Further metallurgical testing of gold at Edleston Main Zone achieves up to 93.3% recovery

Key Highlights

- **SGS Lakefield performed 9 individual gravity and cyanide leachability tests on 4 composite core samples from the Edleston Main Zone Gold Resource[1]**
- **Testing represents first material from Edleston Main Zone to undergo leaching analysis and further optimisation potential identified**
- **Recoveries for gravity and leach processing ranged between 89.1% and 93.3%**
- **Head grades ranged between 0.92g/t and 1.21g/t Au**

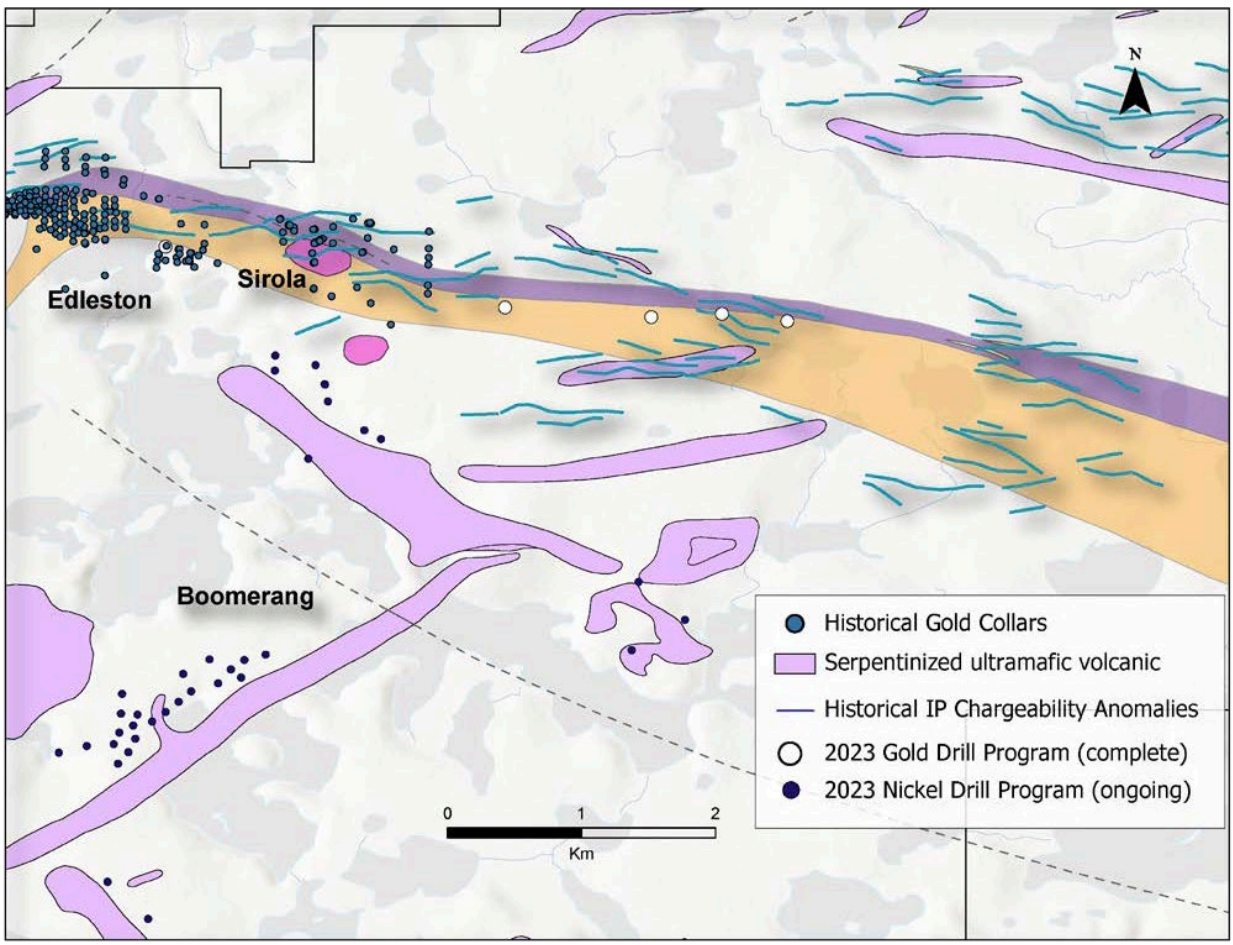

Figure 1: Historical and recent drill hole locations around Edleston and Sirola

[1] ASX Announcement 19 January 2023: Indicated 14.0Mt at 0.90 g/t Au for 400,200oz; Inferred 34.1Mt at 1.00 g/t Au for 1,099,800oz; Global 48.1Mt at 1.00 g/t Au for 1,500,100oz

Aston Minerals Limited (**ASX: ASO**, '**Aston Minerals**' or 'the **Company'**) is pleased to provide an update on the results received from SGS Lakefield on four individual composites from its Edleston Main Resource at the Edleston Gold Project, Canada.

A total of 11 gold bearing cores taken from previous drilling at Edleston Main and included in the current 1.5Moz gold Resource were selected to be used in a metallurgical test program to be conducted at SGS Lakefield, an industry leader in metallurgical and mineralogical testing based in Ontario. Composites were put together based on depth in increments of 50 metres. SGS created four composites which were then used for the metallurgical head assays, gravity work and cyanide leach. These four samples were split for duplicate testing which allowed eight tests to be performed. See Appendix 1 for sample weights.

Mill grind for the tests was P_{80} 75_{um} and leach time 48 hours. Air sparging was used on three composites and oxygen addition on one composite. Oxygen addition improved the leach time as well as the recovery by 4%. From the results, leaching was completed after 24 hours.

Managing Director, Russell Bradford, commented: "*This standard gold metallurgical test program has clearly demonstrated the gold associated with our deposit is susceptible to a particularly high rate of recovery. The testing utilised was aimed at modulating conventional gold recovery methods and industry standard reagent additions and residence times.*

"This exercise has now demonstrated that we have a significant gold deposit that can be recovered through conventional mill gravity circuit and a carbon-in-leach plant at a energy efficient grind size. These results now allow the Aston Board to consider options on the deposit which may include development or potential sale which will be value accretive to shareholders."

The Company also advises that nickel assay results from the short hole Bardwell drilling are expected to be delivered in mid-February. Once all assays have been received an exercise to composite samples for continued flowsheet development will commence. This work is estimated to take 2 months from mid-February. The assays will also be used to re-run the current block model on the Boomerang nickel deposit and assess the reserve status using modifying factors developed from metallurgical testwork and recent published studies of similar style deposits.

Sample Composites

A total of four composite samples were prepared with the following head grades:

Table 1:Composite Sample Head Grades

Sample	Au grade g/t
Master Comp 1	1.10
Master Comp 2	0.92
Master Comp 3	1.12
Master Comp 4	1.21

Gravity Testing

A total of four gravity tests were conducted on four composite samples. The tests were devised to simulate the gravity recovery stage as part of the milling circuit. To approximate this, the sample was ground using a laboratory rod mill then product was processed through a Knelson Concentrator with that concentrate then upgraded further on a Mozley Table. The Mozley Table tails were combined with the Knelson tails as the final tails product.

Table 2: Gravity Testing Results

Sample	Grind P80µm	Gravity Concentrate Au g/t	Au Gravity Recovery %
Master Comp 1	68	311	37.2
Master Comp 2	72	113	11.4
Master Comp 3	79	384	33.1
Master Comp 4	83	534	42.2

Cyanide Leach

A total of nine cyanide leach tests were conducted on four composite samples. The tests were devised to simulate the leaching circuit of a conventional CIL plant. Bottle roll tests at constant cyanide concentrations were utilised. Sample material was sourced from the tails produced by the Knelson Concentrator. Air sparging was utilised in tests 1, 2, and 4 and oxygen addion was used in test 3.

Table 3: Cyanide Leaching Test Results

Composite	Leach Test	Grind Size	Au Extraction %						Overall Recovery Gravity & Leach
			2hr	6hr	12hr	24hr	36hr	48 hr	
Master Comp 1	CN1	68						83.5	**89.6**
	CN2		59	77	81	83	84	82.6	**89.1**
	CN3		81	83	82	83	85	84.5	**90.3**
Master Comp 2	CN4	72						87.6	**89.0**
	CN5		74	83	86	88	84	87.7	**89.1**
Master Comp 3	CN6	79						90.0	**93.3**
	CN7			84	88	90	90	89.3	**92.8**
Master Comp 4	CN8	83						85.0	**91.3**
	CN9		66	81	85	86	86	87.2	**92.6**

This announcement has been authorised for release by the Board of Aston Minerals Limited.

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Competent Person's Statements

The information in this announcement that relates to the Exploration Results for Edleston Project is based on information compiled and fairly represented by Mr Robert Jewson, who is a Member of the Australian Institute of Geoscientists and Non-Executive Director of Aston Minerals Limited. Mr Jewson has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which he has undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Jewson consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

The mineral resource estimate in this announcement was reported by the Company in accordance with listing rule 5.8 on 19 January 2023. The Company confirms it is not aware of any new information or data that materially affects the information included in the previous announcement and that all material assumptions and technical parameters underpinning the estimate in the previous announcement continue to apply and have not materially changed.

Appendix 1: Drill hole information

Hole	Size	Easting	Northing	Elevation	Azimuth	Dip	From	Interval	Au g/t
DDED21-015	NQ	477378	5307393	358	65	45	88	5.5	0.91
DDED21-035	NQ	477102	5307624	358	0	50	93.46	6.0	1.00
DDED21-035	NQ	477102	5307624	358	0	50	126.24	5.3	0.93
DDED21-036	NQ	477353	5307433	360	0	53	247.25	4.8	1.24
DDED21-041	NQ	477104	5307687	359	0	50	47.94	5.1	1.06
DDED21-044	NQ	477449	5307425	360	360	70	360.02	5.5	1.22
DDED21-051	NQ	477124	5307527	378	0	70	120.5	4.5	1.45

Drill hole weights received at SGS Lakefield

Bag	Drill Hole ID	Sample ID	From_m	To_m	Mass_g
1	DDED21-053	ED053-104	127	128	0
		ED053-105	128	129.01	2548.6
		ED053-107	129.01	129.77	1903.2
		ED053-108	129.77	130.56	1859.8
		ED053-109	130.56	131.5	2210.7
		ED053-110	131.5	132.5	2512.8
2	DDED21-051	ED051-110	120.5	122	3811.9
		ED051-113	122	123.5	2463.5
		ED051-114	123.5	125	3341
3	DDED21-044	ED044-298	360.02	360.55	1276
		ED044-302	360.55	361.53	2148.8
		ED044-303	361.53	362.52	2010.1
		ED044-304	362.52	363.48	2039.8
		ED044-305	363.48	364.5	2154.8

Bag	Drill Hole ID	Sample ID	From_m	To_m	Mass_g
		ED044-306	364.5	365.5	2239.2
4	DDED21-041	ED041-027	47.94	48.82	1660.6
		ED041-028	48.82	49.88	2587.7
		ED041-029	49.88	51	2627.6
		ED041-030	51	52.03	2530.8
		ED041-032	52.03	53	2215.1
5	DDED21-035 - A	ED035-064	93.46	95	4093.2
		ED035-065	95	96.5	4084.8
		ED035-066	96.5	97.97	3837.2
		ED035-067	97.97	99.48	3584
6	DDED21-035 - B	ED035-094	126.24	127.02	1835.7
		ED035-095	127.02	128.47	3611.7
		ED035-096	128.47	130	3724
		ED035-097	130	130.5	1059
		ED035-097D	130.5	131.5	2305.6
7	DDED21-036	ED036-170	247.25	249	3775
		ED036-171	249	250.5	3436.1
		ED036-172	250.5	252.03	3461.5
8	DDED21-033 - A	ED033-100	147	148.47	2913
		ED033-101	148.47	149.96	2921.2
		ED033-102	149.96	151.47	2912.4
		ED033-103	151.47	152.96	2866.2
		ED033-104	152.96	154.5	2974.5
9	DDED21-033 - B	ED033-114	163.49	165.07	3058.2
		ED033-115	165.07	166.56	2856.3
		ED033-116	166.56	167.95	2937.2
		ED033-117	167.95	169.49	3024.4
		ED033-119	169.49	170.96	2677
		ED033-120	170.96	172.5	3120.4
10	DDED21-018	ED018-151	184	185.5	2537.1

Bag	Drill Hole ID	Sample ID	From_m	To_m	Mass_g
		ED018-152	185.5	187	2003.6
		ED018-153	187	188	2126.7
		ED018-154	188	189.5	3043.1
11	DDED21-015	ED015-040	88	89.04	2871.4
		ED015-041	89.04	90.08	2927.4
		ED015-042	90.08	91.32	3200.8
		ED015-044	91.32	92.48	3447.8
		ED015-045	92.48	93.49	2911.9

Master composites made up by SGS for head grade and metallurgical testwork

Sample Name	Drill Hole Composite
Master Composite 1	DDED21-053 DDED21-051 DDED21-035-B DDED21-033-A
Master Composite 2	DDED21-044 DDED21-036
Master Composite 3	DDED21-041 DDED21-035-A DDED21-015
Master Composite 4	DDED21-033-B DDED21-018

Appendix 2: JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Comments
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.	Half NQ diamond drill core was submitted to SGS Lakefield Laboratory Ontario for metallurgical gold testing .
	· Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Core was cut into two equal halves with one submitted for metallurgical testing.
	· 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.	A composite sample based in deposit depth was generated based on available diamond drill core within Edleston Main in order to represent the respective grade domains of the resource. Samples from mineralisation within Edleston Main were prepared and sent to SGS Lakefield for metallurgical testing using standard gravity and leaching of the tails material.
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).	Core used in metallurgical testing was from standard tube NQ diamond drilling.
Drill sample recovery	· Method of recording and assessing core and chip sample recoveries and results assessed.	Field geologists measure core recoveries for every drill run completed. The core recovered is physically measured by tape measure and the length is recorded for every "run". Core recovery is calculated as a

Criteria	JORC Code explanation	Comments
		percentage recovery. Core recovery is logged and recorded into the database.
	· Measures taken to maximise sample recovery and ensure representative nature of the samples.	Diamond drilling by nature collects relatively uncontaminated core samples. These are cleaned at the drill site to remove drilling fluids and cuttings to present clean core for logging and sampling.
	· 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.	There was no significant loss of material reported in the mineralised parts of the diamond core.
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.	Drill holes were logged for lithology, alteration, mineralisation, structure and weathering by a geologist. Data is then captured in a database appropriate for mineral resource estimation. Metallurgical testing has been reported in the body of this release.
	· Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	All cores are photographed in the core tray, with individual photographs taken of each tray both dry and wet. Logging conducted is both qualitative and quantitative.
	· The total length and percentage of the relevant intersections logged.	All drill holes were logged in full.
Sub-sampling techniques and sample preparation	· If core, whether cut or sawn and whether quarter, half or all core taken.	Diamond drill core was cut in half. Half the core was submitted for metallurgical testing and the remaining half was stored securely for future reference and potentially further analysis if ever required.
	· If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	Only diamond core drilling utilised.
	· For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Four composite samples weighing approximately 30kg each from the Edleston gold deposit in Timmins were submitted to SGS Lakefield in Ontario. For head characteristics a ~500 g subsample was crushed down to 80% 2mm and was riffled out and submitted for gold analysis by the screened metallics method. The sample was stage pulverized and screened at 150 mesh to produce 20 to 30 g of plus 150 mesh fractions

Criteria	JORC Code explanation	Comments
		for gold assay to completion. The minus 150 mesh fraction was assayed for gold in duplicate and the overall gold grade of the composite was calculated. A smaller subsample was riffled out for carbon speciation and a multi-element ICP scan. For Knelson gravity work a 2 kg sample was riffled and prepared in the same manor as the head sample. For the gold leach work, cyanidation was applied to the tail from the Knelson and Mozley tail.
	· Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Standard preparation procedure inclusive of internal laboratory internal crushing and pulverizing tests were utilised.
	· 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.	Gold head assays were conducted on riffled received material as well as riffled sub-samples for gravity and leach test work. Head assays were compared for sample preparation quality control. Head assays were all compared with original assays conducted at time of drilling to ensure representative samples were used in the metallurgical testing based on gold grade comparable to the resource.
	· Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are considered appropriate to the mineralisation style and grain size of the material.
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.	Samples were submitted for gold assay by fire assay and ICP (atomic absorption) of a 50g pulverized sample. If gold grains of a size larger than the grind size are present, the method can be considered partial digestion. Samples with logged visible gold or reporting over 10g/t Au were analysed by fire assay metallic screen. A representative 500g split is sieved at 100 mesh with assays with assays performed on the entire >100 mesh and 2 splits of the -100 mesh fraction. A final assay is calculated based on the weight of each fraction.
	· For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument	No geophysical tools, spectrometers or handheld XRF instruments were utilized on the selection of samples tested..

Criteria	JORC Code explanation	Comments
	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.	Standard quality control procedures as per SGS Lakefield and head assay comparisons as noted above.
Verification of sampling and assaying	· The verification of significant intersections by either independent or alternative company personnel.	Results were reviewed by the chief geologist, managing director and competent person.
	· The use of twinned holes.	No core used in metallurgical testing was from twinned holes.
	· Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All data was recorded in field logging sheets, digitised then imported into a validated database.
	· Discuss any adjustment to assay data.	No adjustments were performed 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.	Drill collar locations were surveyed using a differential GPS.
	· Specification of the grid system used.	All collar locations are reported in NAD83- 17N grid system.
	· Quality and adequacy of topographic control.	Topographic control on collars was derived from a LIDAR survey completed across the Project. LIDAR is considered to be industry best practice for this stage of exploration.
Data spacing and distribution	· Data spacing for reporting of Exploration Results.	Diamond drill holes are drilled selectively directly targeting mineralisation based on regional orientations known along strike.
	· 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.	The spacing across Edleston Main is sufficient to establish geological and grade continuity appropriate for estimation of a Mineral Resource. The remaining prospects drilled by the Company are on too broad of a spacing to define a mineral resource at present.
	· Whether sample compositing has been applied.	Sample compositing has been applied.

Criteria	JORC Code explanation	Comments
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.	Based on the logging of the drilling and interpretation of the geology the drilling completed is interpreted to be perpendicular to the trend of mineralisation.
	· 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 drilling intercept reported is downhole. Further drilling is required to confirm the geometry of mineralisation.
Sample security	· The measures taken to ensure sample security.	Diamond drill core is transported from site by contractors to a secured core processing facility for logging and sampling. Samples are subsequently sent by a contractor to the assay laboratory.
Audits or reviews	· The results of any audits or reviews of sampling techniques and data.	No audits are documented to have occurred in relation to sampling techniques or data.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

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 Edleston Project is 100% owned by a wholly owned subsidiary of Aston Minerals Ltd. A 2% net smelter return royalty applies across the Project. 1% of the net smelter return royalty can be purchased for $1,000,000 across the mining claims and 1% of the net smelter return royalty can be purchased for $1,000,000 across the Leased Claim.
	· *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.*	Open file verification has been conducted to confirm licenses are in full force.
Exploration done by other parties	· *Acknowledgment and appraisal of exploration by other parties.*	Exploration reported was completed by 55 North Mining Inc (Formerly SGX Resources Inc.). Activities completed include magnetic surveys, VLF/IP surveys, extensive diamond drilling.

Criteria	JORC Code explanation	Commentary
Geology	· *Deposit type, geological setting and style of mineralisation.*	Regionally, Edleston appears to lie along the potential western extension of the Cadillac-Larder fault zone along which a number of major gold deposits are located. Geophysical and geological work has demonstrated that the Edleston Zone sits within the north limb of the host unit/horizon that stretches over 10 km to the east. This unit is broadly folded back toward the south and east immediately to the west of the deposit continuing under and near the contact with shallow sedimentary cover. The host rock is an altered and sheared ultramafic that exhibits extensive silicification and contains quartz-carbonate in veins, veinlets and fracture fill. A revised geological interpretation based on the information obtained from recent drilling and reprocessed magnetics coverages was undertaken. Through this process the extent and intense magnetic response of the Boomerang Target was recognised. Magnetic inversion modelling of the Boomerang Target was undertaken to further constrain the geometry and extent of the dunite/peridotite complex. It is interpreted that this dunite/peridotite body extends for a strike of 5km, is 500 to >1,500m wide and extends to depths of well over 500m. The exploration model applied to conduct targeting of this body is analogous to Dumont and Crawford Nickel-PGE-Cobalt Deposits. Nickel sulphide mineralisation at these deposits was formed through the serpentinisation of a dunite unit (rock composed of >90% olivine). Through the reaction of olivine with water, extensive magnetite is developed hence providing such a strong magnetic response and potentially allowing for a direct exploration targeting method to be applied. Through this process of serpentinisation nickel is liberated from

Criteria	JORC Code explanation	Commentary
		olivine within a strongly reducing environment and the liberated nickel is partitioned into low sulphur nickel sulphide minerals.
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:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *hole length.*	The drill hole location information is set out in the appendix.
	· *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.*	All information has been reported.
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.*	Samples selected for metallurgical testing had a minimum grade of 0.7 g/t Au and a maximum of 1.5 g/t Au.
	· *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.*	Samples selected for metallurgical testing had a minimum grade of 0.7 g/t Au and a maximum of 1.5 g/t Au.
	· *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	No metal equivalence are reported.
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.*	No drilling results reported in this announcement.

Criteria	JORC Code explanation	Commentary
	· *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.*	There is no significant discovery being reported 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.*	All information has been reported.
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.*	No other exploration data is considered meaningful and material to this announcement.
Further work	· *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	Further exploration will be planned by the Company in due course.
	· *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	A map including the location of all gold collars drilled on the Project is included in the body of this release.