

## Lithium exploration resumes at Dome North

*Detailed mapping completed and air-core drilling set to start by the end of May to test for spodumene-bearing pegmatites in the vicinity of the Cade Spodumene Deposit*

### HIGHLIGHTS

- ⇒ **Field work re-commenced** on 23 April after three weeks of COVID-19 stand-down.
- ⇒ Detailed mapping undertaken within the Dome North area has allowed the geological interpretation of the structural setting to evolve, **strengthening confidence in the potential to find more spodumene-bearing pegmatites**.
- ⇒ A **staged, low cost air-core drilling campaign** will commence by end-May around the Cade Spodumene Deposit (*JORC Resource Estimate 8.2Mt @ 1.23% Li<sub>2</sub>O*) and its surrounds.
- ⇒ The air-core programme is **designed to test for blind pegmatites** (located under cover and without a surface expression). The depth of surface cover is typically <10m and the oxide zone is typically 40-60m within the areas of interest.
- ⇒ **An air-core drill will 'hit'** (but not drill through a pegmatite), providing evidence of its existence. Also, the air-core drill cuttings **will be assayed for pathfinder elements**, using Pioneer's internally developed exploration criteria, **to look for any 'near misses'**.
- ⇒ If **fertile LCT pegmatites are intersected in drilling** or strong anomalism is detected, follow-up air-core and/or reverse circulation drill programme(s) will be planned.
- ⇒ **Results from metallurgical test work** on the Cade Spodumene Deposit are expected in June.
- ⇒ **First pass field reconnaissance is underway** in the South Dome area of the Pioneer Dome Project, an area considered prospective for gold and lithium. A desktop study on the gold potential of the Pioneer Dome Project has also commenced.
- ⇒ Mapping of, and a field visit to, the **Juno nickel trend** was undertaken and the next steps are being planned. The area of interest trend is located ~10kms along strike to the south of the Juno 4 nickel prospect owned by Mincor Resources NL (ASX:MCR).



Pioneer Resources Managing Director, Tim Spencer, said: *"Our team is pleased to be back in the field exploring, after adopting appropriate COVID-19 protocols. Drilling at the Dome North area yielded excellent lithium results last year and we are now aiming to add 'low discovery cost' tonnes and grade to the maiden JORC Resource Estimate of 8.2 million tonnes @ 1.23% Li<sub>2</sub>O to get to a development scale. Air-core drilling is a low-cost way to test for pegmatites not outcropping at surface in the vicinity of the Cade Lithium Deposit and the other mineralised pegmatites we have already discovered there. We will also continue to work up the gold and nickel targets at the Pioneer Dome Project."*

Pioneer Resources (ASX: PIO; “Pioneer” or “the Company”) is pleased to advise that exploration field work has re-commenced at its 100%-owned Pioneer Dome Lithium Project, located near Norseman in Western Australia following a three-week suspension due to COVID-19 travel restrictions and lockdown requirements.

A programme of detailed mapping has been completed within the Dome North area in preparation for the next drill programme, together with reconnaissance exploration programmes over prospective lithium and gold areas in the Dome South area.

## **DOME NORTH AREA**

Detailed 1:1000 geological surface mapping was completed in April and is consistent with earlier observations of the Cade Deposit that its outcrops display fabrics that suggest that it may actually comprise several thick pegmatites with sigmoidal or ‘S-shaped’ orientations instead of one planar shaped “branched” pegmatite.

Should this be the case, and given the current wide-spaced drilling in the area, the Cade Deposit could be made up of multiple spodumene pegmatites with greater potential for resource growth than first thought.

Applying this new interpretation of sigmoidal shaped lenses shifts the target areas for drilling the northern and southern strike extensions. These areas will be targeted by the upcoming air-core drilling program.

The Davy Prospect, situated 1.4km west of the Cade Deposit, exhibits a very similar mineralisation style to Cade. The Davy pegmatites are open along strike and at depth and show good potential for adding additional lithium resources to the Cade Deposit, currently 8.2Mt at 1.23% Li<sub>2</sub>O.

The proposed air-core drill programme is planned to commence by the end of May and will comprise 40-80m hole spacings on 200-400m section spacings across areas surrounding the known mineralised pegmatites. It will test for up-dip, near-surface and strike extents of the pegmatites and for new blind pegmatite bodies with no outcrop exposure. The results of the programme will be available by the end of June.

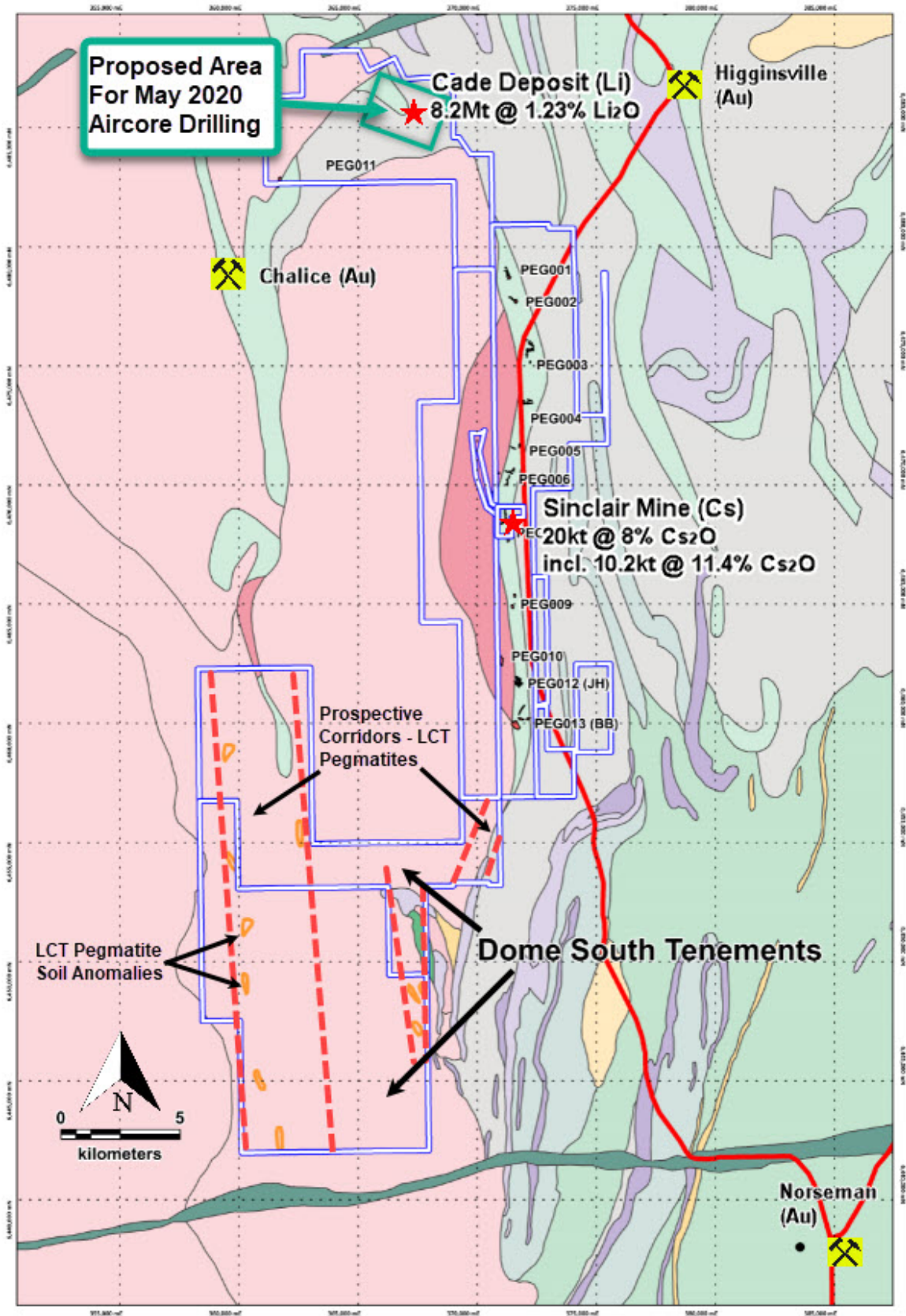
## **DOME SOUTH AREA**

The Pioneer Dome Project covers a strike length of 45km from its northern to its southern boundary and is made up of seven exploration tenements and a Mining Lease (hosting the Sinclair Caesium Mine). Most activity in recent years has been focused on the northernmost tenement, which hosts the Dome North lithium prospects including the Cade Spodumene Deposit, and the eastern flank, which hosts the Sinclair Caesium Mine and numerous pegmatites (designated as ‘PEG...’ in the Figure 2 geological map).

The Dome South tenements (tenements E63/1783 and E63/1825) are less advanced from an exploration perspective, but a review of soil geochemistry has highlighted areas of interest that indicate the potential for LCT pegmatites within a broad north-south striking greenstone corridor on the western flank of the Pioneer Dome Granite and require ground-truthing.

In addition to lithium, selected soils over areas of structural complexity considered prospective for gold mineralisation were submitted for analysis via aqua regia digest and have identified several anomalous zones

Field investigation is required to put the geochemical anomalism into geological context and this is currently underway in conjunction with a detailed desktop study on the gold potential of the Pioneer Dome Project.



**Figure 2:** 1:500k Geological map of the Pioneer Dome Project (tenements in blue) relative to the Norseman Township, highlighting mapped pegmatites (PEG001-PEG0013), the Dome North area including the Cade spodumene lithium pegmatites and the Sinclair Caesium Mine. Nearby gold mines are illustrated by the yellow mine site symbol and labelled.

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*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<sub>2</sub>O 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.*

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*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.*

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