



# PILBARA MINERALS

ACN 112-425-788

ASX RELEASE

28 January 2016

ASX CODE: PLS

## DECEMBER 2015 QUARTERLY ACTIVITIES REPORT

*Further outstanding exploration results at the Pilgangoora Lithium Project, with major resource upgrade imminent and Feasibility Study on-track for delivery by mid-year*

### PILGANGOORA LITHIUM PROJECT

- ❖ Completion of highly successful 2015 drilling campaign, with further broad intersections of high-grade lithium mineralisation, including the following **outstanding near-surface intercepts**:
  - **53m @ 1.71% Li<sub>2</sub>O and 82ppm Ta<sub>2</sub>O<sub>5</sub> from 43m (PLS360),**
  - **45m @ 1.68% Li<sub>2</sub>O and 96ppm Ta<sub>2</sub>O<sub>5</sub> from 9m (PLS202), and**
  - **33m @ 1.61% Li<sub>2</sub>O and 115ppm Ta<sub>2</sub>O<sub>5</sub> from 44m (PLS359).**
- ❖ Discovery of significant new zone of spodumene-tantalite mineralisation to the west of the Central Pegmatite system, with visible spodumene intersected in multiple pegmatites. Assay results include:
  - **26m @ 1.94% Li<sub>2</sub>O from 41m (PLS393), and**
  - **10m @ 1.57% Li<sub>2</sub>O from 80m (PLS401).**
- ❖ All 2015 drilling to be included in a resource update due for completion by late January 2016.
- ❖ All major contracts awarded for the Pilgangoora Feasibility Study, with Como Engineers appointed as lead contractor for engineering, design and study management services.
- ❖ Pre-Feasibility Study financials targeted for release in March with final Feasibility Study due in July, paving the way for development of world-class project to proceed.

### TABBA TABBA TANTALITE PROJECT

- ❖ Subsequent to the Dec Qtr, processing plant commissioning halted as engineering inspection reveals design deficiencies that require rectification.

### CORPORATE

- ❖ **\$12M raised (before costs) in a heavily oversubscribed share placement** of 52.2 M shares, at an issue price of \$0.23 per share. Pilbara now fully funded for drilling and feasibility work to be conducted at Pilgangoora.
- ❖ **\$12.9M cash on hand** at Quarter-end.

## PROJECT DEVELOPMENT ACTIVITIES

### PILGANGOORA LITHIUM PROJECT

#### *In-fill and Extensional Drilling Program*

The Company's highly successful resource extension and in-fill drilling program was completed during the Quarter, focused on the Central and Western Pegmatites, which remain open at depth and to the north, and at the emerging Southern and Monster prospects (See Figure 2).

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This drilling has continued to return excellent results both from within and outside the current Mineral Resource inventory, and also led to the discovery of a significant new zone of lithium-tantalite mineralisation to the west of the Central Pegmatite system (see Figure 1).

Assay results from drilling completed during the Quarter included a series of outstanding, broad, near-surface intercepts, including:

- 53m @ 1.71% Li<sub>2</sub>O and 82ppm Ta<sub>2</sub>O<sub>5</sub> from 43m (PLS360),
- 45m @ 1.68% Li<sub>2</sub>O and 96ppm Ta<sub>2</sub>O<sub>5</sub> from 9m (PLS202), and
- 33m @ 1.61% Li<sub>2</sub>O and 115ppm Ta<sub>2</sub>O<sub>5</sub> from 44m (PLS359).

Full details of the Company's exploration results from the Pilgangoora Project during the Quarter are available from the Company's ASX Announcements dated 23 October 2015, 9 November 2015, 16 November 2015, 30 November 2015, 16 December 2015 and 11 January 2016.

All results from the 2015 drilling program will be incorporated into an updated Mineral Resource estimate for the Pilgangoora Project, which is expected to be released by late January 2016.

### **Significant new discovery at the Western Domain Prospect**

Resource extension and in-fill drilling completed during the Quarter led to the discovery of a significant new pegmatite zone approximately 400m west of the Central Pegmatite system.

The new zone, which was discovered by reconnaissance RC drilling on section 7669700mN, is located outside the current Mineral Resource boundary and demonstrates the significant potential for further growth in the current resource inventory. This area has now been named the Western Domain prospect.

Significant high-grade results from holes PLS393 and PLS401 included 26m @ 1.94% Li<sub>2</sub>O from 41m (PLS393) and 10m @ 1.57% Li<sub>2</sub>O from 80m (PLS401). These pegmatites are open to the north and will be targeted in the 2016 drilling program.

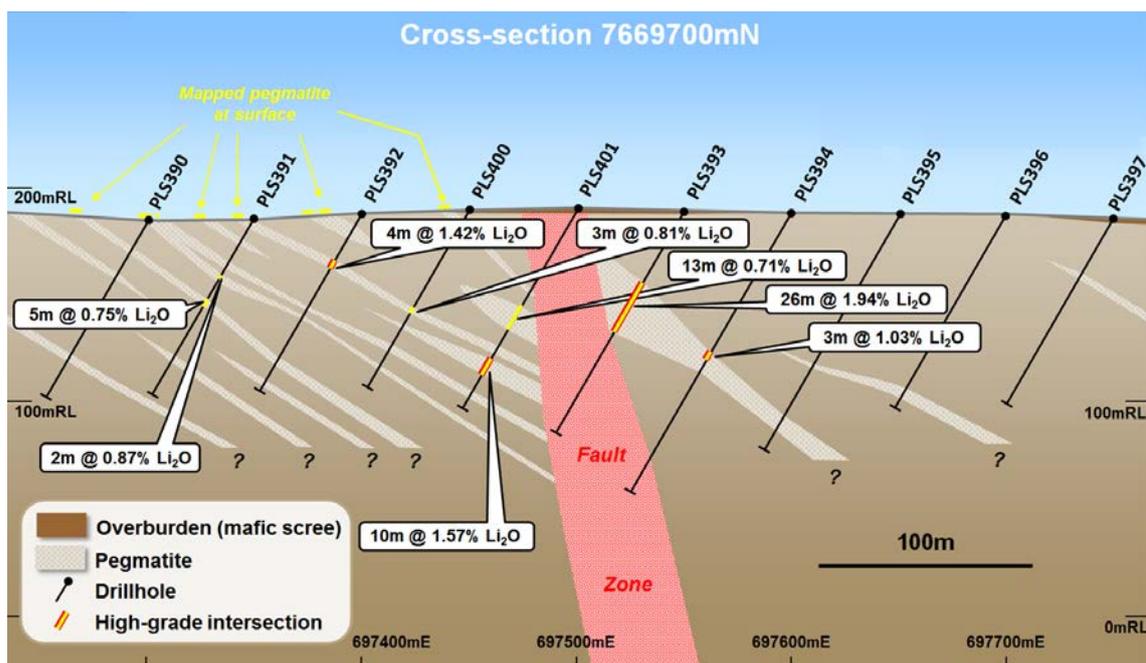


Figure 1: RC Cross-section 7669700mN, EL45/2232



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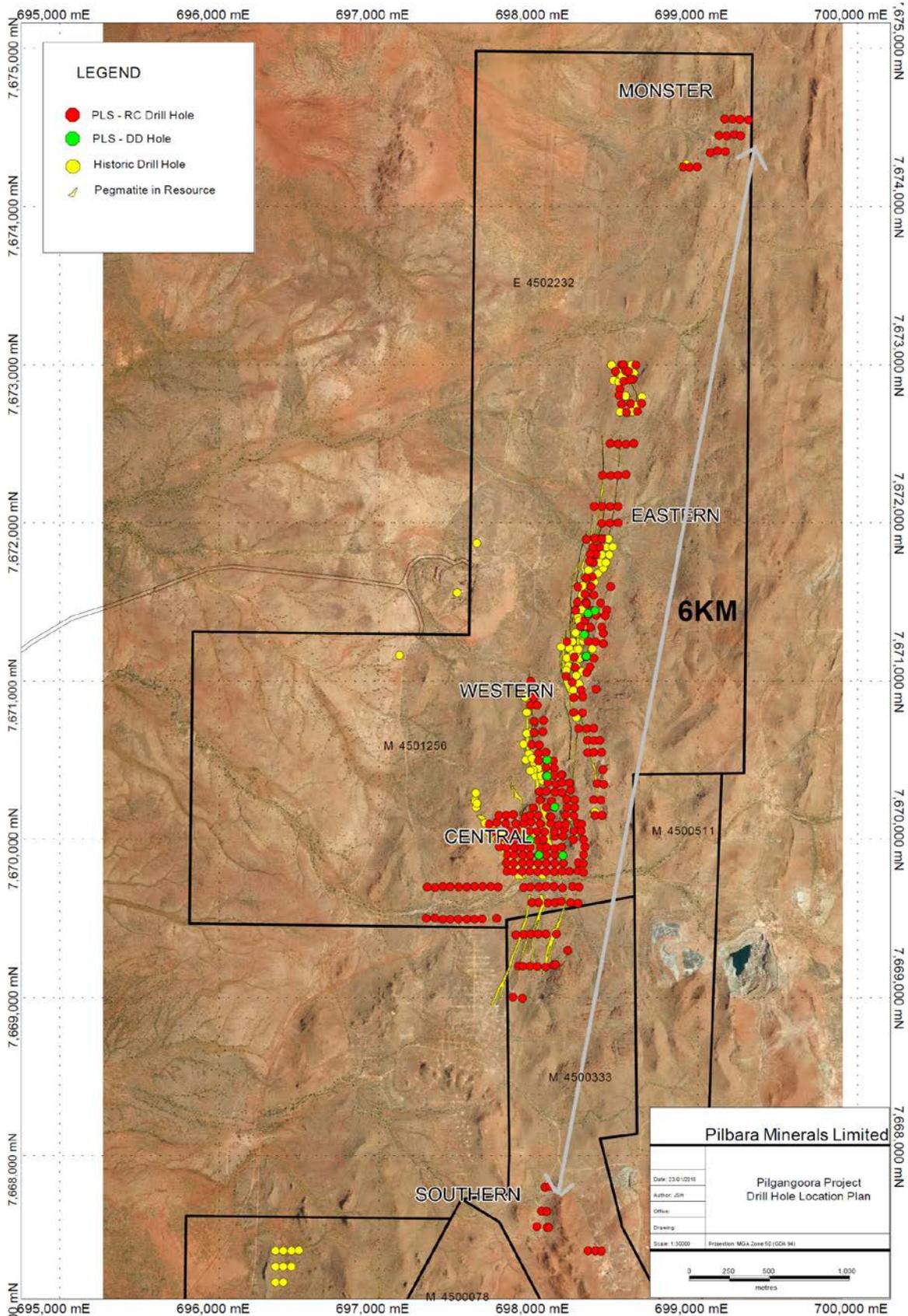


Figure 2: Pilgangoora Drilling Plan and Prospects

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## ***Definitive Feasibility Study***

The Definitive Feasibility Study (DFS) on the Pilgangoora Project commenced during the Quarter, following the award of all key contracts and appointment of consultants.

The major contract – for engineering, design and metallurgical study management services for the process plant and infrastructure components of the DFS – has been awarded to respected Australian-based engineering, metallurgy and construction services group Como Engineers Pty Ltd (“Como Engineers”).

The process plant and infrastructure design contract includes the mine site footprint and encompasses metallurgical input, implementation planning, capital and operating cost estimates, risk and operations management, as well as design of roads and supporting infrastructure and implementation planning.

All the major consultant groups have now been commissioned to deliver the key components of the DFS according to their relevant disciplines after agreeing and tendering a Scope of Work. The major components which have been awarded are:

- Process Plant and Infrastructure – Como Engineers;
- Metallurgical Testwork Management – Como Engineers;
- Mining – MiningPlus;
- Geology and Resources – Trepanier Pty Ltd;
- Tailings Management Facility and Geotechnical – ATC Williams;
- Hydrogeology and Hydrology – Groundwater Resource Management.

Consultants have also been commissioned to undertake the following:

- Environmental Surveys, Approvals and Licensing Documentation;
- Financial Modelling; and
- Owner’s Team Assistance and Project Reviews.

The Feasibility Study team has agreed to deliver Pre-Feasibility Study level project financials in early March and the full Feasibility Study in July 2016. A site familiarisation tour was completed January for all the major consultant groups.

The first phase of the comprehensive metallurgical testwork program has already commenced and is planned to be completed at the end of the March 2016 Quarter with the second phase program covering the variability testing, locked cycle flotation and dense media separation testwork to be completed in May. Further environmental surveys are also planned for the March 2016 Quarter.

The DFS is being undertaken on the basis of developing a standalone operation at Pilgangoora with an annualised ore throughput rate of 2Mtpa, producing lithium concentrates targeting the glass and ceramics industry and the rapidly growing global lithium-ion battery market. As the Pilgangoora deposit also contains tantalum, the DFS will also encompass production of tantalum concentrates, which will provide a by-product credit that will offset the production costs of the lithium concentrate.

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## **TABBA TABBA TANTALUM PROJECT (PLS 100%)**

### ***Plant Commissioning***

On 30 October 2015, the WA Department of Water granted Pilbara's wholly-owned subsidiary Tabba Tabba Tantalum Pty Ltd ("TTT") approval to take water from Ground Water Licence 181791. This approval enabled wet commissioning and initial operations to commence at Tabba Tabba in November

During the commissioning process, Pilbara's operational team identified areas of the plant that require modification and rectification in order to allow it to run to optimal (design) levels. These include the ball mill and the coarse recovery section of the plant, namely the primary and secondary jigs.

While the repairs and modifications are not considered to be major, they have prevented the plant from achieving design throughput and achieving a representative recovery rate during commissioning.

Accordingly, the Company in early January decided to suspend commissioning to allow an engineering assessment to be undertaken with the assistance of independent consulting engineers in order to identify the most timely and cost effective pathway to implement the requisite changes.

Approximately 12,000 tonnes high grade crushed ore is stockpiled and available for processing at the recommencement of operations.

## **PINGA TIN PROJECT**

During the quarter the company applied for an exploration license over the Pinga Tin/Tantalite field (ELA45/4648). The tenement application covers 20 graticular blocks immediately east of the Great Northern Highway approximately 150km by road south of Port Hedland in the Pilbara Region of WA and is located approximately 25km from Mt Francisco and 35km south of the Wodgina Tin – Tantalite fields.

The application covers an historical alluvial tin mining area which produced 37 tonnes of cassiterite (tin) concentrates including some tantalum minerals.

The host rock is a granite with mineralised pegmatite dykes occurring locally in swarms & greisen patches.

## **CORPORATE**

### **APPOINTMENT OF CHIEF EXECUTIVE OFFICER**

During the Quarter, Pilbara Minerals appointed highly experienced mining executive and former Atlas Iron Managing Director Ken Brinsden as Chief Executive Officer effective from 18 January 2016.

Mr Brinsden brings a wealth of mining, project development and operational expertise to Pilbara which will be invaluable as it makes the transition to leading mid-tier mining company through the development of its world-class Pilgangoora Lithium-Tantalum Project in WA's Pilbara region.

He joins Pilbara's experienced management team led by Executive Director Neil Biddle and Technical Director John Young, who have been responsible for rapidly advancing Pilgangoora from an exploration concept to one of the most significant new strategic metals development projects worldwide.

Mr Brinsden is a mining engineer with more than 20 years' experience in surface and underground mining operations. A graduate of the highly regarded Western Australian School of Mines, Mr Brinsden has worked for major mining companies including WMC Resources, Normandy, Central Norseman Gold Corporation, Goldfields and Iluka Resources in a range of production, management, brownfields and greenfields mine development roles.

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He joined Atlas Iron in May 2006 as Operations Manager and played a key role in driving its Pilbara iron ore growth strategy, which saw it become the fourth largest iron ore producer in Australia. He held the roles of Chief Operating Officer and Chief Development Officer before being appointed as Managing Director in February 2012. Mr Brinsden also played a key role in driving the cost-reduction and contractor-collaboration strategies which Atlas implemented in response to the collapse in iron ore prices.

Full details of Mr Brinsden's employment contract are available in the Company's ASX Announcement dated 3 December 2015.

## **COMPLETION OF CAPITAL RAISING**

Pilbara Minerals successfully raised \$12 million (before costs) during the Quarter through a heavily oversubscribed share placement.

The Placement, comprising some 52.2 million fully-paid ordinary share at an issue price of \$0.23 per share, was undertaken to institutional and sophisticated investors in Australia and Asia.

The proceeds from the placement will be used to fund ongoing drilling and feasibility work associated with delivering both the Pre-Feasibility Study and the Definitive Feasibility Study for the Company's flagship 100%-owned Pilgangoora Lithium-Tantalum Project in Western Australia.

The Placement was strongly supported by various Australian and Asian based institutional investors, providing a strong endorsement of the Company and its projects. Foster Stockbroking acted as Sole Lead Manager to the Placement.

The issue of the 52 million shares was made pursuant to the Company's existing placement capacity under listing Rule 7.1 and was settled in one tranche on Friday 27 November 2015.

## **ANNUAL GENERAL MEETING**

A General Meeting of the Company's shareholders was held on 30 November 2015, with all resolutions passed on a show of hands.

## **ABOUT PILBARA MINERALS**

Pilbara Minerals ("Pilbara" – ASX: PLS) is a mining and exploration company listed on the ASX, specialising in the exploration and development of the specialty metals lithium and tantalum. Pilbara owns 100% of the world class Pilgangoora lithium-tantalite project which is the second largest spodumene (lithium aluminium silicate) project in the world. Pilgangoora is also one of the largest pegmatite hosted tantalite resources in the world and Pilbara proposes to produce tantalite as a by-product of its lithium production.

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## ABOUT LITHIUM

Lithium is a soft silvery white metal which is highly reactive and does not occur in nature in its elemental form. It has the highest electrochemical potential of all metals, a key property in its role in Lithium ion batteries. In nature it occurs as compounds within hard rock deposits and salt brines. Lithium and its chemical compounds have a wide range of industrial applications resulting in numerous chemical and technical uses. A key growth area is its use in lithium batteries as a power source for a wide range of applications including consumer electronics, power station-domestic-industrial storage, electric vehicles, power tools and almost every application where electricity is currently supplied by fossil fuels.

## ABOUT TANTALUM

The tantalum market is boutique in size with around 1,300 tonnes required each year. Its primary use is in capacitors for consumer electronics, particularly where long battery life and high performance is required such as smart phones, tablets and laptops.

## CASH BALANCE

The Company had a cash balance of \$12.9M as at 31 December 2015.

## LISTING RULE 5.3.3 INFORMATION

Project	Location	Tenements	Beneficial Interest	Notes	Change in the Quarter
Pilgangoora	Western Australia	E45/2232	100%	Granted	None
Pilgangoora	Western Australia	E45/2241	100%	Granted	None
Pilgangoora	Western Australia	M45/511	100%	Granted	None
Pilgangoora	Western Australia	M45/78	100%	Granted	None
Pilgangoora	Western Australia	M45/333	100%	Granted	None
Pinnacle Hill	Western Australia	E45/3560	100%	Granted	None
Pinga	Western Australia	ELA45/4648		Pending	
Fox Resources JV	Western Australia	E47/1093	45%	JV	None
Fox Resources JV	Western Australia	E47/1094	45%	JV	None
Fox Resources JV	Western Australia	E47/1813	45%	JV	None
Fox Resources JV	Western Australia	E47/1814	45%	JV	None
Fox Resources JV	Western Australia	E47/1815	45%	JV	None
Fox Resources JV	Western Australia	E47/2261	45%	JV	None

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## Competent Person's Statement

*The information in this report that relates to Exploration Results and Exploration Targets is based on and fairly represents information and supporting documentation prepared by Mr John Young (Executive and Chief Geologist of Pilbara Minerals Limited). Mr Young is a shareholder of Pilbara Minerals. Mr Young is a member of the Australasian Institute of Mining and Metallurgy and has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Specifically, Mr Young consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.*

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# Appendix 5B

## Mining exploration entity quarterly report

Introduced 1/7/96. Origin: Appendix 8. Amended 1/7/97, 1/7/98, 30/9/2001.

Name of entity

Pilbara Minerals Limited

ABN

95 112 425 788

Quarter ended ("current quarter")

31 December 2015

### Consolidated statement of cash flows

	Current quarter \$A'000	Year to date (6 months) \$A'000
<b>Cash flows related to operating activities</b>		
1.1 Receipts from product sales and related debtors	-	-
1.2 Payments for (a) exploration and evaluation	(1,894)	(3,354)
(b) development	(2,826)	(2,826)
(c) production	-	-
(d) administration	(867)	(1,528)
1.3 Dividends received	-	-
1.4 Interest and other items of a similar nature received	24	45
1.5 Interest and other costs of finance paid	(147)	(152)
1.6 Income taxes paid	-	-
1.7 Other	-	4
<b>Net Operating Cash Flows</b>	<b>(5,710)</b>	<b>(7,811)</b>
<b>Cash flows related to investing activities</b>		
1.8 Payment for purchases of: (a)prospects	-	-
(b) plant and equipment	(833)	(880)
(c) other investments – Tabba Tabba Tantalum Pty Ltd additional 50%	-	(2,000)
1.9 Proceeds from sale of: (a)prospects	-	-
(b)equity investments	-	-
(c)other fixed assets	-	-
1.10 Loans to Tabba Tabba Tantalum Pty Ltd (prior to acquisition on 25 September 2015)	-	(1,223)
1.11 Loans repaid by other entities	-	-
1.12 Cash obtained on acquisition of additional 50% shareholding in Tabba Tabba Tantalum Pty Ltd (100% owned subsidiary as of 25 September 2015)	-	251
<b>Net investing cash flows</b>	<b>(833)</b>	<b>(3,852)</b>
1.13 Total operating and investing cash flows (carried forward)	<b>(6,543)</b>	<b>(11,663)</b>

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**Appendix 5B**  
**Mining exploration entity quarterly report**

1.13	Total operating and investing cash flows (brought forward)	(6,543)	(11,663)
<b>Cash flows related to financing activities</b>			
1.14	Proceeds from issues of shares, options etc. (net of capital raising costs)	14,484	17,253
1.15	Proceeds from sale of forfeited shares	-	-
1.16	Proceeds from issues of convertible notes	-	4,000
1.17	Repayment of convertible notes on maturity	(161)	(175)
1.18	Dividends paid	-	-
1.19	Proceeds from option conversions received in advance of share issue	-	256
	<b>Net financing cash flows</b>	14,323	21,334
	<b>Net increase (decrease) in cash held</b>	7,780	9,671
1.20	Cash at beginning of quarter/year to date	5,107	3,216
1.21	Exchange rate adjustments to item 1.20	-	-
1.22	<b>Cash at end of quarter</b>	12,887	12,887

**Payments to directors of the entity and associates of the directors**

**Payments to related entities of the entity and associates of the related entities**

		Current quarter \$A'000
1.23	Aggregate amount of payments to the parties included in item 1.2	284
1.24	Aggregate amount of loans to the parties included in item 1.10	-

1.25 Explanation necessary for an understanding of the transactions

**Non-cash financing and investing activities**

2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows

Nil.

2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest

Nil.

**Financing facilities available**

*Add notes as necessary for an understanding of the position.*

		Amount available \$A'000	Amount used \$A'000
3.1	Loan facilities	-	-
3.2	Credit standby arrangements	-	-

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**Estimated cash outflows for next quarter**

	\$A'000
4.1 Exploration and evaluation	1,630
4.2 Mine Development and pre-production expenditure	-
4.3 Administration	675
4.4 Mining operations	1,756
4.5 Convertible Note redemption and interest	221
<b>Total</b>	<b>4,282</b>

**Estimated inflows for next quarter:**

	\$A'000
4.6 Exercise of unlisted options on issue	300
4.7 Proceeds from sale of mining production	-
4.8 Sundry income	205
<b>Total</b>	<b>505</b>

**Reconciliation of cash**

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.	Current quarter \$A'000	Previous quarter \$A'000
5.1 Cash on hand and at bank	12,887	5,107
5.2 Deposits at call	-	-
5.3 Bank overdraft	-	-
5.4 Other (provide details)	-	-
<b>Total: cash at end of quarter</b> (item 1.22)	<b>12,887</b>	<b>5,107</b>

**Changes in interests in mining tenements**

	Tenement reference	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1	Interests in mining tenements relinquished, reduced or lapsed	N/A		
6.2	Interests in mining tenements acquired or increased	N/A		

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**Appendix 5B**  
**Mining exploration entity quarterly report**

**Issued and quoted securities at end of current quarter**

*Description includes rate of interest and any redemption or conversion rights together with prices and dates.*

	Total number	Number quoted	Issue price per security (see note 3) (cents)	Amount paid up per security (see note 3) (cents)
7.1 <b>Preference + securities</b> <i>(description)</i>				
7.2 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions				
7.3 <b>+Ordinary securities</b>	801,688,697	801,688,697	Fully paid	Fully paid
7.4 Changes during quarter (a) Increases through issues  (b) Decreases through returns of capital, buy-backs	52,173,913	52,173,913	\$0.23	\$0.23
7.5 <b>+Convertible debt securities</b> <i>(description)</i>			<i>Issue Price Per Security</i>	<i>Maturity Date</i>
	161,450	-	\$1.00	30/11/2015
	4,000,000	-	\$1.00	02/03/2017
	1,700,000	-	\$1.00	22/12/2016
7.6 Changes during quarter (a) Increases through issues  (b) Decreases through securities matured, converted	(161,450)		\$1.00	30/11/2015
7.7 <b>Options</b> <i>(description and conversion factor)</i>			<i>Exercise price</i>	<i>Expiry date</i>
	31,750,000	-	\$0.05	02/03/2017
	5,625,000	-	\$0.05	22/12/2016
	15,833,329	-	\$0.03	25/03/2017
	33,900,000	-	\$0.10	22/03/2017
	3,409,090	-	\$0.15	01/12/2017

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7.8	Issued during quarter	5,000,000	-	\$0.10	22/03/2017
		17,045,455	-	\$0.15	01/12/2017
7.9	Exercised during quarter	(1,250,000)	-	\$0.05	22/12/2016
		(18,905,200)	-	\$0.05	02/03/2017
		(600,000)	-	\$0.10	22/03/2017
		(12,886,665)	-	\$0.03	25/03/2017
		(13,636,365)	-	\$0.15	01/12/2017
7.10	Expired during quarter				
7.11	<b>Debentures</b> <i>(totals only)</i>				
7.12	<b>Unsecured notes</b> <i>(totals only)</i>				

## Compliance statement

- 1 This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act or other standards acceptable to ASX (see note 4).
- 2 This statement does give a true and fair view of the matters disclosed.



Sign here: .  
Company Secretary  
Print name: Alan Boys

Date: 28 January 2016

## Notes

- 1 The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
- 2 The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.

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**Appendix 5B**  
**Mining exploration entity quarterly report**

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- 3      **Issued and quoted securities** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.
- 4      The definitions in, and provisions of, *AASB 1022: Accounting for Extractive Industries* and *AASB 1026: Statement of Cash Flows* apply to this report.
- 5      **Accounting Standards** ASX will accept, for example, the use of International Accounting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.

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