PILBARA MINERALS
LIMITED

ACN 112-425-788

ASX ANNOUNCEMENT **2nd June, 2015**

FURTHER INCREASE IN HIGH-GRADE LITHIUM RESOURCE AT PILGANGOORA AS DEPOSIT CONTINUES TO GROW

INTERIM RESOURCE UPGRADE DELIVERS 23% INCREASE IN CONTAINED LITHIUM OXIDE WITH DRILLING CONTINUING

HIGHLIGHTS:

- **Updated JORC 2012 Mineral Resource completed for the Pilgangoora Tantalum-Lithium Project** in WA's Pilbara region, with this interim upgrade incorporating the results of successful in-fill RC drilling completed in March and April. The updated Mineral Resource comprises:

    - *Indicated and Inferred Resources of **23.83Mt @ 0.021% Ta_2O_5 (tantalite)** containing **11.3Mlbs Ta_2O_5** and a corresponding lithium resource of **20.48Mt @ 1.16% Li_2O** (spodumene) containing **237,000 tonnes of lithium oxide**;*

    - *Within the total Mineral Resource of 23.83M tonnes, and at a cut-off of **1% Li_2O**, the Inferred and Indicated Lithium Resource amounts to **12.73Mt @ 1.42% Li_2O containing 181,000 tonnes of lithium oxide.***

- **The recent in-fill drilling has boosted the Inferred lithium resource by 32%**. This was achieved from drilling targeting the previously untested south-western pegmatite, which remains open to the south and at depth.

- **Significant potential exists for future resource growth** through further in-fill and step-out drilling, which is currently underway. Pilbara Minerals has updated its **Exploration Target[1]** for the Pilgangoora Project to **50-60 million tonnes @ 175-225ppm Ta_2O_5 and 1.2-1.5% Li_2O.**

Australian strategic metals company Pilbara Minerals Ltd (ASX: PLS) is pleased to report a further interim upgrade to the JORC compliant Mineral Resource estimate for its **Pilgangoora Tantalum-Lithium Project** in WA's Pilbara region, with the latest update delivering a significant increase in the high-value lithium content of the resource.

The updated Mineral Resource includes a **23 per cent increase in contained lithium oxide** and a **6 per cent increase in contained tantalite**, based on information calculated from just 19 new holes. Recent drilling has also clearly indicated the substantial potential for the resource to grow further.

The overall Pilgnagoora mineral resource now comprises **11.3 million pounds of contained tantalite** and **237,000 tonnes of contained lithium oxide**, with the recent successful extensional drilling adding **45,000 tonnes of contained lithium oxide** to the Inferred category.

The recent drilling and interim resource upgrade has also allowed Pilbara to estimate an upgraded Exploration Target for the Pilgangoora Project, demonstrating that it is on track to delineate a **globally significant hard-rock lithium-tantalum deposit.**

The next phase of resource extension drilling at Pilgangoora commenced in late April and is focusing on the central and southern domains, which are outside of the currently defined Mineral Resource. Drilling in these zones is expected to underpin further increases in the resource inventory.

The Pilgangoora Project comprises five tenements, including two Exploration Licences (EL45/2232 and EL45/2241) and three Mining Leases (M45/78, M45/333 and M45/511) covering an area of 31km^2, which are prospective for tantalum and lithium mineralisation. The Project is located immediately north of and along strike from Altura Mining Limited's (ASX: AJM) Pilgangoora Lithium Deposit, which hosts a JORC Resource of **25.2Mt @ 1.23% Li_2O** (lithium oxide).[2]

2012 JORC Resource Estimation

This updated 2012 JORC compliant mineral resource for the Project incorporated all historical data, Pilbara's 2014 drilling program plus the new information from the drilling program completed during March-April 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% Ta_2O_5) results in an Indicated and Inferred Mineral Resource estimate (Table 1) totalling:

- <u>**23.8 million tonnes @ 0.021% Ta_2O_5 containing 11.3 million lbs of Ta_2O_5**</u>

Within the tantalite resource, there is a corresponding ithium resource of **20.5 million tonnes @ 1.16% Li_2O** containing **237,000 tonnes of lithium oxide.**

Table 1: Pilgangoora Project – Mineral Resource Estimate

Category		Tonnage (million tonnes)	Ta_2O_5 (ppm)	Li_2O (%)	Ta_2O_5 (tonnes)	Ta_2O_5 (Mlbs)	Li_2O (T)
Indicated	Ta_2O_5	6.0	233		1,405	3.1	
	Li_2O	4.7		1.36			64,300
Inferred	Ta_2O_5	17.8	208		3,710	8.2	
	Li_2O	15.7		1.10			172,800
TOTAL	**Ta_2O_5**	23.8	**215**		**5,115**	**11.3**	
	Li_2O	**20.5**		**1.16**			**237,100**

The envelope was wire-framed using both geological logging information (in particular logging of zoning within the pegmatite) and assay data for Ta_2O_5 and Li_2O. Note that there were insufficient samples analysed to allow Li_2O mineralisation to be populated into one of the 18 domains.

Another five domains are significantly lower grade and are excluded – hence the different tonnage reported above for the Li_2O 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):

- <u>**12.73 million tonnes @ 1.42% Li_2O containing 181,000 tonnes of lithium oxide.**</u>

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

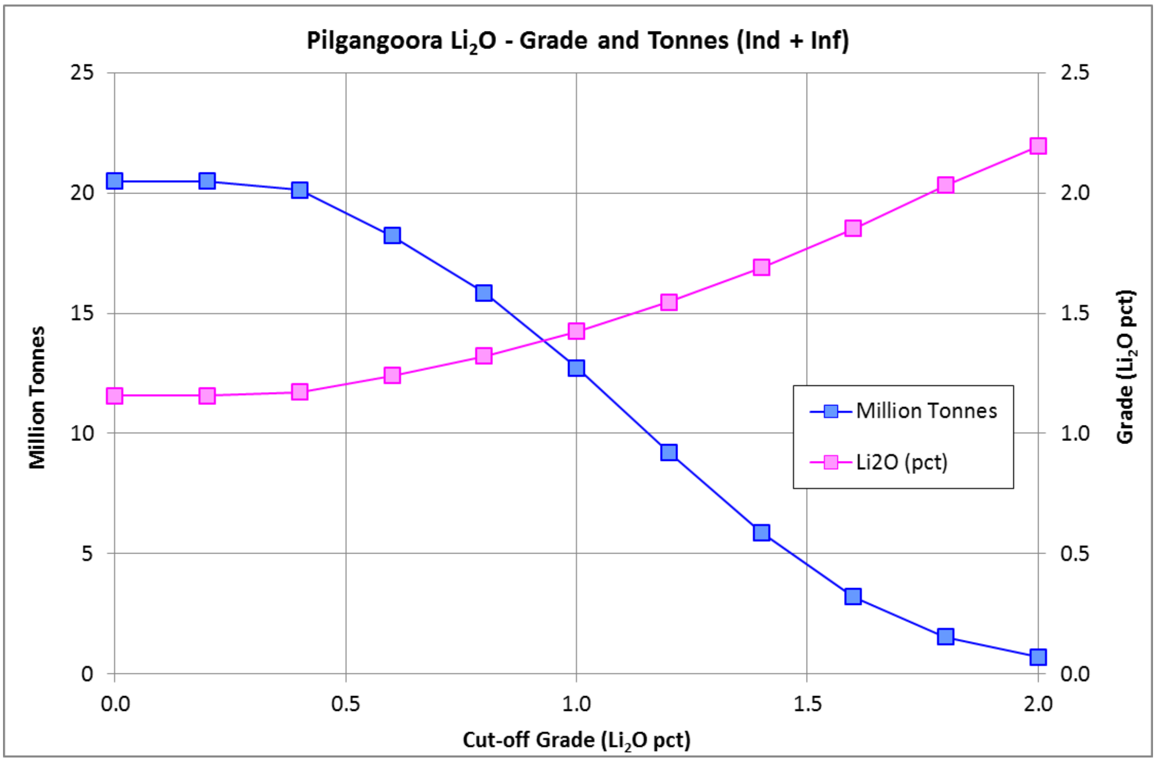

Figure 1 – Grade vs. Tonnage curves for the total lithium resource.

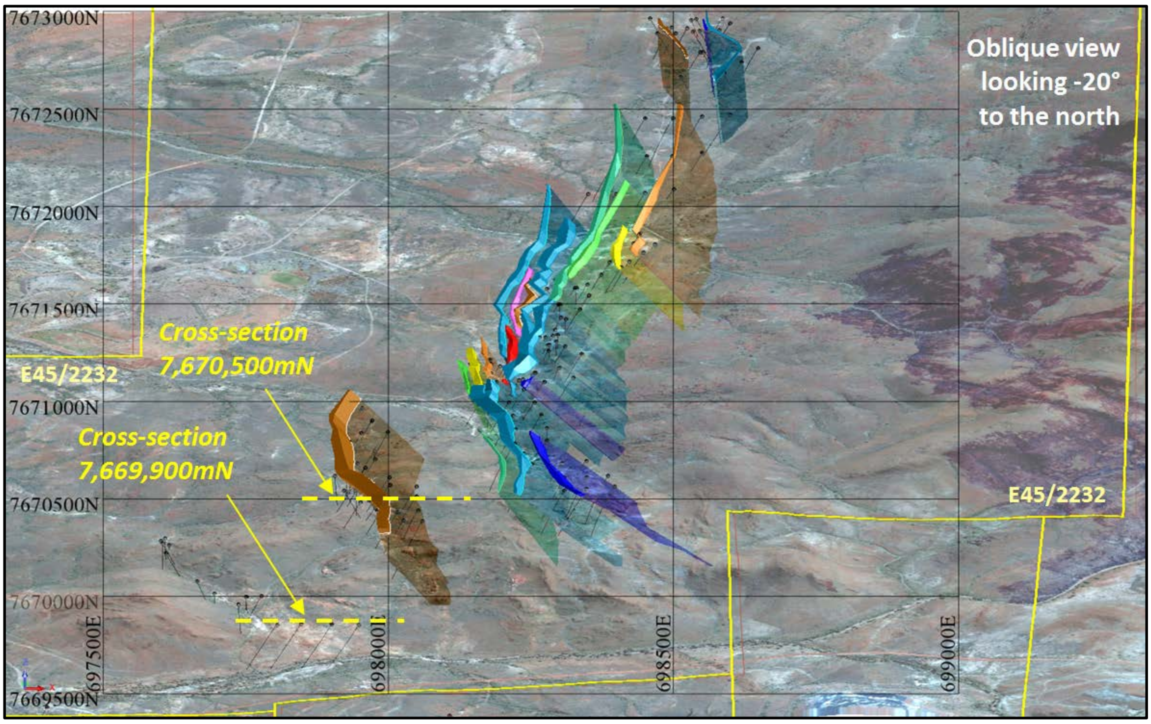

Figure 2 – Snapshot of the Central lithium domains and South western pegmatite (See figure 6 -cross-section 7670500mN) and visible pegmatite outcrops south of the existing resource blocks (See figure 7-cross-section 7669900mN).

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).

Recent Results

A single line of drilling has been completed in the Priority 3 Area outside of the resource area, with all four holes on 7660990mN intersecting pegmatite some 500m south of the South West pegmatite (See figures 2 and 3). Results here were exceptional with widths in excess of 20m. This pegmatite is open north and south of drill section 7660990mn with highlights from this drilling including *(See ASX Release ''Outstanding New Drill Results Pilgangoora', 30/4/2015);*

- ***35m @ 1.60% Li_2O and 102ppm Ta_2O_5*** *from 0m (PLS078) including:*
  4m @ 2.02% Li_2O and 180ppm Ta_2O_5 *from 10m;*
- ***21m @ 1.69% Li_2O and 78ppm Ta_2O_5*** *from 29m (PLS079); including:*
  5m @ 2.06% Li_2O and 68ppm Ta_2O_5 *from 29m;*
- ***9m @ 1.40% Li_2O and 79ppm Ta_2O_5*** *from 3m (PLS080); and*
  24m @ 1.35% Li_2O and 137ppm Ta_2O_5 *from 27m; including:*
  4m @ 2.11% Li_2O and 135ppm Ta_2O_5 *from 27m.*

Updated 2015 Exploration Target

Due to the current estimation of the Mineral Resource being in excess of 23 million tonnes based on the RC drilling completed to date, Pilbara Minerals has updated its **Exploration Target**[1] for the Pilgangoora Project to **50-60 million tonnes @ 175-225ppm Ta_2O_5 and 1.2-1.5% Li_2O** (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.

Figure 3 below illustrates the expected southern extensions of the known resource area.

Table 2 – Pilgangoora Tantalum-Lithium Exploration Target[1] on E45/2232 and M45/333

Exploration Target[1]	Tonnes (Mt)	Grade Li_2O %	Grade Ta_2O_5 ppm
Northern Area	20-25	1.2 - 1.5	200 - 250
Central & Southern Area	30-35	1.2 - 1.5	150 - 200
TOTAL	**50-60**	**1.2 - 1.5**	**175 - 225**

Exploration Target[1]: 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.

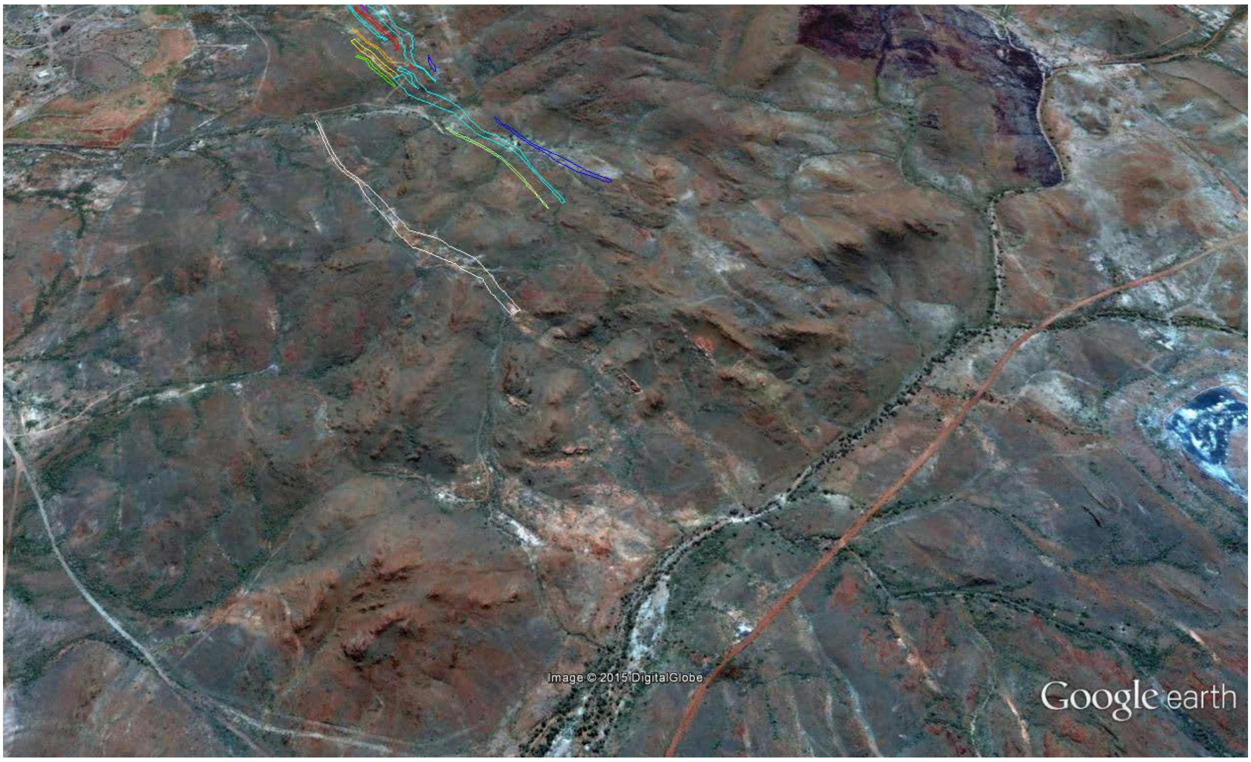

Figure 3 – Snapshot of the Central lithium domains (Light Blue) and South western pegmatite (White) and visible pegmatite outcrops south of the existing resource blocks.

<u>Summary and Management Comment</u>

Pilbara Minerals' Executive Director, Neil Biddle, said the Pilgangoora Project was continuing to grow in size, quality and significance with each round of drilling.

"This interim upgrade builds on the March resource update and, importantly, delivers a significant increment to the high-grade lithium resource," he said.

"Our latest work has also clearly demonstrated the broader potential of this deposit, with the Company announcing a 50-60Mt Exploration Target which gives investors a good indication of its potential as one of the world's largest and highest grade hard rock lithium deposits.

"Coming hard on the heels of the $6 million capital raising announced yesterday, this latest resource upgrade shows that we are well on track towards realising our strategy of building a long-life strategic metals business at the Pilgangoora Project – supported in the short term by production and cash flow from the Tabba Tabba Project," Mr Biddle said.

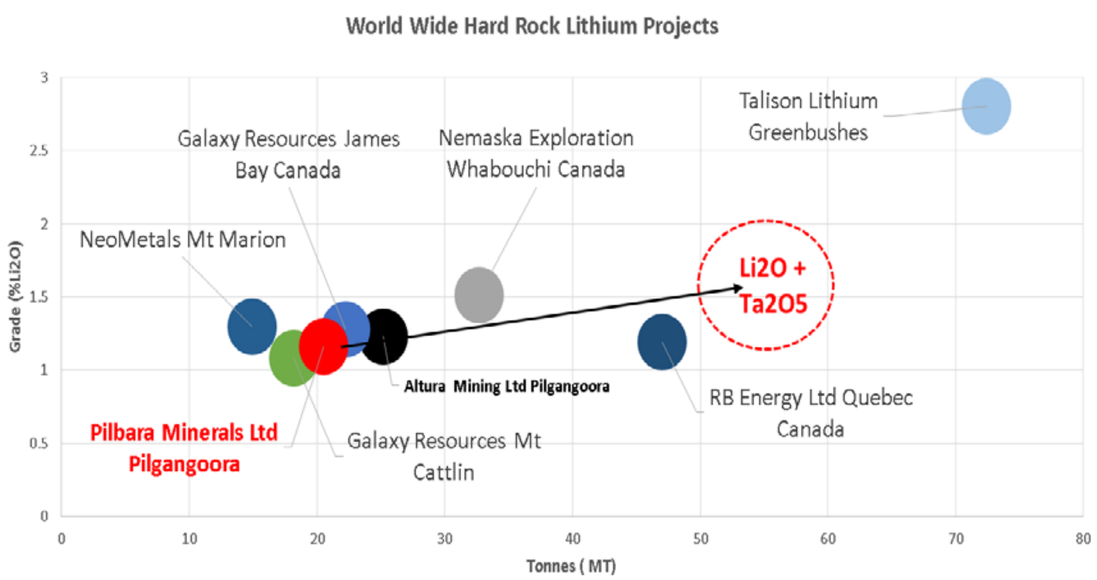

Figure 4 – Resource comparisons with other substantial global lithium deposits (from company publications)

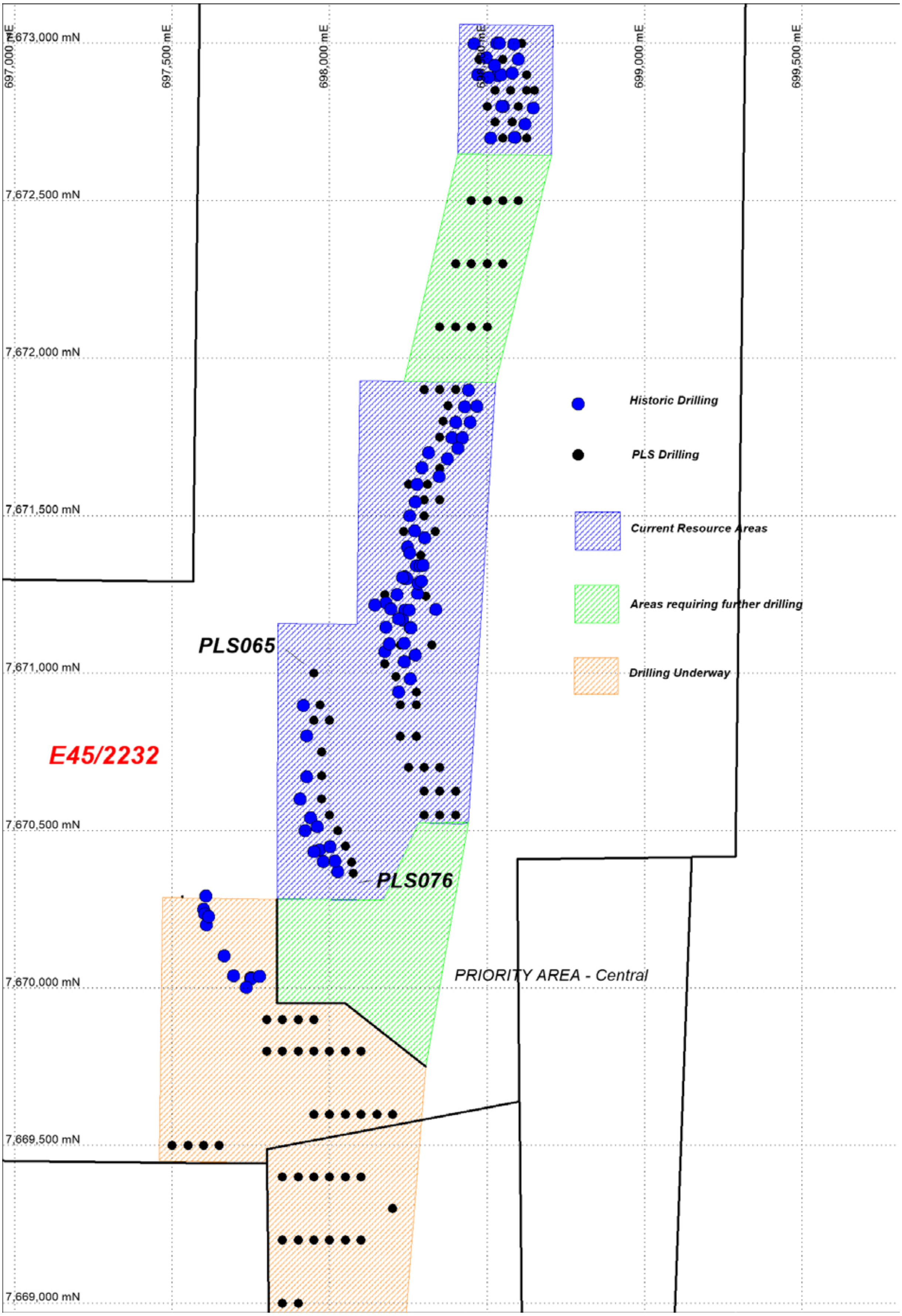

Figure 5 – Pilgangoora RC collar locations within Exploration Licence E45/2232, at a scale of 1:15000.

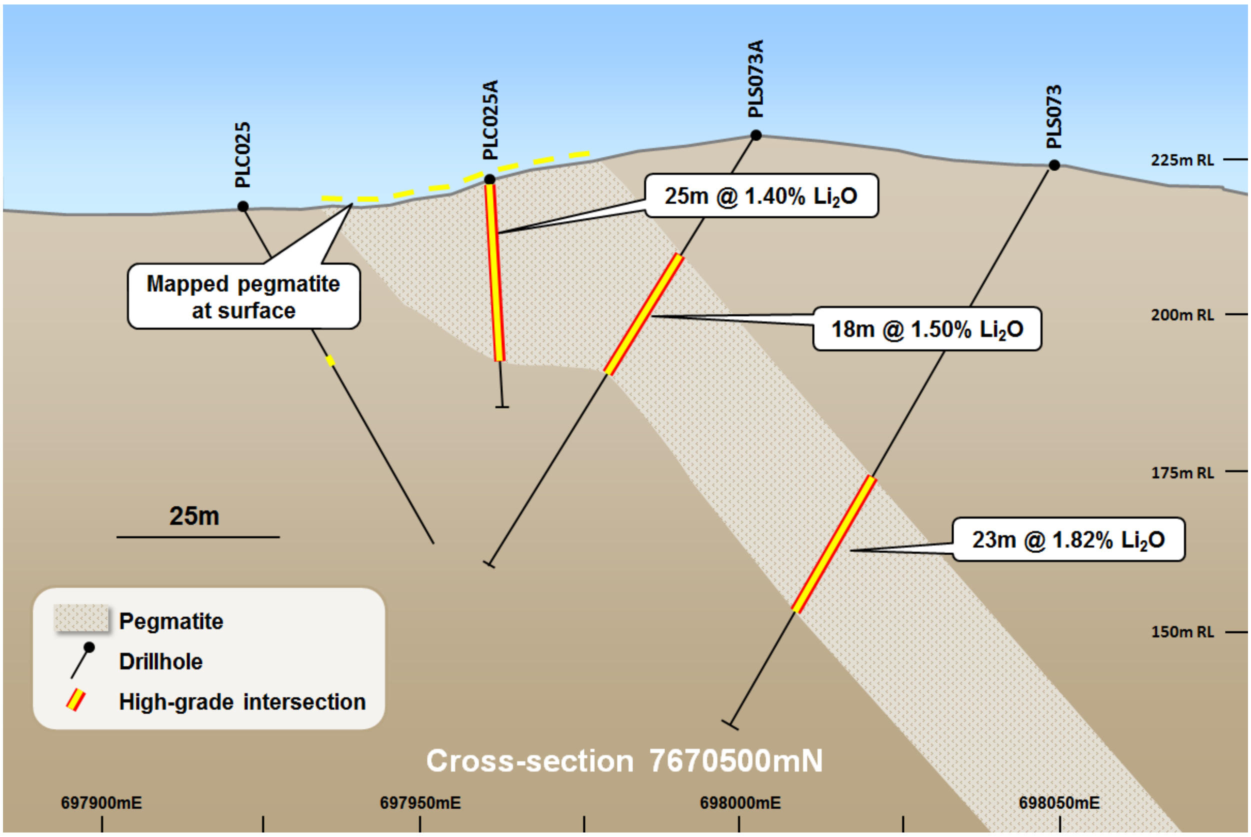

Figure 6 – Geology cross-section 7,670,500mN

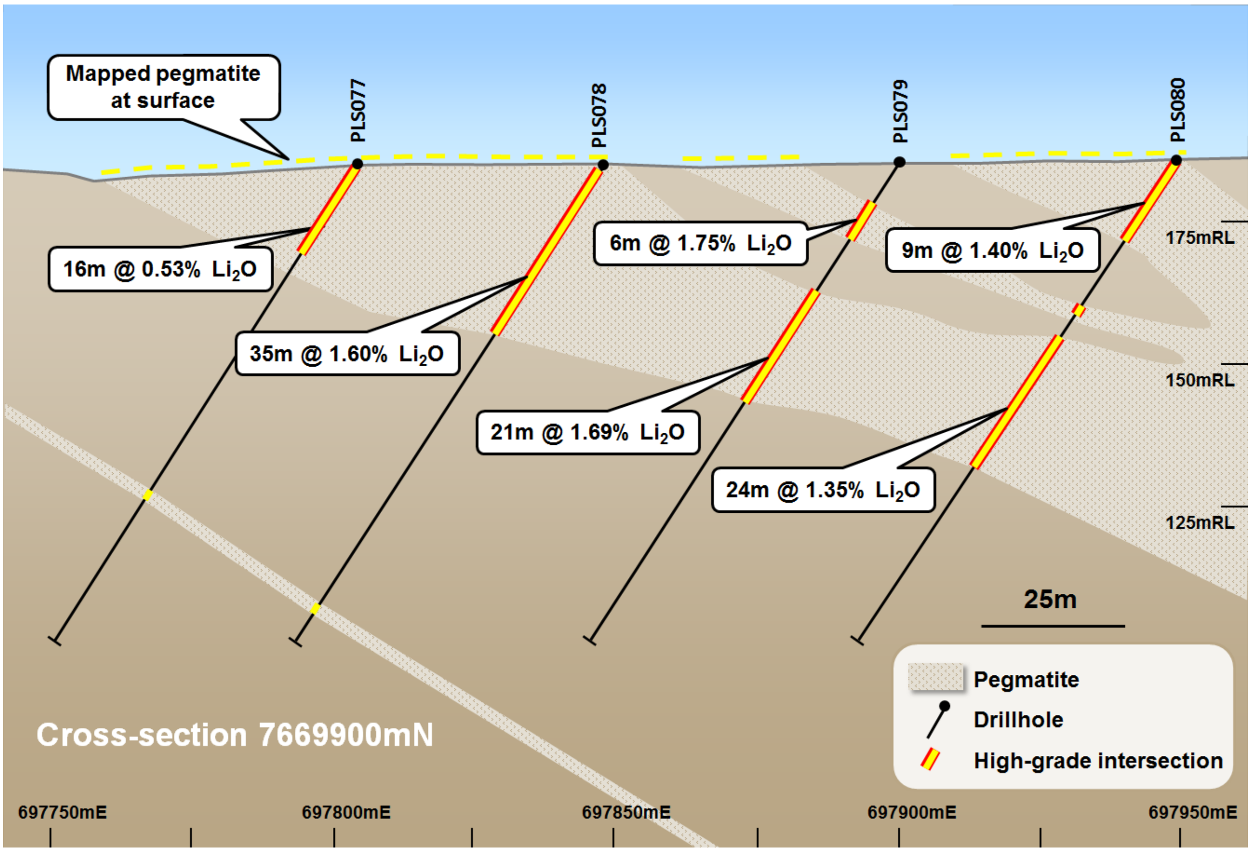

Figure 7 – Geology cross-section 7,669,900mN

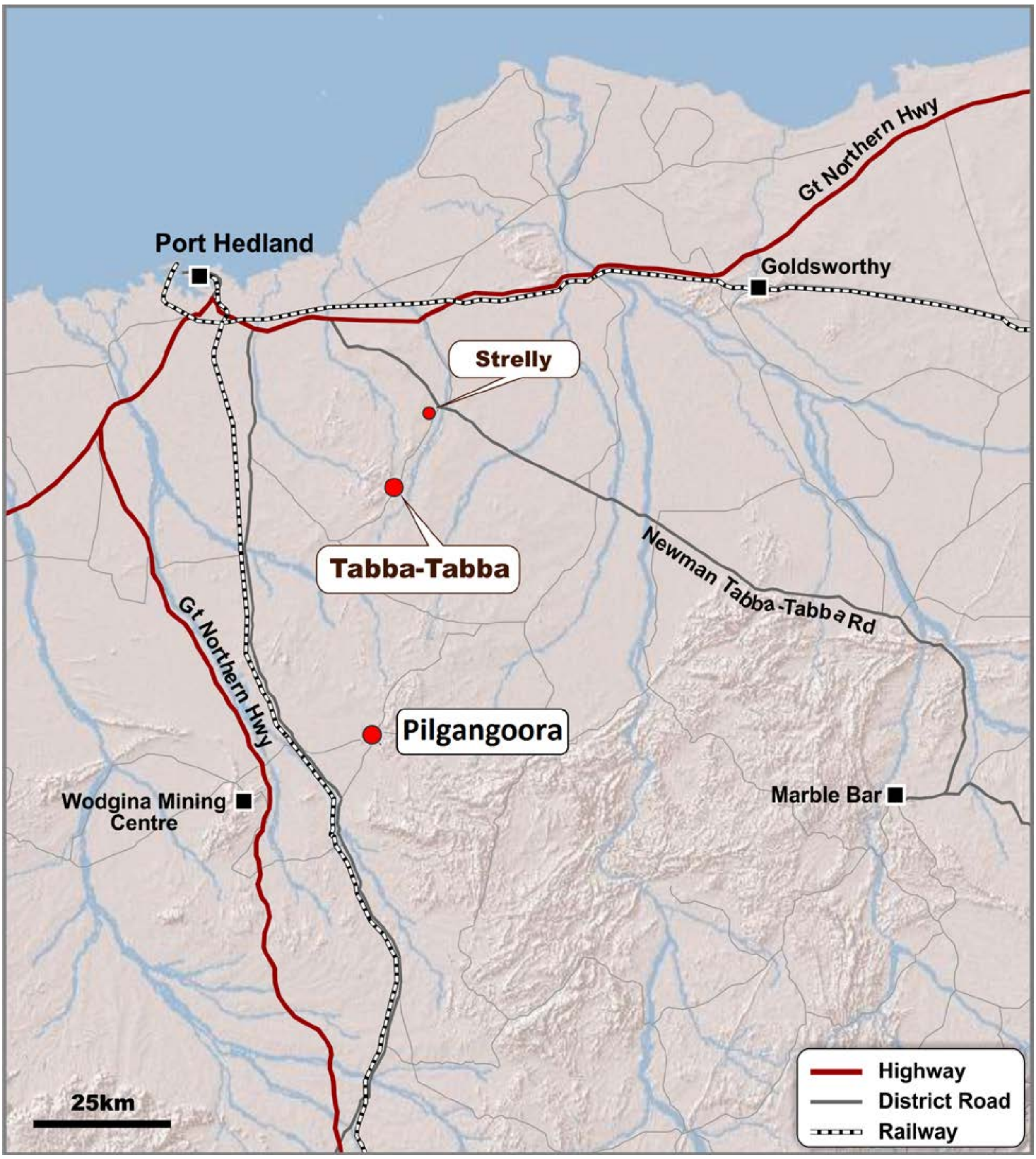

Figure 8 – Location Plan Pilgangoora Project

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 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).

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 2193m.

Sampling and sub-sampling techniques

Sample information used in resource estimation was derived exclusively from RC drilling. The drill samples have been geologically logged and sub-sampled for lab analysis.

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 Ta_2O_5 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 and Li_2O using GEOVIA Surpac™ software. Note that there were insufficient samples analysed to allow populating of Li_2O into 3 of the 18 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 800ppm and 1250ppm for Ta_2O_5 were applied to 3 of the 18 domains prior to estimation. Outlier analysis identified that a top-cut of 3.5% was required for Li_2O for 4 of the 17 domains estimated.

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_2O_5 ppm	Li_2O pct[1]
PLC001	RC	698458	7672998	188	-60	94	45	*Not within resource zone*				
PLC002	RC	698471	7672900	197	-60	78	59	20	43	13	239	
PLC004	RC	698512	7672699	188	-60	82	30	*Not within resource zone*				
PLC005	RC	698531	7673000	185	-70	94	35	*Not within resource zone*				
PLC005A	RC	698540	7673000	185	-60	96	60	22	43	12	288	
PLC006	RC	698534	7672896	201	-60	98	70	*Not within resource zone*				
PLC006A	RC	698545	7672900	201	-60	98	50	*Not within resource zone*				
PLC007	RC	698551	7672800	197	-60	95	52	*Not within resource zone*				
PLC007A	RC	698546	7672800	196	-60	274	55	20	43	9	279	
PLC008	RC	698588	7672702	194	-60	276	45	22	0	20	304	
PLC008A	RC	698587	7672701	194	-60	94	30	22	0	8	327	
PLC013	RC	698315	7671700	187	-60	90	121	12	58	58	202	
PLC013A	RC	698293	7671652	189	-60	96	76	12	43	25	194	
PLC014	RC	698277	7671600	192	-60	96	80	12	31	29	233	1.38[2]
PLC014A	RC	698273	7671544	192	-70	100	64	12	23	25	224	
PLC015	RC	698254	7671500	190	-60	90	85	10	15	7	206	
PLC016	RC	698247	7671400	190	-60	72	60	12	0	2	459	
								10	15	2	99	
								9	40	3	134	
PLC016A	RC	698275	7671342	196	-60	227	80	12	7	21	212	
								8	46	16	363	
								3	62	16	253	
PLC016B	RC	698254	7671381	191	-60	109	79	12	0	34	294	0.91[2]
								9	54	16	121	0.62[2]
PLC017	RC	698240	7671300	193	-70	88	50	12	0	4	174	
PLC017A	RC	698239	7671305	193	-60	50	88	8	40	45	318	1.42
PLC017B	RC	698246	7671300	194	-60	88	80	12	0	20	227	
PLC018	RC	698238	7671200	193	-60	84	50	8	41	8	463	
PLC018A	RC	698231	7671169	193	-60	140	60	12	0	25	259	
								8	27	6	362	
PLC019	RC	698236	7671095	208	-60	90	52	12	21	28	219	0.82
PLC019A	RC	698190	7671093	203	-60	266	64	3	3	9	174	
								6	27	15	197	
								5	54	6	197	
PLC021	RC	697916	7670899	191	-60	96	50	*Not within resource zone*				
PLC022	RC	697927	7670801	195	-88	330	55	*Not within resource zone*				
PLC023	RC	697927	7670670	200	-90	90	60	1	0	6	267	
PLC024	RC	697906	7670600	207	-85	84	56	*Not within resource zone*				
PLC024A	RC	697939	7670540	218	-60	0	30	1	0	21	191	
PLC025	RC	697922	7670500	216	-60	96	60	*Not within resource zone*				
PLC025A	RC	697961	7670512	220	-80	20	34	1	0	28	174	1.27
PLC026	RC	697980	7670401	215	-60	96	124	1	43	81	118	
PLC026A	RC	697967	7670438	218	-60	80	60	*Not within resource zone*				
PLC032	RC	698026	7670370	208	-60	260	70	1	29	326	132	

HoleID	Hole Type	MGA Easting	MGA Northing	RL	Dip	MGA Azimuth	Hole Depth	Domain	Depth From	Interval Length	Ta_2O_5 ppm	Li_2O pct[1]
PLC033	RC	698016	7670403	211	-60	268	80	1	18	10	203	
PLC034	RC	698001	7670448	220	-60	274	80	1	0	24	133	
PLC035	RC	697951	7670433	219	-60	280	60	*Not within resource zone*				
PLC036	RC	698179	7671223	189	-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	193	-60	110	63	6	20	43	192	
PLC038	RC	698175	7671068	200	-60	264	80	3	0	22	158	
								5	37	8	209	
PLC039	RC	698179	7671145	200	-70	280	77	7	0	9	158	
								6	24	14	266	
								5	51	11	100	
PLC040	RC	698195	7671204	192	-60	265	87	7	13	6	152	
								6	36	17	267	
								5	66	8	205	
PLC041	RC	698220	7671173	193	-61	277	93	8	4	4	250	
								7	36	4	115	
								6	60	14	200	
								5	80	7	212	
PLC042	RC	698214	7671249	190	-60	270	99	3	6	4	430	0.48[2]
								7	43	5	159	
								6	62	10	261	
								5	88	5	232	
PLC043	RC	698373	7671681	190	-60	275	117	14	35	5	210	
								13	43	3	248	
								12	65	9	190	
								9	91	2	152	
								3	102	9	296	
PLC044	RC	698348	7671625	191	-60	264	105	13	28	11	179	
								12	52	12	266	
								10	67	3	208	
								9	76	3	159	
								3	88	13	426	0.40[2]
PLC045	RC	698280	7671253	204	-60	233	81	12	20	20	242	1.31
								8	56	7	297	1.81
								3	68	4	233	0.10
PLC046	RC	698281	7671285	203	-60	277	87	12	19	19	222	1.56
								8	53	8	298	1.70
								3	69	7	200	0.65
PLC047	RC	698288	7671341	199	-60	269	93	12	12	21	211	1.32
								8	57	10	412	0.86
								3	68	11	342	1.57
PLC048	RC	698303	7671429	202	-59	239	81	12	27	29	292	1.53
								9	67	1	95	0.91
PLC049	RC	698270	7671452	195	-71	263	87	12	0	15	234	0.96
								10	33	1	109	0.25
								9	40	2	174	1.39
								3	60	11	338	1.14

HoleID	Hole Type	MGA Easting	MGA Northing	RL	Dip	MGA Azimuth	Hole Depth	Domain	Depth From	Interval Length	Ta_2O_5 ppm	Li_2O pct[1]
PLC050	RC	698256	7671143	201	-61	266	123	12	15	17	407	1.82
								8	34	2	304	0.17
								3	51	3	147	0.23
								7	75	6	204	0.96
								6	92	24	206	1.49
PLC051	RC	698273	7671058	216	-60	273	135	11	20	8	211	1.15
								12	40	1	269	2.23
								3	69	36	173	1.34
								4	113	5	143	0.86
PLC052	RC	698237	7671036	210	-60	266	93	12	13	2	197	1.70
								3	40	37	267	1.68
								4	80	4	179	1.24
PLC053	RC	698256	7670982	205	-60	284	125	3	40	30	230	2.00[2]
								4	100	3	150	
PLC054	RC	698219	7670940	196	-59	273	75	3	5	27	203	
								4	67	2	93	
PLC055	RC	698339	7671202	216	-59	262	141	12	64	21	291	
								8	99	6	238	
								3	123	4	343	0.77[2]
PLC056	RC	698252	7671200	197	-59	269	129	12	0	12	225	
								8	21	9	245	
								3	38	10	279	
								7	75	5	187	
								6	102	17	214	
PLC057	RC	698496	7672954	187	-60	273	69	20	16	32	183	1.22
PLC058	RC	698585	7672997	189	-60	267	51	*Not within resource zone*				
PLC059	RC	698599	7672949	196	-60	272	93	22	67	6	352	1.35
								21	78	5	417	0.95
PLC060	RC	698580	7672906	200	-60	265	57	22	19	5	328	0.86
								21	33	5	515	1.49
PLC061	RC	698504	7672891	200	-60	270	45	20	19	7	180	1.33
PLC062	RC	698524	7672930	195	-61	265	93	20	74	16	208	0.92
PLC063	RC	698648	7672795	207	-59	273	81	22	53	6	432	1.51
PLC064	RC	698619	7672743	199	-60	277	57	22	32	7	261	0.98
PLC065	RC	698297	7671343	199	-89	49	141	12	25	37	220	
								8	98	12	327	0.69[2]
								3	120	5	93	
PLC066	RC	698282	7671285	203	-89	108	117	12	23	30	278	0.65[2]
								8	90	6	365	0.80[2]
								3	101	9	102	
PLC067	RC	698257	7671144	202	-77	276	147	12	14	16	248	
								8	38	8	233	
								3	65	3	313	
								7	93	11	201	
								6	125	18	206	
PLC068	RC	698232	7671303	192	-60	270	81	8	5	5	158	1.13
								3	20	9	351	0.94
								7	65	2	210	1.18

HoleID	Hole Type	MGA Easting	MGA Northing	RL	Dip	MGA Azimuth	Hole Depth	Domain	Depth From	Interval Length	Ta_2O_5 ppm	Li_2O pct[1]
PLC069	RC	698387	7671748	188	-60	270	89	14	29	7	201	0.43
								13	45	3	223	0.50
								12	70	13	312	1.03
PLC070	RC	698422	7671748	190	-60	270	149	15	12	5	318	0.47
								14	63	5	200	1.00
								13	68	5	154	0.88
								12	98	13	235	0.77
								3	135	8	248	0.56
PLC071	RC	698400	7671796	188	-60	270	95	14	30	6	400	0.67
								13	43	7	286	0.18
								12	76	14	213	0.71[2]
PLC072	RC	698446	7671797	189	-60	270	161	16	7	2	235	
								15	31	3	413	0.07
								14	68	3	267	
								13	76	6	255	0.64
								12	108	15	217	0.68[2]
								3	140	7	216	0.55
PLC073	RC	698429	7671845	188	-60	270	119	15	14	3	450	0.06
								14	49	3	280	0.81
								13	60	4	245	0.53
								12	84	15	215	0.59
PLC074	RC	698467	7671847	186	-60	270	163	16	11	2	490	0.40
								15	45	3	417	0.61
								14	73	3	330	0.64
								13	89	7	233	0.78
								12	111	17	228	0.54[2]
								3	145	3	197	0.66
PLC075	RC	698440	7671899	184	-60	270	155	16	2	2	345	
								15	16	2	785	
								14	49	2	205	0.04
								13	54	5	266	0.12
								12	84	14	182	0.74
								3	122	3	427	0.30
PLC076	RC	698407	7671714	191	-60	270	161	15	0	2	145	
								14	55	6	218	0.85
								13	61	5	172	0.92
								12	93	12	228	0.80
								3	121	11	234	0.61[2]
PLS017	RC	698450	7672500	183	-59	262	66	13	44	6	194	0.51
PLS018	RC	698499	7672499	183	-61	262	100	*Not within resource zone*				
PLS019	RC	698549	7672497	188	-60	260	100	16	38	8	409	1.63
PLS020	RC	698599	7672501	189	-60	265	102	16	89	8	345	1.45
PLS021	RC	698403	7672300	185	-60	265	96	*Not within resource zone*				
PLS022	RC	698453	7672298	186	-59	264	85	13	40	3	393	0.13
PLS023	RC	698498	7672301	185	-59	261	102	13	79	14	212	0.94
PLS024	RC	698550	7672305	189	-59	254	63	16	41	4	278	0.43
PLS025	RC	698350	7672103	186	-60	265	102	3	58	1	500	0.04
PLS026	RC	698399	7672102	187	-59	262	100	13	10	9	376	0.62

HoleID	Hole Type	MGA Easting	MGA Northing	RL	Dip	MGA Azimuth	Hole Depth	Domain	Depth From	Interval Length	Ta_2O_5 ppm	Li_2O pct[1]
PLS027	RC	698450	7672102	189	-59	264	96	14	28	2	115	0.29
								13	44	20	222	1.22
PLS028	RC	698500	7672103	195	-59	268	102	16	22	2	210	0.60
								14	76	5	244	0.90
								13	88	11	207	0.83
PLS042	RC	698233	7671447	189	-60	270	48	10	1	1	160	0.14
								9	6	1	160	0.07
								3	18	3	200	0.89
PLS043	RC	698335	7671447	209	-60	270	126	12	47	32	217	1.52
								9	90	3	203	1.83
								3	111	4	340	1.40
PLS044	RC	698291	7671380	195	-60	268	90	12	14	25	203	1.30
								9	45	3	163	1.00
								8	61	4	365	1.61
								3	68	4	393	0.92
PLS045	RC	698178	7671248	188	-60	269	60	7	6	4	95	1.73
								6	25	10	214	1.23
PLS046A	RC	698310	7671250	212	-60	267	108	12	34	24	193	1.63
								8	84	7	280	1.26
								3	96	3	247	1.20
PLS047	RC	698323	7671089	212	-60	275	112	11	48	1	270	0.82
								12	67	7	266	1.58
								8	81	1	200	0.60
								3	105	1	170	1.09
PLS048	RC	698229	7671087	209	-60	274	110	8	17	1	310	0.25
								3	33	8	181	2.09
								6	76	15	303	1.33
PLS049	RC	698174	7671030	199	-90	343	60	3	0	22	190	1.54
								4	36	6	380	1.62
PLS050	RC	698211	7670992	201	-60	270	80	3	16	26	187	1.85
PLS051	RC	698268	7670941	196	-60	260	72	3	47	20	214	1.94
PLS052	RC	698223	7670896	185	-60	270	50	3	0	13	209	1.45
PLS053	RC	698278	7670901	187	-90	0	96	3	69	20	124	1.07
PLS054	RC	698221	7670800	194	-60	270	100	3	8	4	156	0.68
PLS055	RC	698278	7670799	201	-60	270	102	2	9	3	210	0.79
								3	50	19	179	1.03
								4	81	14	112	0.76
PLS056	RC	698251	7670700	192	-60	263	96	3	0	9	39	0.09
								4	38	4	125	0.68
								2	16	5	136	0.55
								3	39	7	173	0.98
								4	85	2	155	0.20
PLS057	RC	698304	7670699	195	-60	265	96	2	16	21	136	0.55
								3	39	46	173	0.98
								4	85	87	155	0.20
PLS058	RC	698347	7670701	199	-59	265	100	2	34	1	350	1.35
								3	54	8	176	0.94
PLS059	RC	698308	7670625	195	-64	270	97	2	0	10	259	0.88

HoleID	Hole Type	MGA Easting	MGA Northing	RL	Dip	MGA Azimuth	Hole Depth	Domain	Depth From	Interval Length	Ta_2O_5 ppm	Li_2O pct[1]
								3	46	4	80	0.45
								4	91	4	103	0.48
PLS060	RC	698348	7670622	196	-61	266	100	2	17	9	201	1.41
								3	81	8	109	1.07
PLS061	RC	698385	7670626	197	-60	260	100	2	45	7	204	1.16
PLS062	RC	698308	7670547	198	-60	264	100	3	41	4	198	0.44
								4	92	2	110	0.43
PLS063	RC	698348	7670550	201	-60	262	100	2	11	5	190	0.74
								3	66	9	144	1.77
PLS064	RC	698396	7670551	206	-60	260	100	2	37	4	303	0.88
PLS065	RC	697954	7671002	188	-60	273	100	1	7	4	235	1.16
PLS066	RC	697971	7670900	201	-60	263	100	1	39	6	302	0.31
PLS067	RC	697952	7670849	197	-66	260	73	1	21	6	263	1.09
PLS068	RC	697999	7670852	197	-62	264	100	1	56	5	290	0.75
PLS069	RC	697976	7670750	199	-62	265	100	1	28	13	189	1.21
PLS070	RC	697976	7670677	210	-59	269	100	1	32	11	181	0.87
PLS071	RC	697959	7670600	222	-61	268	100	1	22	18	231	0.34
PLS072	RC	698002	7670548	224	-59	265	79	1	27	26	197	1.52
PLS073	RC	698050	7670500	224	-59	272	103	1	59	24	131	1.79
PLS073A	RC	698002	7670497	228	-59	267	80	1	22	22	200	1.40
PLS074	RC	698049	7670450	224	-60	258	73	1	49	19	110	1.08
PLS075	RC	698051	7670401	215	-62	260	100	1	57	29	108	1.42
PLS076	RC	698060	7670363	210	-62	261	120	1	54	28	84	1.00
PLS077	RC	697804	7669901	184	-58	265	100	*Not within resource zone*				
PLS078	RC	697847	7669901	185	-58	269	100	*Not within resource zone*				
PLS079	RC	697900	7669898	185	-60	265	100	*Not within resource zone*				
PLS080	RC	697948	7669897	185	-60	273	100	*Not within resource zone*				
PLS113	RC	698223	7671152	194	-60	262	99	7	27	7	170	1.85
								6	59	24	154	1.45
PLS114	RC	698299	7671155	207	-70	269	102	12	28	16	272	1.21
								8	72	3	300	1.30
								3	93	2	240	1.43
PLS117	RC	698310	7671417	202	-90	0	90	12	29	27	339	1.74
PLS118	RC	698265	7671344	195	-60	266	84	12	4	11	213	0.69
								8	32	7	443	2.38
								3	49	14	232	0.76
PLS119	RC	698294	7671298	203	-90	0	120	12	25	27	204	1.89
								8	90	6	293	1.52
								3	101	7	161	1.29
PLS120	RC	697402	7669493	177	-60	266	100	*Not within resource zone*				
PLS126	RC	698299	7671499	200	-87	289	100	12	25	22	188	1.62
PLS126								10	61	12	277	1.69
PLS126								9	84	2	455	1.44
PLS127	RC	698327	7671600	194	-89	331	110	13	33	11	244	1.50
PLS127								12	70	10	222	1.38
PLS127								10	85	10	281	1.81
PLS127								9	95	9	214	1.61

Notes:

[1] Where Li_2O field is blank, it is because the interval was not sampled and analysed specifically for Li_2O.
[2] When compared to interval reported for Ta_2O_5, the interval length sampled and analysed specifically for Li_2O is a subset of the reported interval. This is the case for 14 of the intervals reported in the table above, including:

HoleID	Domain	Ta_2O_5 interval	Li_2O interval
PLC014	12	29 m	24 m
PLC016B	12	34 m	33 m
PLC016B	9	16 m	14 m
PLC042	3	4 m	1 m
PLC044	3	13 m	5 m
PLC053	3	30 m	21 m
PLC055	3	4 m	2 m
PLC065	8	12 m	1 m
PLC066	12	30 m	4 m
PLC066	8	6 m	4 m
PLC071	12	14 m	13 m
PLC072	12	15 m	14 m
PLC074	12	17 m	14 m
PLC076	3	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.
	• *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 were all sampled every metre within pegmatite 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

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

Criteria	JORC Code explanation	Commentary
		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 drilling was undertaken by Orbit Drilling.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	• Recoveries for the majority of the historical holes are not known, while recoveries for 2012 GAM holes were overwhelmingly logged as "good." • Recoveries for 2014 and 2015 Pilbara holes were virtually all dry and overwhelmingly logged as "good."
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	• Whilst drilling through the pegmatite, rods were flushed with air after each metre drilled (GAM and Pilbara holes). In addition, moist or wet ground conditions resulted in the cyclone being washed out between each sample run. • Loss of fines as dust was reduced by injecting water into the sample pipe before it reached the cyclone. This minimises the possibility of a positive bias whereby fines are lost, and heavier, tantalum bearing material, is retained.
	• *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• No material bias has been identified.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	• 1m composites were laid out in lines of 20 or 30 samples, with cuttings collected and geologically logged for each interval, and stored in 20 compartment plastic rock-chip trays annotated with hole numbers and depth intervals (one compartment per 1m composite). Geological logging information was recorded directly into an Excel spreadsheet using a toughbook laptop computer. • The GAM rock-chip trays were later stored onsite at Wodgina in one

Criteria	JORC Code explanation	Commentary
		of the exploration department sea containers. • The Pilbara rock-chip trays were transported back to Perth and stored at the company office.
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*	• Logging has primarily been quantitative, using RC chips.
	• *The total length and percentage of the relevant intersections logged.*	• The database contains lithological data for all holes in the database.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	• 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.
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	• Talison/GAM/Pilbara samples have field duplicates as well as laboratory splits and repeats.
	• *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 drilling, field duplicates were taken approximately every 20m, and splits were undertaken at the sample prep stage on every other 20m. • Talison/GAM/Pilbara samples have field duplicates as well as 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.

Criteria	JORC Code explanation	Commentary
	• *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 the expected strong linear relationship reflecting the strong repeatability of the analysis process. • The GAM and Pilbara 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 confirmed the approximate width and grade of previous drilling. • No use of twins
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	• An electronic database containing collars, surveys, assays and geology was provided by GAM. • All GAM assays were sourced directly from Wodgina internal laboratory files. • All Pilbara assays were sourced directly from Nagrom as certified laboratory files.
	• *Discuss any adjustment to assay data.*	• Tantalum was reported as Ta_2O_5 %, and converted to ppm for the

Criteria	JORC Code explanation	Commentary
		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 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 March 2015 RC drilling campaign. Measurements were recorded at 10m, 40m, 70m and 100m (or EOH) for each hole.
	• *Specification of the grid system used.*	• The grid used was MGA Zone 50, datum GDA94.
	• *Quality and adequacy of topographic control.*	• The topographic surface used was sourced from open file SRTM data (90m per pixel), and clipped to cover the Pilgangoora area. • Surveyed drillhole collar elevation data was compared to the SRTM data and incorporated into the constructed topographic surface.
Data spacing	• *Data spacing for reporting of Exploration Results.*	• Talison Completed 54 RC drillholes in 2008

Criteria	JORC Code explanation	Commentary
and distribution		• GAM completed 46 between 2010 and 2012 • Pilbara completed 41 in 2014 and 23 in 2015. • Drilling spacings varied between 25m to 50m apart
	• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*	• The continuity of the mineralization can confidently be interpreted from the geology of the pegmatite sheets, which can be mapped on surface as extending over several hundred metres in strike length.
	• *Whether sample compositing has been applied.*	• No compositing was necessary, as all samples were taken at 1m intervals.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	• The mineralisation dips 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

Criteria	JORC Code explanation	Commentary
		laboratory in Kelmscott by Regal Transport courier truck.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• The collar and assay data have been reviewed by compiling a new SQL relational database. This allowed some minor sample numbering discrepancies to be identified and amended. • Drilling locations and survey orientations have been checked visually in 3 dimensions and found to be consistent. • All GAM assays were sourced directly from the laboratory (Wodgina laboratory). However it has not been possible to check these original digital assay files.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites*	• The Pilgangoora resource lays within E45/2232 which is 100% owned by Pilbara Minerals Limited.
	• *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.*	• No known impediments.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Talison completed RC holes in 2008 • GAM completed RC holes between 2010 and 2012.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Pilgangoora pegmatites are part of the later stages of intrusion of Archaean granitic batholiths into Archaean metagabbros and metavolcanics. Tantalum mineralisation occurs in zoned pegmatites that intruded a sheared Archaean metagabbro.

Criteria	JORC Code explanation	Commentary
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes, including easting and northing of the drill hole collar, elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar, dip and azimuth of the hole, down hole length and interception depth plus hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• Refer to Appendix 1 in this announcement.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• 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	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• Downhole lengths are reported in Appendix 1 of this announcement. • It is noted in previous sections that not all samples analysed for Ta_2O_5 have also been analysed for Li_2O. All pegmatite pulps from the 2012 drilling were analysed for Li_2O but only selected pulps from the 2008 and 2010 drilling were. As noted in Appendix 1, there are 14 intervals reported for Ta_2O_5 that were only partial analysed for Li_2O – see Note 2 for Appendix 1.

Criteria	JORC Code explanation	Commentary
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• See Figures 1 to 7
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• Comprehensive reporting of drilling details have been provided in Appendix 1 in this announcement.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• All meaningful & material exploration data has been reported.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Further planned drilling aims to test extensions to the currently modelled pegmatites zones and to infill where required to increase the number of samples analysed for Li_2O in mineralised domains currently with insufficient data to allow for reporting Li_2O where Ta_2O_5 resources have already been reported.

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.
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 2 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 factors affecting continuity both of grade and geology.*	• 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 mineralogical studies completed by GAM (previously Talison) and Pilbara's recent drillholes.

Criteria	JORC Code explanation	Commentary
		• No alternative interpretations have been considered at this stage. • Grade wireframes correlate extremely well with the logged pegmatite veins. • The key factor affecting continuity is the presence of pegmatite.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The modelled mineralized zone has dimensions of 2,700m (north-south), ranging between 50-100m (east-west) in multiple veins and ranging between 20m and 220m RL (AMSL).
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.*	• Grade estimation using Ordinary Kriging (OK) was completed using Geovia Surpac™ software for both Ta_2O_5 and Li_2O. Note that there were insufficient samples analysed to allow populating of Li_2O into 3 of the 18 domains. • Drill spacing typically ranges from 25m to 50m. • Drillhole samples were flagged with wireframed domain codes. Sample data was composited for Ta_2O_5 and Li_2O 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, an upper cut of between 800ppm and 1250ppm for Ta_2O_5 was applied to three of the domains prior to estimation. A top-cut of 3.5% was required for Li_2O for 4 domains. • 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 samples used variography of geologically similar, adjacent domains. • Block model was constructed with parent blocks of 5m (E) by 25m

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Criteria	JORC Code explanation	Commentary
	• *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.*	(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.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnes have been estimated on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• Grade envelopes have been wireframed to an approximate 100ppm Ta_2O_5 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

Criteria	JORC Code explanation	Commentary
		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 Ta_2O_5 and Li_2O, the potential mining method is considered to be open pit mining.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• 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.
Environmen-tal factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with*	• Appropriate environmental studies and sterilisation drilling would be completed prior to determination of the location of any potential waste rock dump (WRD) facility.

Criteria	JORC Code explanation	Commentary
	an explanation of the environmental assumptions made.	
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. • The bulk density factors applied to the current resource estimate are 2.53 g/cm^3 in the (minimal) oxide/transition zone, and 2.65 g/cm^3 in fresh material. • Further bulk density testwork is planned for core samples expected to be drilled this year.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The Mineral Resource has been classified on the basis of confidence in the geological model, continuity of mineralized zones, drilling density, confidence in the underlying database and the available bulk density information. • All factors considered; the resource estimate has in part been assigned to Indicated resource with the remainder to the Inferred category.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• Whilst Mr. Barnes (Competent Person) is considered Independent of PLS, no third party review has been conducted.
Discussion of	• *Where appropriate a statement of the relative accuracy and*	• The relative accuracy of the Mineral Resource estimate is reflected in

Criteria	JORC Code explanation	Commentary
relative accuracy/ confidence	*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.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code. • The statement relates to global estimates of tonnes and grade.