



**NEW WORLD ALLOYS LTD**

**FINAL REPORT**

**EXPLORATION LICENCE 10422**

**DOUGLAS**

**Period Ended 31 March, 2003**

***S H Robinson  
April, 2003***

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## **EXECUTIVE SUMMARY**

The area covered by EL 10422 was identified as being prospective for limestone flux to be used in the production of magnesium metal near Batchelor. The results of all relevant previous exploration were compiled and assessed. A programme of field sampling of outcropping limestone was carried out. Ten rock chip samples were taken for geochemical analysis.

Some of the samples from areas of outcropping limestone do exhibit good quality characteristics and are likely to be suitable for use as a flux. More detailed evaluation of the limestone was postponed pending the completion of metallurgical testwork relating to the Batchelor Project, grant of environmental approvals for the Project and further progress on the definitive Feasibility Study for the Project.

More recently it has become clear that there is insufficient energy available in the Darwin region to supply the proposed Batchelor project. Unfortunately there has been no commitment to a timeframe for the development of any new energy project and the Company has been forced to place the Batchelor project on an indefinite hold. With the project shelved there is no longer any requirement to continue the work on the limestone flux source and EL 10422 was surrendered.

## **INTRODUCTION**

Douglas EL 10422 was applied for in mid 1999 because the process technology that Mt Grace was then intending to utilise required a feedstock of approximately equal quantities of magnesite and limestone. At that time Mt Grace had outlined a magnesite resource at Batchelor but had not yet located a limestone resource.

A review of the regional geology revealed that there were significant quantities of limestone known in the Daly River Basin. Three criteria were adopted in land selection:

- outcropping and/or near surface limestone/dolomite
- reasonably close to Batchelor i.e. northern part of Basin
- well serviced by existing roads

The Douglas area is part of one of two suitable areas identified. As the general area is partly freehold land and partly leasehold land it was decided to make two separate applications; one covering leasehold land EL 10421 and one over the freehold land EL 10422.

Mt Grace has since decided to utilise a separate, although similar process technology. This process technology requires much less limestone in the feedstock, less than 10%. Hence these limestone areas are of interest to Mt Grace but are not as critical as they may have been for the earlier process approach.

## **TITLE PARTICULARS**

Exploration Licence 10422 was granted over 20 graticular blocks on 25 July 2000. It covers 43.74 square kilometres. The expenditure commitment for the first year was set at \$19,000 and a security bond of \$10,000 was required. As a consequence of the change to the Australian Geodetic Datum it was subsequently determined that EL 10422 actually covered portions of 22 graticular blocks. This meant that 11 of those 22 blocks had to be surrendered prior to 24 July 2002 in order to comply with normal relinquishment provisions.

The Exploration Licence covers portions of two separate freehold titles. Mt Grace has opened discussions with both regarding access for exploration. While no formal agreement has been entered into, both parties were prepared to allow access for geological inspection and rock chip sampling.

## **GEOLOGICAL SETTING**

The Daly River Basin is a sedimentary basin of Cambrian age which overlies the Proterozoic metamorphic basement. It stretches from southwest of Adelaide River to well south of Katherine. The main stratigraphic unit of interest is the Tindall Limestone. It has been explored as a source of limestone for cement manufacture but areas in the northern part of the basin are generally a little too high in MgO content to be suitable for

cement. This is not an issue for the process technology proposed to be used by Mt Grace. Generally the Daly River Basin is relatively undeformed and gently dipping.

## **PREVIOUS EXPLORATION**

A comprehensive search of the NTDME records of previous exploration was made to identify those containing references to exploration for limestone in the northern part of the Daly River Basin, particularly within the Tindall Limestone. Those reports that appeared to be relevant were checked. As was expected some of these did not contain useful data and some contained potentially useful data but the location of samples taken was unclear.

The following reports contain relevant data

CR 1982 – 0332	Report on Cambrian Limestones, Daly River Basin NT – B. Daily, University of Adelaide.
CR 1981 – 0189	Amended Report for year ending 11-06-1981 EL 2067, 1373, 1747, 1748 – L.G.B. Nixon.
CR 1981 – 0009	Final Report on Exploration EL 2052 – Adelaide Brighton Cement.
CR 1980 – 0187	Annual Report EL 1748 – W.J. Fisher.
CR 1979 – 0158	Final Report EL 1748 – Northern Cement Ltd.
CR 1977 – 0145	NT Fenton Geological Report EL 1322 – International Mining Corporation.
CR 1979 – 0154	Final Report Sandy Creek EL 1754 – W.J. Fisher.
CR 1979 – 0015	Final Report EL 1373 – W.J. Fisher Northern Cement Ltd.
CR 1973 – 0261	Annual Report EL 477 – Northern Cement Pty Ltd.
CR 1972 – 0020	Final Report PA 2829 – Northern Cement Pty Ltd.
CR 1986 – 0269	Relinquishment Report EL 2118 – Pancontinental Mining Ltd.
CR 1978 – 0131	Final Report EL 1426 – W.J. Fisher for Northern Cement Pty Ltd.

All of the above exploration programmes, to the extent that limestone was targeted, were abandoned after only preliminary work. Conclusions were that the limestone either carried too high a silica content or that the MgO levels were too high for the material to be suitable for cement manufacture. Mt Grace also requires a low silica content but will be happy to accept material with an MgO content of up to 10 to 12%.

Unfortunately none of the samples taken and assayed, as reported in the above listed reports were located within the boundaries of EL 10422.

### **WORK COMPLETED**

A further review of the previous work was undertaken primarily for familiarisation purposes. Discussions were held with the landowners and their representatives with the conclusion that both of the owners and the tenant on one of the properties were prepared to permit access for the purpose of geological reconnaissance and rock chip sampling. A search of the register of aboriginal sites was undertaken to ensure that any recorded sites were not accidentally damaged or intruded upon. There are no recorded sites within the boundaries of EL 10422.

Several days were spent traversing the area using a vehicle on existing tracks and traverses on foot across other areas not well served by tracks. Ten samples (32657 – 32666) were collected and sent to Analabs in Perth for analysis using XRF. These results have been reported upon in the 2002 Annual Report on EL 10422.

### **EXPENDITURE**

Expenditure on EL 10422 during the period from 24 July, 2002 to 31 March, 2003 is stated below.

	\$
Geologist – Data assessment, 2 days	1,200
Overhead and administration	285
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<b>TOTAL</b>	<b>\$1,485</b>
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### **REHABILITATION REQUIREMENTS**

As there has been no ground disturbing work undertaken on EL 10422 it is not expected that there will be any requirements for rehabilitation. During the life of the tenement the only work carried out on site was geological reconnaissance and rock chip sampling.