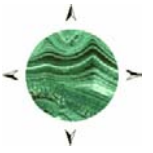


# Malachite Resources NL

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## QUARTERLY REPORT 3 Months ending 30 June 2003

### HIGHLIGHTS

#### Silver & Gold Projects

- Initial drilling program at **Conrad** confirms depth and strike continuity of main lode.
  - Historically mined ore body is part of a large, complex, multi-lode system.
  - Narrow lode intersected at depth near main Conrad shaft.
  - Wider and shallower mineralised zone intersected near Davis shaft, open to southeast.
  - Polymetallic mineralisation, with significant values in silver, copper and tin.
  - Right to negotiate process commenced to allow better access for future drilling.
  
- Further encouraging results at **Boonoo Boonoo**:
  - 10 samples from old mine dumps at Browns lode averaged 13.9 g/t gold and 191 g/t silver.
  
- Attractive new gold prospect at **Tooloom**:
  - Large area of highly gold-anomalous stream sediments delineated at Phelps Creek.
  - Zone of weakly gold-anomalous breccia with open space quartz matrix identified in core of Phelps anomaly.

#### AGI Database

- AGI Database project (BHP Billiton alliance) leads to application over **Copperfield**, an exciting copper-gold-silver opportunity in north Queensland.

#### Corporate

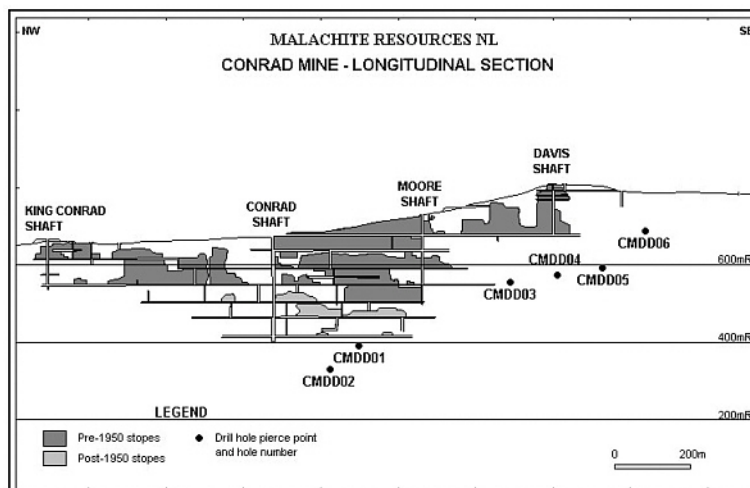
- Acquisition of the outstanding equity completed at the Tooloom gold project.
  
  - Exploration expenditure for the Quarter was \$579,000.
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## Conrad Silver Project, NSW (Malachite 100%)

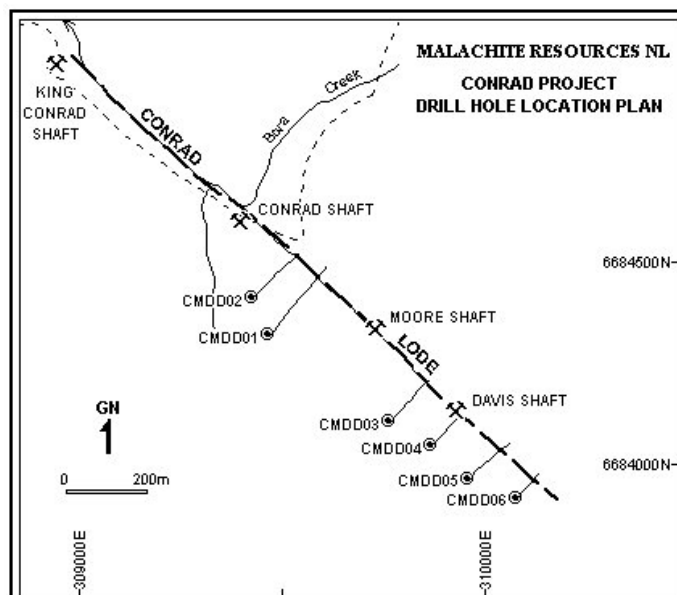
An initial drilling program was completed at the Conrad silver project, 25 km south of Inverell, NSW. A total of 1851 m of pre-collared diamond core drilling was completed in six holes. Originally ten holes were planned but four were postponed to a later program due to limited site access (in advance of completing the right to negotiate process, see below) and slow drill penetration rates in the unusually hard host granite at Conrad. More powerful drilling equipment will be utilised in future if possible.

The six holes completed were spaced widely along about 800 m of strike length, from near the Conrad shaft to southeast of the Davis shaft (see Figure 1 below). This represents only a preliminary test of the Conrad mineralised system, with more drilling required to assess economic potential. The previously mined King Conrad to Conrad section of the lode (Figure 1) has not yet been tested at all by drilling.

**Figure 1: Conrad Project – Results of Recent Drilling**



**a) Longitudinal Section**



**b) Surface Plan**

## **Drilling**

The first two holes (CMDD01 and CMDD02) were deep holes drilled to intersect the lode at depth below old workings near the main Conrad shaft (Figure 1). Both of these deep diamond drill holes intersected the lode over widths typical of the historical average, although mineralisation grades within these intercepts (see Table 1 below) were substantially less than the historical average for the Conrad lode overall. The lode intersections appear generally similar to descriptions of historically mined lode but are relatively more quartz-rich and lower in total sulphide content. At this stage it is not clear whether this represents a fundamental change in the character of the lode with depth or is simply internal variation within a heterogeneous lode. CMDD02 also intersected an additional vein in the hanging wall which returned noteworthy polymetallic grades (Table 1).

The next two holes (CMDD03 and CMDD04) were drilled beneath old workings near the Davis shaft (Figure 1), as the zone below Moore shaft was not accessible for drilling in this program. Core recovery in both holes was poor, due to the presence of fault pug (clay) in the target zones. CMDD03 intersected a relatively broad zone of mineralisation (4.1m true width) with significant grades in silver, copper and tin (Table 1), while CMDD04 intersected only a very narrow mineralised zone, with poor core recovery. The presence of faulting in the two holes at Davis was unexpected and the identity of the material missing in the zones of poor core recovery is uncertain. Future drilling in this section of the lode would need to allow for the presence of soft fault in-fill.

The final two holes (CMDD05 and CMDD06) were drilled to the southeast of the Davis shaft (Figure 1) to test for strike extensions of the Conrad-Davis lode system. Both holes contained broad zones of alteration but there was only a low grade intercept within that alteration zone in CMDD05 (Table 1), with thin parallel sulphide veins rather than a discrete quartz-sulphide lode. CMDD06, drilled a further 100 m or so to the southeast, intercepted a wider mineralised zone, at quite shallow depth, with multiple quartz vein development not seen in CMDD05. This suggests that a separate mineralised shoot may be developing in this direction. Significantly, a well defined geophysical (IP) anomaly extends for about 1.5 km to the southeast from Davis shaft and there is a second, parallel and deeper IP anomaly just off the strike of the main lode about 1 km to the southeast.

## **Results**

It is too soon to draw any firm conclusions about the economic potential of the Conrad lode system, especially in view of the small number of intercepts, their wide spacing within the limited section of the Conrad lode tested, and poor core recovery in two cases. Nevertheless, the potential for broader zones of mineralisation, compared with historic mining widths, is encouraging and the polymetallic nature of the lode, with significant grades in silver, copper and tin, means that delineating high-value ore may be less dependent on silver values

than originally thought. At this stage it would appear that future efforts might be best directed at shallower, broader (and topographically more accessible) targets to the southeast of the Davis shaft, rather than at deep, narrow targets below the main old workings near the Conrad shaft. The King Conrad to Conrad part of the system and the untested zone below Moore shaft (Figure 1) also remain attractive targets for future drilling.

**Table 1: CONRAD PROJECT – MAIN MINERALISED DRILL INTERCEPTS  
JUNE QUARTER, 2003**

Drill hole no.	Lode	From (m)	To (m)	Down-hole Length (m)	True width (m)	Ag G/t (oz/t)	Cu %	Pb %	Zn %	Sn %
CMDD 01	Conrad	392.7	394.1	1.40*	0.75	65 (2.1)	0.23	0.19	0.14	0.22
	including	392.95	393.25	0.30	0.17	169 (5.4)	0.71	0.43	0.05	0.64
CMDD 02	Hanging wall vein	424.8	425.4	0.60	0.3	152 (4.9)	0.71	0.45	0.36	0.78
	Conrad	438.0	440.1	2.10*	0.8	78 (2.5)	0.05	1.35	0.03	<0.01
	including	439.85	440.1	0.25	0.09	318 (10.2)	0.05	6.18	<0.01	0.05
CMDD 03**	Conrad	260.6	267.0	6.40	4.1	98 (3.2)	0.58	0.26	0.21	0.55
	including	260.95	263.15	2.20*	1.4	107 (3.4)	0.91	0.22	0.10	0.75
	and	265.0	266.0	1.00	0.6	166 (5.3)	0.49	0.34	0.11	0.04
CMDD 04**	Conrad	245.3	246.0	0.70*	0.35	182 (5.9)	0.18	1.56	0.16	0.21
CMDD 05	Conrad	215.2	218.4	3.20	1.84	12 (0.4)	0.01	0.50	0.44	0.08
CMDD 06	Conrad	101.3	109.6	8.30	5.4	28 (0.9)	0.07	0.25	0.16	0.16
	including	102.35	103.6	1.25	0.80	97 (3.1)	0.52	0.13	0.06	0.58

**Notes:** \* indicates Conrad Vein \*\* indicates intersection with poor core recovery

The Conrad lode is very close to vertical and thus could in principle be drilled from either side. The initial drilling was conducted from the south side of the lode, even though the topography there is more rugged, as the Company already has a valid right of access to this area for construction of tracks and drill pads.

Topographically, access to the northern side of the lode is easier, potentially allowing utilisation of more powerful, truck-mounted drilling rigs, rather than the less powerful, caterpillar-track-mounted rigs used in the first program. The section of the lode below Moore shaft, between CMDD01 and CMDD03, was not drilled in the first program because of topographic constraints in this area. This part of the Conrad lode would be much better drilled from the northern side.

The same is true of the Conrad to King Conrad section of the lode (Figure 1), where no drilling has yet been conducted but recent sampling of outcropping

lode (which has probably been mined below the outcrops at some depth) yielded high grade results (Table 2).

**TABLE 2: ASSAYS OF OUTCROPPING LODE\* NEAR THE KING CONRAD SHAFT**

SAMPLE NO.	TRUE WIDTH (m)	SILVER g/t (oz/t)	COPPER (%)	LEAD (%)	ZINC (%)	TIN (%)
81456	0.7	940 (30.2)	2.63	2.26	0.22	3.60
81457	0.5	760 (24.4)	0.99	2.34	0.03	1.20

\* Note – these outcrops are probably undermined at depth

However, drilling of the Conrad lode from the north, and drilling of the deeper IP anomaly to the southeast of Davis, would involve working on Crown land where native title may exist. The Company must therefore first comply with the right to negotiate provisions of the Native Title Act; this process is underway.

Further to the southeast again, the strike extension of the Conrad lode can be traced for about 5.5 km on freehold land, where there are substantial, as yet untested, old workings. This area will be evaluated prior to a resumption of drilling. There are also additional targets along parallel structures within the Company's exploration licence, defined by linear features in the aeromagnetic image of the region and reinforced by the existence of mining leases in these locations on old tenement maps. No field work has yet been conducted in these areas, some of which will not be accessible until the right to negotiate process referred to above is completed.

### **Conclusions**

- Malachite's initial evaluation and preliminary drilling of Conrad has shown that it is a large and complex mineralised system, containing numerous targets within the main lode projection and also within parallel structures elsewhere on the property.
- Although drilling has not yet identified an economic ore body within this large system, it has confirmed continuity of the lode at depth and along strike. Future drilling will seek to close in on discrete ore grade shoots or lenses within the lode.
- As drilling continues there is excellent potential for the delineation of a substantial silver-rich, polymetallic ore deposit at Conrad, probably contained within several separate shoots. The initial results suggest that some of these may be substantially wider than was mined historically.

### **Boonoo Boonoo Gold-Silver Project, NSW (Malachite 100%)**

Previous sampling by the Company of dumps at old workings in the Boonoo Boonoo area had shown that many were anomalous in gold and silver. The best result (51.8 g/t Au and 345 g/t Ag) had come from a dump sample at Browns lode. Another nine samples were therefore collected from Browns lode dumps and the results confirm its highly anomalous nature. The average assay of all ten samples collected from dumps on this lode is 13.9 g/t gold (range 0.35 to 51.8 g/t Au) and 191 g/t silver (range 7 to 390 g/t Ag). Importantly, these high precious metal values are accompanied by only low to very low levels of base metals, arsenic and antimony.

As Browns lode intersects the multiple-reef Specimen Gully lode (itself distinctly anomalous in gold and silver) at an oblique angle, an attractive drill target is emerging in this location. Access is good – there are existing tracks – and it is anticipated that this and other prospects at Boonoo Boonoo will be drilled later in the year, in conjunction with drilling planned for Tooloom and follow-up drilling at Rivertree, and after fulfilment of environmental requirements.

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

During the Quarter the Company completed its acquisition of the interest in the Tooloom gold project held by Tooloom Gold Pty. Ltd. This involved the payment of \$70,000 in cash and the issue of 2,000,000 shares and 3,000,000 February 2006 options to Tooloom Gold Pty. Ltd. The securities issued as part of the acquisition price are escrowed until 10 April 2004.

Field work conducted in the period consisted of follow up stream sediment and rock chip sampling at three target areas: Phelps Ck, Diorite Dam and Watsons. Previous sampling at Phelps Ck had indicated highly gold-anomalous stream sediments, in fact the most anomalous so far recorded in the whole Tooloom region. In spite of this, there were no known old workings in the vicinity and the cause of the anomaly was unknown. Follow up sampling conducted in the past Quarter has confirmed a wide area of stream sediment anomalism at Phelps and successfully located at least one possible source. This comprises a zone, several hectares in area, of intensely brecciated (i.e. fragmented) sandstone, healed by coarse, bladed, open space quartz. A few small pits have been dug into this rock by early prospectors and samples collected by the Company yielded weakly anomalous gold values up to 0.3 g/t Au. Over the ridge from the breccia but still within the highly anomalous Phelps drainage system, a sample of quartz-veined sandstone returned 1.48 g/t Au.

These results are regarded as very significant, especially as petrological examination of the quartz in the breccia suggests that the outcrop is above a boiling zone, which is where the bulk of the gold might be expected to precipitate during a mineralising event. Phelps is therefore regarded as a promising target for drilling, which is expected to take place in the December Quarter this year.

Follow up at Diorite Dam and Watsons was more ambiguous but both of these prospects remain attractive for drilling. Petrological examination of samples from Diorite Dam also suggests that there is a boiling zone at depth.

### **East Moonmera Copper-Gold Project, Qld (Malachite 100%)**

Field work to investigate the cause of the well defined aeromagnetic anomaly on this tenement began in late June, with results expected during the September 2003 Quarter. The target model draws an analogy with a similar aeromagnetic feature at the Moonmera porphyry copper deposit, located off the property a few kilometres to the west. The Company's target lies on a NW-trending structural lineament, which is one of three parallel lineaments, the other two passing through the Moonmera copper deposit and the historic Mount Morgan gold-copper mine.

### **AGI Database Project**

Good progress has been made on the AGI Database project, which is an outcome of the Company's alliance with BHP Billiton. Several attractive new target areas have been identified and on 8 July 2003, Malachite announced that it had lodged an application for an exploration tenement over a promising copper-gold-silver prospect, called Copperfield, located about 150 km west of Townsville in north Queensland.

This new project is the first to be secured by Malachite using the AGI Geochemical Database under its strategic alliance with BHP Billiton. Exploration by previous explorers at Copperfield outlined a linear shear or fault zone several metres wide and at least 1.5km long, highly anomalous in copper, gold and silver, and contained within a broad zone of elevated copper-in-soil that coincides with airborne magnetic and radiometric anomalies. No drilling was conducted, even though assays of surface rock samples included many in the 5-15% Cu range and one as high as 45.5% Cu, while gold values ranged up to 27.39 g/t Au and silver up to 257 g/t Ag.

Malachite plans to conduct reconnaissance drilling of the shear zone as soon as possible after grant of title and to evaluate possible nearby repetitions of the zone recognisable in the aeromagnetics. At the same time, the possibility that a large intrusive-related copper-gold system underlies the broad soil copper and geophysical anomalies will be investigated.

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

No new work was undertaken during the Quarter.

### Forward Plans

No drilling is currently scheduled for the September Quarter this year, although a small program may be conducted at **East Moonmera** if field work currently underway identifies an attractive target.

Elsewhere, the focus at **Conrad** will be on assessing the southeastern extension of the main Conrad-Davis lode zone, where the mineralised structure can be traced for several kilometres on freehold land and there are significant, as yet untested old workings. This will involve mapping, rock chip and soil sampling and induced polarisation (IP) geophysics, aimed at defining drill targets for the next program.

The right to negotiate process for the Conrad EL will also continue, with the serving and publication of the required notices under Section 29 of the Native Title Act 1993 (C'th).

Further mapping, sampling and electrical geophysics (IP) will also be carried out at **Boonoo Boonoo** and **Rivertree**, while at **Tooloom** the Phelps prospect will be investigated further, with several lines of ridge and spur soil geochemistry to be completed to help define drill targets for the December Quarter.

Key targets emerging from research utilising the AGI Database will also be evaluated as possible new projects for the Company, following on from the successful identification of the Copperfield opportunity through the AGI Database.

### Expenditure

Exploration expenditure during the period under review amounted to \$579,000.

### 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).



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14 July 2003