

ASX Announcement

22 November 2016

Magnesite bulk trial update

Highlights

- Magnesite ore transported to Whyalla for bulk trial.
 - Magnesite crushing and stockpiling nearing completion.
 - Bulk trial by commercial kiln operator expected to be completed in coming weeks.
 - Successful bulk trial is the next step in the development of the Leigh Creek Magnesite Project.
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Archer Exploration Limited (ASX: AXE) advises that all of the Leigh Creek magnesite ore required for the Whyalla bulk trial has been transported to Whyalla for crushing. Crushing and stockpiling of the magnesite ore in Whyalla is nearly complete with the last of the crushed ore expected to be delivered to site during this week.

As announced on 8 November 2016, Archer will be undertaking a magnesite processing bulk trial at an operating kiln. Magnesite ore has been mined and stockpiled in Adelaide in preparation for the trial. The purpose of the trial is to confirm that a commercial grade caustic calcined magnesia (CCM) and dead burned magnesia (DBM) product can be manufactured in an operating kiln. The resulting magnesia products will then be distributed to potential customers for analysis and testing.



Figure 1: Magnesite stockpile (Adelaide)



Figure 2: Loading of magnesite for transport to Whyalla

Target markets

Leigh Creek Magnesite Project is the world's largest deposit of its type and hosts 48% of world cryptocrystalline (small grained) magnesite resources. Cryptocrystalline magnesite has superior characteristics over macrocrystalline magnesite. The smaller crystal structure and typically higher purity of cryptocrystalline magnesite allow it to produce higher value magnesia products such as high specific surface area (SSA) and high reactivity CCM and high density DBM.

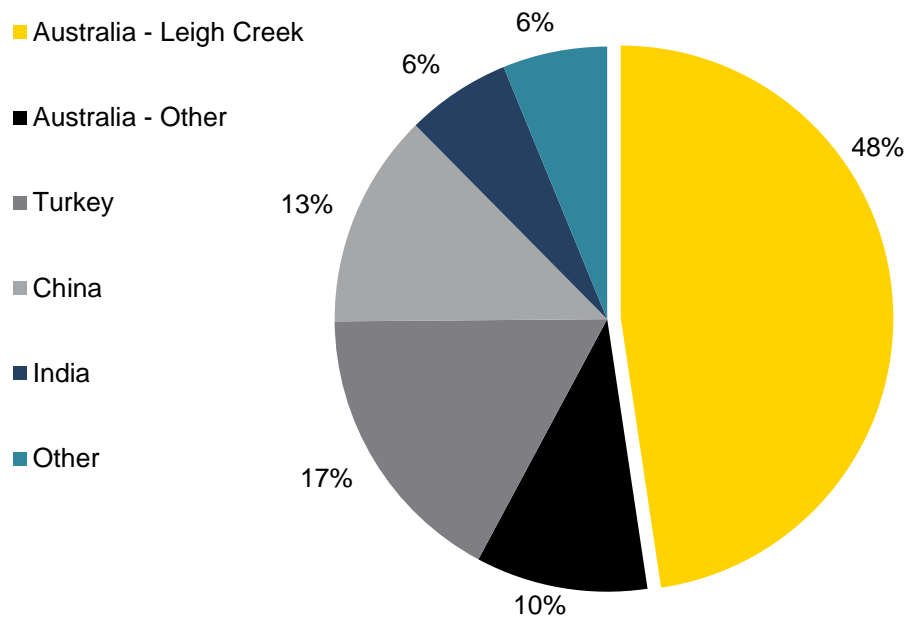


Figure 3: World cryptocrystalline magnesite resources

There are three broad categories of magnesia products and the temperature and type of furnace used in the production process determines the type of magnesia produced.

	Magnesia Product	Approx. temperature (°C)
Archer target market	Calcined MgO (CCM)	850
	Dead burned MgO (DBM)	1,500
	Electrofused MgO (EFM)	>2,800

Archer is targeting the refractory (steel making) industrial grade unshaped DBM market which is forecast **to grow by 3.5% during the next 12 months**. The use of DBM in unshaped applications (monolithics) has become increasingly popular over the last decade, especially in mature industrialised economies. Monolithics now account for an increasing proportion of overall refractory production in Europe, Japan and North America.

The long life and superior physical and chemical properties of the LCM cryptocrystalline magnesite deposits provide a unique opportunity to develop and grow a large scale, low cost, high value magnesia business



Figure 4: *Ross Contractors truck used for magnesite transport*

Next steps and timeline

The kiln operator currently intends to process the magnesite in the coming weeks. Following processing the kiln operator intends to test and trial the resulting product.

Following successful processing and testing, Archer intends to commence distribution of DBM and CCM to potential customers for their assessment.

For further information, please contact:

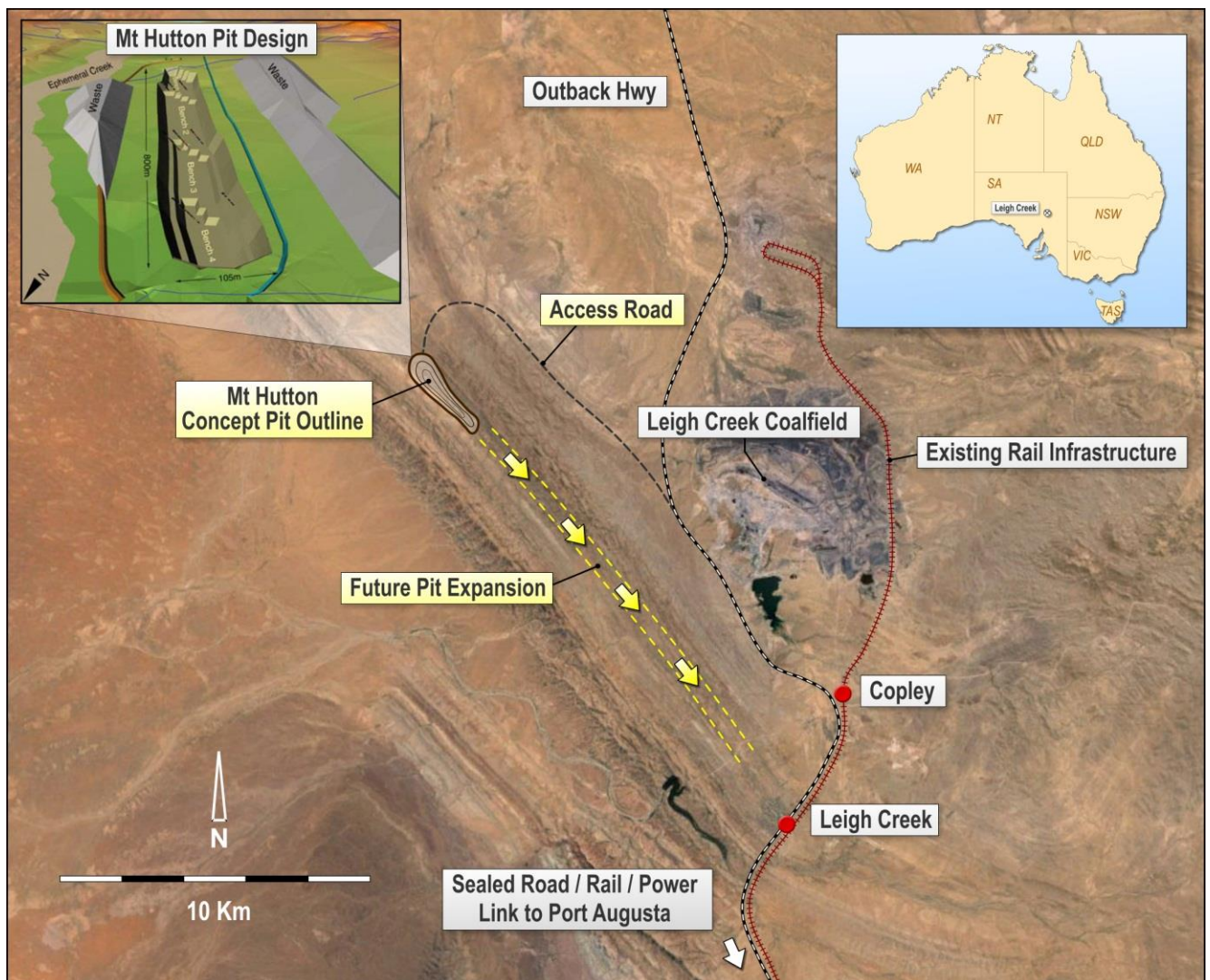
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About the Leigh Creek Magnesite Project

The Leigh Creek Magnesite Project is located approximately 20 kilometres northwest of Leigh Creek Township, South Australia and is the world's largest cryptocrystalline magnesite deposit.

Archer has been developing the Leigh Creek Magnesite Project with the aim of undertaking a simple open pit mining operation, third party processing and the export of high quality caustic calcined magnesia and/or monolithic dead burn magnesia to overseas customers.



Leigh Creek Magnesite Project conceptual development layout