Exploration Update-Diamond Drilling commences at the Lucky Strike Trend

Key Points

- A diamond drilling program has commenced along the Lucky Strike Trend at the Company’s flagship Lefroy Gold Project, south east of Kalgoorlie

- Drill program comprising 6 holes for 350m of core drilling will target three key zones along a 3000m trend

- The Lucky Strike Trend is characterised by gold mineralisation within a north west trending sedimentary iron formation

- Recent wide spaced AC drilling by the Company returned multiple shallow gold intersections and include:-
  - 10m at 4.60g/t Au from 24m in LEFA171
  - 11m at 3.53g/t Au from 60m in LEFA136
  - 6m at 2.77g/t Au from 52m in LEFA240
  - 8m at 2.23g/t Au from 45m in LEFA254

- Drilling to focus on validating gold intersections in the earlier air core drilling, determining the geometry of the mineralisation and evaluating the depth extensions

- Gold system identified is located 4km south west of Silver Lake Resources’ Randall’s Processing Plant

- This program further compliments the commencement of systematic follow up exploration programs for the Lefroy Gold Project, focused at Red Dale, and the Woolibar and Lucky Strike Trends over the coming half year.
The Board of Lefroy Exploration Limited (ASX: LEX) (“Lefroy” or “the Company”) is pleased to announce the commencement of an early stage diamond drilling program along the Lucky Strike Trend at its flagship Lefroy Gold Project ("LGP" or “Project”), located approximately 50km to the south east of Kalgoorlie (Figure 1).

The planned diamond drilling program will consist of 6 precollared holes for a total of 350m of diamond core. The key objectives of the drill program are to determine the geometry of the host rock and gold mineralisation adjacent to previous air core drill hole intersections and also evaluate the depth extension of the mineralisation within fresh rock. The drilling will evaluate three key sections (Figure 3) along the 3000m gold mineralised trend defined from the earlier air core drilling campaigns. The assay results from the program are expected in early October and combined with an improved geological model will form the basis for further air core and reverse circulation drilling.

The Lefroy 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 and current key areas of LEX exploration focus, including Lucky Strike.
The 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 (Figure 2). 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 3000m strike length. The geological sequence at Lucky Strike and the mineralisation intersected is considered similar to the Lucky Bay gold deposit located approximately 2km along strike to the south east. There, gold mineralisation is hosted by a highly oxidised sedimentary iron formation within a sequence of black shale. It demonstrates the emergence of a 4.5km gold mineralised 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 (Figure 3).
The results from the two recent aircore drill campaigns have 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 LEFA 254**

Gold mineralisation is constrained to one or two near vertical dipping sedimentary iron formation (SIF) units within a sequence of black shale and considered similar to that at the nearby Lucky Bay open pit. This sedimentary sequence at Lucky Strike is in contact to the east with a package of mafic rocks consisting of high Mg basalt and dolerite, being part of the Bulong Antiform. This contact zone is the interpreted position of the Mt Monger Fault, a major regional structural trend, similar to the Boulder Lefroy Fault, and the Zuleika Shear as recognised by the Geological Survey of Western Australia (GSWA).

![Inset Map-Lucky Strike Trend highlighting proposed drill traverses, key gold intersections and proximity to the Lucky Bay open pit. Refer Figure 4 for drill section B-B'.](image-url)

The commencement of the Lucky Strike Diamond drill program is the start of a much broader scoping exploration program over the coming 4 months at the Lefroy Gold Project with the main targets being Red Dale and the Lucky Strike and Woolibar Trends. Geological interpretation and targeting work is underway over the Woolibar Trend within Lake Lefroy (Figure 1), in preparation for further drilling in November.
Figure 4. Drill Section 6555770N B-B’ highlighting air core drill intersections, geology and proposed diamond drill holes.
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 newly discovered 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 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 Recomence 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

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.