PILBARA MINERALS LIMITED

ACN 112-425-788

ASX ANNOUNCEMENT **10 March, 2016**

PILGANGOORA LITHIUM-TANTALUM PROJECT SET TO DELIVER OUTSTANDING CASH-FLOWS AND RETURNS: PRE-FEASIBILITY STUDY

PFS CONFIRMS THAT THE WORLD-CLASS PILGANGOORA PROJECT IS ON TRACK TO BECOME A MAJOR NEW LOW-COST SUPPLIER OF HIGH-QUALITY SPODUMENE (LITHIUM) CONCENTRATES

PFS HIGHLIGHTS

- High-quality **Pre-Feasibility Study** (PFS) confirms **technical and financial viability of a standalone 2Mtpa** mining and on-site processing operation at Pilbara's 100%-owned **Pilgangoora Lithium-Tantalite** Project, located near Port Hedland in WA
- **Forecast annual production of approximately 330ktpa of 6% spodumene concentrates** (48ktpa of Lithium Carbonate Equivalent or LCE) and 274,000lbs pa of tantalite
- **Maiden Ore Reserve** of **29.5Mt @ 1.31% Li_2O and 134ppm Ta_2O_5**
- **Current Mine Reserve underpins an initial mine life of 15 years** with further growth expected from the 15,000m drilling campaign currently underway as part of the Definitive Feasibility Study (DFS)
- Initial metallurgical testwork **confirms ability to produce +6% spodumene concentrates** with estimated Lithia (Li_2O) recovery of 77%; further work is underway to improve flotation recoveries
- **Eight product off-take MoU's** already signed with **leading chemical and technical grade customers** for 100% of forecast mine production capacity
- Development schedule demonstrates **plant commissioning from the 4th Quarter of CY2017**

FINANCIALS

- **Outstanding life-of-mine operating cash costs[1] of only USD$205/tonne** of spodumene concentrate FOB (including by-product credits for Ta_2O_5 production)
- **EBITDA over the first 5 years of operations of approximately A$120M per annum**
- PFS based on **life-of-mine average spodumene price of US$456/t CFR[2]** – current spot price +US$600/tonne CFR
- **Project payback in approximately 2 years**
- **Project NPV of A$407M** (10% discount rate, post tax) and **IRR of 44%** (PFS Reserve basis)
- Project **capital estimate of A$184M** ($\pm$25%)

GROWTH

- Analysis completed by MiningPlus and contributing to mine planning in the DFS optimises both Indicated and Inferred material creating Pit inventories[3] totalling **53.9Mt @ 1.29% Li_2O, 128ppm Ta_2O_5 and 1.19% Fe_2O_3 – further significant Reserve and NPV growth** (beyond the PFS Reserve outcome) is expected as a result of current drill programs
- **Definitive Feasibility Study** on track for delivery in Q3 2016, paving the way for finalisation of off-take agreements and project financing – construction targeted to commence in Q1 2017
- Significant **potential for future production increases** to 3Mtpa to meet projected battery demand growth

1. Cash costs include all production costs, corporate and admin, royalties
2. Independent industry analysis by leading global consultancy, Roskill. CFR ("Cost and Freight") is a trade term requiring the seller to arrange transport
3. Pit inventory is a non JORC term, with tonnes estimated as a result of mine optimisation processes across the entire Inferred and Indicated resource base. The pit inventory estimate provides technical guidance to the expansion of the existing project Reserve.

Australian strategic metals company Pilbara Minerals Ltd (ASX: PLS) is pleased to advise that the Pre-Feasibility Study (PFS) on its 100%-owned **Pilgangoora Lithium-Tantalite Project** in WA has delivered outstanding results, confirming that the project is on track to become a globally significant new mining centre for lithium concentrates for many decades to come.

The PFS – which has been completed to a high standard with the assistance of a group of highly experienced independent consultants and contractors – has outlined an extremely robust development with low operating costs, capable of generating exceptional returns for Pilbara shareholders.

The PFS includes an initial maiden Ore Reserve for Pilgangoora of **29.5Mt @ 1.31% Li_2O, 134ppm Ta_2O_5 and 1.18% Fe_2O_3**, underpinning a 2Mtpa standalone mining and processing operation over an initial 15-year mine life. There is considerable potential to extend the mine life and/or increase the production rate in the future, by including additional pit inventory not currently included in the PFS Ore Reserve. Drilling currently underway is expected to further increase the resource and reserve inventory across the project, most importantly within the existing defined reserve pit limits.

The key financial parameters of the project include forecast pre-production capital expenditure of ±$184 million (including mine pre-strip, 2Mtpa Concentrator and all surface infrastructure) and, projected annual average EBITDA of **A$103 million per annum** based on forecast life-of-mine (LOM) pricing, generating a forecast project Net Present Value ($NPV_{10\%}$, post tax) of **A$407 million and IRR of 44%.**

These outcomes are based on a conservative life-of-mine average spodumene price of **US$456/tonne CFR (well below the current spot price of approximately US$600/tonne). An AUD/USD exchange rate of 0.75c has been applied over the LOM.**

The highly successful PFS adds significant momentum to the ongoing Definitive Feasibility Study (DFS) for Pilgangoora, which commenced in January and is on track for delivery in Q3 2016.

Commenting on the PFS results, Pilbara Minerals CEO Ken Brinsden said: “This is an outstanding result for the Company, with the PFS clearly showing that Pilgangoora is a robust, long-life project based on a world-class resource.

“The strong technical fundamentals and excellent financial returns of the project are underpinned by a relatively modest capital cost estimate together with low forecast cash operating costs, which reflects the inclusion of significant tantalite by-product credits.

“This means that the project will be capable of generating very strong operating margins and cash flows, producing a high-quality product that we expect will be in high demand as evidenced by the very high level of interest already displayed by our customer base.

“Based on these results, Pilgangoora is now firmly established as the world’s leading lithium development project – a premier mid-tier mining asset which is already attracting strong interest from prospective project financiers and cornerstone investors based on its potential to transform Pilbara into a leading player in the rapidly growing lithium industry.

“While the PFS – which is an interim document designed to assist us with ongoing financing and off-take discussions while we complete the DFS – is based on an initial mine life of 15 years, we are confident that the mine life will be further extended with additional drilling of the current Inferred Resource base as well as exploration drilling outside of the known Resource envelope. Drilling has already commenced and any additions to the resource inventory will be incorporated into the ongoing Definitive Feasibility Study, further enhancing the key financial outcomes of the project.

“The Pilbara Minerals team, together with our key consultants and contractors, have worked extremely hard in delivering this result for shareholders, and I would like to sincerely thank them for the outstanding financial and technical outcomes they have achieved. We will now focus on the

completion of the Definitive Feasibility Study by Q3 of this year, with the overall aim of commencing commissioning at the Pilgangoora Project during Q4 2017."

PILGANGOORA PFS – PROJECT BACKGROUND

The Pilgangoora Lithium-Tantalum Project is located approximately 120km south of Port Hedland in Western Australia's Pilbara region (see Figure 1). The Project is readily accessible by road, with relatively simple access to existing infrastructure (including downstream port facilities) at the existing port of Port Hedland.

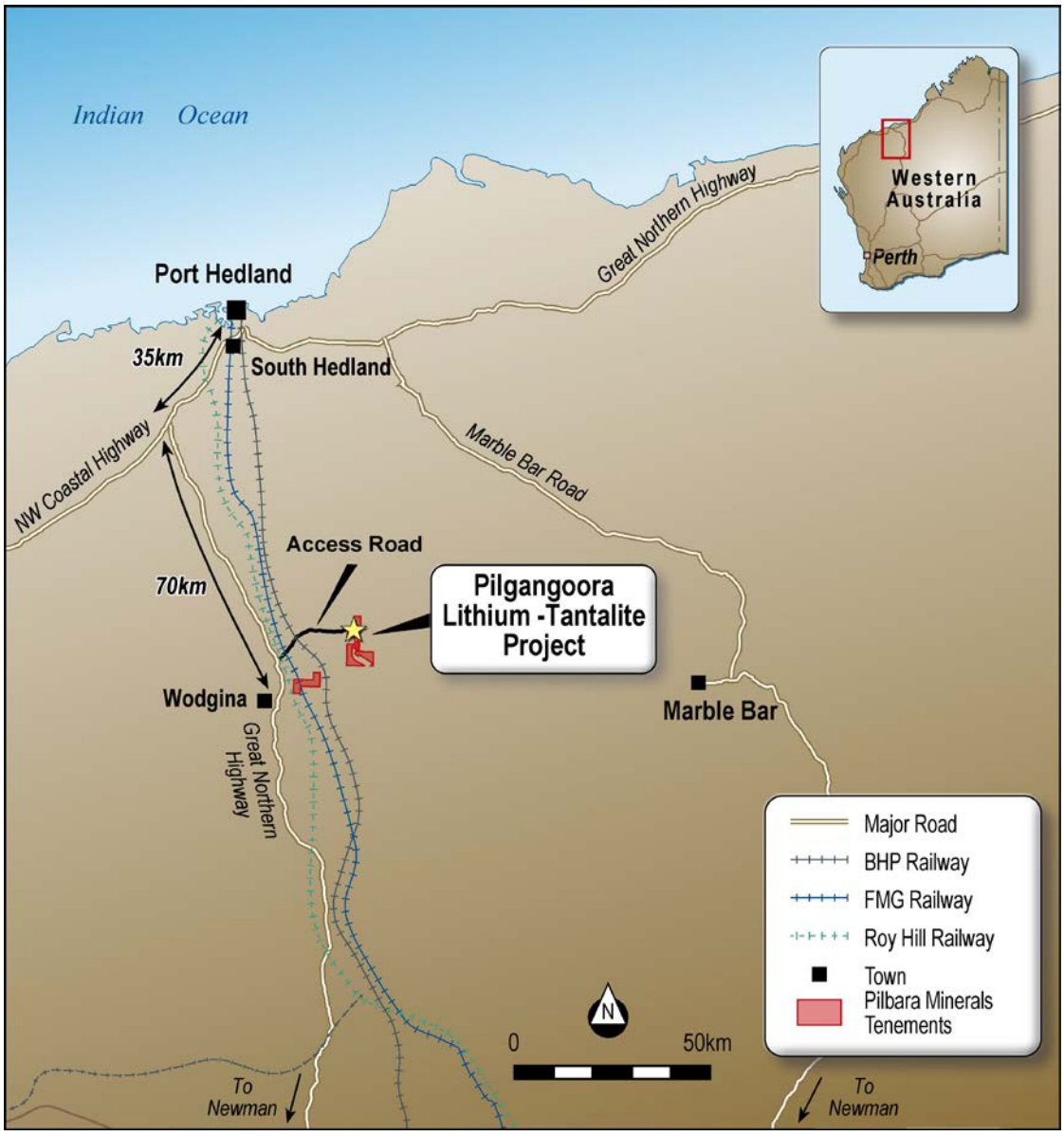


Figure 1: Pilgangoora Lithium-Tantalum Project Location

The Pre-Feasibility and Definitive Feasibility Study works are primarily delivered through consulting and contract resources. The major contract – for engineering, design and metallurgical study management services for the process plant infrastructure (and non-process infrastructure) components of the Definitive Feasibility Study (DFS) – has been awarded to the 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 the design of roads and supporting infrastructure.

All of the major consultant groups are well underway to deliver the key components of the upcoming DFS according to their relevant disciplines. The major components which have been awarded are:

- Process Plant Infrastructure and Non-Process Infrastructure – Como Engineers;
- Metallurgical Testwork Management – Como Engineers;
- Geology and Resources – Trepanier Pty Ltd;
- Mining, Mine Design and Reserves – MiningPlus;
- 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 PFS studied the establishment of a 2 million tonne per annum (Mtpa) mining and processing operation, delivering over 320 thousand tonnes per annum (ktpa) of spodumene concentrates in full production, for the chemical and technical grade markets.

While the scale of the Resource (and therefore Reserve potential) indicates that a larger mine could potentially be established, it is the Company's view that initial production should be limited to facilitate entry of the Project's product streams into the market in an orderly manner.

Figure 2 following shows the proposed site layout inclusive of mining areas, processing facilities and non-process infrastructure.

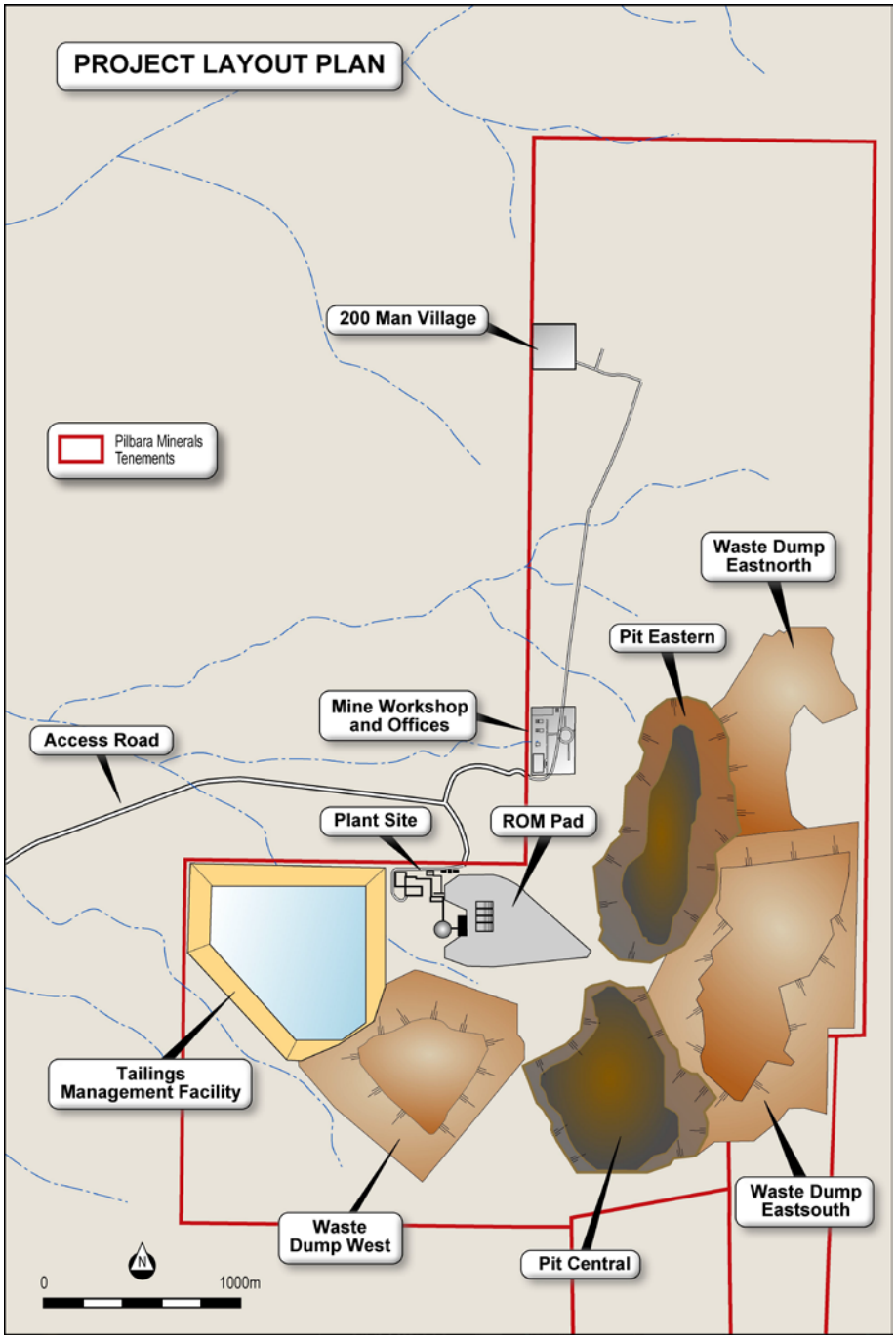


Figure 2: Pilgangoora Project Plan

Following conventional open pit mining and delivery to the Run-of-Mine pad, ore will be processed to concentrate the lithium and tantalum product streams. Concentrates are then transported in bulk (or in certain circumstances some technical grade product may be bagged) for ship loading and delivery to downstream customers.

The Project's entire logistics chain is shown in Figure 3 below:

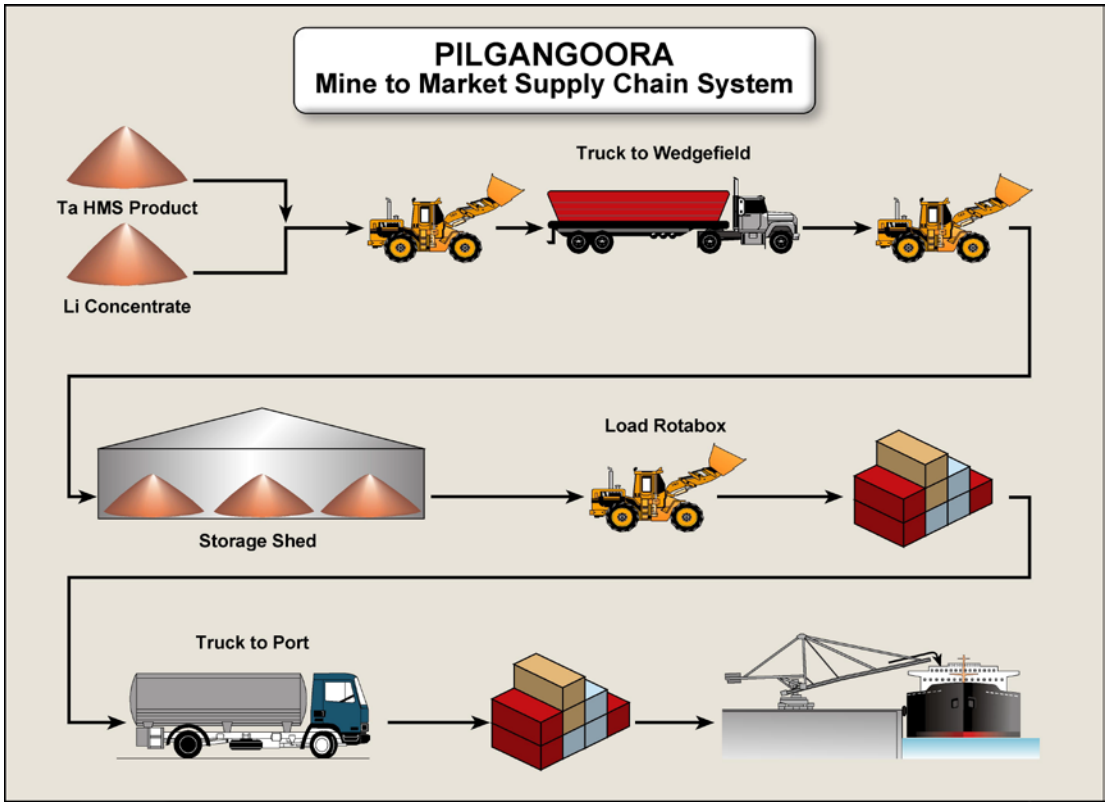


Figure 3: Pilgangoora Logistics Chain

PRE-FEASIBILITY STUDY OUTCOMES

GEOLOGY / RESOURCES

The Pilgangoora tenements are located within the Archean North Pilbara Craton, a granitoid-greenstone terrane which is composed of a series of granitoid-gneiss domes bordered by sinuous greenstone belts composed of mafic-volcanic dominated supracrustal sequences, producing a distinctive dome and basin pattern.

The prospective pegmatites of the Pilgangoora Project are intruded into amphibolite rocks and ultramafic and mafic schists from the Warrawoona Group close to the contact of a granitoid body. The pegmatite system extends over 7km and mineralisation occurs in multiple north-south trending pegmatites with strike lengths reaching up to 1250m. These dykes and veins range from 5-50m in thickness, dip to the east at 30-70°, thicken slightly with depth and are parallel to sub-parallel to the main schistose fabric within sheared greenstones. The pegmatites are comprised of albite, quartz, spodumene, muscovite and K-feldspar.

Pilbara has previously confirmed the significant scale of the Pilgangoora Mineral Resource, recently reporting an upgraded Indicated and Inferred Resource of 80.2Mt grading 1.26% Li_2O (containing 1,008,000 tonnes of lithium oxide), including 42.3Mt grading 195ppm Ta_2O_5 (containing 18.2 million pounds of tantalum oxide). Please refer to Pilbara Minerals' ASX Announcement of 1st February 2016 for further details.

Table 1: Pilgangoora Project – Mineral Resource Estimate

Category		Tonnage (million tonnes)	Ta_2O_5 (ppm)	Li_2O (%)	Ta_2O_5 (tonnes)	Ta_2O_5 (Mlbs)	Li_2O (T)
Indicated	Ta_2O_5	17.9	182		3,255	7.2	
	Li_2O	35.7		1.31			469,400
Inferred	Ta_2O_5	24.3	205		4,995	11.0	
	Li_2O	44.5		1.21			538,600
TOTAL	**Ta_2O_5**	**42.3**	**195**		**8,250**	**18.2**	
	Li_2O	**80.2**		**1.26**			**1,008,000**

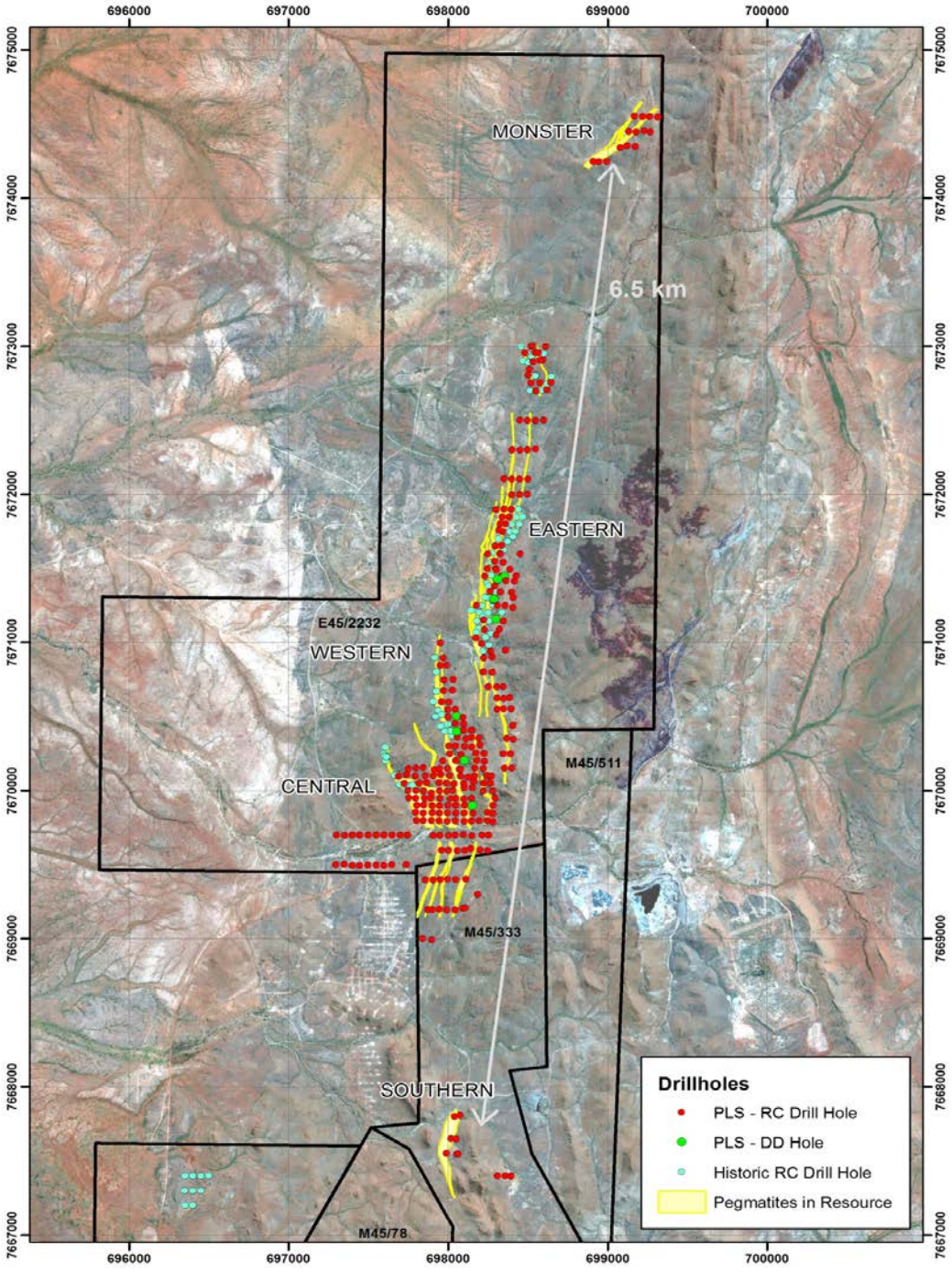


Figure 4: Pilgangoora Project Pegmatites Contributing to the Resource

MINING / RESERVES

Conventional open pit mining is proposed for the delivery of 2Mtpa of ore to the ROM (Run-of-Mine) pad. DFS study works are considering both owner mining and contracted mining scenarios, however for the purpose of the PFS financial analysis and maiden Ore Reserve statements, contractor mining costs have been used.

MiningPlus Pty Ltd has completed an independent review of the existing Mineral Resource, for the purpose of optimisation studies to estimate project Ore Reserves, and found no material flaws in the existing Resource model.

During the PFS stage of work, Mining Plus's scope of work included the work areas outlined below:

- Mine Planning Criteria;
- Optimisation;
- Mine Design and Scheduling;
- Infrastructure;
- Cost and Revenue Modelling; and
- JORC (2012) Ore Reserve Reporting.

The study consisted of an initial conversion of the mineral resource model to a mining model, then the completion of both open pit optimisation and mine shape optimisation using the mining models, with finally the development of engineered open pit designs, and then mines scheduling and costing.

During this PFS level mining study Mining Plus then completed the following tasks:

- Numerous mine shape optimiser runs to determine mining widths;
- Numerous open pit optimisation runs;
- Open pit mine designs;
- Open pit mine schedules; and
- Open pit costing including considerations for infrastructure and people requirements.

The mining method is based on open pit mining, and was evaluated for truck and hydraulic excavator (backhoe) operations utilising 4 x 2.5m flitches for 10m benches for combination waste/pegmatite mining and 10 m bench mining for waste mining.

A Mineable Shape Optimiser (MSO) analysis was run on the Mineral Resource model using a minimum mining width of 2.5m and a maximum of 100m, providing a length weighted mining width of 22-23m. An evaluation of the application of 0.5m boundary dilution for each mining width provided a length weighted average dilution of 4.3%, supporting the study value of 5%, at nominally 12% Fe_2O_3, raising the average grade within the final pit mineral resource from 0.61% to an ore reserve estimate of 1.18% Fe_2O_3.

A Whittle optimisation was performed and a subsquent ultimate pit was designed valuing only JORC Mineral Resource Indicated category material only. There was no measured material within the mineral resource model provided. The optimisations utlised the interim recovery figure for Li2O of 70.4% and the Ta2O5 recovery figure of 47%. Li2O metallurgical test work continued throughout the project is currently at a recovery rate of 76.7%.

All inputs to to mine optimisation and final pits were those used as part of the recently completed Pre-Feasibility Study (PFS), with further recent work completed to finalise study outcomes and this Ore Reserve Estimate for the Pilgangoora Project. Modifying factors are based on the work recently completed in the Pilgangora PFS, with modifying factors such as processing recoveries and costs, financial parameters, and geotechnical design parameters provided by professionals competent in the following areas:

- Assumed average of 2 Million tonnes of ore processing per annum;
- A selling price of USD$430.00/t for Battery Grade concentrate, at 6% Li2O as provided by Pilbara Minerals (prior to the updated Roskill Lithium Market Overview report of Jan16);
- Recent mining costs provided from recent contractor schedule of rates for other projects within the Pilbara region obtained from the from Mining Plus mining cost database; and
- Processing costs as per the 2Mtpa rate from of the Como Engineering.

This JORC Ore Reserve optimisaton results and pit designs, have been compared to recently completed PFS study's optimisation results, pit design and schedules to ensure this Ore Reserve estimate is economic and practically able to be achieved based on all available information.

The current Ore Reserve (as defined by the current Mineral Resource statement of 1st February, 2016 and PFS inputs) is outlined in the table below:

Table 2: Pilgangoora Project – Ore Reserve Estimate

Category	Tonnage (million tonnes)	Li_2O (%)	Ta_2O_5 (ppm)	Fe_2O_3 (%)	Li2O (T)	Ta_2O_5 (tonnes)	Ta_2O_5 (Mlbs)
Proven	0.0	0.00	0	0.00	0	0	0
Probable	29.5	1.31	134	1.18	298,000	1,856	4.09
TOTAL	**29.5**	**1.31**	**134**	**1.15**	**273,000**	**1,856**	**4.09**

This Probable Ore Reserve is the economically mineable part of the Indicated Resource. It includes mining dilution and allowance for losses in mining. Appropriate assessments and studies have been carried out and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified.

The Life-of-Mine (LOM) strip ratio delivered as a result of the PFS Reserve is approximately 3.47:1 (waste to ore tonnes). Mining during the first five years of operations has a strip ratio of 2.87: 1, contributing to lower costs in the earlier years of the Project's life, without compromising results over the remaining LOM based on existing Reserves and consideration of likely reserve growth. The Probable Reserve represents conversion of approximately 87% of the existing Indicated Resource.

The PFS pit and waste rock dump designs are designed and will impact the Pilgangoora Creek. It has been assumed that regulatory approval for this will be achieved during the DFS study. As part of the pit design an initial diversion drain and embankment has been completed. The waste rock dump designs do not take into account any consideration for potential acid forming material (PAF) and are designed to meet the license requirements. Waste rock characterisations studies are currently being completed.

Management of top soil material including pre-stripping prior to mining and storage for future incremental rehabilitation has been considered in the Pre Feasibility Study. A Soil Characterisation review and report has just been completed by environmental consultants, which will facilitate further detailed work regarding top soil management.

The methodology for the completion of the mining costs comprise creation of mining costs per BCM for mining activities with consideration of the location of the material and type of material coded into the block model, and then the mining costs collated per period during mining scheduling and then multiplied by the appropriate rates. Costs for mining establishment have consideration for main activities being completed by mining contractors.

Mining Costs also consider activities for mining team operating costs, management and maintenance, mobile plant maintenance activities and infrastructure, ore rehandle and crusher feed, clear and grub, top soil management, and dry stacked tails haulage.

Load and Haul mining costs have been derived from Mining Plus' database of costs including recent indicative mining costs (2015) from the Pilbara region for similar operations. Considerations have been made for the current competitive nature of the contracting market, diesel price trends and production of Battery Grade concentrate with unrestricted Fe2O3 limits.

Drill and blast costs have been similarly evaluated from drilling costs from the Pilbara region, however they have been modified for the traditionally high powder factors of Spodumene blasting based on experiences of the competent person in operations with similar rock conditions.

Infrastructure requirements for open pit mining include; maintenance workshop for all mobile equipment, offices, crib rooms and amenities, fuel farm, water dams, and de-watering systems as required. It is assumed some of the mine infrastructure will be provided by a primary mining contractor.

As part of the Pilgangoora Pre-feasibility study, Pilbara Minerals commissioned Como Engineers to complete the mineral processing test-work including estimates for the capital required for construction of the processing plant. Within the mining study the metallurgical recovery assumptions used are as per metallurgical results as provided to the Competent Person from external metallurgical consultants (Como Engineering).

Within the mining PFS no allowances were made for deleterious elements as Pilbara Minerals has shown in metallurgical test work that they are unlikely to exist in any significant way.

Mining Plus recommends additional work is completed as the project continues to develop through feasibility level of study and progresses towards project implementation, with the following tasks a priority for additional work:

- Re-quotation for competitive mining costs by contractor based on the intended implementation schedules to improve the reliability of the cost estimates for the open pits;
- Cost estimating the Pilgangoora Creek diversion and embankment;
- Application for mining leases to cover all future waste landforms. The current project sits inside the current and proposed leases. However unconstrained optimisations indicate waste landforms will extend beyond these mining leases;
- Further work is completed in mine scheduling and waste rock dump design to ensure any modifying factors are accurate and there is a high level of confidence as the project undergoes further technical evaluation. This further evaluation would also include consideration of integration of waste rock dump with proposed tailings storage facilities; and
- Further work to evaluate and consider the site with regards to geotechnical engineering, hydrogeology and hydrology conditions that will be impact the mine design and site layout. Pilbara Minerals has further drilling planned to commence shortly to allow geotechnical evaluation of the proposed wall design parameters, and further hydro work.

Pilbara Mining drilling programs (15,000m) are currently underway and are expected to further increase the proportion of Indicated Resources and introduce Measured Resources to the updated Definitive Feasibility Study (DFS) Resource estimate, which will in turn deliver a revised Reserve estimate coincident with the release of the DFS.

In order to accommodate these expected changes and facilitate ongoing mine planning, the pit inventory being considered within the DFS work to date to redefine the Project's current expected mine life comprises **53.9Mt @ 1.29% Li_2O, 128ppm Ta_2O_5 and 1.19% Fe_2O_5**. This pit inventory results from optimisation of both the Indicated and Inferred components of the current Resource model (1st February, 2016). The LOM strip ratio associated with the DFS pit inventory as a result of optimisation and design work to date is 3.6:1.

PFS mine planning, optimisation and design results in two distinct mining areas, targeting the Eastern, Western and Central pegmatite zones.

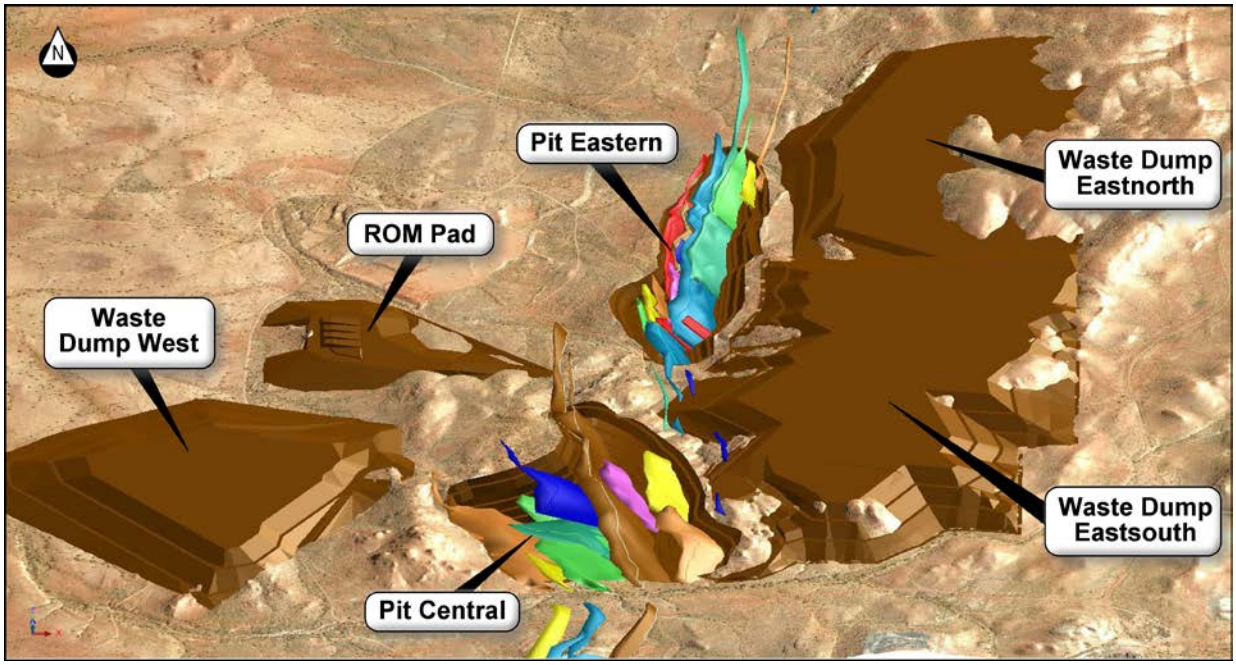


Figure 5: PFS Reserve Mining Areas Overview

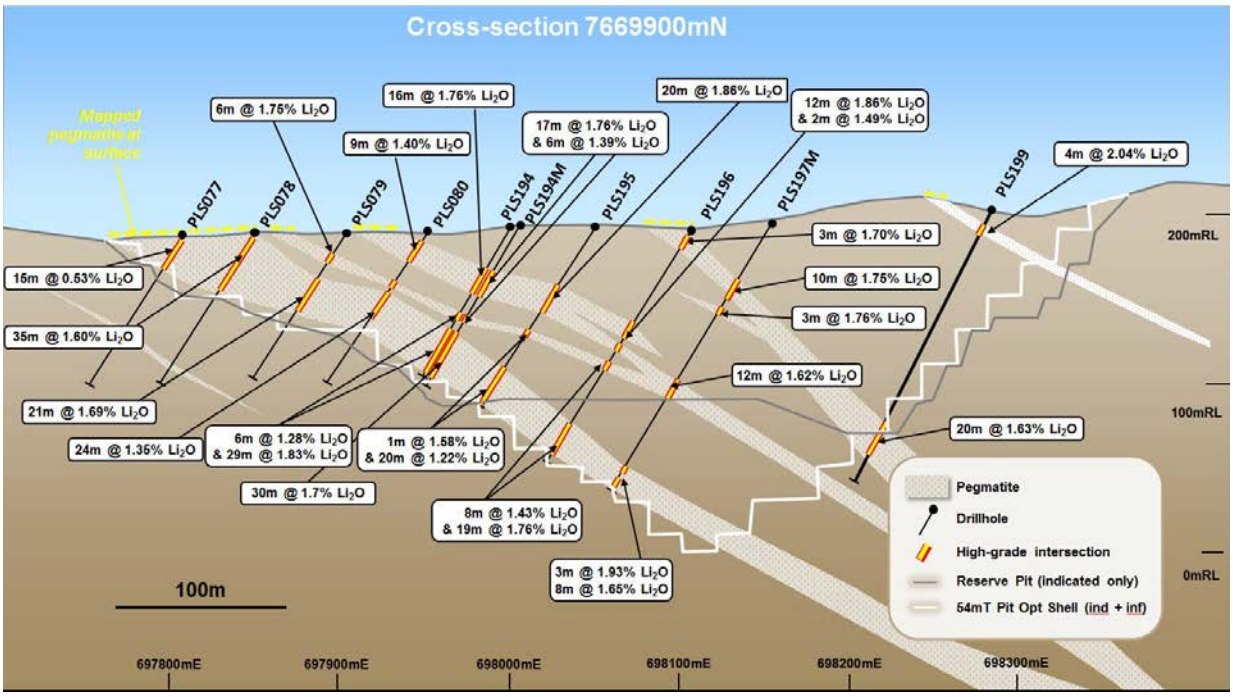


Figure 6 – Central Mining Zone cross-section 7669900mN showing Reserve Pit Shell and DFS Pit Inventory Shell

METALLURGICAL TESTWORK

Resource drilling during 2014 and 2015, including both RC and diamond drilling, has contributed samples for the purpose of metallurgical analysis as part of the PFS. Samples have been sent to independent analytical laboratories for assessment and the results are assisting in the refinement of concentration techniques for both Lithia and Tantalite.

A 100kg parcel of mineralised sample was sent to Dorfner Anzaplan in Germany for exploratory flotation testwork to produce lithium concentrates. Dorfner Anzaplan is a world-renowned specialist in high value industrial and strategic minerals. Testing and analyses are carried out in their own laboratories and test centre, using state-of-the-art analytical methods.

161kg of mineralised sample was also sent to Nagrom Mineral processors in Perth with the objective of measuring the amenability of the ore to gravity, flotation and magnetic separation to recover spodumene and tantalite.

PFS metallurgical testwork has been further supplemented by additional heavy media separation (HMS) and flotation testwork at ALS laboratories (Perth), and flotation testwork at KSPY (Adelaide), to further refine the proposed process plant flow-sheet (please see diagram 7 below) and mineral recovery rates.

As a result of the PFS testwork, lithia recovery has been **calculated at 77% and tantalite recovery at 47%.**

Substantial additional testwork is underway to contribute to the DFS outcomes, and optimisation of the testwork results is expected to increase the recovery to in excess of 77%. Further, bulk samples from PQ diamond core will be subject to pilot scale testwork of the proposed process flow-sheet to generate samples for the Company's proposed customers and associated off-take agreements.

A key focus of the DFS metallurgical testwork is ore variability testing (differing mining locations during the first 5-7 years of mine life) to further refine process flow and mineral recovery.

PROCESSING

The concentrator plant is designed to process 2Mtpa of ore feed. The nominal capacity of the concentrator is 250tph of ore at an average utilisation rate of 91%.

The flowsheet has been designed to target three distinct product streams, namely:

- Chemical Grade spodumene at 6% Li_2O and medium iron;
- Technical Grade spodumene at 6.5% Li_2O and low iron; and
- Tantalite concentrate at 4-5% Ta_2O_5.

The concentrator has six key areas including; crushing, feed preparation, dense media separation, gravity separation, grinding, flotation, magnetic separation and dewatering. Wet magnetic separation has been included in the flotation process for the reduction of iron in the technical grade product.

A generalised process flow diagram for the proposed plant design is provided below:

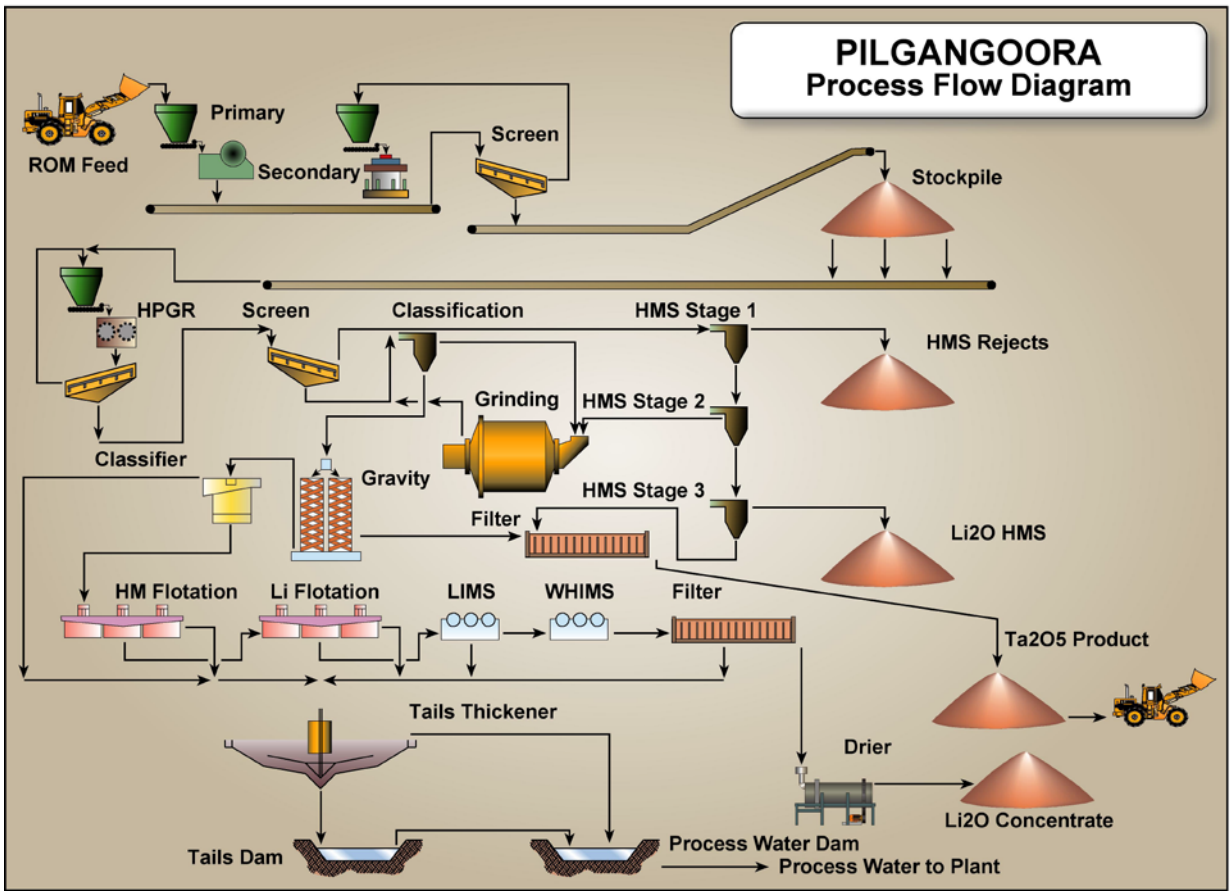


Figure 7: Process Flow Diagram

TAILINGS MANAGEMENT

HMS rejects are planned to be filtered and dry stacked and co-disposed in the mine waste stockpiles. Flotation tailings will be disposed of in a conventional tailings management facility.

SALES / MARKETING / PRICING

The Company has engaged with potential customers and signed Memorandums of Understanding (MoU's) with key users and agents for spodumene concentrates in China, Korea/Japan, North America and Europe. Establishing the MoU's is an important first step in moving towards formal off-take agreements for both chemical and technical grade products.

MoU's cover agency agreements for technical grade product in the European, North American, Japanese/Korean and Chinese markets with key distribution partners. Distribution arrangements are favoured in these markets given the smaller parcel sizes envisaged and multiple downstream buyers of product.

MoU's have been established directly with spodumene convertors for the Chinese chemical lithium market, given the higher sales volumes expected in this market.

The non-binding MoU's are an important first step in building key sales relationships for target markets and customers. The Company's objective is to progress sales arrangements to binding off-take agreements in parallel with the remaining feasibility and financing objectives.

Pilbara is developing the Pilgangoora Project against a backdrop of increasing global lithium consumption, being led by the rechargeable battery market, which accounted for 32% of total lithium consumption in 2015 (being just over 55,000t of Lithium Carbonate Equivalent – LCE).

The short, medium and long-term outlook for lithium consumption appears strong, with overall growth forecast at 6.4% pa to 2025 in the base-case scenario, with the market reaching 336,200t LCE.

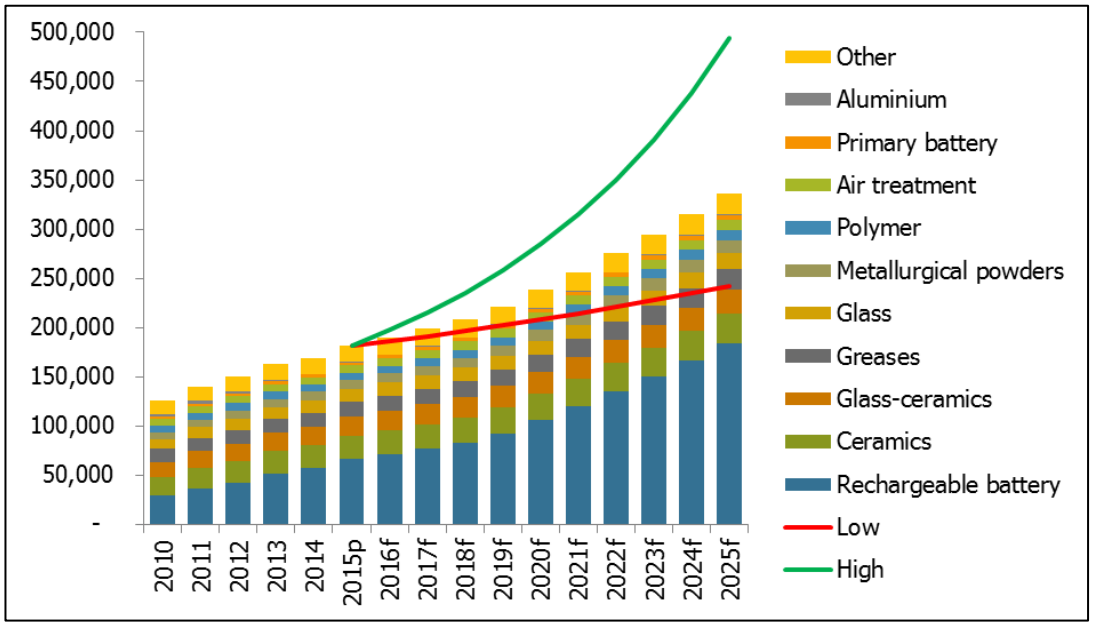


Figure 9: World forecast demand for Lithium by first use (t LCE, Roskill Jan16)

Consumption of lithium in volume terms will continue to be driven by the rechargeable battery sector, which is forecast to register growth of 11.3% per annum through to 2025, reaching 183,250t LCE in the base-case scenario. If production of EVs is higher than forecast, demand for lithium-ion batteries from consumer electronics producer's increases, or lithium-ion increases market share in grid and off-grid storage systems, then consumption of lithium in this application could increase by 21.8% per annum rather than the 14.1% per annum to reach 206,800t LCE.

However, concerns over the success of EVs in the market, and the suitability of lithium-ion to meet long-term vehicle electrification goals warrants a conservative alternative to the base line forecast, with a pessimistic scenario forecasting growth of 4.7% per annum, to around 87,500t LCE by 2025.

In May 2015 Pilbara announced that high-quality spodumene concentrate was successfully produced from 100kg bulk sample by German industrial minerals specialists ANZAPLAN, using simple flotation and magnetic separation (see ASX Release – 25 May 2015). Flotation testing of the bulk sample resulted in very high recoveries of spodumene with two flotation tests producing concentrate grading 5.7% Li20 (lithium oxide) and 0.37% Fe2O3 (iron oxide). Magnetic separation after flotation reduced the iron oxide content of the spodumene concentrate to 0.11% Fe2O3. This work demonstrated that the specifications for typical glass-grade spodumene products could be met.

While the preliminary technical grade testwork to date is positive, the PFS project analysis (and financials) have not included technical grade production. Further metallurgical testwork is required (consistent with the program envisaged within the current DFS) to further refine the market opportunity and plant operating parameters. At this stage metallurgical work and modelling has shown that approximately 270ktpa of chemical grade product (6% Li2O) and 50ktpa of Technical Grade Spodumene Concentrate (+6% Li2O) will be produced.

Pilbara commissioned an independent assessment by world renowned industry experts Roskill, to assess LOM pricing conditions for lithium products equivalent to those expected to be produced from the Pilgangoora Project.

Estimates over years 1 to 15 of the Project's initial mine life include pricing in the range of USD$420 - $460/t CFR (inflation adjusted) for chemical grade spodumene products. Current spot market

conditions in the chemical grade market in China appear substantially higher than the current LOM forecast range as a result of strong demand conditions and insufficient supply.

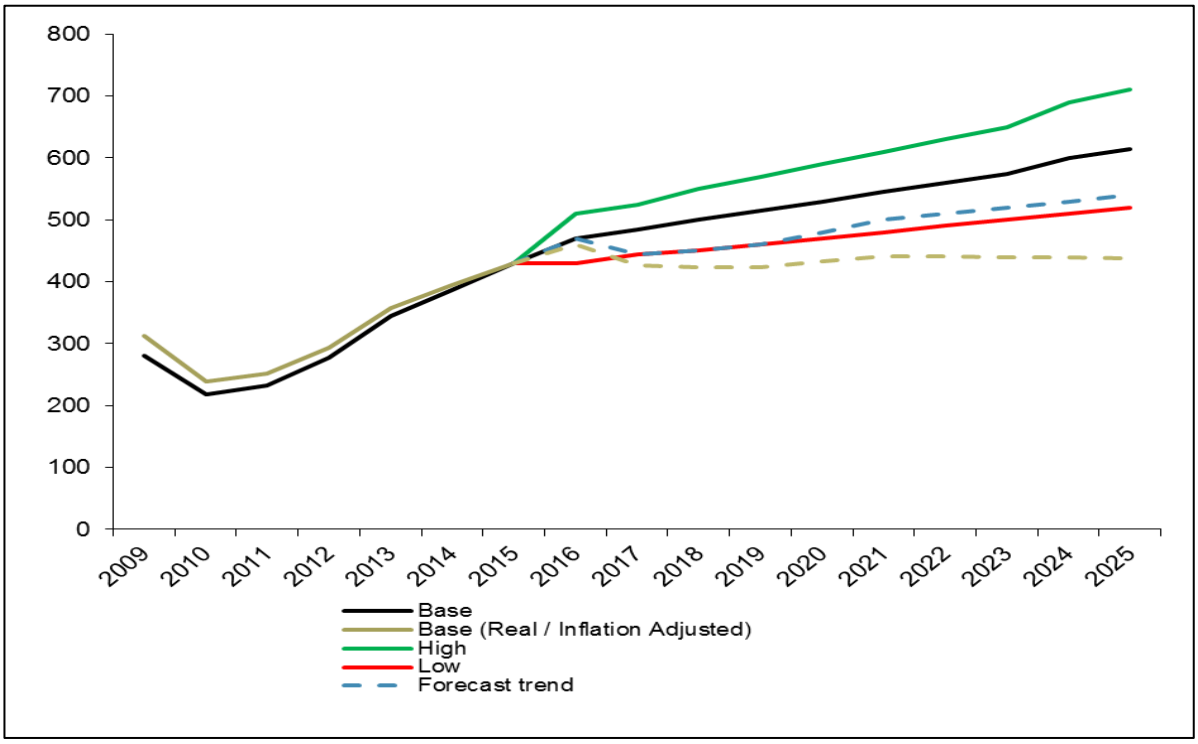


Figure 10: Price forecast for chemical-grade Spodumene concentrate (US$/t CIF, Roskill Jan16)

CAPITAL COST ESTIMATES

The capital cost estimate to construct a new 2.0Mtpa plant and infrastructure at the Pilgangoora site, including all direct and indirect costs, is approximately A$184 million plus (± 25%). This estimate includes a contingency of 15%.

The costs presented have been estimated to an overall accuracy of ± 25%, which is commensurate with the level of study undertaken.

The table below summarises the key components of the capital cost estimate:

Table 3 – Capital Costs Estimate

CAPITAL ITEM	VALUE(M)	SOURCE/COMMENTS
STUDY COST	$5.8	Preliminary Cost estimate.
MINE DEVELOPMENT	$3.0	Mining plus estimate. Include mobilisation. Light vehicles/computers.
PROCESS PLANT	$104.2	Como Engineers - Includes Crushing, HMS, Fine Spodumene Flotation, Tailings, Product Drying & Packaging. Includes EPCM costs of $16.1M.
TAILINGS MANAGEMENT FACILITY	$6.5	Civil and Mechanical. Additional capital costs for raises in years 3, 5, and 7, 10, 12, 14. Totalling $7.8M.
NON PROCESS INFRASTRUCTURE	$34.6	Como Engineers - Includes camp, haul & site roads, Airstrip, Power & Water services, Comms. Includes EPCM costs of $2.6M.
OWNERS COSTS	**$8.0**	Includes Warehouse, Critical Spares, First Fill ect..
CONTINGENCY	**$22.0**	15% of Plant, Infrastructure and Owners costs.
TOTAL	**$184**	

OPERATING COST ESTIMATES

The significant scale of the Pilgangoora Project, together with its location adjacent to existing infrastructure and relatively low strip ratio, contributes to very low forecast project operating costs. Spodumene operating costs are further enhanced with the Tantalum credit arising from Ta_2O_5 concentrate sales.

PFS analysis estimates LOM cash operating costs ranging between USD$160-$240/t year-on-year (FOB, after tantalite credits) of concentrate produced. The LOM average cost of production after Tantalum credits is approximately USD$205/t concentrate FOB. Project costs at these levels indicate that Pilgangoora will be one of the lowest cost hard rock lithium producers globally.

Table 4 – Operating Costs Estimate Details

Cost Item	Amount	Source / Comments
Mining Ore	$6.81/ore t	Mining Plus. Contractor mining rate
Mining Waste	$3.65/waste t	Mining Plus. Contractor mining rate
Dry Stacked Tails	$1.665M pa	Mining Plus. 27.8% of plant feed @ $3/t.
Crusher Feed Costs	$0.80/t plant feed	Mining Plus. FEL feed from ROM to plant @ $2/t – assumes 60% direct tip to plant.
Mining Overheads	$5.06M pa	Mining Plus. Mining Team - including flights/camp/support costs, light vehicles and lab/grade control.
Processing	$20.22/t feed	Como Engineers. Assumed at a flat rate of feed irrespective of the feed quality provided from the mine and the process flow required. Includes site administration costs. Contract power station.
Product Transport	$33.57/t transported	Qube Bulk – half height containers to Port Hedland including ship loading $32.29/t & $380kpa for Port Hedland storage shed.
Corporate & Admin	$5Mpa	Pilbara Minerals. Need to determine – guestimate for now.
3rd Party Royalties	2.5% NSR	Based on GAM SPA Agreement - GAM have first right of refusal for purchase of Lithium or Tantalum. Royalty does not apply if GAM purchase. Assumed GAM purchases all Tantalum. Therefore royalty payable on all Lithium Concentrate sales.
State Royalties	5%	5% for both Lithium Concentrate and Tantalum.

FINANCIAL EVALUATION

Summary of Key Parameters from PFS Financial Model		
Life of Mine (LOM)	Years	15
LOM Ore Mined	Mt	29.5
LOM Waste Mined	Mt	102.4
LOM Strip Ratio	(waste:ore)	3.5
Plant Feed Rate	Mtpa	2.0
Average Lithium Head Grade	%	1.31
Average Lithium Recovery	%	76.7
Average Spodumene Concentrate Production	ktpa	330
Average Tantalite Production	k lbs pa	274
Average Roskill Forecast Chemical Grade Price	US$/t FOB Real	456
Tantalite Forecast Price	US$/lb FOB Real	60
Forecast FX Rate	AUD:USD	0.75
Initial Capital Cost (including 15% contingency)	A$M	184
Average LOM Operating Costs (Real$) *	A$/t product	339
Ave LOM Operating Costs * (after Tantalite Credit)	A$/t product	273
Average Annual EBITDA (Real $)	A$M	103
NPV (10% Discount Rate, Post Tax)	**A$M**	**407**
IRR	**%**	**44.4**
Payback	**Years**	**2.2**

ENVIRONMENTAL REVIEW, PROJECT APPROVALS AND HERITAGE

Pilbara is committed to delivering best practice environmental outcomes and, in line with this commitment, is investing in significant environmental works prior to the commencement of mine construction. This includes work covering the environmental studies of flora and fauna, subterranean and trogolofauna species and heritage assessment.

As part of the PFS and DFS programs of work, the following environmental studies have been completed as at the date of this report:

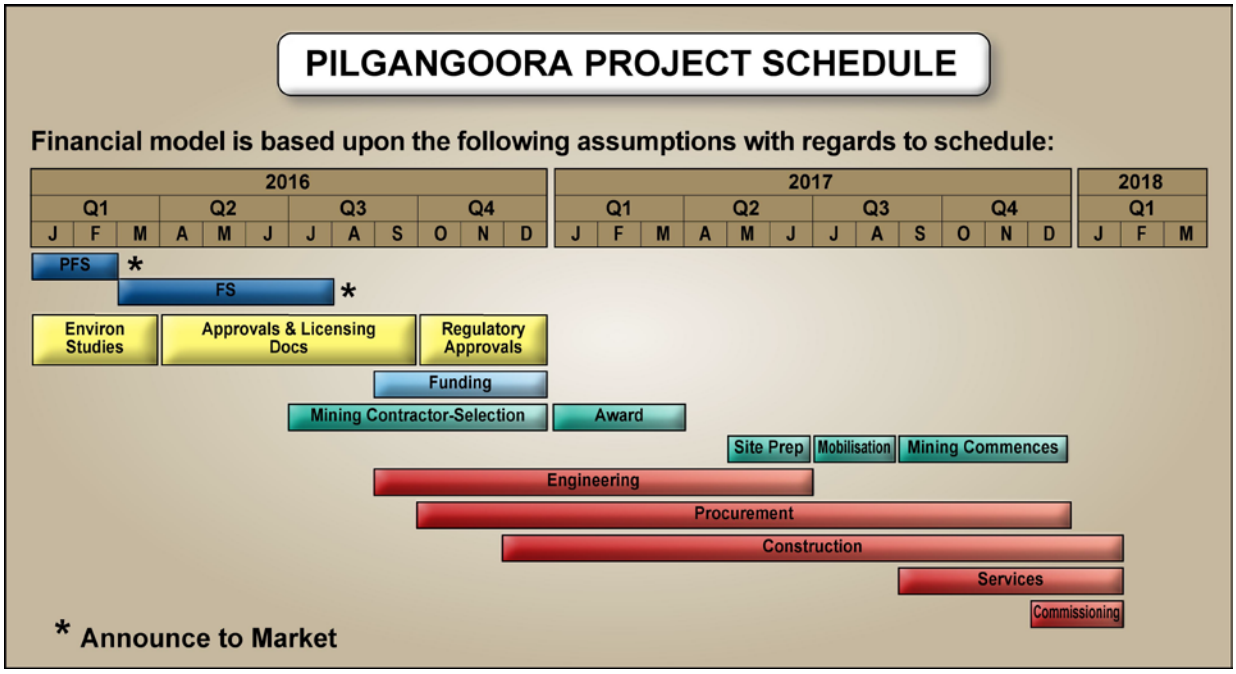
- Water Options Study (Groundwater Development Services, 2015);
- Hydro-Meteorological Desktop Study (Groundwater Resource Management, 2016);
- Level 2 Flora, Vegetation and Level 1 Fauna Assessment (MMWC Environmental, 2015);
- Pilbara Leaf-nosed Bat Targeted (Level 2) Survey (360 Environmental, 2016a);
- Pilbara Leaf-nosed Bat Roost Survey (360 Environmental, 2016b);
- Subterranean Fauna Desktop Assessment (Bennelongia, 2016a);
- Short-Range Endemic Fauna Assessment (Bennelongia, 2016b); and
- Soil Characterisation Study (SignificantENV, 2016).

A Level 2 Fauna survey, detailed groundwater, surface water hydrology and materials (tailings, waste rock & soils) characterisation studies have commenced as part of the Definitive Feasibility Study (DFS) phase of project development.

Several heritage surveys have been completed with the Njamal Group as part of the exploration clearance requirements, and the Pilgangoora Mining Lease Application (E45/1256) is proceeding through the Section 29 “Right to Negotiate” process.

No major issues or risks have been identified by the environmental studies completed to date. Over the coming months the detailed groundwater, surface water and materials (tailings, waste rock & soils) characterisation studies will be completed prior to preparing and submitting the environmental approvals and licensing applications (Works Approval Application, Mining Proposal, Mine Closure Plan, Ground Water Licence and Operating Licence Applications).

PROJECT DELIVERY SCHEDULE



DEFINITIVE FEASIBILITY STUDY

As a result of the significant exploration success achieved during 2015, the Company commenced work towards the delivery of a Definitive Feasibility Study from approximately September last year. As such, much of the detailed project work is already well underway with the aim of delivering the DFS at the earliest possible time.

The DFS is expected to be published during the 3rd Quarter of 2016.

More Information:

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.

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.

Contacts:

Investors / Shareholders

Neil Biddle
Executive Director
Ph +61 (0)8 9336 6267

Ken Brinsden
Chief Executive Officer
Ph +61 (0)8 9336 6267

Media

Nicholas Read
Read Corporate
Ph +61 (0)8 9388 1474

-- ENDS ---

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 1st February , 2016 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 resource announcement made on 1st October, 2016.

The information in this report that relates to Ore Reserves is based on information compiled by David Billington is employed by Mining Plus, is a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy included in a list that is posted on the ASX website from time to time. David Billington has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Ore Reserves'. David Billington consents to the inclusion in the report of the matters based on his (or her) information in the form and context in which it appears.

PILBARA MINERALS
LIMITED

Appendix 2

JORC Code, 2012 Edition – Table 1 report

ACN 112-425-788

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	• The deposit has been sampled using a series of reverse circulation ("RC") holes. • Talison Minerals Pty Ltd ("Talison") conducted a 54 drill hole RC program in 2008 totalling 3,198m and 29 drill holes for a total of 2,783m in 2010. • Between 2010 and 2012, Talison changed its name to Global Advanced Metals ("GAM"). GAM completed 17 RC holes for 1,776m in 2012. • Since 2014, Pilbara Minerals has completed 293 RC holes for 32,354m. • Between July and September 2015, Pilbara Minerals completed 9 diamond holes for 1,082.7m.
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	• Talison/GAM RC holes were all sampled every metre, with samples split on the rig using a cyclone splitter. The sampling system consisted of a trailer mounted cyclone with cone splitter and dust suppression system. The cyclone splitter was configured to split the cuttings at 85% to waste (to be captured in 600mm x 900mm green plastic mining bags) and 15% to the sample port in pre-numbered, draw-string calico sample bags (12-inch by 18-inch). • Pilbara RC holes were all sampled every metre within pegmatite

Criteria	JORC Code explanation	Commentary
		zones and one metre into footwall & hanging wall country rock. Samples were collected using a cyclone and cone splitter attached to the rig with a steel brace. The cyclone splitter was configured to split the cuttings at 85% to waste (to be captured in 600mm x 900mm green plastic mining bags) and 15% to the sample port in draw-string calico sample bags (12-inch by 14-inch). • Diamond core was sampled by taking a 15-20mm fillet at 1m intervals.
	• *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• Talison/GAM holes are all RC, with samples split at the rig sent to the Wodgina site laboratory and analysed by XRF for a suite of 36 elements. • Selected pulps from the 2008 and 2010 drilling plus all pegmatite pulps from the 2012 drilling were collected and sent to SGS Laboratories in Perth for analysis of their lithium content. Lithium analysis was conducted by Atomic Absorption Spectroscopy (AAS). • Pilbara RC samples were split at the rig and sent to the Nagrom laboratory in Perth and analysed by XRF and ICP. • Diamond core was cut at Nagrom, and then crushed and pulverised in preparation for analysis by XRF and ICP.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• The drilling rig used in 2008 is not noted in any reports. • The 2010 drilling was completed by Australian Drilling Solutions using an Atlas Copco Explorac 220 RC truck mounted drill rig with a compressor rated to 350psi / 1200cfm and a booster rated to 800psi, with an expected 600psi down-hole. An auxiliary booster/compressor was not required at any point during the drilling. • The 2012 drilling was completed by McKay Drilling using an 8x8 Mercedes Truck-mounted Schramm T685WS rig with a Foremost

Criteria	JORC Code explanation	Commentary
		automated rod-handler system and on-board compressor rated to 1,350cfm/500psi with an auxiliary booster mounted on a further 8x8 Mercedes truck and rated at 900cfm/350psi. Drilling used a reverse circulation face sampling hammer. The sampling system consisted of a trailer mounted cyclone with cone splitter and dust suppression system. • The Pilbara Minerals 2014 drilling was completed by Quality Drilling Services (QDS Kalgoorlie) using a Track-mounted Schramm T450 RC rig with a 6x6 truck mounted auxiliary booster & compressor. Drilling used a reverse circulation face sampling hammer with nominal 51/4" bit. The system delivered approximately 1800cfm @ 650- 700psi down hole whilst drilling. • The 2015 RC drilling was undertaken by Orbit Drilling (200 holes), Mt Magnet Drilling (44 holes) and Strike Drilling (11 holes). Orbit used two rigs; a Schramm T450RC Rig, and a bigger Hydco 350RC Rig. Mt Magnet also used a Schramm T450RC Rig, and Strike used a SDR04 RC Rig mounted on a VD3000 Marooka track base. • Diamond drilling was also undertaken by Orbit Drilling, using a Hydco 1200H rig, drilling HQ sized core.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	• Recoveries for the majority of the historical holes are not known, while recoveries for 2012 GAM holes were overwhelmingly logged as "good." • Recoveries for Pilbara RC and diamond holes were virtually all dry and overwhelmingly logged as "good."
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	• Whilst drilling through the pegmatite, rods were flushed with air after each metre drilled (GAM and Pilbara holes). In addition, moist or wet ground conditions resulted in the cyclone being washed out between each sample run.

Criteria	JORC Code explanation	Commentary
		• Loss of fines as dust was reduced by injecting water into the sample pipe before it reached the cyclone. This minimises the possibility of a positive bias whereby fines are lost, and heavier, tantalum bearing material, is retained.
	• *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• No material bias has been identified.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	• 1m composites were laid out in lines of 20 or 30 samples, with cuttings collected and geologically logged for each interval, and stored in 20 compartment plastic rock-chip trays annotated with hole numbers and depth intervals (one compartment per 1m composite). Geological logging information was recorded directly into an Excel spreadsheet using a toughbook laptop computer. • The GAM rock-chip trays were later stored onsite at Wodgina in one of the exploration department sea containers. • The Pilbara rock-chip trays were transported back to Perth and stored at the company office. • Diamond core was transported to Nagrom laboratories for cutting, sampling, detailed logging and storage.
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*	• Logging has primarily been quantitative, using RC chips. • Detailed logging has been undertaken on diamond core by a mineralogical consultant.
	• *The total length and percentage of the relevant intersections logged.*	• The database contains lithological data for all holes in the database.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*	• RC samples collected by Talison/GAM were generally dry and split at the rig using a cyclone splitter. • RC samples collected by Pilbara were virtually all dry and split at the rig using a cone splitter mounted directly beneath the cyclone.

Criteria	JORC Code explanation	Commentary
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	• A 15 to 20mm fillet of core was taken every metre from half cut core.
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	• Talison/GAM/Pilbara samples have field duplicates as well as laboratory splits and repeats. • 110 sample pulps were selected from across the pegmatite zones for umpire checks with ALS Laboratory Perth.
	• *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*	• For the Talison/GAM/Pilbara RC drilling, field duplicates were taken approximately every 20m, and splits were undertaken at the sample prep stage on every other 20m. • Talison/GAM/Pilbara RC samples have field duplicates as well as laboratory splits and repeats. • Pilbara diamond holes have laboratory splits and repeats.
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• The Talison/GAM/Pilbara drilling sample sizes are considered to be appropriate to correctly represent the tantalum mineralization at Pilgangoora, based on the style of mineralization (pegmatite), and the thickness and consistency of mineralization.
Quality of assay data & laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• The Talison/GAM samples were assayed by the Wodgina Laboratory, for a 36 element suite using XRF on fused beads. • The Pilbara samples were assayed at the Nagrom Perth laboratory, using XRF on fused beads plus ICP to determine Li_2O, ThO_2 and U_3O_8.
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*	• No geophysical tools were used to determine any element concentrations used in this resource estimate.
	• *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• GAM Wodgina laboratory splits of the samples were taken at twenty metre intervals with a repeat/duplicate analysis also occurring every 20m and offset to the lab splits by 10 samples. In total one field

Criteria	JORC Code explanation	Commentary
		duplicate series, one splits series and one lab duplicate/repeat series were used for quality control purposes assessing different stages in the sampling process. This methodology was used for the samples from the 2010 and 2012 drilling programs. Comparison of these splits and duplicates by using a scatter chart to compare results show the expected strong linear relationship reflecting the strong repeatability of the analysis process. • The GAM and Pilbara RC drilling contains QC samples (field duplicates and laboratory pulp splits, GAM internal standard, selected CRM's for Pilbara), and have produced results deemed acceptable. • 110 sample pulps (10% of the June 2015 resource composite samples) were selected from across the pegmatite zones for umpire checks with ALS Laboratory Perth. All closely correlated with the original Nagrom assays. Further samples will be selected for additional checks.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.*	• Infill drilling completed by GAM in 2012 and Pilbara in 2014 and 2015 confirmed the approximate width and grade of previous drilling. • Eight of the diamond holes were drilled as twins to RC holes, and compared to verify assays and lithology.
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	• An electronic database containing collars, surveys, assays and geology was provided by GAM. • All GAM assays were sourced directly from Wodgina internal laboratory files. • All Pilbara assays were sourced directly from Nagrom as certified laboratory files.
	• *Discuss any adjustment to assay data.*	• Tantalum was reported as Ta_2O_5 %, and converted to ppm for the estimation process.

Criteria	JORC Code explanation	Commentary
		• A two-step adjustment has been applied to the Fe_2O_3 assays to account for (i) contamination of pulps by the steel bowl at the grinding stage, and (ii) contamination of RC chips with the drill bit. Step one is to subtract 0.15% from all Fe_2O_3 assays, step 2 is to subtract a further 0.26% from all Pilbara Minerals RC samples, and 0.10% from all historic RC samples. No second factor has been applied to the Pilbara diamond core Fe_2O_3 assays.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	• Talison/GAM holes were surveyed using a DGPS with sub one metre accuracy by the GAM survey department. • Pilbara drill hole collar locations were surveyed at the end of the program using a dual channel DGPS with +/- 10mm accuracy on northing, easting & RL by Pilbara personnel. • No down hole surveys were completed for PLC001-039 (Talison). • Gyro surveys were completed every 5m down hole for PLC040-068 (Talison). • Eastman Single Shot surveys were completed in a stainless steel starter rod approximately every 30m for PLC069-076 & PLRC001-009 (GAM). • Reflex EZ-shot, electronic single shot camera surveys were completed in a stainless steel starter rod for each hole for the Pilbara November-December 2014 RC drilling. Measurements were recorded from approximately 8m; in the middle; and at the bottom of each hole. • Camteq Proshot, electronic single shot cameras were completed in a stainless steel starter rod for each hole from the Pilbara 2015 RC and diamond drilling campaigns. Measurements were recorded at 10m, 40m, 70m and 100m (or EOH) for each hole.
	• *Specification of the grid system used.*	• The grid used was MGA Zone 50, datum GDA94.

Criteria	JORC Code explanation	Commentary
	• *Quality and adequacy of topographic control.*	• The topographic surface used was a 50cm resolution Digital Surface Model (DSM) derived by stereoscopic photogrammetric processes from 5cm resolution imagery. • Surveyed DGPS drillhole collar elevation data was then compared to this surface, and found to have an average difference of -0.7m.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	• Talison completed 54 RC drillholes in 2008 • GAM completed 46 RC drillholes between 2010 and 2012 • Pilbara completed 293 RC holes between 2014 and 2015. • Pilbara completed 9 diamond drillholes in 2015. • Drilling spacings vary between 25m to 50m apart
	• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*	• The continuity of the mineralization can confidently be interpreted from the geology of the pegmatite sheets, which can be mapped on surface as extending over several hundred metres in strike length.
	• *Whether sample compositing has been applied.*	• No compositing was necessary, as all samples were taken at 1m intervals.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	• The mineralisation dips between 20 and 60 degrees at a dip direction between 050 and 115 degrees for the majority of the domains. The Monster zone strikes 040 to 045 degrees and dips moderately to the south-east. • The drilling orientation and the intersection angles are deemed appropriate.
	• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• No orientation-based sampling bias has been identified.
Sample	• *The measures taken to ensure sample security.*	• Talison sampling security measures are unknown, but assumed to be

Criteria	JORC Code explanation	Commentary
security		equal to industry standards since the drilling is as recent as 2008. • Chain of custody for GAM holes were managed by GAM personnel. Samples were delivered to the Wodgina laboratory by GAM personnel where samples were analysed. • Chain of custody for Pilbara holes were managed by Pilbara personnel. Samples for analysis were delivered to the Regal Transport Depot in Port Hedland by Pilbara personnel. Samples were delivered from the Regal Transport Depot in Perth to the Nagrom laboratory in Kelmscott by Regal Transport courier truck.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• The collar and assay data have been reviewed by compiling a new SQL relational database. This allowed some minor sample numbering discrepancies to be identified and amended. • Drilling locations and survey orientations have been checked visually in 3 dimensions and found to be consistent. • All GAM assays were sourced directly from the laboratory (Wodgina laboratory). However it has not been possible to check these original digital assay files.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites*	• The Pilgangoora resource lays within E45/2232 and M45/333 which are 100% owned by Pilbara Minerals Limited. The E45/2232 area is now also part of a mining lease application (M45/1256).
	• *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the*	• No known impediments.

Criteria	JORC Code explanation	Commentary
	area.	
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Talison completed 54 RC holes in 2008 • GAM completed 46 RC holes between 2010 and 2012.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Pilgangoora pegmatites are part of the later stages of intrusion of Archaean granitic batholiths into Archaean metagabbros and metavolcanics. Tantalum mineralisation occurs in zoned pegmatites that intruded a sheared Archaean metagabbro.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes, including easting and northing of the drill hole collar, elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar, dip and azimuth of the hole, down hole length and interception depth plus hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• Refer to Appendix 1 in the ASX announcement Pilgangoora Mineral Resource Estimate 1st February, 2016 .
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent*	• Length weighed averages used for exploration results are reported in Appendix 1 of this announcement. Cutting of high grades was not applied in the reporting of intercepts. • No metal equivalent values are used.

Criteria	JORC Code explanation	Commentary
	values should be clearly stated.	
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• Downhole lengths are reported in Appendix 1 of this announcement. • It is noted in previous sections that not all samples analysed for Ta_2O_5 have also been analysed for Li_2O. All pegmatite pulps from the 2012 drilling were analysed for Li_2O but only selected pulps from the 2008 and 2010 drilling were. As noted in Appendix 1, there are 7 intervals reported for Ta_2O_5 that were only partial analysed for Li_2O – see Note 2 for Appendix 1.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• See Figures in the ASX announcement Pilgangoora Mineral Resource Estimate 1st February, 2016
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• Comprehensive reporting of drilling details has been provided in Appendix 1 in in the ASX announcement Pilgangoora Mineral Resource Estimate 1st February, 2016.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• All meaningful & material exploration data has been reported.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Further planned drilling aims to test extensions to the currently modelled pegmatites zones and to infill where required to convert Mineral Resources to high confidence classification (i.e. Inferred to Indicated and Indicated to Measured).

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	• The original database was compiled by GAM and supplied as a Microsoft Access database. • The data have then been imported into a relational SQL Server database using DataShed™ (industry standard drillhole database management software). • The data are constantly audited and any discrepancies checked by Pilbara Minerals personnel before being updated in the database.
	• *Data validation procedures used.*	• Normal data validation checks were completed on import to the SQL database. • Data has not been checked back to hard copy results, but has been checked against previous databases supplied by GAM. • All logs are supplied as Excel spreadsheets and any discrepancies checked and corrected by field personnel.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	• John Young (Executive and Chief Geologist - Pilbara Minerals and Competent Person) has visited the site numerous times.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.*	• The confidence in the geological interpretation is considered robust. Tantalum is hosted within pegmatite dykes intruded into mafic meta volcanics and amphibolites of the East Strelley greenstone belt. The area of the Pilgangoora pegmatite field within E45/2232 and M45/333 comprises a series of extremely fractionated dykes and

Criteria	JORC Code explanation	Commentary
	• *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	veins up to 15m thick within the immediate drilling area. These dykes and veins dip to the east at 20-60° and are parallel to sub-parallel to the main schistose fabric within the greenstones. • The geological interpretation is supported by drill hole logging and mineralogical studies completed by GAM (previously Talison) and Pilbara Minerals. • No alternative interpretations have been considered at this stage. • Grade wireframes correlate extremely well with the logged pegmatite veins. • The key factor affecting continuity is the presence of pegmatite.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The main modelled mineralized domains has a total dimension of 4,100m (north-south), ranging between 50-600m (east-west) in multiple veins and ranging between -50m and 220m RL (AMSL). The Monster and Southern areas each have a modelled strike of approximately 700m.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.*	• Grade estimation using Ordinary Kriging (OK) was completed using Geovia Surpac™ software for both Ta_2O_5 and Li_2O. Note that there were insufficient samples analysed to allow populating of Li_2O into 1 of the 35 domains. • Drill spacing typically ranges from 25m to 50m. • Drillhole samples were flagged with wireframed domain codes. Sample data was composited for Ta_2O_5, Li_2O and Fe_2O_3 to 1m using a best fit method. Since all holes were sampled on 1m intervals, there were no residuals. • Influences of extreme sample distribution outliers were reduced by top-cutting on a domain basis. Top-cuts were decided by using a combination of methods including grade histograms, log probability plots and statistical tools. Based on this statistical analysis of the

Criteria	JORC Code explanation	Commentary
	• *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	data population, top-cuts of between 2.0% and 3.8% for Li_2O, 110ppm to 1000ppm for Ta_2O_5 and 1.0% and 4.8% for Fe_2O_3 were applied. Some domains did not require top-cutting. • Directional variograms were modelled by domain using traditional variograms. Nugget values are moderate to low (between 20 and 30%) and structure ranges up to 260m. Domains with more limited samples used variography of geologically similar, adjacent domains. • Block model was constructed with parent blocks of 5m (E) by 25m (N) by 5m (RL) and sub-blocked to 2.5m (E) by 12.5m (N) by 2.5m (RL). All estimation was completed to the parent cell size. Discretisation was set to 5 by 5 by 2 for all domains. • Three estimation passes were used. The first pass had a limit of 75m, the second pass 150m and the third pass searching a large distance to fill the blocks within the wireframed zones. Each pass used a maximum of 12 samples, a minimum of 6 samples and maximum per hole of 4 samples. The exceptions to this were domains with less than 20 samples, which used a maximum of 10 samples, a minimum of 4 samples and maximum per hole of 3 samples for the second pass. • Search ellipse sizes were based primarily on a combination of the variography and the trends of the wireframed mineralized zones. Hard boundaries were applied between all estimation domains. • Validation of the block model included a volumetric comparison of the resource wireframes to the block model volumes. Validation of the grade estimate included comparison of block model grades to the declustered input composite grades plus swath plot comparison by easting, northing and elevation. Visual comparisons of input composite grades vs. block model grades were also completed.

Criteria	JORC Code explanation	Commentary
		• As a potential deleterious element, Fe_2O_3 has been estimated for this resource, both as raw and factored Fe_2O_3. Identification of contamination during both the sample collection (steel from drill bit and rod wear) and assay phases (wear in the steel pulverisation containers) has resulted in a detailed statistical analysis and co-located data comparison between diamond core and RC twin hole assays. Factors have been applied to the raw Fe_2O_3 assays in two steps. Firstly, all Fe_2O_3 assays have been reduced by -0.15% to account for additional iron introduced by the steel pulverisation containers in the sample preparation phase. Secondly, Pilbara RC sample Fe_2O_3 assays have been reduced by -0.26% to account for additional iron introduced by wear on drill bits and rod in the drilling process, -0.1% to the historic RC for the same reason. No second factor has been applied to the Pilbara diamond core Fe_2O_3 assays.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnes have been estimated on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• Grade envelopes have been wireframed to an approximate 100ppm Ta_2O_5 and 1% Li_2O cut-off allowing for continuity of the higher-grade zone. Based on visual and statistical analysis of the drilling results and geological logging of the pegmatite zoning, this cut-off tends to be exactly the same or very close to the natural geological contact between the pegmatite and host mafic rocks.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral*	• Based on the orientations, thicknesses and depths to which the pegmatite veins have been modelled, plus their estimated grades for Ta_2O_5 and Li_2O, the potential mining method is considered to be open pit mining.

Criteria	JORC Code explanation	Commentary
	Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Nagrom Pty Ltd and Anzaplan have both completed scoping metallurgical testwork and have recovered both Ta_2O_5 and Li_2O of marketable qualities. (see ASX release ''Pilbara Testwork Confirms Potential" released 25/05/2015, "Quarterly Activities and Appendix 5B, released 24/04/2015). Further testwork is planned for early 2016. • External metallurgical consultants as part of the Pre- feasibility study have conducted sufficient test work to indicate that Battery Grade Lithium concentrate can be produced at 6% Li2O with a suitable Fe2O3 quality for sale in this market. Similarly preliminary Tantalum concentrate products can be produced for third party sale.
Environmen-tal factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• Appropriate environmental studies and sterilisation drilling would be completed prior to determination of the location of any potential waste rock dump (WRD) facility.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and*	• Previously bulk density has been assigned on the basis of weathering state, based on a specific gravity study carried out in 2006 by the project holders at the time, Sons of Gwalia. Previous consultants as

Criteria	JORC Code explanation	Commentary
	representativeness of the samples. • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	well as GAM personnel have referred to this study and used these figures for the previous resource estimations which were carried out in-house. • Pilbara Minerals completed specific gravity testwork on nine samples across the deposit using both Hydrostatic Weighing (uncoated) on surface grab samples and Gas Pycnometry on RC chips which produces consistent results. Geological mapping and rockchip / grab sampling has not observed any potential porosity in the pegmatite. • Pilbara Minerals conducted hydrostatic weighing tests on uncoated HQ core samples to determine bulk density factors. A total of 207 core samples were tested. Measurements included both pegmatite ore and waste rock. • The bulk density factors applied to the current resource estimate are 2.53 g/cm^3 in the (minimal) oxide, and 2.72 g/cm^3 in fresh/transition zone material.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The Mineral Resource has been classified on the basis of confidence in the geological model, continuity of mineralized zones, drilling density, confidence in the underlying database and the available bulk density information. • All factors considered; the resource estimate has in part been assigned to Indicated resource with the remainder to the Inferred category.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• Whilst Mr. Barnes (Competent Person) is considered Independent of PLS, a third party review has also been completed by MiningPLUS.
Discussion of relative accuracy/	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For*	• The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code.

Criteria	JORC Code explanation	Commentary
confidence	*example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The statement relates to global estimates of tonnes and grade.

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral ***Resource estimate for conversion to Ore Reserves***	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• The Ore Reserve Estimate is based on the Mineral Resource released on the 1st February 2016, by Pilbara Minerals, competent persons: Mr John Young (Executive and Chief Geologist of Pilbara Minerals Limited), Mr Lauritz Barnes, (Consultant with Trepanier Pty Ltd) • The Minerals Resources are reported inclusive of the Ore Reserves.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• A Site Visit was conducted 14th January 2016 by the Ore Reserve Competent Person in order to ensure the data used for the study matches the field observations.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level*	• Mining Plus conducted a Pre-feasibility study on the Pilgangoora project based on the Indicated Resources released as part of the Mineral Resource on the 1st February 2016

	has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	• As part of the Pilgangoora Pre-feasibility study, a mine plan was developed that was technically achievable and economically viable. This mine plan considered material Modifying Factors such as mining, processing, metallurgy, infrastructure, economic, marketing, legal, environmental, social and regulatory.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• The Mineral Resource provided was a geologically domained resource; this geological model was evaluated to determine which block produced cash surplus when treated as ore. • The costs included: differential plant feed mining costs (AUD3.32/dry t), processing plant costs (AUD20.15/dry t), state and third party royalties (7.5%), concentrate transport costs(AUD4.70/dry t). The revenue was determined from both the recovery of Li_2O concentrate (USD430/dry t@ 6% Li_2O) and Tantalum products (USD60/dry lb).The resultant cut off grade was determined to be 0.51% Li_2O or 330ppm Ta_2O_5 on a standalone basis. • An exchange rate of USD:AUD of 0.75:1.00 has been used for the study
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in*	• The Ore Reserves estimate resulting from this Pre-Feasibility study are based on the Mineral Resource released on the 1st February 2016, by Pilbara Minerals, competent persons: Mr John Young (Executive and Chief Geologist of Pilbara Minerals Limited), Mr Lauritz Barnes, (Consultant with Trepanier Pty Ltd). • The Mining method is based on open pit mining and was evaluated for truck and hydraulic excavator(backhoe) operations utilising 4 x 2.5m flitches for 10m benches for combination waste pegmatite mining and 10 m bench mining for waste mining. • A Mine Shape Optimiser analysis was run on the Mineral Resource model using a minimum mining width of 2.5m and a maximum of

	mining studies and the sensitivity of the outcome to their inclusion. • *The infrastructure requirements of the selected mining methods.*	100m, provided a length weighted mining width of 22-23m. An evaluation of the application of 0.5m boundary dilution for each mining width provided a length weighted average dilution of 4.3%, supporting the study value of 5%, @ nominally 12% Fe_2O_3, raising the average grade within the final pit mineral resource from 0.61% to an ore reserve estimate of 1.15% Fe_2O_3 • The 2.5m benches in combination with the application of hydraulic excavator (backhoe) to selectively mine the pegmatite from the waste allowing the selection mining loss values of 5%. • Drilling and blasting has been considered to be completed by track mounted top of the hole rigs with sufficient mobility to access the pit from surface contour to pit bottom • Initial Geotechnical advice from Geotechnical Consultants provided of 20m of 55 degree batters and subsequent 75 batters and 10m wide berms nominally every 20m vertical m, was using during the optimisation and design phase of the study. • The pit design was not limited to the south by the Pilgangoora Creek. It is assumed that the approvals will be gained during the planned DFS studies. • The pit design recovered 2.24Mt of inferred material with in the pit designs, this material was treated as waste for the purposes of the Pre-feasibility study. There is no inferred material used in the Ore-Reserve estimation. • Assumed average of 2 Million tonnes of ore processing per annum. • Recovery 76.7% as per metallurgical results as provided to the Competent Person from external metallurgical consultants (Como

		Engineers). However the mine optimisation used the interim figure of 70.4% as the basis of the mine design in this PFS. • Infrastructure requirements for open pit mining include; maintenance workshop for all mobile equipment, offices, crib rooms and amenities, fuel farm, water dams, and de-watering systems as required. It is assumed some of the mine infrastructure will be provided by a primary mining contractor
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	• As part of the Pilgangoora Pre-feasibility study, Pilbara Minerals commissioned Como Engineers to complete the mineral processing test-work including estimates for the capital required for construction of the processing plant • The essential elements of the process plant design utilise a combination of heavy media separation and flotation, to produce a 6% Li_2O concentrate. • Processing metallurgical consultants have conducted sufficient testwork to indicate that Battery Grade Lithium concentrate an be produced at 6% Li_2O with a suitable Fe_2O_3 quality for sale in this market. Similarly preliminary Tantalum concentrate products have been produced for third party sale. • Li_2O metallurgical recovery is a straight line 76.7%, however the optimisation utilised the interim figure of 70.4% • Ta_2O_5 metallurgical recovery is a straight line 47%, however the optimisation utilised the figure of 45% • Mineralisation analysis and liberation estimates of the product and tails have been completed to support the design and the process flow with mass balances.

		• Metallurgical test work has shown that Fe_2O_3 and deleterious elements are within acceptable range within the concentrate
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• Appropriate environmental studies and sterilisation drilling would be completed prior to the confirmation of the location of the proposed potential waste rock dump (WRD) facility. • The waste rock dump designs do not take into account any consideration for potential acid forming material (PAF) and are designed to meet the license requirements. Waste rock characterisations studies are currently being completed • Management of top soil material including pre-stripping prior to mining and storage for future incremental rehabilitation has been considered in the Pre-feasibility study • A Soil Characterisation review and report has just been completed by environmental consultants, which will facilitate further detailed work regarding top soil management • The Mining Lease Application (MLA45/1256) has commenced the Section29 Right to Negotiate process, submissions by the affected native title party are to be completed by the 26th of April 2016. These submissions set out the potential effect that the grant of M45/1256 will have on the native title party's rights and interests (as per section 39 of the NTA) and form the basis of the future negotiations between the parties. PLS expected no issues with the process that will affect the grant of MLA45/1256. Also exploration leases are held in the area • Hydrology studies are underway for both surface and ground water flows, with no significant impacts on the proposed mining operations • A Permit to interfere with bed and banks application for diversion of

		Pilgangoora creek to allow for southern pit development will be submitted to the regulator following the completion of the Surface Water Management Study during DFS stage".
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• The current waste land form designs are designed to be north of Pilgangoora Creek, however the pit design crosses the Pilgangoora Creek, Pilbara Minerals have advised they have commenced the process for approval of this and see no reason for objection to gaining approval. At this stage no cost allowance has been made for a diversion of the creek. • The project has been evaluated on a nominal 12 hour shift basis • At this stage the project is not with in a daily commute distance of suitable supporting community, hence the project has been evaluated as a fly in fly out operation • An existing historical airstrip is within close proximity to the project • The project will be accessed of the Great Northern highway, which is accessible approximately 30km from site • Potable water will be provide a reverse osmosis plant. Power is expected to be supplied by contract diesel power generation.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• Load and Haul mining costs have been derived from Mining Plus database of costs including recent costs (2015) for the Pilbara region for similar operations. Considerations have been made for the current competitive nature of the contracting market, diesel prices and production of Battery Grade concentrate with unrestricted Fe_2O_3 limits. • Drill and blast costs have been similarly evaluated from drilling costs for the Pilbara region, however they have been modified for the traditionally high powder factors of Spodumene blasting based on

		experiences of the competent person in operations with similar rock conditions • Concentrate transport costs are based indicative prices form a local contractor provided by Pilbara Minerals. For simplicity these were converted to a $/t of dry plant feed @ $4.70 • The methodology for the completion of the mining costs comprise creation of mining costs per BCM for mining activities with consideration of the location of the material and type of material coded into the block model, and then the Mining Costs collated per period during mining scheduling and then multiplied by the appropriate rates. Mining fleet capital has been considered by including numerous mobilisation and demobilisation costs at intervals during the mine life to consider this activity by mining contractors; Costs for mining establishment have consideration for main activities being completed by mining contractors • Mining Costs also consider activities for mining team operating costs, management and maintenance, mobile plant maintenance activities and infrastructure, ore rehandle and crusher feed, clear and grub, top soil management, and dry stacked tails haulage • Allowance has been made for state royalties at 2.5% in accordance with prevailing legislation • Allowance has been made for a third party royalty • No allowances were made for deleterious elements as Pilbara Minerals has shown in metallurgical test work that they are unlikely to exist in any significance way.
Revenue	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates,*	• Li_2O prices are provided by Pilbara Minerals for Battery Grade material at prices sourced form a report commissioned by Pilbara

factors	*transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	Minerals by Roskill February 2016 • Ta_2O_5 prices are provided by Pilbara Minerals for Tantalum concentrates for prices to a third pa source from current information supplied by Metal Pages / Argus Media for Tantalum concentrates for prices to a third party • The study evaluated Li_2O through the project on a recovered dtm unit basis. • An exchange rate of USD:AUD of 0.75:1.00 has been used for the optimisation phase of the study
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• Pilbara Minerals have had preliminary discussions with third parties regarding potential demand for Pilgangoora Li_2O and Ta_2O_5 concentrates, • These discussion have been used for the scaling of the project • Price forecasts for the key commodities are detailed in the "Cut-off grade parameters" section above
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• Lerchs-Grossman analysis of the deposit, via Whittle software, has been conducted to focus development around the economic portion of the deposit • Discounting interest rate of 8% has been utilised • Sensitivities conducted indicate the project is most sensitive to direct revenue factors such as price and metallurgical recovery were completed +/- 20% stand alone, • Sensitivities for other less sensitive values, dilution, mining cost,

		processing cost were completed at +-/10% • Net Present Value (NPV) for the project is positive and is outlined in associated company ASX announcement.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• The project is sited within a couple of kilometres of the historic Lynas Find Open Pit Gold Mine, confirm historic social acceptance to open pit mining • The project is also located in the Pilbara region of Western Australia, one of the most significant mining regions of the globe • Pilbara Minerals confirm at this stage they see not obstruction to gaining a social licence to operate
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• The current project sits inside the exploration leases. The project is situated in current mining leases or applications for mining leases. • The Company has engaged with potential customers and signed Memorandums of Understanding (MoU's) with key users and agents for Spodumene concentrates in China, Korea/Japan, North America and Europe
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• The Indicated Mineral Resource has been converted by application of mining factors to Ore Reserve Estimate • The Ore Reserve Estimate reflects a reasonable expectation of selective mining from a Spodumene pegmatite deposit from 10 years of similar mining experience • The Mineral Resource included no Measured hence the Reserve is 100% Probable

Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• At this stage no formal audit or review has been completed of the Ore Reserve Estimate • The appropriateness of the Ore Reserve calculation was peer reviewed by peers within the Mining Plus group during the completion of the Pre-feasibility study. No material flaws have been identified, and it is considered appropriate ore reserve at a pre-feasibility level
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The Pre-feasibility study has been completed with a relative accuracy of +/-25%, • All mining estimates are based on Australian costs • There are no unforeseen modifying factors at the time of this statement that will have any material impact on the Ore Reserve estimate. • Where practical and possible, current industry practices have been used to quantify estimations made • As part of ongoing works, it is recommended that further work is completed in mine scheduling and waste rock dump design to ensure any modifying factors are accurate and there is a high level of confidence as the project undergoes further technical evaluation. This further evaluation would also include consideration of integration of waste rock dump with proposed tailings storage facilities. Also as part of the DFS work it should be considered and included that the Mine Operations Plans are focused to ensure operational practices and standards are implemented to maintain the assumed mining dilution and recovery factors.