

ABN 48 116 296 541

# **EXCHANGE RELEASE**

# WONARAH ENABLING STUDY CONFIRMS ECONOMIC POTENTIAL FOR MAJOR FERTILISER PRODUCTION FACILITY

28 November 2011

### **HIGHLIGHTS**

- > Independent consultants have modelled the economics of the development of Minemakers' wholly owned Wonarah deposit and proposed downstream processing facilities to produce superphosphoric acid or N-P fertilisers such as diammonium phosphate ("DAP").
- NPVs of around two billion dollars and acceptable rates of return have been modelled.
- The expenditure required for a full bankable feasibility study ("BFS") is justified.
- Joint Venture negotiations with India's NMDC are expected to resume in early December.

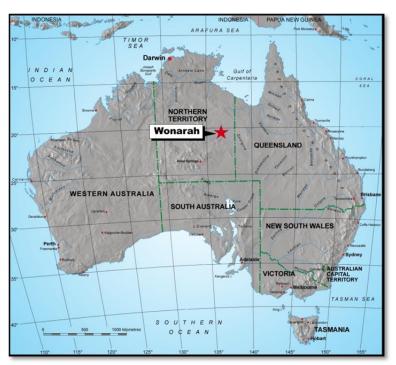


Figure 1

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Minemakers commissioned a study (the "Enabling Study") by independent consultants on the technical practicality and the economics for the development of Wonarah (Figure 1).

The consultants are KEMWorks, a Florida-based fertiliser industry consultancy, for the technical aspects, and Optimum Capital, of Australia, for the financial analysis.

While other development routes or combinations will be considered in a future BFS, the Enabling Study focussed upon two options to produce 1Mtpa of  $P_2O_5$ :

- Production of 1.4Mtpa of 70% P<sub>2</sub>O<sub>5</sub> superphosphoric acid ("SPA") by the Improved Hard Process ("IHP"); or
- Production of 2Mtpa of DAP/MAP via a conventional Wet Acid Process ("WAP").
  (Figure 2)

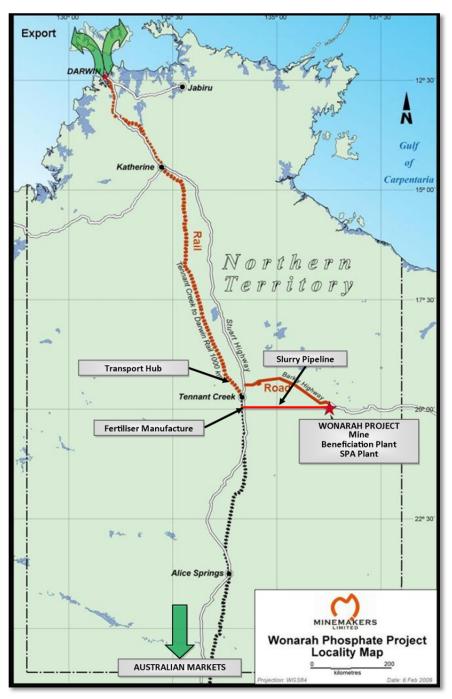


Figure 2



The project economics for these two base case alternatives are presented in the following tables.

Table 1: Summary Financial Outcomes

		<b>WAP Fertilizer</b>	IHP SPA
Ore Mined	Mtpa	7.0	6.5
SPA Sold	Mtpa		1.46
DAP Sold	Mtpa	2.24	
Mine Life	Years	20	20
Net Revenue	A\$M	28,303	21,482
Operating Cost	A\$M	17,633	11,505
Upfront Capital Cost	A\$M	2,464	1,691
Cashflow Before Tax	A\$M	6,981	7,359
NPV Pre-tax Ungeared (8%)	A\$M	1,836	2,350
IRR Pre-tax Ungeared	%	17	24
Operating Margin	%	36	45
Payback	Years	7	6

Table 2: Project Annual Operating Margins

		WAP	IHP
Average Annual Revenue	A\$M	1,378	1,037
Operating Costs			
Mining	A\$M	116	107
Processing	A\$M	658	320
Logistics	A\$M	108	147
Carbon Costs	A\$M	NIL	1.3
Total	A\$M	882	575
Average Annual Operating Cashflow	A\$M	497	462

The financial analysis used current US dollars product prices and a 95 cent A\$/US\$ exchange rate.

# THE SPA OPTION

This is conceptually preferred, as it has significantly lesser capital and operating costs, greater NPV and IRR, and could produce a readily marketable and superior product to merchant grade phosphoric acid ("MGA").

However, before that development route can be selected, JDCPhosphate Inc ("JDC"), the holder of the patent for the IHP, must prove its ability to produce at commercial scale. JDC is raising capital to construct and operate a Demonstration Plant in Florida and aims to have it completed around the end of 2012. Minemakers owns 6.67% of JDC and holds the sole Australian rights to the IHP technology for a term of 7 years.

Under this development scenario, Minemakers would undertake relatively simple beneficiation on site and also construct the IHP kilns at Wonarah. The SPA would be taken in tankers by road to near Tennant Creek and would then be railed to the export port of Darwin, or to southern Australian markets.

Asia currently imports over 3Mt of P<sub>2</sub>O<sub>5</sub> as acid, and demand is anticipated to increase.



### THE DAP/MAP OPTION

In this alternative, a more conventional processing route would be taken. After mining, the ore would be beneficiated on site and then transported via a slurry pipeline to a factory site adjacent to the railway in the vicinity of Tennant Creek.

Sulphuric acid would be manufactured from the burning of imported sulphur, and the phosphate slurry and the acid would be used to manufacture MGA by the usual wet acid process ("WAP").

Imported ammonia would then be used to make N-P fertilisers such as MAP and DAP.

#### **NMDC**

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The results of the Enabling Study have been made available to NMDC in accordance with the MOU executed in June 2011 and negotiations concerning a Joint Venture Agreement are in process.

After November meetings in India between senior representatives from Minemakers and NMDC, further discussions are expected to take place in Australia in early December.

### **FUTURE WORK**

The results of the Enabling Study justify commitment to a BFS. This will begin upon completion of the NMDC JVA and receipt of any necessary approvals.

As Wonarah has a huge phosphate mineralisation base, currently estimated at about 800Mt at beneficiation plant grade, and open along strike, and the two alternatives described above require the mining of only 6 to 7Mtpa, a key aspect of the BFS will be to examine the potential for a larger operation or the production of additional commercial outputs.

A component of the study will also examine the economic impact of building our own ammonia plant, using the gas supply available at Tennant Creek. Although it would increase CAPEX, operating costs are likely to be significantly reduced and would insulate the project from vagaries in world natural gas, and hence ammonia, prices.

The viability to produce exportable beneficiated phosphate rock from our slurried material will also be investigated as part of the BFS.

## OUTLOOK

Minemakers notes the considerable increase in rock phosphate prices throughout 2011. This also favours vertically integrated fertilizer production facilities, which is the objective for Wonarah.

Andrew Drummond Managing Director



For further information on the Wonarah Project, please refer to the Company's NI 43-101 compliant technical report entitled "Mineral Reserve Estimation for Wonarah Phosphate Project, Northern Territory, Australia", dated September 2010 and available on the Company's website and www.sedar.com.

The information in this report that relates to Exploration Results, Exploration Results, cut off grades, project background and Minemakers Comments on the Hellman & Schofield estimates is based on information prepared under the supervision of Andrew Drummond, who is Managing Director of the Company and a Fellow of The Australian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Mr Drummond has sufficient experience deemed relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Drummond is a 'Qualified Person' as defined in NI 43-101 and has supervised the preparation of this report. Mr Drummond consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Information in this report that relates to the current Mineral Resource estimates for Arruwurra and Main Zone reflects information compiled by Jonathon Abbott who is a full time employee of Hellman and Schofield Pty Ltd. Mr Abbott, a member of the Australian Institute of Geoscientists, has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is reporting to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves." and as "Qualified Person" as defined in NI 43-101. Mr Abbott has consented to reporting of the matters based on the information compiled by them, in the form and context in which it appears. For further information on Wonarah resources, please refer to Minemakers' NI 43-101 compliant technical report entitled "Technical Report Mineral Resource Estimation for the Wonarah Phosphate Project – Northern Territory, Australia", dated 16 November 2011 and available on SEDAR at www.sedar.com.

#### Cautionary Statement Regarding Forward-Looking Information

All statements, trend analysis and other information contained in this report relative to markets for Minemakers' trends in resources, recoveries, production and anticipated expense levels, as well as other statements about anticipated future events or results constitute forward-looking statements. Forward-looking statements are often, but not always, identified by the use of words such as "seek", "anticipate", "believe", "plan", "estimate", "expect" and "intend" and statements that an event or result "may", "will", "should", "could" or "might" occur or be achieved and other similar expressions. Forward-looking statements are subject to business and economic risks and uncertainties and other factors that could cause actual results of operations to differ materially from those contained in the forward-looking statements. Forward-looking statements are based on estimates and opinions of management at the date the statements are made. Minemakers does not undertake any obligation to update forward-looking statements even if circumstances or management's estimates or opinions should change. Investors should not place undue reliance on forward-looking statements.

In accordance with JORC Code Clause 18, with respect to future exploration of the phosphatic target zone, the potential quantity and grade of any discovery conceptual in nature, there is insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in determination of a Mineral Resource.