



**ANNUAL
REPORT
2018**

CORPORATE DIRECTORY

Directors

Mr Peter Turnbull
Non-Executive Chairman

Mr Steve Boulton
Non-Executive Director

Mr Ian Jacobson
Non-Executive Director

Managing Director

Mr Simon Slesarewich

Chief Financial Officer & Company Secretary

Mr John Haley

Principal Registered Office in Australia

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Auditor

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Legal

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Stock Exchange Listing

ASX:MLM

Australian Business Number

ABN 45 076 696 092

Subsidiary companies

Greenvale Operations Pty Ltd
ACN 139 136 708

Lucky Break Operations Pty Ltd
ACN 126 272 580

NORNICO Pty Ltd
ACN 065 384 045

Oresome Australia Pty Ltd
ACN 071 762 484

Oresome Bauxite Pty Ltd
ACN 606 362 252

Phoenix Lime Pty Ltd
ACN 096 355 761

Scandium Pty Ltd
ACN 138 608 894

Touchstone Resources Pty Ltd
ACN 126 306 018



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2018 ACHIEVEMENTS

Approval

Mining Lease issued for Urquhart Bauxite project

Growth

Identified opportunity in the Wagina Bauxite project

Merger

Merger between Metallica and Melior Resources announced

Discovery

High purity silica sands at Cape Flattery

AU\$11M

Completed sale of SCONI project for cash and shares

AU\$6M

Cash balance at 30 June 2018

Board

Strengthened with the appointment of a Managing Director and new independent Non-Executive Director

Signed

Market agent appointed and pre acceptance of product from Chinese refineries

Unless stated otherwise, all amounts are in AUD.

2019 GOALS

Complete transformational merger between Metallica Minerals and Melior Resources Inc

Commence production of direct shipping bauxite (DSB) from Urquhart Bauxite project

Secure off-take and sales contracts for Urquhart Bauxite project

Commence ramp up of Urquhart bauxite production to 1.5Mtpa

Complete due diligence on Wagina Bauxite project

Continue to pursue value adding bauxite acquisitions

Continue to realise value from non-core assets

Develop exploration program for Cape Flattery Silica Sands project

LONG TERM VISION

Build a strong ASX-listed cash flow focussed resource company

LETTER TO SHAREHOLDERS

Dear Shareholders,

It is with pleasure that we present to you Metallica's Annual Report for financial year 2018, a period from which the Company exited in a sound financial position, poised for growth and firmly focused on delivering near-term cash flow.

While this report specifically relates to events during the past financial year, the most significant development in Metallica's recent history has occurred since then: the announcement in September of a transformational merger with Toronto Stock Exchange listed Melior Resources.

Combining Metallica with Melior, the owner of the Goondicum ilmenite project near Monto in Queensland, makes strong strategic sense. The merged entity will have two advanced development projects in Goondicum (scheduled to begin commissioning and cash flow in November) and the Urquhart Bauxite project in far north Queensland; a pipeline of promising growth opportunities; and a healthy balance sheet.

Goondicum and Urquhart share similar attributes in that they are fully funded, can be brought into production relatively quickly for a modest upfront capital outlay and will provide all-important near-term cashflow. The price outlooks for both commodities, ilmenite and bauxite, are also positive, giving us added confidence that the merger will be a success.

Despite the unexpected third-party delay in securing approval for access to build a haul road connecting the Urquhart Bauxite project with port facilities at Hey Point, which prevented Metallica from bringing the project into production as envisaged, the Company was successful in achieving several of its goals during financial year 2018. These included strengthening its balance sheet, realising value from non-core assets and identifying attractive growth opportunities that appear to meet its acquisition criteria.

In relation to the Metallica balance sheet, the Company ended the financial year with approximately \$6 million in cash. Following the end of the reporting period, Metallica was also allotted 16,811,916 shares in Australian Mines Limited as part of the consideration for its remaining stake in the SCONI nickel-cobalt-scandium project. The shares are under escrow until the end of September 2018.

The SCONI sale and purchase agreement provides for Metallica to receive a further \$5 million payment from Australian Mines upon the commencement of commercial production from the project, which would ultimately take the total consideration paid to Metallica to \$11 million.

As announced previously, we remain steadfast in our belief that the rationale behind the sale of SCONI was sound and in the best interests of our shareholders. SCONI requires a significant amount of capital to bring into production and it will be several years at least before the project produces first cash flows, neither of which fits our vision for Metallica. The asset was sold on good terms and at a good time in regards to global prices for the commodities it will potentially produce.

Going forward, we will continue to refine the merged entity's asset mix – either by looking to realise value from non-core assets or adding growth assets – provided that doing so has genuine potential to deliver value for shareholders.

On the growth front – and aside from the merger – Metallica has begun due diligence on the Wagina Bauxite project in the Solomon Islands after extending a strategic loan of \$190,000 to owner South West Pacific Bauxite to secure a low-cost option over the asset.

A firm decision on whether to pursue the Wagina acquisition won't be taken until the due diligence process is successfully concluded and the findings are carefully analysed. The asset does however appear to possess the attributes Metallica is looking for in a growth project: it has a substantial JORC 2012 Mineral Resource contained within a granted Mining Lease that could support an operation producing 2-3 million tonnes of bauxite a year for more than 10 years; the development scenario is straightforward; and it is located only 10 days' shipping from China, the world's largest sea-borne bauxite consumer.

We acknowledge that the situation with the Urquhart haul road has been incredibly frustrating for both shareholders and management and it is being given the highest priority by management. We have continued discussions with various stakeholders in good faith and pursued every option available to expedite negotiations, including raising the matter to the highest level of the Queensland government. We are confident that with the assistance of the Queensland government, a successful outcome will be achieved.

Over the course of the financial year, we settled a compensation agreement with the traditional owners of the land on which Urquhart is located (including the haul road area); made significant progress with logistics and bauxite sales; and received federal and state environmental approvals for the project. In January 2018 we were granted a Mining Lease, a milestone achieved with relative speed compared to other mining projects in Queensland, coming as it did within three years of starting the application process.

The Urquhart Bauxite project continues to move toward the completion of the final pre-mining regulatory and commercial approvals, including formal approval from the joint venture committee to mine. The holding costs on Urquhart are modest and we will persevere with seeking a positive resolution. We remain fully funded to bring the project into production based on the estimated capital cost of less than \$2 million. Once all final approvals are secured the project can be developed in just six to eight weeks.

We are confident that the Metallica Board has the right mix of skills and experience to guide the Company to a prosperous future. Simon Slesarewich, who has been Chief Executive Officer since 2015, recently took over as Managing Director and will lead the combined Metallica-Melior should the merger be approved. Melior's George Lloyd will be Non-Executive Chairman, while Managing Director Mark McCauley will support Simon as an Executive Director. Peter Turnbull, Ian Jacobson and Martyn Buttenshaw will also join the merged board as Non-Executive Directors.

Both Metallica and Melior shareholders will have the opportunity to vote on the merger in coming months, with the expectation that, if approved, it will be implemented in December 2018.

We look forward to keeping you updated on this process and we thank you sincerely for your support over financial year 2018. It has been vital to ensuring the health of the company.

Yours sincerely,



PETER TURNBULL
Non-Executive Chairman



SIMON SLESAREWICH
Managing Director

REVIEW OF OPERATIONS

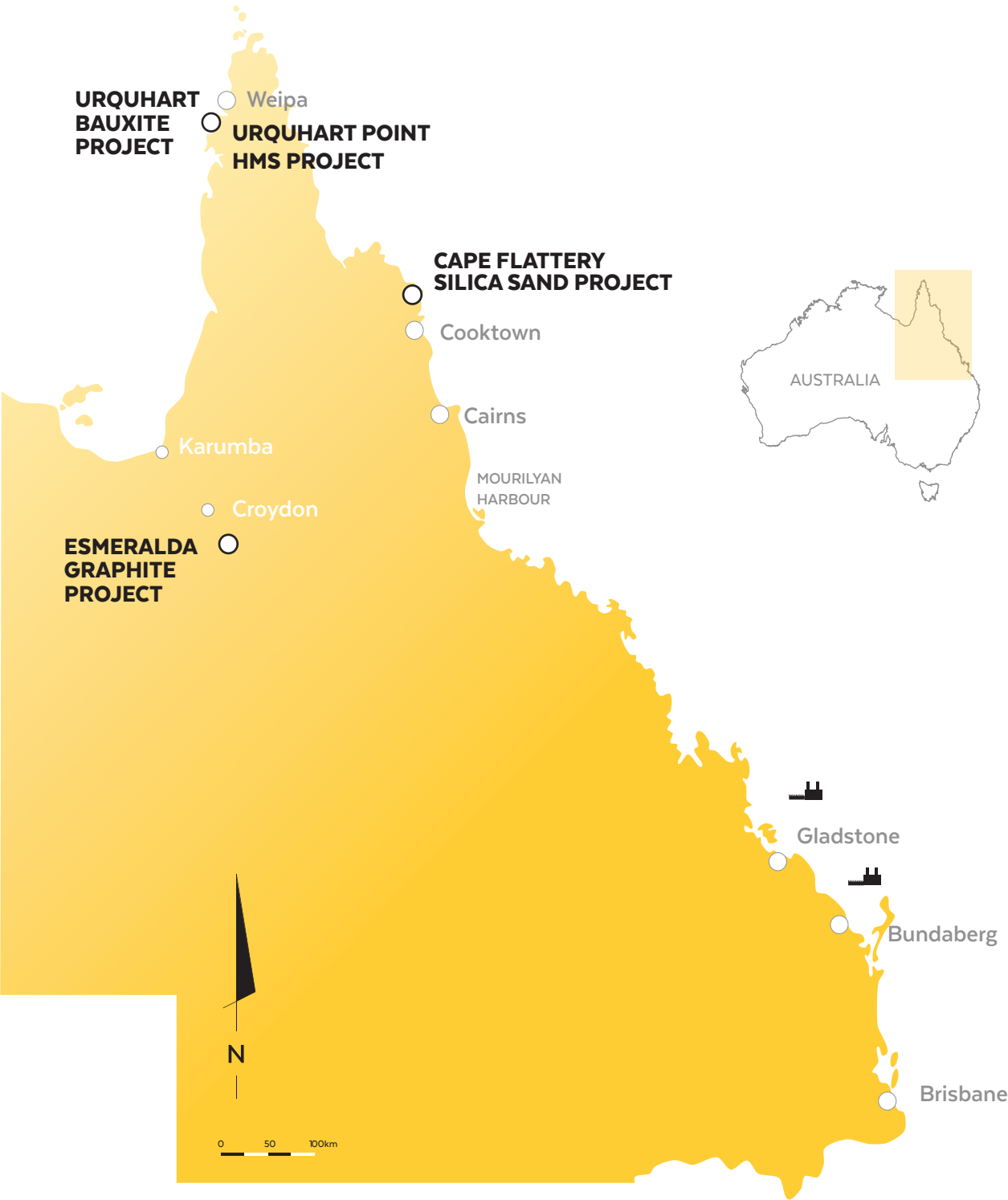


FIGURE 1: Metallica’s project locations

CAPE YORK BAUXITE & HMS JV

1,772 Ha

Mining leases and
Mining lease applications

1,204 km²

Exploration tenure

Bx & HMS

Bauxite and Zircon, Rutile, and Titanium metals

MLM 50%

Manager of Joint
Venture with Ozore
Resources Pty Ltd
holding remaining 50%

The Cape York Bauxite and HMS Project is located on the west coast of Queensland's Cape York Peninsula with 50% held by Metallica Minerals' wholly-owned subsidiary, Oresome Australia Pty Ltd, who is also the Manager of the Joint Venture (JV). The remaining 50% interest is held by a private Chinese investor, Ozore Resources Pty Ltd, pursuant to the Cape York Bauxite and HMS JV signed in August 2014.

Since the formation of the JV, it has expended more than \$12 Million, which has been applied to progressing

development of the Urquhart Bauxite project as well as the design and fabrication of the Urquhart Point HMS processing plant, which is currently in storage.

The JV project has three separate components;

- Urquhart Bauxite project
- Urquhart Point HMS project
- Cape York regional Bauxite & HMS exploration

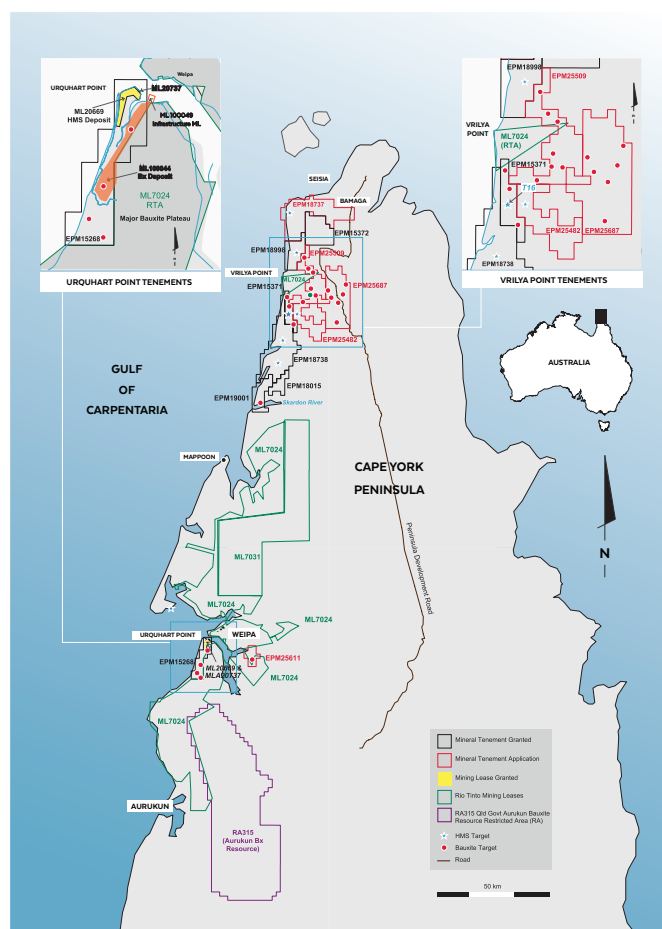


FIGURE 2: Cape York Bauxite and HMS project location

URQUHART BAUXITE PROJECT

The Urquhart Bauxite project is located 5 km southwest of Weipa on the west coast of Queensland's Cape York Peninsula, a region renowned for its extensive deposits of high-quality pisolitic bauxite. The project consists of two bauxite plateaux, known as Area A and Area B, which are wholly contained within the granted Mining Lease.

The Queensland state government granted the Mining Lease for the project in January 2018, and the federal government approved the development of the Project in accordance with the Environmental Protection and Biodiversity Conservation Act 1999 in August 2017. The federal government has appropriately conditioned the development and those

conditions are in line with the Company's expectations.

The company is now waiting on the approval to build the 15km haul road connecting the proposed Urquhart Bauxite project to existing port infrastructure at Hey Point, which is the final government approval required before construction on the project can begin. The company has continued

discussions with various stakeholders around securing this approval and it has now been substantially elevated within the Queensland state government. Once the haul road approval is received the period to bring Urquhart into production will be just 4 – 6 weeks dependant on the wet season.

The Project's JORC (2012) Resource estimate was

Table 1: Urquhart Bauxite project Reserves

	Area	Direct Shipping Bauxite (Low Temp)	Al ₂ O ₃	SiO ₂	THA	Low Temp RSi
		Dry kt	%	%	%	%
Proved	A	2,964	53.7	12.3	42.3	5.4
Probable	A	3,568	51.9	14.2	39.1	5.9
Ore Reserve	A	6,532	52.7	13.3	40.6	5.7

Table 2: Summary of 2018 Updated PFS Results-Urquhart Bauxite project

Item	Unit	Base Case (100% Basis)	Base Case (MLM share - 50% basis)
Total Saleable Product	dry kt	6,532	3,266
Total Al ₂ O ₃	%	52.7	52.7
Total SiO ₂	%	13.3	13.3
Total Revenue	A\$m	389	195
EBITDA	A\$m	68.8	34.4
NPV ¹⁰ Pre Tax	A\$m	47.3	23.7
NPV ¹⁰ Post Tax	A\$m	33.7	20.5
IRR Post Tax		364%	469%
LOM Capital	A\$m	2.2	1.1
Avg CFR Costs*	A\$ tonne	49.08	49.08
Avg CFR Received	A\$ tonne	59.62	59.62
Payback	years	< 2 yrs	< 2 yrs

URQUHART BAUXITE PROJECT

updated in November 2016, following a drilling program completed in August 2016. The total Mineral Resource increased by 26% to 9.5Mt, with 6.9Mt being in the Measured and Indicated categories. An additional 8.5Mt of lower grade transitional material, over and above the 9.5Mt, has been identified for potential beneficiation through dry screening.

Further investigation of the potential of this transitional material will be completed when mining is underway.

Following the updated JORC (2012) Resource estimate, a Pre-Feasibility Study (PFS) was completed in 2016 and a further Updated Pre-Feasibility Study (Updated PFS) was completed in September 2018. The Updated PFS was independently

prepared by Brisbane-based international consultancy, IMC Mining Pty Ltd (IMC), which also completed the JORC (2012) resources estimate. Industry leading independent bauxite analyst, CM Group has provided an updated USD price of bauxite on an as delivered basis (CFR Shandong, China). This differs from the 2016 PFS, which used a Free on Board (FOB)

USD bauxite price. Since 2016 there has been a material increase in USD denominated shipping rates that has had a direct effect on the project. To a lesser extent changes in bauxite price forecasts and foreign exchange rates have also impacted Urquhart's forecast revenue. The results of the Updated PFS are summarised in Table 2.

Table 3: Urquhart Bauxite project Direct Shipping Bauxite (DSB) Mineral Resource at an effective cut-off of 48% Al_2O_3

Classification	Area	Mt	Al_2O_3 %	SiO_2 %	AAI%	RSi%
Measured	A	3.0	54.4	11.8	43.2	5.0
Indicated	A	3.9	53.3	13.1	40.8	5.2
Inferred	A	0.3	54.2	11.3	42.0	4.7
	B	2.3	49.9	17.4	37.2	6.0
	Subtotal	2.6	50.3	16.8	37.6	5.9
Total		9.5	52.8	13.7	40.7	5.3

NOTES

* AAI – Available Alumina @ 150°C

** RSi – Reactive Silica @ 150°C

URQUHART POINT HMS PROJECT

The Urquhart Point HMS project is located 3 km southwest 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).

The modularised HMS processing plant purpose built in South Africa for the project, arrived in Australia

in December 2015 and is currently stored near Brisbane. Although heavy mineral sands prices have improved, the JV has deferred construction of the processing plant to focus on the higher value Urquhart Bauxite project.

The Company continues to receive third party approaches in relation to the Urquhart Point HMS project and processing plant and remains committed

to potentially realise value from the asset.

The HMS development plan could also be implemented very quickly to deliver production if there is a continued improvement in commodity prices.





CAPE YORK REGIONAL EXPLORATION

The JV holds extensive regional tenements along the 200 km coastal belt between Weipa and Northern Cape York Peninsula that are prospective for bauxite and HMS.

The JV did not undertake any field work on its regional bauxite and HMS exploration targets during the year. With a clear focus on the Urquhart Bauxite project.

Significant areas of coastal bauxite have previously been 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 28). The JV has consolidated the size of its tenement holding and reduced holding and operational costs by surrendering areas considered unlikely to hold significant amounts of mineralisation for development.

*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.

BAUXITE MARKETING

In October 2017, the Company appointed Bigbites Ltd (Bigbites), a specialist bauxite marketing company based in Hong Kong, as its Marketing Agent for sales of bauxite from the Company's Urquhart Bauxite project in far north Queensland.

Bigbites is an associate of The CM Group (CM), the world's leading provider of bauxite market intelligence.

Established in 1999, CM has been generating industry-leading analyses of the global bauxite market for over 15 years. The company has an unrivalled understanding of bauxite trade, especially in China, where it has offices in Beijing and Chengdu. CM has been associated with the world's major aluminium producers, including Rio Tinto Alcan,

Alumina Ltd, Alcoa, South32, Norsk Hydro and Vedanta, providing them with a range of strategic bauxite industry and market analysis services.

In working with the Company, Bigbites will provide expert advice on the bauxite market and will undertake marketing and sales exclusively for the Urquhart Bauxite project material.

BAUXITE MARKET

Developments in the global bauxite market over the year continued to support the Company's view that the outlook for pricing and demand remains robust.

Domestic bauxite supply in China continued to be impacted by government crackdowns on illegal mining and environmental inspections. Combined with the effects of declining ore grades at many domestic

mines, these measures by the Chinese government are expected to lead to a significant increase in import volumes over the next 18-24 months.

CM is forecasting that Chinese demand for bauxite will increase by 65-70Mt per annum over the next five to seven years as a result of declining domestic production, and new alumina refining capacity

being built in the country, with approximately 60% of this new demand met by imported bauxite.

Recent policy changes relating to the application of tariffs on imported aluminium goods in the United States of America have to date had no apparent impact on Australian bauxite producers.

CAPE FLATTERY SILICA SANDS

56 km²

Exploration tenure

Silica Sands

For bulk export shipping

MLM 100%

Through subsidiary
Oresome Australia
Pty Ltd

The Cape Flattery Silica Sands project is located approximately 200 km north of Cairns in North Queensland (see Figure 3) and is adjacent to Mitsubishi's Cape Flattery Silica Sands mine, the world's largest Silica Sands mine.

In April, a low cost maiden sampling program identified three target areas with silica

oxide (SiO_2) percentages of greater than 99%. These target areas form the basis of the Exploration Target* developed by the Company of 20-100Mt of high purity silica sands, with insitu quality ranging between 96.9% and 99.6% SiO_2 .

The Company plans to develop an exploration program to establish

whether the silica sand deposit currently being mined in the adjacent mining leases by Mitsubishi continues onto its leases, as appears to be the case.

An Independent logistics consultant has been engaged to investigate access to the existing loadout facilities and the jetty infrastructure at Cape Flattery.

High purity silica sands are becoming more sought after, with the global market growing at a compound annual growth rate (CAGR) of around 6% between 2010 and 2017, according to industry research firm IMARC Group. In 2017, a total of 188Mt of silica sand was produced globally.

The growth has been driven by silica sand's applications across a broad range of industries including glass-making, foundry casting, water filtration, chemicals and metals, along with the hydraulic fracturing process and an increasing amount of hi-tech products including solar panels. For example, the global glass-making industry, one of the major consumers of high purity silica, has experienced significant growth recently as a result of demand from the construction and automotive industries.

IMARC forecasts have demand for silica sands increasing at a CAGR of 7.2% through to 2022, with annual revenues reaching US\$9.6 billion.

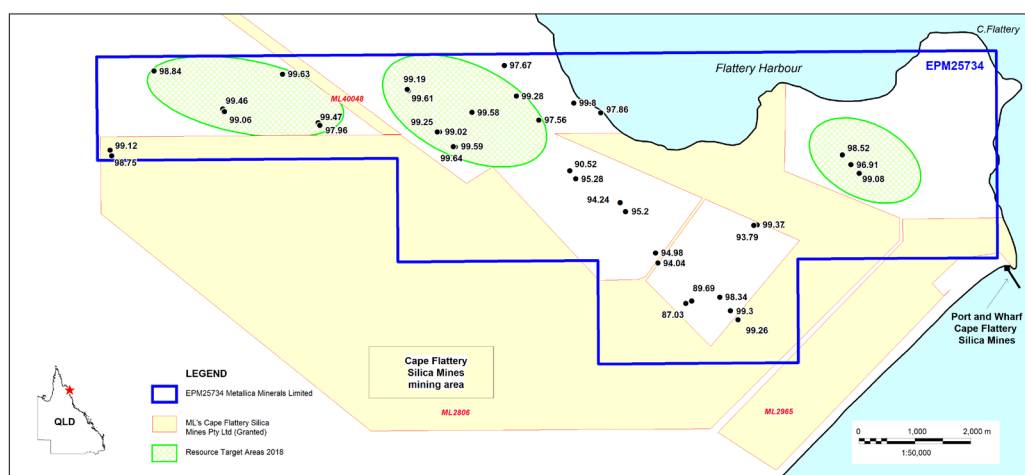


FIGURE 3: Cape Flattery Silica Sands project location

*EXPLORATION TARGET

An Exploration Target is a statement or estimate of the exploration potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of grade (or quality), relates to mineralisation for which there has been insufficient exploration to estimate a Mineral Resource.

GROWTH, WAGINA SOLOMON ISLAND BAUXITE

In April, the Company announced it had entered into a secured loan agreement with South West Pacific Bauxite (HK) Ltd (SWPB), owner of the advanced Wagina Bauxite project in the Solomon Islands.

Under the agreement, Metallica was granted an option to carry out exclusive due diligence on Wagina with a view to ultimately completing a transaction involving the project in exchange for providing a loan.

Details of the loan are as follows:

BORROWER

South West Pacific Bauxite (HK) Ltd

AMOUNT

AUD \$120,000*

TERM

9-12 months

INTEREST RATE

15% per annum

SECURITY

Shares in South West Pacific Bauxite (HK) Ltd

* This loan has now been increased to A\$190,000 to support ongoing activities.

Wagina Island is an island of approximately 78 km² located between Choiseul and Santa Isabel islands in the Choiseul Province of Solomon Islands (Figure 4). The Project is wholly contained on a granted mining lease (ML 01/2016) covering approximately 48 km² on the eastern side of Wagina Island.

The Wagina Bauxite project was discovered by CRA (now Rio Tinto) in 1968, with extensive exploration and detailed assessment undertaken thereafter. SWPB, which owns 75% of the Project, has completed significant internal studies on a simple development scenario, under which bauxite would be mined at or near surface, transported to a barge-loading facility and then transhipped in sheltered deep water to large ocean-going vessels approximately 2km away.

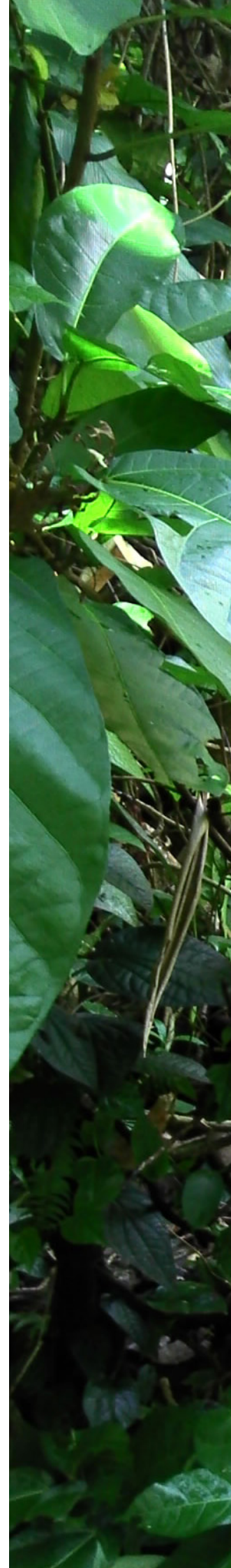
The studies envisage a mining operation producing 2 to 3Mt of bauxite per annum for more than 10 years. The JORC 30Mt bauxite Resource (26.1Mt Measured, 3.6Mt Indicated and 0.5Mt Inferred) is contained within a granted mining lease.

Due diligence on Wagina is advancing well, with no material issues discovered thus far. The Company has also commenced discussions with all levels of government in the Solomons and is engaging with residents of Wagina Island, where the project is located. Strong support for the project has been registered by the national government.

The Wagina project appears to fit the criteria set by the company that assets be advanced, long-life and low cost with the potential to create significant shareholder value. The Wagina project;

- Has the potential to be brought into production via a low cost capex model;
- Capex to be facilitated via Marketing Agreement with Noble;
- Ability to deliver meaningful free cash flow when in operations; and
- Located 10 days shipping to the Chinese market.

The outcome of the due diligence process is expected to be announced in the second half of 2018.





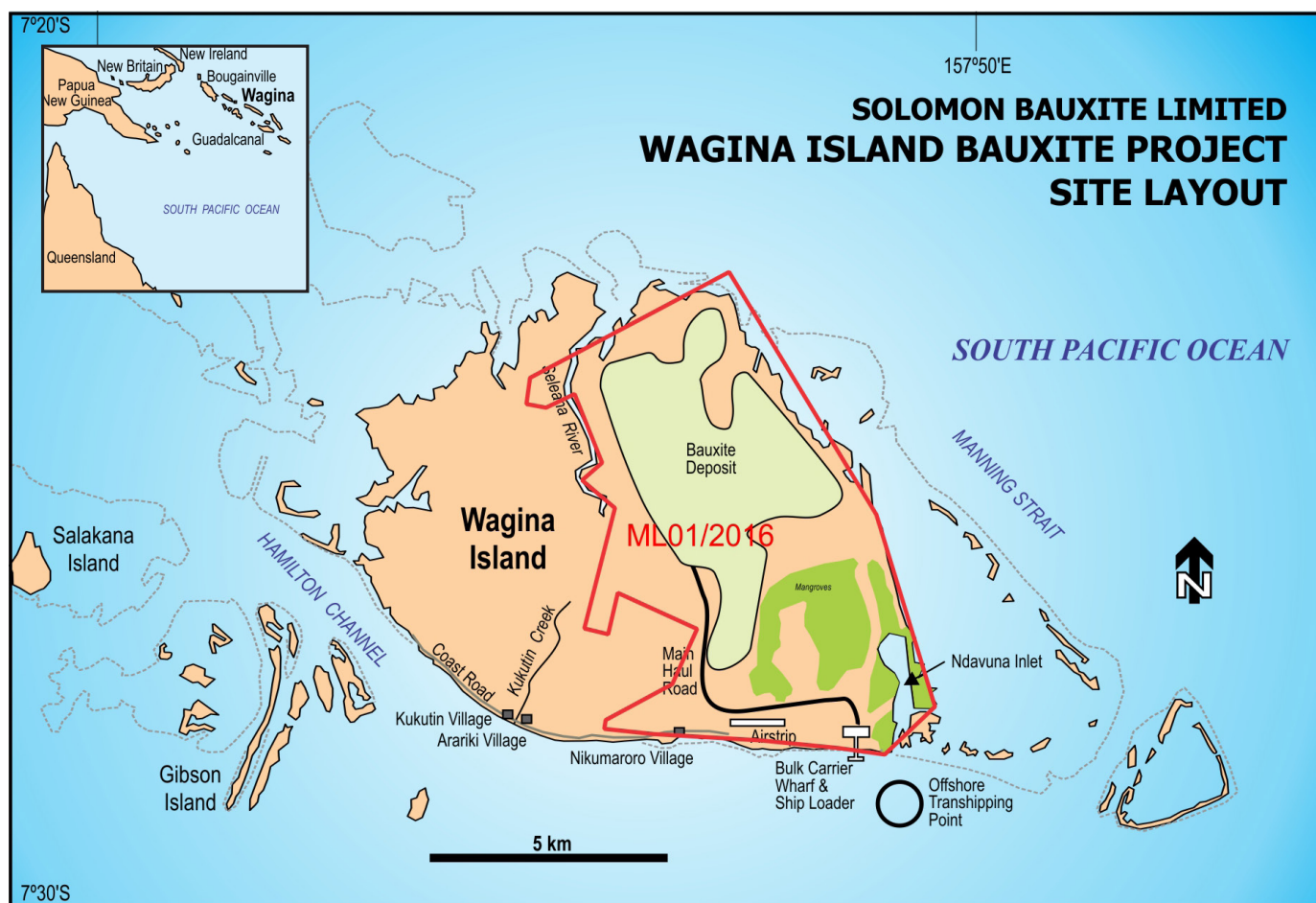


FIGURE 4: Wagina Project location

ESMERALDA GRAPHITE PROJECT



376 km²

Exploration tenure

Graphite

Large scale “graphite in granite”- targeting high purity graphite

MLM 100%

Through subsidiary Touchstone Resources Pty Ltd

The Esmeralda project, located near Croydon in north Queensland (see Figure 1), covers a combined area of more than 370 km² and is held 100% by Metallica’s wholly-owned subsidiary, Touchstone Resources Pty Ltd.

No meaningful exploration work was undertaken on the Esmeralda graphite project during the year. Metallica intends to incrementally progress the project while continuing to focus on its strategy to become a significant bauxite producer. This project has a low holding cost and has the potential to deliver value in the future.

DIRECTOR PROFILES



PETER TURNBULL
NON-EXECUTIVE CHAIRMAN

Mr Turnbull has significant experience as an independent non-executive director and chair across a range of sectors including over a decade in the resources, energy and technology commercialisation sectors

Peter has over 30 years of prior senior executive experience gained in publicly listed, private and government owned organisations operating in Australia, South East Asia, Europe and the Americas. This experience includes senior executive positions with ASX Top 50 companies such as Newcrest Mining Limited, BTR Nylex Limited and Energex Limited, a major government owned energy company. Peter also has significant regulatory, government and public policy experience including as a former director of corporate finance for the Securities and Futures Commission of Hong Kong.

Peter is a non-executive director, Life Member and former President, of the Governance Institute of Australia and is an active contributor, writer and speaker on governance related issues within Australian and international governance circles. Peter's practical governance experience includes the design and management of corporate governance, risk management and remuneration regimes.

Peter is currently a non-executive director of Karoon Gas Australia (ASX:KAR) and Chairman of Calix Limited.



STEVE BOULTON
NON-EXECUTIVE DIRECTOR

Mr Boulton's 40-year career has covered complex fund and asset investment management organisations and utility and infrastructure enterprises, including Director level experience in the mining/minerals sector.

Steve's CEO experience was gained at entities listed on the ASX and NZX, and private and government-owned corporations. This has included CEO positions with Hastings Funds Management, CP2 Funds Management, Prime/BBI, Powerco in New Zealand and Allgas. He has held Executive Chairman at the Dalrymple Bay Coal Terminal, PD Ports in the UK and WestNet Rail. His executive and non-executive Director experience includes Infrastructure Partnerships Australia, Port of Brisbane, Australian Infrastructure Fund, Australian Pacific Airports Corporation and various infrastructure sector national associations.

Steve is currently a Director of Nova Group, a global defence and engineering services firm which has offices throughout Australia and overseas and Chairman of Newcastle Agri Terminal

DIRECTOR PROFILES



MR IAN JACOBSON
NON-EXECUTIVE DIRECTOR

Mr Jacobson has more than 40 years' experience in the aluminium industry and has held senior executive roles in operations and project development with Rio Tinto/Comalco, Alcoa of Australia and BHP Billiton Aluminium.

Ian is also a co-founder and the current Executive Chairman of SCCR Group, which provides a range of consulting services to the primary aluminium industry including; project development, plant management, technical and operational support and governance in bauxite mining, alumina refining and aluminium smelting.

Ian was appointed to the board of the Company on 1 July 2018.



SIMON SLESAREWICH
MANAGING DIRECTOR

Mr Slesarewich is a mining engineer and registered Senior Site Executive in Queensland with over 20 years' experience across a range of jurisdictions, including a strong background in operational and executive roles within the mining and contracting entities. S

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

Simon is a Director of the Queensland Resources Council (QRC) and Chairman of the QRC Management Committee. He is the former CEO of Northern Discovery and Boardwalk Resources and is a renowned bulk commodities and business turnaround specialist

Simon was appointed to the role of Managing Director on 19 April 2018.

Note:

Mr Wang Ruobing (Non-executive Director) and Mr Shu Zhang (Alternate Non-executive Director) both resigned on 1 May 2018.

MANAGEMENT PROFILES



JOHN HALEY

COMPANY SECRETARY & CHIEF FINANCIAL OFFICER

Mr Haley has more than 35 years of senior corporate experience in Australia and Canada.

John has a strong accounting background that has seen him hold a number of senior positions spanning a range of industries including mineral exploration. He has assisted in the start-up of various mineral exploration companies and is a former 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 BAUXITE & HMS JOINT VENTURE

50% ORESOME AUSTRALIA & 50% OZONE RESOURCES PTY LTD

BAUXITE & HEAVY MINERAL SANDS

Tenement	Project name	Holder	STATUS	HA	S/B
ML100044	URQUHART BAUXITE	Oresome Australia Pty Ltd/ Ozore Resoures Pty Ltd	Granted	1360	0
ML100049	URQUHART BAUXITE 2	Oresome Australia Pty Ltd/ Ozore Resoures Pty Ltd	Application	40.5	0
EPM15268	URQUHART POINT	Oresome Australia Pty Ltd/ Ozore Resoures Pty Ltd	Granted	0	16
EPM15371	DOUGHBOY	Oresome Australia Pty Ltd/ Ozore Resoures Pty Ltd	Granted	0	13
EPM15372	JARDINE	Oresome Australia Pty Ltd/ Ozore Resoures Pty Ltd	Granted	0	29
EPM18015	JACKSON RIVER #2	Oresome Australia Pty Ltd/ Ozore Resoures Pty Ltd	Granted	0	4
EPM18737	SANDMAN #3	Oresome Australia Pty Ltd/ Ozore Resoures Pty Ltd	Granted	0	34
EPM18738	SANDMAN #2	Oresome Australia Pty Ltd/ Ozore Resoures Pty Ltd	Application	0	48
EPM18998	SANDMAN #5	Oresome Australia Pty Ltd/ Ozore Resoures Pty Ltd	Granted	0	24
EPM19001	SANDMAN #6	Oresome Australia Pty Ltd/ Ozore Resoures Pty Ltd	Granted	0	21
EPM25400	SANDMAN 12	Oresome Australia Pty Ltd/ Ozore Resoures Pty Ltd	Granted	0	17
EPM25482	SANDMAN #10	Oresome Australia Pty Ltd/ Ozore Resoures Pty Ltd	Granted	0	20
EPM25509	SANDMAN #11	Oresome Australia Pty Ltd/ Ozore Resoures Pty Ltd	Granted	0	41
EPM25611	UPPER EMBLEY	Oresome Australia Pty Ltd/ Ozore Resoures Pty Ltd	Granted	0	13
EPM25687	VRILYA EAST	Oresome Australia Pty Ltd/ Ozore Resoures Pty Ltd	Granted	0	78
ML20669	URQUHART POINT	Oresome Australia Pty Ltd/ Ozore Resoures Pty Ltd	Granted	366	0
ML20737	MBUNG URQUHART POINT EXTENSION	Oresome Australia Pty Ltd/ Ozore Resoures Pty Ltd	Granted	5.4	0

TENEMENT TABLES

CAPE FLATTERY SILICA SANDS PROJECT

100% ORESOME AUSTRALIA PTY LTD

Tenement	Project name	Holder	STATUS	HA	S/B
EPM25734	CAPE FLATTERY	Oresome Australia Pty Ltd	Granted	0	17

PHOENIX LIMESTONE PROJECTS & ESERALDA GRAPHITE PROJECT

100% METALLICA MINERALS LTD

Tenement	Project name	Holder	STATUS	HA	S/B
EPM25728	FAIRVIEW	Phoenix Lime Pty Ltd	Granted	0	5
EPM25756	FAIRVIEW #1	Phoenix Lime Pty Ltd	Granted	0	1

ESMERALDA GRAPHITE PROJECT

100% METALLICA MINERALS LTD

Tenement	Project name	Holder	STATUS	HA	S/B
EPM25779	WARRIOR	Touchstone Resources Pty Ltd	Granted	0	19
EPM25806	ESMERALDA WEST	Touchstone Resources Pty Ltd	Granted	0	50
EPM25807	ESMERALDA EAST	Touchstone Resources Pty Ltd	Granted	0	48

NOTES

All tenements are 100% owned unless expressed otherwise

EPM – Exploration Permit for Minerals

ML – Mining Lease

S/B – Sub blocks

Ha – Hectares



RESOURCES AND RESERVES TABLES



BAUXITE RESOURCES & RESERVES

CAPE YORK BAUXITE AND HMS JOINT VENTURE

URQUHART BAUXITE PROJECT RESERVES

	Area	Direct Shipping Bauxite (Low Temp)	Al ₂ O ₃	SiO ₂	THA	Low Temp RSi
		Dry kt	%	%	%	%
Proved	A	2,964	53.7	12.3	42.3	5.4
Probable	A	3,568	51.9	14.2	39.1	5.9
Ore Reserve	A	6,532	52.7	13.3	40.6	5.7

NOTES

1. THA = Trihydrate Alumina
2. THA = AAI @ 150°C

URQUHART BAUXITE PROJECT DSB MINERAL RESOURCE

AT AN EFFECTIVE CUT-OFF OF 48% Al₂O₃

Classification	Area	Mt	Al ₂ O ₃ %	SiO ₂ %	AAI%	RSi%
Measured	A	3.0	54.4	11.8	43.2	5.0
Indicated	A	3.9	53.3	13.1	40.8	5.2
Inferred	A	0.3	54.2	11.3	42.0	4.7
	B	2.3	49.9	17.4	37.2	6.0
	Subtotal	2.6	50.3	16.8	37.6	5.9
Total		9.5	52.8	13.7	40.7	5.3

NOTES

3. AAI = Available alumina Al₂O₃
4. RSi = Reactive Silica SiO₂

The information in the table above is summarised from the JORC 2012 Mineral Resource in the ASX Release dated 11 May 2015

REGIONAL BAUXITE EXPLORATION TARGETS

Project	Permit	Discrete Targets	Insitu mineralisation tonnage range Mt ²	Total Al ₂ O ₃ % ³	Total SiO ₂ % ³
Vrilya	EPM 15371	3	2 to 6	40-47	insufficient data ¹
Vrilya	EPM 25509	7	12 to 36	40-48	10-19 ¹
Vrilya East	EPM 25687	3	28 to 86	40-43	insufficient data ¹
TOTALS		13	42 to 128		

BAUXITE RESOURCES & RESERVES

*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.

1. previous exploration reports SiO₂ data incomplete
2. range based on measured areas of target plateaus, minimum thickness of >0.5 m bauxite, estimated average thickness of 1.5 m from previous exploration data and bulk density value of 1.5
3. based on screened sample assay results

The information in the table above is summarised from the JORC 2012 Mineral Resource in the ASX Release dated 11 July 2014.

The information in this report that relates to Exploration Results and Exploration Targets is based on information compiled by John Cameron (a geologist of more than 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.

WAGINA MINERAL RESOURCE ESTIMATE (2013)

Classification	Tonnes Dry Mt	Total Al ₂ O ₃ %	Total SiO ₂ %	Available ¹ Al ₂ O ₃	Reactive ¹ SiO ₂	Total Fe ₂ O ₃	Total P ₂ O ₅
Measured	26.1	46.8	3.0	40.4	2.3	16.7	3.5
Indicated	3.6	47.5	2.5	41.8	1.8	16.8	2.6
Inferred	0.5	46.7	3.6	40.3	2.6	16.9	2.7
Total	30.1	46.9	3.0	40.6	2.2	16.7	3.4

COMPETENT PERSON'S STATEMENT

The information in this report that relates to Exploration Results and Exploration Targets is based on information compiled by Dr Andrew White (a geologist of over 50 years experience), and a Competent Person who is a Fellow of the Australian Institute of Geoscientists, a Consulting Geologist employed by Andrew White and Associates Pty Ltd (AWA) and is a contract consultant to South West Pacific Bauxite Ltd.. Dr Andrew White 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. Dr Andrew White consents to the inclusion of this information in the form and context in which it appears in this release/report.

The Mineral Resource estimate was undertaken by Mr Geoff Reed, (a geologist of over 20 years experience), who is a Member and Chartered Professional of the Australasian Institute of Mining and Metallurgy and is a Consulting Geologist employed by Breakaway Mining Services Pty Limited. Mr Geoff Reed 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 Geoff Reed consents to the inclusion of this information in the form and context in which it appears in this release/report.

HMS RESOURCES

URQUHART POINT HMS RESOURCE ESTIMATE

GLOBAL MINERAL RESOURCE - 0% HM CUT OFF GRADE (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
Totals	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
Totals	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
Totals	3,087,040	5.94	183,425	13.30	1.08	10.3	11.6	12.7

The information in the table above is summarised from the JORC 2012 Mineral Resource in the ASX Release dated 24 June 2014.

HMS RESOURCES

URQUHART POINT HMS RESERVE ESTIMATE

ORE RESERVE ESTIMATE - 0.90% (Zr + 0.8 Rt + 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
Totals	1,177	9.5	7.9	1.0	1.1	1.3	1.2	112	11.7	13.6	13.1

NOTES

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 "Maiden Independent Ore Reserve for Urquhart Point HMS project" dated 24 June 2014.
6. The information in the table above is summarised from the "JORC 2012 Mineral Resource" in the ASX Release dated 24 Jan 2014.



NOTES TO RESOURCE TABLES

GOVERNANCE OF MINERAL RESOURCES

The Company engages external consultants and Competent Persons to prepare and calculate Mineral Resources estimates. These estimates and underlying assumptions are reviewed by the Board and Management for reasonableness and accuracy. The results of the Mineral Resource estimates are then reported in accordance with the JORC codes and other applicable rules. Where material changes occur during the year to a project, including project's size, title or exploration results or other technical information, then previous resource estimates and market disclosures are reviewed for completeness.

Metallica reviews its Mineral Resources annually. Where a material change has occurred in the assumptions or data used in previously reported Mineral Resources, a revised resource estimate will be prepared as part of the Annual Review process.

MINERAL RESOURCES AND ORE RESERVES STATEMENTS NOTES

Tonnages, grades and contained metal have been rounded to reflect the accuracy of the calculations. Rounding errors may occur.

Mineral Resource estimates are completed in accordance with JORC (2012) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The information provided in this report is summarised from the latest Mineral Resource statements as referenced in each case.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements, and in the case of estimates of Mineral Resources that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. Metallica confirms that the form and context in which the Competent Person's findings are presented have not materially changed from the original market announcement.

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	Shares	%
1	J IEN MINING PTY LTD	40,099,678	12.44
2	PLAN-I PTY LTD	13,287,502	4.12
3	J P MORGAN NOMINEES AUSTRALIA LIMITED	6,730,065	2.09
4	BONDLINE LIMITED	4,910,966	1.52
5	MR PAUL DOSTAL	4,500,000	1.40
6	COROWA NOMINEES PTY LTD	4,380,098	1.36
7	MRS CAROLYN DOW	3,500,000	1.09
8	MR LEWIS ALFRED SHOTTER	3,300,000	1.02
9	MBM CORPORATION PTY LTD	3,200,000	0.99
10	LATSOD PTY LTD <DOSTAL SUPERFUND A/C>	3,000,000	0.93
11	ASDEN INVESTMENTS PTY LIMITED <ASDEN P/L STAFF S/F A/C>	2,745,121	0.85
12	GEFRATO TRADING PTY LTD	2,610,000	0.81
13	BNP PARIBAS NOMINEES PTY LTD <IB AU NOMS RETAILCLIENT DRP>	2,575,302	0.80
14	AUSTRALIAN EXPORTS & INDUSTRIALISATION SUPER PTY LTD <BUCK FAMILY SUPER FUND A/C>	2,512,500	0.78
15	MR GRAHAM RAYMOND DOW	2,500,630	0.78
16	CODAN TRUSTEES <THE MOUNT COTTON ACCOUNT>	2,500,000	0.78
17	MINNELEX PTY LTD <PYPER FAMILY A/C>	2,465,260	0.76
18	BUCKINGHAM INVESTMENT FINANCIAL SERVICES PTY LTD <LENNOX HEAD PROPERTY A/C>	2,000,000	0.62
19	PWS SUPER PTY LTD <PURE WATER SYSTEMS S/F A/C>	2,000,000	0.62
20	MRS ZI JUAN QI <CHEN FAMILY A/C>	2,000,000	0.62
TOTALS		110,817,122	0.3437
BALANCE OF REGISTER		211,630,286	0.6563
TOTAL SHARES ON ISSUE*		322,447,408	100%

*As at 30 September 2018

