

# First Atlantic Nickel Step-Out Drilling Expands RPM Zone Mineralization to 500 Meters in Width with Large Awaruite Grains Up to 1,000 Microns

Vancouver, British Columbia – (Globenewswire - December 10, 2024) - First Atlantic Nickel Corp. (TSXV: FAN) (OTCQB: FANCF) (FSE: P21) ("First Atlantic" or the "Company") is pleased to announce a significant expansion of the awaruite mineralization at the RPM Zone within its 100% owned, district-scale, 30 kilometer-long Atlantic Nickel Project in Newfoundland (the "Atlantic Nickel Project" or the "Project"). Step-out drilling has intersected visibly disseminated, sulfur-free nickel-alloy (awaruite) mineralization across a width of approximately 500 meters, substantially increasing the width of the newly discovered RPM Zone. Large, elongated awaruite grains, measuring up to 1,000 microns, have been identified, underscoring the Project's exceptional mineralization quality and potential.

# Highlights:

- **Significant Expansion of RPM Zone:** Step-out drilling has confirmed visually disseminated awaruite mineralization over a lateral width of approximately 500 meters, contained within serpentinized peridotite host rock. There is potential for further expansion in both width and along the strike.
- **RPM-DDH003:** A 200-meter step-out hole, drilled eastward from RPM-DDH001, intersected 378 meters of core displaying visual nickel-alloy (awaruite) mineralization, thereby confirming an expansion of the mineralized zone to 500 meters wide. Throughout this interval, large awaruite grains ranging from 200 to 600 microns were observed, including large elongated grains up to 1,000 microns.
- **RPM-DDH002:** Drilled away from the initial discovery hole RPM-DDH001, RPM-DDH002 extended the awaruite mineralization by approximately 300 meters laterally. Awaruite with grain sizes up to 400 microns were observed throughout the hole, which reached a depth of 234 meters before encountering a fault.
- **Pending Phase 1 Drilling:** Additional drill core from Phase 1 Drilling at the RPM Zone is currently being processed at the company's new Drill Core Processing & Storage Facility in Grand Falls-Windsor, Newfoundland. Updates are anticipated shortly.
- **Mineralization Open in All Directions:** The RPM Zone remains open for drilling in all directions, with mineralization appearing more substantial to the east and poised for further expansion along strike.
- **Phase 2 Drilling Commences:** Permits for the upcoming Phase 2 drilling in the RPM Zone and throughout the 30 km ophiolite nickel district have been submitted and are anticipated to be granted in time to initiate Phase 2 drilling this winter. This secondary phase aims to explore deeper mineralization, extending both strike length and width.

For further information, questions, or investor inquiries, please contact **Rob Guzman** at **First Atlantic Nickel** by phone at **+1 844 592 6337** or via email at <u>rob@fanickel.com</u>

#### **RPM Zone - Significant Expansion**

Drilling in the RPM Zone has confirmed the presence of disseminated awaruite mineralization across an impressive width of approximately 500 meters, with significant potential for further growth in both width and strike length, as the zone remains open and untested in these directions. Drilling has consistently encountered visible awaruite mineralization in all holes within the RPM Zone, with visible grain sizes typically ranging from 100 to 600 microns and occasionally reaching up to 1,000 microns. Phase 2 drilling will focus on increasing the strike length and width to fully explore the potential size of RPM Zone. A cross-section (Figure 1) illustrates the significant potential for awaruite mineralization at the RPM Zone, with serpentinized peridotite ultramafic hosting visible awaruite, generally corresponding with a high magnetic geophysical anomaly.

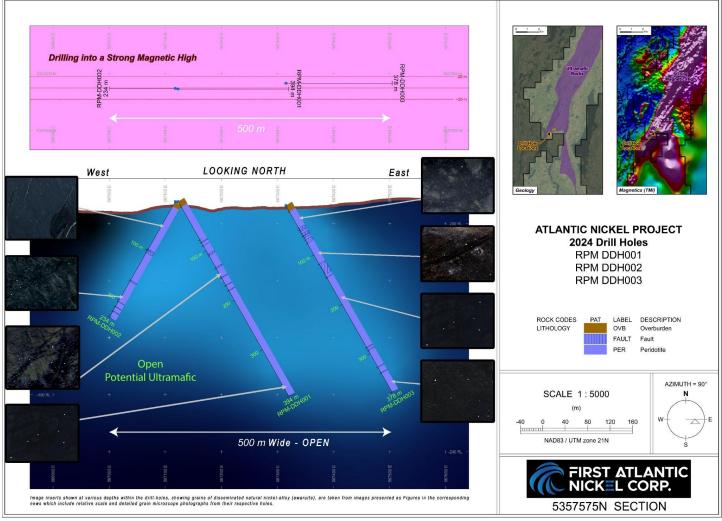


Figure 1: Cross Section Map of RPM Drill Holes 1,2,3 with Drill Core Photos of Awaruite Mineralization at respective locations downhole (see additional Figures below for more detailed core images).

# RPM Drill Holes 2 & 3

Drill Hole RPM-DDH003 is a substantial 200m step-out hole east of RPM-DDH001, which successfully expanded the nickel-alloy awaruite mineralization to a lateral width of approximately 500 meters within the zone (Figure 1). The hole reached a depth of 378 meters, with visible awaruite mineralization observed throughout the drill core. Notably, large elongated awaruite grains measuring up to 1,000 microns were identified at a depth of 180 meters, while grains ranging from 200 to 600 microns were commonly observed disseminated throughout the hole. These coarser-grained awaruite occurrences suggest that the mineralization expands and becomes more significant towards the east, remaining open in this direction and providing substantial width for expansion along strike.

Drill Hole RPM-DDH002 was drilled from the same location as hole 1, but in the opposite direction to the west, aimed to test the western extension of the mineralized zone. This hole extended the zone up to a width of approximately 300 meters, encountering visible awaruite mineralization with grain sizes ranging up to 400 microns. The hole reached a depth of 234 meters downhole before ending in a heavily gouged and faulted zone. Phase 2 drilling will be optimized for increased-depth drilling capabilities, and further drilling to the west will be extended to better test the extent of the mineralization.

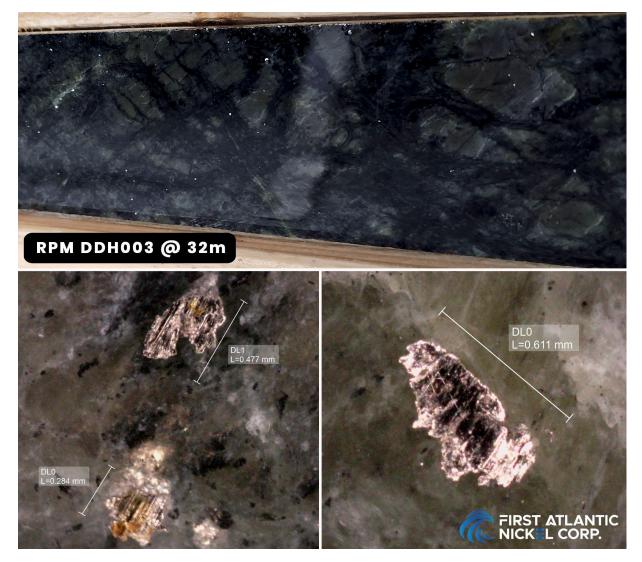


Figure 2: Core sample from drill hole RPM-DDH003 at a depth of 32 meters, displaying visibly disseminated awaruite. The lower images depict magnified views of awaruite grains, showing surfaces that are both smooth and grooved, with grain sizes varying between 284 and 611 microns.

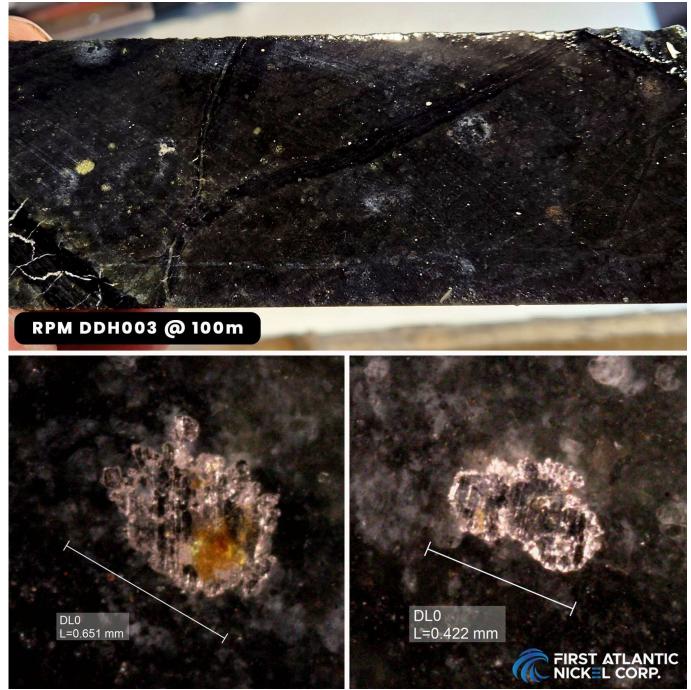


Figure 3: Core sample from drill hole RPM-DDH003 at a depth of 100 meters, showing visible awaruite. The lower images detail magnified views of awaruite grains, which exhibit both smooth and grooved surfaces, with grain sizes ranging from 422 to 651 microns.



Figure 4: Core sample from drill hole RPM-DDH003 at a depth of 180 meters, featuring visible awaruite. The lower images showcase magnified views of the awaruite grains, displaying smooth and grooved surfaces, with an elongated awaruite nickel-alloy grain up to 1,000 microns in size forming as fracture filling.

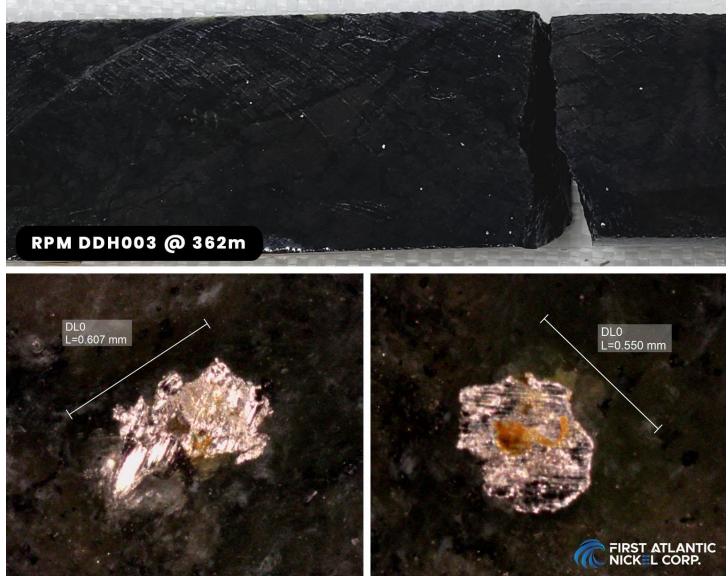


Figure 5: Core sample from drill hole RPM-DDH003 at a depth of 362 meters, where awaruite is visibly present. The lower images present magnified views of the awaruite grains, which show smooth and grooved surfaces, with grain sizes ranging between 550 and 607 microns.



Figure 6: Core sample from drill hole RPM-DDH002 at a depth of 41 meters, showing visible grains of awaruite. The lower images present magnified views of the awaruite grains under a microscope, with sizes up to 428 microns.

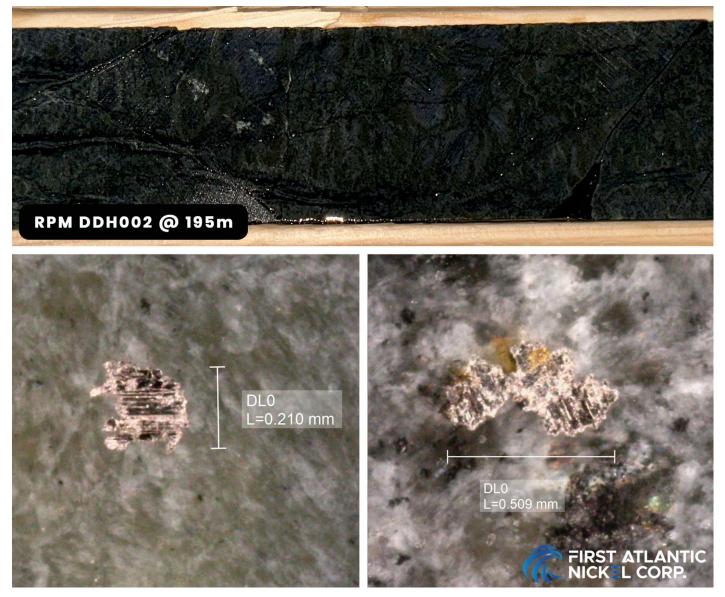


Figure 7: Core sample from drill hole RPM-DDH002 at a depth of 195 meters, featuring visible awaruite. The lower images showcase magnified views of the awaruite grains, with sizes ranging between 210 and 509 microns.

Drilling in the RPM Zone has consistently intersected wide intervals of serpentinized peridotite ultramafic rock, which is part of the large-scale Ophiolite that extends across the property, with the core area spanning approximately 30 kilometers. The serpentinized peridotite within the drilled areas is heavily broken due to evident and extensive faulting and shearing. Phase 2 drilling will utilize a higher power drill rig with a combination of HQ & NQ drill core and specialized drill bits to penetrate deeper into the soft, heavily sheared and serpentinized rock encountered during Phase 1 drilling.

The overburden encountered in RPM-DDH003 was 12 meters thick, while in RPM-DDH002, it was 9 meters thick. In both holes, the overburden was predominantly composed of weathered bedrock, which will also be sampled for awaruite nickel mineralization. The minimal overburden observed is encouraging and would be advantageous in an open-pit mining operation, as low levels of overburden can have a positive impact on strip ratios.

Core samples are being processed and sent to the assay lab for analysis.

**RPM Zone Geology:** The RPM Zone is situated within the expansive 30 km highly magnetic ultramafic ophiolite belt, approximately 10 km south of the Super Gulp target and 25 km south of the historic drilling at Atlantic Lake, where significant nickel mineralization had previously been encountered in drill core. This zone is characterized by wide intervals of heavily sheared and serpentinized peridotite ultramafic rock. The serpentinized peridotite within the drilled areas is heavily broken due to extensive shearing and faulting, resulting from its vertical position within a subduction zone and vertical emplacement rather than being displaced and preserved as a massif. The vertical orientation of the crustal-scale ophiolite is highly favorable, absorbing additional structural breakage and increasing fluid porosity for serpentinization. This vertical orientation also provides significant depth potential for mineralized zones, where the nickel mineralization could extend to depths of 1 km or more, allowing ample room for depth extensions.

**Phase 2 Exploration Plans:** Phase 2 drilling will target deeper mineralization, focusing on extending the strike length and width. This phase will concentrate on the RPM Zone and explore targets throughout the entire 30 km ophiolite trend for awaruite. Permits for Phase 2 have been submitted and are expected to be received in time for drilling this winter. The Phase 2 program aims to delineate and expand known mineralization zones, connecting the RPM and Chrome Pond areas, which are believed to form a significant target for future resource drilling.

Exploration will continue to test the 30 km nickel trend, with additional holes being drilled as the Company expands its operations northward. The RPM zone remains open in all directions, and the Company anticipates providing updates on Phase 1 step-out drilling to the north, with further updates expected soon.

**Visual Identification of Awaruite (Ni3Fe) Nickel Alloy:** Awaruite's distinctive properties make it readily identifiable under visual examination when present as larger grain sizes (see Table 1 below). Due to its soft and malleable nature, larger grains of awaruite exhibit smooth or grooved surfaces when cut. These features are easily observable under a microscope, as seen in various figures presented by the Company (see Figures 1-7). Under bright light, grains larger than 100 microns reflect light, creating a visible sheen. For smaller grains, particularly those below 50 microns, a magnifying glass becomes necessary for detection (see Table 1)<sup>1</sup>. This visibility indicator is crucial as the target size for potential extraction and concentration through flotation or magnetic separation is approximately 10 microns<sup>2</sup> or larger.

<sup>&</sup>lt;sup>1</sup> https://fpxnickel.com/wp-content/uploads/2017/06/Decar-Project-PEA-August-16.pdf

<sup>&</sup>lt;sup>2</sup><u>https://pubs.geoscienceworld.org/segweb/economicgeology/article-abstract/112/3/517/172164/Regional-Metallogeny-and-Genesis-of-a-New-Deposit</u>

Table 1: Awaruite Grain Size Visibility Chart<sup>1</sup>

Grain Size	Awaruite Diameter (µm)	Comments
1	Less than <50 µm	Pin head, requires a hand lens to be visible
2	50 µm to 100 µm	Few visible grains, easy to see with a hand lens
3	100 µm to 200 µm	Visible to naked eye in sunlight
4	200 µm to 300 µm	Visible to naked eye in sunlight
5	300 $\mu m$ to more than >400 $\mu m$	Visible to naked eye in sunlight

# Awaruite (Nickel-iron alloy Ni<sub>2</sub>Fe, Ni<sub>3</sub>Fe)

Awaruite, a naturally occurring sulfur-free nickel-iron alloy composed of Ni<sub>3</sub>Fe or Ni<sub>2</sub>Fe with approximately ~75% nickel content, offers a proven and environmentally safer solution to enhance the resilience and security of North America's domestic critical minerals supply chain. Unlike conventional nickel sources, awaruite can be processed into high-grade concentrates exceeding 60% nickel content through magnetic processing and simple floatation without the need for smelting, roasting, or high-pressure acid leaching<sup>3</sup>. Beginning in 2025, the US Inflation Reduction Act's (IRA) \$7,500 electric vehicle (EV) tax credit mandates that eligible clean vehicles must not contain any critical minerals processed by foreign entities of concern (FEOC)<sup>4</sup>. These entities include Russia and China, which currently dominate the global nickel smelting industry. Awaruite's smelter-free processing approach could potentially help North American manufacturers meet the IRA's stringent critical mineral requirements and reduce dependence on FEOCs for nickel processing.

The U.S. Geological Survey (USGS) highlighted awaruite's potential, stating, "The development of awaruite deposits in other parts of Canada may help alleviate any prolonged shortage of nickel concentrate. Awaruite, a natural iron-nickel alloy, is much easier to concentrate than pentlandite, the principal sulfide of nickel"<sup>5</sup>. Awaruite's unique properties enable cleaner and safer processing compared to conventional sulfide and laterite nickel sources, which often involve smelting, roasting, or high-pressure acid leaching that can release toxic sulfur dioxide, generate hazardous waste, and lead to acid mine drainage. Awaruite's simpler processing, facilitated by its amenability to magnetic processing and lack of sulfur, eliminates these harmful methods, reducing greenhouse gas emissions and risks associated with toxic chemical release, addressing concerns about the large carbon footprint and toxic emissions linked to nickel refining.

The development of awaruite resources is crucial, given China's control in the global nickel market. Chinese companies refine and smelt 68% to 80% of the world's nickel<sup>6</sup> and control an estimated 84% of Indonesia's nickel

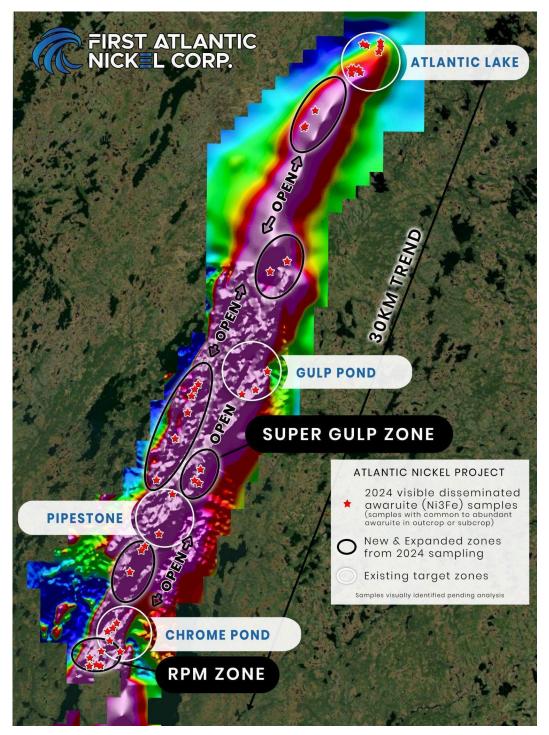
<sup>&</sup>lt;sup>3</sup><u>https://fpxnickel.com/projects-overview/what-is-awaruite/</u>

<sup>&</sup>lt;sup>4</sup> <u>https://home.treasury.gov/news/press-releases/jy1939</u>

<sup>&</sup>lt;sup>5</sup> <u>https://d9-wret.s3.us-west-2.amazonaws.com/assets/palladium/production/mineral-pubs/nickel/mcs-2012-nicke.pdf</u>

<sup>&</sup>lt;sup>6</sup> https://www.brookings.edu/wp-content/uploads/2022/08/LTRC\_ChinaSupplyChain.pdf

output, the largest worldwide supply<sup>7</sup>. Awaruite is a cleaner source of nickel that reduces dependence on foreign processing controlled by China, leading to a more secure and reliable supply for North America's stainless steel and electric vehicle industries.



<sup>7</sup> <u>https://www.airuniversity.af.edu/JIPA/Display/Article/3703867/the-rise-of-great-mineral-powers/</u>

Figure 8: Atlantic Nickel target zones, including RPM Zone and Super Gulp, showing 2024 sampling locations with visible awaruite (nickel-alloy) overlaid on the 30 km nickel ultramafic magnetic trend (background TMI magnetics).

# Investor Information

The Company's common shares trade on the TSX Venture Exchange under the symbol "**FAN**", the American OTCQB Exchange under the symbol "**FANCF**" and on several German exchanges, including Frankfurt and Tradegate, under the symbol "**P21**".

Investors can get updates about First Atlantic by signing up to receive news via email and SMS text at <u>www.fanickel.com</u>. Stay connected and learn more by following us on these social media platforms:

https://x.com/FirstAtlanticNi https://www.facebook.com/firstatlanticnickel https://www.linkedin.com/company/firstatlanticnickel/

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## Disclosure

Adrian Smith, P.Geo., is a qualified person as defined by NI 43-101. The qualified person is a member in good standing of the Professional Engineers and Geoscientists Newfoundland and Labrador (PEGNL) and is a registered professional geoscientist (P.Geo.). Mr. Smith has reviewed and approved the technical information disclosed herein.

## About First Atlantic Nickel Corp.

First Atlantic Nickel Corp. (TSXV: FAN) (OTCQB: FANCF) (FSE: P21) is a Canadian mineral exploration company developing the 100%-owned Atlantic Nickel Project, a large-scale nickel deposit strategically located near existing infrastructure in Newfoundland, Canada. The Project's nickel occurs as awaruite, a natural nickeliron alloy containing approximately 75% nickel with no-sulfur and no-sulfides. Awaruite's properties allow for smelter-free magnetic separation and concentration, which could strengthen North America's critical minerals supply chain by reducing foreign dependence on nickel smelting. This aligns with new US Electric Vehicle US IRA requirements, which stipulate that beginning in 2025, an eligible clean vehicle may not contain any critical minerals processed by a FEOC (Foreign Entities Of Concern)<sup>8</sup>.

First Atlantic aims to be a key input of a secure and reliable North American critical minerals supply chain for the stainless steel and electric vehicle industries in the USA and Canada. The company is positioned to meet the growing demand for responsibly sourced nickel that complies with the critical mineral requirements for eligible clean vehicles under the US IRA. With its commitment to responsible practices and experienced team, First

<sup>&</sup>lt;sup>8</sup> <u>https://home.treasury.gov/news/press-releases/jy1939</u>

Atlantic is poised to contribute significantly to the nickel industry's future, supporting the transition to a cleaner energy landscape. This mission gained importance when the US added nickel to its critical minerals list in 2022, recognizing it as a non-fuel mineral essential to economic and national security with a supply chain vulnerable to disruption.

Neither the 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.

#### Forward-looking statements:

This news release may include "forward-looking information" under applicable Canadian securities legislation. Such forward-looking information reflects management's current beliefs and are based on a number of estimates and/or assumptions made by and information currently available to the Company that, while considered reasonable, are subject to known and unknown risks, uncertainties, and other factors that may cause the actual results and future events to differ materially from those expressed or implied by such forward-looking information. Forward looking information in this news release includes, but is not limited to, expectations regarding the timing, scope, and results from the 2024 work and drilling program; results from assays, new drill permits being issued in time for the Phase 2 drilling to start this winter, the Company's objectives, goals or future plans, statements, and estimates of market conditions. Readers are cautioned that such forwardlooking information are neither promises nor guarantees and are subject to known and unknown risks and uncertainties including, but not limited to, general business, economic, competitive, political and social uncertainties, uncertain and volatile equity and capital markets, lack of available capital, actual results of exploration activities, environmental risks, future prices of base and other metals, operating risks, accidents, labour issues, delays in obtaining governmental approvals and permits, and other risks in the mining industry. Additional factors and risks including various risk factors discussed in the Company's disclosure documents which can be found under the Company's profile on http://www.sedarplus.ca. Should one or more of these risks or uncertainties materialize, or should assumptions underlying the forward-looking statements prove incorrect. actual results may vary materially from those described herein as intended, planned, anticipated, believed, estimated or expected.

The Company is presently an exploration stage company. Exploration is highly speculative in nature, involves many risks, requires substantial expenditures, and may not result in the discovery of mineral deposits that can be mined profitably. Furthermore, the Company currently has no reserves on any of its properties. As a result, there can be no assurance that such forward-looking statements will prove to be accurate, and actual results and future events could differ materially from those anticipated in such statements.