



**AGRI ENERGY**  
LIMITED

**TASMANIAN MAGNESITE PROJECT**

**RETENTION LICENCES**

**ANNUAL REVIEW**

**RL 17/1987 AND RL 18/1987**

**Peter Anderton**  
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## **BACKGROUND AND TENEMENT MATTERS**

This Report covers work done on the two Retention Licences, RL 17/1987 and 18/1987, which comprise the Tasmanian Magnesite Project (Tas Mag Project). The tenements are owned by Tasmania Magnesite NL, a subsidiary of Agri Energy Limited (formally known as Australian Ethanol Limited). Via a July 2005 Agreement, Minemakers Australia NL, a subsidiary of Minemakers Limited (“Minemakers”) was granted an option to acquire the tenements from Tasmania Magnesite NL. In June 2006 the option lapsed and ownership of the tenements reverted unencumbered back to Agri Energy Limited.

Agri Energy Limited has now reassumed management of the Project and is now responsible for conduct of exploration and evaluation under the terms of the Conditions attached to the Licences.

This Report covers the year to 2 March 2007.

The Retention Licences are separated by a few kilometres, and this gap has been secured by the application for an Exploration Licence by Mineral Holdings Australia Pty Ltd.

## **MAGNESIUM OUTLOOK**

The outlook can best be described as mixed for non-Chinese magnesium metal production. As is well known, the three major projects mooted for start-up in Australia in the earlier part of this decade were abandoned due to a combination of weak Magnesium metal prices – which had been driven down by excess Chinese export capacity – and relatively high capital, energy and other operating costs.

In early 2006, Magnesium International Limited, which had previously been SAMAG, the South Australian-based hopeful, had to announce large blow-outs in capital costs at its intended new plant in Egypt. It had moved its operations there having been lured by apparently cheaper costs in this Third World country. It seems very unlikely that this project will now go ahead.

Magnesium metal prices rose substantially during 2005 as Chinese energy prices have trended upwards towards world parity. Nonetheless the style of plant that is environmentally acceptable in the Western World remains is generally now too expensive to enable a satisfactory return on investment funds.

It is evident that there is a need for a new Magnesium metal production technology and several research groups are trying to commercialise that new technology. Until that materialises it is unlikely that the Tasmanian Magnesite Project will support a Magnesium metal production facility.

In February 2007, Agri Energy Limited in conjunction with Ecka Granules Australia Pty Ltd, signed a Memorandum of Understanding committing to financially assist CSIRO in its research in this regard.

## **MAGNESIA OUTLOOK**

Previous metallurgical test work has indicated that the Tasmanian Magnesite Project can generate high quality magnesia from calcination and/or dead-burning.

While magnesia prices have been depressed over the last few years by Chinese exports, some recovery is underway. Additionally, China has relatively low proportions of high grade magnesite. So it has to mine (and export as lower grade magnesia) the large quantities of that lower grade material that are necessarily produced in consequence of mining its high grade needs. It seems that in the future there may be a strongly increasing price gap between lower and higher grade magnesia, and this may lead to an opportunity for our project, and for a calcinations plant in Tasmania.

Within Australia, there seems to be further potential to use the Tasmanian Magnesite Project product to feed a calciner which has already been built in Western Australia.

## **WORK DONE**

### **1. Project Overview**

Featherstone Geological Consultants were commissioned to undertake a technical review of the Project, concentrating on geological aspects.

It effectively indicates that there is probably sufficient drilling information to allow design of a pit or quarry for production of magnesite that could be shipped elsewhere in Australia to be calcined in an existing facility. However, to attain a bankable feasibility for the capital required for the construction of a new Tasmanian calcination plant, infill drilling will be required to raise confidence in the resource estimates and the continuity of the quality of mineralisation.

### **2. Tasmanian Calcination Plant**

In conjunction with Mr Neil Thomas of Mineral Holdings Australia several discussions have been held with unlisted Australian and international groups keen to study construction of a calcination kiln on the northern coast of Tasmania and which would use Bass Strait gas as an energy supply. This continues to be pursued.

### **3. Western Australian Calcination**

The expanding Western Australian laterite nickel industry is a large user of lower to intermediate grade magnesia, which is currently being imported at high cost from Queensland.

Cockburn Cement Ltd, a subsidiary of Adelaide Brighton Limited, owns a mothballed calcination plant near Perth. It is due to complete metallurgical test work on drill core from RLs 17 and 18/1989 shortly and preliminary results verbally reported are encouraging.

Production and export of magnesite to WA is not seen as an end-game, but rather as a way to generate the additional information, initial siteworks and cashflow which will facilitate commitment to construction of a full calcination plant in Tasmania.

### **4. CSIRO Research**

Several meetings were held with officers from CSIRO Melbourne, Ecka Granules and the process consultant of Agri Energy Limited, Mr John Canterford. concerning the potential to accelerate funding for its research on production of Magnesium metal by the carbothermic process also known by the CSIRO as the MagSonic Process. The aim is to demonstrate process and project concept. Agri Energy and Ecka Granules are awaiting a funding proposal from CSIRO to the Tasmanian Government with a series of meetings planned in March and April 2007.

Should a satisfactory position be reached with the Tasmanian Government Agri Energy Limited and Ecka Granules Australia intend to support the second stage program and proof of concept pilot plant test work by the CSIRO in Melbourne, Victoria. Should the proof of concept test work prove successful then the groups intend to move to a small commercial scale pilot plant in Bell Bay at the Ecka Granules Facility. The pilot plant test work and small commercial scale facility program is expected to extend over a two to three year period.

## **PLANNED EVALUATION WORK**

During 2007, the following is planned:

### **1. Magnesium Metal**

Secure the funding commitment and agreement with the Tasmanian Government.

CSIRO aims to further undertake pilot scale Magnesium metal test work to prove the concept of the MagSonic Technology.

Progress with the support of Agri Energy Limited, Ecka Granules Australia, CSIRO and others to a small scale pilot plant facility to be located at Bell Bay in Tasmania.

### **2. Calcination – Tasmania**

If possible, in conjunction with Mineral Holdings Australia, secure an agreement with the party which is keen to build a calcination plant in Tasmania.

### **3. Calcination – Western Australia**

Continue the test work with the possible end users on the potential to produce magnesia for the WA lateritic nickel industry.

## **EXPENDITURE**

Expenditure during the year under review is relatively difficult to quantify as much of it was done in conjunction with other projects, or is being done at no cost to Agri Energy (eg the calcination test work).

A reasonable estimate is AUS \$40,000 spread over both RLs including the funds allocated to the MagSonic Technology development being undertaken by the CSIRO.

2007 expenditure will be governed by the funding levels to be agreed with CSIRO and Ecka Granules Australia.