

DRILLING COMMENCES TO GROW RESOURCES AND MINE LIFE AT TABBA TABBA TANTALUM PROJECT IN WA

PILBARA ON TRACK FOR FIRST PRODUCTION AND CASH-FLOW IN DECEMBER 2014 QUARTER

HIGHLIGHTS

- **Drilling has commenced at the Tabba Tabba Tantalum Project near Port Hedland as part of strategy to grow mine life.**
- **The RC drilling will test potential extensions of the mineralised system to the south and west.**
- **The drilling will also assist with the mining start-up process, grade control and final pit design.**
- **Once the Tabba Tabba program is completed, the rig will move to the large Pilgangoora Tantalum-Lithium Project targeting extensions to the initial JORC Mineral Resource.**

Australian strategic metals company Pilbara Minerals Ltd (ASX: **PLS**) is pleased to announce that a key drilling program has commenced at its flagship **Tabba Tabba Tantalum Project** in WA's Pilbara region ahead of the planned start-up of production next quarter.

The drilling is aimed at increasing Tabba Tabba's mineral inventory and mine life and will also provide information for use in grade control and final pit design.

Tabba Tabba, which is located 55km from Port Hedland, is 50%-owned by Pilbara alongside Nagrom, the leading metallurgical specialists.

Construction of the processing facility, which is currently located at Nagrom's Kelmscott facilities, is well advanced with the plant scheduled to be transported to site ahead of the start of site construction activities once final permits are received. First production is on track for the December Quarter, 2014.

Tabba Tabba has a five-year sales contract with tantalum products supplier Global Advanced Metals Pty Ltd ("GAM")

Any additional mineralisation outlined by the current drilling program will be included in the final mine design. Several holes are also planned to test extensions of the mineralised pegmatite rock which hosts the tantalite along strike to the south and west and at depth.

Pilbara Executive Director Neil Biddle said the Company was confident there was extensive mineralisation at Tabba Tabba outside of the current JORC-compliant resource.

"This drilling will test for immediate near-mine extensions which could be captured in the initial pit design will also test extensions at depth and along strike which could boost our resources and reserves

in the short term and extend the mine life well beyond the initial 18 months defined in the Feasibility Study,” Mr Biddle said.

“The upcoming drilling at Tabba Tabba also forms part of a larger drill program within our strategic metals portfolio in the Pilbara region, with the rig set to move to the Pilgangoora Tantalum-Lithium Project to provide information on the shallower, higher grade zones and expand the known resources,” he said.

Drilling Program

The Tabba Tabba program comprises 39 holes for 1,315m, with drilling planned to focus on both up-dip and down-dip extensions of the mineralised zone. Holes TTPRC 001 to 010 are designed to intersect high-grade mineralisation at depth and south of the existing pit design.

The south-western pegmatite which extends beyond the main zone is open at depth, with historical drill hole TTRC1313 returning an outstanding intersection of 3m at 14,081ppm Ta₂O₅. The mineralisation also remains open down-dip and along strike. Drill holes TTPRC11-TTPRC17 are designed to intersect this zone down-dip.

The northern extension of the pegmatite from around 10340mN to 10500mN has been drilled on 40m spacings. This zone needs to be in-filled to minimum spacings of 20m north-south, which will also assist with grade control prior to mining. Proposed holes TTPRC22-32 have been designed to undertake this in-fill/grade control program.

Background – Tabba Tabba Tantalum Project

Tabba Tabba is being developed and operated as a proposed open cut mine and processing facility. The plant will produce a +5% Ta₂O₅ concentrate for sale under the agreement with GAM.

Tabba Tabba is serviced via Port Hedland (population approximately 20,000), a modern city with full amenities and infrastructure. Site access is via the sealed Marble Bar Highway, some 60km south-east of Port Hedland then south-west for approximately 25km along Wallareenya station single lane dirt road.

In 2013/2014, Pilbara Minerals completed a Final Feasibility Study on the Tabba Tabba Project. The report was prepared by a number of consultants including Mitchell River Group, Croeser Pty Ltd, Nagrom, Dempsey and Seymour. The report covers the technical and economic feasibility of developing the Tabba Tabba Project. The study includes design, engineering and cost estimates for the mining, process plant and associated facilities for a 100,000tpa FIFO operation.

The Mineral Resources and Ore Reserve estimation was classified in compliance with the JORC 2012 Code and the Australian Securities Exchange (“ASX”) listing rules. All prices are in Australian Dollars unless stated to the contrary. The Ore Reserve estimate has been established through a series of mine optimisations and mine designs. The current resource calculation is classified as indicated by MRG and totals 223,000 tonnes at 0.124% Ta₂O₅.

A single-staged pit design has been recommended. Mining is planned to be undertaken by conventional truck and shovel operations under contract mining arrangements.

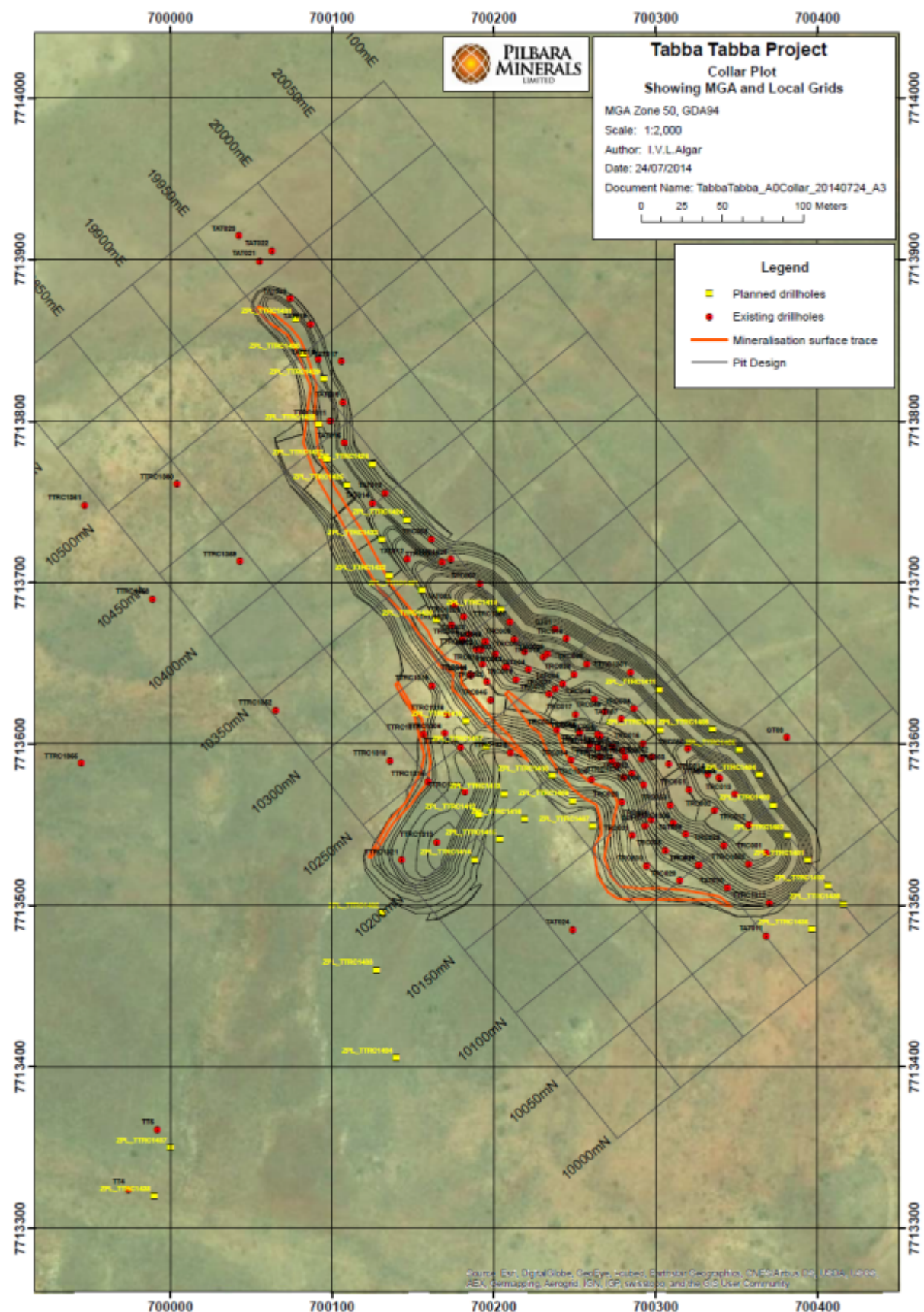


Figure 1 – Proposed Drilling at Tabba Tabba

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. Pilbara's Tabba Tabba Project could supply approximately 7 per cent of the annual market consumption over two years. There are two major buyers of tantalum raw product worldwide, HC Starck and Global Advanced Metals.

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Appendix 1

Table 1: Proposed Tabba Reverse Circulation Program

Hole ID	North local	East Local	North (GDA)	East (GDA)	Dip	Depth
TTPRC 001	10040	20000	700407	7713513	-90	50
TTPRC 002	10060	20000	700394	7713528	-90	50
TTPRC 003	10080	20000	700381	7713544	-90	40
TTPRC 004	10100	20005	700373	7713562	-90	40
TTPRC 005	10120	20010	700364	7713581	-90	50
TTPRC 006	10140	20010	700352	7713597	-90	55
TTPRC 007	10160	20005	700335	7713609	-90	55
TTPRC 008	10160	19910	700261	7713549	-90	15
TTPRC 009	10180	19980	700303	7713609	-90	40
TTPRC 010	10180	19910	700249	7713565	-90	20
TTPRC 011	10200	19910	700236	7713580	-90	15
TTPRC 012	10200	19995	700302	7713634	-90	50
TTPRC 013	10210	19860	700191	7713557	-90	30
TTPRC 014	10210	19880	700206	7713569	-90	35
TTPRC 015	10190	19840	700188	7713528	-90	20
TTPRC 016	10190	19860	700203	7713541	-90	30
TTPRC 017	10190	19880	700219	7713554	-90	35

TTPRC 018	10240	19890	700195	7713599	-90	25
TTPRC 019	10260	19890	700183	7713614	-90	25
TTPRC 020	10300	19950	700204	7713683	-90	40
TTPRC 021	10320	19915	700164	7713677	-90	20
TTPRC 022	10340	19920	700156	7713695	-90	25
TTPRC 023	10360	19910	700135	7713705	-90	15
TTPRC 024	10380	19920	700131	7713726	-90	15
TTPRC 025	10380	19940	700146	7713739	-90	40
TTPRC 026	10420	19925	700109	7713761	-90	15
TTPRC 027	10420	19945	700125	7713773	-90	40
TTPRC 028	10440	19925	700097	7713776	-90	15
TTPRC 029	10460	19935	700092	7713798	-90	15
TTPRC 030	10480	19955	700095	7713826	-90	15
TTPRC 031	10500	19955	700082	7713842	-90	15
TTPRC 032	10520	19965	700077	7713864	-90	15
TTPRC 033	10200	19775	686664	7714911	-90	50
TTPRC 034	10175	19750	686661	7714876	-90	50
TTPRC 035	10125	19725	686637	7714825	-90	50
TTPRC 036	10025	19975	686402	7714956	-90	50
TTPRC 037	10025	20000	686387	7714975	-90	50
TTPRC 038	10170	19582	700000	7713350	-90	50
TTPRC 039	10153	19555	699990	7713320	-90	50
						1315

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 December 18, 2013 Tabbatabba 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 December 18, 2013.

The Company confirms it is not aware of any new information or data that materially affects the information included in the February 19, 2014 Mineral Reserve 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 February 19, 2014.

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.