Exploration Update: Drilling Commenced at Red Dale

Key Points

- A second stage RC drill program is underway at the Red Dale prospect at the Company’s flagship Lefroy Gold Project, south east of Kalgoorlie.

- The gold system targeted is located 1km north of Silver Lake Resources’ Randall’s Processing Plant.

- The Red Dale is characterised by a broad geochemical gold footprint at the base of the palaeochannel over a 1600m strike length defined from previous drilling.

- Earlier RC drilling returned multiple shallow gold intersections from 26 vertical RC holes drilled including:-
  - 9m at 1.69 g/t Au from 41m in LEFR006
  - 6m at 1.75 g/t Au from 42m in LEFR013
  - 7m at 1.44 g/t Au from 47m in LEFR002

- The current drilling program of fourteen holes totaling 840m to target immediate strike extensions of the robust zone of mineralisation identified in May 2017.

- The program is located within the recent Mining Lease application.

- Drilling will support further evaluation of the higher tenor mineralised section of the channel gold system to provide vectors to a primary source area.

Figure 1 RC drilling at Red Dale
The Board of Lefroy Exploration Limited (ASX: LEX) (“Lefroy” or “the Company”) is pleased to announce the commencement of a second stage reverse circulation (RC) drilling program at the Red Dale prospect 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 547km² 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.

The Company has commenced a fourteen hole RC drilling program at Red Dale to evaluate extensions to the higher tenor gold mineralised part of a northerly trending palaeochannel system (Figure 2). The program will comprise approximately 840m of vertical drilling on a nominal 40m grid pattern to the immediate north and south of an earlier RC program.

One angled RC hole will also evaluate the down dip and gold bearing potential of a quartz sulphide vein intersected at the end of hole in LEFA 290 drilled in August 2017.

The key aim of the program is to gain further detailed appreciation of the character of the basal mineralised gravel horizon that can provide vectors to a primary gold source area. Previous RC drilling intersected a mineralised horizon containing angular sub rounded fragments of quartz cobble and pebbles that suggest that a primary source maybe nearby.

The program is expected to take approximately 10 days with compilation of final results expected in mid-December.
Background

The Red Dale prospect adjoins, and is immediately north of the Randalls Processing Plant and Salt Creek Open pit held by Silver Lake Resources (Figure 3). Gold mineralisation at Red Dale was identified in 2007 by Integra Mines Limited (“Integra”) following discovery of the Salt Creek deposit located 2.5km to the south. Integra’s aircore drilling at Red Dale during the period 2007-2010 identified a large regolith hosted gold anomaly of approximately 1.6km in length by up to 1km in width.

Numerous gold intersections were reported at or near the base of the palaeochannel sediments (transported overburden), in gravel horizons overlying a similar package of rocks as at Salt Creek. The Company believes that this broad anomaly and the intersections are reflecting gold anomalous transported basal gravels and sands derived from a nearby bedrock source (primary bedrock), and that the coarse material in the channels is unlikely to have been transported a significant distance.

In May 2017 the Company completed an initial 26 vertical RC holes at the southern end of the palaeochannel. This program recorded significant intersections including 9m at 1.69g/t Au from 41m in LEFR006 and 6m at 1.75g/t Au from 42m in LEFR013 to confirm a gold mineralised palaeochannel system over 320m of strike and open to the north and south.

Figure 2 Red Dale palaeochannel gold system, drill hole plan and planned RC drilling (blue triangles)-map location shown as inset on Figure 3.
A 62 hole vertical aircore (AC) drill program in August 2017 totaling 3,419m, was completed to focus on the northernmost extension of the palaeochannel system (“the channel”), and to follow up a smaller tributary channel system to the west. The drilling confirmed the broad quartz sand gravel base of channel system over a 720m strike length although gold results were of a lower tenor and width than that intersected in the May 2017 RC drill program located 300m to the south.

Both drilling programs have been successful in advancing the geological model to provide vectors to the primary source of the gold in channel. The southern part of the channel has demonstrated high tenor and broader intersections of gold mineralisation at approximately the same vertical depth and this reinforces the Companys view that a primary source maybe nearby.

The Company lodged an application for a Mining Lease over the key area of gold mineralisation at Red Dale in August 2017 to speedily advance this prospect.

Red Dale is part of a group of gold targets identified by LEX within 5km’s of the Randalls Processing Plant. These include the Lucky Strike trend and the recently announced Capstan anomaly (Figure 3). These targets are a key focus for exploration and drilling during the December 2017 Quarter.

Figure 3 Red Dale prospect location and tenement plan highlighting maximum gold in historical drill holes, proximity to Randalls Processing Plant, Lucky Strike trend and Capstan anomaly. Mining Lease application M25/362 highlighted in red-white dashed line. (Refer Figure 2 Inset for LEX 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 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 completed at the Red Dale prospect

- Lefroy Exploration Limited-Prospectus: 8 September 2016
- Managing Directors AGM Presentation: 5 December 2016
- Exploration Update: RC Drilling Commenced at Red Dale 24 April 2017
- Investor Roadshow Presentation 9 May 2017
- Drilling Commences at Red Dale: 11 August 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.