

ASX Announcement

13 October 2015

Pilgangoora ASX Resource Estimate Upgrade Release Reissued

Following the issue of the Company's release on the upgrade of its Pilgangoora resource estimate on 24 September 2015, the ASX has requested that the Company provide supplementary information on Fe₂O₃ content in the resource estimate in respect of this immediate past release and in future resource estimates that may be provided for the Pilgangoora project.

Accordingly we provide a reissue of the previous resource estimate release, which now includes commentary on the Fe₂O₃ content, which is included at pages 9-12 inclusive.

No other changes have been made to the contents of the previous release of 24 September 2015 and clarification statement issued on 1 October 2015.

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ASX ANNOUNCEMENT

13th October, 2015

MAJOR RESOURCE UPGRADE ESTABLISHES PILGANGOORA AS WORLD'S SECOND BIGGEST HARD ROCK SPODUMENE DEPOSIT

***GLOBAL RESOURCE HITS 52.2MT AS LITHIUM RESOURCE SOARS 182%, UNDERPINNING RECENTLY COMMENCED
FEASIBILITY STUDY TO FAST-TRACK PROJECT DEVELOPMENT***

HIGHLIGHTS:

- **Updated JORC 2012 Mineral Resource completed for Pilbara's 100%-owned Pilgangoora Tantalum-Lithium Project** in WA's Pilbara region, with this interim upgrade incorporating the results of successful in-fill RC drilling completed from May to August 2015. The updated Mineral Resource comprises:
 - *Indicated and Inferred Resources of 52.2Mt grading 1.28% Li₂O (spodumene) containing 668,000 tonnes of lithium oxide* with 32.9 million tonnes grading 0.022% Ta₂O₅ (Tantalum) containing 15.7 million pounds of Ta₂O₅;
 - *Within the total Mineral Resource of 52.2Mt, and at a cut-off of 1% Li₂O, the Inferred and Indicated Lithium Resource amounts to **40.7Mt @ 1.43% Li₂O containing 581,000 tonnes of lithium oxide.***
- **The recent in-fill drilling has boosted the Inferred lithium resource by 229% and delivers 56% increase into Indicated.** This was achieved from drilling targeting the previously untested Western and Central pegmatite systems, which remain open at depth and along strike.
- **RC drilling to continue** with a focus on further extensions and improvement in the resource categories required to advance the Feasibility Study work already underway.

Australian strategic metals company Pilbara Minerals Ltd (ASX: PLS) is pleased to advise that it has confirmed the potential of its 100%-owned **Pilgangoora Lithium-Tantalum Project** in WA's Pilbara region to become a world-class supplier to the global lithium market after announcing a major resource upgrade which has seen the high-value lithium content increase nearly threefold.

The updated Mineral Resource includes a **182 per cent increase in contained lithium oxide** and a **39 per cent increase in contained tantalite**, based on information calculated from 125 holes drilled between May and August 2015. Recent drilling has also clearly indicated the potential for the resource to grow further.

The overall Pilgangoora Mineral Resource now comprises **15.7 million pounds of contained tantalite** and **668,000 tonnes of contained lithium oxide**, with the recent successful extensional drilling adding **431,000 tonnes of contained lithium oxide** to the Inferred category.

The next phase of resource extension drilling at Pilgangoora commenced in late August and is focusing on the southern domains and the Monster prospects, which lie outside of the currently defined Mineral Resource. Drilling in these zones is expected to result in further significant increases in the resource inventory.

The recent drilling and interim resource upgrade clearly demonstrates that Pilbara is on track to delineate a **globally significant hard-rock lithium-tantalum deposit at Pilgangoora (See Table 3). The Company has already commenced key aspects of a Feasibility Study as part of a strategy to fast-track development of the project due to the increasing demand for quality spodumene concentrate to feed the growing lithium battery market.**

2012 JORC Resource Estimation

This updated 2012 JORC compliant mineral resource for the Project incorporated all historical data, Pilbara's 2014 and current drilling programs to August 2015.

The estimation was carried out by independent resource consultancy, Trepanier Pty Ltd ("Trepanier"), resulting in the estimation of Inferred and Indicated Resources. The reporting of all domains (capturing material above 0.01% Ta₂O₅) results in an Indicated and Inferred Mineral Resource estimate (Table 1) totalling:

- **52.2 million tonnes @ 1.28% Li₂O containing 668,000 tonnes of Li₂O**

Associated the lithium resource, there is a corresponding tantalite resource of **32.9 million tonnes @ 0.022% Ta₂O₅ containing 15.7 million pounds of contained tantalite.**

Table 1: Pilgangoora Project – Mineral Resource Estimate

Category		Tonnage (million tonnes)	Ta ₂ O ₅ (ppm)	Li ₂ O (%)	Ta ₂ O ₅ (tonnes)	Ta ₂ O ₅ (Mlbs)	Li ₂ O (T)
Indicated	Ta ₂ O ₅	10.9	229		2,495	5.5	
	Li ₂ O	7.8		1.29			100,000
Inferred	Ta ₂ O ₅	22.1	210		4,635	10.2	
	Li ₂ O	44.4		1.28			568,000
TOTAL	Ta ₂ O ₅	32.9	216		7,130	15.7	
	Li ₂ O	52.2		1.28			668,000

The envelope was wire-framed using both geological logging information (in particular logging of zoning within the pegmatite) and assay data for Ta₂O₅ and Li₂O. Note that there were insufficient samples analysed to allow Li₂O mineralisation to be populated into one of the 25 domains.

Of the 25 domains, five are significantly lower grade in Li₂O and are excluded from the Li₂O resource and six are significantly lower grade in Ta₂O₅ and are excluded from the Ta₂O₅ resource – hence the different tonnage reported above for the Li₂O and Ta₂O₅ resource.

If a **lower lithium cut-off of >1%** is used in reporting, this results in a reduction in tonnage but provides a significantly higher grade resource (see Figure 1: Grade vs. tonnage curves for the total lithium resource):

- **40.7 million tonnes @ 1.43% Li₂O containing 581,000 tonnes of lithium oxide.**

Importantly, the bulk of this is confined to the newly defined south-western pegmatites plus the Central Zone (domains 3, 6 and 12) (see Figure 2).

After the current program of RC drilling is complete, the next phase of drilling will concentrate on in-filling the resource (on 50m by 50m spacings) to convert Inferred Resources to Indicated Resources and including known extensions to these higher grade portions within the overall resource estimate.

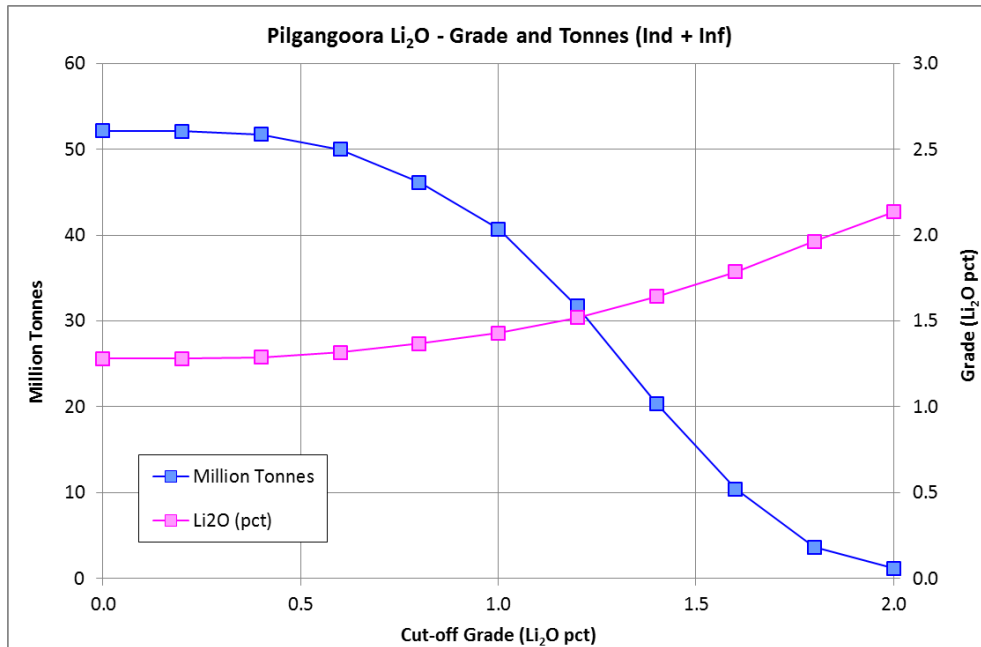


Figure 1 – Grade vs. Tonnage curves for the total lithium resource.

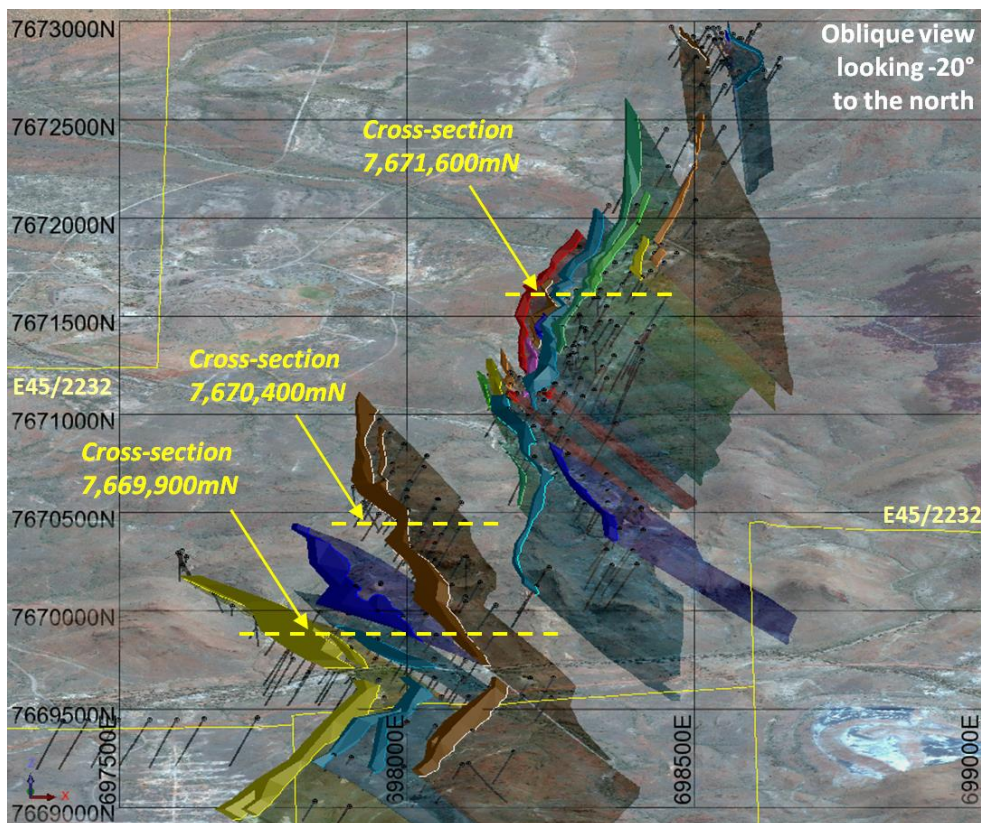


Figure 2 – Snapshot of resource domains (see figures 4 to 6 for cross-sections).

Details of the data used for the estimation, site inspection information and the quality control checks completed on the data are documented in Appendix 1 and 2 (Tables 1 to 3).

Summary and Management Comment

Pilbara Minerals' Executive Director, Neil Biddle, said the latest resource upgrade represented a major step forward in the Company's plans to fast-track the development of the Pilgangoora Project.

"This represents the culmination of a highly successful resource in-fill and extensional drilling program this year which has clearly demonstrated the world-class scale, grade and potential of the Pilgangoora Project," Mr Biddle said.

"This is a significant advance on the resource updates announced earlier this year and, importantly have seen the high-value lithium content of the resource jump significantly. Pilgangoora is now confirmed as the world's second largest lithium deposit, and one of the highest grade globally – with the added advantage of having a significant tantalite component which will help to reduce operating costs by providing a valuable by-product credit."

"We are also encouraged by the results of the drilling which is continuing at the moment but which couldn't be included in this resource upgrade. This work has clearly demonstrated that Pilgangoora will continue to grow significantly, underpinning a greatly expanded overall Exploration Target for the deposit.

"We now have sufficient confidence in the scale and quality of the deposit to press ahead with a Feasibility Study. Key elements of this work are already well underway and we look forward to providing further information in the weeks ahead as we put the foot down to get this project into development as quickly as possible.

"The very high level of interest we have seen from potential off-take partners gives us great confidence that Pilgangoora is the right project at the right time for the lithium market and we are looking forward to unlocking the enormous value of this asset for our shareholders," he said.

Updated 2015 Exploration Target

The next phase drilling planned for 2015 – 2016 totals 105 drill holes for approximately 11,000m. This program includes exploration drilling and in-fill drilling covering surface mapped pegmatites from the Southern Prospect (7,667,500mN) to the Monster Prospect (7,674,200mN) in the North, covering a strike length of over 6km. The current resource covers only 4km of the overall strike potential outlined by previous rock chip sampling and mapping.

Due to the current estimation of the Mineral Resource being in excess of 50 million tonnes based on the RC and Diamond drilling completed to date, Pilbara Minerals has updated its **Exploration Target**¹ for the Pilgangoora Project to **80-90 million tonnes @ 175-225ppm Ta₂O₅ and 1.2-1.5% Li₂O** (Table 2).

An Exploration Target is conceptual in nature and there has been insufficient exploration to estimate a Mineral Resource in compliance with the JORC Code and it is uncertain if further exploration will result in the estimation of a Mineral Resource as defined by the JORC Code.

Table 2 – Pilgangoora Tantalum-Lithium Exploration Target¹ on E45/2232 and M45/333

Exploration Target ¹	Tonnes (Mt)	Grade Li ₂ O %	Grade Ta ₂ O ₅ ppm
Northern Area	30-35	1.2 - 1.5	200 - 250
Central & Southern Area	45-55	1.2 - 1.5	150 - 200
TOTAL	80-90	1.2 - 1.5	175 - 225

Exploration Target¹: The potential quantities and grades are conceptual in nature and there has been insufficient exploration to date to define a Mineral Resource. It is not certain that further exploration will result in the determination of a Mineral Resource under the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, the JORC Code” (JORC 2012). The Exploration Target is not being reported as part of any Mineral Resource or Ore Reserve.

Table 3 Comparison of Producers and Emerging Producers of Lithium in Australia

Company/Deposit	Measured		Indicated		Inferred		Total	
	Resources (Mt)	Grade % Li ₂ O	Resources (Mt)	Grade % Li ₂ O	Resources (Mt)	Grade % Li ₂ O	Resources (Mt)	Grade % Li ₂ O
Talison-Greenbushes(a)	0.6	3.20%	117.9	2.40%	2.1	2.00%	120.6	2.40%
Pilbara Minerals – Pilgangoora			7.8	1.29%	44.4	1.28%	52.2	1.28%
Altura – Pilgangoora(b)			19.80	1.21%	6.3	1.20	26.1	1.20%
Neometals Mt Marion (c)			10.05	1.45%	13.19	1.34%	23.24	1.39
General Mining – Mt Cattlin (d)	2.5	1.20	9.5	1.06	4.3	1.07	16.4	1.08

Sources

- (a) Talison Lithium Limited N143-101 Report 21 December 2012
- (b) Altura Mining ASX Release 14 September 2015
- (c) Neo Metals ASX Release 21 September 2015
- (d) General Mining Corporation ASX Release 4 August 2015

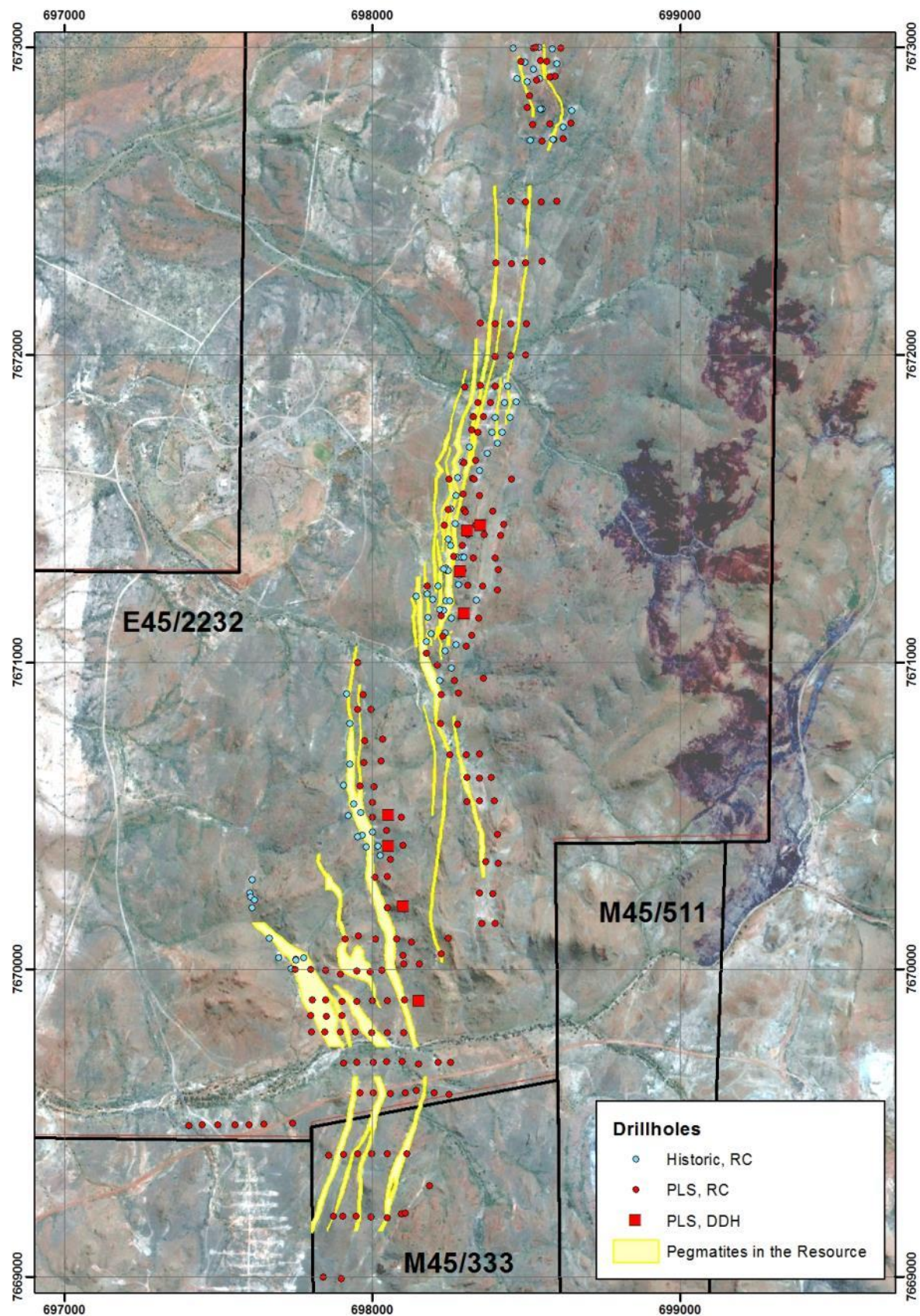


Figure 3 – Pilgangoora RC collar locations within Exploration Licence E45/2232, at a scale of 1:15000.

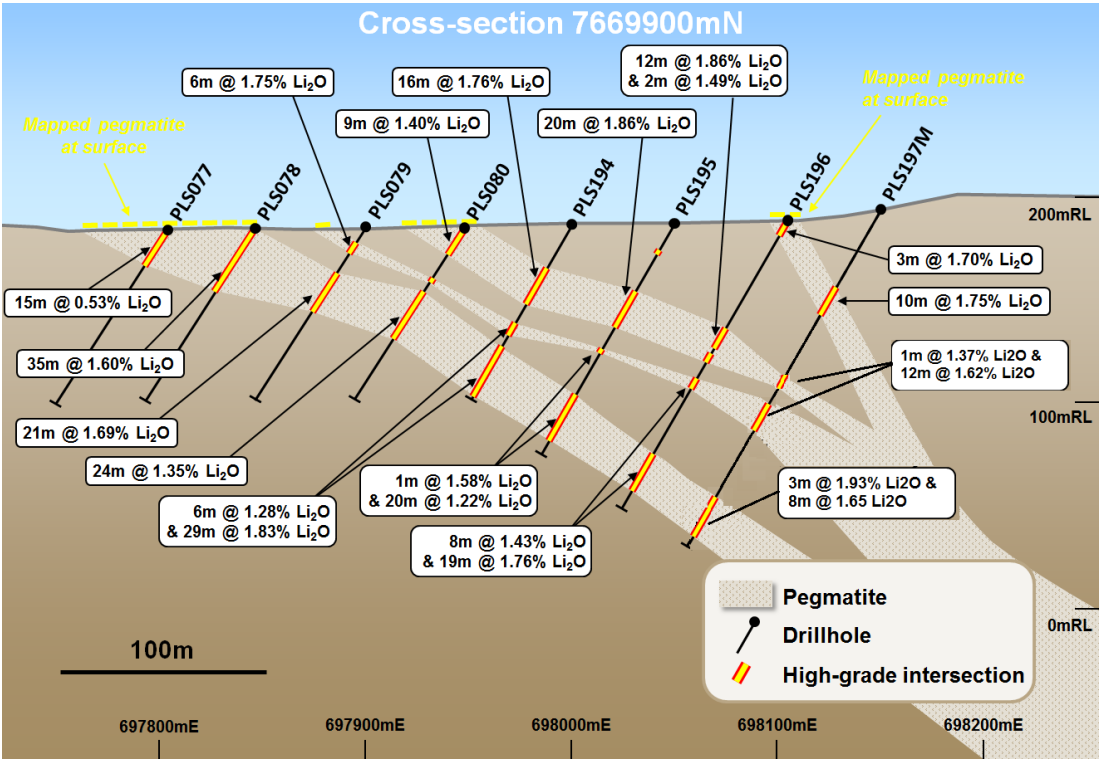


Figure 4 – Geology cross-section 7,669,900mN

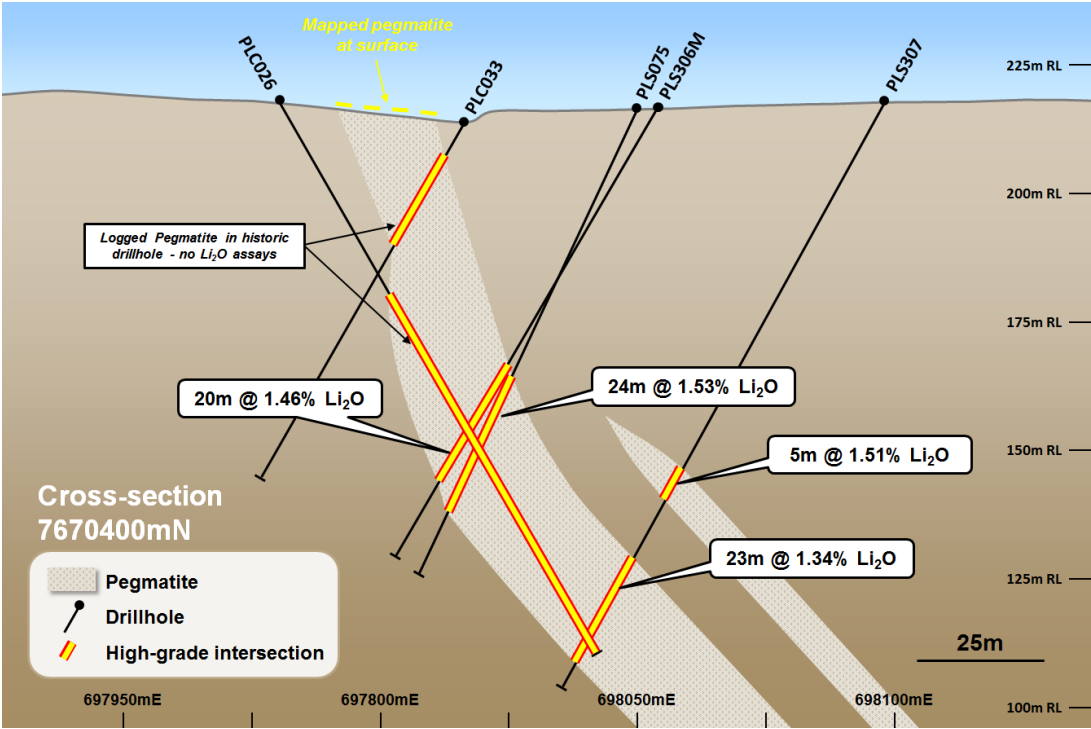


Figure 5 – Geology cross-section 7,670,400mN

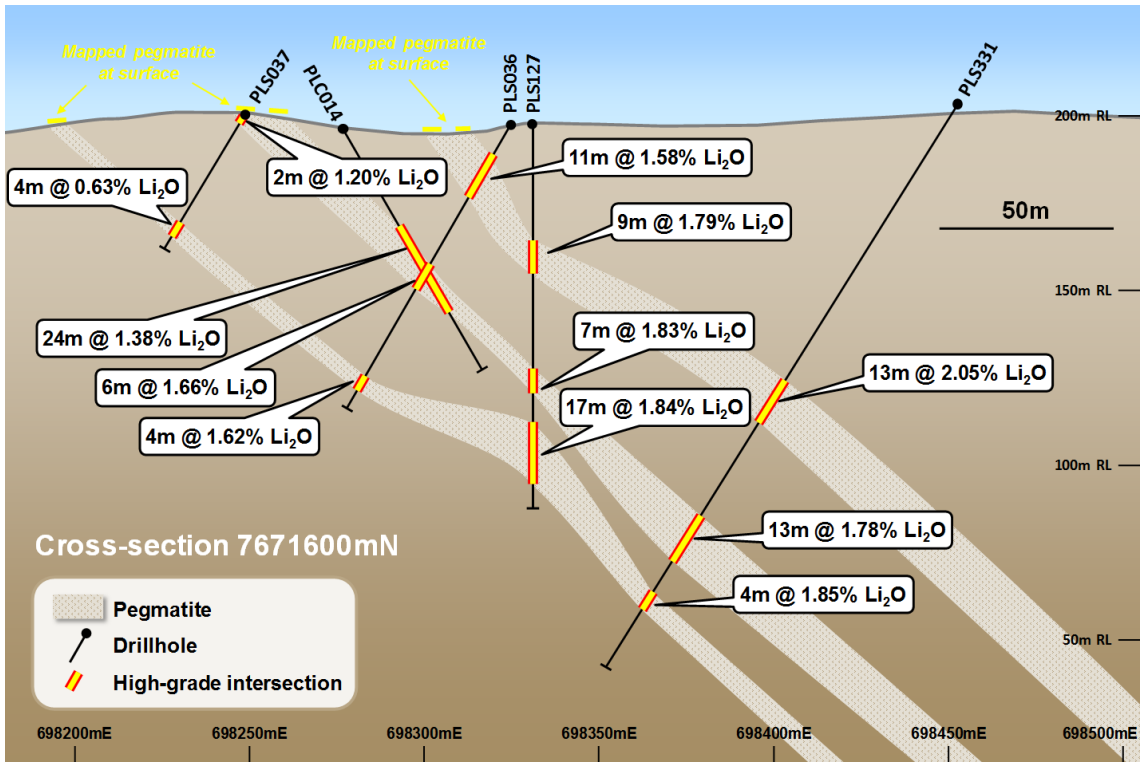


Figure 6 – Geology cross-section 7,671,600mN

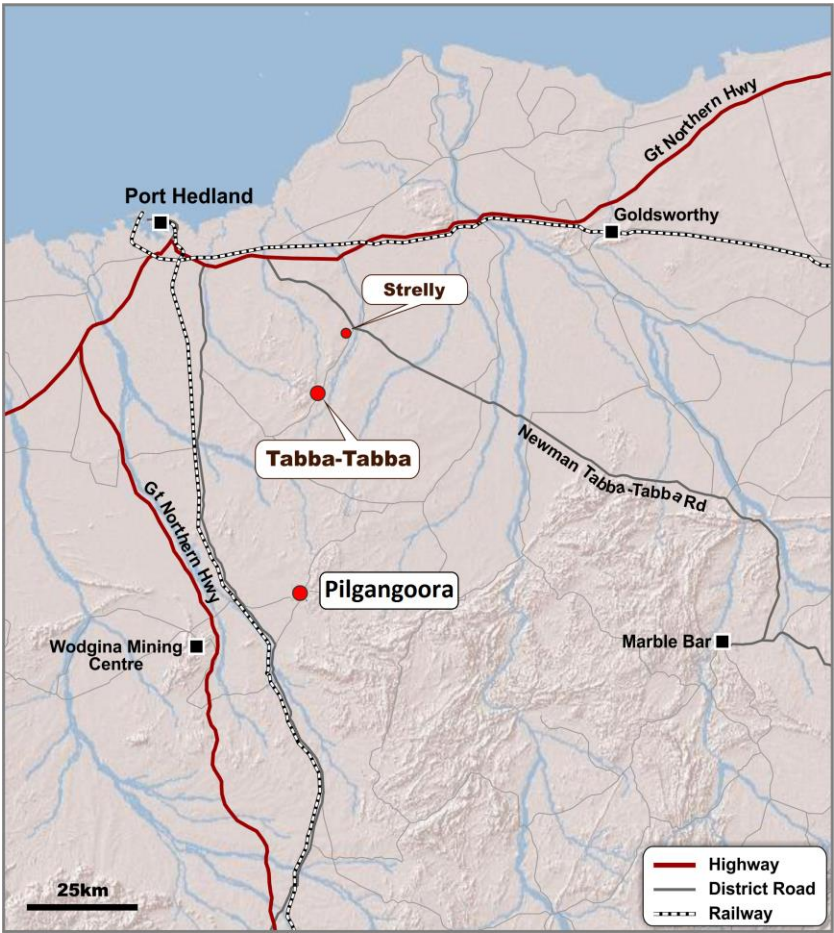


Figure 7 – Location Plan Pilgangoora Project

Fe₂O₃ within resource

In addition to Ta₂O₅ and Li₂O, Pilbara has also estimated the Fe₂O₃ for the resource as it is a potential deleterious element in the production of spodumene concentrates for the glass and ceramics industry.

In May this year Pilbara announced (See ASX Release 25 May 2015) that high-quality spodumene concentrate was successfully produced from 100kg bulk sample by German industrial minerals specialists ANZAPLAN, using simple flotation and magnetic separation. Flotation testing of the bulk sample resulted in very high recoveries of spodumene with two flotation tests producing concentrate grading 5.7% Li₂O (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 meets the specifications of typical glass-grade spodumene products**, which require low iron oxide content, typically in the range of **0.06 – 0.17% Fe₂O₃**. Therefore Fe₂O₃ is not considered to a deleterious element as it can be removed through a standard metallurgical process.

During the process of drilling, sampling and assaying, Pilbara identified two key issues that were causing contamination and hence, artificial elevation of the Fe₂O₃ assays for the drill samples. Firstly, when the drill samples were pulverised in laboratory in steel containers, the highly abrasive nature of mineralised pegmatite again resulted in further iron contamination of the drill samples. Secondly, the highly abrasive nature of the Li₂O/Ta₂O₅ mineralised pegmatite on the RC drilling bits and rods has resulted in iron contamination of the drill samples in the field. These two contamination issues are discussed in more detail below.

As such, Pilbara completed a statistical analysis into the both of the abovementioned issues which then allowed for factoring of the Fe₂O₃ assays to account for the contamination. Both the raw and factored Fe₂O₃ was estimated and reported in Table 4.

Table 4: Pilgangoora Project – Mineral Resource Estimate including Fe₂O₃ (%)

Category		Tonnage (million tonnes)	Ta ₂ O ₅ (ppm)	Li ₂ O (%)	Raw Fe ₂ O ₃ (%)	Factored Fe ₂ O ₃ (%)
Indicated	Ta ₂ O ₅	10.9	229		1.31	0.99
	Li ₂ O	7.8		1.29	1.22	0.90
Inferred	Ta ₂ O ₅	22.1	210		1.33	0.95
	Li ₂ O	44.4		1.28	1.19	0.82
TOTAL	Ta ₂ O ₅	32.9	216		1.32	0.96
	Li ₂ O	52.2		1.28	1.20	0.83

The iron contamination introduced when the drill samples were pulverised in laboratory was investigated initially by pulverising six duplicate samples of crushed and homogenised core in both steel vs. tungsten carbide containers. This produced a convincing set of results with Li₂O and Ta₂O₅ repeating consistently, but with a consistent 0.15% increase in Fe₂O₃ in the samples pulverised in the steel container. To allow for a more substantial, statistically viable dataset, a further 50 samples were analysed using the same process. The additional results confirmed the initial test with a very high degree of confidence, with results shown in Figure 8 and Table 5. An initial factor of -0.15% has been applied to all the raw Fe₂O₃ assays in the database.

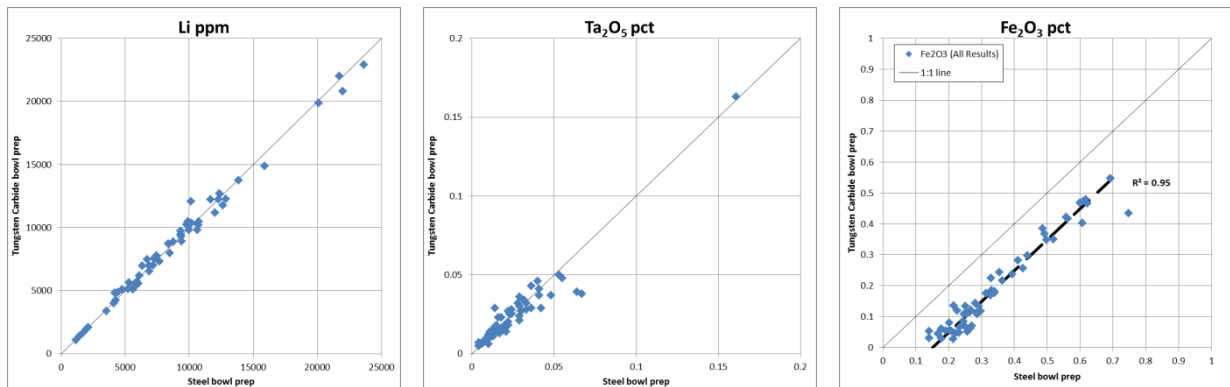


Figure 8 – Charts showing steel vs. tungsten carbide pulverising comparisons for Li (ppm), Ta₂O₅ (%) & Fe₂O₃ (%)

Table 5: Steel vs. tungsten carbide pulverising difference for Li (ppm), Ta₂O₅ (%) & Fe₂O₃ (%)

Difference	Li (%)	Ta ₂ O ₅ (%)	Fe ₂ O ₃ (%)
Average	0.00	0.00	0.15
90% Confidence Average			0.15
Standard Deviation	0.05	0.01	0.04

The iron contamination introduced into the RC drill samples by the highly abrasive nature of the mineralised pegmatite on the RC drilling bits and rods was investigated by comparing Fe₂O₃ assays from 5 sets of twin diamond core and RC holes. To date, Pilbara has completed 8 diamond core holes at Pilgangoora. Three of the holes were excluded from this study as two do not have twin RC holes and the third intersected pegmatites that bifurcated between the holes and made it difficult to directly compare the Fe₂O₃ assays. The twin hole sets were spread over a strike length 1,100m and the separation distance between holes varied between 2m and 15m. Statistical analysis of the spatial co-located data for the Pilbara diamond core, Pilbara RC and historic RC drilling confirmed a consistent significant difference in the Fe₂O₃ assays between the Pilbara diamond core and Pilbara RC – and to a lesser extent between the Pilbara diamond core and the historic RC results. This is illustrated by the box and log probability plots in Figure 9. From this, an additional factor of -0.26% has been applied to all the raw Fe₂O₃ assays for the Pilbara RC holes and -0.1% for the historic RC holes. No additional factor was applied to the Pilbara diamond core Fe₂O₃ assays.

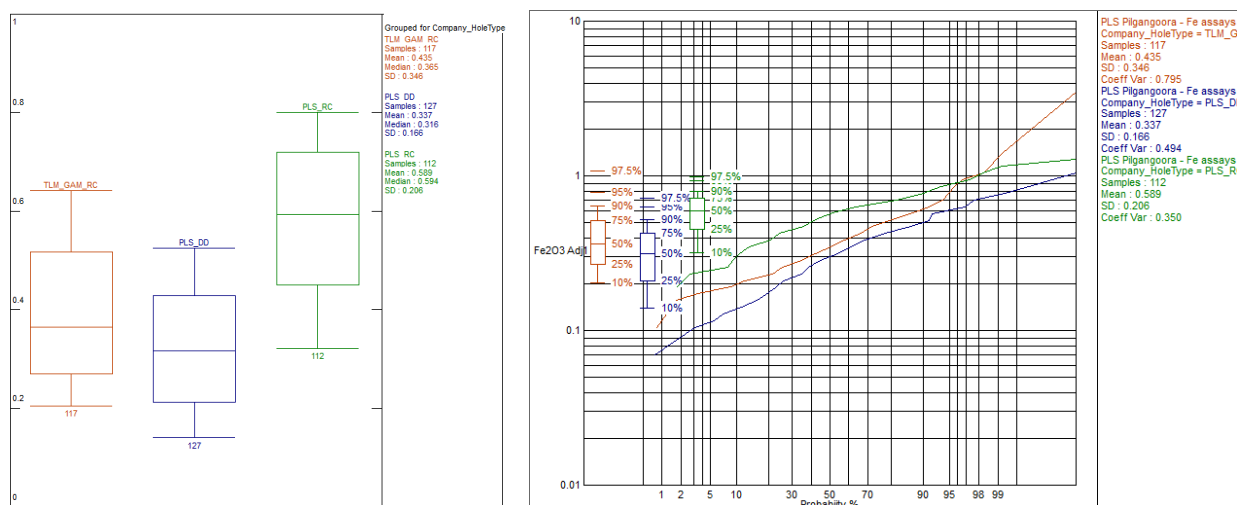


Figure 9 – Charts showing box plot and log probability plot comparing Pilbara diamond core vs. Pilbara RC vs. historic RC for Fe₂O₃ (%) assays

The two step Fe₂O₃ adjustment factors are summarised in Table 6.

Table 6: Fe₂O₃ (%) adjustment factors used at Pilgangoora

Drillhole assay sub-set	Fe ₂ O ₃ (%) Factor 1	Fe ₂ O ₃ (%) Factor 2	Fe ₂ O ₃ (%) Factor Total
Pilbara Diamond Core Samples	-0.15%	N/A	-0.15%
Pilbara RC Samples	-0.15%	-0.26%	-0.41%
Historic RC Samples	-0.15%	-0.10%	-0.25%

Table 7 shows the main pegmatite Li₂O and Ta₂O₅ intersections reported from the diamond drillholes with their corresponding raw and factored Fe₂O₃ grades. Note that only the sample pulverisation correction factor of -0.15% Fe₂O₃ is applied to the diamond core assays. The Factored intersection grades in Table 7 highlight that with the ability to select the geological contacts more accurately using core that the Fe₂O₃ content of Pilgangoora pegmatite drilled by the diamond core holes typically ranges as a zone between 0.23% and 0.62% Fe₂O₃. This range is lower than the estimated resource grade of 0.83% Fe₂O₃ which can be attributed to better geological contact identification and sampling selectivity with core rather than RC, plus less possibility for sample contamination during the drilling process. This illustrates the potential, with some selectivity, to further decrease the Fe₂O₃ grade in the run of mine ore.

Table 7: Fe₂O₃ (%) adjustment factors used at Pilgangoora

HoleID	From (m)	To (m)	Interval (m)	Li ₂ O (%)	Ta ₂ O ₅ (ppm)	Raw Fe ₂ O ₃ (%)	Factored Fe ₂ O ₃ (%)
PLS114M	33	42.68	9.68	1.85	263	0.51	0.36
PLS114M-A	30	45	15	1.84	297	0.46	0.31
	74	76	2	1.21	265	0.52	0.37
	120	132	12	1.70	189	0.73	0.58
	159	162	3	2.16	673	0.48	0.33
	165	178	13	1.74	200	0.51	0.36
PLS197M	75	76	1	1.37	110	0.62	0.47
	108	116	9	1.78	107	0.62	0.47
	167	170	3	1.93	37	0.63	0.48
	173	181	8	1.65	71	0.63	0.48
PLS269M	4	6	2	1.43	540	0.49	0.34
	58	71	13	1.51	332	0.47	0.32
	76	82	6	1.59	145	0.53	0.38
	102	105	3	1.68	270	0.60	0.45
PLS270M	20	21	1	1.92	280	0.38	0.23
	29	43	14	1.69	446	0.77	0.62
	47	52	5	2.71	388	0.49	0.34
	55	59	4	1.26	370	0.38	0.23
PLS272M	26	29	3	1.95	197	0.50	0.35
	33	46	13	1.65	252	0.43	0.28
	88	94	6	1.30	715	0.53	0.38
	103	105	2	2.01	345	0.57	0.42

Table 7: continued

HoleID	From (m)	To (m)	Interval (m)	Li ₂ O (%)	Ta ₂ O ₅ (ppm)	Raw Fe ₂ O ₃ (%)	Factored Fe ₂ O ₃ (%)
PLS303M	61	87	26	1.67	182	0.59	0.44
PLS306M	58	78	20	1.46	124	0.61	0.46
PLS337M	65	99	34	1.56	119	0.60	0.45

Pilbara will continue to investigate and further improve the understanding of the Fe₂O₃ grades of the Pilgangoora pegmatites with additional diamond core drilling to twin RC holes in key parts of the resource, it is expected that run of mine ore will contain Fe₂O₃ grades of less than 0.45% Fe₂O₃ within the resource. It will also be an important consideration in the metallurgical testwork program as it develops, to date simple magnetic separation has removed most of the iron from floatation concentrates.

More Information:

What is Lithium?

Lithium (Li) is recovered from the mineral spodumene and lithium-rich brines. It is used in a range of products such as ceramics, glass, batteries and pharmaceuticals. Lithium use has expanded significantly in recent years due to increasing use in rechargeable batteries in portable electronic devices and in batteries and electric motors for hybrid and electric cars.

What is Tantalum?

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

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

Contact:

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Competent Person's Statement

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

The information in this report that relates to Mineral Resources is based on and fairly represents information compiled by Mr Lauritz Barnes, (Consultant with Trepanier Pty Ltd) and Mr John Young (Executive and Chief Geologist of Pilbara Minerals Limited). Mr Young is a shareholder of Pilbara Minerals. Mr Barnes and Mr Young are members of the Australasian Institute of Mining and Metallurgy and have sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Specifically, Mr Young is the Competent Person for the database, geological model and completed the site inspection. Mr Barnes is the Competent Person for the database and the resource estimation. Mr Barnes and Mr Young consent to the inclusion in this report of the matters based on their information in the form and context in which they appear.

SUMMARY OF RESOURCE ESTIMATE AND REPORTING CRITERIA

As per ASX Listing Rule 5.8 and the 2012 JORC reporting guidelines, a summary of the material information used to estimate the Mineral Resource is detailed below (for more detail please refer to Table 1, Sections 1 to 3 included below in Appendix 2).

Geology and geological interpretation

The Pilgangoora pegmatites are hosted in the East Strelley greenstone belt, which is a series of steeply dipping, mafic meta volcanic rocks and amphibolites. At Pilgangoora, the greenstones have been intruded by a swarm of north-trending, east-dipping pegmatites extending from Mount York in the south northwards for about 11km to McPhees Mining Centre. Many of the pegmatites are very large, reaching over 1000m in length and 200–300m in width. Despite their large size, mineralisation within these zoned pegmatites appears to be restricted to alteration zones, mainly along vein margins containing quartz, albite, muscovite, and spessartine garnet. These mineralised zones contain varying amounts of lepidolite, spodumene, tantalite, cassiterite, and minor microlite, tapiolite, and beryl.

The area of the Pilgangoora pegmatite field within E45/2232 comprises a series of extremely fractionated dykes and veins up to 30m thick within the immediate drilling area. These dykes and veins dip to the east at 45-60° and thicken slightly with depth, are parallel to sub-parallel to the main schistose fabric within the greenstones and are typically separated by 20-30m horizontally (Figures 2 to 4).

Drilling techniques and hole spacing

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. Talison changed its name to Global Advanced Metals (“GAM”) and completed 17 RC holes for 1,776m in 2012. Pilbara Minerals completed 41 RC holes for 3,812m in late 2014. Sections are generally spaced 25m to 50m (Grid North), while holes on section are spaced 5m to 50m apart (see Figures 1 to 4 above). In March 2015 Pilbara Minerals completed 23 RC holes for 2,193m and between May and August a further 135 RC holes (14,064m) and 9 diamond core holes (1,082.7m).

Sampling and sub-sampling techniques

Sample information used in resource estimation was derived from both RC and diamond core drilling. The drill samples have been geologically logged and sampled for lab analysis. Eight of the nine diamond core holes twinned existing RC holes and when compared, strongly confirmed the RC results.

Sample analysis method

The Talison and GAM samples were assayed by GAM’s Wodgina Site Laboratory for a 36 element suite using XRF on fused beads. 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). The recent PLS drillhole samples were analysed by the Nagrom Laboratory in Perth by both fused bead XRF and ICP. No geophysical tools were used to determine any element concentrations used in the resource estimate.

Cut-off grades

Grade envelopes have been wireframed to an approximate 100ppm Ta₂O₅ cut-off which typically coincides with pegmatite boundaries and which allows for geological continuity of the mineralised zones.

Estimation Methodology

Grade estimation was by Ordinary Kriging ("OK") for Ta_2O_5 , Li_2O and Fe_2O_3 (both raw and factored) using GEOVIA Surpac™ software. Note that there were insufficient samples analysed to allow populating of Li_2O into 1 of the 25 domains. The estimate was resolved into 5m (E) x 25m (N) x 5m (RL) parent cells that had been sub-celled at the domain boundaries for accurate domain volume representation. Estimation parameters were based on the variogram models, data geometry and kriging estimation statistics. Top-cuts were decided by completing an outlier analysis using a combination of methods including grade histograms, log probability plots and other statistical tools. Based on this statistical analysis of the data population, top-cuts of between 3.0% and 3.5% for Li_2O and 800ppm, 1250ppm for Ta_2O_5 and between 1.0% and 7.7% for Fe_2O_3 were applied.

Classification criteria

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. The Pilgangoora Mineral Resource in part has been classified as Indicated with the remainder as Inferred according to JORC 2012.

Mining and metallurgical methods and parameters

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.

Historical mining operations and the presence of a tin-tantalum separation plant adjacent to a large tailings dump indicates that the assumption for potential successful processing of Pilgangoora ore is reasonable.

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).

APPENDIX 1

Exploration Results – Downhole intercepts (to be read in conjunction with JORC Table 1)

HoleID	Hole Type	MGA Easting	MGA Northing	RL	Dip	MGA Azimuth	Hole Depth	Domain	Depth From	Interval Length	Ta ₂ O ₅ ppm	Li ₂ O pct ¹
PLC001	RC	698458	7672998	191	-60	94	45	Not within resource zone				
PLC002	RC	698471	7672900	200	-60	78	59	20	43	13	239	
PLC004	RC	698512	7672699	191	-60	82	30	Not within resource zone				
PLC005	RC	698531	7673000	188	-70	94	35	Not within resource zone				
PLC005A	RC	698540	7673000	188	-60	96	60	22	43	12	288	
PLC006	RC	698534	7672896	204	-60	98	70	Not within resource zone				
PLC006A	RC	698545	7672900	204	-60	98	50	Not within resource zone				
PLC007	RC	698551	7672800	200	-60	95	52	Not within resource zone				
PLC007A	RC	698546	7672800	199	-60	274	55	20	44	4	334	
PLC008	RC	698588	7672702	197	-60	276	45	22	0	19	318	
PLC008A	RC	698587	7672701	197	-60	94	30	22	0	7	342	
PLC013	RC	698315	7671700	190	-60	90	121	12	58	58	202	
PLC013A	RC	698293	7671652	192	-60	96	76	12	43	24	194	
PLC014	RC	698277	7671600	195	-60	96	80	12	37	23	275	1.59 ²
PLC014A	RC	698273	7671544	195	-70	100	64	10	23	41	207	
PLC015	RC	698254	7671500	193	-60	90	85	11	15	7	206	
PLC015	RC	698254	7671500	193	-60	90	85	10	48	10	309	
PLC016	RC	698247	7671400	193	-60	72	60	12	0	2	459	
								11	15	2	98	
								10	40	3	134	
PLC016A	RC	698275	7671342	199	-60	227	80	13	6	5	187	
								12	11	17	215	
								9	48	14	395	
								8	62	15	263	
PLC016B	RC	698254	7671381	194	-60	109	79	12	0	33	294	0.92
								10	54	16	121	0.62
PLC017	RC	698240	7671300	196	-70	88	50	12	0	4	174	
PLC017A	RC	698239	7671305	196	-60	50	88	9	41	42	319	1.5
PLC017B	RC	698246	7671300	197	-60	88	80	12	0	20	227	
PLC018	RC	698238	7671200	196	-60	84	50	9	41	6	606	
PLC018A	RC	698231	7671169	196	-60	140	60	12	0	25	259	
								9	28	4	448	
PLC019	RC	698236	7671095	211	-60	90	52	12	24	16	257	0.92
								8	3	9	174	
								6	28	13	205	
								5	55	5	216	
PLC021	RC	697916	7670899	194	-60	96	50	Not within resource zone				
PLC022	RC	697927	7670801	198	-88	330	55	Not within resource zone				
PLC023	RC	697927	7670670	203	-90	90	60	1	0	6	267	
PLC024	RC	697906	7670600	210	-85	84	56	Not within resource zone				
PLC024A	RC	697939	7670540	221	-60	0	30	1	0	21	191	
PLC025	RC	697922	7670500	219	-60	96	60	Not within resource zone				
PLC025A	RC	697961	7670512	223	-80	20	34	1	0	28	174	1.27
PLC026	RC	697980	7670401	218	-60	96	124	1	43	81	118	

HoleID	Hole Type	MGA Easting	MGA Northing	RL	Dip	MGA Azimuth	Hole Depth	Domain	Depth From	Interval Length	Ta ₂ O ₅ ppm	Li ₂ O pct ¹
PLC026A	RC	697967	7670438	221	-60	80	60	1	0	9	314	
PLC027	RC	697608	7670293	205	-60	174	38	Not within resource zone				
PLC028	RC	697601	7670250	216	-60	99	50	Not within resource zone				
PLC028A	RC	697604	7670236	217	-90	90	50	Not within resource zone				
PLC029	RC	697609	7670200	212	-60	90	50	Not within resource zone				
PLC029A	RC	697615	7670228	217	-90	90	10	Not within resource zone				
PLC030	RC	697664	7670103	194	-60	38	50	Not within resource zone				
PLC030A	RC	697695	7670039	195	-90	90	20	Not within resource zone				
PLC030B	RC	697750	7670032	191	-60	8	46	35	0	21	142	
PLC030C	RC	697750	7670031	191	-88	50	25	35	0	10	130	
PLC031	RC	697736	7670003	188	-80	30	60	Not within resource zone				
PLC031A	RC	697777	7670037	190	-60	310	60	35	0	33	157	1.44
PLC032	RC	698026	7670370	211	-60	260	70	1	30	31	133	
PLC033	RC	698016	7670403	214	-60	268	80	1	18	10	203	
PLC034	RC	698001	7670448	223	-60	274	80	1	0	24	133	
PLC035	RC	697951	7670433	222	-60	280	60	Not within resource zone				
PLC036	RC	698179	7671223	192	-60	281	80	7	1	6	193	0.82
								6	24	13	211	1.71
								5	60	3	201	0.22
PLC037	RC	698143	7671215	196	-60	110	63	6	20	43	192	
PLC038	RC	698175	7671068	203	-60	264	80	3	0	22	158	
								5	37	4	270	
PLC039	RC	698179	7671145	203	-70	280	77	7	0	8	161	
								6	24	13	278	
								5	58	3	120	
PLC040	RC	698195	7671204	195	-59.7	265.1	87	7	13	5	149	
								6	36	16	276	
								5	67	6	228	
PLC041	RC	698220	7671173	196	-60.5	277.1	93	9	4	4	250	
								7	36	4	115	
								6	60	14	200	
								5	80	7	212	
PLC042	RC	698214	7671249	193	-59.7	270.4	99	8	7	3	540	0.48 ²
								7	43	5	159	
								6	62	10	261	
								5	88	5	232	
PLC043	RC	698373	7671681	193	-59.7	274.5	117	14	35	5	210	
								13	43	3	248	
								12	65	9	190	
								10	91	2	152	
								8	102	9	296	
PLC044	RC	698348	7671625	194	-59.7	264.4	105	13	28	11	179	
								12	52	12	266	
								10	76	3	159	
								8	88	13	426	0.40 ²
PLC045	RC	698280	7671253	204	-60	233.4	81	12	21	19	248	1.34
								9	56	7	297	1.81
								8	69	3	276	0.08

HoleID	Hole Type	MGA Easting	MGA Northing	RL	Dip	MGA Azimuth	Hole Depth	Domain	Depth From	Interval Length	Ta ₂ O ₅ ppm	Li ₂ O pct ¹
PLC046	RC	698281	7671285	206	-60.1	276.6	87	12	20	17	222	1.67
								9	54	7	320	1.76
								8	70	5	230	0.79
PLC047	RC	698288	7671341	202	-59.7	268.6	93	13	12	10	222	1.73
								12	22	10	201	0.99
								9	59	6	558	1.2
PLC048	RC	698303	7671429	205	-59.1	238.7	81	8	69	9	370	1.74
								13	27	11	316	1.48
								12	41	8	174	2.12
PLC049	RC	698270	7671452	198	-70.7	263.3	87	11	49	6	386	1.48
								10	67	1	95	0.91
								13	0	8	187	1.09
PLC050	RC	698256	7671143	204	-60.9	266.2	123	12	18	7	288	0.82
								11	33	1	109	0.25
								10	40	2	174	1.39
PLC051	RC	698273	7671058	219	-59.5	273.4	135	8	61	10	365	1.16
								12	16	16	416	1.91
								9	34	1	449	0.19
PLC052	RC	698237	7671036	213	-59.5	265.9	93	8	51	3	147	0.23
								7	75	5	213	1.07
								6	92	23	210	1.51
PLC053	RC	698256	7670982	208	-59.5	284.4	125	17	21	5	240	1.48
								12	40	1	269	2.22
								8	69	8	153	1.12
PLC054	RC	698219	7670940	199	-59.3	273.1	75	3	81	16	206	1.77
								4	102	6	223	1.54
								12	13	2	196	1.70
PLC055	RC	698339	7671202	216	-59.1	262	141	3	41	36	265	1.71
								4	80	4	179	1.24
								3	40	29	233	2.00 ²
PLC056	RC	698252	7671200	200	-59.1	269.4	129	4	100	2	170	
								3	5	26	205	
								4	68	1	124	
PLC057	RC	698496	7672954	190	-59.7	273.1	69	12	64	21	291	
								9	103	2	391	
								8	124	2	503	0.98 ²
PLC058	RC	698585	7672997	189	-60	267	51	12	0	12	225	
								9	22	8	266	
								8	39	9	244	
PLC059	RC	698599	7672949	199	-59.7	271.9	93	7	75	5	187	
								6	102	17	214	
								20	16	32	183	1.22
PLC060	RC	698580	7672906	203	-59.5	264.5	57	Not within resource zone				
PLC061	RC	698504	7672891	203	-60.1	269.7	45	22	67	6	352	1.35
								21	78	5	417	0.95
PLC062	RC	698504	7672891	203	-60.1	269.7	45	22	19	5	328	0.86
								21	33	5	515	1.49
PLC063	RC	698504	7672891	203	-60.1	269.7	45	20	19	7	180	1.33

HoleID	Hole Type	MGA Easting	MGA Northing	RL	Dip	MGA Azimuth	Hole Depth	Domain	Depth From	Interval Length	Ta ₂ O ₅ ppm	Li ₂ O pct ¹
PLC062	RC	698524	7672930	198	-60.5	265.1	93	20	74	16	208	0.92
PLC063	RC	698648	7672795	207	-58.9	272.9	81	22	53	6	432	1.51
PLC064	RC	698619	7672743	202	-59.9	277.3	57	22	32	5	277	1.27
PLC065	RC	698297	7671343	202	-88.8	48.5	141	13	25	10	209	
								12	38	23	238	
								9	98	5	638	0.68 ²
								8	124	1	178	
PLC066	RC	698282	7671285	203	-89.3	107.7	117	12	24	26	295	0.64 ²
								9	90	6	364	0.80 ²
								8	106	3	176	
PLC067	RC	698257	7671144	205	-76.7	275.9	147	12	15	14	252	
								9	38	7	240	
								8	65	2	380	
								7	95	9	218	
								6	125	17	211	
PLC068	RC	698232	7671303	195	-59.8	269.5	81	9	5	4	169	1.3
								8	20	8	381	0.99
								7	65	2	210	1.18
PLC069	RC	698387	7671748	191	-60	270	89	14	29	7	201	0.43
								13	45	3	221	0.5
								12	70	12	311	1.1
PLC070	RC	698422	7671748	193	-60	270	149	15	13	3	452	0.64
								14	63	5	198	1
								13	68	5	152	0.88
								12	98	12	241	0.83
								8	137	6	290	0.59
PLC071	RC	698400	7671796	191	-60	270	95	14	30	6	399	0.67
								13	44	6	298	0.17
								12	77	11	211	0.78
PLC072	RC	698446	7671797	192	-60	270	161	16	7	2	232	
								15	31	2	554	0.05
								14	68	3	266	
								13	76	6	254	0.64
								12	108	14	225	0.68
								8	141	6	234	0.59
PLC073	RC	698429	7671845	191	-60	270	119	15	15	2	602	0.07
								14	49	2	288	1.04
								13	60	3	227	0.68
								12	86	13	206	0.64
PLC074	RC	698467	7671847	189	-60	270	163	16	11	2	493	0.40
								15	45	2	564	0.81
								14	73	2	375	0.77
								13	89	7	233	0.78
								12	111	8	326	0.47
								8	151	3	329	0.61
PLC075	RC	698440	7671899	187	-60	270	155	16	2	2	344	
								15	17	1	1205	
								14	49	2	208	0.04

HoleID	Hole Type	MGA Easting	MGA Northing	RL	Dip	MGA Azimuth	Hole Depth	Domain	Depth From	Interval Length	Ta ₂ O ₅ ppm	Li ₂ O pct ¹
PLC075	RC	698440	7671899	187	-60	270	155	13	55	4	279	0.12
								12	84	13	183	0.78
								8	122	2	436	0.33
PLC076	RC	698407	7671714	194	-60	270	161	15	0	1	206	
								14	55	6	217	0.85
								13	61	5	170	0.92
								12	93	12	226	0.80
								8	121	11	232	0.61 ²
PLS001	RC	698522	7673000	188	-59.5	256.2	70	Not within resource zone				
PLS001A	RC	698532	7673000	188	-61.1	85.9	56	Not within resource zone				
PLS002	RC	698612	7672998	195	-60.7	264.9	80	Not within resource zone				
PLS003	RC	698547	7672959	193	-60.2	270.1	70	Not within resource zone				
PLS004	RC	698483	7672956	191	-59.3	270.8	55	20	1	16	111	1.03
PLS005	RC	698533	7672894	204	-60.8	266.6	86	20	75	6	187	1.14
PLS006	RC	698593	7672908	203	-87.9	223.8	110	Not within resource zone				
PLS006A	RC	698577	7672906	203	-61.1	282	70	22	18	2	360	1.06
PLS006A	RC	698577	7672906	203	-61.1	282	70	21	32	3	527	0.89
PLS007	RC	698511	7672845	209	-59.7	271.3	70	20	5	11	361	1.17
PLS011	RC	698503	7672806	204	-60.9	275	51	Not within resource zone				
PLS013	RC	698577	7672753	197	-59.5	266.1	50	Not within resource zone				
PLS014	RC	698521	7672751	195	-60.6	261.4	50	Not within resource zone				
PLS015	RC	698552	7672697	192	-59.4	274.6	70	Assays pending at time of resource estimation				
PLS016	RC	698620	7672705	198	-60.6	269.7	70	22	45	7	433	1.23
PLS017	RC	698450	7672500	183	-59	262	66	13	44	6	194	0.51
PLS018	RC	698499	7672499	183	-60.9	262	100	Not within resource zone				
PLS019	RC	698549	7672497	188	-59.5	260	100	16	38	8	409	1.63
PLS020	RC	698599	7672501	189	-60	265	102	16	90	6	413	1.82
PLS021	RC	698403	7672300	185	-60	265	96	Not within resource zone				
PLS022	RC	698453	7672298	186	-59.4	264.4	85	13	41	2	510	0.09
PLS023	RC	698498	7672301	185	-59.3	260.7	102	13	79	13	212	0.93
PLS024	RC	698550	7672305	189	-59.2	254.3	63	16	41	3	250	0.54
PLS025	RC	698350	7672103	186	-59.7	264.7	102	Not within resource zone				
PLS026	RC	698399	7672102	187	-59.1	261.7	100	13	11	7	413	0.73
PLS027	RC	698450	7672102	189	-58.6	264.2	96	14	28	1	130	0.1
								13	44	20	222	1.22
								16	21	3	193	0.42
PLS028	RC	698500	7672103	195	-58.6	268.3	102	14	76	4	268	0.99
								13	94	5	186	1.18
								8	5	2	305	0.17
PLS029	RC	698300	7671897	185	-59.56	271.18	60	12	14	7	414	0.26
								8	49	1	220	0.34
								14	16	4	402	0.9
PLS031	RC	698398	7671898	185	-60.57	268.45	120	13	31	4	265	1.64
								12	60	6	202	1.29
								8	91	2	285	1.67
PLS032	RC	698383	7671845	190	-60.55	267.79	103	14	17	4	272	1.57
								13	30	5	198	0.9
								12	60	7	251	1.39

HoleID	Hole Type	MGA Easting	MGA Northing	RL	Dip	MGA Azimuth	Hole Depth	Domain	Depth From	Interval Length	Ta ₂ O ₅ ppm	Li ₂ O pct ¹
PLS032	RC	698383	7671845	190	-60.55	267.79	103	8	91	1	300	1.58
PLS033	RC	698361	7671800	189	-60.4	269.6	110	14	8	5	240	1.86
								13	20	4	202	0.95
								12	52	6	190	1.4
								8	80	2	160	0.54
PLS034	RC	698344	7671749	189	-59.9	284.7	110	14	7	4	232	1.62
								13	16	4	200	0.99
								12	44	6	185	0.75
								8	73	1	270	0.17
PLS035	RC	698336	7671656	193	-60.5	270.2	106	14	8	1	100	1.4
								13	12	9	192	1.57
								12	46	9	158	1.58
								10	71	1	180	0.16
								8	99	4	210	0.91
PLS036	RC	698325	7671599	197	-60.1	270	94	13	20	3	227	0.8
								12	46	9	201	1.19
								10	64	3	170	0.29
								8	83	5	408	1.48
PLS037	RC	698248	7671597	199	-59.2	266.5	43	10	0	2	350	1.2
								8	35	4	272	0.63
PLS038	RC	698347	7671542	202	-60.1	259.4	100	13	43	9	204	1.72
								12	63	9	227	1.19
								10	80	13	288	1.43
PLS039	RC	698293	7671549	198	-60.4	268.2	61	13	0	4	405	0.83
								12	10	5	119	0.97
								10	26	9	243	0.86
PLS040	RC	698298	7671498	203	-58.2	262.4	100	13	16	5	174	0.95
								12	36	6	187	1.85
								11	42	4	188	0.62
								10	56	3	77	0.82
								8	83	11	431	1.19
PLS041	RC	698246	7671498	193	-60.5	270.3	100	10	14	1	120	1.08
								8	34	2	295	0.15
PLS042	RC	698233	7671447	189	-60	270	48	11	1	1	160	0.14
								10	6	1	160	0.07
								8	18	3	200	0.89
PLS043	RC	698335	7671447	209	-60	270	126	13	47	8	184	1.49
								12	59	13	256	1.84
								11	74	4	362	2.11
								10	90	3	203	1.83
								8	119	4	160	1.09
PLS044	RC	698291	7671380	195	-60	268	90	13	12	6	267	1.06
								12	22	17	218	1.32
								10	45	3	163	1
								9	61	4	365	1.61
								8	68	4	392	0.92
PLS045	RC	698178	7671248	188	-59.9	268.6	60	7	6	3	117	1.91
								6	25	10	214	1.23

HoleID	Hole Type	MGA Easting	MGA Northing	RL	Dip	MGA Azimuth	Hole Depth	Domain	Depth From	Interval Length	Ta ₂ O ₅ ppm	Li ₂ O pct ¹
PLS046A	RC	698310	7671250	212	-60	267	108	12	44	14	187	1.85
								9	85	6	275	1.39
								8	96	3	247	1.2
PLS047	RC	698323	7671089	212	-59.8	275	112	17	48	1	270	0.82
								12	67	7	266	1.58
								9	81	1	200	0.6
PLS048	RC	698229	7671087	209	-60	274	110	8	105	1	170	1.09
								12	12	2	250	1.57
								9	17	1	310	0.25
PLS049	RC	698174	7671030	199	-89.9	342.6	60	8	33	8	181	2.09
								6	76	16	311	1.25
								3	0	22	190	1.54
PLS050	RC	698211	7670992	201	-60	270	80	4	36	6	380	1.62
PLS051	RC	698268	7670941	196	-60	260	72	3	15	27	185	1.78
PLS052	RC	698223	7670896	185	-60	270	50	3	47	20	214	1.94
PLS053	RC	698278	7670901	187	-60	270	96	3	0	13	209	1.45
PLS054	RC	698221	7670800	194	-60	270	100	3	63	15	171	1.3
								4	9	4	156	0.68
PLS055	RC	698278	7670799	201	-60	270	102	4	34	1	40	0.2
								2	10	2	260	1.04
								3	50	18	188	1.06
PLS056	RC	698251	7670700	192	-60	263	96	4	81	13	117	0.79
								3	0	2	90	0.04
PLS057	RC	698304	7670699	195	-60	265	96	4	38	3	137	0.76
PLS057	RC	698304	7670699	195	-60	265	96	2	16	5	136	0.55
PLS057	RC	698304	7670699	195	-60	265	96	3	39	6	173	1.13
PLS058	RC	698347	7670701	199	-58.5	265	100	4	85	2	155	0.2
PLS059	RC	698308	7670625	195	-63.7	270	97	2	34	1	350	1.35
								3	54	7	181	1.02
								2	0	8	295	1.03
PLS060	RC	698348	7670622	196	-60.7	266	100	3	47	3	47	0.55
								4	91	4	102	0.48
								2	17	9	201	1.41
PLS061	RC	698385	7670626	197	-60	260	100	3	82	7	110	1.21
PLS062	RC	698308	7670547	198	-60	264	100	2	45	8	188	1.09
PLS063	RC	698348	7670550	201	-60	262	100	3	42	2	205	0.72
								4	91	2	65	0.63
PLS064	RC	698396	7670551	206	-60	260	100	2	11	4	215	0.82
PLS065	RC	697952	7670998	190	-59.9	272.7	100	3	67	8	139	1.95
PLS066	RC	697969	7670895	203	-59.5	262.5	100	2	37	3	343	0.99
PLS067	RC	697951	7670846	200	-62.4	263.9	73	1	7	4	235	1.16
PLS068	RC	697994	7670848	199	-62.3	265.3	100	1	11	9	266	0.91
PLS069	RC	697974	7670746	202	-59.4	269.4	100	1	21	6	263	1.09
PLS070	RC	697973	7670674	211	-60.7	267.7	100	1	28	5	280	0.75
PLS071	RC	697959	7670597	224	-59.1	265.3	100	1	9	12	202	1.24
PLS072	RC	698000	7670545	225	-58.9	271.7	79	1	17	16	164	0.74
									19	21	210	0.31
									25	28	189	1.44

HoleID	Hole Type	MGA Easting	MGA Northing	RL	Dip	MGA Azimuth	Hole Depth	Domain	Depth From	Interval Length	Ta ₂ O ₅ ppm	Li ₂ O pct ¹
PLS073	RC	698051	7670498	225	-59.9	260.7	103	1	58	25	130	1.74
PLS073A	RC	698000	7670496	229	-59.4	267.2	80	1	22	22	200	1.40
PLS074	RC	698046	7670452	225	-59.5	258.2	73	1	50	18	114	1.13
PLS075	RC	698050	7670400	216	-61.5	259.8	100	1	58	28	109	1.45
PLS076	RC	698059	7670358	210	-61.8	260.5	120	1	54	28	84	1.00
								31	106	2	120	1.04
PLS077	RC	697804	7669901	184	-58.2	264.9	100	35	0	16	95	0.53
PLS078	RC	697847	7669901	185	-57.5	268.8	100	35	0	36	102	1.58
PLS079	RC	697900	7669898	185	-59.5	265.4	100	35	9	31	108	1.58
PLS080	RC	697948	7669897	185	-60	272.9	100	32	1	11	76	1.26
PLS080	RC	697948	7669897	185	-60	272.9	100	35	35	24	115	1.37
PLS081	RC	697801	7669797	185	-58.36	269.83	100	Not within resource zone				
PLS082	RC	697844	7669797	184	-61.41	265.53	100	35	0	5	46	0.87
PLS083	RC	697896	7669798	185	-59.44	266.4	100	35	8	20	66	0.95
PLS084	RC	697944	7669797	185	-60.64	267.25	100	35	11	30	57	1.55
PLS085	RC	697996	7669794	185	-60.2	266.45	100	32	0	12	141	1.02
								35	57	10	99	0.96
PLS086	RC	698047	7669796	185	-59.69	274.74	103	32	10	24	79	1.23
								35	74	20	70	0.83
PLS087	RC	698101	7669794	185	-59.78	271.54	100	32	41	18	70	1.33
PLS088	RC	697960	7669598	187	-59.98	264.6	100	45	4	4	60	1.36
PLS089	RC	698002	7669598	187	-59.13	264.97	100	45	11	5	66	0.66
PLS090	RC	698058	7669596	189	-60.2	262.67	100	42	7	13	47	1.2
								45	62	3	83	0.89
PLS091	RC	698106	7669598	187	-61.06	264.12	100	42	38	8	55	1.19
								45	77	10	66	1.19
PLS092	RC	698143	7669607	185	-59.81	269.45	116	45	97	14	55	1.26
PLS093	RC	698200	7669599	187	-59.1	265.48	100	40	18	4	52	1.16
PLS093A	RC	698249	7669595	188	-59.89	271.15	127	40	50	4	65	0.58
								42	111	10	75	1.29
PLS094	RC	697498	7669495	183	-59.2	264.1	100	Not within resource zone				
PLS095	RC	697552	7669495	183	-60.02	263.09	100	Not within resource zone				
PLS096	RC	697599	7669495	183	-60.49	263.6	100	Not within resource zone				
PLS097	RC	697647	7669497	184	-59.99	261.35	100	Not within resource zone				
PLS097A	RC	697740	7669500	184	-59.36	257.25	100	Not within resource zone				
PLS098	RC	697859	7669396	200	-61.45	271.53	100	Not within resource zone				
PLS099	RC	697905	7669398	203	-61	270.17	100	45	4	9	52	1.4
PLS100	RC	697952	7669400	211	-59.77	261.56	100	42	7	3	57	1.02
								45	33	8	42	1.65
PLS101	RC	697998	7669401	212	-60.59	267.57	100	42	7	8	41	1.33
PLS101	RC	697998	7669401	212	-60.59	267.57	100	45	55	8	56	1.22
PLS102	RC	698048	7669400	206	-60.35	269.74	100	42	30	7	53	0.84
								45	73	13	59	1.85
PLS103	RC	698112	7669401	196	-59.37	267.47	102	40	0	13	61	2
								42	72	3	63	0.56
PLS104	RC	698185	7669297	195	-59.93	268.23	100	40	69	10	6	1.27
PLS105	RC	697873	7669197	225	-60.71	266.67	103	45	32	9	68	1.06
PLS106	RC	697902	7669197	221	-60.14	266.86	100	42	15	1	80	0.8

HoleID	Hole Type	MGA Easting	MGA Northing	RL	Dip	MGA Azimuth	Hole Depth	Domain	Depth From	Interval Length	Ta ₂ O ₅ ppm	Li ₂ O pct ¹
PLS106	RC	697902	7669197	221	-60.14	266.86	100	45	43	9	69	1.55
PLS107	RC	697947	7669198	207	-60.39	273.27	89	42	24	1	140	0.46
								45	53	13	69	1.68
PLS108	RC	697994	7669194	205	-59.51	275.83	100	42	20	5	30	0.74
								45	78	11	61	1.45
PLS109	RC	698047	7669193	198	-59.33	265	100	42	48	3	12	0.51
PLS110	RC	698095	7669206	204	-60.57	267.98	100	40	30	8	50	0.72
								42	84	3	27	1.01
PLS110A	RC	698107	7669208	205	-49.65	91.58	100	Not within resource zone				
PLS111	RC	697839	7669000	211	-60.57	269.22	103	45	42	16	72	1.34
PLS112	RC	697899	7668994	205	-60.45	274.72	103	45	66	13	68	1.38
PLS113	RC	698223	7671152	194	-60	262	99	7	27	7	170	1.85
								6	59	23	152	1.45
PLS114M-A	DDH	698300	7671156	210	-69.9	273.6	183.5	12	30	16	292	1.78
								9	74	2	265	1.21
								8	94	1	210	1.26
								7	121	11	191	1.76
								6	159	19	252	1.57
PLS115	RC	698566	7672956	192	-59.9	266.3	100	22	6	3	353	0.82
PLS116	RC	698646	7672755	206	-59.3	270.2	70	22	59	6	513	1.16
PLS117	RC	698310	7671417	202	-90	0	90	13	28	18	392	2.07
								12	50	6	265	1.4
PLS118	RC	698265	7671344	195	-60	266	84	12	3	11	217	0.59
								9	32	6	488	2.55
								8	50	10	260	0.82
PLS119	RC	698294	7671298	203	-90	0	120	12	25	27	204	1.89
								9	91	4	325	1.85
								8	104	4	202	1.68
PLS120	RC	697402	7669493	181	-60	266	100	Not within resource zone				
PLS121	RC	697445	7669494	182	-59.7	259.8	103	Not within resource zone				
PLS122	RC	698342	7671846	189	-60	270	80	12	15	6	170	0.39
PLS122	RC	698342	7671846	189	-60	270	80	8	56	1	230	1.24
PLS123	RC	698327	7671799	187	-62.3	262.8	91	12	25	4	245	1.74
PLS124	RC	698321	7671756	187	-61.2	272	80	12	24	6	208	1.05
								8	51	1	180	0.11
PLS125	RC	698298	7671650	192	-59.8	266	73	12	21	7	184	0.91
								10	42	1	170	0.05
								8	67	4	302	0.99
PLS126	RC	698301	7671490	203	-87.2	289.4	100	13	26	11	214	1.79
								12	47	10	165	1.51
								10	61	12	277	1.69
PLS127	RC	698331	7671597	197	-88.7	331.3	110	13	33	11	244	1.5
								12	70	10	222	1.38
								10	86	16	271	1.88
PLS134	RC	698300	7667400	214	-60.9	268.7	100	Assays pending at time of resource estimation				
PLS135	RC	698355	7667400	205	-60	267.4	100	Assays pending at time of resource estimation				
PLS136	RC	698400	7667400	209	-58.7	273.8	100	Assays pending at time of resource estimation				
PLS145	RC	698020	7667650	195	-58.3	268.9	100	Assays pending at time of resource estimation				

HoleID	Hole Type	MGA Easting	MGA Northing	RL	Dip	MGA Azimuth	Hole Depth	Domain	Depth From	Interval Length	Ta ₂ O ₅ ppm	Li ₂ O pct ¹
PLS174	RC	697907	7669696	183	-60	270	100	Not within resource zone				
PLS175	RC	697949	7669697	183	-60	270	100	Not within resource zone				
PLS176	RC	698002	7669698	184	-60	270	100	Not within resource zone				
PLS177	RC	698046	7669700	185	-60	270	100	Not within resource zone				
PLS178	RC	698097	7669702	185	-60	279	109	Not within resource zone				
PLS179	RC	698150	7669693	185	-60	270	100	Not within resource zone				
PLS180	RC	698214	7669699	185	-60	263	100	Not within resource zone				
PLS180A	RC	698254	7669698	185	-60	265	103	Not within resource zone				
PLS185	RC	697798	7669851	185	-60	270	100	Assays pending at time of resource estimation				
PLS186	RC	697851	7669848	185	-60	270	102	35	0	18		
PLS187	RC	697900	7669852	186	-60	270	120	35	0	31		
PLS194	RC	698000	7669900	191	-59.1	267	98	32	26	16	89	1.76
								35	67	29	118	1.83
PLS195	RC	698049	7669899	192	-58.6	268.1	130	31	15	1	90	0.72
								32	38	21	90	1.8
								35	98	24	78	1.1
PLS196	RC	698105	7669901	190	-60.3	269.9	162	1	0	10	108	0.85
								32	60	20	82	1.27
								35	131	22	89	1.6
PLS197M	DDH	698153	7669897	195	-59	265.6	186.5	1	37	10	162	1.75
								31	57	3	53	1.76
								32	107	12	116	1.62
								35	166	15	69	1.42
PLS211	RC	697749	7670000	189	-60.4	272.6	48	35	0	4	62	0.61
PLS212	RC	697799	7670000	190	-58.8	271.1	87	35	0	37	111	1.55
PLS213	RC	697848	7669998	199	-59.3	268	96	35	32	34	111	1.36
PLS214	RC	697897	7669984	199	-60.1	267.7	100	32	24	2	160	1.39
								35	42	43	122	1.54
PLS215	RC	697948	7669996	200	-59.3	274.7	120	31	0	10	75	1.29
								32	38	8	171	2.27
								35	57	57	115	1.57
PLS216	RC	697992	7669994	191	-60	272	130	31	1	8	95	1.64
								32	43	21	78	1.73
								35	90	30	99	1.6
PLS216A	RC	698031	7669998	194	-72.3	270.5	144	31	19	4	108	1.72
								32	61	25	100	1.6
								35	117	22	112	1.75
PLS217	RC	698102	7670019	209	-57.6	254.6	78	1	23	23	133	0.52
								31	71	1	80	0.26
PLS218	RC	698153	7670019	205	-57.8	271.1	100	1	54	19	91	0.47
PLS226	RC	698100	7670047	211	-59.7	267.5	72	1	22	22	123	1.89
PLS228	RC	698225	7670050	227	-59.3	261.2	86	3	1	5	124	1.27
PLS231	RC	697910	7670101	210	-61.8	266.8	132	31	3	3	133	0.95
								32	43	14	96	1.66
								35	87	39	93	1.03
PLS232	RC	697954	7670109	212	-61.3	267.1	146	31	9	3	153	1.11
								32	49	6	230	1.49
								35	101	45	114	1.35

HoleID	Hole Type	MGA Easting	MGA Northing	RL	Dip	MGA Azimuth	Hole Depth	Domain	Depth From	Interval Length	Ta ₂ O ₅ ppm	Li ₂ O pct ¹
PLS233	RC	698078	7670099	211	-59.4	264.4	70	1	6	24	150	1.32
								31	39	3	117	2.3
PLS234	RC	698126	7670090	220	-58.8	256.4	100	1	40	26	102	1.54
								31	79	1	60	0.45
PLS235	RC	698245	7670102	244	-58.3	267.4	100	3	46	3	177	1.18
PLS244	RC	698354	7670151	231	-60.6	269.8	108	3	100	5	102	1.89
PLS245	RC	698399	7670151	231	-57.8	273.3	100	<i>Not within resource zone</i>				
PLS247	RC	698048	7670202	222	-59.4	270.4	90	1	9	33	139	1.65
								31	68	3	80	1.33
PLS248	RC	698097	7670202	225	-60	260.4	114	1	43	33	135	1.61
								31	95	3	107	1.84
PLS259	RC	698006	7670301	208	-59.6	270.6	96	1	2	24	122	0.88
								31	56	3	93	1.22
PLS260	RC	698049	7670302	215	-60	271.8	96	1	30	32	126	1.41
								31	86	6	73	1.58
PLS261	RC	698368	7670351	224	-57.6	269.2	100	2	3	8	236	0.97
								3	92	6	120	0.77
PLS262	RC	698409	7670346	224	-57.7	272.4	100	2	28	4	282	1.25
PLS266	RC	698405	7670439	232	-57	272.4	96	2	34	8	214	1.55
PLS269M	DDH	698353	7671443	212	-59.6	274.3	147.3	13	57	13	359	1.55
								12	76	7	180	1.57
								10	102	4	215	1.27
								8	130	8	176	0.92
PLS270M	DDH	698310	7671427	205	-89.5	208.6	90.7	13	30	17	422	1.5
								12	47	12	342	1.74
PLS271	RC	698327	7671339	209	-90	265.6	139	13	59	9	259	1.7
								12	77	27	241	1.81
PLS272M	DDH	698288	7671293	206	-89.1	304.5	121.3	12	21	27	245	1.19
								9	88	6	715	1.3
								8	103	2	345	2
PLS273	RC	698398	7671996	189	-59.3	265.5	65	13	15	9	210	1.35
								12	44	5	180	0.97
PLS274	RC	698449	7671999	189	-60.1	270.9	100	14	42	1	1090	0.19
								13	50	18	235	0.82
								12	82	9	236	1.75
PLS275	RC	698499	7672000	191	-58.1	273	144	16	31	2	195	1.1
								14	78	2	465	1.22
								13	96	5	232	1.63
								12	114	12	318	1.3
PLS282	RC	698908	7674249	230	-90	0	97	<i>Not within resource zone</i>				
PLS283	RC	698946	7674247	233	-90	0	103	<i>Not within resource zone</i>				
PLS286	RC	699079	7674340	209	-90	0	100	<i>Assays pending at time of resource estimation</i>				
PLS293	RC	698428	7671448	201	-60.9	256.7	180	13	98	10	186	0.69
PLS293	RC	698428	7671448	201	-60.9	256.7	180	12	139	3	243	1
								10	150	7	290	1.13
PLS294	RC	698364	7671415	213	-59.4	264.8	125	13	64	12	217	1.44
								12	84	15	263	1.68
								10	113	1	250	1.11

HoleID	Hole Type	MGA Easting	MGA Northing	RL	Dip	MGA Azimuth	Hole Depth	Domain	Depth From	Interval Length	Ta ₂ O ₅ ppm	Li ₂ O pct ¹
PLS295	RC	698418	7671413	203	-61.8	271.3	130	13	100	4	260	1.17
PLS298	RC	698398	7671339	208	-61	255	170	13	105	3	250	1.24
								12	130	9	320	1.32
PLS300	RC	698408	7671303	210	-65.4	264.8	190	12	151	10	225	1.09
								9	173	6	372	1.37
PLS301	RC	698359	7671249	219	-61.5	270.9	144	12	96	13	252	1.74
								9	136	1	90	0.51
PLS302	RC	698407	7671236	214	-64.1	257.8	180	12	136	5	86	0.39
								9	170	7	259	1.54
PLS303M	DDH	698054	7670501	224	-59.9	275	102.6	1	60	28	182	1.61
PLS304	RC	698094	7670495	221	-59.8	268.8	124	1	94	27	123	0.78
PLS306M	DDH	698053	7670399	216	-60	264.4	99.5	1	58	24	143	1.29
PLS307	RC	698098	7670405	218	-59.7	266.6	130	1	102	24	82	1.31
PLS309	RC	698347	7670249	222	-61.3	274.7	100	3	86	6	123	1.08
PLS310	RC	698392	7670248	223	-57.9	269.4	100	Not within resource zone				
PLS313	RC	698005	7670595	223	-60.1	261.2	110	1	31	25	192	0.81
PLS314	RC	698028	7670678	220	-57.8	261.1	110	1	53	25	221	1.27
PLS315	RC	698034	7670749	215	-58.8	278.2	110	1	59	21	187	1.11
PLS317	RC	698362	7670947	202	-60.1	259.7	150	Not within resource zone				
PLS321	RC	698304	7671052	215	-60	268.3	150	12	60	6	175	1.69
PLS321	RC	698304	7671052	215	-60	268.3	150	4	124	4	332	0.5
PLS322	RC	698345	7671144	215	-68.9	265	198	12	82	1	310	0.32
								9	107	8	235	1.98
								8	126	1	450	0.06
								7	173	11	226	1.06
PLS328	RC	698390	7671492	208	-58.9	271.9	180	13	77	8	249	1.69
								12	97	5	332	1.43
								10	120	3	170	0.71
								8	156	10	190	1.18
PLS331	RC	698452	7671596	203	-59.7	255.6	190	13	95	13	322	1.98
								12	140	14	324	1.69
								10	165	5	204	1.67
PLS337M	DDH	698102	7670203	226	-89.1	0.2	108.5	Assays pending at time of resource estimation				
PLS338	RC	698010	7670099	196	-60.3	269.8	168	Assays pending at time of resource estimation				

Notes:

¹ Where Li₂O field is blank, it is because the interval was not sampled and analysed specifically for Li₂O.

² When compared to interval reported for Ta₂O₅, the interval length sampled and analysed specifically for Li₂O is a subset of the reported interval. This is the case for 9 of the intervals reported in the table above, including:

HoleID	Domain	Ta ₂ O ₅ interval	Li ₂ O interval
PLC014	12	23 m	18 m
PLC042	8	3 m	1 m
PLC044	8	13 m	5 m
PLC053	3	29 m	21 m
PLC055	8	2 m	1 m
PLC065	9	5 m	1 m
PLC066	12	26 m	4 m
PLC066	9	6 m	4 m
PLC076	8	11 m	7 m

Appendix 2

JORC Code, 2012 Edition – Table 1 report

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. - In late 2014, Pilbara Minerals completed 41 RC holes for 3,812m. - In March 2015, Pilbara Minerals completed 23 RC holes for 2,193m. - Between May and September 2015, Pilbara Minerals completed 135 RC holes for 14,064m. - 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
	<i>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.</i>	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. - 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 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	<i>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).</i>	- 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 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. Two rigs were used; a Schramm T450RC Rig, and a bigger Hydco 350RC Rig. • Diamond drilling was also undertaken by Orbit Drilling, using a Hydco 1200H rig, drilling HQ sized core.
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	• Recoveries for the majority of the historical holes are not known, while recoveries for 2012 GAM holes were overwhelmingly logged as "good." • Recoveries for 2014 and 2015 Pilbara holes were virtually all dry and overwhelmingly logged as "good."
	• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	• 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. • 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

Criteria	JORC Code explanation	Commentary
	<i>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.</i>	material, is retained. No material bias has been identified.
Logging	<i>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.</i>	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.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	- Logging has primarily been quantitative, using RC chips. - Detailed logging has been undertaken on diamond core by a mineralogical consultant.
	<i>The total length and percentage of the relevant intersections logged.</i>	The database contains lithological data for all holes in the database.
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	- 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. - A 15 to 20mm fillet of core was taken every metre from half cut core.
	<i>Quality control procedures adopted for all sub-sampling stages to</i>	Talison/GAM/Pilbara samples have field duplicates as well as

Criteria	JORC Code explanation	Commentary
	<i>maximise representivity of samples.</i>	laboratory splits and repeats.
	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 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

Criteria	JORC Code explanation	Commentary
		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.
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 Ta₂O₅ %, and converted to ppm for the estimation process.
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

Criteria	JORC Code explanation	Commentary
		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 drilling campaigns. Measurements were recorded at 10m, 40m, 70m and 100m (or EOH) for each hole.
	• <i>Specification of the grid system used.</i>	• The grid used was MGA Zone 50, datum GDA94.
	• <i>Quality and adequacy of topographic control.</i>	• The topographic surface used was sourced from UTS magnetic survey data. Surveyed drillhole collar elevation data were compared and an adjustment made to the UTS surface whereby it was dropped to match the collar DGPS elevations. • Surveyed drillhole collar elevation data was then incorporated into the adjusted UTS topographic surface.
<i>Data spacing and distribution</i>	• <i>Data spacing for reporting of Exploration Results.</i>	• Talison Completed 54 RC drillholes in 2008 • GAM completed 46 RC drillholes between 2010 and 2012 • Pilbara completed 41 RC holes in 2014 and 158 in 2015. • Pilbara completed 9 diamond drillholes in 2015. • Drilling spacings vary between 25m to 50m apart
	• <i>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.</i>	• 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.

Criteria	JORC Code explanation	Commentary
	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 approximately 45 degrees at a dip direction of 90 degrees. - 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 security	The measures taken to ensure sample security.	- Talison sampling security measures are unknown, but assumed to be 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

Criteria	JORC Code explanation	Commentary
		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
<i>Mineral tenement and land tenure status</i>	<i>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</i>	The Pilgangoora resource lays within E45/2232 which is 100% owned by Pilbara Minerals Limited.
	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	No known impediments.
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	- Talison completed 54 RC holes in 2008 - GAM completed 46 RC holes between 2010 and 2012.
<i>Geology</i>	<i>Deposit type, geological setting and style of mineralisation.</i>	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.
<i>Drill hole Information</i>	<i>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 –</i>	Refer to Appendix 1 in this announcement.

Criteria	JORC Code explanation	Commentary
	<i>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.</i> <i>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.</i>	
Data aggregation methods	<i>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.</i> <i>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.</i> <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	- 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.
Relationship between mineralisation widths and intercept lengths	<i>These relationships are particularly important in the reporting of Exploration Results.</i> <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> <i>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').</i>	- Downhole lengths are reported in Appendix 1 of this announcement. - It is noted in previous sections that not all samples analysed for Ta₂O₅ have also been analysed for Li₂O. All pegmatite pulps from the 2012 drilling were analysed for Li₂O but only selected pulps from the 2008 and 2010 drilling were. As noted in Appendix 1, there are 14 intervals reported for Ta₂O₅ that were only partial analysed for Li₂O – see Note 2 for Appendix 1.
Diagrams	<i>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.</i>	See Figures 1 to 8

Criteria	JORC Code explanation	Commentary
<i>Balanced reporting</i>	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 have been provided in Appendix 1 in this announcement.
<i>Other substantive exploration data</i>	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.
<i>Further work</i>	- 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).

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).
	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) initially visited the site in November 2013 followed by a further 5 times during 2014 and 4 times in 2015.
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 effect, if any, of alternative interpretations on Mineral Resource estimation. - The use of geology in guiding and controlling Mineral Resource estimation.	- 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 comprises a series of extremely fractionated dykes and veins up to 15m thick within the immediate drilling area. These dykes and veins dip to the east at 45-60° and thicken slightly with depth, are parallel to sub-parallel to the main schistose fabric within the greenstones and are typically separated by 20-30m horizontally (Figures 2 to 4). - The geological interpretation is supported by drill hole logging and

Criteria	JORC Code explanation	Commentary
	<i>The factors affecting continuity both of grade and geology.</i>	mineralogical studies completed by GAM (previously Talison) and Pilbara's recent drillholes. - 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.
<i>Dimensions</i>	<i>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.</i>	The modelled mineralized zone has dimensions of 4,100m (north-south), ranging between 50-350m (east-west) in multiple veins and ranging between 20m and 220m RL (AMSL).
<i>Estimation and modelling techniques</i>	<i>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.</i> <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i> <i>The assumptions made regarding recovery of by-products.</i> <i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i> <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i>	- Grade estimation using Ordinary Kriging (OK) was completed using Geovia Surpac™ software for both Ta₂O₅ and Li₂O. Note that there were insufficient samples analysed to allow populating of Li₂O into 1 of the 25 domains. - Drill spacing typically ranges from 25m to 50m. - Drillhole samples were flagged with wireframed domain codes. Sample data was composited for Ta₂O₅, Li₂O and Fe₂O₃ 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 data population, top-cuts of between 3.0% and 3.5% for Li₂O and 800ppm, 1250ppm for Ta₂O₅ and between 1.0% and 7.7% for Fe₂O₃ were applied. - Directional variograms were modelled by domain using traditional variograms. Nugget values are moderate to low (between 20 and 30%) and structure ranges up to 230m. Domains with more limited

Criteria	JORC Code explanation	Commentary
	- 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.	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. - As a potential deleterious element, Fe₂O₃ has been estimated for this resource, both as raw and factored Fe₂O₃. 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

Criteria	JORC Code explanation	Commentary
		assays. Factors have been applied to the raw Fe ₂ O ₃ assays in two steps. Firstly, all Fe ₂ O 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 ₂ O 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 ₂ O 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 Ta₂O₅ and 1% Li₂O 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 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.	Based on the orientations, thicknesses and depths to which the pegmatite veins have been modelled, plus their estimated grades for Ta₂O₅ and Li₂O, the potential mining method is considered to be open pit mining.
Metallurgical factors or	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the	Historical mining operations and the presence of a tin-tantalum separation plant adjacent to a large tailings dump indicates that the

Criteria	JORC Code explanation	Commentary
assumptions	<i>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.</i>	assumption for potential successful processing of Pilgangoora ore is reasonable. Nagrom Pty Ltd and Anzaplan have both completed scoping metallurgical testwork and have recovered both Ta₂O₅ and Li₂O of marketable qualities. (see ASX release “Pilbara Testwork Confirms Potential” released 25/05/2015, “Quarterly Activities and Appendix 5B, released 24/04/2015).
Environmental 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 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.	- 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 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.

Criteria	JORC Code explanation	Commentary
		- Pilbara Minerals conducted hydrostatic weighing tests on uncoated HQ core samples to determine bulk density factors. A total of 127 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/cm³ in the (minimal) oxide/transition zone, and 2.72 g/cm³ in fresh material.
Classification	<i>The basis for the classification of the Mineral Resources into varying confidence categories.</i> <i>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).</i> <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i>	- 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	<i>The results of any audits or reviews of Mineral Resource estimates.</i>	Whilst Mr. Barnes (Competent Person) is considered Independent of PLS, no third party review has been conducted.
Discussion of relative accuracy/ confidence	<i>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 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.</i> <i>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</i>	- 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. - The statement relates to global estimates of tonnes and grade.

Criteria	JORC Code explanation	Commentary
	<i>evaluation. Documentation should include assumptions made and the procedures used.</i> • <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i>	