

Multiple Magnetic Anomalies extend Burns Intrusive corridor to 3000m

- A detailed aeromagnetic survey, covering 54km² over the wider Burns Intrusive complex near Kalgoorlie, has refined and improved knowledge of the magnetic signature of the rock sequence beneath Lake Randall and its adjacent shoreline
- The Burns Au-Cu-Ag prospect has a distinctive, positive, aerial magnetic signature due to strong magnetite alteration of the porphyry and basalt rocks that host the mineralisation
 - Six new magnetic anomalies with signatures similar to Burns have been detected by the recent survey. The anomalies define a corridor of dioritic intrusions, each of which is considered prospective for mineralisation.
 - The northwest trending corridor is over 3000m long and is coincident with a +200ppm drill hole copper anomaly based on resampling of wide spaced historical geochemical holes
 - The largest and northernmost magnetic anomaly, designated as Lovejoy, lies beneath Lake Randall and is adjacent to the strongest drill hole copper anomaly
- Planning and preparation for an RC drill program to test the magnetic anomalies is underway with fieldwork expected to commence in October. This will be followed by drill testing of targets in Lake Randall in November

Managing Director, Wade Johnson, commented "The images from the new magnetic data further support our interpretation that the Burns prospect is one of a number of magnetic anomalies each centered on diorite porphyries considered prospective for Au-Cu-Ag mineralisation. These form a corridor of intrusives, likely along a major structure that potentially extends further to the north west out to Neon. We are very keen to commence RC drill testing of these magnetic anomalies, firstly on land then out on to Lake Randall, with Lovejoy the priority. We have plenty of scope to demonstrate that what we have already discovered at Burns is part of much larger mineral system, outboard of the larger Burns Intrusion that is also yet to be evaluated.

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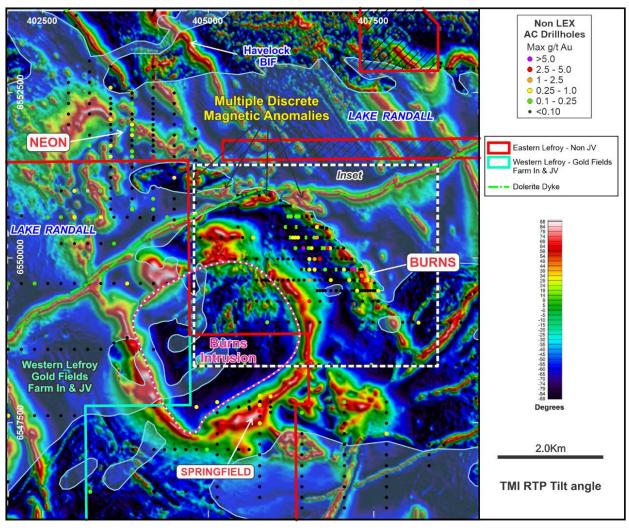


Figure 1 TMI RTP aeromagnetic image showing the full extent of the new aeromagnetic survey and the pronounced annular magnetic anomaly around the Burns Intrusion. Refer Figure 3 for the detail over the Burns prospect magnetic trend (warm colours represent rocks with stronger magnetic character)

Lefroy Exploration Limited (ASX: LEX) ("Lefroy" or "the Company") is pleased to report the results of a detailed aeromagnetic survey completed over an area that includes the Burns Cu-Au prospect. Burns is within the Eastern Lefroy tenement package, which is part of the wholly owned greater Lefroy Gold Project (LGP) located 50km southeast of Kalgoorlie (Figure 2).

The Burns prospect is situated outboard (Figure 1) of a large interpreted felsic intrusion, termed the Burns Intrusion. The intrusion does not outcrop but features distinctive annular aeromagnetic (Figures 1,3 & 4) and gravity geophysical signatures. The Company has not yet established the association between the larger Burns intrusion and the diorite porphyry intrusions intersected at Burns, but considers there is a genetic relationship between them.



At Burns, broad high-grade gold mineralisation is hosted within a newly discovered hematitepyrite-chalcopyrite-magnetite altered diorite porphyry (refer LEX ASX release 23 February 2021) that intrudes high Mg basalt. This porphyry, termed the Eastern Porphyry, is open to the north and south of existing exploration. The eastern extent of the Eastern Porphyry is defined, on multiple drill sections, by foliated footwall basalt. The copper and gold mineralisation hosted by both the diorite porphyry, basalt and massive magnetite veins is considered by the Company to be a new style of Au-Cu-Ag mineralisation in the area. The existence of additional mineralisation under Lake Randall (Figure 1 & 3) is entirely possible and additional drill programs to expand the system are being planned for late CY2021.

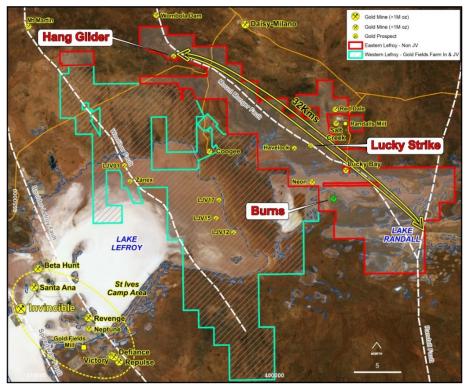


Figure 2 Lefroy Gold Project, highlighting Eastern and Western Lefroy, the location of the Burns prospect and proximity to Lucky Strike. Refer to Figure 2 for aeromagnetic image.

Aeromagnetic Survey

The association of the magnetite alteration and veining with Au-Cu mineralisation at Burns provides an important physical rock parameter (magnetics) that can be used to locate and target additional Burns-style systems external to the current focused drill area. The Company interprets an association between the porphyritic diorite intrusions, the magnetite alteration and the Au-Cu-Ag mineralisation hosted by both basalt and diorite.

The Company completed a detailed 25m line spaced aeromagnetic survey covering 54km² which was centered on and included the entire extent of the Burns Intrusion (Figure 1 & 4) in August 2021 (refer LEX ASX release 18 August 2021).



The survey has provided refined imagery which has improved and enhanced the quality of the known magnetic anomalies to the north of the Burns prospect, both on land and on Lake Randall. The new data replaces older surveys which have wider flight line spacing.

Images from the new aeromagnetic survey (Figure 1 & 4) provide greater clarity and detail compared with the old data. Figure 1 highlights the full extent of the survey and clearly shows the extent of the annular magnetic anomaly surrounding the interpreted Burns Intrusion and a string of six magnetic anomalies to the east that define a distinct, Burns-like magnetic corridor (Figure 3). These anomalies form a 3000m trend, that includes Burns and extends out beneath Lake Randall. The Company interprets that the anomalies represent magnetite alteration zones within and surrounding porphyry dioritic intrusions that are additional to, and similar in style to, Burns.

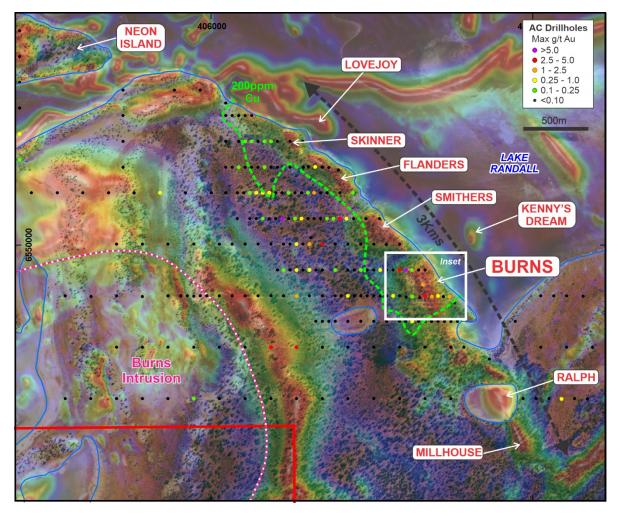


Figure 3 Combined satellite image with transparent TMI RTP aeromagnetic image highlighting the discrete magnetic anomalies along strike of Burns and the extent of the +220ppm copper anomaly. The inset area refers to the area of RC and diamond drilling at the Burns Au-Cu-Ag prospect. (Warm colours represent rocks beneath the surface with higher magnetite content). Coloured and black dots represent historical AC drill holes.



The largest and northernmost magnetic anomaly, now designated Lovejoy, lies beneath Lake Randall (Figures 1 & 3). Lovejoy has a coincident, positive gravity anomaly (refer Figure 4 LEX ASX release 28 July 2021) of similar character to Burns.

Apart from Burns, the six magnetic anomalies have only been partly evaluated by previous wide spaced vertical aircore drill holes. The Company has completed a field inspection of these holes and collected drill chip samples representing the near fresh bedrock from the end of these holes where possible. The samples collected were given whole rock analysis. When combined with data from the Burns prospect the results highlight a +200ppm copper corridor that extends north to Lovejoy (Figure 3). The eastern and northern extents of the anomaly are limited by the absence of drilling in Lake Randall.

A smaller discrete magnetic anomaly, designated Kenny's Dream, lies approximately 400m northwest of Burns (Figure 3). The cause of the anomaly is unclear, but evidence from detailed gravity data suggests this may be related to a buried larger felsic intrusion.

Summary and Ongoing Burns Program

The general association of the Au-Cu-Ag mineralisation at Burns, with magnetite in both basalt and diorite porphyry rocks, provides the rationale for a strong, first order exploration program focussed on the newly found magnetic anomalies. The Company is well advanced with planning for this exploration, with RC drilling to commence in October 2021. Drilling of the geophysical targets on lake Randall is scheduled for November 2021, initially at the Lovejoy site.

This announcement has been authorised for release by the Board

Wade Johnson.

Wade Johnson Managing Director

ASX Announcement 24 September 2021



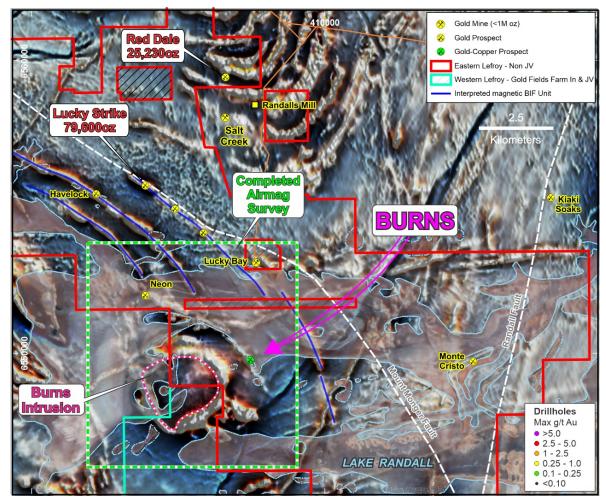


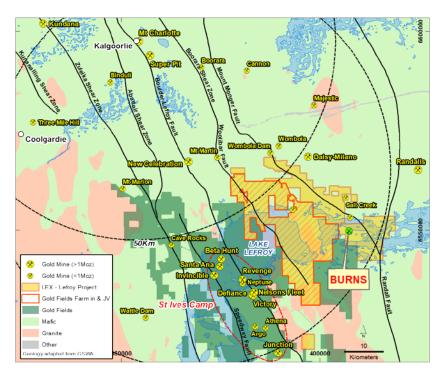
Figure 4 Regional Perspective--Grey scale aeromagnetic image showing the extent of the aeromagnetic survey relative to LEX tenement boundary and the nearby Lucky Strike and Red Dale gold resources. Refer Figure 1 for the new Burns aeromagnetic survey image



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 southeast of Kalgoorlie and the Lake Johnston Project 120km to the west of Norseman.

The 100% owned Lefroy Gold Project contains mainly granted tenure and covers 637.6km² in the heart of the world class gold production area between Kalgoorlie and Norseman. The Project is near 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. The Project is divided into the Western Lefroy package, subject to a Farm-In Agreement with Gold Fields and the Eastern Lefroy package (100% Lefroy owned). The Farm-In Agreement with Gold Fields over the Western Lefroy tenement package commenced on 7 June 2018. Gold Fields can earn up to a 70% interest in the package by spending up to a total of \$25million on exploration activities within 6 years of the commencement date.



Location of the Lefroy Gold Project relative to Kalgoorlie. The Western Lefroy tenement package subject to the Gold Fields Farm In and Joint Venture, and Gold Fields tenure are also highlighted

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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 by the Company of previous exploration at Burns at the Lefroy Gold Project. Exploration results by the previous explorer that refers to the Burns prospect are prepared and disclosed by the Company in accordance with the JORC 2004 code. The Company confirms that is it not aware of any new information or data that materially affects the information included in this market announcement.

- Lefroy Expands Tenement Holding & Secures Au-Cu Prospect: 10 December 2019
- Multiple Gold Trends Confirmed from Eastern Lefroy: 1 September 2020
- Tenement Granted over Burns Au-Cu Prospect: 16 September 2020
- September 2020 Quarterly Activities Report: 29 October 2020
- Drilling Underway at Burns Au-Cu Prospect: 12 January 2021
- Drilling Update-Native copper Intersected at Burns Prospect: 2 February 2021
- Outstanding High-Grade Gold and Copper Mineralisation Intersected at Burns: 23 February 2020
- New Basalt Hosted Gold-Copper Zone Supports Large Burns Mineral System: 9 March 2021
- Exploration Update-Drilling Extends Porphyry at Burns: 26 March 2021
- Diamond Drilling Underway at the Burns Cu-Au Prospect: 21 April 2021
- Resampling of RC holes at Burns confirms and better defines recent Copper Gold intersections: 27 April 2021
- Drill Results Extend Copper Gold Zones at Burns: 29 April 2021
- Multiple Intervals of Altered Porphyry Intersected at Burns: 3 May 2021
- Burns Success Continues-55m vertical depth extension and more strong mineralisation established: 13 May 2021
- Burns Continues to Grow-deeper-wider and a new zone: 25 May 2021
- Burns Drilling Update-first hole on 40N section confirms significant mineralisation extends to the north: 18 June 2021
- Exploration Update-RC drilling commences at the Burns Cu Au prospect: 20 July 2021
- Burns Update-Cu-Au mineralisation confirmed on 0N section, step out drilling extends system: 2 August 2021
- June 2021 Quarterly Activities Report: 28 July 2021
- Exploration Update-Advancing the Burns and Coogee South Prospects: 18 August 2021
- Results from 40N section Further Enhance Burns Cu-Au System: 21 September 2021

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 Report – Lefroy Project – Burns Aeromagnetic Survey SECTION 1: SAMPLING TECHNIQUES AND DATA

	: SAMPLING TECHNIQUES AND DATA	
Criteria	JORC Code Explanation	Commentary
Sampling techniques	• Nature and quality of sampling (eg cut channels, 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.	 No Drilling Undertaken
	• 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. 	
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).	 No Drilling Undertaken
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 	 No Drilling Undertaken
	• 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.	
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 intersections logged. 	• No Drilling Undertaken
Sub-sampling techniques and sample propagation	 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 	No Drilling Undertaken
preparation	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.	
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.	 No Drilling Undertaken.
	• For geophysical tools, spectrometers, handheld XRF 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. 	

Criteria	JORC Code Explanation		Commentary
Verification of sampling and	• The verification of significant intersections by either independent or alternative company personnel.		
assaying	• The use of twinned holes.		
	 Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. 		
	Discuss any adjustment to assay data.		
Location of data points	 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. 	•	Grid System – MGA94 Zone 51
	• Specification of the grid system used.		
	• Quality and adequacy of topographic control.		
Data spacing and	• Data spacing for reporting of Exploration Results.	•	No Drilling Undertaken
distribution	• 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.		
Data spacing and distribution			
Orientation of data in relation to geological structure	considering the deposit type.	•	No drilling undertaken
Structure	• 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.		
Sample security	• The measures taken to ensure sample security.	•	No Drilling Undertaken
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	•	No drilling Undertaken

Section 2: REPORTING OF EXPLORATION RESULTS – Lefroy Project – Burns Aeromagnetic Survey September 2021

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Criteria	JORC Code Explanation	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 50 km in south east from Kalgoorlie, Western Australia and consists of a contiguous package of wholly owned tenements held under title by LEX or its wholly owned subsidiary Monger Exploration Pty Ltd. The work described in this report was completed on Exploration lease E 15/1715. E 15/1715 is held 100% by Monger Exploration Pty Ltd a wholly owned subsidiary of Lefroy Exploration Limited The tenements are current and in good standing with the Department of Mines and Petroleum (DMP) of Western Australia. The aeromagnetic survey was undertaken over E15/1715 and adjacent tenements E26/182, E26/183, E26/524 and E15/1497 held by Monger Exploration Pty Ltd The survey also part covered E26/184 held by Hogans Resources Pty Ltd a wholly owned subsidiary of Lefroy. The tenement forms past of the Mestern Lefron is and Numith Cald Eight
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	 of the Western Lefroy Farm in and JV with Gold Fields 1968-1973 BHP: The earliest recognition of the magnetic anomaly was by BHP. The area fell within TR 3697, which had been taken up for nickel. The anomaly stood out on the BMR aeromagnetic contoured plans and BHP was testing aeromagnetic anomalies that could have an ultramafic source. The anomaly was confirmed by ground magnetics but an attempt to drill test with two percussion holes failed to identify any bedrock and no further work was attempted. 1984 Coopers Resources/Enterprise Gold Mines: The ground encompassing Burns was taken up as three Els, E15/19-21. 1985 BHP: BHP farmed into E15/21 having re-interpreted the magnetic feature as a potential carbonatite. BHP's E15/57 covered the western one third of the anomaly. Following ground magnetic traverses, BHP drilled two diamond core holes, LR 1 and 2. LR 1 falls within Goldfields E15/1638 and LR 2 falls within P15/6397. The results, which are covered in the next section, did not indicate a carbonatite and so BHP withdrew their interest in the area. 1985-1989 CRAE: Meanwhile CRAE was conducting exploration for gold on adjacent tenements and had engaged Jack Hallberg to carry out geological mapping. He mapped suites of intermediate dykes (plagioclase-quartz-hornblende porphyry) intruding basalt in outcrops to the north west of Burns. 1992: M. Della Costa took up E15/304 over aeromagnetic anomalies including Burns. The EL was vended into Kanowna Consolidated Gold Mines as part of the St Alvano project. 1996-2001 WMC: WMC joint-ventured into the St Alvano project, which comprised a total of 12 ELs. They flew 50m line-spaced aeromagnetics and engaged EHW to interpret. Burns was not highlighted as such but the magnetic anomalies forming portions of the annular ring were tested with air core, leading to the discovery of the Neon prospect. Subsequent to the EHW study a gravity survey was conducted which diil dentify the Burns

Criteria	JORC Code Explanation	Commentary
	JORC Code Explanation	 2008 Gold Attire: The ground surrendered by Sovereign over Burns was taken up as E15/1097. 2008-2010 Newmont: Newmont joint ventured into the Sovereign and Gold Attire ELs. It conducted an 800 X 400m gravity survey to trace a north-south "Salt Creek-Lucky Bay" corridor through the tenements. This was tested by four lines of aircore on 640 X 160m spacing. Two aircore traverses on a 1200 X 320m spacing were also and conducted across the interpreted intrusion and the surrounding magnetic halo. Infill drilling was conducted following up on the 2.0m @ 5.0 g/t Au intercept in a Goldfields hole, SAL 1089. The hole was re-entered and a diamond core tail drilled. This hole falls just inside E15/1638 close to the boundary with P15/6397. 2010-2019 Octagonal Resources: Three phases of AC to define a gold in regolith anomaly east of the main intrusive body. Two phases of RC identified Ag-Cu-Au mineralisation on four sections spaced approx. 40m apart. The drilling recognised Cu mineralisation which due to the host rock association, Octagonal believed there was potential for a much larger intrusion related hosted mineralisation. In 2013 surface geophysical techniques were applied looking for conductors that might represent massive sulphides. Ground EM failed to identify any bedrock conductors, but the magnetic surveys did identify anomalies. In 2014, a diamond core hole, OBUDD01, was drilled at -60 degrees to 900 east to 401.5m in order to test the source of the magnetic anomalism, which occurred within the area tested by the RC drilling. It intersected a 3.6m wide zone of mafic-dominant breccia including 0.9m of massive magnetite-chalcopyrite which returned 4.5 g/t Au, 2.6% Cu from 256.4m, within a low-grade zone of 55.95m @ 0.5 g/t Au and 0.2% Cu was intersected from 184.5m. An EIS grant in 2015 and a loan from a third-party loan company and subsequently delisted from the ASX.
Geology	• Deposit type, geological setting and style of mineralisation.	The Lefroy Project is located in the southern part of the Norseman Wiluna Greenstone Belt and straddles the triple junction of three crustal units, the Parker, Boorara and Bulong Domain. The Lefroy project tenements are mostly covered by alluvial, colluvial and lacustrine material with very little outcrop. Burns is proximal to the Lake margin and is subsequently under >20-25m of lake sediment and surface sand dune cover. A stripped profile below this cover means that there is no significant dispersion or oxide component to the Burns prospect. Mineralisation is hosted with a High Mg Basalt and in an intermediate composition porphyry which intrudes the basalt. Mineralisation is primarily gold associated with magnetite alteration and copper occurring as native copper and chalcopyrite in veins and veinlets throughout the basalt and porphyry.
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 	• No drilling Undertaken

Criteria	JORC Code Explanation	Commentary
	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.	
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 	• No Drilling Undertaken
Relationship between mineralisation widths and intercept lengths	 clearly stated. 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 reported. 	No Drilling Undertaken
	 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'). 	
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 (plan) are included in the accompanying 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. 	 Reference to significant assay results from historical or previous drilling are noted in the body of the report.
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 relevant data has been included within this report. Aeromagnetic Survey specifications Undertaken by Magspec Airborne Surveys 25m traverse line spacing Traverse line direction 090-270 Sensor height 25m Total line Kilometres-1855 Magnetometer-Caesium vapour
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. 	 The appropriate next stage of exploration planning is currently underway and noted in the body of the report.