ASX RELEASE **9 OCTOBER 2017**

ARTHUR RIVER MAGNESITE DEPOSIT - JORC (2012) RESOURCE ESTIMATE

Jindalee Resources Limited (ASX: **JRL**) is pleased to announce that the resource estimate for the Arthur River magnesite deposit, which forms part of the Prospect Ridge Project (EL5/2016), has been restated in accordance with the JORC Code (2012).

The Prospect Ridge Project is located in NW Tasmania and contains the Arthur River and Lyons River magnesite deposits. Geoscience Australia's website notes that the Arthur River-Lyons River area covered by the Prospect Ridge Project contains the third largest inventory of magnesite Economic Demonstrated Resources (EDR) in Australia (refer www.ga.gov.au). Jindalee holds a 100% beneficial interest in the Project.

Background

The Prospect Ridge Project is centred approximately 55km SW of Burnie, Tasmania (refer Figure 1). Magnesite deposits were first discovered in the area in 1925 with exploration in the 40 years from 1970 to 2010 undertaken by companies including Mineral Holdings Australia, CRA (now Rio Tinto), Tasmania Magnesite NL (TMNL), Crest Magnesium and Minemakers.

Beacon Hill Resources Plc purchased the leases covering the Arthur River and Lyons River deposits in 2009 and in the period to 2014 completed extensive pre-development activities at the Arthur River deposit including drilling, hydrological studies, environmental and Aboriginal Heritage studies, metallurgical testwork and resource estimates.

On 2 May 2012 Beacon Hill released estimated Inferred Resources of 25Mt @ 42.4% MgO[1] (40% MgO cut-off) for the southern part of the Arthur River deposit only. These resources were reported in accordance with the JORC Code (2004) and were estimated by Stewart Capp from Derwent Geoscience Pty Ltd. No resources were estimated for the Lyons River deposit.

Jindalee engaged Stewart Capp to review this earlier resource estimate and to report the resource estimate in accordance with the JORC Code (2012) if possible. As a result of this review, at a lower cut off of 40% MgO, an Inferred Resource was estimated which totals 25 million tonnes of fresh magnesite grading 42.4% MgO, 4.8% SiO_2, 1.4% Fe_2O_3 and 2.6% CaO to an average depth of 100m below the surface. This estimate assumes that fresh magnesite can be easily separated from zones of internal weathering.

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The resource estimate is summarised at a series of cut-off grades in the table below:

Table 1: ARTHUR RIVER DEPOSIT RESOURCES (INFERRED)*

MgO Lower Cut-Off (%)	Tonnes	MgO (%)	SiO_2 (%)	Fe_2O_3 (%)	CaO (%)
36	36,817,508	41.1	5.9	1.7	2.9
38	32,090,037	41.7	5.4	1.6	2.8
40	**25,121,511**	**42.4**	**4.8**	**1.4**	**2.6**
42	15,279,918	43.3	4.2	1.3	2.2
44	3,042,107	44.5	3.0	1.0	1.9

Please refer to the Resource Estimation Report and accompanying JORC 2012 Table appended to this announcement for further details.

<u>Next Steps</u>

Jindalee has collected two bulk metallurgical composite samples from the Arthur River deposit, comprising ~30kg of oxidised mineralisation and ~70kg of largely fresh magnesite. The two samples (each averaging >40% MgO) were collected from historic drill core and are considered to be representative of typical oxide and fresh mineralisation in the upper 70m of the deposit.

These samples are currently being calcined (heated to between 700°C and 1000°C) to produce caustic calcined magnesia (CCM). In addition to the calcination testwork the metallurgical program will examine the further use of flotation, both prior to the calcination stage and after calcination, as a method of maximising the grade of the calcined magnesia product. Depending on the results of this testwork Jindalee also intends to evaluate Beacon Hill's scoping study[1] in light of favourable exchange rate movements and lower mining industry input costs since May 2012, and recent increases in the price of magnesia products.

EL5/2016 covers 14km of prospective stratigraphy between the Arthur River and Lyons River deposits. Most work to date has been focussed on the southern part of the Arthur River deposit and Jindalee considers there is excellent potential to increase the Project's resource base, both at the Arthur River and Lyons River deposits and along strike from these deposits.

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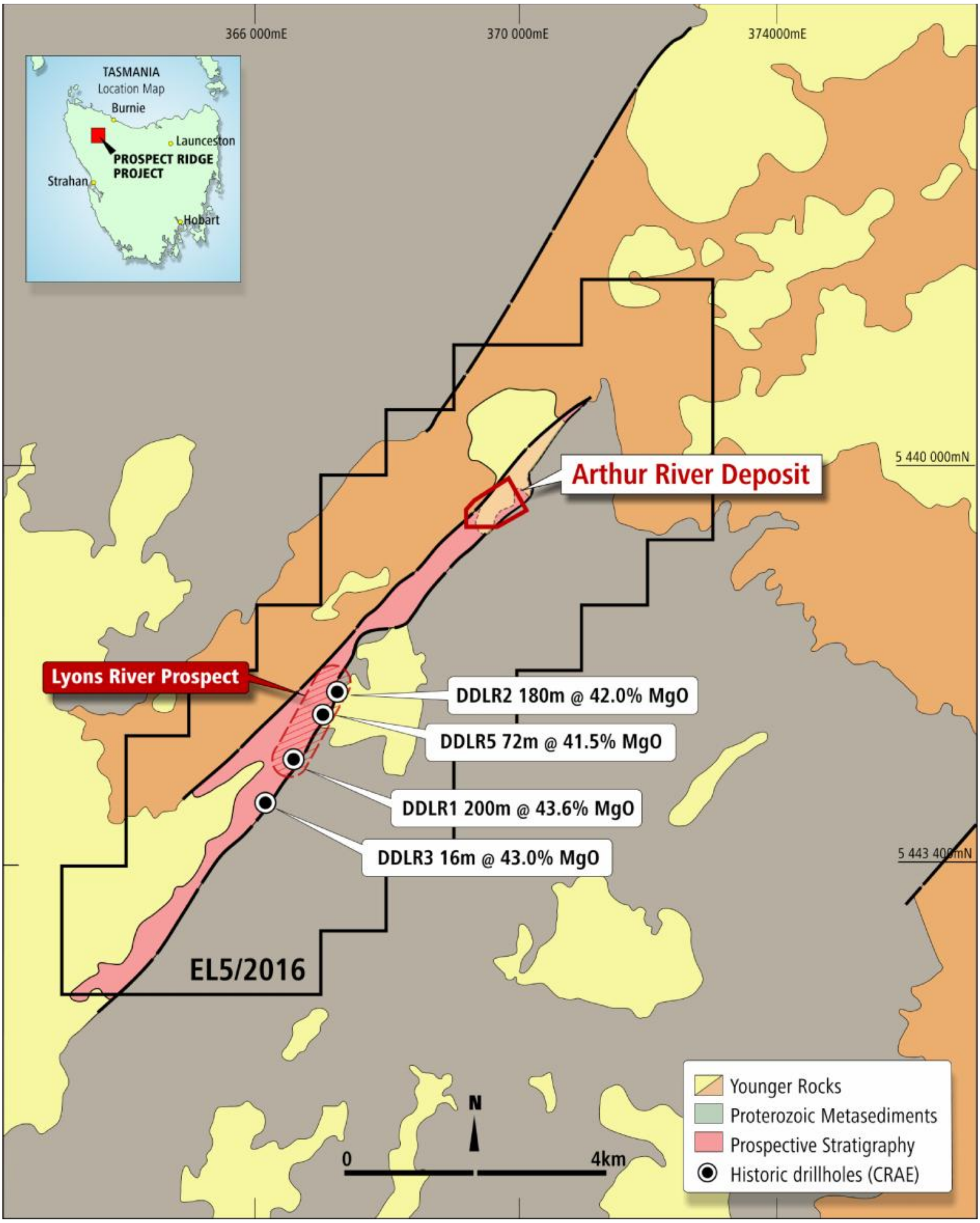
[1] Reference: ASX Announcement by Beacon Hill Resources dated 2 May 2012 titled, *"Positive Preliminary Scoping Study Results for Arthur River Magnesite Project"*.

Figure 1 – Prospect Ridge Project Location Plan



About Magnesite

Magnesite or magnesium carbonate ($MgCO_3$) is the primary source of magnesia (MgO). Annual production of magnesia is approximately 9.4Mt with about 90% of this produced from magnesite feedstock and the balance from seawater and magnesia rich brines. There are three main types of magnesia: caustic calcined magnesia (CCM), deadburned magnesia (DBM) and electrofused magnesia (EFM). CCM is used as a chemical in a number of markets including agriculture (fertiliser and feedstock), mineral processing, pulp and paper manufacture and water treatment. DBM and EFM are used mainly in the refractory industry as a kiln liner and so are essential for the production of steel, cement and glass.

Magnesia and magnesium brines are also used to make magnesium metal (Mg). Magnesium (atomic number 12) is the lightest useful metal and is commonly alloyed with aluminium to create a light, high-strength and corrosion-resistant alloy which is widely used in the aerospace and automotive industries. Magnesium is also being increasingly used in the electronics industry, in both primary and rechargeable batteries and in superconductors. In May 2016 the Toyota Research Institute announced a breakthrough which could lead to magnesium eventually replacing lithium as a safer, more energy dense option for rechargeable batteries.

The strong forecast growth in demand for magnesium and magnesite, together with increasing concentration of supply, has seen the European Commission include both magnesium and magnesite in their latest list of 20 EU Critical Materials, published May 2014 (refer www.ec.europa.eu).

About Jindalee

Jindalee Resources Limited (ASX: JRL) is an exploration company with direct and indirect exposure to gold, iron ore, base metals, uranium and magnesite through projects generated by the Company's technical team. Directors and management combine approximately 100 years of technical and commercial experience, and are significant shareholders in the Company. Jindalee has a track record of rewarding shareholders, including priority entitlements to several successful IPO's. Jindalee also paid shareholders a $0.55 fully franked special dividend in July 2010.

Jindalee's main focus is to create wealth for shareholders through the acquisition of high quality projects. At 30 June 2017 Jindalee held cash and marketable securities worth $5.4M which, combined with the Company's tight capital structure (only 34.9M shares on issue), provide a strong base for leverage into new opportunities.

Further information on the Company can be found at our website: www.jindalee.net

Competent Persons Statement:
The information in this report that relates to Mineral Resources at the Arthur River Deposit is based on information compiled by Mr Stewart Capp, a Competent Person who is a Member of The Australasian Institute of Mining. Mr Capp is employed by Derwent Geoscience (Fiji) Pte Ltd. He has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Capp consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Exploration Results is based on information compiled or reviewed by Mr Terrence Peachey and Mr Lindsay Dudfield. Mr Peachey is an employee of the Company and Mr Dudfield is a consultant to the Company. Mr Peachey is a Member of the Australian Institute of Geoscientists and Mr Dudfield is a Member of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Both Mr Peachey and Mr Dudfield have sufficient experience of relevance to the styles of mineralisation and types of deposit under consideration and to the activities undertaken, to each qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Both Mr Peachey and Mr Dudfield consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

Forward-Looking Statements:
This document may include forward-looking statements. Forward-looking statements include, but are not limited to statements concerning Jindalee Resources Limited's (Jindalee) planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could", "plan", "estimate", "expect", "intend", "may", "potential", "should", and similar expressions are forward-looking statements. Although Jindalee believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.

JINDALEE RESOURCES LIMITED
PROSPECT RIDGE PROJECT

RESOURCE ESTIMATION

Arthur River Magnesite

October 2017

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***Report* # - DG17.001**

DISCLAIMER

In preparing this report, Derwent Geoscience (Fiji) Pte Ltd asserts that all due care and diligence has been taken but accepts no liability for loss or damage to other parties arising from inaccuracies or omissions. While it is believed that the information contained herein is reasonable it should be noted that Derwent Geoscience (Fiji) Pte Ltd does not guarantee the accuracy thereof and the use of this report or any part thereof shall be at the users' risk.

UNITS

Unless expressly stated otherwise, all financial amounts quoted in this document are in Australian Dollars. Physical units are in accordance with the international standard SI system of weights and measures.

All maps and plans are based on GDA94, Zone 55, unless stated otherwise.

RESOURCE ESTIMATION

ARTHUR RIVER MAGNESITE

October 2017

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1. Executive Summary

Work conducted by Derwent Geoscience on the Arthur River Magnesite Project for Tasmania Magnesite NL over the 2010/2011 period culminated in estimation of an Inferred Resource to JORC 2004 standards.

Tasmania Magnesite NL (TMNL) was a wholly owned subsidiary of Beacon Hill Resources PLC, an AIM listed company. Beacon Hill fell into receivership and the company relinquished their tenure over the Arthur River resource. All data, supporting documentation and consultants reports pertaining to the resource estimate and associated scoping study were purchased by Jindalee Resources Limited after EL5/2016 was granted.

The purpose of this report is to report the resource to JORC2012 standards for Jindalee Resources Limited.

Work conducted by Derwent Geoscience Pty Ltd for TMNL over the period 2010/2011 comprised re-logging of existing drill core, mapping, ground geophysics and drilling of an additional 11 diamond drill holes of PQ size. In addition Derwent collated hardcopy historical files acquired by TMNL from previous operators and validated a database to standards suitable for resource estimation.

At a lower cut off of 40% MgO, an Inferred Resource was estimated which totals 25 million tonnes of fresh magnesite grading 42.4% MgO, 4.8% SiO2, 1.4% Fe2O3 and 2.6% CaO to an average depth of 100m below the surface. This estimate assumes that fresh magnesite can be easily separated from zones of internal weathering.

The resource estimate at a series of cut offs is summarised in the table below.

MgO Lower Cut Off (%)	Tonnes	MgO (%)	SiO2 (%)	Fe2O3 (%)	CaO (%)
36	36,817,508	41.1	5.9	1.7	2.9
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42	15,279,918	43.3	4.2	1.3	2.2
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Further work is recommended to upgrade confidence in the resource estimate, notably denser, gridded drilling to increase confidence in the geology, the geological controls on the contaminants and to demonstrate continuity of the higher grade zones of MgO within the broader magnesite body. The location and orientation of both the footwall and hanging wall contacts of the magnesite are poorly constrained by the information on hand.

TMNL went on to complete a scoping study into the feasibility of open pit mining of the resource to produce calcined magnesia products. This study included hydrogeological investigations, metallurgical test work, process design and mine design.

TNML concluded that the project was likely to be viable at a 40% MgO lower cut off, and at a mining production rate of 300,000tpa of Magnesite >40% MgO would have a mine life in excess of 20 years.

2. Introduction

2.1 Location and Access

The Arthur River Magnesite deposit is located in Tasmania approximately 50km to the southwest of Burnie, within the Prospect Ridge Exploration License EL5/2016 (Figure 1). Access is via the Murchison Highway, to the township of Henrietta, thence to West Takone and Farquhars Road, to the Arthur River which is crossed by way of a ford suitable for 4WD vehicles only when the river is running at low volumes. Access within the lease is via a network of 4WD tracks created during prior logging and drilling activity.

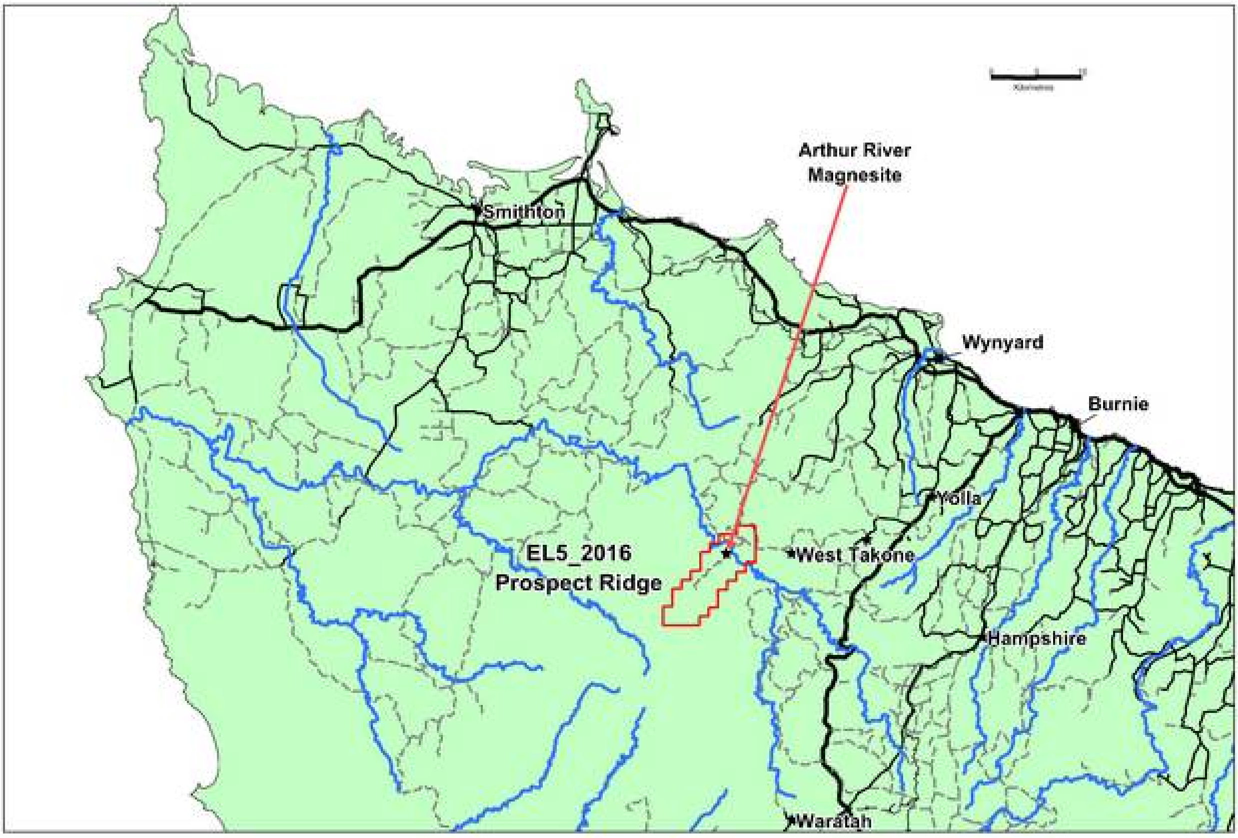


Figure 1: General Location Plan, Prospect Ridge Project, EL5/2016

2.2 Tenure

The Arthur River Magnesite Resource is located within Exploration license EL5_2016, owned 100% by HiTech Minerals Pty Ltd, a wholly owned subsidiary of Jindalee Resources Limited, an Australian ASX listed company. The license is valid until 27th November 2021, after which it may be renewed if the conditions of the tenement have been met.

A 1% gross royalty in the favour of a consultant who introduced the project to Jindalee applies to any future development within EL5_2016.

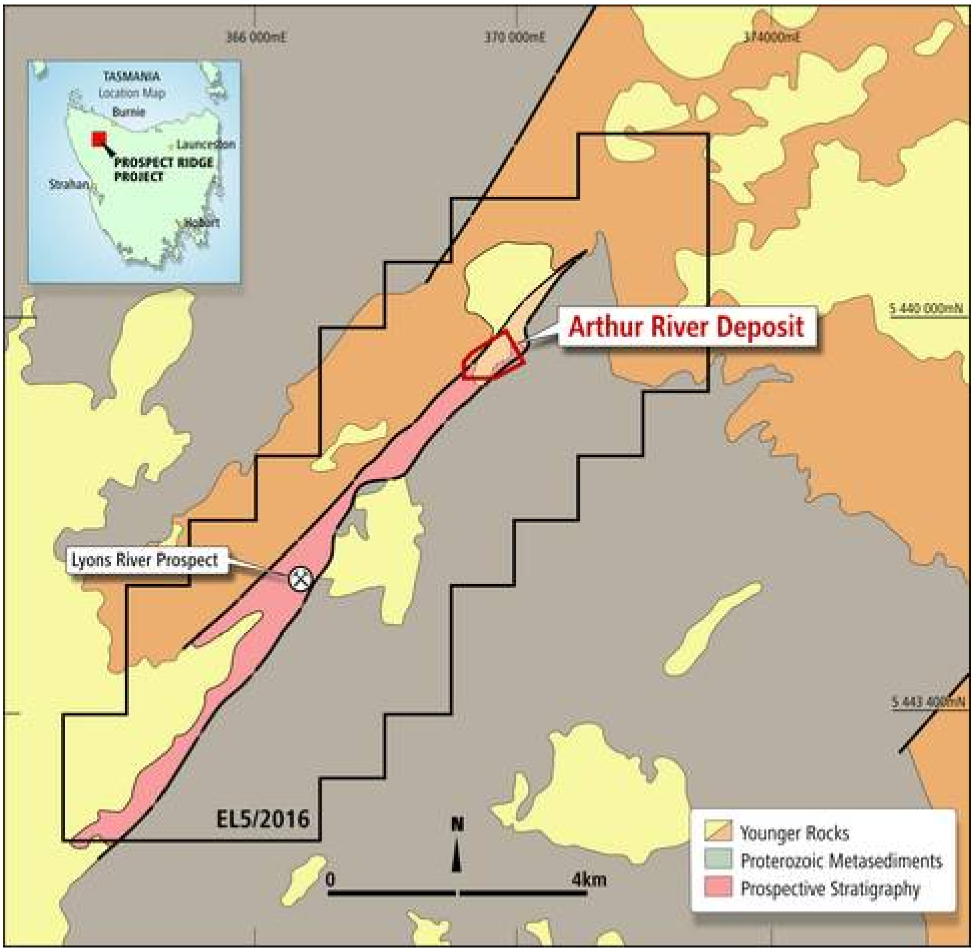


Figure 2: Tenure and summary geology, EL5/2016.

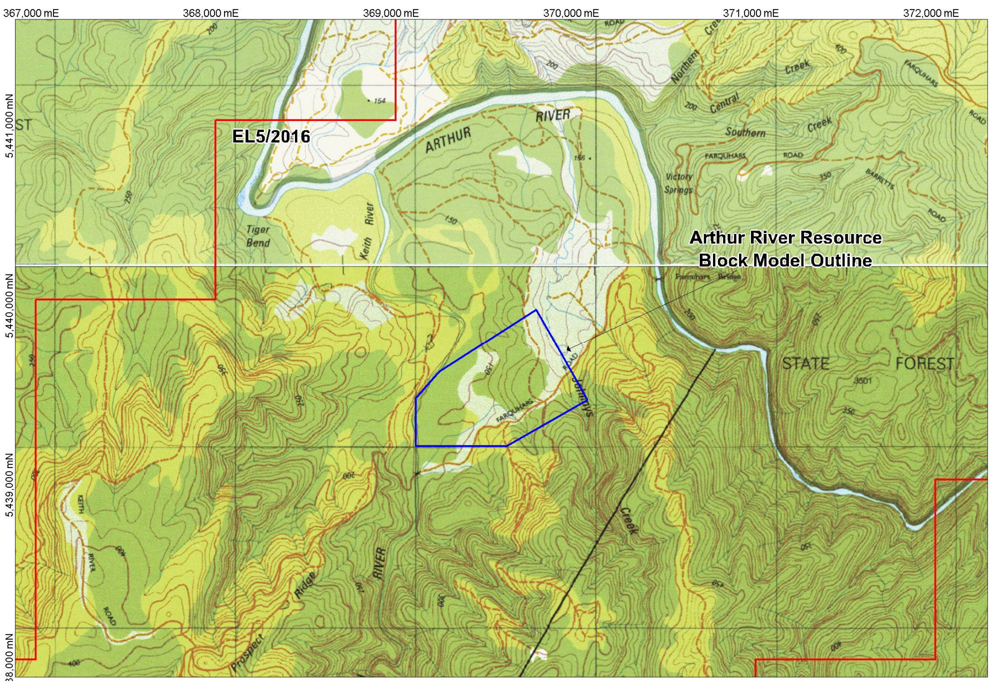


Figure 3: Location and topography, Arthur River Resource.

2.3 Scope of this Report

The scope of this report is to;

- Document resource estimation work undertaken on the project in 2011 to JORC2012 standards.

2.4 Sources of Information

This technical report is based on;

1. Observations made by Stewart Capp and Chris Allen, (both employees of Derwent Geoscience) in the course of field work conducted between 2010 and 2011 (reported in Allen 2011).
2. Information collated from Open File reports by Derwent Geoscience.
3. Information compiled by Derwent Geoscience from Tasmania Magnesite NL reports and files relating to the period 1997 to 2009.
4. Digital drilling data collected and collated by Derwent Geoscience.

Resources in this report have been classified as Measured, Indicated or Inferred under the guidelines laid out in “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 Edition” (JORC Code 2012).

2.5 Statement of Competence

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Stewart Capp, who is a member of The Australasian Institute of Mining and Metallurgy (#200980). Stewart Capp is a consultant geologist and a full time employee of Derwent Geoscience (Fiji) Pte Ltd.

Stewart Capp has sufficient experience which is relevant to the style of mineralisation and deposit type under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the ‘Australasian Code for Reporting of Exploration results, Mineral resources and Ore Reserves’. Stewart Capp consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

2.6 Conversion to Local Grid

The local grid used by previous workers (Crest Magnesium NL) was adopted for this study. The transformation is based on the collars of drill holes MB002 and MB005, with details of the conversion shown below in Figure 4.

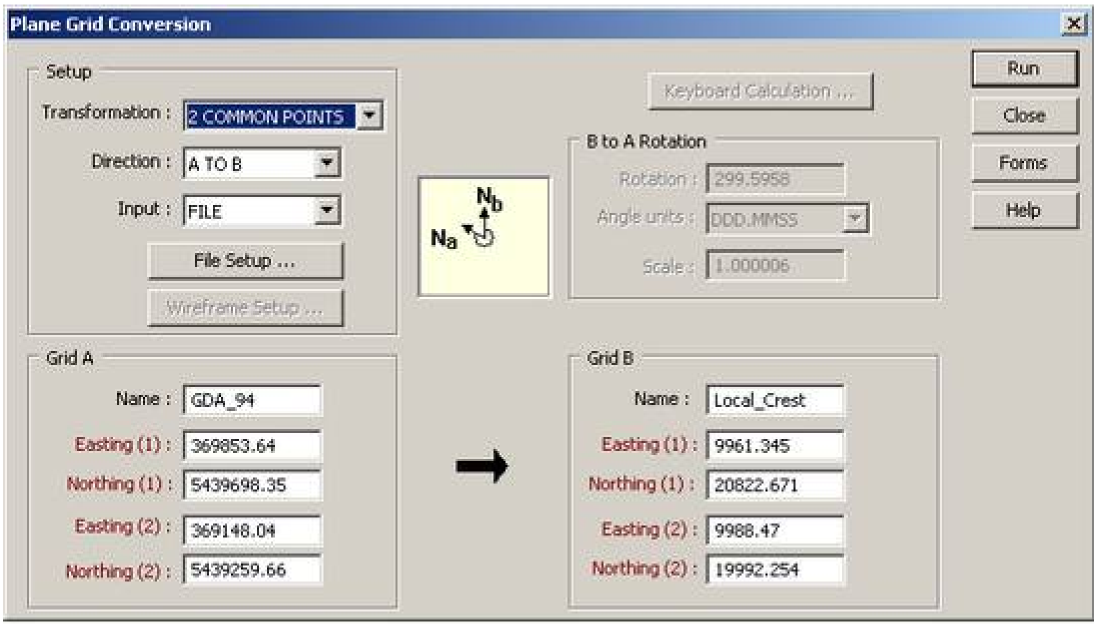


Figure 4: Grid conversion from GDA94 Zone 55 to Local Grid, Arthur River.

3. Regional Geology

The Arthur River magnesite deposit is located within the Arthur Lineament, which is a NNE-striking belt of highly deformed metamorphic Pre-Cambrian rocks extending from just north of Granville Harbour on the west coast, to Wynyard on the north coast. This belt is approximately 110km long and 8km wide, and is generally steeply dipping to the east. To the west of the lineament are the early to middle Neoproterozoic Rocky Cape Group correlates and the late Neoproterozoic Western Ahrberg Group. The Rocky Cape Group is composed predominantly of quartzites and siltstones, while the Ahrberg Group is an autochthonous unit composed mostly of shallow marine siliciclastics which were deposited following an extensional phase, and also coincide with the intrusion of tholeiitic dolerite dykes.

To the east of the lineament are the Burnie and Oonah Formations, which are predominantly Neoproterozoic turbidite sequences, with the Burnie Formation containing greywacke, slaty mudstone and occasional basaltic pillow lavas, and the Oonah Formation also including conglomerate, sandstone, dolomite and chert.

Rocks within the Arthur Lineament are generally phyllitic to schistose and have been variably metamorphosed to greenschist or blueschist facies, with much material within the Bowry Formation appearing as a chloritic schist. The Lineament was formed during the middle Cambrian in the early stages of the Tyennan Orogeny. Further deformation occurred during the Middle Devonian during the Tabberabberan Orogeny, resulting in additional faulting and folding.

Several magnesite deposits are known within the lineament, with three deposits in the south, and three in the north of the lineament. The deposits in the southern section are located at: Main Creek, Bowry Creek and the Savage River mine. To the north are the Lyons River, Arthur River and Cann Creek magnesite deposits. Little is known about the genesis of these deposits.

4. Local geology

Local geology is discussed in detail in Allen 2011 and is summarized herein.

Outcrops of fresh unweathered material in the Arthur River area are rare. The bulk of magnesite outcrops are found to the north of the Arthur River in the Main Creek and Victory Springs area, where sinkholes, blind valleys, pillars, springs and solution tubes were observed. Other outcrops may be observed in the Keith River and the Arthur River near Victory Springs.

Within the project area outcrop is masked by alluvium and glacial materials, which vary up to 20m in thickness.

4.1 Overburden

There are at least five different types of overburden in the area, with three of these covering significant areas. Glaciated materials are often the most readily observed, but other materials include weathered dolerite, magnesitic clays and alluvium.

4.1.1 Alluvial Overburden

Holocene glacial alluvium often forms a 10 to 15 metre cover over the southern part of the deposit where most of the drilling has been concentrated, giving way to iron rich clays to the north. This alluvial material consists mainly of unconsolidated glacial quartzite gravels and rubbles, with angular to rounded clasts up to 20cm in diameter. Rare rounded magnesite clasts were also observed in this material.

4.1.2 Weathered Overburden

The term ‘weathered overburden’ has been applied to materials which are considered to have been weathered in-situ. The area to grid local south of MB4 generally has yellow/grey clay overburden, shown by Perry (2011b) to be mostly of magnesite origin. This area is often swampy, with low topography in comparison to the surrounding environs.

4.2 Magnesite

The magnesite body forms a large pod approximately 2500m long by up to 400m wide, with drilling indicating the magnesite extends to at least a vertical depth of 290m. Dolomite is found within the magnesite body, often appearing abruptly along either weathered contacts or delineated by linear carbonate veins. In some areas the magnesite was observed to be replacing dolomite. Pyritic siltstone is also found within the magnesite, mostly at depths of over 100m, and in the majority of cases occurs as small, wispy veins, giving the appearance of being injected into the magnesite. The siltstone generally occurs on a centimeter scale, and was rarely observed to be more than 1m thick.

The appearance of the magnesite is quite variable, with the bulk of it being white to slightly pink, with clear veining of several varieties giving the material a brecciated appearance.

4.2.1 Talc Content

During the course of logging, talc was observed to form occasional veins. AR002, AR007, AR016 and MB008 were analysed using the Mineral Resources Tasmania HyLogger (Perry 2011b), in which highly variable talc contents were detected within the groundmass of the magnesite (Figures 5 & 6).

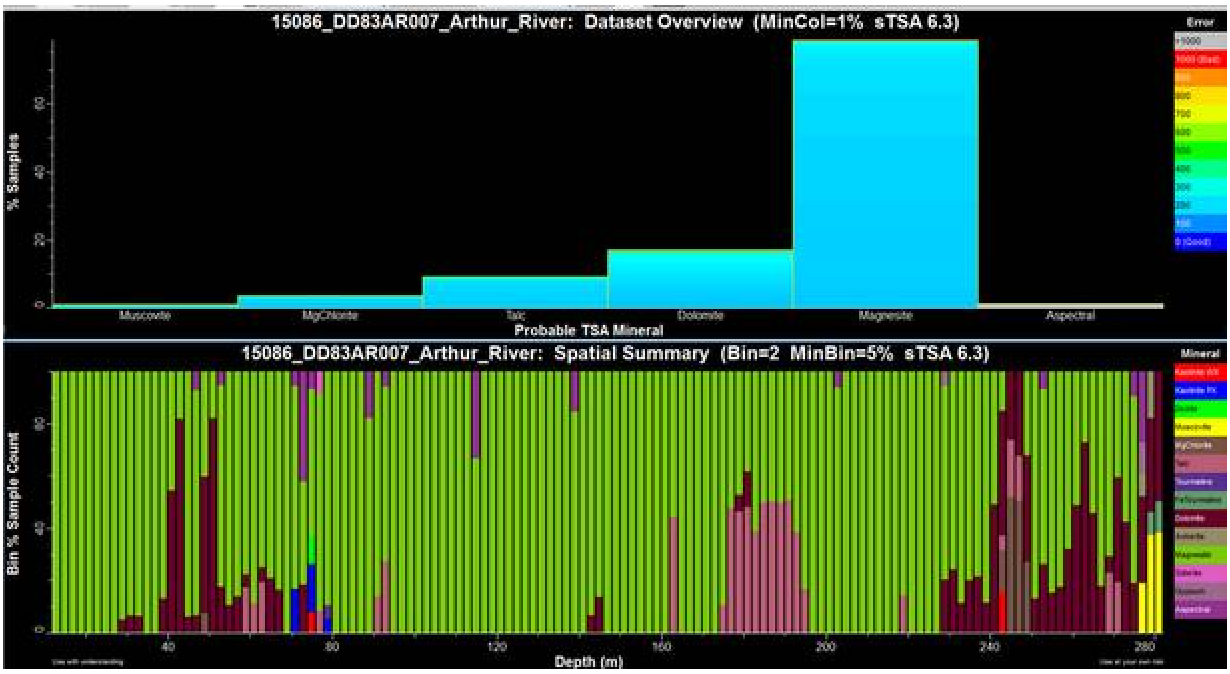


Figure 5: HyLogger data for hole AR007

Mineral contents in relative quantities are shown in the upper section, with the lower section showing the down-hole scan results on a 1m scale. Green = magnesite, light brown = talc, dark brown/purple = dolomite.

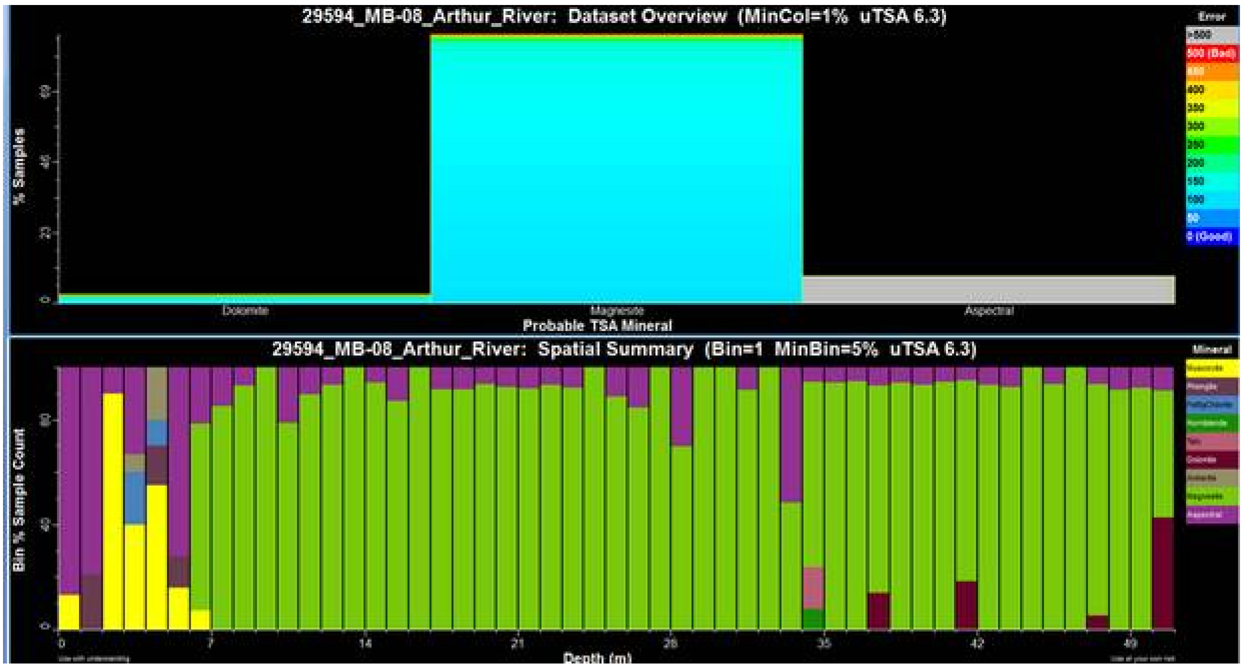


Figure 6: HyLogger data for hole AR008

Mineral contents in relative quantities are shown in the upper section, with the lower section showing the down-hole scan results on a 1m scale. Green = magnesite, light brown = talc, dark brown/purple = dolomite.

MB008 was the only hole to the north of the dolerite dyke which was analysed, and was shown to have low to negligible talc content.

4.2.2 Silica Content

Silica concentrations vary unpredictably within the magnesite, and are generally not discernable to the naked eye.

There appears to be an absence of quartz veining within the magnesite, and silica is rarely observed in the form of individual sub-angular crystals up to 3mm in diameter. The presence of micro-crystalline quartz within the matrix of the magnesite is possible, but it is considered more likely that a large fraction of the silica is dominantly contained within talc, not quartz.

4.2.3 Solution Features/Weathered Zones

Many solution features were encountered during the drilling process; the vast majority of these are filled with clayey sediment, most often derived from the weathering of the surrounding magnesite.

In the past these zones were logged as cavities. This appears to be an erroneous assumption due to the lack of core recovery in these zones. In many cases these solution features exhibit relict clear carbonate veins cross-cutting areas where the groundmass magnesite has decomposed to clay. It would appear they formed when rock adjacent to fractures which allow movement of ground water, are weathered to clay over time.

Material is rarely recovered from these weathered zones as it washes away during the diamond drilling process. Several tests were conducted within these zones to determine if they were voids or filled spaces. The drill string was not able to free fall in any of them, but would make progress if the pump was turned on, suggesting they are filled with unconsolidated material. This is consistent with small quantities clay/sand material that was recovered in drilling.

4.2.4 Dolomite

Dolomite was the only other carbonate noted during lithological logging, and its' occurrences were found most often found proximal to dolerite intrusive. The HyLogger data shows that dolomite is distributed throughout the magnesite to varying degrees, and in general it would appear to be present in solid solution with magnesite.

4.2.5 Dolerite

Doleritic dykes and sills tend to exhibit chilled margins with magnesite. Beyond the chill margins the dolerite is typically medium to coarse-grained, suggesting the dolerite intruded the magnesite.

The dykes are constrained to within the magnesite body and do not extend into either the hanging wall or footwall sequences. The overall shape of the magnesite body suggests it might be a "mega boudin" with structural (sheared) contacts with both the footwall and hanging wall sequences. The lack of continuity of the dolerite dykes across these contacts tends to support this concept and implies the intrusion of dolerite (and hence the formation of the magnesite) occurred prior to significant deformation occurring in the Tyennan Orogeny.

An attempt at dating the dolerite proved unsuccessful (Perry, 2011b), but Perry suspects that it was emplaced during the Tyennan Orogeny, with subsequent deformation during the Tabberabberan Orogeny producing faulting and a partial to pervasive shear fabric.

5. Historical Work

The Arthur River magnesite deposit was first discovered in 1925 by the geologist B. P. Nye, who was assessing the suitability of the area for the construction of a dam. Assay results from samples taken returned results of 45 to 47.6% MgO, almost pure magnesite.

In 1970, Mineral Holdings Australia Pty Ltd (MHA) was granted a large exploration license (EL43/70) over the area and carried out exploration in association with a number of joint venture partners.

Between 1982 and 1988 MHA, in joint venture with CRAE, carried out geological mapping, geophysical gravity surveys, diamond drilling, metallurgical testing and feasibility and marketing studies with the view to assessing the Arthur River and Lyons River magnesite deposits as a source of dead-burned and caustic calcined magnesite.

CRAE completed 7 diamond drill holes on the Arthur River Project (AR001 to AR007) totaling 1,610m of drilling.

This work delineated the magnesite body at Arthur River over 3,500 meters of strike length.

In 1997, TMNL entered into an option agreement to purchase the Arthur River Project from MHA. Check and exploratory diamond drilling at Arthur River comprised seven holes totalling 1,254.3 meters (AR002C, AR007C and AR008 to AR012) and confirmed the results of earlier workers.

Crest Magnesium/TMNL went on to complete a further 16 diamond drill holes, one test pumping bore and 5 monitoring bores. They estimated an Indicated Resource of 29 million tonnes at an average grade of 42.8% MgO and 5.3% SiO_2. Crest completed a feasibility study on production of magnesium metal from the project. The study included hydrogeological investigations, metallurgical test work and open pit mine designs.

The work is fully described in Skwarnecki 2011 and readers are referred there for details.

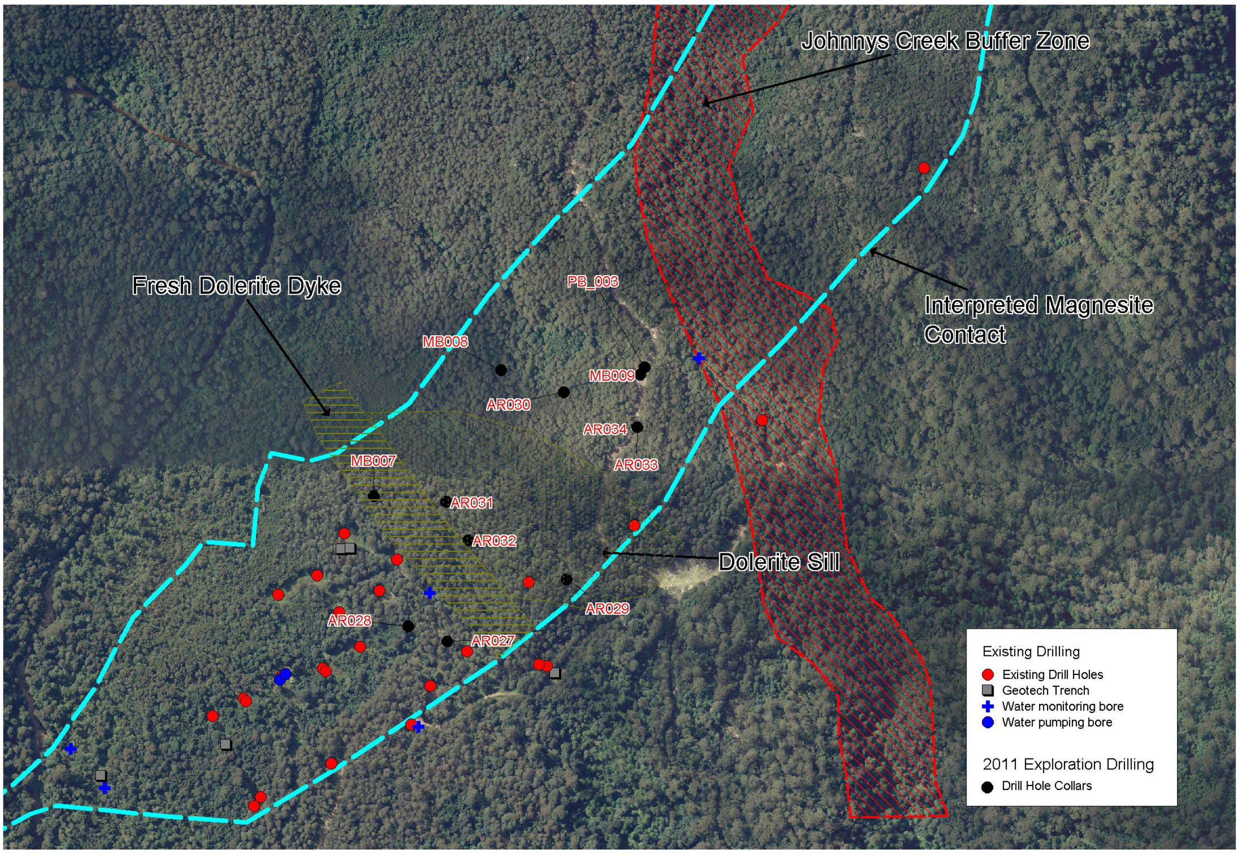


Figure 7: Arthur River drill hole locations.

5.1 Notes on Previous Drilling

5.1.1 Drilling techniques

Previous drilling by Crest Magnesium/TMNL in 1997 was generally triconed through to the fresh rock interface, with HQ triple tube coring thereafter. This was sometimes cased down to NQ coring if difficulties were encountered. The triconed material was not geologically logged.

Drilling by CRAE was also triconed to bedrock with NQ core thereafter.

5.1.2 Logging

All previous drilling was logged by qualified geologists, usually on long hand paper logs. None of the core was orientated and there are no records of geotechnical data being collected or magnetic susceptibility measurements taken. Drilling recoveries are incompletely recorded.

Core photography is available for all previously drilled core, this is held in hardcopy with Jindalee Resources Limited.

5.1.3 Downhole Surveys

Downhole surveys were carried out by CRAE in drill holes AR001 to AR006, generally a single survey was recovered from each hole. None of the Crest drill holes were surveyed and they are assumed to be drilled on their recorded collar orientation.

5.1.4 Core Storage

In 2011 diamond drill holes AR001 to AR003 and AR005 to AR007 were stored at the Mineral Resources Tasmania core storage facility in Mornington. Drill holes AR013 to AR034 were stored in TMNL's core storage facility prior to being relocated to the Mineral Resources Tasmania Mornington core storage facility.

Drill core from holes AR002C, AR007C and AR008 to AR012 appears to have been destroyed in sample preparation as whole core was crushed for assay. The crushed material from these holes appears to have been subsequently discarded by the laboratory.

6. 2010/2011 Work by TMNL

In 2010/2011 a number of investigations were carried out to determine the distribution and character of the dolerite dykes and also measure the depth of alluvial cover.

These work included a ground magnetics survey conducted in October 2010, surface mapping and a drilling program which concentrated on defining the dolerite body and exploring material to the north of the dyke which had not been tested in the past.

A pumping test was undertaken by GHD to better define hydrogeology of the area, building on a previous study by Golder Associates. A geophysics Honors project was undertaken by Owen Perry from the University of Tasmania (Perry 2011b), primarily investigating the geophysical properties of the overburden, and extending to mineralogical properties of the magnesite.

In addition some metallurgical test work was undertaken.

The studies are all reported separately to this report and summarized in Allen 2011.

6.1 Re-logging of Old Core

Prior to commencing drilling, all available drill core from previous work was re-logged.

Diamond drill holes AR001 to AR003, AR005 to AR007 and AR013 to AR026 are stored at the Mineral Resources Tasmania Mornigton core storage facility.

Drill core from holes AR002C, AR007C and AR008 to AR012 were destroyed in the course of analysis by Crest, and crushed material from these holes appears to have been subsequently discarded.

The re-logging allowed for greater consistency to be applied to geological interpretation across the project.

6.2 Drilling

In 2011 a diamond drilling was initiated on 28th February and was completed on the 7th June. The work was carried out by Edrill, with an Atlas Copco CS4000 diamond drill rig.

Eight exploration drill holes and two monitoring bores were drilled with PQ triple tube from surface and one monitoring bore and a pumping test bore drilled by open hole hammer with a water bore drill rig.

Figure 8: Retrieving core from AR028.

HOLE	NORTH (GDA55)	EAST (GDA55)	RL (AHD)	TOTAL DEPTH M	DIP	AZIMUTH (GDA)	PURPOSE
PB003	5439707.8	369799.5	188.2	49.5	-90	-	Pump test Bore
MB007	5439538.6	369485.4	153.0	43.3	-90	-	DD Monitoring Bore
MB008	5439689.8	369622.6	171.5	50.0	-90	-	DD Monitoring Bore
MB009	5439687.2	369789.6	188.7	48.0	-90	-	Open hole monitoring bore
AR027	5439383.3	369565.4	164.8	150.0	-55	60	DD Exploration
AR028	5439398.7	369553.0	163.6	71.1	-55	330	DD Exploration
AR029	5439449.5	369706.4	198.9	89.1	-60	330	DD Exploration
AR030	5439659.9	369691.1	180.6	143.2	-60	330	DD Exploration
AR031	5439541.5	369559.3	168.5	150.0	-60	330	DD Exploration
AR032	5439493.4	369575.7	167.3	150.0	-60	330	DD Exploration
AR033	5439620.5	369786.5	195.2	73.0	-60	330	DD Exploration
AR034	5439630.7	369779.8	194.3	150.0	-60	330	DD Exploration

Table 1: Summary of 2011 drilling

6.2.1 Drilling Aims 2011

The aim of the exploration drilling program was primarily to better define the width of the dolerite dyke and determine if there was potential for an open cut operation to extend through this barrier into magnesite on the other side, and to facilitate hydro geological test work.

6.2.2 Drilling Methods

Diamond drilling carried out in 2011 utilized the following approach;

- All holes were cored from surface, as triple tube drilling.
- Holes were collared with PQ which was drilled down until fresh bedrock was encountered.
- Drilling continued with HQ triple tube by drilling through the landing ring of the PQ barrel. It was found less problematic to not remove the PQ to put a casing shoe on the drill string.
- Drilling continued in HQ to bottom of hole, if problematic ground conditions were encountered the hole was continued in NQ triple tube by coring through the HQ landing ring.
- The casing was recovered from about half of the holes drilled.
- Ground conditions are challenging, and holes tend to cave when casing is removed.

6.2.3 Downhole Surveys

Downhole surveys were taken in at intervals of 30m where possible. A Reflex EZ-Shot instrument was used.

Downhole surveys proved problematic as the holes commonly caved when the rods were back 6m off bottom of hole to carry out the survey. In a number of cases surveys were not taken on completion of holes as they caved as the rods were extracted.

Holes that were successfully surveyed tended to deviate minimally from their planned path.

In future use of an in rod gyro survey tool is strongly recommended.

Core orientation was also undertaken using a Reflex ACT II RD tool. Unfortunately, whilst the tool worked correctly the broken nature of the ground meant that orientations were difficult to carry through complete runs, this lead to a limited amount of useful structural data being collected.

Hole	Depth (m)	Interval (m)	MgO (%)	FeO (%)	SiO (%)
AR027	102.5	44.2	43.04	0.65	7.35
AR028	39.5	19.6	43.10	0.67	3.53
AR029	-	-	-	-	-
AR030	26.0	47.0	41.40	2.30	5.13
AR031	60.0	90.0	42.34	1.49	5.44
AR032	90.0	36.0	40.87	1.22	3.79
AR032	131.0	15.0	41.09	0.81	8.17
AR033	65.5	5.0	41.12	4.78	6.28
AR034	128.5	9.5	40.56	1.93	10.26
MB007	34.3	9.0	42.84	0.93	0.98
MB008	6.9	43.4	43.79	1.93	2.55

Table 2: Summary table of significant assay results from 2011 drilling (>40% MgO).

6.2.4 Surveying and Capping of Holes

Upon completion and removal of the rig, holes were capped using PVC pipe and caps, and their position measured by a licensed surveyor using a Trimble differential GPS (see Table 1).

6.3 Handling and Processing of 2011 Drill Core

6.3.1 Recovery and Transport

At the drill site the core was extracted from the triple-tube, then placed in marked plastic core trays. Where bottom-of-core orientations had been obtained, a mark was placed on the core in red crayon pencils.

Wooden core blocks were placed at the end of each run, denoting the run length, downhole depth and amount recovered (as measured by the driller).

Filled core trays were removed from site once per day by Derwent Geoscience staff, and transported to a core shed at Wynyard.

6.3.2 Core Photography

The core was initially marked up on one meter intervals and bottom of hole orientation lines were extended along core using red crayon pencils. The orientation lines were placed on the upper side of the core prior to photographing the core.

Trays were photographed one at a time, with the start of the tray located in the top left hand corner of the photo. Digital photos are stored with the drilling data base.

Figure 9: Core Photograph - AR027.

6.3.3 Magnetic Susceptibility

The magnetic susceptibility measurements were taken using an Exploranium KT9 Kappameter, with measurements taken at intervals of approximately 1 metre where possible.

6.3.4 Specific Gravity

Specific gravity (density) measurements were collected at approximately 3m spacing's, except in zones where the rock type did not change for long intervals, or where the material was likely to decompose in water.

A simple buoyancy method was used for this project, with the rock first weighed in dry air, then weighed in water. Upon removal from the water the rock was wiped with a towel and weighed again to check for any change of weight that might have been caused by the rock disintegrating or absorbing water. Erroneous readings were repeated or replaced by a nearby rock sample.

The calculation used for calculating the specific gravity is given below:

$$S.G. = Wt_{air}/(Wt_{air}-Wt_{water})$$

Where: Wt_{air} is the free-air mass
Wt_{water} is the submerged weight

6.3.5 Alpha/Beta Measurements

Alpha and Beta measurements of structural, geotechnical and geological features were collected by the geologist during the logging process.

6.3.6 Geotechnical Logging

Geotechnical logging was carried out on all diamond drill holes prior to major disturbance of the core using a system provided by geotechnical consultants GHD.

6.3.7 Geological Logging

Geological logging was completed following geotechnical logging. In addition to lithological logging, vein features were noted for their colour, linearity, and if their occurrences were confined to clast or matrix. Other features noted included the presence of talc or sulfides and their nature, the degree of weathering, and any structures.

All logging was carried out by an appropriately qualified geologist, with assistance from a trained core technician.

6.3.8 Core Sampling

HQ and PQ core was sampled as quarter core, and NQ half core, with all core cut with a diamond saw under the supervision of the project geologist.

Sampling was focused on zones of fresh magnesite; generally other material (overburden and dolerite) was not sampled. Sampling was generally over 1meter intervals, but in zones of poor recovery or on geological boundaries this was sometimes modified. Drill core recoveries were measured for each sample interval and recorded in the drill database.

Material in solution features was not usually sampled, as it was rarely recovered in drilling.

Where cavity fill material was sampled it was sampled separately from the magnesite, the logic being that if the material was included in a magnesite sample it would not be possible to back calculate the grade of the magnesite to model a recovered grade if the fill material can be removed in a washing plant.

3-part sample ticket books were filled out, noting the meterage and recoveries. One part of the ticket was placed in the sample bag and one part in the core tray at the end of each sampled interval. The filled out ticket book butts were filed at Derwent Geosciences' Hobart office.

6.3.9 Sample Preparation and Assays

Samples were submitted to the Burnie branch of ALS Chemex, where sample preparation was carried out, with pulps being freighted to ALS Chemex in Brisbane for analysis. Pulps and bulk rejects were stored at ALS in Burnie.

- At ALS in Burnie the samples were initially sorted and dried at 100°C prior to coarse crushing in a jaw crusher.
- Approximately 300 grams of material was then split off and pulverised to a nominal 90% passing 80# mesh.
- In Brisbane the samples were analysed using ALS's Limestone/Dolomite Suite (Code: ME-XRF12s).

This comprised fusion XRF for CaO, SiO2, Fe2O3, Al2O3, Mn2O3, Na2O, K2O, SO3, MgO, TiO2, Cr2O3, P2O5, SrO and TGA furnace for Loss on Ignition (LOI). A 0.01% detection limit applies to all elements in this suite.

6.3.10 Quality Control

To provide quality control on sample assays, standards from previous assays were inserted at intervals of approximately 25 samples. Three standards of varying composition were used, each comprised of material used in metallurgical studies.

Upon receiving assay results, standards were compared to previous results to confirm the reliability of assays. These are shown graphically in Figures 9 & 10, which shows all samples well grouped, and each standard has a distinctive composition.

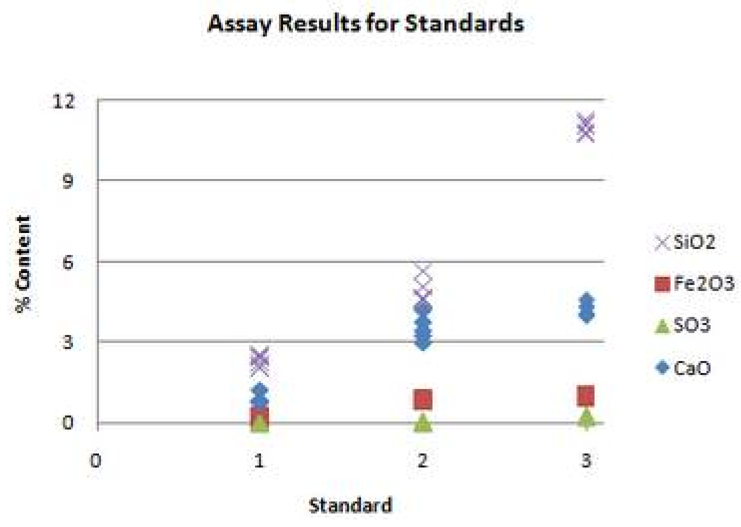


Figure 10: Grouped results for standards used for assays, showing well grouped results for all analyses.

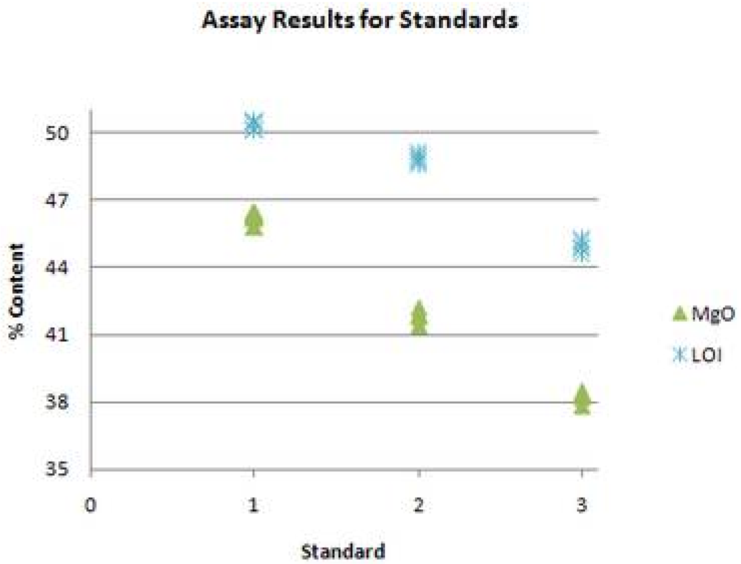


Figure 11: Grouped results for standards used for assays, showing well grouped results for all analyses.

6.3.11 Current Storage of Drilling Material

During the work programme drill core from the 1997 Crest drill programme and the 2011 drill core was stored at TMNL's coreyard in Wynyard. In addition analytical pulps and coarse rejects from the 1997 drilling were also stored in the core yard.

It is the author's understanding that when Beacon Hill Resources went into receivership personnel from Mineral Resources Tasmania collected all the core stored in Wynyard and relocated it to the MRT Mornington Rock Store where it is available for review.

The majority of the analytical pulps are held at eDrill's yard in Wynyard Tasmania. The coarse rejects were disposed.

7. Resource Estimation

An Inferred Resource was estimated for the magnesite at Arthur River. The estimate utilized all drilling and geological data on hand in September 2011 that could be validated.

7.1.1 Database Integrity.

Data used in this resource estimate includes all information on hand as of September 2011.

Historical hardcopy data was entered into a digital database and checked at a rate of at least 1 in 20 entries against the original hardcopy data. In the case of the Crest data the original laboratory reports were available, in the case of the CRAE data only handwritten geological logs with assays were available.

In addition historical drill sampling was checked against the intervals sampled in the core whilst it was being re-logged. The consistent geological data generated from the re-logging of historical core was utilized to create geological model constraining the resource estimate. All re-logging was recorded digitally and merged into the database.

TMNL's 2011 data was merged from digital analytical and geological logging into the database.

The data was subjected to standard checks for inconsistencies using Micromine® Software.

Some drill holes were excluded from the resource estimate as their locations were not accurately documented, one drill hole AR006 was excluded as the analytical data could not be located and validated. All open hammer holes were excluded as they were either not sampled, or samples appear to be contaminated.

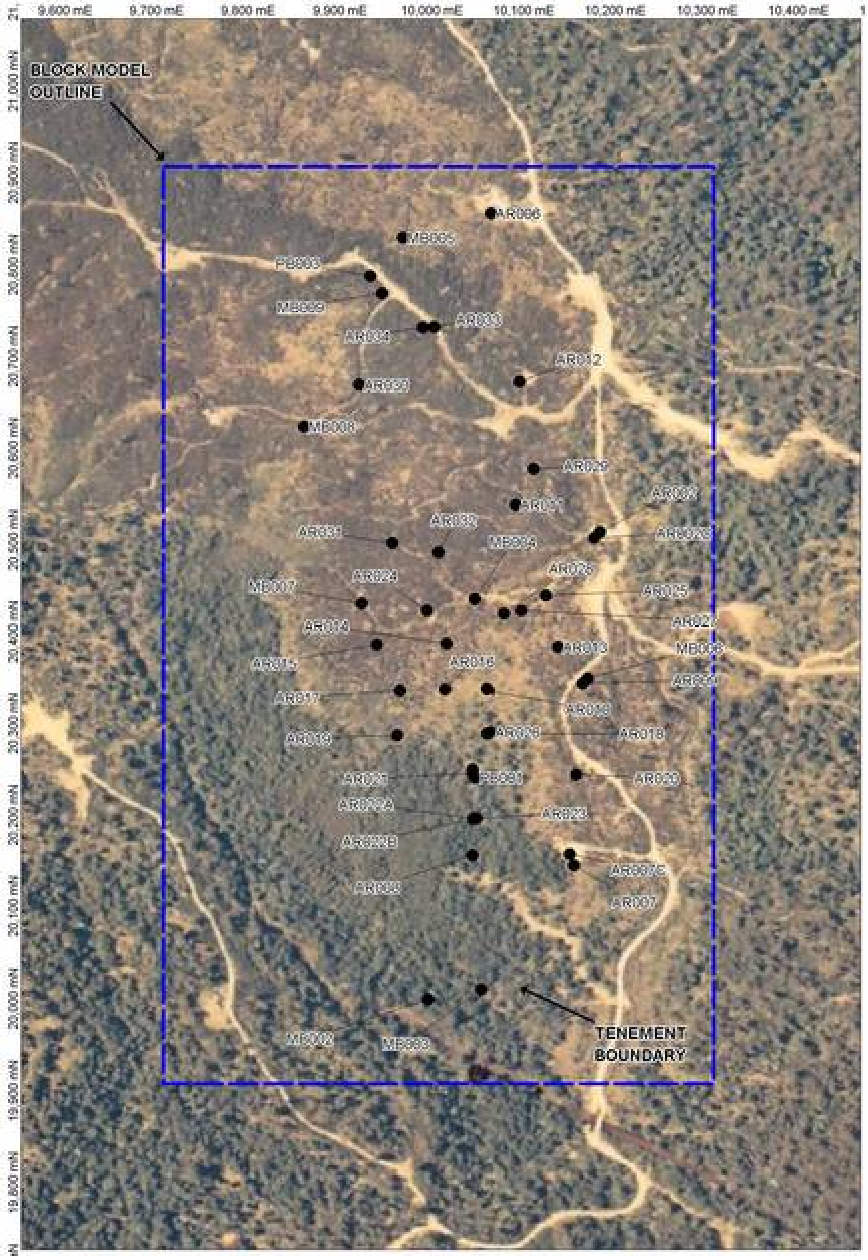


Figure 12: Block Model Outline and Drill Collars (Local Grid)

HOLE	Company	Included or Excluded	COMMENT
AR001	CRAE	Excluded	Drilled outside resource area.
AR002	CRAE	Excluded	Twined by Crest, but collar location not accurately recorded.
AR002c	Crest	Included	Collar location not surveyed, location estimated
AR003	CRAE	Included	Collar location not surveyed, location estimated
AR004	CRAE	Excluded	Hole abandoned in collar, not sampled
AR005	CRAE	Included	Collar location not surveyed, location estimated
AR006	CRAE	Excluded	Analytical data not located
AR007	CRAE	Excluded	Twined by Crest, but collar location not accurately recorded.
AR007C	Crest	Included	
AR008	Crest	Included	
AR009	Crest	Included	
AR010	Crest	Included	
AR011	Crest	Included	
AR012	Crest	Excluded	Not sampled
AR013	Crest	Included	
AR014	Crest	Included	
AR015	Crest	Included	
AR016	Crest	Included	
AR017	Crest	Included	
AR018	Crest	Included	
AR019	Crest	Included	
AR020	Crest	Included	
AR021	Crest	Included	
AR022	Crest	Excluded	Core to 33.7m
AR022A	Crest	Included	Sampled to 51m, hole abandoned
AR022B	Crest	Included	Sampled from 37m.
AR023	Crest	Included	
AR024	Crest	Included	
AR025	Crest	Excluded	Not sampled
AR026	Crest	Included	
AR027	TMNL	Included	
AR028	TMNL	Included	
AR029	TMNL	Included	
AR030	TMNL	Included	
AR031	TMNL	Included	
AR032	TMNL	Included	
AR033	TMNL	Included	
AR034	TMNL	Included	
PB001	Crest	Excluded	Open Hole, sampled on 3m intervals, but samples are very low grade in comparison with adjacent holes, contamination is strongly suspected.
PB002	Crest	Excluded	Open Hole, not sampled.

HOLE	Company	Included or Excluded	COMMENT
PB003	TMNL	Excluded	Open Hole, not sampled
MB001	Crest	Excluded	Not sampled
MB002	Crest	Included	
MB003	Crest	Included	
MB004	Crest	Excluded	Not sampled
MB005	Crest	Included	
MB006	Crest	Excluded	Not sampled
MB007	TMNL	Included	
MB008	TMNL	Included	
MB009	TMNL	Excluded	Open Hole, not sampled

Table 3: Drill Holes used or excluded from the Resource Estimate

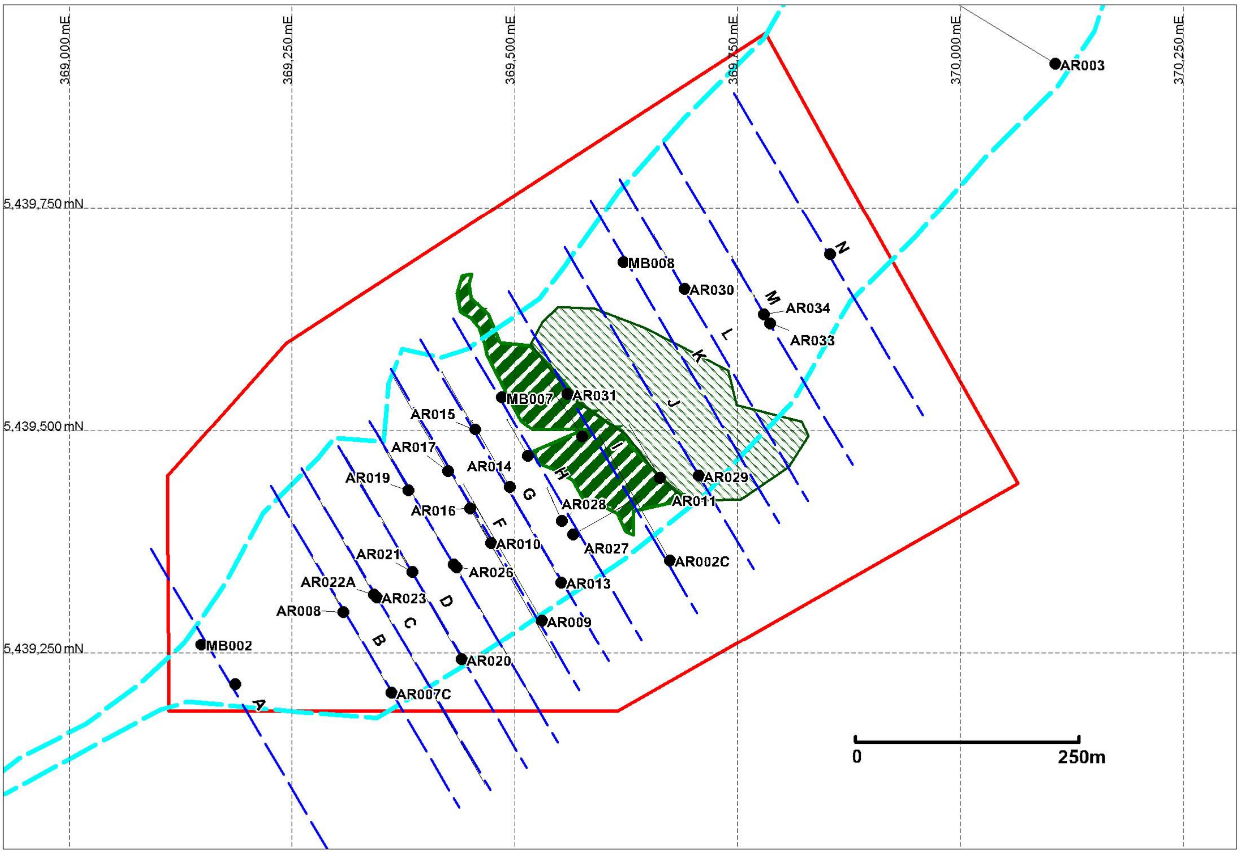


Figure 13: Block Model Outline and Drill Sections (GDA)

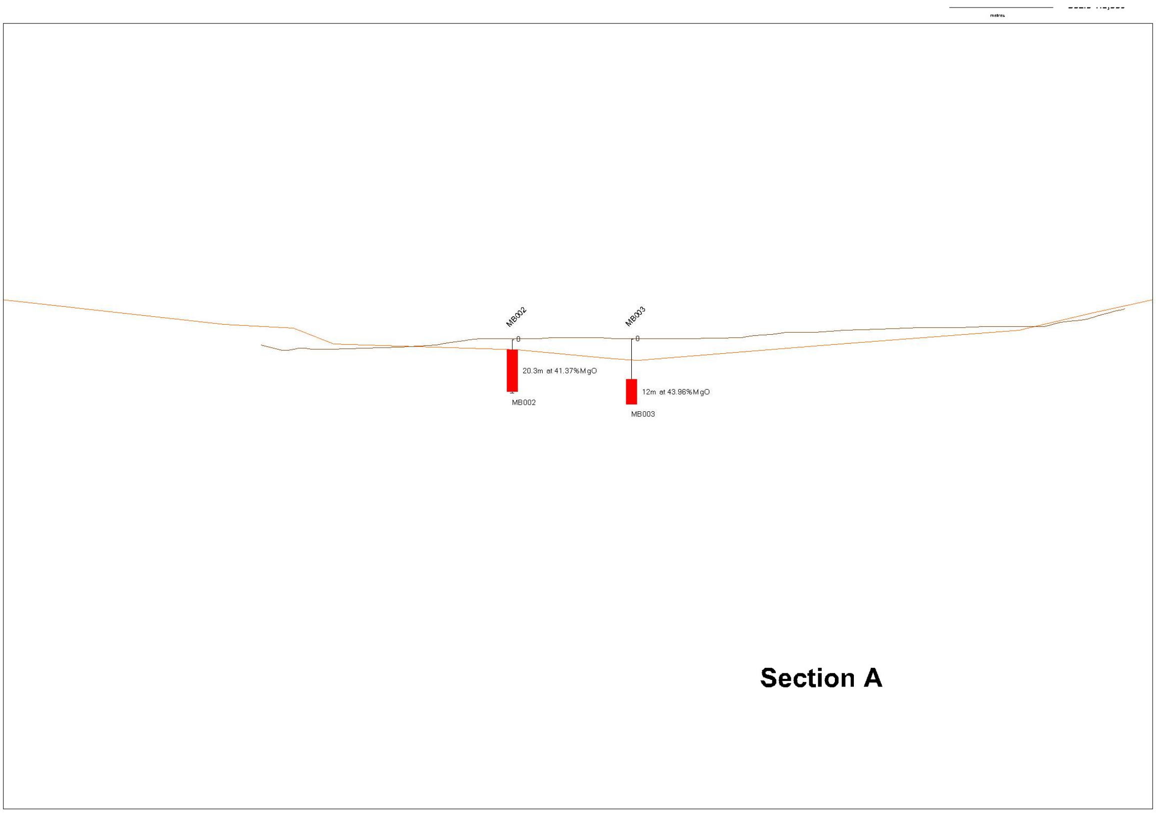


Figure 14: Section A

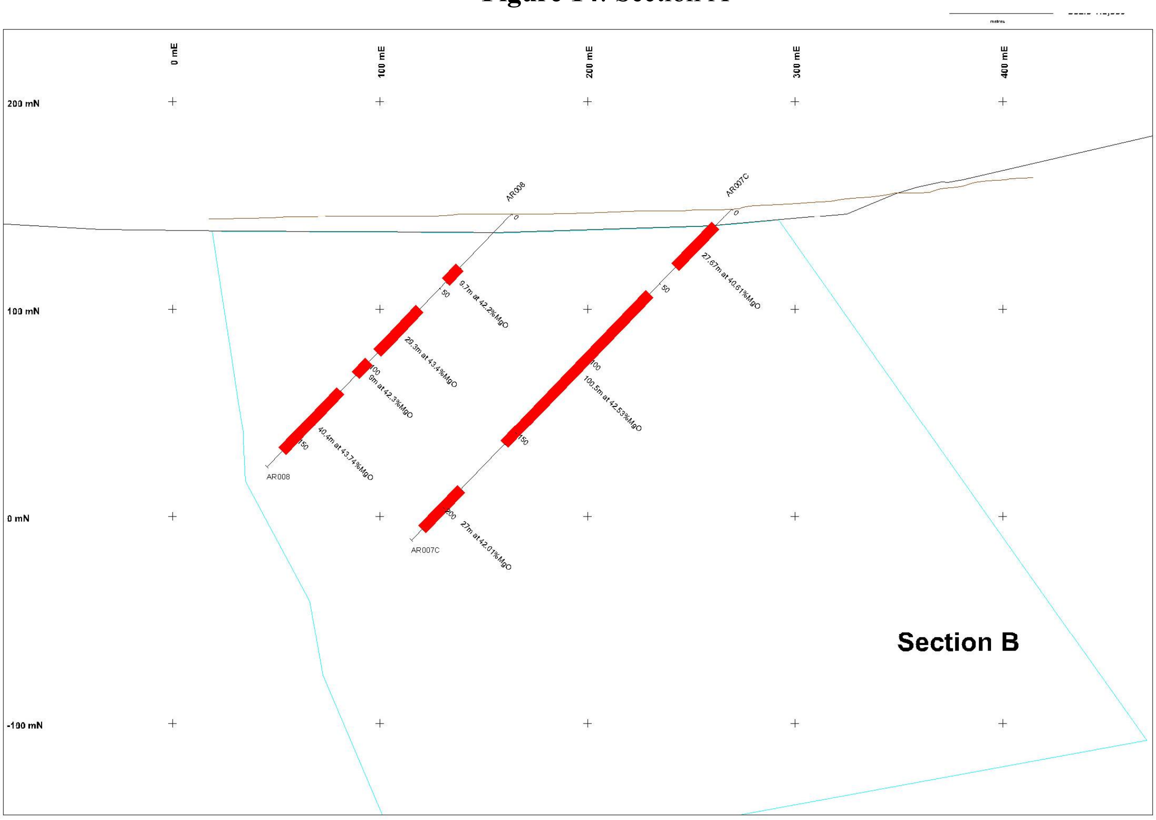


Figure 15: Section B

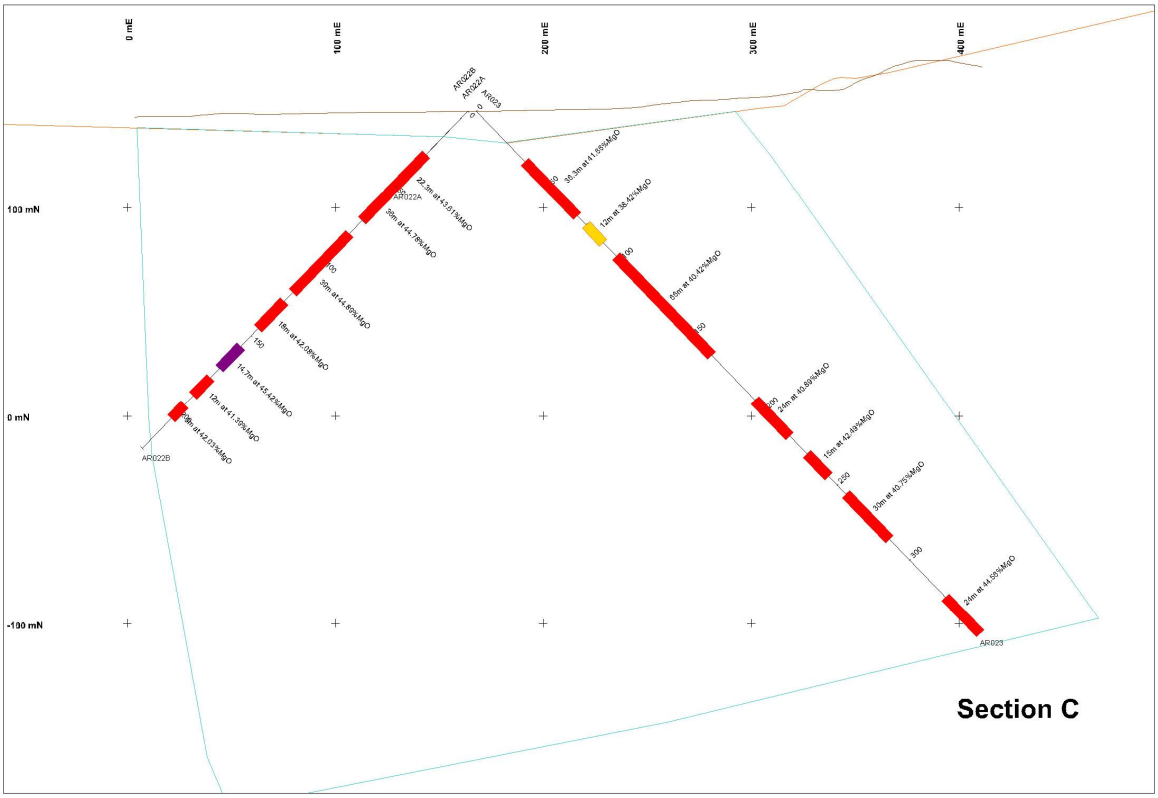


Figure 16: Section C

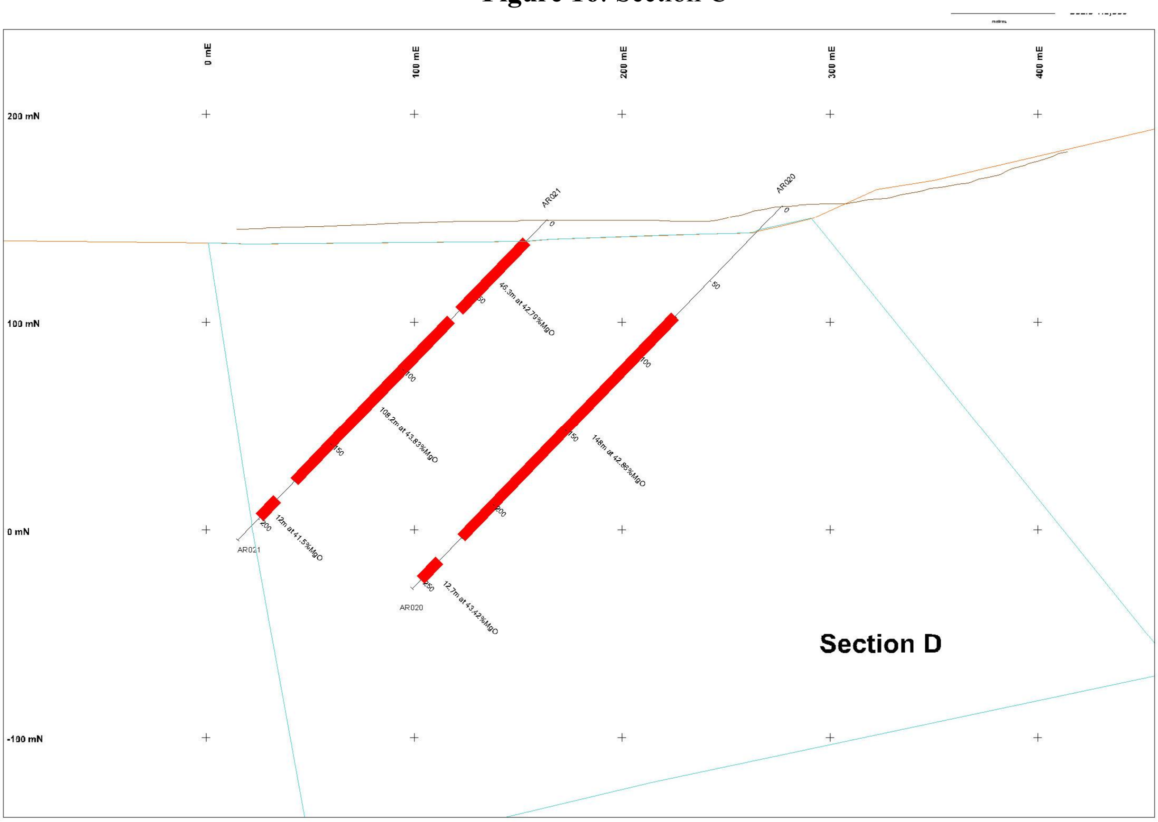


Figure 17: Section D

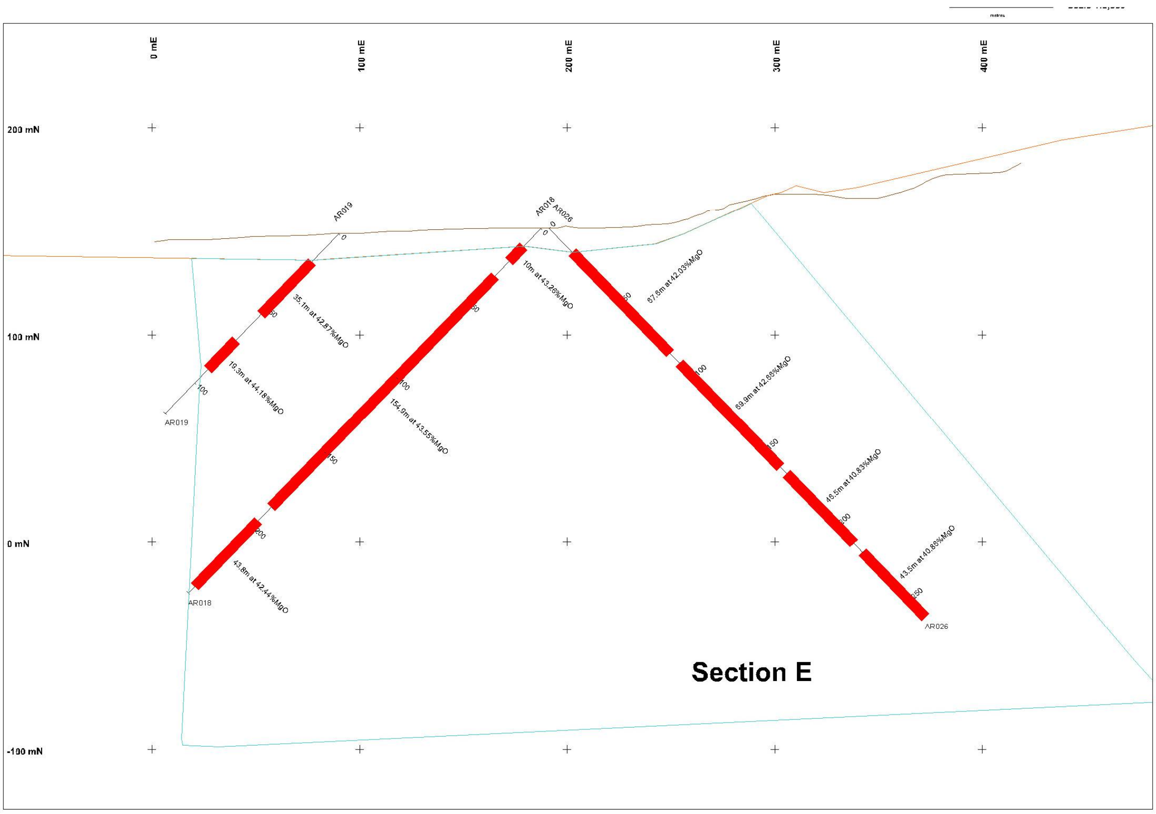


Figure 18: Section E

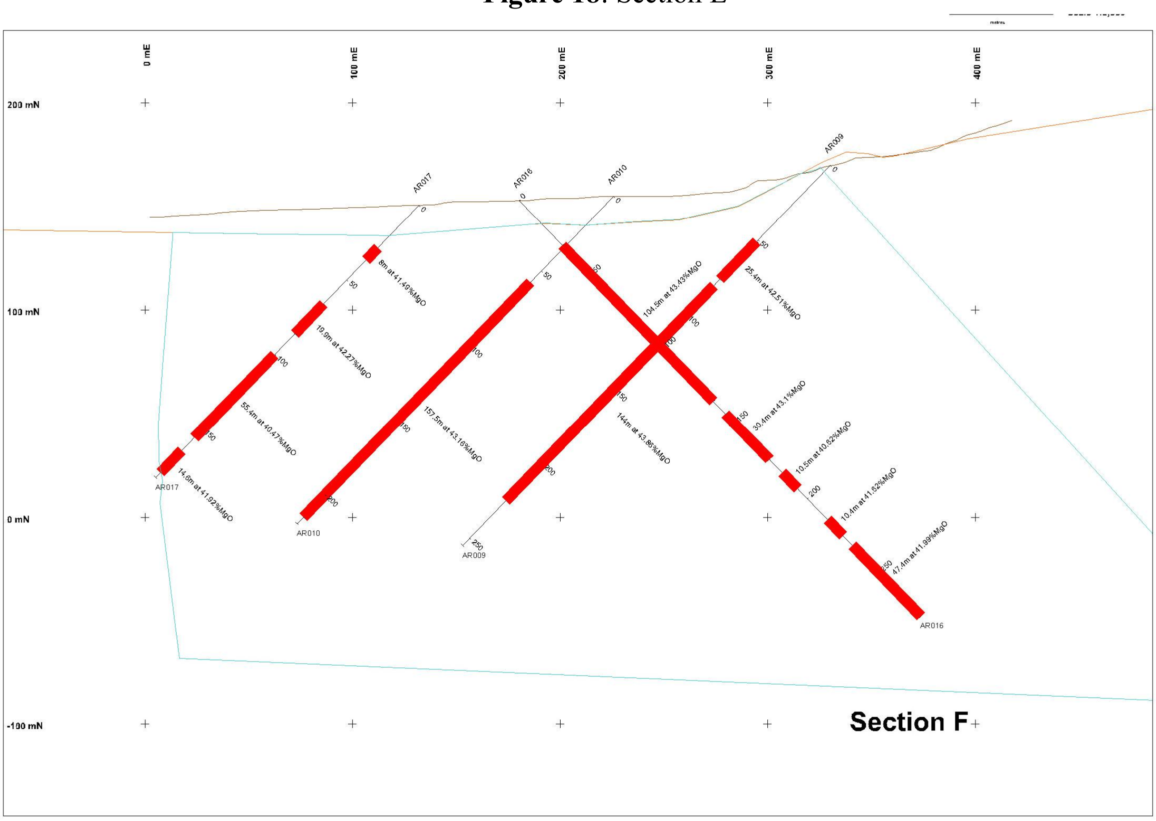


Figure 19: Section F

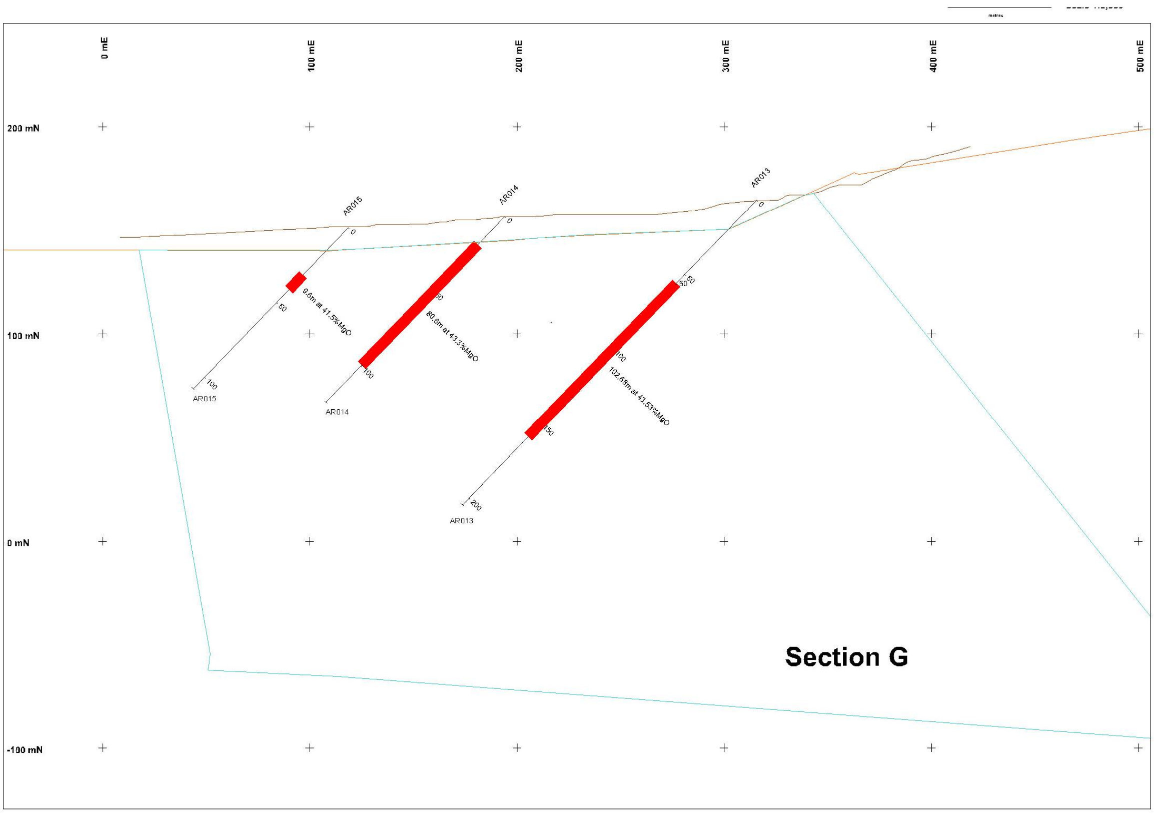


Figure 20: Section G

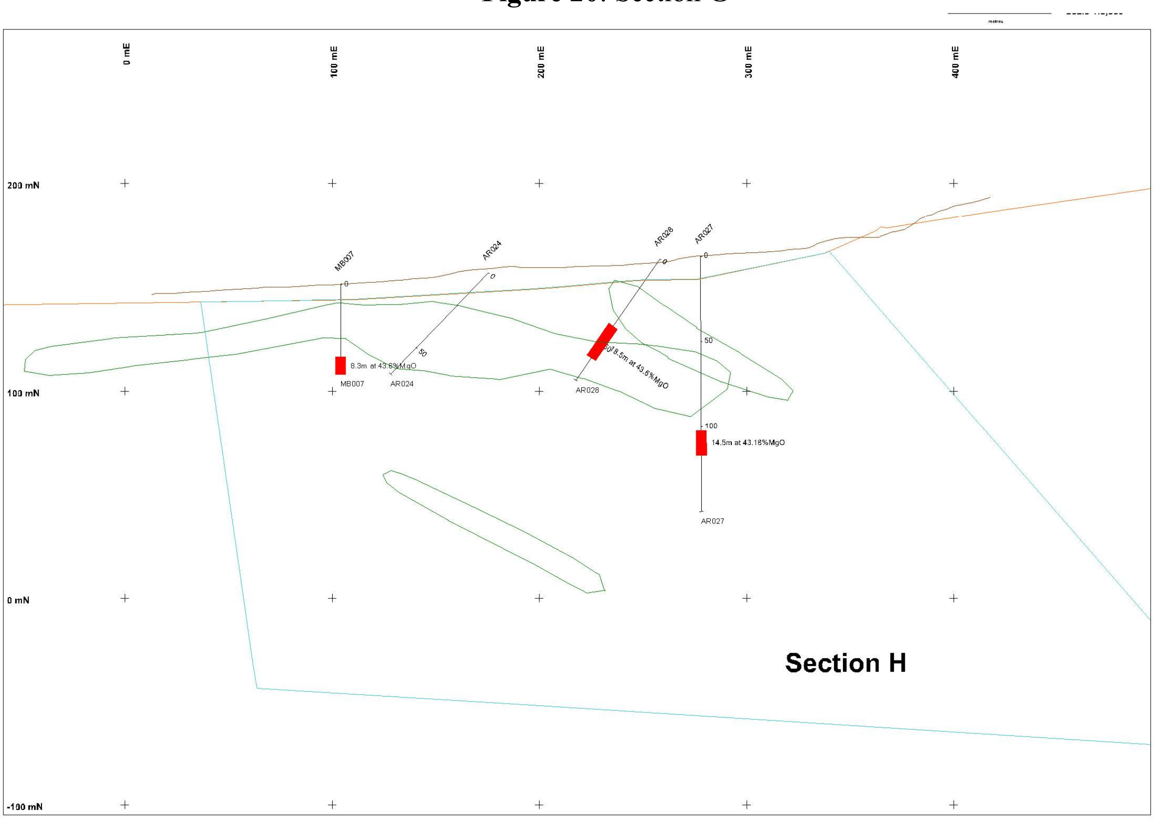


Figure 21: Section H

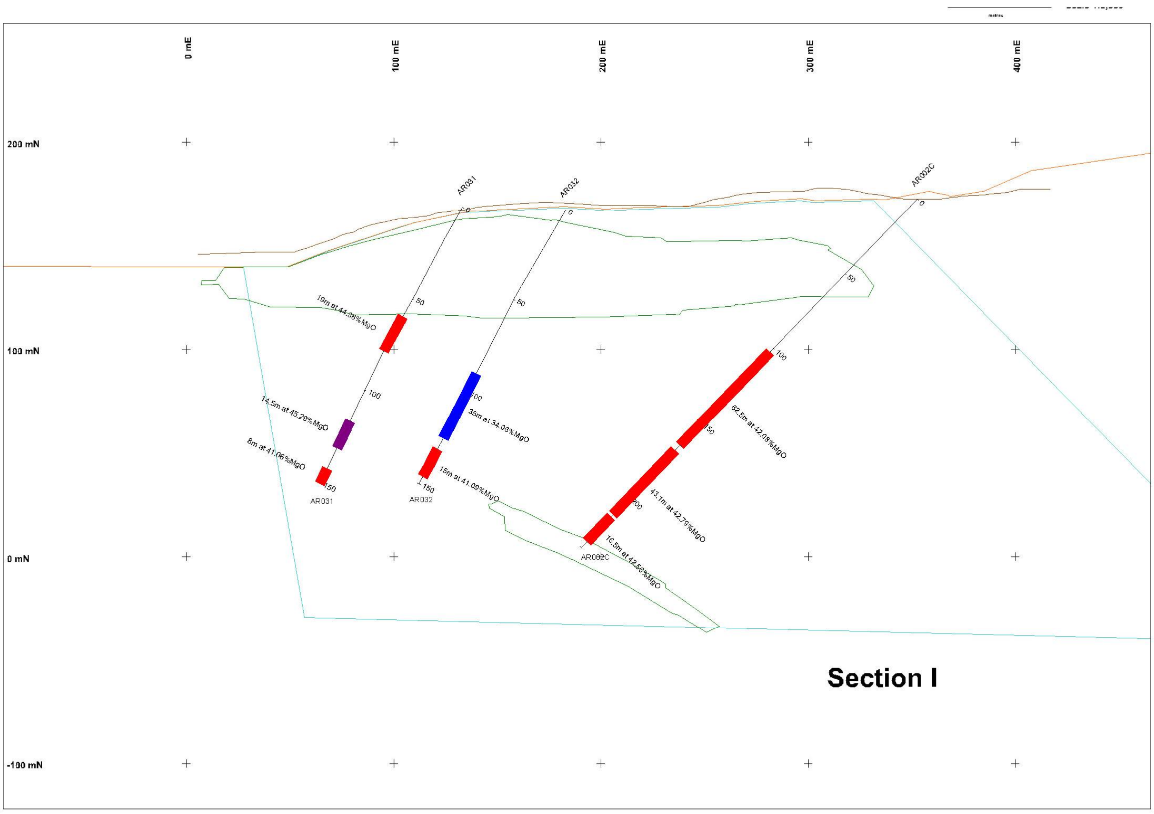


Figure 22: Section I

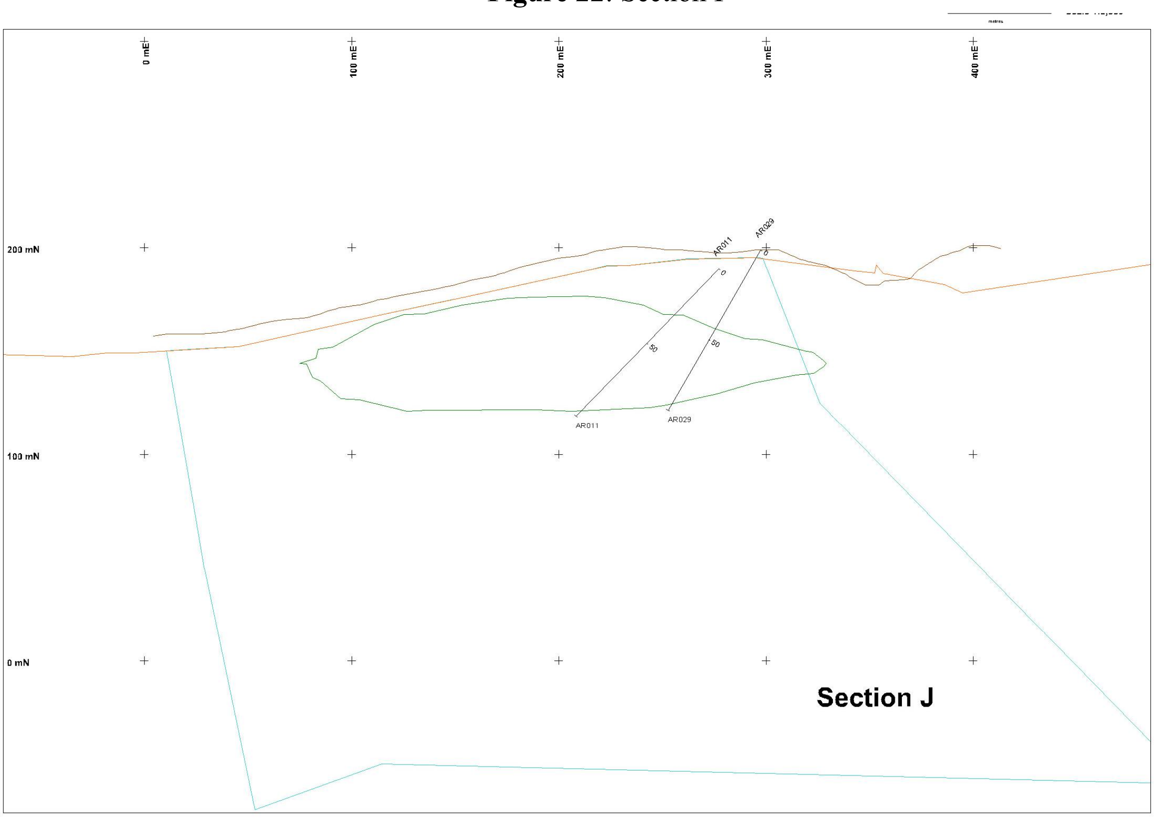


Figure 23: Section J

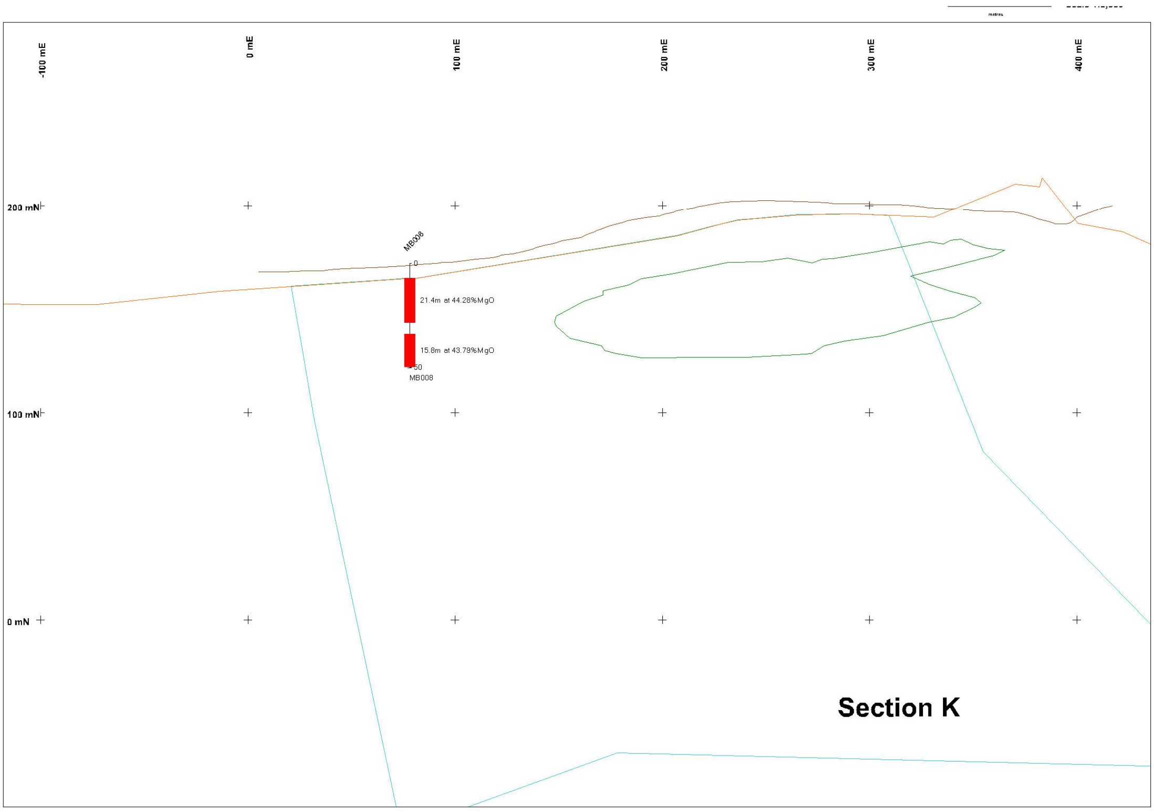


Figure 24: Section K

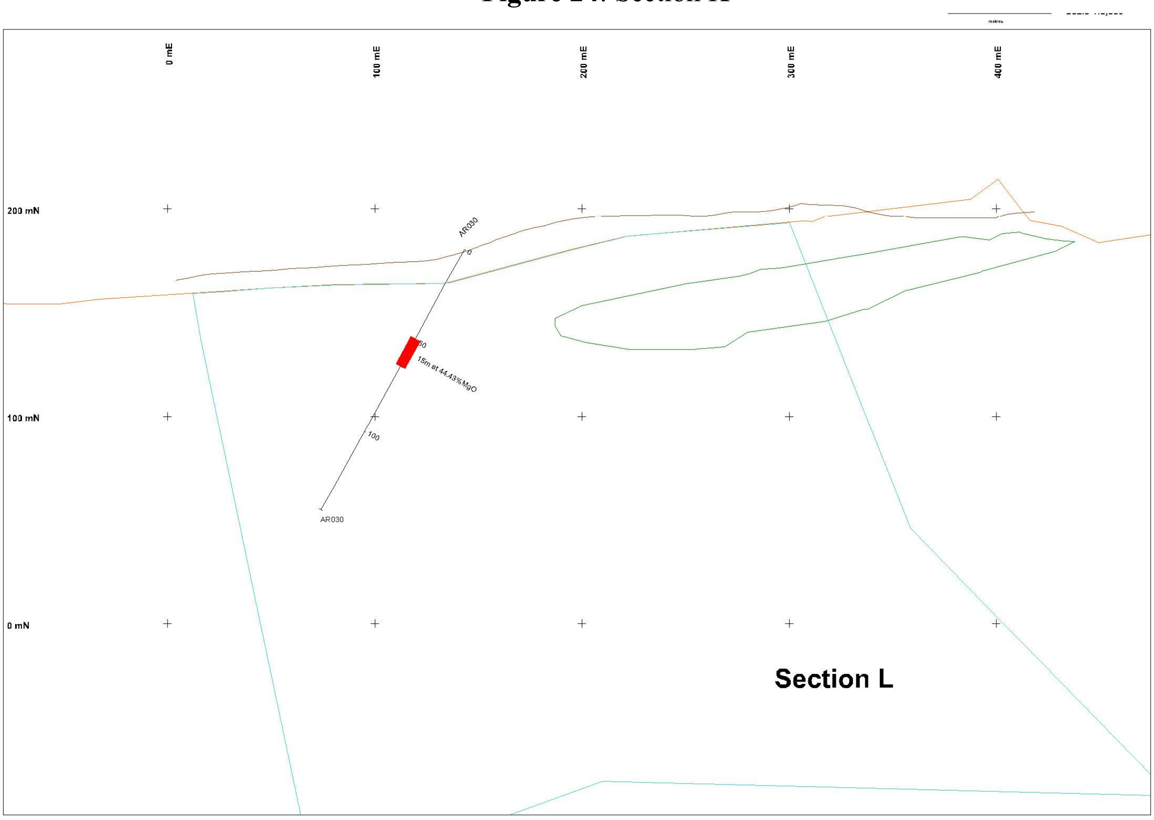


Figure 25: Section L

7.1.2 Site Visits
The author supervised the work carried out by Derwent Geoscience for TMNL in 2011, and as such spent considerable periods of time on site.

7.1.3 Geological Interpretation.
Geological interpretation was undertaken by Chris Allen of Derwent Geoscience and documented in a separate report, Allen 2011. He was responsible for geologically logging all TMNL's drilling, re-logging historical drill core and was intimately involved in all field investigations completed in the 2010/2011 period. His sectional interpretation was imported into Vulcan software and wire framed into a solid model.

The hangingwall and footwall contacts of the magnesite body are poorly constrained by the data available, and further pierce points in areas of economic interest would enhance the model. As additional data is gathered the model will become more reliable.

7.1.4 Block Model Dimensions
A block model (AROct11_V5.bmf) was constructed in local grid using Vulcan software. The model has the following dimensions;

Min X	9,700	Max X	10,300
Min Y	19,900	Max Y	20,900
Min RL	-20	Max RL	230

Maximum block size is 20mX x 40mY x 10mRL with sub-blocking down to 5mX x 10MY x 5mRL.

The model was created with the following fields;

Rock – Rock Type
- too – transported overburden
- mag – magnesite
- magox – Oxidised magnesite
- foot – footwall rocks
- hang – hanging wall rocks
- dola,b,c,d - dolerites

Ox – Oxidation State
- co – completely oxidised
- uo – unoxidised (fresh) rock.

MgO – MgO grade %
SiO2 – SiO2 grade %
Fe2O3 – Fe2O3 grade %
CaO – CaO grade %
Sg – Specific Gravity
Sg_mod – Specific gravity modified to include weathering zones in magnesite

7.1.5 Data density and distribution.
Within the area subject to the resource estimate drilling has been conducted on an east west orientation on sections spaced approximately 50m apart. Drill spacing on sections is highly variable with a number of sections having 2 drill holes collared in opposite direction from a single pad. On average the sectional spacing is of the order of 100m.

7.1.6 Estimation and Modeling Techniques

The drill database was composited to 3m downhole lengths and grade estimation was carried out in two passes using an ellipse with an orientation striking 350^{o} to grid north, and dipping at -35^{o} to grid east.

The following search distances were applied to each pass.

Pass	X	Y	Z
1	80	80	10
2	160	160	20

The estimate utilized Inverse Distance Squared interpolation to estimate grades of MgO and contaminants into each block.

The bock model boundaries passed outside the tenure formerly held by TMNL (ML24M/2009). The estimate was constrained so as to only fill blocks within the tenement. It should be noted that the Magnesite pinches out towards the boundary (the Keith River) and to remove the constraint is unlikely to make a material difference to the resource. Mining beneath the Keith River is unlikely to be a viable option.

7.1.7 Moisture

The densities utilized in this block model should be considered to be wet densities due to the manner in which the measurements were made.

7.1.8 Cut-off Parameters.

A cut-off grade of +40% MgO has been utilized in quoting the resource. This was based on input from Process Technologies Australia Pty Ltd, metallurgical consultants advising TMNL, who also advised that maximum levels of contaminants should fall below 6% SiO2, 2% Fe2O3 and 5% CaO.

7.1.9 Mining factors or assumptions.

The resource model was constructed on the assumption that mining of the magnesite would be via open pit methods. In addition it is assumed that grade control will be used to selectively mine higher grade parcels of magnesite, and to determine the distribution of contaminants on a local scale.

7.1.10 Metallurgical factors or assumptions.

A primary metallurgical assumption is that the weathered clay zones contained within the fresh magnesite (discussed above) will be upgraded in the first stage of processing by crushing wet screening the ROM material to remove the unconsolidated weathered material.

Hence the block model has been constructed in such a manner that an economic assessment can be made by looking directly at the grades of the fresh magnesite without considering dilution by weathered zones.

Test work is required to confirm this assumption.

Based on metallurgical test work conducted by TMNL (and previous operators) it is reasonable to assume that marketable calcine products can be produced from the Arthur River magnesite, utilizing reverse floatation and calcining.

At the time of writing Jindalee Resources is undertaking further test work to validate these assumptions.

7.1.11 Environmental factors or assumptions.

TMNL conducted a number of environment studies aimed at identifying critical issues. The Tasmania Freshwater Lobster (a protected species) reside in Johnnys Creek (Figure 7), which transects the resource. A buffer zone around the creek was defined and excluded from the resource estimate.

The resource is located on land clear felled by forestry activities and later subjected to an intense fire. It is assumed that open pit mining would be approved in this area.

7.1.12 Bulk Density

The following specific gravity values were applied to the model in the "sg" field.

Rock Code	Completely oxidised (t/m3)	Fresh (t/m3)
too	2.2	-
mag	2.3	2.9
magox	2.3	-
foot	2.2	3.0
hang	1.9	2.7
dola,b,c	2.1	2.9
dold	2.4	2.4

The weathered zones associated with solution features are estimated to comprise 13% of the volume of the fresh magnesite. The estimate is based on the average drilling recoveries measured by Derwent Geoscience in the most recent round of drilling. Drilling recoveries are incompletely recorded for previous work conducted by Crest. Whilst it is recognized that a portion of these losses are attributable to other issues (broken ground, driller error etc) there is no means of quantifying the magnitude of these losses. Hence a conservative assumption that all loses are attributable to unrecovered weathered features has been made.

The specific gravity of the clayey weathered zones is assumed to be 2.2 t/m3, based on a single measurement made in the course of recent drilling.

In order for the block model to report correct tonnages of magnesite the specific gravity of the fresh magnesite was factored in the following manner. All other specific gravity values remain unchanged in this field.

sg_mod *= (0.87 * sg magnesite)*
*= (0.87 * 2.9)*
= 2.52 t/m3

It should be noted that for the block model to correctly report tonnages of all materials within a volume the following calculation must be made.

Fresh Magnesite tonnages *- report correctly from the model using "sg_mod"*

Fresh Magnesite volumes *- "mag" volume reporting from the block model * 0.87*
Weathered zone volumes *- "mag" volume reporting from the block model *0.13*
Weathered zone tonnages *- "mag" volume reporting from the block model * 0.13 * 2.2*

Figure 26: Weathered zone in AR032 – 92.5m

7.1.13 Classification.

The resource is classified as Inferred in its entirety for the following reasons;

- Lack of geological understanding.
    - o The orientation of the higher grade zones within the magnesite body is inferred from observations made in a few specific areas; there is no guarantee that this orientation is pervasive throughout the magnesite. A variographic study performed by Hellman & Schofield (Appendix A) failed to demonstrate continuity, denser drilling is required to determine the orientation and continuity of high grade zones.
    - o The controls on the various contaminants (which impacts directly on the value of the magnesite and cost of processing) is unknown. Denser drilling is required to elucidate controls on contaminants, which may differ from the controls on the high grade magnesite.
    - o The location of both the footwall and hanging wall of the magnesite body is poorly constrained, additional drill holes are required.
    - o The thickness and nature of overburden, and the weathering interface is poorly constrained as a significant portion of the drilling was angled from a single point in the centre of the magnesite body. Gridded drilling is required.
- Downhole surveys – it is noted that the bulk of the historical drilling has not been surveyed downhole, this leads to some uncertainty as to the location of most of the samples used in this estimate, however as deviation of drill holes that have been surveyed is not significant, and the magnesite body is large this is unlikely to contribute a significant level of uncertainty to the estimate.
- The specific gravity of the weathered material has not been determined as the material is rarely recovered in drilling. In situ measurements should be undertaken in future drilling, or a targeted program to recover material needs to be undertaken.
- Insitu measurements of density will also allow for a more accurate estimate of the proportion of the volume of weathered zones within the fresh magnesite.

7.1.14 Audits and Reviews

No formal audits or reviews of the resource estimate have been undertaken. Skwarnecki, 2011 commented that the data collection and analytical work were being conducted to expected industry standards.

8. Subsequent Events

Since completion of this resource estimate in 2011 no further sampling or work of a geological nature was carried out on the Arthur River Project. No additional studies that would have any substantive impact on the resource estimate have been completed.

TMNL utilized the 2011 resource model to complete a scoping study. The study was based on a 292,000tpa +40% MgO mining rate, trucked to a plant producing 100,000tpa of calcined magnesia grading +95% MgO. The product was envisioned to be shipped to market via Burnie Port.

The study assessed three potential plant sites, all remote from the resource area, along the transport route to Burnie. It found no significant economic difference between them, each having its own capital or operating cost advantages that tended to balance out.

The resource model was optimized and two pit shells that combined to provide 18 years of production were chosen as the basis for the financial model (Figure: 27). The financial model was notionally closed off at 18years as discounted cash flows from subsequent years had a minimal impact on the model. However mining was projected to continue well past this point.

Key conclusions of the study were;

1. The project appeared viable with a projected IRR of 13 to 14%.
2. The financial model was insensitive to the location of the calcining plant.
3. The model was particularly sensitive to;
    a. Capital Costs
    b. Mining Costs
    c. Market Prices.
4. Additional drilling is required to increase confidence in the resource and enable indicated and measured resources to be calculated.
5. Additional metallurgical test work, particularly reverse floatation, to upgrade the mined product was required in order to better constrain capital cost estimates.

9. Conclusions and Recommendations

A scoping level economic assessment of the magnesite resource was undertaken by TMNL. The work highlighted two areas where pits might be initially developed, described as the North and South pits (Figure: 27).

The North pit area was viewed by TMNL as a potential starting point for mining, it has shallow overburden, is located on a topographic high and contains relatively high grade magnesite with low contaminants. The economic potential of this zone suggests it should be a priority for further resource definition drilling.

It is therefore recommended that work to upgrade resource confidence should focus initially on the two "pit" areas.

1. Drilling should be undertaken on a grid to a recommended density of 50 x 50m in order to better define grade continuity.
2. Drilling should target multiple intercepts into the foot wall and hanging wall in order to define the dip and location of these contacts.
3. In situ density measurements should be undertaken to confirm the specific gravity of the internal weathered zones, and to attempt to quantify the proportion of weathering within the magnesite.
4. A gyro tool should be utilized for in-rod down hole surveys.
5. Commercial standard reference material should be sourced if possible to provide stronger quality assurance, or internally selected standards should be developed and documented.
6. The current sampling and logging practices should be maintained.

However a review of TMNL's scoping study outcomes in the light of current capital and operating cost estimates is recommended prior to further resource definition drilling to ensure further investment is justified.

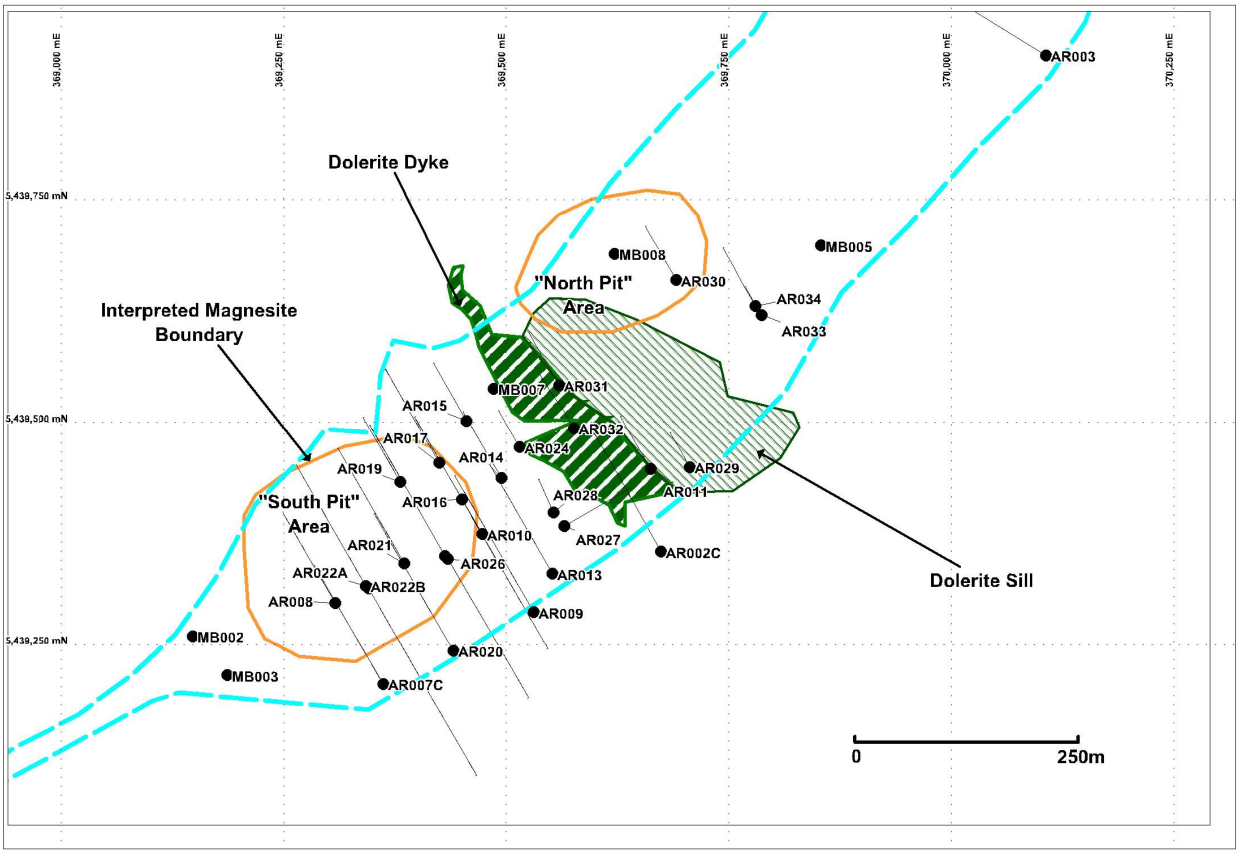


Figure 27: Drilling and the “Pit” areas defined by TMNL’s scoping study

10. References

Abbott, J, 2011 — Resource Potential of the Arthur River Magnesite Deposit. Unpublished internal technical report for Derwent Geoscience by Hellman & Schofield Pty Ltd.

Allen, C.A. 2011 — Field Work Arthur River project 2011. Unpublished internal technical report by Derwent Geoscience Pty Ltd for Tasmania Magnesite NL.

Capp, S.C. 2011 — Resource Estimation Arthur River Magnesite Project. Unpublished internal technical report by Derwent Geoscience Pty Ltd for Tasmania Magnesite NL.

Daley, A. 2012 — Scoping Study, Unpublished internal report to the Beacon Hill Resources PLC Board, 23/02/2012.

Gemell, S. 2011 — Arthur River Magnesite Project, Notes on Order of Magnitude Cost Study, 22 December 2011. Unpublished Memo by Gemell Mining Engineers for Tasmania Magnesite NL Management.

GHD. 2011 — Report for Arthur River ML Scoping Study, Hydrogeological Investigation. Unpublished internal technical report by GHD for Tasmania Magnesite NL.

Perry, O. 2011a — Geology and genesis of Magnesite deposits and a series of deposits within the Arthur Lineament in NW Tasmania, Australia. Unpublished Honors Literature Review, University of Tasmania.

Perry, O. 2011b — A Geophysical and Geological Study of the Arthur River Magnesite Deposit, Northwest Tasmania. Unpublished Honors Research Thesis, University of Tasmania.

Skwarnecki, M. 2011 — Arthur-Lyons Magnesite Project – Update. Competent persons report by Coffey Mining for Beacon Hill Resources PLC.

APPENDIX A – Hellman & Schofield Report

27th September 2011

Mr Stewart Capp
Derwent Geoscience Pty Ltd
PO Box 1081
Sandy Bay, Tasmania 7005

By Email

Dear Stewart

RE: Resource potential of the Arthur River Magnesite deposit

1. Introduction and summary

Hellman & Schofield Pty Ltd (H&S) was commissioned by Derwent Geoscience Pty Ltd (Derwent) to review sampling information available for Tasmania Magnesite's (TMNL) Arthur River Magnesite deposit in northwest Tasmania. Primary goal of this review is estimation of the deposits resource potential and recommendation of work required to report mineral resources in accordance with the JORC code.

The current review is based on sampling data and interpreted geological and mineralisation wireframes provided by Derwent. Derwent specified that H&S was not required to review the validity or quality of the sampling data and it has been used on an as supplied basis.

The supplied mineralised domain strikes north-south and has been interpreted over 1.3 kilometres with an average width of approximately 300 metres. It extends below the base of drilling to around 300 metres depth. Mineralisation is overlain by generally around five to ten metres of alluvium and is cross cut by several variably oriented barren dolerite dykes. The supplied oxidation surface shows considerable variability and ranges from around 10 to 80 metres deep.

Supplied sampling data includes results from 17 RAB and 44 diamond holes for approximately 7,300 metres. This drilling samples the mineralisation on an irregular, commonly broad pattern, ranging from in the order of 100 metres east-west by 50 metres north-south over 350 metres of strike in the central portions of the deposit to considerably broader in the northern and southern parts.

Assay results are not available for a significant proportion of diamond drill hole intersections with the mineralised domain. These unassayed intervals apparently represent a combination of core that has been deliberately not sampled on the basis of geological observations and intervals of core loss. Derwent estimate that around 13% of the mineralised domain comprises weathered clay zones for which diamond drilling typically achieves very poor recovery.

The current review includes MgO, and primary contaminant grades specified by Derwent to include CaO, Fe_2O_3 and SiO_2. Although there is no notable correlation between MgO grades and the individual contaminant grades, there is a general reduction in combined contaminants grade with increasing MgO values reflecting the high proportion of magnesite (47.8% MgO, 52.2% CO_2) represented by MgO high grade samples. The small set of composite intervals with very low MgO grades have particularly high Fe_2O_3 and SiO_2 assays.

For each of the attributes included in the current study, grade continuity is poorly defined by the available broadly spaced drilling. Variogram analysis shows no measurable continuity in the east-west direction reflecting broad spaced sampling in this direction. A set of variogram models produced for the current study assume east-west continuity based on the north-south direction and are of uncertain reliability.

Two Ordinary Kriged (OK) models were constructed for unoxidised magnesite mineralisation, and are designated as Model A and Model B. Model A includes only composites with at least partial assay coverage. For Model B unassayed intervals within the mineralised domain were reviewed on a case by case basis and were classified as either waste, or potentially mineralised dependent on logged lithology and nearby MgO assays. Potentially mineralised intervals were assigned null values and the waste intervals were assigned nominal grades for all attributes on the basis each attribute's correlation with MgO grades.

Table 1 presents both model estimates at the grade thresholds specified by Derwent as representing the current interpretation of potentially economic mineralisation. Both models extend to the base of drilling at around 280 metres below surface. The estimates are subdivided into relatively higher and lower confidence estimates designated as category 1 and 2 estimates respectively with category 1 estimates representing mineralisation tested by generally 100 by 50 metre drilling. The considerable variation between Model A and Model B estimates provides an indication of the sensitivity of estimates to treatment of unassayed intervals.

The Arthur River mineralisation is currently insufficiently well defined to justify reporting of Mineral Resources. The current estimates should be considered as representing the project's exploration potential. JORC resource reporting requirements specify that estimates of exploration potential be reported as a range, and not be aggregated with Mineral Resource estimates for public release. This potential mineralisation is based on broadly spaced drilling and has had insufficient exploration to define a Mineral Resource, and the estimates of tonnage are conceptual in nature. It is uncertain that further drilling will convert any of the exploration potential to a Mineral Resource.

Gemcom software was used for data compilation, wire-framing and composite calculation, and GS3©, the resource estimation software marketed by H&S was used for resource estimation. The resulting GS3© model was imported into Gemcom for reporting of resources, and a Vulcan format model was created for use by Derwent.

Table 1: Arthur River preliminary estimates

> 40% MgO, < 5% CaO, <3% Fe_2O_3, <6% SiO_2						
	Confidence Category	**Mt**	**MgO%**	**CaO %**	**Fe_2O_3 %**	**SiO_2%**
Model A	1	19	43	2.9	1.3	4.1
	2	20	43	2.8	1.6	4.0
	Total	**39**	**43**	**2.8**	**1.5**	**4.0**
Model B	1	14	43	2.8	1.3	4.2
	2	15	43	2.9	1.6	3.8
	Total	**29**	**43**	**2.9**	**1.5**	**4.0**

Recommendations:

Key recommendations to improve confidence in estimates for the Arthur River deposit and progress towards reporting mineral resource estimates in accordance with the JORC code are outlined below:

Infill drilling: Drill spacing required to define grade continuity with sufficient confidence for resource estimation are not clear. However, from the information available for H&S it appears likely that infill drilling to a consistent 50 by 50 metre pattern will allow estimation of Inferred resources.

Sample recovery: Resource estimates are sensitive to treatment of the unassayed intervals that represent a significant proportion of mineralised drill intercepts. Future drill programmes should investigate alternative drilling methods to improve sample recovery, particularly for the weathered, clayey zones. Achieving reliable sample recovery through such zones will improve confidence in future sampling, and allow more accurate assignment of grades to unassayed intervals for existing drilling.

Data collection: Where possible, the current practise of comprehensive sample recovery monitoring, and regular density measurement should be continued for future drill programmes. No information about assay quality monitoring (QAQC) for drilling to date was supplied for the current review. The quality of sampling and assaying for future drilling should closely monitored by routine submission of reference standards, blanks, inter-laboratory checks, and where appropriate duplicate sampling.

Domain interpretation: The supplied geological and mineralisation wireframes appear logically interpreted and generally well constructed. However, there appears to be some, comparatively small areas where minor modifications to domain boundaries including internal dolerite dykes may be improve definition of the mineralised domain and improve confidence in estimates.

Economic potential: JORC reporting rules require resource estimates to be potentially economically viable. In addition to application of appropriate cut off grades, this can require application of appropriate depth constraints, or pit shells for open pit resources. Reporting of Arthur River Mineral Resources in accordance with the JORC code may require some consideration of the limits of potential of economic extraction for the deposit.

2. Available information

2.1 Data compilation

The current review is based on sampling data and interpreted geological and mineralisation wireframes supplied by Derwent in a set of Microsoft Excel files and DXF format triangulations on the 14th of September 2011 (**Table 2**). Checking of the supplied data files for internal consistency by H&S revealed no errors demonstrating that the database has been carefully compiled and thoroughly checked.

Table 2: Key data files

	File	Description
Drill data	Drilling_collar_July_2011.xlsx	Collar information
	DHS.xlsx	Downhole surveys
	Assay.xlsx	Downhole assays
	Lith.xlsx	Geological logging
	SG.xlsx	Density measurements
Wireframes	topo.dxf	Surface topography
	bo_alluvium_extended.dxf	Base alluvium
	to_fresh.dxf	Top of fresh rock (base oxidation)
	dolerite_1.dxf	Dolerite
	dolerite_2.dxf	Dolerite
	dolerite_3.dxf	Dolerite
	dolerite_4.dxf	Dolerite
	magnesite.dxf	Magnesite mineralised domain

Table 3 summarises the drill hole database compiled for the current review, and **Figure 1** shows drill hole traces coloured by sampling type relative to the supplied mineralised domain at the base of oxidation. This table and figure exclude five trenches contained in the supplied sampling database.

Table 3 demonstrates that drilling by Crest Magnesium between 1998 and 1999 provides the majority (61%) of the diamond dataset, with CRA drilling from the 1980's providing 24%, and TMNL's recent drilling contributing 11% of drilling.

Figure 1 shows that drill hole coverage of the mineralisation is highly variable. In the closest sampled portion of the deposit, between approximately 20,150 and 20,500 mN which represents around a quarter of the mineralised domain, data coverage averages approximately 100 metres east-west by 50 metres north south. For the majority of the domain, which extends around 800 metres to the north and 150 metres to the south of this more closely sampled area, the drill hole spacing is considerably broader and less regular.

Table 3: Compiled drill hole database

	RAB		Diamond		Total	
	Holes	**Metres**	**Holes**	**Metres**	**Holes**	**Metres**
CRA 1983-1984	13	159	7	1,644	20	1,802
Crest 1998-1999	2	100	27	4,226	29	4,326
TMNL 20111	2	97.5	10	1,070	12	1,168
Total	**17**	**356.1**	**44**	**6,940**	**61**	**7,296**

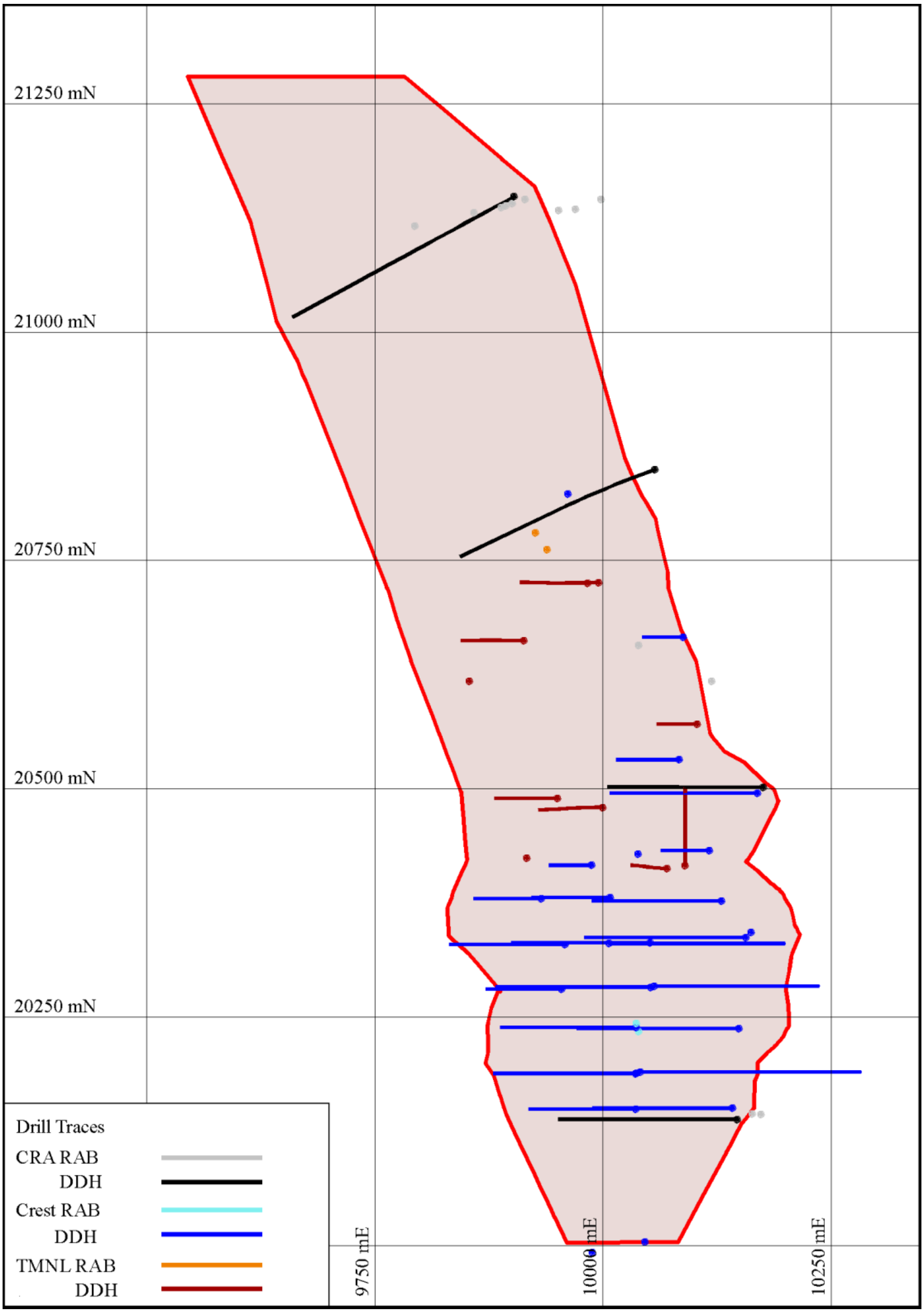


Figure 1: Drill hole traces and mineralised domain

2.2 Sample lengths

Figure 2 presents a histogram of sample lengths for assayed intervals of diamond core. This figure demonstrates that diamond core sample lengths range from 0.1 to 18 metres and vary considerably with sampling phase. Although TMNL's sampling was commonly conducted over metre intervals, the older CRA drilling was generally sampled over longer intervals and is dominated by five metre length samples, and Crests's drilling was generally sampled over intervals of around 1.5 to 3.0 metres.

For the combined dataset of assayed diamond core, 78% was sampled over intervals between 1 and 3 metres in length and the data reviews and Kriged models created for the current study are based on three metre down-hole composites.

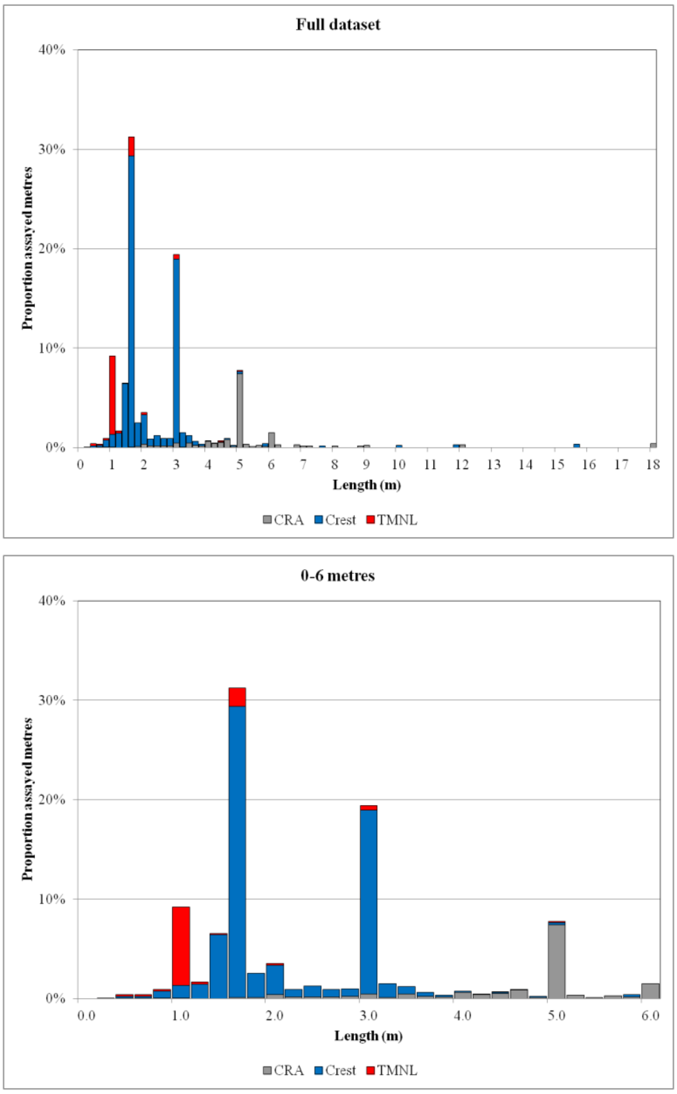


Figure 2: Histogram of diamond core sample lengths

2.3 Assay coverage

Table 4 summarises assay coverage for three metre down-hole composites within the mineralised domain. This table demonstrates that, for each sampling phase assay results are unavailable for a significant proportion of diamond drill hole intervals within the mineralised domain. **Table 4** makes no allowance for core recovery of assayed intervals. The partially assayed composite intervals in this table represent composites where assayed intervals do not provide complete assay coverage of the nominally three metre composites lengths. For these intervals, assay coverage ranges from 3 to 93% and averages 53%.

CRA's drilling has the lowest proportion of assay coverage, with only 52% of mineralised domain drilling from this phase having complete assay coverage. For the combined dataset only 75% of composites have complete assay coverage.

The unassayed and partially assayed composites within the mineralised domain appear to represent a combination of intervals that were deliberately not sampled on the basis of geological observations, such as small intervals of dolerite, and intervals of core loss.

Derwent report that, around 13% of TMNL's drilling within the mineralised domain intersected weathered clay zones for which core recovery was generally very low, suggesting that such intervals are also likely to contribute to a high proportion of the unassayed intervals from other drill phases.

Although the grades of unassayed intervals unclear, available information suggests that they are likely to have lower MgO grades and generally higher contaminant grades than assayed intervals.

Table 4: Assay coverage for mineralised domain composites

		Number	**Proportion**
CRA	Unassayed	160	41%
	Partially assayed	31	8%
	Completely assayed	203	52%
	Total	**394**	**100%**
Crest	Unassayed	109	9%
	Partially assayed	52	4%
	Completely assayed	1,003	86%
	Total	**1,164**	**100%**
TMNL	Unassayed	51	22%
	Partially assayed	49	21%
	Completely assayed	134	57%
	Total	**234**	**100%**
Total	Unassayed	320	18%
	Partially assayed	132	7%
	Completely assayed	1,340	75%
	Total	**1,792**	**100%**

2.4 TMNL core recovery

Information available for TMNL's diamond drilling includes comprehensive measurement of core recovery. The summaries of TMNL core recovery presented in **Table 5** and **Figure 3** exclude a single anomalous interval with greater than 100% recovery (MB007, 42-43.3 metres).

Table 5 and **Figure 3** demonstrates that for the fresh mineralisation that is the focus of current investigations core recovery is generally reasonable and averages 80% and around 50% of mineralised composites have average recoveries of greater than 90%. However, the mineralised drilling does include a significant proportion of low recovery samples with 20% of composites having average recoveries of less than 60% and 10% having less than 40% recovery.

Figure 4 plots core recovery against composite MgO grade and demonstrates that there is no consistent relationship between high or low recovery intervals and MgO grade.

Table 5: Summary of core recovery for mineralised composites from TMNL diamond drilling

	Core Recovery (%)		
	Oxide	**Fresh**	**Total**
Number	31	151	182
Average	**42**	**80**	**73**
Minimum	7	20	7
1st Quartile	16	63	47
Median	**38**	**90**	**83**
3rd Quartile	54	100	100
Max	100	100	100

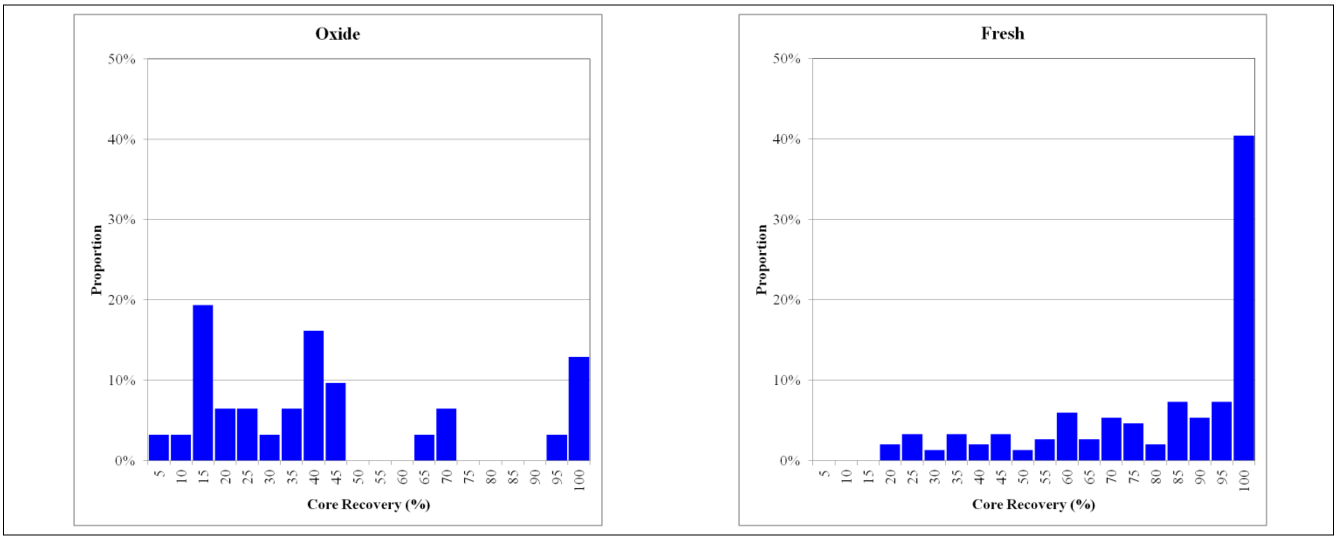


Figure 3: Histograms of core recovery for mineralised TMNL composites

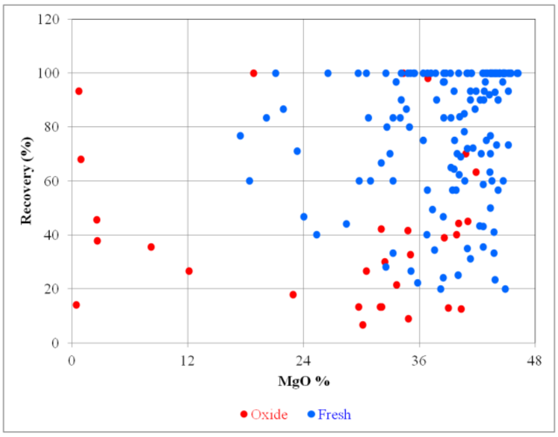


Figure 4: Core recovery vs. MgO grade for mineralised TMNL composites

3. Data reviews

3.1 Mineralised domain composites

The current data reviews and OK models are based on nominally three metre down-hole composites from diamond core sampling. These composites were assigned to mineralised, or background domains and were classified as oxidised or unoxidised on the basis of the wireframes supplied by Derwent.

Composites were assigned to mineralised, and oxidation domains by intersecting drill hole traces with the appropriate wireframes. This coding was checked on a hole by hole basis, and several drill hole intersections were modified for consistency with composited values. These modifications include the southern traverse of holes where the supplied wireframe terminates exactly at the drill holes rather than being extrapolated some additional distance and the drill holes were not initially correctly coded.

3.2 Grade relationships

Correlation between MgO and contaminant assay grades for mineralised domain composites are shown by the summary correlation statistics presented in **Table 6** and the scatter plots in **Figure 5**. **Figure 6** shows average contaminant grades for increments of MgO grades for the full dataset of composites, including background domains. This table and figures demonstrate that, although there is a general reduction in combined contaminate grade ($CaO+Fe_2O_3+SiO_2$) with increasing MgO grade there is no notable correlation between individual contaminant grades and MgO assays.

The low combined contaminant grade for high grade MgO composites reflects the high proportion of magnesite for these intervals, with the maximum MgO composite grade of 47.0% approximating pure magnesite which has an MgO grade of 47.8%.

Figure 5 and **Figure 6** demonstrate that only few composites are available with MgO grades of less than 15%, which prevents accurate estimation of average contaminant grades for such low MgO grades.

Table 6: Correlation statistics

Oxide	**MgO %**	**CaO %**	**Fe_2O_3 %**	**SiO_2 %**
Number		98		
Mean	**29.4**	**2.45**	**10.5**	**19.4**
Variance	192	27.1	225	348
Coeff. Var.	0.47	2.13	1.43	0.96
Minimum	0.37	0.01	0.42	0.20
1st Quartile	22.9	0.13	2.51	6.62
Median	34.3	0.31	4.21	11.8
3rd Quartile	40.0	1.28	11.2	24.4
Maximum	46.5	26.5	66.8	78.9
Pearson Correl.		-0.01	-0.76	-0.78
Spear. Correl.		0.31	-0.62	-0.76
Fresh	**MgO %**	**CaO %**	**Fe_2O_3 %**	**SiO_2 %**
Number		1,374		
Mean	**40.7**	**3.62**	**1.62**	**6.5**
Variance	22.1	16.6	3.46	24.6
Coeff. Var.	0.12	1.13	1.15	0.76
Minimum	17.4	0.11	0.01	0.01
1st Quartile	39.2	1.00	0.60	2.74
Median	42.0	2.14	1.10	5.4
3rd Quartile	43.9	4.82	1.9	9.1
Maximum	47.0	27.7	27.7	35.2
Pearson Correl.		-0.78	-0.40	-0.57
Spear. Correl.		-0.59	-0.41	-0.57

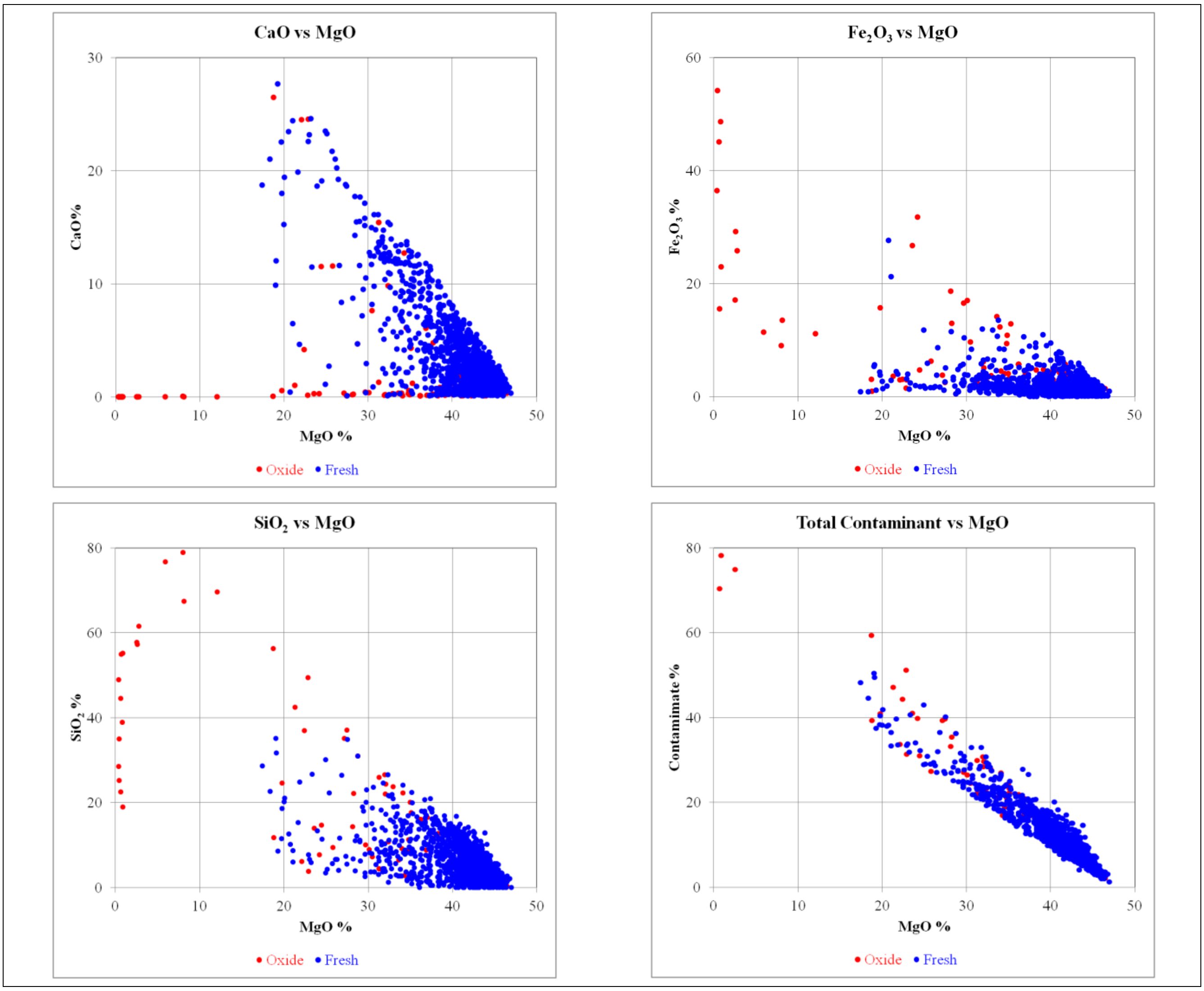


Figure 5: Mineralised composite scatter plots

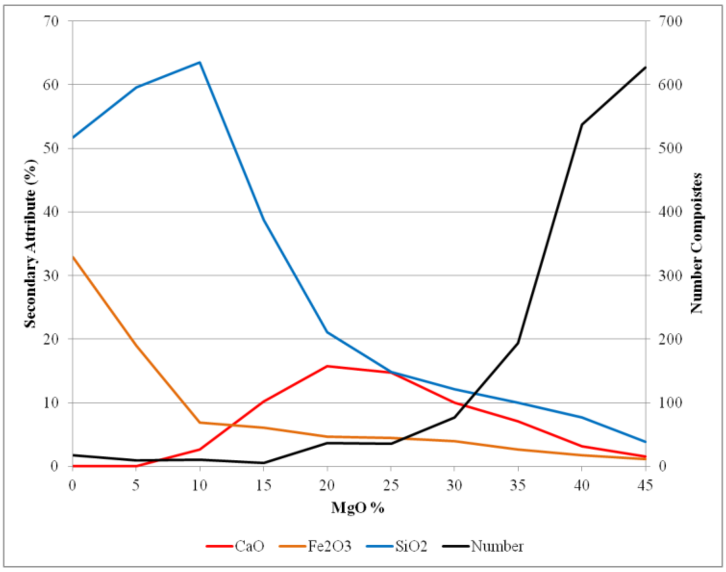


Figure 6: Contaminant grade vs. MgO trend plot

3.3 Composite total grades

Although the Arthur River dataset does not include CO_2 assay results for, composite grades for this attribute can be estimated from the theoretical 1.092:1 CO_2: MgO ratio for pure magnesite. **Table 7**, **Figure 7** and **Figure 8** summarise composite assay totals for the attributes included in the current study including CO_2 grades estimated from MgO values.

Although composite total grades average close to 100% for higher grade mineralised composites, for low MgO grade composites, total grades tend to be lower and are commonly around 80 to 90%. This trend appears to reflect proportionally higher concentrations of attributes that are not included in this review such as Al_2O_3, for low grade composites.

Table 7: Composite total grades

	Background domains		Mineralised domain	
	Oxide	**Fresh**	**Oxide**	**Fresh**
Number	18	21	98	1,374
Average	**89.8**	**90.5**	**93.9**	**97.0**
Minimum	63.4	63.4	71.9	77.4
1st Quartile	81.4	86.5	90.7	95.9
Median	**95.2**	**94.2**	**95.8**	**98.1**
3rd Quartile	97.0	96.7	97.9	99.1
Maximum	104.6	104.6	106.1	106.3

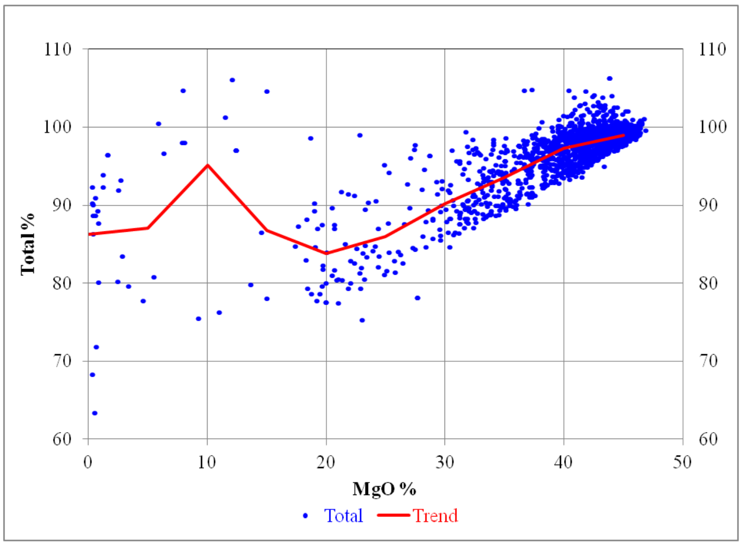


Figure 7: Composite total grade vs. MgO for full dataset

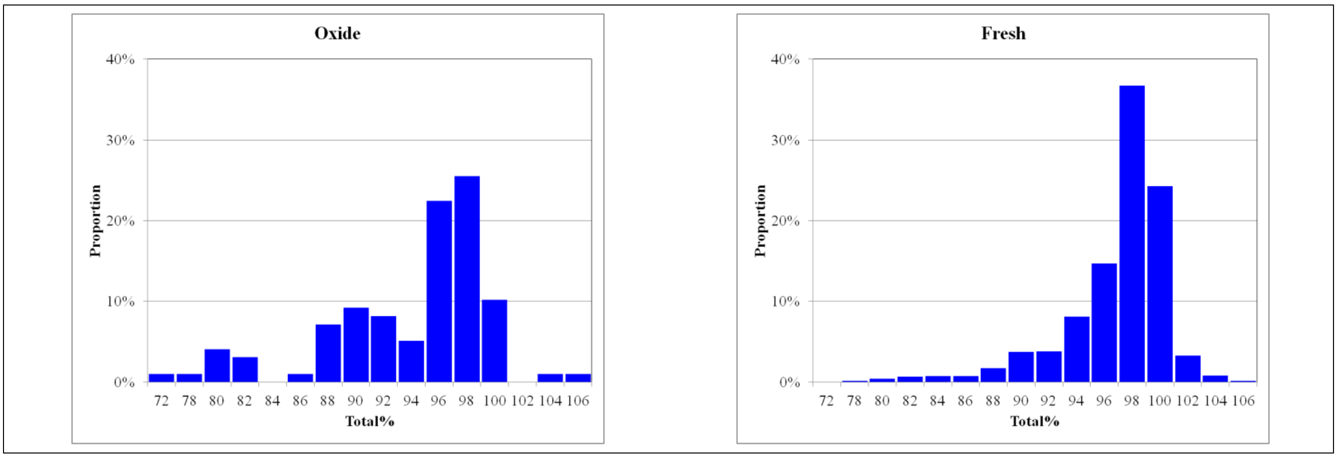


Figure 8: Histograms of composite total grades for mineralised domains

3.4 Bulk density

Information supplied for the current review includes 299 immersion density measurements performed on samples of TMNL diamond core. Not details of the density measurement technique were provided. **Table 8** summarises density results by domain and oxidation type, and **Figure 9** compares density with MgO grade for the 186 density measurements with associated assay grades.

Figure 9 demonstrates a general association between increasing MgO grade and increasing density, with an increase in average density from around 2.75 t/bcm at 20% MgO to around 2.93 t/bcm for composites with MgO grades close to the grade of pure magnesite at around 47%. This upper density value is slightly less than the density of pure magnesite of 3.0 t/m^3.

Table 8: Summary of density results

Domain	Oxidation	Number	Density (t/bcm)		
			Minimum	Average	Density
Background	Oxide	12	2.06	2.50	2.65
	Fresh	22	2.61	3.05	3.91
Dolerite	Oxide	29	1.77	2.19	2.95
	Fresh	36	2.05	2.76	3.01
Mineralised domain	Oxide	33	1.40	2.53	2.96
	Fresh	166	1.84	2.86	3.36

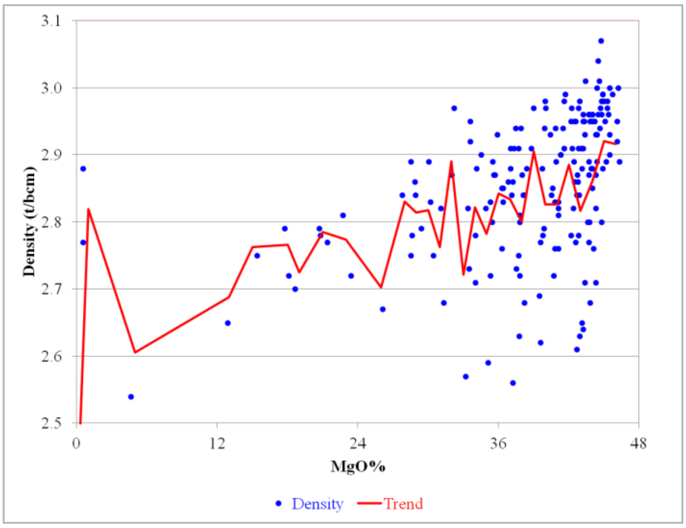


Figure 9: Density vs. MgO grade

Derwent specified that the current study assumes a density of 2.9 t/bcm for fresh magnesite mineralisation and include allowance for 13% weathered clay zones within the magnesite at an average density of 2.2 t/bcm. As shown in **Table 9** this gives a weighted average density of 2.8 t/bcm for the fresh mineralisation.

Table 9: Determination of average mineralisation density

	Proportion	Density (t/bcm)
Unoxidised magnesite mineralisation	87%	2.9
Weathered clay zones	13%	2.2
Total	**100%**	**2.8**

3.5 Spatial continuity analysis

Derwent requested that the current review include development of variogram models for each of the attributes of interest. With few regularly spaced holes and a minimum spacing of around 100 metres east-west by 50 metres north-south, the available sampling includes too few regularly gridded data for reliable variogram modelling.

Figure 10 shows plots of the variograms produced for the current study. In the north-south direction, where data spacing in the closely sampled central portions of the deposit is around 50 metres, these plots show some grade continuity. However, for the east-west direction, where data spacing is generally broader than 100 metres, these plots show no apparent grade continuity.

This lack of measurable grade continuity, particularly in the east-west direction appears to be a reflection of the lack of regularly gridded data. Although data requirements for meaningful variogram modelling are currently unclear, the available information suggests that infill drilling a significant volume of the mineralisation to around 50 by 50 metre spacing is likely to improve understanding of grade continuity.

Variogram models developed for the current study are summarised in **Table 10**, and shown as red lines in the east-west and down-hole plots in **Figure 10**. Since modelling of east-west grade continuity is currently impractical, the variograms for this direction are copied from the north-south direction. These models are of uncertain reliability and additional sampling is required to provide a confident measure of grade continuity.

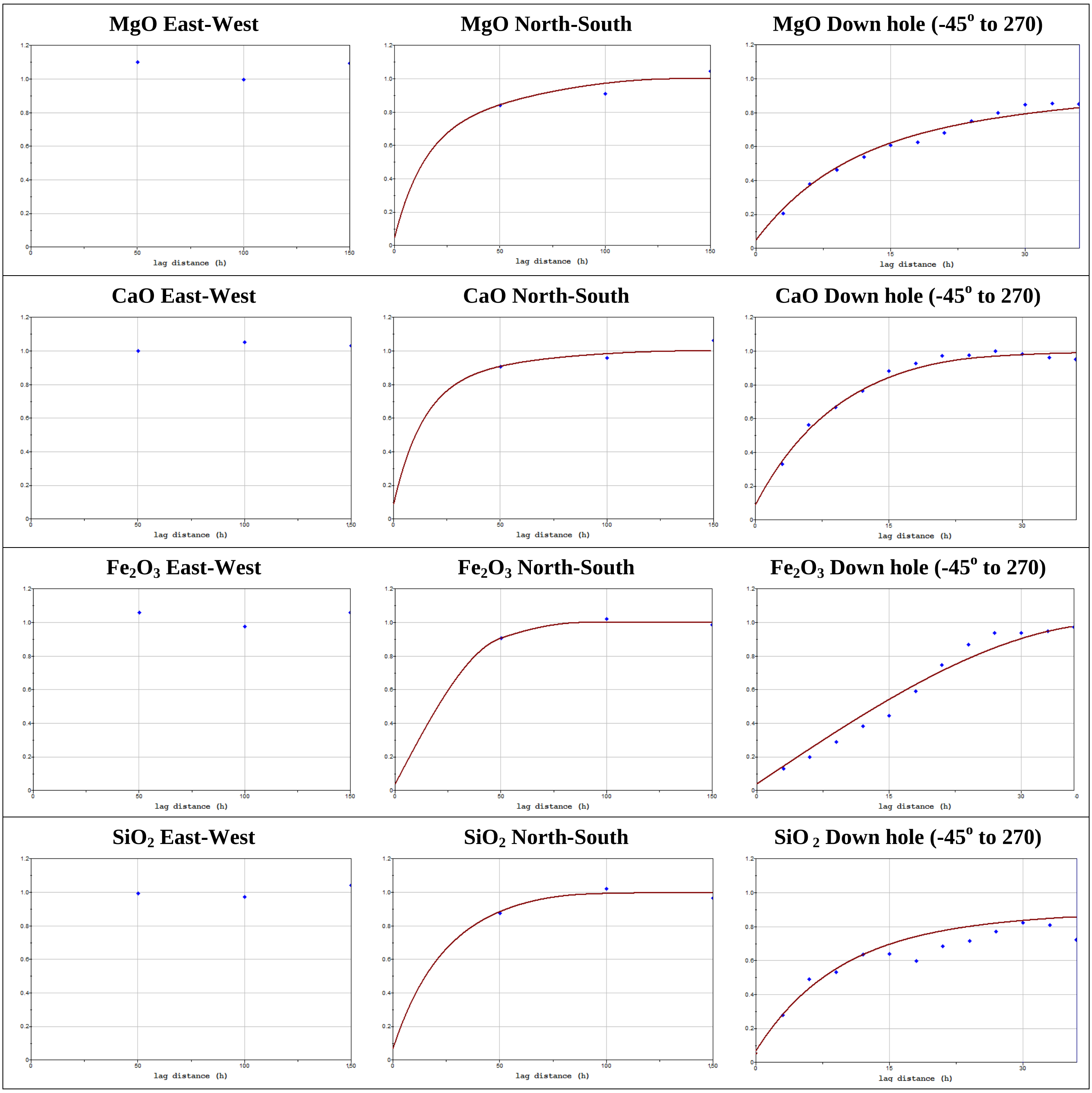


Figure 10: Variogram plots

Table 10: Variogram models

Attribute	**Nugget**	**First Structure**			**Second Structure**		
	Co	**Sill**	**Model**	**Range (x,y,z)**	**Sill**	**Model**	**Range (x,y,z)**
MgO	0.05	0.66	exp	43,43,30	0.29	sph	135,135,110
CaO	0.09	0.77	exp	43,43,25	0.14	sph	140,140,25
Fe_2O_3	0.04	0.59	sph	50,50,40	0.37	sph	90,90,43
SiO_2	0.07	0.76	exp	64,64,28	0.17	sph	90,90,205

4. Ordinary Kriged models

4.1 General

The current study included construction of two Ordinary Kriged models for fresh magnesite mineralisation. The two models, which are designated as Model A and Model B used consistent estimation parameters and differed only in treatment of unassayed intervals.

Model A included only composites with at least partial assay coverage, and ignored unassayed intervals. For Model B unassayed intervals within the mineralised domain were reviewed on a case by case basis, and dependent on logged lithology and nearby assay values data were classified as either waste, or potentially mineralised. The potentially mineralised intervals were assigned null values and the waste intervals were assigned nominal grades for all attributes on the basis each attributes correlation with MgO grades.

This approach was adopted to investigate the effect of the treatment of unassayed intervals on resource estimates.

Both models included composites from oxidised and fresh portions of the magnesite domains. The resultant estimates were reported within a wireframe representing unoxidised magnesite mineralisation trimmed by the barren dyke wireframes.

Both models assume a density of 2.8 t/bcm on the basis of the values specified by Derwent for fresh magnesite with allowance for 13% weathered clay zones at 2.2 t/bcm.

Gemcom software was used for data compilation, wire-framing and composite calculation, and GS3©, the resource estimation software marketed by H&S was used for resource estimation. The resulting GS3© model was imported into Gemcom for reporting of resources, and a Vulcan format versions of both model were created for use by Derwent.

4.2 Estimation of waste grades

In addition to 1,340 three metre composites with complete assay coverage, diamond drilling within the mineralised domain includes 132 partially assayed composites, and 320 completely unassayed composite intervals.

The dataset used for estimation of Model A included all completely and partially unassayed composites with no modification for unassayed portions.

As described above, for Model B the partially and completely unassayed composite intervals were reviewed and assigned to potentially mineralised or waste categories on a case by case basis. Out of the combined set of 452 completely, or partially unassayed composites 149 (23%) were classified as potentially mineralised and 303 (67%) were assigned to the waste category.

For the Model B dataset, unassayed portions of each mineralised domain composites were assigned the attribute grades listed in **Table 11.** These values were derived from the relationship between secondary attribute grades and MgO assays described in section 3.2. Reliability of these assumed grades is unclear.

The assigned grades give a total composite grade of approximately 81%, which is within the range of the trend shown for composite total grades (**Figure 7**) and consistent with the plot of combined contaminant grade versus MgO grade shown in **Figure 5**.

Table 11: Grades for unassayed "waste" intervals

Attribute	Grade (%)
MgO %	0.01
CaO	0.05
Fe_2O_3	30
SiO_2	51
CO_2 (Estimated from MgO)	0.01
Total	**81.1**

4.3 Composite statistics

Summary statistics for the composite datasets used for Model A and Model B are presented in **Table 12**. This table demonstrates that, as expected, relative to Model A data, the Model B dataset shows lower average MgO grades, and comparatively higher average contaminant grades. The greatest relative difference is shown for Fe_2O_3 grades reflecting the comparatively high grades assigned to unassayed waste intervals for this attribute.

Table 12: Resource dataset composite statistics

Model A	**MgO %**		**CaO %**		**Fe_2O_3 %**		**SiO_2 %**	
	Oxide	**Fresh**	**Oxide**	**Fresh**	**Oxide**	**Fresh**	**Oxide**	**Fresh**
Number	98	1,374	98	1,374	98	1,374	98	1,374
Mean	**29.4**	**40.7**	**2.45**	**3.62**	**10.5**	**1.62**	**19.4**	**6.49**
Variance	192	22.1	27.1	16.6	225	3.46	348	24.6
Coeff. Var.	0.47	0.12	2.13	1.13	1.43	1.15	0.96	0.76
Minimum	0.37	17.4	0.01	0.11	0.42	0.01	0.20	0.01
1st Quartile	22.9	39.2	0.13	1.00	2.51	0.60	6.62	2.74
Median	34.3	42.0	0.31	2.14	4.21	1.10	11.8	5.38
3rd Quartile	40.0	43.9	1.28	4.82	11.2	1.90	24.4	9.10
Maximum	46.5	47.0	26.5	27.7	66.8	27.7	78.9	35.2
Model B	**MgO %**		**CaO %**		**Fe_2O_3 %**		**SiO_2 %**	
	Oxide	**Fresh**	**Oxide**	**Fresh**	**Oxide**	**Fresh**	**Oxide**	**Fresh**
Number	252	1,415	252	1,415	252	1,415	252	1,415
Mean	**9.57**	**38.5**	**0.89**	**3.40**	**23.8**	**3.21**	**40.5**	**8.97**
Variance	224	91.9	11.0	15.7	147	37.7	303	108
Coeff. Var.	1.56	0.25	3.74	1.16	0.51	1.91	0.43	1.16
Minimum	0.01	0.0	0.01	0.05	0.95	0.01	2.64	0.01
1st Quartile	0.01	37.6	0.05	0.86	15.38	0.62	25.3	2.85
Median	0.01	41.7	0.05	2.01	30.00	1.19	51.0	5.86
3rd Quartile	19.8	43.8	0.13	4.47	30.0	2.30	51.0	10.4
Maximum	44.0	47.0	26.5	27.7	66.8	30.0	74.1	51.0

4.4 Estimation parameters

Estimation parameters selected for the current study reflect the current data availability. As development of the project continues and additional drilling is completed the criteria adopted for estimation are likely to change.

Table 13 presents the extents and block sizes of the block model created for the current study. The model extents encompass the full extents of the supplied mineralisation to the base of drilling at around 300 metres depth.

To precisely represent the volume of the mineralised domain, each block in the model was flagged with the proportion intersected by the magnesite mineralised domain truncated to the base of oxidation and trimmed to the cross cutting dykes.

Table 13: Block model extents and block sizes

	Easting	Northing	Elevation
Minimum	9,450 mE	19,800 mN	-120 mRL
Maximum	10,650 mE	21,400 mN	220 mRL
Extents	1,200 m	1,600 mN	340 m
Block size	50 m	50 m	5
Number of blocks	24	32	68

The three progressively more relaxed search criteria used for estimation are presented in **Table 14**. These criteria selected to inform a high proportion of the supplied mineralised domain and include search raddi that are very long relative to apparent grade continuity.

Table 14: Search criteria

Search Pass	Radius (x,y,z)	Minimum Data	Minimum Octants	Maximum Data
1	100,100,10	8	2	32
2	200,200,20	8	2	32
3	200,200,20	4	1	32

Variograms used for the current estimates are described in section 3.5.

To provide an indication of the relative confidence of the current estimates, blocks in the model are assigned to comparatively higher or comparatively less confident categories. Blocks informed by search pass 1 to the south of 20,550 mN were assigned to the higher confidence category (category 1) and all other estimated blocks were assigned to confidence category 2. This process assigns estimates in the area with approximately 100 by 50 metre spaced drilling to category 1.

4.5 Model estimates

Table 15 shows Model A and Model B estimates subdivided by confidence category for several cut off grade scenarios, including the set of MgO and contaminant thresholds specified by Derwent as representing potentially economic mineralisation.

Table 15 demonstrates that, for the entire estimated volumes, Model B estimates similar tonnages to Model A, with lower MgO grades and higher contaminant grades. When reported at the various cut offs shown in **Table 15**, Model B gives considerably lower tonnage estimates at comparable grades to Model A. The variation between Model A and Model B estimates provides an indication of the sensitivity of estimates to treatment of unassayed intervals.

Table 15: Model estimates

Model A estimates						
Cut off	**Confidence Category**	**Tonnes Million**	**MgO %**	**CaO %**	**Fe_2O_3 %**	**SiO_2 %**
Entire estimated volume	1	52	41	3.1	1.8	6.9
	2	136	38	5.4	1.8	8.7
	Total	**188**	**39**	**4.8**	**1.8**	**8.2**
> 38% MgO	1	48	42	2.9	1.4	6.5
	2	73	41	3.1	1.4	7.5
	Total	**121**	**41**	**3.0**	**1.4**	**7.1**
> 40% MgO	1	39	42	2.7	1.4	5.9
	2	51	42	2.6	1.3	6.6
	Total	**90**	**42**	**2.6**	**1.3**	**6.3**
>42% MgO	1	19	43	2.3	1.2	4.8
	2	20	43	2.2	1.2	5.1
	Total	**39**	**43**	**2.2**	**1.2**	**5.0**
>40% MgO, < 5% CaO, <3% Fe_2O_3, <6% SiO_2	1	19	43	2.9	1.3	4.1
	2	20	43	2.8	1.6	4.0
	Total	**39**	**43**	**2.8**	**1.5**	**4.0**
Model B Estimates						
Cut off	**Confidence Category**	**Tonnes Million**	**MgO %**	**CaO %**	**Fe_2O_3 %**	**SiO_2 %**
Entire estimated volume	1	54	38	2.9	3.7	9.9
	2	136	34	4.7	5.0	13.2
	Total	**190**	**35**	**4.2**	**4.6**	**12.3**
> 38% MgO	1	39	41	2.8	1.5	6.9
	2	50	41	2.7	1.4	7.4
	Total	**89**	**41**	**2.7**	**1.4**	**7.2**
> 40% MgO	1	30	42	2.5	1.5	6.1
	2	39	42	2.5	1.4	6.7
	Total	**69**	**42**	**2.5**	**1.4**	**6.4**
>42% MgO	1	15	43	2.1	1.3	5.0
	2	16	43	2.2	1.2	5.1
	Total	**31**	**43**	**2.2**	**1.2**	**5.1**
>40% MgO, < 5% CaO, <3% Fe_2O_3, <6% SiO_2	1	14	43	2.8	1.3	4.2
	2	15	43	2.9	1.6	3.8
	Total	**29**	**43**	**2.9**	**1.5**	**4.0**

Yours Sincerely

Jonathon Abbott
Consulting Geologist
Hellman & Schofield

APPENDIX B – JORC2012 Table

Arthur River Project – December 2011 Resource Estimate

October 2017

Section 1 – Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling Techniques	Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	All sampling used in the estimate was diamond drill core, varying in size from PQ, HQ & NQ core. All sampling was carried out under the direct supervision of a qualified geologist.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Half core and ¼ core samples were collected, with the core either cut along a line drawn on the top of the core, as it was placed into the trays by the drillers, or along a line drawn 15^{o} from the top of hole orientation line. The left hand side of the cut core was bagged for submission to a laboratory.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	Diamond core sample lengths ranged from 0.1 to 18 metres and varied considerably with sampling phases. Although TMNL's sampling was commonly conducted over metre intervals, the older CRAE drilling was generally sampled over longer intervals and was dominated by five metre length samples, and Crest Magnesium's drilling was generally sampled over intervals of around 1.5 to 3.0 metres. 78% of samples were collected over intervals between 1 and 3 metres in length. All sampled core from the interval was submitted to the laboratory for sample preparation, no sub-sampling was performed on site. Samples were generally only collected from fresh Magnesite, and sample lengths were modified to match geological boundaries.
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	All drilling used in the estimate comprised PQ HQ & NQ triple tube diamond drilling.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Core recovery was measured and recorded individually for each sample and the information stored in the analytical database. Average core recovery was 86%, with most core loss being from silt filled zones (probably stylolite's) within the Magnesite.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Triple tube diamond drilling was used to provide the best core recovery.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Analytical data was compared to core recovery, and there was no relationship between them. However the grade of the material lost is not known, and the impact on the estimate might be either positive or negative. The bulk of the intercepts used in the estimate had core recoveries averaging 90%.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	All TMNL's drilling was geologically and geotechnically logged by qualified geological staff to an appropriate standard. Historical drilling used in this estimate was geologically logged by qualified geologists, but geotechnical data was not recorded. All available historical drilling was re-logged and some check samples were collected.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	All core was photographed prior to being sampled. The photography is stored in a digital format. Geological logging was generally qualitative in nature.
	The total length and percentage of the relevant	100% of the 6,078.3m of drilling used in the

	intersections logged.	estimate was geologically logged, with the exception of the historical pre-collars which were generally tricone drilling and not geologically logged.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Half core and ¼ core samples were cut with a diamond saw along the orientation line drawn on the core.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	Only diamond core sampling was employed throughout.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Samples were submitted to either Analabs or ALS, where they were dried, crushed and pulverised to 90% passing -80# prior to being sub sampled for a variety of analytical work. The process is considered appropriate given the generally coarse grained nature of the mineralisation. The work was conducted to generally accepted industry standards.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Field QC procedures required that analytical standards were submitted at a rate of 1:25. Standard reference material was prepared from historical coarse rejects for this purpose.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	Re-splitting and re-assaying of sub samples and field duplicates has not yet been conducted due to the early stage nature of the project. However bulk metallurgical samples were collected and the results reconciled with analytical data.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are considered appropriate.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	All drilling samples were submitted to NATA accredited laboratories and used industry accepted analytical methods. The analytical methods are considered to be total techniques.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	All assay data is laboratory-based analysis.
	Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	Laboratory QA/QC data is available for all analytical jobs with the exception of CRAE's drillholes where there is no QAQC data available. The data suggests an acceptable level of precision was achieved. Internal standards were developed and submitted with all TMNL drilling. Acceptable levels of accuracy were achieved.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Verification of historical drill intersections was undertaken by collecting bulk metallurgical samples. The samples were collected by Derwent Geoscience personnel. Crest Magnesium sent a number of duplicate samples to umpire laboratories.
	The use of twinned holes.	No drill holes on which this estimate is based have been twined to date. Crest undertook twining of earlier CRAE drillholes AR2 & AR7. The exact location of these drill hole collars could not be determined and they were not utilised in this resource estimate.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All drilling information was recorded on paper on site, then entered into Excel spreadsheets which were checked for irregularities. All hardcopy data pertaining to historical drilling was checked and verified. Several drill holes were excluded from the resource estimate as hardcopy data was not available for review.
	Discuss any adjustment to assay data.	No adjustments have been made to the analytical data.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	All drill hole collars utilised in the resource estimate were located by a licensed surveyor and are considered accurate to +/-0.1cm. Single shot downhole survey data was collected at 30m intervals where possible in the TMNL

		drilling, the drill holes showed minimal deviations. No downhole survey data was available for the historical drill holes. Due to the lack of deviation observed in the holes that were surveyed, and the large scale of the mineralised intercepts the un-surveyed holes are considered appropriate for use in an inferred resource.
	Specification of the grid system used.	GDA94, Zone 55.
	Quality and adequacy of topographic control.	The topographic model was generated from LiDAR data and is considered accurate to +\-1cm.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Drilling was conducted on a section spacing of approximately 50m with holes at variable spacing's on each section, averaging 100m. Drill spacing was impacted by topographic features and the requirement to minimise vegetation clearing; it is common to collar pairs of holes from a single drill pad.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	Data density is considered sufficient for estimation of an inferred resource, but not sufficient for Ore Reserve estimation.
	Whether sample compositing has been applied.	Samples were composited to 3m intervals for use in the resource estimate.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The mineralisation is interpreted to dip at 35 degrees to the east; drilling at angles between vertical and -60° to grid west is considered to be appropriate to achieve unbiased sampling in this style of mineralisation.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Considering the massive nature of the mineralisation it is considered unlikely that drill orientation has introduced any bias to the estimate.
Sample security	The measures taken to ensure sample security.	The chain of custody for the TMNL drilling was managed by Derwent Geoscience, with drill core secured in a locked shed. The chain of custody for the other drill holes is unrecorded, however the tenor of the results, and the geology of that drilling is consistent with later drilling and the company has no reason to suspect the samples were interfered with.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	A review of the work was undertaken by Coffey Mining in November 2011 on behalf of Beacon Hill Resources PLC who concluded that the 2010/2011 work complied with analytical best practise, and that the earlier 1989/1990 work was good..

Section 2 – Reporting of Exploration Results

Criteria	JORC Code Explanation	Commentary
Mineral Tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	The Inferred Resource is located on EL5/2016. Jindalee holds a 100% beneficial interest in the Project, with the consultant who introduced the Project to Jindalee retaining a 1% gross royalty.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The tenement is currently valid until 27 November 2021, at which time the tenement may be renewed.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The Arthur River magnesite deposit was first discovered in 1925 by the geologist B. P. Nye. In 1970, Mineral Holdings Australia Pty Ltd (MHA) was granted a large exploration license (EL43/70) over the area and carried out exploration in association with a number of joint venture partners. Between 1982 and 1988 MHA, in joint venture with CRAE, carried out geological mapping,

		gravity surveys, diamond drilling, metallurgical testing and feasibility and marketing studies. CRAE completed 7 diamond drill holes on the Arthur River Project (AR001 to AR007) totalling 1,610m of drilling. This work delineated the magnesite body at the Arthur River, over 3,500 meters of strike length. In 1997, Tasmania Magnesite N.L. (TMNL) entered into an option agreement to purchase the Arthur River Project from MHA. Check and exploratory diamond drilling at Arthur River comprised seven holes totalling 1,254.3 meters (AR002C, AR007C and AR008 to AR012). Crest Magnesium/TMNL went on to complete a further 16 diamond drill holes, one test pumping bore and 5 monitoring bores totalling 4,226.1m of drilling. They initiated feasibility work, hydrogeological studies, and resource estimation. Resource estimates generated and publicly reported by Crest are comparable in tonnage, MGO grades and contaminant grades to this estimate. Beacon Hill PLC, through its wholly owned subsidiary TMNL, completed a further 1,118m of drilling, environmental studies, hydrogeological studies, metallurgical test work, resource estimation and marketing studies which culminated in a scoping study.
Geology	Deposit type, geological setting and style of mineralisation.	The Arthur River magnesite deposit is located within the Arthur Lineament, which is a NNW-striking belt of highly deformed metamorphic Pre-Cambrian rocks extending from just north of Granville Harbour on the west coast, to Wynyard on the north coast. The deposit comprises a massive Magnesite body overlain by up to 20m of Holocene glacial sediments. The magnesite body forms a large pod approximately 2500m long by up to 400m wide, with drilling indicating it extends to at least a vertical depth of 290m. The appearance of the magnesite is quite variable, with the bulk of it being white to slightly pink, with clear veining of several varieties giving the material a brecciated appearance.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length.	See attached Table 1 for drill hole collar details, and Table 2 for selected significant intercepts.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.	Based on statistical evidence, no cutting of high grade assays was considered necessary. Results compiled in Table 2 are based on a 40%MgO lower grade cut-off with a maximum of **4m** internal dilution and are length weighted average grades.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation	Results are based on wide intersections above the 40% minimum lower grade cut-off. There are no long lengths containing lower grade assays

	should be stated and some typical examples of such aggregations should be shown in detail.	included within the aggregated intersections.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Metal equivalence values are not required for this style of deposit.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	The controls on the high grade mineralisation are poorly understood, and further studies are recommended to resolve this issue and upgrade confidence in the resource estimate. Mineralisation is interpreted to dip at -35° to grid south, most holes are drilled at -50 to -60° to grid north so intercepts in these holes are very close to true widths. Intercepts quoted for vertical holes are 120% of the true widths. Three holes were drilled at -50° in a downdip orientation (AR016, AR023 & AR026). Intercepts in these holes may be more than double the true width of the mineralisation.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	These are included in the attached diagrams.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	See Table 2 for a listing of aggregated intersections above the 40% lower grade cut-off, with a maximum of 4m of continuous down hole dilution incorporated into the intersections where the dilution material is wholly comprised of lower grade magnesium carbonate.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Bulk density measurements used in this estimate were measured from drill core. Substantial investigations, including mineralogical studies, calcine, flotation and other metallurgical recovery testwork, groundwater and hydrological studies, geotechnical investigations and preliminary mining and scoping studies have been undertaken by a number of consultant groups on behalf of CRAE, Crest Magnesium and Beacon Hill PLC as part of various historical Scoping and Prefeasibility Studies. Results of these investigations broadly support the contention that, subject to further work, the Arthur River deposit has the potential for eventual economic extraction. Further work is necessary to further refine these parameters.
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).	Further drilling is required to better define the extent of the high grade zones and to close off the mineralisation along strike. In addition metallurgical work and other studies are also being undertaken or planned to improve the level of confidence in the resource and potential for future economic extraction.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Refer to attached diagrams

Section 3 – Estimation and Reporting of Mineral Resources

Criteria	JORC Code Explanation	Commentary
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.	See above Section 1 **Verification of sampling and assaying** Historical analytical data was entered into the database from the original laboratory reports in the case of the Crest data and from the handwritten drill logs in the case of the CRAE data. All data entry was checked at a rate of at least 1 in 20 entries against the original

		hardcopy. All TMNL data was merged from digital analytical files into the database.
	Data validation procedures used.	See above Section 1 **Verification of sampling and assaying** Data validation was undertaken by checking sampled intervals of historical core against that in the database during the course of re-logging it and confirming that this matched publicly reported data in technical reports submitted to the Tasmanian Department of Mines. Some Crest historical core was sampled for metallurgical work by TMNL, the analytical data from these samples was compatible with the historical assay data.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	The author supervised the work completed by TMNL has spent considerable periods of time on site.
	If no site visits have been undertaken indicate why this is the case.	Not applicable.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	As more data is collected the geological interpretation will be updated.
	Nature of the data used and of any assumptions made.	Logging and mapping were the basis of the geological interpretation. Interpretation, as a rule, heavily relies on assumptions.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	An alternative interpretation will have an impact on the resource estimate, however at this point in time all historical and current interpretations are similar.
	The use of geology in guiding and controlling Mineral Resource estimation.	The geological interpretation was developed first, and then a model of the resource was constructed.
	The factors affecting continuity both of grade and geology.	These are poorly understood due to the wide spacing of the current drilling, hence classification of the entire resource estimate as inferred.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	The mineralisation is very consistent in nature within the resource area.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	The estimate was undertaken using Vulcan® software and an Inverse Distance Squared (IDS) estimation methodology. Wireframes were generated for geological zones, based on the current geological interpretation. Assay data was composited to 3m, and an 80m x 80m x 10m search ellipse was used for grade interpolation. No uppercuts were applied to the estimate.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	Historical (including unpublished and non JORC compliant) estimates are of similar quanta.
	The assumptions made regarding recovery of by-products.	No assumptions have been made at this stage.
	Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).	Potentially deleterious elements including SiO_2, Fe_2O_3 and CaO were estimated into the model
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	Maximum block size is 20mX x 40mY x 10mRL with sub-blocking down to 5mX x 10MY x 5mRL. A primary search ellipse of 80m x 80m x 10m was followed by a secondary search of 160 x 160 x 20m. Average drill hole spacing is 50 x 100m.
	Any assumptions behind modelling of selective mining units.	Not Applicable to this estimate.
	Any assumptions about correlation between	Not Applicable to this estimate, each element was

	variables.	estimated separately, using the same parameters.
	Description of how the geological interpretation was used to control the resource estimates.	The modelled mineralisation is based on the geological interpretation.
	Discussion of basis for using or not using grade cutting or capping.	A probability plot of the grade data was generated and no outliers were observed.
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	The block model grades were visually checked to conform with the drill hole grades. No reconciliation data from historical mining is available.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages were estimated on a dry basis, the moisture content has not been measured.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	A cut-off grade of +40% MgO was selected as metallurgical test work indicated that it was possible to produce a marketable calcined product from material above this grade. In addition maximum levels of contaminants should fall below 6% SiO_2, 2% Fe_2O_3 and 5% CaO.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	The resource model was constructed on the assumption that mining of the magnesite would be via open pit methods. In addition it is assumed that grade control will be used to selectively mine higher grade parcels of magnesite, and to determine the distribution of contaminants on a local scale.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	A primary metallurgical assumption is that the weathered clay zones contained within the fresh Magnesite will be upgraded in the first stage of processing by crushing and wet screening the ROM material to remove the unconsolidated weathered material. Hence the block model has been constructed in such a manner that an economic assessment can be made by looking directly at the grades of the fresh magnesite without considering dilution by weathered zones. A significant amount of historical metallurgical test work on the project suggests that it is possible to produce a marketable calcined product.
Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	Environmental impacts have not been considered in detail; however studies completed by TMNL and Crest Magnesium suggested that it is reasonable to assume that the environmental impacts of an open pit mining operation will be manageable.
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	Density data was collected from the core from samples selected on 3m intervals from the TMNL and historical drill core. The densities were measure using a simple buoyancy method. They should be considered to be wet densities.
	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.	The methodology required the wet sample to be weighed and compared to the dry weight. From this data it can be shown that the material is not porous.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	No assumptions were made.
Classification	The basis for the classification of the Mineral	The estimate was been entirely classified as an

	Resources into varying confidence categories.	Inferred Resource under the 2012 JORC Guidelines. In order for confidence in the estimate to be upgraded further infill drilling to a density of approximately 50 x 50m is recommended.
	Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	Yes it has.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	Yes it does.
Audits or reviews.	The results of any audits or reviews of Mineral Resource estimates.	No audits or reviews of the Mineral Resource estimate have been carried out.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	The estimate has been classified entirely as an Inferred Resource, the classification appropriately reflects the confidence level in the mineral resource.
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	See above.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	No production data is available.

HOLE NUMBER	North (GDA)	East (GDA)	COLLAR RL (m)	TOTAL DEPTH (m)	DRILLED BY	DIP	AZIMUTH (GDA)
AR001	5440859	370563.4	200	138	CRAE	-46	310
AR002C	5439354	369674	172.5	233.5	Crest	-46	330.5
AR003	5439912	370106.4	183	408	CRAE	-46	301.5
AR004	5440283	370298.4	180	32	CRAE	-45	300
AR005	5440349	370184.4	167	156.2	CRAE	-46	300
AR007C	5439205	369361.5	148.3	222	Crest	-46	330
AR008	5439297	369307.6	146	169.6	Crest	-46	330
AR009	5439287	369530.6	169.9	254.9	Crest	-46	330
AR010	5439374	369473.1	154.9	219.5	Crest	-46	330
AR011	5439447	369662.5	189.9	99	Crest	-46	330
AR012	5439510	369781	202.2	65	Crest	-46	330
AR013	5439330	369551.9	164.5	204.3	Crest	-46	330
AR014	5439437	369494.4	156.4	124.1	Crest	-46	330
AR015	5439502	369455.4	151	107.6	Crest	-46	330
AR016*	5439413	369449.8	152.9	278.6	Crest	-46	150
AR017	5439454	369424.9	150.6	182.5	Crest	-46	330
AR018	5439350	369431.3	151.3	244.5	Crest	-46	330
AR019	5439433	369380.9	148.8	120.4	Crest	-46	330
AR020	5439243	369440.4	156	256	Crest	-46	330
AR021	5439341	369385.3	149.2	214.2	Crest	-46	330

AR022A	5439316	369342.1	146.4	51	Crest	-46	330
AR022B	5439316	369342.1	146.4	225.3	Crest	-46	330
AR023*	5439313	369345.1	146.4	349	Crest	-46	150
AR024	5439472	369514.6	157	67.7	Crest	-46	330
AR025	5439369	369593.1	166.5	77	Crest	-46	330
AR026*	5439347	369434.4	151.3	260.6	Crest	-46	150
AR027#	5439383	369565.4	164.8	150	TMNL	-55	60.1
AR028	5439399	369553	163.6	71.1	TMNL	-55	335.1
AR029	5439449	369706.4	198.8	89.1	TMNL	-60	330.1
AR030	5439660	369690.7	180.2	143.2	TMNL	-60	330.1
AR031	5439541	369559.3	168.5	150	TMNL	-60	330.1
AR032	5439493	369575.7	167.3	150	TMNL	-60	330.1
AR033	5439620	369786.5	195.2	73	TMNL	-60	330.1
AR034	5439631	369779.8	194.2	150	TMNL	-60	330.1
MB002	5439260	369148	143.5	25.6	Crest	-90	0
MB003	5439215	369186.2	143.8	31.4	Crest	-90	0
MB004	5439434	369551	161.4	41.8	Crest	-90	0
MB005	5439698	369853.6	176.8	50	Crest	-90	0
MB006	5439284	369538.4	170.6	51	Crest	-90	0
MB007	5439538	369485.6	151.5	43.3	TMNL	-90	0
MB008	5439689	369621.9	171.9	50.3	TMNL	-90	0
MB009	5439687	369789.4	188.4	48	TMNL	-90	0

*Note: These holes were drilled down dip.
#Note: AR027 was drilled along strike to test the width of a dolerite dyke.

Table 1: Collars of all drill holes utilised in this estimate.

Table 2: All significant drill intercepts >40% MgO and >8m down hole from drilling utilised in the resource estimate.

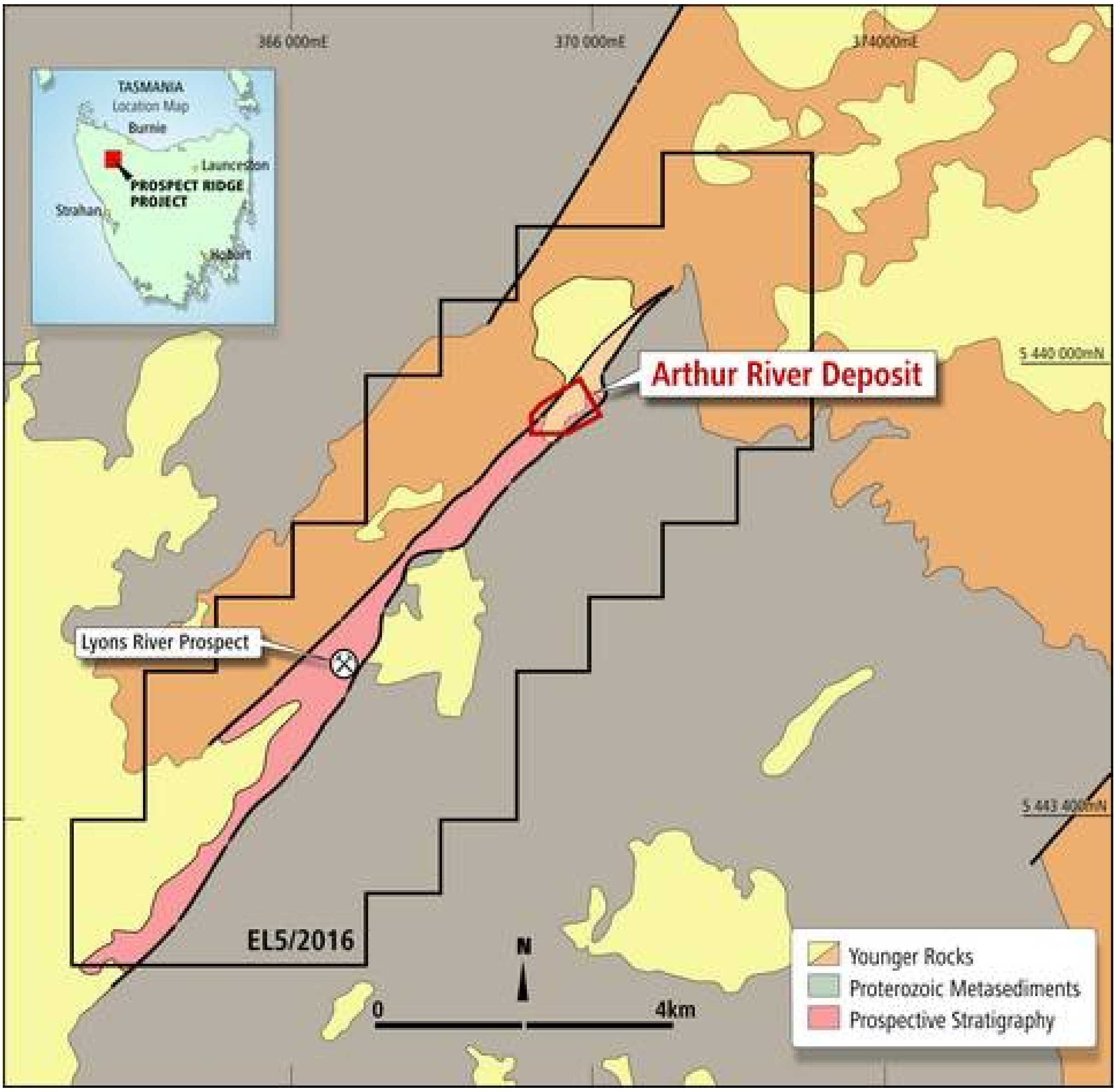
Hole	From (m)	To (m)	Length (m)	MgO %	CaO %	Fe_2O_3 %	SiO_2 %	LOI %
AR002C	102.5	165	62.5	42.08	2.49	0.88	9.13	NA
AR002C	168.4	211.5	43.1	42.79	1.41	0.47	8.56	NA
AR002C	213	229.5	16.5	42.56	2.17	0.24	8.74	NA
AR003	78	90	12	41.68	0.37	3.62	8.47	45.59
AR003	184	225	41	42.90	2.28	2.36	3.19	49.08
AR003	243	256	13	39.65	2.64	1.67	9.20	44.15
AR005	32.95	43	10.05	43.94	1.55	1.13	4.02	48.50
AR007C	11.33	39	27.67	40.61	1.32	1.29	7.93	NA
AR007C	57	157.5	100.5	42.53	1.25	2.36	6.20	NA
AR007C	187.6	214.6	27	42.01	1.28	1.93	7.87	NA
AR008	36	45.7	9.7	42.20	1.61	2.97	4.34	NA
AR008	63.7	93	29.3	43.40	2.78	0.64	4.22	NA
AR008	99	108	9	42.30	3.73	0.82	6.28	NA
AR008	118.6	159	40.4	43.74	4.15	0.61	0.26	NA

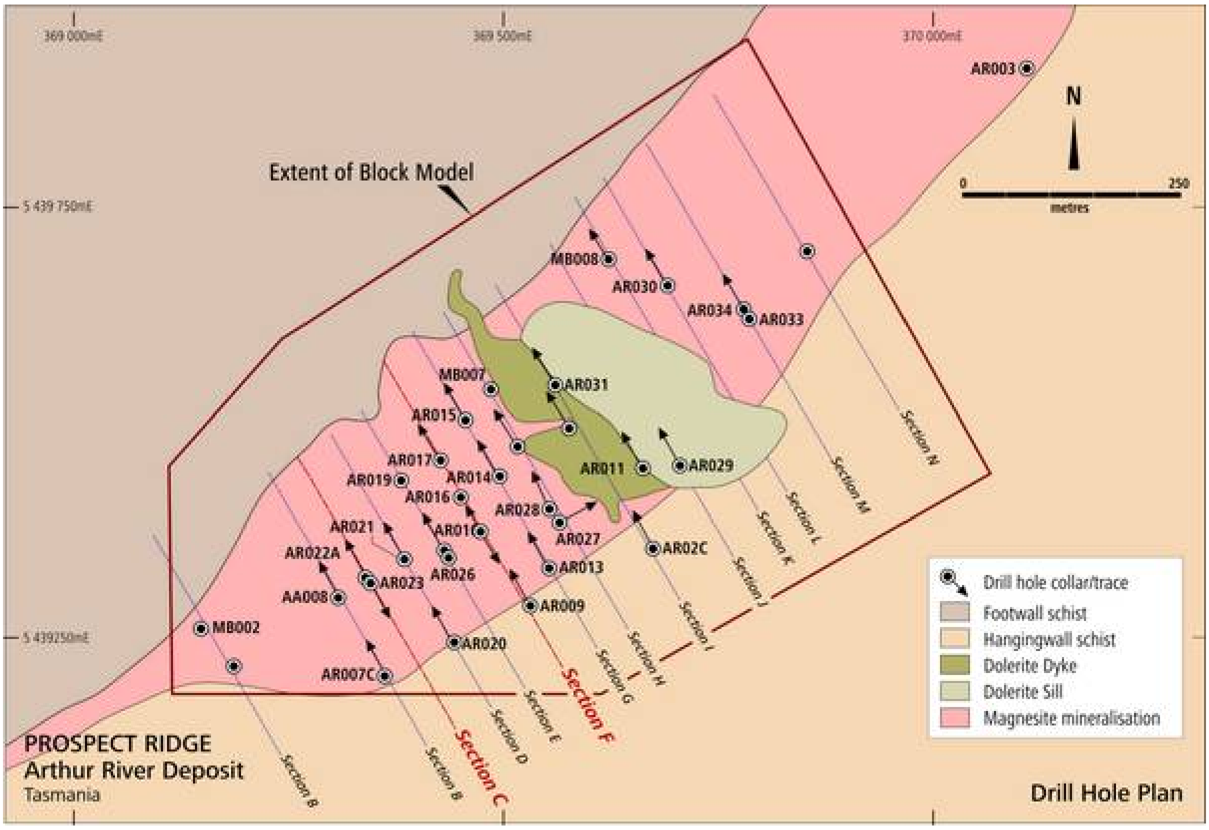
Hole	From (m)	To (m)	Length (m)	MgO %	CaO %	Fe_2O_3 %	SiO_2 %	LOI %
AR009	51	76.4	25.4	42.51	4.63	0.82	1.92	NA
AR009	80.8	224.8	144	43.86	2.98	0.45	3.06	NA
AR010	57.6	215.1	157.5	43.16	2.42	0.78	4.30	NA
AR013	55.92	158.6	102.68	43.53	3.23	0.50	1.83	49.04
AR014	18.7	99.3	80.6	43.30	2.88	0.44	4.66	48.34
AR015	31.5	41.1	9.6	41.50	0.13	4.22	6.01	47.18
AR016	30.1	134.6	104.5	43.43	2.56	0.98	3.75	48.72
AR016	143.2	173.6	30.4	43.10	2.49	0.57	5.11	48.47
AR016	182.6	193.1	10.5	40.62	1.82	0.64	11.04	45.49
AR016	214.1	224.5	10.4	41.62	1.93	0.56	9.00	46.69
AR016	231.2	278.6	47.4	41.99	1.00	0.48	10.08	46.06
AR017	28.6	36.6	8	41.49	0.64	3.31	6.95	47.22
AR017	66.1	86	19.9	42.27	1.31	4.13	3.11	48.38
AR017	100.2	155.6	55.4	40.47	5.62	1.36	3.12	49.04
AR017	164.6	179.2	14.6	41.92	4.81	1.46	1.16	50.31
AR018	12	22	10	43.26	0.13	3.25	3.85	49.01
AR018	32	186.9	154.9	43.55	1.32	2.29	3.67	48.84
AR018	196.2	240	43.8	42.44	3.65	1.73	2.18	49.65
AR019	18.9	54	35.1	42.87	0.29	3.83	4.81	47.88
AR019	71.5	90.8	19.3	44.18	0.37	3.38	1.68	49.78
AR020	74	222	148	42.86	1.60	2.04	4.99	48.18
AR020	237.3	250	12.7	43.42	0.59	1.52	5.67	48.08
AR021	14.5	60.8	46.3	42.79	0.66	1.74	6.64	47.62
AR021	66.8	175	108.2	43.83	1.49	1.62	3.61	49.26
AR021	187	199	12	41.50	5.93	1.68	0.69	50.18
AR022A	28.7	51	22.3	43.61	1.60	0.90	4.60	49.06
AR022B	37	73	36	44.78	1.07	0.83	3.34	49.70
AR022B	82	121	39	44.89	1.92	0.52	2.50	49.73
AR022B	127	145	18	42.08	5.60	0.87	1.09	50.17
AR022B	157	171.7	14.7	45.42	1.98	1.10	0.38	50.66
AR022B	178	190	12	41.39	5.18	2.25	0.98	48.61
AR022B	196	205	9	42.03	4.58	0.90	2.94	49.00
AR023	33.7	70	36.3	41.66	1.19	3.50	6.51	46.57
AR023	76	88	12	38.42	3.62	0.66	12.26	44.52
AR023	97	163	66	40.42	2.09	2.75	8.13	45.97
AR023	193	217	24	40.89	1.85	0.25	11.49	44.92
AR023	229	244	15	42.49	1.36	0.37	8.46	46.86
AR023	256	286	30	40.75	3.16	0.92	10.53	44.42
AR023	325	349	24	44.56	0.93	0.78	4.17	48.80
AR026	16	83.6	67.6	42.03	2.07	1.26	6.60	47.68
AR026	90.2	160.1	69.9	42.66	3.21	0.60	4.68	48.44
AR026	164.6	211.1	46.5	40.83	1.64	0.38	11.26	45.14
AR026	217.1	260.6	43.5	40.86	3.13	1.17	8.52	45.93
AR027	102.5	117	14.5	43.18	1.46	0.66	8.71	45.52
AR028	39.5	58	18.5	43.60	2.92	0.59	3.33	49.33
AR030	49	64	15	44.43	1.52	1.79	1.34	50.66
AR031	60	79	19	44.36	1.67	1.54	2.44	49.77
AR031	116.5	131	14.5	45.29	0.73	1.13	2.24	50.50
AR031	142	150	8	41.06	0.47	2.18	9.73	46.25
AR032	90	125	35	34.06	4.15	1.08	3.15	40.32

Hole	From (m)	To (m)	Length (m)	MgO %	CaO %	Fe_2O_3 %	SiO_2 %	LOI %
AR032	131	146	15	41.09	4.38	0.81	8.17	45.45
AR034	129	137	8	40.86	0.91	2.01	9.89	46.11
MB002	4.7	25	20.3	41.37	3.47	1.36	5.03	48.32
MB003	19.4	31.4	12	43.96	1.66	0.79	3.38	49.70
MB005	29.7	48.5	18.8	41.52	2.51	1.89	5.51	48.15
MB007	35	43.3	8.3	43.60	3.66	0.87	0.93	50.78
MB008	6.9	28.3	21.4	44.28	0.79	1.95	2.68	50.04
MB008	33.9	49.7	15.8	43.79	1.58	1.96	2.36	50.05

Notes:

- Significant intercepts comprise a minimum down hole intercept of >40%Mgo at least 8m in length of magnesite.
- Significant intercepts may include up to four continuous meters of magnesite grading less than 40%.
- NA - Not analysed




PROSPECT RIDGE
Arthur River Deposit
Tasmania
Drill Hole Plan
Extent of Block Model
N
0
250
metres
369 000mE
369 500mE
370 000mE
5 439 750mE
5 439250mE
Drill hole collar/trace
Footwall schist
Hangingwall schist
Dolerite Dyke
Dolerite Sill
Magnesite mineralisation
Section B
Section C
Section D
Section E
Section F
Section G
Section H
Section I
Section J
Section K
Section L
Section M
Section N
AR003
MB008
AR030
AR034
AR033
MB007
AR031
AR015
AR017
AR019
AR014
AR016
AR011
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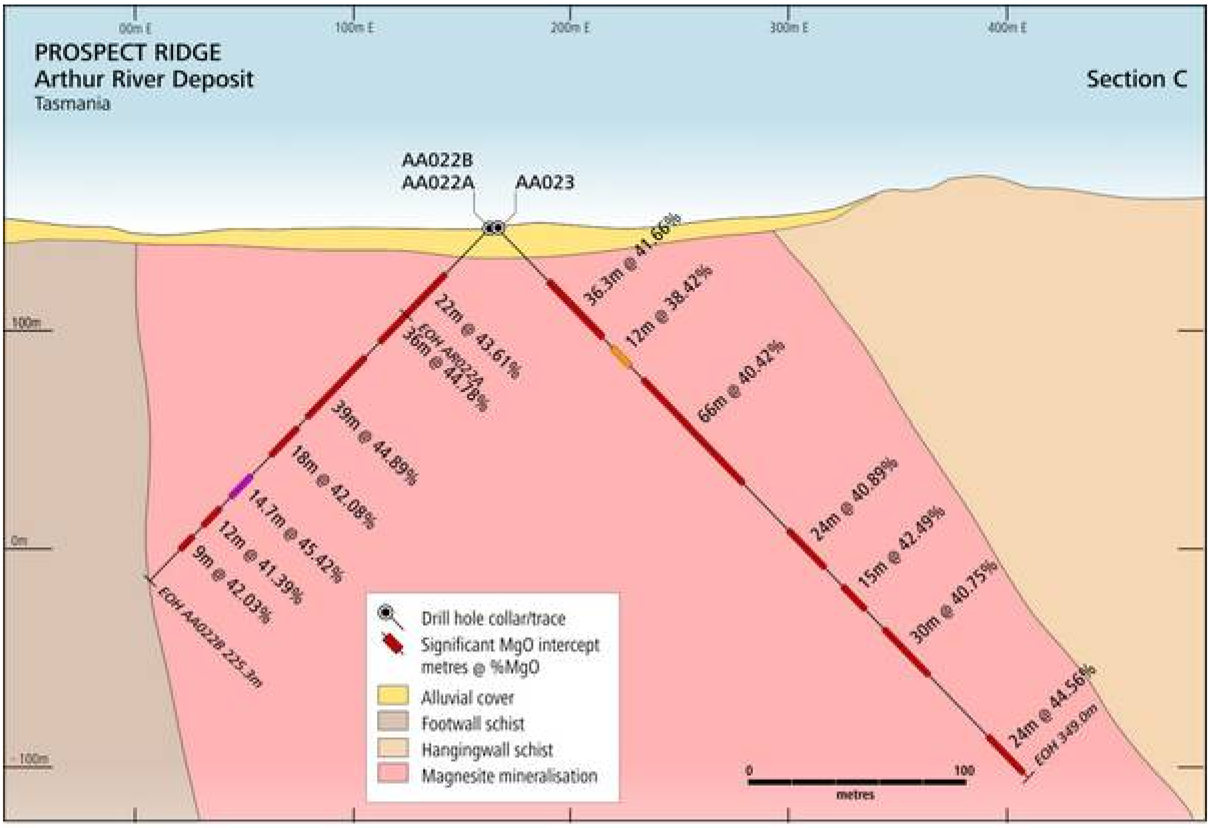
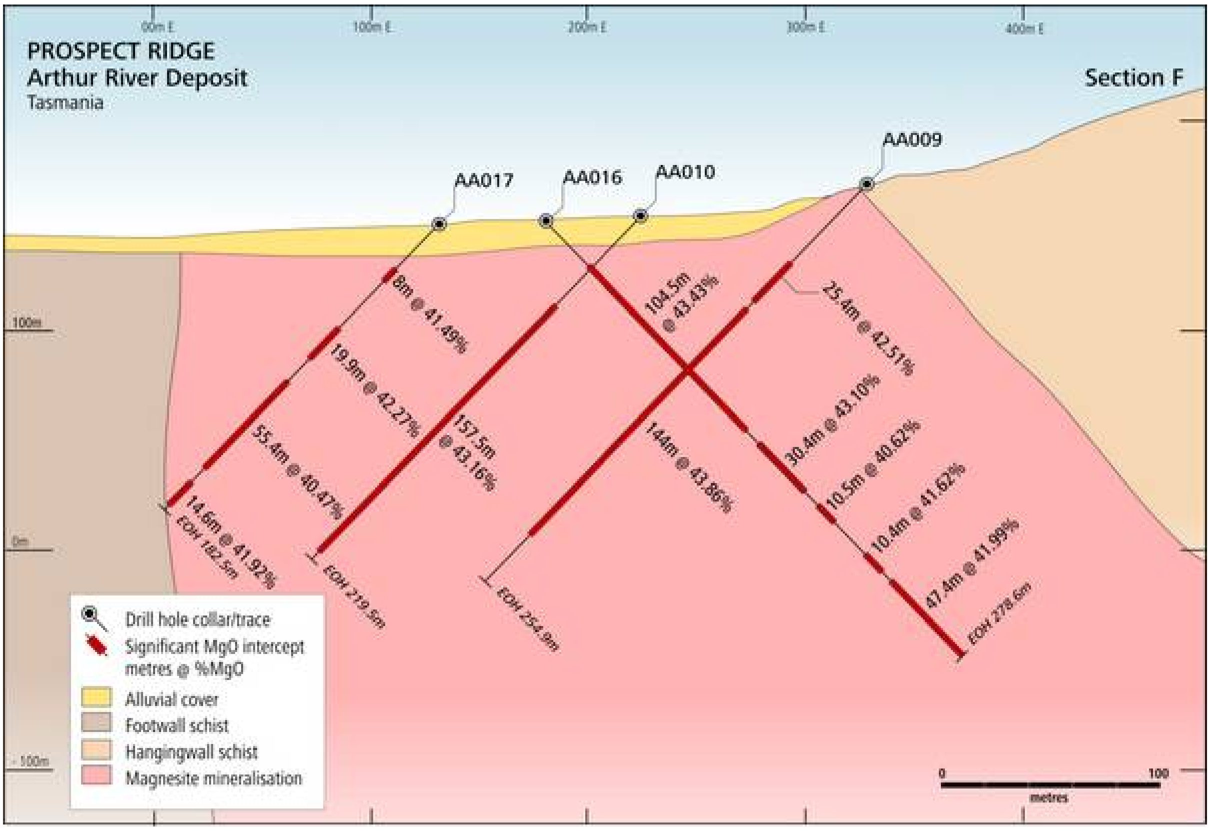
AR009
MB002
AR020
AR007C


PROSPECT RIDGE
Arthur River Deposit
Tasmania
Section C
00m E
100m E
200m E
300m E
400m E
100m
0m
-100m
AA022B
AA022A
AA023
22m @ 43.61%
EOH AR022A
36m @ 44.78%
39m @ 44.89%
18m @ 42.08%
14.7m @ 45.42%
12m @ 41.39%
9m @ 42.03%
EOH AA022B 225.3m
36.3m @ 41.66%
12m @ 38.42%
66m @ 40.42%
24m @ 40.89%
15m @ 42.49%
30m @ 40.75%
24m @ 44.56%
EOH 349.0m
Drill hole collar/trace
Significant MgO intercept metres @ %MgO
Alluvial cover
Footwall schist
Hangingwall schist
Magnesite mineralisation
0
100
metres


PROSPECT RIDGE
Arthur River Deposit
Tasmania
Section F
00m E
100m E
200m E
300m E
400m E
100m
0m
-100m
AA017
AA016
AA010
AA009
8m @ 41.49%
19.9m @ 42.27%
55.4m @ 40.47%
14.6m @ 41.92%
EOH 182.5m
157.5m @ 43.16%
EOH 219.5m
104.5m @ 43.43%
144m @ 43.86%
EOH 254.9m
25.4m @ 42.51%
30.4m @ 43.10%
10.5m @ 40.62%
10.4m @ 41.62%
47.4m @ 41.99%
EOH 278.6m
Drill hole collar/trace
Significant MgO intercept metres @ %MgO
Alluvial cover
Footwall schist
Hangingwall schist
Magnesite mineralisation
0
100
metres