



## ASX RELEASE

21 December 2009

### METALLICA BOOSTS QUEENSLAND NI-CO PROJECT BY ACQUIRING GREENVALE NICKEL MINE ASSETS

- Metallica purchases 100% Greenvale Mine site tenements for \$1.65M
- Greenvale contains remnant Inferred & Indicated Resource of 38 million tonnes (Mt) at 0.8% Nickel (Ni) – (see Table 3)
- Remnant high grades confirmed by drilling – including 24m @ 1.94% Ni and 24m @ 1.65% Ni from separate areas, (see Tables 1 & 2, Figure 2)
- Excellent development site and existing infrastructure
- Pre-feasibility study started on establishing a processing operation at the Greenvale site, using feed sourced from Greenvale and blended with trucked cobalt rich Kokomo nickel laterite ores.

One of Australia's former large and high grade nickel laterite mines is being acquired by Metallica Minerals Limited (ASX code – MLM) in an expansion of the Company's flagship nickel-cobalt portfolio and planned mining precinct between Townsville and Cairns.

A combined total consideration of A\$1.65 million will go to Straits Resources Ltd (Straits) and Resource Mining Corporation (RMI) to acquire all of their joint venture ownership of the three Greenvale tenements, EPMs 11223, 10680 and 10866 which comprise the historic Greenvale nickel mine and its immediate surrounds – Metallica's 100% owned subsidiary Greenvale Operations Pty Ltd will hold 100% of the Greenvale tenements.

The Greenvale acquisition price totals \$650,000 cash and 3.33 million Metallica ordinary shares at a deemed price of A\$0.30 per share.

The Greenvale assets are immediately south of Metallica's Kokomo deposit which together with the Minnamoolka and Bell Creek deposits to the north, comprise the Company's advanced NORNICO nickel-cobalt project.

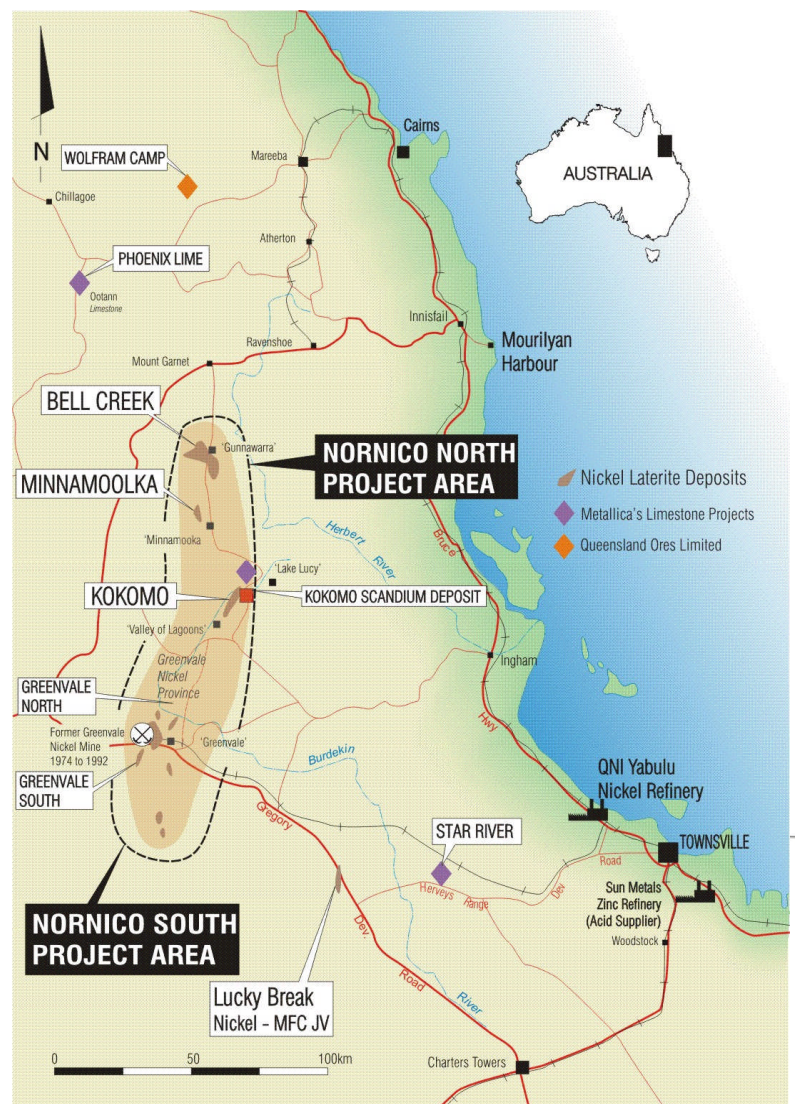


Figure 1 – NORNICO project setting

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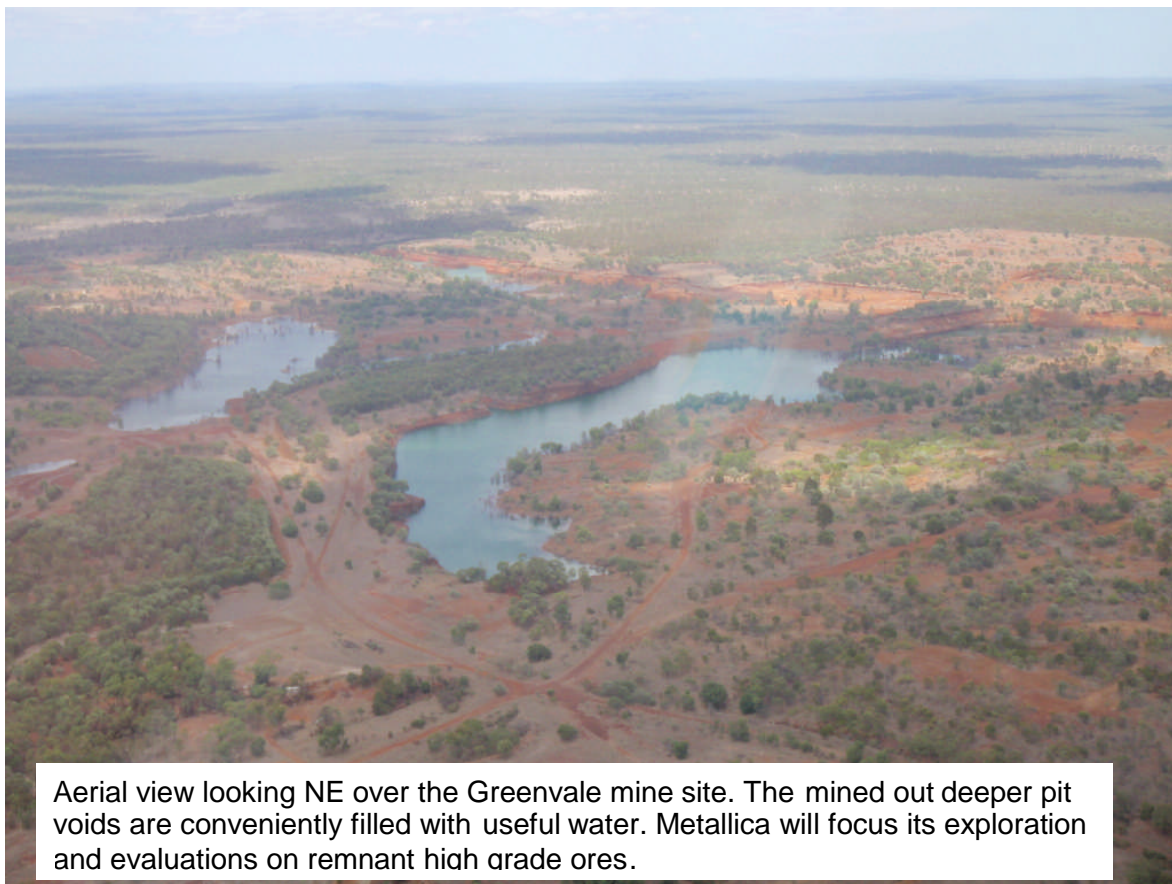
Because of existing mining, infrastructure in the region and the upside of near surface remnant and stockpiled nickel mineralisation at the Greenvale Nickel mine, the Company believes the acquisition presents the option to move to nearer-term maiden production of high grade Ni-Co ore through a modest-scale commercial plant at the Greenvale Mine.

The Greenvale tenements cover both the Greenvale mine site and the nearby Lucknow nickel-cobalt (Ni-Co) deposit just a few kilometres west of the Greenvale township.

The Greenvale mine operated for 18 years from 1974 to 1992, mining ore from a 3 km<sup>2</sup> area, that produced 40 million tonnes (Mt) of nickel laterite ore grading 1.56% Ni and 0.12% Co, making it the largest high grade nickel laterite mine in Australia.

The Greenvale mine had previously transported the high grade nickel ore by a specially built rail line, for processing at the nearby coastal Yabulu nickel-cobalt refinery near Townsville – see Figure 1.

The Greenvale tenements are shown in the attachment at the end of this release.



Metallica's Managing Director, Mr Andrew Gillies, said: *"This is a significant consolidation and enhancement of our resource base, exploration and mining potential at NORNICO as the Greenvale project contains a very strategic and significant remnant nickel mine resource.*

*"This resource will considerably add to Metallica's 100%-owned NORNICO project Ni-Co deposits immediately to the north and potentially provide high grade feed for an initial production start-up as well as being an excellent mining and processing site for future NORNICO operations.*

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*“The site is one we have been keen on for quite some time, as the mine area is well served by sealed roads, close proximity to the Greenvale township and associated water and power infrastructure and is only 2.5 hours drive from Townsville.”*

*“Our feasibility and development team is currently assessing the opportunity for a modest size atmospheric acid leaching (AAL) operation as NORNICO Stage 1 - something in the order of 100,000 to 150,000 tonnes per annum (tpa) on the Greenvale mine site.”*

*“This operation would source very high grade nickel-cobalt ore blended from Greenvale as well as cobalt and scandium-rich nickel ores trucked from the Kokomo project 55km northeast of Greenvale. Acid used in the processing would be trucked from Townsville.”*

*“We envisage that after a few years of NORNICO Stage 1 operations, Metallica would be commissioning the planned much larger NORNICO Stage 2 operation (in the order of 1.0 to 0.75Mtpa) which would have its own acid and power plant.”*

*“The flow sheet for this plant is designed to source high grade Ni-Co ores from all NORNICO deposits – including Greenvale – at which point the Stage 1 Greenvale plant processing could conceivably revert to predominantly scandium-rich nickel laterite ores for Scandium Oxide production with some Ni-Co bi-products.”*

Mr Gillies said the inclusion of the Greenvale project now cemented NORNICO’s excellent location and access to high grade Ni-Co ores – factors that set it apart from other nickel laterite projects and provided an environment to maximise returns.



View over the purpose built Greenvale township established 1973-74 to support the Greenvale mine 4km to the west.

### **Background – Drilling & Resources**

The Straits and RMI joint venture undertook Reverse Circulation (RC) drilling on the Greenvale mine site to define the extent of the remnant nickel resource.

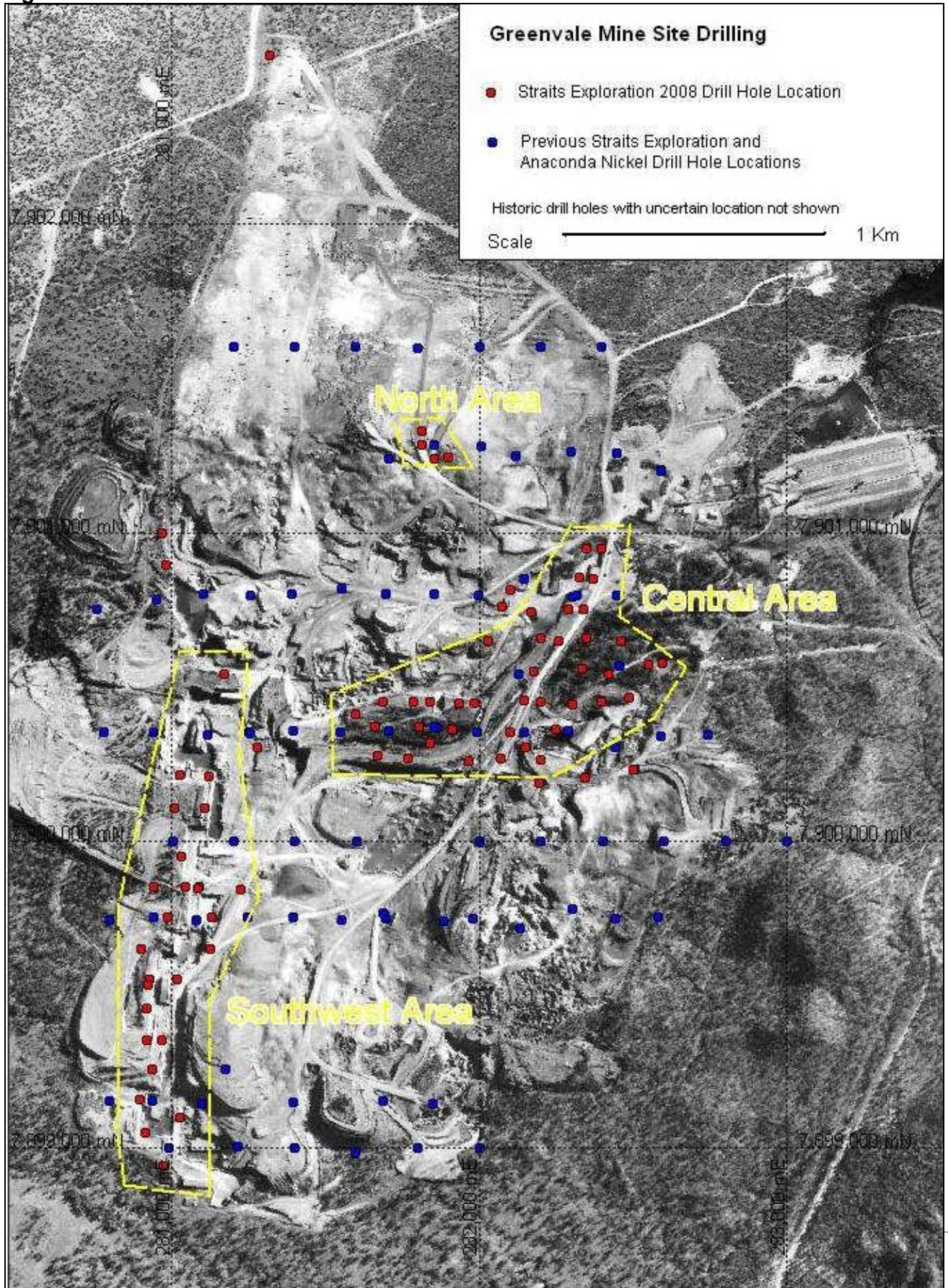
Between May 2007 and July 2008, Straits drilled 141 RC holes for 5,935m, with approximately 25% of the holes drilled intersecting Ni grades greater than 1% over a 5m interval.

The Straits drilling identified three areas which were either un-mined or where mining was limited. Drill hole locations are presented on Figure 2.

Two main areas of high grade nickel laterite have been identified by the Straits drilling and are referred to by Metallica as the Greenvale Mine Central and Southern Areas, - see Figure 2, with significant higher grade drilling results summarised in the tables below.

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Figure 2: Drill Hole Locations and Location of Remnant Greenvale Mine Ore Bodies



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**Table 1: Drill Results Greenvale Mine Central Area**

Hole No.	From (m)	To (m)	Interval (m)	Ni (%)
GV013	32	45	12	1.30
GV046	29	53	24	1.94
GV067	35	52	17	1.69
GV070	21	29	8	1.19
GV081	33	42	9	1.17
GV084	19	33	14	1.08
GV089	24	33	9	1.06
GV090	30	47	17	1.81
GV091	22	32	10	1.07
GV092	27	40	13	1.16
GV093	18	33	15	1.14
GV094	23	35	12	1.45
GV095	19	35	16	1.31
GV096	32	41	9	1.50
GV097	30	42	12	1.66

**Table 2: Drill Results Greenvale Mine South-western Area**

Hole No.	From (m)	To (m)	Interval (m)	Ni (%)
GV055	1	15	14	1.14
GV110	23	33	10	1.34
GV111	16	40	24	1.65
GV112	23	36	13	1.07
GV113	26	38	12	1.19
GV114	11	19	8	1.24
GV119	17	30	13	1.26
GV120	33	51	19	1.15
GV130	10	20	10	1.40

# The above intercepts have been calculated using a 1% Ni COG, Due to the horizontal nature of the laterite mineralisation, reported intersections from the vertical drill holes represent true widths.

Outside these two areas, hole (GVN-015) drilled in the **Greenvale Mine North** area intersected 15m @ 1.69% Ni from surface and it is possible that additional resources will be identified in this area.

There are also likely to be large tonnages of lower grade nickel-cobalt laterite within the mined stockpile dumps on the old mine site.

**An Inferred and Indicated Resource for Greenvale of 38Mt @ 0.80% Ni and 0.05% Co** was announced by Straits Resources Ltd (see ASX release dated 29<sup>th</sup> July 2009) using a cut off grade of 0.5% Ni - see Table 3 for a breakdown of this resource. It is highly likely that high grade zones of +1% Ni will be identified within this resource and Metallica will be targeting these zones as highest priority with a drilling campaign early in 2010.

The **Lucknow tenement** is located immediately south of Greenvale and is a lateritised ridge which has high cobalt values, the higher grade zones will be drilled in detail at first opportunity after the completion of the Greenvale mine site drilling.

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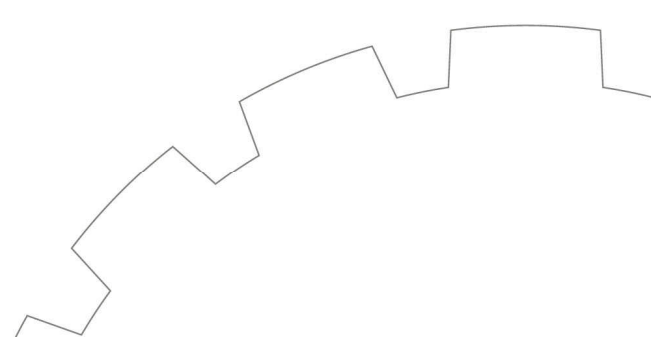




Table 3: Mineral Resource at Greenvale Nickel Mine, Queensland

Classification	Ni % (COG)	Mt	Nickel %	Cobalt %	Contained Ni tonnes	Contained Co tonnes
Indicated	0.5	4.8	0.90	0.05	40,000	2,400
Inferred	0.5	32.90	0.80	0.05	270,000	17,300
<b>Total</b>	<b>0.5</b>	<b>37.70</b>	<b>0.80</b>	<b>0.05</b>	<b>310,000</b>	<b>19,700</b>

\* This resource information was previously released by Straits Resources Ltd in a Quarterly Report to the ASX dated 29<sup>th</sup> July 2009. The information in this report relating to the Greenvale Mineral Resource is based on information estimated by Byron Dumpleton, who is a member of the Australian Institute of Geoscientist. Mr Dumpleton is a Resource Geologist Consultant and has sufficient experience relevant to the style of mineralisation, 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 "Australian Code for reporting of Minerals Resources and Ore Reserves." Mr Dumpleton consents to the inclusion in the report of the matters based on their information in the form and context in which it appears is JORC compliant.

It is highly likely that high grade zones of +1% Ni will be defined within this resource. Metallica is planning a drilling campaign for the first quarter of 2010 to increase the resource categories at Greenvale and to define a high grade zone of nickel laterite mineralisation.

Metallica has an initial Exploration Target\* of between 10Mt to 15Mt grading between 1.0% and 1.4% Ni of remnant mineralisation on the Greenvale mine site.

Metallica will evaluate the Lucknow tenement which is located immediately south of Greenvale and is a lateritised ridge which has high cobalt values, the higher grade zones will be drilled in detail at first opportunity after the completion of the Greenvale drilling.

#### Competent Persons

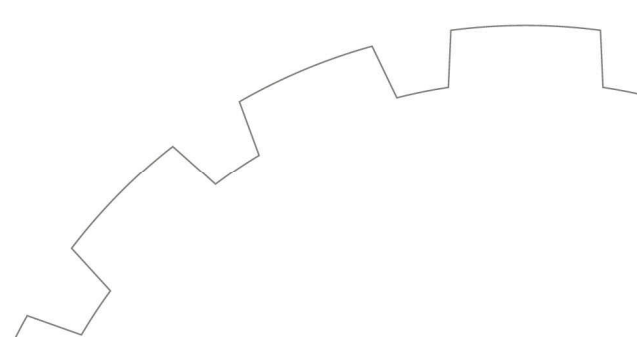
Technical information and exploration results contained in this report has been compiled by Metallica Minerals Ltd full time employees Andrew Gillies in the position of Managing Director and Metallica Minerals Ltd Exploration Manager, Mr Pat Smith MSc. B.Sc (Hons). Mr Gillies and Mr Smith are members of the Australasian Institute of Mining and Metallurgy and 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 Gillies and Mr Smith consent to the inclusion in this report of the matters based on the information in the form and context in which it appears

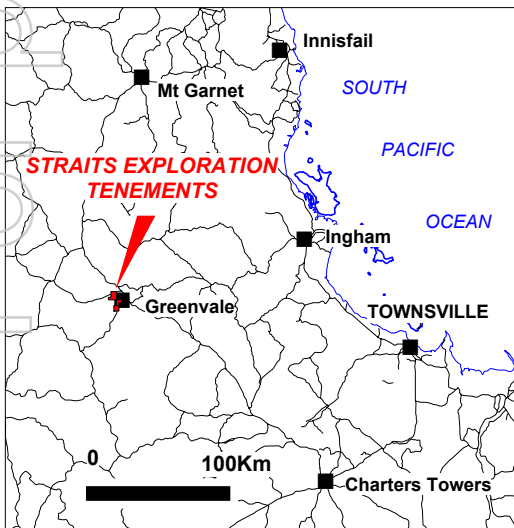
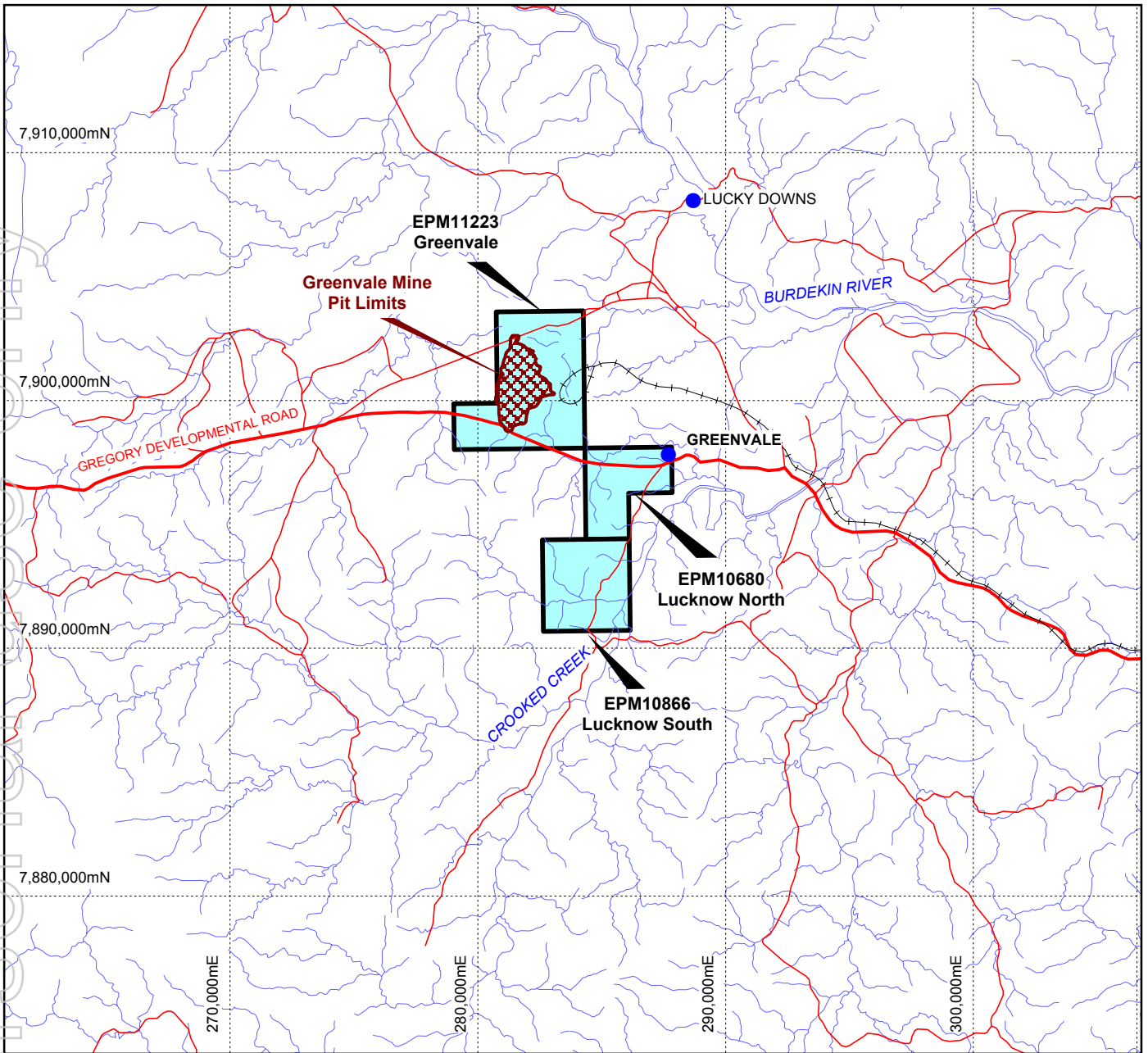
\*With regards to Exploration Targets – The potential quantity and quality or grade is conceptual in nature, and that there is insufficient exploration to define a Mineral Resource and that it is uncertain if future exploration will result in the determination of a Mineral Resource.

For further information  
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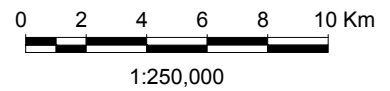
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**INDEX MAP**



		<b>METALLICA MINERALS LTD</b>	
		<b>EPM10680</b> <b>EPM11233</b> <b>EPM10866</b>	<b>GREENVALE</b> <b>LUCKNOW NORTH</b> <b>LUCKNOW SOUTH</b>
<b>CURRENT GREENVALE TENEMENTS</b> <b>STRAITS EXPLORATION</b>			
COMPILED BY	P.SMITH	AUG 09	SCALE 1:250,000
DRAFTED BY	K.J.CORRIE	AUG 09	Proj.: MGA94 (Zone55)
REVISED			DWG No :
			<b>FIGURE</b>