



ASX/Media Announcement

22 November 2016

## PILGANGOORA SET FOR FURTHER RESOURCE UPGRADE AS STRATEGIC DEVELOPMENT DRILLING DELIVERS MORE THICK, HIGH GRADE RESULTS

*2016 exploration program completed with strong results paving way for new resource this quarter*

### HIGHLIGHTS:

- Exceptional results generated from strategic development drilling at the Far East, South End and Monster pegmatite zones, at Pilbara's 100%-owned Pilgangoora Lithium-Tantalum Project in WA.
- Strategic development drilling immediately east of the Altura tenement boundary demonstrates continuation and thickening of the pegmatite zones. Significant intercepts include:
  - 8m @ 1.75% Li<sub>2</sub>O from 56m (PLS951);
  - 8m @ 1.57% Li<sub>2</sub>O from 82m (PLS951);
  - 23m @ 1.35% Li<sub>2</sub>O from 119m (PLS951);
  - 10m @ 1.71% Li<sub>2</sub>O from 161m (PLS951);
  - 9m @ 1.43% Li<sub>2</sub>O from 86m (PLS952);
  - 21m @ 1.66% Li<sub>2</sub>O from 143m (PLS955); and
  - 11m @ 1.41% Li<sub>2</sub>O from 102m (PLS958).
- Mineralisation at the Far East prospect now extends over 1.2km and remains open both to the north and south. Significant new intercepts include:
  - 13m @ 1.61% Li<sub>2</sub>O from 96m (PLS961); and
  - 5m @ 1.87% Li<sub>2</sub>O from 104m (PLS965).
- Reconnaissance exploration drilling at the Houston Creek pegmatite to the north of the Eastern Domain has returned some encouraging shallow ore grade intercepts, including:
  - 12m @ 1.55% Li<sub>2</sub>O from 13m (PLS890).
- Resource extension drilling at Monster has returned significant widths of high-grade mineralisation down dip of the currently defined resource. Significant intercepts include:
  - 12m @ 1.73% Li<sub>2</sub>O from 48m (PLS921);
  - 15m @ 1.76% Li<sub>2</sub>O from 81m (PLS923);
  - 16m @ 1.41% Li<sub>2</sub>O from 53m (PLS926);
  - 10m @ 1.58% Li<sub>2</sub>O from 112m (PLS928); and
  - 8m @ 1.57% Li<sub>2</sub>O from 59m (PLS959).
- A total of 111 holes for 14,293m have now been completed since the resumption of drilling on 7 September, with the highly successful 2016 drilling program now complete.
- The results, which will assist with waste dump design and final pit design, will be incorporated in an updated Mineral Resource estimate at the end of 2016.

Australian lithium developer Pilbara Minerals Ltd (ASX: PLS) is pleased to report that it has now completed extensive programs of sterilisation and strategic development drilling at its 100%-owned **Pilgangoora Lithium-Tantalum Project**, located near Port Hedland in WA, with outstanding results generated in several areas paving the way for a further increase the project's resource inventory.

Results have now been received for 65 Reverse Circulation (RC) drill-holes from the recently completed drilling program. The drilling was designed to target extensions to known near-surface pegmatites with the potential to

add material tonnes to the existing resource base and assist with final pit designs, as well as sterilisation drilling to define final locations for key site infrastructure including waste dumps.

Recent drilling results at both the Far East and Monster pegmatites has continued to identify significant thick zones of high-grade mineralisation. Results from the Far East zone have defined lithium mineralisation in a single pegmatite which extends for over 1.2km while drilling at the Monster prospect has extended the mineralised pegmatite a further 250m to the south.

RC drilling of the pegmatites adjacent to Altura Mining's (ASX: AJM) eastern boundary has also been completed with results indicating that the mineralised pegmatites extend on to Pilbara's tenement M45/333. This exploration work indicates that there is potential for a significant expansion of the proposed South Pit in conjunction with Altura's proposed mining operations.

Pilbara's Managing Director and CEO, Mr Ken Brinsden, said the completion of the sterilisation and strategic drilling program marked the end of a remarkably successful 2016 exploration campaign at Pilgangoora.

"When you stand back and look at what has been achieved this year in terms of drilled metres and the astonishing return on that investment in terms of resource and reserve growth, it has been a standout performance by our exploration team," he said.

"The major focus of this final chapter of the exploration program has been to sterilise locations for key infrastructure and strategically target resource extensions which could impact materially on pit designs and infrastructure placement.

"That work has been extremely fruitful right up until the recent conclusion of the program, with the drilling returning outstanding results on numerous fronts. Of particular note is the very large pegmatites which have now been delineated at the Far East and Monster prospects and the strategically important results which have been generated at the Altura tenement boundary.

"We are confident that these results will underpin a further material increase in the overall resource inventory at Pilgangoora, and we expect to finalise that resource upgrade before Christmas. This will further underscore the global significance of the Pilgangoora deposit and its potential to underpin a long-life, low-cost production centre for spodumene concentrates for many decades to come."

## Results

The Far East Pegmatite Zone (previously referred to as the South Eastern Pegmatite) was discovered in July 2016 and is located along the eastern flank of the main resource area at Pilgangoora, approximately 300m from the proposed Central Pit (see **Figure 2**).

The Far East Zone has minimal surface outcrop exposed over 200m, but drilling has revealed a continuous pegmatite now measuring over 1.2km in length. The Far East pegmatite will form part of the resource upgrade due later this year

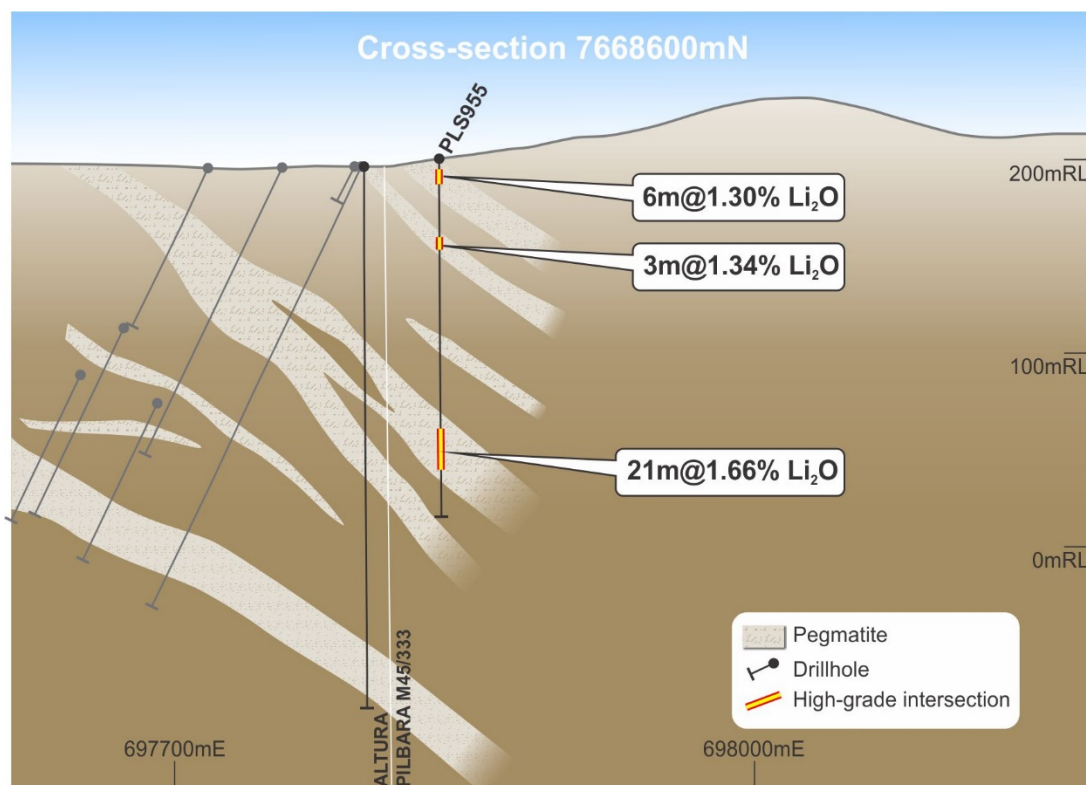
Significant results have been received from strategic drilling along the eastern side of the Altura/Pilbara tenement boundary (western boundary of M45/333). This drilling lies south of the proposed South Pit, which forms part of the proposed mining area outlined in the September 2016 Definitive Feasibility Study (see **Figure 3**). Results have been received for the first eight holes of the resource extension drilling program, which has returned significant widths of mineralisation including:

- **8m @ 1.75% Li<sub>2</sub>O from 56m (PLS951);**
- **23m @ 1.35% Li<sub>2</sub>O from 119m (PLS951);**
- **10m @ 1.71% Li<sub>2</sub>O from 161m (PLS951);**
- **9m @ 1.43% Li<sub>2</sub>O from 86m (PLS952);**
- **21m @ 1.66% Li<sub>2</sub>O from 143m (PLS955); and**
- **11m @ 1.41% Li<sub>2</sub>O from 102m (PLS958).**

This pegmatite zone remains open to the south and open at depth (**Figure 1**).

The current Mineral Resource for South Pit will be remodelled and re-calculated. There is potential for the deeper extensions to be mined in conjunction with Altura in the future. Pilbara signed a co-operation agreement with Altura Mining (see ASX Announcement – 25 August 2016) formalising a framework for ongoing co-operation between the two companies. Part of this agreement is a Memorandum of Understanding (MOU) to jointly evaluate the potential to expand or jointly exploit the pegmatite system that is shared across the tenement boundaries.

**Figure 1: Cross Section 7668600mN (Southern Area – Altura East)**





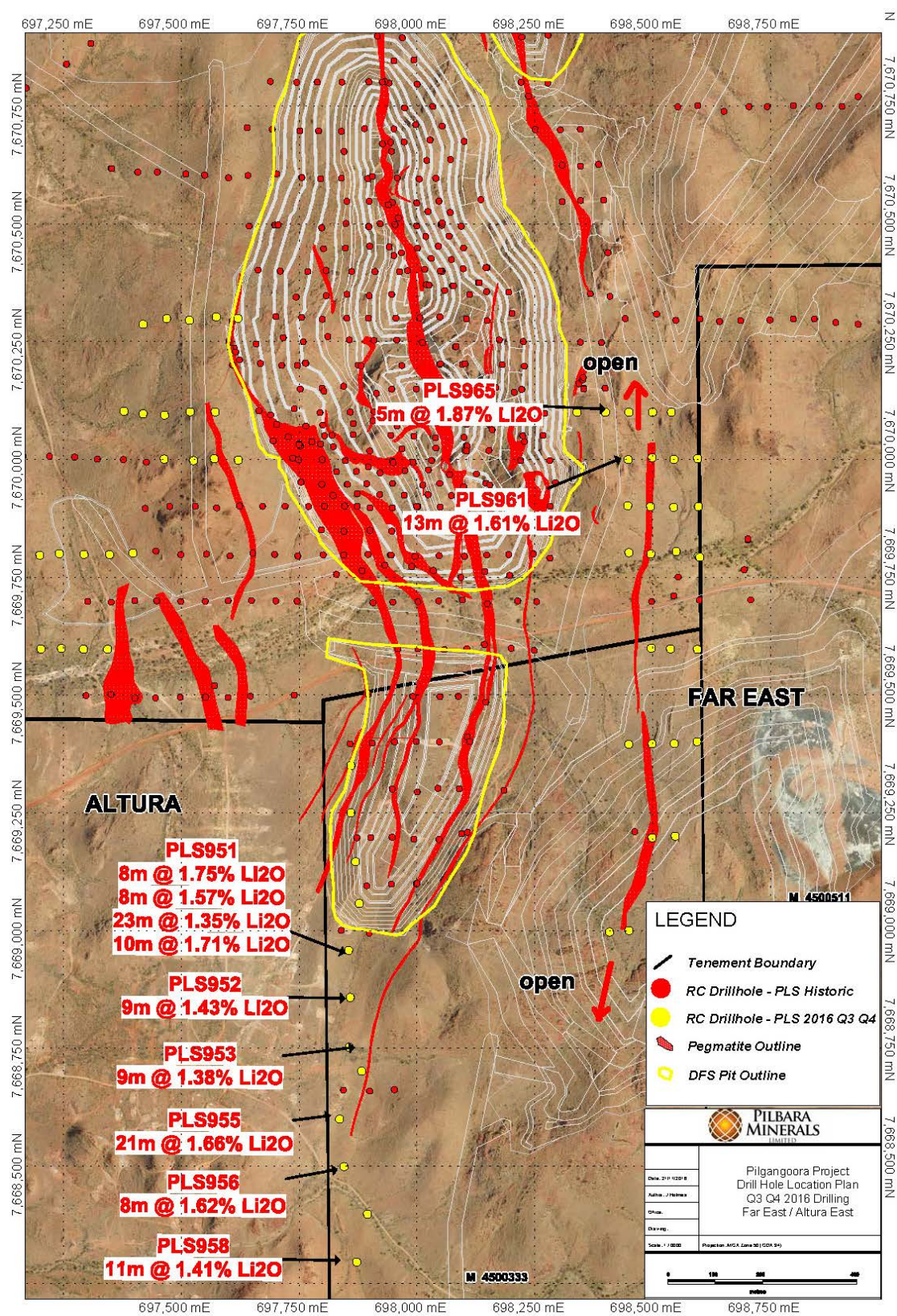
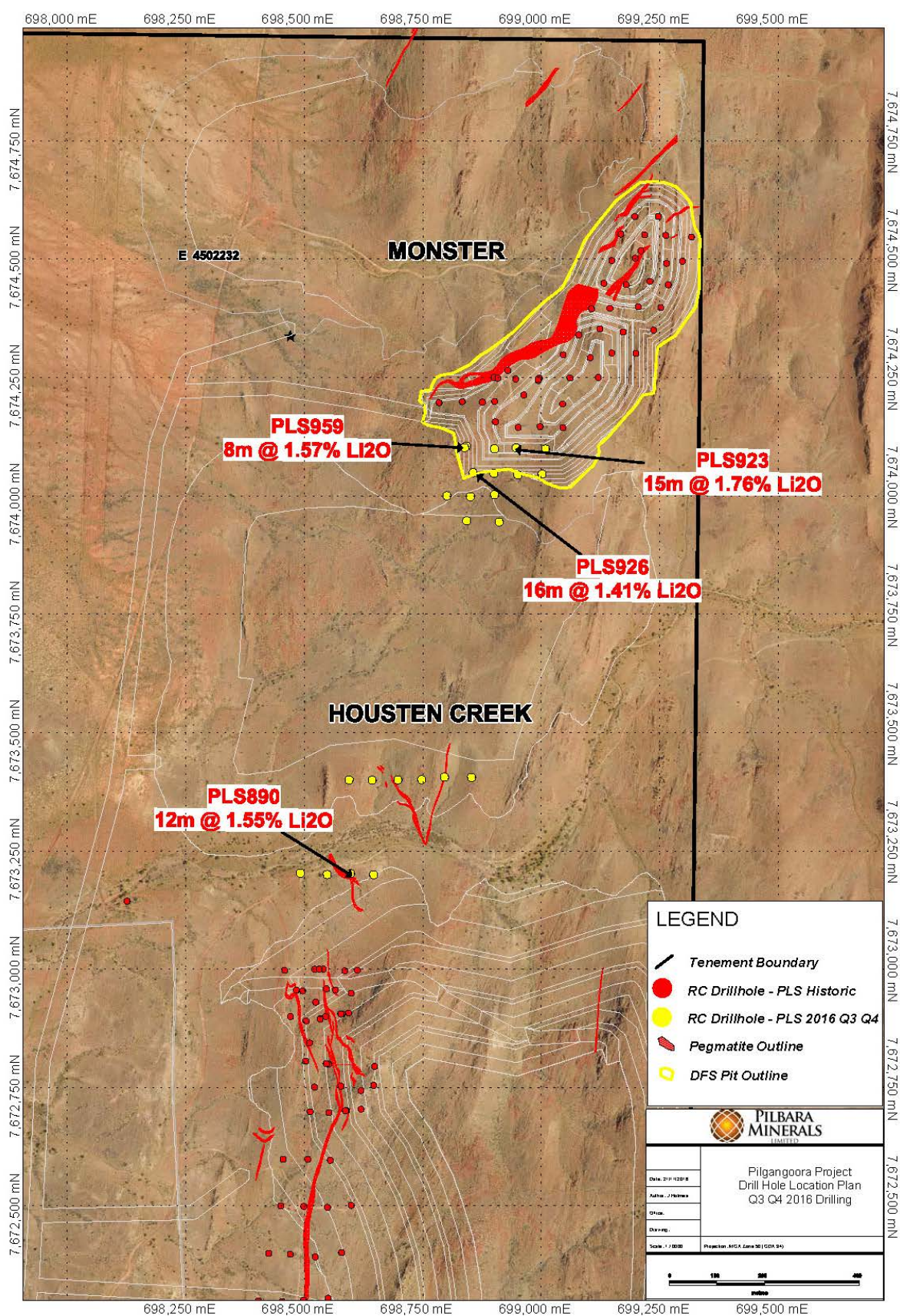
**Figure 2: New RC Drilling, Far East Pegmatite / Altura Boundary, E45/2232 & M45/333**




Figure 3: New RC Drilling Monster and Houston Creek E45/2232



## More Information:

### ABOUT PILBARA MINERALS

Pilbara Minerals ("Pilbara" – ASX: PLS) is a mining and exploration company listed on the ASX, specialising in the exploration and development of the specialty metals Lithium and Tantalum. Pilbara owns 100% of the world class Pilgangoora Lithium-Tantalum project which is the second largest Spodumene (Lithium Aluminium Silicate) project in the world. Pilgangoora is also one of the largest pegmatite hosted Tantalite resources in the world and Pilbara proposes to produce Tantalite as a by-product of its Spodumene production.

### ABOUT LITHIUM

Lithium is a soft silvery white metal which is highly reactive and does not occur in nature in its elemental form. It has the highest electrochemical potential of all metals, a key property in its role in Lithium-ion batteries. In nature it occurs as compounds within hard rock deposits and salt brines. Lithium and its chemical compounds have a wide range of industrial applications resulting in numerous chemical and technical uses. A key growth area is its use in lithium batteries as a power source for a wide range of applications including consumer electronics, power station-domestic-industrial storage, electric vehicles, power tools and almost every application where electricity is currently supplied by fossil fuels.

### ABOUT TANTALUM

The Tantalum market is boutique in size with around 1,300 tonnes required each year. Its primary use is in capacitors for consumer electronics, particularly where long battery life and high performance is required such as smart phones, tablets and laptops.

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## FORWARD LOOKING STATEMENTS AND IMPORTANT NOTICE

*This announcement may contain some references to forecasts, estimates, assumptions and other forward-looking statements. Although the Company believes that its expectations, estimates and forecast outcomes are based on reasonable assumptions, it can give no assurance that they will be achieved. They may be affected by a variety of variables and changes in underlying assumptions that are subject to risk factors associated with the nature of the business, which could cause actual results to differ materially from those expressed herein. All references to dollars (\$) and cents in this announcement are to Australian currency, unless otherwise stated.*

*Investors should make and rely upon their own enquiries before deciding to acquire or deal in the Company's securities.*

## 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 (Technical Director 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.*

## Appendix 1 – Table 1 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)
PLS829	99	102	3	1.5	74.83
PLS829	109	110	1	1.77	51.3
PLS829	148	152	4	1.57	375
PLS830	133	139	6	1.85	68.17
PLS833	21	23	2	1.27	121.05
PLS834	36	44	8	2.05	62.81
PLS834	59	62	3	1.07	91.57
PLS834	143	144	1	1.21	53.8
PLS835	62	64	2	1.59	108.1
PLS835	77	79	2	1.98	67.95
PLS835	110	112	2	1.43	841.5
PLS835	174	183	9	1.57	65.98
PLS836	86	87	1	1.21	81.4
PLS836	96	97	1	1.54	136.5
PLS836	101	104	3	1.11	56.77
PLS845	31	33	2	1.49	82.3
PLS846	74	75	1	1.03	75
PLS847	96	103	7	1.69	90.26
PLS859	3	4	1	1.01	84.7
PLS859	9	10	1	1.38	138.5
PLS859	18	20	2	1.36	63.85
PLS859	51	52	1	1.03	10.1
PLS860	33	35	2	1.22	0.7
PLS890	13	25	12	1.55	191.08
PLS890	32	36	4	1.84	224.5
PLS891	69	72	3	1.79	172.5
PLS891	89	90	1	1.12	273
PLS900	55	57	2	1.71	160
PLS901	111	115	4	1.34	248.5
PLS921	48	57	9	2.11	145.57
PLS922	35	39	4	1.75	163.38



Hole ID	From (m)	To (m)	Thickness (m)	Li2O %	Ta2O5 (ppm)
PLS922	46	49	3	1.16	165.33
PLS923	55	56	1	1.53	185.5
PLS923	82	95	13	1.92	99.68
PLS924	95	102	7	1.66	110.41
PLS924	111	112	1	1.14	195.5
PLS926	54	60	6	1.69	82.6
PLS926	63	69	6	1.68	169.42
PLS927	58	62	4	2.34	89.65
PLS927	74	78	4	1.51	97.88
PLS928	79	85	6	1.99	119.75
PLS928	89	92	3	1.66	173.77
PLS928	113	121	8	1.77	194.89
PLS929	107	110	3	1.57	260.83
PLS929	117	119	2	2	55.4
PLS931	65	66	1	1.08	187.5
PLS932	68	73	5	2.22	123.9
PLS932	92	93	1	1.14	81.6
PLS933	85	92	7	1.64	100.06
PLS936	97	100	3	1.88	169.57
PLS940	52	53	1	1.05	317
PLS941	100	101	1	2.2	193
PLS941	108	109	1	1.49	112
PLS942	91	94	3	1.39	255.33
PLS943	43	44	1	1.68	207
PLS946	247	249	2	1.79	266
PLS951	56	63	7	1.92	76.2
PLS951	83	90	7	1.72	70.09
PLS951	120	121	1	1.16	47.4
PLS951	133	142	9	1.63	70.03
PLS951	161	171	10	1.71	56.24
PLS952	87	95	8	1.49	108.29
PLS953	3	4	1	1.38	52.5
PLS953	21	24	3	1.1	54.77
PLS953	117	119	2	2.13	91.2
PLS953	142	144	2	1.19	48.65



Hole ID	From (m)	To (m)	Thickness (m)	Li2O %	Ta2O5 (ppm)
PLS953	147	150	3	2.12	46.83
PLS954	30	32	2	1.19	46.45
PLS954	44	45	1	2.22	24.6
PLS954	49	50	1	1.16	68.7
PLS954	62	68	6	1.54	46.72
PLS954	134	136	2	1.38	60.1
PLS954	142	143	1	1.51	70.1
PLS954	165	172	7	2.3	35.59
PLS955	7	13	6	1.3	77.12
PLS955	94	97	3	1.34	55.2
PLS955	143	164	21	1.66	59.7
PLS956	27	35	8	1.62	54.71
PLS956	44	47	3	1.43	54.57
PLS956	143	151	8	1.38	78.97
PLS956	155	159	4	1.46	61.65
PLS956	162	164	2	1.46	51.7
PLS956	174	180	6	1.65	64.23
PLS957	23	24	1	1.81	51.4
PLS957	32	33	1	1.1	80.7
PLS957	90	92	2	1.64	55.35
PLS958	102	113	11	1.41	52.95
PLS955	7	13	6	1.3	164.72
PLS961	97	107	10	1.89	98.76
PLS962	136	139	3	1.03	65.03
PLS965	25	28	3	1.28	280
PLS965	104	108	4	2.17	91.23

**Table 2: Drilling Intersections (>100ppm Ta2O5)**

Hole ID	From (m)	To (m)	Thickness (m)	Ta2O5 (ppm)	Li2O %
PLS829	101	104	3	148.97	1.2
PLS829	108	116	8	330.29	0.46
PLS829	148	155	7	329.86	0.99
PLS830	132	133	1	124.5	0.75
PLS830	141	142	1	189.5	0.19
PLS833	22	24	2	172.75	0.75
PLS834	46	48	2	437	0.2
PLS834	60	64	4	195.95	0.66
PLS835	62	66	4	131.43	1.06
PLS835	76	77	1	101.5	0.71
PLS835	104	115	11	305.88	0.45
PLS835	180	181	1	101.5	2.02
PLS836	93	97	4	106.72	0.73
PLS836	104	106	2	283.5	0.32
PLS937	122	123	1	243	0.47
PLS941	65	66	1	112.5	0.11
PLS941	99	102	3	230.67	1.01
PLS941	107	110	3	125.83	0.62
PLS942	91	95	4	263.75	1.27
PLS943	0	45	45	223.4	0.31
PLS845	51	52	1	177	0.13
PLS845	79	80	1	161	0.24
PLS847	95	96	1	105.5	0.34
PLS847	99	104	5	135.28	1.52
PLS854	91	92	1	136	0.06
PLS855	52	53	1	152.5	0
PLS856	180	181	1	158.5	0
PLS857	24	27	3	137.17	0
PLS857	30	32	2	340.5	0.01
PLS858	44	45	1	108	0.02
PLS859	0	1	1	111	0.02
PLS859	4	5	1	118	0.88
PLS859	9	10	1	138.5	1.38
PLS859	21	22	1	117.5	0.11
PLS859	53	54	1	115.5	0.37
PLS859	99	102	3	196.5	0.05
PLS860	98	99	1	122	0.13
PLS860	102	103	1	151.5	0
PLS871	33	34	1	135.5	0
PLS871	82	86	4	150.12	0.02
PLS872	36	39	3	287.17	0.01
PLS873	73	83	10	435.81	0.02

Hole ID	From (m)	To (m)	Thickness (m)	Ta2O5 (ppm)	Li2O %
PLS875	102	104	2	125.75	0.05
PLS888	56	57	1	124	0.02
PLS890	13	25	12	191.08	1.55
PLS890	32	52	20	159.83	0.89
PLS891	52	53	1	255	0.17
PLS891	69	73	4	160.12	1.44
PLS891	89	91	2	195.5	0.65
PLS891	97	98	1	227	0.13
PLS891	104	105	1	133.5	0.26
PLS897	84	85	1	139	0.09
PLS899	14	17	3	104.7	0.07
PLS899	33	34	1	220	0.5
PLS899	37	39	2	317.5	0.54
PLS900	52	61	9	205.11	0.59
PLS900	79	80	1	405	0.06
PLS901	100	101	1	190	0.13
PLS901	110	120	10	252.85	0.84
PLS902	34	35	1	244	0.11
PLS921	48	63	15	134.41	1.43
PLS922	16	18	2	125.5	0.38
PLS922	35	39	4	163.38	1.75
PLS922	46	49	3	165.33	1.16
PLS922	60	71	11	152.95	0.4
PLS923	45	57	12	206.21	0.37
PLS923	81	82	1	146	0.77
PLS923	89	95	6	130.73	1.97
PLS924	95	102	7	110.41	1.66
PLS924	111	115	4	167.5	0.48
PLS926	53	54	1	103	0.95
PLS926	59	60	1	114.5	1.29
PLS926	63	71	8	156.31	1.33
PLS927	58	59	1	115.5	2.39
PLS927	65	66	1	154	0.58
PLS927	74	75	1	139.5	2.35
PLS928	80	82	2	209.25	0.85
PLS928	86	91	5	304.7	0.82
PLS928	116	125	9	207.56	1.16
PLS929	106	110	4	241.88	1.39
PLS929	119	120	1	102	0.24
PLS931	62	67	5	184.7	0.59
PLS932	67	75	8	136.06	1.55
PLS933	84	85	1	162	0.48
PLS933	88	89	1	179.5	1.93



Hole ID	From (m)	To (m)	Thickness (m)	Ta2O5 (ppm)	Li2O %
PLS936	98	100	2	216.75	1.68
PLS940	47	48	1	178.5	0.06
PLS940	52	54	2	305	0.6
PLS940	64	65	1	142	0.22
PLS940	79	80	1	403	0.02
PLS943	43	45	2	190	0.84
PLS946	247	249	2	266	1.79
PLS951	60	62	2	128.25	2
PLS951	89	90	1	109.5	1.68
PLS951	132	134	2	205.25	1.84
PLS952	87	91	4	146.13	1.79
PLS953	105	119	14	97.29	0.64
PLS953	139	140	1	112.5	0.09
PLS953	145	146	1	103	0.75
PLS959	59	67	8	171.54	1.57
PLS961	95	105	10	113.99	1.74
PLS961	114	117	3	118.33	0.16
PLS962	80	82	2	490.5	0.07
PLS965	25	30	5	260.5	0.86
PLS965	107	108	1	135.5	2.45

## Drilling Information Pilgangoora Lithium – Tantalum Project

Altura East						
Hole ID	East GDA94	North GDA94	RL	Dip	Azm	DEPTH
PLS947	697860	7669350	200	-90	0	122
PLS948	697860	7669250	200	-90	0	154
PLS949	697870	7669146	224	-90	0	200
PLS950	697878	7669057	213	-90	0	196
PLS951*	697855	7668958	204	-90	0	190
PLS952*	697858	7668858	200	-90	0	118
PLS953*	697857	7668752	197	-90	0	178
PLS954*	697883	7668702	200	-90	0	196
PLS955*	697836	7668599	201	-90	0	178
PLS956*	697845	7668499	197	-90	0	190
PLS957*	697895	7668398	195	-90	0	196
PLS958*	697872	7668296	200	-90	0	196

Central						
Hole ID	East GDA94	North GDA94	RL	Dip	Azm	DEPTH
PLS939	698355	7670950	201	-70	270	600
PLS940*	698000	7670997	189	-60	270	100
PLS941*	698046	7670998	188	-60	270	118
PLS942*	698099	7671001	192	-60	270	100
PLS943*	698144	7671002	196	-60	270	100

Houston Creek						
Hole ID	East GDA94	North GDA94	RL	Dip	Azm	DEPTH
PLS888	698491	7673203	181	-60	270	100
PLS889	698548	7673200	182	-60	270	100
PLS890*	698597	7673202	183	-60	270	100
PLS891*	698646	7673200	185	-60	270	118
PLS899*	698697	7673400	189	-60	270	100
PLS900*	698748	7673401	194	-60	270	100
PLS901*	698796	7673406	193	-60	270	124
PLS902	698853	7673405	197	-60	270	100
PLS897	698594	7673400	193	-60	270	100
PLS898	698643	7673399	186	-60	270	100

<b>Far East Domain</b>						
<b>Hole ID</b>	<b>East GDA94</b>	<b>North GDA94</b>	<b>RL</b>	<b>Dip</b>	<b>Azm</b>	<b>DEPTH</b>
PLS798	698496	7669900	199	-60	270	100
PLS799	698545	7669898	190	-60	270	112
PLS800	698597	7669900	193	-60	270	190
PLS801	698497	7669799	186	-60	270	100
PLS802	698550	7669805	185	-60	270	112
PLS803	698598	7669794	185	-60	270	60
PLS803A	698600	7669792	185	-60	270	154
PLS811	698449	7669395	193	-60	270	100
PLS812	698499	7669396	197	-60	270	100
PLS813	698546	7669397	203	-60	270	100
PLS814	698594	7669401	204	-60	270	200
PLS819	698499	7669197	201	-60	270	100
PLS820	698548	7669200	205	-60	270	154
PLS825	698409	7668997	197	-60	270	106
PLS826	698450	7669000	201	-60	270	124
PLS827	698499	7668999	208	-60	270	152
PLS944	698499	7670004	200	-60	270	112
PLS945	698545	7670000	202	-60	270	160
PLS946*	698596	7670002	208	-60	270	256
PLS960	698447	7669902	210	-60	270	106
PLS961*	698450	7670000	200	-60	270	124
PLS962*	698450	7670100	200	-60	270	142
PLS963	698500	7670100	200	-60	270	160
PLS964	698540	7670100	200	-60	270	214
PLS965*	698400	7670100	200	-60	270	124
PLS966	698450	7669802	188	-60	270	100
PLS967	698340	7670100	200	-60	270	100



<b>Monster</b>						
<b>Hole ID</b>	<b>East GDA94</b>	<b>North GDA94</b>	<b>RL</b>	<b>Dip</b>	<b>Azm</b>	<b>DEPTH</b>
PLS921*	698842	7674105	224	-90	0	70
PLS922*	698901	7674099	208	-90	0	76
PLS923*	698947	7674101	207	-90	0	100
PLS924*	699009	7674099	209	-90	0	123
PLS926*	698856	7674049	209	-60	270	100
PLS927*	698900	7674048	201	-60	270	88
PLS928*	698950	7674044	203	-60	270	130
PLS929*	699002	7674046	213	-60	270	130
PLS931*	698801	7674000	205	-60	270	118
PLS932*	698851	7673998	199	-60	270	100
PLS933*	698901	7674002	203	-60	270	100
PLS936*	698842	7673947	196	-60	270	112
PLS937*	698911	7673945	206	-60	270	130
PLS959*	698838	7674102	224	-60	270	88

<b>Pilgangoora Creek West</b>						
<b>Hole ID</b>	<b>East GDA94</b>	<b>North GDA94</b>	<b>RL</b>	<b>Dip</b>	<b>Azm</b>	<b>DEPTH</b>
PLS854*	697049	7669599	178	-60	270	103
PLS855	697096	7669599	178	-60	270	142
PLS856	697152	7669598	179	-60	270	196
PLS857	697202	7669598	179	-60	270	125
PLS858*	697246	7669598	179	-60	270	130
PLS859*	697292	7669597	178	-60	270	112
PLS860*	697344	7669597	178	-60	270	112
PLS867	697000	7669803	186	-60	270	100
PLS868	697052	7669799	189	-60	270	100
PLS869	697100	7669800	189	-60	270	100
PLS870	697140	7669801	197	-60	270	100
PLS871*	697200	7669797	194	-60	270	100
PLS872*	697241	7669800	187	-60	270	100
PLS873	697294	7669798	184	-60	270	100
PLS874	697348	7669798	186	-60	270	112
PLS875	697397	7669801	191	-60	270	106

<b>South End</b>						
<b>Hole ID</b>	<b>East GDA94</b>	<b>North GDA94</b>	<b>RL</b>	<b>Dip</b>	<b>Azm</b>	<b>DEPTH</b>
PLS134E	698310	7667400	200	-60	270	178
PLS504A	698110	7667350	200	-60	90	184
PLS513A	698074	7667726	207	-60	90	220
PLS909	697970	7667720	199	-60	270	88
PLS910	698297	7667600	205	-60	270	178
PLS911	698150	7667404	244	-90	0	160
PLS912	698101	7667249	211	-60	270	100
PLS913	698146	7667261	213	-60	270	112
PLS914	698202	7667235	218	-60	270	160
PLS915	698094	7667136	227	-60	270	118
PLS916	698146	7667150	248	-60	270	148
PLS917	698206	7667141	235	-60	270	118

<b>West End</b>						
<b>Hole ID</b>	<b>East GDA94</b>	<b>North GDA94</b>	<b>RL</b>	<b>Dip</b>	<b>Azm</b>	<b>DEPTH</b>
PLS828	697464	7670001	212	-60	270	100
PLS829*	697526	7669997	222	-60	270	160
PLS830	697570	7670001	229	-60	270	170
PLS831	697621	7669999	213	-60	270	100
PLS832	697379	7670102	191	-60	270	104
PLS833*	697419	7670097	192	-60	270	112
PLS834*	697465	7670094	199	-60	270	154
PLS835*	697519	7670101	213	-60	270	190
PLS836*	697572	7670101	217	-60	270	118
PLS843	697419	7670287	209	-60	270	100
PLS844	697469	7670299	213	-60	270	100
PLS845*	697517	7670295	211	-60	270	100
PLS846*	697574	7670302	208	-60	270	100
PLS847*	697620	7670299	204	-60	270	112

\* Results reported in this announcement



## 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>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>111 holes for 14,293m</b>  Results for <b>50</b> holes are being reported, see Appendix 1.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	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).
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (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.</i>	PLS holes were all RC, with samples split at the rig, samples are then sent to ALS Perth laboratory and analysed for a suite of 19 elements.
<b>Drilling techniques</b>	<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</i>	RC Drilling was completed by a track mounted Schramm T450 with an automated rod-handler system and on-board compressor rated to 1,350cfm/800psi. Drilling



Criteria	JORC Code explanation	Commentary
	<i>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>	used a reverse circulation face sampling hammer. The sampling system consisted of a rig mounted cyclone with cone splitter and dust suppression system.
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	Sample recovery was recorded as good for RC holes.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	Whilst drilling through the pegmatite, rods were flushed with air after each 6 metre interval.
	<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>	Samples were dry and recoveries are noted as "good."
<b>Logging</b>	<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.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i>	Logging has primarily been quantitative.
	<i>The total length and percentage of the relevant intersections logged.</i>	The database contains lithological data for all holes in the database.
<b>Sub-sampling techniques and sample preparation</b>	<i>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.</i>	RC samples were generally dry and split at the rig using a cyclone splitter, which is appropriate and industry standard.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	PLS samples have field duplicates, field standards and blanks as well as laboratory splits and repeats.
	<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.

Criteria	JORC Code explanation	Commentary
	<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>	<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 ALS Global in Perth WA, for 19 elements using ME-MS91 Sodium Peroxide for ICPMS finish and Peroxide fusion with an ME-ICP89 a ICPAES finish.
	<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.
	<i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. 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 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 ALS Global internal standards), and have produced results deemed acceptable.
<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>  <i>The use of twinned holes.</i>	Infill drilling completed by PLS in this program has confirmed the approximate width and grade of historical drilling. PQ diamond holes were completed as twins, and has confirmed the approximate width and grade of previous RC drilling.
	<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.
	<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>	<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.

Criteria	JORC Code explanation	Commentary
		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).
	<i>Specification of the grid system used.</i>	The grid used was MGA (GDA94, Zone 50)
	<i>Quality and adequacy of topographic control.</i>	The topographic surface was calculated by a detailed Aerial survey completed by PLS
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	Drilling spacing varied between 25m to 200m apart
	<i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i>	The 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>Whether sample compositing has been applied.</i>	No compositing
<b>Orientation of data in relation to geological structure</b>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	The mineralisation dips approximately 45-60 degrees at a dip direction of 090 degrees The drilling orientation and the intersection angles are deemed appropriate.
	<i>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>	No orientation-based sampling bias has been identified.
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	Chain of custody for PLS holes were managed by PLS personnel.
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	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 ALS GLOBAL 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>	<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>	PLS owns 100% of tenement E45/2232, M45/333
	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	No known impediments.
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Talison completed RC holes in 2008 GAM completed RC holes between 2010 and 2012.
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	The Pilgangoora pegmatites are part of the later stages of intrusion of Archaean granitic batholiths into Archaean metagabbros and metavolcanics. Tantalum mineralisation occurs in zoned pegmatites that have intruded a sheared metagabbro.
<b>Drill hole Information</b>	<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. 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>	Refer to Appendix 1 this announcement.
<b>Data aggregation methods</b>	<i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. 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</i>	Length weighed averages used for exploration results reported in Table 2 and 3. Cutting of high grades was not applied in the reporting of intercepts in Table 2 and 3 No metal equivalent values are used.

Criteria	JORC Code explanation	Commentary
	<i>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.</i>	
<b>Relationship between mineralisation widths and intercept lengths</b>	<i>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 (e.g. 'down hole length, true width not known').</i>	Downhole lengths are reported in Table 1 and 2
<b>Diagrams</b>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	See Figures 1-3
<b>Balanced reporting</b>	<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>	Comprehensive reporting of drill details has been provided in Appendix 1 of this announcement.
<b>Other substantive exploration data</b>	<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>	All meaningful & material exploration data has been reported.
<b>Further work</b>	<i>The nature and scale of planned further work (e.g. 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.</i>	The aim is to upgrade the existing JORC compliant resource calculation.

-- ENDS --