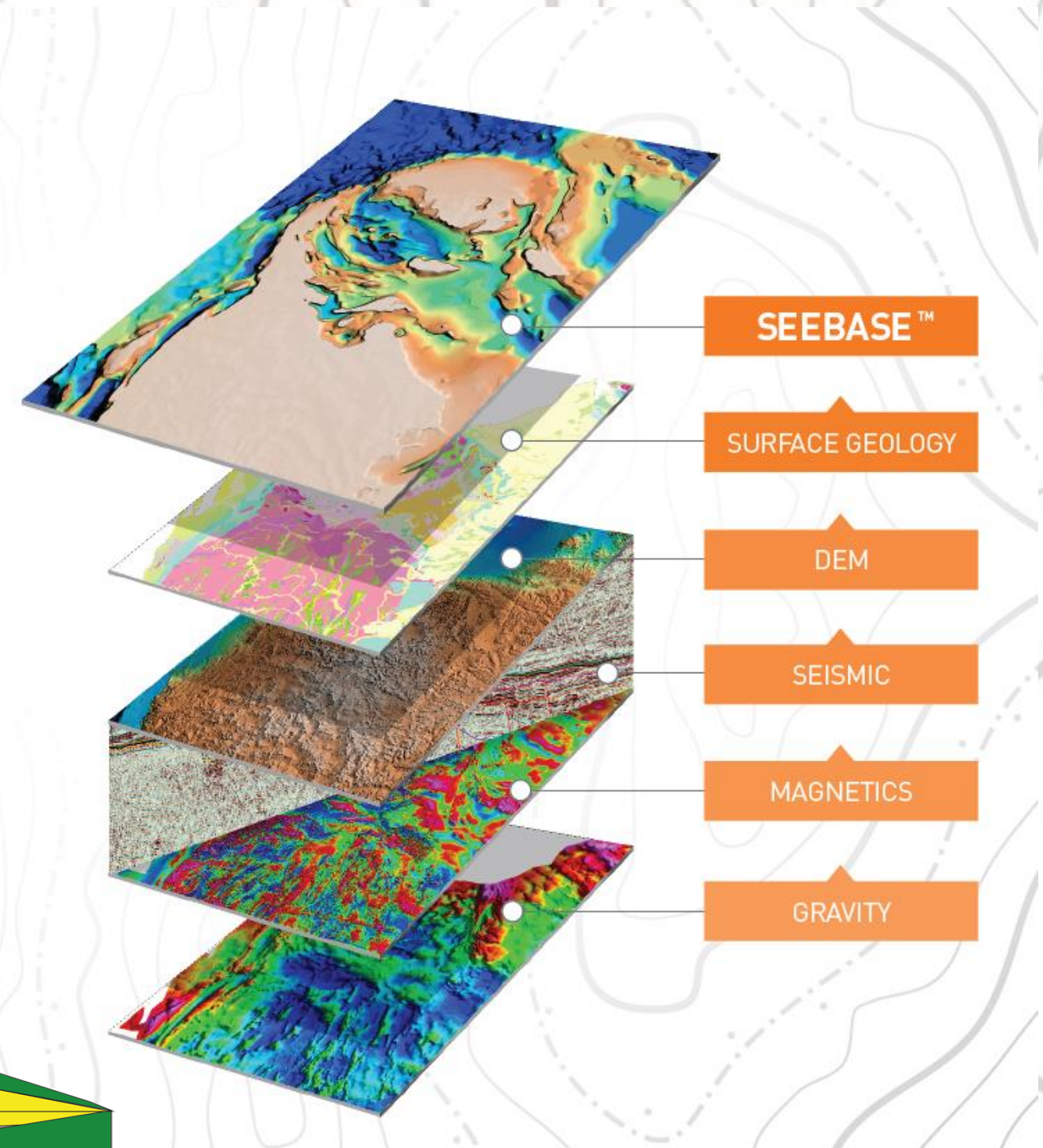
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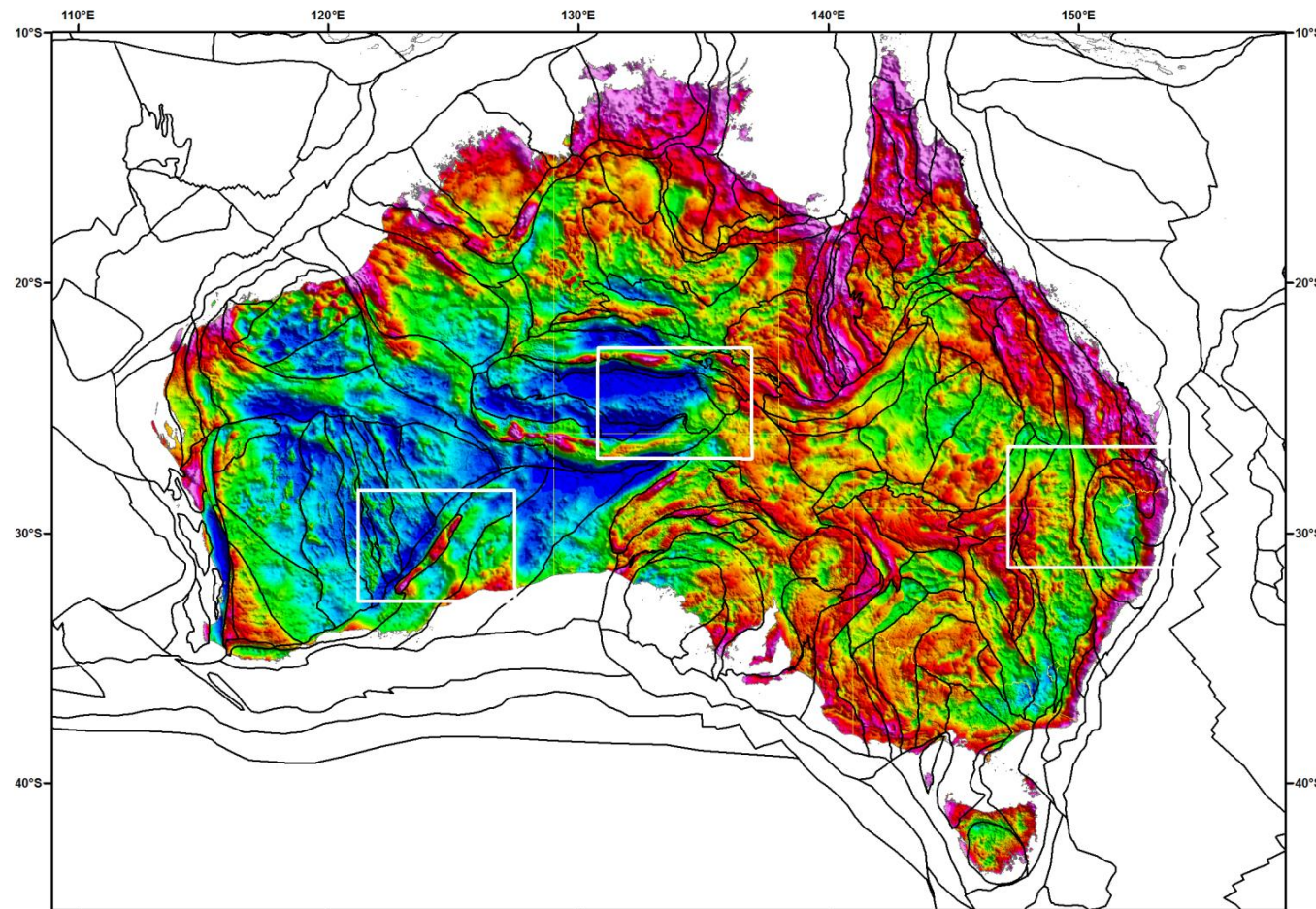


FROGTECH's SEEBASE

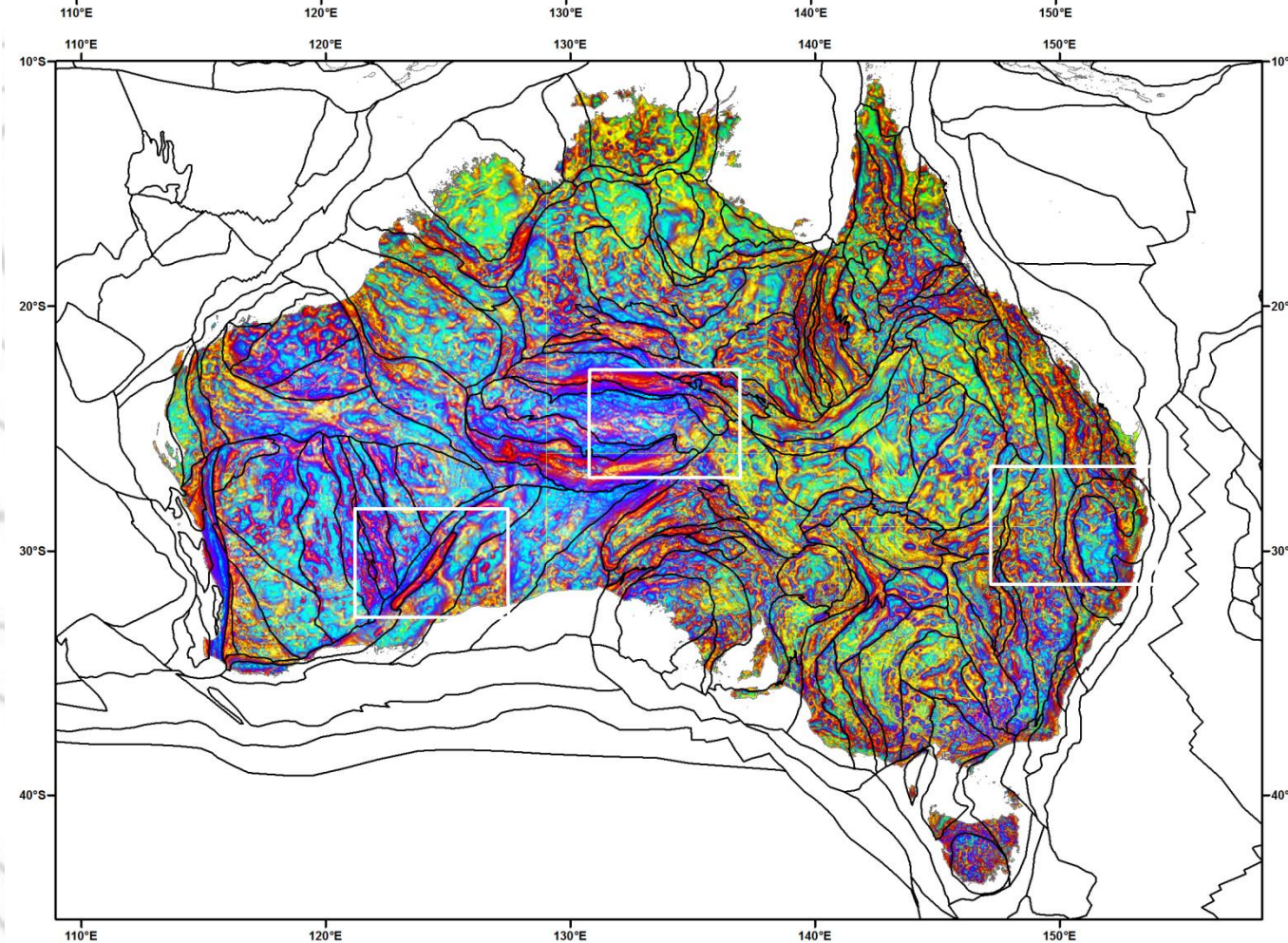
- **Map view approach**
- **Bottom up approach**
- **Importance of Basement**
 - **(more than) Depth to basement**
 - **Basement characterisation**
 - **Geodynamic history**
 - **Heat flow**



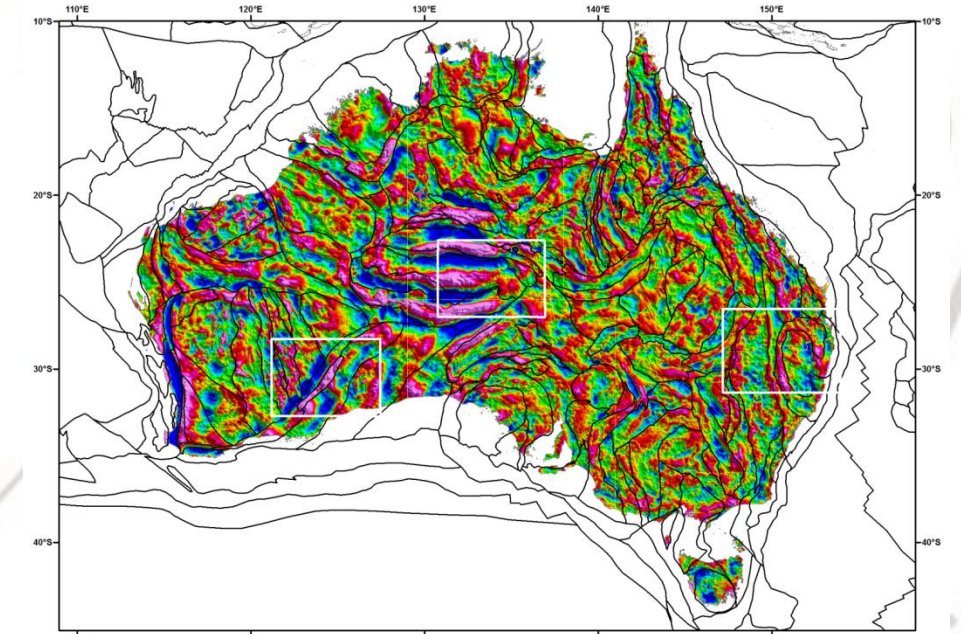
Bouguer Gravity image
(Geoscience Australia ANGD Gravity Grid, June 2009, Density 2.67g/cc)



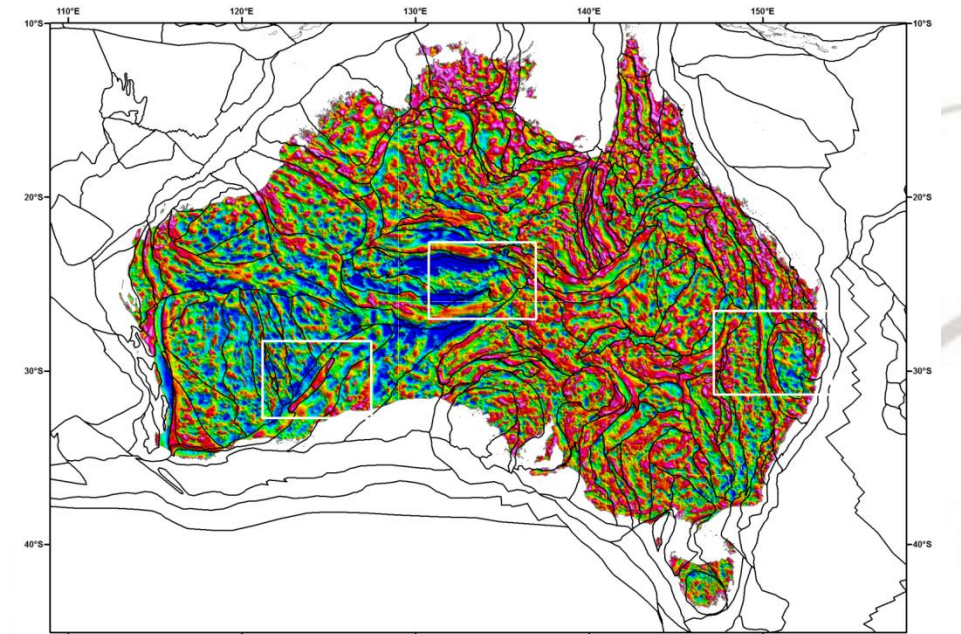
Ternary Image - Tilt, MS and AGC of Bouguer Gravity
(enhancement by FROGTECH, 2012)



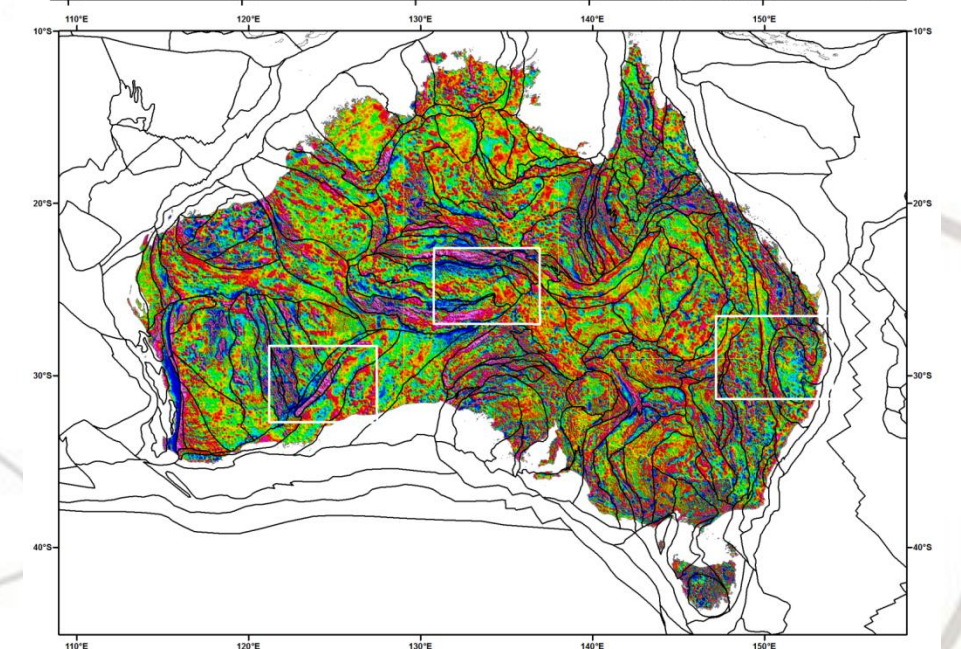
300km High-pass (HP) of Bouguer Gravity
(enhancement by FROGTECH, 2012)

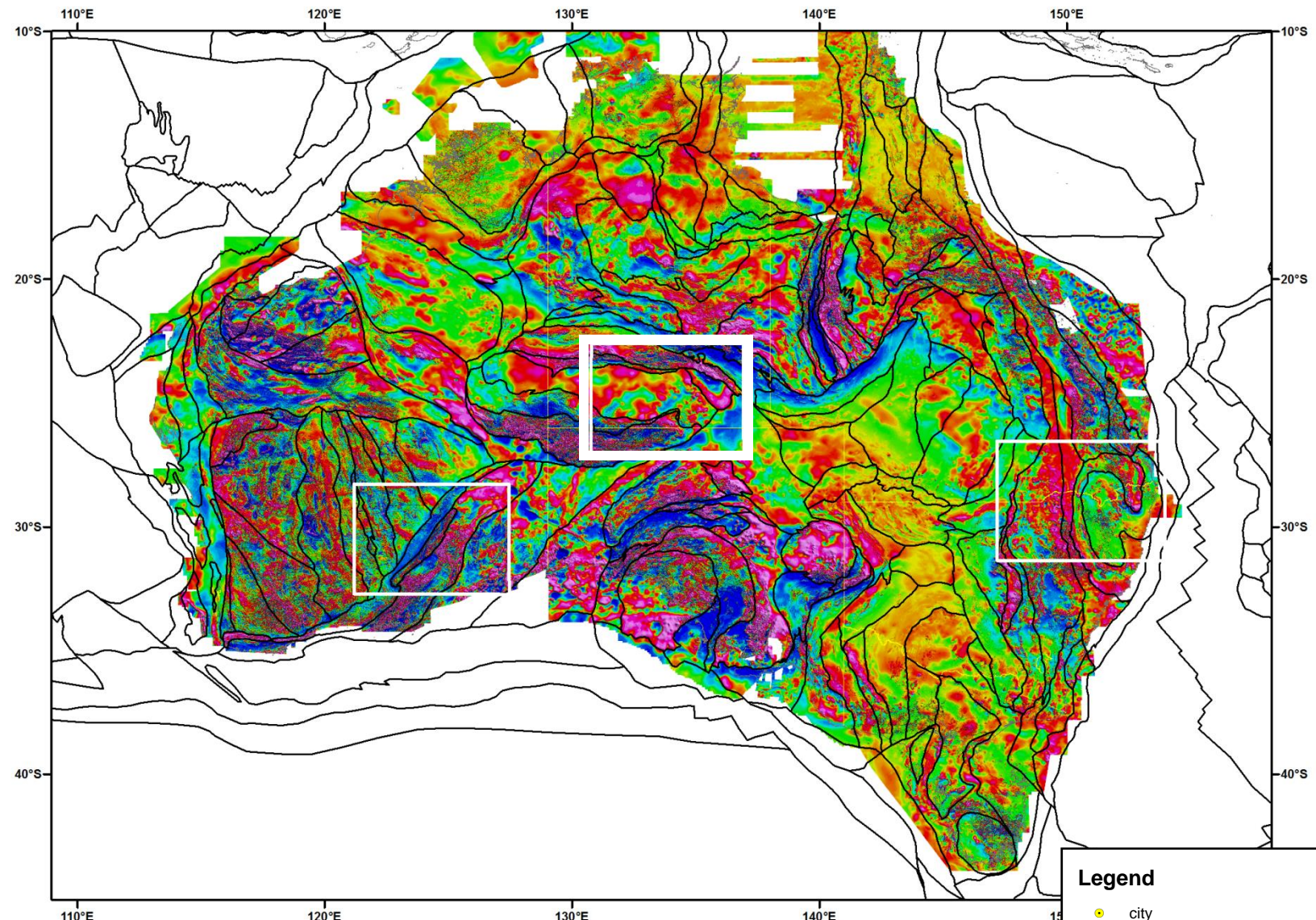


Automatic Gain Control (AGC - window size 100 grid cells) of Bouguer Gravity
(enhancement by FROGTECH, 2012)



First vertical derivative (1VD) of Bouguer Gravity
(enhancement by FROGTECH, 2012)

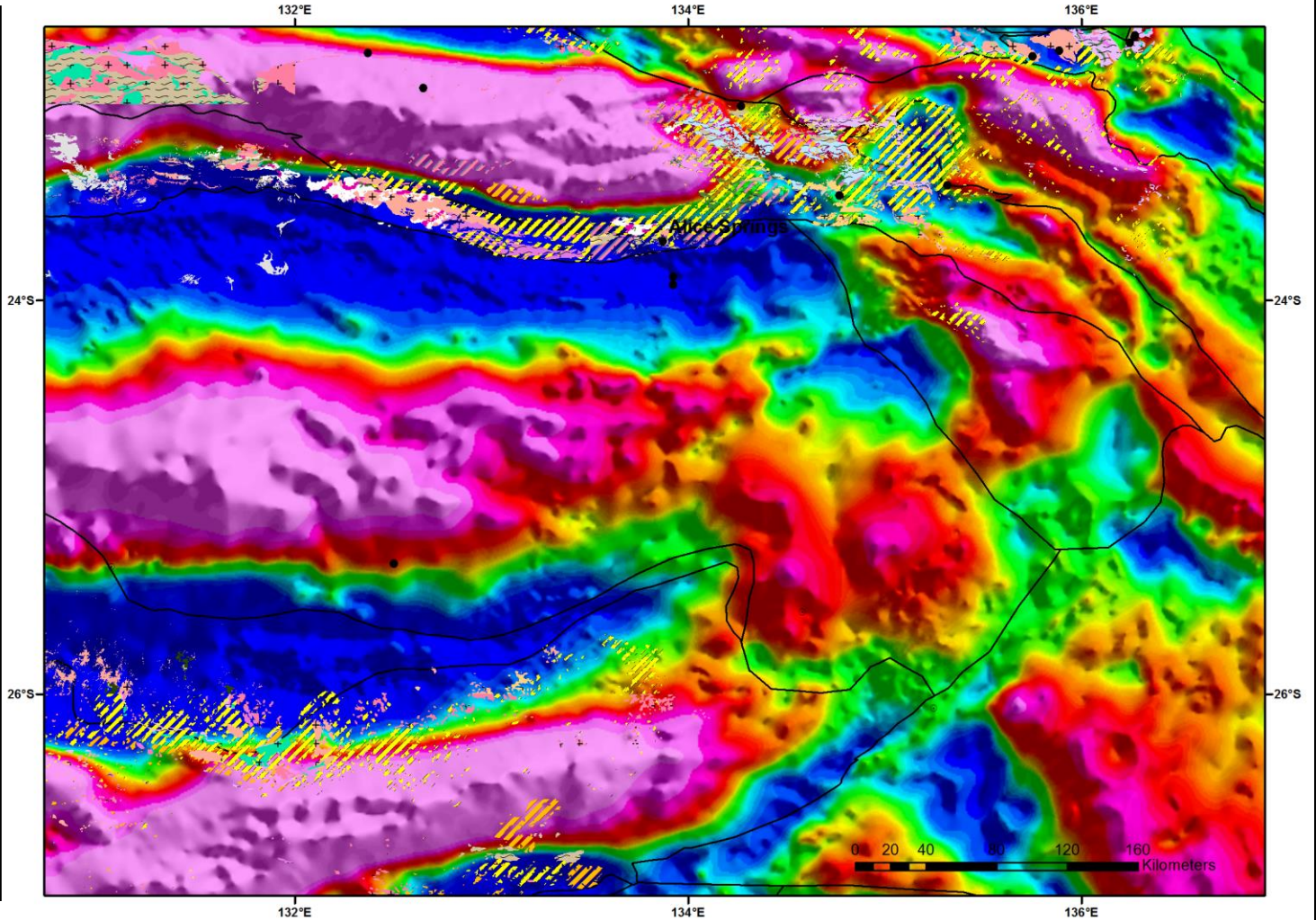
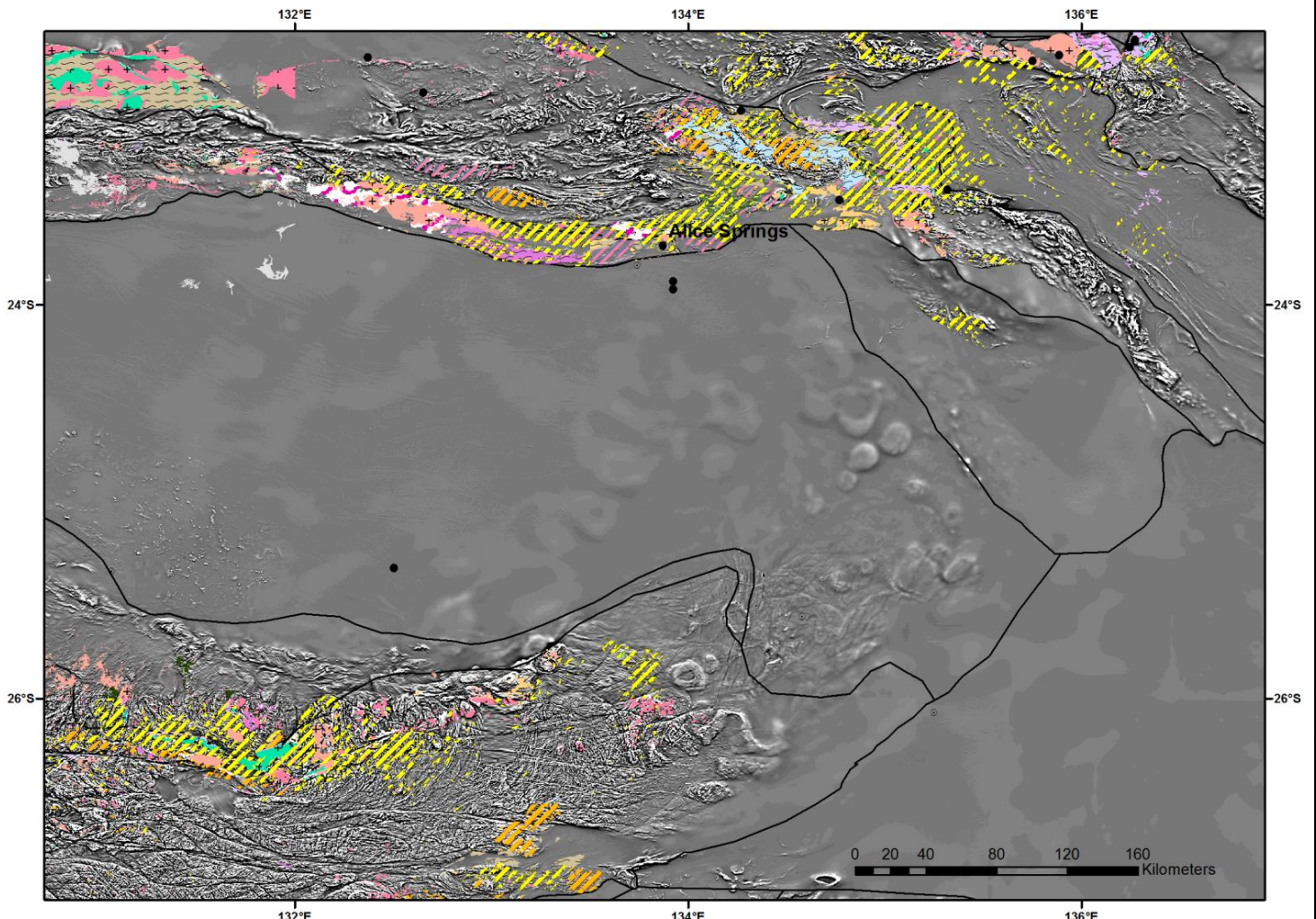




Total Magnetic Intensity (TMI) image (Fifth Edition TMI Anomaly Grid of Australia, Geoscience Australia, 2010)

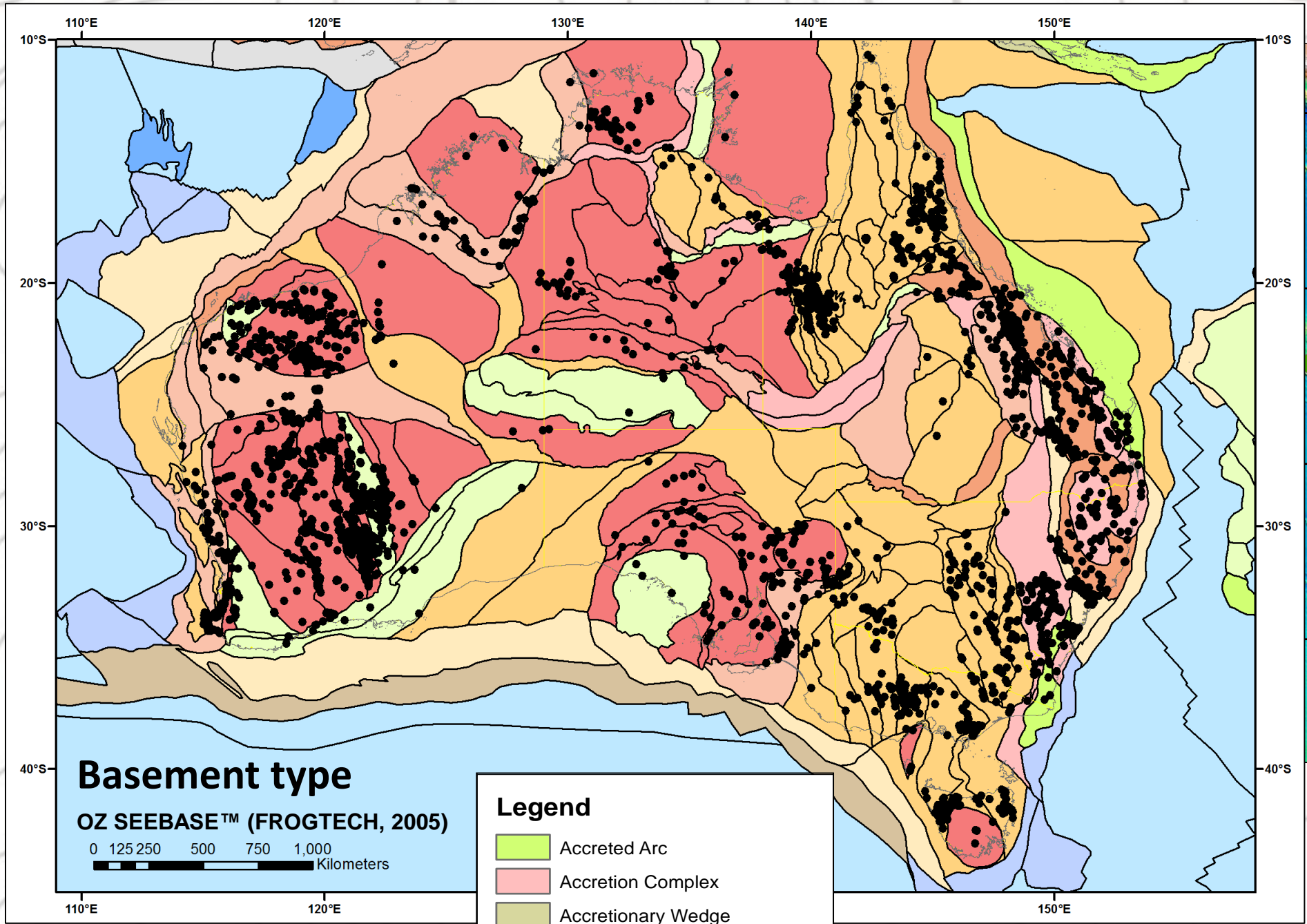
Above right: Greyscale image of First Vertical Derivative (1VD) of Total Magnetic Intensity (TMI)

Right: 300km High-pass (HP) of the Bouguer gravity of the eastern side of the Amadeus Basin



- Legend**
- city
 - town
 - Ore deposits
 - Felsic intrusive
 - ▨ Felsic orthogneiss
 - Felsic-intermediate intrusive
 - ▨ Gneiss
 - ▨ Granulite
 - Intermediate intrusive
 - Intrusive
 - Mafic intrusive
 - Meta-felsic intrusive
 - Meta-igneous
 - Meta-intrusive
 - Meta-mafic
 - Meta-mafic intrusive
 - Meta-ultramafic
 - Metacarbonate
 - Metamorphic
 - Metaquartzite
 - Metasediment
 - Migmatite
 - ▨ Paragneiss
 - Ultramafic intrusive
 - Unknown

Why is this high/low there?
Mapping Geology, NOT anomalies



- Legend**
- Accreted Arc
 - Accretion Complex
 - Accretionary Wedge
 - Continental Arc
 - Craton
 - Cratonised Arc
 - Forearc-Accretionary Wedge
 - Highly Attenuated
 - Island Arc
 - Oceanic Crust
 - Oceanic Plateau
 - Ophiolite
 - Transitional
 - Transitional magmatic
 - Transitional non-magmatic
 - Undifferentiated Continental
 - Undifferentiated Orogenic Belt

