

#### **News Release**

# Murchison Releases Assays for Remaining Holes Drilled at Barre de Fer Zone, Confirms High-Grade Near Surface Nickel-Copper-Cobalt Sulphide Mineralization

January 17<sup>th</sup>, 2023 (Burlington, Ontario): **Murchison Minerals Ltd.** ("Murchison" or the "Company") (TSXV: MUR | OTCQB: MURMF) is pleased to announce assay results for the remaining eight diamond drillholes, from the Barre de Fer ("BDF") Zone, drilled as part of the 2022 Summer Exploration Program on the 100% - owned HPM (Haut-Plateau de la Manicouagan) Project, located in Quebec. The drillholes from today's release successfully expanded mineralization down dip as well as along strike to the north and south of the Barre de Fer (BDF) Zone. The results confirm the previously released pXRF results and further demonstrate that the BDF Zone remains open and unconstrained, along strike, and at depth. Future drilling will continue to focus on systematically expanding and delineating the BDF Zone.

# **Highlights**

- BDF22-010 intersected multiple strong intervals of massive to semi-massive mineralization including:
  - o 19.92 m at 1.17% NiEq or 3.49% CuEq (29.71m to 49.63 m)
    - including 4.66 m at 2.55% NiEq or 7.59 CuEq (41.34 m to 46.0 m)
  - 7.59 m at 1.78% NiEq or 5.31% CuEq (56.41 to 64.0 m)
    - including 4.03 m at 3.15% NiEq or 9.37% CuEq (56.41 m to 60.44 m)
- BDF22-003 intersected multiple shallow intervals of mineralization including:
  - o 5.5 m at 0.77% NiEq or 2.29% CuEq (8.5 m to 14.00 m)
  - 2.3 m at 3.56% NiEq or 10.60% CuEq (25.37 m to 27.67 m)
  - 4.31 m at 2.39% NiEq or 7.13% CuEq (36.69 m to 41.0 m)
- BDF22-007 intersected extensive amounts of disseminated to stringer mineralization including:
  - 55.98 m at 0.44% NiEq or 1.32% CuEq (256.5 m to 312.48 m)
    - including 16.0 m at 0.62% NiEq or 1.84% CuEq (258.5 m to 274.5 m)
  - 39.05 m at 0.41% NiEg or 1.21% CuEg (366.5 m to 405.55 m)
    - including 9.31 m at 0.81% NiEq or 2.41% CuEq (379.60 m to 388.91 m)
- The results to date have successfully expanded the preliminary modelled mineralization, the current dimensions of the BDF Zone are:

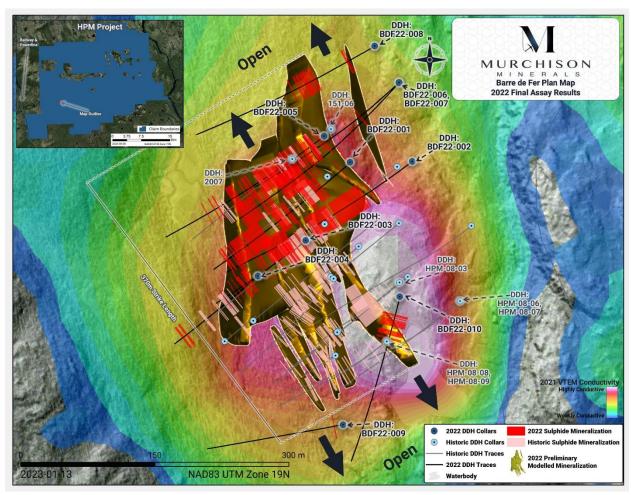
- Mineralization at depth has now been extended down to 475 m, versus the preliminary model at 295 m
- Along strike, the zone of mineralization has been extended from 315 m to 370 m
- Mineralization was expanded along the width of the mineralized zone from 150 m to 200 m, with individual lenses now modelled up to 48 m in thickness, compared to the 28 m in the preliminary version

## Murchison Minerals President and CEO Troy Boisjoli comments:

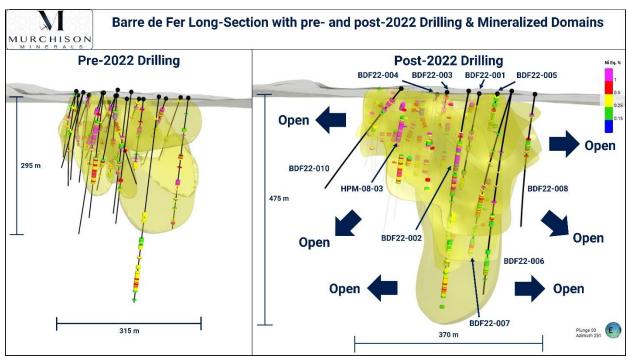
"The 2022 Summer Exploration program had three main objectives: expansion and delineation of the Barre de Fer Zone, discovery of new nickel-sulphide showings on surface via prospecting, and the identification of additional EM anomalies through property wide geophysics – with today's release I am pleased to report all objectives were achieved and have surpassed our expectations. Today's results from Barre de Fer demonstrate the Zone is near-surface and contains high-grade nickel-sulphide mineralization throughout its footprint - furthermore, the Zone remains open and unconstrained, and primed for future expansion. The opportunity at HPM is huge, with the BDF Zone as HPM's flagship, and a pipeline of de-risked nickel-sulphide showings, our aim is to make 2023 a banner year for the Company. In an industry where nickel projects are scarce, and with Quebec being one of the top mining jurisdictions globally, HPM is an emerging nickel district that should not be overlooked."

## Murchison Minerals Vice-President of Exploration John Shmyr comments:

"Today's results mark the finalization of assay data from our highly successfully expansion and delineation program at the Barre de Fer Zone. Results from the assays continue to prove the exceptional nature of BDF and expand our understanding of the geology and geometry of the Zone. Crucially, as we expand our understanding at BDF, this is helping guide our planning for the 2023, with respect to future expansion of the Zone and regionally along trend. We are just scratching the surface, and what we are seeing has excited that the best is yet to come."



**Figure 1:** Location map of Barre de Fer looking down, showing drill holes BDF22-001 to BDF22-010 with the updated preliminary mineralized domain model.



**Figure 2:** Long Section View of the Barre de Fer Zone mineral zone looking South-west showing the previous model (left) and updated model (right) of the nickel mineralization, 2022 drill holes highlighted in black on the right.

Table 1: BDF22-003 to 010 Highlighted Results

| Table 1. DDI 22 000 to 010 Highlighted Results |           |             |           |                 |      |      |      |         |         |
|--|-----------|-------------|-----------|-----------------|------|------|------|---------|---------|
| Hole ID  |           | From<br>(m) | To<br>(m) | Interval<br>(m) | Ni % | Cu % | Co % | Ni Eq.% | Cu Eq.% |
| BDF22-003                                      |           | 8.5         | 14        | 5.5             | 0.51 | 0.52 | 0.04 | 0.77    | 2.29    |
|  |           | 25.37       | 27.67     | 2.3             | 2.78 | 1.02 | 0.19 | 3.56    | 10.60   |
|  |           | 36.69       | 41        | 4.31            | 1.72 | 1.16 | 0.12 | 2.39    | 7.13    |
|  |           | 44.28       | 49.68     | 5.4             | 1.02 | 0.19 | 0.07 | 1.25    | 3.71    |
|  |           | 75          | 79        | 4               | 0.35 | 0.22 | 0.03 | 0.49    | 1.46    |
|  | Includes  | 75          | 76        | 1               | 0.76 | 0.69 | 0.06 | 1.12    | 3.35    |
|  |           | 154         | 162       | 8               | 0.22 | 0.07 | 0.02 | 0.29    | 0.87    |
|  |           | 188.67      | 189.21    | 0.54            | 0.73 | 0.25 | 0.06 | 0.96    | 2.86    |
| BDF22-004                                      |           | 13.5        | 30        | 16.5            | 0.34 | 0.13 | 0.03 | 0.45    | 1.35    |
|  | Includes  | 13.5        | 16        | 2.5             | 0.44 | 0.24 | 0.03 | 0.60    | 1.79    |
|  | Includes  | 20.5        | 21        | 0.5             | 0.61 | 0.04 | 0.05 | 0.73    | 2.16    |
|  | Includes  | 25          | 30        | 5               | 0.72 | 0.29 | 0.05 | 0.94    | 2.80    |
|  | Including | 25          | 27        | 2               | 1.15 | 0.54 | 0.08 | 1.53    | 4.56    |
| BDF22-005                                      |           | 66          | 91.68     | 25.68           | 0.21 | 0.08 | 0.02 | 0.28    | 0.82    |
|  |           | 96          | 98        | 2               | 0.42 | 0.10 | 0.03 | 0.52    | 1.54    |
|  |           | 110.7       | 149.29    | 38.59           | 0.23 | 0.13 | 0.02 | 0.31    | 0.93    |
|  |           | 163         | 175       | 12              | 0.13 | 0.05 | 0.01 | 0.17    | 0.50    |
|  |           | 194.25      | 209.6     | 15.35           | 0.32 | 0.14 | 0.03 | 0.43    | 1.27    |

|           | Includes | 205.76 | 207.67 | 1.91  | 1.57 | 0.61 | 0.11 | 2.03 | 6.04 |
|-----------|----------|--------|--------|-------|------|------|------|------|------|
| BDF22-006 |          | 136.78 | 137.82 | 1.04  | 0.51 | 0.18 | 0.04 | 0.65 | 1.95 |
|           |          | 213    | 214.95 | 1.95  | 0.88 | 0.34 | 0.06 | 1.12 | 3.33 |
|           |          | 248.4  | 251.9  | 3.5   | 0.86 | 0.32 | 0.06 | 1.09 | 3.25 |
|           |          | 278.51 | 305    | 26.49 | 0.22 | 0.10 | 0.02 | 0.30 | 0.89 |
|           | Includes | 284    | 289.1  | 5.1   | 0.52 | 0.23 | 0.04 | 0.68 | 2.04 |
|           |          | 356.5  | 368    | 11.5  | 0.15 | 0.07 | 0.01 | 0.21 | 0.61 |
|           |          | 376.42 | 415    | 38.58 | 0.18 | 0.09 | 0.02 | 0.25 | 0.74 |
|           | Includes | 408.5  | 410.5  | 2     | 0.49 | 0.25 | 0.04 | 0.66 | 1.97 |
|           |          | 176.25 | 177.25 | 1     | 0.76 | 0.53 | 0.05 | 1.06 | 3.17 |
|           |          | 232.48 | 233.98 | 1.5   | 0.36 | 0.20 | 0.03 | 0.49 | 1.45 |
|           |          | 238.8  | 240.8  | 2     | 0.45 | 0.53 | 0.04 | 0.71 | 2.11 |
|           |          | 245.34 | 248.84 | 3.5   | 0.59 | 0.20 | 0.04 | 0.75 | 2.24 |
| BDF22-007 |          | 256.5  | 312.48 | 55.98 | 0.33 | 0.17 | 0.02 | 0.44 | 1.32 |
|           | Includes | 258.5  | 274.5  | 16    | 0.46 | 0.25 | 0.03 | 0.62 | 1.84 |
|           |          | 335.73 | 358.23 | 22.5  | 0.12 | 0.06 | 0.01 | 0.17 | 0.51 |
|           |          | 366.5  | 405.55 | 39.05 | 0.30 | 0.15 | 0.03 | 0.41 | 1.21 |
|           | Includes | 379.6  | 388.91 | 9.31  | 0.60 | 0.31 | 0.05 | 0.81 | 2.41 |
| BDF22-008 |          | 52.9   | 58     | 5.1   | 0.23 | 0.13 | 0.01 | 0.29 | 0.88 |
|           |          | 118.5  | 153.5  | 35    | 0.20 | 0.07 | 0.02 | 0.26 | 0.78 |
|           | Includes | 142.85 | 147.72 | 4.87  | 0.44 | 0.13 | 0.03 | 0.55 | 1.65 |
|           |          | 163.25 | 164.75 | 1.5   | 0.41 | 0.19 | 0.02 | 0.52 | 1.56 |
| BDF22-010 |          | 29.71  | 49.63  | 19.92 | 0.83 | 0.60 | 0.06 | 1.17 | 3.49 |
|           | Includes | 41.34  | 46     | 4.66  | 1.83 | 1.26 | 0.13 | 2.55 | 7.59 |
|           |          | 56.41  | 64     | 7.59  | 1.39 | 0.48 | 0.10 | 1.78 | 5.31 |
|           | Includes | 56.41  | 60.44  | 4.03  | 2.46 | 0.84 | 0.17 | 3.15 | 9.37 |
|           |          | 68     | 71.03  | 3.03  | 0.64 | 0.23 | 0.05 | 0.83 | 2.47 |

<sup>\*</sup>Reported as core length, true thickness is not known. \*\*Nickel Equivalent (NiEq) & Copper Equivalent (CuEq) values were calculated using the following USD metal prices from Oct 7, 2022: \$10.145/lb Nickel, \$3.4067/lb Copper, and \$23.566/lb Cobalt. NiEq.% was calculated using Ni%+((Cu Price/Ni Price) \*Cu %)+((Co Price/Ni Price) \*Co %). CuEq.% was calculated using Cu%+((Ni Price/Cu Price)\* Ni %)+((Co Price/Cu Price)\*Co %).

## 2022 Summer Diamond Drilling

During the 2022 summer exploration program at HPM, a total of 13 diamond drillholes were completed, comprising 4,316 metres. This includes 1) drill holes at BDF, and an additional 3 holes at Syrah. The pXRF results for the ten holes drilled at BDF were previously released and lab assays have now been released for all drilling completed at BDF.

Today's release of lab assay results as well as the previously released assay results from BDF22-001 & 002 validate the rigorous Direct Rock Sampling (DRS) Portable X-Ray Fluorescence (pXRF) process that the Company developed in advance of the 2022 Summer Exploration Program. The DRS process allowed the Company to produce near laboratory quality results in the field. In turn,

this process enabled the Company to model zones of mineralization in real time, creating a dynamic exploration process which was unaffected by laboratory delays faced by many industry peers.

Murchison expects to release the assay results from the remaining 3 drillholes completed at the Syrah target once results have been finalized and interpreted.

**Table 2: Drill Hole Information** 

| Hole      | Easting UTM* | Northing UTM* | Elevation (m) | Azimuth (°) | Dip (°) | Length (m) |
|-----------|--------------|---------------|---------------|-------------|---------|------------|
| BDF22-003 | 614872       | 5722814       | 889           | 232         | -63     | 251        |
| BDF22-004 | 614818       | 5722774       | 884.6         | 232         | -45     | 176        |
| BDF22-005 | 614892       | 5722930       | 886           | 232         | -55     | 351        |
| BDF22-006 | 614976       | 5722990       | 891           | 223         | -65     | 461        |
| BDF22-007 | 614976       | 5722990       | 891           | 232         | -55     | 409        |
| BDF22-008 | 614949       | 5723031       | 885           | 239         | -52     | 350        |
| BDF22-009 | 614914       | 5722608       | 890           | 260         | -45     | 221        |
| BDF22-010 | 614977       | 5722751       | 896           | 195         | -46     | 280        |

<sup>\*</sup>UTM Projected Coordinate System: NAD83 UTM Zone 19N

#### **BDF Mineralization**

The mineralization observed at BDF occurs predominantly as two different types: i) Meter to multimetre intervals of massive and brecciated sulphide within zones of stringer and disseminated sulphide mineralization, hosted in gabbronorite and peridotite, ii) Disseminated sulphide with lesser stringer to net sulphide, over broad intervals, hosted within a gabbronorite. The sulphide mineralization consists of pyrrhotite with granular pentlandite and stringer chalcopyrite, or as chalcopyrite loops with pentlandite within massive pyrrhotite.

## QA/QC

Murchison has implemented and is adhering to a strict Quality Assurance/Quality Control program. NQ-size core was drilled, and mineralized intervals were marked by geologists during core description. The marked intervals were sampled using a core saw, one-half is kept as a witness sample at core facility in Saguenay, Quebec and the other assigned a unique number and placed within a plastic bag. The specific gravity of every 10th sample was measured using the mass-in-air / mass-in-water method. Samples were shipped directly to SRC Geoanalytical Labs in

Saskatoon, Saskatchewan. The samples were ground and prepared for analysis by the lab using total digestion. Analyzes were performed using ICP-OES for nickel, copper, and cobalt. Every 25th sample sent to the lab was a field duplicate (quarter core), blanks and certified reference material were also submitted approximately every 25th sample.

## **About the HPM Project**

The HPM Project is located within the Haut-Plateau de la Manicouagan area, east of the Manicouagan structure, the site of a major 215 Ma impact event. The extensive reservoir at Manicouagan supports five hydro-power plants. The existing Quebec Cartier rail line, located within the HPM Project area, links Labrador City to Port Cartier and Sept Iles, two major iron ore port facilities.



Figure 3: HPM Location Map

The claims host prospective gabbroic, ultramafic and anorthositic bodies within the Manicouagan metamorphic complex and are associated with significant nickel-copper-cobalt sulphide mineralization first identified by Falconbridge in 1999, where they discovered extensive nickel-bearing sulphide mineralization at BDF during drilling in 2001 - 2002. Murchison Minerals Ltd.'s predecessor – Manicouagan Minerals – drilled in the area in 2008 and 2009. The majority of the past drilling at the HPM Project targeted the BDF geophysical conductor and confirmed the presence of nickel-copper-cobalt sulphide mineralization over approximately 300-metres strike length to a depth of 295 metres. The mineralization remains open at depth and partially along strike.

In March of 2022, the Company completed a comprehensive data compilation, verification and modelling program, comprising all previous drill hole data from the BDF Zone. The modelling program consisted of developing a preliminary 3D interpretation of nickel mineralization at BDF. Based on the modelling, the Zone outcrops on surface, extends to a vertical depth of 295 m, has a strike length of 315 m, and is composed of multiple stacked lenses over a maximum footprint width of 150 m. Individual lenses have a maximum thickness of 28 m. During the 2022 Summer Exploration Program, diamond drilling focused on the expansion and delineation of mineralization at BDF. Those results are currently being evaluated and the Preliminary model will be updated as results become available. No resource estimates have been completed on the Zone to date.

After Murchison acquired 100% ownership of the property in 2019, the Company focused exploration work on the camp-scale potential of the region. Aerial EM surveys completed in the spring of 2021 identified more than 50 anomalous conductors. Prospecting crews were able to traverse three (3) of the more than 50 anomalies, and discovered new outcrops of nickel-bearing sulphide mineralization in the process. The prospecting program was followed by an inaugural drill program at the PYC Target area – an EM anomaly with a 1.95-km strike length. Subsequent to the completion of the drill program at PYC, the Company increased its dominant land position in the Haut-Plateau region from 139 km² to 576 km². Finally, as a result of the spring 2022 VTEM survey, completed over the remaining 85% of the HPM property area, the Company further increase its land holdings at HPM to 648 km².

## **Qualifying Statement**

The foregoing scientific and technical disclosures on the HPM Project have been reviewed by John Shmyr, P.Geo., VP Exploration, a registered member of the Professional Engineers and Geoscientists of Saskatchewan and current holder of a special authorization with the Ordre des Géologues du Québec. Mr. Shmyr is a Qualified Person as defined by National Instrument 43-101. The Qualified Person has verified the data disclosed in this release, including sampling, analytical and test data underlying the information contained in this release. Mr. Shmyr consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

Some data disclosed in this News Release relating to sampling and drilling results is historical in nature. Neither the Company nor a qualified person has yet verified this data and therefore

investors should not place undue reliance on such data. In some cases, the data may be unverifiable due to lack of drill core. Mineralization hosted on adjacent and/or nearby and/or geologically similar properties is not necessarily indicative of mineralization hosted on the Company's properties.

## **About Murchison Minerals Ltd. (TSXV: MUR, OTCQB: MURMF)**

Murchison is a Canadian-based exploration company focused on nickel-copper-cobalt exploration at the 100% - owned HPM Project in Quebec and the exploration and development of the 100% - owned Brabant Lake zinc-copper-silver project in north-central Saskatchewan. The Company also holds an option to earn 100% interest in the Barraute VMS exploration project also located in Quebec, north of Val d'Or.

Additional information about Murchison and its exploration projects can be found on the Company's website at <a href="www.murchisonminerals.ca">www.murchisonminerals.ca</a> . For further information, please contact:

Troy Boisjoli, President and CEO, Erik H Martin, CFO, or Justin LaFosse, Director Corporate Development Tel: (416) 350-3776 info@murchisonminerals.com

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#### Forward-Looking Information

The content and grades of any mineral deposits at the Company's properties are conceptual in nature. There has been insufficient exploration to define a mineral resource on the property and it is uncertain if further exploration will result in any target being delineated as a mineral resource.

Certain information set forth in this news release may contain forward-looking information that involves substantial known and unknown risks and uncertainties. This forward-looking information is subject to numerous risks and uncertainties, certain of which are beyond the control of the Company, including, but not limited to, the impact of general economic conditions, industry conditions, and dependence upon regulatory approvals. FLI herein includes, but is not limited to: future drill results; stakeholder engagement and relationships; parameters and methods used with respect to the assay results; the prospects, if any, of the deposits; future prospects at the deposits; and the significance of exploration activities and results. FLI is designed to help you understand management's current views of its near- and longer-term prospects, and it may not be appropriate for other purposes. FLI by their nature are based on assumptions and involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by such FLI. Although the FLI contained in this press release is based upon what management believes, or believed at the time, to be reasonable assumptions, the Company cannot assure shareholders and prospective purchasers of securities of the Company that actual results will be consistent with such FLI, as there may be other factors that cause results not to be as anticipated, estimated or intended, and neither the Company nor any other person assumes responsibility for the accuracy and completeness of any such FLI. Except as required by law, the Company does not undertake, and assumes no obligation, to update or revise any such FLI contained herein to reflect new events or circumstances, except as may be required by law. Unless otherwise noted, this press release has been prepared based on information available as of the date of this press release. Accordingly, you should not place undue reliance on the FLI or information contained herein. Furthermore, should one or more of the risks, uncertainties or other factors materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in FLI. Assumptions upon which FLI is based, without limitation, include: the ability of exploration activities to accurately predict mineralization; the accuracy of geological modelling; the ability of the Company to complete further exploration activities; the legitimacy of title and property interests in the deposits; the accuracy of key assumptions, parameters or methods used to obtain the assay results; the ability of the Company to obtain required approvals; the results of exploration activities; the evolution of the global economic climate; metal prices; environmental expectations; community and nongovernmental actions; and any impacts of COVID-19 on the deposits, the Company's financial position, the Company's ability to secure required funding, or operations. Risks and uncertainties about the Company's business are more fully discussed in the disclosure materials filed with the securities regulatory authorities in Canada, which are available at

| www.sedar.com. Neither TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in policies of the TSX Venture Exchange accepts responsibility for the adequacy or accuracy of this release. | је |
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