

Exploration Update-Geophysical Surveys Commenced at Lefroy Gold Project

LEFROY EXPLORATION LIMITED

Western Australian Focused
Gold Explorer

ASX Code: LEX

Shares on Issue:

64.5m

Current Share Price:

13c

Market Capitalisation:

\$8.4m

Board of Directors

Chairman
Gordon Galt

Non-Executive Directors

Michael Davies
James Beecher
Geoffrey Pigott

Managing Director

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Flagship Exploration Project

Lefroy Gold Project

Growth Exploration Projects

Lake Johnston Project
Murchison Project

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Key Points

- Multiple ground based geophysical surveys are underway at the Lefroy Gold Project, south east of Kalgoorlie
- The detailed ground surveys are located over three existing prospects and one newly defined gold target
- Detailed ground magnetic survey commenced along the Woolibar Trend in Lake Lefroy covering the LLT04 and LLT06 gold prospects
- At Lucky Strike, a detailed ground magnetic survey in progress to improve resolution of prospective mineralised BIF horizon
- Exploration initiated at the Paddy's Secret alluvial gold discovery (figure below) with detailed ground gravity and magnetic surveys commenced to aid initial mapping of bedrock.



Photo of gold nuggets discovered at Paddy's Secret (The nuggets were found prior to the acquisition of the tenement by the Company in 2016)

- The multiple surveys are a support program to refine drilling programs scheduled for November at Lucky Strike and along the Woolibar Trend.
- Data acquisition complements the existing geophysical database to support advancing the geological model and enhancing the target portfolio at the Lefroy Gold Project

The Board of Lefroy Exploration Limited (ASX: LEX) (“Lefroy” or “the Company”) is pleased to announce the commencement of multi-program detailed ground based geophysical surveys over priority gold prospects at its flagship Lefroy Gold Project (“LGP” or “Project”), located approximately 50km to the south east of Kalgoorlie (Figure 1).

The program of ground gravity and magnetic surveys are designed to complement existing detailed geophysical datasets over the Woolibar and Lucky Strike trends, but also gather new detailed data at the newly defined Paddy’s Secret prospect. The Company’s exploration approach is to acquire, interrogate and interpret detailed gravity and magnetic survey data as an initial exploration tool to search for new large gold deposits hidden beneath various generations of cover rocks, including those in Lake Lefroy. The integration of the geophysical data and interrogation with the Company’s advancing extensive drilling database will be used to rank and refine drill targets scheduled to be commenced in November.

The Lefroy Gold Project is wholly owned by the Company and the commanding semi-contiguous granted land package covers 547km² located immediately east of the St Ives Gold camp, operated by Gold Fields and south of the Mt Monger gold centre operated by Silver Lake Resources Limited (ASX:SLR). Four operating gold plants are located within 50km of the project and provide potential processing opportunities for the Company in its pursuit for the discovery of a large gold system.

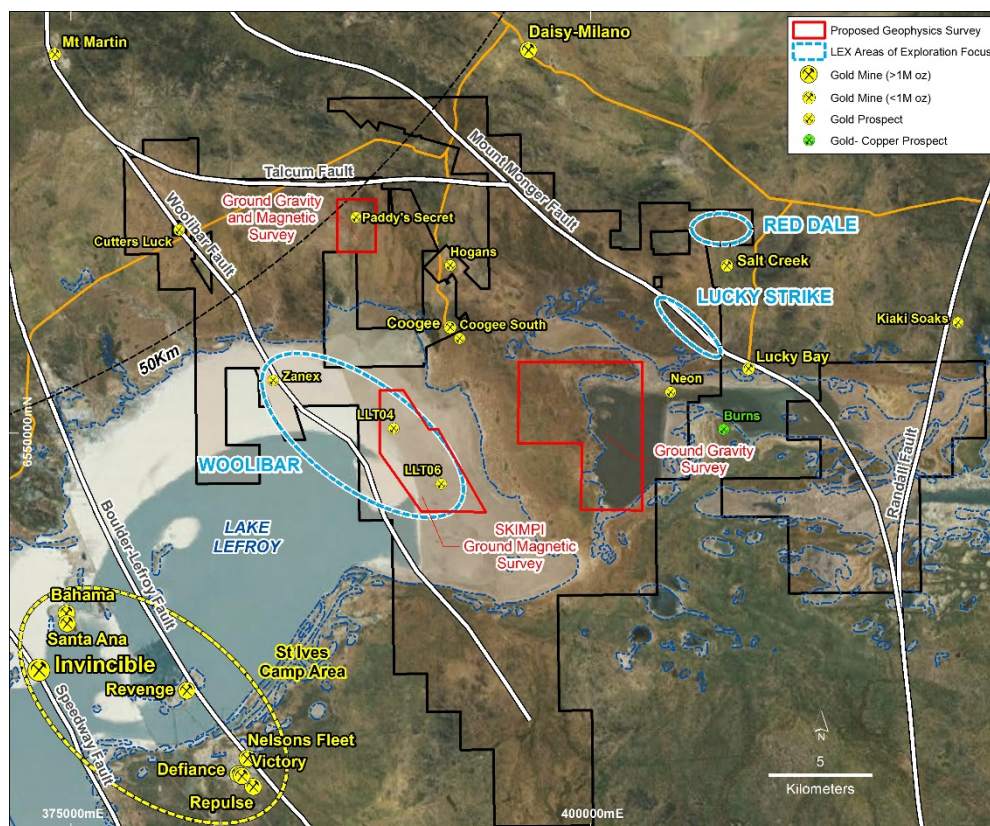


Figure 1 Location of the Lefroy Gold Project land package, current key areas of LEX exploration focus, proximity to the St Ives Gold Camp, and areas of ground geophysical surveys.

WOOLIBAR TREND

The Woolibar Trend covers a 13km north westerly trending sequence of rocks within the eastern part of Lake Lefroy, and along or subparallel to an informally defined Woolibar Fault interpreted from the Company's detailed ground gravity data. The Company completed an early stage aircore drill program in February 2017 to evaluate seven priority target areas located within the eastern part of Lake Lefroy in its wholly owned tenement package. The results from this early stage drill program reaffirmed the tenor of gold at the Zanex Prospect, and highlighted two new and emerging targets at LLT04 and LLT06 that are based upon a subtle geochemical gold (plus 40ppb Au) signature, a favourable geological environment and trends defined from regional magnetic data.

Follow up air core drilling at the LLT04 target in June extended the gold anomaly a further 350m to the north, to a total of 1500m. Importantly, the anomaly is adjacent to the interpreted contact between magnetite altered basalt and intermediate volcanic rocks, which can be interpreted from both aeromagnetic and ground gravity imagery.

To advance a second stage of follow up air core drilling at the LLT04 and LLT06 prospects a detailed ground magnetic survey, known as a SKIMPI survey (Sled Kart Instrument for Magnetic Prospectivity Imaging - Woodcock et al, 2015) has commenced (Figure 2). The survey will collect data on east west lines spaced 25m apart totaling approximately 842 line kilometers. The data from the detailed survey will be processed to provide improved resolution to the unique magnetic pattern in this area and place the gold anomalies identified in context to refine the drill program.

The SKIMPI survey is expected to be completed by mid-October, to provide input for a lake drilling programmed scheduled for November.

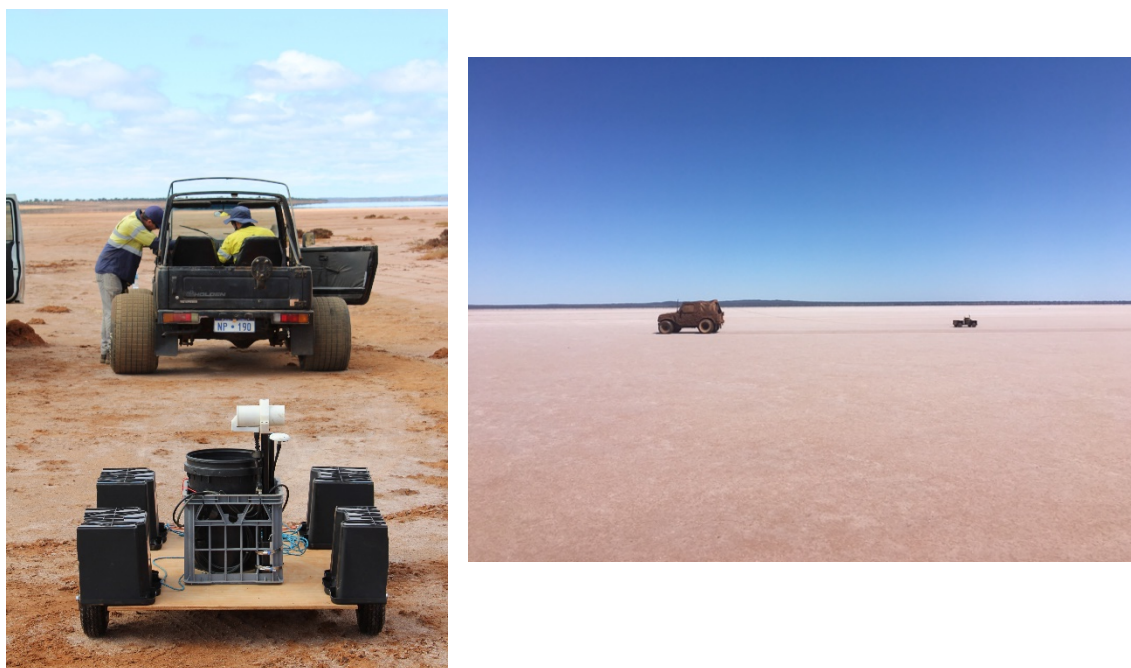


Figure 2 SKIMPI survey equipment (left) and data collection on Lake Lefroy (right).

LUCKY STRIKE TREND

The Lucky Strike Trend is located approximately 2km to the northwest of the high grade Lucky Bay open pit mined by Silver Lake Resources (ASX:SLR) during 2015 and 4km to the south west of the Randalls Processing Plant operated by SLR. Reconnaissance early stage air core drilling by the Company since November 2016 has defined a new and emerging gold mineralised trend hosted within sedimentary rocks over a 3000m strike length. Recent early stage diamond drilling intersected high grade gold mineralisation, including 1.7m at 63gpt Au from 44.7m in LSRD006, within a highly oxidised Banded Iron Formation (BIF) which has a strong magnetic signature in fresh rock. The high grade intersection is located proximal to a discrete north west trending magnetic feature defined from regional aeromagnetic data.

A detailed close spaced (25m line spacing) ground magnetic survey is due to commence in mid-October to provide an improved resolution of the magnetic unit that will assist in refining an RC drilling program scheduled commence in early November.

PADDY'S SECRET

The newly named Paddy's Secret prospect is the site of the discovery of an alluvial gold find in 2013-2014 and approximately 4km to the north west of the historical Hogans Find gold workings (Figure 1-Alluvial patch). At Paddy's Secret, gold nuggets were found by prospecting with metal detectors in an area covering 400m by 200m within recent alluvium and to a depth of 1m. The alluvial find is entirely within the Company's wholly owned tenement E26/134, with the alluvial gold rights held by a prospector under an agreement (refer to LEX Prospectus dated 8 September 2016).

Several large (plus 10oz) nuggets (Figure 3) were recovered, many of which have a flat habit, some with striations-lineation's which supports the Company's view that they are primary in origin and interpreted to be sourced from a shear hosted lode. The prospect has been elevated in the portfolio after subsequent re inspection of some nuggets and acquisition of detailed mapping undertaken at the time of the nugget discovery.

Exploration is underway at Paddy's Secret with a detailed infill ground gravity survey comprising 196 stations to create a 200m by 100m grid. , This will be immediately followed up by a detailed ground magnetic survey covering a 1km by 1.5km area centered on the alluvial gold find. This is an initial methodical exploration step to acquire detailed geophysical data over an area that has limited outcrop and relatively non responsive geophysical gravity or magnetic signature from regional datasets. Both surveys are due to be completed by late October and will form the basis to develop a geological model and a program of follow up exploration to locate the primary source of the nuggets.



Figure 3 Selection of gold nuggets prospected from Paddy's Secret. These nuggets are not the property of the Company. Photo courtesy of prospector Fred Saunders

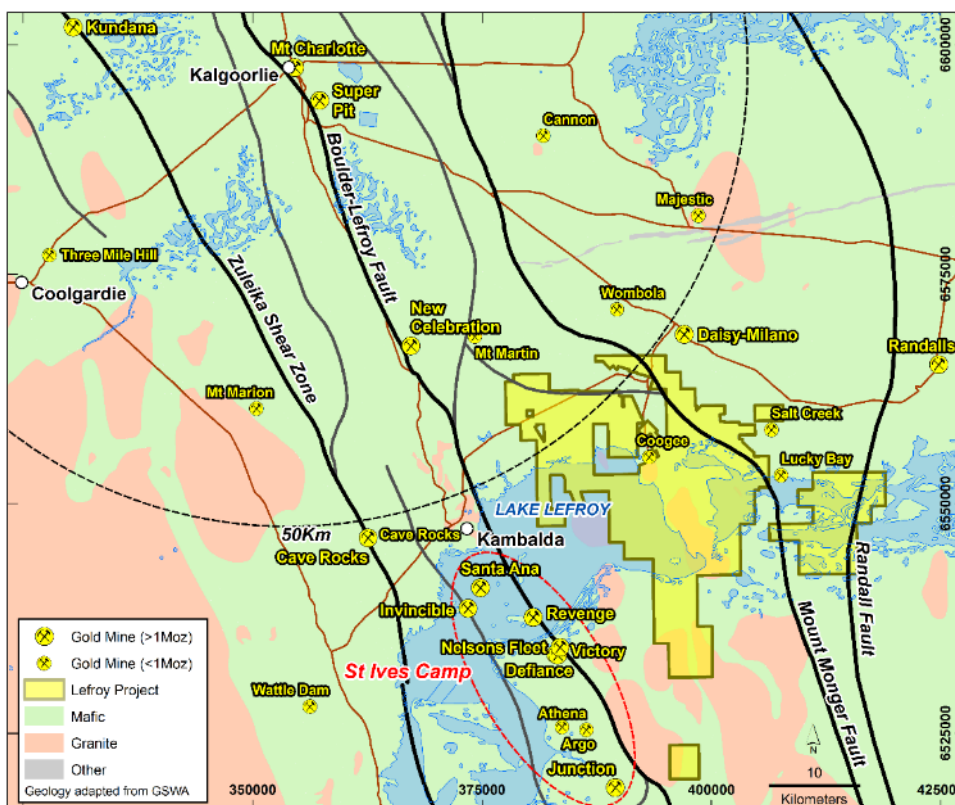
COOGEE SOUTH

The Coogee South prospect is a broad area that lies along strike to the south of the Coogee Gold mine (Figure 1). A detailed ground gravity program is underway in an area that has had limited prior gravity coverage. This program on a 400m by 200m grid pattern will collect data from 2994 stations and infill the current gap in the gravity coverage in this priority area.

About Lefroy Exploration Limited and the Lefroy Gold Project

Lefroy Exploration Limited is a new WA based and focused explorer taking a disciplined methodical approach in the search for high value gold and nickel deposits. 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 covering 547km², located 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.



Location of the Lefroy Gold Project relative to Kalgoorlie, Gold Fields St Ives Gold Camp near Lake Lefroy, and major gold deposits.

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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 on the Lefroy Gold Project.

- Lefroy Exploration Limited-Prospectus: 8 September 2016
- Managing Directors AGM Presentation: 5 December 2016
- Lefroy Exploration Limited-March 2017 Quarterly Report: 28 April 2017
- Drilling Extends Gold Anomalies along the Woolibar Trend: 20 June 2017
- Lefroy Exploration Limited-June 2017 Quarterly Report: 27 July 2017

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.

Reference

Woodcock, J., Edmonds, P., Moore, S., Douth, D., Foley, A., 2015. St Ives gold mine; Invincible: From Discovery to development. In NewGenGold 2015 Conference Proceedings.