

Copper Mines of Tasmania Pty Ltd

RL3/2006
Copper Clays Annual Report
3rd Nov 2008 – 3rd Nov 2009



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**Date: 15 September 2009-09-15
CMT report no: T2009-001**

Distribution:
MRT - Hobart
CMT - Queenstown

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1. Introduction

RL 3/2006 is a 2 km² retention licence acquired by Copper Mines of Tasmania after a decision to relinquish the exploration license EL 52/94 to the east of the mining lease 1M/95. The retention licence (Figure 1) is within the land district of Montagu vicinity of Linda. The area covers three known mineralised zones: Lyell Consols, Lyell Blocks and King Lyell. The King Lyell deposit is located within a SE plunging tight syncline, the basement of the syncline consists of the Pioneer Sandstone which overlies the Owen Conglomerate. Gordon Limestone infills the syncline and is the host for the mineralised clay in the southern portion of the deposit. In the northern part of the deposit the clay is exposed at surface and has been interpreted as material that has been derived from the limestone through acidic water reactions.

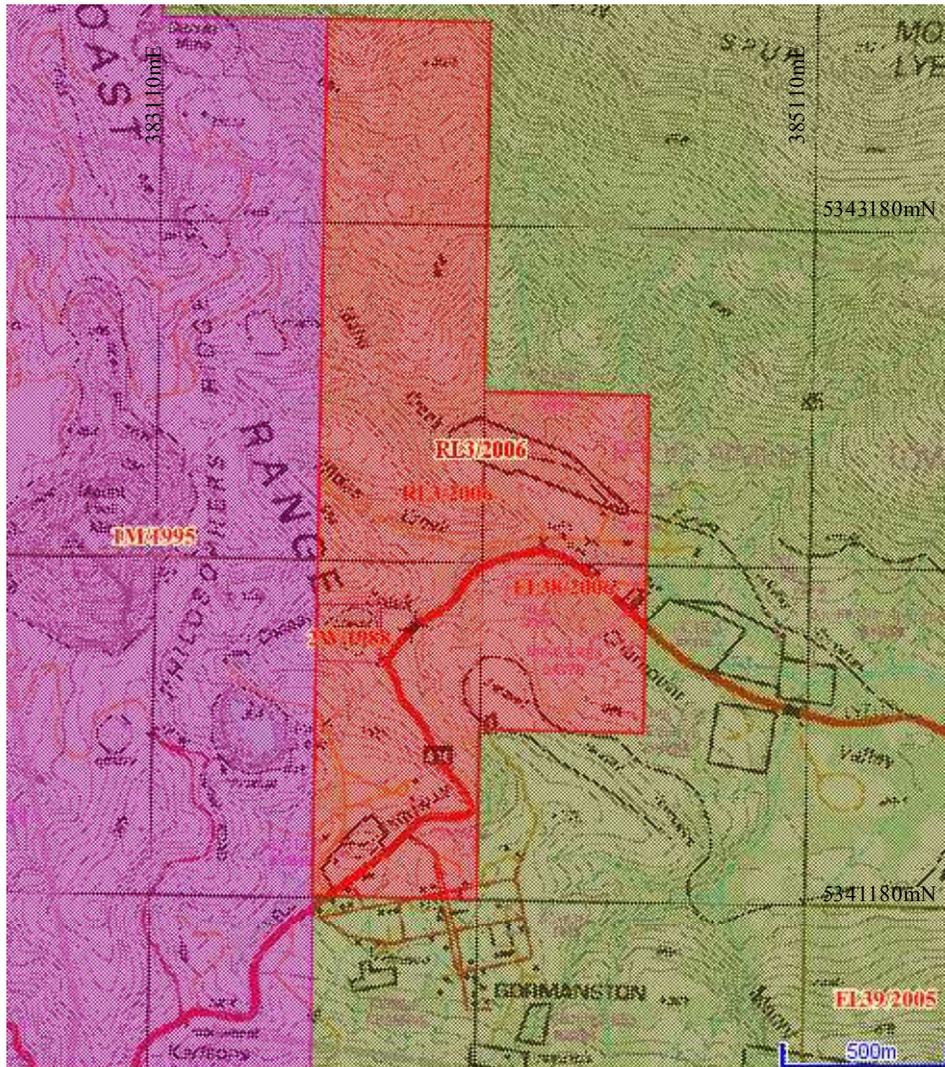


Figure 1, RL3/2006 licence position to the East of 1M/95

2. Review of previous work

2.1 Most significant recent work prior to RL 3/2006 was a report titled 'Open cut potential of the copper clays area Mt Lyell Tasmania' by K. Wills, (1995).

This report summarises previous work done on the prospect and aims to assess the potential resource of the three known copper clay deposits. This work was continued by K. Morrison and J. Knight (1997), with a report titled King Lyell Copper Clays Resource Assessment. This report calculates an inferred resource using wireframed cross-sections and a longitudinal section created from unvalidated historical drilling and the 1996 CMT drilling results. This report concluded that with a modelled pit an estimated resource of 1.2 million tonnes at 1.37% copper exists with a stripping ratio of 2.3:1.

The resource potential was further evaluated with a preliminary mine economics analysis in 1997 by CMT senior Mining Engineer Tony Weston. These reports have been submitted previously to MRT along with the EL 52/94 Linda Annual Report, K. Morrison 1997.

2.2 During 2005, 6 diamond drill holes totalling 452m were drilled to test the reproducibility of historical drilling results and to provide a more defined extent of mineralisation in areas where drill density was low. Only 2 of the 6 holes intersected the mineralised clay (05KLD002 & 05KLD003). The mineralisation in 05KLD002 occurred between 41-55m with a grade of 0.51% Cu occurring through a zone of highly oxidised clay. These results have been used to validate a nearby RC hole (96KLC001) which had reported values of 14m @ 0.51% Cu and 8m @ 1.27% respectively. This drilling program was also used to test modern drilling techniques and their ability to increase core recoveries in clay environments, provide some definition of the extent of the mineralisation boundary and to test the reproducibility of historical drilling (R.Hill, 2006). With this drilling there is now 13 drill holes over the King Lyell deposit.

2.3 Cu Clay Mineralogy Sep 2005 report compiled by McArthur Ore Deposit Assessments Pty Ltd. CMT provided 6 composite samples from a single drillhole for mineralogical assessment, only 3 of the samples contained adequate mineralisation for analysis. The results of this report identified native copper, cuprite (mainly rimming native copper, but also commonly liberated), covellite, chalcocite, bornite and chalcopyrite as the main copper bearing minerals.

2.4 A 3D lithological model based on K.Wills interpretative cross sections and surface mapping from 1995 has been created using Surpac mining software. Using this modelling a wireframe encapsulating the interpreted mineralisation is now available for future resource estimates and to help define future drilling programs.

2.5 Modelling of known underground workings from historical maps around the King Lyell deposit and the Iron Blow was created after the geological model. This data can now be used to establish their effect on any future operation on the King Lyell deposit. The most noticeable features within the King Lyell area include the Batchelor shaft, the 323m level adit and the Iron blow access tunnel. These features directly impact any proposed pit design over the King Lyell deposit. The Iron Blow underground workings link with the Iron Blow access tunnel providing a direct link between the water stored in the Iron Blow pit and presumably the underground workings to the King Lyell area. The condition of the underground workings is unknown.

2.6 Aerial photography was flown on the 8th and 9th of March 2008. This data was then used for vector mapping and contour data was used to update digital terrain models. Aerial photography is flown over CMT's mine lease approximately every two years but this time the Copper Clays district was included in a detailed survey.

2.7 During May 2007 AMC consultants submitted a high level Strategic Review of the Mt Lyell operation with the purpose of identifying and ranking exploration targets and development to extend the life of mine beyond the current Prince Lyell reserves. This review identified the Copper Clay deposits and recommended the initiation of a scoping study to allow the investment in sampling and test work to progress these deposits to a prefeasibility study. Late 2007 – Mid 2008 AMC consultants prepared a scoping study to determine the potential of the Copper Clay deposits. This was used to justify the expenditure required to gain the relevant data to proceed with a feasibility study. The review is a comprehensive overview of the issues and aspects related to mining the King Lyell deposit.

3. Exploration completed

No Exploration was completed during the period of this report.

4. Expenditure

November 08 – November 09: No expenditure was accrued during the period.

5. Environment

During the period of this report no groundwork has had any impact on environmental conditions.

Various environmental considerations have been compiled concerning exploration for the next year of exploration on the licence.

Potential future environmental impact would be contributed initially by a drilling program. As the majority of the site is already significantly disturbed most the drill sites would be situated on the remains of Gaspersic's gravel stockpile. Only the drilling around the boundary of the deposit would impose any significant environmental impact with the possibility of track and drill pad construction. At this stage with a limited expected budget it is unlikely any track construction will be conducted, with most of the planned drilling occurring at the centre of the deposit where there is already significant disturbance.

Environmental concerns related to further expansion of the project have also been identified.

- a. An operation including a small open pit over the King Lyell deposit would most likely intersect an Iron Blow access tunnel. The condition and exact location of this tunnel is unknown. It has been anticipated that drainage and treatment of the water in the iron blow is the most likely scenario for successful operation of the project.
- b. The position of surrounding Iron Blow waste rock dumps are also likely to inhibit pit construction over the King Lyell deposit, a suitable location to relocate this material will be necessary.

6. Conclusions

The justification has been provided to progress the King Lyell deposit with the AMC scoping study suggesting that the King Lyell deposit has the potential to provide a project with a NPV at an 8% discount rate ($NPV_{8\%}$) in the range of A\$20M to A\$40M dependant on commodity price. Again these suggestions are based on limited geological data and are only used as a guide to determine the potential of the project. The results of the report suggest that the King Lyell deposit possesses significant value to CMT and has justified the work required to progress the deposit.

7. Proposed works program Nov 09 – Nov 10

A budget of \$250,000 was approved by Vedanta resources for the King Lyell project on the 11/9/08, this was then put on hold (December 08) due the to sudden economic downturn. Recent discussions have been aimed at getting this project re-approved so drilling can commence.

The proposed works program consists of:

- Detailed geological mapping
- Surface sampling program, collection of bulk sample for metallurgical testwork.
- Drilling program
- Assay and metallurgical testwork
- Resource modelling

References

G. McArthur (2005), *Cu Clays Mineralogy*, McArthur Ore Deposit Assessments Pty Ltd,

K. Wills (1999), *Open cut potential of the Copper Clays area Mt Lyell Tasmania*. Copper Mines of Tasmania Pty Ltd

AMC Consultants, Copper Clay Scoping Study, Copper Mines of Tasmania Pty Ltd, Feb 2005.

K. Morrison and J. Knight (1997), King Lyell Copper Clays Resource Assessment. (*Internal unpublished report*)

K. Morrison (1997), *Copper Mines of Tasmania EL 52/94 Linda Annual Report year 3*.

R. Hill (2006), *Copper Mines of Tasmania, Exploration Licence 52/1994 - Linda, Annual Report for the period ending 01 May 2006*. Copper Mines of Tasmania Pty Ltd