

## MURCHISON CONFIRMS WIDESPREAD NICKEL-COPPER-COBALT SURFACE MINERALIZATION AT ITS PYC TARGET WITH GRADES UP TO 1.27% NICKEL EQUIVALENT (2.59% COPPER EQUIVALENT)

**August 16, 2021 (Toronto, Ontario):** Murchison Minerals Ltd. (“Murchison” or the “Company”) (TSXV: MUR) is pleased to announce that it has received assay results from its June prospecting program at the PYC target area on the 100%-owned HPM (Haut-Plateau de la Manicouagan) property in Quebec. These results, shown in Figure 1, confirm widespread nickel-copper-cobalt surface mineralization across the entirety of the traced 1.7 km strike length of sulphide mineralization ([see June 29, 2021 release](#)). The results are from grab samples and short backpack drill core samples, featuring assays as high as **1.27%** Nickel Equivalent or **2.59%** Copper Equivalent (0.79% Ni, 0.14% Cu, 0.15% Co) from 0.83 metres of backpack drill core. The assay results also confirm mineralization south-east of the PYC target at the newly discovered Dix showing, which assayed as high as **0.90%** Nickel Equivalent or **1.83%** Copper Equivalent (0.44% Ni, 0.39% Cu, 0.10% Co) from 0.45 metres of backpack drill core. *(Note: the backpack drill core samples are being treated as grab samples only used to collect non-weathered sample material.)*

The prospecting results confirm that the PYC target is highly prospective for hosting large-tonnage nickel-copper-cobalt mineralization within a large, semi-massive, pyrrhotite body. The prospecting included the collection of 49 litho-geochemical samples, with 38 of the samples exceeding 0.3% Copper Equivalent (see Figure 1 and Table 1). Murchison has applied for permits to conduct a fall drill program to extensively test PYC.

Murchison’s VP Exploration John Shmyr comments: *“We are very excited by the results we are seeing at HPM, and the team cannot wait to complete more work on the project — it has amazing potential that is now being realized. If the mineralization at PYC continues at depth, then we may be looking at a sulphide body with significant tonnage potential. We look forward to commencing our first drill program on the project since 2009.”*

The thickness of the PYC mineralization has yet to be confirmed by drilling but was systematically tested with backpack drilling at one location where it was determined to be approximately 59 metres wide. The mineralization was split between two parallel limbs (28 metres and 31 metres wide) that were separated by 30 metres of unmineralized gabbro, but other locations appear to consist of a single, thicker horizon. The depth extent of the mineralization is currently unknown, but preliminary geophysical modelling suggests it extends to at least 300 metres depth, basically the detection limit of the EM survey. Murchison has submitted an 8 kg preliminary metallurgical sample collected from PYC during the prospecting program to the Saskatchewan Research Council (SRC) for QEMSCAN analysis and preliminary flotation tests to determine the host mineral of the nickel mineralization as well as a preliminary flowsheet for the recovery of the contained nickel, copper, and cobalt. Murchison expects to receive these results soon.

The PYC target is located approximately 8 km from existing power and rail infrastructure. Until completion of this field program, PYC had only been tested with two short drill holes in 2001 (hole 151-03) and 2009 (hole 09-701-01). These two holes respectively intersected 18.5 metres (ending in mineralization) and 12.0 metres of disseminated to semi-massive sulphides grading 0.26% nickel, 0.13% copper and 500 ppm cobalt and 0.27% nickel, 0.20% copper and 500 ppm cobalt. Historic grab samples collected by Falconbridge in 1999 at PYC assayed as high as 0.76% Ni and 0.93% Cu.

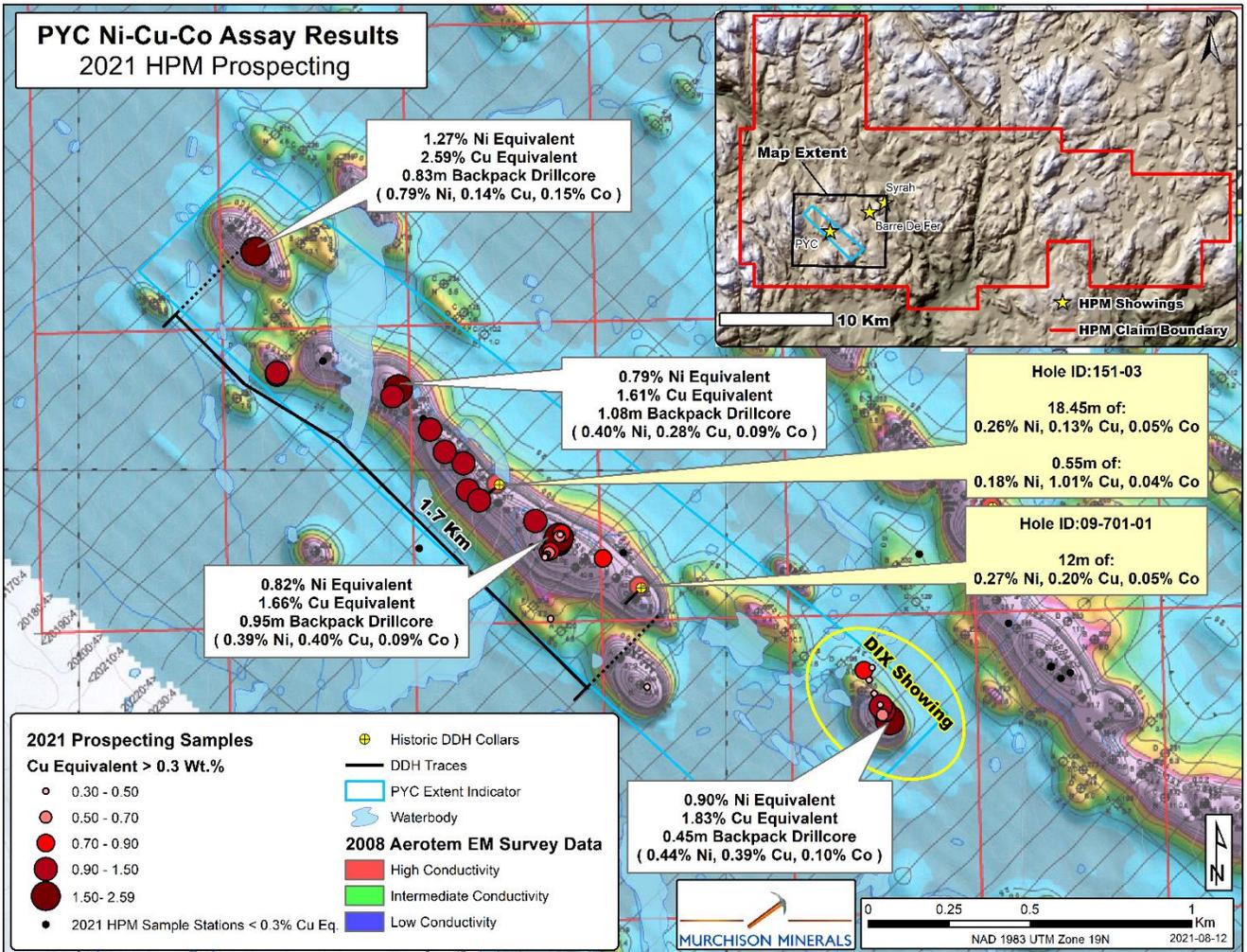


Figure 1 – Prospecting Assays Results mapped at PYC and DIX

**Table 1 – PYC Prospecting Assay Highlights**

Sample	Sample Type	Easting	Northing	Length (m)	Ni %	Cu %	Co %	Cu Eq %	Ni Eq %
49340	Backpack Core	613181	5722025	0.5	0.25	0.64	0.05	<b>1.44</b>	<b>0.71</b>
49341	Backpack Core	613123	5722060	0.46	0.28	0.25	0.07	<b>1.19</b>	<b>0.58</b>
49342	Backpack Core	613078	5722129	0.81	0.39	0.20	0.09	<b>1.49</b>	<b>0.73</b>
49344	Grab	612604	5722299	N/A	0.38	0.25	0.07	<b>1.44</b>	<b>0.71</b>
49345	Backpack Core	612538	5722680	0.83	0.79	0.14	0.15	<b>2.59</b>	<b>1.27</b>
49348	Backpack Core	612961	5722232	0.48	0.38	0.18	0.08	<b>1.38</b>	<b>0.68</b>
49349	Backpack Core	612979	5722254	1.08	0.40	0.28	0.09	<b>1.61</b>	<b>0.79</b>
49506	Backpack Core	613229	5721910	0.4	0.26	0.09	0.06	<b>0.93</b>	<b>0.46</b>
49508	Backpack Core	613194	5721941	0.43	0.35	0.19	0.08	<b>1.37</b>	<b>0.68</b>
49512	Grab	613612	5721731	N/A	0.24	0.08	0.05	<b>0.85</b>	<b>0.42</b>
49514	Backpack Core	613443	5721751	0.62	0.21	0.17	0.05	<b>0.89</b>	<b>0.44</b>
49516	Backpack Core	613403	5721847	0.51	0.26	0.14	0.06	<b>1.01</b>	<b>0.50</b>
49528	Backpack Core	612605	5722305	0.45	0.32	0.16	0.05	<b>1.09</b>	<b>0.54</b>
49537	Backpack Core	613450	5721753	0.6	0.22	0.13	0.05	<b>0.85</b>	<b>0.42</b>
49538	Backpack Core	613472	5721783	0.2	0.62	0.08	0.15	<b>2.16</b>	<b>1.07</b>
49553	Backpack Core	613473	5721788	0.5	0.42	0.32	0.09	<b>1.68</b>	<b>0.83</b>
49555	Backpack Core	613476	5721795	0.6	0.47	0.06	0.10	<b>1.56</b>	<b>0.77</b>
49554	Backpack Core	613473	5721788	0.45	0.35	0.49	0.08	<b>1.64</b>	<b>0.81</b>
49513	Backpack Core	613443	5721751	0.38	0.20	0.17	0.05	<b>0.83</b>	<b>0.41</b>

\*Copper Equivalent (CuEq) and Nickel Equivalent (NiEq) values are based on the following metal prices from Aug 9th, 2021: \$8.60/lb Ni, \$4.24/lb Cu, and \$23.76/lb Co.



**Figure 2 – Gossan defining surface mineralization at PYC**



**Figure 3 – Example of sulphide mineralization from PYC observed in backpack drill core**

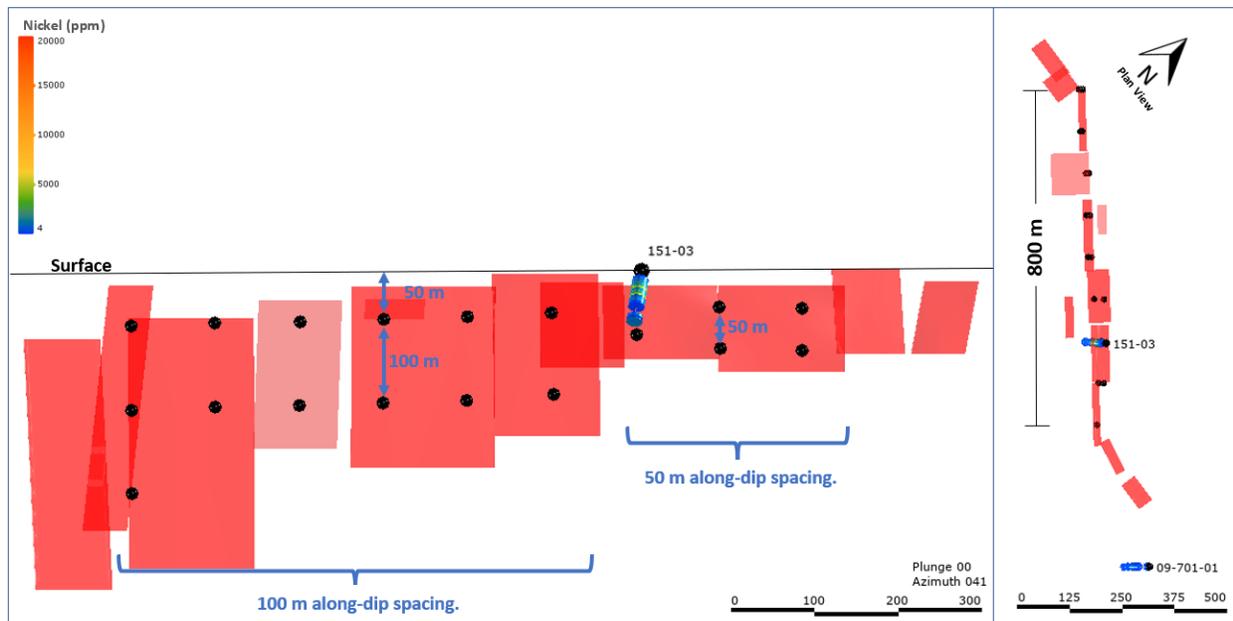
#### **PYC Fall 2021 Drill Plan**

Murchison plans to conduct a fall drill program to delineate the PYC target once permits have been received.

The proposed drill plan considers the following:

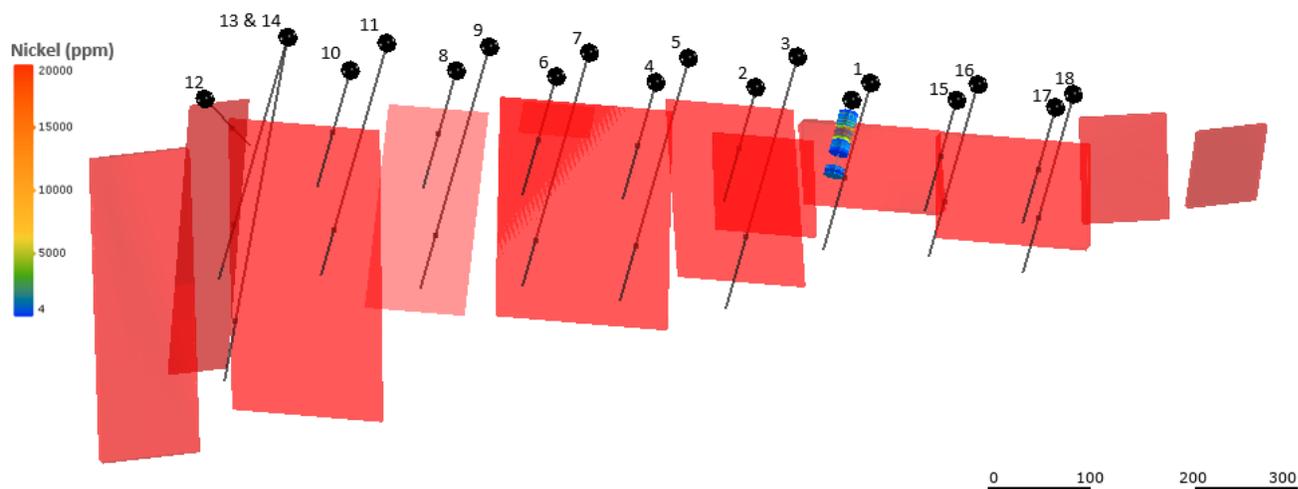
- Drill hole spacing of 100 m (along strike) by 100 m (along dip).
- The Maxwell Model EM plates.
- The existing drill hole, 151-03, which was terminated in mineralization, thus all drill holes were planned beyond this horizon.
- The 2021 prospecting program mapped the outcropping expression of the known mineralization.

The PYC target is currently defined by two drill holes, 151-03 and 09-701-01; the drill program is designed to test the subvertical Maxwell Model EM plates associated with 151-03 (Figure 4). The proposed drill program may be extended to the northwest and southeast flexures observed in the EM plates.



**Figure 4 - Long-section view looking northeast and plan view of the PYC Maxwell Model EM plates, the proposed drill hole targets, and drill hole 151-03 displaying assay nickel concentrations.**

**The 18 proposed drill holes are planned along nine fences, spaced 100 m apart, over a strike length of 800 m. The upper-most hole in each fence was designed to intersect the Maxwell Model EM plate 50 m below the topography. The lower hole in each fence is designed to intersect the Maxwell Model EM plate 100 m below the upper hole to provide maximum coverage along the fence. In areas where the Maxwell Model EM plate does not extend at least 100 m below the upper designed hole, the along-dip spacing was reduced to 50 m. Six of the fences use along-dip spacing of 100 m, and the remaining three fences use along-dip spacing of 50 m. One hole is proposed below the existing 151-03 hole at a 50 m spacing. The program totals 3,550 m with drill holes ranging between 120 m and 345 m in length.**



**Figure 5 - Oblique view looking north-northeast of the PYC Maxwell Model EM plates, the proposed drill holes, and drill hole 151-03 displaying assay nickel concentrations.**

The Maxwell Model EM plates that formed the basis of the targeting suggest that the conductive body is sub-vertical, but at the decimeter-scale the plates undulate dip direction from NE (75° at the shallowest) to SW (62° at the shallowest). The conductive body likely has a reasonably constant strike and dip that needs to be confirmed through drilling. The proposed drill plan will provide guidance for the start-up, but the drill program will be dynamic in nature.

The Company will re-evaluate the Barre de Fer prospect (1.5 km north-east of PYC) to create an initial mineral resource estimate for the historically drilled nickel-copper-cobalt mineralization. Barre de Fer has exceptional drill intercepts, including 43.15 metres grading 1.74% Ni, 0.90% Cu and 904 ppm Co in hole HPM-08-03 drilled in 2008. (2.45 % NiEq or 4.94% CuEq)

### **Local Infrastructure**

The HPM project is located east of the Manicouagan Crater, the site of a major meteorite impact estimated to be 215 million-years-old. The extensive water reservoir supports five hydro-power installations. The existing Quebec Cartier rail line, located 8 kilometres west of the PYC project area, links Labrador City to Port Cartier and Sept Iles, two major iron ore port facilities.

### **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.

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

Murchison is a Canadian-based exploration company focused on the exploration and development of the 100%-owned Brabant Lake zinc-copper-silver project in north-central Saskatchewan. The Company also owns 100% of the HPM nickel-copper-cobalt project in Quebec and holds an option to earn 100%-interest in the Barraute VMS (Volcanogenic Massive Sulphide) exploration project also located in Quebec, north of Val d'Or. Murchison currently has 108.9 million shares issued and outstanding.

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

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