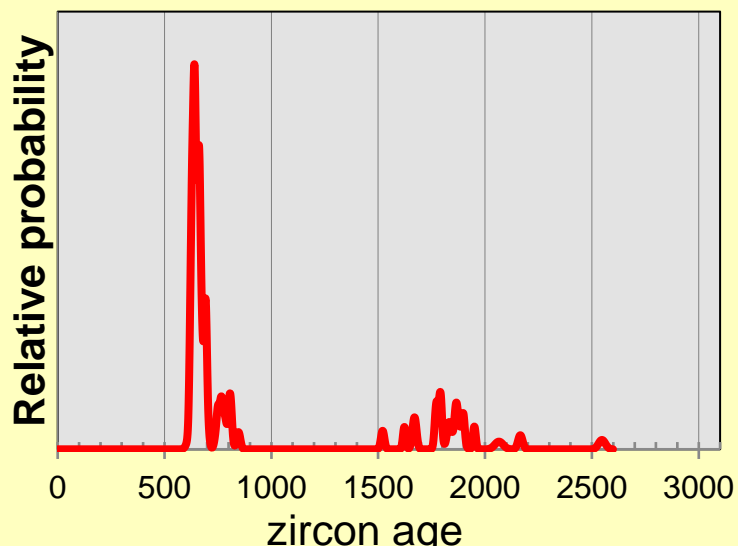


GEOCHRONOLOGY STUDIES, HEAZLEWOOD AREA



An unpublished Mineral
Resources Tasmania Report for:

J Everard

MRT

By: R S Bottrill, S Meffre

Date: 10 October 2022

Mineral Resources Tasmania

SUMMARY

Seven samples from the Heazlewood-Waratah area were analysed by LA-ICPMS on zircons to determine ages by U/Pb geochronology. The preliminary data is summarised here.

INTRODUCTION

Dating of the complex Late Proterozoic to early Cambrian geological sequences in the Savage River – Waratah area has, to now, been rather sparse and inconclusive, especially in the Arthur Metamorphic complex (AMC). Seven rock samples from this area, mostly collected by J Everard, were submitted for further geochronology, by U/Pb isotope dating by LAICPMS analysis of zircon separates. Details are shown in Table 1.

Table 1: Sample details.

Reg No.	Location	Unit	Description	Field No.
R023853	Hizzard R ~800m below Alfords Ck, left bank	possible Oonah Fm correlate	dark grey thinly bedded pyritic medium-gr quartz sandstone	GT3082
R023811	lower Heazlewood R	possible Success Ck Gp correlate?	well-cleaved, thinly bedded shaly coarse-gr siltstone	GT2823
R023876	Castray R	possible Crimson Ck/Luina Gp correlate	coarse-gr lithicwacke sandstone, probably hornfelsed	GT3215
R023895	Whyte R ~550m below Castray R	possible Crimson Ck/Luina Gp correlate	dark grey to black fine-gr lithicwacke sandstone; probably hornfelsed	GT3267
R024434	tributary of Whyte R, ~1.1 km SSW of Jasper Hill	possible Crimson Ck/Luina Gp correlate	massive greenish-grey fine-gr mafic lithicwacke sandstone	GT3462
R023851	Hizzard R ~1.6 km below Alfords Ck	possible Crimson Ck/Luina Gp correlate	massive medium-gr micaceous quartzose lithicwacke sandstone	GT3078
R024418	Ridge N of Whyte R	possible Crimson Ck/Luina Gp correlate	cream to grey cgr lithicwacke sst grading to granule conglomerate	GT3358

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METHODS

The rocks were subsampled, crushed and panned to produce zircon rich heavy concentrates. These were handpicked, mounted in epoxy blocks, polished and analysed by LA-ICPMS (see appendix 1).

RESULTS

Reg No	Done?	Unit	Field No.	UTas No.	No. zircons
R023853	?	possible Oonah Fm correlate	GT3082	2019-G-303	100
R023811	?	possible Success Ck Gp correlate?	GT2823	2019-G-304	100
R023876	?	possible Crimson Ck/Luina Gp correlate	GT3215	2019-G-305	100
R023895	Done	possible Crimson Ck/Luina Gp correlate	GT3267	2019-G-306	100
R024434	Done	possible Crimson Ck/Luina Gp correlate	GT3462	2019-G-307	100
R023851	Done	possible Crimson Ck/Luina Gp correlate	GT3078	2019-G-308	30
R024418	Done	possible Crimson Ck/Luina Gp correlate	GT3358	2019-G-309	17

RESULTS

The geochronology results are uploaded to TRIM as file LJN2019-076 (TRIM # D19/140626/1) and will later be uploaded into the TIGER database as the Geochronology database system is developed. Summary charts are shown in Appendix 1.

The results will be interpreted more fully in another report (Cumming et al in prep).

R.S. Bottrill
MINERALOGIST/PETROLOGIST

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Disclaimers

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Appendix 1: Geochronology Report

Client: G Cumming & R. Bottrill

Sample Source: Savage R district

MRT Job Number: LJJ2020-010

Analysis: Geochronology

Methods: LA-ICPMS: U/Pb on Zircons

Reg No	Done?	Unit	Field No	UTas No.	No. zircons
R023853	?	possible Oonah Fm correlate	GT3082	2019-G-303	100
R023811	?	possible Success Ck Gp correlate?	GT2823	2019-G-304	100
R023876	?	possible Crimson Ck/Luina Gp correlate	GT3215	2019-G-305	100
R023895	Done	possible Crimson Ck/Luina Gp correlate	GT3267	2019-G-306	100
R024434	Done	possible Crimson Ck/Luina Gp correlate	GT3462	2019-G-307	100
R023851	Done	possible Crimson Ck/Luina Gp correlate	GT3078	2019-G-308	30
R024418	Done	possible Crimson Ck/Luina Gp correlate	GT3358	2019-G-309	17

The data files are stored in TRIM under LJJ2019-076, with Reference No D19/140626/1.
The age distributions are shown below.

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Data Summary

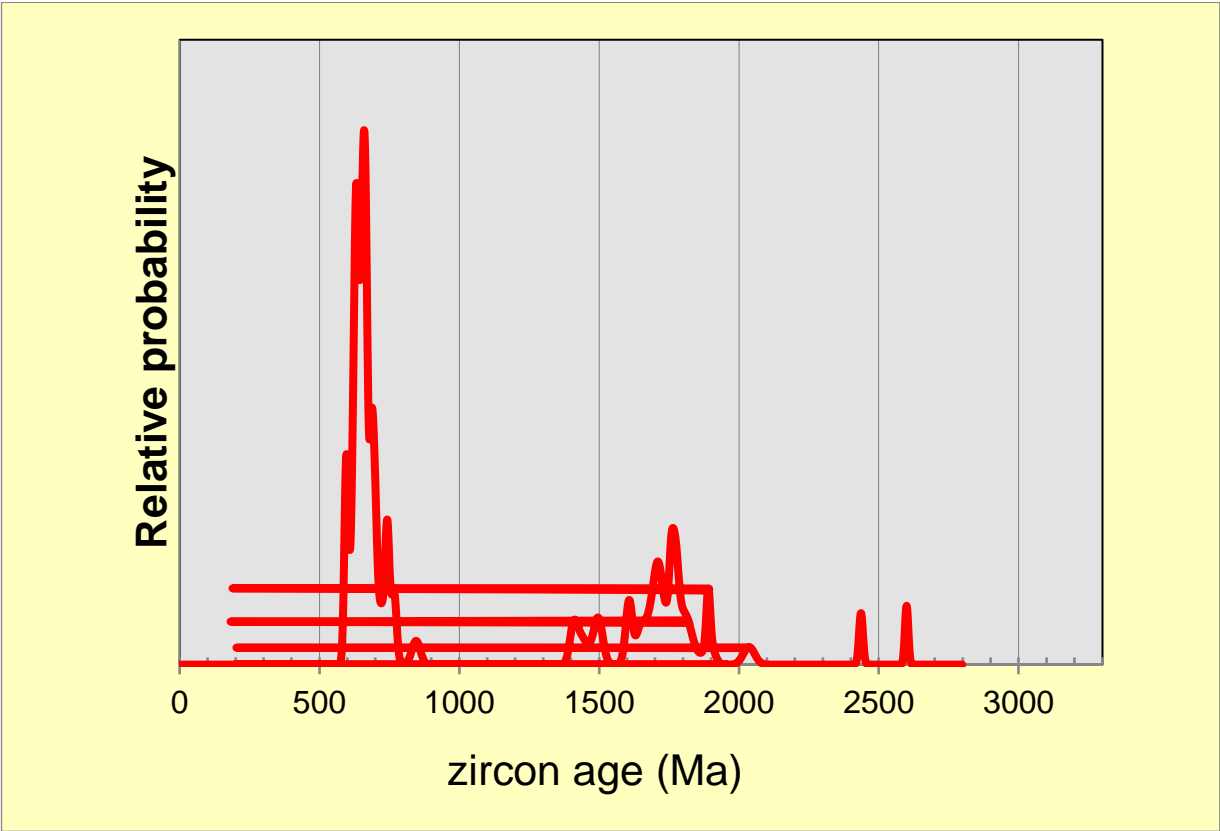


Fig. 1. R023895 possible Crimson Ck/Luina Gp correlate GT3267 2019-G-306

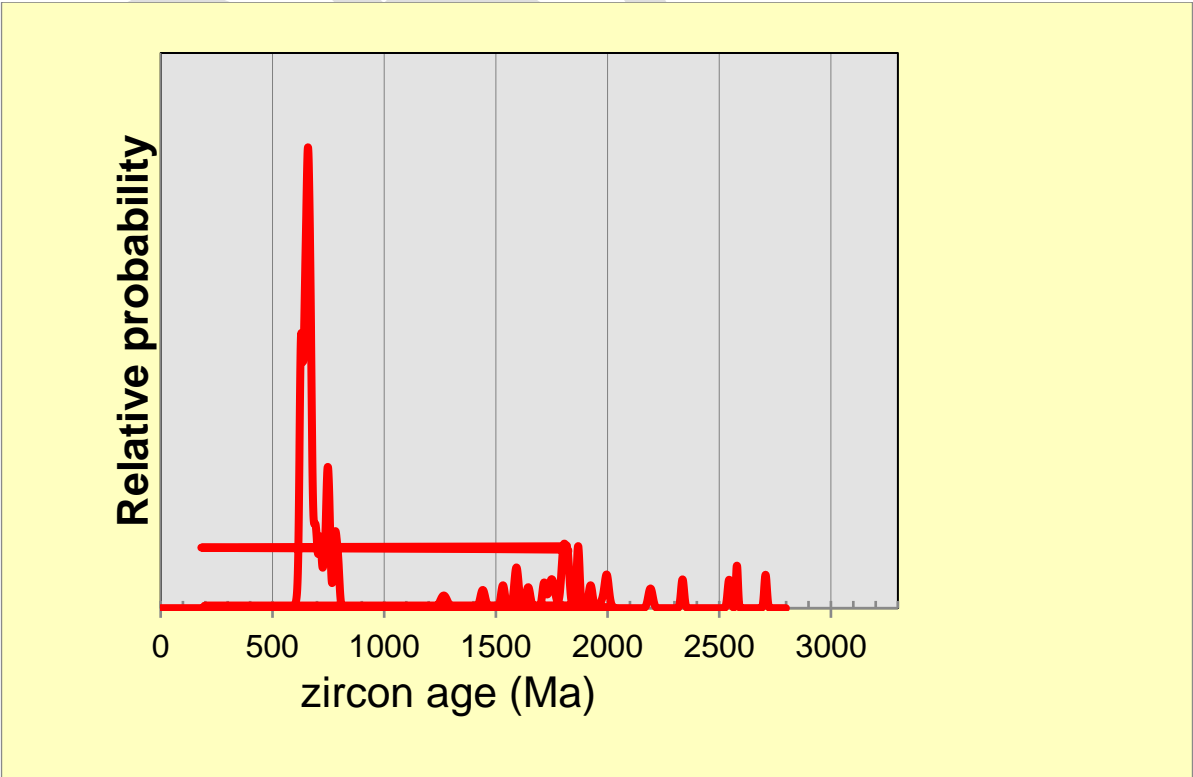


Fig. 2. R024434 possible Crimson Ck/Luina Gp correlate GT3462 2019-G-307

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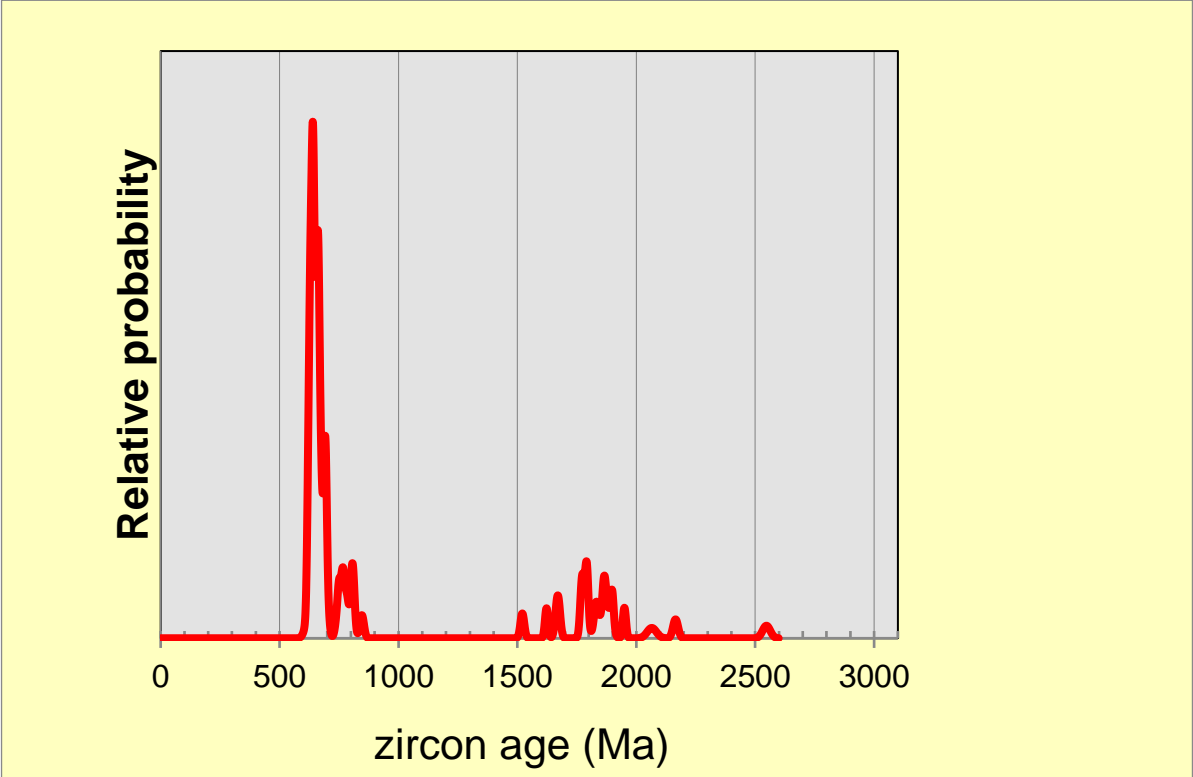


Fig. 3. R023851 possible Crimson Ck/Luina Gp correlate GT3078 2019-G-308

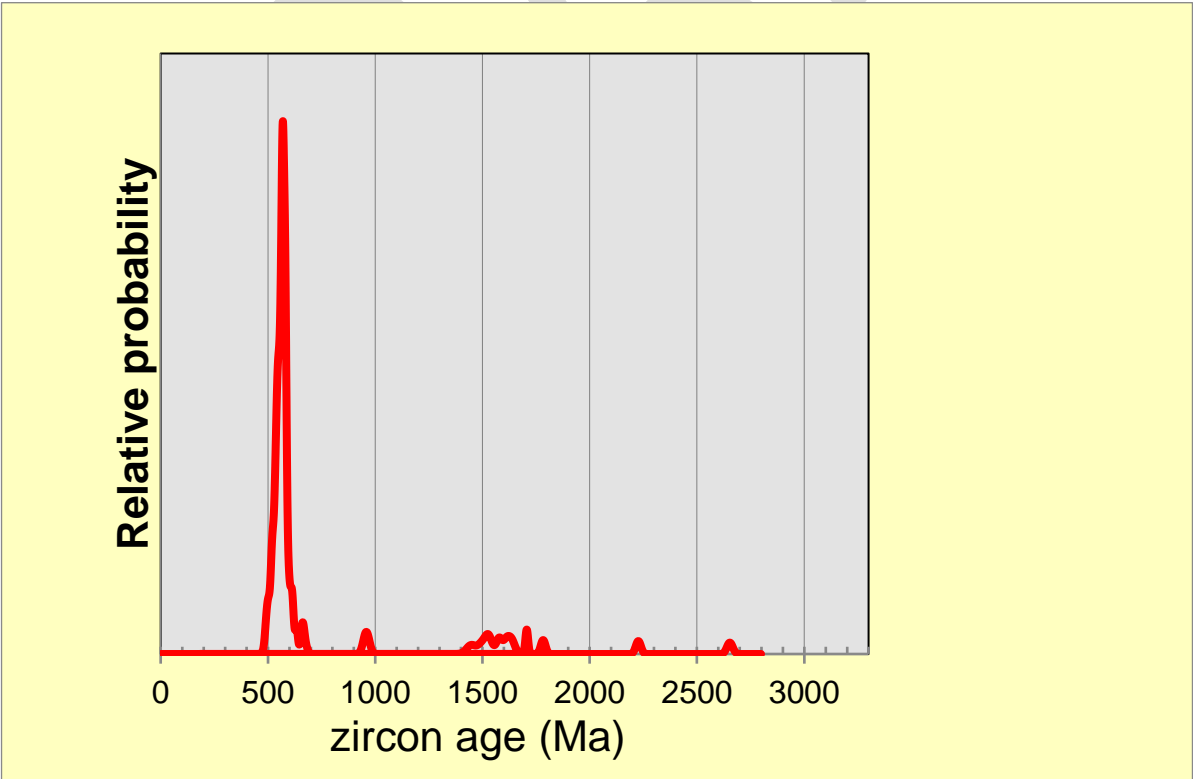


Fig. 4. R024418 possible Crimson Ck/Luina Gp correlate GT3358 2019-G-309