

Current geoscience activities at MRT

Andrew McNeill

1 December 2022

What's on at MRT



Funding of Activities at MRT



Mining for Tasmania's Future Policy for:

- Promotional activity
- Stage 2 re-development at Mornington (Laboratories) - completed

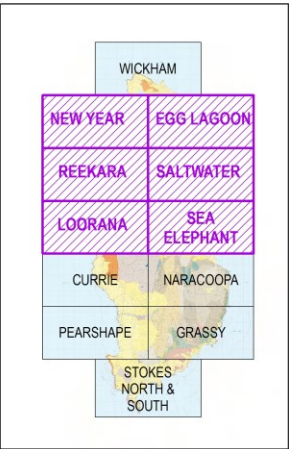
FY 2021/22 to 2024/25 a new **Geoscience Initiative** with funding of \$2.0 million

FY 2022/23 to 2024/25 there is a further \$1.5 million for **EDGI** co-funded drilling




FY2022/23 to 2024/25 an additional \$0.8 million through the **Support for the Mining, Exploration and Quarrying Sectors** initiative

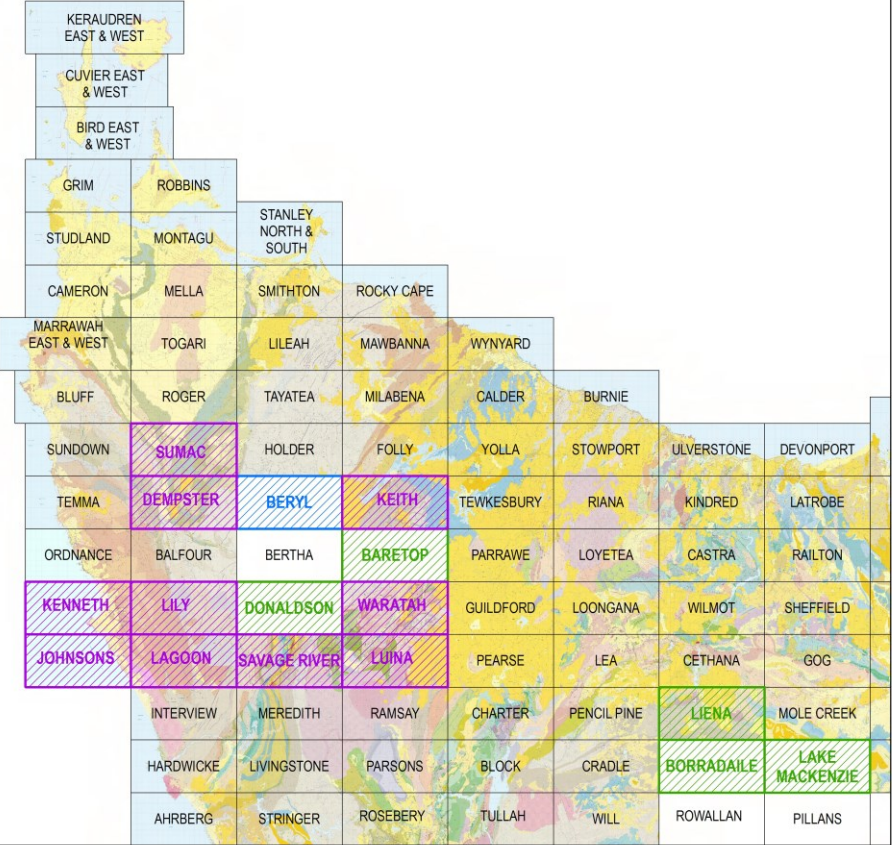
Commonwealth Exploring For the Future **EFTF** (2020/21-2023/24) – Tasmania's share up to \$3.0 million

Regional mapping



1:25 000 Mapping Programme

-  Fieldwork in progress
-  Map production in progress
-  Revised / Published 2017-2022



New map system and databases being used; finalising digital data output.

Mapping on King Island completed – all six sheets now published

Lily and Lagoon sheets published

Beryl sheet in production

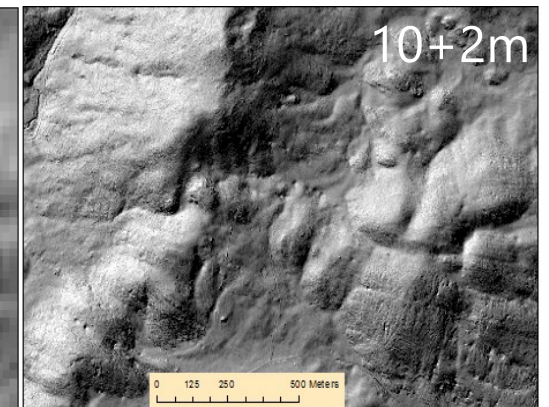
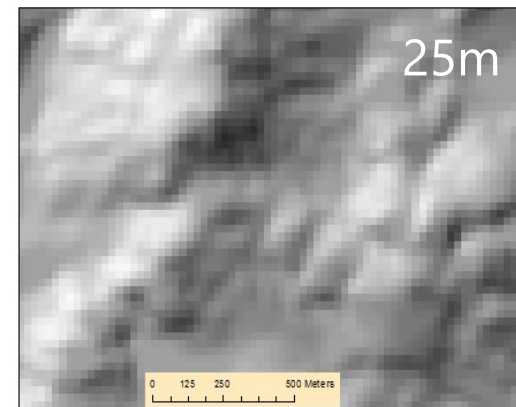
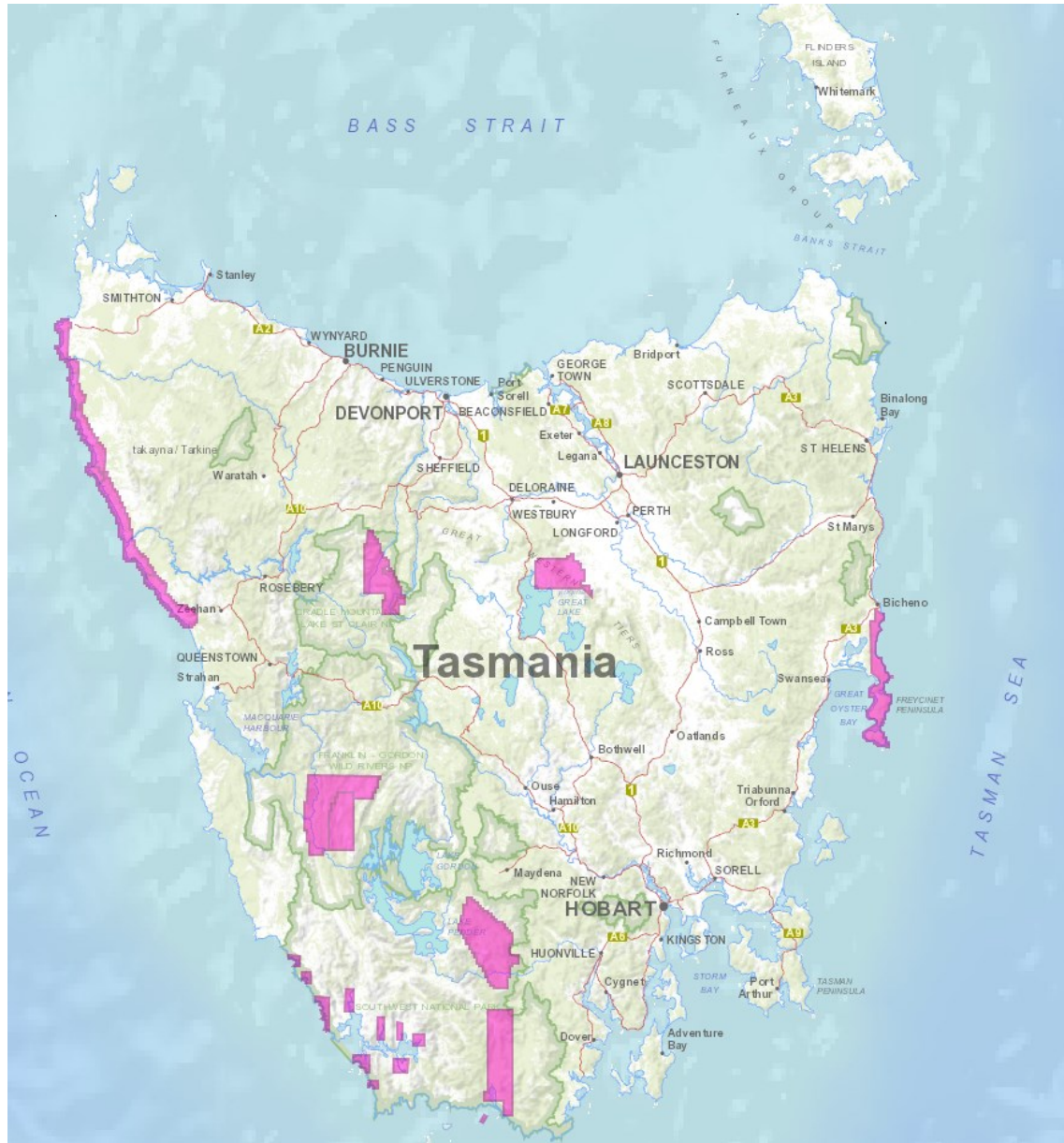
Currently mapping Liena (major update), Lake Mackenzie and Borradaile supported by magnetics / radiometrics acquired in 2021, and Donaldson (with LiDAR acquired in 2021)

Regional mapping

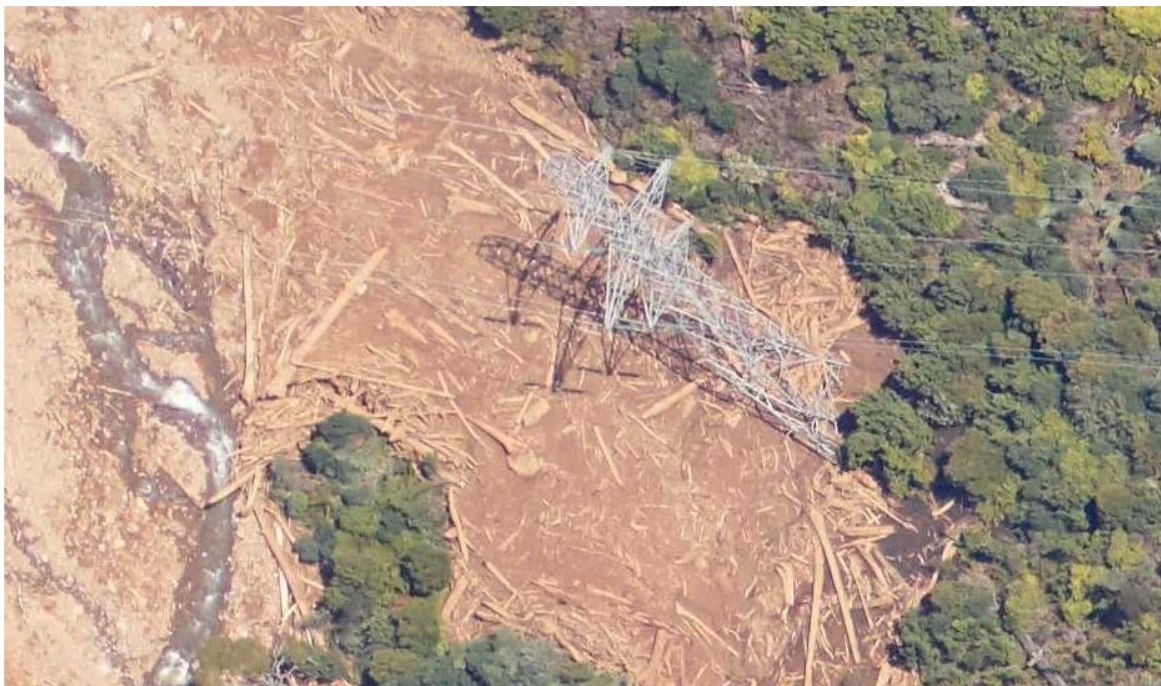
2022/23 planned LiDAR acquisition – underway

MRT funding collection of data for areas of interest as budget allows (Poatina, Lodi)

Will build into MRTs statewide DEM as data becomes available



State-wide LiDAR



Images courtesy of Enzen

Enzen and 42-24 are planning to fly all of Tasmania with LiDAR and imagery every year for the next 10 years.

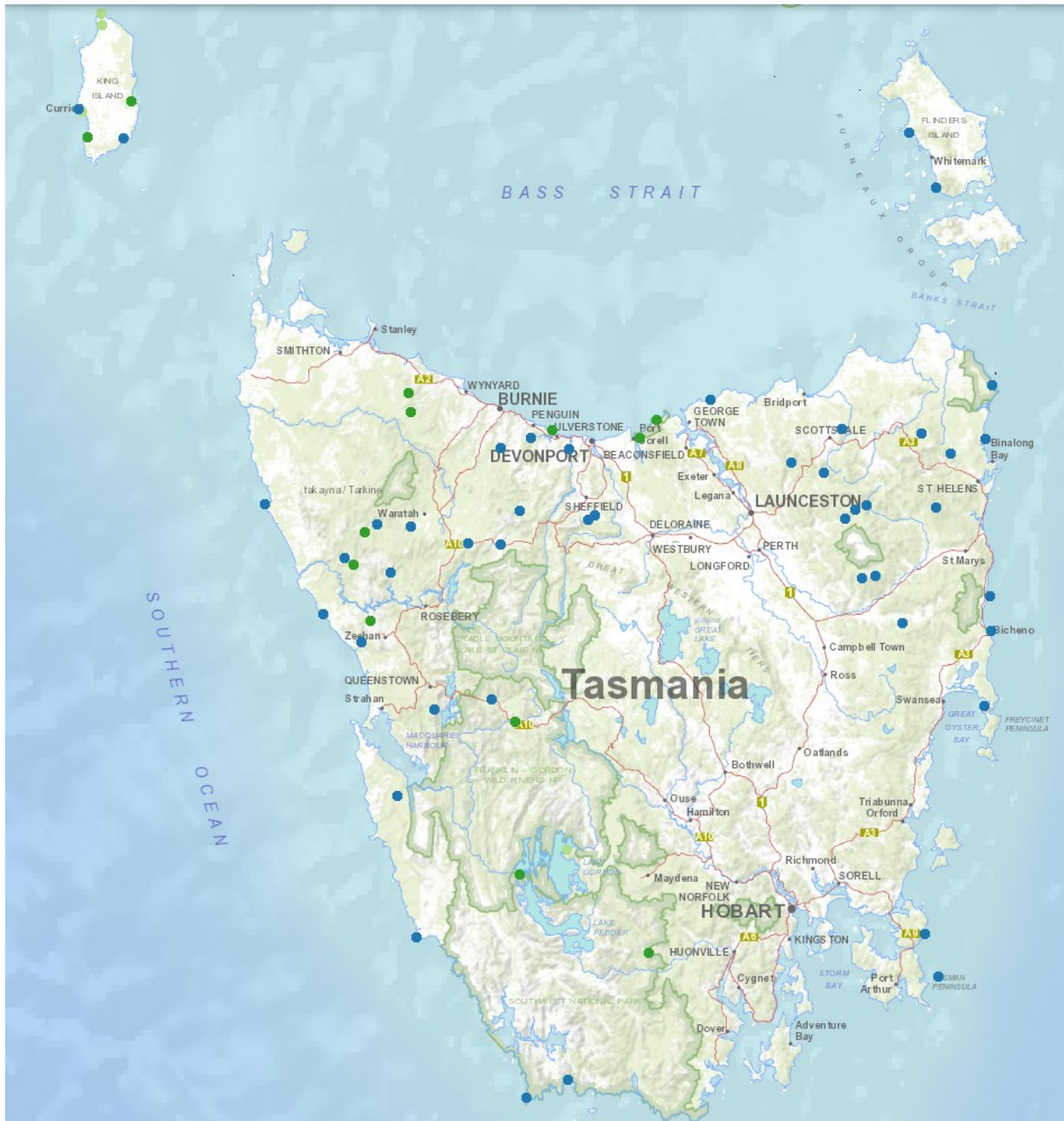
Foundation supporters are DSTC and TasNetworks

Commercial operation – cost of data unclear; strong push on value adding to data

Have their own aircraft, first state-wide coverage to be completed by March 2023

Capacity to divert to respond to issues such as the October rainfall event

Data - Geochronology



GA / MRT compilation of existing Geochronological data

As part of the EFTF project

Around 870 ages

Not complete – plan to update regularly

Report close to release

Data will be available on the EFTF, theLIST and MRTs new map viewers

Will be supplemented with results from Sheree's work

See poster.....

Documents and reports

Geographic Area

Geographic Location

Data Source MRT Documents
 Company Reports - Onshore
 Company Reports - Offshore Hydrocarbons

Author

Date of Publication

More Search Options Hide

Report Number

Title

Keywords

Company Name

Tenement Reference

Commodities

Minerals

Deposits

Activities

Wells

Seismic Survey

Mapsheets

Documents and reports

Report	BDR2022_01
Date	03/10/2022
Author(s)	Knight, K.
Title	Bulk Data Report - 2022
Tenement(s)	1 volumes, 1 data package note, 2 Appendices, 4 Compressed data folders
Physical Description	
Digital Media	
Other Ref.	
Map (250K)	
Map (50/100K)	
Geographic Activities	Auger , Commodities , Diamond , Drilling , Geochemistry , Geophysics , Industrial minerals , Metalliferous , Mineral n/ore , Mining , Ore Reserves , Physical properties , Rock-chip , Rotary/percussion , Sediment/pan conc. , Soil , Whole-rock:Major , Whole-rock:Trace
Minerals	
Deposits	
Keywords	
Annotation	This Bulk data package provides an extract of open file data from Mineral Resources Tasmania's (MRT) TIGER Drilling and Samples and Observations databases, as at July 2022. The data is organised into a series of related tables, grouped into the following data types: Drilling data (Collar and surveys); Drill hole sample and analysis data (Sample and geochemistry, and petrophysics); Drill hole sample and analysis data (Sample and geochemistry, and petrophysics); and Surface sample and analysis data (Sample and geochemistry, and petrophysics).



[View Area On Map](#)

Related MRT Plan(s):

[< Back to Search Results](#)

Data - Data dumps

Still adding historical data:

73,700 drill samples and assays added

620 GHD geotechnical drill holes

>5,000 scanned drill logs

As an interim measure producing bulk data dumps:

Drill hole collars and surveys

Drill hole samples and assays

Surface samples and assays

Petrophysical data – surface and drillhole

Will announce this in the “news” on the website and newsletter when released.....

Geophysics

Eastern Tasmania Airborne magnetic and radiometric survey

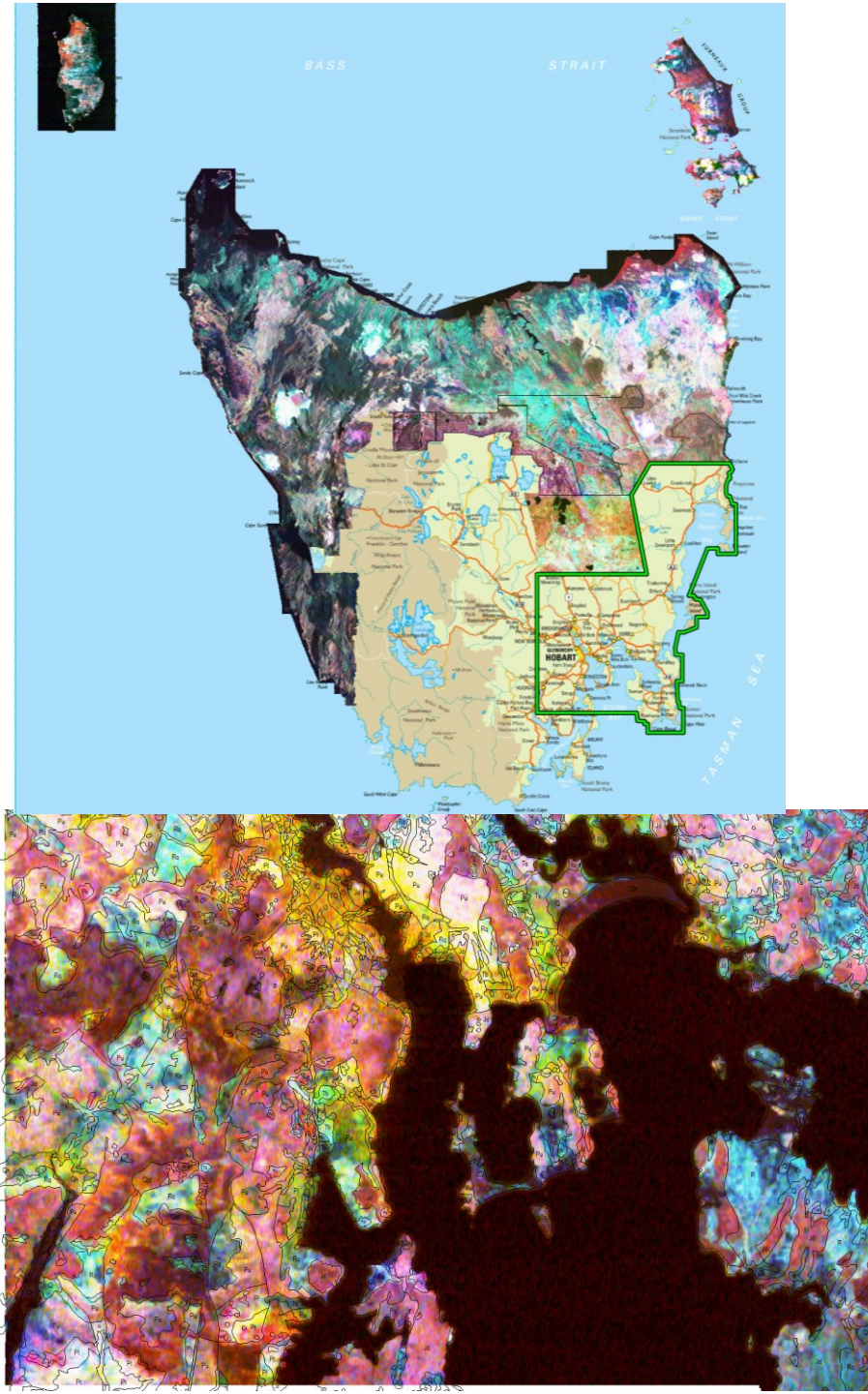
Commenced March and completed in June 2022.

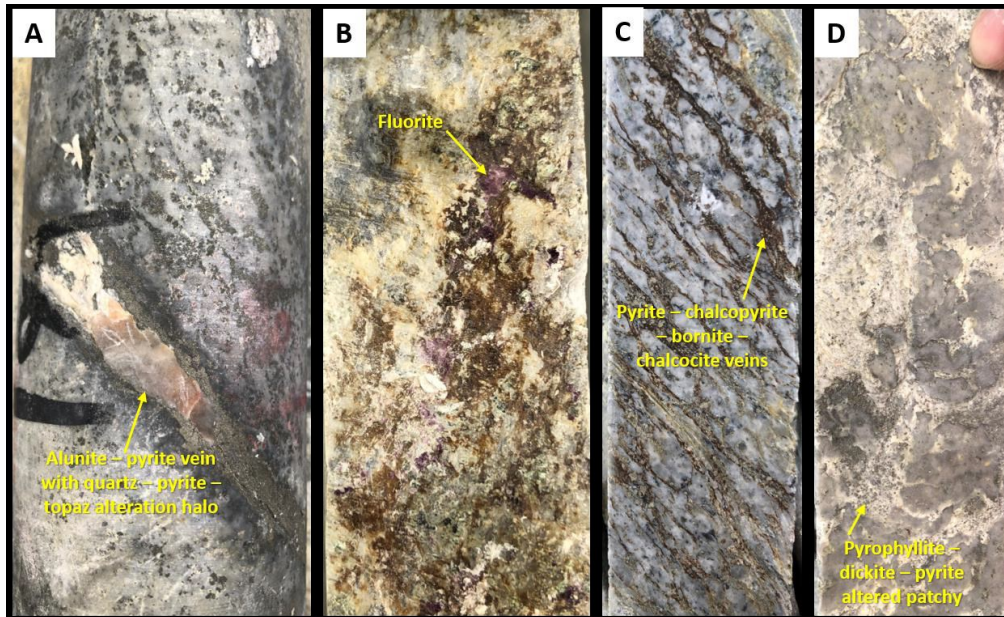
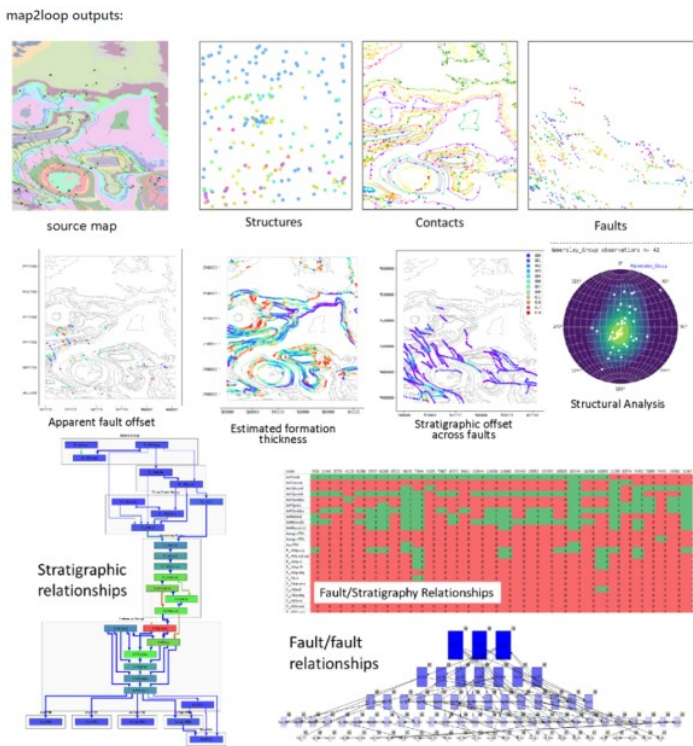
57,300 line km (200m spaced lines at nominal 80m altitude)

Largely funded by EFTF (approx. \$1.2 million) with \$130K from MRT

Issues with Radiometric data – now resolved

Data release to be officially announced on Monday 5th December





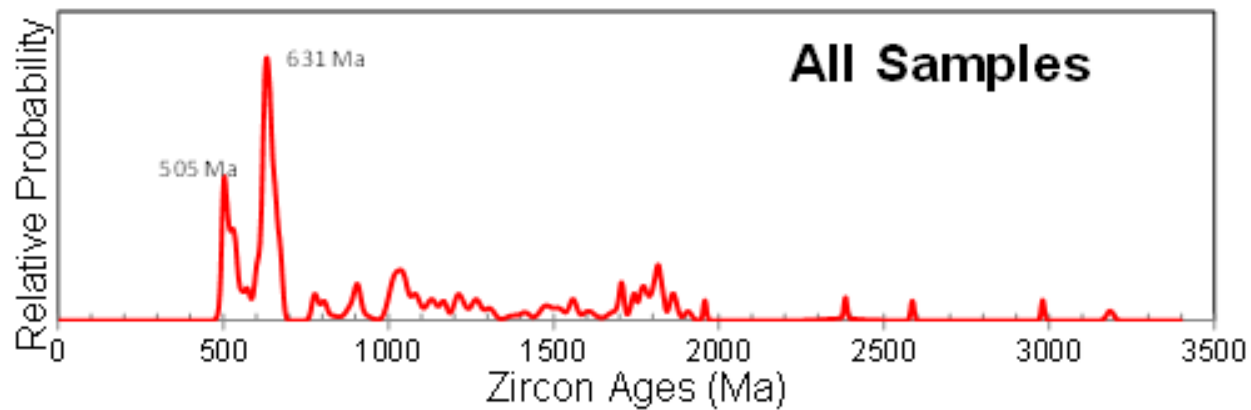
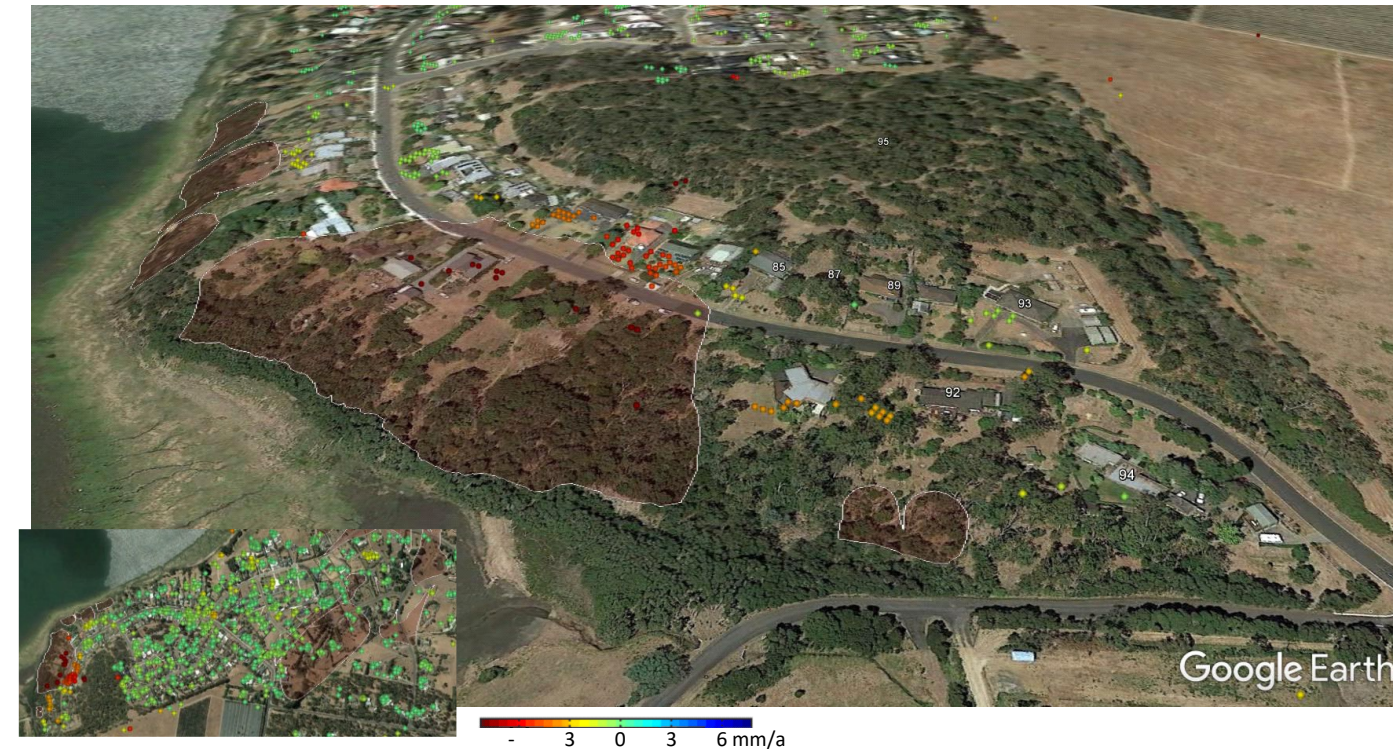
- New projects:
 - LOOP 3D; ARC Linkage – automated implicit 3D modelling.
 - IOCG3; CODES & industry – Alpine and *Savage River*
 - Critical Minerals Regional Research Collaboration Program - CODES & industry
 - Western Tharsis PhD; CODES & CMT – exploration and ore body characterisation
 - High resolution imagery; CODES & NRET – application to geological mapping
 - Scotia mineralogy; CODES – reconcile mineralogy with AMD
 - Natural Hydrogen generation – UNSW +GA (application)

Natural hazards:

- Use of InSAR – Legana and Tarroona
- PhD Student at SFU, Canada

Geochronology:

- Henty Fault Wedge
- Ar-Ar dating of Tertiary basalts
- King Island shear zones:
 740 ± 9 Ma (monazite)
- Mewstone Granite – Cambrian age



EDGI co-funded drilling

In first Year of EDGI phase 2

Rounds 1-4 completed and results made publicly available

MRT have Hylogged all Round 1- 4 core and logging of Round 5 in progress.

Round 5 and 6 - some completed but extensions for several projects

Round 7 in progress - 17 grants awarded

Round 8 (second round of Phase 2) likely to be open for application in 1st quarter 2023





The age of shear zones on western King Island
2022

Authors: D.F. Owen, P. Bennett, C.G. Gunning, J.L. Everard and K. Coombs
Date: 07/2022
Email: info@mrt.tas.gov.au
Website: www.mrt.tas.gov.au

REPORT No.: TR31



Assembled palynology results for Sub-basalt Drilling Project holes, northwest Tasmania
2022

Author: N.J. Roberts
Date: x/09/2022
Email: info@mrt.tas.gov.au
Website: www.mrt.tas.gov.au

REPORT No.: TR32



A Cambrian U-Pb age for the Mewstone Granite, SW Tasmania
2022

Author: J.L. Everard and S. Pfeiffer
Date: 2/1/2022
Email: info@mrt.tas.gov.au
Website: www.mrt.tas.gov.au

REPORT No.: TR33



Geological Survey Paper 8:
Structural Geology of the Arthur Range, Southern Tyennan Domain, Tasmania
2022

Authors: D. R. Gray
Date: 29/01/2022
Email: info@mrt.tas.gov.au
Website: www.mrt.tas.gov.au

REPORT No.: GSP8



Photograph view down the Western Arthur Range looking to the southeast from Mt Sikes (1233m). The foreground shows Lake Oboro with the glacial and sorted quartzite ridge including Mt Pagara (1003m) above the lake left side, and Mt Capricorn (1007m) in centre middle ground beyond, extending through to the Crags of Ardara with West Peak (1140m) the high peak visible in the distance (centre-right). The Eastern Arthur Range is the distant range background right, with Federation Peak (1225m) and Carvers Bluff (1145m) defining the high ridge in the far-right background. The spine of the Range is occupied by the Devonian Western Arthur Anticline with the anticline folds approximating the range fields. The ridge of a north-east-facing, mountain, isolated micro-tidal fringe is visible in the right-hand peak above Lake Oboro and in Mt Capricorn behind. (Photo credit: David Nield)



Fossicking Areas in Tasmania



Tasmanian Government
Department of State Growth
Mineral Resources Tasmania

MRT Website and publications

- 12 new geoscience reports published to date in 2022
- Revised fossicking guide released
- Field guide for recent STSG conference on King Island
- More frequent updates to website; products, events and “MRT News”.

112. Authority of prospecting licence and group prospecting licence

- (1) The holder of a licence may prospect on –
- (a) any Crown land which is not subject to a mineral tenement; or
 - (b) any Crown land which is subject to a mineral tenement with the written consent of the tenement holder; or
 - (c) any other land which is subject to a mineral tenement with the written consent of the tenement holder and the owner or occupier of the land;
-
- (3) The owner or occupier of land or the holder of a mineral tenement may –
- (a) give consent subject to any condition; or
 - (b) withdraw that consent at any time.
- (4) A holder of a mineral tenement who refuses to give consent for the holder of a licence to prospect on land which is subject to the mineral tenement must give that person written reasons for the refusal.

- A reminder to tenement holders of the requirements to reply to prospectors who request access....



Andrew McNeill

Chief Government Geologist

Andrew.mcneill@stategrowth.tas.gov.au

Ph: 03 61654732

www.mrt.tas.gov.au