

Drill testing of multiple magnetic targets underway at Burns

- A 20-hole, RC drill program is underway at the Burns copper-gold prospect at the Eastern Lefroy project, near Kalgoorlie, Western Australia.
- The proof-of-concept program will evaluate multiple magnetic anomalies along a 3000m corridor highlighted from the recent aeromagnetic survey that includes the Burns Cu-Au prospect. The anomalies also coincide with a +200ppm drill hole copper anomaly.
- The five targeted magnetic anomalies have signatures similar to Burns and are interpreted to represent magnetite alteration zones around diorite porphyry intrusions, each of which is considered prospective for Cu-Au mineralisation similar to Burns.
- The initial two holes of the program have been completed, and are located adjacent to the largest magnetic anomaly known as Lovejoy
- The program, totalling approximately 4500m, is expected to take 3 weeks to complete. Assay results from this program are expected in December
- Follow up stage 2 drill evaluation of the Kenny's Dream and Lovejoy magnetic anomalies in Lake Randall using a specialised lake drill rig is scheduled to commence in November
- Assay results for the earlier final Burns diamond drill hole and five RC holes are pending.

Lefroy Exploration Managing Director, Wade Johnson said *"We are excited to be back out RC drilling at Burns evaluating multiple magnetic targets that share characteristics to the established Burns Cu-Au system. This is the first stage of a larger program that will involve lake drilling to demonstrate the scale of the intrusion related system and its related mineralisation over a 3000m corridor and extending out into Lake Randall"*



Lefroy Exploration Limited (ASX: LEX) (“Lefroy” or “the Company”) is pleased to announce the commencement of a reverse circulation (RC) drill program to evaluate multiple magnetic anomalies along a 3000m corridor that includes the Burns copper gold prospect (Figure 1). Each anomaly has a similar magnetic signature to Burns. Burns is within the Eastern Lefroy tenement package, which is part of the wholly owned greater Lefroy Gold Project (LGP) located 50km southeast of Kalgoorlie.

The Burns prospect is situated outboard (Figure 1) of a large interpreted felsic intrusion, termed the Burns Intrusion. The intrusion does not outcrop but features distinctive annular aeromagnetic (Figure 1) and gravity geophysical signatures. The Company has not yet established the association between the larger Burns intrusion and the diorite porphyry intrusions intersected at Burns but considers there is a genetic relationship between them.

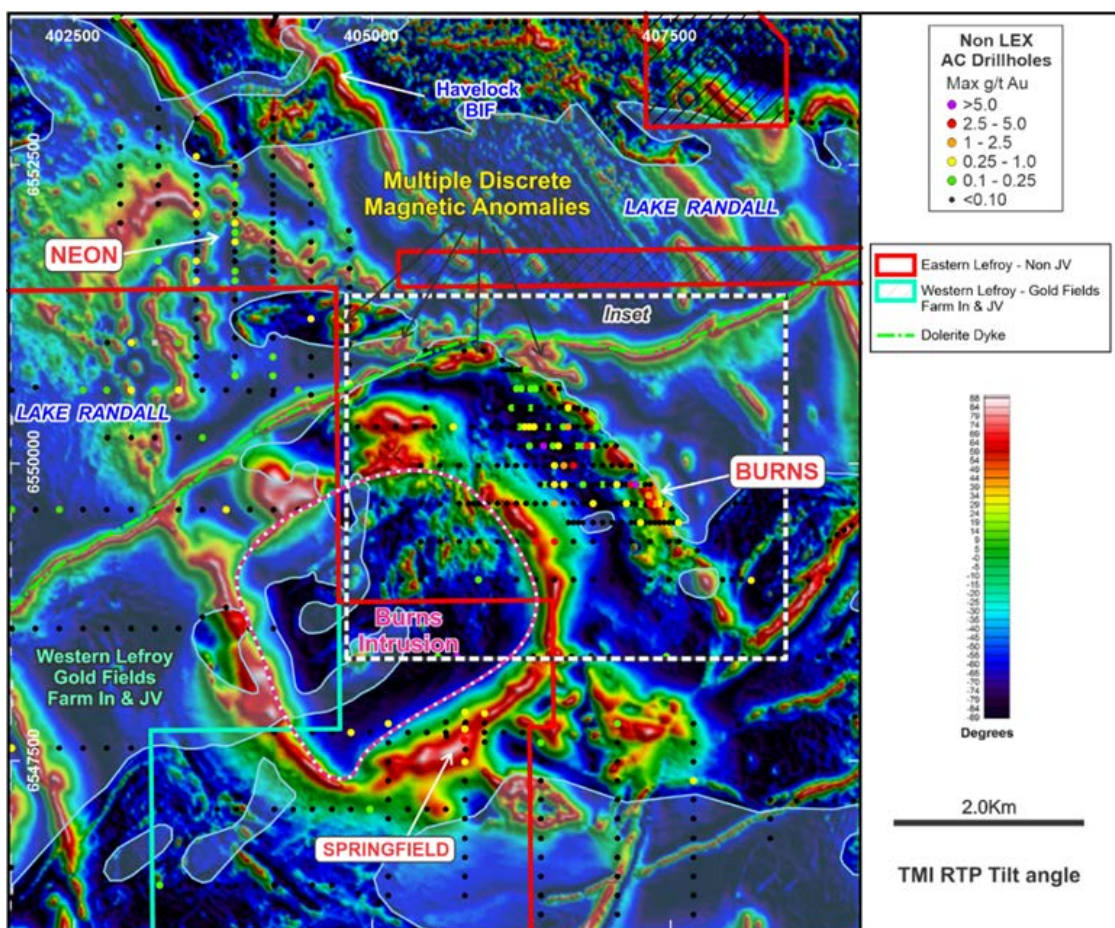


Figure 1 TMI RTP aeromagnetic image showing the full extent of the new aeromagnetic survey and the pronounced annular magnetic anomaly around the Burns Intrusion. Refer Figure 2 for the detail over the Burns prospect magnetic trend (warm colours represent rocks with stronger magnetic character)

At Burns, broad high-grade gold mineralisation is hosted within a newly discovered hematite-pyrite-chalcopyrite-magnetite altered diorite porphyry (refer LEX ASX release 23 February 2021) that intrudes high Mg basalt. This porphyry, termed the Eastern Porphyry, is open to the north and south of existing exploration. The eastern extent of the Eastern Porphyry is defined, on multiple drill sections, by foliated footwall basalt.

The copper and gold mineralisation hosted by both the diorite porphyry, basalt and massive magnetite veins is considered by the Company to be a new style of Au-Cu-Ag mineralisation in the area. The existence of additional mineralisation under Lake Randall (Figure 1 & 2) is entirely possible and additional drill programs to expand the system are being planned for late CY2021.

The association of the magnetite alteration and veining with Au-Cu mineralisation at Burns provides an important physical rock parameter (magnetics) that can be used to locate and target additional Burns-style systems external to the current focused drill area. The Company interprets an association between the porphyritic diorite intrusions, the magnetite alteration and the Au-Cu and Ag mineralisation hosted by both basalt and diorite.

The Company completed a detailed 25m line spaced aeromagnetic survey covering 54km² which was centered on and included the entire extent of the Burns Intrusion (Figure 1) in August 2021 (refer LEX ASX release 24 September 2021). The survey provided refined imagery which has improved and enhanced the quality of the known magnetic anomalies to the north and south of the Burns prospect, both on land and on Lake Randall.

Figure 1 highlights the full extent of the survey and clearly shows the extent of the annular magnetic anomaly surrounding the interpreted Burns Intrusion and a string of six magnetic anomalies to the east that define a distinct, Burns-like magnetic corridor (Figure 1 & 2). These anomalies (e.g., Lovely, Skinner, Flanders) form a 3000m trend, that includes Burns and extends out beneath Lake Randall (Lovejoy). The Company interprets that the anomalies represent magnetite alteration zones within and surrounding porphyry dioritic intrusions that are additional to, and similar in style to, Burns.

The largest and northernmost magnetic anomaly, now designated Lovejoy, lies beneath Lake Randall (Figures 1 & 2). Lovejoy also has a coincident, positive gravity (dense rock) anomaly (refer Figure 4 LEX ASX release 28 July 2021) of similar geophysical signature to Burns.

Apart from Burns, the six magnetic anomalies have only been partly evaluated by previous (historical) wide spaced vertical aircore drill holes (refer LEX ASX release 24 September 2021). The Company completed a field inspection of these holes and collected drill chip samples representing the near fresh bedrock from the end of these holes where possible. When combined with data from the Burns prospect the results from samples highlight a +200ppm copper corridor that extends north to Lovejoy (Figure 2). The eastern and northern extents of the anomaly are limited by the absence of drilling in Lake Randall.

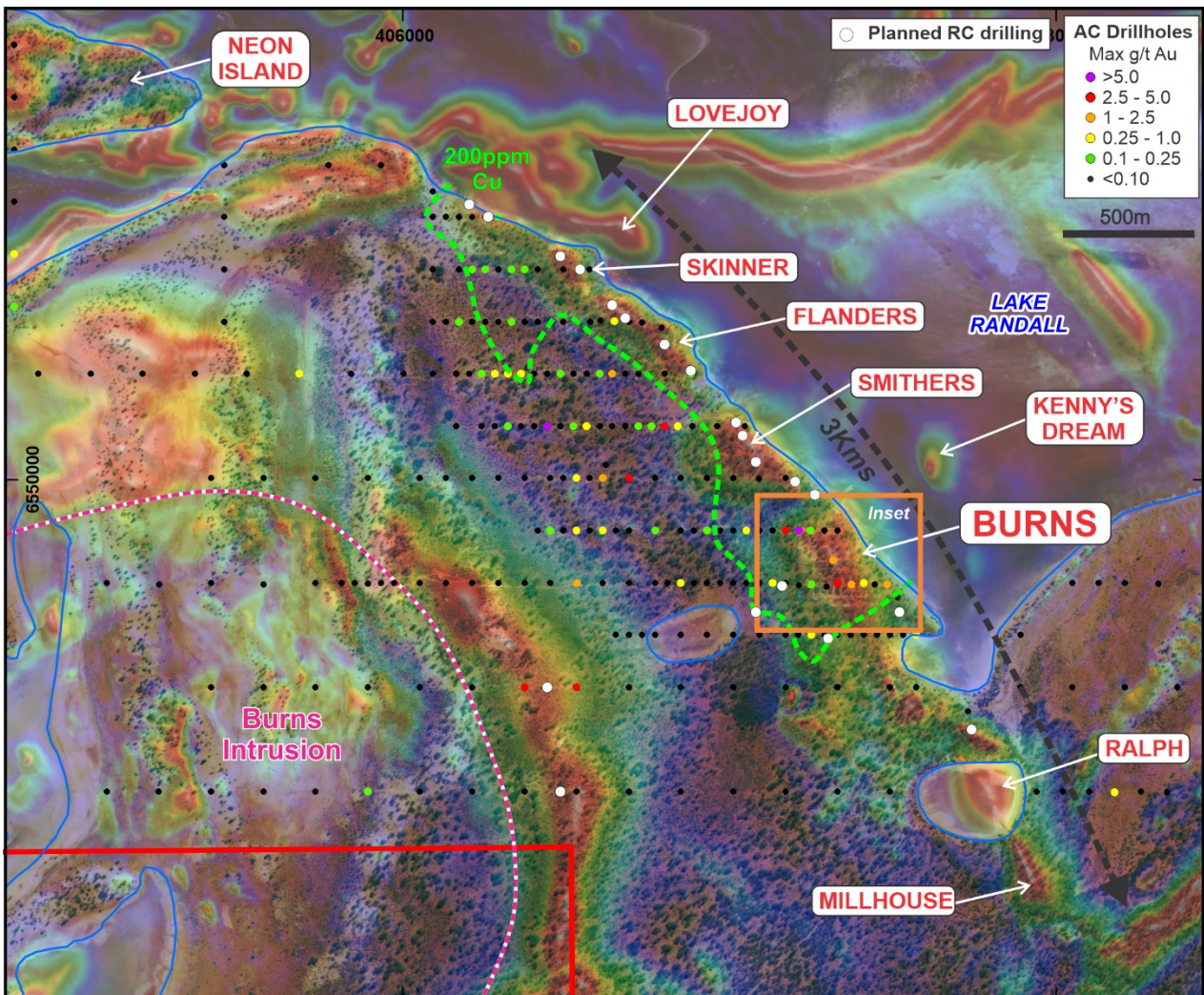


Figure 2 Combined satellite image with transparent TMI RTP aeromagnetic image highlighting the discrete magnetic anomalies (e.g., Lovejoy, Skinner, Flanders) along strike of Burns and the extent of the +220ppm copper anomaly. The inset area refers to the area of RC and diamond drilling at the Burns Au-Cu-Ag prospect. (Warm colours represent rocks beneath the surface with higher magnetite content). Coloured and black dots represent historical AC drill holes. **White dots represent planned RC holes**

Drill Program

The general association of the Au-Cu-Ag mineralisation at Burns, with magnetite in both basalt and diorite porphyry rocks, provides the rationale for a strong, first order exploration program focussed on the newly found magnetic anomalies.

Stage 1 of the program will involve drilling land-based targets using an RC rig, with stage 2 requiring a specialised lake aircore rig to evaluate targets in Lake Randall.

The stage 1 RC drilling program is underway. The 20-hole/4500m program will focus on evaluating multiple targets over the 3000m Burns corridor, but an additional three holes to characterise the main Burns Intrusion with the following key areas to focus:

- 13 RC holes testing the new magnetic anomalies known as Lovejoy, Skinner, Flanders, Smithers and Ralph
- 4 RC holes at Burns evaluating extensions to the western basalt that host broad zones of copper mineralisation
- 2 RC holes to evaluate the annular magnetic anomaly surrounding the Burns Intrusion
- 1 RC hole to evaluate the centre of the Burns Intrusion

The 13 holes evaluating the new anomalies are a proof-of-concept evaluation of five magnetic anomalies to characterise the geology and determine similarities with the established Burns Au-Cu system. Hole depths range from 200m to 250m.

The program is estimated to take three weeks to complete. Initial assay results from the program are expected in December.

Stage 2 of the program will involve evaluation of the Lovejoy and Kenny's Dream magnetic anomalies and the eastern extent of Burns all located in Lake Randall. Lovejoy is considered by the Company to be a priority target given it has coincident magnetic-gravity anomaly (LEX ASX release 24 September 2021). This drilling will require a specialised Lake aircore drill rig with drilling scheduled to commence in November 2021.

The two staged program approach is designed to scope out the broader extent of the Burns mineral system to support defining metal zonation and alteration patterns that could lead to stronger zones of mineralisation.

This announcement has been authorised for release by the Board



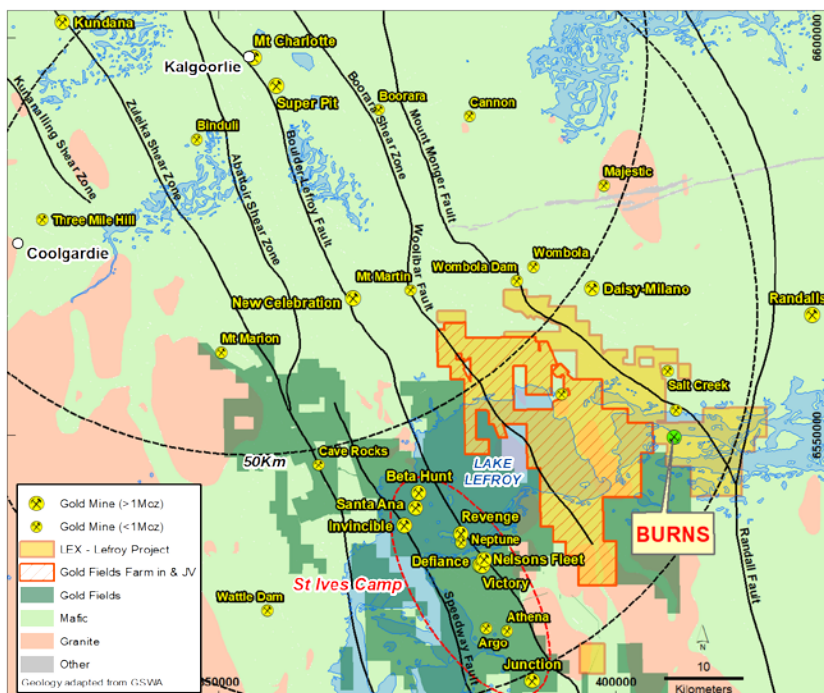
Wade Johnson
Managing Director

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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 south east 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 621km² in the heart of the world class gold production area between Kalgoorlie and Norseman. The Project is in close proximity 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 \$25million on exploration activities within 6 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 are 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 that 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.

- Lefroy Expands Tenement Holding & Secures Au-Cu Prospect: 10 December 2019
- Multiple Gold Trends Confirmed from Eastern Lefroy: 1 September 2020
- Tenement Granted over Burns Au-Cu Prospect: 16 September 2020
- September 2020 Quarterly Activities Report: 29 October 2020
- Drilling Underway at Burns Au-Cu Prospect: 12 January 2021
- Drilling Update-Native copper Intersected at Burns Prospect: 2 February 2021
- Outstanding High-Grade Gold and Copper Mineralisation Intersected at Burns: 23 February 2020
- New Basalt Hosted Gold-Copper Zone Supports Large Burns Mineral System: 9 March 2021
- Exploration Update-Drilling Extends Porphyry at Burns: 26 March 2021
- Diamond Drilling Underway at the Burns Cu-Au Prospect: 21 April 2021
- Resampling of RC holes at Burns confirms and better defines recent Copper Gold intersections: 27 April 2021
- Drill Results Extend Copper Gold Zones at Burns: 29 April 2021
- Multiple Intervals of Altered Porphyry Intersected at Burns: 3 May 2021
- Burns Success Continues-55m vertical depth extension and more strong mineralisation established: 13 May 2021
- Burns Continues to Grow-deeper-wider and a new zone: 25 May 2021
- Burns Drilling Update-first hole on 40N section confirms significant mineralisation extends to the north: 18 June 2021
- Exploration Update-RC drilling commences at the Burns Cu Au prospect: 20 July 2021
- Burns Update-Cu-Au mineralisation confirmed on 0N section, step out drilling extends system: 2 August 2021
- June 2021 Quarterly Activities Report: 28 July 2021
- Exploration Update-Advancing the Burns and Coogee South Prospects: 18 August 2021
- Results from 40N section Further Enhance Burns Cu-Au System: 21 September 2021

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