



Lefroy Exploration

ASX ANNOUNCEMENT
FOR PERIOD ENDING 31 MARCH 2024

MARCH 2024 QUARTERLY ACTIVITIES REPORT

ASX:LEX

QUARTER HIGHLIGHTS

EXPLORATION

- Resource extension drilling program at Mt Martin Gold Mine completed for 29 RC holes over 5,712m.
- Significant gold intersections returned from assay results, identifying mineralization beyond the existing Indicated/Inferred Mineral Resource Estimate (MRE) of 501,175oz gold.
 - Drilling northwest of Mt Martin pit highlights down-dip continuity and growth potential of mineralised structures with intersections including 10m @ 4.32g/t Au from 222m in LEFR379.
 - Additional shallow mineralised zones identified east of Mt Martin open pit in an underexplored area (East Shear) point to upside resource potential, including 8m @ 3.98g/t Au from 38m in LEFR395.
- Assay results received for drillhole GYD040 at Goodyear Nickel Deposit return a high-grade nickel interval of 1.2m @ 10.01% Ni from 278.7m
- Comprehensive review of exploration properties identifies new pipeline of high-grade gold targets to accelerate resource growth and build on existing 1.1Moz gold base.
- New drilling programs planned within the Lucky Strike district, with activity at both Lucky Strike and Havelock targets commencing subsequent to quarter's end.

CORPORATE

- At 31 March 2024, the Company had cash reserves of \$2.5 million and no debt
- Mr Graeme Gribbin appointed CEO following significant business review and restructure
- David Kelly appointed Non-Executive Director effective 1 January 2024
- In response to current market conditions, the company is focusing near term exploration on its portfolio of gold assets.

ABOUT LEFROY EXPLORATION

- Perth-based explorer focused on expanding and developing a growing gold portfolio in WA
- Flagship Lefroy Project (LP) covers 635km² of 100%-owned contiguous tenure in the Goldfields
- Located 35km south-east of Kalgoorlie and 20km north of Kambalda gold and nickel mining centres
- Focused exploration across the broader Lefroy Project, including Location 45 and surrounding the Mt Martin Gold Mine.
- Growing gold inventory of more than 1.1m ounces across multiple projects in the world class Goldfields region
- Valuing discipline, teamwork and innovation to discover a high-value, long-life, economic precious and base metal deposits

LEFROY EXPLORATION LTD

Shares on issue (@ 23 April 2024)	200.5M
Price (@ 23 April 2024)	A\$0.12
Market Cap (@ 23 April 2024)	A\$24.1
Cash (@ 31 March 2024)	A\$2.5M

BOARD OF DIRECTORS

Mr Gordon Galt	Non-Executive Chairman
Mr Michael Davies	Non-Executive Director
Ms Tara French	Non-Executive Director
Mr David Kelly	Non-Executive Director

EXPLORATION ACTIVITIES

During the quarter Lefroy Exploration (“Lefroy” or “LEX”) (ASX:LEX”) finalised an initial tranche of exploration drilling and drill core analysis across two projects within Location 45, the Company’s freehold lease near Kalgoorlie and Kambalda (refer ASX announcement [23 May 2023](#)).

Drilling activity was conducted from late November 2023 through to late December 2023 focused on the Mt Martin Gold Mine and Goodyear Nickel Deposit, with assay results received early in the March quarter.

DRILLING EXTENDS GOLD MINERALISATION AT MT MARTIN GOLD MINE

The Company’s resource expansion drilling program at Mt Martin consisted of 29 reverse circulation (RC) drillholes for a total of 5,712m located proximal to the existing open pit (refer Figure 1) and evaluated the potential for multiple extensions at depth and shallow gold-bearing shear structures over a strike length of 1,000m.

Each drillhole averaged approximately 200m depth and holes were targeted as nominal 40m step-outs from existing mineralisation.

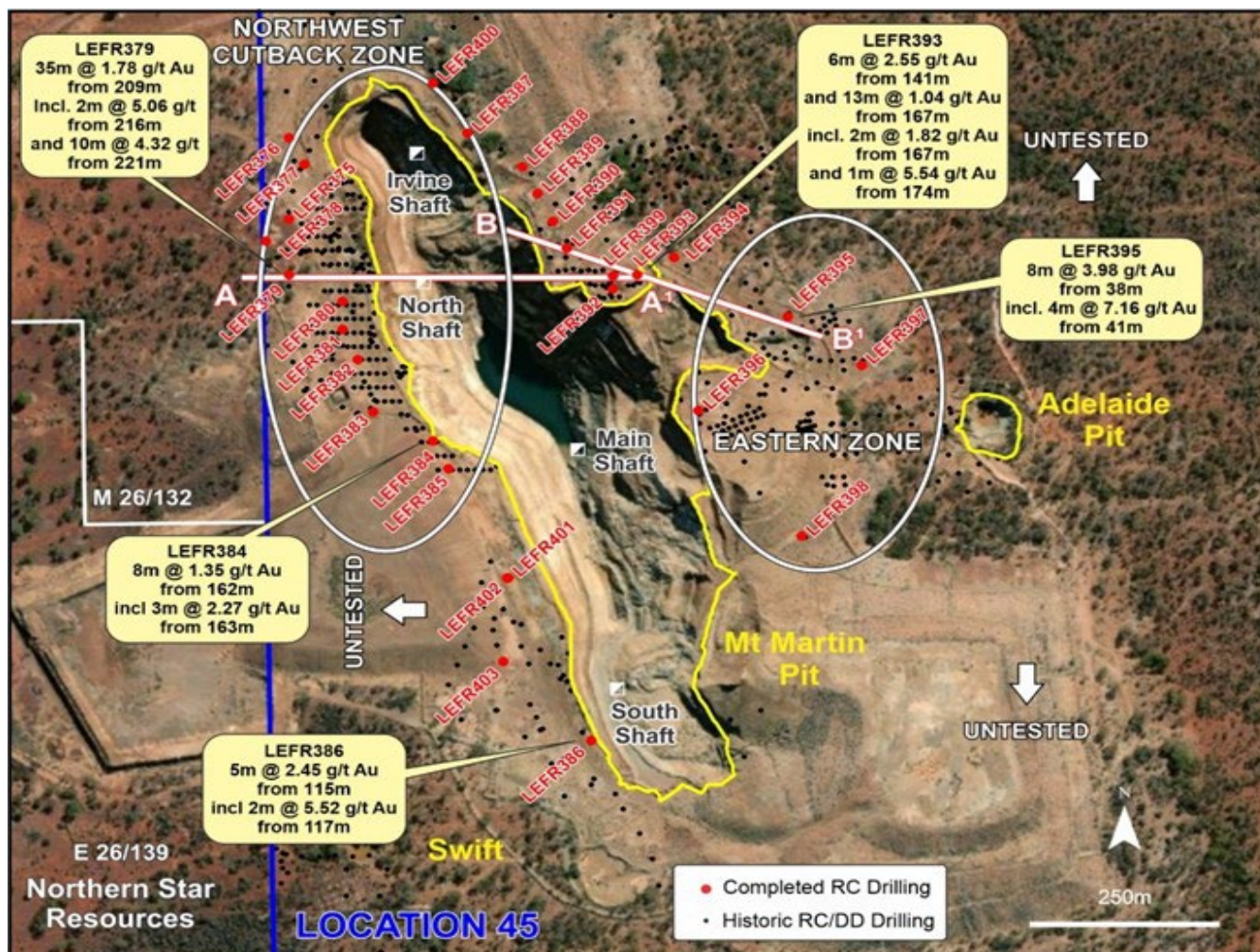


Figure 1: Mt Martin Gold Mine drill hole location plan showing target areas to the east and west of the existing pit.

The program returned significant gold intersections, which extended mineralisation beyond the existing Indicated/Inferred Mineral Resource Estimate (MRE) of 501,175oz gold. Full drill hole collar details and significant assay results are available in an ASX announcement from [18 January 2024](#).

Drill holes on the west side of the open pit (Figure 1) targeted the north-west plunging ore shoots, which are a feature of high-grade mineralisation at Mt Martin. Significant results included:

- 35m @ 1.78g/t Au from 209m including 10m @ 4.32g/t Au from 222m (LEFR379)
- 3m @ 3.74g/t Au from 128m (LEFR376)
- 4m @ 2.6g/t Au from 178m (LEFR380)
- 5m @ 2.45g/t Au from 115m (LEFR386)

Drill holes on the east side of the pit were planned to confirm near-surface continuity of mineralised structures including the Main Shear and the East Shear outside the eastern extent of the open pit.

This area has been subject to limited historic drilling and forms a gap in resource data immediately outside the open pit. Significant results included:

- 8m @ 3.98g/t Au from 38m, including 4m @ 7.16g/t Au from 41m (LEFR395)
- 3m @ 2.62g/t Au from 53m (LEFR395)
- 6m @ 2.55g/t Au from 141m (LEFR393)
- 13m @ 1.04g/t Au from 167m (LEFR393)

RESULTS CONFIRM HIGH GRADE NICKEL SULPHIDES AT GOODYEAR

Lefroy’s program at Goodyear Nickel Deposit marked its maiden diamond drilling conducted on the resource and the first nickel exploration at Location 45 for 15 years.

The program ran from November to late December 2023, with assay results received in January 2024 returning highly elevated nickel values, particularly in drillhole GYD040.

Drillhole GYD040 followed-up historical high-grade intersections and tested the margins of the Contact 1 Inferred Resource envelope proximal to the highly prospective mineralised basal contact.

Initial encouraging observations of massive sulphide accumulations were supported by assay results that returned nickel values including an interval of 1.2m @ 10.01% Ni from 287.7m (Figure 2)

The intersection supports historical intercepts and confirmed Goodyear is host to high-grade nickel sulphides accumulated at the base of the ultramafic unit.

During the quarter Lefroy also progressed key environmental and heritage approvals for the Goodyear area. While the Company has taken the position to pause nickel exploration at this time, the Company will be well placed to recommence activity at the site when market conditions improve.

Further information on diamond drilling results are available in the ASX announcement from [10 January 2024](#).

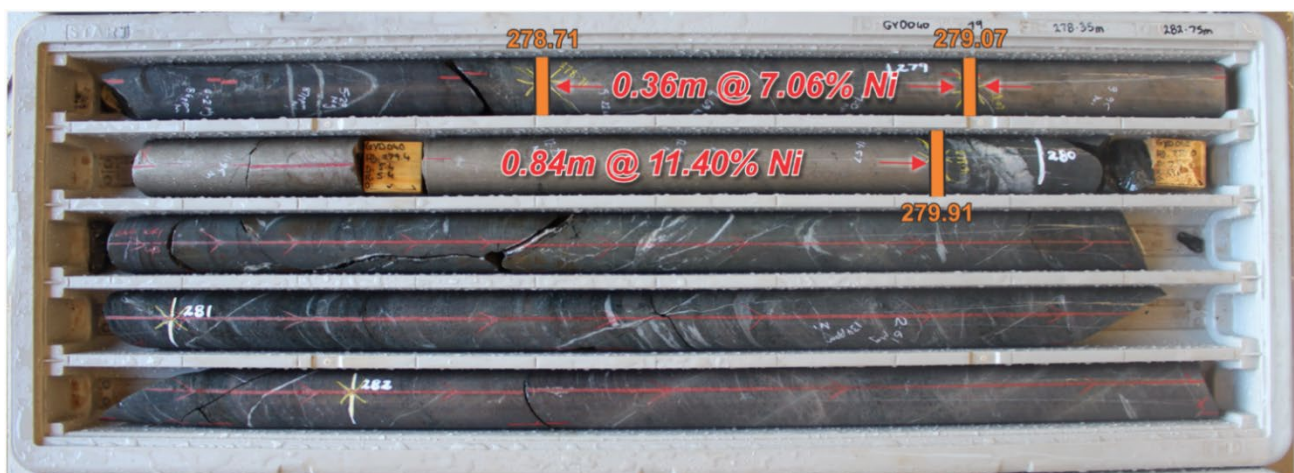


Figure 2: Core taken from drillhole GYD040 Drill showing significant intersections.

STRATEGIC REFOCUS TO ACCELERATE GOLD ASSET GROWTH

Following a significant restructure of the business and completion of a strategic review, Lefroy reset its focus on gold exploration aiming to expand and upgrade gold resources (refer ASX announcement [23 February 2024](#))

Corporate running costs were also significantly reduced following a restructure of the business, which included the transition in leadership from former Managing Director Wade Johnson to the appointment of Graeme Gribbin as Chief Executive Officer in February.

Among key actions taken as part of the strategic review were:

- A review of all existing gold resources, with the aim of expanding and upgrading of mineable open pit opportunities
- Assessment of the extent and cost of exploration programs required to achieve these outcomes
- Engagement with regional operators of gold processing plants and prospective developers to determine pathways towards near-term commercialisation.

These actions culminated in the Company setting a new exploration trajectory in 2024 following a comprehensive gold target review, which resulted in an expanded exploration portfolio.

Among key outcomes identified was maturation of gold targets within the Company's dominant 635km² Lefroy Project landholding. Prospective targets include Lucky Strike South, Havelock, Red Dale, Erinmore, Lovejoy, Neon, Coogee, Burns and Mt Martin (refer Figure 3 overpage).

EXPLORATION COMMENCES ON HIGH-GRADE GOLD TARGETS

During the quarter planning was finalised in preparation for the commencement of targeting several pre-resource to resource extension stage exploration targets.

The focus combined testing high ranking pre-resource targets in the Lucky Strike district (Lucky Strike and Havelock) as a priority followed closely by advancing the geological and resource setting at Mt Martin with a view to updating the mineral resource estimate in the upcoming June FY24 quarter.

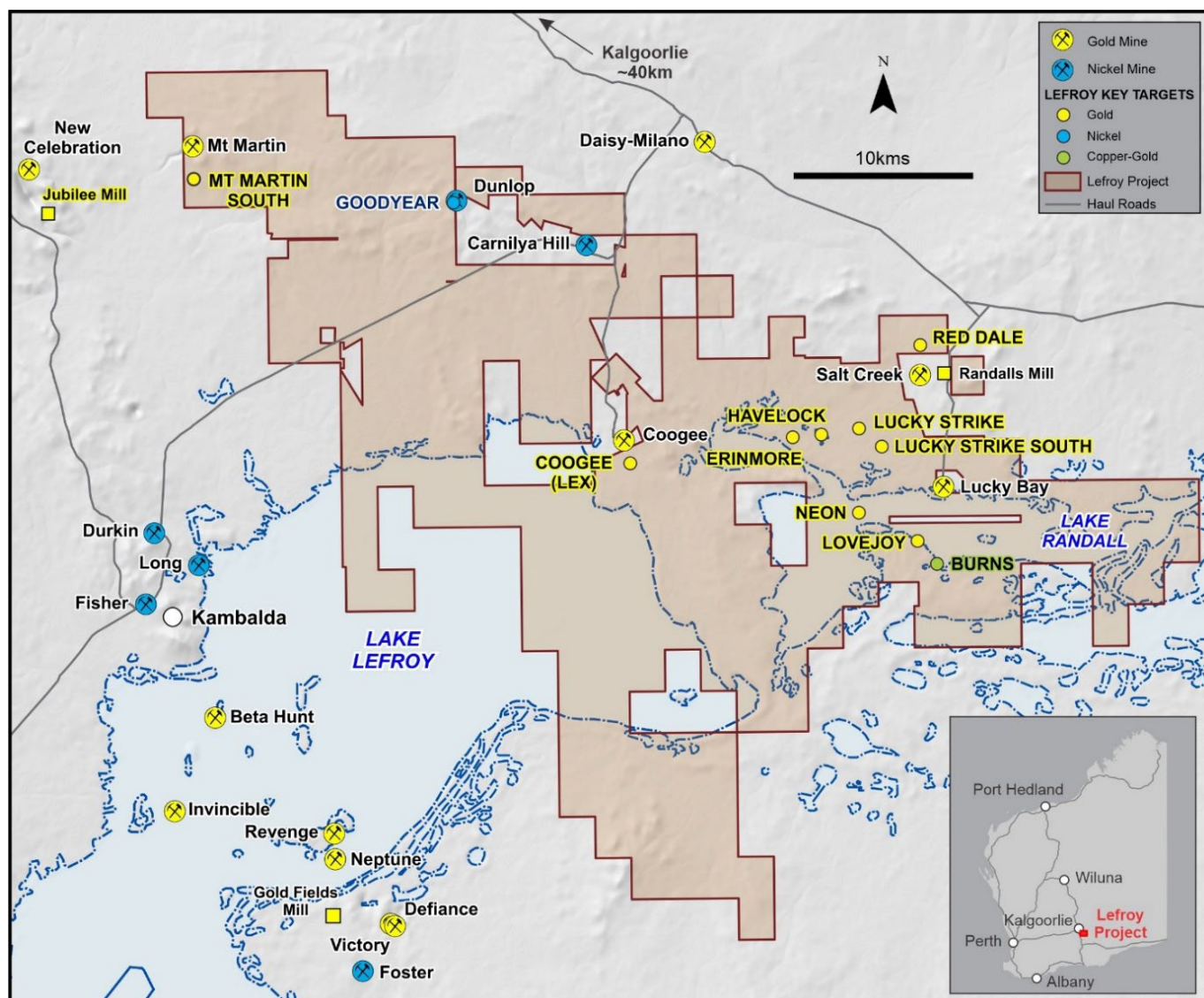


Figure 3: Identified pipeline of gold targets within the Lefroy Project area.

Subsequent to quarter's end, a shallow 17-hole RC drilling program began testing numerous historic high grade targets identified by Lefroy from previous drilling campaigns dating back to the period from 2017 - 2020 for Lucky Strike and 2022 for Havelock (refer ASX announcement [19 April 2024](#)).

Assay results are anticipated to be returned through May and will be communicated via the ASX.

CORPORATE

CASH POSITION

At 31 March 2024 the Company had cash reserves of \$2.5 million and no debt (refer to section 4.6 of Appendix 5B March 2024 quarterly cash flow report).

During the March 2024 quarter the Company's total outgoings on its operating activities were \$0.53 million (refer to section 1.9 of the Appendix 5B), with an elevated outgoing amount relating to redundancy and directors' payments associated with the Company restructure in February.

Net cash used in investing activities was \$1.14 million, which was primarily attributed to exploration and evaluation (refer to section 2.6 of Appendix 5B). A number of significant drilling contractor invoices were settled during the quarter relating to both gold and nickel exploration activity conducted and completed up to December 2023. It should be noted that a substantial portion of this was incurred in January 2024, with a significant reduction in outgoings occurring across February and March 2024.

The Company wishes to advise that despite the recommencement of exploration drilling activities in the upcoming quarter, the corporate restructure will result in an overall reduction in corporate costs and outgoings are expected to be notably lower in the June quarter.

Lastly, the Company is in the process of finalising its research and development tax incentive program submission, relating to research activities performed on the Burns project during the FY23 period. It is anticipated that this rebate will be received by 30 June 2024, providing additional funding for operational and investing activities going forward.

GRAEME GRIBBIN APPOINTED AS CHIEF EXECUTIVE OFFICER

During the quarter highly experienced geologist Graeme Gribbin was appointed Chief Executive Officer of Lefroy, replacing the previous Managing Director Wade Johnson.

Graeme brings more than 25 years of exploration to LEX, with mining and management experience spanning gold and nickel projects, from greenfields exploration through to resource, project development and mining.

Graeme holds a BSc (Hons) in Geology and is a current member of the Australian Institute of Geoscientists (AIG).

DAVE KELLY NED APPOINTMENT TAKES EFFECT

On 1 January 2024 the appointment of Dave Kelly as Non-Executive Director on the Board of Lefroy Exploration took effect (refer ASX announcement [20 December 2023](#)).

Mr Kelly is a highly qualified geologist and mining executive with extensive gold and nickel experience across the entire value chain from exploration to development.

SIGNIFICANT ANNOUNCEMENTS

The Company released a number of significant ASX announcements through the last quarter.

27 March 2024	Lefroy to Recommence Exploration of High-Grade Gold Targets
23 February 2024	Strategy to Focus on Gold Development and Exploration
06 February 2024	Executive Update – Leadership Changes

18 January 2024	Drilling Extends Gold Mineralisation at Mt Martin Gold Mine
10 January 2024	Results Confirm High Grade Nickel Sulphides at Goodyear

-Ends-

This announcement has been authorised for release by the Board of Directors.



Graeme Gribbin
CEO

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DISCLAIMER

CAUTION REGARDING FORWARD-LOOKING INFORMATION

This document contains forward-looking statements concerning Lefroy Exploration Limited. Forward-looking statements are not statements of historical fact and actual events and results may differ materially from those described in the forward-looking statements as a result of a variety of risks, uncertainties and other factors. Forward-looking statements are inherently subject to business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause the Company's actual results to differ materially from those expressed or implied in any forward-looking information provided by the Company, or on behalf of, the Company. Such factors include, among other things, risks relating to additional funding requirements, metal prices, exploration, development and operating risks, competition, production risks, regulatory, including environmental regulation and liability and potential title disputes.

Forward-looking statements in this document are based on the Company's beliefs, opinions and estimates of Lefroy Exploration Limited as of the dates the forward-looking statements are made, and no obligation is assumed to update forward-looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.

COMPETENT PERSON STATEMENT

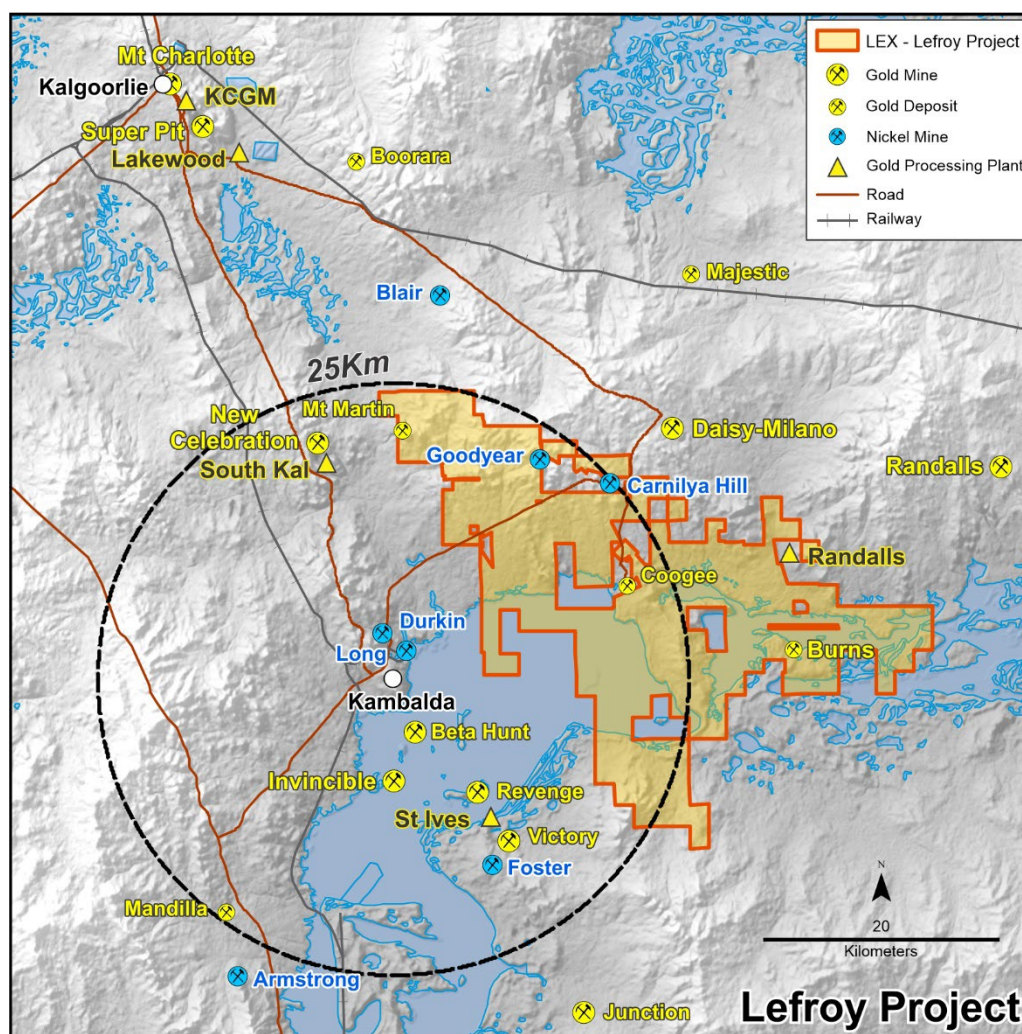
The information in this announcement that relates to exploration targets and exploration results is based on information compiled by Graeme Gribbin, a competent person who is a member of the Australian Institute of Geoscientists (AIG). Mr Gribbin is employed by Lefroy Exploration Limited. Mr Gribbin 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. Mr Gribbin 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 Limited confirms it is not aware of any new information or data which materially affects the information included in the original market announcements. Lefroy Exploration Limited confirms the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

ABOUT LEFROY EXPLORATION LIMITED

Lefroy Exploration Limited (ASX:LEX) is an active West Australian exploration company focused on developing its growing gold and critical minerals projects. The Company’s portfolio of high-quality projects includes the Lefroy Project, located in the heart of the world-class Kalgoorlie and Kambalda gold and nickel mining districts, the Lake Johnston Project 120km west of Norseman, and the large 2872km² Glenayle Project 210km north of Wiluna.

The Lefroy Project is a contiguous land package of 635km² with a growing mineral resource inventory of approximately 1.1 million ounces of gold, 58,000 tonnes of contained copper and 14,780 tonnes of contained nickel, as at August 2023 (refer to LEX [2023 Annual Report](#)).

In May 2023, Lefroy signed a Mineral Rights Agreement with title holder Franco-Nevada Pty Ltd, to acquire the mineral rights to Hampton East Location 45 (Location 45) (Refer ASX release 23 May 2023). Location 45 is a freehold property, located within 25km of Kambalda and 35km southeast of Kalgoorlie. The property hosts the historic Mt Martin gold mine, which has historically produced approximately 200,000 ounces of gold grading at 2.8g/t and which includes an existing resource of 501,175 oz gold (8.7Mt @ 1.79g/t Au) (refer to ASX release [5 September 2023](#)).



Regional location map of the Lefroy Project

LEFROY EXPLORATION LIMITED TENEMENT SCHEDULE 31 March 2024				
Tenement Id	Project	Ten Status	Holder	Interest %
P26/3765	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100 ⁽¹⁾
P26/3764	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100 ⁽¹⁾
E26/0134	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100 ⁽¹⁾
E26/0193	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100 ⁽¹⁾
E26/0150	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100 ⁽¹⁾
E15/1615	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100 ⁽¹⁾
E26/0131	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100 ⁽¹⁾
E26/0184	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100 ⁽¹⁾
E15/1447	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100 ⁽¹⁾
M26/0842	Western Lefroy JV	Live	HOGANS RESOURCES PTY LTD	100 ⁽¹⁾
M26/0850	Western Lefroy JV	Pending	HOGANS RESOURCES PTY LTD	100 ⁽¹⁾
M26/0851	Western Lefroy JV	Pending	HOGANS RESOURCES PTY LTD	100 ⁽¹⁾
E15/1498	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E26/0195	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽²⁾
E15/1497	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
P25/2488	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
P26/4423	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
P26/4437	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
P26/4438	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
P25/2317	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
P25/2316	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E25/0517	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E25/0518	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
P25/2421	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E15/1715	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E26/0182	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E25/0587	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E26/0183	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E25/524	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E 63/2395	Lake Johnston	Pending	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E 63/2396	Lake Johnston	Pending	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E 63/2402	Lake Johnston	Pending	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E 74/792	Lake Johnston	Pending	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
M25/0362	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
M25/0363	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
M25/0366	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E25/0606	Lefroy	Pending	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
P26/4392	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
P26/4393	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
P26/4394	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾

LEFROY EXPLORATION LIMITED TENEMENT SCHEDULE 31 March 2024 - continued				
Tenement ID	Project	Ten Status	Holder	Interest %
P26/4391	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E26/0176	Lefroy	Live	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
L25/0061	Lucky Strike Haul Road	Pending	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
L25/0063	Mulga Haul Road	Pending	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E63/2073	Lake Johnson	Live	HAMPTON METALS PTY LTD	100 ⁽¹⁾
E63/1723	Lake Johnston – CHR (Li rights)	Live	HAMPTON METALS PTY LTD	100 ⁽²⁾
E63/1722	Lake Johnston – CHR (Li rights)	Live	HAMPTON METALS PTY LTD	100 ⁽²⁾
E63/1777	Lake Johnston – CHR (Li rights)	Live	HAMPTON METALS PTY LTD	100 ⁽²⁾
E69/3945	Glenayle	Live	HAMPTON METALS PTY LTD	100 ⁽¹⁾
E69/3946	Glenayle	Live	HAMPTON METALS PTY LTD	100 ⁽¹⁾
E69/3947	Glenayle	Live	HAMPTON METALS PTY LTD	100 ⁽¹⁾
E69/3948	Glenayle	Live	HAMPTON METALS PTY LTD	100 ⁽¹⁾
E69/3949	Glenayle	Live	HAMPTON METALS PTY LTD	100 ⁽¹⁾
E69/4045	Glenayle	Live	HAMPTON METALS PTY LTD	100 ⁽¹⁾
E26/240	Lefroy	Pending	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E26/241	Lefroy	Pending	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E15/1954	Lefroy	Pending	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E15/1955	Lefroy	Pending	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E26/260	Lefroy	Pending	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
E26/261	Lefroy	Pending	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
M15/1907	Lefroy	Pending	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾
M25/379	Lefroy	Pending	MONGER EXPLORATION PTY LTD	100 ⁽¹⁾

E = Exploration Licence

M = Mining Lease

P = Prospecting Licence

L = Miscellaneous
Licence

Notes to accompany tenement listing:

- (1) Hogans Resources Pty Ltd, Monger Exploration Pty Ltd and Hampton Metals Pty Ltd are wholly owned subsidiaries of Lefroy Exploration Ltd.
- (2) E63/1722, E63/1723 and E63/1777 - Held under title by HMT. Charger Metals NL (ASX CHR) and Lithium Australia NL (ASX:LIT) have the rights to Lithium.