

# Malachite Resources NL

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## QUARTERLY REPORT 3 Months Ending 31 December 2004

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### HIGHLIGHTS

#### **Elsmore Tin Project, NSW**

- DRILLING UNDERWAY AT SHEEP STATION HILL
  - A 1,000m program of shallow RC drilling at Sheep Station Hill commenced late in the Quarter.
  - The Company's option over the Elsmore mine was allowed to lapse.

#### **Tooloom Gold Project, NSW**

- NEW DRILL TARGETS AT PHOENIX
  - Detailed soil geochemistry has identified an attractive target at Phoenix, largely untested by drilling.

#### **Copperfield Project, Qld.**

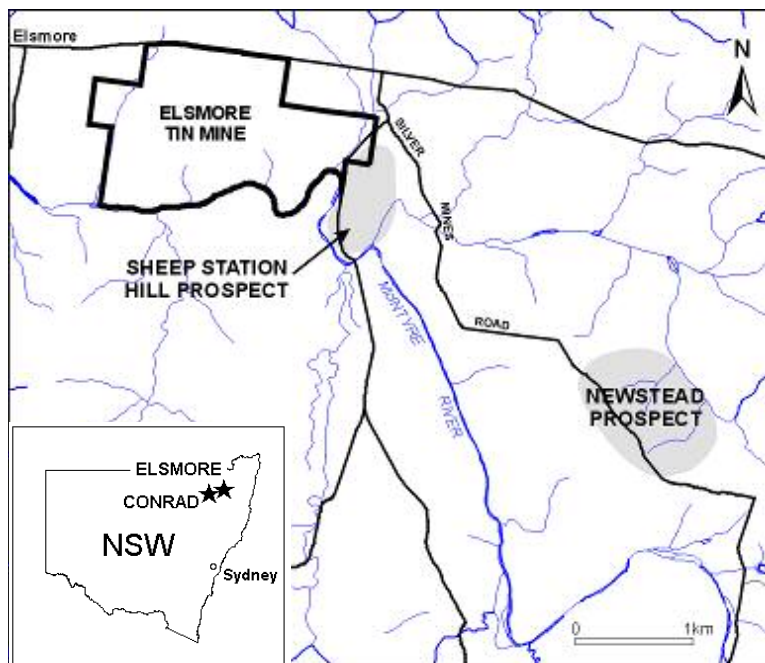
- EXCITING COPPER/GOLD/SILVER/TIN DRILL TARGET
  - A very promising drill target has been identified in the southern part of the Copperfield lode.
  - A strong IP anomaly underlies this target at shallow depth.

#### **Corporate**

- Rivertree and Boonoo Boonoo projects were joint ventured with Macmin Silver Limited.
  - Exploration expenditure for the Quarter was approximately \$175,000
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### Elsmore Tin Project, NSW (Malachite 100%)

A program of approximately 1,000m of shallow reverse circulation percussion (“RC”) drilling commenced late in the Quarter at Sheep Station Hill on the Elsmore exploration licence (EL 6196), held 100% by the Company and situated about 20km east of Inverell in northern NSW (Figure 1). Drilling resumed in January, after a suspension over the Christmas – New Year period. Several scout holes will also be drilled at Newstead before completion of the program.



**Figure 1: Reference map showing location of Elsmore project and of the Sheep Station Hill and Newstead greisen prospects (on EL 6196) in relation to the Elsmore tin mine (excluded from EL 6196).**

The current drilling program is testing the prominent greisen<sup>1</sup> veins that crop out over Sheep Station Hill. Earlier sampling of these outcrops by the Company produced very encouraging tin assay results. The holes being drilled at present are intended to intersect the tin-bearing veins at shallow depth and provide information about the grades of tin, molybdenum, silver and tungsten below surface. Assay results are awaited but significant cassiterite (the ore mineral of tin)

and molybdenite (the ore mineral of molybdenum) have been noted in a number of samples during geological logging of the drill chips.

In November, 2004, Malachite's option over the Elsmore Tin Mine was allowed to lapse, as the results of exploration conducted on the property by the Company were not sufficient to justify the exercise price. Nevertheless, significant potential remains at the Elsmore mine and the Company hopes to carry out further exploration in the future under an alternative arrangement.

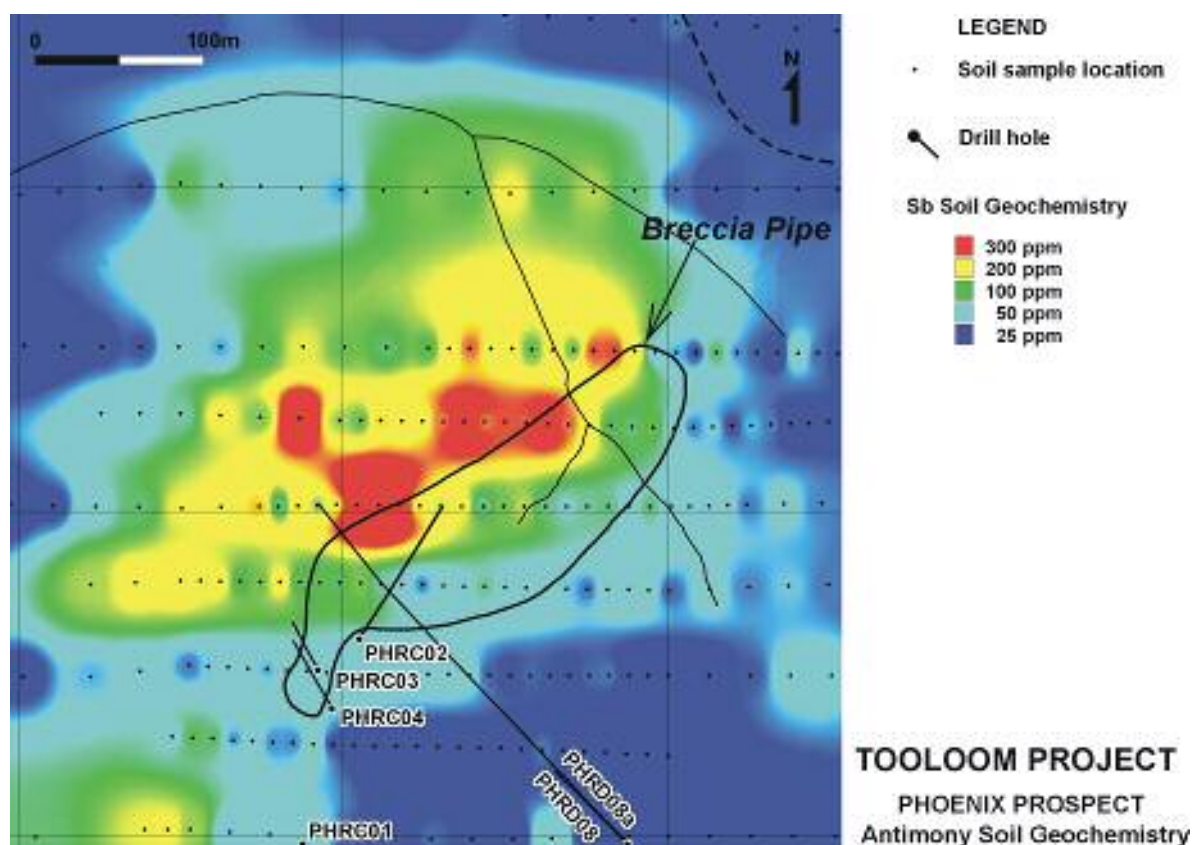
### Tooloom Gold Project, NSW (Malachite 100%)

During the Quarter a detailed soil geochemical survey was carried out over part of the Phoenix prospect, with special emphasis on the area near the breccia pipe. The aim was to enhance our understanding of metal distribution at surface and relate it to the situation at depth, as revealed by the limited drilling conducted to date. Given the close association of gold with antimony at depth in hole PHRC02, and the high grades of antimony intersected in that hole, the patterns of antimony geochemistry in particular are of interest for targeting future drilling.

Gold results from the soil geochemistry are still awaited, but the antimony results (Figure 2) are very encouraging. There is a strong concentration of antimony just to the north of the breccia pipe, with maxima at the northern margin of the pipe. None of the existing holes has properly tested this anomaly. The best hole (PHRC02, drilled to 174m) did reach the southern edge of the anomaly in its lower (and best mineralised) section. Hole PHRD08a was also drilled below the southern part of the anomaly but at such a depth (about 500m) that surface data are not so relevant. The next drilling program at Phoenix is expected to focus on the soil antimony anomaly and will test the top 150-200m below it, near where the best assay results to date have been achieved. It is likely, too, that when the enhanced soil gold geochemical data are received additional near-surface gold targets will emerge.

<sup>1</sup> The term “greisen” refers to granite that has been strongly altered by hydrothermal activity, producing a rock rich in quartz and mica and commonly carrying significant tin values.

**Figure 2: Map of part of Phoenix prospect showing breccia pipe and previous drilling in relation to newly defined antimony soil anomaly.**



### **Conrad Silver Project, NSW (Malachite 100%)**

No new field work was carried out at Conrad while negotiations with the registered native title parties continued. A draft access agreement, providing for Malachite's access to Crown land where native title may exist, is expected to be signed in the near future. Plans are being drawn up for a geophysical (IP) survey to be carried out along the strike extension of the Conrad lode as soon as access is possible.

### **Mt Ramsay Project, Tasmania (Malachite farming-in)**

A short program of in-fill prospecting, geological mapping and rock chip sampling was conducted in early December to assist in planning for drill testing of the geophysical anomalies (EM conductors) in 2005. A suite of 32 rock chip samples and five soil samples was collected. Several of these proved to be anomalous in tin and/or other base metals, with the best assays reported being 106 ppm Sn and 0.40% Cu in separate rock samples. These results support the view that the geophysical anomalies in the Mt Ramsay target area are associated with mineralisation.

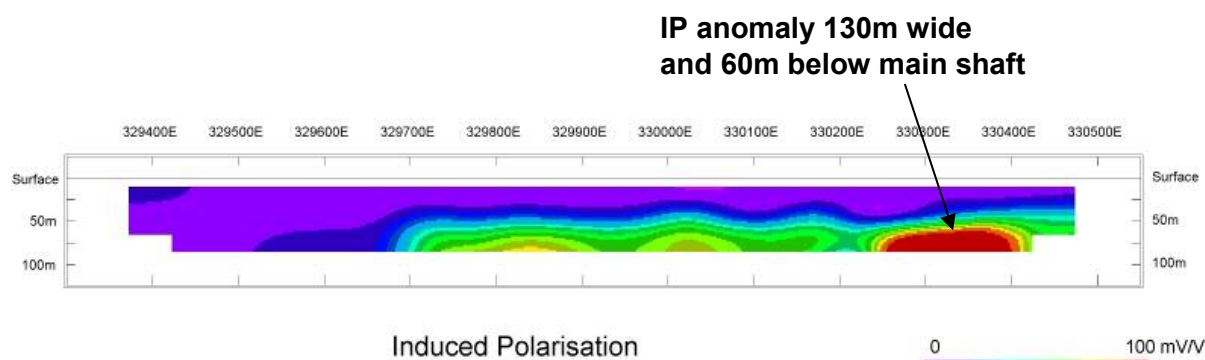
It is hoped to carry out a preliminary drilling program at Mt Ramsay before the end of the current summer. Very steep terrain in the target area severely limits access for drill rigs, but it is thought that a two-hole helicopter-supported diamond drilling program from the top of the ridge is feasible and planning is proceeding for such a program to take place, possibly in April, 2005.

### **Copperfield, Queensland (Malachite 100%)**

An initial field program, involving geological mapping and geochemical sampling of outcrops, was carried out at Copperfield, following grant of title in September. The mapping showed the Copperfield lode to be a highly mineralised, NW-trending fault zone, 1.8km long, cutting thinly bedded sedimentary rocks of the Kangaroo Hills Formation at either end and a Permo-Carboniferous granite, which is the likely source of the metals, in the central portion.

Approximately 20 shallow shafts, pits and other old workings are scattered along the length of the lode. Both granitic and sedimentary rocks contain significant Cu-Au-Ag mineralisation and gold-bearing stockwork quartz veins are also present locally. The mineralisation at Copperfield lies within a broad (1.8 x 1.5 km) copper-in-soil anomaly, defined by previous company soil sampling programs. This large elevated Cu signature is broadly coincident with circular-shaped aeromagnetic and radiometric anomalies.

Malachite's field work clearly indicated that the southern part of Copperfield mineralised zone (around the main, 5m deep shaft) is the most compelling, as here the lode appears to be wider, at around 2-4 m, there is a greater concentration of old workings in parallel structures for up to 300m across strike, and gold-copper grades are at their highest. Furthermore, re-analysis of geophysical data generated by a previous explorer has shown that a very strong, untested induced polarization (IP) anomaly, 130m wide, with a top interpreted to be around 60 m below the surface, underlies the southern area. Figure 3 is a dipole-dipole IP inversion profile that shows the IP anomaly in the vicinity of the main shaft, suggesting that the high grade mineralisation observed at surface, and in the old shaft, may increase in intensity at a depth of around 60 m.



**Figure 3: Dipole-dipole IP anomaly inversion profile showing a strong IP response (red area) at 60m below surface in the immediate vicinity of the main shaft.**

Malachite's recent rock chip sampling program over the main Copperfield lode confirmed its polymetallic nature and surface high grades. Furthermore, the previously unrecorded presence of significant tin and tungsten was revealed by Malachite's sampling. Maximum assays (in separate samples) for the 58 rock chip geochemical samples collected by Malachite are: 3.67 g/t Au, 18.0% Cu, 290 g/t Ag, 0.44% Sn, 0.21% W and 0.72% Bi. The highest rock chip assays are for samples from the southern part of the prospect, in or near the main old shaft.

### **Lynd River, Queensland (Malachite 100%)**

Malachite's application for a tenement over the Lynd River area in north Queensland was granted in early December, 2004. The exploration objective at Lynd River is a series of geophysical and geochemical anomalies that appear to have strong similarities with those that characterise the Mt Leyshon and Kidston gold deposits, located elsewhere in north Queensland. The Company is currently compiling all previous exploration data for the area in preparation for field work which is expected to begin at Lynd River after the northern wet season.

### **Boonoo Boonoo Gold-Silver Project, NSW (Malachite 40%);**

### **Rivertree Silver Project, NSW (Malachite 40%)**

On 10 December 2004 the Company joint ventured these two northern NSW projects with Macmin Silver Limited ("Macmin"). Pursuant to this new joint venture, Macmin has reimbursed Malachite for previous exploration expenditure at Rivertree and Boonoo Boonoo by issuing the Company with 4,063,830 shares in Macmin, equivalent in value at the time to previous expenditure by Malachite of \$573,000 at the two projects.

Under the joint venture, Macmin has an initial 60% interest and may increase this to 75% by funding \$500,000 in exploration at Rivertree and Boonoo Boonoo over the next three years. Planning for follow up by Macmin to Malachite's previous work is underway.

## AGI Database Project

No activity in the past Quarter.

## Forward Plans

The Sheep Station Hill and Newstead prospects at Elsmore will continue to be a key focus for the Company in the first Quarter of 2005. Depending on the results of the current drilling program, follow up drilling is tentatively planned for March – April. The next phase of work at Tooloom will be renewed drilling at Phoenix, which is scheduled for April – May. A geophysical program is planned at Conrad, probably in March, when an IP survey will seek to trace the Conrad lode to the southeast, along strike from the Conrad mine. At Mt Ramsay in Tasmania, the intention is to carry out initial drilling of the electrical conductors, identified in the Government airborne geophysical survey and confirmed on the ground by Malachite, as soon as possible. A suitable rig is currently being sourced and it is hoped to complete at least two holes by April.

## Expenditure

Exploration expenditure during the period under review amounted to approximately \$175,000.

## Further Information

For further information please contact Garry Lowder on (02) 9415 6833 or 0417 212 099, or by email at [glowder@malachite.com.au](mailto:glowder@malachite.com.au).



G.G. LOWDER  
Managing Director  
27 January 2005

*The information in this report that relates to Exploration Results is based on information compiled by Dr Garry Lowder, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Dr Lowder 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.' Dr Lowder consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*