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MacDonald Mines Provides Update on 2022 Phase 1 Drill Program

Including Observations at Alwyn Mine Copper-Gold Trend

Toronto, Ontario – May 25, 2022 - MacDonald Mines Exploration Ltd. (TSX-V: BMK, OTC: MCDMF) ("MacDonald Mines" or the **"Company")** is pleased to provide an update on the Phase 1 drill program undertaken at the Alwyn Mine Copper-Gold (Cu-Au) Trend and the Glade Gold (Au) Trend on its 100% owned SPJ Property in Sudbury, Ontario.

Highlights of Phase 1 Alwyn Mine Drill Program

- Phase 1 drilling observations in conjunction with GoldSpot Discoveries' ("GoldSpot") interpreted 2.5km Alwyn trend are very encouraging and demonstrate the potential, subject to pending assay results, to further expand the Copper-Gold (Cu-Au) mineralization system associated with the Alwyn Mine
- Intersection, in four of the five holes completed in the Alwyn Mine area, of broad intervals (30-116m – core length) containing up to 2% chalcopyrite, traces of bornite and variable pyrite
- Sulfide mineralization associated with multi-directional networks of quartz-carbonate to carbonate veins representing an average of 5-10% of the mineralized zones.
- Potential Copper-Gold mineralization confirmed over a strike length of 115m and remains open in all directions
- Strongest quartz veining, alteration and mineralization intersected east of the Alwyn Mine where a high-priority target of GoldSpot further extends south for 1.5 km

Greg Romain, President & CEO, commented; "The favorable observations at Alwyn to date is very encouraging and further supports the work recently completed by GoldSpot. With the core now being delivered to the assay lab, we look forward to reporting the assay results from Alwyn when they become available and reporting on the drilling at Glade." Mr. Romain added; "We look forward to meeting with investors at the upcoming PDAC in June and I encourage everyone to stop by our booth to meet the team and learn more about the exciting developments."

Phase 1 Drill Program

The Company recently completed drilling at Alwyn Mine and Glade as part of MacDonald Mines Phase 1 2022 exploration program. The drill program consisted of 665m of oriented diamond drilling at the northern end of the 1.5 km-long high-priority target identified by GoldSpot in the Alwyn Copper-Gold (Cu-Au) Trend, as well as 503m of oriented diamond drilling along the Glade Gold (Au) Trend (Figure 1 & Table 1).

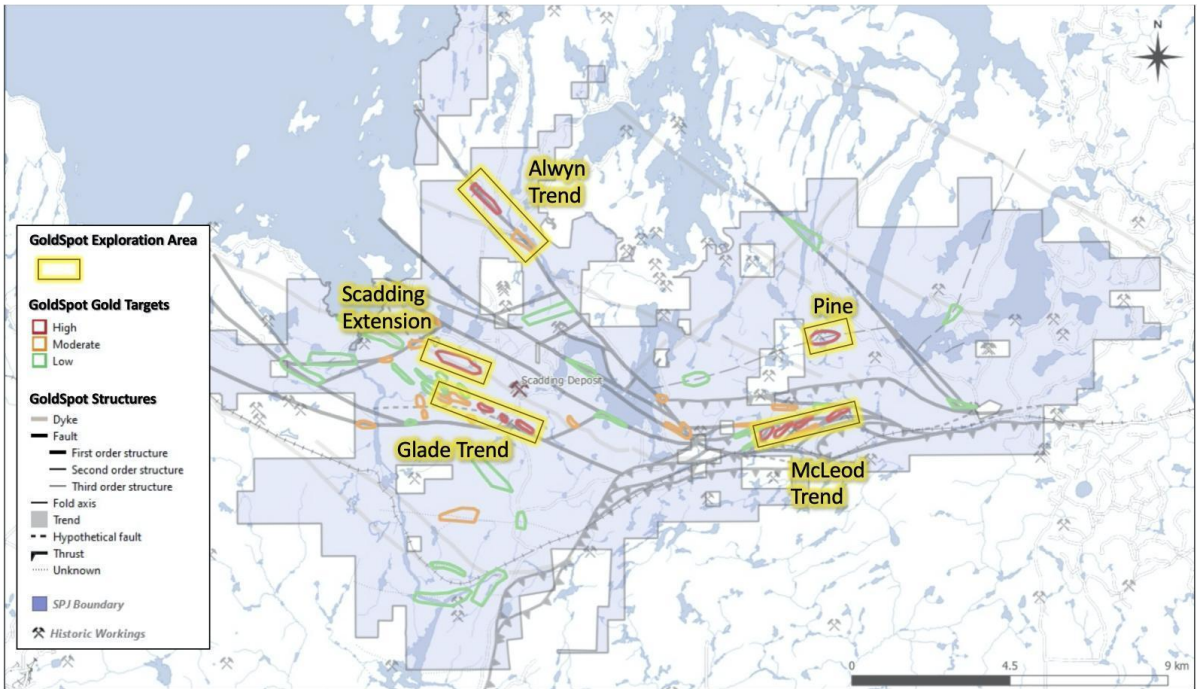

Figure 1: GoldSpot generated targets at the SPJ Property.

Official Name	Collar location			Hole Attributes		
	Easting (m)	Northing (m)	Elevation (m)	Final Depth (m)	Azimuth	Dip
Alwyn Mine Copper-Gold (Cu-Au) Trend						
AW-22-098	528287.2	5172073.6	283.17	129	25	-45
AW-22-099	528243.8	5172086.5	287.66	120	45	-45
AW-22-100	528243.8	5172086.5	287.66	150	65	-60
AW-22-101	528333.2	5172047.1	278.31	150	0	-62
AW-22-102	528333.2	5172047.1	278.31	141	30	-45
Glade Gold (Au) Trend						
AG-22-103	529007.1	5165585.9	292.5	221	135	-45
AG-22-104	529176.5	5165554.8	306.4	156	140	-45
AG-22-105	529274.5	5165536	304.6	126	135	-45

Table 1: Collar details for Phase 1 drilling at Alwyn Mine and Glade. Note that these are the planned collar coordinates, which will be updated with final coordinates during post drilling surveying.

Alwyn Target

The 2021 trenching/mapping program at Alwyn Mine confirmed the presence of two significant shear zones and a dense network of Copper-Gold (Cu-Au) bearing quartz-carbonate veins at surface. Historical drilling at Alwyn intercepted the same system, including 16.59 g/t Au over 1.52m and 4.46 g/t Au over 3.81m (Haultain Resources, 1983, AFRI 41I10NE0154). Copper and silver assays were not reported during that historic drilling program. The reader is cautioned that the assay data is historical in nature, and the qualified person has not independently validated the accuracy of the historical results. The true width of the intersected zone of mineralization is unknown.

Phase 1 of drilling in the Alwyn Mine Copper-Gold (Cu-Au) Trend consisted of five oriented diamond drill holes, totalling 665m. Variably dense and multi-directional networks of quartz-carbonate to carbonate veins, comparable to the networks of veins associated with Copper-Gold (Cu-Au) mineralization at surface, were intersected in four out of the five drill holes. Iron oxide alteration occurring as sporadic specular to earthy hematite veinlets was also observed in conjunction with

certain zones of chalcopyrite mineralization and more broadly in the Alwyn area. Observations made in these holes demonstrated the potential for the Alwyn Mine Copper-Gold (Cu-Au) trend to extend southeast of its currently known footprint, as it was predicted by GoldSpot (see news release May 3rd, 2022). MacDonald's drilling also confirmed veining and mineralization over a 115m strike length and that mineralization remains open in all directions (Figure 2).

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. Quartz-carbonate, carbonate and hematite-carbonate veining variably mineralized with chalcopyrite and pyrite persisted over 100m in the drill hole, including a 3m quartz-carbonate vein (true width currently unknown) with 2-3% fracture filling chalcopyrite and up to 3-5% very fine-grained clusters/fracture filling chalcopyrite-pyrite. The location of AW-22-102 suggests that the Copper-Gold (Cu-Au) vein system remains prospective to the south where GoldSpot's high-priority target extends for 1.5 km.

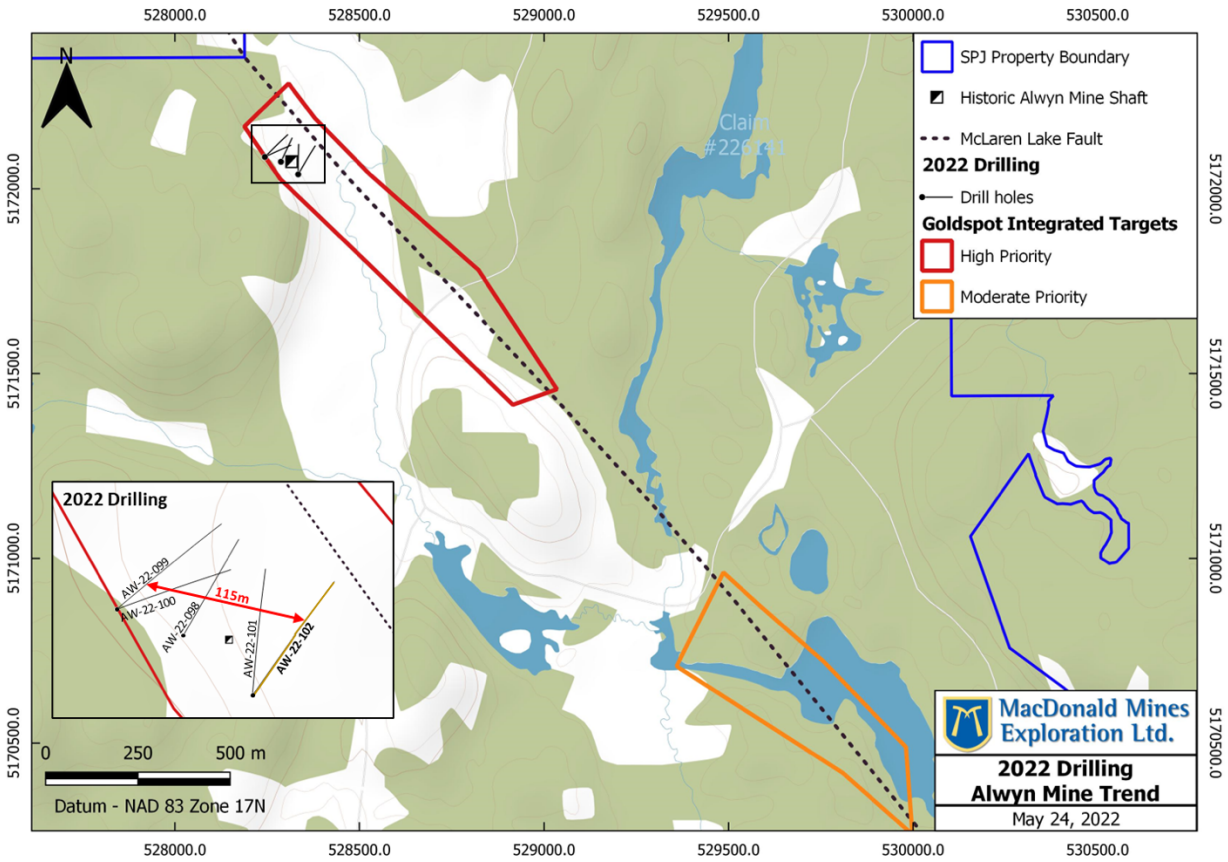

Figure 2: Phase 1 drilling by MacDonald Mines along the Alwyn Mine Copper-Gold (Cu-Au) trend.

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 + pyrite up to 5%, but typically containing 0.5-2% total sulphides. Specular hematite is commonly found in fractures within mineralized veins and halos around sulphides in veins. Additional potassic and sodic alteration halos were common near stronger mineralization.

The initial findings of this drill program (pending assays) in conjunction with Goldspot's interpreted 2.5km long Alwyn trend, including a 1.5 km-long high-priority target shown to be associated with Copper-Gold (Cu-Au) mineralization, are very encouraging for future exploration programs in the Alwyn Mine Copper-Gold (Cu-Au) Trend.

Glade Gold Target

Phase 1 continued with 503m of new drilling at the Glade Gold (Au) trend to follow up on the successful drilling and trench work completed in 2021 (see news releases dated May 13th, June 15th, and July 6th, 2021). Mineralization appears to follow the upper and lower contacts of a Nipissing sill with Huronian sedimentary rocks, potentially spanning a 3km east-southeasterly trend, as indicated by GoldSpot's targeting results. The goal of this program was to target high grade Au mineralization down plunge from Au-bearing quartz veins hosted in the Nipissing diabase that were identified on surface and in our previous drilling campaign. Logging of the vein network at Glade is currently underway.

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 is 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 structures surrounding Alwyn, Glade, MacLeod and Norstar. The Company is also focusing on key battery 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 battery metals is at an all-time high, and Macdonald Mines' feels 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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