

May 23, 2024

TSX Venture Exchange Symbol: NCX



## Northisle Commences 2024 Phase I Exploration Program; 2023 Drill Results Confirm Thesis at Pemberton Hills

### Highlights:

- Northisle 2024 Phase 1 drill program commencing
  - Extend near-surface drilling discovery at West Goodspeed through systematic step-out drilling into large, near-surface magnetic anomaly
  - Identify causative intrusion at Northwest Expo through targeted step-outs and high leverage infill holes which will also test potential for mineralized porphyry source at depth
  - In-fill Northwest Expo resource to upgrade to >90% Indicated Resources within resource estimate shell
- Pemberton Hills 2023 drill results confirm overall thesis and demonstrate progress towards porphyry source of 6 kilometre (km) long by 1.5km thick lithocap
- Surface mapping and additional geophysics to continue on high priority targets throughout the property

**Vancouver, B.C.** – Northisle Copper and Gold Inc. (TSX-V: NCX) (“Northisle” or the “Company”) is pleased to announce that it has commenced its 2024 Phase I exploration program at the North Island Project. The 2024 Phase I exploration program will consist of approximately 10,000 metres (m) of drilling and is designed to systematically vector towards the core of several identified porphyry systems trending across Goodspeed and Northwest Expo. Surface mapping and additional geophysics will continue on high priority targets throughout Northisle’s district-scale North Island Project. In addition, the Company has released its Pemberton Hills 2023 drill results which confirms the overall exploration thesis and demonstrates progress towards the porphyry system’s potassic layer.

*Sam Lee, President & CEO of Northisle stated “We are pleased to release the final results of our highly successful 2023 exploration program and announce that we’re immediately initiating our 2024 Phase I program. The 2023 exploration program produced our strongest results in Company history and the 2024 program seeks to do the same. Our 2024 program will also be bold in testing multiple porphyry systems at depth to potentially locate the source of the high-grade gold and copper mineralization reported in 2023.”*

A drill is currently being staged to the West Goodspeed target, with a second drill rig to be added to support helicopter-assisted drilling at Northwest Expo within the coming weeks.

### Key Catalysts

In 2024, the Company will continue advancing the North Island Project, with development and exploration catalysts throughout the year leading to measurable impacts for shareholders, including the following:

- **COMPLETED** - Geophysics results from Northwest Expo and West Goodspeed
- **COMPLETED** - Final 2023 Pemberton Hills Drill Results
- **COMPLETED** - Commencement of 2024 drilling program
- **Q2 2024** - Preliminary Project Trade-offs
- **Late Q2/Early Q3 2024** - Initial Exploration Results from 2024 Phase 1 drilling program
- **Q3 2024** - Commencement of advanced economic and technical studies
- **H2 2024** – Full Results from 2024 Phase 1 drilling program
- **Ongoing** - Continued positive engagement with indigenous rightsholders and local stakeholders

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## Upcoming Investor Events

During 2024, the Company will continue to be active in investor outreach. Northisle will be attending several external investor events including the following events during Q2/Q3 2024:

- Summer 2024: Broker and Institutional Site Visits
- September 10 – 13, 2024: **Precious Metals Summit**, Beaver Creek, CO
- September 15 – 18, 2024: **Gold Forum Americas**, Colorado Springs, CO
- November 20 – 21, 2024: **Swiss Mining Institute**, Zurich, Switzerland

## West Goodspeed Exploration

Drilling in 2024 will commence with the West Goodspeed target, the discovery of which was announced by Northisle in December 2023 (see [December 6, 2023 press release](#)). The West Goodspeed target was identified through a combination of a ground geophysical survey and a review of historical exploration activity including recent surface alteration mapping, examining 2017 drill logs adjacent to Red Dog and historical assessment reports.

Mineralization in GS23-04 and GS23-05, which starts immediately below 6 metres of overburden and includes 125m grading 0.49% copper equivalent (Cu Eq) in GS23-05 and 78m grading 0.48% Cu Eq. in GS23-04 is associated with quartz-sericite-pyrite (QSP) alteration which suggest the drill holes are proximal to the potential causative intrusion for this porphyry system. The initial follow-up drill program will systematically seek to vector towards the source intrusion with the goal of intercepting the potentially higher grade potassic zone commonly found in similar porphyry systems. At the previously producing Island Copper mine the potassic alteration consisted of biotite-magnetite. GS23-04 and GS23-05 are peripheral to and north of a large northerly trending magnetic anomaly which will be further explored by drilling. GS23-05 ended in mineralization proximal to this anomaly as shown in Figure 3.

The 2024 program at West Goodspeed will include approximately 3,600m of drilling in at least 7 step-out holes to the south and east of the two West Goodspeed discovery drill holes. Additional holes are proposed for a magnetic anomaly southeast of the original Goodspeed surface exposure of stockwork quartz-magnetite veinlets hosting chalcopyrite and bornite.

Figure 1 shows the proposed locations of the 2024 Phase 1 drill holes in the Goodspeed area.

Figure 1: Aerial View Looking East at West Goodspeed and Goodspeed targets

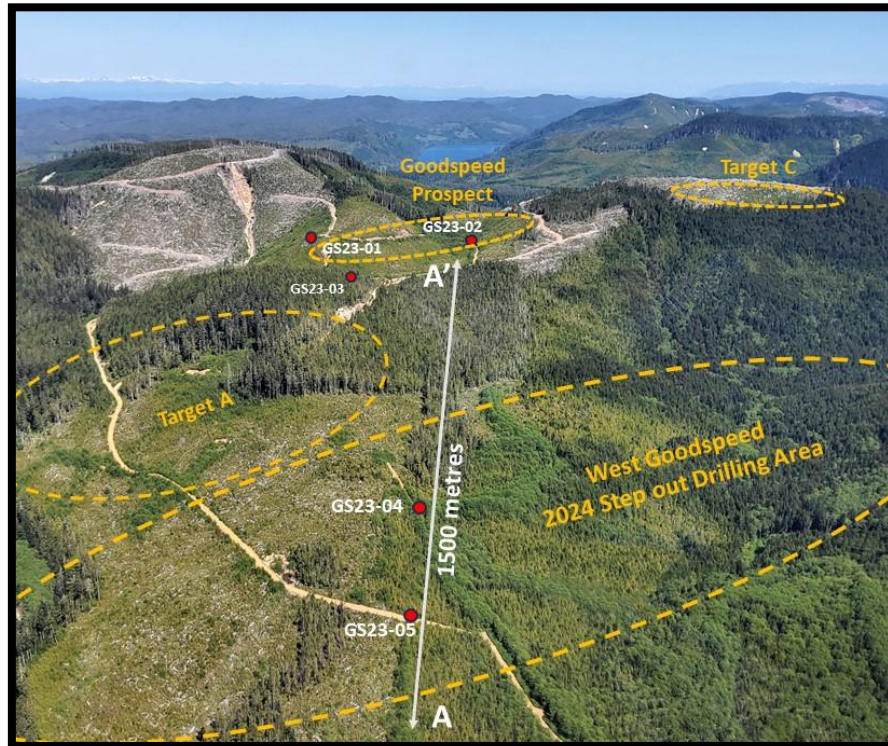


Figure 2 shows 2024 drill targets in the Goodspeed area in the context of integrated 2021 and 2023 geophysical surveys.

Figure 2: 2024 Exploration Targets at West Goodspeed

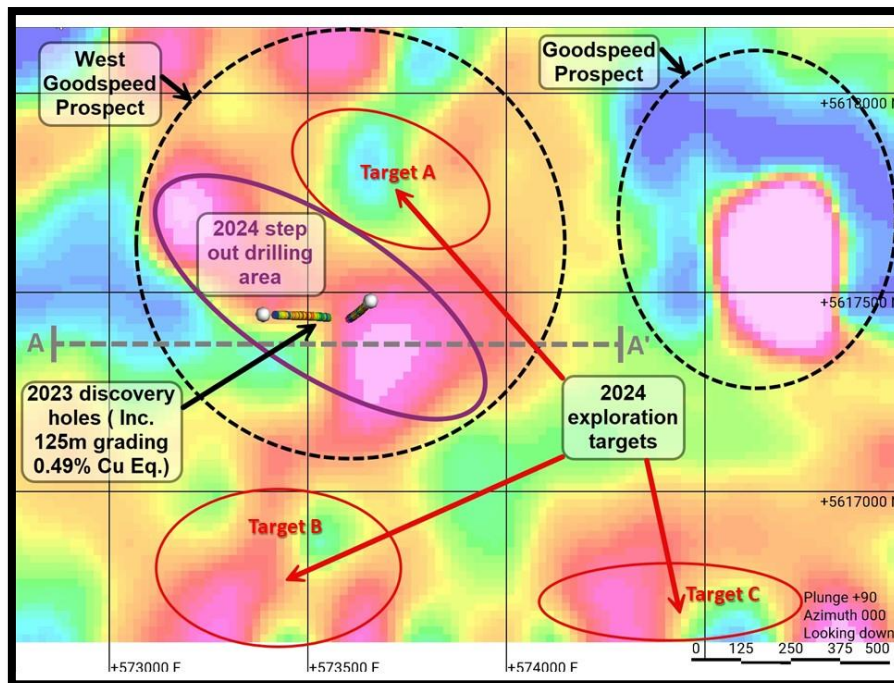
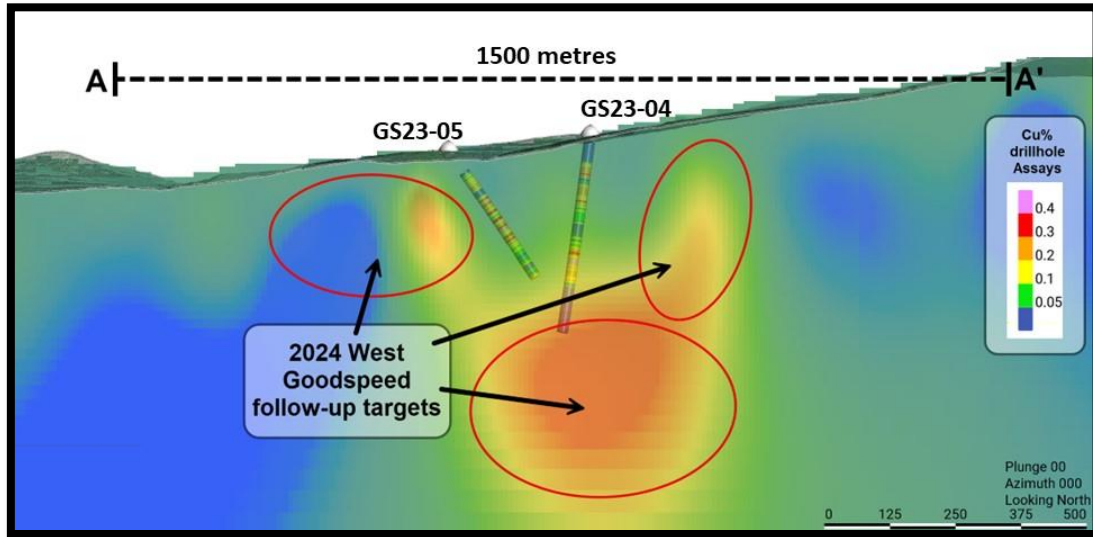


Figure 3 shows a section including the 2023 discovery drill holes at West Goodspeed as well as the newly identified deep magnetic target which was not penetrated by 2023 drilling.

Figure 3: Section showing 2024 Drill targets with 2023 Discovery Drilling



### Northwest Expo Exploration

After drilling at Goodspeed concludes, Northisle will be systematically testing several targets at Northwest Expo for the source of the gold-enriched mineralization contained in the recently announced Northwest Expo Mineral Resource Estimate (“MRE”). In addition, the 2024 exploration program includes several in-fill holes designed to convert a significant portion of the inferred resource within the higher-grade southwest portion of the deposit, while also testing the potential for a porphyry source at depth, highlighted by an intercept in NW23-13 which included 130m grading 2.13 grams per tonne (g/t) gold equivalent (Au Eq). (see [September 27, 2023 press release](#)).

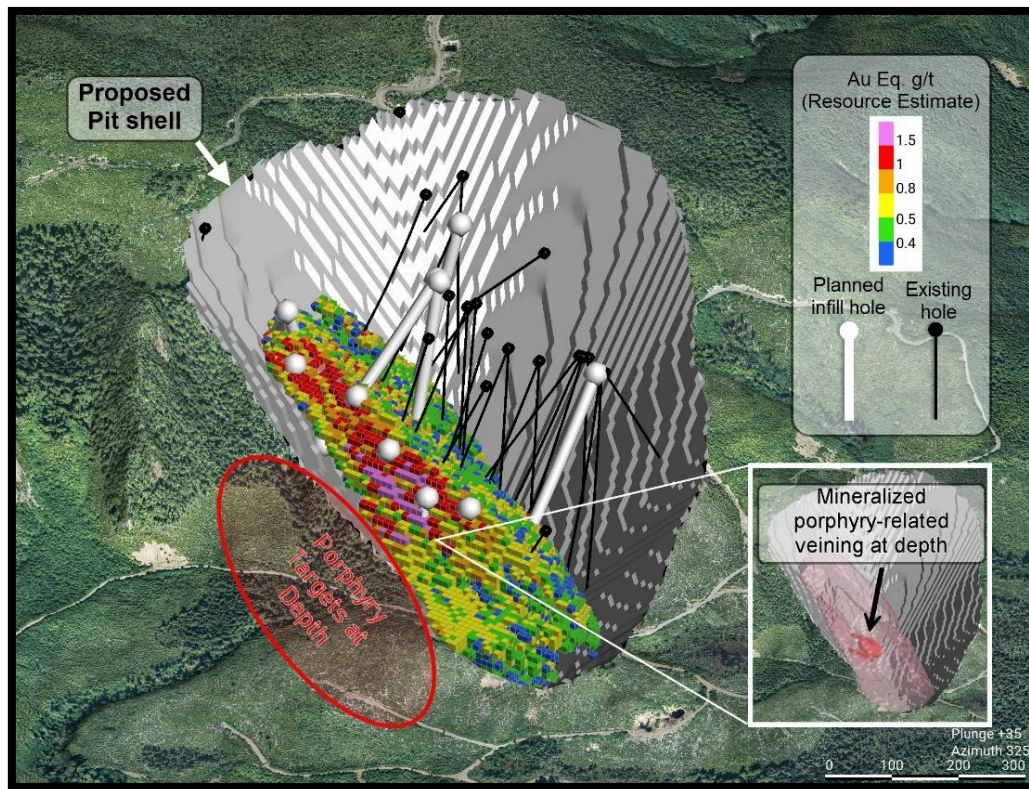
Within the deposit footprint, the Company has planned approximately 3,600m of drilling in 8 drill holes.

Three of the drill holes at the south of the resource shell are planned to test for the potential source of the higher-grade mineralization that was observed during 2023 drilling in stockwork covellite, chalcocite, and bornite veinlets in porphyry xenoliths, within a hydrothermal breccia encountered in drill hole NW23-13. This breccia was observed from 320m to 338m and graded 3.5g/t gold (Au) and 1.0% copper over 18 m. In addition, a review of Northisle drill core and from programs carried out by previous operators identified drill core which includes stockworked A and B style quartz veining at depth in drill hole EC-233 200m northwest of NW23-13. The mineralized material contains fluorine bearing topaz, which in upper parts of porphyry systems occurs above the hydrothermal up-flow zone, higher temperature, low pH clays including pyrophyllite and dickite which also occur in adjacent drill holes and suggest proximity to the potassic zone below this area, which is typical of porphyry systems.

Figure 4 shows the proposed location of drill holes within the Northwest Expo deposit as well as the location of identified porphyry-style veining relative to the existing resource model and the target area for potential causative intrusions at depth.



**Figure 4: Northwest Expo Block Model showing Inferred Resources > 0.4g/t Au Eq and Target for Potential Porphyry Mineralization at Depth**

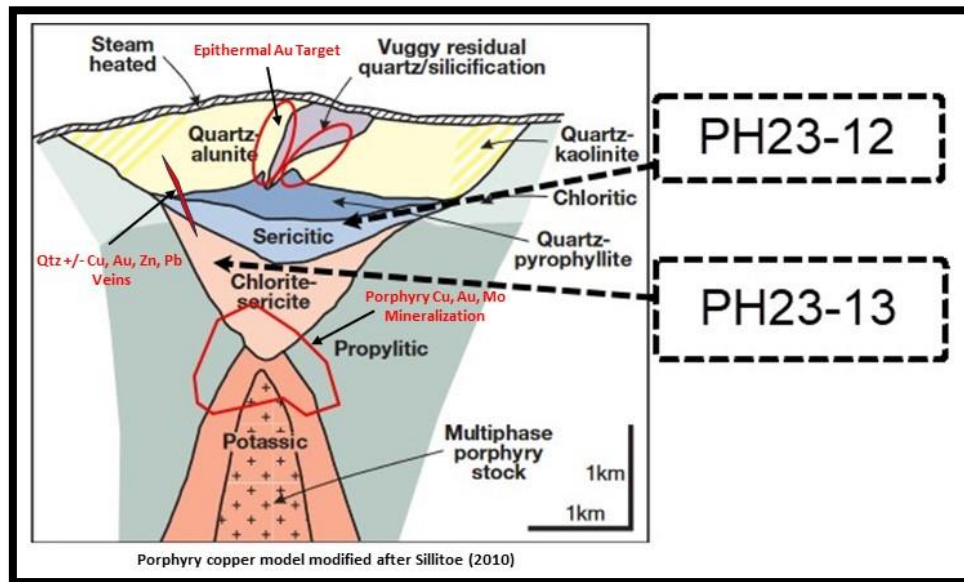


In addition, step-out drilling is planned, subject to receipt of all relevant approvals, to test several additional potential porphyry occurrences in the area between Northwest Expo and Goodspeed which is part of the larger trend on the northwest end of the North Island Project.

### **Pemberton Hills Results and Exploration**

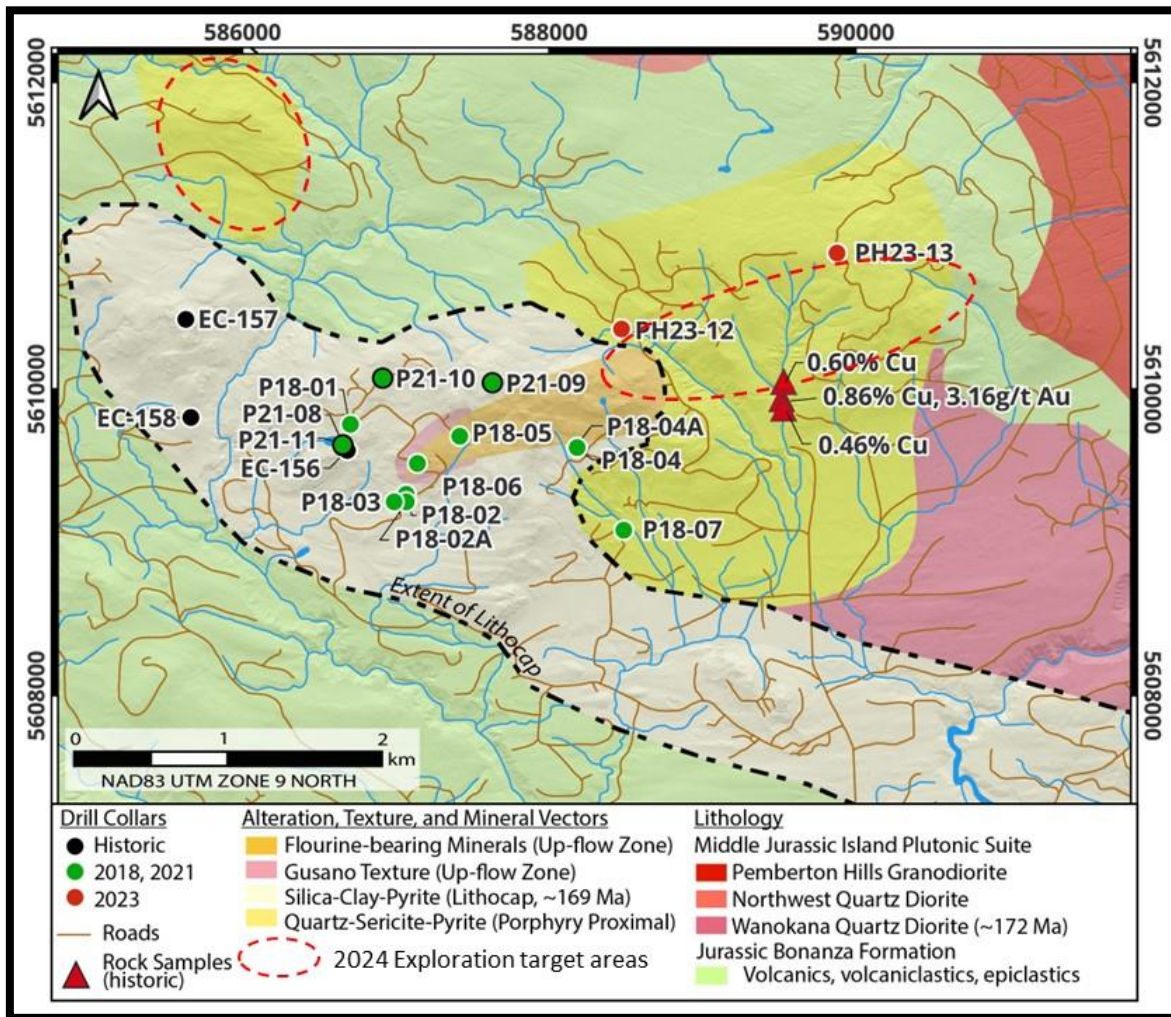
2023 drilling at Pemberton Hills was successful in confirming the overall exploration thesis regarding the southwest tilt of the 6.5 km long by 1.4km thick lithocap, and the orientation of the very large hydrothermal system at Pemberton Hills extending to the northeast of this. The underlying system is evidenced by a 1.5km wide by 2.5km long QSP alteration zone at surface. QSP alteration usually occurs peripherally to potassic alteration hosting copper mineralization. Drill holes PH23-12 and PH23-13 confirmed the extent and orientation of this hydrothermal system as shown in Figure 5 and shows where the drill holes are interpreted to have intersected the porphyry system.

Figure 5: Porphyry Model Including Interpreted Location of Pemberton Hills Drilling (after Sillitoe)



Drill hole PH23-12 was drilled proximal to the lithocap and was oriented to pierce magnetic and induced polarization (IP) anomalies adjacent to a QSP altered quartz-diorite. The hole showed significant QSP alteration and minor chalcopryrite bearing quartz stockwork veining, which indicates progression towards the source of the system but did not contain economically significant mineralization. PH23-13 was drilled further from the lithocap to the northeast and targeted in the direction of a large magnetic anomaly. The drill hole intercepted QSP alteration which again indicates proximity to potassic alteration. Examining the drill results in association with magnetic survey data and historic surface sampling, which included copper and gold values within at least 200m long narrow quartz veins, the current interpretation is that the possible source occurs south of the 2023 drill holes and north of the historic surface samples. This interpretation is shown in Figure 6 in the context of surface geology and alteration.

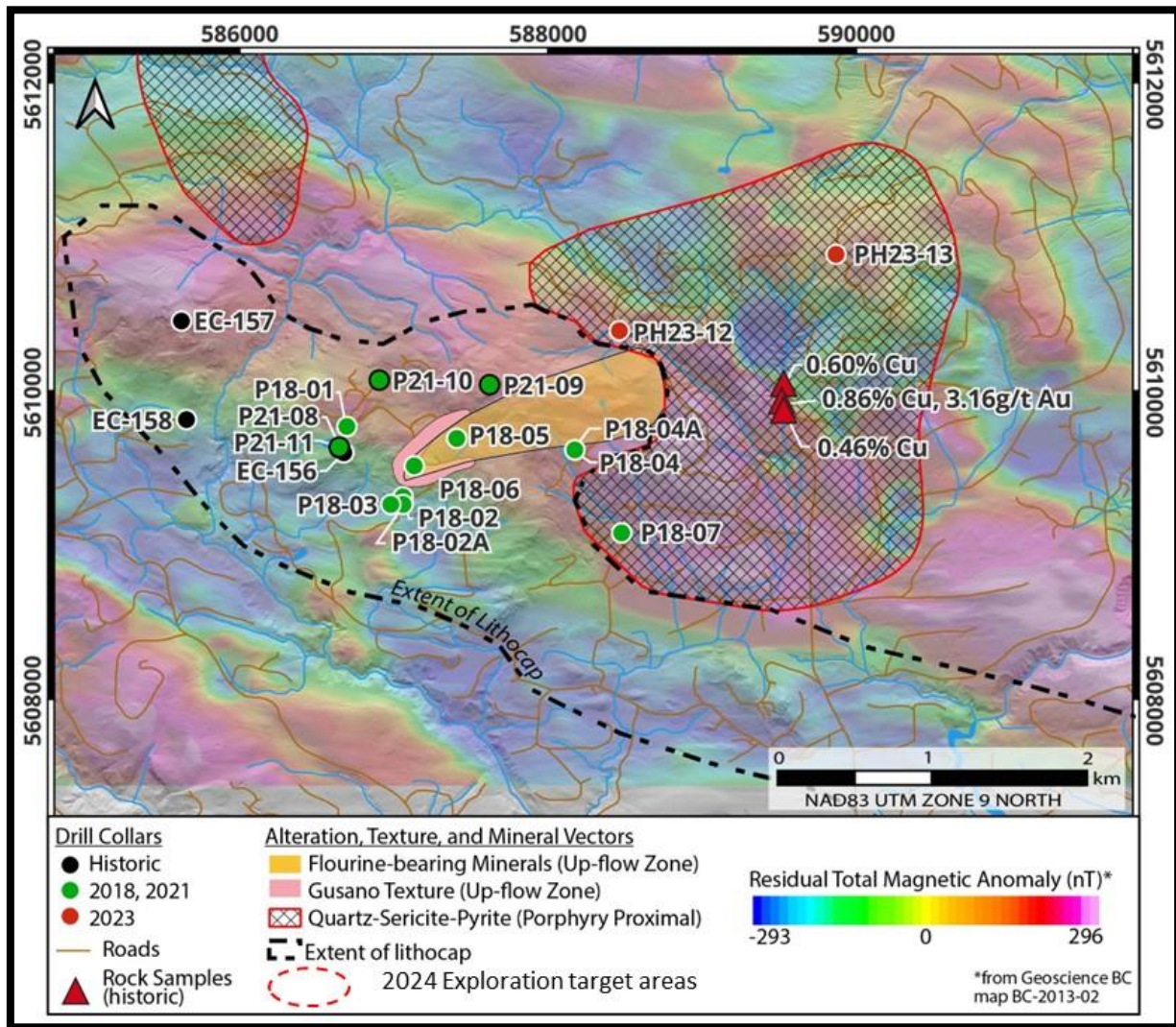
Figure 6: Pemberton Hills Geology and Alteration



The 2024 surface exploration at Pemberton Hills will include a detailed surface mapping program targeted at obtaining additional structural information, sericite speciation, chlorite proximitor analysis, quartz and gypsum vein density mapping and rock geochemistry information which will aid in future drill targeting. Figure 7 shows the target areas in the context of previous drilling and surface magnetics.



Figure 7: Pemberton Hills Target Areas



## Hushamu Exploration

At Hushamu, the Company has reviewed drill core, logging, and surface exploration over the last several years, as well as results of drilling from other targets on the property. There are now multiple indicators that the Hushamu deposit, like Northwest Expo, is lithocap hosted. In addition, the orientation of the overall porphyry system has been reinterpreted which indicates that the causative intrusion may be to the south of the Hushamu resource, rather than to the north. Evidence for this reinterpretation includes:

- the presence of zunyite, a fluorine bearing mineral like topaz occurring in the upflow zone of porphyry deposits
- the discovery in a recent bulldozed area of sheeted and stockwork quartz veining over 600m, plus leached stockwork quartz veining with residual jarosite, goethite and hematite grading 0.1% to 0.5% copper on the south side of the Hushamu deposit; and
- the observation of gusano texture, which commonly occurs in lithocaps above hydrothermal upflow zones of porphyry deposits in adjacent drill holes to the north

Northisle will be conducting a mapping program similar to that at Pemberton Hills, which will obtain additional structural and vectoring information in order to support drilling in this new target area. Figure 8 shows the planned target area for this mapping program as well as an example of a leached quartz stockwork boulder.



Figure 8: Hushamu Feldspar Porphyry Quartz Stockwork Zone

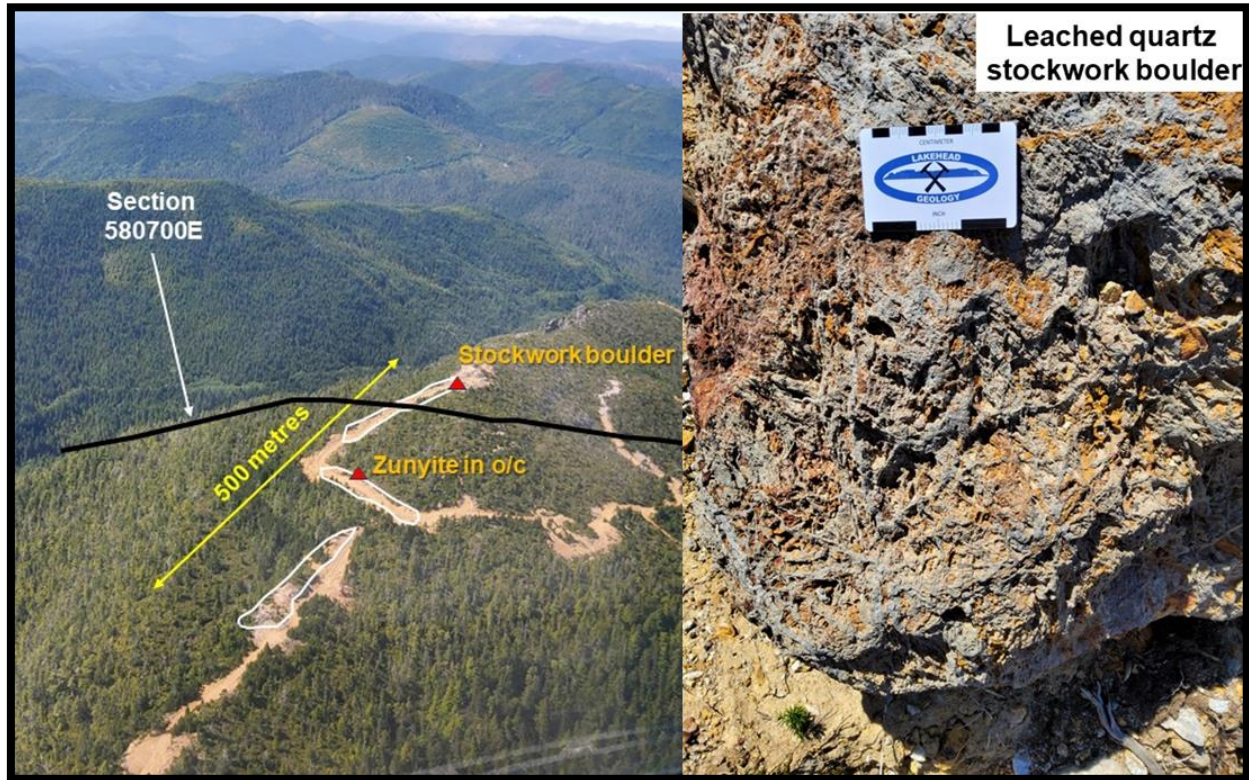
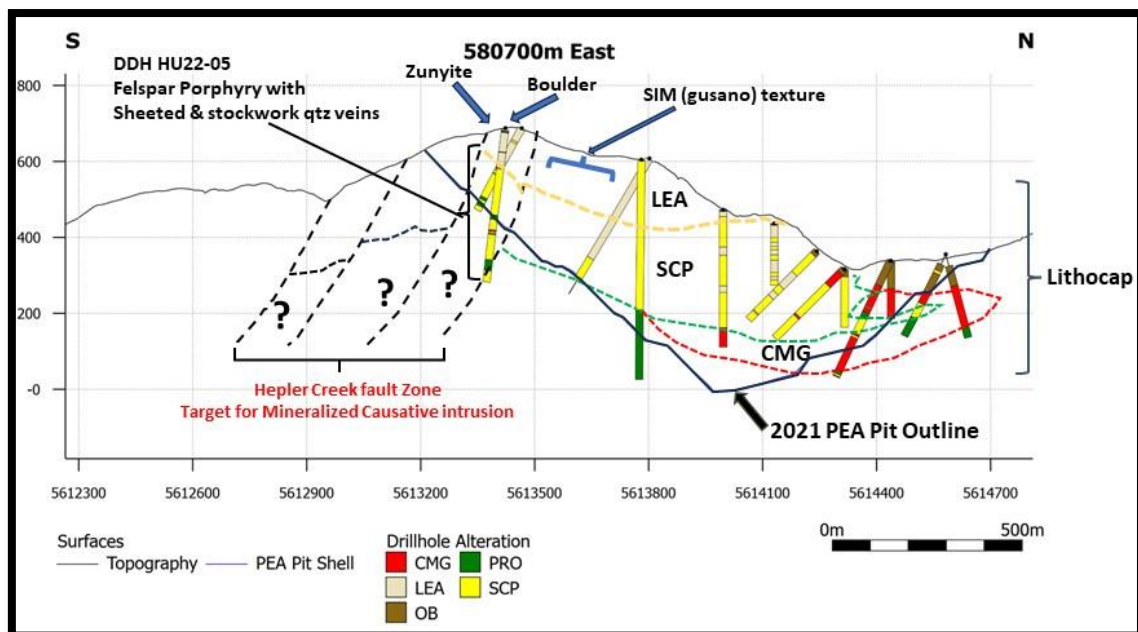


Figure 9 shows a cross-section of the Hushamu deposit with the new interpreted potential porphyry source target.

Figure 9: Section 580700 East Showing New Porphyry Source Target Area



## Additional Technical Details

### ***Logging, Sampling and Assaying Procedures and QA/QC***

The diamond drill core logging and sampling program was carried out under a rigorous quality assurance / quality control (QA/QC) program using industry best practices. Drill intersections in this release are typically HQ to 100 m and NQ thereafter to the end of holes. After drilling, core was logged for geology, structure, and geotechnical characteristics utilizing Geospark© core logging software, then marked for sampling and photographed on site. The cores for analyses were marked for sampling based on geological intervals with individual samples 3 m or less in length. Drill core was cut lengthwise in half with a core saw. Half-core was sent for assays reported in this news release. Prior to cutting core for assay bulk density was also determined on site by taking 15 to 20 centimetres (cm) lengths of whole core of each lithology at 10 m intervals. The ends of these were then cut at right angle to the core axis, retaining all pieces to be returned to the core box for later sample cutting and analysis. The diameter of each core sampled for bulk density was measured at each end with digital calipers to 3 decimal places and recorded. The length of the core was measured on four sides at 90 degrees to each other, to 2 decimal places and recorded. The software averaged the lengths and diameters. The mass of the dry core was measured twice on an Ohaus© balance to 2 decimal places. If no discrepancy occurred the measurement was recorded. If there was a discrepancy the measuring was repeated until no discrepancy between 2 measurements occurred. The density was calculated using the formula Bulk Density =  $\pi$  times  $r^2$  times  $h$  (where  $r$  is radius of core and  $h$  is length of core). Certified standard masses are used to calibrate the scale balance used for bulk density determinations. The balance in the core logging area was levelled on a large concrete block to avoid vibration, was leveled, and surrounded by a wooden partition to avoid wind affecting the balance. The measurements were recorded in Geospark© logging software and Bulk Density calculated to 2 decimal places.

A total of 5% assay standards or blanks and 5% core duplicates are included in the sample stream as a quality control measure and are reviewed after analyses are received. Standards were obtained from WCM Minerals, Vancouver, CDN Minerals, Langley and OREAS, Canada. Blanks were obtained from unmineralized course bagged limestone landscaping rock. Standards and blanks in 2023 drill results to date have been approved as acceptable. Duplicate data add to the long-term estimates of precision for assay data on the project and precision for drill results reported is deemed to be within acceptable levels. Samples were sent to the MSALABS in Langley, BC where the samples were dried, then crushed, split and a 250 gram (g) split was pulverized to 85% passing -200 mesh (-75 micrometres ( $\mu\text{m}$ )) size pulps. Clean crush material was passed through the crusher and clean silica was pulverized between each sample. The pulps were analyzed for gold by fire assay fusion of 50 g of the 250 g split. Total gold content was determined by digesting the silver doré bead from the fusion and then analysing by AA (MSA Code FAS-121). All samples were also analyzed for multiple elements by taking a 0.25 g of the 250g split which was heated in  $\text{HNO}_3$ ,  $\text{HClO}_4$  and  $\text{HF}$  to fuming and taken to dryness. The residue was dissolved in  $\text{HCl}$  and then analyzed utilizing ICP-MS (MSA Code IMS-230). Any sulphur analysis from this latter analysis with a value greater than 10% was reanalyzed utilizing a Leco sulfur analyzer. Iron and Tungsten accelerators are added to the sample and a stream of oxygen is passed over the sample in the induction furnace. As the sample is heated, sulfur dioxide released from the sample is measured by an IR detection system and the Total Sulphur content is determined. (MSA Code SPM-210). MSALABS (Langley) is an independent, international ISO/IEC 17025:2005 accredited laboratory.

Pulps and rejects of holes with significant assay intervals are stored at Western Mineral Storage. The remaining split core is indexed and stored at Northisle logging and office facility in Port Hardy, BC.

Drill Results in this news release are length weighted averages.

### **Qualified Persons and Data Verification**

Robin Tolbert, P.Geo., Vice President Exploration of Northisle, and a Qualified Person as defined by National Instrument 43-101 *Standards of Disclosure for Mineral Projects*, has reviewed and approved the scientific and technical disclosure contained in this news release.

### **About Northisle**

Northisle Copper and Gold Inc. is a Vancouver-based company whose mission is to become Canada's leading sustainable mineral resource company for the future. Northisle, through its 100% owned subsidiary North Island Mining Corp., owns the North Island Project, which is one of the most promising copper and gold porphyry projects in Canada. The North Island Project is located near Port Hardy, British Columbia on a more than 34,000-hectare block of mineral titles 100% owned by Northisle stretching 50 kilometres northwest from the now closed Island Copper Mine operated by BHP Billiton. Northisle completed an updated preliminary economic assessment for the North Island Project in 2021 and is now focused on continued advancement of the project while exploring within this highly prospective land package.

For more information on Northisle please visit the Company's website at [www.northisle.ca](http://www.northisle.ca).

On behalf of Northisle Copper and Gold Inc.

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### **Cautionary Note Concerning Inferred Resources**

Unless otherwise indicated, all technical information included in this news release, including references to inferred mineral resources, has been prepared in accordance with NI 43-101 and the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) classification system. The inferred mineral resources referred to in this news release are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is a risk that such inferred mineral resources may not be converted into measured or indicated mineral resources. While it is assumed that with continued exploration, most of the inferred mineral resources could be upgraded to an indicated resource category, due to the uncertainty that may attach to inferred mineral resources, there is no assurance that inferred mineral resources will be upgraded to resources with sufficient geological continuity to constitute proven and probable mineral reserves as a result of continued exploration.

### **Cautionary Note Regarding Adjacent and Historical Property Disclosure**

This news release contains information regarding adjacent and historical properties and deposits. Investors are cautioned that adjacent mineral deposits or systems, or past-performance of historical mines, do not necessarily indicate and certainly do not prove the existence, nature or extent of mineral deposits on the North Island Project.

### **Cautionary Statements regarding Forward-Looking Information**

Certain information in this news release constitutes forward-looking statements under applicable securities law. Any statements that are contained in this news release that are not statements of historical fact may be deemed to be forward-looking statements. Forward-looking statements are often identified by terms such as "may", "should", "anticipate", "expect", "intend" and similar expressions. Forward-looking statements in this news release include, but are not limited to, statements relating to the MRE; plans and expectations regarding the 2024 exploration program; plans and

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expectations regarding future project development; timing of key catalysts; planned activities, including further drilling, at the North Island Project; the Company's anticipated exploration activities; and the Company's plans for advancement of the North Island Project. Forward-looking statements necessarily involve known and unknown risks, including, without limitation, Northisle's ability to implement its business strategies; risks associated with mineral exploration and production; risks associated with general economic conditions; adverse industry events; stakeholder engagement; marketing and transportation costs; loss of markets; volatility of commodity prices; inability to access sufficient capital from internal and external sources, and/or inability to access sufficient capital on favourable terms; industry and government regulation; changes in legislation, income tax and regulatory matters; competition; currency and interest rate fluctuations; and other risks. Readers are cautioned that the foregoing list is not exhaustive.

Readers are further cautioned not to place undue reliance on forward-looking statements as there can be no assurance that the plans, intentions, or expectations upon which they are placed will occur. Such information, although considered reasonable by management at the time of preparation, may prove to be incorrect and actual results may differ materially from those anticipated. Forward-looking statements contained in this news release are expressly qualified by this cautionary statement.

The forward-looking statements contained in this news release represent the expectations of management of Northisle as of the date of this news release, and, accordingly, are subject to change after such date. Northisle does not undertake any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as expressly required by applicable securities law.

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