



## ASX AND MEDIA RELEASE

Monday 21 April 2008

### UPDATE - NORNICO NICKEL PROJECT (QLD)

- **Process Design Changes Improve Efficiencies**
- **Mine Feasibility Study due end of year**
- **Nickel production target now 7,000 tpa**

Metallica Minerals Ltd (ASX code "MLM") today announced a change to a section of the proposed nickel-cobalt recovery component of its flagship NORNICO nickel project northwest of Townsville to achieve efficiency gains, plus significant savings in construction and operating costs.

The major change is in the process flowsheet design to include an Ion Exchange (IX) resin stage for selective nickel and cobalt recovery methodology compared to the originally proposed precipitation process, whereby the nickel and cobalt metal product is obtained from solution using carefully rising pH control.

Metallica says the decision, prompted by higher than expected cost estimates for the precipitation plant (the "backend" aspect of the metal extraction process), will push out the completion of the current mine feasibility study from mid-year until late this year, to allow for further process design and backend metallurgical test work.

A review of alternative options for the backend flowsheet favours a hybrid of the conventional precipitation flowsheet to include an IX resin section for clean, selective and efficient nickel and cobalt metal recovery.

The inclusion of the IX resin route should lower the capital cost for the greenfields NORNICO heap leach nickel operation, which is expected to produce, subject to feasibility study (including further detailed metallurgy), first nickel and cobalt production forecast in late 2010.

It should also achieve a more efficient process, and lower overall operating costs for what Metallica says will be a minimum 10-15 year mine life but "probably decades" using the higher grade portions of NORNICO's Measured and Indicated Resource (30.5 Mt at 0.74% Ni using 0.45% Ni cut-off, *see Table 1 below*), to produce either Ni hydroxide or carbonate product. However, the "front end" (mining and heap leaching) throughput will initially be reduced to 1 million tonnes per annum (Mtpa) to more adequately match the new backend flowsheet and this will result in reduced nickel production to around 7,000 (previously planned 10,000) tonnes of nickel per annum.

"Our primary focus is to make NORNICO as robust as possible as we believe it will have a very long mine life, and our optimism is gathered from the fact that NORNICO is in an excellent location, its ore types have shown to be highly amenable to acid leaching, a major portion of its nickel deposits comprise dry, free silica rich, iron poor laterite ore types with good screen upgrade and heap stability characteristics, plus we have a very competitive process flowsheet," Metallica's Managing Director, Mr Andrew Gillies, said today.



He said the original backend precipitation process was chosen more than two years ago and significant process understanding has been considered in the intervening period.

“The IX resin process is a well used metal recovery technology from acidic solutions, particularly for uranium, copper and base metals, and in hindsight, perhaps we could have gone down that path in the first place. We also have several patent applications on heap leach processing, including the new flowsheet now proposed for NORNICO”

Mr Gillies said indicative acid and power plant capital costs from suppliers for NORNICO, allowing for the production of up to 2,000 tonnes per day of acid, had “come in within our expectation range at around \$135 million”.

“This is the single largest capital cost item of the project and one which we will obviously continue to monitor closely as we advance the feasibility study towards completion,” he said.

Metallica is proposing a three-part operation at NORNICO, comprising an acid and power plant, a front end nickel laterite heap leaching operation to get the nickel into solution, and then a backend plant to precipitate iron for removal, and then recover nickel and cobalt from the leach solutions – now using the preferred IX resin technology – to produce nickel and cobalt product for sale to nickel refineries.

No cost estimates for the overall project have yet been released as they are subject to final feasibility study recommendations, but Mr Gillies said that on early indications, the change in backend plant announced today, and other flow-on impacts associated with that change, should save “tens of millions of dollars” and gain considerable added efficiencies.

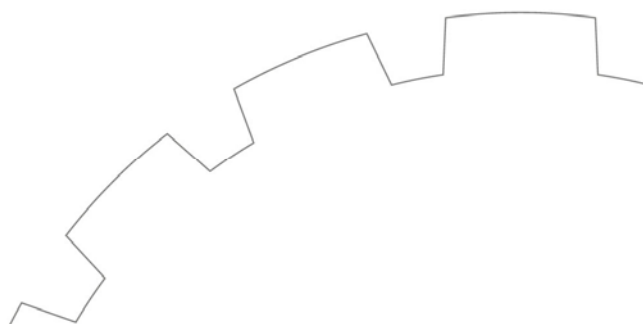
These efficiencies will likely include lower capital cost, lower acid and lime usage, slightly better nickel and cobalt recovery, and produce a cleaner (lower contaminant metals) and higher grade intermediate product which will promote a better price paid from refineries.

“It is also envisaged there will be a smaller acid and power plant requirement - of around 1,500 to 1,800 tonnes per day acid production compared to 2,000 tpd, although it maybe more beneficial to retain this capacity for potential future capacity scale-up and project expansion” he said.

Mr Gillies added that due to the escalation of materials and labour cost environment facing Australian resource and infrastructure developers, Metallica had also elected to revise slightly upwards, its internal nickel and cobalt average long-term pricing estimates. These metal prices, for the purpose of feasibility, have now been revised to US\$9/lb Ni (previously US\$8/lb) and US\$18/lb Co (previously US\$16/lb). It should be noted that there will be cost price pressures for all nickel developers and producers, plus we expect these prices to be well below Chinese Pig iron nickel production costs which are estimated around US\$11-15/lb Ni. Current global prices for the commodities are around US\$13/lb Ni and US\$50/lb Co.”

Metallica and feasibility study manager, Lycopodium Engineers, will now redefine and readjust NORNICO’s plant configurations and costings to take into account the IX resin process step inclusion and “to get the most cost effective flowsheet and plant set-up right by the end of the feasibility” Mr Gillies said.

Subject to the feasibility study, project financing is expected to be put in place from early 2009 as well as contracts let for some of the long-lead items which could take 22-months for delivery.



# METALLICA MINERALS LIMITED



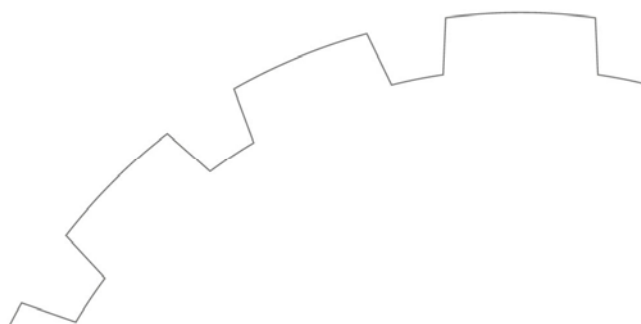
Metallica recently announced an upgraded Measured, Indicated and Inferred resource for NORNIC from its combined Minnamoolka and Bell Creek deposits comprising 35.5 million tonnes grading 0.73% nickel at a cut-off grade of 0.45% nickel for a contained 259,000 tonnes of nickel (see *Table 1 and ASX Release dated 14 April 2008*) – with significant potential to add additional nickel deposits from adjoining brownfields and greenfields regional exploration.

## For Further Information

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*Technical information, Exploration Results and Mineral Resources contained in this report has been compiled by Metallica Minerals Ltd full time employees Andrew Gillies in the position of Managing Director and Metallica Minerals Ltd Exploration Manager, Mr Pat Smith MSc. B.Sc (Hons), M.AusIMM. The updated resource estimate for Bell Creek was completed independently of Metallica by Mr John Horton BSc (Hons), DipCompSc, PGradCertGeostats, M.AusIMM, MAIG of Golder Associates Pty Ltd. Resources presented were compiled by Mr Gillies and Mr Smith for Minnamoolka and Mr Horton for Bell Creek, all of whom are competent persons and members of the Australasian Institute of Mining and Metallurgy. Mr Horton, Mr Gillies and Mr Smith have relevant experience to the mineralisation being reported on to qualify as Competent Persons as defined by the Australasian Code for Reporting of Minerals Resources and Reserves. Mr Horton, Mr Gillies and Mr Smith consent to the inclusion in the report of the matters based on the information in the form and context in which it appears.*





**Table 1: NORNIC Nickel Mineral Resource Table (Bell Creek and Minnamoolka Deposits)**

Nickel Deposit	Tonnes Mt	Ni (%)	Co (%)	Fe (%)	Mg (%)	In-situ Ni metal	In-situ Co metal
<b>Bell Creek South (BCS)</b>							
Measured	7.54	0.94	0.07	12.3	7.4	70,880	4,900
Indicated	0.40	0.74	0.04	10.7	9.2	2,960	170
Inferred	1.16	0.74	0.04	8.5	9.3	8,580	420
<b>Bell Creek North (BCN)</b>							
Indicated	5.64	0.65	0.02	8.28	8.9	36,660	1,180
<b>Bell Creek Northwest (BCNW)</b>							
Indicated	5.18	0.67	0.04	14.1	5.3	34,710	2,070
<b>Minnamoolka</b>							
Indicated	11.83	0.67	0.031	9.7	11.7	79,260	3,670
Inferred	2.90	0.64	0.021	8.3	11.6	18,560	550
<b>The Neck# - between BCS and BCN</b>							
Inferred	0.58	0.87	0.03	9.0	8.0	5,060	180
<b>The Pod# - west of BCS</b>							
Inferred	0.28	0.73	0.05	9.2	5.7	2,020	140
<b>Totals</b>	<b>Tonnes (Mt)</b>	<b>Ni (%)</b>	<b>Co (%)</b>	<b>Fe (%)</b>	<b>Mg (%)</b>	<b>In-situ Ni metal</b>	<b>In-situ Co metal</b>
<b>Measured</b>	7.54	0.94	0.07	12.3	7.4	70,880	4,900
<b>Indicated</b>	23.1	0.67	0.03	10.3	9.5	154,440	7,100
<b>Inferred</b>	4.9	0.70	0.03	8.5	10.3	34,440	1,320
<b>Overall total</b>	<b>35.51</b>	<b>0.73</b>	<b>0.04</b>	<b>10.2</b>	<b>8.9</b>	<b>259,220</b>	<b>13,320</b>

Block models for the above resources (with the exception of the Pod and the Neck) were constructed by filling wire frame surfaces representing nickel laterite mineralization boundary with 10m by 10m by 1m blocks. Nickel (Ni) grades were estimated by ordinary kriging using a 60m by 60m by 2.5m or 50m by 50m by 2.5m search radius, depending on the drill spacing of the deposit. A minimum of 4 and a maximum of 15 composites were used to estimate each block, with a maximum of 3 composites from any 1 drill hole. Therefore, at least 2 drill holes were used to estimate block grade values. At Bell Creek South and Minnamoolka a nominal 0.3% Ni mineralised envelope was used as a hard boundary for Ni and Co block grade estimation. Hard boundaries were also used between the laterite and basement zones.

\*Variations due to rounding factors

\*\*\* Iron (Fe) and magnesium (Mg) are included to indicate the overall ore quality, as both metals influence acid consumption as well as dissolved Fe, Mg and other metals, which are contaminants to nickel loaded pregnant solution which is treated to produce a marketable nickel and cobalt intermediate product. As a rule, the lower the Fe and Mg in the laterite ore the better metallurgically the ore is suited for heap leach processing.

# Both The Pod and The Neck were estimated using an arithmetic mean - cross sectional (polygonal) method, a 0.45% Ni external cut-off grade and a minimum assumed mining width of 2m was applied.

Further Information – See ASX Release 14 April 2008.