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MINERAL RESOURCE ESTIMATE UPDATE FOR THE SINCLAIR CAESIUM ZONE DEPOSIT

AND

NEAR TERM POLLUCITE PRODUCTION GUIDANCE

Perth, Western Australia: 8 November 2018: Pioneer Resources Limited (the "Company" or "Pioneer") (ASX: PIO) advises of a revision to the Mineral Resource Estimate (initially released to ASX on 22 March 2017), and near-term[1] production guidance in relation to the extraction of pollucite at the Sinclair Mine which is within the Company's 100%-owned Pioneer Dome Project, located 40km north of Norseman, Western Australia.

Highlights

- Updated Mineral Resource Estimate is 7,110t containing the caesium mineral 'pollucite' with a grade of 16.4% Cs_2O.
- Near-term[1] production guidance of between 6,000 – 8,000 tonnes based on the revised resource with the extracted volumes of saleable pollucite-containing mineralisation subject to mining losses and dilution.
- Mine overburden removal proceeding apace and potassium feldspar is currently being stockpiled. Marketing for the potassium feldspar is well underway and discussions are advancing with potential customers.
- Mining and crushing activities are expected to be completed by February 2019 with the direct shipping of pollucite expected to start in February 2019 and finish by May 2019.
- Final 5 confirmatory drill holes strongly mineralised with pollucite, including:
  - PDD225: 7m at 19.5% Cs_2O from 43m
  - PDD226: 7m at 19.4% Cs_2O from 44m
  - PDD227: 5m at 14.3% Cs_2O from 49m
  - PDD228: 5.5m at 16.9% Cs_2O from 42.5m
  - PDD229: 6.4m at 17.5% Cs_2O from 48.6m

Pioneer Managing Director, Dave Crook, said:

"Whilst the revised resource is smaller than the maiden resource reported in March 2017, we are still expecting to recover a similar volume of pollucite due to the fact that we had assumed a greater rate of mining loss to the maiden resource. We are very excited to be nearing the point of mining the pollucite and I am very pleased that the mining operation is on target. Exploration plans to find the next zone of pollucite are advancing as our understanding of the geology in and surrounding the Sinclair Mine Stage 1 pit grows.

[1] Within the current financial year ended 30 June 2019.

REVISED MINERAL RESOURCE ESTIMATE

Following the March 2017 resource that was based on a 10m by 10m drill spacing, the addition of three geotechnical diamond core holes gave indications that the Sinclair Zone Caesium Deposit was likely to have a somewhat more complex geometry than modelled at that time. Consequently, a further 17 holes were drilled to intersect the deposit on a 10m by 5m pattern with some extra 5m infill, and then a revised Mineral Resource Estimate completed. The Mineral Resource Estimate is now **7,110t of the caesium ore 'pollucite' with a grade of 16.4% Cs_2O,** as summarised by category in Table 1 below.

Table 1. Mineral Resource Summary by Category: Sinclair Caesium Deposit

Classification	Tonnes (t)	Cs_2O (%)
Measured	6,340	17.5
Indicated	490	5.3
Inferred	280	11.4
Total	**7,110**	**16.4**

Note: Appropriate rounding applied

BASIS FOR THE MINERAL RESOURCE ESTIMATE

The Mineral Resource estimate focuses on a central, highly fractionated inner "core" within the Sinclair pegmatite intrusive approximately 40m below surface. The mineralised core comprises pollucite, lepidolite and petalite, together with sub parallel quartz ribs. Geologically the pollucite occurs as interstitial bodies within this "core", identified as GP8 in Company geological logs.

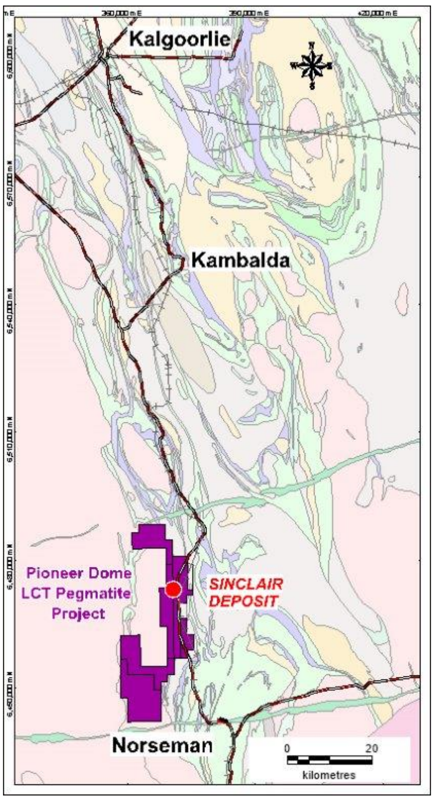


***Figure 1**. Location diagram for the Pioneer Dome Project, and Sinclair Deposit*

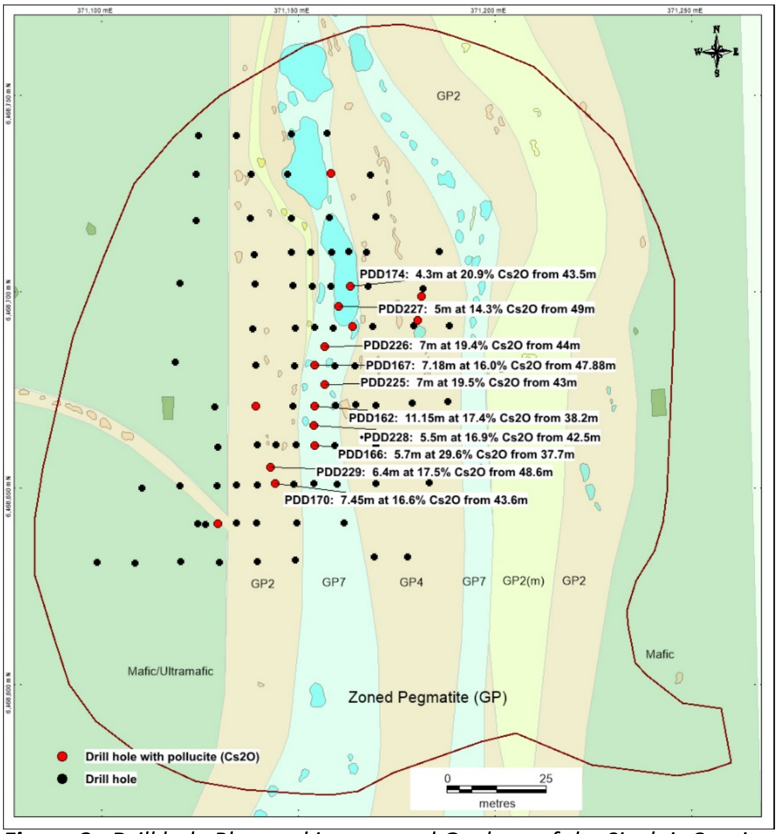


***Figure 2.** Drill hole Plan and interpreted Geology of the Sinclair Caesium Deposit project*

Drilling Density

The Sinclair caesium deposit has now been drilled on a 10m to 5m E by 10m N grid with 5 additional 5m N infill confirmatory diamond core holes using Industry-standard RC and Diamond drilling techniques.

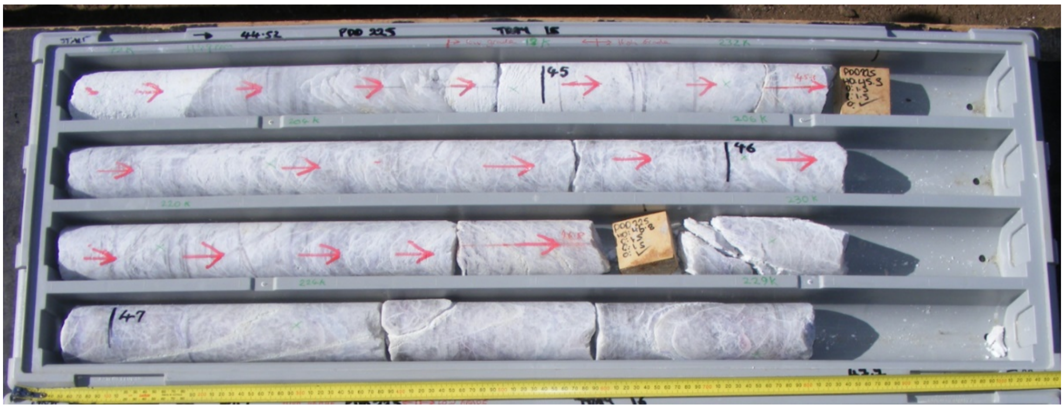
The five confirmatory diamond core holes were completed during the resource modelling process to confirm the geological interpretation. (refer to Figure 2).

Table 2
Diamond Drilling: Significant Cs_2O Intersections

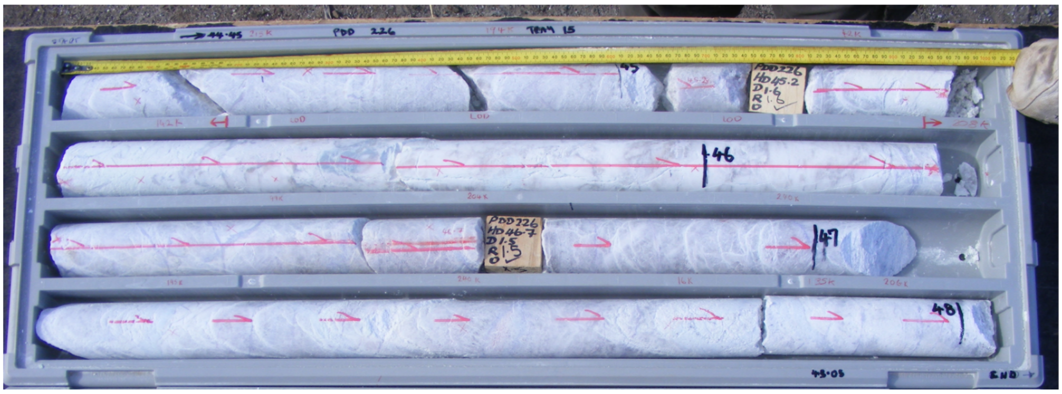
Hole ID	Hole Type	East (m)	North (m)	RL	Dip	Azimuth	Hole Depth	Depth From	Interval Length	Cs_2O (%)
PDD225	DDH	371156.6	6468676.3	331.3	-60.0	90	63.4	43.0	7.0	19.5
PDD226	DDH	371156.7	6468685.9	331.9	-60.0	90	63.2	44.0	7.0	19.4
PDD227	DDH	371160.3	6468696.2	332.2	-60.0	90	64.7	50.0	5.0	14.3
PDD228	DDH	371154.0	6468665.9	330.8	-60.0	90	66.3	43.0	5.5	16.9
PDD229	DDH	371142.9	6468655.3	330.4	-60.0	90	63.4	43.5	6.4	17.5

Notes:

- Hole locations were measured by a licenced surveyor in MGA 94 zone 51 using a DGPS which is considered fit for purpose.
- The azimuth is in location-corrected degrees as determined with a north seeking gyroscope probe.
- Intersections are drill core widths which have not been converted into true width.
- Appropriate rounding of Cs_2O values applied



Core from PDD225. Significant pollucite Intersected over **7m at 19.5% Cs_2O from 43m**



Core from PDD226. Significant pollucite Intersected over **7m at 19.4% Cs_2O from 44m**

Other Data

In addition to chemical analysis:

- there are over 70 bulk density measurements within the deposit;
- all holes have been downhole surveyed with a north seeking gyroscope probe; and
- the collar coordinates have been surveyed with an RTK DGPS by a licenced surveyor.

Reverse circulation drill holes were sampled on a 1m basis downhole, and diamond sampling was on a geological unit basis, with a minimum downhole sample length of 0.3m and a maximum downhole length of 1m.

Samples (including samples previously analysed by a four acid digestion and an ICP-MS determination) were submitted or re-submitted to Intertek Genalysis for analysis by Li Borate fusion, XRF analysis, being the preferred technique used by Cabot Corporation at their Bernic Lake Mine in Manitoba.

Standards and duplicates were inserted to confirm the accuracy and quality of the assay results. All QA/QC samples returned results within acceptable limits. Where analyses were completed using two techniques, key elements were checked and showed little significant difference.

Comparison to previous Mineral Resource Estimate

It is noted that this revised Mineral Resource Estimate has reduced the reported resource (now 7,110t at 16.4% Cs_2O) when compared to that announced on 22 March 2017 (10,500t at 17.1% Cs_2O).

As mentioned, the March 2017 resource was completed using already close spaced drilling (10m by 10m) and the classification applied was deemed appropriate at the time for this level of detail and the geological understanding applied to building the model. However, the addition of three specific geotechnical drill holes identified additional complexity and the decision was made to infill to 10m x 5m and in part, closer to 5m spacing. The mining concept has also been revised to open pit rather the initial underground concept allowing for potentially easier identification and selection of the pollucite material during mining and extraction of the overlaying microcline material.

Offtake arrangement

100% of pollucite extracted will be sold to Cabot Corporation under the offtake and funding agreement in place between the parties. Under the arrangement, Cabot has already provided a US$4.8 million interest-free loan to fund mining operations with all funds advanced by Cabot repayable by the delivery of pollucite.

Due to the extremely limited global supply of pollucite and the specialised nature of the caesium downstream market, pricing of pollucite is regarded as highly confidential. Both Cabot and Pioneer are bound under confidentiality not to disclose the pricing terms contained in the offtake agreement.

Figure 3. *Cross section through the Sinclair Deposit Caesium at 6,468,678mN.*

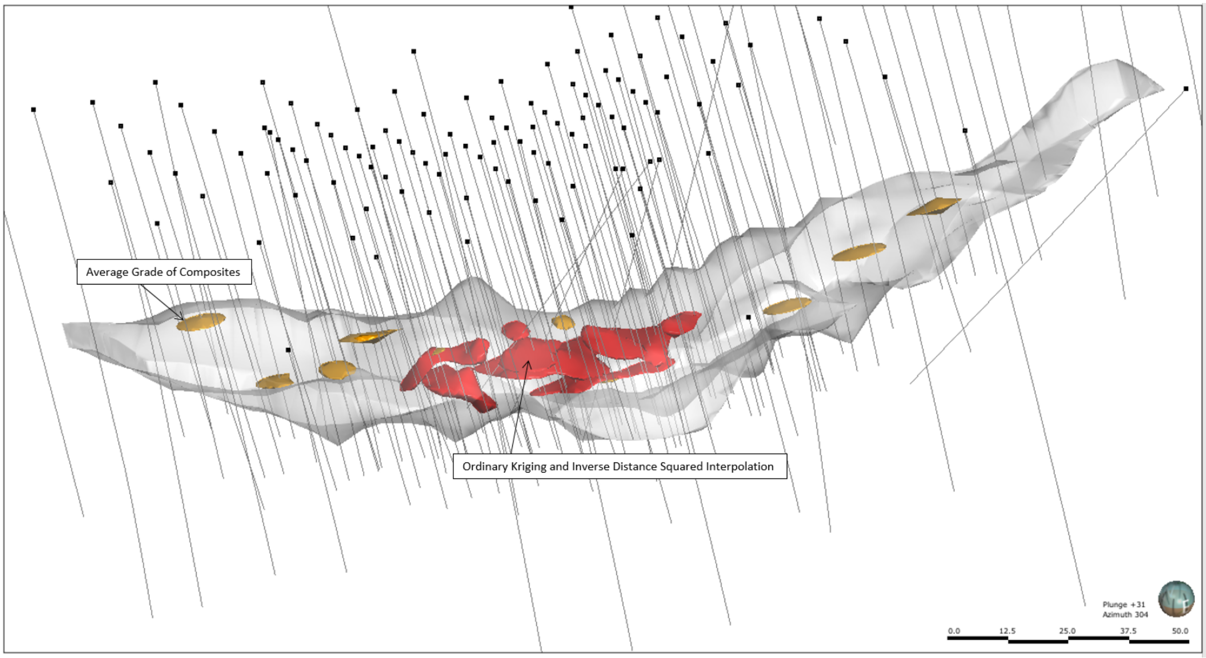


Figure 4*. Oblique view looking down to the north-west of the pollucite bodies within core pegmatite, showing grade interpolation methods.*

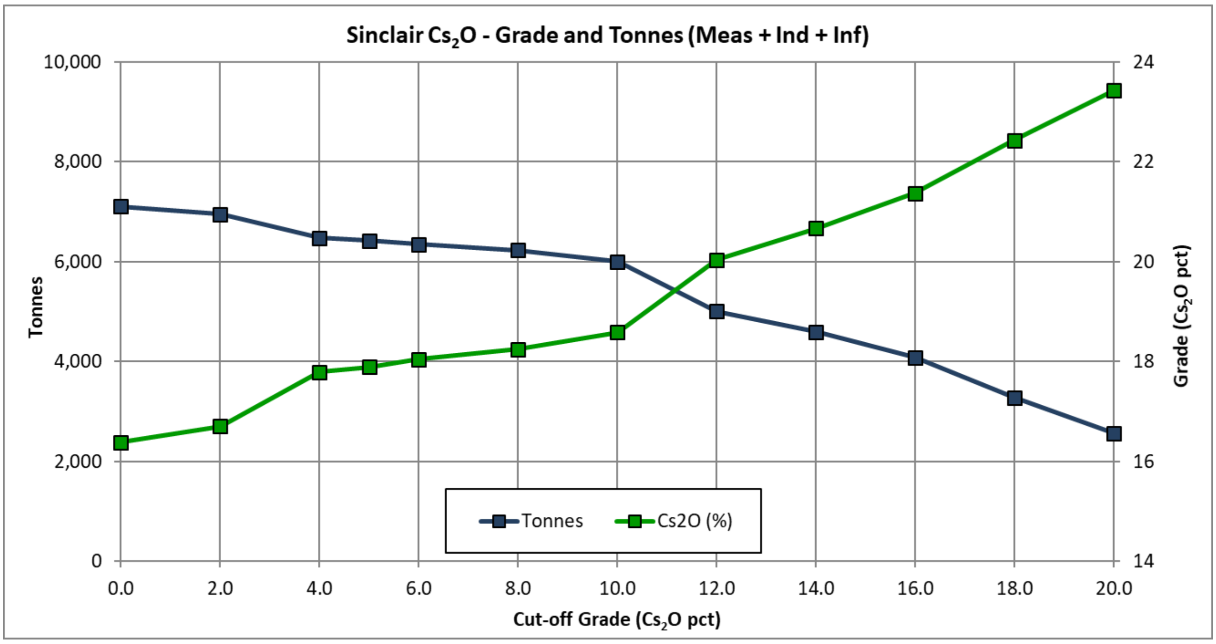


Figure 5. *Grade-tonnage curves from the Resource Estimation of the Sinclair Deposit.*

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About Pioneer Resources Limited

Pioneer is a new miner and active explorer focused on key global demand-driven commodities. The Company operates a portfolio of strategically located lithium, caesium, potassium ("alkali metals"), nickel, cobalt and gold projects in mining regions in Western Australia, plus a portfolio of high quality lithium assets in Canada. Drilling is in progress, or has been recently completed, at each of these Projects.

Pioneer Dome Project and the Sinclair Zone Caesium Deposit: In late 2016 Pioneer reported the discovery of Australia's first caesium (in the mineral 'pollucite') deposit. Pollucite is a high value mineral and global supply is very constrained. It is a rare caesium mineral that forms in extremely differentiated LCT pegmatite systems. The primarily use of caesium is in Caesium Formate brine used in high temperature/high pressure oil and gas drilling.

The Project has seen well developed thicknesses of microcline mineralisation intersected in drilling. Also, the lithium minerals petalite and lepidolite have been intersected in drilling.

Cobalt: Golden Ridge Project, WA: Cobalt demand is expanding in response to its requirement in the manufacture of cobalt-based lithium batteries in certain electric vehicles and electricity stabilisation systems (powerwalls). Other uses include in super-alloys, including jet engine turbine blades, and for corrosion resistant metal applications.

Nickel: Blair Dome/Golden Ridge Project: The price for nickel is steadily improving. The Company owns the closed Blair Nickel Sulphide Mine located between Kalgoorlie and Kambalda, WA, where near-mine target generation is continuing. The Company recently announced a significant new nickel sulphide drilling intersection at the Leo's Dam Prospect, highlighting the prospectivity of the greater project area.

Lithium: Mavis Lake Project, Canada: Pioneer Dome Project, WA: Lithium has been classed as a 'critical metal' meaning it has a number of important uses across various parts of the modern, globalised economy including communication, electronic, digital, mobile and battery technologies; and transportation, particularly aerospace and automotive emissions reduction. Critical metals seem likely to play an important role in the nascent green economy, particularly solar and wind power; electric vehicle and rechargeable batteries; and energy-efficient lighting.

References

Pioneer Dome: Refer Company's announcements to ASX dated 19 May 2016, 27 July 2016, 28 August 2016, 1 September 2016, 4 October 2016, 17 October 2016, 14 November 2016, 2 December 2016, 13 December 2016, 13 January 2017, 24 January 2017, 23 February 2017, 20 March 2017, 22 March 2017, 20 May 2017, 21 February 2018, 19 April 2018, 20 May 2018, 25 July 2018, 26 July 2018, 30 July 2018, 30 August 2018

Competent Person' Statement

The information in this report that relates to Exploration Results is based on information supplied to and compiled by Mr David Crook. Mr Crook is a full-time employee of Pioneer Resources Limited. Mr Crook is a member of The Australasian Institute of Mining and Metallurgy (member 105893) and member of the Australian Institute of Geoscientists. Mr Crook has sufficient experience of relevance to the exploration processes and 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

The information in this report that relates to Mineral Resources is based on and fairly represents information compiled by Mr David Crook and Mr Lauritz Barnes. Mr Crook is a full-time employee of Pioneer Resources Limited and Mr Barnes is a consultant to Pioneer Resources Limited. Mr Crook and Mr Barnes are both members of the Australasian Institute of Mining and Metallurgy and have sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

Specifically, Mr Crook is the Competent Person for the database, geological model and interpretation plus completed the site inspections. Mr Barnes is the Competent Person for the resource block model estimation. Mr Crook and Mr Barnes consent to the inclusion in this report of the matters based on their information in the form and context in which they appear.

Caution Regarding Forward Looking Information

This document may contain forward looking statements concerning the projects owned by the Company. Statements concerning mining reserves and resources may also be deemed to be forward looking statements in that they involve estimates based on specific assumptions.

Forward-looking statements are not statements of historical fact and actual events and results may differ materially from those described in the forward-looking statements as a result of a variety of risks, uncertainties and other factors. Forward-looking statements are inherently subject to business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause the Company's actual results to differ materially from those expressed or implied in any forward-looking information provided by the Company, or on behalf of, the Company. Such factors include, among other things, risks relating to additional funding requirements, metal prices, exploration, development and operating risks, competition, production risks, regulatory restrictions, including environmental regulation and liability and potential title disputes.

Forward looking statements in this document are based on the Company's beliefs, opinions and estimates of the Company as of the dates the forward-looking statements are made, and no obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.

There can be no assurance that the Company's plans for development of its mineral properties will proceed as currently expected. There can also be no assurance that the Company will be able to confirm the presence of additional mineral deposits, that any mineralisation will prove to be economic or that a mine will successfully be developed on any of the Company's mineral properties. Circumstances or management's estimates or opinions could change. The reader is cautioned not to place undue reliance on forward-looking statements.

NOVEMBER 2018 SINCLAIR RESOURCE ESTIMATE AND REPORTING CRITERIA

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

Location and Description

The Sinclair Caesium Deposit, owned 100% by Pioneer Resources Limited, is located approximately 40km north of Norseman in the Eastern Goldfields Province of Western Australia. The Pioneer Dome project is well serviced by existing infrastructure including a sealed road, water pipeline, rail and a gas pipeline all are related to the modern mining history within the Pioneer tenement package and the proximity to other current and historic operations and the nearby regional centre of Kalgoorlie.

Geology and geological interpretation

The Pioneer Dome Project area occurs within the southern part of the Norseman-Wiluna greenstone belt of the Yilgarn craton. The dominant geological features are the late Archean Pioneer Dome and the older mafic and ultramafic units of the greenstone belt. Late stage pegmatite intrusive sills and dykes intrude the older stratigraphy including a granite gneiss, located to the west of the Sinclair Deposit.

Locally, the underlying geology comprises a series of N striking, westerly dipping belts of Archaean mafic, ultramafic and sedimentary rocks. The entire sequence is intruded by a series of pegmatite dykes and sills associated with the later stage Pioneer Dome granite intrusive. These pegmatite dykes form a swarm of intrusive bodies along a strike length of approximately 15km along the eastern edge of the granite dome. The area has been extensively explored since the late 1960's for nickel sulphide mineralisation associated with the extensive ultramafic volcanic units in the area. Historical exploration consisted of geological mapping, trenching, geophysical surveys and minor drilling. No historical drilling or exploration was conducted targeting lithium, caesium or tantalum nor the abundant pegmatite bodies.

The Sinclair Caesium deposit occurs within a large differentiated pegmatite within the large pegmatite swarm adjacent to the Pioneer Dome. Several of these pegmatite intrusive bodies, including the PEG008 (or Sinclair Pegmatite) intrusive which hosts the Sinclair Caesium deposit, have a geochemical signature associated with the Lithium Caesium Tantalum (LCT) subclass of pegmatites (London 2008). The Peg008 pegmatite and Sinclair deposit are geologically similar to the large Tanco Mine at Bernic Lake, Manitoba.

The mineralised zones (pollucite, lepidolite and petalite) form the inner core of the pegmatite intrusive approximately 40m below surface. The caesium mineral pollucite is the primary commercial mineral of interest within the Sinclair Caesium deposit, although potassium feldspar and lithium minerals lepidolite and petalite will be extracted and stockpiled. The pollucite occurs as interstitial pods, layered between lithium silicates and quartz ribs which occur as sub parallel bodies within the core pegmatite.

Drilling techniques and hole spacing

The geological interpretation for the central Sinclair Pegmatite, which hosts the pollucite deposit, is constrained by a total of ninety-five (95) drill holes which were completed from surface. Of these, 28 intersected Cs mineralisation (predominantly pollucite) with a grade greater than 5% Cs_2O, comprising 11 RC intersections and 17 core intersections.

RC drilling was using a 5 ½" – 5 ¾" (140mm – 146mm) face sampling hammer with the diamond drilling consisting of HQ and NQ sized core. Core was oriented relative to the bottom of the hole with meter marks determined from the driller's blocks and core loss determined from the distance drilled against the length of core collected. The sample recovery was always greater than 95%, therefore no sample bias was derived from the sample recovery. Sample recovery from the RC drilling was determined from the relative size of the bulk residue material collected. The RC sample recovery was consistent irrespective of the geological units being drilled.

Drilling commenced in the Peg008 target zone in September 2016 with an initial very wide spaced series of RC drill traverses. Drill hole PDRC015 intersected the core of the pegmatite and the pollucite mineralisation returning a drill intersection of 6m at 27.7% Cs_2O from 47m downhole. Additional detailed RC and Diamond drilling was undertaken in November 2016 with additional extensional RC drilling completed in January 2017. The drilling was conducted on a 10m x 10m drill pattern around the initial drill intersection with extensional drilling occurring on a slightly wider drill spacing.

In May 2017, three geotechnical diamond holes were drilled in between sections, and in 2018 a program of infill holes were drilled at 5m intervals along section, with 5 holes drilled at 5m intervals between sections.

Several holes within the Resource area have been geophysically logged with several downhole logging tools including gamma, active source density, optical tele viewer, magnetic susceptibility, orientation tools and point resistivity. The downhole logging data assisted in the overall geological model and provided confidence in the geological continuity of the pollucite mineralisation.

Sampling and sub-sampling techniques

Sampling information used in the resource estimation was derived from diamond core drilling and RC drilling. Samples were collected at 1m intervals for the RC drilling with the diamond core sampling being much more selective. For the core samples a minimum sample width was 30cm with a maximum of 1m.

The RC samples were an approximately 3kg sample collected from a cone splitter attached to the drill cyclone.

Key RC bulk residue samples (of approximately 20kg stored in plastic bags) were riffle-split to form duplicates. These were both assayed and showed consistent repeatability.

The diamond core was sampled as half core cut by a diamond saw within geologically consistent mineralised zones. Sample sizes were determined to avoid sampling across geological/mineralisation boundaries.

Sample Analysis Method

Sample preparation involved crushing and pulverising each entire (approximately) 3kg sample.

A subsample (including samples previously analysed by a four-acid digestion and an ICP-MS determination) were submitted or re-submitted to Intertek Genalysis for analysis by Li Borate fusion, XRF analysis, being the preferred technique used by Cabot Corporation at the Bernic Lake Mine.

Bulk Density

The bulk density (BD) determination was carried out using the Gravimetric or water immersion method, whereby half core samples were weighed dry and again while immersed in water. A calculation is used to determine the bulk density of the drill core. Additional samples were tested by a gas pycnometer which directly measures the density of the sample.

A total of 167 samples were used to determine the Bulk density by water immersion with an additional 44 samples had a density determined by a gas pycnometer determination by Intertek Genalysis.

A review of the Bulk Density against the caesium grades has been completed with a weakly positive correlation between grade and density and was used to calculate bulk densities in the model (bd_metric_reg). All data within a 90% confidence interval were used which resulted in a regression line defined by the formula: $y=0.0062x + 2.7$, where y and x are Bulk density and Cs_2O grade respectively.

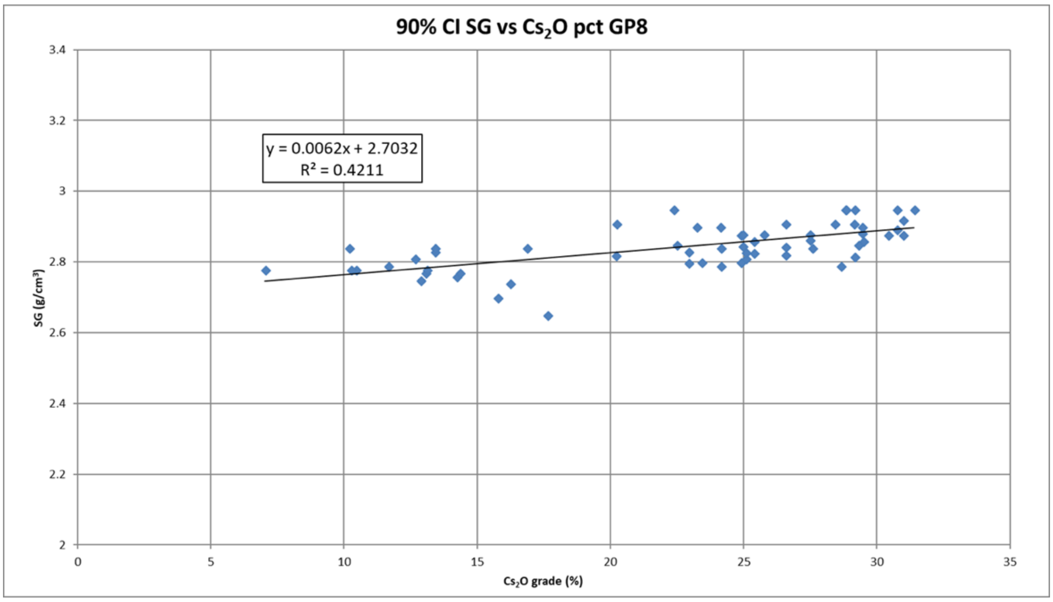

Figure 6: *Chart displaying regression line between Cs grade (%) and specific gravity (g/cm3) for drill samples tested for bulk density (pyncnometer and gravity)r within a 90% Confidence Limit.*

In addition, a simple arithmetic average of the density data gave a result of 2.85 g/cm^{3}for the pollucite.

Comparison of the two methods gave global tonnages of 7,221t (using 2.85 g/cm^3) vs 7,108t (using regression). The regressed bulk density was used to estimate the tonnage reported for the Cs_2O Mineral Resource Estimate, as it was deemed to provide a better locate estimate of tonnes.

Cut-off Grades

In additional to the detailed geological logging, internal pegmatite zonation boundaries typically coincide with anomalous or depleted Cs, Li and Ta which assisted in confirming geological continuity of the mineralised zone. Changes in rock density also assisted in refining the positions of key contacts. Grade envelopes have been wireframed to a 1% Cs_2O cut-off which equates to the pollucite geological zone within the pegmatite. The 1% Cs_2O cut-off grade was selected as it best represents the boundary between the background grade (<1% Cs_2O) and the distinct high grade pollucite domain (>10% Cs_2O). All pegmatite zonation (and grade) contact models were built in Leapfrog™ Geo software and exported for use as domain boundaries for the block model.

Estimation Methodology

Grade estimation used both Inverse Distance Squared and Ordinary Kriging for Cs_2O (%) using GEOVIA Surpac™ software into the pollucite domain. The estimate was resolved into 5m (E) x 5m (N) x 1m (RL) parent cells that had been sub-celled at the domain boundaries for accurate domain volume representation. Estimation parameters were based on the variogram models, data geometry and kriging estimation statistics. Potential top-cuts were analysed by completing an outlier analysis using a combination of methods including grade histograms, log probability plots and other statistical tools. Based on this statistical analysis of the data population, top-cuts were not required for Cs_2O %. Tonnes have been reported on a dry basis.

Due to the nature of the pollucite mineralisation, which tends to be interstitial to the quartz ribs, some of the sub domains only contained one or two samples. In these cases, it was decided to replace the interpolated grades with the composite mean for the entire sub domain. Figure 4 above illustrates the spatial distribution of the individual sub domains within the core pegmatite.

Classification Criteria

The classification boundaries for the resource classification for this deposit are largely based on drill density. This has been completed “manually” by creating a wireframe around the central area of closest spaced drilling.

All factors considered, the resource estimate has been classified with portions of Measured, Indicated and Inferred Resources for Cs_2O (only within Domain 8) and Li_2O (only within Domains 5 and 9). Figure 7 shows how the resource categories are delineated in the block model for the entire modelled inner "core" mineralised zones (pollucite, lepidolite and petalite).

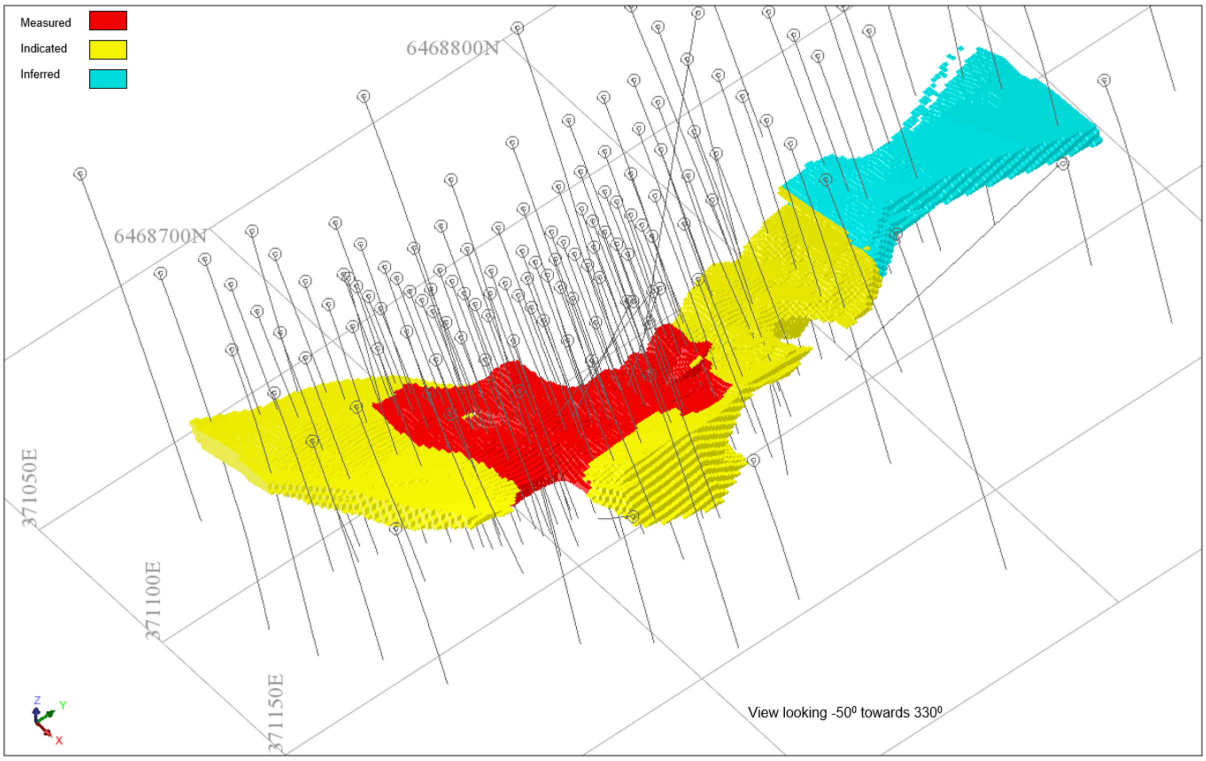

Figure 7: *Block Model showing Resource Classification Categories for the entire modelled inner "core" mineralised zones (pollucite, lepidolite and petalite). The pollucite resource is modelled as pods within this inner core.*

Previous Mining and Metallurgical Considerations

While there had been no previous mining within the PEG008 pegmatite, open pit mining is now underway.

As the pollucite mineralisation is being sold as a 'direct shipping' product, with only limited crushing and screening being undertaken before containerisation and export, no further testing is required.

APPENDIX 1

Table 1: Summary of drill intersections used in the Pollucite Resource Estimate

Hole ID	Hole Type	East (m)	North (m)	RL	Dip	Azimuth	Hole Depth	Depth From	Interval Length	Cs_2O (%)
PDD125	DDH	371181.29	6468698.74	331.28	-49.8	191	64.6	44.7	4.0	17.0
PDD127	DDH	371180.22	6468692.65	331.03	-65.1	191	60.0	41.9	2.2	26.0
PDD161	DDH	371154.05	6468690.88	332.24	-60.0	90	70.7	56.0	0.3	20.4
PDD162	DDH	371154.12	6468670.94	331.02	-60.5	90	66.2	38.2	9.6	20.7
PDD163	DDH	371164.58	6468671.32	330.54	-60.5	90	63.2	41.6	0.3	0.8
PDD164	DDH	371163.75	6468691.13	331.66	-61.0	90	63.2	45.8	1.1	14.0
PDD165	DDH	371144.30	6468661.06	330.62	-60.0	90	63.2	44.2	1.4	8.9
PDD166	DDH	371154.23	6468660.82	330.37	-60.0	90	67.7	37.7	5.7	29.6
PDD167	DDH	371154.17	6468681.27	331.76	-60.0	91	64.7	40.8	7.2	26.1
PDD169	DDH	371153.86	6468651.20	330.09	-60.0	90	61.7	37.1	0.9	9.4
PDD170	DDH	371144.10	6468651.10	330.22	-60.0	90	61.7	43.6	5.3	22.8
PDD171	DDH	371134.34	6468650.82	330.56	-60.5	90	54.2	42.2	0.8	0.8
PDRC015	RC	371159.34	6468681.10	331.29	-60.0	94	108.0	46.0	8.0	21.4
PDRCD066	RCD	371148.97	6468681.13	331.66	-60.1	91	66.6	49.2	2.0	11.8
PDRCD068	RCD	371158.83	6468690.83	332.03	-59.6	91	66.3	44.4	4.6	26.7
PDRCD069	RCD	371149.24	6468690.79	332.19	-60.7	89	69.6	51.3	2.6	21.5
PDRCD071	RCD	371159.40	6468671.00	330.88	-59.9	91	66.6	41.4	4.3	27.9
PDRCD072	RCD	371148.68	6468670.91	331.14	-60.0	92	75.3	51.0	2.0	1.4
PDRC074	RC	371158.32	6468701.46	332.50	-59.9	93	73.0	49.0	6.0	17.5
PDRC077	RC	371147.14	6468757.66	334.23	-60.0	90	79.0	54.0	2.0	1.8
PDRC083	RC	371149.50	6468660.93	330.53	-60.0	92	73.0	43.0	11.0	17.7
PDRC084	RC	371139.49	6468660.97	330.78	-60.5	90	73.0	50.0	4.0	14.2
PDRC090	RC	371158.47	6468710.05	332.98	-60.0	90	66.0	48.0	1.0	12.3
PDRC093	RC	371148.82	6468650.95	330.14	-60.1	87	72.0	48.0	2.0	10.5
PDRC094	RC	371139.61	6468650.87	330.09	-60.0	89	78.0	48.0	4.0	8.8
PDRC096	RC	371139.44	6468641.07	330.37	-60.0	90	75.0	38.0	2.0	2.0
PDRC109	RC	371129.38	6468650.69	330.71	-60.0	90	72.0	45.0	2.0	1.0
PDRC116	RC	371120.09	6468631.35	331.03	-60.0	90	66.0	53.0	1.0	4.5
PDRC117	RC	371129.62	6468640.86	330.59	-60.0	90	72.0	48.0	2.0	23.3
PDD172	DDH	371134.33	6468641.12	330.44	-61.0	88	61.8	40.5	0.3	5.9
PDD174	DDH	371163.24	6468701.35	332.19	-60.5	91	60.0	43.5	4.3	20.9
PDD175	DDH	371153.54	6468701.46	332.63	-60.5	90	70.7	50.7	0.8	19.1
PDRC182	RC	371138.96	6468781.98	333.01	-60.0	90	72.0	54.0	3.0	11.4
PDRC189	RC	371158.29	6468730.04	333.24	-60.0	90	72.0	52.0	2.0	11.5
PDRC202	RC	371139.09	6468670.78	331.23	-60.0	90	72.0	53.0	2.0	6.6
PDRC211	RC	371120.18	6468615.12	331.53	-60.0	90	78.0	36.0	2.0	2.1
PDD225	DDH	371156.63	6468676.34	331.30	-60.0	90	63.4	43.0	7.0	19.5
PDD226	DDH	371156.79	6468685.95	331.89	-60.0	90	63.2	44.0	7.0	19.4
PDD227	DDH	371160.30	6468696.17	332.17	-60.0	90	64.7	50.0	5.0	14.3
PDD228	DDH	371154.03	6468665.94	330.76	-60.0	90	66.3	43.0	5.5	16.9
PDD229	DDH	371142.87	6468655.33	330.43	-60.0	90	63.4	43.5	6.4	17.5

- Hole locations were measured by a licenced surveyor in MGA 94 zone 51 using a DGPS which is considered fit for purpose.
- The azimuth is in location-corrected degrees as determined with a north seeking gyroscope probe.
- Intersections are drill core widths which have not been converted into true width.
- Appropriate rounding of Cs_2O values applied

APPENDIX 2

Table 2: Collar Coordinates for RC drilling completed in 2018

Hole ID	Type	East	North	RL	Dip	Azimuth	Depth
PDRC114	RC	371140	6468631	330.55	-60	90.1	66
PDRC115	RC	371130	6468631	330.7	-60	90.1	66
PDRC116	RC	371120	6468631	331.03	-60	90.1	66
PDRC117	RC	371130	6468641	330.59	-60	90.1	72
PDRC118	RC	371120	6468651	331.05	-60	90.1	78
PDRC119	RC	371130	6468660	331.12	-60	90.1	72
PDRC120	RC	371138	6468690	332.11	-60	90.1	84
PDRC121	RC	371126	6468641	330.69	-68	90.1	66
PDD125	DDH	371181	6468699	331.28	-50	190.9	64.6
PDD126	DDH	371182	6468701	331.31	-75	190.0	66.5
PDD127	DDH	371180	6468693	331.03	-65	191.0	60
PDD161	DDH	371154	6468691	332.24	-60	90.1	70.7
PDD162	DDH	371154	6468671	331.02	-61	90.1	66.2
PDD163	DDH	371165	6468671	330.54	-61	90.1	63.2
PDD164	DDH	371164	6468691	331.66	-61	90.1	63.2
PDD165	DDH	371144	6468661	330.62	-60	90.1	63.2
PDD166	DDH	371154	6468661	330.37	-60	90.1	67.7
PDD167	DDH	371154	6468681	331.76	-60	91.1	64.7
PDD168	DDH	371164	6468681	331.06	-61	90.1	61.7
PDD169	DDH	371154	6468651	330.09	-60	90.1	61.7
PDD170	DDH	371144	6468651	330.22	-60	90.1	61.7
PDD171	DDH	371134	6468651	330.56	-61	90.1	54.2
PDD172	DDH	371134	6468641	330.44	-61	88.1	61.8
PDD173	DDH	371124	6468641	330.83	-61	90.1	64.7
PDD174	DDH	371163	6468701	332.19	-61	91.1	60
PDD175	DDH	371154	6468701	332.63	-61	90.1	70.7
PDD176	DDH	371163	6468710	332.57	-60	90.1	63
PDD180	DDH	371153	6468710	333.09	-61	90.1	68.7
PDRC187	RC	371134	6468740	333.79	-60	90.1	78
PDRC188	RC	371125	6468740	333.69	-60	90.1	84
PDRC189	RC	371158	6468730	333.24	-60	90.1	72
PDRC190	RC	371147	6468730	333.8	-60	90.1	72
PDRC191	RC	371138	6468730	333.75	-60	90.1	84
PDRC192	RC	371124	6468730	333.62	-60	90.1	90
PDRC193	RC	371170	6468719	332.49	-60	90.1	72
PDRC194	RC	371124	6468718	333.47	-60	90.1	84
PDRC195	RC	371139	6468710	332.94	-60	90.1	78
PDRC196	RC	371139	6468702	332.61	-60	90.1	90
PDRC197	RC	371120	6468702	333.03	-60	90.1	84
PDRC198	RC	371179	6468691	331.02	-60	90.1	66
PDRC199	RC	371179	6468681	330.48	-60	90.1	73
PDRC200	RC	371139	6468681	331.69	-60	90.1	72

Hole ID	Type	East	North	RL	Dip	Azimuth	Depth
PDRC201	RC	371179	6468672	330.01	-60	90.1	60
PDRC202	RC	371139	6468671	331.23	-60	90.1	72
PDRC203	RC	371170	6468661	329.67	-60	90.1	54
PDRC204	RC	371170	6468651	329.37	-60	90.1	54
PDRC205	RC	371110	6468650	331.49	-60	90.1	84
PDRC206	RC	371162	6468641	329.62	-60	90.1	54
PDRC207	RC	371149	6468632	330.07	-60	90.1	60
PDRC214	RC	371169	6468632	329.48	-60	90.1	48
PDRC215	RC	371108	6468631	331.7	-60	90.1	72
PDRC216	RC	371099	6468631	332.2	-70	90.1	72
PDRC217	RC	371183	6468651	329.04	-60	90.1	48
PDRC218	RC	371188	6468672	329.87	-55	90.1	48
PDRC219	RC	371129	6468671	331.4	-60	90.1	72
PDRC220	RC	371188	6468691	330.78	-60	90.1	60
PDRC221	RC	371186	6468710	331.65	-60	90.1	48
PDRC222	RC	371168	6468730	332.74	-60	90.1	66
PDRC224	RC	371178	6468633	329.18	-50	91.1	48
PDD225	DDH	371157	6468676	331.3	-60	90.1	63.4
PDD226	DDH	371157	6468686	331.89	-60	90.1	63.2
PDD227	DDH	371160	6468696	332.17	-60	90.1	64.7
PDD228	DDH	371154	6468666	330.76	-60	90.1	66.3
PDD229	DDH	371143	6468655	330.43	-60	90.1	63.4

Notes:

- Hole locations were measured by a licenced surveyor in MGA 94 zone 51 using a DGPS which is considered fit for purpose.
- The azimuth is in location-corrected degrees as determined with a north seeking gyroscope probe.

JORC (2012) Code – Table 1

Section 1 - Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Pioneer Dome Project, Sinclair Caesium Prospect.

Criteria	JORC Code explanation	Commentary
Sampling techniques	*Nature and quality of sampling (eg cut Faces, 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.*	• Reverse circulation (RC) samples from holes drilled from surface reported. • Single meter samples were collected in calico bags via a cone splitter directly from the cyclone on the RC drill rig. • Three-meter composite samples collected for intervals that were considered to have low LCT element concentrations, based on pXRF data, taken from the sample piles via an aluminium scoop. • pXRF analysis was undertaken on each sample using a Bruker S1 Titan 800 hand held portable XRF analyser for internal use, and not reported herein; or • HQ3 Core samples from holes drilled from surface where shown.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	• Industry-standard reverse circulation drilling, using a face-sampling hammer with a booster and auxiliary compressors used to ensure dry samples. • Duplicate samples and Certified Reference Standards inserted at regular intervals to provide assay quality checks. The standards and duplicates reported within acceptable limits. • Industry-standard HQ3 diamond core drilling using a diamond-set cutting bit. • Certified Reference Standards were inserted at regular intervals to provide assay quality checks. The standards reported within acceptable limits. • Samples are considered 'fit for purpose', being to detect anomalous metal element occurrences.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	• Reverse circulation drilling was used to obtain 1 m samples or 3m composite samples of approximately 3.5 kg which are delivered to the laboratory. Following preparation by grinding, a subsample is taken, the size of which is determined by the analytical process or concentration of metal elements. • Half core samples of lengths determined by geology vary in weight. • The analytical process for a package of elements specific for exploring LCT pegmatites included digestion by a four acid digestion with a Mass Spectrometer (MS) determination (Intertek analysis code 4A Li48-MS). Over range samples were re analysed by sodium peroxide zirconium crucible fusion. • Cs2O analysis was repeated by lithium borate fusion, XRF finish.

Criteria	JORC Code explanation	Commentary
Drilling techniques	*Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Reverse Circulation Drilling, 4.5 inch drill string, Face-sampling hammer, Auxiliary and Booster compressors used to exclude ground water. • HQ3 standard core drilling.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	• During drilling the geologist recorded occasions when sample quality is poor, sample return was low, when the sample was wet or compromised in another way.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	• Sample recovery is generally good for RC drilling using the equipment described. • Sample recovery is mostly under the control of the drill operator and is generally influenced by the experience and knowledge of the operator. • Sample recovery for core drilling is usually very high. Core measurements enable core recoveries to be calculated and form part of the QA/QC record.
	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.	• Because the sample recoveries are assumed to be high, any possible relationship between sample recovery and grade has not been investigated.
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.*	• Lithological logs exist for these holes in a database. Fields captured include lithology, mineralogy, sulphide abundance and type, alteration, texture, recovery, weathering and colour.
	Whether logging is qualitative or quantitative in nature. Core (or costean, Face, etc) photography.	• Logging has primarily been qualitative. • Qualitative litho-geochemistry based on pXRF analyses is used to confirm rock types. • A representative sample of each meter is sieved and retained in chip trays for future reference. • XRD analysis of selected pulps retained from the chemical analysis may be undertaken once all chemical assays have been received.
	The total length and percentage of the relevant intersections logged.	• The entire length of the drill holes has been geologically logged.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.* *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	• All one-metre intervals are collected via a cone splitter directly attached to the cyclone when dry. All samples were dry. Individual samples were approximate 3.5kg. The bulk residue was collected via plastic drums and laid out in order on the drill pad. • Individual meter samples of the pegmatite that were enriched in elements typically associated with lithium in LCT pegmatites, as determined by a portable XRF (Bruker pXRF) were submitted to the laboratory. Three meter composites were collected for the remainder of the drill holes in areas where the pXRF analysis indicated low associated element concentrations. In some drill holes the sampling (on a three meter composite basis) was undertaken prior to the pXRF analysis. Any three meter composite samples that returned anomalous LCT elements will be re sampled using the original single meter samples.

Criteria	JORC Code explanation	Commentary
		• The sample collection, splitting and sampling for this style of drilling is standard industry practise and fit for purpose. • Core was cut with quarter and half core sampled with a maximum sample length being 100cm and a minimum length being 30cm. From the core drilling, only zones considered prospective for lithium or caesium have been sampled.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	• Cyclones are routinely cleaned after each 6m rod. • Geologist looks for evidence of sample contamination, which was recorded where present. • The use of booster and auxiliary compressors ensures samples are dry, which best ensures a quality sample. • The cut core was sampled with the right-hand side of the core always collected for chemical analysis, the orientation line was retained.
	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.	• Standard Reference Material is included at a rate of 1 per 30 samples for all assay submissions. • Duplicate field samples for the RC drilling are routinely inserted at a 1 per 30 samples. • Laboratory quality control samples used and monitored by the laboratory and the company.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	• The sample size is considered appropriate for the style of deposit being sampled.
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.*	• The sample preparation and assay method used is standard industry practice and is appropriate for the deposit.
	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.	• Pioneer owns a Bruker S1 Titan 800 handheld XRF instrument which is used to provide the geologist with basic, qualitative litho-geochemistry data only. This data is not considered reportable.
	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.	• Standards and laboratory checks have been assessed. Most of the standards show results within acceptable limits of accuracy, with good precision in most cases. Internal laboratory checks indicate very high levels of precision.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.* *The use of twinned holes.*	• Significant intersections are calculated and checked by suitably qualified personnel. • No holes have been twinned
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	• Pioneer has a digital SQL drilling database where information is stored. • The Company uses a range of consultants to load and validate data, and appraise quality control samples.

Criteria	JORC Code explanation	Commentary
	Discuss any adjustment to assay data.	• Pioneer has adjusted the lithium (Li), tantalum (Ta) and caesium (Cs) assay results to determine Li2O, Ta2O5 and Cs2O grades. This adjustment is a multiplication of the elemental Li, Ta and Cs assay results by 2.153, 1.221 and 1.06 to determine Li2O, Ta2O5 and Cs2O grades respectively.
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.*	• Collar surveys were initially completed using a hand-held GPS with an accuracy of +-3 metres. The collar locations of the holes have since been surveyed by a licenced surveyor using a differential GPS. The new-collar surveys provide very accurate positions for all holes including the RL of each drill collar.
	Specification of the grid system used.	• MGA94 (Zone 51)
	Quality and adequacy of topographic control.	• Topographic control is by DGPS, carried out by a licensed surveyor.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	• Individual drill hole spacing varies. This drill programme was predominantly drilled on a 10x10m grid.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	• The data spacing is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation.
	Whether sample compositing has been applied.	• Samples have been composited to 1m intervals within estimated domains.
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.* *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.*	• The strike of the mineralisation is estimated at to be broadly north – south, therefore the angled holes have been usually drilled towards East. Scissor holes have been drilled to confirm the dip of mineralisation. • Intersections are drill core widths which have not been converted into true width, however closely approximately true widths based on the interpretation of the pegmatite bodies and the orientation of the drilling.
Sample security	*The measures taken to ensure sample security.*	• Pioneer uses standard industry practices when collecting, transporting and storing samples for analysis. • Drilling pulps are retained by Pioneer off site.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	• Sampling techniques for assays have not been specifically audited but follow common practice in the Western Australian exploration industry. • The assay data and quality control samples are periodically audited by an independent consultant.

Section 2 - Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites*	• *The drilling reported herein is entirely within M63/665 ("Tenement") which is a granted mining lease.* • *The tenement is located approximately 40km N of Norseman WA.* • *Pioneer Resources Limited is the registered holder of the Tenement and holds a 100% unencumbered interest in all minerals within the Tenement.* • *The tenement is on vacant crown land.* • *The Ngadju Native Title Claimant Group has a determined Native Title Claim which covers the Pioneer Dome project.*
	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.	• *At the time of this Statement M63/665 is in Good Standing. To the best of the Company's knowledge, other than industry standard permits to operate there are no impediments to Pioneer's operations within the tenement.*
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	• *There has been no previous LCT pegmatite exploration on the Pioneer Dome project. Previous mapping by the Western Australian Geological Survey and Western Mining Corporation (WMC) in the 1970's identified several pegmatite intrusions however these were not systematically explored for Lithium or associated elements.*
Geology	*Deposit type, geological setting and style of mineralisation.*	• *The Project pegmatites are consistent with records of highly differentiated Lithium Caesium Tantalum (LCT) pegmatite intrusion. This type of pegmatite intrusions are the target intrusions of hard rock lithium deposits.*
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 of this announcement.*
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• *Intersections noted are from 1m sample intervals or from three-meter composite samples where specifically noted.* • *Intersections are based on a 0.75% (lower) cut-off for lithium and 10% for caesium with a minimum width of 1m, a maximum of three meters of internal and no external dilution. No metal equivalent values have been used.*

Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• *Downhole lengths are reported in Appendix 1. The current geological interpretation, based on RC drilling and mapping, suggests that the true widths are similar to the down hole widths.*
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.*	• *Refer to maps in this report.*
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 and 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 Caesium deposit will be mined and delivered to an offtake partner as a crushed, DSO product.* • *Step-out drilling will explore for further deposits of caesium.* • *Partners to purchase K Feldspar, Lepidolite and Petalite are being sought. Success with such a sale process will determine whether the Company continues exploration initiatives for these commodities.*

Section 3 – Estimation and Reporting of Mineral Resources

(Criteria listed in the section1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	• *The drilling data have been imported into a relational SQL server database using Datashed™ (Industry standard drill hole database management software).* • *All of the available drilling data has been imported into 3D mining and modelling software packages (Surpac™ and Leapfrog™), which allow visual interrogation of the data integrity and continuity. All of the resource interpretations have been carried out using these software packages. During the interpretation process it is possible to highlight drilling data that does not conform to the geological interpretation for further validation.*
	• *Data validation procedures used.*	• *Data validation checks were completed on import to the SQL database.* • *Data validation has been carried out by visually checking the positions and orientations of drill holes.*
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	• *Competent Person Mr David Crook has visited the site numerous times.*
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• *The confidence in the geological interpretation is considered robust as the continuity of the GP8 (pollucite) zone within the pegmatite is consistent between drillholes.* • *No assumptions have been made regarding the geological interpretation.* • *There have been no alternative interpretations have been considered at this stage.* • *The key factors affecting continuity is the presence of the pollucite zone within the pegmatite.*
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• *The Mineral Resource estimate contains several pollucite pods which occur as interstitial bodies between sub parallel quartz ribs and surrounding lepidolite or petalite bodies.* • *The bulk of the pollucite which occurs within the core pegmatite, covers a length of approximately 60m maximum length, up to 20m wide and up to 10m thick laying 40m below surface.*
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.*	• *Grade estimation used both Inverse Distance Squared and Ordinary Kriging (for comparison) for Cs_2O (%) using GEOVIA Surpac™ version 6.8.1* • *Drillhole samples were flagged with the wireframed domain code.* • *Sample data was composited to 1m which is the most frequent sampling interval.* • *Influences of extreme sample distribution outliers were reduced by top-cutting on a domain basis. Top-cuts were decided by using a combination of methods including grade histograms, log probability plots and statistical tools. Based on this statistical analysis of the data population, no top-cuts were applied.*

Criteria	JORC Code explanation	Commentary
	• *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• *Directional variograms were modelled by domain using traditional variograms. Nugget values are moderate to high and grade ranges generally short (approximately 25-30m).* • *The Block Model was constructed with parent blocks of 5m (E) x 5m (N) x 1m (RL) parent cells that was sub-celled to 1.25 (E) x 1.25m (N) x 0.25m (RL) at the domain boundaries for accurate domain volume representation.* • *Search ellipse sizes were based primarily on a combination of the variography and the trends of the wireframed mineralized zones. Hard boundaries were applied to the estimation domain.* • *Three estimation passes were used. The first pass had a limit of 15m, the second pass 30m and the third pass searching a large distance to fill and blocks within the wireframed zones. Passes used various maximum / minimum sample numbers and maximum samples per hole – based on the sample distribution and number of samples contained within each domain.* • *Validation of the block model included a volumetric comparison of the resource wireframe to the block model volume. Validation of the grade estimate included comparison of block model grades to the declustered input composite grades plus swath plot comparison by easting, northing and elevation. Visual comparisons of input composite grades vs. block model grades were also completed.* • *It is noted that this revised Mineral Resource Estimate has reduced the reported resource (now 7,110t at 16.4% Cs_2O) when compared to that announced on 22 March 2017 (10,500t at 17.1% Cs_2O). As mentioned, the March 2017 resource was completed using already close spaced drilling (10m by 10m) and the classification applied was deemed appropriate at the time for this level of detail and the geological understanding applied to building the model. However, the addition of three specific geotechnical drill holes identified additional complexity and the decision was made to infill to 10m x 5m and in part, closer to 5m spacing. The mining concept has also been revised to open pit rather the initial underground concept allowing for potential easier identification and selection of the pollucite material during mining plus extraction of the overlaying microcline material.*
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• *Tonnes have been estimated on a dry basis.*
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• *Grade envelopes have been wireframed to a 1% Cs_2O cut-off which equates to the pollucite geological zone within the pegmatite.* • *The 1% Cs_2O cut-off grade was selected as it best represents the boundary between the background grade (<1% Cs_2O) and the distinct high grade pollucite domain (>10% Cs_2O).*

Criteria	JORC Code explanation	Commentary
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• *It is assumed that any mining methods would be selective and relatively small scale so as to optimise the grade of the ore and minimise dilution.* • *While there had been no previous mining within the PEG008 pegmatite, small-scale open pit mining is now underway.* • *An internal Scoping Study of operating cost estimates for the mine has been completed and will be reported separately.*
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• *The caesium ore will be sold as a crushed, direct shipping product.*
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• *Environmental studies including Flora and Fauna studies were completed. Given the very small size of the Sinclair Deposit any waste material generated from the extraction is expected to be very small. As the pegmatite body contains no sulphides it is expected that the ore and waste would be benign and have a very low acid forming potential.*
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• *Bulk density measurements have been carried out on 167 core samples, of which 64 are in the pollucite zone.* • *Pyncnometry measurements have been completed for 44 samples comprising RC chips and core samples.* • *An analysis of bulk density measurements against Cs_2O grades has been completed. A clear positive correlation exists between Cs and bulk density. This regressed bulk density has been used to report the mineral estimation tonnages.* • *Both the gravimetric determination and pyncnometry gave similar results, indicating that porosity is not an issue for this material.*
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).*	• *The Sinclair pollucite resource has been classified on the basis of confidence in the detailed geological understanding and defined continuity of the mineralised zone (drill spacing 5 to 10mE x 10m N with some additional 5m N infill) and the available bulk density data.* • *All factors considered; the resource estimate has been assigned to Measured, Indicated, and Inferred resources.*

Criteria	JORC Code explanation	Commentary
	• *Whether the result appropriately reflects the Competent Person's view of the deposit.*	
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• *No external audits of the resource have been carried out.*
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• *The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code.* • *The statement relates to global estimates of tonnes and grade.*