

## DRILLING TO COMMENCE AT PIONEER DOME LITHIUM PROJECT

**Perth Western Australia, 23 August 2016: Pioneer Resources Limited ("Company" or "Pioneer", ASX: PIO)** is pleased to provide the following exploration update.

The Company advises that drilling is booked to commence on Tuesday 30 August. All regulatory requirements for drilling have been completed, including a Programme of Work approval and a Heritage Protection Survey.

- **First drill holes to target PEG008, a 1.7 km long suite of mapped, differentiated pegmatites with a coincident lithium soil geochemistry anomaly;**
- **Programme of approximately 5,000m RC drilling, testing PEG001, PEG002 and PEG008. Subject to results, additional RC and diamond core drilling can immediately follow;**
- **Laboratory results expected during late September and October 2016;**
- **Additional soil geochemistry (halted due to rain) to be progressively completed to extend anomalies generated between PEG003 and PEG007 inclusive.**

The 100%-held Pioneer Dome Lithium Project is located mid-way between Kalgoorlie and the Port of Esperance, and 75km south of the Mt Marion Lithium Mine, in Western Australia.

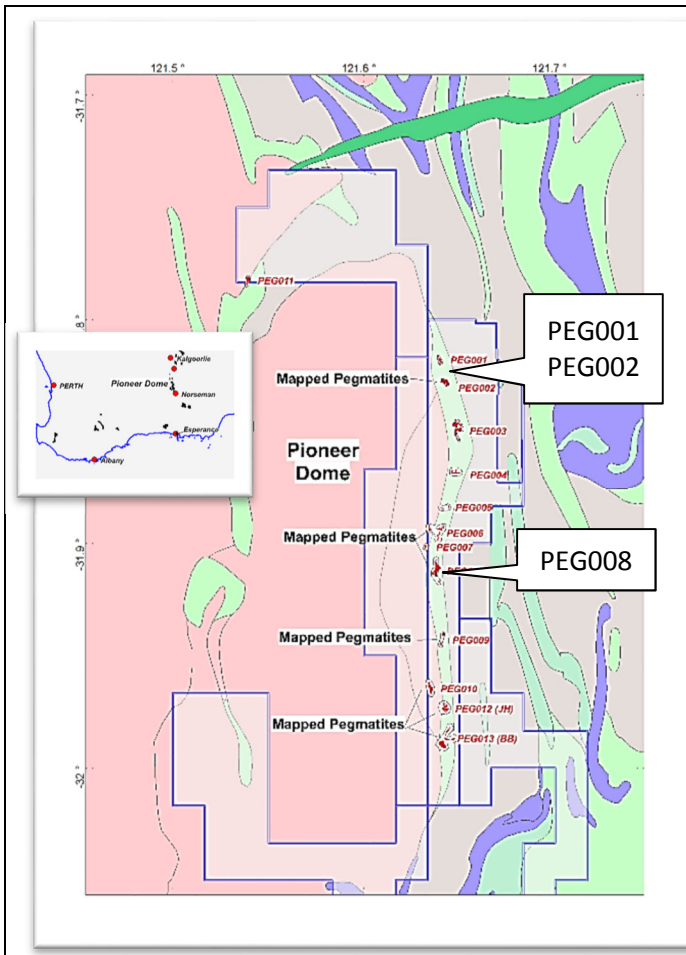
The programme as planned will initially see approximately 5,000 metres of reverse circulation ("RC") drilling completed, with drill holes collared on a 160 x 80 metre grid. A provision for additional drilling may see hole-spacing reduced to 40 metres along the drill traverses as results are received.

PEG008 is of a class of rocks referred to as LCT Pegmatites (anomalous in "L" Lithium "C" Caesium and "T" Tantalum). World-wide, LCT Pegmatites are a major source of lithium (occurring in spodumene, petalite and lepidolite), tantalum (tantallite) and caesium (pollucite). Western Australian examples include Greenbushes (the world's largest spodumene mine), Pilgangoora, Mt Marian and Mt Cattlin.

Approximately 50% of the Pioneer Dome Project pegmatites have been covered soil geochemistry. When results are combined with imagery from airborne geophysical surveys and geological mapping, a 14 kilometre long pegmatite corridor is evident, with 13 mapped pegmatite clusters identified to date along the eastern margin of the Pioneer Dome.

Laboratory results from the RC drilling program are expected in September-October. The Company also plans to follow up the RC program with a supporting diamond core drill program.

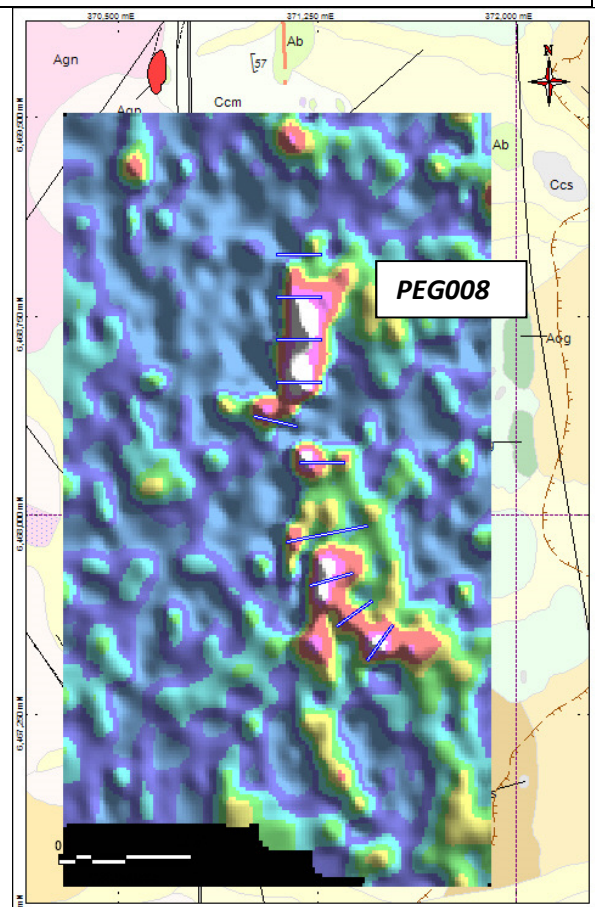
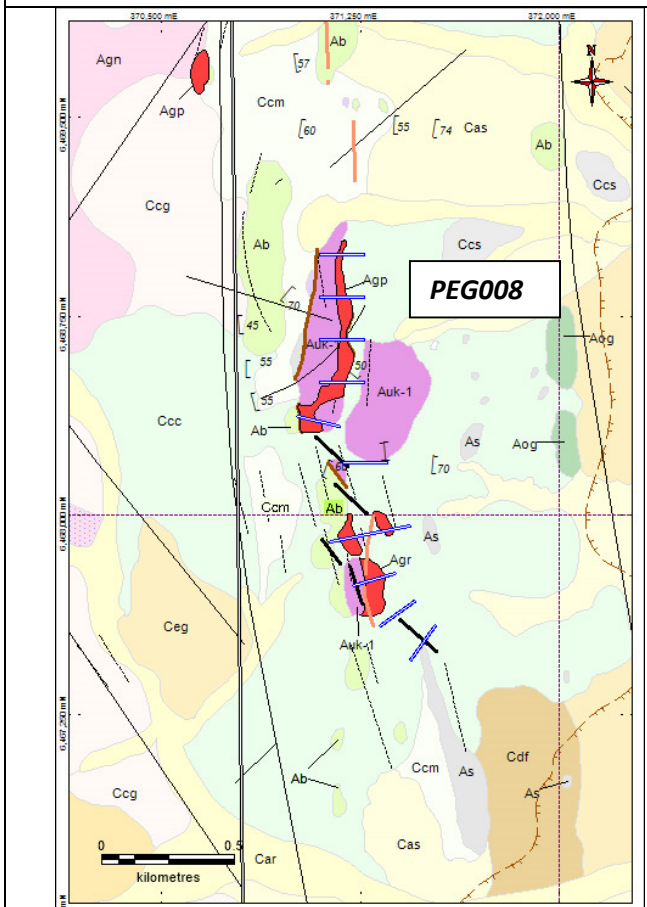




**Figure 1.** The Pioneer Dome Lithium Project tenements showing mapped pegmatites.

Lithium anomalies from soil geochemistry have been identified at PEG001-PEG002, and PEG008.

Other anomalies are indicated from small surveys at PEG003, 005, 006 and 009, however more sampling is required to fully resolve drill targets.



**Figure 2: Geology of the PEG008 lithium target:** Based on field mapping and other sources, the pegmatite cluster is shown in red. (Jones 2005)  
The overall anomaly is approximately 1.7km long.

**Figure 3: Geochemistry Image of a proprietary lithium index:** The anomaly is coincident with mapped (and additional buried) pegmatites. Blue lines are proposed drill traverses.

## **ABOUT THE PIONEER DOME LITHIUM PROJECT**

The Pioneer Dome was recognised as having potential for lithium mineralisation following a review of historic exploration reports which recorded that numerous pegmatites were intersected in nickel or gold-focused drilling undertaken since the 1960s. The prospectivity model was further enhanced by colloquial records of lithium and tantalum mineralisation and tourmaline in prospector scale workings, which are some of the characteristic minerals of a zoned rare-metal pegmatite complex.

The Project comprises 1 granted exploration licence and 4 exploration licence applications, with a total area of 284 sq km, extending over approximately a 45 km strike length and a 20 km width.

The Company has taken in the order of 5,000 lithium-focused soil samples, which strongly support the case for the presence of LCT pegmatites with the potential to host lithium minerals.

The Project is well located being approximately 130km south of Kalgoorlie, and 200km north of the Port of Esperance. Access is excellent with the Goldfields Highway and Esperance railway, and water and gas pipelines passing through the Project. About Pioneer Resources Limited

Pioneer is an active exploration company focused on key global demand-driven commodities. This includes a portfolio of strategically located lithium, gold, nickel and other commodity projects in mining regions in Western Australia, plus a portfolio of high quality lithium assets, in Canada and 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.

-ENDS-



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## REFERENCES

Company announcements to ASX 19 May, 2016, 27 July 2016.

Jones, M.G., 2005: The Surface Geology of the Pioneer Dome Area, Yilgarn Craton, W.A

## GLOSSARY

Elements: “Au” means gold, “Be” beryllium, “Cs” caesium, “Cu” copper, “Ni” nickel, “Ag” silver, “Pb” lead, “Zn” zinc, “Pt” platinum, “Pd” palladium, “Li” Lithium, “Nb” niobium, “Rb” rubidium, “Sb” antimony, “Sn” tin, “Ta” tantalum.

“Diamond Drilling” or “Core Drilling” uses a diamond-set drill bit to produce a cylindrical core of rock.

“Li<sub>2</sub>O” means Lithia, or Lithium Oxide, and is the elemental metal quantity converted to its oxide (in percent (%)), which is a form of reporting used for lithium in scientific literature. The conversion factor for Li to Li<sub>2</sub>O is 2.152.

“Mafic” and “Ultramafic” are a class of igneous rocks high in magnesium “ma” and iron “fic”, which are thought to be derived from magma from near the earth’s mantle.

“Pegmatite” is a common plutonic rock of variable texture and coarseness that is composed of interlocking crystals of widely different sizes. They are formed by fractional crystallization of an incompatible element-enriched granitic melt. Several factors control whether or not barren granite will fractionate to produce a fertile granite melt (Černý 1991; Breaks 2003):

- presence of trapped volatiles: fertile granites crystallize from a volatile-rich melt.
- composition of melt: fertile granites are derived from an aluminium-rich melt.
- source of magma: barren granites are usually derived from the partial melting of an igneous source (I-type), whereas fertile granites are derived from partial melting of a peraluminous sedimentary source (S-type).
- degree of partial melting: fertile granites require a high degree of partial melting of the source rock that produced the magma.

Initially, fractional crystallization of a granitic melt will form barren granite consisting of common rock forming minerals such as quartz, potassium feldspar, plagioclase and mica. Because incompatible rare elements, such as Be, Li, Nb, Ta, Cs, B, which do not easily fit into the crystal of these common rock-forming minerals, become increasingly concentrated in the granitic melt as common rock forming minerals continue to crystallize and separate from the melt.

“Spodumene” is a lithium aluminosilicate (pyroxene) found in certain rare-element pegmatites, with the formula LiAlSi<sub>2</sub>O<sub>6</sub>. Spodumene is the principal lithium mineral sourced from pegmatites and is the preferred source for high purity lithium products.

“ppm” means 1 part per million by weight.

“RC” means reverse circulation, a drilling technique that is used to return uncontaminated pulverised rock samples through a central tube inside the drill pipes. RC samples can be used in industry-standard Mineral Resource estimates.

“Regolith” means the layer of loose, heterogeneous material covering solid rock. It includes dust, soil, broken rock, and other related materials. In Western Australia it most commonly refers to the almost ubiquitous layer of weathered and decomposed rock overlying fresh rock.

“N”, “S”, “E”, or “W” refer to the compass orientations north, south, east or west respectively.

“pXRF” means portable x-ray fluorescence. Pioneer owns an Olympus portable XRF analyser which is an analytical tool providing semi-quantitative analyses for a range of elements ‘in the field’.

## **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 Dr Nigel Brand. Mr Crook is a full time employee of Pioneer Resources Limited and a member of The Australasian Institute of Mining and Metallurgy (member 105893) and the Australian Institute of Geoscientists (member 6034). Mr Crook has 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'.

Dr Brand is the principal of geochemical consultancy Geochemical Services Pty Ltd, and is 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 Dr Brand 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 document 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.