



PILBARA MINERALS
LIMITED
ACN 112-425-788

ASX ANNOUNCEMENT

6th November, 2014

MAJOR NEW DRILLING PROGRAM COMMENCES AT PILGANGOORA LITHIUM-TANTALUM PROJECT, WA

10,000M RC DRILLING PROGRAM UNDERWAY AIMED AT UPGRADING AND EXPANDING EXISTING JORC RESOURCE

HIGHLIGHTS:

- **Reverse Circulation (RC) drilling has commenced** at the **Pilgangoora Lithium-Tantalum Project** (100% PLS), located 55km from the Tabba Tabba Tantalum Project.
- **The 10,348m program is designed to in-fill and extend the known resource and test potential extensions of the mineralised system to the north and south of the previously drilled areas.**

Australian strategic metals company Pilbara Minerals Ltd (ASX: PLS) is pleased to announce that it has commenced a major new Reverse Circulation drilling program at its 100%-owned **Pilgangoora Lithium-Tantalum Project** in the Pilbara region of Western Australia.

The initial phase drilling is designed to in-fill areas of the existing JORC 2012 compliant Inferred Resource with the objective of increasing confidence in the resource and upgrading the resource category to Indicated. The remainder of the program (approximately 50%) has been designed to test extensions of the mineralised pegmatite along strike to the north and south of the current resource.

The current Pilgangoora Inferred Resource totals 10.4M tonnes @ 0.024% Ta₂O₅ for 5,500,000lbs Ta₂O₅, including 8.6M tonnes @ 1.01% Li₂O for 87,000 tonnes of lithium. The resource is located within E45/2232 (see Figure2).

Pilbara CEO Executive Director, Mr Neil Biddle, said the start of drilling at Pilgangoora marked and exciting new growth phase for the Company.

“Pilgangoora represents a potentially company-making opportunity for the Company which we are pursuing as part of our longer term strategy to become a world-class strategic metals house,” he said.

“We are looking forward to the results of this drilling, which will begin to flow in the coming weeks in parallel with construction and mining activities at the Tabba Tabba Tantalum Project.”

Pilgangoora Drilling

At Pilgangoora, the 112-hole, 10,348m program commenced on 5 November (see photographs in Figure 1). Initial RC drilling will focus on the current resource area from 7671500mN (see Figure 2) and advance

to the south, concentrating on the zones that require in-fill, given that previous drilling was conducted on wide spacings on lines 50-100m apart.

The current detailed program will test the validity of the exploration target and improve the resource model. The drilling rig will then move onto extensional drilling in both the Northern and Southern Zones.

Assay results from the initial phase of RC drilling are expected to be available in December 2014. Pilbara has set a longer-term objective of defining a significant hard rock lithium and tantalum resource at Pilgangoora.



Figure 1 – Exploration Activities at Pilgangoora

Background – Pilgangoora Lithium- Tantalum Project

The Pilgangoora Lithium- Tantalum Project is located about 25km north-east of the world class Wodgina Tantalum mine owned by Global Advanced Metals Wodgina (GAMW) and 82km SSE of Port Hedland, Pilgangoora includes several tin–tantalite alluvial and eluvial placer deposits which have been mined intermittently since 1947. The Project comprises two Exploration Licences (E45/2232 and E45/2241) and three Mining Leases (M45/78, M45/333 and M45/511), covering an area of 31km².

The Pilgangoora pegmatite field comprises a series of extremely fractionated dykes and veins up to 15m thick within the immediate drilling area (Figure 2). These dykes and veins dip to the east at 45-60° and thicken slightly with depth, are parallel to sub-parallel to the main schistose fabric within the greenstones and are typically separated by 20-30m horizontally.

The Project is immediately north of and along strike from Altura Mining Limited’s (ASX: AJM) Pilgangoora Lithium Deposit. GAMW completed RC drilling on EL45/2232 between 2008 and 2012, as well as broader-spaced drilling over the 3.2km strike length of the main pegmatite field on EL45/2232.

This enabled Pilbara to complete a maiden JORC Mineral Resource estimate and updated Exploration Target for the Pilgangoora Project, which was announced to the market on 17 June 2014. The current

Pilgangoora Tantalum-Lithium resource area (which hosts an Inferred Resource of 10.4M tonnes @ 0.024% Ta₂O₅ for 5,500,000lbs Ta₂O₅, including 8.6M tonnes @ 1.01% Li₂O for 87,000 tonnes of lithium) lies within E45/2232.

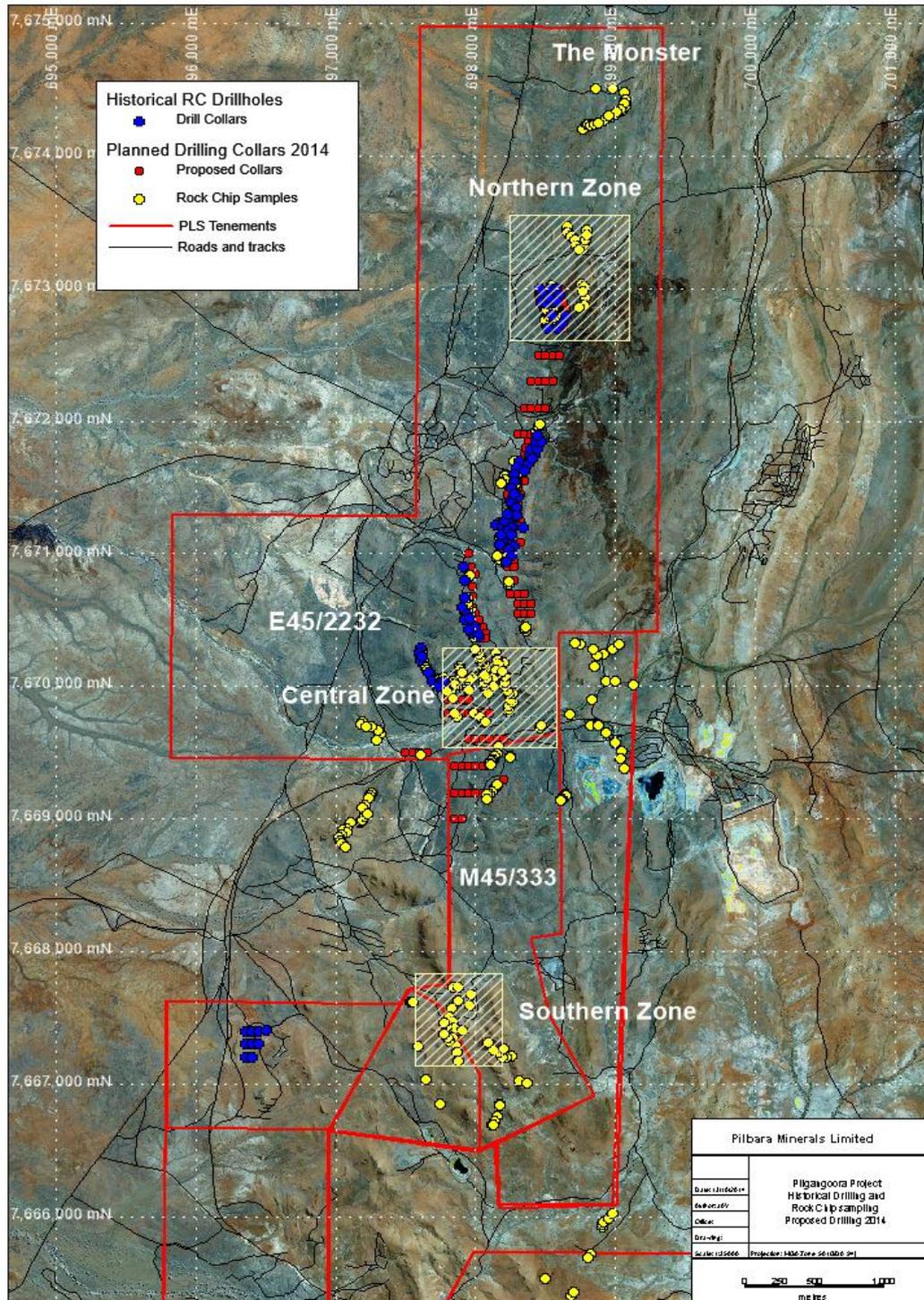


Figure 2: Location Plan of Exploration Activities at Pilgangoora

More Information:

What is Tantalum?

The primary source of tantalum is from minerals such as tantalite, columbite, wodginite and microlite contained in pegmatite ore bodies. The largest deposits are located in Australia, Brazil and Africa. Tantalum's **major use is** in the production of electronic components, **especially for capacitors**, with additional use in components for chemical plants, nuclear power plants, airplanes and missiles. It is also used as a substitute for platinum.

The tantalum market is boutique in size with around 1,300 tonnes required each year. However the market is rapidly growing due to capacitor use in wireless and handheld devices. PLS's Tabba Tabba Project could supply approximately 7% of the annual market consumption over two years. There are two major buyers of tantalum raw product worldwide: HC Stark and Global Advanced Metals.

Contact:

Neil Biddle
Director
Ph 0418 915 752

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Competent Person's Statement

The Company confirms it is not aware of any new information or data that materially affects the information included in the June 17, 2013 Pilgangoora Mineral Resource Estimate and that all material assumptions and technical parameters underpinning the estimate continue to apply and have not materially changed when referring to its maiden resource announcement made on June 17, 2013.

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.