Archer Exploration Ltd.: Leigh Creek Magnesite - Project Study

21.03.2016 | ABN Newswire

Adelaide, Australia - Archer Exploration Ltd. (ASX:AXE) is pleased to announce that it has completed a Project Study (Study) on the magnesite deposit at the 100% owned Mount Hutton Magnesite Project (Project). The Project is part of the larger Leigh Creek Magnesite Project, located approximately 20 kilometres northwest of Leigh Creek Township, South Australia.

Highlights

- The Study examines possible open pit mining and processing options and provides a strong case for undertaking a bulk trial as a prerequisite to firming up mining and processing plans.

- Subject to satisfactory completion of the bulk trial work, the Study has highlighted the potential for a simple open pit mining operation that assumes the trucking of magnesite to an off-site calcination plant.

- Test work to date indicates that the Project may be able to produce both caustic calcined magnesia and dead burn magnesia products.

- The Study has only looked at the potential of the Mt Hutton deposit and not all of the known deposits in the project area, suggesting that potential exists to increase the scale and life of the Project.

The Study provides strong impetus for the Project and Archer will use it as a basis for further evaluation towards potential development and discussions with third parties in seeking access to rail, calciners and associated infrastructure.

Project Study

It should be noted that the term "Project Study" is not a technical term as used in the JORC Code 2012. The Project Study is an internal reference to a study that was prepared by Archer for project guidance purposes only and is based on technical and economic assessments of a low-confidence level. Due to this low confidence level it is not considered appropriate to report production targets or financial forecasts derived from production targets.

Investors are advised that the results of the Study do not establish the economic viability or definite value of the Project. Investors should note that for the Company to establish economic viability of its Project, the Company will need to establish sufficient Mineral Resources and Mineral Reserves and sufficiently consider mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and government factors.

This Study examines the possible mining and processing options and their potential economic benefit in order for Archer to optimise planning for the next stage of Project development.

Capital expenditure and operating cost estimates used in the Study were derived from estimates provided by contractors, service providers and other consultants.

Processing Options

The Leigh Creek Magnesite Project is well known with several companies having completed historical studies to develop the project, with the most recent being SAMAG in early 2000's. These previous studies were based on the construction of a stand-alone processing facility to make magnesia products, or in the case of SAMAG for the manufacture of magnesium metal. Archer's proposal is not to build a stand-alone processing facility (approximate cost $80 - $120 million) or to make magnesium metal but to use third party kilns and furnaces to make caustic calcined magnesia (CCM) and dead burn magnesia (DBM) products.

There is underutilised infrastructure in the vicinity of the Project and elsewhere in South Australia that may be available to Archer. The Study is based on a simple processing scenario of contract mining at Mount Hutton and then hauling magnesite off-site to pre-existing plants for processing.

Mine Development Model

The uppermost 17 magnesite beds at Mt Hutton have width and excellent continuity with many outcropping or covered by a shallow layer of topsoil. The Myrtle Springs mine, located approximately 3km along strike from Mt Hutton, is a working open pit magnesite mine and the Study assumes that Mt Hutton will be mined in the same manner as Myrtle Springs. More detailed mine design work is required to determine whether terrace mining or the dumping of waste to stockpiles is the most cost effective mining method.

Samples from each of the magnesite beds have been analysed and it has been assumed that the first 9 beds will be mined in the first pass mining operation and that the remaining beds will be extracted on a second pass. However, more detailed mine design is required before the optimum mine sequencing can be determined.

Flow Sheet Design, Capital Expenditure and Operating Expenditure

The processing of magnesite is very simple - the magnesite is placed in a kiln or furnace and then heated to a range of temperatures to make different magnesia products. There is no grinding, flotation or other complicated mineral processing required for the Archer magnesite.

The Study assumes the use of contractors and third party processing for which Archer will be charged a unit rate ($/tonne). Archer has been provided with indicative operating cost estimates by potential contractors and toll processors. The processing plant will be operated by the plant owners meaning that Archer will not need to build or operate any processing plant infrastructure.

The Study assumes the following:

- Open pit mining and crushing by mining contractors.
- Contractor haulage by rail or road to processing plant.
- Toll processing by third parties.
- Contractor haulage to port for export to customers.

Archer is undertaking detailed metallurgical testing to determine the temperatures required to produce CCM and DBM and the resultant chemical characteristics of the CCM and DBM product. A bulk trial (x000's of tonnes) of magnesite will be undertaken by toll processors later in 2016 and the resultant magnesia product sent to potential customers for testing.

Potential cash flow

Subject to satisfactory completion of a bulk trial to be undertaken by toll processors later this year, the Study indicates robust economics with the Project economics influenced by the proportion of CCM and DBM produced (DBM sells for higher prices than CCM).

It is noted that the ability to produce mainly DBM could add significant value to the Project's economics - presenting a strong case for further test work, marketing and the signing of agreements for the toll processing of magnesite.

Historic Mineral Resources

The Study has focused only on Mt Hutton which represents only part of the total Leigh Creek Magnesite Project Mineral Resource of 453Mt @ 41.4% MgO (refer to table 1 in link below). Therefore, potential exists to greatly increase the mine life and scale of the Project.

The mineral resources reported in table 1 above were reported by SAMAG in 2000 and were prepared in accordance with JORC Code 1999. It is important to note that:

- the estimates are historical estimates and are not reported in accordance with the JORC Code 2012;

- a competent person has not done sufficient work to classify the historical estimates as mineral resources or ore reserves in accordance with the JORC Code 2012; and

- it is uncertain that following evaluation and/or further exploration work that the historical estimates will be able to be reported as mineral resources or ore reserves in accordance with the JORC Code 2012.

Next Steps

Archer will work to finalise and execute agreements with mining contractors and toll processors as well as the gaining of all government and other approvals required to undertake the bulk trial later this year.

To view tables and figures, please visit:
http://abnnewswire.net/lnk/E4RD7Y4G

About Archer Exploration Limited:

Archer Exploration Ltd. (ASX:AXE) is an Australian Stock Exchange listed company with 100% ownership of 15 tenements and one Exploration Licence Application all in South Australia covering 6,053 km2.

Archer also has the rights to all minerals other than uranium on EL4693 covering a further 816 km2. Archer's main project is the Campoona Graphite Project which is located within reach of established and major developing infrastructure. It has a JORC 2004 Resource of 5.27 million tonnes @ 7.6 % TC (based on 2% TC cut-off).

Contact:

Archer Exploration Ltd.
Mr Greg, English Chairman
Tel: +61-8-8272-3288

Mr Gerard Anderson, Managing Director
Tel: +61-8-8272-3288