

ASX Release: 28 April 2017

QUARTERLY ACTIVITY REPORT

For the Period Ending 31st March 2017

Highlights:

- Early stage aircore drilling programs totaling 7,474m completed at Lucky Strike and in Lake Lefroy, at the Company's flagship Lefroy Gold Project, south east of Kalgoorlie.
- At Lake Lefroy, reconnaissance drilling evaluated seven priority targets along the Woolibar Trend, including the Zanex Prospect, where an encouraging gold intersection of 17m from 40m at 2.14g/t Au was returned from hole LEFA 47.
- Two new broad and cohesive gold anomalies defined at the LLT04 and LLT06 targets in Lake Lefroy with encouraging intersections including 4m at 1.71g/t Au from 44m in LEFA 086 at target LLT04, and 4m at 2.39g/t from 88m in LEFA 113 at target LLT06.
- Gold anomalies at LLT04 and LLT06 have defined a new mineralised geological trend over a 3.5km strike that is subparallel and to the east of the Woolibar Fault.
- At Lucky Strike, significant intersections include 11m at 3.53g/t from 60m in LEFA 136 and 10m at 4.60g/t Au from 24m in LEFA 171 and, both holes ending in mineralisation, demonstrating the emergence of a new gold trend with a 3000m strike length.
- Interpretation of geophysical data supports the extension of the Lucky Strike trend a further 10km to the north west, all in tenure secured by the Company and with little effective previous exploration.

The Board of Lefroy Exploration Limited (ASX: LEX) is pleased to provide its report on activities and progress made during the March 2017 Quarter. The Quarter was an aggressive period of exploration for the Company with the focus being on early stage air core drilling programs being successfully completed at its flagship Lefroy Gold Project, located approximately 50km to the south east of Kalgoorlie. The significant results returned from both drilling programs and the resulting recognition of two emerging gold trends gives the Company a solid foundation for follow up drilling in the June Quarter.

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EXPLORATION OVERVIEW

The Company has three key projects in the Yilgarn Block of Western Australia where it is focusing exploration aimed at discovering high value gold and nickel deposits capable of being rapidly developed. During the Quarter, exploration was focused and conducted at the Lefroy Gold Project, to continue on from the results received from work programs completed during the December 2016 Quarter. The Company remains committed to early stage exploration for new gold systems at the Lefroy Gold Project, which is generating positive results, and continuation of this exploration work will continue during the June Quarter

Lefroy Gold Project, 100% ownership by Lefroy

The Lefroy Gold Project ("LGP"), located some 50km to the south east of Kalgoorlie, is the Company's flagship project, with five advanced gold target areas recognised from appraisal of previous exploration completed by others over the past 25 years.

The 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 LGP adjoins the Gold Fields owned St Ives gold camp and mining centre, which contains the newly discovered Invincible gold deposit, currently 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) (refer Figure 1).

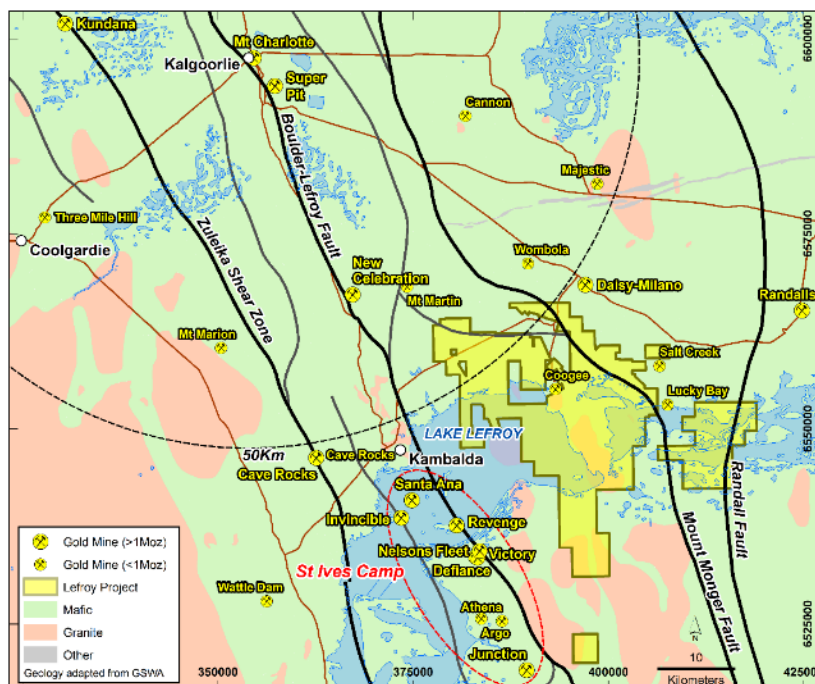


Figure 1 Location of the Lefroy Gold Project relative to Kalgoorlie, Gold Fields St Ives Gold Camp and major gold deposits.

Exploration during the March Quarter consisted of early stage air core drill programs evaluating selected conceptual targets in Lake Lefroy along the Woolibar Trend and also a follow up program at Lucky Strike, both areas generating positive gold results.

Woolibar Trend

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 tenements (Figure 2). The seven targets evaluated comprised six conceptual targets defined from geophysical datasets and one geochemical target known as the Zanex Prospect, where previous drilling by Cyprus Gold Australia Limited in 1997 intersected 6m at 2.97gpt Au from wide spaced aircore drilling that has never been followed up (refer to LEX Prospectus dated 8 September 2016).

The six conceptual targets (Figures 2&3) were generated following interpretation of airborne magnetic and ground gravity geophysical datasets that has provided an improved geological and structural framework for the area (refer LEX: ASX announcement 23 December 2016). These targets were 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 evaluated in the program lie along or adjacent to a corridor termed the Woolibar Trend. Within Lake Lefroy, the targets extend over a 10km northwest strike length. 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.

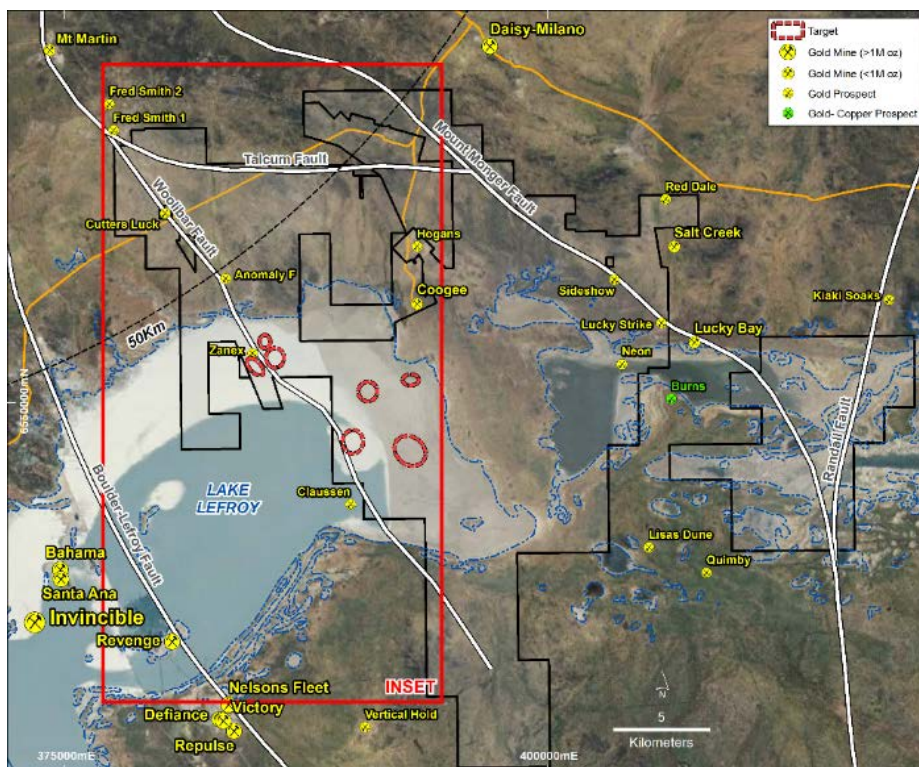


Figure 2 Lefroy Gold Project tenement package and location of targets evaluated in Lake Lefroy. Refer to Figure 3 for inset map.

Each of the target areas were evaluated with wide spaced vertical air core drilling as an initial test to understand the geology beneath the recent lake sediments and older transported cover sequences. Drill traverses were spaced at either 160m or 320m apart, and hole centres mainly 80m apart but up to 160m. The methodology of the wide spaced program was to determine the depth of the cover and regolith, determine geology to support ongoing development of the geological model and to search for indicators (alteration, geochemistry) or hints that could represent the footprint of a gold system.

A total of 4,881m of drilling was completed in 92 holes over the seven targets. Drill hole depths predominantly ranged from 30-55m, the air core drill technique terminating near or top of fresh rock. However at target LLT06 (Figure 3) holes terminated at depths of 80-108m encountering deeper transported cover above basement lithological units.

This phase of exploration has tested two structural trends where previous exploration in the 1990s had found indications of gold mineralisation and has now identified a new gold mineralised geological trend subparallel and to the east of the Woolibar Fault.

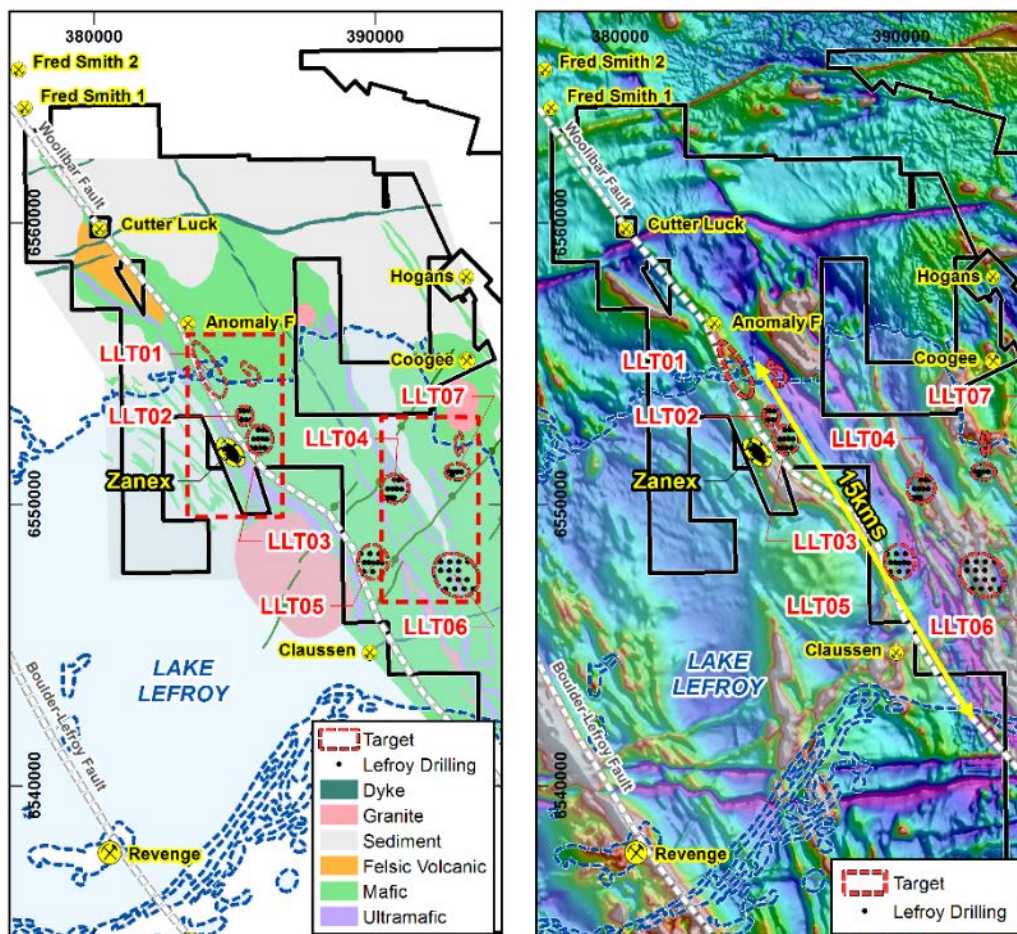


Figure 3 Inset Map-Highlighting geological interpretation on left and TMI RTP aeromagnetic image on right, both with targets drilled, and extent of Lake Lefroy (refer to inset maps for targets LLT4&6).

Encouraging assay results were received from the composite samples (4m) from three of the seven targets evaluated. At Zanex, an intersection of **17m at 2.14g/t Au from 40m** to the end of hole was returned from hole LEFA 47. The hole intersected some 20m of transported cover above saprolite and terminated in an interpreted altered mafic lithology. The drill program at Zanex comprised an initial four 160m spaced lines with holes at 80m centres, closed down to 40m centres at selected locations. The Zanex Prospect consists of a north west trending sequence of strongly altered high Mg basalt over a 500m strike length intruded by porphyry. This early stage drilling remains predominantly wide spaced drilling within a stripped regolith profile. Exploration is underway to collect the 1m samples from selected holes for analysis to assist in improving the geochemical response.

At the LLT04 and LLT06 targets results from composite samples have highlighted two emerging targets based upon a subtle geochemical gold signature, a favourable geological environment and trends defined from aeromagnetic data (Figure 4). Contouring maximum gold value in each hole has resulted in the definition of cohesive anomalies (+40ppb Au) at LTT04 and LLT006. Importantly, the best intersections returned from each anomaly were 4m at 1.71g/t Au from 44m in LEFA 086 at target LLT04 (Figure 5), and 4m at 2.39g/t from 88m in LEFA 113 at target LTT06. Targets LLT04 and 06 are located 3.5km apart along strike on the same magnetic unit, which from bottom of hole drill chips is recognised to be a magnetite altered mafic unit. (Figure 4).

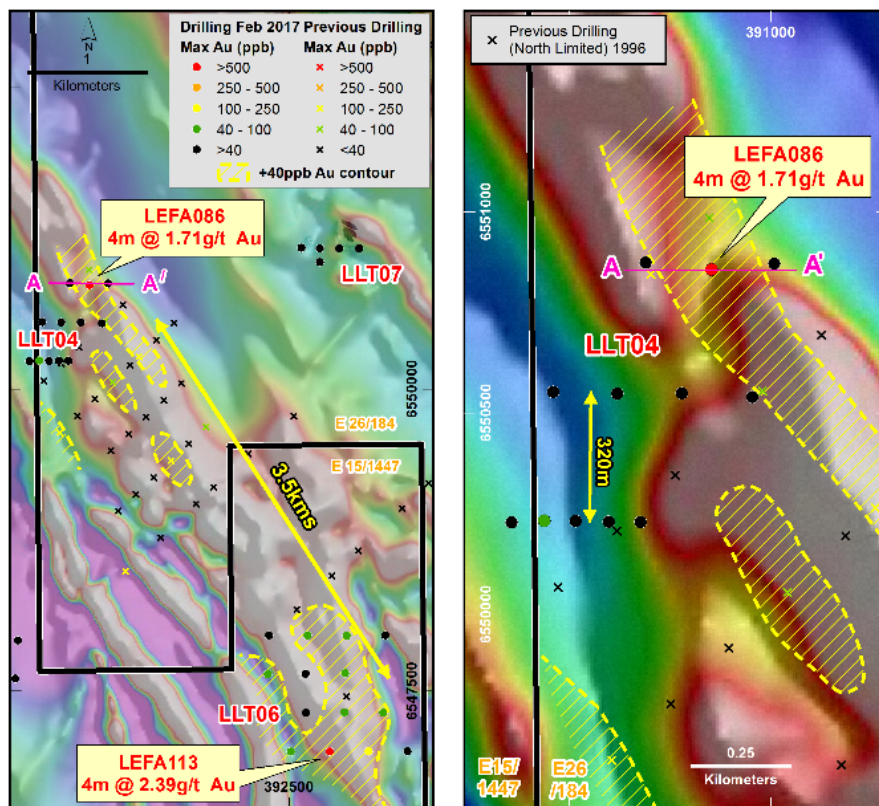


Figure 4 Inset Map-Drill plan at showing the LTT04 & 06 targets over TMI - RTP1VD aeromagnetic image. Right image highlights the targeted break in the aeromagnetic trend.

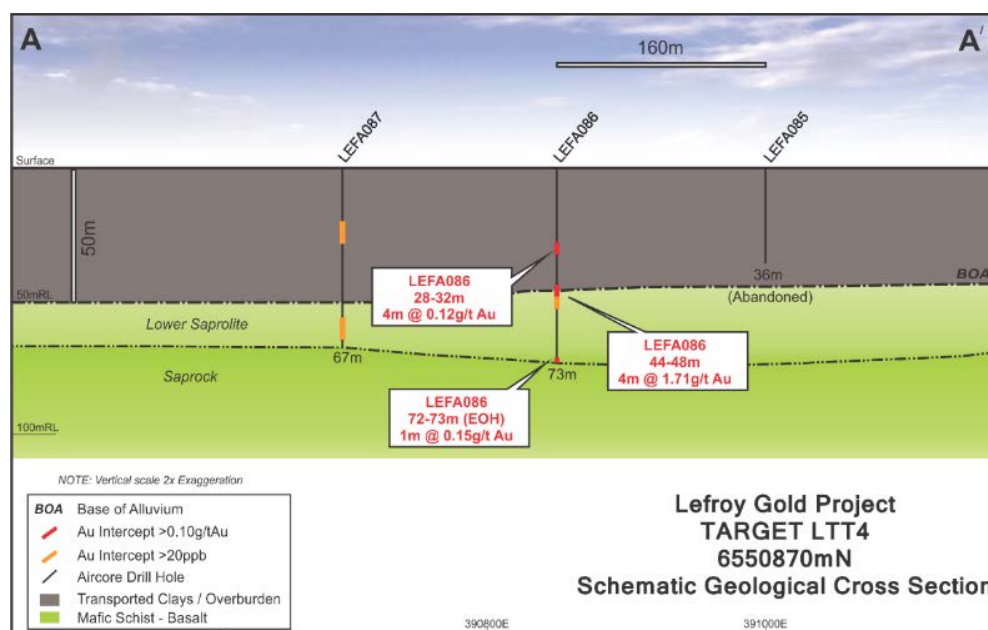


Figure 5 Drill Section at LTT04 target, highlighting transported cover, stripped regolith profile and key intersections from the wide spaced drilling.

The Company is encouraged by the results of the initial exploration program over Lake Lefroy and further work is in progress. Bottom of hole (BoH) samples from drill holes that penetrated bedrock have been submitted for multi-element analysis (suite of elements) and will be used to map geochemical patterns from pathfinder elements (e.g. Arsenic, Tellurium, Bismuth) that could be associated with a primary gold system. Resampling of the 1m sample intervals from the anomalous 4m composite samples is in progress. Advancing the geological model is integral to the ongoing work program and will involve incorporating the new geological knowledge from drilling to further interrogate the geophysical data, to deliver an updated geological interpretation and generate new drill targets. Follow up aircore drilling to test the extensions of the Zanex, LLT04 and LLT06 anomalous trends is being scheduled for May.

Lucky Strike

The Lucky Strike Prospect is located 2km to the northwest of the Lucky Bay open pit, mined by Silver Lake Resources (ASX:SLR) during 2015 (Figure 2). The Company has interpreted from geophysical and geological data that the Lucky Strike Prospect shares a similar geological and structural setting to Lucky Bay, 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.

The Company completed an initial air core drilling program at Lucky Strike in November 2016 which focused on evaluating 1,100m of strike around a previous highly anomalous intersection of 22m at 2.97g/t Au in air core hole SCA 794, drilled by Integra Mining Limited in 2010. This program successfully defined a northwest trending zone of bedrock gold mineralisation over a 220m strike length, centered on SCA 794, but also indicated a new zone of gold mineralisation 300m along strike to the north west in hole LEFA 027, which intersected 5m at 0.76g/t Au to end of hole (refer ASX Announcement 23 December 2016).

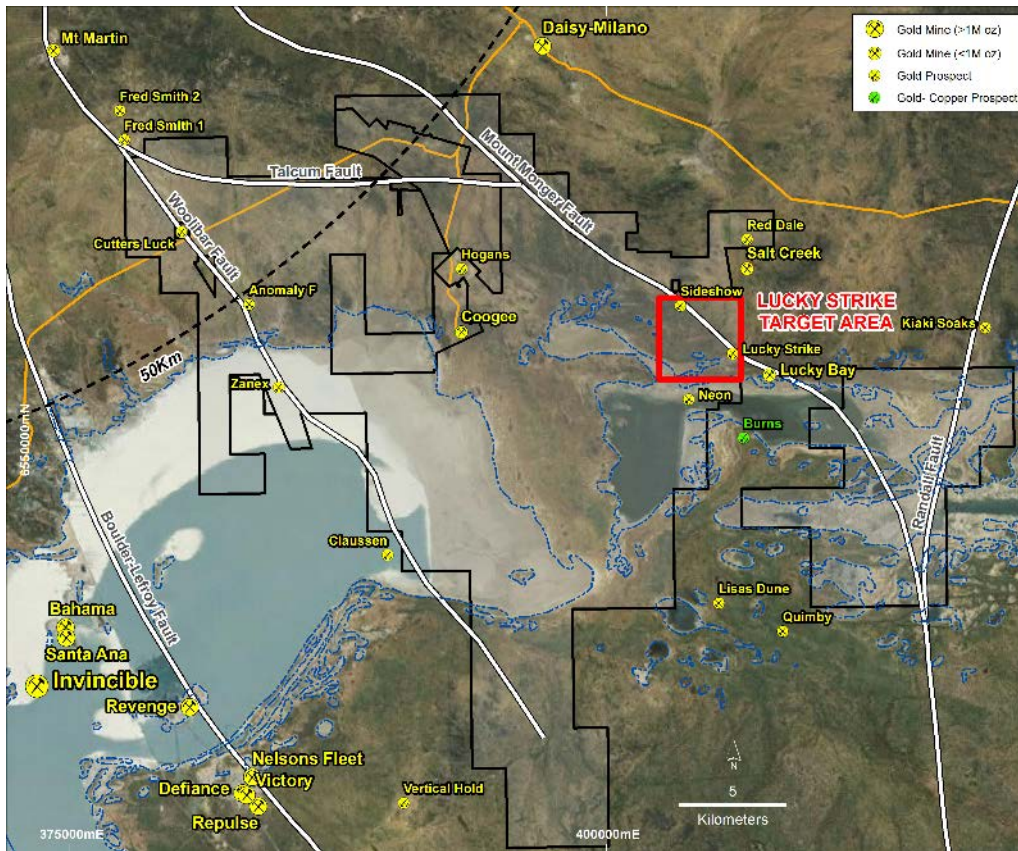


Figure 6- Location of the Lucky Strike area at the Lefroy Gold Project

In late March an aircore drill program of 48 holes totaling 2,593m evaluated a 1,500m strike length of this stratigraphic package to the northwest and along strike of the November 2016 program, and extending to the Sideshow Prospect within the Company's E26/183 (Figure 7). The drill program was a reconnaissance first pass evaluation, with lines spaced at 320m and holes at 80m centres and specifically targeted after recognition of the confluence of anomalies and structural trends generated from the interpretation of regional aeromagnetics and the Company's detailed ground gravity dataset.

Subsequent to the end of the Quarter assay results from composite samples (4m) were received for the 48 holes and announced (LEX: ASX Announcement 18 April 2016). Contouring maximum gold values in each hole has resulted in the definition of three key anomalies (+100ppb Au) over the 3000m of strike length evaluated by the Company. The best intersections returned from the recent drilling were **11m at 3.53g/t Au from 60m to End of Hole (EoH) in LEFA136** (Figure 7), and **10m at 4.60g/t from 24m to EoH in LEFA171** (Figures 7&8).

The results from the two phases of relatively wide spaced early stage air core drilling are considered by the Company to be significant when placed in a regional geological context. The new gold intersections support the previous intersection in SCA794 drilled in 2010 by highlighting the broad high grade nature of gold mineralisation in what have been interpreted to be sedimentary rocks. This new potential gold trend lies on or adjacent to the Mt Monger Fault which is interpreted by the Company as possibly extending south east to encompass the Lucky Bay open pit, and 10km to the north west within tenements wholly owned by the Company and that have had very little systematic reconnaissance drilling (Figure 6).

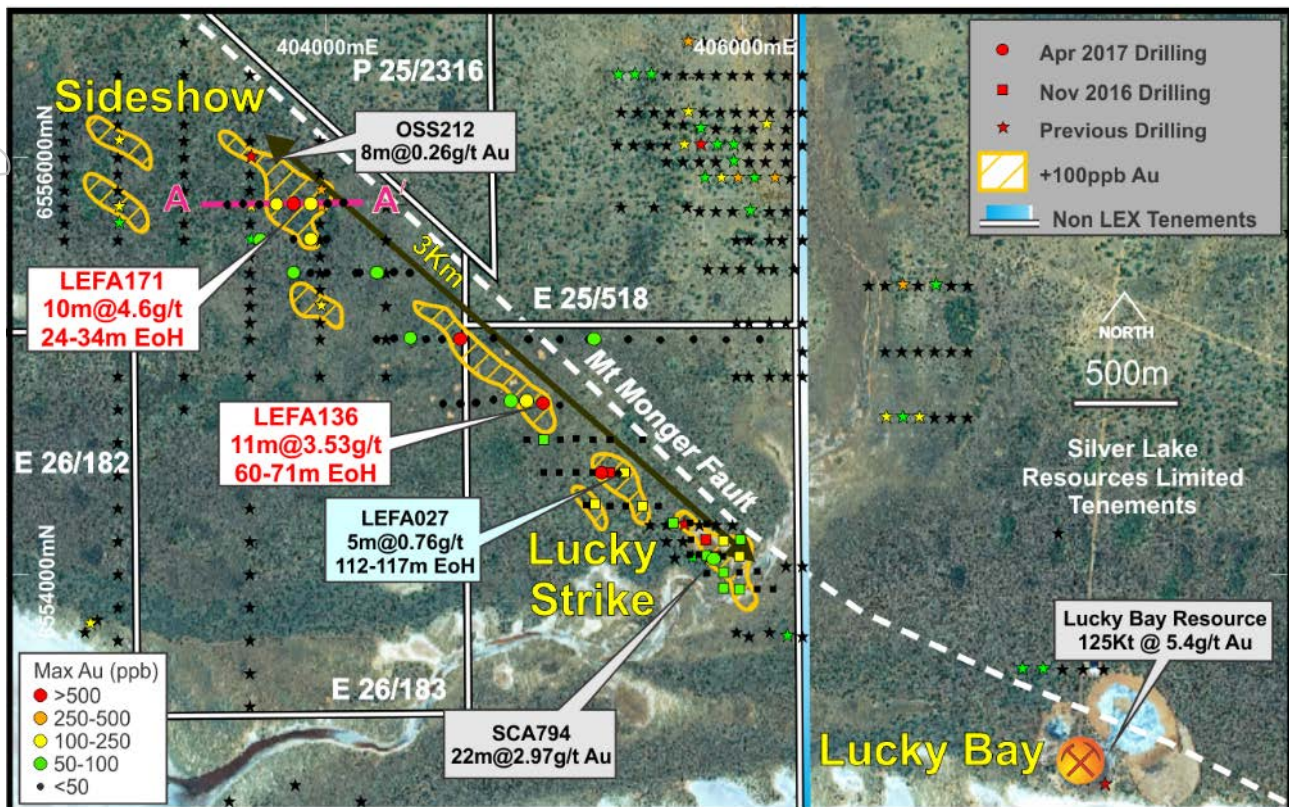


Figure 7 Location of LEX tenements, Lucky Strike Prospect, recent drilling and proximity to the Lucky Bay Open pit. Refer to drill section A-A' in Figure 8.

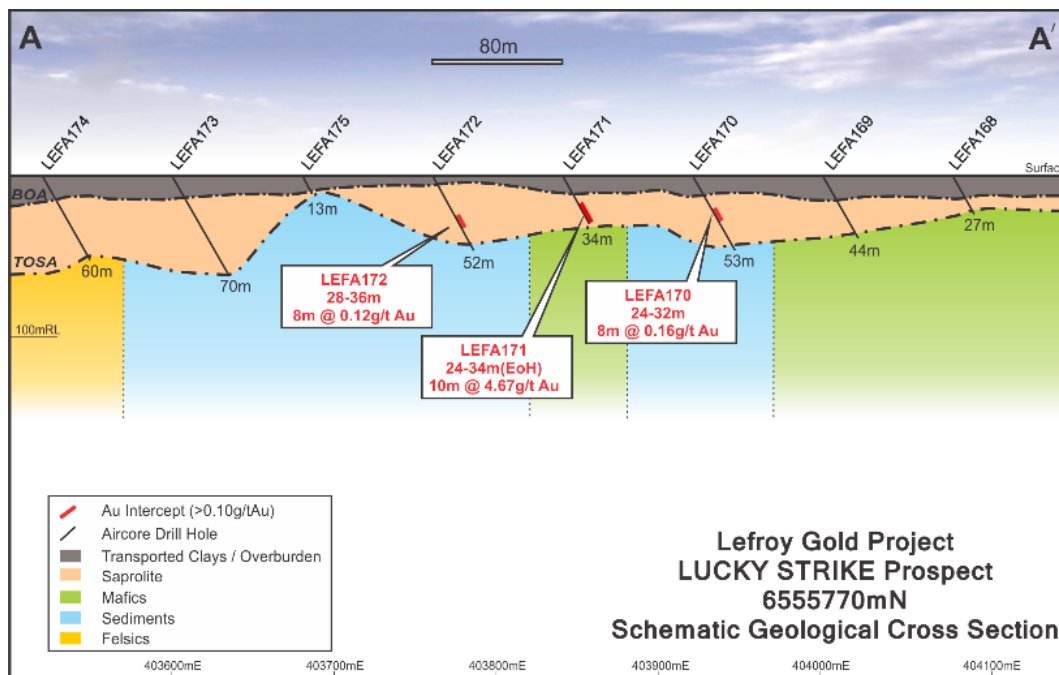


Figure 8 Lucky Strike Drill Section 6555770mN (A-A') highlighting the significant intersection in LEFA171.

The Company is very encouraged by the results of the initial exploration at Lucky Strike and in particular that it now demonstrates the gold bearing mineral potential along the interpreted position of the Mt Monger Fault. In addition the results generated over the 3000m strike length highlight the success of the Company's ground selection process, the interrogation of historical exploration data and the fundamental use of gravity data in the interpretation.

Resampling of the 1m sample intervals from the anomalous 4m composite samples has been completed and results are pending. Additional air core drilling is scheduled to commence in May to infill around the key gold intersections and to reduce the line spacing to a regular 160m spacing within the 3000m trend identified. Planning for exploration along strike to the north west is underway and is likely to involve infill ground gravity and then wide spaced reconnaissance drilling.

Lake Johnston Project (Gold and Nickel), Lefroy 100% of Gold and Nickel Rights

The Lake Johnston Project is located 120km west of Norseman and comprises two exploration licences (E63/1722 & 1723) held under title by Lefroy and one exploration licence (E63/1777) held by Lithium Australia NL (ASX:LIT). These holdings form a cohesive package in excess of 300km² over the Lake Johnston Greenstone Belt. Lefroy has acquired the gold and nickel rights to E63/1777 under a Tenement Rights Agreement.

The area is considered prospective for gold and nickel, with the tenement package covering the northern strike extension to the Maggie Hayes and Emily Anne nickel mines. The T1 nickel prospect, where previous drilling of geophysical (Ground EM) anomalies intersected sulphides in ultramafic rocks, lies along strike to the north of Emily Anne.

No work was undertaken during the quarter

Murchison Gold Project, Lefroy 100%

The Murchison Gold Project comprises two pending exploration licences and eighteen pending prospecting licences covering 134km² to the west of Cue. One exploration licence lies to the south and along strike from Big Bell, and the other tenements form a contiguous package near to and adjoining the Cuddingwarra Mining Centre. During the quarter the Company continued negotiations with the Native Title Corporation for a Heritage Access agreement. It is anticipated an agreement will be reached in the June Quarter 2017 which will subsequently allow the required process to commence towards grant of the tenements.

Exploration Outlook

The Company will maintain exploration activity in the June Quarter on the back of the encouraging and positive results returned from the air core drilling along the Woolibar trend in Lake Lefroy and at Lucky Strike. This work will again focus on drilling campaigns at the Lefroy Gold Project, with air core drilling planned to follow up and extend the Zanex, LLT04 and LLT06 targets in Lake Lefroy. At Lucky Strike aircore drilling will both infill the defined system and also undertake step out exploration to evaluate the trend to the north west. Subsequent to the end of the Quarter, a program of reverse circulation drilling was commenced at Red Dale.

The Company will also continue to compile historical drilling information at the Lefroy Gold Project and add data to its growing master database. This data search includes sourcing information from non-digital archived reports, preparing to digital format and entering to the master database. In particular the focus will be on compilation of historical drill data along the Woolibar Trend.

CORPORATE

On 13 January 2017 the Company announced the change of its Australian Registered Office and postal address to Level 1, 11 Ventnor Avenue, West Perth, WA, 6005, Australia and PO Box 821 West Perth WA 6872.

On 16 January 2017 the Company announced that effective 17 January 2017 that responsibility for the Company's share registry services would transfer to Computershare Investor Services Pty Ltd office in Perth, Western Australia, following the Australian registered office move to Western Australia.

On 13 March 2017 the Company released its Financial Statements for the 6 months ended 31 December 2016.

During the quarter the Company spent \$0.25 million on its exploration activities as noted in this report. At 31 March 2017 the Company had cash reserves of approximately \$3.5 million and held 2,070,859 shares in Lithium Australia NL.

About Lefroy Exploration 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. The LGP supports the commitment by the Company to focus on exploration for new greenfields gold discoveries in areas of limited or no previous exploration but in areas that have favourable geological and geophysical characteristics.

For Further Information please contact:

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Notes Specific-ASX Announcements March Quarter 2017

The following announcements were lodged with the ASX during and subsequent to the March 2016 Quarter and further details (including supporting JORC Reporting Tables) for each of the sections noted in this Quarterly Activities Report can be found in the announcements. Note that these announcements are not the only announcements released to the ASX during the Quarter but specific to exploration reporting. The Company confirms that it is not aware of any new information or data that materially affects the information on the Lake Lefroy or Lucky Strike Prospect included in the following announcements.

- Drilling Campaign Commences on Lake Lefroy 8 February 2017
- Initial Drilling at Lake Lefroy Completed 9 March 2017
- Exploration Update: Drilling to Recommence at Lucky Strike 29 March 2017
- Exploration Update: New Gold Anomalies Defined in Lake Lefroy 3 April 2017
- Significant Intersections at Lucky Strike Prospect 18 April 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.

LEFROY EXPLORATION LTD TENEMENT SCHEDULE March 31 2017

Project	Tenement ID	Ten status	Holder	Interest %
Lefroy	E26/0183	Live	HOGANS RESOURCES PTY LTD	100 ¹
Lefroy	E26/0184	Live	HOGANS RESOURCES PTY LTD	100 ¹
Lefroy	E 26/0131	Live	HOGANS RESOURCES PTY LTD	100 ¹
Lefroy	E 26/0134	Live	HOGANS RESOURCES PTY LTD	100 ¹
Lefroy	E 26/0150	Live	HOGANS RESOURCES PTY LTD	100 ¹
Lefroy	P 26/3689	Live	HOGANS RESOURCES PTY LTD	100 ¹
Lefroy	P 26/3690	Live	HOGANS RESOURCES PTY LTD	100 ¹
Lefroy	P 26/3691	Live	HOGANS RESOURCES PTY LTD	100 ¹
Lefroy	P 26/3764	Live	HOGANS RESOURCES PTY LTD	100 ¹
Lefroy	P 26/3765	Live	HOGANS RESOURCES PTY LTD	100 ¹
Lefroy	P26/3889	Live	HOGANS RESOURCES PTY LTD	100 ¹
Lefroy	P26/3890	Live	HOGANS RESOURCES PTY LTD	100 ¹
Lefroy	P26/3891	Live	HOGANS RESOURCES PTY LTD	100 ¹
Lefroy	P 25/2059	Live	HOGANS RESOURCES PTY LTD	100 ¹
Lefroy	E 25/0517	Live	HOGANS RESOURCES PTY LTD	100 ¹
Lefroy	E26/0182	Live	LEFROY EXPLORATION LTD	100
Lefroy	E15/1447	Live	LEFROY EXPLORATION LTD	100*
Lefroy	P25/2316	Live	LEFROY EXPLORATION LTD	100
Lefroy	P25/2317	Live	LEFROY EXPLORATION LTD	100
Lefroy	E25/0518	Live	LEFROY EXPLORATION LTD	100
Lefroy	E15/1497	Pending	LEFROY EXPLORATION LTD	100
Lefroy	E15/1498	Live	LEFROY EXPLORATION LTD	100
Lefroy	E26/0193	Pending	LEFROY EXPLORATION LTD	100
Lefroy	P25/2421	Pending	LEFROY EXPLORATION LTD	100
Lake Johnston	E63/1722	Live	LEFROY EXPLORATION LTD	100 ²
Lake Johnston	E63/1723	Live	LEFROY EXPLORATION LTD	100 ²
Lake Johnston	E63/1777	Live	LITHIUM AUSTRALIA NL	Note
Murchison	E21/0192	Pending	LEFROY EXPLORATION LTD	100
Murchison	E21/0193	Pending	LEFROY EXPLORATION LTD	100
Murchison	P20/2256	Pending	LEFROY EXPLORATION LTD	100
Murchison	P20/2257	Pending	LEFROY EXPLORATION LTD	100
Murchison	P20/2258	Pending	LEFROY EXPLORATION LTD	100
Murchison	P20/2259	Pending	LEFROY EXPLORATION LTD	100
Murchison	P20/2260	Pending	LEFROY EXPLORATION LTD	100
Murchison	P20/2261	Pending	LEFROY EXPLORATION LTD	100
Murchison	P20/2262	Pending	LEFROY EXPLORATION LTD	100
Murchison	P20/2263	Pending	LEFROY EXPLORATION LTD	100
Murchison	P20/2264	Pending	LEFROY EXPLORATION LTD	100
Murchison	P20/2265	Pending	LEFROY EXPLORATION LTD	100
Murchison	P20/2266	Pending	LEFROY EXPLORATION LTD	100
Murchison	P20/2267	Pending	LEFROY EXPLORATION LTD	100
Murchison	P20/2268	Pending	LEFROY EXPLORATION LTD	100
Murchison	P20/2269	Pending	LEFROY EXPLORATION LTD	100
Murchison	P20/2272	Pending	LEFROY EXPLORATION LTD	100
Murchison	P20/2273	Pending	LEFROY EXPLORATION LTD	100
Murchison	P20/2274	Pending	LEFROY EXPLORATION LTD	100
Murchison	P20/2275	Pending	LEFROY EXPLORATION LTD	100

1-Hogans Resources Pty Ltd is a wholly owned subsidiary of Lefroy Exploration Limited

*E15/1447- Title transferred from Montezuma Mining Company Ltd (ASX: MZM) to LEX on 24 January 2017.

Note-E63/1777-LEX has the gold and nickel rights.

2-E63/1722 and E63/1723- Held under title by LEX, Lithium Australia NL (LIT) have the rights to Lithium