

ASX Release: 24 April 2017

Exploration Update-RC Drilling Commenced at Red Dale

Key Points:

- Initial RC drill program commenced at the Red Dale Prospect, at the Company's flagship Lefroy Gold Project, south east of Kalgoorlie
- Red Dale Prospect characterised by a broad geochemical gold footprint defined from drilling by previous exploration
- Previous drilling, by Integra included a high grade intercept of 4m at 18.2g/t from 54m in RDD006 reported from gravel horizon at base of palaeochannel
- Initial reconnaissance RC drill program comprising 2600m of drilling to target area of stronger base of channel gold anomaly in search for primary source

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 Red Dale Prospect at its flagship Lefroy Gold Project ("LGP" or "Project"), located approximately 50km to the south east of Kalgoorlie (Figure 1).

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 Red Dale Prospect adjoins (Figure 2), and is immediately north of the Randalls Processing Plant and Salt Creek Open pit held by Silver Lake Resources (ASX:SLR). Gold mineralisation was identified in 2007 by Integra Mines Limited ("Integra") following on from their 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 gold anomaly of approximately 1.2km in length by up to 1km in width. Numerous gold intersections were reported at or near the base of palaeochannel, in gravel horizons overlying a similar package of rocks as at Salt Creek.

Subsequent deeper reverse circulation and diamond drilling (14 holes) by Integra to evaluate the stronger gold anomalies generated from aircore drilling and to seek a primary source of mineralisation returned disappointing gold results from the bedrock. However, further promising strong results were returned from the basal channel gravels including 4m at 18.2g/t Au from 54m in RDD006, 3m at 8.62g/t Au from 46m in RDD007 and 6m at 1.50g/t Au from 47m in RDD014.

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Figure 1-Lefroy Gold Project and location of the Red Dale Prospect

The Company considers these anomalies are likely to be reflecting gold anomalous transported basal gravels derived from a nearby bedrock source, and that the material in the channels is unlikely to have been transported a significant distance. This has been further confirmed from recent re assessment and logging of old drill spoil In the field paying particular attention to the basal quartz rich gravels. These gravels are characterised by coarse sub angular quartz chips, with sub rounded edges giving support to the potential a local bedrock source.

After detailed assessment of the previous exploration and field checking of drill spoil from the old holes the Company has recognised a key target at Red Dale where a program of reverse circulation drilling has been designed to assess a 400m long trend (Figure 3). This area is recognised as having continuity of strong gold results at the base of the channel (Figure 4) from prior drilling by Integra overlying altered quartz dolerite bedrock, considered a favourable host rock to gold mineralisation in the Eastern Goldfields.

The program totaling 2600m will consist of five 80m spaced drill traverses with 5-6 holes spaced at 40m intervals (Figure 3). Hole depths are planned to go to approximately 100m in order to penetrate into the fresh bedrock. The aim of this program is twofold, firstly to further understand the morphology of the palaeochannel and characterise the basal gravels and secondly to improve the understanding and extent of the altered bedrock. The interrogation of both these data sources combined with assay results could then be used to provide vectors to a primary bedrock source for the base of channel gold mineralisation.

The program is expected to be completed in early May with final results received by mid-May.





Figure 2 Red Dale Prospect location plan highlighting maximum gold in hole and key intercepts (refer Figure 3 Inset) [drill hole location and results originally depicted in Figure 13 of the Independent Geologist's Report contained in the Lefroy Exploration Limited Prospectus dated 8 September 2016]



Figure 3 Red Dale Prospect drill hole location plan, refer to Figure 4 for Drill Section A-A'





Figure 4 Schematic cross-section at 6559400N to highlight historical drilling and gold intersections at the base of the Palaeochannel (Base of Alluvium-BOA)

 Table 1
 Historical Drilling-Lefroy Gold Project-Red Dale: Significant gold intercepts from air core drilling reported from

 Palaeochannel sediments
 Palaeochannel sediments

Drill hole intersections tabulated below are calculated with a 0.50g/t Au lower cut for the entire drill program reported from transported palaeochannel sediments. Information reported was sourced from open file WAMEX reports for drilling completed between 2006 and 2009 by Integra Mining Limited. Samples routinely collected as 4m composite intervals. In some instances resampling of individual 1m samples was completed. **Only significant** (>0.25g/t Au) intersections from palaeochannel (transported overburden) are shown.

WAMEX report A104012 is the final surrender report for prior tenement E25/280 and reports all exploration completed during the period October 2005 to October 2014. The information below is sourced from that report.

	ole Id	Collar N (MGA)	Collar E (MGA)	Collar RL	Dip °	Azimuth °	Hole Depth (m)	Depth From (m)	Depth To (m)	Gold Intersection (downhole width) (m)	Au Value (g/t)
R	DAC019	406555	6559555	300	60	90	101	52	60	8	0.56
R	DAC025	406050	6559555	300	60	90	65	48	52	4	0.40
R	DAC026	405950	6559555	300	60	90	56	40	52	12	0.38
R	DAC029	405850	6559555	300	60	90	70	44	48	4	0.53
C R	DAC061	406620	6559320	300	60	90	91	52	60	8	0.54
R	DAC245	406780	6559320	300	60	90	88	56	60	4	0.36
R	DAC246	406700	6559320	300	60	90	88	52	60	8	0.64
R	DAC077	406620	6559480	300	60	90	82	56	68	12	0.57
R	DAC078	406540	6559480	300	60	90	81	32	36	4	0.11
R	DAC402	406760	6559400	300	60	90	83	52	56	4	0.28
R	DAC403	406720	6559400	300	60	90	75	54	59	5	1.07
R	DAC404	406680	6559400	300	60	90	81	53	60	7	1.21
R	DAC405	406640	6559400	300	60	90	97	55	56	1	1.26
R	DAC406	406600	6559400	300	60	90	93	53	57	4	1.44
R	DAC434	406660	6559480	300	60	90	65	55	58	3	0.93
R	DAC435	406580	6559480	300	60	90	80	53	58	5	0.91



Table 2 Historical Drilling-Lefroy Gold Project-Red Dale: Significant gold intercepts from diamond drilling

Drill hole intersections tabulated below are calculated with a 0.50g/t Au lower cut. Information reported was sourced from open file WAMEX reports for drilling completed between 2006 and 2010 by Integra Mining Limited. Samples routinely collected as 1m intervals of half core. Within some intervals of oxide core and palaeochannel sediments core intervals were composited (eg RDD6 54-58m) All significant (>0.50g/t Au) intersections from diamond drilling at Red Dale are shown.

WAMEX report A104012 is the final surrender report for prior tenement E25/280 and reports all exploration completed during the period October 2005 to October 2014. The information below is sourced from that report.

	Hole Id	Collar N (MGA)	Collar E (MGA)	Collar RL	Dip °	Azimuth °	Hole Depth (m)	Depth From (m)	Depth To (m)	Gold Intersection (downhole width)	Au Value (g/t)
1	BDD004	6550400	406558.2	201 412	60	45	107 5	E 4		width)	0.51
9	RDD004	6559400	406558.2	301.413	-60	45	187.5	54	55	1	0.51
1/	RDD005	0559427	406584.4	301.769	-60	50	180	54	50	2	1.37
	RDD005	6559427	406584.4	301.769	-60	50	180	56	57	1	1.55
9	RDD006	6559458	406611.9	302.042	-60	45	180	42	43	1	0.89
	RDD006	6559458	406611.9	302.042	-60	45	180	43	44	1	0.89
	RDD006	6559458	406611.9	302.042	-60	45	180	52	53	1	0.5
	RDD006	6559458	406611.9	302.042	-60	45	180	54	58	4	18.68
	RDD007	6559486	406639.8	302.541	-60	45	335.8	53	55.5	2.5	9.28
	RDD007	6559486	406639.8	302.541	-60	45	335.8	44	45	1	0.54
_	RDD007	6559486	406639.8	302.541	-60	45	335.8	46	47	1	3.9
7	RDD007	6559486	406639.8	302.541	-60	45	335.8	47	48	1	18.34
7/	RDD007	6559486	406639.8	302.541	-60	45	335.8	48	49	1	3.61
_	RDD009	6559979	406196.5	301.43	-60	45	204.1	168	169	1	1.19
	RDD010	6559950	406168.1	301.25	-60	54	252	49	50	1	1.23
_	RDD010	6559950	406168.1	301.25	-60	54	252	51	52	1	0.64
-	RDD012	6559732	406658.5	300	-61	220	249	43.5	44	0.5	2.31
	RDD012	6559732	406658.5	300	-61	220	249	54	55	1	1.44
_	RDD014	6559600	406527	300	-60	45	262.7	44	45	1	0.64
1/	RDD014	6559600	406527	300	-60	45	262.7	47	48	1	1.15
J	RDD014	6559600	406527	300	-60	45	262.7	48	49	1	0.92
	RDD014	6559600	406527	300	-60	45	262.7	49	50	1	0.53
	RDD014	6559600	406527	300	-60	45	262.7	50	51	1	1.63
1	RDD014	6559600	406527	300	-60	45	262.7	51	52	1	1.54
	RDD014	6559600	406527	300	-60	45	262.7	52	53	1	3.23



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.



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 Red Dale Prospect 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 Red Dale Prospect included in the following announcements.

- Lefroy Exploration Limited-Prospectus: 8 September 2016
- Managing Directors AGM Presentation: 5 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 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.

JORC CODE, 2012 Edition-Table 1 Lefroy Gold Project: Red Dale Prospect –- 24 April 2017 SECTION 1: SAMPLING TECHNIQUES AND DATA (Commentary on Historical Exploration information described below at Red Dale has been derived from WAMEX Open File reports sourced from the Department of Mines and Petroleum and detailed in the Independent Geologists Report contained in the Lefroy Exploration Limited Prospectus dated 8 September 2016)

	Criteria IORC Code Explanation		Commentary			
	Samplina	Nature and quality of sampling (eq. cut channels	Aircore(AC) drilling			
	techniques	 random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information. 	 One metre AC samples were collected from the cyclone and laid out in rows on the ground. Composite 4m samples were then collected by spear or scoop sampling the 1m piles to produce a bulk 2-3kg sample which were sent to the Laboratory. Reverse Circulation (RC) drilling One metre samples collected from the cyclone and then composited into 4m samples by scoop or spear sampling for analysis. Anomalous samples were resubmitted as single 1 m intervals. Diamond Drilling (DD) Sampling of Diamond drill core conducted is considered industry standard at the time of collection (halfcore). 			
	Drilling techniques	 Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	 AC drilling-refer to WAMEX reports A76546, A80006, A80491, A88483. RC drilling-refer to WAMEX report A80491 Diamond Drilling-refer to WAMEX report A94057, 89402 and 104012 			
D	Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	 A84957, 88483 and 104012. RAB-AC-RC—Sample recovery insufficiently recorded in the drilling database. 			
		 Measures taken to maximise sample recovery and ensur- representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	 However technical reports do note of difficult drilling conditions at or near the base of the palaeochannels and associated quartz gravel horizons. High groundwater flows affected sample recovery. Diamond Drilling-core recovery recorded. 			
	Logging	 Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature Core (or costean, channel, etc) photography. The total length and percentage of the relevant 	 All drill holes reported were geologically logged for the entire length of the hole. Relogging of air core drill holes was reported in WAMEX report 84957. 			
	Sub-sampling techniques and sample preparation	 If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled. 	 Diamond Drilling Half core samples collected. RC drilling Collection of 4m composite samples, single metre samples collected if 4m composite was considered anomalous. AC Drilling Collection of 2m or 4m composite samples an if considered anomalous 1m intervals resampled. The sample preparation of the RAB&AC followed industry best practice at the time, involving oven drying, pulverising, to produce a homogenous sub sample for analysis. 			
	Quality of assay data and laboratory tests	 The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF 	 Previous explorers employed laboratories such as Genalysis and ALS, Samples routinely analysed for gold by aqua regia digest or 40g Fire Assay digest method 			

	Criteria	JORC Code Explanation		Commentary
	Verification of	 instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. The verification of significant intersections by either independent or alternative company personnel 	•	with an AAS finish. No geophysical tools, spectrometers or hand held XRF instruments used. Previous explorers did not document detailed QAQC procedures. Not documented in the historical WAMEX
\geq	assaying	 The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. 		
5	Location of data points	 Discuss any adjustment to assay data. Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	•	Drill holes at Red Dale surveyed using GPS. Topographic elevation if captured by using reading from hand held GPS with an accuracy of+-10m and considered suitable for the flat terrain. Historical drill holes merge and position validated against 2016 satellite imagery of the area.
	Data spacing and distribution	 Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	•	AC drilling: Initial hole spacing at nominal 160m centres on reconnaissance east west orientated drill lines. Final grid spacing of 80m line and 40m hole centres. RC Drilling: targeted on anomalous RAB-AC drill results, drilled on same traverse lines but irregularly spaced. Diamond Drilling: sited to evaluate anomalous AC results but orientated at bearing of 225 degrees. Three key traverses drilled AC samples composite range 2-6m but generally 4m. No assay compositing has been applied.
102 1510	Orientation of data in relation to geological structure	 Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	•	The AC drilling is reconnaissance in nature, being relatively wide spaced and the orientation of the gold mineralised structures intersected is yet to be confirmed. There is insufficient information to determine if the RC and DD holes were orientated perpendicular to the mineralised structures.
_	Sample security Audits or reviews	 The measures taken to ensure sample security. The results of any audits or reviews of sampling 	•	Not documented in historic reports
	Audits of Teviews	techniques and data.	•	Not documented in historic reports.

Section 2: REPORTING OF EXPLORATION RESULTS – Lefroy Gold Project-Red Dale Prospect –- 24 April 2017 (Commentary on Historical Exploration Results described below has been derived from WAMEX Open File reports sourced from the Department of Minerals and Petroleum and detailed in the Independent Geologists Report contained in the Lefroy Exploration Limited Prospectus dated 8 September 2016)

	Critorio	IODC Code Evaluation	Commentary			
	Mineral tenement and land tenure status	 Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	 The Lefroy Project is located approximately 50km in a south easterly direction from Kalgoorlie, Western Australia and consists of a contiguous package of tenements covering approximately 540 square kilometres. The tenement E25/517 is current and in good standing with the Department of Mines and Petroleum (DMP) of Western Australia. The tenement is held by Hogans Resources Pty Ltd, a wholly owned subsidiary of Lefroy Exploration Limited. Full tenement details are listed in the Independent Solicitors Report attached to the Lefroy Exploration Limited prospectus. 			
JD R	Exploration done by other parties	 Acknowledgment and appraisal of exploration by other parties. 	• For Full details of exploration done by other parties at the Lefroy Project refer to the Independent Geologists Report ('IGR') attached to the prospectus.			
	Geology	• Deposit type, geological setting and style of mineralisation.	• For full details of the geological settings at the Lefroy Project refer to the Independent Geologists Report attached to this prospectus and also documented in the WAMEX reports noted in Table 1.			
	Drill hole Information	 A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	 Red Dale Prospect- Drill Intersections shown on plan within Figure 7 of Prospectus sourced from WAMEX reports A80006 and 104012 and refer to Independent Geologists Report attached to the prospectus. Table 1 in the body of this announcement tabulates significant intersections in palaeochannel sediments (Transported Overburden) from aircore drilling. Figure 2 in the body of this announcement displays positions of all historical holes drilled on tenement E25/517. 			
	Data aggregation methods	 In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	 Weighted averages based on the sum of length multiply by assay divided by total length. Intercepts based on 1m, 2m or 4m sampling No grade cutting has been undertaken. 			
	Relationship between mineralisation widths and intercept lengths	 These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be 	 All results are based on down-hole metres. Given the reconnaissance nature of the drilling the geometry of the mineralisation reported is not known and the true width is 			

Criteria	JORC Code Explanation	Commentary			
	 reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	not known.			
Diagrams	 Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	 Appropriate summary diagrams are included in the prospectus and the IGR and in this announcement. 			
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	 Significant assay results are reported in the IGR. Drill holes with no significant results are not reported but are shown on the plans in Figures 2 & 3 of this release. 			
Other substantive exploration data	 Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	 All other exploration data for Red Dale has been included within the IGR in the prospectus. 			
Further work	 The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	 Initial exploration at Red Dale will consist of a program of vertical RC drilling on 5 traverses as depicted on Figure 3 in this release. Additional drilling and exploration will be contingent on the results from this current phase of exploration. 			