



Abstract Guide 2024

AME Roundup 2024 is hosted on the traditional, unceded territories of the Coast Salish people, including the lands of the x^wməθk^wəyəm (Musqueam), Skwxwú7mesh (Squamish) and səlilwətał (Tsleil-Waututh) Nations. We are committed to creating pathways for Indigenous leadership and participation in mineral exploration and development.

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REGIONAL OVERVIEWS

MINERAL EXPLORATION AND MINING IN BRITISH COLUMBIA, 2023

Gordon Clarke, Director, Mineral Development Office, British Columbia Ministry of Energy, Mines and Low Carbon Innovation

Regional Overviews

10:10 AM – 10:35 AM

Mineral and coal production for 2023 continued to be a major contributor to the provincial economy. Coal typically accounts for 50–60% of the production value, copper approximately 25–30% and gold approximately 10–15%. Coal production is almost exclusively metallurgical coal. The forecast value of mineral production for 2023 is expected to be less than 2022's estimated value of \$17.5 billion due to a decrease in metallurgical coal and copper prices.

The British Columbia Geological Survey (BCGS) tracks the progress of approximately 400 mineral and coal exploration projects annually. The value of exploration expenditures had been increasing since 2019. Total expenditures in 2022 were \$740 million, an increase of \$80.6 million from 2021. For 2023, expenditures are expected to decrease. Global unrest has reduced financing and activity; the full impact has yet to be tabulated.

Mine construction continued at Ascot Resources Ltd.'s Premier Gold project and at Artemis Gold Inc.'s Blackwater Gold project. Both plan to start commercial production in 2024. Acquisitions continued to highlight the quality of British Columbia projects and the province's attractiveness for investment. Hudbay Minerals Inc. purchased the Copper Mountain mine from Copper Mountain Mining Corporation for approximately US\$439 million (approximately C\$593 million). Newmont Corporation purchased Newcrest Mining Limited for US\$17 billion (approximately C\$23 billion). Newcrest's assets in the province included the Red Chris (70%) and Brucejack mines. Teck Resources Limited announced its agreement to sell its British Columbia steelmaking coal business, Elk Valley Resources, for US\$9 billion. New ownership will be Glencore plc (77%), Nippon Steel Corporation (20%) and POSCO (3%).

Several projects progressed through Preliminary Economic Assessment, Prefeasibility or Feasibility stages. Some advanced projects are expected to complete up to 40 000 m of exploration drilling in 2023. The largest drill projects target gold, but there are also significant porphyry copper exploration projects active from grassroots through near-mine and mine expansion stages. Projects also targeted nickel, zinc, silver, REE, tungsten and metallurgical coal. Significant drill intersections and discoveries were reported at all stages of exploration. Reports of new discoveries and significant results continue for precious metals, base metals and other commodities, supporting British Columbia's reputation as a premier exploration and mining jurisdiction.

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YUKON MINERAL EXPLORATION AND MINING OVERVIEW

Sarah Ellis, Economic Geologist, Yukon Geological Survey

Regional Overviews

10:35 AM – 11:00 AM

Despite tough market conditions, exploration activity in the Yukon has continued to stabilize and the territory saw another year of significant exploration results and new discoveries. Natural Resources Canada's revised spending intentions for 2023 totaled C\$162.7 million this year; tracking of exploration and development spending by the Yukon Geological Survey via press releases, personal communications and publicly reported information is ongoing and will be presented during this session. Most exploration expenditures in Yukon were on gold targets (approximately 55%) followed by lead-zinc (approximately 25%), silver (approximately 9%) and copper (approximately 9%) targets.

Highlights of early-stage exploration in 2023 include Snowline Gold Corp.'s continued exploration success at their Valley target, a reduced intrusion-related gold deposit on their Rogue property; Banyan Gold Corp.'s release of a 6.2 million oz Inferred Resource; Fireweed Metals' completion of their largest drill program to date and purchase of MacTung; and Cascadia Minerals' maiden drill program intersecting broad intervals of copper-gold mineralization. Three advanced projects in Yukon continued through permitting in 2023, including Newmont's Coffee project, BMC Minerals' Kudz Ze Kayah project and Western Copper and Gold's Casino project.

Mining highlights include for 2023:

- Victoria Gold's Eagle mine producing 125 thousand oz Au in the first threequarters of 2023, up 17% compared to third quarter last year with an estimated production guidance for year end of 160 to 180 thousand oz Au.
- Hecla Mining purchased the Keno mine from Alexco Resources in September 2022 and re-opened their mill in May 2023. Production at Keno Hill began to ramp back up mid-year producing 900 thousand oz Ag by third quarter with a revised production guidance of 1.6 to 1.8 million oz Ag for 2023.
- Minto Metals ceased operations on May 13th and the Minto mine was placed into court-ordered receivership in July. As of the end of November, the receiver is in the middle of the sale process. Site operation and reclamation is currently under supervision by the Government of Yukon.

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2023 ALASKA MINERAL INDUSTRY OVERVIEW

David Szumigala, Minerals Geologist, Alaska Division of Geological & Geophysical Surveys

Regional Overviews

11:00 AM – 11:30 AM

Alaska's diverse metallogenic provinces, underexplored mineral resource potential and world-class metal and coal deposits continue to attract exploration capital. Alaska's mineral industry remained vibrant in 2023, with robust production from seven metal mines and one coal mine, a handful of projects in the development stage, and steady exploration for a diverse range of metals and commodities.

Teck's Red Dog mine is the world's largest zinc mine by 2022 production, and 2023 production is on pace to surpass tonnages for zinc and lead. Kinross Gold Corporation's Fort Knox mine poured the 9 millionth gold ounce in September, and Northern Star Resources's Pogo mine is on pace to pour its 5 millionth gold ounce in 2025. Hecla Mining Company's Greens Creek mine had record mill throughput in the first quarter of 2023, with minelife extended to 2037. Coeur Mining Inc.'s Kensington mine extended minelife and announced exciting exploration results. Usibelli Coal Mine remains a steady producer and important regional electricity producer. A ground-breaking ceremony occurred in August 2023 for the Manh Choh mine, with expected gold production in 2024.

Alaska's estimated total 2023 exploration spending is at least US\$230 million (approximately C\$310 million). Gold remained a focus of exploration, accounting for almost 50% of Alaskan exploration spending, and 36% of exploration spending was used for polymetallic metals associated with volcanogenic massive sulphide deposits. Strong interest in critical and strategic minerals fanned exploration efforts. Exploration drilling programs were completed at the Aktigiruaq-Anarraaq, Kensington, Greens Creek, Sun, Roosevelt, Estelle, Golden Summit, Goodpaster/Central, Graphite Creek, Herbert Gold, Icy Cape, Johnson Tract, Lik (Su), Lucky Shot, Manh Choh, Nikolai, Palmer, Flat, Tanacross, Treasure Creek, Cantoo, Whistler, Kougarok, Wiseman and Waterpump Creek/Last Hurrah projects.

Alaska's government encourages resource development by providing geological datasets/maps, airborne geophysical surveys, Alaska Industrial Development and Export Authority partnerships with private entities to finance infrastructure, and permit coordination by the Office of Project Management and Permitting (<https://dggs.alaska.gov/minerals/akgeology-info.html>).

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THEME SESSION: EXPLORING FOR VALUE

UNVEILING THE SECRETS OF SUSTAINABLE GROWTH: A STRATEGIC APPROACH TO EXPLORATION AND MINING SUCCESS

Rob Krcmarov, Corporate Board Member

Theme Session: Exploring for Value

1:40 PM – 2:15 PM

In the dynamic landscape of the mining industry, the foundation for sustained growth lies in the artful orchestration of exploration strategies and the cultivation of a discovery-driven team. This presentation delves into the transformative power of building an effective exploration strategy and fostering a culture that thrives on discovery. The assertion is clear: Giant world-class discoveries, when approached with finesse, stand out as the riskiest yet most cost-effective organic growth investments.

While mergers and acquisitions (M&A) often capture headlines and attention, the true narrative of success in the mining industry requires a nuanced understanding of exploration potential. This presentation illuminates the critical role of exploration insights in validating and justifying the inevitable acquisition premium associated with M&A activities. Celebrating the success stories of Barrick Gold, the presentation showcases compelling case studies that highlight the value proposition of not only adding ounces but also creating strategic beachheads for new business and M&A opportunities.

The heart of the presentation lies in unraveling the intricacies of building a successful exploration culture. Participants will gain insights into establishing critical success factors that can propel any exploration group toward sustained excellence. From organizational dynamics to technological integration, the presentation provides a guide on how to shape a culture that not only survives but thrives in the ever-evolving landscape of the mining industry.

Join us as we navigate the uncharted territories of sustainable growth, where effective exploration strategies and discovery-driven teams become the catalysts for organic success. This presentation is a roadmap for companies aiming not just to endure, but to flourish in an industry where strategic exploration is the key to unlocking phenomenal value.

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UNEARTHING COAL'S VALUE AND ITS APPLICABILITY FOR OTHER COMMODITIES

Andrea Rutley, Head of Technical & Analytics, Anglo American

Theme Session: Exploring for Value

2:15 PM – 2:50 PM

Coal is often perceived as a non-critical commodity, yet its contributions to national economies, growth and development are significant. The intent of this presentation is not to debate the positive or negative value of coal, but to demonstrate a different perspective on exploring the value coal delivers.

Irrespective of commodity, operational difficulties have exponentially increased during the past 10 years. Government and stakeholder expectations have become the principal factors behind the success of mining companies. Mining operations are impacted by increased mining complexity, with the easy to mine and simplest to process ore already exploited. Successful economic extraction of ore must be achieved while adhering to strict governance processes, navigating increased safety considerations and using the best possible technical solutions to develop and comply with the most efficient mine plan.

In Australia, Anglo American operates five steelmaking coal operations, predominantly through underground longwall mining. Longwall mining involves extracting coal from underground panels that are 300–350 m wide and up to 4 km in length, from a coal seam up to 4.5 m thick. This method of mining has limited flexibility and, as a result, all potential risks to mining must be well understood in advance.

The application of 3D rock mass modelling incorporating high-resolution seismic inversions, geological, geotechnical and geophysical data, leads to advanced gas and strata knowledge, without which there is the potential for significant safety incidents and/or production disruption. To achieve this and mitigate these risks, it is essential to use the best technical solutions from a range of industries; adapt them to the level of resolution required and deliver fully integrated technical, geological and geophysical interpretations.

This presentation is designed to start a conversation promoting alternative thinking that provides solutions to maximize the value of mining and associated social benefits, not just for coal but for all commodities.

MINERAL EXPLORATION IN TAHLTAN TERRITORY; STEWARDS, FAMILIES AND MINERS

Kody John Penner, Vice-Chair, Tahltan Nation Development Corporation (TNDC)

Theme Session: Critical to Our Future

2:50 PM – 3:25 PM

Abstract not available at time of printing.

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UNVEILING TECK'S OREBODY KNOWLEDGE PATH TO SUCCESS: FROM EXPLORATION TO OPERATION

Gabriela Brandao, Director, Orebody Knowledge, Teck Resources Limited; Ayesha Ahmed, Principal Geologist, Teck Resources Limited

Theme Session: Exploring for Value

3:25 PM – 4:00 PM

In today's challenging mining landscape, the key to long-term success lies in unlocking the full potential of exploration, advanced projects and mine operations. This presentation will explore how Teck is thoughtfully adding value to its operations through innovative approaches and technologies. Three insightful case studies will be showcased, each highlighting Teck's commitment to driving efficiency, sustainability and profitability in the mining industry.

The first case study centres on 'dynamic reserves to drive drilling decisions.' Teck's application of a dynamic modelling method enables the adaptation of drilling decisions and serves as the basis to inform senior stakeholders about the impact of drilling on project economics. By continuously updating reserve estimates based on emerging geological data, Teck can optimize drilling campaigns, mitigate exploration risks and maximize resource utilization.

The second case study addresses the importance of waste rock characterization at brownfield projects. Leveraging advanced geoscientific techniques, Teck predicts potential environmental impacts, enabling informed decisions on waste management and fostering a sustainable approach to mining operations.

The third case study spotlights the trial of the IMDEX BLAST DOG™, an autonomous, track-mounted blast hole logging tool for down-hole multi-parameter data collection. Preliminary evaluation of the results is promising and indicates potential for the BLAST DOG data to inform blast loading rules, as well as generate high-resolution, short-term models of proxies for alteration/hardness to inform blending decisions for optimized throughput and recovery.

Through these three case studies, attendees will gain valuable insights into how Teck is embracing orebody knowledge to add substantial value to its exploration, advanced projects and mine operations. This presentation promises to inspire and empower industry professionals to explore new avenues of value creation and sustainability in the mining sector.

COMMODITIES AND FINANCIAL MARKETS

THE FIVE PILLARS OF THE ENERGY TRANSITION: WHERE DO METALS FIT IN?

Rowena Gunn, Senior Analyst, Wood Mackenzie

Commodities and Financial Markets

9:05 AM – 9:35 AM

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The energy transition starts and ends with metals. If we want to generate, transmit, store or use renewable electricity we cannot do so without a vast quantity of metals.

Wood Mackenzie's base case view aligns with an approximately 2.5°C warming scenario. This base scenario requires approximately \$200 billion of investment in metals in the next decade to close supply gaps. But what does it take to achieve an accelerated decarbonization?

In this talk we will present the current commodity outlook for some key metals and discuss what would be required to meet a net zero scenario: Where are the supply gaps? How much investment will it take? What is the timescale? Why is more investment not already flowing into this industry? What are the political, financial and practical challenges to increased metals supply?

PHOTOVOLTAIC AND OTHER SEMICONDUCTOR MATERIALS: CRITICALITY, MARKETS, RESOURCES, ECONOMIC GEOLOGY AND OPPORTUNITIES

George J. Simandl, Adjunct Professor, School of Earth and Ocean Sciences, University of Victoria, BC

Commodities and Financial Markets

9:35 AM – 10:05 AM

The reduction of greenhouse gas emissions depends on the availability of clean energy. To harness solar energy, photovoltaic (PV) materials (solar-grade silicon [SG-Si], germanium, gallium, indium, tellurium, selenium and arsenic) must be available at a reasonable cost. With the exception of SG-Si, the markets for these critical materials do not exceed 200 000 tonnes/year; however, they are subject to fast growth rates. Apart of SG-Si, PV materials are byproducts of base- and precious-metal extraction. This source is motivated in part by environmental and workplace regulations and the need to purify the main commodity to users' specifications. Given favourable market conditions, any PV material can be derived from more than one deposit type. For example, germanium can be recovered as a byproduct of base-metal extraction from bauxite, Mississippi Valley-type, clastic-dominated sediment-hosted Zn-Pb, Kipushi-type and Apex-type deposits.

The raw materials required to produce metallurgical-grade silicon (MG-Si), mainly quartzites, are available on all continents. The process is energy intensive, so the availability of abundant, inexpensive, and 'clean' power is one of the key parameters in selecting future silicon metal plant sites. Metallurgical-grade silicon is the precursor material needed to produce SG-Si. Although there is no lack of raw materials expected to cause shortages of PV materials in the short term, shortages linked to bottlenecks, geopolitical economic considerations, armed conflicts, natural hazards outside of human control or unexpected increase in demand due to commercialization of new technologies are possible. The advent of the 'circular economy' cannot eliminate the need to increase mine, smelter and refinery production of PV materials. Furthermore, the previously discussed semiconductors are also used in electronic devices (e.g., microchips essential for mobile phones, computers, automobiles, aerospace, national defence), for which even higher purity materials are required than for the photovoltaic industry.

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MAKING SENSE OF TODAY'S MINING AND CAPITAL MARKETS

Cam Currie, Senior Investment Advisor, Currie Metals & Mining, Canaccord Genuity Corp.

Commodities and Financial Markets

10:05 AM – 10:35 AM

Narrative Economics is now the driving force in today's Capital Markets. Narrative drives money into exchange-traded funds (ETFs), which are then invested in the underlying ETF holdings. Despite gold's great performance to new highs, there is no narrative of this in financial media, which is one of the primary reasons gold equities are not reacting to the gold price move.

Traditionally a very large segment of the investing public owned gold equities and the financial media covered the sector. But during the past 10 years, those investors have moved on to other sectors, be it cannabis, crypto, digital or disruptive industries.

Gold must regain its audience to attract today's investor.

PRECIOUS METALS & THE RETURN OF GREAT POWER POLITICS

Emil Kalinowski, Metals Market Research, Wheaton Precious Metals

Commodities and Financial Markets

10:35 AM – 11:05 AM

Gold and silver will serve to protect the real value of wealth during the coming generation-long era of inflation. The era comes courtesy of persistent negative real rates and governments turning markets into public utilities. It is a return to the post World War II period of controls on price, rent and capital. Government industrial planning and regulatory financial repression will allow policy makers to inflate away debts—already at all-time highs—borrowed to address a litany of socioeconomic and geopolitical disorders.

The 2007-09 Global Financial Crisis ended the post-Cold War globalization and arrested the political-economy's pendulum swing towards laissez-faire markets. A decade of false economic dawns ended with the 2020 Covid(s)-Shutdown(s) and 2022 Russia-Ukraine war. An era of international cooperation and enrichment had truly ended, the period of confrontation had begun and the pendulum swings back towards dirigisme.

The metals and mining industry is one key battlefield in this nascent great power confrontation. China's monopoly of mineral processing in the context of a de-globalizing world has put many governments in a vulnerable position, especially after the examples of Covid/Shutdown supply chain fragility and Russian energy dependence.

Yet with current public (and private) sector debt loads governments are constrained in how they can respond, at least in post-1980s economic framework. The least socioeconomically disruptive solution is to return to the post-World War II years of financial repression, to commandeer private savings for government-directed financing and inflate away debt (and savings) as policy makers confront emergencies.

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For commodity producers, nominal and real returns can be achieved. For individuals, precious metals offer one of the few escape hatches to real wealth preservation.

RECENT TRENDS IN MINERAL EXPLORATION FINANCING

Kendra Johnston, PGeo, MBA; Managing Director, PearTree Canada

Commodities and Financial Markets

11:05 AM – 11:30 AM

It is said that the world needs 388 new mines by 2030 to meet our collective climate goals. With approximately 340 mines currently operating in the United States and Canada (according to the Fraser Institute), we as explorers and miners need to double the work that we are doing. In British Columbia, there is an average of 275 active exploration projects and an average of 16 operating mines each year. Using these numbers to extrapolate, BC needs an additional 315 active exploration projects annually and 18 new mines to pull its weight and contribute on a pro rata basis to the mineral and metal production needed by 2030.

Although there is a significant increase in the need for minerals and metals, financing early-stage exploration projects is becoming more difficult. The retail market has declined with negative public perception of the mining industry as we struggle to attract new young investors. In addition, we have seen charity flow-through financing become more common and take on a larger portion of the market share. This shift is altering the traditional timing and annual cycles of exploration financing.

Recent policy changes, including the creation and implementation of the Critical Mineral Exploration Tax Credit, increases in various provincial tax credits, changes to the Alternative Minimum Tax and announcements, and incentives in the federal and provincial Critical Mineral Strategies, have also impacted the size, type, stage and location of projects that are receiving financing.

This presentation will discuss the recent trends in exploration financing, what's impacting the trends and some considerations for planning your financings in 2024.

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ADVANCES IN GEOSCIENCE

RECENT ADVANCES IN YUKON GEOLOGY

Maurice Colpron, Head, Bedrock Geology, Yukon Geological Survey; Tyler Ambrose and David Moynihan, Yukon Geological Survey

Advances in Geoscience

9:05 AM – 9:25 AM

Recent mapping projects and regional studies by the Yukon Geological Survey (YGS) continue to improve our understanding of Yukon geology and refine tectonic and metallogenetic models. Mapping in the Wernecke Mountains has improved details of Proterozoic stratigraphy and provides the framework for mineralization in the North Fork Klondike River area. Mapping in the Teslin map area brings refinement to relationships between the Yukon-Tanana, Slide Mountain and Cassiar terranes in this region, and has identified a belt of relict Permian high-pressure rocks overprinted by Jurassic deformation. Regional detrital zircon studies of the Yukon-Tanana Terrane improve correlation of Upper Devonian–Carboniferous strata within the terrane and demonstrates its distinct character from Paleozoic rocks of the Tracy Arm Terrane in southeastern Alaska. High-precision U-Pb zircon dating of Permian igneous, meta-igneous and metasedimentary rocks from the Klondike district (Yukon-Tanana Terrane) indicates that significant Pb-loss affected rocks in this region. Most notably, the undeformed Jim Creek pluton (previously dated at ca. 252 Ma) was previously thought to bracket a Permian deformation and metamorphic event affecting the foliated Sulphur Creek orthogneiss and the timing of the Klondike orogeny. New chemical abrasion–thermal ionization mass spectrometry (CA-TIMS) U-Pb zircon dating now shows that the Jim Creek and Sulphur Creek intrusions have identical ages of ca. 260.9 Ma. The deformation and metamorphism in the Klondike region are most reasonably interpreted to be Jurassic and the variation in fabric development is related to heterogeneous deformation at different structural levels. Studies of Jurassic igneous and sedimentary rocks in southern Yukon have led to a revised tectonic model for the Intermontane terranes involving arc collision in the north followed by sinistral strike-slip faulting and southward retreat of Hazelton subduction zone in the Early Jurassic. Finally, geophysical surveys undertaken as part of the YGS geothermal research program provide new constraints on the geometry of major faults in southern Yukon.

LINKS BETWEEN PHYSICAL PROPERTIES AND MINERALOGY, AND FIRST RESULTS OF THE BC GEOLOGICAL SURVEY–GEOLOGICAL SURVEY OF CANADA CRITICAL MINERALS COLLABORATION

Randy Enkin, Head of the Paleomagnetism and Petrophysics Laboratory, Geological Survey of Canada

Advances in Geoscience

9:25 AM – 9:45 AM

Modern mineral exploration demands interpretation formed by the integration of two principal activities: geological mapping and geophysical survey collection. The linking element is the physical properties of rocks, which must be measured, compiled and analyzed. The current emphasis on critical minerals motivates us to look deeper into previously explored regions to understand the geological settings that are conducive to discovering economic critical mineral systems.

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Government geological surveys hold large archives of hand samples collected during decades of field mapping. We can add value to these collections for the exploration community by producing open and accessible datasets of their metadata, geochemistry and physical properties. The BC Geological Survey (BCGS) and the Geological Survey of Canada are collaborating to make such a study on the BCGS legacy rock sample collection; preliminary results for the first couple of thousand samples will be released at Roundup.

Physical properties of rocks are directly controlled by the bulk composition, mineralogy and texture. By identifying the physical property characteristics of normal rocks, we gain a better understanding of the exotic rocks we are looking for.

Gravity and magnetic surveys reflect density and magnetic properties, which can mostly be described by the relative amounts of three principal components of mineral families: the light minerals (quartz, feldspar and calcite), the dark minerals (ferromagnesian silicates) and magnetite. Ore minerals and porosity add and subtract density. Importantly, igneous rocks formed in the upper crust usually have an approximately 10:1 ratio of ferromagnesian silicates to magnetite, and most subsequent geological processes lead to magnetite loss.

Electric resistivity and chargeability are controlled by permeability and ore minerals, which effectively form networks of wires and capacitors, as revealed by equivalent circuit analysis of spectral impedance measurements.

PALEOZOIC VOLCANIC ROCKS IN THE NORTHERN CANADIAN CORDILLERA: REMNANTS OF A RIFTED MARGIN

Rosie Cobbett, Project Geologist, Yukon Geological Survey and Memorial University of Newfoundland; Maurice Colpron, Yukon Geological Survey; Stephen Piercey, Memorial University of Newfoundland; Luke Beranek, Memorial University of Newfoundland; Jim Crowley, Department of Geosciences, Boise State University

Advances in Geoscience

9:45 AM – 10:05 AM

Lower and middle Paleozoic volcanic rocks that occur in ancient North American continental margin strata provide insights into the architecture of the western Laurentian rifted margin. Geochronology, trace-element and isotope geochemistry, volcanic facies analysis and stratigraphic section measurements are used to analyze the structure of the lithosphere during and after rifting. Precise U-Pb chemical abrasion–isotope dilution–thermal ionization mass spectrometry (CA-ID-TIMS) on zircon collected from the mafic volcanic piles indicates that magmatism along the margin occurred periodically from Late Cambrian until at least the Middle Ordovician. Geochemistry suggests the partial melts formed in the garnet stability field (greater than approximately 75 km) and the isotope signatures indicate the source of the melts may be the subcontinental lithospheric mantle.

This work provides insight into the location of lower to middle Paleozoic margin parallel grabens, rift-transfer faults and basin-platform transitions. Collectively, these features add detail to our understanding of the geometry of the rifted margin and allow inferences to be made about how the margin evolved after breakup. For example, reactivation of rift-related crustal-scale faults may lead to post-rift magmatism that occurs after breakup along the margin. Rift transfer faults are favourably oriented for re-activation as strike-slip faults, and westward-dipping normal faults that accommodated crustal extension during rifting are favourably oriented for reactivation as thrust faults during collisional orogenesis. Understanding the post-rift lithospheric architecture of western Laurentia is

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important for focused mineral exploration of base-metal deposits because globally these deposits are spatially associated with the transition from thin and thick lithosphere.

‘CRITICAL MINERAL INDEX’: GEOCHEMICAL SIGNAL OF CARBONATITE-RELATED CRITICAL METALS IN PROVINCIAL DRAINAGE SEDIMENTS

Alexei S. Rukhlov, Yao Cui, Quinn Cunningham, Gabe Fortin and Cameron Anderson, British Columbia Geological Survey

Advances in Geoscience

10:05 AM – 10:25 AM

Carbonatites, rare igneous rocks consisting of at least 30% primary carbonate minerals, have become increasingly important exploration targets because they are major sources of niobium, rare earth elements (REE) and other critical minerals. Demand for these minerals has rapidly increased as the world transitions to low-carbon technologies. The British Columbia alkaline province, a long (at least 1000 km), narrow (approximately 200 km) orogen-parallel belt along the western flank of Ancestral North America, contains numerous carbonatites and related silica-undersaturated and alkaline silicate rocks that host REE and rare-metal resources. Using multi-element stream sediment geochemical data collected as part of Regional Geochemical Survey (RGS) programs since 1976, we defined a multivariate ‘critical mineral index’ to assess prospectivity for carbonatite-hosted critical metals. Based on discriminant analysis of a training subset of the data downstream of known carbonatite occurrences ($n = 53$), our carbonatite index, which is validated by a test subset of the data, highlights numerous areas prospective for REE. Stream sediment data showing carbonatite index scores greater than the 93rd percentile ($n = 50$) reveal maximum contrast of REE, Nb, Ta, Ti, Zr, Hf, Th, U, P, K and other carbonatite indicators relative to the median (background) concentrations in stream sediments of the study area. Estimated predicted geochemical resources (in tonnes of metal per 1 m depth), based on productivities of metals in the stream basins, suggest significant potential for REE and other carbonatite-hosted critical metals. Based on data from known carbonatites, we propose a refined prospectivity approach to assess the critical metals’ potential in underexplored regions that includes analysis of detailed stream sediment, panned heavy mineral concentrate, and soil lithochemical surveys and high-resolution airborne radiometric and magnetic data.

MAGMATIC SULPHIDE DEPOSITS—GEOCHEMICAL AND ISOTOPIC TOOLS FOR EXPLORATION AND CHARACTERIZATION

Matthew J. Brzozowski, Mineral Deposit Geologist, British Columbia Geological Survey

Advances in Geoscience

10:25 AM – 10:45 AM

The societal shift toward a low-carbon future is leading to an increased demand for critical metals, of which the platinum group elements (PGE: Pt, Pd, Rh, Ru, Ir, Os) are important. Mafic- to ultramafic-hosted magmatic sulphide deposits are the main source of PGE globally, as well as significant contributors of nickel, copper and cobalt. As part of British Columbia’s critical minerals geoscience program, which is designed to provide foundational knowledge of

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critical mineral opportunities in BC, this presentation will discuss some key aspects of magmatic sulphide deposits, with an emphasis on geochemical tools that can be applied to their exploration.

Magmatic sulphide deposits form where metal-rich sulphide liquid exsolved from the host magma and accumulated. As a result, they generally do not exhibit evidence of mineralization external to the ore-bearing pluton. This has posed significant challenges in targeting and characterizing these deposits because the region of interest is relatively small (less than 1 km²). Additionally, geochemical tools applicable to exploration for hydrothermal deposits (e.g., magnetite and chlorite chemistry) cannot be readily applied to magmatic sulphide deposits. Understanding the mechanisms that generate magmatic sulphide deposits, therefore, becomes vital to exploration success, along with knowledge of the geochemical tools that can trace these processes. Mantle-derived magmas require external influence to become saturated in sulphide liquid, the most common mechanism being incorporation of wallrock sulphur. Sulphur isotopes remain one of the most robust ways of assessing sulphide saturation, but interpretations require an understanding of the competing processes controlling the isotope signatures. The Cu/Pd–S/Se diagram serves as a simple and efficient way of understanding sulphide saturation as these ratios record the range of processes that generate and modify magmatic deposits (e.g., contamination, R factor). Novel copper isotopes serve as a way to characterize metal sources (e.g., sediments), but can also be used to assess crustal contamination and metal enrichment processes.

USING PALEONTOLOGICAL EVIDENCE TO CONSTRAIN TECTONIC MODELS FOR THE CANADIAN CORDILLERA

Martyn Golding, Research Scientist, Geological Survey of Canada

Advances in Geoscience

10:45 AM – 11:05 AM

The Canadian Cordillera is a composite of crustal terranes with various stratigraphic and tectonic histories. The relationships between these terranes and their relative positions throughout the late Paleozoic and Mesozoic, are an ongoing field of research. In British Columbia and southern Yukon, the oceanic Cache Creek Terrane is structurally juxtaposed between the island arc Stikine and Quesnel terranes; the exotic island arc Wrangell Terrane lies farther to the west. Multivariate statistical analysis of Late Triassic (late Carnian to early Norian) conodont faunas from the Stikine and Quesnel terranes and the North American margin has suggested that the terranes were likely situated to the south of their present location prior to accretion to the North American margin in the Early–Middle Jurassic, and that the Stikine Terrane was located in a more southerly position than the Quesnel Terrane. Further evidence for terrane location is provided by oxygen isotope analysis of conodont phosphate. Oxygen isotope ratios are primarily controlled by sea-surface temperature; therefore, analysis of the oxygen isotope ratios preserved in Late Triassic (early Norian) conodonts of the Quesnel, Stikine and Wrangell terranes, as well as the northern part of the North American margin, allow the relative temperature of each of these tectonic entities to be determined for this time interval. This study demonstrates that Wrangell, Stikine and Quesnel terranes were all hotter than the North American margin in the early Norian and were likely located to the south of their current locations, with the Stikine Terrane again located farther south than the Quesnel Terrane. Both techniques provide evidence suitable for the evaluation of competing tectonic models and demonstrate the utility of paleontology for understanding Cordilleran tectonics.

LATE TRIASSIC MARINE SEDIMENTATION AND ITS IMPLICATIONS FOR TERRANE DEFINITIONS, TERRANE ASSEMBLY AND TECTONIC SETTING OF INTERMONTANE TERRANES IN NORTHERN BRITISH COLUMBIA AND YUKON, CANADA

A. Zagorevski, Research Scientist, Geological Survey of Canada; M. Mihalynuk, British Columbia Geological Survey; N. Joyce, British Columbia Geological Survey

Advances in Geoscience

11:05 AM – 11:30 AM

The North American Cordillera is the birthplace of the terrane concept that laid the foundations for global terrane analysis. Some Cordilleran terranes were defined based on their 'oceanic' characteristics, including submarine volcanosedimentary rocks such as chert, siliciclastic rocks, carbonate and basalt, and various crustal to mantle components of ophiolites, as well as nascent arc assemblages. A critical assumption in the definition of these terranes is that their components represent structurally disrupted ocean floor stratigraphy, seamounts and abyssal sedimentary rocks. Since the definition of oceanic terranes in the Cordillera, significant progress in understanding the origins of ophiolites and ages of the various components of the oceanic terranes challenges the established notions of these terranes. In addition, many terrane-bounding faults are now known to significantly postdate terrane amalgamation and, therefore, do not represent primary sutures. As such, terranes and their boundaries need to be re-evaluated.

In this contribution, the iconic oceanic chert-limestone-siliciclastic sequences that were previously included in the Cache Creek Terrane are re-examined. Data from regional mapping, compilation, new fossils and zircon provenance U-Pb dates demonstrate that the vast majority of these rocks are Middle Triassic to Early Jurassic and overlap a composite terrane that comprises Middle Triassic and older suprasubduction zone ophiolites and Paleozoic carbonate platform (Atlin and Cache Creek terranes). We demonstrate that the detrital components, U-Pb zircon provenance, geochemistry and isotopes are consistent with derivation from the adjacent Mesozoic arcs and their Paleozoic basement. These data suggest that the Mesozoic arc and oceanic 'terrane' represent a regionally extensive marine overlap assemblage on an already amalgamated, composite terrane. This has profound implications for terrane distribution, sutures, late Paleozoic to early Mesozoic tectonics, origin of the 'Tethyan' terranes, and the initiation of early Mesozoic porphyry mineralization in the Cordillera.

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THE GATHERING PLACE: SESSION 1

BUILDING A PATH TO A HEALTHY CULTURALLY GROUNDED FUTURE

Christy Smith (moderator), Senior Vice President, Falkirk Environmental Consultants; Virginia Aspinall, n̓eʔkəpmx Programs Manager, Madelynn Albert, n̓eʔkəpmxcin Team Lead and Sarah Desrosiers, Territorial Stewardship Manager, Citxw Nlaka'pamux Assembly

The Gathering Place: Session 1

2:00 PM – 2:30 PM

Citxw Nlaka'pamux Assembly (CNA) was created in 2013, but its work is rooted in hundreds of years of history and a legacy of protecting the n̓eʔkəpmx people, culture, values and territory. This work to protect and advance n̓eʔkəpmx rights, title, values and interests is a modern iteration of efforts that stretch back to the 1800s.

The Teck Highland Valley Copper (HVC) mine site, located within the unceded territory of the n̓eʔkəpmx Nation, operated (in various iterations) for approximately 50 years before n̓eʔkəpmx leaders of CNA negotiated agreements with the company and the Province of British Columbia in 2013. Citxw Nlaka'pamux Assembly was founded to enact these agreements on behalf of the Participating Bands: Ashcroft Indian Band, Boston Bar First Nation, Coldwater Indian Band, Cook's Ferry Indian Band, Nicomen Indian Band, Nooaitch Indian Band, Shackan Indian Band and Siska Indian Band.

The agreements include a Participation Agreement (PA) between the Participating Bands and HVC, an Economic and Community Development Agreement (ECDA) between the Participating Bands and the Province of British Columbia and an Implementation Agreement between the Participating Bands outlining their commitment to work together. The PA between the Participating Bands and Teck HVC is a long-term commitment between both parties to share profits and other benefits such as training, employment and contract work at HVC for businesses owned by the Participating Bands and their members. It is also a commitment to work collaboratively on topics such as environmental stewardship, mining activities and community outreach.

Citxw Nlaka'pamux Assembly's goal is to build a healthy, culturally grounded future for our people, through a collective effort in the n̓eʔkəpmx Nation to sustainably manage natural resources and economic development. Together we will determine how to care for our lands, protect our culture and uphold our Rights and Title over our territory.

In addition to CNA, the Nlaka'pamux Legacy Trust Indenture (NLX Trust) was formed to receive, manage and distribute funds generated from HVC and funding agreements as laid out in the PA and ECDA.

Our panel discussion will dive deep into the work we do at CNA.

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REIMAGINING AN INDIGENOUS-LED SUSTAINABLE MINERAL RESOURCE SECTOR IN CANADA

Philippe Tortell, Professor of Oceanography, Department of Earth, Ocean and Atmospheric Sciences, UBC; Alan Edzerza, Elder, Tahltan Nation; Carol Liao, Associate Professor, UBC Sauder School of Business; Werner Antweiler, Sauder School of Business, UBC; Roger Beckie, Professor, Department of Earth, Ocean and Atmospheric Sciences, UBC

Gathering Place: Session 1

2:30 PM – 3:15 PM

The Canadian Critical Minerals Strategy outlines a plan for Canada to become a leading global supplier of minerals for the renewable energy transition, while meeting its carbon reduction targets and upholding the constitutional rights of Indigenous people. The strategy represents an ambitious and inspired vision, but the path toward implementation is far from clear. New, multi-sector and interdisciplinary approaches are urgently needed to solve the mineral supply challenges of the future, while also supporting Indigenous sovereignty and environmental stewardship. This panel will discuss the key challenges and opportunities ahead, as we seek to develop a new paradigm of Indigenous-led mineral resource development in Canada. With an emphasis on collaborative, interdisciplinary research, education and capacity building, we seek to reimagine the mineral resource sector as a path towards Indigenous reconciliation and environmental sustainability. In this respect, British Columbia can and should be an inspirational model for the world.

PANEL – SEABRIDGE GOLD: JOHNNY MOUNTAIN MINE RECLAMATION PROJECT

Elizabeth Miller, VP Environment & Social Responsibility, Seabridge Gold

Gathering Place: Session 1

3:15 PM – 4:00 PM

Abstract not available at time of printing.

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CRITICAL AND BASE METALS

EMERGENCE OF A NORTH AMERICAN LITHIUM PROVINCE: DYNAMICS OF AN EXPLORATION BOOM IN THE JAMES BAY REGION, QUEBEC

Jean-Marc Lulin, President & CEO, Azimut Exploration Inc.

Critical and Base Metals

1:35 PM – 2:05 PM

The Eeyou Istchee James Bay region (175 000 km²) in Quebec is experiencing an unprecedented exploration boom for lithium. To date five spodumene pegmatite deposits with estimated resources and/or reserves have been defined, including two with tonnages greater than 100 million tonnes: the CV5 deposit (Patriot Battery Metals) and the James Bay deposit (Allkem).

The global demand for new lithium deposits to supply battery gigafactories, combined with the recognition of the region for its highly prospective geological environment (though still largely underexplored for lithium), has attracted an influx of new Canadian and international players, as well as prompting local explorers to re-evaluate their existing projects.

During the past two years, claim staking has increased by 258% (from 45 300 to 117 000 claims) supported by the strong lithium price and the major CV5 discovery, which potentially announces the emergence of a mining district. This potential is further supported by another surging area: the Adina zone of Winsome Resources and surrounding properties. A new discovery wave is in progress. In 2023, 15 outcropping spodumene pegmatite discoveries were announced across approximately 51 recorded lithium occurrences in the region.

The quest for lithium is backed by Quebec's extensive governmental geoscientific database, which includes regional-scale multi-element lake bottom sediment surveys, magnetic surveys, geological mapping and quality infrastructure.

While the James Bay region shares many geological characteristics with Western Australia, it is still today at low exploration maturity. Surface discoveries can be made by basic prospecting. The region has the potential to become a major hardrock lithium producer in North America. The provincial and federal governments are actively supporting the creation of a complete value chain, linking this emerging lithium mining region to the downstream electric manufacturing sector in southern Quebec.

SANTA CRUZ COPPER PROJECT, ARIZONA, USA

Glen Kuntz, Senior Vice President, Mine Development, Ivanhoe Electric Inc.

Critical and Base Metals

2:05 PM – 2:35 PM

The Santa Cruz copper project is in Arizona, United States, a prolific mining state where more than 35 million tonnes of copper have been produced since 1980 (approximately 65% of total US production). Ivanhoe Electric (IE) has a

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compelling opportunity to build a modern, low-carbon footprint, sustainable, copper-producing industrial complex in the United States.

Mineralization was first discovered in the 1970s but was largely undeveloped due to market conditions and fragmented title and ownership. In 2021, IE secured an option to acquire 100% of the mineral rights constituting Santa Cruz and entered into agreements to acquire further surface rights and mineral titles. Mineralization is multifaceted and consists of hypogene chalcopyrite, supergene chalcocite, and oxide minerals chrysocolla and atacamite.

The Santa Cruz initial assessment and preliminary economic assessment, completed in September 2023, focus on a small surface footprint, underground copper mine with 5.9 million tonnes mined annually, exclusively on the high-grade exotic, oxide and enriched domains of the Santa Cruz and East Ridge deposits. Life of mine copper production is estimated at 1.6 million tonnes over a 20 year mine life with a cash cost of US\$1.36 (about C\$1.81) per pound of copper produced.

Ivanoe Electric is advancing environmental, technical and economic studies for an underground high-grade copper mining operation, with a focus on minimizing the surface footprint of the mine, while incorporating leading technologies to improve efficiencies and costs. We are designing a technologically advanced mine that we expect to result in low carbon-dioxide emissions per pound of copper produced and be a leading example of responsibly produced domestic copper

REVITALIZING THE PAST-PRODUCING CREAN HILL NICKEL-COPPER-PRECIOUS-METAL MINE, SUDBURY, ONTARIO, CANADA

David King, Senior Vice President, Technical Services, Magna Mining Inc.

Critical and Base Metals

2:35 PM – 3:05 PM

Magna Mining is a nickel exploration and development company focused on the historical nickel-producing region of Sudbury, Ontario. The flagship assets are the past-producing Shakespeare and Crean Hill mines, located on the southwest side of the Sudbury Basin.

The Shakespeare project is unrelated to the Sudbury igneous complex and has an existing NI 43-101-compliant Indicated Resource of more than 20 million tonnes grading 0.34% Ni and 0.36% Cu. Most of the permits are in place to restart production through the construction of a 4500 tonne/day mine, mill and tailings storage facility.

The Crean Hill mine is located on the south range of the Sudbury igneous complex and was operated by Inco for more than 80 years. Historical mining focused on nickel and copper, and more recent exploration has concentrated in the footwall of the main contact orebodies, where mineralization contains increased precious metals along with nickel and copper. Crean Hill has an existing NI 43-101-compliant Indicated Resource of more than 30 million tonnes, including a high-grade underground Indicated Resource of more than 14.5 million tonnes grading 0.96% Ni, 0.84% Cu and 2.44 g/t Pt + Pd + Au. As a brownfield, past-producing site, Crean Hill has the potential to be brought back into initial production in the near term. Magna's immediate objective is to begin the production of nickel, copper and precious metals from Crean Hill in 2024. This would be achieved by processing the ore from Crean Hill at one of the

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existing processing facilities in Sudbury through an ore sales agreement. The relevant permits for initial production from Crean Hill and the terms for an ore-selling agreement are expected to be achieved within the next quarter. In the longer term, ore from Crean Hill would be processed at Shakespeare once construction is completed.

LARGE SCALE PLATINUM GROUP METAL AND NICKEL SULPHIDE MINERALIZATION WITHIN THE LUANGA MAFIC/ULTRAMAFIC COMPLEX, BRAZIL

Heinrick Müller, MGSSA, Pri.Sci.Nat, Vice President–Technical, Bravo Mining Corp.; Luis Azevedo, Chairman and CEO, Bravo Mining Corp.

Critical and Base Metals

3:05 PM – 3:35 PM

Mafic-ultramafic rocks of the neo-Archaeon Luanga Complex (“Luanga”) host South America’s largest known platinum group metal (PGM) deposit. Bravo is currently working to define mineral resources along Luanga’s 8.1 km strike length.

Luanga is located within the world-class Carajás mineral province in Pará State, Brazil, and consists of ultramafic cumulates (Ultramafic zone), intercalated mafic and ultramafic cumulates (Transition zone) and mafic cumulates in a layered igneous sequence. The PGM mineralization is mostly contained within the Transition zone at its lower contact (Sulfide zone) with the basal ultramafics. Luanga has been overturned, resulting in a complete cross section of the stratigraphy being exposed on surface.

The Transition zone is characterized by orthopyroxenite, harzburgite and norite and is up to 800 m thick. Platinum group metals are locally associated with disseminated base-metal sulphides and constrained within a mineralized zone 5 to 60 m thick. Sulphide abundance within the Sulphide zone ranges from 1 to 3 vol.%. Coincident PGM mineralization ranges from 1 to > 20 g/t PGM+Au. The layered stratigraphy has generally been drill tested to a depth of approximately 150 m and remains open down dip.

The mineralized zone is further characterized by areas of high rhodium concentrations, with recent resampling of historical drill core reporting 6 m at 8.9 g/t PGM+Au, which includes 1.8 g/t rhenium, and 2 m at 24.4 g/t PGM+Au, which includes 5.1 g/t rhenium, in hole PPT-LUAN-FD0065. The Sulphide zone PGMs are predominantly associated with pentlandite, contributing appreciable amounts of sulphide nickel to the mineralized zone (approximately 0.1–0.2%).

Drilling by Bravo has also intersected significant massive sulphide mineralization within Luanga, including 11 m at 2.0% total nickel, 1.2% copper and 4.4 g/t PGM+Au, in hole DDH22LU047.

Bravo is currently carrying out its Phase 3 work program as defined in its NI 43-101 Technical Report to grow the current mineral resource estimate of what we believe to be Latin America’s pre-eminent Tier-1 PGM-nickel project

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ILLINOIS CREEK PROJECT: A NEW, LARGE-SCALE CARBONATE REPLACEMENT DEPOSIT SYSTEM IN ALASKA, USA

Kit Marrs, CEO/Co-Founder, Sage Langston-Stewart, Project Geologist, Western Alaska Minerals

Critical and Base Metals

3:35 PM – 4:00 PM

Waterpump Creek (WPC) is a silverlead-zinc carbonate replacement deposit (CRD) within the Illinois Creek district in west-central Alaska, United States, located approximately 250 miles (approximately 400 km) west of Fairbanks, Alaska. The Illinois Creek district, originally discovered in the 1980s by Anaconda, is home to five evolving mineral projects containing gold, silver, copper, lead and zinc. Recent focus has been on the high-grade sulphide mineralization at Waterpump Creek and expanding exploration to the district-wide CRD system.

The 2023 drilling season set out to accomplish two primary drilling goals: 1) infill and extension drilling at Waterpump Creek (WPC) and 2) exploring for southern continuation of the WPC sulphide along trend to the south at Anaconda's Last Hurrah target. Five holes, totalling 1706.3 m, were drilled at WPC and nine holes, totalling 3412.2 m, were drilled at Last Hurrah. Three of the five infill drillholes at WPC intercepted sulphides. Information determined from these drillholes is useful for understanding the mineralizing system at WPC and allows for the estimation of a mineral resource for WPC. The drilling at Last Hurrah intercepted impressive alteration including ultraviolet fluorescence of fugitive calcite, sanding, bleaching and 'tan' alteration, and provided alteration and geochemical vectors to 'hone in on' CRD mineralization within two separate permissive horizons.

In addition to drilling, a 3D resistivity and IP survey was completed in 2023. This survey followed up on historical IP anomalies, which showed a 1.4 km untested anomaly linking WPC to Last Hurrah. Major structures, alteration halos and new targets have been identified using 3D inversion modelling of the survey data. A northeast-southwest, low-resistivity anomaly ties together the continued mineralization from WPC to Last Hurrah and shows the expansive sanding alteration halo.

The 2023 drill results coupled with the new geophysical modelling and geological understanding for the district has delineated exciting targets for a successful 2024 drilling season.

THE GATHERING PLACE, SESSION 2

LEADING THROUGH CHANGE – PERSPECTIVES OF INDIGENOUS OWNERS ON ADVANCING PROJECTS

Jill Tsolinas, Board Chair, AME and Executive Director, BC Centre of Training Excellence in Mining (CTEM); J. Paul Stevenson, CEO, Sego Resources Inc.; Phillip Jerry Asp, CEO/Chair, Spirit Rock Resources

The Gathering Place: Session 2

9:05 AM – 9:50 AM

Changes in the business landscape have altered how projects can advance, bringing renewed awareness to the challenges and complexities of mineral development. Join the Centre of Training Excellence in Mining for a dialogue

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with Indigenous project owners who are advancing mineral projects at different stages of the mining life cycle. The leaders will share their learnings of how to navigate the current staking and permitting processes, what engagement with local communities could look like, and how to balance capacity constraints of the project and partners.

THE MINERAL TENURE ACT: WHAT'S NEXT?

Sharon Singh (moderator), Partner, Bennett Jones

The Gathering Place: Session 2

9:50 AM – 10:40 AM

Abstract not available at time of printing.

INCREASING PROJECT VALUE THROUGH ENRICHING LOCAL PARTNERSHIPS

Leah Bradish, Director, Continuing Education, Contract Training and Regional Campus Operations, College of the Rockies; Emily Bailey, Health and Safety Coordinator, Osisko Development, Cariboo Gold Project; Nick Reinhardt, Project Manager / Head of Product & Process Development, Chartwell Resource Group. Ltd.

The Gathering Place: Session 2

10:40 AM – 11:00 AM

Sustaining and strengthening local partnerships has been viewed as a foundational support for a project's viability, and in an ever-changing world, the process has become more dynamic. Join the Centre of Training Excellence in Mining to hear recent examples of how project-based partnerships collectively discovered new ways to deepen relationships, in some cases, despite differences in partner capacities. The speakers will share how responding to local and emergent opportunities provided shifts that allowed for the discovery of new ways of engaging.

PRECIOUS METALS

GOLD-RICH PORPHYRIES AND RELATED DEPOSITS – CHARACTERISTICS AND EXPLORATIONS STRATEGIES

David R. Cooke, Director, Centre for Ore Deposit and Earth Sciences (CODES), University of Tasmania, Australia

Precious Metals

9:10 AM – 9:40 AM

Gold-rich porphyry deposits are one of the most economically important subtypes of the porphyry family. They form in magmatic arcs and post-collisional tectonic settings and are associated with calcalkaline and alkalic intrusive complexes. Numerous examples of calcalkaline porphyry deposits occur in Cenozoic and Mesozoic oceanic island arcs and continental arcs of the Pacific Rim, the Tethyan belt, and the Paleozoic arc segments of the Central Asian orogenic belt. Major alkalic porphyry terrains include the Mesozoic Stikinia and Quesnellia (British Columbia) and the Paleozoic Macquarie Arc (New South Wales, Australia). Important postcollisional belts include the Gandese and Middle–Lower Yangtse belts (China), and copper-gold porphyry deposits of New Guinea.

Gold-rich porphyry deposits are associated with multiphase, hydrous, oxidized intrusive complexes composed of pipes, stocks and/or dikes. They are typically localized at or near the intersection of major crustal-scale fault systems. Mineralized vein stockworks and/or sheeted vein systems form in and around the apex of the intrusive complex. Potassic, sodic, propylitic, intermediate argillic, phyllic and advanced argillic assemblages are zoned around and overprint the intrusive complexes in calcalkaline gold-rich porphyry systems. Alkalic systems have more complicated overprinting domains of calcpotassic, calcsodic, potassic, sodic and propylitic assemblages, with phyllic alteration typically restricted to late-stage fault systems. Peripheral mineralization styles are dependent on local protoliths and fluid compositions, with skarns and carbonate replacement deposits forming in reactive wallrocks (e.g., carbonate rocks, ultramafic rocks, silica-undersaturated volcanic rocks). Intermediate sulphidation epithermal veins and breccias are localized by late-stage faults, whereas high sulphidation lodes, replacements and breccias can be localized by faults in upflow zones, and/or in large stratabound domains of advanced argillic and silicic alteration (lithocaps). Successful exploration for porphyry deposits requires recognition of the significance of these peripheral alteration and/or mineralization features combined with the application of appropriate geological, geophysical and geochemical exploration methods adapted to local conditions.

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K92'S KAINANTU PROPERTY, PAPUA NEW GUINEA: SUCCESSFUL EXPLORATION LEADING TO TRANSFORMATIVE GROWTH

Chris Muller, Executive Vice President – Exploration, Dean Williamson, Florence Apisai and Michael Parak, K92 Mining Inc.

Precious Metals

9:40 AM – 10:05 AM

Papua New Guinea boasts among the most significant porphyry and epithermal gold and copper-gold deposits in the Indo-Pacific region. Multiple large, high-grade deposits, including two operating mines, and prospects are located in the Morobe and Eastern Highlands provinces, containing in excess of 100 million oz AuEq.

As well as operating the Kainantu gold mine, K92 Mining Limited ('K92') has had immense exploration success on its tenements, which occupy 836 km², including 136 km² under application. In October 2016, K92 discovered the 'Kora North' deposit; since then the vein deposit resource has grown astronomically and now stands at 2.6 million ounces AuEq Measured and Indicated and 4.5 million ounces AuEq Inferred. This latest update incorporates four lodes (Kora K1, Kora K2, Judd J1 and Judd J2), with ongoing drilling set to further expand all of these.

K92 is in the process of drill testing two other major vein gold deposits, at Arakompa and Maniape, with historical Inferred mineral resource estimates of 798 thousand oz at 9.0 g/t Au and 560 thousand oz at 2.2 g/t Au, respectively. Karempe, another vein gold deposit, contains at least five distinct lodes, spanning more than 1000 m along strike.

K92 has also had success with porphyry exploration on the Kainantu property. A significant maiden Inferred resource estimate was announced for the Blue Lake Porphyry (4 km south of the Kainantu mine, EL470), in August 2022, with declaration of 10.8 million ounces AuEq at 0.61 g/t AuEq or 4.7 billion pounds CuEq at 0.38% CuEq, based on 549 million tonnes at 0.21 g/t Au, 0.23% Cu and 2.42 g/t Ag at a 0.4 g/t AuEq cut-off grade.

To date, the NI 43-101 Compliance Resource base is 2.6 million oz Measured and Indicated and 15.3 million ounces AuEq Inferred. A key focus for K92 is to grow this resource substantially through the drilling of high-priority, near-mine targets as well as regional prospects. Many have been identified from the Mobile MT geophysical survey of all K92 licences, which demonstrates an impressive correlation of known deposits, both veins and porphyries, with conductivity.

DISCOVERING A NEW DISTRICT – NEW FOUND GOLD CORP.'S QUEENSWAY GOLD PROJECT, CENTRAL NEWFOUNDLAND: AN EXPLORATION UPDATE

Melissa Render, Vice President of Exploration, New Found Gold Corp.

Precious Metals

10:05 AM – 10:30 AM

New Found Gold Corporation is a Canadian junior exploration company that has experienced tremendous discovery success on its Queensway project, located in the central Newfoundland gold belt. The Queensway project is a district-scale exploration play, striking more than 100 km and covering 1662 km². Despite the fact that

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Newfoundland is not regarded as a significant centre for gold production, New Found Gold has rapidly advanced the project over the course of 3.5 years and identified an extensive orogenic gold mineral system. Starting with the discovery of the high-grade, near-surface Keats zone in late 2019, the project has seen the addition of key zones such as Iceberg, Keats West, Golden Joint, Lotto, Jackpot, K2, Monte Carlo, and those at Queensway South. The Queensway project boasts tens of kilometres of untested strike length with a myriad of newly discovered and historical gold showings.

The project lies within the Exploits subzone of the Dunnage zone, which comprises a fold-thrust sequence of Ordovician turbiditic rocks of the Davidsville Group. The property is transected by two prominent regional-scale structures, the Appleton and JBP fault zones, that formed during the Appalachian orogeny and closure of the Iapetus Ocean. Gold mineralization occurs in an extensive network of epizonal quartz veins that occupy secondary brittle faults adjacent to these regional structures.

With more than 500 000 m drilled and most of the drilling targeting the top 200 m vertical depth of an approximately 7 km long stretch of the Appleton fault zone, the project is well positioned heading into 2024. A sizeable, fully funded exploration program is planned and will consist of approximately 120 000 m of diamond drilling, intended to expand on the discoveries made to date, push exploration deeper at Queensway North, and continue to test new regional targets. In addition to the drill program, an extensive regional field program is designed to add to the company's robust target pipeline.

ISLAND GOLD MINE, ONTARIO: GEOLOGY, MINERALIZATION CONTROLS AND EXPLORATION APPLICATIONS

Carl Nagy, Principal District Geologist, Alamos Gold – Island Gold Mine

Precious Metals

10:30 AM – 10:55 AM

The Island Gold mine is an Archean orogenic gold deposit located in the Michipicoten greenstone belt in northeastern Ontario. To date the deposit has produced more than 1.2 million oz Au and contains an additional 1.464 million oz in Proven and Probable Reserves, 0.291 million oz Measured and Indicated Resources and 3.529 million ounces in Inferred Resources. (Production and Mineral Reserves and Resources as of December 31, 2022).

The geology of the Island Gold deposit is characterized by a protracted deformation history with distinct lithostructural events controlling the distribution of gold mineralization. This presentation will provide an overview of the geological framework of the deposit and demonstrate how key geological features can be applied from in-mine through to belt-scale exploration to expand mineralization and explore for new discoveries.

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EPISODE IV: A NEW HOPE BAY

Conrad Dix, Exploration Manager, Nunavut, Agnico Eagle Mines Limited

Precious Metals

10:55 AM – 11:30 AM

The 80 km long Hope Bay project is located in the Kitikmeot region of Nunavut, Canada, 685 km northeast of Yellowknife, Northwest Territories, and 125 km southwest of Cambridge Bay, NU. The project includes portions of the Hope Bay and Elu greenstone belts, and hosts three gold deposits (Doris, Madrid and Boston) with historical mineral reserves and mineral resources and more than 90 regional exploration targets.

The significant historical exploration activity at Hope Bay has included more than 1 000 000 m of drilling with more than 90% occurring on the established deposits of Doris, Madrid and Boston. Gold production from Doris was operational from early 2017 until the end of September 2022.

Agnico Eagle Mines Limited acquired the Hope Bay property in February 2021 and suspended production activities in the second half of 2022 to place a primary focus on exploration throughout Hope Bay. A strong emphasis is put on integration of historical data with new exploration tools and technologies for improved orebody knowledge and exploration vectoring. This work has led to significant breakthroughs, such as at Doris, where distinct basalt suites controlling gold distribution have been recognized; and at Madrid, where improving the understanding of lithological and structural controls on the main deposit has led to better targeting along favourable horizons.

Exploration remains a priority for Agnico Eagle at Hope Bay, with an ongoing effort to explore the extensions of known mineralization and a commitment to broaden this exploration strategy with the intent to discover new deposits on the project.

GEOSCIENCE INNOVATION

MICROBES MAY SAVE US ALL

Aria Hahn, PhD, CEO and Co-Founder, Koonkie Canada Inc.

Geoscience Innovation

1:30 PM – 1:45 PM

During the next decade, mining companies will build the foundational pieces for the ‘mine of the future.’ These mines will enable sustainable circular economic development by generating value at each stage of the mine life cycle, from exploration and extraction to mine closure and remediation. To achieve this, the mining industry must develop new and innovative technologies that reduce their environmental footprint. Microbial solutions are a promising new approach to mining processes; however, designing and implementing such solutions requires understanding of the broader mining microbiome and accurate characterization of the microbial community at specific sites. The current genomic approach to obtaining this information overcomes the challenges of culturing microbes in the lab but requires data from many samples to be effective. The mining microbiome analytics platform (M-MAP) reduces the time and effort to access the necessary data by combining a library of data from thousands of samples from mining-

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related environments, a sample analysis platform tailored to the mining microbiome, and a powerful database of analysis-ready environmental data.

REMOTELY PILOTED AIRCRAFT RADIOMETRICS IN MINERAL EXPLORATION, INTERIOR PLATEAU, BRITISH COLUMBIA

Travis Ferbey, British Columbia Geological Survey; Easton A. Elia, British Columbia Geological Survey; Rob B.K. Shives, GamX Inc.; Nicolas Martin-Burtart, Radiation Solutions Inc.; Mel Best, Bemex Consulting International; Brent C. Ward, Simon Fraser University

Geoscience Innovation

1:50 PM – 2:10 PM

Radiometrics data are used to map rocks and hydrothermal alteration related to mineral systems like porphyry copper±molybdenum±gold, magmatic nickel±copper±cobalt±PGE, and carbonatite-hosted tantalum-niobium-REE. The geochemistry and mineral assemblage of subglacial tills are used to gain insight into rocks within glaciated terrain that are prospective and buried, but its radiometric signature is not often considered. We collected subglacial till radiometrics data over 13 survey areas within British Columbia's Interior Plateau to assess if the data can detect glacial dispersal from different rock types. A Radiation Solutions Inc. RS-530 gamma-ray spectrometer, using a thallium-doped sodium iodide crystal, was mounted to a remotely piloted aircraft system (RPAS) and flown at 1–2 m/s, 5–10 m above ground level, along flight lines spaced 5–10 m apart, using a 1 Hz sample rate (or 1 s count time). Noise-adjusted singular value decomposition, a principal component type analysis, was used to reconstruct these data with a higher signal to noise ratio. Potassium data collected via RPAS radiometrics compare well to in-situ potassium determinations by a handheld gamma-ray spectrometer (120 s count time) and lithium borate fusion ICP-AES on samples of the same subglacial tills. There is general agreement between our high-resolution RPAS potassium data, gridded at 1/3 line spacing (1.67–3.33 m cell size), and overlapping regional-scale fixed wing data (100 m cell size). Using K/eTh plots, RPAS radiometrics data can differentiate tills derived from some bedrock types. A limitation of RPAS radiometrics surveys over low-radioactivity sediments is the requirement to fly the instrument close to ground. In forested terrain, such as British Columbia's Interior Plateau, data acquisition is limited to cutblocks, which may not be located over geology of interest. This limitation would not exist in high altitude or high latitude scenarios where trees are absent.

EMERGING TECH FOR EXPLORATION: DEEP MAGNETOTELLURIC IMAGING TO DRIVE DISCOVERY

Robert Gordon, MBA., P. Eng., FGC, Geophysicist, Mgr. Marketing and Sales, Quantec Geoscience

Geoscience Innovation

2:10 PM – 2:30 PM

Geophysical exploration for mineral deposits has typically searched directly for orebodies by looking for a region with anomalous properties such as density, resistivity, magnetic susceptibility or chargeability. Many orebodies are formed by processes that occur in convergent plate boundaries such as subduction zones. Studying these processes can give insights into the formation and distribution of deposits. The mineral systems approach expands the

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exploration scope by looking for the entire system that formed the orebody, including regions where fluids originated, flow pathways and structures that caused mineral deposition. The value of this approach is being investigated by a number of recent initiatives in both governmental and university research. These studies use 3D exploration methods that image to crustal and upper mantle depths.

One of the most promising technologies for these deep investigations has been magnetotellurics (MT). This method, invented in the 1950s, uses natural electromagnetic signals to measure the electrical resistivity of the Earth. The use of MT in exploration was limited through the 1990s. Since 2000, its use in deposit-scale exploration has increased, though until recently widescale use across the mining industry has been limited. Following a number of high-profile MT exploration successes, such as the discovery of a set of low resistivity fingers beneath the world-class IOCG deposit at Olympic Dam, there has been an increase in MT regional and exploration surveys.

This paper will highlight how MT can be used on a range of spatial scales that extend from regional (10–100 km) to local (0.1–10 km) mineral exploration. Examples presented will include regional-scale, government-funded initiatives from Western Australia and Ontario; regional-scale exploration in northern Canada; local scale surveys in Ontario and British Columbia; and mine-site exploration, where the geophysical study contributed directly to the discovery of a new porphyry system below the mine.

SANDS OF TIME: PORPHYRY PROSPECTING USING ZIRCON IN STREAMS

Jack Milton, Chief Geologist, Fireweed Metals

Geoscience Innovation

2:30 PM – 2:50 PM

A new exploration method has been successfully trialled and implemented in the Yukon using zircons in modern stream sediments to detect porphyry copper-gold mineralization in areas of poor exposure and deep weathering, where traditional stream-sediment geochemistry may be ineffective. A case study is presented on the Casino copper-gold-molybdenum deposit, where the method was trialled and validated. A statistical method was developed to predict the area of exposed source rocks for zircons of a specific age population that was used to guide a regional exploration program in the Dawson Range, Yukon. Results of a three-year exploration program are presented that show the detection of Casino suite zircons, gold grains and a significant copper-molybdenum soil anomaly in an area with no mapped Casino suite intrusive rocks.

YUKON VIRTUAL GEOLOGY: INCREASING THE ACCESSIBILITY OF FIELD-BASED GEOSCIENCE

Joel Cubley, Associate Professor, Earth Sciences, Yukon University

Geoscience Innovation

2:50 PM – 3:10 PM

Geoscience literacy is a critical underpinning of constructive engagement and participation with the mineral exploration and mining industries; however, undergraduate geology and geophysics enrolments are at their lowest level in nearly 20 years, and the discipline is significantly underemphasized in secondary school curricula. The Yukon Virtual Geology project is a growing platform of virtual field experiences highlighting geological landscapes across

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the territory, increasing accessibility and providing easy-to-access resources for educators and the general public to boost their geoscience knowledge. To date, the project includes experiences focused on skarn mineralization and mining history in the Whitehorse Copper Belt, the formation of Triassic carbonate reef complexes and their unique fossil assemblages, and Neogene to Quaternary volcanism and volcanic landforms within the Northern Cordilleran Volcanic Province. In a soon-to-be released experience, Virtual Geology staff have traveled across the territory capturing the fieldwork and expertise of geoscience researchers in the North to communicate the breadth of the geoscience field.

This talk will introduce platform content but also focus on the easily accessible, low-cost imaging and display solutions and workflows used by the project that could be used on exploration and mining projects. This includes the construction of high-resolution 3D digital models of hand samples and drill core; simple incorporation of digital surface models (DSMs) and orthomosaics into high-resolution, easily navigable web-hosted site models, and construction of first-person–perspective 3D environments where the user (e.g., geologist) can independently walk around a site and interact with multiple media types. The presentation will also highlight options for interactive thin-section engagement. Traditional 2D images of outcrops, core and hand samples can be enhanced with technology; this presentation will provide ideas for collective forward progress while highlighting the need to promote and showcase geoscience.

GEOCHEMICAL DATA EXTRACTED FROM ASSESSMENT REPORTS IN YUKON: EXAMPLES FROM THE DAWSON RANGE

Yury Klyukin, Sarah Ellis and Patrick Sack, Yukon Geological Survey

Geoscience Innovation

3:10 PM – 3:30 PM

The Yukon Geological Survey holds a significant amount of publicly available geological data from mineral exploration projects in the Yukon. Most of these data are in mining assessment reports filed annually with the Government of Yukon. One limitation of these data is that they are stored within individual reports that are not easily synthesized. To streamline work with geochemical data from assessment reports, we have developed a toolset to extract spatial and geochemical data from reports, perform quality assurance and quality control measures, and submit the data to a database. The initial version of GARDEd (Geochemical Assessment Report Data Extracted database) is now online.

This project focused on surficial geochemical data from rock, soil, stream sediment and vegetation samples. As of October 2023, there are more than 6000 assessment reports with surficial geochemical data, representing more than \$500 million of reported exploration expenditures.

Here we present a snapshot of the data collected using this toolset. GARDEd follows the data model established by the British Columbia Geological Survey in 2019 and currently includes geochemical data from 311 assessment reports describing 307 311 samples. Most of these data in this initial release come from assessment reports relating to exploration in the Dawson Range, west-central Yukon and were submitted between 2005 and 2018.

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APPLICATION OF MACHINE LEARNING FOR STRUCTURAL DATA EXTRACTION

Geoff Owen, Manager of Structural Geology Team, Teck Resources Limited

Geoscience Innovation

3:30 PM – 3:50 PM

Understanding rock mass characteristics to support exploration, project development and mine designs relies on collecting and analyzing consistent, high-quality geotechnical and structural data. These data include crucial information such as logged faults and fault zones, rock quality designation (RQD) values and fracture frequency (FF) calculations from drill core. Unfortunately, these datasets often lack consistency due to human error as well as changes in personnel and data collection techniques during a project's lifespan. Additionally, structural data collection workflows (in particular, fault logging) often fall short in providing data suitable for understanding connectivity between drillholes, orientations, extents of damage zones and drillhole characteristics.

To address these challenges, machine learning is rapidly evolving to reduce subjectivity, streamline future data collection and extract value from historical imagery. This presentation discusses two machine learning proof-of-concept collaborations between Teck Resources Limited (Teck) and ALS-Goldspot. The first part of this presentation introduces Teck's classification system for brittle faults and fault zones and highlights how machine learning is being used to analyze historical imagery and classify such fault zones. The second part of this presentation highlights the application of machine learning for distinguishing mechanical and natural breaks and the development of RQD and FF calculations from this analysis. Both proof-of-concept studies have yielded positive results.

Machine learning is emerging as a powerful tool for structural geology data collection and the work presented here is likely one of many possible applications. By using this technology explored in the abovementioned case studies, the authors believe there is potential to leverage significant value from drill core imagery and to reduce time-consuming data collection tasks in our exploration and operational environments.

SENSING YOUR CORE: LIGHTS AND LASERS AND X-RAYS, OH MY!

Shaun Barker, Director, Mineral Deposit Research Unit, UBC; Cassady Harraden, Postdoctoral Research Fellow, Mineral Deposit Research Unit, UBC

Geoscience Innovation

3:50 PM – 4:00 PM

Drill core is one of the most expensive and valuable pieces of data collected by the mineral exploration industry. Extracting as much information as possible from that drill core maximizes its value and utility. Information derived from drill core can provide vital data across all stages of a project's life: It informs future drillhole targeting; allows for increased understanding of the strength and character of an orebody, how it might behave during future mining activities, and how variable mineral processing responses might be; and gives insight into waste material might contain so that steps can be taken to reduce risk and environmental impact.

Recently an array of new core sensing techniques has been developed and deployed by a number of commercial service providers. These analyses are commonly obtained shortly after drill core is extracted and provide immediate

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value for geological logging, as well as permanent data capture of key parameters from the rocks (e.g., chemistry, mineralogy, fractures). Data collection methods include X-ray fluorescence (both spot and continuous scanning methods); hyperspectral data at a variety of wavelengths (short-, middle- and long-wave infrared) and sampling patterns (spot analyses, continuous lines, imaging); laser-induced breakdown spectroscopy; X-ray tomography (for chemical and structural information in 3D) and instruments that can make continuous measurements of physical rock properties such as strength and hardness. Ultimately, the appropriate scanning methods for a particular deposit will depend on what the end user wants to use the data for (considering both immediate and potential future needs), the commodity or commodities of interest, the geological and mineralogical nature of the system (which impacts the scanning methods that will be most appropriate) and the opportunity cost (e.g., sample destruction, how added cost will impact available budget for other data collection). Users should consider not only the cost of obtaining data but also the benefit. In some cases, it has been clearly demonstrated that consistent, unbiased data collection has both short- and long-term benefits, can speed up geological data collection, and allow for more rapid and robust decisions to be made in near-real time.

THE GATHERING PLACE: SESSION 3

FIRESIDE CHAT: OUR JOURNEY FROM AGREEMENT TO COLLABORATION

Sabrina Lakhani, Superintendent, Brucejack Social Performance, Newmont Corporation; Andrew Robinson, Chief Executive Order, Nisga'a Lisims Government

The Gathering Place: Session 3

1:35 PM – 2:05 PM

This fireside chat sheds light on the interplay between strengthened relationships and enhanced governance and its role in achieving sustainable and inclusive outcomes between mining companies and communities. Gain first-hand insights from the Nisga'a Nation and see applied examples from their journey with Brucejack mine.

WORKING TOWARD CONSENSUS AND CONSENT IN THE ENVIRONMENTAL ASSESSMENT ACT

Katherine St. James, Project Assessment Director, BC Environmental Assessment Office; Tim Michell, Councillor, Lhtako Dené Nation; Kelsey Dodd, Permitting & Compliance Coordinator, Osisko Development Corp.

The Gathering Place: Session 3

2:05 PM – 2:50 PM

In this session, we explore the experience of seeking consensus and consent under the British Columbia 2018 Environmental Assessment Act (EAA) from the perspectives of proponent, Indigenous Nation, and provincial regulator.

In 2019, the BC EAA came into force. It was developed with intentions to enhance public confidence by ensuring impacted First Nations, local communities, local governments and the broader public can meaningfully participate in all stages of environmental assessment, advance reconciliation with First Nations through seeking consensus at all key milestones during the environmental assessment process and ultimately seek consent for the project at the end and protect the environment while offering clear pathways to sustainable project approvals. Cariboo Gold was

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the first project to proceed through the EAA process, beginning in March 2020 and ending with referral for decision in September 2023. Consensus was reached with the Lhtako Dené Nation at all key milestones leading through the environmental assessment process, and consent was reached for the project.

The process for seeking consensus led to a more robust referral package for decision makers and issues were raised earlier, ensuring that the interests of Lhtako Dené Nation were considered throughout the process. The experience is shared from the perspectives of the regulator (BC Environmental Assessment Office), the proponent (Osisko Development Corp.) and the Lhtako Dené Nation. This session offers a candid assessment of each experience throughout the process of seeking consensus and consent and discussing how issues that arose were resolved, whether the goals of the EAA were achieved and recommendations for future projects.

EMERGING SUCCESSES IN SKILLS DEVELOPMENT FOR A STRONGER WORKFORCE

Candice Appleby (moderator), Manager, Strategic Projects, AME; Colleen Cashin, VP, People & Corporate Culture, Tahltan Nation Development Corporation; Aldea Lavallie, Social Performance Lead, Newmont; Dana Imbeault, Senior Director of Operations and Skills Development, Mining Industry Human Resources Council

The Gathering Place: Session 3

2:50 PM – 3:50 PM

Having a workforce that is able and agile enough to adapt to the evolution of the industry's needs is essential to a project's current and long-term vitality and yet it remains a pervasive challenge. Join the Centre of Training Excellence in Mining as we share experiences of developing a stronger workforce from rural and remote projects. The dialogue will include practical examples of overcoming barriers to workforce participation and advancement through skills development.

BC, YUKON AND ALASKA

NORTHWEST EXPO LITHOCAP-HOSTED COPPER-GOLD-MOLYBDENUM-RHENIUM DEPOSIT, VANCOUVER ISLAND, BRITISH COLUMBIA

Robin Tolbert, Vice President, Exploration, Northisle Copper and Gold Inc.

BC, Yukon & Alaska

9:05 AM – 9:30 AM

Northwest Expo is the most northwest of eight porphyry targets extending in a belt more than 40 km from BHP's closed Island Copper mine through Northisle Copper and Gold's 214 claim, a mineral tenure covering more than 33 000 ha, 19 km west of Port Hardy, Vancouver Island, British Columbia. Within this belt of Jurassic Island arc volcanism (Bonanza Formation) and coeval Island intrusives (diorite to quartz monzonite) are the Hushamu deposit (472.8 million tonnes Indicated grading 0.2% Cu, 0.23 g/t Au, 0.008% Mo and 0.35 g/t Re) and Red Dog deposit (54.5 million tonnes Indicated grading 0.22% Cu, 0.31 g/t Au and 0.04 g/t Re). Since 2021, exploration work at Pemberton Hills, Hushamu and Northwest Expo has recognized that the mineralization focused on in the past is not in the classic BC porphyry cupola or 'stem', but in the lithocap facies of the classic porphyry model. This is common in young porphyry deposits in South America and southeast Asia, but in BC the lithocaps that may have existed have

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been eroded down to the cupola or 'stem'. At Northwest Expo and Hushamu, the lithological and alteration features characterizing this lithocap-hosted mineralization are:

- extensive intense advanced argillic alteration ranging from high temperature/low pH pyrophyllite–dickite through kaolinite–dickite to lower temperature/higher pH illite–smectite
- silica-brine immiscibility (gusano) textured alteration (SIM) extending from the hydrothermal upflow zone
- the presence of fluorine-bearing minerals topaz and zunyite that occur in the hydrothermal upflow zone
- extensive hydrothermal breccias
- unique to Hushamu and Northwest Expo, laterally layered, mottled silica-chlorite-magnetite+chalcopyrite mineralization

Several factors have indicated that further exploration is required to the south of Northwest Expo and Hushamu to locate the down-faulted intrusions (stems) of the lithocap-hosted mineralization at these two targets: The realization that mineralization is in the lithocap, the discovery of 600 m of stockwork quartz veins in feldspar porphyry with intense leaching leaving hematite after chalcopyrite and jarosite after pyrite at the south of Hushamu, and recent drillhole NW23-13 at Northwest Expo with a hydrothermal breccia with xenoliths of quartz-stockwork feldspar porphyry containing hypogene covellite(?) veinlets, with 15 m grading 3.42 g/t Au and 1.15% Cu, within 130 m grading 1.65 g/t Au and 0.33% Cu, at the south of Northwest Expo Zone 1.

Work at Northwest Expo into 2024 will focus on carrying out surface lithological, structural and alteration mapping and detailed rock geochemistry in conjunction with recent magnetic surveys and historical soil sampling to vector into the cores of the porphyry systems.

Core displayed will be of lithocap-style alteration and mineralization:

- Silica clay pyrite–SCP
- Silica-brine Immiscibility–SIM or gusano textured alteration
- Zunyite-bearing alteration
- Characteristic mottled quartz-chlorite-magnetite-chalcopyrite (CMG) mineralization
- Hydrothermal breccia from NW23-13 grading 3.42 g/t Au, 1.15% Cu over 15 m containing feldspar porphyry fragments with quartz stockwork

RDP COPPER-GOLD PORPHYRY PROJECT – FOLLOWING UP THE RDP-22-005 BREAKTHROUGH RESULT

C. Paul Jago, Chief Geologist, Pacific Ridge Exploration Ltd.

BC, Yukon & Alaska

9:30 AM – 9:55 AM

The Roy, Day and Porcupine mineral showings were identified through grassroots to early-stage exploration programs in the early 1970s, following Falconbridge Ltd.'s discovery of the Sustut Copper deposit. These showings and related porphyry copper-gold exploration target areas now comprise the RDP project of Pacific Ridge Exploration Ltd. The project is under option to Antofagasta Minerals, who can earn a 75% interest over eight years; Pacific Ridge is the operator. The RDP project is in the eastern Stikine Terrane in north-central British Columbia and is underlain

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by Hazelton Group volcanic rocks and Black Lake Plutonic Suite intrusive rocks. The area attained a higher profile following the 2018 Geoscience BC release of Search Phase III regional airborne magnetic and radiometric data. Porphyry prospectivity may coincide with the Hazelton Group–Takla Group regional unconformity or red line. The nearest mapped red line to RDP is 4 km from the Day prospect, but new interpretations suggest a red line surface extends onto RDP in the area of the prospects. Drilling at the Day prospect in 2022 returned one of the best copper intersections in BC that year, with 497.2 m of 0.68% CuEq. The grade of this breakthrough drillhole was similar to historical best results at Day, but the intersection was eight times longer than anything previously reported. Auriferous copper sulphide, with potassic alteration, occurs in early-stage veins as fracture fill and as mineral replacements. The mineralized body can be interpreted as tabular, with a steep northeast dip and bounding fault on its southwest side. Exploration in 2023 included two drillholes at Day that stepped out 300 m in two directions to test the size of the porphyry system; an initial drill test of the Bird prospect following the 2022 discovery of porphyry mineralization in a stream cutbank; and surface geophysics and geochemistry programs at Day, Bird and Porcupine.

MULTIPLE STAKED, HIGH-GRADE GOLD ZONES IDENTIFIED AT GOLIATH’S GOLDDIGGER PROPERTY IN BRITISH COLUMBIA’S PROLIFIC GOLDEN TRIANGLE

Steve Israel, Senior Project Geologist, Archer, Cathro & Associates (1981) Limited

BC, Yukon & Alaska

9:55 AM – 10:20 AM

Goliath Resources Ltd.’s 100%-controlled Golddigger property is located within the Golden Triangle of British Columbia, one of North America’s most prolific metallogenic belts and host to numerous world-class deposits. The property covers 61 685 ha and encompasses several newly discovered showings and occurrences exposed due to recent glacial and snowpack abatement along 56 km of the red line. The property is close to the road-accessible town of Kitsault, BC, with power and infrastructure for up to 300 people, and a permitted mill site on private property, and direct barge access to Prince Rupert, 190 km away.

Recent drilling has uncovered a large system of high-grade polymetallic, gold and silver veins and breccia. Mineralization is hosted within a pre-existing structural network developed within Jurassic volcanic and sedimentary rocks. Eocene magmatic hydrothermal fluids, believed to be the source of the mineralization, infiltrated along the structures leading to the development of shear and extensional veins/breccia zones.

This new discovery covers 1.8 km² and contains at least three stacked zones of mineralization identified during 10 months of accumulated exploration, including the Surebet zone, the Bonanza Shear and the Golden Gate. Drill intercepts include up to 21.08 g/t AuEq (18.95 g/t Au and 95.31 g/t Ag) over 23.00 m within the Surebet zone. The Bonanza Shear has returned values up to 65.00 g/t AuEq (64.88 g/t Au and 8.03 g/t Ag) over 7.90 m. The Golden Gate was discovered in 2023 and returned intercepts up to 34.03 g/t AuEq or 1.09 oz/t AuEq (32.55 g/t Au and 65.71 g/t Ag) over 9 m. In the Surebet zone, 219 out of 234 (94%) of exploratory holes hit sulphide mineralization and 35% of the holes drilled in 2023 contain visible gold; the system remains wide open. Metallurgical studies show 92.2% gold recovery using gravity and flotation, including 48.4% free gold from gravity alone.

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CONTINUED SUCCESS AT THE BLUEBERRY ZONE—SCOTTIE GOLD MINE PROJECT

Thomas Mumford, VP Exploration, Scottie Resources

BC, Yukon & Alaska

10:20 AM – 10:40 AM

The Blueberry zone is located in British Columbia, Canada's Golden Triangle region, just 2 km northeast of the 100%-owned, past-producing Scottie gold mine. Despite high-grade surficial samples and easy road access, the Blueberry vein had only limited reported drilling prior to the Scottie Resources' exploration work. The target was significantly advanced during Scottie's 2019 drill program, when an interval grading 7.44 g/t Au over 34.78 m was intersected in a new north-south-oriented zone adjacent to the main Blueberry vein. The drill results received from 2020 to 2023 coupled with surficial mapping and sampling suggest that the north-south mineralized trend is a first-order structure that hosts an array of southwest-trending, sub-parallel, sulphide-rich veins that obliquely crosscut it and host high-grade gold. Released highlight intercepts from the 2023 drill program include (1) 56.4 g/t gold over 3.7 m, (2) 26.9 g/t gold over 4.0 m, (3) 10.4 g/t gold over 7.65 m, (4) 88.4 g/t gold over 2.00 m and (5) 13.0 g/t gold over 8.50 m.

As of the end of 2022, the extent of the north-south zone, defined by the contact between andesite and siltstone units of the Hazelton Group and the presence of cross-cutting sulphide-rich structures, has a drilled strike length of 1550 m and has been tested to 400 m depth; the 2023 drill campaign aims to expand on this. The Blueberry zone is located on the Granduc Road, 20 km north of Ascot Resources' Premier project, which is fully financed for construction. Newcrest's Brucejack mine is located 25 km to the north.

VALLEY—REDEFINING THE GOLD-ENDOWMENT POTENTIAL OF THE RIRGS MODEL

Thomas Branson, VP Exploration, Snowline Gold Corp; Scott Berdahl, CEO, Snowline Gold Corp; Andrew Turner, Exploration Manager, Snowline Gold Corp; Sergio Gamonal, Chief Geologist, Snowline Gold Corp

BC, Yukon & Alaska

10:40 AM – 11:05 AM

Valley is a significant new reduced intrusion-related gold system (RIRGS) discovery in Yukon's Selwyn basin. Since the first drillholes tested the margins of the Valley stock in late 2021, Snowline has rapidly delineated a mineralization footprint of approximately 700 by 500 m with continuously mineralized intercepts extending from surface up to greater than 450 m vertical depth, highlighted by drillhole V-23-039, which returned 2.5 g/t Au over 553.8 m from surface, including 132 m of 5.0 g/t Au from 6.0 m downhole.

The Valley stock is a 1000 by 800 m (surface expression) mid-Cretaceous, Mayo-suite, multi-phase granodiorite intruding siltstones and shales of the Ordovician–Silurian Road River Group with a contact-metamorphosed, pyrrhotite-rich hornfels aureole surrounding the intrusion. An unusually high density of gold-bearing sheeted quartz+carbonate veins (locally > 30 veins per metre) crosscut the intrusion. Veins occur in at least three orientations, all hosting visible gold along with bismuthinite, scheelite and telluride minerals and minor pyrite, pyrrhotite, chalcopyrite and arsenopyrite. Veins are dominantly controlled by steeply northeast-dipping, northwest-striking faults parallel to the orientation of the eponymous valley and locally appear to be spatially associated with a fine-grained porphyritic phase.

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Situated in the Tombstone gold belt (TGB), a trend of RIRGS-style deposits including Kinross' Ft Knox and Victoria Gold's Eagle mines, Valley is the locus of exploration activities within Snowline's Rogue project, which covers a 30 by 60 km magnetic geophysical anomaly associated with mid-Cretaceous intrusions of the Rogue Plutonic Complex (RPC). Compared to average reserve grades at Ft Knox (0.37 g/t Au) and Eagle (0.64 g/t Au), many of Valley's intercepts are multiples above what is currently being profitably extracted in the TGB. Initial metallurgical work demonstrates excellent gold recoveries consistent with Ft Knox and Eagle. In addition to Valley, the RPC hosts numerous underexplored intrusions with high potential for further RIRGS discoveries.

PRESENTATION FROM H.H. SPUD HUESTIS AWARD RECIPIENT

Jack Milton, Chief Geologist, Fireweed Metals

BC, Yukon & Alaska

11:05 AM – 11:30 AM

ENVIRONMENTAL, SOCIAL & GOVERNANCE

MITIGATING CLIMATE CHANGE THROUGH MINERAL EXPLORATION – AN OPPORTUNITY FOR ECONOMIC RECONCILIATION

Cooper Quinn

ESG

9:10 AM – 9:40 AM

Since 1760, approximately 2.5 billion tonnes of carbon dioxide have been emitted into the atmosphere through anthropogenic processes. This excess carbon dioxide is a main cause of global climate change. Geological processes such as rock weathering remove approximately 1 billion tonnes of carbon dioxide from the atmosphere each year through a suite of natural reactions known as carbon mineralization. Research shows these processes can be accelerated to capture and store climate-relevant quantities of carbon dioxide, using minerals that previously had little or no economic value.

It is critical that companies seeking to conduct work on Indigenous land respect the distinct rights of Indigenous peoples. The study of new mineralogy, emerging regulatory and policy regimes, and novel nature of carbon mineralization represents an opportunity to rethink how industry and Indigenous rightsholders work together from exploration to implementation, so that Indigenous interests and knowledge are incorporated into locating, quantifying and monetizing these new types of ore deposits. There is a significant opportunity to advance these new types of ore deposits because the carbon dioxide removal market may exceed \$1 trillion/year by 2050 according to some estimates. Projects that can be advanced with inclusion of Indigenous communities from day one offer the potential for these communities to directly participate in our collective effort to mitigate climate change and to see generational economic benefits.

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BEST PRACTICES FOR HERITAGE – COLLABORATIONS IN BRITISH COLUMBIA’S GOLDEN TRIANGLE

Kay Jollymore, Senior Archaeology Manager, Kleanza Consulting Ltd.

ESG

9:40 AM – 10:10 AM

Cultural heritage and archeological investigations have long been a component of mineral exploration programs and project development, but many proponents are unfamiliar with the process, regulatory setting and the importance of engagement with First Nations. This session will discuss considerations and challenges to keep in mind when developing cultural heritage programs for your project. We will touch on cultural heritage and archeology in British Columbia, regulatory considerations, First Nations input and participation, risk management and the importance of managing cultural heritage on your project. Best practices and examples of positive Proponent–First Nations–Archaeologist collaborations from British Columbia’s Golden Triangle region will be presented and discussed.

THREE GUIDING PRINCIPLES TO HELP FOSTER BETTER RELATIONSHIPS AND PROJECTS

Deanna Higginson, Technical Lead, Lands & Culture, Two Worlds Consulting

ESG

10:10 AM – 10:40 AM

From exploration to closure, proponents understand the importance of developing meaningful relationships with the potentially affected Indigenous Nations whose traditional territories characterize the sociocultural landscape where their deposit is located; however, they often struggle with translating this understanding into tangible actions and best practices: not only those needed to meet or exceed regulatory requirements, but also written and unwritten requirements and expectations that Indigenous Nations may have. Join Deanna Higginson as she shares three guiding principles to help foster better relationships and projects, learned from more than 10 years of professional experience leading human environment scopes for mining projects across western and northern Canada.

PREPARING YOUR WORKFORCE – SKILLS NEEDED FOR TODAY AND TOMORROW AND SUPPORTING SKILLS DEVELOPMENT

Dana Imbeault, Senior Director of Operations and Skills Development, Mining Industry Human Resources Council; Jill Tsolinas, Executive Director, BC Centre of Training Excellence in Mining (CTEM)

ESG

10:40 AM – 11:10 AM

Recognizing the workforce skills needed for today and tomorrow is critical for project success and project longevity; training and workforce development is also a key aspect of ESG by supporting local communities to increase participation in the workforce. The Centre of Training Excellence in Mining and the Mining Industry Human Resources Council will share a Skills Roadmap of what skills are needed and what training employees are asking for.

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They will also provide what has been learned in skills development for key in-demand jobs through case studies focused on developing and implementing training for the positions of diamond driller and underground miner.

EXPLORING THE VALUE OF CLEAN WATER: AME ROBERT HEDLEY AWARD RECIPIENT

Lynda Smithard, Chief Operating Officer, McCue Engineering

ESG

11:10 AM – 11:30 AM

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CORE SHACK

AMERICAN EAGLE GOLD

NAK PROJECT

Charles Greig, Geological Advisor, American Eagle Gold

The NAK project is in the Babine copper-gold porphyry district of Central British Columbia. The poorly exposed NAK porphyry system was first recognized and initially drilled in the 1960s, and that early work revealed a large near-surface copper-gold system with dimensions exceeding 1.5 by 1.5 km. Further historical drilling was undertaken as part of programs during the intervening decades but was limited to shallow depths, with the nearly 80 holes drilled prior to 2022 averaging only 170 m in depth. In 2022 and 2023, American Eagle's drilling programs explored deeper along a north-south trend in the west-central part of this large system, intersecting significant copper and gold mineralization below, and marginal to, the best of the shallow, historically defined mineralized zones. Very strong results from the 2023 drill program, including intervals exceeding 500 m of bornite-chalcopryrite-chalcocite mineralization, have been intersected along a zone that has a distinct IP chargeability and resistivity signature. This zone underpins the significant exploration potential that remains at NAK, yet is just one part of a large and underexplored system that includes an undrilled geophysical trend to the east of and mirroring the trend that hosts the zone targeted by the company during the past two seasons. An aggressive drill program is planned for 2024, with the goals of expanding and connecting the zones that were the focus of work in 2022 and 2023, enlarging near-surface zones of higher grade, and connecting the various higher grade zones intersected at depth. In addition, the company plans to continue to explore, through focused geophysics and scout drilling, little-tested parts of this large porphyry system.

ARCUS DEVELOPMENT GROUP INC.

TOULEARY PROPERTY, YUKON

Ian Talbot, President & CEO, Arcus Development Group Inc.

The Touleary property is located in the South Klondike district of the Yukon, approximately 100 km south of Dawson City. The property comprises 397 claims and covers an area of 8000 ha. Arcus Development Group Inc. ("Arcus") holds a 100% interest in the property, subject to a 1% net smelter return royalty held by Hecla Mining Company applicable to the eastern half of the claim block.

During a previous five-hole drill program (936 m), Arcus identified the first VMS mineralization in the South Klondike district. The VMS mineralization was intersected in all five drillholes and contained subeconomic to economic amounts of copper, zinc, silver and gold. The best drill intersection included 7.18% Cu, 3.55% Zn, 116 g/t Ag and 3.55 g/t Au over 2.25 m.

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The Touleary property lies within the Yukon-Tanana Terrane (YTT) approximately 100 km southwest of the Tintina fault. The YTT comprises a variety of Upper Devonian to Lower Mississippian metavolcanic, metasedimentary and metamorphic rocks, representing both arc and back-arc environments. During the Eocene, a segment of the YTT was displaced 450 km to the southeast along the Tintina fault. These displaced YTT rocks occur in the Finlayson Lake district of southeastern Yukon and are host to the Wolverine, Kudze Kayah, Fyre Lake and GP4F VMS deposits.

In 2023, Arcus undertook a complete reinterpretation of all of its existing geological, geophysical and geochemical data on the Touleary property, and identified eight deposit-scale targets. The target area is 10 by 4 km and exhibits district-scale potential. The eight new targets are believed to represent bimodal sequences of mafic and felsic volcanic rocks or vent complexes. As part of the recent reinterpretation, Arcus has concluded that the YTT rocks underlying the property are likely much more extensive than originally believed.

Arcus has designed a 2024 drill program to evaluate the district-scale VMS potential of the Touleary property. Initially, four of the eight new targets will be assessed with multiple drillholes as part of a 3 300 m (18 hole) reverse circulation drill program.

AU GOLD CORP.

PONDEROSA PROJECT: LOW SULPHIDATION EPITHERMAL GOLD IN THE SPENCES BRIDGE GOLD BELT

William Wengzynowski and Marc Blythe, Au Gold Corp.

The Ponderosa project is located in southcentral British Columbia within the unceded traditional territory of the Nlaka'pamux People. The property, which is fully road accessible, is situated 16 km southwest of Merritt, BC, and approximately 20 km northwest of Westhaven Gold Corp.'s Shovelnose project.

Rocks of immediate interest in the belt underlie much of the property and comprise successions of Cretaceous subaerial and pyroclastic volcanic flows of the Pimainus and Spius formations. Diamond drilling at Ponderosa in 2022 focused primarily on surface vein exposures at the Tomahawk zone, comprising high-level silica veins, vein breccias and quartz stringer zones. All drillholes at Tomahawk intersected epithermal-associated alteration, with the best mineralized intercept from PD22-13 yielding 18.91 m of 0.44 g/t gold from 25.91 m. The highest gold-bearing subinterval was encountered at the bottom of this intercept and yielded 2.20 g/t across 1.00 m.

A review of the mineralization and alteration from the Tomahawk zone by industry experts suggest this part of the system may be distal to a structural feeder zone but is potentially within hundreds of metres.

A recently revised interpretation of the Ponderosa structural architecture and associated mineralizing system, by the company, outlined an en echelon structural corridor of approximately 2 km strike length with zones of contiguous gold-arsenic soil geochemistry and clusters of gold-bearing prospecting samples from both historical and recent campaigns. The best epithermal mineralization sampled on the property yielded 46.90 g/t gold and 110 g/t silver within the southern part of the corridor, roughly 1 km south of the 2022 drill area.

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Continued exploration at Ponderosa will systematically test the newly revised structural corridor strategically along its strike length to identify in-situ epithermal gold-silver mineralization associated with the dispersion of gold-bearing surface samples along much of the trend.

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AZIMUT EXPLORATION INC.

GALINÉE PROPERTY: IN THE HEART OF A NEW LITHIUM DISTRICT, JAMES BAY REGION, QUÉBEC, CANADA

Jean-Marc Lulin, President and CEO, Azimut Exploration Inc.

The Galinée property (649 claims, 335 km²) is a 36 km long project located 60 km south of the Trans-Taiga Road, a regional all-weather access road to major hydro-electric complexes. The project is a 50/50 joint venture between Azimut and SOQUEM, a subsidiary of Investissement Québec. Azimut is acting as the operator.

In October 2023, Azimut and SOQUEM initiated a maiden drill program to test the downdip extension of the significant lithium discovery made by Winsome Resources on their Adina project. The spodumene pegmatites at Adina, so far delineated over a strike length of 1300 m, border the northern limit of the Galinée project.

At Galinée, 10 of the 12 holes have intersected spodumene pegmatites, which are currently recognized laterally over 700 m. Intercepts of up to 78.4 m in core length were encountered and are likely to represent the continuation of the Adina zone. The mineralized intercepts, for which assay results are pending, indicate a subhorizontal to shallowly dipping zone completely open to the east and south. Spodumene content ranges from 5% to 30%, often with coarse crystals up to 50 cm long. Other associated minerals include quartz, white feldspar, tourmaline and, less frequently, garnet, apatite, lepidolite and colombo-tantalite. Holmquistite, a typical lithium-bearing amphibole in the margins of lithium-rich pegmatites, is also frequently observed. The host rock is dark green amphibolite.

A minimum 5000 m drill program is underway to accelerate the delineation of this discovery within a 2 km long target area. Galinée displays multiple well-defined exploration targets, including a 20 km long lithium-cesium-gallium-tin anomaly in lake sediments in the northwestern part of the property, largely correlating with an amphibolite unit. The Galinée project holds a central position within an emerging lithium district where significant additional discoveries will likely occur.

BANYAN GOLD CORP.

AURMAC: COUNTRY-ROCK-HOSTED, INTRUSION-RELATED GOLD SYSTEM

James Thom, Project Manager, Banyan Gold Corp.

Located 35 km north of Mayo, central Yukon, the AurMac property is a country-rock-hosted, intrusion-related gold system. An updated mineral resource for the AurMac property of 6 200 000 oz of gold was announced on May 18, 2023. The mineral resource is contained in three near-/on-surface deposits: the Airstrip, Aurex Hill and Powerline deposits.

The three deposits are hosted within the Sourdough Hill member of the Keno Hill Quartzite Formation along the trend of the Tombstone Plutonic Suite. The Keno Hill Quartzite Formation are Mississippian–Permian deep-water sediments in the Selwyn Basin, most notable for the world-class Keno Hill silver deposits hosted in the basal quartzite member, stratigraphically below the Sourdough Hill member.

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Gold mineralization is associated with pyrrhotitic retrograde skarn-like alteration and quartz-sulphosalt-arsenopyrite-pyrite veins, and locally with siderite—base-metal veins and breccias.

Retrograde calcsilicate alteration with pyrrhotite and gold are found in shear and contact metamorphic-induced calcsilicate-altered calcareous sediments. They contain abundant pyrrhotite (locally in massive bands) along low-angle shear planes and later veins and fractures. Pyrrhotite forms >99% of the sulphide mineralization associated with the calcsilicate alteration, with minor/trace amounts of chalcopyrite, pyrite and sphalerite. Scheelite is also common in the pyrrhotitic-rich horizons.

Quartz-sulphosalt-arsenopyrite-pyrite±gold veins tend to occur in clusters of dilatant zones that have a west to southwest strike; the dip of the veins is commonly shallow to the north. The veins typically range from 5 to 20 mm in thickness. Scheelite is also common in veins.

Siderite-galena-sphalerite±arsenopyrite±gold veins and breccia zones are similar to those described in the Keno Hill silver district and are siderite-healed brittle fault zones with coarsely crystalline galena and marmatite sphalerite.

We will be showcasing 2023 drill core with visible gold, cross-sections from each deposit and examples of the three styles of gold mineralization found at AurMac.

BRIXTON METALS CORPORATION

THORN PROJECT: AN EMERGING PORPHYRY-EPITHERMAL DISTRICT

Christina Anstey, VP Exploration, Brixton Metals Corporation

The Thorn project, located in northwestern British Columbia, hosts a district-scale, Triassic to Eocene volcano-plutonic complex and related sedimentary units with several styles of mineralization related to porphyry and epithermal environments. Brixton Metals is actively exploring along an 80 km mega-trend and the 2022 to 2023 drill campaigns have resulted in Brixton's most significant drill intercepts to date on both its Camp Creek Cu-Au-Ag-Mo porphyry target and Trapper gold target.

Camp Creek is a blind Cu-Au-Ag-Mo porphyry target that has been the focus of Brixton's drilling since 2011. Recent drill testing has pushed holes beyond 1000 m depths and has encountered open-ended porphyry mineralization including 1562.35 m of 0.19% Cu, 0.05 g/t Au, 2.81 g/t Ag and 180 ppm Mo (0.34% CuEq) in THN23-261. Copper mineralization is largely hosted within the Cretaceous porphyry X unit and the Triassic Stuhini Group sedimentary rocks. Brixton continues to test the extents of this porphyry system at depth and toward the northwest, northeast and southeast.

The Trapper gold target represents an intermediate-sulphidation epithermal system hosted in Upper Triassic Stuhini Group volcanics, which are intruded by a Cretaceous quartz diorite, interpreted as part of the Thorn Magmatic Suite. Gold mineralization is structurally controlled within quartz-carbonate stockworks and epithermal veins that host sulphides (pyrite, galena, sphalerite) and rare occurrences of visible gold. Recent drilling at the Trapper target has resulted in numerous visible gold occurrences and significant high-grade intercepts including 304.46 m of 1.19 g/t Au in THN22-237 and 253.0 m of 1.40 g/t Au in THN22-244.

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Key geological insights taken from drilling, the use of oriented core, SWIR, XRF and geophysical rock properties (magnetic susceptibility, conductivity-chargeability) have all contributed to drill targeting. Drill core and rock samples will showcase the styles of mineralization and key geological features from both the Camp Creek and Trapper targets.

CASCADIA MINERALS LTD.

CATCH: A NEW COPPER-GOLD PORPHYRY DISCOVERY IN YUKON, CANADA

Adam Coulter, Austin Schneebeil, and John Kelley, Cascadia Minerals Ltd.

The 118 km² Catch property is located in central Yukon, Canada, 56 km southeast of the town of Carmacks, within the Traditional Territory of the Little Salmon Carmacks First Nation. The property is in an underexplored part of the Stikine Terrane, which extends from the Golden Triangle in British Columbia into Yukon. The Stikine Terrane is characterized by Late Triassic to Early Jurassic volcanic-plutonic arc complexes that are well-endowed with copper-gold-molybdenum porphyries including the Red Chris, Schaft Creek, Kemess, KSM and Galore Creek deposits and mines.

The Catch property is mostly underlain by augite-phyric basalt of the Semenof Formation, centred on a 7 by 3 km regional magnetic high. Mineralization is associated with propylitic to sodic alteration of basalt and lesser diorite, and intrusion-cemented and hydrothermal breccias. Locally there is intense albitization, silicification, brecciation and up to 10% disseminated to semi-massive pyrite, pyrrhotite, chalcopyrite and trace bornite. Secondary copper minerals including malachite, azurite and tenorite are widespread at surface, coat fracture surfaces and are often associated with gypsum.

Inaugural diamond drilling at Catch in 2023 intersected significant copper-gold mineralization hosted in dominantly propylitic- to sodic-altered basalt and diorite. Highlight intercepts include 116.60 m of 0.31% copper with 0.30 g/t gold in hole CA-23-002 and 45.83 m of 0.30% copper with 0.15 g/t gold in hole CA-23-001, which both targeted coincident 1200 by 600 m high-IP chargeability and 800 by 600 m magnetic low anomalies. Drilling has not intercepted significant potassic alteration, suggesting the potential to discover higher copper-gold grades associated with the potassic core of the system. Three additional holes are pending from a target 2 km north.

Mineralization at Catch is open in all directions and represents the discovery of a new greenfield copper-gold±molybdenum near-surface porphyry system with district-scale potential in an underexplored part of Yukon.

CASSIAR GOLD CORP.

EXPLORATION ADVANCES AND OPPORTUNITY IN THE CASSIAR GOLD DISTRICT

Jill Maxwell, VP Exploration, and Colin Birnie, Senior Geologist, Cassiar Gold Corp.

The Cassiar gold district in northern British Columbia lies along a belt of orogenic gold deposits that includes the Cariboo, Barkerville and Sheep Creek districts. The camp is hosted by the Sylvester allochthon, composed of stacked, shallowly dipping panels of Paleozoic to early Mesozoic mafic volcanic rocks, ultramafic sills and fine-grained siliciclastic sedimentary rocks. Regional Mesozoic deformation is associated with gold veins in the district.

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Gold-bearing quartz veins occur in stacked mafic volcanic panels along a 15 km north-northwest–trending corridor, controlled by low-angle thrust faulting localized along weaker listwanite and sedimentary horizons. This corridor is concordant with the dominant lineation trend representative of the transportation direction of thrust faults. Auriferous veins form perpendicular to this trend. Veins may occur at deflections of lithological contacts or accommodate offsets of contacts between competent units and weaker adjacent units.

Mineralization style varies across the property. Cassiar South hosts multiple high-grade quartz vein deposits, with 350 000 oz of past production. Mineralization is associated with east-northeast–trending quartz-carbonate veins occurring beneath ultramafic sheets or stepped downward within mafic volcanic panels. Mineralized veins include minor sulphide mineralization, commonly with visible gold.

The Cassiar North area hosts the near-surface Taurus bulk-tonnage deposit, with a recent 1.4 million ounce inferred resource at 1.14 g/t gold. The deposit is characterized by sheeted quartz-carbonate extension and shear veins hosted in gently dipping mafic volcanic rocks, with disseminated pyrite-carbonate alteration forming bulk mineralized zones and higher-grade corridors proximal to veins. Recent drilling identified north-northwest mineralization trends along two major faults that had been intersected in historical drilling but not previously recognized as significant mineralizing corridors at Taurus.

Historical exploration has largely focused near past-producing mines, leaving significant target potential including lateral vein extensions, new internal high-grade corridors within bulk mineralized zones, and discovery of new parallel and stacked vein systems.

COEUR MINING INC.

SILVERTIP DEPOSIT: CRITICAL METALS IN A TOP JURISDICTION

David Cass, VP Exploration, Coeur Mining Inc.

The Silvertip Ag-Pb-Zn deposit is located in northern British Columbia, approximately 100 km west of Watson Lake and immediately south of the Yukon border. This formerly producing mine lies within the Cassiar Terrane along the eastern flank of the Cassiar batholith in an underexplored portion of continental margin geology. It is arguably one of the highest grade undeveloped polymetallic carbonate-hosted replacement deposits in the world. In addition to silver, lead and zinc, recent drilling has also identified a suite of other key critical minerals that support the growing strategic value of this deposit, including indium, gallium, tin, antimony and gold. The project and 41 km² of concessions are 100% owned by Coeur Silvertip Holdings Ltd., a subsidiary of Coeur Mining Inc.

Mineralization at Silvertip was previously interpreted as hosted in a single subhorizontal manto horizon located at the top of the McDame limestone package in contact with overlying Earn sediments; however, since acquisition of the project in 2017, Coeur has discovered numerous subvertical, high-grade massive sulphide chimneys, with the Southern Silver zone being the largest discovered to date, in addition to several new stacked manto horizons hosted at different elevations throughout the McDame limestone. Favourable indications for mineralization have also been identified lower in the stratigraphic sequence, in the underlying dolostone, sandstone and Atan Group limestones, effectively opening up more than 2500 vertical metres of stratigraphy that is prospective for stacked, carbonate replacement deposits.

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Exploration to date by Coeur has focused on expanding the resource base in part of the carbonate replacement portion of the system. Several targets exist elsewhere on the property showing similar geophysical anomalies, structural features and/or geochemical signatures to Silvertip and are high priority for follow up. Recent deep drilling at Silvertip has indicated proximity to an intrusive heat source, opening up potential for skarn and porphyry styles of mineralization in addition to carbonate replacement mineralization.

CORE ASSETS CORPORATION

BLUE PROPERTY: FULL SPECTRUM PORPHYRY–CARBONATE REPLACEMENT MINERALIZATION IN NORTHWEST BRITISH COLUMBIA

M. Barrington, Vice President of Exploration, Core Assets Corporation; J. Baldwin, Exploration Manager, Core Assets Corporation

The Silver Lime porphyry-carbonate replacement project in northwest British Columbia hosts one of the largest and highest grade exposed occurrences of Ag-Pb-Zn±Cu-Au carbonate replacement massive sulphide mineralization in the world. This project covers only a fraction of the mineralized footprint of Core Assets' flagship Blue property.

The Silver Lime project is underlain by a Proterozoic to Paleozoic metamorphosed continental margin sedimentary package comprising schists, limestone and marble. Metasedimentary units are folded and intruded by multi-generational, mineralized, felsic to intermediate, porphyritic stocks and dikes. Metal content zones outward from the intrusion-hosted copper-molybdenum mineralization of the Sulphide City target, from zinc-copper-rich skarn to distal and dike-contact Ag-Pb-Zn-Cu-Au carbonate replacement mineralization at the Grizzly, Pete's and Gally targets. Skarn and carbonate replacement mineralization are observed as sulphide replacement textures in carbonate hostrocks, and as fault and fracture fills.

In 2023, drillhole SLM23-028, completed at the Pete's carbonate replacement target, intersected 6.40 m grading 159 g/t Ag, 8.7% Pb, 7.7% Zn and 0.23% Cu from 27.43 m depth, including 0.57 m of 301 g/t Ag, 11.5% Pb, 10.7% Zn and 0.31% Cu. Hole SLM23-048, drilled 2.4 km southeast along the same regional fold hinge at the Gally CRD target, returned 8.00 m of 139 g/t Ag, 3.5% Pb+Zn and 0.18% Cu from surface, including 1.30 m of 845 g/t Ag, 31.3% Pb+Zn and 1.10% Cu from 1.05 m depth, and 0.50 m of 1030 g/t Ag, 32.4% Pb+Zn and 1.16% Cu. These impressive intercepts correspond to anomalies identified in the 2023 3D DCIP (direct current resistivity and induced polarization) geophysical survey completed over the Pete's–Gally trend. Survey results support the continuity of these features over strike lengths of 320–900 m and to approximately 120 m depth. The features appear to connect to deep-seated, strong chargeability anomalies, locally coincident with the Sulphide City porphyry, via steeply dipping geophysical features interpreted as massive sulphide feeder structures. All prospective anomalies remain open for exploration in multiple directions and at depth.

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DEFENSE METALS CORP.

WICHEEDA LIGHT RARE EARTH ELEMENT CARBONATITE DEPOSIT

Kris Raffle, Qualified Person, Defense Metals Corp.

The 100% owned 6759 ha Wicheeda rare earth element (REE) property is located approximately 80 km northeast of the city of Prince George, British Columbia. An updated Wicheeda REE project mineral resource estimate was recently announced that incorporates an additional 10 350 m of drillhole data from 45 holes drilled by Defense Metals during 2021 and 2022.

The 2023 mineral resource comprises measured and indicated resources of 34.2 million tonnes, averaging 2.02% total rare earth oxide, and inferred resources of 11.1 million tonnes averaging 1.02% total rare earth oxide. This represents a 17% increase in resources and conversion of 101% of the prior 2021 mineral resource to measured and indicated categories.

The company's ongoing preliminary feasibility study has included additional open-pit and site infrastructure geotechnical drilling, and advanced metallurgical testwork.

Flotation variability testwork across a range of grades and lithologies culminated in a locked-cycle test that produced a high-grade 50.7% total rare earth oxide concentrate at 85.4% recovery from a 2.9% total rare earth oxide representative composite. Adoption of an acid bake hydrometallurgical process, with potential to improve capital and operating costs versus prior gangue-leach-caustic-cracking process, yielded > 90% recovery of neodymium and praseodymium in pilot plant operations.

DOLLY VARDEN SILVER CORP.

MINERAL DEPOSITS OF THE KITSALT VALLEY, NORTHERN BRITISH COLUMBIA, CANADA

Rob van Egmond, VP Exploration, Dolly Varden Silver Corporation; Bram van Straaten, Rebecca Hunter* (*currently Vice President, Exploration, Forum Energy Metals Corp.), Emily Miller, Geologists, British Columbia Geological Survey

The Kitsalt Valley area represents a sub-basin of the Eskay Rift located in the southern region of the Golden Triangle in northwestern British Columbia. The Dolly Varden Silver Corporation's Kitsalt Valley Project encompasses more than 15 km of folded Jurassic Hazelton Group volcanoclastics and sedimentary rocks deposited during the Eskay Rift time period of the Middle Jurassic. The current mineral resource on the property comprises seven deposits of differing styles, yet similar age of emplacement associated with basin bounding structures and stratigraphy. The deposits can be broadly split into two groups: a volcanogenic exhalative and epithermal silver-lead-zinc zone on the east side of the valley in the south, and epithermal breccia vein gold-copper belt along the west side of the valley.

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In 2022, the Homestake Ridge and the Dolly Varden projects were consolidated into the Kitsault Valley project, creating one continuous property that has recently been interpreted as hosting a complete mineralizing system evidenced by copper-gold porphyry-style alteration in the west and the Jurassic Big Bulk copper-gold porphyry to the east, with higher level, structurally controlled epithermal gold and copper deposits above and distal exhalative and vein breccia silver and base-metal deposits to the side within the valley. Approximately 90 000 m of drilling has been done in 2022 and 2023 between the two projects.

Exploration drilling has tested below the cap of Upper Hazelton argillite and discovered blind silver mineralization widening and extending beneath from the Wolf deposit. Step-out hole DV23-368 intersected 1898 g/t Ag over 1.00 m within 381 g/t Ag over 29.34 m indicating the system is widening and remains strong toward the central valley fold axis.

Infill and step-out drilling at the recently consolidated Homestake Ridge gold-copper deposits has shown the continuity of the vein breccias and stockwork mineralization.

FARADAY COPPER CORP.

COPPER CREEK, ARIZONA—EARLY HALO PORPHYRY AND BRECCIA-HOSTED COPPER-MOLYBDENUM-SILVER DEPOSIT

Thomas Bissig, Paul Harbidge, Dante Padilla, Benedek Gál, Zach Allwright, Faraday Copper Corp.

The Copper Creek project, endowed with more than 4.2 billion pounds copper Measured and Indicated Mineral Resources, is one of the largest undeveloped copper deposits in North America. It is characterized by unique mineralization styles including high-grade breccias with local occurrence of semi-massive to massive sulphide, as well as early halo veins. The early halo vein mineralization style at Copper Creek is consistent with porphyry systems emplaced at 5 to 6 km crustal depth, which is deeper than many other porphyry deposits, but similar to examples such as Highland Valley, British Columbia, or parts of Los Pelambres, Chile.

The project is situated in the heart of the Laramide porphyry copper province of the southwestern United States, in the Galiuro mountain range, 70 km northeast of Tucson, Arizona. Mineralization (dated between 59 and 61.6 Ma) is hosted in the Copper Creek batholith (62 Ma) and the Glory Hole volcanics (63 Ma).

Unlike many other porphyry deposits of Arizona, Copper Creek has experienced limited supergene oxidation or secondary copper enrichment.

Hydrothermal breccias overprint early halo veins, are typically 100 to 400 m across and can have a vertical extent of more than 1000 m. They mostly contain angular clasts cemented by variable proportions of quartz, muscovite, carbonate and sulphides. Clastic matrix is insignificant. Quartz-coarse sericite alteration is commonly associated with high-grade, breccia-hosted mineralization.

Core on display will show high-grade, breccia-hosted mineralization from the Keel zone. Samples on display are from a chalcopyrite-cemented breccia with copper content from 4.89 to 7.66%. In addition, representative samples for other mineralization styles including massive sulphide, early halo-style mineralization and miarolitic cavities will be on display.

FIREWEED METALS

ADVANCING CRITICAL METALS ASSETS: MACPASS, MACTUNG AND GAYNA PROJECTS

Quinton Willms and Kaitie Purdue, Project Geologists, Fireweed Metals

In 2023, Fireweed Metals completed its largest ever drill program, comprising more than 24 000 m at the Boundary zone, Tom, Jason and Mactung deposits. Other highlights include publishing an updated mineral resource at Mactung and identifying drill targets at Gayna through a ground gravity survey.

Macpass:

Located in eastern Yukon, Paleozoic sedimentary sequences host the Tom and Jason zinc-lead-silver-barite deposits and Boundary zinc-lead-silver mineralization. Faults have acted as fluid conduits, many episodically reactivated to overprint earlier pulses of mineralization, particularly at Boundary zone. Targeting a proposed feeder structure and major conduit, Fireweed drilled new high-grade intercepts between Boundary West and Main, unifying the two zones into one larger zone containing stratiform and semi-massive to massive sulphide mineralization. Hole NB23-007 eclipsed the previous best hole drilled with 118.0 m of 15.1% Zn, 2.8% Pb and 85.8 g/t Ag and 82.5 m of 11.9% Zn, 2.2% Pb and 81.2 g/t Ag.

At Tom, stratiform mineralization was extended with a step-out hole, TS23-009D2, 150 m from the present resource. At Jason, stacked mineralized lenses were present in a step-out hole, JS23-001D1, 120 m from similar observed mineralization that is interpreted to result from faulting during deposit formation.

Mactung:

One of the largest high-grade tungsten skarn deposits in the world, Mactung is contiguous with the Macpass project. High-grade scheelite mineralization was formed by magmatic hydrothermal fluids from a nearby granitic stock. After resampling and validating existing core, Fireweed released an updated mineral resource of 41.5 million tonnes indicated resource at 0.73% WO₃ and 12.2 million tonnes inferred resource at 0.59% WO₃. In 2023, approximately 1000 m were drilled for detailed metallurgical and ore-sorting studies.

Gayna:

Located in the Northwest Territories, Gayna hosts Mississippi Valley-type zinc-lead-gallium-germanium mineralization within Neoproterozoic carbonates. Fireweed's 2022 and 2023 ground gravity surveys have outlined potential for massive sulphide mineralization on the edges of reef-margin and reef-top positions that were not historically targeted.

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FATHOM NICKEL INC.

GOCHAGER LAKE PROJECT: A NICKEL-COPPER-COBALT DEPOSIT IN SASKATCHEWAN

Ian Fraser, CEO VP Exploration Fathom Nickel Inc; Vanessa Beach, TerraLogic Exploration

Located in north-central Saskatchewan, the Gochager Lake property falls within the La Ronge domain of the Proterozoic Trans-Hudson Orogenic Belt. The property is underlain by northeast-trending metasedimentary rocks of the Crew Lake belt, and the centre of the property hosts a series of differentiated gabbroic intrusions that are aligned with the northeasterly trend and positioned along the axial hinge of a regional-scale fold.

The Gochager Lake deposit, a magmatic nickel-copper-cobalt sulphide deposit, is hosted within one of these intrusions. The deposit was defined by drilling between 1966 and 1967, and at the time the resource was estimated to be 4.3 million short tons at a grade of 0.295% Ni and 0.081% Cu. Cobalt was a recognized component of the mineralization but was not systematically assayed for, and was not included in the historical mineral resource estimate.

Sulphide mineralization within the deposit occurs as steeply plunging chutes of high-grade, semi-massive sulphide contained within broad halos of disseminated mineralization. These high-grade chutes are highly conductive, and borehole electromagnetic surveying is an effective tool for exploration targeting within the deposit.

The deposit exhibits classic magmatic sulphide textures. Interstitial, globular and net-textured pyrrhotite and pentlandite are common and grade into zones of semi-massive to massive sulphide. Granular pentlandite occurs in pyrrhotite and forms classic loop textures around individual pyrrhotite grains. Chalcopyrite occurs in low concentrations throughout the deposit and increases in abundance across zones of semi-massive sulphide. Nickel tenors average between 3 and 4%, and cobalt to nickel ratios average between 1:12 and 1:14.

Fathom Nickel Inc. entered into an option agreement in September 2022 to acquire a 100% interest in the Gochager Lake property, and through property acquisition and direct staking has expanded the property to 22 620 ha across nine contiguous mineral claims.

GFG RESOURCES INC.

MONCLERG GOLD SYSTEM

Anders Carlson, VP Exploration, GFG Resources Inc.

GFG Resources Inc. ("GFG") is the second largest landowner in the Timmins Gold District, Ontario, with over 800 km² spanning across three properties: Goldarm, Pen, and Doré. Since 2018, the company has been actively advancing its portfolio across the Western Abitibi through regional till, prospecting, geophysics and drilling.

In 2021, GFG initiated exploration at the Goldarm Property and has completed successive annual drill campaigns including an upcoming campaign kicking off in late January 2024. The Goldarm Property occurs primarily within the Archean-age Kidd-Munro assemblage straddling both the Pipestone and North Pipestone Faults which run in parallel north of the Porcupine-Destor Fault. This 15,000-hectare property hosts the Montclerg Gold Deposit located just

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north of the Pipestone Fault within mafic and felsic volcanics and associated porphyry intrusions. The deposit is comprised of three primary zones: the bulk-tonnage Main Zone and the higher-grade Upper and Lower Footwall zones. The Lower Footwall Zone is the deepest of the 3 zones and has a known strike-length of approximately 250 metres and has been defined by drilling from 250 to 450 vertical metres below surface.

In November of 2023, GFG drilled a 150-metre step-out hole down-dip on the Lower Footwall Zone intersecting 4.79 g/t gold over 12.8 metres. The significant increase in true width of this zone coupled with the change in host-rock geometry at depth has GFG excited about the potential to expand this zone below 450 vertical metres. This mineralized zone will be presented at the 2024 AME RoundUp Core Shack.

Looking ahead, GFG is focused on testing a multitude of gold, VMS, and porphyry-hosted targets within the Goldarm Property. This focus aligns with the company's strategy to unlock the full potential of its extensive landholdings, which also include the Pen and Doré properties. Additionally, the regional till survey conducted at the Doré Property in Fall 2023, near the new Côté Gold Mine, aims to uncover new discoveries close to existing operations

GLADIATOR METALS CORP.

WHITEHORSE COPPER PROJECT, YUKON

The Whitehorse Copper project is an advanced-stage copper±molybdenum±silver±gold skarn exploration project in the Yukon, Canada. The property comprises 314 contiguous claims covering approximately 5380 ha (13 294 acres) in the Whitehorse Mining District.

Copper mineralization on the Whitehorse Copper Belt was first discovered in 1897 on the Whitehorse Copper Belt, as it became to be known. The Whitehorse Copper Belt comprises more than 30 copper-related, primarily skarn occurrences covering an area of 35 by 5 km in a northwest-trending arc. Exploration and mining development have been carried out intermittently since that time, with the main production period lasting from 1967 to 1982, during which production totalled 267 500 000 lbs Cu, 225 000 oz Au and 2 838 000 oz Ag from 11.1 million short tons of mineralized material milled.

In November 2022, Gladiator Metals Corp. executed an option agreement to acquire 100% of the Whitehorse Copper project by incurring exploration expenditures of \$12 million on the project, staged payment of \$300,000 in cash and the staged issue of 15 million shares over 6 years. Following the exercise of the option, Gladiator must pay the optionor, or such other person(s) as the optionor may direct from time to time, a 1.0% net smelter returns royalty on the Whitehorse Copper project.

GOLDSTORM METALS CORP.

ELECTRUM: GOLDSTORM METALS CORP.'S HIGH-GRADE AU-AG AND BASE-METAL PROJECT IN THE GOLDEN TRIANGLE, BRITISH COLUMBIA

Natalie Senger, Vice President of Resource Development, Goldstorm Metals Corp. and Ken Konkin, President, CEO & Director, Goldstorm Metals Corp.

The Electrum property is located directly between Newmont Corporation's Brucejack mine, approximately 20 km to the north, and the past-producing Silbak Premier mine, 20 km to the south. Mineralization at Electrum is controlled by two major fault lines that locally host bonanza gold grades, along with broader stockwork zones, within a complex geological model. Similar to the nearby Brucejack mine, gold and silver mineralization occurs as coarse electrum in several generations of quartz-carbonate veins and vein breccias hosted within a deformed volcanic-sedimentary sequence. Intermediate- to low-sulphidation gold and silver mineralization is present in many of the veins, accompanied by pyrite, sphalerite, galena and chalcopyrite, such as that intersected in 2023 with 0.51 m of 1.29 g/t gold, 266.00 g/t silver, 3.14% lead and 2.44% zinc in hole EZ-23-03. Precious-metal mineralized veins have been traced on surface over lengths from several tens of metres to more than 100 m, pinching and swelling along strike, similar to the vein intersected in 2023 with 0.50 m grading 233.50 g/t gold and 756 g/t silver within 4.50 m grading 27.00 g/t gold and 111.09 g/t silver in hole EZ-23-08.

GOLIATH RESOURCES LIMITED

GOLDDIGGER PROPERTY: NEW GOLD MINERALIZATION IN THE GOLDEN TRIANGLE, BC

Manuelle Lazzarotto, Goliath Resources Limited; Simone Pujatti, Goliath Resources Limited; and Steve Israel, Archer, Cathro & Associates (1981) Limited

The Golddigger property is situated in northwestern British Columbia, at the southern extremity of the prolific Golden Triangle. The property features sulphide mineralization associated with visible gold occurrences in three stacked shear zones, all hosted within Hazelton Group rocks of the Stikine Terrane. The structural geometry of the mineralized shear planes was delineated by modelling of more than 50 000 m of diamond drilling from 234 holes; detailed geological mapping and analysis of numerous surface grab, channel and soil samples.

Mineralization predominantly resides within mesothermal quartz breccia veins, developed along planes of weakness, forming three prominent stacked shear zones—the Surebet zone, Bonanza shear and Golden Gate zone—along with associated splays. The Surebet zone is formed within upper Hazelton Group sedimentary units characterized by mudstone, siltstone and sandstone, and is exposed for more than 2.1 km with 700 m of vertical relief. The Bonanza shear is located at the contact between the upper Hazelton sedimentary unit and massive andesitic to dacitic flows of the lower Hazelton volcanic unit. The newly discovered Golden Gate zone is within the volcanics, below the Bonanza shear, and is interpreted to be the feeder zone that channelled mineralizing fluids into the overlying shear planes.

An Eocene Re-Os age obtained from pyrrhotite associated with gold mineralization at the Surebet zone, in conjunction with fluid inclusion studies and the spatial proximity of the deposit to the Hyder pluton, suggest an

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intrusion-related genesis for gold-sulphide mineralization at the property. Comprehensive surface and drilling programs are continuing to refine the overall geological framework, ultimately aiding in the identification of the mineralizing fluid source. Hyperspectral imaging analyses on core samples are currently being conducted to shed light on the fluid-rock interaction patterns associated with precious- and base-metal mineralization helping to better target ongoing exploration.

HECLA MINING CORPORATION

EXPLORATION OF THE KENO HILL SILVER DISTRICT, YUKON, CANADA

Seymour Iles, Keno District Exploration Manager, Hecla Mining Corporation

Keno Hill, Yukon, is Canada's second largest historical silver producing district, with 214 million ounces of silver mined at an average grade of 44 oz/t from more than 40 occurrences between 1913 and 1989. Since 2006, multidisciplinary district-scale exploration for high-grade silver-lead-zinc lodes over the 242 km² project area has resulted in a current silver reserve of 49.5 million ounces predominantly located within the Flame & Moth and Bermingham deposits (refer to <https://www.hecla.com/operations/hecla-keno-hill-yukon-territory-canada>). The property also contains a resource comprising 32.3 million ounces Indicated and 25.5 million ounces Inferred.

A 15 500 m diamond drilling program was completed in 2023, focused on near-mine exploration at the Bermingham deposit. The program successfully intersected high-grade silver mineralization outside of the current resource area on both the Bermingham-Townsite vein and the Bermingham Footwall vein. The latter vein intersection is especially notable, having occurred at an elevation more than 300 m below the reserve.

The high-grade silver-lead-zinc mineralization is deposited in narrow, hydrothermal siderite-quartz veining developed in the regionally extensive, competent, but highly deformed, Mississippian Keno Hill Quartzite Formation. The silver minerals, associated with galena and sphalerite, belong predominantly to the tetrahedrite series, although pyrrargyrite and native silver are not uncommon. Vein formation is fault controlled and analysis of the distribution of mineralization in the Bellekeno and Bermingham mines has led to an understanding of the structural controls of the wider mineral system and provided a tool for effective exploration targeting.

I-80 GOLD CORP

RUBY HILL, EUREKA DISTRICT, NEVADA, USA

Tyler Hill, Chief Geologist, i-80 Gold Corp

The Eureka district, located in central Nevada, United States, was one of the first significant mining districts in the state, with ore discovered in 1864. The orebodies consist of oxidized Au-Ag-Pb carbonate replacement deposits (CRD) hosted in Ordovician to Cambrian carbonates. Production of these ores continued through the mid-1900s, with an estimated 1.65 million ounces Au, 39 million ounces Ag, and 625 million pounds Pb produced from just 2.0 million short tons; however, this production is likely understated.

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Exploration by Homestake Mining in the 1990s resulted in the discovery of oxidized distal-disseminated ore at Mineral Point and oxidized Carlin-type ore at Archimedes. Ultimately, a combination of Homestake, Barrick Gold Corporation, Waterton Global Resource Management and i-80 Gold have produced approximately 1.5 million ounces Au from the Archimedes pit. Additional exploration by Homestake and later Barrick identified high-grade sulphide Carlin-type mineralization at depth (Ruby Deeps), as well as a zinc skarn deposit (Blackjack).

The Ruby Hill property was acquired by i-80 Gold from Waterton in October 2021, and i-80 Gold has conducted significant exploration since that time. More than 65 000 m of drilling has focused on infill and step-out drilling of the Ruby Deeps, 426 zone and additional targets across the property. Follow-up drilling on historical Homestake and Barrick holes south of the Archimedes pit has resulted in the discovery of Hilltop, a new zone of CRD mineralization. The 2022 discovery hole intersected 28.3 m of 515 g/t Ag, 28.9% Pb and 10.5% Zn immediately beneath alluvium. Additional exploration discovered a new zinc skarn zone, with the discovery hole intersecting 39.6 m of 12.3% Zn. Drilling continues ahead of a resource estimate, expected in 2024.

KODIAK COPPER CORP.

MPD PROJECT: EXPANDING A NUMBER OF PROSPECTIVE COPPER-GOLD PORPHYRY SYSTEMS IN SOUTHERN BRITISH COLUMBIA

Jeff Ward and Dave Skelton, Kodiak Copper Corp.

The MPD project is located in south-central British Columbia, 40 km south of Merritt and 10 km north of Princeton. Kodiak Copper Corp. initially acquired the property in 2018 and has subsequently expanded the land package to 22 684 ha, consolidating four historical prospect areas (Man, Prime, Dillard and Axe) into a single project for the first time.

The MPD project lies within the southern portion of the Quesnel Terrane, BC's primary copper-producing belt, which hosts nearby mines such as the world-class Highland Valley mine, New Afton and the Copper Mountain mine. Late Triassic–Early Jurassic alkalic and calcalkalic island arc volcanics and comagmatic intrusives of the Nicola Group underlie most of the property. Copper-gold mineralization at MPD is hosted by north-trending, steeply dipping, altered dioritic rocks; porphyritic volcanics and late-stage, structurally controlled veining.

The Gate zone was discovered in 2019 by a single drillhole that tested the north end of a copper-in-soil anomaly. Additional drilling from 2020 to 2022 defined a high-grade copper-gold zone within a wider mineralized envelope including a 282 m intercept with 0.70% Cu and 0.49 g/t Au. The mineralization was traced for 1 km along strike and extended over a width of 350 m and a depth of 900 m. Drilling in 2022 also successfully extended known mineralization to depth on the Dillard and Prime zones, which are located close to Gate.

The 2023 exploration drill program focused on advancing several porphyry systems, including the Man, West, South and 1516 zones. The goal was to extend mineralization to depth in the West, Man and South zones and test a Cu–Au–Mo zone at 1516. Drilling at the West zone intersected 941 m of 0.21% Cu and 0.16 g/t Au including 254 m of 0.49% Cu and 0.29 g/t Au. Evidence of high-temperature mineralization was also encountered at West in a copper-bearing hydrothermal breccia that was identified below 735 m. Drilling at Man intersected several zones of mineralization from 29 to 924 m, including 0.34% Cu, 0.28 g/t Au and 1.71 g/t Ag over 116 m. The 1516 zone is a

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copper-molybdenum target associated with a greater than 2 km long polymetallic soil anomaly. Follow-up drilling is scheduled in all areas for 2024.

The MPD project has excellent potential for the further expansion of significant copper-gold zones, as has been typical of other multi-centre copper porphyry deposits in BC. Further drilling is required to investigate the extent and potential of the porphyry centres to host an economic deposit.

LAVRAS GOLD

FAZENDA DO POSTO GOLD DISCOVERY, LAVRAS DO SUL, RIO GRANDE DO SUL STATE, SOUTHERN BRAZIL

Michael Durose, CEO, Lavras Gold Corp.; Joao Moller, Geologist, Lavras Gold Corp.

The Fazenda do Posto gold discovery, announced on August 29, 2023, is located 150 m west of the 500 000 oz Butiá gold deposit in an area of recessive topography across a northeast-trending fault.

Discovery hole 23FP002 returned 340 m grading 1.1 g/t Au from 117 m, including 160 m grading 1.8 g/t Au from 199 m, and 27 m grading 2.1 g/t Au from 208 m, and 68 m grading 2.1 g/t Au from 293 m. Follow-up drilling in holes 23FP003 and 23FP006 confirm long intervals of continuous gold mineralization within episyenite and starting at drillhole depths of 87 m and 31 m, respectively.

The original granodiorite hostrock is extensively albitized into a salmon pink-coloured aphanitic cap rock termed albitite. Just below the cap rock, gold is hosted within pervasively hydrothermally altered granodiorite that has morphed into episyenite. Episyenite typically consists of 95% brick-red potassium feldspar and albite, 2–3% black to dark-green, iron-rich chlorite, 1–2% grey and white carbonate (calcite) and 1–3% disseminated pyrite and arsenian pyrite. Feldspar grain boundaries are subrounded to subangular, reflecting pervasive metasomatic alteration likely from alkaline fluids. Brick-red colouration of the feldspar minerals is thought to result from iron and barium zonation within the feldspar minerals. Gold mineralization is associated with the sulphide minerals. Mineralization is remarkably continuous over very long intervals. A higher density of sulphide mineralization usually results in higher gold grades. Perthitic granite is closely associated with zones of mineralized episyenite. Perthitic granite consists of 85–95% pink potassium feldspar and 5–15% milky quartz. Perthitic granite can contain gold mineralization when iron-rich chlorite and disseminated sulphides are present.

Alkaline fluids are thought to have dissolved the original quartz in the granodiorite, creating porosity and permeability in the remaining vuggy hostrock. A subsequent mineralizing event deposited gold in the form of sulphides (pyrite and arsenian pyrite) into the vugs along with iron-rich chlorite and carbonate (calcite). Depending on ambient temperature, pressure and pH conditions, milky quartz was being deposited in the vugs forming perthitic granite.

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LI-FT POWER LTD.

YELLOWKNIFE LITHIUM PROJECT—POWERING THE NORTH’S CRITICAL MINERAL INVENTORY

Andrew Ganton, Exploration Manager, Li-FT Power Ltd.

The Yellowknife Lithium project (YLP) comprises a series of mining leases that cover most of the lithium pegmatites that make up the Yellowknife Pegmatite Province (YPP). Numerous spodumene-bearing pegmatites with strike lengths up to 1800 m and widths from 7 to 40 m outcrop in the project area. The spodumene-bearing dikes are visible from satellite imagery, with historical trench reporting lithium oxide grades of 1.10–1.59%. The YPP dikes are hosted in a metasedimentary sequence of the Archean Burwash Group and are postulated to be genetically linked to the S-type two-mica granites of the approximately 2600 Ma Prosperous suite.

The YLP is near the City of Yellowknife, with the closest outcropping pegmatite only 18 km from the eastern city limits. In June 2023, Li-FT Power Ltd. initiated an aggressive resource drill campaign, completing 34 328 m of diamond drilling on eight spodumene-bearing dikes to date (Fi SW, Fi Main, Ki, Hi [Shorty], Big East, Big West, Nite and Echo).

The target ore commodity is spodumene, a lithium-bearing aluminum silicate pyroxene mineral ($\text{LiAlSi}_2\text{O}_6$). Spodumene crystals measuring 0.5 to 20 cm comprise 5 to 50% of the modal percentage of rock volume accompanying megacrystic potassium feldspar, quartz and muscovite. Trace lepidolite, amblygonite, beryl, apatite and garnet is also present.

Li-FT Power Ltd. is clearing the path for rapid development of these pegmatites to meet the ever-increasing global market demand for lithium in spodumene concentrates. An additional 20 000 m of resource diamond drilling is planned for the winter of 2024.

METALLIC MINERALS CORP.

LA PLATA PROJECT: A HIGH-GRADE PGE AND PRECIOUS METAL–RICH ALKALINE COPPER PORPHYRY SYSTEM IN SOUTHWESTERN COLORADO, USA

Scott Petsel, President, Metallic Minerals Corp.

Mineralization in the La Plata Mountains of southwestern Colorado, United States, was first discovered by Spanish explorers in the late 1700s. The high-grade epithermal silver-gold-telluride vein systems they found were explored and developed by prospectors and miners from the 1850s to the 1940s. In the 1950s, the progenitors of Rio Tinto and Freeport McMoRan identified a Laramide alkalic porphyry system in the centre of the district. More than 15 000 m of drilling was completed in the ensuing years before low copper prices in the late 1970s compelled a reordering of priorities.

The La Plata project had been overlooked for nearly 50 years when it was acquired by Metallic Minerals (Metallic) in 2019. Systematic exploration of the property and surrounding district began, with a focus being the establishment of a NI 43-101 mineral resource estimate at the Cu-Ag-Au-PGE-bearing Allard stock, a goal that was achieved in April 2022. In July 2023, Metallic announced an updated inferred resource for the project of 1.3 billion pounds CuEq that

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includes 17 million oz Ag. The ensuing 2023 drill campaign was designed to test extensions of the higher grade, precious metal-rich mineralization in hole LAP22-04, which intersected 816 m of continuous mineralization grading 0.41% CuEq. The hole ended in 9.75 m of high-grade 3.53% CuEq (1.59% Cu, 12.46 g/t Ag, 0.338 g/t Au, 1.064 g/t Pt and 1.833 g/t Pd) mineralization. The last sample of the hole returned more than 5.0 g/t Pt and 5.3 g/t Pd along with high-grade copper, silver and gold over 0.61 m. The association of PGEs with alkalic porphyry systems is well documented, but their presence at such phenomenal grades is rare. The multi-phase alkalic porphyry intrusion presents many complications but also many opportunities, as multiple intrusive centres with copper mineralization are likely to be recognized with further exploration.

NEWMONT CORPORATION

COFFEE PROJECT DRILLHOLE 23-MAC-DD055: ATYPICAL MINERALIZATION STYLE AND INSIGHTS INTO MINERALIZATION GENESIS ON THE COFFEE PROPERTY, YUKON, CANADA

Aedan O'Brien, Jacob Kitchen, Davin Hoffman, Alex Brubacher, Jim Essman, Newmont Corporation

Newmont's Coffee gold project is a proposed open-pit and heap-leach gold development project located in west-central Yukon.

Characteristic mineralization at Coffee is represented by shallow, breccia-hosted and associated wallrock replacement-style oxide gold. Mineralization is hosted within Paleozoic metamorphic rocks and mid-Cretaceous granite as arsenian pyrite, which replaces igneous and metamorphic biotite and phengite in the host rocks.

Drillhole 23-MAC-DD055 was drilled within the Supremo Extension zone, located approximately 800 m northwest of the Supremo T3 structure (largest, most continuous mineralized structure on the Coffee property) and considerably lower stratigraphically.

Mineralization within drillhole 23-MAC-DD055 is unique and largely atypical of mineralization observed elsewhere on the property, represented by extensive disseminated arsenian pyrite and arsenian pyrite mineralized clasts within isolated hydrothermal and tectonically deformed breccias in close spatial (and possibly temporal) proximity to semi-banded quartz-carbonate-sulphide veins. In comparison, conventional Coffee-style mineralization typically hosts extensive oxidation within incompetent, tectonically deformed breccia structures within the supergene environment. An additional distinction from characteristic Coffee-style mineralization is represented by banded, mineralized(?) veining observed throughout the mineralized intervals within 23-MAC-DD055, preliminarily interpreted to be associated with epithermal-style mineralization.

PORPHYRY CU-AU MINERALIZATION AT EAST RIDGE, A NEW DISCOVERY AT THE RED CHRIS DEPOSIT, BRITISH COLUMBIA, CANADA

Denise Baker, Ian Betts, Will Clarke, Liam Fannin, Nicholas Fitzpatrick, Anthony Harris, Joanna Lipske, Pearce Luck, Andrew Stone, Newmont Corporation; Chris Rees and Jim Miller-Tait, Imperial Metals Corporation; Alan Wilson, GeoAqua Consultants Limited

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Red Chris is a Late Triassic high-potassium calcalkalic (silica-saturated alkalic) porphyry copper-gold deposit hosted predominantly within the Red stock, a large, east-northeast–elongate stock 8 km long and up to 1.5 km wide. The deposit consists of at least four zones over a strike length of approximately 4 km. From west to east the zones are Gully, Main, East and a new discovery at East Ridge. Porphyry-related, fracture-controlled and disseminated chalcopyrite±bornite mineralization is centred on a composite swarm of east-west– to east-northeast–striking, steeply northwest-dipping, pre-, syn- and late-mineral dykes of granodiorite, quartz monzonite to monzonite composition that intrude volcanosedimentary and lesser volcanic rocks of the Late Triassic Stuhini Group. At least three porphyry phases (P1 to P3) are recognized at Red Chris based on subtle compositional and textural differences and truncated veins. The bulk of copper-gold mineralization was introduced during emplacement of the P2 set of porphyry dikes. Higher grade gold-copper mineralization is centred on zones of early potassic (K-feldspar–biotite–albite–quartz–magnetite) and calcpotassic alteration (actinolite–biotite–K-feldspar–magnetite) that has been overprinted by phyllic and intense intermediate argillic (quartz–illite–chlorite–carbonate) alteration, in addition to late-stage quartz-carbonate veins and late-mineral faults.

NEW WORLD RESOURCES

ANTLER VMS: HIGH-GRADE COPPER EXPLORATION AND DEVELOPMENT IN ARIZONA, USA

Michael Haynes, Managing Director, New World Resources; Patrick Siglin, Exploration Manager, New World Resources; Tracy Roach, Project Manager, New World Resources

The Antler copper deposit, located in northwestern Arizona, United States, is a high-grade, polymetallic VMS copper-zinc-lead-silver-gold deposit. Mineralization outcrops at surface over 750 m strike and is open at depth. A JORC mineral resource estimate was released in November 2022 and comprises 11.4 million tonnes at 2.1% Cu, 5.0% Zn, 0.9% Pb, 32.9 g/t Ag and 0.36 g/t Au.

Antler was discovered in the late 1800s. Historical production was intermittent from 1916 to 1970, during which time approximately 70 000 t at 2.9% Cu, 6.2% Zn, 1.1% Pb, 31 g/t Ag and 0.3 g/t Au were mined and processed.

The Antler deposit lies within a northeast-trending belt of Precambrian metasedimentary rocks and metavolcanics that comprise felsic to mafic compositions of gneisses and schists subject to amphibolite grades, multiple intrusions and deformation events. This belt contains two known VMS deposits: Antler and Copper World. Sulphide mineralogy at Antler is a combination of sphalerite, chalcopyrite and galena with pyrrhotite and pyrite. The mineralogy is massive to disseminated, stratabound and interpreted to be synvolcanic and both replacement and exhalative type. Present-day replacement-style mineralization is attributed to at least one remineralizing event.

The predominant wallrock to sulphide mineralization is quartz-biotite (feldspar) schist or meta-rhyolite. Two parallel lodes of mineralization, east and west, are separated by as much as 45 m of barren schist. The two limbs appear to converge, forming northward-trending shoots of mineralization referred to as the Main shoot and South shoot.

RACKLA METALS INC.

HIT PROJECT: REDUCED INTRUSION-RELATED GOLD SYSTEM IN THE EASTERN TOMBSTONE GOLD BELT, YUKON

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Scott Casselman, Doug Murray and Armand Reypin, Rackla Metals Inc.

Located at MacMillan Pass, Yukon, a short distance from the North Canol Road, the HIT property hosts a newly discovered reduced intrusion-related gold system target.

The property is centred around the Canol Trail stock, a mid-Cretaceous monzogranite belonging to the Tungsten suite. The stock intrudes and metasomatizes Selwyn basin sedimentary rocks. Seven mineral occurrences have been identified along the margins of the intrusion. These have historically been described as copper-gold-antimony-bismuth skarn occurrences, the most significant of which is the Mehitabel prospect.

Rackla Metals optioned the HIT property in the fall of 2022 and conducted their first exploration at the site in summer 2023. The company completed a comprehensive program consisting of an airborne geophysical survey, stream sediment and soil sampling, prospecting, geological mapping and diamond drilling totalling 997 m in five holes.

Significant findings from the 2023 program include a magnetic low centred on the intrusion with magnetic high 'shoulders' around the intrusion defining the hornfelsed contact aureole; stream sediment samples containing up to 9.67 ppm Au; a zoned soil and talus-fines geochemical anomaly with coincident Au-Bi-As that measures 2 by 1 km, with several values greater than 0.5 ppm Au; the observation of an abundance of sheeted quartz-sulphide veins in the intrusion, particularly in the area of the Mehitabel prospect, where the density is up to 55 veins per metre; several surface rock samples with values above 0.5 g/t Au and up to 26.5 g/t Au.

Drillholes HIT-003 and HIT-004 were drilled at the Mehitabel prospect. These holes intersected a broad zone of sheeted quartz-pyrrhotite-bismuthinite-arsenopyrite mineralization that has been traced across a width of 240 m. HIT-003 intersected 129.8 m containing 0.248 g/t Au and HIT-004 intersected 45.5 m containing 0.516 g/t Au. These intercepts point to increasing grade to the southwest, where the heart of the soil and talus-fine anomaly is located. The zone is open in all directions. The company is encouraged by the results from its first exploration program on the site and the crews are excited to follow up on these results in 2024.

RADISSON MINING RESOURCES

O'BRIEN GOLD PROJECT: GROWING AND DEVELOPING QUEBEC'S FUTURE POTENTIAL HIGHEST GRADE GOLD MINE

Vivien Janvier, Director Geology; Hubert Parent-Bouchard, Chief Finance Officer, Radisson Mining Resources

Radisson Mining Resources' flagship O'Brien project is in Cadillac, Quebec, halfway between Val d'or and Rouyn-Noranda, in the Abitibi region. Geologically, the project extends over 5.2 km along the Larder-Lake-Cadillac fault, the most prolific sector of the Abitibi greenstone belt. O'Brien is the consolidation of three former high-grade gold mines: Thompson Cadillac, O'Brien and Kewagama. Between 1927 and 1956, the O'Brien mine alone, produced 587 121 oz at an average grade of 15.25 g/t Au, making it the richest mine by grade in Quebec at the time. The gold mineralization is illustrated by quartz veins extremely rich in gold, exceeding 100 g/t in several areas, with very common visible gold. These veins are generally narrow and impressively continuous. When folded on themselves, which is not uncommon, the mineralized zone can reach thicknesses of 5 m. These folded zones are the source of some of the richest ore from the O'Brien mine. Over the years, thanks especially to a better geological understanding of the former O'Brien mine, Radisson has demonstrated the presence of new areas that are very rich in gold.

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Following a 127 000 m drilling campaign, which concluded in 2022, Radisson doubled its gold resources, confirming very high gold values and, importantly, a deposit of significant scale. Gold zones remain open in all directions. The O'Brien deposit is currently the highest grade undeveloped project in Quebec. Today, Radisson shows potential for several million ounces within the system, and with up to 40 000 m of drilling currently underway, it is expected that new major extensions will be discovered.

SITKA GOLD CORP.

BLACKJACK DEPOSIT: AN EXAMPLE OF HIGH-GRADE GOLD MINERALIZATION IN A REDUCED INTRUSION-RELATED GOLD SYSTEM IN YUKON'S TOMBSTONE GOLD BELT

Mike Burke, Don Penner, Greg Dawson, Gilles Dessareau, Sitka Gold Corp.

The RC gold project lies within the Yukon portion of the east-trending Tombstone gold belt, which is host to several gold deposits related to Cretaceous intrusions of the Tombstone Plutonic Suite. This belt of rocks has produced many reduced intrusion-related gold systems containing multiple millions of ounces of gold such as the Eagle gold mine in Yukon, Canada, and the Fort Knox mine in Alaska, United States. Recent exploration success by Sitka Gold at the Blackjack deposit and Snowline Gold at the Valley target has highlighted the potential for these typically large bulk-tonnage systems to host higher grades than previously thought.

The project area has been explored for decades by numerous operators in their search for the hardrock gold deposits as the likely source for the placer gold in Clear Creek. There is good access to the area due to historical and current placer mining.

The RC project profile was elevated in late 2021 with the discovery of the Blackjack deposit in hole 21-21 (220 m of 1.2 g/t Au). Follow-up drilling in 2022 laid the groundwork for a NI 43-101 Inferred Resource Estimate announced in early 2023 of 900,000 ounces of gold (33 743 000 tonnes grading 0.83 g/t). Each successive drill program has significantly advanced the project and 2023 was no exception. Drillhole RC23-47 was drilled outside of the resource area and intersected 219 m grading 1.31 g/t Au including 124.8 m of 2.01 g/t Au, the highest grade intersection on the project to date.

Mineralization consisting of sheeted quartz sulphide veining within megacrystic porphyritic quartz monzonite from hole RC23-47 will be displayed.

SOUTHERN CROSS GOLD

SUNDAY CREEK: AN EPIZONAL GOLD-TIN DISCOVERY

Kenneth Bush, Exploration Manager, Southern Cross Gold; Michael Hudson, Managing Director, Southern Cross Gold

Located in Central Victoria, Australia, the Sunday Creek project is one of the most exciting pre-resource gold-tin exploration projects in Australia. Sunday Creek is within the Melbourne structural zone in the Lachlan fold belt. The regional host to the Sunday Creek mineralization is an interbedded turbidite sequence of siltstones, mudstones and

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minor sandstones, metamorphosed to subgreenschist facies and folded into a set of open north-west-trending folds. Intruded into this sedimentary sequence is a series of intermediate monzodiorite–diorite dikes and breccias on an east-west trend. Mineralization is structurally controlled, with increased mineralization associated with an intense alteration of sericite-carbonate ‘bleaching’ around the intrusive sequence. Mineralization is dominantly hosted within zones of subvertical, brittle-ductile shear veins and associated veins of visible gold, quartz, stibnite and minor ferroan carbonate infill and associated disseminated sulphides in the form of arsenian pyrite, pyrite and arsenopyrite. The mineralized zones crosscut the bleached sedimentary rocks and altered dike with a northwest orientation and are typically 5–20 m wide, 20–60 m in strike length and continue vertically to a depth of 1 km.

The age of mineralization has been estimated to be Late Devonian, associated with the Tabberabberan orogeny and consistent with surrounding epizonal deposits of similar characteristics (e.g., Fosterville and Costerfield).

Drillhole SDDSC082 (331.5 m at 7.1 g/t AuEq [6.8 g/t Au, 0.2% Sb] from 413.6 m [uncut]), traverses 18 individual high-grade structures including 0.2 m grading 4190 g/t AuEq (4190 g/t Au, 0.1% Sb) from 418.4 m to 418.6 m.

On a grade-thickness basis, SDDSC082 (cumulative 2 418 g/t AuEq per metre) is the best hole drilled on the project to date. The hole hit continuous mineralization that can be mapped from surface to 550 m deep and also drilled the deepest mineralization on the project, reaching 1 km of vertical depth.

STILLWATER CRITICAL MINERALS

NICKEL+COPPER+COBALT+PGE MINERALIZATION WITHIN THE LOWER ULTRAMAFIC SERIES OF THE STILLWATER COMPLEX, MONTANA, USA

Danie Grobler, VP Exploration, Stillwater Critical Minerals; Albie Brits, Senior Geologist, Stillwater Critical Minerals; Mike Ostensen, Project Geologist, Stillwater Critical Minerals; Justin Modroo, Project Geophysicist, Stillwater Critical Minerals

The Stillwater Complex is renowned for its high-grade PGE (JM Reef) mineralization, which is currently being exploited by Sibanye-Stillwater mining company. Only the eastern part of the complex has historically been explored for base metal nickel+copper contact-style mineralization. Stillwater Critical Minerals (SCM) is actively exploring for nickel+copper+cobalt+PGE and gold within the lower third of the central and western portion of the layered intrusion, from the Basal Series, at the footwall contact, upwards into the Peridotite and Bronzite zones of the Ultramafic Series (UMS).

Stillwater Critical Minerals has identified remarkable parallels with contact-style mineralization described from the Platreef project of the northern limb of the Bushveld Complex in South Africa, including

- thick zones of PGE+nickel+copper–mineralized pegmatoidal orthopyroxenite,
- PGE-bearing chromitite seams,
- extensive zones of net-textured to massive nickel-enriched base-metal sulphide mineralization found within the footwall contact zone of the layered intrusion, and
- a new style of structurally controlled mineralization enriched in nickel sulphide within north-south–trending transgressive sulphidic ultramafic lithologies.

The lower Stillwater Complex exhibits a very similar stratigraphy to that of the Platreef in South Africa, with ultramafics and chromitites near its base grading into predominantly pyroxenites higher up. It further displays the same metal distribution pattern, with PGE-enrichment toward the top of the UMS, and base-metal sulphide enrichment into the footwall contact zone. The upper portion of Chrome Mountain appears to be represented by PGE+nickel+copper–bearing pegmatoidal orthopyroxenite with associated chromitite stringers of Bronzite zone affinity. This may be of significant exploration importance because historical descriptions of mineralization within the lower Stillwater Complex have always been correlated with the Peridotite zone, which has mostly been explored within the eastern part of the complex.

Application to the Stillwater Complex of the above contact-style stratiform reef model in combination with a detailed structural interpretation forms an important exploration strategy to identify continuous high-grade zones of mineralization within the broader disseminated mineralization in the lower part of the mafic-ultramafic layered complexes.

SUMMA SILVER CORP.

EXPLORING FOR HIGH-GRADE, EPITHERMAL-RELATED SILVER AND GOLD MINERALIZATION ACROSS FAMOUS MINING DISTRICTS IN SOUTHWESTERN UNITED STATES

Chris York, Galen McNamara, Liam Eades, Christopher Leslie, Giordy Belfiore and Daniel Verrell, Summa Silver Corp; Ben Hinkle, Rangefront Mining Services

Summa Silver Corp. is focused on silver and gold exploration across two projects in the southwestern United States. The Mogollon project in southwestern New Mexico and the Hughes project in central Nevada are centred on historical mining districts and have been the subject to multiple exploration drill programs since 2020.

The Mogollon project is host to numerous low-sulphidation, epithermal-related silver-gold targets dispersed across approximately 77 km of near-continuous and complex vein systems. Historical mining produced approximately 13.1 million oz Ag and 271 thousand oz Au, primarily from three mines: Fanney, Last Chance and Consolidated.

Recent drilling by Summa at the Consolidated Extension target, centred on the past-producing Consolidated mine, intersected broad zones of quartz-calcite breccias and stockworks with colloform-banded veins highlighted by intercepts such as 448 g/t AgEq over 31 m (129 g/t Ag, 3.88 g/t Au; MOG22-05) and 640 g/t AgEq over 9.9 m (306 g/t Ag, 4.26 g/t Au; MOG22-10). At Consolidated, 500 m of strike length has been tested by drilling, with results showing strong grade continuity and mineralization open to the north and south.

The Hughes project is centred on the eastern extension of the historical Tonopah mining district, covering an approximately 6.5 km east-west trend of high-grade, epithermal-related silver-gold targets. Central to the project is the past-producing Belmont mine, which exploited a series of stacked, moderately to steeply dipping, southwest-northeast-oriented, high-grade veins.

Previous drill programs by Summa targeted high-grade extensions of some of these veins and yielded intercepts highlighted by 536 g/t AgEq over 18.5 m (286 g/t Ag, 3.1 g/t Au; SUM20-06) and 3971 g/t AgEq over 2.8 m (2252 g/t Ag, 21.6 g/t Au; SUM21-30). Recent project-wide, multidisciplinary exploration programs defined multiple targets east of the Belmont mine including the Ruby and Sapphire targets, where significant silver-gold vein discoveries have been made (1450 g/t AgEq over 3.0 m; SUM23-59 at Ruby).

TDG GOLD CORP

RESURGENCE OF METS—A HIGH-GRADE EPITHERMAL PROSPECT IN THE TOODOGGONE DISTRICT, BRITISH COLUMBIA

Steven Kramar, V.P. Exploration, TDG Gold Corp.; Genevieve Huyer, Project Geologist, TDG Gold Corp.; Christopher Dail, Technical Consultant, TDG Gold Corp.

TDG Gold's Mets epithermal gold+silver prospect was discovered in 1980 during follow-up exploration of stream sediment surveys by past operators. The road-accessible project is located in the Toodoggone district of north-central British Columbia, approximately 14 km northwest of Thesis Gold's Lawyers deposit and approximately 23 km

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northwest of TDG's former producing Baker mine and mill. The property is held under a 30 year mining lease renewed with support of First Nations and local communities. Exploration by past operators between 1980 and 1992 outlined multiple high-grade epithermal gold+silver zones hosted in quartz-barite breccias and silicified and intensely argillic-altered structural zones developed along lithological contacts. Gold-to-silver ratios are high and mineral assemblages represent high levels of the epithermal system. Systematic work by past operators included stream sediment sampling (> 100 samples), soil sampling (> 10 000 samples), rock sampling (> 450 samples), trenching (2600 m), high-resolution ground and airborne geophysical surveys and limited shallow drilling (8240 m). This past work outlines a 2.2 km long favourable structural corridor and target area. Historical drilling was focused on a 130 m long segment of the corridor known as the A-Zone, which intercepted high-grade gold mineralization and was the focus of pre-mining development work in 1992. Compilation of the historical Mets drilling of A-Zone intersections comprises approximately 850 m of assayed core of the approximately 2450 m drilled in 27 NQ and BQ core holes. TDG has recovered and compiled most of the historical exploration data from the project and, in late 2023, initiated extensive ground geophysical surveys and a small drilling program to initially verify historically reported drillhole intercepts. Intercepts from three shallow TDG holes drilled over 100 m of strike length of the interpreted 1 km long A-Zone mineralized corridor, using a 3 g/t Au cutoff grade, include 20 m of 11.1 g/t Au; 9.2 m of 8.95 g/t gold and 8.6 m of 5.1 g/t Au.

TECTONIC METALS INC.

REVEALING THE FLAT GOLD SYSTEM: CHICKEN MOUNTAIN INTRUSION

Peter Kleespies, VP Exploration, Tectonic Metals Inc

The Flat gold system is located in southwestern Alaska, United States, 40 km north of the Donlin gold project in the Kuskokwim mineral belt. The project comprises 99 800 acres primarily owned by Doyon, Limited, one of Alaska's largest Native regional corporations. The property hosts bulk tonnage, intrusion-related gold mineralization potential like that found at the Fort Knox (Alaska) and Eagle (Yukon) gold mines. Since 1908, the Flat has been a significant placer gold district, with 1.4 million oz Au produced from streams draining the Chicken Mountain–Black Creek complex.

The partially unroofed, multiphase stocks of Chicken Mountain and Black Creek (68.3 to 73.2 Ma) intrude Kuskokwim sedimentary rocks and are cogenetic with accumulations of intermediate and felsic volcanics. Hornfelsing occurs within the sedimentary and volcanic rocks adjacent to the intrusions and in areas of suspected unexposed intrusion cupolas. At Chicken Mountain, three major phases are present: Monzodiorite and gabbro comprise the outer margin, biotite monzonite forms a central transitional phase and leucocratic quartz monzonite forms the central phase.

Two styles of bedrock gold mineralization are recognized:

1. Low-grade intrusion-related mineralization within altered, fractured and veined Chicken Mountain–Black Creek stocks. Significant gold mineralization is hosted within the late-stage quartz monzonite at Chicken Mountain.
2. Contact-related vein and disseminated bulk tonnage mineralization hosted within sedimentary and volcanic rocks. Most notable are the Golden Apex zone and Golden Hornfels along the eastern contact of the Black Creek stock.

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Historical exploration between 1977 and 2003, including 55 core and reverse circulation drillholes totalling 6907 m, provide an extensive surface and subsurface geochemical database. Significant surficial gold in soil generated by historical exploration remains untested by drilling.

Initial exploration efforts by Tectonic are focused on the central portion of the Chicken Mountain stock within late-stage leucocratic quartz monzonite, which appears to be a major source of the placer gold in the district. In 2023, Tectonic completed a diamond and reverse circulation drilling program at Chicken Mountain to further augment the historical drill data through oriented core data and high-quality, multi-element geochemistry to provide an updated structural and geochemical framework for ongoing exploration vectoring at Flat.

TUDOR GOLD CORP.

GOLDSTORM DEPOSIT: A LARGE GOLD-COPPER PORPHYRY SYSTEM AT TREATY CREEK, BRITISH COLUMBIA

Natalie Senger, VP Resource Development, Tudor Gold Corp.; Ken Konkin, President & CEO, Tudor Gold Corp.

The Treaty Creek project hosts the Goldstorm deposit, comprising a large gold-copper porphyry system and several other mineralized zones. As disclosed in the NI-43-101 Technical Report for the Treaty Creek Project, dated April 28, 2023 and prepared by Garth Kirkham Geosystems and JDS Energy & Mining Inc., the Goldstorm deposit has an Indicated Mineral Resource of 23.37 million oz of AuEq grading 1.13 g/t AuEq (18.75 million oz Au grading 0.91 g/t, 2.18 billion pounds Cu grading 0.15%, 112.4 million oz Ag grading 5.45 g/t) and an Inferred Mineral Resource of 7.35 million oz of AuEq grading 0.98 g/t AuEq (5.54 million oz Au grading 0.74 g/t, 0.85 billion pounds Cu grading 0.16%, 45.08 million oz Ag grading 5.99 g/t), with a pit-constrained cutoff of 0.5 g/t AuEq and an underground cutoff of 0.7 g/t AuEq. The Goldstorm deposit has been categorized into three dominant mineral domains and several smaller mineral domains. The CS-600 domain largely consists of an intermediate intrusive stock and hosts most of the copper mineralization within the Goldstorm deposit. CS-600 has an Indicated Mineral Resource of 9.86 million oz AuEq grading 1.10 g/t AuEq (6.22 million oz Au grading 0.70 g/t, 1.98 billion pounds Cu grading 0.32%, 51.1 million oz Ag grading 5.71 g/t) and an Inferred Mineral Resource of 3.71 million oz AuEq grading 1.19 g/t AuEq (2.32 million oz Au grading 0.75 g/t, 0.76 billion pounds Cu grading 0.36%, 18.71 million oz Ag grading 6.01 g/t). The Goldstorm deposit remains open in all directions and requires further exploration drilling to determine the size and extent of the deposit.

VICTORIA GOLD CORP

DUBLIN GULCH PROJECT, YUKON

Helena Kuikka, Victoria Gold Corp

Victoria Gold's Dublin Gulch property is situated in the Yukon, Canada, approximately 375 km north of the capital city of Whitehorse.

The property covers an area of 555 km² and includes the company's operating Eagle gold mine. Based on the 2023 Eagle technical report and after adjusting for depletion through December 31, 2022, the Eagle and Olive deposits

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include Proven and Probable Reserves of 2.6 million ounces of Au from 124 million tonnes of ore with a grade of 0.65 g/t, and a Mineral Resource of 245 million tonnes averaging 0.59 g/t Au, containing 4.7 million ounces Au in the Measured and Indicated category, inclusive of Proven and Probable Reserves.

In September 2022, a maiden Inferred Resource of 1.1 million ounces of Au (19,956,934 tonnes grading 1.67 g/t) was released for the Raven deposit.

Recent exploration programs have focused on expansion of targets near the Eagle gold mine as well as the rapidly developing Raven and Lynx targets. The 2023 exploration season focused on infill drilling and step-out diamond drilling along strike to the east of Raven—a program that culminated in more than 13 000 m of diamond drilling in 39 holes on Raven. Highlights from the 2023 exploration program include 3.45 g/t Au over 27.5 m, 1.4 g/t Au over 78.4 m, 5.38 g/t Au over 31.4 m and 1.5 g/t over 54.0 m. The Raven drill program also resulted in several highly anomalous base-metal intercepts from a distinct set of massive sulphide veining. Highlights include 23.46% Pb, 22.32% Zn and 545.0 g/t Ag with 3.10 g/t Au over 1.2 m and 11.04% Pb, 7.00% Zn and 216.08 g/t Ag with 13.68 g/t Au over 3.5 m.

WESTHAVEN GOLD CORP.

SHOVELNOSE GOLD PROJECT

Peter Fischl, P.Geo., Exploration Manager, Westhaven Gold Corp.

Westhaven Gold Corp. currently operates four projects in the Spences Bridge gold belt, a 110 km long northwest-trending belt of mid-Cretaceous continental-arc volcanics in south-central British Columbia. These projects host a series of syn-volcanic, low-sulphidation epithermal gold-silver prospects, with Westhaven's flagship property, the Shovelnose gold project, being the most advanced of these. The Shovelnose project is located 30 km south of Merritt, BC, and is easily accessible via Highway 5, the Coquihalla Highway. The project has an underground mineral resource estimate of 654 000 oz Indicated and 176 000 oz Inferred contained over a strike length of 420 m. Recent drilling has focused on extending the strike length of this 4.3 km long quartz vein system to the northwest at the Franz target. Highlights of this drilling include 39.42 g/t Au over 12.0 m (hole SN22-333), located 2.7 km to the northwest of the currently defined underground resource. Drilling from this past year also tested for satellite vein zones proximal to the main vein zone (Vein Zone 1). A highlight here includes 17.61 g/t Au over 3.68 m, drilled at the north-trending MIK Vein zone, 200 m southwest of Vein Zone 1. A second subparallel, north-northwest-striking satellite vein system, located 1.3 km to the northeast of Vein Zone 1 at the Hydrothermal Breccia 2 target, has been traced over a strike length of 180 m. Results from here include 1.23 g/t Au over 6.0 m (hole SN22-257) and 0.58 g/t Au over 5.51 m (hole SN23-341).

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PROJECT GENERATORS HUB

EAGLE PLAINS RESOURCES

Eagle Plains Resources (EPL:TSX-V) is a British Columbia–based mineral exploration project generator operating since 1992. Managed by geologists and technical staff, Eagle Plains operates more than 50 exploration projects in western Canada with a focus in northern Saskatchewan and British Columbia. Project locations within these jurisdictions include the uranium-rich Athabasca Basin in northern Saskatchewan, the porphyry fertile Quesnel Terrane of BC and the SEDEX potential of the Aldridge Basin in southeastern BC.

Our clientele ranges from senior producers to start-ups seeking a listing property. Through research, strategic acquisition and quality geoscience, we have assembled quality precious-, critical- and energy-metal projects ranging from grassroots to drill-ready with a diverse commodity profile. As part of our project generator model, we have a number of projects with requisite expenditures to qualify for listing transaction status on the CSE and TSX-V.

Deposit types include SEDEX; porphyry; VMS; orogenic gold; unconformity and basement-hosted uranium; REE associated with alkalic igneous intrusions, syenite and uranium; and vein-hosted precious and base metals.

Commodities include: gold, uranium, lithium, copper, zinc, molybdenum, nickel, light and heavy REEs, large-flake graphite, tungsten, tantalum and industrial minerals including gypsum.

Eagle Plains' wholly owned subsidiary, Terralogic Exploration Inc., provides geological consulting and technical expertise for a full spectrum of exploration projects, including preparation of NI 43-101–compliant technical reports. The NAK project is in the Babine copper-gold porphyry district of Central British Columbia. The poorly exposed NAK porphyry system was first recognized and initially drilled in the 1960s, and that early work revealed a large near-surface copper-gold system with dimensions exceeding 1.5 by 1.5 km. Further historical drilling was undertaken as part of programs during the intervening decades but was limited to shallow depths, with the nearly 80 holes drilled prior to 2022 averaging only 170 m in depth. In 2022 and 2023, American Eagle's drilling programs explored deeper along a north-south trend in the west-central part of this large system, intersecting significant copper and gold mineralization below, and marginal to, the best of the shallow, historically defined mineralized zones. Very strong results from the 2023 drill program, including intervals exceeding 500 m of bornite-chalcopryrite-chalcocite mineralization, have been intersected along a zone that has a distinct IP chargeability and resistivity signature. This zone underpins the significant exploration potential that remains at NAK, yet is just one part of a large and underexplored system that includes an undrilled geophysical trend to the east of and mirroring the trend that hosts the zone targeted by the company during the past two seasons. An aggressive drill program is planned for 2024, with the goals of expanding and connecting the zones that were the focus of work in 2022 and 2023, enlarging near-surface zones of higher grade, and connecting the various higher grade zones intersected at depth. In addition, the company plans to continue to explore, through focused geophysics and scout drilling, little-tested parts of this large porphyry system.

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LATIN METALS

Latin Metals Inc. focuses on exploration for gold-silver epithermal deposits, skarn deposits, copper porphyry deposits and sedimentary copper deposits in Argentina and Peru. The company is focused on acquisition by staking, greenfield exploration to define drill targets, and ultimately securing partners to take projects forward through drilling. The quality of projects being generated is reflected in our roster of previous and current partners, which includes Yamana Gold, Newmont, Barrick and AngloGold Ashanti.

The projects acquired have potential for significant discoveries and are located in areas of Argentina and Peru where community support and drill permits are achievable. A key aspect of Latin Metals' operations is our emphasis on social responsibility, particularly in communication and coordination with local communities. This approach ensures that exploration and potential mining activities align with local environmental and social standards, leading to early community agreements and drill permits. Where possible, we like to present projects with drill targets and drill permits in place, allowing partners to move to drill testing in the shortest possible time.

Latin Metals' sedimentary copper play in northwest Argentina is one example of how our innovative thinking and exploration experience can lead to inexpensive acquisition of very high potential projects. Acquisition of more than 400 000 ha across four projects in the Salta and Jujay provinces has secured ground across a vast area of prospective terrain. As far as we know, no other company had considered this idea and all the ground we wanted to acquire was available for staking. Moving through initial stages of exploration we are satisfying all the exploration criteria that we want to see and systematically identifying sediment-hosted copper mineralization in outcrop. We plan to complete geochemical sampling of hundreds of catchments to screen the entire 400 000 ha block. We were drawn to the concept for this project because these deposits, when discovered, tend to be both large tonnage and high grade, making them attractive to industry-leading mid-tier and major mining companies. Most importantly, the project has been successful to date, with more success to come.

Overall, Latin Metals' diverse portfolio of exploration projects in South America is grounded in a technically innovative, methodical approach to mineral exploration, combining geological expertise and entrepreneurial thinking with a commitment to responsible and sustainable practices.

MIRASOL RESOURCES

Mirasol Resources (MRZ :TSX-V) has had a successful history as a leading discovery-focused exploration company in Chile and Argentina. With long-standing operations and permitting offices in Argentina and Chile, Mirasol has established itself as the 'partner of choice' for major mining companies and local communities. Mirasol has successfully optioned properties to various mining companies during its 20 year history, including Newcrest, Oceana Gold, Pan American Silver, Yamana Gold and Hochschild Mining. The most rewarding was the discovery and sale of the Joaquin project in 2012, which was put into production by Pan American Silver. Mirasol continues to advance a strong pipeline of highly prospective early- and mid-stage projects.

The recent developments by Filo del Sol and NGEx have built significant interest in copper exploration in Vicuna district of Argentina and Chile from major mining companies and investors. Prior to the exciting results from Filo del Sol, Mirasol had identified and staked the Sobek project based on the prospective local structural architecture in one the world's most endowed regions for giant magmatic-hydrothermal ore deposits. Sobek is located 7 km west of Filo

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Del Sol and 3 km west of NGEx's new discovery at Lunahuasi. In preparation for drilling, in 2022 Mirasol completed a property-wide airborne mobile MT geophysical survey that outlined a very striking cluster of anomalies. Based on the mobile MT survey, geochemical soil anomalies and select surface rockchip results, Mirasol initiated the maiden drill campaign at Sobek in June 2023. Drilling on the first of two holes was stopped at a depth of 352 m, and the second hole reached 586 m before being halted due to the onset of winter weather conditions. Drilling is expected to resume in early 2024.

For more information on Mirasol and our projects visit our website at mirasolresources.com or contact us at contact@mirasolresources.com.

OROGEN ROYALTIES INC.

Orogen Royalties Inc. is focused on organic royalty creation and royalty acquisitions on precious- and base-metal discoveries in western North America. The Company's royalty portfolio includes the Ermitaño gold and silver mine (2% net smelter return [NSR] royalty) in Sonora, Mexico, being mined by First Majestic Silver Corp., and the Silicon-Merlin gold project (1% NSR royalty) in Nevada, United States, being advanced by AngloGold Ashanti NA. Orogen is well financed, with several projects actively being explored under joint ventures and a portfolio of gold and copper assets in British Columbia, Nevada and Sonora available for sale or option.

RIVERSIDE RESOURCES INC

Riverside Resources Inc. has a quality portfolio of copper, gold, silver and REE projects with drill permits, good access and defined targets. The company's business model of joint venture partnerships has progressed the business of discovery for the past 15 years, and we are ready to progress with partners on projects in British Columbia, Ontario and Mexico. Riverside's technical team has discovered mines and the current portfolio has high potential, and projects able to be acquired through option or purchase. Lead projects include Pichette and Oakes in Ontario; Revel REE and Elly Gold in British Columbia; and Union, Cecilia, Ariel and Cuarentas in Sonora, Mexico. Contact us at JManco@rivres.com if you are interested in properties and learning more, or visit our website: www.rivres.com

SILVER RANGE RESOURCES

Silver Range is a prospect generation mineral exploration company with a specific focus on generating, acquiring and selling targets hosting high-grade gold and silver mineralization. Silver Range generates prospects through a combination of archival research and basic field investigations, including prospecting and geochemical surveys. Prospective targets are acquired by staking and are then explored with geological mapping, sampling, and geochemical and geophysical surveying to develop drill targets. In general, Silver Range does not drill the projects in its portfolio.

Silver Range selects targets with reported or sampled surface mineralization grading higher than 5 g/t Au or 400 g/t Ag, provided such targets fall within geological deposit models hosting deposits with overall grades meeting or exceeding these thresholds. The Silver Range property portfolio currently consists of 42 mineral properties located in Nevada and Arizona, United States, and in Canada's territories. Most of the exploration work carried out during 2023 was focused on prospective targets in Nevada and Arizona.

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Silver Range creates value and generates cash flow by selling interests in its projects to third parties. Silver Range will enter into property transactions at any stage of property exploration, from concept through completion. Such property transactions may include outright sales, option-to-purchase arrangements, joint ventures, the generation and vending of royalties attached to projects, the generation of management fees to oversee exploration, and/or obtaining reimbursement for exploration expenditures. Intangible value may also be created through the negotiation of carried property interests.

Payments to Silver Range are made in cash, securities in publicly trading companies, or securities in companies seeking a public listing. Proceeds from property transactions are used first to defray the costs of general operation and to recapture the cost of project generation and exploration. Excess proceeds and property interests are retained as investments in the success of Silver Range projects and partner companies.

Silver Range seeks to increase shareholder value on a sustained basis by generating cash flow to defray operating and exploration expenses, thereby reducing any requirement to issue its own shares from treasury; by generating and maintaining interests in active exploration projects; and by acquiring significant equity interests in partner companies.

STRATEGIC METALS LTD.

Strategic Metals Ltd. is a well-funded, Yukon-focused explorer and project generator with interests in more than 100 properties, including 18 projects under option and 12 net smelter return (NSR) royalty interests. The company's exploration team has long history in the Yukon and are widely regarded as Yukon experts. Management has been involved in the discovery or advancement of many Yukon mineral deposits, including both the highest grade, more than 1 million oz gold deposits and the largest copper-gold deposit.

Through its long history of Yukon-focused exploration, Strategic Metals has developed close working relationships with many Yukon-based contractors that can be leveraged by new option or joint venture partners, providing them with cost effective, turn-key exploration solutions.

Strategic's current property portfolio covers a wide range of commodities, including copper, lead, zinc, gold, silver, tin and tungsten. Projects range from early-stage exploration ideas to drill-confirmed prospects to historically defined mineral resources. In 2023, Strategic's joint venture partners conducted drill programs on a large-scale copper prospect as well as a high-grade gold prospect as part of their respective earn-ins.

The company has built large shareholdings in several high-quality junior explorers by optioning projects and making early-stage investments; Strategic is also a seed investor and major shareholder of a promising environmental technology company, Terra CO2 Technologies. Strategic's cash and shareholdings currently exceed its market capitalization and Strategic and its option partners continue to advance its impressive project portfolio.

TRANSITION METALS CORP

Transition Metals Corp (TSXV: XTM) is a Sudbury-based, multi-commodity project generator that specializes in converting new exploration ideas into discoveries. The award-winning team of geoscientists has extensive exploration experience and actively develops and tests new ideas for discovering mineralization in places that others have not looked, often allowing the company to acquire properties inexpensively.

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Transition has developed a high-quality portfolio of early to advanced-stage exploration projects. The company focuses on identifying district-scale opportunities and has developed a broad portfolio of projects targeting gold, nickel-copper-PGM, and base metals with a focus on Canada that includes Ontario, Saskatchewan and the Yukon.

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Notes

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Notes

