



## News Release

# Murchison Minerals Commences Summer Exploration Program and Completes Large Scale VTEM Survey on its 100% Owned HPM Ni-Cu-Co Project Identifying a Significant Number of New EM Anomalies

July 7<sup>th</sup>, 2022 (Burlington, Ontario): **Murchison Minerals Ltd.** (“Murchison” or the “Company”) (TSXV: **MUR** OTCQB: **MURMF**) is pleased to announce the commencement of its summer exploration program with crews mobilizing to site mid-June, and the start of the prospecting phase of the program on the 100% - owned HPM (Haut-Plateau de la Manicouagan) Project, located in Quebec. Furthermore, the Company has also begun the process of probing previous drill collars at the Barre de Fer (BDF) Zone with a downhole borehole electromagnetic (EM) survey. The borehole EM surveys will help refine and target areas of expansion and delineation for the upcoming drilling phase of the summer program. Additionally, the Company also recently completed the initial 3212 line-km airborne EM survey, at 200 metre spacing, which commenced in April of 2022, and covers the remaining 85% of the HPM claim block. The preliminary results from the VTEM survey have detected a significant number of new prospective geophysical anomalies. Due to the newly detected anomalies, the Company has staked an additional 72 km<sup>2</sup> of claims contiguous to the currently defined HPM property; HPM’s property area is now 648 km<sup>2</sup>. The Company has also begun flying an additional 980 line-km near the newly located prospective anomalies at 100 metre line spacing.

## HPM Regional Prospecting Program

The Company has completed mobilization of a temporary work camp that will support the diamond drilling phase of the summer exploration program as well as the currently ongoing prospecting program. The prospecting program consists of 3 teams which are utilizing GDD’s “Beep Mat” technology to locate near surface nickel-bearing sulphide mineralization associated with the newly identified geophysical anomalies. Any anomalies that are detected using the Beep Mat are then sampled using a small backpack diamond drill. Preliminary work at the BDF Zone has been successful in locating multiple new areas of surface mineralization, assays are pending for those samples (Figure 1).



**Figure 1:** Example of the recently collected backpack drill core from newly located surface BDF mineralization with observable pyrrhotite (iron sulphide), chalcopyrite (copper sulphide) and pentlandite (nickel sulphide).

### **Advancing Exploration at BDF**

In concurrence with the ongoing prospecting program, the Company has commenced borehole EM surveying on previously drilled holes at the BDF Zone. Additionally, the lone hole previously drilled at the nearby Syrah Target – which is interpreted to have missed the geophysical target – has also been surveyed. The borehole EM survey at Syrah has detected an off-hole EM response which is indicative of potential nickel bearing sulphide mineralization. The borehole EM work is ongoing, and the Company will use the results to better refine areas for expansion at the BDF Zone as well as to assist in drill targeting at the prospective Syrah Target.

The Company has also recently compiled the drill core from the 2008 exploration program – at the BDF Zone – to a core storage facility in Saguenay, QC. The 2008 exploration program was operated by Murchison Minerals' predecessor company, Manicouagan Minerals, that completed 13 of the 25 drill holes that currently make up the BDF Zone. The mineralized portions of the drill core were stored indoors and remain in great condition (Figure 2). Additionally, the 2008 drill core is now undergoing relogging and geochemical sampling, which will be used to update the current geological interpretation. Those results will also assist in targeting expansion areas at BDF during the summer drill program.

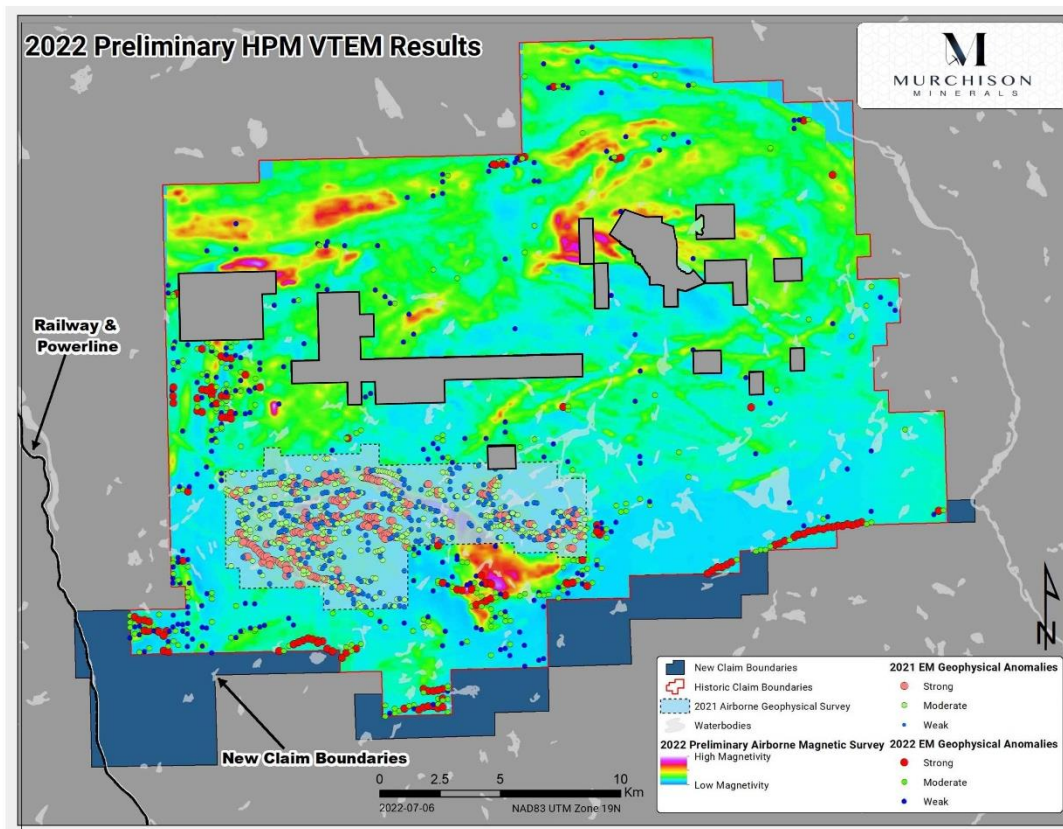


**Figure 2:** Drill core from BDF with observable pyrrhotite (iron sulphide), chalcopyrite (copper sulphide) and pentlandite (nickel sulphide) mineralization from an interval in Hole HPM08-04 which assayed 1.74% Ni, 0.66% Cu and 0.09% Co over 15.06 metres.

## Preliminary HPM VTEM Results

Murchison is also pleased to announce the preliminary results from the 2022 Airborne VTEM survey. The survey was designed to cover the remaining 85% of the HPM claim block which was not previously tested with modern airborne geophysics. The survey consisted of 3212 line-km flown at a 200-metre spacing, and successfully detected a significant number of new prospective EM anomalies (Figure 3). The new anomalies are currently being flown with VTEM at 100 metre line spacing for increased spatial resolution. The additional VTEM survey will consist of a further 980 line-km being flown.

The newly identified anomalies will then be followed up with detailed ground prospecting to identify the source on surface. The prospecting work will be used to prioritize the anomalies for future exploration drill targeting. Many of the newly located anomalies have a similar response to the high-grade Ni-Cu-Co BDF Zone, with high conductivity and magnetic responses; these anomalies will be prioritized for prospecting. Once the Company receives final VTEM data, the most prospective anomalies will be selected for 3D geophysical modelling.



*Figure 3: Map of Preliminary 2022 VTEM Data.*



## Summer Drilling Update

The Company is planning to drill at least 7,500 m over the course of the summer program. Most of those metres are expected to be drilled at BDF for the purpose of expansion and delineation, the objective of which is to produce a maiden resource by Q4 of this year, or early Q1 of 2023. The remaining metres will be drilled at the Syrah Target, a 600 m long EM anomaly that lies just 350 m from BDF - the Company's current interpretation shows the possibility that BDF and Syrah are connected at depth. The drilling phase of the summer program will commence once the downhole borehole EM surveys, relogging, and structural analysis have been completed and interpreted.

### **Barre de Fer Zone**

- The BDF Zone (the "Zone") is currently defined by 25 diamond drill holes with 5,564 metres of drilling completed between 2001 and 2008
- Based on the modelling, the Zone outcrops on surface, has a strike length of 315 m, and is composed of multiple stacked lenses over a maximum 150 m wide zone. Individual lenses have a maximum thickness of 28 m. The modelled mineralization extends to a vertical depth of 295 m. Extensive mineralization has also been intersected outside the current model, up to a vertical depth of 440 m. The Zone remains undrilled and unconstrained along strike and at depth.
- Best intersection to date is hole HPM-08-03 drilled to a depth of 345 m intersected five zones of Ni-bearing sulphide mineralization totalling **60.07 m** of composite mineralization (Tables 1 & 2), including:
  - **52.15 m** grading **2.04% NiEq** (1.52% Ni, 0.79% Cu, 0.08% Co from 74.45 m to 126.60 m) including **12.04 m** at **3.00% NiEq** (2.35% Ni, 0.88% Cu, 0.11% Co from 100.71 m to 112.75 m) and **10.56 m** at **2.92% NiEq** (2.15% Ni, 1.17% Cu, 0.11% Co from 85.16 m to 95.72 m)

### **Murchison Minerals President and CEO Troy Boisjoli comments:**

*"With the recent closing of the Private Placement Murchison is well positioned to execute the 2022 HPM exploration program. The objectives for the program are i) expand and define high-grade nickel, copper, cobalt mineralization at BDF and Syrah ii) continue to build a portfolio of highly prospective de-risked exploration targets. The early results have us well placed to achieve these objectives which will significantly advance the HPM project."*

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

*“Murchison is very pleased with the preliminary VTEM results demonstrating multiple new areas which are responding similar to the BDF Zone and we are eager to begin prospecting in these areas. The early prospecting results which have been concentrated at BDF has been very encouraging where the Zone now crops out in several locations across it’s strike length demonstrating good continuity, previously historic prospecting had only found mineralization in one location.”*

**About the HPM Project**

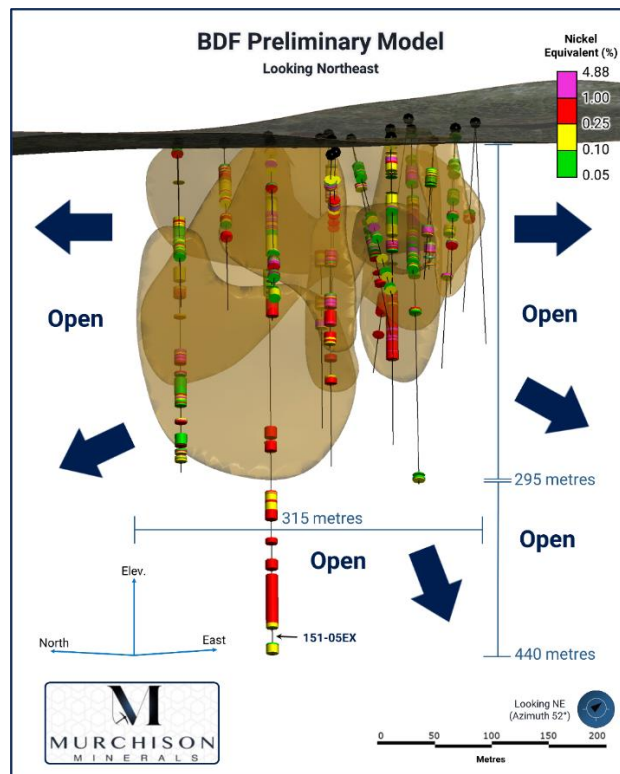
The HPM Project is located within the Haut-Plateau de la Manicouagan area, east of the Manicouagan structure, the site of a major 215 Ma impact event. The extensive reservoir at Manicouagan supports five hydro-power plants. The existing Quebec Cartier rail line, located eight kilometres west of the PYC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



**Figure 4: 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 280 metres. The mineralization remains open at depth and partially along strike.

The Company recently completed a comprehensive data compilation, verification and modelling program, comprising all drill hole data from the BDF Zone. The modelling program consisted of developing a preliminary 3D interpretation of nickel mineralization at BDF (Figure 5). 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. However, extensive mineralization has been intersected to a vertical depth of 440 m, and the Zone remains undrilled and unconstrained along strike and at depth. No resource estimates have been completed on the Zone to date.



**Figure 5: Barre de Fer Zone Preliminary Nickel Mineralization Model, isometric view looking Northeast**

(Nickel Equivalent (NiEq) values were calculated using the following USD metal prices from Mar 23, 2022: \$12.76/lb Nickel, \$4.76/lb Copper and \$37.20/lb Cobalt.)

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 km<sup>2</sup> to 576 km<sup>2</sup>.

### **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. Mr. Shmyr is a Qualified Person as defined by National Instrument 43-101.

### **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. Murchison currently has 218.2 million shares issued and outstanding.

Additional information about Murchison and its exploration projects can be found on the Company's website at [www.murchisonminerals.ca](http://www.murchisonminerals.ca). For further information, please contact:

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

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