Murchison Intersects Best Hole to Date on HPM Property 121.2 metre Interval with a pXRF Estimate of 1.39% Ni Eq (or 4.14% Cu Eq) – Including 21.0 metre at 3.43% Ni Eq (or 10.25% Cu Eq)

written by Raj Shah | September 14, 2022

September 14, 2022 (Source) – **Murchison Minerals Ltd. ("Murchison" or the "Company") (TSXV:MUR)(OTCQB:MURMF)** is pleased to announce results analysed using portable x-ray fluorescence (pXRF) from the second diamond drillhole, at the Barre de Fer ("BDF") zone, as part of the 2022 Summer Exploration Program on the 100% – owned HPM (Haut-Plateau de la Manicouagan) Project, located in Quebec.

It should be noted that pXRF results provide only an indication of the amount of Ni, Cu, and Co present, Certified assaying of the core samples is still required to accurately determine the amount of mineralization (Nickel-Copper-Cobalt). The Company has implemented rigorous QA/QC procedures utilizing a direct rock sampler (Figure 9) to produce reasonably representative preliminary results (see pXRF Sample Procedures and QA/QC below).

BDF22-002 Highlights

- **The hole was drilled to a depth of 452 m and intersected**

two broad zones of Ni-Cu-Co sulphide bearing mineralization totalling 175.15 m of composite thickness (Table 1) including:

- ***121.20 m estimated at 1.39% pXRF Ni Eq. (123.80 to 245.0 m)***
    - ***Including 10.10 m at 2.75% pXRF Ni Eq. (134.1 to 144.20 m)***
    - ***Including 44.00 m at 2.18% pXRF Ni Eq. (152.00 to 196.00 m)***
    - ***Including 28.80 m at 3.03% pXRF Ni Eq. (152.00 to 180.80 m)***
    - ***Including 21.00 m at 3.43% pXRF Ni Eq. (152.5 to 173.5 m)***
    - ***Including 3.75 m at 3.43% pXRF Ni Eq. (177.05 to 180.8 m)***
    - ***Including 10.50 m at 1.97% pXRF Ni Eq. (207.5 to 218.0 m)***
    - **53.95 m disseminated sulphide zone estimated at 0.25% pXRF Ni Eq. (303.55 to 357.50 m)**
- **Best intersection drilled to date on the HPM Property**
- **The hole successfully confirmed mineralization downdip from DH-151-02, exceeding expectations. The hole also confirmed mineralization up dip of DH-151-05EX.**
- **The majority of the mineralization is outside of the previously modelled zone (Figure 7)**

Figure 1: *Massive sulphide mineralization in BDF22-002 at 152.00 m to 161.00 m.*

Murchison Minerals President and CEO Troy Boisjoli comments:

"The objective of the 2022 drill program was to expand near-surface high-grade nickel, copper, cobalt mineralization at the Barre de Fer Zone and the holes to date are delivering on that objective. The pXRF results from BDF22-002 have exceeded our expectations in terms of estimated grade and thickness – 121.20 m estimated at 1.41% pXRF Ni Eq (or 4.14% Cu Eq) is a very significant nickel bearing magmatic sulphide intersection and I congratulate Murchison's technical team. The 2022 drilling results will enable to Company to materially advance the Ni-Cu-Co HPM Project, at a time when the world is desperate for future supply of critical minerals."

Murchison Minerals Vice-President of Exploration John Shmyr comments:

"The results from BDF22-002 are exceptional and further indicate the size and scale of the sulphide mineralizing system that is present at BDF. Our geologic understanding has grown significantly throughout the drill campaign. Our work further confirms BDF as magmatic chonolith type system and other chonolith type deposits like Voisey's Bay are composed of multiple zones, which has the technical team excited about the exploration potential."

Table 1: BDF22-002 pXRF Results

Hole		From (m)	To (m)	Length* (m)	pXRF Ni %	pXRF Cu %	pXRF Co %	pXRF Ni Eq. %**	pXRF Cu Eq. %**
BDF22-002		123.8	245	121.20	1.08	0.59	0.05	1.39	4.14
	Includes	**134.1**	**144.2**	**10.10**	**2.19**	**1.02**	**0.10**	**2.75**	**8.22**
	Includes	**152**	**196**	**44.00**	**1.72**	**0.84**	**0.08**	**2.18**	**6.51**
	Including	***152***	***180.8***	***28.80***	***2.39***	***1.18***	***0.11***	***3.03***	***9.05***
	Including	***152.5***	***173.5***	***21.00***	***2.67***	***1.48***	***0.12***	***3.43***	***10.25***
	Including	***177.05***	***180.8***	***3.75***	***2.95***	***0.56***	***0.14***	***3.43***	***10.24***
	Includes	**207.5**	**218**	**10.50**	**1.45**	**1.05**	**0.08**	**1.97**	**5.89**
		303.55	357.5	53.95	0.20	0.13	0.00	0.25	0.74

** Reported as core length, true thickness is not known. **Nickel Equivalent (Ni Eq) & Copper Equivalent (Cu Eq) values were calculated using the following USD metal prices from Sept 12, 2022: $10.84/lb Nickel, $3.63/lb Copper, and $23.56/lb Cobalt. Ni Eq.% was calculated using Ni%+((Cu Price/Ni Price) *Cu %)+((Co Price/Ni Price) *Co %). Cu Eq.% was calculated using Cu%+((Ni Price/Cu Price)* Ni %)+((Co Price/Cu Price)*Co %).*

Table 2: Drill Hole Information

Hole	Easting	Northing	Elevation (m)	Depth (m)	Azimuth (°)	Dip (°)
BDF22-002	614991	5722902	891	452	233	-57

BDF22-002 Mineralization

The mineralization observed in BDF22-002 occurs within two separate zones. The upper zone comprises multi-metre intervals of massive and breccia sulphide within zones of stringer and disseminated sulphide mineralization hosted in peridotite and norite (Figure 3 & 5).

The lower zone of mineralization (303.55 m to 357.50 m) comprises primarily disseminated sulphide, over a broad 53.95m wide zone hosted within an olivine gabbronorite.

The sulphide mineralization consists of pyrrhotite with granular pentlandite and chalcopyrite loops with pentlandite. The massive sulphide mineralization is predominantly hosted in a dark, moderately serpentinized peridotite and lesser olivine gabbronorites and a dark, fine grained norite. The primary magmatic sulphide mineral textures coupled with the development of disseminated sulphide mineralization and magmatic breccias indicate that the mineralization is similar to chonolith style deposits like Voisey’s Bay. Work progresses to define the stratigraphic controls of the intrusive rocks on the distribution of massive, breccia, and disseminated sulphide types; these controls will guide future exploration in the extension and discovery of additional mineral zone along strike and at depth.

Figure 2: Close-up of *Massive and semi-massive sulphide mineralization in BDF22-002.*

Figure 3: *Massive sulphide mineralization in BDF22-002 at 135.70 m to 180.80 m.*

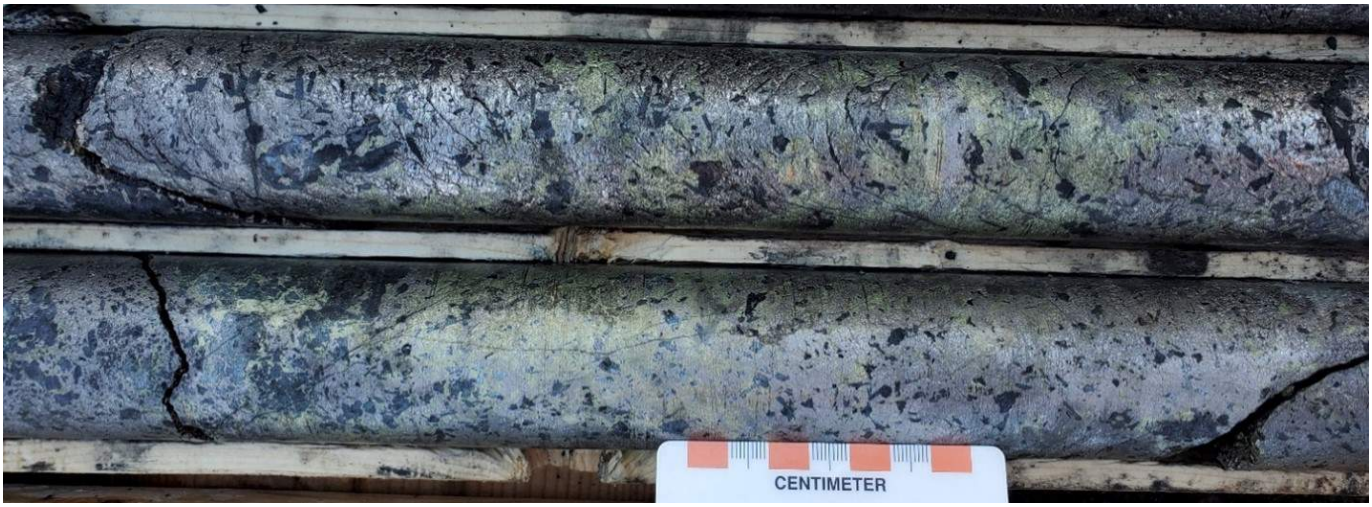

Figure 4: *Zoom in on Massive Sulphide in BDF22-002 displaying observable pentlandite (nickel sulphide) and chalcopyrite (copper sulphide) with pyrrhotite (iron sulphide) mineralization.*

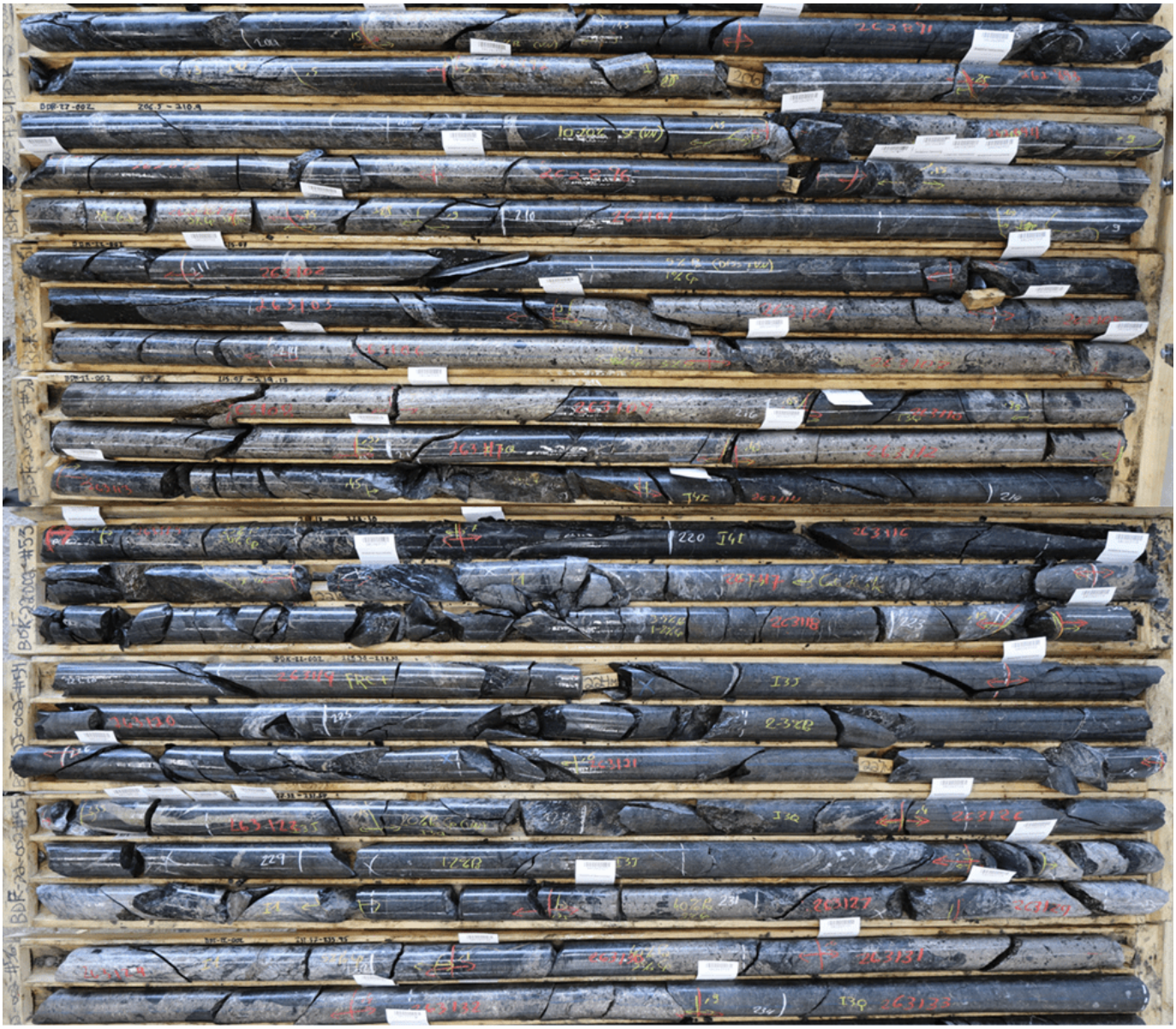

Figure 5: *Massive, semi-massive, stringer to disseminated mineralization observed in BDF22-002 at 204.00 m to 234.00 m.*

2022 Summer Diamond Drilling

During the 2022 summer exploration program, a total of 13 diamond drill holes were completed, comprising 4,316 metres. This includes ten drillholes at BDF, and an additional three holes at Syrah. The drill core is currently undergoing processing and pXRF results are being determined. Results will be released as soon as the data has been verified. The previously released pXRF results from BDF22-001 (See September

8th Release and Table 3) demonstrated significant expansion below the current modeled mineral zones. These results paired with the results from BDF22-002, highlights significantly potential for expansion of the BDF mineral zone and the Company considers these results exceptional.

The Company is progressing towards establishing a maiden resource on BDF by early Q1 of 2023.

Observations made on the drill core including the proportions of sulphide to gangue, the mineralogy of the sulphides, and their textural relationships when coupled with the results from the pXRF have allowed Murchison to prioritize exploration and report new results in a timely way. Samples from BDF22-002 have been sent to the Saskatchewan Research Council's Geoanalytical Laboratory for commercial certified assaying and the Company is awaiting the results.

Table 3: 2022 Drill Campaign pXRF Results to date

Hole		From (m)	To (m)	Length* (m)	pXRF Ni %	pXRF Cu %	pXRF Co %	pXRF Ni Eq. %**	pXRF Cu Eq. %**
BDF22-001		89.95	108	18.05	1.58	0.56	0.08	1.94	5.79
	Includes	**96.5**	**108**	**11.5**	**2.13**	**0.64**	**0.1**	**2.56**	**7.65**
	Includes	**97.8**	**105.9**	**8.1**	**2.82**	**0.78**	**0.13**	**3.36**	**10.04**
		122	132.85	10.85	0.29	0.24	0.02	0.41	1.24
		180.5	189	8.5	0.63	0.3	0.03	0.80	2.37
		196.5	219.2	22.7	0.2	0.1	0	0.23	0.70
		267	336.9	69.9	0.5	0.24	0.04	0.67	1.99
	Includes	**283.4**	**299.5**	**16.1**	**1.03**	**0.48**	**0.08**	**1.36**	**4.07**
BDF22-002		123.8	245	121.2	1.08	0.59	0.05	1.39	4.14
	Includes	**134.1**	**144.2**	**10.1**	**2.19**	**1.02**	**0.10**	**2.75**	**8.22**
	Includes	**152**	**196**	**44**	**1.72**	**0.84**	**0.08**	**2.18**	**6.51**
	Including	***152***	***180.8***	***28.8***	***2.39***	***1.18***	***0.11***	***3.03***	**9.05**
	Including	***152.5***	***173.5***	***21***	***2.67***	***1.48***	***0.12***	***3.43***	**10.25**

** Reported as core length, true thickness is not known. **Nickel Equivalent (Ni Eq) & Copper Equivalent (Cu Eq) values were calculated using the following USD metal prices from Sept 12, 2022: $10.84/lb Nickel, $3.63/lb Copper, and $23.56/lb Cobalt.*

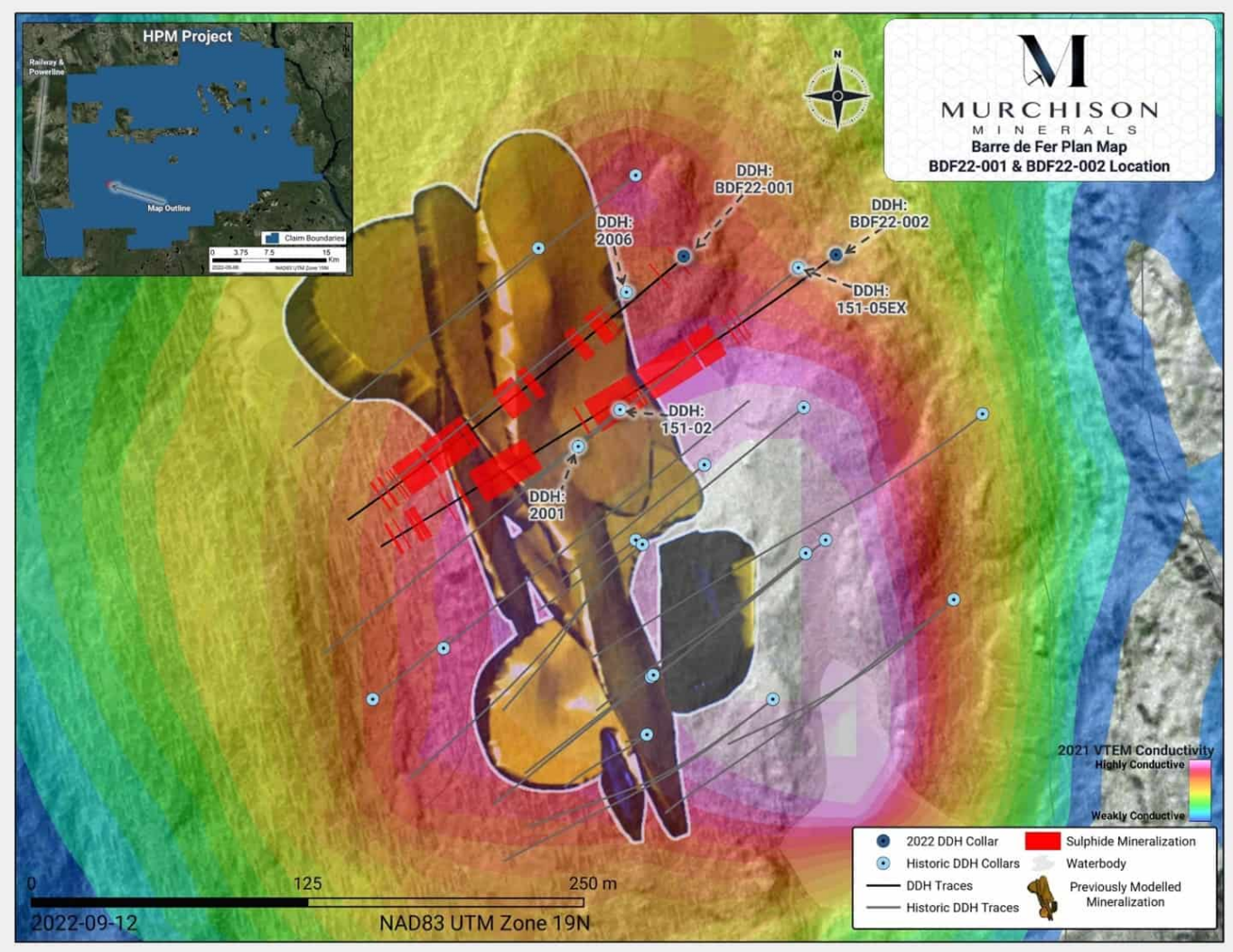

Figure 6: *Location map of Barre de Fer, showing drill hole BDF22-002 & BDF22-001*

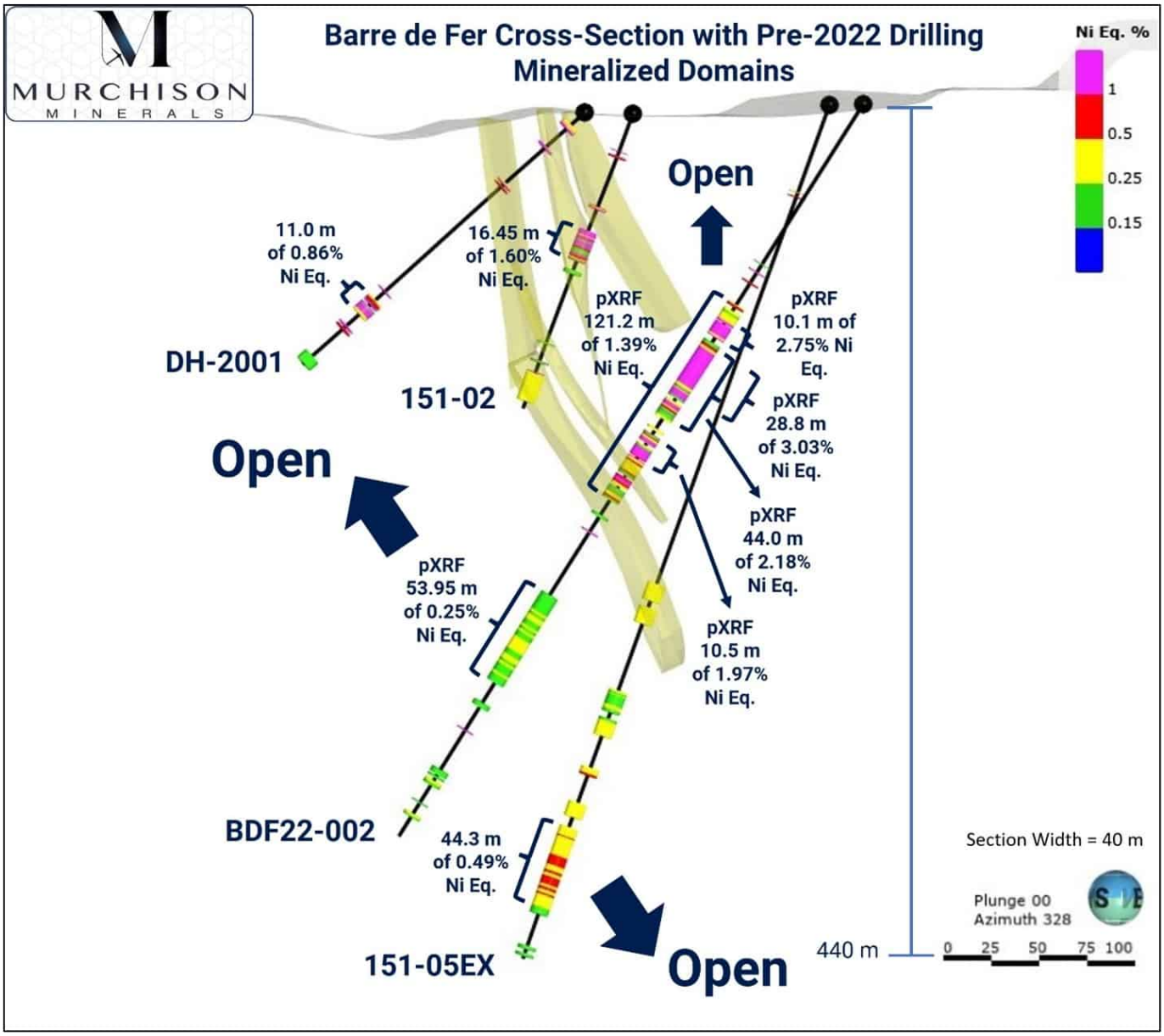

Figure 7: *Cross section of the Barre de Fer Zone mineral zone showing the previous model of the nickel mineralization domains and pXRF results from BDF22-002.*

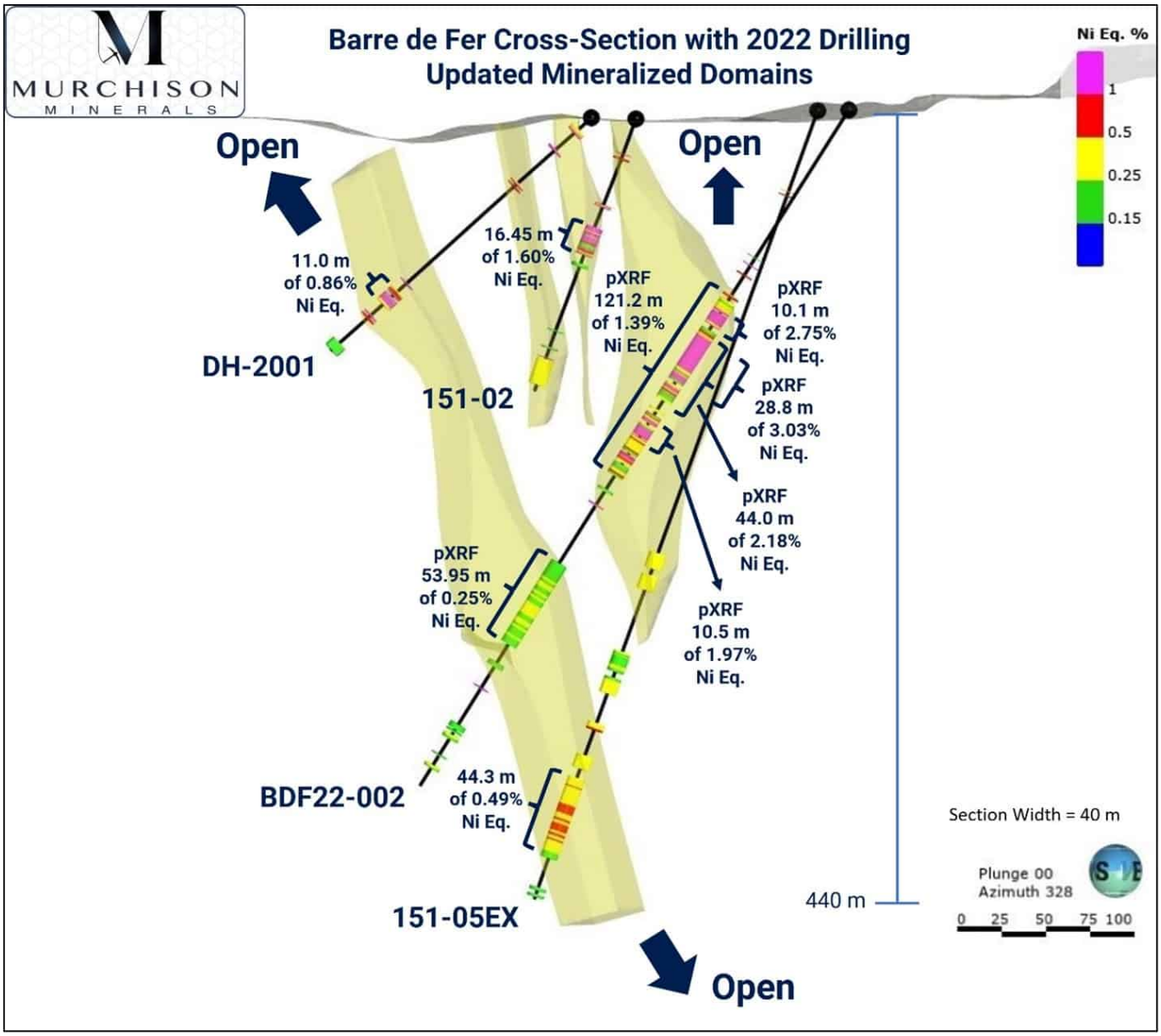

Figure 8: *Cross section of the Barre de Fer Zone mineral zone showing the updated model of the nickel mineralization domains and pXRF results from BDF22-002.*

pXRF Sample Procedures and QA/QC

Murchison has implemented a rigorous pXRF sampling and analysis procedure to support the estimation of Ni, Cu and Co concentrations.

In order to collect a homogenous sample, a direct rock sampler (DRS) was utilized for all samples (Figure 9). The DRS consists

of a modified angler grinder utilizing a diamond blade in which the rock cuttings are collected within a plastic vial. DRS sampling was undertaken from each core interval that is to be submitted to a commercial laboratory for analyses by total digestion ICP-OES and gold platinum palladium by fire assay. The DRS was used to channel the entire length of each sample with a single pass at a uniform depth of 3 mm and was cut without water. Each channel was cut parallel to core axis; adjacent DRS samples were cut along a uniform plane with consistent relative beta rotation angles to the orientation line, irrespective of the minerals to be intersected. The collected powder is pressed into a small puck with a very thin plastic film overtop and labelled with its unique identifying number. Between each sample all equipment was thoroughly cleaned to prevent cross-contamination. The sample pucks represent a continuous sample across the length of the mineralized intervals. The DRS channel sample collects a limited amount of material for analysis through typically course-grained assemblages of sulphide that can create nugget effects. Where coarse grained material is present, individual pXRF results may be different from the total digestion ICP-OES results. The nugget effect however is buffered by the significant quantity of samples that compose each composite interval since some samples will report low and others high as compared to lab assays.

Each sample puck was analyzed using a Niton XL5 XRF analyzer mounted in a test stand. The samples were analyzed for 90 seconds utilizing 3 element filters, each filter configured for a 30 second analysis. For every 10 samples analyzed, a standard was analyzed consisting of certified reference material that was pressed into a sample puck. Five standards were utilized, and the analyzed standard was selected based on the relative nickel grade of the previous samples in order to analyze a standard with comparable metal grade to the unknown. Multiple blank

samples were also prepared by sampling barren quartz hand samples and pressing the material into sample pucks. Regular analysis of the blank material indicates minimal issues regarding sample contamination caused by the diamond blade. Each sample is thus assigned a pXRF Ni, Cu, and Co value which will then be superseded by lab quality assay results when they are received.

Figure 9: *Direct rock sampler, sampled core and example sample puck from BDF22-001.*

Table 4: – Comparitive Table of Average XRF Results vs Standards

Sample	Ni % XRF	Ni % Expected	Cu % XRF	Cu % Expected	Co % XRF	Co % Expected
Oreas 72b (10 analysis)	0.70	0.7086	0.02	0.02	<>	0.01
Oreas 73b (28 analysis)	1.53	1.5	0.05	0.04	0.02	0.02
Oreas 74b (3 analysis)	3.42	3.39	0.11	0.09	0.04	0.05

Oreas 75a (1 analysis)	5.01	5.25	0.20	0.2	0.10	0.09
Oreas 76a (1 analysis)	7.10	7.4	0.29	0.3	0.10	0.12

Table 5: – Example XRF analysis of Blank Material

Sample	Ni % XRF	Cu % XRF	Co ppm XRF
QTZ 1	<>	0.02	<>
QTZ 2	<>	0.05	<>
QTZ 3	0.01	0.03	<>

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.

MURCHISON
MINERALS
HPM Project Location Map
N
Quebec
Map Extent
0 125 250 500 Km
Fermont
Labrador
Hart-Jaune
Hydroelectric Station
HPM Project
Route 389
Sept-Iles
Port-Cartier
Saint Lawrence
River
Baie Comeau
HPM Claim Boundary
Waterbody
Highways
Railway & Powerline
0
100
200 Km
2022-08-01
NAD83 UTM Zone 19N

Figure 10: *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 km^2 to 576 km^2. 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 km^2.

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. 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** . For further information, please contact:

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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.

SOURCE: Murchison Minerals Ltd.