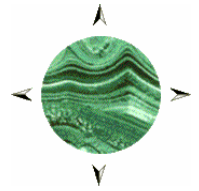


# Malachite Resources NL

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**ASX Announcement**

**Code: MAR**

**2 June 2008**

## ELSMORE TIN PROJECT: Progress Report and Future Plans

### SUMMARY

**Recent exploration results at Malachite's Elsmore Tin Project have significantly increased the Company's chances of developing a viable tin mining operation in the area.**

Malachite Resources (ASX: MAR & MAROA) advises that the Company is very encouraged by recent results from exploration at its wholly owned Elsmore Tin Project, located about 15km southeast of Inverell in northern NSW (Fig. 1). The potential for development of an economic tin mining operation within the project area has increased significantly and Malachite is planning a follow up program for the near future, to include drilling and bulk sampling.



**Figure 1: Elsmore Tin Project Location Map**

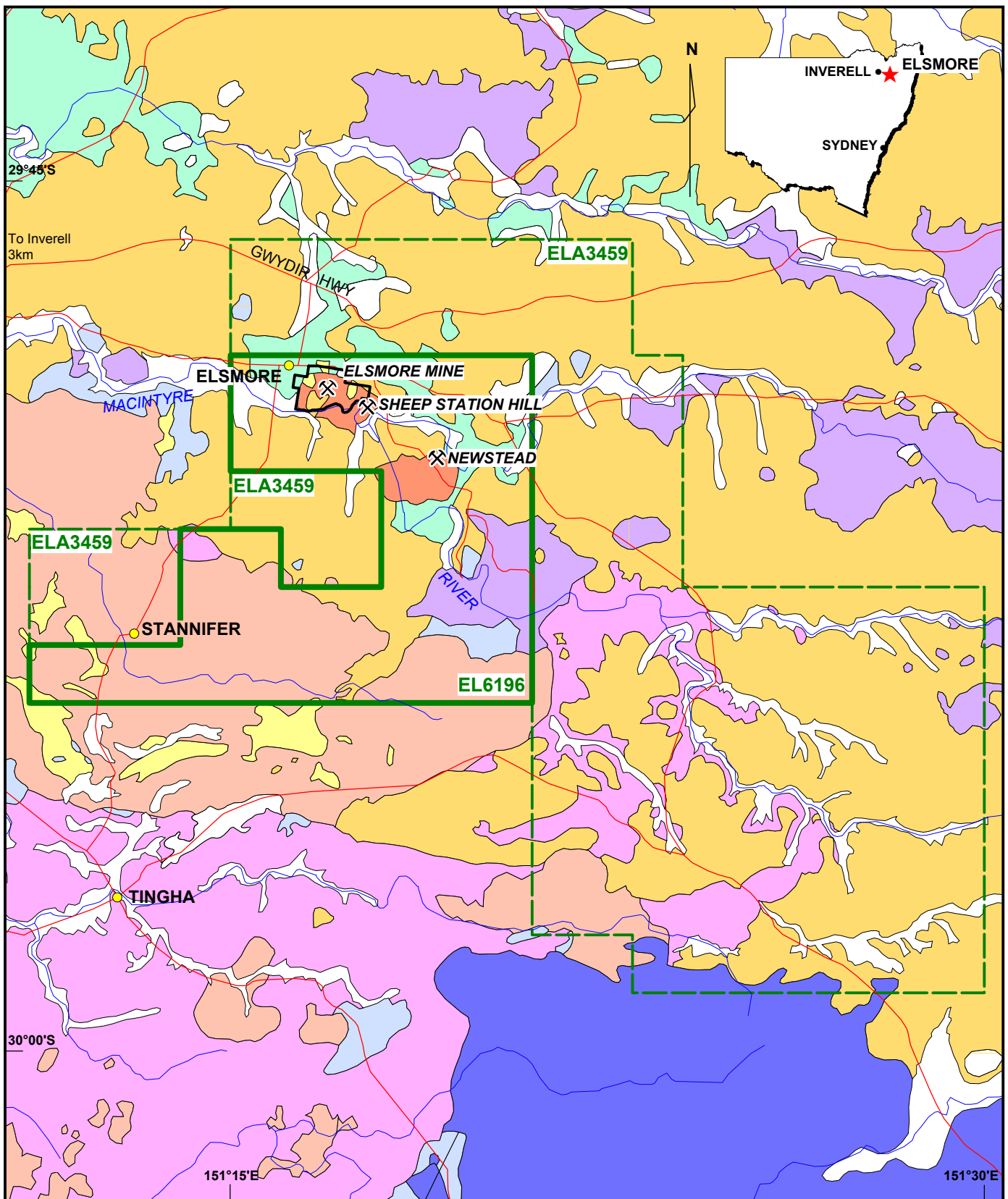
**Tenement Holdings** – The Elsmore Tin Project comprises an exploration licence (EL6196; “Elsmore”) of 32 units and an exploration licence application (ELA3459; “Macintyre”) of 100 units; together these tenements cover approximately 400km<sup>2</sup> (Fig. 2). Numerous old tin mines and tin occurrences are recorded within the Elsmore EL and in some parts of the Macintyre ELA.

The Elsmore Tin Mine, which was the first commercial tin mine in NSW, lies within the boundaries of EL6196 but is excluded from it (Fig. 2). The Elsmore mine was developed on a large tin-bearing greisen<sup>1</sup> system, the eastern part of which lies within Malachite's ground at Sheep Station Hill. Recent exploration by Malachite has been focused on the Newstead Prospect, which is located about 5km southeast of Elsmore (Fig. 2) and incorporates a large tin-bearing greisen system similar to that at the Elsmore Tin Mine, as well as alluvial deposits, both at surface and in deep leads<sup>2</sup>.

**Palaeo-Alluvial Occurrences** – Of greatest importance for the short to medium term is the recent recognition that most of the old surface workings at the Newstead Prospect are developed in a semi-consolidated, palaeo-alluvial deposit (i.e. a ‘fossil’ alluvial deposit, not closely related to present day streams) that is at least five metres deep in places, perhaps more, and covers an area between 0.5 and 1km<sup>2</sup> (the outer limits and maximum depth have not yet been adequately defined). The name “Karaula Lead” seems to have been applied to this deposit historically and Malachite has adopted that name for use going forward.

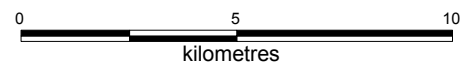
<sup>1</sup> The term “greisen” refers to granite that has been substantially altered by mineralizing solutions and now consists largely of quartz and mica, commonly together with tin and sometimes other minerals, including tungsten, molybdenum, copper and bismuth. A great many of the current and historical tin mines around the world are hosted by greisen or are developed in alluvial deposits derived from greisen.


<sup>2</sup> The term “Lead” is an historical term commonly used in the early days of mining in Australia mainly to describe an alluvial deposit, such as a river gravel deposit. A “Deep Lead” is a buried alluvial deposit, commonly one contained in an old river valley that has been filled in by a younger deposit, such as a lava flow.



**LEGEND**

- |   |                                     |                     |                      |
|---|-------------------------------------|---------------------|----------------------|
| ● | Town or village                     | Tertiary            |                      |
| ⌘ | Prospect                            | □                   | Sediments            |
| — | Road                                | ■                   | Volcanics            |
| — | River or creek                      | Triassic            |                      |
| — | Elsmore Mine (excluded from EL6196) | ■                   | Elsmore Granite      |
| — | ELA3459 boundary                    | ■                   | Gilgai Granite       |
| — | EL6196 boundary                     | Permo-Carboniferous |                      |
|   |                                     | ■                   | Tingha Adamellite    |
|   |                                     | ■                   | Emmaville Volcanics  |
|   |                                     | ■                   | Texas Beds           |
|   |                                     | ■                   | Sandon Beds          |
|   |                                     | ■                   | Wandsworth Volcanics |



 <b>MALACHITE RESOURCES NL</b>	
<b>ELSMORE PROJECT</b> <b>EL6196, ELA3459</b> Location Plan showing Regional Geology and Malachite Prospects	
Scale: 1:175000	Date: May 2008
Reference #: ELS-0003	Figure 2

While some of Karaula Lead has been removed by small scale mining in the past, it does appear that by far the bulk of the original deposit remains intact, as shown for example in Figures 3 and 4.

Malachite has sampled the Karaula Lead in a number of places, both in outcrop and by shallow auger drilling. Results in terms of tin content are highly variable, but it would seem that a significant part of the Karaula Lead carries tin grades of the order of 0.5 to 2kg/cu m. A tin grade of 0.5-1kg/cu m would probably be attractive for modern surface mining, containing, at today's tin prices, around \$20 worth of tin metal per cubic metre. Importantly, the Karaula Lead also contains zircon and sapphires, one or both of which could be a by-product of any future mining.



**Figure 3: Outcrop of the Karaula Lead, showing its immediate proximity to the land surface**

**Figure 4: Exposed face in the Karaula Lead; a sample from the centre of this exposure assayed 0.5kg/cu m of tin**



**Hard Rock Occurrences** – At Newstead most of the historic tin production came from surface alluvial deposits but old shafts and adits into tin-bearing hard rock are also quite widespread. In 2005 Malachite drilled two reverse circulation percussion holes into a greisen body at Newstead, intersecting significant tin, silver, lead and zinc values. One of those holes (NSRC04) intersected 24m @ 714ppm Sn, 23g/t Ag, 0.25% Pb and 0.29% Zn (from 7m to 31m down hole). The other hole (NSRC05) intersected generally lower grades, except for 1m of 630ppm Sn, 138g/t Ag, 0.33% Pb and 840ppm Zn (22-23m down hole).

More recently, outcrop sampling (44 samples) of this greisen occurrence gave an average tin assay of 780ppm Sn, consistent with the earlier drilling results. The surface samples are also strongly anomalous in lead, with an average of 740ppm Pb, but up to 3,280ppm Pb (i.e. up to 0.33% Pb) and contain anomalous silver (up to 8g/t Ag). The greisen is oxidized at surface and hence silver and zinc have probably been leached from the outcrop, whereas the more insoluble lead remains in the outcrop.

While the tin grades in the greisen are probably too low to justify mining in their own right, the presence of significant silver, lead and zinc at depth (as shown by drilling) may add sufficient value to make the deposit economic to mine. It is thought that the greisen body at Newstead could thus become a source of ore production in the future, especially if a gravity processing plant is already in place to process the Karaula Lead palaeo-alluvials. Furthermore, if a sulphide processing plant is operating at Conrad, it may be possible to recover separate tin and sulphide mineral concentrates from the Newstead greisen deposit by gravity processing and then treat the sulphide concentrate at Conrad to recover the lead, zinc and silver.

This is another example of the economic benefits that could flow from Malachite's geographic focus on the highly mineralised Inverell region.

**Future Program** – Looking ahead, the future exploration at Newstead will concentrate on the Karaula Lead and is expected to include the following:

- More accurate mapping of the lateral extent of the palaeo-alluvial material that makes up the Karaula Lead deposit, including sampling of surface outcrops.
- Air core drilling of the deposit, with particular attention to the alluvial/bed rock interface, which is where the best grades would be expected<sup>3</sup>.
- Semi-quantitative mineralogical analysis of heavy mineral concentrates to determine the type and potential value of accessory minerals (such as zircon).
- Estimation of a mineral resource based on surface mapping and sampling and air core drilling.
- Bulk sampling and bench scale laboratory testing to confirm recovered grades of tin and any valuable accessory minerals.
- Economic modeling to assess the likely economics of development and mining.

This program is expected to take place over the next three months and if results continue to be positive a further program to include pilot scale mining and processing should follow. At an opportune time is also intended to conduct more drilling of the nearby greisen deposit.

**Forward Strategy** – If that work proves successful it is expected that the Company will apply for a mining lease and development consent to commence a mining operation that could produce 500 to 1,000 tonnes of tin in concentrates per annum. The total tin resource remains to be determined but the Company believes a target of 3,000 to 5,000 tonnes of contained tin at Newstead is possible.

Such a tin mining operation at Newstead could generate a healthy cash flow for Malachite while the Company continues evaluation, feasibility and development of its much larger and longer term Conrad Silver Project, located 25km southwest of Elsmore.

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For further information please visit the Company's website: [www.malachite.com.au](http://www.malachite.com.au)  
or contact: **Garry Lowder, Managing Director** at (02) 9411 6033 or 0417 212 099,  
or by email at: [glowder@malachite.com.au](mailto:glowder@malachite.com.au)



G.G. LOWDER  
Managing Director  
2 June 2008

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<sup>3</sup> It is noteworthy that many of the old shafts into the Karaula Lead go down vertically for 2-3m then "ballroom" out, presumably reflecting the attractiveness of higher grades in the lower part of the alluvial column. Unfortunately the old shafts are too unstable to be safe to access for modern sampling.

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**ABOUT MALACHITE** – Malachite Resources is a Sydney-based resources company that listed on the ASX in November 2002 and is an active explorer for gold, silver and base metals in eastern Australia. At the beginning of June, 2008 the Company had over \$4 million in cash and no debt. The Company's key assets are:

The **CONRAD SILVER PROJECT** located in northern NSW, where the Company is evaluating the scope to reopen the old **Conrad Silver Mine** near Inverell. Conrad has had two previous periods of production but has not operated for over 50 years. Drilling at Conrad by Malachite has intersected narrow high grade, massive sulphide, silver-rich base metal veins, like those mined in the past, and wide zones of lower grade, disseminated and stockwork veined, polymetallic mineralisation. At current prices silver represents 30-40% of total metal value in the Conrad ore. Preliminary economic modelling suggests that a mineral resource containing 8-10 million ounces of silver plus base metals would be sufficient to support reopening of the Conrad Mine. Drilling to establish that resource continues.

Malachite also has excellent exposure to tin, through its **ELSMORE** Project, near Inverell in northern NSW, where the Company is considering the possible development of a palaeo-alluvial tin deposit, known as the Karaula Lead, at the Newstead Prospect. The Karaula Lead appears to have the potential to support a small surface mining operation, which could be developed with low capital and operating costs and generate useful cash flow for the Company. Work is now underway to better quantify the Karaula Lead deposit and assess its economics.

The **VOLGA COPPER PROJECT** in northwest Queensland, east and northeast of Mt Isa, where the Company is exploring for copper-gold at the **Mt Lidster** and **Volga Elderberry** properties. Previous drilling at Mt Lidster and Volga has produced some encouraging high grade copper intersections. Follow up drilling is underway.

The **TOOLOOM GOLD PROJECT** also in northeast NSW. Tooloom is a forgotten goldfield rediscovered by Malachite where numerous prospects have been identified, including a significant greenfields discovery called **Phoenix**. The company is systematically exploring Phoenix and the other prospects at Tooloom, which are intrusion-related and have major ore potential. Further drilling at Phoenix is underway and will follow elsewhere at Tooloom in the coming months.

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**COMPETENT PERSON STATEMENT**

*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.*