



## Redbank Mines Limited

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*Volcanic Pipe Breccia*

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*or*

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**ASX Code:** "RBM" - shares  
"RBMO" - options

*e-lodgement*

8 Pages

31 January 2008

## Activities Report for the Quarter ending 31 December 2007

### Redbank Copper Project – NT

- ▶ Pre-feasibility study points to robust 6,000+ tpa copper operation with low capital start-up costs at Redbank Copper Project, NT
- ▶ Pre-mining stage Copper production from treatment of stockpiles up 62% on corresponding prior year period to 191 tonnes for the quarter, generating revenue of \$1.2m
- ▶ New volcanic breccia pipe identified from soil geochem work on ERL94
- ▶ Soil geochemistry program locates 16 additional copper anomalies and broad trends indicative of a major copper mineralisation system at depth beneath the known Redbank copper pipe field.
- ▶ Exploration Joint Venture entered into with Glencore International AG on nearby EL 24654

### Mt Kasi Gold Project – Fiji

- ▶ JORC classified Mineral Resource of 3.4 million tonnes at 2.2 g/t Au for 240,000 oz Au
- ▶ Renewal of Leases in Fiji – subject to negotiation with Interim Government in Fiji

### Corporate

- ▶ 1 for 3 Rights Issue and Placement Offer to raise a total of \$5.39m announced 6 December
- ▶ Placement raises \$850,000
- ▶ Mt Haden sale partially completed and Macquarie debt reduced by \$300,000

## 1.0 Redbank Copper Project, NT - 100%

### 1.1 Pre-feasibility points to fast track development of 6,300 tpa Cu Operation

The Company reported the results of a pre-feasibility study commissioned to evaluate development options for the Redbank Copper Project.

The study showed that the project is technically viable and financially robust at current copper price as well as the LME forward copper price over the medium term, generating an attractive return on investment and rapid capital payback.

Under the operating assumptions considered, the base case for the preferred staged project development option will result in:

- ▶ 31,500 tonnes of copper over 5 years, with average copper production of 6,300 tonnes per annum
- ▶ revenue based on resources in the top 100 metres alone of over \$196 million, and
- ▶ EBITDA of \$60 million over 5 years, with average project annual EBITDA of \$12.0 million.
- ▶ NPV<sub>(8%)</sub> is \$25.0m and IRR is 72.5%.

Existing mine infrastructure and the small scale operations recently established attract significant capital cost savings and the opportunity for fast track development with a short payback compared to a new start up operation:

- ▶ Oxides stage - capital costs are \$5.2m (+/-30%), start up within 12 months and payback within 15 months;
- ▶ Sulphides stage - capital costs \$14.2 million (+/-25%), start up within 24 months and capital payback of 18 months.

The individual optimised pits generated by the study (for the Bluff, Redbank and Azurite deposits) show that material in the top 100 metres from surface averages a mining head grade of:

- ▶ 1.44% Cu for oxides and
- ▶ 2.15% Cu for sulphides.

The relatively low capital cost and the adoption of tried and proven copper recovery technology already in use by the Company for the oxides stage represent an attractive

development proposition with low financial and technical risk. Coupled with the significant exploration upside inherent in the Company's exploration portfolio, this provides a solid foundation for sustained growth and attractive returns to shareholders.

### 1.2 Copper Production December Quarter

The limited present production is from the site 'clean-up' or pre-mining Stage 1 of the project and not indicative of production levels anticipated once mining of oxides commences during Stages 2 (oxides) and 3 (sulphides) of the project. The Company regards any interim cash generated from the treatment of these stockpiles as a contribution to fixed costs and its exploration and development budget.

Copper production for the December quarter increased by 8.5% over the previous quarter to 191 tonnes of copper metal equivalent from the treatment of stockpiles (176 tonnes in the September quarter). This is 62% up on the 118 tonnes produced in the corresponding prior year period to 30 December 2006 (revenue of \$716,000).

Gross sales revenue based on prevailing LME spot price was approximately \$1,200,000 net of treatment and refinery charges and before adjustment for unsold finished inventory (\$1,100,000 for September quarter). The final price for product shipped by the Company during the quarter will be determined based on the relevant Quotational Period, usually three months after the date of delivery to the destination port.

### 1.3 Refurbishment of Crushing Circuit

The Company has completed the refurbishment of a two stage crushing circuit during the quarter which is presently being commissioned. The remaining high grade stockpiled material of approximately 20,000 tonnes at 5% Cu will now be crushed and treated will serve to extend Stage 1 of the Project at least until June 2009.

#### 1.4 Completion of soil geochemistry coverage of ERL94 identifies new pipe, 16 additional anomalies and indicates trends suggestive of a major copper mineralisation system at depth

The Company completed a major 2,000 sample soil geochemistry programme on the Redbank operations tenement ERL94 (RBM – 100%) during December 2007. The programme completed soil sampling coverage of areas underlain by the Gold Creek Volcanics, the main host of the copper mineralisation. The soil geochemistry of ERL94 is now defined by over 7,000 data points. The 2007 programme was carried out on a 100m by 50m sample spacing. Samples were collected from the 'B' soil horizon and sieved to collect the -20 mesh (1mm) fraction which was then analysed in the field with a Niton XRF. Quality control samples were also sent to the laboratory for conventional analysis.

The top half of the attached **Figure 1** shows the copper soil geochemistry of ERL94. The old workings at Redbank, Azurite and Prince are clearly expressed with copper in excess of 500ppm. This is a reflection of the mineralisation being exposed at surface enhanced by dust dispersion from the old mining and ore sorting activities. The Bluff deposit is also prominent because of mineralisation exposed at the surface. The soil geochemistry for the Sandy Flat deposit shown in **Figure 1** was collected before the deposit was identified and mined. It is identifiable by a number of peak soil values of between 300 and 400ppm copper. Background levels of copper in soil overlying the host rocks is less than 75ppm. Soil values above 200ppm are considered to be a significant anomaly.

A series of 5 soil geochemistry numbered AN1 to 5 in **Figure 1** were previously defined by CRA Exploration in 1995. The current programme has succeeded in defining a further 16 anomalies of equivalent or higher rank (**top half Figure 1, An6 to An21**).

In addition a new volcanic pipe, **Kerslake** has been identified. The Kerslake pipe is about 60m in diameter and surrounded by a soil anomaly of 150 to 300ppm copper measuring 200 by 300m. Collapse breccias plugging the pipe at the surface do not appear to contain visible copper mineralisation, however the breccia does contain decimetre scale veining of coarsely crystalline haematite which may represent a late stage

replacement of copper sulphides or a haematite rich phase at the extremity of the copper mineralisation system. Significant copper mineralisation may be present beneath the haematitic breccia plug.

The 21 copper soil anomalies now defined do not necessarily all represent copper mineralised breccia pipes extending throughout the entire 200m plus thick sequence of Gold Creek Volcanics like the known copper pipes. However a number clearly have values and dimensions that are consistent with the known pipe signatures.

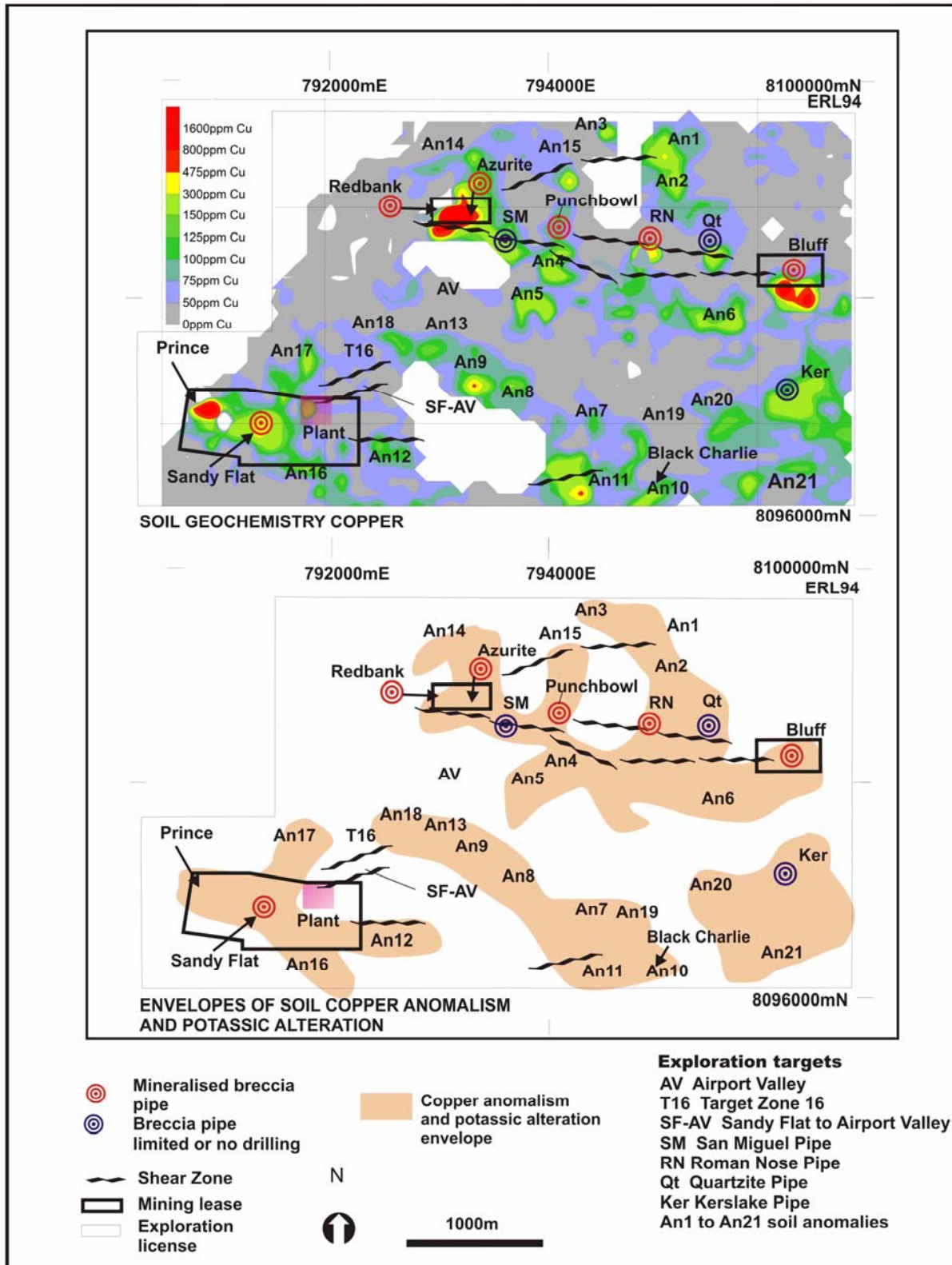
The geochemical data also shows a broader pattern of anomalism that would appear related to a larger mineralisation system at depth beneath the Redbank area. While the copper bearing volcanic pipes produce discrete and intense copper anomalies, there are large areas of lower level copper anomalism that appear not to be related to soil dispersions from pipe sources but to zones of broad anomalism within the Gold Creek Volcanics. In addition the volcanics within these zones often show signs of the potassic alteration that is associated with the copper mineralisation in the Redbank area.

The lower part of **Figure 1** shows the broad areas of low level Gold Creek copper anomalism and potassic alteration with the discrete anomalies and the known mineralisation overlaid. This pattern implies migration of mineralising fluids permeating up through the Gold Creek Volcanics through numerous small fractures and fissures and not just channelled through the breccia pipes. This is consistent with a laterally extensive copper mineralisation source at depth.

Drilling to date has demonstrated that the pipe hosted copper mineralisation extends at least 200+m down into the underlying Wooloogorang Formation. There is therefore potential for the discovery of a major copper mineralisation system at depth beneath the Redbank area.

During 2008 the Company plans to evaluate a number of discrete targets defined by the new soil geochemistry data. While immediate drilling priorities remain for extension and infill drilling of the resources in the known pipes, the new targets and indications of a much larger mineralisation system at depth demonstrates the broader potential of the Redbank Copper Project.

Figure 1



### 1.5 Resin Column to Dewater Sandy Flat Open Pit

The Company has previously announced an initiative utilizing US resin extraction technology to recover approximately 300 tonnes of contained copper in solution (approx value at current prices A\$3.0 million) over a period of twelve months.

The commissioning of the resin column to dewater the Sandy Flat open pit has experienced delays due to further technical difficulties associated with column flow rates and concern as to the resin specification. The Company is working with Ammtec Limited as the technology provider and licensee in Australia to identify possible solutions to rectify these technical difficulties.

The Sandy Flat pit is around 45m deep and dewatering will expose sulphide ore that will be mined as part of Stage 3 of the Redbank Project development.

### 1.6 Exploration Joint Venture with Glencore International AG on EL24654 (Copperado JV)

On 4 December 2007, the Company announced that it had entered into a joint venture agreement with Glencore International AG ("Glencore") to explore an 805 sq km Exploration License EL 24654 close to the Redbank Copper Project in the Northern Territory (Figure 2). The JV area is located 10km north east of present operations and project area on ERL 94.

#### JV Terms

The principal terms of the JV are:

- ▶ Glencore shall have the option to acquire a 50% interest in the JV area tenement EL24654 after sole funding AUD 1 million within 2 years.
- ▶ Expenditure within the first field season will be AUD 500,000.
- ▶ Glencore will spend the first AUD 500,000 before it is able to make an election to withdraw.
- ▶ Redbank will prepare programmes and budgets for consideration by the JV parties and will conduct the exploration on behalf of the JV.
- ▶ Contributions subsequent to the first AUD 1 million of expenditure will be on an equity pro rata basis

- ▶ Glencore and related entities will have the exclusive right to the offtake of base metals derived from the JV area.

The Company looks forward to an active field exploration programme on the joint venture area and to working closely with Glencore on this exciting near minesite source of additional mineralization for treatment at the Redbank Mine.

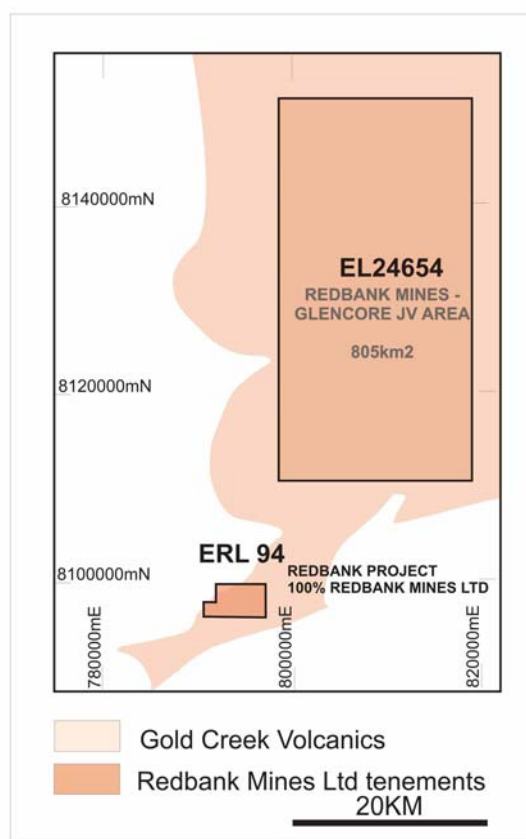


Figure 2 – EL 24654 and ERL 94

EL 24654 contains a large area of the Gold Creek Volcanics. Previous exploration on the tenement has been cursory due to difficult terrain. Consequently despite being only 10km north east of the Redbank, the tenement is essentially unexplored for base metals.

## JV Exploration Programme

The extensive area of prospective but poorly explored Gold Creek Volcanics (**Figure 2**) within the JV area represents an exciting frontier exploration opportunity for the discovery of new copper resources in close proximity to the expanding Redbank Copper Project. With the logistic benefit of the Redbank Copper Operations 10km from the JV area it will be possible to progress exploration rapidly.

An AUD 500,000 exploration program will be undertaken between April and September 2008. Fugro Airborne Surveys Pty Ltd will conduct an 11,000 kilometre fixed wing airborne magnetic and radiometric survey in April. Stream sediment sampling will commence at the same time. A 5,000 sample soil geochemistry program is scheduled for June and July, to evaluate broad target areas identified from the airborne geophysical data and the stream sediment sampling.

## 2.0 Exploration – Mt Kasi Gold Project

JORC classified Mineral Resource of 3.4 million tonnes at 2.2 g/t Au for 240,000 oz Au

### 2.1 Status of Leases and Plans to Execute Drilling Programme

As at 31 December 2007, the Company's exploration and mining leases were subject to renewal. The Interim Government in Fiji is taking an active role in directing the Mineral Resources Department on broader policy considerations that are to apply before tenements are renewed or extended to incumbent holders in the ordinary course of business under the Mining Act. A new Minister for Lands and Mineral Resources was appointed in early January 2008 and he is in the process of being briefed by his Department on the status of the Mt Kasi project. The Company is in discussion with the new Minister, the Mineral Resources Department and other key decision makers in the interim administration as part of the process of negotiating the terms of renewal of its leases.

The Company expects that the leases will be renewed as it has met its work obligations and put forward a sound exploration programme going forward designed to identify and prove up additional near mine and regional resources to achieve the necessary critical mass required to advance the project toward production in the medium term. There can be no guarantee

however that this will be the case as the decision making process by the Interim Government authorities is subject to discretionary considerations unrelated to the Company's compliance with previous work programmes.

Pending the renewal, and based on verbal representations received from the former Minister that the renewals would be forthcoming, the Company has mobilized a diamond rig to test near-mine advanced targets with 2,500 metres of diamond drilling at the primary target of Cresswells as well as other prospects. The programme has been put on hold however pending clarification of the status of the leases by the Interim Government and negotiation of any new conditions that are that are to apply. A detailed description of Cresswells and other targets is contained in the Company's 2007 Annual report.

The Company's exploration strategy remains to drill test near minesite and regional targets that have the potential to provide not only incremental ore tonnages within a 5 to 10 km trucking distance of a processing plant at Mineral Hill, but also gold deposits with significant dimensions and attractive economics in the context of the established mine infrastructure. The short to medium term target is to double the current resource base prior to undertaking feasibility studies.

### 3.0 East Kimberleys, Western Australia (Redbank 100%)

*Mt Barrett M80/506, Banjo Bore M80/507, Banjo Bore East M80/53, Townsite M80/565, Mt Barrett East E80/2594, Mt Pandora E80/2595, Elvire E80/2864, Halls Creek Water & Water Reserve E80/3297*

No work was carried out on these tenements during the quarter under review.

### 4.0 Mt Haden: Gold & Copper, Mackay, Queensland (Redbank 100%)

*MLs 4739 to 4743 (inclusive); ML 4745; ML 4753, ML 4786*

On 1 July 2007 the Company announced that it had entered into an agreement to sell its interest in the Sarina/Mt Haden project in Queensland for \$500,000. On 14 December 2007 the cash consideration of \$300,000 was received by the Company and was utilised to reduce the debt with Macquarie Bank Limited by the same. The remaining \$200,000 of consideration receivable by the Company is to be paid by the purchaser with

shares to this value. The shares are to be transferable and unencumbered listed shares in a company listed and trading on either the ASX or TSX to be nominated by the purchaser prior to completion of the sale; the number of such shares is to be determined by reference to the volume weighted average share price during the 10 business days prior to the completion date.

Settlement for these shares is expected to occur in the first half of calendar 2008.

## 5.0 Exploration Expenditure

Exploration and evaluation expenditure for the quarter was approximately \$124,000 (\$85,000 previous quarter).

## 6.0 Corporate

### 6.1 Issued Capital and Issued Tradeable Options

The Company completed an excluded placement of 10,625,000 shares during December to raise \$850,000 before issue cost. The issued share capital of the Company at the date of this report is 142,091,147 ordinary shares. The tradeable options on issue are 38,115,864.

### 6.2 Rights Issue, Placement and Underwriting

On 6 December 2007 the Company announced a one for three entitlements issue and placement offer to raise a total of \$5,389,098. All shareholders on the register on 27 December 2007 are entitled to participate in the entitlements offer.

Yours faithfully,

Redbank Mines Limited

Jerome G Vitale  
Managing Director

Glencore International AG has agreed to partially underwrite the issue. Under the terms of the Underwriting Agreement, Glencore has advanced a sum of \$1,000,000 to the Company as an unsecured loan pending completion of the offer. These funds have been utilised for working capital purposes.

In consideration for underwriting \$1.0 million of the rights issue and providing financial support, Glencore is to be issued with 4.0 million options with a strike price of 9.6 cents per share exercisable at any time until 31 January 2011.

Full details of the offers are contained in the Prospectus issued by the Company dated 13 December 2007 and lodged with ASIC on that date.

The Company announced on 21 January 2008 that **the closing date for the entitlement issue has been extended until 21 February 2008 and the placement offer until 24 March 2008** (the placement may close prior to this date at any time without notice).

### 6.3 Annual Report and 2007 AGM

The 2007 Annual Report of the Company was released on 31 October 2007 and may be viewed on the Company's website at [www.redbankmines.com.au](http://www.redbankmines.com.au).

The Annual General Meeting of the Company was held in Perth on 28 November 2007. The Notice of Meeting and explanatory memorandum are available on the Company's website. All resolutions put to the meeting were passed on a show of hands.

**Note:**

The technical aspects of this communication pertaining to the Mt Kasi project have been compiled by Mr Craig R Hall, B.Sc. (Hons), MAusIMM, MAIG. Mr Hall is an employee of a subsidiary of Redbank Mines Limited and has sufficient expertise relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Hall consents to the inclusion in this report of the matters referred to, based on the information being in the form and context in which it appears.

Information in this report on Mineral Resources at the Redbank Copper Project is based on information compiled by Mr Phil Jankowski, who is a Member of The Australasian Institute of Mining and Metallurgy. Phil Jankowski is a full-time employee of SRK Consulting (Australasia) Pty Ltd, and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Jankowski consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

All other geological information on the Redbank Copper Project insofar as it relates to the Company's exploration results at the Redbank Copper Project, is sourced from information compiled by Dr D James Searle, B.Sc, PhD, MAusIMM,. Dr Searle is an Executive Director of Redbank Mines Limited and has sufficient expertise relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Mineral Resources and Reserves'. Dr Searle has approved the inclusion of the statement in the form and context which it appears.