

Exploration Update

Major Drilling Programs Recommenced at Lefroy

- Two major early-stage gold focussed aircore drilling programs have recommenced and are underway at the Lefroy Gold Project, 70km southeast of Kalgoorlie
- At the wholly owned Eastern Lefroy, a 9000m aircore drilling campaign is evaluating multiple targets external to the Burns Cu Au prospect and which are considered prospective for gold mineralisation beneath Lake Randall. The program is: -
 - a continuation and expansion of the lake drilling aircore drill program that commenced in November 2021 at Burns
 - evaluating multiple host rocks and target styles generated from assessment of geophysical data, including extensions to Burns, over a 50km² area of Lake Randall
 - scheduled to take 6 weeks to complete with assay results expected from April.
- At Western Lefroy, JV partner Gold Fields has recommenced the 46,000m Full Field Aircore (FFAC) program that commenced in October 2021. The program is: -
 - designed to cover most of the land area of the tenement package with approximately 1318 vertical holes on regular 400m by 400m spaced grid pattern planned
 - expected to take at least 6 months to complete, with first assay results to be reported by Gold Fields in April.
- Initial assay results from the aircore drilling programs completed by the Company and Gold Fields at Eastern and Western Lefroy in 2021 are expected in January 2022.



Lefroy Exploration Managing Director, Wade Johnson said *"We are excited to be back out drill testing multiple targets for gold and gold copper mineral systems nearby to Burns and beneath the vast Lake Randall. Our campaign complements the recommencement of the land based FFAC drilling program by Gold Fields at Western Lefroy. In total +50,000m of early-stage drilling is being undertaken on these two fronts at the Lefroy Project"*

Lefroy Exploration Limited (ASX: LEX) (“Lefroy” or “the Company”) is pleased to announce that two major early stage aircore (AC) drilling programs have recommenced and are underway at the Lefroy Gold Project (LGP) located 70km southeast of Kalgoorlie. Both programs are focussed on exploring for new gold mineral systems in areas of limited or no previous drilling coverage.

At the Company’s wholly owned Eastern Lefroy sub project aircore drilling has recommenced to evaluate multiple geophysical targets in the vast Lake Randall, continuing and expanding upon the program that commenced in November 2021 immediately adjacent to Burns. At Western Lefroy, JV partner Gold Fields has also recommenced the large, land-based Full Field Aircore (FFAC) drilling program that commenced in October 2021 (Figure 1).

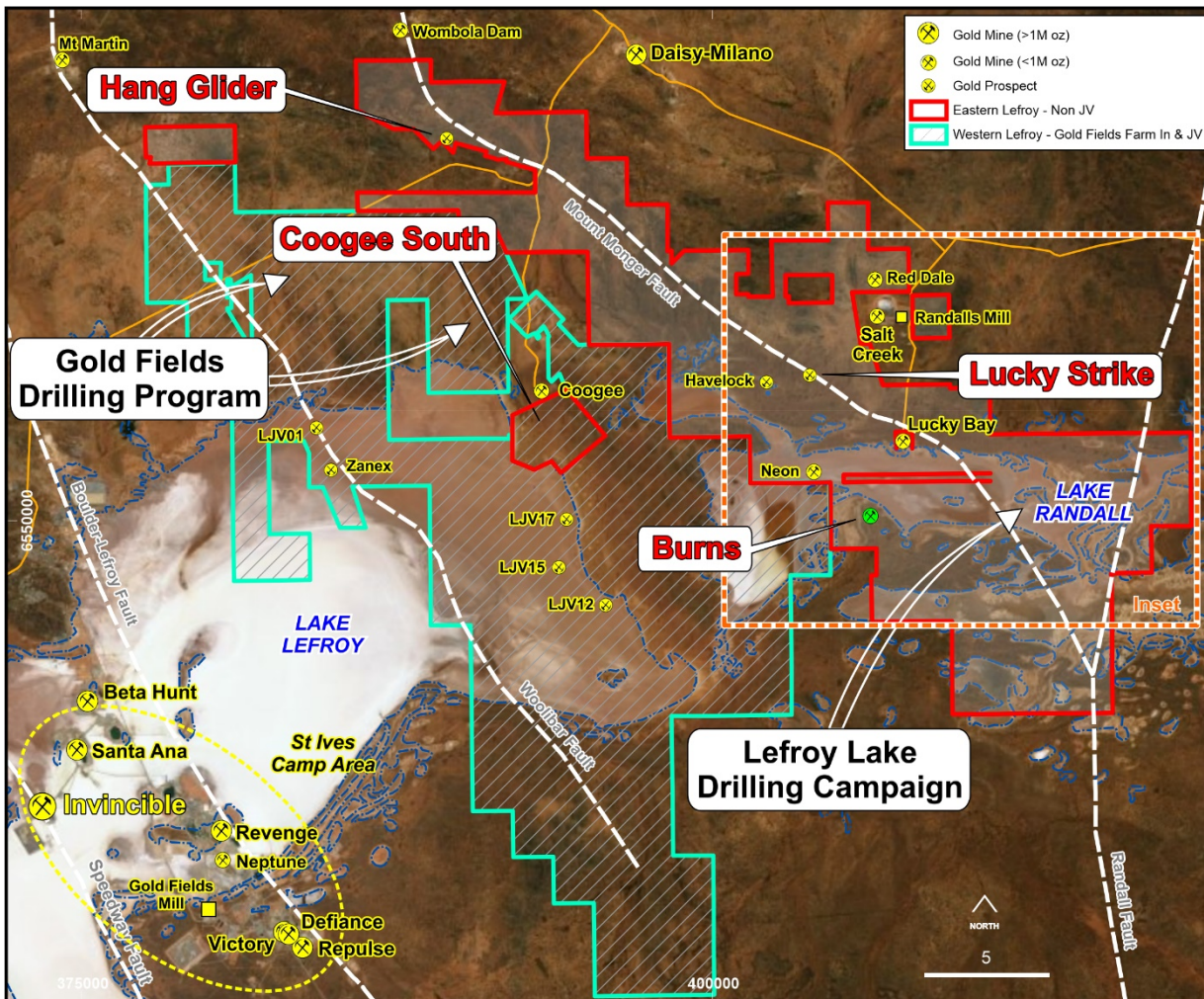


Figure 1. Lefroy Gold Project showing extent of the Eastern and Western sub projects, proximity to the St Ives and Daisy Milano gold mines and areas of aircore drilling now underway. Refer to Figure 2 for the inset and detail to the aircore drilling targets at Eastern Lefroy.

Eastern Lefroy-Lake Randall

In October 2021 the Company commenced a staged drilling program to assess the limits of the Burns Cu-Au mineral system, with targets generated from the detailed aeromagnetic survey completed in July 2021. 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 involved drilling land-based aeromagnetic targets (onshore) using an RC rig. This program was completed in early November and results from the 12 RC holes are pending. Stage 2 commenced in late November 2021 and involved using specialised lake aircore rig to evaluate aeromagnetic targets (e.g., Lovejoy, Kenny’s Dream) in Lake Randall (offshore) immediate adjacent to and along the Burns corridor. The extent of drill hole coverage from this campaign is shown on Figure 3.

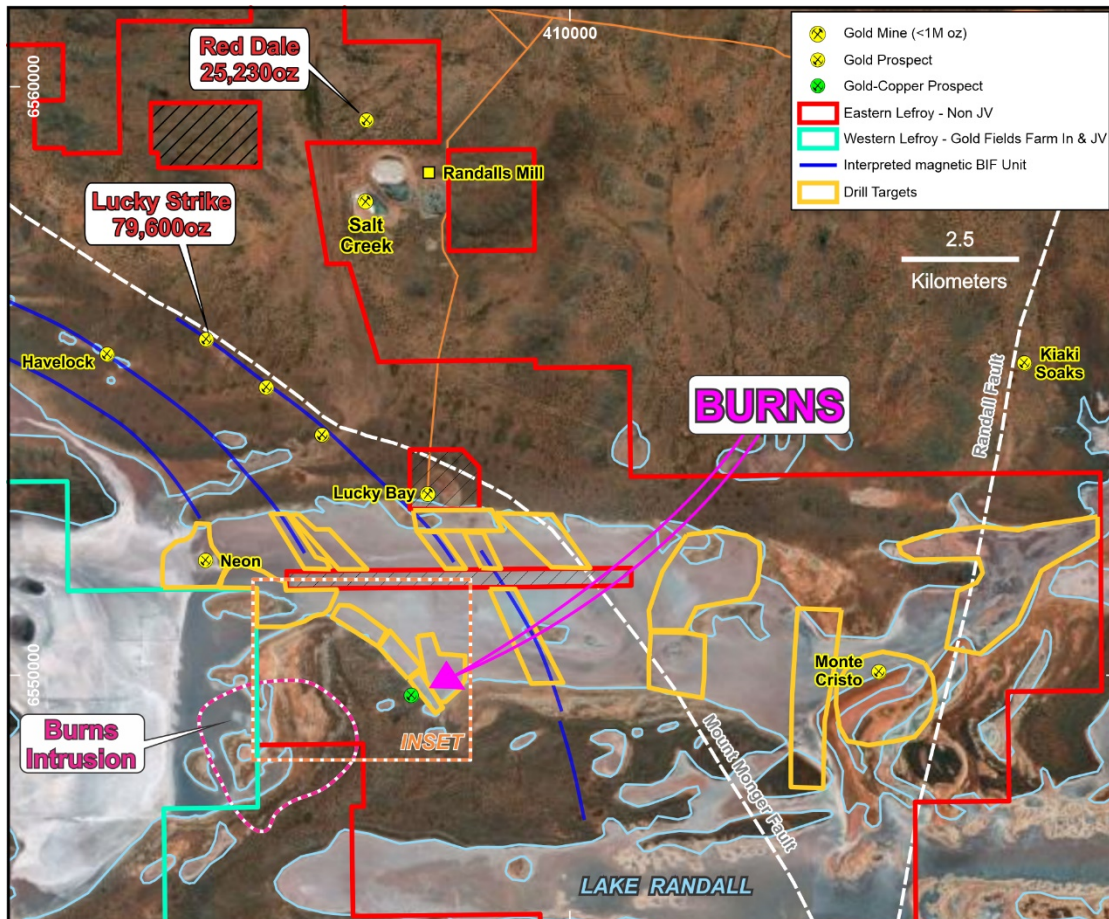


Figure 2 Inset figure highlighting targets to be drilled in Lake Randall. Inset (Figure 3) refers to drilling completed immediate adjacent to Burns.

The stage 2 drilling program in Lake Randall was suspended in mid-December 2022 for the year

end break, with 199 vertical holes being completed (Figure 3). Results for this campaign are pending with initial results expected in February. The assay turnaround time is now extending out to 3 months post-despatch from Kalgoorlie due to staffing constraints and volume of samples to be processed at the Perth laboratory.

During the November-December 2021 AC drilling campaign, additional drill targets were generated in Lake Randall based on geological information derived from the recent campaign and interrogated with geophysical (gravity & aeromagnetic) datasets. Twelve new drill targets were generated in Lake Randall and extend approximately 15km to the east over the Company's tenure (Figure 2).

Targets include some that are partially tested by previous (non-LEX) drilling at Neon and Monte Cristo, but most are newly generated targets with no prior exploration. The program aims to discover new gold and or gold copper mineral systems, peripheral and parallel to the Burns corridor beneath Lake Randall and to fill the geological knowledge gap in this largely unexplored area.

The key targeting parameters or areas of priority focus are: -

- Extension of the Burns diorite complex northwest of Lovejoy and out to Neon
- Demagnetised zones within the strike extensions of the Lucky Strike, Havelock and Erinmore sedimentary iron formations
- Targets (e.g., Monte Cristo) associated with the convergence of the regional Mt Monger and Randall Faults
- Immediate southeast strike extension of the sequence that hosts the gold mineralisation at Lucky Bay

The aircore drilling is planned to test each target on a nominal 160m line spacing, with vertical holes at 80m centres. A total of 300 holes have been planned, with an estimated average depth of 30m, for a total of approximately 9000m to be drilled.

The program is expected to take at least 6 weeks to complete, with assay results expected in April 2022. The drilling duration is expected to overlap with receipt of assay results from the Nov-Dec 2021 drilling campaign and provide the opportunity to conduct infill drilling on gold and or gold copper anomalies generated while the specialised lake drill rig is on site.

The combined results from the lake AC campaigns and the October 2021 RC drill program will provide a broad geochemical and geological baseline framework over a 50 square kilometre area to focus more detailed drill evaluation at and or near to Burns in CY2022.

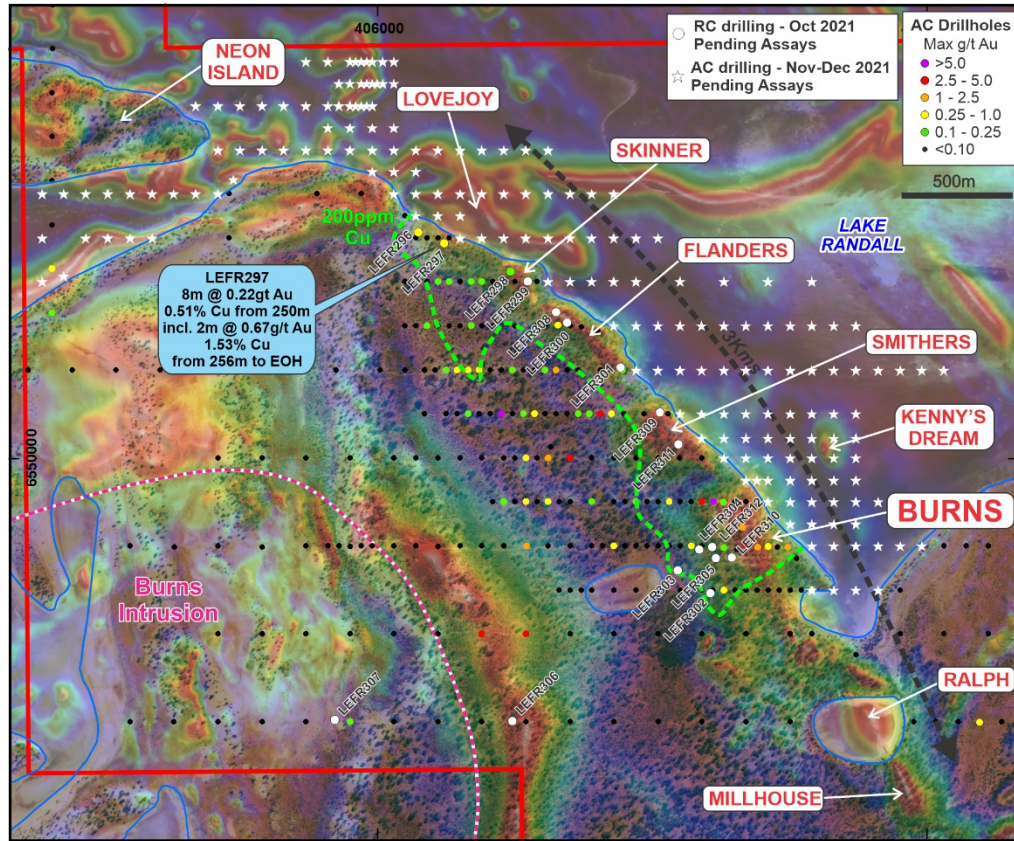


Figure 3 Combined satellite image with transparent TMI RTP aeromagnetic image highlighting the discrete magnetic anomalies (e.g., Lovejoy, Skinner, Flanders) along strike of Burns. White stars represent AC drill holes completed in November-December 2021. (Warm colours represent rocks beneath the surface with higher magnetite content). **October 2021 RC holes are depicted.**

Western Lefroy

Gold Fields Limited (NYSE: GFI) (“Gold Fields”) has recommenced a major aircore (AC) drilling program (Figure 4) on the Company’s tenements at Western Lefroy. The program is part of the \$25million Farm-In and Joint Venture (FIJV) agreement between Lefroy and Gold Fields and a continuation of the program that commenced in October 2021 (refer LEX ASX release 12 October 2021).

That program involves completing approximately 1300 vertical holes spaced 400m apart on traverses 400m apart to cover most of the land area of the Western Lefroy tenement package. This program will yield foundation geological and geochemical information that will be interrogated in conjunction with the geophysical data to deliver specific targets for AC, RC and diamond drilling.

During the December quarter, 442 holes for 8690m were completed (Figure 4). This included a focused, close spaced drill program at Paddys Secret, the site of an alluvial gold find in 2013-2014, where several large (plus 10oz) gold nuggets were discovered in a 400m by 200m area (LEX:ASX release 12 October 2017).

The AC drilling is a reconnaissance technique, searching for both geochemical anomalies and geology from the bedrock or top of fresh rock (TOFR) beneath the surface and oxidised rock that comprise the regolith. The depth of the regolith and TOFR is highly variable, ranging from 5m to 100m vertical and averaging 35m.

The air core program is expected to take 6 months to complete and is dependent on land access. Results material to the Company will be reported to the market as the program progresses. Assay results for the AC drilling completed in the December 2021 Quarter are expected in late January consistent with quarterly reporting requirements under the JV agreement.

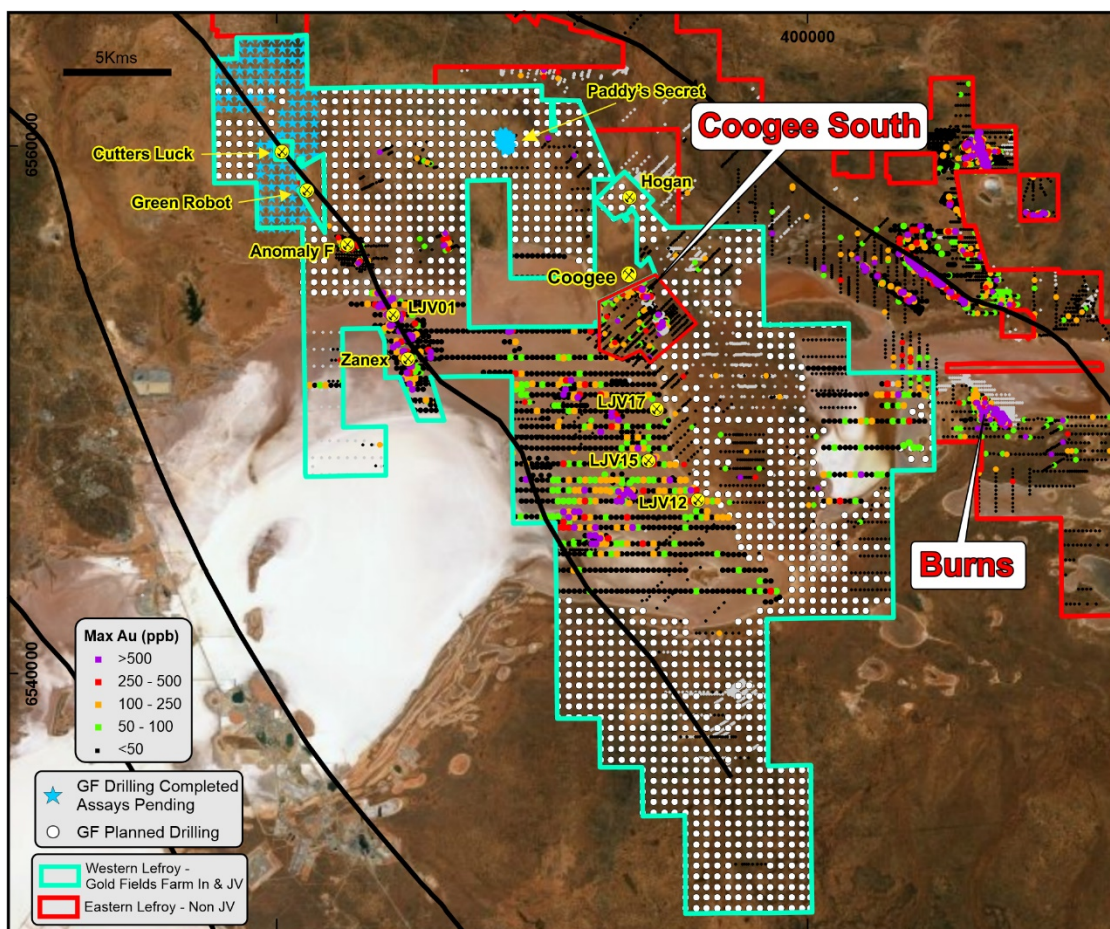
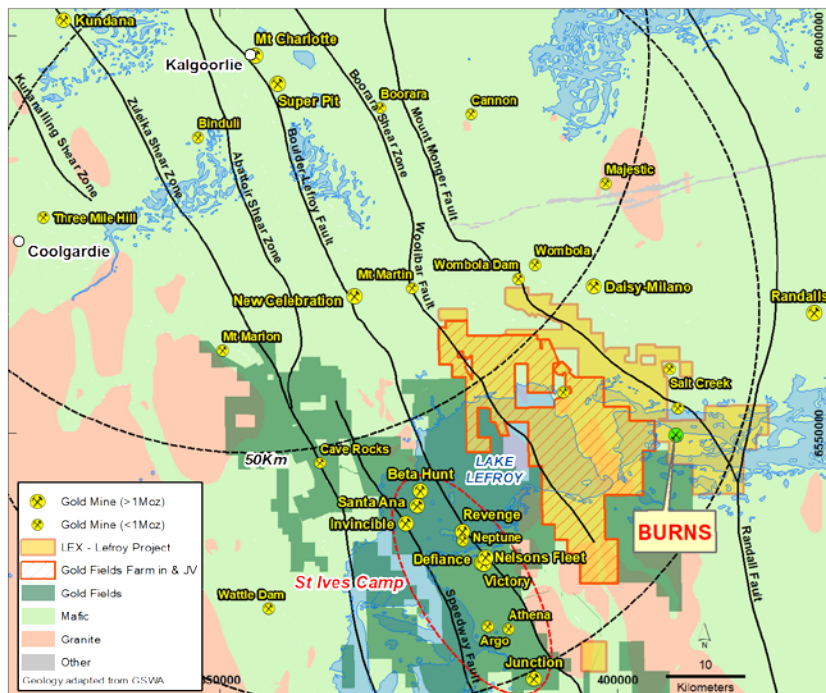


Figure 4 Lefroy Gold Project tenement package highlighting the Gold Fields Farm in & JV package, proximity to Gold Fields St Ives and location of the Full Field Aircore (FFAC) drilling program adjacent to Lake Lefroy. Schematic locations of the drill holes in the FFAC program are represented by the white dots. Blue dots represent holes drilled in the December 2021 quarter. Drilling by Gold Fields in Lake Lefroy during 2019-2021 is also shown for reference

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 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

For Further Information please contact:

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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.

- Outstanding High-Grade Gold and Copper Mineralisation Intersected at Burns: 23 February 2020
- Exploration Update-Drilling Extends Porphyry at Burns: 26 March 2021
- Drill Results Extend Copper Gold Zones at Burns: 29 April 2021
- Multiple Intervals of Altered Porphyry Intersected at Burns: 3 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
- Multiple magnetic anomalies highlight 3000m trend at Burns: 28 September 2021
- Drill testing of multiple magnetic targets underway at Burns: 5 October 2021
- Massive drilling planned for the Western Lefroy JV:13 October 2021
- Burns Update-Drill Results continue to support larger Cu-Au-Ag system: 3 November 2021
- Burns Update Drilling underway at Lovejoy anomaly: 22 November 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

This announcement has been authorised for release by the Board



Wade Johnson
Managing Director

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