

Mineral Resources Tasmania

Laboratory Report

LJN2020-056

MINERALOGICAL ANALYSES, DOLCOATH GRANITE



An unpublished Mineral Resources Tasmania Report for:

MRT

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SUMMARY

This sample from the Dolcoath drillhole is a topaz-muscovite-quartz greisen.

INTRODUCTION

One rock sample was sampled from drill core to help determine the REE content and age of granites and skarns in the area. Details are shown in Table 1.

Table 1: Sample Details

Reg. No	Location	Description
G408758	DD82- DG3, 77.8-77.9 Dolcoath, Moina	Greisenised granite

PROCESS

To determine the mineralogy of the rock, some representative parts of the material were crushed and analysed by X-ray Diffraction (XRD) in the Mineral Resources Tasmania (MRT) Laboratories, Rosny Park.

SAMPLE DESCRIPTION

In hand specimen, sample G408758 consists of medium grained, grey greisenised granite with black mica.

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Figure 1: Sample G408758, drillcore sample, dry. Plain light, FOV ~90 mm.



Figure 2: Sample G408758, drillcore sample, wet. Plain light, FOV ~90 mm.

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XRD ANALYSES

The samples were prepared, examined and analysed in the MRT Laboratories, Rosny Park, Tasmania. They were run on a Rigaku Miniflex 600 X-Ray Diffractometer system: a 600W generator 150mm goniometer with a Cu tube; 40kV/15mA, sample spinner and a Scintillation counter (SC) with Be window, -3° to 145° 2θ scanning range and 2° - 145° 2θ measuring range, with a scanning speed of 0.01 to $100^{\circ}/\text{min}$, a graphite counter monochromator and a $K\beta$ Ni- filter. The analysis software used is the PDXL2, using the ICDD database.

The results are shown in Appendix 1 and indicate mostly quartz and muscovite with very minor topaz and traces of fluorite and pyrite.

DISCUSSION AND CONCLUSIONS

The sample is a topaz-muscovite-quartz greisen.

R.S. Bottrill

MINERALOGIST/PETROLOGIST

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Appendix 1: XRD Analyses

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Client: R Bottrill
Sample Location: Dolcoath Hill, Moina
Job Number: LJN2020-056
Analyses: Approximate Mineralogy
Methods: XRD
Analyst: T Coyte
Lab Manager: R Bottrill
Date: 17/8/2020

XRD RESULTS – G408758

General Information

Measurement Date:	17/6/2020	Interpretative Date:	17/8/2020
Job Number/Client:	LJN2020-056 Dolcoath	XRD	Rigaku Miniflex 600
Registration Number:	G408758	Analyst:	T Coyte
Quantitative Method:	XPlot	Process Medium:	Whole Rock
Sample Holder:	0.2mm Round Al	Speed (deg/min):	0.5
Comment:	Due to high Preferred orientation on Muscovite, a combination of MinSQ and pXRF was used to quantify the Muscovite.		

Analysis Results

Phase Name	Content wt% (\pm error)	Formula
Quartz	62(10)	SiO ₂
Muscovite-2M1	31(8)	KAl ₂ (AlSi ₃ O ₁₀)(OH) ₂
Topaz	5(3)	Al ₂ SiO ₄ (F,OH) ₂
Fluorite	1(1)	CaF ₂
Pyrite	<1	FeS ₂

Notes:

No tourmaline detected.
Peak overlap may interfere with identifications and quantitative calculations.
Amorphous minerals and minerals present in trace amounts may not be detected.

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Phase Data Pattern

