

ASX announcement

2 November 2022

Additional large pegmatites discovered at Higginsville

Argonaut Resources NL (ASX: ARE) (*Argonaut* or the *Company*) is pleased to advise that recent fieldwork has led to the discovery of additional, large Lithium-Caesium-Tantalum Pegmatites (*LCT Pegmatites*) within the Darson pegmatite swarm at its 80% held Higginsville project in Western Australia. Samples have been submitted for analysis.

Highlights

LCT Pegmatites

- Field mapping and sampling by Argonaut has defined an **extensive swarm of LCT Pegmatites**.
- Recent detailed mapping of the Darson pegmatite swarm uncovered several new LCT Pegmatite outcrops, the largest of which measures **~400m in strike length and ~150m in width**.
- The pegmatite swarm extends over an aggregate **strike length of two kilometres** (Figure 2).
- Previous mapping by Argonaut had delineated LCT Pegmatites up to 90m in width¹.

Prime Geological Setting for Discovery

- The Darson pegmatite swarm sits at or near the margin of the Pioneer Granite.
- This is a **prime geological setting** for the discovery of a commercial lithium deposit and is located within:
 - four kilometres of the Dome North lithium pegmatite deposits, and
 - 12 kilometres of the Sinclair Caesium Mine (see Figure 2).
- Regionally, the Darson Pegmatite Swarm is located at the centre of a cluster of lithium Resources including:
 - Bald Hill (Alliance),
 - Mount Marion (Mineral Resources) and
 - Buldania (Liontown). See Figure 1.

Lithium Exploration

- Argonaut has submitted pegmatite samples for laboratory analysis.
- Soil samples have been taken across the pegmatite swarm and have also submitted for laboratory analysis.
- Argonaut is currently seeking approvals for an **RC drilling program** targeting LCT Pegmatites at the Darson prospect.
- Argonaut is fully funded to proceed to drill the lithium targets following receipt of approvals.

“Pegmatites of these dimensions have the potential to host lithium deposits of significance to Argonaut investors.”

Lindsay Owler, Argonaut CEO

¹ <https://www.argonautresources.com/site/pdf/a797f0ff-48c3-4bfc-ba27-60e0d99c771a/Higginsville-Swarm-of-Lithium-Pegmatites-to-be-Explored.pdf>

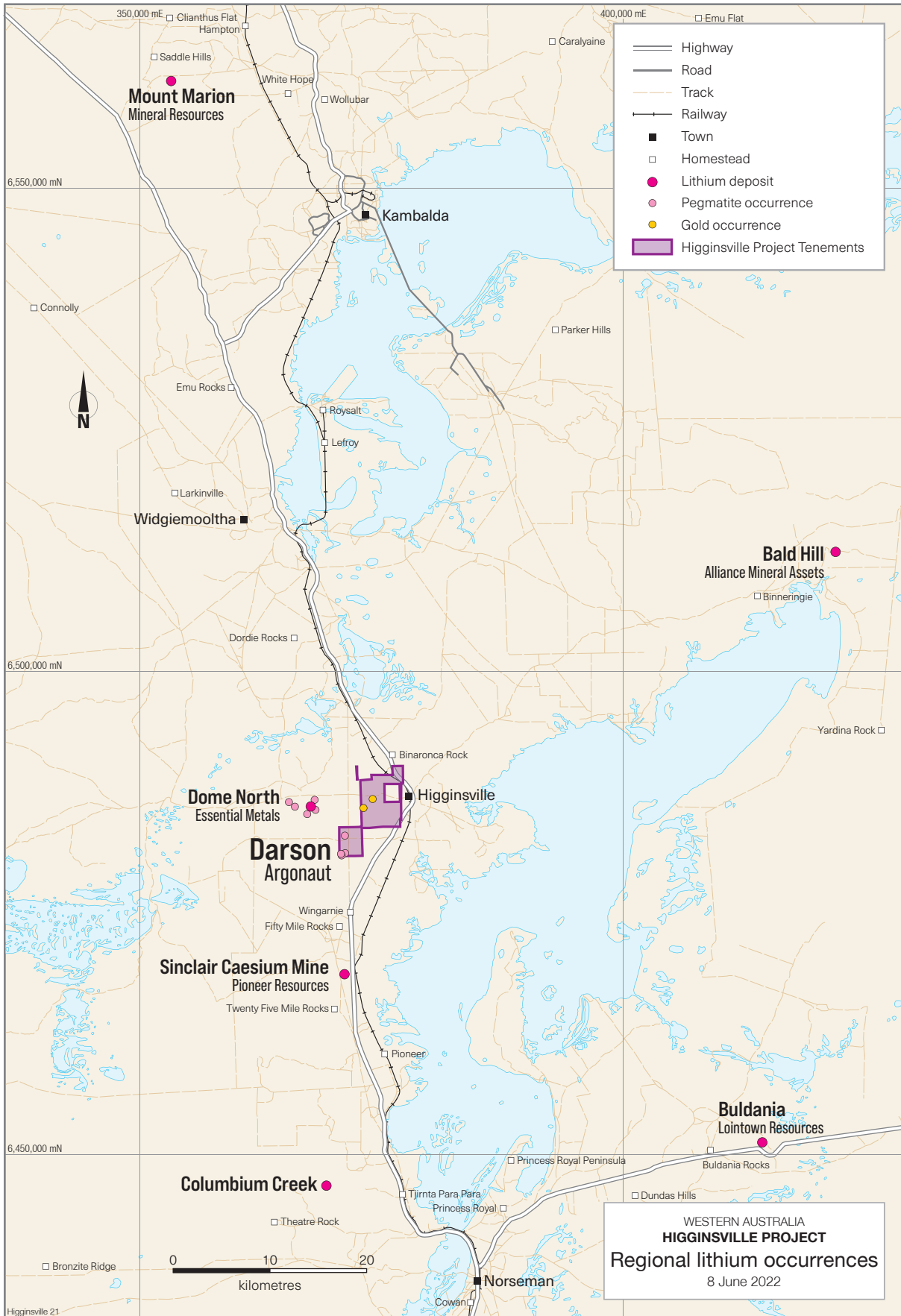


Figure 1 Regional lithium pegmatite deposits in the area of the Darson Pegmatite Swarm, Higginsville, WA.

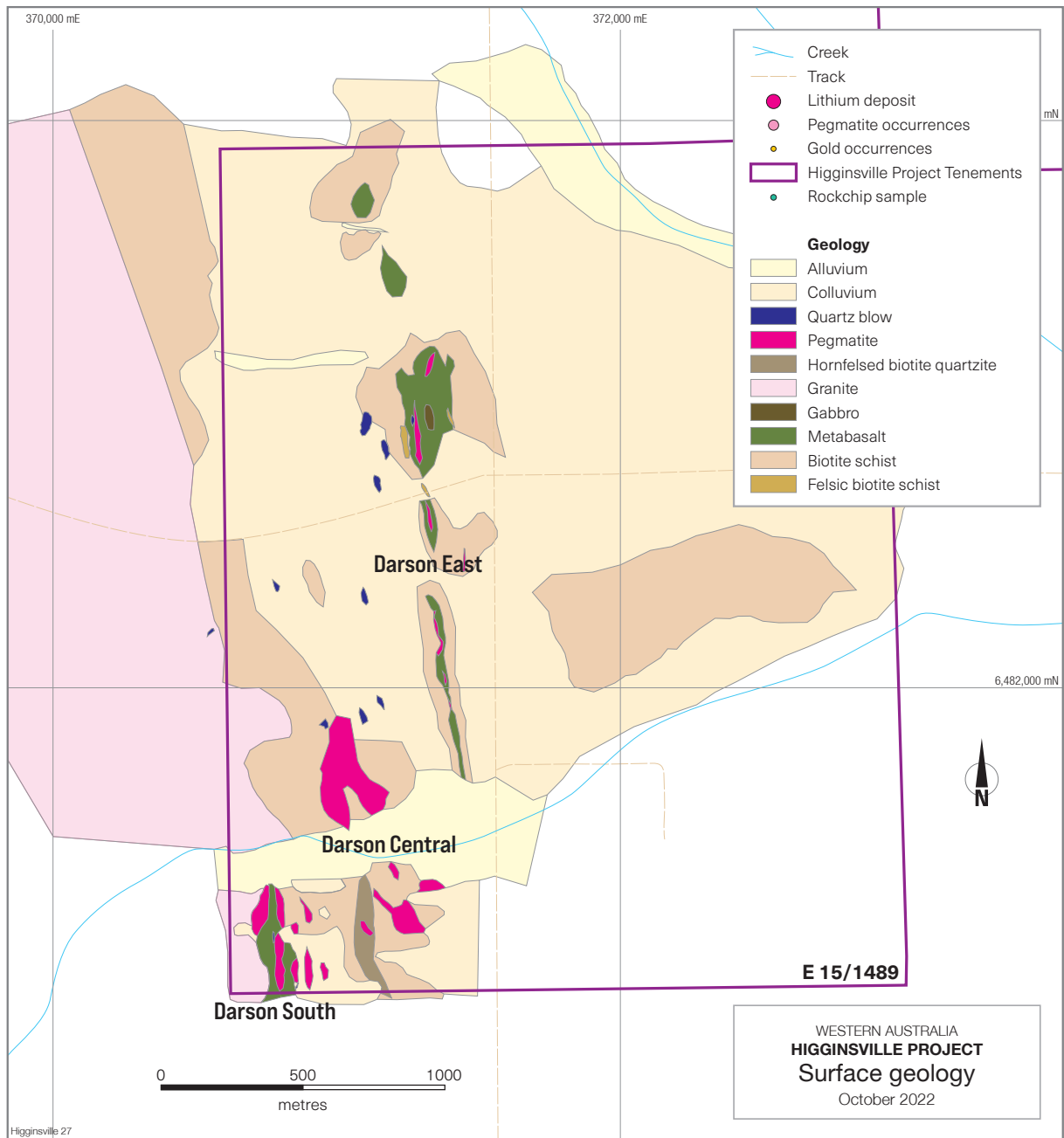


Figure 2 The Darson Pegmatite Swarm is located radially outwards from the Pioneer Granite.

Lithium Exploration

Darson Pegmatite Swarm

Numerous LCT Pegmatites up to 150m wide

Fieldwork undertaken by Argonaut during February 2022 and September/October 2022 has defined an extensive swarm of LCT Pegmatites up to 150m in width extending over an aggregate strike length of two kilometres (Figure 2).

The pegmatites are located near the margin of the Pioneer Granite. The Pioneer Granite caused the emplacement of LCT Pegmatites at the Dome North lithium deposit and at Sinclair, which was previously mined for caesium (Figure 1).

Mapping

Following the success of initial scouting traverses over the Darson area of E15/1489 in February 2022, detailed mapping was undertaken during September and October 2022 in conjunction with a soil sampling program.

This recent geological mapping identified several previously unrecorded LCT Pegmatite occurrences including a particularly large pegmatite measuring ~400m in strike length and ~150m in width at Darson Central (Figure 2). The mapping program delineated three distinct types of pegmatite (Figure 2):

1. Darson South: contact pegmatites, occurring either on or nearby to the margin of the Pioneer Granite.
2. Darson Central: wide, potentially voluminous pegmatites which occur 300 to 600m from the granite margin. Hosted in muscovite-biotite schist.
3. Darson East: medium to fine grained pegmatites occurring within a meta-basalt approximately 800m from the granite margin.

Several drill targets have been defined by this mapping program. The ranking of these targets will be completed on receipt of analytical results.

Soil Sampling

A soil sampling program was completed over the Darson pegmatite swarm during September and October 2022. 278 soil samples plus QA/QC samples were collected from in-situ (residual) soil profiles. These samples have been submitted for laboratory analysis.

Surrounding Lithium Deposits

The Darson Pegmatite Swarm is well located amongst numerous significant lithium Resources in the Eastern Goldfields region of the southern Yilgarn Craton, Western Australia. The area features the Bald Hill lithium tantalum mine, the Mount Marion lithium mine and the Buldania lithium project, as well the nearby Dome North lithium Resource².

The Darson prospect is adjacent to a sealed highway and rail line and benefits from being in the Tier-1 mining jurisdiction of Western Australia.

Exploration Program

Reverse Circulation Drilling

Argonaut is seeking authorisation for a reverse circulation (RC) drilling program to test Darson South, Darson Central and Darson East for lithium mineralisation.

The RC drilling program will involve traverses of angled RC holes to approximately 100m depth to test the most prospective mapped pegmatites.

Access to the site is excellent via existing roads. Argonaut has significant existing experience drilling at E15/1489.

Argonaut will submit a program of works for approval by the WA government following the completion of a heritage survey.

² <https://wcsecure.weblink.com.au/pdf/ESS/02529464.pdf>

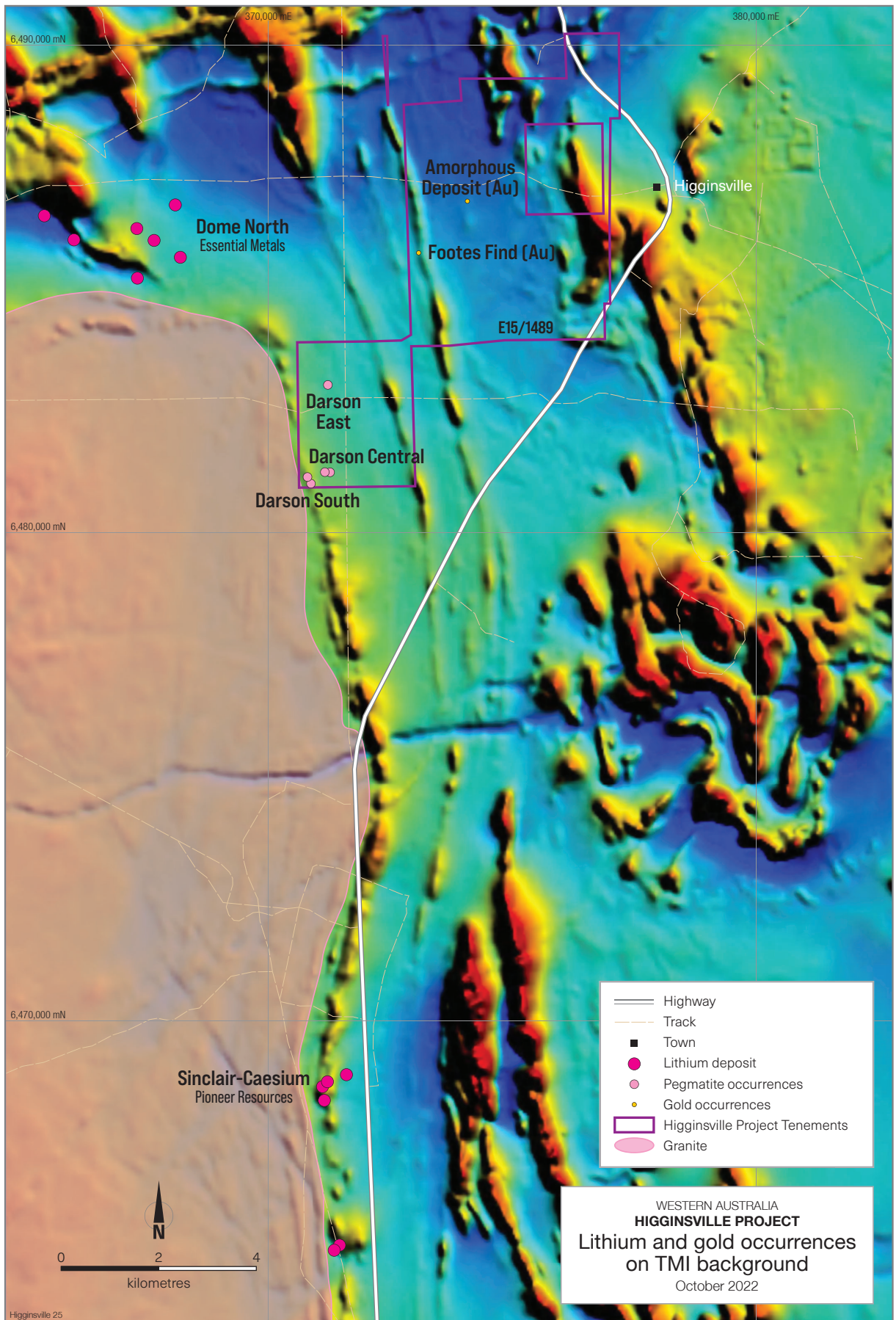


Figure 3 Several LCT Pegmatite deposits are located on the margin of the Pioneer Granite.

Joint Venture Agreement

The Higginsville project is governed by a joint venture agreement between Argonaut and Loded Dog Prospecting Pty Ltd titled “Eastern Goldfields New Joint Venture and Royalty Agreement”. This JVA relates to exploration licence E15/1489. Argonaut holds an 80% interest and will sole fund joint venture activities through until completion of a bankable feasibility study and a decision to mine is made.

This report is authorised for release by:

Lindsay Owler

Director and CEO

Argonaut Resources NL



Photo 1 Extensive outcropping LCT Pegmatite, Darson Central.



Photo 2 LCT Pegmatite with complex mineralogy, Darson Central.

Competent Person Statement

Sections of information contained in this report that relate to Exploration Results were compiled or supervised by Mr Lindsay Owler BSc, MAusIMM who is a Member of the Australasian Institute of Mining and Metallurgy and is a full-time employee of Argonaut Resources NL. Mr Owler holds shares and options in Argonaut Resources NL, details of which are disclosed in the Company's 2021 Annual Report. Mr Owler has sufficient experience which is relevant to the style of mineral deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the “Australasian Code for Reporting of Mineral Resources and Ore Reserves”. Mr Owler consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.