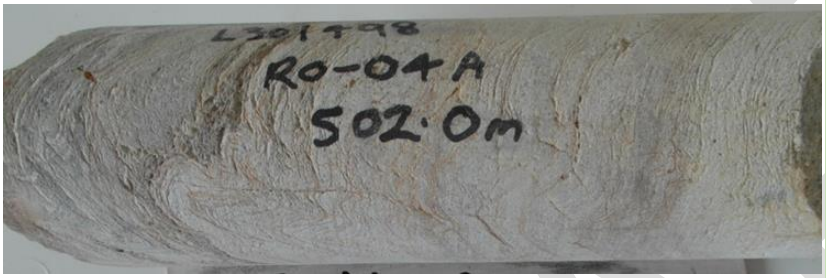
Mineral Resources Tasmania

Laboratory Report

LJN2020-131

PETROPHYSICAL TESTS:

Maggs Mountain



An unpublished Mineral Resources Tasmania Report for:

Mark Duffett, MRT

By: R King and L Unwin

Date: 31 October 2022

Mineral Resources Tasmania
Department of State Growth

Tasmanian Government

INTRODUCTION

Sixteen rock samples were collected from Maggs Mountain Diamond Drill Cores by M Duffett, for physical property measurements; with details listed in Table 1 below.

Table 1: Sample details.

Reg. #	Field #	Location	Sample Description
A501208	25.94-26.20m	Maggs Moutain RO-BH04	Lithology: basalt
A501209	55.0m	Maggs Mountain RO-BH04	Lithology: basalt
A501210	88.0m	Maggs Mountain RO-BH04	Lithology: basalt
A501211	110m	Maggs Mountain RO-BH04a	Lithology: basalt
A501212	180.7m	Maggs Mountain RO-BH04a	Lithology: basalt
A501213	207.2m	Maggs Mountain RO-BH04a	Lithology: basalt
A501214	268.7m	Maggs Mountain RO-BH04a	Lithology: basalt
A501215	RO-BH04a/293.75m	Maggs Mountain RO-BH04a	Lithology: basalt
A501254	367.3m	Maggs Mountain RO-BH04a	Lithology: siltstone
A501256	484.1m	Maggs Mountain RO-BH04a	Lithology: siltstone
A501260	211.3m	Maggs Mountain RO-BH04a	Lithology: mudstone
A501262	305.5m	Maggs Mountain RO-BH04a	Lithology: mudstone
L301497	501.1m	Maggs Mountain RO-BH04a	foliated multiply deformed quartzite - Lithology: quartzite
L301498	502m	Maggs Mountain RO-BH04a	foliated multiply deformed quartzite - Lithology: quartzite
L301499	502.9m	Maggs Mountain RO-BH04a	foliated multiply deformed quartzite - Lithology: quartzite
L301500	504m	Maggs Mountain RO-BH04a	foliated multiply deformed quartzite - Lithology: quartzite

SAMPLE DESCRIPTION

The samples consisted of coherent diamond drill core, from Maggs Mountain Tasmania. Photos of each sample are listed below (Photo 1-16).

Photo 1: Sample A501208 - Basalt. FOV: about 450 mm

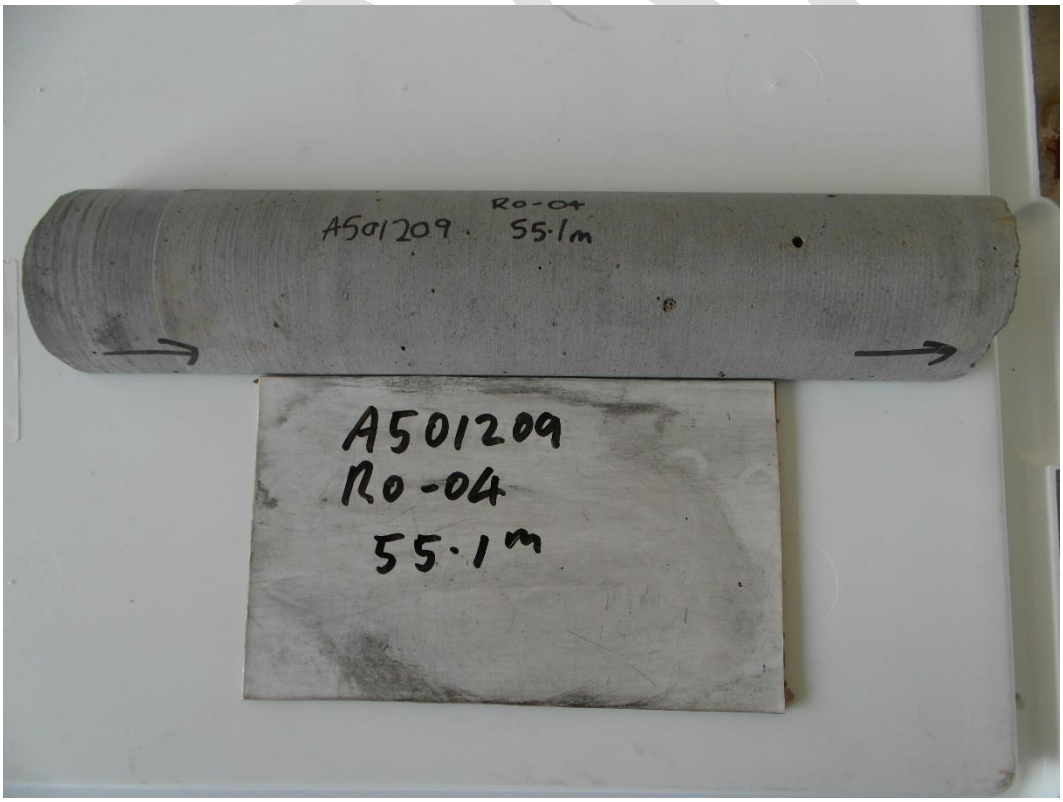


Photo 2: Sample A501209 – Basalt. FOV: about 300 mm

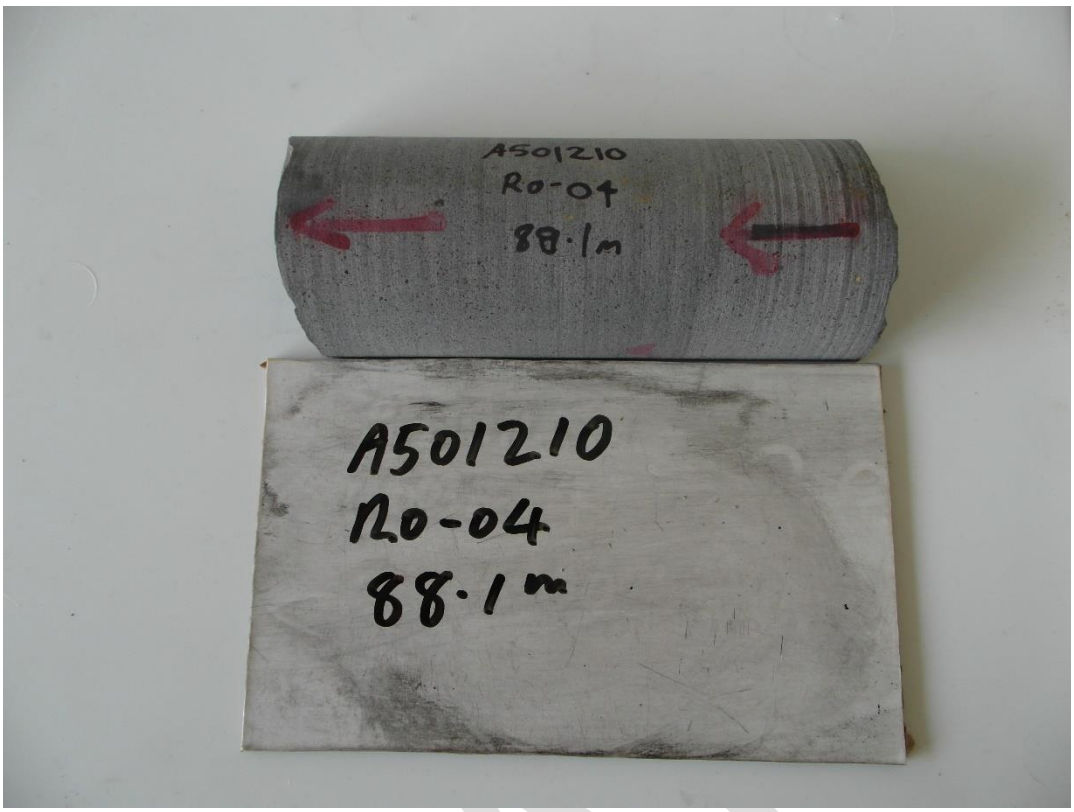


Photo 3: Sample A501210 - Basalt. FOV: about 150 mm

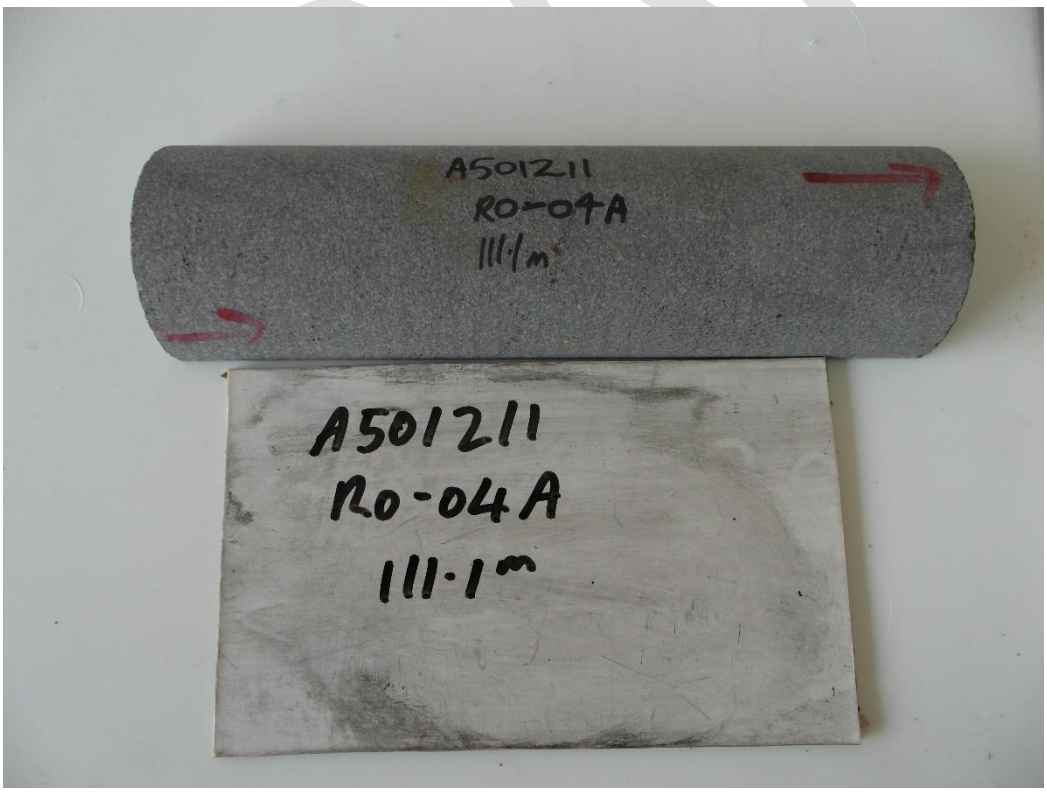


Photo 4: Sample A501211 - Basalt. FOV: about 300 mm

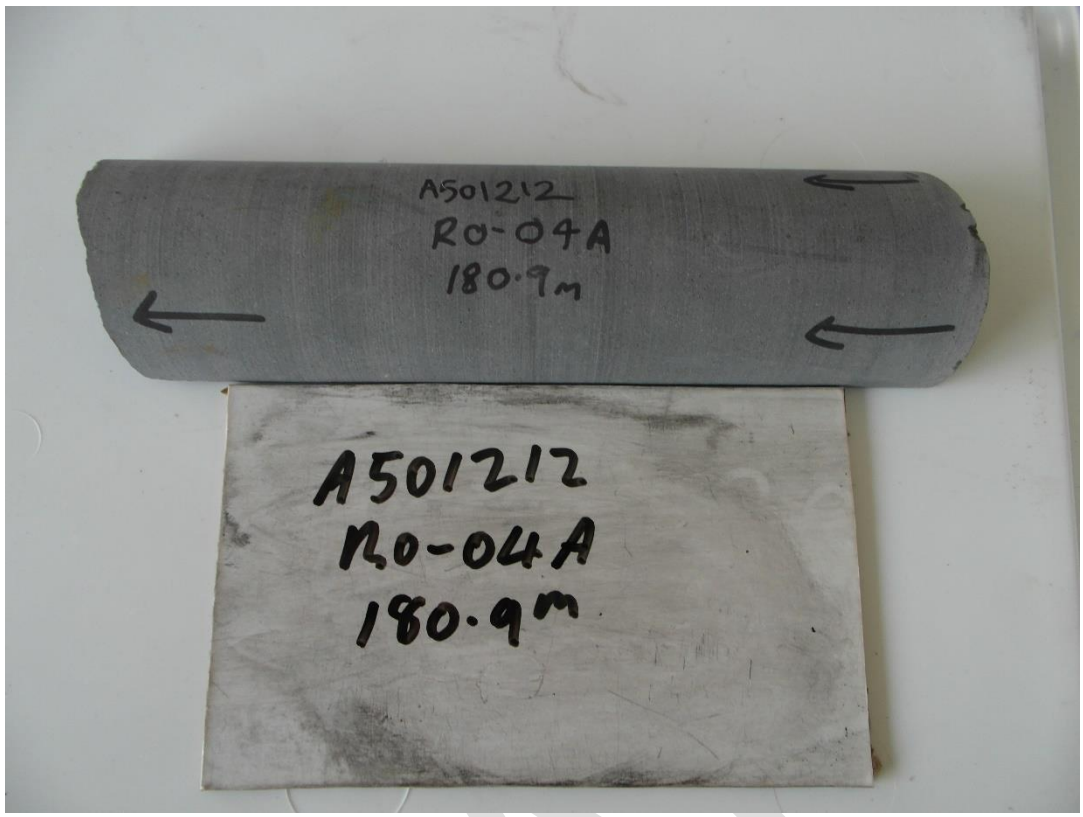


Photo 5: Sample A501212 – Basalt. FOV: about 450 mm

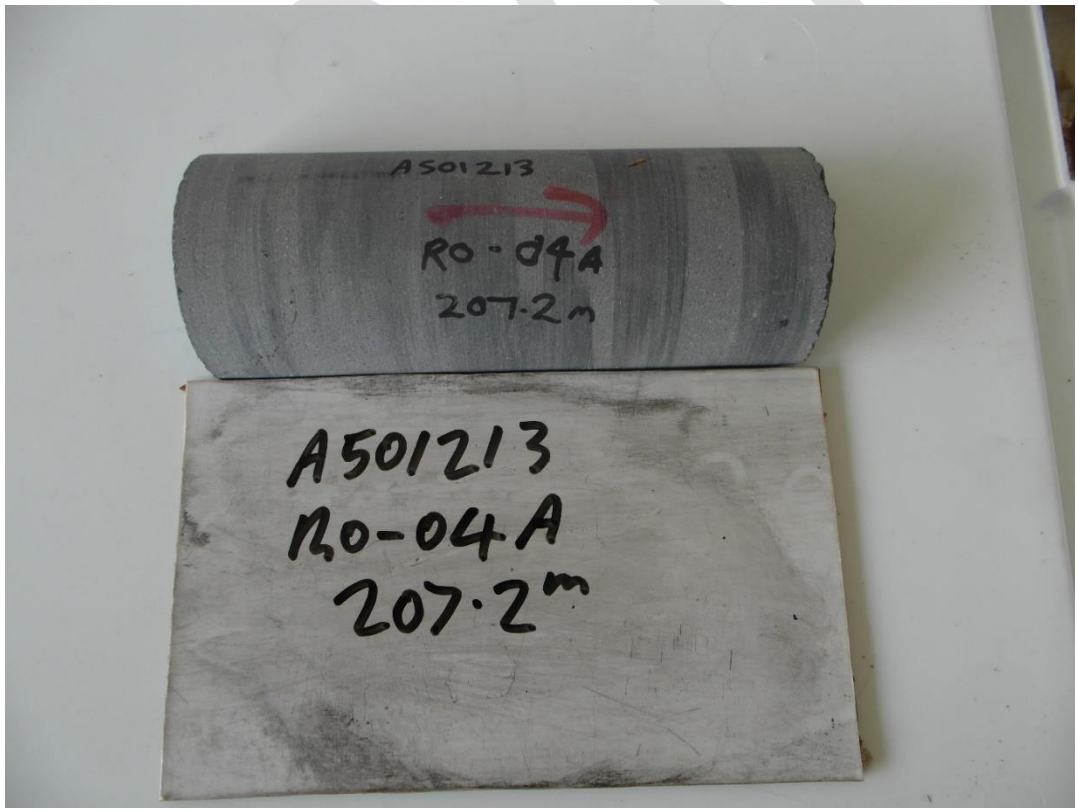


Photo 6: Sample A501213 - Basalt. FOV: about 200 m

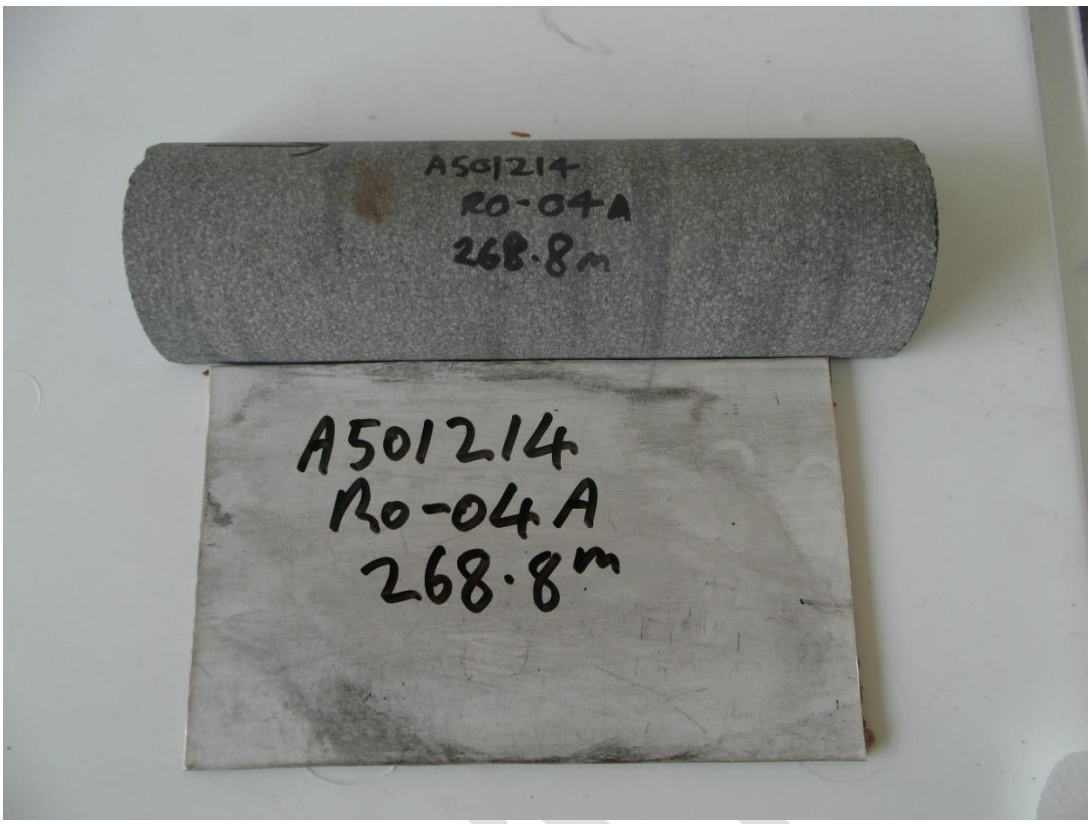


Photo 7: Sample A501214 - Basalt. FOV: about 450 mm

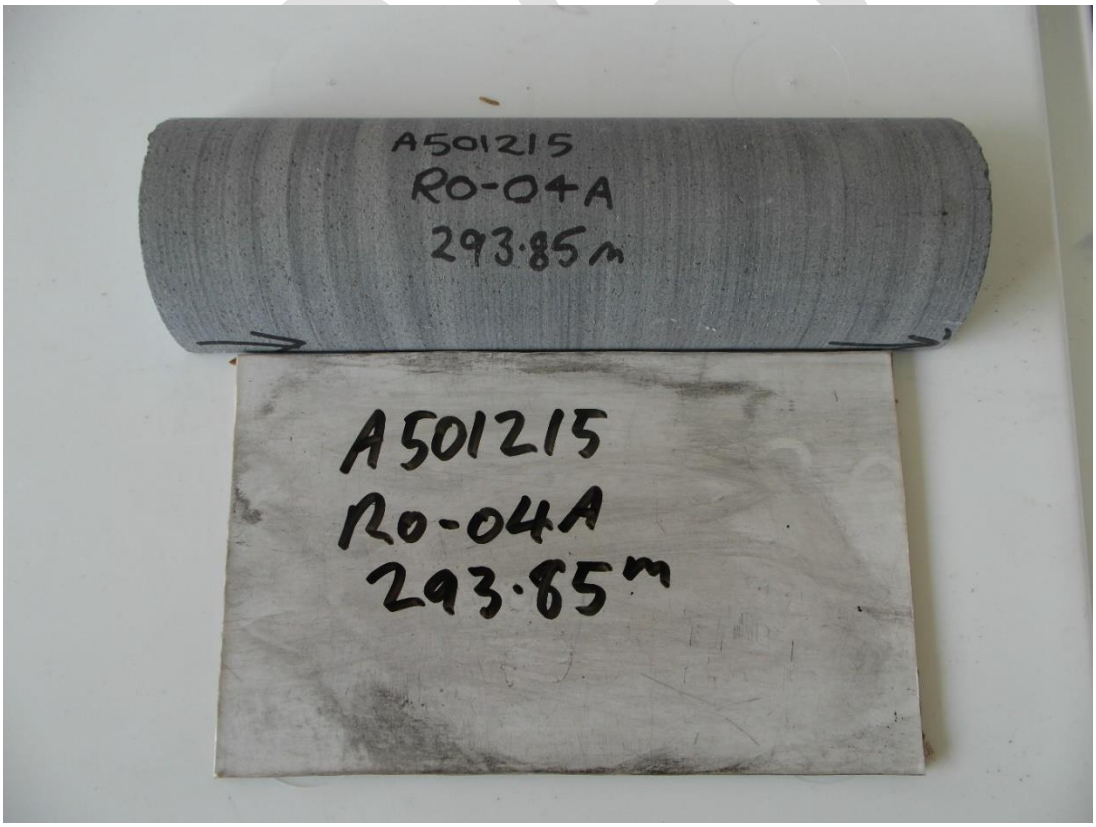


Photo 8: Sample A501215 - Basalt. FOV: about 200 mm

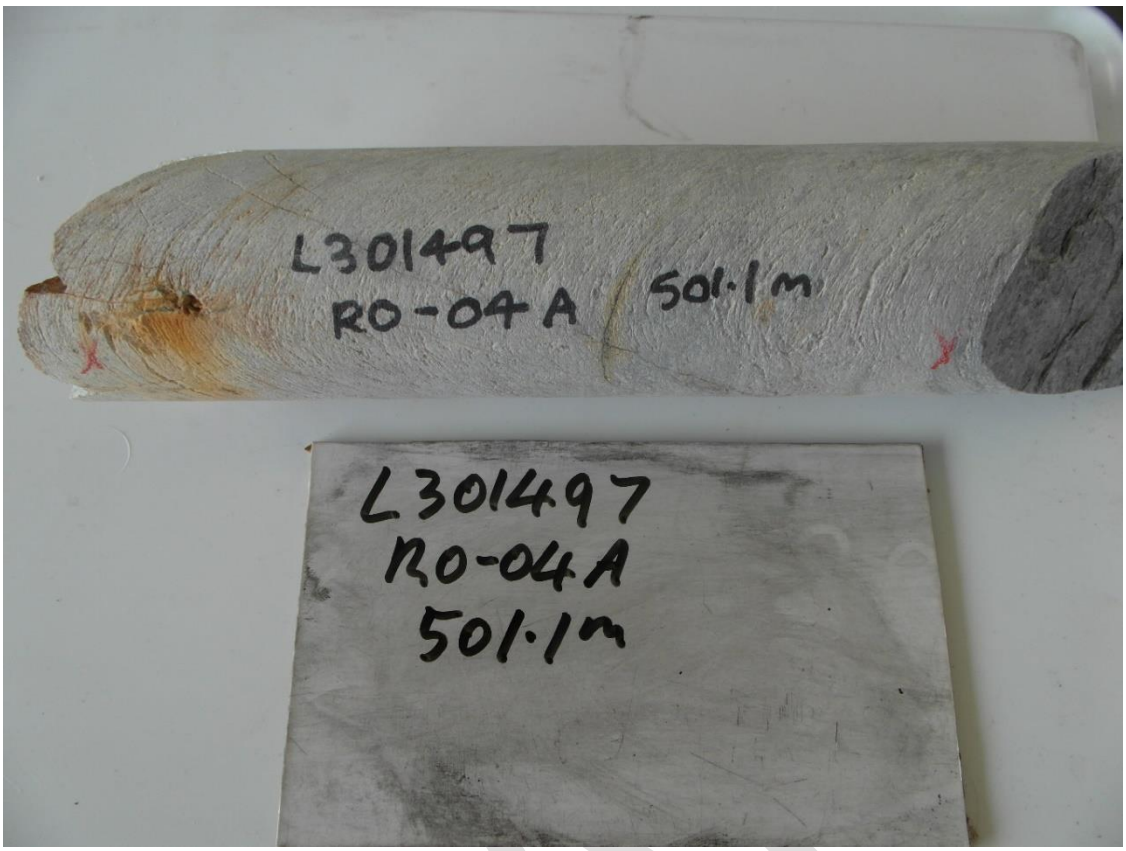


Photo 9: Sample L301497 - foliated multiply deformed quartzite. FOV: about 300 mm

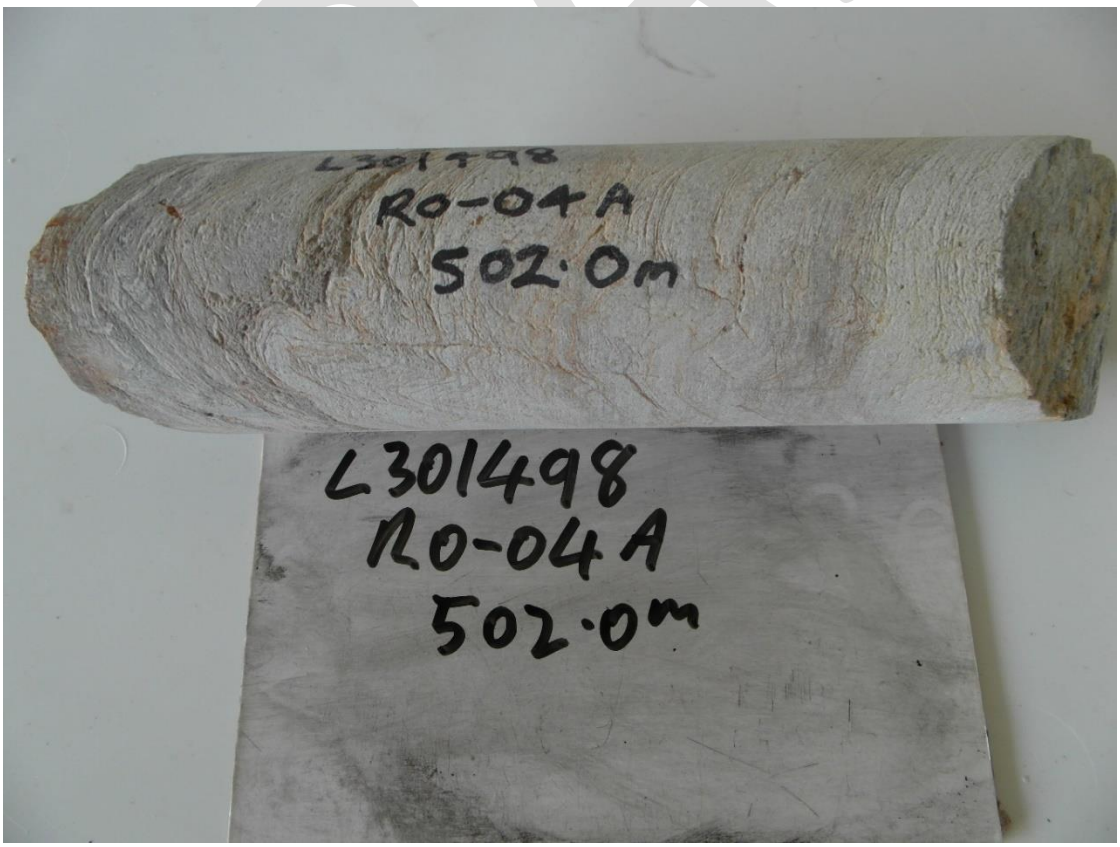


Photo 10: Sample L301498 – foliated multiply deformed quartzite. FOV: about 400 mm

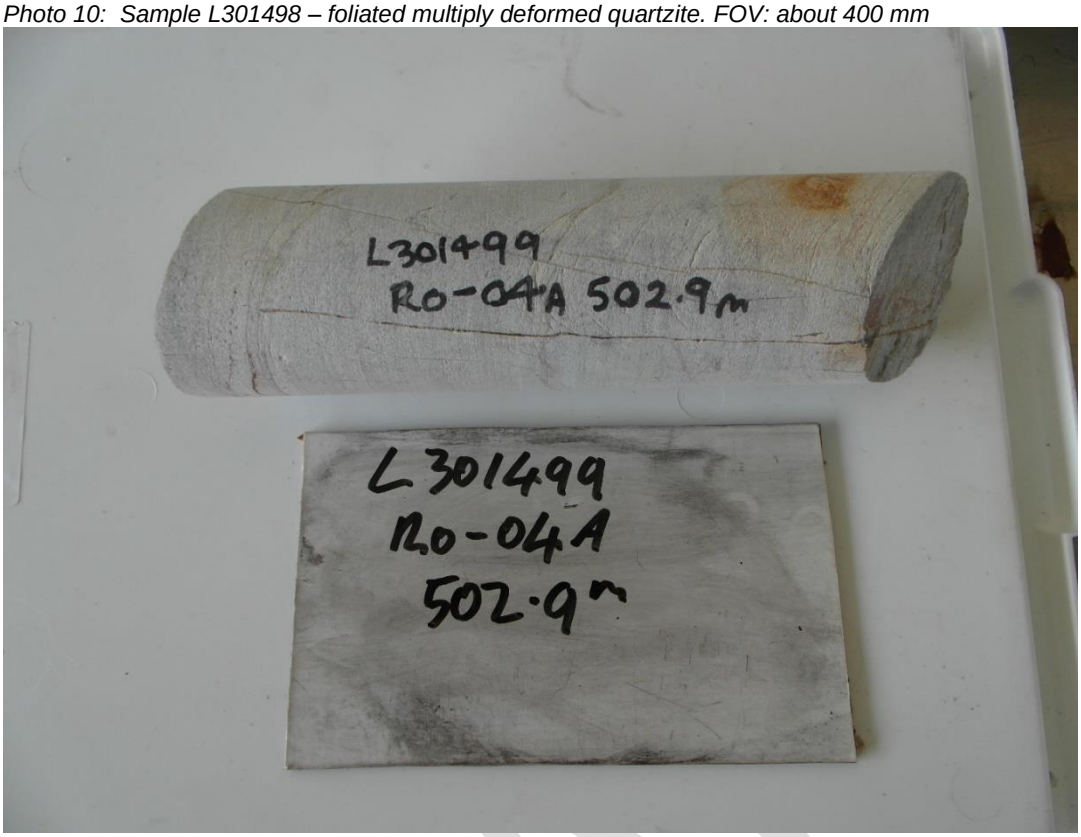


Photo 11: Sample L301499 - foliated multiply deformed quartzite. Grey-green to dark grey green. FOV: about 300 mm

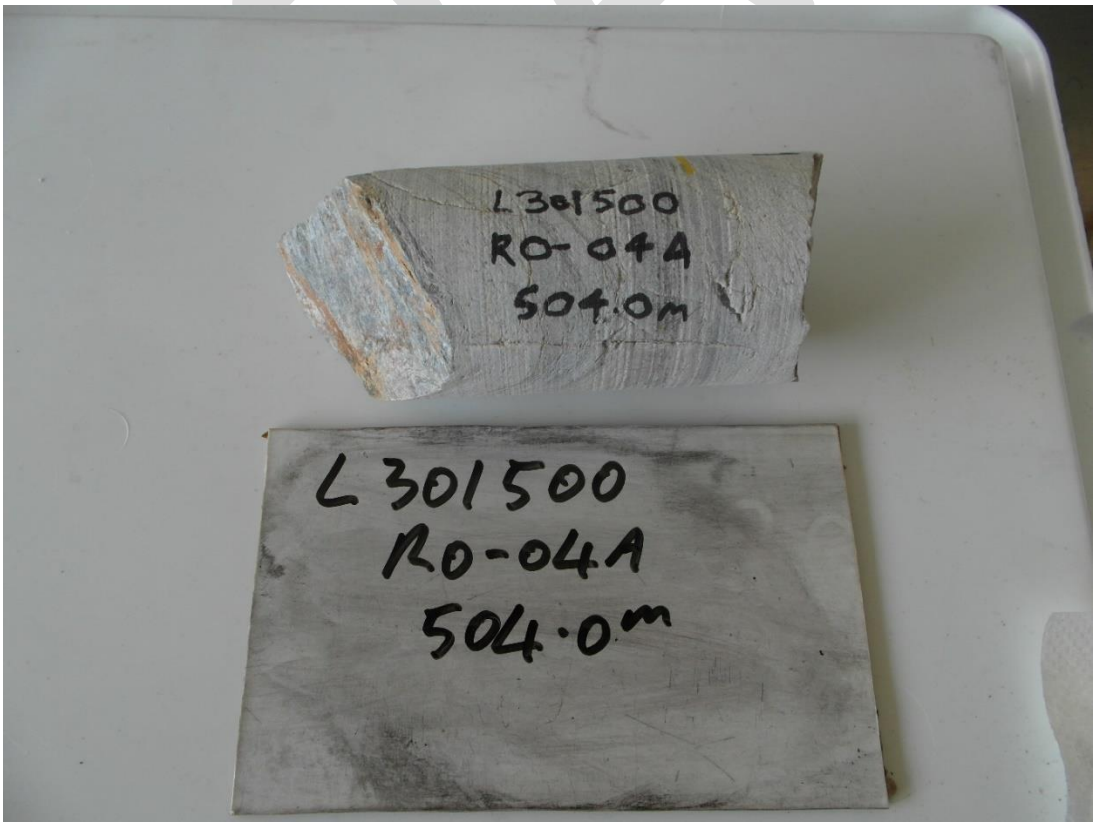


Photo 12: Sample L301500 - foliated multiply deformed quartzite FOV: about 300 mm

Photo 13: Sample A501260 – mudstone. FOV: about 300 mm

Photo 14: Sample A501262 – mudstone. FOV: about 300 mm

Photo 15: Sample A501254 – siltstone. FOV: about 300 mm

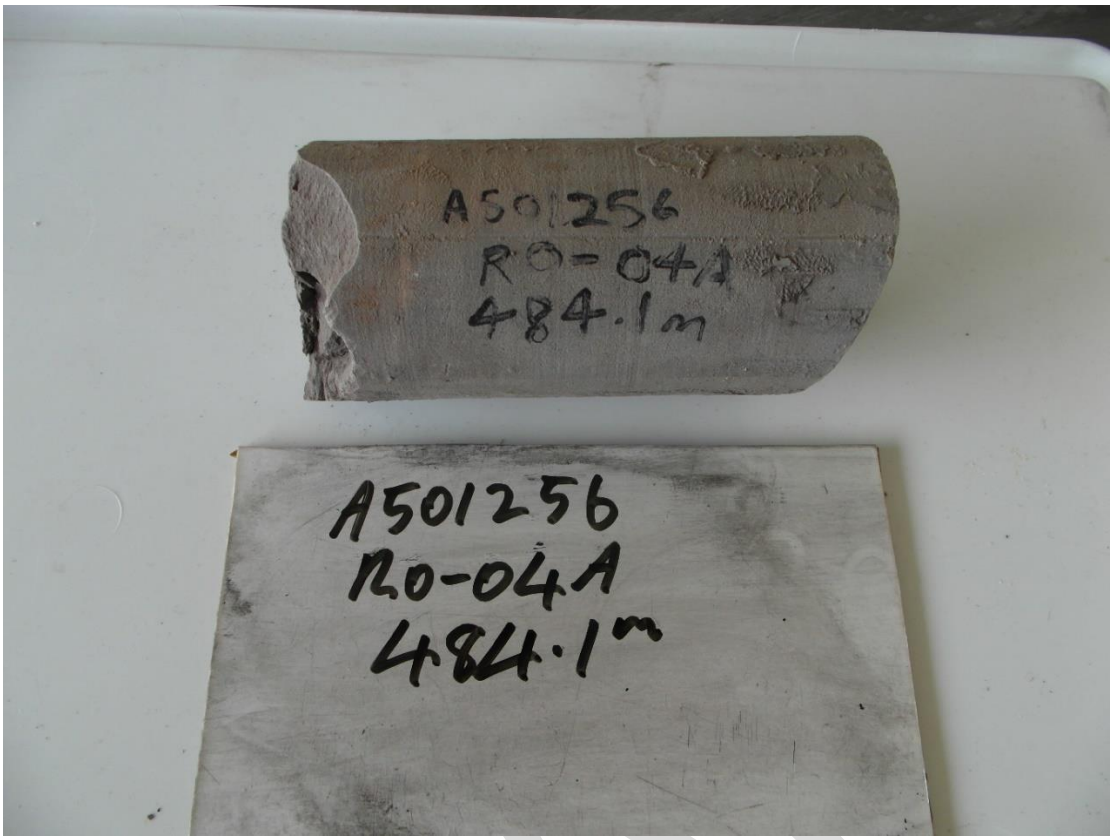


Photo 16: Sample A501256 – siltstone. FOV: about 300 mm

LABORATORY TESTS

The samples were soaked for a minimum of 48 hours and weighed in water, and then wet in air. Samples were dried in a 90°C oven for a minimum of 12 hours then weighed dry. The wet porosity and density (specific gravity) was determined by standard gravimetric methods in the Mineral Resources Tasmania (MRT) Core Library, with an electronic balance accurate to 0.1g. The relative accuracy of the results is ~1% for specific gravity and ~5% for wet porosity. The summary of results is shown in Table 2 and full details listed in Appendix 1. The results in red are those using the above method without the 48hrs soaking in water

Table 2: Summary of Specific Gravity and Wet porosity

Sample ID	Location	Rocktype	Dry bulk SG	Wet bulk SG	Wet porosity (%)
A501208	RO-BH04/25.94-26.20m	basalt - Lithology: basalt	2.88	2.89	1.48
A501209	RO-BH04/55.0m	basalt - Lithology: basalt	2.73	2.77	4.15

A501210	RO-BH04/88.0m	basalt - Lithology: basalt	2.81	2.82	1.51
A501211	RO-BH04a/110m	basalt - Lithology: basalt	2.83	2.84	1.25
A501212	RO-BH04a/180.7m	basalt - Lithology: basalt	2.99	2.99	0.10
A501213	RO-BH04a/207.2m	basalt - Lithology: basalt	**3.01**	**3.01**	0.10
A501214	RO-BH04a/268.7m	basalt - Lithology: basalt	2.90	2.91	0.36
A501215	RO-BH04a/293.75m	basalt - Lithology: basalt	2.98	2.98	0.24
A501254	367.3m	Lithology: siltstone	**1.84**	**1.85**	1.17
A501256	484.1m	Lithology: siltstone	**1.97**	**1.98**	1.57
A501260	211.3m	Lithology: mudstone	**1.96**	**1.98**	1.67
A501262	305.5m	Lithology: mudstone	**1.94**	**1.95**	1.66
L301497	501.1m	foliated multiply deformed quartzite - Lithology: quartzite	2.57	2.61	4.57
L301498	502m	foliated multiply deformed quartzite - Lithology: quartzite	2.61	2.64	2.82
L301499	502.9m	foliated multiply deformed quartzite - Lithology: quartzite	2.68	2.68	0.42
L301500	504m	foliated multiply deformed quartzite - Lithology: quartzite	2.65	2.66	1.00

L Unwin

LABORATORY TECHNICIAN

R King

LABORATORY TECHNICIAN

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Mineral Resources Tasmania

Appendix 1: Laboratory Report – Physical Property analyses

Client: M Duffett

Analysis: Physical Properties

Method: Gravimetric S.G. & Porosity

Location: Maggs Mountain

Sample ID	Dry Weight in Air (g)	Sub-sat Wt in water (g)	Sat. Wt. in Air (g)	Dry bulk SG	Wet bulk SG	Wet porosity (%)
A501208-25.94-26.2m	1033.6	679.9	1038.9	2.88	2.89	1.48
A501209-55.0m	1008.0	654.3	1023.3	2.73	2.77	4.15
A501210-88.0m	594.8	386.2	598.0	2.81	2.82	1.51
A501211-110.0m	769.8	500.8	773.2	2.83	2.84	1.25
A501212-180.7m	877.2	584.0	877.5	2.99	2.99	0.10
A501213-207.2m	598.7	399.7	598.9	**3.01**	**3.01**	0.10
A501214-268.7m	796.4	523.1	797.4	2.90	2.91	0.36
A501215-293.75m	751.2	499.7	751.8	2.98	2.98	0.24
A501254-367.3m*	676.4	312.4	680.7	**1.84**	**1.85**	1.17
A501256-484.1m*	675.6	337.4	681.0	**1.97**	**1.98**	1.57
A501260-211.3m*	187.7	93.7	189.3	**1.96**	**1.98**	1.67
A501262-305.5m*	898.1	441.8	905.8	**1.94**	**1.95**	1.66
L301497-501.1m	1826.3	1147.9	1858.8	2.57	2.61	4.57
L301498-502.0m	1369.4	859.1	1384.2	2.61	2.64	2.82
L301499-502.9m	1548.5	973.1	1550.9	2.68	2.68	0.42
L301500-504.0m	901.7	564.4	905.1	2.65	2.66	1.00