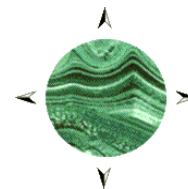


# Malachite Resources NL

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**ASX Announcement**

**Code: MAR**

**16 December 2008**

## **CONRAD SILVER PROJECT: RESOURCE UPGRADE TO FORM BASIS OF NEW SCOPING STUDY**

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### **HIGHLIGHTS**

- **Conrad mineral resource upgraded to 19.2Moz of silver equivalent**
  - **50% of this is silver, the balance being the associated tin, copper, lead and zinc expressed as silver equivalent**
  - **High grade resource increased by 150% to 458,000t**
  - **Deposit remains open along strike and at depth**
  - **New scoping study planned for early 2009**
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Malachite Resources NL (ASX: MAR) advises that a new mineral resource estimate has been prepared for the Conrad Silver Project, located 25km south of Inverell in northern NSW. The new estimate is based on the results of all drilling to date, amounting to over 25,000 metres of drilling in 107 drill holes.

**MINERAL RESOURCE ESTIMATE** – The Conrad mineralisation is made up of three principal components, namely the Conrad Lode, the King Conrad Lode and the Greisen Zone. The first two of these are narrow, sulphide-rich quartz lodes for which the resource estimates are based on a fixed underground mining width of 1.2 metres. The Greisen Zone is a broad, lower grade body with disseminated and sulphide veinlet mineralisation hosted by altered granite (greisen) over widths of 10 to 40 metres. Reporting of resource estimates for the Greisen Zone is based on a cut off of 74g/t silver equivalent<sup>1</sup> (“Ag<sub>EQ</sub>”). The new global mineral resource estimates<sup>2</sup> may be summarised as follows:

- **Conrad Lode:-**  
2.25 million tonnes @ 206g/t Ag<sub>EQ</sub> (or 6.6oz/t Ag<sub>EQ</sub>) for 14.9 million ounces of silver equivalent, including 7.7 million ounces of silver.
- **King Conrad Lode:-**  
397,000 tonnes @ 208g/t Ag<sub>EQ</sub> or (6.7oz/t Ag<sub>EQ</sub>) for 2.7 million ounces of silver equivalent, including 1.3 million ounces of silver.
- **Greisen Zone:-**  
479,000 tonnes @ 103g/t Ag<sub>EQ</sub> or (3.3oz/t Ag<sub>EQ</sub>) for 1.6 million ounces of silver equivalent, including 625,000 ounces of silver.

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<sup>1</sup> For an explanation of the term “silver equivalent” or “Ag<sub>EQ</sub>” and the basis on which silver equivalent grades have been calculated, please see Appendix A.

<sup>2</sup> Details may be found in Table 1.

The total contained silver equivalent amounts to 19.2 million ounces. Of this, 9.6 million ounces (50%) is silver, while the balance represents the value of the associated tin, copper, lead and zinc. Indium is present but has not been included in the silver equivalent calculations at this stage as its metallurgical recovery and net smelter return have not yet been investigated.

**HIGH GRADE SHOOTS** – High grade zones (or shoots) of mineralisation that have been identified from the drilling to date in the Conrad and King Conrad Lodes are expected to be the initial target for any future mining. Assuming Conrad is like many other lode deposits around the world, the higher grade zones are likely to contain the greater part of the ore body value. To emphasise the significance of the high grade shoots within the lodes, mineral resource estimates have been reported applying Defined Shapes and a cut off of 300g/t Ag<sub>EQ</sub> (retaining the 1.2m mining width), with the following results<sup>3</sup>:

- **High Grade Resource in Conrad and King Conrad Lodes:-**  
458,000 tonnes @ 424g/t Ag<sub>EQ</sub> or (13.6oz/t Ag<sub>EQ</sub>) for 6.2 million ounces of silver equivalent, including 3.4 million ounces of silver.

This is a 150% increase over the previous high grade resource estimate and shows the beneficial effect of infill drilling in identified high grade zones.

**COMMENTARY** – A plan showing drill hole locations at Conrad is included here as Figure 1. A three dimensional projection of the Conrad and King Conrad Lodes and the Greisen Zone is shown in Figure 2. The block model grade distributions for the Conrad and King Conrad Lodes are shown in Figures 3 and 4 respectively.

For the resource estimates it is assumed that the Conrad and King Conrad Lodes would be mined by mechanised underground methods. A width of 1.2m has been utilised in the global lode resource estimate, rather than a cut off grade, as this width is regarded as the minimum stoping width for mechanised mining. At Conrad, a 1.2m width would generally encompass all of the quartz-sulphide lode plus some of the adjacent mineralised alteration envelope.

In the case of the Greisen Zone it has been assumed that mining, at least initially, would be by open pit methods. Such a pit would also incorporate a small part of the King Conrad Lode, including about 284,000 silver equivalent ounces in lode resource. A second open pit may be possible at the southeastern end of the Conrad Lode resource, where historic mining is minimal and the mineralisation effectively comes to the surface.

In terms of contained metal, the new global mineral resource figure for Conrad<sup>4</sup> represents a fairly modest 9% increase over the interim figure announced in August this year. However, the high grade resource, which is likely to be the key to successful future mining, has been increased by 150%. Furthermore, resource definition at Conrad is still very much a “work in progress”, for while the Conrad Lode has been drilled over a 2km strike length, it remains open along strike, particularly to the southeast, where there is evidence of mineralisation or old workings for another 3.5km. It is also open at depth along its entire strike length, with one deep drill hole confirming that mineralisation continues to at least 500m below the land

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<sup>3</sup> For details please see Table 1.

<sup>4</sup> For a description of the resource estimation methodology please see Appendix B.

surface. Also, much of the drilling is still widely spaced and it is likely that any additional infill drilling will significantly improve the quality of the resource, especially if that drilling targets the high grade zones that have been identified to date.

A further upgrade may come as metallurgical test work continues and a better estimate of tin recovery is achieved, allowing tin to carry more weight in the silver equivalent calculation. It is noteworthy that the metallurgical work completed so far provides strong encouragement that good, saleable concentrates can be produced from the Conrad lodes. It has also shown that the mineralisation, including the lower grade alteration envelope mineralisation, can be upgraded efficiently by gravity treatment before conventional sulphide milling and flotation. Such gravity upgrading would significantly reduce the mass of material to be milled (by rejecting waste) but retain most of the original contained payable metal in the ore. This bonus arises from the generally coarse grain size of the Conrad sulphides, which facilitates separation of ore minerals from waste, and pre-milling gravity upgrading could become a key component of a flow sheet for economic development of the deposit.

**FUTURE PLANS** – Malachite believes that, as the Conrad Lode is open both along strike and at depth, increasing the mineral resource at Conrad in the future will be largely a matter of additional drilling. However, before proceeding with more drilling, the Company considers that a better understanding of possible project economics at Conrad should be obtained.

To this end, early in 2009 the Company's consulting mining engineer will incorporate the upgraded resource data into a new scoping study for Conrad and review possible mining, milling and capital costs for the project. That study will address issues such as the benefits of gravity upgrading of the ore, including the mineralised alteration envelopes, the economic impact of open pitting shallow greisen ore at the northwestern end of the Conrad system and shallow lode ore at the southeastern end, the comparative benefits of the various underground mining methods that might apply at Conrad and the optimal scale for initial development.

The new scoping study will provide an indication of how far along the development path the Conrad Silver Project has come. It will also provide a blueprint for the future work required to complete Conrad's transition from a prospect based on an old mine to a modern, polymetallic mining operation, possibly with both open pit and underground production.

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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  
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G. G. LOWDER  
Managing Director  
16 December 2008

## **TABLE 1: CONRAD MINERAL RESOURCE ESTIMATES**

### **Conrad Lode: Global Resource Estimate**

Category	Tonnes	Ag g/t	Cu %	Pb %	Zn %	Sn %	In g/t	Ag <sub>EQ</sub> g/t
Indicated	447,250	123.8	0.26	1.30	0.46	0.28	7.7	239.1
Inferred	1,807,476	101.9	0.21	1.22	0.46	0.22	6.4	197.6
<b>Total</b>	<b>2,254,726</b>	<b>106.2</b>	<b>0.22</b>	<b>1.24</b>	<b>0.46</b>	<b>0.23</b>	<b>6.7</b>	<b>205.8</b>

Based on a 1.2m wide vein, with no cut off and allowing for historical depletion

### **Conrad Lode: High Grade Resource Estimate**

Category	Tonnes	Ag g/t	Cu %	Pb %	Zn %	Sn %	In g/t	Ag <sub>EQ</sub> g/t
Indicated	76,982	211.8	0.39	2.62	1.02	0.46	14.2	413.1
Inferred	317,040	235.3	0.37	2.46	0.48	0.42	11.2	413.1
<b>Total</b>	<b>394,022</b>	<b>230.7</b>	<b>0.37</b>	<b>2.49</b>	<b>0.58</b>	<b>0.43</b>	<b>11.8</b>	<b>413.1</b>

Based on a 1.2m wide vein, with a 300g/t Ag<sub>EQ</sub> cut off and allowing for historical depletion

### **King Conrad Lode: Global Resource Estimate**

Category	Tonnes	Ag g/t	Cu %	Pb %	Zn %	Sn %	In g/t	Ag <sub>EQ</sub> g/t
Indicated	210,573	139.5	0.20	2.50	1.16	0.26	9.7	286.2
Inferred	186,459	55.8	0.05	1.09	0.66	0.11	5.0	118.7
<b>Total</b>	<b>397,032</b>	<b>100.2</b>	<b>0.13</b>	<b>1.84</b>	<b>0.93</b>	<b>0.19</b>	<b>7.5</b>	<b>207.5</b>

Based on a 1.2m wide vein, with no cut off and allowing for historical depletion

### **King Conrad Lode: High Grade Resource Estimate**

Category	Tonnes	Ag g/t	Cu %	Pb %	Zn %	Sn %	In g/t	Ag <sub>EQ</sub> g/t
Indicated	64,278	245.4	0.46	3.81	1.54	0.47	15.2	491.8
<b>Total</b>	<b>64,278</b>	<b>245.4</b>	<b>0.46</b>	<b>3.81</b>	<b>1.54</b>	<b>0.47</b>	<b>15.2</b>	<b>491.8</b>

Based on a 1.2m wide vein, with a 300g/t Ag<sub>EQ</sub> cut off, a Defined Shape and allowing for historical depletion

### **Combined Conrad and King Conrad Lodes: Global Resource Estimate**

Category	Tonnes	Ag g/t	Cu %	Pb %	Zn %	Sn %	In g/t	Ag <sub>EQ</sub> g/t
Indicated	657,823	128.8	0.24	1.69	0.68	0.28	8.3	254.2
Inferred	1,993,935	97.6	0.19	1.21	0.48	0.21	6.3	190.2
<b>Total</b>	<b>2,651,758</b>	<b>105.3</b>	<b>0.20</b>	<b>1.33</b>	<b>0.53</b>	<b>0.22</b>	<b>6.8</b>	<b>206.1</b>

Based on a 1.2m wide vein, with no cut off and allowing for historical depletion

### **Combined Conrad and King Conrad Lodes: High Grade Resource Estimate**

Category	Tonnes	Ag g/t	Cu %	Pb %	Zn %	Sn %	In g/t	Ag <sub>EQ</sub> g/t
Indicated	141,260	227.1	0.42	3.16	1.25	0.47	14.7	448.9
Inferred	317,040	235.3	0.37	2.46	0.48	0.42	11.2	413.1
<b>Total</b>	<b>458,300</b>	<b>232.8</b>	<b>0.39</b>	<b>2.68</b>	<b>0.72</b>	<b>0.44</b>	<b>12.3</b>	<b>424.1</b>

Based on a 1.2m wide vein, with a 300g/t Ag<sub>EQ</sub> cut off, Defined Shapes and allowing for historical depletion

**TABLE 1 ctd.: Greisen Zone: Resource Estimate**

Category	Tonnes	Ag g/t	Cu %	Pb %	Zn %	Sn %	Ag <sub>EQ</sub> g/t
Indicated	293,041	40.7	0.02	0.81	0.71	0.13	101.1
Inferred	185,602	40.5	0.03	0.98	0.82	0.13	106.5
<b>Total</b>	<b>478,643</b>	<b>40.6</b>	<b>0.02</b>	<b>0.88</b>	<b>0.75</b>	<b>0.13</b>	<b>103.2</b>

Based on a 74g/t Ag<sub>EQ</sub> cut off within a wireframe at a notional 10g/t silver cut off

**ABOUT MALACHITE** – Malachite Resources is a Sydney-based resources company that listed on the ASX in November 2002 and is an active explorer for silver, tin, gold, copper and associated base metals in eastern Australia. At the beginning of October, 2008 the Company had approximately \$2.5 million in cash and no debt. The Company's key assets are:

The **CONRAD SILVER PROJECT**, which is located 25km south of Inverell, 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 50% of total recoverable metal value in the Conrad ore and tin accounts for about 25% of the value. An interim mineral resource containing 8.8Moz of silver, or 17.7Moz of silver equivalent, has been delineated at Conrad and drilling to add to and upgrade that resource was completed at the end of September, 2008.

Malachite also has excellent exposure to tin, through its **ELSMORE** Project, located 20km east of Inverell, where the Company is considering the possible development of a paleo-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**, located 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.

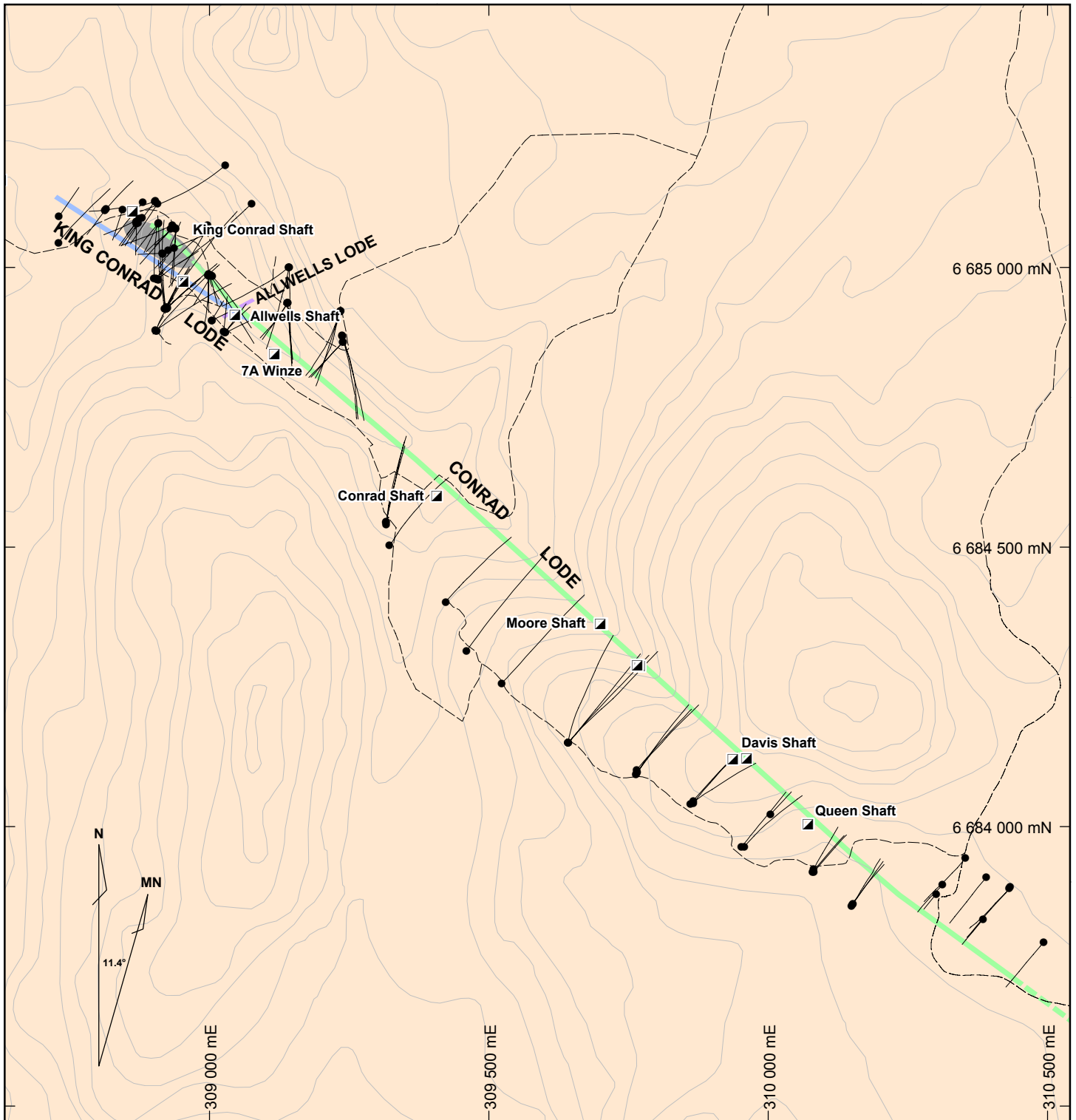
The **TOOLOOM GOLD PROJECT** also in northeast NSW. Tooloom is a forgotten goldfield rediscovered by Malachite where numerous prospects have been identified, including a significant green fields discovery called **Phoenix**. The company is systematically exploring Phoenix and the other prospects at Tooloom,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

## COMPETENT PERSON STATEMENT

*The data in this report that relates to Exploration Results, the accuracy and quality of data forming the basis of all resource estimates, and the interpretation of mineralisation for the Conrad Deposit, are based on information compiled by Mr Russell Meares who is a Fellow of The Australasian Institute of Mining and Metallurgy (FAusIMM) and who has sufficient experience 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 (the "JORC Code"). Mr Meares is a full-time employee of Malachite Resources NL and he consents to the inclusion in the report of the Exploration Results in the form and context in which they appear.*

*The data in this report that relates to Mineral Resources for the Conrad Deposit is based on information evaluated by Mr Simon Tear who is a Member of The Australasian Institute of Mining and Metallurgy (MAusIMM) and who has sufficient experience 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 (the "JORC Code"). Mr Tear is a full-time employee of Hellman & Schofield Pty Ltd and he consents to the inclusion in the report of the Mineral Resource in the form and context in which it appears.*

*The data in this report that relates to silver equivalent grades, cut off grades and likely mining style for the Conrad Deposit is based on information evaluated by Mr Declan Franzmann who is a Member of The Australasian Institute of Mining and Metallurgy (MAusIMM) and who has sufficient experience 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 (the "JORC Code"). Mr Franzmann is a full-time employee of Citraen Pty Ltd and he consents to the inclusion in the report of the Mineral Resource in the form and context in which it appears.*




**LEGEND**

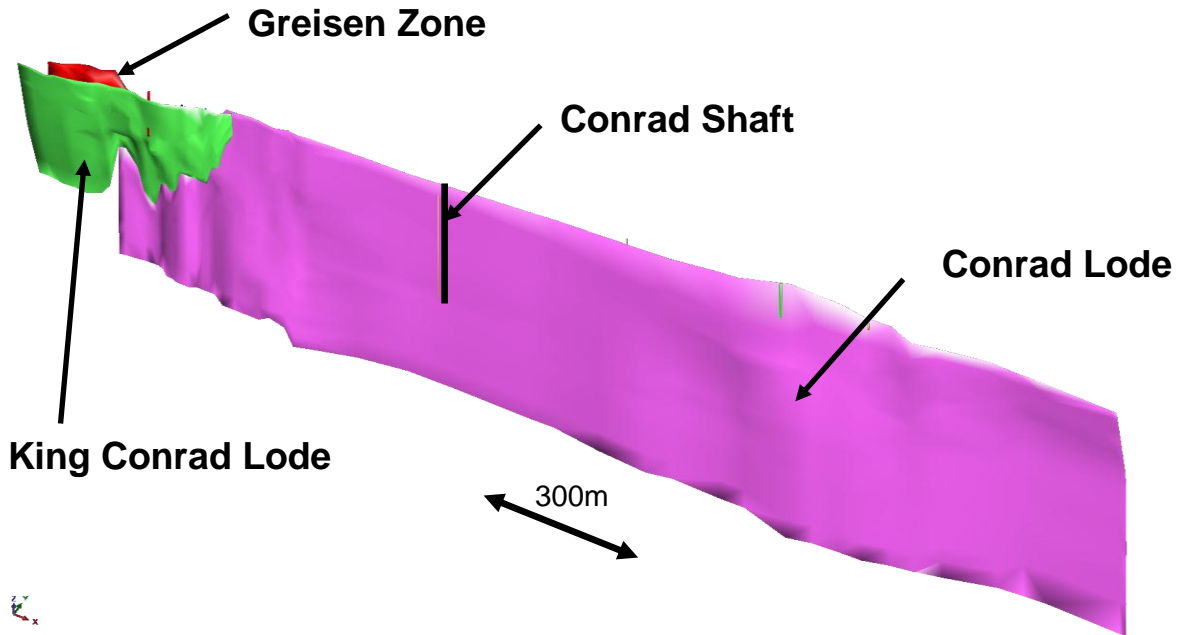
- Drill hole showing projected hole trace
- Interpreted position of King Conrad Lode
- Interpreted position of Conrad Lode
- Interpreted position of Allwells Lode
- Interpreted position of Graisen Zone
- Shaft, winze
- Track
- Contour (10m interval)
- Gilgai Granite

Proj/Grid: GDA94/MGA56

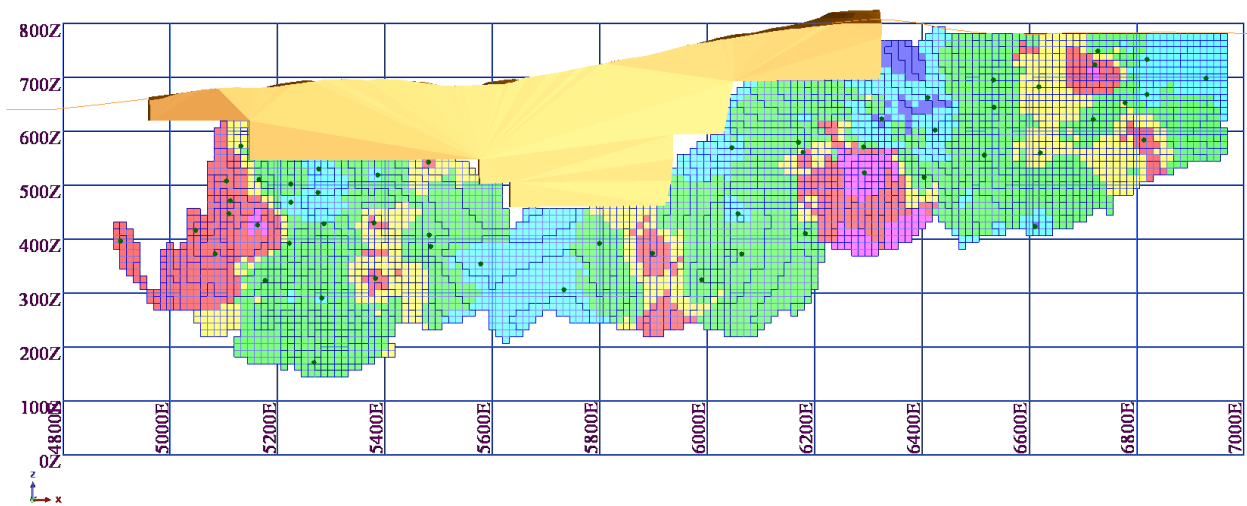


 <b>MALACHITE RESOURCES NL</b>	
<b>CONRAD SILVER MINE</b> <b>DRILL HOLE PLAN</b>	
Scale: 1:10000	Date: December 2008
Reference #: CON-0047	Figure 1

**Figure 2: Conrad Project: 3D model of Lodes and Greisen Zone**

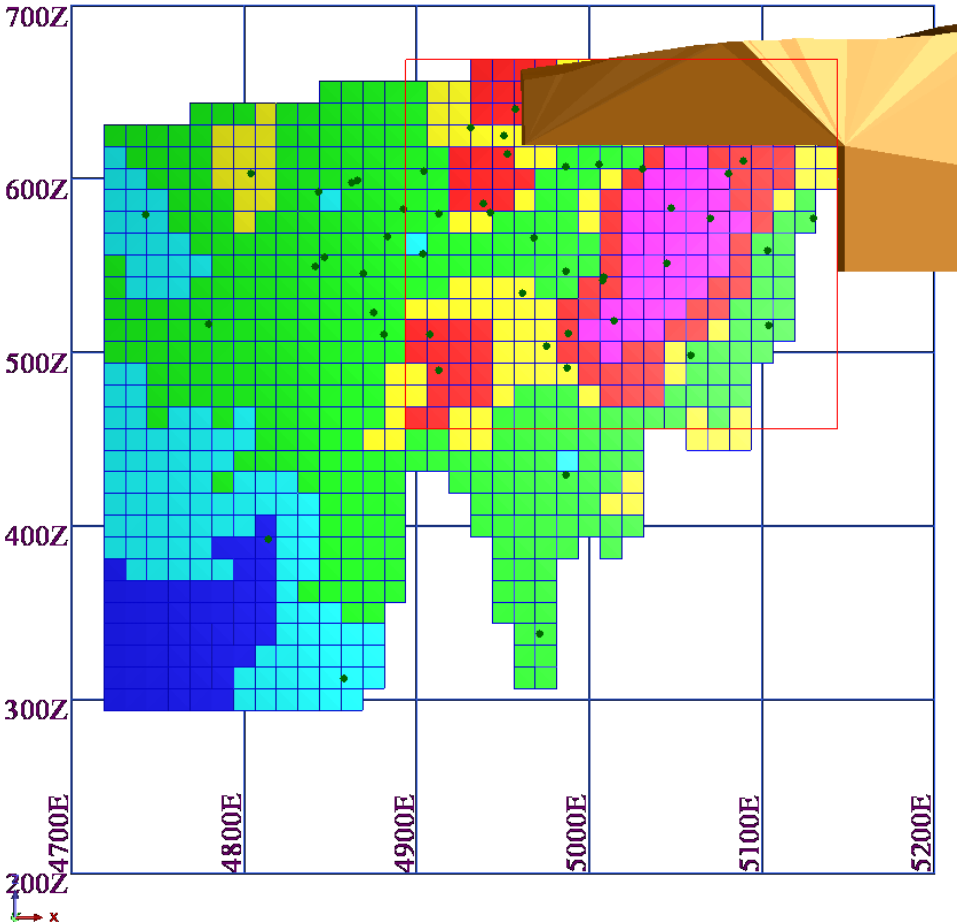


**Figure 3: Conrad Lode: Block Grade Distribution - Silver Equivalent**



Silver Equivalent: blue=0-40g/t; cyan=40-100; green=100-236; yellow=236-300; red=300-500; magenta=>500;  
Brown shape = Historical Depletion; green dots = drill hole pierce points

**Figure 4: King Conrad Lode: Block Grade Distribution - Silver Equivalent**



Silver Equivalent : blue=0-40g/t; cyan=40-100; green=100-236; yellow=236-300; red=300-500; magenta=>500 Brown shape = Historical Depletion (incl. old drives); green dots = drill hole pierce points



## APPENDIX A

### DETERMINATION OF SILVER EQUIVALENTS

The term “silver equivalent” is used to provide a basis for comparison with other silver – base metal deposits that contain different ratios of metals. Details of the parameters used and the assumptions made for calculation of the silver equivalent grades are set out in the Table below. It should be noted that the silver equivalent equation will vary in line with variation in the metal prices, exchange rates, smelter returns and mill recoveries that are applied to the calculation. This means the silver equivalent grades quoted in this report could be different if calculated at another time using another data set. The methodology applied here conforms with recommended practice.

#### Calculation of Ag Equivalents

Conrad Ag equivalent calculator									
Metal	Smelter	Metal		Effective metal price (net smelter)	\$/1% metal in 1t ore	Recovered		Ag <sub>eq</sub> ratio	unit
	Return (%)	Price	Unit			Mill Recovery	(\$/1% metal in 1t ore)		
Ag	80%	<b>470</b>	A\$/kg	376	3,759	90%	3,383	<b>1.0</b>	g/t
Pb	55%	<b>1,538</b>	A\$/t	846	8.5	90%	7.62	<b>22.5</b>	%
Zn	50%	<b>1,692</b>	A\$/t	846	8.5	80%	6.77	<b>20.0</b>	%
Cu	65%	<b>4,769</b>	A\$/t	3,100	31.0	80%	24.80	<b>73.3</b>	%
Sn	70%	<b>17,846</b>	A\$/t	12,492	124.9	55%	68.71	<b>203.1</b>	%

Silver Equivalent equation:

$$\mathbf{Ag_{EQ} = Ag (g/t) + 22.5 * Pb (\%) + 20.0 * Zn (\%) + 73.3 * Cu (\%) + 203.1 * Sn (\%)}$$

The parameters used for the Ag equivalent calculation are:

- Exchange rate – \$A1.00 = \$US0.65
- Ag metal price – \$US9.50/oz
- Pb metal price – \$US1,000/t (= \$US0.45/lb)
- Zn metal price – \$US1,100/t (= \$US0.50/lb)
- Cu metal price – \$US3,100/t (= \$US1.41/lb)
- Sn metal price – \$US11,600/t (= \$US5.26/lb)
- Estimated Net Smelter Return based on typical smelter terms ;
- Process recoveries estimated from preliminary metallurgical testing and previous experience.

The metal prices and exchange rate used in the silver equivalent determinations were those current as of 8 December 2008. It should be noted that indium has not been included in silver equivalent determinations at this stage.

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## **APPENDIX B**

### **RESOURCE ESTIMATION METHODOLOGY**

The resource estimates have been reported for Malachite by the Company's consultants, Hellman and Schofield Pty Ltd ("Hellman & Schofield") and their results are set out in Table 1.

The resource estimate has been produced from 107 drill holes (all drilled by Malachite), mainly diamond drilling of variable spacing, covering over 2km of strike. Sampling has dominantly been geologically controlled sawn half core with the samples analysed by appropriate techniques at a commercial laboratory.

Drill hole collars have been located by a Registered Surveyor and all data have been compiled into an Access database. Malachite has assumed responsibility for the data and the geological interpretation. Density data are based on the modelling of over 800 individual determinations for single pieces of whole core covering a range of rock and mineralisation types.

A series of 3D geological shapes have been interpreted by Malachite from drill hole geological and assay data to constrain the source composite data for the resource modelling. A fixed width of 1.2m has been used for the lode shape designs. Resource estimation methodology used by Hellman & Schofield has been a combination of 2D (for the lodes) and 3D (the Greisen Zone) composited drill hole data modelled according to the nature of the mineralisation. Ordinary Kriging was the preferred modelling method with a series of different search ellipses reflecting the mineralisation style.

Resource classification by Hellman & Schofield has included Indicated and Inferred Resources as tabulated in Table 1. The classification of the resources for the two lodes is based on the composite data spacing, the perceived continuity of the geological structure and the assumption that the whole of the designed 1.2m wide lode shape will be extracted from an underground operation. No cut off grade has been applied.

At Malachite's request high grade resource estimates have been reported for the two lodes. The reporting is based on the use of Designed Shapes for the high grade zones, a 300g/t  $Ag_{EQ}$  cut off and assuming a 1.2m mined width.

The Greisen Zone resource has been reported to a 74g/t silver equivalent cut off and is intended to be mined initially as an open pit operation. This proposed pit will also capture a small amount of the near surface King Conrad Lode material. The classification of the resources for the Greisen Zone is based on the drill hole spacing and the mineral grade continuity.