

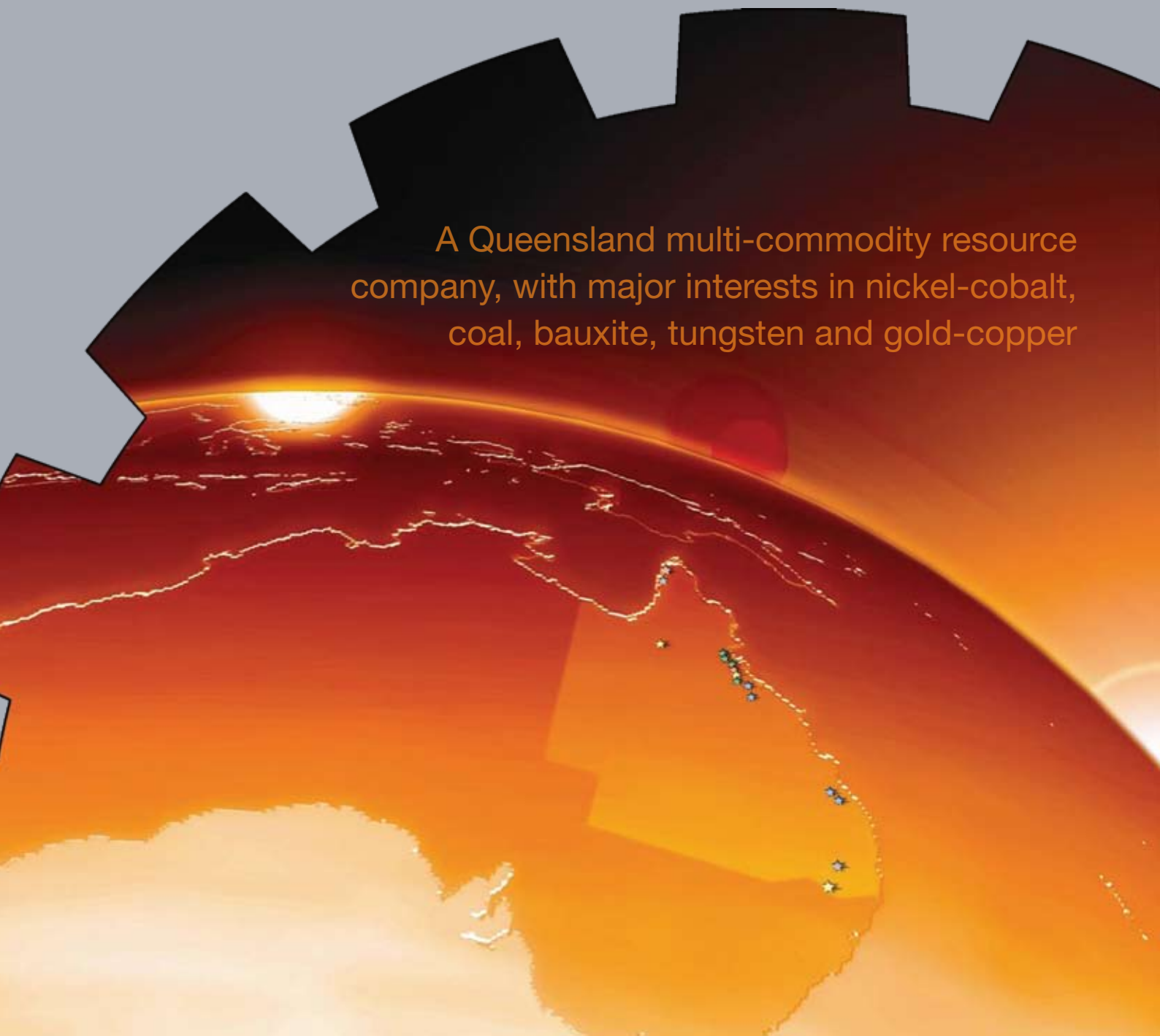
# METALLICA MINERALS LTD

ABN 45 076 696 092



Annual Report  
2009

A Queensland multi-commodity resource company, with major interests in nickel-cobalt, coal, bauxite, tungsten and gold-copper



# Corporate Directory

<b>BOARD OF DIRECTORS</b>	David K Barwick..... Non-Executive Chairman Andrew L Gillies..... Managing Director/CEO John K Haley ..... Executive Director/CFO Peter B Nicholson ..... Non-Executive Director Wu Shu ..... Non-Executive Director
<b>COMPANY SECRETARY</b>	John K Haley
<b>PRINCIPAL AND REGISTERED OFFICE</b>	1 Potts Street, East Brisbane QLD 4169 GPO Box 122 Brisbane QLD 4001 Phone (07) 3891 9611   Fax (07) 3891 9199 Email admin@metallicaminerals.com.au
<b>WEBSITE</b>	www.metallicaminerals.com.au
<b>SHARE REGISTER</b>	<b>Link Market Services Limited</b> Level 19, 324 Queen Street, Brisbane QLD 4001
<b>AUDITORS</b>	<b>BDO Kendalls (QLD)</b> Level 18, 300 Queen Street, Brisbane QLD 4001
<b>SOLICITORS</b>	<b>Hopgood Ganim</b> Level 8, Waterfront Place, 1 Eagle Street, Brisbane QLD 4001
<b>STOCK EXCHANGE LISTING</b>	Metallica Minerals Ltd is listed on the Australian Stock Exchange (ASX). Home Stock Exchange is Brisbane. Riverside Centre, 123 Eagle Street, Brisbane QLD 4001
<b>ASX CODE</b>	MLM (ordinary shares)

## Company history

The primary objective and strategy of Metallica Minerals Limited (ASX: “MLM”) (“Metallica” or “the Company”) is to achieve long-life profitable nickel-cobalt production in the most efficient way, and enhance its major interests in coal, bauxite, scandium, limestone and recently added tungsten-moly and copper-gold assets, to provide attractive returns for shareholders.

Metallica was named after the classic, medieval mining and metallurgy textbook *De Re Metallica*, first published in 1556 by Georgius Agricola, a German physician and scientist.

Agricola, known as the father of mineralogy, was a pioneer in physical geology and the first to classify minerals scientifically.

*De Re Metallica*, his most celebrated work, was a standard in metallurgy and mining for over a century and was translated into English (1912) by Herbert C Hoover. Hoover was a mining engineer who worked in Western Australia and became President of the United States of America in 1929.

Metallica was incorporated in 1997 and secured various Queensland mineral properties early that year with the acquisition of NORNICO Pty Ltd and Oresome Australia Pty Ltd. The principal asset acquired was the NORNICO Nickel-Cobalt Project north-west of Townsville, which contained tenements over known nickel laterite deposits north of the historic Greenvale Nickel Mine. As an unlisted entity at the time, Metallica was able to progress its mineral portfolio by securing timely seed capital raisings and attracting quality joint venture partners.

An Initial Public Offer (IPO) and ASX listing was undertaken in November 2004 through which Metallica raised A\$3.15 million in funding to advance its projects. Injections of capital since listing from Kagara Limited, Anegada Metals and Resource Capital Funds (RCF), combined with some insightful corporate transactions, have positioned the Company so the NORNICO Nickel-Cobalt Project is now at feasibility stage.

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In mid-2007, Metallica sold its then coal assets to Cockatoo Coal Limited for \$5 million cash and \$5 million worth of Cockatoo shares. In July 2008 Metallica sold its Cockatoo Coal shares for \$20 million.

Late in 2008, Metallica's then 40%-owned bauxite exploration company, Cape Alumina Limited ("Cape Alumina"), prepared a Prospectus IPO and successfully listed on the ASX on 29 January 2009. Metallica remains the largest shareholder in Cape Alumina (ASX: CBX) with 33% of the expanded capital.

Metallica's coal and energy interests, primarily over 4,000km<sup>2</sup> of the Surat Basin north-west of Brisbane, are held through its 79% shareholding in MetroCoal Limited ("MetroCoal"). MetroCoal is preparing a Prospectus IPO with the intention of listing on the ASX in December 2009.

In mid-2009, Metallica acquired a 76% holding in Queensland Ores Limited (now named Planet Metals Limited) (ASX: PMQ) ("Planet Metals") which owns 85% of the Wolfram Camp tungsten-molybdenite project, 90km inland from Cairns, and 100% of the Mt Cannindah copper-gold project, 40km from Monto in south-east Queensland.

## Capital Structure

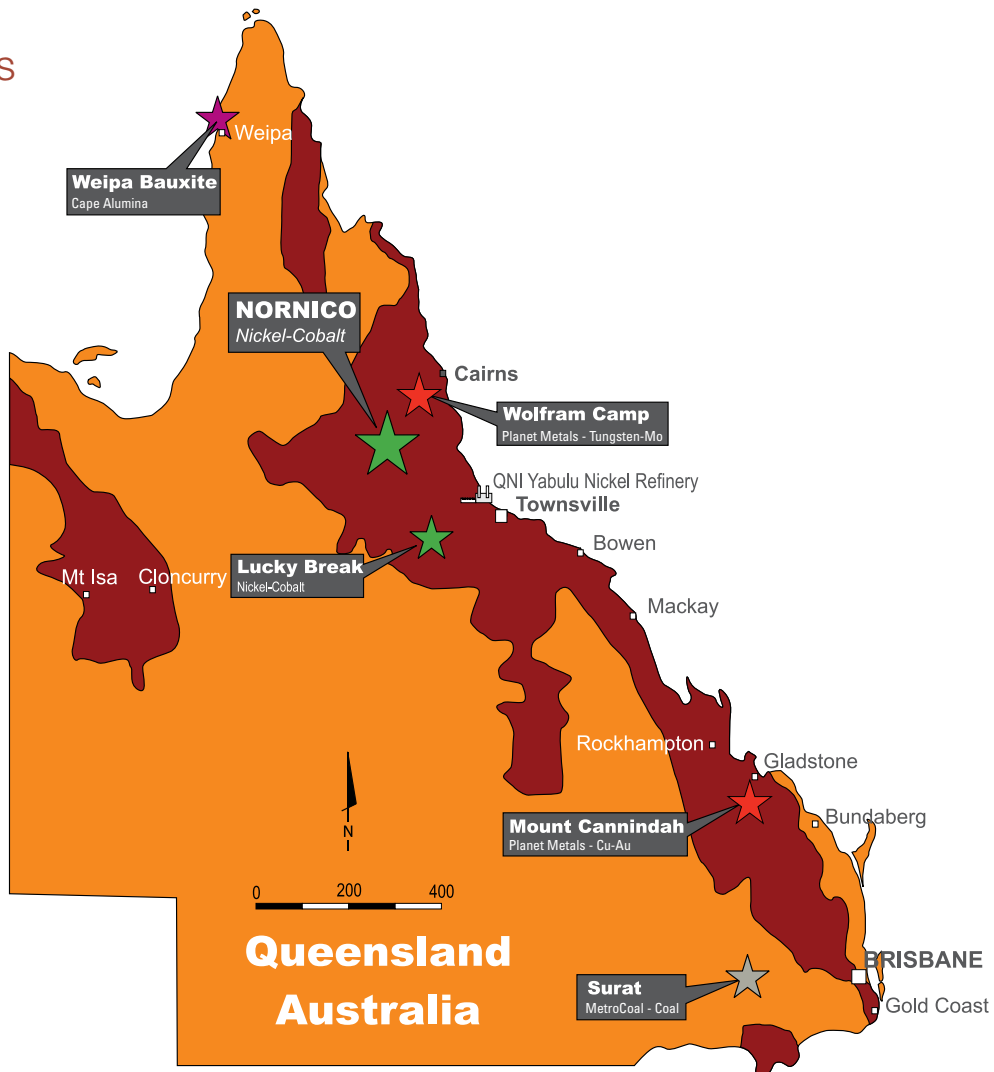
As at 30 June 2009, Metallica's issued capital comprised 121,740,917 fully paid ordinary shares and 6,750,000 unlisted shareholder, employee and Director options. The Company has approximately 2,628 shareholders with the Top 20 shareholders holding 61.1% of the total shares on issue.

## Cash Position

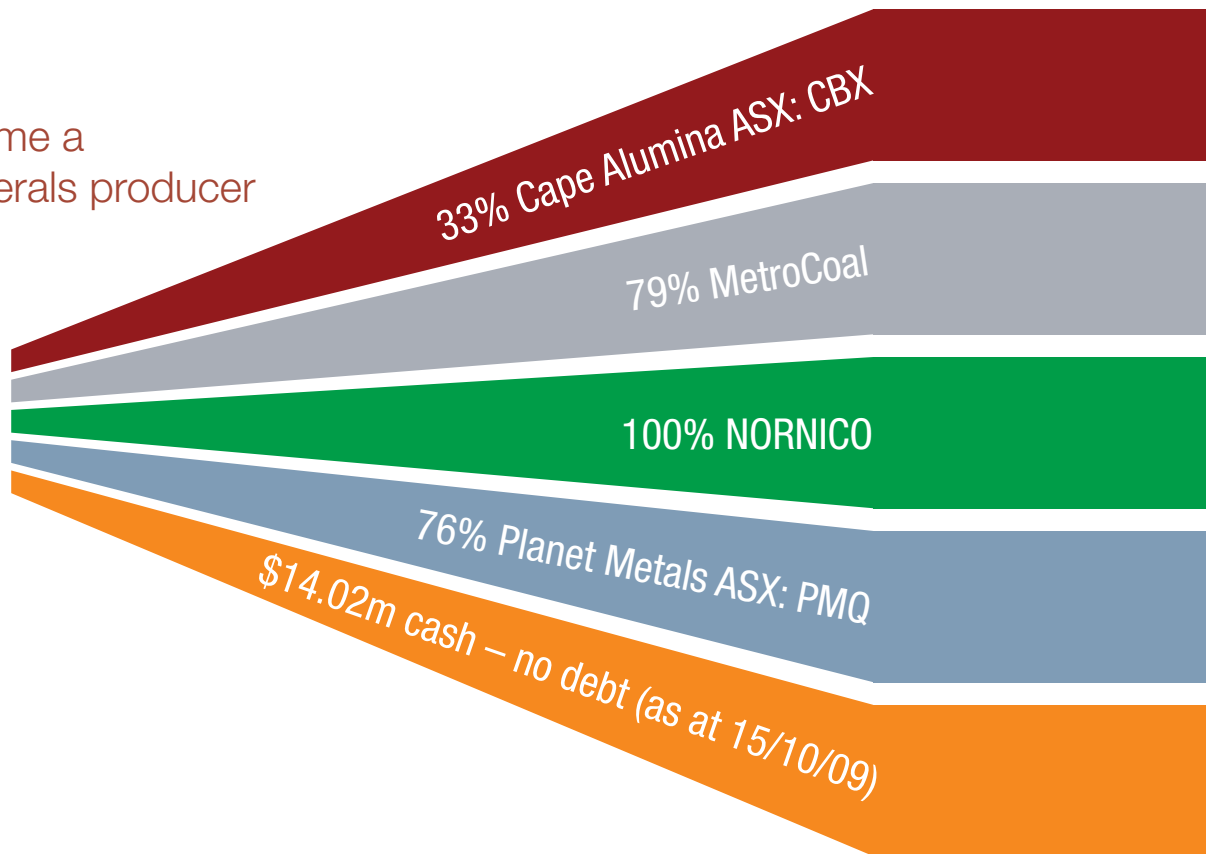
The Company was effectively debt-free with cash reserves of approximately A\$16.34 million as at 30 June 2009. The cash position has subsequently decreased to approximately \$14.02 million as at the date of this report, being 15 October 2009.

# Metallica's mineral portfolio

Figure 1

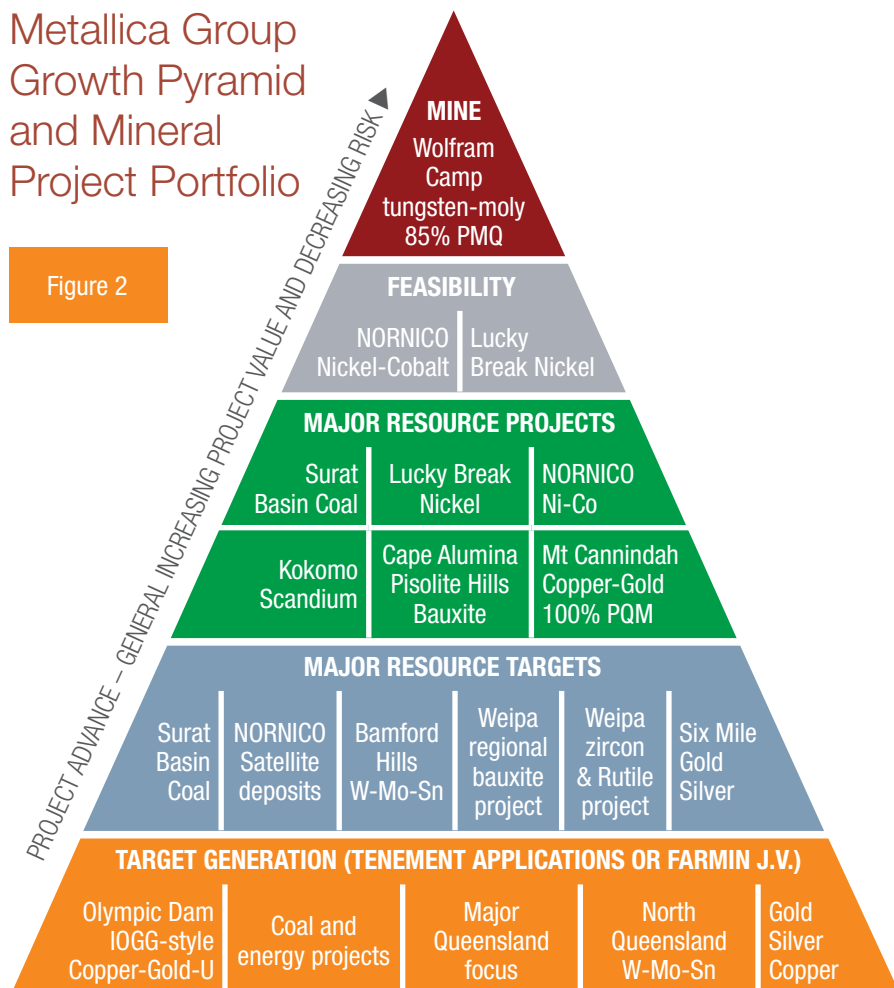


Vision to become a diversified minerals producer



# Metallica Group Growth Pyramid and Mineral Project Portfolio

Figure 2



## Vision

Metallica's vision is to be a highly profitable long-term diversified minerals producer.

Part of this vision is to be at the forefront of a new generation of Australian-based mineral producers, employing leading edge technologies and strategies to generate high value products in a competitive international marketplace, and delivering shareholder value through company profit and growth.

The Company's short-term production aim is to (through its shareholding in Planet Metals) review the resources and processing plant at the Wolfram Camp tungsten-molybdenum project and, if favourable, seek to recommence production.

The Company's medium-term aim is to become a highly profitable and long-term nickel-cobalt (and tungsten-molybdenum and possibly scandium) producer and add substantial value to its coal, copper-gold, bauxite, scandium, zircon and rutile, and limestone interests while maintaining the highest social, environmental and safety standards.

## Strategy

Metallica has a clear, five-tier business strategy in pursuit of wealth generation for its shareholders.

1. To generate profitable, long life tungsten-molybdenum (through Planet Metals) and nickel-cobalt production, with minimal shareholder dilution.
2. To maintain a selective and quality acquisition philosophy that is opportunistic, realistic and forward-looking with respect to choosing only those mineral properties that are considered to have a high probability of becoming a profitable mine.
3. To continue to consolidate tenements containing existing mineral deposits and prospective areas over Metallica's key projects, as seen in its substantial nickel-cobalt, bauxite and coal interests.
4. To realise intrinsic value from the Company by progressing exploration and evaluation success through feasibility studies to bring projects into production, and if beneficial, enter into agreements with leading international resource or industrial companies.
5. To maintain a policy of divesting non-core assets for the purpose of securing funds and investments without shareholder dilution and applying those sale proceeds to advance its core mineral assets and business opportunities.

<b>Weipa Bauxite</b>	
<b>4,000km<sup>2</sup> Surat Basin Coal and UCG Energy</b>	
<b>Nickel-Cobalt Laterite</b> 364kt contained Nickel 29kt contained Cobalt	
<b>85% Wolfram Camp Mine Tungsten-Moly</b>	
<b>Mt Cannindah (100% Planet Metals) Copper-Gold</b>	





Metallica Brisbane office team

## Highlights

- Revised feasibility and development strategy for the flagship NORNICCO nickel-cobalt project to a one million tonnes per annum (Mtpa) heated agitated Atmospheric Acid Leach (AAL) “front end” operation, with a “back end” plant incorporating solvent extraction (SX) and electrowinning (EW) to produce nickel metal and a cobalt intermediate product. Benefits comprise the inclusion of cobalt-rich nickel resources from Kokomo (one of NORNICCO’s key deposits), higher Ni and Co recoveries, expected high feed grades, higher revenue from nickel metal and potential significant by-products of manganese and scandium oxides combining to provide significantly higher revenues than the previous development strategy.
- Completed major drilling programs at Kokomo Ni-Co-Sc project totalling 544 new drill holes, providing the addition of the maiden Kokomo Ni-Co resource. Metallica has significantly increased the size and quality of the NORNICCO resource inventory to 50Mt at 0.72% Ni + 0.06% Co containing approximately 364,000t nickel and 29,000t cobalt (see Table 6, page 31 for Measured, Indicated and Inferred categories). This drilling also defined a maiden Kokomo scandium resource estimate of 4.55Mt at 131g/t Sc containing approximately 600t (or 19 million ounces) of scandium metal (see Table 4, page 30).
- In mid-2009 a second major drilling program commenced, comprising 312 holes (7,798m) at the Kokomo cobalt-rich nickel laterite deposit. Results from this drilling are expected to significantly increase the current Kokomo Ni-Co and Sc resources.
- Cape Alumina (Metallica 33%) increased its in-situ bauxite resource at Pisolite Hills to 130Mt (see Table 9, page 32 for Measured, Indicated and Inferred categories). Cape Alumina listed on the ASX (ASX Code: CBX) 29 January 2009 – Metallica currently has a 33% shareholding comprising approximately 42 million Cape Alumina shares.



Wolfram Camp processing plant

# Key objectives for the 2009/10 year

- Major initiative into coal, fuels and energy advanced with two drilling programs completed 2008/09, culminating in an initial coal resource of 172Mt (see Table 10, page 33 for Indicated and Inferred categories) within MDLA 406, suitable for an Underground Coal Gasification (UCG) project. This resource area represents <1.5% of MetroCoal's tenements, which cover an area of 4,000km<sup>2</sup> over coal bearing strata in South East Queensland.
- Cash reserves during the year increased substantially due to the sale of Metallica's Cockatoo Coal shareholding for A\$20 million in July 2008. As at 30 June 2009, Metallica's cash balance was approximately A\$16.34 million.
- Metallica successfully acquired 76% of Planet Metals Limited (previously Queensland Ores Limited) which holds two significant Queensland resource projects – Wolfram Camp W-Mo (85%) and Mt Cannindah Cu-Au (100%) – both with granted MLs. The Wolfram Camp project has a full-scale commercial processing plant

- Complete scoping and pre-feasibility study for the revised NORNICO and progress permitting of the Bell Creek Consolidated and Kokomo Mining Lease Application.
- Through its major shareholding in Planet Metals, complete resource evaluation drilling at Wolfram Camp tungsten-molybdenum mine site to add to the drill database and complete new resource estimate by December 2009.
- If resource estimate and processing plant review is favourable and subject to reasonable tungsten and molybdenum price outlook, seek to recommission the Wolfram Camp Mine.
- Complete follow-up drilling program on specific high grade Ni-Co and Sc zones and complete open pit design and mine schedules.
- Seek financial and marketing opportunities to advance the Kokomo scandium project.
- Progress MetroCoal's prospectus for proposed ASX listing in December 2009 and commence coal exploration and evaluation activities.

and equipment which had cost Queensland Ores in excess of A\$20 million. Metallica acquired 76% holding through issuing 7.18 million Metallica shares (5.8% of Metallica's expanded capital) and \$1.31 million cash.

- Completed successful seed raising of A\$1 million in capital in August 2009 for 79% owned MetroCoal subsidiary – paving the way for planned float and ASX listing by the end of 2009 of a new Australian coal, associated fuels and energy focused company.
- Metallica's total shares on issue is 121.7 million shares (2008: 112.4 million shares), as at 30 June 2009 and the date of this report.



## Chairman's Report

In spite of the Global Financial Crisis I am pleased to report that Metallica has continued to achieve its targets, and been able to progress all its Queensland projects and retain a very healthy cash balance.

Consistent with the policy of giving non-core assets their own management team and funding capability, Metallica was one of the few companies to achieve an IPO in 2009 by listing Cape Alumina (ASX: CBX). Metallica remains the largest shareholder with a strategic 33% stake, and since listing, Cape has continued to confidently progress its Weipa bauxite project through resource evaluation and pre-feasibility studies.

In recent weeks the Company has also announced the successful closing of a further \$1 million in seed capital for Metallica's 79% owned MetroCoal. MetroCoal holds a substantial coal tenement portfolio in the Surat Coal Basin. MetroCoal is progressing towards an IPO, expected later this year, subject to economic conditions. Two broking firms have assisted with the seed capital raising and will be supporting the proposed IPO.

As well as advancing our diversified resource project portfolio, Metallica also took advantage of the downturn and utilising the strength of its balance sheet, successfully made a takeover bid for Queensland Ores Limited (now named Planet Metals Limited), currently achieving 76% of its issued capital. Planet Metals

owns the Wolfram Camp Tungsten and Molybdenum Project, including a new full-scale commercial plant. This project is currently being actively evaluated before considering returning the operation to tungsten and molybdenum production. Planet Metals also owns the Mt Cannindah copper-gold project, which already has an attractive resource and exploration targets within granted mining leases.

In view of recent lower nickel prices, the feasibility study on the Company's 100% owned NORNICO Project has been delayed to include the substantial Kokomo nickel-cobalt (and scandium) project and to reassess process flow sheet options to ensure the most up-to-date technology for the extraction of the nickel and cobalt is utilised. The board remain very confident that NORNICO can become a profitable long term nickel-cobalt producer.

Metallica has continued to advance its other projects during the year, with the ongoing strategy of being recognised as a diversified resource development company with its major interests in nickel, cobalt, scandium, bauxite, coal, limestone and more recently added tungsten, molybdenum, copper and gold through its major shareholding in Planet Metals.

On behalf of our Board, I would like to acknowledge the efforts of the entire Metallica team which has continued to develop our projects and support our corporate activities through what has been a very difficult year for a lot of resource companies. The team, led by our Managing Director Andrew Gillies, continues to progress our corporate vision to become a highly profitable diversified minerals producer.

Also on behalf of the Board, I invite all shareholders to attend the Annual General Meeting, which is scheduled for 10.30am on 27 November 2009, to receive an update on the progress made on our various projects and activities.

**D K Barwick**  
CHAIRMAN



# Managing Director's Review



Despite global financial turmoil through most of 2008/09, the financial year saw Metallica continue its emergence as a Queensland-based, multi-commodity resource company with a nickel-cobalt development focus. We have major interests in coal and bauxite and now, due to the recent acquisition of a major shareholding in Planet Metals, we have added a potential tungsten-molybdenum mining project and an advanced copper-gold project to our portfolio.

It was another very active and progressive year for Metallica, both in corporate terms and for progressing its resource projects towards its goal of moving from a diversified resource company to a developer and producer. This goal was strengthened by the timely acquisition of a 76% shareholding in Planet Metals, which controls the Wolfram Camp tungsten-molybdenum mine and the Mt Cannindah copper-gold project.

Metallica's future looks bright, with renewed growth in demand for mineral commodities, particularly from China and the Company's resource project portfolio, with exposure to nickel-cobalt (NORNICO 100%), coal-fuel-energy (MetroCoal), bauxite (Cape Alumina), tungsten-moly (Planet Metals) and copper-gold (Planet Metals).

For the year ended 30 June 2009, Metallica expended approximately \$6.1 million on mineral exploration and evaluation while still retaining a healthy \$16.34 million (previous \$7.43 million) cash position, and 121.7 million (previously 112.4 million) shares on issue.

The intrinsic value of Metallica was further increased over the year through the culmination of the following achievements and highlights:

## Corporate

- Cape Alumina advanced its Weipa bauxite project, prepared an IPO prospectus and listed on the ASX on 29 January 2009, raising approximately \$15 million. Metallica remains the largest shareholder, holding approximately 42 million shares or 33%.
- In June Metallica closed a scrip offer of one MLM share for every 22 Planet Metals shares, achieving a 71% shareholding. Subsequently Metallica has increased its shareholding to 76% through a \$1.31 million contribution in the Planet Metals rights issue raising \$1.5 million. Planet Metals controls the Wolfram Camp tungsten and molybdenum project, including a new full-scale commercial processing plant, and the Mt Cannindah copper-gold project which already has an attractive copper-gold resource and exploration targets within granted mining leases.
- In early 2009, Jien Mining Pty Ltd (Jien), a subsidiary of Jilin HOROC Nonferrous Metal Group Co Ltd, China's second largest nickel-cobalt producer, acquired Kagara Ltd's shareholding in Metallica and Jien is now Metallica's largest shareholder, holding approximately 18.8%. Mr Wu Shu was appointed to the Metallica Board, representing Jien, and Kagara director Mr Mark Ashley resigned from the Metallica Board. Mr Tao Li has been appointed as the alternate Director of Mr Wu.
- Through the conversion of a convertible note on 18 September 2009, Metallica has increased its shareholding to 47% in Orion Metals Ltd (ASX: ORM) (previously named Queensland Gold and Minerals Ltd), and the company in conjunction with MLM is continuing to seek attractive opportunities in the resources sector.
- Cash investments made during the 2008/09 financial year include: \$1,707,747 to Cape Alumina; \$292,000 to Orion Metals; \$1,000,000 to MetroCoal; and \$1,300,000 to Planet Metals.

## Nickel-cobalt projects

### NORNICO NICKEL-COBALT PROJECT

- Metallica is undertaking evaluation and initiating revised feasibility studies on its NORNICO nickel project for a 1.0Mtpa heated agitated Atmospheric Acid Leach (AAL) (previously heap leach) nickel cobalt laterite operation incorporating iron precipitation, solvent extraction (SX) and electrowinning (EW) (previously IX resin) metal recovery with an onsite acid plant and power generation to produce nickel metal (in the order of 10,000t Ni pa) and >1,000t cobalt (as a cobalt sulphide intermediate product) for what is expected to be a long-life project (>15 years).
- With the inclusion of the Kokomo cobalt-rich nickel resources, NORNICO resource base now includes three main deposits; Bell Creek and Minnamoolka south of Mt Garnet, and Kokomo north of Greenvale in North Queensland.
- All NORNICO drilling in 2008/09 was focused on the central portion of the Kokomo Ni-Co project; this comprised the completion of 544 drill holes (15,511m drilling) between June to October 2008.
- The 2008 Kokomo drilling resulted in a maiden resource of 12.2Mt at 0.67% Ni and 0.12% Co (1.03% NiEq) based on 606 drill holes. The Kokomo resource was added to the Bell Creek and Minnamoolka resources, providing a new combined NORNICO resource estimate of 50.8Mt at 0.72% Ni and 0.06% Co containing 364,000t nickel and 29,000t cobalt (January 2009) (see Table 5, page 31).
- Results from ongoing AAL and previous heap leach column testwork on the NORNICO nickel-cobalt laterite ores has shown the ores to be highly amenable to sulphuric acid leaching of nickel and cobalt. This has resulted in the continual refinement of a processing strategy and techniques for potential profitable long-life nickel-cobalt production. The preferred processing route is now

heated agitated AAL to get the Ni-Co into solution ("front end") and SX/EW to get the nickel metal and cobalt as intermediate product out of solution ("back end").

- The Kokomo Scandium Project was further progressed by the identification of over 100 drill holes having significant scandium mineralisation. The maiden scandium resource estimate was 4.55Mt at 131g/t Sc containing approximately 600t (or 19 million ounces) of scandium metal. Since the scandium resource estimate, additional drilling has intersected high-grade scandium, with best results to date recording up to 37m of 435g/t Sc.
- There has been renewed interest in rare earths and "tech metals" such as scandium, particularly for aluminium alloys and fuel cells. Metallica is including scandium in its NORNICO metallurgical test work and investigating the recovery of scandium in the NORNICO flowsheet as a possible valuable by-product to the Ni-Co operation and/or as a stand alone small-scale scandium processing operation.

### LUCKY BREAK NICKEL PROJECT (METALS FINANCE CORPORATION (MFC)/ 40% METALLICA 60% JV)

- MFC is the manager of the Lucky Break nickel project and has been developing it with a view to establishing a small 60,000–100,000tpa Atmospheric Acid Leach (AAL) and Ion Exchange (IX) resin nickel laterite processing operation to produce in the order of 1,000tpa nickel metal.
- In early 2009, MFC undertook a comprehensive review of the Lucky Break Project, which has resulted in the planned processing capacity of the proposed plant being scaled back, and using higher grade nickel ore to make the project more robust. MFC is expected to make a decision for development in early 2010.

## Coal projects (79% MetroCoal)

- MetroCoal's vision is to build a substantial coal, fuels and energy business based on export thermal coal and Underground Coal Gasification (UCG) to produce coal gas (or syngas) for gas fired electricity sales and in the longer term use the syngas for Gas To Liquids (GTL) processes. MetroCoal's strategy is to evaluate and exploit previously stranded large coal deposits in a favourable setting.
- MetroCoal holds coal tenements covering over 4,000km<sup>2</sup> of coal-bearing strata in the Surat and Ipswich Coal Basins in southern Queensland. MetroCoal has an exploration target of 2 to 3.5 billion tonnes (Bt). The Surat Basin coals are suited to the production of export thermal coal and are highly amenable to UCG. Linc Energy and Carbon Energy are both developing their UCG demonstration plants in the region.
- The UCG process heats coal at depth (between 150 and 400m) so that gasification of the coal seams takes place underground. The resultant coal gas (or syngas) is utilised at surface for power generation or, in the longer term, conversion into clean diesel or other fuels or feedstock for the fertiliser and explosives industries. The climate change impetus, sustained high energy consumption, the threat of peak oil and high fuel prices together with the current economic uncertainty have created a far more receptive market awareness of coal's broader potential as a cleaner energy contributor.
- During the year, MetroCoal completed 24 drill holes (6,859m) on its Surat Basin coal tenements. In October 2008 eight regionally located holes (1,966m) were completed to confirm regional continuity of coal seams. MetroCoal completed its second drilling program in May 2009 comprising 16 holes (4,893m) within MDL Application 406 "Juandah", confirming the target Macalister Seams continuity, and





Planet Metals Wolfram Camp plant

defining an initial resource of 172Mt suitable for a UCG project in the Surat Basin. MDLA 406 has no overlapping petroleum tenure.

- Discussions have commenced with several potential joint venture partners regarding conventional mining opportunities of the shallower coal (<200m depth). MetroCoal will be looking for areas where the coal seam structure (such as the Macalister Upper Seam) would be suited to modern, mechanised underground mining systems (such as longwall mining) and potentially even small opencast mineable areas. The coal in these shallower areas is not suited to UCG but could be economically mined at current and forecast export coal prices.
- Work on preparing the documentation for an Initial Public Offering (IPO) is continuing, with the IPO planned for late 2009 (subject to favourable market conditions). The IPO will raise the funds needed to continue the exploration and evaluation drilling required to establish a resource base necessary to support conventional coal mining operations, and where the coal is deeper, UCG projects. The exploration target is to establish a combined coal resource of between 2 and 3.5 billion tonnes (Bt) within two years of listing.

## Bauxite projects (33% Cape Alumina)

- Cape Alumina further increased its resource at the Pisolite Hills Project to 130.1Mt (previously 100.8Mt) of Measured (27.5Mt), Indicated (56Mt) and Inferred (46.6Mt) insitu bauxite, which is expected to yield 86Mt of dry product bauxite suitable for export. This resource is based on 2,547 aircore holes drilled from 2006 to late 2008 (see Table 9, page 32).
- Substantial work and expenditure was completed progressing environmental, Cultural Heritage and community relations and a pre-feasibility study in late 2008, which has since been reviewed to allow for recent project modifications and enhancements.

## Tungsten-molybdenum projects (76% Planet Metals)

- Metallica's investment in Planet Metals (formerly Queensland Ores Limited) will allow Metallica to apply its resources and expertise in managing the Wolfram Camp Tungsten and Molybdenum Project (85% Planet Metals) with a view of returning it to production once an updated resource assessment and

metallurgical review is undertaken. A 65 hole (3,000m) core drill program commenced in September 2009.

- Wolfram Camp's current Measured and Indicated Resource estimate is 710,000t at 0.42% WO<sub>3</sub> and 0.17% MoS<sub>2</sub> within a 700m zone to a maximum depth of 60m below surface (see Table 8, page 32). The resource is open pitable and open along strike.
- Wolfram Camp mine site includes granted mining leases, tailings dam, site infrastructure, and open pitable tungsten-molybdenum resources plus a relatively new and complete 150,000tpa ore processing plant (on care and maintenance since November 2008), first commissioned mid-2008.
- Planet Metals is earning in to the highly mineralised tungsten-moly-tin Bamford Hill project, 30km south-west of Wolfram Camp.

## Copper-gold (76% Planet Metals)

- Planet Metals holds 100% of the Mt Cannindah copper-gold project near Monto in South East Queensland. Mt Cannindah includes nine granted mining leases covering 6km<sup>2</sup> and two surrounding EPMs. The project includes a Measured

Resource of 5.6Mt at 0.95% Cu and 0.4g/t Au (see Table 7, page 32) and several large mineralised prospects within a large porphyry copper gold system.

## Limestone projects

Metallica controls six strategically located, high-quality limestone projects, comprising Ootann, Blue Rock, Star, Mt Podge, Boyne and Fairview.

- Phoenix Lime Pty Ltd (a wholly owned subsidiary of Metallica) holds 240Ha of mining leases covering a large high grade limestone deposit, suitable for calcining and underpinning NORNICO's lime and limestone requirements. This includes the Ootann limestone quarry operation, which is approximately 130km via road from the proposed NORNICO processing site.
- During the year, Phoenix Lime completed market studies for lime in North Queensland and began feasibility studies into construction of a new lime kiln at the Ootann operation for the life span of the NORNICO project.
- A 75 hole drilling program at Ootann was completed, which identified a high grade limestone deposit in excess of 50Mt to a maximum depth of 30m below surface.
- At the Fairview Limestone Project, MDL394 (approximately 776Ha) a mining lease has recently been applied for to advance the level of tenure.
- Both the Fairview and Boyne limestone deposits are well positioned to provide for the future lime and limestone requirements of Gladstone's industrial growth and negotiations have been ongoing with potential customers.
- Phoenix Lime has a granted tenement covering the Mt Podge limestone deposits located approximately 15km north of the Star limestone mining lease and 90km West of Townsville. Both projects are well positioned to take advantage of industrial development as far south as Bowen.

## Zircon-rutile project

- Held through its wholly owned subsidiary, Oresome Australia Pty Ltd, Metallica holds the Urquhart Point Tenement (EPM 15268), which covers the Urquhart Point high-grade zircon and rutile heavy mineral sands (HMS) deposit located 5km west of Weipa, and a large area of prospective strandlines. In late 2008 joint venture partner, Matilda Minerals Ltd (Matilda) went into administration and no significant exploration has been conducted on the project since that time. Metallica is reviewing its options on how best to progress the Weipa HMS Project.

## Since year-end

- A 3,000m diamond core drill program comprising around 65 drill holes commenced in September on the Wolfram Camp tungsten-molybdenum mine site for resource confirmation and definition, in preparation of a revised resource estimate planned for December 2009.
- In mid-September a 312 hole program (7,798m) on the Kokomo Ni-Co and Sc deposit was completed. Impressive intercepts have been recorded including KK663 – 13m at 1.93% Ni and 0.63% Co. A revised Kokomo resource estimate based on the combined 913 holes (25,733m) is expected early November.
- The NORNICO Scoping Study is advancing based on a revised 1Mtpa AAL project – expected to be completed by the end of October 2009.
- MetroCoal completed a \$1 million seed capital raising in August 2009, has the support of two stock broking firms and is to progress the preparation of a prospectus IPO for listing on the Australian Stock Exchange late in 2009 (subject to favourable market conditions).
- In July 2009, Metallica signed a joint venture agreement with Salisbury Resources Ltd whereby Metallica can earn up to 75% in three highly attractive

South Australian tenements (Toby, Merna Mora and Lake Torrens) having Iron Oxide-Copper-Gold-Uranium (IOCGU) Olympic Dam style geophysical targets.

- Phoenix Lime has commenced a drilling program on the Mt Podge limestone project.

## The year ahead

The Metallica team started the year well and looks forward to another exciting and productive year as the Company advances its diversified resource portfolio comprising high quality key projects in nickel-cobalt, bauxite, coal, tungsten-molybdenum and copper-gold, as well as its substantial zircon/rutile, scandium, limestone projects, and other advanced mineral exploration interests (see Figures 1 and 2).

This includes reporting further progress aimed at realising the inherent value that exists within our multi-commodity portfolio to increase shareholder value.



**Andrew Gillies**  
Managing Director





Exploration and  
evaluation **report**  
for the 2008/09 financial year



# NORNICO nickel-cobalt project

The NORNICO nickel-cobalt project is located between the townships of Mt Garnet and Greenvale in North Queensland. The project comprises the Bell Creek nickel-cobalt laterite resource located 32km south of Mt Garnet, the Minnamoolka nickel resource located 30km south of Bell Creek and the cobalt-rich Kokomo nickel resource located 50km north of Greenvale (see Figures 3 and 5). The project also includes smaller nickel-cobalt deposits around Greenvale.

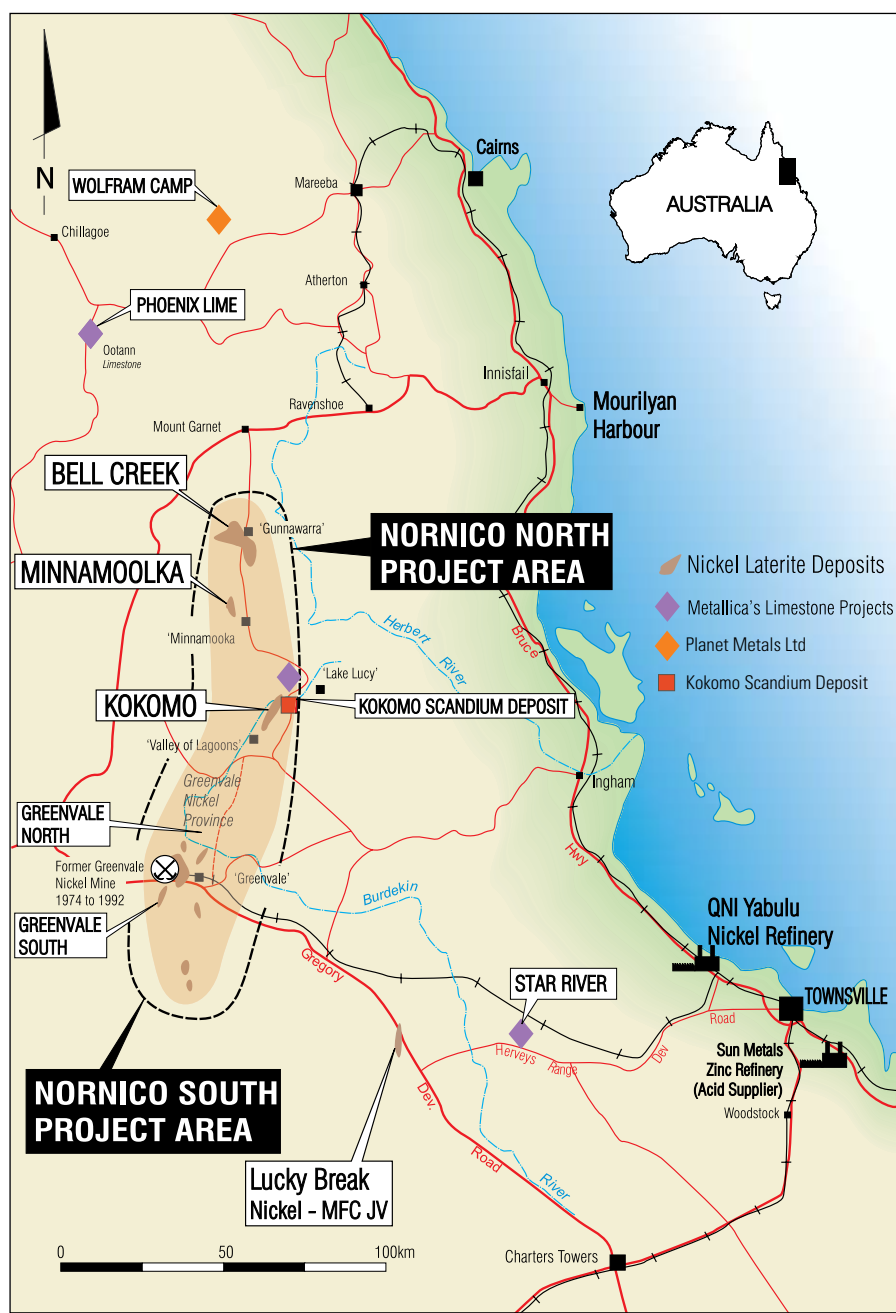


Figure 3: NORNICO regional setting

NORNICO's key advantages are its excellent geographic location and the ore being highly amenable to sulphuric acid leaching. Also the NORNICO deposits generally have broad mineralisation close to surface (<40m), low iron content, low strip ratio, a high proportion of free silica-rich ore types (potential for upgrading) and low moisture content.

The project definition is currently based on a 1Mtpa operation sourcing higher grade Ni-Co ores from the Bell Creek, Minnamoolka and Kokomo deposits, with an onsite acid generation plant with co-generation of power producing nickel and cobalt products over a minimum 15 year mine life.

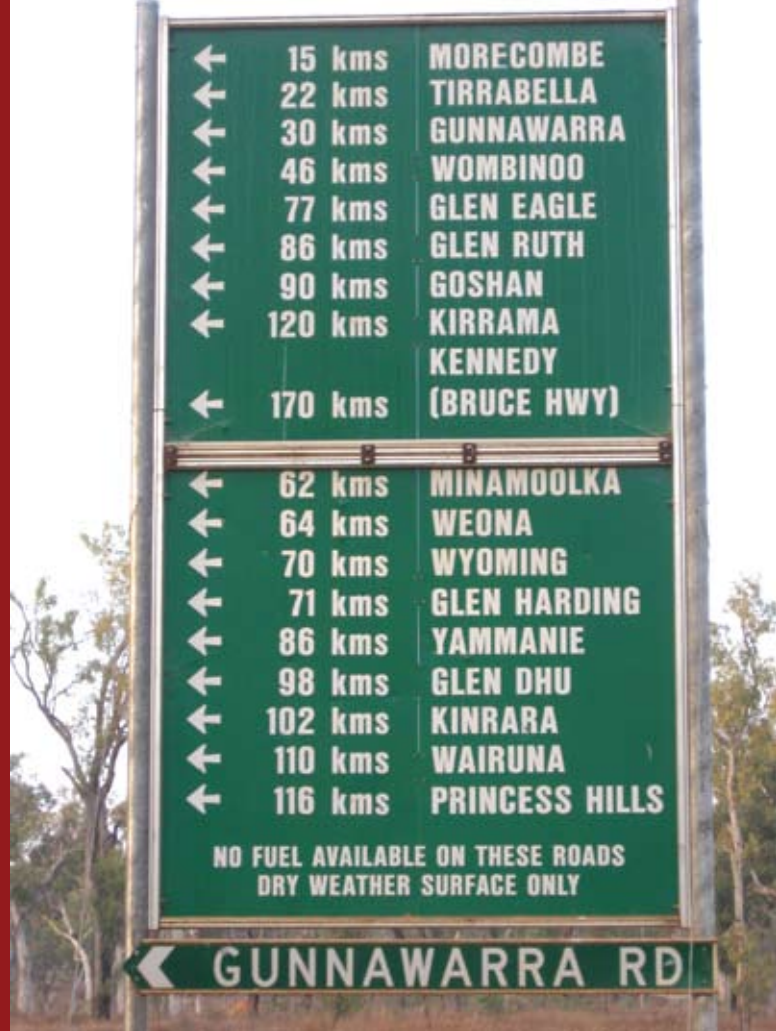
The combined NORNICO resource base of the three deposits of Bell Creek, Minnamoolka and Kokomo is approximately 50Mt @ 0.72% Ni and 0.06% Co (364Kt Ni and 29Kt Co contained) (see Tables 5 and 6, page 31). Infill and step out drilling has recently been completed at Kokomo, which is expected to further increase the NORNICO resource base.

NORNICO is in an excellent location, close to markets, fresh water, infrastructure and port facilities (140km via road), and is safe and in an ideal climate and environment.

## Feasibility study

Metallica appointed Lycopodium Minerals Pty Ltd as the Feasibility Study Manager for the NORNICO Project in September 2007. Originally the project flowsheet was based on a 1Mtpa heap leach operation

NORNICO is in an excellent location – close to markets, fresh water, infrastructure and port facilities – and is safe and in an ideal climate and environment.



with a back end precipitation circuit to produce a mixed hydroxide product (Ni-Co hydroxide product). In April 2008 it was decided to change the back end flowsheet to incorporate an Ion Exchange (IX) resin component in order to achieve expected efficiency gains plus possible significant savings in construction and operating costs. However, in March 2009 the heap leach/IX project producing a nickel hydroxide product was found not to offer the advantages originally expected. Metallica subsequently decided to defer the completion of the engineering component of the feasibility study due to the poor financial climate in early 2009, low commodity prices, particularly in nickel and the sentiment towards nickel laterite projects. Lycopodium issued a close out report at the end of June 2009.

In May 2009 it was decided to investigate further possible project enhancements internally using Metallica's own in-house process management team assisted by consultants.

It was concluded that the preferred option going forward would be for a 1Mtpa project based on heated agitated Atmospheric Acid Leach (AAL) and solvent extraction/ electrowinning (SX/EW) to produce LME

nickel metal and cobalt as cobalt sulphide with its own sulphur burning acid plant. An internal Scoping Study was initiated to confirm the process suitability and to improve the financial position of

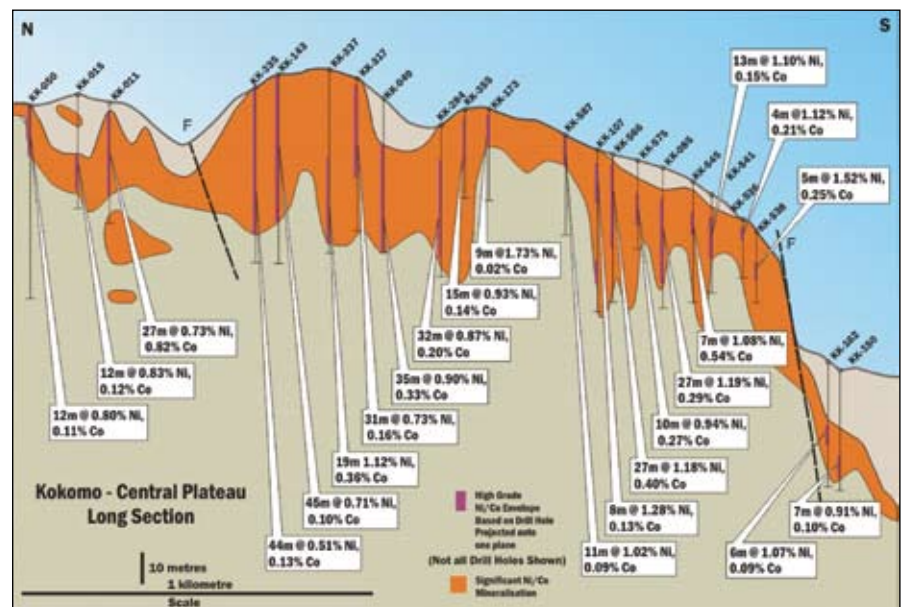


Figure 4: Kokomo – Central Plateau long section

the project. This revised flowsheet option is expected to:

- Increase project “in-ground” metal content and value. An agitated AAL flowsheet would allow the higher grade nickel-cobalt portions of the Kokomo resources (cobalt-rich nickel laterite) to be directly added to the Bell Creek and Minnamoolka resources, thereby adding higher grade as well as extended project life
- Substantially improve overall nickel and cobalt recoveries (both plus 90%)
- Increase metal payment of both nickel and cobalt

- Allow some beneficiation of silica box material (eg. increased feed head grade)
- Potentially include by-products such as electrolytic manganese dioxide (EMD) and scandium oxide, particularly if high Sc-Mn-Co ores are trucked from Kokomo.

These enhancements could possibly be negated by operating and capital cost considerations, which are yet to be fully determined.

The internal Scoping Study is expected to be completed by the end of October 2009. Adequate metallurgical testwork to support the study has been completed successfully.

Work towards environmental approvals and licensing has progressed throughout the year. A Mining Lease application was made over the Kokomo Ni-Co and Sc resources and environmental studies have commenced. Water harvesting licenses have been granted, together with a license for power export sales. Ongoing site background environmental sampling has continued.

## Metallurgical testwork

Considerable metallurgical testwork to support the feasibility study has been completed during the year at a number of external laboratories. Full pilot plant IX testing using a PSI IX resin was successfully completed at Ammtec, Perth in early 2009. Also a Heap Leach pilot plant located at Bell Creek was operated for most of the 2008/09 year.

Heated agitated Atmospheric Acid Leach (AAL) testwork has been carried out at HRL Testing in Brisbane. Results on representative ores for Bell Creek South and Kokomo are impressive, with Kokomo slightly better. Results indicate that 90% extractions of both nickel and cobalt are achieved within five to six hours using 600kg/t sulphuric acid. In addition scandium extractions exceeded 90% on typical Ni-Co ores with low scandium grade (<50g/t Sc) relative to the scandium ore zones (typically >200g/t Sc).

Bench scale Canopean testwork (CMN Process) demonstrated that a high purity nickel electrolyte suitable for production of LME grade nickel cathode can be produced from NORNICCO leach liquors using the CMN process.

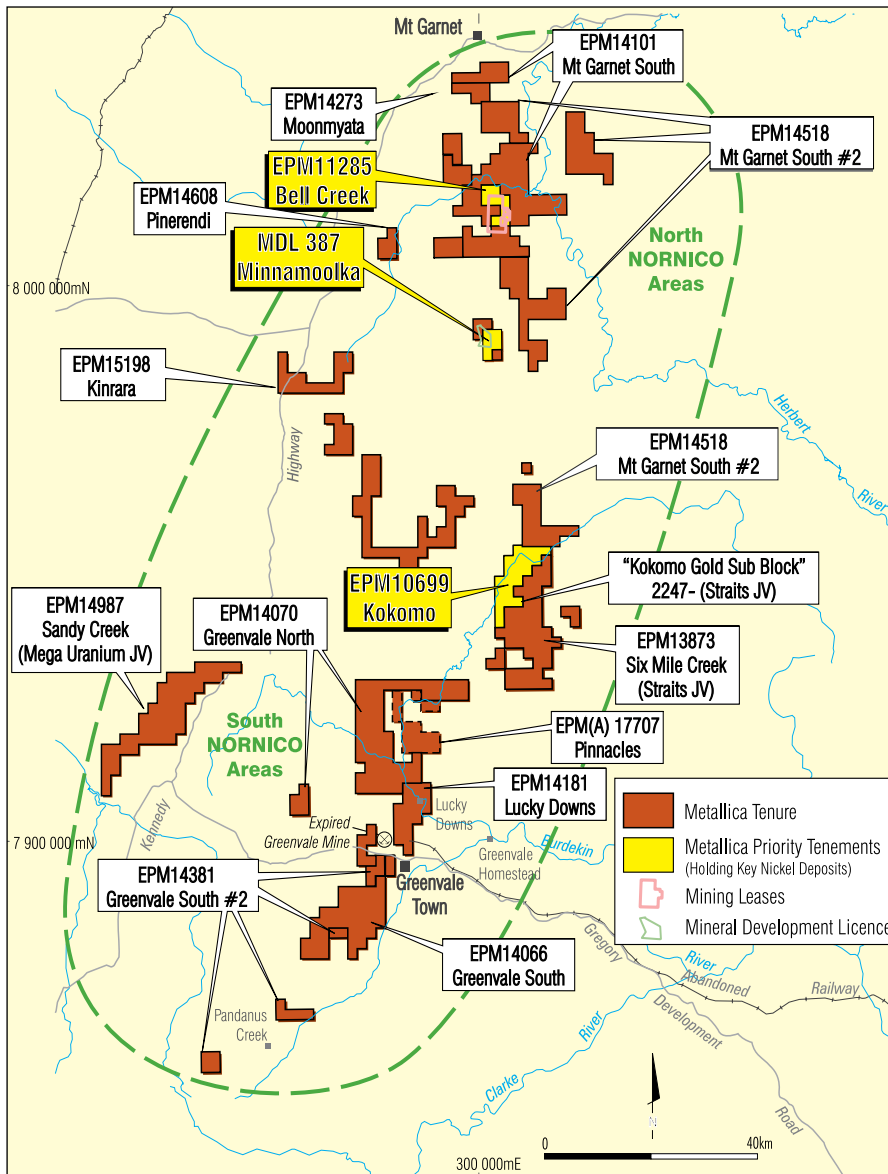


Figure 5: NORNICCO tenements



# NORNICO exploration and evaluation

100% MLM

Exploration work on the NORNICO tenements in the 2008/09 year predominantly comprised resource-orientated Reverse Circulation (RC) and diamond core drilling. Metallica drilled approximately 20,000m at six prospects during the year, with the bulk of the drilling being undertaken at the Kokomo nickel-cobalt scandium laterite deposit. Table 1, page 30 details the drilling completed by Metallica in the last 12 months.

In 2008, resource and exploration drilling was conducted on the Kokomo tenement (EPM 10699), situated on the Valley of Lagoons Station and located approximately 50km north of the Greenvale township. Drilling was aimed at defining a maiden resource for the Kokomo nickel cobalt project which would conform to JORC guidelines for the reporting of ore reserves and resources (see Table 5, page 31).

In addition to the Kokomo drilling, Metallica completed an updated resource estimate for the Bell Creek deposit which now includes two smaller satellite deposits, The Neck and The Pod, which were defined in August 2008.

Metallica also undertook exploration drilling targeting nickel-sulphide and base metal mineralisation at the Moonmyata and Rudd Creek prospects located south of Mt Garnet and completed several XRF soil programs over ground prospective for nickel laterite mineralisation and base metals.

## Kokomo nickel-cobalt scandium laterite

The Kokomo Ni-Co-Sc laterite deposit formed on a north-east/south-west

trending ultramafic unit which crops out for a strike length of 16km and can be up to 800m wide. The ultramafic unit is bounded by two major faults, referred to as the Eastern and Western Boundary Faults, with meta-sediments of the Wiruna formation outcropping on either side of the ultramafic.

Metallica has drill tested approximately 7km of the entire ultramafic strike length, however the drilling has been concentrated in the central part of the Kokomo ultramafic (the Central Plateau Area) where the laterite development is most pronounced and where it is at its widest. In the Central Plateau Area the laterite can be up to 60m in thickness, between 400m to 800m wide and approximately 5km long.

## Kokomo drilling

In the 2008/09 Financial Year, Metallica completed 540 RC holes (KK-077 to KK-606), totalling 15,340m of drilling at Kokomo. In addition to this, four PQ diamond holes totalling 171m were drilled to provide samples for metallurgical testwork, more detailed geological information and bulk density data. Drilling commenced in mid-July 2008 and was completed by mid-October 2008.

The drilling concentrated on defining the nickel-cobalt mineralisation in the ultramafic unit over a 5km strike length in the Central Plateau Area. Drilling was on a nominal 100m by 40m grid, with infill drilling to 50m by 40m completed over zones in the laterite where higher nickel-cobalt grades have been intersected.

The drilling identified discrete higher grade nickel-cobalt mineralised zones, such as

a zone (approximately 1.6km long and 100m wide) (see Figure 7), associated with a major fault on the eastern side of the Kokomo deposit (the Eastern Boundary Fault) adjacent to a broad lower grade zone.

## Kokomo nickel-cobalt resource estimate

On the completion of the 2008 resource drilling at Kokomo, Golder Associates completed an independent resource estimate on the Kokomo nickel-cobalt laterite project in January 2009. The Kokomo mineral resource estimate identified an Inferred and Indicated Resource of 12.2Mt @ 0.67% Ni and 0.12% Co, (using a 0.70% Ni Eq cutoff grade). Of this total 5.2Mt @ 0.69% Ni and 0.13% Co was classified as Indicated with 7Mt @ 0.66% Ni and 0.11 % Co as Inferred. Drilled (2008) Ni-Co mineralisation at Kokomo is presented pictorially in Figure 6.

Within the Kokomo Ni-Co resource are higher grade nickel-cobalt zones which will be amenable to selective mining. Table 2, page 30 shows the Kokomo Resource at various cut-off grades.

## Kokomo – additional work

A Mining Lease application (MLA 10342) has been lodged over the Kokomo Ni-Co and Sc deposit, a dry season environmental study over the laterite has been completed and metallurgical testwork on material from the Kokomo deposit has been initiated at HRL Testing in Brisbane.

Metallica recommenced drilling at Kokomo in June 2009 and continued through until mid-September. The 2009 drilling was focused on the zones of higher grade nickel-cobalt mineralisation to increase the resource categories from Inferred and Indicated to Indicated and Measured. Drilling was also completed over the central and western part of the Kokomo Plateau where zones of high grade mineralisation had remained open. In total an additional 307 RC holes (KK-607 to KK-913) have been completed at Kokomo for a total of 7,686m. In addition to this, four PQ core holes were drilled for 112m to provide additional material for testwork and for bulk density determinations. Data from this drilling program will be used in an updated resource estimate for the deposit which is due early November 2009.

Highlights from the 2009 drilling program include:

- KK-638 ..... 19m @ 1.43% Ni & 0.08% Co
- KK-663 ..... 13m @ 1.93% Ni & 0.63% Co
- KK-683 ..... 12m @ 1.14% Ni & 0.51% Co
- KK-695 ..... 19m @ 0.80% Ni & 0.23% Co
- KK-743 ..... 22m @ 0.79% Ni & 0.43% Co
- KK-771 ..... 35m @ 0.81% Ni & 0.22% Co
- KK-787 ..... 16m @ 0.80% Ni & 0.54% Co
- KK-793 ..... 19m @ 1.15% Ni & 0.20% Co
- KK-799 ..... 12m @ 1.05% Ni & 0.48% Co
- KK-800 ..... 8m @ 1.38% Ni & 0.30% Co
- KK-865 ..... 10m @ 1.00% Ni & 0.36% Co
- KK-876 ..... 10m @ 1.15% Ni & 0.37% Co
- KK-875 ..... 23m @ 0.96% Ni & 0.18% Co
- KK-873 ..... 11m @ 0.87% Ni & 0.45% Co

## Kokomo scandium (Sc) project

In addition to the Kokomo nickel-cobalt resources, there is a significant high grade scandium resource at Kokomo. The Kokomo scandium project is owned by Metallica 80% Straits Resources Ltd 20%.

Scandium is a rare earth “tech metal” which is used as an additive to enhance the properties of aluminium alloys, in fuel cells and lighting.

The scandium mineralisation is associated with the nickel-cobalt mineralisation and is usually found above the nickel-cobalt mineralisation in the laterite profile, but can also occur within it. The high grade scandium mineralisation is predominantly confined to the oxide zone on the eastern margin of the Central Kokomo Plateau. For the resource estimate, four zones of laterite (oxide) hosted scandium mineralisation have been identified. Once all the assay results from the current round of drilling have been received it is possible that these zones may be more continuous (see Figure 6).

High grade scandium has now been identified over a strike length of 4km and has been located on plateaus and in low lying areas between the laterite plateaus in topographical lows covered by shallow alluvial sediments.

An in-house arithmetic mean/cross sectional resource estimate has been completed for the scandium content of the Kokomo laterite deposit by Metallica using the data obtained from the nickel-cobalt drilling. A separate resource estimate for each of the four zones was calculated and details of the Kokomo scandium resource are presented in Table 3, page 30. A map showing the holes which intersected greater than 60ppm Sc are plotted in Figure 6.

The initial scandium (Sc) resource estimate (based on 106 drill holes) for the Kokomo scandium deposit comprising four zones of scandium mineralisation totalled 4.55Mt at 131g/t Sc for approximately 600t of contained scandium metal (see Table 4, page 30).

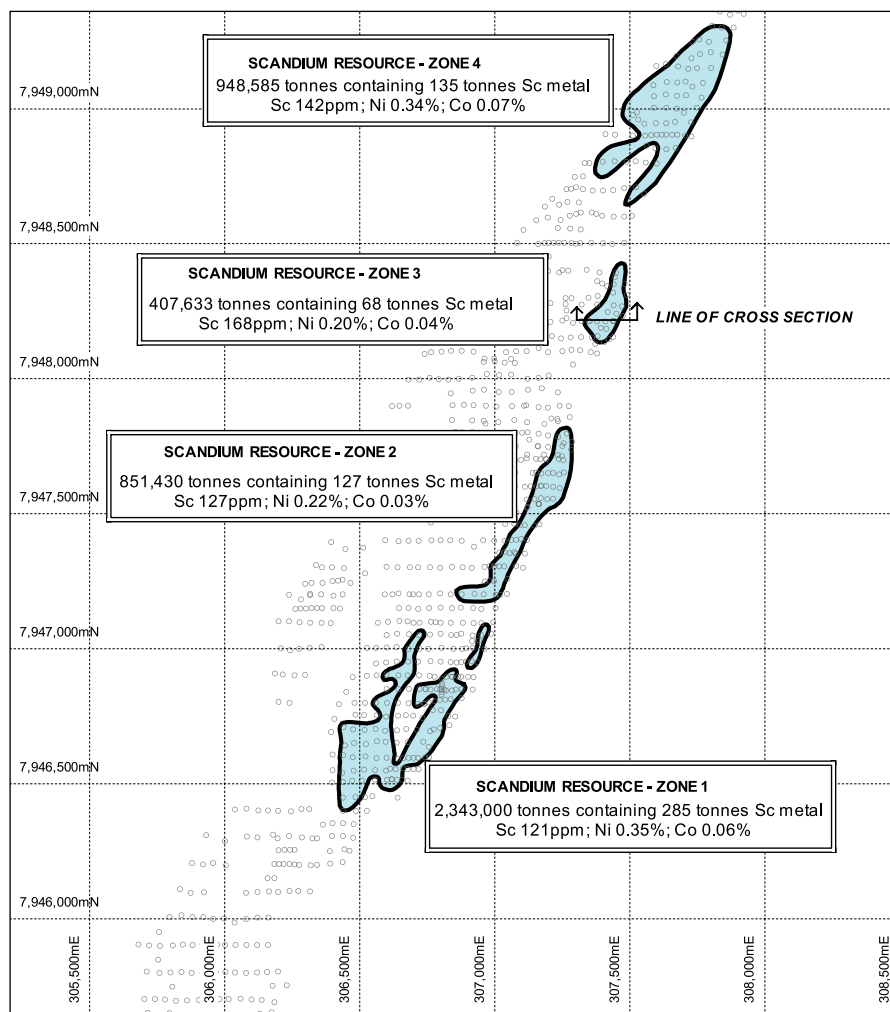


Figure 6: Scandium resource outline (pre-2009 resource drilling)

An updated scandium resource (using ordinary kriging) will be estimated for Kokomo using the additional data from the 2009 in-fill and step-out drilling program and an independent resource estimate is expected to be completed for the scandium deposit around late November 2009. High grade scandium zones were intersected in the 2009 drilling, with better results including:

KK-627 ..... 8m @ 228ppm Sc from 1m  
 KK-635 ..... 20m @ 195ppm Sc from 7m  
 KK-678 ..... 7m @ 205ppm Sc from 0m  
 KK-709 ..... 28m @ 172ppm Sc from 0m  
 KK-805 ..... 37m @ 435ppm Sc from 16m  
 KK-828 ..... 19m @ 400ppm Sc from 11m

There has been renewed interest in rare earths and “tech metals” such as scandium, particularly for aluminium alloys and fuel cells. Metallica is including scandium in its NORNICO metallurgical test work and investigating the recovery of scandium in the NORNICO flowsheet as a possible valuable by-product to the Ni-Co operation and/or as a stand alone small scale scandium processing operation.

## NORNICO Ni-Co resource

In the 2008/09 Financial Year, nickel and cobalt resources from The Neck and The Pod were included in the Bell Creek resources. These deposits were identified in late 2007 and early 2008. With the inclusion of these small resources and the Kokomo Resource, the overall combined Measured, Indicated and Inferred NORNICO resource now stands at 50.8Mt @ 0.72% Ni and 0.06% Co, containing approximately 363,000t of nickel and 29,000t of cobalt metal; an increase of 32% in terms of tonnes, a 30% increase in nickel metal and a 100% increase in cobalt content from the 2008 resource.

A breakdown of the resources by deposit and by categories is presented in Tables 5–6, page 31.



Drill hole site within the Kokomo high grade scandium zone

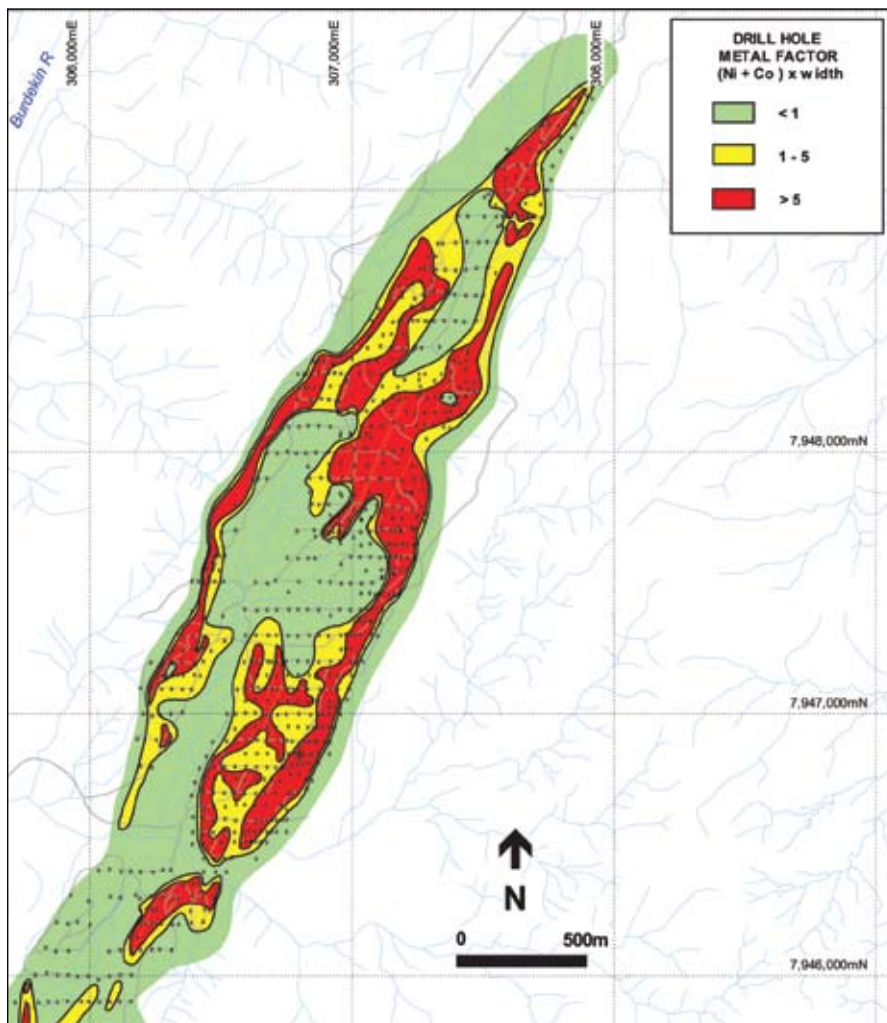


Figure 7: EPM10699 – Kokomo Nickel-Cobalt Project Central Plateau Ni + Co metal factor map



# Planet Metals Ltd

MLM currently holds approximately 76%

- Wolfram Camp – Tungsten-Molybdenum Project
- Mt Cannindah – Copper-Gold Project

On 9 June 2009, Metallica closed its one MLM for 22 Planet Metals scrip takeover bid for Planet Metals, holding approximately 71% of Planet Metals' issued capital.

On 26 June 2009, Planet Metals closed a rights issue with 177,307,572 shares

allotted on 1 and 7 July 2009. Metallica subscribed its full entitlement of \$1.31 million in the rights issue, which raised a total of approximately \$1.5 million. At the close of the rights issue Metallica holds approximately 76% of Planet Metals.

Planet Metals had approximately 398.1 million shares on issue.

On 29 June 2009 the loan (with interest) of \$611,600 to Planet Metals from Outback Metals Limited was repaid in full, and as at 30 June 2009 Planet Metals had funds on hand of \$1,250,000 and creditors of \$110,000, effectively no debt, with all of its assets unencumbered. On 9 June 2009, Mr Ken Dredge and Mr John Greenwood resigned as Directors of Planet Metals, and Mr David Barwick and Mr Andrew Gillies were appointed as Directors, with Mr Barwick being appointed Chairman of Directors. Mr Roger Marshall and Mr Barry Kelly remained as Directors of Planet Metals. Also on this date Mr Garry Gill resigned as Company Secretary of Planet Metals and Mr John Haley was appointed as Company Secretary. Mr Barwick, Mr Gillies and Mr Haley are all Directors of Metallica. Subsequently Mr Roger Marshall resigned from the Board.

The investment in Planet Metals will allow Metallica to apply its resources and expertise in managing the Wolfram Camp Tungsten and Molybdenum Project, with a view to returning it to production. However, no timing can be placed on this program until an updated resource (after further drilling) assessment and metallurgical review is undertaken.

Planet Metals announced a one for two non-renounceable rights issue at 10 cents per share to Planet Metals shareholders (rights issue September 2009). The rights issue will raise approximately \$2 million to principally fund a further resource evaluation drilling program, resource estimate, mining studies, other mine site and processing plant evaluation and reviews at the Wolfram Camp tungsten/molybdenum mine (currently under care and maintenance) in North Queensland, and for working capital. The rights issue will

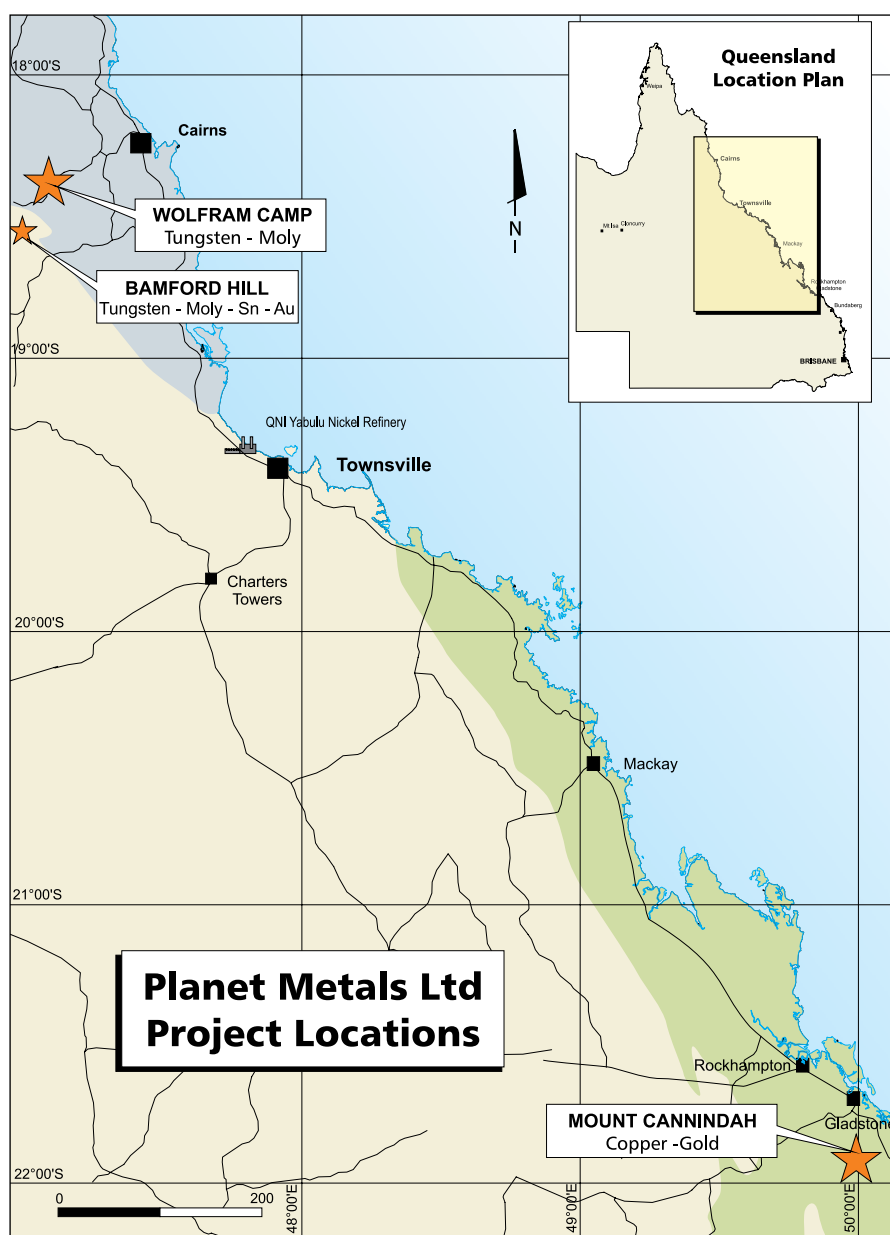


Figure 8: Planet Metals Limited project locations





Drilling at Wolfram Camp October 2009

be carried out on a post-consolidation basis following the consolidation of the share capital of Planet Metals on a 10 for one basis, as approved by the shareholders at the General Meeting held on 4 September 2009.

Dependant on the results of the drilling program and any follow-up drilling required, resource estimate results and other work, tungsten and molybdenum price movements, any remaining funds will be put towards further progressing the Wolfram Camp Project toward a decision for recommencing production.

The rights issue is fully underwritten by Metallica and closes on 2 November 2009.

## Operations

Mine care and maintenance activities continued to be undertaken in 2009 at the Wolfram Camp Project, with frequent site inspections being carried out, site remedial earthworks related to the stormwater

diversion drain, site roadworks and cleaning out of the sediment traps. A 3,000m drilling diamond core resource drilling program definition commenced mid-September 2009.

## Mount Cannindah (Planet Metals 100%)

### COPPER-GOLD PROJECT, NEAR MONTO, SOUTH-EAST QUEENSLAND

Planet Metals holds 100% of the Mt Cannindah copper-gold project near Monto in South East Queensland (see Figure 8). Mt Cannindah includes nine granted mining leases covering 6km<sup>2</sup> and two surrounding EPMs. The project includes a Measured resource of 5.6Mt at 0.95% Cu and 0.4g/t Au (see Table 7, page 32) and several large mineralised prospects within a large porphyry copper-gold system.

In order to conserve cash, no exploration work took place at Mount Cannindah Mining Leases or Exploration Permits.

## Bamford Hill (Planet Metals earning up to 85%)

### TUNGSTEN, MOLYBDENUM, TIN AND GOLD PROJECT, 30KM SOUTH-WEST OF WOLFRAM CAMP

Planet Metals is earning in to the highly mineralised tungsten-moly-tin Bamford Hill project, 30km south west of Wolfram Camp.

In order to conserve cash, no exploration work took place at the Bamford Hill Exploration Permits.

# Lucky Break nickel project

Metals Finance Company (MFC) / 40% Metallica 60% JV

The Lucky Break nickel project, located 140km west of Townsville (see Figure 9) is a joint venture between Metals Finance Corporation (ASX: MFC) and Metallica. Metallica holds two granted Mining Leases (ML 10324 and 10332).

MFC is the manager of the Lucky Break nickel project and is responsible for all development costs as part of its earn-in agreement. Metallica is free carried and will receive a share of the operating surplus once the project is in operation, initially 15% until MFC has recouped its capital investment and then 60% thereafter. The project is to be developed and brought into nickel production at no extra cost to Metallica and hence does not dilute shareholder equity. The other key advantage is that it provides Metallica with invaluable operational experience and know-how, ahead of the much larger scale NORNICO development.

MFC completed a comprehensive pilot program on Lucky Break ore in May 2007. An independent feasibility study demonstrated

that the project was technically and financially viable under the conditions prevailing at the time of the study and, as a consequence, MFC and Metallica decided in June 2007 to progress towards implementation of the project. Development of the project was subsequently delayed in late 2008 due to issues with acid supply for the project and global financial circumstances.

In early 2009, MFC completed a detailed review of the project and revised internal feasibility study, incorporating revisions in scale and flowsheet more tailored to current market conditions. The results of the study have been positive and illustrate that the project is more robust under the new parameters, with updated projections suggesting:

- Significant reduction in acid consumption per pound of nickel produced
- Significantly lower capital cost
- Higher potential revenue through the higher grade nickel product.

MFC has commenced work on updating capital and operating costs and other related studies, with a view to finalising a Feasibility Study on the revised project by the end of 2009. The proposed nickel operation is of modest size, with nickel production in the order of 1,000t nickel metal per annum. The study is targeted at providing a basis for recommencing development of the project in 2010.

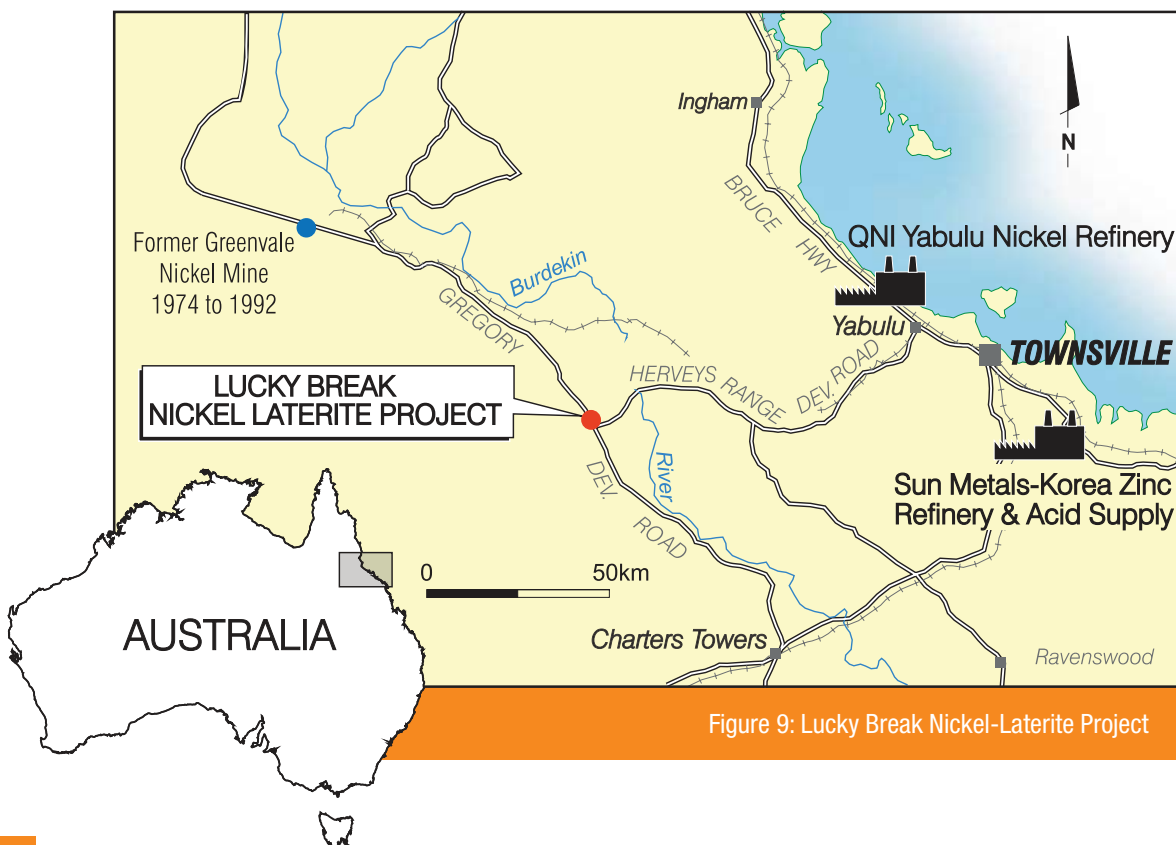


Figure 9: Lucky Break Nickel-Laterite Project

# Bauxite

(MLM holds 83% of Cape Alumina Ltd)

Metallica holds approximately 33% (comprising 42.3 million ordinary shares) of Cape Alumina Limited. Cape Alumina holds 100% of the Weipa Bauxite project on Queensland's Cape York Peninsula (see Figure 10). This project covers approximately 2,100km<sup>2</sup> of exploration tenure within the extent of the world class Weipa Bauxite Province and is adjacent to the large mining leases held by Rio Tinto. Cape Alumina is a specialist bauxite (ore for aluminium) exploration and development company.

Significant advancements were made during the year, including the release of an upgraded resource of 130Mt (27.5Mt Measured, 56.1Mt Indicated and 46.6Mt Inferred) of in-situ bauxite (previously 100Mt) (see Table 9, page 32). This resource is based on 2,547 air core holes drilled from 2006 to late 2008 (see Figure 11).

## Cape Alumina's bauxite quality

There are three main forms of bauxite – gibbsite, bohemite and diaspore. Gibbsite can be treated at low temperatures (<150°C) whereas the other forms require higher temperatures for digestion, which leads to higher energy costs. Due to the high gibbsite/bohemite ratio (early tests estimate 90–95% of the available alumina is present at gibbsite), Cape Alumina's Pisolite Hill bauxite deposits appear to be suited to a low-temperature Bayer refinery process that is currently used in a number of recently built Chinese refineries.

## Chinese bauxite demand

Demand for bauxite from China has increased dramatically in recent years. Strong expressions of interest in future bauxite purchases have been received from several Chinese refineries. At planned capacity, these refineries are expected to import ~20Mt of bauxite per annum. On 10 October 2008 Cape and Xinfu signed an offtake agreement to supply 1Mtpa

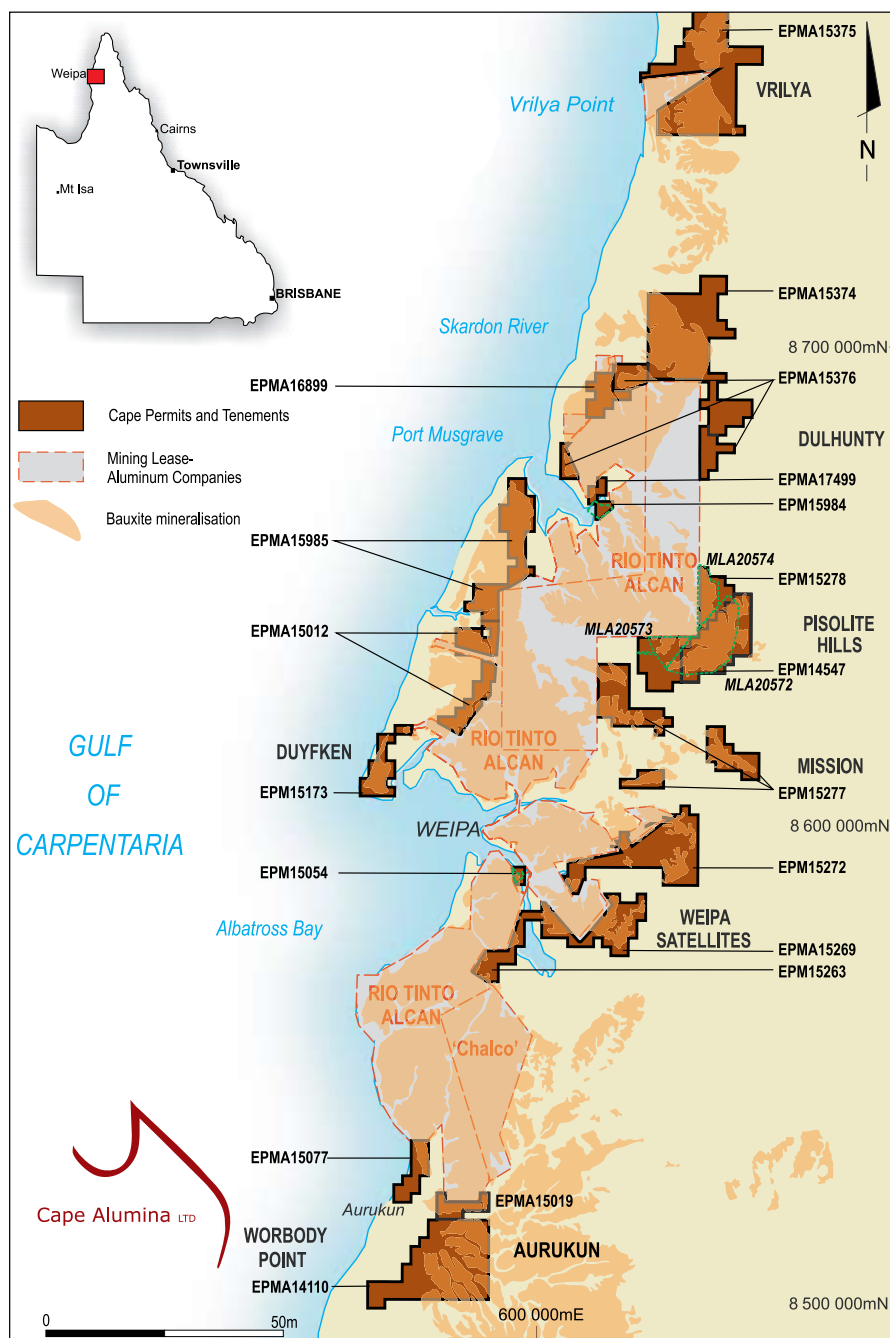


Figure 10: Cape Alumina Weipa Bauxite Project tenements





Pisolitic Bauxite



Conducting drilling on Pisolite Hills Bauxite Project

of bauxite over five years. Further offtake agreements are expected to be signed upon completion of a Bankable Feasibility Study. Xinha is believed to be one of the biggest bauxite importers in China. The fact that Xinha has also acquired a significant stake in Cape Alumina is evidence that reliable bauxite supply is a key issue among Chinese refineries.

## Cape Alumina highlights

- Successfully listed Cape Alumina (CBX) on ASX on 29 January 2009, raising approximately \$15 million.
- Bauxite resource upgrade at Pisolite Hills to 130 million in-situ tonnes – sufficient for a 10–15 year initial mine life.
- Excellent progress on the Pisolite Hills Environmental Impact Statement (EIS) and the negotiation of an Indigenous Land Use Agreement (ILUA) has been made during the year.
- Further bauxite resource drilling is currently underway.

## Cape Alumina business plan

Cape Alumina's business plan is based on the initial development of the Pisolite Hills

bauxite deposit and the rapid assessment of regional prospects to grow the company's bauxite resource base.

### PISOLITE HILLS PROJECT SUMMARY

Pisolite Hills, which is Cape Alumina's most advanced bauxite project, is situated approximately 50km north-east of Weipa in the western Cape York region of Far North Queensland (see Figure 10). Bauxite will be transported via truck or conveyor approximately 34km to a stockpile area near the mouth of the Ducie River. Barges will be loaded using a stacker-reclaimer. When loaded, the barges will be self-propelled or towed by tug to waiting Panamax or Cape size vessels moored in the Gulf of Carpentaria, where the bauxite will be transferred from barge to export vessel via a floating conveyor transfer vessel. The majority of the bauxite is expected to be sold to the Chinese alumina refineries.

The ability to load Cape size vessels will give Cape Alumina flexibility that may result in a reduced unit shipping cost.

There is further potential to increase the life of the Pisolite Hills project through additional drilling, planned over a number of satellite areas of bauxite mineralisation. In addition, over the next two years Cape Alumina plans to systematically explore a number of regional projects currently defined within the company's 2,100km<sup>2</sup> tenement holding over the Weipa Bauxite

Plateau, with a view to further expanding the bauxite resource base.

Cape Alumina is committed to implementing industry best practice in sustainable development and environmental management. In partnership with local traditional owners, the company will evaluate programs for feral pest control, conservation areas and weed and fire management which, when combined with its mining rehabilitation practices, will aim to maximise the post-mining environmental and land use value.

The Pisolite Hills project is expected, if developed, to export approximately 7Mt of dry product bauxite per year over a 10–15 year mine life. Cape Alumina envisages that the project will mine one or more ore blocks totalling an area of approximately 200–300Ha per year. Bauxite will typically be extracted from the top three to four metres of the profile and rehabilitation will commence immediately on the completion of mining.

Pisolite Hills has an in-situ mineral resource of 130.2Mt of Measured (27.5Mt), Indicated (56.1Mt) and Inferred (46.6Mt) bauxite (see Table 9, page 32). After wet beneficiation, the resource is expected to yield approximately 86Mt of product bauxite on a dry basis including Measured (20.1Mt), Indicated (37.9Mt) and Inferred (28Mt) resources at an average grade of 53.1% Al<sub>2</sub>O<sub>3</sub> (41.5% available alumina and 7.5% reactive silica at 150°C) (see Table 9, page 32).



A new drilling program commenced on Pisolite Hills project in late August 2009, comprising a planned program of approximately 1,400 holes and 6,000–7,000m of drilling.

### WESTERN CAPE YORK REGIONAL TENEMENTS

Cape Alumina currently holds ten granted exploration permits, nine exploration permit applications and five mining lease applications over 2,100km<sup>2</sup> of the Weipa Bauxite Province on western Cape York.

Cape Alumina proposes to undertake a staged exploration program on its tenements, aimed at initially evaluating the advanced Pisolite Hills project while at the same time actively progressing the assessment of other areas which have been interpreted as priority exploration zones. The primary method of evaluation will be drilling and assaying following the negotiation of access agreements and grant of the tenements. Through this process, Cape Alumina aims to generate a pipeline of projects at various stages of development and exploration to meet the forecast expanding market demand.

## Environment

### PISOLITE HILLS AREA

The planned mining areas and mine-related infrastructure at Pisolite Hills are to be located on a dry stringybark lateritic plateau with predominant Darwin Stringybark (a tree common to the area) cover.

Preliminary reports have been prepared for the surface water, groundwater, wet and dry season flora and fauna surveys, and aquatic ecology of the project area to support the Pisolite Hills Environmental Impact Study (EIS).

### NEW PORT AT PORT MUSGRAVE

Cape Alumina is planning to build a stockpile and barge loading port as well as a village and related infrastructure to support the Pisolite Hills mine approximately 34km north-west of Pisolite Hills, near the mouth of the Ducie River.

A large number of environmental field studies have now been completed in Port Musgrave, the Wenlock and Ducie Rivers and the offshore marine areas in support of the Pisolite Hills EIS and a number of preliminary reports have been received.

Post-wet season and dry season fisheries surveys and a wet season sea grass survey have so far been completed by the Queensland Department of Primary Industries and Fisheries.

and assisted by the Mapoon Aboriginal Shire Council.

Extensive consultation has been undertaken with the indigenous community and will continue during the further exploration and project planning stage.

## Indigenous cultural heritage

Portions of both the port and mining areas of the project are contained within DOGIT lands, managed by Aboriginal trustees appointed by the Queensland Government

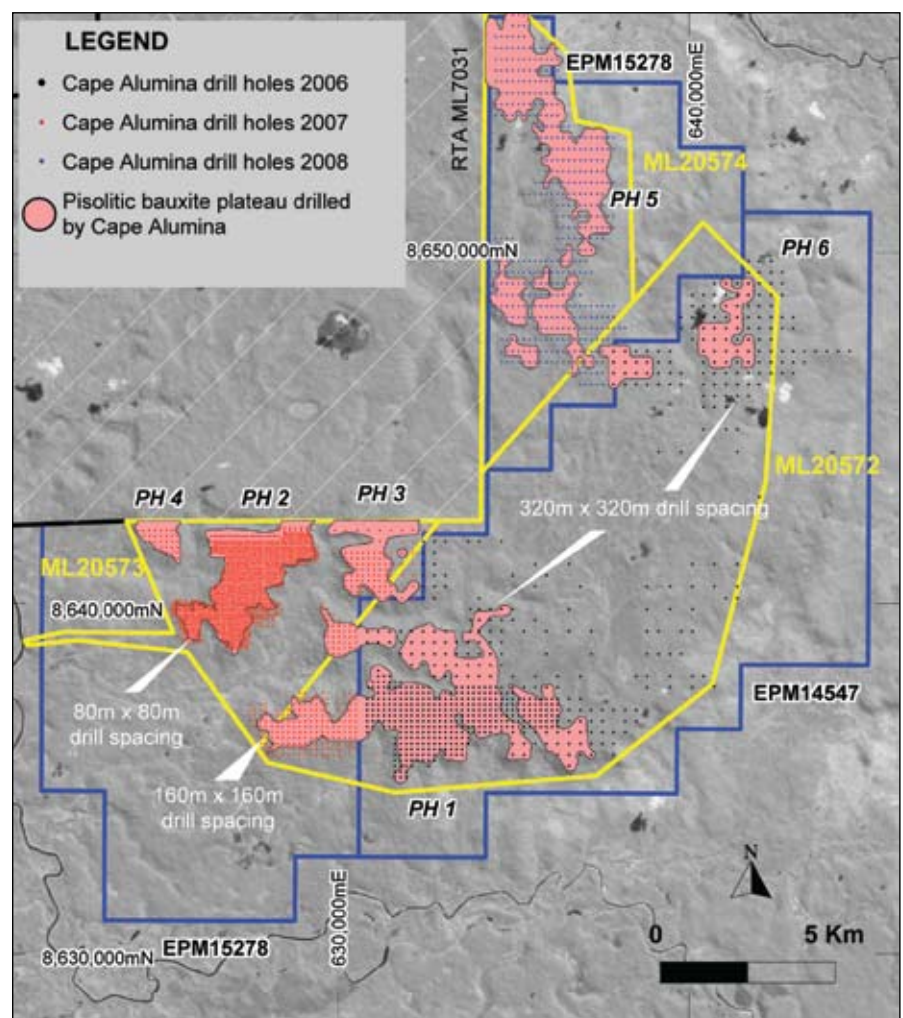


Figure 11: Pisolite Hills Project drilling 2006–2008

# MetroCoal

Metallica currently holds 79%

MetroCoal Limited owns extensive coal exploration tenements in the Surat Basin, located in Southern Queensland (see Figure 12). MetroCoal's simple strategy is to exploit previously stranded Surat Basin coal deposits suitable for exploitation via underground mining and or Underground Coal Gasification (UCG) in a favourable geographic setting.

The Surat Basin is expected to become one of Australia's major coal and energy resource areas and MetroCoal sees an enormous future for its two pronged strategy for building shareholder value through the development of:

1. Export thermal coal from underground mining and, where possible, opencast mining

2. UCG with associated power generation and, ultimately, an integrated gas synthesis process producing high quality, clean liquid fuels (eg. clean diesel) or chemicals such as ammonia nitrate.

The Company has identified coal exploration targets totalling between 2 and 3.5 billion tonnes (Bt)\* and expects to identify a coal resource of at least two billion tonnes within

the next two years. The resource is expected to include between 200Mt and 300Mt within the Juandah Project area (currently 172Mt) that will be available for UCG and subsequent syngas fired power generation and ultimately potential coal-to-liquids.

MetroCoal's geological knowledge of its tenements is based on a combination of the publicly available information from

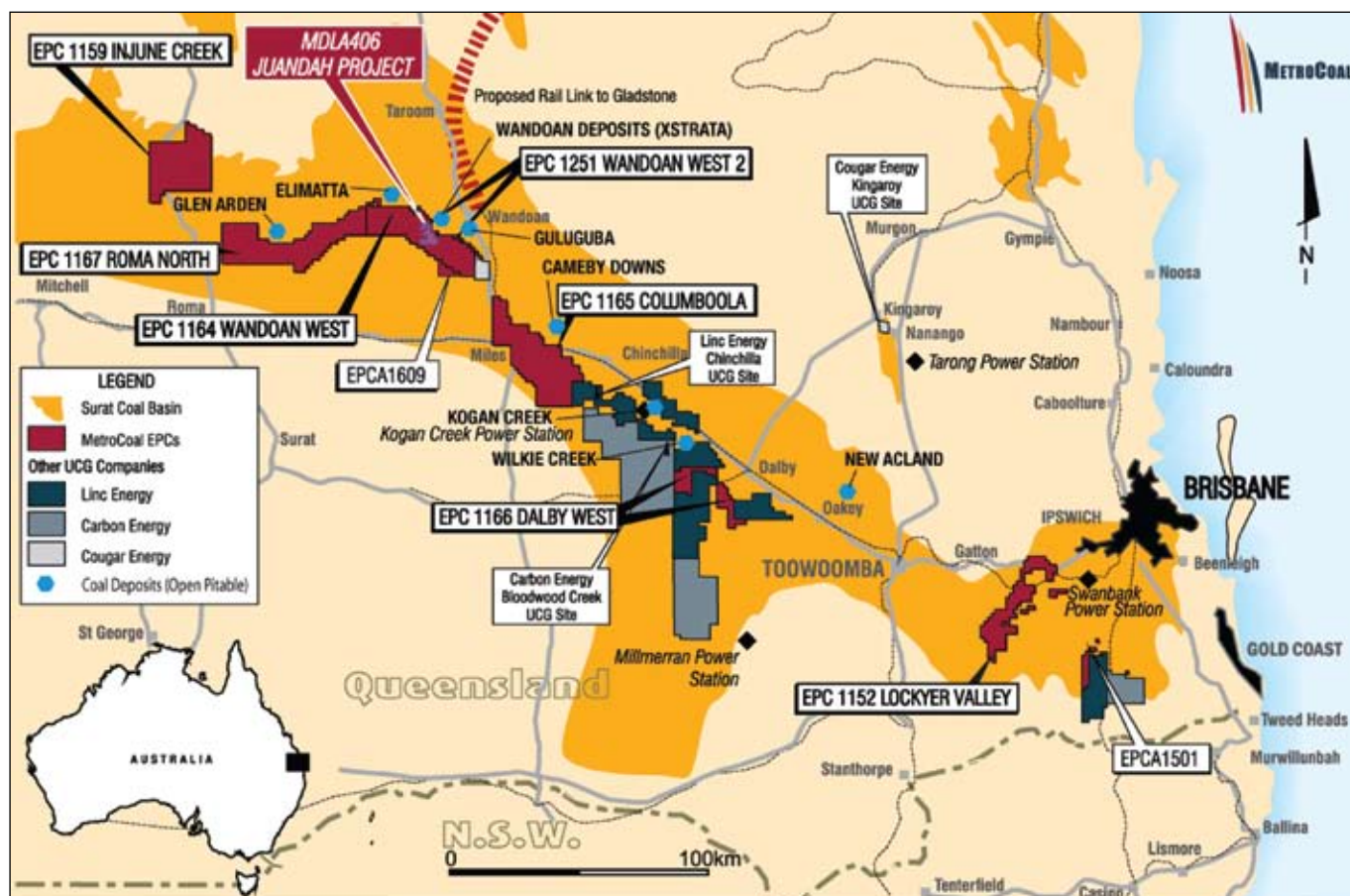


Figure 12: MetroCoal South East Queensland coal tenements

\*The potential quality is conceptual in nature and there has been insufficient information to define a coal resource.

exploration programs carried out mostly in the early 1980s, adjoining established coal projects and two exploration drill programs completed by MetroCoal.

The first program, in 2008, comprised seven widely spaced holes over some 50km of strike in MetroCoal's northern tenements and successfully confirmed its drilling targets; and the second program in April 2008 was focused within the Juandah Project area (MDLA 406) and established an initial JORC Code compliant resource of 172Mt, comprising 149.2Mt Inferred and 22.5Mt Indicated (see Table 10, page 33). The Juandah coal resource area represents approximately 1.5% of MetroCoal's prospective coal strata area in the Surat Basin. MDLA 406 (see Figure 13) has no overlapping petroleum tenure and is therefore available for UCG.

Importantly, borehole logs confirm that the Macalister Upper Seam is continuous over most of MetroCoal's tenements with seam thickness expected to be between 2 metres and 4.5 metres. This seam thickness is

ideal for modern high productivity bord and pillar or longwall mining. Extensive areas where the Macalister Upper, Middle and Lower Seams coalesce are also expected. In these areas the composite seam may be as thick as 12m, presenting very attractive mining and UCG targets.

MetroCoal is preparing an Initial Public Offering (IPO) which is expected to be completed before the end of 2009. The IPO will provide the funds to continue the resource development program. Over the next two years MetroCoal proposes to spend at least \$4 million on drilling and other evaluation activities, including seismic surveys. During this time MetroCoal will also seek to develop joint venture relationships with suitable parties for conventional mining and will establish an appropriate structure to exploit its UCG opportunities, either through technology alliances or other arrangements.

Global thermal coal demand is forecast to grow substantially over the next decade and beyond, maintaining high demand for

seaborne coal in the export market together with high coal prices. In the near term ABARE forecast that Australian annual thermal coal exports will grow by almost 50Mt from 115Mt a year to 164Mt a year by 2014 (ABARE Economic Overview March 2009).

Infrastructure expansion in Central and Southern Queensland is planned that will open up the Surat Coal Basin to the export market. Surat Basin Rail's plans to construct the "southern missing link" are well advanced and Port of Gladstone Wiggins Island coal terminal is also progressing.

The UCG/synfuel industry has significant environmental advantages over other forms of coal utilisation and is increasingly being recognised as a "clean coal technology". The environmental benefits associated with UCG are obtained principally through lower CO<sub>2</sub> emissions and minimisation of SO<sub>x</sub>, NO<sub>x</sub> and particulates and the production of "clean" liquid fuel products. Additional environmental benefits are due to the fact there is no surface mining as the coal is exploited in-situ (>150m depth), eliminating the physical

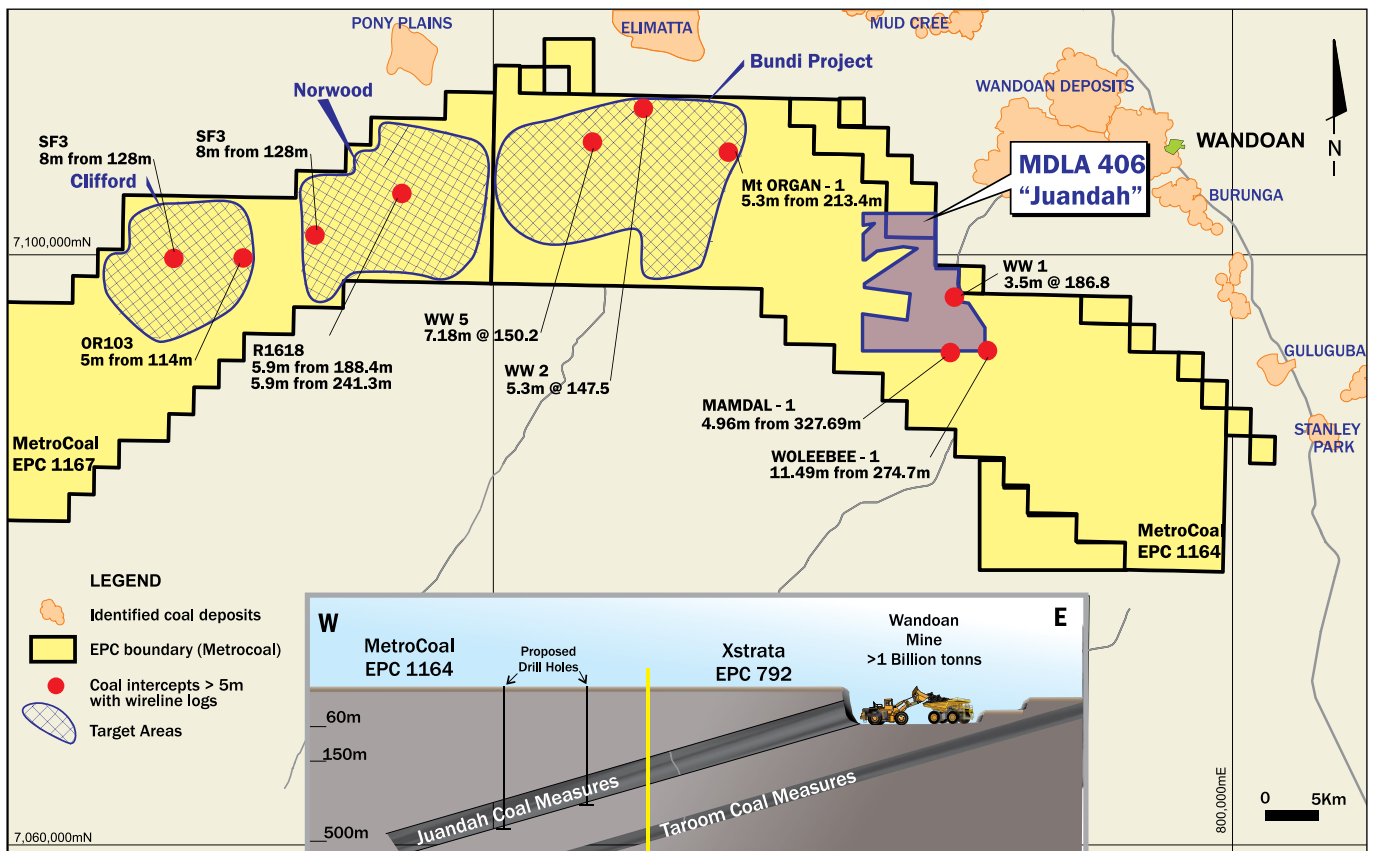


Figure 13: Wandoan West – Roma North



impact of mining and bringing stranded coal deposits, otherwise unmineable due to depth or low quality, to commercial account.

UCG is well placed to take advantage of the clean coal technologies currently being developed, especially those using carbon sequestration. The power generation and syngas conversion processes are all

“carbon capture” ready. This means that any CO<sub>2</sub> generated could be captured and subsequently sequestered.

The major benefit of underground coal mining and UCG is that they minimise impact to the land surface and environment (see Figure 14).

Forecasts of liquid fuel supply and demand carried out by various agencies

all show Australia’s growing trade imbalance and increasing reliance on imported liquid fuel. Figure 15 shows the forecasts sourced from ABARE, Geoscience Australia and APPEA. In 2015, based on these figures, Australia will be importing around 600,000 barrels a day which, at A\$100 per barrel would cost almost A\$25 billion.

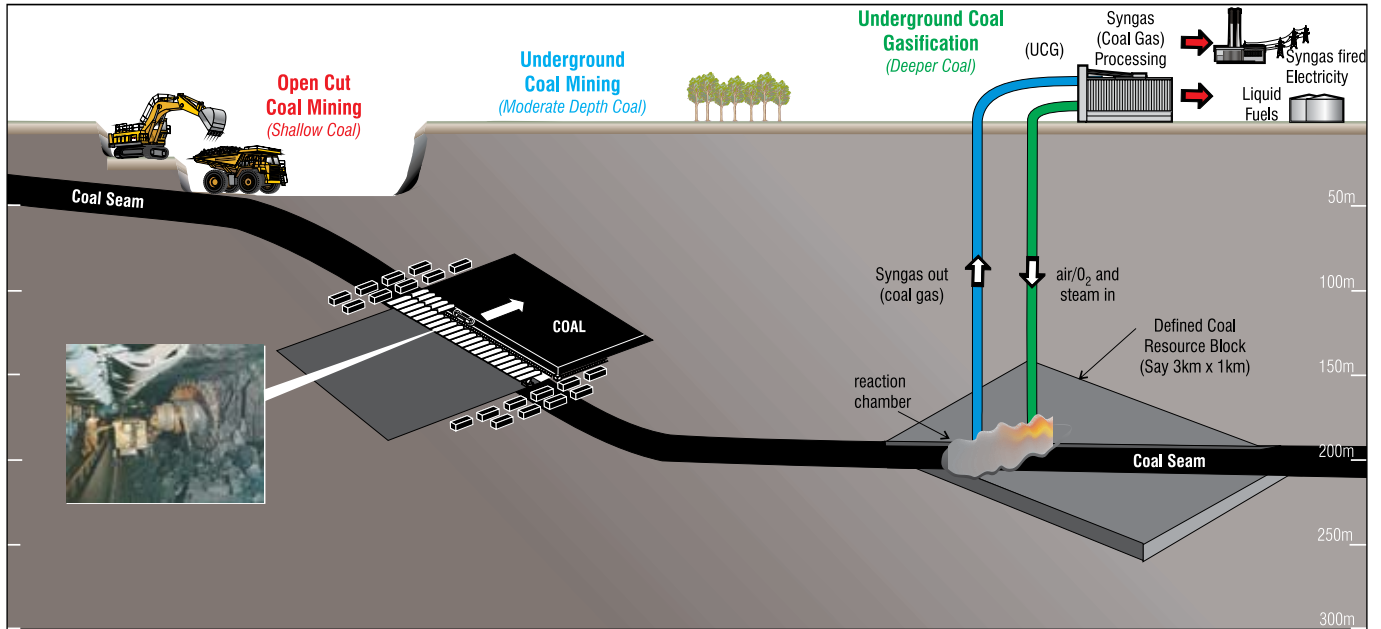


Figure 14: Exploration, evaluation and development strategy – “three coal development strategies within the same coal project area”

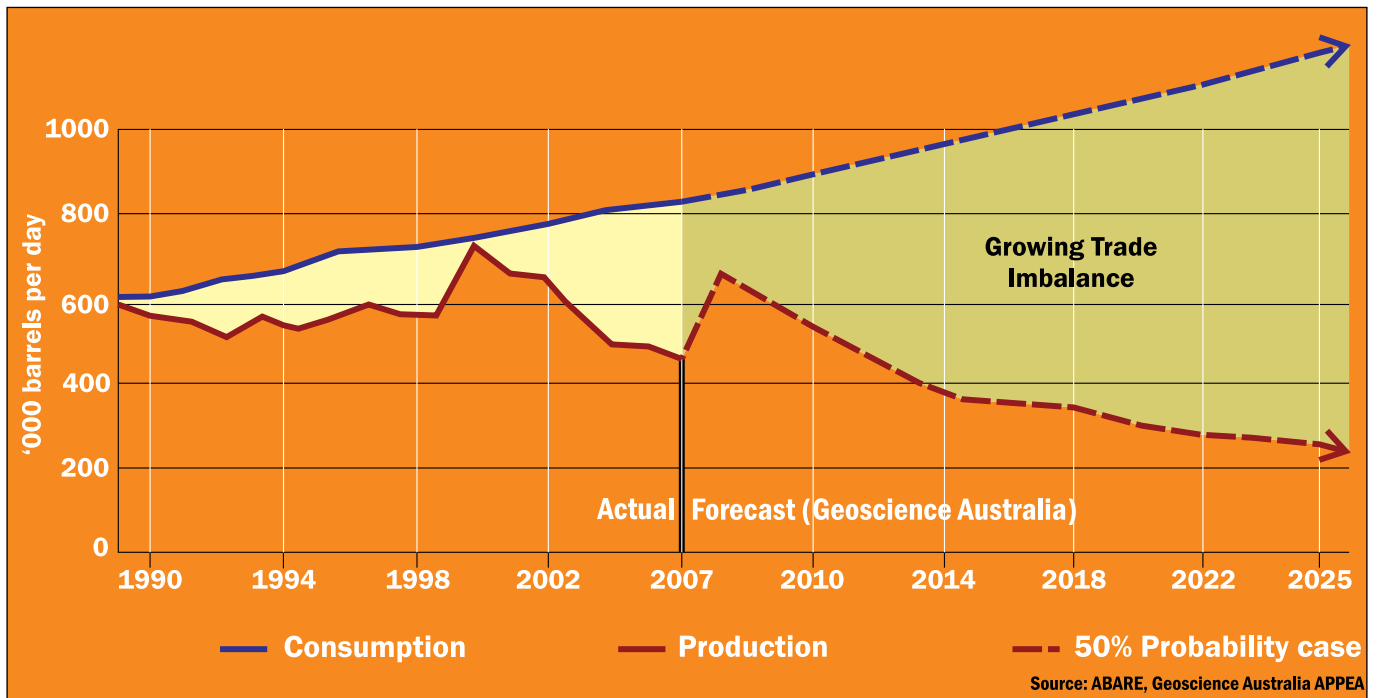


Figure 15: Australian liquid fuel supply and demand





Preparing blast at Ootann limestone quarry

# Limestone

(100% MLM)

Metallica owns six strategically located, high quality limestone projects comprising Ootann (near NORNICCO), Star and Mt Podge (near Lucky Break and Townsville), Boyne and Fairview (both near Gladstone), and the Blue Rock deposit between Minnamoolka and Kokomo. Limestone ( $\text{CaCO}_3$ ) and burnt lime ( $\text{CaO}$ ) are key inputs for many manufacturing and chemical processes as well as building materials for construction.

Phoenix Lime Pty Ltd (a wholly owned subsidiary of Metallica) holds 240Ha of mining leases covering the large high grade Ootann limestone deposit suitable for calcining and underpinning NORNICCO's lime and limestone requirements as well as selling product to external customers. Ootann is located 130km via existing road from the proposed NORNICCO processing site.

Phoenix Lime has investigated the construction of a new lime kiln at the Ootann limestone quarry operation for the lifespan of the NORNICCO nickel project, which will require substantial tonnages of limestone and lime. A 75 hole drilling program at Ootann was completed, which identified a high grade limestone deposit in excess of 50Mt to a maximum depth of 30m below surface.

This year saw significant sales of crushed limestone to the Tablelands Regional Council (TRC) for use in roadwork. Sales of agricultural lime have been solid over the past year and are increasing.

Samples from the Fairview drilling program completed in the December Quarter have been assayed and this information has been collated to estimate tonnage and quality. Information has been supplied to the Department of Mines and consequently Metallica has been granted MDL394 "Fairview" (774Ha). A Mining Lease application has been surveyed over the Fairview Limestone deposit (comprising approximately 29Mt of limestone to a maximum depth of 25m) in August 2009 to ensure Phoenix is in a

position to extract limestone at Fairview when the opportunity arises.

Proposed activities for the remainder of the year include initial exploration drilling at the Mount Podge EPM17018 and resource drilling at the Boyne SW Mining Lease 80132.



# Exploring for copper-gold uranium on prominent South Australian targets

Metallica can earn a 75% interest in three IOCGU style targets.

In mid-July 2009, Metallica signed a joint venture agreement with unlisted Adelaide based minerals explorer Salisbury Resources Ltd (Salisbury) whereby Metallica can earn up to a 75% interest in three highly attractive tenements (Toby, Lake Torrens and Merna Mora). Within each of the three tenements, attractive Iron Oxide-Copper-Gold-Uranium (IOCGU) – Olympic Dam style targets have been identified.

Metallica has also taken a \$100,000 cornerstone seed capital investment in Salisbury, and has injected an additional initial \$300,000 into exploration campaigns on the three Salisbury JV Projects.

The three IOCGU farm-in projects are:

- The 188km<sup>2</sup> EL 3402 (Toby), 65km east of Oodnadatta
- The 293km<sup>2</sup> EL 3630 (Merna Mora) 30km south-west of Hawker
- The 1,207km<sup>2</sup> EL 4118 and EL 4119 (Lake Torrens) project, 50km east of the Carrapateena IOCGU Cu-Au deposit.

The targets have coincident prominent gravity highs associated with interesting magnetic features under cover in a similar exploration setting to Olympic Dam, Carrapateena and Prominent Hill deposits. To date gravity surveys have

been completed on the Merna Mora and Lake Torrens IOCGU projects, with targets identified. The first deep drill hole (TB02 – 670m) in the Toby gravity feature magnetic complex has been completed. Granite basement was reached at 240m with the hole predominately intersecting weak to moderately clay-chlorite altered intrusives. Unfortunately no pervasive hematite or economic minerals were observed. This drilling will most likely be followed by drilling on Merna Mora and Lake Torrens targets once current ground gravity and magnetic survey data modelling are completed to better define the anomalies for drill site selection.

## Zircon-rutile project

Weipa Heavy Mineral Sands (HMS) Zircon-Rutile Project

Through subsidiary Oresome Australia Pty Ltd, Metallica holds one granted tenement (Urquhart Point) and three tenement applications (see Table 11, page 33) targeting rutile and zircon in sand dunes and strandlines along the coast line near Weipa. In 2008, an Indicated Resource of 2.8Mt @ 7.0% heavy Mineral (HM) to a maximum depth of three metres was identified at the Urquhart Point deposit, three kilometres south-west of Weipa. The valuable HMS suite is dominated by zircon and rutile, likely greater than 30% combined. There is a further nine

kilometres of coastline still to be tested at Urquhart Point.

In October 2008, Joint Venture partner Matilda Minerals Limited (ASX: MAL), went into administration and no significant exploration has been conducted on the project since that time.

Metallica is reviewing its options on how it should progress the Weipa heavy mineral sands project.

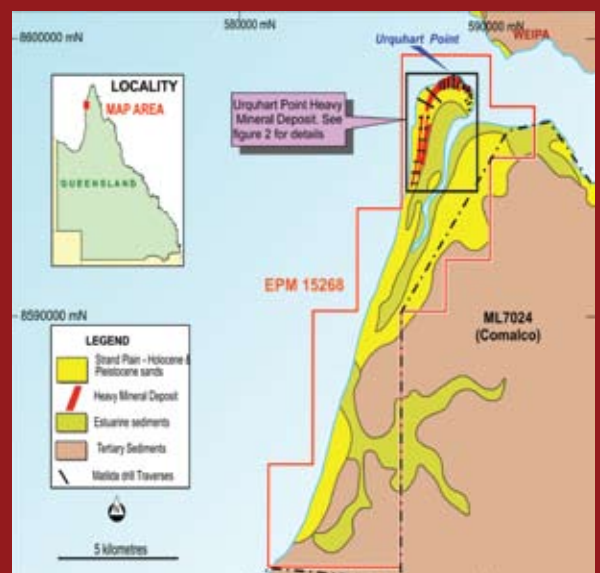


Figure 16: Urquhart Point Heavy Mineral Sands Project

### Competent Persons Statement

The exploration comments have been prepared by Mr Roger Hobbs BAppSc (Geophys & Geol), MAusIMM, a Director of Matilda, who has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which is to be undertaken 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'. Mr Hobbs consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

**Table 1: NORNICCO Project area drilling summary July 2008–June 2009**

Prospect	Drill Type	No. holes drilled	Metres drilled
Kokomo	RC	540	15,340*
Kokomo	Diamond	4	171
Moonmyata	Diamond	6	1,498
Rudd Creek	Diamond	7	1,311
Poison Creek	Diamond	1	202
Bell Creek	Diamond	1	161
<b>Total</b>		<b>661</b>	<b>21,346</b>

\*A further 312 holes for 7,798m have been drilled at Kokomo since June 2009, for a combined Kokomo total of 856 drill holes (23,309m).

**Table 2: Kokomo Indicated and Inferred Ni-Co Resource – at different COGs**

Ni Eq COG (%)	Tonnes (Mt)	Ni (%)	Co (%)	Ni Eq (%)	Fe (%)	Mg (%)	Mn (%)
0.50	20.6	0.58	0.09	0.85	21.8	3.5	0.51
0.55	18.6	0.60	0.09	0.88	21.8	3.5	0.53
0.60	16.3	0.63	0.10	0.93	21.6	3.6	0.56
0.65	14.2	0.65	0.11	0.97	21.6	3.7	0.59
<b>0.70</b>	<b>12.2</b>	<b>0.67</b>	<b>0.12</b>	<b>1.02</b>	<b>21.7</b>	<b>3.7</b>	<b>0.63</b>
0.75	10.4	0.70	0.13	1.07	21.9	3.7	0.67
0.80	8.9	0.72	0.14	1.12	22.2	3.7	0.71

Ni equivalent (Ni Eq) value obtained using 1Ni +3Co and is based on recent nickel and cobalt prices of around \$7/lb for nickel and a cobalt price of \$21/lb. See Table 6 for resource breakdown.

**Table 3: Kokomo scandium deposit – resource**

Zone	Tonnes	Sc (ppm)	Ni (%)	Co (%)	Tonnes (Sc metal)
Zone 1	2,343,000	121	0.35	0.06	285
Zone 2	851,430	127	0.22	0.03	109
Zone 3	407,633	168	0.20	0.04	68
Zone 4	948,585	142	0.34	0.07	135
<b>Total</b>	<b>4,550,648</b>	<b>131</b>	<b>0.31</b>	<b>0.05</b>	<b>596</b>

**Table 4: Kokomo scandium deposit – resource categories**

Category	Tonnes (Mt)	Sc (ppm)	Tonnes (Sc metal)
Indicated	3.60	128	462
Inferred	0.95	142	134
<b>Total</b>	<b>4.55</b>	<b>131</b>	<b>596</b>

COG of 60ppm Sc was used.

#### Competent Persons Statement

This Mineral Resource estimate for the Kokomo Scandium project is based upon and accurately reflects data compiled and validated by Patrick Smith (Metallica's Exploration Manager) who is a Member of the Australasian Institute of Mining and Metallurgy and a full time employee of Metallica Minerals Ltd. Mr Smith has sufficient experience that is relevant to the style of mineralisation and the type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the 2004 edition of the 'Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Smith consents to the inclusion of this information in the form and context in which it appears in this document.

**Table 5: Resource totals for each of the NORNICO Nickel-Cobalt deposits (Measured, Indicated and Inferred)**

Nickel-cobalt deposit	Million	Ni (%)	Co (%)	Fe (%)	Mg (%)	Ni (tonnes)	Co (tonnes)
Bell Creek South	11.41	0.88	0.06	11.00	7.70	100,580	6,690
Bell Creek North	5.64	0.65	0.02	8.30	8.90	36,660	1,180
Bell Creek Northwest	5.18	0.67	0.04	14.10	5.30	34,710	1,970
The Neck	1.39	0.73	0.02	8.30	6.90	10,120	320
The Pod	0.28	0.73	0.05	9.20	5.70	2,020	140
Minnamoolka	14.73	0.66	0.03	9.40	11.70	97,820	4,280
Kokomo*	12.20	0.67	0.12	21.70	3.70	82,080	14,460
<b>Totals</b>	<b>50.83</b>	<b>0.72</b>	<b>0.06</b>	<b>13.03</b>	<b>7.74</b>	<b>363,990</b>	<b>29,040</b>

\*The above resources have been calculated using a 0.45% Ni cut-off grade (COG), with the exception of Kokomo which was estimated using a 0.70% Ni Eq (Ni + 3Co) COG.

**Table 6: NORNICO Nickel-Cobalt Resource Inventory – Measured, Indicated and inferred**

Nickel-cobalt deposit resource category	Tonnes (Mt)	Ni (%)	Co (%)	Fe (%)	Mg (%)	Ni metal (tonnes)	Co metal (tonnes)
<b>Bell Creek South (BCS)</b>							
Measured	10.90	0.89	0.06	11.2	7.7	97,010	6,540
Indicated	0.51	0.70	0.03	7.9	8.9	3,570	150
<b>Bell Creek North (BCN)</b>							
Indicated	5.64	0.65	0.02	8.3	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	1,970
<b>The Neck – between BCS and BCN</b>							
Indicated	1.39	0.73	0.02	8.3	6.9	10,120	320
<b>The Pod* – west of BCS</b>							
Inferred	0.28	0.73	0.05	9.2	5.7	2,020	140
<b>Minnamoolka</b>							
Indicated	11.83	0.67	0.03	9.7	11.7	79,260	3,670
Inferred	2.90	0.64	0.02	8.3	11.6	18,560	610
<b>Kokomo</b>							
Indicated	5.20	0.69	0.13	23.5	3.7	35,880	6,760
Inferred	7.00	0.66	0.11	20.3	3.7	46,200	7,700
<b>Totals</b>							
<b>Measured</b>	<b>10.90</b>	<b>0.89</b>	<b>0.06</b>	<b>11.2</b>	<b>7.7</b>	<b>97,010</b>	<b>6,540</b>
<b>Indicated</b>	<b>29.75</b>	<b>0.67</b>	<b>0.05</b>	<b>12.5</b>	<b>8.3</b>	<b>200,200</b>	<b>14,050</b>
<b>Inferred</b>	<b>10.18</b>	<b>0.65</b>	<b>0.08</b>	<b>16.6</b>	<b>6.0</b>	<b>66,780</b>	<b>8,450</b>
<b>Overall total</b>	<b>50.83</b>	<b>0.72</b>	<b>0.06</b>	<b>13.0</b>	<b>7.7</b>	<b>363,990</b>	<b>29,040</b>

- Above categories all calculated using a 0.45% Ni cut-off grade, with the exception of Kokomo which was estimated using a 0.70% Ni Eq cog (1Ni + 3Co).
- Block models for the above resources (with exception of The Pod) estimates were constructed by filling wire frame surfaces representing nickel laterite mineralisation boundary with 10m by 10m by 1m blocks. Nickel (Ni) grades were estimated by ordinary kriging using various search radius, depending on the drill spacing of the deposit. A minimum of four and a maximum of 15 composites were used to estimate each block, with a maximum of three composites from any one drill hole. Therefore, at least three drill holes were used to estimate block grade values. At Bell Creek South, Minnamoolka and Kokomo 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 metallurgy and the ore is more suited to heap acid leach processing.

\*The Pod Inferred resource was estimated using an arithmetic mean-cross sectional (polygonal) method, a 0.45% Ni external cut-off grade and a minimum assumed mining width of two metres was applied (ASX Release Competent Person Patrick Smith).

#### Competent Persons Statement

This NORNICO Mineral Resource estimate (with the exception of the resource for The Pod) is based upon and accurately reflects data compiled, validated or supervised by Mr John Horton, Principal Geologist, who is a Member of the Australasian Institute of Mining and Metallurgy and a full time employee of Golder Associates Pty Ltd. Mr Horton has sufficient experience that is relevant to the style of mineralisation and the type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the 2004 edition of the 'Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Horton consents to the inclusion of this information in the form and context in which it appears in this document. For Further details and see Metallica ASX Release dated 19 January.



**Table 7: Mt Cannindah Resource Inventory (March 2008)**

Category	Million tonnes	Cu%	Au g/t
Measured	5.57	0.95	0.41
Inferred	1.9	1.0	0.3
<b>Total</b>	<b>7.47</b>	<b>0.97</b>	<b>0.38</b>

The JORC compliant resource estimate was undertaken by Golder Associates Pty Limited and is based on the 25 diamond drillholes (DD) and 17 reverse circulation (RC) holes.

#### Competent Persons Statement

The information in this report that relates to Mineral Resources for the Mt Cannindah Copper Gold Project is based upon information compiled and/or supervised by Mr Andrew Border and Dr Andrew Richmond, both of whom are Members of the Australasian Institute of Mining and Metallurgy. Dr Richmond, a full time employee of Golder Associates Pty Ltd, is responsible for the resource block model and estimation. Mr Border, a full time employee of QOL, is responsible for all other aspects of the Mineral Resource estimate. Both Mr Border and Dr Richmond have sufficient experience that is relevant to the style of mineralisation and the type of deposit under consideration and to the activity which they have undertaken to qualify as Competent Persons as defined in the 2004 edition of the 'Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Border and Dr Richmond consent to the inclusion of this information in the form and context in which it appears in this report.

**Table 8: Wolfram Camp Tungsten and Molybdenum Project Resource**

Measured	598,200 tonnes	0.42% WO <sub>3</sub>	0.17% MoS <sub>2</sub>
Indicated	111,500 tonnes	0.41% WO <sub>3</sub>	0.16% MoS <sub>2</sub>
Inferred	238,300 tonnes	0.4% WO <sub>3</sub>	0.2% MoS <sub>2</sub>
Measured and Indicated	710,000 tonnes	0.42% WO <sub>3</sub>	0.17% MoS <sub>2</sub>

#### Competent Persons Statement

The information in the attached report that relates to Exploration Results, Mineral Resources and Ore Reserves was based on information compiled by Mr Andrew Border. Andy Border is a Member of the Australasian Institute of Mining and Metallurgy, and as a full time employee of PMQ is responsible for the resource estimates. Mr Border has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activities being undertaken to qualify as a Competent Person as defined in the 2004 Edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Border consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

**Table 9: Cape Alumina – Mineral Resource for Pisolite Hills bauxite deposits within EPM14547 and EPM15278**

Resource category	In-situ dry tonnes (Mt)	Dry beneficiated tonnes (Mt)	Beneficiated bauxite qualities							
			Total SiO <sub>2</sub> (%)	Total Al <sub>2</sub> O <sub>3</sub> (%)	Fe <sub>2</sub> O <sub>3</sub> (%)	TiO <sub>2</sub> (%)	LOI (%)	Recovery (%)	RSiO <sub>2</sub> (%)*	THA (%)**
Total Measured	27.5	20.1	10.8	54.4	6.7	2.2	25.6	73.1	6.4	41.8
Total Indicated	56.1	37.9	12.5	53.5	6.2	2.2	25.3	67.6	7.6	41.8
Total Inferred	46.6	28.0	13.2	51.8	7.6	2.3	24.8	60.2	8.1	40.8
<b>Global total</b>	<b>130.2</b>	<b>86.1</b>	<b>12.4</b>	<b>53.1</b>	<b>6.8</b>	<b>2.2</b>	<b>25.2</b>	<b>66.1</b>	<b>7.5</b>	<b>41.5</b>

\*RSiO<sub>2</sub> – Reactive silica at 150°C.

\*\*THA – Trihydrate Available Alumina (gibbsite alumina + kaolinite alumina – low temperature desilication product [DSP] alumina) at 150°C.

Note: The Pisolite Hills Mineral Resource has been reported assuming that the bauxite will be blended with an external source during low-temperature processing to ensure that the bauxite material feed achieves reactive silica and iron oxide thresholds specific to a nominated alumina refinery.

#### Competent Persons Statement

The information in this report related to Cape Alumina Ltd – Pisolite Hills Bauxite Project Mineral Resources was compiled by Mr Justin Legg and Mr Matthew Nimmo and reviewed by Mr Justin Watson, who are full time employees of Snowden Mining Industry Consultants. Mr Legg and Mr Watson are Members of The Australasian Institute of Mining and Metallurgy and Mr Nimmo is a Member of the Australian Institute of Geoscientists. The Mineral Resource estimate is based upon and accurately reflects data compiled by Mr John Cameron who is a full time employee of Cape Alumina Limited and reviewed by Mr Legg, Mr Nimmo and Mr Watson. Mr Legg, Mr Nimmo, Mr Watson and Mr Cameron all consent in writing to the inclusion in the report of the matters based on the information and context in which it appears in this report.

Mr Watson 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'. The information in this report that relates to Exploration Results is based on information compiled and supplied by Mr John Cameron from Cape Alumina Limited. Mr John Cameron is a full-time employee of Cape Alumina Limited and a member of the Australasian Institute of Mining and Metallurgy. Mr Cameron 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'.

**Table 10: MetroCoal Juandah Project Coal Resource**

Measured	149.2Mt
Indicated	22.5Mt
<b>Measured and Indicated</b>	<b>171.7Mt</b>

**Competent Persons Statement**

The information in this statement that relates to in situ resources for the Juandah coal project is based on information compiled by GeoConsult and reviewed by Warwick Smyth, who is a member of the Australasian Institute of Mining and Metallurgy (CP) Geology and the Australian Institute of Geoscientists. Warwick Smyth is a qualified geologist (BSc Geol, Grad Dip AF&I, MAusIMM (CP), MGSA, MAIG), and has over 17 years experience which is relevant to the style of mineralisation, the type of deposit under consideration and to the activity which has been undertaken to qualify as a Competent Person as defined by the 2004 edition of the 'Australia Code for Reporting of Coal Resources'. Warwick Smyth consents in writing to the inclusion in the statement of the matters based on the information in the form and context in which it appears.

The information in this statement that relates to in situ coal results is based on information compiled by Neil Mackenzie-Forbes, who is a member of the Australian Institute of Geoscientists and a full time employee of MetroCoal Ltd. Neil Mackenzie-Forbes is a qualified geologist (B App Sc, MAIG), and has over 15 years experience with over 9 years relevant to the style of mineralisation, the type of deposit under consideration and to the activity which has been undertaken to qualify as a Competent Person as defined by the 2004 edition of the 'Australia Code for Reporting of Coal Resources'. Neil Mackenzie-Forbes consents in writing to the inclusion in the statement of the matters based on the information in the form and context in which it appears.

**Table 11: Tenement schedule (as at 30 June 2009)**

<b>Nickel-Cobalt Projects</b>						
Tenement	Project Name	Holder/Applicant	Status (expiry date)	No. Sub Block	Commodity Targeted	Min. Annual Expenditure
ML 4187	Bell Creek North Lease	NORNICO Pty Ltd	Granted (29/2/2020)	71.35 Ha	Ni, Co	N/A
ML 4188	Bell Creek South Lease	NORNICO Pty Ltd	Granted (29/2/2020)	98.11 Ha	Ni, Co	N/A
ML 10324	Dingo Dam	NORNICO Pty Ltd	Granted (28/02/2026)	36.17 Ha	Ni, Co	N/A
ML 10332	Lucky Break	NORNICO Pty Ltd	Granted (30/11/2027)	241.7 Ha	Ni, Co	N/A
MLA 20549	Bell Ck Consolidated	NORNICO Pty Ltd	Application	2145 Ha	Ni, Co	N/A
MDL 387	Minnamoolka	NORNICO Pty Ltd	Granted (30/6/2013)	654.26 ha	Ni, Co	\$50,000
EPM 10235	Minnamoolka	NORNICO Pty Ltd	Granted (8/9/2008)*	5	Ni, Co	\$50,000
EPM 10699	Kokomo	NORNICO Pty Ltd	Granted (21/8/2008)	21	Ni, Co, Sc, Au	\$100,000
EPM 11285	Bell Creek	NORNICO Pty Ltd	Granted (27/8/2008)*	8	Ni, Co	\$50,000
EPM 14066	Greenvale South	NORNICO Pty Ltd	Granted (22/08/2009)*	48	Ni, Co, PGE	\$40,000
EPM 14070	Greenvale North	NORNICO Pty Ltd	Granted (22/08/2009)*	65	Ni, Co, Cu, Au	\$50,000
EPM 14101	Mt Garnet South	NORNICO Pty Ltd	Granted (22/12/2008)*	80	Ni, Co, Au, PGE	\$60,000
EPM 14181	Lucky Downs	NORNICO Pty Ltd	Granted (22/08/2009)*	18	Ni, Co, Cu	\$30,000
EPM 14273	Moonmyata	NORNICO Pty Ltd	Granted (22/12/2012)	8 125	Ni, Co, Au, PGE	\$40,000
EPM 14381	Greenvale South #2	NORNICO Pty Ltd	Granted (14/12/2009)*	15	Ni, Co, Cu	\$40,000
EPM 14392	Lucky Break	NORNICO Pty Ltd	Granted (29/6/2009)*	16	Ni, Co	\$40,000
EPM 14518	Mt Garnet South #2	NORNICO Pty Ltd	Granted (7/3/2010)	87	Ni, Co, Au, Cu	\$40,000
EPM 14608	Pinnerendi	NORNICO Pty Ltd	Granted (16/6/2010)	12	Ni	\$60,000
EPM 14658	Yellow Jack	NORNICO Pty Ltd	Granted (26/6/2010)	13	Ni, Co	\$40,000
EPM 14987	Sandy Creek	NORNICO Pty Ltd	Granted (8/11/2010)	50	Ni, Co, Au, U.	\$40,000

Tenement	Project Name	Holder/Applicant	Status (expiry date)	No. Sub Block	Commodity Targeted	Min. Annual Expenditure
EPM 15198	Kinrara	NORNICO Pty Ltd	Granted (26/9/2008)*	67	Ni, Co, PGE, Cu	\$40,000
EPM 15924	Gunnawarra	NORNICO Pty Ltd	Granted (7/12/2011)	6	Earthy Dolomite	\$13,000
EPMA 17707	Pinnacles	NORNICO Pty Ltd	Granted (26/4/2014)	16	Ni, Co	\$50,000
EPMA 17892	Lockup Well	NORNICO Pty Ltd	Application	1	Ni, Co	\$15,000
EPMA 17893	Broken River South	NORNICO Pty Ltd	Application	3	Ni, Co	\$20,000
EPMA 18167	Canoona	NORNICO Pty Ltd	Application	22	Ni, Co	\$20,000

Note: NORNICO Pty Ltd previously named QLD Gold Pty Ltd.

NORNICO Pty Ltd is a 100% subsidiary of Metallica Minerals Ltd.

This NORNICO Mineral Resource estimate (with the exception of the resource for The Pod) is based upon and accurately reflects data compiled, validated or supervised by Mr John Horton, Principal Geologist, who is a Member of the Australasian Institute of Mining and Metallurgy and a full time employee of Golder Associates Pty Ltd. Mr Horton has sufficient experience that is relevant to the style of mineralisation and the type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the 2004 edition of the 'Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Horton consents to the inclusion of this information in the form and context in which it appears in this document. For further details and see Metallica ASX Release dated 19 January.

#### Coal Projects (MetroCoal Ltd)

Tenement	Project Name	Holder/Applicant	Status (expiry date)	No. Sub Block	Commodity Targeted	Min. Annual Expenditure
EPC 1152	Lockyer Valley	MetroCoal Limited	Granted (11/12/2012)	150	Open Cut Thermal Coal & UCG	\$60,000
EPC 1159	Injune Creek	MetroCoal Limited	Granted (11/12/2010)	237	Open Cut Thermal Coal & UCG	\$55,000
EPC 1164	Wandoan West	MetroCoal Limited	Granted (11/12/2010)	215	UCG & UC	\$55,000
EPC 1165	Columboola	MetroCoal Limited	Granted (9/12/2010)	294	UCG & UC	\$55,000
EPC 1166	Dalby West	MetroCoal Limited	Granted (11/12/2012)	97	UCG & UC	\$60,000
EPC 1167	Roma North	MetroCoal Limited	Granted (11/12/2010)	289	UCG & UC	\$55,000
EPC 1251	Wandoan West 2	MetroCoal Limited	Granted (16/9/2013)	19	UCG & UC	\$20,000
EPCA 1501	Dugandan	MetroCoal Limited	Offered for grant	20	UCG & UC	\$40,000
EPCA 1609	Wandoan West 3	MetroCoal Limited	Application	18	UCG & UC	\$40,000
EPCA 1640	Pentland South	MetroCoal Limited	Application	114	UCG & UC	\$120,000
MDLA 406	Juandah	MetroCoal Limited	Application	4986 ha	UCG & UC	\$330,000

Note: MetroCoal Limited owned 84% by Metallica Minerals Limited. All tenements held 100% by MetroCoal.

#### Limestone Projects

Tenement	Project Name	Holder/Applicant	Status (expiry date)	No. Sub Block	Commodity Targeted	Min. Annual Expenditure
ML 10276	Star River Limestone	Metallica Minerals Ltd	Granted (30/4/2023)	18.54 Ha	Limestone	N/A
ML 80131	Boyne Limestone NE	Metallica Minerals Ltd	Granted (30/4/2027)	54.40 Ha	Limestone	N/A
ML 80132	Boyne Limestone SW	Metallica Minerals Ltd	Granted (30/9/2027)	52.70 Ha	Limestone	N/A
EPM 13423	Boyne Limestone	Metallica Minerals Ltd	Granted (1/1/2011)	4	Limestone	\$10,000
EPM 13756	Fairview Limestone	Metallica Minerals Ltd	Granted (10/12/2011)	2	Limestone	\$10,000



## Limestone Projects

Tenement	Project Name	Holder/Applicant	Status (expiry date)	No. Sub Block	Commodity Targeted	Min. Annual Expenditure
EPM 14042	Fairview Extended	Metallica Minerals Ltd	Granted (23/10/2007)*	2	Limestone	\$60,000
EPM 17018	Mt Podge	Phoenix Lime Pty Ltd	Granted (12/2/2014)	4	Limestone	\$22,500
MDLA 394	Fairview	Metallica Minerals Ltd	Application	776.6Ha	Limestone	\$50,000
ML 4788	Crotty 1 (Ootann)	Phoenix Lime Pty Ltd	Granted (31/1/2026)	2.023Ha	Limestone	N/A
ML 4789	Crotty 2 (Ootann)	Phoenix Lime Pty Ltd	Granted (31/1/2026)	2.023Ha	Limestone	N/A
ML 5079	Crotty (Ootann)	Phoenix Lime Pty Ltd	Granted (30/4/2025)	25.95Ha	Limestone	N/A
ML 5372	Crotty 3 (Ootann)	Phoenix Lime Pty Ltd	Granted (31/1/2013)	210Ha	Limestone	N/A

Note: Phoenix Lime Pty Ltd is a 100% subsidiary of Metallica Minerals Ltd.

## Gold, Precious and Base Metals, other Projects

Tenement	Project Name	Holder/Applicant	Status (expiry date)	No. Sub Block	Commodity Targeted	Min. Annual Expenditure
EPM 13873	Six Mile	NORNICO Pty Ltd	Granted (10/12/2007)*	51	Gold, Copper	\$50,000
EPM 14477	Texas North	Oresome Australia Pty Ltd	Granted (22/08/2009)	11	Au, Ag	\$40,000
EPM 15268	Urquhart Point	Oresome Australia Pty Ltd	Granted (24/10/2012)	24	Rutile, Zircon, HMS	\$30,000
EPMA 15370	Jackson River	Oresome Australia Pty Ltd	Offered for grant	14	Rutile, Zircon, HMS	\$15,000
EPMA 15371	Doughboy	Oresome Australia Pty Ltd	Offered for grant	16	Rutile, Zircon, HMS	\$15,000
EPMA 15372	Jardine	Oresome Australia Pty Ltd	Offered for grant	45	Rutile, Zircon, HMS	\$15,000
EPM 15848	Tondoon	Oresome Australia Pty Ltd	Granted (22/05/2013)	18	Bauxite	\$17,000
EPMA 18015	Jackson River #2	Oresome Australia Pty Ltd	Application	3	Rutile, Zircon, HMS	\$15,000

Note: Oresome Australia Pty Ltd is owned 100% by Metallica Minerals Limited.

Note:

(\* ) In Renewal

PGE = Platinum Group Elements, HMS = Heavy Mineral Sands,

All tenements 100% held unless expressed otherwise

NORNICO Pty Ltd previously named QLD Gold Pty Ltd

EPM = Exploration Permit for Minerals

EPMA = Application for Exploration Permit for Minerals

EPC = Exploration Permit for Coal

EPCA = Application for Exploration Permit for Coal

ML = Mining Lease

MLA = Application for Mining Lease

MDL = Mineral Development Licence

MDLA = Mineral Development Licence Application

UCG = Underground Coal Gasification targeted

UC = Underground Coal (conventional) mining targeted



# 20 largest shareholders

The names of the 20 largest shareholders as at 28 September 2009, in each class of security are:

Rank	Investor	Current Balance	% Issued Capital
1.	Jien Mining Pty Ltd	22,218,730	18.25
2.	Resource Capital Fund III LP	13,473,290	11.07
3.	Golden Breed Pty Ltd	8,770,000	7.20
4.	Bondline Limited	4,910,966	4.03
5.	Codan Trustees <The Mount Cotton Account>	2,500,000	2.05
6.	Asden Investments Pty Ltd	2,418,474	1.99
7.	Outback Metals Limited	2,164,682	1.78
8.	Colwell Kennedy Australia Pty Ltd	2,000,000	1.64
9.	China Xinha Group Corporation	1,964,386	1.61
10.	Latsod Pty Ltd <Dostal Superfund A/C>	1,687,000	1.39
11.	Mr Paul Dostal	1,521,957	1.25
12.	Resource Capital Fund IV LP	1,473,290	1.21
13.	Robert John Gillies	1,342,429	1.10
14.	Miss Judith Emily Ruwolt	1,261,911	1.04
15.	K E Bryan No 2 Pty Ltd <K E Bryal No 2 A/C>	1,200,000	.99
16.	Minnelex Pty Ltd	1,147,410	.94
17.	Select Resources Pty Ltd	1,007,410	.83
18.	Tregantle Pty Ltd <Tregantle A/C>	950,000	.78
19.	Mr Shane Colin Mardon	833,000	.68
20.	Ryahed Pty Ltd <Ryahed Super Fund A/C>	813,933	.67
	<b>TOTAL</b>	<b>73,659,126</b>	<b>61.1%</b>

Total Shares on Issue at 28 September 2009 is 121,740,917





## METALLICA MINERALS LTD

ABN 45 076 696 092

“A clear strategy for major growth”

A Queensland multi-commodity resource company,  
with major interests in nickel-cobalt, coal, bauxite,  
tungsten and gold-copper

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