# METALLICA MINERALS LIMITED

## ANNUAL REPORT 2015

# CORPORATE DIRECTORY

## DIRECTORS

Mr Barry J Casson (Non–Executive Chairman)
Mr Andrew L Gillies (Non–Executive Director)
Dr Shu Wu (Non–Executive Director)
Mr Shu Zhang (Alternate Director to Dr Shu Wu)

## CHIEF EXECUTIVE OFFICER

Mr Simon J Slesarewich

## CHIEF FINANCIAL OFFICER & COMPANY SECRETARY

Mr John K Haley

## PRINCIPAL REGISTERED OFFICE IN AUSTRALIA

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## AUDITOR

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## STOCK EXCHANGE LISTING

ASX: MLM

## AUSTRALIAN BUSINESS NUMBER

ABN: 45 076 696 092

## SUBSIDIARY COMPANIES

NORNICO Pty Ltd ACN 065 384 045
Oresome Australia Pty Ltd ACN 071 762 484
Oresome Bauxite Pty Ltd ACN 606 362 252
Lucky Break Operations Pty Ltd ACN 126 272 580
Phoenix Lime Pty Ltd ACN 096 355 761
Greenvale Operations Pty Ltd ACN 139 136 708
Scandium Pty Ltd ACN 138 608 894
Touchstone Resources Pty Ltd ACN 126 306 018

# CONTENTS



## 2015 ACHIEVEMENTS

- $500,000 sale of Ootann Limestone Project
- $370,000 sale of Star Limestone Project
- $450,000 Nickel Royalty received for Dingo Dam Mining Lease, a further $200,000 to be received in October
- Mining Lease Application lodged for Urquhart Point Bauxite Project
- 7.5Mt Inferred Bauxite JORC Resource at Urquhart Point Bauxite Project, Direct Shipping Bauxite (DSB) also confirmed
- $7.5M received from Joint Venture Partner to progress the Cape York Heavy Mineral Sands (HMS) and Bauxite Projects
- Sold remaining shareholding in MetroMining for $2M
- Completed corporate raising of $500,000
- $579,000 R&D tax refund received
- Completed fabrication of 110tphr HMS processing plant – currently being transported to Brisbane

## 2016 GOALS

- Further advance Urquhart Point Bauxite Project and gain approvals for a modest 1.5–2Mtpa Direct Shipping Bauxite (DSB) operation
- Continue to review low temperature bauxite opportunities located in the Pacific Basin
- Identify and evaluate other value–adding projects
- Complete drilling program at Esmeralda Graphite project near Croydon
- Review plans for development of the Urquhart Point HMS project
- Continue to realise value from non–core assets
- Progress negotiations for joint venture partners for the SCONI nickel–cobalt–scandium project
- Investigate commercial opportunities on Metallica's Scandium Intellectual Property

# CHAIRMAN & CEO'S LETTER

## BARRY CASSON & SIMON SLESAREWICH

Dear Metallica Shareholder

The past year saw Metallica replicate the cost cutting and reduced expenditure by Australia's mining industry large and small, as subdued commodity and equities markets persisted in the resources sector.

Your Board elected to use this 'market downtime' to rework just how Metallica should emerge for the longer term from this negative environment.

We ran leaner and meaner, cut Director, management, administration and external costs, with more savings to come and in particular we looked critically at how to renew the Company, how to seek value from non–core assets and critically review which projects could now genuinely be commercialised.

Review outcomes include a timely renewal of the Board, through a change to its Chair and a new CEO replacing the long held position of Managing Director.

We pay tribute to founding Managing Director, Andrew Gillies, and the robust stewardship of now retired Chair, David Barwick, for guiding Metallica from its ASX listing in 2004 through many challenging times and yet delivering a legacy of advanced development assets.

Importantly, Metallica has not had to pursue a fire sale of assets or revert to a seemingly common approach in the sector's "survival at any expense".

Metallica's upside includes our projects near Weipa in Queensland, our unique graphite project, also in Queensland, and completing the successful staged disposal of our limestone assets.

Our SCONI (scandium, cobalt and nickel) project northwest of Townsville retains global appeal but requires wider and increased use of scandium and a return of market sentiment.

Full project details are included in the following pages.

As your new Chair, I have the value and knowledge of five years on your Board, and we retain the skill set of Andrew Gillies as a Non–Executive Director. As the new CEO, Simon Slesarewich brings a new and complimentary skill set of achievement as an experienced project developer and operator.

**So what is Metallica's future?**

Resources companies making the transition from explorer and project developer into a producer require by convention, different and proven skill sets.

As your new Chair and CEO, Simon and I plan to respect the project gains of the past but also bring a fresh set of eyes, ideas and approach and deliver the necessary project financing, mergers, acquisitions and offtake agreements to achieve growth.

Project development is not easy. It is not for the inexperienced. In Simon we have the project development skills.

Metallica will only move on those projects which have real scale, attract good management, financially robust partners, and are in an in–demand commodity that allows for profitably sufficient for riding out the cyclic ups and downs of commodity interests. We will not be short–sighted or single minded in our due diligence. We will retain an open mind not bound by any specific commodity or jurisdiction. Our deliberations will be based simply on whether a new opportunity brings value to shareholders and in particular will deliver reliable and timely cashflow.

Mineral sand prices (particularly titanium minerals rutile and ilmenite) have continued to decline in 2015 and the Joint Venture and your Company are monitoring this and periodically reviewing options while continuing to progress the development of the Urquhart Point HMS project on a more cautious step-by-step or staged approach.

We need game–changers. In the short–term, that is likely to be bauxite, but as we mentioned above, new value–adding opportunities that may be outside our historic project focus, will get serious attention from your Board and management.

Oddly enough, the current negative equities market sentiment around resources is presenting projects and opportunities at well below conventional values and Metallica enters this arena with an open mind.

Graphite may be a second string to our game–changer aspirations but again, that depends on drilling success in Q4 targeting high purity graphite at our re–emergent Esmeralda graphite project near Croydon in Queensland.

**Why bauxite as an early lead?**

Metallica is the owner and JV developer of substantial bauxite rich tenements south and north of Rio Tinto's existing Weipa bauxite mining and export operations, and we control vast tracts of bauxite rich tenements along the entire western Cape York Peninsula.

This gives us unique, direct and cost competitive sea routes into the established and emerging bauxite markets of Asia and the sub–Continent – better defined as the Pacific Basin.

**Bauxite remained buoyant through 2015 as a bulk commodity with strong fundamentals.**

Our geographically advantaged Cape York bauxite is largely of Direct Shipping Bauxite (DSB) quality that can cost–competitively support substantial Free On Board (FOB) volumes of good grade into well–established sea routes at a time when there is a forecast shortfall in global bauxite supply.

Bauxite fundamentals look strong and we see upside for Metallica and future partners in prioritising development of our bauxite in the near and medium–term.

Emerging global data also points to increasing bauxite volume demand, sustained pricing and shortfalls in 2016, particularly in China and India.

New refineries and smelters are being developed independent of direct links to any particular bauxite mine, thus spurring a seaborne market that was not available historically.

Our bauxite objective is to achieve sales of 5–7Mtpa within 3–5 years. We have set some criteria. Bauxite projects must contain low temperature bauxite, be within the Pacific Basin to ensure access to China, be producing or near producing assets and be able to trade through the cycle.

First stop will be our planned Urquhart Point bauxite operation where we expect to gain approval for a modest 1.5–2Mtpa DSB operation by late in calendar year 2016, assuming that a full EIS is not required.

Due diligence is underway on possible bauxite acquisitions and we are assessing projects held by alumina and aluminium producers – not the natural owners of bauxite mines. Metallica sees bauxite as an exciting and rewarding sector. However, we shall remain disciplined and ensure that any acquisition adds value to shareholders and meets our stated criteria.

Metallica's bauxite production would enter markets with an expected 68Mtpa shortfall by 2040 with low temperature bauxite of the Metallica style and favoured by China, under–supplied in the short, medium and long–term.

Indonesian bans on raw bauxite exports remain in place – creating a ~40Mtpa hole in global markets which Australia is best placed to fill.

China needs to import more than 75Mtpa of bauxite in the next 5 years – with new sources of supply needed. That is Metallica's target for this specific commodity but it may eventually also be in parallel with other opportunities in other mineral commodities as they present.

For example, we have the potentially game changing Esmeralda graphite in granite project in Queensland and we look forward to reporting to you the results from the upcoming drilling program.

We first drilled Esmeralda in 2006, proving it as a large and potentially high grade deposit.

Esmeralda is a unique hydrothermal graphite system similar to the world leading but narrow vein small Sri Lankan graphite mines.

Graphite is attracting high interest for its long–term fundamentals in servicing emerging high end technologies reliant on high quality and high purity graphite.

Esmeralda is a good example of an opportunity with the potential to significantly re–rate Metallica.

**So that is where Metallica is headed.**

Metallica's new direction is exciting, realistic and designed to ensure Metallica has a future measured initially in bauxite production, development and potentially graphite but also being open to other commodities and projects if they present at value-adding price points and market demand.

Thank you for your loyalty.

Market pressures have sapped the junior resources end but that underpins why we have reviewed, redesigned and refocused your Company and we invite you to stay with us on our shared journey.

**BARRY CASSON**
Chairman

**SIMON SLESAREWICH**
Chief Executive Officer

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# PROJECT GENERATION

The Company has commenced the identification of potential new value adding projects and is currently carrying out preliminary due diligence on several projects in a select number of commodity groups.

The current market environment has resulted in many opportunities for companies with available funding and/or funding support and management teams that add value by revitalising and moving advanced but typically dormant or underdeveloped projects forward.

The appointment of Mr. Simon Slesarewich as the Company's CEO will allow the Company to target larger, more advanced projects using Simon's engineering background, operational and project development experience.

As noted in the Chairman and CEO letter, Metallica will only consider projects which have:

- real scale,
- can attract good management,
- established and financially robust partners, and
- are in an in–demand commodity that allows for profitably sufficient to ride out the cyclic ups and downs of commodities.

The Company will not be bound by any specific commodity or jurisdiction, but continues to believe additional bauxite projects are a high priority commodity of interest. However, we shall remain disciplined and ensure that any acquisition adds value to shareholders and meets our stated criteria.

Bauxite remained buoyant through 2015 as a bulk commodity with strong current and forecast fundamentals.

Emerging global data points to increasing bauxite volume demand, sustained pricing and shortfalls in under 12 months, particularly in China and India.

For Metallica, bauxite projects should preferably contain low temperature bauxite, be located within the Pacific Basin to ensure more advantageous access to China, be producing or near producing assets and be able to trade through the cycle.

It is planned that the Urquhart Point Bauxite Project (held in a 50/50 Joint Venture) will be progressed toward approval for a modest 1.5–2Mtpa DSB operation by late in calendar year 2016, assuming that a full Environmental Impact Study ("EIS") is not required.

Due diligence is also underway on possible bauxite acquisitions and Metallica is assessing projects, including some held by alumina and aluminium producers.

Our bauxite objective is to achieve sales of 5–7Mtpa within 3–5 years.

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# CAPE YORK

## HMS AND BAUXITE PROJECT

| | |
|---|---|
| **AREA** | 1,797 Ha Mining Leases and Mining Lease Applications and 1,257km$^2$ Exploration Tenure |
| **COMMODITY** | HMS (Zircon, Rutile, Titanium minerals) and Bauxite (Bx) |
| **HOLDING** | MLM 50% (Joint Venture) with Ozore Resources Pty Ltd holding 50% |

The Cape York Heavy Mineral Sands (HMS) and Bauxite Project is located on the west coast of Queensland's Cape York Peninsular, and is now held 50% by Metallica Minerals' wholly owned subsidiary, Oresome Australia Pty Ltd, with a 50% interest held by a Private Chinese investor Ozore Resources Pty Ltd, pursuant to the Cape York HMS and Bauxite Joint Venture entered into in August 2014.

In accordance with the Joint Venture Agreement, Ozore has now provided A$7.5M to develop the Urquhart Point Project and to explore other tenements held within the Cape York region. Since formation, the JV has expended over $7M on progressing the Urquhart Point HMS Project as well as the regional mineral sand and bauxite exploration programs, with the majority of the funds applied to the manufacturing of the HMS processing plant which has recently been completed in South Africa and is currently being shipped to Brisbane.

The project has three separate components;

- Urquhart Point HMS Project
- Urquhart Point Bauxite Project
- Cape York Regional HMS & Bauxite Exploration

Looking east above the Urquhart Point ML & proposed HMS mining area across the Embley River Weipa Port and Township

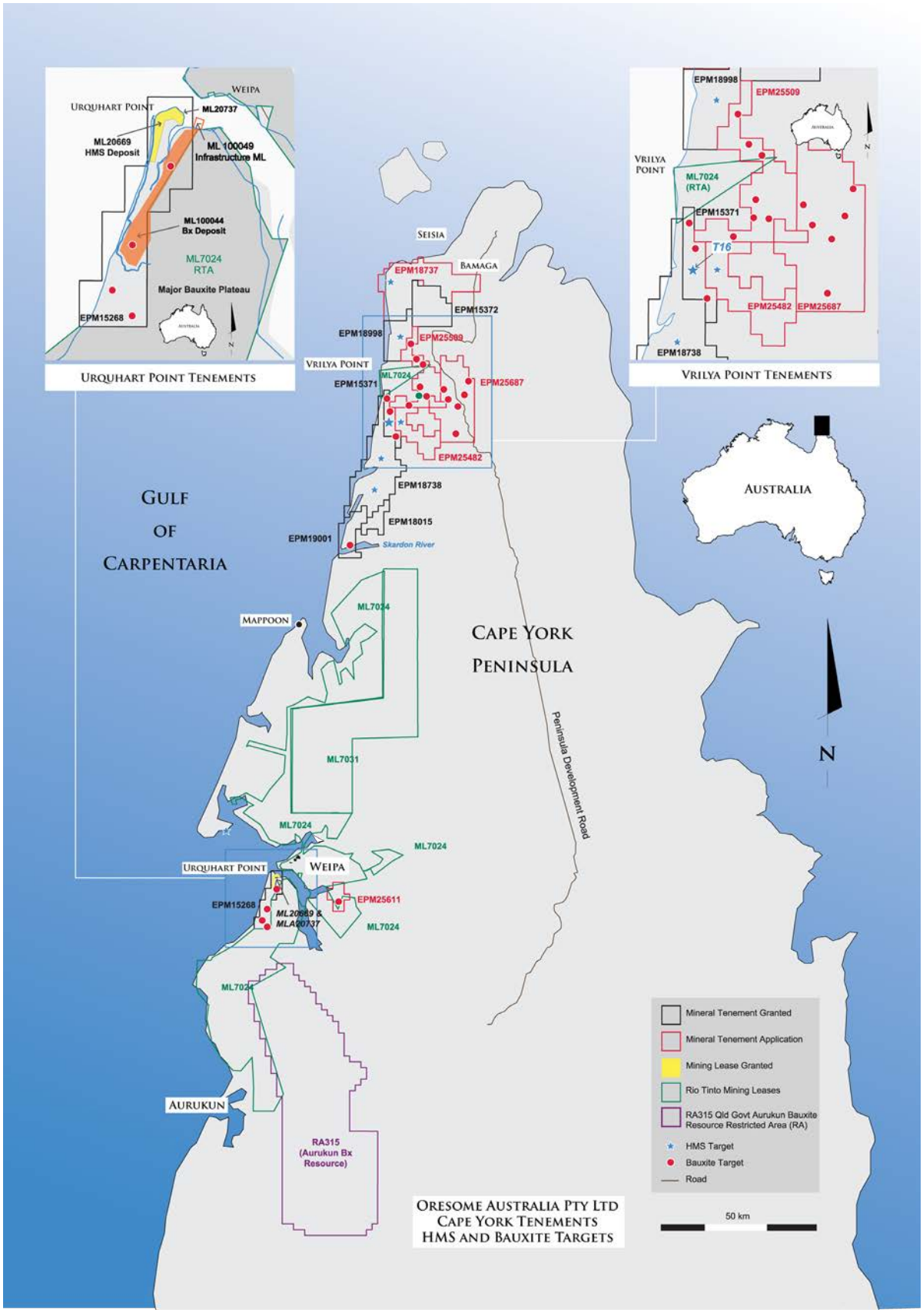



**FIGURE 1:** Cape York HMS and Bauxite Project Areas

# URQUHART POINT
## HMS PROJECT

The Urquhart Point Heavy Mineral Sand (HMS) project is located 3km south west of Weipa. The JV envisages a simple dry mining (<3m depth) and wet processing operation using standard gravity (spiral concentrators) HMS separation to produce a zircon–rutile heavy mineral concentrate (HMC).

In October 2014 a Plant Supply Contract was executed with Consulmet Pty Ltd. The contract was a turnkey contract to supply and commission the HMS concentrator plant. The fabrication and construction of the modularised processing plant has been completed in South Africa and is currently being shipped to Brisbane.

Onsite civil works at Urquhart Point have been completed in preparation for the arrival, construction and commissioning of the plant.

The JV is currently reviewing plans for the project's completion due to the currently lower than anticipated Australian dollar prices for mineral sands, particularly rutile and ilmenite.

Civil works completed in preparation for the HMS processing plant with haul road from the initial mining area

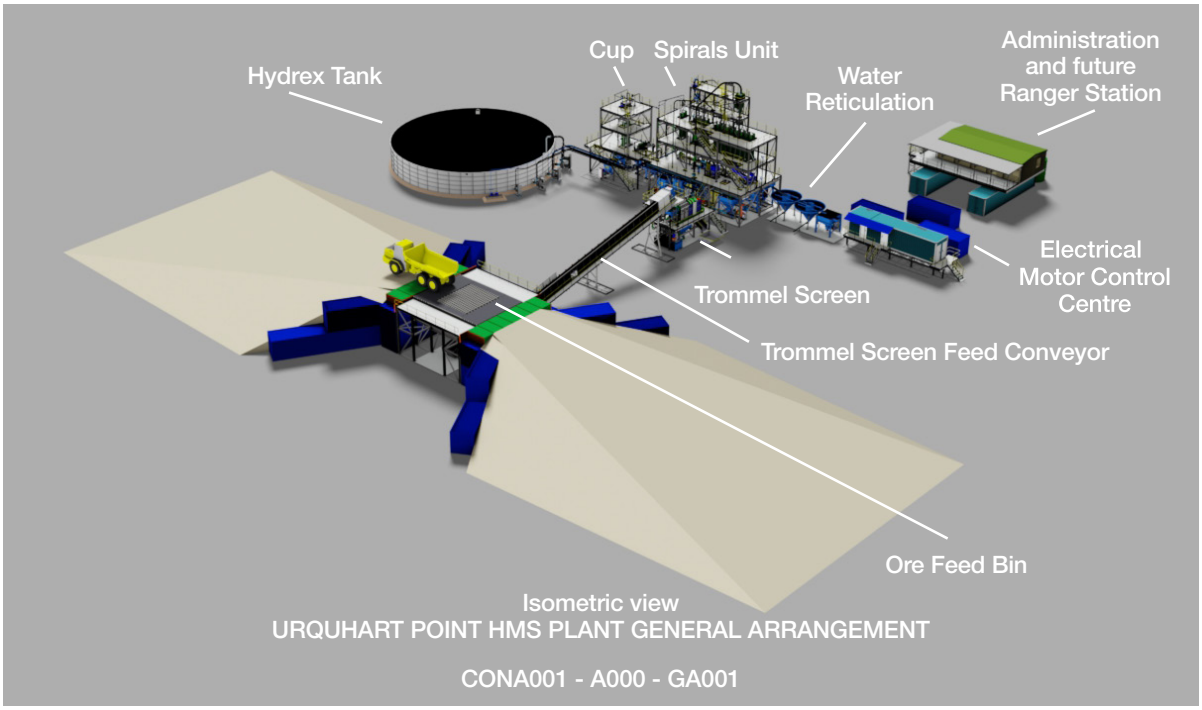



**FIGURE 2:** 3D CAD image Urquhart HMS plant design

# URQUHART
## BAUXITE PROJECT

The Urquhart Bauxite Project is situated adjacent to the HMS project and is some 5km southwest of Weipa on Queensland's Cape York Peninsula. Western Cape York is world–renowned for its extensive deposits of high–quality, export grade pisolitic bauxite.

The Joint Venture has lodged a Mining Lease Application (MLA) 100044 comprising 1,378Ha covering the Urquhart Bauxite Resource (Area A and Area B) and an infrastructure mining lease application MLA 100049 over the potential north jetty barge option area.

The maiden aircore drilling program was completed in December 2014. The program consisted of 85 holes using an aircore drill rig. The holes were drilled in two target areas Area A and Area B on a nominal 320 x 320m grid pattern.

The Area A drill program comprised 23 holes for a total of 167.5m, with an average depth of 7.3m. High grade pisolitic bauxite was encountered in 21 of these holes.

The Area B drill program comprised 62 holes for a total of 305m with an average depth of 4.9m of which 7 holes were 160m spaced infill drill holes and 3 were duplicate holes.

The areas are adjacent to the boundry of Rio Tinto's mining lease covering the South of the Embley bauxite project.

The drilling results coupled with the completed geological modelling confirm that the majority of the Urquhart bauxite resource is suitable for Direct Shipping Bauxite (DSB). The potential production of DSB allows for the expedited permitting and development of a relatively simple mining–truck–barge operation with low capital and operating costs.

The Weipa type bauxite is of high quality export grade with high alumina content (>50% $Al_2O_3$) that is sought after in the seaborne market.

In May 2015, the Joint Venture announced a maiden JORC 2012 compliant bauxite Resource estimate for the Urquhart Bauxite Project. The 2015 Resource estimate for the Urquhart Bauxite Project (for both Areas A and B) at the 45% $Al_2O_3$ cut–off for DSB is: Inferred 7.5Mt @ 51.0% $Al_2O_3$, 16.3% $SiO_2$.

Additional details by area are provided in Tables 1 and 2.

Available alumina (AAl) and reactive silica (RSi) were selectively sampled for intervals below a 15% $SiO_2$ or above 48% $Al_2O_3$ threshold at Area A. This represents the lower half of the bauxite horizon defined in Area A.

In comparison, Area B has generally higher $SiO_2$ and a much smaller and less continuous lower bauxite domain as defined on a 15% $SiO_2$ or above 48% $Al_2O_3$ threshold. It has similar chemistry but currently no available AAl and RSi assay results to conclusively determine the overall quality of Area B.

Estimates for the lower bauxite horizon as a higher grade subset of the 45% $Al_2O_3$ resource in Table 1 are provided in Table 2 and at an effective cut–off grade of 15% $SiO_2$. This includes available AAl and RSi information for Area A of: Area A Inferred 4.0Mt @ 53.3% $Al_2O_3$, 13.0% $SiO_2$, 40.6% AAl, 4.9% RSi.

The JV holds extensive regional HMS and bauxite tenements along the 300km sandy coastal belt between Weipa and the tip of Cape York Peninsula.

**TABLE 1: Urquhart DSB Resource statement details at 45% $Al_2O_3$ cut–off**

| Area | DSB (in–situ) | | | |
|---|---|---|---|---|
| | Kt | $Al_2O_3$% | $SiO_2$% | Kt^ |
| A | 5,121 | 52.0 | 15.0 | 3,769 |
| B | 2,366 | 48.8 | 19.0 | 1,505 |
| **Total** | **7,487** | **51.0** | **16.3** | **5,274** |

**TABLE 2: Urquhart DSB Resource statement for the lower Bauxite profile**

| Area | DSB (in–situ) | | | | |
|---|---|---|---|---|---|
| | Kt | $Al_2O_3$% | $SiO_2$% | AAl% | RSi% |
| A | 3,987 | 53.3 | 13.0 | 40.6 | 4.9 |
| B | 777 | 52.7 | 13.2 | | |
| **Total** | **4,764** | **53.2** | **13.0** | | |

Tonnages are a subset of those reported in Table 1
^ Recovered tonnage (tonnes x yield) for the same DSB cut–off grade and DSB in–situ dry tonnage

# CAPE YORK
## REGIONAL EXPLORATION

The JV holds extensive regional HMS and bauxite tenements along the 300km sandy coastal belt between Weipa and near the tip of Cape York Peninsula.

In November 2014, the JV completed a follow up drilling program on the T–16 HMS project which consisted of 355 holes for a total of 1,933m of grid drilling using an air–core drill rig. The results of the drill program were received in mid 2015 and as such the HMS exploration target was significantly downgraded as a result of more extensive drilling which not only closed off the HMS mineralisation identified in late 2013 but also the average HM grade was lower.

Significant areas of coastal bauxite was identified during a review of the Cape York tenement portfolio. The target areas are characterised by low lying, partly dissected and undulating laterite plateaus. Data compilation and desk–top studies have outlined eight prospective plateau zones within the tenements where previous exploration drilling encountered bauxite intervals grading in excess of 40% $Al_2O_3$ (alumina). An initial combined bauxite Exploration Target* across the regional Cape York tenements is in the range of 42Mt – 128Mt (see table on page 29). The JV has consolidated the size of its tenement holding by surrendering areas considered unlikely to hold significant areas of mineralisation for development, thereby reducing holding and operational costs.

A local contractor's barge, traveling via the deep sheltered water shipping channel adjacent to the Urquhart Point mining lease, about to unload a drilling rig and other equipment on the beach at Urquhart Point. Similar barges can be used in the future for barging HMS concentrate and potentially bauxite for transshipment to a nearby ship.

# ESMERALDA PROJECT
## GRAPHITE

| | |
|---|---|
| **AREA** | 1,068km$^2$ Exploration Tenure |
| **COMMODITY** | Graphite (large scale "graphite in granite") – targeting high purity graphite |
| **HOLDING** | MLM 100% (through subsidiary Touchstone Resources Pty Ltd) |

The Esmeralda Graphite project consists of four tenements and is located south of Croydon in North Queensland. Metallica has identified significant graphite mineralisation within its Exploration Permit for Minerals (EPMs) 25779, 25806, 25807 and 25990 over the Esmeralda Granites.

These occurrences were primarily identified in 2006 during a Metallica drilling program that was targeting well defined airborne and ground defined intense electromagnetic (EM) anomalies. At the time the exploration target of the drilling was base metal and/or gold bearing massive sulphide mineralization, however instead of sulphides Metallica discovered significant graphite mineralisation.

Graphite is rarely associated as a constituent mineral in igneous rocks. At the time the discovery was not considered of sufficient commercial interest to progress further exploration.

More recently, a literature review of publicly available information on graphite occurrences in the Esmeralda granites and Croydon volcanics indicates large suites of igneous rocks that are inherently and uniquely graphite bearing. Metallica will be drilling an area where it is interpreted that hydrothermal processes and/or magmatic differentiation or structural controls have concentrated graphite into significantly higher percentages.

Previous percussion drilling, including Metallica in 2006, exploring for metals and other mineral mineralisation, recorded significant zones (>20m down hole intercepts) of observed graphite mineralisation (>10% graphite visually) in the drill logs.

As the graphite is not metamorphic in origin, nor occurs in metamorphic host rock, similar to over 95% of the world's known graphite deposits, the Esmeralda Graphite Project is relatively unique as igneous sourced or hydrothermal graphite deposits are rare.

Known deposits of this type are typically of very high purity graphite in either flake or crystalline form (such examples include Sri Lankan deposits and the Albany Graphite Granite deposit in Canada). The carbon source is non–organic and the carbon is thought to be from deep $CO_2$ or $CH_4$ gaseous injection into the magma chamber and later crystallising out as pure or near pure carbon (graphite) crystals.

Metallica has developed a "Hydrothermal" mineralisation model for the Esmeralda granite based on work completed by the Bureau of Mineral Resources (BMR) in 1988 and recent discovery of the Albany graphite deposit in 2013. Metallica has identified 14 historic percussion exploration drill holes across the region intersecting significant graphitic granite.

The proposed new core drilling program to be completed by the end of 2015 will comprise two holes (each to be drilled at least 125m in depth) twinning two historic exploration percussion holes; RC002A (2006) and PB18 (1988), approximately 500m apart, which intersected significant graphite granite breccia. These are within the priority Warrior Graphite Exploration target within EPM 25779 approximately 70km SSW of Croydon (see Figure 3).

The graphite bearing drill core intervals will then be assessed to determine the graphite form, purity, mineralogy and preliminary metallurgy characteristics and marketability. The cost of the two drill holes (planned to be a total of ~300m), supervision and analysis is expected to be modest with the ability to deliver significant value to shareholders should extensive high purity graphite be confirmed.

Previous Electromagnetic (EM) surveys, including a survey by Metallica in 2006, readily identified conductive graphite and additional future EM surveys will better define additional targets for future exploration. Metallica's proposed drill holes are within a very well defined large and intense EM anomaly as could be expected by the significant graphite observed from the drilling (2006).

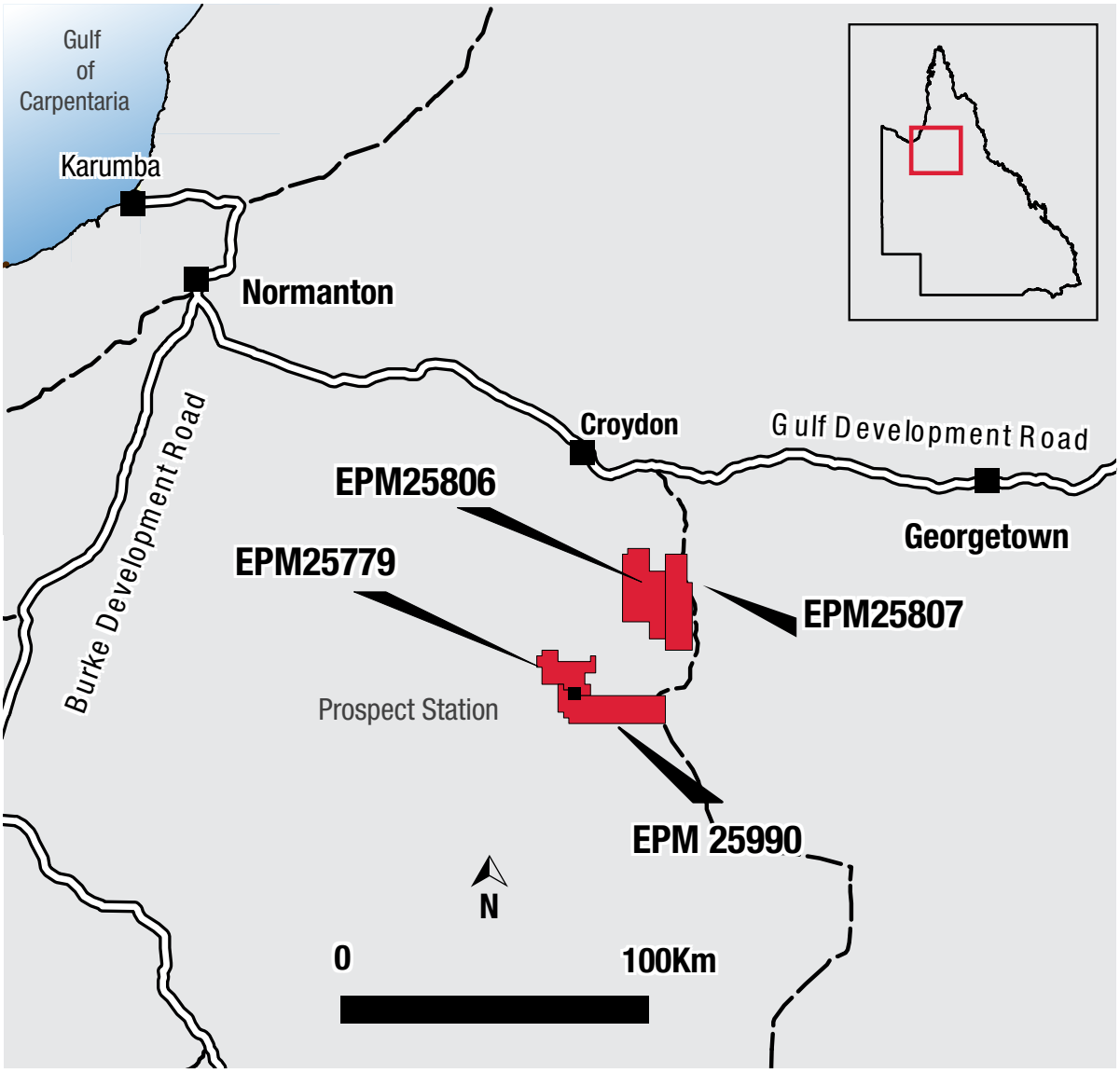



**FIGURE 3:** Esmeralda Graphite Project Area

# LUCKY BREAK PROJECT

## NICKEL LATERITE

| | |
|---|---|
| **AREA** | 103 Ha Mining Leases |
| **COMMODITY** | Nickel Laterite |
| **HOLDING** | MLM 100% (subject to Royalty Agreement – see below) |

The Lucky Break Nickel Project is located 140km by road west of Townsville. The Project consists of two granted mining leases covering 103 Ha.

On 12 January 2015, the Company entered into a Royalty Agreement with a private company to allow the mining and extraction of nickel laterite ore from the Dingo Dam Mining Lease within the Lucky Break nickel project.

An initial Royalty payment of $250,000 was received in January 2015. Mining operations were completed in June 2015 with the private company advising that over 100,000 tonnes of high grade nickel laterite ore had been extracted. Under the Agreement, the removal of 90,000 tonnes of ore triggers the following further payments;

» $200,000 paid in September 2015

» $200,000 due in October 2015

The private company is also responsible for all site rehabilitation work which has commenced.

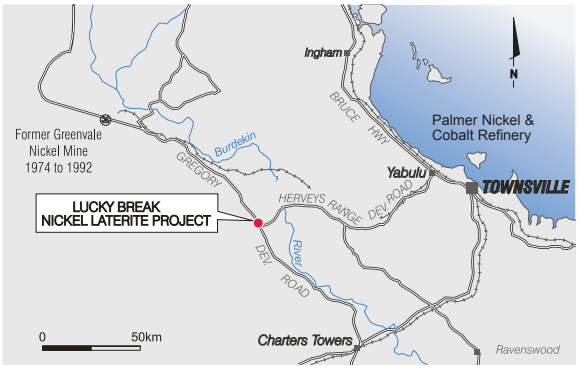



**FIGURE 4:** Lucky Break Nickel Project Area

# SCONI PROJECT

## NICKEL – COBALT – SCANDIUM

| | |
|---|---|
| **AREA** | 2,049 Ha Mining leases, 478 Ha Mineral Development Licenses and 155.6km$^2$ Exploration Tenure |
| **COMMODITY** | Nickel, Cobalt and Scandium |
| **HOLDING** | MLM 100% |

The SCONI nickel–cobalt–scandium Tri–Metal Project is located less than three hours' drive Northwest of Townsville, Queensland. The SCONI project consists of five deposits, Greenvale, Lucknow, Bell Creek, Minnamoolka and Kokomo, with granted Mining Leases covering all key deposits and the mining lease application covering the Greenvale Ni –Co –Sc resource expected to be granted by Q1 2016 to secure the tenement and investment to date.

During the year no significant project work has been undertaken as activities have effectively been placed on hold while joint venture partners are being sought. The Company is in continuing discussions with potential partners for the purpose of progressing the projects development.

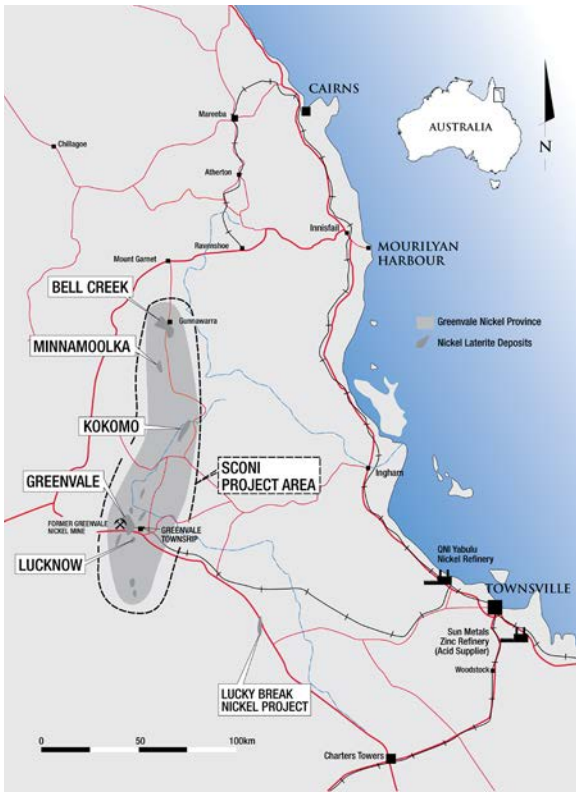



**FIGURE 5:** SCONI Project Area

# PHOENIX LIME PROJECTS

## LIMESTONE – LIME

| | |
|---|---|
| **AREA** | 107 Ha Mining Leases and 19km$^2$ Exploration Tenure |
| **COMMODITY** | Limestone–Lime |
| **HOLDING** | 100% |

Through its wholly owned subsidiary, Phoenix Lime Pty Ltd, Metallica Minerals owned four high quality limestone projects in Queensland.

On 9 July 2015, Phoenix Lime executed a Sales Agreement to sell four granted mining leases covering the Ootann Limestone tenements and associated equipment to a private limestone and lime group. A $25,000 non–refundable deposit was received with the final payment of $475,000 received in September 2015. The Company is also expecting to receive a further $27,000 from the refunding of environmental bonds held by the Queensland Government

On 15 July 2015, a private limestone and lime group entered into an additional Sales Agreement to acquire the non–core Star Limestone Project from Phoenix Lime. The Star Limestone Project consisted of a single granted mining Lease ML 10276. A 5% deposit was received which was paid to the Company, along with the final payment of $351,500, in September 2015.

The Fairview and Boyne Limestone projects are held 100% by the Company, are located close to the industrial markets of Gladstone and can be developed as opportunities to supply lime and limestone in the local market arise. The Company is continuing to pursue options to realise value from these assets.

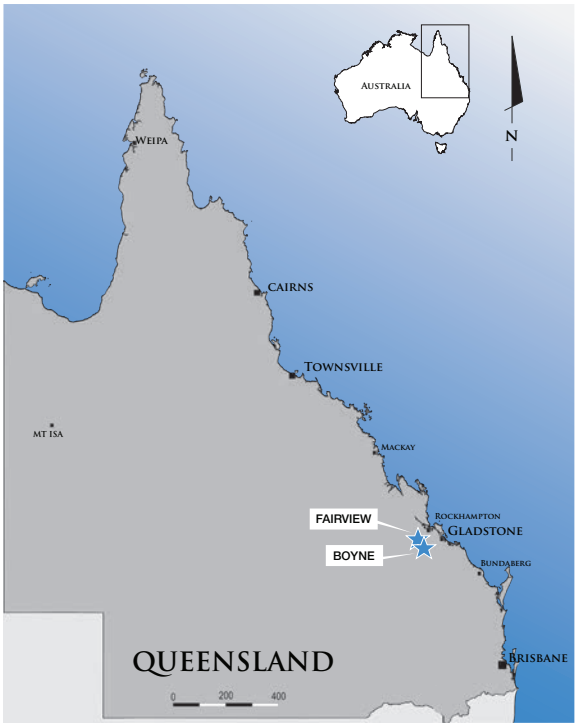



**FIGURE 6:** Phoenix Lime Project Area

# CAPE FLATTERY
## SILICA SANDS

| | |
|---|---|
| **AREA** | 54km$^2$ Exploration Tenure |
| **COMMODITY** | Silica Sand (for bulk export shipping) |
| **HOLDING** | MLM 100% (through subsidiary Oresome Australia Pty Ltd) |

The Cape Flattery Silica Sand Project is located approximately 200km north of Cairns in North Queensland (see Figure 7). The EPM covers part of a large quaternary sand dune field, a section of which is currently being mined by Cape Flattery Silica Mines Pty Ltd (CFSM), a wholly owned subsidiary of Mitsubishi Corporation (see Figure 8).

Cape Flattery has operated since 1967 and is the world's largest silica sand mining operation. The dune field is known to contain high grade silica sand. Metallica will evaluate its potential for development as a silica sand mining and bulk shipping operation.


**FIGURE 7:** Cape Flattery Project Area


**FIGURE 8:** Cape Flattery EPM & CFSM mining lease location

Mining operations on Metallica's Dingo Dam nickel mining lease in late March
First nickel ore trucked to the Palmer nickel cobalt refinery in April

# DIRECTOR PROFILES

## BARRY J CASSON
NON EXECUTIVE CHAIRMAN

Mr Casson was appointed Chairman of the Board on 30 June 2015, Barry has been a Non–Executive Director since 1 December 2010. Barry has more than 40 years experience in accounting, finance and general management with several listed and unlisted companies, primarily in the resources industry. He has had extensive international experience in project financing and corporate transactions.

He is also a Non–Executive Director of Unitywater since 2013 (statutory authority).

## ANDREW L GILLIES
NON EXECUTIVE DIRECTOR

Mr Gillies was Managing Director of the Company until 13 July 2015 and now holds the position of Non–Executive Director.

Andrew graduated from the University of Queensland in 1985 with a Bachelor of Science (Geology), is a member of the Aus.I.M.M. Mr Gillies' key strength is mineral resource management and strategic planning specialising in project generation, selection and acquisition. He has acquired a considerable database and significant knowledge of mineral deposits in Queensland. Since 1985 he has worked continuously as a geologist in the mining and exploration industry, accruing over 30 years experience across a range of commodities. He has valuable experience in the fields of exploration, feasibility studies, development, open pit and underground mining of mineral deposits. Mr Gillies, though his company Golden Breed Pty Ltd and super fund holds 10.7 million shares in Metallica.

# DIRECTOR PROFILES

## DR SHU WU
NON–EXECUTIVE DIRECTOR

Dr Wu Shu is a Director of Jien Mining Pty Ltd which holds 40,099,678 shares in Metallica Minerals Limited.

He is Chairman and Director of Jilin Jien Nickel Industry Co. Ltd listed on the Shanghai Stock Exchange (Director since 2003), Director of Liberty Mines Inc. listed on the TSX, Canada (director since 2009).

## DR SHU ZHANG
ALTERNATE NON–EXECUTIVE DIRECTOR TO DR SHU WU

Dr Shu Zhang has over 40 years' experience in mining, first as a Miner, then a Mining Engineer, and later an Executive Manager in operations and project development in companies in Australia, China, and Canada.

Dr Zhang was one of the key members who played a critical role in the successful development of Sino Gold Mining Limited.

Dr Zhang has worked for the Jilin Nickel Group since 2011, and is a Director of Jilin's Canadian subsidiaries, being the unlisted Canadian Royalties Inc., and the TSX listed Northern Sun Mining Corporation.

# MANAGEMENT PROFILES

## SIMON SLESAREWICH
CHIEF EXECUTIVE OFFICER

Mr Slesarewich was appointed to the position of Chief Executive Officer on 13 July 2015.

Simon is a Mining Engineer and registered Senior Site Executive in Queensland, has more than 18 years' experience across a range of jurisdictions, including a strong background in operational and executive roles within both mining and contracting entities.

He holds a Bachelor of Engineering (Mining) from the University of Queensland and Graduate Diplomas in Business Administration, Applied Finance and Investment.

Simon is currently a Director of Larkham Resources, is a former CEO of Northern Discovery and Boardwalk Resources and is a renowned bulk commodities and business turnaround specialist.

## JOHN K HALEY
COMPANY SECRETARY & CFO

Mr Haley has over 30 years of senior corporate experience in Canada and Australia. He has a diverse career in a range of industries including mineral exploration and has participated as a seed capitalist in a number of mineral exploration companies. He is a Director of the Queensland Resources Council.

John has previously worked with Coopers & Lybrand and Arthur Andersen & Co., and with listed and unlisted companies in general management, financial reporting and company secretarial positions.

# TENEMENT TABLES

# TENEMENT TABLES

## CAPE YORK HMS & BAUXITE JOINT VENTURE
## 50% ORESOME AUSTRALIA & 50% OZONE RESOURCES PTY LTD

### HEAVY MINERAL SANDS & BAUXITE

| Tenement | Project Name | Holder/Applicant | Status | Area |
|---|---|---|---|---|
| ML 20669 | Urquhart Point | Oresome Australia P/L | Granted | 366 Ha |
| ML 20737 | Mbung Urquhart Point Extension | Oresome Australia P/L | Granted | 5 Ha |
| EPM 15268 | Urquhart Point | Oresome Australia P/L | Granted | 21 s/b |
| EPM 15371 | Doughboy | Oresome Australia P/L | Granted | 13 s/b |
| EPM 15372 | Jardine | Oresome Australia P/L | Granted | 29 s/b |
| EPM 18015 | Jackson River #2 | Oresome Australia P/L | RA | 4 s/b |
| EPM 18737 | Sandman #3 | Oresome Australia P/L | Granted | 34 s/b |
| EPM 18738 | Sandman #2 | Oresome Australia P/L | RA | 48 s/b |
| EPM 18998 | Sandman #5 | Oresome Australia P/L | Granted | 24 s/b |
| EPM 19001 | Sandman #6 | Oresome Australia P/L | Granted | 28 s/b |
| EPM 25400 | Sandman #12 | Oresome Australia P/L | Granted | 17 s/b |
| EPM 25482 | Sandman #10 | Oresome Australia P/L | Granted | 20 s/b |
| EPM 25509 | Sandman #11 | Oresome Australia P/L | Granted | 41 s/b |
| EPM 25611 | Upper Embley | Oresome Australia P/L | Application | 13 s/b |
| EPM 25687 | Vrilya East | Oresome Australia P/L | Granted | 84 s/b |
| ML 100044 | Urquhart Bauxite | Oresome Bauxite P/L | Application | 1379 Ha |
| ML 100049 | Urquhart Bauxite #2 | Oresome Bauxite P/L | Application | 54 Ha |

### ORESOME AUSTRALIA PTY LTD

| Tenement | Project Name | Holder/Applicant | Status | Area |
|---|---|---|---|---|
| EPM 25734 | Cape Flattery | Oresome Australia P/L | Granted | 17 s/b |

# TENEMENT TABLES

## SCONI PROJECTS NORTH & SOUTH & LUCKY BREAK 100% MLM

### NICKEL–COBALT PROJECT – NORTH

| Tenement | Project Name | Holder/Applicant | Status | Area |
|---|---|---|---|---|
| ML 20549 | Bell Creek Consolidated | Nornico P/L | Granted | 393 Ha |
| MDL 387 | Minnamoolka | Nornico P/L | Granted# | 343 Ha |

### NICKEL–COBALT–SCANDIUM PROJECT – SOUTH

| Tenement | Project Name | Holder/Applicant | Status | Area |
|---|---|---|---|---|
| ML 10366 | Lucknow | Nornico P/L | Granted | 139 s/b |
| EPM 11223 | Dinner Creek | Greenvale Operations P/L | Granted | 7 s/b |
| ML 10368 | Greenvale | Greenvale Operations P/L | Application | 1092 s/b |
| EPM 25865 | Greenvale Lucknow #2 | Greenvale Operations P/L | Application | 13 s/b |
| ML 10342 | Kokomo | Nornico P/L | Granted | 419 s/b |
| EPM 25833 | Kokomo | Nornico P/L | Granted | 10 s/b |
| EPM 14066 | Greenvale South | Nornico P/L | Granted | 4 s/b |
| EPM 14181 | Lucky Downs | Nornico P/L | Granted | 1 s/b |
| EPM 25834 | Greenvale Lucknow | Nornico P/L | Application | 13 s/b |

### LUCKY BREAK NICKEL PROJECTS

| Tenement | Project Name | Holder/Applicant | Status | Area |
|---|---|---|---|---|
| ML 10324 | Dingo Dam | Nornico P/L | Granted | 36 Ha |
| ML 10332 | Lucky Break | Nornico P/L | Granted | 67 Ha |

# TENEMENT TABLES

## PHOENIX LIME PROJECT & ESMERALDA GRAPHITE PROJECT 100% MLM

### PHOENIX LIMESTONE PROJECTS – 100% MLM

| Tenement | Project Name | Holder/Applicant | Status | Area |
|---|---|---|---|---|
| EPM 25728 | Fairview | Phoenix Lime P/L | Granted | 5 s/b |
| EPM 25756 | Fairview #1 | Phoenix Lime P/L | Granted | 1 s/b |
| ML 80131 | Boyne Limestone Northeast Anderson | Phoenix Lime P/L | Granted | 54 Ha |
| ML 80132 | Boyne Limestone South West Olive | Phoenix Lime P/L | Granted | 53 Ha |
| ML 80162 | Fairview | Phoenix Lime P/L | Granted | 692 Ha |

### ESMERALDA GRAPHITE PROJECTS – 100% MLM

| Tenement | Project Name | Holder/Applicant | Status | Area |
|---|---|---|---|---|
| EPM 25779 | Warrior | Touchstone Resources P/L | Granted | 54 s/b |
| EPM 25806 | Esmeralda West | Touchstone Resources P/L | Granted | 100 s/b |
| EPM 25807 | Esmeralda East | Touchstone Resources P/L | Granted | 80 s/b |
| EPM 25990 | Warrigal | Touchstone Resources P/L | Application | 100 s/b |

**NOTES**

All tenements are 100% owned unless express otherwise

# Renewal pending

EPM = Exploration Permit for Minerals

EPMA = Exploration Permit for Minerals Application

ML = Mining Lease

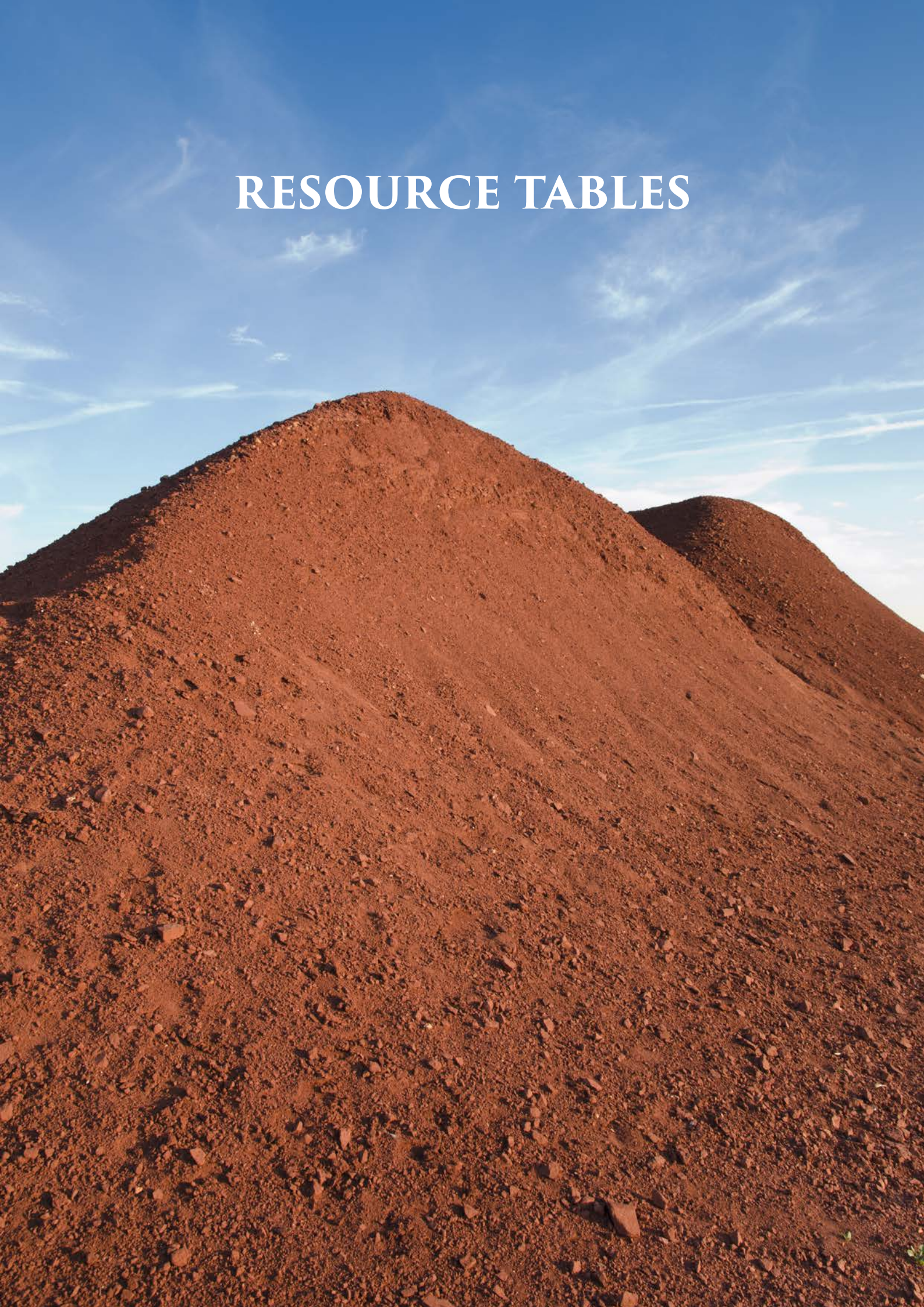
MLA = Mining Lease Application

MDLA = Mineral Development Licence Application

s/b = Sub blocks

Ha = Hectares

# RESOURCE TABLES



# RESOURCE TABLES

## URQUHART POINT HMS RESOURCE ESTIMATE

### GLOBAL MINERAL RESOURCE – 0% HM COG

| Resource Category | Tonnes (t) | HM % | HM tonnes | OS % | Slimes % | Zircon % | Rutile % | Ilmenite % |
|---|---|---|---|---|---|---|---|---|
| Measured | 1,945,360 | 6.92 | 134,529 | 13.83 | 1.07 | 10.2 | 12.5 | 12.5 |
| Indicated | 1,365,440 | 4.60 | 62,746 | 15.33 | 1.15 | 11.4 | 10.9 | 13.2 |
| **Total** | **3,310,800** | **5.96** | **197,275** | **14.45** | **1.11** | **10.6** | **12.0** | **12.7** |

### MINERAL RESOURCE CONSTRAINED BY MINING LEASE & ENVIRONMENTAL BUFFERS – 0% HM COG

| Resource Category | Tonnes (t) | HM % | HM tonnes | OS % | Slimes % | Zircon % | Rutile % | Ilmenite % |
|---|---|---|---|---|---|---|---|---|
| Measured | 1,882,960 | 6.57 | 123,716 | 14.17 | 1.07 | 9.7 | 12.0 | 12.4 |
| Indicated | 1,345,840 | 4.60 | 61,930 | 15.41 | 1.16 | 11.4 | 10.9 | 13.2 |
| **Total** | **3,228,800** | **5.75** | **185,646** | **14.68** | **1.11** | **10.3** | **11.6** | **12.7** |

### MINERAL RESOURCE CONSTRAINED BY MINING LEASE & ENVIRONMENTAL BUFFERS – 2% HM COG

| Resource Category | Tonnes (t) | HM % | HM tonnes | OS % | Slimes % | Zircon % | Rutile % | Ilmenite % |
|---|---|---|---|---|---|---|---|---|
| Measured | 1,781,360 | 6.85 | 122,090 | 12.46 | 1.03 | 9.8 | 12.0 | 12.4 |
| Indicated | 1,305,680 | 4.70 | 61,335 | 14.44 | 1.15 | 11.4 | 10.9 | 13.2 |
| **Total** | **3,087,040** | **5.94** | **183,425** | **13.30** | **1.08** | **10.3** | **11.6** | **12.7** |

**COMPETENT PERSON STATEMENT**

The information in this report that relates to Mineral Resources Estimation for the Urquhart Point Project is based on information compiled and reviewed by Mr Simon Coxhell. Mr Coxhell is a consultant to the Company and a member of the Australasian Institute of Mining and Metallurgy. Mr Coxhell has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr Coxhell consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

For further information see ASX Release 20 May 2014.

# RESOURCE TABLES

## URQUHART POINT HMS RESERVE ESTIMATE

### ORE RESERVE ESTIMATE – 0.90% (ZR + 0.8 RUTILE + 0.31 IL) COG

| Ore Resource Category | Tonnes kt | Head Grade | | | | | | HM tonnage & Mineral Assemblage | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HM % | OS % | Slimes % | Zr % | Rt % | Il % | HM kt | Zr % of HM | Rt % of HM | Il% of HM |
| Proved | 967 | 10.6 | 8.1 | 1.0 | 1.2 | 1.4 | 1.4 | 102 | 11.1 | 13.7 | 12.9 |
| Provable | 210 | 4.8 | 6.7 | 1.2 | 0.9 | 0.6 | 0.7 | 10 | 17.7 | 13.2 | 14.4 |
| **Total** | **1,177** | **9.5** | **7.9** | **1.0** | **1.1** | **1.3** | **1.2** | **112** | **11.7** | **13.6** | **13.1** |

NOTE

1. The Ore Reserves are based on the following forecast long term FOB prices: Zircon $1,500/t, Rutile US$1,200/t and Ilmenite US$200/t.
2. Ore Reserves are based on a Zircon Equivalent cut–off grade of 0.90%.
3. Zircon Equivalent = Zircon % + 0.8 x Rutile % + 0.13 x Ilmenite %. Recoveries used in the equivalence calculation are 98.2%, 98.0% and 95.8% for Zircon, Rutile and Ilmenite respectively.
4. The HMS Reserves have been independently estimated by consultants IMC Mining Pty Ltd.
5. For further information see ASX Release on Maiden Independent Ore Reserve for Urquhart Point HMS Project dated 24 June 2014.

COMPETENT PERSONS STATEMENT

The information in this report that relates to Ore Reserves is based on information compiled by François Bazin of IMC Mining Pty Ltd, a Competent Person who is a Chartered Professional Member of The Australasian Institute of Mining and Metallurgy.

Mr François Bazin has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. François Bazin consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. François Bazin is a consultant to Metallica Minerals Limited and Oresome Australia Pty Ltd.

# RESOURCE TABLES

## URQUHART BAUXITE RESOURCE ESTIMATES

### URQUHART DSB RESOURCE STATEMENT DETAILS – 45% $Al_2O_3$ COG

| Area | DSB (in–situ) | | | Screened 1.2 mm | | | |
|---|---|---|---|---|---|---|---|
| | Kt | $Al_2O_3$% | $SiO_2$% | Kt^ | Yield % | $Al_2O_3$% | $SiO_2$% |
| A | 5,121 | 52.0 | 15.0 | 3,769 | 73.6 | 56.8 | 7.0 |
| B | 2,366 | 48.8 | 19.0 | 1,505 | 63.6 | 54.4 | 9.3 |
| **Total** | **7,487** | **51.0** | **16.3** | **5,274** | **70.5** | **56.1** | **7.6** |

^ Recovered tonnage (tonnes x yield) for the same DSB cut–off grade and DSB in–situ dry tonnage

### URQUHART DSB RESOURCE STATEMENT FOR THE LOWER BAUXITE PROFILE

| Area | DSB (in–situ) | | | | | Screened 1.2 mm | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Kt | $Al_2O_3$% | $SiO_2$% | AAl % | RSi % | Kt^ | Yield % | $Al_2O_3$% | $SiO_2$% |
| A | 3987 | 53.3 | 13.0 | 40.6 | 4.9 | 3037 | 76.2 | 57.1 | 6.7 |
| B | 777 | 52.7 | 13.2 | – | – | 486 | 62.6 | 56.1 | 7.0 |
| **Total** | **4764** | **53.2** | **13.0** | **–** | **–** | **3523** | **74.0** | **56.9** | **6.7** |

Tonnages are a subset of those reported in the table above
^ Recovered tonnage (tonnes x yield) for the same DSB cut–off grade and DSB in–situ dry tonnage

AAl = Available alumina $Al_20_3$
RSi = Reactive Silica $SiO_2$

#### COMPETENT PERSON STATEMENT

The information in this report that relates to Mineral Resources is based on information compiled by John Horton, Associate of IMC Mining Pty Ltd, who is a Fellow of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. 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 2012 edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Horton consents to the inclusion in this release of matters based on his information in the form and context in which it appears.

For further information see ASX Release 11 May 2015.

# CAPE YORK JOINT VENTURE

## REGIONAL BAUXITE EXPLORATION TARGETS

Within Cape York HMS and Bauxite Joint Venture's 1,257km$^2$ exploration tenement portfolio in Western Cape York bauxite province, Far North Queensland includes:

- coastal bauxite targets near Urquhart Point and Vrilya Point 160km north of Weipa (see Figure 1)
- initial combined bauxite Exploration Target* across all exploration holdings is in the range of 42Mt to 128Mt – see table below

Metallica has identified 13 priority highly prospective bauxite zones within Oresome's tenement package near Urquhart and Vrilya Points adjoining Rio Tinto's mining leases, (which cover substantial good quality bauxite deposits) see Figure 1.

### *EXPLORATION TARGET

The potential quantity and grade of the bauxite deposits are conceptual in nature. There is insufficient information at this time to define a mineral resource and there is no certainty that further exploration will result in the determination of a mineral resource in these areas.

| Project | Permit | Discrete Targets | Insitu mineralisation tonnage range Mt[2] | Total $Al_2O_3$ %[3] | Total $SiO_2$ %[3] |
|---|---|---|---|---|---|
| **Vrilya** | EPM15371 | 3 | 2 to 6 | 40–47 | insufficient data[1] |
| **Vrilya** | EPMA25509 | 7 | 12 to 36 | 40–48 | 10–19[1] |
| **Vrilya East** | EPMA25687 | 3 | 28 to 86 | 40–43 | insufficient data[1] |
| | **TOTAL** | **13** | **42 to 128** | | |

[1] previous exploration reports $SiO_2$ data incomplete
[2] range based on measured areas of target plateaus, minimum thickness of >0.5m bauxite, estimated average thickness of 1.5m from previous exploration data and bulk density value of 1.5
[3] based on screened sample assay results

### COMPETENT PERSONS STATEMENT – BAUXITE EXPLORATION PROJECT

The Technical information contained in this report has been compiled and/or supervised by Mr Andrew Gillies B.Sci (Geology) M.Aus.I.M.M (Non–Executive Director of Metallica Minerals Ltd) who is a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy (M.Aus.I.M.M). Mr Gillies has relevant experience in the mineralisation, exploration results, Exploration Targets and Resources estimates being reported on to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Gillies consents to the inclusion of this information in the form and context in which it appears in this release.

The information in this report that relates to Exploration Results and Exploration Targets is based on information compiled by John Cameron (a geologist of over 25 years experience), and a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy and a contract consultant to Metallica Minerals Ltd. Mr Cameron has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Cameron consents to the inclusion of this information in the form and context in which it appears in this report.

# RESOURCE TABLES

## SCONI SOUTHERN DEPOSITS Ni-Co & Sc RESOURCE STATEMENTS

### COG NICKEL EQUIVALENT = 0.7% (NI + 1.5 CO + 0.01 SC)

| Description | Tonnes Mt | Ni % | Co % | Sc g/t | Ni Metal kt | Co Metal kt | Sc Metal t | Equivalent Sc Oxide t |
|---|---|---|---|---|---|---|---|---|
| KOKOMO | | | | | | | | |
| Measured | 2.2 | 0.57 | 0.11 | 80 | 12.2 | 2.5 | 173 | 265 |
| Indicated | 17.2 | 0.56 | 0.09 | 49 | 95.8 | 15.5 | 843 | 1,292 |
| Inferred | 10.2 | 0.36 | 0.04 | 59 | 36.7 | 4.5 | 603 | 924 |
| **Totals** | **29.5** | **0.49** | **0.08** | **55** | **144.8** | **22.4** | **1,619** | **2,483** |
| GREENVALE – INSITU, DUMPS AND STOCKPILES | | | | | | | | |
| Measured | 5.4 | 0.77 | 0.06 | 39 | 41.6 | 3.3 | 208 | 319 |
| Indicated | 10.5 | 0.7 | 0.05 | 36 | 74.3 | 5.3 | 379 | 582 |
| Inferred | 11.5 | 0.42 | 0.03 | 44 | 48.8 | 4 | 509 | 781 |
| **Totals** | **27.4** | **0.6** | **0.04** | **40** | **164.8** | **12.7** | **1,097** | **1,682** |
| LUCKNOW | | | | | | | | |
| Measured | 1.7 | 0.45 | 0.1 | 103 | 7.9 | 1.8 | 180 | 276 |
| Indicated | 10.6 | 0.27 | 0.07 | 128 | 28.5 | 7.2 | 1,357 | 2,081 |
| Inferred | 1.5 | 0.4 | 0.07 | 41 | 5.8 | 1 | 60 | 92 |
| **Totals** | **13.8** | **0.31** | **0.07** | **116** | **42.2** | **10** | **1,597** | **2,449** |
| COMBINED SOUTHERN DEPOSITS | | | | | | | | |
| Measured | 9.3 | 0.66 | 0.08 | 60 | 61.7 | 7.6 | 561 | 860 |
| Indicated | 38.3 | 0.52 | 0.07 | 67 | 198.7 | 28 | 2,580 | 3,957 |
| Inferred | 23.2 | 0.39 | 0.04 | 51 | 91.4 | 9.6 | 1,172 | 1,797 |
| **TOTALS** | **70.7** | **0.5** | **0.06** | **61** | **351.8** | **45.2** | **4,313** | **6,615** |

### COG NICKEL EQUIVALENT = 1.0% (NI + 1.5 CO + 0.01 SC)

| Description | Tonnes Mt | Ni % | Co % | Sc g/t | Ni Metal kt | Co Metal kt | Sc Metal t | Equivalent Sc Oxide t |
|---|---|---|---|---|---|---|---|---|
| COMBINED SOUTHERN DEPOSITS | | | | | | | | |
| Measured | 6.2 | 0.79 | 0.1 | 73 | 48.8 | 6.2 | 451 | 691 |
| Indicated | 23.2 | 0.56 | 0.08 | 92 | 129.5 | 19.5 | 2,140 | 3,282 |
| Inferred | 6.6 | 0.49 | 0.06 | 67 | 32.9 | 3.9 | 445 | 682 |
| **TOTALS** | **36.1** | **0.59** | **0.08** | **84** | **211.2** | **29.5** | **3,036** | **4,656** |

**NOTE**: Variations in totals may be due to rounding factors

# RESOURCE TABLES

## SCONI NORTHERN DEPOSITS Ni-Co RESOURCE STATEMENTS

**COG NICKEL EQUIVALENT = 0.7% (NI + 1.5 CO)**

| Description | Tonnes Mt | Ni % | Co % | Ni Metal kt | Co Metal kt |
|---|---|---|---|---|---|
| BELL CREEK SOUTH | | | | | |
| Measured | 7.8 | 0.96 | 0.07 | 75.5 | 5.1 |
| Indicated | 0.1 | 0.81 | 0.05 | 1.2 | 0.1 |
| **Totals** | **8** | **0.96** | **0.06** | **76.7** | **5.2** |
| BELL CREEK NORTH | | | | | |
| Indicated | 2 | 0.86 | 0.03 | 16.8 | 0.5 |
| **Totals** | **2** | **0.86** | **0.03** | **16.8** | **0.5** |
| BELL CREEK NORTHWEST | | | | | |
| Indicated | 2.5 | 0.81 | 0.05 | 20.1 | 1.2 |
| **Totals** | **2.5** | **0.81** | **0.05** | **20.1** | **1.2** |
| The Neck | | | | | |
| Indicated | 0.4 | 0.84 | 0.03 | 3.5 | 0.1 |
| **Totals** | **0.4** | **0.84** | **0.03** | **3.5** | **0.1** |
| MINNAMOOLKA | | | | | |
| Indicated | 4.7 | 0.82 | 0.05 | 38.3 | 2.1 |
| Inferred | 0.9 | 0.78 | 0.04 | 6.7 | 0.3 |
| **Totals** | **5.5** | **0.82** | **0.04** | **45** | **2.4** |
| COMBINED NORTHERN DEPOSITS | | | | | |
| Measured | 7.8 | 0.96 | 0.07 | 75.5 | 5.1 |
| Indicated | 9.7 | 0.83 | 0.04 | 79.9 | 4 |
| Inferred | 0.9 | 0.78 | 0.04 | 6.7 | 0.3 |
| **TOTALS** | **18.4** | **0.88** | **0.05** | **162.1** | **9.4** |

**NOTE**: Variations in totals may be due to rounding factors

# RESOURCE TABLES

## COMBINED SCONI DEPOSITS Ni-Co & Sc RESOURCE STATEMENTS

### COG NICKEL EQUIVALENT = 0.7% (NI + 1.5 CO + 0.01 SC)

| Deposit | Tonnes Mt | Ni % | Co % | Sc g/t | Ni Metal kt | Co Metal kt | Sc Metal t | Equivalent Sc Oxide t |
|---|---|---|---|---|---|---|---|---|
| KOKOMO | | | | | | | | |
| Total | 29.5 | 0.49 | 0.08 | 55 | 144.8 | 22.4 | 1,619 | 2,483 |
| GREENVALE – INSITU | | | | | | | | |
| Total | 16.3 | 0.73 | 0.05 | 38 | 118.8 | 8.9 | 614 | 941 |
| GREENVALE – DUMPS AND STOCKPILES | | | | | | | | |
| Total | 11.1 | 0.42 | 0.03 | 44 | 46 | 3.8 | 483 | 741 |
| LUCKNOW | | | | | | | | |
| Total | 13.8 | 0.31 | 0.07 | 116 | 42.2 | 10 | 1,597 | 2,449 |
| COMBINED SCONI SOUTH DEPOSITS RESOURCE | | | | | | | | |
| Measured | 9.3 | 0.66 | 0.08 | 60 | 61.7 | 7.6 | 561 | 861 |
| Indicated | 38.3 | 0.52 | 0.07 | 67 | 198.7 | 28 | 2,580 | 3,956 |
| Inferred | 23.2 | 0.39 | 0.04 | 51 | 91.4 | 9.6 | 1,172 | 1,798 |
| **Totals** | **70.7** | **0.5** | **0.06** | **61** | **351.8** | **45.2** | **4,313** | **6,615** |
| BELL CREEK SOUTH | | | | | | | | |
| Totals | 8 | 0.96 | 0.06 | – | 76.7 | 5.2 | – | – |
| BELL CREEK NORTH | | | | | | | | |
| Totals | 2 | 0.86 | 0.03 | – | 16.8 | 0.5 | – | – |
| BELL CREEK NORTHWEST | | | | | | | | |
| Totals | 2.5 | 0.81 | 0.05 | – | 20.1 | 1.2 | – | – |
| THE NECK | | | | | | | | |
| Totals | 0.4 | 0.84 | 0.03 | – | 3.5 | 0.1 | – | – |
| MINNAMOOLKA | | | | | | | | |
| Totals | 5.5 | 0.82 | 0.04 | – | 45 | 2.4 | – | – |
| COMBINED SCONI NORTHERN DEPOSITS RESOURCE | | | | | | | | |
| Measured | 7.8 | 0.96 | 0.07 | – | 75.5 | 5.1 | – | – |
| Indicated | 9.7 | 0.83 | 0.04 | – | 79.9 | 4 | – | – |
| Inferred | 0.9 | 0.78 | 0.04 | – | 6.7 | 0.3 | – | – |
| **Totals** | **18.4** | **0.88** | **0.05** | **–** | **162.1** | **9.4** | **–** | **–** |
| COMBINED SCONI SOUTHERN AND NORTHERN DEPOSITS RESOURCE | | | | | | | | |
| Measured | 17.1 | 0.8 | 0.07 | 33 | 137.3 | 12.7 | 561 | 861 |
| Indicated | 48 | 0.58 | 0.07 | 54 | 278.6 | 32 | 2,580 | 3,956 |
| Inferred | 24 | 0.41 | 0.04 | 49 | 98.1 | 9.9 | 1,172 | 1,798 |
| **TOTAL** | **89.1** | **0.58** | **0.06** | **48** | **514** | **54.5** | **4,313** | **6,615** |

**NOTE:** In the Northern nickel deposits the Sc grade is typically very low (5–30g/t Sc), therefore no Sc Resource estimated. Resultant Sc grade for combined SCONI (South and North) Project is therefore low. Variations in totals may be due to rounding factors.

# RESOURCE TABLES

## COMBINED SCONI DEPOSITS Ni-Co & Sc RESOURCE STATEMENTS

### COG NICKEL EQUIVALENT = 1.0% (NI + 1.5 CO + 0.01 SC)

| Deposit | Tonnes Mt | Ni % | Co % | Sc g/t | Ni Metal kt | Co Metal kt | Sc Metal t | Sc Oxide t |
|---|---|---|---|---|---|---|---|---|
| KOKOMO | | | | | | | | |
| Total | 13.9 | 0.56 | 0.1 | 80 | 77.4 | 14.2 | 1,108 | 1,699 |
| GREENVALE – INSITU | | | | | | | | |
| Total | 9.5 | 0.95 | 0.07 | 39 | 90.3 | 6.9 | 365 | 560 |
| GREENVALE – DUMPS AND STOCKPILES | | | | | | | | |
| Total | 2.6 | 0.58 | 0.05 | 40 | 15.1 | 1.3 | 103 | 158 |
| LUCKNOW | | | | | | | | |
| Total | 10.1 | 0.28 | 0.07 | 145 | 28.4 | 7.3 | 1,459 | 2,238 |
| COMBINED SCONI SOUTH DEPOSITS RESOURCE | | | | | | | | |
| Measured | 6.2 | 0.79 | 0.1 | 73 | 48.8 | 6.2 | 451 | 691 |
| Indicated | 23.2 | 0.56 | 0.08 | 92 | 129.5 | 19.5 | 2,140 | 3,281 |
| Inferred | 6.6 | 0.49 | 0.06 | 67 | 32.9 | 3.9 | 445 | 682 |
| Totals | **36.1** | **0.59** | **0.08** | **84** | **211.2** | **29.5** | **3,036** | **4,656** |
| BELL CREEK SOUTH | | | | | | | | |
| Totals | 3.6 | 1.21 | 0.08 | – | 43.3 | 3 | – | – |
| BELL CREEK NORTH | | | | | | | | |
| Totals | 0.4 | 1.16 | 0.04 | – | 4.8 | 0.1 | – | – |
| BELL CREEK NORTHWEST | | | | | | | | |
| Totals | 0.4 | 1.05 | 0.06 | – | 4.5 | 0.3 | – | – |
| THE NECK | | | | | | | | |
| Totals | 0.1 | 1.17 | 0.03 | – | 0.9 | 0.02 | – | – |
| MINNAMOOLKA | | | | | | | | |
| Totals | 1 | 1.07 | 0.08 | – | 11 | 0.8 | – | – |
| COMBINED SCONI NORTHERN DEPOSITS RESOURCE | | | | | | | | |
| Measured | 3.6 | 1.21 | 0.08 | – | 43 | 3 | – | – |
| Indicated | 1.9 | 1.09 | 0.06 | – | 20.4 | 1.2 | – | – |
| Inferred | 0.1 | 1.04 | 0.07 | – | 1 | 0.1 | – | – |
| Totals | **5.5** | **1.16** | **0.08** | **–** | **64.5** | **4.3** | **–** | **–** |
| COMBINED SCONI SOUTHERN AND NORTHERN DEPOSITS RESOURCE | | | | | | | | |
| Measured | 9.8 | 0.94 | 0.09 | 46 | 91.9 | 9.2 | 451 | 692 |
| Indicated | 25.1 | 0.6 | 0.08 | 85 | 149.9 | 20.7 | 2,140 | 3,282 |
| Inferred | 6.7 | 0.5 | 0.06 | 66 | 33.9 | 3.9 | 445 | 682 |
| TOTAL | **41.6** | **0.66** | **0.08** | **73** | **275.7** | **33.8** | **3,036** | **4,656** |

**NOTE:** In the Northern nickel deposits the Sc grade is typically very low (5–30g/t Sc), therefore no Sc Resource estimated. Resultant Sc grade for combined SCONI (South and North) Project is therefore low. Variations in totals may be due to rounding factors.

# NOTES TO RESOURCE TABLES
## AND COMPETENT PERSON STATEMENTS

1. Scandium is typically sold as an oxide product. Hence the equivalent scandium oxide has been calculated at 1.534 times contained scandium metal.
2. The Mineral Resources for the Southern Deposits of Lucknow, Greenvale and Kokomo are reported at a cut–off grade (COG) of NiEq 0.7% (Ni + 1.5Co + 0.01Sc). This NiEq COG formula has been calculated using commodity prices of US$10/lb nickel, US$15/lb cobalt and US$1,500/kg scandium oxide, and recoveries of 90% for all three metals. Metallica indicates that the metallurgical testwork to date provides reasonable potential for the nickel, cobalt and scandium to be recovered at similar recoveries to those achieved in the testwork.
3. The Mineral Resources for the Northern Deposits of Bell Creek South, Bell Creek North, Bell Creek Northwest, Minnamoolka and The Neck are reported at a COG of NiEq 0.7% (Ni + 1.5Co). This NiEq COG formula has been calculated using commodity prices of US$10/lb nickel and US$15/lb cobalt, and recoveries of 90% for both nickel and cobalt.
4. No scandium content was estimated in the Northern deposits as Sc assays are generally not available. From limited data there is good indication the Northern deposits are relatively low in Sc (generally between 5 and 30g/t Sc).
5. Variations in totals may be present due to rounding factors.
6. For further details on the SCONI scandium and nickel cobalt resource see Metallica Minerals Ltd's ASX release JORC 2013 – Sc–Co–Ni Resource Upgrade dated 21 October 2013.

## COMPETENT PERSONS STATEMENTS

**Technical information and exploration results** contained in this report have been compiled by Metallica Minerals Ltd's full time employee Andrew Gillies B.Sc MAus.I.M.M in the position of Non–Executive Director.

Mr Gillies has sufficient experience that is relevant to the style of mineralisation being reported on to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Minerals Resources and Ore Reserves. Mr Gillies consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

**The SCONI Nickel–Cobalt and Scandium Project Mineral Resource Estimate(s)** is based upon and accurately reflects data compiled, validated or supervised by Mr John Horton, Principal Geologist FAus.I.M.M (CP) and is 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 2012 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 report.

The **information in this report that relates to Ore Reserves** is based on information compiled by François Bazin of IMC Mining Pty Ltd, a Competent Person who is a Chartered Professional Member of The Australasian Institute of Mining and Metallurgy.

François Bazin has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. François Bazin consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. François Bazin is a consultant to Metallica Minerals Limited and Oresome Australia Pty Ltd.

## CAUTION REGARDING FORWARD LOOKING STATEMENTS

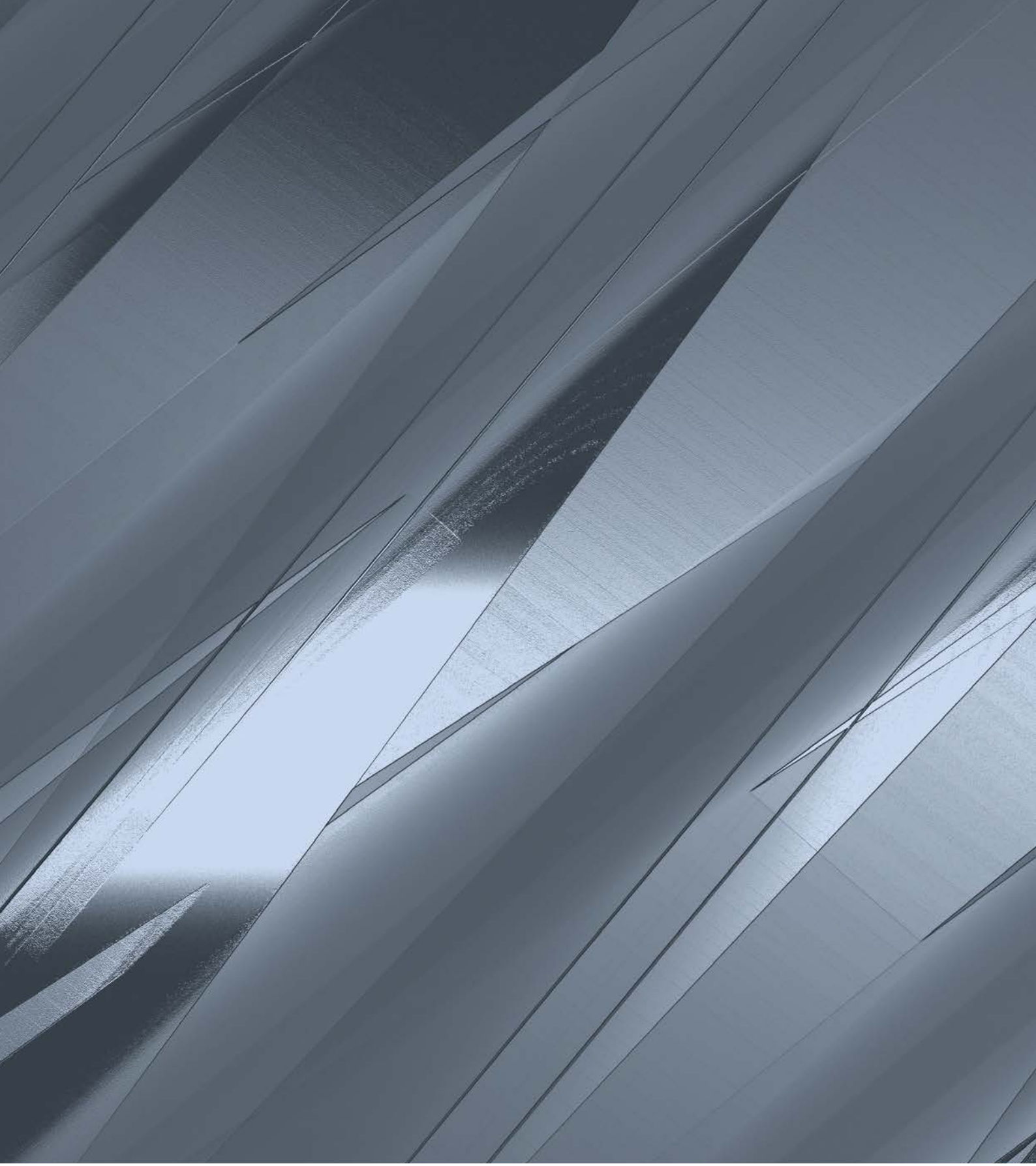
Certain statements made in this report contain or comprise certain forward–looking statements.

Although Metallica believes that the estimates and expectations reflected in such forward–looking statements are reasonable, no assurance can be given that such expectations will prove to have been correct. Accordingly, results could differ materially from those set out in the forward–looking statements as a result of, among other factors, changes in economic and market conditions, success of business and operating initiatives, changes in the regulatory environment and other government actions, fluctuations in commodity prices and exchange rates and business and operational risk management. Metallica undertakes no obligation to update publicly or release any revisions to these forward–looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events.

# TOP 20 SHAREHOLDERS

| Rank | Name | | % Issued Capital |
|---|---|---|---|
| 1 | Jien Mining Pty Ltd | 40,099,678 | 24.03% |
| 2 | Victorian Ferries Pty Ltd | 16,382,860 | 9.82% |
| 3 | Golden Breed Pty Ltd | 8,800,000 | 5.27% |
| 4 | Bondline Ltd | 4,910,966 | 2.94% |
| 5 | Codan Trustees | 2,500,000 | 1.50% |
| 6 | Asden Investments Pty Limited | 2,403,274 | 1.44% |
| 7 | Minnelex Pty Ltd | 2,394,434 | 1.43% |
| 8 | China Xinfa Group Corporation Ltd | 1,964,386 | 1.18% |
| 9 | Mr Andrew Gillies & Mrs Karen Gillies Superfund | 1,900,000 | 1.14% |
| 10 | J P Morgan Nominees Australia Limited | 1,730,308 | 1.04% |
| 11 | UOB Kay Hian Private Limited | 1,512,537 | 0.91% |
| 12 | Robert John Gillies | 1,342,164 | 0.80% |
| 13 | Althea & Richard Bond Super Pty Ltd | 1,200,000 | 0.72% |
| 14 | Judith Emily Ruwolt | 1,111,911 | 0.67% |
| 15 | Mr Graham Fitch | 1,100,000 | 0.66% |
| 16 | Dr Paul Robert Messenger & Ms Mandaley Perkins | 1,086,600 | 0.65% |
| 17 | Mr Teddy Tjandramulia | 1,066,671 | 0.64% |
| 18 | Bond Street Custodians Ltd | 1,000,000 | 0.60% |
| 19 | Carojon Pty Ltd | 1,000,000 | 0.60% |
| 20 | Kimbriki Nominees Pty Ltd | 1,000,000 | 0.60% |
| | **Total** | **94,505,789** | **56.63%** |
| | **Balance of Register** | **72,386,041** | **43.37%** |
| | **TOTAL SHARES ON ISSUE*** | **166,891,830** | **100.00%** |

*as at 30 September 2015



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