ASX ANNOUNCEMENT **15th April 2015**

NEW THICK HIGH-GRADE LITHIUM AND TANTALUM HITS POINT TO FURTHER RESOURCE GROWTH AT PILGANGOORA

RECENTLY RE-COMMENCED RESOURCE IN-FILL AND EXTENSIONAL DRILLING DELIVERS EXCELLENT INITIAL RESULTS

HIGHLIGHTS:

- **Further broad intersections of high-grade lithium and tantalum** mineralisation in pegmatites returned from the first six Reverse Circulation (RC) drill holes completed since resumption of drilling in March 2015 at Pilbara's 100%-owned **Pilgangoora Lithium-Tantalum Project**, in WA's Pilbara region.

- **Outstanding results confirm the continuity and robustness of high-grade lithium and tantalum mineralisation**, with latest results from within the existing Priority 1 resource area including:

    - ***11m @ 1.58% Li_2O and 210ppm Ta_2O_5*** *from 22m (PLS036); and*
      6m @ 1.66% Li_2O and 197ppm Ta_2O_5 *from 48m;*
    - ***9m @ 1.72% Li_2O and 204ppm Ta_2O_5*** *from 43m (PLS038);and*
      7m @ 1.41% Li_2O and 221ppm Ta_2O_5 *from64m; and*
      6m@ 2.21% Li_2O and 315ppm Ta_2O_5 *from 82m;*
    - ***11m @ 1.79% Li_2O and 214ppm Ta_2O_5*** *from 26m (PLS0126); and*
      6m @ 1.71% Li_2O and 178ppm Ta_2O_5 *from 47m; and*
      8m @ 2.16% Li_2O and 334ppm Ta_2O_5 *from 61m;*
    - ***9m @ 1.79% Li_2O and 240ppm Ta_2O_5*** *from 33m (PLS0127); and*
      7m @ 1.1.83% Li_2O and 231ppm Ta_2O_5 *from 70m; and*
      17m@ 1.84% Li_2O and 266ppm Ta_2O_5 *from 85m*

- **23 holes for 2184m now completed, results are from within the Priority 1 Resource Area** at Pilgangoora with drilling set to resume in late April 2015 to complete the planned 10,000m program.

- **Results are pending from the Priority 2 and 3 Areas**, outside of the current resource area, where **significant widths of pegmatite** have been intersected. Historical drilling in the Priority 2 Area returned **lithium grades of +1% Li_2O**.

Australian strategic metals company Pilbara Minerals Ltd (ASX: PLS) is pleased to advise that recent successful drilling has highlighted the potential for further resource growth at its flagship **Pilgangoora Tantalum-Lithium Project**, located near Port Hedland in WA.

A program of resource in-fill and extensional drilling resumed at Pilgangoora in early March, with a total of 23 Reverse Circulation drill holes for 2,184m completed prior to the Easter break. Drilling will resume in late April 2015 to complete the balance of the 10,000m program.

Drilling in the **Priority 1 Area** (see Figure 1 following) has now been completed with assay results for the first six RC holes in the Priority 1 Area confirming the continuity and robustness of the high-grade lithium and tantalum mineralisation.

Pegmatites containing high grades of lithium and tantalum have been intersected along the northern line 7671500mN to 7671600mN in the Priority 1 Area, with significant high-grade intersections **grading more than 1.5% Li_2O and more than 300ppm Ta_2O_5** returned from this area, including **6m @ 2.21% Li_2O and 315ppm Ta_2O_5** from 82m (PLS038) and **8m @ 2.16% Li_2O and 334ppm Ta_2O_5** from 62m (PLS0126).

Logging of the holes from the Priority 2 and 3 Areas indicates that significant widths of pegmatite have also been intersected in holes PLS070 to PLS076**.** Results for these holes are pending.

Full intersections and assay results are provided in Table 1 (page4 refers).

The new phase of resource in-fill and extensional drilling at Pilgangoora builds on the updated Mineral Resource announced on 9 March 2015. The updated Pilgangoora resource comprises Indicated and Inferred Resources of **21.7Mt @ 0.022% Ta_2O_5 (tantalite)** containing **10.7Mlbs Ta_2O_5** and a Lithium Resource of **16.6Mt @ 1.16% Li_2O** (spodumene) containing **192,000 tonnes of lithium oxide**.

Pilbara's Executive Director, Mr Neil Biddle, said the Company was delighted with the early results from the new phase of resource drilling at Pilgangoora, which was designed to further grow and enhance the resource, both in terms of overall size and grade.

"Pilgangoora is already a globally significant hard rock lithium-tantalum deposit, currently ranking in the 20-30Mt size range," Mr Biddle said. "The new drilling program is already returning thick intersections of high-grade lithium grading 1.5% to 2% Li_2O – well above the average resource grade – from within the Priority 1 Area, which bodes well for a potential grade uplift as part of the next resource update.

"In addition, results are still pending from the Priority 2 and 3 Areas, outside of the current resource envelope, where drilling has intersected thick zones of pegmatite down-hole, confirming our belief that there is excellent potential to further expand the resource," he added.

Pilgangoora Reverse Circulation Program – Detailed Discussion

The Pilgangoora drilling program on Exploration Licences (EL45/2232) re-commenced on 11 March 2015. The drilling to date has in-filled the existing resource zone along the Eastern pegmatite body, as well as testing extensions to the known mineralisation in Priority areas 1 to 3 (see Figure 1).

Results

Significant higher grade zones returning >1.5% Li_2O (see Table 1, highlighted in yellow) have been received from the first six holes within the Priority 1 resource area. Drilling on the northern lines 7671500m N and 7671600mN, holes PLS126 and PLS127 intersected consistent mineralised down-hole widths of **6-8m of + 2% Li_2O.**

Results are pending from the Priority 2 Area, which had previously been drilled on line spacings of 50m, often with only one drill hole per section. Thirteen historical holes were drilled along this pegmatite, but only one drill hole in this area had been assayed for lithium**, returning lithium grades in excess of 1% Li_2O.** Priority 2 Drilling has intersected significant widths of pegmatite in this program.

A single line of drilling has been completed in the Priority 3 exploration area, with all four holes on 766990mN intersecting pegmatite some 500m south of the Priority 2 Area. This zone will require in-fill drilling as part of the next phase of work (see Figure 1).

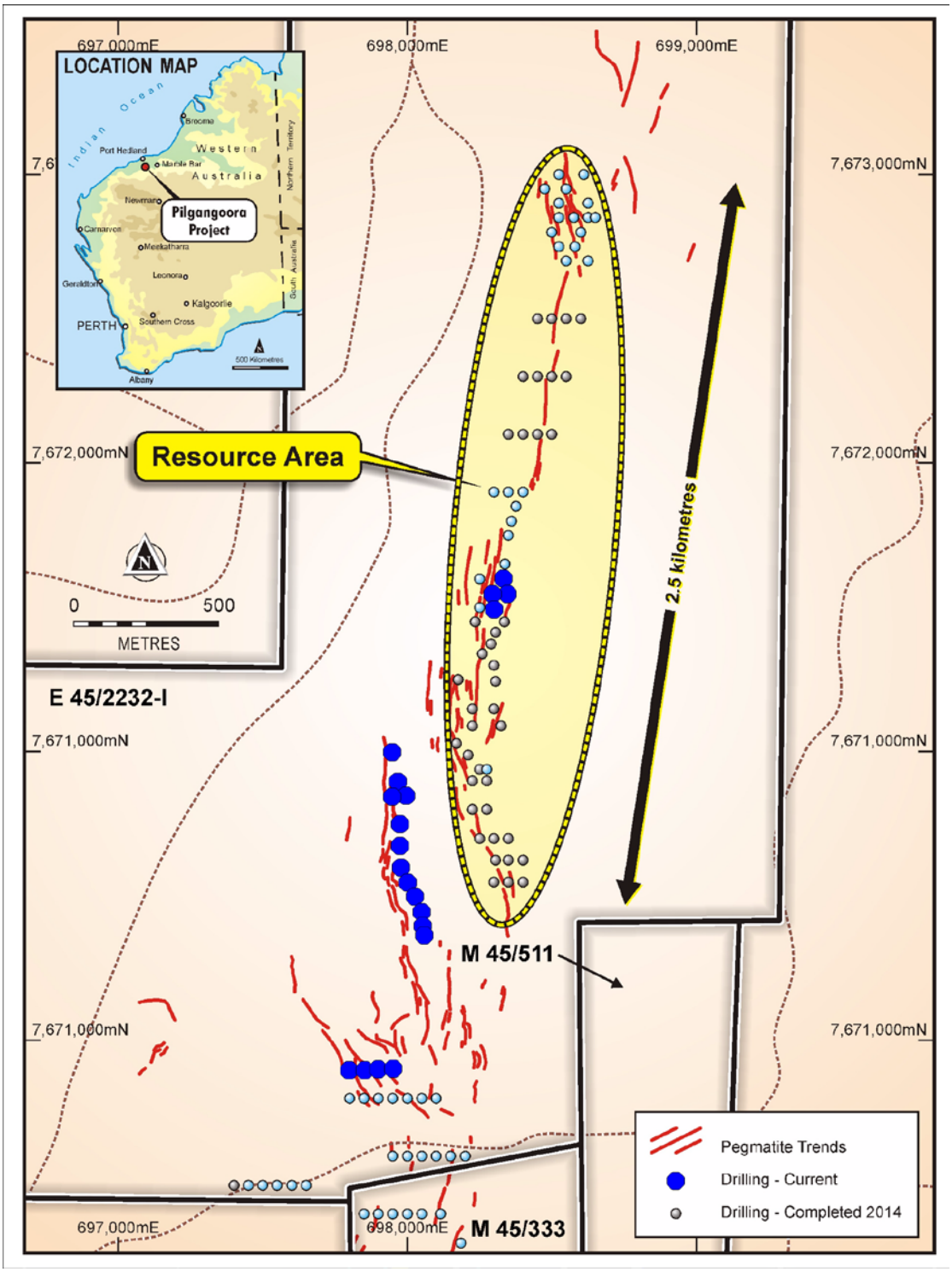

Figure 1 – Pilgangoora RC Collar Locations EL45/2232

Table 1 below lists all recently received assay results from drill holes PLS036 to PLS127

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Table 1: Drilling Intersections (>1% Li_2O)

Hole Id	From (m)	To (m)	Thickness (m)	Li_2O (%)	Ta_2O_5 (ppm)
PLS036	22	33	11	1.58	210
	48	54	6	1.66	197
	84	88	4	1.62	393
PLS038	43	52	9	1.72	204
	64	71	7	1.41	221
	82	88	6	2.21	315
PLS039	1	3	2	1.19	565
	12	13	1	2.26	160
	26	31	5	1.28	208
PLS040	16	18	2	1.32	190
	27	29	2	1.17	225
	36	42	6	1.85	187
	83	85	2	1.50	490
	88	94	6	1.49	225
PLS0126	26	37	11	1.79	214
	47	53	6	1.71	178
	61	69	8	2.16	334
	84	85	1	1.93	530
PLS0127	33	42	9	1.79	240
	70	77	7	1.83	231
	85	102	17	1.84	266

Table 2: Drilling Intersections (>100ppm Ta_2O_5)

Hole Id	From (m)	To (m)	Thickness (m)	Ta_2O_5	Li_2O (%)
PLS036	10	13	3	137	0.19
	15	17	2	205	0.45
	20	23	3	227	0.80
	45	55	10	194	1.09
	64	67	3	170	0.29
	82	89	7	331	1.26
PLS038	43	52	9	204	1.72
	63	73	10	219	1.10
	80	96	16	280	1.21
PLS039	0	4	4	405	0.83
	12	15	3	173	1.16
	25	34	9	256	0.81
	43	44	1	110	0.47
	50	52	2	110	0.54
PLS040	15	22	7	163	0.80
	27	29	2	225	1.17
	36	46	10	187	1.36
	76	78	2	570	0.10
	83	95	12	407	1.13
PLS0126	25	37	12	208	1.71
	48	57	9	173	1.51
	61	73	12	279	1.69
	82	85	3	250	0.77
PLS0127	33	44	11	244	1.50
	70	80	10	222	1.38
	85	104	19	249	1.71

About Pilbara Minerals

Pilbara Minerals (Pilbara) is a mining and exploration company listed on the ASX, specialising in the exploration and development of the specialty metals tantalum and lithium. Pilbara is currently developing the Tabba Tabba Tantalum deposit, located approximately 50km south-east of Port Hedland through a 50% Joint Venture. Pilbara is also drilling out the advanced 100%-owned Pilgangoora tantalum-lithium deposit close to Tabba Tabba.

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

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

Lithium is a soft silvery white metal and has the highest electrochemical potential of all metals. In nature it occurs as compounds within hard rock deposits and salt brines. Lithium and its chemical compounds have a wide range of beneficial properties resulting in numerous chemical and technical uses. A key growth area is its use in lithium batteries as a power source for a wide range of applications including electric bikes, motor vehicles, buses, trucks and taxis.

Contact:

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Competent Person's Statement

The Company confirms it is not aware of any new information or data that materially affects the information included in the March 9, 2015 Pilgangoora Mineral Resource Estimate and that all material assumptions and technical parameters underpinning the estimate continue to apply and have not materially changed when referring to its maiden resource announcement made on March 9, 2015.

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 (Exploration Manager 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.

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Appendix 1 – Total Drilling Completed 3/04/2015

Hole ID	North GDA94	East GDA94	RL	Dip	AZ	Depth
PLS036	7671600	698327	194	-60	270	94
PLS127	7671600	698327	194	-90	0	110
PLS038	7671547	698351	200	-60	270	100
PLS039	7671549	698294	195	-60	270	60
PLS040	7671499	698299	200	-60	270	100
PLS126	7671499	698299	200	-90	0	100
PLS065	7671002	697954	188	-60	270	100
PLS066	7670900	697971	201	-60	270	100
PLS067	7670849	697952	197	-60	270	70
PLS068	7670852	697999	197	-60	270	100
PLS069	7670750	697976	199	-60	270	100
PLS070	7670677	697976	210	-60	270	100
PLS071	7670600	697959	222	-60	270	100
PLS072	7670548	698002	224	-60	270	76
PLS073	7670500	698050	224	-60	270	101
PLS073A	7670497	698002	228	-60	270	80
PLS074	7670450	698049	224	-60	270	73
PLS075	7670401	698051	215	-60	270	100
PLS076	7670363	698060	210	-60	270	120
PLS077	7669901	697804	184	-60	270	100
PLS078	7669901	697847	185	-60	270	100
PLS079	7669898	697900	185	-60	270	100
PLS080	7669897	697948	185	-60	270	100
					TOTAL	**2184**

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 (e.g. 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.*	• Pilbara Minerals Limited (PLS) have completed to 23 drill hole RC program totalling 2184m
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	• PLS RC holes were sampled every metre, with samples split on the rig using a cyclone splitter. The sampling system consisted of a rig 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 draw-string calico sample bags (10-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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.*	• PLS holes were all RC, with samples split at the rig, samples are then sent to NAGROM Perth laboratory and analysed for a suite of 18 elements. Analysis was completed by XRF and ICP techniques.

Criteria	JORC Code explanation	Commentary
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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).*	• Drilling was completed by an track mounted Schramm T450 with an automated rod-handler system and on-board compressor rated to 1,350cfm/800psi. Drilling used a reverse circulation face sampling hammer. The sampling system consisted of a rig mounted cyclone with cone splitter and dust suppression system.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	• Sample recovery was recorded as good for RC holes.
	• *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 6 metre interval.
	• *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.*	• Samples were dry and recoveries are noted as "good."
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 samples 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 with hole numbers and depth intervals marked (one compartment per 1m). Geological logging information was recorded directly onto hard copy logging sheets and later transferred an Excel spreadsheet. The rock-chip trays are to be stored in PLS Perth office..
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*	• Logging has primarily been quantitative.
	• *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	• *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*	• RC samples were generally dry and split at the rig using a cyclone splitter, which is appropriate and industry standard.

Criteria	JORC Code explanation	Commentary
preparation	*sample preparation technique.*	
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	• PLS samples have field duplicates, field standards and blanks 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.*	• Field duplicates were taken approximately every 20m, and standards and blanks every 50 samples.
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Drilling sample sizes are considered to be appropriate to correctly represent the tantalum and lithium mineralization at PIlgangoora based on the style of mineralization (pegmatite) and the thickness and consistency of mineralization.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• PLS samples were assayed at NAGROM Pty Ltd 's Laboratory in Perth WA, for a 18 element suite using XRF on fused beads, and total acid digestion with an ICP finish.
	• *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.*	• PLS duplicates of the samples were taken at twenty metre intervals with blanks and standards inserted every 50m. Comparison of duplicates by using a scatter chart to compare results show the expected strong linear relationship reflecting the strong repeatability of the sampling and analysis process. • The PLS drilling contains QC samples (field duplicates, blanks and standards plus laboratory pulp splits, and NAGROM internal standards), and have produced results deemed acceptable.

Criteria	JORC Code explanation	Commentary
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 PLS in this program has confirmed the approximate width and grade of historical 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 is maintained by Trepanier Pty Ltd, an Independent Geological consultancy.
	• *Discuss any adjustment to assay data.*	• Li was converted to Li_2O for the purpose of reporting. The conversion used was Li_2O = Li x 1.6
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.*	• PLS holes were surveyed using DGPS in GDA94, Zone 50. • Down hole surveying of drill holes was conducted using a Reflex EZ-shot, electronic single shot camera to determine the true dip and azimuth of each hole. • Measurements were recorded at the bottom of each hole. Drill hole collar locations will be surveyed at the end of the program by a differential GPS (DGPS).
	• *Specification of the grid system used.*	• The grid used was MGA (GDA94, Zone 50)
	• *Quality and adequacy of topographic control.*	• The topographic surface used was supplied by GAM
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	• Drilling spacings varied between 50m to 200m apart
	• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral*	• The interpretation of the mineralised domains are supported by a moderate drill spacing, plus both geological zones and assay grades can be

Criteria	JORC Code explanation	Commentary
	Resource and Ore Reserve estimation procedure(s) and classifications applied.	interpreted with confidence.
	• *Whether sample compositing has been applied.*	• No compositing
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 45-60 degrees at a dip direction of 090 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.*	• Chain of custody for PLS holes were managed by PLS personnel.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Sampling techniques for historical assays have not been audited. • The collar and assay data have been reviewed by checking all of the data in the digital database against hard copy logs. • All PLS assays were sourced directly from the NAGROM laboratory

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	• *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*	• PLS owns 100% of tenement E45/2232

Criteria	JORC Code explanation	Commentary
tenure status		
	• *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 have intruded a sheared metagabbro.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes, including easting and northing of the drill hole collar, elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar, dip and azimuth of the hole, down hole length and interception depth plus hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• Refer to Appendix 1 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.*	• Length weighed averages used for exploration results reported in Table 1 and 2 . Cutting of high grades was not applied in the reporting of intercepts in Table 1 and 2 • No metal equivalent values are used.

Criteria	JORC Code explanation	Commentary
	• *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• Downhole lengths are reported in Table 1 and 2
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
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 drill details has been provided in Appendix 1 of 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.*	• The aim is to upgrade the existing JORC compliant resource calculation.