POLLUCITE EXTRACTION ON SCHEDULE FOR DECEMBER
PEGMATITE CORE MINERALS ENCOUNTERED IN THE MOST RECENT BENCH AT THE SINCLAIR MINE

Perth, Western Australia: 28 November 2018: Pioneer Resources Limited (“Pioneer” or the “Company”) (ASX: PIO) is pleased to provide an update for its 100%-owned Sinclair Mine, an operation to extract the caesium mineral pollucite, located 40km north of Norseman, Western Australia.

Mining Update

- 420,000 BCM\(^2\) excavated to date representing 90% of a planned material to be mined from the Stage 1 Pit;
- Overburden mined, in addition to waste, includes an estimated 122,000t\(^2\) of high-quality potassium feldspar (“KFA”) and 11,000t\(^2\) of potassium feldspar with elevated rubidium (“KFX”). Small volumes of potassium feldspar continue to be mined. Good quality KFA remains in the northern pit wall, which is consistent with the geological model and mine plan.
- Recent blast-hole samples contain the lithium minerals lepidolite and petalite, confirming that mining is approaching the pegmatite “Core Zone” which includes the project objective: the caesium-rich pollucite deposit.

Photograph 1 - 25\(^{th}\) November 2018: Panorama of the Stage 1 Sinclair Mine looking South. Mining equipment includes a 75t excavator and 4 x 40 tonne articulated dump-trucks (moxies), plus drill and blast equipment.

The Stage 1 Sinclair Mine is an open pit designed to extract pollucite from within the highly fractionated inner “core zone” of the Sinclair pegmatite intrusive, located approximately 40m below surface.

At present the northern pit floor (at the centre of the photograph) is at an RL of 300m. Small quantities of lepidolite and petalite were excavated while removing the 302.5-300m RL flitch, indicating that mining is starting to expose the core zone.

The mineralised core zone comprises pollucite, lepidolite and petalite, together with sub parallel quartz ribs. The geological model suggests the pollucite extraction will commence from the 295m RL.
Pioneer Managing Director, Dave Crook, said:

“Progress at the Sinclair Mine is currently on time and on budget with 90% of material moved.

“Within the next few weeks we will extract the pollucite mineralisation, which will be a very exciting time as the hard work and personal commitment put in by the Company’s staff comes to fruition.”

**Photograph 2 - The Sinclair Pit looking north:** The potassium feldspar (KFA) zone extends north from the Stage 1 pit.

**Photograph 3 – Potassium Feldspar (KFA) Stockpile:**

Based on truck counts and applying a truck tonnage factor, the Company’s geologists have estimated that there is 122,000t of KFA potassium feldspar on the stockpile.
A further 70,000t of second-quality potassium feldspar has been stockpiled separately or used for sheeting the stockpile area, in a manner that will allow recovery and beneficiation to remove mica-contamination prior to sale.

Rubidium-containing potassium feldspar (KFX) is also stockpiled separately.

Figure 1. Location diagram for the Pioneer Dome Project, and Sinclair Deposit, located approximately 40km north of Norseman, WA.

Figure 2. Drill hole Plan and interpreted geology of the Sinclair Caesium Deposit

Figure 3. Cross section through the Sinclair Deposit Caesium at 6,468,678mN.
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 high quality lithium asset 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 rare caesium mineral that forms in extremely differentiated LCT pegmatite systems. Global supply is very constrained. The primarily use of caesium is in Caesium Formate brine used in high temperature/high pressure oil and gas drilling.

The pollucite is overlain by thicknesses of microcline, a potassium feldspar, and co-exists with the lithium minerals petalite and lepidolite.

The Company recently provided a revised Mineral Resource Estimate (ASX 8 November 2018). The Mineral Resource Estimate is **7,110t of the caesium ore ‘pollucite’ with a grade of 16.4% Cs₂O**, as summarised by category in Table 1 below.

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

<table>
<thead>
<tr>
<th>Classification</th>
<th>Tonnes (t)</th>
<th>Cs₂O (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured</td>
<td>6,340</td>
<td>17.5</td>
</tr>
<tr>
<td>Indicated</td>
<td>490</td>
<td>5.3</td>
</tr>
<tr>
<td>Inferred</td>
<td>280</td>
<td>11.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>7,110</strong></td>
<td><strong>16.4</strong></td>
</tr>
</tbody>
</table>

Note: Appropriate rounding applied

Core from PDD225. Significant pollucite Intersected over **7m at 19.5% Cs₂O from 43m**

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**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:** 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**


**Notes:**

1. BCM means bank cubic metres and is an estimate of the in-situ volume of rock moved. The estimate is made by multiplying the count of truck loads by the truck’s estimated carrying capacity. The estimated volume is corroborated by a monthly survey of the mine.
2. The stockpile tonnage is estimated by multiplying the BCM by the specific gravity of the rock.
**Competent Person’ Statement**

The information above that relates to the Company’s Resources and Exploration Results is extracted from various ASX Announcements as listed in the References, including released on 8 November 2018 entitled “Mineral Resource Update for the Sinclair Caesium Zone” and for which Competent Persons consents were obtained. The Competent Persons’ consents remain in place for subsequent releases by the Company of the same information in the same form and context, until the consent is withdrawn or replaced by a subsequent report and accompanying consent. The reports are available to review on the ASX website and on the Company’s website at [www.PIOresources.com.au](http://www.PIOresources.com.au). The Company confirms that it is not aware of any new information or data that materially effects the information included in the original market announcement, and, in the case of estimates of Mineral Resources, that all market assumptions and technical assumptions underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

**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.