2024
ASX RELEASE



18 June 2024 ASX Code: COD

# **Oxide Flotation Success Delivers Pathway to Improved Recoveries**

Material uplift in rougher flotation stage recoveries for the Windabout deposit achieved through the application of novel oxide collectors – with significant positive implications for copper recoveries across the entire Elizabeth Creek Project.

# **Highlights**

- Metallurgical test work breakthrough using novel oxide collectors has demonstrated a pathway to achieving higher copper recoveries across the Elizabeth Creek Copper-Cobalt Project.
- First stage of work undertaken on Windabout Deposit, test work to be expanded to Emmie Bluff and MG14.
- The improvement has step-change potential for the Project, where improvements in metal recoveries is a significant potential source of revenue uplift.
- Detailed follow-up test work will commence in the coming days focused on reagent optimisation, multi-stage grinding/flotation and the reintroduction of de-sliming and cleaner floats to the process.
- The next stage of work is expected to produce a representative final concentrate grade for inclusion in updated project economics.

**Coda Minerals Limited** (ASX: COD, "Coda", or "the Company") is pleased to report highly encouraging initial results from ongoing metallurgical test work being undertaken on material sourced from its 100%-owned **Elizabeth Creek Copper-Cobalt Project** in South Australia. This work builds on the most recent iteration of the Project's strongly positive Scoping Study, delivered in March 2024<sup>1</sup>.

The results reported today relate to recently completed metallurgical test work on material from Windabout, one of the open pit deposits at Elizabeth Creek. A series of flotation tests were undertaken to assess the impact of novel oxide collectors (Syensquo Aero® Ox 100 series and 3418A) on copper recovery. Both sets of tests were successful in improving recoveries of both copper and cobalt (see Table 1, Figure 1 and Figure 2).

Test work was performed on Windabout mineralisation and were designed to improve recoveries during the initial "rougher" stages of flotation by seeking to better float copper oxides. These oxides are estimated to make up approximately 25% of the copper mineralisation in Windabout.

Strongly positive results were observed compared to baseline flotation. When concentrates were produced to comparable grades using each method, the modified flowsheets reported significantly higher recoveries. In particular, test JR12 noted below producing an 11.6% increase in copper recovery compared to baseline at a comparable copper grade.

Discussing the new results, Coda's CEO Chris Stevens said: "To deliver a transformational uplift at Elizabeth Creek we have two major levers to pull: the first is in exploring for additional Resources and the second is in seeking to increase copper recoveries. This work is the first step in achieving improvements to recoveries by delivering a major uplift during the rougher float stages without incurring any significant additional costs. Pursuing an Increase in recovery numbers is extremely

<sup>&</sup>lt;sup>1</sup> For full details, see "Further Key Improvement in Underground Project Economics", released to market on 14 March 2024 and available at <a href="https://www.codaminerals.com/wp-content/uploads/2024/03/20240314">https://www.codaminerals.com/wp-content/uploads/2024/03/20240314</a> Coda ASX-ANN Further-Key-Improvement-in-Underground-Project-<a href="https://www.codaminerals.com/wp-content/uploads/2024/03/20240314">https://www.codaminerals.com/wp-content/uploads/2024/03/20240314</a> Coda ASX-ANN Further-Key-Improvement-in-Underground-Project-</a>



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important as it essentially delivers more payable metal from the same number of mined tonnes without a material increase in costs.

"We have commenced test work with Windabout, which has the lowest overall recoveries across the Project, but we anticipate that this change in flotation collectors will also deliver major improvements for the MG14 and Emmie Bluff deposits. These tests show that this work has been extremely worthwhile, demonstrating unequivocally that the right combination of reagents can concentrate the oxides within these deposits.

"With this successful application during the rougher stage, we will now progress to test work across the whole flotation process through to cleaner concentrate. Following that we will then undertake test work on MG14 and Emmie Bluff as well. Once complete, we anticipate that this work will give us updated recovery numbers for each deposit, flowing through ultimately to a potentially significant boost to overall project economics."

# Rougher Grade Recovery Curve - Cu

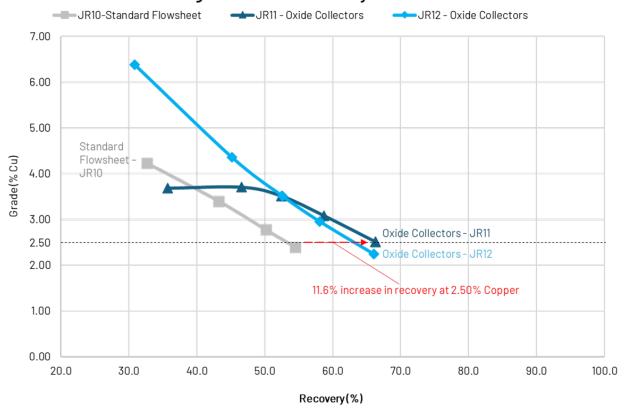


Figure 1 Rougher flotation Grade/Recovery curve for copper under the Scoping Study flowsheet (excl deslime) (JR10) and modified with various oxide collectors (JR11 and JR12). Note the improvement in both grade and recovery relative to the baseline flowsheet, particularly in test JR12.

Table 1 Cumulative recovery and grade for multi-step rougher flotation. Please note that the low concentrate grades are due to the tests being rougher flotation only – progression to cleaner concentrate is required to provide concentrate grades suitable for sale or treatment in a hydrometallurgical processing plant. Coda has chosen to restrict these tests to rougher flotation due to this step being the most important for metal recovery, as well as to ensure quicker and lower cost test work.

	JR10 Standard Flowsheet		JR 11 Modified Flowsheet		JR12 Modified Flowsheet	
	% Cu	Recovery (% Cu)	% Cu	Recovery (% Cu)	% Cu	Recovery (% Cu)
Ro Conc 1	4.23	32.6	3.68	35.7	6.38	30.8
Ro Conc 1-2	3.40	43.2	3.70	46.6	4.36	45.1
Ro Conc 1-3	2.77	50.1	3.51	52.4	3.51	52.6
Ro Conc 1-4	2.39	54.5	3.08	58.7	2.95	58.1
Ro Conc 1-5	1.87	64.0	2.51	66.3	2.24	66.1

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The tests compared the rougher flotation performance using the baseline flowsheet which underpins the Elizabeth Creek Scoping Study (minus the deslime step) with a pair of modified flowsheets which incorporate novel oxide collectors principally from the Syensquo Aero® Ox 100 series. Conventional flotation is designed to separate copper which is hosted as a sulphide, while the addition of oxide collectors facilitates the flotation of copper held as oxides as well. Diagnostic leach tests suggest that approximately 25% of the copper in this sample is held as oxide, a figure well within the typical range for this deposit and other deposits at Elizabeth Creek.

The modified oxide collector regimes improved net recoveries in two ways. First, slightly more total recovery was achieved after 33 minutes vs the baseline flowsheet. Far more importantly however, when concentrates were produced to comparable grades using each method, the oxide collectors generated significantly higher recoveries.

Test JR12, which used a more diverse array of oxide collectors, was particularly successful, with recovery consistently materially higher at any given concentrate grade (see Figure 1) As an example, as shown in the highlighted cells in Table 1, at a comparable grade (2.39% Cu vs 2.24% Cu), test JR12 saw an improvement of 11.6% in copper recovery relative to baseline flotation. Equivalent recoveries were also achieved faster using the new collectors.

These results have the potential to improve net recovery markedly, while also potentially allowing for reduced CAPEX through faster flotation concentration.

The Company is currently scoping up the next round of test work, which will focus on defining and optimising an improved flowsheet making use of these collectors. The test work also identified a consistent Sulphur: Copper ratio between the rougher concentrate and the tails/slimes, suggesting a significant amount of the copper lost to tails could be in sulphide form, and therefore potentially available to flotation.

The next round of test work will assess adjustments to grind size and flotation techniques to attempt to capture an increased percentage of this copper, further improving recovery.





#### **Detailed Technical Information**

A total of three rougher flotation tests were carried out on material from the Windabout deposit at Elizabeth Creek. The material had a head grade of approximately 1.06% Cu and 0.06% Co.

A baseline test (JR10) was undertaken using the standard flowsheet developed for the Elizabeth Creek Scoping Study (minus the deslime step) to serve as a comparison. Various changes were made to the oxide collectors in tests JR11 and JR12 to improve copper and cobalt recovery with JR11 seeing the addition of OC100 and OX101 in place of A9863, while JR12 saw the use of 3418A as a collector along with OX100, 101 and 102.

The modified Oxide collector regimes saw marginal improved net recoveries after 33 minutes vs the baseline flowsheet, but at significantly higher grades – particularly for JR12, which used a more diverse array of oxide collectors, recovery was consistently materially higher at a given concentrate grade. See the highlighted cells in Table 1as an example – at a comparable grade (2.39% Cu vs 2.24% Cu), test JR12 saw an improvement of 11.6% relative to baseline flotation.

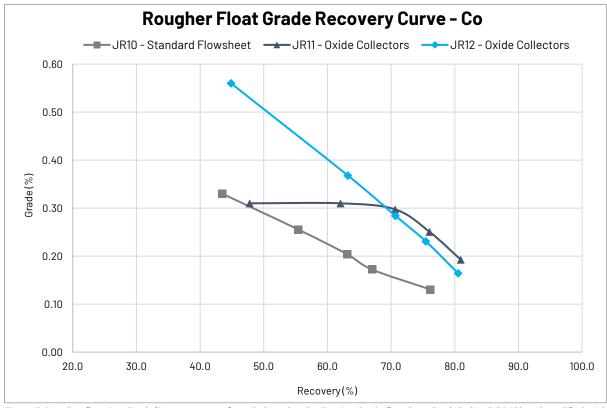


Figure 2 Rougher flotation Grade/Recovery curve for cobalt under the Scoping Study flowsheet (excl deslime) (JR10) and modified with various oxide collectors (JR11 and JR12). Baseline recovery of cobalt was reduced relative to the original scoping study due in part to lack of deslime, sample variability and other factors.

Reagents were added according to the dosage detailed in Table 2. Samples were ground to P80 of 53µm and flotation was carried out in 5 stages for a total of 33 minutes at a pulp density of 35% w/w. Tests were proof of concept and thus were carried out in Perth tap water – future tests will be undertaken in synthetic or actual site water, which is highly saline.

Table 2 Test work reagent regimes.

		CuSO <sub>4</sub>	PAX	OX100	OX101	OX102	3418A	A9863	Cyquest3223
JR10	Subtotal (g/t)	50	350	1	-	1	-	120	500
JR11	Subtotal (g/t)	50	250	40	40	-	-	-	500
JR12	Subtotal (g/t)	50	250	25	30	30	5	-	500







>30% of copper remained in tails for all three tests. This may be attributed to locking of copper minerals with gangue minerals and relatively low liberation. A relatively high sulphur content was identified in the tailings, with a sulphur to copper ratio very similar to that of the feed, indicating that copper sulphide minerals are very likely present in the tailings (as opposed to copper in the tails being dominated by oxide or copper silicate minerals). Previous test work suggests that approximately half of this copper would be expected to be lost during the deslime step when that is returned to the flowsheet, however the remainder is likely to be available for flotation, and a multi-stage grind/flotation has been proposed as a means to access this copper.

#### **Next Steps**

Coda is currently scoping the next phase of test work designed to assess a number of factors which collectively have the potential to materially improve overall copper recovery.

The programme of test work, which the company anticipates will take approximately three months, will prioritise optimization of the reagent scheme using oxide collectors in the rougher tests and sample from the Windabout ore body. These tests will evaluate collector type, collector dosage, flotation time, dispersant and depressant type and the impact of desliming. Staged grinding/flotation will also be undertaken to attempt to reduce sulphide (and oxide) losses to the tailings in the rougher float.

This work should define a modified, optimised rougher flotation regime which will be followed up by rougher-cleaner tests to assess a more complete flowsheet comparable to that which would be used in a real plant. The modified flowsheet will also be tested on the other major deposits at Elizabeth Creek to confirm its applicability across the entire project.

### Implications for Project Economics

Under the current flowsheet, copper recovery at Elizabeth Creek varies from deposit to deposit, and the most recent scoping study assumed recoveries of 57.9%, 66.5% and 77.2% for the MG14, Windabout and Emmie Bluff deposits respectively<sup>2</sup>. While it should be noted that these figures have been assessed only to a level of detail consistent with Coda's Scoping Study and further variability test work is required, there is likely to remain considerable room for improvement.

Excluding loss to deslime (which accounts for approximately 16% of copper lost at the Windabout deposit, but no losses at the other deposits which do not require deslime), the rest of the copper lost to tails is the result principally of liberation and mineralogy, specifically oxide and silicate copper which are currently either not targeted (oxides) or cannot be floated with modern conventional flotation techniques (silicates).

If successful, the proposed test work is designed to improve project economics in a number of ways:

- Reducing copper losses in the flotation step, specifically through oxide collectors and multi-stage grinding and
  flotation, would see increases to copper production and ultimately associated revenue with only very limited
  increases in processing costs.
- Improving recovery has the potential to adjust the relevant equations which drive mine planning, potentially
  providing additional tonnes which can be economically mined from existing resources. Of all the deposits, the
  leverage for improvement in this space is probably greatest at Windabout, which has an estimated production target
  of only approximately 6 million tonnes from a defined resource in excess of 17 million tonnes.
- Recovery appeared to progress faster with the new collectors relative to the old flowsheet. A faster recovery means
  that potentially fewer or smaller flotation cells can process the same amount of tonnes and extract the same amount
  of copper, potentially allowing for CAPEX reductions.

<sup>&</sup>lt;sup>2</sup> For full details, see "Positive Scoping Study – Elizabeth Creek Copper Cobalt Project", released to the market on 23 March 2023 and available at <a href="https://www.codaminerals.com/wp-content/uploads/2023/03/20230323">https://www.codaminerals.com/wp-content/uploads/2023/03/20230323</a> COD ASX-ANN Elizabeth-Creek-Scoping-Study VRelease.pdf



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This announcement has been authorised for release by the Board of Coda Minerals Ltd

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# Competent Person's Statement

The information in this report which relates to metallurgical results is based on information compiled by Mr. Nick Vines, who is an employee of Strategic Metallurgy, a metallurgical consultancy engaged by Coda Minerals. Mr Vines is a Member of the Australian Institute of Mining and Metallurgy and has sufficient relevant experience to the style of metallurgical test work under consideration and interpretation thereof, and to the activities 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 Vines consents to the inclusion in this report of the matters based on the information compiled by him, in the form and context in which it appears.

#### About Coda Minerals

**Coda Minerals Limited** (ASX: COD) is focused on the discovery and development of minerals that are leveraged to the global energy transformation through electrification and the adoption of renewable energy technologies.

Coda's flagship asset is the 100%-owned Elizabeth Creek Copper-Cobalt Project, located in the world-class Olympic Copper Province in the Eastern Gawler Craton, South Australia's most productive copper belt. Elizabeth Creek is centred 100km south of BHP's Olympic Dam copper-gold-uranium mine, 15km from its new Oak Dam West Project and 50km west of OZ Minerals' Carrapateena copper-gold Project.

Coda consolidated 100% ownership of the Elizabeth Creek Copper Project after completing the acquisition of its former joint venture partner, Torrens Mining, in the first half of 2022.

Elizabeth Creek consists principally of 701 square kilometres of tenure which hosts three known 'Zambian-style' coppercobalt deposits, including JORC 2012 compliant Indicated Mineral Resources at the Windabout (18Mt @ 1.14% CuEq) and MG14 (1.8Mt @ 1.67% CuEq) deposits<sup>3</sup>, and the Indicated/Inferred Emmie Bluff Mineral Resource 40.2Mt @ 1.87% CuEq)<sup>4</sup>. Collectively, the three resources at Elizabeth Creek now host a total of in excess of 1 million tonnes of contained copper equivalent.

<sup>&</sup>lt;sup>4</sup> For full details, see "Scoping Study Update Delivers Materially Improved Economics", released to market on 30 January 2024 and available at <a href="https://www.codaminerals.com/wp-content/uploads/2024/01/20240130">https://www.codaminerals.com/wp-content/uploads/2024/01/20240130</a> Coda ASX-ANN Scoping-Study-Update-Delivers-Materially-Improved-Economics RELEASE.pdf



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<sup>&</sup>lt;sup>3</sup> 2020.10.26 - Confirmation Statements JORC, Competent Person: Tim Callaghan.



Coda has also discovered a significant IOCG system adjacent to and below the Emmie Bluff target, with initial deep diamond drilling in June 2021 intersecting 200m of intense IOCG alteration at the Emmie IOCG target, including approximately 50m of copper sulphide mineralisation<sup>5</sup>. Since then, Coda has drilled 21 holes into Emmie IOCG, with all but three returning significant widths of mineralisation, some over 3% copper and 0.5g/t gold<sup>6</sup>.

Coda has a dual strategy for success at Elizabeth Creek. Firstly, it is working towards the next step in the development process for its Zambian-style copper cobalt projects by advancing technical and economic studies to further improve the Project's economics as it works towards a full Pre-Feasibility Study and eventual development of the Project into production.

Secondly, it is undertaking a substantial geophysical and interpretation programme at the Emmie IOCG prospect to further understand the structures and extent of the geological model defined over the past year of drilling.

Coda also has 100% ownership of the Cameron River Copper-Gold Project, located in the highly prospective Mount Isa Inlier in Queensland. The Project comprises 35km<sup>2</sup> of copper and gold exploration tenure spanning two Exploration Permits (EPMs 27042 and 27053).

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<sup>&</sup>lt;sup>5</sup> 2021.06.22 - Thick Zone of IOCG Mineralisation Intersected at Emmie Bluff Deeps, Competent Person: Mr Matthew Weber.

<sup>&</sup>lt;sup>6</sup> 2022.08.18 – <u>Assays from IOCG Drilling Confirm Target Areas for Follow Up</u>, Competent Person: Mr Matthew Weber.



## Competent Persons' Statements and Confirmatory Statement - Mineral Resource Estimates

Information regarding the MG14 and Windabout Mineral Resources is extracted from the report entitled "Confirmation Statements JORC" created on 26<sup>th</sup> October 2020 and is available to view at <a href="https://www.codaminerals.com/wp-content/uploads/2020/10/20201026">https://www.codaminerals.com/wp-content/uploads/2020/10/20201026</a> Coda ASX-ANN Confirmation-Statements-JORC.pdf

Information regarding the Company's MG14 and Windabout Mineral Resource Estimates is based on, and fairly represents, information and supporting documentation compiled by Tim Callaghan, who is self-employed. Mr Callaghan is a Member of the Australasian Institute of Mining and Metallurgy ("AusIMM"), and has a minimum of five years' 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' ("JORC Code"). Mr Callaghan has consented to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Information regarding the Emmie Bluff Mineral Resource is extracted from the report entitled "Scoping Study Update Delivers Materially Improved Economics" released on 30<sup>th</sup> January 2024 and is available to view at <a href="https://www.codaminerals.com/wp-content/uploads/2024/01/20240130">https://www.codaminerals.com/wp-content/uploads/2024/01/20240130</a> Coda ASX-ANN Scoping-Study-Update-Delivers-Materially-Improved-Economics RELEASE.pdf

Information regarding the Company's Emmie Bluff Mineral Resource Estimates is based on, and fairly represents work done by Dr Michael Cunningham of Sonny Consulting Services Pty Ltd. Dr Cunningham is a Member of the Australasian Institute of Mining and Metallurgy and has sufficient relevant experience to the style of mineralisation and type of deposit under consideration and to the activities 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.

## Listing Rule 5.23.2

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements cited in this announcement and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

## Statement Regarding Metal Equivalent Calculations

Metal Equivalent grades are quoted for one or more of the Emmie Bluff, Windabout and MG14 Mineral Resources, or for exploration results considered by the company to be related directly to one of these Mineral Resources, in this announcement.

#### For the Emmie Bluff Mineral Resource:

The Emmie Bluff Mineral Resource is reported as 43Mt @ 1.3% Cu, 470 ppm Co, 11 g/t Ag and 0.15% Zn (1.84% Copper Equivalent (CuEq)) reported at a cut-off grade of 1% CuEq. The calculation of this metal equivalent is based on the following assumptions.

Metal	Coefficient	Forecast Price	Price Unit
Copper	0.8	\$7,000	USD/Tonne
Cobalt	0.85	\$55,000	USD/Tonne
Zinc	0.9	\$2,100	USD/Tonne
Silver	0.85	\$18.50	USD/Oz

Price assumptions used when calculating copper equivalent grades were based primarily on Consensus Economics forecasts of metals, except for Cobalt, which was sourced via communication with subject matter experts. Metallurgical assumptions used when calculating copper equivalent grades were based on a simple bulk float utilising rougher and minimal cleaner/scavenger circuits. The produced a reasonably consistent mean recovery across most metals of between approximately 83 and 94 percent. For simplicity, and to in part account for losses associated with less intensive cleaner floats and losses to the hydromet plant, these figures were rounded down to the nearest 5%.



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Application of these assumptions resulted in the following calculation of CuEq:

$$CuEq\% = Cu\% + 0.00068 \times Co\ ppm + 0.337 \times Zn\ \% + 90.3 \times \frac{Ag\ ppm}{10000}$$

#### For the Windabout and MG14 Mineral Resource:

The Windabout and MG14 Mineral Resource are reported at a cut-off grade of 0.5% CuEq as:

- Windabout: 17.67Mt @ 0.77% Cu, 492 ppm Co and 8 g/t Ag (1.41% CuEq)
- MG14: 1.83Mt @ 1.24% Cu, 334 ppm Co and 14 g/t Ag (1.84% CuEq)

The calculation of this metal equivalent is based on the following assumptions.

Metal	Mining Recovery %	Dilution %	Recovery %	Payability %	Forecast Price	Price Unit
Copper	0.9	0.05	0.6	0.7	\$6,600	USD/Tonne
Cobalt	0.9	0.05	0.85	0.75	\$55,000	USD/Tonne

Price assumptions used when calculating copper equivalent grades were based on recent historical metal prices at the time of calculation (2018). Metallurgical assumptions are based on extensive metallurgical testwork undertaken on the two deposits to 2018 across various potential flowsheets involving both floatation and leaching. Ag analyses in the estimation and metallurgical testwork were considered insufficient at the time to include in the metal equivalent calculation.

Application of these assumptions resulted in the following calculation of CuEq:

$$CuEq\% = Cu\% + 0.0012 \times Co~ppm$$

It is the opinion of the company that both sets of prices used in the calculations are reasonable to conservative long-term forecasts for real dollar metal prices during the years most relevant to the deposits (approx. 2026-2030).

It is the opinion of the company that all of the elements included in the metal equivalent calculations have a reasonable potential to be recovered and sold.

For full details of the Emmie Bluff Metal Equivalent calculation, please see "Standout 43Mt Maiden Cu-Co Resource at Emmie Bluff", released to the ASX on 20<sup>th</sup> December 2021 and available at <a href="https://www.codaminerals.com/wp-content/uploads/2021/12/20211220">https://www.codaminerals.com/wp-content/uploads/2021/12/20211220</a> Coda ASX-ANN Standout-43Mt-Maiden-Cu-Co-Resource-at-Emmie-Bluff RELEASE.pdf.

For full details of the MG14/Windabout Metal Equivalent Calculation, please see "Confirmation of Exploration Target & Mineral Resource and Ore Reserve Statement", released to the ASX on 23<sup>rd</sup> October 2020 and available at <a href="https://www.codaminerals.com/wp-content/uploads/2020/10/20201026">https://www.codaminerals.com/wp-content/uploads/2020/10/20201026</a> Coda ASX-ANN Confirmation-Statements-JORC.pdf.

### Forward Looking Statements

This announcement contains 'forward-looking information' that is based on the Company's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to the Company's business strategy, plans, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations, mineral reserves and resources, results of exploration and related expenses. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'potential', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this announcement are cautioned that such statements are only predictions, and that the Company's actual future results or performance may be materially different. Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking information.





# Appendix 2: Detailed Technical Information and JORC Table ${\bf 1}$

## Section 1 Sampling Techniques and Data

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

Criteria .	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. 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> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Metallurgical sample was taken from sample drilled and composited in 2018/2019.</li> <li>Samples were collected as 8 inch core from two drillholes in the Windabout deposit.</li> <li>The material has been kept in cold storage since compositing/flotation to minimise oxidation.</li> </ul>



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Criteria	JORC Code explanation	Commentary
Drilling techniques	<ul> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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).</li> </ul>	<ul> <li>Drilling has not been reported as part of this release.</li> <li>Metallurgical sample was taken from 8" diamond core (Windabout).</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul> <li>Drilling has not been reported as part of this release.</li> <li>Metallurgical sample was taken from diamond drilling at Windabout, where recovery is typically excellent. No recovery issues were noted in the holes/at the depths from which sample was derived.</li> </ul>
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> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Drilling has not been reported as part of this release. No Mineral Resource has been estimated as part of this announcement.</li> <li>All core was qualitatively logged by suitably qualified field geologists at the time of drilling.</li> </ul>







Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all subsampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Drilling has not been reported as part of this release.</li> <li>Tapley Hill Fm shale (host rock) is a fine grained shale, mineralogy is known to be fine grained from field logging/XRD – grain size is not considered a relevant factor for sampling representivity but is a factor in metallurgical properties.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>Original assays via sodium peroxide fusion, ICP-OES/ICP-MS (Ag).</li> <li>All assays were undertaken under the supervision of Strategic Metallurgy at the ALS lab in Perth, Western Australia using Base Metals by XRF BM.</li> </ul>

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Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>No details are available of repeats, standards, etc. or other assay verification tests undertaken. Duplication and verification of metallurgical results will be undertaken as part of follow up test work using the same sample composite.</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Drilling has not been reported as part of this release.</li> <li>Collar details provided below were ascertained using handheld GPS and are reported in the GDA 94, MGA Zone 53 datum.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Drilling has not been reported as part of this release.</li> <li>Representative composites was made of material from a number of holes to improve representivity.</li> </ul>
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 orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	Drilling has not been reported as part of this release.

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Criteria	JO	ORC C	ode explanation	Commo	entary
Sample		•	The measures taken to ensure sample security.	•	Metallurgical samples were provided by Coda to Strategic Metallurgy for cold
security					storage, and was used in this test work.
				•	Sample has been consistently held and stored by primary contractors to Coda
					Minerals in what the company considers to be secure settings.
Audits	or	•	The results of any audits or reviews of sampling	•	No audits, umpire assays or reviews have been undertaken.
reviews			techniques and 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	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>Windabout is located on EL 6518</li> <li>The tenement is owned by Coda Minerals, formally as a 70:30 split between by Coda Minerals Ltd and Terrace Mining Pty Ltd (a wholly owned subsidiary of Coda).</li> <li>The tenure is in good standing and is considered secure at the time of this release. No other impediments are known at this time.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>Historical exploration of the Windabout prospect has been undertaken by (among others) Mt Isa Mines, Gunson Resources, Torrens Mining and Gindalbie Metals (Coda's predecessor company).</li> <li>With the exception of data from Gindalbie Metals, all historical results used to guide Coda's exploration has been obtained from the Geological Survey of South Australia via the South Australian Resources Information Gateway (SARIG).</li> </ul>



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Criteria	JORC Code explanation	Commentary
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The Elizabeth Creek project, of which Emmie Bluff is a part, sits in the Stuart Shelf within the broader Olympic Copper Province in South Australia.</li> <li>Windabout mineralisation is hosted in the dolomitic shales and dolarenites of the Neoproterozoic Tapley Hill Formation. This formation unconformably overlies the Meso/Palaeoproterozoic Pandurra Formation due to local uplifting associated with the Pernatty Upwarp. This unconformity, as well as structures associated with the Pernatty Upwarp, represent the most likely fluid flow pathways associated with the emplacement of metal bearing sulphides.</li> <li>Windabout mineralisation closely resembles mineralisation in the MG14 and Emmie Bluff resources found approximately 7km southeast and 40 kilometres to the north, repsectively, also within the broader Elizabeth Creek tenure. It is considered to fall within the broad "Zambian-style" family of sediment hosted copper deposits.</li> </ul>
Drill hole Information	<ul> <li>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:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	Drilling has not been reported as part of this release.     Sample was taken from the following drillholes to generate the composite tested:    Hole ID   EOH   East   North   RL   Dip   Azi

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Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	
Diagrams	<ul> <li>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.</li> </ul>	No additional diagrams are considered relevant for this release.
Balanced reporting	<ul> <li>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.</li> </ul>	
Other substantive exploration data	<ul> <li>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.</li> </ul>	release.







Criteria	JORC Code explanation	Commentary
Further work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Coda intends to undertake additional work to replicate this result and optimise the reagent regime and flotation technique, as described in the body of the announcement.</li> <li>No other diagrams are considered relevant to this release.</li> </ul>



