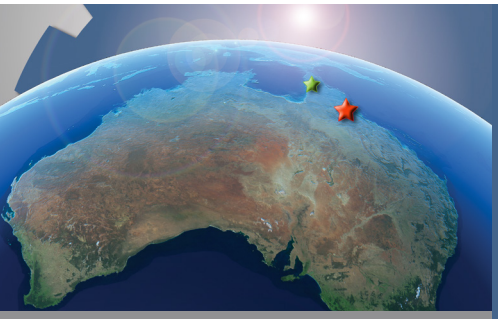
Quarterly Report

to 30 June 2014



ASX Release

29 July 2014

Metallica Minerals Ltd

An Australian zircon-rutile, bauxite and nickel-cobalt-scandium resource development and exploration Company

ASX:MLM

ISSUED CAPITAL (30/06/14)
160,641,830 Ordinary Shares
18,779,166 Options
(5M options expired 02/04/14)
See latest Appendix 5B Lodged 03/07/2014 for more detail

SHAREHOLDERS (30/06/14)
2,107 shareholders

Top 20 shareholders hold 58.6%

LARGEST SHAREHOLDERS
Jien Mining Pty Ltd – 24.9%
Victorian Ferries Pty Ltd – 10.8%
Golden Breed Pty Ltd – 6.2%
Bondline Ltd – 3%

DIRECTORS
David K. Barwick – Non Exec Chairman
Andrew Gillies – Managing Director
Barry Casson – Non Exec Director
Shu Wu – Non Exec Director
(Tao Li – Alternate Director to Mr Wu)

SENIOR MANAGEMENT
John Haley – CFO & Company Secretary
Stewart Hagan – GM Industrial Minerals

CASH BALANCE
As at 30 /06/14, MLM's cash balance was approximately $1.24 million. No Debt. $500,000 Research and Development tax offset is expected by October 2014.

Project Highlights

ALL PROJECTS 100% OWNED

URQUHART POINT AND CAPE YORK HMS & BAUXITE PROJECT

The Cape York Heavy Mineral Sands (HMS) project has been the focus of activities and expenditure in the June Quarter, culminating with the completion of the Urquhart Point HMS Reserve and a positive Feasibility Study. In addition, there was the inclusion of substantial nearby bauxite (Bx) exploration areas; now called the Cape York HMS and Bauxite project.

URQUHART POINT HMS & BAUXITE PROJECT – MINING LEASE

- The Resource at Urquhart Point has a combined Measured and Indicated Resource of 3.09 million tonnes (Mt) at 5.94% Heavy Minerals (HM) at a cut-off grade (COG) of 2.0% HM. *For further information, see ASX Release dated 20 May 2014.*
- Within this Resource is a Proved and Probable Ore Reserve estimated by IMC of 1.18Mt at 9.5% HM, 8% oversize and 1% slimes. The HM assemblage is estimated to be 11.7% zircon (Zr), 13.6% rutile (Rt) and 13.1% ilmenite (Ilmn), see Table 1.
- Positive Feasibility Study received from independent Mining Consultants, IMC Mining Pty Ltd.
  - Capex of AU$6.5M and estimated project NPV 10% is AU$4.9M, IRR is 69%.
  - Supports economics for a 5 year mine life based on current Ore Reserves.
  - One (1) year payback period from start of operations.
  - Simple shallow (<3m) dry sand mining (240,000 ore tonnes per year) and conventional wet gravity separation (spirals) plant operation to produce a mixed heavy mineral concentrate (HMC) product for sale.
- Quotes and estimates for the processing plant and related equipment alternatives have been obtained.
- Subject to project funding, it is Metallica's aim to initiate development of Urquhart Point project as soon as practicable with planned production commencing in mid-late 2015. *For further information see ASX Release dated 24 June 2014*

URQUHART POINT BAUXITE PROJECT – EXPLORATION

- 8km^2 combined bauxite plateau exploration target within EPM 15268 adjoining Rio Tinto's large mining leases covering bauxite resources, see Figure 7.
- 8 auger holes completed in **Area B** – best hole - recorded 57% total Al_2O_3 and 6% total SiO_2 which is high quality and strongly indicates potential for Direct Shipping Ore (DSO) bauxite from nearby proposed Urquhart Point barge sites, see Figures 2 & 7.
- Urquhart Point Exploration Target* 5-10Mt insitu bauxite mineralization – see Table 3.

ABN: 45 076 696 092 | ☎ +61 7 3249 3000 | +61 7 3249 3001 | admin@metallicaminerals.com.au | ASX:MLM
www.metallicaminerals.com.au | 71 Lytton Road, East Brisbane QLD 4169 | GPO Box 122, Brisbane QLD 4001

Highlights

CAPE YORK HMS & BAUXITE PROJECTS CONTINUED

CAPE YORK REGIONAL HMS EXPLORATION

- Limited regional HMS exploration included the T16 HMS deposit (discovered October 2013), see Figures 2 & 6.
- Field work is expected to commence by the end of the September Quarter, primarily on further defining and expanding the extents of HM mineralization at T16 as well as other nearby HMS and bauxite targets. *For further information as ASX Releases dated 11 July 2014 and 22 January 2014.*

CAPE YORK REGIONAL BAUXITE EXPLORATION

- Significant areas of bauxite identified in a review of Cape York tenement portfolio.
- 15 bauxite Exploration Target* areas delineated within existing tenement areas, see Figures 2, 6 & 7.
- Includes many coastal bauxite targets near Vrilya Point, 160km north of Weipa, see Figure 6.
- Initial combined bauxite Exploration Target* across all Metallica's Western Cape York tenements is in the range of 47Mt - 138Mt (including Urquhart Point EPM Exploration Target 5Mt-10Mt) – see Table 3. *For further information see ASX Release dated 11 July 2014.*
- In June the Queensland Government released updates under the proposed Cape York Regional Plan (CYRP), the maps showed none of Oresomes Cape York exploration tenements are within the designated Strategic Environmental Areas (SEA'S). Any future proposed mining operations on Metallica's tenements are expected to be subject to only the existing Environment Impact Statement (EIS) processes. *See ASX Release dated 17 June 2014.*

COMBINED HMS & BAUXITE STRATEGY

- The strong synergies and costs savings present for the exploration, evaluation and possible future development of the Cape York mining, transport, barging, export shipping infrastructure for both HMS and bauxite deposits. Especially the projects in close proximity such as Urquhart Point (near Weipa) and Vrilya Point (160km North of Weipa).

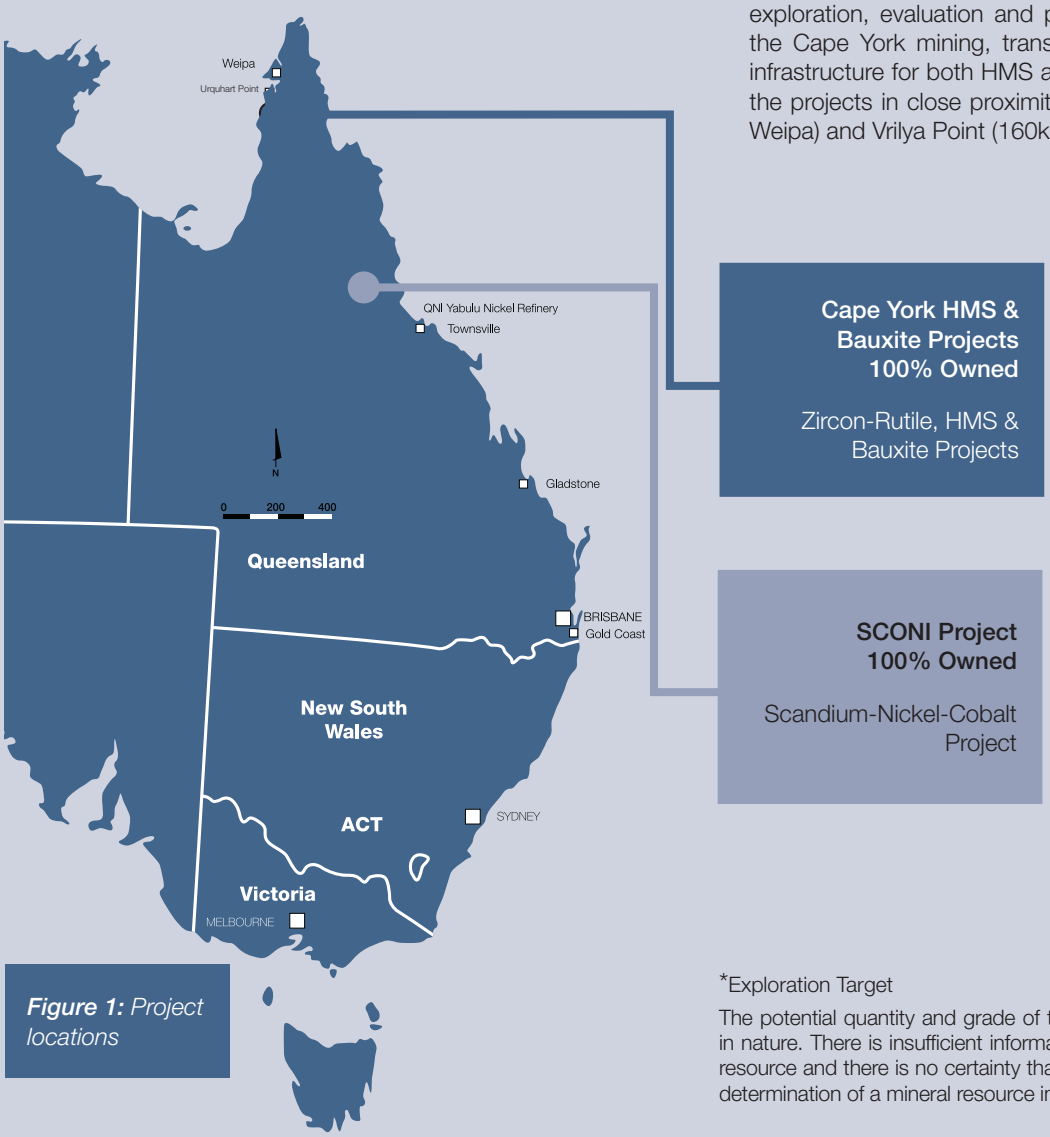


***Figure 1:** Project locations*

*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.

Highlights

SCONI PROJECT

BAUXITE MARKET OUTLOOK HIGHLY FAVOURABLE

Increasing bauxite demand and prices are expected to intensify due to the simultaneous major reduction in bauxite supply from Indonesia (due to unprocessed mineral export ban) and India, and increased demand for alumina to supply rising aluminium production and consumption in China, India and Middle East. *Further information see page 13 of this Quarterly Report.*

SCONI PROJECT SCANDIUM, NICKEL AND COBALT

Metallica is continuing with the following activities on a conservative and as required basis;

- Mining Leases have been granted by the Mining Registrar securing the Lucknow (scandium-nickel-cobalt) and Bell Creek Consolidated (nickel-cobalt) Projects, see Figure 9.
- Progressing negotiations with interested parties and reviewing possible scandium development options with potential partners in the SCONI (Scandium-Cobalt-Nickel) Tri-Metal Project project. The nickel price and outlook has improved considerably since late 2013.
- Seeking additional offtake agreements and/or alliances with end users of scandium.
- Progressing its intellectual property and patent applications for refining scandium ores to high purity scandium oxide (>99.9%).
- SCONI Environmental Impact Assessment (EIS) studies are well advanced but currently on hold (due to funding constraints) for the Greenvale Mining Lease application.
- SCONI related exploration tenements have been further rationalized and minimised, focus on existing resources secured within granted mining leases and mineral development licences for future development.

CORPORATE

Project expenditure (other than the Urquhart Point Feasibility Study) and administrative costs further reduced during the quarter, until further funding can be secured.

SAFETY

There were no lost time injuries recorded during the June quarter.

>99.9% purity scandia (scandium oxide) produced from pilot plant testwork on SCONI scandium ore.

The SCONI Project is unique and requires strategic partners to fully implement a new and exciting critical metals market in scandium.

Financials

To be read in conjunction with Appendix 5B lodged with ASX on 3 July 2014

FINANCIAL & INVESTMENT POSITION

- Metallica's had approximately $1.24M in cash (no debt other than trade creditors) as at 30 June 2014
- Metallica holds 64,300,000 in MetroCoal Limited (ASX:MTE) securities which had a market value of approximately $2.5M as at 28 July 2014. Metallica's investment in Cape Alumina Ltd was sold in April 2014.

COST REDUCTIONS IN THE QUARTER

Other than the completion of the Urquhart Point HMS Feasibility Study, the Company continued to further reduce project and administrative costs during the quarter to conserve Metallica's cash position. Metallica is pursuing project funding, strategic partnerships, off-take arrangements and progressing its Cape York HMS and Bauxite Project and SCONI project mining leases, applications and environmental licences on a low cost basis. The Board will revisit the reduced expenditure program once further funding is secured.

OUTLOOK FOR H2 2014

- The first half of 2014 has continued to be extremely difficult for both exploration and junior resource companies. The Company will continue seeking potential strategic investors for both the Cape York zircon-rutile and bauxite Project and the SCONI Ni-Co-Sc Project. Expenditure on the Company's projects will continue at reduced levels until such time as further funding is secured and market conditions substantially improve.
- The Board and management will keep all options open for corporate transactions, which despite market conditions, could potentially deliver substantial value and future growth for our shareholders. It is our intention to be well prepared for the next upturn in the resources sector and equity markets.
- Metallica is in advanced negotiations for funding the proposed Urquhart Point HMS mine and subject to funding, its development could commence in the September Quarter.
- There will be continued emphasis on gaining project partnerships for advancing our resource development projects – the proposed Urquhart Point HMS development, the Cape York HMS & Bauxite exploration projects and the SCONI nickel-cobalt and scandium projects.
- The Queensland Government's CYRP which came into force on 13 June 2014 confirmed that all tenements held by Metallica and its subsidiaries are currently unaffected, this allows Oresome to confidently explore the west coastal region of Cape York.
- Subject to additional funding, the Company plans to continue regional exploration, including a further drilling program on the T16 HMS discovery and on the Company's other Cape York tenements where at least 10 HMS and 15 bauxite Exploration Targets* have been identified.

Looking east above the Urquhart Point ML & proposed HMS mining area (including barge loading sites) across the Embley River (a deep protected shipping channel), Weipa Port and Township. Further distance is Rio Tinto's Weipa bauxite mining and shipping operations.

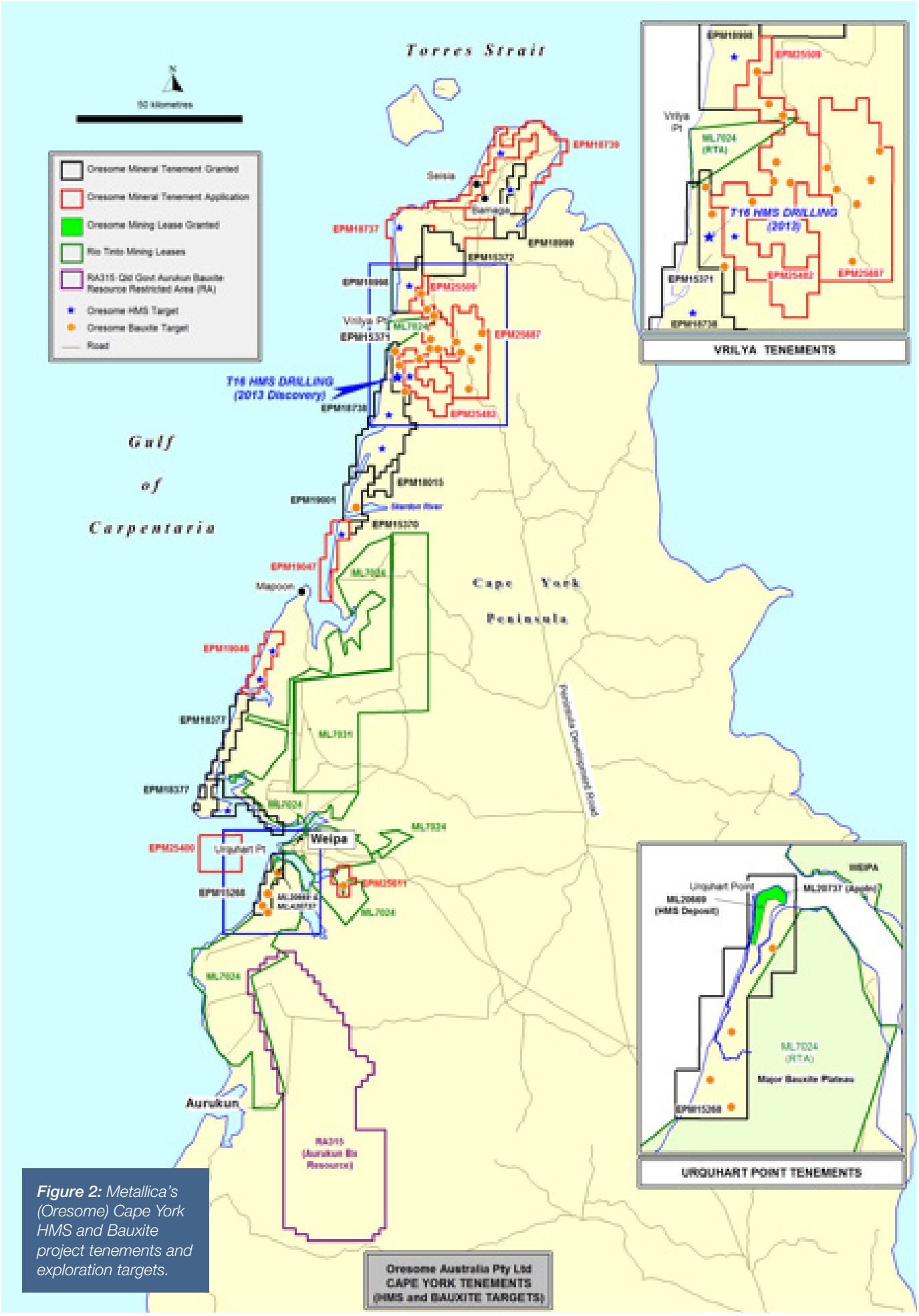


Figure 2: *Metallica's (Oresome) Cape York HMS and Bauxite project tenements and exploration targets.*

Urquhart Point and Regional Cape York HMS & Bauxite Project

100% OWNED

URQUHART POINT MINING LEASE

Metallica is planning to develop a simple dry mining (<3m depth) and wet mineral processing using standard gravity (spiral concentrators) HMS separation and concentration operation. The mineral processing essentially involves the separation of the heavy minerals (>4 specific gravity (SG) density) including zircon-titanium minerals and iron oxide minerals of the sand which averages approximately 6-10% of the HMS from the lighter (<3 SG) quartz and calcareous sands (i.e. normally averaging >90% HMS). No chemicals are required for HMS processing or HM concentration.

The HMS processing rate is proposed to be approximately 100 tonnes per hour (~240,000 tonnes per year) to produce HM concentrate over a 5 year mining and processing life.

During the quarter, Metallica focused on the successful completion of the Feasibility Study and has continued to actively advance appropriate project funding and offtake options to enable planned development of the Project.

MAIDEN INDEPENDENT ORE RESERVE ESTIMATE

- Proved and Probable Ore Reserve estimated by IMC is 1.18Mt at 9.5% HM, 8% oversize and 1% slimes. The HM mineral assemblage is estimated to be 11.7% Zr, 13.6% Rt and 13.1% Imn. The HMS Reserves (see Table 1) are at surface, averaging between 1.5-2m in thickness.
- Estimated concentrate production of 87,000t with an average VHM assemblage of 14.8% Zr, 17.3% Rt and 16.2% Imn with the balance comprising predominately iron oxide sands.

The Urquhart Point Ore Reserve estimates are shown in Table 1 in accordance with the JORC 2012 guidelines. The Ore Reserve has been estimated by taking into account the relevant modifying factors including; environmental buffers, mining lease boundaries, ore loss and dilution and COG estimate.

The Ore Reserves estimates used a Zircon Equivalent cut-off grade (COG) of 0.90% taking into account the three saleable minerals; Zircon, Rutile and Ilmenite.

The formula used for the Zircon Equivalent is as follows:

Zircon US$1,500/t, Rutile US$1,200/t and Ilmenite US$200/t

The Ore Reserves are based on a Zr equivalent COG of 0.90% taking into account the three saleable minerals; zircon, rutile and ilmenite. The formula used for the Zircon Equivalent is as follows:

Zircon equivalent = zircon % + 0.8x rutile % + 0.13x ilmenite %.

The WCP recoveries used in the equivalence calculation are 98.2%, 98.0% and 95.8% for zircon, rutile and ilmenite respectively.

FEASIBILITY STUDY COMPLETED

Positive Feasibility Study received from IMC Mining Pty Ltd ("IMC") on Metallica's 100% owned Urquhart Point HMS Project near Weipa in Far North Queensland.

- Supports economics for a 5 year mine life based on current Ore Reserves. Required project capital is approximately AU$6.5 million with a one year payback period from the start of operations.
- Simple shallow (<3m) dry sand mining (240,000 ore tonnes per year) and conventional wet gravity separation plant operation (using spirals with no chemicals required) to produce a mixed heavy mineral concentrate (HMC) product for sale.
- Key financial metrics are summarised in Table 2, these provide a sound basis on which to proceed with Urquhart Point's project financing and development.

Table 2: Key Financial Metrics

Parameter	Quantity
NPV10%	AU$4.9M
IRR	69%
Mine life	4.9 years
CAPEX estimate	AU$6.5M
Undiscounted cash-flow (after CAPEX)	AU$7.3M

Table 1 : Urquhart Point Ore Reserve Estimate/Statement (June 2014)

		Head Grade						HM Tonnage & Mineral Assemblage			
Ore Reserve Category	Tonnes kt	HM %	OS %	Slimes %	Zircon %	Rutile %	Ilmenite %	HM kt	Zircon % of HM	Rutile % of HM	Ilmenite % of HM
Proved	967	10.6	8.1	1.0	1.2	1.4	1.4	102	11.1	13.7	12.9
Probable	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**

PROJECT EVALUATION

The Urquhart Point Project is modest in size but should provide reasonable investment returns.

The direct establishment cost for the project is estimated to be AU$6.5M and the operating cost, (inclusive of corporate overheads), is estimated to be AU$12.52/t of material mined.

It is estimated that the project will produce 87kt of concentrate at an average grade of 14.8% zircon, 17.3% rutile and 16.2% ilmenite.

During the life of the project, the concentrate is estimated to be valued between US$250/t to US$330/t FOB depending on the mineral composition and spot price of the minerals at the time of sale.

The project is required to pay two revenue based royalties, one to the Queensland Government and a second to the Wik and Wik Way trust.

A long term exchange rate between the US$ and the AU$ of 0.85 has been used to estimate the Ore Reserves and in the financial model.

The operating costs are estimated to be between AU$2.5M and $3.0M per year.

The net revenue for the Urquhart Point project is estimated to be high in the first year of the operation due to the high grades mined in the first mining areas. The net revenue is shown in Figure 3 and is based on the May 2014 TZMI price forecast, the undiscounted cashflow is graphically summarized in Figure 4.

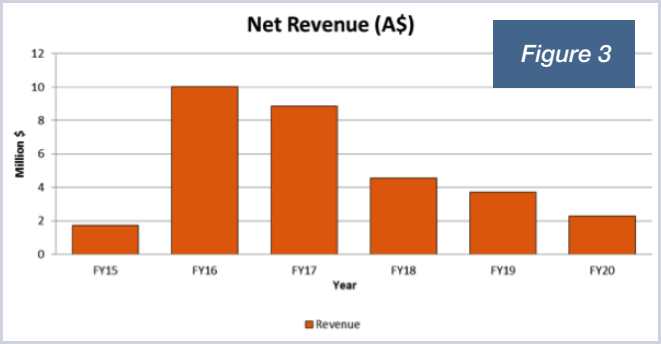


Figure 3

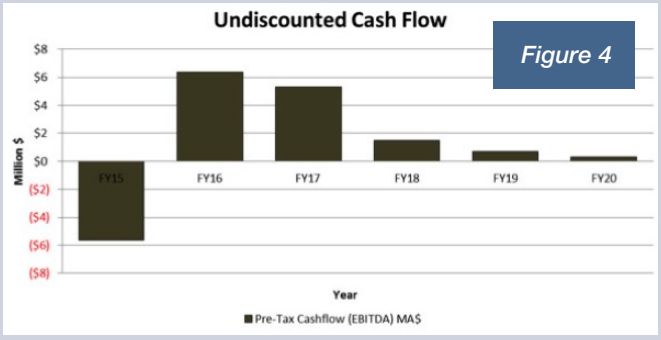


Figure 4

SENSITIVITY ANALYSIS

A sensitivity analysis was undertaken on the Net Present Value (NPV) of the Urquhart Point Project. A discount rate of 10% was used to discount the future cashflows.

The effect of +20% to -20% changes in the AU$:US$ exchange rate, commodity prices and operating costs was estimated and is summarised in Figure 5.

As with most commodity projects, the Urquhart Point project is most sensitive to changes in commodity prices and exchange rate. For example, a 20% increase in exchange rate (from 0.85 to 1.02 AU$:US$) is estimated to reduce the project NPV from AU$4.9M to AU$1.3M. Similarly, a 20% increase in commodity prices, is estimated to increase the project NPV from AU$4.9M to AU$9.1M, an increase of 89%. The project is less sensitive to changes in capital and operating costs as shown in Figure 5.

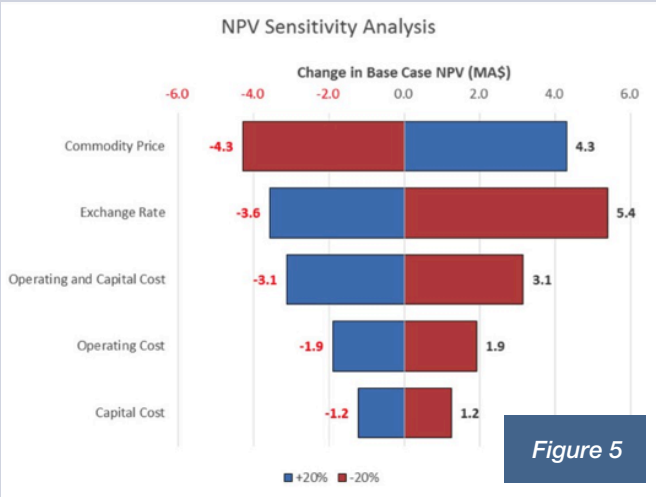


Figure 5

PROPOSED URQUHART POINT HMS DEVELOPMENT OPPORTUNITIES

There are several enhancement opportunities for the Urquhart Point HMS Project that have not been incorporated into the Feasibility Study. These opportunities include;

1. The two southern HMS strands, Heron and Egret, have been almost entirely excluded from the current proposed mine production schedule and the Maiden Ore Reserves due to the sparse mineral assemblage data. Including this material could add approximately 0.6Mt (2.5 years) of ore feed to the plant at 5.6% HM.
2. Oresome has over 2,500km^2 of exploration tenements over a 300km coastal belt prospective for HMS and bauxite deposits in the region. The successful development of the Urquhart Point Project is seen as an opportunity to showcase Metallica and Oresome's commitment to minimizing environmental impact and providing local employment in a safe and sustainable manner.
3. The project location is also proximate to significant bauxite discovery potential in the southern portion of the Urquhart Point EPM. There may also be an opportunity to use the Urquhart Point infrastructure, established local relationships and existing permits to facilitate Oresome's and/or a third party's bauxite mining, barging and shipping operation in addition to the HM concentrate barging and shipping capacity.

URQUHART POINT BAUXITE PROJECT (EPM 15268)

- 8km^2 combined bauxite plateau Exploration Target* within EPM 15268 adjoining Rio Tinto's large mining leases covering bauxite resources, see Figure 7.
- 8 auger holes completed in Area B – best hole - recorded 57% total Al_2O_3 and 6% total SiO_2 which is high quality and strongly indicates potential for Direct Shipping Ore (DSO) bauxite from nearby proposed Urquhart Point barge sites.
- Urquhart Point Exploration Target* 5-10Mt insitu bauxite mineralization – see Table 3.

First pass reconnaissance sampling over mapped bauxite (the principal oretype for aluminium) confirms potential for export quality bauxite within the Urquhart Point EPM.

Recently completed bauxite exploration on EPM15268 Urquhart Point, in May 2014 first phase reconnaissance hand auger drilling completed over four laterite plateau areas (Area A, B, C and D) has so far intersected significant and good quality bauxite at Area A and B *(see ASX Release dated 11 July 2014*).

The four plateau areas represent extensions and outliers of a major bauxite plateau within the adjacent large Rio Tinto Aluminium (RTA) mining lease.

Most promising is Area B which lies approximately 6km south of Metallica's existing Urquhart Point HMS ML being proposed for development (*refer to ASX Release Maiden Ore Reserve and Positive Feasibility Study for Urquhart Point HMS project dated 24 June 2014*).

At Area B, eight shallow hand auger holes were drilled to either blade refusal or a maximum depth of 3.4m (limit of auger drill capacity) at a nominal 600m spacing. The auger samples were wet screened at ALS laboratories in Brisbane to remove the fine fraction (<1.2mm), and analysed for total oxides. The best results from 8 holes recorded 57% total Al_2O_3 and 6% total SiO_2.

Area A is located adjacent to the boundary of the RTA ML covering an extensive bauxite plateau (see Figure 7). Area A was tested with two auger holes. Augur hole (AA1) assayed 53% Al_2O_3 and 12.2% SiO_2 in the interval from 2.25-2.75m ending in bauxite.

Mapping and sampling of Area A and Area B indicates that bauxite mineralisation on the two plateaus extends over a total Exploration Target* area of approximately 8km^2 within which, there is an Exploration Target* of 5-10Mt of bauxite mineralisation – see Table 3.

CAPE YORK REGIONAL HMS EXPLORATION (INCLUDING T-16)

- Due to focus on the Urquhart Point Feasibility Study limited work was undertaken on regional HMS exploration, including the T16 HMS deposit (discovered October 2013).
- Field work is expected to commence by the end of the September Quarter, primarily on further defining and expanding the extent of HM mineralization at T16 as well as other nearby HMS and bauxite targets

For further information as ASX Releases dated 11 July 2014 and 22 January 2014.

Photo from helicopter showing large Vrilya East bauxite laterite plateaus where bauxite targets are defined for grid drilling

The T16 project is located within EPM 15371 located immediately south of Vrilya Point and is the first regional tenement to be explored and just one of the 20 tenements held 100% by the Company. The drilled area (of which all 35 holes intersected significant HMS mineralisation) is only a small portion of the T16 target area and this in turn, is only a small portion of the regional HMS prospective zone. In essence, there is excellent potential for additional and potentially major HMS discoveries.

The T16 region is a very small part of the extensive exploration permits and applications covering approximately 2,500km^2 of mostly continuous ground prospective for mineral sands on east coastal areas of Cape York Peninsular, see Figure 2.

For further information see ASX Releases dated 22 January 2014 and 11 July 2014.

CAPE YORK REGIONAL BAUXITE EXPLORATION

- Significant areas of coastal bauxite identified in a review of Cape York tenement portfolio most particularly at Urquhart Point and the Vrilya area (160km North of Weipa).
- 15 bauxite Exploration Target* areas delineated within existing tenement areas, see Figure 2.
- Initial combined bauxite Exploration Target* across all Metallica's Western Cape York tenements is in the range of 47Mt -138Mt (including Urquhart Point EPM Exploration Target* of 5Mt -10Mt) – see Table 3.

  For further information as ASX Release dated 11 July 2014

In the June Quarter, Metallica completed a detailed review of its extensive Cape York tenement portfolio with the view to ascertaining the potential to host significant bauxite deposits in addition to the highly prospective HMS project.

The bauxite exploration potential is of such magnitude that Metallica has adopted an all-encompassing dual HMS - bauxite project exploration focus and strategy for Western Cape York, Queensland.

VRYLIA & VRYLIA EAST BAUXITE TARGETS

VRYLIA BAUXITE TARGET

The target areas south and east of Vrilya Point (approx. 160km North of Weipa) on EPM15371 and EPM25509 respectfully, are characterised by low lying, partly dissected and undulating laterite plateau.

Recent data compilation and desk-top studies have outlined eight prospective plateau zones (Figure 6) within the Oresome tenements where previous exploration drilling encountered bauxite intervals grading in excess of 40% Al_2O_3.

VRILYA EAST BAUXITE TARGETS

The Vrilya East tenement (EPMA 25687) includes a 210km^2 area of dissected aluminous laterite plateaus (see Figure 6) portions upon which previous company exploration reconnaissance was completed in the 1970's & 80's.

CAPE YORK REGIONAL PLAN (CYRP)

The Queensland Government released updates under the proposed CYRP which confirmed that future mining operations on the Company's Cape York tenements (see Figure 2) will only be subject to the existing Environmental Impact Statement (EIS) processes. *For further information see ASX Release dated 17 June 2014.*

A local barge, travelling via the deep protected 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 transhipment to a nearby ship.

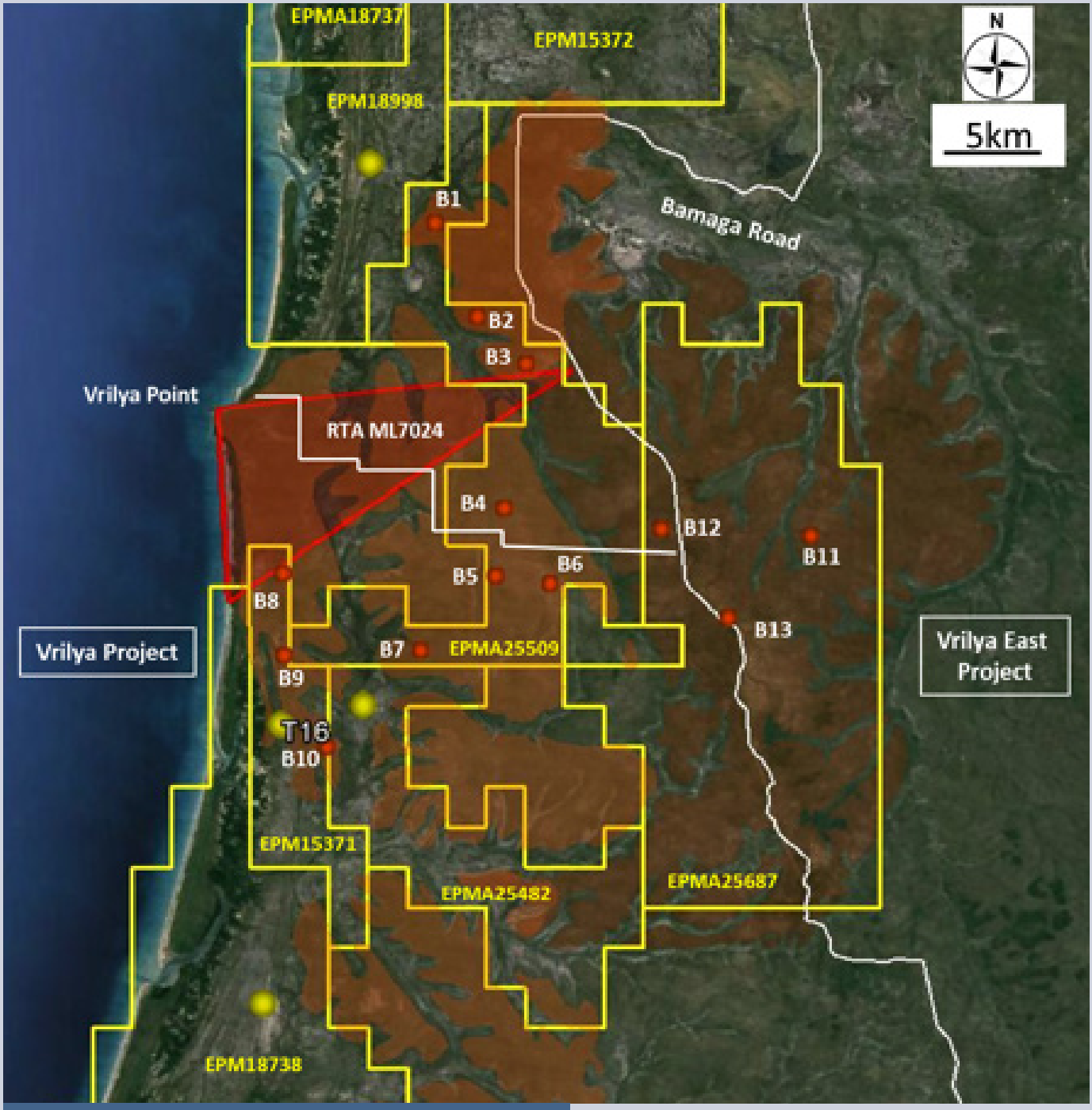


Figure 6: *Oresome's Vrilya and Vrilya East Project Tenements (numbered) with outline of Government and Oresome mapped laterite plateaus, access routes and identified bauxite targets (orange circles) and regional HMS targets (yellow circles).*

REGIONAL EXPLORATION PLANS FOR THE SEPTEMBER QUARTER

Metallica plans (subject to adequate funding) to continue exploration of its extensive regional tenements along the 300km sandy coastal belt between Weipa and the tip of Cape York Peninsula. Exploration work will focus on the recently discovered zircon rich T16 HMS deposit and nearby bauxite plateau targets. Initial evaluations will also continue on at least 10 untested radiometric targets already identified within strandlines, sand dunes and inland sand formations.

These features are not known to have been previously investigated for HMS accumulations and there is considered very good potential for extensive HMS mineralisation.

Many of Oresome's tenements also contain bauxite. These bauxite areas will also be evaluated to establish the bauxite quality and extent, starting on well defined target Area A and Area B in the Urquhart Point tenement and immediately east and north of the T16 HMS project in the Vrilya area.

KEY PRIORITIES - SEPTEMBER QUARTER

- Gain Urquhart Point HMS project development funding which could also extend to a portion of funds for regional exploration.
- On gaining project funding, initiate the development of the Urquhart Point Project.
- Grid drill Urquhart Point and Vrilya bauxite projects in conjunction with HMS targets (starting with the T16 HMS deposit) in current September quarter (subject to funding).
- Develop conceptual exploration and development plan (subject to appropriate permitting) to identify accessible DSO (Direct Shipping Ore) bauxite to be simply mined, screened and trucked to a barge-ship operation, such as already planned for Urquhart Point HMS project.

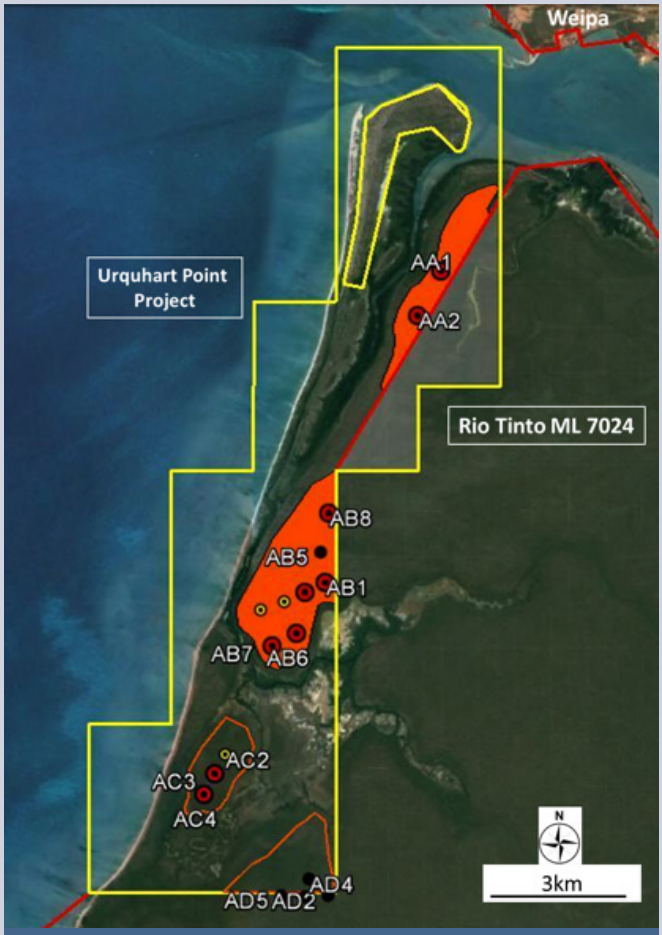


Figure 7: *Urquhart Point EPM15268 Location of targeted bauxite plateaus - Area A, B, C & D with summary shallow hand auger drill results – Red hole – bauxite intersected, Yellow hole - ended in overburden (i.e. bauxite or basement not reached) and Black hole - ended in non-bauxite. Full orange polygons outline future bauxite Exploration Targets* planned for grid drilling.*

Table 3: Summary of Oresome's Current Regional Bauxite Exploration Targets*

Project	Permit	Discrete Targets	Insitu mineralisation tonnage range (Mt)[2]	Total Al_2O_3 (%)[3]	Total SiO_2 (%)[3]
Urquhart Point	EPM15268	2	5 to 10	43-55	5-18
Vrilya	EPM15371	3	2 to 6	40-47	Insufficient data[1]
	EPMA25509	7	12 to 36	40-48	10-19[1]
Vrilya East	EPMA25687	3	28 to 86	40-43	Insufficient data[1]
	TOTAL	**15**	**47 to 138**		

NOTES

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.

Titanium Metals and Market

WHAT IS ZIRCON & RUTILE

Mineral sands are found along ancient shorelines. Mineral sands are mined and processed using gravity separation to produce Heavy Mineral Concentrate (HMC). HMC is further processed at a mineral separation plant to produce two main products, zircon and rutile and ilmenite (for titanium dioxide products).

INTRODUCTION TO TITANIUM

- Titanium (Ti) is created through a number of different processes to create a titanium dioxide (TiO) pigment, titanium sponge or titanium metal.
- Titanium dioxide is pure white, highly refractive, and can absorb ultraviolet light. For these reasons it is highly sought after as a pigment in paints, paper, plastics, rubber and other materials.
- Titanium dioxide is non-toxic, non-fibrogenic and biologically inert so it can be used in cosmetics, foodstuffs and pharmaceuticals.
- Titanium metal has a particularly high strength to weight ratio and is highly resistant to corrosion. For these reasons it can be used in a range of aeronautical and surgical applications, sporting equipment and jewellery.

INTRODUCTION TO ZIRCON

- Zircon ($ZrSiO_4$) is a principal mineral sand that has a wide range of industrial uses. Consumption is dominated by the use of milled zircon powder.
- Zircon is a hard, glassy mineral used for the manufacture of ceramics and refractories and also in a range of other high-tech industrial and chemical applications.
- It is used extensively for ceramic glazes, most commonly applied in kitchen tiles, dinner-ware, bathroom products and decorative ceramics.
- Zirconium metal has a very high melting point and has applications in nuclear fuel rods and other alloys.
- Over half of the demand for zircon comes from the ceramics industry, with housing titles a key driver of overall demand.
- There is a strong correlation between global economic growth rates and zircon demand. Zircon demand has increased along with the progressive industrialisation of emerging economies such as China and India.

Industrial ceramics made using zircon are used for heat and abrasion resistance. Some industrial ceramics are referred to as refractories - materials that retain their physical shape and chemical composition when subjected to very high temperatures.

With a melting point of around 1,800°C, refractories are used as linings to protect furnaces and kilns for smelting metals and for the manufacture of chemicals.

Resistance to corrosion makes zircon products ideal for use in the chemical industry and in desalination plants.

One of the early discoveries for zircon use was for the manufacture of phosphates for kidney dialysis. Zircon compounds have a low toxicity and are now increasingly preferred in the manufacture of some foodstuffs, pharmaceuticals and medicines.

WHAT IS RUTILE

Rutile (TiO_2) is a titanium mineral and is used to manufacture titanium dioxide pigment. Pure white, highly refractive and ultra-violet absorbing, titanium dioxide is used in protective coatings such as house and car paints, sunscreens, plastics, paper, and textiles.

Amongst a range of other uses, rutile and synthetic rutile can be used to make titanium metal, which is essential to the aerospace industry because of its lightness, strength and durability. Titanium metal is also used in desalination plants and corrosive chemical industries, because of its inertness and resistance to corrosion. Its non-reactive properties make titanium metal one of the few materials that can be used in the human body as hip replacements and pacemakers.

Rutile and leucoxene are further used as a flux material in welding electrodes for shipbuilding and civil engineering.

WHAT IS BAUXITE

Bauxite is the principle aluminium ore, and the world's main source of aluminium. Lateritic bauxites (silicate bauxites) are formed by extreme lateritic weathering and residual accumulation.

The lateritic bauxites are found mostly in the countries of the tropics. They were formed by laterisation of various aluminous silicate rocks such as shale, basalt, granite, gneiss etc.

In comparison with the iron-rich laterites, the formation of bauxites depends even more on intense weathering conditions in a location with very good drainage. This enables dissolution of kaolinite and precipitation of aluminium hydroxide minerals such as gibbsite. Zones with highest aluminium content are frequently located below a ferruginous surface layer.

In 2009, Australia was the top producer of bauxite with almost one-third of the world's production, followed by China (generally of lower grade and for domestic use only), Brazil, India, Indonesia and Guinea.

CURRENT SEABORNE BAUXITE MARKET

Early in 2014, the Indonesian Government confirmed its unprocessed minerals export ban, including bauxite exports. The Government legislated to restrict bauxite exports from Indonesia and reinforced that laws encouraging down-stream processing in Indonesia would remain in place. Indonesia was at that point, China's largest external provider of bauxite.

Indonesia's unprocessed minerals export ban is not temporary. China's dependency on Indonesian bauxite for three quarters of its import requirements has finally come to an end (CRU July 2014) as graphically shown in Figure 8.

Alternative suppliers have to come on stream and there are great opportunities for the right projects, particularly in Australia. Existing third party bauxite capacity is not sufficient to fill the void left by Indonesia and new projects need to come on stream soon, see Figure 8.

China is the World's largest alumina producer and consumer, but is short in bauxite, which is being consumed at an ever-increasing rate.

As a result, bauxite demand and prices are increasingly based on the continuing growth of the Chinese market and China is looking for a reliable, alternative, long-term supply of high-quality bauxite. Australia logistically is well placed to supply this demand.

Aluminium is now a more competitively priced metal than ever before and its consumption is rising faster than other metals. China has insufficient domestic bauxite to feed its burgeoning aluminium industry and imports 40% of its bauxite, mainly from Indonesia, Australia and India. Some bauxite is being imported from Guinea in West Africa, costing US$90/t (imported to China) – a clear indication of market stress about security of supply.

Cape York's proximity to China means Australia provides a logistical advantage over many other alternative supply sources and therefore positions Metallica to take advantage of any increase in demand for Australian bauxite.

Bauxite demand is intensifying due to a perfect storm of simultaneous reduction in bauxite supply from Indonesia, India and China and increased demand for alumina to supply the rapidly rising aluminium production and consumption in these markets.

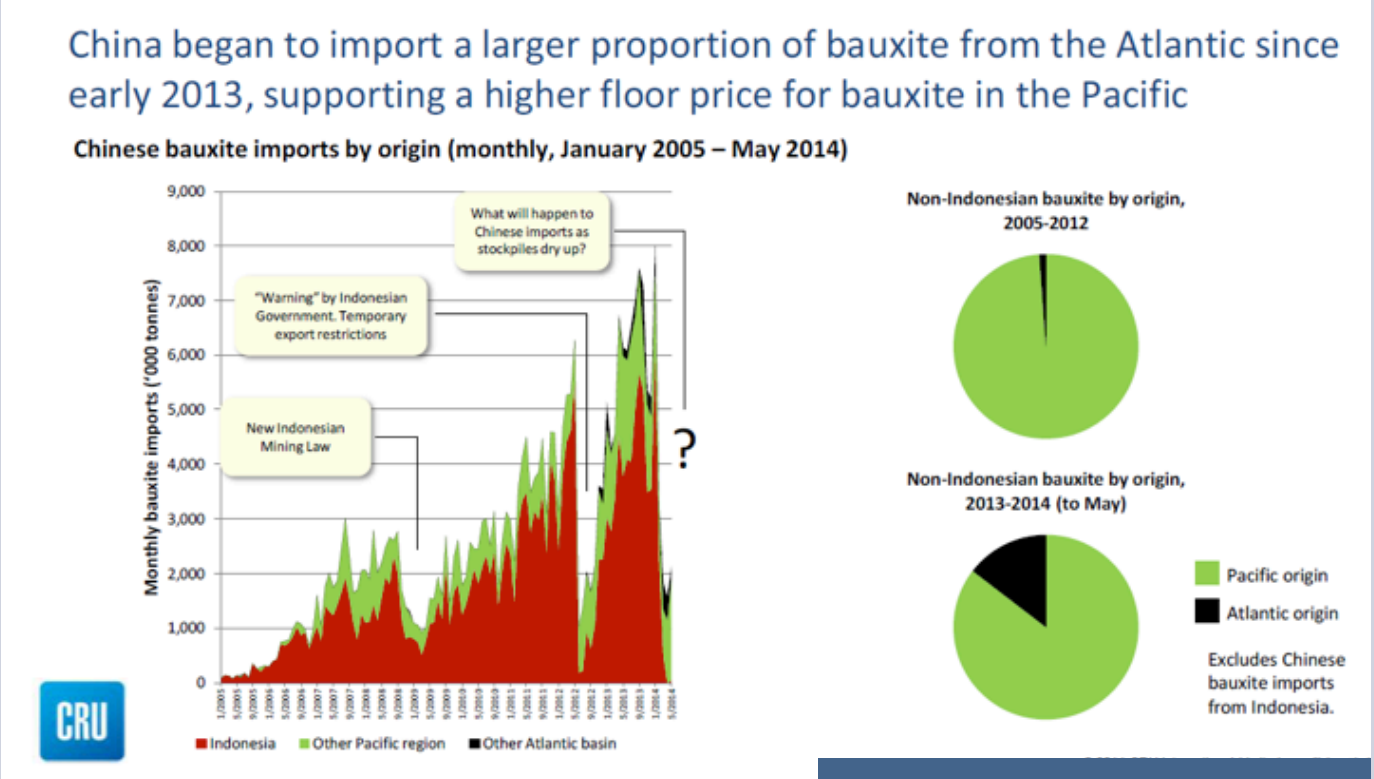


***Figure 8**: Indonesian bauxite supply to China collapsed after 12 January 2014 export bans*

Source: CRU Insight 23 July 2014, CRU International Pty Ltd

SCONI Project

SCANDIUM–COBALT–NICKEL PROJECT

DURING THE JUNE QUARTER

- During the June Quarter the Mining Registrar granted Mining Leases (ML) for Lucknow (scandium-nickel-cobalt) and Bell Creek Consolidated (nickel-cobalt) projects, see Figure 9.
- SCONI Environmental Impact Assessment (EIS) studies are well advanced for the Greenvale Mining Lease application area but currently on hold. SCONI related exploration tenements have been rationalized and minimised, focusing on existing nickel-cobalt and scandium resources at Bell Creek Minnamoolka, Kokomo, Lucknow, and Greenvale being secured within mining leases for future development.
- The SCONI project is a unique project that requires strategic partners to fully implement a new and exciting critical metals market – scandium. This takes time and business confidence.
- The Company seeks to enhance shareholder value through continued efforts to complete necessary permitting and to develop important relationships with interested parties for Ni-Co and Sc offtake and project participation.
- Fundamentals and outlook in the nickel market are improving particularly resulting from the Indonesian nickel laterite export ban a major supplier to China's nickel industry (particularly Nickel Pig Iron)
- SCONI will be marketed as a Nickel-Cobalt & Scandium tri-metal project to established Nickel companies who see major benefits in having a long life project in an excellent location in a relatively low risk country.
- Seeking partners for either a SCONI Scandium and/or a SCONI Ni-Co-Sc project development.

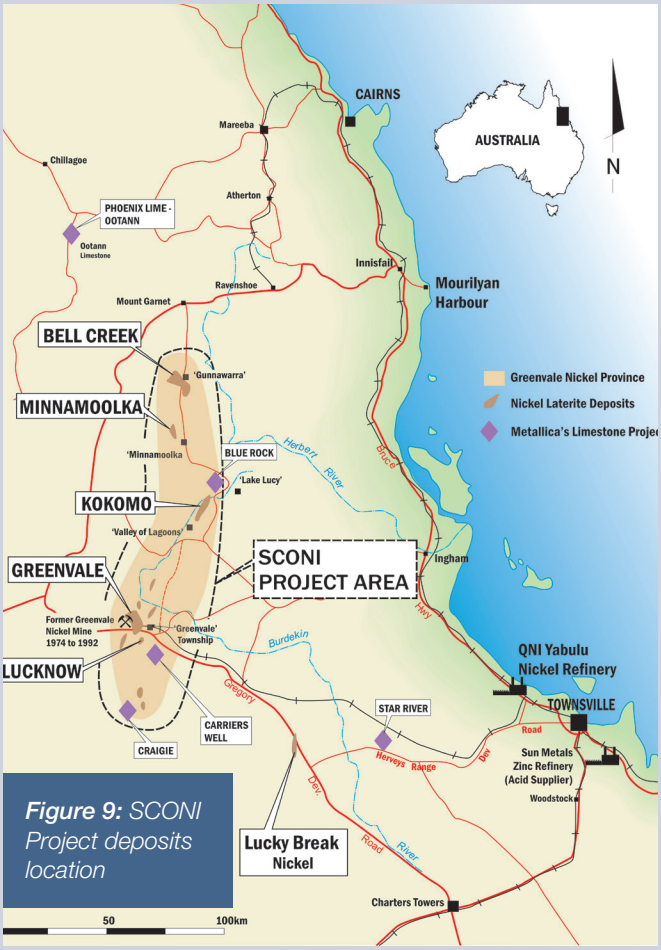


***Figure 9:** SCONI Project deposits location*

Scandium-Aluminium master alloy waffle
~98% Al & 2% Sc produced by KBM Affilips with whom Metallica has a strategic alliance
See ASX Release 7 November and 3 October 2012

SCANDIUM MARKETING

Metallica has continued scandium marketing as the size and growth of the potential global scandium market and opportunity cannot be underestimated. The two key focus sectors of our scandium marketing have been Solid Oxide Fuel Cells (SOFCs) and Aluminium Alloy industries (particularly aerospace).

Activity on SCONI is focused on entering into additional binding off-take agreements and/or strategic alliances with world leaders in SOFC and aluminium alloy developers and end users (most particularly the aerospace industry). Until further off-take agreements and project funding (via partnerships or joint venture) are entered into, minimum project activity is occurring.

About Scandium

ABOUT SCANDIUM

Scandium (Sc - Element 21 of the periodic table) is one of the 17 rare earth elements (REEs) and one of the most useful and valuable. High-grade, large tonnage, easily mineable scandium deposits with favourable metallurgy and location are scarce, making it a commodity that is difficult to obtain in commercial quantities.

Among other benefits, scandium has unique properties that can enhance the world's technological future. Scandium is one of the most potent strengthening elements that can be alloyed with aluminium to create stronger master alloys with applications in;

- Aerospace (and possibly in automobiles and transport generally) – seeking better range and fuel efficiency without compromising performance;
- High performance sporting equipment; and
- Additive layer manufacturing (3D printing) of complex metal shapes.

Scandium-strengthened aluminium alloys produce lighter-weight, higher-strength components and structures with superior weldability, better thermal and corrosion resistance and greater durability.

Scandium is used in the production of SOFCs by companies such as Bloom Energy. As the western world transitions towards green energy, SOFCs will become more widely used, providing clean and efficient energy that is driven by the massive worldwide expansion of natural gas usage and distribution infrastructure.

Scandium is used in SOFCs to enhance the efficiency of the zirconia electrolyte for generating electricity and recoverable heat through an electro-chemical process that converts fuel (typically natural gas, methane) and air (oxygen 20%) into electricity and heat without combustion, noise or moving parts. Scandium stabilised zirconia electrolyte provides very high ionic conductivity and efficiency which is not readily achievable with other elements.

The use of scandium has been limited by its scarcity of occurring in commercial concentrations and lack of reliable supply. The current total world supply of scandium is estimated to be around ten tonnes of scandium oxide per annum, all of which is sourced as a minor by-product from other metals and industrial processes. High purity scandium oxide currently sells at prices in excess of US$2,000/kg depending on product quantity and purity. However, as evidenced by the Company's Heads of Agreement with Bloom Energy (late 2012) and interest from Al Alloy manufacturers and end users, the potential market for scandium is poised for a step change in demand.

To learn more about the SCONI project and scandium, see the 4 page summary – 'A New Spice Metal to Enhance Industry & Life' on the Metallica website.

QUARTERLY REPORT 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.

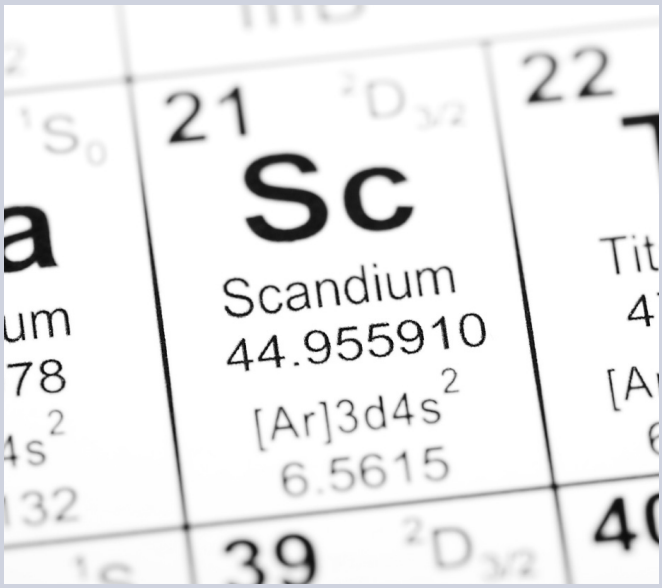
François Bazin has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral 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.

The **Technical information** contained in this report has been compiled and/or supervised by Mr Andrew Gillies B.Sci (Geology) M.AusIMM (Managing Director of Metallica Minerals Ltd) who is a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy (M.AusIMM). Mr Gillies has relevant experience in the mineralisation, exploration results 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.

CAUTION REGARDING FORWARD LOOKING STATEMENTS

Certain statements made in this announcement 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 publically 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.



Metallica Minerals Limited

An Australian zircon-rutile, bauxite and nickel-cobalt-scandium resource development and exploration company

ASX:MLM

Subsidiary companies:
NORNICO Pty Ltd ACN 065 384 045
Oresome Australia Pty Ltd ACN 071 762 484
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

ABN: 45 076 696 092 | ☎ +61 7 3249 3000 | +61 7 3249 3001 | admin@metallicaminerals.com.au | ASX:MLM
www.metallicaminerals.com.au | 71 Lytton Road, East Brisbane QLD 4169 | GPO Box 122, Brisbane QLD 4001