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# DRILLING CONTINUES TO DEFINE SHALLOW HIGH-GRADE CAESIUM AT THE SINCLAIR DISCOVERY WITHIN THE PIONEER DOME PEGMATITE.

**Perth Western Australia, 24 January 2017: Pioneer Resources Limited** ("Company" or "Pioneer", ASX: PIO) is pleased to provide a drilling update for its 100%-held Pioneer Dome Lithium-Caesium-Tantalum ("LCT") Pegmatite Project in the Eastern Goldfields of Western Australia.

On 13 January 2017, the Company provided a tabulation of high-grade caesium assays (>10% Cs<sub>2</sub>O) from drilling completed in December 2016, and advised that drilling would resume.

Approximately 1,200m of RC drilling is now underway and is expected to be completed before the end of January, with assay results to hand by the end of February. Holes are designed to test for extensions to the Sinclair Caesium Zone south of drill hole PDRC083 and north of PCRC074 (see Figure 1); and as an initial test of a high priority lithium-caesium target located 175m south of the Sinclair Zone.

### THE SINCLAIR HIGH-GRADE CAESIUM EXPLORATION TARGET

**The high-value caesium mineral pollucite** has been intersected in drilling at the Sinclair Zone over a strike length of 60m prior to this round of drilling, including:

• PDRC015: 6m at 29.37% Cs2O from 47m<sup>1</sup> (highest grade of 32.46% Cs<sub>2</sub>O from 50m)

• PDRCD068: 3.85m at 27.78% Cs<sub>2</sub>O from 44.35m<sup>2</sup> (highest grade of 29.53% Cs<sub>2</sub>O from 46m)

• PDRCD071: 6.35m at 18.60% Cs<sub>2</sub>O from 41.4m<sup>2</sup> (highest grade of 30.37% Cs<sub>2</sub>O from 42m)

PDRC074: 7m at 17.12% Cs2O from 49m¹ (highest grade of 25.44% Cs2O from 54m)

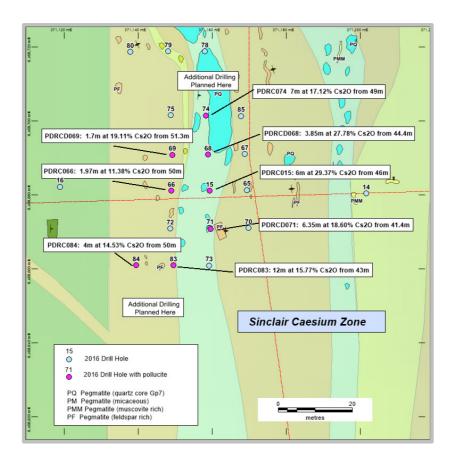
• PDRC083: 12m at 15.77% Cs<sub>2</sub>O from 43m<sup>1</sup> (highest grade of 26.84% Cs<sub>2</sub>O from 47m)

• PDRC084: 4m at 14.53% Cs<sub>2</sub>O from 50m<sup>1</sup> (highest grade of 16.20% Cs<sub>2</sub>O from 52m)

# **DEVELOPMENT-FOCUSED OUTLOOK**

- Mining Lease Application pegged, and negotiations with the Native Title holder initiated;
- Regulatory process (including POW, mining proposal, botanical monitoring and project management plan) under way. When all approvals are received, the Company plans to extract a bulk sample of 1,000t of high grade pollucite for metallurgical test work; and by doing so will further test mineralisation for continuity;
- A Mineral Resource Estimate, which is a component of the overall development plan, has commenced;
- Concept metallurgical process test work proposals received for both pollucite (for the production of caesium formate) and lepidolite (for lithium carbonate).

Pioneer's Managing Director, David Crook, said "The Sinclair Caesium Zone is of sufficient size to warrant full evaluation of the economics and options to efficiently commercialise the discovery, which will be completed while the Company continues to evaluate other lithium targets within the Project."



**Figure 1. Drill Hole Collar Locations at the Sinclair Caesium Zone.** Pollucite has been intersected in marked holes. The lens of mineralisation is open to extension in both a northerly and southerly direction.

# ABOUT POLLUCITE - THE PRINCIPAL ORE MINERAL OF CAESIUM

Pollucite is a rare mineral of caesium that forms only in extremely differentiated zones of rare-metal lithium-caesium-tantalum pegmatite systems. It is found in commercial quantities at the Tanco Mine in Canada and Bikita Mine in Zimbabwe, where it is mined principally for use in the manufacture of Caesium Formate, a high density fluid used in high temperature/high pressure oil and gas drilling. The principal Caesium Formate manufacturer and dealer is Cabot Corporation (NYSE: CBT), through its Cabot Speciality Fluids division. Caesium Formate provides a number of well documented benefits including, minimal damage to the hydrocarbon-bearing formation resulting in higher production rates, where it acts as a lubricant, is non-corrosive and is considered an environmentally-friendly benign chemical when compared to alternatives. Caesium in principal commercial usage is the non-radioactive isotope. (Refer to Downs, J., et al)

# **CAESIUM EXPLORATION TARGET**

On 13 January 2017, the Company provided an initial Exploration Target for the Sinclair Caesium Zone, being between 10,000t and 25,000t of pollucite at a grade between 15% and 25%  $Cs_2O^*$ 

This target is based on RC and Diamond Drilling, plus detailed geochemistry and geological mapping. Generally, drill holes have been completed on an approximate 10m x 10m grid.

\* It is important to note that the quantity and grade of an Exploration Target is conceptual in nature, and that more work is required before an estimate of a Mineral Resource will be undertaken. It is therefore inherently uncertain that the additional work will result in the estimation of a Mineral Resource, as defined under the JORC Code 2012.

### **ABOUT PIONEER RESOURCES LIMITED**

The Company's strategy is to actively explore for key, global demand-driven commodities in highly prospective geological domains, in areas with low geopolitical risk and with established infrastructure. The Company's portfolio includes high quality lithium and caesium assets in Canada and WA, plus strategically located gold and nickel projects in mining regions of Western Australia.

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## **FOOTNOTES**

- 1. Reverse Circulation drill hole
- 2. Diamond Core drill hole
- 3. Refer to Company announcements to ASX 17 October 2016
- 4. Refer to Company announcements to ASX 14 December 2016

# **REFERENCES**

Company announcements to ASX 19 May 2016, 27 July 2016, 28 August 2016, 1 September 2016, 4 October 2016, 17 October 2016, 14 November 2016, 14 December 2016, 13 January 2017 and Quarterly Activity Reports.

Bradley, D., and McAuley, A. (2013): "A preliminary deposit model for lithium-cesium-tantalum (LCT) pegmatites". *U.S. Geological Survey Open File Report 2013-1008 7p.* 

Downs, J. D., Blaszczynski, M., Turner, J., and Harris, M. (2006): "Drilling and Completing Difficult HP/HT Wells with the aid of Cesium Formate Brines – A Performance review."

London, David (2008) Pegmatites, Mineralogical Association of Canada.

Tuck, C. A. (2015) "U.S. Geological Survey, Mineral Commodity Summaries, January 2015, (Cesium)"

### **GLOSSARY**

For descriptions of any technical terms that are not described within the report, the reader is directed to various internet sources such as Wikipedia (www.wikipedia.org) or Mindat (www.mindat.org)

### **COMPETENT PERSON**

The information in this report that relates to Exploration Results is based on information supplied to and compiled by Mr David Crook and Mr Paul Dunbar. Mr Crook is a full time employee of Pioneer Resources Limited and Mr Dunbar is a consultant to Pioneer Resources Limited. Both Mr Crook and Mr Dunbar are members of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists and have sufficient experience which is relevant to the exploration processes 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 Crook and Mr Dunbar consent to the inclusion of the matters presented in the announcement in the form and context in which they appear.

### **CAUTION REGARDING FORWARD LOOKING INFORMATION**

This announcement contains certain statements that may be deemed "forward-looking statements." All statements in this announcement, other than statements of historical facts, that address future market developments, government actions and events, are forward-looking statements.

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 generally on the Company's beliefs, opinions and estimates as of the dates the forward looking statements that 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.

Although Pioneer believes the outcomes expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and actual results or developments may differ materially from those in forward-looking statements. Factors that could cause actual results to differ materially from those in forward-looking statements include new rare earth applications, the development of economic rare earth substitutes and general economic, market or business conditions.

While, Pioneer has made every reasonable effort to ensure the veracity of the information presented they cannot expressly guarantee the accuracy and reliability of the estimates, forecasts and conclusions contained herein. Accordingly, the statements in the presentation should be used for general guidance only.