

## Exploration Update: RC Drilling Commenced at Lucky Strike

### LEFROY EXPLORATION LIMITED

Western Australian Focused

Gold Explorer

ASX Code: LEX

Shares on Issue:

64.5m

Current Share Price:

17c

Market Capitalisation:

\$11m

Board of Directors

Chairman

Gordon Galt

Non-Executive Directors

Michael Davies

James Beecher

Geoffrey Pigott

Managing Director

Wade Johnson

Flagship Exploration Project

Lefroy Gold Project

Growth Exploration Projects

Lake Johnston Project

Murchison Project

Australian Registered Office

Level 1, 11 Ventnor Avenue

West Perth, 6005

E: [info@lestroyex.com](mailto:info@lestroyex.com)

T: +61 8 9321 0984

ARBN: 052 123 930

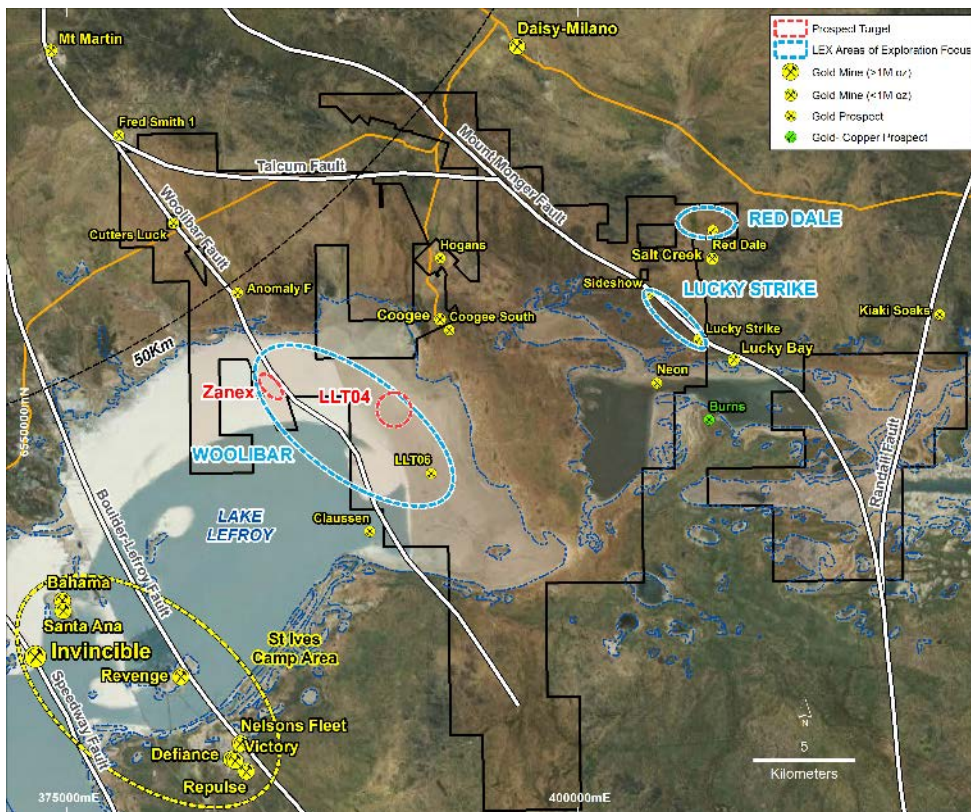
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### Key Points

- An RC drill program is underway at the Lucky Strike Trend at the Company's flagship Lefroy Gold Project, south east of Kalgoorlie.
- The high grade gold target zone is located 4km south west of Silver Lake Resources' Randall's Processing Plant
- The Lucky Strike Trend is characterised by gold mineralisation within a newly discovered northwest trending package of sedimentary rocks along the Mt Monger Fault
- Multiple shallow high grade gold intersections were returned from LSRD006, part of a recent six hole program of early stage diamond drilling that include:-
  - 5.8m at 4.0g/t Au from 25.6m
  - 1m at 12.3g/t Au from 40.7m
  - 1.7m at 63g/t Au from 44.7m
  - 0.3m at 10.3g/t Au from 46.6m
- High grade intersections are within a broader interval of mineralisation (~25m) hosted within a highly oxidised Banded Iron Formation (BIF)
- The strongly magnetic BIF unit is defined as a discrete linear feature over a 500m strike length and is the site of the current drill program
- The current drilling program of nine holes totaling 540m will target the immediate strike extensions of the high grade zone in LSRD006
- Final results from the program are expected in December
- The drilling program is part of a focused exploration program in the immediate area, with drilling recently completed at Red Dale and the definition of the Capstan gold anomaly 500m to the north of Lucky Strike.

The Board of Lefroy Exploration Limited (ASX: LEX) (“Lefroy” or “the Company”) is pleased to announce the commencement of an initial reverse circulation (RC) drilling program at the Lucky Strike Trend at its flagship Lefroy Gold Project (Lefroy Project or LGP) located approximately 50km to the south east of Kalgoorlie in the Eastern Goldfields Province of Western Australia (Figure 1).

The LGP is a commanding semi-contiguous granted land package that covers 547km<sup>2</sup> located immediately east of the world class St Ives Gold camp, operated by Gold Fields and south of the high grade Mt Monger gold centre operated by Silver Lake Resources Limited (ASX:SLR). Four operating gold processing operations are strategically located within 50km of the project.



**Figure 1** Lefroy Gold Project and the location of Lucky Strike and two other key areas of exploration focus by the company.

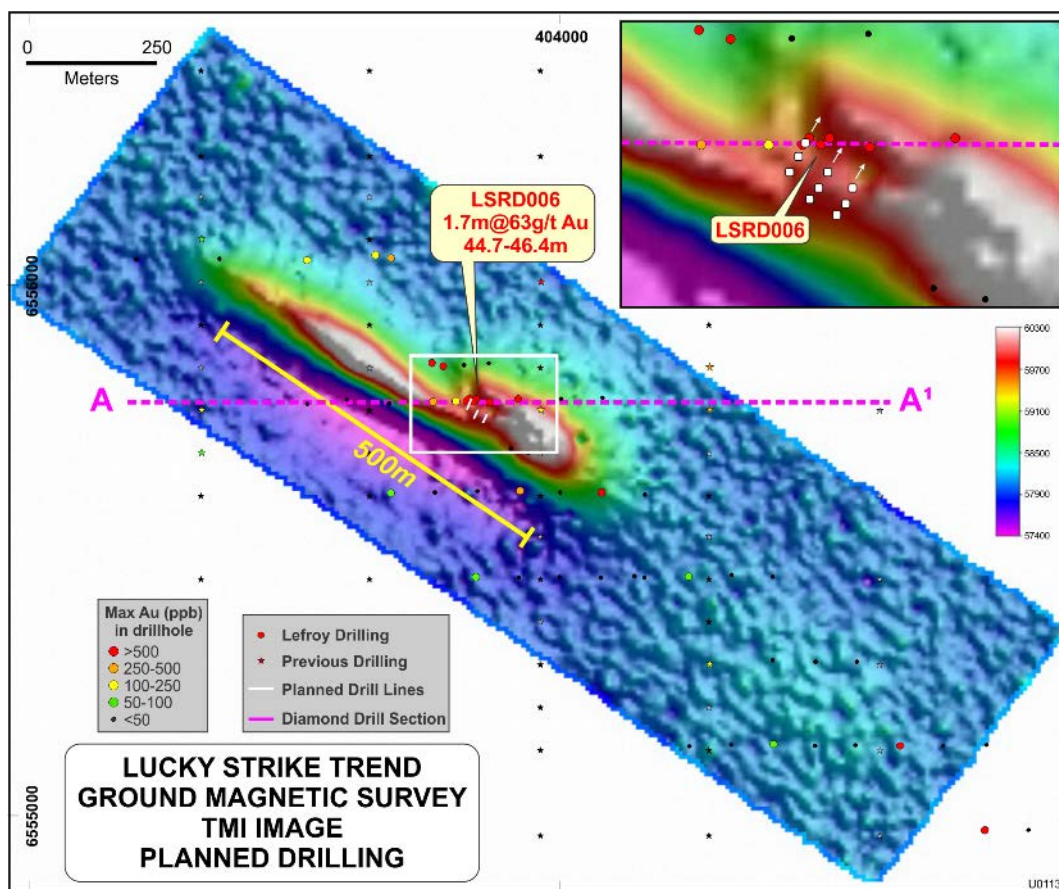
The Company has commenced a focused nine hole RC drilling program at Lucky Strike to evaluate extensions to and the geometry of the recent discovery of high grade shallow gold mineralisation intersected in hole LSRD006 (Figures 2, 3 & 4). The program will comprise approximately 540m of angled drilling on a nominal 20m grid pattern immediately along strike of the interpreted surface projection of the mineralisation in LSRD006.

The mineralisation in LSRD006 is within a highly oxidised banded iron formation (BIF) which is strongly magnetic in fresh rock, intersected in hole LSRD001 (Figure 4). A recent detailed ground magnetic survey was successful in defining the extent and geometry of the BIF unit as a unique discrete linear magnetic high over a 500m strike length. The high grade mineralisation in LSRD006 is located at an inflexion point where the linear trend transitions to a rounded appearance that suggests a later structural control on the BIF horizon.

The results from this ground magnetic survey have been used to place the gold mineralisation in context of the magnetic unit and refine the drilling program. Consequently the orientation of the drill lines is now approximately perpendicular to the strike of the magnetic BIF unit.

The key aim of the program is to demonstrate strike and down dip continuity of the high grade mineralisation through the close spaced drilling. This will then aid the establishment of the structural control on the mineralisation which maybe oblique to the strike of the BIF. The advancement of the geological and structural model will then aid further exploration along the 3000m trend.

The program is expected to take approximately 4 days with compilation of final results expected in mid-December.



**Figure 2** Lucky Strike drill hole plan and planned RC drilling (Inset-white squares) over ground magnetic TMI image (refer to Figure 3 for survey location, refer to Figure 4 for drill section A-A').

## Background

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 (Figure 5). The Company has interpreted from geophysical and geological data that the Lucky Strike Trend shares a similar geological and structural setting to the Lucky Bay deposit, being adjacent to the regional Mt Monger Fault that separates mafic units of the Bulong Antiform to the north and metasedimentary rocks to the south.

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 3,000m strike length. The geological sequence at Lucky Strike and the mineralisation intersected is considered similar to the Lucky Bay gold deposit located approximately 2kms along strike to the south east. This supports the Company's view of the emergence of a combined 4.5km long gold mineralised structural trend from the Lucky Bay deposit to the northwest, along the Lucky Strike Trend, and coincident with the interpreted position of the Mt Monger Fault

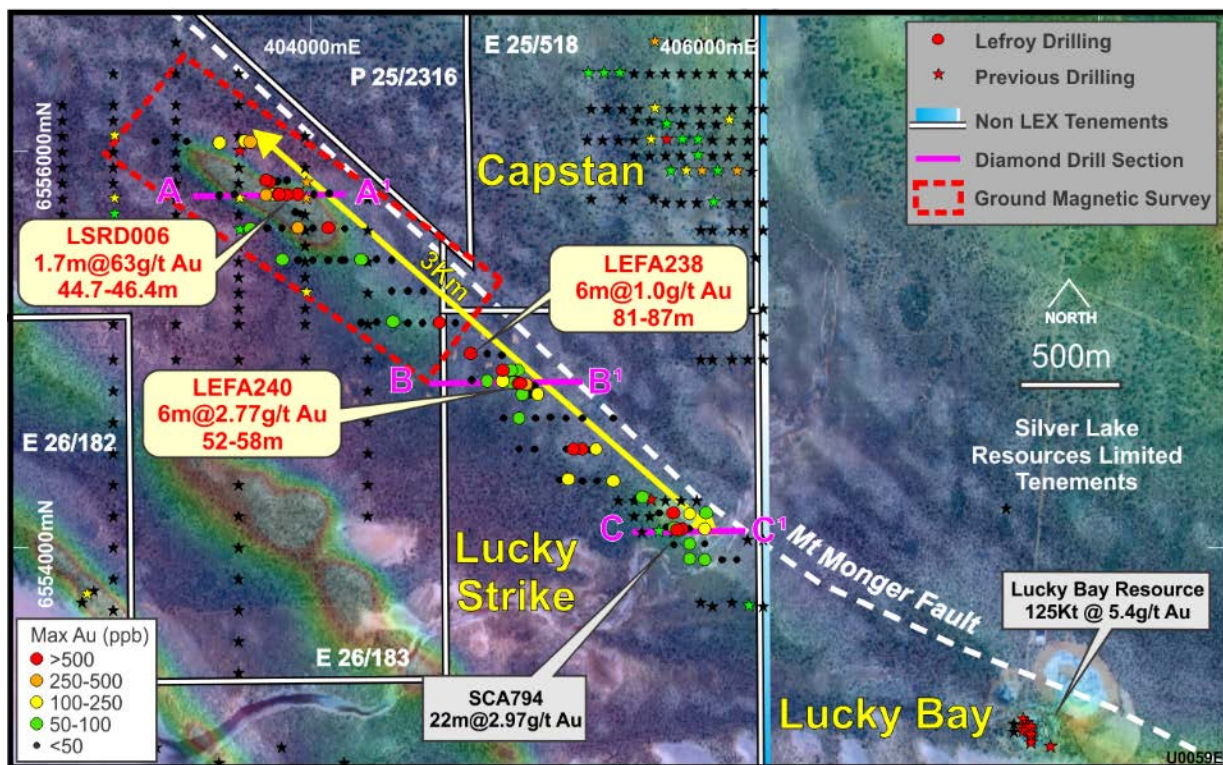
The results from the two earlier aircore drill campaigns returned encouraging near surface oxide gold intersections from the nominal 160m spaced drill sections including:-

**11m at 3.53g/t Au from 60m to End of Hole (EoH) in LEFA136**

**10m at 4.60g/t from 24m to EoH in LEFA171**

**6m at 2.77g/t Au from 52m in LEFA240**

**8m at 2.23g/t Au from 45m in LEFA254**



**Figure 3** Lucky Strike drill hole plan and extent of ground magnetic survey over aeromagnetic TMI image (map location shown as inset on Figure 4).

In August 2017 a precollared diamond drilling program consisting of 6 holes for a total of 362.5m of core drilling was completed to determine the geometry of the host rock and gold mineralisation. The drilling evaluated three key sections (Figure 3) spaced approximately 1,000m apart along the 3,000m gold mineralised trend defined from the earlier air core drilling campaigns.

Drill hole LSRD006 returned significant multiple narrow high grade oxide gold intersections (Figure 4). The mineralised intervals correspond to a wide zone (approximately 25m down hole length) of highly oxidised Banded Iron Formation (BIF) and siltstone. Significant intersections from LSRD006 include:-

**5.8m at 4.0g/t Au from 25.6m (Inc. 0.4m at 18.6g/t Au)**

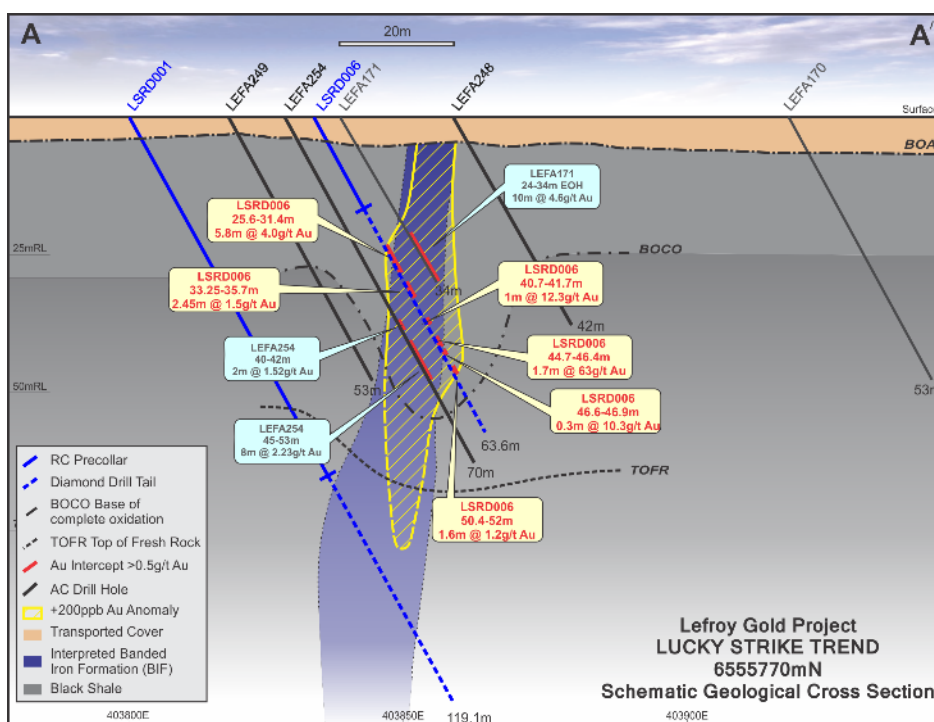
**2.4m at 1.5g/t Au from 33.2m**

**1m at 12.3g/t Au from 40.7m**

**1.7m at 63g/t Au from 44.7m (Inc. 0.9m at 107g/t Au)**

**0.3m at 10.3g/t Au from 46.6m**

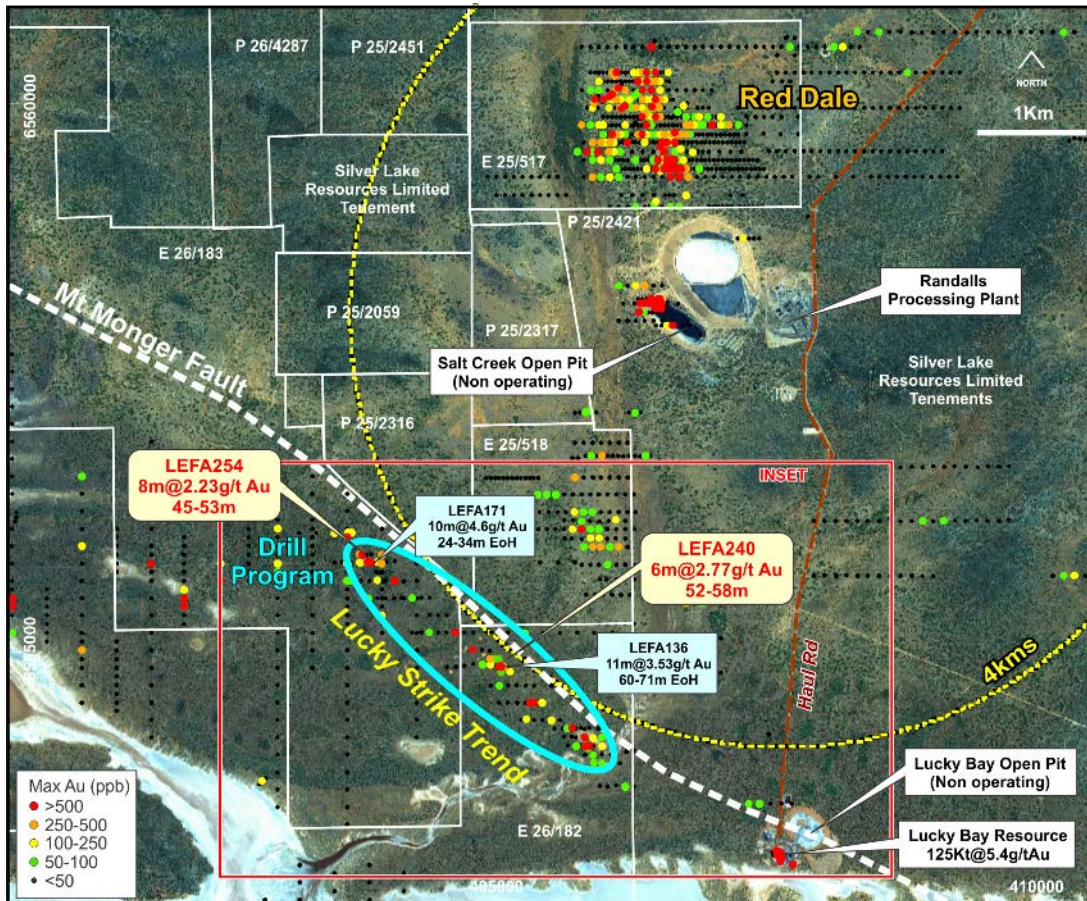
The drilling confirmed the earlier geological interpretation of a steeply dipping Banded Iron Formation (BIF) within a sequence of siltstone and black shale. Hole LSRD001 was designed to target the primary BIF below the base of weathering (Figure 4). The hole successfully intercepted >20m (down hole width) of altered strongly magnetic BIF. No significant gold intersections were recorded in this broad interval with an initial interpretation suggesting high grade gold mineralisation located in structurally controlled high grade ore shoots either along strike or at depth.



**Figure 4.** Geological Cross Section A-A', 6555770N section highlighting completed LSRD001 and LSRD006

The high grade gold mineralisation in LSRD006 is associated with a highly oxidised BIF unit bounded by interbedded black shale and siltstone. Quartz veining is a common feature of the BIF unit but is itself not strongly mineralised. The very high grade intersection of 0.9m at 107g/t Au in oxidised BIF in LSRD006 is interpreted to be due to weathered sulphides.

Lucky Strike is part of a group of gold targets identified by LEX within 5km's of the Randalls Processing Plant (Figure 5). These include the Red Dale prospect and the recently announced Capstan anomaly. These targets are a key focus for exploration and drilling during the December 2017 Quarter.

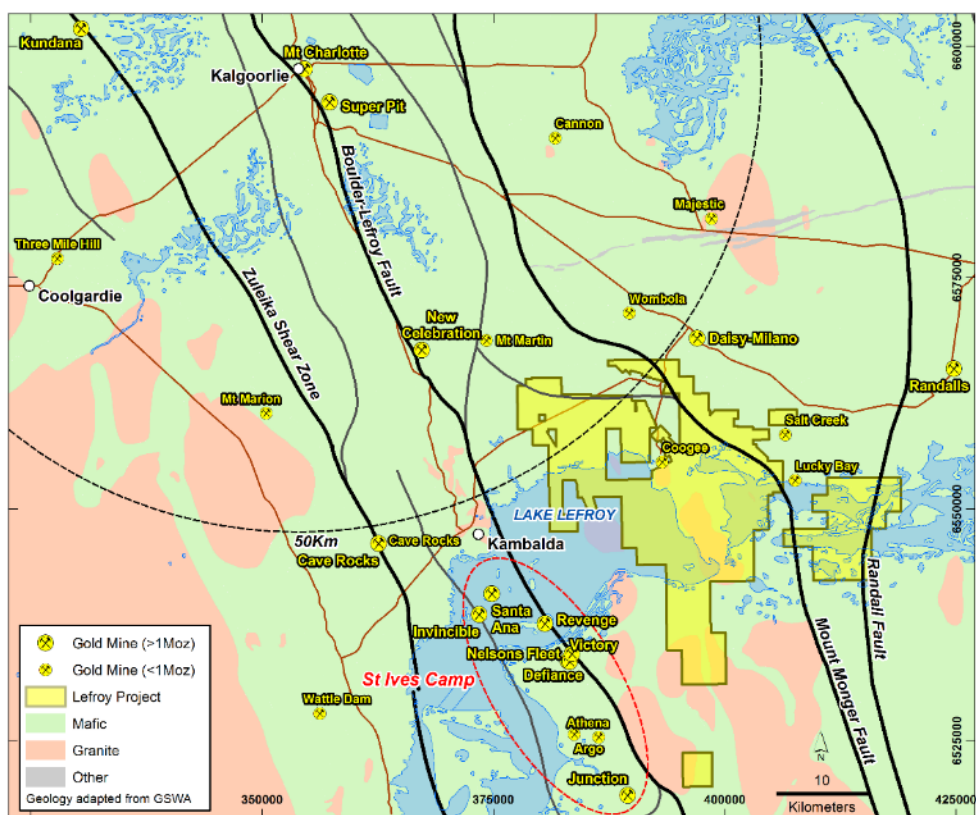


**Figure 5** Location of the Lucky Strike Trend relative to the LEX Red Dale Prospect and proximity to the Randalls Processing Facility and infrastructure. The key Lucky Strike air core gold intersections are also highlighted (refer to Figure 3 for detailed inset map and recent drilling)

**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 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 547km<sup>2</sup>, 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.**

For Further Information please contact:

Wade Johnson  
 Managing Director  
 Telephone: +61 8 93210984

Email: [wjohnson@lefroymax.com](mailto:wjohnson@lefroymax.com)

## 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 Lucky Strike Trend at the Lefroy Gold Project. The Company confirms that it is not aware of any new information or data that materially affects the information on the Lucky Strike Trend included in the following announcements.

- Lefroy Exploration Limited-Prospectus: 8 September 2016
- Lefroy Commences Exploration: 24 October 2016
- Lefroy Commences Drilling at Lucky Strike: 17 November 2016
- Managing Directors AGM Presentation: 5 December 2016
- Drilling at Lucky Strike Supports and Extends Gold Trend: 23 December 2016
- Exploration Update: Aircore Drilling to Recommence at Lucky Strike: 29 March 2016
- Significant Intersections at Lucky Strike Prospect: 18 April 2017
- Aircore Drill results enhance the Lucky Strike Trend: 7 July 2017
- Exploration Update: Diamond Drilling Commences at the Lucky Strike Trend: 31 August 2017
- High Grade Gold Mineralisation Intersected at Lucky Strike: 21 September 2017
- September 2017 Quarterly Activities Report: 25 October 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.*