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Sen Hon vv Heffernan ELECTORATE OFFICE

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Senator Bill Heffernan Suite 703, Westfield Towers 100 William Street Sydney NSW 2011

Dear Senator Heffernan

# THE POTENTIAL FOR A MAJOR ROCK PHOSPHATE INDUSTRY IN THE MT ISA/BARKLY REGION

## Summary

You may recall that we met at the Australian Fertiliser Outlook Briefing in Sydney last October, at which we both spoke. I follow up by writing to present the potential for Australia to become one of the world's great producing areas for rock phosphate.

In turn, and subject to getting appropriate infrastructure in place, this can lead to:

- A major new export industry for the benefit of all Australians.
- Access to cheaper rock phosphate for Australia by introducing competition.
- · Potential to open up Australia's fertiliser manufacturing industry.

I will present the commentary in synopsis form and welcome any follow-up questions.

## 1. OVERALL ROCK PHOSPHATE POTENTIAL

Australia is blessed with possessing one of the world's few major phosphatecontaining basins (Figure 1).

- (i) Depletion of available resources (USA and China), environmental problems (USA), government policy (China), relatively small resource positions (Israel and Syria), impaired geopolitics (Togo, Uganda, Kazakhstan) has lead to an OPEC look-alike for phosphate dominated by the largest exporter, state-owned Moroccan company, OCP and a similar one in Jordan.
- (ii) Morocco increased export prices ten-fold from December 2007 to June 2008 to US\$400–500/t fob and they have not moved down much relative to other world commodities since then, now being quoted at \$250-290/t.

Fertiliser prices such as di-ammonium phosphate ("DAP") are at about half 2008 levels, but this is due to cost decreases for nitrogen or ammonia (via natural gas) and sulphur/sulphuric acid (a by-product from base metal smelting or the oil industry).



- (iii) The phosphate price strength leads to opportunity for Australia.
- (iv) Rock phosphate is a bulk commodity which needs to be exported or moved, as raw product or fertiliser, to fertiliser plants or farmers.
- (v) The key to bulk product movement is infrastructure: road, rail, ports.



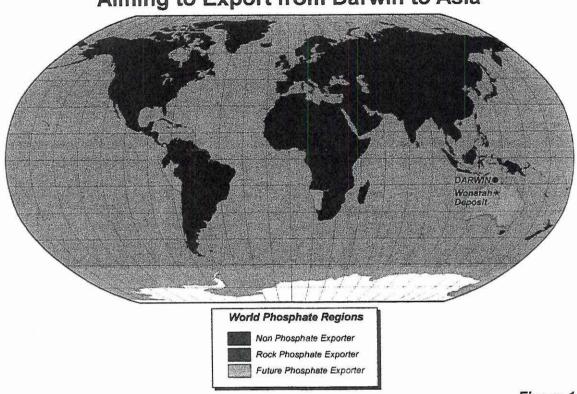


Figure 1

#### 2. RESOURCE POSITION AND POTENTIAL

- (i) Australia's rock phosphate lies within the geological entity, the Georgina Basin, which extends from the Mt Isa district westerly to around Tennant Creek and the north-south standard gauge Ghan railway (Figure 2).
- (ii) As most of Australia's deposits were found some decades ago and so generally pre-date the approved resource classifications scheme, the JORC Code, it is difficult to quote resource estimates now, but it would be quite reasonable to assume at least a collective two billion tonnes in identified deposits and with a lot of upside. This compares with estimated worldwide production of about 150Mt in 2008.



## 4. OTHER "TRAPPED" MINERALISATION

(i) For the same lack of infrastructure reasons, there has been curtailment of new mine development and/or expansions in the NW Queensland district, for deposits other than phosphatic also.

## 5. MINEMAKERS' WONARAH PHOSPHATE DEPOSIT OVERVIEW

- (i) Currently a JORC compliant resource position of over 460Mt of rock phosphate and this will be significantly improved during 2009 (Figure 3).
- (ii) Likely to be mined for decades.
- (iii) It is the most westerly of all the known deposits and therefore the closest to the north-south standard gauge rail line.
- (iv) As luck would have it, it lies immediately adjacent to the only bitumen link between the Northern Territory and Queensland, the Barkly Highway.
- (v) Minemakers aims to truck product by road train to Tennant Creek, rehandle it and rail it to Darwin.
- (vi) This option leads to potential for early production, but also leads to:
  - An upper practical production limit estimated at about 3Mtpa.
  - Inefficiencies and extra costs of about \$50/t which transfer ultimately to reduced taxes and royalties.
  - By world standards, the project will not be a low-cost producer.
  - Additional greenhouse gases, ETS penalties etc.

Because of their even worse situation with respect to present infrastructure, the other deposits and their owners have an even greater need for additional infrastructure than do Minemakers and Wonarah.

- (vii) Nonetheless, the relatively favoured infrastructure position for Minemakers leads to its potential to be:
  - First significant cab off the phosphate rank.
  - The one needing the least CAPEX to get into production.
- (viii) In the current global financial crisis, probably the easiest one to finance.



Wonarah Phosphate Project Overview

SEL26451
SEL26452
Freehold CLC
Applic

EL9979

Arrukeurra
Doposit

EL26589

EL26589

# Figure 3

## 6. SO WHAT IS NEEDED?

# 6.1 Railway Infrastructure

## From a Minemakers' Perspective

- (i) A standard gauge rail link from Wonarah to Tennant Creek would enable a \$50/t saving on costs and the ability to increase production from the artificial 3Mtpa ceiling.
- (ii) From Tennant Creek, phosphate can be:
  - Railed north to Darwin for export to fertiliser factories in Asia.
  - Railed north to Darwin as feed for a potential major fertiliser plant (natural gas for ammonia will shortly be abundant from the new pipeline from Blacktip to Darwin, and the Japanese IMPEX decision to bring Kimberly gas to Darwin)
  - Railed south to existing and new fertiliser plants in southern Australia and Western Australia.



- (iii) That \$50/t saving could either:
  - Allow a cheaper product to be made available to Australian fertiliser plants.
  - Make Wonarah more competitive against traditional Moroccan, etc, suppliers.
  - Or even keep the mining operation afloat should the world enter a future period of sustained low rock phosphate prices.
- (iv) It needs be borne in mind that a new and viable Australian rock phosphate industry (as opposed to Incitec Pivot's vertically integrated phosphate fertiliser production) does need long term prices well above the old levels of US\$50/t fob ex Morocco. Australian rock simply cannot compete because none of the deposits are near the coast and/or with cheap freight access to a port.

So assuming a long term "middle of the road price" of say US\$200/t fob Morocco, then that AU\$50/t saving in freight which would result from having a rail link to Tennant Creek is obviously potentially very important. It could mean viability, or otherwise, of the entire operation or could have a large impact on profitability.

## From a Broader Mining Industry Perspective

- (i) The attached map "Australia's Hot Phosphate Plays" shows both known deposits and the area that is the subject of exploration for phosphate. Development of all of them would be enhanced by that railway and, in most cases, will actually depend on it.
- (ii) The Mt Isa Cloncurry district is richly mineralised but the main products have been high value smelted products, such as from Mt Isa, or high value concentrates such as from Osborne. They have been able to sustain the high cost of freighting to a port. However, recent mine closures, such as at Copperco's mine near Cloncurry, have highlighted how in times of low prices, mines cannot survive the additional high costs of overcoming freight disadvantage.
- (iii) Additional to that, high tonnage, lesser value products such as magnetite are currently not economic due to freight costs/lack of cheaper freight infrastructure.

Examples of this are magnetite deposits in Queensland near the Northern Territory border, and also mines such as Osborne in Queensland which produces magnetite as a by-product but it is simply being stockpiled, as it cannot be gotten to market economically because of the usual tyranny of distance.



# 6.2 Darwin Port Expansion

Minemakers alone wants to start operations at 3Mtpa and, subject to development of markets, to expand it to 6Mtpa for exports, plus whatever can be sold within Australia.

As far as Australia is concerned, the existing rail network southerly from Tennant Creek is in place to service markets in the southern States and Western Australia.

For exports, however, significant and probably sequential expansions of the Port of Darwin will be required.

Today, at best, Minemakers could export 1Mtpa and this is largely because of some recent availability over the wharves at the Port caused by the impact of falling metal prices and their effects of exportability of some current users of The Ghan railway and the Port.

The NT Government is committed to an expansion of the Port of Darwin so that Minemakers can export 3Mtpa from the end of 2010. It is to be hoped and presumed that the NT Government will be able to source the funding to fulfil that promise.

Later, more expansions may well be required so as to be able to handle, and benefit, from:

- Wonarah expansions
- Other phosphate project start ups
- Other commodity mines in NT and also tapping into NW Queensland mineral deposits

## 7. THE WONARAH RAILWAY

Earlier this month, Minemakers and Australian Transport and Energy Corridor Ltd ("ATEC") announced they are about to undertake a feasibility study on a 250km spur line from Tennant Creek to Wonarah. If built it will cover about 40% of the distance between Tennant Creek to Mt Isa. It will be of great importance to Minemakers and potentially would allow future mine expansions. It will not do anything much for development of the other phosphate and non-phosphate deposits.



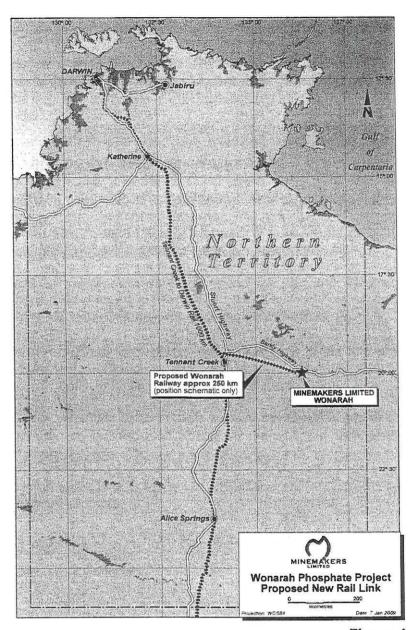


Figure 4

## 8. THE SOLUTION

Australia can become a major player in the world rock phosphate and phosphate fertiliser industry. Competition could be introduced. However, effective transport infrastructure is needed to overcome the very significant costs associated with moving bulk freight.

## It will need:

 Construction of a standard gauge rail link between Mt Isa and Darwin, firstly by construction of a Tennant Creek – Wonarah spur.



- Some upgrading of the north-south Ghan railway (mainly just extra passing loops, so not a great expense) and then an extension to Mt Isa.
- Appropriate expansion of the Port of Darwin, the only natural port capable of that level of expansion between Townsville and the Pilbara and the only one with established associated infrastructure, a population base etc.

## 9. PROGRESS AND EVENTS SINCE NOVEMBER

Mineral prices have continued to collapse and mine closures and cutbacks are being often announced. The minerals supercycle has now been completed and Australia was not able to take full advantage of it because its poor freight and port infrastructure did not allow maximisation of export production.

The sheer size of the world's population and the demand for products will ensure that there will be future supercycles. Establishing infrastructure now will ensure that Australia can maximise its opportunities in the future.

The decrease in rock phosphate prices will be welcome to farmers, but mean it is less likely that new Australian phosphate deposits will come into production due to the costs of getting high tonnages to and through a port.

Due to its relative proximity to the Ghan railway, Wonarah is better positioned than any of the others but reduced operating margins will hamper expansion plans.

- The Minemakers/ATEC study on the Wonarah/Tennant Creek rail line has been announced.
- The expansion of the Port of Darwin has been short-listed on the Infrastructure Australia Study, but a proposal to build the Tennant Creek to Mt Isa railway was not.

Yours sincerely

Andrew Drummond Managing Director