



Lefroy Exploration

ASX ANNOUNCEMENT | 24 NOVEMBER 2023

RESOURCE EXTENSION DRILLING UNDERWAY AT MT MARTIN GOLD MINE

ASX:LEX

HIGHLIGHTS

- RC resource drilling is underway at the Mt Martin Gold Mine, within freehold property Location 45, located 35km southeast of Kalgoorlie.
- The initial drilling program consists of 37 RC holes for 7,100m, and is aiming to expand the existing Mt Martin Mineral Resource Estimate of 501,175 oz Au (8.7Mt @ 1.79g/t Au).
- Drillholes planned to extend previous intersections such as 12m @ 6.65 g/t Au from 318m in drill hole AUZD003, which indicate strong potential for additional high-grade gold zones beyond the existing pit shell.
- Drilling is expected to be completed in mid-December with initial gold assay results anticipated later in December.
- New drill data is expected to enhance the existing resource and deliver additional shallow ounces to facilitate further optimisation studies and resumption of open cut mining in due course.
- Options for early commercialisation of Mt Martin is still the Company's priority.

First Lefroy Drill hole at Mt Martin





LEFROY MANAGING DIRECTOR WADE JOHNSON COMMENTED:

"We are thrilled to kick off our maiden resource drilling program at the Mt Martin Gold Mine located within Location 45 where we recently acquired the mineral rights over this freehold property. Mt Martin contains a significant gold resource beneath the open pit that has remained undrilled for almost 10 years and that presents an opportunity for near term development. Our aim is to rapidly assess and grow the resource to pursue restart of the mine as the gold price continues to strengthen. We are fortunate to have several major gold mines neighboring Mt Martin and believe this provides potential options to rapidly realise value from this asset, in addition we have developed a strong exploration framework to significantly grow the resource"

DRILLING PROGRAM ROLLOUT

Lefroy Exploration Limited ('Lefroy' or 'the Company') (ASX:LEX) is pleased to announce that resource expansion drilling has commenced at the Mt Martin Gold Mine (Mt Martin).

Lefroy's drilling is the first new exploration at Mt Martin in over ten years. A total of 37 reverse circulation drill holes are planned in this program to evaluate multiple shallow west dipping gold mineralised structures over a 1000m strike length (Figure 1).

Limited shallow historic drilling indicates that there are multiple mineralised shear structures outside the open pit that remain largely untested, including the Adelaide Shear (Figure 2). This program is designed to extend known mineralised shear zones outside the historic mine workings and deliver additional gold resources for open pit mine development planning.

This program is expected to be completed within 3 weeks with initial assay results anticipated to be returned in early December, and final results in January 2024.

Further extensional drilling is planned for Q1/24 and will aim to test multiple high grade gold shoots beneath the existing mine workings and untested extensions of the controlling shear structures along strike of the open pit. Drillhole intercepts that will be followed up include 12m @ 6.65 g/t Au from 318m in drill hole AUZD003 and 33.15m @ 3.82g/t Au from 0m in underground drill hole MUG33, which indicate strong potential for the continuity of high-grade gold mineralisation beyond the existing pit shell.

The results from these initial drilling programs are anticipated to significantly increase the existing resources in advance of initial mine optimisation studies at Mt Martin.

Mt Martin is a high priority target for the Company with the opportunity for near term development of open pit mining upon completion of the drilling and optimisation studies of the resource. In parallel with this field work the Company is actively pursuing options for early commercialisation of Mt Martin resource.

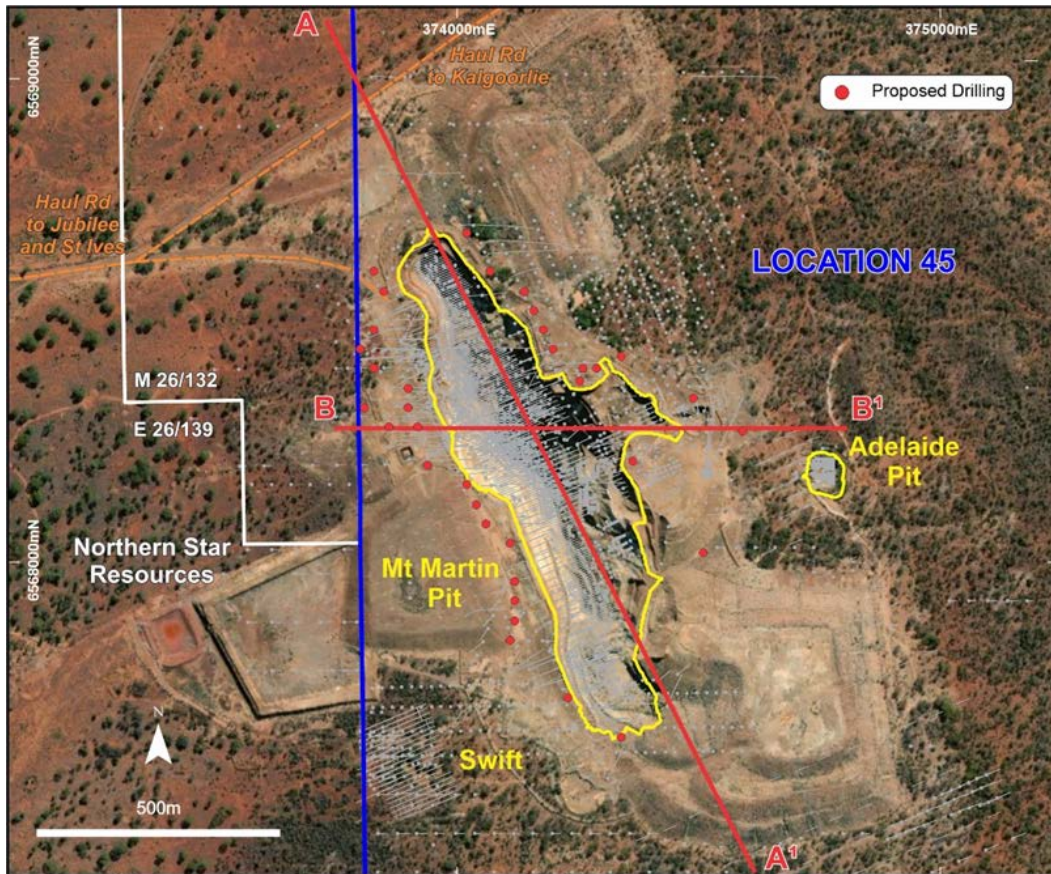


Figure 1 Plan of Mt Martin open pits, highlighting location of planned drill holes and section line for Figure 2. (refer to Figure 3 for location)

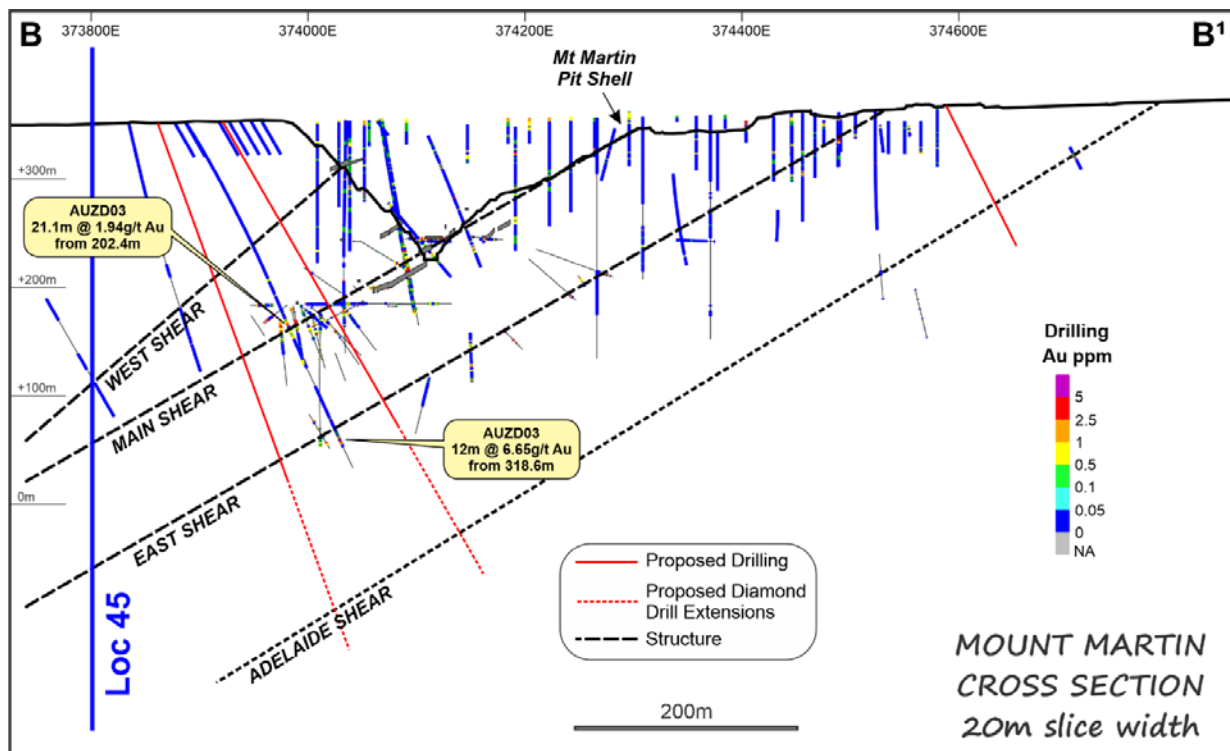


Figure 2 Cross section of Mt Martin through resource looking North, showing targeted mineralised structures and planned drill holes (refer to Figure 2 for section location)



MT MARTIN GOLD MINE

Mt Martin lies on the western boundary of freehold title, Location 45 (Figure 3), within Lefroy’s 635km² greater Lefroy Project. The Lefroy Project is strategically positioned in the highly endowed Kalgoorlie Terrane, surrounded by the infrastructure and haul roads of multiple other operating gold mines within the prolific Kalgoorlie-Kambalda mining district (Refer Figure 4).

Lefroy acquired Mt Martin and Location 45 in May 2023 through a Mineral Rights Agreement between title holder Franco Nevada Pty Ltd and Lefroy’s wholly owned subsidiaries (refer to LEX ASX release [23 May 2023](#)).

Since the acquisition, the Company has, compiled and reviewed a complete database of all drilling, mineral resource and exploration data for Mt Martin, obtained from previous mineral rights holders, Westgold Resources Limited (ASX:WGX) and Northern Star Resources Limited (ASX:NST). The data validates an Indicated and Inferred resource of 8.7Mt @ 1.79 g/t Au containing 501,175oz Au (refer LEX ASX release 5 September 2023).

Previously recorded results also indicated significant potential for resource growth at the mine, which has historically produced approximately 200,000 ounces through both shallow underground and open pit mining techniques.

Outside of Mt Martin site presents significant exploration upside potential, with approximately 76km² of Location 45 largely unexplored and providing reasonable prospectivity for additional gold and nickel discoveries in the future.

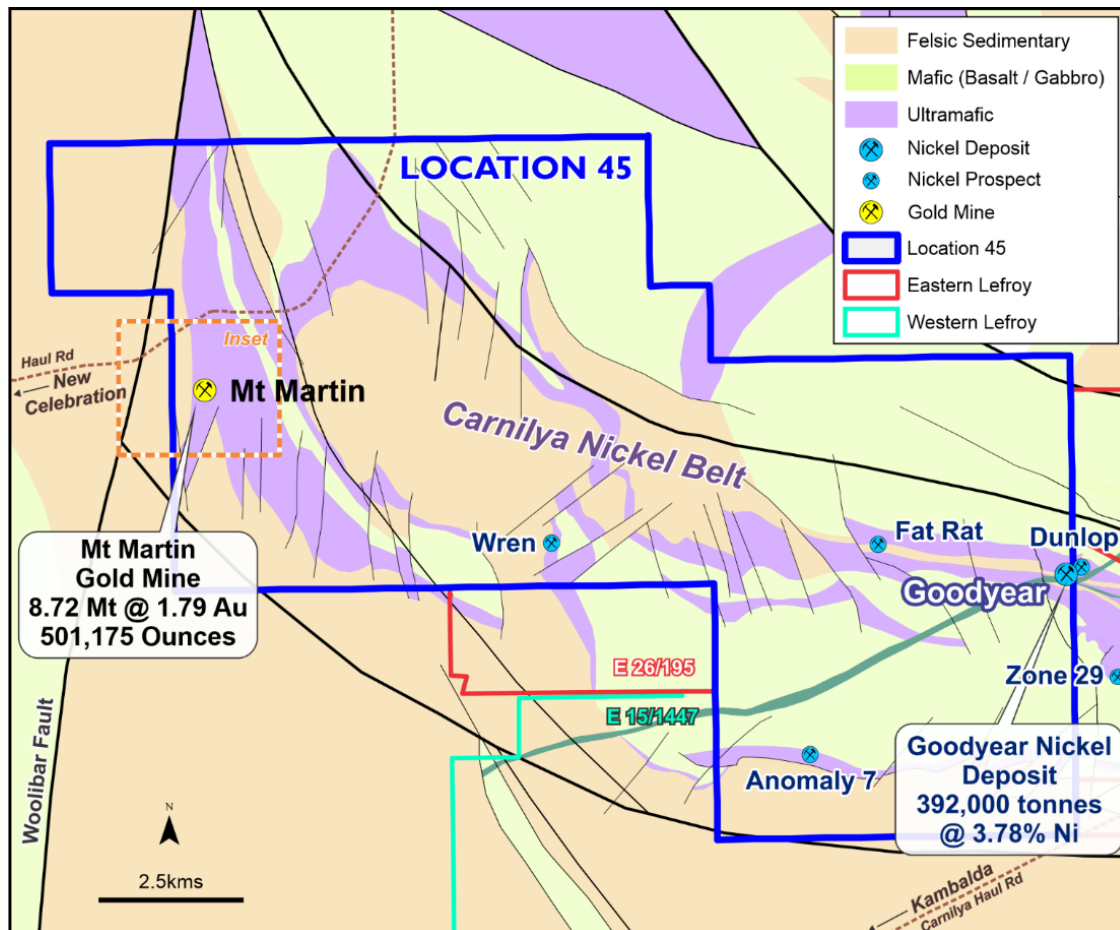


Figure 3 Interpreted bedrock geology map of Location 45 hosting Mt Martin Gold Mine and Goodyear Nickel Deposit



ABOUT LEFROY EXPLORATION LIMITED

Lefroy Exploration Limited (ASX:LEX) is an active West Australian exploration company focused on expanding and developing its growing gold and critical minerals projects. The Company holds a diverse portfolio of high-quality projects, including the Lefroy Project located in the heart of the world-class Kalgoorlie-Kambalda gold and nickel mining district, in Western Australia. The Lefroy Project is a commanding and contiguous land package of 635km² with a growing mineral resource inventory currently standing at 1.1 million ounces of gold, 58,000 tonnes of contained copper and 14,780 tonnes of contained nickel (as at September 2023).

This achievement is the culmination of several significant greenfields discoveries and strategic land acquisitions by the Company since its founding in 2016. This includes the Lucky Strike and Red Dale gold deposits, the Burns Gold-Copper (porphyry) Project, and the newly acquired freehold title, Location 45.

Lefroy's wholly owned subsidiary, Hampton Metals Ltd is focused on the exploration and development of the Company's nickel assets. It's priority projects includes the Goodyear Nickel Deposit (Goodyear) within Location 45, Carnilya South 6km east of Goodyear, the Lake Johnston Project 120km west of Norseman, and the large 2872km² Glenayle Project 210km north of Wiluna.

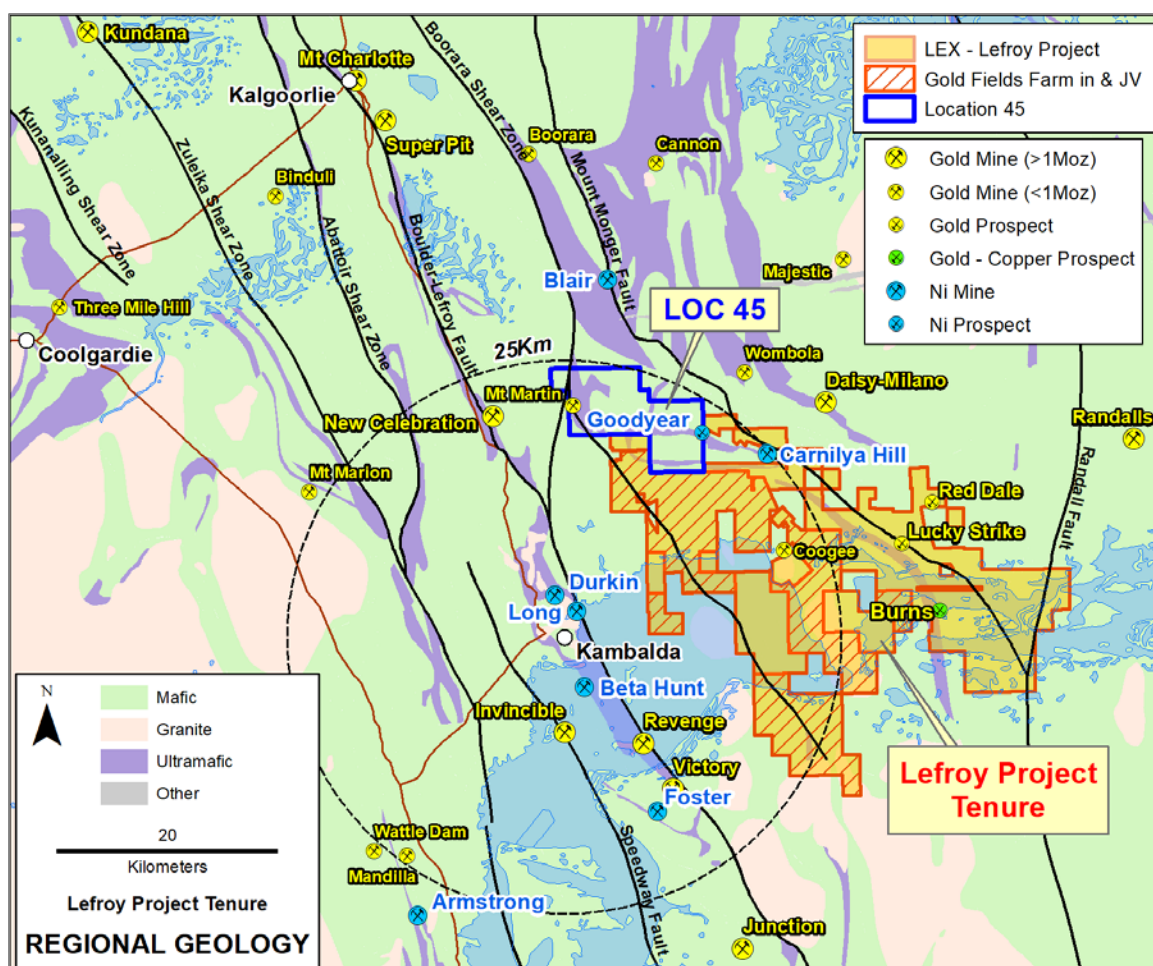


Figure 4 Map of Lefroy Gold Project including the Company's flagship Burns Project, located within close proximity to the Kalgoorlie and Kambalda mining centres and major gold mining operations including Gold Fields' St Ives Camp.



Supporting ASX Announcements

The following announcements were lodged with the ASX and further details (including supporting JORC Tables) for each of the sections noted in this Announcement can be found in the following releases. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. In the case of the Mt Martin mineral resource, the Company confirms that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

- September 2023 Quarterly Activities Report: 17 October 2023
- Growth Potential for Mt Martin Gold Mine Confirmed: 5 September 2023
- Lefroy Confirms High-Grade 15Kt Resource at Goodyear: 23 Aug 2023
- June 2023 Quarterly Activities Report: 01 Aug 2023
- Acquisition of Mineral Rights Transforms Lefroy: 23 May 2023

Competent Person Statement

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 of Directors.

Wade Johnson
Managing Director

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