

QUARTERLY REPORT

FOR THE QUARTER ENDING 30 SEPTEMBER 2016 : DATED 31 OCTOBER 2016



METALLICA MINERALS LTD

is an Australian resources developer primarily focused on advancing its bauxite, graphite and mineral sands projects

ISSUED CAPITAL*

227,311,635	Ordinary Shares
29,935,691	Listed Options
8,000,000	Unlisted Options

SHAREHOLDERS#

2,108 shareholders
Top 20 shareholders hold 41.09%

LARGEST SHAREHOLDERS

Jien Mining P/L	17.64%
ABN Amro Clearing	
Sydney Nominees P/L	4.73%
Golden Breed P/L	3.96%

DIRECTORS

Barry Casson
Non Executive Chairman
Andrew Gillies
Non Executive Director
Shu Wu Non
Non Executive Director
Shu Zhang
Alternate Director to Dr Wu

SENIOR MANAGEMENT

Simon Slesarewich
Chief Executive Officer
John Haley
CFO & Company Secretary

CASH BALANCE^

MLM's cash balance is approximately \$1,450,000.
No debt.

*As at 30.09.16, see Appendix 5B
Lodged 18.10.16 for more detail

#As at 01.10.16

^As at 30.09.16

HIGHLIGHTS

No EIS

Queensland Government confirms no EIS required¹

1st Shipment

Green Coast Resources Pty Ltd (GCR) completed it's maiden shipment of bauxite²

GCR Loan

Executed with GCR, owner & operator of the Hey Point bauxite project locking in logistic services and transshipping access.³

Farm-in & JV

With Australian Mines Ltd (ASX:AUZ) over Metallica's 100% owned scandium, cobalt and nickel (SCONI) project⁴ \$250,000 cash payment received

\$316,000

R&D tax refund under the Incentive Offset Refund for MLM's design initiatives and other elements of the HMS processing plant⁵

PROJECT HIGHLIGHTS

URQUHART BAUXITE PROJECT

- First bauxite production on schedule for Q2 2017.
- Queensland's Department of Environment and Heritage Protection confirms that it does not require an Environmental Impact Study (EIS) to be completed.¹
- The established barging and transshipping facility at Hey Point was successfully commissioned and has now completed its maiden shipment of bauxite.²

- Logistic services and transshipping access to ensure very low start-up capital and a compressed start-up schedule, thereby significantly de-risking the project have been locked in via the short term loan to Green Coast Resources.²
- Loan conditions are:
- \$250,000 Tranche 1 (drawn), \$250,000 Tranche 2 can be drawn if conditions are met
 - 3 month loan term at 3.5% interest per month

- Completed a further drill program in August 2016 to increase the current Resource and category confidence further.

ESMERALDA GRAPHITE PROJECT

- Completed an Electromagnetic (EM) survey, particularly to identify shallow graphite mineralisation similar to that encountered in the 2015 drill program.⁶

DECEMBER QUARTER OUTLOOK

The Company's current focus is on completing the work required to enable the granting of mining leases for the Urquhart bauxite project and on progressing the full access and logistics agreements to utilise the nearby Hey Point facility.

The detailed drill program completed in August 2016 will result in an updated resource report for Urquhart bauxite.

This in turn will underpin a pre-feasibility study that is expected to confirm results

from a previously completed internal Options Study.

The attractiveness of Metallica's considerable and strategically located Cape York bauxite assets has been boosted by the Indonesian Government's export ban on bauxite and the further imposition of a bauxite mining moratorium by the Malaysian Government.

Data from the recently completed EM Survey at Esmerelda will be analysed

to potentially identify shallow graphite mineralisation similar to that encountered in the 2015 drill program. The targets generated from this analysis will be followed up in 2017

The HMS processing plant is currently stored near Brisbane. Given the continuing low heavy minerals sands prices, the Cape York Bauxite and HMS Joint Venture has deferred planned construction of the HMS plant to focus on the higher value Urquhart bauxite project.

Following several approaches from third parties, the Joint Venture is reviewing several options that may deliver value to the Joint Venture.

The Company is seeking a potential joint venture partnership or other transactions on the Cape Flattery Silica Sands Project.

Metallica continues to assess potential acquisition opportunities that will add value to shareholders.

NOTICES

COMPETENT PERSON'S STATEMENT

The technical information contained in this report was compiled or supervised by Mr Andrew Gillies, BSc(Geol), a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy (MAAusIMM) and a non-Executive Director of Metallica Minerals Ltd. Mr Gillies has relevant experience in the mineralisation, exploration results and resources being reported 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 (JORC Code 2012). 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.

1. ASX Release 25 October 2016: Qld Government confirms Urquhart Bauxite does not require an EIS. Available at asx.com.au
2. ASX Release 24 October 2016: Metallica's logistics provider ships maiden cargo from Hey Point. Available asx.com.au
3. ASX Release 4 October 2016: Company update and loan to Green Coast Resources. Available at asx.com.au
4. ASX Release 10 October 2016: Australian Mines SCONI Joint Venture. Available at asx.com.au
5. ASX Release 8 August 2016: 316,000 R&D Refund. Available asx.com.au
6. ASX Release 10 December 2015: Assays strongly support potential for large graphite deposit. Available at asx.com.au

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CAPE YORK BAUXITE & HMS JV

1,784 Ha

Mining leases and Mining lease applications

1,200 km²

Exploration tenure

Bx & HMS

Bauxite and Heavy Mineral Sands: zircon, rutile, and titanium minerals

MLM 50%

Ozore Resources Pty Ltd 50%

Pursuant to the joint venture agreement, the Cape York Bauxite and HMS Project Joint Venture is held 50% by Oresome Australia Pty Ltd, a wholly owned subsidiary of Metallica Minerals, and 50% by a private Chinese investor, Ozore Resources Pty Ltd (Ozore).

The Cape York Bauxite and HMS Project Joint Venture comprises three separate projects: Urquhart bauxite project, Urquhart Point HMS Project, and Cape York Regional Exploration Project.

Since the formation of the JV on 8 September 2014, the JV has expended in excess of \$8.5 million. The funds have been applied to progressing development of the Urquhart bauxite project and the Urquhart Point HMS project, as well as the design and fabrication of the Urquhart Point HMS processing plant.

PRIORITIES FOR THE DECEMBER QUARTER

- Development of the Urquhart bauxite project remains on schedule to commence production in Urquhart bauxite project Q2 2017. The JV will continue to progress and finalise permitting and approvals necessary to realise production from Urquhart bauxite as referred to in this report.
- Approaches from third parties in relation to the Urquhart Point HMS Project and processing plant, will be reviewed and considered so as to potentially deliver value to the Joint Venture.

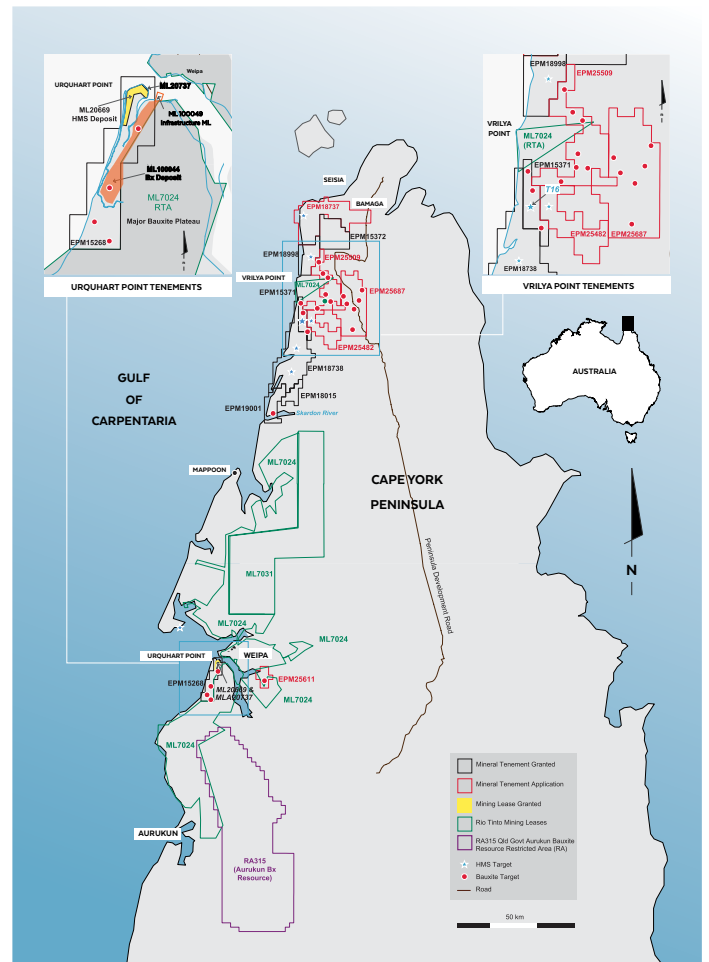


FIGURE 1: Cape York Bauxite and HMS project areas

URQUHART BAUXITE PROJECT

The Urquhart bauxite project is situated adjacent to the Urquhart Point (HMS) granted mining lease, some 5 km south-west of Weipa on the west coast of Queensland's Cape York Peninsula. The western Cape York is world-renowned for its extensive deposits of high-quality, export-grade pisolitic bauxite. The project consists of two bauxite plateaus, known as Area A and Area B, which are wholly contained within the lease area (see Figure 2).

Both the Queensland and Commonwealth governments have confirmed that the Urquhart bauxite project will not require an EIS to be completed. This most important determination should see a Mining Lease granted in the first quarter of 2017, thereby allowing mobilisation of contractors to commence immediately after the 2016/17 wet season. This in turn will see first production from Urquhart bauxite project during the second quarter of 2017.

A Heads of Agreement (HoA) was executed early in April 2016⁷, as well as the short term loan to Green Coast Resources Pty Ltd (GCR), the owner and operator of the nearby Hey Point bauxite

project, for bauxite logistic services and trans shipping access. These agreements significantly de-risks the project and delivers a very low start-up capital requirement and a compressed start-up schedule. Under the agreement, direct shipping bauxite (DSB) from the Urquhart bauxite project will be delivered to export vessels via the approved nearby Hey Point load-out facility, located only 15 km from the Urquhart bauxite project.

Through the HoA and the provision of a Short-Term Loan to GCR, Metallica has been able to lock in a logistics solution for Urquhart bauxite product. The parties will look to finalise by November 2016, the full formal contract for the Hey Point transshipping service and access. If a contract is not entered into by that time, GCR is still bound to provide the transshipping services and access to Metallica under the loan agreement, with a transshipping services cap applied to the rate charged to Metallica. The purpose of the Loan was to assist GCR itself in achieving that company's maiden bauxite shipment which occurred on 22 October 2016.

The JV has lodged Mining Lease Application (MLA)

100044 of 1,379 Ha, which covers the Urquhart bauxite resource (Area A and Area B).⁸

A drill program was completed in August 2016 that is expected to result in an increase in the Resource category confidence and will underpin further studies that are predicted to verify the in-house Options and assessment study that identified Hey Point as the preferred logistics solution.

To date, drilling results, coupled with the completed geological modelling, confirm that the majority of the Urquhart bauxite resource is suitable for Direct Shipping Bauxite (DSB). The potential production of DSB expedites permitting and development of the project due to the relatively simple mining-truck-barge operation with consequentially low capital and operating costs. DSB is planned to be produced at an average production rate of 1.5 to 2 Mtpa.

The high-quality export-grade Weipa-type bauxite has a high alumina content (>50% Al₂O₃), which is sought after in the seaborne market. In May 2015, the JV announced a maiden JORC-compliant bauxite

Mineral Resource. The May 2015 Inferred Mineral Resource estimate for the Urquhart bauxite project (Areas A and B) at a 45% Al₂O₃ cut-off for DSB is 7.5 Mt @ 51.0% Al₂O₃, 16.3% SiO₂. Additional details of the bauxite resource are provided in Table 1.

In Area A, available alumina (AAI) and reactive silica (RSi) were selectively sampled for intervals below a threshold of 15% SiO₂ or above 48% Al₂O₃. This represents the lower half of the bauxite horizon defined in Area A.

Subsequently, this lower section was modelled as a separate domain where the assays for AAI and RSi were available. In comparison, Area B has generally higher SiO₂ and a much smaller and less continuous lower bauxite domain. It has similar chemistry, but currently no AAI or RSi assay results are available to conclusively determine the overall quality of Area B. Estimates for the lower bauxite horizon as a higher grade subset of the 45% Al₂O₃ cut-off Resource in Table 1 are provided in Table 2 at an effective cut-off grade of 15% SiO₂.

TABLE 1: Urquhart DSB Resource statement details at 45% Al₂O₃ cut-off

Area	DSB (in-situ)		
	Kt	Al ₂ O ₃ %	SiO ₂ %
A	5,121	52.0	15.0
B	2,366	48.8	19.0
Total	7,487	51.0	16.3

7. ASX Release 7 April 2016 "Logistics Solution for Urquhart Bauxite Project", available www.asx.com.au

8. ASX Release 4 October 2016 "Company update and Loan to Green Coast Resources", available www.asx.com.au

URQUHART BAUXITE PROJECT

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

Area	Kt	Al ₂ O ₃ %	DSB (in-situ)		
			SiO ₂ %	AAI%	RSi%
A	3,987	53.3	13.0	40.6	4.9
B	777	52.7	13.2		
Total	4,764	53.2	13.0		

NOTES

1. Tonnes in Table 2 are a subset of those reported in Table 1.
2. Recovered tonnage (tonnes x yield) for the same DSB cut-off grade and DSB in situ dry tonnage.

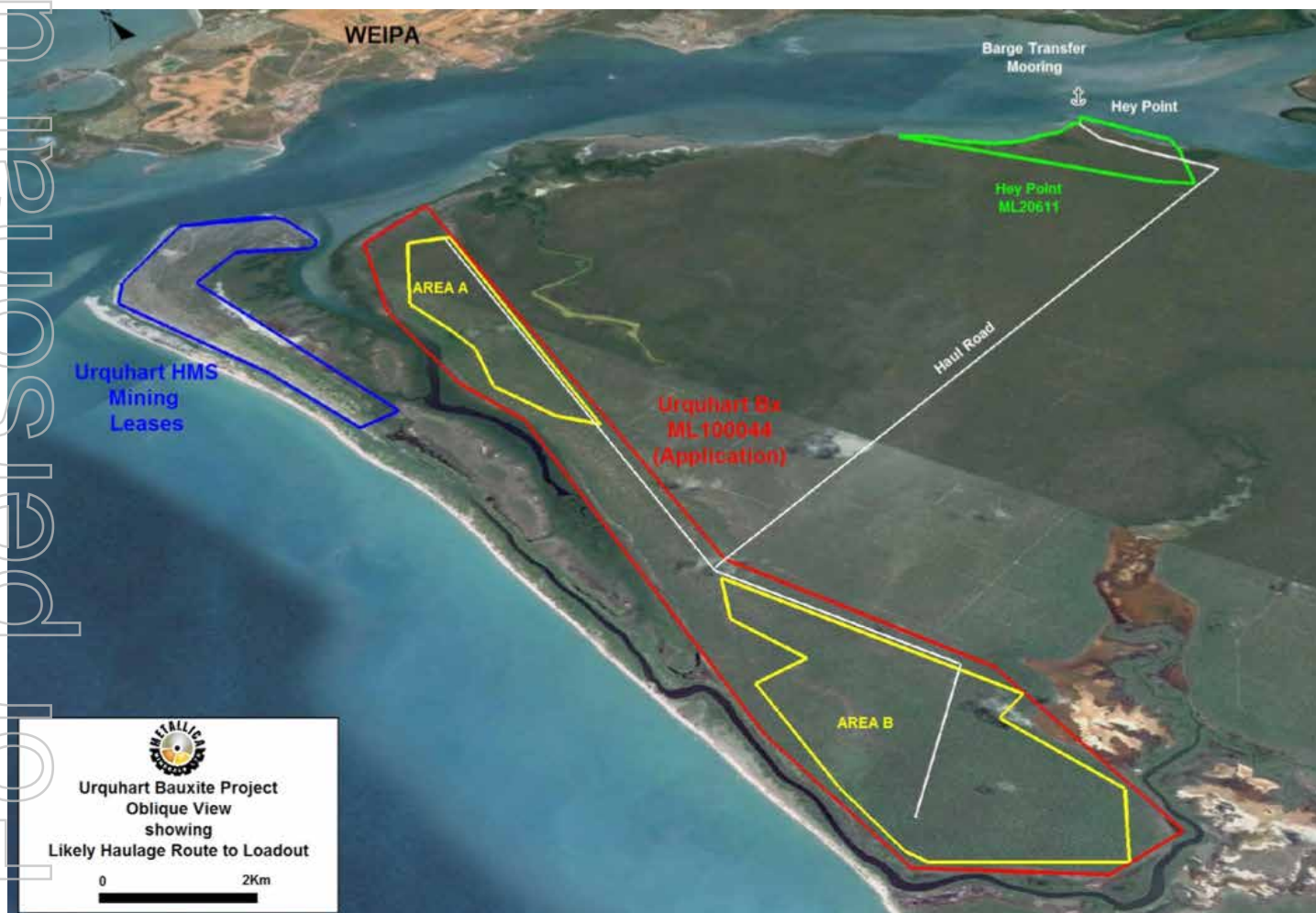


FIGURE 2: Aerial view showing likely haulage route and proximity of Hey Point load-out facility (green) to the Urquhart bauxite project lease (red) and mining areas (yellow)

URQUHART POINT HMS PROJECT

The modularized HMS processing plant arrived in Australia in December 2015 and is currently stored near Brisbane. Given the continuing low heavy mineral sand prices, the JV has deferred construction of the heavy mineral sand processing plant to focus on the higher value

Urquhart bauxite project. Following several approaches from third parties, the Joint Venture is reviewing several options that may deliver value to the Joint Venture.

The Urquhart Point HMS project is located on Urquhart Point, 3 km south-west of

Weipa (see Figure 3). The JV has developed a simple dry mining (less than 3 metre depth) and wet sand mineral processing operation using standard gravity (spiral concentrators) HMS separation to produce a zircon-rutile heavy mineral concentrate (HMC). The development plan

can be implemented very quickly to deliver production if there is an improvement in commodity prices.

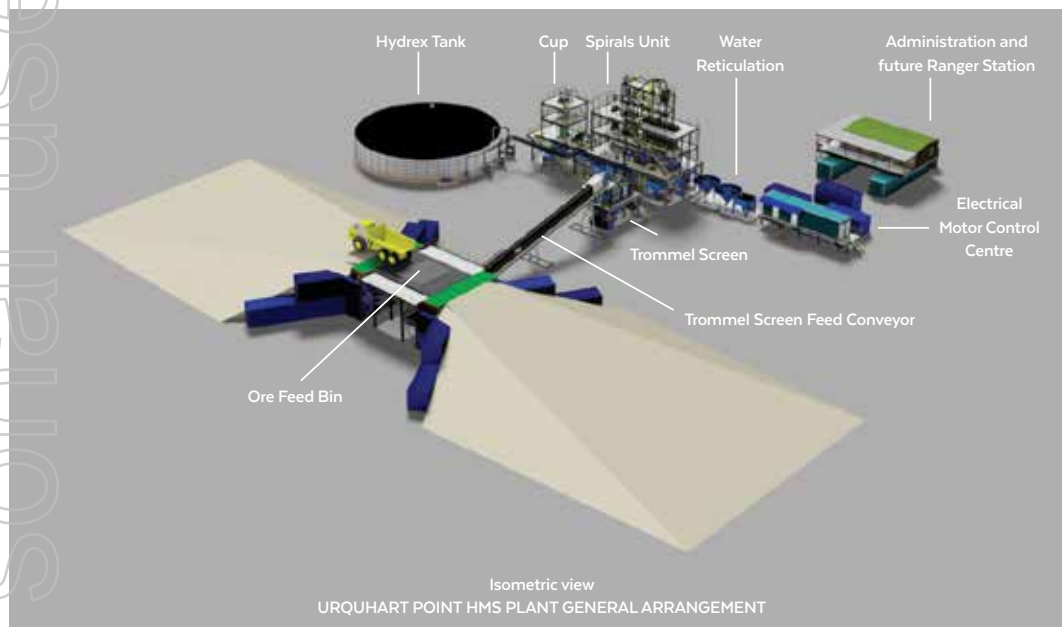


FIGURE 3: 3D CAD image Urquhart HMS plant design

CAPE YORK REGIONAL EXPLORATION

The Joint Venture did not undertake any field work on its regional bauxite and HMS exploration targets during the September quarter.

With a clear focus on the Urquhart bauxite project, regional exploration is currently on hold.



ESMERALDA GRAPHITE PROJECT

581 km²

Exploration tenure

Graphite

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

MLM 100%

Through subsidiary Touchstone Resources Pty Ltd



In July 2015, Metallica Minerals was granted Exploration Permits for Minerals (EPMs) 25779, 25806 and 25807, which make up the Esmeralda graphite project. The project, located near Croydon in north Queensland, covers a combined area of more than 500 km² and is held 100% by Metallica’s wholly-owned subsidiary, Touchstone Resources Pty Ltd.

Metallica has identified significant graphite occurrences within the Esmeralda granites in the project area. These occurrences were first identified in 2006 by Metallica during a drilling program that targeted well-defined airborne and ground-defined intense electromagnetic (EM) anomalies. At the time, the drilling focused on base metal and gold-bearing massive sulphide mineralisation. Instead of sulphides, Metallica identified significant graphite mineralisation. The discovery was unexpected because graphite is rarely associated with igneous rocks, such as granite.

Subsequently, a literature review of graphite occurrences

in the Esmeralda granites and Croydon volcanics indicated large suites of potentially graphite-bearing igneous rocks. Metallica has identified targets where magmatic differentiation or structural controls could concentrate graphite into significantly higher percentages.

Previous percussion drilling, including the 2006 Metallica program, recorded significant zones of observable graphite mineralisation (>10% graphite visually) while exploring for metals and other types of mineralisation. Fourteen historic percussion exploration drill holes were identified intersecting significant graphitic granite.

Igneous or hydrothermal-style graphite deposits, such as Esmeralda, are rare. The more common metamorphic-style graphite deposits make up 95% of the world’s known graphite deposits. Unlike the metamorphic-style deposits, hydrothermal-style graphite deposits are typically of high purity graphite in either flake or crystalline form. Examples of this style of

mineralisation include the high-grade, narrow-vein Sri Lankan deposits and the Albany graphite deposit in Canada. The carbon source is non-organic and the carbon is thought to be from deep carbon dioxide (CO₂) or methane (CH₄) gaseous injection into the magma chamber, which later crystallises out as pure or near-pure carbon (graphite) crystals.

Metallica has developed a hydrothermal mineralisation model for the Esmeralda granite based on work completed by the Bureau of Mineral Resources (BMR) in 1988 and the 2013 discovery of the Albany graphite deposit.

A two hole drill program (ItQ size core) was completed in October 2015. The assay results from the drill holes, approximately 1.2km apart, confirmed thick graphite (graphitic carbon - Cg) mineralised intervals in the first two exploration holes.

The core was assayed for graphite content and total carbon. In summary, both drill holes (in a vertical two-hole

drilling program) intersected significant broad graphite mineralisation (using a 3% Cg cut-off) with continuous intercepts of:

WDO01 - 95m @ 6.5% Cg from 71m

WDO02 - 29.1m @ 7.8% Cg from 71.9m

An independent petrology study has also been completed on six representative samples from the mineralised zones. The petrology study identified the same distinctive alteration and mineralisation style present in both holes and which is associated with consistent grades, indicating that the graphite mineralisation may be continuous for 1.2 km or more.

These results add strong support to the Company’s belief that the Warrior deposit, that makes up a part of the Esmeralda graphite project, is very large and would be uniquely amenable to large-scale bulk mining. WDO01 ended in significant graphite mineralisation (4.1% Cg), with mineralisation open in all directions.

ESMERALDA GRAPHITE PROJECT

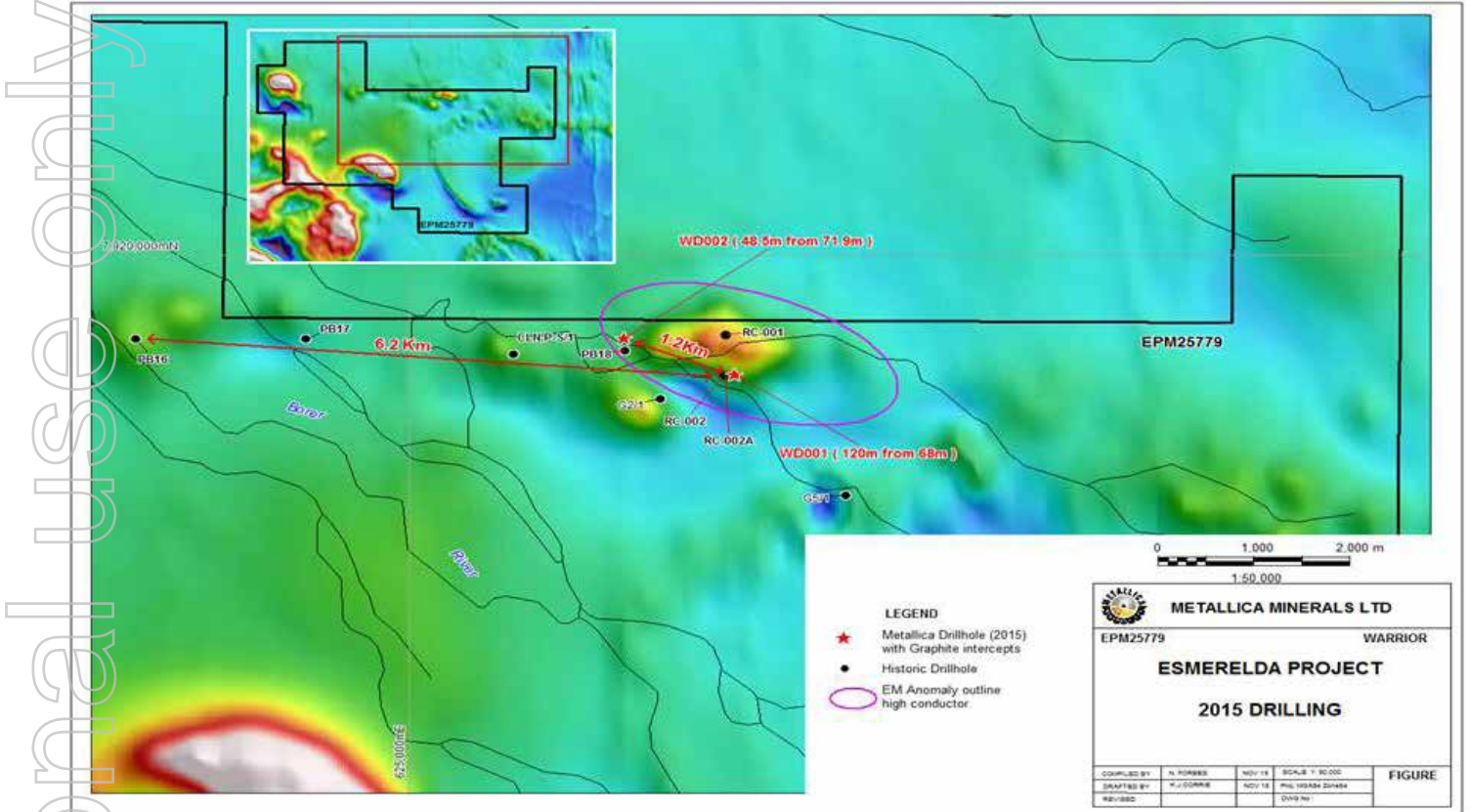


FIGURE 4: 2015 drill holes with historic holes up to 6.2 km away with graphite intersections reported

Metallurgical results, including those from the Mineral Liberation Analysis, show that 97.8% TC purity product⁹ can potentially be even further improved by removing impurities via conventional processing methods, including additional purification stages.

The test work followed standard procedures that involved crushing and preparation of representative drill core samples for bench scale floatation testwork. With the addition of standard floatation reagents, a

concentrate grade of 91.5% TC (90.6% Cg) was able to be produced at a 91% recovery.

Further purification testwork using an additional single stage caustic bake and wash process, produced an even higher concentrate grade of 97.8% TC.⁹

The Company completed an electromagnetic (EM) geophysics program in October 2016 to identify near surface graphite mineralisation for follow up testing. Data from this program is currently

being analysed to identify walk-up drill targets. These targets are planned to be drilled during 2017.

PRIORITIES FOR THE DECEMBER QUARTER

- Analyse data from the electromagnetic (EM) geophysics program to identify walk-up drill targets for near surface graphite mineralization.
- Commence preparations for a 2017 drill programme.

9. ASX Release 24 May 2016: High purity and recovery from Esmeralda Graphite Testwork, available www.asx.com.au

SCONI SCANDIUM, COBALT & NICKEL PROJECT

2,049 Ha

Mining leases

478 Ha

Mineral development licenses

155.6 km²

Exploration tenure

MLM 100%

Through subsidiaries NORNICO Pty Ltd and Greenvale Operations Pty Ltd

The SCONI scandium-cobalt-nickel tri-metal project is located less than three hours' drive northwest of Townsville, Queensland. The SCONI project consists of five deposits, Greenvale, Lucknow, Bell Creek, Minnamoolka and Kokomo, with granted mining leases covering all key deposits.

On 10 October 2016, Metallica announced that the Company had entered into a Farm-in and JV Agreement with Australian Mines Ltd (Australian Mines) (ASX:AUZ) over Metallica's 100% owned SCONI project.⁴

KEY TERMS OF THE AGREEMENT INCLUDE:

STAGE 1 EARN-IN

- Payment of \$250,000 to Metallica on execution of the Agreement (now received).
- Australian Mines is able to earn 50% of SCONI after completing a Definitive Feasibility Study (DFS) or having expended \$10 Million on the DFS within 4 years.

STAGE 2 EARN-IN

Australian Mines is able to earn a further 25% (total 75%) in the project after arranging suitable finance to fund the development plan laid out in the DFS within 18 months of completing Stage 1.

Other terms within the Agreement are typical of these type of agreements and include maintaining the tenements, dilution, buy-out rights and change of control provisions.

The JV with Australian Mines over the SCONI project delivers on Metallica's commitment to create value from non-core assets, preserves Metallica's significant past investment, whilst maintaining an exposure to the continued upside from the development of the SCONI project.

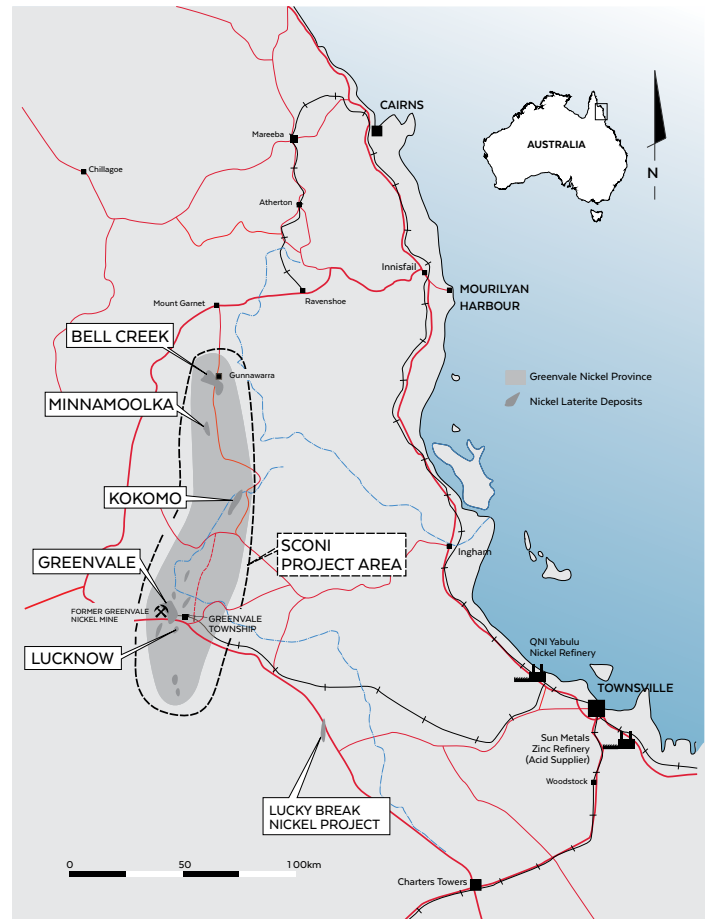


FIGURE 5: SCONI project area

CAPE FLATTERY SILICA SANDS

54km²

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 6).

The EPM covers part of a large Quaternary sand dune field, which is believed to contain high-grade silica sand, a section of which is currently being mined by Cape Flattery Silica Mines Pty Ltd (CFSM), a wholly owned subsidiary of Mitsubishi Corporation.

The adjacent CFSM operation has operated since 1967 and

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

PRIORITIES FOR THE DECEMBER QUARTER

Metallica is in ongoing discussions with parties for the potential sale of the project, or joint venture for a silica sand mining and bulk shipping operation.



FIGURE 6: Cape Flattery project area

SUBSIDIARY COMPANIES

NORNICO Pty Ltd
ACN 065 384 045

Oresome Australia Pty Ltd
ACN 071 762 484

Oresome Bauxite Pty Ltd
ACN 606 362 252

Lucky Break Operations Pty Ltd
ACN 126 272 580

Phoenix Lime Pty Ltd
ACN 096 355 761

Greenvale Operations Pty Ltd
ACN 139 136 708

Scandium Pty Ltd
ACN 138 608 894

Touchstone Resources Pty Ltd
ACN 126 306 018

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