ASX ANNOUNCEMENT
8 June 2020
ASX: PIO

Evaluation of Sinclair Caesium Mine Stage 2 underway

Strong potential for extension of highly profitable Stage 1 mining operation highlighted by a geological review, prompting the commencement of new development studies

HIGHLIGHTS

⇒ A geological review of the existing data generated from Stage 1 mining activities and drilling outside the pit shell demonstrates that **additional caesium-bearing pollucite lenses** exist just outside the northern pit wall and extend for at least 80m to the north.

⇒ An **Exploration Target*** of between 1,000 and 2,000 tonnes at a grade of between 8% and 14% Cs_2O (caesium oxide) has been defined from the remaining Resource outside the Stage 1 pit to the north (581 tonnes @ 7.6% Cs_2O) and from the 2019 diamond core drill intersections that targeted these specific pollucite zones.

**The potential quantity and grade of the Exploration Target is conceptual in nature. There is insufficient exploration information generated to estimate a Mineral Resource and it is uncertain that further exploration will result in the estimation of a Mineral Resource.*

⇒ As a result, investigations have commenced to determine:

- What **further drilling** information is needed;
- Which **mining method** is more suitable – open pit cut-back or 'airleg' style underground mining from the pit floor;
- Potential **off-take partners** for a Stage 2 mining operation;
- Opportunities to '**value add'** given that caesium in a semi-finished or finished form can command significant premiums to already valuable crushed ore.

Figure 1: Sinclair Caesium Mine – looking north-west with the blue arrow indicating the direction of the pollucite corridor.

Pioneer Resources Managing Director, Tim Spencer, said: *"The Sinclair Mine paid off handsomely for the Company. While the Stage 2 mine would likely be smaller in scale, it could yield an even higher margin per tonne of caesium oxide extracted and generate additional cash so that we can continue to self-fund our exploration activities for lithium, gold and nickel.*

"We envisage that the Stage 2 activity would involve less than three months of mining activity and would be undertaken in parallel with other exploration activities so that we continue to advance all of our projects in parallel. We look forward to reporting the results of the Stage 2 evaluation and hopefully moving this high-value asset back into commercial production as soon as possible."

Pioneer Resources (ASX: PIO; "Pioneer" or "the Company") is pleased to advise that it has commenced studies to determine the potential to undertake a second phase of mining at the Company's 100%-owned **Sinclair Caesium Mine**, located near Norseman in Western Australia. This follows a positive geological review of the potential for a significant northern extension of the caesium-bearing pollucite lenses.

The Sinclair Caesium Mine is located within the Company's Pioneer Dome Project, which also hosts the Dome North Lithium (Spodumene) Project approximately 18km further north. The Mine is less than 500m from the Coolgardie – Esperance highway and 240km from the Esperance Seaport.

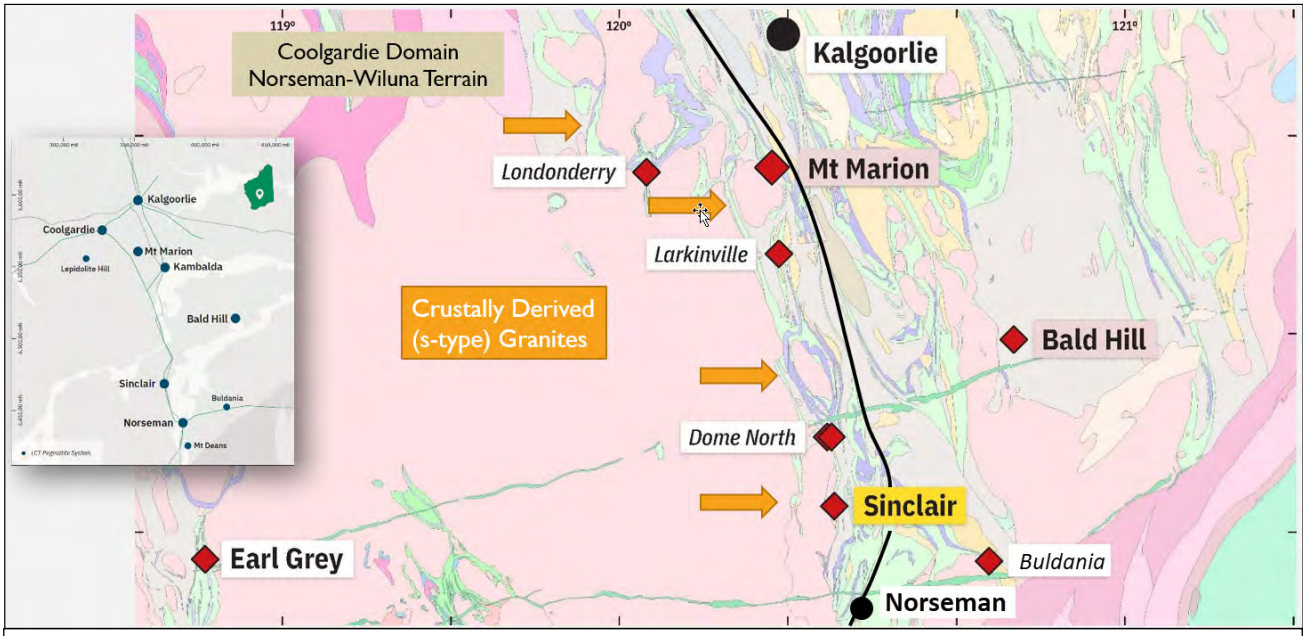

Figure 2: Map showing the proximal locations of the Sinclair Caesium Mine and the Dome North Lithium Project to the town centres of Kalgoorlie and Norseman.

SINCLAIR MINE – STAGE 1 RECAP

Pollucite was discovered during a drilling programme undertaken during August to October 2016. Mining commenced two years later in September 2018 and was completed in January 2019. During mining operations, but before reaching the pollucite zone of the multi-mineral deposit, a revised JORC Mineral Resource Estimate (Indicated and Inferred) of 7,110 tonnes @ 16.4% Cs_2O containing 1,166 tonnes of caesium oxide was reported in November 2018 (*refer ASX release 8 November 2018*).

Following completion of all sales of pollucite (the final shipment reconciliation assays have just been received), the Company is pleased to report that the mine materially overperformed the Resource Estimate, with 38% more caesium oxide sold than was estimated in the Resource contained in the pit shell. Please refer to the following table:

***Table 1**: Sinclair Mine caesium oxide reconciliation*

SINCLAIR MINE RECONCILIATION	Tonnes	Cs2O %	Cs2O Tonnes
JORC Resource Estimate (November 2018)	**7,110**	**16.4%**	**1,166**
Resource excluding pollucite outside pit shell to north	**6,529**	**17.2%**	**1,122**
Product Sold			
Higher grade material	10,208	11.3%	1,158
Lower grade material	8,421	4.7%	392
Total product sold	**18,629**	**8.3%**	**1,551**
Positive reconciliation over Resource	**12,100**		**429**
	185%		**38%**

The geological variability of the Sinclair Deposit is considered high with pollucite lenses displaying extreme variation in geometries over short distances. The exploration and resource definition surface drill density, while very high for a typical Resource drill-out (some sections were drilled on a 5m x 5m pattern), was simply not sufficient to adequately delineate the pollucite deposit to achieve a higher degree (+/- 10%) of accuracy.

An independent geo-statistical assessment was prepared as part of mine planning and the conclusion was that the volumetric delineation of the Resource was likely to be on the conservative side.

The cash operating surplus from Stage 1 was $10.2 million, so an average margin of $6,576 per caesium oxide (Cs_2O) tonne, or $547 per ore tonne @ 8.3% Cs_2O, was generated. The '*pollucite: other material*' pit strip ratio was close to 70:1, so a considerable amount of material was mined to extract a small and valuable quantity of ore.

SINCLAIR MINE – STAGE 2

The Stage 1 open pit shell was optimised to extract all profitable modelled caesium oxide ore blocks, which meant that several small lenses of pollucite fell just outside the pit shell. Upon completion of mining, one ore block was exposed in the northern pit wall and it was evident that high grade pollucite mineralisation of sufficient extractable thickness extended beyond the limit of the pit wall. This is illustrated in Figure 3 below.

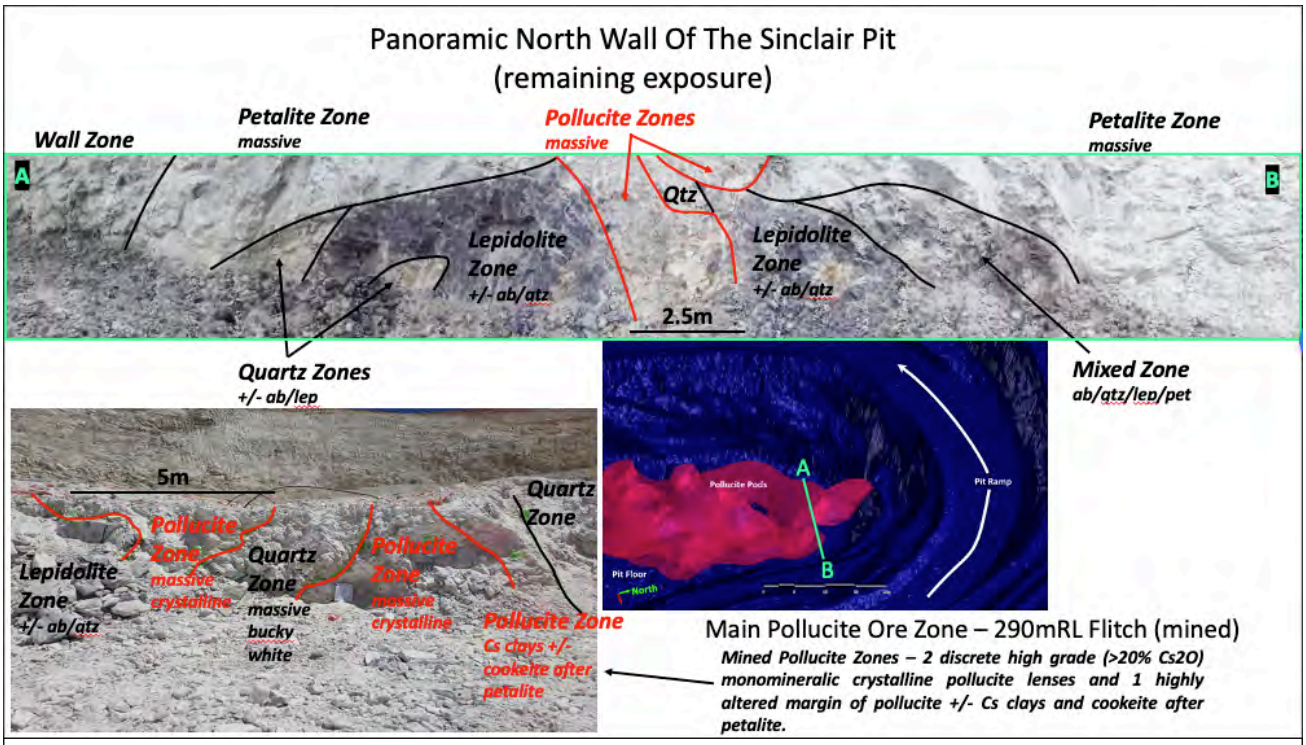

Figure 3: Photo of the north pit wall marked up with the mineral zonation including a 2.5 metre wide band of pollucite in the centre.

During pre-mine Resource definition drilling, small zones of pollucite were intersected along strike of the modelled 'corridor' to the north of the main deposit, but they were not sufficiently large to warrant inclusion in the open pit optimisation.

Following completion of mining, further drilling (diamond core) along this northern corridor intersected more pollucite. Re-evaluation of these intersections using the knowledge obtained from mining of the main deposit has highlighted the potential to extract more pollucite.

Table 2 below summarises the drilling intersections that fall outside of the current Stage 1 pit. The reverse circulation holes were drilled before Stage 1 mining took place and the diamond core drill holes were drill after completion of mining.

***Table 2**: All caesium oxide intersections from the northern pit wall to approximately 80 metres north:*

Hole ID	From (m)	To (m)	Interval (m)	Cs_2O (%)
Sinclair Caesium Mine extension drilling North				
RC holes drilled pre Stage 1 mining				
PDRC077 (1)	55	56	1	3.4
PDRC182 (2)	53	57	4	10.1
Including	56	57	**1**	**17.0**
PDRC189 (2)	52	54	2	11.9
Diamond holes drilled post Stage 1 mining				
PDD259 (3)	54.70	55.45	0.75	14.9
PDD261 (3)	53.75	56.38	2.63	17.8
Including	54.50	56.38	**1.88**	**23.9**
PDD262 (3)	47.25	48.10	0.85	1.6
PDD262 (3)	51.85	54.65	2.80	14.6
Including	51.85	52.9	**1.05**	**24.2**

Notes:

(1) Reported in ASX release dated 13 December 2016

(2) Reported in ASX release dated 26 July 2018

(3) Reported in ASX release dated 15 August 2019

- *Intersections have been calculated using minimum 1% Cs_2O cut-off grade, minimum thickness 0.5m, no internal waste, and no external waste.*
- *Intersections are 'down-hole' and do not represent a true width.*

This geological review underpins the Exploration Target of between 1,000 and 2,000 tonnes at a grade between 8% and 14% Cs_2O (caesium oxide) defined from remaining resources outside the stage 1 pit to the north and 2019 diamond core intersections that targeted these specific pollucite zones.

It is based on modelling of the intersected pollucite zones, which are illustrated in the Long Section depicted in Figure 4. Conceptually, the minimum and maximum of the Exploration Target range represents 10% to 20% of the material that would be mined in a corridor mined with the following dimensions:

- Length = 80 metres
- Width = 8 metres
- Height = 6 metres

The potential quantity and grade of the Exploration Target is conceptual in nature. There is insufficient exploration information generated to estimate a Mineral Resource and it is uncertain that further exploration will result in the estimation of a Mineral Resource.

The long section shown in Figure 4 below illustrates the location of the modelled pollucite lenses north of the Stage 1 open pit. Six out of 15 drill holes within the 10m wide by 80m long 'corridor' intersected pollucite, while a further eight holes outside the corridor did not.

This reinforces the Company's understanding of the sporadic nature of pollucite mineralisation at Sinclair. However, this limited amount of drilling has defined a sufficient area to allow the determination of an Exploration Target.

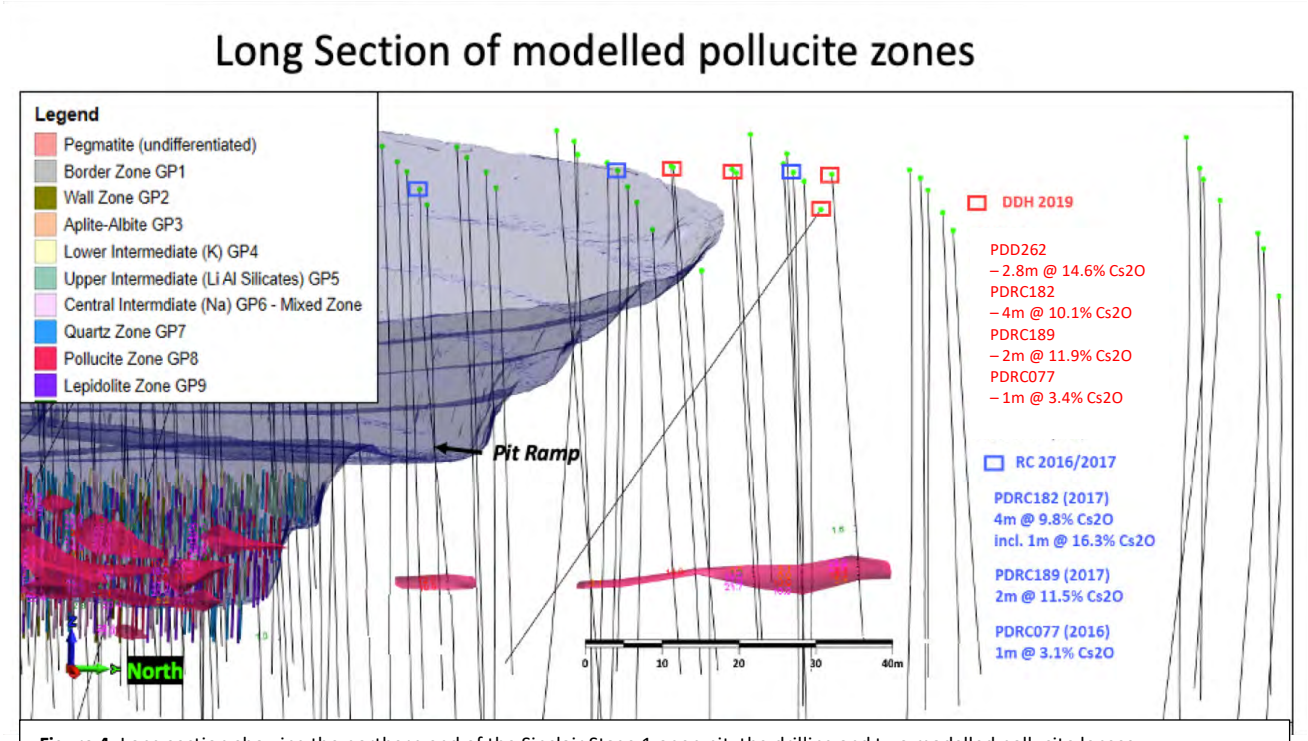

Figure 4: Long section showing the northern end of the Sinclair Stage 1 open pit, the drilling and two modelled pollucite lenses.

The Company's recent experience of mining pollucite in the open pit, including the positive reconciliation against the 2018 JORC Resource Estimate, and its understanding of what minerals and their elemental concentrations surround pollucite lenses, gives us confidence to warrant further drilling to prove up economically extractable pollucite zones.

While the Exploration Target is smaller than the Initial Resource that was mined during Stage 1, it does have the potential to yield higher margin ore, particularly if the underground development approach is possible.

As scoping or feasibility type studies are not yet complete, the Company is precluded under ASX and JORC rules from publishing production targets or economic estimates at this stage.

THE NEXT STEPS

Several steps will now be completed in order to determine if a second stage of mining should proceed:

1. ***More drilling***: Three stages of drilling are planned. The first will underpin confidence that there are additional pollucite lenses of sufficient size to suggest that a mine expansion is possible. The second will build on the scale and confidence that there is more pollucite along the 'corridor' up to and including the existing modelled lenses (~80m from the open pit wall). The third phase will test extensions to the corridor further north of the 80m mark.

2. ***Technical and economic modelling***: Independent high-level analysis will be commissioned to evaluate the technical and economic risks and returns of an open pit cutback versus a targeted underground drive from the bottom of the open pit. At this early stage, an airleg style underground drive appears likely to deliver better economics and control over dilution, but it does introduce risks associated with that style of mining.

3. ***Partner***: The Company will need to partner with an off-take buyer on terms that will maximise the economic return of the Project. This will be a function of price, minimum grade threshold and the form of the delivered material. Engagement has already commenced, and the initial feedback has been positive.

These steps are planned to be completed during the September quarter.

This ASX release has been approved by the Board of Directors

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About Pioneer Resources Limited

Following successful completion of the Sinclair Caesium Mine, Pioneer is now a well-funded and active explorer focused on key global demand-driven commodities, looking for its next opportunity to create shareholder wealth through exploration and project development. The Company operates a portfolio of strategically located lithium, caesium, nickel, cobalt and gold projects in mining regions in Western Australia, plus a high-quality lithium asset in Canada.

Lithium:

- The ***Pioneer Dome LCT Project*** is highly prospective for lithium, evidenced by the discovery of multiple spodumene bearing pegmatites in the Dome North area. It includes the Cade Deposit, on which a maiden JORC Inferred Resource of 8.2 million tonnes @ 1.23% Li_2O was estimated in November 2019.
- The Company holds a 51% Project interest in the ***Mavis Lake Lithium Project***, Canada where Company drilling has intersected spodumene.

Nickel: The Company owns the ***Blair-Golden Ridge Project*** which includes the suspended Blair Nickel Sulphide Mine, located between Kalgoorlie and Kambalda, WA. Near-mine target generation is continuing, with the Company announcing a new disseminated nickel sulphide drilling discovery at the Leo Dam Prospect in 2018, highlighting the prospectivity of the greater project area and this work has now been progressed by recent drilling.

Cobalt: Also found as a wide-spread hydromorphic layer throughout the eastern Golden Ridge Project, cobalt is another commodity with demand expanding in response to its requirement in the manufacture of cobalt-based batteries in certain electric vehicles and electricity stabilisation systems (powerwalls). Other uses for cobalt include in the manufacture of super-alloys, including jet engine turbine blades, and for corrosion resistant metal applications.

Gold: Pioneer's key gold projects are free-carried with well credentialed JV partners:

- ***Acra JV Project*** near Kalgoorlie W.A.: Northern Star Resources Limited (ASX:NST) has earned a 75% Project Interest and continues to fully fund exploration programmes until a decision to mine with Pioneer retaining a 25% interest.
- ***Kangan Project*** in the West Pilbara W.A: A farmin & JV agreement with Novo Resources Corp (TSXV.NVO) and Sumitomo Corporation will fully fund gold exploration programmes until a decision to mine is made, with Pioneer retaining a 30% interest.
- ***Balagundi Project***: A farmin & JV agreement with where Black Cat Syndicate Limited (ASX:BC8) is earning a 75% interest in the Project located at Bulong, near Kalgoorlie, W.A. Black Cat will then fully fund gold exploration programmes until a decision to mine is made, with Pioneer retaining a 25% interest.

COMPETENT PERSON

The information in this report that relates to Exploration Results is based on information compiled by Mr Stuart Kerr. Mr Kerr is a fulltime employee of Pioneer Resources Limited and holds shares/equity based securities in Pioneer Resources Limited. Mr Kerr is a member of the Australian Institute of Geoscientists and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Editions of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Kerr consents to the inclusion in the report of the matters based on his (or her) information in the form and context in which it appears.

Caution Regarding Forward Looking Information

This document may contain forward looking statements containing 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, variations to sales agreements, 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 would be based on the Company's beliefs, opinions and estimates 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.

Circumstances or management's estimates or opinions could change. The reader is cautioned not to place undue reliance on forward-looking statements.

APPENDIX 1. Drill Hole Information and Results Summary

Table 1 Reverse Circulation Drill Hole Collar Locations										
Hole ID	**Type**	**Grid**	**East (m)**	**North (m)**	**RL (m)**	**Dip (^{0})**	**azimuth (^{0})**	**RC (m)**	**Core (m)**	**Depth (m)**
PDRC077	RC	MGA94_51	371147.14	6468757.66	334.23	-60	90	79	-	79
PDRC182	RC	MGA94_51	371138.96	6468781.98	333.01	-60	90	72		72
PDRC189	RC	MGA94_51	371158.29	6468730.04	333.24	-60	90	72		72
PDD259	Core	MGA94_51	371138.3	6468766.0	333.6	-59	89	-	69	69
PDD261	Core	MGA94_51	371138.4	6468774.0	333.2	-60	89	-	63.6	63.6
PDD262	Core	MGA94_51	371139.1	6468787.0	332.8	-60	88	-	62.9	62.9

Notes:

- *Hole locations were measured by a licenced surveyor in MGA 94 zone 51 using a DGPS which is considered fit for purpose.*
- *For holes prefix PDRC, the azimuth is in degrees magnetic as derived from a hand held compass.*
- *For holes prefix PDD the azimuth is in degrees true north as derived from a north seeking gyro tool.*

Table 2 Selected Assays				
Hole ID	From	To	Metres	Cs_2O (%)
PDRC077	55	56	1.00	3.4
PDRC182	53	57	4.00	10.1
PDRC189	52	54	2.00	11.9
PDD259	54.70	55.45	0.75	14.9
PDD261	53.75	54.20	0.45	3.5
PDD261	54.20	54.50	0.30	1.3
PDD261	54.50	55.00	0.50	19.6
PDD261	55.00	56.00	1.00	27.0
PDD261	56.00	56.38	0.38	21.7
PDD262	47.25	48.1	0.85	1.6
PDD262	51.85	52.4	0.55	25.5
PDD262	52.4	52.9	0.50	22.9
PDD262	52.9	53.5	0.60	8.1
PDD262	53.5	54	0.50	13.3
PDD262	54	54.65	0.65	5.9

Notes:

- *Selected Assay results derived from chemical analysis by Intertek-Genalysis. The elemental assay results have been calculated to oxide concentrations by multiplying Cs by 1.0602 to derive Cs_2O.*
- *Intersections are 'down-hole' and do not represent a true width.*
- *Selected Cs_2O assays have been rounded to one decimal place.*

Section 1 - Sampling Techniques and Data

1. SECTION 1 - SAMPLING TECHNIQUES AND DATA

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

Pioneer Dome Project, Sinclair Deposit.

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 and HQ3 (triple tube) core samples from holes drilled from surface reported. • Single metre samples were collected in calico bags via a cone splitter directly from the cyclone on the RC drill rig. Three-metre composite samples for intervals that were considered to have low LCT element concentrations from the pXRF data were collected from the sample piles via an aluminium scoop. • HQ3 core was measured and marked up for every metre. • pXRF analysis was undertaken on each 1m sample using a Bruker S1 Titan 600 handheld portable XRF analyser for internal use only, and not reported herein.
	• *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. • RC: Individual one metre samples were collected using a cyclone and a cone splitter into sub samples of approximately 3.0kg weight, the cyclone was regularly cleaned at the end of each 6m rod to minimise contamination. • Duplicate samples and Certified Reference Standards were inserted at regular intervals to provide assay quality checks. The standards and duplicates reported within acceptable limits. • Industry-standard diamond core drilling, using HQ diamond-set cutting tools. • 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*	• Reverse circulation drilling was used to obtain 1 m samples from which approximately 3.0 kg sampled. • 3.0 kg samples were crushed and pulverised by pulp mill to nominal P80/75um to produce a 50-gram charge for analysis.

Criteria	JORC Code explanation	Commentary
	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.	• Diamond core - Half core samples of lengths determined by geology vary in weight, minimum 10cm - maximum 1m for pollucite. Other lithologies are generally 0.5m – maximum 1.5m. • Lithium exploration package of elements were analysed by a four acid digestion with a Mass Spectrometre (MS) determination (Intertek analysis code 4A Li48-MS). The quoted detection limits for this method are a lower detection limit of 0.1ppm and an upper detection of 5000ppm Li. Most other elements have a similar analytical range. Any over range samples were re analysed by a sodium peroxide zirconium crucible fusion with a detection range of 1ppm to 20% Li. • High Cs-containing samples analysed using lithium borate fusion XRF analysis.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diametre, 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. • Diamond Drilling. ○ HQ standard drill string. ○ HQ3 triple tube oriented core.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	• During RC drilling the geologist recorded occasions when sample quality is poor, sample return was low, when the sample was wet or compromised in another way. • Drill core is measured and compared with the core blocks and length of drill rods in use to ascertain recovery and core loss.
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	• Sample recovery is good for RC drilling at the Sinclair Pegmatite using the equipment described. • RC 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 was maximised using HQ3 triple tube during diamond drilling, any core loss was noted during geological logging. • 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. • Structural measurements for alpha and beta angles are recorded where possible in diamond core to aid interpretation. Recovery, RQD and fracture frequency are also recorded on all diamond core to aid in geotechnical evaluations • The detail captured is considered high and fit for purpose.

Criteria	JORC Code explanation	Commentary
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, Face, etc) photography.*	• Logging has primarily been qualitative but includes quantitative estimates on mineral abundance. • Qualitative litho-geochemistry based on pXRF analyses is used to confirm rock types. • A representative sample of each RC drill metre is sieved and retained in chip trays for future reference. • Half core is retained in trays for future reference.
	• *The total length and percentage of the relevant intersections logged.*	• The entire length of the drill holes were 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.*	• RC drilling - Individual one metre samples were collected via a cone splitter directly attached to the cyclone when dry. All samples were dry. Individual samples were approximate 3.0kg. The bulk residue was collected via green plastic bags and laid out in order on the drill pad. • Diamond core intervals between 0.1m and 1.4m (geology dependent) are sawn along orientation marks and one side of the core is consistently sampled leaving the half with the oriented line in the box for future reference. • Individual RC drilling metre samples of the pegmatite that were enriched in elements typically associated with lithium in LCT pegmatites, as determined by a portable XRF (S1 Titan 600 Bruker pXRF) were submitted to the laboratory. Three metre 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-metre composite basis) was undertaken prior to the pXRF analysis. Any three metre composite samples that returned anomalous LCT elements were re sampled using the original single metre samples. • The sample collection, splitting and sampling for the types of drilling used is considered standard industry practise.
	• *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. • Duplicate field samples are routinely inserted at a 1 per 30 samples for RC drilling. • Duplicate samples for diamond core are not applicable or needed for this type of mineralisation. • Laboratory quality control samples were inserted by the laboratory with the performance of these control samples monitored by the laboratory and the company.

Criteria	JORC Code explanation	Commentary
	• *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 considered standard industry practice and is appropriate for the deposit.
	• *For geophysical tools, spectrometres, handheld XRF instruments, etc, the parametres 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 600 handheld XRF instrument which it used to provide the geologist with basic, qualitative litho-geochemistry data and assist with selecting zones for sampling. Zones have been selected due to elevated caesium, niobium, tantalum, rubidium, or tin. • Intervals during RC drilling not identified as elevated from the pXRF have been sampled with three metre composites. • Standards and blanks have been analysed with the Bruker to ensure the instrument is operating as expected and correctly calibrated.
	• *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 by experienced staff with these intersections checked by other staff. • No holes have been twinned but the nature of pollucite mineralisation warrants very close spaced drillholes, sometimes less than 5m apart.
	• *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.
	• *Discuss any adjustment to assay data.*	• Pioneer has adjusted the lithium (Li), tantalum (Ta) and caesium (Cs) assay results to determine Li_2O, Ta_2O_5 and Cs_2O grades. This adjustment is a multiplication of the elemental Li, Ta and Cs assay results by 2.153, 1.221 and 1.0602 to determine Li_2O, Ta_2O_5 and Cs_2O 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.*	• The collar locations of the holes have been surveyed by a licenced surveyor using a differential GPS. The 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. • A high-resolution DEM exists over the entire M63/665 lease.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	• Drill spacing for lithium extensions was drilled on 20m-40m spaced panels with drill holes 10-20m apart.

Criteria	JORC Code explanation	Commentary
		• Drill spacing for caesium extensions was drilled on 10m spaced panels with drill holes 5m apart.
	• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*	• The data is not yet sufficient and dense enough to conduct the estimation of a mineral resource for pollucite (Cs). • The results of the drilling did not warrant the estimation of a lithium resource.
	• *Whether sample compositing has been applied.*	• All reported assays are of 1m samples for RC drilling and between 0.1m -1.4m for diamond core.
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, dipping west, therefore angled drill holes at -60° have been drilled at 090^0. A single drillhole angled at 157° was needed to target under the pit due to access difficulty. The pegmatite dips toward the west in the Sinclair Zone. Cross sections were drawn as the holes progressed to ensure the drilling was optimal to the interpreted orientation of the mineralisation. • Down hole intercept widths are estimated to 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 Pioneer Dome drilling reported herein is entirely within M63/665 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 lithium exploration drilling or sampling on the Pioneer Dome project outside of Pioneer Resources Ltd. 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. The Sinclair Deposit is classified as a Petalite/Lepidolite sub type and is highly enriched in caesium in the very rare mineral form pollucite.
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.*	• Weighted average Cs_2O assays within the release are calculated using 1% Cs_2O cut-off grade, minimum thickness 0.5m, no internal waste and no external dilution.

Criteria	JORC Code explanation	Commentary
	• *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.*	• Weighted average Li2O assays (not reported or relevant to this release) are for generally adjacent samples above 0.8% Li_2O. • Assays in Table 2 are as per the intervals sampled. • There are no metal equivalent values reported.
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 drilling and mapping, suggests that the true widths approximate 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 figures 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.*	• Planned further work includes exploration and resource drilling, geological modelling and 3DM update. • Results of the drilling will determine if a resource estimation of remaining pollucite is warranted.