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MacDonald Intersects 0.41% Copper Equivalent (CuEq) over 90.44 m at Alwyn including 3.99 % CuEq over 3.20 m;

Visible Gold in all Drill Holes at Glade

Toronto, Ontario – September 1, 2022 - MacDonald Mines Exploration Ltd. (TSX-V: BMK, OTC: MCDMF) ("MacDonald Mines" or the **"Company")** is pleased to announce the results of its Phase 1 drill program undertaken at the Alwyn Copper-Gold Trend ("Alwyn") and observations from the drilling completed at the Glade Gold Trend ("Glade") on its 100% owned SPJ Property ("SPJ") near Sudbury, Ontario.

Highlights of Phase 1 Alwyn and Glade Drill Program

- **0.41 % CuEq (0.17 % Cu, 0.36 g/t Au and 0.28 g/t Ag) over 90.44 m** in hole AW-22-102 (Alwyn), within an untested area of Alwyn, including two zones of stronger mineralization
    - Hole AW-22-102 is hosting the strongest zone of mineralization intersected in the 2022 program in the Alwyn trend and is located at the southeastern end of the area tested by the initial five holes program at Alwyn (see Figure 3)
    - Upper zone: 41.53 m at 0.53 % CuEq (0.24 % Cu, 0.43 g/t Au and 0.41 g/t Ag) including 3.99 % CuEq (1.36 % Cu, 3.87 g/t Au and 3.05 g/t Ag) over 3.20 m
    - Lower zone: 13.00 m at 0.84 % CuEq (0.29 % Cu, 0.82 g/t Au and 0.33 g/t Ag)

- Identification of cobalt anomalies in most of the drill holes completed in the Alwyn system with the broadest intersection being 0.015 % Co over 26.50 meters in AW-22-101

- Copper-gold mineralization open in all directions and confirmed over a strike length of 115 m within the 2.5 km Alwyn Copper-Gold Trend interpreted in conjunction with the work of GoldSpot Discoveries ("GoldSpot")
    - Supports the potential to further expand the Alwyn copper-gold system

- **Visible gold observed in all three new drill holes completed at Glade**, down plunge from gold-bearing veins measured at surface during 2021 trenching (see press releases June 8th and July 6th, 2021).

Greg Romain, President & CEO, commented;

"We are extremely encouraged by the results at Alwyn as it validates the work previously completed by GoldSpot and our team, that indicated a potential 2.5 km long trend favorable to host a large polymetallic system with affinities to mineral systems forming Iron oxide-copper-gold deposits (IOCG). We believe the visible gold observations to date at Glade also display significant potential and we look forward to sharing those assay results when they become available."

Mr. Romain added: "Our focus is now two-fold on the SPJ Property being the high grade gold structures associated with the Scadding-Glade system, and key critical (cobalt, copper, nickel, PGE) and precious (gold, silver) metals that are variably found in the Alwyn, McLeod-Norstar-Palkovics, Candore and Jerome Trends."

Phase 1 Drill Program

MacDonald Mines Phase 1 2022 drilling program consisted of 693 m of oriented diamond drilling at the northern end of a 1.0 km-long high-priority target identified by GoldSpot at Alwyn, as well as 502 m of oriented diamond drilling at Glade (Figure 1 & Table 1).

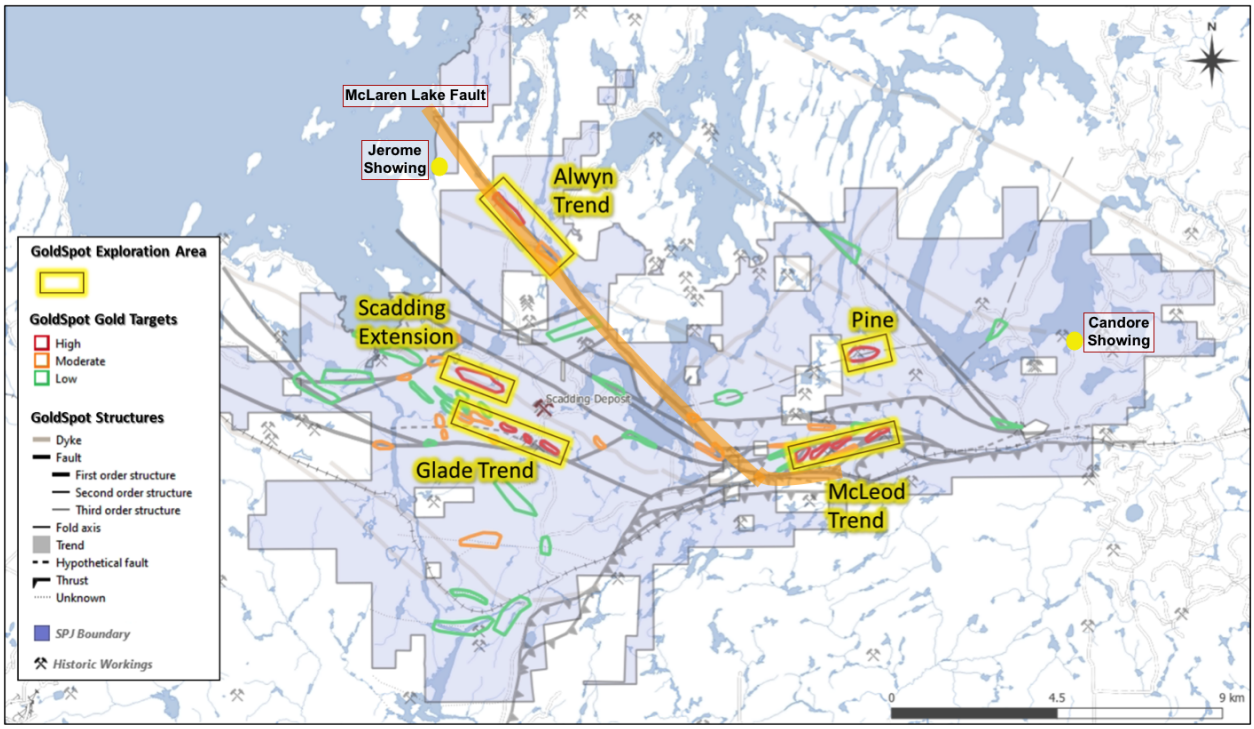

Figure 1: GoldSpot generated targets at the SPJ Property.

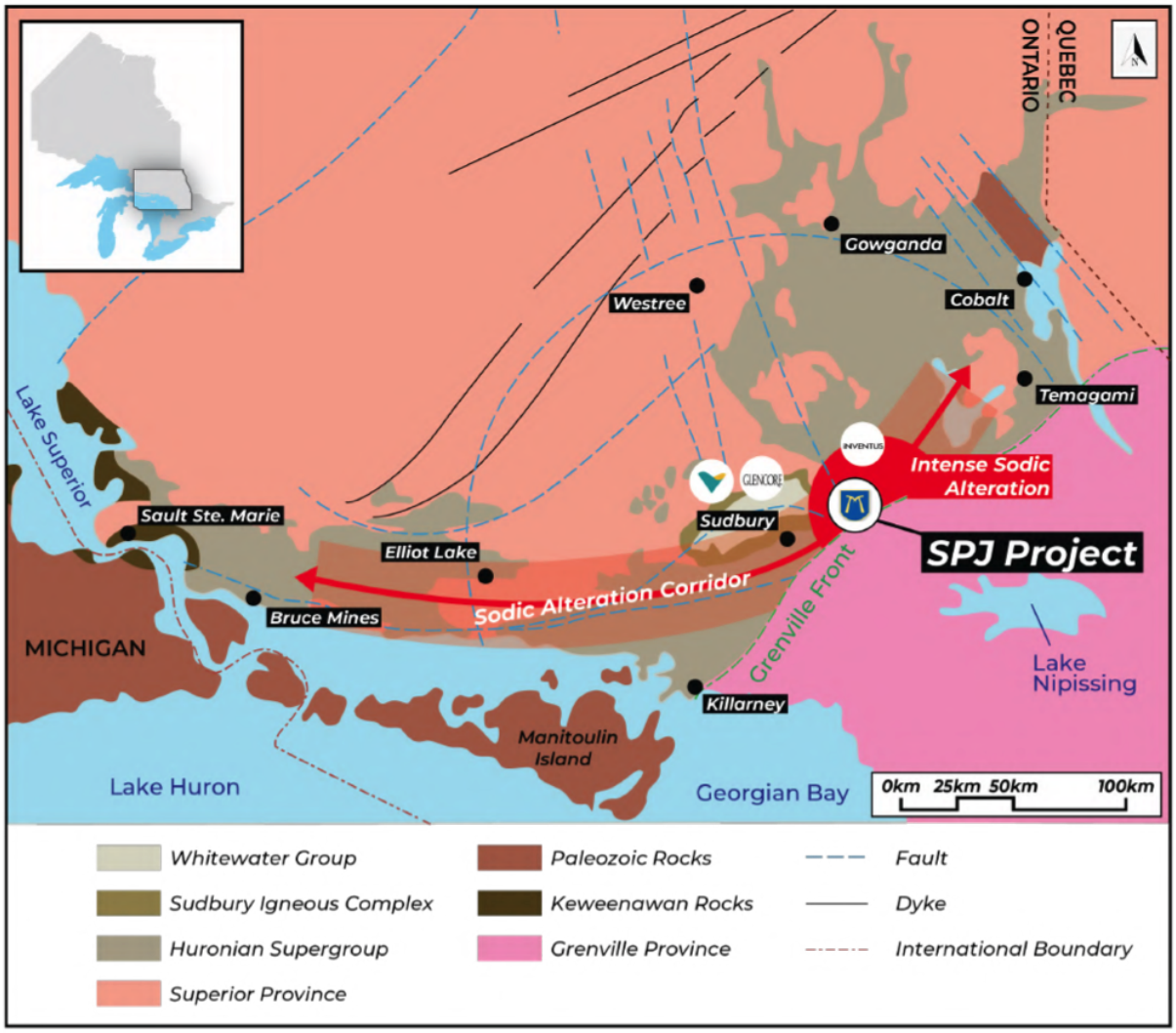

Figure 2 - MacDonald Mines SPJ Project Location

Table 1: Collar details for Phase 1 drilling at Alwyn Mine and Glade.

Hole ID	Collar location			Hole Attributes		
	Easting (m)	Northing (m)	Elevation (m)	Final Depth (m)	Azimuth	Dip
Alwyn Mine Cu-Au Trend						
AW-22-098	5172074	528287.2	283.17	129	25	-45
AW-22-099	5172086	528243.8	287.66	120	45	-45
AW-22-100	5172086	528243.8	287.66	153	65	-60
AW-22-101	5172047	528333.2	278.31	150	0	-62
AW-22-102	5172047	528333.2	278.31	141	30	-45
Glade Au Trend						
AG-22-103	5165586	529007.1	292.5	220	135	-45
AG-22-104	5165555	529176.5	306.4	156	140	-45
AG-22-105	5165536	529274.5	304.6	126	135	-45

Table 2: Reported assays – May 2022 drill program at the Alwyn Copper-Gold Trend

Hole ID	From (m)	To (m)	Length (m)*	Au (g/t)	Ag (g/t)	Co (ppm)	Cu (wt. %)	Cu Eq. (%)**	Au Eq. (g/t)**	Co Eq. (ppm)**
AW-22-098	13.0	108.1	95.10	0.16	0.18	66	0.11	0.22		
	Including									
	13.0	50.5	37.50	0.32	0.23	78.6	0.172	0.39		
	Including									
	13.0	22.2	9.20	0.48	0.18	150	0.06			
	92.0	108.1	16.10	0.05	0.07		0.11	0.14		
AW-22-099	*13.0*	*50.5*	15.00	0.24	0.15		0.08	0.24		
AW-22-100	38.7	41	2.30	0.11	0.21		0.18	0.26		
AW-22-101	49	59.65	10.65	0.35	0.24		0.13	0.37		
	Including									
	49.0	*50.0*	1.00	3.32	0.55		0.40		3.92	
	76.5	103	26.50	0.04	0.17	153	0.02			229
AW-22-102	41.34	131.78	90.44	0.36	0.28	60	0.17	0.41		
	Including									
	41.34	82.87	41.53	0.43	0.41	62	0.24	0.53		
	47.0	50.2	3.20	3.87	3.05		1.36	3.99		
	118.8	131.7	13.00	0.82	0.33		0.29	0.84		

**Assay results are presented over core length. As they represent discoveries, additional drilling is necessary to estimate the true width of the discovered zones of mineralization.*

***Metal equivalency calculations contain only the values presented in this table. All other metal values were deemed below significant values. Metal equivalents are calculated based on metal prices in US dollars of $8,313/T Cu, $51,020/T Co, $18.84/oz Ag and $1,740/oz Au as reported on August 29th, 2022 by London Metals Exchange (copper and cobalt cash prices) and Kitco Metals (gold and silver).*

Alwyn Target

Phase 1 drilling at Alwyn consisted of five oriented diamond drill holes, totalling 693 m. Variably dense and multi-directional networks of quartz-carbonate to carbonate veins, comparable to the networks of veins associated with copper-gold mineralization at surface, were intersected in all five drill holes. At surface and in diamond drilling in the Alwyn area, sporadic veins comprised of specular hematite + K-feldspar and variably associated with chalcopyrite mineralization were also observed. This iron oxide-bearing + K-feldspar alteration type is characteristic of mineral systems hosting IOCG deposits.

Considering the observation of iron oxide alteration potentially associated with copper mineralization and the potential association of that alteration type with IOCG mineralization, the next phase of exploration at Alwyn will consist of a targeted gravity survey over the 2.5 km long Alwyn trend. This survey will help to define the footprint of iron oxide alteration/mineralization, including potassium feldspar, earthy & specular hematite associated with mineralization and veins, extending to the southeast of the strongly mineralized zone in hole AW-22-102. Regional magnetic surveys indicate several interesting features along the Alwyn trend and McLaren Lake Fault. No gravity surveys have been completed in this area to date which is necessary to detect concentrations of specular hematite. The results of the survey will be integrated into GoldSpot's machine learning technology to generate additional targets for future drilling and exploration.

The strongest zone of quartz-carbonate veining associated with chalcopyrite and pyrite mineralization was intersected in hole AW-22-102 that was drilled in a previously untested area east of the historical Alwyn Mine. The broad interval of mineralization and alteration consists of two zones of stronger mineralization (referred to as the Upper and Lower Zones) separated by a zone of pervasive but weaker mineralization.

Quartz-carbonate, carbonate and hematite-carbonate veining variably mineralized with chalcopyrite and pyrite persisted over 100 m in the drill hole, including a 3 m quartz-carbonate vein that contains 3.99 % CuEq (1.36 % Cu, 3.87 g/t Au and 3.05 g/t Ag). The location of AW-22-102 suggests that the copper-gold vein system remains prospective to the south, as it was predicted by GoldSpot (see news release May 3rd, 2022), where the high priority Alwyn target extends for 1.0 km. Phase 1 drilling also confirmed veining and mineralization over a 115 m strike length and demonstrated that mineralization remains open in all directions (Figure 2).

In the other drill holes, mineralized zones consisted of 5-10% veins spanning broad intervals up to 116m, crosscut by occasional, narrow (<10m) Nipissing diabase dykes. Approximately 30% of veins carry mineralization, consisting of chalcopyrite and pyrite up to 5%, but typically containing 0.5-2% total sulphides. Comparably to hole AW-22-102, hole AW-22-098, the furthest hole to the west, intercepted a broad zone of copper-gold mineralization with the Upper and Lower Zones carrying more consistent mineralization (Table 2).

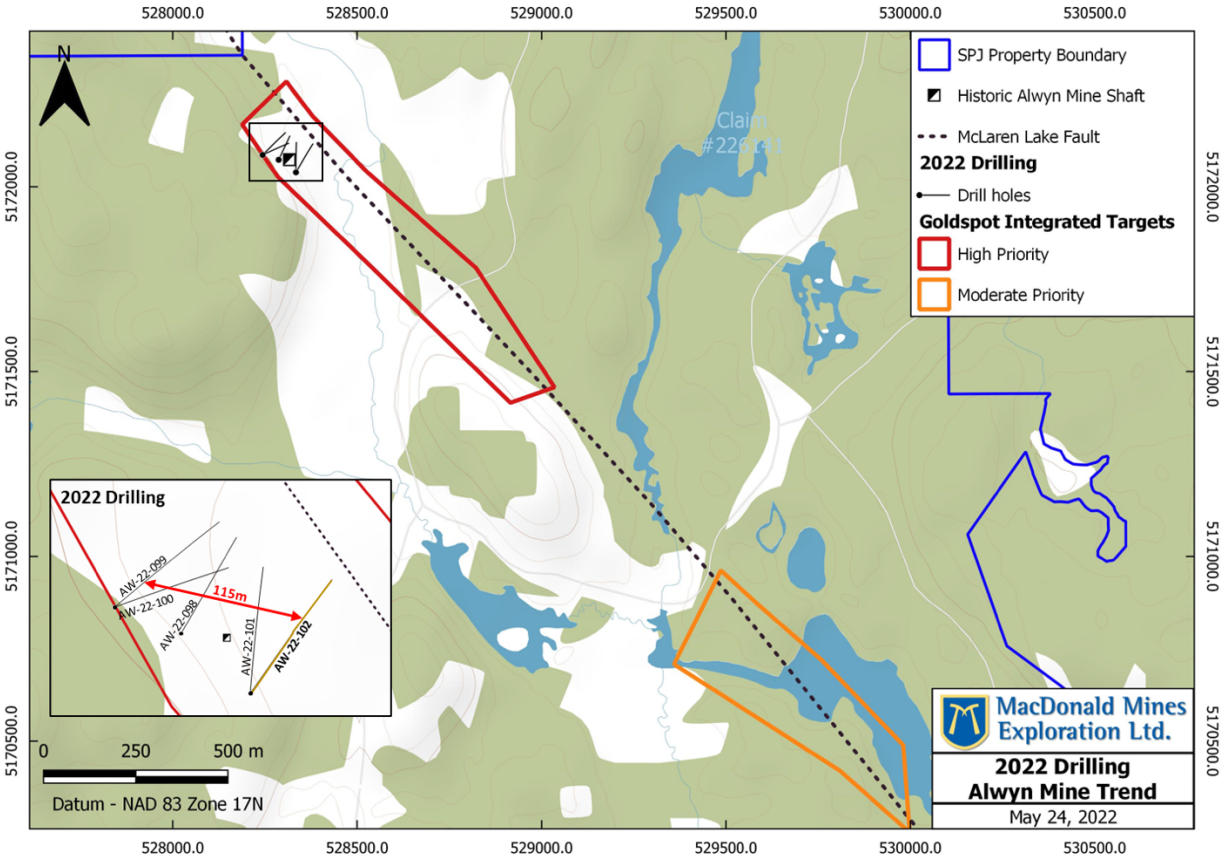

Figure 3: Phase 1 drilling by MacDonald Mines along the Alwyn Mine Copper-Gold Trend.

Glade Gold Target

In the Glade Gold Trend, 502 m of drilling tested the extension of the Glade systems following positive drilling and trench work completed in 2021 (see news releases dated May 13th, June 15th, and July 6, 2021). Mineralization appears to follow the upper and lower contacts of a Nipissing sill with Huronian sedimentary rocks, potentially spanning a 3 km east-southeasterly trend, as indicated by GoldSpot's targeting results.

The goal of this program was to target high grade gold mineralization down plunge from Au-bearing quartz veins hosted in the Nipissing diabase that were identified on surface and in our 2021 drilling and trenching campaign. Similar quartz-carbonate vein systems as those observed throughout 2021

trench work and drilling, were observed in all three new drill holes. Visible gold in quartz veins was also identified in all three drill holes from the 2022 drilling in the Glade system. At approximately 28 m n hole AG-22-105, many specks of visible gold were observed in a quartz-chlorite vein, down plunge from Au-bearing veins measured in trench AGT-21-002 in 2021, which included 7.19 g/t Au over 4.0m in channel samples (see press release from June 8th, 2021). Assay results for Glade are pending, but visual observations made in core suggest that additional exploration can extend the footprints of gold mineralization in the Glade Gold Trend.

About MacDonald Mines Exploration Ltd.

MacDonald Mines is a Canadian gold and base metal exploration company focused on exploring its 100%-owned, 19,720ha (197km^2) SPJ Project, 20km southeast of the prolific Sudbury Mining Camp in Northern Ontario. The Company's focus is to locate what it theorizes to be large gold systems with high-grade gold surrounding the past producing Scadding Gold Mine and potential large gold and polymetallic structures surrounding Alwyn, Glade, MacLeod and Norstar. The Company is also focusing on key critical metal systems surrounding Candore and Jerome within the SPJ Project to supply the renewable energy transition, particularly nickel, copper, and PGE's. The demand and need for critical metals is at an all-time high, and Macdonald Mines' believes the SPJ Property Area has the potential to be part of the solution.

Qualified Person

Jean-François Montreuil, P.Geo., Chief Geologist of MacDonald Mines, is the qualified person as defined by National Instrument 43-101 *Standards of Disclosure for Mineral Projects*, responsible for preparing, supervising, and approving this news release's scientific and technical content.

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