



# KORAB RESOURCES LIMITED

KORAB HOUSE

[www.korab.com.au](http://www.korab.com.au)

16 August 2018

## WINCHESTER MAGNESIUM CARBONATE QUARRY UPDATE

### Issued Capital

Issued Shares: 303 MLN

Last Price: 2.6 cents

Capitalisation: \$8 MLN

### Listing Codes

ASX: KOR

BERLIN: C6S

### Directors

**Andrej K. Karpinski**

Executive Chairman  
Director

**Rodney H. Skeet**

Non-executive Director  
(Independent)

**Daniel A. Smetana**

Non-executive Director  
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**Anthony G. Wills**

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### Projects

**Winchester**

(Rum Jungle, NT)

Magnesium carbonate (MgCO<sub>3</sub>)

**Batchelor**

(Rum Jungle, NT)

Au, Ag, Zn, Pb, Ni, Cu, Co, Sc,  
Mn

**Geolsec**

(Rum Jungle, NT)

Phosphate rock

(P2O<sub>5</sub>)

(Sub-leased to third party)

**Mt. Elephant**

(Ashburton, WA)

Au, Cu  
(Optioned for sale)

Korab Resources Ltd ("Korab", or "Company") (ASX: KOR) and its subsidiaries ("Korab Group") are pleased to provide the following update regarding the Winchester magnesium carbonate project.

During June, July and early part of August Korab held series of meetings and negotiations with multiple interested parties including trading houses, end users, and processors of magnesium carbonate and magnesia products. The counterparties comprised the key players in the magnesium carbonate, processed magnesia, and refractories sectors as well as major trading houses in Europe, India, South East Asia, Korea, Japan, China, and Americas.

The meetings and negotiations went very well. It is apparent from the face-to-face meetings that the current demand for the raw and processed magnesia is higher than anticipated in our earlier assessments. The cuts to Chinese production of raw magnesium carbonate rock, caustic calcined magnesia (CCM) and dead burned magnesia (DBM) have led to increased prices and made it harder for end users and trading houses to secure stable supplies. The situation is likely to continue into 2020/2021. During the last 3 months, Company was focusing on 4 main areas: funding, offtakes, permitting, divesting (or sub-leasing) of other assets.

### FUNDING

After more than two months of meetings and discussions, Korab is in the process of evaluating various funding proposals for the Winchester quarry. These include:

1. forward sale which is essentially a prepayments for magnesite rock to be delivered once project is in production (preferred option),
2. debt financing to be repaid out of sales revenue,
3. sale of a minority equity stake in the project,

The evaluation of the proposals is still continuing as are the discussions with interested parties. The discussions are incomplete. Whilst the detailed terms of funding being discussed are confidential, the general structure of the forward sale envisages a prepayment for approximately 100,000 tonnes of crushed magnesium carbonate rock which would be delivered in 2-3 shipments once the quarry is operational. The pre-sale of 100,000 tonnes of rock can be easily covered from the proposed 600,000-800,000 tonnes annual capacity of the quarry.

It is clear from the discussion and negotiations, that the funding of the project is most likely to be through forward sales, or a combination of forward sales, and a small bank loan. Given the balance sheets of the potential counterparties to the proposed offtakes, this option appears to be most advantageous to both sides.

Note that there can be no certainty that any agreement or agreements regarding the funding can be reached or that any transaction will eventuate. No commercial terms have been agreed between the parties. Accordingly, no investment decision should be made on the basis of this information. Korab will advise the market if and when an agreement or agreements have been reached.

Discussions with the potential Chinese funders which were announced in March 2016 are currently on hold. The Company has deferred any decisions in this regard to enable evaluation and consideration of other proposals of funding the development received from other parties.



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### OFFTAKES

Korab Group has also held discussion with potential offtake partners and buyers of magnesium carbonate rock from Winchester quarry. As part of the discussion and negotiations, Korab personnel met with representatives of magnesium carbonate buyers, trading houses, magnesium carbonate processors, refractories makers, and battery makers from China, Japan, Korea, Brazil, Germany, Belgium, Holland, Austria, and Poland. Further discussions with buyers and end users took place during August and additional face-to-face meetings are scheduled for September.

As previously advised, Korab received several proposals regarding sales of the rock, which are currently being evaluated. In addition, some of these parties requested bulk samples of magnesite rock for test-processing into CCM, DBM, and refractory bricks.

Because of the summer break in the northern hemisphere and many key people going on annual leave the process was somewhat slowed-down during July and August but is likely to accelerate now as personnel are returning from leave.

Discussions and negotiations cover first-year volumes (in aggregate) of approximately 620,000-670,000 tonnes per annum of crushed magnesium carbonate rock.

Please note that the offtake discussions are incomplete (and the terms are confidential). There can be no certainty that any agreement or agreements can be reached or that any transactions will eventuate. No commercial terms have been agreed between the parties. Accordingly, no investment decision should be made on the basis of this information. Korab will advise the market if and when an agreement or agreements have been reached.

### ADDITIONAL PRODUCTS

During the discussion, several of the potential buyers and trading houses who expressed interest in buying raw rock, asked Korab to also review potential supply of CCM, and/or DBM (in addition to raw magnesite rock) as parallel product lines.

The prices for CCM and DBM are significantly higher than raw magnesium carbonate rock, with DBM prices reaching US\$1,200-\$1,400/tonne. By comparison, raw magnesium carbonate rock sells for between US\$100/tonne and US\$135/tonne.

Based on our discussion with the trading houses and end users, the potential first-year sales volumes of the two additional products are in the range of 300,000 to 600,000 tonnes per annum for CCM, and 150,000 to 350,000 tonnes for DBM.

Each tonne of CCM or DBM requires as an input approximately 2.2 tonnes of raw magnesium carbonate rock. The above volumes of CCM and DBM are therefore equivalent to additional production of raw magnesium carbonate rock from the quarry of between 990,000 and 2,100,000 tonnes.

As result of the meetings with potential buyers and trading houses, and given the potential changes to the production volumes and revenue streams Korab commenced review of the economics of adding the CCM, and/or DBM (produced on toll-treatment basis) to the product line-up. The review will assess the costs and benefits including potential cash-flows, earnings, processing costs, logistics, etc.). The economic review envisages that the sales of raw DSO magnesium carbonate rock would occur in parallel with the sales of the processed CCM, and DBM.

Whilst the review process is not complete, initial results suggest a positive case for additional revenue stream from toll-treatment processing of magnesium carbonate into CCM, and/or DBM.

As a consequence of this Korab has commenced discussions with companies operating kilns suitable for conversion of raw rock into CCM and with parties operating kilns suitable for production of DBM. The discussions cover arrangements for processing of the rock on a toll-treatment basis. These types



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of arrangements could potential provide additional revenue streams while sidestepping the need for significant additional capital investment required to build the kilns and to establish supporting infrastructure. Results of the above economic review will be provided to the market when they are finalised. The review is using as a starting point the outcomes from the feasibility study to develop Winchester magnesium carbonate quarry as a direct shipping ore (DSO) operation which were reported to the market on 7 March 2018, and on 21 March 2018. Full text of the report containing the results of the feasibility study and various cautionary statements is available at the following link:

<https://www.asx.com.au/asx/statistics/displayAnnouncement.do?display=pdf&idsId=01964262>



Figure 1 Rotary kiln



Figure 2 Vertical shaft kiln



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### PERMITTING

As part of the above review Korab is in the process of assessing some changes to the site infrastructure plan, quarry production scheduling, and the relevant logistics to accommodate the possibly increased volumes of material leaving the site. The Company has previously sought input from other stakeholders with regard to the site planning and quarry scheduling and is waiting for some of the responses to incorporate them in the plan.

It is expected that this assessment process will be completed shortly. Following the completion, after applying the above changes (if required) Korab intends to submit the notice of intent to mine to the relevant departments.

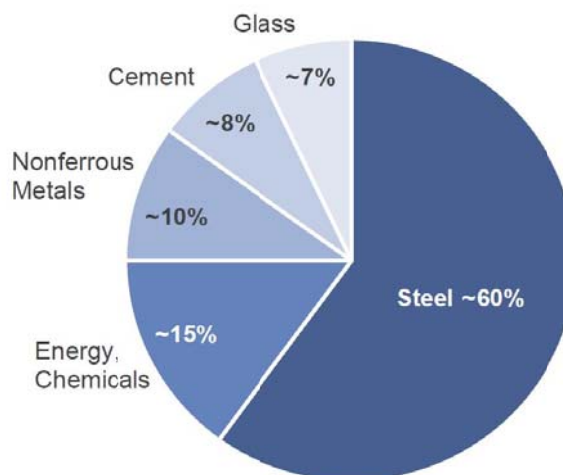
### BACKGROUND INFORMATION

Most of raw magnesium carbonate rock produced globally is calcined in rotary or vertical shaft kilns to produce CCM, DBM, or fused magnesia.



Figure 3 Raw magnesium carbonate rock processing

CCM, DBM and fused magnesia are primarily used in production of refractory lining for steel making, energy, and chemicals industries, in refining of non-ferrous metals (primarily copper and cobalt), cement making, and glass making.



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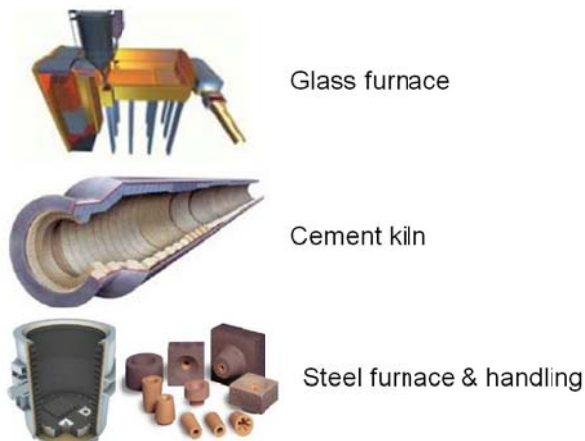
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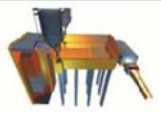

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Most of the magnesia (approximately 75%) is used in refractory linings in steel, cement, and glass making and handling.



The life cycle of the refractories varies from as little as 20 minutes to as long as 10 years. Majority of the refractories are used in steel making where the life cycle is between 20 minutes and 2 months. The input cost of refractories as a percentage of the operating costs of a steel, or cement maker is relatively small at less than 2%. This makes the demand for refractories driven primarily by the demand for steel, cement, and glass and makes it relatively immune to refractories price increases. A 100% price increase in the cost of refractories will increase the overall operating costs of a steel maker by less than 2%.

Key industries	Applications	Replacement	Costs*
Steel	Basic oxygen-, electric arc furnace, casting ladles 	20 minutes to 2 months	~1.5%
Cement / Lime	Rotary kiln 	annually	~0.5%
Nonferrous Metals	Copper-converter 	1 – 10 years	~0.2%
Glass	Glass furnace 	up to 10 years	~1.0%
Energy / Environment / Chemicals	Secondary reformer 	5 – 10 years	~1.5%

The grade and purity of the magnesium carbonate rock from Winchester magnesite deposit allows for production of high purity CCM, and DBM which are in high demand. The grade, purity, and chemical composition of the rock produced by the quarry will be further fine-tuned and enhanced by dry sorting using specialised mineral sorting equipment.



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The Winchester deposit is located south of Darwin in the Northern Territory, approximately 85km by road, less than a hundred meters from sealed road, and less than 5km from railway line. For location of the project please see Figure 4.



Figure 4 Location of the deposit

The deposit is a shallow, flat laying body covered by up to 5 meters of unconsolidated soil and gravel overburden. Figure 5 shows the test mining of magnesium carbonate rock at Winchester. Surface (top of the overburden) and the top of the magnesium carbonate rock are clearly marked in the photo. Personnel are visible in the open pit setting the explosive charges. Blasted rock was then excavated using hydraulic excavators and moved to the pad using trucks.



Figure 5 Test mining of magnesium carbonate rock



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Because of its shallow cover, low waste to ore ratio, high purity, proximity to infrastructure and excellent logistics, Winchester magnesite project is one of the better undeveloped sources of magnesium carbonate rock.

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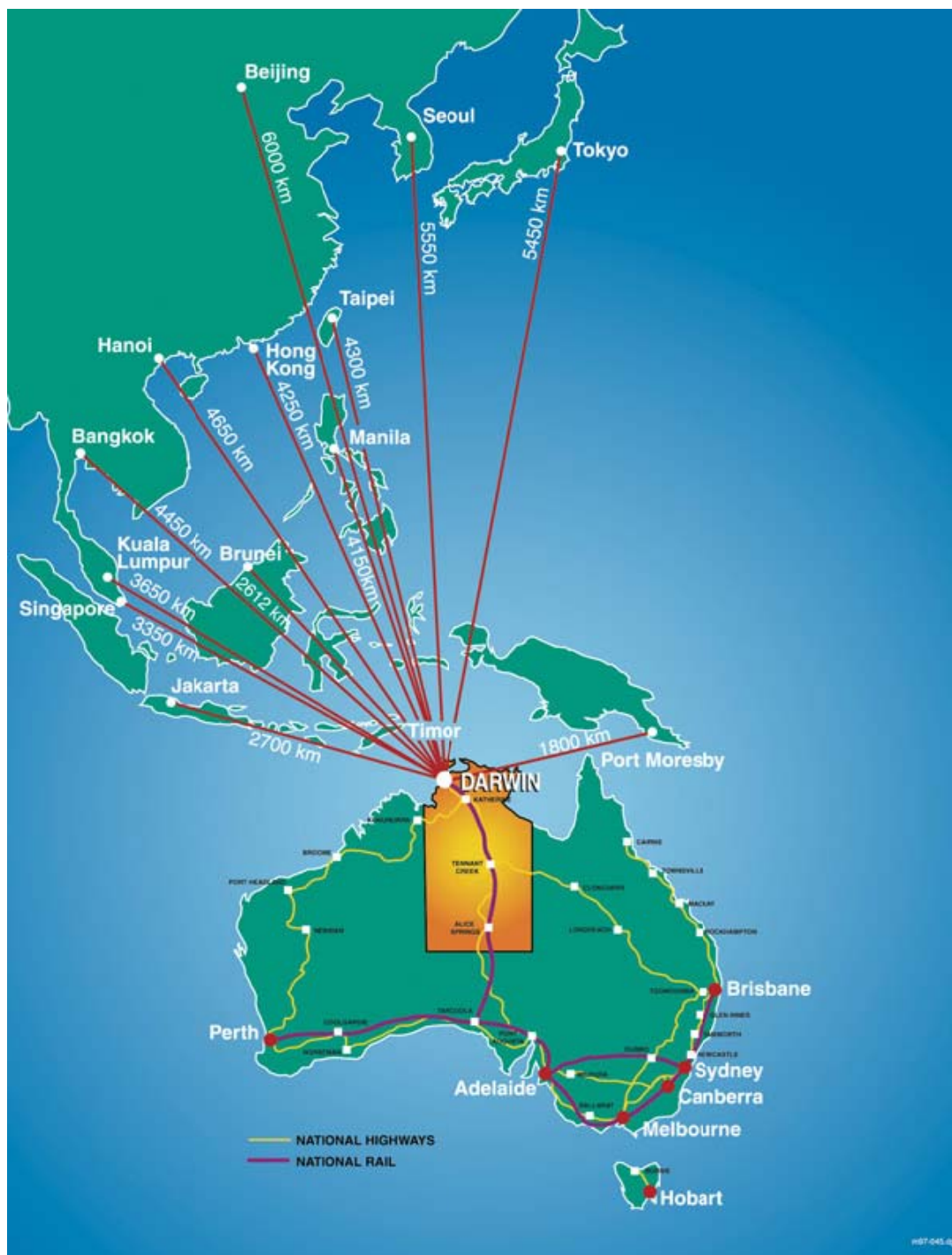


Figure 6 Shipping lanes and road/rail transport

INVESTOR CONTACT:

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ABOUT KORAB RESOURCES



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Korab Resources Ltd is an international mining and exploration company with operations in Australia and Europe. Korab's projects include Winchester magnesium carbonate deposit at Batchelor in the Northern Territory of Australia. Korab also explores for gold, cobalt, silver, lead, zinc, copper, nickel, lithium, and tin at Batchelor and Green Alligator in the Northern Territory. Korab also holds Geolsec phosphate rock deposit (near Batchelor) which is sub-leased to a third party. The Company also holds Mt. Elephant copper/gold project (in the Ashburton Mineral Field in Western Australia) which is currently optioned for sales. Overseas, Korab holds a gold and silver deposit at Bobrikovo (in eastern Ukraine) which is currently subject to sale negotiations. More information about Korab's projects can be sourced from Korab's website at [www.korab.com.au](http://www.korab.com.au). Korab Resources Ltd is listed on Australian Securities Exchange, which is Korab's home market. Korab's shares are traded on Australian Securities Exchange (ASX) and on the Berlin Stock Exchange (Börse Berlin).

### DISCLAIMER AND CAUTIONARY STATEMENT

Forward-looking statements are statements that are not historical facts. Words such as "expect(s)", "expected", "feel(s)", "believe(s)", "will", "may", "anticipate(s)", "should", "envisage(s)" and similar expressions are intended to identify such forward-looking information. This information includes, but is not limited to statements regarding future exploration results, resources, or reserves, and production. Anyone reading this report is cautioned not to place undue reliance on these forward-looking statements. All of such statements are subject to risks and uncertainties (many of which are difficult to predict and which generally are beyond the control of the Company) that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include, but are not limited to: those relating to the interpretation of exploration results (including drill results), the geology, grade and continuity of mineral deposits and conclusions of economic evaluations; risks relating to possible variations in reserves, grade, mining dilution, ore loss, and recovery rates; risks relating to changes in project financial and technical parameters; risks relating to the potential for delays in exploration programs, project evaluation/review, completion of feasibility studies and project development; risks related to commodity prices and foreign exchange rate fluctuations; risks related to failure to secure adequate financing on a timely basis and on acceptable terms; risks related to delays in obtaining governmental, or other permits and approvals; risks related to security of tenure; and other risks and uncertainties related to the Company's prospects, properties and business strategy. Any forward-looking information contained in this report is provided as of the date of this report. Except as required under applicable listing rules and securities laws, the Company does not intend, and does not assume any obligation, to update this forward-looking information. Pilbara East and Pilbara West projects are considered to be of early stage, grass roots exploration status.



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