

ASX Release: 18 April 2017

Significant Intersections at Lucky Strike Define New Mineralised Trend

Key Points:

- Results from early stage aircore drilling at the Lucky Strike Prospect demonstrate the emergence of a new gold trend with a 3000m strike length
- Significant intersections include 10m at 4.60g/t Au from 24m in LEFA 171 and 11m at 3.53g/t from 60m in LEFA 136, both holes ending in mineralisation
- The new intersections compliment an historical intersection of 22m at 2.97g/t from 112m in SCA794
- Mineralised trend is located within an altered package of sedimentary rocks proximal to the regional Mt Monger Fault, to the north west of the Lucky Bay open pit
- Interpretation of detailed ground gravity data supports the extension of the trend a further 10km to the north west, all in tenure secured by the Company and with little effective previous exploration
- Initial results from the drilling support the Company's view that the Mt Monger Fault could be an emerging gold bearing regional structure
- Follow up infill air core drilling to commence in early May

The Board of Lefroy Exploration Limited (ASX: LEX) ("Lefroy" or "the Company") is pleased to announce the results from an early stage aircore drilling program at the Lucky Strike Prospect at its flagship Lefroy Gold Project ("LGP" or "Project"), located approximately 50km to the south east of Kalgoorlie. 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 (Figure 1).

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.

Lefroy Exploration

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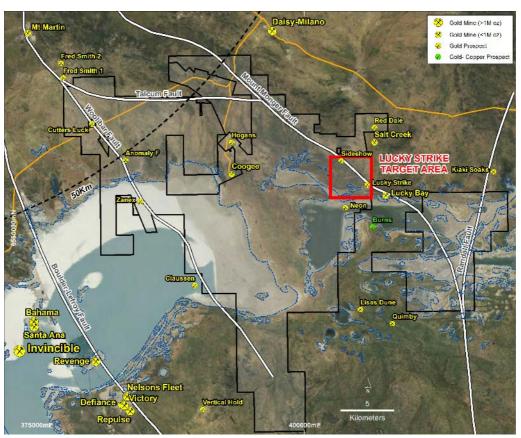


Figure 1- Location of the Lucky Strike area at the Lefroy Gold Project

The Company completed an initial air core drilling program at Lucky Strike in November 2016 which focused on evaluating 1100m 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).

The recently completed aircore drill program of 48 holes totaling 2593m evaluated a 1500m 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 2). 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.

Assay results from composite samples (4m) have been received for the 48 holes, with key intercepts highlighted on Table 1. 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 2), and 10m at 4.60g/t from 24m to EoH in LEFA171 (Figure 2&3).



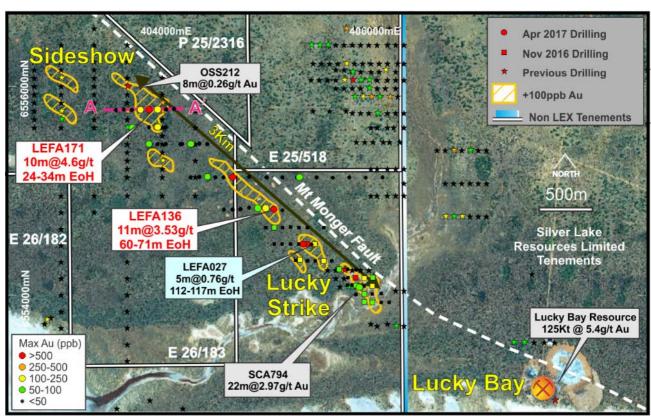


Figure 2 Location of LEX tenements, Lucky Strike Prospect, recent drilling and proximity to the Lucky Bay Open pit. Refer to drill section A-A' in Figure 3.

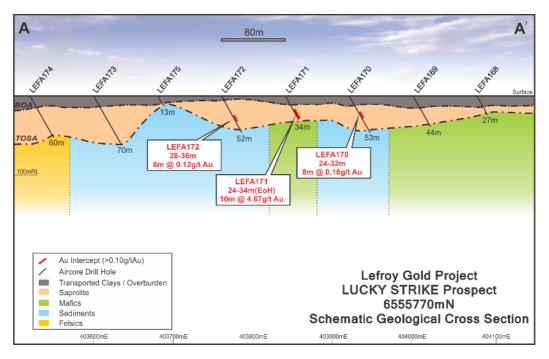


Figure 3 Lucky Strike Drill Section 6555770mN (A-A') highlighting the significant intersection in LEFA171.



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 strong 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 1). The position of the fault can be interpreted and accurately determined using the Company's compilation of detailed ground gravity datasets over the entire Lefroy Gold Project, which is being used as a key targeting tool.

The Company recognised the importance and significance of the Mt Monger Fault in its early ground selection process that has resulted in it now controlling in excess of what could be a 15km of strike length, in which it has now demonstrated gold mineralisation over 3km.

ONGOING WORK PROGRAM

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The Company is 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.

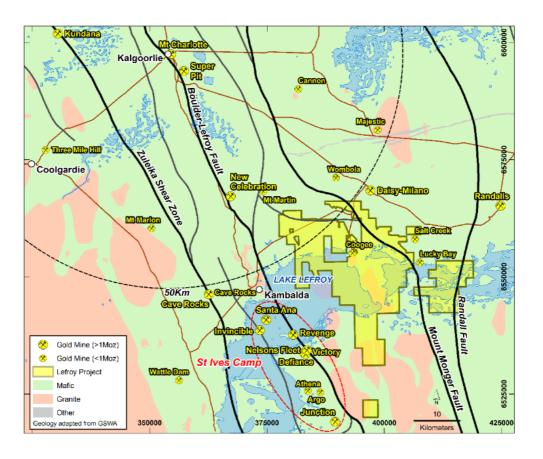
Additional air core drilling is scheduled to commence in early May to infill around the key gold intersections and to reduce the line spacing to a regular 160m spacing within the 3000m trend identified. Planning for exploration along strike to the north west is underway and is likely to involve infill ground gravity, and then wide spaced reconnaissance drilling.



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 (LGP) 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.



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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Table 1 2017 AirCore Drilling-Lefroy Gold Project-Lucky Strike Prospect

Drill hole intersections tabulated below are calculated with a 0.10g/t Au lower cut for the entire drill program. These represent the individual composite sample results. Samples are routinely collected as 4m composite intervals. The last sample of each hole is dedicated 1m interval, and the prior sample can vary from 1-4m depending on final depth. Only significant (>0.10ppm Au) intersections from the program are shown below.

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) (m)	Au Value (g/t)
LEFA133	6554490	405323	285	-60	90	140	139	140	1	1.52
LEFA136	6554824	405040	285	-60	90	71	60	64	4	0.92
LEFA136	6554824	405040	285	-60	90	71	64	68	4	6.35
LEFA136	6554824	405040	285	-60	90	71	68	70	2	3.91
LEFA136	6554824	405040	285	-60	90	71	70	71	1	1.98
LEFA137	6554838	404960	285	-60	90	61	16	20	4	0.12
LEFA153	6555132	404640	285	-60	90	79	44	48	4	0.7
LEFA153	6555132	404640	285	-60	90	79	48	52	4	0.25
LEFA170	6555785	403921	285	-60	90	53	24	28	4	0.21
LEFA170	6555785	403921	285	-60	90	53	28	32	4	0.12
LEFA171	6555785	403841	285	-60	90	34	20	24	4	0.14
LEFA171	6555785	403841	285	-60	90	34	24	28	4	9.09
LEFA171	6555785	403841	285	-60	90	34	28	32	4	2.07
LEFA171	6555785	403841	285	-60	90	34	32	33	1	1.14
LEFA171	6555785	403841	285	-60	90	34	33	34	1	0.93
LEFA172	6555780	403761	285	-60	90	52	4	8	4	0.11
LEFA172	6555780	403761	285	-60	90	52	28	32	4	0.13
LEFA172	6555780	403761	285	-60	90	52	32	36	4	0.12
LEFA177	6555613	403924	285	-60	90	45	24	28	4	0.15



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 Lucky Strike Prospect at the Lefroy Gold Project.

- Lefroy Exploration Limited-Prospectus: 8 September 2016
- Lefroy Commences Exploration: 24 October 2016
- Lefroy Commences Drilling at Lucky Strike: 17 November 2016
- Managing Directors AGM Presentation: 5 December 2016
- Drilling at Lucky Strike Supports and Extends Gold Trend: 23 December 2016
- Exploration Update: Aircore Drilling to Recommence at Lucky Strike:29 March 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 Report –Lefroy Project –Lucky Strike Prospect-as at 18 April 2017 SECTION 1: 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. 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. 	 The sampling noted in this release has been carried out using AirCore (AC) drilling at the Lucky Strike Prospect. The AC program comprised 48 angled holes for 2593m, holes varying in depth from 15-140m with and average depth of 53m. All holes were drilled -60° to 090° at 80m centres on four 320m spaced lines, and four infill 40m spacing on existing drill lines. Sampling and QAQC protocols as per industry best practice with further details below. AC samples were collected from the cyclone at 1m intervals and laid out in rows of 10 or 20m (10-20 samples) on the ground. Composite 4m samples were then collected by scoop sampling the 1m piles with a flour scoop to produce a bulk 2-3kg sample which was sent to the Laboratory in Kalgoorlie for analysis. Samples were dried, pulverised, split to produce a 40g sample for analysis by fire assay with Au determination by Atomic Absorption Spectrometry.
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).	The AirCore (AC) drilling was completed by Raglan Drilling (Kalgoorlie). The AC drill bit has a diameter of 78mm and collects samples through an inner tube to reduce contamination, but also allows better penetration through any palaeochannel puggy clays and fine sands. Aircore drilling is blade refusal and hence terminates in fresh or hard material such as quartz
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. 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. 	 The majority of the samples collected from the AC drill program were dry. Minor AC samples were wet at the base of the holes. Sample recovery size and sample condition (dry, wet, moist) recorded. Recovery of samples estimated to be 80-100%, with some variability to 10% recovery particularly drilling through moist transported clays-gravels and in the deeper (+100m) holes. Drilling with care (eg. clearing hole at start of rod, regular cyclone cleaning) if water encountered to reduce incidence of wet – sticky sample and cross contamination. Insufficient sample population to determine whether relationship exists between sample recovery and grade. The quality of the sample (wet, dry, low recovery) was recorded during logging.
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. 	 Detailed logging of, regolith, lithology, structure, mineralisation and recoveries recorded in each hole by qualified geologist. Logging carried out by sieving 2m composite sample cuttings, washing in water and the entire hole collected in plastic chip trays for future reference. Every hole was logged for the entire

Criteria	JORC Code Explanation	Commentary
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. 	 No core drilling completed Composite samples of 4m were collected by scoop sampling 1m intervals into prenumbered calico bags. Sample weight 1.5 - 2 kg. The last interval of each hole is a 1m sample and the second last composite can vary between 1-4m. Collected composite samples placed in plastic and/or polyweave bags for despatch to assay laboratory. The sample preparation of the AC follows industry best practice, involving oven drying, pulverising, to produce a homogenous sub sample for analysis. Along with composite samples, standards and blanks were randomly inserted (approximately every 60 samples) and were included in the laboratory analysis. Standards were certified reference material prepared by Geostats Pty Ltd. Duplicate samples were collected at zones of interest and at irregular intervals of about 1 in every three holes.
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 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. 	Samples routinely analysed for gold using the 40gram Fire Assay digest method with an AAS finish at Bureau Veritas's Perth Laboratory. A separate Bottom of Hole
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. 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. 	 The results have been reviewed by alternative company personnel and minor sampling errors identified were field checked and corrected. No holes were twinned. Capture of field logging is electronic using Toughbook hardware and Logchief software. Logged data is then exported as an excel spreadsheet to the Companys external database managers which will be loaded to the Company's DATASHED database and validation checks completed to ensure data accuracy. Assay files are received electronically from the laboratory by the Managing Director and filed to the companys server. There has been no adjustment to the assay data. The primary Au field reported by the laboratory is the value used for plotting, interrogating and reporting.
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. Specification of the grid system used. Quality and adequacy of topographic control. 	Drill hole positions were surveyed using a hand held Garmin GPS with a horizontal

Criteria	JORC Code Explanation	Commentary
		 completed. Grid System – MGA94 Zone 51. Topographic elevation captured by using reading from Garmin hand held GPS with an accuracy of+-10m and considered suitable for the flat terrain.
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. 	 Hole spacing at nominal 80m centres on new in fill east west orientated drill lines with line spacing's varying from 160m to 320m. Infill drilling to 40m centres on selected locations on existing sections. AC samples composite range 1-4m but generally 4m. No assay compositing has been applied.
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 East West orientated drill traverse considered effective to evaluate the north westerly trending geology and regional M Monger Fault which has been interpreted from aeromagnetic and gravity data. Dril holes are reconnaissance and are orientated appropriately to ensure unbiased sampling of the geological trends 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.
Sample security	The measures taken to ensure sample security.	 Individual composite samples wer bagged in plastic bags, collected an personally delivered to the Bureau Verita Laboratory in Kalgoorlie by the LEX Fiel Supervisor. Bureau Veritas check the samples receive against the LEX submission form to notif of any missing or extra samples. Followin analysis the sample pulps and residues ar retained by the laboratory in a secur storage yard.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	 All results of this drill program were reviewed by the Senior Exploration Geologist and Managing Director, and anomalous gold intersections inspected in the field to correlate with geology. No specific site audits or reviews have been conducted.

Section 2: REPORTING OF EXPLORATION RESULTS – LEFROY PROJECT-Lucky Strike Prospect As at April 18 2017

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's Hogans Resources Pty Ltd. The work described in this report was undertaken on Exploration Licence E26/182 and E26/183 held 100% by Lefroy Exploration Limited.

Criteria	JORC Code Explanation	Commentary
		 The tenements are current and in good standing with the Department of Mines and Petroleum (DMP) of Western Australia.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	 At the Lucky Strike Prospect the key exploration in the area was by Integra Mines limited in 2010 and this drill program is well reported in a report to the Department of Mines and Petroleum WAMEX report A104013. This report clearly documents the air core drill program that resulted in the intersection in hole SCA794.
)	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. The project is underlain by a folded and fault bounded sequence of Archaean rocks, and in the Lucky Strike area being predominantly metasediments, and basalt. The key structural element at Lucky Strike is the north west trending Mt Monger Fault separating the mafic lithologies to the north in the Bulong domain to the metasediments to the south.
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 	 Table containing drill hole collar, survey, and intersection data for material (gold intersections >0.10gpt Au) drill holes are included in the Table in the body of the announcement. No Information has been excluded. There are historical drill holes within the Lucky Strike Prospect and these are depicted on the drill hole plan in the announcement.
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. 	 All report grades have been length weighted. High grades have not been cut. A lower cut off of 0.5gpt Au has been used to identify significant results. These are considered significant given the first pass reconnaissance nature of the drilling. Table 1 in the body of the report presents all individual composite results greater than 0.10g/t Au Reported AC results have been calculated using a minimum intercept width of 4m. Anomalous composite samples have been resampled No metal equivalent values or formulas used.
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 reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this 	 All results are based on down-hole metres. Given the wide spaced reconnaissance nature of the drilling the geometry of the mineralisation reported is not sufficiently known and the true width is not known

	Criteria	JORC Code Explanation	Commentary
		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 (section & 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.	 Significant individual assay results are provided in Table 1 for the recent LEX drill program. Drill holes with no significant results are not reported. Significant assay results from historical 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.
	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. 	 Follow up infill air core drilling is being considered for the Lucky Strike Prospect Additional air core drilling is also considered to further evaluate the new anomaly along strike to the north west.
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