Drilling Campaign Commences on Lake Lefroy

Key Points:

- Significant phase of aircore drilling is commencing at the Company's flagship Lefroy Gold Project
- Drilling is focused on evaluation of seven priority targets, including the Zanex Prospect all located on Lake Lefroy, 14km to the east of the St Ives Gold Mining Operation
- Six of the targets to be evaluated have been generated from interpretation of geophysical datasets, including recently acquired detailed ground gravity survey data
- Targets situated along an emerging structural corridor defined from geophysical data and termed the Woolibar Trend
- Estimated 5000m of drilling in 80 holes to be completed, with final results anticipated in April

The Board of Lefroy Exploration Limited (ASX: LEX) (“Lefroy” or “the Company”) is pleased to announce the commencement of its extensive early stage aircore drilling program on Lake Lefroy at its flagship Lefroy Gold Project (“LGP or Project”).

LGP is a commanding contiguous land package covering in excess of 540km² in the heart of the world class gold production area between Kalgoorlie and Norseman. The Project adjoins the Gold Fields owned St Ives gold camp and mining centre, which contains the Invincible gold deposit, now in production and located in the western part of Lake Lefroy. The LGP is also immediately south of the Mount Monger Gold Operation and adjoins the site of the Randalls Processing Facility, both operated by Silver Lake Resources (ASX: SLR).

The Company is commencing an early stage aircore drill program to evaluate seven priority target areas located within the eastern part of Lake Lefroy within tenements wholly owned by the Company. Included in the target portfolio is the priority Zanex target, where previous drilling by Cyprus Gold Australia Limited in 1997 intersected 6m at 2.97gpt Au from wide spaced aircore drilling, that has never before been followed up (refer to LEX Prospectus dated 8 September 2016).
The remaining six targets have been generated from interpretation of airborne magnetic and ground gravity geophysical datasets that has provided an improved geological and structural framework for the area. These targets have been selected on the basis of areas of geological and or structural complexity that have been derived from interpreting the geophysical data, and in particular the detailed ground gravity data, acquired by the Company in November 2016.

All the targets to be evaluated lie along or adjacent to a corridor termed the Woolibar Trend. To the north of Zanex, this trend encompasses the historical Cutters Luck gold workings and a series of small but nevertheless important alluvial gold workings. These occurrences support the hypothesis that the trend could be gold bearing.

The targets will be evaluated from vertical aircore holes using a specialised lake drilling rig on an initial wide spaced grid pattern (generally 320m line spacing by 160m drill hole spacing), with an estimated 5000m of drilling allowing the ability to test multiple targets over a large area in Lake Lefroy. The aim of this approach is threefold, 1) to broadly test each area to gain an appreciation of the geology beneath the lake cover, 2) to gain an understanding of the regolith (oxide rock), and 3) to define the geochemical footprint of any mineralised systems found. Further infill drilling can then be focused on geological and geochemical anomalies defined from the initial stage.

The Company is cognizant of the discovery history of the nearby Invincible Gold Mine, also on Lake Lefroy, where initial drill intersections in the early 1990’s were subtle (<0.25g/t Au) and hence overlooked for follow up drilling for some 20 years. The key learnings from the discovery of this gold deposit can provide important information to improve focus and prioritisation of follow up drilling.

The drilling program is expected to take 3 weeks to complete and anticipates assay results being available for reporting in April.

Figure 1 Location of the Lefroy Gold Project relative to Kalgoorlie, Gold Fields St Ives Gold Camp near Lake Lefroy, and major gold deposits.
Figure 2 Lefroy Project tenement package, location of targets for drill evaluation and extent of geophysical interpretation shown in red outline.

Figure 3 Inset Map—Highlighting geological interpretation on left and residual gravity image on right, both with targets, and extent of Lake Lefroy.
About Lefroy Exploration and the Lefroy 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.

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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
- Lefroy Commences Exploration 24 October 2016
- Gravity Survey Completed at Lefroy Project 22 November 2016
- Managing Directors AGM Presentation 5 December 2016
- Exploration Update 23 December 2016

The information in this announcement that relates to exploration targets and exploration results is based on information compiled by Wade Johnson a competent persons who is a member of the Australasian 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.