ASX Announcement
28 January 2022

Lefroy Exploration

December 2021 Quarterly Activities Report

LEFROY EXPLORATION LIMITED
Western Australian Focused Gold Explorer

ASX Code: LEX

Shares on Issue:
147M

Current Share Price:
29.5c

Market Capitalisation:
$43.4m

Board of Directors
Chairman
Gordon Galt

Managing Director
Wade Johnson

Non-Executive Directors
Michael Davies
Geoffrey Pigott

Flagship Exploration Project
Lefroy Gold Project
- Eastern Lefroy
- Western Lefroy JV

Growth Exploration Projects
Lake Johnston Nickel Project
Glenayle Nickel Project

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HIGHLIGHTS

Exploration activities were accelerated on two fronts during the December 2021 quarter. Step out drill programs evaluated multiple targets at the Burns Cu-Au Prospect at Eastern Lefroy and JV partner Gold Fields commenced a large aircore drilling program at Western Lefroy

Eastern Lefroy

Burns

- *Final assay results were received for a 17-hole RC drill program that evaluated multiple targets at Burns in October 2021. The results continue to enhance the Intrusion related mineral system and identify new areas that include the Lovejoy target:*

- *At Lovejoy, hole LEFR297 intersected and ended in strongly altered diorite porphyry similar to that observed at Burns which is some 2000m to the southeast. Assay results were:*
  - ***10m @ 0.21g/t Au & 0.60% Cu & 2.5g/t Ag from 218m Including 2m @ 0.41g/t Au & 1.56% Cu & 5.5g/t Ag from 225m***
  - ***8m @ 0.22g/t Au & 0.51% Cu & 1.75g/t Ag from 250m to EOH and Including 2m @ 0.67g/t Au & 1.53% Cu & 5.0g/t Ag from 256m to EOH***

- *LEFR307, located 1600m to the west of the established Burns system intersected a new palaeochannel hosted intercept of **17m @ 1.70g/t Au from 75m including 7m @ 3.58g/t Au from 80m** that is open.*

Coogee South

- *Results from the maiden 136-hole AC drilling program successfully generated two new broad gold anomalies known as Catalina and Bronte which are both open*

Western Lefroy Farm In (WLFI)

- *Gold Fields commenced a large 46,000m land based Full Field Aircore (FFAC) drilling program, with 1318 holes planned.*

Corporate

- *A $6 million heavily oversubscribed share placement to institutional and sophisticated investors was completed in November 2021.*
- *The Company had $6.37m in cash and equivalents and zero debt as of 31 December 2021.*

INTRODUCTION

Overview

The Board of Lefroy Exploration Limited (ASX: LEX) ("**Lefroy**" or the "**Company**") is pleased to provide its report on exploration activities during the December 2021 Quarter. Lefroy is an exploration company taking a systematic generative exploration approach at its flagship Lefroy Gold Project ("**LGP**") to discover high-value gold and gold-copper deposits.

Lefroy Gold Project (LGP)

The Lefroy Gold Project is wholly owned by the Company and located approximately 50km to the southeast of Kalgoorlie in the Eastern Goldfields Province of Western Australia (Figure 1). The commanding, semi-contiguous, granted land package covers 637.6km^2 immediately east of and adjoining the world class +10Moz St Ives Gold camp, operated by Gold Fields Limited (NYSE: GFI) ("**Gold Fields**"), and is immediately south of the high-grade Mt Monger gold centre operated by Silver Lake Resources Limited (ASX:SLR) ("**Silver Lake**"). Four gold processing operations are strategically located within 50km of the project and provide commercial options for processing any gold resources discovered.

LGP is referenced in two packages, i.e.

- **Eastern Lefroy** covering 265.6km^2 of wholly owned tenements (Figure 1) including Lucky Strike, Red Dale, Hang Glider Hill, Havelock, Burns and other sub-projects along or near the regional scale Mt Monger fault, now also including Coogee South, and;

- **Western Lefroy Joint Venture** ("**WLJV**") tenements (Figure 1) covering 372km^2 adjoining the Gold Fields tenements that make up the St Ives mining operation. Gold Fields can earn up to a 70% interest in the LEX tenements by spending up to a total of $25million on exploration activities within 6 years of the commencement date of 7 June 2018.

Eastern Lefroy Gold Project

The key focus of exploration by the Company in Eastern Lefroy during the quarter was at the priority Burns Copper-Gold Prospect ("**Burns Cu-Au Prospect**") located within the Non-JV Eastern Lefroy sub project (Figure 1). This involved the completion of two programs evaluating the broader geological and geochemical footprint of Burns with:

1. a 17-hole RC drill program testing multiple targets within and external to the established Burns Cu-Au system
2. an early stage aircore drilling program on Lake Randall adjacent to Burns and the RC targets, that recommenced in January 2022.

A secondary exploration focus by the company was at Coogee South with the assessment and reporting of results for the maiden aircore drilling program undertaken in the prior quarter.

Western Lefroy Farm In (WLFI) & Joint Venture (Gold Fields earn in)

In July 2021 Gold Fields elected to earn the Stage 2 Participating Interest. The Stage 2 earn-in allows Gold Fields to sole fund a further $15 million of expenditure over 3 years (by June 2024) to earn an additional 19% interest in the Joint Venture to bring its total interest to 70%.

During the quarter Gold Fields commenced a massive land based Full Field Aircore (FFAC) drilling program. This program was suspended over the Christmas New year period and has since recommenced subsequent to Quarters end.

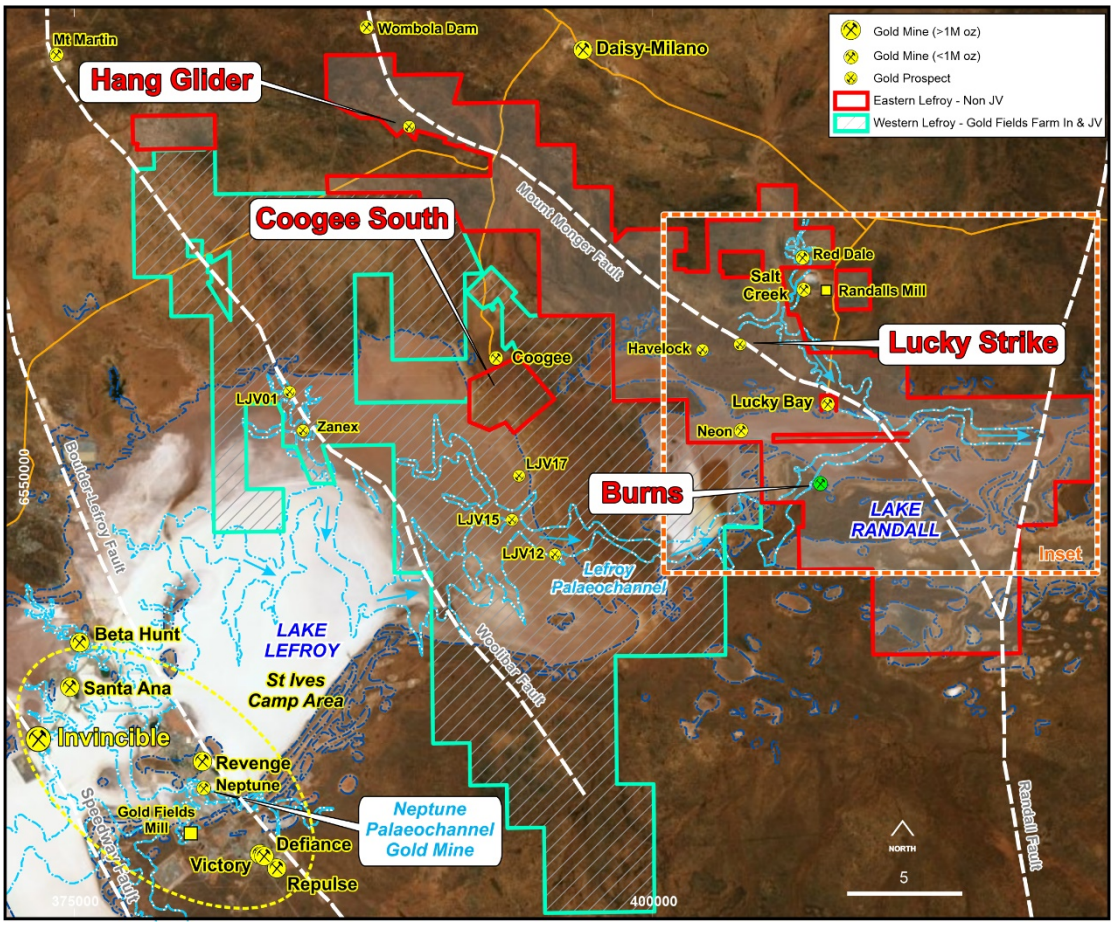


Figure 1 Lefroy Gold Project showing extent of the Eastern and Western sub projects, proximity to the St Ives and Daisy Milano gold mines and the extent of the Lefroy Palaeodrainage that extends from St Ives to Burns and Lake Randall. Refer to Figure 2 for the inset and detail to the exploration at Burns.

EXPLORATION ACTIVITIES

Eastern Lefroy Gold Project (LEX 100%)

The Eastern Lefroy project is a semi contiguous package of wholly owned tenements that cover approximately 37km of strike along and straddling the regional scale Mt Monger Fault (Figure 1). The Mt Monger Fault is considered to be structurally analogous to other major regional faults in the Kalgoorlie terrain (e.g., Boulder-Lefroy, Zuleika, Randall) that are likely a primary control to gold mineralization. The Company considers the Mt Monger Fault to be similarly prospective to host large gold deposits adjacent to its interpreted position, however the area lacks a significant degree of exploration.

The Company has identified three priority centres, or hubs along the Mt Monger Fault trend where greenfields exploration for gold is being focused (Figure 1). These hubs are ranked according to the level of prior exploration activity, gold anomalies identified as noted below, and the structural setting.

P1- Lake Randall Exploration Hub: -Generative Exploration (Burns)

P2- Lucky Strike Exploration Hub: -Advanced Exploration (Havelock, Lucky Strike)

P3- Hang Glider Hill Exploration Hub: -Early-Stage Exploration (Hang Glider, Coogee South)

During the December 2021 Quarter the Company continued to focus field activities on the Lake Randall Exploration Hub subsequent to the strong gold copper discovery intersection recorded in hole LEFR260 at the Burns Cu-Au Prospect in February 2021.

Burns Cu-Au Prospect

The Burns Cu-Au Prospect lies within the Lake Randall Exploration (LRE) Hub that is immediately southeast of the linear trending Lucky Strike-Havelock-Erinmore banded iron formation (BIF) trends (Figure 2) and west of the Mt Monger Fault.

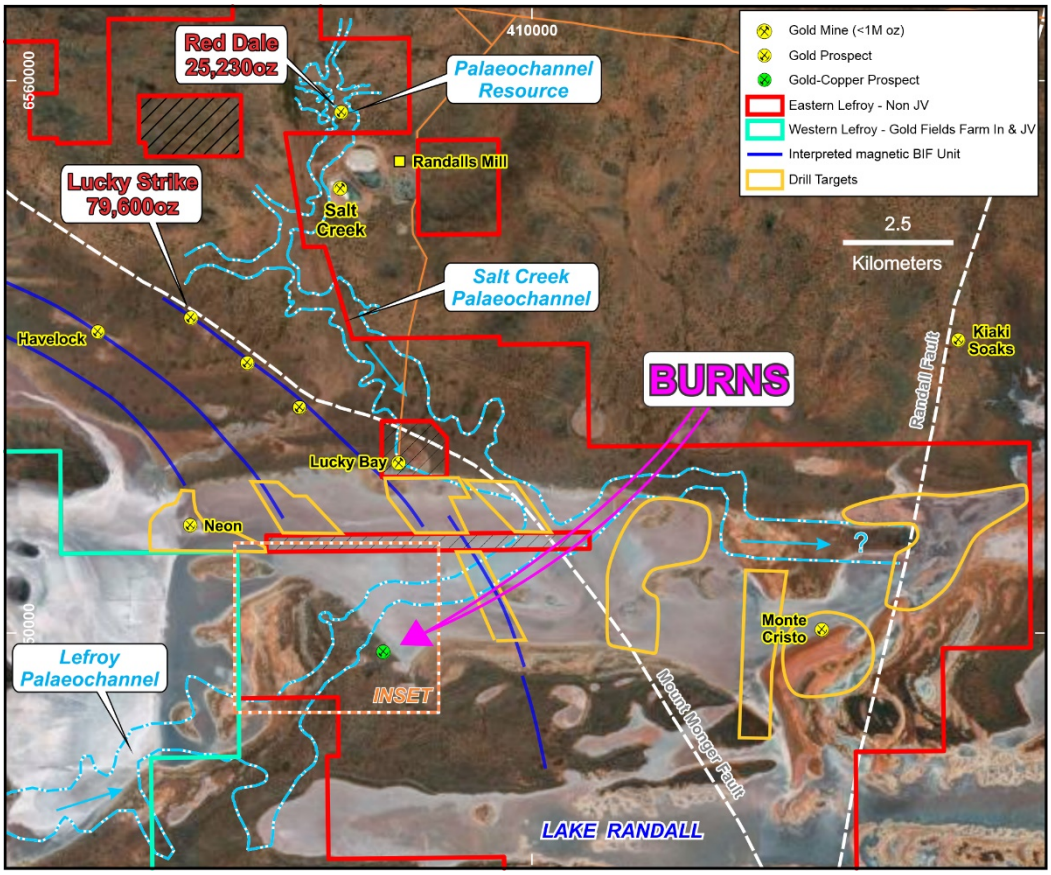


Figure 2 Inset figure highlighting targets to be drilled in Lake Randall. Inset (Figure 3) refers to RC and AC drilling completed immediate adjacent to Burns in the December FY21 Quarter.

The Burns prospect is situated on the eastern margin of a large interpreted felsic intrusion, termed the Burns Intrusion. The intrusion does not outcrop and is represented by a distinctive annular aeromagnetic (Figure 3) and gravity geophysical signature (refer LEX ASX release 16 September 2020).

The Burns prospect is situated on the eastern margin of a large interpreted felsic intrusion, termed the Burns Intrusion. The intrusion does not outcrop and is represented by a distinctive annular aeromagnetic (Figure 3) and gravity geophysical signature (refer LEX ASX release 16 September 2020). A maiden 22-hole RC drill program completed in Jan-Feb 2021 intersected a spectacular gold and copper interval in hole LEFR260 containing 38m @ 7.63g/t Au & 0.56% Cu from 134m. The results from that RC program provided the geological and geochemical data that highlighted the unique geological characteristics of Burns and the stepping block to continued exploration activity.

The 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. Diamond drilling on the zero north (baseline) and 40N sections has defined the eastern extent of the Eastern Porphyry marked by foliated basalt that may indicate a major structure beneath Lake Randall. The alteration and mineralisation are open at depth.

The copper and gold mineralisation hosted by both the magnetite altered diorite porphyry and basalt is considered by the Company to be a new style of mineralisation in the area, a land position dominated by Lefroy (Figure 1 & 2). The existence of additional mineralisation further east under Lake Randall is not discounted by the subsequent RC and diamond drilling campaigns and is the subject of a major aircore drilling program that commenced in November 2021.

During the December 2021 Quarter the Company completed two drilling programs to explore the broader geological and geochemical footprint of the Burns system. This involved a 17 hole step out RC drill program in October 2021 and an initial phase of aircore (AC) drilling in Lake Randall in December. Subsequent to the end of the December Quarter results were received for the RC drilling and the AC drilling has recommenced in Lake Randall.

RC Drill program

A detailed aeromagnetic survey completed over the broader Burns area in August 2021 defined multiple Burns look alike magnetic anomalies over a 3000m trend (Figure 3), known as the Burns Corridor. The Company interpreted the anomalies to represent magnetite alteration zones within and surrounding porphyry dioritic intrusions that are additional to and similar in style to Burns.

This triggered the Company to commence a staged drilling program to assess the broader limits of the Burns mineral system and surrounding geology. Stage 1 of the program involved drilling land-based targets using an RC rig, with stage 2 requiring a specialised lake aircore rig to evaluate targets (e.g., Lovejoy) in Lake Randall with an initial phase completed in December 2021. The expanded stage 2 AC program is currently underway in Lake Randall.

In October 2021 the stage 1 “onshore” RC drilling program was completed. A total of 16 angled holes for 3336m evaluated 6 magnetic anomalies, including six holes at Burns (Figure 3 & 4). Hole depths ranged from 120m to 258m, with an average depth of 200m. This program included one vertical hole (LEFR307) located 1600m west of Burns (Figure 2) drilled to target the main Burns Intrusion

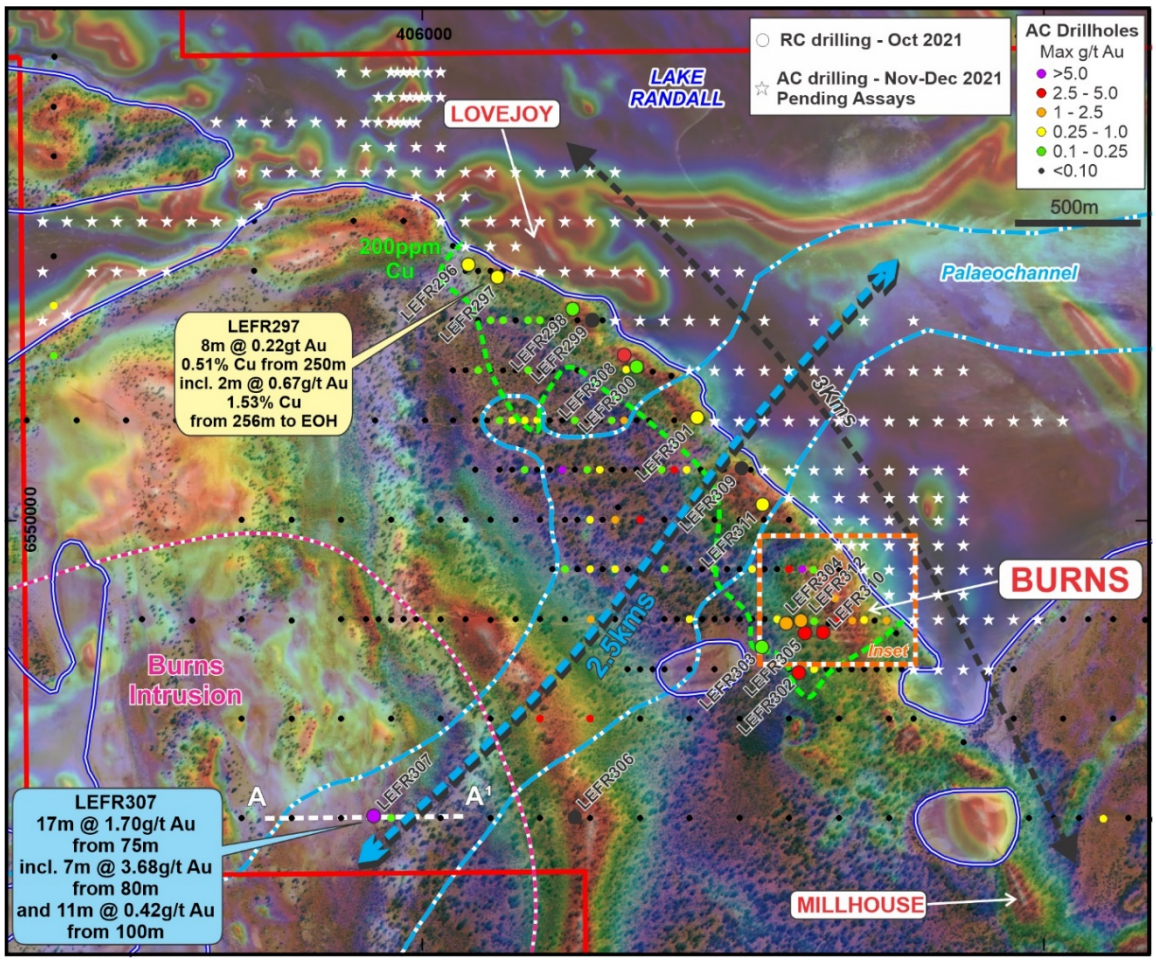


Figure 3 Combined satellite image with transparent TMI RTP aeromagnetic image highlighting the discrete magnetic anomalies along strike of Burns and a segment of the Lefroy Palaeodrainage. The inset area refers to the area of RC and diamond drilling at the Burns Au-Cu-Ag prospect (Figure 3). (Warm colours represent rocks beneath the surface with higher magnetite content). Coloured and black dots represent historical AC drill holes. The October RC drill holes are highlighted. Refer to Figure 4, the inset, for the October RC hole locations at Burns

The nine RC holes evaluating the Smithers, Flanders, Skinner and Lovejoy magnetic anomalies up to 2000m north of Burns (Figure 2) all intersected altered diorite and basalt similar to that observed at Burns. The strongest alteration in dioritic porphyry was intersected in holes at Lovejoy and Skinnner. Holes LEFR296 and 297 are on the western margin of Lovejoy magnetic anomaly (Figure 2) that was evaluated In December with aircore drilling on Lake Randall.

The results (LEX ASX release 25 January 2022) from the 17-hole RC program defined new positions of gold and or gold copper mineralisation and expanded the footprint of the Burns Cu-Au style of mineralisation (Figure 3).

Importantly, and as previously reported hole LEFR297 (Figure 3) intersected significant intervals of hematite silica altered porphyry and associated Cu-Au-Ag-Mo mineralisation. A fault zone with angular diorite clasts in an intense hematite altered silica matrix including strong fine disseminated magnetite and sulphides was intersected from 228m to 250m. The last 2m of the hole ended in strong copper mineralisation hosted by altered diorite porphyry and basalt with associated gold and silver credits.

Significant results from hole LEFR297 include:

- **10m @ 0.21g/t Au & 0.60% Cu & 2.5g/t Ag from 218m**

  Including 2m @ 0.41g/t Au & 1.56% Cu & 5.5g/t Ag from 225m
- **8m @ 0.22g/t Au & 0.51% Cu & 1.75g/t Ag from 250m to EOH**

  Including 2m @ 0.67g/t Au & 1.53% Cu & 5.0g/t Ag from 256m to EOH

This hole is the most northerly RC hole drilled along the Burns corridor with results pending for the air core drill holes drilled north along strike within Lake Randall (Figure 3). The Cu Au mineralisation and altered dioritic host rocks within LEFR297 are consistent with that observed at Burns and demonstrates the extent of the system approximately 1600m northwest of Burns is open.

Additional to the bedrock exploration a new gold zone and opportunity has been discovered approximately 1600m to the west of the established Burns system (Figure 3). Two holes (LEFR306 & 307) were drilled to evaluate the untested core and margin to the large Burns Intrusion. The target area had only been tested by historical (2007-2012 era) wide spaced (320m line 160m centres) aircore drilling, most of which was considered by the Company as ineffective.

Vertical hole LEFR307 was designed to evaluate the intrusion but also follow up a prior subtle gold anomaly hosted in transported cover in an historical aircore hole. The single RC hole intersected a broad gold interval at the base of the transported cover and established gold mineralisation in the monzodiorite basement (Figure 3). The results include: -

- A new palaeochannel hosted intercept of **17m @ 1.70g/t Au from 75m including 7m @ 3.68g/t Au from 80m** that is open
- The first intersection within the monzodiorite basement of **11m @ 0.42g/t Au from 100m,** that supports this as a new host rock and is also open

This single hole has now established that the basal sediments in the palaeochannel at Burns can host significant gold mineralisation and that the monzodiorite basement beneath is also a host to primary gold mineralisation. The intersections are open in all directions.

The Burns palaeochannel (channel) is part of the larger Lefroy drainage that extends east from the St Ives gold camp (Figure 1). At Burns the Company has established the extent of the channel based on interpretation of the historical AC drilling (Figure 4). The broad channel extends from LEFR307 in the southwest and trends to the northeast and beneath Lake Randall for approximately 2500m. The channel and basal gravels were intersected in the December 2021 aircore drilling in Lake Randall, with results pending. The channel is open to the east.

The broad gold intercept in LEFR307 demonstrates that the basal gravels in the channel can host significant gold mineralisation and are considered by the Company to be a priority target to follow up, in addition to pursuing the Cu Au mineralisation at Burns. Palaeochannels can be hosts to gold resources and deposits, like the Neptune open pit at St Ives and the Red Dale gold resource within the Salt Creek Palaeodrainage. The Burns intersection is located downstream and within the Lefroy Palaeodrainage.

A component of the October 2021 drill program also involved completion of 6 angled RC holes at Burns to follow up the broad Cu intersections (LEFR289) hosted within the western basalt (Figure 5). Four (LEFR304,305,310,312) of the 6 holes were drilled on existing drill sections (Figure 5) to assist in constraining the dimensions and orientation to the basalt hosted Cu mineralisation. The remaining two (LEFR302 & 303) of the 6 holes were broad step out holes to the southwest of the two drill sections noted above.
Significant results from these 6 holes include: -

- **19m @ 0.24% Cu, 0.03g/t Au, 0.47g/t Ag from 24m in LEFR305**
- **13m @ 0.40% Cu, 0.31g/t Au, 0.85g/t Ag from 230m in LEFR305**
- **16m @ 0.60% Cu, 0.03g/t Au, 0.91g/t Ag from 24m in LEFR310**
- **11m @ 0.46% Cu, 0.14g/t Au, 0.50g/t Ag from 107m in LEFR310**
- **20m @ 0.51% Cu, 0.50g/t Au, 1.38g/t Ag from 123m in LEFR310**
- **30m @ 0.39% Cu, 0.50g/t Au, 0.64g/t Ag from161m in LEFR310**

Holes LEFR305 and LEFR310 were targeted to drill through the western basalt Cu mineralised zone and test for continuity of the high-grade intersection in LEFR273 (29.1m @ 2.64g/t Au and 0.18% Cu from 277.4m). The LEFR273 intersection is expressed as a broad zone of fracture fill carbonate-hematite-gypsum-magnesite-chalcopyrite veining within basalt at the contact of the eastern porphyry (refer LEX ASX release 29 April 2021).

The intersection in LEFR273 is interpreted to represent a possible southern plunge of the high-grade zone in discovery hole LEFR260, located 140m to the North. LEFR305 and LEFR310 successfully intersecting broad Cu-Au intervals in the western basalt, which significantly expands the mineralised zone discovered in LEFR273. Both LEFR305 and LEFR310 were terminated before reaching targeted depth due to excessive ground water inflows and the key target position remains untested and open at depth and along strike. These holes will be used as a precollar for later diamond drilling to target the Interpreted fault zone.

In addition, a total of 9 holes (including LEFR297) were completed as a proof-of-concept program to evaluate multiple magnetic anomalies along a 3000m interpreted structural corridor highlighted from the recent aeromagnetic survey that includes the Burns Cu-Au prospect (Figure 3). The anomalies coincide with a +200ppm bottom of hole copper anomaly from previous shallow aircore drilling.

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. Significant results from these holes include: -

- **4m @ 1.22g/t Au & 0.16% Cu & 0.5g/t Ag from 109m in LEFR308**
  Including 1m @ 3.95g/t Au & 0.35% Cu & 1.5g/t Ag from 111m
- **4m @ 0.16% Cu, 0.08g/t Au, 1g/t Ag from 152m in LEFR308**
- **7m @ 0.19% Cu, 0.09g/t Au, 0.86g/t Ag from 171m in LEFR308**
- **6m @ 0.24% Cu, 0.04g/t Au, 0.58g/t Ag from 54m in LEFR300**
- **6m @ 0.15% Cu, 0.75g/t Ag from 87m in LEFR309**

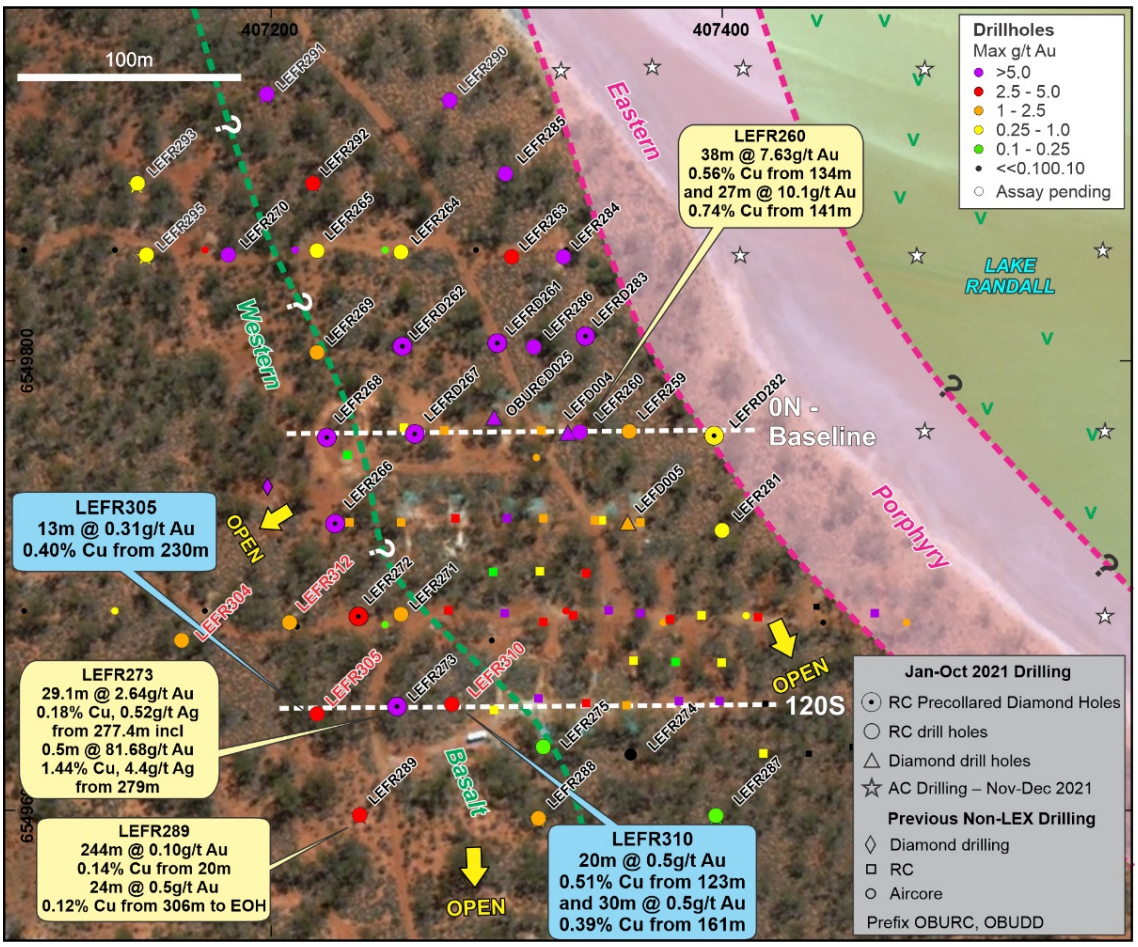


Figure 4 Drill hole plan at the Burns prospect highlighting four of the RC holes in October 2021 drill program at Burns relative to LEFR260 and the interpreted extent of the Eastern Porphyry. Holes with recent results that evaluated the western basalt are highlighted in red font.

Mineralisation is hosted within magnetite and hematite altered basalt and diorite porphyries of similar composition to those observed at Burns. A discrete mineralised fault zone was also intersected over a strike length of 600m in holes LEFR297, LEFR298, LEFR299, LEFR300 and LEFR308. This fault is characterised by angular diorite clasts in an intense hematite altered silica matrix including strong fine disseminated magnetite and sulphides. This fault structure remains untested along strike north under Lake Randall and at depth.

These results are encouraging as they confirm that the discrete magnetic anomalies are coincident with magnetite alteration and Cu-Au mineralisation. This confirms continuity of mineralisation with the same geochemical signature as the Burns system for 1600m along strike of the initial Burns discovery. The results also validate the targeting criteria used by the Company for this initial step-out RC program and will aid in refining and validating targets for follow-up drilling, including the new targets currently being evaluated by the lake aircore drilling program on Lake Randall outlined below.

Lake Randall AC Drill program

Stage 2 of the greater Burns exploration program 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 199-hole campaign is shown on Figure 3 (white stars).

Results for this campaign are pending with initial results expected in February 2022.

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

A total of 300 holes have been planned, with an estimated average depth of 30m, for a total of approximately 9000m to be drilled and is underway (LX ASX release 18 January 2022). 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 receival 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.

Next Steps

The key objective to progress evaluation of the Burns system in the March 2022 Quarter is the completion of the AC drilling in Lake Randall to evaluate multiple targets external to Burns. This stage 2 program as noted above is underway and is aimed at evaluating targets beneath Lake Randall and filling the geological knowledge gap immediately to the east of Burns. The combined results from this AC and the recent RC drill program will provide the broad geochemical and geological framework over the 3000m trend to then focus more detailed drill evaluation.

Assay results for the December CY21 Quarter campaign are pending with initial results expected in February 2022.

Coogee South Prospect

The Coogee South Prospect is located immediately along strike to the south of the high-grade (+5g/t Au) Coogee open pit (Figure 1 & 5), which was successfully mined by Ramelius Resources Limited ("Ramelius" and ASX: RMS) during 2014. Coogee South was excised from the Western Lefroy Farm-in (WLFI) and JV and returned as a 100% owned project to the Company on 18 June 2021 (refer LEX ASX release 2 August 2021).

A 136-hole first pass AC program for a total of 4056m was completed by the Company in September 2021 at Coogee South and results reported in November 2021 (LEX ASX release 4 November 2021).

This early-stage drill program aimed to evaluate a priority target area immediately along strike to the south of the Coogee open pit (Figure 5). A limited phase of RC drilling in 2006 recorded a best intersection of 17m at 1.67g/t Au from 99m in CSRC03 within the Coogee South excision (Figure 1). This target remains open down dip and along strike.

The 136-hole air core drilling program evaluated the 1500m corridor defined by historical shallow rotary air blast drilling (RAB) with close spaced (80m line & 40m centres) drilling (Figure 5). The holes are effectively a geochemical sampling program designed to outline and generate regolith (oxide rock) gold anomalies for follow up deeper RC drill evaluation

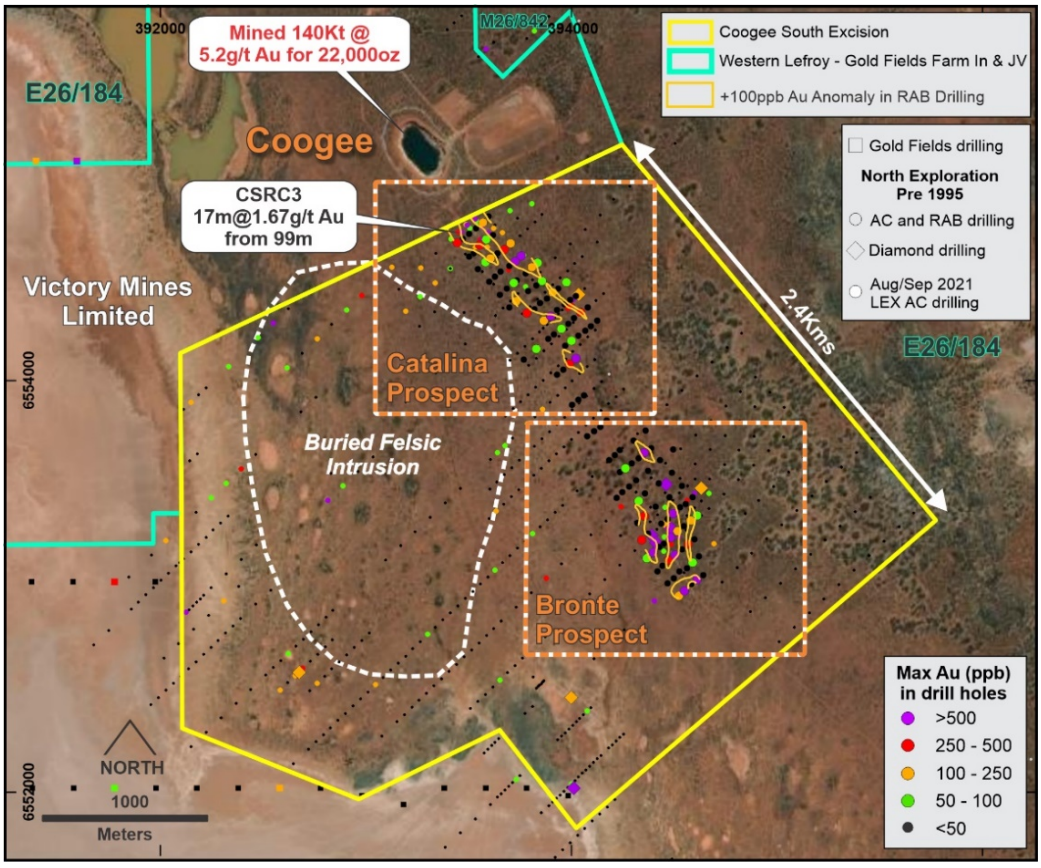


Figure 5 Inset Map showing the extent of the Coogee South excision from granted exploration licence 26/184, and recent LEX drilling and the location of the two new gold anomalies generated.

Drilling successfully generated two new broad gold anomalies known as Catalina and Bronte (Figure 5). The aircore (AC) drilling technique provides a rapid first pass coverage of new areas to gather samples from the top of the bedrock or fresh rock. It generates anomalies in the bedrock for follow up RC or diamond core drill testing.

Significant results from the program include:

- **3m @ 0.99g/t Au from 24m to EOH in LEFA967**
- **6m @ 0.38g/t Au from 12m to EOH in LEFA984**
- **4m @ 0.67g/t Au from 24m in LEFA992**
- **2m @ 0.84g/t Au from 24m to EOH in LEFA1004**
- **4m @ 1.48g/t Au from 36m to EOH in LEFA1020**
- **1m @ 1.40g/t Au from 29m to EOH in LEFA1022**

The Catalina gold anomaly (Figure 5) is 800m in strike and located immediately south of the tenement boundary. The anomaly has a northwest trend that is coincident with a magnetite altered rock unit. Catalina has a coincident gold copper anomaly and is considered to be similar to the mineralisation at Coogee with the strongest anomalism coincident with the interpreted continuation of the flat dipping Coogee structure.

In contrast, the Bronte gold anomaly is approximately 400m (Figure 5) in strike and has a more northerly trending aspect. The key rock type at Bronte is a diorite porphyry and there is no associated copper anomalism (refer Figure 6). The Bronte anomaly is open to the south with some of the higher tenor gold intercepts being from the southernmost drill traverse

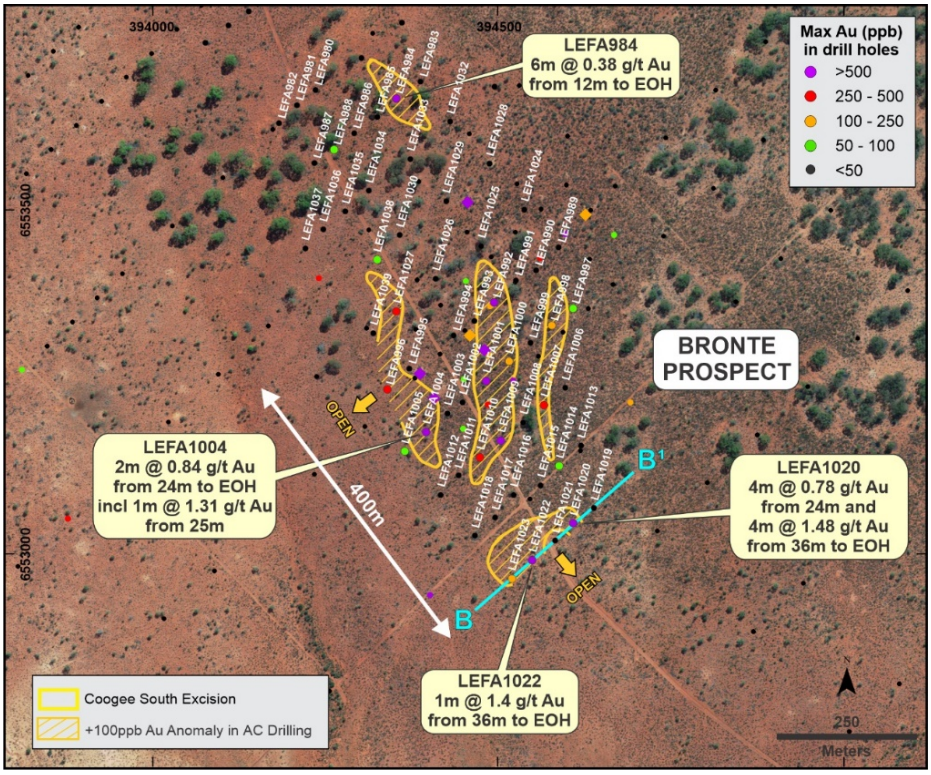


Figure 6 Inset Map showing the extent of the Bronte anomaly

Planning of the next phase of exploration at Coogee South is complete. The program will include RC drilling to test down dip of the recent intersections and additional AC drilling to extend the limits of the new anomalies at Catalina and Bronte. Initial diamond drilling is also planned to evaluate the key geological and structural characteristics of the Coogee South Prospect. Drilling is scheduled to commence in the March Quarter 2022 depending on drill rig availability.

Western Lefroy Gold Project (Farm-In and JV: Gold Fields right to earn 70%)

The Western Lefroy tenement package being farmed into by Gold Fields covers Lake Lefroy and the surrounding area. The package comprises 372km^2 of the total 637.6km^2 of the LGP and is adjacent to Gold Fields' +10 million-ounce St Ives Gold operation (Figure 1).

During the December Quarter it was announced (LEX ASX release 12 October 2021) that a massive Full Field Aircore (FFAC) drill program had been planned and was underway. The program involved completing approximately 1318 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 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 February.

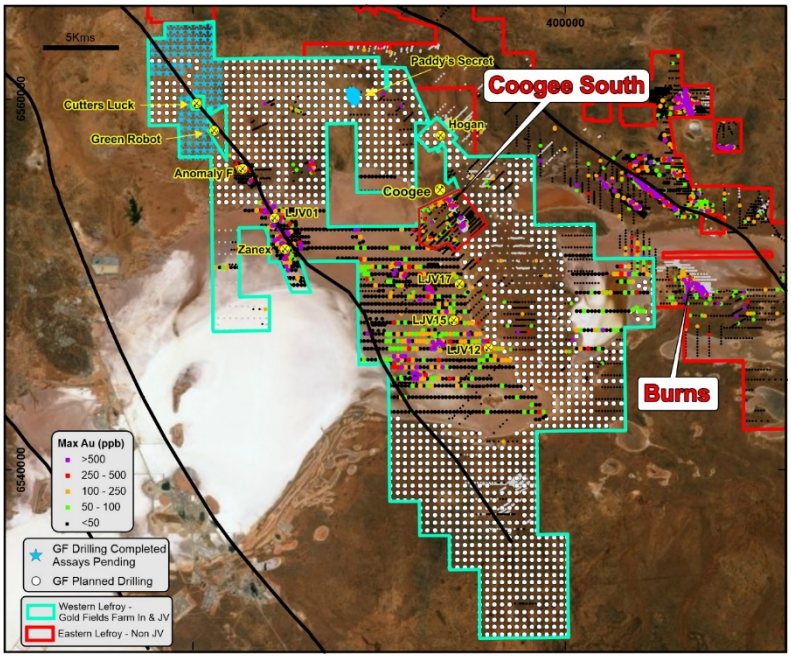


Figure 4 Lefroy Gold Project tenement package highlighting the Gold Fields Farm in & JV package, proximity to Gold Fields St Ives and location of the Full Field Aircore (FFAC) drilling program adjacent to Lake Lefroy.

Next Steps

A quarterly exploration committee meeting was held on 27 January 2022 at the St Ives gold mine to plan and discuss the December CY21 Quarter exploration program and the ongoing exploration program. The Company will be kept informed as the FFAC program progresses. Results are not expected until February 2022.

Lake Johnston Project (Gold and Nickel), Lefroy 100% of Gold and Nickel Rights

The Lake Johnston Project is located 120km west of Norseman in Western Australia and comprises two granted exploration licenses (E63/1722 & 1723) held under title by Lefroy, and one recently acquired exploration license (E63/1777) held under title by Lefroy with lithium rights held by Lithium Australia NL (ASX:LIT) ("**Lithium Australia**"). These holdings form a cohesive package of 197km^2 over the Lake Johnston Greenstone Belt.

The Company continues to progress the opportunity to accelerate nickel and gold exploration on the project and is actively pursuing tasks to assist this strategy. The Company is mindful of the exploration prospectivity for nickel and gold mineralisation on the cohesive land package, but with the full focus being at Eastern Lefroy there is limited opportunity to run parallel exploration programs. The Company also recognises the appreciation in the nickel price and future demand by the EV industry and the opportunity to develop a dedicated Ni exploration Company

During the October 2021 quarter the Company registered a wholly owned subsidiary company, Johnston Lakes Nickel Pty Ltd (JLN). The internal transfer of the Lake Johnston tenements held by LEX and Ni rights on five tenements at Carnilya south held by Monger Exploration Pty Ltd, also a subsidiary of the Company into JLN was initiated.

TThe new JLN entity also applied for five large exploration licenses to form the Glenayle project, north of Wiluna in Western Australia in September 2021 (Refer ASX announcement of 26 October 2021 for further information).

Subsequent to the end of the December Quarter Transfer documents had been lodged with the Department of Mines, Industry Regulation and Safety (DMIRS). The Company continues to focus on a separate listing of the nickel assets held by JLN as a dedicated greenfield nickel explorer (refer LEX ASX release 25 October 2021).

EXPLORATION OUTLOOK MARCH 2022 QUARTER

Eastern Lefroy (100% LEX, Non-JV)

The Company will continue to actively progress field-based exploration in the March 2022 Quarter on the Non-JV Eastern Lefroy package. The Company has a major air core drilling program currently underway (refer LEX ASX release 18 January 2022) on Lake Randall as noted in this report. This program is scheduled to be completed in March with results anticipated in April

There is a significant back log of AC samples from Burns December Lake drilling campaign at the Laboratory awaiting assay. The expected assay turnaround remains at least 3 months with initial results expected in early February for validation and reporting.

Compilation of the gold and multielement data and from this large AC program with the RC and diamond drill data along will provide the baseline geochemical framework to provide vectors to higher priority targets. This will include planning for a deep (+1km) EIS funded diamond drill hole at Burns.

In addition, and whilst results are pending, planning for a program of wide spaced RC drilling to evaluate and expand the dimensions of the palaeochannel mineralisation is underway. This drilling is scheduled to be commenced In the March quarter, but dependent on rig availability

A drilling program is also scheduled to be completed at Coogee South and dependent on rig availability. The primary focus here is to expand the footprint of the Catalina and Bronte gold anomalies with AC drilling.

Western Lefroy (Farm-In and JV Gold Fields right to earn 70%)

The FFAC program will be ongoing subject to Land access clearances in advance of the drilling.

Lake Johnston (Lefroy 100% of Gold and Nickel Rights)

The Company will continue progressing a listing of JLN as noted above to realise value from this asset. A detailed aeromagnetic survey is scheduled to be completed in February to cover the Brians Bluff Trend located approximately 15km east of the Maggie Hayes nickel mine.

CORPORATE

During the December 2021 Quarter the Company's total outgoings on its operating activities was $1.50 million, of which $1.19 million was attributed to direct exploration expenditure as noted in this report.

As of 31 December 2021, the Company had cash reserves of $6.37 million and no debt.

During the December 2021 Quarter payments totalling $85,000 were paid to related parties of the Company and their associates for Director fees and consulting services (refer to section 6 of the December 2021 Quarterly cash flow report for further detail).

On 10 November 2021, the Company advised that it had completed a significantly oversubscribed placement of 18 million fully paid ordinary shares at $0.35 per share to raise A$6.3 million (before issue costs) to institutional and sophisticated investors and certain Directors (LEX ASX release 10 November 2021) ("**Placement**"). The proceeds of the Placement will be used to accelerate exploration at the Company's 100% owned Eastern Lefroy Gold Project and for general working capital purposes.

The Company held its 2021 Annual General Meeting on 3 December 2021 (refer LEX ASX releases 3 December 2021). The Company also held a General Meeting of Shareholders on 3 December 2021 to ratify the Placement and approve the issue of shares under the Placement to certain Directors (refer LEX ASX release 3 December 2021).

On 21 December 2021 the Company announced the change of its Australian office to the following:

Level 3
7 Rheola Street
West Perth WA 6005
Australia

This announcement has been authorised for release by the Board of Lefroy Exploration Limited.

Wade Johnson

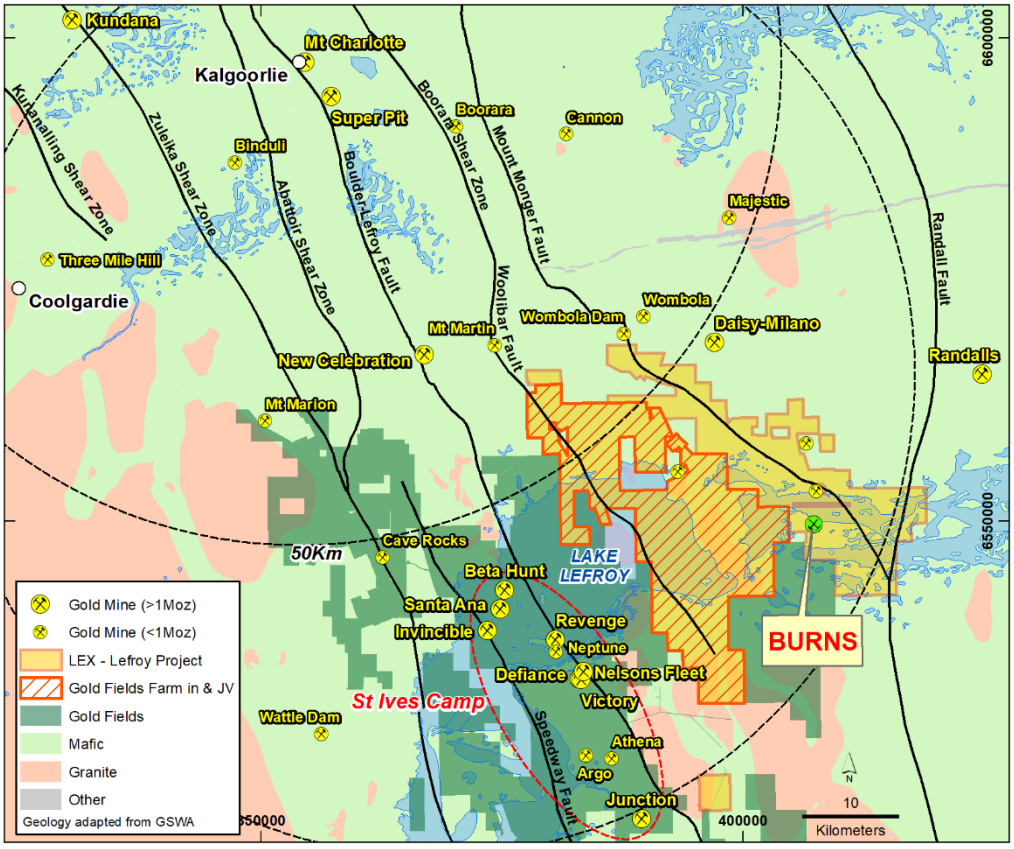
Managing Director

END

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 637.6km2 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 by the Company but specific to exploration completed during the December 2021 Quarter and reported in this announcement.

- 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 Program Planned for the Western Lefroy JV: 13 October 2021
- LEX Expands Nickel Portfolio Securing a Major Land Package: 26 October 2021
- Burns Update-Drill results Support Larger Cu-Au System: 3 November 2021
- Coogee South Update-Aircore Drilling Outlines Two Geochemical Gold Anomalies:4 November 2021
- Burns Update-Drilling Underway at Lovejoy Anomaly : 22 November 2021
- Major Drilling Programs Recommenced at Lefroy:19 January 2022
- RC Drill Results Outline New Gold Zone at Burns: 25 January 2022

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.

Lefroy Exploration

LEFROY EXPLORATION LTD TENEMENT SCHEDULE 31 December 2021				
Project	**Tenement ID**	**Ten status**	**Holder**	**Interest %**
Lefroy	E15/1447	Live	HOGANS RESOURCES PTY LTD	100(1)
Lefroy	E15/1615	Live	HOGANS RESOURCES PTY LTD	100(1)
Lefroy	E26/0131	Live	HOGANS RESOURCES PTY LTD	100(1)
Lefroy	E26/0134	Live	HOGANS RESOURCES PTY LTD	100(1)
Lefroy	E26/0150	Live	HOGANS RESOURCES PTY LTD	100(1)
Lefroy	E26/0184	Live	HOGANS RESOURCES PTY LTD	100(1)
Lefroy	E26/0193	Live	HOGANS RESOURCES PTY LTD	100(1)
Lefroy	M26/0842	Live	HOGANS RESOURCES PTY LTD	100(1)
Lefroy	M26/0850	Pending	HOGANS RESOURCES PTY LTD	100(1)
Lefroy	M26/0851	Pending	HOGANS RESOURCES PTY LTD	100(1)
Lefroy	P26/3764	Live	HOGANS RESOURCES PTY LTD	100(1)
Lefroy	P26/3765	Live	HOGANS RESOURCES PTY LTD	100(1)
Lefroy	P26/3889	Live	HOGANS RESOURCES PTY LTD	100(1)
Lefroy	P26/3890	Live	HOGANS RESOURCES PTY LTD	100(1)
Lefroy	P26/3891	Live	HOGANS RESOURCES PTY LTD	100(1)
Lake Johnston	E63/1722	Live	LEFROY EXPLORATION LTD	100
Lake Johnston	E63/1723	Live	LEFROY EXPLORATION LTD	100(2)
Lake Johnston	E63/2073	Liv	LEFROY EXPLORATION LTD	100
Lefroy	E15/1497	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	E15/1498	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	E15/1715	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	E25/0517	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	E25/0518	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	E25/0587	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	E25/0606	Pending	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	E26/0176	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	E26/0182	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	E26/0183	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	E26/0195	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	M25/0362	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	M25/0363	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	M25/0366	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	P25/2316	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	P25/2317	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	P25/2421	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	P25/2451	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	P25/2488	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	E15/1497	Live	MONGER EXPLORATION PTY LTD	100(1)

LEFROY EXPLORATION LTD TENEMENT SCHEDULE 31 December 2021 cont.				
Project	**Tenement ID**	**Ten status**	**Holder**	**Interest %**
Lefroy	P26/4287	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	P26/4391	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	P26/4392	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	P26/4393	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	P26/4394	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	P26/4423	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	P26/4424	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	P26/4425	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	P26/4437	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	P26/4438	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	P26/4443	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	P26/4444	Live	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	L25/0061	Pending	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	L25/0063	Pending	MONGER EXPLORATION PTY LTD	100(1)
Lefroy	E25/524	Live	MONGER EXPLORATION PTY LTD	100(1)
Transferring from Lithium Aust	E63/1777	Live	LITHIUM AUSTRALIA NL	100(3)
Glenayle	E69/3945	Application	JOHNSTON LAKES NICKEL PTY LTD	100(1)
Glenayle	E69/3946	Application	JOHNSTON LAKES NICKEL PTY LTD	100(1)
Glenayle	E69/3947	Application	JOHNSTON LAKES NICKEL PTY LTD	100(1)
Glenayle	E69/3948	Application	JOHNSTON LAKES NICKEL PTY LTD	100(1)
Glenayle	E69/3949	Application	JOHNSTON LAKES NICKEL PTY LTD	100(1)

Notes to accompany tenement listing

(1) Hogans Resources Pty Ltd, Monger Exploration Pty Ltd and Johnston Lakes Nickel Pty Ltd (JLN Pty Ltd) are wholly owned subsidiaries of Lefroy Exploration Limited

(2) E63/1722, E63/1723 and E63/1777 - Held under title by LEX. Lithium Australia NL (ASX:LIT) have the rights to Lithium. Transfer of title to JLN Pty Ltd is with DMIRS.

(3) E63/1777 is held by Lithium Australia NL and will be held by them until completion of the transfer process with DMIRS.

(4) E25/524 was transferred on 28 May 2021 from Silver Lake Resources to Monger Exploration Pty Ltd

DMIRS-- Department of Mines Industry Regulation and Safety