ASX Announcement/Press Release
Zenith Minerals Limited (ASX:ZNC)
5th April 2023

DULCIE GOLD DRILLING UPDATE

High-Grade Gold Mineralisation

Investment Highlights

- Dulcie Far North prospect now drilled on 40m centres over 400m strike length with four Reverse Circulation (RC) holes and fifteen diamond (DDH) holes completed in March for an aggregate 2,514m.
- New drilling is encouraging, with significant widths of alteration* (silica-biotite-pyrrhotite) observed in the new drill holes, consistent with high-grade gold mineralised intervals from Zenith's previous drill program that returned: **12m at 6.1 g/t Au, 5m at 7.4 g/t Au, 3m at 10.7 g/t Au** and **5m at 10.6 g/t Au ****
- First assay results anticipated from the laboratory in early May 2023.

Zenith Minerals (ASX:ZNC) ("**Zenith", or the "Company**") is pleased to advise that an infill drill programme of 15 diamond holes and 4 RC holes for an aggregate 2,514m has now been completed at the Dulcie Far North Prospect, within the Company's 100% owned Split Rocks Gold Project, located in the Southern Cross-Forrestania Greenstone Belt of Western Australia.

Drilling is following up previous high-grade gold intersections at Dulcie Far North including:

- **12m @ 6.1 g/t Au from 108m in SRRC018, incl 5m @ 10.5 g/t Au from 113m,**
- **7m @ 7.8 g/t Au from 90m in ZDRC090, incl 5m @ 10.6 g/t Au from 91m,**
- **8m @ 4.2 g/t Au from 99m in ZDRC098, incl 3m @ 10.7 g/t Au from 103m,**
- **5m @ 7.4 g/t Au from 47m in ZDRC095, and**
- **9m @ 2.0 g/t Au from 57m in ZDRC095**

Assay results are anticipated in May ahead of resource estimation work to be completed in June 2023.

Executive Chair David Ledger said: *"We are excited by the visual continuity of the mineralisation observed in our recent drilling at Dulcie Far North, the alteration and observed thicknesses are consistent with our earlier high-grade gold intersections so we look forward to receiving the assay results in May."*

*Note that the observations of alteration are based solely on visual inspection of drill core and drill chips, which are yet to be analysed. The presence of alteration within the host rocks does not equate to gold mineralisation until confirmed by chemical assay. Visual observations are no substitute for chemical assays.

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About Zenith Minerals
Zenith Minerals Limited (ASX:ZNC) is an Australian-based minerals exploration company leveraged to the increasing global demand for metals critical to the production processes of new energy industrial sectors.

The Company currently has three lithium projects all located in Western Australia. Two projects, Split Rocks and Waratah Well, are being explored under the terms of a joint venture between Zenith and EV Metals Group (EVM). Split Rocks covers landholdings of approximately 660km^2 in the Forrestania greenstone belt immediately north of the established Mt Holland lithium deposit. Waratah Well, located approximately 20km northwest of the regional town of Yalgoo in the Murchison Region holds a lithium pegmatite with ongoing exploration required.

More recently, Zenith secured an option to acquire 100% of the Hayes Hill lithium – nickel project, located in the Norseman – Widgiemooltha area of Western Australia.

In January 2022, Zenith entered into a joint venture with EV Metals Group (EVM), a global battery material and technology company with plans to develop an integrated Battery Chemicals Complex at Yanbu Industrial City on the western coast of Saudi Arabia. EVM can earn a 60% interest in the lithium rights on two lithium projects, Split Rocks and Waratah Well, with Zenith retaining a 40% project share, under terms that see Zenith funded through to bankable feasibility on any project development. Should EVM not meet the requirement to complete a bankable feasibility on the Split Rocks or Waratah Well lithium projects, before January 2024, then EVM will have earned no interest in the joint venture.

In addition to its battery metal assets Zenith owns a portfolio of gold and base metal projects that was intended for a demerger into a separate company, Mackerel Metals Limited, to be listed on ASX. Following a review of market conditions, the Company decided to defer the strategy of a spin-out and instead advance these projects under Zenith's stewardship (ASX release 2-Dec-22).

To learn more, please visit www.zenithminerals.com.au

This ASX announcement has been authorised by the Board of Zenith Minerals Limited

Competent Persons Statement
The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Mr Kevin Seymour, who is a Member of the Australian Institute of Geoscientists and an employee of Zenith Minerals Limited. Mr Seymour has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Seymour consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Material ASX Releases Previously Released

The Company has released all material information that relates to Exploration Results, Mineral Resources and Reserves, Economic Studies and Production for the Company's Projects on a continuous basis to the ASX and in compliance with JORC 2012. The Company confirms that it is not aware of any new information that materially affects the content of this ASX release and that the material assumptions and technical parameters remain unchanged.

Table 1: RC and DDH drill hole collar locations

Hole ID	Drill Type	GDA Easting	GDA Northing	RL	RC Precollar (m)	DDH Tail (m)	F/Depth (m)
SRDD001	RCD	744982	6484800	386	58.40	68.30	126.70
SRDD002	RCD	744977	6484801	386	100.20	38.40	138.60
SRDD003	RCD	744963	6484840	385	59.00	49.53	108.53
SRDD004	RCD	744959	6484838	385	69.40	70.60	140.00
SRDD005	RCD	744912	6484878	384	100.40	50.24	150.64
SRDD006	RCD	744918	6484885	384	118.40	51.70	170.10
SRDD007	RCD	744922	6484886	384	90.20	79.58	169.78
SRDD008	RCD	744854	6484954	382	81.90	88.30	170.20
SRDD009	RCD	744861	6484955	382	112.40	32.30	144.70
SRDD010	RCD	744728	6485198	380	130.50	50.20	180.70
SRDD011	RCD	744717	6485197	380	130.20	50.05	180.25
SRDD012	RCD	744715	6485197	380	142.20	50.30	192.50
SRDD013	RCD	744879	6485133	380	100.30	50.50	150.80
SRRC017D	RCD	744848	6484961	382	106.40	59.38	165.78
SRRC023	RC	744891	6484968	380	112.00	0.00	112.00
SRRC022	RC	745007	6485168	380	76.00	0.00	76.00
SRRC021	RC	744947	6485150	380	118.00	0.00	118.00
SRRC020	RC	744885	6485130	379	125.00	0.00	125.00

RCD – Reverse Circulation Precollar and Diamond Tail
RC - Reverse Circulation Drill Hole

** Refer Zenith's ASX Release dated 25 January 2023

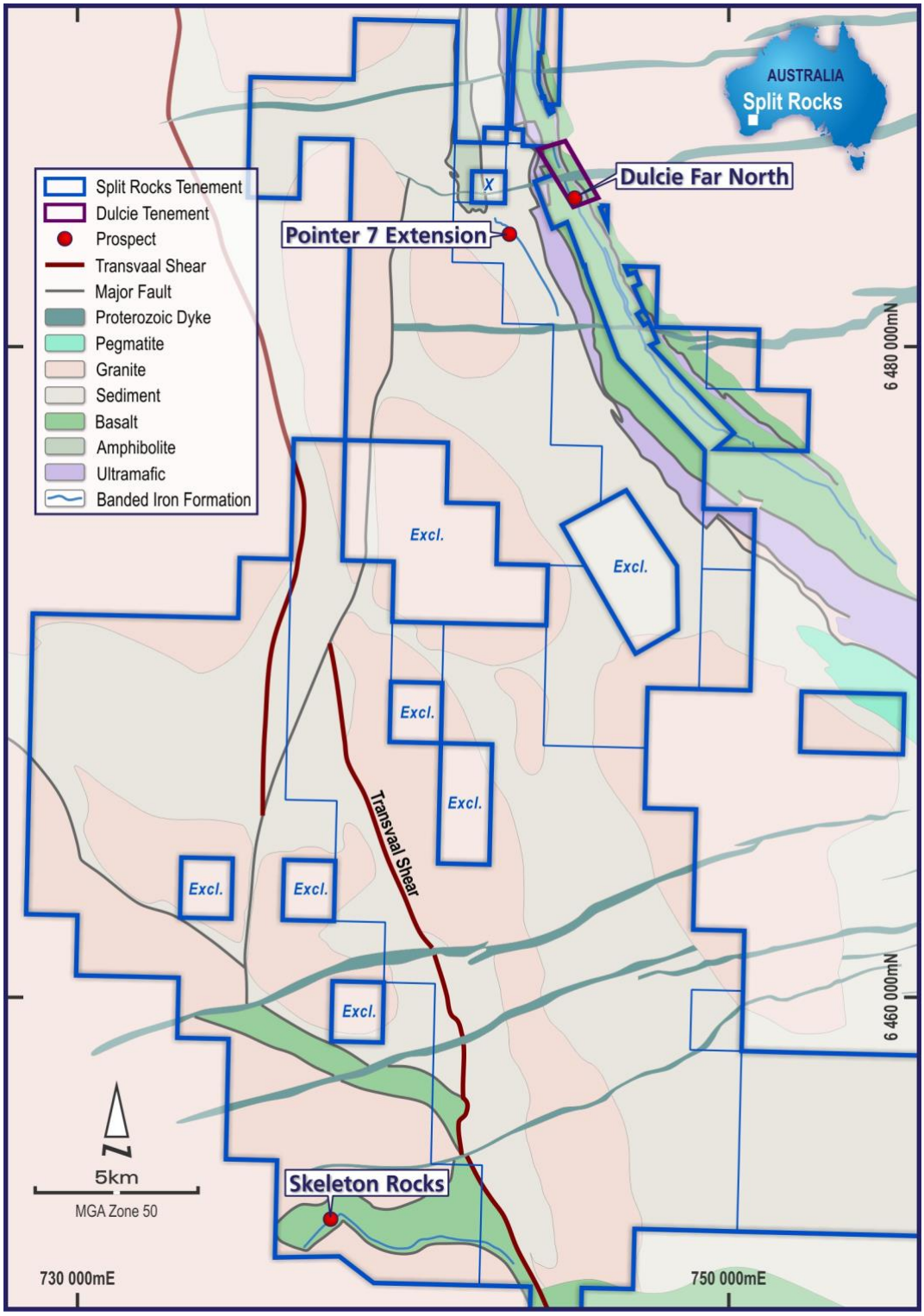

Figure 1: Dulcie Far North location diagram

Figure 2: Wispy to semi-massive plus banded pyrrhotite (brassy sulphide) replacing magnetite within the silica flooded, biotite and calc-silicate (garnet-magnetite-hornblende) altered amphibolites + banded iron formation rocks, in SRDD006 134.78m to 136.45m

Appendix 1: Split Rocks Gold Project - JORC Table 1

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.*	• At Split Rocks gold mineralised RC intervals are systematically sampled using industry standard 1m intervals collected from reverse circulation (RC) drill holes and/or 4m composites from reconnaissance Aircore traverses. Surface Diamond holes were preferentially sampled along sub 1m geological contacts, otherwise 1m intervals are the default. • Drill hole locations were designed to allow for spatial spread across the interpreted mineralised zone. All RC precollar samples are collected, and cone split to 3-4kg samples on 1m metre intervals. Four metre composites were collected by spearing the bulk residue and were despatched to the laboratory. Aircore samples are speared from piles on the ground and are composited into 4m intervals before despatching to the laboratory. Single metre bottom of hole Aircore samples are also collected for trace element determinations. Diamond core is half cut along downhole orientation lines. Half core is sent to the laboratory for analysis and the other half is retained for future reference. • Standard fire assaying was employed using a 50gm charge with an AAS finish for all diamond, RC and Aircore chip samples. Trace element determination when undertaken uses a multi (4) acid digest and ICP-AES or MS finish.
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,*	• Drilling is completed using best practice NQ diamond core, 5 ¾" face sampling RC drilling hammers for all RC drill holes at Split Rocks and 3" Aircore bits/RC hammers.

Criteria	JORC Code explanation	Commentary
	face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	
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.*	• All diamond core is jigsawed to ensure any core loss, if present is fully accounted for. Bulk RC and Aircore drill holes samples are visually inspected by the supervising geologist to ensure adequate clean sample recoveries are achieved. Note Aircore drilling while clean is not used in any resource estimation work. Any wet, contaminated or poor sample returns are flagged and recorded in the database to ensure no sampling bias is introduced. • Zones of poor sample return both in RC and Aircore are recorded in the database and cross checked once assay results are received from the laboratory to ensure no misrepresentation of sampling intervals has occurred. Zero sample recovery is achieved while navi drilling. The navi lengths are kept to a minimum and avoided when close to potentially mineralised units.
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.*	• All drill samples are geologically logged on site by professional geologists. Details on the host lithologies, deformation, dominant minerals including sulphide species and alteration minerals plus veining are recorded relationally (separately) so the logging is interactive and not biased to lithology. • Drill hole logging is qualitative on visual recordings of rock forming minerals and quantitative on estimates of mineral abundance. • The entire length of each drill hole is geologically logged.
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,*	• Duplicate samples are collected every 25th sample from the RC and Aircore chips as well as quarter core from the diamond holes. Further, with selected drill-outs additional duplicates will be planned by ensuring there is an adequate

Criteria	JORC Code explanation	Commentary
	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.*	spread of duplicate samples (25%) taken from predicted ore positions when ore zones are projected from adjacent drill holes • Dry RC 1m samples are riffle split to 3-4kg as drilled and dispatched to the laboratory. Any wet samples are recorded in the database as such and allowed to dry before splitting and dispatching to the laboratory. • All core, RC and Aircore chips are pulverized prior to splitting in the laboratory to ensure homogenous samples with >85% passing 75um. 200gm is extracted by spatula that is used for the 50gm charge on standard fire assays. • All samples submitted to the laboratory are sorted and reconciled against the submission documents. In addition to duplicates every 25th sample, a high grade or low grade standard is included every 50th sample, and a controlled blank is inserted every 100th sample. The laboratory uses barren flushes to clean their pulveriser and their own internal standards and duplicates to ensure industry best practice quality control is maintained. • The sample size is considered appropriate for the type, style, thickness and consistency of mineralization.
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,*	• The fire assay method is designed to measure the total gold in the core, RC and Aircore samples. The technique involves standard fire assays using a 50gm sample charge with a lead flux (decomposed in the furnace). The prill is totally digested by HCl and HNO_3 acids before measurement of the gold determination with ICP-OES finishes to give a lower limit of detection of 0.001 g/t Au. Aqua regia digest is considered adequate for surface soil sampling. • No field analyses of gold grades are completed. Quantitative analysis of

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	external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	the gold content and trace elements is undertaken in a controlled laboratory environment. • Industry best practice is employed with the inclusion of duplicates and standards as discussed above and used by Zenith as well as the laboratory. All Zenith standards and blanks are interrogated to ensure they lie within acceptable tolerances. Additionally, sample size, grind size and field duplicates are examined to ensure no bias to gold grades exists.
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.*	• Alternative Zenith personnel must inspect the diamond core, RC and Aircore chips in the field to verify the correlation of mineralised zones between assay results and lithology, alteration and mineralization. • All holes are digitally logged in the field and all primary data is forwarded to Zenith's Database Administrator (DBA) where it is imported into Expedio, a commercially available and industry accepted database software package. Assay data is electronically merged when received from the laboratory. The responsible project geologist reviews the data in the database to ensure that it is correct and has merged properly and that all the drill data collected in the field has been captured and entered into the database correctly. • The responsible geologist makes the DBA aware of any errors and/or omissions to the database and the corrections (if required) are corrected in the database immediately. • No adjustments or calibrations are made to any of the assay data recorded in the database.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and*	• All drill hole collars are picked up using accurate DGPS survey control. All down hole surveys are collected using north seeking gyros survey

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	other locations used in Mineral Resource estimation. • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	tools. • All Split Rocks holes are picked up in MGA94 – Zone 50 grid coordinates. • DGPS RL measurements captured the collar surveys of the drill holes prior to the resource estimation work.
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 core drilling and RC drilling is generally completed orthogonal to the interpreted strike of the target horizon(s). Aircore drilling is completed on systematic MGA E-W or N-S traverses with holes nominally 50m apart.
Sample security	• *The measures taken to ensure sample security.*	• Sample security is integral to Zenith's sampling procedures. All bagged samples are delivered directly from the field to the assay laboratory in Perth whereupon the laboratory checks the physically received samples against Zenith's sample submission/dispatch notes.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Sampling techniques and procedures are reviewed prior to the commencement of new work programmes to ensure adequate procedures are in place to maximize the sample collection and sample quality on new projects. No external audits have been completed to date.

Part 2: Reporting of Exploration Results

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*	• The Dulcie Far North tenement (ML77/1292) is located on Crown Land and is held 100% by Zenith. A 2% Net Smelter Return Royalty is payable on any gold or lithium minerals mined below 6m from surface and a 0.125% Net Profits Royalty is payable on any gold

Criteria	JORC Code explanation	Commentary
	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.*	mined below 6m. A private syndicate has the right to acquire any gold mineralisation within the top 6m below the natural surface as part of a small scale gold heap leach operation being undertaken by the syndicate. Heritage surveys are completed as required prior to any ground disturbing activities in accordance with Zenith's responsibilities under the Aboriginal Heritage Act in Australia. • Currently all the tenements are in good standing. There are no known impediments to obtaining a licences to operate in the area.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Exploration and mining by other parties has been reviewed and is used as a guide to Zenith's exploration activities. Previous parties may have completed shallow RAB, Aircore drilling and RC drilling over parts of the project.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The targeted mineralisation is typical of orogenic structurally controlled Archaean gold lode systems. In all instances the mineralisation is controlled by anastomosing shear zones/fault zones passing through competent banded iron formation (BIF) rock units. Ductile shearing is common within the amphibolite/basaltic host rock.
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*	• All drill holes reported by Zenith must have the following parameters applied. All drill holes completed, including holes with no significant results (as defined in the Attachments) are reported in this announcement. • Easting and northing are given in MGA94 coordinates as defined in the Attachments for Mount Venn. • RL is AHD • Dip is the inclination of the hole from the horizontal. Azimuth is reported in magnetic degrees as the direction the hole is drilled. MGA94 and magnetic degrees vary

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	○ *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.*	by <1^0 in the project area. All reported azimuths are corrected for magnetic declinations. • Down hole length is the distance measured along the drill hole trace. Intersection length is the thickness of an anomalous gold intersection measured along the drill hole trace. • Hole length is the distance from the surface to the end of the hole measured along the drill hole trace. • No results currently available from the exploration drilling are excluded from this report. Gold grade intersections >0.25 g/t Au within 4m Aircore composites or >0.5 g/t Au within single metre RC samples (with up to 4m of internal dilution) are considered significant in the broader mineralised host rocks. Diamond core samples are generally cut along geological contacts or up to 1m maximum. • Gold grades greater than 0.5 g/t Au are highlighted where good continuity of higher-grade mineralization is observed. 0.1 g/t Au cut-offs are used for reconnaissance exploration programs.
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.*	• The first gold assay result received from each sample reported by the laboratory is tabled in the list of significant assays. Subsequent repeat analyses when performed by the laboratory are checked against the original to ensure repeatability of the assay results. • Weighted average techniques are applied to determine the grade of the anomalous interval when geological intervals less than 1m have been sampled. • Exploration drilling results are generally reported using a 0.5 g/t Au lower cut-off for RC and diamond or 0.1 g/t Au for Aircore drilling (as described above and reported in the Attachments) and may include up to 4m of internal

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		dilution. • All assay results are reported to 3 significant figures in line with the analytical precision of the laboratory techniques employed. • No metal equivalent reporting is used or applied.
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 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').*	• The intersection length is measured down the length of the hole and is not usually the true width. When sufficient knowledge on the thickness of the intersection is known an estimate of the true thickness is provided
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.*	• Detailed drill hole sections and plans for each prospect must be plotted and interpreted as part of the internal QAQC process. Field sections must be compared with Micromine plots to ensure no errors or omissions creep into the database. • The field geologist will interpret/plot his/her geology observations onto cross sections while logging the hole in the field before validating and transferring the digital data to the DBA. • Errors and/or discrepancies with lithological logs must be rectified and forwarded to Perth before the assay results are received. • Final cross sections displaying corrected geology and assays are to be plotted and interpreted. Depending on the target 3-D wireframes may require construction too. At the very least cross- sectional data must be translated into plan view and the relevant scaled (1:2,500 or 1:25,000) geological interpretation be updated and integrated in MapInfo. The project geologist will

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		draft any changes/modifications required as directed by the relevant project geologist / EM.
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 widths are defined in the body of the report, detailing cut-off values employed, any internal dilution and from to intervals • NSR refer to all other intersections that don't meet the criteria described.
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 known exploration data has been reported in this release and/or referenced from previous announcements and/or historical exploration company reports where appropriate
Further work	• *The nature and scale of planned further work (e.g. 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.*	• Details of proposed future work programmes with appropriate plans and cross sections will be released separately