



Lefroy Exploration

# Burns Project Demonstrates Significant Scale

- Interpretation of drill results reinforces LEX's view that there is significant scale to its "first-of-a-kind" alkalic gold-copper porphyry discovery and the larger mineralized system at Lefroy's Burns Project in WA's Eastern Goldfields region.
- Focused drilling at Burns Central has advanced understanding of the mineral system and complements initial targeting of anomalies along strike within the 2.5km Burns Corridor.
- Additional drilling across multiple targets is planned to test nearby gold and copper anomalies with similar characteristics and linkages to Burns Central.
- The maiden Mineral Resource Estimate (MRE) for Burns Central will be released in April 2023

Lefroy Exploration Limited (ASX: LEX) ("Lefroy" or "the Company") is pleased to provide an update on exploration and data interpretation activities at its flagship Burns Gold-Copper Project.

Results from 67 Reverse Circulation (RC) holes drilled in the Burns Central resource program ([ASX announcement 2 March 2023](#)) confirmed a unique alkalic-porphyry-style mineral system with a strike length of at least 500m and vertical depth of at least 200m deep from surface, enriched in gold-copper-molybdenum-silver and cobalt.

Coupled with previous results from 11 holes drilled at prospects along strike within the 2.5km Burns Corridor, the data suggest an extensive mineral system with considerable potential for significant resource expansion.

Work to date, including research in partnership with UWA's Centre for Exploration Targeting (CET), has consolidated Lefroy's understanding and confidence in the 2.5km Burns Corridor as a significant camp-scale mineral system.

Analogous to Burns are the alkalic gold-copper porphyry deposits of the Cadia district in NSW and the British Columbia province in Canada. These deposits are highly economically attractive due to their higher gold content and geometry, which should enable cost-effective mining.

Key compelling characteristics for alkalic-porphyry-style mineralisation at Burns Central include a lack of quartz veins, an oxidised alteration assemblage and metal zonation throughout the system.



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Lefroy Managing Director Wade Johnson said:

“In the short time since Burns’ first spectacular discovery hole drilled in February 2021, Lefroy has conducted widescale exploration, research, data compilation and interpretation, which has consolidated the Company’s understanding of the main Burns Central body as being an **Archaean alkalic-porphyry-style mineral system of considerable scale** that is completely unique to the Eastern Goldfields, and even Western Australia.”

“Exploration at Burns is still in its early days. Mineralisation at Burns Central remains open in all directions. We have only focused on the shallow part of the system at Burns Central, where we are progressing a maiden Mineral Resource Estimate on track for delivery in April 2023.”

“Compilation of our new Burns long-section reinforces that **Burns Central is just the tip of the iceberg** in context of the greater Burns Project area’s total endowment.”

“Directly along strike of Burns Central are multiple anomalies in the 2.5km long Burns Corridor, where early drilling data signals a high probability of further gold and copper discoveries with direct linkage to mineralisation at Burns Central.”

“The **quality of intercepts** among the limited holes Lefroy has drilled at prospects along the Burns Corridor is **nothing short of exceptional** and provides significant exploration upside at the Burns Project.”

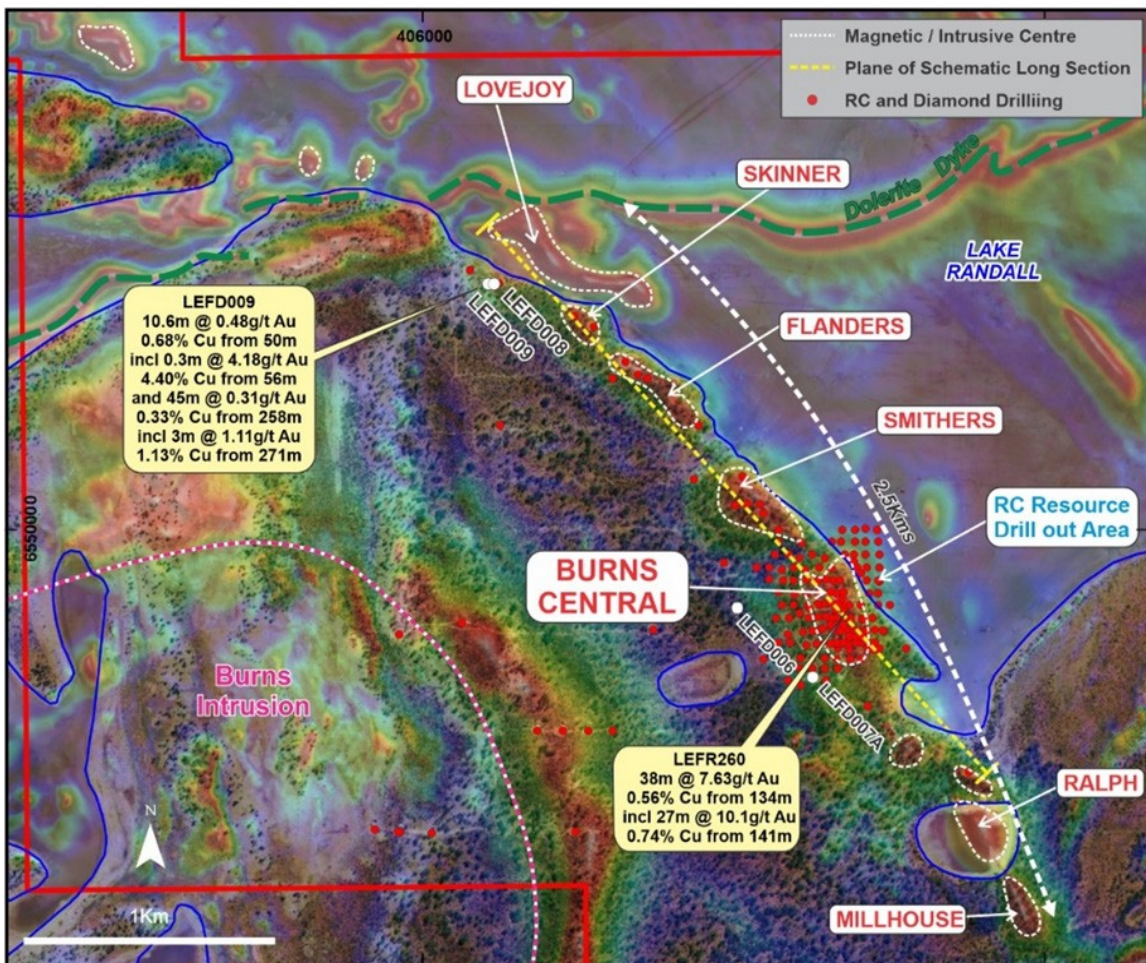


Figure 1 Overview of Burns Project area on a combined satellite and TMI RTP aeromagnetic imagery, featuring Burns Central mineral system and neighboring magnetic anomalies along 2.5km Burns Corridor trend.



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## Exploration upside across Burns Project

Burns Central has been the focus of drilling activity by Lefroy since January 2021 and displays consistent gold and copper mineralisation open in all directions, including at significant depth.

A distinct pattern in the distribution of gold and copper has been identified (refer Figures 4 and 5), with a gold dominant component plunging towards the south and a broad zone of copper trending north-west, associated with concentrated areas of magnetite alteration and porphyry intrusions.

All 67 RC resource holes drilled across Burns Central in late 2022 returned significant gold and copper intercepts or anomalism ([ASX announcement 2 March 2023](#)).

Within the greater Burns Project area, Lefroy has completed nine first-pass RC holes within the Burns Corridor, along the shoreline of Lake Randall.

These holes aimed to test other magnetic anomalies similar to Burns and returned significant copper and gold intercepts, expanding the footprint of mineralisation known to date ([ASX announcement 3 November 2021](#)).

These anomalies occur within a 2.5km trend (refer Figure 1) and display a similar signature to Burns Central, which remain effectively untested and limited only by a lack of drill data.

Prospects identified along the trend that will be subject to further drilling activity include Smithers, Flanders, Skinner, Millhouse and Ralph (refer Figures 1 - 3), and 1.3km north of Burns Central at Lovejoy, where two diamond holes drilled in Q3 2022 returned broad intervals of gold and copper and discrete higher-grade zones in a hydrothermal breccia ([ASX announcement 29 November 2022](#)).

## Improved data and imaging points to larger porphyry system

Interpretation and 3D modeling of drill results at Burns Central have provided Lefroy with an improved context of the geometry and extent of the gold and copper mineralisation (refer Figures 2 and 3).

Close spaced resource drilling has led to the development of better visibility of the continuity of gold and copper mineralisation within Burns Central.

Initial step out drilling along the Burns Corridor indicates similar mineralisation may continue at anomalies north (e.g., Smithers and Lovejoy) and south (refer Figures 2 and 3).

This is a typical feature of alkalic porphyry systems that tend to occur as clusters of multiple deposits spread over significant strike lengths.

Among the key porphyry indicators is the presence of immobile element molybdenum ("Mo" or "moly"), which sets the porphyry-style mineralisation apart from typical orogenic deposits in the Eastern Goldfields.

Elevated moly levels of +10ppm were detected over broad intercepts indicating drill holes are close to the system's core.

Drilling also detected multiple cobalt intercepts, up to 1500 ppm ([ASX Announcement 6 February 2023](#)). This provides a strong indication of metal zonation throughout the system along with gold, copper and moly.



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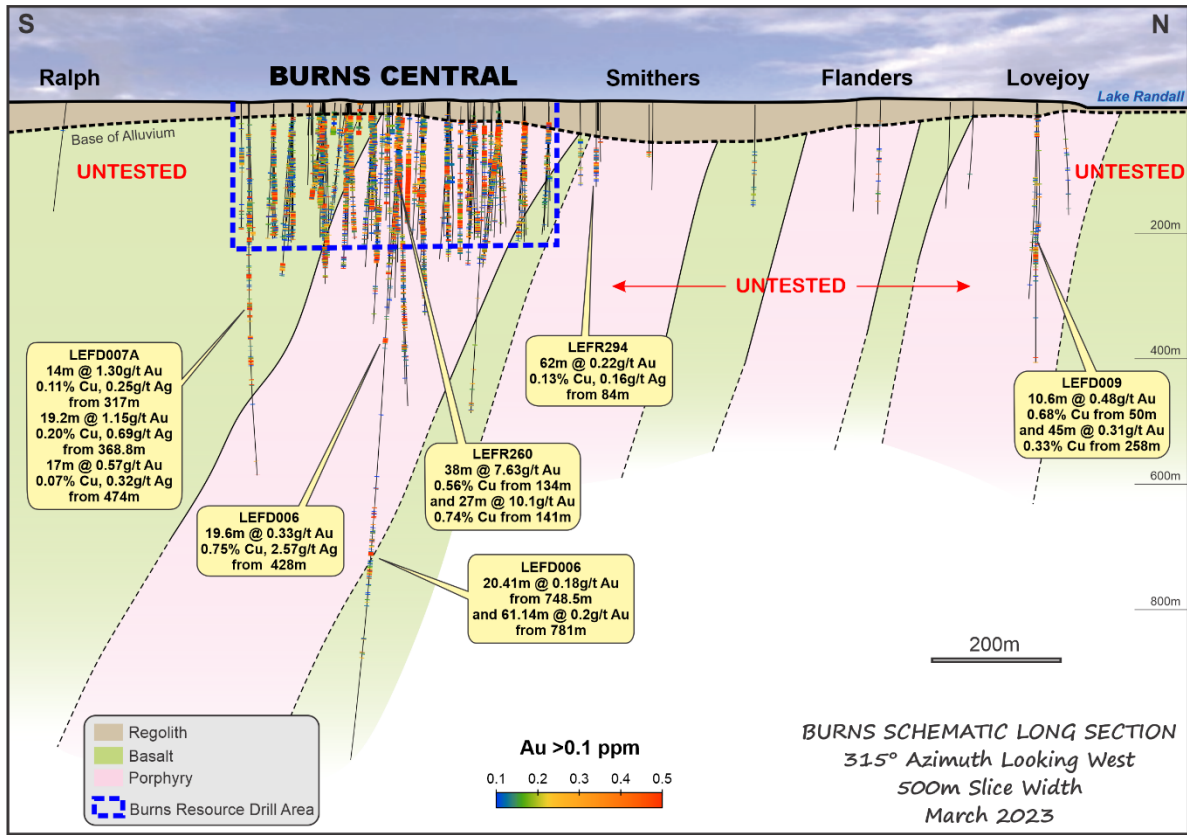


Figure 2: Schematic longitudinal sections (looking west) of the Burns Corridor showing RC and diamond drill hole locations, interpreted geology, limited drill testing of the gold distribution between Ralph and Lovejoy prospects, and the Burns Central Resource drill area.

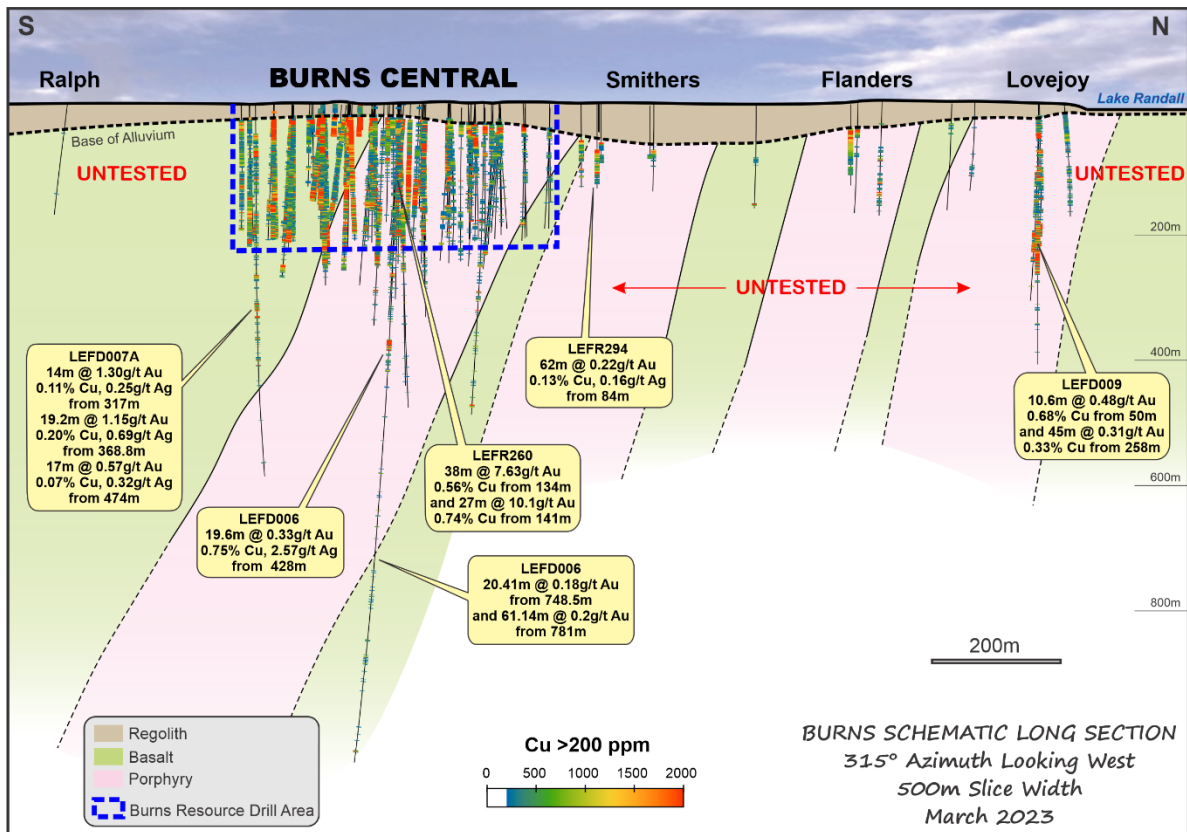


Figure 3: Schematic longitudinal sections (looking west) of the Burns Corridor showing RC and diamond drill hole locations, interpreted geology, limited drill testing of the copper distribution between Ralph and Lovejoy prospects, and the Burns Central Resource drill area.

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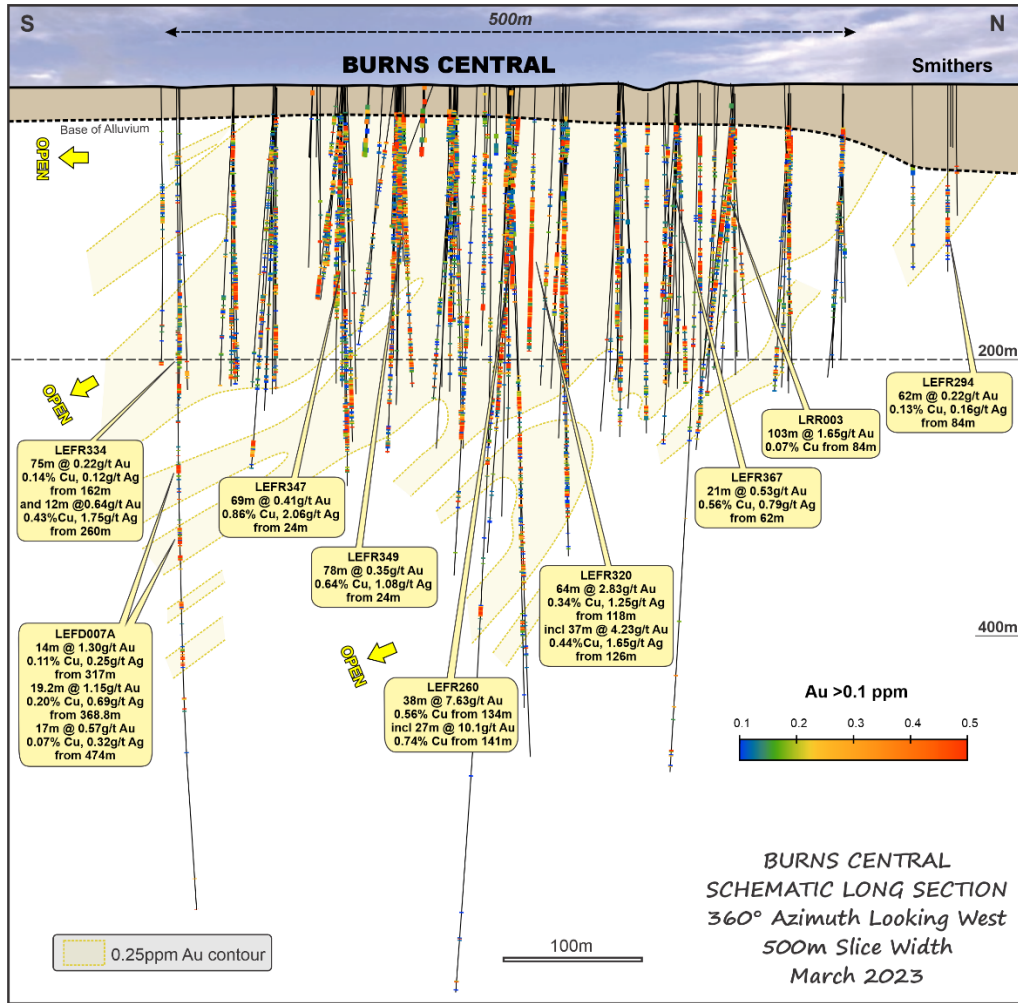


Figure 4: Schematic long section showing gold distribution and key intercepts at Burns Central.

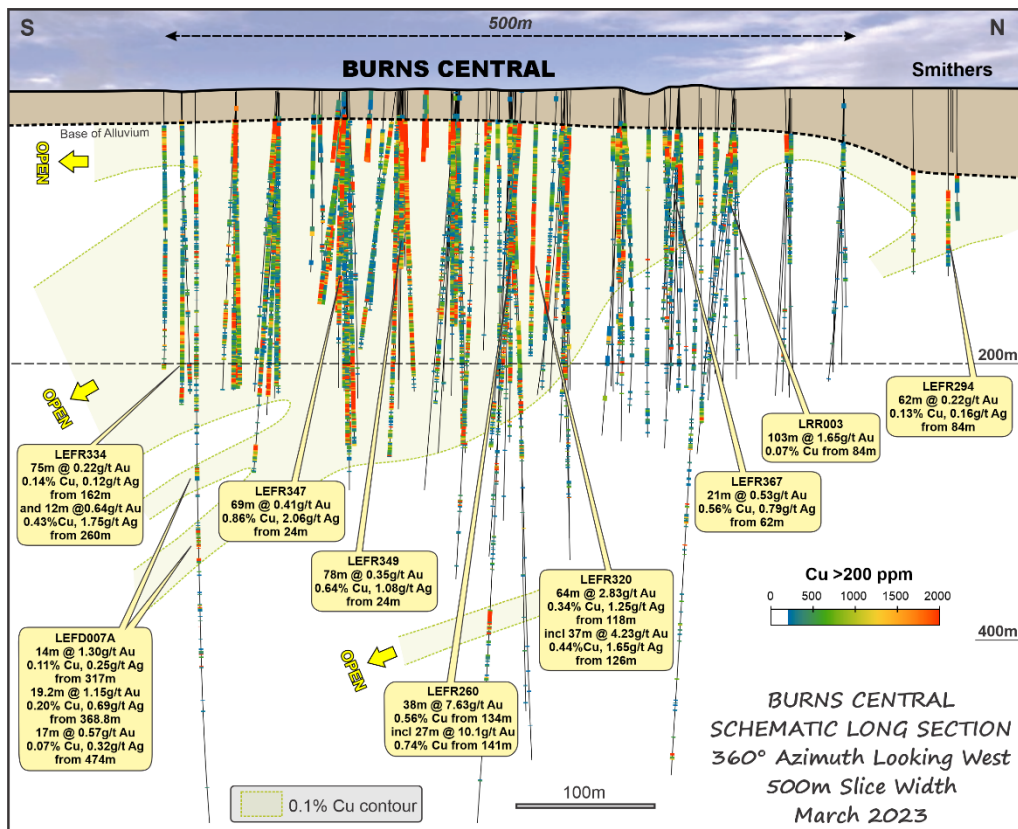


Figure 5: Schematic long section showing copper distribution and key intercepts at Burns Central.

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## Progress towards Burns Central MRE

Data from the 67-hole RC drill program completed in December 2022, in combination with previous drilling data, will support the maiden MRE for Burns Central.

The MRE is well advanced and on track to be finalised by Measured Group Pty Ltd in April 2023.

The Company continues to develop a work plan for wider exploration activity at Burns, with intensified exploration drilling planned for the Burns Corridor to further test additional gold and copper anomalies along strike of Burns Central.

**This announcement has been authorised for release by the Board.**



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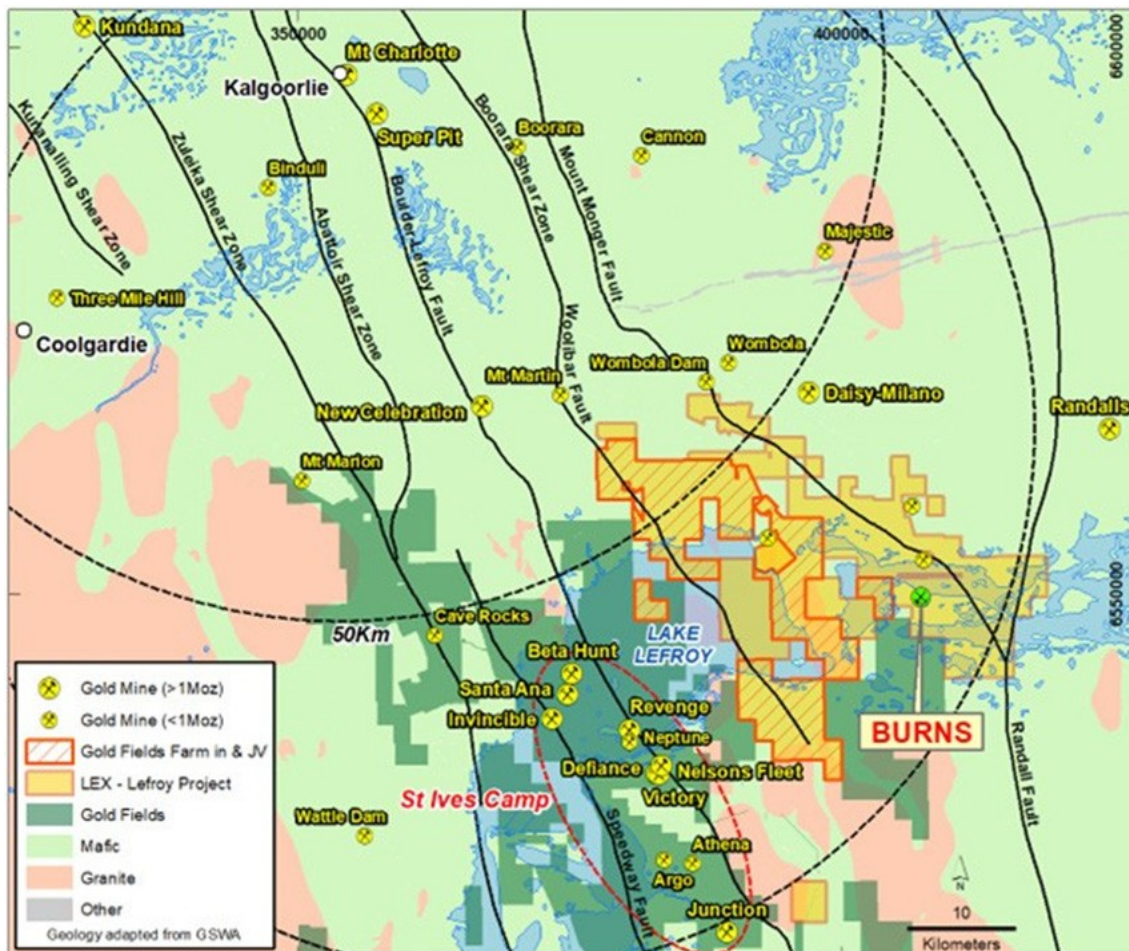


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## About Lefroy Exploration Limited and the Lefroy Gold Project

Lefroy Exploration Limited is a WA based and focused explorer taking a disciplined methodical and conceptual approach in the search for high value gold deposits in the Yilgarn Block of Western Australia. Key projects include the Lefroy Gold Project to the southeast of Kalgoorlie and the Lake Johnston Project 120km to the west of Norseman.

The 100% owned Lefroy Gold Project contains mainly granted tenure and covers 534km<sup>2</sup> in the heart of the world class gold production area between Kalgoorlie and Norseman. The Project is proximal to Gold Fields' St Ives gold camp, which contains the Invincible gold mine located in Lake Lefroy and is also immediately south of Silver Lake Resources' (ASX: SLR) Daisy Milano gold mining operation. The Project is divided into the Western Lefroy package, subject to a Farm-In Agreement with Gold Fields and the Eastern Lefroy package (100% Lefroy owned). The Farm-In Agreement with Gold Fields over the Western Lefroy tenement package commenced on 7 June 2018. Gold Fields can earn up to a 70% interest in the package by spending up to a total of \$25 million on exploration activities within six years of the commencement date.



Location of the Lefroy Gold Project relative to Kalgoorlie. The Western Lefroy tenement package subject to the Gold Fields joint venture, and Gold Fields tenure is also highlighted.



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## Notes Specific-ASX Announcements

The following announcements were lodged with the ASX and further details (including supporting JORC Reporting Tables) for each of the sections noted in this announcement can be found in the following releases.

Note these announcements are not the only announcements released to the ASX but specific to exploration reporting by the Company of previous exploration at Burns at the Lefroy Gold Project.

- [Outstanding High-Grade Gold and Copper Mineralisation Intersected at Burns: 23 February 2021](#)
- [Drill testing of multiple magnetic targets underway at Burns: 5 October November 2021](#)
- [Burns Update drill results support larger Cu-Au-Ag system: 3 November 2021](#)
- [Multiple Broad Cu Au Drill Intersections at Lovejoy Expand Scale of Burns System: 29 November 2022](#)
- [Multiple Gold Intercepts Continue to Expand Burns: 5 December 2022](#)
- [December 2022 Quarterly Activities Report: 31 January 2023](#)
- [Multiple, Shallow Thick Copper -Gold Intersections at Burns: 6 February 2023](#)
- [Strong Gold and Copper Intersections Continue to Expand Burns Central: 2 March 2023](#)

The information in this announcement that relates to exploration targets and exploration results is based on information compiled by Wade Johnson a competent person who is a member of the Australian Institute of Geoscientists (AIG). Wade Johnson is employed by Lefroy Exploration Limited. Wade has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 edition of the JORC Code. Wade Johnson consents to the inclusion in this announcement of the matters based on his work in the form and context in which it appears.

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