

# Sulphide mineralisation extended at B2 for further 500m of strike

### **Key Highlights**

- Sulphide mineralisation visually confirmed at B2 for an additional 500m along strike extension of 1 billion tonne nickel mineral resource<sup>1</sup>
- 3 diamond drill holes completed to date at B2 in 2023 campaign
- DDED23-129, drilled to a depth of 426m, intersected approximately 183m of disseminated to interstitial 1- 2% sulphide mineralisation consisting of pentlandite +/- pyrrhotite from 132m to 315m
- DDED23-130, drilled to a depth of 510m, intersected approximately 287m of disseminated to interstitial 1-4% sulphide mineralisation consisting of pentlandite +/- pyrrhotite from 157m to 444m
- DDED23-131, drilled to a depth of 342m, intersected 154m of disseminated to interstitial 1-8% sulphide mineralisation consisting of pentlandite +/- pyrrhotite from 155m to 309m
- All 3 holes are within 300m of DDED22-107 which returned results of 181m at 0.28% Ni and 500m of DDED22-105 which returned 85.5m at 0.33% Ni including 2m at 1.37% Ni (ending in mineralisation)
- Upper and lower extension drilling of prior high grade intersections at B2 underway and will be reported in coming weeks
- Infill drilling of shallow zones of Bardwell resource and high grade plunge component extensions to be conducted in coming weeks



Figure 1: DDED23-131 interstitial to disseminated sulphide mineralisation at 270.2m

<sup>&</sup>lt;sup>1</sup> ASX announcement 21 February 2023 – Indicated: 155Mt at 0.28% Ni, 0.011% Co; Inferred 889Mt at 0.27% Ni, 0.011% Co for a total of 1,044Mt at 0.27% Ni, 0.011% Co

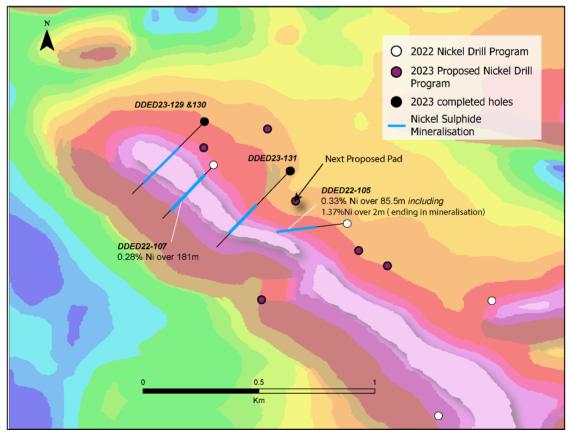
Aston Minerals Limited (**ASX: ASO**, '**Aston Minerals**' or 'the **Company'**) is pleased to provide an update on the extensional drilling underway across B2 zone within the Boomerang Nickel-Cobalt target with visual confirmation of sulphides intersected in all 3 holes drilled to date at B2 in the 2023 drill campaign.

Managing Director, Russell Bradford, commented "The mineralised intersections identified in the most recent drilling across B2 confirms the step out drilling exercise is successfully increasing the scale of sulphide mineralisation at the Edleston Project. The aim of the drilling at B2 zone extend the mineralisation along strike and at depth relative to the existing resource - so far we are delighted to report that its confirming what we expected.

"The 3 holes completed in this current campaign at B2 are north-west of high-grade hole DDED22-105, which was the most northerly hole included in our 1 billion tonne nickel-cobalt maiden resource released in February 2023. Drilling will then head to the south-east on B2 before moving down to the Hook and infill drilling at the Bardwell Prospect.

"As well as providing results for a resource upgrade at Boomerang, core collected from this drill campaign will also be used to continue development of our metallurgical process flowsheet in preparation for the next phase of development at Edleston."

Drilling is now underway to further define upper and lower extension of DDED22-105, which intersected **0.33% Ni over 85.5m including 1.37% Ni over 2m** and ended in mineralisation.



All assays will be released to market as they become available.

Figure 2: Planview of the current drill program at the B2 prospect



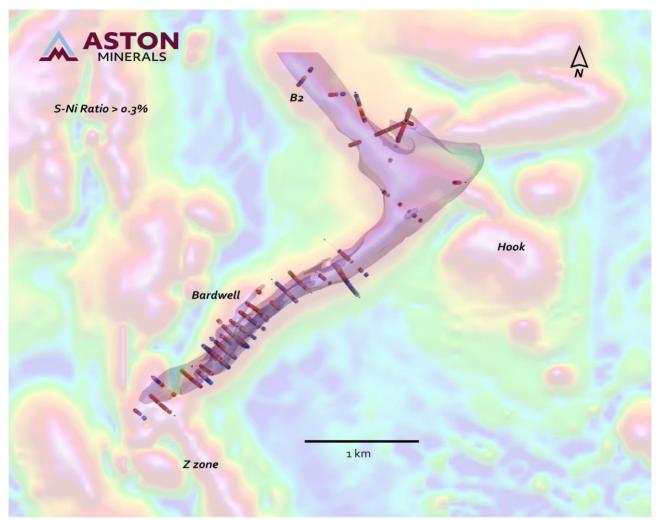


Figure 3: Boomerang Nickel-Cobalt target at Edleston Project noting B2 zone to the north.

## Edleston Project Overview, Ontario, Canada (100% ASO)

The Edleston Project is located approximately 60km via road to the south of Timmins, Ontario, Canada. The towns of Timmins and Kirkland Lake are located close by and host significant former and current producers, with required services and skilled labour available to support exploration and development of the Project.

The Project is located within the Abitibi Greenstone Belt of Archean metavolcanic and medisedimentary units that have been steeply folded with axes trending in general east-west orientation. The Edleston Project currently hosts a **maiden nickel-cobalt resource of 1.044 billion tonnes** across the Boomerang Target<sup>2</sup> and a **1.5Moz maiden gold resource** at Edleston and Sirola<sup>3</sup>.

The Boomerang Target is interpreted to be a Dunite/Peridotite unit which has undergone extensive serpentinisation. This process of is responsible for the reaction of olivine to produce magnetite and

<sup>&</sup>lt;sup>3</sup> ASX announcement 19 January 2023 – Indicated: 14.0Mt at 0.90g/t Au for 400,200oz Au; Inferred: 34.1Mt at 1.00g/t Au for 1,099,800oz Au for a total of 48.1Mt at 1.00g/t Au for 1,500,100oz Au



 $<sup>^2</sup>$  ASX announcement 21 February 2023 – Indicated: 155Mt at 0.28% Ni, 0.011% Co; Inferred 889Mt at 0.27% Ni, 0.011% Co for a total of 1,044Mt at 0.27% Ni, 0.011% Co

brucite, resulting in a strongly reducing environment whereby nickel is released from decomposition of olivine. The nickel mineralisation is typically partitioned into low sulphur nickel sulphide minerals. Due to the magnetite association with mineralisation, a 3D inversion model of magnetics has been generated and has been utilised to assist with targeting. Extensive drilling has confirmed the presence of continuous nickel sulphide mineralisation.



Figure 4: Edleston Project Location Plan

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

## Contacts

#### For more information, please contact:

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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 estimates in this announcement were reported by the Company in accordance with listing rule 5.8 for resource on 19 January 2023 (gold) and 21 February 2023 (nickel-cobalt). 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 estimates in the previous announcement continue to apply and have not materially changed.





#### Appendix 1: Drill hole information and visual estimate of sulphide mineralisation

Hole	Size	Easting	Northing	Elevation	Azimuth	Dip	Final Depth (m)
DDED23-129	HQ	478,358	5,306,439	362	220	-45	426
DDED23-130	HQ	478,355	5,306,437	377	220	-60	510
DDED23-131	HQ	478,593	5,306,229	369	220	-45	342

Hole	From	То	Interval	Sulphide %	Host Lithology
	(m)	(m)	(m)	(Visual Estimate)	
DDED23-129	132	315	183	Interstitial 1-2% (pentlandite +/- pyrrhotite)	Fine grained peridotite
DDED23-130	157	444	287	Finely disseminated to interstitial 1-4% (pentlandite +/- pyrrhotite)	Fine grained serpentinised peridotite
DDED23-131	155	309	154	Disseminated to interstitial 1-8% (pentlandite +/- pyrrhotite)	Fine grained serpentinised peridotite

In relation to the disclosure of visual mineralisation, the Company cautions that estimates of sulphide mineralisation abundance from preliminary geological logging should not be considered a proxy for quantitative analysis of a laboratory assay result. Assay results are required to determine the actual widths and grade of the visible mineralisation. Samples have been submitted to the laboratory and current turnaround times for receipt of the assay results is uncertain, however, the Company notes it will report all assay results as they become available.



#### 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	<ul> <li>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.</li> </ul>	Half NQ/HQ diamond drill core was submitted for analysis.
	<ul> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	Core was cut into two equal halves with one submitted for analysis.
	<ul> <li>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</li> </ul>	Sample intervals was based on geological observations. Minimum core width sampled was 0.3m and maximum 1.5m. Samples were submitted to ALS Laboratories Vancouver.
	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).	Standard tube NQ and HQ Diamond drilling was undertaken.
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



Criteria	JORC Code explanation	Comments
		tape measure and the length is recorded for every "run". Core recovery is calculated as a 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 is no significant loss of material reported in the mineralised parts of the diamond core to date.
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> </ul>	<ul><li>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.</li><li>All cores are photographed in the core tray, with individual photographs taken of each tray both dry and wet. Logging</li></ul>
	<ul> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	conducted is both qualitative and quantitative. 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 analysis 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 completed.
	• For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Sample preparation by Activation Laboratories in Timmins used their standard preparation method. Samples were crushed to 80% passing 2mm, riffle split and pulverized to 95% passing 105µm.



Criteria	JORC Code explanation	Comments
	<ul> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> </ul>	Standard preparation procedure inclusive of internal laboratory internal crushing and pulverizing tests were utilised by Activation Laboratories Timmins.
	• 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.	Field duplicate samples were taken at the rate of 1:25 samples. Standard reference materials and blanks were similarly inserted at the rate of 1:25 before and after predicted high grade intervals multiple blanks were inserted to ensure that there was no cross sample contamination. QAQC verified that the blank material reported below detection and thus no cross contamination between samples.
	<ul> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	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.	Both four acid digest ICP total digestion and ICP two acid (aqua regia) partial digestion methods were utilised on all samples. This was aiming to determine an indicative proportion of sulphide versus silicate associated nickel on the basis of the partial digestion method being ineffective at liberating silicate hosted nickel mineralisation. The high degree of correlation indicated between the two results is indicative of a high proportion of sulphide associated mineralisation.
		ICP total digestion method involved analysis of a pulp by gently heating in a mixture of ultrapure HF/HNO3/HCIO4 until dry and the residue dissolved in dilute ultrapure HNO3. ICP partial digestion method involved analysis of a pulp digested with 8:1 ultrapure HNO3:HCI for 1 hour at 95oC.



Criteria	JORC Code explanation	Comments
	· For geophysical tools, spectrometers, handheld XRF	An Olympus Vanta VMR pXRF in Geochem mode was
	instruments, etc, the parameters used in determining the analysis	utilised to assist with identification of nickel sulphide
	including instrument make and model, reading times, calibrations	minerals Readings were collected over 40 second intervals
	factors applied and their derivation, etc.	for all 3 beams. The instrument is calibrated according to the
		manufacturer's specifications and a calibration check is
		performed daily to confirm the unit is operating within
		expected parameters as well as a performance test against
		a certified reference material. The manufacturer's most
		recent certificate of calibration is dated July 28, 2021 with
		nickel performance calibrated from OREAS 74a and GBM
		398-4 certified reference materials.
	· Nature of quality control procedures adopted (eg standards,	Standard reference materials and blanks were inserted
	blanks, duplicates, external laboratory checks) and whether	routinely at the rate of 1:25 samples.
	acceptable levels of accuracy (ie lack of bias) and precision have	
	been established.	
Verification of sampling and assaying	· The verification of significant intersections by either	Results were reviewed by the chief geologist, managing
	independent or alternative company personnel.	director and competent person.
	The use of twinned holes.	None of the current holes being drilled are considered to be
		twin holes.
	· Documentation of primary data, data entry procedures, data	All data was recorded in field logging sheets, digitsed then
	verification, data storage (physical and electronic) protocols.	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	Drill collar locations were surveyed using a differential GPS.
	(collar and down-hole surveys), trenches, mine workings and	
	other locations used in Mineral Resource estimation.	
	Specification of the grid system used.	All collar locations are reported in NAD83- 17N grid system.



Criteria	JORC Code explanation	Comments
	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	<ul> <li>Data spacing for reporting of Exploration Results.</li> </ul>	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.	Drilling has been completed on approximately 250m line spacing and 100m spacing on sections across the B2 target. Based on a comparison of the continuity and geological understanding attained from the mineral resource estimation along strike to this, the mineralisation is sufficiently defined to include in future resource estimations.
	Whether sample compositing has been applied.	Sample compositing has been applied. Results reported are length weighted averages.
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the</li> </ul>	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. The drilling intercept reported is downhole. Further drilling is
	orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	required to confirm the geometry of mineralisation.
Sample security	<ul> <li>The measures taken to ensure sample security.</li> </ul>	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,	The Edleston Project is 100% owned by a wholly owned subsidiary of Aston Minerals Ltd.
	historical sites, wilderness or national park and environmental settings.	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.
Geology	<ul> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	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.



Criteria	JORC Code explanation	Commentary
		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 olivine
		within a strongly reducing environment and the
		liberated nickel is partitioned into low sulphur nickel
		sulphide minerals.



Criteria	JORC Code explanation	Commentary
Drill hole Information	• A summary of all information material to the understanding of	Drill hole locations are described in the body of the
	the exploration results including a tabulation of the following	text, in the appendix and on related Figures.
	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.	
	· If the exclusion of this information is justified on the basis that	All information has been reported. At present no
	the information is not Material and this exclusion does not detract	sampling or analysis has been completed.
	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	Length weighted averages are reported in the
	techniques, maximum and/or minimum grade truncations (eg cutting	highlights and body of the announcement. A full
	of high grades) and cut-off grades are usually Material and should	listing of the individual intervals is reported in the
	be stated.	body of the release above.
	· Where aggregate intercepts incorporate short lengths of high	Length weighted averages have been applied
	grade results and longer lengths of low grade results, the procedure	where necessary to calculate composite intervals.
	used for such aggregation should be stated and some typical	Calculations were performed in excel using the
	examples of such aggregations should be shown in detail.	sumproduct function to calculate the length
		weighted average grades.
	· The assumptions used for any reporting of metal equivalent	No metal equivalence are reported.
	values should be clearly stated.	
Relationship between mineralisation widths	· These relationships are particularly important in the reporting of	Intervals of alteration and mineralisation reported
and intercept lengths	Exploration Results. If the geometry of the mineralisation with	are apparent widths. Further drilling is required to
	respect to the drill hole angle is known, its nature should be reported.	understand the geometry of mineralisation and thus
		the true width of mineralisation.



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	Maps and plans have been included in body of the
	intercepts should be included for any significant discovery being	announcement.
	reported These should include, but not be limited to a plan view of	
	drill hole collar locations and appropriate sectional views.	
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not	All information has been reported.
	practicable, representative reporting of both low and high grades	
	and/or widths should be practiced to avoid misleading reporting of	
	Exploration Results.	
Other substantive exploration data	• Other exploration data, if meaningful and material, should be	No other exploration data is considered meaningful
	reported including (but not limited to): geological observations;	and material to this announcement.
	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.	
Further work	• The nature and scale of planned further work (eg tests for lateral	Further infilling and extensional drilling of the B2
	extensions or depth extensions or large-scale step-out drilling).	target is proposed and planned collars are included
		in the body of the release.
	• Diagrams clearly highlighting the areas of possible extensions,	Maps including the location of samples and
	including the main geological interpretations and future drilling	prospects are included in the body of this release.
	areas, provided this information is not commercially sensitive.	

