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Annual Report for RL8802 and ML2M/99 for period ending 22 May 2000.
Golden Triangle Resources NL*
Laughton, C.A. 2M/1999; RL2/1988

**ANNUAL REPORT FOR RL8802 AND ML2M/99 FOR THE
PERIOD ENDING 22 MAY 2000**

by

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for

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MINERAL RESOURCES
17 MAY 2000
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RL 8802 PT 4 See folio 3.
2M/99 PT 1. See folio 65.

20 October 2000

Abstract

The work recorded and referenced to in this report follows on from the Annual Report for the period ended 22 May 1999. The principal objectives of the investigations carried out by Golden Triangle Resources NL to the conclusion of the project have been to upgrade the resource, and continue laboratory investigations to optimise the flow sheet.

During the period January to May 1999 the second round of drilling was carried out to further define the Main Creek magnesite deposit to that of an indicated resource.

Other pertinent activities related to the process testwork for the recovery of high purity magnesium from the magnesite ore, with particular attention on impurity removal in the dehydration stage.

The recommendations were to continue all phases of activity, with identification and drilling of a measured resource block and ore reserve definition for mine planning, and continuation of the metallurgical testwork program.

However, the Option Deed was terminated in September 1999 and Golden Triangle Resources NL withdrew from the project.

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1. Introduction

The drilling program carried out during the last five months of the previous 12-month period ended 22 May 1999 was designed to upgrade the magnesite resource from the Inferred to the Indicated category in the Main Creek deposit area, in northwest Tasmania (Fig.1) as distinct from the Bowry Creek deposit area. It is reported on in this period as some time was necessary for receipt of all analytical data, and for Newnham Exploration & Mining Services to put together and calculate the new resource data. The report (Newnham, 1999, N11) is dated 30 June 1999. The 21-hole core-drilling program encompassed 6,473 metres of drilling on RL8802 and ML2M/99. The relationship is clearly displayed in Fig.2 of this report, showing the effective replacement of the previous CML46M/90 by ML2M/99, the "Magnesite Lease" as was originally applied for by Savage Resources Limited, and approved by the Director of Mines, Mineral Resources Tasmania on 10 March 1999, and granted by the Minister on 25 March 1999.

The contiguous tenements are located in northwest Tasmania 6 km south-southwest from the Savage River iron ore mine.

The key title, is the "Magnesite Lease" that was to be transferred to GTR to complete the exercise of the Option Deed.

2. Review of previous work

2(a) Prior to current tenements

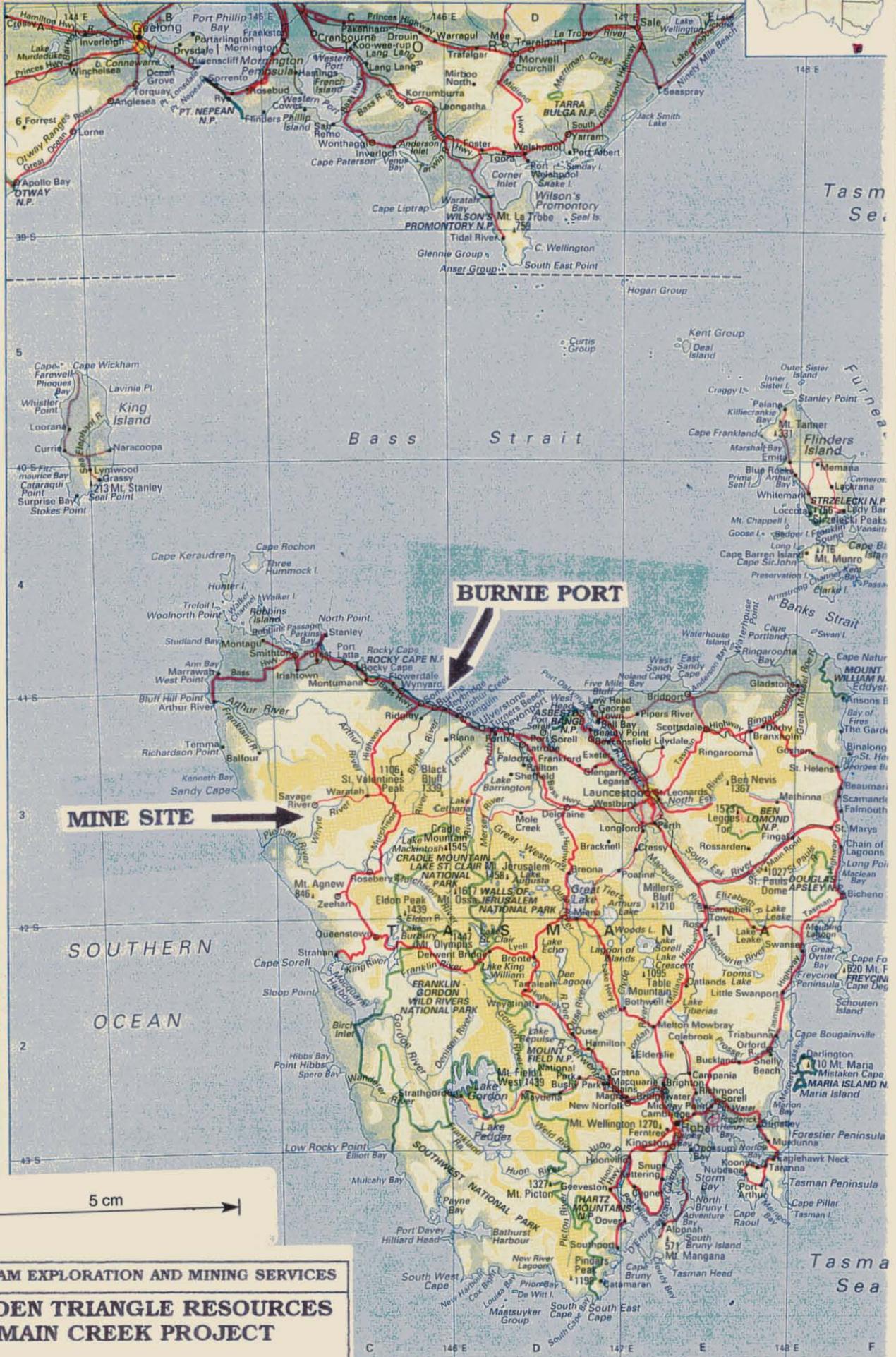
The two current tenements (RL8802 and ML2M/99) that form a unit with respect to the work done on the investigation of the magnesite resources as a potential feedstock for magnesium metal production, have different histories, with the former in existence for a much longer time period. The latter replaces the greater part of CML46M/90, but with the excision of the Long Plains magnetite deposit in 5M/99 from the southern end, and the ochre and umber deposits in 3M/99 and 4M/99 respectively from within 2M/99, although only to depths of 40 and 25 metres respectively.

Prior to the conversion of CML46M/90 and the above changes GTR had considered the integrated development of the magnesite resources, the magnetite, the ochre and the umber deposits (Newnham, 1998, N7). [It should be noted that the umber deposit is incorrectly located in Fig.1 of that report, as it lies to the southeast in CML46M/90 not in RL8802.] This was a consequence of certain synergies relating to the development of the pigment resources that could also affect the mining of the magnesite.

The prior tenement to RL8802 and CML46M/90 was Exploration Licence 4/61 and the work on that tenement, as well as the successors, particularly in relation to the magnesite deposits was reviewed in the Annual Report for the period ending 22 May 1999 (Laughton, 2000).

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GOOSTIG



MINE SITE

BURNIE PORT

NEWNHAM EXPLORATION AND MINING SERVICES

**GOLDEN TRIANGLE RESOURCES
MAIN CREEK PROJECT**

LOCATION PLAN

Scale: 1:2500000

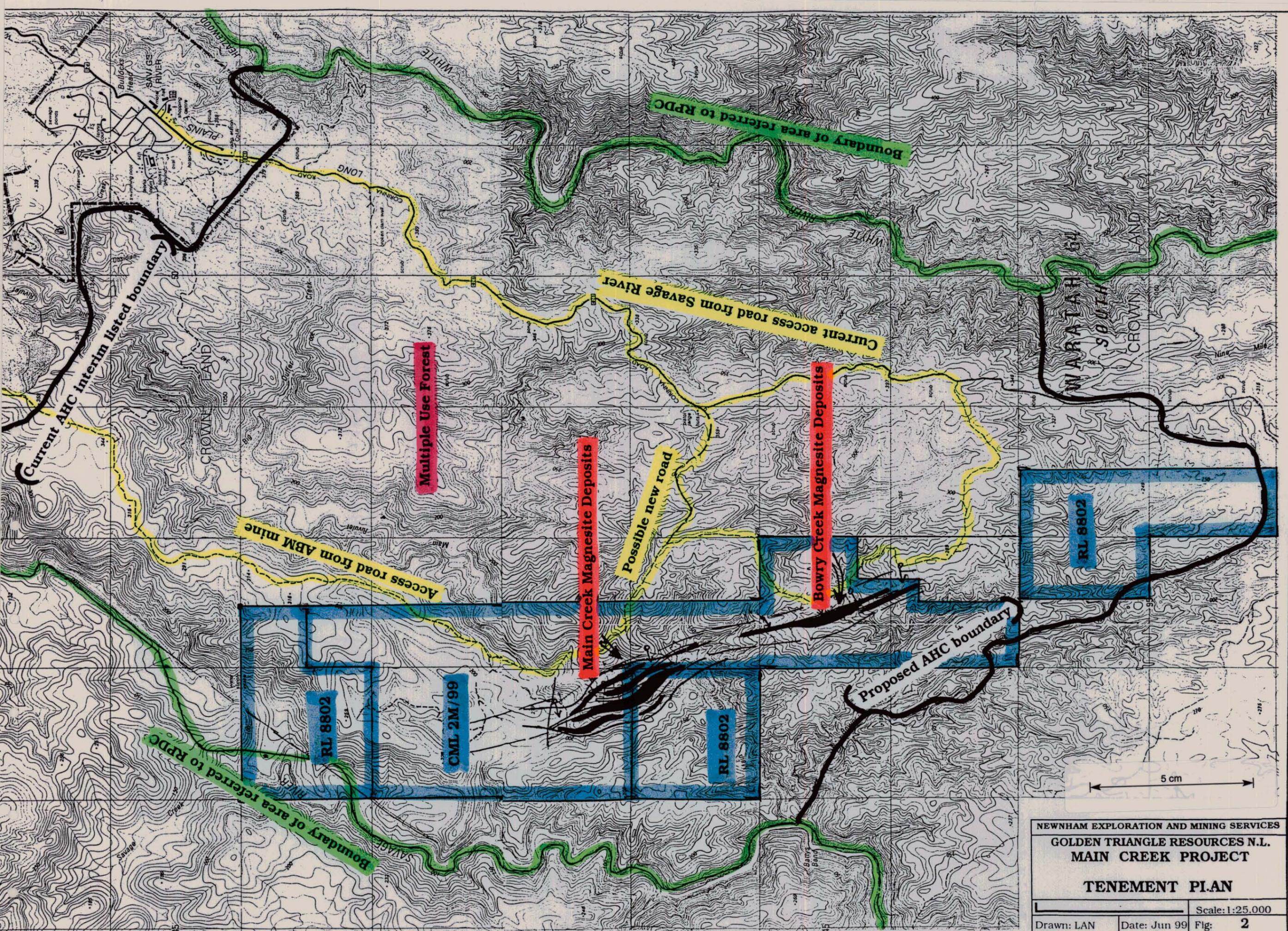
Drawn: LAN

Date: Jul 98

Fig 1

Transverse Mercator I

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NEWHAM EXPLORATION AND MINING SERVICES
 GOLDEN TRIANGLE RESOURCES N.L.
 MAIN CREEK PROJECT

TENEMENT PLAN

Scale: 1:25,000	
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Fig: 2	

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2(b) During current tenements

The previous work on RL8802 has been described and summarised in the Annual Report for the period ending 22 May 1999 (Laughton, 2000). ML2M/99 was only granted to Savage Resources Limited by the Minister on 25 March 1999, near the end of the second drilling program (near the end of the previous period) on the magnesite resources, carried out by GTR. This is reviewed in this Annual Report when the report was received (N11) for the reasons given in the introductory section.

3. Exploration completed during the report period

During the period January to May 1999 a 21-hole core-drilling program for 6,473 metres was completed on the Main Creek magnesite deposit. This allowed the upgrading of that part of the 'inferred' magnesite resource in the project area to the 'indicated' category.

This gave 23.76 million tonnes at 44.03% MgO grade for the Main Creek deposit, which extends from ML2M/99 through the northeast corner of RL8802. The details of this work are in a combined report for the two licences dated 30 June 1999 by consulting geologist L. Newnham (1999, N11). The resource occurs in five lenses with a strike length of 700m within a 200 to 400m wide carbonate unit that was tested to a vertical depth of 200 to 300m beneath the weathered zone. The resource estimation method used conventional contouring and area measurement methods on longitudinal projections constructed from sets of interpretative geological level plans and sections. It was further noted (N11, p.8) that "there exist substantial additional inferred resources developed as smaller lenses adjacent to and between the principal indicated resource lenses." Furthermore, "potential also exists at main Creek to substantially increase these identified resources by way of lens extensions both along strike to the north and south and at depth down-dip."

4. Other activities carried out during the report period

Lakefield Research Limited continued preliminary metallurgical work including further trials of pre-leaching beneficiation through flotation and the Alcan dehydration technology (ADT).

4(a) Metallurgical testwork programs - flotation

Calcium removal from the leach solution that is present in the association with the magnesite as dolomite is generally the most difficult task because of its similar behaviour to magnesium. Whilst the calcium content varies in the ore and can be minimised by selective mining in the underground mode, the total available resource increases significantly if an additional 1% CaO above the cut-off limit is allowed for. Hence, a testwork program was initiated to determine whether a pre-leach flotation aimed at calcium removal might be cost effective. This was the aim of the preliminary, baseline tests at Lakefield Research Limited (1999, L21) following a literature search that gave significant encouragement to proceed.

"The results of the preliminary tests have demonstrated that dolomite, which is the main calcium carrier, can be removed from the magnesite, to below 1% CaO after

development of a commercial beneficiation process.” (Abstract, L21). The details of the tests are contained in the report.

4(b) Metallurgical testwork programs – dehydration impurity rejection

The most critical and difficult area of the process flow sheet development lies in the dehydration. Work in the preceding period (Laughton, 2000), indicated that the patented Alcan Dehydration Technology (ADT) should be the first choice. As a consequence agreement was obtained with Alcan to proceed with their assistance to develop the ADT into a practical, commercial technology commencing with Main Creek magnesite as the feedstock through Lakefield Research Limited.

The initial testwork began with the aim of examining the potential of the ADT to reject impurities other than water/oxygen from the dehydrated product. Six tests were done. A method supplied by Alcan International was followed. Three synthetic solutions, containing magnesium chloride and selected impurities at selected levels, simulating liquor at three points in the envisage flow sheet Lakefield Research Limited, 1999, L22). However, in accordance with the Confidentiality Agreement between Alcan and GTR the results of the testwork cannot be released in this report.

5. Discussion of results

A more than adequate indicated resource was outlined at the Main Creek magnesite deposit to supply feedstock to an 80,000 tpa magnesium metal refinery at a rate of 400,000 tpa magnesite for a minimum 50-year period. The average grades of the five lenses, defined by >10m horizontal widths, ranged from 42.63% MgO to 45.25% MgO. Underground mining of the competent material provides the opportunity for selective mining of the best quality material within each lens, where the best ground conditions occur. The same applies to the Bowry Creek lens, and in both areas the magnesite remains open in depth and along strike.

The laboratory testwork on flotation indicated that a pre-leach flotation circuit could achieve a significant reduction in CaO content if required, which may not be necessary. The same applies to silica removal based on work done in the previous period and had been determined to be unnecessary. The results show that the magnesite ore is a much better potential feed for magnesium production than for magnesia.

No further work was done on the project by GTR during the period, other than that described, due to the termination of the Option Deed with SRL and the withdrawal of GTR from the project in September 1999.

6. Conclusions

Development considerations and recommendations following the completion of the second drilling program are detailed in report N11. These indicated the most attractive area for initial underground mining in the Main Creek deposit, and the preferred access route to the portal site via the Corinna Road. An additional drilling program was recommended for detailed mine planning and elevation of a 10 to 15 Mt block to the measured resource category, and a

portion to 'reserves'. The drilling program should be preceded by a statistical study to examine variations in assay data within and between drill holes.

Initial dolomite separation test results demonstrated that sequential flotation of magnesite from dolomite is feasible, and should be followed by development of a reagent scheme, optimisation of that scheme, and determination of the optimum flow sheet configuration.

7. Environment

On completion of the drilling program, the access tracks were regraded and cross-drains established where appropriate.

A proposal for the environmental investigations program covering 'Land alienation', 'Water quality', 'Amenity', 'Socio-economic development', 'Cultural values', 'Housekeeping', 'Traffic and transport', was not implemented when the project came to a close in September 1999 with the termination of the Option Deed.

Expenditure

CATEGORY	EXPENDITURE	SUB-TOTAL	TOTAL
Geology	73606	73606	
Geochemistry	21733	21733	
Geophysics – air	0	0	
Geophysics – ground	0	0	
Metallurgy	58531	58531	
Feasibility studies	49303	49303	
Rehabilitation	0	0	
Drilling	62512	62512	
Gridding	0	0	
Other			
Field office	6474		
Government fees	1221		
Legal fees	34261		
Superannuation	4994		
Travel expenses	11938		
		61330	
			327015
Overhead – 10%			32701
Total expenditure			359716

References

Lakefield Research Limited. 1999 An investigation of the removal of dolomite from a magnesite ore sample. Progress report 1. LRL Project No. LR 5519. GTR Report L21.

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Newnham, L. 1998 Integrated development of: - Main Creek magnesite; Long Plains magnetite; pigments: a preliminary evaluation. Report for Golden Triangle Resources NL by Newnham Exploration & Mining Services, 12 August 1998. GTR Report N7.

Newnham, L. 1999 Main Creek Project report on drilling program – January-May 1999 and magnesite resource potential. Report for Golden Triangle Resources NL by Newnham Exploration & Mining Services, 30 June 1999. 4 Vols. GTR Report N11.

Keywords

Standard mineral names:- (Magnesia), magnesite, magnesium, ochre, pigment, umber.

Standard mine/deposit names:- Bowry Ck, Main Ck.

Standard keywords:- Beneficiation, Carbonate hosted mineralisation, dolomite, (core drilling, dehydration, environment), flotation, hydrometallurgy, mining: open pit, mining: underground, resource estimation,