



# QUARTERLY REPORT

to 31 March 2015

## ASX Release

30 April 2015

**Metallica Minerals Limited is an Australian zircon-rutile, bauxite and nickel-cobalt-scandium resource development and exploration Company**

**ASX:MLM**

### ISSUED CAPITAL (31/03/15)

166,891,830 Ordinary Shares  
2,000,000 Options  
*See latest Appendix 5B Lodged 14/04/15 for more detail*

### SHAREHOLDERS (31/12/14)

2,056 shareholders

**Top 20 shareholders hold 59.46%**

### LARGEST SHAREHOLDERS

Jien Mining Pty Ltd – 24.0%  
Victorian Ferries Pty Ltd – 10.4%  
Golden Breed Pty Ltd – 5.3%  
Bondline Ltd – 2.9%

### DIRECTORS

David K. Barwick  
*Non Executive Chairman*  
Andrew Gillies  
*Managing Director*  
Barry Casson  
*Non Executive Director*  
Shu Wu  
*Non Executive Director*  
Shu Zhang  
*Alternate Director to Dr Wu*

### SENIOR MANAGEMENT

John Haley  
*CFO & Company Secretary*  
Stewart Hagan  
*GM Oresome Australia*

### CASH BALANCE

As at 31/03/15, MLM's cash balance was approximately \$2.11 million.  
No Debt.

## PROJECT HIGHLIGHTS

### URQUHART POINT AND CAPE YORK HMS & BAUXITE PROJECT

**60% MLM (OZORE RESOURCES PTY LTD EARNT 40% AND PROGRESSING TO 50%)**

The Cape York Heavy Mineral Sands (HMS) and Bauxite project has been the focus of activities in the March Quarter;

#### URQUHART HMS PROJECT

- Fabrication by Consulmet Pty Ltd of the Urquhart HMS processing plant has commenced in South Africa and is now expected to be shipped in mid May (previously early March) and delivered to Urquhart Point now in late July 2015
- Over \$4M has been expended by the JV on plant and equipment
- Site clearance works progressed for plant site, infrastructure and initial mining areas
- Zircon-Rutile concentrate production now expected to commence in September

#### URQUHART BAUXITE PROJECT

- Drilling results confirm Direct Shipping (DS) Bauxite with high alumina and moderate reactive silica drill results from Area A
- Attractive average grades of 40% available alumina ( $Avl Al_2O_3$ ) and 4.9% reactive silica (RXSi) from low temperature (150°C) digestion
- Demand and growth forecast for bauxite is strong
- Native Title negotiations, environmental studies and permitting commenced
- Resource estimation and conceptual development studies initiated

## COMPANY HIGHLIGHTS

- Queensland Nickel Pty Ltd (QN) have commenced open pit mining on Metallica's 100% held Dingo Dam nickel Mining Lease (part of the Lucky Break Project) with nickel laterite ore being trucked to the Palmer Nickel and Cobalt Refinery near Townsville
- \$250,000 Royalty payment received in January for Lucky Break Project, see Appendix 5B
- Three EPM Applications have been offered for grant, approximately 50 to 70km SW of Croydon in North Queensland. The area is highly prospective for graphite mineralisation uniquely hosted within granitoid rocks "Graphite in Granite" – Metallica is seeking partners.
- Cape Flattery Silica Sands project EPMA 25734 has been offered for grant, the tenement contains high purity silica sand deposits on a headland adjoining the world's largest silica sand operation
- Continuing to consider options to progress SCONI and realise value of limestone assets

# HIGHLIGHTS

## CORPORATE

### SAFETY

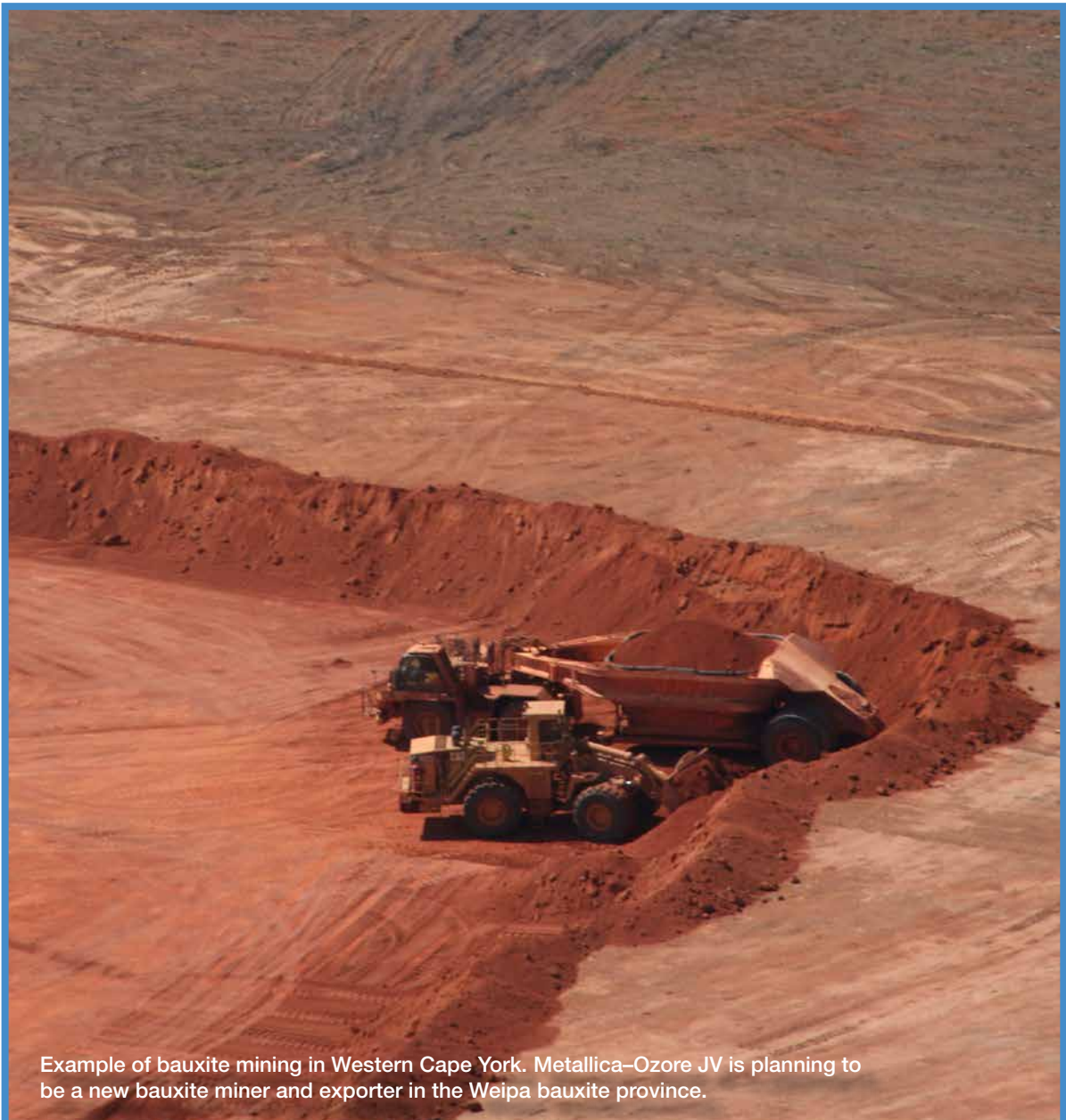
There were no lost time injuries recorded during the March quarter.

### FINANCIAL & INVESTMENT POSITION

Metallica had approximately \$2.11 million in cash (no debt other than trade creditors) as at 31 March 2015.

### COST REDUCTIONS IN THE QUARTER

The Company continued to further reduce project and administrative costs during the quarter to conserve funds. Expenditure on the Cape York HMS and Bauxite Project is now a Joint Venture (JV) cost as Metallica is free-carried to the extent of \$7.5M, of which approximately \$2.1M in funding is remaining.



Example of bauxite mining in Western Cape York. Metallica–Ozore JV is planning to be a new bauxite miner and exporter in the Weipa bauxite province.



# OUTLOOK FOR THE JUNE QUARTER

Urquhart HMS processing plant production now expected in September 2015 with first zircon-rutile concentrate shipment now expected in late 2015.

The Cape York HMS and Bauxite Joint Venture will also focus on progressing adjoining Bauxite deposits (Area A & B) near Urquhart Point and expects to have a maiden resource estimate and a conceptual development study completed by the end of June. The JV will also progress the regional Bauxite and HMS Projects subject to funding.

Metallica will progress negotiations for JV partnerships on the SCONI Ni-Co-Sc Project and is currently in negotiations with an established nickel company.

The Company is also evaluating opportunities to add to or realise the value of its Queensland Limestone assets.

Expenditure on the Company's non-core projects will continue at low levels and on an as required basis until such time as further funding is secured

and market conditions substantially improve. There will be continued emphasis on gaining project partnerships for advancing our resource development projects.

## MAJOR EMERGING BAUXITE OPPORTUNITY

On a commodity basis, we believe that 2015 will highlight the attractiveness of Metallica having considerable bauxite exposure. Unless there is a reversal of the bauxite export ban by the Indonesian Government (considered extremely unlikely), it is confidently forecast there will be a considerable shortfall in bauxite supply to China.

This bauxite shortfall should be reflected in a continuation of rising bauxite prices as reliable bauxite supply is critical to the Chinese alumina/aluminium industry. Indonesia previously supplied nearly three quarters of China's imported bauxite, which has been nil to negligible since early 2014.



Bauxite outcrop sampling

# CAPE YORK

## HMS AND BAUXITE PROJECT JV

<b>AREA</b>	2,500km <sup>2</sup> exploration tenements (see Figure 1)
<b>COMMODITY</b>	Heavy Mineral Sands (zircon, rutile, Ti minerals) and Bauxite
<b>HOLDING</b>	MLM 60% (JV), with Ozore Resources Pty Ltd (a private Chinese investor), holding 40% (earning a total of 50%)

### THREE SEPARATE PROJECT COMPONENTS

- **Urquhart HMS Project**  
committed to HMS process plant construction completion and production in September 2015
- **Urquhart Bauxite Project**
  - Direct Shipping Bauxite (DSB) confirmed for Area A (see ASX release 17 April & 26 February 2015)
  - Area B drilling confirmed additional bauxite in 40 of 62 holes (see ASX release dated 26 February 2015)
  - Confirmed high available alumina and moderate reactive silica for Area A (see ASX release dated 17 April 2015)
- **Cape York Regional HMS & Bauxite Project major exploration upside**  
Oresome (100% MLM subsidiary) holds extensive tenements in Western Cape York within the world class Weipa bauxite province. These tenements predominately cover two exploration target types; HM sand and laterite bauxite.

The Cape York HMS and Bauxite Project JV is located on the west coast of Queensland's Cape York, and will be held 50% by Metallica Minerals' wholly owned subsidiary, Oresome Australia Pty Ltd, with a 50% interest being earned by a private Chinese investor, Ozore Resources Pty Ltd (Ozore), pursuant to the Cape York HMS and Bauxite agreement entered into in August 2014.

In accordance with the Agreement, Ozore is to provide A\$7.5M (of which \$6M has been received for a 40% interest) to develop the Urquhart HMS Project, and to explore for additional HMS and bauxite deposits within the JV tenements held within the Cape York region. The funds are sufficient to finance the construction and commissioning of the Urquhart HMS Project by September 2015.

Since the formation of the Ozore-Oresome JV on the 8th September 2014, the JV has expended over \$5M on progressing the Urquhart HMS Project and regional exploration programs, with the majority of funds applied to the manufacturing of the HMS processing plant. Metallica has been free-carried for this total amount.



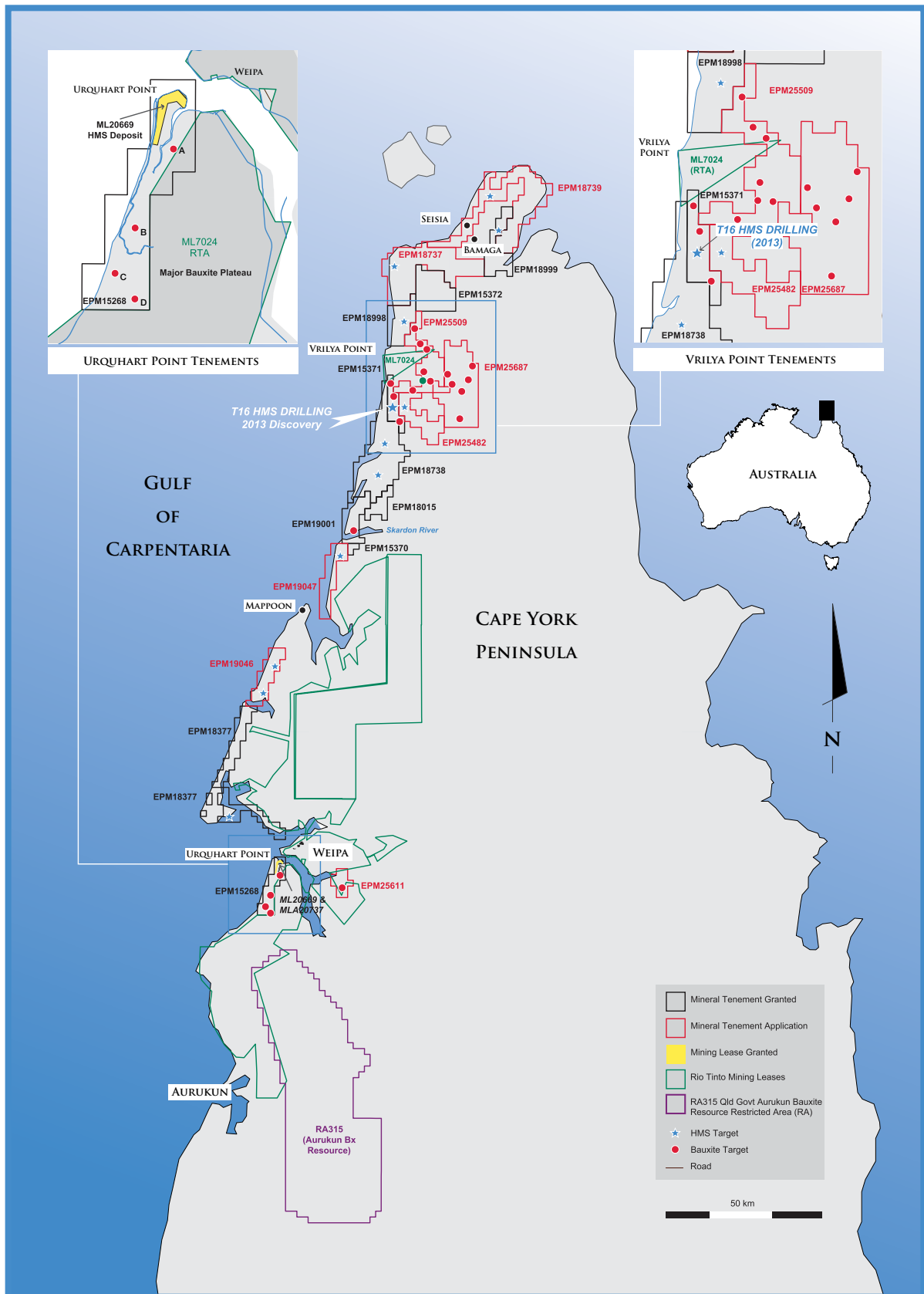


FIGURE 1: CAPE YORK HMS AND BAUXITE PROJECT'S REGIONAL SETTING



# URQUHART HMS PROJECT

The Urquhart HMS Project is located on Urquhart Point 3km south west of Weipa. (see Figure 1, 2, 3, 4 & photo page 18). The JV is developing a simple dry mining (<3m depth) and wet sand mineral processing operation using standard gravity (spiral concentrators) HMS separation to produce a zircon-rutile heavy mineral concentrate (HMC).

The mineral processing involves the separation of the heavy minerals (>4 specific gravity (SG) density) including zircon-titanium minerals and iron oxide minerals in the sand from the lighter (<3 SG) quartz and calcareous sands. No chemicals are required for HMS processing or HM concentration.

The HMS processing rate will be approximately 110 tonnes per hour (~270,000 tonnes per year) to produce HM concentrate over a 4 year mining and processing life based on the current reserve.

The JV has executed a legally binding Plant Supply Contract with Consulmet Pty Ltd ("Consulmet"). The plant supply contract is a fixed price turnkey contract (including fixed foreign exchange rate) to supply and deliver the plant and associated equipment to Weipa and for the commissioning of the fully assembled HMS concentrator plant (and associated infrastructure) on site at Urquhart Point (see Figure 2 & 3). The ordering of components and construction of the modularized plant has commenced in South Africa, and the plant is scheduled to arrive in Weipa in July 2015. The plant was due to be commissioned in June 2015 however the JV decided to add a fine sand screening unit (Derek screen) to remove >250 micron size trash fraction of the HMC plus an additional clean-up spirals. This extra equipment, fitted as a final processing stage is called the Concentrator Upgrade Plant (CUP) or the "back end" of the main processing plant, will further separate coarse and light sand material and enhance the quality of the zircon-rutile HMC. Because of this CUP addition, the plant is now expected to be delivered to site in late July and commissioned in early September 2015

with full scale HMS production commencing soon after.

The pre-civil site preparation works are currently on schedule. Offtake discussions and HMC product marketing have continued to progress.

## OPERATIONAL REVIEW

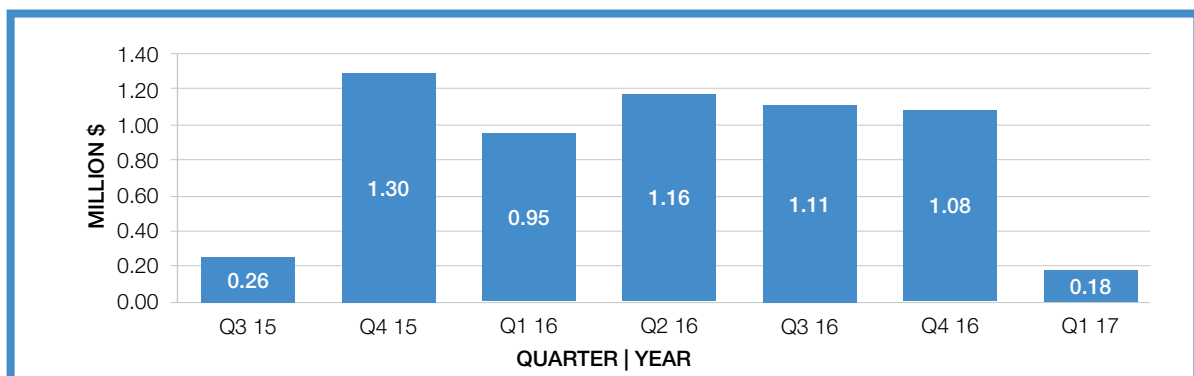
Due to the currently lower than anticipated prices of mineral sands (particularly Ti Minerals i.e. Rutile and Ilmenite) since the Urquhart Point HMS Feasibility Study in July 2014, (note: those decreases are partly offset by falls in the Australian dollar), the JV has internally revised the Project Financial model ahead of commencing JV operations. The Mining Schedule has also been revised to maximize feed grades and resulting cashflow, principally by further high grading and preparing a pre-production stockpile of high grade material.

As a result of these improvements, for the first seven quarters the average very high HM grade plant feed will be approximately 14%, comprising a zircon plus rutile assemblage (% of HM) of over 30% (see Figure 2).

Recent zircon market analysis from well known research participants have reported that current global mineral sands operations have an average HM grade of just over 4%, with combined rutile and zircon assemblages comprising 13% of this. However, of the new deposits under active investigation they estimate the zircon/rutile assemblages to be closer to 9%.

Metallica's long term outlook on zircon and rutile prices has not changed since the Ore Reserves were declared in mid 2014. The revised internal financial model has calculated that the project will generate approximately \$6M after tax cash flow in the first seven quarters of production (see graph below). Metallica will receive 50 per cent of this cash flow.

## UNDISCOUNTED AFTER TAX JV CASH FLOW



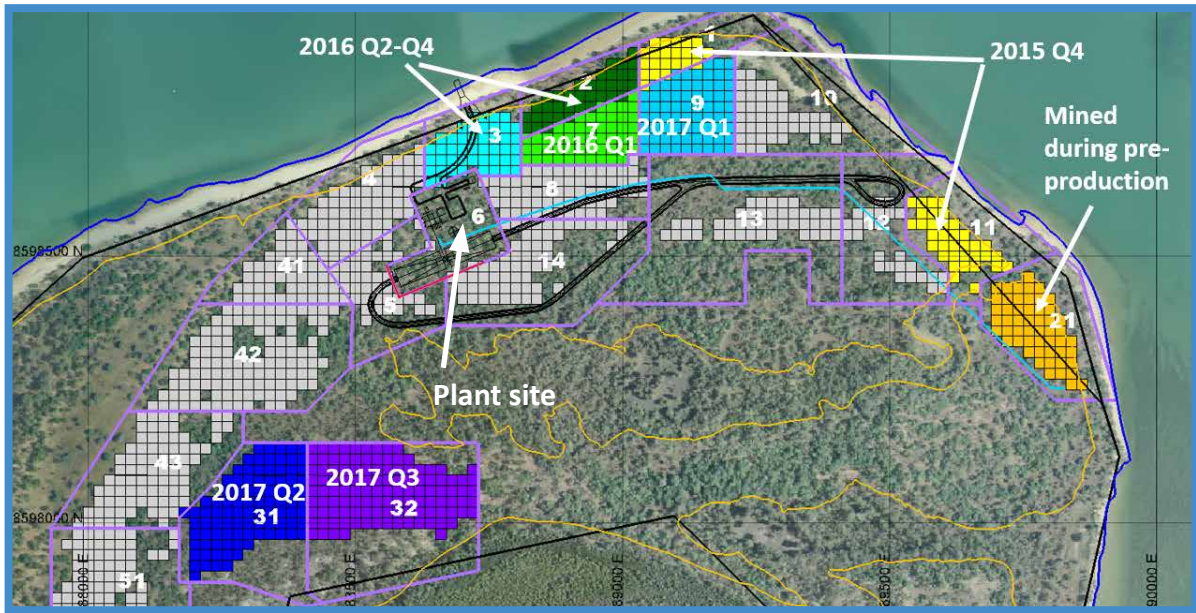


FIGURE 2: URQUHART HMS SITE & INITIAL MINING PLAN

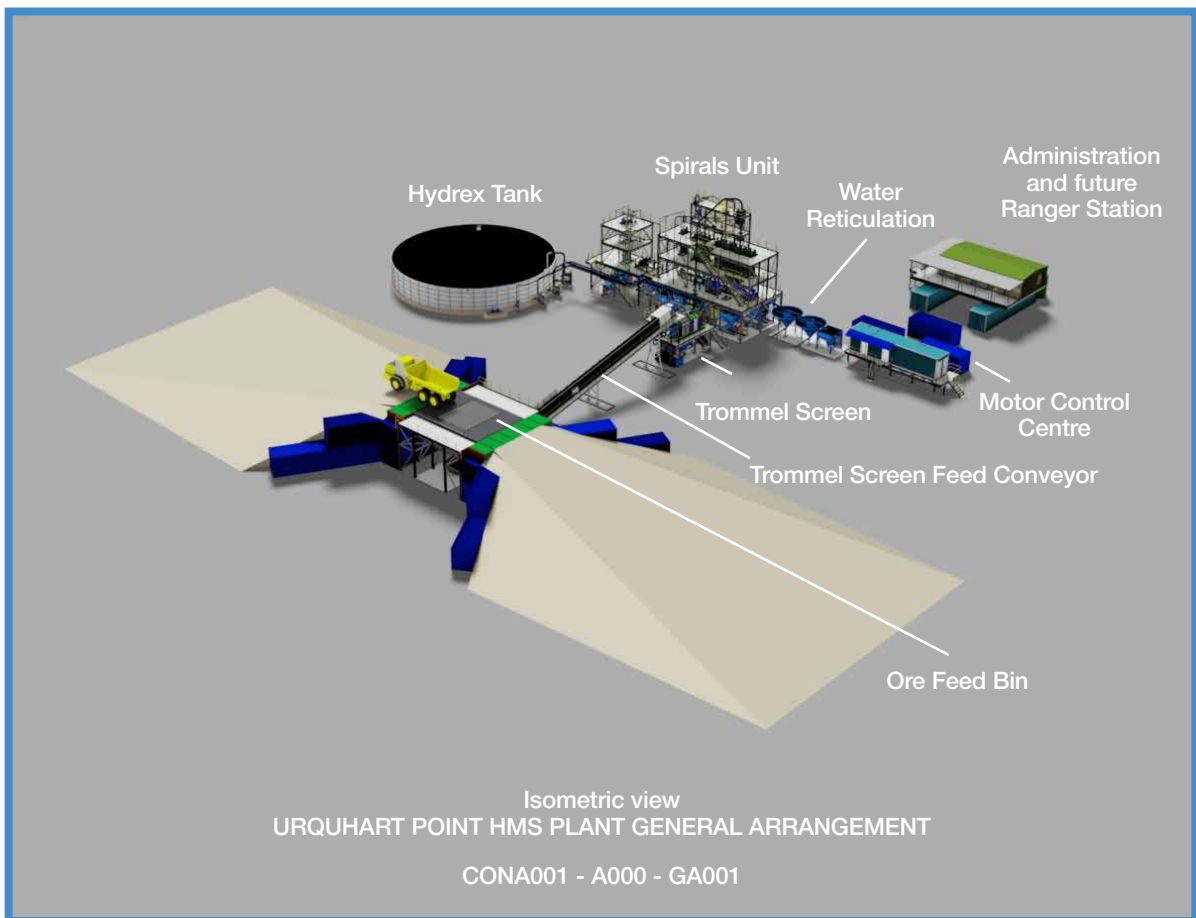


FIGURE 3: 3D CAD IMAGE URQUHART HMS PLANT DESIGN

# URQUHART DS BAUXITE PROJECT

The maiden Urquhart Bauxite aircore drilling program was completed in December 2014. The program consisted of 85 holes using an aircore drill rig (see Table 1). The holes were drilled in two target areas (Area A & Area B) on a nominal 320 x 320m grid pattern. The targets, Area A and Area B, are immediately southeast of the Urquhart Zircon-Rutile HMS mining project currently under development (see Figure 4).

**Table 1: Urquhart Bauxite Project Drilling Summary**

Area	Holes	Drilled (m)	Mean depth (m)
A	23	167.50	7.3
B	62	304.75	4.9
Total	85	472.25	5.6

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 (see Figure 5).

Area B drill program comprised 62 holes (total 305m drilled, average depth 4.9m) of which 7 holes were 160m spaced infill drill holes and 3 were duplicate holes.

The areas are located adjacent to the boundary of Rio Tinto Australia's mining lease covering the South of the Embley bauxite project, an extensive bauxite plateau (see Figures 1 & 4).

Attractive average grades of 40% available alumina ( $\text{Al}_2\text{O}_3$ ) and 4.9% reactive silica ( $\text{R}_x\text{Si}$ ) from low temperature ( $150^\circ\text{C}$ ) digestion testwork confirm high grade Direct Shipping Bauxite (DSB) from Area A. The available alumina and reactive silica results above meet key market criteria for export bauxite markets. *For further*

*information see ASX Release dated 17 April 2015.*

Area A is also close to the JV's current construction of a new zircon-rutile HMS mine and plant operation due for commissioning later this year.

The JV has commenced the preparation of a JORC compliant resource estimate and also commissioned a Wet Season environmental study. The JV expects that it will lodge bauxite Mining Lease Application(s) in May 2015.

The current base case conceptual development plan is to define and mine Direct Shipping (DS) bauxite at Area A & B. The shallow deposits will be simply mined (see image below) and the bauxite trucked approximately 8-12km through the JV's 100% owned tenements to a stockpile point within the Urquhart HMS mining lease near the shipping channel for barge loading on to a ship moored less than 1km distance in sheltered deep waters of the Embley River/Weipa port (see Figures 4, 5 and photos page 11 & 18). In conjunction or alternatively it may also be feasible (subject to a cost benefit study and commercial considerations) to truck the ore to the Hey Point Project (held by Green Coast Resources Pty Ltd) area for barging.

Bauxite demand forecast for at least the foreseeable future is expected to be very strong. This should be reflected in rising bauxite prices to levels well above the average bauxite price in recent years. The export opportunity will be selling bauxite to Chinese alumina companies and also traders now that a major portion of China imported bauxite supply has been taken from the market due to Indonesia's export ban in early 2014.

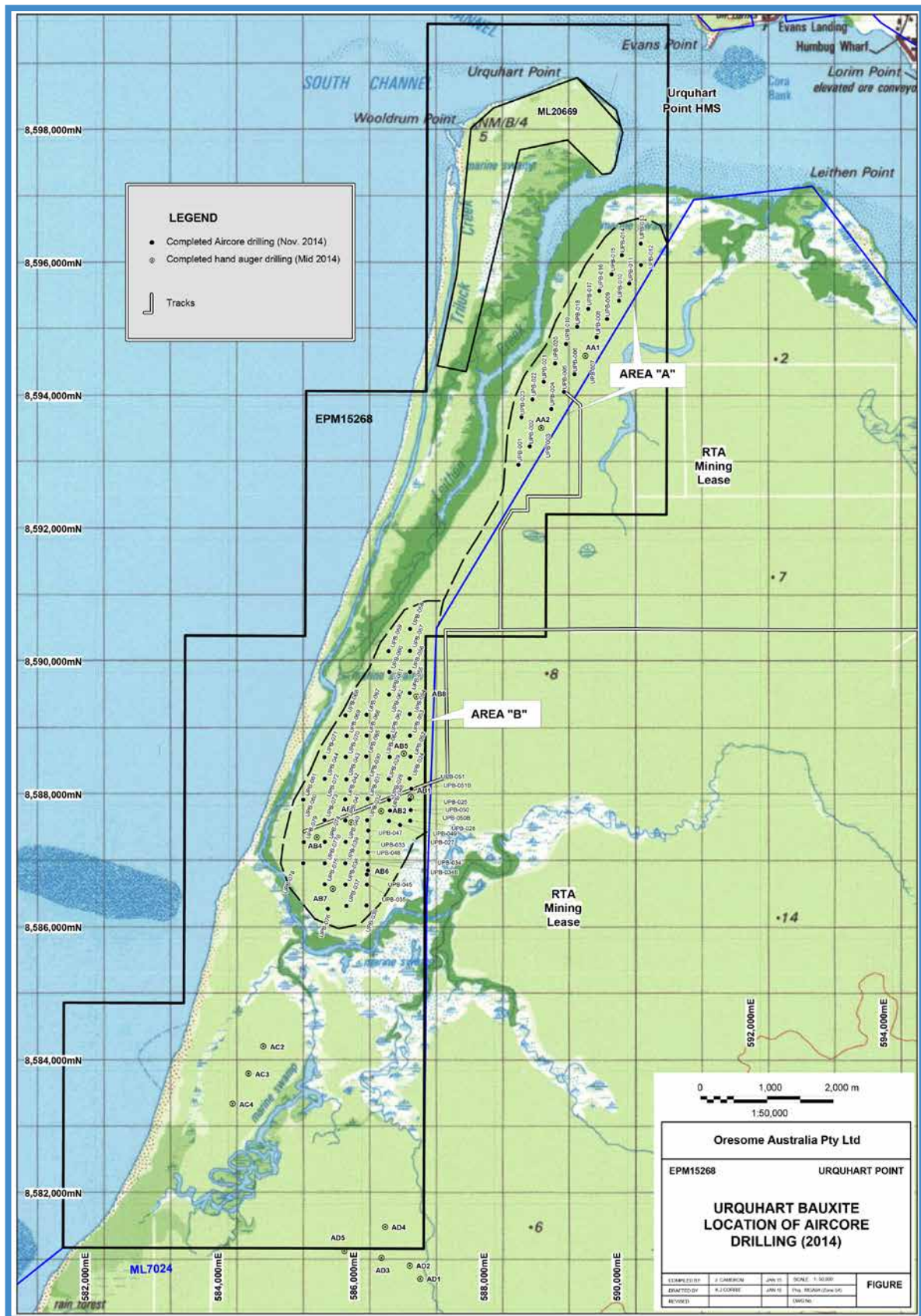
An independent bauxite market analysis forecast estimates China's bauxite import requirements to rise to 65-75Mtpa (dry) by 2020, this is up from 40Mtpa (dry) in 2014.

## DIRECT SHIPPING BAUXITE OPPORTUNITY

MINE → TRUCK → BARGE → SHIP → \$\$







**FIGURE 4: URQUHART HMS MINING LEASE & BAUXITE PROJECT AREA A & B DRILL HOLE LOCATIONS WITHIN EPM 15268**

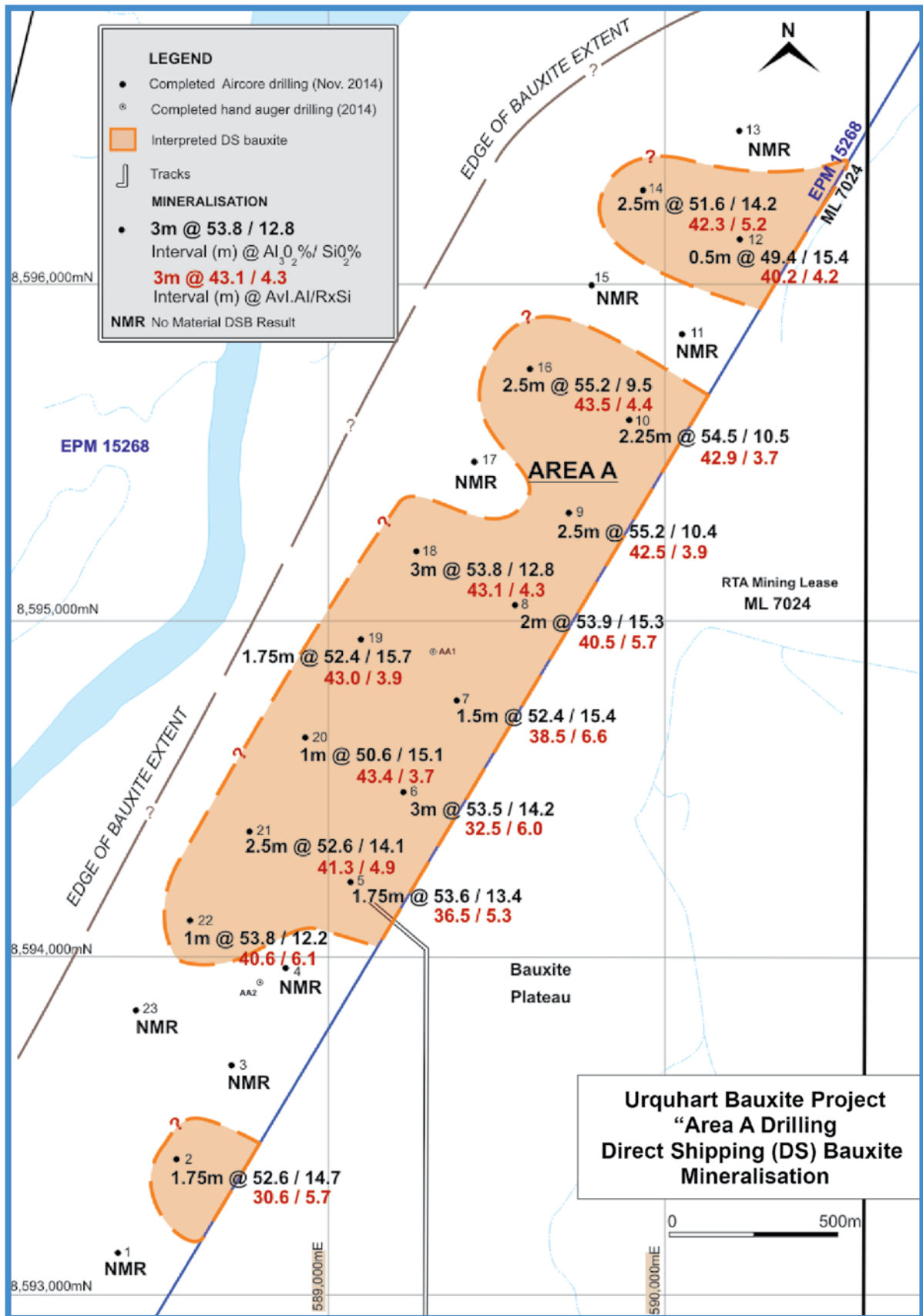


FIGURE 5: URQUHART BAUXITE PROJECT - AREA A DSB MINERALISATION





Example of simple shallow mining of bauxite



Example of barge transshipment



## CAPE YORK

### REGIONAL HMS EXPLORATION INCLUDING T-16

The Company completed the T16 drilling program in late November 2014. The program consisted of 355 holes for a total of 1,933m of grid drilling (average depth of 5.8m) using an aircore drill rig.

This drill program was a follow up program to the initial regional exploration auger drill program (35 holes) on the T16 exploration target in October 2013.

The T16 project, within EPM 15371, is located immediately south of Vrilya Point and is the first regional target and tenement to be explored by the JV; and it is just one of the 20 HMS targets or anomalies held 100% by the JV.

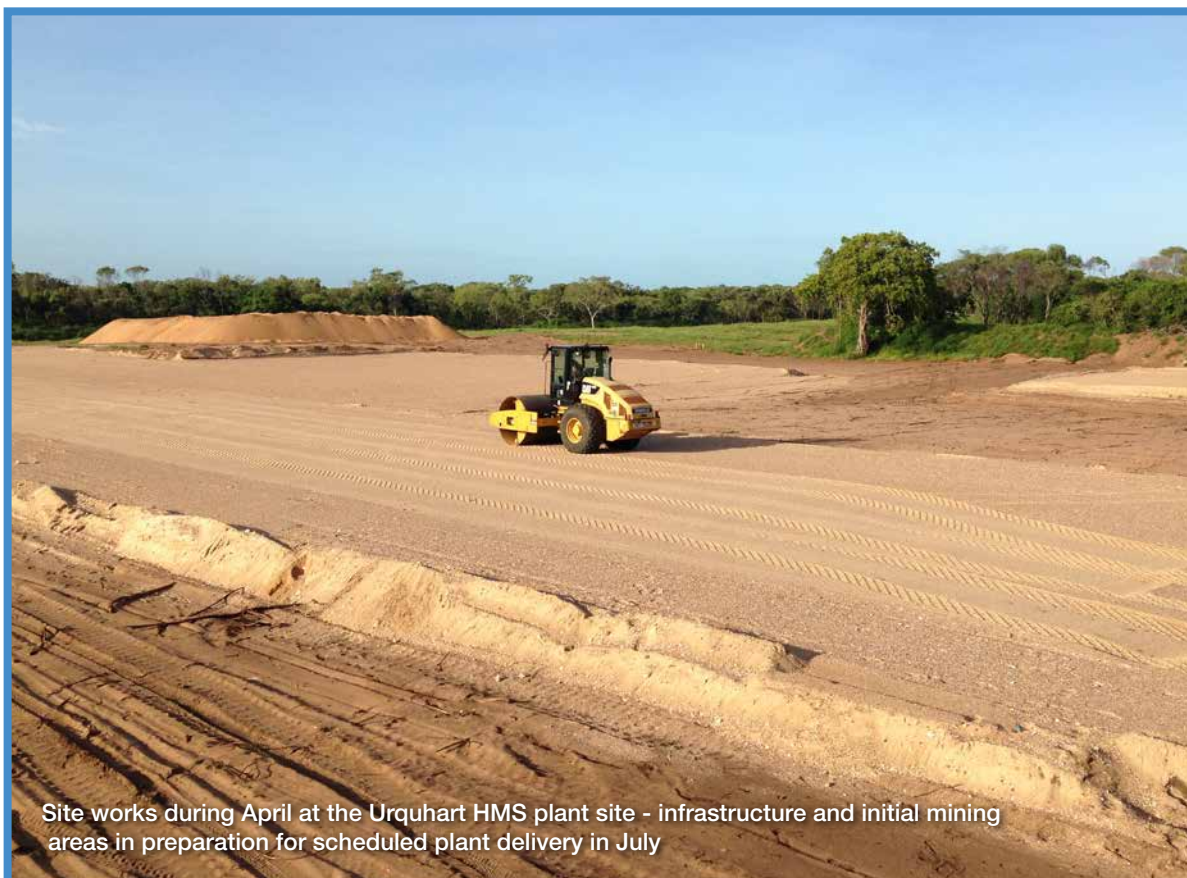
The T16 exploration target has been significantly downgraded as a result of the more extensive December drill program which not only closed off the HMS mineralisation identified in late 2013 but also the average HM grade was lower. The JV will now

investigate other HMS targets as there is excellent potential for additional zircon rich HMS discoveries within the Cape York tenement portfolio.

The T16 project area is a very small part of the extensive exploration permits and applications covering approximately 2,500km<sup>2</sup> of mostly contiguous ground prospective for mineral sands and bauxite on west coastal areas of Cape York Peninsular (see Figure 1).

### HMS EXPLORATION PLANS FOR 2015

The JV plans to continue reconnaissance exploration of its extensive regional tenements along the 300km sandy coastal belt between Weipa and the tip of Cape York Peninsula to define priority drill targets. *For further information see ASX Releases dated 22 January, 11 July and 25 November 2014.*



Site works during April at the Urquhart HMS plant site - infrastructure and initial mining areas in preparation for scheduled plant delivery in July

# CAPE YORK

## REGIONAL BAUXITE EXPLORATION

The JV completed a detailed review of its extensive Cape York tenement portfolio with the view to ascertaining its potential to host significant bauxite deposits in addition to the highly prospective regional HMS targets.

Significant areas of laterite/bauxite were identified particularly in the Vrilya area ~70km North of Weipa (see Figure 1 and Vrilya area map insert).

The review identified an initial combined bauxite Exploration Target \* across all Vrilya Area and Urquhart tenements in the range of 47-138Mt (see Table 2). *For further information see ASX Release dated 11 July 2014.*

It is the JV's intention to focus its efforts for the next Quarter on evaluating the Urquhart Bauxite project, however subject to the pending grant of a number of regional Exploration Permits for Minerals (EPM's) and funding, the JV plans to carry out an exploration program on the regional bauxite targets later in 2015.

### KEY HMS & BAUXITE PRIORITIES FOR THE JUNE QUARTER

- Complete civil site works on Urquhart HMS Project in preparation for plant delivery in July
- Inspect the completed processing plant being manufactured in South Africa prior to its shipment to Australia (leaving mid May and arriving to site in July)
- Finalise a JORC compliant resource for Urquhart Bauxite Project
- Lodge Application for Mining Lease(s) over Area A & B bauxite deposits
- Undertake wet season environmental survey and monitoring at Urquhart Bauxite project
- Continue bauxite project evaluation and initial market studies
- Prioritise the next regional HMS and bauxite exploration target(s) for drilling

**Table 2: Identified and initial combined bauxite Exploration Target\***

Project	Permit	Discrete Targets	Insitu mineralization tonnage range Mt <sup>2</sup>	Total Al <sub>2</sub> O <sub>3</sub> % <sup>3</sup>	Total SiO <sub>2</sub> % <sup>3</sup>
Urquhart Point	EPM15268	2	5 to 10	43-55	5-18
Vrilya	EPM15371	3	2 to 6	40-47	Insufficient data <sup>1</sup>
Vrilya	EPMA25509	7	12 to 36	40-48	10-191
Vrilya East	EPMA25687	3	28 to 86	40-43	Insufficient data <sup>1</sup>
TOTAL		15	47 to 138		

<sup>1</sup> previous exploration reports SiO<sub>2</sub> data incomplete

<sup>2</sup> 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

<sup>3</sup> based on screened sample assay results

#### \*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 resources in these areas.

# SCONI PROJECT

## NICKEL - COBALT - SCANDIUM

AREA	6,300 Ha Mining Leases & Applications
COMMODITY	Nickel, Cobalt and Scandium
HOLDING	MLM 100%

During the March Quarter no significant project work was undertaken as project activities are on hold while joint venture partners are being sought.

The SCONI Ni-Co-Sc “Tri-metal” project (see Figure 6) is a unique project that requires strategic partners. This takes time and business confidence.

While to date several Pre-feasibility studies have been undertaken on the SCONI (previously named NORNICO) project there is considerable scope to enhance the projects’ processing flowsheet and resulting economics and the potential of SCONI through the addition of the following:

- Beneficiation studies to enhance nickel + / - cobalt and scandium grades
- Application of combining both Pressure Acid Leaching (PAL) and Atmospheric Acid Leaching (AAL) (previously only investigated singularly)
- Reviewing process flowsheet and testing latest laterite processing technologies
- Sourcing major plant and equipment from China and other lower cost manufacturing countries

The Company is in discussions with potential partners for the purpose of progressing SCONI Ni-Co-Sc (and/or Scandium) projects development.

For further information on SCONI and its Ni-Co-Sc resources see Metallica Minerals Annual Report ASX release 6 October 2014 pages 24-30.

### KEY PRIORITIES FOR THE JUNE QUARTER

- Continue negotiations for a Joint Venture on the SCONI Ni-Co-Sc Project
- Enter the national phase (including Australia, USA and other countries) of Metallica’s owned scandium processing and purification technology patent applications.

- Launch the commercialisation of Metallica’s scandium intellectual property (IP) for the extraction of scandium and subsequent refining into high purity scandium oxide (99.99%  $\text{Sc}_2\text{O}_3$ ) using Metallica’s patented technology and approaching emerging and current scandium producers.

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.

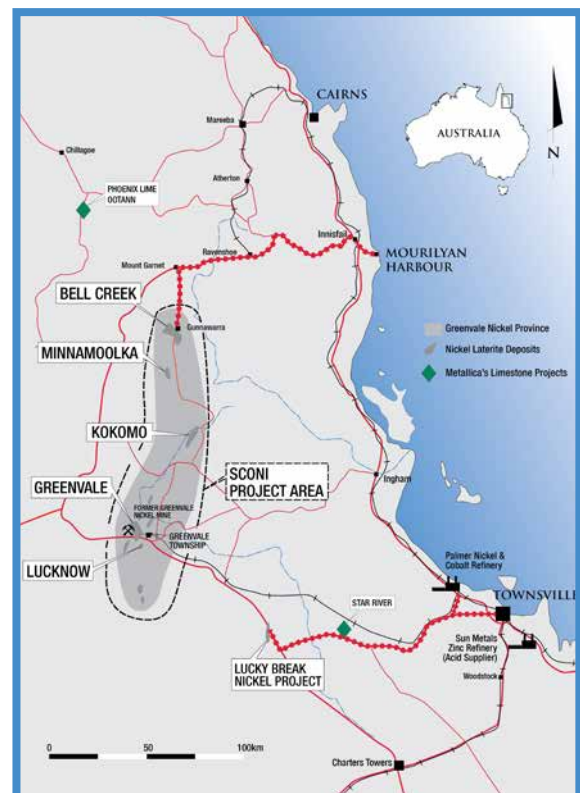


FIGURE 6: SCONI PROJECT AREA



# LUCKY BREAK NICKEL PROJECT

<b>COMMODITY</b>	Nickel and Cobalt Laterite
<b>HOLDING</b>	MLM 100% (subject to Royalty Agreement - see below)

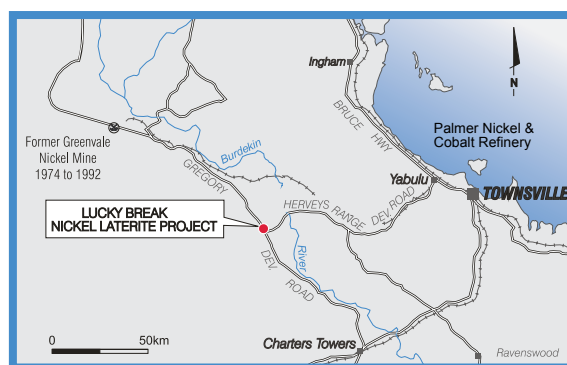
On 12 January 2015, the Company entered into a Royalty Agreement with Queensland Nickel Pty Ltd (QN) to allow the mining and extraction of nickel laterite ore from the Company's Dingo Dam Mining Lease within the Lucky Break nickel project located 140km by road west of Townsville (see Figure 7).

A Royalty payment of \$250,000 was received in January with a further payment of \$200,000 due in September 2015 and a further payment of \$200,000 should QN mine more than 60,000 tonne of nickel ore.

In late March, Queensland Nickel (QN) commenced open pit mining on Metallica's 100% held Dingo Dam nickel mining lease (part of the Lucky Break Project) with nickel laterite ore being trucked to the Palmer Nickel and Cobalt Refinery near Townsville

QN has commenced mining, screening, stockpiling and trucking operations on site and have been advised that over 17,000 tonnes of nickel ore has been mined and stockpiled (see photo below and page 19).

QN is also responsible for conducting all mining operations and trucking activities and associated rehabilitation at Dingo Dam. *For further information see ASX Release dated 12 January 2015.*



**FIGURE 7: LUCKY BREAK  
PROJECT AREA**



In late March QN commenced mining operations on Metallica's Dingo Dam nickel mining lease with first nickel ore trucked to the Palmer nickel cobalt refinery in April

# NEW PROJECTS

## WARRIOR AND ESMERALDA GRAPHITE PROJECT

<b>AREA</b>	South of Croydon, North Queensland
<b>COMMODITY</b>	Graphite (large scale “graphite in granite”)
<b>HOLDING</b>	MLM 100% (through subsidiary Touchstone Resources Pty Ltd)

Three large EPM Applications (25779, 25806, and 25807) covering over 750km<sup>2</sup> have recently been offered for grant over the Prospect (the name of a water bore and cattle station) area, approximately 50 - 70km SW of Croydon in North Queensland (see Figure 8).

The area is highly prospective for graphite mineralisation uniquely hosted within granitoid rocks as “Graphite in Granite”. Metallica is presently seeking JV partners.

In 2006, Metallica percussion drilled the Prospect project in search of Ni-Cu-Au-PGM sulphide deposits hosted in granitoid and gabbroic basement rocks. Several large and intense electromagnetic (EM) targets were identified from both airborne and ground EM surveys (undertaken by Metallica) which produced prominent drill targets to test the anomaly for massive sulphide mineralisation. As the result of a regional water bore drill logs review, past exploration drilling in the region and airborne magnetic surveys, the majority of the basement rocks were correctly interpreted to be igneous rather than sedimentary or metamorphic rocks, with the potential to host carbonaceous sediments or coal, hence the explanation for the intense EM anomalies identified. At that time, confidence in the discovery of sulphides hosted in granitoids was very high. However, after MLM drilled several holes into these EM anomalies, it became clear that the intense EM anomalies in the granites were not caused by sulphides, but obviously explained by disseminated graphite and in some instances, massive graphite within interpreted graphite shears. It is noted that graphite mineralisation hosted within granite on this scale is geologically unique and rare on a global scale as graphite almost exclusively occurs within metamorphosed sedimentary carbonaceous rocks.

Since no significant Ni-Cu-Au or PGM mineralisation was intercepted by the drilling and at the time (2006) there was no interest in graphite, the samples were discarded and the tenements were abandoned. Thereafter, the area was then reapplied for by another explorer in search for similar metals and the tenements were held until 2014. In the last few years there has been considerable market awareness and increasing usage and demand for graphite and therefore MLM decided to reapply for the ground over the known graphite mineralisation and surrounding prospective area

which may also be prospective, principally for graphite but not discounting other minerals and metals. Metallica, through its subsidiary Touchstone Resources, applied for the area in September 2014 and the applications are currently offered for grant.

The short term strategy is to twin several previous holes that intersected significant graphite mineralisation and recover core samples of the graphite in the granite. MLM has no doubt that graphite is present in significant qualities, but unfortunately, no samples from the 2006 percussion drilling programme containing graphite are available. The important aspect to test is the quality of the graphite.

Graphite in granite is rare. However, MLM’s exploration model interprets that there was originally a large sedimentary coal basin in that area (similar to the many coal basins in eastern Australia), but that this basin was intruded by magma which effectively melted all the existing rocks and minerals (quartz, feldspar, etc.) back into the magma, except the coal or other carbonaceous rocks. Carbon has a very high melting point (> 3,000°C) and therefore, it is possible that the coal converted to graphite and remained disseminated or segregated in certain zones (e.g. graphitic granite breccia) in the magma, which when it cools, becomes a granitoid rock. It is known that fine disseminated graphite also occurs in volcanic rocks in the Croydon area and that these volcanics were most likely sourced from the same graphite bearing magmas.

In essence, MLM knows that there is significant graphite mineralisation already identified in the region (i.e. Croydon volcanics) and locally from the EM survey and past drilling. MLM therefore expects that the graphite will be of high quality as a result of natural processes which have effectively removed most of the other minerals from the original carbon sediment have graphite as the sole remnant mineral remaining - a form of natural selective upgrading. MLM proposes to undertake a small diamond drilling programme to obtain good quality core samples of graphite mineralisation and then carry out quality test work and market analysis. If the results are positive, then there is clear potential for the discovery of large and possible high quality graphite deposits.

# NEW PROJECTS

## CAPE FLATTERY SILICA SAND PROJECT

<b>AREA</b>	North of Cairns, North Queensland
<b>COMMODITY</b>	Silica Sand (for bulk export shipping)
<b>HOLDING</b>	MLM 100% (through subsidiary Oresome Australia Pty Ltd)

The Cape Flattery EPM application is located approximately 200km north of Cairns in North Queensland (see Figure 8), and 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 9).

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.

### OTHER PROJECTS - JUNE QUARTER KEY PRIORITIES

- Seek Partners for our 100% owned limestone, graphite and silica sand projects



FIGURE 8: WARRIOR & CAPE FLATTERY PROJECT LOCATIONS

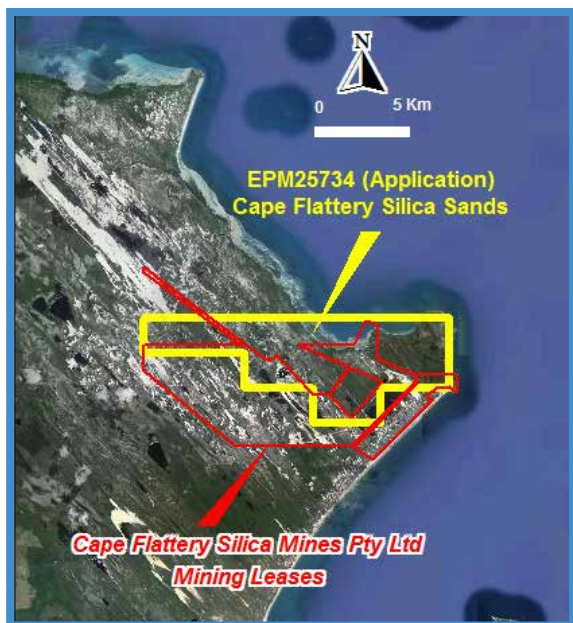
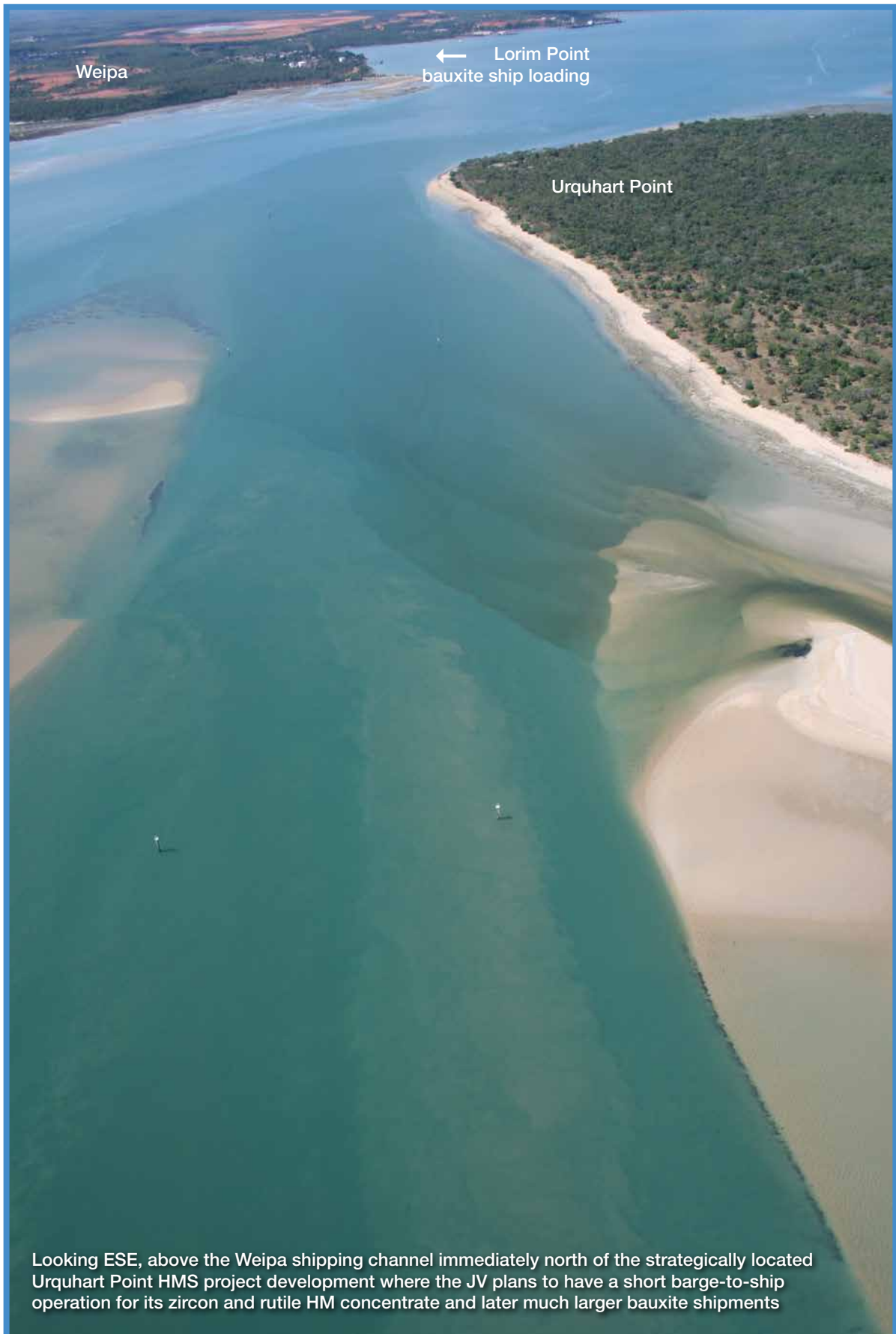


FIGURE 9: CAPE FLATTERY EPMA & CFSM MINING LEASE LOCATION





# DISCLAIMER

## & COMPETENT PERSONS STATEMENTS

### QUARTERLY REPORT COMPETENT PERSONS STATEMENTS

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 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 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.



QN mining nickel laterite ore on the Dingo Dam Nickel Project

#### 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  
Touchstone Resources Pty Ltd ACN 126 306 018



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