



# PILBARA MINERALS LIMITED

ACN 112-425-788

ASX ANNOUNCEMENT

1 September 2015

## PILGANGOORA: WESTERN PEGMATITE DELIVERS OUTSTANDING NEW THICK HIGH-GRADE DRILL RESULTS

*RC DRILLING FURTHER EXTENDS THE RESOURCE WITH ADDITIONAL DIAMOND DRILLING ALSO UNDERWAY*

### *HIGHLIGHTS:*

1. Further thick, high-grade lithium mineralisation intersected in the Western Pegmatite in the next 15 Reverse Circulation (RC) drill-holes completed during August at the 100%-owned Pilgangoora Lithium-Tantalum Project. Significant assay results include:
  2. 23m @ 1.34% Li<sub>2</sub>O and 80ppm Ta<sub>2</sub>O<sub>5</sub> from 102m(PLS307)
  3. 22m @ 1.89 Li<sub>2</sub>O and 123ppm Ta<sub>2</sub>O<sub>5</sub> from 22m(PLS226)
  4. 12m @ 1.35% Li<sub>2</sub>O and 119ppm Ta<sub>2</sub>O<sub>5</sub> from 51m (PLS314); and  
11m @ 1.44% Li<sub>2</sub>O and 277ppm Ta<sub>2</sub>O<sub>5</sub> from 71m
  5. 9m @ 1.87% Li<sub>2</sub>O and 141ppm Ta<sub>2</sub>O<sub>5</sub> from 60m (PLS315)
  6. 5m @ 1.17% Li<sub>2</sub>O and 180ppm Ta<sub>2</sub>O<sub>5</sub> from 12m(PLS304)
  7. 6m @ 1.32% Li<sub>2</sub>O and 130ppm Ta<sub>2</sub>O<sub>5</sub> from 31m(PLS313)
8. Eastern Pegmatite still open to the south, where wide-spaced drilling has defined narrower but high-grade lithium mineralisation. Significant assay results from this area include:
  9. 8m @ 1.55% Li<sub>2</sub>O and 240ppm Ta<sub>2</sub>O<sub>5</sub> from 34m(PLS266)
  10. 2m @ 1.50% Li<sub>2</sub>O and 350ppm Ta<sub>2</sub>O<sub>5</sub> from 8m(PLS261)
  11. 2m @ 1.74% Li<sub>2</sub>O and 270ppm Ta<sub>2</sub>O<sub>5</sub> from 28m(PLS262);
  12. 3m @ 2.57% Li<sub>2</sub>O and 287ppm Ta<sub>2</sub>O<sub>5</sub> from 4m(PLS244); and  
6m @ 1.76% Li<sub>2</sub>O and 100ppm Ta<sub>2</sub>O<sub>5</sub> from 99m.
13. The new results all occur outside of the current JORC resource at Pilgangoora (which is mainly hosted within the Eastern Pegmatite), and will be included in a major resource upgrade due to be completed towards the end of September.

Australian strategic metals company Pilbara Minerals Ltd (ASX: PLS) is pleased to report further outstanding results from resource drilling at its flagship 100%-owned **Pilgangoora Lithium-Tantalum Project**, located near Port Hedland in WA, where recent drilling along the Western Pegmatite has intersected thick zones of continuous high-grade mineralisation.

Approximately 75 per cent of the current JORC Mineral Resource at Pilgangoora is hosted within the Eastern Pegmatite. Recent successful drilling along the Western Pegmatite has therefore highlighted the substantial growth potential at Pilgangoora, where a major resource update is planned later this month.

Three drill rigs are currently operating at Pilgangoora. Two Reverse Circulation (RC) rigs are focusing on extensions to the resource along the Eastern and Western Pegmatite systems (see Figure 2) while a diamond rig is providing valuable core for metallurgical testwork purposes.

The latest drilling results have confirmed the continuity of the resource along the Western Pegmatite with assay results returning high-grade tantalum intersections with associated lithium (between 1-1.8%  $\text{Li}_2\text{O}$ ).

The pegmatite widths intersected down-hole vary but average between 10m and 30m, with visible spodumene evident in all pegmatites intersected. Due to the success of the drilling in this area so far, the Company has decided to expand the diamond drilling program with the addition of two holes along the southern section of the Western Pegmatite **some 400m and 600m south of PLS307** (see Figure 4).

Full intersections and assay results are provided in Table 1 on page 8 onwards of this release.

While the tenor of the tantalum ( $\text{Ta}_2\text{O}_5$ ) results in the Western Pegmatite system have generally been lower as the drilling has moved south, the mineralisation contains significant widths and grades of lithium such as in holes PLS307 and PLS226, which respectively returned intersections of **23m @ 1.34%  $\text{Li}_2\text{O}$  and 80ppm  $\text{Ta}_2\text{O}_5$  and 22m @ 1.89  $\text{Li}_2\text{O}$  and 123ppm  $\text{Ta}_2\text{O}_5$**  respectively.

Pilgangoora is a unique deposit in global terms, in having high lithium grades plus significant potential by-product tantalum.



**Figure 1: Aerial view looking south-west along the Western Pegmatite, showing the significant scale of the Pilgangoora Lithium-Tantalum Project**

Pilbara's Executive Director, Mr Neil Biddle, said the resource drilling program was exceeding expectations in terms of the thickness, grade and tenor of the mineralisation with the outstanding results from the Western Pegmatite proving to be an exciting new development.

"The focus of drilling up until this point has been within the Eastern Pegmatite, where most of the resource has been defined," he said.



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“That looks likely to change as a result of this latest drilling, which has returned some exceptional results from the Western Pegmatite. We will include as much of this drilling as we can in the next resource update, which is due towards the end of September.

“That should provide investors with a further clear indication of the scale, quality and potential of the Pilgangoora Project as a world-class lithium deposit which should be capable of producing high quality low-iron spodumene concentrate for global markets,” Mr Biddle added.

## **Pilgangoora Reverse Circulation Program – Discussion**

Results have now been received for a further **15 RC drill holes**, with this latest phase of RC drilling focused on extensions to the known mineralisation within the Eastern Pegmatite and new extensional RC drilling along the Western Pegmatite.

The Eastern Pegmatite was the focus of the previous resource drilling, as part of the Priority 1 campaign in 2014 and 2015. Results from drilling at the southern end of the Eastern Pegmatite on 100m by 50m drill spacings returned narrower stepping dipping pegmatite dykes between 2-8m in width but containing significant grades of both lithium and tantalum.

The RC drilling to along the Western Pegmatite date has confirmed the continuity of mineralisation from section 7670400mN (PLS307) to 7669900mN (see Figures 2,3 and 4 ), 500m south of the current resource. Significant results were returned in this area from holes PLS307 (23m @ 1.34% Li<sub>2</sub>O from 102m), PLS0314 (12m @ 1.35% Li<sub>2</sub>O and 11m @ 1.44 Li<sub>2</sub>O from 51m and 71m respectively) and PLS226 (22m @ 1.89% Li<sub>2</sub>O from 22m).

Typical intersections range in width from 20-30m in the southern end of the Western Pegmatite with up to three individual pegmatites identified. Recent drilling has focused on the southern extension of the Western Pegmatite zone, from PLS259 to PLS 196, where all holes intersected a significant thickness of pegmatite ranging from 22m to 34m in width and dipping 45° east.

Due to the success of this recent RC drilling, the Company has extended its diamond drilling program with a further two holes planned. Proposed RC hole 197 has been replaced by a diamond hole, PLS197M (see Figure 2 below), which was completed a total depth of 186.5m. The lower footwall pegmatite intersected by this hole is approximately 18m thick with spodumene megacrysts observed throughout.

Results from PLS194 to 197M have not been received as yet (results from PLS077 to PLS080 were previously announced on 30<sup>th</sup> April 2015 – see ASX Announcement “Outstanding New Drilling Results Pilgangoora”).



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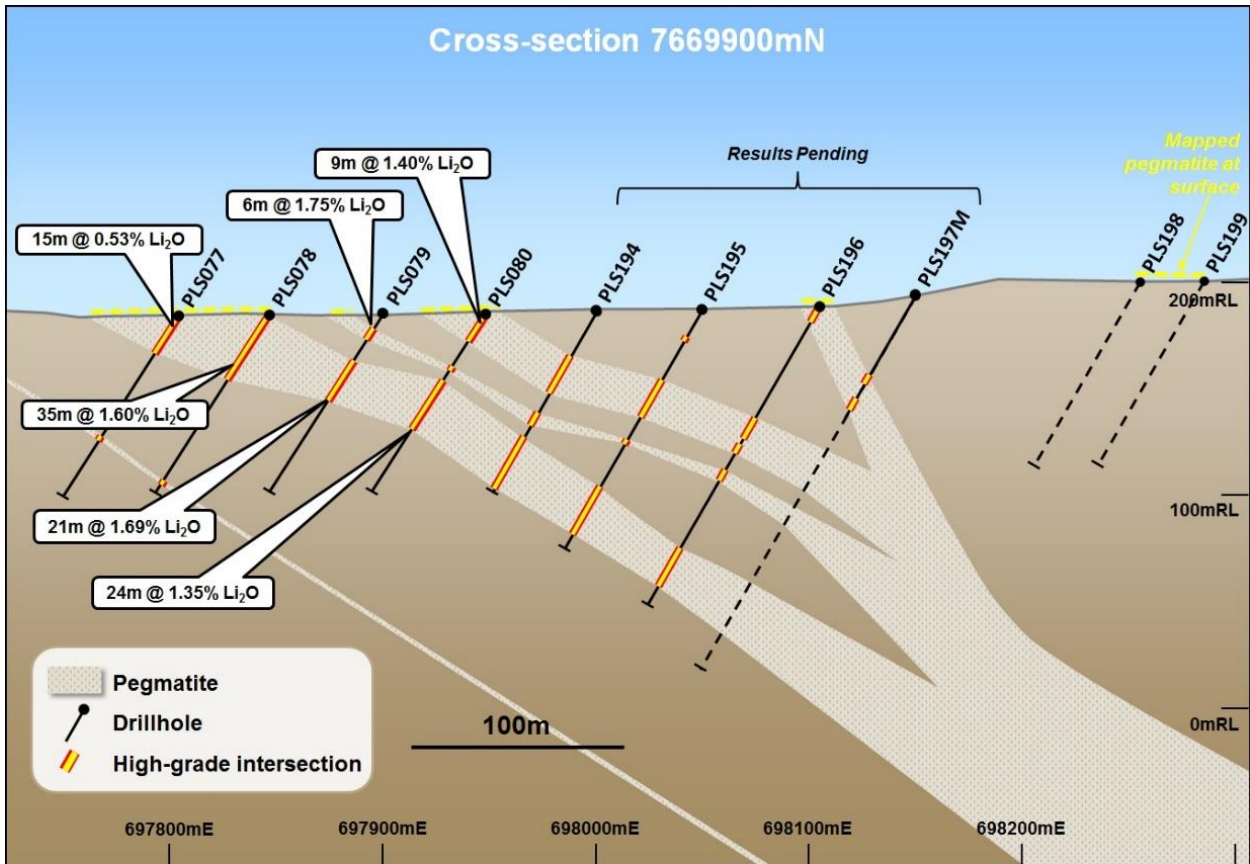


Figure 2: View looking north, Western Pegmatite System Cross-Section 7669900mN



Figure 3: View looking south, Western Pegmatite System Diamond Drill hole PLS197M



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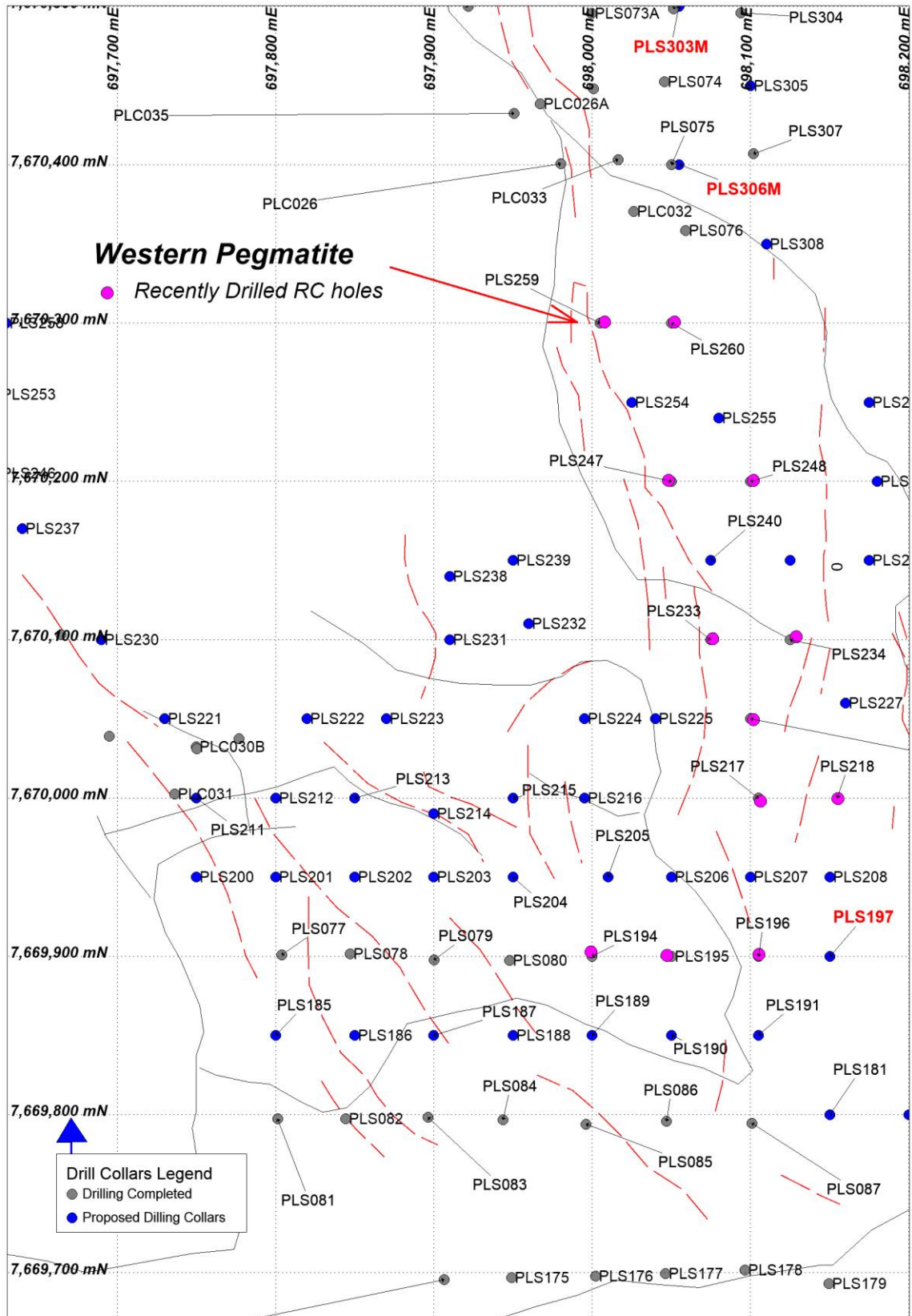


Figure 4– RC Drill Collars Western Pegmatite EL45/2232



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Table 1 below lists all recently received assay results from all drill holes in this report.

**Table 1: Drilling Intersections (>1% Li<sub>2</sub>O)**

Hole Id	From (m)	To (m)	Thickness (m)	Li <sub>2</sub> O (%)	Ta <sub>2</sub> O <sub>5</sub> (ppm)
<b>Western Pegmatite</b>					
PLS315	60	69	9	1.87	141
	87	89	2	1.27	140
	92	93	1	1.10	220
PLS314	51	63	12	1.35	119
	71	82	11	1.44	277
PLS313	31	37	6	1.32	130
	42	47	5	1.53	124
	51	52	1	1.35	180
PLS307	83	88	5	1.51	80
	102	125	23	1.34	80
PLS304	101	104	3	1.40	80
	107	108	1	1.17	170
	111	112	1	1.46	70
	114	119	5	1.17	180
PLS226	22	44	22	1.89	123

Hole Id	From (m)	To (m)	Thickness (m)	Li <sub>2</sub> O (%)	Ta <sub>2</sub> O <sub>5</sub> (ppm)
<b>Eastern Pegmatite</b>					
PLS0266	18	20	2	1.25	240
	34	42	8	1.55	210
PLS0261	4	6	2	1.18	170
	8	10	2	1.50	350
	93	95	2	1.55	90
PLS0262	28	30	2	1.74	270
PLS309	86	90	4	1.38	113
PLS310	NSR				
PLS245	NSR				
PLS244	4	7	3	2.57	287
	99	105	6	1.76	100
PLS235	45	48	3	1.5	147
PLS228	1	5	4	1.5	125



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**Table 2: Drilling Intersections (>100 ppm Ta<sub>2</sub>O<sub>5</sub>)**

Hole Id	From (m)	To (m)	Thickness (m)	Ta <sub>2</sub> O <sub>5</sub> (>100ppm)	Li <sub>2</sub> O (%)
<b>Western Pegmatite</b>					
PLS315	59	69	10	139	1.72
	85	96	11	230	0.55
PLS314	51	63	12	119	1.35
	71	87	16	274	1.11
PLS313	7	8	1	140	0.05
	33	38	5	168	1.06
	41	61	20	206	0.62
PLS307	103	104	1	100	2.4
	108	109	1	100	1.94
	110	111	1	110	1.36
	121	126	5	116	1.12
PLS304	105	122	17	160	0.76
PLS226	22	24	2	125	0.98
	27	28	1	110	2.08
	33	44	11	167	2.04

Hole Id	From (m)	To (m)	Thickness (m)	Ta <sub>2</sub> O <sub>5</sub> (>100ppm)	Li <sub>2</sub> O (%)
<b>Eastern Pegmatite</b>					
PLS0266	17	20	3	260	1.02
	23	25	2	520	0.42
	34	43	9	210	1.39
PLS0261	3	11	8	240	0.97
	84	87	3	150	0.13
	92	98	6	120	0.77
PLS0262	9	11	2	580	0.28
	28	33	5	250	1.13
PLS309	85	92	7	119	1.05
PLS310	4	6	2	100	0.09
PLS245	7	9	2	245	1.52
	22	23	1	180	1.36
PLS235	45	50	5	172	1.07
PLS228	2	7	5	128	0.98

## About Pilbara Minerals

Pilbara Minerals Limited (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.



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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.

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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 June 1, 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 June 1, 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

Hole ID	North GDA94 Actual	East GDA94 Actual	RL	Dip	AZ	Depth
PLS315	7670750	698033	200	-60	270	110
PLS314	7670678	698028	210	-60	270	110
PLS313	7670598	698002	222	-60	270	100
PLS307	7670407	698102	215	-60	270	130
PLS304	7670496	698094	246	-60	270	124
PLS266	7670439	698406	234	-60	270	96
PLS261	7670354	698368	200	-60	270	100
PLS262	7670346	698409	200	-60	270	100
PLS309	7670246	698354	200	-60	270	100
PLS310	7670248	698394	200	-60	270	100
PLS245	7670150	698400	200	-60	270	100
PLS244	7670150	698450	200	-60	270	108
PLS235	7670100	698245	200	-60	270	100
PLS228	7670050	698230	200	-60	270	86
PLS226	7670050	698100	214	-60	270	72
PLS217	7670000	698105	212	-60	270	78
PLS218	7670000	698155	207	-60	270	100
PLS234	7670100	698125	223	-60	270	100
PLS233	7670100	698075	219	-60	270	70
PLS248	7670200	698100	232	-60	270	114
PLS247	7670200	698050	229	-60	270	90
PLS260	7670300	6980050	219	-60	270	96
PLS259	7670300	6980005	185	-60	270	96
PLS194	7669900	6988000	185	-60	270	98
PLS195	7669900	6988050	185	-60	270	130
PLS196	7669900	6988000	185	-60	270	162
PLS300	7671300	698410	200	-60	270	170
PLS298	7671340	698400	200	-60	270	170
PLS294	7671415	698370	210	-60	270	125
PLS295	7671415	698420	200	-60	270	130
PLS293	7671450	698435	210	-60	270	180
PLS328	7671500	698400	200	-60	270	180
PLS331	7671600	698450	200	-60	270	190

RC Results Pending

## 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
<b>Sampling techniques</b>	<i>14. 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.</i>	Pilbara Minerals Limited (PLS) have completed <b>38 drill holes for 3815m</b> . Results being reported are for first 15 RC holes ( PLS315to PLS 226, see Appendix 1 ).
	<i>15. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	16. 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). 17. HQ Core measured and marked up on site and photographed prior to transport to Perth.
	<i>18. 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</i>	19. 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. HQ Core measured and marked up on site and photographed prior to transport to Perth, where 10mm fillet taken for analysis. Analysis was completed by XRF and ICP techniques.



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Criteria	JORC Code explanation	Commentary
	<i>problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i>	
<b>Drilling techniques</b>	20. <i>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).</i>	21. RC 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. 22. HQ Diamond Drilling completed by Hydco 1200H with an automated rod-handler system
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	23. Sample recovery was recorded as good for RC holes. 24. HQ core sample recovery excellent.
	25. <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	26. Whilst drilling through the pegmatite, rods were flushed with air after each 6 metre interval.
	27. <i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	28. Samples were dry and recoveries are noted as “good.”
<b>Logging</b>	29. <i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i>	1m 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. HQ core was cut and logged in 1 m intervals.
	32. <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	Logging has primarily been quantitative.
	34. <i>The total length and percentage of the relevant intersections logged.</i>	The database contains lithological data for all holes in the database.



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Criteria	JORC Code explanation	Commentary
<b>Sub-sampling techniques and sample preparation</b>	36. <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> 37. <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	38. RC samples were generally dry and split at the rig using a cyclone splitter, which is appropriate and industry standard. 39. HQ Core was filleted (sawn), equivalent to a ¼ core size sample taken.
	40. <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	41. PLS samples have field duplicates, field standards and blanks as well as laboratory splits and repeats.
	42. <i>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.</i>	Field duplicates were taken approximately every 20m, and standards and blanks every 50 samples.
	44. <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	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.
<b>Quality of assay data and laboratory tests</b>	46. <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	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.
	48. <i>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.</i>	No geophysical tools were used to determine any element concentrations used in this resource estimate.
	50. <i>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.</i>	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



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Criteria	JORC Code explanation	Commentary
		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.
<b>Verification of sampling and assaying</b>	53. <i>The verification of significant intersections by either independent or alternative company personnel.</i>	Infill drilling completed by PLS in this program has confirmed the approximate width and grade of historical drilling. 3 HQ diamond holes were completed as twins, and has confirmed the approximate width and grade of previous RC drilling
	54. <i>The use of twinned holes.</i>	
	57. <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	An electronic database containing collars, surveys, assays and geology is maintained by Trepanier Pty Ltd, an Independent Geological consultancy.
	59. <i>Discuss any adjustment to assay data.</i>	Li was converted to Li <sub>2</sub> O for the purpose of reporting. The conversion used was Li <sub>2</sub> O = Li x 2.153
<b>Location of data points</b>	61. <i>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.</i>	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).
	65. <i>Specification of the grid system used.</i>	The grid used was MGA (GDA94, Zone 50)
	67. <i>Quality and adequacy of topographic control.</i>	68. The topographic surface used was supplied by GAM
<b>Data spacing and</b>	69. <i>Data spacing for reporting of Exploration Results.</i>	70. Drilling spacings varied between 50m to 200m apart



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Criteria	JORC Code explanation	Commentary
<b>distribution</b>		
	<i>71. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i>	The interpretation of the mineralised domains are supported by a moderate drill spacing, plus both geological zones and assay grades can be interpreted with confidence.
	<i>73. Whether sample compositing has been applied.</i>	No compositing
<b>Orientation of data in relation to geological structure</b>	<i>75. Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	76. The mineralisation dips approximately 45-60 degrees at a dip direction of 090 degrees 77. The drilling orientation and the intersection angles are deemed appropriate.
	<i>78. 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.</i>	79. No orientation-based sampling bias has been identified.
<b>Sample security</b>	<i>80. The measures taken to ensure sample security.</i>	81. Chain of custody for PLS holes were managed by PLS personnel.
<b>Audits or reviews</b>	<i>82. The results of any audits or reviews of sampling techniques and data.</i>	83. Sampling techniques for historical assays have not been audited. 84. The collar and assay data have been reviewed by checking all of the data in the digital database against hard copy logs. 85. 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
<b>Mineral tenement and land tenure status</b>	86. <i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites</i>	87. PLS owns 100% of tenement E45/2232, M45/333
	88. <i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	89. No known impediments.
<b>Exploration done by other parties</b>	90. <i>Acknowledgment and appraisal of exploration by other parties.</i>	91. Talison completed RC holes in 2008 92. GAM completed RC holes between 2010 and 2012.
<b>Geology</b>	93. <i>Deposit type, geological setting and style of mineralisation.</i>	94. 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.
<b>Drill hole Information</b>	95. <i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes, including easting and northing of the drill hole collar, elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar, dip and azimuth of the hole, down hole length and interception depth plus hole length.</i> 96. <i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i>	97. Refer to Appendix 1 this announcement.
<b>Data</b>	98. <i>In reporting Exploration Results, weighting averaging techniques,</i>	101. Length weighed averages used for exploration results reported in



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Criteria	JORC Code explanation	Commentary
<b>aggregation methods</b>	<p><i>maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i></p> <p>99. <i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></p> <p>100. <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	<p>Table 1 and 2. Cutting of high grades was not applied in the reporting of intercepts in Table 1 and 2</p> <p>102. No metal equivalent values are used.</p>
<b>Relationship between mineralisation widths and intercept lengths</b>	<p>103. <i>These relationships are particularly important in the reporting of Exploration Results.</i></p> <p>104. <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p>105. <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i></p>	<p>106. Downhole lengths are reported in Table 2 and 3</p>
<b>Diagrams</b>	<p>107. <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></p>	<p>108. See Figures 5</p>
<b>Balanced reporting</b>	<p>109. <i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></p>	<p>110. Comprehensive reporting of drill details has been provided in Appendix 1 of this announcement.</p>
<b>Other substantive exploration data</b>	<p>111. <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></p>	<p>112. All meaningful &amp; material exploration data has been reported.</p>





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<b>Further work</b>	113. <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> 114. <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	115. The aim is to upgrade the existing JORC compliant resource calculation.